



## Contents

<b>00 - Technical Data</b> .....	<b>1</b>
<b>1 gearbox identification</b> .....	<b>1</b>
1.1 Location on gearbox .....	1
1.2 Prefix, correspondence, gear ratio, filling volume .....	1
<b>2 gearbox assembly scheme</b> .....	<b>3</b>
2.1 Nomenclature .....	3
2.2 Gear ratios .....	4
<b>3 Gear ratio calculation „i“</b> .....	<b>5</b>
<b>4 General repair instructions</b> .....	<b>6</b>
4.1 gearbox .....	6
4.2 Gaskets and retainers .....	6
4.3 Screws, nuts .....	7
4.4 Roller Bearings .....	7
4.5 Adjustment shims .....	7
4.6 Synchronizer rings .....	8
<b>30 - Clutch - control system</b> .....	<b>9</b>
<b>1 Clutch drive mechanism - repair</b> .....	<b>9</b>
1.1 Hydraulic system - assembly overview .....	10
1.2 Clutch slave cylinder - remove and install .....	11
<b>2 Clutch drive mechanism - repair</b> .....	<b>13</b>
<b>3 Clutch - repair</b> .....	<b>15</b>
<b>34 - Drive, housing</b> .....	<b>18</b>
<b>1 Diagnosis, measurement and information system</b> .....	<b>18</b>
1.1 Connect .....	18
<b>2 Electronic components and installation locations</b> .....	<b>19</b>
2.1 "Tiptronic" upshift switch on the steering wheel E438 and/or "Tiptronic" downshift switch on the steering wheel E439 .....	20
2.2 Gear identification sensor 2 G616 .....	21
2.3 Gearbox input speed sensor G182 .....	22
2.4 Gear identification sensor G604 .....	23
2.5 Diagnosis socket .....	24
2.6 Selected gear indicator Y6 .....	25
2.7 Automatic gearbox control unit J217 .....	25
<b>3 Selector lever</b> .....	<b>26</b>
3.1 Selector lever - assembly overview .....	26
3.2 Selector lever handle - remove and install .....	27
3.3 Upper selector lever cover - remove and install .....	28
3.4 Selector lever - remove and install .....	29
3.5 Lower selector lever cover - remove and install .....	30
3.6 Selection lever boot - adjust .....	31
3.7 Selector lever operating positions - check .....	32
<b>4 Gear selection mechanism - remove and install</b> .....	<b>33</b>
4.1 Gear selection mechanism - assembly overview .....	33
4.2 Gear selection mechanism - remove and install .....	34
<b>5 Gear selection mechanism - disassemble and assemble</b> .....	<b>42</b>
5.1 Gear selection mechanism - assembly overview .....	43
5.2 Valve set - assembly overview .....	47
5.3 Valve set - remove and install .....	47
5.4 High-pressure slave cylinder - replace .....	48
5.5 Pressure tube - replace .....	49



5.6	Maximum pressure valve - replace	49
5.7	Gearbox hydraulic pressure sensor G270 - replace	49
5.8	Electric motor for the Hydraulic gearbox pump V387 - remove and install	50
5.9	Gearbox hydraulic pressure pump V387 - remove and install	51
5.10	Hydraulic oil reservoir - remove and install	52
5.11	Return tube - replace	52
5.12	Wiring harness - remove and install	53
5.13	Connector bracket (wiring harness) - remove and install	54
5.14	Tightening torques	55
<b>6</b>	<b>gearbox - remove and install</b>	<b>56</b>
6.1	Removal	57
6.2	Installation	62
6.3	Tightening torques	65
<b>7</b>	<b>Gear oil level - check and replenish</b>	<b>67</b>
7.1	Oil level - check	67
7.2	Oil level - replenish	67
<b>8</b>	<b>Oil level for the gear selection mechanism - check and replenish</b>	<b>68</b>
8.1	Oil level - check	68
8.2	Oil level - replenish	69
<b>9</b>	<b>gearbox - disassemble and assemble</b>	<b>70</b>
9.1	gearbox - assembly overview	71
9.2	I - Gearbox housing cover and 5th gear	72
9.3	II - Clutch housing	73
9.4	III - Input shaft, planet pinion, differential, selection mechanism and selector forks	74
9.5	Input shaft, planet pinion, differential, selection mechanism and selector forks - disassemble and assemble	75
<b>10</b>	<b>Gearbox and clutch housings - repair</b>	<b>83</b>
<b>11</b>	<b>Selector forks - disassemble and assemble</b>	<b>89</b>
<b>35 - Gears and shafts</b>		<b>94</b>
1	Input shaft - disassemble and assemble	94
2	Planet pinion - disassemble and assemble	105
<b>39 - gearbox shafts, differential</b>		<b>113</b>
<b>1</b>	<b>Retainer for the drive flange - replace</b>	<b>113</b>
1.1	Left drive flange retainer (left side) - replace	113
1.2	Drive flange retainer (right side) - replace	116
<b>2</b>	<b>Differential - repair</b>	<b>119</b>
2.1	Differential - disassemble and assemble	119
2.2	Differential - adjust	127