



## Contents

<b>00 - Technical data</b>	<b>1</b>
<b>1 Safety information</b>	<b>1</b>
1.1 Safety measures when working on vehicles with start/stop system	1
1.2 Safety precautions when working on a 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
<b>2 Repair instructions</b>	<b>3</b>
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
<b>3 Evaluating accident vehicles</b>	<b>10</b>
3.1 Check list for evaluating running gear on accident vehicles	10
<b>4 Disposal</b>	<b>12</b>
4.1 Releasing gas and draining front gas-filled shock absorbers	12
4.2 Releasing gas and draining rear gas-filled shock absorbers	13
<b>40 - Front suspension</b>	<b>15</b>
<b>1 Front axle</b>	<b>15</b>
1.1 Overview of fitting locations – front axle	15
<b>2 Subframe</b>	<b>18</b>
2.1 Assembly overview – subframe	18
2.2 Removing and installing subframe without steering rack	18
2.3 Removing and installing subframe with steering rack	24
2.4 Repairing subframe	32
2.5 Repairing thread in longitudinal member	44
2.6 Fixing subframe in position	44
2.7 Lowering subframe	48
<b>3 Anti-roll bar</b>	<b>53</b>
3.1 Assembly overview – anti-roll bar	53
3.2 Removing and installing anti-roll bar	53
3.3 Removing and installing coupling rod	59
<b>4 Suspension strut, upper suspension link</b>	<b>61</b>
4.1 Assembly overview - suspension strut, upper suspension link	61
4.2 Removing and installing suspension strut	62
4.3 Repairing suspension strut	73
<b>5 Lower suspension link, swivel joint</b>	<b>77</b>
5.1 Assembly overview - lower suspension link, swivel joint	77
5.2 Removing and installing lower suspension link	78
5.3 Checking swivel joint	92
5.4 Removing and installing swivel joint	92
5.5 Renewing front bonded rubber bush for lower suspension link	97
5.6 Renewing rear bonded rubber bush for lower suspension link	100
<b>6 Wheel bearing</b>	<b>105</b>
6.1 Assembly overview – wheel bearing assembly	105
6.2 Removing and installing wheel bearing housing	105
6.3 Removing and installing wheel bearing unit	112



<b>7</b>	<b>Drive shaft</b> .....	<b>117</b>
7.1	Overview - drive shaft .....	117
7.2	Assembly overview – drive shaft .....	118
7.3	Removing and installing drive shaft .....	124
7.4	Loosening and tightening threaded connections of drive shaft .....	144
7.5	Removing and installing drive shaft heat shield .....	145
7.6	Dismantling and assembling drive shaft .....	146
7.7	Checking outer constant velocity joint .....	172
7.8	Checking inner constant velocity joint .....	173
<b>42</b>	<b>- Rear suspension</b> .....	<b>176</b>
<b>1</b>	<b>Rear axle</b> .....	<b>176</b>
1.1	Overview – rear axle .....	176
1.2	Lowering rear axle .....	178
1.3	Removing and installing rear axle .....	188
1.4	Removing and installing shield for rear axle .....	201
<b>2</b>	<b>Subframe</b> .....	<b>203</b>
2.1	Assembly overview – subframe .....	203
2.2	Assembly overview - add-on parts for subframe .....	204
2.3	Fixing subframe in position .....	205
2.4	Repairing subframe .....	220
<b>3</b>	<b>Anti-roll bar</b> .....	<b>235</b>
3.1	Assembly overview – anti-roll bar .....	235
3.2	Removing and installing anti-roll bar .....	236
3.3	Removing and installing coupling rod .....	238
<b>4</b>	<b>Suspension link, track rod</b> .....	<b>241</b>
4.1	Assembly overview - transverse link .....	241
4.2	Assembly overview – track rod .....	245
4.3	Removing and installing upper transverse link .....	246
4.4	Removing and installing lower transverse link .....	247
4.5	Removing and installing track rod .....	249
<b>5</b>	<b>Suspension strut, shock absorber, spring</b> .....	<b>251</b>
5.1	Assembly overview - suspension strut, shock absorber, spring .....	251
5.2	Removing and installing shock absorber .....	252
5.3	Repairing shock absorber .....	255
5.4	Removing and installing spring .....	257
<b>6</b>	<b>Wheel bearing assembly, trailing arm</b> .....	<b>264</b>
6.1	Assembly overview – wheel bearing assembly .....	264
6.2	Assembly overview - trailing arm .....	266
6.3	Removing and installing wheel bearing housing .....	267
6.4	Removing and installing wheel bearing unit .....	279
6.5	Renewing bonded rubber bush for wheel bearing housing .....	286
6.6	Removing and installing trailing arm with mounting bracket .....	290
6.7	Repairing trailing arm .....	294
<b>7</b>	<b>Drive shaft</b> .....	<b>305</b>
7.1	Assembly overview – drive shaft .....	305
7.2	Loosening and tightening threaded connections of drive shaft .....	309
7.3	Removing and installing drive shaft .....	310
7.4	Dismantling and assembling drive shaft .....	318
7.5	Checking outer constant velocity joint .....	325
7.6	Checking inner constant velocity joint .....	326
<b>43</b>	<b>- Self-levelling suspension</b> .....	<b>329</b>
<b>1</b>	<b>Electronic damping control</b> .....	<b>329</b>
1.1	Overview of fitting locations - electronically controlled damping system .....	329



1.2	Removing and installing electronically controlled damping control unit J250	331
1.3	Removing and installing front body acceleration senders G341/G342	334
1.4	Removing and installing rear left body acceleration sender G699	336
<b>2</b>	<b>Vehicle level sender</b>	<b>340</b>
2.1	Assembly overview – front vehicle level senders	340
2.2	Assembly overview – rear vehicle level senders	341
2.3	Removing and installing front vehicle level senders G78/G289	342
2.4	Removing and installing rear vehicle level senders G76/G77	344
<b>44</b>	<b>- Wheels, tyres, vehicle geometry</b>	<b>346</b>
<b>1</b>	<b>Wheel alignment</b>	<b>346</b>
1.1	Notes for wheel alignment	346
1.2	Prerequisites for wheel alignment	347
1.3	Test preparations	347
1.4	Specifications for wheel alignment	349
1.5	Wheel alignment procedure	351
1.6	Necessity of wheel alignment	353
1.7	Vehicle data sticker	354
1.8	Adjusting camber at front wheels	355
1.9	Adjusting camber on rear axle	357
1.10	Adjusting toe at rear axle	358
1.11	Adjusting front axle toe	359
1.12	Wheel runout compensation	360
1.13	Checking maximum steering wheel angle	361
<b>48</b>	<b>- Steering</b>	<b>362</b>
<b>1</b>	<b>Steering wheel</b>	<b>362</b>
1.1	Assembly overview – steering wheel	362
1.2	Removing and installing steering wheel	363
<b>2</b>	<b>Steering column</b>	<b>365</b>
2.1	Assembly overview – steering column	365
2.2	Checking steering column for damage	366
2.3	Handling and transporting steering column	367
2.4	Removing and installing steering column	368
2.5	Removing and installing control unit for electronic steering column lock J764	377
<b>3</b>	<b>Steering rack</b>	<b>380</b>
3.1	Assembly overview – steering rack	380
3.2	Removing and installing steering rack	385
3.3	Removing and installing bellows	396
3.4	Removing and installing track rod	398
3.5	Removing and installing track rod ball joint	403
3.6	Repairing steering rack	404
<b>4</b>	<b>Sensors</b>	<b>410</b>
4.1	Removing and installing steering angle sender G85	410