



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 notes	3
3.1 General repair instructions	3
4 Technical data	8
4.1 Capacities	8
4.2 Allocation gearbox - engine	8
4.3 Calculation of gear ratios	8
5 Overview - power transmission	9
5.1 Overview - power transmission - front-wheel drive	9
6 Electrical components	11
6.1 Overview of fitting locations - electrical components	11
30 - Clutch	13
1 Clutch mechanism	13
1.1 Assembly overview - pedal cluster	13
1.2 Assembly overview - clutch hydraulics	15
1.3 Assembly overview - clutch release mechanism	16
1.4 Removing and installing clutch pedal	18
1.5 Removing and installing over-centre spring	22
1.6 Removing and installing mounting bracket	25
1.7 Removing and installing bearing bush	34
1.8 Checking clutch master cylinder and clutch slave cylinder	35
1.9 Removing and installing clutch position sender G476	35
1.10 Removing and installing clutch master cylinder	36
1.11 Removing and installing clutch slave cylinder	38
1.12 Bleeding clutch mechanism	42
1.13 Repairing clutch release mechanism	44
2 Clutch	46
2.1 Assembly overview - clutch	46
2.2 Removing and installing clutch	48
34 - Controls, housing	63
1 Selector mechanism	63
1.1 Installation position - selector mechanism	63
1.2 Assembly overview - Gear lever and selector housing	64
1.3 Removing and installing selector mechanism	66
1.4 Adjusting selector mechanism	68
1.5 Removing and installing gear selector cable	71
1.6 Removing and installing selector lever handle	76
1.7 Renewing selector shaft seal	77
1.8 Checking selector mechanism	79
2 Removing and installing gearbox	80
2.1 Specified torques for gearbox	80
2.2 Removing gearbox	80
2.3 Installing gearbox	89
3 Assembly mountings	96
3.1 Assembly overview - assembly mountings	96



4	Gearbox transport	97
4.1	Gearbox transport	97
5	Dismantling and assembling gearbox	99
5.1	Schematic overview - gearbox	99
5.2	Assembly overview - gearbox housing and selector mechanism	99
5.3	Assembly overview - selector unit	100
5.4	Assembly overview - input shaft, output shafts, differential, selector rods	101
5.5	Assembly overview - selector forks	102
5.6	Dismantling and assembling gearbox	104
6	Gearbox housing, clutch housing	126
6.1	Assembly overview - gearbox housing	126
6.2	Assembly overview - clutch housing	128
6.3	Assembly overview - cover for gearbox housing and 5th gear	130
6.4	Repairing gearbox housing	132
6.5	Repairing clutch housing	139
6.6	Removing gearbox housing cover	146
6.7	Mounting gearbox housing cover	153
7	Securing to engine and gearbox support	160
7.1	Securing to engine and gearbox support	160
8	Gear oil	162
8.1	Checking gear oil level and replenishing gear oil	162
35 - Gears, shafts		164
1	Input shaft	164
1.1	Assembly overview – input shaft	164
1.2	Dismantling and assembling input shaft	166
2	Output shaft	173
2.1	Assembly overview - output shaft	173
2.2	Dismantling and assembling output shaft	176
2.3	Adjusting output shaft	189
3	Reverse shaft	195
3.1	Assembly overview - reverse shaft	195
3.2	Dismantling and assembling reverse shaft	195
39 - Final drive - differential		199
1	Seals	199
1.1	Overview of fitting locations - oil seals	199
1.2	Renewing left seal	199
1.3	Renewing right seal	203
1.4	Renewing input shaft seal	207
2	Differential	210
2.1	Assembly overview - differential	210
2.2	Dismantling and assembling differential	212
2.3	Adjusting differential	215
3	Adjustment overview	221