Capic v Ford Motor Company of Australia Pty Ltd [2021] FCA 715

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| File number: | NSD 724 of 2016 |
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| Judgment of: | **PERRAM J** |
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| Date of judgment: | 29 June 2021 |
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| Catchwords: | **CONSUMER LAW** – representative proceedings – guarantee of acceptable quality in s 54 *Australian Consumer Law* (‘ACL’) – where 73,451 vehicles supplied in Australia with DPS6 dry dual clutch transmission – allegation transmission non-compliant with s 54 guarantee due to real risks of failure arising from four component and two architectural deficiencies – where failure manifests in range of undesirable symptoms including vehicle shudder – where Respondent introduced revised versions of three of four original components – where Respondent submitted some symptoms are ‘normal operating characteristics’ of the vehicles – where component deficiencies interrelated with transmission’s architecture ­– where Applicant alleged transmission control module failure a safety issue  **CONSUMER LAW** – representative proceedings – where Applicant claimed damages for herself and on behalf of group under ACL s 271(1) – whether s 271(1) confers a single cause of action where goods have multiple features that independently constitute non-compliance with s 54  **CONSUMER LAW** – where Respondent replaced failed components under warranty – where effectiveness of replacements in issue – where Respondent relies on ACL s 271(6) to negative Applicant’s claim – whether s 271(6) part of cause of action or defence – whether s 271(6) enlivened where consumer has not required manufacturer to repair goods – whether Applicant bears onus in relation to s 271(6) – where parties did not litigate question of ‘reasonable time’ with respect to group members – whether late repairs affect entitlement to damages – whether Respondent bears onus in relation to s 271(2)  **CONSUMER LAW** – representative proceedings –allegation of misleading or deceptive conduct based on implied representations arising from marketing of vehicles – where no link to knowledge of Respondent – where express representation alleged to be on Respondent’s website – where no evidence as to context of representation  **EVIDENCE** – where Applicant sought to rely on evidence from 52 group members in class of 73,451 vehicles – where method of selection unknown – whether evidence of group members sufficiently representative to be probative  **REPRESENTATIVE PROCEEDINGS** – where Applicant sought aggregate damages on behalf of group – where *Federal Court of Australia Act 1976* (Cth) s 33Z requires reasonably accurate assessment of total amount to which group members will be entitled – where group member’s entitlement to reduction in value damages for defective components unknown  **DAMAGES** – Applicant’s individual claim for reduction in value – whether value to be assessed at time of supply or by considering repairs performed during life of vehicle  **DAMAGES** – Applicant’s individual claim for other reasonably foreseeable loss under s 272(1)(b) – whether Applicant can recover excess tax and financing costs – effect of award of reduction in value damages  **PRACTICE AND PROCEDURE** – where Respondent objected to Applicant’s reliance on certain documents discovered in US proceedings – where documents tendered at end of trial and not part of particularised case – whether reliance procedurally fair in light of notice given |
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| Legislation: | *Census and Statistics Act 1905* (Cth) s 17(2)  *Competition and Consumer Act 2010* (Cth) s 82, Sch 2 ss 2, 4, 7(e), 18, 33, 54, 59(1), 259, 271, 272, 273, 274  *Evidence Act 1995* (Cth) ss 81, 144, 159, 191, Dictionary definition of ‘Australian Statistician’  *Federal Court of Australia Act 1976* (Cth) ss 33Z, 51A(1)(a)  *Sale of Goods Act 1895* (WA) s 52  Sale of Goods Act 1893 (UK) |
|  |  |
| Cases cited: | *APS Satellite Pty Ltd (formerly known as “SkyMesh Pty Ltd”) v Ipstar Australia Pty Ltd*  [2016] NSWSC 1898  *Australian Competition and Consumer Commission v Ford Motor Company of Australia Limited* [2018] FCA 703; 360 ALR 124  *Australian Competition and Consumer Commission v Jayco Corporation Pty Ltd* [2020] FCA 1672  *Australian Competition and Consumer Commission v Pratt (No 3)* [2009] FCA 407; 175 FCR 558  *Avel Pty Ltd v Multicoin Amusements Pty Ltd* (1990) 171 CLR 88  *Banque Commerciale SA, En Liquidation v Akhil Holdings Ltd* (1990) 169 CLR 279  *Boyer v FRP Pools and Spas Pty Ltd* [2019] NSWCATCD 52  *Capic v Ford Motor Company (No 3)* [2017] FCA 771  *Capic v Ford Motor Company of Australia Limited (No 4)* [2017] FCA 1575  *Capic v Ford Motor Company of Australia Limited (Form of Common Questions)* [2020] FCA 884  *Capic v Ford Motor Company of Australia Limited (Knowledge Common Questions)* [2020] FCA 885  *Capic v Ford Motor Company of Australia Limited (Late Evidence)* [2020] FCA 1117  *Capital Securities XV Pty Ltd v Calleja* [2018] NSWCA 26  *Chaplin v Hicks* [1911] 2 KB 786  *Chowder Bay Pty Ltd v Paganin* [2018] FCAFC 25  *Commonwealth v Amann Aviation Pty Ltd* (1991) 174 CLR 64  *Courtney v Medtel Pty Ltd* [2003] FCA 36; 126 FCR 219  *Doe d Wetherell v Bird* (1833) 111 ER 63; 7 Car & P 6  *Federal Commissioner of Taxation v Rozman* [2010] FCA 324; 186 FCR 1  *Fink v Fink* (1946) 74 CLR 127  *Gould v Mount Oxide Mines Ltd (in liq)* (1916) 22 CLR 490  *Graham Barclay Oysters Pty Ltd v Ryan* [2000] FCA 1099; 102 FCR 307  *Hadley v Baxendale* (1854) 156 ER 145  *Henville v Walker* [2001] HCA 52; 206 CLR 459  *Hoy Mobile Pty Ltd v Allphones Retail Pty Ltd* [2008] FCA 369; 167 FCR 314  *Jones v Dunkel* (1959) 101 CLR 298  *Jones v Schiffmann* (1971) 124 CLR 303  *Kent v Wotton & Byrne Pty Ltd* [2006] TASSC 8; 15 Tas R 264  *Manly Council v Byrne* [2004] NSWCA 123  *McRae v Commonwealth Disposals Commission* (1951) 84 CLR 377  *McWilliam’s Wines Pty Ltd v LS Booth Wine Transport Pty Ltd* (1992) 25 NSWLR 723  *Medtel v Courtney* [2003] FCAFC 151; 130 FCR 182  *Moore v Scenic Tours Pty Ltd* [2020] HCA 17; 94 ALJR 481  *Parkdale Custom Built Furniture Pty Ltd v Puxu Pty Ltd* (1982) 149 CLR 191  *Parmar v Minister for Immigration and Citizenship* [2011] FCA 760  *Project Blue Sky Inc v Australian Broadcasting Authority* [1998] HCA 28; 194 CLR 355  *Protec Pacific Pty Ltd v Steuler Services GmbH & Co KG* [2014] VSCA 338  *Swick Nominees Pty Ltd v LeRoi International Inc (No 2)* [2015] WASCA 35; 48 WAR 376  *Taco Company of Australia Inc v Taco Bell Pty Ltd* (1982) 42 ALR 177  *Unique International College Pty Ltd v Australian Competition and Consumer Commission* [2018] FCAFC 155; 266 FCR 631  *Vautin v BY Winddown, Inc. (formerly Bertram Yachts) (No 4)* [2018] FCA 426; 362 ALR 702  *Vines v Djordjevitch* (1955) 91 CLR 512  *Wardley Australia Ltd v Western Australia* (1992) 175 CLR 514  *Waters v Mercedes Holdings Pty Ltd* [2012] FCAFC 80; 203 FCR 218  *Wentworth District Capital Ltd v Commissioner of Taxation* [2010] FCA 862  Australian Bureau of Statistics, *3303.0 Causes of Death, Australia, 2019* (Australian Bureau of Statistics, Canberra, 23 October 2020)  Hancock PA and Weaver JL, ‘On Time Distortions under Stress’ (2005) 6(2) *Theoretical Issues in Ergonomics Science* 193-211  Langer J, Wapner S and Werner H, ‘The Effect of Danger upon the Experience of Time' (1961) 74(1) *The American Journal of Psychology* 94-97  Odgers S, *Uniform Evidence Law* (14th ed, Thomson Reuters, 2019) |
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| Division: |  |
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| Registry: |  |
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| National Practice Area: | Commercial and Corporations |
|  |  |
| Sub-area: | Regulator and Consumer Protection |
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| Number of paragraphs: | 969 |
|  |  |
| Date of last submissions: | 23 September 2020 (Applicant)  16 September 2020 (Respondent) |
|  |  |
| Date of hearing: | 15-19, 22-26 and 29-30 June, 1, 6-8, 10, 13-17 and 21-24 July |
|  |  |
| Counsel for the Applicant: | Mr I R Pike SC with Ms F Roughley and Mr P Strickland |
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| Solicitor for the Applicant: | Corrs Chambers Westgarth |
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| Counsel for the Respondent: | Mr C Scerri QC with Ms K Anderson and Mr T Farhall |
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| Solicitor for the Respondent: | Allens |

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| **Table of Corrections** |  |
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| 4 November 2021 | In paragraph 112(b), the word “he” has been inserted between the words “line” and “gave”. |
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| 4 November 2021 | In the fourth sentence of paragraph 697, the full stop has been replaced with a question mark. |
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| 4 November 2021 | In the third sentence of paragraph 739, “s 271(1)(a)” has been changed to “s 272(1)(a)”. |

ORDERS

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|  | | NSD 724 of 2016 |
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| BETWEEN: | BILJANA CAPIC  Applicant | |
| AND: | FORD MOTOR COMPANY OF AUSTRALIA PTY LTD ACN 004 116 223  Respondent | |

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| order made by: | PERRAM J |
| DATE OF ORDER: | 29 June 2021 |

THE COURT ORDERS THAT:

1. The direction of 29 July 2020 relating to the Applicant’s tender list be revoked to the extent it applies to the documents listed in Annexure A.
2. The matter stand over for further case management on 27 July 2021 at 9.30 am.
3. The parties not deliver written submissions in advance of the case management hearing.

**AND THE COURT NOTES THAT:**

1. The documents in Annexure A will be removed from the ‘Admitted Into Evidence’ section of the electronic Court Book.

Note: Entry of orders is dealt with in Rule 39.32 of the *Federal Court Rules 2011*.

Annexure A

|  | Document ID | Title | Date |
| --- | --- | --- | --- |
| 1 | FOR.712.002.6164 | 6 Panel - Launch Judder 30-Nov-12 | 17/01/2013 |
| 2 | FOR.712.002.8367 | RE: DPS6 seals | 31/07/2013 |
| 3 | FOR.713.001.0347 | May 03,2012 B299 CMT | 2/05/2012 |
| 4 | FOR.729.004.7466 | RE: Ability to clean engine oil from the DPS6 clutches | 29/05/2015 |
| 5 | FOR.729.005.4035 | RE: DPS6 Clutch Cleaning | 21/10/2015 |
| 6 | FOR.729.005.4055 | RE: DPS6 Clutch Cleaning | 6/10/2015 |
| 7 | FOR.729.005.4064 | RE: DPS6 Clutch Cleaning | 7/10/2015 |
| 8 | FORD\_DPS6-SAC\_00053729 | 00.00-R-202\_Functional\_Attribute\_Rating\_of\_Vehicles.doc | 22/05/2017 |
| 9 | FORD\_DPS6-SAC\_00053808 | 00.00-R-201\_Vehicle\_and\_Attribute\_Customer\_Rating\_System.doc | 22/05/2017 |
| 10 | VGS20034961 | RE: Dealer call Friday | 11/12/2010 |
| 11 | VGS20099409 | DPS6 Fiesta Shudder Take-off.pdf | 11/12/2012 |
| 12 | VGS20140955 | Proposed Solution to DPS6 Inertia and Thermal Issues | 30/04/2010 |
| 13 | VGS20141401 | ONE Ford PPT Template (Base Version) | 18/02/2013 |
| 14 | VGS20143863 | Fw At HPS Paper - Odell Review | 1/11/2011 |
| 15 | VGS20143864 | 2011 FWB Automatic Transmission - High Priority Study - M. Fields and S. Odell Follow-Ups - Key Follow-Up Items From Oct 27 2011 SAR Review | 27/10/2011 |
| 16 | VGS20143916 | Fw Note to Send out Under Joe's Signature | 4/11/2011 |
| 17 | VGS20143918 | 2011 FWB Automatic Transmission - High Priority Study - Key Follow-Up Items From Oct 27 2011 SAR Review | 27/10/2011 |
| 18 | VGS20150040 | Updated Agenda for the Engineering Governance Forum (EGF) - September 24th 2008 - Timing 08.30h AM - 9.30h AM US Time - 14.30h - 15.30h CET - Location PDC 1B-C73 / Merk18-MC4 / NetMeeting 19.171.147.108 | 24/09/2008 |
| 19 | VGS20151953 | 2013MY DPS6 Upgrade for 1.0L GTDI Unit PS/PSC - Executive Summary | 3/06/2009 |
| 20 | VGS20166367 | Transmission and Driveline PTTR Meeting Minutes - 7/31/09 | 5/08/2009 |
| 21 | VGS20166394 | DPS6 Clutch Torque Capacity | 7/08/2009 |
| 22 | VGS20168759 | DMF DPS6 NVH Assessment (Gear Rattle) Vehicle Test & CAE - Presenters H Jiang / G Pietron | 31/07/2009 |
| 23 | VGS20179358 | Engine Start Concerns Auto Trans Engagement Concerns Leaving Park And/or Check Engine Light with DTC P06B8 P0884-Built On or Before 8/17/2010 - TSB 10-19-6 | 24/12/2010 |
| 24 | VGS20185585 | DPS6 August 2007 Design Review Minutes Day 2 | 3/09/2007 |
| 25 | VGS20231997 | FW: Reviewing DPS6 Dry Clutch Durability and 1.0L GTDI w/Eli Avny | 4/04/2013 |
| 26 | VGS20231999 | DPS6 Application Assessment | 4/04/2013 |
| 27 | VGS20232207 | DPS6 Application Assessment | 4/04/2013 |
| 28 | VGS20254283 | Fw Cardanic-Damper Concept Issue Impacting Grattle | 8/12/2009 |
| 29 | VGS20343126 | DPS6 Design Review Minutes June 22 2007 | 26/06/2007 |
| 30 | VGS20345669 | Twin Dry PowerShift (DPS6) With 1.6L GTDI IR Status Review - Trans/Driveline Research & Advanced - August 2008 | 1/08/2008 |
| 31 | VGS20387022 | FW: investigating abnormal noises vehicle 1 data | 15/08/2013 |
| 32 | VGS20415042 | RE: DPS6 Next Steps | 9/03/2014 |
| 33 | VGS20415048 | Talking Point MF March 11 rev1.docx | 9/03/2014 |
| 34 | VGS20419396 | Qs v4 - DPS6.docx | 7/03/2014 |
| 35 | VGS20481752 | TGW - Introduction into an Proposal - DPS6 Integrated Cooling System - Cascade Session Towards GTC/LuK Team - Mail 1 | 25/01/2013 |
| 36 | VGS20948373 | DPS6 Clutch Cooling Project | 5/10/2012 |
| 37 | VGS21239077 | 6DCT250 - Design Review - Ford and Getrag at LuK in Buehl | 28/09/2007 |
| 38 | VGS21274162 | October 6th 1 x1 w TKB/Steve Armstrong | 22/09/2011 |
| 39 | VGS21274195 | Getrag Group/GFT Briefing Paper for October 3rd Week Meetings with Armstrong and Hagenmeyer | 23/09/2011 |
| 40 | VGS21274196 | Getrag and GFT Relationship with Ford | 1/01/2012 |
| 41 | VGS21274198 | Getrag Briefing Paper | 1/01/2012 |
| 42 | VGS21274233 | Getrag Group/GFT Briefing Paper for October 3rd Week Meetings with Armstrong and Hagenmeyer | 27/09/2011 |
| 43 | VGS21276324 | Fw Roush Support for DPS6 | 7/12/2012 |
| 44 | VGS21276329 | DPS6 Dual Clutch Air Cooling Concept Project | 7/12/2012 |
| 45 | VGS21276340 | Roush Support for DPS6 | 12/12/2012 |
| 46 | VGS21277518 | PowerPoint Presentation | 31/01/2014 |
| 47 | VGS21293945 | SPD6 1.0L DMF - Initial Study - Update - 22-Mar-2012 | 22/03/2012 |
| 48 | VGS21343988 | Fw Slide About B8080 Implementation | 7/05/2010 |
| 49 | VGS21343990 | B8080 Implementation in B-Car | 7/05/2010 |
| 50 | VGS21354959 | Slide 1 | 19/11/2013 |
| 51 | VGS21355122 | FW: DPS6 Getrag Status Update | 20/03/2014 |
| 52 | VGS21513649 | Proposed Customer Hang Tag | 4/02/2013 |
| 53 | VGS21683733 | Thermal Mass to Forced Cooling Sensitivity Study Phase 1 | 28/02/2010 |
| 54 | VGS5-00129095 | RE: investigating abnormal noises vehicle 1 data | 18/08/2013 |
| 55 | VGS5-00170109 | RE: Meet with Ann Carter? | 18/11/2013 |
| 56 | VGS5-00170111 | DPS6 Warranty Negotiation Strategy.docx | 18/11/2013 |
| 57 | VGS5-00171150 | DPS6 Paper for SAR 10:30am | 27/01/2014 |
| 58 | VGS5-00171151 | DPS6 Cost Estimate 11-22-13 SR Submission v2 (01-27-14).pdf | 26/01/2014 |
| 59 | VGS5-00171156 | Getrag DPS6 Seal Leaks\_1pager01262014vF2.docx | 26/01/2014 |
| 60 | VGS5-00188800 | Fw DPS6 Production Engrg Budgetary Estimate | 27/01/2013 |
| 61 | VGS7-0009634 | SREA C00867 Approved | 4/05/2015 |
| 62 | VGS7-0148130 | RE: Emailing: QCN Request Form V4 AE8Z-7048-A Seal leakers copy | 8/05/2013 |
| 63 | VGS7-0151656 | RE: Shudder Event | 22/02/2013 |
| 64 | FOR.700.005.0013 | 16X53-16131-Oct 21 extract AP only | 24/10/2016 |
| 65 | FOR.725.026.6816 | SSM Rear Seal Leaks\_20087-2013-1750 | 27/08/2015 |
| 66 | FOR.725.026.6819 | Rear Main Seal and DPS6 Transmissions | 27/08/2015 |
| 67 | FORD\_DPS6-SAC\_00007042 | 10\_22\_15 DPS6 C12995785 all hands #23.ppt | 4/08/2016 |
| 68 | VGS20090227 | FW: DPS6 Clutch Cooling Project | 30/11/2012 |
| 69 | VGS20090292 | FW: Clutch Temp Testing | 30/11/2012 |
| 70 | VGS20109545 | C346 media drive feedback | 9/12/2010 |
| 71 | VGS20148606 | RE: TGW Improvement - Hardware Changes - Proposal | 5/04/2012 |
| 72 | VGS20169615 | Slide 1 | 2/10/2009 |
| 73 | VGS20190063 | Microsoft PowerPoint - Ford Focus TGW competitive analysis 7-21-2011 ver2.ppt | 26/07/2011 |
| 74 | VGS20956107 | FW: Ford Cardanic Clucth Application | 4/11/2012 |
| 75 | VGS21238832 | PS195 SDS Version 1.0.xls | 20/04/2006 |
| 76 | VGS20090230 | DPS6 Active Cooling Project CR Gateway & Project Status - Trans/Driveline Research & Advanced Engineering | 27/08/2010 |
| 77 | VGS20090260 | Active Cooling for Dry DCT Transmissions | 05/04/2012 |
| 78 | VGS20090281 | DPS6 Temperature and Torque Correlations | 04/10/2012 |
| 79 | VGS20204805 | Evolution and Outlook PowerShift DCT250 - Piero Aversa and Ernest DeVincent | 16/09/2010 |

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PERRAM J:

# Section I: Introduction

1. The Applicant, Ms Capic, brings this suit on her own behalf and on behalf of the group whom she represents, against Ford Motor Company of Australia Pty Ltd (‘Ford Australia’). When referring to Ms Capic in her capacity as the group’s representative I will refer to her as the Applicant and when referring to her in her own capacity I will call her Ms Capic. I deal first with the position of Ms Capic and then of the group whom she represents.

## Ms Capic

### Liability

1. On 24 December 2012 Ms Capic purchased a 2012 Ford Focus from Sterling Ford in Melbourne which had been imported into Australia by the Respondent. She claims that since its purchase her vehicle has displayed a number of mechanical difficulties which she says are associated with its transmission (a 6-speed dry dual clutch PowerShift transmission, known as the ‘DPS6’). These difficulties are alleged to include shuddering, sudden deceleration, grinding noises and difficulties with gear selection (but there are many others). As the case was run, Ms Capic said that the DPS6 had certain features which created a risk that the symptoms would occur and she says that those risks were all present at the time that she purchased the vehicle. She submits that the supply of a vehicle which is inherently subject to such risks of failure contravenes the guarantee of acceptable quality imposed by s 54 of the *Australian Consumer Law* (‘ACL’), being Sch 2 to the *Competition and Consumer Act 2010* (Cth) (‘the Act’).
2. For reasons I will later explain, there is no doubt that s 54 applies to the Respondent as the importer of the vehicle. ACL s 271(1) permits Ms Capic to sue the Respondent for breach of the guarantee of acceptable quality and to recover damages from it. Without expanding at this stage on what any of the following mechanical engineering jargon means, Ms Capic says that the DPS6 posed four risks related to components within it (‘the Component Deficiencies’). The components and their risks of failure were:

* Input shaft seals which had a tendency to leak permitting lubricants from the gearbox side of the transmission to enter the part of the bell housing containing the otherwise dry clutch and drive plates and contaminate them;
* Inadequate friction material on the faces of the clutch and drive plates (the friction material is also referred to as the ‘clutch lining’);
* A transmission control module (‘TCM’) which contained a printed circuit board (‘PCB’) to which was affixed, amongst other things, two types of integrated circuits known as an ATIC 91 and an ATIC 106. These were affixed to the PCB by means of solder. Ms Capic says that the coefficients of thermal expansion of the PCB and the ATIC 91 and ATIC 106 chips were different and that repeated heating and cooling of the TCM (which is attached to the transmission assembly) created a risk of the solder cracking; and
* A rear main oil seal which had a tendency to leak permitting lubricants to enter the bell housing from the engine side of the transmission and contaminate the clutch and drive plates.

1. Ms Capic submits that each of the first three risks eventuated in the case of her vehicle and gave rise to a range of symptoms including shudder. Her case, however, is not that her vehicle is not of acceptable quality because the risks materialised, it is rather that it was not of acceptable quality because it was supplied with these risks inherent in it. The full implications of running her case on the basis of risks were not always appreciated by either side.
2. I have concluded that she has established the existence of each of the risks set out above except the risk said to arise from the rear main oil seal. For each risk she has a separate cause of action under ACL s 271(1) entitling her to claim damages from the Respondent under s 272.
3. As it happens, I am also satisfied that in the case of her vehicle the three risks which I have accepted also manifested themselves and that after they did her vehicle displayed a troubling range of behaviours. Ms Capic took her vehicle for servicing on many occasions and complained about these problems. For a long time they were not fixed. However, in the case of the input shaft seals they were eventually replaced in a way which satisfies me that after the replacement the risk posed by them no longer existed.
4. In the case of the TCM the issue is slightly more complex. There are two relevant events. The first involved the installation of a software update known as 15B22 which detected solder cracking before actual symptoms became perceptible to the driver. The second was the replacement of the old TCM with a new TCM with a revised ATIC 91 chip. It is only after this second event that I am satisfied that the relevant risk of TCM failure was removed in Ms Capic’s vehicle. I am not satisfied that she has demonstrated the existence of the problem with the original ATIC 106 chips.
5. In the case of the friction material I am not satisfied that the Respondent has satisfactorily resolved the problem.
6. These conclusions matter because the Respondent asserts that it is entitled to rely upon ACL s 271(6) in response to Ms Capic’s claim:
7. If an affected person in relation to goods has, in accordance with an express warranty given or made by the manufacturer of the goods, required the manufacturer to remedy a failure to comply with a guarantee referred to in subsection (1), (3) or (5):

(a) by repairing the goods; or

(b) by replacing the goods with goods of an identical type;

then, despite that subsection, the affected person is not entitled to commence an action under that subsection to recover damages of a kind referred to in section 272(1)(a) unless the manufacturer has refused or failed to remedy the failure, or has failed to remedy the failure within a reasonable time.

1. The proper construction of this provision is very difficult and I will not touch upon it here. I will simply say that I accept that the risk inherent in the input shaft seals with which her vehicle was supplied was eliminated when they were replaced and that the risk posed by the TCM was eliminated when her vehicle received a new TCM with the revised ATIC 91 chip.
2. However, in both cases I do not accept that the Respondent did this within a reasonable time so that s 271(6) does not apply. Consequently, I am satisfied that Ms Capic is entitled to sue the Respondent for the reduction in value damage she has suffered as a result of the supply to her of a vehicle with the three inherent risks.
3. In addition to her case that the four components above were attended by a risk of failure Ms Capic also pursued a more general case that her vehicle was not of acceptable quality because it had a risk of certain symptoms (principally, but not only shudder) because of what were said to be two architectural features of the DPS6 (‘the Architectural Deficiencies’). These were:

* Inadequate heat management; and
* Inadequate damping of torsional vibrations.

1. These problems were designated as ‘architectural’ because of a contention that they could not be cured without changes to the architecture of the DPS6 and that this in fact had not occurred. The Respondent denied the existence of either risk. I have concluded that the heat management case does not succeed. However, I have accepted that the manner in which the DPS6 damped torsional vibrations generated a risk that the gears in her vehicle would rattle and that the vehicle would display a slight shudder at low speeds. There was no dispute that there was a risk that these two symptoms could occur. Indeed, the Respondent submitted that they were both ‘normal operating characteristics’ of the DPS6. I have not accepted that the fact that gear rattling and a slight shudder at low speeds are described as normal operating characteristics has the consequence that they cannot constitute a breach of the guarantee of acceptable quality. I have concluded that the fact that Ms Capic’s vehicle was supplied with these two problems inherent in it has the consequence that it is not of acceptable quality for the purposes of s 271(1) and she has another cause of action against the Respondent in respect of them. Since the Respondent claims these features are normal operating characteristics it has not attempted to resolve them.

### Damages

1. Ms Capic claims that she is entitled to reduction in value damages under s 272(1)(a). I have accepted that she is and that she is entitled to the sum of $6,820.91 together with interest up to judgment from 24 December 2012. Ms Capic also claims to be entitled to damages under s 272(1)(b) because, so it is argued, she paid too much GST and stamp duty on the purchase of the vehicle on the basis (as it has fallen out) that it was worth 30% less than the $22,736.36 she paid for it. For myself, there is an interesting and complex question not dealt with by the parties whether an award of these damages is conceptually coherent since Ms Capic is to be placed in the position she would have been if the vehicle had complied with the guarantee of acceptable quality. On one view, this has been done by awarding her $6,820.91 for reduction in value damages and there is then no sense in which GST and stamp duty represent losses, those being amounts Ms Capic always expected to pay in the bargained-for position to which she would have been restored. However, this was not a defence raised by the Respondent. In any event I have determined that even if it had been this issue would not have been a bar to Ms Capic recovering these sums. Of the actual defences raised by the Respondent to this claim for damages, I have not found any persuasive. I therefore award amounts for GST and stamp duty.
2. Ms Capic purchased the vehicle using a finance lease. She also claims to be entitled to damages for the fact that she was required to ‘borrow’ more than she should have. I have accepted this claim and rejected the Respondent’s defences to it. On each rental payment she paid GST and I have also concluded that she is entitled to an amount to reflect the fact that with lower lease payments she would have paid less GST on these.
3. Although Ms Capic made a claim for damages for inconvenience, distress and vexation in her pleadings she did not pursue it in her submissions and I make no award for it.

## The group claim

### Liability

1. The DPS6 was fitted in 73,451 vehicles imported into Australia by the Respondent. I will call this cohort the ‘Affected Vehicles’. These vehicles consisted of the model lines of the Focus, Fiesta and EcoSport and the dates they were supplied new range from 22 September 2010 to 29 December 2017. The group consists principally of the persons who purchased these vehicles new together with subsequent second hand purchasers between 1 January 2011 and 29 November 2018. The Applicant estimated there are approximately 185,000 people in the group by reasoning that each car had been owned on average by 2.5 persons in this time.
2. The picture is much more complex in the case of the group than it is in the case of Ms Capic. The vehicles were manufactured by the Respondent’s parent, Ford Motor Company (‘Ford US’). As the problems with the DPS6 became apparent Ford US worked to resolve them. As a solution became available it was gradually implemented in vehicles which were already on the road. However, this was only done where the vehicles presented for service with a problem (except in the case of 15B22 which was installed when vehicles were brought in for regular servicing). This approach is known as a ‘fix on fail’ approach. Ford US also adjusted its manufacturing processes so that the fixes were applied in new vehicles. Turning to the particular problems advanced by the Applicant:

#### Input shaft seals

1. I am satisfied that the Affected Vehicles which were supplied with the original input shaft seals posed a risk of failure and that all of these vehicles were at the time of their supply not of acceptable quality.
2. Where the original input shaft seals have not been replaced no question under ACL s 271(6) arises and these group members have claims under s 271(1) for reduction in value damages under s 272(1)(a) and (if applicable) other reasonably foreseeable loss and damage under s 272(1)(b) .
3. Where the input shaft seals have been replaced with seals containing both the new FKM elastomer and a steel outer backing on the inner seal, I accept that each relevant group member ‘required’ the repair within the meaning of s 271(6). However, in these cases the issue of whether the repair was effected within a reasonable time was not the subject of the present trial. Both parties eschewed any attempt to prove whether group members’ vehicles had been repaired within a reasonable time by asserting that the other bore the burden of proving this matter. The effect of this impasse was that there is no evidence before the Court on the topic. Had either party attempted to prove this matter it would have been immediately apparent that it could not have been tried as a common issue since it turns on the individual position of each group member. For this reason the only conclusion is that the matter was not tried and could not have been tried as a common issue.
4. Consequently, it cannot presently be known whether these group members have claims for reduction in value damages although the prima facie position is that they may have claims for other reasonably foreseeable loss and damage under ACL s 272(1)(b). This conclusion about the present uncertainty as to the availability of reduction in value damages does not apply in those vehicles where an input shaft seal was replaced with one containing only the new FKM elastomer but not the new steel backing on the inner seal.

#### Clutch lining

1. I am satisfied that each vehicle which was supplied with the original clutch lining material (known as B8080) suffered from a risk of developing symptoms such that it did not comply with the guarantee of acceptable quality.
2. Some of the Affected Vehicles supplied with this material have never had it replaced. I am satisfied that each such group member has a cause of action under s 271(1) for reduction in value damages under s 272(1)(a) and if applicable for other reasonably foreseeable loss or damage under s 272(1)(b).
3. Some of the Affected Vehicles supplied with this material have since received replacement clutches using lining material known as RCF1o. I am satisfied that this replacement has removed the relevant risk of symptoms. The Respondent then seeks to rely on s 271(6) to defeat such a group member’s claim for reduction in value damages. I am satisfied that each such group member ‘required’ the Respondent to repair the vehicle, however, the issue of whether it did so within a reasonable time was not tried in the present trial. Its outcome will turn in each case on *when* the particular group member required the Respondent to repair the problem and when, in fact, the Respondent did so. Since that issue was not tried it is not presently known whether the Respondent has a defence to a claim for reduction in value damages under s 271(6) in the case of such a group member. This will not be known until the individual position of each group member is ascertained. However, as with the input shaft seals, s 271(6) does not affect a group member’s entitlement to seek compensation for reasonably foreseeable loss or damage other than reduction in value damages, ie under s 272(1)(b).
4. Some vehicles received a replacement clutch known as a half-hybrid B8040/B8080 clutch rather than an RCF1o clutch. I am not satisfied that the Respondent has proved that this half-hybrid clutch eliminated the risk. Consequently, no question under s 271(6) can arise. It follows that these group members do have claims for reduction in value damages as well as for other reasonably foreseeable loss and damage under s 272(1)(b).
5. Not all of the vehicles were supplied with B8080. Some were supplied with the half-hybrid B8040/B8080 clutch. I am not satisfied that the Applicant has demonstrated that this material posed the risks of failure she alleges and hence I am not satisfied that these group members have a claim for damages in respect of their clutch lining. It will be noted that I have already rejected the Respondent’s reliance on s 271(6) with respect to the half-hybrid clutch. In effect, both parties failed to prove anything useful about the half-hybrid clutch.
6. In the case of the vehicles which were supplied with RCF1o the group members do not have a claim in respect of the clutch lining.

#### The TCM

1. The case based on the ATIC 106 chips fails on the facts. However, the case based on the original ATIC 91 chip is viable. Not all of the Affected Vehicles were supplied with a TCM containing an ATIC 91 chip attended by a risk of solder cracking. Affected Vehicles supplied with a TCM with the revised ATIC 91 chip were not in breach of the guarantee of acceptable quality for this reason and their owners do not have a claim under s 271(1) in respect of it.
2. The vehicles supplied with TCMs containing the original ATIC 91 chip were not of acceptable quality at the time of their supply because of the risks they posed. The Respondent applied two fixes. First, each vehicle which was presented for service after 27 October 2015 received a software update known as 15B22. It did not address the physical problem of solder cracking but it detected that problem before the symptoms associated with it became perceptible to the driver and disabled the vehicle in a sufficiently confronting way, attended with warning lights and messages, that it may be accepted that a driver would take the vehicle in for service almost immediately and without fail. Secondly, once new TCMs with the revised ATIC 91 chip became available these were inserted into vehicles which showed symptoms of TCM failure or which had been brought in for service due to the operation of the warning system instituted by the 15B22 software update.
3. The first fix was effective in those vehicles into which it was installed where replacement TCMs with the revised ATIC 91 chip were available in service stock but not effective in those vehicles in which it was not installed or where it was installed without the corresponding availability in service of TCMs with the revised ATIC 91 chip. The second and third class of these have claims for reduction in value damages if their original TCM was not otherwise replaced. It is not known whether the first class have claims for reduction in value damages in respect of this issue because, while I accept that the installation was an effective repair for the purposes of s 271(6) where new TCMs were available as replacements in service, the issue of whether the repair took place within a reasonable time has not been tried nor has it been shown for each group member that replacement TCMs with the revised ATIC 91 chip were in fact available.
4. The replacement of the original TCM with a new TCM with the revised ATIC 91 chip was a successful repair and removed the risk posed by the original TCM. However, in the case of each such group member it is not presently known whether the replacement was effected within a reasonable time. It cannot presently be known whether these group members have claims for reduction in value damages.

#### Rear main oil seal

1. The group members have not established that any of the Affected Vehicles had an inherent risk of failure due to the rear main oil seal. This claim fails.

#### Inadequate heat management

1. The group members have not established that their vehicles had an inherent risk of failure because of the way in which heat was managed in the DPS6. This claim fails.

#### Rattling gears and slight shudder at low speeds

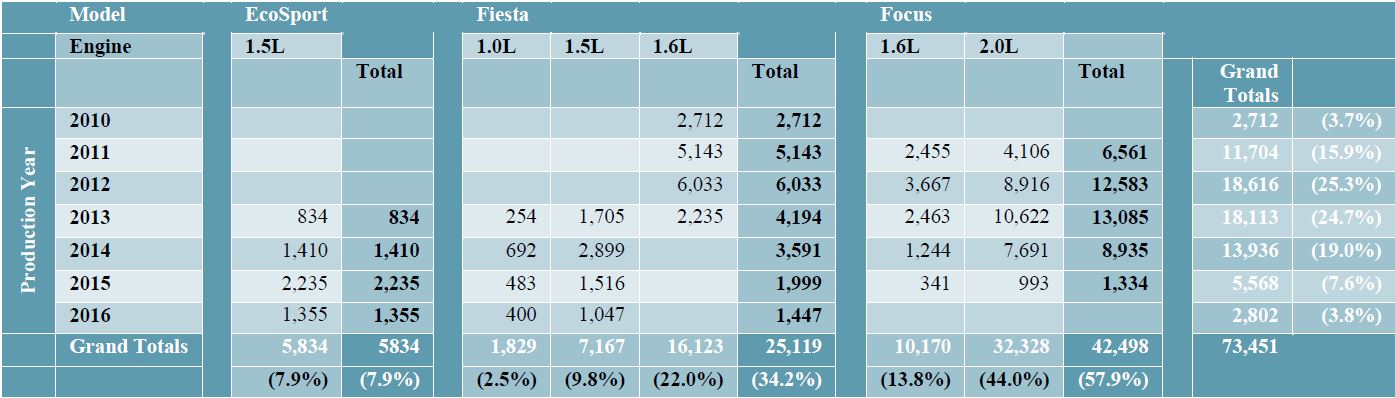
1. I am satisfied that all Affected Vehicles have a risk that they will develop these symptoms due to the manner in which the DPS6 damps torsional vibrations. I have concluded that the Affected Vehicles do not comply with the guarantee of acceptable quality because of this issue. The Respondent has not attempted to resolve this.

### Damages

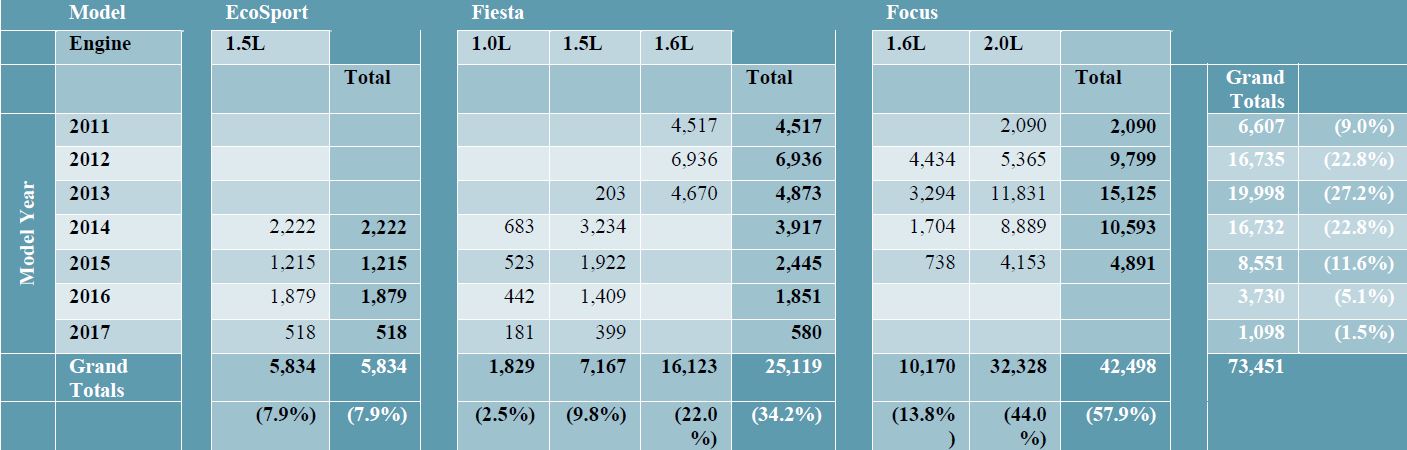
1. The group members sought damages on an aggregate basis under s 33Z(1)(f) of the *Federal Court of Australia Act 1976* (Cth) (‘FCA Act’). Such an award may only be made if the Court is satisfied that a reasonably accurate assessment can be made of the total amount to which group members will be entitled: s 33Z(3). Since it is not presently known which group members have which causes of action for reduction in value damages the question of whether there can be aggregation under this provision does not yet arise. The claim is therefore refused on the current state of the case. If and when the issue of whether the various repairs were effected within a reasonable time is resolved, this question may be revisited.
2. For reasons explained more fully in Section XIV, this conclusion is not disturbed by either of the following matters:
3. First, that all group members have causes of action in relation to the risks of rattling gears and a slight shudder at low speeds which I have concluded are caused by inadequate torsional damping. This was a comparatively minor issue when compared with the Applicant’s case on the Component Deficiencies. In any event, an award of aggregate damages cannot be made unless the Court can arrive at a reasonably accurate assessment of the *total* amount to which group members are entitled under the judgment: FCA Act s 33Z(3). This is not possible for reasons I have just outlined.
4. Secondly, that the group’s aggregate damages claim incorporated amounts for alleged excess finance and tax and repair time costs, comprising other reasonably foreseeable loss or damage under s 272(1)(b). While the entitlement to damages under that provision does not depend on the continued existence of a cause of action for reduction in value damages, nonetheless it is not possible to make a reasonably accurate assessment of group members’ *total* entitlement. In any event, as I explain in Section XIV, any assessment of excess finance and tax losses cannot be undertaken until the quantum of any entitlement to reduction in value damages is known. The result therefore is that there can yet be no award of aggregate damages.
5. Finally, before moving to the substantive issues in the case, it should be recorded that this trial was conducted during the Victorian lockdown in 2020 in circumstances of considerable hardship for both parties, their lawyers and those working within the Court. The entire 6 week trial was conducted by means of a virtual platform with not a single appearance in a court room by any person. This required a high degree of co-operation between the legal representatives for the parties. Whilst no doubt the trial was conducted with little quarter given by either side to the other, this formal hostility did not extend to facilitating the orderly conduct of the trial in the difficult circumstances of the pandemic. The Court records its thanks to the representatives of the parties for bringing the matter to trial in this fashion.

# Section II: The Affected Vehicles

1. The Affected Vehicles consist of 73,451 separate vehicles manufactured by Ford US under the model lines Focus, Fiesta and EcoSport during the period between July 2010 and December 2016. Each of the vehicles was manufactured either in Rayong in Thailand, Saarlouis in Germany or Chennai in India. Each of the vehicles is equipped with the DPS6 transmission. Further, each of the vehicles was sold by the Respondent through Ford Australia dealerships to consumers in the Australian market.
2. Apart from the three model lines, the vehicles may relevantly be further sub-categorised by reference to their year of production and their engine size. In the case of production year, there can be a lag of up to one year between the time a vehicle is physically assembled at a Ford plant and the time at which it is eventually sold. Whilst sometimes the model year of a vehicle can be the same as the production year this is not inevitably so and for some vehicles the model year is the year following the production year. This is so, for example, in the case of the Affected Vehicles bearing a 2017 model year, as all were produced in 2016.
3. The Applicant’s submissions summarised the composition of the fleet of Affected Vehicles in Table 1 of her submissions which is based upon production year:

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1. A table was also prepared by reference to model year (as opposed to production year):

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1. The Respondent’s submissions contained a similar set of tables which very marginally differed. After judgment was reserved I queried the parties as to the discrepancy. On 6 August 2020, my Associate was informed by the parties that the Court should rely upon the tables in the Applicant’s submissions. The minor discrepancy related to the inclusion in the Respondent’s figures of some vehicles which had never been sold. For that reason, I will act on the basis of the tables I have just set out.
2. The Ford Focus constitutes the largest segment of the Affected Vehicles (57.9%) followed by the Fiesta (34.2%) and the EcoSport (7.9%). The small number of EcoSports involved is a reflection, in part, of the fact that it did not enter production until 2013. It will also be noted that there is a significant decline in the number of Affected Vehicles manufactured after 2014. Most of the Affected Vehicles (88.6%) were manufactured between 2010 and 2014 and 11.4% were manufactured in 2015 and 2016.
3. Next it is useful to note where these vehicles are located in the wider market for all vehicles. The Fiesta and EcoSport are what are known as B-segment vehicles whilst the Focus is a C-segment vehicle. Both B- and C-segment vehicles are designed to be lightweight, fuel efficient and relatively inexpensive to purchase and operate in comparison to larger and more expensive vehicles in the D-segment (eg the Audi A4) or the E-segment (eg the Mercedes-Benz E-class). C-segment vehicles are generally larger than B-segment vehicles. The Focus is larger than the Fiesta but similar in size to the EcoSport. B- and C-segment vehicles are typically equipped with smaller engines between 1.0 and 2.0 litres in size.
4. Although the tables above refer to engine size without discrimination between engine type, there is a debate between the parties about the role of ‘dual mass flywheels’. I need not explain what that debate is at this point (see Section X below) although it concerns the kind of flywheel connecting the crankshaft to the drive plate (I explain these terms below at Section IV).
5. The flywheel debate does make it necessary, as a matter of background, to understand that, with the exception of the 1.0L Fiesta, all the Affected Vehicles have 4-cylinder engines. Each of these engines was equipped with a ‘single-mass flywheel’. The 1.0L Fiesta, on the other hand, was built with a turbocharged 3-cylinder engine (known as the ‘Fox’) equipped with a dual mass flywheel. I return to the large topic of dual mass flywheels and torsional vibrations below at Section X. It forms a significant part of the engineering debate between the parties.
6. Within model lines there were further distinctions which reflected differences in trim or additional functionality. In general, different levels of trim can range from the cosmetic (ie, leather seats instead of fabric) through to improvements in performance and comfort (ie, increased sound insulation and better powertrain mount tuning). For the Affected Vehicles, these different trims can be identified by each model line’s badge. The Affected Vehicles include the Fiesta in six different badges (CL, LX, ZETEC, Ambiente, Trend and Sport), the EcoSport in three (Ambiente, Trend and Titanium) and the Focus in four (Sport, Ambiente, Trend and Titanium/Sport). Nothing in this litigation turns on the differences between badges but since they often appear in the evidence it is useful to know what they mean.
7. I was not taken to any evidence directly on this matter, but in submissions the Applicant referred to there being 64,963 Affected Vehicles remaining from the 73,451 once the settled claims had been removed. In any event the total number of vehicles remaining in the class is not material at this stage.

# Section III: Procedural Consequences of the Way the Case was Run

1. The Applicant’s case that the Affected Vehicles were not of acceptable quality is principally found at §6AB of the fourth further amended statement of claim (‘4FASOC’). It is a case alleging that the vehicles had a propensity towards certain identified misbehaviours. There was no issue in the case as to whether individual vehicles in the class actually exhibited the misbehaviours (although there was in Ms Capic’s individual case). This interpretation of §6AB reflected the parties’ understanding of it with which the Court had previously agreed: *Capic v Ford Motor Company (No 3)* [2017] FCA 771 at [16]. Any inquiry into the individual position of vehicles within the class would not have presented common issues suitable for determination in a class action trial. The Applicant did not therefore seek to prove the individual position of vehicles within the cohort. It is true that the Applicant did call 52 other group members to give evidence about their vehicles but she submitted their relevance was only to give anecdotal support for her case that the vehicles suffered from the propensities alleged and to exemplify the expectations of a reasonable consumer.
2. The case therefore is about the existence of propensities (or risks) of identified forms of vehicle misbehaviour. The method of proof selected by the Applicant was to seek to prove that the propensities or risks existed because of particular mechanical features of the DPS6. In an ordinary claim that goods are not of acceptable quality the question of why they are such is irrelevant. For example, if I buy a kettle and it does not work, it does not matter why it does not work. It is not of acceptable quality simply because it does not work. The applicant in such a case has no need to prove its design or componentry deficient, just that it does not work. However, where a case of unacceptable quality is pursued on the basis that the goods pose a risk of some kind, the qualities of the argument necessarily require an identification of some reason why the risk exists. Ordinarily, this will require some form of practical explanation of a problem in construction or design. For example, if an applicant wishes to prove that a kettle is defective because it has a 5% risk of exploding, it will usually be necessary to explain what it is about the kettle that gives rise to that risk. The only other alternative would be to rely on sufficiently robust empirical data to show that in fact 5% of the kettles did explode.
3. The manner in which the Applicant sought to prove the existence of the risks of the alleged misbehaviours was multi-faceted. She relied on:

* the evidence of Dr Jürgen Greiner, a transmissions engineer;
* the evidence of herself and 52 other members of the group as to the difficulties they had had with their own vehicles;
* evidence derived from warranty claims and complaints data maintained by the Respondent;
* documents produced by Ford US which were referred to by Dr Greiner in his reports; and
* documents produced by Ford US which were not referred to by Dr Greiner in his reports.

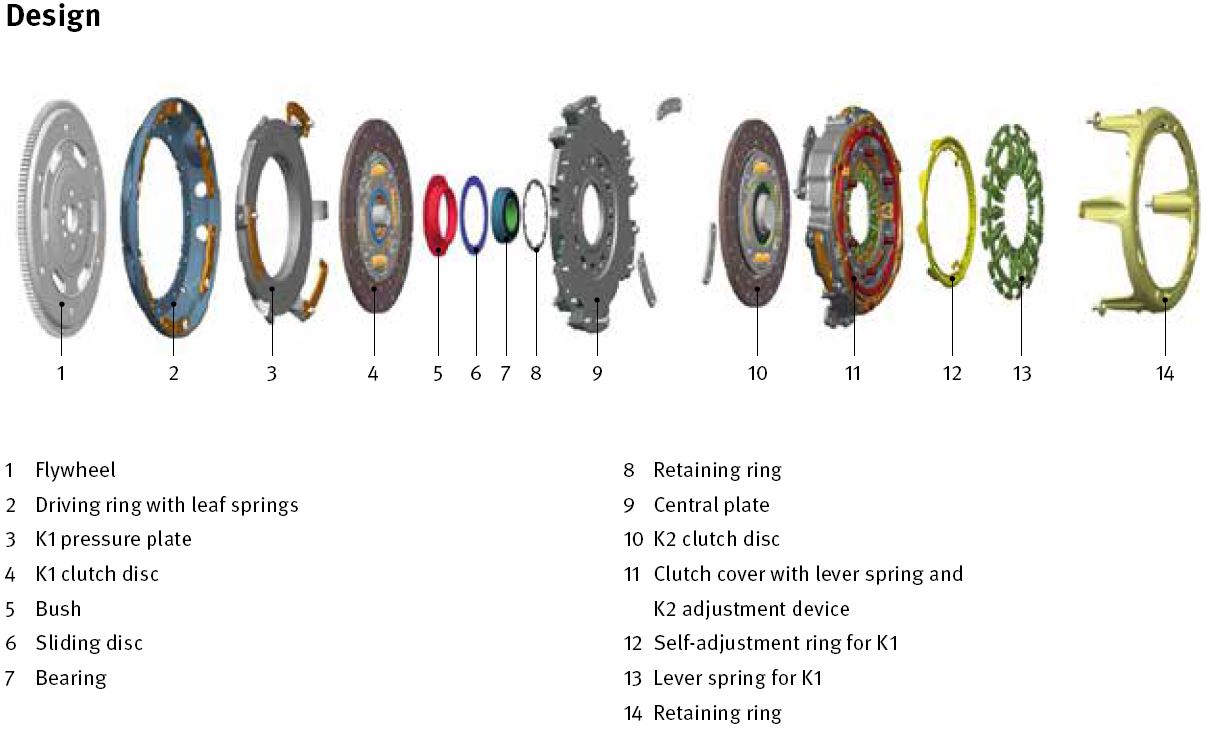
1. For reasons I explain more fully in Section XVI the Applicant’s case was that the vehicles suffered from the risks of misbehaviour identified by Dr Greiner. This was not the way that §6AB of the 4FASOC was particularised but the Applicant later notified the Respondent that she would prove the existence of the deficiencies through Dr Greiner. By the time the matter came to trial, it was on this basis that it was conducted. The parties chose to make the correctness of Dr Greiner’s evidence the field of their dispute which they were at liberty to do.
2. Dr Greiner referred to a number of documents which had been created by Ford US and, in relation to these there is no doubt that the Respondent has been given an opportunity to meet the Applicant’s case. However, at the end of the trial the Applicant tendered a number of Ford US documents not referred to in Dr Greiner’s evidence without indicating at any time prior to her closing written submissions what their significance was. As I explain in Section XVI this is procedurally unfair and will not be permitted.
3. In relation to the 52 vehicle owners who were called, I explain in Section V as to why I do not think I can rely on their evidence to substantiate the existence of risks across the Affected Vehicles where the Applicant provided no evidence as to how these witnesses had been selected or what the statistical value of a sample of 52 vehicles from a cohort of 73,451 might be.
4. Consequently the case that the Respondent was required to meet on the existence of the alleged propensity of the vehicles to misbehave was the case consisting of:

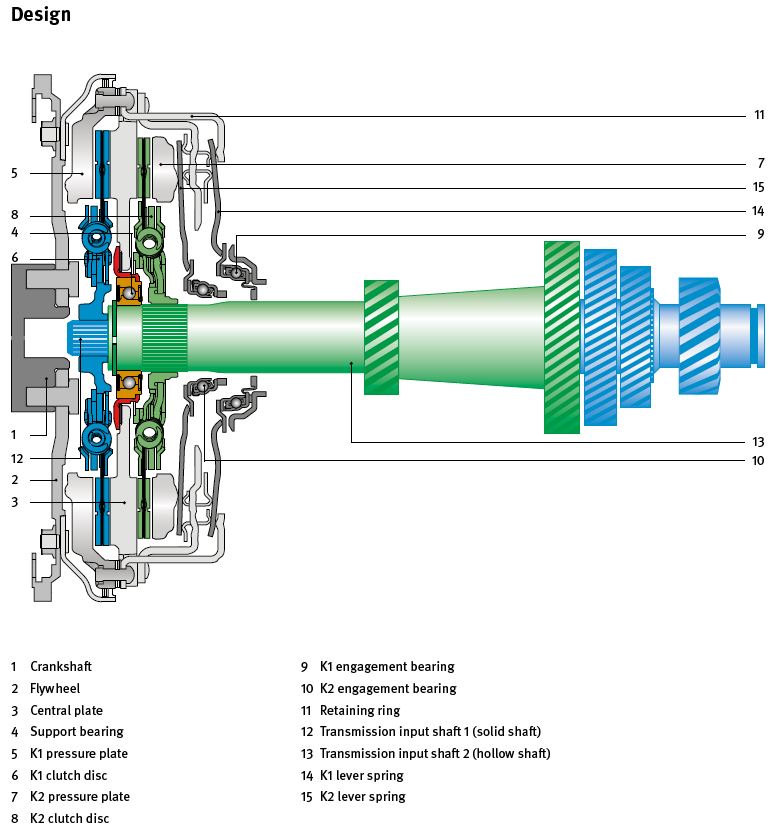
* Dr Greiner’s evidence including the Ford US documents referred to by him;
* The Respondent’s warranty and complaints data and the evidence derived from that data.

1. It is then necessary to identify features of the DPS6 relevant to the Applicant’s case.

# Section IV: The Nature and Relevant Features of the DPS6

1. The DPS6 is a dry dual clutch transmission. A *dual clutch transmission* is a transmission with two clutches. In the DPS6 one clutch operates the odd numbered gears (‘clutch 1’) and the other the even numbered gears along with reverse (‘clutch 2’). This permits the transmission to have two gears selected at once. Clutch 1 is attached to an inner input shaft which is itself located within a hollow outer input shaft to which clutch 2 is attached. In both cases, the clutch plate sits between a pressure plate and a central drive plate. The pressure plates are controlled by actuators and squeeze the relevant clutch plate onto the drive plate. The drive plate is connected to the crankshaft (via a flywheel) and it is the crankshaft that takes power from the engine. The clutch plate is connected to the input shaft. When a gear is fully engaged, the drive plate and the clutch plate move at the same rotational speed and are pressed onto each other such that power flows from the crankshaft to the input shaft and from there through the transmission to the gears to drive the car. When the vehicle is moved from a standing position (‘launch’) or when a gear change is performed, the clutch plate and the drive plate move at different speeds until they are brought to the same speed in the same way as occurs in a manual transmission. This period of transition depends on the frictional qualities of the clutch lining or friction material which lines the relevant faces of the clutch plates, the pressure plates and the drive plate. This material is an important element in the operation of the transmission and its frictional qualities dictate the manner in which the transmission operates. Because there are two clutches in a dual clutch transmission there are four areas of frictional contact involved, one on each side of the drive plate and one between each clutch plate and its respective pressure plate. Below are two diagrams of the DPS6 architecture. By way of explanation, in the labels K1 refers to clutch 1 related components and K2 to clutch 2 related components, while the clutch plates are labelled ‘clutch disc’ and the drive plate is labelled ‘central plate’.





1. Because humans do not have three legs, it is generally not feasible for a dual clutch transmission to be operated by the driver. In the DPS6 the control of the two clutches is given over to a computer located on the transmission control module (‘TCM’). When the transmission is in one gear it works out what the next gear change will be and selects that gear whilst the relevant input shaft is not connected to the engine (via the drive plate–clutch plate system). The next change of gear therefore avoids any delay whilst the new gear is selected and correspondingly there is no need for an interruption in the delivery of power whilst the transmission is disengaged from the drive plate (as occurs in a manual when the clutch is disengaged in order to allow the driver to physically shift into the next gear with the gearstick). A change of gear in the DPS6 therefore only requires a switch of power between the input shafts, brought about by disengaging one clutch plate while simultaneously engaging the other clutch plate with the corresponding side of the drive plate.
2. With that brief discussion in mind, the following concepts are relevant to this litigation:
3. *Clutch lining*. The surfaces of both sides of each clutch plate and the drive plate, along with the surfaces of the pressure plate that face the clutch plate are lined with the clutch lining material. The frictional qualities of the clutch lining are, as I have already said, central to the operation of the transmission. The TCM knows what these qualities are and they are factored into the procedures it uses for changing gears. Unpredictable variations in the frictional qualities of the clutch lining disrupt the process of gear shifts in ways which are themselves unpredictable. The frictional qualities of the clutch lining are also affected by heat, that is to say, some clutch lining materials behave differently (and unpredictably) the hotter the transmission is. This clutch lining is also referred to interchangeably in the evidence as *clutch material* or *friction material*.
4. *Clutch slip*. When the clutch plate and the drive plate are fully engaged with each other they are pressed together in a state of static friction and rotate as one so that power passes from the engine through them to the gears and then on to the wheels. When they are being introduced to each other, on the other hand, they move at different speeds until they are brought to the same speed. The initial difference in their rotational speeds reflects the fact that after launch the drive plate will be rotating at a rotational speed related to the rotational speed of the crankshaft (with the influence of the flywheel in between) whereas the clutch plate will not be rotating at all. As they are gradually introduced to each other by increasing the pressure exerted on the clutch plate side (by a spring loaded pressure plate) the clutch plate begins to rotate sympathetically with the drive plate until, ultimately, it is rotating at the same speed. Whilst in the transition from not rotating at all (in a state of full disengagement before launch) to rotating at the same speed as the drive plate, the clutch is said to be in slip phase which reflects the fact that the plates are rotating at different speeds and therefore necessarily in a state of kinetic friction. Although this sounds complex, for persons who can drive a manual vehicle the ideas will be familiar. In particular, in a manual vehicle the slip phase corresponds to the skill involved in re-engaging the clutch by lifting your foot off the clutch pedal following a gear change. Clutch slip is used during gear changes but it may also be used as a form of braking. For example, the practice of ‘riding the clutch’ in a manual vehicle when on a slope so as to keep the vehicle stationary involves keeping the clutch in a constant state of clutch slip. This practice is generally regarded as unsound in a manual vehicle as it wears out the clutch lining and generates heat. One of the issues in this case concerns the programming of the TCM to use clutch slip as a method for damping torsional vibrations. This brings one to torsional vibrations:
5. *Torsional vibrations*. The pistons in an internal combustion engine are attached to the crankshaft. Because they fire at different times this means that the crankshaft accelerates as each piston fires and then begins to decelerate as the explosion finishes and continues to drop off until the next piston fires. Although it is usual to say that the crankshaft is rotating at a particular rate of revolutions per minute (rpm) this is in fact an incomplete description of what is occurring. In reality, the rotational speed of the crankshaft is not constant but oscillates at a high frequency related to the rate at which the pistons are firing. The intermittent nature of the piston firing also means that the turning force (or torque) output by the crankshaft also fluctuates. Torsional vibrations are a product of the fluctuations in both the speed and torque of the crankshaft. In an internal combustion engine they are a fact of life but can have negative consequences. For example, the presence of a vibrational oscillation in a vehicle may have unwelcome consequences if the frequency of the oscillation coincides with a harmonic frequency of any other component in the vehicle. When this occurs other components of the vehicle may begin to rattle. Consequently, at some point some effort must be made to damp the torsional vibrations produced by the engine. There are several ways of doing so. In the DPS6 the TCM was programmed to soak up the torsional vibrations by using clutch slip and also with the use of ‘torsional springs’ known as inner dampers which were located within the clutch plates. Other ways exist too, for example, by placing a flywheel on the crankshaft equipped with dampers. All of these solutions have strengths and weaknesses. A flywheel with torsional dampers will reduce torsional vibrations. But nothing is for free. Such a flywheel is heavy and can affect the vehicle’s fuel consumption. Further, the same phenomenon which soaks up the torsional vibrations also guarantees that more engine power is needed to drive the crankshaft. This corresponds with a reduced responsiveness in the vehicle to applications of power (and an overall reduction in power).
6. *The TCM*. The TCM is a computer consisting of several integrated circuits soldered to a printed circuit board and is bolted onto the transmission housing (which is also referred to as the bell housing). As such it is exposed to the heat generated by the transmission. The temperature the DPS6 operates at depends, inter alia, on the amount of heat generated through the friction involved in clutch slip. This fluctuates with the manner and frequency of gear changes. A vehicle with a lot of gears will have more frequent gear changes and is likely to run hotter. The picture then is one of fluctuations in temperature. The integrated circuits and the printed circuit board expand and contract when heated and cooled. For the reasons just given, this occurs very frequently in a dual clutch transmission. If they expand and contract at different rates, this will expose the solder to mechanical strain and may cause cracking in the solder over time. Cracking in the solder in turn may cause electrical conductivity issues which may cause the TCM to behave erratically. This problem does not occur if the printed circuit board and the integrated circuits soldered to it have the same coefficient of thermal expansion, as the expansion and contraction would then occur at identical rates.
7. *Input shaft seals*. The DPS6 is a dry dual clutch transmission. In general, dual clutch transmissions may be wet or dry. A wet transmission is one in which the clutch plates are bathed in a liquid. The purpose of the liquid is to remove heat from the transmission. A dry dual clutch assembly is one in which the clutch and drive plates are not so bathed but are instead cooled by the surrounding air in the bell housing, with the rotating clutch plates acting as fans. One advantage of a dry clutch is that it is lighter and the clutch plates experience less resistance when rotating (which improves fuel efficiency). A disadvantage is that air cooling is not as efficient as liquid cooling due to the higher heat capacity of liquids. In a dry clutch transmission the desired frictional properties of the clutch lining are premised on the clutch lining remaining dry. How is this achieved? The input shaft to which the clutch is connected is exposed in the gearbox to lubricants. It is important for the operation of the clutches that these lubricants do not find their way onto the surface of the clutch lining. The clutch plates and drive plate faces must therefore be sealed from the gearbox. This is achieved by means of seals. Relevantly there are two seals, both known as input shaft seals, which serve this purpose (one for the inner input shaft and one for the outer input shaft). If the input shaft seals fail then lubricants may find their way onto the clutch lining. The presence of fluid on the clutch lining affects the frictional qualities of the clutch lining and may cause the clutches to behave in unpredictable ways.
8. *Rear main oil seal*. The problem just described exists on both sides of the transmission. Just as the clutch lining must be kept free of contamination from lubricants coming from the gearbox side so too must it be protected from oil contamination coming from the engine side. The purpose of the rear main oil seal is to provide that protection at the point where the crankshaft exits the engine and enters the transmission environment.
9. *Heat management*. When a clutch is in its slip phase, the kinetic friction involved generates heat. Heat may affect the frictional qualities of the clutch lining. The clutch lining must be such as to perform predictably in the heat environment in which it finds itself. Where the clutch lining is not sufficient in a given temperature environment there are two possible solutions. Either the clutch lining material may be changed so that it can operate predictably in the actual heat environment of the transmission or additional cooling measures may be introduced into the transmission. For example, one might change to a wet clutch configuration or, perhaps, increase the air flow throughout the transmission by some means (like a fan).
10. *Wet clutch shudder*. The term ‘shudder’ was used in a somewhat amorphous manner in this litigation to describe undesirable vehicle behaviour that is caused by a number of distinct problems. Wet clutch shudder is that subset of shudder which is the result of lubricating fluid contaminating the clutch lining and causing it to behave unpredictably.
11. *Dry clutch shudder.* In distinction to wet clutch shudder, dry clutch shudder refers to that shudder emanating from the errant behaviour of clutch plates that have not been contaminated with fluid. Within this genus, ‘self-excited shudder’ is that which is linked to the inherent frictional properties of the clutch lining material, while ‘forced-excited shudder’ is the result of geometric variability in the clutch components.

# Section V: The Witnesses

## The Applicant’s lay witnesses

### Ms Capic

1. Ms Capic gave her evidence in chief by means of three affidavits dated 7 June 2018, 22 November 2019 and 5 May 2020. She was cross-examined on Thursday 18 June 2020 and Friday 19 June 2020 which were the 4th and 5th days of the trial. The cross-examination appears at T222-330.
2. The principal issue about her credit turned on some evidence she gave in relation to the financing of her vehicle. It is therefore necessary to understand that financing before that evidence can be assessed.
3. Ms Capic currently works for herself as a business consultant providing, inter alia, payroll management and bookkeeping services. At the time she gave her evidence she was 35 years old. On 24 December 2012 Ms Capic purchased a 2012 Ford Focus LW MKII Sport 2.0L from Sterling Ford who traded from Bundoora in Victoria. It was a 5 door hatchback and its colour was frozen white. In addition, Ms Capic also paid for tinted windows and some carpet mats. On top of these costs there were some on-road costs. The purchase costs for the vehicle were as follows:

|  |  |
| --- | --- |
| Vehicle | $25,627.27 |
| Carpet mats – 3pcs | $65.00 |
| Window tint | $200.00 |
| Discount: | -$2,890.91 |
| Dealer delivery | $1,540.91 |
| Total: | $24,542.27 |
| GST: | $2,454.23 |

1. In addition there were the following on-road expenses:

|  |  |
| --- | --- |
| Registration fee | $232.30 |
| Compulsory third party | $464.20 |
| Slimline Plate Fee | $92.00 |
| Stamp Duty | $810.00 |
| Total: | $1,598.50 |

1. Thus Ms Capic was required to pay the following amounts on the acquisition of the vehicle:

|  |  |
| --- | --- |
| Car purchase costs | $24,542.27 |
| GST | $2,454.23 |
| On-road costs | $1,598.50 |
| Total: | $28,595.00 |

1. On the same day, Ms Capic entered into a ‘novated finance lease’ with BMW Australia Finance Ltd (‘BMW Finance’) under which an amount of $27,930.27 was financed. A copy of the terms of this lease is not available but the evidence does include an amortisation schedule and it corroborates Ms Capic’s evidence that the lease was a novated finance lease. There was no direct evidence about this but I propose to assume that a novated finance lease is a hire purchase arrangement where an employer (a) agrees to meet the rental payments due under a hire purchase arrangement in relation to a motor vehicle provided to an employee; but (b) is not obliged to make the residual payment at the end. Ms Capic gave evidence that at the time of this first lease she was employed by IN-Fusion Management Pty Ltd and that it was a term of her employment agreement that she would be provided with a car. A copy of that agreement was not in evidence but Ms Capic says that she entered into a fresh employment contract with IN-Fusion Management Pty Ltd on 1 June 2014 in which there was a similar term. That agreement is available. One of its provisions is as follows:

In addition to your remuneration, you are also provided with a fully maintained motor vehicle which will operate under a personal novated lease. IN-Fusion Management will be responsible for meeting all lease payments on your behalf whilst you are an employee of the business and; be responsible for the costs associated with running and maintaining the vehicle accordingly, for example, Fuel, Registration, Insurance, Servicing, Tolls and Repairs.

1. In this case, one can discern from the amortisation schedule which was put in evidence that the lease had a four year term with monthly payments of $586.09 (including GST). There was a residual payment of $12,839.20 (including GST) due at the end of the fourth year on 24 December 2016. There is a gap of $664.73 between the total purchase price due to Sterling Ford of $28,595.00 and the amount provided by BMW Finance of $27,930.27. I am unable to account for this anomaly.
2. In August 2016 Ms Capic’s employer IN-Fusion Management Pty Ltd went into administration. In the period between 24 August 2016 and 25 October 2016 it appears to have continued to have been debited for the payments under the lease but on each occasion the payments were dishonoured. Ms Capic says, and I accept, that IN-Fusion (or perhaps what had been its business) was eventually purchased by a new entity, Interstate Enterprises Pty Ltd which traded as ‘Tecside Group’. Tecside employed Ms Capic under an employment contract dated 16 September 2016. It contained this term:

At the time of writing this offer, Tecside will continue with the current arrangements in relation to your novated lease. We will, however, reserve the right to incorporate the lease into your salary as a salary sacrifice arrangement. This will not impact your current net salary.

1. This was apt to pick up the former arrangement with IN-Fusion. A document entitled ‘BMW Group Financial Services – Transaction Inquiry’ printed on 17 September 2019 contains a complete history of the amounts due and payments made under the BMW Finance lease. It records that a single payment of $1765.77 was made on 14 December 2016 which was the amount by which the lease with BMW Finance had by then fallen into arrears. I infer that this payment was made by Tecside. This was, however, the only payment ever made by Tecside because on 24 December 2016 the BMW Finance lease expired under its own terms. Tecside’s obligations to Ms Capic were only to meet the rental payments and it was not obliged to, and did not, pay the residual amount then due. The residual was $12,839.20.
2. Ms Capic did not pay the residual either, at least not at that time. BMW Finance’s Transaction Inquiry document records that it corresponded with Ms Capic on 11 January 2017, 20 January 2017 and 28 February 2017 and I infer that is likely to have been in relation to her obligation to pay the residual.
3. One may infer that if unattended for a sufficiently long period of time it is possible that BMW Finance might have repossessed Ms Capic’s vehicle under the terms of the finance lease. In any event, by May 2017 it is clear that steps were underway designed to secure a new finance lease in the amount of the outstanding residual due under the BMW Finance lease. Ms Capic’s evidence in her affidavit of 7 June 2018 was that she thought that it was Tecside’s obligation to secure a new finance lease: §30. She says that on 22 March 2017 she signed an invoice for the sale of her vehicle. Whilst this is correct it is not an entirely complete statement. She was also the person to whom the vehicle on sale was to be supplied to. The sale price was for the amount of the residual payment of $12,839.20. Ms Capic is recorded therefore both as the vendor and as the person to whom the vehicle was to be delivered.
4. However, I am satisfied that no such transaction occurred on 22 March 2017. As I shortly explain, Ms Capic did not obtain finance until 29 May 2017 and I do not think Ms Capic could, or at least would, have paid out the first lease until the second lease was entered into. A more likely explanation for the date of this document is that it is a document which was, for some reason, thought necessary to facilitate the second lease.
5. That second lease was procured, and in fact probably advanced, by Ms Capic’s finance broker, Mr Crea. According to her evidence, he had been in touch with her and had impressed upon her the need quickly to refinance the amount due to BMW Finance. Under cross-examination she said that it was Mr Crea’s company Melbourne Finance Broking Pty Ltd which had refinanced the residual. Certainly the lease that began 29 May 2017 suggests that the lessor was Melbourne Finance Broking Pty Ltd as trustee for the Melbourne Finance Broking Unit Trust. Puzzlingly, however, subsequent demands for payment appear to have come from Macquarie Leasing Pty Ltd (‘Macquarie Leasing’) but it was not a party to the second finance lease. A letter from Macquarie Leasing dated 11 November 2019 seems to record a payment having been received on 30 May 2017. Furthermore, another letter from Macquarie Leasing dated 13 November 2019 appears to be, at first glance, a record that the first monthly payment of $368.18 had been made by Ms Capic to Macquarie Leasing on 29 May 2017. That might suggest that Macquarie Leasing has been the lessor on that day which is the same date as the lease with Melbourne Finance Broking. However, closer examination does not bear this out. The document is in fact merely an amortisation schedule and bears an annotation ‘This is not a payment history or statement of account and therefore does not reflect actual payment activity on your contract’. It would be unsafe to rely on this document to infer that Macquarie Leasing was first paid on 29 May 2017.
6. At T261.16 Ms Capic gave evidence that she thought, based on the documents, that Melbourne Finance Broking had paid out the first lease but that subsequently a new lease had been entered into. I do not think Ms Capic was purporting to give this evidence as an explicit exercise in recollection; rather, it was an attempt to explain why Melbourne Finance Broking appeared to have been the lessor on 29 May 2017.
7. There is clearly a missing piece in the evidence. There are only two available explanations. Either Melbourne Finance Broking novated the second lease to Macquarie Leasing or a fresh, third, lease was entered into with Macquarie Leasing which was used to refinance the second lease with Melbourne Finance Broking. Ms Capic’s reconstruction of events is consistent with the latter but I do not think her speculation is especially probative. As will be seen, it is not necessary to resolve this issue, although I would express a preference for the novation theory were it necessary – it seems more consistent with the absence of any evidence of a third lease. What is important, however, is that on either view, Melbourne Finance Broking was to be the lessor on 26 May 2017 and this means that it (and Mr Crea) were acting in that capacity on that day.
8. The second lease was a 3 year finance lease requiring the payment of 36 instalments of $386.18. Shortly after the second finance lease was executed (on 26 May 2017) Ms Capic was made redundant by Tecside. This occurred in June 2017. Tecside agreed however to continue to meet the lease payments under the second lease until 30 November 2017. I infer that it made no payments after that date. Consistently with the drawing of that inference, Macquarie Leasing wrote to Ms Capic on 29 January 2018 pointing out her account had fallen into arrears. This letter confirms that at least by then the lessor was no longer Melbourne Finance Broking although it does not explain how that came to be.
9. Ms Capic then began meeting the lease payments herself. The second (novated) or perhaps third (new) lease was due to expire on 29 May 2020 at which time she was bound to make a residual payment of $6,355.40. A few weeks before that day dawned, Ms Capic had already affirmed at §20(a) in her affidavit of 5 May 2020 that she felt financially trapped by her finance lease. She also said that between the date of that affidavit and 29 May 2020 (a period of only 24 days) she would shortly have to meet the residual payment and the then single remaining monthly instalment under the second (or perhaps third) lease. At trial she confirmed that she had in fact made these payments: T247.20.
10. It is then useful to turn to the credit attack which the Respondent launched across this somewhat dry ground. It submitted that Ms Capic had given evidence about her entry into the second finance lease which was not to her credit. The submission went this way: on 26 May 2017, her finance broker had sent her documents to be executed for the second lease and she had completed these. One of the documents was the lease itself which she signed. The document contained a section under which Ms Capic was asked to give a number of acknowledgements and warranties. Clause 3 was as follows:

Except for any defects disclosed in Item 4 of Schedule 1, the Goods are of merchantable quality and free from defect.

1. But no defect had been notified in the schedule. This was submitted to be surprising because Ms Capic had by then commenced this proceeding (on 17 May 2016) just over a year before. In the proceeding she already had alleged, at §19 of her original Statement of Claim, that her vehicle suffered from a number of identified problems and was not of acceptable quality within the meaning of ACL s 54. She found herself in the position therefore of having alleged in this class action that the vehicle was defective but having afterwards warranted to Melbourne Finance Broking that the vehicle was of merchantable quality and free from defect. This involves a potential inconsistency.
2. Ms Capic was extensively cross-examined about the inconsistency at T257-258 and her evidence was ultimately that she had in fact verbally told her broker, Mr Crea, about the defects. She was also criticised for not mentioning the fact that she had done so in any of her affidavits. Whilst I do not think Ms Capic is to be criticised for not mentioning the matter in her affidavits, I do not accept her evidence that she told Mr Crea of the problems with the vehicle for two reasons. First, Ms Capic had an incentive not to tell Mr Crea about the difficulties with the vehicle. Secondly, it seems doubtful had Mr Crea been informed of the problems with the vehicle as Ms Capic then perceived them that he would have extended the finance to her.
3. *As to her failure to include her discussion with Mr Crea in any of her affidavits*: I do not think this especially remarkable. Whether Ms Capic told Mr Crea about the vehicle’s problems does not relate to any issue in her case in chief. It was not raised in any of the Respondent’s evidence. It only finally became relevant once the Respondent decided to make a credit issue out of it during the cross-examination.
4. *As to her motive not to tell Mr Crea about the problems with the vehicle*: by 26 May 2017 Ms Capic was in need of finance. The residual under the BMW Finance lease had been due for many months and BMW Finance had written to her several times after the lease had expired. It is reasonable to infer that at some point BMW Finance would have looked to its rights. By 26 May 2017, Ms Capic had been in default for 5 months by not paying the residual. She may have been right that it was Tecside’s responsibility to organise another lease (I offer no view on that question) but, at the end of the day, if BMW Finance repossessed the vehicle after the non-payment of the residual, it was in a real sense, her problem. I think it fair to infer in that circumstance that she had a real motive to organise the second lease and that this need had become more pressing by 26 May 2017.
5. Furthermore, by May 2017 Ms Capic’s perception of her vehicle was negative. The car was serviced on 30 May 2017 very shortly after the date she signed the second lease. Her evidence in her affidavit of 7 June 2018 was that she had told the Ford dealer when it was serviced on that day that the vehicle was displaying the usual problems, ie shuddering, not enough power, vibration and an inability to take off. On this occasion the dealer replaced the clutch and input shaft seals. In her affidavit of 5 May 2020, she said at §20(b) that she could not in good conscience sell the car to another person. She had earlier stated this in her affidavit of 7 June 2018 at §153. Irrespective of the mechanical realities of Ms Capic’s vehicle, there seems little doubt that she was subjectively deeply dissatisfied with it. One does not, after all, start a class action on a whim. I infer that as at the time Ms Capic entered into the second lease on 26 May 2017, she thought her vehicle was something she could not in good conscience sell to another person. Although her evidence to that effect was only forthcoming in her 7 June 2018 affidavit, I do not think that at this point this was a revelation at which she had only recently arrived. It seems to me that it is likely to have been her view since at least the commencement of the class action.
6. Ms Capic found herself in the position on 26 May 2017 of needing the finance to avoid difficulties with BMW Finance but being the owner of a vehicle about which she had grave doubts. Revelation of the problems her vehicle presented to Mr Crea might well have led, in Ms Capic’s perception, to Melbourne Finance Broking refusing to refinance the residual. And, for the reasons I have already given, the situation by May 2017 was such that Ms Capic had been in default with BMW Finance for some months. These two factors gave Ms Capic incentives not to tell Mr Crea about the difficulties with the vehicle. I do not disregard the fact that Ms Capic denied that she had kept the matter from Mr Crea in order to ensure that the finance would be forthcoming, saying at T263.4 under cross-examination that she had not thought of that ‘until you [ie, the cross-examiner] just mentioned that now’. I accept that it is unlikely she set out deliberately to keep this from Mr Crea. A more likely scenario is that the two incentives lingered at the fringe of her conscious mind and merely edged her towards non-disclosure without her ever forming a complete thought that she would not disclose.
7. As to the unlikelihood of Mr Crea extending finance if informed of the problems with the vehicle: Ms Capic was seeking to refinance the residual under the BMW Finance lease. This was an amount of $12,839.20. Although some care should be exercised in assuming that this figure represented the depreciated value of Ms Capic’s vehicle by 26 May 2017 (the rates of depreciation set for tax purposes are usually higher than actual depreciation rates so as to encourage the replacement of equipment and hence economic growth) nevertheless it is a useful benchmark by which to gauge the value of the car even if only in a rough way. It is sufficient, for example, to conclude that for the amount being borrowed the loan to value ratio would have been reasonably high and hence the quality of the security was important. The revelation to Mr Crea that the vehicle was beset with the difficulties about which Ms Capic was complaining in 2017 would have affected the potential realisable value of the only security she was offering. It is difficult to see that it would have been in the interests of Mr Crea to extend the finance without knowing quite a bit more about what the difficulties were. Since Melbourne Finance Broking was the initial lender under the second lease this was not just a problem which could be waved through to some unfortunate third-party financier. Just as BMW Finance was Ms Capic’s real problem, so too it would have been Mr Crea’s real problem if he had lent against the vehicle’s capital value knowing, as on this hypothesis he would have, that it suffered from multiple problems and knowing, as he would have, that Ms Capic was in default under the BMW Finance lease. It is possible Mr Crea might have proceeded despite these problems, but it strikes me as unlikely.
8. These matters lead me to conclude that Ms Capic did not tell Mr Crea about the difficulties with her vehicle. Her evidence at trial that she did was therefore false.
9. It is difficult to think that this episode was to her credit although, in fairness to her, it is tolerably clear what happened. The fact that the defects had not been disclosed by her was a fact that she understandably felt embarrassed about and she was keen, I think, to come across – as she believes herself to be – as an honest person. The irony of the situation is that I do not think that her failure to disclose the defects in the financing documents reflected any deliberate dishonesty on her part. I accept that she most likely signed the lease without appreciating the significance of the warranty as many people would. In her efforts to appear honest on this issue regrettably Ms Capic was not telling the truth. The situation she found herself in during cross-examination was a difficult one and Mr Scerri QC’s cross-examination of her was searching and stern. It must have been a stressful occasion for her and this incident is, in some sense, unfortunate since it was unnecessary. The cross-examination persisted on the issue for several pages. Ultimately Ms Capic tried to say at T262.39-40 that she thought that the word ‘defect’ ‘meant something where it’s physically broken or, you know, can’t turn the car on or something along those lines….’. This answer did not strike me as very plausible. My impression was that by this stage of questioning Ms Capic was quite distressed and was, in some ways, flailing around.
10. I think I am bound to accept the Respondent’s submission that the cross-examination showed that Ms Capic, when presented with evidence which was not helpful to her case, would provide answers designed to advance her case. Ultimately the Respondent submitted that Ms Capic was ‘a generally honest although unreliable witness’. I accept this submission. Her evidence about what she told Mr Crea does not persuade me that Ms Capic is at the core of matters a dishonest person but it does persuade me that when pushed into a corner in the witness box her answers might not always be reliable.
11. There is also some reason to think that Ms Capic, at least in relation to the topic of her car about which she clearly feels strongly may, on occasion be carried along towards some overstatement. This is not an uncommon human trait and I think it reflects her passion for the cause rather than any underlying desire to deceive. A similar problem besets recreational fishers.
12. The Respondent instanced a number of examples of this. The first concerned Ms Capic’s account of an incident she experienced on 3 February 2016. She said that she had been driving on the Eastlink Freeway when her vehicle lost power and rapidly decelerated from 80 km/h to 20 km/h in ‘three to five seconds’. Under cross-examination she stated it was ‘a few seconds’ before clarifying that by this she meant approximately three to five seconds. The Respondent made two submissions about this evidence. The first was that it was implausible that the vehicle would have decelerated at such a rate. Ms Capic’s counsel submitted that there was no evidence to support such a proposition. I was initially attracted to that observation but upon reflection I have changed my mind about it. There is no doubt that an incident did occur on 3 February 2016 and, as I explain elsewhere, that the incident was most likely caused by the TCM solder issue. However, whilst there is evidence that the TCM solder issue sometimes resulted in sudden power losses there is no evidence that it resulted in powerful braking action. A reduction in speed from 80 km/h to 20 km/h in 3-5 seconds is not a circumstance which could result from a power loss but would appear to require the presence of braking action. Accepting that braking action in a car with gears and a clutch can be achieved by dropping gears there is no evidence that the TCM solder issue caused such a symptom and there is also no reason to think that it affected the braking system itself. I therefore do not think that it is possible that Ms Capic’s car decelerated on 3 February 2016 from 80 km/h to 20 km/h in 3-5 seconds as she initially affirmed in her affidavit.
13. I am fortified in that conclusion because it is Ms Capic’s own evidence that the vehicle lost power during the incident which shows that she was not trying to say that the vehicle suddenly decided to apply the brakes or to brake by unexpectedly shifting down gears. Put another way, I accept Ms Capic’s evidence that there was a power loss but I do not accept her initial evidence that this resulted in the rate of deceleration which she claimed.
14. There is therefore something in the Respondent’s submission that her evidence about this involved some exaggeration.
15. Ms Capic did not submit that her initial evidence could be explained by the fact that stressful physical events often result in distorted perceptions of time. On this view, having one’s car suddenly start slowing down for no reason on a freeway would be a stressful event and her perception that the car decelerated more rapidly than in fact it did could be explained by the subtle effects of human psychology. There is a question in relation to such a submission as to whether the distorted timing effect would have resulted in her perception of time speeding up (and the incident seeming shorter in her memory) or slowing down (and the incident seeming longer). Some literature in this area, and my own personal experience after a lifetime of minor misadventures, might suggest that it is the latter effect in which case one would expect that Ms Capic’s perception would have been that the vehicle decelerated over a longer period (and hence that it decelerated more slowly). Since neither party made a submission about this matter and since it involves some considerations of human psychology about which the Court has no evidence it would not be safe to venture into any further consideration of it, interesting though it may be: cf Hancock PA and Weaver JL, ‘On Time Distortions under Stress’ (2005) 6(2) *Theoretical Issues in Ergonomics Science* 193-211; Langer J, Wapner S and Werner H, ‘The Effect of Danger upon the Experience of Time' (1961) 74(1) *The American Journal of Psychology* 94-97. I have considered whether it might lie within a legitimate area of judicial notice within the meaning of s 144(1) of the *Evidence Act 1995* (Cth) but I do not think that the requirements of that provision can be engaged in this instance and I do not think that I should reason that my own experiences are universally shared.
16. I therefore accept the Respondent’s submission that Ms Capic’s initial evidence about the rapidity of the deceleration of her vehicle was exaggerated. In the scheme of human drama, it was not one of the great exaggerations but an exaggeration it nevertheless was.
17. The second example of exaggeration relied upon by the Respondent concerned a Facebook Messenger message she sent on 17 February 2016 to Ford’s Facebook Page. Relevantly it was as follows:

I have had issues with my Ford Focus 2012 since it was purchased. 3 years later, after numerous services and replacement of different parts regarding the transmission issue, I still continue to have the same issue but this time very serious and unsafe. It is a major failure and an extreme road safety hazard. It needs to be taken off the road for the safety of all people!!!

1. I do not think that Ms Capic’s car has ever been ‘an extreme road safety hazard’. As the Respondent pointed out she continued to use the car throughout the period between this message and the trial, including to transport her parents, niece and friends in it. I think that if Ms Capic really thought the vehicle represented an extreme road safety hazard (her words) then it is unlikely she would have driven it herself and even less likely that she would have driven her friends and relatives.
2. One may perhaps argue about whether the vehicle did pose a safety issue (I resolve that issue in these reasons at Section VIII) but I do not think that the word ‘extreme’ is, or ever has been, apposite. No doubt in the context of chat groups devoted to complaining about Ford vehicles participants can, from time to time, in the heady atmosphere of shared consumer anger get a little over excited. In such an environment a tendency for the participants to reach for their pitchforks is, perhaps, common. I tend to think that Ms Capic’s message can be placed in this category. Does this too show that she is perhaps prone to exaggeration? I think I must accept that to an extent she can be. I also think, however, the context in which the message occurred needs to be taken into account.
3. On the other hand, I reject a third example the Respondent proffered of Ms Capic’s tendencies towards exaggeration. It submitted that she had exaggerated the extent of the difficulties which manifested themselves within a few weeks of acquiring the vehicle. She had said in her affidavit of 7 June 2018 that she had applied the brakes and the vehicle had begun to shake and that the shaking was sufficient to move papers on the dashboard. The Respondent submitted that Ms Capic had done nothing about this problem other than to raise it at the next service which occurred approximately two and a half months after the incident. I do not think that her decision to wait until then shows that her evidence about this is exaggerated. Many people probably would wait until the next service if faced with such a problem.
4. Having regard to these matters I therefore conclude that Ms Capic is an essentially honest witness. However, she is capable like many people of some degree of exaggeration. I also think that her desire to present as a good and honest witness led her into a situation in relation to the finance lease where unfortunately the desire became an impediment to its own fulfilment. I therefore propose to approach her evidence with some care although not without also some sympathy. For completeness, I reject the submission that whatever defects might have appeared in her evidence under cross-examination were, to an extent, to be explained because the questions she had been asked were unclear. Evidence always looks less coherent on the printed page when it is stripped of its timing, body language and surrounding context. A quick perusal of the transcript of the oral closing submissions will make that point. I did not apprehend any difficulty out of the ordinary with the questions Ms Capic was asked.

### The Applicant’s other lay witnesses

1. The Applicant led evidence from 52 other group members about the difficulties they had had with their cars. She did not lead any evidence as to how these 52 witnesses had been selected from the owners of the 64,963 vehicles that have not had their claims settled.
2. The Applicant submitted that these witnesses were relevant because they provided ‘anecdotal confirmation, at a human level’ that Dr Greiner’s evidence that the vehicles were defective was correct. The Respondent submitted for the evidence of these witnesses to be of any use it would be necessary to show that the sample of 52 group members was in some way representative of the group as a whole. To the extent that the Applicant sought to suggest that the 52 witnesses threw light on what reasonable consumers might expect (which is relevant to the analysis required by s 54 of the ACL) there was likewise no evidence which could support the conclusion that these 52 consumers were relevantly representative.
3. The Applicant submitted that the evidence of the 52 witnesses as to their reactions to the difficulties exhibited by their vehicles was relevant. It was submitted that evidence of that kind had been received from class members in *Graham Barclay Oysters Pty Ltd v Ryan* [2000] FCA 1099; 102 FCR 307 at 445 per Lindgren J (with whom Lee J agreed at 330 [69]). I do not accept this submission. What Lindgren J said at 445 [533]-[534] was this:

The words ‘‘as it is reasonable to expect’’ suggests a question as to the identity of the person or persons, the reasonableness of whose expectation is in question and is to be determined by the court. Possible contenders are:

(1) the consumer or other person who suffers loss or damage;

(2) a reasonable consumer placed as that actual consumer or other person was;

(3) a reasonable bystander (in effect, the court).

In my opinion consistently with both the objective nature of the standard aimed for and the consumer protection purpose of the provision, it is the second or third category of person whose reasonable expectation is called into service by the statute, and in my opinion a reasonable bystander would seek to put himself or herself in the position of a reasonable consumer placed as the actual consumer or other person was. Accordingly, it is right to inquire into the reasonable expectations of a category (2) person.

1. This passage does not establish that the expectations of a selection of the consumers are relevant to the inquiry. Indeed, it seems explicit that Lindgren J was suggesting that that evidence be put to one side in undertaking the inquiry into what the expectations of a reasonable consumer in the position of the class member would be. I reject the submission.
2. More generally, I do not accept that this evidence can be of assistance when the method of selection has not been established. In *Unique International College Pty Ltd v Australian Competition and Consumer Commission* [2018] FCAFC 155; 266 FCR 631 the Full Court concluded that evidence as to the position of 6 consumers out of 3,600 was not sufficiently probative to be useful where the Commission had led no evidence as to how the 6 had been selected or as to how they were otherwise representative of the population of consumers. Although the context was different, the difference is not material. In effect, the Applicant’s submission that the material was relevant in an ‘anecdotal’ manner is the key point. The Court does not make findings of fact applicable to a class of persons based only on the anecdotal evidence of an unrepresentative number of them.
3. Since I cannot conceive that these witnesses will assist my determination of whether the risks alleged by the Applicant were inherent across the Affected Vehicles nor my assessment of the position of a reasonable consumer, I do not propose to spend any more time on their evidence.

## The Respondent’s lay witnesses

### Mr Karageorgiou

1. Between 2009 and 2014 Michael Karageorgiou was the Service Engineering Operations Manager (‘SEO Manager’) of Ford Australia and was responsible for the markets in Australia and New Zealand. He made an affidavit dated 1 October 2019 to which there were some minor objections. He was called by the Respondent on the 9th day of the trial, Thursday 25 June 2020 and gave evidence over two days. He was examined in chief at T509-516, cross-examined at T517-608 and re-examined at T609-614.
2. Mr Karageorgiou was first employed by the Respondent in 1998 and remains employed by it. Since 1998 he has held a number of roles within the Ford Group. Most recently he has been working in China in roles relating to the customer experience in the Asia-Pacific. Mr Karageorgiou was the first of three SEO Managers who worked for the Respondent during the period from 2011 to the present (which includes the period during which the Affected Vehicles were sold). He was succeeded by Mr Cruse in 2014 and Mr Cruse was succeeded by Mr Nethercote in 2018. All three were called by the Respondent to testify on its behalf.
3. Mr Karageorgiou holds a bachelor’s degree in aerospace engineering and another in business. He also holds a master’s degree in business administration. He gave evidence about his role as the SEO Manager during the period 2011 to July 2014 including a cross-over period in July 2014 when he handed the role over to Mr Cruse. He explained the service engineering operations of the Respondent and gave evidence about the nature of the DPS6 transmission including its handling characteristics. He explained that the DPS6 had been refined over time. In addition, he gave particular evidence about the steps the Respondent took to address the leaks from the input shaft seals which had become apparent during the period he held the SEO Manager position. He also explained the distinction he drew between the normal operating characteristics of the DPS6, on the one hand, and quality concerns with it, on the other.
4. He thought it was important to communicate to owners of vehicles equipped with a DPS6 what the normal operating characteristics of the transmission were. He gave specific evidence about information circulars which had been provided to the Respondent’s dealers relating to the performance of the DPS6 and he explained the training which was given to dealers about that. He explained Ford US’ worldwide monitoring systems for vehicle performance and the issuing of technical service bulletins (‘TSB’) (which were intended to inform the servicing activities of dealers) and field service actions (which more related to the taking of some proactive step by dealers).
5. The Applicant criticised Mr Karageorgiou’s evidence on a number of bases. These were:
6. That he gave his evidence to reflect the Respondent’s company line;
7. When challenged to deviate from the company line he gave responses such as ‘not specifically’, ‘not necessarily’ or ‘I can’t recall’ or would proffer a response which was beneficial to the Respondent but inconsistent with contemporaneous records or underlying documents; and
8. He had been heavily prepared.
9. To make good these bases the Applicant pointed to three examples. First, it was submitted that Mr Karageorgiou had tried to suggest that there may be some specific differences between the DPS6 in one car versus another before he ‘ultimately’ agreed that the general operation was the same. This, however, is not what the evidence shows. The transcript references given in the Applicant’s submissions are T539.43-47, T540.16-17 and T540.24-33. From these portions of the transcript it can be seen that Mr Karageorgiou did not ‘ultimately’ agree that the general operation was the same. It was in fact the first answer he proffered. The evidence referenced by the Applicant begins at T539.43:

The question I am asking is, in each of those nameplates, the DPS6 transmission, in terms of its hardware and componentry, was the same, wasn’t it?---Well, it was not the same, because there mated to different engines and they’re installed in different applications. So, technically, they are not the same. In essence, the principles and general operation is the same.

1. The next relevant part of the transcript is at T540.14-26:

All right. And – okay. All right. But in terms of the – subject to that difference, is there any difference in terms of the hardware and componentry in each of the DPS6 transmissions?---So every transmission has specific differences. The general operation is the same.

What are the specific differences, then, Mr Karageorgiou?---Well, your gear ratios are one. Your – the casing and how it mounts to the engine is another. You know, there could – and there’s – there could be other specific details that are very different to a particular – to a particular application.

All right. But in terms of the basic layout of the DPS transmission – and by that I mean two clutches, centre plate or drive plate in the middle, inner input shaft outer input shaft, and the like, they are all the same; correct?---Correct.

1. Pausing there, Mr Karageorgiou was accepting that the layout of the transmissions was the same. The cross-examination continues at T540.28-47:

And the whole idea was to have, in effect, a modular unit of the same size that could be used in various applications; that’s correct, isn’t it?---That – that is a principle that’s used in the design; correct.

And the clutch assembly in each of the DPS6 transmissions, in terms of its architecture, is the same; correct?---Generally. Correct. Yes.

All right. Why do you say “generally”? Why not just “yes”?---Because every clutch– it could be – you know, the – the specifics of the clutch assembly will be designed to suit the application for which it is used. The principles of operation are the same, but the specifics of the clutch could be different from one application to another.

But do you mean to convey by that there’s a different sized clutch plate?---Well, could be that it has different sized clutch plates. It could be that the – you know, torsional springs inside the clutch could be different, because it has a different engine that it mates to.

But when you say could be, do you actually know, Mr Karageorgiou?---I – I do not recollect the specific differences of all the different clutches that are used in the DPS6 applications across the Ford model range, no.

1. Mr Karageorgiou accepted that the general operation of the DPS6 was the same in each vehicle but he thought, although he could not be sure, that different engine sizes might affect the size of the clutch plates and the nature of the torsional springs. He could not recall what those differences were but he thought that there were some. The cross-examiner did not suggest to him that he was wrong about this.
2. What one does not see in this evidence is the notion that Mr Karageorgiou was ultimately driven to accept that the layout was the same. That submission can only succeed by incorrectly inverting the order in which Mr Karageorgiou gave his evidence. Once the correct order is applied the submission collapses. I reject it.
3. The second example of Mr Karageorgiou’s alleged tendency ‘to pedal the company line’ was as follows and related to the issue of leaking from the input shaft seals. Mr Karageorgiou had agreed that the new seals differed from the old seals and that manufacturing new vehicles with the new seals would not result in the new seals being put in vehicles which were already on the road. He also accepted that in the case of those vehicles there continued to be a risk of a seal leak. I accept the evidence of Mr Karageorgiou shows each of those matters. Next it was submitted that ‘when it was put to him that there was a risk of failure in all vehicles with the old seals, he denied it, and struggled to explain why it would not be so’.
4. No transcript reference for this last proposition is given in the Applicant’s submissions. This is probably because Mr Karageorgiou gave no such evidence. To the contrary, he accepted at T594.19-38 that the earlier vehicles with the old seals carried with them a risk of failure:

But – and to properly deal with the problem of the seals – would be to bring all those vehicles that are either on the road or on the lot, bring them in and change the seals; do you agree with that?---If every single car was going to fail, then, yes, you would do that.

But you’ve already accepted that these seals carried with them a risk of failure, correct?---There is a – yes, there is a risk associated with that, and my understanding was it was a manufacturing quality issue that caused it.

But there was also a problem with the properties of the seal, correct?---I’m not aware of issues with the properties of the seal.

All right. But the way to eliminate the risk, Mr Karageorgiou, would be to bring in all the vehicles that had been produced prior to the dates that you put in 27 and to change the seals, correct?---Well, if – again, if, you know, the majority of all the cars were going to fail, then, you know, that’s what you would do. However, the experience that we had was this was not, you know – not every single car would fail and some cars, you know, that had potentially been impacted during manufacturing, they may fail, but the car was provided with a warranty and we can support the customers in that respect.

1. The submission that Mr Karageorgiou denied that there was a risk of failure in relation to the vehicles with the old seals cannot be maintained in the face of this evidence which is to the contrary. I reject the allied submission that when confronted with that proposition that he ‘struggled to explain’ why the vehicles with the old seals did not have that risk. He did not struggle because he did not say that. It may be that what the Applicant was in fact seeking to submit was that Mr Karageorgiou denied that due to the risk of leak from the old seals, every single individual vehicle fitted with that seal was at risk of failure. That would be consistent with this question which was asked of Mr Karageorgiou at T594.40-44 immediately following the above exchange:

Vehicles that had potentially been impacted during manufacturing, Mr Karageorgiou, would be all of those vehicles that were manufactured prior to the dates that you put in paragraph 27; that’s correct, isn’t it?---Well, I – no, because it could depend on, you know, what caused it, as to how many cars could be affected.

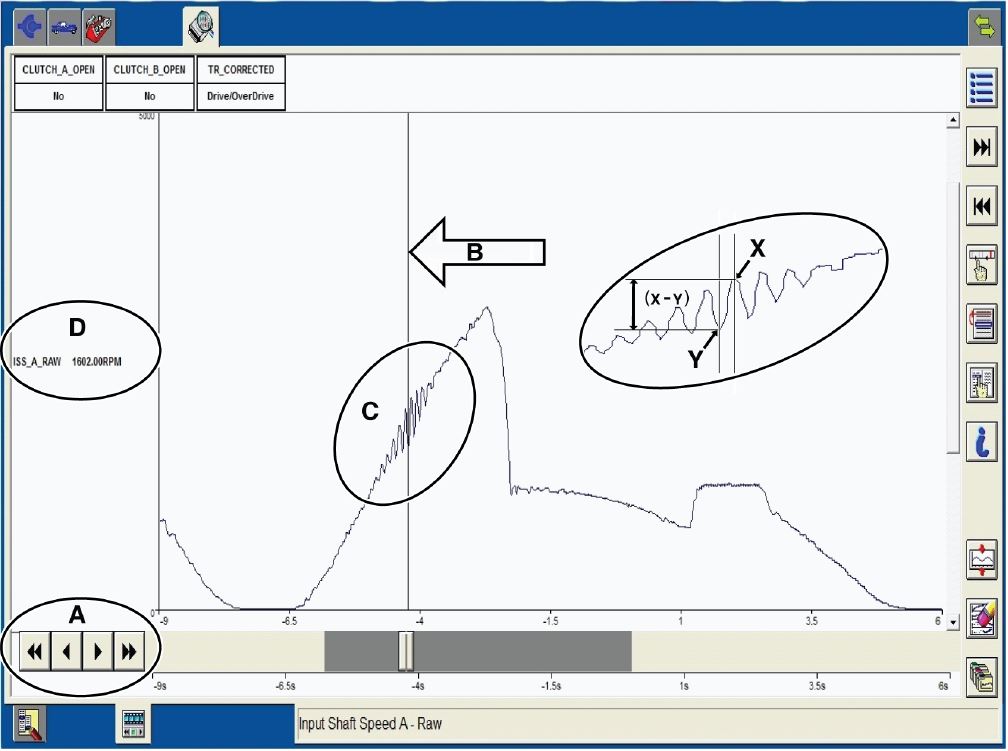
1. I remain unpersuaded by this attack on Mr Karageorgiou’s credit even if that is what the submission was intended to be.
2. The Applicant’s final point about this was that Mr Karageorgiou was ultimately forced to concede that he was speculating. The actual part of the transcript is T595.1-10:

And there was obviously a reason for having those new properties in the new seals; do you agree with that?---There would be a reason, that’s correct.

All right. And so there would be a risk, would there not, of failure in all of the vehicles with all of the old seals, correct?---If those seals suffered from that manufacturing quality issue, that’s correct. The new properties could have been there to make that manufacturing process more robust.

You are you are just speculate in that last answer, aren’t you, Mr Karageorgiou?---I am speculating.

1. I agree that Mr Karageorgiou conceded that he was, in this case, speculating. However, I do not regard this evidence as impacting negatively on his credit. In particular, I do not accept that his evidence was generally speculative.
2. The third example proffered is more substantial. There is no doubt that on or around 8 October 2013 Mr Karageorgiou received TSB14/13. It was expressly directed to the issue of intermittent transmission clutch shudder in the DPS6. Mr Karageorgiou’s evidence was that at that time, as he understood it, the clutch shudder issue related to a leak of transmission fluid into the bell housing. The point of the cross-examination was to attempt to show that TSB14/13 also disclosed that there was a shudder problem which was not associated with the leak of transmission fluid into the bell housing. To cut ahead somewhat, subsequent to TSB14/13 it was determined by Ford that the friction material the clutch plate was lined with was itself a source of clutch shudder and that discovery led to the replacement of those clutches which presented with difficulties with clutches lined with a new friction material. I deal with this issue in much more detail below at Section VII. The point for present purposes is that TSB14/13 does not refer to this problem.
3. TSB14/13 contains a procedure to be carried out when a car with clutch shudder presented for repair or servicing. Very shortly it instructed the mechanic to conduct a test of the fluctuations in the rotation rate of the inner transmission input shaft during acceleration from a standing start. This test was known as the 250 rpm test which meant that it was designed to ascertain whether the fluctuations in the transmission input shaft’s rate of revolution exceeded 250 rpm. A data logger tool would record the clutch shudder event as the vehicle was accelerated from rest at 18-30% of the full throttle power. The tool would then produce a graphical representation of the shudder, an example of which is given below:



1. The horizontal axis of this graph measures time elapsed, notated in 2.5 second intervals. The vertical axis records the rate of rotation of the inner input shaft in rpm. The circled section ‘C’, which is reproduced to its right in expanded form, is the clutch slip phase during take-off where the rotation rate of the input shaft is increasing to eventually match that of the drive plate. However during this phase of slip the rotation rate of the input shaft oscillates relatively rapidly. The 250 rpm test looks to these oscillations and measures whether the largest height difference between any adjacent peak (‘X’ in the diagram) and trough (‘Y’ in the diagram) is greater than 250 rpm.
2. The mechanic was instructed to apply the test and to examine the bell housing for signs of any leaking transmission fluid. The four possible results and the step to be taken in each case were:

|  |  |
| --- | --- |
| **Test Outcome** | **Action to be taken** |
| <  250 rpm without visible transmission fluid | Vehicle OK – no further action needed |
| > 250 rpm without visible transmission fluid | Replace dual clutch assembly |
| < 350 rpm with visible transmission fluid | Clean dual clutch assembly |
| > 350 rpm with visible transmission fluid | Replace dual clutch assembly |

1. The cross-examiner’s point was that the second of these options showed that there was an issue of clutch shudder which was not connected with the leakage of transmission fluid. The cross-examiner sought to have Mr Karageorgiou accept that there was another issue. The relevant evidence was as follows at T592.19-593.19:

I want to suggest to you there is no other reading of 13(c) of this document that I have just taken you to other than there was an issue with the excessive shudder in the DPS6 transmission at this time that was unrelated to the transmission oil leak seal issue; that is correct, isn’t it?---That could be interpreted, correct, yes.

You’re agreeing with the proposition I just put to you, correct?---The proposition that you are putting forward, I was not aware of an issue separate to the oil leak seal at that time, but based on this TSB, there was a clause there that would capture and address any other issues associated with the clutch that may have not been associated with the seal leak.

But how does the mere replacement of the clutch assembly, with exactly the same componentry that was in there before, fix the problem?

HIS HONOUR: Maybe the clutch was stuffed, Mr Pike.

MR PIKE: Can I ask the witness the question, your Honour?

HIS HONOUR: Yes.

MR PIKE: How does - - -?---That – that’s – so - - -

All right. I will ask another question. You are aware, aren’t you, Mr Karageorgiou, that subsequently Ford diagnosed a problem with the friction material on these clutch faces?---I have subsequently become aware that there was a change in the material on the clutch assembly, yes.

Because it was found that that B80/80 material that was used at this time on the clutch plates was causing excessive shudder, correct?---I – I’m not familiar with what the cause of that was because it happened after my time.

I want to suggest to you that the problem that was being – sorry, I will go back to it. Just pardon me one moment, your Honour.

All right. Just dealing back on 13(c) of this document, Mr Karageorgiou, did you know as at October 2013 what the cause was of the excessive shudder that was unrelated to the transmission seal issue?---I – at that point I don’t recollect that we had a separate issue that was not associated with the oil seal.

But you accept, don’t you, on reading 13(c), that there was such a separate issue?---It’s also possible that there was something, as I said earlier, the clutch may not meet our specification. There could be an issue with the clutch that required – that caused it to have shudder. There’s lots of components within the clutch assembly, and if one of those components failed, then that could cause shudder. For example, you could have a torsional spring failure, which could cause that type of situation. So (c) was there to address if the clutch had a problem separately.

1. There are two interpretations of the procedure described in TSB14/13 at play. One is that where the shudder test exceeded 250 rpm but there was no sign of leaking transmission fluid that this signified a known problem the solution to which was to replace the clutch assembly. The other is that this demonstrated that there was an unknown problem with the transmission and that the solution was to replace the clutch assembly. The correct selection between these two choices turns upon the terms of TSB14/13 itself. Three parts are important for this exercise. The first is the heading:

Subject: Intermittent Transmission Clutch Shudder DPS6 Powershift Transmission And/Or Transmission Fluid Leak

1. This is capable of supporting the idea that the bulletin was dealing with two distinct but sometimes overlapping problems: intermittent clutch shudder and transmission fluid leak. The contents of the bulletin are then described under Section 1 which is headed ‘Description’:

Some WT/WZ Fiesta and LW/LW11 Focus vehicles equipped with a DPS6 ‘Powershift’ transmission may exhibit an intermittent transmission clutch shudder on light acceleration from rest. Some vehicles may or may not exhibit transmission fluid leaking from the clutch housing. Refer to Page 3 for TSB applicability.

In the event of a customer complaint for these conditions, please follow the Service Procedure outlined below.

1. This too suggests that there were two issues involved and it was those issues which the bulletin aimed to solve. Leaving out quite a lot of the technical detail in the bulletin and moving instead to the central instruction at §13 what it said was this:

Inspect the dual clutch assembly for signs of fluid contamination.

a. If the dual clutch assembly is contaminated with transmission fluid and the RPM difference calculated in Step 8 is below 350 RPM the dual clutch assembly may be cleaned. Proceed to Step 14.

b. If the dual clutch assembly is contaminated with transmission fluid and the RPM difference calculated in Step 8 is 350 RPM or above the dual clutch assembly must be replaced. Proceed to step 15.

c. If the dual clutch assembly is not contaminated with any type of fluids and the RPM difference calculated in Step 8 is 250 RPM or above the dual clutch assembly must be replaced. Proceed to Step 15.

1. One can test what §13(c) shows by asking oneself what would happen to a customer whose vehicle presented with a clutch shudder, returned an rpm fluctuation > 250 but which did not show signs of leaking transmission fluid. There are two possibilities. The vehicle could be returned to the customer with nothing done to it. In that case, presumably the intermittent clutch shudder would continue. The second possibility is that one might try and fix the problem (whatever it was) by replacing the entire clutch assembly.
2. It is possible that the persons who wrote the bulletin were already aware that there was another difficulty with the clutch lining material and that the ‘dry’ clutch shudder, ie one not caused by fluid having leaked into the bell housing, might result from it. It is also possible that the authors of the bulletin were aware that dry clutch shudder might be caused by a range of problems, perhaps some of them overlapping. I discuss this later on but, for example, excess shudder might result from a constellation of factors such as a single mass flywheel, the driving of the vehicle in an assertive fashion, the absence of a cooling system in the DPS6 and the material selected to line the clutch plate. Another possibility is that for entirely unknown reasons this particular customer’s car had a damaged clutch assembly.
3. The solution in §13(c) of replacing the clutch assembly seems to me to be the last resort solution for any sufficiently noticeable shudder problem which had not been solved by cleaning the clutch assembly of transmission fluid.
4. The point for present purposes is that whilst the person who wrote the bulletin may or may not have had one or more other possible problems in mind in directing the execution of §13(c), I do not think that the bulletin makes explicit what those problems (if they were then perceived at Ford US) were. To the extent the cross-examination was directed at seeking to win from Mr Karageorgiou a concession that he had been aware of some other problem, I do not think that it succeeded. The bulletin did not say there was another known problem and is consistent with a range of possibilities in that regard. Mr Karageorgiou himself made this point at T593.13-19 extracted above at [128] detailing that the shudder could have been caused by the failure of any of the components in the clutch other than the input shaft seal.
5. This point brings one back, of course, to the cross-examination of Mr Karageorgiou. Mr Karageorgiou denied that he was aware that the bulletin disclosed the existence of a clutch shudder problem in addition to that caused by leaking transmission fluid. At T585.6-8 he said this:

So what I want to suggest to you is that it was apparent to you, on reading this TSB, if not earlier, that it wasn’t all vehicles that exhibited the shudder that had a transmission fluid leak; that’s correct, isn’t it?---I – I disagree.

1. And at T585.26-29 he said this:

All right. And so your evidence is that at this time that was what you thought was the only problem; is that correct?---That’s correct.

All right. Leading to shudder; correct?---That – that’s correct. That was the – yes.

1. The Applicant submitted that Mr Karageorgiou had eventually accepted that, despite his denial of being aware of a dry clutch shudder problem after becoming aware of the bulletin, this was in fact the only reading of the bulletin which was open. The Applicant cited T592.19-22 as evidence of this confession. However, that is not what that extract of the transcript bears out nor is it altogether complete. The complete reference is T592.19-28 which is extracted above at [128].
2. I read this evidence as being consistent with the interpretation of the bulletin I have explained above. I do not think that, having regard to the second answer given in the transcript, Mr Karageorgiou accepted that the bulletin showed there was another issue.
3. So far as concerns the Applicant’s submissions concerning Mr Karageorgiou’s response to some questions as ‘not specifically’, ‘not necessarily’ or ‘I can’t recall’, no specific references were given in the Applicant’s submissions. These expressions, or expressions near to them, appear many, many times in the transcript and, without specific reference, I do not propose to examine them. I will say, however, that it was not my impression of Mr Karageorgiou that he was seeking to evade answering the questions he was asked. So far as the submission that Mr Karageorgiou had been heavily prepared is concerned, I was not taken to any evidence to that effect. Even if I had been and it was shown that Mr Karageorgiou had spent a lot of time preparing before entering the witness box, it would not affect my assessment of his credibility. I did not have the impression that he was delivering set speeches. Rather my impression was that he was endeavouring to answer the questions as best he could.
4. In those circumstances, I reject the Applicant’s attack on Mr Karageorgiou’s credibility. He was a reliable witness.

### Mr Cruse

1. Mark Cruse is presently employed by the Respondent as the Customer Service Engineering Manager in its International Markets Group. He has worked for the Respondent in a number of roles since 2002 but, relevantly for this trial, was employed as its Service Engineering Manager from August 2014 to January 2018, replacing Mr Karageorgiou. His duties at that time included dealer technical support for field service actions and managing campaigns, recalls, technical hotlines, field service engineers, training, tools, diagnostics and publications. He is also a qualified motor mechanic and is qualified in, and has taught, automotive engineering.
2. Mr Cruse made an affidavit dated 1 October 2019 which was read at trial with some minor objections limiting the use of certain sentences. He was called as one of the Respondent’s witnesses on the 11th and 12th days of the trial, Monday 29 June 2020 and Tuesday 30 June 2020. He was examined in chief at T631, cross-examined from T632-751 and re-examined from T752-755.
3. He gave evidence about the nature of the DPS6 transmission, the position of the Respondent as part of Ford US’ Asia-Pacific region, the process of updating the DPS6 transmission based on field experience and its normal operating characteristics. He also gave evidence about difficulties with the DPS6 which were known to the Respondent by 2016: wet clutch shudder, the TCM solder issue and dry clutch shudder. He explained Ford US’ global quality monitoring process and the manner in which the Respondent was notified of quality concerns with Ford vehicles and the processes by which it passed that kind of information on to its dealers. He gave specific evidence about what he knew about the DPS6 during his tenure as the Service Engineering Manager commencing with the handover period with Mr Karageorgiou in July 2014. He explained the various technical service bulletins which had been issued during that time, the warranty extensions that had been granted and the additional training which had been given to dealers. He gave specific evidence about a change in the clutch friction material which became available in Australia from May 2016. Mr Cruse said that by the end of 2016 he thought that the three quality concerns with the DPS6 referred to above had been resolved.
4. I deal with the specific issues raised by Mr Cruse’s evidence later in these reasons. However, it is convenient to deal at this juncture with the Applicant’s global criticisms of his evidence. The Applicant submitted that Mr Cruse gave his evidence about the Respondent’s knowledge of the Component Deficiencies at a high level of generality. She also submitted that his evidence reflected the Respondent’s ‘company line’. It was said that he had resorted, under cross-examination, to responses such as ‘not specifically’, ‘not necessarily’ and ‘I can’t recall’.
5. During his cross-examination over two days, Mr Cruse did not answer any question ‘not specifically’.
6. There were 12 occasions on which he used words to a similar effect. They are at T635.9, T645.36, T670.43, T675.10, T682.15, T683.39, T685.6, T696.39, T717.10, T718.12, T720.24 and T725.31. I have examined each of those and I do not consider that they reflect adversely on his credit when read in context.
7. He had answered two questions ‘not necessarily’. The first was at T695.45-696.3:

And would also lead to decreased performance of the transmission?---Can you explain what you mean by performance in this case, Mr Pike.

Well, the fuel efficiency of it, for one?---Well, not necessarily, because it would get into its top gear on the highway and still operate locked up. So I don’t know that it would hurt the fuel efficiency necessarily, Mr Pike.

1. I do not consider that this reflects adversely of Mr Cruse’s credit. The second was at T725.4-16:

However you wish, Mr Cruse?---Yes. 1, I was aware of; that’s the assembly plant damage on installation. And 5. I had some knowledge that the surface finish was contributing. The others I was not aware of.

All right. So 5 is a design issue?---Not necessarily.

Well, it says:

*Design not to Ford guidelines.*

So I want to suggest to you it’s a design issue?---Okay. As suggested there, I knew there was surface finish concerns, which could have, in my mind, been machining. I had not seen this, Mr Pike.

1. Although Mr Cruse accepted the cross-examiner’s position I do not think this supports the broader contention that he was resistant or equivocal in his answers. Mr Cruse used the answer ‘I can’t recall’ or ‘I don’t recall’ on 23 occasions during his cross-examination. These are at T635.9, T641.32, T642.18, T646.25, T646.30, T646.35, T646.41, T647.2, T647.45, T670.32, T670.44, T678.21, T679.31, T679.42, T696.39, T708.29, T708.40, T717.1, T717.10, T718.12, T733.26, T740.40 and T745.24. I have examined each of these. Each appears to be an example of Mr Cruse legitimately saying that he could not recall. Given that most of this evidence related to events which occurred 8 years ago this is unsurprising. There was no challenge to him on any of these occasions to the effect that he could recall.
2. As to the ‘company line’ submission, that was not my apprehension of his evidence if by that it is meant that he gave evidence contrary to the fact so as to further the position of the Respondent. No doubt, he was sympathetic to the Respondent but it was not my impression that he was willing to give incorrect evidence to further its position.
3. It was also said that his responses were often inconsistent with objective contemporaneous or underlying documents. These documents were not identified and the submission, in that circumstance, is not able to be assessed in that general form.
4. The Applicant also submitted that Mr Cruse had been heavily prepared for his cross-examination. Under cross-examination, he said that he had spent ‘weeks’ preparing for it: T646.44, T650.22 and T680.15. I accept that Mr Cruse had prepared heavily for the cross-examination. That is not a surprising proposition where the Applicant is suing the Respondent for hundreds of millions of dollars and Mr Cruse is an important one of the Respondent’s witnesses who is still employed by it. I do not think it reflects adversely on his credit. No doubt it means that he had had a thorough opportunity to think through the matters in relation to which he was challenged but I did not obtain the impression he was reciting his evidence programmatically or delivering speeches.
5. The Applicant submitted that Mr Cruse’s evidence should be approached with care because it was apparent that he was often unwilling to concede matters until confronted with a document. Three examples were given.
6. The first example was that he had denied under cross-examination that he was aware in mid-2010 that Volkswagen produced a car which contained (as the Affected Vehicles do) a dry dual clutch transmission and only accepted that he must have been aware of it by at least April 2012 when he was taken to a document. The evidence does not bear this out. The relevant question appeared at T635.18-25:

All right. Now, you’re aware – sorry, you were aware in sort of mid-2010 that the DPS6 was Ford’s first dry dual clutch technology transmission?---Yes.

Were you aware *at the time* that VW and its associated brands had a dry dual clutch transmission in service?---No, I was not.

(Emphasis added)

1. So what Mr Cruse was asked was whether he was aware in mid-2010 (ie ‘at the time’) that Volkswagen had a dry dual clutch transmission. He was then asked at T648.34-40 about an email he had sent on 26 April 2012 whose subject heading was ‘Re: “TGW” for VW DSG in China/DPS6 Market Intro’:

And if you have a look again at the subject there, Mr Cruse, do you see the subject?---Yes.

TGW or VWDSG in China/DGS6 market intro. Do you see that?---Yes, I do.

So do you accept by this time, so April 2012, you were aware of a VW dry dual clutch transmission?---Based on the heading, yes, aware of the existence, yes.

1. I see no contradiction between Mr Cruse’s initial evidence that he was not aware of the Volkswagen dry dual clutch in mid-2010 and his acceptance, based on his email, that he was aware of it by April 2012. The Applicant’s submission about this suggested that he had initially denied being aware of it in 2010 but this had changed when he was confronted with the email. But his evidence about that never changed. It was *not* suggested to him that he was aware in mid-2010 of the Volkswagen dry dual clutch transmission. There is no basis in the evidence which supports the contention that Mr Cruse had given evidence about what he knew in mid-2010 and then recanted from it when confronted with the email. I reject the submission that the first example reflects poorly on Mr Cruse’s credit.
2. The second example concerned an internal Ford US document dated 8 January 2012 and entitled ‘DPS6 Lessons Learned Paper – Summary of Key Issues for the DPS6 Transmission Project’. It is an engineering document concerned with various issues which had arisen in relation to the DPS6 transmission by 8 January 2012. The cross-examination of Mr Cruse sought to have him accept that he was aware of this document by April 2012. This was done by taking him through an email chain in April 2012 in which Mr Cruse had referred to the Lessons Learned document. I interpolate that at this point in the cross-examination Mr Cruse had not been shown the Lessons Learned document. Even so, he conceded in the face of the email chain that he was aware of it but only as a document relating to training at T645.16-24:

MR PIKE: All right. But I want to suggest to you you were aware at this time of an actual document in relation to the DPS6 transmission that was a lessons learned document?---From a training perspective, I will say yes. For anything else, I will say no.

All right. But it’s – I’m talking about an actual document actually headed Lessons Learned. You were aware of it, weren’t you?---I’m not aware, based on the context. If you’re saying training, I expect there’s something heading Lessons Learned for training. Anything else, I’m – I’m not aware of at this time.

1. He was then shown the Lessons Learned document at T646.9 and asked about whether he could deny knowing of the document in April 2012:

All right. You’re not in a position to deny that you saw it prior to April 2012; correct?---Please continue. I will try to see if I can remember something. Please continue. Again. Again. Again. Again. Once more, please. Again. Once more. Again. Mr Pike, I – I don’t recall seeing that at that time. I just simply don’t recall it.

All right. But, again, you’re not able to deny that you had seen it prior to April 2012?---I can’t deny, no.

All right?---I can’t recall seeing it either.

Have you seen it – are you meaning to convey, by the answer that you’ve just given, that you have seen it since April 2012?---I’ve seen it in recent weeks, as supplied by Allens, for review.

1. The multiple references to ‘again’ are Mr Cruse directing the document operator to scroll through the document and may be disregarded. What I get from this exchange is that Mr Cruse probably was aware of the Lessons Learned document in April 2012 but had no actual recollection of the matter.
2. In the Applicant’s submissions it was then said that Mr Cruse *ultimately* accepted that he had been aware of the Lesson Learned document in April 2012 and this was shown by exchanges which happened at T647 and T649. This submission does not go very far, however. Mr Cruse had, in fact, already conceded that he must have been aware of the document because of the email chain at T645 extracted above but he had added the rider that he would have been aware of it only from a training perspective. I do not think that the transcript at T647.42-45 and T649.27-28 cited by the Applicant supports the contention that he *ultimately* accepted that he had been aware of it in April 2012 for three reasons. *First*, the word *ultimately* is unsound when he had already accepted that he was aware of it. *Secondly*, there might nevertheless be second life for the contention were it to be shown that Mr Cruse had abandoned his qualification that he had been aware of the document only from a training perspective but T647.42-45 simply does not establish this:

And don’t you accept, therefore, that you must have been aware, as at April 2012, of the first document that I just showed to you, being the USA lessons learned document?---That’s what’s being referred to here as a USA lessons learned publication. Other than that, I don’t recall the document, Mr Pike.

1. *Thirdly*, contrary to the Applicant’s submission at [73], T649.27-28 does not establish that Mr Cruse ‘ultimately conceded he had been aware of it in April 2012’. What it says is this:

And so would you accept this document that is on screen is likely to be the attachment that is referred to in your email?---Yes.

1. However, the document on the screen was an Excel spreadsheet which had been attached to an email sent by Mr Cruse: T649.17. It was not the Lessons Learned document. Consequently, this evidence does not support the contention.
2. In her written submissions in reply the Applicant sought to buttress this case by reference to the answer given by Mr Cruse at T641.14-16:

MR PIKE: So you’re aware, aren’t you, Mr Cruse, of something called lessons learned documents in relation to the DPS6 transmission?---I’m, at this stage, not yet sure of what you’re referring to, Mr Pike, no.

1. This was the first question Mr Cruse was asked in this exchange. This is not evidence that Mr Cruse was unaware of the document; it is evidence that he did not know what the cross-examiner was talking about. I have considered whether the point the Applicant was trying to make here was that Mr Cruse perhaps was giving evidence about two different documents. One of these was generated by his office and was concerned with lessons learned from a training perspective and the other was the Ford US Lessons Learned document. Combing the transcript one can perhaps cobble together such a proposition (see eg, T645.33-46) but I do not really think that was put squarely. In any event, I do not think it matters. Whatever the Applicant’s submission about this was, I simply do not think that Mr Cruse was really seeking to be evasive about it.
2. I do not accept therefore the Applicant’s submission that Mr Cruse gave evidence about when he knew of the Lessons Learned document from which he ultimately resiled. His substantive evidence at the start of this section of cross-examination (leaving aside the first answer to which I have referred) was that he was aware of the document from a training perspective. I do not apprehend his evidence was any different by the end of this phase of his cross-examination. I do not accept therefore the Applicant’s implicit submission at [73] that he had given inaccurate evidence at the outset of this topic from which he had then, confronted with documentation, resiled. That is not what happened.
3. The third example concerned input shaft seal leaks. The Applicant’s point was that Mr Cruse had ‘initially’ refused to concede that he had been aware in 2014 that the seal leak was a design issue but that he had ‘ultimately’ conceded this ‘because he had known that the replacement seals were more robust and involved a “change to the seal”’ at T685.1-9.
4. The Applicant’s submissions did not identify where Mr Cruse had initially refused to concede that he had been aware in 2014 that the seal leak was a design issue. At T650.27-34 Mr Cruse agreed that he had been aware in 2013/2014 that there was an issue with the input shaft seals and oil leaking through them. At T650.37 he said that he had not been aware in 2013/2014 that the input shaft seal leak issue was a design issue.
5. The evidence that Mr Cruse resiled from this was at T684.40-685.9:

All right. And we’re dealing here with August 2014; correct?---Yes.

And the – so do you mean to convey by those answers that you understood then that part of the work being done in relation to the seals was to make them more robust; correct?---Yes. And – and bear in mind I walked into the role and this work had been done. So we had a TSB, we had seals that were now brown instead of black, and – and we had our instruction out to the dealer body when I walk in to that role. Correct.

But just to be clear, you understood that the brown seals were more robust than the black seals; correct?---Yes. Yes. Correct.

And because they were made with a different material, which obviously had different properties; correct?---I wasn’t aware of the materials change. I wasn’t aware of the specifics of the robustness action.

You were at least aware, weren’t you, that they were more robust because of a changed design?---A change to the seal, yes. Yes.

1. Whether one regards Mr Cruse as having recanted from his earlier evidence at T650.37 that he was not aware that the input shaft seal leak issue was a design issue depends upon whether one reads this evidence as demonstrating an acceptance on his part that the switch from black seals to more robust brown seals was a design change. I do not read his final answer as evidencing that. I read his final answer as him accepting that the change to the seal had resulted in a more robust seal. I do not read it as Mr Cruse accepting that the change to the seals was a design change. I read the answer as accepting that the new seals were more robust (‘yes’) but because of a change in the seal (‘a change to the seal’) rather than a ‘changed design’. The cross-examiner’s position was that a change in the seal material meant that the issue with the old seals must therefore have been a design issue. I do not think this was Mr Cruse’s position.
2. Consequently, I do not accept that Mr Cruse resiled from his earlier evidence and I do not accept that this evidence detracts from his credit.
3. The Applicant then finally submitted that Mr Cruse seemed to have prepared answers on topics of interest. There were two steps to this argument:
4. He had given long non-responsive answers to questions relating to the topics of safety or the TCM at T693.22-33, T693.38-41; and
5. When asked a simple question about how he defined a safety issue he had said at T703.16-17 ‘Do you want to talk about TCMs, Mr Pike, first?’
6. I do not think the answers in (a) were not responsive and whilst I would accept that the first answer was long, the second was not. The first part of the series of questions and answers leading up to and including T693.22-33 is as follows:

All right. But you know people in the real world sometimes don’t always react to even months and months of warning in relation to lights going on; that’s correct, isn’t it?---Yes. We would expect that they should though, Mr Pike.

But, for example, if you’ve got a teenage son that just keeps driving a car until maybe his father gets in the car and sees the warning light has been on for a number of months. That’s a real world situation, isn’t it, Mr Cruse?---Yes, I think both you and I experience it, by that look on your face, Mr Pike.

I’m living it every day. But that’s all right. But it’s a real world situation, isn’t it?---Yes. People do ignore things, but – but let’s walk through this one so we’re all clear. An ATIC91 chip will take years to initially propagate. So this car could be three or four-year old, maybe six-year old. And then when it does begin, it will indicate to the driver through drivability issues. There will be this jerkiness that we’re talking about. And then that will go for months. That will go for three or four months of intermittent every now and again it’s doing this jerk to me. And that’s what the customer would complain of. Ultimately, if ignored, that customer then will have trouble getting out of park. There will be lights on the dash and the vehicle would be able to roll for many, many metres. If it was un – non-powered through the transmission, in something in the order of 500 metres, it would roll for and probably near a minute. And in that time all steering and braking would be still functional, Mr Pike.

1. The cross-examiner was positing the example of a wayward teenage son who was likely to ignore the warning light on the dashboard. The witness was saying that both he and the cross-examiner appeared, from the look on the cross-examiner’s face, to be suffering from the same kind of teenage son. The substantive answer he then gave was to the effect that even with such a driver the nature of the problem was such that it would eventually mean that the car could not be driven. I do not think this was non-responsive. It may have been the result of some pre-examination thinking by Mr Cruse – I cannot say – but even if it was, it does not detract from the responsiveness of the answer.
2. The second part was this (at T693.35-41):

All right. But if you’re, for example, going across an intersection at the time of immediate failure, you wouldn’t be able to put any power on to enable to you get out of the problem; correct?---Yes. Similarly, you may not have been timetable power into the problem, depending on your chances on the day. You may not have moved off, Mr Pike. One of the more severe failure modes here is that it won’t move away from a stationary position. It won’t go. So you may not have been moved into problem in the first place.

1. This does not appear to be long or unresponsive. Dealing with (b), the full exchange is at T703.10-25:

48. You say there that:

*None of the quality issues described above have ever posed a safety issue.*

Do you see that?---Yes.

How do you define a safety issue in that context, sir?---Can we break them down? Do you want to talk about TCMs, Mr Pike, first?

I just want to get an understanding first, if I could, Mr Cruse, about what you mean by “safety issue”, being the term you have used in your affidavit?---Okay. So a safety issue to me is one that is catastrophic. One that comes with no warning. One that renders the vehicle uncontrollable. Maybe a good example would be a steering arm that falls off the vehicle or a steering rack and I have no control. A brake system that catastrophically fails or maybe a safety system like an airbag and Takata is another good example.

1. When this evidence was given, I did have the impression that Mr Cruse had something to say about the TCM issue and, in the context, I am prepared to accept that he may have been attempting to give a prepared answer to this question. However, at least at this juncture the cross-examiner did not permit him to deliver whatever he was going to say about the TCM issue.
2. I therefore reject the Applicant’s attack on Mr Cruse’s credibility except the last one. To accept that is, however, only to accept that Mr Cruse had evidently thought about the TCM issue from a safety perspective and had tried unsuccessfully to give those views voice at that juncture in the cross-examination. I do not accept the implicit, broader, proposition at [75] of the Applicant’s submissions that Mr Cruse’s evidence should somehow be discounted because much of it had been pre-prepared. That was not shown even allowing for the answer at T703.16-17.
3. I conclude that Mr Cruse was a reliable witness and I do not think that I should be circumspect in the use to which his evidence is put.

### Mr Nethercote

1. Timothy Nethercote is the current Service Engineering Manager of the Respondent. He succeeded Mr Cruse in that role on 1 January 2018. He made an affidavit dated 26 September 2019 to which there were objections which were ruled upon. He was called by the Respondent on the 12th day of the trial, Tuesday 30 June 2020. He was examined in chief at T773-779 and cross-examined at T779-796.
2. Mr Nethercote holds a bachelor’s degree in mechanical engineering and an MBA. He began working for Prodrive as a test engineer and manager for Ford products in 2002 and has been employed by the Respondent since 2008. In this time he has performed a number of roles including his current one as the Service Engineering Manager. His evidence was largely to similar effect to that of Mr Karageorgiou and Mr Cruse. There were some differences. The adoption of new input shaft seals, the change in the clutch lining material and the resolution of the TCM solder issue had been completed on Mr Cruse’s watch. The issue which Mr Nethercote was principally concerned with was the resolution of a concern that dealers were over-diagnosing clutch shudder problems in the DPS6 which was leading to excessive rates of clutch replacement. Mr Nethercote led a process which he said tamped down the number of clutch replacements.
3. He also gave evidence about the extension of Ford’s warranty programs. These were (principally):

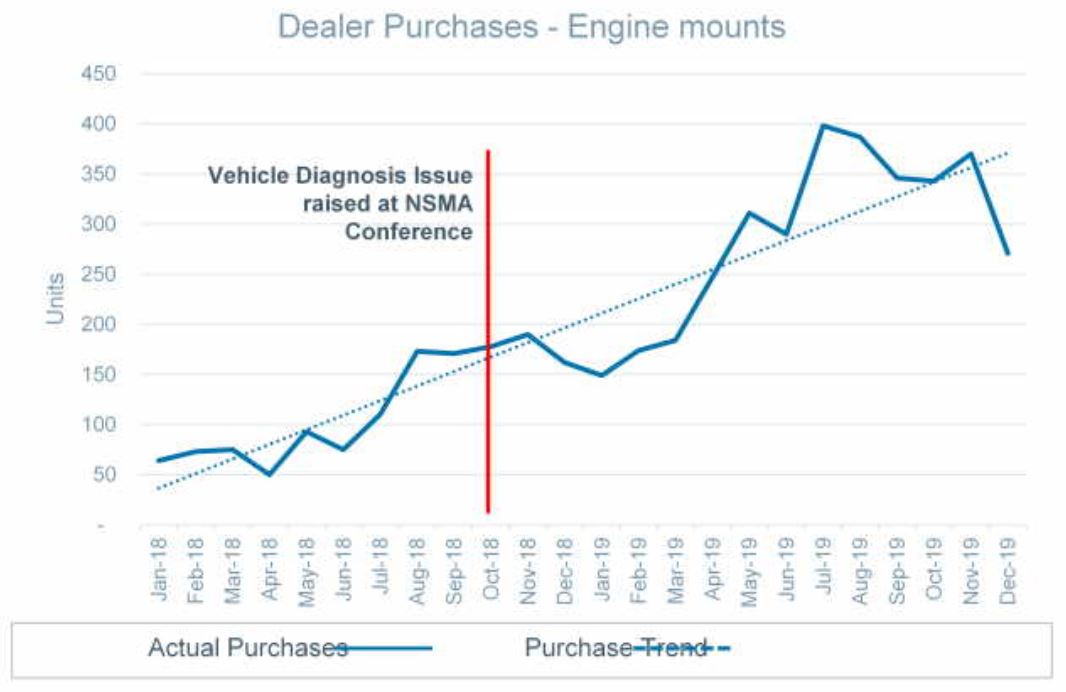
* A new car warranty for 5 years that Ford will at its option repair, replace or adjust free of charge any part of a car which is found to be defective. This warranty had been for 3 years or 100,000 km prior to 1 May 2018 but was extended to five years with no kilometre limit after that date.
* In 2014 the Respondent extended the warranty on the 2010-2014 model year vehicles with a DPS6 to 5 years or 160,000 km in respect of the input shaft seals, the clutch and the transmission software calibration (at the time the general warranty was only for 3 years).
* In December 2016 this warranty was extended to 7 years or 160,000 km and to include model years 2015-2017. Where the vehicles had been sold with the improved input shaft seals this warranty was set at 5 years or 100,000 km.
* In 2015 the new car warranty’s coverage of the TCM in the DPS6 was extended to 240,000 km or 10 years for the 2010-2015 model years. This was later extended to include model year 2016 as well.

1. The Applicant’s main submission about Mr Nethercote’s evidence was that as he was the last in time of the service engineering managers, his evidence was of even less relevance than that of Mr Cruse or Mr Karageorgiou. The Respondent submitted that it was ‘hard to see’ how some of the questions Mr Nethercote was asked under cross-examination were of ‘any assistance to the Court’. Although the Applicant repeated the submission she had made in relation to Mr Karageorgiou and Mr Cruse that Mr Nethercote was keeping to the company line it did not appear that he was altering his testimony for that reason although he was obviously sympathetic to his employer.
2. I also agree that the structure of his affidavit was largely the same as Mr Karageorgiou’s and Mr Cruse’s but I do not think that this implies that it was not his evidence. As for Mr Karageorgiou and Mr Cruse, I have reviewed each occasion that Mr Nethercote replied ‘not specifically’, ‘not necessarily’ or ‘I can’t recall’. In each instance Mr Nethercote appeared to me to be honestly unable to remember the detail he was being asked about. I accept that Mr Nethercote was a reliable witness.
3. Despite their submissions that Mr Nethercote’s evidence was not centrally relevant the parties did nevertheless come to blows in relation to one aspect of his evidence. As I have said, Mr Nethercote was involved in the program of seeking to reduce the over-diagnosing of clutch shudder. This began in 2019.
4. For completeness, it is useful to note that Mr Nethercote was Service Engineering Manager in July 2019 when the Respondent distributed a Service Manager’s Letter on 16 July 2019 with Mr Nethercote recorded as the author. The letter dealt with the topic of the ‘DPS6 Powershift Transmission Diagnosis Process’. It had two elements of note for present purposes. First, it conveyed the information that the Respondent had found that less than 5% of vehicles which dealers diagnosed as requiring a replacement clutch in fact did require this. Secondly, it cautioned that a vehicle failing the 250 rpm test was not determinative of there being a problem with the clutch as shudder could be caused by other factors too. This passage was as follows:

**NOTE:** Please be aware that the 250RPM threshold vibration test is not a definitive indicator that there is a problem with the clutch. The vibration test is a measurement of the shudder on the input shafts, which can be caused by various different items from slipping clutches, to other NVH concerns. These other NVH concerns could produce a 250RPM vibration in the recorded session file.

1. Another document which went out on the same day was entitled ‘Dealer Confidential Bulletin’. It was in the same terms and need not be set out.
2. This evidence is material because it suggests that the fact that there is a fluctuation in the rate of revolution of the input shaft above 250 rpm does not necessarily indicate that there is a problem with the clutch. For example, Mr Nethercote mentioned at §31 that worn engine mounts or spark plugs can produce a similar effect from a driver’s perspective. The Respondent’s point is that once this was realised there was a significant decline in clutch repairs and an increase in engine mount repairs. Mr Nethercote provided some PowerPoint slides which were said to show these two effects:





1. I take the ultimate significance of this evidence to be as tending to prove that the fact that the warranty data shows a particular level of clutch replacements does not necessarily mean that the clutches were the source of the problem.
2. Certainly, the Applicant’s advisers were exercised by these documents which they described as ‘self-serving’. The Applicant submitted in writing that the Court should be sceptical about them because:
3. The Service Manager’s letter had been written in mid-July 2019 when this case was entering the evidence preparation stage and the slides were prepared in February 2020; and
4. They had not been written by the persons who were actually knowledgeable about the limitations of the 250 rpm test.
5. These two submissions are different in kind. Submission (a) is an invitation to conclude that the documents have been written in the terms that they were so that they could be put before this Court to prove that failing the 250 rpm test does not equate to a defective clutch. The Respondent pointed out that this had not been put to Mr Nethercote. I agree. It would be unfair to conclude that Mr Nethercote had presided over the production of documents which are ostensibly dealer bulletins so as to provide helpful evidence in this case without hearing what he had to say about that proposition. In that circumstance, I will not entertain submission (a).
6. Submission (b) does not suffer from that vice and it may be put. I will deal with the issues surrounding the 250 rpm test in more detail below. The Applicant also took issue in reply with Mr Nethercote’s PowerPoint slides. Here the point was that the slides had only been introduced very late in Mr Nethercote’s examination in chief. In fact, the tendering of the PowerPoint slides caused something of a frisson when it occurred: T774-777. The Applicant objected to it on the basis that she was taken by surprise but it transpired that at least one of the eight letters the parties’ solicitors traded on 5 June 2020 had included a statement by the Respondent’s solicitors that they intended to tender the slides through Mr Nethercote. Mr Nethercote duly gave evidence that the slides had been prepared in February 2020 and the slides were then received in evidence.
7. More substantive to my mind is the Applicant’s second submission that the data which underlay the slides had not been produced. The course I propose to take in relation to these slides is to address the issues which arise about the 250 rpm test from a substantive engineering perspective. To the extent it is necessary I will use Mr Nethercote’s slides as confirmatory of that engineering conclusion (if they are confirmatory). I will not use the slides as evidence directly pointing to one engineering answer over another.
8. The Applicant made two other points about Mr Nethercote’s slides. One was that the graphs did not demonstrate causation but at best correlation. By the end of the trial it had become apparent that the Respondent really did seek to use the material to show, as Senior Counsel put it at T1682.47ff, ‘it can’t be a coincidence … that when the number of clutch purchases goes down, the number of engine mount purchases goes up’. I accept that the Applicant is correct to submit that this, as with most statistical relationships, just shows correlation rather than causation. Of course to say that is not to say that the material is irrelevant but rather just to understand its inherent limits.
9. The other matter concerned the cross-examination of Dr Greiner on this point. It was said that Dr Greiner did not have the thesis implicit in Mr Nethercote’s slides put to him, ie, that in many instances, a failed 250 rpm test was not indicative of a clutch problem. I deal with that issue in much more detail in Section VII.

### Mr Davidson

1. Greg Davidson is, and has been since January 2016, the Director of Sales for the Respondent. He has held a number of roles within the Respondent relating to marketing and, in the period between 2009 and 2012, was the Respondent’s Marketing Strategy & Communications Manager. Between 2013 and 2015 he was the Group Marketing Manager – Passenger Vehicles. Mr Davidson gave detailed evidence about the way in which the Respondent sells its cars. Ultimately, however Mr Davidson was not called and his affidavit of 2 October 2019 was not read.
2. In that affidavit he gave evidence at §§30-33 that data published by RedBook on the second-hand automotive market was used extensively in the industry, including by the Respondent, to determine used car pricing and residual values. The Applicant tendered these paragraphs of his affidavit in support of a submission (at [714](e)) that Mr Cuthbert’s evidence about the value of Ms Capic’s car should not be accepted because, inter alia, it was based on an advertisement for a newer model year Focus which RedBook indicated had a higher value than Ms Capic’s car. I return to this issue when I deal with Mr Cuthbert’s evidence. Mr Davidson has no relevance beyond that issue.

## Dr Greiner and Mr Kuhn

1. I deal in much more detail with the evidence of Dr Greiner and Mr Kuhn later in these reasons. Dr Greiner is a transmission engineer. He prepared an expert report dated 22 November 2019 and a report in reply to Mr Kuhn’s dated 13 March 2020. Dr Greiner holds a diploma in mechanical engineering from the University of Stuttgart which he obtained in 1984 together with a PhD which he obtained from the same university in 1990. His thesis dealt with the topic of lubrication and cooling of oil-injected gearboxes. Since then he has worked for a number of companies involved in the manufacture of gearboxes: the Cincinnati Gear Company (naval gearboxes), Daimler AG (ie Maybach, Mercedes-Benz, Smart, Jeep, Dodge and Chrysler), LuK (a manufacturer of clutch systems), ZF Friedrichshafen AG (a manufacturer of automotive components) and is now presently working for his own consultancy firm.
2. In Dr Greiner’s long and illustrious career with gearboxes he has worked on many different kinds including, relevantly to this case, dual clutch transmissions of both the wet and dry variety and has worked with dual mass flywheels and torsional damping systems (also very relevant to this case). Importantly, whilst working for LuK his main responsibility was completing the development of a clutch and actuation system for a dry dual clutch transmission. I was very impressed with Dr Greiner as a witness and having now scoured his reports in some detail I am persuaded that he knows more about the problems at hand in this case than anyone else who has looked at it.
3. During the concurrent evidence that Dr Greiner gave with Mr Kuhn an attack was made on Dr Greiner’s credit. The basis of the attack was that Dr Greiner had included a table from a textbook written by one of his former colleagues at ZF Friedrichshafen AG. In fact, as he explained in a short affidavit sworn 8 July 2020, he had modified the table slightly. I saw this episode and am entirely satisfied that Dr Greiner was simply trying to be helpful. The Respondent further submitted that Dr Greiner’s answers in the concurrent evidence session were often tangential or unresponsive. This was not my assessment. For completeness, I did not apprehend there to be any particular language difficulties with Dr Greiner’s evidence who, to my observation, spoke excellent English.
4. The Respondent criticised Dr Greiner’s evidence because he had not inspected Ms Capic’s vehicle. Leaving aside the debating point that Mr Kuhn had not done so either, I see no force in this point. As I explain elsewhere at some point in this trial someone had to address the complex mechanical engineering issues arising from the DPS6. To think that a quick look under the bonnet of Ms Capic’s vehicle would have been useful in what is effectively a very complex engineering question concerning millions of vehicles worldwide is naïve. I reject the Respondent’s submission that Dr Greiner was a desktop expert or that he lived in an ivory tower in Stuttgart. I did not find this kind of name-calling either helpful or dignified.
5. Mr Robert Kuhn was called by the Respondent and prepared an expert report dated 20 February 2020. He holds a bachelor’s degree in mechanical engineering from Carnegie Mellon University in Pittsburgh and a master’s degree in automotive systems engineering from the University of Michigan, Dearborn. The topic of his thesis was the variability in system performance due to varying combinations of design and manufacturing inputs. He has worked on a number of different engineering systems for a number of different companies including Chrysler Corporation, Algor Software, Ford Motor Company, DaimlerChrysler and Exponent. He currently works for JP Research, Inc. as its managing engineer and provides consultancy services to many automotive companies. Whilst at Exponent he spent 6 months working as the managing engineer at the rapid equipping force laboratory at Kandahar Airfield in Afghanistan. His role was to manage the development of rapid engineering solutions for problems being experienced by the US army in the field. In his concurrent evidence he described this as very satisfying work which one can well understand.
6. My impression is that Mr Kuhn is more of a generalist than Dr Greiner. Mr Kuhn has worked on transmissions in his career and is qualified to express views about them but my impression was that Dr Greiner had devoted his lifetime to that particular topic. As it happens, I do not think this matters since Mr Kuhn’s evidence did not really contradict Dr Greiner’s. The Respondent’s approach to the litigation was, as I explain later in these reasons, largely not to confront Dr Greiner’s evidence directly but instead to try and paint it as a theory in search of a problem. This is not the place to deal with that debate. However, this is the place to record that, like Dr Greiner, I found Mr Kuhn to be an excellent witness.

## Mr Holtshausen and Ms Padmanaban

1. Mr Ronald Holtshausen is a data analyst who was called by the Applicant. He prepared four reports for the proceeding, dated 5 November 2019, 14 November 2019, 9 March 2020 and 7 July 2020. In effect Mr Holtshausen topped and tailed the raw warranty and complaints data into formats which could be used by others. It is not entirely clear why he was required for cross-examination but under cross-examination he maintained his position that he had topped and tailed the data as he had been requested to do. This was one of many idle moments during the trial.
2. Ms Jeya Padmanaban, who is a statistician and president of JP Research, Inc., prepared two reports dated 14 February 2020 and 17 June 2020. In these she topped and tailed the data differently to Mr Holtshausen (as she had been instructed to do by the Respondent). She too confirmed under cross-examination that this is what she had been asked to do but ventured a little more evidence about the statistical analysis she had undertaken. Their concurrent evidence session appeared to me a debate in search of a topic. I deal with some aspects of Ms Padmanaban’s evidence later in these reasons. For present purposes, it is enough to say that both Mr Holtshausen and Ms Padmanaban were witnesses of credit. Ms Padmanaban was also included in one of the concurrent evidence sessions with Dr Greiner and Mr Kuhn which was a little odd. Largely this was to confront Dr Greiner with Ms Padmanaban’s preferred metric of vehicle years of exposure which I deal with below in Section VII. Dr Greiner had not heard of this concept. Although at certain points Ms Padmanaban seemed to be cross-examining Dr Greiner I do not think she was trying to be other than helpful and Dr Greiner did not seem especially put out by the experience. Neither was I.

## Mr Marston and Mr Carter

1. The Respondent retained a mechanical engineer, Rowan Carter to inspect Ms Capic’s vehicle and to provide his expert opinion on its mechanical condition. David Marston was retained by the Applicant to inspect the vehicle both before and after Mr Carter’s inspections and also to observe Mr Carter’s testing. I deal with the submissions made as to their credit and the use to which their respective evidence can be put in Section XI below.

## Mr Vasilakis and Mr Cuthbert

1. Mr Spiro Vasilakis and Mr Graeme Cuthbert were called by the Applicant and Respondent respectively. These gentlemen are car valuers who were tasked with the valuation of Ms Capic’s vehicle. Although there was extensive cross-examination of them none of it dented their credit. As will be seen in Section XV below, I do not think their evidence was especially relevant but neither was to blame for this. Each side criticised the credit of the witness the other side called but I did not find any of these criticisms persuasive.

## Mr Stockton and Dr Strombom

1. The final witnesses called were Mr Edward Stockton for the Applicant and Dr Bruce Strombom for the Respondent. Mr Stockton produced reports dated 17 December 2019, 8 April 2020 and 10 June 2020 and Dr Strombom produced a report dated 10 March 2020, while a joint report dated 18 May 2020 was also prepared. Both of these men are economists and their evidence went to the claim for loss and damage. This evidence was highly technical. Although each party sought to impugn the credit of the other’s witnesses, I found these attempts quite unconvincing and, to be frank, not very useful in the context of evidence of this kind. As will be seen, as the case has fallen out the need to consider their evidence fully has not yet arisen due to some procedural problems.

# Section VI: The Leaking Input Shaft Seals

1. The role of the two input shaft seals has been explained above at [62(e)]. The inner input shaft seal (‘the inner seal’) lies between the hollow outer input shaft and the solid inner input shaft. The outer input shaft seal (‘the outer seal’) is located where the outer input shaft exits the gearbox. Both seals are radial shaft seals which are seals which are used for sealing rotating elements. The basic challenge with rotating elements is to provide a seal between the rotating shaft and the non-moving bore in which that rotation occurs. The part of the seal which abuts the rotating shaft is known as the lip. The key idea in the lip is that a thin layer of lubricant is squeezed between it and the rotating shaft and that this thin layer should be maintained by a process known as pumping. The part of the seal which abuts the bore through which the shaft passes (ie the hole in the bell housing through which the rotating shaft passes for the outer seal or for the inner seal, the outer input shaft) is known as the outer backing. Unlike the lip it does not have to deal with a rotating shaft because the bore does not move relative to the seal. The outer backing is locked into the bore using an interference fit which, as I understood it, meant that it was very slightly larger than the bore diameter and therefore had to be forced into place. Once in place it is kept there by static frictional forces.
2. There is no doubt that for some vehicles the input shaft seals leaked. The parties proceeded on the assumption that this problem potentially affected all models until a change in production was introduced progressively from 28 June 2013 to 1 October 2013. There was perhaps a hint in Dr Greiner’s evidence that the problem may have been limited to the Focus and Fiesta models, although in fairness this is not entirely clear. In any event, no-one else suggested such a limitation and I proceed on the basis that all three model lines, including the EcoSport, were affected.
3. Dr Greiner identified two problems with the seals, in addition to some issues he said were a result of inadequacies in the manufacturing and assembly process of the transmission. The first concerned the adequacy of the material from which the lip was made. The second concerned the adequacy of the material from which the outer backing of the inner seal was made. This view was also expressed in a number of Ford US’ internal documents to which Dr Greiner referred.

## Lip material

1. The inner seal was made from an elastomer (rubber) called AEM whilst the outer seal was made from an elastomer called ACM. Neither was suitable for use in the DPS6 as in both seals the lip could eventually fail and permit ingress of lubricant into the bell housing.
2. The Respondent did not dispute that it had been necessary to replace both the inner and outer seals to deal with the lip issues. The AEM and ACM materials were replaced with a new material ‘FKM’ which was deployed in the production of new vehicles. This occurred in the Fiesta from 30 August 2013 and in the EcoSport from 1 October 2013. In the case of the Focus, it occurred from 28 June 2013 for vehicles which were manufactured in Germany and from 2 September 2013 for vehicles manufactured in Thailand.
3. Dr Greiner accepted, and Mr Kuhn agreed, that the substitution of the FKM material addressed one of the problems which the leaking input shaft seals had presented, vizlip failure. Dr Greiner was critical of how long it took to substitute the AEM and ACM elastomers with FKM but he did not deny that it was effective once introduced.

## Outer backing material

1. The Applicant’s case appears to be that the outer backing material of the inner seal (which it will be recalled is the surface of the seal jammed into the bore and there held by static friction) was apt to cause the seal to pop out and thereby to permit leaks to occur. Dr Greiner gave evidence to this effect and there was support for this proposition in some of the Ford US documents to which Dr Greiner referred. Further, the sequence of events might suggest that Ford US thought that the inner seal’s outer backing material was a problem. The initial outer backing of the inner seal was made from rubber but in late 2014 Ford US introduced in production new seals with an outer backing made from steel rather than rubber.
2. Dr Greiner accepted during his concurrent evidence that the replacement of the inner input shaft seals had resolved the issues of failure due to popping out of the seal. The replacement of the seals in production occurred, however, in two tranches. First, the AEM and ACM elastomers in the lips were replaced with FKM. This had occurred across all model lines by 1 October 2013. In November 2014, Ford US changed the outer backing material of the inner seal from rubber to steel.
3. In his report in chief at §494 Dr Greiner gave evidence that the switch from AEM and ACM to FKM ‘significantly reduced the number of Ford’s warranty repairs associated with leaking seals, however, it did not eliminate them’. Dr Greiner did not say, in terms, that the problem was only solved once the inner seal’s outer backing was switched to steel, although this may be seen as an implication to be drawn from his evidence.
4. Dr Greiner’s evidence that the seals continued to generate warranty claims (and hence to leak) is based on an affidavit of an employee of Ford US, Mr Christopher Kwasniewicz sworn on 5 September 2018 in proceedings against Ford US in the state of Michigan. Mr Kwasniewicz was, at the time he swore the affidavit, the North American Power Train Quality Manager. Before that he had been the Systems Manager for the DPS6. At §33 of this affidavit he said this:

We had determined that a small percentage of input shaft seals were also “walking out” or coming out of place. Although changing the seal material helped to fix this issue, we continued to work on a design change to make the seals even more robust. The design change ultimately implemented was to make the inner input seal steel-backed, which was implemented into production in late 2014.

1. Dr Greiner also relied on a document from the US proceedings VGS7-0021823 which was a presentation given by Getrag on their investigation into the leaking seals. An annotation to a slide on the seal replacement data observed ‘FKM material solved a large warranty issue, but there is still existing warranty left over’.
2. I conclude therefore that after the switch from AEM and ACM to FKM, a ‘small percentage of input shaft seals’ were continuing to come out of place. I therefore accept Dr Greiner’s evidence that the switch in elastomer material did not fully resolve the problem with the leaking input shaft seals and that full resolution was only achieved in late 2014 when the inner seal’s outer backing material was switched from rubber to steel. I therefore also accept that the choice of rubber rather than steel contributed (in some manner) to the leaking of the input shaft seals.

## Were the lip and outer backing problems design or manufacturing problems?

1. There is no dispute that the original input shaft seals posed a risk of failure. I am not sure in that circumstance that much is gained by assaying the precise problem with the input shaft seals and, determining as a matter of taxonomy whether those problems should be characterised as failures in manufacturing processes or instead as failures in design. This is because the question in the case is whether the vehicles pose a risk of a particular set of failures and are, for that reason, not of acceptable quality under s 54. Whether that risk proceeds from features of the input shaft seals which have their origins in manufacturing processes or instead design processes (or both) is irrelevant to that question.
2. Were it necessary to express a view on this issue, I would take my guide from the contemporaneously expressed view of the engineers employed by Ford US which were formulated in their lengthy and well documented efforts to identify the cause of the leaking seals. In a document generated within Ford US, in conjunction with Getrag representatives, entitled ‘Consumer Driven 6-Sigma’ the authors engaged in a standard reporting method for problem solving (‘6-Sigma’) applied to the identified problem of transmission fluid leaks in the DPS6 (FOR.712.002.8368). This document was dated 13 August 2012. At p 7 and p 8 it suggests that Ford US saw the problem with the input shaft seals as having 10 causes, 5 of which it identified as process failures and 5 of which it identified as design failures. It categorised the problem with the lip as being constituted by failures both of design and manufacture. It suggests that the problem of the outer backing material of the inner seal was a design problem.
3. To read this document is to see how complex the diagnosis of the problems was. Nothing would be gained by explaining these problems in these reasons. I mention this matter only for the purposes of resolving the dispute as to whether these were design or manufacturing problems. Dr Greiner thought the problems were a mix of design and manufacturing problems. Mr Kuhn was of the view that they were manufacturing problems. I have found this 6-Sigma report a surer foundation for a conclusion than Mr Kuhn’s evidence.
4. As I have detailed above at Section V, the Respondent also called three Australian witnesses who worked for it, who when asked about this issue said that the problems were all manufacturing problems. This evidence was unpersuasive. Whilst all three men were engineers they were not called as experts and they gave evidence that they were not involved in Ford US’ efforts to solve the problem of leaking input shaft seals. Instead, they were effectively the people in charge of conducting the Respondent’s warranty program in Australia. Since it is apparent that Ford US estimated it would spend hundreds of millions of dollars on the problem of the leaking input shaft seals, it seems to me likely that these three witnesses produced by its Australian subsidiary were probably not the people within the group who were most knowledgeable about what the problem with the seals was. On the other hand, the documents to which I have referred seem to have been written by senior Ford US engineers who were very familiar with those problems. I see no reason in that circumstance to prefer the evidence of the peripheral witnesses employed by the Respondent to what is contained in the 6-Sigma report.

## What problems could leaking input shaft seals give rise to?

1. Where the seals failed it was common ground between the parties that this could cause lubricant to come into contact with the clutch lining. This would alter the frictional profile of the clutch lining in unpredictable ways and cause a range of problems which made it more and more difficult for the TCM to keep control of the transmission. These problems, which were all intermittent, included difficulties with gear selection, sudden deceleration, jerking, grinding noises and the appearance of the check engine light. Dr Greiner also thought they could extend to intermittent revving of the engine, slower response times, loss of power and roll back whilst in gear. There could also be rattling noises, shudder both on launch and during gear shifts and sudden or delayed gear shifts. I accept this evidence.

## What was the risk of the seals failing?

1. For Fiestas manufactured from 30 August 2013, EcoSports from 1 October 2013 and Focuses from either 28 June 2013 (Germany) or 2 September 2013 (Thailand) the risk of failure was reduced to the ‘small percentage’ referred to in Mr Kwasniewicz’s affidavit at §33. This followed the switching of the AEM and ACM elastomer to FKM at those times. The residual but smaller risk was finally eliminated in late 2014 when the outer backing material of the inner seal was changed to steel. After that I am satisfied that the input shaft seals no longer posed a risk of failure.
2. There are therefore two risks to be assessed: (a) the risk posed prior to the switch in elastomers; and, (b) the risk after the switch in elastomers but prior to the change from rubber to steel in the inner seal’s outer backing.
3. As to (a): in a document titled ‘DPS6 Evidence Book’ dated 22 November 2013 (VGS7-180958), Ford US and Getrag projected that the seals in question would fail at a rate of 36% during a warranty period of 5 years/60,000 miles. This evidence was not challenged by the Respondent. The projected failure rate of 36% within 5 years/60,000 miles was based on the Ford US seal replacement data for the 2012 model year DPS6 vehicles sold in North America. The DPS6 Evidence Book includes the derivation of this projection and justifies the use of the 2012 model year vehicles as ‘the most refined set of data’ available to map the failure rate (\_0971). The data in the evidence book (\_0972) shows a significant rate of failure across models and geographical regions for vehicles fitted with the input shaft seals in question. There is no evidence to suggest that the seals fitted to the vehicles sold in Australia failed at a dramatically different rate to those fitted to vehicles sold overseas and the Respondent made no attempt to sustain such a contention (and, in fact, Ford US assumed that all of the seals fitted in DPS6 vehicles would fail at the same rate globally).
4. The apparent purpose of modelling the seal failure rate globally was to allow Ford US to estimate the total cost it would incur undertaking replacements in vehicles under warranty. This estimation is itemised at \_0987 and by employing the global 5 year/60,000 miles failure rate of 36%, comes to a total figure of USD475 million.
5. From this evidence I infer that there was a substantial failure rate for the original input shaft seals. It is unnecessary to come to a conclusion about an exact figure, but the evidence from Ford US shows that it was well in excess of 20% over the first 5 years of a vehicle’s life.
6. As to (b), I am unable to come to a conclusion. Mr Kwasniewiczsaid that a small percentage was involved. However, to my mind this could mean 0.001% or 5%. A Ford US document dated 7 March 2014 suggested that in the approximately 6 months following the implementation in production of the switch in elastomers, only 0.02% of vehicles were presenting seal leakage. However I was taken to no information about how these vehicles, with the new elastomer material but the old rubber backing on the inner seal, fared beyond these first few months of their life. Without some more information I am not able to make a meaningful estimate of the risk involved. I find that the Applicant has not proved what the risk posed by the use of rubber rather than steel for the inner seal’s outer backing was beyond that it was a ‘small percentage’. Therefore the Applicant has not proved that a real risk of failure existed for seals with the new elastomers but original outer backing.

## Fix on fail: vehicles which were repaired

1. Vehicles produced after the switch in elastomers therefore do not have faulty input shaft seals. What of the vehicles produced before then? The Respondent adopted a ‘fix on fail’ approach to the input shaft seals. Where vehicles presented with problems with the transmission the Respondent gradually replaced the input shaft seals and cleaned the clutch assembly. In every case where the input shaft seals were replaced with seals with both the FKM elastomer and a steel backing on the inner seal, I conclude that the repair was effective to resolve the issue. In the case of these vehicles, they were put into the market with inner input shaft seals which had a real risk of failure. For vehicles that were replaced with seals containing the new elastomer but old rubber backing, there remained a risk, the extent of which has not been substantiated. However, in all cases where the input shaft seals have been replaced by the Respondent since the introduction of the steel backing, I conclude that the risk arising from the original difficulty no longer exists.

## Fix on fail: vehicles which have not been repaired

1. In the case of vehicles which have not had their input shaft seals replaced (along with those which received a replacement with the new elastomer material, but the old rubber backing), the situation is unclear. The reasons why these vehicles have not had their input shaft seals replaced under the extended warranties granted by the Respondent could be multiple:

* The vehicles may be driven by owners whose driving habits make it less likely that the seals fail. For example, Dr Greiner thought that the problems with the seals were exacerbated by the heat at which the transmission operated. I return to that issue later at [534] to conclude that Dr Greiner is right about this. In any event, the operating temperature range of the DPS6 will be lower in vehicles which are driven sedately or in circumstances where gear shifts are less frequent.
* Some vehicles may be driven by owners who have not noticed the problems or do not care about them.
* Since the failure rate appears to have been about 36% over 5 years, this implies that 64% do not fail over the same period (assuming the figure has discounted repeat failures). Although one cannot be precise about this, it implies that some of the input shaft seals have not failed yet or may never fail.

1. These observations are plausible as lines of thought but they are no more than that. Thus whilst I think it is plausible that the failure rate of the remaining cohort of vehicles which have not had their input shaft seals replaced may be materially lower than the original 36% failure rate across all vehicles because most of the failures are already likely to have occurred, I do not think there is an evidentiary basis on which I may reason in that manner. Accordingly, I propose to proceed on the basis that the failure rate for this cohort is approximately the same as it was when they first entered the market, that is to say, a real risk.

## Other problems

1. Dr Greiner also gave evidence that the input shaft seals were made more likely to fail by reason of other difficulties with the DPS6 that he identified. For example, he thought that heat had its role to play in the failure as did the extent of damping of torsional vibrations. As I explain later in these reasons, it is likely that the characteristics of the DPS6, both in terms of torsional vibrations and heat, had some impact on the failure of the input shaft seals. However, whatever those effects were, the replacement of AEM and ACM with FKM and the switch to a steel outer backing for the inner seal means they are no longer material. Insofar as the input shaft seals have not been replaced, the issue is surplusage since I have accepted that those vehicles were supplied with a real risk of failure. That that risk of failure may have some additional causes beyond the use of AEM and ACM and a rubber outer backing material does not matter.

## Safety issue

1. I did not apprehend the Applicant to submit that the input shaft seals issue was a safety risk.
2. It is next necessary to turn to the issue relating to the clutch lining material.

# Section VII: The Clutch Lining and Assembly

1. Two issues are concerned here. The major one concerns the material from which the clutch lining was made. There is a lesser issue concerned with the way the clutches were assembled.

## Clutch lining material: B8080

1. Most of the Affected Vehicles were manufactured with a clutch lining known as B8080. It was used in the following vehicles:
2. All Focus vehicles sold in Australia. There are 42,498 of these vehicles which constitute 57.9% of the entire cohort of 73,451 Affected Vehicles;
3. All Fiestas sold in Australia manufactured before 7 January 2015. However, ‘all’ requires two qualifications. First, the 1.0L ‘Fox’ Fiesta was never manufactured with B8080 but instead with RCF1o so the 1.0L ‘Fox’ Fiesta is not amongst those vehicles affected. Secondly, the 1.6L Fiesta was not offered in Australia after the conclusion of the 2013 production year. The 1.6L Fiestas in which B8080 was used are therefore limited to those produced prior to the end of the 2013 production year. In all, 20,734 Fiestas were produced with B8080, representing 28.2% of the Affected Vehicles;
4. All EcoSports sold in Australia manufactured before 3 September 2016. There are 5,578 of these vehicles which represent 7.6% of the Affected Vehicles.
5. In relation to this somewhat complex group (93.7% of the Affected Vehicles) it had originally been proposed that the clutch lining would be made from another material, RCF1o. However, before the commencement of production of the DPS6 by Getrag at its plant in Irapuato (in Mexico), this was changed to B8080. It is not now in dispute that the selection of B8080 for the DPS6 gave rise to problems.
6. In particular, the Respondent agreed that it presented a risk of a phenomenon known as ‘negative damping’ which would be experienced by the driver as a shuddering sensation. Negative damping occurs when a vibration or oscillation is not damped but instead reinforced (the increasing arc of a child being pushed on a swing is an example of negative damping). In the DPS6 negative damping could lead to a condition in the transmission known as ‘self-excited shudder’. This shudder was noticeable to the driver of the vehicle. This problem is a result of the frictional properties of B8080.
7. The Applicant submitted on the basis of Dr Greiner’s evidence that there were three other problems with B8080: (a) it had unpredictable frictional variability; (b) it had a high propensity to undergo ‘green shudder’; and, (c) there were variations in the B8080 material between various production batches which exacerbated the frictional unpredictability of the material. Mr Kuhn did not take issue with this. By way of further explanation: the consequences of unpredictable frictional variability (problem (a)) is that the TCM experiences difficulty in predicting how the clutch plate will behave as it is introduced to the drive plate. This confusion within the TCM manifests itself as difficulty in changing gears. Here useful comparison may be made with the situation confronting a person who has never driven a manual car when trying to use the clutch or, where a person used to one manual car, has to drive another with a quite different clutch. The concept of ‘green shudder’ (problem (b)) was described by Dr Greiner as resulting from a clutch that has not yet been ‘broken-in’. In such a clutch the friction material still has an uneven surface which may cause fluctuations. The problem of variation between batches (problem (c)) was described by Dr Greiner as resulting from Ford US not having set sufficient production specifications or ‘tolerances’ for the B8080 material which he thought could have enabled inconsistent batches of the B8080 material to be manufactured. Mr Kuhn did not agree with this observing that since B8080 had not been used in the field it would not have been possible to set the appropriate tolerances. It is not necessary to resolve this debate.
8. In any event, I accept that each of these problems existed. They are corroborated by engineering documents produced by Ford US and set out at [336] of the Applicant’s closing submissions. I did not apprehend the Respondent to dispute these matters although in its submissions it only referred to the problem of self-excited shudder. However, this really does not matter. The Respondent accepts that the B8080 material gave rise to a problem with the performance of the DPS6 which it regarded as sufficient to justify replacing it with different clutch lining materials. I return to those other materials and the process of replacement shortly. In the meantime, it is necessary to say something of the separate assembly problem.

## Clutch assembly problem: geometric misalignment in production

1. In addition to the problem with the B8080 material the Applicant alleged that shudder also arose from the way in which the clutch components had themselves been manufactured and assembled. Here the problem was that sometimes the clutch components were geometrically misaligned in production. This is a different problem to the selection of the B8080 material itself although it is related to it in the sense that the thing which could be misaligned was a clutch plate surface made from B8080. Dr Greiner described the problem by saying that geometric variations in rotating components (such as a clutch) can cause the force at the clutch interface to become unevenly distributed on the drive and clutch plates. This problem could result in torque fluctuations at the input shaft which in turn could cause ‘forced-excited shudder’. This is because the geometric variations can result in multiple overlapping forces each of which can force excitement at the clutch interface resulting in shudder. This is a different kind of shudder to that which resulted from negative damping (ie self-excited shudder) which flowed from the B8080 material itself. From the perspective of the driver, however, they do not manifest in materially different symptoms even if the underlying pathologies are quite different from an engineering perspective.
2. In fact, it is likely that there were two problems at work here. One concerned geometric variations in the clutch components themselves but the other concerned the way in which the clutches were actually assembled during the production process. Ford US’ root cause analysis of the problem, which was referred to by Mr Kuhn at §181, identified these twin aspects of the geometric variation issue. Further, as Mr Kuhn explained at §154 and §182 the twin problems were eventually addressed by the introduction of tighter quality control measures which consisted of ‘end of line sorting of clutch assemblies’. This involved testing of the clutches at the end of the production line to identify those suffering from the problem.
3. I conclude that there were two problems: geometric variations in the clutch components themselves (the B8080 lining being one such component) and geometric variation resulting from the way in which the clutch system was assembled. Both could result in forced-excited shudder.
4. I should say that this particular problem did not receive a lot of attention at the trial and tended to be subsumed in the Sturm und Drang of the problems arising purely from the use of the B8080 material. However, I am satisfied that it was pleaded at §6AB(a)(vii), advanced by Dr Greiner in his evidence and accepted by Mr Kuhn in his evidence in the sense that he did not contradict it.

## Design or manufacturing problems?

1. Dealing then first with the problems arising purely from the use of the B8080 material, there was a debate between the parties as to whether the difficulty was a design deficiency. Mr Kuhn thought that the problem was not a design problem because, as I have already mentioned, there had been no specified tolerance for the damping factor when the DPS6 went into production. He did not think this was a deficiency in the development process because field experience with the B8080 material did not exist at that time.
2. Again, I do not see why this issue matters. Regardless of how the problem with the B8080 material is to be characterised, the fact is that it was a problem. Whether it was a design problem or some other problem for which Ford US might not be seen as responsible in the sense of making a mistake, does not intersect with the legal issues in this case. Whether Ford US could have known that the B8080 material would give rise to this problem since there was no specified desired damping factor and an absence of field experience with it is a red herring. Whilst I can understand Mr Kuhn’s point that it may perhaps be difficult to blame Ford US for the problem when no damping factor had been specified and there was no field data (I reach no view on that question), that appears to be a point which exists in a different domain of discourse. The specification of B8080 for the clutch lining material appears to be a question of design – it is difficult to see what else it is.
3. Turning then to the problems arising from geometric variations, as I have said, this was really two problems. Both were manufacturing problems so far as I can see. That some clutches made with B8080 contained geometric variations is a matter which derives from the manner in which they were manufactured. This is borne out by the fact that not all of the clutches manufactured suffered from the problem. The situation is clearer still in those cases where the geometric variations arose from the way the clutches were assembled.

## What problems could the B8080 clutch lining material and the difficulties with geometric variation give rise to?

1. Dr Greiner thought that the use of B8080 material was apt to give rise to a propensity for vehicles to experience self-excited shudder, harsh and jerky gear shifts, a lack or loss of power, noise, vibration and harshness issues, a degree of clutch odour and green shudder: §388-389. The documents produced by Ford US suggested that the B8080 material had a propensity to cause green shudder and self-excited shudder. Dr Greiner and Ford US both thought that the geometric misalignments in production could cause forced-excited shudder as well. I accept all of this evidence.

## Resolution of the problems in production

1. The problem arising from geometric variations was resolved on an interim basis (ie before the introduction of new clutch lining material) by the introduction of tighter quality control measures including the process of testing the clutches at the end of the production line to detect the problem. Both Dr Greiner and Mr Kuhn agreed that this resolved the problem of forced-excited shudder. These tighter quality control measures were introduced in July 2013 and resolved the problem of forced-excited shudder in vehicles manufactured after that date.
2. The solution to the problems posed by the frictional qualities of the B8080 material was multifaceted depending on the model line.

### Fiesta

1. In relation to the Fiesta vehicles the situation is somewhat complex. From January 2015 the Respondent says that the 1.5L Fiesta was manufactured with a new material called RCF1o. It does not make any submission about the position of the 1.6L Fiesta. The evidence the Respondent relies upon to make good this point is Mr Kuhn at §155 who consistently therewith does not refer to the 1.6L Fiesta. On the other hand, the Applicant submits that the RCF1o material was introduced into all Fiestas from 7 January 2015 apart from the 1.0L Fox Fiesta which, as I have already noted, was never manufactured with B8080. ‘Every other kind of Fiesta’ (to use the Applicant’s phrase) is another way of saying the 1.5L and 1.6L Fiestas. As I have already explained, however, the 1.6L Fiesta was not sold in Australia after the end of the 2013 production year. It follows that it was no longer being sold in Australia at the time RCF1o was introduced into the production process. Necessarily, therefore, all 1.6L Fiesta vehicles sold in Australia were sold with the B8080 material. The full position therefore is: none of the 1.0L Fox Fiesta vehicles ever had the B8080 clutch lining, all of the 1.6L Fiesta vehicles sold in Australia did have the B8080 clutch lining and the 1.5L Fiesta vehicles manufactured prior to 7 January 2015 used the B8080 material whilst those manufactured after then contained RCF1o.

### EcoSport

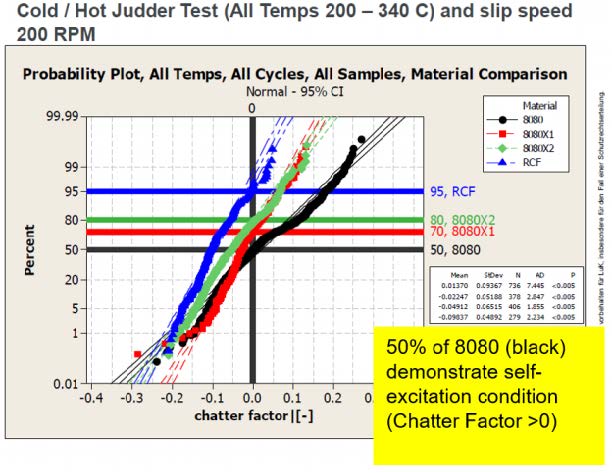
1. The Respondent says that from September 2016 the B8080 material was replaced in production with a half-hybrid clutch made from B8040 on one clutch plate face and B8080 on the other three clutch plate faces (recalling the fact noted above at [60] that there are four clutch plate faces, one on each side of both clutch plates).
2. Dr Greiner says that the switch was from B8080 to a half-hybrid clutch consisting of B8080 on clutch 2 and a combination of B8080 and B8040 on clutch 1. It is unclear to me whether this implies that the material on the drive plate face on clutch 1 was made from one material (B8080) whilst the material on the clutch plate face contacting that drive plate face was made from the other (B8040), or the other way around; or that either of these combinations occurred instead on the pressure plate side, or instead that both faces on the drive plate side of clutch 1 were made from B8040 while those on the pressure plate side of clutch 1 were made from B8080, or the other way around again; or, finally, whether the material on any or all of the friction surfaces in clutch 1 was actually a blend of B8080 and B8040. The parties did not attempt to explain what they meant. The better view is that the evidence from Ford’s internal documents supports the implication that it was both surfaces on the drive plate side of clutch 1 that were B8040 while both the pressure plate and the clutch plate surface on the other side of clutch 1 were B8080.
3. Dr Greiner further opined that Ford US had adopted this position because (a) it had detected that over 95% of its warranty spend on clutch replacements was incurred in relation to clutch 1; and, (b) the use of B8040 material on clutch 2 degraded performance. This opinion was based on root cause analysis conducted by Ford US. That analysis suggested that switching clutch 1 to a hybrid B8040/B8080 clutch did not improve but also did not worsen the problem with green shudder. It also suggested that, in the half-hybrid clutch, ‘long term damping is positive – mitigating the main issue with 8080 high time in service judder’: Greiner §414(c). I did not apprehend Mr Kuhn to take issue with this.
4. Dr Greiner was agnostic about whether Ford’s analysis was correct, noting that he had been unable independently to verify the analysis by reference to the underlying testing data. He further noted that, while he does have experience working with RCF1o and believes that the shift to that material would have provided increased damping, he does not have experience with B8040 or a half-hybrid clutch and therefore was not prepared to draw a definitive conclusion. In any event, I accept Dr Greiner’s evidence that the change in production involved keeping B8080 on clutch 2 and introducing a combination of B8080 and B8040 on clutch 1 and infer that, while this did not resolve green shudder it did not worsen it either. I deal with the effectiveness of the production fixes in more detail below.

### Focus

1. Insofar as the Focus vehicles were concerned, no production change was introduced. However, from September 2015 the Focus vehicles no longer included the DPS6. I therefore conclude that all Focus vehicles sold in Australia were manufactured using the B8080 material until September 2015 when the DPS6 was no longer used.

## How effective were the fixes in production?

1. There is no debate that the introduction of the tighter quality control measures I have described resolved the problem of forced-excited shudder resulting from the two geometric variation issues I have described. This was implemented in all three model lines (Fiesta, Focus and EcoSport).
2. There was then a debate as to the efficacy of the switch in production in the Fiestas from B8080 to RCF1o and the switch in the EcoSports to the half-hybrid B8040/B8080. The issue does not arise with the Focus vehicles because the switch was never made in production consequent upon a larger decision to stop using the DPS6 altogether in those vehicles.
3. The Applicant submitted that the switch to RCF1o (in the Fiesta) and to the half-hybrid B8040/B8080 clutch (in the EcoSport) had not completely resolved the problems initially posed by B8080. She relied on three items of evidence to make good this point:
4. Dr Greiner’s evidence at §415 that the new friction material was a dramatic improvement but not a complete fix;
5. A 6 Panel report dated 21 August 2013 (a Ford US root cause analysis) which was said to show that both RCF1o and B8080 had a propensity towards self-excited shudder and that this was supported by another Ford US analysis produced in 2017; and
6. Mr Kuhn’s evidence which was said to show that even after the change in material the replacement rate for clutches was above accepted benchmarks.
7. On the other hand, the Respondent submitted that the switch in materials had been an effective fix. The Respondent relied upon three items of evidence to make good this contention:
8. Mr Kuhn’s evidence that the switch had been effective;
9. Dr Greiner’s evidence, in his reply report and in oral testimony, that the switch had been an effective measure for addressing dry shudder; and
10. Warranty data which showed a significant reduction in warranty claim rates after the switch was made.
11. I do not accept that Dr Greiner said at §415 that the new friction material was a dramatic improvement but not a complete fix. That is not what he says at §415. I accept the Respondent’s submission that Mr Kuhn said at §3 of his report, in an introductory section couched at a very high level of generality, that the issues presented by, inter alia, the use of B8080 had been adequately and effectively addressed. He did not say this but I infer from the balance of the report that he was referring to the switch to RCF1o in the Fiesta and to the half-hybrid B8040/B8080 clutch in the EcoSport. I also accept the Respondent’s submission that Dr Greiner said at §255 of his reply report that the switches to those materials ‘appear to have been successful’. Dr Greiner gave oral evidence slightly at variance with this at T1154.30-34 where he said that he thought that the change in the friction materials had not been a ‘100 per cent fix’ but that it had made ‘a big difference’. Subsequently, at T1249.27-28 he said that he thought that the switch to RCF1o in the Fiesta had been a ‘really very effective measure for addressing dry shudder’. This statement did not, however, extend to the half-hybrid B8040/B8080 clutch (in the EcoSport) and, indeed, Dr Greiner made no comments specifically directed to the efficacy of the half-hybrid.
12. Dr Greiner’s reticence about the half-hybrid B8040/B8080 clutch is explained, I think, by his evidence at §415 that he had no experience in working with a half-hybrid clutch or, indeed, B8040 itself. While Dr Greiner briefly adverted to warranty data which seemed to suggest that the switch to B8040 in replacement clutches for Focus vehicles in North America lowered the rate of clutch repairs, he ultimately did not draw any conclusion himself about the efficacy of the half-hybrid clutch. In any event, it is not entirely clear to me that the graph extracted by Dr Greiner at §415 in fact refers to vehicles which have been fitted with replacement half-hybrid clutches or, if it does, what it in fact reveals about them. I return to this graph later in the context of clutch replacements for vehicles on the road.
13. I conclude that the evidence of Dr Greiner and Mr Kuhn supports the proposition that the switch to RCF1o in the Fiesta was effective. Although I accept that Mr Kuhn made a general statement supportive of the efficacy of all of the fixes applied by Ford US this did not in terms refer to the half-hybrid clutch and he did not in the body of his report address the issue of its efficacy from an engineering perspective at all. He did give evidence, based on warranty data, about the efficacy of RCF1o but his report did not touch upon the efficacy of the B8040/B8080 material other than by the general reference in his introductory remarks. I do not think I should act upon that evidence as being evidence about the B8040/B8080 material from an engineering perspective when he gave no specific consideration to that issue in the body of his report. Consequently, the position is that neither Dr Greiner nor Mr Kuhn really had anything to say from an engineering perspective about the efficacy of the half-hybrid B8040/B8080 clutch.
14. Turning then to the 6 Panel report prepared by Ford US and dated 21 August 2013, this document appears to be concerned with the Focus vehicles. As I have said, the switch in production of friction materials did not occur for Focus vehicles sold in Australia, however, it did occur in Focus vehicles sold in North America. This document is therefore a problem solving method addressed to the switch in materials in a different model line (the Focus) to the ones presently under consideration (the Fiesta and the EcoSport). As I have explained above, the Focus is larger than the Fiesta but similar in size to the EcoSport. The part of the document relied upon by the Applicant to make good this point is at p 22. It is useful to set it out:



1. The graph certainly refers to RCF1o but it does not at first blush appear to refer to the half-hybrid B8040/B8080 clutch. The Applicant submitted, however, that the reference to ‘B80X2” was a reference to B8040. However, the graph does not refer to ‘B80X2’ but instead to ‘8080X2’ and ‘8080X1’. In any event, the Applicant submitted that B80X2 should be taken as a reference to B8040 because of a document apparently produced by an entity called Schaeffler entitled ‘B8080 Damping Characteristics’ and dated 24 June 2014. I pause to note that this is not a Ford US document (although it appears to have been produced by Ford US in the *Vargas* proceeding, defined in Section XVI below). The Applicant relied upon a page of this document which was unnumbered (although was annotated VGS5-00264327 at 4342 in the electronic Court Book). This page contains a photograph of some gears beneath which appear the words:

B8080 Development Improvements = B80X1 (B8038) and B80X2 (B8040)

1. Having reviewed the whole of this document, I accept that its authors in 2014 intended to refer to B8040 with the notation B80X2. I am also prepared to accept that in the Ford US 6 Panel Report the reference to 8080X2 should be taken as a reference to the B8040 material. References to 8080X2 can be found, from time to time, in some of the documents produced by Ford US. However, even so I do not think that this really assists the Applicant. The graph which appears at p 22 and is extracted above is a comparison of the negative damping characteristics of four materials: B8080, B8040, B8038 and RCF1o. At the time that this document was prepared (21 August 2013) the use of B8040 in a half-hybrid clutch had not been implemented and indeed, would not be implemented anywhere until 23 October 2015 when it was implemented in North America. The fact that a completely different material, B8038, is analysed suggests that this document was part of the problem solving exercise as indeed does the title of the document itself. As will be seen later, in some of the documents produced by Ford US I am prepared to accept that a reference to B8040 is in fact a reference to the implementation of B8040 in a half-hybrid clutch, however, I am not prepared to do so in the case of this document. This is because I am not satisfied that at this stage the idea of using a half-hybrid clutch had yet crystallised within Ford US as a solution. I therefore conclude that the graph at p 22 is what it appears to be, that is to say, an analysis of the negative damping characteristics of four different clutch lining materials.
2. Consequently, what the graph shows is that (a) negative damping occurs where the chatter factor >0; (b) B8080 exhibits this 50% of the time; (c) B8038 30% of the time; (d) B8040 20% of the time; and, (e) RCF1o 5% of the time. I do not read it as saying anything about the performance of B8040 in one side of clutch 1 in a half-hybrid DPS6 transmission.
3. This suggests that the Fiesta vehicles which were switched in production to RCF1o may exhibit negative damping 5% of the time. So far as the EcoSport is concerned the position is more complex. There was no switch in materials on clutch 2 but the problem which existed on clutch 2 seems to have been quite small (to be clear, the Applicant did not run a case independently based on clutch 2). There was a switch to B8040 on part of clutch 1 but, as I have said, I am not satisfied that the evidence says anything about its tendencies towards negative damping. I am not prepared to act on either of these matters (ie a 5% chance of self-excited shudder arising from RCF1o or the use of B8040 in the half-hybrid clutches).
4. Accordingly, I do not accept the Applicant’s submission that this document shows that the switch to the half-hybrid B8040/B8080 clutch did not resolve the issue of negative damping (and therefore self-excited shudder). I should say that Dr Greiner referred to the graph at §174 of his reply report. However, he did not advance the proposition that the switch to the half-hybrid B8040/B8080 clutch did not resolve the shudder problem, a contention which appears first to have emerged in the Applicant’s closing written submissions.
5. The Applicant also relied on another Ford US problem analysis (‘the 14D Report’). This document is not dated but appears to have been produced around October 2016. This analysis is addressed to all three model lines and is concerned with the DPS6 generally and the problem of shudder. The Applicant relied upon this quotation from p 3 of this document:

Testing performed by the supplier verified that the new clutch materials ***reduced*** failure modes associated with the prior material (see attachment 5.1 - judder test for clutch excitation over time in service).

RCF1o Clutch Material: Warranty analysis at **6 MIS** for Fiesta indicates **2.64 R/1000 level** post-containment vs. 29.76 R/1000 pre-containment.

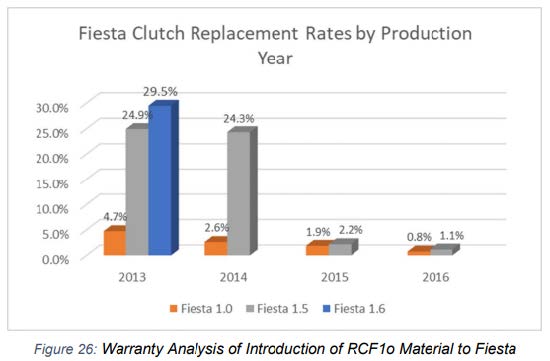
B8040 Clutch Material: Warranty analysis at **3 MIS** for Focus indicates **0.37 R/1000 level** post-containment vs. 3.45 R/1000 pre-containment.

(Emphasis per the Applicant’s submissions)

1. The Applicant submitted that this showed that the switch in materials (which one may comfortably infer was intended to cover both the switch to RCF1o and to the half-hybrid B8040/B8080 clutch) had ‘reduced’ failure modes ‘but self-evidently not eliminated them’. The Applicant’s submission, however, omitted reference to the attachment with which this section was accompanied. That attachment was entitled ‘Attachment 5pt1.pdf’. This attachment dealt separately with RCF1o and B8040. So far as B8040 was concerned it appears to show that the new material did not exhibit negative damping other than when the clutch was very new and even then only at very low levels. For RCF1o it indicates that it experiences no negative damping at all. Read in that light, I do not read ‘reduced’ in the body of the report in the way the Applicant suggests. The attachment suggests that the problem would be eliminated for clutches with RCF1o but is inconclusive as to the effect of introducing B8040 into one side of an otherwise fully B8080 dual clutch transmission.
2. I do not accept therefore that this document shows that the switch in production to the half-hybrid B8040/B8080 clutch was not effective. Consequently, I do not accept that the two documents relied upon by the Applicant demonstrate that the switch to RCF1o or the half-hybrid B8040/B8080 clutch was not effective.
3. That leaves the warranty data. Both sides relied upon this data to support their contentions about the efficacy of the switch in production to RCF1o and the half-hybrid B8040/B8080 clutch. The Applicant submitted that a graph prepared by Mr Kuhn (his Figure 26) and part of the 14D Report from Ford US showed that the fixes had not been effective. The Respondent submitted that graphs prepared by Ms Padmanaban (Figure 6 and Figure 7 in her second report) showed that they had.

### The Applicant’s contentions

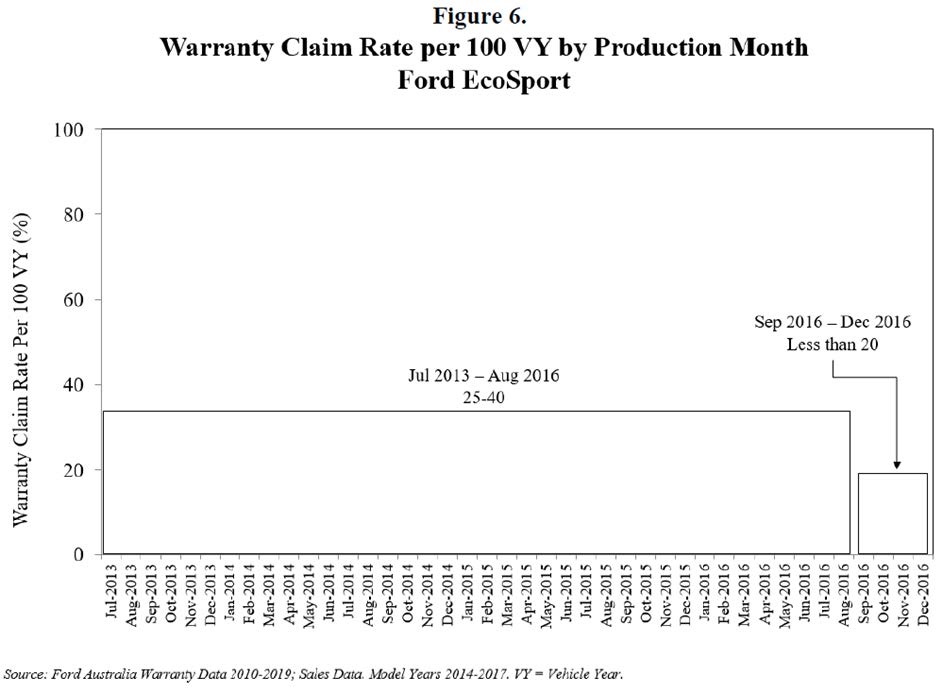
1. Figure 26 in Mr Kuhn’s report is as follows:

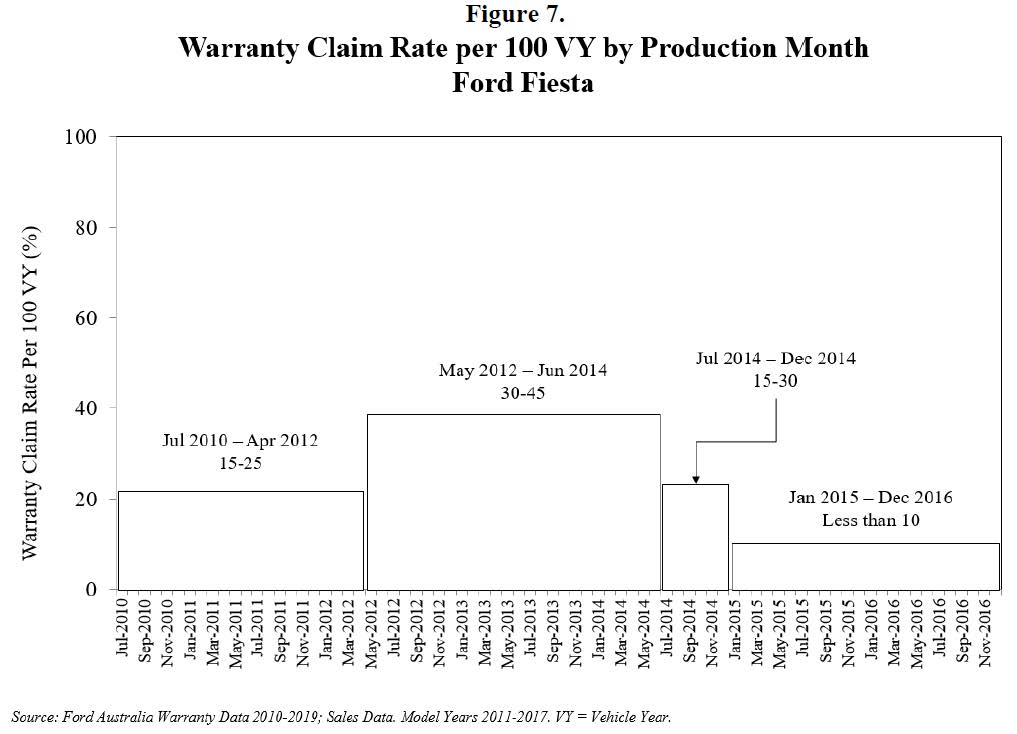


1. She submitted that this showed that for Fiesta vehicles produced after January 2015, the clutch replacement rate was comfortably in excess of the benchmark of 3RE/1000 by 24 MIS and was travelling close to 10RE/1000 for the 2016 vehicles by about 24-30 MIS. This submission involves a number of concepts which need to be explained before the submission is assessed.
2. The notation 3RE/1000 is a shorthand for 3 repair events per 1000 vehicles. The rate thus expressed is somewhat amorphous since it does not say anything about the vehicles it applies to (presumably they do not include those still standing on the showroom floor). To be meaningful it needs to be tied to a third variable which can frame the rate. For example, one might usefully say that there were 3 clutch replacements per 1000 vehicles that had been in service for a year or, alternatively, that had been driven at least 30,000 kms. The raw statement that there are 3 clutch replacements per 1000 vehicles is, therefore, arguably meaningless. No doubt for this reason, transmission engineers sometimes add an additional dimension to this metric known as months in service (‘MIS’). Thus 1RE/1000 at 18 MIS means that for every 1,000 vehicles which have been in service for 18 months there has been 1 clutch replacement.
3. Next, the benchmark referred to in the Applicant’s submission is a reference to a document entitled ‘System Design Specifications’. The SDS is an Excel spreadsheet with a number of tabs. One of these is entitled ‘Document History’. It sets out the history of the document and suggests that it was initially created on 15 March 2006 and thereafter updated several times until 24 July 2009. Another tab headed ‘DPS6 Powershift Transmission – System Design Specification’ suggests that the document sets out the specifications required by Ford US’ Transmission and Driveline Engineering division. That raises the question of specifications for whom? Since it was Getrag and LuK who made the transmission I infer that this document represents the specifications provided by Ford US to Getrag (or LuK) for the DPS6. Pausing there, the DPS6 was put in three different model lines involved in the present litigation. It would be surprising given the range of engine and chassis sizes of the vehicles that the performance specifications for the DPS6 for each model line would be the same.
4. The Applicant’s submissions at [357] and [360] referred to a number of elements of the SDS. The first was cells 27, 28 and 33 of the tab in the SDS entitled ‘NVH’. ‘NVH’ is an acronym for ‘noise, vibration and harshness’. The only point of these references appears to be that they contain a cross-reference to another tab entitled ‘B299N Specific Targets’. There is also another tab entitled ‘C Car Specific Targets’. B299 is a reference to Fiesta vehicles which were usually identified by an alphanumeric code starting with B (recalling that the Fiesta is a B-segment vehicle). For example, as Annexure 5 to Dr Greiner’s report shows, the Fiesta vehicles amongst the Affected Vehicles were all known as B299A. I infer that the tab entitled ‘B299N Specific Targets’ sets out the specific targets applicable to all types of Fiesta and that the N is, in effect, a variable which can reflect any of the codes for the various versions of the Fiesta. As such the ‘B299N Specific Targets’ tab is not relevant to the EcoSport (B515A) or the Focus (C346A and C346E). Since the present discussion does not concern the Focus the tab dealing with C-segment car specific targets may be put to one side.
5. Moving then to the tab entitled ‘B299N specific targets’ one enters the fray knowing one is not talking about the EcoSport but only the Fiesta. The Applicant identified row 69 as the focus of her attention. It specifies that the rate of repair per 1000 is to be 3.2 for the B299N vehicles (ie the Fiesta). It does not say anything about MIS periods. It also identifies that the rate of replacement for the ‘commodity target’ is 3. Doing the best that one can, I infer that the commodity target is some other vehicle actual or imagined against which the B299N is to be compared, perhaps a competitor’s vehicle.
6. Returning then to the Applicant’s submission at [360], it contains two elements. One is a submission about what Mr Kuhn’s Figure 26 shows. The second concerns a comparison between what the figure is said to show and the suggested benchmark of 3/1000 by 24 MIS. I deal with Figure 26 shortly but the comparison submission must fail. The benchmark rate identified by the Applicant in her submissions is a benchmark of 3.2 not 3 and is not, contrary to the Applicant’s submission, expressed by reference to 24 MIS. The transposition error of 3.2 to 3 is probably not especially material (and, indeed, seems not to have been made at [357] of the Applicant’s submissions or at [69] of her reply submissions) but the reference to 24 MIS which I cannot locate in the SDS makes the submission difficult to assess. In her reply submissions, the Applicant says that she *inferred* that the ‘SDS … uses the industry interval of by 24 MIS’ because that is the interval which Dr Greiner regarded as ‘typical’ ([40(a)]). I do not think it is safe, absent direct evidence about the benchmark adopted by Ford US in the SDS, to draw such an inference. Moreover, despite the Applicant’s assertion at [40(a)] of her reply submissions that the Respondent’s ‘criticism that the R/1000 benchmark might require some other interval was something the Respondent needed to prove by evidence’, it is the Applicant who advanced the argument that the warranty data bespeaks the inefficacy of the switches in clutch lining material. In that context, the warranty data’s opacity stands in the way of her argument being accepted. That said, I do accept that the portion relied upon by the Applicant in the SDS is concerned with the Fiesta vehicles. However, it is not concerned with the EcoSport (where the switch was to the half-hybrid clutch).
7. Turning then to Figure 26 itself, on its face it is concerned with the Fiesta not the EcoSport so, like the SDS itself, it is of no probative value in relation to the EcoSport. So far as I can see it does not say anything about what the suggested benchmark should be at all. Indeed, I cannot help but think that [360] of the Applicant’s submissions has in some way miscarried. I am unable in that circumstance to assess the Applicant’s submission about it because that submission does not make sense. The explanation proffered at [40(a)] of the Applicant’s reply submissions, referred to above, does not improve the position.
8. Addressing myself to Figure 26 unencumbered by the Applicant’s submission about it, I do not think that it shows that the switch to RCF1o in the Fiesta in January 2015 did not resolve the problem. There is, so it seems to me, a missing metric in Figure 26. Taking, for example, the 2014 production year it tells one that 24.3% of the 1.5L vehicles for that production year have had a clutch replacement. Does Figure 26 mean that 24.3% of 1.5L Fiesta vehicles had had at least 1 clutch replacement by November 2019? I mention that date because that is when the warranty data that Mr Kuhn was briefed with concludes, and his comments on the seemingly identical Figure 27 at §239 of his report suggest this interpretation. It is not clear to me however that this is the case.
9. These problems make Figure 26 difficult to grasp. No doubt, some rate dropped from 24.3% to 2.2% between the 2014 and 2015 production years but I do not really know what that rate is. Doing the best that one can, I proceed on the basis that the Applicant’s point is that even after the introduction of RCF1o in production from January 2015 the rate (whatever it is) was still at 2.2%. The inference underlying this submission is that all elements of the non-zero clutch replacement rate after January 2015 are to be attributed to problems with the performance of RCF1o. But I do not see why I should draw that inference. Presumably there is a background failure rate for clutches which has got nothing to do with the inherent properties of their friction material and which turns upon real-life matters such as how vehicles are driven and maintained. In a given population of vehicles, some are going to be driven in harsh conditions and treated disrespectfully (Dr Greiner referred to this as ‘spirited driving’). Is that what the 2.2% reflects? Or does only part of the 2.2% reflect that problem? On that view, would the part which was left be significant? Or does some other problem lurk behind the figure?
10. Given these insuperable difficulties, I do not think that this kind of evidence shows anything about the efficacy of RCF1o in the absence of some engineering evidence that there was, in fact, a problem with RCF1o. If there is such engineering evidence then it is a much surer foundation for this kind of finding than this kind of evidence. If there is no such engineering evidence then I do not think that this kind of evidence can be used to summon a case from thin air. I therefore do not accept the Applicant’s submission that Figure 26 shows that the switch to RCF1o was not effective.
11. To prove the switch to RCF1o was effective, the Respondent chose to rely on Ms Padmanaban’s evidence to which I will come. To the extent the Respondent relied on Figure 26 by extracting the seemingly identical Figure 27 in a later section of its submissions, I would have found it unpersuasive for the same reasons I find the Applicant’s submission about Figure 26 unpersuasive. Further, there are aspects of Figure 26 which are apt to mislead. To the extent that it is being advanced as showing the switch to RCF1o was effective, it is puzzling to me why the 1.0L Fox Fiesta has been included in the graph since it never used B8080 in the first place. The same may be said about the inclusion of the 1.6L Fiesta which also never had the switch to RCF1o in Australia. The only vehicle in which the switch occurred in Australia is the 1.5L Fiesta.
12. So Figure 26 does not help the Applicant. She also relied on the 14D Report to which I have referred. This submission was at [361]. It refers to the ‘250 rpm test’ which I have explained in more detail above at [125]-[127]. Ford dealers in Australia were instructed to apply the test to vehicles presenting with clutch issues. In effect the test was applied to see if a vehicle exhibited shudder. Dealers were instructed not to replace a clutch if no shudder was exhibited. There was a debate between the parties as to whether this was an appropriate test with the Applicant submitting that the Respondent in selecting the rate was motivated by cost considerations rather than a desire accurately to detect the true extent of deficiencies experienced by customers. I address that debate in more detail below, in the section dealing with on-road fixes. The implication of that in the current context is that it might mean that the rate of clutch replacements was artificially depressed because of the way the test was designed. Given my view that there is not much assistance for either party in the warranty data this, if accepted, is merely another reason for staying away from it. However, that was not what the Applicant submitted. Instead, she submitted that the 14D Report had acknowledged that vehicles with a fluctuation in the rotation rate of the transmission’s input shaft below 250 rpm can still have shudder. There is no need to set out this portion of the 14D Report. Assuming in the Applicant’s favour that the warranty data understates the extent of the shudder problem, this would not assist in advancing a case that the RCF1o fix had not been effective. On this hypothesis, this would only show that Figure 26 in Mr Kuhn’s report – whatever it means – understates the problem. As I have said, I do not think I can do much with the 2.2% referred to in Figure 26 in terms of assessing whether RCF1o works. If one adds into this conceptual quagmire that the 2.2% figure may be understated because of the limitations of the 250 rpm test I do not see that that problem gets any better. Understated, of course, covers a range of sins. Was it a little bit understated? Should it have been 4%? Without knowing a bit more about that the same difficulty to which I have already referred still exists, that is to say, what is causing this failure rate? The Applicant took as her point of departure that the residual failure rate was caused by the RCF1o material whilst the Respondent (at least in relying on Ms Padmanaban) took as its point of departure that the low level of the residual failure rate showed RCF1o had resolved the issue. In fact, both sides imported into the data their own view of how the case ought be decided and tended to ignore the other side’s point. The Respondent only saw the drop in the clutch replacement rate on the introduction of RCF1o and ignored the residual failure rate that remained. The Applicant focused only on the residual rate and ignored the drop which had occurred. For my part, I do not find this evidence at all helpful.
13. In those circumstances, I do not accept that Figure 26 shows that the RCF1o material was not an adequate fix (or, for completeness, that it was). The picture is not improved even if one accepts that the 250 rpm test led to under-diagnosis.
14. The Applicant’s submissions about Figure 26 do not appear to have been directed at the EcoSport which did not involve a switch to RCF1o but instead to the half-hybrid B8040/B8080 clutch. In any event, Figure 26 is not about that topic.

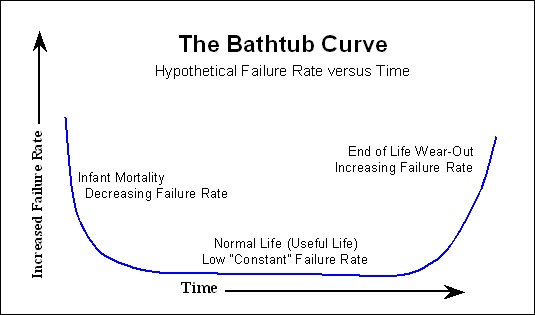
### The Respondent’s submissions

1. The Respondent submitted that the effectiveness of both fixes (RCF1o and B8040/B8080) was demonstrated by the warranty data for both the Fiesta and EcoSport vehicles. The Respondent relied on the evidence of a statistician, Ms Padmanaban, who subjected the warranty data to further analysis and processing.
2. The Respondent’s submission that the fixes had been effective was based on Figure 6 and Figure 7 in Ms Padmanaban’s second report. Figure 6 is about the EcoSport (ie the B8040/B8080 switch) and Figure 7 is about the Fiesta (the RCF1o switch). The figures are as follows:





1. Figure 6 and Figure 7 require a lot of explanation in order to make sense of them. The explanation begins with Ms Padmanaban’s use of the metric ‘VY’. She explained that she had analysed the data to determine the rate of warranty claims against the number of years of vehicle exposure. Ms Padmanaban referred to this metric as ‘vehicle years (VY) of exposure’. For example, a vehicle which has been on the road for 1 year has a VY of 1 year. Using the VY metric she was able to determine that there were 25,123 Fiesta vehicles on the road (this is at variance with the finding above that there were 25,119 such vehicles but this may be put to one side) which had between them 165,846 vehicle years. As with Mr Holtshausen, the data analysed by Ms Padmanaban concluded at 26 November 2019.
2. I do not find these graphs at all useful. They suffer from the same problem as Figure 26 in Mr Kuhn’s report. What Figure 7 shows for the Fiesta vehicles is that after the introduction of the RCF1o material a rate which had been between 15-30 warranty claims per 100 vehicle years dropped to a rate of less than 10. Because the use of the blocks has obscured what the actual rates were for each production month one does not really know what the actual drop was other than it could have been as little as a 33% drop from 15 (the minimum in the previous block) to 10 (the maximum in the post January 2015 block) or at least as large as a 66% drop from 30 (the maximum in the preceding block) to 10 and perhaps as high as 100% if the claim rate for the January 2015 production month was 0%. What the graph tells one therefore is that the drop was somewhere between 33% and 100%. Why the position of particular production months was removed from the graph is a mystery but I am bound to say that presented in the form that it is I do not find it very helpful. For completeness, in her first report Ms Padmanaban did include a version of the graph in Annexure 4 in which the individual production month data was displayed, along with annotated confidence intervals. However, the parties agreed that some (unrelated) data had to be removed from the warranty data and these graphs prefigure its removal. It was this change which necessitated Ms Padmanaban’s second report. One cannot therefore do much with Annexure 4 other than to note that production of a graph which had the actual position of particular production months was something which could have been done in Figure 6 and Figure 7 of her second report.
3. Assuming in the Respondent’s favour that I should take from Figure 7 that there was some kind of non-trivial drop in warranty claims from January 2015 (which is about as good as it gets), I do not think this throws any light on whether the switch to RCF1o did, or did not, resolve the shudder problem. To the extent that there is a residual level of claims (unknowable because of the decision to use a block-style graph), this might tend to suggest (and the Applicant would no doubt submit) that this showed RCF1o was not an effective solution. An assessment of either party’s submissions about this would require a grasp of what the background rate was likely to be and how the (unknown) rate implied by Figure 7 related to that background rate. In effect, whilst I can see that the substitution of RCF1o improved the situation I cannot say it resolved it. Nor, based on this data, can I say that it did not resolve it.
4. In any event, I am to a degree sceptical about the decision to analyse the position by reference to vehicle years. To understand this scepticism it is necessary to take a short detour and to understand what is known as the bathtub curve. Mr Kuhn and Dr Greiner were both familiar with the bathtub curve. Mr Kuhn regarded it as ‘accepted in the industry’ (§111) and Dr Greiner agreed with this at §246 and following of his reply report. He summarised the idea this way by saying that ‘over the lifecycle of a product, the curve capturing the observed failure rate is expected to take the shape of a bathtub’. Mr Kuhn provided a picture of a bathtub curve at Figure 8:



1. Dr Greiner was referring to failure rates in actual vehicles and, unlike Figure 7 in Ms Padmanaban’s report, was not using the VY metric. The point for present purposes is that the warranty claim rate for new vehicles is expected to be high but then drop rapidly to a low rate for most of the life of the vehicle before rising sharply as it reaches the end of its life (in this way, cars are like humans: mostly vulnerable in infancy and old age). The problem with the VY metric may now be appreciated. Under it, the warranty claims made by a vehicle in its first year on the road are treated precisely the same way as for a vehicle in its fifth year on the road. To illustrate this point imagine there are only three vehicles, A which has been on the road for 1 year and B and C which have both been on the road for 3 years. Imagine further that A has made 2 warranty claims in its first year and that B and C have also made 2 claims in their first year but none since. If this is imagined in terms of warranty claim rates by reference to how long each vehicle has been on the road it conforms simplistically to the bathtub curve. That curve reflects the reality that for B and C no claims were made after the first year.
2. But the bathtub looks quite different through the lens of vehicle years. Between them A, B and C have 7 years on the road and the number of claims is 6. The rate of claims per VY is 6/7, ie, less than one. However, in the real world all three vehicles made 2 claims in their first year. The figure is reduced to less than one because, in effect, the low claim rate in the later years reduces the high initial claim rate. The effect of the VY metric on warranty claims is to reduce the apparently high initial rate by reason of the subsequent lower rate. In other words, the VY metric flattens the bathtub curve.
3. When used as a metric to measure claim rates I am concerned, therefore, that it has a depressing effect on failure rates the older the age of the cohort (at least until the other end of the bathtub is reached). The warranty data in the present case cuts out at 26 November 2019. The complaints data however extends only to 31 January 2019. In her first report Ms Padmanaban analyses the complaints data at §§92-100 also using the VY metric. More complaints data was available extending up to 18 March 2020 and the Respondent, in the lead up to the trial, wished to use it. This matter was first ventilated at an interlocutory hearing on 5 June 2020. The trial was due to start on 15 June 2020. I took the view that more data would always be becoming available on an ongoing basis and that at some point a line had to be put under the evidence in the interests of an orderly trial. I therefore concluded that no further complaints data becoming available after 31 January 2019 should be used. It is an interesting thought, not necessary to pursue, that later data would have brought more of the bottom of the bathtub into the VY analysis thereby further depressing the apparent complaint rate. Certainly, the enthusiasm of the Respondent to include the data and the equal enthusiasm of the Applicant to resist it puzzled me on 5 June 2020. In any event, there is no need to draw any conclusions about this.
4. Returning to Ms Padmanaban’s Figure 7, it seems to me that quite apart from the use of the blocks which hide the detail in the actual data, the figure does not show, as the Respondent submitted, a significant reduction in ‘warranty claim rates’. Rather, it shows a reduction in warranty claim rates per 100 VY which is quite a different, although not altogether unrelated, concept. For the reason I have just given, there is good reason to think, in light of the bathtub curve, that situation may be more complex than this submission implies.
5. I should say for completeness that Ms Padmanaban explained that VY accounted for the total number of years a vehicle is on the road after it had been purchased which seems correct. She also said that it reflected the true exposure of the vehicle in the field. About this I am much less certain. Whilst there is no doubt a connection between the age of a vehicle in years and its exposure in the field this connection is by no means straightforward. For example, four year old vehicles which have been driven in excess of 100,000 km per year are treated, under the VY metric, in the same way as vehicles of the same age driven only on Sunday mornings. There may be intuitive reasons to think that the warranty claim rates for these two classes of vehicles may be different.
6. In fairness to Ms Padmanaban, she did not invent the VY metric. As she said in her first report at §28, it is frequently used by the Insurance Institute for Highway Safety in the US and by other highway safety researchers ‘to calculate the total number of years a vehicle is on the road’. She gave similar evidence when briefly cross-examined about it. This statement seems tautological to me but I accept it. Further, she also explained that the use of the VY metric was the preferred approach for the automotive highway safety community when assessing the field performance of vehicles. It is not clear to me why the automotive highway safety community has alighted on the VY metric but I am sure they have their reasons. In fact, it appears that Ms Padmanaban’s use of the VY metric may have been causally connected in some way with the fact that the Respondent’s solicitors instructed her to use it (although I accept that she may have thought independently that it was a useful metric). At §8(d) and §8(e) of their letter of instruction dated 11 February 2020 Ms Padmanaban was explicitly instructed to produce analyses of the warranty data expressed as rates per 100 vehicle years and this she has certainly done.
7. What is striking about the VY metric, however, is the position of transmission engineers who work or have worked with transmissions on a full-time basis. For example, Dr Greiner had never heard of the VY metric. Given the breadth of his experience as a transmission engineer this suggests that it is not a metric used by transmission engineers. The same may be said of the engineers who prepared the root cause analyses within Ford US. The VY metric does not appear in those analyses. This suggests that, for whatever reason, transmission engineers do not think the VY metric is useful regardless of the position of the automotive highway safety community. Mr Kuhn also did not refer in his report to vehicle years and at §188 endorses the use of RE/1000 to determine correlations between corrective actions and warranty rates.
8. I therefore do not accept the Respondent’s submission that Figure 7 shows that the RCF1o material did not exhibit problems. Had the Applicant made such a submission, I would also not have accepted any suggestion that it showed that the RCF1o did exhibit problems. Largely for the same reasons as I have given in relation to the Applicant’s attempt to extract something useful from Figure 26 of Mr Kuhn’s report, it seems to me that this kind of evidence is of little use.
9. Figure 7 dealt, of course, only with the Fiesta vehicles. For the same reasons, however, I do not accept that Figure 6 helps either party in relation to the EcoSport.

## Conclusions on the switch in production to RCF1o and half-hybrid B8040/B8080

1. As to RCF1o, Dr Greiner thought it an effective solution. Mr Kuhn thought so too. He did not, however, address it from an engineering position and his opinion seems largely to have been based on the warranty data (as expressed in his Figure 26). As I have said, I do not find either parties’ reliance on that data in the least persuasive. Nevertheless, I propose to accept Dr Greiner’s evidence about it. I was impressed by Dr Greiner and his evidence about this was against the interests of the Applicant. I conclude that the switch in production to RCF1o resolved the problem of dry shudder.
2. Of course Dr Greiner had said that there were other problems (such as ‘green shudder’, described above) flowing from the use of B8080. Although little attention was given to this, given that those problems were linked by him to B8080 it would appear to follow that RCF1o did not exhibit these problems. Certainly, I did not detect at trial any attempt to prove that RCF1o exhibited the other problems associated with B8080. The Applicant’s attempt to impugn RCF1o was principally focused on the warranty data and for that reason mostly unpersuasive.
3. As to the switch to the half-hybrid B8040/B8080 clutch in the EcoSport, Dr Greiner had no experience with it and expressed no views about it. The 2013 analysis prepared by Ford US does suggest that B8040 could exhibit dry shudder. However, as I have said, I do not accept that this evidence says anything about the use of B8040 in a half-hybrid clutch. I do not accept that the warranty claims data says anything useful on this topic. Mr Kuhn gave evidence about it but it was expressed in his introduction at such a level of generality as not to be useful. Consequently, I do not accept that it has been proven by the Applicant that the switch to the half-hybrid clutch in production was not effective. If it were for the Respondent to prove that the switch was effective, I would not accept that that was proven either.

## ‘Fix on fail’ strategy for vehicles on the road

1. In addition to the production fixes, Ford also implemented a strategy for addressing problems with clutch components in vehicles on the road. This section deals with the nature and efficacy of the on-road fixes.
2. Ford’s strategy in respect of each component deficiency was described as ‘fix on fail’, meaning that the defective component was replaced, to borrow Mr Kuhn’s phrase ‘when and if’ it presented with problems. In the normal course, this meant that a clutch was only replaced following a complaint by a customer that they were experiencing a problem symptomatic of a defective clutch: cf Greiner §28(c); Kuhn §234. Dr Greiner was critical of the fix on fail strategy, opining that it has left on the road many vehicles with components prone to failing because customers are unaware of the risk of defects and that there is a fix or partial fix available. Mr Kuhn, for his part, described this criticism as ‘unwarranted’ and gave evidence that fix on fail is a standard approach in the industry for non-safety related component deficiencies: §§234-235. Whether or not the fix on fail approach is standard and whether or not Dr Greiner’s criticism is warranted are questions not necessary to decide. What matters for present purposes is that it is in fact the approach that Ford adopted.
3. The mere fact that a customer reported an issue which might be associated with a defective clutch (like shudder) did not necessarily result in the clutch being replaced. Instead, Ford instructed its dealers and servicing engineers to undertake a diagnostic analysis called the 250 rpm test, to which I have referred above. The test calculates fluctuations in the rotation rate of the inner transmission input shaft during acceleration from a standing start. If the fluctuations in the transmission input shaft’s rate of revolution exceed 250 rpm without visible fluid contamination, the clutch would ordinarily be regarded as exhibiting (or liable to exhibit) dry shudder and would be replaced: see TSB13/14 (FOR.004.001.0089).

### Fiesta

1. As I have explained, all 1.5L and 1.6L Fiestas produced before 7 January 2015 were produced with B8080 material. Since around September 2016, where those vehicles underwent a clutch replacement, the RCF1o material was installed. There was no suggestion that the use of RCF1o in a replacement clutch is any less effective than its use in production. Accordingly, I conclude that this fix was effective in the Fiesta vehicles on the road to which it was applied.

### EcoSport

1. From around September 2016, the half-hybrid B8040/B8080 clutches were available for installation in EcoSports on the road. As I have explained, the evidence does not support a conclusion one way or the other as to whether the use of half-hybrid B8040/B8080 clutch in production solved the problems associated with the B8080 material. That applies equally to its use in replacement clutches for vehicles on the road.

### Focus

1. In the case of the Focus, too, the half-hybrid B8040/B8080 clutch was available for installation from around September 2016. At §415 of his report Dr Greiner extracted a graph from a Ford US document which appears to depict warranty data inter alia for 2016 model year Focus vehicles with ‘new B8040 material’ and for 2015 model year Focus vehicles ‘with old B8080 material’. Dr Greiner implied that, based on the data, it appears that the deployment of the half-hybrid B8040/B8080 clutch lowered the rate of clutch repairs although, as I have said, he fell short of expressing a concluded view about this. The graph suffers from similar problems to other representations of the warranty data discussed above. Among other matters, it is not clear (and Dr Greiner does not explain) precisely which cohorts of vehicles are being represented and what has happened to those vehicles. Possibly, the graph is intended to show that certain 2016 model year Focus vehicles had a clutch replacement and received the half-hybrid clutch and, when compared with 2015 model year Focus vehicles (all of which, on this hypothesis, retained the B8080 material), the upgraded vehicles were associated with a lower warranty claim rate. But this is opaque and I decline to speculate upon it. Correspondingly, although the Respondent sought to demonstrate that the switch to B8040/B8080 had been effective its submissions did not advance any contention that the position of the fix in relation to on-road changes to Focus vehicles should be treated any differently to that of the EcoSport. It therefore flows from my conclusion in respect of the EcoSport that the efficacy of the on-road switch for Focus vehicles has been neither proven nor disproven.

### 250 rpm test

1. As mentioned above, Ford applied a clutch replacement to a vehicle on the road where the vehicle failed the 250 rpm test. Typically, unless the need for a clutch replacement was otherwise indicated, it was not replaced if the vehicle did *not* fail the 250 rpm test.
2. The Applicant submitted that the 250 rpm test was not adequate and that vehicles suffering from shudder could still pass the 250 rpm test. In my view, this is one of many a non-issue in the case, especially when the Applicant’s case on this issue is thought about clearly. That case is that the vehicles were manufactured in such a way that they presented a risk of dry shudder. In the case of some vehicles, the Respondent remedied the problem by changing the B8080 material to RCF1o. As I have explained, I am satisfied that whenever this occurred it resolved the various problems which B8080 posed. In relation to those vehicles which have not had the replacement the Applicant’s case remains that the vehicles are blighted by the existence of a risk of dry shudder. If the Applicant is correct about the existence of that risk in vehicles which still have B8080 in them, it hardly seems to matter whether the 250 rpm test is a sound test or not. In those vehicles where the change has been made the risk has been removed. In those vehicles where it has not, the risk remains.
3. The position is similar in the case of those vehicles in which B8080 was replaced with the half-hybrid B8040/B8080 clutch. For the reasons I have stated, it has not been shown that the half-hybrid clutch is defective and therefore that the problem still exists in vehicles on the road which have received a half-hybrid replacement clutch. On the other hand, neither has it been proved the problem has been resolved in such vehicles. I return to this topic when addressing which party bore the onus of proving that the substitution of B8080 with RCF1o was effective. The Applicant relies for her critique of the 250 rpm test on the evidence of Dr Greiner which, if accepted, would establish only that it is possible that a vehicle may exhibit shudder while returning a test reading of below 250 rpm not that this in fact occurred or is likely to occur in vehicles which have been or will be fitted with a replacement half-hybrid clutch. In other words, even if I were to accept Dr Greiner’s critique of the design of the 250 rpm test, this would not be sufficient to disturb my conclusion that the efficacy of the installation of half-hybrid B8040/B8080 clutches in vehicles on the road has been neither proven nor disproven.

### Geometric variability issue in vehicles on the road

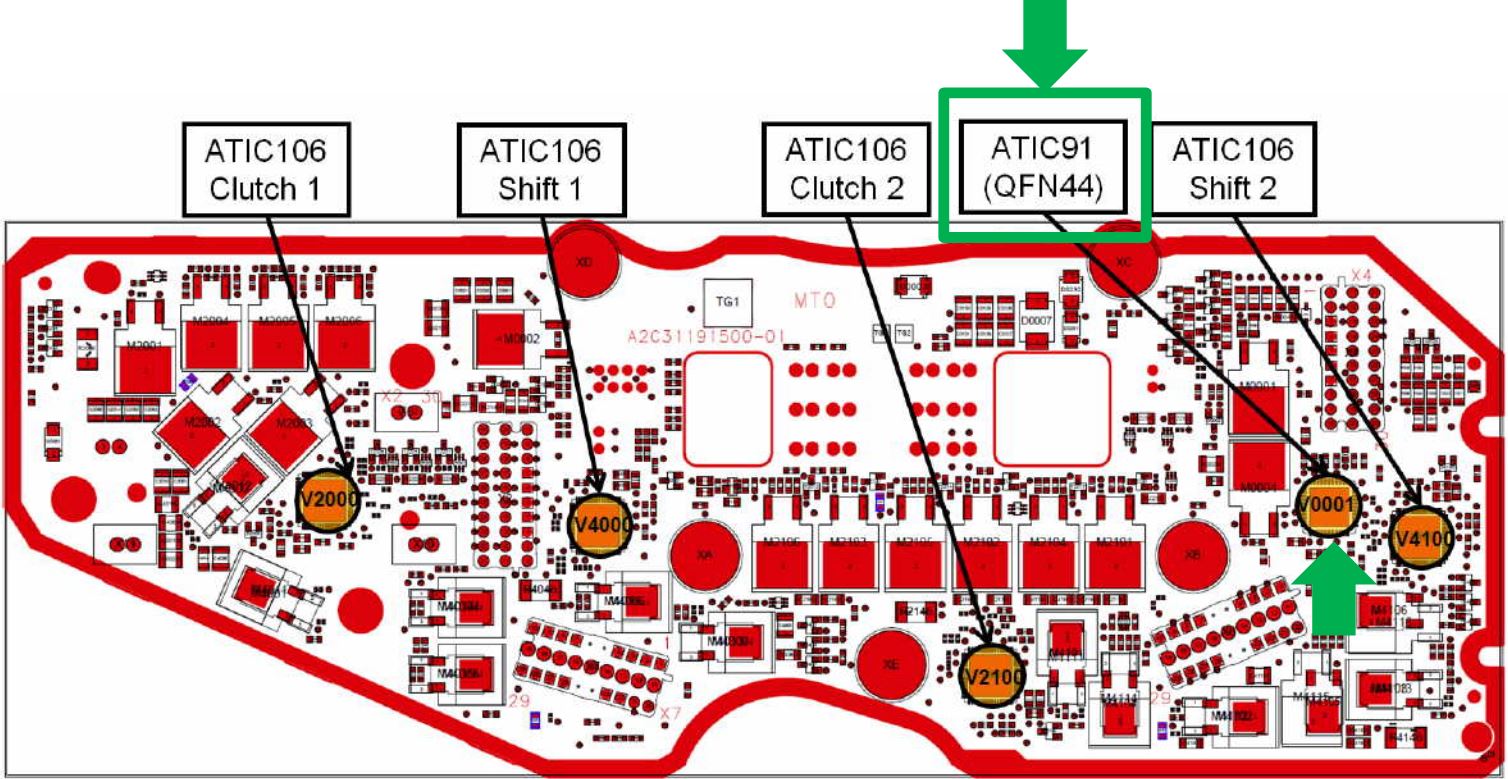
1. I explained above that Ford sought to remedy the issue of geometric variability in production by introducing end of line testing and sorting procedures (to the extent the problem was caused by the way the clutch components were manufactured or assembled).
2. I conclude that the problem of geometric variability, to the extent it was a problem with the way the clutch components were manufactured or assembled in vehicles on the road that had been produced prior to July 2013, was fixed for those vehicles that had a clutch replacement after this date, as these replacement clutches had been subject to the end of line testing that eliminated the variability problem.

## The risk of problems eventuating

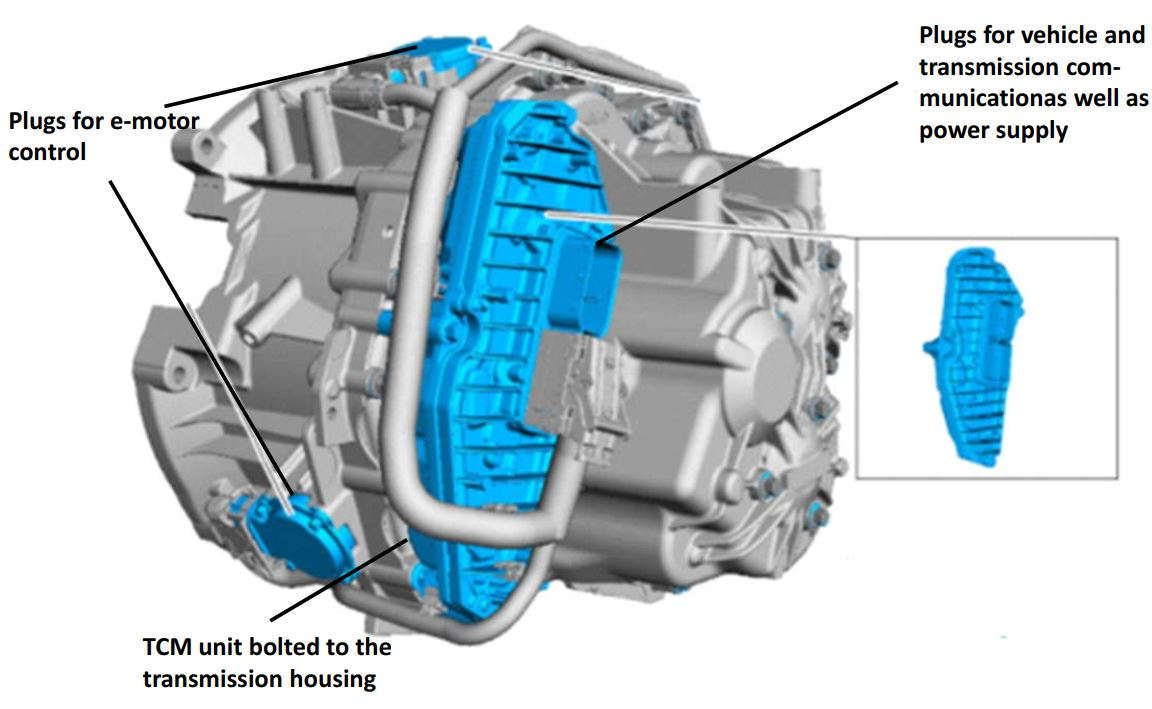
1. I am satisfied that as produced all of the vehicles in the cohort which used B8080 as their clutch lining material had a real risk of developing dry shudder. The size of this risk is difficult precisely to quantify. However, the 21 August 2013 6 Panel Report suggested that 50% of clutches made from B8080 exhibited self-excited shudder which is a lot. The final 14D Report from October 2016 suggested that the problem of self-excited shudder further deteriorated over the life of the clutch. This suggests that there may be some reason to think that the problem worsens with time.
2. On the other hand, the warranty data is not a reliable estimate since it deals only with those vehicles where the problem actually manifested itself. There will be vehicles on the road where the problem is yet to eventuate or become the subject of a complaint. The warranty data, even if it could be used to measure the risk, would underestimate it. This is a point Dr Greiner made at §180 and §187. Further, for reasons I have already given, there are real problems with extracting precise propositions from the warranty data for reasons relating to the potential presence of other factors. I do however accept that it is sufficient to say that the problems posed by B8080 were real. The correctness of that conclusion is buttressed by the fact that Ford US decided to resolve the problem in production by introducing RCF1o into the Fiesta and the half-hybrid B8040/B8080 into the EcoSport and by its corresponding decision to make the same switch in all three model lines in some of the on-road vehicles which were presented for servicing. Given the very substantial costs involved this is not something a profit-maximising firm would do unless there was a real problem.
3. I conclude therefore that the use of B8080 presented a real risk of dry shudder. It is difficult to say this in relation to the other symptoms described by Dr Greiner, such as green shudder. As it happens, it does not in the end matter since if the Applicant succeeds on dry shudder that is sufficient for her. If she fails on dry shudder the other difficulties do not matter either since they are linked back to the same alleged properties of B8080 that would cause dry shudder.
4. In relation to those vehicles which never had the B8080 material because they were produced after the change in production and were manufactured with RCF1o, I conclude that there is no real risk of dry shudder. I reach the same conclusion in relation to those vehicles which were manufactured with B8080 but have subsequently had the clutch material changed to RCF1o. For completeness, however, it remains the fact that when initially sold into the market they carried the risk (which has subsequently been removed).
5. In relation to those vehicles manufactured with the half-hybrid B8040/B8080 clutch, or which were manufactured with B8080 but have subsequently had the clutch material changed to B8040/B8080, I am unable to conclude whether they do or do not present a real risk of dry shudder for the reasons I have articulated.
6. In relation to those vehicles which were manufactured with B8080 but are yet to have the clutch lining changed to B8040/B8080 or RCF1o I conclude that the risk of clutch shudder remains real particularly since the problem may worsen over time. As in the case of the input shaft seals, no submission was developed by the Respondent that those vehicles where failure had not yet occurred were less likely to fail given the current age of the cohort. As I have said elsewhere, the assessment of such a submission, had it been made, would require much in the way of analysis. I do not think it would be safe to attempt such a recalibration where neither party adverted to it.

# Section VIII: The TCM Issue

1. As mentioned already the TCM is the computer which controls the transmission. It relies on sensors within the transmission to inform it of the current state of the transmission and issues commands to mechanical actuators within the transmission to bring about gear changes and to control the two clutches. Intuitively, just as the driver of a manual vehicle co-ordinates his or her operation of the clutch and gear changes with their operation of the engine and the brakes so too the TCM has to know what is happening in those other systems within the vehicle in order to ensure that its operation of the transmission is coherent with those activities. For example, if the vehicle is slowing down to a particular speed range via the application of the brakes this may signify that the next gear change will be a down shift and the TCM must act accordingly to set in train the steps necessary to achieve that. Consequently, the TCM must communicate with these other systems. This involves receiving information from within the transmission which is accomplished via electronic sensors. It also involves giving instructions to the mechanical actuators within the transmission to conduct the operation it has decided upon.
2. Within the transmission itself there are principally two activities to which the TCM must attend, changing the gear on the inactive input shaft and when the time comes to connect that non-moving input shaft to the power, negotiating the introduction of the relevant clutch plate to the drive plate. The first of these functions involves mechanical actuators within the shift drums (these change the gears) and the second involves mechanical actuators which move the pressure plate, thereby pushing the clutch plate onto the drive plate.
3. Each clutch is responsible either for the odd numbered gears or the even numbered gears, clutch 1 the odd numbered gears and clutch 2 the even numbered. These are each separately controlled, that is to say, there is a controller for clutch 1, a controller for the gear changes associated with clutch 1, a controller for clutch 2 and a controller for gear changes associated with clutch 2. There are, therefore, four distinct control functions involved in operating the mechanical aspects of the transmission.
4. In addition to these control functions, the TCM must also control itself and the distribution of electrical power within it. This is a fifth control function.
5. Each of the control functions is performed by a separate integrated circuit (or chip) within the TCM. The chips which do this are known as ‘automotive technology integrated circuits’ or ‘ATICs’. In the DPS6 the four control functions relating to the operation of the clutches and gear changes are performed by four ATICs. Each of these is known as an ATIC 106. The fifth control function relating to power distribution on the TCM itself is performed by a different ATIC known as an ATIC 91.
6. One observation that may be made immediately is that failure in the ATIC 106 chips is likely to result in only localised dysfunction. For example, if the ATIC 106 controller for the gear shifts on clutch 1 completely failed then this would result only in an inability to change gears to an odd numbered gear. Where the ATIC 106 controlling the odd numbered gears failed in a less than complete way, then varying degrees of dysfunction in gear changes with those gears might be observed. Intermittent dysfunction in an ATIC 106 controlling a clutch would, on the other hand, be likely to result in symptoms associated with instability in that clutch system. But these failures are localised in the particular system controlled by the relevant ATIC 106.
7. This may be contrasted with the situation where there was failure in the ATIC 91. In such a case, as I explain in more detail below, the TCM goes offline. The clutches are designed so that, absent communications from the TCM, they mechanically place themselves into neutral by disengaging the clutch plate from the drive plate. This is referred to as a fail-safe mode and operates in a similar fashion to a dead man’s switch. If the failure is very brief (in the order of milliseconds) then this process will not progress very far and the disengagement of the clutches may not be detectable at all or perhaps only as a brief shudder. If the failure is longer in duration (a few seconds) then the effect is a power loss. The full disengagement of the clutch will mean, in that circumstance, that the power of the engine is no longer being applied through the drivetrain to the wheels. For that reason, the failure of the ATIC 91 chip leads to potentially more significant disruptions in the driving experience. Consistently with that observation, Mr Cruse explained that the driveability impacts of an affected ATIC 91 chip were more significant than those of an affected ATIC 106 chip: §41.
8. The ATIC 91 and ATIC 106 chips were soldered to a printed circuit board (‘PCB’) described as the lower PCB. The lower board looked like this:



1. The lower board was mounted within the TCM module which itself was then bolted to the external surface of the transmission as this figure shows:



1. The proximity of the TCM to the transmission housing meant that the temperature of the latter would naturally influence that of the former. As has been noted in the case of the friction material, the state of kinetic friction which occurs during the introduction of the clutch plates to the drive plate generates heat and this phenomenon is only likely to increase with more frequent gear changing. Because it is bolted to the transmission housing this heat is shared by conduction with the TCM. The frequent fluctuations in temperature experienced by the transmission are therefore shared with the TCM.
2. These fluctuations then bring one to the topic of the coefficient of thermal expansion (‘CTE’). This is the rate at which an object expands or contracts with a given change in temperature. If two objects each with a different CTE are bound together then fluctuations in temperature will cause them to expand and contract at different rates and this difference generates a physical force. It is this principle, for example, which underpins the operation of a bimetallic thermostat. In the case of a thermostat the change in temperature is converted into mechanical action which turns off or on a heating element.
3. What is good engineering in a thermostat, however, is not necessarily good engineering in a PCB. In this case, the PCB had a CTE of 18 (measured in ppm/C˚) whilst the original ATIC 91 chips had a CTE of 6. The ratio of these two coefficients was therefore 3:1 which is to say that the PCB expanded three times as fast as the ATIC 91 chip. The evidence did not directly disclose what the CTE for the ATIC 106 chips was but it did suggest, in a fairly unspecific way, that the problem was similar. Although some more detail about this might have been helpful it does not matter since the parties both accepted that the CTE problem afflicting the ATIC 106 was similar to that afflicting the ATIC 91. I emphasise, however, that the evidence about this was far from clear.
4. In any event, the effect of the differing CTEs in the case of the ATIC 91 chips (and what I will assume was a differing CTE in the case of the ATIC 106 chips) was that over time the repeated heating and cooling of the TCM created a repeated mechanical strain on the solder which affixed the chips to the PCB.
5. This repeated mechanical strain could cause cracks to occur in that solder. Although it is not necessary to be precise about this, I should mention Dr Greiner’s evidence about this problem. There exists a test known as an ‘RCoT’ test (for Rapid Change of Temperature). This test involves rapidly cycling a component between a high temperature and a low temperature – Dr Greiner instanced 115C˚ and -40C˚ – so as to see how long the component remains functional. Dr Greiner thought that a component should generally be able to withstand 1,500 such cycles of testing. There was some evidence in Ford US’ documents which suggested that, during the development of the TCM, solder cracking had been observed after 750 such cycles (in the ‘Generation 1.3’ TCM) and after 1,000 cycles (in the ‘Generation 1.5’ TCM). Whether that is actually so or what the precise number was probably does not much matter for, as I will shortly explain, the phenomenon of solder cracking was not in dispute.
6. What is solder cracking? Dr Greiner explained that placing the solder under the repeated physical stress arising from temperature fluctuations could cause the substructure of the solder to change. As installed the solder substructure consists of small and consistent grains but under the mechanical stress caused by the temperature fluctuations the grains would become larger and inconsistently sized and shaped. As this process of grain growth progresses it can lead to cracks in the solder. The condition thus described is inherently progressive. Dr Greiner seemed to imply that the temperature fluctuations themselves would contribute to this process independently of the mechanical stress they generated. He did not, however, suggest that the solder cracking process would have happened but for the mechanical stress caused by the temperature fluctuations. Put another way, if the CTE problem had not existed, the temperature fluctuations would not have caused solder cracking by themselves.
7. A consequence of sufficient cracking is disruption in electrical conductivity between the PCB and the chip but this may take some time to occur. Disruption to the conductivity of the solder leads to interference in the communications passing to and from the relevant ATIC. Disruptions of this kind vary in their severity. When a degradation in the solder first occurs it may have little or no direct result since the crack involved may be very small and may not yet materially disrupt the flow of electricity. As the problem worsens, however, there may be complete although intermittent disruptions to conductivity which may be only of very short duration (in the order of milliseconds). As more cracks develop the problem deepens and the disruptions may become more frequent or of longer duration or both until, at last, there is a complete break.
8. The progressive symptoms which solder cracking can generate depends on where it occurs. The symptomology of the failure of the ATIC 106 chips manifests itself in a range of problems with clutch performance and gear changes whilst damage to the ATIC 91 chip can generate failures resulting from attempts of various durations to disengage the clutch caused by the fail-safe mode. It is necessary therefore to describe the distinct problems arising from both. The submissions of the Applicant at [292] and the summary table of Dr Greiner (Table 8) lumped all of the symptoms arising from the ATIC 91 and ATIC 106 chips together under the rubric of the ‘TCM Solder Cracks’. It is, however, necessary to examine them separately.

## ATIC 91 failure symptoms

1. A Ford US 6 panel report included an assessment by Getrag of what a customer might experience in a vehicle suffering from degenerative cracking in the solder affixing an ATIC 91 chip to the PCB. This document is not expressed in perfect English so it is best to let it speak for itself to avoid the perils of interpretation:

Customer experience: (Symptoms For Atic91)

1. Loss of motion condition may occur while driving or stopped
2. Indication to customer:

* *Consistently* – PRNDL on cluster will start flashing, “D” or other position will be blinking
* *May* be accompanied by Check Engine Light
* *May* be accompanied by various messages in cluster Message center including: Transmission Malfunction, Transmission Overheating, Hill Assist not available.

1. Vehicle coasts to side of road, engine remained running.

Braking & Steering assist still active.

1. Pedal response:

* Experience 1: Neutral (open clutch)
* Attempt to accelerate, engine rev’s.
* No Forward/No Reverse
* Steering and brakes still functional
* Experience 2: No throttle response
* Attempt to accelerate, engine remains at idle.
* No Forward/No Reverse
* Steering and brakes are still functional.

1. Once stopped:

* If engine turned off and restart is attempted – will not crank. No Start.
* Allow vehicle to sit with key off for 5 – 10 minutes, then car may crank and start and drive normally

1. Codes Set may include:

* TCM: P0607 and/or P06B8 Control Module or NVRAM failure
* ABS/IPC: U0101 and U1013 loss of communication with TCM
* PCM/IPC: P0850 Park/Neutral Switch Input

1. I would read point 1 as implying a loss of power of some description which could happen whilst driving or at rest. I do not entirely understand point 2 but I take from it at least that a series of lights would come on including a flashing of the Drive gear and that various other messages such as the ominous ‘Check Engine’ light or ‘Hill assist not available’ might come on. Point 3 appears to suggest a problem similar to point 1, namely a disengagement of the transmission leaving the car to coast without any engine power transmitted to the wheels. Point 4 is self-explanatory as is point 5.
2. Each of these symptoms is consistent with the point made earlier that failure of the ATIC 91 manifests itself as attempts by the clutches to disengage themselves when the TCM goes offline (the consequence of the vehicle’s neutral fail-safe mode). As I have foreshadowed, when a power cut occurs the mechatronic actuators in the transmission default to the open position. The symptoms which arise from this problem depend on how long the TCM is offline. It is easy to understand that when the TCM is offline for several seconds then this will be experienced by the driver as the kind of complete loss of power which results when the vehicle puts itself in neutral gear. When the TCM is offline for only a matter of milliseconds then, as Dr Greiner explained, this might be experienced as a shudder.
3. Because the solder cracking problem is progressive rather than instantaneous the course of symptoms is also progressive. At first, the cracking will be asymptomatic (so far as the driver is aware), then there may be symptoms such as the shudder described by Dr Greiner which may be followed by very brief, but discernible, losses of driving power; finally, there may be a loss of driving power for a substantial period of time (in the order of many seconds). I accept Dr Greiner’s evidence, which is consistent with common sense, that these final stages of the problem are dangerous. If a vehicle overtaking another suffers a three second power loss this generates a real risk of an accident. Other similar examples may be imagined such as turning in front of oncoming traffic.

## ATIC 106 failure symptoms

1. Dr Greiner did not give direct evidence about what the consequences of intermittent or complete failure of an ATIC 106 chip might do. But Mr Cruse described the problem in these terms:

If an ATIC 106 chip is affected, the transmission may not always select gears appropriately or may sometimes ‘miss’ gears. If one ATIC 106 chip loses communication altogether, the transmission will not be able to select the gears controlled by that chip. This could influence the vehicle’s performance – for example, if the transmission cannot select second gear, the running speed may increase inappropriately high (‘rev’) in first gear before shifting into third gear, resulting in a jerking or shuddering sensation.

1. I accept this evidence.

## The Affected Vehicles

1. The difficulty with the soldering of the ATIC 91 and ATIC 106 chips was common to all three model lines sold in Australia: the Fiesta, the Focus and the EcoSport.

## Risk of failure

1. I have explained the different symptoms that could arise when the solder attaching the ATIC 91 and ATIC 106 chips to the PCB began to crack. Since this is a case about risks of failure, it is necessary to consider the risks of those difficulties arising. The position of the two chips is not the same.

### ATIC 91

1. An initial observation is that the problems were of increasing severity and that severity was a function of the length of time the vehicle continued to be driven. The shuddering problem referred to by Dr Greiner (caused by extremely short drop outs in communication with the ATIC 91) might be thought to be an example of an early symptom whereas a complete loss of power for an extended period might be thought to be a problem which would only arise once the cracking had developed after a considerable time.  The risk of a particular symptom arising would therefore seem to be a function, in part, of the time the vehicle has been driven.
2. Whilst the Applicant’s submissions did belatedly draw a distinction between the consequences of failure in the ATIC 91 and ATIC 106 chips they did not observe that distinction when dealing with the extent of the risks posed. For example, she submitted that in March 2014 the warranty claims rate for Fiesta and Focus vehicles had increased and that this had been noted by Ford US. The document she relied upon was a long document which Ford US may have sent to Getrag possibly in February 2015. It begins with a letter which is undated and unsigned. The signature block is for Mr Alan Draper and the recipient is the Chief Executive Officer of Getrag, Mr Kotecha. The references to ‘MAM’ in the letter should be understood as a reference to the TCM. The letter is not an everyday letter. It is worth setting its text out in full:

Mihir Kotecha

Chief Executive Office, Getrag

Getrag Innovations Center

Hermann Hagenmeyer Strasse

74199 Untergruppenbach INSERT DATE

Germany

Mihir,

Following significant analysis into the DPS6 mechatronic actuation module (MAM) field issues, Ford has determined that the best course of action for affected vehicles is to initiate a customer satisfaction action aimed at correcting all vehicles equipped with DPS6 transmissions built since November, 2009. This action includes a warranty extension on 2.47M DPS6 equipped vehicles along with a potential software re-flash aimed at earlier issue detection and failure mode mitigation for all vehicles that Ford has developed.

The initiation of these actions, along with corresponding customer notification, is pending finalization of a robust service part supply plan. Discussion on this plan has been ongoing and I ask for your team's continued support as we finalize these details.

Currently we are forecasting that these actions will cost us over $579M through the 2024 calendar year, not including our normal warranty coverage. There is significant technical data that demonstrates Getrag is fully responsible for this issue based on the robustness of the design independent of any other factors.

Due to the significant actions and costs in dealing with this situation I would like to immediately schedule a face to face meeting to discuss the next steps in terms of implementation actions as well as recovery discussions from Getrag to Ford. Please contact my office to arrange the meeting details.

As always, we implement such difficult actions in the best interest of our mutual DPS6 customers. Going forward we need to jointly execute these repairs quickly as well as address the resulting supply and commercial issues in a proactive and timely manner.

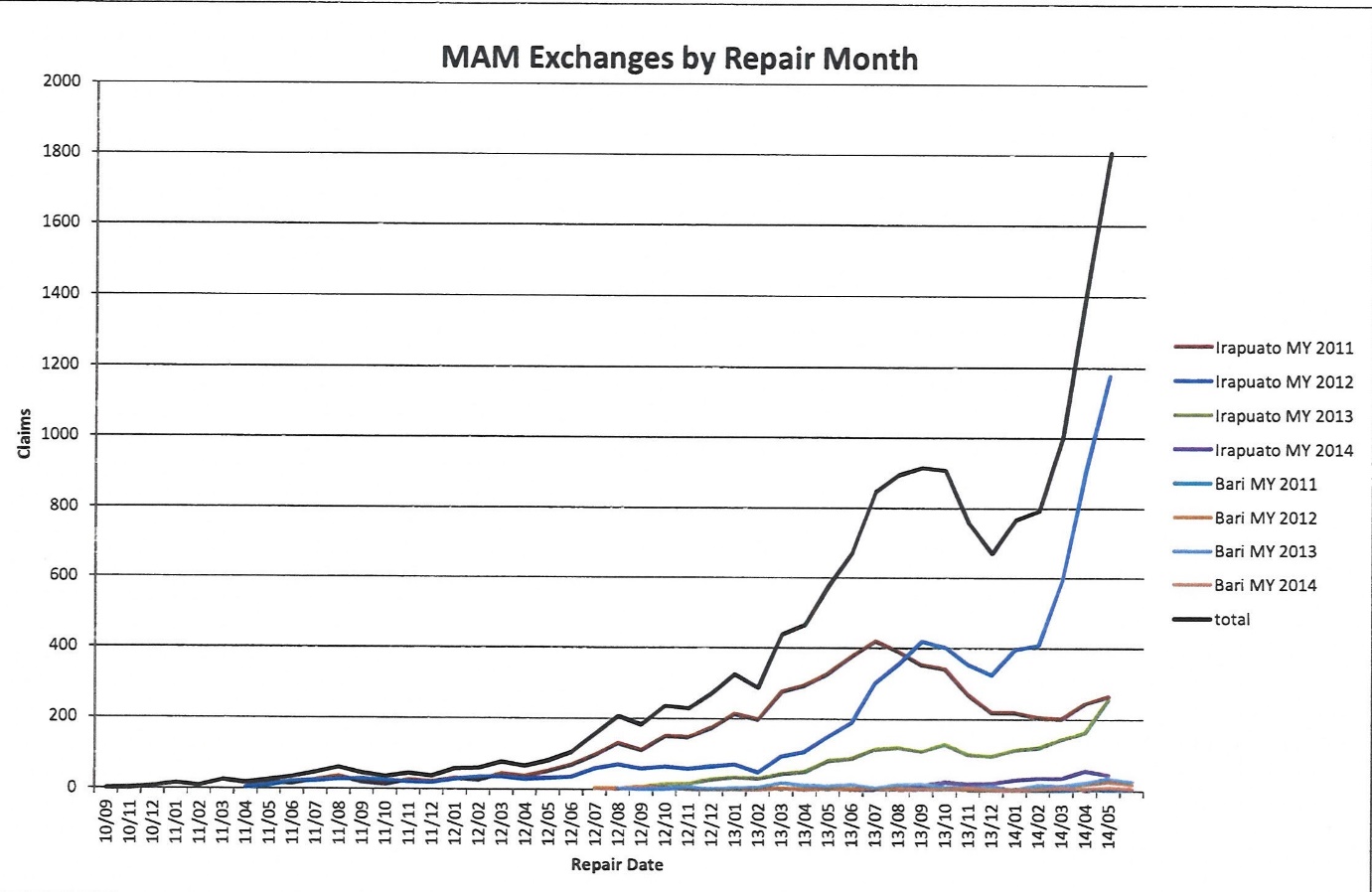
Sincerely,

Alan Draper

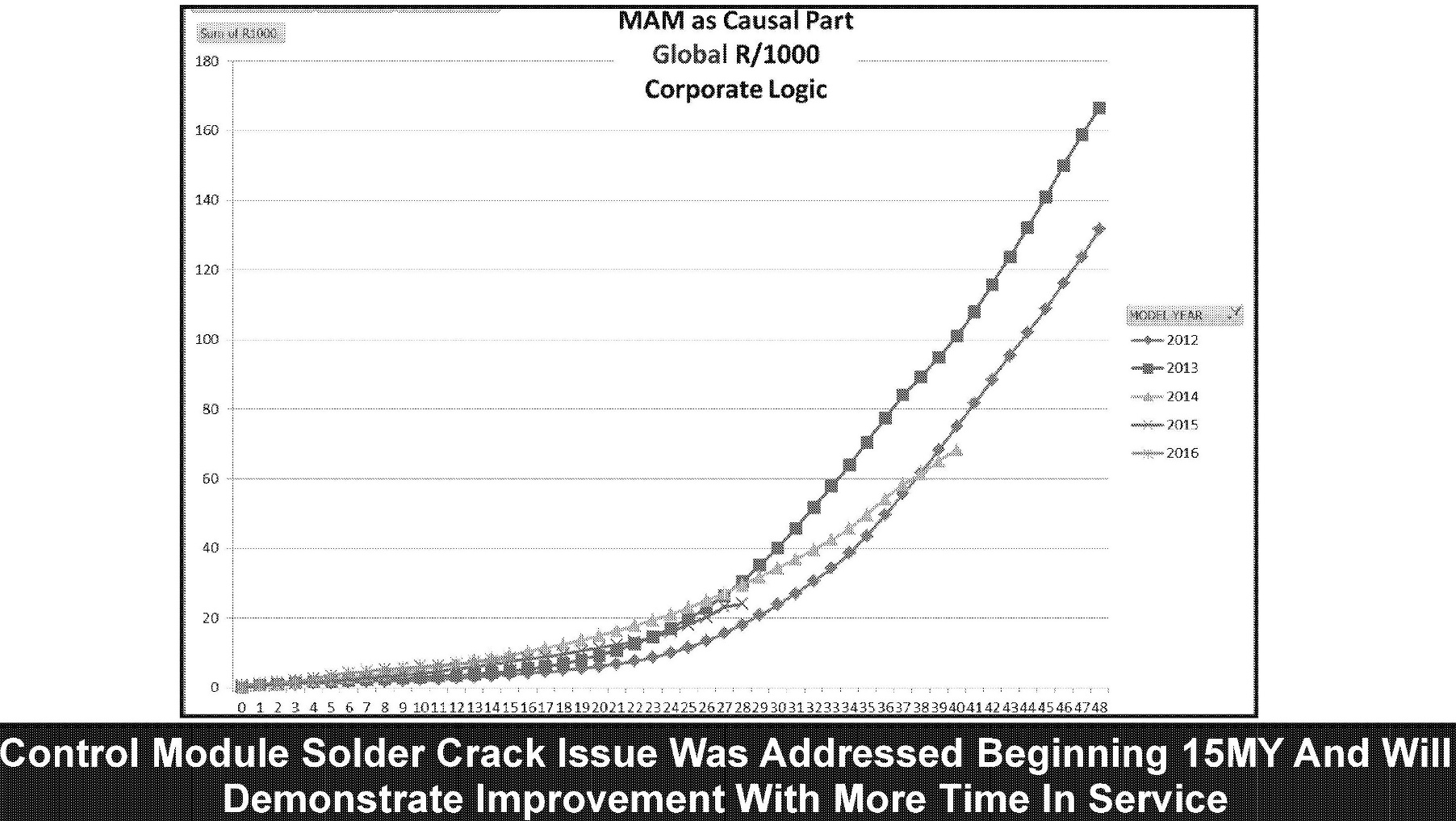
Global Director, Powertrain Installations Purchasing

Ford Motor Company

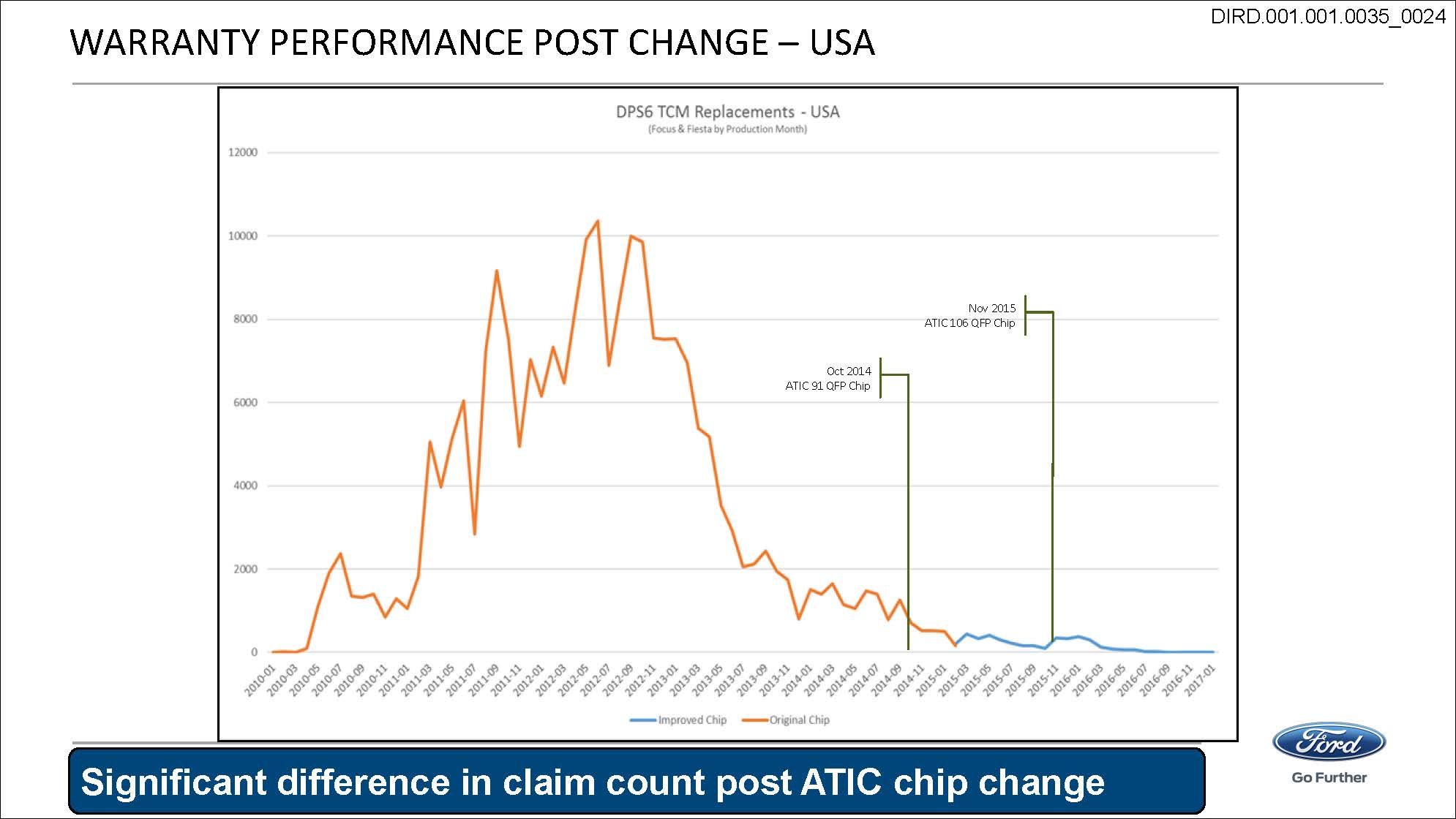
1. There is no doubt that, if sent, this was a shot across the bows of Getrag. The following 647 pages contain various assessments by Ford US of the problem, some by Getrag and some assessments, which are difficult to follow, of another firm which seems to have had a hand in manufacturing the TCM, Continental. The Applicant relies on p 5 of this document to make good her point that the warranty claims for the Fiestas and Focuses had increased. This document is a PowerPoint slide prepared by Ford US and it does say that there was increase in MAM (TCM) replacements in March 2014. It says this occurred in B-segment and C-segment vehicles. I think therefore that the Applicant is not correct in limiting its application to Fiesta and Focus vehicles. The statement applies to the B-segment EcoSport as well, although they had only just begun to be sold in Australia at this point in time.
2. There is a lot of detail in the 650 pages of this document but the point for present purposes is that the topic of discussion is the ATIC 91 chip. Although one may fairly infer that Ford US had gone to war with Getrag over the TCM (or was at least thinking of doing so if the letter is only a draft) that war seems to be a war about the ATIC 91 chip and not about the ATIC 106 chip. If one lingers for long in this document one will discover Getrag’s efforts to put the blame at the feet of problems for which it was not responsible. For example, one of the lesser ones was Getrag’s contention that the problem arose to an extent from vibration. At p 13 Ford US expressed its view that the vibration levels were acceptable and in any event a joint Getrag-Ford US team had decided that vibrations only accelerated the underlying problem.
3. I do not need to enter the fray on that debate, rather the point is that one needs to understand the context of this document and its concomitant potential strengths and weaknesses. For example, it is quite possible that the document is Ford US putting its most aggressive case to Getrag about why the problem is Getrag’s problem and not Ford US’. Given the apparent amount involved – USD579 million – it is wise to be astute to the motives of its authors.
4. The principal limitation, however, is the one that I have referred to already, namely, that substantially all of the document is about the ATIC 91 chip and is not about the ATIC 106 chip. I accept the Applicant’s submission (modified to include the EcoSport) that this document provides evidence that the warranty claim rate had become elevated by March 2014. To know that, however, is not to know very much. Dr Greiner drew the Court’s attention to a graph prepared by Ford US (and included with the letter) which does show a dramatic escalation in warranty claims. This graph is as follows:



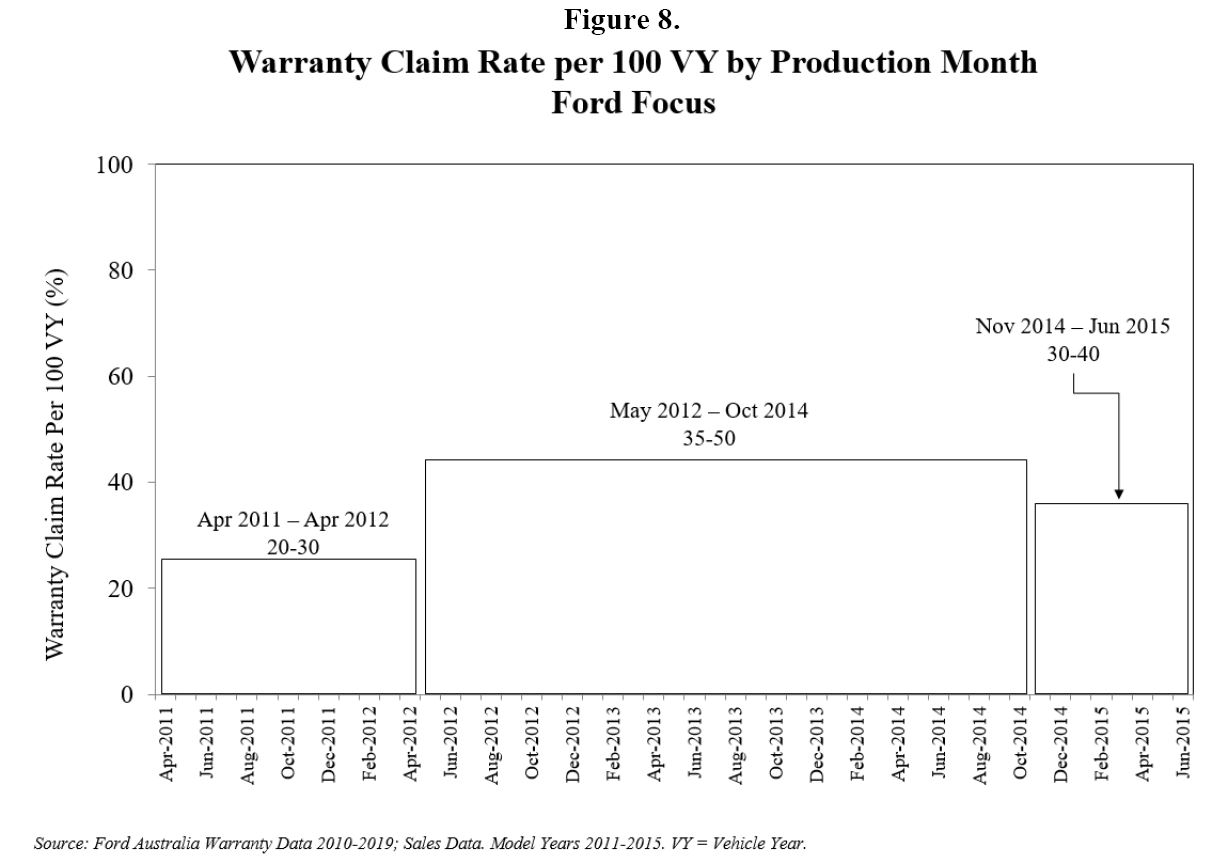
1. Dr Greiner did not attempt to link the graph to either the ATIC 91 chips or the ATIC 106 chips which was perhaps astute. The graph appears at p 40 of the document containing the letter extracted above and is included amongst those documents setting out Ford US’ position. If examined carefully it will be seen that it suggests very widely fluctuating rates of warranty repairs depending on when the transmission was manufactured and whether it was manufactured at the plant at Bari in Italy or at the plant in Irapuato in Mexico, assuming that the volume of output of these locations was relatively similar across these model years.
2. If this is correct it would seem to suggest that the problem was in some way related to the way in which the DPS6 was manufactured rather than the TCM itself. Neither party to this litigation suggested, however, that this was so. Nor did the Respondent develop a submission that the risk profile of transmissions which were manufactured with the ATIC 91 chip differed depending on their year and place of manufacture. For example, the graph might be thought to suggest that DPS6 transmissions made in Bari in 2012 do not seem to have much of a TCM problem at all. This in turn might suggest that the Applicant’s assumption that there was a uniform risk of failure for all vehicles was unsound. However, such a contention was not developed and it would be procedurally unfair for me to consider it.
3. In the end, I am nevertheless concerned that this document might not be entirely reliable given the agendas of Getrag and Ford US in these communications. Although it certainly shows an upward trend, acceptance of its validity would imply the intra-cohort fluctuations to which I have referred and which do not appear to be consistent with either party’s case.
4. Dr Greiner also referred to another graph prepared by Ford US. It is contained in a document prepared in December 2016 entitled ‘DPS6 Update’ (Ford\_DPS6-SAC\_00056942). The graph is at p 5 and is thus:



1. Of course one does not know from this graph how much of this related to the ATIC 91 chip and how much to the ATIC 106 chip and it likely accounts for both. But it does suggest that by 48 months in service the rate of TCM repair for 2012 model year vehicles was around 13%. There were some other graphs available, one from Mr Kuhn and two from Ms Padmanaban. Mr Kuhn’s graph was at §191 and was in these terms:



1. In fact, this is not Mr Kuhn’s graph. As will be seen, it is actually a graph prepared by the Respondent and provided to what was then known as the Department of Infrastructure and Regional Development (‘DIRD’) as part of the Respondent’s efforts to persuade DIRD to close its safety investigation into the vehicles in Australia. Be that as it may, the real problem is that I do not understand this graph. The line graph appears to show the number of warranty claims for the old chips and the new chips. The two time points in green refer to the introduction of the new ATIC 91 and new ATIC 106 chips (more about these new chips shortly). But the green bars seem quite inconsistent with the line graph. One reading of the green lines is that by the time the new ATIC 91 chip was introduced the problem had already largely disappeared. However, neither side explored such a submission or its implications. On the other hand, one imagines the green line was intended to mean something. Mr Kuhn did not explain any of the lines but said it showed the new chips had been effective. For its part, while the Respondent made passing reference to this graph in a footnote to its submissions it did not explain what the lines really show. I have considered whether the decline that begins with vehicles produced from 2013 onwards is in fact just a function of those cars not having spent sufficient time in service to manifest solder cracking. In this vein I note that this downwards trend as the relevant vehicles decrease in age matches that depicted in the graph I have extracted immediately before this one which shows an increasing number of failures with additional months of service. However, since neither party explored this nuance in the evidence I do not believe I should attempt to do so myself.
2. The Respondent also relied on two graphs prepared by Ms Padmanaban, Figure 7 and Figure 8. I have previously set out Figure 7 above at [293]. Figure 8 is as follows:



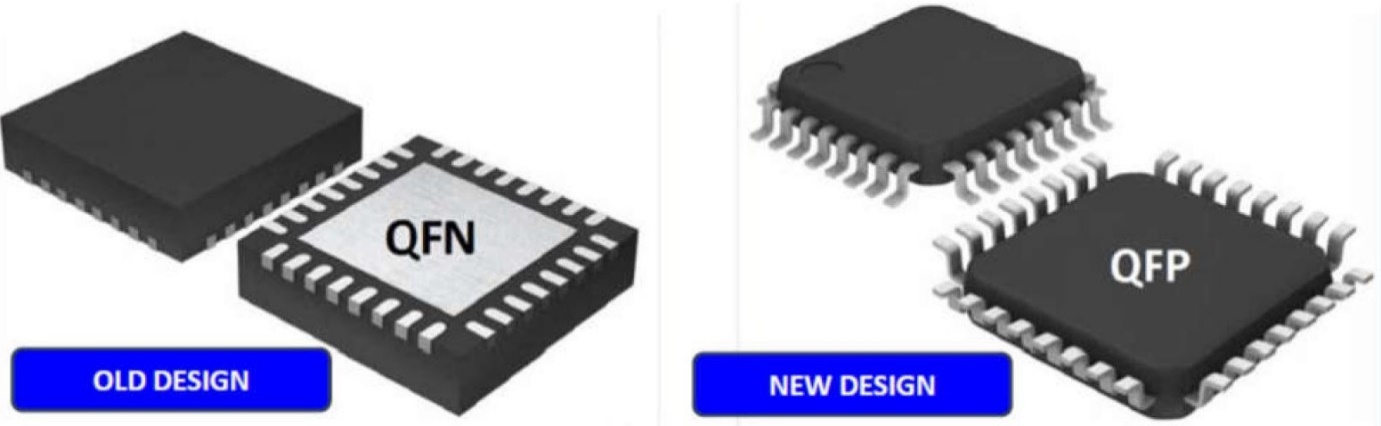
1. These figures do not tell one very much about the failure rate of the ATIC 91 or ATIC 106 chips before they were replaced, although they do suggest a reduction in warranty claim rates per VY. As I have already noted, I am concerned about the effect the VY metric has in terms of reducing the apparent warranty claim rate where the claim rate is initially higher but then drops off. Without drawing a conclusion about it, a problem of the same genus may arise here where the claim rate is initially very low before increasing significantly as the vehicle ages. Because the problem caused by solder cracks is initially non-existent but develops progressively over the life of the vehicle this may imply that the effect of the VY metric is artificially to lower the apparent rate of warranty claims. This in turn may make the effect of the new chips (which have spent less time on the road on average than the old chip) appear more pronounced. As will be seen, however, I do not need to resolve this potential secondary effect of the metric, nor the opacity introduced by the use of indiscriminate blocks spanning many production month data points. However, it underscores my hesitation in placing much reliance on Figure 7 and Figure 8.
2. Despite all of these uncertainties, I am prepared to infer that the use of the original ATIC 91 chip did pose a real risk of failure. The primary reason for this is the engineering evidence which reveals the progressive nature of the problem and its physical consequences. It was a problem which was more likely to occur the longer the vehicle was driven and it was a problem which got worse not better once it manifested itself. The problem was sufficient to persuade Ford US to embark on a program seeking to remediate the problem by replacing the ATIC 91 chips in new vehicles and progressively replacing them where necessary in vehicles which were already on the road. The claim made by Ford US against Getrag, foreshadowed in the letter extracted above, suggested that the costs to Ford US were in excess of half a billion US dollars. A subsequent, and substantial, settlement was reached between Ford US, Getrag and Continental. One may infer therefore that the description of the problem in the theoretical terms proposed by Dr Greiner (and in Ford US’ own documents) corresponded with a real world problem, certainly a nine digit one.
3. The various graphs referred to do all suggest that there was a substantial uptick in warranty claims which Ford US, at least, seemed anxious to put at the feet of the ATIC 91 and Getrag. Although close examination of the graphs suggests that the picture may be somewhat more complex, nevertheless, it is fair to say that the evidence all points in the direction of the problems with the ATIC 91 chips being reasonably widespread. Indeed, it is clear that Ford US (and the Respondent) were aware of a large number of negative customer experiences arising from the ATIC 91. They would not have devoted the resources they did to the problem were it otherwise. For completeness, I did not understand Mr Cruse to be saying at T691-693 and T731-732 that the problem posed by the solder cracking had not resulted in a significant number of negative customer experiences so I do not need to assess the Applicant’s submission that I should not accept his evidence to that effect.
4. Consequently, I find that there was a real risk of the solder cracking on the original ATIC 91 chip. Where this risk eventuated, it would cause, in turn, the series of steadily worsening symptoms to which I have already referred. Whether the most serious of those symptoms – complete loss of motive power for several seconds – would occur depended on how long the vehicle continued to be driven once the initial less serious symptoms were manifest. Those symptoms included, as noted above, shudders and brief power drops as well as various warning messages lighting up on the dashboard such as flashing of the ‘D’ symbol on the gear selector. It will be necessary to return to this topic when assessing the Applicant’s submission that the ATIC 91 posed a safety risk.

### ATIC 106

1. I am unable to make a similar finding about the ATIC 106 chips. There is no material which allows me to assess the existence of any independent risk that they posed. As I have said, the Applicant made no submissions about the existence of a risk of failure arising from the ATIC 106 chips. The best that can be said is that there was a sufficient problem for Ford US to think it profit maximising to replace the chips in production and, eventually, for some vehicles on the road. However, I do not think that is sufficient for me to make any sensible assessment of the risk it posed independent of the ATIC 91 chip. The evidence is consistent with the ATIC 106 problem being regarded as minor but with Ford US deciding that since it was going to have to change the entire TCM it might as well take the opportunity to fix a somewhat smaller problem. The situation of the ATIC 106 chips was, in a real sense, overshadowed by that of the ATIC 91 chips and this had the consequence that it is not possible to make a finding about it. No doubt, there is a more detailed story to be told about the ATIC 106 chips but neither party really embarked upon it and it would be inappropriate for me to try and guess about it.

## Engineering solutions

1. The engineering solution to the problem had several features. The primary solution was to introduce revised ATIC 91 and ATIC 106 chips. The solutions in relation to each were not, however, the same. The initial ATIC 91 chips had been made by Texas Instruments and, as I have noted, had a CTE of 6. Ford US (or Getrag) then arranged for the supply of a new ATIC 91 chip by STMicroelectronics which had a CTE of 12 thereby reducing the ratio of the CTE of the PCB to that of the chip to 18:12 or 1.5:1 (down from 3:1). This resulted in the solder being exposed to less mechanical strain.
2. So far as the ATIC 106 chips were concerned, while the new chips were also produced by STMicroelectronics with a CTE closer to that of the PCB, a different design was also adopted. The original ATIC 106 chips had been of a ‘QFN package design’. Some older people will have a mental image of chips as having small pins extruding from them by which they are soldered to the PCB. A QFN design is different. In a QFN design the pins do not extrude from the chip and are mere flat metallic sections on the surface of one side of the chip. The side on which those metallic surfaces are embedded is then soldered to the PCB. The advantage of a QFN design is that the chip takes up less vertical space for it is not raised on its pins. One consequence of the use of a QFN design is that the solder must absorb any mechanical stress arising from differences in the CTE of the chip and PCB.
3. The new ATIC 106 did not utilise a QFN design. Instead it was equipped with external extruding pins which were themselves soldered to the PCB which was known as a ‘QFP design’. Dr Greiner illustrated the difference between the two kinds of chips this way:



1. This figure was originally provided by the Respondent to DIRD in Australia as part of an effort on its part to persuade DIRD that the problems with the TCM had been rectified. Dr Greiner explained that this solution meant that the mechanical stress arising from remaining difference in the CTE between the chip and the PCB was able to be shared between the solder joint and the pin itself.
2. Although Dr Greiner did not suggest this, it is possible that the revised ATIC 91 chip also used a QFP design. There are some stray references in the evidence which hint that this might have been so but it was not an issue which was examined closely by any of the witnesses. Nothing turns upon it.
3. Both Dr Greiner and Mr Kuhn accepted that these two solutions were effective to prevent solder cracking from occurring. It is therefore not necessary to assess the Respondent’s reliance upon Ms Padmanaban’s evidence to make good that proposition. For reasons I have already given, however, I have some concerns about Figure 7 and Figure 8.

## Introduction of solutions in production

1. The new ATIC 91 chips were introduced into the production process at various times. They were installed in Fiesta vehicles produced from 23 June 2014 if produced at one of the plants in Rayong, Thailand (AutoAlliance Thailand) but for all other Fiesta vehicles and all Focus and EcoSport vehicles from 10 November 2014.
2. The new ATIC 106 chips were installed in new vehicles over a range of dates between 9 February 2015 and 20 September 2016 in accordance with the following table:

|  |  |  |
| --- | --- | --- |
| **Vehicle line** | **Place of production** | **Available on vehicles built from** |
| Fiesta | Rayong (AutoAlliance Thailand), Thailand | 19 January 2016 (1.5L and 1.6L models)  20 January 2016 (1.0L model) |
| Fiesta | Rayong (Ford Thailand Manufacturing), Thailand | 19 January 2016 |
| Focus | Saarlouis, Germany | 9 February 2015 (2.0L model)  17 November 2015 (1.6L model) |
| Focus | Rayong (Ford Thailand Manufacturing), Thailand | 20 September 2016 |
| EcoSport | Chennai, India | 20 September 2016 |

1. The Applicant submitted that the ‘TCM Solder Crack deficiency’ was only resolved once the second round of changes to the ATIC 106 were completed. No doubt this is literally true. However, in circumstances where I am unable to assess the existence of an independent risk posed by the ATIC 106 chips, I am unable to say whether there was a risk in those vehicles which had the new ATIC 91 chips installed but which continued to contain the old ATIC 106 chips. I am prepared to assume there was some desirability of having the new ATIC 106 chips otherwise Ford US would not have bothered changing the chip. However, there is simply no way to assess the existence of any risk of failure where a vehicle had a new ATIC 91 chip but old ATIC 106 chips. Since the Applicant bears the onus of proof on establishing the risk, I find that the risk has not been proven.
2. There was evidence that from around October 2015 an update for the software in the DPS6 called ‘15B22’ was available which could detect solder cracking before any symptoms became apparent to the driver. When the problem was detected, a series of warning lights would light up, upshifts in gears would be delayed and fifth and sixth gears disabled altogether. In practical terms, this would compel the driver to take the vehicle in for servicing. The evidence did not disclose, however, whether this software update was included in vehicles in production. It is perhaps natural to think that it was but I do not think that sufficient to make a finding about it. As will be seen, this probably does not matter.

## Introduction of solutions into vehicles already on the road

1. From 27 October 2015 vehicles which presented for service had their software updated in the manner I have just described. The Respondent told DIRD during a presentation on 22 March 2017 that by 17 March 2017 81% of vehicles had had their software updated. From 22 April 2016 the Respondent had written to all those owners of vehicles who had not yet had the update presumably to tell them about the problem and the need for an update. Finally the Respondent informed DIRD on 14 September 2017 that the installation rate was at that point 86%. It follows, and I find, that the update had been installed in 86% of vehicles in the period between 27 October 2015 when it was rolled out and 17 March 2017 as stated in the presentation. I have no reason to doubt the correctness of these statements and I did not apprehend the Applicant to submit that the presentation was not correct especially since it relied upon the same document to establish key dates: [313]. The Applicant also did not dispute the accuracy of the 86% figure that DIRD recorded as receiving from the Respondent on 14 September 2017.
2. I conclude that once the 15B22 software update was installed it would have detected any solder cracking before it manifested in symptoms perceptible to the driver and would have caused the vehicle to be brought in for a service in a very short period of time and without exception.
3. I reach this conclusion on the basis that the parties agreed this was how 15B22 operated and both Mr Cruse and Mr Kuhn gave evidence to that effect, which was accepted by Dr Greiner. A similar explanation of 15B22 was also provided to DIRD during its 2017 inquires which it also accepted. For completeness I note that the evidence Ms Capic gave of her experience on 3 February 2016 (discussed above at [92]) may suggest otherwise, as there is no mention of her receiving the warning messages prior to what seems to have been a total (or near-total) loss of motive power. This is despite the fact that her car received the 15B22 update on 16 November 2015, as is explained in more detail in Section XI below. However this argument was not advanced by the Applicant. Even if it had been, Ms Capic’s evidence on this point is susceptible to other interpretations which the Respondent may have chosen to advance. It is not necessary for me to wade into this myself, indeed it would be speculative and inappropriate for me to do so where the point was not taken at trial. I therefore conclude in accordance with what the Applicant accepted, that the 15B22 software update would trigger alerts where solder cracking had begun, prior to the onset of any symptoms perceptible to the driver.
4. Having concluded that the ATIC 106 chips are not shown to exhibit a real risk of failure the matter reduces to the position of the ATIC 91 chips. In relation to the cohort of vehicles which were sold in Australia with the original ATIC 91 chips it seems to me, for the reasons I have already given, that they continue to pose a real risk of failure. As in other parts of the case, no attempt was made to run a case that the risk of failure was likely to have dropped on the basis that all those vehicles which were going to fail had already done so.
5. It is important to note that by relying on the installation of 15B22 to respond to this risk of failure, the Respondent was not seeking to address the underlying engineering cause of the solder cracking (ie a mismatch of CTEs between the ATIC 91 chip and the PCB). Instead the fix is one which relies upon the likelihood that a human driver will respond to the warning messages prompted by the software and bring the vehicle in for servicing before the real risk manifested so as to produce symptoms perceptible to the driver. In that sense, while I have concluded that 15B22 would almost without fail compel a driver to do so, if the fix is to be effective it is also necessary that there be replacement TCMs with the revised ATIC 91 chips available for the vehicle once it is brought in for service. Otherwise, a driver so compelled would drive away from the servicing mechanic with a replacement TCM containing the old ATIC 91 chip and which therefore suffered from the same risk of failure that caused her to bring the vehicle in. In no rational sense could that be described as a fix.
6. Mr Cruse’s evidence is that once the new chip was introduced in production it was progressively introduced into service stock. The process of introducing it into production occurred either on 23 June 2014 or 10 November 2014 depending on the model line and place of manufacture. However there is no direct evidence as to the specific date that TCMs with the new chip became available in service in Australia. The Applicant asks the Court to conclude that the new TCMs were not available until February 2016 on the basis that this was when Ms Capic’s car first received a replacement TCM, despite having been presented for servicing in both October and November 2015 with a ‘check engine’ light displaying. I do not think this provides a sufficient basis to draw a conclusion about the availability of the new TCMs across Australia. On the other hand, the Respondent has not led any evidence which would allow me to conclude that the new TCMs were available at an earlier date nor made a positive submission to that effect. Because the software update only began to be installed after 27 October 2015, one may also infer that in those vehicles where the 15B22 update had not been installed, the replacement of a TCM would only have occurred when a vehicle was brought in for service for some other reason or if the TCM chips experienced the kind of severe failure where communication was lost for 5 seconds or more, as a failure of this order was required to trigger the relevant diagnostic code prior to the 15B22 update.
7. As at the date of judgment, the Australian cohort of vehicles which were manufactured with the old chip may be divided into two classes: those which continue to have the old ATIC 91 chip and those where it has been replaced with the new ATIC 91 chip. Subject to a point about the 15B22 software to which I turn in the next paragraph, the former continue to pose the real risk identified, the latter do not.
8. Amongst those where the old chip remains, a very high proportion will have had the software update. No submission was made to the effect that there was any reason to think that the rate at which the software was updated was different in the case of those vehicles which continued to have the old ATIC 91 chip in them (for example, on the basis that some of these vehicles might be serviced less regularly). I infer that since the 86% figure given to DIRD in September 2017, additional vehicles with an old ATIC 91 chip are likely to have had their software updated and therefore that, as at the date of judgment, at least 86% of vehicles are in that category. In relation to those vehicles, I am satisfied that the software will detect any solder cracking and this will rapidly lead to the replacement of the ATIC 91 (by means of a new TCM). In these vehicles I am satisfied that the relevant risk of failure has been resolved (provided, for reasons I have explained, that a new TCM with the revised ATIC 91 chip is available to a driver prompted by the software to bring their vehicle in for service). On the other hand, I am also satisfied that theoretically up to 14% of vehicles containing the old ATIC 91 chip have not had the update and in them a real risk of failure remains.

## Safety issue?

1. The Applicant contended that the TCM solder issue represented a safety issue prior to the introduction of the 15B22 software update. The first question which arises is why this matters. The actual question for determination is whether the vehicles were of acceptable quality within the meaning of ACL s 54. The safety risk the Applicant puts forward is that which arises from the ATIC 91 chip and is limited to the symptom consisting of a total loss of motive power. If one makes the assumption that the Applicant succeeds in proving that, as sold, the vehicles had a real risk of a total loss of motive power whilst driving then the question is whether a vehicle with that real risk is of acceptable quality within the meaning of s 54. If on the other hand, the Applicant fails to show the existence of such a real risk then the issue does not seem to arise. On this view of affairs, the question of whether the real risk was also a safety risk does not seem to matter very much.
2. However, the parties were united in their view that this was something they should debate. The Applicant said that it arose by reason of the allegation at 4FASOC §6AB(e) which does, indeed, refer to safety although for myself I would not be sure that by itself that makes the question of safety a legal one calling for determination. One of the difficulties in resolving the issue is that the word ‘safe’ in s 54 is not defined and is, in its nature, somewhat amorphous. For example, all vehicles in Australia can be said to present a safety risk. In 2019, 739 people in cars were killed in transport accidents (I have taken judicial notice of this fact for the reasons given at the end of these reasons at [956]). This is a lot of people. If a kitchen kettle exacted such a toll it would surely be banned. However, a car is not a kettle and at some level society seems to accept that a certain degree of carnage on the roads is a justified cost to bear in return for the general social benefits that motor vehicles otherwise provide. The fact that a safety calculus may involve societal inputs of that kind is reflected in the fact that there are several ways cars could be made much safer. For example, the road toll would surely plummet if car ignition systems were fitted with a breathalyser that would not permit the vehicle to be driven by a person who was drunk. No doubt too, many deaths and severe injuries would be avoided if car engines were fitted with a governor which limited the speed of the vehicle to 60km/h. But I hesitate to say that vehicles lacking those features pose a safety risk even though hundreds of lives each year might be saved by the introduction of these very simple and inexpensive engineering solutions. The point for present purposes is that safety is a complex concept involving an assessment of upside and downside risks and to a degree societal standards. When presented in the context of a legal debate untethered from any suggested legal standard, there is a risk that the debate will be meaningless.
3. Having registered my objection to the question, it is then appropriate to consider the position of the two chips. I can deal with the ATIC 106 chip very briefly. The Applicant has failed to show the existence of the risk of symptoms posed by this chip independent of the ATIC 91 and the question therefore of whether it was also a safety risk cannot be assessed. In any event, I did not really apprehend that the Applicant’s submission about safety was directed at the ATIC 106.
4. Turning then to the position of the ATIC 91 chip, I have accepted that there was a real risk that vehicles in the cohort might develop solder cracking and therefore a real risk that the vehicles equipped with an old ATIC 91 might develop symptoms associated with that risk. The only risk which was put as a safety risk was the risk that there might be a loss of motive power for a period of sustained duration, perhaps a few seconds or more. This was a symptom which would only appear after earlier symptoms such as shudder or a very brief power drop had gone unremedied. And it may also have been preceded by lights appearing on the dashboard when the symptoms made themselves known.
5. The question then is whether that risk is a safety risk. If one takes out of the picture the antecedent symptoms including the flashing lights on the gear selector so that the first and only symptom of the solder cracking was a sustained period of loss of motive power, then I would not hesitate to describe the risk to safety as real. On this, admittedly artificial, hypothesis there would be a real risk of solder cracking which would first manifest itself when the vehicle suddenly lost power. That could happen in an overtaking situation or midway through an intersection. The potential for a serious accident is obvious.
6. What makes the situation more complex is that, as the Respondent submits, long before a driver experienced that power loss, there would have been a range of lesser symptoms of increasing severity and the display of flashing lights on the gear selector. Here the thinking is that these symptoms and those flashing lights would have been likely to cause the driver of the vehicle to take it in for servicing. On this view, whilst there might be a risk of ultimate loss of motive power this risk must be much reduced by the practical reality that very few vehicles are likely to be driven to the point where it materialises.
7. I have found this a difficult submission to assess. My initial impression of the problem was that one needed to identify what the risk of this particular symptom was. Whilst I have accepted that there is a real risk of solder cracking and hence a real risk of the symptoms associated with solder cracking, this statement does not permit one to deduce anything about the risk of a particular symptom. Conceptualised that way, this suggests that it was one for the Applicant to prove as the party bearing the onus of proof. If so, then the fact that the evidence does not permit any conclusions to be drawn entails that the Applicant fails to show that the risk of a total loss of motive power was a real risk and, therefore, that it was a safety risk.
8. A corollary of that line of thought would be, in fact, that the Applicant fails to prove that there is a real risk of any particular symptom. This follows because the same argument can be made in relation to each individual symptom. This leads one to the curious, although not necessarily logically indefensible position, that there is a real risk of the set of symptoms but no real risk in relation to any individual symptom.
9. Another way of looking at the problem, however, is this. There is a real risk of solder cracking and hence of the symptoms it entails. Those symptoms include a total loss of motive power for a sustained period of time. Indeed, this was not in dispute on the evidence. Having accepted that that symptom was amongst the class of symptoms of which there was a real risk, the challenge then becomes how to accommodate the fact that it is the end-stage symptom into the analysis. Here the answer may lie in the distinction between the legal burden of proof (which at all times lay on the Applicant) and the evidentiary burden (which might, depending on the circumstances, shift).
10. I think this second way of looking at the problem is better than the first. There are two reasons for this. First, I am concerned about the artificiality identified in the penultimate paragraph although I accept that it is not an incoherent outcome. Secondly, the nature of the proposition under consideration, on inspection, shows that it was really a defensive proposition put forward by the Respondent and was not something which the Applicant was required to negative. The relevant propositions were these:
11. there was a real risk of solder cracking;
12. there was therefore a real risk of the symptoms associated with solder cracking;
13. those symptoms included a complete loss of motive power for more than a transitory period of time; but
14. the risk of that symptom was so small as not to constitute a safety risk because the nature of the anterior symptoms would have caused the vehicle to be serviced before there ever could be a complete loss of power for more than a transitory period of time.

Framed that way, it is apparent that the fourth proposition was a matter for the Respondent to prove and not a matter for the Applicant to disprove. The Applicant bore the onus of proving that there was a risk (or real risk as I have preferred to characterise it). She proved that there was a real risk of solder cracking and that the symptoms which could flow from that included a non-transitory total loss of power. At that point the evidentiary burden shifted to the Respondent to prove that, in fact, the symptom would never have arisen because the vehicle would have been serviced on the occurrence of the earlier less severe symptoms.

1. I am not satisfied that the evidence makes good that contention. No doubt the idea that many vehicles would be presented for service before arriving at a complete loss of motive power for more than a transitory period of time has an anecdotal attractiveness. However, I do not think that just because I can follow the line of thought that it proves it as a fact. No doubt for many vehicles this will be true but I do not think I can say it is inevitably so. Further, there is the additional problem that prior to at least mid-2014 but very possibly up until a later date, if presented for service the problem would not be fixed because the new TCM with the revised ATIC 91 chip was not available.
2. Once that conclusion is arrived at it seems therefore that the real risk of solder cracking carried with it a risk of a non-transitory loss of power. As I have said, I am satisfied that this risk was a safety risk.
3. The Respondent sought to counter this conclusion by pointing out that DIRD had been satisfied that the ATIC 91 chips did not pose a safety issue. I reject this submission primarily because the views of DIRD in no way bind the Court which must make up its mind on the evidence before it. The views of DIRD are, of course, hearsay but no objection was taken on this basis and documents recording those views were probably admissible as business records. But the fact that no witness was called from DIRD to express an opinion on the safety of the vehicles does suggest that one should be sure of the foundation on which the DIRD conclusions were built before giving them too much weight. It is therefore necessary to pay close regard to the chain of events leading to DIRD’s decision to terminate its safety investigation into the DPS6.
4. The last of these events was a letter sent by DIRD to the Respondent on 17 October 2017 informing the Respondent that DIRD’s safety concerns had been clarified. What those safety concerns were and why DIRD was satisfied appears more completely from two internal DIRD memoranda. From these one can determine the scope of DIRD’s inquiries. An internal memorandum dated 22 September 2017 reported on a visit to the Respondent’s premises at Campbellfield in Victoria. The DIRD officials were shown a Ford Focus which had had the software update installed and which was displaying a live fault code. The Respondent reported that the software update had now been installed in 86% of the 70,000 odd vehicle population. Pausing there, this meant that the rate had increased from 81% to 86% in the intervening 6 months (the 81% figure appeared in the presentation made to DIRD for 17 March 2017). The report did not spell this out, but the 86% figure entailed that there were still nearly 10,000 vehicles on the road that had not had the 15B22 update.
5. The report also noted that all owners had been written to about the update. The report did not contain any discussion of the safety risk posed by these 10,000 or so vehicles, save for the generic observation in respect of each of the vehicle faults DIRD was investigating (dry clutch shudder, wet clutch shudder and the TCM issue) that where ‘a vehicle owner presents their vehicle when the symptoms first appear there should be no issues affecting safety’. Its focus was instead on the effectiveness of the software update.
6. Two matters were not considered: (a) what was the rate of failure in the vehicles still driving around with the old ATIC 91 chip in their TCMs which had not had the 15B22 update; (b) was the rate at which the update had been installed likely to rise much higher than 86% in the future?
7. As to (a) DIRD knew nothing. The Respondent’s presentation to it in March 2017 had not revealed information of that kind other than in the delphic graph which Mr Kuhn relied on in his report and which is, as I have explained above, resistant to comprehension. Mr Kuhn’s understandable failure to explain what it means and my signal failure, despite several concerted attempts, to understand it either satisfies me that it is unlikely that DIRD understood it. The implication of this is that DIRD knew that there were around 10,000 vehicles on the road with a risk of failure. Further, the presentation in March 2017 had made clear that the symptoms included a loss of motive power. DIRD did not seek to assess the risk to public safety of having 10,000 vehicles on the road with a risk of loss of motive power.
8. As to (b), the take up rate for the software update had increased from 0% to 81% in the 17 months between October 2015 and March 2017 and then by a further 5% in the six months between March 2017 and September 2017. To understand what this signified it would be necessary to see how the rate trended across the whole 23 month period. On its face it would seem very likely that the rate of updating was dropping off. But how fast? One would need to have a view about the asymptote towards which the installation rate was edging to have a view about this. Without that – even if only in a rough and ready sort of way – one could not know even approximately how many vehicles in the future would be left without the 15B22 software update while carrying the old ATIC 91 chip inside them.
9. Thus it would appear that DIRD neither addressed itself to the risk to public safety posed by around 10,000 vehicles on the road with the risk of a loss of motive power nor to what this risk was likely to look like in the future.
10. Then there is an internal advice note dated 22 September 2017 (that is likely the same day as the report) recommending that the investigation be closed. This is signed by a senior official within DIRD. The relevant passage is:

*Safety Issues (will or may cause injury)*

The Department has one report of a collision that the complainant attributed to a faulty PowerShift transmission. However, FMC [Ford Motor Company] has indicated that appropriate distance between vehicles is the main contributing factor, rather than any vehicle failure. There is insufficient evidence to suggest there is a systemic safety issue resulting from the issues identified by FMC.

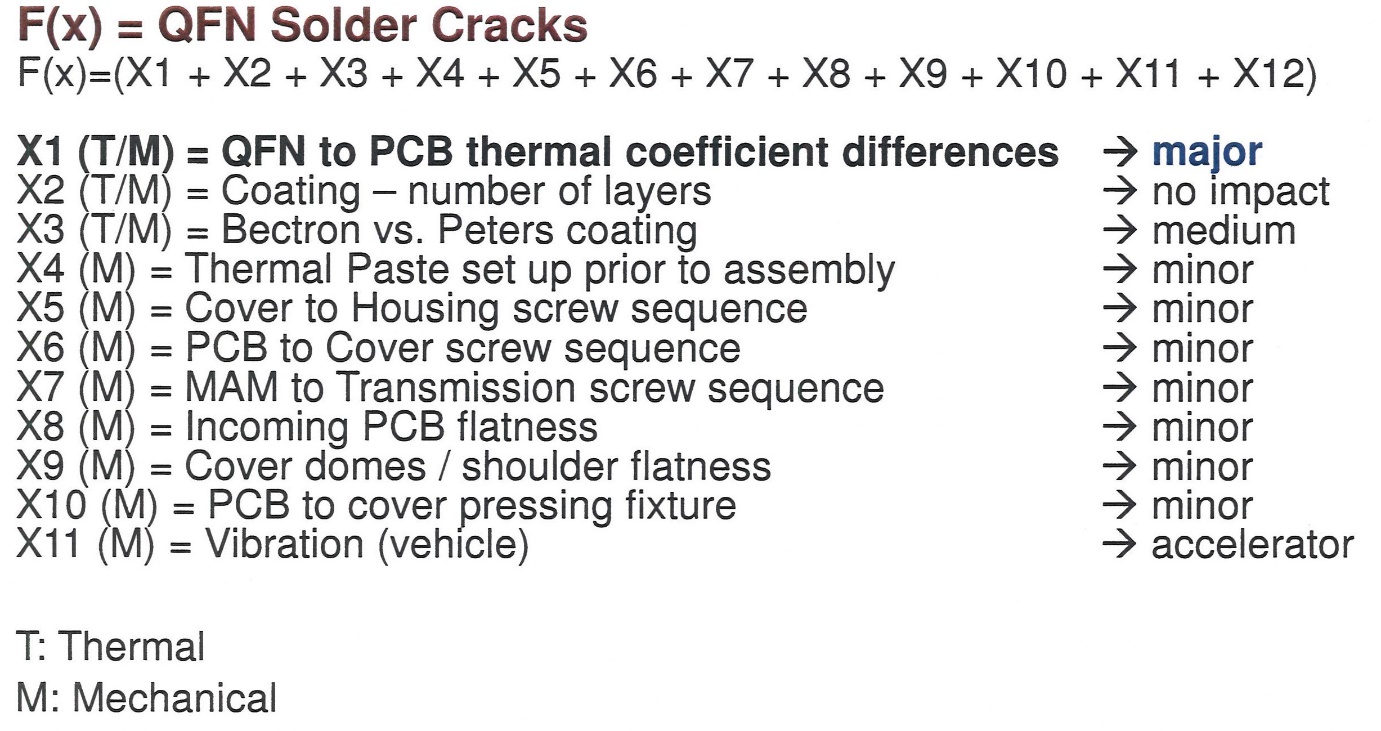
1. DIRD therefore knew that there had been a car accident in which the DPS6 had been implicated. DIRD appears not to have been troubled by this. This was because the Respondent, who I infer was not present at the accident, told DIRD that the collision had been caused by the two vehicles being too close to each other. The memorandum does not explain why DIRD preferred the Respondent’s version to the driver’s which is perhaps curious.
2. To accept the Respondent’s submission that DIRD’s decision showed that the vehicle was safe I would first need to be satisfied that DIRD’s investigation was adequate for the purpose of assessing safety. On the evidence before me I am not satisfied of that. Of course, DIRD has not been heard on this. There may perhaps be other materials which show that a thorough investigation was carried out. However, I can only assess on the evidence before the Court the Respondent’s contention that one should conclude that the ATIC 91 chip did not pose a safety risk because DIRD reached that conclusion. The evidence is not sufficient for that purpose.
3. There is one final remark which should be made. As I explain below in Section XVI, the Respondent understandably sought to exclude the evidence to which I have just referred but I admitted it over objection because it showed the background to DIRD’s decision. Now that the Respondent has actively sought to put DIRD’s conclusion forward to prove the safety of the DPS6 the relevance of the antecedent decision-making as reply evidence is clear.
4. To the extent that it matters I therefore conclude that the old ATIC 91 chip posed a safety risk in the vehicles in which it was installed and poses such a risk in those in which it remains which have not had the 15B22 software update.

## Design or manufacturing problem

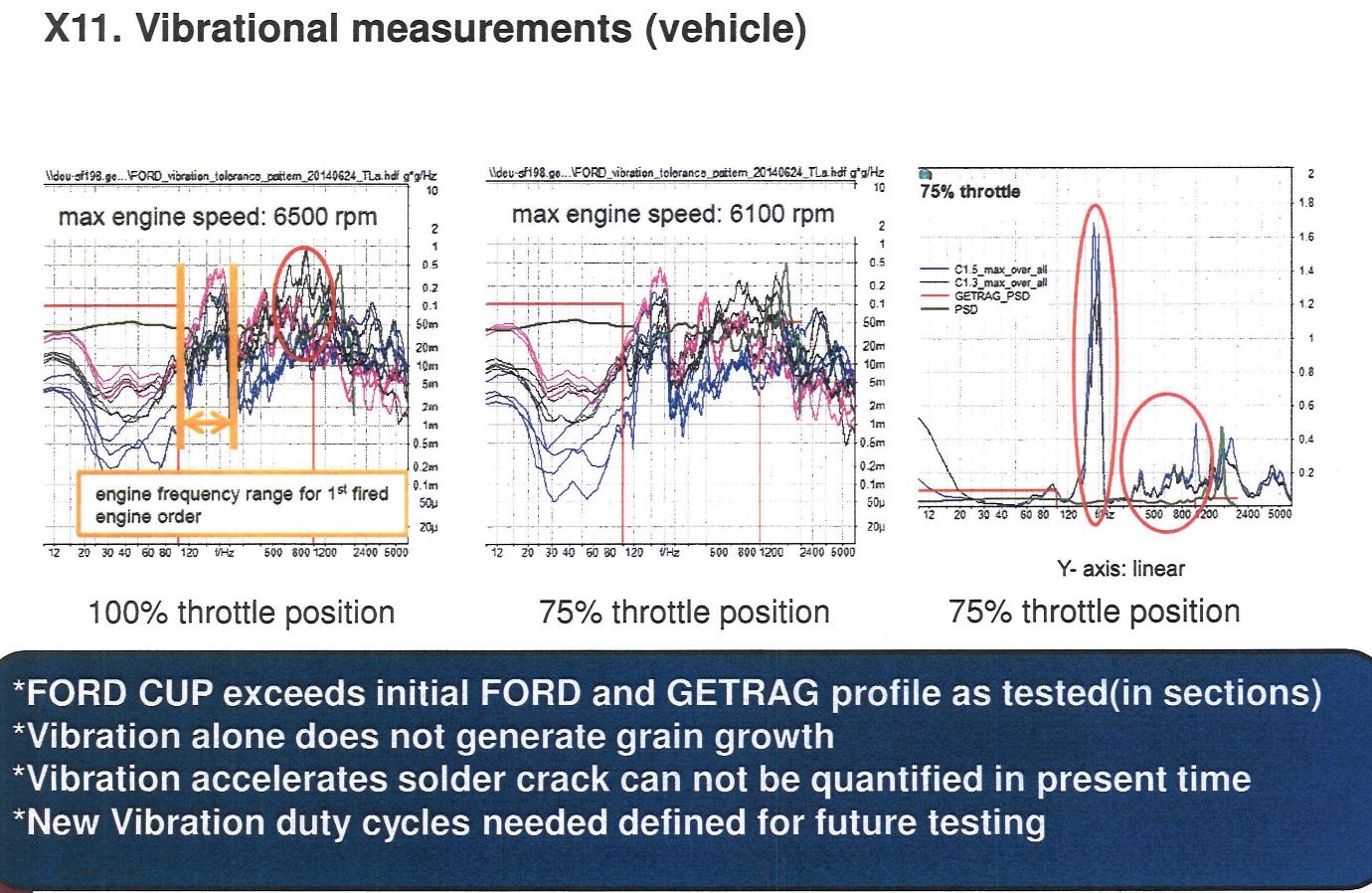
1. The parties joined issue on the question of whether the ATIC 91 (and ATIC 106) chips were a design or manufacturing problem. I do not think that this issue matters (as I have already explained). Lest I be wrong about that, however, it is clear, on the evidence in this case, that the problem was a difference between the CTEs of the chips and that of the PCB. This is a design problem not a manufacturing problem.

## Vibrations

1. Because it will be necessary to return to this when considering the Applicant’s case that the DPS6 was afflicted with Architectural Deficiencies including, relevantly, a failure to provide for adequate torsional damping, it is convenient to note at this point the Applicant’s submission that there was evidence that vibrations had contributed to the problem with the solder cracking. There is evidence to this effect. Amongst the Getrag documentation previously referred to there is a table setting out the result of Ford US, Getrag and Continental’s joint investigations into the causes of the solder cracking. It is in these terms:



1. This suggests that it was Getrag and Continental’s view that vehicle vibration was a factor, albeit it secondary, in the cracking solder. The problem is described as ‘X11’. The document contains a slide devoted to X11. It is in these terms:



1. This suggests that vibration alone did not cause solder cracking but where solder cracking was occurring vibrations accelerated the problem (this was also Dr Greiner’s view). It is not clear from this material what the vibration being referred to actually is. It does seem to be a vibration which is associated with the engine speed. As such I am prepared to assume that it could be torsional vibrations. I return to this issue later.

# Section IX: The Rear Main Oil Seal

1. At the back of the engine there is a seal which surrounds the engine crankshaft as it exits the engine. It is variously known as the rear engine oil seal, rear main oil seal or the crankshaft seal. I will refer to it as the rear main oil seal which is the phrase the parties adopted in their submissions. The purpose of the seal is to prevent engine lubricating oil from passing out of the engine’s crankcase and into the bell housing of the transmission. The Applicant alleges that the rear main oil seal in the 2.0L Focus had a propensity to leak which caused oil to make its way into the bell housing and there to contaminate the clutch plates. Dr Greiner thought, and I accept, that if this leaking occurred it would result in the same range of symptoms as arose from leaking input shaft seals (discussed above): §512. Mr Kuhn accepted that if the rear main oil seals leaked then it could ‘potentially’ create a clutch performance issue: §160. I do not accept that it is a potential clutch issue. If engine lubricating oil finds its way on to the clutch surfaces of the dry DPS6 transmission then, for the reasons which both Dr Greiner and Mr Kuhn accepted in relation to the input shaft seals, it will disrupt the ability of the TCM to be able to predict the frictional qualities of the clutch lining. This will cause the TCM to be less proficient at changing gears. If the rear main oil seal leaks then the problems with the clutch will not be potential problems, they will be actual ones.
2. Mr Kuhn also thought that in the industry the rear main oil seals were considered part of the engine and not part of the transmission. The apparent point of this distinction in taxonomy was that if these seals were to leak the problem should be considered an engine problem and not a transmission problem. Mr Kuhn may well be right about that and indeed Dr Greiner agreed with the suggestion in his reply report but I do not think it matters. It is true that the allegation which appears at 4FASOC §6AB(iii) suggests that the alleged deficiency in the rear main oil seals was a problem with the DPS6 transmission. And it is true that the Respondent denied this allegation save for admitting that the rear main oil seal leak was a ‘minor additional cause of wet clutch shudder affecting some vehicles’. However, the Respondent did not in its submissions take any point that a case about the rear main oil seals was outside the pleaded case because those seals did not form part of the transmission but were instead an engine component. Instead both parties approached the issue on the basis that the question for determination was whether there was any problem with the rear main oil seals. This question of taxonomy can therefore be put aside.
3. The Applicant’s case on this was, as I have said, confined to the 2.0L Focus. The Applicant submitted that the design of the rear main oil seal was deficient. To prove that case the Applicant drew attention to a number of documents in which there are references to leaking rear main oil seals. I return to those documents shortly. However, one may observe at the outset that not one of these documents says anything about thedesign of the rear main oil seals or their manner of manufacture or assembly. In that regard, this may be contrasted with the evidence about the input shaft seals, the selection of the clutch lining material and the TCM. In each of those cases, there was engineering evidence not only from Dr Greiner but also within Ford US’ own documents identifying a defect in design or manufacture (or both). In the case of the input shaft seals, the problems included that the material selected for the lip was not adequate in the heat environment of the DPS6 and that for the inner seal a rubber backing had been used rather than a steel backing. In the case of the clutch lining the problem was in the selection of the B8080 material which did not have suitable frictional qualities for the DPS6 and also because of geometric misalignments arising from the way the components were manufactured and assembled. In the case of the TCM, the basic problem was the difference between the CTEs of the ATIC 91 and ATIC 106 chips, on the one hand, and the CTE of the PCB, on the other.
4. In the case of the rear main oil seals, however, the Applicant’s case that there was a design deficiency is not grounded in any more than an assertion. At §513 of his report, Dr Greiner was candid in saying that the Ford US documents he had examined had not identified any root cause of the problem of leaking rear main oil seals. More importantly, Dr Greiner himself expressed no opinion as to what that cause was.
5. Without an identification of what the cause of the alleged rear main oil seal leak was, it is difficult to assess the Applicant’s contention that they suffered from a design defect because the Applicant does not say what was actually wrong with them. It is also difficult to understand without such an explanation what the attendant risk of failure was since the mechanism of failure is unknown. It might be possible, despite that lacuna, to prove statistically that there was a problem. As will be seen, however, the Applicant does not attempt such an exercise.
6. Turning then to the documents upon which the Applicant relies, they were as follows.
7. First, an email dated 11 December 2010 and a report dated 12 November 2012. Neither of these documents was referred to prior to the delivery of the Applicant’s closing written submissions and, for the reasons I give at Section XVI it would be procedurally unfair for the Applicant now to be permitted to rely on them. They therefore form part of a corpus of documents which I will order to be excluded from the evidence. In any event, I do not think they assist. The email does no more than show that on 10 December 2010 a dealer contacted Ford US to report a leaking rear main oil seal. The Applicant submitted that it showed that ‘there was an issue with installation of the rear main seal rolling during installation, and there had been approximately three confirmed complaints of leaks in the field at that time’. What the document says relevantly is this:

As to the rear main seal, yes, there was an issue at TEP with installation and the seal rolling a touch during installation. However, we have not seen too many confirmed rear main seal leak complaints in the field to date. Maybe 3 total.

1. There are three problems with this. First, there is no evidence as to what ‘TEP’ means or what ‘the seal rolling a touch during installation’ means. The removal of the ambiguous phrases from the email and their incomplete paraphrasing in the submission means that the submission is inaccurate inasmuch as it suggests clarity where there is none. Particularly where the Respondent has been given no opportunity to respond to this material, the submission is unhelpful. Secondly, it is unclear whether the vehicle to which the email relates was a 2.0L Focus. Thirdly, the email contains no evidence of a design defect.
2. The Applicant submitted that the report dated 12 November 2012 contained various records of customer complaints which showed that dealers who had contacted a service hotline had been told that Ford US had ‘seen the engine rear crankshaft seal and the transmission input shaft seals leak’ and were directed to replace the rear main oil seal if it was leaking together with the clutch assembly. I accept that the report shows that dealers had called regarding transmission leaks and had been told that the hotline was familiar with leaking input shaft seals and rear main oil seals. However, at the top of the relevant records of customer complaints, including those cited by the Applicant at [382](b), it is noted that the vehicle involved was a 1.6L Fiesta and not a 2.0L Focus. The report is not therefore related to the case the Applicant advances in her submissions.
3. Secondly, the Applicant relied on a Consumer Driven 6-Sigma report dated 22 February 2013. She submitted that this document showed that non-transmission related leaks (being clutch and seal changes with evidence of rear main oil seal leak) accounted for 8% of total leaks at that time. The report relates to the Focus/Fiesta transmission family program, as its front page makes clear. Page 2 of the document says that transmission leaks are ranked third in ‘V48’, which Dr Greiner suggests (somewhat opaquely) denotes ‘an internal Ford vehicle system category referring to automated transmission systems’ but there is no evidence as to what is encompassed by the ‘V48’ category and what is not. At p 5 there is a pie chart which suggests that of the warranty claims made for 2013 model year vehicles relating to transmission fluid leaks, 8% are ‘non-transmission’. The summary comment under the chart says that ‘Non Transmission are Clutch and Seal Changes with evidence of Engine Rear Main Seal Leak’. Next to that is an observation ‘Engine seal team engaged’. I pause to note that this evidence supports Mr Kuhn’s observation, with which Dr Greiner agreed, that the rear main oil seal is not part of the transmission but rather the engine. The balance of the document does not discuss the rear main oil seal no doubt because its subject matter is transmission fluid leaks and the topic of rear main oil seal leaks was not thought to form part of that inquiry. This rather suggests that the more interesting document would be the corresponding 6-Sigma Report relating to the rear main oil seal issue, assuming one exists, but the Applicant did not point to such a document. The report of 22 February 2013 rises no higher than showing that the transmission engineers considered that in 8% of the warranty claims for transmission fluid leaks there was ‘evidence’ of rear main oil seal leaks and that the people responsible for that issue (the engine seal team) had been engaged. There is no evidence of a design or manufacturing deficiency in the rear main oil seal or the method of its installation.
4. Thirdly, the Applicant relies on a special service message dated 28 August 2013. This, too, is a document I have concluded should be excluded from the evidence on procedural fairness grounds. The Applicant is not therefore entitled to rely on it but even if she had been I do not think it would assist her. The Applicant submits that the document shows ‘that some vehicles may experience a fluid leak between the engine and transmission’ and that it instructs dealers to ensure that the rear main seal was only replaced after a rear main seal failure was confirmed ‘through appropriate diagnostics’. I accept that the document says this. It appears to be discussing a problem common to the Fiesta and the Focus which is difficult to square with the contention that this problem afflicted only the 2.0L Focus. But regardless, it contains no evidence of a design or manufacturing deficiency. Further, whilst it suggests that the problem of a leaking rear main oil seal was known it provides no evidence as to the extent of that problem.
5. Fourthly, the Applicant seeks to rely on a PowerPoint presentation dated around 2014 which showed how to diagnose rear main oil seal leaks. The presentation is entitled ‘Rear Main Seal & DPS6 Transmissions’ and is also a document to be excluded from the evidence on procedural fairness grounds. It contains detailed instructions on how to diagnose an oil leak in the rear main oil seal. Largely this involves putting fluorescent dye in the engine oil and poking around the transmission with a UV light leak detector. It says nothing about the prevalence of the problem or the existence of any design or manufacturing deficiency. I do not think this document would have assisted the Applicant had she been entitled to rely on it. It seems likely that given the number of vehicles on the road, sometimes there are going to be leaks in the rear main oil seal and it is useful for the dealers to be told how to diagnose that problem when it arises. The existence of a diagnostic aid does not take the matter very far.
6. Fifthly, the Applicant submits that an email from Ford Asia-Pacific to Ford US shows that Ford US was aware that there were a number of cases where contamination was coming from leaking rear main oil seals and that this was a worldwide problem. The document is in fact an email chain which commences on 18 June 2014 and finishes on 30 September 2014. At 10.01 pm on 18 June 2014 this email was sent:

Ford of Australia have identified an interesting concern when performing the DS6 Intermittent Clutch Shudder TSB. It seems that not all of the contamination cases are coming from the Input Shaft Seals, but there are a number of cases (about 63 on DPS6 Focus from FTM Thailand) where the crankshaft rear seal is leaking causing the engine oil to contaminate the dual clutch on the DPS6 resulting in intermittent take off shudder too. Only occurs on the 2.0L GDi engine as far as we know.

Are you guys aware of this concern in North America?

Can you forward to the right people for the 2.0L GTDi engine for review?

Will try to obtain some pictures from the field for your use also.

It will obviously have an impact on the incidences of contaminated clutch assemblies (particularly any post-BP cases) and needs to be incorporated into any reviews. Please let me know what you find.

Khun Anuwat: can you please raise this with the FTM PVT to see if they can pursue robust concern ID and resolution through the PD/PVT LEA channels?

1. This email is discussing the problem which the Applicant is putting: a problem with the 2.0L Focus. Sixty-three Focus vehicles manufactured in Thailand have exhibited the problem. The author seeks information on whether other Ford entities have experienced the same problem. An email at 7.39 am on 19 June 2014 confirms that the problem is being experienced ‘in the rest of the world’. At 1.53 pm on 19 June 2014 this email was sent:

Team – Please take a look at these slides:

Please note that:

* Manual vs Auto trans bar colors change between the 2… Sorry.
* The first slide is by vehicle build date.
* The second slide is by repair date.
* Note the correlation of Manual trans seal repair dates to DPS6 TSB Introduction (Though I’ve been told that there is no way the Auto Trans TSB is affecting Manual Trans seal Warranty).
* To be clear, There will be a few Rear Seal Leaks in the field – every Plant has a few… But .. these charts clearly demonstrate the primary issue in my mind.
* Dearborn Engine, as always, works to improve sealing, and has recently made another tweak to RTV based upon recommendation of our technical experts.
* The last tweak was in July 2013.

1. The slides referred to are not attached. The highlight is the statement ‘every Plant has a few…But…these charts clearly demonstrate the primary issue in my mind.’ Then at 11.28 am on 5 August 2014 an email was sent relevantly in these terms:

It looks like the seals are good but the pan to block area is the area of the leak.

1. This suggests that the problem was *not* in fact with the seals. Then at 6 August 2014 at 4.21 am an email was sent relevantly in these terms:

Pls review the attached photos showing examples of misdiagnosed oil pan leaks.

1. This appears to suggest that there were known examples of oil pan leaks being misdiagnosed as rear main oil seal leaks. The same day at 8.34 am this email was sent:

Hi Steve,

Hoping you could clarify in simple terms for us please:

1. Are your findings that the cause of the customer complaint is (mostly) due to DPS6 input shaft seal leaks and NOT the rear crankshaft seal leak?

2. Can you provide a rough % breakdown on the cases you’ve reviewed?

3. Are there any other sourced of misdiagnosis that we should be reviewing in this general area?

Reason I ask is that perhaps we need to draft some TSB type communication for our dealers in China to ensure a robust diagnosis. If that’s what is deemed is required, then I’d need support from the team to provide me with the info to help get the diagnostic right.

1. This calls for further information and ruminates on whether there needs to be a technical service bulletin to the dealers in China. The response came back on 8 August 2014 at 5:43 am:

Hello Carlo.

We reviewed a total of 80 claims using the photos provided.

Here is the break down.

As far as the response:

25% are front cover

30% confirmed trans seals

20% suspect trans seals

25% not enough info

It should also be stated that in North America for the 2014 model year only one returned rear oil seal was a confirmed leaker. The seal was rolled.

1. I do not know whether ‘front cover’ means rear main oil seal but perhaps it does. It also contains the information that there was only one confirmed rear main oil seal leak in North America for the 2014 model year. The final email is on 30 September 2014:

Hi Steve,

Following on from your feedback in early August, I’d like to suggest that perhaps FNA PT Quality have understated the number of 2.0Lt engines with a rear crankshaft seal leak affecting the performance of the DPS6 transmission.

I’ve attached yet another dealer report about this from Australia, and have had similar responses from many other APA markets. Dealers are not convinced this is all DPS6 input shaft leaks, and are going to the great lengths of preparing detailed teardowns for the Field Service Engineers in order to demonstrate their point.

Has there been a similar change in the flow of reports from FNA, particularly as more vehicles are looked at under the TSB and extended warranty/FSA for DPS excessive shudder?

1. This reasserts the existence of the problem, suggests that the problem may be understated and relays another dealer report from Australia.
2. I have set out this email chain to show how difficult it is to draw any conclusions from it. Certainly the problem of rear main oil seal leaks is being discussed. But there is an internal debate taking place and I cannot discern how that internal debate was resolved. Some voices in the chain believe there is a problem with the seals, some appear to believe that it is another problem (with the pan) which is being misdiagnosed and some believe that the information is inconclusive. Looking at the exchange as a whole I do not think it advances the Applicant’s case. It does show that some people within Ford were looking at a problem with the rear main oil seals and were debating how much of a problem it was. It certainly does not advance a case that there was a design or manufacturing defect in the seals.
3. Sixthly, the Applicant relied on a presentation dated 2 August 2014 entitled ‘DPS6 Technical Specialist’ and submitted that it ‘listed the rear main oil seal carrier as a cause of clutch contamination and explained how to diagnose it’. It is apparent from p 3 that this document is a PowerPoint presentation intended to be used at a meeting because it tells the reader that there will be morning tea at 10.00 am and the location of the toilets. The people identified to address the meeting are a Mr Addison, a field service engineer, and a Mr Athanasiadis, a foreman and ‘DPS6 Guru’. The meeting appears to relate to the delivery of a course, the outline of which suggests its purpose was to introduce the DPS6 Technical Specialist and to combine customer processes and techniques with DPS6 technical skills. There then follows a great deal of upbeat material about customer focus (p 14) together with a reminder (at p 17) that this was an opportunity for personal growth. At p 27 the people attending are asked to consider the body language of the customer to determine whether they are in a hurry and at p 29 the suggestion is made that the customer should be offered a warm beverage. The presentation continues in this kind of vein for many slides. The Applicant relies on a slide at p 79 which I infer was to be presented well after lunch. It says this:

Clutch contamination

* Input shaft seals
* Rear main oil seal carrier
* Sump to block joint

1. I do not get much from this. The Applicant also relies on pp 82 and 87:

Rear main oil seal carrier

* After transmission removal check between the flywheel and the block for oil which normally be seen on the bottom edge of the seal carrier.
* Oil may also be present in the cast cavities in the rear face of the block.
* If oil is visible the sealing of the rear main seal carrier to the cylinder block may be suspect. This can be checked by pressure testing the crankcase (3-5psi max.) and inspecting the lower corners and edges of the seal carrier for bubbles after spraying with soapy water.

…

Rear main oil seal carrier

The carrier may need to be resealed around its entire perimeter to the block and the horizontal seal veranda on the sump.

1. Remove old sealant from carrier and clean thoroughly using a solvent.
2. Remove old sealant from horizontal sump veranda and rear face of block
3. Clean all surfaces thoroughly using a solvent. Sealer will not adhere to contaminated surfaces.
4. I accept that this gives those in attendance instructions on how to check for leaks in the rear main oil seal and if necessary to clean and re-seal the rear main oil seal carrier. I do not accept that this shows the existence of a design or manufacturing defect. Indeed, I do not think it shows anything other than that Ford US was endeavouring to ensure that its field staff could diagnose and rectify problems with the DPS6.
5. Seventhly, the Applicant relied on an email from Ford Asia-Pacific to Ford US dated 25 September 2014 to show that there had been further instances of rear main oil seal leaks. In fact it refers to one further case (‘We’ve had a case in Australia…’), although a later email in the chain dated 3 October 2014 refers to an unspecified number of ‘cases’. A reply to the first email dated 29 September 2014 correctly says that the symptoms of such a leak would be the same as in the case of leaks in the seals in the transmission (ie the input shaft seals). The emails contain no evidence of a design or manufacturing deficiency.
6. Eighthly, the Applicant relies on an email sent by Ford Asia-Pacific on 11 August 2015 to show that there was pressure from dealers in the Asia-Pacific market to develop a TSB in relation to the rear main oil seal leaks. This is actually the first in a series of emails, however, reliance is only placed on this first one. I accept that the email does support the proposition advanced by the Applicant. The email chain as a whole suggests that Ford was concerned to deal with the problem of leaking rear main oil seals in a manner that ensured that excessive (or possibly redundant) warranty work was not done.
7. In addition to these documents, the Applicant also seeks to rely upon four documents she set out at [385]. The Respondent objected to the Applicant’s reliance upon these documents on the procedural fairness basis that they had not seen the light of day until the Applicant’s closing submissions. Below at Section XVI I accept this submission. The documents are therefore among those that will be excluded from the evidence. I will disregard [385].
8. Taken all together, I accept that this material shows that dealers had encountered some instances of failing rear main oil seals in the field and that Ford US was aware that there was a problem of some kind. I do not accept that they provide any evidence that there was a design or manufacturing deficiency. The cause of the problem is simply never discussed. Further, although I accept there were instances in the field there is no evidence as to what the extent of that problem was. I do not accept that the reference to 8% in the Consumer Driven 6-Sigma report dated 22 February 2013 shows that 8% of transmission fluid leak warranty claims related to this problem. The actual statement is not that definitive and really only suggests that 8% of those warranty claims might have involved the problem and referred the matter to a different engine seal team to consider.
9. The first solid piece of evidence about the problem is contained in a TSB issued on 7 January 2016 on the subject of ‘excessive transmission clutch shudder on DPS6 “PowerShift” Transmission due to rear engine oil leak on 2.0L Duratec Focus’. This TSB makes clear that the problem applied to certain ‘LW Focus MkII’ vehicles built before 20 September 2013 equipped with a 2.0L Duratec engine and a DPS6 transmission. Duratec is a kind of engine made by Ford. The problem is summarised on the first page under the hearing ‘Summary’:

Certain LW Focus Mkll vehicles built before 20-Sep-2013, equipped with a 2.0L Duratec engine and DPS6 transmission may exhibit a rear engine oil leak which could contaminate the Clutch and Damper Unit causing a clutch shudder concern.

1. No light is thrown on the extent of the problem or its cause. Once a rear main oil seal leak had been adequately diagnosed, dealers were then instructed to replace the seal and clutch.
2. What therefore has the Applicant actually proved about this problem? I accept that the following has been shown:
3. There were instances in which the rear main oil seals leaked engine oil into the bell housing.
4. If such leaking occurred it would lead to the same symptoms as those which arose from the leaking input shaft seals.
5. There were a sufficient number of instances for the matter to be discussed internally within Ford US.
6. Disparate views were expressed within Ford US as to the extent of the problem.
7. The nature of the problem was referred to the engine seal team for consideration but the outcome of that process is unknown.
8. A TSB was issued on 7 January 2016. Where the problem was detected the solution for vehicles on the road was to replace the seal and replace the clutch. There is no evidence that the seal which replaced the old seal was any different to the old seal.
9. That 2.0L LW Focus MkII vehicles manufactured in the period beginning in April 2011 and ending 20 September 2013 were affected by the problem.
10. What has not been proven is:
11. The cause of the problem.
12. How the problem was resolved in production from 20 September 2013.
13. What the risk of the problem arising was.
14. It is therefore not possible for me to say in relation to any particular Focus vehicle that there was a real risk that it would develop this problem. Certainly some vehicles developed it but further than that it is not possible to go.

# Section X: The Architectural Deficiencies

1. The Applicant submitted that each of the vehicles was not of acceptable quality because each was equipped with a DPS6 which suffered from the incurable problems of inadequate torsional damping and inadequate heat management. I have given a brief discussion of torsional vibrations in Section IV but it is now useful to discuss them in some more detail.

## Torsional vibrations

1. Because the pistons in an internal combustion engine fire at different times the crankshaft to which they are attached accelerates each time a piston fires in a cylinder. As the explosion in a cylinder ends the crankshaft begins to decelerate before accelerating once again when the next piston fires. Since each piston firing is accompanied by an acceleration and deceleration this means that the crankshaft does not rotate at a constant speed but instead oscillates between a lower and upper bound. The engine output via the crankshaft is not therefore a smooth output but is instead one in which there is an oscillation. This oscillation is known as a torsional vibration.

### Negative consequences of torsional vibrations

1. The mechanical phenomenon of torsional vibration is one which manifests initially in the crankshaft. Unchecked, it can be transmitted through the entire drivetrain (ie the system which delivers power to the wheels, also referred to as the driveline, which combined with the engine forms what is called the powertrain). It is apparent from Dr Greiner’s evidence that unchecked torsional vibrations could by themselves give rise to some particular difficulties. These were (a) upshift and downshift harshness and (b) gear rattle (also known as ‘grattle’). However, Dr Greiner also gave evidence that unchecked torsional vibrations could *contribute* to the problems which would arise if the clutch lining material had negative damping characteristics or there was geometric misalignments of the clutch components. These were respectively, the problems of self-excited shudder and forced-excited shudder. As I have already discussed above, in fact the DPS6 had both of these problems. The initial use of B8080 had negative damping characteristics and the way in which some of the clutches had been manufactured meant that some of them were geometrically misaligned. I did not understand Dr Greiner’s evidence to be that the problems of self-excited and forced-excited shudder would occur merely because torsional vibrations were transmitted through the drivetrain. Those problems might be exacerbated by torsional vibrations but they would not be caused by them in the absence of some other deficiency in the clutch system.
2. The problems of harsh gear changes and gear rattle, by contrast, were problems caused by unchecked torsional vibrations. Dr Greiner thought that gear rattling would occur when gears which were not presently engaged vibrated resonantly with the frequency of the torsional vibration. I infer that gears which are engaged are locked together with no freedom of movement relative to the transmission shafts but with gears which are at rest there is some leeway permitting them to move sufficiently to vibrate. This vibration would manifest itself as a rattling sound. Dr Greiner also thought that the torsional vibrations could contribute to harshness, including during gear shifts. Dr Greiner explained harshness in this context meant ‘an unpleasant and subjective characteristic of noise or vibration which disturbs the comfort of the passenger or driver’. Mr Kuhn did not take issue with Dr Greiner’s explanation of this phenomenon.

### The need for damping

1. The avoidance of these problems was therefore useful. Dr Greiner thought and Mr Kuhn did not disagree that in principle it was a good idea to damp the torsional vibrations carried by the crankshaft. Dr Greiner explained that perfect damping would occur when the torsional vibrations transmitted to the input shaft were damped to zero but he also said that this does not occur in the real world. There will always be some degree of torsional vibration carried through the transmission no matter how rigorous the damping measures taken to suppress it. Further, the more effective the damping measures the more likely there are to be related downsides. For example, Dr Greiner thought – and no one else disagreed – that attaching a flywheel with a damping system to the crankshaft would indeed damp the torsional vibrations carried to the transmission. But such a flywheel has drawbacks. It is heavy which reduces responsiveness and power and Mr Kuhn thought it would negatively affect fuel efficiency.

### The damping mechanisms of the DPS6

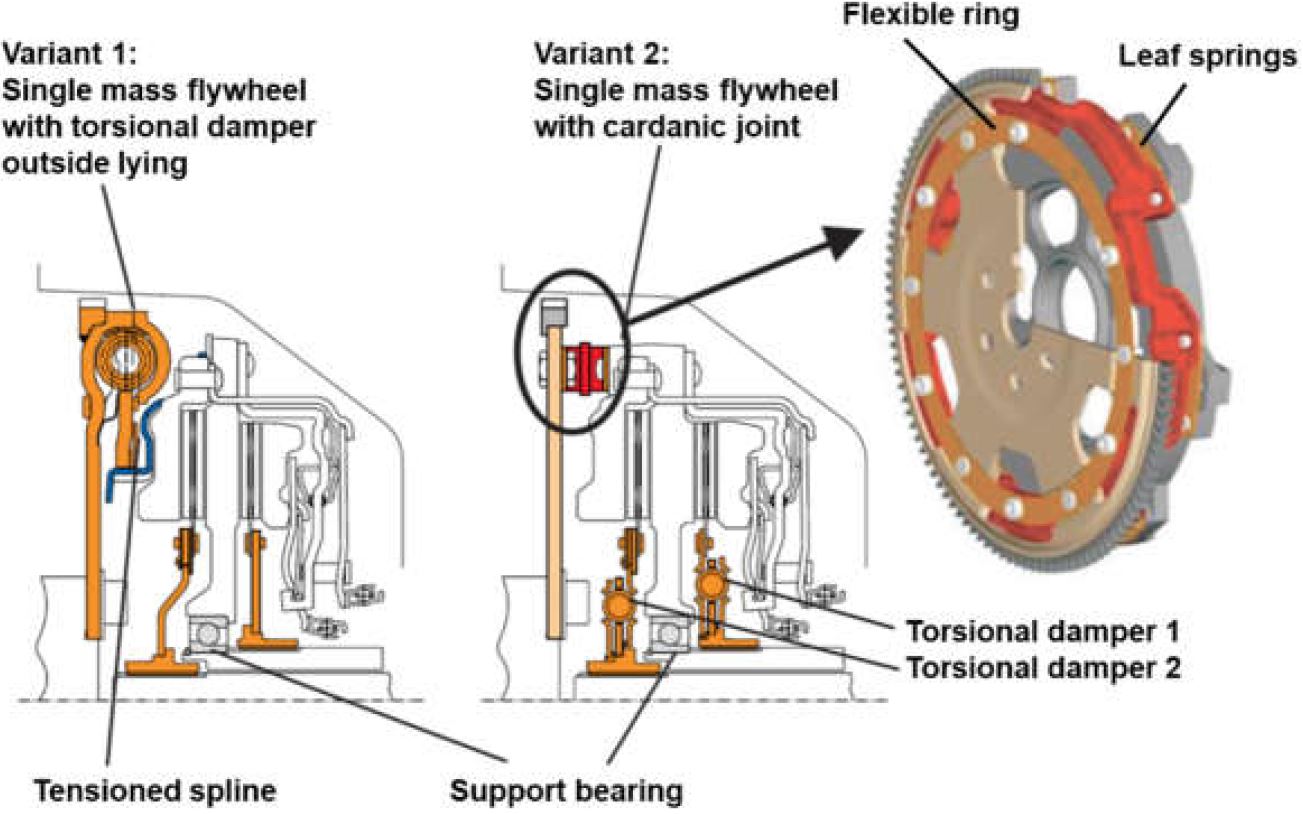
1. In any event, Dr Greiner was critical of the design of the DPS6 from the perspective of torsional damping. His evidence was that vehicles which were fitted with a dry clutch transmission (such as the DPS6) were inherently prone to torsional vibrations ‘compared to other transmission concepts’ and the use of the DPS6 therefore required that there be adequate torsional damping. I do not think that Dr Greiner’s evidence that dual clutch transmissions were inherently prone to torsional vibrations compared to other transmissions goes very far because the other transmissions he had in mind were automatic transmissions which deployed a torque converter. For reasons which need not detain this judgment, a torque converter inherently damps torsional vibrations. I did not apprehend that Dr Greiner was suggesting that the torsional vibrations afflicting the DPS6 were in kind different to those experienced by other transmissions which used clutches (such as manual vehicles). I accept that Dr Greiner did say that because the DPS6 is a dry clutch the friction variability issues arising at the clutch surfaces are more delicate and that the interaction of torsional vibrations and inadequate friction material is a particular problem to look out for. Indeed, as the discussion of B8080 above demonstrates, this problem in fact materialised in the DPS6.
2. In any event, Dr Greiner gave somewhat more specific evidence about the problems of the DPS6 with torsional vibrations. He thought that the DPS6 had three damping measures:
3. the connection of the engine to the transmission by means of a *single mass flywheel* with a *cardanic joint*;
4. the presence of small *inner dampers* within the clutch plates; and
5. the programming of the TCM to use ‘*clutch slip*’ to damp the torsional vibrations.
6. I explain the concepts in italics shortly. For immediate purposes it is necessary to highlight an architectural feature of Dr Greiner’s own evidence. The measures set out in (a) to (c) may fairly be said to constitute between them a system for torsional damping. Dr Greiner gave evidence that each of the measures (a) to (c) could be described as ‘inadequate’ but the actual question, in my opinion, is whether the entire damping system which they together constitute was inadequate. Further, Dr Greiner approached the question before him as a transmission engineer for which he can hardly be faulted. The question of whether the damping systems for the DPS6 are adequate from an engineering perspective is not quite the same question as whether vehicles fitted with a DPS6 are of acceptable quality for the purposes of ACL s 54. For example, it is often said that the Sydney Harbour Bridge is over-engineered in the sense that it was built much stronger than it needed, in fact, to be. In that sense, its engineering was inadequate because excessive resources had been devoted to achieving a strength which was of no practical utility. The bridge however is perfectly adequate from the perspective of all those who have driven over it.
7. The Respondent made both these points against Dr Greiner, at one point somewhat colourfully accusing him of living in an ivory tower in Stuttgart. I do not think this criticism of him was fair, although I do accept that Dr Greiner lived in Stuttgart at the time the case went to trial. Although this case does not call upon me to express an opinion as to whether transmission engineers would think the design, construction and implementation of the DPS6 represented best practice in terms of mechanical engineering, Dr Greiner’s contention that it did not, has its attractions. The DPS6 has, on any view, been an expensive adventure for Ford US.

#### Single and dual mass flywheels

1. Returning to the three elements of the DPS6’s damping system described by Dr Greiner, the first was the connection of the engine to the transmission by means of a *single mass flywheel* with a *cardanic joint*. Dr Greiner’s evidence about these concepts was somewhat technical. The flywheel in the DPS6 was a single piece of iron and did not contain any damping mechanisms. That kind of flywheel may be compared with a dual mass flywheel (‘DMF’). A DMF consists, in effect, of two flywheels joined with a spring mechanism. One plate is attached to the crankshaft and the other to the drive plate. Although they turn together, there is some leeway afforded in their interaction by the presence of the spring mechanism. This leeway can absorb the torsional vibrations. As the pistons fire the engine side of the DMF accelerates but rather than pass this entire rotational fluctuation on to the second mass on the transmission side the spring dampers initially contract converting the kinetic energy of the acceleration into elastic potential energy in the dampers. As the piston decelerates the potential energy is released as the spring damper expands. The net result is that the oscillation is confined to the DMF mass on the engine side and does not substantively travel to the mass on the transmission side. By these means, the torsional vibrations of the engine are isolated from the transmission.
2. Because the DMF has two flywheel masses the single flywheel is referred to as a single mass flywheel (‘SMF’). There was really no dispute that the damping qualities of a DMF were superior to those of an SMF. On the other hand, the DMF has drawbacks, too. It is larger in volume and therefore heavier, which reduces power and diminishes fuel efficiency, although Dr Greiner gave evidence that any such diminishing would be more than offset by the gains in efficiency from being able to run the engine at a lower rpm without intolerable vibration. A DMF is also more complex and hence more prone to failure (as a result of Murphy’s Law). However, this is by the by. Whilst it is true that the DPS6 used an SMF and not a DMF it had other damping mechanisms.

#### The cardanic joint

1. The next feature of the DPS6 relevant from a damping perspective is the cardanic joint. In the DPS6 the SMF is connected to the transmission by such a joint. Both Dr Greiner and Mr Kuhn agreed that a cardanic joint was essentially a flexible joint which allowed torque to be transferred between different rotating shafts. Dr Greiner explained that in the DPS6 the cardanic joint was comprised of a flexible ring on the engine side and leaf springs on the dual clutch side which were durable. Dr Greiner thought that the cardanic joint could compensate for deviations between the crankshaft and input shafts. At one stage during the hearing, I wondered whether the purpose of the cardanic joint was to address the fact that the crankshaft and the centre of the drive plate were not aligned. However, the import of this aspect of Dr Greiner’s evidence would appear to be that they are in fact generally aligned but may, on occasion, cease to be aligned. This implies that in some circumstances either the crankshaft moves from its usual position or the transmission moves from its usual position or both. It is not clear on the evidence why this would occur but the effect of Dr Greiner’s evidence is that the cardanic joint overcomes any difficulties which arise if they do.
2. Dr Greiner illustrated the cardanic joint in Figure 27 in his report. Figure 27 is as follows:



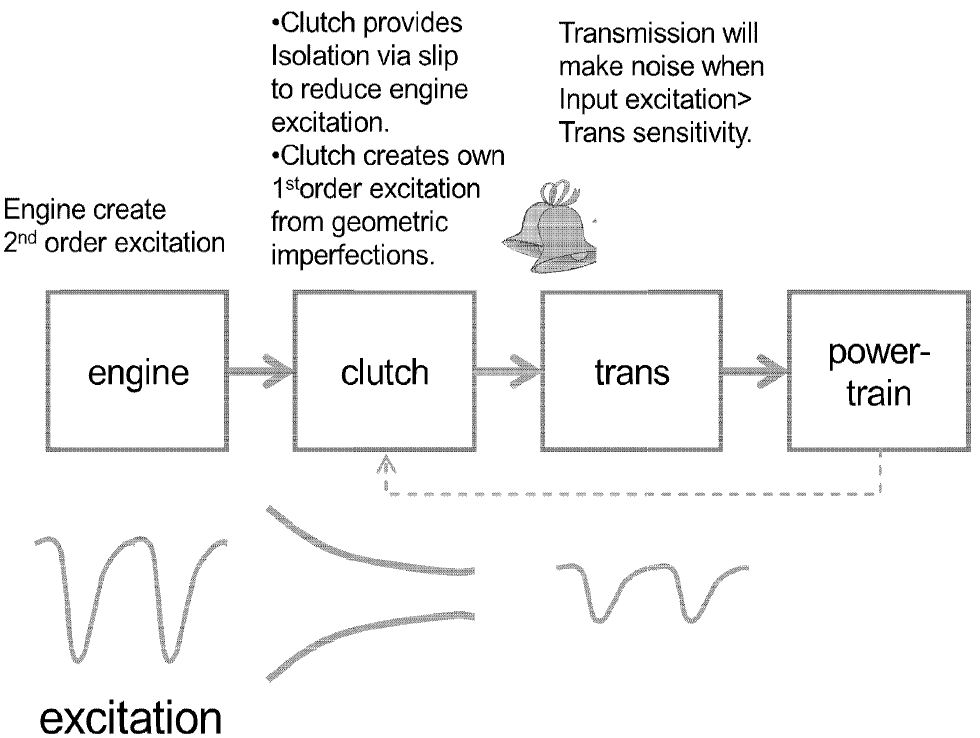
1. The diagram on the right labelled ‘Variant 2’ reflects the position in the DPS6. One might have thought that the leaf springs could have had the effect of acting as a damper of torsional vibrations but Dr Greiner’s evidence at §303 was that the cardanic joint itself provided little or no torsional damping. Mr Kuhn expressed no view on the matter. I therefore accept Dr Greiner’s evidence about this. Consequently, it seems that the torsional vibrations are transmitted from the flywheel through the drive plate and then to the clutch plates without any substantial diminution.

#### The inner dampers

1. That is not the end of the story, however, for in the DPS6 the two clutch plates were each fitted with a torsional damper which can be seen in Figure 27. These were called ‘inner dampers’. As I understood it, these dampers consisted of springs within the clutch plates. A clutch assembly was tendered in evidence but the inner dampers are not easy to observe to an untrained observer. Nevertheless, I accept Dr Greiner’s evidence about them which was, in any event, not contradicted on this point. Because it will shortly be relevant, the inner dampers are essentially a spring mechanism which converts the kinetic energy of the upswing in the oscillation to potential energy and then releases the potential energy as kinetic energy on the downswing.
2. I accept Dr Greiner’s evidence that the mechanical aspects of damping in the DPS6 were provided only by these inner dampers integrated into each clutch plate (and therefore not in any significant way by the cardanic joint). Consequently, I accept that the torsional vibrations were substantially transmitted from the crankshaft to the flywheel and then on to the drive plate where, in turn, they were transmitted to the clutch plates. *Mechanically*, the system was designed to damp the torsional vibrations only by means of the inner dampers within the clutch plates.

#### Software damping: clutch slip

1. However, the DPS6 had another strategy for damping the torsional vibrations. Dr Greiner said that the DPS6 also deployed a software measure, which I assume was controlled by the TCM. This was a process known as ‘clutch slip’. Clutch slip describes the situation which exists when the engaged clutch plate and the drive plate are not rotating at the same speed. In the DPS6 this occurs most obviously when gears are changed and also when the vehicle first starts to move (‘launch’). The purpose of the clutch assembly is to bring the clutch plate and the drive plate to the same speed. This is achieved by gradually introducing the clutch plate to the drive plate with increasing pressure. If performed smoothly the endpoint of the operation should be that the two plates are held together by static friction and are rotating at the same speed. Clutch slip in this sense is a transitional phase between the complete non-engagement of the clutch plate with the drive plate and the full engagement of the two plates with each other.
2. However, clutch slip may be used for other purposes too. In a manual car, for example, a driver on a hill may keep the car at rest but nevertheless in gear by ‘riding’ the clutch. In that case, the clutch is left partially engaged to the extent necessary to provide sufficient forward motive force to stop the car from rolling back. Another use of clutch slip can be to reduce torsional vibrations. Dr Greiner explained that clutch slip can be used to isolate the transmission from the torsional vibrations of the engine. The manner in which it does so is different to that which underlies the operation of the damping springs in the clutch plates in the DPS6. The springs tend to average out the torsional vibrations. Where clutch slip is used to isolate the transmission from the torsional vibrations of the engine it lowers the transmission speed toward the lowest rotational speed of the engine during the oscillation. Effectively the TCM damps the torsional vibrations by riding the clutch a little bit.
3. There is an unhelpful issue between the parties as to whether the DPS6 did in fact use clutch slip in this way. Mr Kuhn did not address this question in his report. Dr Greiner’s opinion that the DPS6 did use clutch slip in this fashion is based on a document produced by Ford US dated 20 August 2012 entitled ‘DPS6 NVH Task Force – Status’. This document was prepared by a Mr Joseph Borneo who the report describes as a ‘TDE Master Black Belt’. I assume that ‘TDE’ here stands for Transmission Driveline Engineering from its use as such elsewhere in the evidence. This document was produced by Ford US in the *Vargas* proceeding. At p 6 it has a heading ‘DPS6 Gear Rattle Physics 101’. Underneath that heading is this diagram:



1. Dr Greiner’s evidence was a reference to the statement ‘Clutch provides Isolation via slip to reduce engine excitation’. About this the Respondent submitted at [173] as follows:

It is also worth noting that his opinion that the DPS6 relied on clutch slip as a substitute for a hardware torsional damping system is based on a single Ford US document. That document, dated August 2012, contains no technical data or analysis. It refers to clutch slip but does not make any statement about whether that slip was appropriate. It is not clear what the status of the document is or the basis for the assertions it contains. Dr Greiner referred to no other evidence suggesting that the level of clutch slip was ‘excessive.'

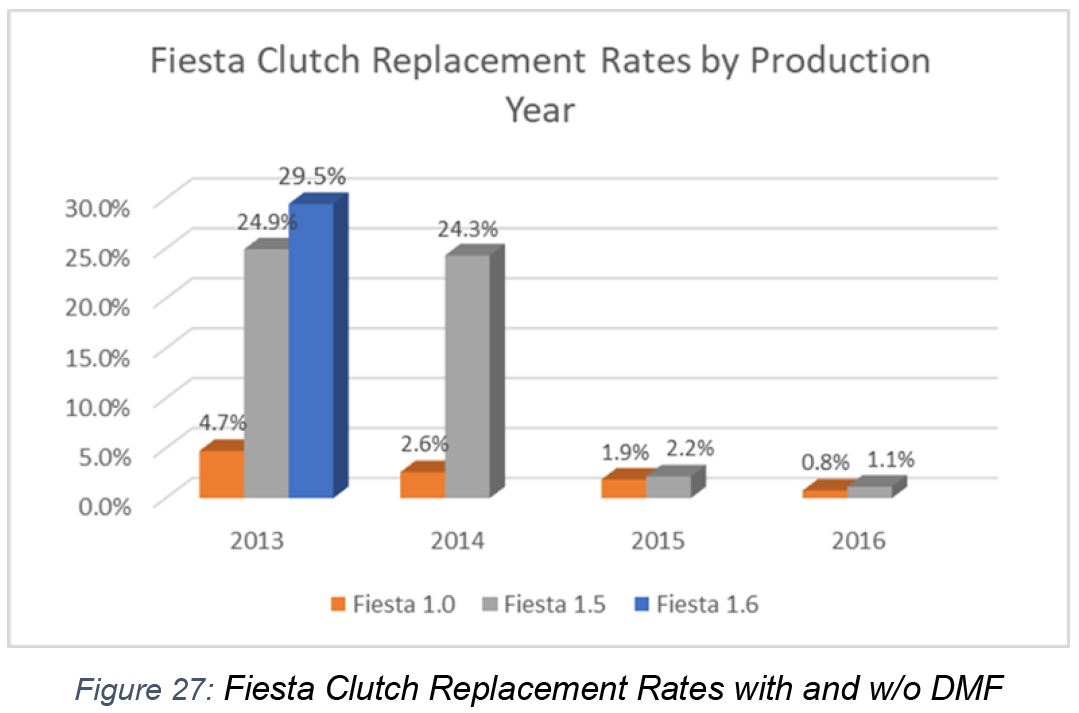
(Footnote omitted)

1. This submission does not say that Dr Greiner was incorrect in suggesting that the DPS6 used clutch slip as a torsional damping system. It points out that the document does not say that any such use of clutch slip was inappropriate. This is true but something of a strawman since Dr Greiner did not suggest that it did. I am left unclear as to what the Respondent’s actual position was on whether the DPS6 used clutch slip as a method for damping torsional vibrations. If the DPS6 did not use clutch slip as a method for damping torsional vibrations this is something Mr Kuhn could easily have said. Further, the contention that Ford US would not know how its own transmission works is unattractive and I do not think that the Court can be seriously asked to conclude that the Respondent did not know, by the time of the trial, whether the DPS6 used clutch slip as a torsional damping mechanism.
2. Instead of saying Dr Greiner was wrong about this, the Respondent instead issued the equivocating invitation in their submissions at [173] set out above to discount Dr Greiner’s evidence because the status of Mr Borneo’s document was not clear and because it contained no basis for the assertions it contained.
3. It is not clear to me why Mr Borneo’s document is of ‘unclear’ status. It seems to be a high level presentation prepared as part of a project within the Ford US entitled ‘DPS6 NVH Task Force’. This does not sound like a document prepared on a whim. It is not something written on a Post-It™ note or affixed nonchalantly to the fridge in the staff kitchen. Further, whilst I am not entirely clear why Mr Borneo was a Master Black Belt in TDE I did not apprehend that the title was intended to suggest he was an amateur. The presentation appears to be the result of serious consideration from someone who has the appearance of knowing what they are talking about. If the Respondent wants to say that this document does not show that clutch slip was used to damp torsional vibrations then a good place to start with that contention would be to deny the proposition in its submissions. This it does not do.
4. I read [173] as a carefully crafted submission designed not to assert that the DPS6 did not use clutch slip whilst maximising doubt and uncertainty. As such, I do not propose to expend any more time on this point and I see no reason not to infer that this document means what it appears to say, namely, that the DPS6 did use clutch slip to damp torsional vibrations. In any event, as I mention below, there are other documents produced by Ford US which refer to the use of clutch slip to damp torsional vibrations.
5. I therefore find that the DPS6 did use clutch slip to damp torsional vibrations. Consequently, I find as a fact that the damping of torsional vibrations in the DPS6 was achieved by the use of:
6. the inner dampers within the clutch plates; and
7. the use of clutch slip.

### Did the torsional damping measures remove the torsional vibrations?

#### Inner dampers

1. Dr Greiner thought that the inner dampers provided negligible damping for the DPS6. Mr Kuhn expressed no view on this question. The Respondent criticised Dr Greiner’s opinions on the general basis that they were those of an armchair expert who had not actually examined the DPS6. When that criticism is applied to the present issue it becomes an observation that the question of whether the inner dampers provide adequate mechanical damping is a question inherently susceptible to an empirical answer. In other words, as I understood the submission, in the absence of Dr Greiner having actually conducted some form of experiment on the DPS6 to measure the damping characteristics of the inner dampers, the Court should place no weight on his opinion that the inner dampers provided negligible damping.
2. That submission is made in a forensic context which includes the fact that the Respondent has itself made few efforts directly to engage with any of Dr Greiner’s engineering contentions. Rather, Mr Kuhn’s approach involved a methodological attack on Dr Greiner’s approach. In Mr Kuhn’s view, as a matter of transmission engineering, one ought not to hypothesise the existence of a problem in a vacuum; rather, one should ascertain from the available data whether there is a problem. If it appears that there is a problem then one can start to test various hypotheses until the nature of the problem is ascertained.
3. This methodology is very much in evidence in the manner in which Ford US’ engineers approached the various problems which arose in relation to clutch shudder. First, the problem of clutch shudder was identified from the warranty and complaints data. Then, gradually, the sources of the shudder were ascertained: leaking input shaft seals (causing fluid contamination of the clutch surfaces), the negative damping characteristics of the B8080 (causing self-excited shudder) and geometric misalignment of the clutch components (causing forced-excited shudder). In Mr Kuhn’s view, Dr Greiner had put the horse before the cart. The correct place to start was in the warranty and complaints data to see if there was in fact a problem. Although Mr Kuhn could see that the leaking input shaft seals, the differing CTE’s of the ATIC chips and the PCB in the TCM, and the frictional variability and negative damping characteristics of the clutch lining material had each elevated the rate of warranty claims, that data also showed that once solutions to those problems were applied in production, those rates had dropped off. From this drop off in rates one could therefore conclude that the problem had been identified and resolved. (I do not fully accept this: the drop off in rates tends to suggest that the identified engineering problem was at least one source of the identified behavioural pathology but it does not demonstrate that it was the *only* source because the rate did not drop to zero).
4. Mr Kuhn did not think the data, after the in-production fixes were applied, suggested the existence of some other problem with the DPS6. No occasion therefore arose to consider whether the DPS6 suffered from the alleged Architectural Deficiencies because the data did not suggest there was a problem for which it would be worthwhile formulating a causative hypothesis. Consequently, Mr Kuhn thought – in effect – that Dr Greiner’s opinion about inadequate torsional damping (and heat management) was a theory in search of a problem.
5. There are, I think, three answers to this. First, as I have said, the repair rates did not drop to zero. Mr Kuhn put before the Court his Figure 27 which showed the rate of clutch replacements by production year for Fiestas including for the Fox Fiesta. The significance of the Fox is that it did have a DMF. Figure 27 was in these terms and appears identical to the Figure 26 I have discussed above at [277]:



1. What one gets from this graph rather depends on what one is looking for. From the Applicant’s perspective, it shows that there was a background failure rate of 1.1% by around 40 MIS for the 2016 production year (as the dataset concludes in November 2019) and that this proves the existence of the Architectural Deficiencies (including inadequate torsional damping). From the Respondent’s perspective, it shows that the rate for the 1.5L Fiesta drops precipitously from 24.3% for the 2014 production year to 1.1% for the 2016 production year which were instead manufactured with the revised friction material, near the 0.8% of the DMF-equipped Fox Fiesta and that this shows that the Architectural Deficiencies cannot therefore exist. The same remarks apply as I have made above in Section VII. The limitations of this material are obvious. It includes neither the EcoSport nor the Focus. It only relates to vehicles which received a clutch replacement. Not included are those vehicles which were not presented for service and those vehicles which, whilst presented for service, did not receive a clutch replacement. Included in the 2013 production year is the 1.6L Fiesta. It ceased to have a DPS6 in the following years. It might have been interesting to compare the clutch replacement rate for a vehicle which on no view could be suffering from the alleged Architectural Deficiencies with the 1.5L Fiesta but neither party seemed interested in such an enterprise. Further, as I have already asked, what does the rate of 1.1% by 35-47 MIS for 2016 production year vehicles imply? Is this a high rate? Is there a background rate of clutch replacement for a perfectly well-behaved transmission? Is this rate higher than that rate? There are so many imponderables to this evidence that I am unable to attach any significance to it.
2. I suppose Mr Kuhn might say that if these rates suggested a problem, they did not suggest it was a very big problem. However, once the debate has moved to that arena, the premise of Mr Kuhn’s attack on Dr Greiner’s methodology is no longer sound – there is a problem and all that is being debated is its size.
3. Secondly, at least in relation to the inner dampers, I am not sure Mr Kuhn’s criticism of Dr Greiner’s methodology is as sound as it appears to be at first blush. I accept of course that the way in which Mr Kuhn approaches the question is a methodologically sound process of problem solving. It does not follow, however, that the approach of Dr Greiner is not itself sound: there is more than one way to peel an orange. Whilst the idea of a theory searching for a problem has a certain rhetorical force it is apt to hide theoretical postures which may be quite distinct. For example, if my car has no battery I can confidently predict it will not start and, like Dr Johnson, I may dismiss on the basis of ordinary experience the views of those who demand empirical rigour. On the other hand, consider a theory that my windscreen wipers are decreasing the fuel efficiency of my car because their shape increases the thickness of the boundary layer which increases aerodynamic drag. This is not a theory which stands in quite the same position as the no-battery hypothesis and one might well hesitate to affirm its correctness without some evidence of how the vehicle behaves in the absence of the offending windscreen wipers.
4. Dr Greiner’s opinion about the inner dampers was expressed in these terms:

The hardware torsional damping in the DPS6 is provided by small inner dampers within the clutch plates; however, these inner dampers provide insufficient torsional damping. In my opinion, this damping system did not provide adequate isolation of the transmission from the torsional vibrations of the engine. The documents which I have been briefed with suggest that a similar view was expressed within Ford.

…

From an engineering perspective, given the inevitability and magnitude of engine vibrations, *something* needs to be done to dampen vibrations. It is evident to me, based on my knowledge and experience with the various torsional damping options available to transmission designers, that the hardware damping measures included in the DPS6 are of a kind that provide negligible damping. Consequently, the primary torsional damping measure in the DPS6 is its software, which I am aware is primarily the option of clutch slip. In other words, in my opinion the design of the DPS6 sought to compensate for inadequate hardware torsional damping with significant clutch slip to damp torsional vibrations at the clutch plate drive plate interface.

1. Although the damping characteristics of the inner dampers is not something I would feel able to express an opinion about, I am satisfied that this is something Dr Greiner can comfortably do. He has been involved in the engineering of many transmissions and is very familiar with the problems that can arise with damping systems. Although it is not obvious to me, I accept that it is obvious to Dr Greiner. Consequently, I accept that his opinion falls into the first category I have described above. For a transmission engineer, it is obvious that inner dampers located in the clutch plates provide, on their own, negligible damping in the same way that it is obvious to me that my car will not work without a battery. That reasoning is sufficient for me to be satisfied that I should find that the inner dampers provided negligible torsional damping. An additional (but explicitly parallel) reason for reaching that conclusion is the failure of the Respondent to suggest to the contrary, let alone to give any evidence to the contrary. The operation of the DPS6 is something the Respondent (and its parent) are uniquely placed to know. I may more comfortably draw the conclusion that the inner dampers provided negligible torsional damping where the Respondent has taken the position of staying stumm. To be clear, I would have reached this conclusion without relying on that failure.
2. I therefore do not think that Mr Kuhn’s methodological objection has much traction, at least on this point. For largely similar reasons, I also accept Dr Greiner’s allied point that in the DPS6 the inadequacies of the inner dampers therefore place the lion’s share of the damping duties on clutch slip.
3. The third problem for the Respondent’s submission is that Dr Greiner’s opinions are not isolated but can be identified in the documents generated by the engineers working for Ford US on the DPS6. This is not only apt to corroborate Dr Greiner’s views (and acquit him of the charge of living alone in an ivory tower) but also tends to undermine any contention that the view that the inner dampers provided negligible torsional damping was an exercise in theory disconnected from the real world.
4. The first of these is a document entitled ‘DPS6 Lessons Learned Paper – Summary of Key Issues for the DPS6 Transmission Project’ and is dated 22 August 2012. At p 8607 it contains a comparison between the Focus and the Veloster (a Hyundai vehicle). Under the heading ‘Dual Mass Flywheel’ it says:

The Veloster is equipped with a dual mass flywheel while the Focus is not. The DMF provides enhanced isolation to engine torsionals and requires less slip to provide isolation.

1. I do not take from this that the use of the SMF with inner dampers was inadequate, only that the use of a DMF provided an enhanced outcome by comparison. I do take from this quote, however, some support for the (presently unrelated) proposition that clutch slip was used as a method of combatting torsional vibrations (as noted above). A second part of this document upon which Dr Greiner relied was at p 8584. Under the heading ‘Architecture Hardware Limitations’ there is the statement ‘Clutch judder on launch due to limited system damping’. Under the heading ‘Specific Design Tradeoffs’ the documents says that the tradeoff was between a DMF which had good noise, vibration and harshness characteristics (‘NVH’) and a conventional flywheel (SMF) whose advantages were those of cost and performance. I do not take from this document that the damping characteristics of an SMF linked to clutch plates fitted with inner dampers was inadequate; only that it was inferior to that of a DMF from an NVH point of view and superior from the point of view of performance and cost.
2. The second document had the same title as the first, ie ‘DPS6 Lessons Learned Paper – Summary of Key Issues for the DPS6 Transmission Project’, but this time was dated 8 January 2013. At p 2999 there is a heading ‘DPS6 Hardware Limitations’ underneath which appears a graph charting judder sensitivity. Beneath that is a statement in a box which reads ‘Dry Clutch DCTs are prone to judder, rattle and other customer NVH issues due to dry friction variability and lack of damping’. I take the dry friction issue to be a reference to the difficulties which were initially encountered using B8080 as the clutch lining. I do take from this document, however, that there was a lack of damping in the DPS6 which was associated with judder, rattle and other NVH issues (‘judder’ is used occasionally in Ford US documents to refer to the subset of shudder that occurs immediately after a vehicle takes off from rest).
3. The third document relied upon by Dr Greiner ends up being in substance the same as the first and may be disregarded.
4. The fourth document is entitled ‘DPS6 Update’ and is dated December 2016. At p 6968 there is a heading ‘Fundamental DCT Hardware Constraints’ under which is a graph beneath which appears the statement ‘DCT Architecture Constraints Remain After Other Improvements’. This is followed by three suggested such limitations the third of which is ‘Lack of system damping contributes to NVH error states (grattle, rattle)’. I accept that this suggests that its authors thought that there was insufficient system damping. At p 6972 a page appears which is near identical to an earlier document and need not be mentioned. At p 6976 there is a more detailed explanation of the trade-offs involved in using an SMF over a DMF. In relation to the SMF it is said that ‘DMF not used leading to increased friction variability and reduced robustness to vehicle NVH’.
5. Taken together these documents suggest that Ford US’ engineers thought that the use of an SMF resulted in a reduced level of damping which was associated with customer NVH issues, including judder and rattle. Although the last document uses the language that the SMF led to ‘reduced robustness to vehicle NVH’ it is tolerably clear what that means despite the circumlocution. I reject the Respondent’s contention that the documents are all too unclear. They are its parent company’s documents. The Respondent was fully on notice of the use to which Dr Greiner was going to put these documents. If it desired to prove that Ford US’ engineers had some different view and these documents were inaccurate it was fully at liberty to call its engineers (who undoubtedly know more about the DPS6 than anyone else).
6. But the Respondent did not go down that path. It did, however, submit through Mr Kuhn that the documents produced by Ford US did not identify torsional vibrations as a root cause or contributor to the seal leaks or the TCM issue. Assuming that to be so, however, it does not follow that there was no problem with torsional vibrations – only that these two problems were not causally connected to such a problem. The submission, in effect, is an artful form of misdirection.
7. In that circumstance, I accept Dr Greiner’s opinion that the use of inner dampers contributed negligible damping in the DPS6.
8. It is then necessary to turn to the issue of clutch slip. Dr Greiner tended to treat the inner dampers and clutch slip separately but, in my view, they constitute a system and must be considered as such at least when considering the issue of whether torsional vibrations were being passed through the transmission. There would be no utility in proving that the inner dampers provided negligible damping if it were then shown that the use of clutch slip was sufficient to damp the vibrations which remained. From a vibration management perspective, either the system constituted by the inner dampers and the use of clutch slip is adequate as a whole or it is not (this is not so in relation to the issue of heat generation – there may be a heat problem caused by clutch slip even if the inner dampers and the use of clutch slip adequately damp the torsional vibrations).

#### Clutch slip

1. Dr Greiner thought that using clutch slip as a form of torsional damping was ‘difficult and generally ineffective’: §315. This was because clutch slip was very difficult to control with the precision required to maintain a given level of damping. Dr Greiner did *not* directly say that the DPS6 had failed to achieve that level of precision. His point was couched at a higher level of abstraction and was about the use of clutch slip in general. It was the opinion of a skilled transmission engineer that this was a difficult method to pursue which, when combined with other difficulties, would lead him not to select clutch slip as a torsional damping measure if he were designing the DPS6.
2. There were therefore two problems with clutch slip: (a) it was difficult to make it work well as a damping method; and, (b) it had other drawbacks. The other drawbacks are not directly relevant to the present discussion but it is as well to note them. There were several: first, the use of clutch slip results in reduced performance due to less torque being transferred from the engine to the wheels because some torque is given up during clutch slip. That which is lost corresponds with the difference in the rotational speeds of the drive plate and the clutch plate, as the clutch plate rotates at the lower bound of the drive plate’s oscillating speed. This can also lead to delayed gearshifts. Secondly, the energy loss in that rotational gap is expended largely through kinetic friction forces at the clutch plate–drive plate interface and is converted into heat. Thirdly, the opportunities for the clutch to cool via air convection between events of clutch slip inherent in ordinary gear changes are reduced when the clutch remains in a state of continuous slip even when not changing gear. Thus not only does clutch slip generate its own heat when used as a torsional damper but it disrupts the ordinary passive cooling of the clutches between gear changes. Fourthly, because some of the torque output of the engine is being used to fund the clutch slip, the amount of power transmitted to the wheels is necessarily decreased. To obtain the same power which would have been transmitted to the wheels but for the use of clutch slip it is therefore necessary for more torque to be produced by the engine. Consequently, the use of clutch slip as a torsional damper increases fuel usage and correspondingly decreases fuel efficiency. Fifthly, the use of clutch slip increases the wear on the clutch.
3. Returning then to the adequacy of clutch slip as a damping mechanism, Dr Greiner thought that the difficulties which inhered in its deployment as such meant that it was normally only used in combination with ‘an adequate torsional damping solution’. As I understood his opinion, it was difficult to control the clutch slip with sufficient precision to maintain a consistent level of damping: §315. Dr Greiner did not rule out the use of clutch slip as a damping strategy altogether. He accepted that it could be used ‘in a limited way and in combination with an adequate torsional damping solution, such as a DMF or an SMF with an outer damper’. It was because he had concluded that the inner dampers in the clutch plates contributed only negligible torsional damping that he therefore thought that the use of clutch slip in the DPS6 was not appropriate.
4. I have found this aspect of the case difficult. For although Dr Greiner thought that it was difficult to control the clutch slip sufficiently to maintain a consistent level of damping he did not say it was impossible. Further, he did not explicitly state that the way in which clutch slip was implemented in the DPS6 had failed to surmount the real difficulty he identified. However, I accept that it is tolerably clear that Dr Greiner did not think that the DPS6 had surmounted the difficulties he identified, even if he did not say so in terms. This is for two reasons. First, it was clearly his opinion that the DPS6’s implementation of clutch slip was not an adequate damping solution in the absence of appropriate hardware damping (and he did not think that the DPS6 did have appropriate hardware damping): §317. Secondly, he did say that the torsional damping measures in the DPS6 were not adequate to isolate the transmission from the engine: eg §303. It is difficult to reconcile those statements with the proposition that the DPS6 had successfully damped the torsional vibrations using clutch slip. I therefore accept that Dr Greiner thought that the use of clutch slip in the DPS6 had not surmounted the problems he identified and therefore was not a sufficient method of damping torsional vibrations.
5. Should Dr Greiner’s opinion on this matter be accepted? Here we are considering the problems generated by the failure to damp the vibrations adequately and are not yet examining the issue of any additional heat generated by the use of clutch slip. Further, we are examining the Applicant’s contention that the failure to damp the torsional vibrations adequately was an architectural deficiency, ie one that inhered in the very design of the DPS6 which persisted even when the three proven Component Deficiencies were resolved.
6. It is not enough to say that the damping was inadequate per se. This is because this is a case under ACL s 54 and the Applicant needs to show that the vehicles were not of acceptable quality. That question is a consumer-facing question. That torsional vibrations are not adequately damped is not a proposition about which a consumer might be concerned unless it gave rise to some problem which interfered with the performance of the vehicle. To be clear, this is not to say that the true question in the case is the presence of some undesirable symptom. As I explained in Section III above, the basis on which the case has been run is that the Applicant must prove that the Affected Vehicles suffered from various risks of failure, where failure manifested symptomatically. In order to do this, she has chosen to rely principally on Dr Greiner’s evidence to provide the engineering explanation for why the various risks existed. The point for present purposes is the corollary one: it is not enough for the Applicant to demonstrate merely the existence of some engineering attribute (a level of damping below that which a transmission engineer like Dr Greiner would expect) unless that attribute gave rise to a relevant risk of failure – ie that the vehicle would exhibit undesirable symptoms or behaviours.
7. Of the five problems Dr Greiner identified as being contributed to by inadequate torsional damping, three of them depended on either the presence of B8080 or the previously discussed geometric misalignment issues with the clutch components. Only two of them arose purely from inadequate damping by itself: harsh gear shifts and gear rattle. The three which related to B8080 or the misalignments in the clutch components cannot be, in my view, truly architectural because the replacement of B8080 with RCF1o shows that the problem of negative damping and frictional variability is surmountable. The same is true for the resolution of the problems in production with the clutch components. This is not to say that the torsional vibrations cannot be a problem in those vehicles which still have B8080, only that those vehicles already have a problem because they have B8080 and, in a sense, the fact that the torsional vibrations exacerbate that problem does not add much to the analysis. (I leave out of this observation the difficult position of the half-hybrid clutch about whose efficacy neither party succeeded in demonstrating anything – it will be necessary to revisit this when considering the question of where the onus of proof lay). I note for completeness that in Table 8 in his first report, Dr Greiner lists ‘Architecture Deficiencies – Damping’ as one of six root causes of shudder, with the choice of friction material also implicated. However I do not regard this inclusion in Table 8 as sufficient to establish that inadequate torsional damping would lead to shudder in transmissions with the RCF1o material in the absence of any evidence as to the mechanism by which this would occur. Indeed, one of the other six root causes to which Dr Greiner points is ‘Component Deficiency – Rear Main Oil Seal’ and, as explained in Section IX, I have not accepted the Applicant’s case on that issue.
8. Consequently, for present purposes the issue is whether the vehicles fitted with a DPS6 had a real risk of displaying harsh gear shifts and gear rattling (that is the two symptoms *not* associated with B8080). A harsh gear shift occurs when the clutch plate is introduced to the drive plate rapidly. In such a circumstance, the speed of the clutch plate comes up to the speed of the drive plate rapidly. Inherently, the period of time during which the state of clutch slip continues is shorter. As Mr Kuhn explained, in some circumstances, harsh gear shifts are a virtue. For example, cars with ‘sportier’ gearboxes typically use less clutch slip. When the gear is changed it is fully engaged more quickly which gives the driver a sense of putting the vehicle through its paces. Of course, such behaviour is not to everyone’s taste. And, of course, there must be limits to the concept. Dr Greiner thought that harsh gear shifts could arise ‘due to essentially undamped torsional vibrations’. I do not quite understand that as an explanation. In particular, I do not understand, if the torsional vibrations have passed from the crankshaft, via the SMF, through the drive plate and then onto the clutch plate, why this would cause the gear shifting to use less clutch slip or, correlatively, for a gear change to be more rapid. As I understood the problem with the inner dampers, the difficulty was that they were located in the clutch plates and were not sufficient to prevent the torsional vibrations passing through to the rest of the transmission.
9. On the other hand, there is no difficulty in understanding Dr Greiner’s evidence about the rattling of gears. The torsional vibrations simply cause unloaded gears to vibrate and rattle as a result of resonance.
10. Nevertheless, Dr Greiner thought that both problems would result from inadequate torsional damping. But this brings one back to Mr Kuhn’s point that one ought not to speak about problems at a theoretical level but should instead ask whether there is a problem in the first place. On this view, before accusing the DPS6 of harsh gear shifts and rattling gears one should pause to consider whether it actually suffered from those problems (or a risk of those problems).
11. The documents set out above at [486]-[490] provide some evidence that torsional damping in the DPS6 was associated with customer NVH issues, including judder and rattle and that the use of an SMF led to ‘reduced robustness to vehicle NVH’. Beyond this the evidence does not go very far. The warranty and complaints data is of no use to either party on this question for it neither proves nor disproves the existence of these two problems.
12. I have concluded, on balance, that it is shown that the DPS6 had the tendency to rattle due to the use of the inner dampers and clutch slip. I accept Dr Greiner’s evidence about rattle which is supported by the Ford US documents set out above. I do not feel that I can safely conclude that harsh gear shifts resulted from the use of inner dampers and clutch slip because (a) that is not referred to specifically in the documents upon which Dr Greiner relied beyond general observations about NVH issues and judder and more significantly (b) I do not understand Dr Greiner’s explanation of the phenomenon. In his report in reply at §66 Dr Greiner made some more comments about harsh gear shifts but this time he linked the problem to frictional variability in the clutch lining material. He had explained that problem at §583 in his report in chief in terms which I can readily follow. However, it is not an explanation of how harsh gear shifts can result from torsional vibrations in the absence of variability in the friction material.
13. For completeness, I have not disregarded Dr Greiner’s oral evidence beginning at T1168.4 that:

The other effect of these [torsional damping] systems is to reduce the propensity of NVH problems in the car. Yes. It has – there is only a minor influence on the clutch engagement and disengagement, from my experience. And it is very tough to say here, in the DPS6, because there is no DMF investigated with regard to the clutch problems they had, so I can hardly say whether it was there. From my experience is, when you introduce a DMF, the launches and the shifts, they are much smoother with that. The reason for that is because the DMF is reducing the torsional speed or the speed fluctuations to an amount – a very low amount – before this fluctuation is going into the clutch. Yes? The drive plate, that is seeing the reduced torsional vibration from the engine already. So – and that – this impact is, I can only describe it like it is smoothing the launches, because the speed fluctuations are much slower and it is smoothing the gear shifts because of that. So that’s the main purpose of a DMF or torsional damping system integrated in the automatic transmission.

1. Although this suggests that a DMF improves the smoothness of launches and gear shifts, it does not solve the explanatory deficit I have referred to.
2. Finally, on this topic, much of the case in Court was taken up on the issue of shudder. Dr Greiner’s evidence did not suggest that shudder arose only by reason of the inner dampers and the use of clutch slip. He confined his comments on shudder and torsional vibration to those cases where the clutch lining or component assembly was implicated.

## Heat management

1. This is not the end of the issue however for there was a second string to Dr Greiner’s evidence and this was what was said to be the generation of excess heat in the transmission when clutch slip was used. Dr Greiner explained that the use of clutch slip gave rise to this problem. He thought it exacerbated the frictional variability of the clutch lining material (ie B8080) and was itself aggravated by reliance on passive air circulation within the bell housing as a method for cooling. I have dealt with the problems with the B8080 material in Section VII above. For present purposes, the important point is that even if the use of clutch slip with the SMF and inner dampers was sufficient to damp the torsional vibrations, the clutch slip came with its own suite of problems relating to heat.
2. Dr Greiner had a number of solutions to the heating problem. These included putting a fan in the transmission and widening the spread of gears so that gear changes took place less frequently. I will be forgiven for not setting out in detail Dr Greiner’s detailed analysis of the cooling solutions. However, as will be seen I do not think that it is necessary to consider them.
3. This is because they lead nowhere. Assuming in the Applicant’s favour that the use of clutch slip generated heat and that the heat management system was not sufficient to deal with this, the question then arises: what actual problem did this cause? By itself a hot transmission does not translate into a vehicle which is not of acceptable quality within the meaning of s 54. There must be something about the excess heat which impacts negatively on a consumer’s enjoyment of a vehicle fitted with the DPS6.
4. As I understood Dr Greiner’s evidence, the problem with unwanted heat in a dry clutch assembly was that the frictional qualities of the clutch lining material were highly temperature sensitive. In short, as the temperature increases the frictional qualities of the clutch lining become unpredictable. When the behaviour of the clutch lining is unpredictable this makes it increasingly difficult for the TCM to make accurate decisions about how to control the clutch plates. This leads to a range of symptoms such as difficult gear changes.
5. Dr Greiner accepted at §335 of his report in chief that the use of a friction material with more consistent behaviour at the high temperatures experienced in the DPS6 was, in theory, a solution. However, he did not believe such a material had been available to Ford US and, so far as he was aware, such a material did not exist. Dr Greiner accepted that the friction material (ie B8080) had been changed in the Fiesta vehicles (as I have discussed in Section VII) and he accepted that the change in material had ‘somewhat mitigated the inadequate heat management issue’ but it had not overcome the architectural problem. I take that to be a statement that the switch from B8080 to RCF1o in the Fiesta had not completely solved the heat problem and for that reason the alleged Architectural Deficiency continued to exert its influence. Under cross-examination Dr Greiner accepted that the switch from B8080 to RCF1o in the Fiestas had been an effective measure for addressing dry shudder, whilst maintaining that there continued to be an underlying issue of inadequate heat management. However his oral evidence on this matter also did not point to any problems independently arising from excessive heat in the transmission but rather suggested that without adequate heat management, RCF1o would suffer the same performance issues as the original B8080 material, albeit to a much lesser extent.
6. That accepted interdependence of any heat related issues and the clutch lining material marks, I think, the end of the case based on the alleged Architectural Deficiency of inadequate heat management. The fact is that an appropriate clutch lining can be selected which deals with the heat environment of the DPS6 and, indeed I have found that such a clutch lining was installed in the later Fiesta vehicles.
7. Even if I had accepted that RCF1o was not itself an adequate solution, this would not detract from this conclusion. Whilst one may accept that the design (or architecture) of the DPS6 leads to a particular heat profile this does not entail that it is an Architectural Deficiency in the sense the Applicant used that expression unless it is also shown that the problems to which it gives rise are themselves irremediable. In this case that would require one to show not only that B8080 and RCF1o were not sufficient in the heat environment of the DPS6 but also that there was no clutch lining material which could be sufficient. The proof of such a negative proposition was not attempted in this case but its proof was a necessary incident of the Applicant’s allegation that the heat management issue was ‘architectural’ and therefore irremediable. To say that something cannot be remedied is to cast upon oneself the burden, heavy perhaps, of proving that remediation is not possible. I do not think that has been demonstrated even if I were to accept that RCF1o was itself not an adequate solution.
8. In any event, regardless of where one ends up on the adequacy of RCF1o this means that the alleged Architectural Deficiency of inadequate heat management is not incurable. In fact, whilst it might well be able to be remediated by introducing a superior cooling system, it can also be remediated by changing the clutch lining material to something which can handle the heat.
9. It is an interesting thought experiment in relation to those vehicles which still contain clutches made from B8080 whether the defect is the clutch lining material or, on the other hand, the combined effect of the use of clutch slip as a torsional damper together with a cooling system not sufficient for the clutch lining to perform optimally. Perhaps the better view is that the DPS6 is a system and it is erroneous to compartmentalise its operation into different integers. As originally configured, the DPS6 displayed symptoms derived from the B8080 clutch lining material behaving unpredictably due to the temperature at which the DPS6 could operate. This problem can be fixed three different ways: (a) stop using clutch slip; (b) improve the cooling of the transmission; or, (c) find a clutch material which can tolerate the heat. It is difficult to see how one can describe a failure to adopt any of (a)-(c) as a deficiency if one of them is adopted. The use of clutch slip will be relevantly harmless if the clutch lining can operate in the heat environment. The original clutch lining material B8080 will be adequate if clutch slip is not used. The use of clutch slip with B8080 will be adequate if a sufficient cooling mechanism is provided. It is therefore unhelpful to think in terms of whether individual elements in the transmission are adequate. The question is only meaningful when considered on a system-wide basis.
10. In reaching that conclusion I do nevertheless accept that it is possible to offer an engineering opinion on whether a transmission designed so that these choices have to be made is of a sound design. I also accept that (a)-(c) might differ in terms of cost, difficulty of implementation and efficiency so that it might be possible to say that a transmission engineer might look askance at one or more of them. However, the focus in the present case is on whether the transmission worked. Useful comparison may be made with the question of whether the Sydney Harbour Bridge is sufficient to carry cars as opposed to the question whether its design is efficient. Questions of such engineering standards are not therefore directly relevant to this case. No doubt the DPS6 could have been designed better, perhaps much better, but here the question is whether it was functional.

## The position of the Respondent

1. On the evidence put forward by the Applicant the conclusion I would draw, therefore, is that the damping provided by the DPS6 was such that the Affected Vehicles carried a prospect that their gears might rattle. This rattle was the result of the damping measures in the DPS6 permitting torsional vibrations to be transmitted to the transmission shafts in the gearbox.
2. However, the Respondent itself submitted that vehicles fitted with a DPS6 displayed five characteristics that were normal operating characteristics. Mr Kuhn was asked to comment on each of them but their significance for present purposes is that the Respondent accepts that these characteristics are part of the DPS6’s normal operation. The characteristics are:
3. a slight vibration or shudder under light acceleration at slow speeds or during a coast down, as the transmission upshifts or downshifts;
4. firm gear shifting under aggressive acceleration;
5. a slight audible rattle, particularly when operated within an enclosed area such as a carpark;
6. mechanical sounds when shifting, or after the vehicle has been turned off; and
7. a slight shunting sensation at very low speeds.
8. It will be seen that (c) corresponds with what I have accepted the Applicant succeeded in proving.
9. Although I was not persuaded by Dr Greiner’s evidence about (b) firm gear shifting (because I did not follow his explanation), it is apparent that the Respondent accepts that the DPS6 does exhibit firm gear shifting under aggressive acceleration as an ordinary part of its operation. I so find. I am unable to say whether the firm gear shifts are a consequence of the transmission of torsional vibrations through the drivetrain due to the low level of torsional damping provided in the DPS6. I could not follow Dr Greiner’s explanation and the Respondent proffered no explanation.
10. The slight vibration or shudder in (a) is interesting. Dr Greiner did not give direct evidence about this for, as I have said, the only symptoms he linked solely to torsional vibrations were harsh gear shifts and rattling. However, Mr Kuhn gave evidence that intermittent torsional slipping in the clutch assembly could generate a low frequency vibration in the powertrain which may in some cases be detected by the driver. Whether it would be detected by the driver depended on the sensitivity of the driver, the extent to which the powertrain was isolated from the rest of the vehicle and the magnitude of the clutch slip. Indeed, he defined shudder at the end of his report as ‘powertrain or driveline torsional vibration that can be felt by the operator or passengers’. I infer, from the Respondent’s admission that (a) is an ordinary incident of the DPS6, that at low speeds the frequency of the torsional vibration drops and becomes perceptible as it travels through the drivetrain. This appears to imply that at higher speeds the frequency of the oscillation renders it undetectable. As such, it appears to be an example where the torsional vibration is simply apparent to the driver. I accept the existence of this shudder. It is, I should say, neither an example of self-excited shudder nor of forced-excited shudder, that is to say, it is not something which is related to the frictional qualities of the clutch lining or any misalignment of the clutch components. In any event, since the Respondent admits this I find that it is an ordinary incident of the operation of the DPS6.
11. I make a similar finding in relation to (e), the shunting sensation at low speeds. Mr Kuhn gave evidence that this term referred to longitudinal oscillation of the vehicle, while Mr Cruse compared the sensation to driving a manual vehicle at slow speed or the feeling one might experience when hitching a trailer. Dr Greiner compared it to a rocking motion and classified it as a subset of shudder. Neither Dr Greiner nor any other witness gave evidence to the effect that shunting could be caused by torsional vibrations independently of the behaviour of the clutch lining and I am therefore left in the same position as for (b). That is I am unable to say whether it is caused by torsional vibrations but since the Respondent has admitted that it was a feature of the Affected Vehicles, I find as much.
12. Finally as to (d), the mechanical sounds, both Mr Kuhn and Dr Greiner viewed them as an expected incident of a dual clutch transmission, with Dr Greiner opining that nevertheless drivers often found them unusual. There was no suggestion in the evidence that these sounds were a result of either torsional vibrations or heat. I therefore accept that they were a feature of the Affected Vehicles without attributing their cause to any architectural deficiency.
13. The Respondent submits that symptoms (a)-(e) are normal operating characteristics of a DPS6 and hence cannot amount to a breach of the guarantee under ACL s 54. I deal with this contention below at Section XII.

## Conclusions on Architectural Deficiencies

### Inadequate damping of torsional vibrations

1. For the reasons I have just given, the torsional damping system in the DPS6 was such as to permit the transmission of torsional vibrations to the drivetrain and that this in turn caused a slight shudder at low speeds and gear rattling. I have also found that the DPS6 can exhibit harsh gear shifts, produce mechanical sounds when shifting or after the vehicle has been turned off and to the extent that it is distinct from shudder, shunting but I have been unable to say that this was caused by the transmission of torsional vibrations.
2. Do these conclusions involve acceptance of the allegation that the DPS6 suffered from the Architectural Deficiency constituted by inadequate damping of torsional vibrations? On balance, I think the words ‘deficiency’ and ‘inadequate’ are loaded in a way which is apt to distract attention from the statutory question posed in ACL s 54. That standard is not concerned with the engineering qualities of the transmission per se but only with whether the vehicles were of acceptable quality. To label the engineering qualities of the DPS6 with the word ‘deficiency’ or its damping system with the word ‘inadequate’ carries a particular risk that such a designation will contaminate the assessment of the statutory question. Where that word is used in an engineering context that risk is augmented. What is a deficiency from an engineer’s perspective may not necessarily be unacceptable from a consumer’s perspective. Indeed, it is precisely the prospect of such an outcome which underpins the Respondent’s contention that the DPS6 complies with the s 54 guarantee because shudder, harsh gear shifts, rattle, shunting and mechanical sounds during gear shifts are but its normal operating characteristics. Such an outcome is not logically excluded merely because a transmission engineer might think the torsional damping provided in the DPS6 could have been better.
3. I therefore do not accept the Applicant’s contention that the DPS6 suffered from the Architectural Deficiency constituted by inadequate torsional damping. However, as I have explained I do accept that torsional vibrations caused 2 of the 5 normal operating characteristics which the Respondent admitted. Rejection of this contention does not, however, tell one anything about whether those characteristics meant the vehicles did or did not comply with the guarantee of acceptable quality in s 54.

### Inadequate heat management

1. I do not find that the heat management in the DPS6 was inherently inadequate although I do accept that it was not appropriate to use B8080 in the DPS6 because of the heat profile.

## Connection to the Component Deficiencies

1. For reasons I have already given, I do not accept that the DPS6 suffered from the alleged Architectural Deficiencies. I do accept, however, that the use of an SMF, inner dampers and clutch slip to damp the torsional vibrations was apt to generate a degree of heat which led to the B8080 clutch lining material behaving eccentrically when sufficiently heated. I have already explained that one may view the problem as being located in two alternate states of affairs: *either* the transmission ran too hot for the B8080 *or* the B8080 was not adequate to handle the heat the transmission generated. In any event, I accept the Applicant’s submission that the B8080 problem was causally connected to the use of an SMF, inner dampers and clutch slip as torsional damping measures. However, since I do not regard the use of an SMF, inner dampers and clutch slip as presenting a problem without the corresponding use of B8080, this conclusion does not go very far.
2. The Applicant also submitted that the TCM issue and the problem of the leaking input shaft seals could be laid at the feet of the decision to use an SMF, inner dampers, and clutch slip to manage torsional vibrations along with the inadequate heat management. I accept that in the case of the TCM the problem was exacerbated by heat. The difference in CTE between the ATIC 91 and 106 chips and the PCB to which they were soldered was a significant cause of the real risk of cracking in the solder joints which arose. The higher the temperatures experienced by the transmission the greater the physical forces experienced at the solder joints. It is easy to see therefore that a transmission configuration which led to higher temperatures would exacerbate this problem. Again, however, I do not think this conclusion leads anywhere. The problem could be fixed by reducing the temperature of the transmission or, as was done, by reconfiguring the TCM such that it was more robust in the given temperature environment of the DPS6. Similarly, even if, assuming in the Applicants favour that torsional vibrations accelerated the cracking process brought about by the difference in the CTEs, the changes made to the TCM meant that this process would not commence in the first place.
3. The same conclusion follows in relation to the leaking input shaft seals. Although the matter is not as quite as clear in their case, I nevertheless have accepted that this too was a problem exacerbated by torsional vibrations and heat. So viewed, it is causally connected to the decision to use an SMF, inner dampers and clutch slip. To be clear, I do not think that it has been shown that the input shaft seals would not have failed if there had been more robust torsional damping or heat management in the DPS6. The finding is one of exacerbation.

# Section XI: Ms Capic’s Car

1. Ms Capic purchased a Ford Focus on 24 December 2012. From shortly after the date of its purchase the car displayed a range of issues relating to its transmission. Ms Capic gave evidence of these problems in great detail. Between 14 April 2013 and 11 June 2019, Ms Capic took her car in for servicing on 15 occasions, first at Sterling Ford and the remaining 14 times at Jefferson Ford, and reported the problems with the vehicle on each occasion. On each occasion that Jefferson Ford serviced the vehicle it generated service records. Although Ms Capic’s evidence of the errant behaviours of her vehicle are much more detailed and provide cogent evidence of how annoying the vehicle was to her, following the approach of Mr Carter, the information contained in the relevant service records can be helpfully summarised in tabular form:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Service No and Odometer** | **Date** | **Owner’s comments recorded** | **Dealer’s comments** | **Action by dealer** |
| #5  38,935 km | 26 September 2014 | Vehicle shudders on acceleration | Checked & found evident | Carried out TCM software update and adaptive relearn under warranty  Road tested all ok |
| #8  59,561 km | 7 October 2015 | Check engine light coming on | Backed out pin in C1633 circuit  Carried out self test & found fault code P0902, traced to pin | Rectified electrical connection issue under warranty  Road tested ok |
| #9  62,182 km | 16 November 2015 | Check and report engine light is coming on – int and gear changes are harsh, and trans overheating light came on | Completed TSB 15B22 recall | Reprogrammed the TCM under warranty, including installing the 15B22 software update |
| #10  67,523 km | 10 February 2016 | Check engine light coming on & lacks power | Completed TSB15/07 | Replaced TCM under warranty |
| #11  69,330 km | 19 March 2016 | Check and report shudder on acceleration | Completed IDS test no fault codes found  Found no leaks evident and slip rate under 250 rpm | Carried out adaptive relearn without charge  Rechecked ok |
| #12 | 15 July 2016 | Checked for shudder on acceleration | Found shudder evident | Carried out TCM software update and adaptive relearn under warranty  Road tested ok |
| #13  91,363 km | 30 May 2017 | Checked for shudder on acceleration | Found excessive clutch shudder | Replaced clutch and input shaft seals  Carried out adaptive relearn  Road tested ok |
| #14  107,226 km | 25 May 2018 | Check shuddering on acceleration | Could [not] carry out slip rate test due to customer not wishing us to connect our IDS to the vehicle | Road tested vehicle and found all ok |
| #15  123,326 km | 11 June 2019 | Check shudder on acceleration, worse going up hills | Found shudder evident at 292 rpm slip rate  Out of extended component warranty | Carried out adaptive relearn and found passed at 151 rpm slip rate |

1. The three critical events are the replacement of the TCM on 10 February 2016 and the replacement of the clutch lining and input shaft seals on 30 May 2017. Although Ms Capic’s vehicle received the 15B22 software update on 16 November 2015, as I have noted above in Section VIII, there is no basis on which I can conclude that a TCM with the revised ATIC 91 chip was available for her vehicle prior to 10 February 2016. As a result, the real risk of solder cracking causing noticeable symptoms was only removed with the replacement of her TCM.
2. I infer from the fact that the vehicle’s TCM, clutch lining and input shaft seals were replaced that those components had failed. It was not suggested that I should not reason in that fashion. Since I have concluded that vehicles in the position of Ms Capic’s vehicle (ie a 2012 model year Focus) had a real risk that those three components would fail, this finding is really only that the real risk which existed had in fact come to pass. I am unable to determine which failure came first or whether they all developed simultaneously. However, this is immaterial to any issue which needs resolution. It is clear that the problems started within the first few months she owned the vehicle and were thereafter not fixed (at least until 30 May 2017 – a debate to which I will shortly turn).
3. Ms Capic gives evidence which suggests that she made somewhat more detailed complaints than the service records summarised in the above table suggest. It does not really matter for the outcome of the case what Ms Capic said to the mechanics. The vehicle either was or was not of acceptable quality and the dialogues which took place between them cannot impact on that issue. To the extent that it matters, I reason that the mechanics are likely to summarise the customer’s complaints in terms which are familiar to them and to do so in a fairly brief format (as befits a summary). On the other hand, Ms Capic is likely to have a vivid recollection of the problems with the vehicle. I do not read the two sources of evidence as being contradictory. I accept Ms Capic’s evidence about the problems which occurred before 30 May 2017.
4. It is not in dispute that upon the service on 30 May 2017 Ms Capic’s vehicle now had all three original components replaced (ie the TCM, input shaft seals and clutch lining). Despite that, her evidence was that the same problems persisted after 30 May 2017. If the only evidence in the case were Ms Capic’s evidence and the engineering evidence this might suggest that there was a problem with Ms Capic’s evidence. This is despite the fact that the Respondent accepts that Ms Capic’s vehicle will continue to display the normal operating characteristics, as the problems complained of by Ms Capic would appear to go beyond these behaviours. On this view, there might appear to be no mechanical explanation for the way in which Ms Capic says the vehicle has behaved since 30 May 2017 and this would make less credible her account.
5. However, this view would be wrong. Because Ms Capic’s vehicle is a Focus its replacement clutch was not one with RCF1o lining material but was instead a half-hybrid B8040/B8080 clutch. I have been unable to reach any view as to whether the half-hybrid clutch was an effective fix. The logical problem adverted to in the previous paragraph would only arise if it had been found that the half-hybrid clutch was an effective fix. As the evidence stands, Ms Capic’s report of continuing problems after the clutch was replaced is not inherently inconsistent with the engineering evidence.
6. The continuation of these problems also finds some support in the fact that during the most recent service of Ms Capic’s vehicle on 11 June 2019, a Jefferson Ford mechanic performing the 250 rpm test recorded a shudder event of 292 rpm. The mechanic then programmed the transmission to perform its adaptive relearning procedure, after which shudder was recorded at only 151 rpm. The Respondent submits that no reliance can be placed on this record. The Respondent relied on the view expressed by Mr Carter that the 250 rpm test was not correctly performed because the vehicle had not been brought to a complete stop prior to the measured acceleration, an observation with which Dr Greiner agreed. While Mr Carter’s view was that therefore the reading ‘may not have confirmed the existence of clutch shudder’, Dr Greiner thought the results ‘quite clearly capture a shudder event’.
7. It is relevant to note that the mechanic’s own notes in the service record read ‘FOUND SHUDDER EVIDENT AT 292 RPM SLIP RATE’. Regardless of whether the procedure was an appropriate diagnosis of clutch shudder (or alternatively shudder in the broader sense of including torsional vibrations from the engine), the continuing symptoms Ms Capic said she was experiencing appear to have been also experienced by the servicing mechanic at Jefferson Ford.
8. Returning then to Ms Capic, whilst I have found her basically to be an honest witness, I have also found that when pressed into a corner in the witness box she might occasionally indulge in mild untruth in the heat of the moment. No doubt, this is regrettable. However, I do not think that finding would warrant not accepting her evidence about the continuation of the problems after 30 May 2017. There is a difference, on the one hand, between being cross-examined unexpectedly about an apparently irrelevant answer in a finance lease document and, in effect, being caught out making it up on the run and, on the other hand, concocting a written account well in advance of the trial. The latter would involve a degree of calculated dishonesty which does not square with my basic assessment of Ms Capic’s character. Further, if one makes the hypothesis that her evidence about this was concocted, there are significant difficulties. First, to do that would be to tell not a small fib but a large one. In a sense this evidence lies close to the heart of what the case was about from Ms Capic’s perspective. What would be involved in constructing such an untruth would not be the gilding of a lily. Secondly, Ms Capic affirmed the first of the three affidavits upon which she relies after the vehicle had been inspected by Mr Carter and Mr Marston so she must surely have been aware that the risk of detection of any such deceit on her part would be high. It is too much to think that Ms Capic would have done this.
9. Further, as I explain below her evidence is corroborated by Mr Marston’s notes in addition to the motor mechanic’s notes of the service on 11 June 2019 at [542] above. Although the Respondent damaged Mr Marston’s credibility to an extent, it did not do so sufficiently for me to reject the veracity of his notes which record some of the symptoms reported by Ms Capic (although not shudder).
10. For those reasons, I accept Ms Capic’s evidence that even after the replacement of the clutch assembly and input shaft seals in May 2017, the problems with the vehicle persisted. For completeness, as I explain further below I do not accept that the problems were caused by left foot braking by Ms Capic. The evidence was far too thin for the drawing of that inference.
11. Finally, I accept Ms Capic’s detailed evidence about her frustrations with her vehicle. These arose because she would take the vehicle in for servicing, would be told the problems were resolved and then the problem would recur. Given the number of times she had this experience, it would be rather surprising if she were a contented customer. The component problems with her vehicle really only began to be addressed in February 2016 when the TCM was replaced. But, as I have mentioned in Section VIII, it might have been the case (although there was no sufficient basis for concluding) that on no occasion when Ms Capic’s vehicle presented for service prior to 10 February 2016 was a new TCM available at Jefferson Ford for installation. If that was the case, Ms Capic was in a sense wasting her time. This is not to blame the mechanics at Jefferson Ford who it may safely be assumed did precisely what the TSBs told them to do. In that sense Ms Capic is wrong when she says she felt that she was being lied to or played the fool. Before the fixes were made available to vehicles on the road the mechanics really had no more chance of fixing her car than she did.

## The independent inspection of Ms Capic’s car

1. The question of whether the Applicant’s vehicle was defective was the subject of evidence from two motor mechanics who examined it. These experts were Mr Carter, who gave evidence for the Respondent, and Mr Marston, who gave evidence for the Applicant.
2. Mr Carter tested the vehicle in 2018 and again in 2020. When he drove the vehicle in 2018 he was accompanied by Mr Marston. Mr Carter prepared two reports dated 16 May 2018 and 14 February 2020. Mr Marston also inspected the vehicle on a number of occasions without Mr Carter.
3. The Applicant did not initially serve any evidence from Mr Marston but after it became apparent that the Respondent was going to submit that the failure to call Mr Marston implied that Mr Marston did not think there was anything wrong with her vehicle, the Applicant belatedly applied to adduce evidence from him outside the evidence preparation timetable. The Respondent objected to this being done but I concluded that the Applicant should be permitted to rely on his late evidence: *Capic v Ford Motor Company of Australia Limited (Late Evidence)* [2020] FCA 1117. Subsequent to that decision the Applicant filed two affidavits by Mr Marston, one of 27 June 2020 and one of 3 July 2020. These affidavits did not involve Mr Marston giving much in the way of direct testimony but rather centred on the production of notes he had taken of his inspections of the vehicle.
4. Mr Marston was called on the 15th day of the trial, 7 July 2020, at T876. He was cross-examined at T877-940 and re-examined at T940-943. Mr Carter was called on the 18th day of the trial, 13 July 2020, at T1109. He was cross-examined at T1111-1141 and re-examined at T1141-1144. In addition to his reports, Mr Carter also prepared an affidavit in response to Mr Marston’s late evidence dated 13 July 2020.

### Mr Carter

1. It is useful to begin with Mr Carter’s evidence. Mr Carter holds a bachelor’s degree in mechanical engineering from Monash University which he obtained in 1976. He is a registered automotive consultant with the Commonwealth Department of Infrastructure and Regional Development (‘DIRD’), an engineering signatory with VicRoads and a vehicle examiner approved by the National Heavy Vehicle Regulator. He is a member of several professional bodies associated with automotive engineers. He has also worked as a specialist design engineer with a large motor vehicle manufacturer. He has worked in and around motor vehicles for over thirty five years. It is clear that he is well qualified to express opinions on the issue of the condition of the Applicant’s car.
2. In his first report of 16 May 2018 Mr Carter explained his qualifications, the program of testing to which he had subjected the Applicant’s vehicle and his conclusions about the vehicle. He had assessed the vehicle over a two day period during which he had been accompanied by Mr Marston. The first day of testing took place on 24 April 2018 and consisted of a test drive of around 4 hours duration during which the vehicle was driven 140 km. In his report he provided a map of the route taken and he said that it consisted of suburban, inner city and freeway driving. He also observed that the vehicle had been fitted for the purposes of the test drive with equipment to record audio, video, GPS location and some information relating to the operation of the engine and transmission.
3. Mr Carter did not observe any issues with the engine or the transmission during the test drive.
4. On the second day of Mr Carter’s testing, 26 April 2018, the vehicle was subject to a diagnostic scan using Ford’s proprietary Integrated Diagnostic System (‘IDS’) and an underbody mechanical inspection. This was done by a Ford Australia field service engineer at a mechanic’s workshop (in fact, Mr Carter’s son’s workshop) in Melbourne. The field service engineer also performed an on-road test for clutch shudder using Ford’s IDS with Mr Carter present. The result of these examinations was that he did not detect any issues with the engine or the transmission.
5. After the delivery of Mr Carter’s first report the Respondent’s solicitors were keen to reconcile the Applicant’s evidence that the vehicle continued to display a range of symptoms with Mr Carter’s conclusions that there was nothing wrong with the engine or the transmission and that the car was in good working order. They therefore asked Mr Carter to prepare a second report.
6. For this second report the vehicle was tested over a four day period, from 20 January 2020 to 23 January 2020. On the first day Mr Carter, this time without the company of Mr Marston, drove 80 km around Melbourne including in inner city and freeway conditions at speeds of up to 100 km/h. On the second day the vehicle was again tested using the IDS. It was also taken to Mr Carter’s son’s workshop and put on a hoist so its undercarriage could be examined. On the third day it was taken on a 50 km test drive around suburban Melbourne between Camberwell and Bayswater. On the fourth and final day, Mr Carter drove the Applicant’s vehicle with his left foot on the brake pedal to ascertain whether the transmission problems experienced by the Applicant might have been caused by the manner in which she was driving the vehicle.
7. Mr Carter’s conclusions remained the same as those in his first report: there was nothing wrong with the engine or the transmission. During the diagnostic testing using the IDS leading to his first report a shudder result of 50 rpm was returned. As has been explained above, it was Ford’s position that the relevant threshold over which shudder was deemed problematic was 250 rpm. While the Applicant (through Dr Greiner) suggested that this had been set too high and a threshold of say 200 rpm would have been more appropriate, nowhere was it suggested that a result of 50 rpm could be anything beyond a very minor shudder. Assuming such a shudder to be detectable, it would in my view merely be an example of the torsional vibrations being transmitted through the drivetrain at low speeds (not having been soaked up by the inner dampers and clutch slip). The Respondent, of course, said that such a shudder was part of the DPS6’s normal operating characteristics.
8. In his second report Mr Carter did venture the opinion that one possible explanation for why he could find nothing wrong with the vehicle but the Applicant could still nevertheless report clutch shudder could be that the Applicant was using the incorrect grade of fuel or was perhaps driving with her left foot resting on the brake pedal. Mr Carter did observe a minor shudder and a minor noise which he described in these terms:

No abnormal noises from the engine or transmission were evident during the on-road testing.

Minor vehicle shake when the engine is idling in Park was observed, which diminished as the engine warmed up and was not apparent after refuelling with Premium Unleaded petrol. This could be caused by a failed engine mounting, sparkplug condition, or fuel type or quality.

A minor noise at 100 km/h when applying more throttle was noticed on the first test drive, which could be due to a failed engine mounting or the fuel type or quality.

1. This is relevant to a submission made by the Applicant to which I will return. For present purposes, it will be observed that Mr Carter appears to be saying that the slight shudder was caused by not using premium unleaded petrol. An alternate explanation, which I favour, is that this minor shudder and minor noise are both examples of the normal operating characteristics of the DPS6 which the Respondent accepts and which are, as I have found, the consequence of the torsional vibrations not always being fully damped by the inner dampers and clutch slip.
2. Having delivered two reports of Mr Carter both expressing the view that there was nothing wrong with the vehicle, the Respondent observed in its opening submissions that it was notable that although Mr Marston, on behalf of the Applicant, had been present with Mr Carter during the first period of testing, no report had been forthcoming from him. This led to the late evidence application to which I have already made reference and Mr Marston’s affidavits of 27 June 2020 and 3 July 2020.

### Mr Marston

1. Mr Marston was not called as an expert witness but really just to introduce into evidence his notes of some testing he performed on the vehicle. Mr Marston is an automotive specialist and master mechanic. He is a member of the Institute of Automotive Mechanical Engineers and has over 40 years’ experience in repairing vehicles.
2. Mr Marston gave evidence that he had accompanied Mr Carter on his inspections in 2018 and that, in addition, he had inspected the vehicle both before and after Mr Carter’s 2018 inspections. He also observed the servicing undertaken on the vehicle at a Ford dealership’s premises on 24 and 25 May 2018 when Ms Capic took it in for its regular service. In addition, Mr Marston independently test drove the vehicle without Mr Carter on 25 May 2018 after the service had been completed.
3. Mr Marston kept notes of his inspections. He was not initially asked to do a report. Subsequently, when the Respondent said in its opening submissions that an inference should be drawn against the Applicant for failing to call Mr Marston, his notes were unearthed. Mr Marston thereafter annotated them in red ink.
4. Mr Marston also gave evidence under cross-examination which contradicted the evidence of Mr Carter as to what had happened during the test drives. The first of these disputes concerned the initial test drive conducted on 24 April 2018. Mr Marston gave evidence at T880.44-46 that during that test drive he had identified erratic gearbox changing and fluid noises coming from the gearbox. He pointed out that his notes of the test drive included a statement ‘*I noticed rough changing down 5-4-3-2*’. He stated at T881.9 that following this he *‘*actually asked Mr Carter if we could re-drive that section of road, and my recollection is that Mr Carter replied something like “I’m doing the road test. We will keep going”’.He also said at T893.7 that he could not recall whether he had mentioned the fluid noise to Mr Carter at the time.
5. Subsequent to Mr Marston’s evidence Mr Carter provided an affidavit affirmed 13 July 2020. He said that he recalled that Mr Marston had made a comment about rough gear changing and had done so at about 11.20 am on the first day of testing on 24 April 2018 while they were on the Tullamarine Freeway, past the Essendon Fields exit where there were roadworks. There was no challenge to Mr Carter’s ability to be so precise in his recollection. It may be that it is related to the fact that he recorded the entire inspection procedure by video. His evidence about what had been said about the fluid noise was also very precise. His affidavit at §6 and §7 reads:

Mr Marston did make a comment about rough gear changing. He made the comment at about 11.20am on the first day (24 April 2018). We were driving along the Tullamarine Freeway, past the Essendon Fields exit where there were road works. Mr Marston said that when we were decelerating down the hill, as we changed gear, that he thought that the gear change had felt a bit 'rough'. I responded that I did not notice anything, but that I would do it again. I then slowed down twice to allow the transmission to change down gear as we drove along, decelerating and accelerating as we were going past the DFO on our left. We then both said that we didn't notice any rough gear changes. The gear changes were normal both when decelerating and accelerating.

Mr Marston did make a comment later on about there being a 'fluid noise' from the transmission. In response I said to Mr Marston that I did not think the transmission was making any noise that I considered to be 'non-commercial'. I did not hear any fluid noise at all from the transmission during my inspection.

1. He was not challenged about this recollection. But it is consistent with another part of Mr Marston’s notes where it is recorded after the reference to the rough changing down of gears that ‘*Retested OK*’. Mr Marston denied under cross-examination that this was a reference to Mr Carter re-doing the test but claimed instead at T882.27 that it meant that ‘in the continuation of the drive, I didn’t note that happened – I didn’t note that issue again’. I do not accept this evidence. It is inconsistent with the note and Mr Carter’s evidence. Further, Mr Marston’s evidence about this is sufficiently untenable to lend credence to the idea that he saw himself as Ms Capic’s advocate. I will return to the significance of this observation later.
2. I therefore do not think that the vehicle exhibited the rough changing of gears referred to in Mr Marston’s notes. The topic of rough gear changes was discussed between them and re-examined carefully after which they both agreed rough changing of gears was not present. Insofar as the fluid noise is concerned, I accept that Mr Marston thought he heard a fluid noise but I also accept Mr Carter’s evidence that no noise came out of the gearbox which was ‘non-commercial’, that is to say, not the ordinary kind of noise which gearboxes make. In any event, a fluid noise (cf gear rattling) is not amongst the catalogue of problems put forward by the Applicant.
3. This brings me more generally to the issue of the reliability of Mr Marston’s evidence. The Respondent raises several matters which it said would justify the Court in concluding that Mr Marston’s evidence should be approached with caution. These were:

#### The IDS episode

1. The Applicant took her vehicle to be serviced at Jefferson Ford on 24 May 2018. Mr Marston accompanied her on this occasion. The question which arises is whether Mr Marston did, or did not, instruct the dealer not to connect the Respondent’s IDS equipment to the Applicant’s vehicle. In itself, whether he did so or not is not strikingly relevant to any significant issue in this proceeding but the answers given by Mr Marston about this topic led to a substantial submission that Mr Marston’s evidence was unreliable.
2. To be fair to Mr Marston it is necessary to give a little background to the issue. The IDS is a computer system which Ford dealers plug into a vehicle. Relevantly here it performs two functions. First, it gives the mechanic working on the vehicle access to diagnostic data which the on-board computer system has collected from the vehicle since the last service event. Secondly, it permits software updates to be loaded into the vehicle’s computer control system.
3. When Mr Marston was retained by the Applicant’s then solicitors on 23 April 2018 he was instructed to accompany Mr Carter on his inspections of the vehicle. He was also instructed to ensure that the vehicle was not tampered with or altered beyond the reasonable course of inspection during these inspections. Following Mr Carter’s testing procedures Mr Marston reported back to the solicitors by email dated 6 May 2018. This email shows that Mr Marston understood that this instruction did not prevent computer systems being connected to the vehicle so long as they were ‘passive’ and did not bring about any ‘changes to the vehicles parameters’.
4. Although Mr Marston’s written retainer did not require him to attend when the Applicant next presented her car for routine servicing it appears that, by whatever means, the retainer had expanded to include that role. This service visit took place on 24 May 2018 when Ms Capic took the vehicle to Jefferson Ford accompanied by Mr Marston. In her 22 November 2019 affidavit Ms Capic explained that when she took the vehicle for servicing she did ‘not agree to let Jefferson Ford connect my vehicle to its testing systems’. This suggests that the instruction not to connect the IDS to the vehicle came from Ms Capic.
5. There are documents which bear upon this issue. Mr Marston’s attendance at the vehicle’s servicing at Jefferson Ford created some tension on the workshop floor and initially the service manager would not permit the service to be performed with Mr Marston hovering in the background. More senior personnel at Jefferson Ford were then summoned and ultimately Mr Marston was permitted to watch the servicing of the vehicle (although only from behind a glass screen). This background information suggests that, from the Jefferson Ford mechanic’s perspective, the servicing of Ms Capic’s vehicle might have been a somewhat tenser affair than usual.
6. Consistently with Ms Capic’s evidence that she did not permit the IDS to be connected to the vehicle there is a note in Jefferson Ford’s service records which records that wish:

‘-COULD CARRY OUT SLIP RATE TEST DUE TO CUSTOMER NOT WISHING US TO CONNECT OUR IDS TO THE VEHICLE’

1. (Both parties accepted at trial that the word ‘NOT’ is missing from this entry and that it should be read as ‘COULD NOT CARRY OUT…’.) It is apparent from what Mr Marston understood from his instructions that he had no reason to prevent the IDS being connected to the vehicle to perform the 250 rpm test but he did have a reason to prevent any updating of the software. Mr Marston had been present during Mr Carter’s tests a month prior when the vehicle had been twice connected to the IDS and had raised no objection to this process other than as to the updating of software. There is no rational reason why Mr Marston would suggest that the vehicle should not be connected to the IDS and, by contrast, there are sensible reasons why he might say that its software ought not to be updated.
2. Consequently, I do not think Mr Marston would have told the mechanic at the service visit on 24 May 2018 not to connect the IDS. The only thing he is likely to have said would have been that there should be no software changes to the vehicle. I therefore accept Ms Capic’s evidence that she gave the instruction not to connect the vehicle to the IDS and I conclude that Mr Marston did not say this.
3. Mr Marston’s notes for the service visit record ‘*No IDS to be used*’. This entry appears in his notes for 24 May 2018 just after 10 am when he and Ms Capic first arrived at Jefferson Ford. I infer that it is a note by Mr Marston of Ms Capic’s instruction. The same notation appears in the notes for later in the day: ‘*Service 105hrs. No IDS F&R brakes and skim discs. R&R 4 tyres. Fit recall hose to tank for fuel*’. I incline to the view that this is Mr Marston recording the facts which had been stated to him by Jefferson Ford, that is to say, confirming that the IDS had not been connected.
4. Mr Marston was cross-examined to suggest that it was he who had instructed that the IDS not be connected. The cross-examination began by taking Mr Marston to the Jefferson Ford service record which recorded that the *customer* had given an instruction not to connect the IDS. At T901 Mr Marston denied that he had given such an instruction and said that his only concern was to prevent software updates. That answer is consistent with the evidence I have just described. Mr Marston was not the customer; that was Ms Capic. Mr Marston was unable to recall whether the IDS was connected or not but this hardly seems surprising given the triviality of the issue.
5. The Respondent focussed on two of Mr Marston’s answers during the cross-examination which it said discredited him. First the Respondent criticised Mr Marston for maintaining his denial that he had instructed Jefferson Ford not to connect the IDS ‘even in the face of his own contemporaneous notes’ which recorded ‘*No IDS to be used*’. I do not consider this was a fair criticism of Mr Marston. The Jefferson Ford service record suggested that it was Ms Capic who had said this not Mr Marston and this was strongly corroborated by Ms Capic’s own evidence. And, as I have noted, Mr Marston had no reason to direct that the IDS not be connected and indeed he had previously been present with Mr Carter when it had been. His only concern, from which he did not waver, was that the IDS not be used to update the software. There is therefore nothing remarkable in Mr Marston continuing to deny that he had instructed that the IDS not be connected in the face of his notes. He did not give such a direction and his notes do not say that he did. The cross-examination proceeded on a false assumption – contrary to the Jefferson Ford document, Ms Capic’s evidence and Mr Marston’s evidence – that it was Mr Marston who had given this direction.
6. Next the Respondent described some of Mr Marston’s evidence about this as ‘incredible’. The evidence in question is T904.1-11:

See, you’ve written:

*No IDS to be used.*

?---Yes .

Isn’t that the instruction you gave the Ford dealer?---That is a brief note of – of mine that says – so my understanding of that note is I instructed the guys to say they could not make any software adjustments, as I had previously mentioned.

Are you serious, Mr Marston?---Absolutely.

1. In fact, I do not think Mr Marston’s notes record his instructions to Jefferson Ford not to change the software. While I do not doubt that Mr Marston recalled saying that – it was the one thing he was clear on – the note is not about that. Consequently, there is an element of confusion in this evidence. That confusion is the joint result of the cross-examiner’s incorrect assumption that the note recorded instructions given by Mr Marston rather than Ms Capic and Mr Marston’s confused acceptance of that assumption and his subsequent attempt to reconcile it with his own recollection. I do not think this evidence was ‘incredible’. I think it was confused but no more.
2. Nor do I accept the Respondent’s submission that another answer Mr Marston gave on this topic was ‘implausible’. The relevant evidence is at T904.41-905.30:

Yes. And I’m interested in the next note:

*No IDS.*

?---Yes. So no IDS, front and rear brakes, skim discs and tyres. Correct. Yes. So that note, to me, says they made no changes with the IDS and they - - -

Yes?--- - - - repaired the brakes.

And I suggest to you, again, that your note:

*No IDS –*

means that you directed the Ford dealer, as the service record says, not to connect the IDS?---That would be unreasonable, because part of carrying out that service is to check the fault codes.

I suggest – just answer my question, Mr Marston?---Mmm.

I suggest to you that that note corroborates what the service record shows, what your previous note shows, that you told them, “Do not connect the IDS.” What do you say - - -?---That’s - - -

- - - to that?---That’s incorrect. I told them not - - -

And I suggest - - -?--- - - - to make any software adjustments.

Yes. And I suggest that that answer also is untrue. What do you say to that?---Unfortunately, I – whilst I accept you can say that, that is not correct.

Well, you’re not lying, are you?---No, I’m not lying.

Would you like to say you are not lying?---I am not lying.

About - - -?---So - - -

- - - this IDS issue?---About the IDS issue. Absolutely.

1. I do not think this evidence was implausible.
2. Accordingly, I find that (a) Ms Capic instructed Jefferson Ford not to connect the IDS; (b) if Mr Marston said anything on this topic it was only that they should not update the software; (c) that his notes that the IDS was not connected reflected only Ms Capic’s instruction. In short, I do not think that this determined attack on Mr Marston’s credit succeeds.

#### The absence of reported problems in Mr Marston’s summary

1. After his test drive with Mr Carter, the Applicant’s solicitors asked Mr Marston by email dated 3 May 2018 to ‘provide us with an email summary of the inspection and anything notable that occurred during the week’. He responded by email dated 6 May 2018. That response referred to the fact that Mr Carter ‘had video recording equipment in the vehicle’ but made no reference to any difficulties Mr Marston had observed with the vehicle. There was no reference, for example, to the fluid noise or rough gear changing he gave evidence about at the trial. This is not to suggest that he did not genuinely observe those in his own mind when he made the notes, but it does support the idea that whatever they were he did not regard them as a sufficient problem to report to the Applicant’s solicitors.

#### Driving conditions debate

1. The next debate concerned Mr Marston’s criticism that Mr Carter had not driven the vehicle in peak hour traffic or stop–start traffic and had not sufficiently stressed the gearbox. This evidence was given in re-examination at T942.25-40. He thought that there had been ‘no severe driving….just a gentle drive through the city and through the country’. In his affidavit of 13 July 2020 Mr Carter responded to this evidence as follows at §10 and §11:

We did drive in stop/start traffic. I refer to the route set out on page 5 of my First report. I recall there was stop/start traffic on various parts of the route, including:

(a) on sections of Burke Road;

(b) on Flemington Road;

(c) around Carlton and in particular along Johnston Street;

(d) on Acland St while we were getting out of St Kilda , which was during peak hour in the late afternoon; and

(e) at the end of the day, coming back along Dandenong Road, then onto Wattletree Road and turning onto and along Tooronga Road, all in congested traffic.

I also carried out aggressive and severe driving. I accelerated sharply on several occasions, including on the Tullamarine Freeway. Numerous times I accelerated the car on full throttle. For example, I did an aggressive acceleration on Prospect Hill Road in Camberwell from the roundabout, as well as when we were turning right from Belmore Road into Balwyn Road. I also applied light, medium and hard throttle. I also did a lot of starting on, and accelerating on, hills, such as around Balwyn. The hills were at a gradient of 3 and 4 degrees. It is incorrect to describe the road test as a "gentle drive".

1. Mr Carter was not challenged about this evidence although the Applicant submitted at [535] that Mr Carter’s evidence was light on detail. This part of it does not appear to be light on detail to me. It is also consistent with the testing methodology outlined in Mr Carter’s first report where he said that the point of the exercise had been to test the vehicle in a variety of circumstances. (‘The route chosen for the test drive was designed to expose the vehicle to a wide variety of circumstances and driving conditions which would normally be encountered in Melbourne and its surrounding suburbs’: p 5.) In the end the Applicant submitted that Mr Marston’s notes showed that the testing had started after 10.40 am and finished by 4.33 pm so that the test conditions had missed most of peak hour. I do not think, however, that this is an answer to Mr Carter’s evidence.

#### Mr Marston’s subsequent testing

1. This brings me at length to that aspect of Mr Marston’s evidence which is most controversial. It will be recalled that Mr Marston had accompanied Ms Capic for the service of her car on 24 May 2018. As it happens the vehicle remained with Jefferson Ford until the next day when Mr Marston’s notes suggest that he picked it up at 2.08 pm. It would appear he took it for a test drive by himself. Mr Marston’s notes for 25 May 2018 record this:

At 2.08 advised vehicle was ready for customer. So I carried out a road test alone. The vehicle displayed some braking issues, noise and shudder from front RHS. Took vehicle to workshop and spoke to service person Harry who got William Tech to road test with me. He noted brake issues too and took vehicle back to workshop, stripped RHF brakes and remachined and reassembled.

I then re road tested brakes OK.

However on road test vehicle displayed:

- erratic gear change

- lost power from standing start

- hunting between gears

- lag from take off

- vehicle held acceleration when foot taken off throttle at 60kms

- when vehicle cold hard to select gear.

1. Nothing is to be made of the fact that this was not mentioned in his report to the solicitors on 6 May 2018 because it occurred on 25 May 2018, some weeks later. Mr Marston himself does not appear to have done anything immediately with these observations. On 25 July 2018 he sent an email to the solicitors referring to the servicing on 24 and 25 May 2018. In the email he said this:

The reason for me mentioning this; To confirm the vehicle had been correctly repaired I had to carry out an extended road test. During that test I personally noted some vehicle abnormalities which Ms Capic had advised us of, but I had previously not personally experienced. I wonder if this is relevant and possibly merits a quick conversation.

Separately, if it is appropriate and if you have received a copy of their experts CarTech report I would appreciate a copy of it. Obviously, I am happy to comment on it formally if you wanted me to, however, for my own learning and understanding I would appreciate a chance to view it.

1. The Applicant submits that Mr Marston’s notes of his test drive on 25 May 2018 are evidence that the Applicant’s vehicle continued to experience shudder even after her clutch and seals were replaced. However, the notes do not refer to shudder as one of the issues he encountered and I do not think they are evidence about that. On the other hand, they are evidence that on 25 May 2018 whilst Mr Marston was testing the brakes on his own the vehicle displayed each of the six problems recorded in his notes.
2. The Respondent submitted the circumstances in which Mr Marston had done this testing was unknown and hence this evidence could be given little weight. I do not think this criticism has great force. The vehicle should not display these behaviours in any ordinary circumstance. If the roles were reversed and it was Mr Carter who had done a solitary test which revealed no symptoms then the submission would be forceful. Because the problem is intermittent unless one had known what Mr Carter had done with the vehicle, then the fact that no problem was found would be of little weight. But the internal logic of this is not the same when the intermittent problem decided to occur during Mr Marston’s testing. It seems likely that Mr Marston was testing the brakes when these events occurred (certainly that is what his notes suggest).
3. This point may be pursued. There are two ways Mr Marston may have driven the vehicle, in an ordinary way or, instead (as Dr Greiner put it) in a ‘spirited’ fashion. If the vehicle was driven calmly then occurrence of the intermittent problem shows that it occurs in that driving condition. If the vehicle was being driven con brio and the intermittent problem occurred this shows that the problem occurred during that driving condition. But neither conclusion leads to the outcome that Mr Marston’s observations are unreliable.
4. I have wondered whether the reliability of Mr Marston’s notes may be impacted by other matters. I have rejected the attacks on his credit detailed above so those matters may be disregarded. I do not accept, as was suggested in the Respondent’s closing address, that what he observed on 25 May 2018 might be put down to an attempt on his part to solicit work from the Applicant’s lawyers: cf T1643.1ff. The logic of the submission entails Mr Marston making up symptoms for the purpose of garnering further work and then permitting his notes to go forward knowing them to be false but attached to an affidavit sworn by him to be true. That would be a grave matter and I would hesitate to find it unless it was clearly established. Moreover, it was not put to Mr Marston that his notes of 25 May 2018 were false so that even if I were minded to make such a finding – which I am not – there would be insuperable procedural roadblocks to reasoning in that fashion. To the same end, whilst I am usually quite sceptical of the value of general assessments of credit disconnected from analysis of evidence, I am bound to say that Mr Marston did not strike me as the kind of person who would behave in that way. I have earlier observed that I think Mr Marston may have regarded himself as being in Ms Capic’s corner and to have tailored his evidence to assist her when presented with the opportunity. But there is a large gulf between advocacy and dishonesty and I do not think Mr Marston lies on the dishonest side of the line.
5. Consequently, I do not accept the invitation concealed within the Respondent’s incomplete submission that the symptoms Mr Marston noted bore some similarity to the ones about which Ms Capic had complained to him. It was an incomplete submission because it omitted its final step which was the unstated suggestion that Mr Marston was Ms Capic’s advocate and was simply repeating her evidence as his own. I do not think that Mr Marston’s advocacy can be said to go that far.

#### Did the Applicant challenge Mr Carter’s evidence?

1. The Applicant submitted at [106] that she did not challenge ‘any of Mr Carter’s evidence that he personally did not experience any of these defects during his 2018 test drive’ and she does not challenge his conclusions about the 2020 test drive. Indeed, the Applicant submitted that I should accept Mr Carter’s evidence because it was not inconsistent with Ms Capic’s. She explicitly said that she did not challenge Mr Carter’s evidence that he did not experience the issues which Ms Capic describes in her affidavits. The Applicant went out of her way at [106] to submit that she also accepted Mr Carter’s evidence about the ‘minor vehicle shake’ and ‘minor noise at 100 km/h’. In indicating her acceptance of this evidence (which is in her favour and therefore not much of a concession) the Applicant omitted from the quote Mr Carter’s evidence in the very same passage that these problems could be associated with not using premium grade fuel and that the shake was only present when the engine was cold (neither of which, but particularly the first, is in her favour at all).
2. However, at [107] and also at [531]-[535] the Applicant explained why Mr Carter’s evidence did not matter. First, insofar as he suggested that the problems were caused by driving with the left foot resting on the brake pedal she submitted that the evidence was that she did not do so. Ms Capic did accept at T309 that very occasionally she did drive the vehicle with her left foot on the brake but this was only in very limited circumstances. After the delivery of Mr Carter’s second report with its suggestion of left foot braking Ms Capic had affirmed her final affidavit (of 5 May 2020) in which she addressed this topic squarely at §§12-14. There is no need to set this out. In essence she confessed – I am not sure that is really the right word – that she did put her left foot on the brake when she was parked on a steep hill. She said that she did this very rarely. Ms Capic was cross-examined at T309 about this practice but not in a way that qualifies or alters this evidence. For the reasons I give in Section V I accept that Ms Capic was basically an honest witness although when put under pressure in the witness box she could find herself saying something perhaps not entirely true in the heat of the moment. Her denial that she is a left foot brake driver is one I therefore accept and I do not think that the fact that occasionally she sneaks her left foot on the brake when parked on a steep hill means that she should be characterised in that way either. The difficulties Mr Carter described as arising from the deviant practice of left foot brake driving would not occur in the very limited circumstances in which Ms Capic took this walk on the wild side. In that circumstance, whilst I do not reject Mr Carter’s theory that left foot braking could be a cause of the problems I conclude that that theory has no application to the Applicant because that is not, in fact, how she drives her car. In that circumstance, the Respondent accepted that there was no need to inquire further into the admittedly curious fact that the Applicant’s former lawyers instructed Mr Marston not to investigate the phenomenon of left foot braking: T1683.33.
3. Secondly, the Applicant submitted that Mr Carter’s evidence was not inconsistent with the fact that the Applicant’s car had been produced with each of the Component Deficiencies. This was because he only examined the vehicle after the TCM, input shaft seals and the B8080 clutch had been replaced. Furthermore, the matters which Mr Carter did note – minor vehicle shake and minor noise at 100 km/h – are consistent with the existence of torsional vibrations passing through the drivetrain. The Respondent accepts that a slight shudder at low speeds, gear rattle, shunting and harsh gear changes could occur with the DPS6 independently of the three Component Deficiencies I have found to be proven. I have found that the first two of these issues were the result of torsional vibrations being transmitted through the drivetrain as a consequence of not being completely damped by the use of inner dampers and clutch slip. I conclude that what Mr Carter observed were manifestations of this issue.
4. Having submitted that the Court should accept Mr Carter’s evidence and having explained why the evidence did not matter, the Applicant’s submissions then subsequently struck out in a new direction by developing an elaborate attack on Mr Carter’s credit at [109]-[115]. It is hard to know how to reconcile the Applicant’s various submissions on this topic. Out of respect to Mr Carter, however, I will just record that I reject these challenges to his credit. I do not think that the fact that Mr Carter was aware of the issues with the DPS6 before the preparation of his reports signifies anything apart from the fact that as a professional automotive engineer he does not live under a rock. I do not think, in that circumstance, that his failure to refer to that previous experience reflects anything of moment. Nor do I think that it is especially to the point that he had done previous work on a DPS6 equipped vehicle for the Respondent in 2012. The suggestion that it was improper for him to test his left foot braking thesis on the Applicant’s car without first getting permission of the Applicant was, in my view, one of many sideshows with which this litigation has been beset as was the criticism of his summary of the dealer invoices. Finally, whilst I accept that Mr Carter was not a transmission engineer, that does not entail, as the Applicant effectively submitted that it did, that his conclusions could be thrown in the forensic trash can (whilst inviting me in an earlier paragraph to accept everything he said). When all is said and done Mr Carter is a mechanical engineer with 35 years’ experience working with motor vehicles. It is not as if the Respondent had called a pastry chef to testify about Ms Capic’s vehicle.

### Conclusions on Mr Carter’s and Mr Marston’s evidence

1. I find that Mr Carter’s testing procedure was rigorous and methodologically sound. During the 2018 test neither he nor Mr Marston observed any difficulties with the transmission or the engine. I accept Mr Carter’s evidence that the vehicle was in good working order and that none of the problems it is alleged to suffer from became manifest during his tests in 2018. I also accept that none of these problems became manifest during the 2020 test apart from a slight shudder and minor noise. I accept that the vehicle returned a result of 50 rpm on the IDS test in 2020 but I do not think this has any significance.
2. I also accept that the vehicle displayed the 6 matters referred to in Mr Marston’s notes on 25 May 2018. These do not include shudder. I have accepted Ms Capic’s evidence that the vehicle continued to display symptoms after the TCM, clutch and input shaft seals were replaced. It would have been open to me not to have accepted her evidence about this. The evidence before the Court could have justified the conclusion that Ms Capic did not tell the truth about the answer she gave in the finance lease and that she was, perhaps, prone to exaggeration when it came to her car (as evidenced by her Facebook Messenger message). Both of those matters could have justified the rejection of her evidence that the vehicle continued to display symptoms after the replacement of the TCM, clutch and the input shaft seals.
3. However, as I have explained, I feel uncomfortable with the idea that she made this evidence up and such a conclusion is not consistent with my basic assessment of her as an honest witness. Further, as I have explained, the clutch replacement Ms Capic’s Focus received was not the RCF1o lined clutch but instead the half-hybrid B8040/B8080 clutch. The Respondent did not demonstrate that this material did in fact resolve the problems which B8080 had presented. On the engineering evidence it is therefore possible that Ms Capic’s vehicle did continue to display problems (noting too that the Applicant did not prove that the half-hybrid B8040/B8080 clutch was not effective). Had her vehicle received the RCF1o material the matter would have been much more problematic – perhaps insolubly so ­– because in that circumstance there could be no mechanical explanation for the behaviour. However, where the efficacy of the half-hybrid B8040/B8080 clutch has not been proven that problem does not arise.
4. I mention these matters again at the risk of repetition because they impact on Mr Marston’s evidence in the same way. I have resolved them the same way. Finally, the evidence of Ms Capic and Mr Marston corroborate each other. It is relevant to observe that (a) it is less likely that they are both lying about this matter; and, (b) if either is telling the truth about what they experienced, this makes it much more likely that the other is telling the truth. I make these comments to indicate that in reaching the conclusions I have about Ms Capic and Mr Marston on this topic I have considered the way in which each witness’s evidence relates to the other’s.

# Section XII: Acceptable Quality

1. This issue is governed by ACL s 54(1)-(3) which provide:

**54 Guarantee as to acceptable quality**

1. If:
2. a person supplies, in trade or commerce, goods to a consumer; and
3. the supply does not occur by way of sale by auction;

there is a guarantee that the goods are of acceptable quality.

1. Goods are of ***acceptable quality*** if they are as:
2. fit for all the purposes for which goods of that kind are commonly supplied; and
3. acceptable in appearance and finish; and
4. free from defects; and
5. safe; and
6. durable;

as a reasonable consumer fully acquainted with the state and condition of the goods (including any hidden defects of the goods), would regard as acceptable having regard to the matters in subsection (3).

1. The matters for the purposes of subsection (2) are:
2. the nature of the goods; and
3. the price of the goods (if relevant); and
4. any statements made about the goods or any packaging or label on the goods; and
5. any representation made about the goods by the supplier or manufacturer of the goods; and
6. any other relevant circumstances relating to the supply of the goods.
7. Section 54 avoids saying who provides the guarantee. To take it at face value it would appear to imply the existence of a legal right in the consumer under the guarantee without specifying the identity of the person with the corresponding obligation. However, this initial impression is incorrect. Some two hundred pages later in the ACL, s 271 provides an action in damages against the manufacturer of the goods where the guarantee is breached. Section 271(1) provides:

**271 Action for damages against manufacturer of goods**

1. If:
2. the guarantee under section 54 applies to a supply of goods to a consumer; and
3. the guarantee is not complied with;

an affected person in relation to the goods may, by action against the manufacturer of the goods, recover damages from the manufacturer.

1. This provision is about manufacturers. Of course, the Respondent did not manufacture any of the vehicles. But this does not matter because ‘manufacturer’ does not mean ‘manufacturer’ in this case. Any person who had read ACL s 7(e) would know this because it defines ‘manufacturer’ to include a person who imports goods into Australia where that person is not the manufacturer and at the time of the importation the manufacturer does not have a place of business in Australia. The upshot of these provisions is that where a person imports goods into Australia there is a guarantee that the goods are of acceptable quality.
2. As I will later explain, while Ms Capic is a person who may make a claim for reduction in value damages under s 271(1), that proposition is more complicated in respect of the other members of the group. The reasons for and consequences of this remain to be considered but, for present purposes, the issue is whether the vehicles were of ‘acceptable quality’ within the meaning of s 54(1). The language of s 54(1) suggests that the guarantee applies at the time of supply of vehicles. The issue is therefore whether the vehicles were of acceptable quality at the time of supply.
3. ‘Acceptable quality’ is defined in s 54(2), extracted above. The relevant portions of this are the requirement that the vehicles be fit for all purposes for which such vehicles are commonly supplied, be free from defects, be safe and be durable. In deciding whether the vehicles satisfied those requirements one is required by s 54(2) to have regard ‘to the matters in subsection (3)’, also extracted above.
4. The Applicant’s case took as its starting point that the vehicles fitted with the DPS6 had various risks of failure. The Applicant contended that goods with a risk of failure would not be of acceptable quality. She relied on this Court’s decision in *Courtney v Medtel Pty Ltd* [2003] FCA 36; 126 FCR 219 (‘*Medtel*’). In that case it was found that Mr Courtney was entitled to recover damages for the pain, suffering, loss of enjoyment of life and economic loss associated with having removed from his chest cavity a particular kind of sub-optimal pacemaker. The pacemaker unwisely utilised ‘yellow spool solder’ which is bad. The use of yellow spool solder was generally attended by a risk of dendritic failure which is why Mr Courtney had the pacemaker removed. On inspection of the blighted pacemaker following its successful explantation from Mr Courtney it was ascertained that it had always functioned normally and, indeed, had it not been explanted it would probably not have failed prematurely. The risk with the yellow-spool solder, though real, would likely never have eventuated in Mr Courtney’s case. With hindsight one could say that the explantation had been unnecessary. Indeed, this is precisely what the manufacturer did say in resisting Mr Courtney’s claim.
5. The trial judge, Sackville J, understandably rejected this unattractive submission. He concluded that the pacemaker was not of merchantable quality because it had a superadded risk of failure, that is, a superadded risk that it would be unable to fulfil the purpose of restoring or maintaining the heart rate of patients experiencing electrical heart-related problems: *Medtel* [224]. It was not to the point that in the individual case the risk might not have transpired. The Full Court upheld the trial judge’s conclusions: *Medtel v Courtney* [2003] FCAFC 151; 130 FCR 182. Branson J with whom Jacobson J agreed observed at [78]:

In my view, having regard to the evidence before the primary judge … no error can be shown to have been involved in his Honour’s conclusion that a pacemaker that has only the ordinary or usual risk of premature failure is more fit for the purpose of being used as a pacemaker than a pacemaker that has, by reason of the method of its manufacture, an appreciably higher risk of premature failure. In this case it was reasonable to expect, at the time of the supply to Mr Courtney of his pacemaker, that Mr Courtney’s pacemaker had been manufactured in a way which gave rise to only the ordinary or usual risk of premature failure. However, the use of yellow spool solder in the manufacture of Mr Courtney’s pacemaker meant that Mr Courtney’s pacemaker had an appreciably higher risk of premature failure than the ordinary or usual risk of premature failure to be expected in pacemakers.

1. This reasoning has been applied to other goods with an inherent risk which renders them not of acceptable quality: eg, components in satellite broadband devices in *APS Satellite Pty Ltd (formerly known as “SkyMesh Pty Ltd”) v Ipstar Australia Pty Ltd*  [2016] NSWSC 1898 (‘*APS Satellite*’) at [69]-[82] per Rein J (while the case was not on all fours with *Medtel*, his Honour recognised the reasoning in *Medtel* as an authoritative approach to ‘prone to failure’ cases); high density polyethelene containment liner in *Protec Pacific Pty Ltd v Steuler Services GmbH & Co KG* [2014] VSCA 338 at [516]-[531] per Tate, Santamaria and Kyrou JJA (although the claim failed); and, ocean going recreational fishing vessels in *Vautin v BY Winddown, Inc. (formerly Bertram Yachts) (No 4)* [2018] FCA 426; 362 ALR 702 (‘*Vautin*’)at [145]-[151] per Derrington J.
2. The Respondent submitted that *Medtel* was distinguishable because a pacemaker was a non-discretionary good upon which a consumer’s life might depend. There was no comparison to be made between the nature of a pacemaker and the nature of a vehicle or between the potential for a pacemaker to fail and the potential for a vehicle to exhibit non-safety related issues. Further, there was no way the pacemaker in Mr Courtney’s chest could have been checked for yellow spool solder; explantation was the only reasonable course open.
3. I accept that not every inherent risk of failure will have the consequence that goods are not of acceptable quality. The conclusion in any particular case will be a function of the nature of the feared failure and the extent of the risk of its occurrence, measured against the consumer’s reasonable expectations of how the product ought to behave. Sometimes the failure will be trivial or the risk insubstantial and in such cases the claim may fail. Further than this, at least in principle, seems dangerous to go.
4. Plainly enough the risk in *Medtel* was a very serious risk from Mr Courtney’s perspective but I do not read the case as stipulating that inherent risk claims are confined to those where the risk is life-threatening or of some similar ominous standard separate from the standard embedded in the statutory questions embodied in s 54(2) itself: the consumer’s reasonable expectations of the fitness for purpose, appearance, lack of defects, safety and durability of the product in question (see *Medtel* at [224] per Sackville J). In *APS Satellite* the risk was that the satellite kit was prone to leak which is hardly the stuff of drama. In *Vautin* the way in which the vessel had been constructed exposed its hull to a risk of delamination in heavy seas. These perils are not of the genre to which the Respondent seeks to confine the *Medtel* principle. I conclude that the principle is not so confined.

## The matters in s 54(3)

1. It is therefore necessary to consider whether each of the inherent risks of failure I have concluded existed were such as to mean that the vehicles were not of acceptable quality. However, that assessment is required by s 54(2) to be conducted having regard to the matters in s 54(3) which are therefore mandatory matters which the Court must assess. Dealing with each in turn:

### Section 54(3)(a): the nature of the goods

1. Each of the vehicles was a B- or C-segment vehicle. B- and C-segment motor vehicles are at the cheaper end of the market, or as the Respondent put it, ‘they are economical entry-level vehicles’. The uses to which they would commonly be put would be for passenger transportation. They are likely to be used in traffic conditions of all kinds which would include driving in heavy traffic, light traffic, on good roads and on bad. They are also likely to be driven in a range of manners ranging from sedately to vigorously.

### Section 54(3)(b): the price of the goods (if relevant)

1. The Applicant did not make any submission about the effect (if any) of the actual prices of the Affected Vehicles on the analysis under s 54, beyond noting they were priced competitively with other new vehicles in their segment of the market. However, as part of his expert evidence on the question of excess depreciation Mr Stockton was provided with a spreadsheet of the Respondent’s recommended list prices for roughly 90% of all types of Affected Vehicle. Resort to this document shows that there are 18 distinct prices involved. They fluctuate according to model line, year, engine size, and badge. The Focus across the period ranged in price from $22,590 to $33,840, the Fiesta from $17,490 to $22,525 and the EcoSport from $22,790 to $27,790. In general and subject to significant variation, the Focus was more expensive than the EcoSport which was more expensive than the Fiesta. Whilst these are not expensive cars their purchase prices nevertheless represent amounts that would be a substantial investment for most people.

### Section 54(3)(c): any statements made about the goods on any packaging or label on the goods

1. It was not suggested by either party that there were any such statements which were relevant.

### Section 54(3)(d): any representation made about the goods by the supplier or manufacturer of the goods

1. This provision does not in terms require the representation to be made to the consumer and I can see no warrant for reading it as if it did. The Applicant submitted that the vehicles had been marketed as quality motor vehicles with a new DPS6 transmission that was ‘sealed for life’, ‘low maintenance’, with ‘smooth gear changes’ and offering ‘the convenience of an automatic’ with the performance of a manual. However, the Applicant’s analysis of the evidence pertinent to s 54(3)(d) dealt only with ‘smooth gear changes’, ‘the power or responsiveness of a manual with the benefits and ease of an automatic’ and ‘sealed for life’.
2. The evidence for each key message was as follows:

#### It was an automatic transmission with smooth gear changes

1. The evidence for this was said to be T547.26-36, T548.5, T550.44 and T635.40-43. The first three references are from the cross-examination of Mr Karageorgiou. The first three references appear to be in error because they do not refer to any representation about smooth gear changes. However, it seems the Applicant is working off an earlier version of the transcript for this day of the trial which was subsequently reissued by the transcript provider and the pagination shifted by one page. Making that assumption the first three references should instead be T546.26-36, T547.5 and T549.44. These are from the cross-examination of Mr Karageorgiou and read as follows:

And then it says:

*PowerShift technology. Thanks to the latest PowerShift technology, when you’re driving the Fiesta it’s like having the best of both worlds – smoother gear changes, with excellent fuel efficiency.*

?---Yes.

All right. That was, as you understood it, one of the key marketing messages that was being put out by Ford in Australia in relation to these vehicles with the DPS6 transmission?---Yes.

…

And that the gear changes would be smooth?---That’s correct

…

And I want to suggest to you smooth gear changes; correct?---Yes.

1. The context for these answers is that Mr Karageorgiou was being taken to a document which the transcript identifies as FOR.727.001.1720. Mr Karageorgiou identified the document as one prepared by the Respondent’s marketing and sales organisation (of which he was not a member). At T550.26-T551.1 this exchange occurred:

This sort of a document is then given to dealers, to provide them with product information in relation to, in this case, the WT Fiesta?---That would be a fair statement.

The idea being that dealer staff would then read this material, so that they’re able to properly market the vehicle?---That would be expected.

All right. So if we go to 1722 – no, 23 – there’s the introduction:

*So with the introduction of the new WT model, the award-winning Fiesta range will be poised to further strengthen Ford’s position in the light-car market.*

Do you see that?---Yes.

All right. So it’s – this is, in effect, introducing to dealers, in effect, the key attributes of the new WT Fiesta; correct?---Correct.

And is it consistent with your expectation that a similar document would be prepared, for example, in relation to the new Focus range when that was introduced?---Look, I – I was not part of the marketing and sales organisation, but I would expect that to be the case.

All right. And similarly in relation to the EcoSport; correct?---Correct.

1. I take the Applicant’s submission to be that (a) a document of this kind was prepared for all three models for the dealers to assist them in marketing the vehicles; (b) the dealers might be expected to make statements along the lines of what was contained in the document to customers; so that (c) it may be inferred that representations to the effect contained in the document were made by the dealers about the vehicles (and the DPS6). The Applicant’s submission did not rely on any part of the document in relation to her s 54 case but I assume this was an oversight.
2. The document is entitled ‘WT Fiesta Sales Guide’ and is dated October 2010. There were a number of pages to which Mr Karageorgiou was taken in the cross-examination. The relevant passages are as follows from T551.3ff:

All right. So could we go, please, then to page 1727. Just blow up – that’s fine. Thank you. So this is – I’m sorry. Can you include the heading, as well, that is just above that. So these are the Key Product Changes; do you see that?---Yes.

And it’s one of the key product changes, obviously enough, is the PowerShift transmission; correct?---Correct.

All right:

*The six speed PowerShift –*

I am reading from the document –

*automatic transmission is now the only automatic option on all petrol WT Fiesta models.*

Correct?---Yes.

So there’s no longer a conventional automatic with a torque converter available?---That’s correct.

And:

*PowerShift introduces an efficient and smooth changing dual dry clutch transmission.*

Do you see that?---Yes.

Again, a similar marketing message to what we saw in the earlier brochure that I took you to?---Mmm.

And at the end of the next paragraph:

*This leads to less torque interruption and a more consistent smoother driving experience.*

Do you see that?---I do.

All right. And then you’ve got the key competitors. Do you see that in the table?---I do.

Do you agree that they were the key competitor vehicles of the Ford Fiesta at or about this point of time?---I don’t recollect exactly who was in the market. But, yes, they – they seemed to be the competitors at the time.

All right. And then, below that:

*Compared to the four and five speed transmissions offered by competitors, the Fiesta’s six speed PowerShift transmission will offer more responsive power, seamless gear changes and better fuel economy.*

Do you see that?---I do.

What’s on the screen:

*The Fiesta’s automatic option is a key selling point against competitors and its advantages should be communicated to any prospective customer.*

Correct?---Correct.

So one of the key messages that dealers were being told to dealers were being told to identify to intending purchaser was the PowerShift transmission; correct?---That’s what’s stated on the document.

All right. And that what that transmission offered was an efficient and smooth-changing transmission; correct?---Correct.

Leading to a more consistent, smoother driving experience?---That’s what the document says. Yes.

Yes. Nothing about shudder, judder, and the like; correct?---Correct.

1. I accept that the Applicant has proven that the Respondent made representations in 2010 about the WT Fiesta to the effect that:
2. the DPS6 introduced an efficient and smooth changing dry dual clutch transmission;
3. the DPS6 led to a more consistent smoother driving experience; and
4. the DPS6 offered seamless gear changes.
5. It is difficult to know what to make of Mr Karageorgiou’s concession that he would expect there to be equivalent documents for the Fiesta and the EcoSport. There are problems of detail with the Applicant’s approach to this issue. There are six badges of the Fiesta within the Affected Vehicle population, only three of which fall within the genus of WT Fiestas, all being built between 2010 and 2013. The Applicant did not invite the witness (or me) to conclude that the document dated October 2010 applied to some or all other kinds of Fiestas (eg of the genus ‘WZ’ and built between 2012 and 2016). Nor was the witness or the Court taken to an equivalent document for the WZ Fiestas – indeed, the purpose of extracting Mr Karageorgiou’s concession seems to have been to avoid such a process.
6. Mr Karageorgiou gave evidence that his responsibilities as SEO Manager included developing technical publications and dealer training for vehicles pre-launch, although his primary focus was on post-launch support, including those aspects of dealer training and general after-sales care of vehicles. He also had responsibility for the warranty repair program undertaken in relation to vehicles fitted with the DPS6. Mr Karageorgiou was not from the marketing and sales department. However as SEO manager he reported to the Ford Customer Service Division (‘FCSD’) General Manger, where the FCSD was also responsible for ‘Marketing and Sales (service parts)’. Whilst I share his view that it was likely that the marketing department had produced similar sales guides for other model lines and indeed he was taken to a similar document in relation to the Focus dated 2011 (to which the Applicant referred in her submissions on the misleading and deceptive conduct case, considered in Section XIII below), I am not especially confident that Mr Karageorgiou’s evidence was sufficient to obviate the need for the Court to be taken to the other documents. I do not think I could infer that everything which appears in this document necessarily appeared in other such documents. In many ways the documents will be obviously different if only to reflect the fact that the vehicles are different. Against that one might say that the DPS6 was common to all the vehicles so that one might expect that statements made about it would be the same. However, the commonsense of this reduces on close inspection. Across the period Ford US became aware of several problems with the DPS6. Is the Court to infer that it did not change the text of these documents in light of those changes? These matters make it difficult to conclude that the statements contained in this document are contained in all other such documents.
7. I am not satisfied that I can find on the basis of this material that for every type of vehicle in the Affected Vehicle Population the same statements were made. It would be a guess aided only by Mr Karageorgiou’s speculation. This matter could easily have been proved by a notice to admit facts or, even, by the tender of all of the documents.
8. Turning then to the Applicant’s reliance on the cross-examination of Mr Cruse at T635.40-43. This exchange is as follows:

All right. As you understood it, it was being marketed by Ford in Australia as an automatic transmission?---Yes, that’s correct. It’s an automatic transmission.

Offering smooth gear changes with excellent fuel efficiency?---Yes.

1. Given that Mr Cruse occupied the same role that Mr Karageorgiou had before him, the value of this evidence may perhaps be doubted. However, the Respondent in addressing itself to the Applicant’s s 54 case did not submit that I should not accept it and was otherwise enthusiastic about Mr Cruse’s value as a witness. Thin as it is, I accept therefore that this evidence shows that the DPS6 was marketed as an automatic transmission with smooth gear changes.

#### The DPS6 had the power or responsiveness of a manual with the benefits and ease of an automatic

1. Here, the Applicant again relied on the cross-examination of Mr Karageorgiou. Based on the relevant content of the transcript I again infer that the intended references were T547.1-3 and T549.46-550.3. These sections of the transcript are as follows:

Again, as you understood it, that was another one of the key messages that was being put out by Ford in marketing these vehicles, namely, that you had responsiveness of a manual with the ease of an automatic; correct?---That’s correct.

…

All right. Now – and as you understood it, Mr Karageorgiou, these things were being marketed as automatic transmission; correct?---That is correct.

With the ease of an automatic, by which, you understood – in the sense in which I’ve used it before, namely, that the driver doesn’t need to do anything to change gears; correct?---That’s correct.

1. Mr Cruse also accepted that the DPS6 was marketed as having ‘the power of a manual with the benefits of an automatic’: T635.45. He did not refer to the ‘ease’ of an automatic. Whilst this evidence appears a little thin to me where neither Mr Karageorgiou or Mr Cruse were responsible for the preparation of these materials, in circumstances where the Respondent did not address itself to the issue in the context of the s 54 case, I propose to act upon it.

#### The DPS6 was ‘sealed for life’

1. Again, on the basis of Mr Cruse’s evidence at T636.1-2, I accept that the DPS6 was marketed in this fashion, which the Applicant suggested meant that it was a low maintenance component part.

#### Conclusion on s 54(3)(d) representations

1. I do not think that the statement that the DPS6 had the ‘benefits of an automatic’ goes very far in this case. What were the benefits? One’s initial reaction would be that the principal benefit is not having to change the gears or operate a clutch. It is not in dispute that the DPS6 did not require drivers to do either. As to it having the ‘power or responsiveness of a manual’, given that the central issues arising from the proven Component Deficiencies or inadequate torsional damping did not correspond to a lack of power or responsiveness vis-a-vis a manual transmission, I have only had limited regard to this representation.
2. Nor do I think that ‘sealed for life’ goes very far either. As I understood it, the Applicant’s point about this was that the phrase implied that the transmission would not need to be opened up and repaired on a frequent basis and/or that it would be generally low maintenance. I do not think that is very persuasive; among other matters, there is no suggestion that the transmissions became ‘unsealed’ (whatever that would entail) and I am not convinced that the phrase ‘sealed for life’ would itself reasonably be understood to mean or imply that the transmission was low maintenance.
3. That said, I do accept that the statement that the DPS6 had ‘smooth gear changes’ is pertinent to the resolution of the question whether the Affected Vehicles were of acceptable quality.

### Section 54(3)(e): any other relevant circumstances relating to the supply of the goods

1. Neither party explicitly took me to this provision in the context of any facts. However, one submission made by the Respondent would appear to fall within it. This is the fact that vehicles are sold with warranties and regularly serviced. It is a fact of life that motor vehicles do develop problems and require repair. Whilst one does not take one’s kettle in for a service after 5,000 cups of tea (or one class action judgment) it is an ordinary incident of car ownership to have the car serviced and its problems rectified under warranty. The limits of this observation should be noted. It does not mean, for example, that motor vehicles cannot be other than of acceptable quality. It is a question of degree.
2. Having surveyed the mandatory matters in s 54(3) it is then necessary to consider each of the problems which have been identified.

## Vehicles with original input shaft seals

1. I have concluded that vehicles which were supplied with the original input shaft seals had a real risk that the seals would leak and thereby permit lubricants to travel to the clutch plates. When this occurred it would cause the clutch to behave unpredictably. When this occurred a range of symptoms could ensue. These were intermittent and included difficulties with gear selection, sudden deceleration, shudder, grinding noises, the appearance of the check engine light, slower response times and rattling.
2. Having regard to the matters set out above, I do not think that vehicles with this inherent risk can be said to be fit for the purpose of being driven as a motor vehicle in ordinary conditions. Such a purpose is one of the purposes (probably the principal purpose) for which the vehicles were commonly supplied. It follows that the vehicles containing the original input shaft seals did not at the time of their supply satisfy s 54(2)(a) and were accordingly not of acceptable quality within the meaning of s 54(2). They also did not comply with s 54(2)(c) (ie they were not free from defects).
3. In reaching that conclusion I have, as I have said, taken into account each of the matters set out above, ie the s 54(3) matters. These include the thin findings in relation to s 54(3)(d). Even if I had concluded that no such representations had been made, I would have reached the same conclusion on the question under s 54(2). In my view, it is clear that vehicles supplied with this proclivity were not of acceptable quality.
4. A currently indeterminate number of vehicles supplied with the original input shaft seals have had these replaced with seals made from the FKM elastomer with a steel outer backing on the inner seal. For present purposes, that does not impact on the question of whether the vehicles complied with the s 54 guarantee at the time of their supply. It is, however, relevant to the Applicant’s claim under ACL s 271 and it is potentially relevant to the question of damages. It is not necessary or appropriate to deal with those issues at this juncture.

## Vehicles with B8080

1. I have concluded that every vehicle supplied with a DPS6 containing clutches which used B8080 lining material had a real risk that the clutches would behave unpredictably confusing the TCM and causing the transmission itself to behave unpredictably. In those vehicles in the cohort which still contain clutches solely reliant on B8080 lining this inherent risk continues. As I have explained, the B8080 clutches were and are prone to result in shudder, difficulty changing gears, lack or loss of power, NVH issues and clutch odour.
2. Having regard to the matters set out above, I do not think that vehicles supplied with the B8080 lining can be said to be fit for the purpose of being driven as a motor vehicle (s 54(2)(a)) or that they were free from defects (s 54(2)(c)). Consequently, at the time they were supplied vehicles containing the B8080 lining were not of acceptable quality.
3. I would have reached the same conclusion even if I had not accepted the existence of the representations referred to above in dealing with s 54(3)(d).
4. A large number of vehicles containing clutches with the B8080 lining have had them replaced with either an RCF1o clutch or the half-hybrid B8040/B8080 clutch. I repeat the remarks I have made about the legal significance of rectification work above.
5. As for the 256 EcoSports manufactured with the half-hybrid B8040/B8080 clutch, the effect of the conclusions reached in Section VII is that the Applicant has not proven that these vehicles were prone to the same difficulties as those containing B8080. The Applicant therefore has not proven that these vehicles were supplied in breach of the s 54 guarantee by reason of their clutch lining.

## Vehicles with a TCM containing the original ATIC 91 chip

1. I have concluded that vehicles which were supplied with a TCM containing an original ATIC 91 chip had a real risk of developing solder cracks. If the cracks developed the consequence was a gradual reduction in the solder’s conductive efficiency and a corresponding propensity for interruptions in the distribution of electrical power to the TCM. As this occurred a steadily increasing range of transmission faults would arise. Where the TCM was offline for a matter of milliseconds this might be perceptible to the driver as a shuddering sensation; as the problem worsened, however, the vehicle might sustain a total loss of motive power for a period of seconds – which was unsafe. This was a fault which could, albeit in rare circumstances, result in a serious accident.
2. Having regard to the matters set out above, I do not think that vehicles supplied with the original ATIC 91 chip can be said to be fit for the purpose of being driven as a motor vehicle (s 54(2)(a)) or that they were free from defects (s 54(2)(c)) or that they were safe (s 54(2)(d)). Consequently, at the time they were supplied vehicles containing the original ATIC 91 chip were not of acceptable quality.
3. I would have reached the same conclusion even if I had not accepted the existence of the representations referred to above in dealing with s 54(3)(d).
4. From 27 October 2015 a large proportion of vehicles containing the original ATIC 91 chip have received the 15B22 software update (at least 86%) and some of these vehicles may have had their TCMs replaced with a new TCM containing the revised ATIC 91 chip. I repeat the remarks I have made about the legal significance of rectification work above (in relation to the input shaft seals).
5. For completeness, I have not drawn any independent conclusion about the ATIC 106 chip, so far as it might bear upon the question under s 54. This is a consequence of the fact, as I explained above in Section VIII, that there was insufficient material to support a finding that a real risk of failure existed in relation to the ATIC 106 chip.

## Vehicles with the ‘normal operating characteristics’

1. It will be recalled that the Respondent accepts that the vehicles have a tendency to display the following characteristics:
2. a slight vibration or shudder under light acceleration at slow speeds or during a coast down, as the transmission upshifts or downshifts;
3. firm gear shifting under aggressive acceleration;
4. a slight audible rattle, particularly when operated within an enclosed area such as a carpark;
5. mechanical sounds when shifting, or after the vehicle has been turned off; and
6. a slight shunting sensation at very low speeds.
7. The Applicant submitted that these ‘normal operating characteristics’ were put forward by the Respondent as those problems which were left over after the Component Deficiencies were resolved. She did not wrestle with the possibility that those characteristics might be the consequences of the torsional vibrations to which the Applicant pointed as part of her Architectural Deficiencies case.
8. I have explained that (a) and (c) are most likely the result of torsional vibrations being transmitted through the driveline. In light of the Respondent’s positive assertion of these behaviours as something to be expected, I have accepted that (b), (d) and (e) are exhibited by the DPS6 without making any finding as to their cause. The shudder which is referred to in (a) is therefore a different shudder to that arising from self-excited shudder or forced-excited shudder. Those latter two kinds of shudder arose from the complex physics attending the interaction of the clutch plate with the drive plate. The shudder here is different and is an oscillation transmitted directly from the crankshaft.
9. Regardless of where these five phenomena fit into the Applicant’s case, the Respondent’s position was that these behaviours were ‘normal operating characteristics’ of the DPS6 and as such could not have the consequence that the vehicles were not of acceptable quality. This is a form of argument by definition. Its limitations may be illustrated. A car with a tendency to explode in a fireball would not be of acceptable quality even if the manufacturer successfully proved that this behaviour was a normal operating characteristic of the vehicle. This might suggest that proof by a manufacturer that a characteristic is a normal operating characteristic is not legally responsive to a contention that the characteristic is such as to mean that the requirements of s 54(2) are not satisfied.
10. Of course, where a manufacturer explicitly draws to a consumer’s attention that a vehicle has a specific eccentricity then the presence of that eccentricity will not on its own render the vehicle other than of acceptable quality. So much flows from s 54(4):
11. If:
12. goods supplied to a consumer are not of acceptable quality; and
13. the only reason or reasons why they are not of acceptable quality were specifically drawn to the consumer’s attention before the consumer agreed to the supply;

the goods are taken to be of acceptable quality.

1. In this case, however, the Respondent did not suggest that s 54(4) was the point it was trying to make. Put another way, it did not submit that it had specifically drawn the attention of purchasers of vehicles fitted with a DPS6 to these normal operating characteristics.
2. I have found it difficult to conceptualise the Respondent’s submissions in a way which can be reconciled with the text of s 54. If a good *X* has a particular quality *a* which means that one of the integers in s 54(2) is not satisfied it is difficult to see that it can be legally significant that *a* is a normal operating characteristic of *X*. Accepting that it is such a characteristic cannot without more lead to the conclusion that s 54(2) is satisfied (in this case to do so would be inconsistent with the initial hypothesis). To avoid that inconsistency it is therefore necessary to accommodate the submission within the interstices of s 54(2) itself. But when the argument is broken down and distributed across the integers of s 54(2) the problem merely recurs. Thus in terms of s 54(2)(a), if *X* is not fit for a purpose for which goods like *X* are commonly supplied because of *a*, then it is difficult to see how the fact that *a* is a normal operating characteristic of *X* can lead to a different outcome. The same point may be made in relation to each of s 54(2)(b)-(e). Perhaps the point is made most clearly with the safety requirement in s 54(2)(d). It cannot be to the point that a quality which makes a good unsafe is also one of its normal operating characteristics.
3. I therefore conclude that the Respondent’s factual contention that the five characteristics of the DPS6 are its ‘normal operating characteristics’ is irrelevant to any legal issue which arises from s 54(2). It is therefore not necessary to decide whether as a matter of fact the Respondent is correct. Lest I have stepped into error in drawing that conclusion, however, it is useful to determine that issue.
4. The Respondent’s submission was that the five characteristics were a feature not only of the DPS6 but also of other dual clutch transmissions. This contention was based on the evidence of Mr Kuhn. At §93 he said that the five characteristics were not materially different to the performance of other dual clutch transmissions. He did not identify the other dual clutch transmissions he had in mind except in the case of the Hyundai. At §78 he discussed the Ecoshift DCT which was fitted in some versions of the Hyundai Tucson. Mr Kuhn extracted a quote from the ‘2016 Hyundai Tucson Owner’s Manual’ which suggests that the Ecoshift DCT was a dry clutch assembly as well. Mr Kuhn gave no evidence of what the normal operating characteristics of the EcoShift DCT were. However, the extract from the Tucson Owners’ Manual described three such characteristics. These were:
   1. Unlike a traditional automatic transmission, the gear shifting can sometimes be felt and heard on the Ecoshift dual clutch transmission.
   2. Shifts are sometimes more noticeable, and a light vibration can be felt.
   3. The dry-type clutch transfers torque more directly and provides a direct-drive feeling which may feel different from a conventional automatic transmission. This may be more noticeable when launching the vehicle from a stop or when travelling at low, stop-and-go vehicle speeds.
5. He also discussed the Hyundai Veloster, which appears also to have had the EcoShift DCT. Whilst he did not say what its normal operating characteristics were he set out part of the text appearing on its ‘hang tag’ at §79:
6. The vehicle is equipped with an EcoShift Dual Clutch Transmission (DCT).
7. It gives the driving feel of a Manual Transmission yet provides the convenience of a fully Automatic Transmission.
8. Unlike a traditional Automatic Transmission, when the ignition is turned ON/OFF or when driving, gear shifting can be felt and heard on the DCT.
9. Think of it as an automatically shifting Manual Transmission.
10. Shift into Drive range and you get great shifting feedback and sound without having to shift manually.
11. When you choose, you can drive it like a Manual Transmission by moving the gear lever to the right and then pushing it forward or pulling it back for crisp gear changes.
12. Please refer to the Owner’s Manual for additional information on the DCT.
13. He did not say whether the Veloster was a dry or wet clutch arrangement, although it appears likely that given the transmission is also identified as an Ecoshift DCT that it was dry. I note also that the Court was elsewhere taken to Ford US documents that recorded the Veloster as having a DMF.
14. Mr Kuhn’s principal point at §93 was that the five characteristics were common to vehicles equipped with dual clutch transmissions. He provided only two examples of these. If the evidence was intended to establish the general proposition that all vehicles with dual clutch transmissions have the five characteristics then I do not accept that the extracts from the Tucson owner’s manual and Veloster’s hang tag come close to making such a proposition good. If Mr Kuhn in fact meant (as I think is more likely) that the five characteristics are the common inheritance of vehicles with dry dual clutch transmissions, then the situation is slightly better, but in my view, nowhere near adequate. If the Respondent wished to prove that vehicles with dry dual clutch transmissions all have the five characteristics, this was presumably an easy thing to do for an entity in the position of the Respondent. I do not know how many vehicles with dry dual clutch transmissions there are in the market but I think it very unlikely there are only the Affected Vehicles and these two Hyundai models. Indeed, Mr Cruse’s cross-examination revealed that by 2012 Volkswagen also had vehicles with a dry dual clutch transmission. The significance of the Veloster and the Tucson is therefore imponderable.
15. That leaves unparticularised Mr Kuhn’s opinion that there are no material differences between the five characteristics of the DPS6 equipped vehicles and the characteristics of vehicles equipped with dual clutch transmissions generally. I do not accept this opinion exposes Mr Kuhn’s reasoning in a way which allows me to scrutinise its correctness.
16. I therefore do not accept that all dual clutch transmissions or all dry dual clutch transmissions have normal operating characteristics that include the five referred to above. In particular, I do not accept the Respondent’s submission at [279(a)] that the behaviours ‘are found in millions of other vehicles’. There was no evidence for this.
17. The Applicant went somewhat further. She suggested that the normal operating characteristics had not appeared in the initial owner’s manuals, advertising material or pre-production documents and first appeared in a circular to dealers sent in October 2012. Here the implicit submission was that there was nothing normal about the normal operating characteristics and their introduction into subsequent literature was an attempt to re-educate owners into thinking that their defective vehicles were not defective because the impugned behaviour was normal. The Applicant added spice to this dish by quoting from an email within Ford containing the memorable line ‘In my view, there is no way we can “explain” our way out of something like this by declaring that this is “normal”’.
18. By contrast, the Respondent submitted that with new technology like the DPS6 ‘customer education may be required in response to feedback from the field’.
19. I do not think that the colourful email assists. In context, it is plain that a single vehicle is being discussed and the remark is not addressed to the five characteristics. There is no doubt, on the other hand, that the Respondent appears to have realised prior to the circular of October 2012 that the five characteristics existed. Whether the Respondent thought that they were actually faults and set out to persuade their customers that black was white or whether the Respondent genuinely believed that black was white, does not seem to me to matter. It does not matter because the answer to that question has nothing to do with s 54(2). If it mattered, I would be disinclined to regard this episode as an exercise in pulling the wool over customers’ eyes.
20. All of that leaves unanswered the questions posed by s 54(2). I have considered the matters in s 54(3) above and do not need to repeat them. However, of particular significance, is the finding that the DPS6 was marketed as providing smooth gear shifts. I do not think that characteristic (a) and (b) meet that description. Turning then to s 54(2) itself, I do not think vehicles fitted with a DPS6 are ‘free from defect’ within the meaning of s 54(2)(c) because they are prone to display a slight shudder in some gear change situations and exhibit firm gear shifts when driven with gusto.
21. Whichever way one looks at these phenomena they are not smooth gear shifts. Perhaps in a vehicle not marketed as the DPS6 was marketed, the outcome might be different. However, this is how the DPS6 was marketed and viewed in that context, as required by s 54(3)(d), the vehicles fitted with the DPS6 and therefore prone to these behaviours are not of acceptable quality.
22. I also accept that the tendency to exhibit gear rattling means that the vehicles were not acceptable in terms of their ‘finish’ within s 54(2)(b). Section 54(2)(b) refers to ‘appearance and finish’. I do not think this is a composite expression. The presumption against superfluity therefore implies that finish has a meaning which extends beyond merely visual qualities of the goods. New cars should not have a tendency to rattle, even slightly.
23. However I have pointed out above that the Applicant made no attempt to connect the normal operating characteristics to its case alleging that all Affected Vehicles were defective due to the root causes of inadequate torsional damping and inadequate heat management. This is significant because as I explain more fully below in Section XVI, the Applicant chose to particularise its case based on the evidence given by Dr Greiner. This choice meant that the trial of the s 54 question was conducted exclusively on the basis of the four alleged Component Deficiencies and two alleged Architectural Deficiencies. As I am not satisfied that the Applicant has connected 3 of the 5 normal operating characteristics to its Architectural Deficiency case (and the Applicant did not submit they were connected to the Component Deficiencies), it would be procedurally unfair to consider these characteristics in assessing whether the Respondent has complied with statutory guarantee where it was never asked to meet this case at trial.
24. I therefore conclude that all vehicles fitted with a DPS6 were supplied in breach of s 54(2), as they are prone to slight shudder at low speeds and gear rattling, being the two normal operating characteristics that have been causally linked to the case run by the Applicant on inadequate torsional damping. No attempt has been made to fix these two characteristics, so all vehicles remain afflicted by this risk.

## Ms Capic’s vehicle

1. I do not need to spend much time on this. In light of the conclusions above it follows that Ms Capic’s vehicle was supplied to her in breach of s 54 for four reasons. It contains a DPS6 the normal operating characteristics of which made it prone to a slight shudder and rattling, it contained the original input shaft seals, it contained a B8080 clutch and it contained a TCM fitted with an original ATIC 91 chip. As Mr Pike SC for the Applicant put it, it was a lemon.

## Summary of conclusions on acceptable quality

### All Affected Vehicles

1. All 73,451 vehicles in the cohort were supplied in circumstances where the guarantee of acceptable quality under s 54 was not complied with. This was because they were prone to display the following problems, being the two ‘normal operating characteristics’ caused by inadequate torsional damping:

* a slight shudder at low speeds; and
* gear rattling.

1. The combination of these is sufficient to render the vehicles not of acceptable quality. These problems have not been resolved.

### Input shaft seals

1. The following Affected Vehicles were not of acceptable quality when supplied because they contained input shaft seals with a real risk of leaking:
2. Fiestas manufactured before 30 August 2013 (17,274 vehicles);
3. Focuses manufactured at the Ford Thailand Manufacturing plant before 2 September 2013 (18,068 vehicles);
4. Focuses manufactured at the Saarlouis plant before 28 June 2013 (11,537 vehicles);
5. EcoSports manufactured before 1 October 2013 (170 vehicles).

This represents 64.1% of the Affected Vehicles.

1. Vehicles manufactured after those dates did not have this problem and did not when supplied fail to comply with the guarantee of acceptable quality by reason of this matter.
2. Where vehicles on the road have had their input shaft seals replaced with new input shaft seals containing both the new elastomer and the steel outer backing on the inner seal, it is not presently possible to say that any cause of action for reduction in value damages exists under ACL s 271(1). For the reasons given below at [758]-[761] including in respect of the ‘reasonable time’ issue, this cannot be known until the individual position of each group member is examined. Whether therefore a group member has a claim for damages under s 272(1)(a) (reduction in value damages) is unknown. However, a claim for damages under s 272(1)(b) for damages other than reduction in value damages is available.
3. Where vehicles on the road received replacement input shaft seals that had the new elastomer but the original rubber outer backing on the inner seal, I have found that neither side proved the extent of the remaining risk in these replacement seals. I discuss the implications of this below.
4. Vehicles which have not had their input shaft seals replaced remain not of acceptable quality by reason of that matter.

### Clutch lining

1. Vehicles manufactured with B8080 clutches have a propensity to develop a range of issues including self-excited shudder. As supplied they were not of acceptable quality.
2. 93.7% of the Affected Vehicles were supplied with the original B8080 clutch lining:
3. all Focuses (42,498 vehicles);
4. Fiestas manufactured before 7 January 2015, excluding the 1.0L ‘Fox’ Fiesta (20,734 vehicles);
5. EcoSports manufactured before 3 September 2016 (5,578 vehicles).
6. Fiestas manufactured from 7 January 2015 contained RCF1o clutches which do not have this problem. EcoSports produced from 3 September 2016 were made with a half-hybrid B8040/B8080 clutch; in relation to these vehicles, the Applicant did not discharge her onus of proving that as supplied they were not of acceptable quality by reason of their being manufactured with the half-hybrid clutch. I have already explained that no production change was introduced for the Focus vehicles because from September 2015 Ford stopped using the DPS6 altogether in production of those vehicles.
7. Where vehicles manufactured with B8080 clutches have received replacement RCF1o clutches it is not presently possible to say whether a relevant group member has a cause of action for reduction in value damages because, for reasons given at [758]-[761] below, the status of the Respondent’s reliance on s 271(6) is presently indeterminate. However, such group members remain entitled to make a claim for damages under s 272(1)(b).
8. Where vehicles manufactured with B8080 clutches have received replacement half-hybrid B8040/B8080 clutches the Respondent cannot defeat the Applicant’s s 271 claim by relying on s 271(6) (for reasons I explain later) and the group members are entitled to make a claim for reduction in value damages as well as damages under s 272(1)(b).

### TCM

1. All three model lines of Affected Vehicles were initially manufactured with TCMs containing ATIC 91 chips that had a real risk of developing solder cracks. As supplied, those vehicles were not of acceptable quality on account of that real risk. These vehicles were:
2. Fiestas manufactured before 23 June 2014 at the AutoAlliance Thailand plant (20,235 vehicles);
3. All other Fiestas (from the Ford Thailand Manufacturing plant), all Focuses and all EcoSports that were manufactured before 10 November 2014 (44,349 vehicles in total).

This represents 87.9% of the Affected Vehicles.

1. New ATIC 91 chips which did not exhibit a real risk of developing solder cracks were introduced into production at various times depending on the model line and place of manufacture. They were installed in Fiesta vehicles manufactured from 23 June 2014 if produced at one of the plants in Rayong, Thailand (AutoAlliance Thailand) but for all other Fiesta vehicles and all Focus and EcoSport vehicles from 10 November 2014. Vehicles manufactured with the new chip were not supplied in breach of the s 54 guarantee by reason of the characteristics of the TCM.
2. As I have explained, while there is no direct evidence as to the specific date that TCMs with the new ATIC 91 chip were available for installation in service, it is clear that this happened progressively after 23 June 2014 and 10 November 2014 when those TCMs were rolled out in production across the three model lines. Vehicles on the road which have received a replacement TCM containing the new ATIC 91 chips have ceased to suffer from a real risk of failure by reason of this matter from that time. This does not mean that they were of acceptable quality when supplied, however. It will be necessary to return to this issue when considering the legal implications of the repair.
3. Furthermore, the 15B22 software update was installed in vehicles on the road from 27 October 2015. The effect of this update was that the TCM would detect solder cracking before the progressive symptoms associated with it were perceptible to the driver and would in this way cause the vehicle to be brought in for service before those symptoms manifested. I therefore conclude that for vehicles which contain the original ATIC 91 chip but have received this update, they have also ceased to suffer from a real risk of failure by reason of this matter from the time when TCMs with the new ATIC 91 chip were available to them in service after they had received the update.

### Reduction in value damages

1. For reasons explored below at [743]ff the group members who are presently entitled to make a claim for reduction in value damages are:
2. all group members but only in relation to the slight shudder at low speeds and gear rattling;
3. group members in relation to vehicles supplied with any of the three original components which have not had any one of these components replaced but only in relation to the relevant non-replaced component(s);
4. group members in relation to a vehicle supplied with a B8080 clutch which has since been replaced with the half-hybrid B8040/B8080 clutch.
5. It is also clear that there may be other group members who, after a consideration of their individual position may be able to claim reduction in value damages in relation to a proven Component Deficiency if it transpires that the relevant component replacement was not effected within a reasonable time.

### Other damages under s 272(1)(b)

1. In principle, these damages are available to all group members. The Applicant did not deal in detail with damages of this kind in her submissions although she did make a claim for GST, stamp duty and interest on the alleged reduction in value and for excess financing costs. The Respondent disputed that such damages were available under s 272(1)(b) on the basis, inter alia, that they were not foreseeable. I deal with this issue later. For present purposes, the point is that while the Applicant relied upon Mr Stockton’s analysis to assert an entitlement on the part of group members to certain amounts in aggregate damages for excess finance and repair time costs (presumably, although this was not entirely clear, under s 272(1)(b)), it would seem that such damages will need to be the subject of further determination having regard to the individual position of each group member.

## Section 271 of the ACL

1. The parties were at odds about the operation of ACL s 271(6) and s 271(2).
2. A significant number of vehicles have had one or more problems fixed by dealers under warranty. Where that has occurred, s 271(6) impacts on the ability of a person to recover damages for breach of the guarantee of acceptable quality. It does so by operating on the provision which confers the person’s cause of action. In this case, the cause of action is conferred by s 271(1). Section 271(6) operates as some form of qualification to s 271(1). Section 271(1) is itself linked to s 272 which specifies the damages which may be recovered. Also relevant is the right in s 271(5) to sue a manufacturer for failure to comply with an express (ie voluntary) warranty and s 271(2) which perhaps operates as a proviso to s 271(1) when goods are affected by the conduct of third parties. All of these provisions are relevant in this matter. They are as follows

**271 Action for damages against manufacturers of goods**

(1) If:

(a)  the guarantee under section 54 applies to a supply of goods to a consumer; and

(b)  the guarantee is not complied with;

an affected person in relation to the goods may, by action against the manufacturer of the goods, recover damages from the manufacturer.

(2)  Subsection (1) does not apply if the guarantee under section 54 is not complied with only because of:

(a)  an act, default or omission of, or any representation made by, any person other than the manufacturer or an employee or agent of the manufacturer; or

(b)  a cause independent of human control that occurred after the goods left the control of the manufacturer; or

(c)  the fact that the price charged by the supplier was higher than the manufacturer’s recommended retail price, or the average retail price, for the goods.

…

(5)  If:

(a)  the guarantee under section 58 or 59(1) applies to a supply of goods to a consumer; and

(b)  the guarantee is not complied with;

an affected person in relation to the goods may, by action against the manufacturer of the goods, recover damages from the manufacturer.

(6)  If an affected person in relation to goods has, in accordance with an express warranty given or made by the manufacturer of the goods, required the manufacturer to remedy a failure to comply with a guarantee referred to in subsection (1), (3) or (5):

(a) by repairing the goods; or

(b) by replacing the goods with goods of an identical type;

then, despite that subsection, the affected person is not entitled to commence an action under that subsection to recover damages of a kind referred to in section 272(1)(a) unless the manufacturer has refused or failed to remedy the failure, or has failed to remedy the failure within a reasonable time.

…

**272 Damages that may be recovered by action against manufacturers of goods**

(1)  In an action for damages under this Division, an affected person in relation to goods is entitled to recover damages for:

(a) any reduction in the value of the goods, resulting from the failure to comply with the guarantee to which the action relates, below whichever of the following prices is lower:

(i) the price paid or payable by the consumer for the goods;

(ii) the average retail price of the goods at the time of supply; and

(b) any loss or damage suffered by the affected person because of the failure to comply with the guarantee to which the action relates if it was reasonably foreseeable that the affected person would suffer such loss or damage as a result of such a failure.

(2) Without limiting subsection (1)(b), the cost of inspecting and returning the goods to the manufacturer is taken to be a reasonably foreseeable loss suffered by the affected person as a result of the failure to comply with the guarantee.

(3) Subsection (1)(b) does not apply to loss or damage suffered through a reduction in the value of the goods.

1. There are other guarantees in the ACL but it is only the acceptable quality guarantee created by s 54(1) and made actionable by s 271(1) that is directly relevant in this litigation. Section 271(5) may have had some potential relevance but appears to have escaped attention or been thought not to be worth pursuing.
2. Four issues divide the parties. The first is whether s 271(6) applies where the consumer has not required the manufacturer to repair the goods. The second is whether delay in effecting repairs prevents s 271(6) operating. The third relates to who has to prove what about s 271(6): does the Applicant have to prove that it does not apply or must the Respondent prove that it does? The fourth relates to s 271(2) and concerns who bears the onus of proving the acts of the third parties. Before tackling these questions it is useful to begin with some background information which informs the questions at hand.

### Some background to the provision

#### Affected person

1. Section 271(1) confers a cause of action on an ‘affected person’. This is defined in s 2 to include a consumer who acquires the goods or someone who acquires the goods from or derives title to the goods through or under the consumer (which might include, for example, a second-hand owner or a finance company). In the interests of clarity I will generally use the expression ‘consumer’ in this discussion but it should be remembered that the statutory phrase is actually ‘affected person’.

#### Express warranty in s 271(6)

1. Section 271(6) refers to the consumer requiring the manufacturer to remedy a failure to comply with the statutory guarantee ‘in accordance with an express warranty’. As most law students studying contract will appreciate, it has always been a puzzle how as a matter of contract law a consumer may enforce an express warranty given by a manufacturer. Certainly this puzzled me at law school. The manufacturer and the consumer are rarely in privity of contract and, as such, the latter cannot sue in contract on the warranty. Section 59(1) provides the answer. It imposes another statutory guarantee on the manufacturer, in this case, a statutory guarantee that the manufacturer will comply with any express warranty it has given. Section 59(1) provides:

**59 Guarantee as to express warranties**

        (1)  If:

                     (a)  a person supplies, in trade or commerce, goods to a consumer; and

                     (b)  the supply does not occur by way of sale by auction;

there is a guarantee that the manufacturer of the goods will comply with any express warranty given or made by the manufacturer in relation to the goods.

1. This guarantee is separate from the guarantee under s 54(1) that the goods will be of acceptable quality. What it means, however, is that whatever warranty a manufacturer gives in relation to the goods it makes, s 59(1) requires that the warranty be honoured: *Australian Competition and Consumer Commission v Jayco Corporation Pty Ltd* [2020] FCA 1672 (‘*ACCC v Jayco*’) at [719], [722] per Wheelahan J. Although it is not directly relevant to this case, for completeness, s 271(5) confers a cause of action on a consumer where the manufacturer in breach of the guarantee under s 59(1) fails to comply with an express warranty. In this case, the Respondent extended its express warranties on several occasions in relation to transmission repairs. Since the Applicant has not sued on this basis, this largely does not matter although it has residual interpretative significance.
2. This significance is that s 271(6) refers to a consumer requiring a manufacturer to remedy a failure to comply with the guarantee of acceptable quality ‘in accordance with an express warranty given or made by the manufacturer’. Where the manufacturer has not given any express warranties then it would appear to follow that the consumer could not require the manufacturer to remedy any failure to comply with the acceptable quality guarantee pursuant to such an express warranty. This in turn suggests that s 271(6) does not speak to that situation. Another way of saying this is that the statute imposes no obligation by itself on a manufacturer to repair or replace goods which do not comply with the guarantee of acceptable quality. The only direct statutory right is the consumer’s right to claim damages under s 271(1) for breach of the guarantee under s 54(1).
3. This may be contrasted with the situation in relation to the suppliers of such goods. The immediately relevant provisions for this case, ss 271-273, comprise Division 2 of Part 5-4 which deals with the liability of manufacturers. But Division 1 deals with the liability of suppliers. These provisions are reasonably complex but for present purposes it suffices to say in a fairly loose way that they include a right in the consumer to require the supplier of the goods to remedy a failure to comply with the acceptable quality guarantee (s 259(2)) and, where the failure cannot be remedied or is a major failure, the consumer may return the goods or sue the supplier to recover reduction in value damages (s 259(3)). Where this sort of event occurs and provided certain conditions are met, Division 3 (‘Miscellaneous’) requires by s 274 that the manufacturer indemnify the supplier. The operation of Division 1 has been examined in some detail by Wheelahan J in *ACCC v Jayco* and by Derrington J in *Vautin*.
4. The point for present purposes is that it is the supplier who stands in the firing line first and must under Division 1 repair or replace the goods unless the failure to comply with the s 54 guarantee cannot be remedied or is a major failure. No such *direct* statutory obligation rests on the manufacturer unless it has given an express warranty that it will repair or replace the goods. This it may do but is not required to do. But if it decides to do so the express warranty so proffered is given statutory force by s 59(1) and by s 271(5) the consumer may sue the manufacturer for failing to comply with its own express warranty. Although the remedial provisions with respect to suppliers are complex, by contrast there is no corresponding machinery in the case of manufacturers and the repair/replacement process happens under the auspices of whatever the express warranty provides for (backed up by s 59(1) and s 271(5)).
5. In a case where goods are not of acceptable quality and the manufacturer has given an express warranty that it will repair the goods with which it has failed to comply, the situation therefore becomes governed by two distinct regimes. First, the consumer may sue directly on the failure to comply with the guarantee of acceptable quality under s 271(1). Secondly, it may sue for failure to comply with the express warranty under s 271(5). As I have said, this second route was not explored in this case.
6. Section 271(6), which is the pivotal provision in the present context, speaks to both situations as the references to s 271(1) and s 271(5) show (the reference to subsection (3) is irrelevant for present purposes and may be disregarded). Section 271(6) is a qualification on these two distinct statutory causes of action. As will be seen, s 271(6) is *very* poorly drafted. However, standing back from its turbid mysteries, it is reasonably clear that the drafter was stumbling towards trying to say that if the manufacturer repairs or replaces the goods under an express warranty then the consumer cannot sue for reduction in value damages either for any failure to comply with the guarantee of acceptable quality (under s 271(1)) or for any failure to comply with an express warranty (under s 271(5)). The consumer’s right to sue for other damages under s 272(1)(b) is not, however, impaired by s 271(6).
7. The key point for present purposes is that the manufacturer is not obliged to give an express warranty. Where no express warranty has been given s 271(6) never becomes relevant. It is therefore entirely possible that s 271(1) but not s 271(6) may operate in any given case. In such a case, the consumer is not left without a remedy for a failure by the manufacturer to comply with the guarantee of acceptable quality. Unquestionably, in that situation the consumer may sue the manufacturer under s 271(1). Where that happens, s 271(6) simply never gets into the picture.

#### The right to damages in s 272(1)

1. Section 272(1) contemplates recovery of damages for reduction in value (s 272(1)(a)) and other loss or damage which was reasonably foreseeable (s 272(1)(b)).
2. More important is the fact that s 272 speaks in terms of ‘an action for damages under this Division’. Section 271 confers such causes of action in each of s 271(1), s 271(3) and s 271(5). As I have already indicated only the causes of action in s 271(1) and s 271(5) are presently relevant. The Respondent submitted that the cause of action conferred by s 271(1) had as one of its constituent elements the suffering of loss and damage. Neither s 271(1) nor s 271(5) actually says this in terms. Both may be contrasted with s 82 of the Act which relevantly provides:

**82  Actions for damages**

(1)  A person who suffers loss or damage by conduct of another person that was done in contravention of:

(a) a provision of Part IV, IVB or IVBA; or

(b) section 55B, 60C or 60K; or

(c) subsection 56BN(1), 56BO(1), 56BU(1) or 56CC(1) or section 56CD; or

(d) a civil penalty provision of the consumer data rules;

may recover the amount of the loss or damage by action against that other person or against any person involved in the contravention.

(2)  An action under subsection (1) may be commenced at any time within 6 years after the day on which the cause of action that relates to the conduct accrued.

…

1. In s 82 it is clear that the suffering of loss and damage is a precondition to the operation of the provision. This understanding is orthodox: see, eg, *Henville v Walker* [2001] HCA 52; 206 CLR 459 at 468-469 [13]-[14] per Gleeson CJ, 480-482 [61], [63], [66] per Gaudron J, 484 [78] per McHugh J, 508-509 [158], [160] per Hayne J, Gummow J agreeing with McHugh J and Hayne J at 507 [153]; *Wardley Australia Ltd v Western Australia* (1992) 175 CLR 514 at 525 per Mason CJ, Dawson, Gaudron and McHugh JJ.
2. By contrast, s 271(1) and s 271(5) do not precondition the right to sue on the suffering of loss or damage. Against that it might be said that the right they do confer is a right to recover damages. The nature of those damages is set out in s 272(1)(a) and s 272(1)(b) and consists of reduction in value damages and any other loss or damage suffered by reason of the breach which it is reasonably foreseeable would be suffered. A consumer who has suffered no loss or damage of the kind recognised in s 272(1) will certainly fail to recover damages. But this does not necessarily mean they have no cause of action. Causes of action in which damage is not a necessary element are common enough: actions in trespass and actions for breach of contract are obvious examples.
3. It is relevant to consider s 273, which provides:

**273 Time limit for actions against manufacturers of goods**

An affected person may commence an action for damages under this Division at any time within 3 years after the day on which the affected person first became aware, or ought reasonably to have become aware, that the guarantee to which the action relates has not been complied with.

1. The fact that the relevant limitation period for any cause of action established under this Division is not determined by reference to the suffering of damage further suggests that such damage does not form part of the cause of action.
2. If matters rested there, I do not think I would conclude that the loss and damage set out in s 272(1) formed part of the cause of action in s 271(1) or s 271(5). However, the triumph of the drafter’s art which is s 271(6) complicates the picture. It uses the phrase ‘the affected person is not entitled to commence an action under that subsection to recover damages of a kind referred to in section 272(1)(a) unless…’. Read literally neither s 271(1) nor s 271(5) (being the subsection referred to) actually establish an action ‘to recover damages of a kind of referred to in s 272(1)(a)’ and so read it does not literally make sense. What those provisions actually create is a right to claim unspecified damages with the nature of the damages only later fleshed out in s 272(1).
3. If one construes s 271(1) and s 271(5) as not including loss and damage as part of the cause of action then one is faced with an intractable problem of coherence with s 271(6). One should, of course, strive to read provisions of a statute in a harmonious way: *Project Blue Sky Inc v Australian Broadcasting Authority* [1998] HCA 28; 194 CLR 355 at 281-282 [70] per McHugh, Gummow, Kirby and Hayne JJ. No doubt this amiable fiction is useful as an interpretative tool but it often requires much by way of willing suspension of disbelief. This is particularly so with this provision. In any event, I conclude that each of s 271(1) and s 271(5) creates a separate cause of action in which loss and damage of the kind set out in s 272(1)(a) and s 272(1)(b) is respectively an element. This is admittedly difficult to square with the text of s 271(1) and s 271(5), however, it is the only way that one can avoid incoherence in the reference in s 271(6) to an entitlement to commence an action for damages under s 272(1)(a).
4. The reference to s 272(1)(a) in s 271(6) also highlights something which is easy to overlook. Whatever else the provision does, it only does it to claims for damages under s 272(1)(a), ie, reduction in value damages. The provision has no operation where other damages are claimed under s 272(1)(b). At this point, we are a long way down the rabbit hole, but an example of what this could possibly mean may be imagined and, indeed, may even be relevant to this case. For example, consider a vehicle sold with the benefit of a manufacturer’s express warranty that it would repair the vehicle’s transmission should it suffer from an outbreak of forced-excited clutch shudder. The hapless owner presents the vehicle for repair over several years but each time the vehicle is not repaired and the problems persist. Finally, after many years of frustration the manufacturer finally succeeds in repairing the vehicle. Because the repair was successful, subject to the effect of the phrase ‘within a reasonable time’ (a matter to which I will return), s 271(6) would appear to block any claim the owner would have for reduction in value damages. Nevertheless, it would appear to leave alive any claim for damages she might have under s 272(1)(b) for other damages. These might include compensation for having to hire another vehicle. They might also include an element for frustration and the life-affliction which is several years of living with a car which just will not behave. Although Mr Pike SC did not integrate his suggestion that Ms Capic’s vehicle was a ‘lemon’ into s 272(1)(b), it may be that damages for reasonably foreseeable loss other than reduction in value caused by being sold a lemon might be available under it. And, if they are, I do not think that s 271(6) would stand in the way of such a claim.
5. Having cleared the underbrush, it is then useful to proceed to the four issues which divide the parties.

### Is s 271(6) enlivened if a person does not require the goods to be repaired or replaced?

1. As to the first issue, the Respondent submits that it is ‘untenable’ to suggest that the consumer must first require the manufacturer to repair or replace the goods before the provision can apply. The reason for this was said to be that the first part of s 271(6) in terms referred specifically to the consumer having required the manufacturer to remedy a failure to comply with the guarantee. The construction was said to be supported further by the consideration that otherwise it would operate in an incongruous fashion. What was the incongruity? It was that a consumer who had not required the manufacturer to repair or replace the goods would nonetheless be able to sue the manufacturer under s 271(1).
2. I do not accept this submission. Whilst it is true that the provision does specifically refer to the consumer having required the manufacturer to remedy a failure to comply with the guarantee, it does so as a part of a conditional statement in which the reference forms the hypothesis to be satisfied before its conclusion follows. The provision therefore refers to an existing obligation in the consumer to require a manufacturer to remedy the failure to comply with the guarantee in the same way that the sentence ‘If it is raining I will bring my umbrella’ refers to the existing state of the weather; that is to say, not at all.
3. Nor do I detect any incongruity. The operation of s 271(6) (and s 271(1)) is that one cannot get the benefit of repair or replacement of goods under an express warranty and then, having done so, sue for damages on the very defect which has been remedied. It is one or it is the other. But that dichotomy is mute when there is no express warranty in the first place or, even where there is, where the consumer has not exercised his or her rights under it. This conclusion springs from common sense but also from the fact that the provision begins with the word ‘if’ combined with the unavoidable fact that one cannot extract from a statement in the form ‘If A then B’ the proposition A.
4. The Respondent also sought to buttress its construction by contextual analysis which pointed to what it described as the ACL’s preference for ‘flexible’ (which I took to mean non-litigious) remedies for failures to comply with the acceptable quality guarantee. This argument rested on the fact that under Division 1 of Part 5-4 it is for the supplier to choose which remedy to offer: repair, replacement or refund. Only if the supplier fails to effect one of these options within a reasonable time may the consumer reject the goods or recover compensation from the supplier. There are two problems with this argument. First, as the Respondent acknowledged and I described above, in fact Division 1 does expressly contemplate that the consumer in some circumstances may reject the goods or seek compensation from the supplier without the anterior step of the supplier attempting a more ‘flexible’ remedy: namely, where the failure cannot be remedied or is a ‘major failure’. This is difficult to square with the suggestion that the ACL in general abhors the consumer seeking compensation as a first step.
5. Secondly, to the extent that ACL Part 5-4 provides different remedial mechanisms in Division 1 (suppliers) and Division 2 (manufacturers) this would not seem to be a sound basis for reading Division 2 as if it said the same thing as Division 1. Those differences would rather suggest (as is obvious) that a different scheme was intended. Neither would this be surprising – as I have explained, the consumer does not stand in the same legal (or indeed practical) relationship to the supplier of goods as it does to the manufacturer. I therefore cannot accept the Respondent’s argument that s 271(6) should be read as if it formed part of a cascade of remedial steps functionally equivalent to that provided for in Division 1.
6. Consequently, the language of s 271(6) requires the conclusion that it is not enlivened unless (a) the manufacturer has issued an express warranty; and (b) the consumer has in fact required the manufacturer to remedy any failure to comply with the acceptable quality guarantee under that express warranty.
7. To be fair, although the Respondent did not rely upon it, there is some limited support for its position in the NSW Civil and Administrative Tribunal’s decision in *Boyer v FRP Pools and Spas Pty Ltd* [2019] NSWCATCD 52 at [72]-[74] where it was found the dissatisfied purchasers of a swimming pool could not sue under s 271(1) whilst they had not taken up the vendor’s offer to repair the pool’s gel-based coating. The point does not, however, appear to have been argued and, with respect, for the reasons I have given it cannot be reconciled with the text of s 271(6) and, in particular, the first word of the section, ‘if’.

### The significance of late repairs

1. As to the second issue, the provision does not say anything about late repairs or replacements. Rather, it removes a consumer’s cause of action if, having required the manufacturer under its express warranty to make the goods of acceptable quality, the manufacturer does so within a reasonable time. The Respondent referred to this timing requirement as a species of constructive failure to repair which I think is a sound description of its operation. If a manufacturer who has been required to remedy non-compliance with the guarantee of acceptable quality, fails to do so within a reasonable time then it is treated as if it had not done so at all: s 271(6) will not be engaged. In that circumstance, the use of the concept of a lately performed repair is not especially helpful and runs the risk of obscuring the statutory question.
2. The question of what a reasonable time is for the purposes of s 271(6) will depend on the facts in each case. It will depend at least on the goods in question and the nature of the problem but other factors may enter into the equation as well.

### Who bears the onus of proof under s 271(6)

1. Section 271(6), even by the lamentable standards of Commonwealth drafting, lurks near the bottom of the barrel. Problems with it include:
2. it is expressed in terms which suggest that it goes to the existence of the cause of action (‘is not entitled to commence an action’);
3. it refers to a cause of action for the kind of damages referred to in s 272(1)(a) when the cause of action conferred by s 271(1) does not;
4. it is in the form if A then B unless *not* C (ie the manufacturer has not repaired or replaced the goods within a reasonable time);
5. although it is centrally about what happens when goods *are actually* repaired or replaced it avoids referring to that occurrence; and
6. it has several redundant expressions and circumlocutions.
7. As to (a), it is difficult to read the expression ‘is not entitled to commence an action’ other than as going to the existence of the cause of action. Because a plaintiff must plead and prove the constituent elements of his or her cause of action, this at first blush seems to mean that the plaintiff must prove the ‘fact’ in s 271(6). Where the fact consists of a statement in the form ‘If A then B unless not C’ this is problematic. It is also obscure about what happens when the manufacturer has not issued an express warranty.
8. As to (b), I have dealt with this issue above.
9. As to (c), in English the statement ‘I will wear a t-shirt unless it is cold’ means ‘If it is cold I will *not* wear my t-shirt which I would otherwise wear’ – more formally, A unless B is formally equivalent to If B then ~A, otherwise A (using ~ to represent negation). The significance of this is that every ‘unless’ clause conceals a negative. Consequently, putting a clause after the word ‘unless’ which contains a ‘not’ is essentially incomprehensible to most readers not skilled in formal logic because it conceals a double negative. For example, the statement ‘I will bring my umbrella unless it is not raining’ sounds like gibberish to most people (because it is), but if dissected carefully turns out only to mean ‘If it is raining I will bring my umbrella which I would not otherwise bring’.
10. This vice appears in s 271(6) but with the added infelicity of casting the negative concept it uses in terms which avoid the word ‘not’ making the double negative doubly concealed. What is said is that ‘the manufacturer has refused or failed to remedy the failure or has failed to remedy the failure within a reasonable time’. What this means in English is that ‘the manufacturer has not remedied the failure within a reasonable time’.
11. As to (d), it is striking that the critical fact which enlivens the consequences of s 271(6) – the actual repair or replacement by the manufacturer of the goods under warranty – is nowhere to be found in the provision. This is because the drafter has decided to capture this central matter in the event which consists of the manufacturer not failing ‘to remedy the failure’ to comply with the guarantee of acceptable quality.
12. As to (e), it is otiose to speak, as s 271(6) does, of the situation where ‘the manufacturer has *refused* or *failed to remedy* the failure, or has *failed to remedy* the failure within a reasonable time’. If the manufacturer has *refused* to remedy the failure then it has *failed* to remedy the failure – refusal adds not a jot to failure. It is of course merely an added touch that the clause uses the verb ‘fail’ to refer to what the manufacturer has not done under the warranty but uses the noun ‘failure’ to refer to what the manufacturer has not done under the acceptable quality guarantee, that is to say, the two failures are not the same. These combine in the nadir which is surely the phrase ‘failed to remedy the failure’.
13. Further, it is likewise otiose to deal separately, on the one hand, with the failure to remedy the failure and, on the other, separately the failure to do so within a reasonable time. A failure to remedy the failure is entirely captured by the idea of failing to remedy it within a reasonable time – a fact one can confirm to oneself by asking what the conclusory words ‘failed to remedy the failure after a reasonable time’ add to the provision.
14. In effect, the whole of the section after the word ‘unless’ just means ‘unless the manufacturer has failed to remedy the non-compliance with the guarantee of acceptable quality within a reasonable time’.
15. A similar problem appears in the opening part of s 271(6). What is the difference between a warranty ‘given’ and a warranty ‘made’? In short: nothing at all. The provision would have precisely the same content if it said ‘If an affected person has, in accordance with an express warranty given by a manufacturer, required the manufacturer to remedy a failure to comply with a guarantee…’
16. What then does this incomprehensible provision mean? The internal logic of the provision is not affected by translating it into English. This one can do by removing the baffling ‘unless’ and replacing it with an ‘if’, suppressing the concomitant double negatives, switching ‘non-compliance’ for ‘failure’, removing the unnecessary clauses (a) and (b) and expunging the other stylistic aberrations. When this is done the provision reads:

‘If a manufacturer who has been required to repair or replace goods under an express warranty it has given does so within a reasonable time then the affected person is not entitled to commence an action under subsection (1), (3) or (5) to recover damages of a kind referred to in section 272(1)(a).’

1. As I have said, there is no avoiding that this provision goes to the existence of the cause of action. As such, it is to be read as part of s 271(1) in this case. (Similar reasoning would apply to s 271(3) and s 271(5) but treatment of them may be omitted for present purposes.) So read, it is apparent that s 271(6) is just one large ‘unless’ statement appended to s 271(1). Turning s 271(6) into such an ‘unless’ statement requires the removal of a double negative from the provision but, as I have explained, this does not affect its internal operating mechanics. Reading the two provisions together in this way one sees that s 271(1) and s 271(6) together mean (removing a few more unnecessary ‘in relations to’, adjusting some other unfortunate expressions and applying some commas):

‘If the guarantee under s 54 applies to a supply of goods to a consumer and the guarantee is not complied with then an affected person may, by action against the manufacturer of the goods, recover damages unless the affected person required the manufacturer to replace or repair the goods under an express warranty and the manufacturer did so within a reasonable time, in which case the affected person cannot commence an action to recover damages of the kind referred to in s 272(1)(a).’

1. Viewed that way, it is apparent that s 271(6) is a proviso to a s 271(1) action for reduction in value damages. The question then becomes whether the proviso is in the nature of a justification or excuse, in which case the Respondent will bear the onus, or whether it rather represents part of the ‘total statement’ of the cause of action, in which case the onus will lie with the Applicant: *Avel Pty Ltd v Multicoin Amusements Pty Ltd* (1990) 171 CLR 88 at 119 per McHugh J, citing *Vines v Djordjevitch* (1955) 91 CLR 512 (‘*Vines*’) at 519 per Dixon CJ, McTiernan, Webb, Fullagar and Kitto JJ. This is a question of construction to be resolved as a matter of substance rather than form: *Waters v Mercedes Holdings Pty Ltd* [2012] FCAFC 80; 203 FCR 218 at [16] per Jacobson, Flick and Foster JJ. It therefore does not matter, for instance, that the proviso appears in a different sub-section (s 271(6)) than the right of action (s 271(1)) or indeed the guarantee (s 54). Among other matters, it may be relevant that the proviso assumes or relies upon ‘additional facts of a special nature’ that are discrete from the facts which must be relied upon to make good the claim: *Vines* at 519.
2. In substance, the proviso in s 271(6) is a defence, being in the nature of a justification or exception which a manufacturer seeks to bring itself within and, accordingly, in respect of which it bears the onus. A powerful substantive consideration in support of this construction has already been discussed: namely, s 271(1) operates where the manufacturer has not given an express warranty or, even if it has, where the consumer decides not to exercise his or her rights under it. It also operates where the consumer commences an action for the damages identified in s 272(1)(b) without claiming the reduction in value under s 272(1)(a). In that circumstance, it cannot be said that the proviso in s 271(6) forms an essential element of the right of action conferred by s 271(1). If the proviso is to be relevant at all, it can only be so as a matter agitated by the manufacturer by way of answer to the claim. As such, it is the Respondent who must prove that it gave an express warranty, that it was required pursuant to that warranty to remedy the non-compliance with the guarantee by making a repair or issuing a replacement and that it did so within a reasonable time: see *Vautin* at [278] per Derrington J with respect to s 262(1).
3. For completeness I note that I have considered the possibility that the drafter’s choice of the near indecipherable ‘if-then-unless’ structure in s 271(6) was intended to convey implications as to the distribution of the onus of proving the matters identified in the provision. On this view, perhaps what the drafter intended to convey is that the onus is split within the subsection such that the manufacturer bears the onus of proving everything from the opening ‘if’ to the ‘unless’ and the consumer bears the onus of proving everything thereafter. To my mind however, such a reading of s 271(6) strays dangerously into the territory of allowing a richness of meaning to statutory text which clearly struggles to support it. One observes, for instance, that the language could also conceivably support a split in onus reciprocal to that postulated above (ie consumer first, manufacturer second). None of this overcomes the other difficulties discussed above and, accordingly, I am not inclined to accept such a reading.

### Who bears the onus under s 271(2)

1. Leaving aside the observation that s 271(2)(c) appears to make no sense of any kind, s 271(2)(a) and s 271(2)(b) are both concerned with the effect of third parties on the goods. As with s 271(6) I read it as a proviso to s 271(1) which is in the nature of a defence, being a justification or exception. Consequently, it is the Respondent which bears the onus of proving it applies. The Applicant is not obliged to negative it. In any event, the parties’ submissions render quite unclear the extent to which s 271(2) is at issue in the proceeding. Notably, the Respondent at [355] says that it is ‘impossible to say whether claims of any group members are excluded by s 271(2)’. I am not satisfied that the way in which the trial was run meant that there was any such factual enquiry. As with the issue of the ‘reasonable time’ under s 271(6) and its application to group members other than Ms Capic, the parties just did not litigate this at a factual level (as I explain shortly). I do not think therefore that one can say that the Respondent failed to discharge an onus it bore. Rather, this was not an issue which was tried in the first hearing. The absence of a common question addressed to s 271(2) confirms my impression of the trial’s dynamics. In any future hearing about the Respondent’s defences under s 271(2) and s 271(6), it will bear the onus. At this stage, all that has been determined is the meaning of the provision.

## The implications of s 271(6)

1. It is necessary to address the position of the group members and Ms Capic separately.

### Group members

1. I have concluded that all the vehicles in the cohort are not of acceptable quality on account of displaying a slight shudder at low speeds and gear rattling, being two of the so-called normal operating characteristics (in this Section I will refer to these as ‘the two normal operating characteristics’). Since the Respondent has never attempted to remediate those problems – either by means of changes in production or by the application of fixes to vehicles already on the road – no question of whether those vehicles have been repaired under warranty arises. The issues concerning the effect of s 271(6) are irrelevant to these problems.
2. The question which now arises concerns those vehicles in the cohort which were manufactured with the original input shaft seals, the B8080 clutch lining material and the TCM containing the original ATIC 91 chips but where these have been replaced by the Respondent on-road (ie, in service) with new input shaft seals, a new clutch lining material and a TCM containing the revised ATIC 91 chip or the 15B22 software update where revised TCMs were available in service. The question concerns the operation of s 271(6). The clutch lining issue and the input shaft seals with rubber outer backing raise slightly different problems and it is convenient to deal first with the position of the steel-backed input shaft seals and the TCM.
3. However, before that issue can be assessed it is necessary to confront a problem which the parties’ submissions did not address. This concerns the question of whether s 271(1) confers a separate cause of action for each problem sufficient to constitute non-compliance with the guarantee (for convenience each such problem is described below as a ‘fault’). For example, if a particular vehicle suffers from the two normal operating characteristics and a TCM with a real risk of developing solder cracks (in this Section, a ‘faulty TCM’), does the group member have one cause of action under s 271(1) or does he or she have two?
4. This question is of significance because of the defence afforded by s 271(6). If there is but one cause of action regardless of the number of faults then the repair defence under s 271(6) becomes conceptually problematic. To stay with the example of the vehicle which suffered on supply (the relevant time these questions are to be addressed) from the two normal operating characteristics and a faulty TCM: what happens if the TCM is replaced within a reasonable time but the two normal operating characteristics remain unremediated?
5. If there is but one cause of action for a failure to comply with the guarantee in s 54 then at the time of supply when the cause of action accrued the vehicle suffered from two faults: the two normal operating characteristics and the faulty TCM. On the basis of that single cause of action, damages would be available for reduction in value under s 272(1)(a) and other damages under s 272(1)(b). In effect, the single cause of action gives rise to two separate heads of damages.
6. On this view, the fact that a faulty TCM was subsequently replaced within a reasonable time would not give rise to a defence under s 271(6). This would be because the act of repair did not result in the vehicle being of acceptable quality. Even after the replacement of the faulty TCM it would remain blighted by the two normal operating characteristics.
7. On the other hand, if each fault gives rise to a separate cause of action then a different result follows. In that situation, the group member has an entitlement to sue for reduction in value damages under s 272(1)(a) and other damages under s 272(1)(b) in relation to the two normal operating characteristics. However, he or she has a separate cause of action for the same heads of damages arising from the faulty TCM. However, where the TCM has been replaced by the manufacturer within a reasonable time, then s 271(6) will operate to provide the manufacturer with a defence to a claim for reduction in value damages under s 272(1)(a) in relation to the TCM.
8. These then are the two competing interpretations of Division 2 of Part 5-4 vying for the field. I prefer the second reading. I read s 54 as establishing a single norm. That norm may be breached in more than one way. A vehicle may have several things wrong with it each of which is sufficient to mean that it is not of acceptable quality. Each time the norm is breached s 271(1) confers a separate cause of action. In terms of s 271(1) this is because each time the norm is breached ‘the guarantee is not complied with’. That expression is neutral on how many factual matters underpin the failure, that is to say, it is consistent with either of the interpretations I have outlined.
9. However, I prefer the second interpretation for two reasons. First, it avoids the anomalous availability of reduction in value damages in relation to a fault that has been repaired within a reasonable time in a case where another fault exists and has not been. Secondly, s 271(6) refers to the failure of the manufacturer ‘to remedy *a*failure to comply with the guarantee’ (my emphasis) and therefore appears to recognise that there may be more than one such failure.
10. Consequently, I conclude that each fault constitutes a failure to comply with the statutory guarantee and gives rise to a separate cause of action. This means that the issues which arise under s 271(6) are live in relation to the input shaft seals, clutch lining and TCM even though all of the Affected Vehicles also fail to comply with the statutory guarantee because of the two normal operating characteristics.

#### Replacement of the input shaft seals and TCM under the Respondent’s express warranty

1. There is no dispute that where these components were replaced, this had been done by the Respondent under its express warranty. Neither party invited me to consider in detail the terms of the express warranties. In particular, the Applicant did not mount an argument that the repairs had been done outside the scope of any particular express warranty so that it was not a repair to which s 271(6) could apply.
2. For the reasons I have given above, it is for the Respondent to make out a case under s 271(6). To discharge the onus it bears it is therefore necessary for it prove in the case of each group member that:
3. the group member required it to remedy the non-compliance with the guarantee of acceptable quality by repairing or replacing the vehicle;
4. it remedied the non-compliance with the guarantee of acceptable quality; and
5. it did so within a reasonable time.
6. Whilst s 271(6) stipulates that for it to apply the consumer must ‘require’ the manufacturer to remedy the non-compliance with the guarantee it does not say that the act of requirement need be express. What the provision necessitates is that the consumer requires the non-compliance to be remedied by the manufacturer repairing or replacing the vehicle in accordance with an express warranty. Where a consumer brings in for service a vehicle which is not working properly and the manufacturer in fact repairs the vehicle, I would infer that both understood that the vehicle was to be repaired and that the moving party in the transaction was the owner of the vehicle. Even if no actual words were used it is clear what the parties were intending. If it were otherwise, the actions of the manufacturer would be inexplicable. I would infer from this everyday situation that a requirement in terms of s 271(6) occurred, even if the service had been preceded by a communication from the Respondent instructing the owner to bring the vehicle in for service in certain circumstances. Accordingly, I conclude that the fact that each vehicle was in fact repaired by the Respondent during a service event by the replacement of the input shaft seals and/or either the insertion of a new TCM or the installation of 15B22 where the new TCMs were available in service allows one to infer that the consumer had required the vehicle to be repaired. Although one reading of s 271(6) might be that the consumer had to refer in terms to the guarantee under s 54, this would give it an operation which is comical – most consumers have no idea about s 54 and it would require language of the clearest kind to arrive at such an outlandish outcome. Section 271(6) does not say this.
7. I therefore accept that the Respondent has proved the first element (a) above in any case where it repaired a vehicle by replacing the input shaft seals or replacing or updating the TCM in accordance with an express warranty. In relation to the second element (b), on the evidence I have found that the replacement of the input shaft seals with new input shaft seals containing both the FKM elastomer and the steel outer backing on the inner seal and the TCM with a new TCM containing the revised ATIC 91 chips or alternatively installing the 15B22 software update where new TCMs were available in service was an effective solution. Once this was done, to the extent that the vehicle had not been of acceptable quality under s 54 because of *that* problem it ceased to be non-compliant with s 54 in relation to that problem.
8. I note here that a key factual question relating to the TCM has not been resolved in relation to the group members. It is not currently known for each group member that received the 15B22 software update prior to receiving a replacement TCM with the revised ATIC 91 chips whether, in the event the software had triggered an alert, a revised TCM in fact would have been available to them in service. The effect of my conclusions in Section VIII is that if no such TCMs were available in service to the vehicle, the installation of 15B22 in isolation was not an effective repair.
9. An even larger problem emerges at the level of (c), that is, that the repair was effected within a reasonable time. The Respondent did not endeavour to prove that it had done so. On the face of it, therefore, it would appear that (c) is not satisfied. However, the picture is more complex than this. It would, I think, be fair to say that neither party really wrestled with the significance of this aspect of s 271(6). The Applicant submitted that s 271(6) conferred a defence which was for the Respondent to make good, including on the issue of ‘reasonable time’. As it happens, I have accepted that submission. She did at [676] specifically address the obligation of a manufacturer to remedy the non-compliance with s 54 *within a reasonable time* which may speak for itself:

As to the second condition, the issue of principle is what is meant by the “reasonable time” in which the manufacturer must repair or replace the defective good. Although what constitutes a reasonable time would vary having regard to the nature of the goods and the circumstances, it too should be beneficially construed. If the defect were causing, or had a propensity to cause, safety issues, the reasonable time would probably be very short, possibly no more than one or two weeks. The reasonable time for defects causing other defects might be longer. However, whatever the period is, it would not be in the order of many months or years. Accordingly, if Ford Australia has failed to repair the defects, or replace the Affected Vehicle, in a time shorter than months or years, s 271(6) can have no application.

1. What this submission did not turn its mind to is how this issue is to be resolved in relation to group members. There is no doubt the submission was suggesting that the Court should determine something about ‘reasonable time’ but it is obvious that the question may well have different answers for different group members. Many of the issues the parties litigated during the trial did not find expression in a common question. This was one of them.
2. The Respondent submitted that many group members’ claims would be barred by s 271(6) and that ‘this necessarily involves an inquiry into the service history of each vehicle’. I accept that the full position under s 271(6) cannot be known at this stage.
3. I am satisfied that the issue of whether the repairs were effected within a reasonable time for individual group members was not an issue tried during the first hearing. What this means is that the question of whether the Respondent is entitled to rely on a defence under s 271(6) in relation to these two issues is not presently known either. Because the s 271(6) defence, if successful, deprives a group member of a cause of action under s 271(1) it is therefore also not presently known whether group members whose vehicles have had their input shaft seals and/or TCMs replaced/updated have a claim under s 271(1) for reduction in value damages under s 272(1)(a) (recalling that the s 271(6) defence only applies to those damages and not to other damages under s 272(1)(b)).
4. In Section XIV, I turn to the issue of whether there should be an award of aggregate damages. The parties seemed clear that this was to be decided and there was a common question which reflected the need to answer it. However, the consequence of this conclusion is that it cannot be known who has a cause of action for reduction in value damages for replaced components and hence even to whom such an act of aggregation might be applied with respect to those damages.

#### The replacement of the B8080 clutch lining material and input shaft seals with rubber-backed replacements under warranty

1. At this point, there is a twist. In those cases where a B8080 clutch was replaced with an RCF1o clutch I am satisfied that this repair was effective. For the reasons just given, however, it is not possible at this stage to assess the Respondent’s s 271(6) defence.
2. Where a B8080 clutch was replaced with a half-hybrid B8040/8080 clutch I have concluded that neither party proved anything as to its efficacy. Having now determined that the Respondent bore the onus of proving that the repair was effective, I conclude that in the case of these vehicles, no repair has been effected which might have been sufficient for the purposes of s 271(6).
3. The same is true for the input shaft seals which were made from the new FKM elastomer but had the original rubber outer backing on the inner seal. While the Applicant has not proven the extent of the risk of failure posed by these seals (meaning vehicles supplied with them were not in breach of s 54 for this reason), nor has the Respondent (meaning that when used as replacement seals I cannot conclude that a s 271(6) repair has been effectively performed). As the Respondent bears the onus of making good its s 271(6) defence, it has not proven that a successful repair has been effected where it used a seal with the original rubber outer backing.

### Ms Capic

1. On the findings I have made about Ms Capic’s vehicle, the vehicle remains not of acceptable quality. Although Ms Capic’s vehicle has been frequently repaired, only the replacement of the TCM and the input shaft seals may be regarded as repairs sufficient to remove the real risk in relation to those components and therefore to remove those faults as independently sufficient causes of the vehicle being not of acceptable quality. However, Ms Capic’s report of her vehicle’s ongoing symptoms is consistent with the continued presence of the two normal operating characteristics and with the prospect (about which there can be no general conclusion) that the installation of a half-hybrid clutch was not an effective fix. In summary, Ms Capic’s car was not of acceptable quality when it was sold to her. It is not of acceptable quality now. Her input shaft seals were replaced on 30 May 2017, 4.5 years after they were installed and well after the introduction of steel-backed inner seals. Considering that this was the 13th occasion on which her vehicle was serviced and my acceptance of her evidence that on each previous occasion she had complained about its performance, I do not consider that this was ‘within a reasonable time’. The same is true for the replacement of her TCM on 10 February 2016, over 3 years after she purchased the car.
2. In respect of the unsuccessful repairs the question of whether they were effected within a reasonable time does not arise. However, at the time of the replacement of the clutch on 30 May 2017 the vehicle had not been of acceptable quality for 4.5 years. If I had found that the events of 30 May 2017 were sufficient to render the vehicle of acceptable quality in relation to the clutch lining, I would have concluded that 4.5 years lay outside a reasonable time.

# Section XIII: Misleading or Deceptive Conduct

## Group

1. This section deals with the Applicant’s misleading or deceptive conduct case on behalf of the group before dealing with her individual claim. It is convenient to begin with the pleaded case.

### The pleaded case

1. The pleaded case on misleading or deceptive conduct is contained in Section D of the 4FASOC which is entitled ‘Ford Australia’s misleading or deceptive conduct’. Section D has nine headed subsections which are unnumbered. It is useful to add numbers:
2. Vehicle Representations – §§7A-7E
3. Transmission Representations – §§7F-7J
4. PowerShift Representations – §§7-8AB
5. Representations were misleading or deceptive: s 18 ACL – §§8AK-8C
6. Representations were misleading or deceptive: s 33 ACL – §§8CG-8E
7. Reliance – §8F
8. Ford Australia’s knowledge and omissions – §§20A-24A
9. Omissions were misleading and deceptive: s 18 ACL – §25A
10. Omissions were misleading and deceptive: s 33 ACL – §§25B-25C
11. This outline is useful because it underscores that the Applicant has four cases relating to misleading or deceptive conduct: the Vehicle Representations, the Transmission Representations, the PowerShift Representations and the omissions.

### Vehicle Representations and Transmission Representations

1. The implied representations case alleges that the Respondent represented that the Affected Vehicles:
2. were, or were part of model lines that were, of good quality, of good driving experience, typically reliable, typically durable, safe, without unusual or abnormal maintenance issues, and/or comfortable, or alternatively were at least consistent with comparator vehicles in these respects aside from maintenance issues (‘Vehicle Representations’);
3. further or alternatively, contained or were part of model lines that contained, a transmission system that was not typically subject to unusual or elevated risk of failure or early deterioration, typically provided comfortable or acceptable driving or passenger experience, typically was safe, not high maintenance, responsive and/or advanced (‘Transmission Representations’).
4. The Vehicle Representations and Transmission Representations are said to arise from conduct which, amongst other matters, also includes omissions. It will be seen, therefore, that there are in fact two omissions cases. I will expand on these two cases shortly. The conduct (including the omissions) said to give rise to the Vehicle Representations and Transmission Representations is the same for both and attention may for present purposes be confined to the conduct said to give rise to the Vehicle Representations which is contained in the unnumbered particulars to §7A:

The representations were implied. The Applicant relies on the following:

* Ford Australia made the Affected Vehicles available for sale through its Dealers
* Ford Australia marketed, advertised and promoted the Affected Vehicles to consumers throughout Australia for use as everyday passenger cars;
* Ford Australia advertised the Affected Vehicles at a particular price and offered the Affected Vehicles for sale through its Dealers at a particular price;
* The absence of any (or any adequate) correcting statement to Group Members or the public at large by Ford Australia or its Dealers prior to April or May 2018 disclosing the existence of the Vehicle Defects and/or the PowerShift Transmission Defect, and the extent of complaints received from Ford Australia by customers;
* The matters recorded at Ford Australia Admissions, [9], [10];
* The price of the Affected Vehicles. During the relevant period, Ford Australia's minimum manufacturer list prices for new Affected Vehicles were around: Fiesta ($17,825), Focus ($22,590), and the EcoSport ($22,790).

1. The matters adverted to in the fifth bullet point do not add anything of substance to the rest of the list beyond identifying the Respondent’s concession that the s 54 guarantee of acceptable quality applied to the vehicles at the time of supply. It will be seen that the fourth bullet point contains the allegation of conduct by omission. The omission particularised (really, alleged) is the failure to disclose the Vehicle Defects and/or the PowerShift Transmission Defect together with a failure to disclose the extent of the complaints that had been received from customers. The Vehicle Defects and the PowerShift Transmission Defect are defined in §6AB and §6AC. These paragraphs contain a catalogue of problems. However, the Applicant did not pursue this case about the Vehicle Defects or the PowerShift Transmission Defect. Instead, she relied upon Dr Greiner’s evidence and advanced a case that the defects with the DPS6 were six:

* Leaking input shaft seals;
* Inappropriate clutch lining material;
* The TCM solder cracks;
* The rear main oil seal issue;
* Inadequate damping of torsional vibrations; and
* Inadequate heat management.

1. The Respondent acquiesced in this approach and the abandonment of the concepts of Vehicle Defects and the PowerShift Transmission Defect as defined in §6AB and §6AC. This was unsurprising as prior to trial the Applicant had informed the Respondent that further particulars about the defects were unnecessary because the case would be conducted on the basis of the problems described by Dr Greiner in his report. He explained that each of these underlying issues gave rise to a range of symptoms (which I have assayed elsewhere in this judgment). The point for present purposes is that the way the case was run meant that the defects were said to be the mechanical deficiencies identified by Dr Greiner and not the symptoms to which those deficiencies gave rise. The need for the class action to be structured in that way so as to generate common issues is a matter I have noted several times: *Capic v Ford Motor Company of Australia Limited (No 3)* [2017] FCA 771 at [8]-[9], [16]; *Capic v Ford Motor Company of Australia Limited (Form of Common Questions)* [2020] FCA 884; *Capic v Ford Motor Company of Australia Limited (Knowledge Common Questions)* [2020] FCA 885 at [4] and [7] and in these reasons at Section III. In this Section, for convenience I refer to the problems explored by Dr Greiner as ‘deficiencies’ in distinction to what I will call ‘the Defects’ being the Vehicle Defects and the PowerShift Transmission Defect as defined in the pleadings.
2. So far as the deficiencies are concerned, earlier in this judgment I have accepted only the leaking input shaft seals, the selection of B8080 clutch lining material, the TCM issue and that part of the torsional vibration case which consists of the rattling of gears and slight shudder. Despite the pleading’s use of the defined terms Vehicle Defects and PowerShift Transmission Defect, therefore, the first omissions case rests primarily on a failure by the Respondent to disclose these mechanical root causes combined with a failure to disclose the extent of customer complaints it had received. I shall call this case the smaller omissions case.
3. The second omissions case was larger and distinct. It is referred to in the headings I have numbered above at (7)-(9) and commences at 4FASOC §20A. The Respondent is alleged to have known 24 separate matters at §20B(a)-(x). At §20C it is said that by reason of those matters the Respondent knew of ‘the facts *underlying* the Vehicle Defects and the PowerShift Transmission Defect’ (my emphasis). The concept of ‘the facts *underlying*’ the Defects is a vestige of a time when the case was being run on the basis of symptoms rather than root causes. The deficiencies identified by Dr Greiner, by contrast, were root causes and, as such, there are no facts which may be said to underlie them in a causative sense. I disregard in making that statement Dr Greiner’s general observation that the ultimate cause of all of the problems with the DPS6 was Ford US’ decision to bring the DPS6 into production too quickly without adequate pre-launch work. I do so because, although interesting, that contention lies beyond the scope of the issues in this case. When one adjusts the pleading to make it work in light of the way the case was run (on the basis of Dr Greiner’s evidence) I incline to the view that it should be read as if it alleged that the Respondent knew of the deficiencies identified by Dr Greiner. Another way of putting this is that the Respondent knew of the existence of the ‘real risks’ which I have concluded existed in relation to the original input shaft seals, clutch lining, TCM and part of the inadequate torsional damping issue.
4. Following certain presently immaterial allegations at §§20D-22, the pleader alleges at §23 that the Respondent failed to disclose: the Defects; the fact that the Respondent had issued customer satisfaction program notices and bulletins to customers recalling vehicles for repair; and, the fact that the Defects persisted even after they had purportedly been repaired. Finally, the pleader alleges that the omissions were misleading or deceptive and that the Group Members (and Ms Capic) relied upon them in purchasing their vehicles: §§25A-25C.
5. This more developed omissions case is not the same as the smaller omissions case secreted within the case on Vehicle Representations and Transmission Representations found in the particulars to §7A extracted above.
6. It might have been natural to allege in the smaller omissions case that the Respondent knew of the same matters as it was alleged to know in the larger omissions case, ie the §20B allegations. This has not, however, been done. There *is* a link between the two cases but not the one that might be expected. The pleader alleges that the Vehicle Representations and the Transmission Representations (which are based on conduct which includes the smaller omissions case) were made without reasonable grounds to the extent they were representations with respect to future matters: §7E and §7J. The particulars to these paragraphs include a reference to §§20B-24A. §20B contains, of course, the allegations of knowledge.
7. So the smaller omissions case secreted within the cases on Vehicle Representations and Transmission Representations is that the Respondent knew of the root causes of the problems with the vehicles and knew of the level of consumer complaints and that by failing to disclose those two matters (together with some other conduct to which I refer below) it engaged in misleading or deceptive conduct. The conduct was misleading or deceptive, so it is alleged, because the vehicles as supplied in fact contained the relevant defects and, to the extent the representations were ‘with respect to future matters’ for the purposes of ACL s 4, the Respondent lacked reasonable grounds for making them. The Respondent lacked reasonable grounds, so it is said, since it knew the matters alleged in §20B. It is *not* said that the Vehicle Representations and Transmission Representations were made, however, because the Respondent knew of the matters in §20B. Rather, at [600] of her submissions the Applicant advanced the case particularised at §7A extracted above, that is that the fact the representations were made may be implied from the following alleged conduct of Ford Australia:
8. making the Affected Vehicles available for sale through its dealers;
9. marketing, advertising and promoting the Affected Vehicles to consumers throughout Australia for use as everyday passenger cars, and at particular price points ranging between $17,825 and $22,790;
10. not making any corrective statement (or adequate statement) disclosing the Defects or the complaints it had received from customers, before April or May 2018; and
11. supplying the Affected Vehicles to customers with a guarantee of acceptable quality under s 54 of the ACL.
12. On the other hand, the gist of the larger omissions case is that the Respondent knew of the matters in §20B and failed to disclose them thereby engaging in misleading or deceptive conduct.
13. So viewed, it will be seen that §20B serves two distinct purposes in the pleading. It alleges the knowledge underpinning the larger omissions case at §§20A-25C but is also one of the reasons why the Vehicle Representations and Transmission Representations are said to have been misleading or deceptive – that is, to the extent those representations were ‘with respect to future matters’ for the purposes of ACL s 4, the Respondent did not have reasonable grounds for making them. But, again, the larger omissions case is not alleged to be one of the reasons why the Court can conclude that the Vehicle Representations and Transmission Representations were made.
14. How did the parties deal with this? The Applicant made no submission about the larger omissions case at §§20A-25C insofar as it affected group members other than herself (the topic of this section). The only omissions case actually advanced on behalf of group members was the smaller omissions case contained within the case on Vehicle Representations and Transmission Representations. Her submissions about those therefore did not address the case pleaded at §§20A-25C although it is true that she did make extensive submissions about the 24 matters alleged to be known to the Respondent in §20B and that at §20D(a) at [552]-[583]. This discussion appeared in a section of her submissions entitled ‘Ford’s Knowledge of Alleged Defects’. This section appears squarely to have been directed at §20B. The submissions in this section, however, pulled up short of advancing the case to which §20B was primarily connected, namely, the larger omissions case pleaded at §§20A-25C.
15. The problem thus on display is this. No submission has in fact been made by the Applicant to advance the larger omissions case pleaded at §§20A-25C insofar as it relates to group members other than herself. Submissions have been made about the case on Vehicle Representations and Transmission Representations which contains the smaller omissions case. But here no sound basis was proffered for a conclusion that the smaller omissions in fact occurred. As I have explained there are only two elements to the smaller omissions case: (a) knowledge of the Vehicle Defects and PowerShift Transmission Defect and which, as the trial was run, means knowledge of the root causes not the symptoms; and, (b) the level of consumer complaints.
16. Before considering what to make of this, it is useful to touch briefly on the Respondent’s position. Under the heading ‘Ford Australia’s Knowledge of the Alleged Defects’ the Respondent assayed the allegations of knowledge at 4FASOC §20B and §20D(a). Like the Applicant, the Respondent did not deal with the larger omissions case pleaded at §§20A-25C although it thoroughly probed the knowledge allegations contained in §20B and §20D(a). In the following section of its submissions, the Respondent then dealt with the misleading or deceptive conduct case. However, in this section the Respondent confined itself to dealing with the Vehicle Representations, the Transmission Representations and the PowerShift Representations (consisting of the headings I have numbered (1)-(6) above). It did not advert either to the smaller omissions case (in §7A) or the larger omissions case (in §§20A-25C) insofar as they related to group members other than Ms Capic.
17. When the Respondent came to deal with the case on Vehicle Representations and Transmission Representations it in fact ignored the smaller omissions case. This is apparent from its submissions at [309]:

The Applicant alleges that the Respondent made misleading or deceptive implied representations about the vehicles. The ‘Vehicle Representations’ and the ‘Transmission Representations’ are, in essence, alleged to be representations as to the quality, driving experience and durability of the Affected Vehicles and the DPS6 transmission. The Applicant alleges that these representations can be implied from the fact that the Respondent:

1. made the Affected Vehicles available for sale on the market;
2. marketed, advertised and promoted the Affected Vehicles for use as every day cars; and
3. advertised and offered the Affected Vehicles for sale through its Dealers at a certain price point.
4. It will be seen that the submission does not refer to the smaller omissions case. This is odd since the smaller omissions case was referred to in the bullet point particular at 4FASOC §7A and in the Applicant’s submissions at [600], extracted above. Of course, although the Applicant referred to the smaller omissions case at [600] in the sense of setting out the case based on the Vehicle Representations and the Transmission Representations, she did not go on to develop any submission about the smaller omissions case and, as I have explained, the allegations at §20B were invoked in this context not to prove that the smaller omissions in fact occurred but only to assert that, should the Vehicle Representations and Transmission Representations be regarded as future representations, they were made without reasonable grounds for the purposes of ACL s 4. However, the reason why the Respondent ignored the smaller omissions case was disclosed at [328] of its submissions, namely that it understood that the only claim for determination by the Court in respect of omissions was the Applicant’s individual claim as distinct from the claims of the other group members.
5. So the position the parties got themselves to at the trial on the topic of misleading or deceptive conduct by omission is as follows. The Applicant:
6. relied upon the knowledge allegations at §20B for the proposition that the Vehicle Representations and Transmission Representations (of which the smaller omissions were a component) to the extent they were future representations lacked reasonable grounds but simply did not deal with the anterior question of whether the smaller omissions in fact occurred; and
7. made no submissions at all on the larger omissions case pleaded at §§20A-25C insofar as it affected group members other than Ms Capic.
8. For its part the Respondent:
9. made no submissions about a case that the Vehicle Representations and Transmission Representations had been made by reason of conduct which consisted of *any* kind of omission (whether the smaller or larger variety);
10. made no submissions about the larger omissions case at §§20A-25C; and
11. did make an extensive submission that the Applicant’s submissions about the Respondent’s knowledge of the matters in §20B and §20D(a) were wrong.
12. The threshold question I must deal with is whether the Vehicle Representations and Transmission Representations were in fact made. The first proffered basis for such a finding was the smaller omissions case, reflected in [600(c)] of the Applicant’s submissions. I have just explained that the Applicant did not advance any reasons in her submissions for concluding that the smaller omissions in fact occurred and, as such, they do not assist on the threshold question of whether the Vehicle Representations and Transmission Representations were made. I have pondered whether I could myself seek to put together the Applicant’s submissions about the smaller omissions case by picking over the wreckage of §20B and seeing what can be repurposed from it. However, I do not think that I should do that. It is not the Court’s role to fill the gaps with what it thinks might have been but was not said, particularly in litigation of the present kind. Further, to give §20B a second purpose different to the one the Applicant actually advanced would be procedurally unfair. I will return to §20B shortly but there are other more fundamental problems with it and its relationship with the way the Applicant ran her case which make it perilous to step foot into it.
13. Approaching the question, therefore, in a context in which the smaller omissions are absent because the Applicant said nothing about them, the Applicant is left with [600(a)-(b),(d)] of her submissions. In substance, the Applicant invites the Court to conclude that the Vehicle Representations and Transmission Representations were implied by the Respondent’s conduct in marketing the cars as everyday passenger vehicles at particular price points and supplying them through its dealers in circumstances where the s 54 guarantee applied.
14. I do not accept that such conduct could give rise to the alleged representations which, as the outline at the beginning of this Section demonstrates, in substance are that the vehicles and the DPS6 provided a good driving experience which was not subject to an unusual or elevated risk of failure. Without a case that the Respondent knew that there was something wrong with the vehicles, it is difficult to see how such an implied representation could arise. As Giles J explained in *McWilliam’s Wines Pty Ltd v LS Booth Wine Transport Pty Ltd* (1992) 25 NSWLR 723 at 729 where one party knows something which is not revealed to the other, silence can in an appropriate circumstance give rise to an implied representation. But I know of no case where silence has been held to give rise to an implied representation where there is no such information asymmetry. As this aspect of the case has finally fallen out, it is not open to conclude that any relevant asymmetry existed.
15. It follows that the Applicant’s case on Vehicle Representations and Transmission Representations fails at the threshold and the question of whether any such representations were misleading or deceptive does not arise. This also means that there is no need to deal with the curious but irrelevant dispute between the parties about the knowledge allegations in §20B insofar as they relate to the question of whether one should conclude that the representations had been made (cf the different issue of whether, if they were made they were representations as to the future made without reasonable grounds because the Respondent knew of the matters in §20B) and as I have noted already, these are the only matters advanced by the Applicant, as no submissions were made on the larger omissions case to the extent it affected group members other than Ms Capic. There remains the possibility that a Full Court on appeal may find clarity and substance in the Applicant’s case on Vehicle Representations and Transmission Representations where I have found only chaos. On this view, it would be useful for me to resolve the factual matters in §20B to relieve the Full Court of the need to do so if it takes the view that those matters have dispositive significance on this aspect of the case.
16. I have concluded that I should not do this. This is because in addition to its irrelevance, §20B also reflects a heresy which was purged from the rest of the case at a much earlier time but which appears to have lingered in the purgatory which is the misleading or deceptive conduct case. As I have mentioned already, the Applicant’s case was originally about symptoms but was changed to a case about root causes. The symptoms misconception, however, has never been fully expunged from the pleading but has lived on in little nooks and crannies in the 4FASOC including in the definitions of the ‘Vehicle Defects’ and ‘PowerShift Transmission Defect’ (which proceed largely by reference to symptoms). But the trial was run for 6 weeks on the basis of the root causes. That disjunct between how the Vehicle Defects and PowerShift Transmission Defect were pleaded and how the Applicant ran her case on Dr Greiner’s evidence (with no demur from the Respondent) has seismic consequences for the pockets of the pleading where the symptoms case still lurks. One of those places, unfortunately, is §20B. Its allegations are largely about symptoms (although there is the odd stray reference to an underlying cause – nothing is tidy in this pleading). But unlike the definition of the Defects, the caravan of the Applicant’s case about why the representations were misleading has long moved on and is now based on Dr Greiner’s views about root cause problems. Indeed, the Applicant was explicit in her submissions that the alleged conduct in the case on the Vehicle Representations and Transmission Representations (including the smaller omissions case) was misleading or deceptive precisely because the vehicles suffered from the problems identified by Dr Greiner.
17. So even on a very generous interpretation of the pleading and the relationship between the alleged symptoms and the root causes that are a function of the way the case was run, one is still left with the difficulty that the failure to disclose the symptoms which the Respondent is alleged to have known about is said to be misleading or deceptive because of the Respondent’s knowledge of the root causes of those symptoms. But where the same symptoms often proceed from *different* root causes this is unworkable. For example, clutch shudder (in its various guises) may be caused by the leaking input shaft seals, the B8080 clutch lining material and the TCM solder cracks. To allege that the Respondent knew of the symptom of clutch shudder and this was misleading or deceptive because it knew about the mechanical deficiencies of the B8080 clutch lining material just leads to conceptual chaos where clutch shudder can also be caused by the TCM solder cracks and the leaking input shaft seals.
18. In that circumstance, I conclude that not only is §20B divorced from any viable issue in the context of the misleading or deceptive conduct case brought on behalf of group members other than Ms Capic but that its ‘architecture’, perhaps ironically, is inherently deficient. For completeness, the Applicant’s oral submissions on this were as follows at T1603.4-14:

… Misleading and deceptive conduct, 29 through to 32.

In the interests of time I’m content to rely upon our written submissions because I think they do set out our arguments and I don’t think there’s much need in there. There are a few document references but they’re largely to the marketing and promotional material that I took your Honour to at the start of play yesterday, so I don’t feel the need to take up time this afternoon in taking your Honour to that material. So what that means for present purposes is that I’m content to rely on what we’ve said in writing in relation to misleading and deceptive conduct and so I can then move through to 33…

1. I do not think this advanced matters. I decline to deal with the larger omissions case insofar as it pertains to group members other than Ms Capic.
2. I note the parties also joined issue on whether the Vehicle Representations and Transmission Representations were with respect to future matters for the purposes of ACL s 4. Had it been necessary to decide, I would have concluded that they were not future representations for the purposes of that section because in substance they related only to the existence (or not) of various risks of failure which inhered in the vehicles at the time of supply. That is to say, a representation that certain risks did not exist in relation to the vehicles was a representation about the quality of the vehicles at that point in time; properly understood, it was not a prediction that the failures in respect of which the risks existed would not eventuate. It is not necessary therefore to determine the actual case advanced by the Applicant as to why there were no reasonable grounds but, one may note as I already have, that it was based on §20B. For the reasons I have given, I do not propose to make findings about §20B in the context of the misleading or deceptive conduct claim brought on behalf of group members other than Ms Capic.

### The PowerShift Representations

1. It is not in dispute that between November 2013 and 11 May 2016 the following appeared on the Respondent’s website:

When it comes to transmissions, people are generally either manual or automatic fans. But what if you could get the best of both worlds in the one gearbox? The sporty feel and efficiency of a manual, with the ease of an automatic.

The transmission automatically engages the next gear in the sequence in anticipation of the shift, so gear changes are quick and power delivery is seamless, whether accelerating or slowing down.

PowerShift transmissions are sealed for life and engineered to last 10 years or 240,000 kms, making them extremely low maintenance.

1. The Applicant pleaded at §8A that this conveyed to the public that:

(1) Gear shifts and acceleration would be smooth;

(2) Vehicles fitted with the PowerShift Transmission would be extremely low maintenance; and

(3) Vehicles fitted with the PowerShift Transmission would thereby have the same driving ease and convenience as a vehicle fitted with an automatic transmission.

(collectively, **the** **PowerShift Representations**).

1. Neither party took me to evidence about the website beyond a screenshot of what appears to be a mobile version of a webpage containing the PowerShift Representations, apparently from 2016, that was referred to in closing submissions. I was not shown any other examples containing representations in the same terms nor contextual information such as where the page was located within the Respondent’s website. All that is known of it, so far as I can see, is the text admitted in the pleadings. The Respondent correctly said that context was important but did not take me to any context. The cases are clear that ‘context is critical’ in this area: *Chowder Bay Pty Ltd v Paganin* [2018] FCAFC 25 at [15] per Besanko, Markovic and Lee JJ, citing *Taco Company of Australia Inc v Taco Bell Pty Ltd* (1982) 42 ALR 177 at 199 per Deane and Fitzgerald JJ and *Parkdale Custom Built Furniture Pty Ltd v Puxu Pty Ltd* (1982) 149 CLR 191 at 198 per Gibbs CJ.
2. It is the Applicant which bears the onus of proving that the ordinary reasonable consumer would have understood the webpage to convey the representations alleged. It is therefore the Applicant that bore the onus of proving what the context was. She has not proved a jot about the context. It is not open to me to make a finding about this without the context having been proved. For all I know the webpage might have been reached after a disclaimer.
3. I reject the case based on the PowerShift Representations. There was a dispute as to whether the webpage was available outside the date range of November 2013 to 11 May 2016. The Respondent has admitted that it was available during that time but has not otherwise admitted any further date range. I do not accept that the Applicant came close to proving it was available outside that range. She obtained from Mr Karageorgiou during cross-examination some very general statements about the availability of brochures and the Respondent’s key marketing messages. This was not sufficient.

## Ms Capic

1. Ms Capic submitted that if the Court were satisfied that the Vehicle Representations, Transmission Representations and PowerShift Representations had been made then it should be inferred that she was misled by them. Since I am not satisfied that it has been proved that those representations were made, that issue does not arise. To be clear, Ms Capic did not suggest that the forensic mechanics of any of these three cases differed in relation to her individual position from that of other group members.
2. Section 6.3.3 of Ms Capic’s submissions was entitled ‘The omissions case’. This submission appears to involve an invocation of the case at 4FASOC §§20A-25C which above I labelled the ‘larger omissions case’. The submission is not explicit in this but since it is treated separately from the submissions on the Vehicle Representations, Transmission Representations and PowerShift Representations this appears a likely interpretation of it. It is, of course, this very submission which is missing from the submissions made on behalf of the other group members dealt with in the preceding paragraphs.
3. However, the case advanced in relation to knowledge is much narrower in scope than the allegations pleaded at 4FASOC §20B. Ms Capic submits at [634] that by December 2012 the Respondent knew that:
4. Affected Vehicles were exhibiting shudder and that this was a common issue;
5. it had received 284 complaints about Affected Vehicles in relation to issues including excessive clutch shudder, excess noisiness from the transmission, delayed acceleration and excessive shuddering and jerking when accelerating; and
6. TCM failures were an issue in Affected Vehicles.
7. The Respondent accepted that this was part of the larger omissions case. Indeed, at [328] it made the submission that ‘the only claim for determination by the Court in respect of the Respondent’s Alleged Omissions is the Applicant’s individual claim’. The implication of this – that the Applicant omitted to put the omissions case on behalf of other group members – is a proposition which I have upheld above. The case at §20B therefore falls to be determined for the purposes of what is alleged at §§20A-25C. However, the Applicant did not advance all the allegations contained within the 24 sub-paragraphs of §20B. Instead, she relied only on the 3 matters (a)-(c) set out at [634] of her submissions which have been extracted above.
8. The Respondent did not suggest that this alleged knowledge lay outside the scope of §20B and I proceed on the basis that this case is open to the Applicant. Dealing with each in turn:

### The Affected Vehicles were exhibiting shudder and that this was a common issue

1. The evidence for this was an email from Andrew Puglia to Shriraj Makim and others. I accept that Mr Puglia worked for Ford at the relevant time. The email reads:

See attached 6-panel.

We have seen a number of these “shudder” cases in Aus (in fact we were the first to raise the issue with TDE back in Nov 2011, but we didn’t get any traction until FNA started seeing warranty concerns for the same issue!)

In most cases, we’ve had success with older production vehicles by changing the clutch pack for this issue. Cal re-flashing rarely worked (contrary to the claims in the 6-panel)

Recently we also saw a vehicle with this issue that also had some strange grattle like symptoms (Adrian’s vehicle).

Martin/Adrian – can you confirm if/how the issue was fixed on that vehicle?

1. This is the final email in a chain of many emails. Without setting those emails out, it is apparent that they are referring to a clutch shudder problem in respect of which the end of line clutch sorting antidote was implemented by Getrag. It is clear in my view that this is a reference to the manual process of clutch sorting which was instituted to overcome the problem of forced-excited shudder caused by geometric misalignment (see Section VII). In fact the topic being discussed in the chain is the possibility that after the introduction of manual sorting of the clutch assemblies by Getrag to address the issue of geometric variability, there were still cases of shudder being reported. Here the implication was that it was necessary to trace the vehicles in which shudder was present to identify if their production dates were before or after that time (‘the break point’). If it had happened after the break point, so the idea ran, it implied that the clutch sorting was not working or that there was some other problem.
2. Ms Capic also referred to a page in one of the attachments to this email chain in which the following appears:

**Conclusion**

* Tip in shudder appears dominated by engine 1st order vibration in vehicle line X direction (fore/aft)
* Shudder lasts for approx. 1 sec after initial tip-in
* Shudder coincides with flare in engine rpm, suggesting the clutch may be slipping during the tip in shudder event

**Recommendation**

* Swap transmission between good and bad vehicles and confirm if issue follows transmission.
* If so, send transmission back to GFT/TDE team for teardown analysis.

1. I am not sure what one gets from this. As is abundantly clear by this point in the reasons, the use of the word ‘shudder’ without more does not go far by way of explanation. Nor is much ascertained by the reference to 1st order vibrations which may be found in a number of the Respondent’s documents along with references to 2nd order vibrations. Some of this material related to the issue of geometric misalignment in the clutch assemblies. It is possible therefore that this passage may be married up with the reference to the sorting problem in the body of the email chain. But the Applicant did not suggest this and to reason in that way I would be really guessing at what the Applicant’s submissions were trying to say.
2. Nevertheless, I accept on the basis of this email chain that the Respondent was aware in 2011 prior to the purchase by Ms Capic of her vehicle that there had been a ‘number of shudder cases’ in Australia.

### The Respondent had received 284 complaints about the Affected Vehicles in relation to issues including excessive clutch shudder, excess noisiness from the transmission, delayed acceleration and excessive shuddering and jerking when accelerating

1. The basis for this was said to be §§32, 33, 37 of the Statement of Agreed Facts and Admissions tendered in the proceeding brought by the ACCC against the Respondent in this Court: *Australian Competition and Consumer Commission v Ford Motor Company of Australia Limited* [2018] FCA 703; 360 ALR 124. Those paragraphs are as follows:

32 By 2011, Ford Australia and its Dealers had started receiving complaints from Customers about issues with, and the operation of, their Vehicles (**Complaints**). Each year between 2011 and 2016 these complaints intensified in number and scale, such that by 2015 and 2016 Ford Australia and its Dealers were receiving complaints from Customers in the several thousands.

33 The Complaints related to, amongst other things, excessive clutch shudder, excessive noisiness from the transmission, delayed acceleration, and excessive shuddering and jerking when accelerating.

…

37 The total number of “cases” opened by the CRC relating to Vehicles in each calendar year were approximately:

1. 2011 – 284;
2. 2012 – 813;
3. 2013 – 1,254
4. 2014 – 1,708;
5. 2015 – 4,374;
6. 2016 – 8,238.
7. The Respondent submitted that at best this document was evidence of what matters the Australian Competition and Consumer Commission and the Respondent had agreed did not need to be proved in that proceeding. The statement was tendered in that proceeding under s 191 of the *Evidence Act 1995* (Cth)and is certainly evidence of that. However, it is also evidence from which it could be inferred that statements in the paragraphs were correct. Here the thinking would be that the Respondent would be unlikely to agree as a fact something which was not a fact. Against that, it might be said that the Respondent may have taken the course in the other proceeding of agreeing facts for tactical or pragmatic reasons. Both inferences are open on the paragraphs. I think the former inference more likely than the latter. I may more confidently draw that inference where the Respondent did not produce a witness to suggest that it was the latter course which was correct: *Jones v Dunkel* (1959) 101 CLR 298 at 308 per Kitto J, 312 per Menzies J and 319 per Windeyer J; *Manly Council v Byrne* [2004] NSWCA 123 at [51] per Campbell JA, Beazley JA agreeing at [1] and Pearlman AJA agreeing at [2]. However, I would draw the inference even without resort to *Jones v Dunkel*. It merely makes me more confident in the correctness of the inference.
8. So to hold is not to regard the representations in the statement as ‘previous representations’ for the purposes of Pt 3.2 of the Evidence Act(‘Hearsay’) which, as Ryan J explained in *Australian Competition and Consumer Commission v Pratt (No 3)* [2009] FCA 407; 175 FCR 558 at [83]-[84], they are not. That is to say, while each representation in the statement is ‘no more than a representation by each party to the proceeding that he, she or it will not dispute the asserted fact in that proceeding’ nonetheless it is open to this Court to infer from the parties’ decision so to eschew such disputation that the asserted fact is true. As I have said, I draw that inference with greater confidence having regard to the absence of contradictory evidence which it was peculiarly within the Respondent’s power to lead.
9. While Ryan J also explained at [84] that the representations in such a statement are not ‘admissions’ for the purposes of s 81 of the Evidence Act, nonetheless it is noteworthy that in civil proceedings the rule has long been that ‘formal admissions made by attorneys of both sides at a first trial could be relied on at the second trial after the first verdict had been set aside’: *Hoy Mobile Pty Ltd v Allphones Retail Pty Ltd* [2008] FCA 369; 167 FCR 314 at [18] per Rares J, citing *Doe d Wetherell v Bird* (1833) 111 ER 63; 7 Car & P 6 at 7 per Lord Denman CJ. In other words, it has never been thought that admitted facts may have vitality only within the four corners of the proceeding in connection with which they were admitted.
10. I therefore accept the truth of the matters appearing at §§32, 33, 37 and I find that in 2011 there were 284 cases opened by the Respondent relating to complaints about vehicles with a DPS6 and that these related to a variety of problems including clutch shudder. On the basis of the paragraph I am unable to determine how many of the 284 complaints related to which problem. The Applicant did not attempt to unscramble that egg.

### The TCM failures were an issue in Affected Vehicles

1. Ms Capic’s submissions cited no evidence for this claim. Accordingly, I do not accept it. Within the bowels of 4FASOC §20B, at sub-paragraph (f), the pleader refers to a Ford US document to which recourse might have been made in the context of the Applicant’s submissions on this claim at [634] and the matters argued there. As I have already explained, I do not consider it appropriate or procedurally fair for me to comb through §20B and seek to repurpose portions of it which were not invoked or advanced by the Applicant in her submissions on misleading or deceptive conduct. In any event, the Respondent cavilled with the Applicant’s reliance on this document in the context of the submissions she made on Ford Australia’s knowledge. For reasons I outline below, I have concluded that the Applicant has not made good her claim that there was a ‘free flow’ of information from Ford US to Ford Australia which would have had the effect that any knowledge on the part of the former evidenced by this document, assuming it had been relied upon at [634], could be attributed to the Respondent.

### Some implications

1. I therefore find that the Respondent knew that there had been a number of shudder cases in Australia in 2011 and that there had been 284 complaints in that year which it had logged relating to a number of symptoms including shudder.
2. Ms Capic’s pleaded case at §20B and §20C is that the knowledge of the Respondent gave it knowledge of the facts underlying the Vehicle Defects and the Transmission Defects. I have already explained the difficulty with using those concepts given the way the case was run based on Dr Greiner’s evidence. As I have said, the coherent way to approach the matter is on the basis that it is being alleged that the Respondent knew about the deficiencies identified by Dr Greiner. On the finding I have just made it is not open to infer that the Respondent was aware in 2011 of the problems identified by Dr Greiner.
3. Ms Capic submitted instead that the matters which I have just found the Respondent knew were matters which should have been disclosed to Ms Capic. This does not reflect any pleaded case but this does not matter since the Respondent appeared content to meet the case actually put in the Applicant’s submissions. For completeness there is an allegation at §23A which might be relevant to such a case but it is not pitched at what was known in 2011.

### Was there misleading or deceptive conduct?

1. Given those conclusions it follows that Ms Capic’s individual claim on the larger omissions case cannot succeed. Knowing that there had been a number of cases of shudder in 2011 and 284 reports of a variety of issues cannot logically be connected with the idea that the Respondent was bound to draw to Ms Capic’s attention the deficiencies described by Dr Greiner. Even if the case is reimagined to be the unpleaded case that the Respondent should have disclosed to Ms Capic that there had been a number of cases of shudder in 2011 and 284 complaints relating to a variety of issues, I do not accept, given the numbers of vehicles involved, that these kind of numbers were sufficiently material to enliven any obligation on the Respondent to say something. In any event, such a case will not be found in Ms Capic’s pleading.
2. Further, the evidence does not establish that the Respondent knew prior to 24 December 2012 (the date Ms Capic purchased her vehicle) of the matters described by Dr Greiner. The reasons for this are as follows. In the section of her submissions entitled ‘Ford’s Knowledge of Alleged Defects’, Ms Capic developed a theory that there was a free flow of information between the Respondent and Ford US. On the assumption that that theory is correct the next step in the argument is that Ford US was aware prior to 24 December 2012 of the matters described by Dr Greiner.
3. It is convenient to deal with the second step first. Ms Capic did not develop any submissions as to why Ford US should be taken to have knowledge prior to 24 December 2012 of the problems identified by Dr Greiner. Such a case was pursued in relation to the matters alleged at §20B. However, the version of the §20B case which Ms Capic pursued in relation to the larger omissions case was that argued at [634] which relies only on the three matters there set out. There are documents referred to in a separate section of Ms Capic’s submissions which might suggest that Ford US had knowledge of some aspects of the Greiner-framework issues prior to 24 December 2012. However, it would be procedurally unfair to rely upon these matters for two reasons. First, four of the paragraphs involved ([562], [571], [576] and [579]) rely on documents which I have concluded ought not to be considered since the Applicant did not adequately notify her reliance upon them until the delivery of her closing written submissions. Secondly, the §20B case is not directed to proving something about knowledge as at 24 December 2012. Simply now to transplant that aspect of the §20B case into the form in which Ms Capic ran her own version of the larger omissions case (ie the three matters at [634]) would be procedurally unfair on the Respondent who has never been required to meet such a case.
4. The question of whether that unproven knowledge should be attributed to the Respondent therefore does not arise. Had it arisen I would have rejected it.
5. Briefly, the reasons for this are as follows. The Applicant submits that the Respondent should be taken to be aware of matters of which Ford US was aware because of the free flow of information between the two. The evidence for this free flow was as follows:
6. Mr Cruse gave evidence that the Respondent’s quality organisation interacted with counterparts within Ford US in relation to DPS6 issues;
7. Mr Karageorgiou’s team dealt with the Ford Asia-Pacific team who in turn dealt with the lead engineering organisation within Ford US;
8. Mr Karageorgiou and Mr Cruse gave evidence of the free flow of information concerning the DPS6 between personnel within the Respondent, Ford’s Asia-Pacific team and Ford US. Mr Cruse gave evidence that the lead engineering team within Ford US worked on the DPS6 issues and shared their learning in a free flowing way with the teams in the Asia-Pacific and within the Respondent;
9. Mr Cruse gave evidence that the Respondent had access to documents created by Ford US concerning the DPS6.
10. As to (a), I do not accept that Mr Cruse’s evidence establishes this matter. At T682 he was being cross-examined about the switch to the RCF1o clutch lining. He was taken to a particular 6-Panel report and asked some questions. The relevant portion of the transcript is T682.10-22:

All right. So it’s your evidence, is it, that you didn’t see this document in August 2013?---Correct.

All right. Now, you can’t give any reason why, can you, the North American people would not have shared this document with the Asia Pacific and Australian counter parts at or about this time?---No specific reason, but the function of the LEA is to investigate and develop the rectification. At my end, Mr Pike, I in the Australia role, receive TSBs and field service actions ready to implement to dealer. So I would not expect to receive this to me ordinarily, or as a matter of normal process from an LEA elsewhere in the world.

But you had the concern monitoring team that was dealing with the issue with the Americans, correct?---Yes. They were based in our building, Mr Pike, yes.

1. An LEA is a ‘lead engineering activity’. Mr Cruse appears to say that he would not normally expect to receive the document ‘from an LEA elsewhere in the world’. The Applicant relies on the final question and answer. Mr Cruse appears to say that the concern monitoring team was in his building. It is possible that the answer he first gave ‘yes’ implied that the team were dealing with the Americans but this is not clear to me. It is equally possible he was saying that the concern monitoring team was dealing with the issue.
2. As to (b), the portion of Mr Karageorgiou’s evidence relied upon is T568.14-19 and T568.32-38. It contains no evidence to the suggested effect. This may be because here too the Applicant was referring to the earlier version of the transcript of this day of the trial. It seems, therefore, that the Applicant had in mind T567.14-19 and T567.32-38 of the reissued transcript which contains this exchange:

What other channels are you referring to in giving that answer?---Well, it could be either dealer reports or technical hotline calls that we get; that’s the other channels.

All right. Then you were aware, weren’t you, that work was being done by Ford elsewhere in the world to try and work out what the root cause was?---At a point in time I became aware. Yes.

…

All right. And did you speak to anybody at Ford in the US or anyone who was actually doing that work?---I – I don’t recall speaking to anybody, because we don’t deal directly with the lead engineering organisation. We work through our regional service engineering who provides that information to us.

Okay. So it went up through Asia Pacific. That was the information line; is that correct?---That is correct.

1. I do not think this exchange supports the proposition for which the Applicant contends. Mr Karageorgiou’s evidence rises only to demonstrate (i) that he did not deal with Ford US and (ii) that he instead dealt with Ford Asia-Pacific. The answers he gave were not addressed to the existence or nature of any information flow from Ford US to Ford Asia-Pacific, let alone from Ford US to Ford Australia. I note for completeness that answers given elsewhere in this section of the cross-examination suggest that Mr Karageorgiou became aware of the fact that Ford US was undertaking root cause analysis on shudder by speaking to the Asia-Pacific team. However there is no suggestion that the substance of the information Mr Karageorgiou thereby received went beyond the mere fact that investigation was occurring. Even if such evidence existed it would not, without more, ground an inference that this was typical of the information flow between the Asia-Pacific team and Mr Karageorgiou, let alone between that Asia-Pacific team and Ford US. Therefore this evidence does not support the proposition that there was a ‘free flow’ of information from Ford US to the Respondent.
2. As to (c), two portions of Mr Karageorgiou’s evidence were relied upon. The first was T578.1-6. Mr Karageorgiou was being cross-examined about what information from Australia was conveyed elsewhere in the organisation. At T577.42-T578.6 this exchange occurred:

All right. But what’s your best recollection now about what was going on in 2012 in the context of the DPS6 transmission?---I – my recollection of around 2012 was we would have had our local team still working with a regional team.

All right. And so what’s – is an aspect of what the local team is doing is analysing warranty and complaint data, is that an aspect of it?---That is correct. That is correct.

All right. And is that then being fed up at the regional level – to the regional level, sorry?---That’s correct.

And was it your expectation also that that would then be even fed up further up the line to Ford in the US?---That – yes, if there was – if it was a global application, that’s correct, yes.

1. This establishes that information travelled up from Australia to the ‘regional level’, ie Ford Asia-Pacific, with the ‘expectation’ that it would then travel up to Ford US. It does not establish that information travelled in the opposite direction. The second passage was at T580.15-34:

All right. And this is all being driven out of – in terms of trying to understand the root cause analysis or do the root cause analysis in relation to the DPS6 transmission, it’s being driven by Ford in the US, correct?---Well, Ford in the US was the lead engineering organisation for the DPS6 transmission, so they would be the lead entity investigating.

All right. Just with you knowledge of the Ford – the way Ford worked at the time, there would have been, wouldn’t there, a pretty free flow of information both up the chain, by which I mean from Australia to Asia Pac to Ford US, firstly, correct?---Well, our – again, from an Australian perspective, we put all of our data into a repository that could be accessed by, you know, people in the US, that’s correct.

All right. And it also worked the other way, didn’t it, in that the work that was being done in the US as to what the root cause of these problems were, was also being shared down the line to, for example, the local level in Australia?---So the normal process was the lead engineering organisation would investigate and then subsequently would disseminate information to the markets that had that particular vehicle, and were – and had that particular concern. But ultimately the markets would – would be responsible for the communication to the local dealers.

1. This suggests that Ford US would investigate and then disseminate information. I do not accept that this evidence shows that information held by Ford US was transferred to the Respondent. Indeed, the examination continued at T580.39-T581.4:

All right. So what I’m suggesting to you is there would have been a relatively free flow of information down the chain from Ford in the US, which would have come down to Asia Pacific and then to Australia, in relation to the work being done in the US to diagnosis what was wrong with the DPS6, that’s correct, isn’t it?

MR SCERRI: Your Honour, could that question be limited to a timeframe?

HIS HONOUR: Mr Pike, can you do that?

MR PIKE: Well, 2012, to start with?---Well, I – I – I can’t comment on the free-flowing, because I – I’m not aware of when a communication may have been issued by the US and, subsequently, when we, at the market level, received that communication.

1. Mr Karageorgiou’s evidence was that he could not comment on whether the information was free flowing.
2. The Applicant relied on Mr Cruse’s evidence at T699.6-11, T701.3-4, T702.3-5, T702.13-17 and T676.39-46. The passage at T699.6-11 does not assist. Mr Cruse was being examined about an email sent by a Ford US employee in 2014 to several persons including Mr Cruse. It contained an explanation of the shudder problem. Senior counsel for the Applicant put to Mr Cruse that this showed a fairly free flow of information between Ford US and the Respondent. Mr Cruse replied ‘yes’ but added that it ‘would have been in response [to] my request for a TSB on the subject Mr Pike’. The passage at T701.3-4 also does not assist. This involved a cross-examination on an email from the Asia-Pacific division of Ford to Ford US. Mr Cruse agreed that it showed a free flow of information from the Asia-Pacific division and Ford US. That does not prove a free flow of information from Ford US to the Respondent. The passages at T702.3-5 and T702.13-17 do not assist either. Here Mr Cruse was being cross-examined about an email sent by Mr Jacobs (a member of Ford Asia-Pacific) to a number of people about the rear main oil seal issue. Assuming some of those people were at Ford US this does not establish a free flow of information from Ford US to the Respondent.
3. The final passage was at T676.39-46:

All right. Now, a lot of – I think you’ve already said, but a lot of work was being done, to your knowledge, by Ford, the lead engineering team in the US, in relation to this; correct?---I knew the lead engineering activity were – or had been working the wet issue. As I said, I was not aware of the dry issue until some time later.

Right. But there was a fair degree of sharing of information, wasn’t there, from Ford in the US, downstream, to Asia Pacific and Australia?---Yes, I would ask our Asia Pacific concern monitoring team as to how our rates of repair were going.

1. The ‘yes’ does not quite fit with the rest of the answer. However, I accept that it is some evidence that information was shared by Ford US with the Respondent.
2. As to (d), I accept that documents such as a 14D Report generated within Ford US were available globally and cross-shared. Mr Cruse gave evidence to this effect at T749.7. I also accept for the reasons I have given above at Section V that Mr Cruse was probably aware in April 2012 of a Ford US document entitled ‘DPS6 Lessons Learned Paper – Summary of Key Issues for the DPS6 Transmission Project’. I accept that Mr Cruse said that he could think of no reason why the relevant team within Ford US would not share a 6-Panel Report with the Asia-Pacific and Australian counterpart teams (T682.13-15). However, he qualified this in the same answer to say that he would not ordinarily expect to receive it as part of the Australian team. I also accept Mr Cruse’s evidence that Ford US provided training information to the Respondent: T635.4-5.
3. The picture then is a little complex. There is some basis for thinking that once engineering problems and their solutions were identified by Ford US they were communicated to the Respondent by means of product information letters and TSBs. But it also seems reasonably clear that information did move from Ford US to the Respondent before these formal steps. One explanation for this is likely to be that Ford US needed information as to how vehicles in the field were actually behaving and that information could be obtained from its subsidiaries in the various jurisdictions including Australia. Most of this happened by email and naturally emails get answered sometimes with further questions and answers. The evidence is replete with long email chains with recipients from several different divisions communicating about particular problems.
4. I therefore do not accept that information about the problems the DPS6 posed were never communicated to the Respondent until a formal step was taken such as the issue of a product information letter or TSB. On the other hand, I do not accept that the evidence supports the Applicant’s submission at [559] that once personnel within Ford US identified the root cause of a problem with the DPS6 the Respondent became aware of that matter shortly afterwards. I do not consider that the Applicant has established the ‘free flow’ of information between Ford US and the Respondent to the extent that the expression suggests that all information in one found its way to the other in a reasonably timely fashion. Rather, the evidence suggests that sometimes information about a particular problem would make its way to the Respondent in advance of a formal communique like a product information letter or TSB. However, I do not accept that this was the result of any internal administrative arrangement or mechanism. Rather, it was a function of discussions which from time to time took place. I do accept that the 14D reports were available by means of a file sharing arrangement.
5. This conclusion means that unless the material relied upon was a 14D report or was the particular 6-Panel report to which Mr Cruse was referring, I cannot be satisfied that the material was known to the Respondent. I would not be able to find the opposite either, that is to say, I cannot find that information known within Ford US was not known to the Respondent. However, the Applicant bears the onus and it is my former inability which determines the matter.

### Conclusion

1. Ms Capic’s individual claim for misleading and deceptive conduct fails.

# Section XIV: The Group’s Aggregate Damages Claim

1. Section 33Z(1)(f) of the FCA Act provides that in determining a matter in a representative proceeding the Court may, amongst other things: ‘award damages in an aggregate amount without specifying amounts awarded in respect of individual group members’.
2. By s 33Z(3) of the FCA Act the Court is not to make such an order unless ‘a reasonably accurate assessment can be made of the total amount to which group members will be entitled under the judgment’. I am unpersuaded that such an order should be made in this case. The misleading or deceptive conduct case has failed and may be disregarded (if indeed it had any relevance). The case in question is therefore the failure by the Respondent to comply with the statutory guarantee under ACL s 54 that required the vehicles to be of acceptable quality when supplied. The cause of action is conferred by ACL s 271(1) which I have dealt with above at Section XII. As I have explained there, it cannot yet be known in each case in which the Respondent replaced the input shaft seals, the TCM or a B8080 clutch with an RCF1o clutch whether the repair was performed within a reasonable time. This was because the issue of whether repairs to vehicles other than Ms Capic’s were effected within a reasonable time was not one which was litigated at the trial. Accordingly, there are a significant number of group members in respect of whom it is not known at the moment whether they in fact continue to have causes of action for reduction in value damages under ACL s 272(1)(a). In relation to those group members there could not even be an award of individual damages, let alone aggregate damages because the continued existence of their causes of action for reduction in value damages has not been established in relation to those proven Component Deficiencies.
3. Of course, there are group members who do have causes of action under s 271(1) for reduction in value. These include those whose cars came with one or more of the three proven Component Deficiencies and where those problems have not yet been remedied. It also includes all group members in relation to the gear rattling and slight shudder at low speeds caused by the extent of damping of torsional vibrations in the DPS6.
4. The Applicant’s case on aggregate damages is based on the idea that the Affected Vehicles depreciated more rapidly than relevant comparator vehicles by reason of the various problems which they had. As knowledge of the problems permeated the marketplace it was reflected in decreased resale prices. In a nutshell, the argument is that the issues with the DPS6 became sufficiently widely known that it impacted on the vehicles’ rate of depreciation. The Applicant therefore seeks on behalf of the group an award of aggregate damages to reverse this effect of group-wide excess depreciation. Large numbers are involved.
5. Except in relation to the gear rattling issue and slight shudder at low speeds associated with inadequate torsional damping (ie the intersection of what is left of the Applicant’s architectural deficiencies case and the ‘normal operating characteristics’ asserted by the Respondent) this assumption of a constant rate of excess depreciation across all Affected Vehicles is not conceivably possible because it is not even known for which of the vehicles there exists which causes of action for reduction in value. In relation to the issues of gear rattling and slight shudder at low speeds which are common to every vehicle because the Respondent submitted they were normal operating characteristics, I do not think it would be rational to award the entire group excess depreciation damages when it is as plain as a pikestaff that the depreciation relates to other much more significant issues. The real part of the Applicant’s case is not about rattling gears or a slight shudder at low speeds – it is about the erratic and much more dramatic behaviour caused by the TCM solder cracks and the problems generated by the leaking input shaft seals and use of B8080 clutch lining material. I am not in any way persuaded that the group-wide excess depreciation now claimed can be sheeted home to gear rattling and the slight shudder. Thus whilst every group member has a cause of action in relation to those issues under no circumstances would I contemplate awarding the excess depreciation damages now sought on the basis of it. To do so would be indefensible.
6. Section 33Z(3) of the FCA Act conditions the exercise of the power in s 33Z(1)(f) on the possibility of a reasonably accurate assessment being made of the ‘total amount’ to which group members will be entitled under the judgment. As I have explained, in relation to the input shaft seals, the B8080 clutch lining and the TCM, the Court does not even know at this stage which group members have causes of action for reduction in value and which do not. In relation to those issues, the question of aggregation of claims posed under s 33Z(1)(f) is not enlivened because it is not even known what the claims are which might be aggregated. The elaborate debate between the parties as to whether aggregation was appropriate does not even arise.
7. I note for completeness that the group’s aggregate damages claim also included amounts for excess finance and tax losses and repair time costs. The Applicant’s submissions did not say so expressly but, as in the case of Ms Capic’s individual damages claim which I turn to below in Section XV, I understood these alleged heads of loss to be claimed under ACL s 272(1)(b). They therefore represent heads of loss the entitlement to which is unaffected by ACL s 271(6) and the issue of which group members continue to have causes of action for reduction in value damages for the three proven Component Deficiencies. Nonetheless the Court is not in a position to award aggregate damages in respect of these alleged heads of loss. There are two reasons for this:
8. First, FCA Act s 33Z(3) provides that the Court is not to award aggregate damages ‘unless a reasonably accurate assessment can be made of the *total* amount to which group members will be entitled under the judgment’ (emphasis added). As I have explained, this is not at present possible because the full picture under ACL s 271(1) and s 271(6) is not yet known. Even assuming it be possible to arrive at an aggregate assessment of group members’ entitlement to damages under s 272(1)(b) for excess finance, tax and repair time costs, this would not be an assessment of the total amount to which group members are entitled under the judgment.
9. Secondly, even if that be wrong, a proper assessment of any damages for excess tax and finance losses cannot be made until a group member’s quantum of reduction in value damages is known. The reasons for this are explained in Section XV below in connection with Ms Capic’s individual claim for damages.
10. I decline to award aggregate damages under s 33Z(1)(f).

# Section XV: Ms Capic’s Individual Claim for Loss and Damage

## The nature of the claims

1. Ms Capic claims damages from the Respondent under ACL s 271 on the basis that the vehicle did not comply at the time of its supply with the guarantee of acceptable quality. Simplifying her claims at the outset so that they can be followed she claims these heads of damages:

### Reduction in value damages under s 272(1)(a)

1. Ms Capic alleges that she paid $22,736.36 for the vehicle on 24 December 2012 and on that day the car was not worth that much because it was afflicted with the Component and Architectural Deficiencies. That amount is less than the purchase price particularised at 4FASOC §3 – I explain later in these reasons why $22,736.36 is the figure upon which the Applicant now relies. Her claim is put in various ways but at its highest would see her receive $12,504 under this head. I note at this stage that amounts referred to in this Section of the reasons do not include pre-judgment interest.

### Consequential losses under s 272(1)(b)

1. Ms Capic alleges that because she paid too much for the vehicle she also paid too much GST and stamp duty and too much in the way of finance lease expenses. She also claims compensation for the time she spent having the vehicle serviced. At most these claims are $11,451 for excess financing costs, $378 for stamp duty, $1,250.40 for GST and $345 for time spent having the car serviced.

### Inconvenience, distress and vexation

1. Although Ms Capic claimed damages for inconvenience, distress and vexation at 4FASOC §32C she did not pursue this claim in her closing written submissions.

## The causes of action

### Input Shaft Seals

1. Ms Capic has a cause of action in relation to the input shaft seals under s 271(1). Her vehicle was sold to her with a real risk that its input shaft seals would fail causing a range of symptoms including shudder. That risk came to pass. As I have elsewhere explained that problem was finally resolved on 30 May 2017 but that was far too late to constitute a repair within the reasonable time contemplated in ACL s 271(6). It is, therefore, clear that Ms Capic continues to have a cause of action under s 271(1). Section 271(6) is prima facie engaged because repair works were undertaken on the vehicle but the evidence does not permit the conclusion that the Respondent has discharged its burden of demonstrating that the repairs were effective and implemented within a reasonable time. Consequently, s 271(6) does not operate to extinguish Ms Capic’s cause of action in s 271(1). In any event, as I have explained elsewhere, s 271(6) only bars a claim for reduction in value damages under s 272(1)(a); had the proviso been engaged, it would not have precluded Ms Capic’s claim for consequential losses other than reduction in value. I deal with this in greater detail below.
2. The Respondent submitted that it was relevant that it resolved this problem (four and a half years after the vehicle’s purchase) even if the repair did not in terms engage s 271(6). At a factual level one may accept this in the sense that the vehicle no longer suffers from this problem into the future. On the other hand, as Ms Capic submits, the same factual palette would also need to include the proposition that the vehicle did suffer from the problem for 4.5 years which is, I accept, a substantial part of its operating life. For reasons to which I will later come, neither of these submissions wrestles with the forensic implications which flow from the fact that Ms Capic’s case was pitched in terms of risks rather than manifest symptoms. However, at a factual level I accept both.

### The TCM issue

1. Ms Capic has a cause of action in relation to the TCM where substantially the same analysis applies as with the input shaft seals, with the relevant event occurring on 10 February 2016 when she received a new TCM containing the revised ATIC 91 chip. As I have explained above in Section XI, where the Respondent’s attempt to fix the TCM issue with the 15B22 update is dependent on the availability of new TCMs in service and where it has not led any evidence to show that they were in fact available for Ms Capic’s vehicle prior to February 2016, I cannot conclude that the installation of the software update was an effective repair for the purposes of s 271(6). However, even if 15B22 had been an effective fix in Ms Capic’s case, it would not affect the result because the software update could not extinguish Ms Capic’s cause of action in relation to this problem having occurred nearly three years after the date of purchase (and thus outside a reasonable time).

### The replacement of B8080

1. Ms Capic does not need to confront the question of reasonable time under s 271(6) in the case of the replacement of her clutch. For the reasons I have given, the switch from the B8080 clutch to the half-hybrid B8040/B8080 clutch has not been shown to have been effective. Consistent therewith I have accepted Ms Capic’s evidence that even after the clutch replacement on 30 May 2017 the vehicle has continued to misbehave. The repair not being shown to be effective, s 271(6) is irrelevant. In the case of this deficiency, it was present when the vehicle was sold (with a B8080 clutch) and the switch to a half-hybrid clutch has not resolved the issue. For its entire life the vehicle has not been of acceptable quality because of its clutch lining.

### The rattling gears and the slight shudder at low speeds

1. I have accepted the element of the Applicant’s architectural deficiencies case which consists of these two issues (which were also said by the Respondent to be normal operating characteristics). The vehicle was not of acceptable quality for this reason at the time of its acquisition and remains so. No issue as to s 271(6) arises since no repair has been attempted.
2. It follows that Ms Capic is entitled to damages under both limbs of s 272(1) for the input shaft seals, the clutch lining, the TCM and the rattling gears and slight shudder caused by the inadequate damping of torsional vibrations.

## Reduction in value damages

1. Although a case was initially advanced based on the excess depreciation theory underpinning the aggregate damages case, Ms Capic accepted that if aggregate damages were not awarded then resort should not be had to the evidence of Mr Stockton for assessing any reduction in value in her vehicle (although she did submit that Mr Stockton’s formula for pre-judgment interest should be applied to the reduction in value as assessed by Mr Vasilakis, which is not presently material). Mr Stockton’s evidence about excess depreciation (and Dr Strombom’s in response) may therefore be disregarded for present purposes since no award of aggregate damages is to be made. Mr Stockton has some residual relevance to the claims made for some of the consequential losses to which I will return.

### Mr Vasilakis

1. Ms Capic led evidence from a car valuer, Mr Vasilakis as to the reduction in value her car suffered. This was done on two bases. The first was on the assumption that the vehicle suffered from all four of the Component Deficiencies together with the Architectural Deficiencies, the second on the basis that it suffered only from the four Component Deficiencies. Mr Vasilakis valued the vehicle as at the date of its acquisition, 24 December 2012.
2. I have not accepted the case based on the rear main oil seal, one of the four alleged Component Deficiencies which Mr Vasilakis was instructed to assume existed. Further, although Mr Vasilakis assumed that the clutch lining issue had eventually been resolved, this is not what I have found. To that extent both of Mr Vasilakis’ valuations have been done on a basis which does not quite match the facts. Further, insofar as the Architectural Deficiencies case is concerned I have accepted very little of it. I have not accepted that inadequate heat management adds anything to the issue with the clutch lining material. Although I have accepted a part of the torsional vibration case, I have done so only in relation to gear rattling and a slight shudder at low speeds. It is apparent that Mr Vasilakis was asked to assume a range of symptoms associated with the Architectural Deficiencies case greater than those which I have found, ie, erratic gear shifts and a lack of power.
3. In his first report dated 18 December 2019 he assessed the reduction in value by reference to both the Component and Architectural Deficiencies as the difference between the fair market value of the vehicle at the time of its acquisition without the defects and its fair market value with those defects. Given my conclusions on the Architectural Deficiencies I do not think that the assumptions on which Mr Vasilakis’ opinion is based are sufficiently close to reality to make it useful.
4. Mr Vasilakis also prepared a second report dated 8 April 2020 on the basis that the vehicle only suffered from the Component Deficiencies. The assumptions included one Component Deficiency which I have not accepted as having been proved (rear main oil seal) and excluded as having been resolved one Component Deficiency which the Respondent has not shown was resolved (clutch lining).
5. On this basis he assessed the fair market value of the vehicle as at the date of its acquisition on the assumption that it had no defects as being the same as the price paid for it, $22,736.36. He assessed its value with the Component Deficiency as being 60%-70% of its fair market value without them, ie, $13,641.82 to $15,915.45. Mr Vasilakis did not explain how he arrived at this view in any great detail. His reasoning was at §§31-34:

In my First Report, I explained that the most valuable years of a car’s life occur at the beginning of its life. I noted in paragraph 38 of my First Report my opinion that about 40% of the value of a car like Ms Capic’s would usually expire within the first 4 years of its life. As I note above, fixes were not available for any of the Component Deficiencies until at least about 3 years after Ms Capic bought the Car, and the problems with the seals and the friction material were not fixed until about 4.5 years after the date of purchase.

Based on my experience, consumers would insist on a very substantial discount on account of the Component Deficiencies, considering their potential and actual impact on the Car’s performance, comfort, reliability, durability and safety. That discount would take into account that the Car is prone to shudder, have erratic gear shifts, gear selection problems, lack of power or response, and excessive noise. It would also take into account that the car might be hard to sell, expensive to maintain and inconvenient compared to other options on the market.

Based on my experience, I would estimate the fair market value of Ms Capic’s car, at the Time of the Supply, with the Component Deficiencies (and not with the Architectural Deficiencies) to be about 60% to 70% of the fair market value of that car without those defects. That is, $13,641.82-$15,915.45 (excl GST). In reaching that conclusion, I have assumed that the cost of the repairs required to address the Component Deficiencies would be covered by Ford.

Accordingly, I assess the reduction in value to be between $6,820.91 and $9,094.54 (ex GST), or $7,957.72 (ex GST) at its midpoint.

1. The Respondent submitted that Mr Vasilakis’ opinion was not useful because he did not explain his process of reasoning and seems to have engaged in an ‘intuitive’ valuation. There is some substance to this contention although in valuation cases it often loses much of its force. In such cases, the final step usually involves the application of judgment following a review of relevant matters. However, I do accept that I would need to adjust Mr Vasilakis’ opinion to take account of the disjunct between his assumptions and the facts as found. Unfortunately, I do not see how I can do this for inasmuch as I accept Mr Vasilakis’ capacity to perform the necessary evaluative exercise I am not sure that I could simulate that exercise on the facts as found. Regardless of whether §§31-34 are sufficient from an evidentiary perspective they are not sufficient from the practical perspective of seeking to recalibrate them to reflect the different factual situation which has been found.
2. Before turning to how Ms Capic’s damages might be assessed in that circumstance, it is necessary to attend in some detail to the purchase of the vehicle.

### The purchase of the vehicle

1. I have dealt with this above at Section V but reproduce those conclusions in a more summary form in this section. The evidence includes an invoice addressed to her seeking payment of $28,595.00. The finance lease she then entered into with BMW Finance shows that she financed that purchase by means of a chattel lease under which she agreed to pay $586.09 per month on the 24th day of the month for four years and to pay a residual payment at the end of the lease of $12,839.20. As I have previously noted, the $664.73 gap between the amount due to BMW Finance and the amount due to Sterling Ford is not explained on the evidence. The evidence shows that the lease payments were in fact met by her then employer until August 2016 when it went into administration. Her new employer then took over the repayments including the arrears until the lease expired on 24 December 2016. Ms Capic did not meet her obligation to pay the residual of $12,839.20 until 29 May 2017 when she entered into a second finance lease for the amount of the residual. I have noted the possibility that there may have been a third finance lease which replaced the second lease but have not been able to resolve that issue. The monthly payments under this lease (of which there were 36) were $368.18. There was an obligation to pay a residual of $6,355.40 on 29 May 2020. Her then employer met the monthly rental payments until 30 November 2017. After that she was obliged to meet them herself. She appears to have fallen into arrears for a period but eventually to have met them and paid the residual on 29 May 2020.
2. The invoice which was issued for the purchase of the car by Sterling Ford is summarised above at Section V. It shows the purchase price for the car was $24,542.27 (excluding GST). However, it includes a charge for delivery by the dealer of $1,540.91 which does not in my opinion form part of the purchase price. When that is deducted the figure becomes $23,001.36. Ms Capic says in her submissions that she paid $22,736.36 which differs by $265. That difference is represented by a charge of $200 for window tinting and $65 for carpet mats which she has excluded from her claim. For myself I would have included them as part of the purchase price of the vehicle, however, Ms Capic did not approach it that way and I will not do so either. Thus the pre-GST purchase price was $22,736.36.
3. The dealer paid GST (as the supplier) and stamp duty and some other charges which it sought to recover under the invoice. Together with the purchase price (including dealer delivery) these added up to the $28,595.00 to which I have referred.
4. It may be inferred that there was a contract of purchase between Ms Capic and Sterling Ford under which she agreed to purchase and it agreed to sell her the vehicle together with some other items (including GST and stamp duty) for the amount of the invoice. Ms Capic discharged the monetary obligation created by this agreement by procuring BMW Finance to pay the sum of $28,595. It advanced that sum in return for her promise to meet the monthly repayments and pay the residual at the end of the lease.
5. It was not suggested by either party that the vehicle had not been registered in Ms Capic’s name. The registration papers which are in evidence show that it was registered in her name. Indeed, the Respondent has always treated her as the owner. It is unclear whether the various finance companies registered a security interest in the vehicle, although Mr Cuthbert’s report contained a screenshot of a PPSR search which seemed to indicate this was at least done by Macquarie Leasing Pty Ltd. Indeed, it is unclear what the terms of the leases were (or at least the initial one) and neither party took me to them.

### How much did Ms Capic pay for the vehicle?

1. Although at one time Ms Capic pursued a case that the amount she had paid for the vehicle was the total of the amounts paid under the first finance lease ($40,971.52) this case was not pursued in final submissions. The amount she claimed as the purchase price was $22,736.36 and I accept this.
2. The Respondent submitted at [366] that because her employers had met the rental payments under both leases until November 2017 Ms Capic had not paid the total amount of the invoice. I do not accept this submission. The payment of the invoice by BMW Australia (no doubt at Ms Capic’s direction) discharged Ms Capic’s monetary obligation to Sterling Ford and was accordingly a payment by her. This is well-established: see my own remarks in *Federal Commissioner of Taxation v Rozman* [2010] FCA 324; 186 FCR 1 at [20]-[23] and those of Leeming JA in *Capital Securities XV Pty Ltd v Calleja* [2018] NSWCA 26at [106], Basten JA agreeing at [1] and Gleeson JA agreeing at [2]. In any event, it is unclear whether in making this submission the Respondent was contending that Ms Capic had not purchased the vehicle. If it was making such a submission I reject it. Ms Capic had monetary obligations under the leases to make the rental payments. The fact that A is obliged to pay B but that obligation is acquitted by a payment by C to B does not mean, for the reasons I have just given, that A has not made the payment. The fact that it is A’s monetary obligation which is discharged permits of no other answer. It is for this reason that a person who borrows the purchase price for a house from a bank still purchases the house even though, on the day, the funds come from the bank.
3. A variant of this argument pursued by the Respondent at [403] was that the finance costs under the leases were met by her employers until November 2017. This submission is related to the question of whether Ms Capic can recover excess finance costs on the basis that she paid too much for the car. I return to this issue below. However, I do not accept that the fact that her employers met her lease payments has any impact unless it is shown that they did so as a gift. However, I do not conclude that they did so gratuitously. Her employment arrangements clearly included her employer making the lease payments as part of an overall salary package. As such these payments were not gratuities.

### Mr Cuthbert’s evidence as to the value of the vehicle

1. I also reject the Respondent’s own valuation evidence. This came from Mr Cuthbert who in his report dated 11 March 2020 assessed the current market value (excluding exterior damage) of Ms Capic’s vehicle to be $11,000 in January 2020. But that is the wrong question. The correct question is what the value was when she purchased it. No doubt, it is true to say as the Respondent did at [372] that evidence of current market value is ‘of considerable utility … because any assessment of loss suffered at the date of supply must have regard to subsequent events’. But its considerable utility does not extend to overcoming a complete absence of any evidence as to what the value actually was at the date of acquisition.
2. The use to which the Respondent put Mr Cuthbert’s evidence was instead to apply that ‘considerable utility’ not to any valuation at 24 December 2012 which he had conducted, but as an instrument to criticise Mr Vasilakis’ evidence. This it did by pointing out that the value Mr Vasilakis placed on the vehicle on 24 December 2012 on the assumption that it had both sets of the deficiencies alleged by Ms Capic was less than the value Mr Cuthbert placed on the vehicle in January 2020. This no longer matters since I have not relied on this aspect of Mr Vasilakis’ evidence but was, in any event, unpersuasive. Mr Cuthbert was not asked to assume that the vehicle suffered from any defects. Instead he was asked to value the vehicle on the basis of his own inspection, documents evidencing the vehicle’s service history and Mr Carter’s report that the vehicle was mechanically sound and operated normally. Through no fault of Mr Carter’s, however, I have not accepted that to be so. Mr Cuthbert’s evidence is irrelevant because his assumptions do not match the facts and because he was asked the wrong question.
3. Consequently, there is no useful evidence about the fair market value of Ms Capic’s vehicle on 24 December 2012 on the assumption that it suffered from the risks of failure I have found that it did.
4. Be that as it may, I am quite satisfied that Ms Capic’s vehicle was worth less at the time of its acquisition than she paid for it. Mr Vasilakis gave evidence to this effect which was not contradicted but in any event it is to my mind obvious. How should the reduction in value damages be assessed? It is trite that ‘mere difficulty in estimating damages does not relieve a court from the responsibility of estimating them’ and ‘[w]here precise evidence is not available the court must do the best it can’: *Commonwealth v Amann Aviation Pty Ltd* (1991) 174 CLR 64 at 83 per Mason CJ and Dawson J, citing *Fink v Fink* (1946) 74 CLR 127 at 143 per Dixon and McTiernan JJ; *McRae v Commonwealth Disposals Commission* (1951) 84 CLR 377 at 411-412 per Dixon and Fullagar JJ; *Chaplin v Hicks* [1911] 2 KB 786 at 792 per Vaughan Williams LJ; *Jones v Schiffmann* (1971) 124 CLR 303 at 308 per Menzies J.
5. The process of assessing what the value of a chattel was 9 years in the past when the defects it suffered from are risks not actualities is inherently impressionistic. That the risks came to pass is, so it seems to me, not to the point. If it were otherwise the value at the date of acquisition would be conceptually tied to contingent future events and hence theoretically unknowable. The fact that the vehicle’s input shaft seals did fail does not, therefore, matter. But for the same reason, the fact that the Respondent replaced them does not matter either for neither bears upon the risk of failure which existed at the date of the acquisition. The risks of the three proven component failures Ms Capic faced on 24 December 2012 were not altered in their extent when they came to pass just as a person who wins the lottery cannot be said to have had a 100% chance of winning. They had the same chance as everyone else: the outcome of a probabilistic event does not affect the original probability.
6. Identical remarks may be made about the TCM. In the case of the clutch lining the same analysis flows albeit with a slight twist. That the risk came off that the clutch lining would behave erratically is irrelevant to the value at the time of its acquisition for the reasons just given. It is thus also irrelevant that it was *not* successfully repaired (whereas in the case of the TCM and input shafts seals what is irrelevant is that they *were* repaired).
7. In a sense, the Applicant makes this very submission on behalf of group members when she submits that group members with vehicles which have never displayed any symptoms are equally entitled to recover. The Applicant’s position on this issue is an inevitable corollary of running the case on the basis of a risk of symptoms rather than actual symptoms.
8. Ms Capic’s vehicle came with a real risk that:
9. the input shaft seals would fail resulting in oil contamination of the clutch plate surface in turn causing wet clutch shudder;
10. the solder connecting the ATIC 91 chip to the PCB in the TCM would progressively crack giving rise to an increasing array of problems starting with loss of power for a few milliseconds (which might be imperceptible or experienced as a brief shuddering sensation) and ending with a total loss of motive power for a period of seconds;
11. the clutch lining material would exhibit negative damping causing it to behave unpredictably resulting in self-excited shudder and geometric misalignment in the clutch components would cause forced-excited shudder; and
12. torsional vibrations would be transmitted from the crankshaft through the drivetrain resulting in gear rattling and a slight shudder at low speeds.
13. I assess the risk of (d) as high since the Respondent described it as a normal operating characteristic but I would also describe the occurrence of the risk as not as dramatic as (a) to (c).
14. I disregard the offer made by Jefferson Ford on 10 February 2016 to purchase the vehicle for $10,000. Whilst it appears that Ms Capic told the dealer the problems she had with the vehicle, again, this invites the wrong question which is about the value of a chattel attended by risks of failure at the date of purchase rather than the value of the chattel given the occurrence of the risks or some of them.
15. Taking these matters into account, I have concluded that Ms Capic’s vehicle was worth 30% less than its fair market value without any defect on the day that she purchased it. I accept that its fair market value on 24 December 2012 without defects was the amount she paid for it, $22,736.36 and I assess her reduction in value damages at $6,820.91. This is the amount which, if tendered to her on 24 December 2012, would have put her in the position she would have been in if the guarantee of acceptable quality had been complied with at least in a balance sheet sense (ie expectation damages). I will order pursuant to s 51A(1)(a) of the FCA Act that there be interest up to judgment on that sum from 24 December 2012 at 4% above the official cash rate published by the Reserve Bank of Australia, calculated monthly but without compounding.

## Consequential losses

### GST, stamp duty and financing costs

1. Ms Capic claimed to be entitled to be put in the position she would have been in if she had in fact paid only for what the car was worth having regard to its defects – as it has fallen out, that is 70% of the price she did pay or $15,915.45. In that counterfactual, so she argues, she would have paid 30% less GST, stamp duty and financing costs. She claims these losses under s 272(1)(b). As Edelman J has observed in relation to the similar provisions of the ACL (s 267(3) and s 267(4)), s 272(1)(a) and s 272(1)(b) resemble the two components of compensatory damages available at common law for breach of contract: *Moore v Scenic Tours Pty Ltd* [2020] HCA 17; 94 ALJR 481 at [63]-[67]. These two components are (1) compensation directly for the performance interest and (2) compensation for consequential losses, which is bounded in the same manner as at common law by the second limb of the rule in *Hadley v Baxendale* (1854) 156 ER 145: see also *Swick Nominees Pty Ltd v LeRoi International Inc (No 2)* [2015] WASCA 35; 48 WAR 376 at [265]-[272] per Buss JA in relation to the *Sale of Goods Act 1895* (WA) s 52. This might suggest that the point of the award was to put Ms Capic in the position she would have been in if the vehicle had been of acceptable quality. That view of s 272(1) would suggest that although it is a statutory cause of action it takes its cue from familiar provisions in sale of goods legislation dating back to the Sale of Goods Act 1893 (UK) elegantly drafted by Sir Mackenzie Chalmers, remnants of which even now may be perceived, fresco-like, under the crude graffiti of the ACL. The implied term that goods will be of merchantable quality was imposed by Chalmers’ statute and the measure of damages was the contractual one, namely, expectation damages – the plaintiff was to be put in the position she would have been if the term had been complied with.
2. If the point of an award of reduction in value damages is to put Ms Capic in the position she would have been if she had paid $15,915.45 for a vehicle worth that much then one may readily accept that she has paid too much for these various charges and they should, on a pro rata basis, be reimbursed to her by the Respondent. On the other hand, if the point of the award of reduction in value damages is to place her in the position she would have been if the vehicle had been worth $22,736.36 then the opposite result occurs because, on that view, she has paid the correct amounts of GST, stamp duty and financing costs. The difference between these two approaches is the difference between awarding reduction in value damages, on the one hand, for paying too much for what was actually obtained and, on the other, obtaining too little for what was actually paid. In both cases the primary figure is clear – $6,820.91 – but in one case this amount represents the extent of an overpayment (to be refunded) and in the other the extent of an under-delivery (to be compensated for with an award of expectation damages).
3. In my view the identification of the purpose served by an award of reduction in value damages potentially impacts upon the kinds of losses which may be recovered as consequential losses under s 272(1)(b). What is causally connected to an overpayment which is to be refunded is not necessarily the same as that which is causally connected to an under-delivery which is to be compensated for. The expression ‘reduction in value’ damages suggests to me that it is the latter which may be the correct approach
4. However, so characterising the issue only generates further questions. If, as I apprehend, the question of consequential loss is to be approached on an expectation basis then this requires the identification of a state of affairs to which the plaintiff is to be restored. It is natural to think that there is only one of these but theoretically there may be more. In this case, it would be possible to acquit Ms Capic’s entitlement to be put in the position she would have been if the vehicle had been of acceptable quality in at least three ways:
5. she could hand back her vehicle and be given a 2012 Ford Focus which has done the same mileage as her vehicle (with the Respondent meeting any transfer costs) but which is defect-free;
6. she could retain her current vehicle but be given $6,820.91 worth of a defect-free 2012 Ford Focus with similar mileage – perhaps from the boot to somewhere in the back seats (obviously this is practically impossible but it serves a useful illustrative purpose); and
7. she could retain her vehicle and be awarded $6,820.91 cash as at 24 December 2012 together with an award of interest up to judgment.
8. These three scenarios lead to different outcomes on the question of consequential loss. It is clear that in (a), it would lead to overcompensation if she were awarded the GST, stamp duty and financing costs she has incurred. On this hypothesis, she will have been placed in precisely the position she would have occupied if the Respondent had originally met its obligations under s 54 and that position always entailed payment of the amounts of GST, stamp duty and financing costs in fact paid.
9. The approach in (b) most likely leads to the same outcome.
10. The approach in (c) is in fact the consequence of the award of reduction in value damages to which I have concluded Ms Capic is entitled. This is a less than perfect version of what her position would have been if s 54 had been complied with and is mired with real world difficulties. In this imperfect world Ms Capic has received a car worth $15,915.45 and received $6,820.91 in cash as reduction in value damages. Yet she has paid GST, stamp duty and excess financing costs on the basis that the vehicle was worth $22,736.36. The award of reduction in value damages is incapable of putting her in the precise position she would have been if the guarantee had been complied with because the award of reduction in value damages is not a perfect tool for achieving that outcome. Not to award her as consequential damages the excess GST, stamp duty and financing costs would leave her out of pocket because the vehicle she has was not worth the purchase price and because the award of $6,820.91 in cash does not generate a liability in her hands to pay GST, stamp duty or finance costs. Consequently, on this view, the excess GST, stamp duty and finance costs are recoverable.
11. The question then becomes which of these scenarios should be selected as the state of affairs upon which a calculation of expectation damages is to be based. Common sense suggests that it should be scenario (c) which is, in fact, the fruits of the Court’s imperfect efforts to achieve compliance with s 54. To choose (a) and (b) would be theoretically pure but also unreal when it is known that is not how the expectation generated by s 54 has been met. Whether s 272(1) is to be approached on such a basis and whether, if so, these excess imposts and financing costs are recoverable is, to my mind, the most interesting question in this case. Neither party made any submissions about it. If I had arrived at a contrary conclusion it would be procedurally unfair to act on that conclusion without hearing from Ms Capic. However, in circumstances where I have rejected an argument which could have been put by the Respondent (but was not) I do not think the same problem arises.
12. The Respondent, while not framing the question in the way I have just done, submitted that these charges could not be recovered for three, maybe four reasons. As will be shortly seen, the identification of the purpose of an award of damages under s 272(1) cannot really be disaggregated from the submissions the Respondent does actually make.
13. The first related to a suggestion that the claims were not pleaded. This was certainly said at [398]-[399] of the Respondent’s submissions. At [400] the Respondent then said ‘Leaving to one side the fact that the Applicant’s excess finance and tax costs loss is not pleaded ... it is submitted that such loss is not recoverable in any event, because…’ and there then follow the other three reasons for resisting the claim.
14. One begins therefore with the task of construing what the Respondent meant by the words ‘Leaving to one side’. I do not read that as a waiver of the objection. To make one point leaving another point to one side is to make an alternative argument on the assumption, contrary to the argument, that the first point is not accepted. Thus it seems to me the pleading issue is in play.
15. At 4FASOC §31 the Applicant claimed on her own behalf and on behalf of group members damages under s 271 for the Respondent’s failure to comply with the guarantee in s 54. It is in these terms:

By reason of the failure to comply with the guarantee imposed by s 54 of the ACL, the Applicant and Guarantee Subgroup Members are entitled under s 271 of the ACL to recover damages from Ford Australia.

1. At §31AA she alleged certain losses were reasonably foreseeable:
2. costs of acquiring Affected Vehicles;
3. devaluation of Affected Vehicles;
4. costs of inspecting Affected Vehicles;
5. costs of returning the Affected Vehicles for servicing, repair or replacement;
6. costs of servicing of, or repairs to, the Affected Vehicles;
7. costs of replacement car hire (including taxi fares) incurred in respect of periods during which the Affected Vehicles were not able to be used;
8. wages and income lost in respect of periods during which the Affected Vehicles were not able to be used;
9. additional financing costs in respect of the Affected Vehicles;
10. additional stamp duty and dealer delivery charges in respect of the Affected Vehicles; and
11. damages for inconvenience, distress and vexation.
12. It seems to me that the Applicant claimed damages under s 271 and s 272 and alleged that the stamp duty cost was reasonably foreseeable. I would read §31 and §31AA(i) as sufficient to raise the claim for stamp duty. The Respondent did not draw §31AA to my attention. Instead it pointed to §36:

The Applicant claims, in her own right and on behalf of the Group Members, the relief specified in the application, namely:

(i) declaratory relief as to the conduct of Ford Australia in contravention of the ACL;

(ii) damages pursuant to s 236 of the ACL;

(iii) damages pursuant to s 271 and 272 of the ACL;

(iv) damages, including, but not limited to, diminution in value of the Affected Vehicle(s), any amounts paid for repairs, car hire, taxi fares, additional finance costs and any additional expenses and costs incurred as a result of the necessity to replace the Affected Vehicle and obtain a different vehicle;

(v) in the alternative to (i) to (iv) above, pursuant to s 33Z(1)(f), an award of damages in an aggregate amount;

(vii) interest;

(vii) Costs ; and

(viii) such other orders as the Court thinks fit.

1. That puts the matter beyond doubt in the case of stamp duty – the only residual doubt I had about this was whether it could truly be said that the Applicant had claimed damages in §31 but §36 is certainly such a claim. Further, it is clear that §36(iv) involves a claim for additional finance costs. It is true that it is separate from the claim for damages under s 271 and s 272 but I do not read the sub-paragraphs as exclusive of each other (except (v) which is expressed to be in the alternative).
2. That leaves the GST. By a letter providing further particulars dated 1 July 2020 the Applicant provided particulars of a claim for GST. This was said to be by way of further particulars to §36(ii)-(iv). In my opinion, that was sufficient to include the claim for GST. The particulars make clear what the submissions do not, that there are two claims for GST – one on the vehicle and one on the rental payments.
3. I am satisfied that the two claims for GST, stamp duty and finance costs are within the pleaded case.
4. Turning then to the other reasons the Respondent resisted the claims, these were three.
5. The first was that the asserted losses were not reasonably foreseeable and hence did not satisfy the requirements of s 272(1)(b). The second was that they did not satisfy s 272(3). The third was that they had not been suffered by Ms Capic but represented costs paid by her employers.
6. The first argument presents an interesting conundrum. It seems obvious that it is reasonably foreseeable that if one supplies a vehicle which has inherent risks of failure such that it is worth less than the amount it is sold for, the person to whom it is sold will end up paying more GST and stamp duty than they would have if the vehicle had been sold at its true value. The GST and stamp duty are unavoidable transaction costs which makes their foreseeability that much easier to appreciate. Car finance is not inevitable but it is such a common incident of the purchase of vehicles that it can, I think, be put in the same category and, along with it, any GST paid in respect of such a finance lease.
7. But this superficially straightforward analysis conceals a difficulty. As I have explained, Ms Capic’s claim may be characterised either as a claim that she paid too much for what she received (the overpayment characterisation) or that she received less than what the Respondent promised to deliver (the under-delivery characterisation). Thus, the effect of the award of damages under s 272(1)(a) may be characterised either as a reimbursement for an overpayment or the belated delivery of that which ought to have been but was not delivered at the time of supply (to put it crudely, $6,820.91 worth of car). If one takes the second characterisation, Ms Capic will end up in the position where she received exactly what she bargained for. How then can the amounts paid for GST, stamp duty and finance costs represent a loss, where the bargained-for position always entailed payment of precisely those amounts? Would an additional award to cover those sums not represent double recovery?
8. The answer is that the overpayment characterisation and not the under-delivery characterisation is that which best accords with logic and principle. Once Ms Capic recovers $6,820.91, her position will be that of someone who paid $15,915.45 for a car which, including its defects, was worth exactly that. But that was not the car on which she paid GST, stamp duty and financing costs. Those amounts were paid on and by reference to a car which, defect free, was worth $22,736.36. And, the $6,820.91 she will now receive is not exigible to GST or stamp duty and has no impact on what her financing costs actually were. The proper characterisation is that the excess amounts of tax and finance were reasonably foreseeable and, subject to the Respondent’s second and third arguments to which I will shortly turn, are recoverable under s 272(1)(b).
9. I do not accept the second argument. Section 272(3) provides:

Subsection (1)(b) does not apply to loss or damage suffered through a reduction in the value of the goods.

1. The Respondent submitted that Ms Capic’s claims were ‘tied to the (allegedly overpriced) value of the vehicle’. Here one can catch just a glimpse of the problem I have adverted to above about expectation damages. The Respondent’s submissions may refer to Ms Capic’s damages claim as being one of having paid an overprice but that is not the language of s 272(3). To fall within it the losses must be ‘suffered through’ the reduction in the value of the goods. The fact that the imposts and financing costs were paid on the purchase price rather than on the true value of the vehicle makes it difficult to see how they were ‘suffered through’ the reduction in value. ‘Suffered through’ is an expression which connotes a relationship of causation. In most contexts, there is more to causation than satisfaction of the ‘but for’ test. And, as has often been pointed out, where there are two sufficient causes (A and B) for an event C, the application of the but for test leads to the anomalous result that neither A nor B is causative of C. Even so, I think it is instructive in this case that the excess GST, stamp duty and financing costs would still have been incurred if there had not been a reduction in the value of Ms Capic’s vehicle. That is a further reason for concluding that they have not been ‘suffered through’ the reduction in value for the purposes of s 272(3).
2. The third argument was that Ms Capic had not suffered these losses herself because they had been paid by her employer. I have dealt with this argument above at [878] by rejecting it.
3. In that circumstance, I accept that the Applicant has demonstrated that she is entitled to recover from the Respondent excess amounts of GST, stamp duty and financing costs having regard to the position she now finds herself in: (a) owning a vehicle for which she paid $22,736.36 on 24 December 2012 which was worth at that time $15,915.45; (b) being awarded $6,820.91 in reduction in value damages; and (c) being awarded interest between 24 December 2012 and the date of judgment. In that situation, Ms Capic is out of pocket if she is not awarded these excess amounts. The excess finance costs carry with them excess GST paid by Ms Capic on her rental payments which, for completeness, I also accept were reasonably foreseeable
4. Ms Capic relied upon the evidence of Mr Stockton to calculate these amounts. However, the reduction in value amounts upon which they were calculated are not the same as the one upon which I have proceeded ($6,820.91) so they are of no use for present purposes. Working out what the figures are as a result of these conclusions involves minor numerical work and no further evidence. For example, the excess amount of GST is $682.09. It seems that excess amount of stamp duty would be $204.63. The reworking of the finance leases on the assumption that the initial purchase price was $15,915.45 is a more involved exercise but does not involve anything more difficult than calculation under a hire purchase agreement using the same rates as under the leases which were in fact in place. Of course, this will impact on the residuals and these will need to be adjusted too.
5. For completeness, I reject the Respondent’s submission at [404] that damages for excess financing costs should not be awarded in relation to the second finance lease. Here the argument was that by the time this lease had been entered into Ms Capic had already commenced this proceeding and therefore knew what the problems with the car were. The Respondent submitted that it was well-established that a buyer of defective goods cannot obtain damages for consequential losses after the defect has been discovered because to do so would be to incur costs at the risk of the seller. I accept that this principle exists but not that it has anything to do with this case. The issue here is whether the loss under the second finance lease is of a reasonably foreseeable kind. In my view, and subject to my general criticism of this approach to damages, it plainly is. Ms Capic only entered the second lease because of the first.

### Repair time

1. Ms Capic claims $345 for time spent obtaining repairs. To obtain this figure Mr Stockton used Google Maps to derive the route between Ms Capic’s home and the Ford dealer to whom she took the vehicle for servicing. From this he derived the round-trip drive time to which he added 10 minutes spent waiting for alternative transportation to be arranged and 6 minutes of total transaction time with the service department. He applied a 50% time discount in instances where non-DPS6 related repairs also occurred on the visit on the basis that only half of the work done related to the DPS6. He then applied to that time estimate the average hourly wage rate for Ms Capic’s postal code to obtain the figure of $345.
2. I am not satisfied that there is any basis for Mr Stockton’s decision to apply a 50% discount to reflect the fact that not all issues related to the DPS6 on visits where there were other repairs. I am not satisfied that Ms Capic is entitled to any compensation for an ordinary scheduled service, even if there ended up being DPS6 related repairs performed. For example, I was not taken to any evidence to the effect that this DPS6 related work meant that these ordinary scheduled services took longer than they otherwise would have.
3. Whilst I accept that Ms Capic lost at least some time when taking her vehicle in for unscheduled services, she has not led any evidence to establish that this caused her to suffer a loss that equates to the average wage earnt across that time period. There was no evidence of whether these services necessitated her taking time off from work or whether she would have spent this time otherwise earning income.
4. I am not satisfied of the sense of using wages derived from postcodes when Ms Capic’s actual salary is known (noting that Mr Stockton did calculate what the figure would be on such a basis but that this was not the figure sought by Ms Capic in her written submissions). This approach may have more credence when looking at aggregate damages across the group but in Ms Capic’s case it asks me to ignore known facts. In those circumstances, I do not think it appropriate to award this element.

### Damages for inconvenience, distress and vexation

1. Although claimed in the 4FASOC at §32C particular 2, Ms Capic did not develop any submissions about this matter. I make no award.

# Section XVI: Miscellaneous

## Procedural fairness

1. The Respondent submits that the Applicant should not be permitted to rely on 84 identified documents. The documents were nominated in a schedule (‘Schedule 1’) to some procedural orders made at the end of the hearing to regulate the conduct of the present debate. It is convenient to refer to them as the Schedule 1 documents.
2. By the time the debate concluded the Respondent had withdrawn its objection to 3 of these documents. From the Applicant’s side of the ledger, there was eventually agreement to withdraw her reliance on a further 5 documents, leaving 76 documents in contest.
3. With 11 exceptions, the remaining documents consist of documents produced by Ford US to the United States District Court for the Central District of California pursuant to orders made by that court under 28 USC §1782. The background to the §1782 proceeding is explained in *Capic v Ford Motor Company of Australia Limited (No 4)* [2017] FCA 1575 at [11]-[22]. The documents produced by Ford US were copies of transcripts or depositions of Ford US employees taken in proceedings in the US concerning the DPS6 together with categories 9, 12, 13, 19, 23 and 32 of the discovery categories requested by the Plaintiff in one of those proceedings, *Vargas et al v Ford Motor Company* Case No.2:12-cv-08388-AB (FFMx) (‘*Vargas*’). *Vargas* was filed in the US District Court for the Central District of California. I shall refer to the documents produced by Ford US to the District Court as the ‘§1782 documents’. The Respondent submitted that there are approximately 330,000 of these documents.
4. It is useful first to deal with the position of the Schedule 1 documents which are drawn from the §1782 documents.

### Schedule 1 documents drawn from the §1782 documents

1. The Applicant seeks to rely upon these documents to prove one or more of the defects she alleges in §6AB of the 4FASOC. The demonstration of those defects is an important step towards the allegation she makes at §29(1) and §29(2) that the class vehicles were not of acceptable quality within the meaning of s 54 of the ACL.
2. The Respondent submits that it would be procedurally unfair for the Court to permit the Applicant to rely upon these documents to prove those defects. An assessment of that proposition calls for an examination of the way in which the case has been pleaded and run by the Applicant. For each of the defects alleged in §6AB the Applicant has provided particulars in the pleading. In some cases the pleading indicates that the Applicant will rely on admissions made by the Respondent in other proceedings, in others reliance is placed upon an affidavit sworn by a Ford US employee in the US proceedings. Other particulars are provided also.
3. However, the subscribed particulars to §6AB make no reference to the expert evidence of Dr Greiner. It is clear nevertheless that the Applicant ran her case on the basis that the way in which she sought to make good the defects allegations in §6AB was on the basis of Dr Greiner’s evidence. This is so for two reasons: (a) a letter dated 30 August 2019 from the Applicant’s solicitors to the Respondent’s solicitors explained that the way she would prove at least some of the alleged defects would be by means of the expert testimony of Dr Greiner (this is in the electronic Court Book under ‘particulars’); and, (b) the way the trial was conducted centred on the evidence of Dr Greiner. In terms, the case put and met was that the vehicles suffered from the four Component Deficiencies and the two Architectural Deficiencies.
4. As a matter of procedure, therefore, it is apparent that Dr Greiner’s reports served the purpose both of providing the Respondent with the particulars of how §6AB would be proved and also the evidence to make good that proof. Consequently, Dr Greiner’s evidence provides the metes and bounds of the dispute between the parties.
5. The result is this case is an example of the principle that parties may jointly choose to conduct their case on a basis other than that formally alleged in the pleadings: *Gould v Mount Oxide Mines Ltd (in liq)* (1916) 22 CLR 490 at 517 per Isaacs and Rich JJ; *Banque Commerciale SA, En Liquidation v Akhil Holdings Ltd* (1990) 169 CLR 279 at 287 per Mason CJ and Gaudron J, 293 per Dawson J.
6. The documents now in question, viz those of the Schedule 1 documents consisting of §1782 documents, are agreed between the parties not to be referred to in Dr Greiner’s reports. Some of them were provided to Dr Greiner but he did not include them in his report. I do not regard the fact that the Respondent knew some of these documents had been provided to Dr Greiner although not relied upon by him is of any legal significance.
7. It is apparent that the documents currently under consideration are relevant to the allegations in §6AB. For example, one of the documents is evidence which tends to suggest that Ford US decided in 2011 to discontinue the DPS6 and return to a conventional automatic transmission. This is rationally capable of supporting a finding that the DPS6 suffered from clutch shudder (when combined with other evidence).
8. However, the way in which the Applicant conducted her case on clutch shudder is that she would prove its existence on the basis of Dr Greiner’s evidence. This is a consequence of having elected to nominate Dr Greiner’s evidence as the particulars to §6AB. Since these documents are not in Dr Greiner’s reports it follows that they are outside the particularised case.
9. The Applicant submitted that this was not so. Here the argument was that the documents tended to prove the matters identified by Dr Greiner. However, that submission impermissibly elides the allegations of material fact in §6AB (which delimit and define what is relevant in the proceeding) with the particulars provided for that allegation by means of Dr Greiner’s reports (which give notice to the Respondent of how that case is to be proved). That the parties have acquiesced in the Applicant proving the allegations in §6AB by means of Dr Greiner’s reports does not entail that the Applicant is therefore entitled to lead additional evidence to support Dr Greiner’s conclusions. I note for completeness that the particulars in the 4FASOC do contain Document ID’s of certain documents produced by Ford US. None of these however are the documents which are the subject of the current debate.
10. Consequently, I accept the Respondent’s submission that it is procedurally unfair for the Applicant to rely upon the documents in question to prove the allegations in §6AB. Until the delivery of her closing written submissions the Applicant has never given the Respondent any meaningful indication that she would seek to prove the allegations in §6AB by means of these documents.
11. To this the Applicant rejoined that she had, in a large number of cases, given the Respondent notice of her intention to tender some of these documents and had done so in advance of the trial. So much may be accepted but it does not alter the fact that the Applicant has not given the Respondent notice of an intention to prove the allegations in §6AB other than by means of the subscribed particulars to that allegation or by means of Dr Greiner’s reports.
12. There is force therefore in the Respondent’s submission that it has been deprived of the opportunity of considering whether it should: (a) tender some of the other §1782 documents perhaps to contradict the documents upon which the Applicant now seeks to rely; (b) ask its own witnesses about the documents; and, (c) perhaps call other witnesses. The Applicant says that the Respondent has not led any evidence about these matters. However, I do not think that matters. Parties are often confined to the way in which they have run their case (often by being tied to their particulars) and this is not usually thought to require evidence from the other party that they would be prejudiced if some other course were taken. In any event, the prejudice pointed to by the Respondent – especially the possibility of considering whether to tender additional documents – is to my mind reasonably obvious.
13. The Applicant submitted that if I thought there was something in the Respondent’s position the more desirable course would be to permit it to take the steps it says it has been denied. Assessment of that submission occurs in a context where the present debate:

* arose in the last week of a six week trial;
* required two rounds of written submissions some weeks after the trial had concluded; and
* will necessarily be resolved after judgment had been reserved.

1. I do not accept in that context that it would be consistent with orderly trial management to give the Respondent an opportunity to reopen its case several months after the trial has concluded so that it can be given an opportunity to meet a case not foreshadowed at trial.
2. For completeness, I reject the Applicant’s submission that the Respondent had consented to her use of these documents because it had consented to the final form of the tender list (which included the documents). As a matter of formality, at the time the Respondent objected to the use of Schedule 1 documents on the basis that they were not yet formally in evidence. They would not find their way into evidence until 10.22 am on 29 July 2020 when my Associate informed the parties that the documents identified in document TDL.010.006.0001 would be received into evidence. By this time, the trial had been completed subject to the cleaning up of some loose ends (such as the tender of documents).
3. When the Schedule 1 documents were received into evidence on 29 July 2020 it is true that this occurred with the agreement of the Respondent. However, that agreement must be seen in context. On the last day of the trial, 24 July 2020, the Respondent had indicated that there were a number of documents in the draft list then provided to it which were not referred to anywhere in the evidence or in the submissions (by contrast the Schedule 1 documents were referred to in the Applicant’s closing written submissions if not anywhere else). It was the Respondent’s position that these never-referred-to documents should not be tendered. The Applicant appears to have agreed with this and removed documents of that kind from the final form of list. The Respondent then agreed to the tender of the balance. However, it is quite clear that this took place against a backdrop which included the Respondent’s continuing objection to the Schedule 1 documents. I do not think that its entitlement to make that objection was thereby lost. It continued to assert that reliance could not be placed upon the documents. Where the Respondent makes good its objection, the course I will take is to revoke to the extent necessary the interlocutory order by which the documents were admitted.
4. In that circumstance, I conclude that it would be procedurally unfair for the Applicant to be permitted to prove the allegations in §6AB by relying on those of the Schedule 1 documents which are drawn from the §1782 documents.
5. Despite the assertion in the Applicant’s written submissions that all the documents relate to pleaded issues and many relate to issues addressed in Mr Kuhn’s evidence, the Applicant fell short of submitting that any of the Schedule 1 documents were properly to be seen as being in reply to Mr Kuhn’s evidence and therefore admissible even if not mentioned in Dr Greiner’s report. For example, part of the Respondent’s defence as advanced by Mr Kuhn was that shudder was a normal operating characteristic of the DPS6 and did not constitute a defect. Legitimate evidence in reply to that evidence would have included the tender of documents proving that shudder was not a normal operating characteristic of the DPS6. This may well have included evidence which showed that Ford US decided in 2011 to discontinue use of the DPS6 in favour of a conventional automatic transmission. However, the Applicant did not put the matter that way and I need not form a view about it. Had such a submission been made, it would then have been necessary to assess the procedural consequences of the failure of the Applicant to cross-examine Mr Kuhn on this material. The outcome of that debate is not self-evident.
6. The parties were asked to prepare a table explaining their respective views on each of the Schedule 1 documents. The Respondent treated the table as an invitation to formulate further objections lying beyond its procedural fairness objection. I gave no leave for such objections to be made and I do not propose to entertain them.

### Schedule 1 documents not being §1782 documents

1. These documents were not the subject of direct submission and their significance emerged only in the table prepared by the parties.
2. The first document in this category is DIRD.001.001.0236 which is a minute of a decision made within DIRD. The Applicant submitted that the point of this document was to rebut any assertion that DIRD’s position provided evidence that there was no problem with the input shaft seals. The point was to show that the information which DIRD acted upon was not the same as the information before the Court. So viewed, the relevance of this evidence is as reply evidence to the Respondent’s evidence concerning the position of DIRD. For example, Mr Cruse gave evidence at §52 of his affidavit that DIRD had written to the Respondent on 17 October 2017 saying that its concerns ‘were clarified satisfactorily’. I propose to permit this document to remain in evidence.
3. The second document in this category is FOR.712.002.8367, an email forwarding a 6 Panel report that was referred to by Dr Greiner. The Applicant wishes to rely on this document to show the existence of knowledge within the Respondent of the input shaft seal issues discussed in the report, an allegation that appears at §20B(e). As with the §1782 documents, it would be procedurally unfair to allow this to occur when this document has never formed a part of the particularised case.
4. The third document is a spreadsheet FOR.713.001.0347. This was said to prove that the Respondent was aware of the TCM solder issue. That allegation appears at §20B(f). The particulars to that allegation indicate that this will be proved by means of FOR.713.001.0348 which is an agenda. I note that while the agenda and spreadsheet appear to have been attached to the same email, the contents of the spreadsheet could not be said to be reproduced or summarised in the agenda. No application was made to amend the particulars. The present document therefore falls outside the particularised case and will be removed from the evidence.
5. The fourth, fifth, sixth and seventh documents are FOR.729.004.7466, FOR.729.005.4035, FOR.729.005.4055 and FOR.729.005.4064. Each is an email in the same chain discussing the rear main oil seals and is said to prove the allegation at §6AB(a)(iii). None of these documents have ever formed part of the particularised case and the Applicant first signalled her intention to tender them on 16 July 2020. This was near the end of the fifth week of the trial, when the only remaining evidence was that of Mr Stockton and Dr Strombom on aggregate loss and damage. These documents will be removed from the evidence.
6. The eighth document is FOR.758.001.3126, the unsworn affidavit of Matthew Fyie, of Ford US, dated 3 July 2020. This affidavit was produced in the context of an application made by the Applicant to discharge suppression orders that applied to the §1782 documents. The Applicant wishes to rely on the affidavit to support its submission that a *Jones v Dunkel* inference should be drawn against the Respondent in relation to its failure to call witnesses who had detailed knowledge of the alleged deficiencies. Mr Fyie was not called to give evidence regarding the DPS6 and the Applicant submits that the existence of his unsworn affidavit evidences his availability to do so. Having being produced during the third week of the trial, this document clearly could not have formed part of the particularised case. However, given that it was filed and served by the Respondent (despite appearing to have been prepared by the solicitors acting for Ford US) there does not seem to be any procedural unfairness flowing from the Applicant relying on it. I will therefore allow it to remain in evidence.
7. The ninth document is FOR.700.005.0013, a spreadsheet said to be relevant to the allegations concerning the friction material that appear at §6AB(a)(i)(A), §6AB(a)(v) and §6AB(a)(ci). Despite being attached to a 14D report which is in evidence, this spreadsheet has not been particularised. It will be removed from the evidence.
8. The final two documents are FOR.725.026.6816 and FOR.725.026.6819. Both were attached to an email referred to by Dr Greiner and are said to prove the allegation at §6AB(a)(iii) relating to the rear main oil seal deficiency. However Dr Greiner’s reference to the covering email does not extend to how the Applicant seeks to use the attachments in question at [382] of her closing submissions. They do not form part of the particularised case and will be removed from the evidence.

### Orders

1. I will therefore remove from the evidence all of the objected to Schedule 1 documents save for the DIRD minute and the unsworn affidavit of Matthew Fyie. The appropriate way for this to occur is for me to revoke the order admitting the Schedule 1 documents into evidence, save for those where the Respondent does not press its objection and the two documents I have determined should remain in evidence.

## Judicial notice

1. I propose to take judicial notice of the fact that driving a car inevitably has some degree of risk. In particular, I note that the Australian Bureau of Statistics (‘ABS’) has recorded that 739 people died in 2019 as a ‘Car occupant injured in transport accident’. To take notice of the fact that people die driving cars each year in Australia I must consider whether the requirements of s 144 of the *Evidence Act 1995* (Cth) have been satisfied. It states:

**144 Matters of common knowledge**

1. Proof is not required about knowledge that is not reasonably open to question and is:
2. common knowledge in the locality in which the proceeding is being held or generally; or
3. capable of verification by reference to a document the authority of which cannot reasonably be questioned.

(2) The judge may acquire knowledge of that kind in any way the judge thinks fit.

1. The court (including, if there is a jury, the jury) is to take knowledge of that kind into account.
2. The judge is to give a party such opportunity to make submissions, and to refer to relevant information, relating to the acquiring or taking into account of knowledge of that kind as is necessary to ensure that the party is not unfairly prejudiced.
3. Considering then s 144(1)(b), it is relevant to note the effect of s 159 of the Evidence Act. It states:

**159 Official statistics**

A document that purports:

1. to be published by the Australian Statistician; and
2. to contain statistics or abstracts compiled and analysed by the Australian Statistician under the *Census and Statistics Act 1905*.

is evidence that those statistics or abstracts were compiled and analysed by the Australian Statistician under that Act.

1. In light of the definition of ‘Australian Statistician’ in the Evidence Act’s Dictionary and the deeming effect of s 17(2) of the *Census and Statistics Act 1905* (Cth), s 159 encompasses documents published by the ABS such as *3303.0 Causes of Death, Australia, 2019*  (Australian Bureau of Statistics, Canberra, 23 October 2020). The effect of s 159 means that I am to take this document as evidence that the statistics it contains were compiled and analysed by the Australian Statistician. I therefore can conclude that for the purposes of s 144(1)(b) it is a document the authority of which cannot reasonably be questioned.
2. While this satisfies the 2nd limb of s 144(1), the knowledge that people die driving cars each year must also be ‘not reasonably open to question’. I am satisfied that this is the case as the knowledge falls within the same category of information such as ‘asbestos is dangerous and can be deadly’: see *Kent v Wotton & Byrne Pty Ltd* [2006] TASSC 8; 15 Tas R 264 at [12] per Blow J, cited in Odgers S, *Uniform Evidence Law* (14th ed, Thomson Reuters, 2019) p 1351 [144.60]. This is not the kind of knowledge that I considered in *Parmar v Minister for Immigration and Citizenship* [2011] FCA 760 at [12]-[13], which was the intricacies of a language test. It is more akin to the information found in a meteorological document or a map: see *Wentworth District Capital Ltd v Commissioner of Taxation* [2010] FCA 862 at [2]. Finally s 144(4) requires me to give parties the opportunity to make submissions as is necessary to ensure that they are not unfairly prejudiced. I do not see how any submissions are necessary to avoid prejudice here as neither party could be disadvantaged if I take this knowledge into account, nor could the fact that ‘people die driving cars each year in Australia’ be meaningfully contradicted. Section 144(2) therefore allows me to acquire the knowledge in any way I see fit and I do so by reference to the document published by the ABS. I then rely on s 144(3) to take this knowledge into account.

# Section XVII: Conclusion and Answers TO Common Questions

1. The Court directed that certain common questions be stated for the purposes of the trial. These questions are as follows:

**Defects**

1 Which Affected Vehicles, when supplied as new, contained or were part of model lines containing a PowerShift Transmission that had:

(a) Component Deficiency – Friction Material?

(b) Component Deficiency – Input Shaft Seals?

(c) Component Deficiency – Rear Main Oil Seal?

(d) Component Deficiency – TCM Solder Cracks?

2 Which Affected Vehicles, when supplied as new, contained or were part of model lines containing a PowerShift Transmission that had:

(a) Architecture Deficiency – Damping?

(b) Architecture Deficiency – Heat?

3 Did the Affected Vehicles that had the Component Deficiency – Friction Material have, or have an unusual propensity to have, the:

(a) performance issues (as defined in sub-paragraph 6AB(b) of the 4FASOC);

(b) reliability issues (as defined in sub-paragraph 6AB(c) of the 4FASOC);

(c) durability issues (as defined in sub-paragraph 6AB(d) of the 4FASOC); and/or

(d) comfort issues (as defined in sub-paragraph 6AB(f) of the 4FASOC)?

4 Did the Affected Vehicles that had the Component Deficiency – Input Shaft Seals have, or have an unusual propensity to have, the:

(a) performance issues (as defined in sub-paragraph 6AB(b) of the 4FASOC);

(b) reliability issues (as defined in sub-paragraph 6AB(c) of the 4FASOC);

(c) durability issues (as defined in sub-paragraph 6AB(d) of the 4FASOC); and/or

(d) comfort issues (as defined in sub-paragraph 6AB(f) of the 4FASOC)?

5 Did the Affected Vehicles that had the Component Deficiency – Rear Main Oil Seal have, or have an unusual propensity to have, the:

(a) performance issues (as defined in sub-paragraph 6AB(b) of the 4FASOC);

(b) reliability issues (as defined in sub-paragraph 6AB(c) of the 4FASOC);

(c) durability issues (as defined in sub-paragraph 6AB(d) of the 4FASOC); and/or

(d) comfort issues (as defined in sub-paragraph 6AB(f) of the 4FASOC)?

6 Did the Affected Vehicles that had the Component Deficiency – TCM Solder Cracks have, or have an unusual propensity to have, the:

(a) performance issues (as defined in sub-paragraph 6AB(b) of the 4FASOC);

(b) reliability issues (as defined in sub-paragraph 6AB(c) of the 4FASOC);

(c) durability issues (as defined in sub-paragraph 6AB(d) of the 4FASOC);

(d) safety issues (as defined in sub-paragraph 6AB(e) of the 4FASOC); and/or

(e) comfort issues (as defined in sub-paragraph 6AB(f) of the 4FASOC)?

7 Did the Affected Vehicles that had the Architecture Deficiency – Damping have, or have an unusual propensity to have, the:

(a) performance issues (as defined in sub-paragraph 6AB(b) of the 4FASOC);

(b) reliability issues (as defined in sub-paragraph 6AB(c) of the 4FASOC);

(c) durability issues (as defined in sub-paragraph 6AB(d) of the 4FASOC);

(d) safety issues (as defined in sub-paragraph 6AB(e) of the 4FASOC); and/or

(e) comfort issues (as defined in sub-paragraph 6AB(f) of the 4FASOC)?

8 Did the Affected Vehicles that had the Architecture Deficiency – Heat have, or have an unusual propensity to have the:

(a) performance issues (as defined in sub-paragraph 6AB(b) of the 4FASOC);

(b) reliability issues (as defined in sub-paragraph 6AB(c) of the 4FASOC);

(c) durability issues (as defined in sub-paragraph 6AB(d) of the 4FASOC);

(d) safety issues (as defined in sub-paragraph 6AB(e) of the 4FASOC); and/or

(e) comfort issues (as defined in sub-paragraph 6AB(f) of the 4FASOC)?

**Knowledge**

9 Did the Respondent know, and if so, from when, the matters pleaded at paragraph 20B of the 4FASOC?

10 Did the Respondent know, and if so, from when, the matters pleaded at paragraph 20D(a) of the 4FASOC?

**Guarantee Subgroup**

11 When the Affected Vehicles were supplied as new, did they fail to comply with the guarantee of acceptable quality within the meaning of s 54 of the ACL?

**Ford Customer Subgroup**

12 Did Ford Australia make, to the Applicant and Ford Customer Subgroup Members (as defined in paragraph 7B(b) of 4FASOC):

(a) the Vehicle Representations (as defined in paragraph 7A of the 4FASOC), and if so, were those representations false and misleading in contravention of s 18 of the ACL and/or liable to mislead the public as to the nature, the characteristics of the suitability for purpose of Affected Vehicles in contravention of s 33 of the ACL;

(b) the Transmission Representations (as defined in paragraph 7F of the 4FASOC), and if so, were those representations false and misleading in contravention of s 18 of the ACL and/or liable to mislead the public as to the nature, the characteristics of the suitability for purpose of Affected Vehicles in contravention of s 33 of the ACL.

13 Did Ford Australia make, to the Applicant and Ford Customer Subgroup Members, the PowerShift Representations (as defined in paragraph 8A of the 4FASOC), and, if so, were the PowerShift Representations misleading or deceptive, or likely to mislead or deceive, in contravention of s 18 of the ACL.

14 Were the PowerShift Representations liable to mislead the public as to the nature, the characteristics, or the suitability for purpose of the Affected Vehicles, in contravention of s 33 of the ACL.

1. Some of these may be answered as they stand. For example for Question 1 and Question 2:
2. Which Affected Vehicles, when supplied as new, contained or were part of model lines containing a PowerShift Transmission that had:
   1. Component Deficiency – Friction Material?

*All Focuses; Fiestas manufactured before 7 January 2015 (excluding the 1.0L ‘Fox’ Fiesta); and EcoSports manufactured before 3 September 2016.*

* 1. Component Deficiency – Input Shaft Seals?

*Fiestas manufactured before 30 August 2013; Focuses manufactured at the Ford Thailand Manufacturing plant before 2 September 2013; Focuses manufactured at the Saarlouis plant before 28 June 2013; and EcoSports manufactured before 1 October 2013.*

* 1. Component Deficiency – Rear Main Oil Seal?

*None*

* 1. Component Deficiency – TCM Solder Cracks?

*Fiestas manufactured at the AutoAlliance Thailand plant before 23 June 2014; Fiestas manufactured at the Ford Thailand Manufacturing plant before 10 November 2014; Focuses manufactured before 10 November 2014; and EcoSports manufactured before 10 November 2014*

1. Which Affected Vehicles, when supplied as new, contained or were part of model lines containing a PowerShift Transmission that had:
   1. Architecture Deficiency – Damping?

*All Affected Vehicles to the extent it led to a slight shudder at low speeds and gear rattling.*

* 1. Architecture Deficiency – Heat?

*None*

1. It is also clear that the answers to Question 5(a)-(d) and Question 8(a)-(e) are all ‘no’.
2. So far as Questions 3, 4, 6 and 7 are concerned, the decision to use the concept of performance, reliability, durability, safety and comfort issues is liable to mask a great deal of detail. Although I will hear the parties on this, it would be better if the questions were restated to reflect the precise Component Deficiencies and risks associated with them. For example, the selection of B8080 clutch lining material carried with it risks of a number of symptoms only one of which was self-excited shudder. The risks and symptoms should be precisely identified in the questions.
3. Question 9 relates to the misadventure which is 4FASOC §20B and should not be answered. Question 10 relates to the barely mentioned §20D(a). The Applicant refers to §20D(a) in her submissions just twice at [552] and [558]. As far as I can see its only purpose is as part of the same misadventure of §20B, being the inchoate larger omissions case. The actual allegation in §20D(a) is:

By reason of the matters alleged in paragraphs 6AB-6AC, 6Al, 6AK, 6AM, 20B, and further or alternatively, paragraph 20C, during the relevant period, Ford Australia knew that:

1. it had advised on, and Dealers had implemented, certain repairs and replacement works to be carried out on certain Affected Vehicles to attempt to address the Vehicle Defects and PowerShift Transmission Defect (or one, some or all of them);
2. Holding this up to the light and squinting, I take this to be a reference to the fact that the Respondent implemented the three fixes for vehicles which were already in service and consequently, in relation to each implementation, must be taken to have known the nature of the problem which was being fixed. Thus, for example, the replacement of the input shaft seals from August 2013 gives rise to an implication that the Respondent knew that the input shaft seals were being replaced because there was something wrong with them and that the something was likely to be that they had leaked. Similar observations may be made about the B8080 clutch lining material, software update 15B22 and the revised TCM. In principle, I accept this. However, rather than push the actual findings I have made through the definition of the Vehicle Defects and PowerShift Transmission Defect in the 4FASOC, it would be better if the question actually reflects what the factual debate was – that is, the debate within the framework of issues assayed by Dr Greiner.
3. As for Question 11, while the answer to the Question as it stands is ‘yes’, this will need to be adjusted to reflect at least two matters. The first is the fact that each deficiency (constituted by a risk) gives rise to a separate cause of action under s 271(1). The second is that the particular deficiency (risks) will need to be identified with precision. Some attention may eventually need to be given to the fact that some of the vehicles were supplied before the commencement of the ACL.
4. Questions 12(a), 12(b) and 13 should be answered ‘no’. Question 14 does not arise.
5. In addition to the existing questions it is apparent that the parties in fact litigated a number of issues which they omitted to state as common questions. That will now need to be rectified. They include (at least):
6. the proper construction of s 271(1), s 271(6) and s 272;
7. the problems which were successfully repaired by the Respondent;
8. the problems which were not;
9. whether, in relation to the successful repairs, the relevant group members required the Respondent to conduct the repair; and
10. whether there should be an award of aggregate damages.
11. The parties will need to confer on these matters and propound revised questions and proposed answers. I will give them 28 days to do so. There will be a case management hearing on 27 July 2021. At that time, any remaining debate about the questions and answers will be ventilated, any question of costs may be mentioned although not debated and the future course of the litigation charted. At the same time, the issue of Ms Capic’s excess GST, stamp duty and financing costs may be mentioned and orders made resolving, if nothing else, her case. The only formal orders I will make are those in relation to the category of documents which I have determined the Applicant not be entitled to rely upon for reasons of procedural fairness, that the matter stand over for further case management on 27 July 2021 and that the parties not deliver written submissions in advance of the case management hearing.

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| I certify that the preceding nine hundred and sixty-nine (969) numbered paragraphs are a true copy of the Reasons for Judgment of the Honourable Justice Perram. |

Associate:

Dated: 29 June 2021