

Contents

00 - Technical data	1
1 Safety information	1
1.1 Safety information	1
2 Repair instructions	2
2.1 Repair instructions	2
3 Electrical components	3
3.1 Starting diagnosis	3
27 - Starter, current supply, CCS	8
1 Safety and repair instructions	8
1.1 Safety information	8
1.2 Repair instructions	8
2 Battery	9
2.1 Assembly overview - battery A, vehicles without alternative drive system (0K0)	9
2.2 Assembly overview - battery A, vehicles with high-voltage system (0K3)	10
2.3 Assembly overview - battery A, vehicles with alternative drive system (0K4)	10
2.4 Assembly overview - second battery A1	11
2.5 Assembly overview - battery, 48 V A6	13
2.6 Disconnecting and connecting battery A - vehicles without alternative drive system (0K0) ..	16
2.7 Disconnecting and connecting battery A - vehicles with high-voltage system (0K3)	18
2.8 Disconnecting and connecting battery A - vehicles with alternative drive system (0K4) ..	19
2.9 De-energising 48 Volt system	24
2.10 Re-energising 48 Volt system	24
2.11 Removing and installing earth cable with battery monitor control unit J367 - vehicles without alternative drive system (0K0)	24
2.12 Removing and installing earth cable with battery monitor control unit J367 - vehicles with high-voltage system (0K3)	25
2.13 Removing and installing earth cable with battery monitor control unit J367 - vehicles with alternative drive system (0K4)	27
2.14 Removing and installing battery A - vehicles without alternative drive system (0K0)	30
2.15 Removing and installing battery A - vehicles with high-voltage system (0K3)	34
2.16 Removing and installing battery A - vehicles with alternative drive system (0K4)	37
2.17 Removing and installing second battery A1	43
2.18 Removing and installing battery, 48 V A6	45
2.19 Removing and installing protective housing for second battery A1	49
2.20 Removing and installing protective housing for battery, 48 V A6	51
2.21 Removing and installing battery fan V457/V458	54
2.22 Inspecting and classifying second battery A1	54
2.23 Inspecting and classifying battery, 48 V A6	55
2.24 Charging battery A	56
2.25 Charging second battery A1	58
2.26 Charging battery, 48 V A6	58
2.27 Removing and installing battery cut-off relay/battery isolation igniter	58
2.28 Removing and installing battery isolation igniter, 48 V N751	58
3 Voltage converter	60
3.1 Assembly overview - voltage converter	60
3.2 Removing and installing voltage converter (48 V/12 V) A7	60
4 Jump-start connection point	64
4.1 Assembly overview - jump-start connection point	64
5 Alternator	65
5.1 Assembly overview - alternator, vehicles with 2.0 ltr. TFSI engine	65
5.2 Assembly overview - alternator, vehicles with 2.0 ltr. TDI engine	65
5.3 Assembly overview - alternator, vehicles with 2.9 ltr./3.0 ltr. TFSI engine	67

5.4	Assembly overview - alternator, vehicles with 3.0 ltr. TDI engine, generation I	69
5.5	Assembly overview - alternator, vehicles with 3.0 ltr. TDI engine, generation II	69
5.6	Assembly overview - alternator, vehicles with 3.0 ltr. TDI engine, generation III	71
5.7	Assembly overview - alternator, vehicles with 4.0 ltr. TFSI engine	72
5.8	Removing and installing alternator - vehicles with 2.0 ltr. TFSI engine	74
5.9	Removing and installing alternator - vehicles with 2.0 ltr. TDI engine	75
5.10	Removing and installing alternator - vehicles with 2.9 ltr. TFSI engine	79
5.11	Removing and installing alternator - vehicles with 3.0 ltr. TFSI engine	82
5.12	Removing and installing alternator - vehicles with 3.0 ltr. TDI engine, generation I	87
5.13	Removing and installing alternator - vehicles with 3.0 ltr. TDI engine, generation II	91
5.14	Removing and installing alternator - vehicles with 3.0 ltr. TDI engine, generation III	97
5.15	Removing and installing alternator - vehicles with 4.0 ltr. TFSI engine	105
5.16	Checking alternator C - vehicles without alternative drive system (0K0)	109
5.17	Checking starter-alternator C29 - vehicles with alternative drive system (0K4)	109
6	Starter	111
6.1	Assembly overview - starter	111
6.2	Removing and installing starter - vehicles with 2.0 ltr. TFSI engine	111
6.3	Removing and installing starter - vehicles with 2.9 ltr./3.0 ltr. TFSI engine	113
6.4	Removing and installing starter - vehicles with 4.0 ltr. TFSI engine	116
6.5	Removing and installing starter - vehicles with 2.0 ltr. TDI engine	117
6.6	Removing and installing starter - vehicles with 3.0 ltr. TDI engine, generation I	120
6.7	Removing and installing starter - vehicles with 3.0 ltr. TDI engine, generation II and generation III	122
90	Gauges, instruments	125
1	Safety and repair instructions	125
1.1	Safety information	125
1.2	Repair instructions	125
2	Dash panel insert	126
2.1	Assembly overview - dash panel insert	126
2.2	Assembly overview - head-up display	127
2.3	Removing and installing dash panel insert with control unit in dash panel insert J285	128
2.4	Removing and installing control unit for head-up display	131
3	Horn	134
3.1	Assembly overview - horn	134
3.2	Removing and installing treble horn H2/bass horn H7	135
3.3	Removing and installing reverse warning beeper H29	142
92	Windscreen wash/wipe system	144
1	Safety and repair instructions	144
1.1	Safety information	144
1.2	Repair instructions	144
2	Windscreen wiper system	145
2.1	Overview of fitting locations - windscreen wiper system	145
2.2	Assembly overview - windscreen wiper system	145
2.3	Moving wipers to service position	147
2.4	Removing and installing wiper blade - vehicles without wiper with integrated washer jet	148
2.5	Removing and installing wiper blade - vehicles with wiper with integrated washer jet	149
2.6	Removing and installing wiper arm - vehicles without wiper with integrated washer jet	150
2.7	Removing and installing wiper arm - vehicles with wiper with integrated washer jet	152
2.8	Adjusting wiper arms	155
2.9	Removing and installing wiper motor V	157
2.10	Removing and installing rain and light sensor G397	158
3	Windscreen washer system	163

3.1	Assembly overview - windscreen washer system, vehicles without wiper with integrated washer jet	163
3.2	Assembly overview - windscreen washer system, vehicles with wiper with integrated washer jet	165
3.3	Removing and installing filler neck for washer fluid reservoir	166
3.4	Removing and installing washer fluid reservoir	166
3.5	Removing and installing windscreen washer fluid level sender	168
3.6	Removing and installing washer pump	169
3.7	Removing and installing windscreen washer pump control unit J1100 - vehicles with wiper with integrated washer jet	169
3.8	Removing and installing washer jets	171
3.9	Adjusting washer jets	171
4	Rear window wiper system	174
4.1	Overview of fitting locations - rear window wiper system	174
4.2	Assembly overview - rear window wiper system	174
4.3	Removing and installing wiper blade	175
4.4	Removing and installing wiper arm	176
4.5	Adjusting wiper arm	178
4.6	Removing and installing rear window wiper motor V12	179
5	Rear window washer system	181
5.1	Assembly overview - rear window washer system	181
5.2	Removing and installing washer jet for rear window washer system	182
5.3	Adjusting washer jet	182
6	Headlight washer system	184
6.1	Assembly overview - headlight washer system	184
6.2	Assembly overview - additional washer system, A6	184
6.3	Assembly overview - additional washer system, A7 Sportback	185
6.4	Removing and installing headlight washer system pump V11	186
6.5	Removing and installing washer jets	187
6.6	Removing and installing rear window washer pump V13	194
7	Washer fluid hoses	195
7.1	Repairing washer fluid hoses	195
94	Lights, bulbs, switches - exterior	196
1	Safety and repair instructions	196
1.1	Safety information	196
1.2	Repair instructions	196
2	Headlights	197
2.1	Assembly overview - headlight, A6	197
2.2	Assembly overview - headlight, A7 Sportback	203
2.3	Assembly overview - headlight, RS 6 Avant/RS 7 Sportback	206
2.4	Assembly overview - repair kit for headlight housing, A6	209
2.5	Assembly overview - repair kit for headlight housing, A7 Sportback	210
2.6	Assembly overview - repair kit for headlight housing, RS 6 Avant/RS 7 Sportback	212
2.7	Removing and installing headlight housing	214
2.8	Adjusting LED headlights	216
2.9	Adjusting matrix LED headlights	225
2.10	Removing and installing front turn signal bulb M5/M7	242
2.11	Removing and installing LED module - LED headlights, A6	244
2.12	Removing and installing LED module - low matrix LED headlights, A6	246
2.13	Removing and installing output module 1 for LED headlight A27/A31 - A6	249
2.14	Removing and installing output module 1 for LED headlight A27/A31 - A7 Sportback	254
2.15	Removing and installing output module 1 for LED headlight A27/A31 - RS 6 Avant/RS 7 Sportback	257
2.16	Removing and installing output module for matrix headlight - matrix LED headlights with laser main beams	260

2.17	Removing and installing headlight fan V407/V408 - A6	261
2.18	Removing and installing headlight fan V407/V408 - A7 Sportback	262
2.19	Removing and installing headlight fan V407/V408 - RS 6 Avant, RS 7 Sportback	264
2.20	Removing and installing headlight fan 2 V463/V464 - headlights with laser main beams	265
2.21	Removing and installing headlight range control motor V48/V49 - A6	267
2.22	Removing and installing headlight range control motor V48/V49 - A7 Sportback	272
2.23	Removing and installing headlight range control motor V48/V49 - RS 6 Avant/RS 7 Sportback	277
2.24	Installing repair kit for headlight housing - A6	282
2.25	Installing repair kit for headlight housing - A7 Sportback	283
2.26	Installing repair kit for headlight housing - RS 6 Avant/RS 7 Sportback	284
2.27	Removing and installing filter membrane	285
2.28	Removing and installing sealing frame	286
2.29	Adapting headlights for driving on the left side of the road	286
2.30	Adapting headlights for driving on the right side of the road	286
3	Daytime running lights	287
3.1	Assembly overview - signature lighting	287
3.2	Removing and installing signature lighting	287
3.3	Removing and installing light for signature lighting L275/L276	288
4	Lights in exterior mirror	290
4.1	Assembly overview - lights in exterior mirror	290
4.2	Removing and installing turn signal	290
5	Lights in exterior door handle	292
5.1	Assembly overview - lights in exterior door handle	292
5.2	Removing and installing exterior door handle illumination bulb	292
6	Lights in sill panel moulding	294
6.1	Assembly overview - entry light	294
7	Tail light clusters	295
7.1	Assembly overview - tail light cluster on body, A6	295
7.2	Assembly overview - tail light cluster on body, A7 Sportback	295
7.3	Assembly overview - tail light cluster on rear lid, A6	296
7.4	Assembly overview - tail light cluster on rear lid, A7 Sportback	298
7.5	Removing and installing tail light cluster - A6	300
7.6	Removing and installing tail light cluster - A7 Sportback	301
7.7	Removing and installing tail light cluster on rear lid - A6	302
7.8	Removing and installing tail light cluster on rear lid - A7 Sportback	304
7.9	Correcting installation position of tail light cluster - A6	306
7.10	Correcting installation position of tail light cluster - A7 Sportback	309
8	High-level brake light	313
8.1	Assembly overview - high-level brake light, A6	313
8.2	Assembly overview - high-level brake light, A7 Sportback	313
8.3	Removing and installing high-level brake light bulb M25 - A6 Saloon	315
8.4	Removing and installing high-level brake light bulb M25 - A6 Avant, A6 allroad	316
8.5	Removing and installing high-level brake light bulb M25 - A7 Sportback	317
9	Number plate light	320
9.1	Removing and installing number plate light X4/X5	320
10	Entry and start authorisation	321
10.1	Overview of fitting locations - entry and start authorisation system	321
10.2	Overview of fitting locations - keyless entry system	321
10.3	Assembly overview - exterior door handle for keyless entry system	323
10.4	Removing and installing contact sensor for exterior door handle	324
10.5	Removing and installing interior aerial 1 for entry and start system R138	325
10.6	Removing and installing front aerial for entry and start authorisation R376	325
10.7	Removing and installing luggage compartment aerial for entry and start system R137	327
10.8	Removing and installing aerial for entry and start authorisation R200/R201	328

10.9	Removing and installing near field communication control unit 2 J1170	329
10.10	Alcohol interlock	329
11	Steering column switch module	345
11.1	Assembly overview - steering column switch module	345
11.2	Removing and installing steering column switch module	345
12	Towing bracket	347
12.1	Removing and installing trailer detector control unit J345	347
12.2	Removing and installing trailer socket U10	347
96	Lights, bulbs, switches - interior	348
1	Safety and repair instructions	348
1.1	Safety information	348
1.2	Repair instructions	348
2	Lights	349
2.1	Overview of fitting locations - lights in dash panel	349
2.2	Overview of fitting locations - lights in front doors	351
2.3	Overview of fitting locations - lights in rear doors	352
2.4	Overview of fitting locations - background lighting in doors	353
2.5	Overview of fitting locations - lights in centre console	357
2.6	Overview of fitting locations - lights in seats, B-pillar and storage compartment (rear)	359
2.7	Overview of fitting locations - lights in luggage compartment	360
2.8	Overview of fitting locations - lights in roof trim	361
2.9	Removing and installing glove compartment light W6	363
2.10	Removing and installing footwell illumination bulb L151/L152	363
2.11	Removing and installing central locking SAFELOCK function warning lamp K133	364
2.12	Removing and installing light for front interior door handle illumination	364
2.13	Removing and installing front entry light W92/W93	365
2.14	Removing and installing light for rear interior door handle illumination	366
2.15	Removing and installing rear entry light W83/W84	366
2.16	Removing and installing light conductor for dash panel background lighting	367
2.17	Removing and installing light conductor for front door background lighting with light for door background lighting W86/W87/L200/L199	369
2.18	Removing and installing light for door storage compartment illumination L255/L256/L257/L258	371
2.19	Removing and installing rear exit warning lamp W113/W114	372
2.20	Removing and installing light for rear door contour lighting L253/L254	372
2.21	Removing and installing light conductor for rear door background lighting with light for door background lighting W88/W89/L201/L202	373
2.22	Removing and installing light conductor for front centre console background lighting with lights for background lighting L193/L194/L195/L196	375
2.23	Removing and installing selector lever position display Y5	376
2.24	Removing and installing right centre armrest illumination bulb L228	377
2.25	Removing and installing storage compartment illumination bulb in rear centre console L159	378
2.26	Removing and installing rear footwell light W9/W10	378
2.27	Removing and installing luggage compartment light - A6 Saloon	379
2.28	Removing and installing luggage compartment light - A6 Avant, A6 allroad, A7 Sportback	379
2.29	Removing and installing rear lid light W51	380
2.30	Removing and installing illuminated vanity mirror W20/W14	381
3	Controls	382
3.1	Overview of fitting locations - controls in dash panel	382
3.2	Overview of fitting locations - controls in front doors	382
3.3	Overview of fitting locations - controls in rear doors, vehicles without China equipment	384
3.4	Overview of fitting locations - controls in rear doors, vehicles with China equipment	385
3.5	Overview of fitting locations - controls in centre console	386
3.6	Overview of fitting locations - controls in rear centre armrest	386



3.7	Overview of fitting locations - controls in luggage compartment	387
3.8	Overview of fitting locations - controls in roof trim	388
3.9	Assembly overview - front interior light	390
3.10	Removing and installing light switch E1	391
3.11	Removing and installing steering column adjustment switch E167	391
3.12	Removing and installing centre switch module in dash panel EX22	394
3.13	Removing and installing switch module 1 in centre console EX23	395
3.14	Removing and installing valet parking button E536	396
3.15	Removing and installing glove compartment light switch E26	397
3.16	Removing and installing exterior mirror adjuster EX11	397
3.17	Removing and installing operating unit for window regulator in driver door EX36	398
3.18	Removing and installing window regulator switch in front passenger door EX27	399
3.19	Removing and installing interior locking button for central locking system E308/E309	400
3.20	Removing and installing operating unit for memory settings E464/E465	401
3.21	Removing and installing rear lid remote release button E233	401
3.22	Removing and installing button for deactivating interior monitoring and vehicle inclination sensor E616	403
3.23	Removing and installing operating unit in rear door EX60/EX61 - vehicles without China equipment	403
3.24	Removing and installing operating unit in rear door EX60/EX61 - vehicles with China equipment	404
3.25	Removing and installing rear interior locking button for central locking system E717/E718	405
3.26	Removing and installing parking brake button EX12	406
3.27	Removing and installing backrest adjustment button E425	406
3.28	Removing and installing button for longitudinal adjustment of front passenger seat E603	407
3.29	Removing and installing entry and start authorisation button E408	408
3.30	Removing and installing operating unit for rear seat adjustment E920	408
3.31	Removing and installing towing bracket release button E754	409
3.32	Removing and installing rear lid handle release button E234 - A6	410
3.33	Removing and installing rear lid handle release button E234 - A7 Sportback	413
3.34	Removing and installing operating unit for rear lid control EX58	415
3.35	Removing and installing rear lid warning buzzer H32	415
3.36	Removing and installing sunroof button E325	416
3.37	Removing and installing front interior light/reading light	417
3.38	Dismantling and assembling front interior light/reading light	418
3.39	Removing and installing interior light/reading light (rear) - vehicles without panoramic sunroof (rear)	422
3.40	Removing and installing interior light/reading light (rear) - vehicles with panoramic sunroof (rear)	423
4	Anti-theft alarm system	424
4.1	Assembly overview - interior monitoring	424
4.2	Removing and installing alarm horn H12	424
4.3	Removing and installing anti-theft alarm sensor G578	426
5	Cigarette lighter, socket	428
5.1	Assembly overview - cigarette lighter, 12 V socket	428
5.2	Removing and installing cigarette lighter U1/12 V socket U5	428
5.3	Removing and installing cigarette lighter illumination bulb/socket illumination bulb	431
5.4	Removing and installing rear cigarette lighter U9/12 V socket 2 U18	431
5.5	Removing and installing 12 V socket 3 U19	433
5.6	Renewing 12 V socket 3 U19	434
97 - Wiring		437
1	Safety and repair instructions	437
1.1	Safety information	437
1.2	Repair instructions	437
2	Relay carriers, fuse carriers, electronics boxes	438

2.1	Assembly overview - relay carriers, fuse carriers, electronics boxes	438
2.2	Assembly overview - main fuse carrier, vehicles without high-voltage system (0K0/0K4)	448
2.3	Assembly overview - main fuse carrier, vehicles with high-voltage system (0K3)	450
2.4	Removing and installing relay and fuse carrier (front left)	452
2.5	Removing and installing coupling point on right A-pillar, bottom TARU	457
2.6	Removing and installing suppression capacitor C24	459
2.7	Removing and installing wiring junction TV1 - vehicles without high-voltage system (0K0/0K4)	460
2.8	Removing and installing wiring junction TV1 - vehicles with high-voltage system (0K3)	461
2.9	Removing and installing terminal 30 wiring junction TV2	462
2.10	Removing and installing terminal 30a wiring junction TV3	464
2.11	Removing and installing terminal 40 wiring junction TV66	466
2.12	Removing and installing terminal 40 wiring junction 2 TV67	467
2.13	Removing and installing fuse holders in dash panel	469
2.14	Removing and installing relay and fuse carrier in luggage compartment	470
2.15	Removing and installing main fuse carrier on battery A - vehicles without alternative drive system (0K0)	474
2.16	Removing and installing main fuse carrier on battery A - vehicles with high-voltage system (0K3)	477
2.17	Removing and installing main fuse carrier on battery A - vehicles with alternative drive system (0K4)	479
3	Control units	483
3.1	Overview of fitting locations - control units	483
3.2	Assembly overview - data bus diagnostic interface	484
3.3	Removing and installing onboard supply control unit J519 - left-hand drive vehicles	485
3.4	Removing and installing onboard supply control unit J519 - right-hand drive vehicles	487
3.5	Removing and installing garage door operation control unit - A6	488
3.6	Removing and installing garage door operation control unit - A7 Sportback	489
3.7	Removing and installing data bus diagnostic interface J533	490
4	Connectors	494
4.1	Overview of fitting locations - connectors	494
4.2	Unplugging door coupling point	494
4.3	Removing and installing coupling station at left A-pillar	495
4.4	Removing and installing coupling station at right A-pillar	496
4.5	Repairing electrical wiring harnesses and electrical connectors	497
5	Releasing and dismantling connector housings	498
5.1	Releasing and dismantling connector housings	498
6	Cleaning contact surfaces	499
6.1	Cleaning contact surfaces	499
7	Repairing aerial wires	500
7.1	Repairing aerial wires	500
8	Fibre optic cables	501
8.1	Fibre optic cables	501
9	Vehicle diagnostic, testing and information systems	502
9.1	Vehicle diagnostic, testing and information systems	502