

## Contents

<b>00 - Technical data</b> .....	<b>1</b>
<b>1 Identification of gearbox</b> .....	<b>1</b>
1.1 Identification of gearbox .....	1
<b>2 Information on "Automatic gearbox 01N"</b> .....	<b>2</b>
2.1 Information on "Automatic gearbox 01N" .....	2
2.2 Self-diagnosis .....	2
<b>3 Code letters, gearbox allocation, ratios, equipment</b> .....	<b>2</b>
3.1 Code letters, gearbox allocation, ratios, equipment .....	2
<b>4 Capacities</b> .....	<b>3</b>
4.1 Capacities .....	3
<b>5 Repair with an exchange component</b> .....	<b>4</b>
5.1 Repair with an exchange component .....	4
5.2 Items included with exchange component .....	5
<b>6 General repair instructions</b> .....	<b>12</b>
6.1 General repair instructions .....	12
<b>32 - Torque converter</b> .....	<b>14</b>
<b>1 Torque converter</b> .....	<b>14</b>
1.1 Torque converter .....	14
1.2 Torque converter allocation .....	15
1.3 Identification of torque converter .....	15
1.4 Removing sleeve bearing from turbine shaft .....	16
1.5 Fitting a new torque converter oil seal .....	18
1.6 Draining torque converter .....	19
1.7 Checking torque converter .....	20
1.8 Installing torque converter .....	20
<b>37 - Controls, Housing</b> .....	<b>22</b>
<b>1 Servicing gear selector mechanism</b> .....	<b>22</b>
1.1 Servicing gear selector mechanism .....	22
1.2 Dismantling and assembling selector mechanism .....	22
1.3 Removing and installing selector lever handle .....	28
1.4 Removing and installing selector lever lock solenoid -N110 and wiring for selector lever illumination .....	29
1.5 Removing and installing gear selector mechanism .....	29
1.6 Checking gear selector mechanism .....	32
1.7 Removing and installing selector lever cable .....	32
1.8 Checking and adjusting selector lever cable .....	34
1.9 Removing and installing locking cable .....	35
1.10 Checking ignition key lock .....	40
<b>2 Checking gearbox</b> .....	<b>41</b>
2.1 Checking gearbox .....	41
2.2 Checking main pressure .....	41
<b>3 Removing and installing gearbox</b> .....	<b>45</b>
3.1 Removing and installing gearbox .....	45
3.2 Transporting automatic gearbox .....	56
3.3 Securing gearbox to repair stand .....	57
<b>4 Checking and topping up ATF level</b> .....	<b>58</b>
4.1 Checking and topping up ATF level .....	58
4.2 Checking ATF level .....	59
4.3 Changing ATF or filling up after repairs .....	64
<b>5 Gearbox with selector elements</b> .....	<b>66</b>



5.1	Gearbox with selector elements . . . . .	66
5.2	Position of selector elements . . . . .	67
<b>6</b>	<b>Dismantling and assembling gearbox . . . . .</b>	<b>68</b>
6.1	Dismantling and assembling gearbox . . . . .	68
6.2	Rules for cleanliness when working on the automatic gearbox . . . . .	68
<b>7</b>	<b>Removing and installing ATF pipes . . . . .</b>	<b>68</b>
7.1	Removing and installing ATF pipes . . . . .	68
7.2	Petrol engine without air conditioner . . . . .	69
7.3	Petrol engine with air conditioner, TDI engine . . . . .	70
7.4	Cleaning ATF pipes and ATF cooler . . . . .	71
<b>8</b>	<b>Dismantling and assembling planetary gearbox . . . . .</b>	<b>72</b>
8.1	Dismantling and assembling planetary gearbox . . . . .	72
8.2	Dismantling planetary gearbox - overview . . . . .	72
8.3	Dismantling planetary gearbox . . . . .	77
8.4	Assembling planet carrier - overview . . . . .	82
8.5	I - Installing planet carrier . . . . .	84
8.6	II - Installing components from reverse gear brake -B1- up to circlip for -B2- supporting tube . . . . .	86
8.7	III - Installing components from large sun gear up to reverse gear clutch -K2- . . . . .	89
8.8	IV - Installing components from supporting tube for -B2- up to ATF pump . . . . .	93
8.9	Assembling planetary gearbox . . . . .	96
8.10	Pressing clutch -K1- onto clutch -K3- . . . . .	106
8.11	Planetary gearbox adjustments - overview . . . . .	108
8.12	I - Adjusting planet carrier . . . . .	109
8.13	II - Adjusting reverse gear brake -B1- - overview . . . . .	115
8.14	III - Adjusting clutch play between -K1- and -K2- . . . . .	120
8.15	IV - Adjusting 2nd and 4th gear brake -B2- . . . . .	125
<b>38 - Gears, Hydraulic controls . . . . .</b>		<b>131</b>
<b>1</b>	<b>Dismantling and assembling ATF pump . . . . .</b>	<b>131</b>
1.1	Dismantling and assembling ATF pump . . . . .	131
<b>2</b>	<b>Dismantling and assembling free wheel with -B1- piston . . . . .</b>	<b>135</b>
2.1	Dismantling and assembling free wheel with -B1- piston . . . . .	135
<b>3</b>	<b>Dismantling and assembling 1st to 3rd gear clutch -K1- . . . . .</b>	<b>138</b>
3.1	Dismantling and assembling 1st to 3rd gear clutch -K1- . . . . .	138
<b>4</b>	<b>Dismantling and assembling reverse gear clutch -K2- . . . . .</b>	<b>144</b>
4.1	Dismantling and assembling reverse gear clutch -K2- . . . . .	144
<b>5</b>	<b>Dismantling and assembling 3rd and 4th gear clutch -K3- with turbine shaft . . . . .</b>	<b>149</b>
5.1	Dismantling and assembling 3rd and 4th gear clutch -K3- with turbine shaft . . . . .	149
<b>6</b>	<b>Removing and installing valve body . . . . .</b>	<b>155</b>
6.1	Removing and installing valve body . . . . .	155
6.2	Removing and installing oil pan . . . . .	161
6.3	Removing and installing ATF screen . . . . .	162
6.4	Removing and installing valve body . . . . .	163
6.5	Operating rod for manual selector valve . . . . .	164
6.6	Removing and installing conductor strip with 10-pin connector . . . . .	166
<b>7</b>	<b>Dismantling and assembling parking lock . . . . .</b>	<b>168</b>
7.1	Dismantling and assembling parking lock . . . . .	168
<b>8</b>	<b>Removing and installing senders on gearbox housing . . . . .</b>	<b>177</b>
8.1	Removing and installing senders on gearbox housing . . . . .	177
8.2	Removing and installing speedometer sender -G22 . . . . .	177
8.3	Removing and installing gearbox speed sender -G38 . . . . .	178
8.4	Removing and installing vehicle speed sender -G68 . . . . .	179
<b>39 - Final drive, Differential . . . . .</b>		<b>181</b>

<b>1</b>	<b>Checking oil in final drive</b> .....	<b>181</b>
1.1	Checking oil in final drive .....	181
<b>2</b>	<b>Renewing flange shaft oil seals</b> .....	<b>182</b>
2.1	Renewing flange shaft oil seals .....	182
2.2	Renewing left-hand flange shaft oil seal .....	182
2.3	Renewing right-hand drive flange oil seal .....	185
2.4	Removing and installing grooved ball bearing on output shaft for drive flange .....	189
<b>3</b>	<b>Dismantling and assembling final drive</b> .....	<b>191</b>
3.1	Dismantling and assembling final drive .....	191
3.2	Repair overview of final drive .....	191
3.3	Removing and installing input gear .....	192
3.4	Removing and installing drive pinion .....	200
3.5	Removing and installing differential .....	212
3.6	Dismantling and assembling differential .....	217
3.7	Removing and installing differential bevel gears .....	227
<b>4</b>	<b>Adjusting final drive</b> .....	<b>228</b>
4.1	Adjusting final drive .....	228
4.2	Overview of adjustments .....	229
4.3	Adjustment overview .....	231
4.4	Adjusting input gear .....	231
<b>5</b>	<b>Adjusting drive pinion and crown wheel</b> .....	<b>233</b>
5.1	Adjusting drive pinion and crown wheel .....	233
5.2	Adjusting and marking gear sets .....	234
5.3	Recommended sequence for readjusting final drive set .....	235
5.4	Adjusting drive pinion .....	239
5.5	Adjusting crown wheel .....	246