



Contents

00 - Materials	1
1 Safety information	1
1.1 Safety measures when working on vehicles with a start/stop system	1
1.2 Safety precautions when using testers and measuring instruments during a road test	1
2 Identification	2
2.1 Allocation of PR number - brakes	2
3 Technical data	4
3.1 Technical data for brakes	4
4 Brake test	9
4.1 General information	9
4.2 Checking vehicles with front-wheel drive	9
4.3 Checking electromechanical parking brake	9
45 - Anti-lock brake system	11
1 General information	11
2 Overview of fitting locations	13
2.1 Overview of fitting locations - ABS/ESP	13
3 Control unit and hydraulic unit	16
3.1 Assembly overview - control unit and hydraulic unit	16
3.2 Removing and installing ABS control unit J104 and ABS hydraulic unit N55	18
3.3 Separating control unit from hydraulic unit	34
3.4 Fitting control unit to hydraulic unit	35
3.5 Connecting brake lines to hydraulic unit	37
4 Sensors	39
4.1 Assembly overview - speed sensor on front axle	39
4.2 Assembly overview - speed sensor on rear axle	40
4.3 Removing and installing ESP sensor unit G419	40
4.4 Removing and installing speed sensors on front axle G45/G47	40
4.5 Removing and installing speed sensors on rear axle G44/G46	41
4.6 Checking ABS sensor ring	43
46 - Brakes - mechanism	45
1 Front brake	45
1.1 Assembly overview - front brake	45
1.2 Removing and installing brake pads	47
1.3 Removing and installing brake caliper	50
1.4 Removing and installing brake carrier	52
1.5 Removing and installing brake disc	54
1.6 Removing and installing brake splash plate	57
2 Rear brake	60
2.1 Assembly overview - rear brakes	60
2.2 Removing and installing brake pads	62
2.3 Removing and installing brake caliper	68
3 Parking brake	73
3.1 Overview of fitting locations - parking brake	73
3.2 Removing and installing control unit for electromechanical parking brake J540	75
3.3 Removing and installing parking brake motor V282/V283	75
4 Brake pedal	78
4.1 Assembly overview - brake pedal	78
4.2 Removing and installing mounting bracket	80
4.3 Separating brake pedal from brake servo	83



4.4	Connecting brake pedal to brake servo	84
4.5	Removing and installing brake pedal	84
47 - Brakes - hydraulics	86
1	Front brake caliper	86
1.1	Assembly overview – front brake caliper	86
1.2	Removing and installing brake caliper piston	87
2	Rear brake caliper	90
2.1	Assembly overview – rear brake caliper	90
2.2	Removing and installing protective cap	91
3	Brake servo and brake master cylinder	95
3.1	Assembly overview - brake servo/brake master cylinder	95
3.2	Removing and installing brake light switch	98
3.3	Removing and installing brake servo	99
3.4	Removing and installing brake master cylinder	105
4	Vacuum system	112
4.1	Assembly overview - vacuum pump	112
4.2	Checking non-return valve	112
4.3	Removing and installing vacuum sender G608	113
4.4	Checking vacuum system	114
5	Brake lines	120
5.1	Repairing brake lines	120
6	Hydraulic system	126
6.1	General notes on brake fluid	126
6.2	Pre-bleeding hydraulic system	126
6.3	Bleeding hydraulic system following standard procedure	129
6.4	Subsequent bleeding of hydraulic system	130
6.5	Testing for leaks	131