



Contents

00 - Technical data	1
1 Safety information	1
1.1 Safety measures when working on vehicles with a start/stop system	1
1.2 Safety precautions when working on subframe	1
2 Repair instructions	2
2.1 Leaks at shock absorbers	2
2.2 Noises from shock absorbers	2
2.3 Checking shock absorbers when removed	3
2.4 Steering rack	3
2.5 Gaskets and seals	4
2.6 Nuts and bolts	4
2.7 Electrical components	4
2.8 Raising suspension to unladen position (vehicles with coil springs)	4
3 Evaluating accident vehicles	9
3.1 Check list for evaluating running gear on accident vehicles	9
4 Waste disposal	11
4.1 Releasing gas and draining front gas-filled shock absorbers	11
4.2 Releasing gas and draining rear gas-filled shock absorbers	13
40 - Front suspension	15
1 Front axle	15
1.1 Overview of fitting locations - front axle	15
2 Subframe	16
2.1 Assembly overview - subframe	16
2.2 Fixing position of subframe	17
2.3 Lowering subframe	21
2.4 Removing and installing subframe without steering rack	25
2.5 Removing and installing subframe with steering rack	29
2.6 Repairing subframe	41
2.7 Removing and installing anti-roll bar	48
2.8 Removing and installing coupling rod	52
2.9 Repairing thread in longitudinal member	53
3 Suspension strut, upper suspension link	54
3.1 Assembly overview - suspension strut, upper suspension link	54
3.2 Removing and installing suspension strut	55
3.3 Repairing suspension strut	62
4 Lower suspension link, swivel joint	66
4.1 Assembly overview - lower suspension link, swivel joint	66
4.2 Removing and installing lower suspension link	67
4.3 Checking swivel joint	73
4.4 Removing and installing swivel joint	74
4.5 Renewing front bonded rubber bush for lower suspension link	78
4.6 Renewing rear bonded rubber bush for lower suspension link	81
5 Wheel bearing	85
5.1 Assembly overview - wheel bearing	85
5.2 Removing and installing wheel bearing housing	86
5.3 Removing and installing wheel bearing unit	90
6 Drive shaft	94
6.1 Overview - drive shaft	94
6.2 Assembly overview - drive shaft	95
6.3 Removing and installing drive shaft	100
6.4 Loosening and tightening threaded connections of drive shaft	117



6.5	Removing and installing drive shaft heat shield	119
6.6	Dismantling and assembling drive shaft	119
6.7	Checking outer constant velocity joint	134
6.8	Checking inner constant velocity joint	135
42	- Rear suspension	137
1	Rear axle	137
1.1	Overview - rear axle	137
1.2	Lowering rear axle	140
1.3	Removing and installing rear axle	142
1.4	Removing and installing shield for rear axle	149
2	Axle beam	150
2.1	Assembly overview - axle beam	150
2.2	Renewing bonded rubber bush for axle beam	151
3	Subframe	158
3.1	Assembly overview - subframe	158
3.2	Assembly overview - add-on parts for subframe	159
3.3	Fixing position of subframe	159
4	Anti-roll bar	164
4.1	Assembly overview - anti-roll bar	164
4.2	Removing and installing anti-roll bar	164
4.3	Removing and installing coupling rod	166
5	Suspension link, track rod	169
5.1	Assembly overview - transverse link	169
5.2	Assembly overview - track rod	170
5.3	Removing and installing upper transverse link	170
5.4	Removing and installing lower transverse link	171
5.5	Removing and installing track rod	173
6	Suspension strut, shock absorber, spring	175
6.1	Assembly overview - suspension strut, shock absorber, spring	175
6.2	Removing and installing shock absorbers	177
6.3	Repairing shock absorber	182
6.4	Removing and installing spring	184
7	Wheel bearing assembly, trailing arm	191
7.1	Assembly overview - wheel bearing	191
7.2	Assembly overview - trailing arm	193
7.3	Removing and installing wheel bearing housing	193
7.4	Removing and installing wheel bearing unit	197
7.5	Renewing bonded rubber bush for wheel bearing housing	204
7.6	Removing and installing trailing arm with mounting bracket	207
7.7	Repairing trailing arm	209
43	- Self-levelling suspension	213
1	Electronically controlled damping system	213
1.1	Assembly overview - electronically controlled damping system	213
1.2	Removing and installing electronically controlled damping control unit J250	216
1.3	Removing and installing front body acceleration senders G341 / G342	217
1.4	Removing and installing rear left body acceleration sender G699	218
2	Vehicle level sender	220
2.1	Assembly overview - front vehicle level senders	220
2.2	Assembly overview - rear vehicle level senders	221
2.3	Removing and installing front vehicle level senders G78 / G289	222
2.4	Removing and installing rear vehicle level senders G76 / G77	224
44	- Wheels, tyres, vehicle geometry	227



1	Wheel alignment	227
1.1	Notes for wheel alignment	227
1.2	Conditions for testing	228
1.3	Test preparations	228
1.4	Specifications for wheel alignment	230
1.5	Wheel alignment procedure	233
1.6	Necessity of wheel alignment	234
1.7	Vehicle data sticker	236
1.8	Adjusting camber at front wheels	237
1.9	Adjusting camber on rear axle	238
1.10	Adjusting toe at rear axle	239
1.11	Adjusting front axle toe	240
1.12	Wheel runout compensation	241
1.13	Checking maximum wheel lock	241
2	Adaptive cruise control	243
2.1	Calibrating adaptive cruise control	243
3	Front camera for assist systems	257
3.1	Calibrating front camera for driver assist systems	257
48	Steering	264
1	Steering wheel	264
1.1	Assembly overview - steering wheel	264
1.2	Removing and installing steering wheel	264
2	Steering column	267
2.1	Assembly overview - steering column	267
2.2	Checking steering column for damage	268
2.3	Handling and transporting steering column	268
2.4	Removing and installing steering column	269
2.5	Removing and installing control unit for electronic steering column lock J764	278
3	Steering rack	280
3.1	Assembly overview - steering rack	280
3.2	Removing and installing steering rack	284
3.3	Removing and installing bellows	299
3.4	Removing and installing track rod	302
3.5	Removing and installing track rod ball joint	305
3.6	Repairing steering rack	306
4	Sensors	311
4.1	Removing and installing steering angle sender G85	311