

## Contents

<b>00 - Technical data</b>	<b>1</b>
<b>1 Identification</b>	<b>1</b>
1.1 PR number and type of brake system	1
<b>2 Safety information</b>	<b>3</b>
2.1 Safety precautions when working on vehicles with start/stop system	3
2.2 Safety precautions when using testers and measuring instruments during a road test	3
<b>3 Repair instructions</b>	<b>4</b>
3.1 Identification plates	4
3.2 Use of impact wrenches	4
3.3 Rules for cleanliness	4
3.4 General repair instructions	5
3.5 Contact corrosion	5
<b>4 Technical data</b>	<b>6</b>
4.1 Technical data for brakes	6
<b>5 Brake test</b>	<b>7</b>
5.1 General notes	7
5.2 Testing vehicles with rear-wheel drive	7
5.3 Testing vehicles with all-wheel drive	7
5.4 Checking parking brake	8
5.5 Checking brake discs	8
<b>6 Electrical components</b>	<b>16</b>
6.1 Starting diagnosis	16
<b>45 - Anti-lock brake system</b>	<b>18</b>
<b>1 General notes</b>	<b>18</b>
1.1 Notes for repair work on the ABS	18
<b>2 Overview of fitting locations</b>	<b>19</b>
2.1 Overview of fitting locations - ABS/ESP	19
<b>3 Control unit and hydraulic unit</b>	<b>22</b>
3.1 Assembly overview - control unit and hydraulic unit	22
3.2 Removing and installing ABS control unit J104/ABS hydraulic unit N55	24
<b>4 Sensors</b>	<b>30</b>
4.1 Assembly overview - speed sensors on front axle	30
4.2 Assembly overview - speed sensors on rear axle	30
4.3 Removing and installing brake light switch	31
4.4 Removing and installing control unit for sensor electronics	33
4.5 Removing and installing front wheel speed sensor G45/G47	34
4.6 Removing and installing rear wheel speed sensor G44/G46	35
4.7 Checking ABS sensor ring	35
<b>46 - Brakes - mechanism</b>	<b>37</b>
<b>1 Front brakes</b>	<b>37</b>
1.1 Assembly overview - front brakes	37
1.2 Removing and installing brake pads	42
1.3 Removing and installing brake caliper	55
1.4 Renewing brake caliper	61
1.5 Removing and installing brake disc	73
1.6 Removing and installing splash plate	75
1.7 Removing and installing pad wear indicator wire	76
<b>2 Rear brakes</b>	<b>78</b>
2.1 Assembly overview - rear brakes	78



2.2	Removing and installing brake pads	81
2.3	Removing and installing brake caliper	88
2.4	Renewing brake caliper	91
2.5	Removing and installing brake disc	97
2.6	Removing and installing splash plate	98
2.7	Removing and installing pad wear indicator wire	99
<b>3</b>	<b>Parking brake</b>	<b>101</b>
3.1	Overview of fitting locations - parking brake	101
3.2	Assembly overview - parking brake	102
3.3	Assembly overview - brake caliper	103
3.4	Removing and installing control unit for electromechanical parking brake J540	105
3.5	Removing and installing parking brake motor V282/V283	106
3.6	Releasing parking brake manually	108
3.7	Removing and installing brake pads	109
3.8	Removing and installing brake caliper	112
3.9	Removing and installing brake caliper piston	113
<b>4</b>	<b>Brake pedal</b>	<b>117</b>
4.1	Assembly overview - brake pedal	117
4.2	Removing and installing mounting bracket for brake pedal	119
4.3	Separating brake pedal from brake servo	122
4.4	Connecting brake pedal to brake servo	123
4.5	Removing and installing brake pedal	123
<b>47 - Brakes - hydraulics</b>		<b>126</b>
<b>1</b>	<b>Front brake caliper</b>	<b>126</b>
1.1	Assembly overview - front brake caliper	126
1.2	Removing and installing brake caliper piston	126
<b>2</b>	<b>Rear brake caliper</b>	<b>131</b>
2.1	Assembly overview - rear brake caliper	131
2.2	Removing and installing brake caliper piston	131
<b>3</b>	<b>Brake servo/brake master cylinder</b>	<b>136</b>
3.1	Assembly overview - brake servo/brake master cylinder	136
3.2	Removing and installing brake servo	140
3.3	Checking operation of brake servo	144
3.4	Removing and installing brake master cylinder	145
3.5	Removing and installing brake fluid reservoir	147
3.6	Removing and installing brake fluid level warning contact F34	150
<b>4</b>	<b>Vacuum system</b>	<b>152</b>
4.1	Assembly overview - electric vacuum pump	152
4.2	Checking non-return valve	153
4.3	Removing and installing vacuum line	153
4.4	Removing and installing brake servo pressure sensor	155
4.5	Removing and installing electric vacuum pump	156
<b>5</b>	<b>Brake lines</b>	<b>157</b>
5.1	Routing of brake lines	157
<b>6</b>	<b>Hydraulic system</b>	<b>158</b>
6.1	General notes on brake fluid	158
6.2	Bleeding hydraulic system	159
6.3	Leak test	162