



## Contents

<b>00 - Technical data</b>	<b>1</b>
<b>1 Safety information</b>	<b>1</b>
1.1 General safety provisions	1
1.2 Safety measures when working on vehicles with a start/stop system	1
1.3 Notes on tow-starting/towing	2
1.4 Safety precautions when using testers and measuring instruments during a road test	2
<b>2 Identification</b>	<b>3</b>
2.1 Gearbox identification	3
<b>3 Repair instructions</b>	<b>4</b>
3.1 General information	4
3.2 Rules for cleanliness	4
3.3 General repair instructions	4
3.4 Gaskets and seals	5
3.5 Nuts and bolts	6
<b>4 Technical data</b>	<b>7</b>
4.1 Allocation gearbox - engine	7
4.2 Capacities	7
<b>5 Electrical components</b>	<b>8</b>
5.1 Overview of fitting locations - electrical components	8
<b>30 - Clutch</b>	<b>9</b>
<b>1 Clutch</b>	<b>9</b>
1.1 Assembly overview - dual clutch	9
1.2 Removing and installing clutch end cover	9
1.3 Removing dual clutch	14
1.4 Installing dual clutch	18
<b>34 - Controls, housing</b>	<b>28</b>
<b>1 Mechatronic unit</b>	<b>28</b>
1.1 Assembly overview - mechatronic unit	28
1.2 Removing and installing sump	29
1.3 Removing and installing mechatronic unit	32
<b>2 Bevel box</b>	<b>35</b>
2.1 Assembly overview - bevel box	35
2.2 Distinguishing between different types of bevel boxes	36
2.3 Removing bevel box	36
2.4 Installing bevel box	43
<b>3 Selector mechanism</b>	<b>49</b>
3.1 Assembly overview - selector mechanism	49
3.2 Emergency release from position P	51
3.3 Removing and installing selector lever handle	53
3.4 Moving push-button in the handle to installation position	56
3.5 Removing and installing selector mechanism	58
3.6 Checking selector mechanism	60
3.7 Checking and adjusting selector lever cable	61
3.8 Renewing selector shaft seal	63
<b>4 Removing and installing gearbox</b>	<b>67</b>
4.1 Specified torques for gearbox	67
4.2 Removing gearbox	68
4.3 Installing gearbox	115
<b>5 Assembly mountings</b>	<b>120</b>
5.1 Assembly overview - assembly mountings	120



<b>6</b>	<b>Transporting gearbox</b> .....	<b>122</b>
<b>7</b>	<b>Securing to engine and gearbox support</b> .....	<b>124</b>
<b>8</b>	<b>Gear oil circuit</b> .....	<b>126</b>
8.1	Assembly overview - gear oil circuit .....	126
8.2	Removing and installing gear oil cooler .....	126
8.3	Removing and installing gear oil filter .....	129
8.4	Removing and installing motor for auxiliary hydraulic pump 1 for gearbox oil V475 .....	131
<b>9</b>	<b>Gear oil</b> .....	<b>134</b>
9.1	Overview of oil drain and inspection plugs .....	134
9.2	Tools for gear oil change .....	134
9.3	Checking gear oil level .....	136
9.4	Draining and filling gear oil .....	140
<b>35 - Gears, shafts</b> .....		<b>143</b>
1	Currently, no repairs can be made to gears and shafts .....	143
<b>39 - Final drive - differential</b> .....		<b>144</b>
<b>1</b>	<b>Gear oil</b> .....	<b>144</b>
1.1	Checking gear oil level .....	144
1.2	Draining and filling gear oil .....	145
<b>2</b>	<b>Oil seals</b> .....	<b>150</b>
2.1	Overview of fitting locations - seals .....	150
2.2	Renewing left seal .....	150
2.3	Renewing right oil seal .....	153
<b>3</b>	<b>Differential</b> .....	<b>156</b>
3.1	Removing and installing right flange shaft .....	156
<b>4</b>	<b>Components of bevel box</b> .....	<b>159</b>
4.1	Assembly overview - components of bevel box .....	159
4.2	Renewing bevel box seals .....	164
4.3	Renewing output flange and redetermining thickness of shim .....	193