

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 on vehicles with high-voltage system	2
2.2 Safety precautions when using testers and measuring instruments during a road test	7
3 Repair instructions	8
3.1 Rules for cleanliness	8
3.2 General repair instructions	8
3.3 Contact corrosion	8
4 Technical data	10
4.1 Technical data for brakes	10
5 Assessing degree of wear on ceramic brake discs	16
5.1 Assessing degree of wear on ceramic brake discs	16
5.2 Wear assessment of ceramic brake disc with tester VAS 6813	22
6 Brake test	29
6.1 General notes on brake test	29
6.2 Testing vehicles with front-wheel drive	29
6.3 Testing vehicles with all-wheel drive	29
6.4 Checking parking brake	30
45 - Anti-lock brake system	31
1 General notes	31
1.1 Notes for repair work on ABS	31
2 Overview of fitting locations	32
2.1 Overview of fitting locations - ABS/ESP	32
3 Control unit and hydraulic unit	35
3.1 Assembly overview - control unit and hydraulic unit	35
3.2 Removing and installing ABS control unit J104 / ABS hydraulic unit N55	38
3.3 Separating control unit from hydraulic unit	59
3.4 Attaching control unit to hydraulic unit	61
4 Sensors	65
4.1 Assembly overview - speed sensors on front axle	65
4.2 Assembly overview - speed sensors on rear axle	66
4.3 Removing and installing brake light switch	68
4.4 Removing and installing front wheel speed sensor G45 / G47	70
4.5 Removing and installing rear wheel speed sensor G44 / G46	71
4.6 Checking ABS speed sensor ring	73
46 - Brakes - mechanism	75
1 Front brakes	75
1.1 Assembly overview - front brakes	75
1.2 Vibration dampers on brake caliper	83
1.3 Removing and installing brake pads	84
1.4 Removing and installing brake caliper	96
1.5 Renewing brake caliper	104
1.6 Removing and installing brake carrier	117
1.7 Removing and installing brake disc	119
1.8 Removing and installing splash plate	121
2 Rear brakes	123
2.1 Assembly overview - rear brakes	123



2.2	Removing and installing brake pads	127
2.3	Removing and installing brake caliper	135
2.4	Renewing brake caliper	139
2.5	Removing and installing brake carrier	143
2.6	Removing and installing brake disc	146
2.7	Removing and installing splash plate	148
3	Parking brake	150
3.1	Assembly overview - parking brake	150
3.2	Removing and installing parking brake motor V282 / V283	151
3.3	Releasing parking brake manually	154
4	Brake pedal	156
4.1	Assembly overview - brake pedal	156
4.2	Separating brake pedal from brake servo	158
4.3	Connecting brake pedal to brake servo	159
4.4	Removing and installing brake pedal	159
4.5	Removing and installing mounting bracket	161
47	Brakes - hydraulics	163
1	Front brake caliper	163
1.1	Assembly overview - front brake caliper	163
1.2	Removing and installing brake caliper piston	164
1.3	Renewing bearing bushes and guide pins	170
2	Rear brake caliper	171
2.1	Assembly overview - rear brake caliper	171
2.2	Removing and installing protective cap	171
2.3	Renewing bearing bushes and guide pins	173
3	Brake servo/brake master cylinder	175
3.1	Assembly overview - brake servo/brake master cylinder	175
3.2	Assembly overview - brake system pressure accumulator VX70	179
3.3	Removing and installing brake servo	181
3.4	Removing and installing brake master cylinder	192
3.5	Removing and installing brake fluid reservoir	199
3.6	Removing and installing brake fluid level warning contact F34	208
3.7	Removing and installing brake system pressure accumulator VX70	208
4	Vacuum system	213
4.1	Assembly overview - electric vacuum pump	213
4.2	Assembly overview - vacuum pump	218
4.3	Checking non-return valve	220
4.4	Removing and installing non-return valve	221
4.5	Removing and installing vacuum sender G608	224
4.6	Checking vacuum system	225
4.7	Removing and installing electric vacuum pump	229
4.8	Removing and installing vacuum pump	233
5	Brake lines	239
5.1	Connection points	239
6	Hydraulic system	240
6.1	General notes on brake fluid	240
6.2	Bleeding hydraulic system	242
6.3	Pre-bleeding brake system pressure accumulator VX70	251
6.4	Leak test	252