



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 high-voltage system	1
1.3 Safety precautions when working in the vicinity of high-voltage components	2
1.4 Safety precautions when working on subframe	2
2 Repair notes	3
2.1 Leaks at shock absorbers	3
2.2 Noises from shock absorbers	3
2.3 Checking shock absorbers when removed	4
2.4 Steering rack	4
2.5 Gaskets and seals	5
2.6 Nuts and bolts	5
2.7 Electrical components	5
2.8 Raising suspension to unladen position (vehicles with coil springs)	5
3 Evaluating accident vehicles	9
3.1 Check list for evaluating running gear on accident vehicles	9
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	14
1 Front axle	14
1.1 Overview of fitting locations – front axle	14
2 Subframe	15
2.1 Assembly overview – subframe	15
2.2 Removing and installing subframe without steering rack	17
2.3 Removing and installing subframe with steering rack	22
2.4 Repairing subframe	37
2.5 Removing and installing anti-roll bar	48
2.6 Removing and installing coupling rod	54
2.7 Repairing thread in longitudinal member	55
2.8 Fixing subframe in position	55
2.9 Lowering subframe	59
3 Suspension strut, upper suspension link	64
3.1 Assembly overview - suspension strut, upper suspension link	64
3.2 Removing and installing suspension strut	65
3.3 Repairing suspension strut	76
4 Lower suspension link, swivel joint	80
4.1 Assembly overview - lower suspension link, swivel joint	80
4.2 Removing and installing lower suspension link	82
4.3 Checking swivel joint	95
4.4 Removing and installing swivel joint	96
4.5 Renewing bonded rubber bush for lower suspension link	101
5 Wheel bearing	109
5.1 Assembly overview – wheel bearing assembly	109
5.2 Removing and installing wheel bearing housing	109
5.3 Removing and installing wheel bearing unit	116
6 Drive shaft	120
6.1 Overview - drive shaft	120
6.2 Assembly overview – drive shaft	121
6.3 Removing and installing drive shaft	127



6.4	Loosening and tightening threaded connections of drive shaft	145
6.5	Removing and installing drive shaft heat shield	146
6.6	Dismantling and assembling drive shaft	147
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	175
1.3	Removing and installing rear axle	183
1.4	Removing and installing shield for rear axle, vehicles with multi-link suspension	197
2	Axle beam	198
2.1	Assembly overview – axle beam	198
2.2	Renewing bonded rubber bush for axle beam	198
2.3	Assembly overview - attachments for torsion beam axle	207
3	Subframe	208
3.1	Assembly overview – subframe	208
3.2	Assembly overview - add-on parts for subframe	209
3.3	Fixing subframe in position	210
3.4	Repairing subframe	225
4	Anti-roll bar	239
4.1	Assembly overview – anti-roll bar	239
4.2	Removing and installing anti-roll bar	240
4.3	Removing and installing coupling rod	241
5	Suspension link, track rod	245
5.1	Assembly overview - transverse link	245
5.2	Assembly overview – track rod	249
5.3	Removing and installing upper transverse link	251
5.4	Removing and installing lower transverse link	254
5.5	Removing and installing track rod	255
6	Suspension strut, shock absorber, spring	257
6.1	Assembly overview - suspension strut, shock absorber, spring	257
6.2	Removing and installing shock absorber	259
6.3	Repairing shock absorber	266
6.4	Removing and installing spring	268
7	Wheel bearing assembly, trailing arm	278
7.1	Assembly overview – wheel bearing assembly	278
7.2	Assembly overview - trailing arm	283
7.3	Removing and installing wheel bearing housing	284
7.4	Removing and installing wheel bearing unit	295
7.5	Renewing bonded rubber bush for wheel bearing housing	305
7.6	Removing and installing trailing arm with mounting bracket	310
7.7	Repairing trailing arm, vehicles with standard bushes	313
8	Drive shaft	319
8.1	Assembly overview – drive shaft	319
8.2	Removing and installing drive shaft	321
8.3	Dismantling and assembling drive shaft	326
8.4	Loosening and tightening threaded connections of drive shaft	332
8.5	Checking outer constant velocity joint	333
8.6	Checking inner constant velocity joint	335
43	Self-levelling suspension	338
1	Electronically controlled damping system	338
1.1	Assembly overview - electronically controlled damping system	338



1.2	Removing and installing electronically controlled damping control unit J250	342
1.3	Removing and installing front body acceleration senders G341/G342	343
1.4	Removing and installing rear body acceleration sender G343	344
2	Vehicle level sender	346
2.1	Assembly overview – front vehicle level senders	346
2.2	Assembly overview – rear vehicle level senders	347
2.3	Removing and installing front vehicle level senders G78/G289	349
2.4	Removing and installing rear vehicle level senders G76/G77	351
44	- Wheels, tyres, vehicle geometry	356
1	Wheel alignment	356
1.1	Notes for wheel alignment	356
1.2	Conditions for testing	357
1.3	Test preparations	357
1.4	Specifications for wheel alignment	359
1.5	Setting vehicle to initial position for wheel alignment	362
1.6	Wheel alignment procedure	362
1.7	Necessity of wheel alignment	364
1.8	Adjusting camber at front wheels	366
1.9	Adjusting camber on rear axle	367
1.10	Adjusting toe at rear axle	369
1.11	Adjusting front axle toe	370
1.12	Wheel runout compensation	371
1.13	Vehicle data sticker	371
1.14	Checking maximum steering wheel angle	371
48	- Steering	373
1	Steering wheel	373
1.1	Assembly overview – steering wheel	373
1.2	Removing and installing steering wheel	374
2	Steering column	376
2.1	Assembly overview – steering column	376
2.2	Checking steering column for damage	377
2.3	Handling and transporting steering column	378
2.4	Removing and installing steering column	379
2.5	Removing and installing control unit for electronic steering column lock J764	385
3	Steering rack	388
3.1	Assembly overview – steering rack	388
3.2	Removing and installing steering rack	392
3.3	Removing and installing boot	411
3.4	Removing and installing track rod	414
3.5	Removing and installing track rod ball joint	419
3.6	Repairing steering rack	420
4	Sensors	425
4.1	Removing and installing steering angle sender G85	425