



Contents

00 - Technical data	1
1 Safety information	1
1.1 Safety measures when working on vehicles with a start/stop system	1
1.2 Safety precautions when using testers and measuring instruments during a road test	1
2 Identification	2
2.1 Gearbox identification	2
3 Repair instructions	3
3.1 General repair instructions	3
3.2 Gaskets and seals	5
3.3 Nuts and bolts	5
4 Technical data	6
4.1 Capacities	6
4.2 Allocation gearbox - engine	6
30 - Clutch	10
1 Clutch operation	10
1.1 Assembly overview - clutch mechanism	10
1.2 Assembly overview - clutch release mechanism	12
1.3 Removing and installing over-centre spring	12
1.4 Removing and installing mounting bracket	13
1.5 Removing and installing clutch master cylinder	14
1.6 Bleeding clutch mechanism	16
1.7 Removing and installing clutch pedal switch	17
2 Clutch	20
2.1 Assembly overview - clutch	20
2.2 Removing and installing clutch	22
34 - Controls, housing	26
1 Selector mechanism	26
1.1 Installation position - selector mechanism	26
1.2 Assembly overview - gear knob and cover	28
1.3 Assembly overview - Gear lever and selector housing	28
1.4 Removing and installing selector mechanism	29
1.5 Adjusting selector mechanism	31
1.6 Checking selector mechanism	34
1.7 Removing and installing selector lever handle	35
1.8 Dismantling and assembling selector mechanism	36
2 Removing and installing gearbox	38
2.1 Specified torques for gearbox	38
2.2 Removing gearbox	38
2.3 Installing gearbox	43
3 Assembly mountings	45
3.1 Assembly overview - assembly mountings, version A	45
3.2 Assembly overview - assembly mountings, version B	47
3.3 Removing and installing gearbox mountings, version B	48
4 Transporting gearbox	50
5 Dismantling and assembling gearbox	51
5.1 Schematic overview - gearbox	51
5.2 Assembly overview - clutch housing and input shaft	52
5.3 Assembly overview - gearbox housing, layshaft, output shaft and selector unit	53
5.4 Assembly overview - selector unit	55
5.5 Assembly overview - selector forks	56



5.6	Removing and installing propshaft flange	57
5.7	Removing and installing adapter shaft	59
5.8	Dismantling and assembling gearbox	61
6	Gearbox housing, clutch housing	76
6.1	Assembly overview - gearbox housing	76
6.2	Assembly overview - clutch housing	79
6.3	Repairing gearbox housing	79
6.4	Repairing clutch housing	82
7	Gear oil	87
7.1	Checking gear oil level	87
7.2	Draining and filling gear oil	88
35	Gears, shafts	89
1	Input and output shafts	89
1.1	Assembly overview - input shaft and output shaft	89
1.2	Dismantling and assembling output shaft	93
1.3	Renewing input shaft seal	104
1.4	Renewing output shaft seal	105
2	Layshaft	109
2.1	Assembly overview - layshaft	109
2.2	Dismantling and assembling layshaft	112
3	Reverse shaft	119
3.1	Assembly overview - reverse shaft	119
3.2	Removing and installing reverse shaft	120