



Contents

00 - Technical data	1
1 Safety information	1
1.1 Safety measures when working on vehicles with a start/stop system	1
2 Identification	2
2.1 Gearbox identification	2
3 Technical data	4
3.1 Allocation gearbox - engine	4
3.2 Capacities	5
3.3 Calculation of gear ratios	5
4 Overview - power transmission	6
5 Electrical components	8
5.1 Overview of fitting locations - electrical components	8
6 Repair instructions	10
6.1 General repair instructions	10
30 - Clutch	14
1 Clutch mechanism	14
1.1 Overview of fitting locations – clutch mechanism	14
1.2 Assembly overview - pedal cluster	15
1.3 Assembly overview - clutch hydraulics	17
1.4 Assembly overview - clutch release mechanism	21
1.5 Removing and installing bearing bush	23
1.6 Checking clutch master cylinder and clutch slave cylinder	24
1.7 Removing and installing clutch position sender G476	25
1.8 Removing and installing return spring	26
1.9 Removing and installing over-centre spring	29
1.10 Removing and installing clutch pedal	32
1.11 Removing and installing mounting bracket	34
1.12 Removing and installing clutch master cylinder	40
1.13 Removing and installing clutch slave cylinder	40
1.14 Removing and installing lines for clutch mechanism	44
1.15 Bleeding clutch mechanism	47
1.16 Repairing clutch release mechanism	48
2 Clutch	50
2.1 Assembly overview - clutch	50
2.2 Removing and installing clutch	52
34 - Controls, housing	67
1 Selector mechanism	67
1.1 Installation position - selector mechanism	67
1.2 Assembly overview – gear knob and cover	68
1.3 Assembly overview - selector mechanism	69
1.4 Removing and installing gear knob	71
1.5 Removing and installing selector mechanism	73
1.6 Repairing selector mechanism	76
1.7 Adjusting selector mechanism	81
1.8 Checking selector mechanism	85
2 Removing and installing gearbox	86
2.1 Removing gearbox	86
2.2 Installing gearbox	98
2.3 Specified torques for gearbox	107
3 Assembly mountings	108



3.1	Assembly overview - assembly mountings	108
4	Transporting gearbox	111
5	Gear oil	112
5.1	Checking gear oil level	112
5.2	Draining and filling gear oil	112
6	Securing to engine and gearbox support	115
7	Dismantling and assembling gearbox	117
7.1	Schematic overview - gearbox	117
7.2	Assembly overview - gearbox	118
7.3	Assembly overview - cover for gearbox housing and 5th gear	119
7.4	Assembly overview - gearbox housing and selector mechanism	121
7.5	Assembly overview - selector unit	123
7.6	Assembly overview - shafts, differential, selector mechanism	124
7.7	Assembly overview - selector forks	125
7.8	Repairing selector unit	126
7.9	Renewing selector shaft seal	128
7.10	Repairing selector forks	128
7.11	Removing cover for gearbox housing and 5th gear	133
7.12	Dismantling and assembling gearbox	139
7.13	Installing cover for gearbox housing and 5th gear	154
8	Gearbox housing, clutch housing	159
8.1	Assembly overview - gearbox housing and clutch housing	159
8.2	Repairing gearbox housing	162
8.3	Repairing clutch housing	168
35 - Gears, shafts		170
1	Input shaft	170
1.1	Assembly overview - input shaft	170
1.2	Dismantling and assembling input shaft	172
1.3	Adjusting input shaft	180
1.4	Renewing input shaft seal	185
2	Output shaft	187
2.1	Assembly overview - output shaft	187
2.2	Dismantling and assembling output shaft	190
2.3	Adjusting output shaft	204
3	Reverse shaft	210
3.1	Assembly overview - reverse shaft	210
3.2	Dismantling and assembling reverse shaft	210
39 - Final drive - differential		214
1	Oil seals	214
1.1	Overview of fitting locations - oil seals	214
1.2	Renewing left seal	214
1.3	Renewing right seal	217
2	Differential	222
2.1	Assembly overview - differential	222
2.2	Dismantling and assembling differential	224
2.3	Adjusting differential	230
3	Adjustment overview	234