

## Contents

<b>00 - Technical data</b>	<b>1</b>
<b>1 Identification</b>	<b>1</b>
1.1 Gearbox identification	1
1.2 Identification of bevel box	2
<b>2 Technical data</b>	<b>3</b>
2.1 Capacities	3
<b>3 Safety information</b>	<b>4</b>
3.1 General safety regulations	4
3.2 Safety precautions when working on vehicles with start/stop system	4
3.3 Safety precautions when using testers and measuring instruments during a road test	5
3.4 Safety precautions when tow-starting and towing	5
<b>4 Repair instructions</b>	<b>6</b>
4.1 General notes	6
4.2 Rules for cleanliness	7
4.3 General repair instructions	7
4.4 Contact corrosion	8
4.5 Safety functions of gearbox control unit	9
4.6 Use of impact wrenches	9
<b>5 Electrical components</b>	<b>11</b>
5.1 Overview of fitting locations - electrical components	11
<b>30 - Clutch</b>	<b>12</b>
<b>1 Clutch</b>	<b>12</b>
1.1 Assembly overview - dual clutch	12
1.2 Removing and installing clutch end cover	12
1.3 Removing dual clutch	16
1.4 Installing dual clutch	19
<b>34 - Controls, housing</b>	<b>27</b>
<b>1 Selector mechanism</b>	<b>27</b>
1.1 Assembly overview - selector lever handle	27
1.2 Assembly overview - selector mechanism	30
1.3 Manual release from position P	32
1.4 Removing and installing selector lever handle	34
1.5 Bringing interlock button in handle into installation position	37
1.6 Removing and installing selector mechanism	38
1.7 Checking selector mechanism	40
1.8 Checking and adjusting selector lever cable	43
<b>2 Removing and installing gearbox</b>	<b>45</b>
2.1 Removing gearbox	45
2.2 Installing gearbox	50
2.3 Tightening torques for gearbox	53
<b>3 Transporting gearbox</b>	<b>56</b>
<b>4 Securing to engine and gearbox support</b>	<b>58</b>
<b>5 Assembly mountings</b>	<b>59</b>
5.1 Assembly overview - assembly mountings	59
<b>6 Bevel box</b>	<b>60</b>
6.1 Removing bevel box	60
6.2 Installing bevel box	63
6.3 Tightening torques for bevel box	64
<b>7 Gear oil circuit</b>	<b>65</b>



7.1	Assembly overview - gear oil circuit	65
7.2	Removing and installing gear oil cooler	65
7.3	Removing and installing gear oil filter	68
<b>8</b>	<b>Mechatronic unit</b>	<b>70</b>
8.1	Assembly overview - mechatronic unit	70
8.2	Removing and installing oil pan	71
8.3	Removing and installing mechatronic unit	74
<b>9</b>	<b>Gear oil</b>	<b>77</b>
9.1	Overview - drain and inspection plugs	77
9.2	Checking gear oil level	77
9.3	Draining and filling gear oil	82
<b>10</b>	<b>Dismantling and assembling gearbox</b>	<b>86</b>
10.1	Renewing sealing cap	86
<b>35 - Gears, shafts</b>		<b>88</b>
1	<b>Dismantling and assembling gears and shafts</b>	<b>88</b>
<b>39 - Final drive - differential</b>		<b>89</b>
1	<b>Gearbox control system</b>	<b>89</b>
1.1	Overview of fitting locations - gearbox control system	89
1.2	Overview of fitting locations - mechatronic unit senders	91
2	<b>Oil seals</b>	<b>92</b>
2.1	Overview of fitting locations - oil seals	92
2.2	Renewing left oil seal	92
2.3	Renewing right oil seal	94
3	<b>Gear oil</b>	<b>97</b>
3.1	Checking gear oil level	97
3.2	Draining and filling gear oil	98
4	<b>Components of bevel box</b>	<b>103</b>
4.1	Assembly overview - components of bevel box	103
4.2	Renewing oil seals (left-side)	109
4.3	Renewing right oil seal	112
4.4	Renewing oil seal for output flange	115
4.5	Renewing needle bearings (polygon bearings) for stub shaft (right-side)	127