

Contents

00 - Technical data	1
1 Safety information	1
1.1 Safety precautions when working on the high-voltage system	1
1.2 Safety precautions when working in the vicinity of high-voltage components	2
1.3 Safety precautions when working on vehicles with start/stop system	2
1.4 Safety precautions when using testers and measuring instruments during a road test	3
2 Repair instructions	4
2.1 Rules for cleanliness	4
2.2 General notes	4
2.3 Contact corrosion	4
2.4 ESD (electrostatic discharge) workplace	5
2.5 Routing and attachment of lines and wiring	5
2.6 Identification plates	6
2.7 Use of impact wrenches	6
91 - Radio, telephone, navigation	7
1 Safety information	7
2 Infotainment system	8
2.1 Layout - infotainment system	8
2.2 Overview of fitting locations - infotainment system	10
2.3 Removing and installing infotainment system display	11
2.4 Removing and installing control unit 1 for information electronics J794	15
2.5 Removing and installing multimedia system operating unit E380	16
2.6 Pin assignment	21
3 Sound system	36
3.1 Layout - sound system	36
3.2 Overview of fitting locations - sound system	41
3.3 Removing and installing digital sound package control unit/amplifier	49
3.4 Removing and installing rear treble loudspeakers R14/R16	51
3.5 Removing and installing front treble loudspeakers R20/R22	54
3.6 Removing and installing front mid-range loudspeakers	55
3.7 Removing and installing rear bass loudspeakers R15/R17	56
3.8 Removing and installing front bass loudspeakers R21/R23	60
3.9 Removing and installing subwoofer R211	61
3.10 Removing and installing effect loudspeakers	64
3.11 Removing and installing centre loudspeaker	69
3.12 Pin assignment	70
4 Aerial systems	73
4.1 Layout - aerial systems	73
4.2 Overview of fitting locations - aerial systems	75
4.3 Pin assignment	82
4.4 Removing and installing aerial amplifier	93
4.5 Removing and installing window aerial suppression filter C18	106
4.6 Removing and installing roof aerial	109
4.7 Removing and installing GPS aerial	110
4.8 Removing and installing telephone aerial	111
4.9 Removing and installing satellite tuner aerial	112
4.10 Removing and installing traffic data aerial	113
4.11 Removing and installing dedicated short-range communication aerial	114
4.12 Removing and installing bumper aerials	114
4.13 Removing and installing dash panel aerial	116
5 Radio	118



5.1	Layout - radio	118
5.2	Overview of fitting locations - radio	129
5.3	Removing and installing radio	132
5.4	Pin assignment	133
6	Telephone system	161
6.1	Layout - telephone	161
6.2	Overview of fitting locations - telephone system	171
6.3	Assembly overview - microphone unit	174
6.4	Removing and installing microphone unit in front roof module R164	176
6.5	Removing and installing aerial amplifier for mobile telephone R86	178
6.6	Removing and installing telephone bracket R126	180
6.7	Pin assignment	183
7	Navigation system	208
7.1	Layout - navigation system	208
7.2	Overview of fitting locations - navigation system	209
7.3	Removing and installing chip card reader control unit	210
7.4	Pin assignment	211
8	TV system	230
8.1	Layout - TV system	230
8.2	Overview of fitting locations - TV system	231
8.3	Pin assignment	233
8.4	Removing and installing TV tuner	234
9	Reversing camera system	240
9.1	Layout - reversing camera system	240
9.2	Overview of fitting locations - reversing camera system	242
9.3	Removing and installing reversing camera R189	245
9.4	Calibrating reversing camera system	247
9.5	Removing and installing reversing camera system control unit J772	254
9.6	Connectors on reversing camera system control unit J772	257
10	Multifunction steering wheel	260
10.1	Layout - multifunction steering wheel	260
10.2	Assembly overview - multi-function steering wheel	260
10.3	Removing and installing multifunction buttons in steering wheel E441/E440	262
10.4	Removing and installing tiptronic switches in steering wheel E439/E438	270
11	Connection for external multimedia devices	272
11.1	Layout - connection for external multimedia devices	272
11.2	Connectors on connection for external multimedia devices	275
11.3	Removing and installing connection for external audio sources R199	284
11.4	Removing and installing USB connection 1 U41	286
11.5	Removing and installing USB charging socket 1 U37	286
12	Mobile online services	288
12.1	General description - mobile online services	288
12.2	Overview of fitting locations - mobile online services	291
12.3	Removing and installing emergency call module control unit and communication unit J949	292
12.4	Emergency assistance call button E276	293
12.5	Loudspeaker for emergency call module R335	294
12.6	Pin assignment	295