

Contents

00 - Technical data	1
1 Identification	1
2 Technical data	2
2.1 Capacities	2
3 Safety information	3
3.1 General safety regulations	3
3.2 Safety precautions when working on vehicles with start/stop system	4
3.3 Safety precautions when using testers and measuring instruments during a road test	4
3.4 Safety precautions when tow-starting and towing	4
4 Repair instructions	6
4.1 Rules for cleanliness	6
4.2 General repair instructions	6
4.3 Deactivating ATF pump and discharging hydraulic accumulator	8
4.4 Contact corrosion	8
4.5 Safety functions of gearbox control unit	8
5 Electrical components	10
5.1 Overview of fitting locations - electrical components	10
30 - Clutch	11
1 Clutch	11
34 - Controls, housing	12
1 Selector mechanism	12
1.1 Assembly overview - selector cables	12
1.2 Assembly overview - selector lever handle	13
1.3 Assembly overview - selector mechanism	14
1.4 Manual release from position P	16
1.5 Removing and installing selector lever handle	18
1.6 Bringing interlock button in handle into installation position	27
1.7 Removing and installing selector mechanism	29
1.8 Checking selector mechanism	33
1.9 Removing and installing selector lever cable	35
1.10 Checking and adjusting selector lever cable	41
1.11 Removing and installing selector lever lock solenoid N110	47
1.12 Removing and installing selector lever sensors control unit J587	50
1.13 Removing and installing gear sensor	51
1.14 Renewing selector shaft oil seal	54
2 Removing and installing gearbox	57
2.1 Removing gearbox	57
2.2 Installing gearbox	67
2.3 Tightening torques for gearbox	76
3 Transporting gearbox	79
4 Securing to engine and gearbox support	80
5 Assembly mountings	81
5.1 Assembly overview - assembly mountings	81
5.2 Removing and installing tunnel cross member	81
5.3 Removing and installing gearbox support with gearbox mounting	84
5.4 Removing and installing gearbox mounting	84
6 Gear oil circuit	86
6.1 Assembly overview - gear oil circuit	86
6.2 Removing and installing gear oil pump	86



7	ATF circuit	89
7.1	Assembly overview - ATF circuit	89
7.2	Removing and installing ATF cooler	91
8	Gear oil	96
8.1	Checking gear oil level	96
8.2	Draining and filling gear oil	97
9	ATF	101
9.1	Checking ATF level	101
9.2	Draining and filling ATF	104
10	Mechatronic unit	109
10.1	Assembly overview - mechatronic unit	109
10.2	Removing and installing oil pan	111
10.3	Removing and installing mechatronic unit	114
35 - Gears, shafts		116
1	Dismantling and assembling gears and shafts	116
39 - Final drive - differential		117
1	Gearbox control system	117
1.1	Overview of fitting locations - gearbox control system	117
2	Oil seals	119
2.1	Overview of fitting locations - oil seals	119
2.2	Renewing left oil seal	119
2.3	Renewing right oil seal	119
3	Differential	125
3.1	Assembly overview - differential	125
3.2	Removing and installing left flange shaft	127
3.3	Removing and installing right flange shaft	132