



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 Evaluating accident vehicles	2
2.1 Check list for evaluating running gear on accident vehicles	2
3 Repair instructions	4
3.1 Leaks at shock absorbers	4
3.2 Noises from shock absorbers	4
3.3 Checking shock absorbers when removed	5
3.4 Steering rack	5
3.5 Gaskets and seals	6
3.6 Nuts and bolts	6
3.7 Electrical components	6
3.8 Raising suspension to unladen position (vehicles with coil springs)	7
4 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 Removing and installing subframe without steering rack	18
2.3 Removing and installing subframe with steering rack	23
2.4 Repairing subframe	31
2.5 Removing and installing anti-roll bar	45
2.6 Removing and installing coupling rod	50
2.7 Repairing thread in longitudinal member	52
2.8 Fixing subframe in position	52
2.9 Lowering subframe	57
3 Suspension strut, upper suspension link	62
3.1 Assembly overview - suspension strut, upper suspension link	62
3.2 Removing and installing suspension strut	63
3.3 Repairing suspension strut	74
4 Lower suspension link, swivel joint	79
4.1 Assembly overview - lower suspension link, swivel joint	79
4.2 Removing and installing lower suspension link	80
4.3 Checking swivel joint	89
4.4 Removing and installing swivel joint	89
4.5 Renewing front bonded rubber bush for lower suspension link	94
4.6 Renewing rear bonded rubber bush for lower suspension link	98
5 Wheel bearing	102
5.1 Assembly overview – wheel bearing assembly	102
5.2 Removing and installing wheel bearing housing	102
5.3 Removing and installing wheel bearing unit	109
6 Drive shaft	114
6.1 Overview - drive shaft	114
6.2 Assembly overview – drive shaft	115
6.3 Removing and installing drive shaft	123
6.4 Loosening and tightening threaded connections of drive shaft	142



6.5	Removing and installing drive shaft heat shield	144
6.6	Dismantling and assembling drive shaft	145
6.7	Checking outer constant velocity joint	166
6.8	Checking inner constant velocity joint	167
42	Rear suspension	171
1	Rear axle	171
1.1	Overview – rear axle	171
1.2	Lowering rear axle	172
1.3	Removing and installing rear axle	179
1.4	Removing and installing shield for rear axle	189
2	Subframe	191
2.1	Assembly overview – subframe	191
2.2	Assembly overview - add-on parts for subframe	192
2.3	Fixing subframe in position	193
2.4	Repairing subframe	208
3	Anti-roll bar	223
3.1	Assembly overview - anti-roll bar	223
3.2	Removing and installing anti-roll bar	223
3.3	Removing and installing coupling rod	225
4	Suspension link, track rod	229
4.1	Assembly overview - transverse link	229
4.2	Assembly overview - track rod	231
4.3	Removing and installing upper transverse link	231
4.4	Removing and installing lower transverse link	233
4.5	Removing and installing track rod	235
5	Suspension strut, shock absorber, spring	237
5.1	Assembly overview - suspension strut, shock absorber, spring	237
5.2	Removing and installing shock absorber	238
5.3	Repairing shock absorber	242
5.4	Removing and installing spring	244
6	Wheel bearing assembly, trailing arm	252
6.1	Assembly overview – wheel bearing assembly	252
6.2	Assembly overview - trailing arm	254
6.3	Removing and installing wheel bearing housing	255
6.4	Removing and installing wheel bearing unit	267
6.5	Renewing bonded rubber bush for wheel bearing housing	275
6.6	Removing and installing trailing arm with mounting bracket	278
6.7	Repairing trailing arm	282
7	Drive shaft	288
7.1	Assembly overview – drive shaft	288
7.2	Loosening and tightening threaded connections of drive shaft	292
7.3	Removing and installing drive shaft	293
7.4	Dismantling and assembling drive shaft	301
7.5	Checking outer constant velocity joint	308
7.6	Checking inner constant velocity joint	309
43	Self-levelling suspension	313
1	Electronically controlled damping system	313
1.1	Assembly overview - electronically controlled damping system	313
1.2	Removing and installing electronically controlled damping control unit J250	315
1.3	Removing and installing front body acceleration senders G341/G342	316
1.4	Removing and installing rear body acceleration sender G343	319
2	Vehicle level sender	321
2.1	Assembly overview - front vehicle level senders	321



2.2	Assembly overview - rear vehicle level senders	322
2.3	Removing and installing front vehicle level senders G78/G289	322
2.4	Removing and installing rear vehicle level senders G76/G77	324
44	- Wheels, tyres, vehicle geometry	326
1	Wheel alignment	326
1.1	Notes for wheel alignment	326
1.2	Conditions for testing	327
1.3	Test preparations	327
1.4	Specifications for wheel alignment	329
1.5	Wheel alignment procedure	330
1.6	Necessity of wheel alignment	332
1.7	Vehicle data sticker	333
1.8	Adjusting camber at front wheels	333
1.9	Adjusting camber on rear axle	335
1.10	Adjusting toe at rear axle	337
1.11	Adjusting front axle toe	337
1.12	Wheel runout compensation	339
1.13	Checking maximum wheel lock	339
2	Adaptive cruise control	341
2.1	Calibrating adaptive cruise control	341
3	Front camera for assist systems	347
3.1	Calibrating front camera for assist systems	347
48	- Steering	355
1	Steering wheel	355
1.1	Assembly overview – steering wheel	355
1.2	Removing and installing steering wheel	355
2	Steering column	358
2.1	Assembly overview – steering column	358
2.2	Checking steering column for damage	359
2.3	Handling and transporting steering column	360
2.4	Removing and installing steering column	361
2.5	Removing and installing control unit for electronic steering column lock J764	372
3	Steering rack	375
3.1	Assembly overview – steering rack	375
3.2	Removing and installing steering rack	380
3.3	Removing and installing boot	392
3.4	Removing and installing track rod	394
3.5	Removing and installing track rod ball joint	399
3.6	Repairing steering rack	401
4	Sensors	406
4.1	Removing and installing steering angle sender G85	406