

Contents

00 - Technical data	1
1 Identification	1
1.1 Gearbox identification	1
2 Safety precautions	2
2.1 Safety precautions when working on vehicle	2
2.2 Safety precautions when working on vehicles with start/stop system	3
2.3 Safety precautions when using testers and measuring instruments during a road test	3
2.4 Safety precautions when working on subframe	3
2.5 Safety precautions when tow-starting and towing	4
3 Repair instructions	5
3.1 Rules for cleanliness	5
3.2 General notes	5
3.3 General repair instructions	5
3.4 Contact corrosion	7
3.5 Routing and attaching lines and wiring	8
4 Technical data	9
4.1 Capacities	9
4.2 Allocation of gearbox to engine	10
37 - Controls, housing	12
1 Selector mechanism	12
1.1 Exploded view - selector lever handle	12
1.2 Exploded view - selector mechanism	13
1.3 Exploded view - selector lever cable	15
1.4 Manual release from position P	15
1.5 Removing and installing selector lever handle	16
1.6 Removing and installing selector mechanism	19
1.7 Checking selector mechanism	21
1.8 Removing and installing selector lever cable	23
1.9 Checking and adjusting selector lever cable	27
1.10 Removing and installing selector lever lock solenoid N110	31
1.11 Removing and installing selector lever sensors control unit J587	33
1.12 Removing and installing gear selector position P switch F305	34
1.13 Renewing selector shaft oil seal	34
2 Removing and installing gearbox	35
2.1 Removing gearbox	35
2.2 Installing gearbox	62
2.3 Tightening torques for gearbox	70
3 Assembly mountings	73
3.1 Exploded view - assembly mountings	73
3.2 Removing and installing tunnel cross member	73
4 Transporting gearbox	76
5 Securing to engine and gearbox support	77
6 ATF circuit	78
6.1 Exploded view - ATF circuit	78
6.2 Removing and installing ATF cooler	79
6.3 Removing and installing ATF filter	82
6.4 Removing and installing ATF lines	84
7 ATF	87
7.1 Checking ATF level	87
7.2 Draining and filling ATF	93



38 - Gears, control	99
1 Dismantling and assembling gearbox	99
1.1 Exploded view - dual-mass flywheel	99
1.2 Exploded view - gearbox control system	99
1.3 Removing and installing dual-mass flywheel	100
1.4 Removing and installing end cover	100
39 - Final drive - differential	103
1 Final drive	103
1.1 Exploded view - final drive	103
2 Gear oil	105
2.1 Checking gear oil level	105
2.2 Draining and filling gear oil	106
3 Oil seals	109
3.1 Overview of fitting locations - oil seals	109
3.2 Renewing oil seal (left-side)	109
3.3 Renewing oil seal (right-side)	110
3.4 Renewing oil seal for input shaft	110
4 Differential	111
4.1 Removing and installing flange shaft (left-side)	111
4.2 Removing and installing flange shaft (right-side)	111
5 Gearbox control system	114
5.1 Overview of fitting locations - gearbox control system	114
5.2 Removing and installing gearbox control unit	117
5.3 Removing and installing hydraulic control unit	117