

Contents

00 - Technical data	1
1 Safety precautions	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 information and repair notes	8
1.1 Safety information	8
1.2 Repair instructions	8
2 Battery	9
2.1 Assembly overview - battery, left-hand drive vehicles	9
2.2 Assembly overview - battery, right-hand drive vehicles	11
2.3 Disconnecting and connecting battery	13
2.4 Removing and installing positive cable - left-hand drive vehicles	14
2.5 Removing and installing positive cable - right-hand drive vehicles	16
2.6 Removing and installing battery - left-hand drive vehicles	18
2.7 Removing and installing battery - right-hand drive vehicles	23
2.8 Inspecting and classifying battery A	27
2.9 Checking battery	28
2.10 Charging battery	28
3 Voltage converter	31
3.1 Voltage converter	31
4 Jump-start terminal	32
4.1 Assembly overview - jump-start terminal	32
90 - Gauges, instruments	33
1 Safety information and repair notes	33
1.1 Safety information	33
1.2 Repair instructions	33
2 Dash panel insert	34
2.1 Assembly overview - head-up display	34
2.2 Removing and installing dash panel insert with control unit in dash panel insert J285	34
2.3 Removing and installing control unit for head-up display	36
3 Horn	39
3.1 Assembly overview - horn	39
3.2 Removing and installing treble horn H2/bass horn H7	39
92 - Windscreen wash/wipe system	41
1 Safety information and repair notes	41
1.1 Safety information	41
1.2 Repair instructions	41
2 Windscreen wiper system	42
2.1 Overview of fitting locations - windscreen wiper system	42
2.2 Assembly overview - windscreen wiper system	42
2.3 Moving wipers to service position	44
2.4 Removing and installing wiper blade	44
2.5 Removing and installing wiper arms	45
2.6 Adjusting wiper arms	46
2.7 Removing and installing windscreen wiper VX58	48

2.8	Removing and installing rain and light sensor G397	49
3	Windscreen washer system	54
3.1	Assembly overview - windscreen washer system	54
3.2	Assembly overview - additional washer system	56
3.3	Removing and installing washer fluid reservoir	58
3.4	Removing and installing windscreen washer fluid level sender	61
3.5	Removing and installing washer pump	61
3.6	Removing and installing headlight washer system pump V11	63
3.7	Removing and installing washer jets	64
3.8	Adjusting washer jets	66
4	Washer fluid hoses	67
4.1	Repairing washer fluid hoses	67
94	Lights, bulbs, switches - exterior	68
1	Safety information and repair notes	68
1.1	Safety information	68
1.2	Repair instructions	68
2	Headlights	69
2.1	Assembly overview - matrix LED headlights (8IY)/laser LED headlights (8IZ)	69
2.2	Removing and installing headlights	72
2.3	Adjusting headlights - ECE vehicles	74
2.4	Adjusting headlights - NAR vehicles	79
2.5	Installing repair kit for headlight housing	83
2.6	Adapting headlights for driving on the left side of the road	83
2.7	Adapting headlights for driving on the right side of the road	83
2.8	Removing and installing headlight range control motor V48/V49	84
2.9	Removing and installing headlight fan	86
2.10	Removing and installing headlight fan	87
2.11	Removing and installing output module 1 for LED headlight A27/A31	90
3	Lights in exterior mirror	92
3.1	Removing and installing turn signal	92
4	Lights in exterior door handle	96
4.1	Removing and installing exterior door handle illumination bulb	96
5	Lights in sill panel moulding	98
5.1	Assembly overview - entry light	98
6	Tail light clusters	99
6.1	Assembly overview - tail light cluster on body	99
6.2	Assembly overview - tail light cluster on rear lid	99
6.3	Removing and installing tail light cluster	101
6.4	Removing and installing tail light cluster on rear lid	103
7	High-level brake light	106
7.1	Removing and installing high-level brake light	106
8	Entry and start authorisation	108
8.1	Overview of fitting locations - entry and start authorisation system	108
8.2	Overview of fitting locations - keyless entry system	108
8.3	Assembly overview - exterior door handle for keyless entry system	110
8.4	Removing and installing exterior door handle switch	110
8.5	Removing and installing interior aerial 1 for entry and start system R138	112
8.6	Removing and installing front aerial for entry and start authorisation R376	112
8.7	Removing and installing luggage compartment aerial for entry and start system R137	113
8.8	Removing and installing aerial for entry and start authorisation R200/R201	114
8.9	Alcohol interlock	114
9	Steering column switch module	131
9.1	Assembly overview - steering column switch module	131

9.2	Removing and installing steering column switch module	131
10	Automatic headlight range control	133
10.1	Overview of fitting locations - automatic headlight range control	133
96	Lights, bulbs, switches - interior	134
1	Safety information and repair notes	134
1.1	Safety information	134
1.2	Repair instructions	134
2	Lights	135
2.1	Overview of fitting locations - lights in dash panel	135
2.2	Overview of fitting locations - lights in front doors	136
2.3	Overview of fitting locations - lights in rear doors	137
2.4	Overview of fitting locations - background lighting in doors	138
2.5	Overview of fitting locations - lights in centre console	140
2.6	Overview of fitting locations - lights in luggage compartment	141
2.7	Overview of fitting locations - lights in roof trim	142
2.8	Removing and installing glove compartment light W6	143
2.9	Removing and installing front footwell light K268/K269	144
2.10	Removing and installing central locking SAFELOCK function warning lamp K133	145
2.11	Removing and installing entry light W92/W93/W83/W84	145
2.12	Removing and installing bulb for dash panel background lighting	146
2.13	Removing and installing light 1 for door background lighting L199/L200/L201/L202	147
2.14	Removing and installing light for door storage compartment illumination L255/L256/L257/ L258	149
2.15	Removing and installing light for front centre console background lighting L193/L194	149
2.16	Removing and installing rear footwell light W45/W46	150
2.17	Removing and installing luggage compartment light	151
2.18	Removing and installing illuminated vanity mirror W20/W14	152
3	Controls	153
3.1	Overview of fitting locations - controls in dash panel	153
3.2	Overview of fitting locations - controls in front doors	153
3.3	Overview of fitting locations - controls in rear doors	154
3.4	Overview of fitting locations - controls in centre console	155
3.5	Overview of fitting locations - controls in luggage compartment	156
3.6	Overview of fitting locations - controls in roof trim	157
3.7	Removing and installing light switch E1	158
3.8	Removing and installing steering column adjustment switch E167	159
3.9	Removing and installing centre switch module in dash panel EX22	160
3.10	Removing and installing glove compartment light switch E26	161
3.11	Removing and installing exterior mirror adjuster EX11	161
3.12	Removing and installing operating unit for window regulator in driver door EX36	162
3.13	Removing and installing window regulator switch in front passenger door EX27	163
3.14	Removing and installing interior locking button for central locking system E308/E309	163
3.15	Removing and installing driver operating unit for memory settings E464	164
3.16	Removing and installing rear lid remote release button E233	165
3.17	Removing and installing bonnet remote release button E975	166
3.18	Removing and installing operating unit in rear door EX60/EX61	167
3.19	Removing and installing entry and start authorisation button E408	168
3.20	Removing and installing rear lid handle release button E234	168
3.21	Removing and installing operating unit for rear lid control EX58	170
3.22	Removing and installing button for luggage compartment manual release E596	171
3.23	Removing and installing button for luggage compartment manual release, rear E904	172
3.24	Removing and installing rear lid warning buzzer H32	173
3.25	Removing and installing front interior light/reading light	173
3.26	Removing and installing rear interior light/reading light	174

4	Anti-theft alarm system	176
4.1	Assembly overview - interior monitoring	176
4.2	Removing and installing alarm horn H12	176
4.3	Removing and installing anti-theft alarm sensor G578	177
5	Cigarette lighter, socket	179
5.1	Assembly overview - cigarette lighter, 12 V socket	179
5.2	Removing and installing cigarette lighter U1/12 V socket U5	179
5.3	Removing and installing clamping sleeve	181
5.4	Removing and installing 12 V socket 2 U18	182
5.5	Renewing 12 V socket 2 U18	183
97 - Wiring	186	
1	Safety information and repair notes	186
1.1	Safety information	186
1.2	Repair instructions	186
2	Relay carriers, fuse carriers, electronics boxes	187
2.1	Assembly overview - relay carriers, fuse carriers, electronics boxes	187
2.2	Removing and installing electronics box	191
2.3	Removing and installing relay and fuse carriers	193
2.4	Removing and installing fuse holder	202
2.5	Removing and installing fuse holder SO/SP	203
2.6	Removing and installing wiring junction TV1	203
3	Control units	206
3.1	Overview of fitting locations - control units	206
3.2	Removing and installing onboard supply control unit J519	206
3.3	Removing and installing garage door operation control unit	210
3.4	Removing and installing data bus diagnostic interface J533	211
4	Connectors	213
4.1	Repairing electrical wiring harnesses and electrical connectors	213
5	Releasing and dismantling connector housings	214
5.1	Releasing and dismantling connector housings	214
6	Cleaning contact surfaces	215
6.1	Cleaning contact surfaces	215
7	Repairing aerial wires	216
7.1	Repairing aerial wires	216
8	Fibre optic cables	217
8.1	Fibre optic cables	217