

Contents

00 - Technical data	1
1 Identification	1
1.1 PR number and type of brake system	1
2 Safety information	2
2.1 Safety precautions when working in the vicinity of high-voltage components	2
2.2 Safety precautions when working on the high-voltage system	2
2.3 Safety precautions when working on vehicles with start/stop system	3
2.4 Safety precautions when using testers and measuring instruments during a road test	4
3 Repair instructions	5
3.1 Rules for cleanliness	5
3.2 General repair instructions	5
3.3 Contact corrosion	5
3.4 Identification plates	6
3.5 Use of impact wrenches	6
4 Technical data	8
4.1 Technical data for brakes	8
5 Brake test	11
5.1 General notes	11
5.2 Testing vehicles with all-wheel drive	11
5.3 Checking parking brake	11
5.4 Checking brake discs	12
6 Electrical components	19
6.1 Starting diagnosis	19
45 - Anti-lock brake system	21
1 Safety information	21
2 General notes	22
2.1 Notes for repair work on ABS	22
3 Overview of fitting locations	23
3.1 Overview of fitting locations - ABS/ESP	23
4 Control unit and hydraulic unit	26
4.1 Assembly overview - control unit and hydraulic unit	26
4.2 Removing and installing ABS control unit J104 / ABS hydraulic unit N55	29
4.3 Separating control unit from hydraulic unit	34
4.4 Attaching control unit to hydraulic unit	36
4.5 Connecting brake lines to hydraulic unit	37
5 Sensors	39
5.1 Assembly overview - speed sensors on front axle	39
5.2 Assembly overview - speed sensors on rear axle	39
5.3 Removing and installing front wheel speed sensor G45 / G47	40
5.4 Removing and installing rear wheel speed sensor G44 / G46	41
5.5 Checking ABS sensor ring	41
46 - Brakes - mechanism	43
1 Safety information	43
2 Front brakes	44
2.1 Assembly overview - front brakes	44
2.2 Removing and installing brake pads	54
2.3 Removing and installing brake caliper	60
2.4 Renewing brake caliper	65
2.5 Removing and installing brake disc	69



2.6	Removing and installing splash plate	76
2.7	Removing and installing pad wear indicator wire	76
3	Rear brakes	79
3.1	Assembly overview - rear brakes	79
3.2	Removing and installing brake pads	85
3.3	Removing and installing brake caliper	93
3.4	Renewing brake caliper	96
3.5	Removing and installing brake carrier	99
3.6	Removing and installing brake disc	99
3.7	Removing and installing splash plate	101
3.8	Removing and installing pad wear indicator wire	102
4	Parking brake	104
4.1	Assembly overview - parking brake	104
4.2	Removing and installing parking brake motor V282 / V283	104
4.3	Releasing parking brake manually	106
5	Brake pedal	107
5.1	Assembly overview - brake pedal	107
5.2	Removing and installing mounting bracket	108
5.3	Separating brake pedal from brake servo	109
5.4	Connecting brake pedal to brake servo	110
5.5	Removing and installing brake pedal	111
47 - Brakes - hydraulics		112
1	Safety information	112
2	Front brake caliper	113
2.1	Assembly overview - front brake caliper	113
2.2	Removing and installing brake caliper piston	113
3	Rear brake caliper	117
3.1	Assembly overview - rear brake caliper	117
3.2	Removing and installing brake caliper piston	117
4	Brake servo/brake master cylinder	122
4.1	Assembly overview - brake servo/brake master cylinder	122
4.2	Removing and installing brake light switch	128
4.3	Removing and installing brake servo	130
4.4	Removing and installing brake master cylinder	136
4.5	Removing and installing brake fluid reservoir	139
4.6	Removing and installing brake fluid level warning contact F34	142
4.7	Removing and installing brake system pressure accumulator VX70	142
5	Vacuum system	146
5.1	Assembly overview - vacuum pump	146
5.2	Checking non-return valve	154
5.3	Removing and installing non-return valve	154
5.4	Removing and installing vacuum pump	157
5.5	Removing and installing brake servo pressure sensor	162
5.6	Checking vacuum system	162
6	Hydraulic system	167
6.1	General notes on brake fluid	167
6.2	Bleeding hydraulic system	168
6.3	Pre-bleeding brake system pressure accumulator VX70	173
6.4	Leak test	174