



## Contents

|  |           |
|--|-----------|
| <b>00 - Technical data</b>   | <b>1</b>  |
| <b>1 Safety information</b>  | <b>1</b>  |
| 1.1 General safety provisions  | 1         |
| 1.2 Safety measures when working on vehicles with a start/stop system  | 2         |
| 1.3 Notes on tow-starting/towing   | 2         |
| 1.4 Safety precautions when using testers and measuring instruments during a road test   | 2         |
| <b>2 Identification</b>  | <b>4</b>  |
| 2.1 Identification of gearbox  | 4         |
| <b>3 Repair notes</b>  | <b>5</b>  |
| 3.1 General information  | 5         |
| 3.2 Rules for cleanliness  | 6         |
| 3.3 General repair instructions  | 6         |
| 3.4 Gaskets and seals  | 7         |
| 3.5 Nuts and bolts   | 8         |
| <b>4 Technical data</b>  | <b>9</b>  |
| 4.1 Allocation gearbox - engine  | 9         |
| 4.2 Capacities   | 9         |
| <b>5 Electrical components</b>   | <b>11</b> |
| 5.1 Overview of fitting locations - electrical components  | 11        |
| <b>30 - Clutch</b>   | <b>12</b> |
| <b>1 Clutch</b>  | <b>12</b> |
| 1.1 Assembly overview - dual clutch  | 12        |
| 1.2 Removing and installing clutch end cover   | 13        |
| 1.3 Removing dual clutch   | 18        |
| 1.4 Installing dual clutch   | 21        |
| <b>34 - Controls, housing</b>  | <b>32</b> |
| <b>1 Mechatronic unit</b>  | <b>32</b> |
| 1.1 Removing and installing mechatronic unit for dual clutch gearbox J743 (gearbox installed)  | 32        |
| 1.2 Removing and installing mechatronic unit for dual clutch gearbox J743 (gearbox removed)  | 40        |
| 1.3 Removing and installing gearbox input speed sender G182 and oil temperature sender in multi-plate clutch G509 up to gearbox date 05/15 | 47        |
| <b>2 Removing and installing gear oil cooler</b>   | <b>49</b> |
| 2.1 Renewing bleeder   | 51        |
| <b>3 Emergency release of selector lever</b>   | <b>53</b> |
| <b>4 Removing and installing selector lever handle</b>   | <b>54</b> |
| 4.1 Removing and installing handle   | 54        |
| 4.2 Moving push-button in the handle to installation position  | 58        |
| <b>5 Selector mechanism</b>  | <b>60</b> |
| 5.1 Overview - selector mechanism  | 60        |
| 5.2 Removing and installing selector mechanism   | 61        |
| 5.3 Checking selector lever cable  | 65        |
| 5.4 Adjusting selector lever cable   | 66        |
| <b>6 Checking selector mechanism</b>   | <b>68</b> |
| 6.1 Selector lever in "P" position and ignition switched on  | 68        |
| 6.2 Selector lever in "N" position and ignition switched on  | 68        |
| 6.3 Selector lever in position "Tiptronic"   | 68        |
| 6.4 Ignition and light switched on   | 69        |
| 6.5 Selector lever position indicator  | 69        |
| <b>7 Dismantling and assembling gearbox</b>  | <b>70</b> |



|  |   |            |
|--|---|------------|
| 7.1                                    | Assembly overview - gearbox   | 70         |
| <b>8</b>                               | <b>Removing and installing gearbox</b>  | <b>76</b>  |
| 8.1                                    | Removing gearbox  | 76         |
| 8.2                                    | Installing gearbox  | 97         |
| 8.3                                    | Specified torques   | 97         |
| <b>9</b>                               | <b>Transporting gearbox and securing to assembly stand</b>  | <b>101</b> |
| <b>10</b>                              | <b>Bevel box</b>  | <b>102</b> |
| 10.1                                   | Removing and installing bevel box, vehicles with 2.0 l - 100/103/130 kW diesel engine                                 | 102        |
| 10.2                                   | Removing and installing bevel box, vehicles with petrol engine and vehicles with 2.0 l - 110/130/135 kW diesel engine | 102        |
| 10.3                                   | Detaching bevel box from gearbox – gearbox removed  | 114        |
| <b>11</b>                              | <b>Oil and oil filter</b>   | <b>119</b> |
| 11.1                                   | Renewing oil filter   | 120        |
| 11.2                                   | Checking oil level and topping up   | 121        |
| 11.3                                   | Draining and filling oil  | 124        |
| <b>35 - Gears, shafts</b>              |   | <b>129</b> |
| 1                                      | Currently, no repairs can be made to gears and shafts   | 129        |
| <b>39 - Final drive - differential</b> |   | <b>130</b> |
| <b>1</b>                               | <b>Bevel box</b>  | <b>130</b> |
| 1.1                                    | Assembly overview - bevel box   | 130        |
| <b>2</b>                               | <b>Overview of fitting locations - oil seals</b>  | <b>133</b> |
| <b>3</b>                               | <b>Renewing seals on gearbox</b>  | <b>134</b> |
| 3.1                                    | Renewing oil seal for left flange shaft   | 134        |
| 3.2                                    | Renewing right seal (between gearbox and bevel box) on gearbox  | 136        |
| <b>4</b>                               | <b>Renewing seals on bevel box</b>  | <b>138</b> |
| 4.1                                    | Renewing seals on left (between bevel box and gearbox)  | 139        |
| 4.2                                    | Renewing right seal (drive shaft side)  | 142        |
| 4.3                                    | Renewing output flange oil seal (bevel box removed)   | 144        |
| 4.4                                    | Renewing needle bearing (polygon bearing) for stub shaft  | 150        |
| <b>5</b>                               | <b>Checking and topping up gear oil in bevel box</b>  | <b>155</b> |
| 5.1                                    | Checking gear oil in bevel box  | 155        |
| 5.2                                    | Filling gear oil in bevel box   | 155        |
| 5.3                                    | Specified torque  | 158        |