



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 the 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	6
3.4 Contact corrosion	8
3.5 Routing and attachment of pipes, hoses and wiring	9
3.6 Use of impact wrenches	9
4 Technical data	10
4.1 Capacities	10
4.2 Oil distribution	11
4.3 Clutch logic	12
5 Transmission layout	13
5.1 Transmission layout - four-wheel drive	13
32 - Torque converter	14
1 Torque converter	14
37 - Controls, housing	15
1 Selector mechanism	15
1.1 Exploded view - selector lever handle	15
1.2 Exploded view - selector mechanism	17
1.3 Exploded view - selector lever cable	19
1.4 Manual release from position P	20
1.5 Removing and installing selector lever handle	20
1.6 Bringing interlock button in handle into installation position	25
1.7 Removing and installing selector mechanism	27
1.8 Checking selector mechanism	32
1.9 Removing and installing selector lever cable	35
1.10 Checking and adjusting selector lever cable	39
1.11 Removing and installing selector lever lock solenoid N110	43
1.12 Removing and installing selector lever sensors control unit J587	45
1.13 Removing and installing gear selector position P switch F305	46
1.14 Renewing selector shaft oil seal	46
2 Removing and installing gearbox	49
2.1 Removing gearbox	49
2.2 Installing gearbox	92
2.3 Tightening torques for gearbox	98
3 Assembly mountings	100
3.1 Exploded view - assembly mountings	100
3.2 Removing and installing tunnel cross member	100
4 Transporting gearbox	103
5 Securing to engine and gearbox support	104



6	ATF circuit	105
6.1	Exploded view - ATF circuit	105
6.2	Removing and installing ATF cooler	106
6.3	Removing and installing ATF lines	109
7	ATF	113
7.1	Checking ATF level	113
7.2	Draining and filling ATF	116
38 - Gears, control		120
1	ATF system	120
1.1	Removing and installing oil pan	120
2	Mechatronic unit	124
39 - Final drive - front differential		125
1	Final drive	125
1.1	Exploded view - final drive	125
1.2	Renewing O-ring on cover for front final drive	127
2	Gear oil	129
2.1	Overview of fitting locations - drain and inspection plugs	129
2.2	Checking gear oil level	130
2.3	Draining and filling gear oil	139
3	Gear oil cooler and pipes	150
3.1	Removing and installing gear oil cooler	150
4	Oil seals	152
4.1	Overview of fitting locations - oil seals	152
4.2	Renewing oil seal (left-side)	153
4.3	Renewing oil seal (right-side)	156
5	Differential	158
5.1	Removing and installing flange shaft (left-side)	158
5.2	Removing and installing flange shaft (right-side)	159
5.3	Renewing ball bearing for flange shaft (left-side)	162
6	Centre differential	165
7	Transfer box	166
8	Gearbox control system	167
8.1	Overview of fitting locations - gearbox control system	167