



## Contents

<b>00 - Technical data</b>	<b>1</b>
<b>1 Safety information</b>	<b>1</b>
1.1 Safety measures when working on vehicles with a start/stop system	1
<b>2 Identification</b>	<b>2</b>
2.1 Gearbox identification	2
<b>3 Technical data</b>	<b>4</b>
3.1 Allocation gearbox - engine	4
3.2 Capacities	4
<b>4 Overview - power transmission</b>	<b>5</b>
<b>5 Electrical components</b>	<b>7</b>
5.1 Overview of fitting locations - electrical components	7
<b>6 Repair instructions</b>	<b>9</b>
6.1 General repair instructions	9
<b>30 - Clutch</b>	<b>13</b>
<b>1 Clutch mechanism</b>	<b>13</b>
1.1 Overview of fitting locations – clutch mechanism	13
1.2 Assembly overview - pedal cluster	14
1.3 Assembly overview - clutch hydraulics	16
1.4 Assembly overview - clutch release mechanism	18
1.5 Removing and installing bearing bush	19
1.6 Checking clutch master cylinder and clutch slave cylinder	21
1.7 Removing and installing clutch position sender G476	22
1.8 Removing and installing extension spring	22
1.9 Removing and installing clutch pedal	24
1.10 Removing and installing mounting bracket	24
1.11 Removing and installing clutch master cylinder	29
1.12 Removing and installing clutch slave cylinder	30
1.13 Removing and installing lines for clutch mechanism	33
1.14 Bleeding clutch mechanism	37
1.15 Removing and installing clutch pedal switch F36	39
1.16 Repairing clutch release mechanism	40
<b>2 Clutch</b>	<b>42</b>
2.1 Assembly overview - clutch	42
2.2 Removing and installing clutch	42
<b>34 - Controls, housing</b>	<b>49</b>
<b>1 Selector mechanism</b>	<b>49</b>
1.1 Installation position - selector mechanism	49
1.2 Assembly overview – gear knob and cover	50
1.3 Assembly overview - selector mechanism	51
1.4 Removing and installing gear knob	53
1.5 Removing and installing selector mechanism	55
1.6 Repairing selector mechanism	59
1.7 Adjusting selector mechanism	63
1.8 Checking selector mechanism	66
<b>2 Removing and installing gearbox</b>	<b>67</b>
2.1 Removing gearbox	67
2.2 Installing gearbox	75
2.3 Specified torques for gearbox	78
<b>3 Assembly mountings</b>	<b>79</b>
3.1 Assembly overview - assembly mountings	79



<b>4</b>	<b>Transporting gearbox</b> .....	<b>82</b>
<b>5</b>	<b>Gear oil</b> .....	<b>84</b>
5.1	Checking gear oil level .....	84
5.2	Draining and filling gear oil .....	85
<b>6</b>	<b>Securing to engine and gearbox support</b> .....	<b>87</b>
<b>7</b>	<b>Dismantling and assembling gearbox</b> .....	<b>89</b>
7.1	Schematic overview - gearbox .....	89
7.2	Assembly overview - gearbox .....	90
7.3	Assembly overview - cover for gearbox housing and 5th/6th gear .....	90
7.4	Assembly overview - clutch housing .....	92
7.5	Assembly overview - shafts, differential, selector mechanism .....	93
7.6	Assembly overview - selector unit .....	95
7.7	Assembly overview - selector forks .....	96
7.8	Repairing selector forks .....	97
7.9	Repairing selector unit .....	102
7.10	Renewing selector shaft seal .....	105
7.11	Dismantling and assembling gearbox .....	106
<b>8</b>	<b>Gearbox housing, clutch housing</b> .....	<b>127</b>
8.1	Assembly overview - gearbox housing and clutch housing .....	127
8.2	Assembly overview - gearbox housing cover .....	129
8.3	Repairing gearbox housing cover .....	130
8.4	Repairing clutch housing .....	133
<b>35</b>	<b>Gears, shafts</b> .....	<b>136</b>
<b>1</b>	<b>Input shaft</b> .....	<b>136</b>
1.1	Assembly overview - input shaft .....	136
1.2	Dismantling and assembling input shaft .....	139
1.3	Renewing input shaft seal .....	151
<b>2</b>	<b>Output shaft</b> .....	<b>153</b>
2.1	Assembly overview - output shaft .....	153
2.2	Dismantling and assembling output shaft .....	156
<b>39</b>	<b>Final drive - differential</b> .....	<b>164</b>
<b>1</b>	<b>Oil seals</b> .....	<b>164</b>
1.1	Overview of fitting locations - seals .....	164
1.2	Renewing left seal .....	164
1.3	Renewing right oil seal .....	167
<b>2</b>	<b>Differential</b> .....	<b>170</b>
2.1	Assembly overview - differential .....	170
2.2	Dismantling and assembling differential .....	171
2.3	Adjusting differential .....	181