

Contents

00 - Technical data	1
1 Identification	1
1.1 PR number and type of brake system	1
2 Safety information	3
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
2.3 Safety precautions when working on the high-voltage system	3
2.4 Safety precautions when working in the vicinity of high-voltage components	4
3 Repair instructions	6
3.1 Identification plates	6
3.2 Use of impact wrenches	6
3.3 Rules for cleanliness	6
3.4 General repair instructions	7
3.5 Contact corrosion	7
4 Technical data	9
4.1 Technical data for brakes	9
5 Brake test	10
5.1 General notes	10
5.2 Testing vehicles with front-wheel drive	10
5.3 Testing vehicles with all-wheel drive	10
5.4 Checking parking brake	10
5.5 Checking brake discs	11
6 Electrical components	14
6.1 Starting diagnosis	14
45 - Anti-lock brake system	16
1 Safety information	16
2 General notes	17
2.1 Notes for repair work on ABS	17
3 Overview of fitting locations	18
3.1 Overview of fitting locations - ABS/ESP	18
4 Control unit and hydraulic unit	21
4.1 Assembly overview - control unit and hydraulic unit	21
4.2 Removing and installing ABS control unit J104 with ABS hydraulic unit N55	26
4.3 Separating control unit from hydraulic unit	38
4.4 Attaching control unit to hydraulic unit	40
5 Sensors	42
5.1 Assembly overview - speed sensors on front axle	42
5.2 Assembly overview - speed sensors on rear axle	43
5.3 Removing and installing brake light switch	45
5.4 Removing and installing front wheel speed sensor G45/G47	48
5.5 Removing and installing rear wheel speed sensor G44/G46	49
5.6 Checking ABS sensor ring	51
46 - Brakes - mechanism	53
1 Safety information	53
2 Front brakes	54
2.1 Assembly overview - front brakes	54
2.2 Removing and installing brake pads	56
2.3 Removing and installing brake caliper	61
2.4 Renewing brake caliper	63



2.5	Removing and installing brake carrier	67
2.6	Removing and installing brake disc	68
2.7	Removing and installing splash plate	69
3	Rear brakes	71
3.1	Assembly overview - rear brakes	71
3.2	Removing and installing brake pads	74
3.3	Removing and installing brake caliper	80
3.4	Renewing brake caliper	83
3.5	Removing and installing brake carrier	86
3.6	Removing and installing brake disc	88
3.7	Removing and installing splash plate	89
4	Parking brake	91
4.1	Assembly overview - parking brake	91
4.2	Removing and installing parking brake motor V282/V283	91
4.3	Releasing parking brake manually	93
5	Brake pedal	95
5.1	Assembly overview - brake pedal	95
5.2	Separating brake pedal from brake servo	99
5.3	Connecting brake pedal to brake servo	99
5.4	Removing and installing brake pedal	100
5.5	Removing and installing mounting bracket	103
47 - Brakes - hydraulics		108
1	Safety information	108
2	Front brake caliper	109
2.1	Assembly overview - front brake caliper	109
2.2	Removing and installing brake caliper piston	109
2.3	Renewing bearing bushes and guide pins	112
3	Rear brake caliper	114
3.1	Assembly overview - rear brake caliper	114
3.2	Removing and installing protective cap	114
3.3	Renewing bearing bushes and guide pins	117
4	Brake servo/brake master cylinder	119
4.1	Assembly overview - brake servo/brake master cylinder	119
4.2	Removing and installing brake servo	127
4.3	Removing and installing brake master cylinder	141
4.4	Removing and installing brake fluid reservoir	148
4.5	Removing and installing brake fluid level warning contact F34	156
4.6	Removing and installing brake system pressure accumulator VX70	157
5	Vacuum system	161
5.1	Assembly overview - electric vacuum pump	161
5.2	Assembly overview - vacuum pump	163
5.3	Checking non-return valve	164
5.4	Removing and installing non-return valve	165
5.5	Removing and installing vacuum sender G608	167
5.6	Checking vacuum system	168
5.7	Removing and installing electric vacuum pump	173
5.8	Removing and installing vacuum pump	174
6	Brake lines	177
6.1	Connection points	177
7	Hydraulic system	179
7.1	General notes on brake fluid	179
7.2	Bleeding hydraulic system (normal bleeding procedure)	180
7.3	Bleeding hydraulic system (additional bleeding procedure)	183

7.4 Leak test 186