



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 |