



Contents

91 - Communication	1
1 Communication systems	1
1.1 General description - communication systems	1
1.2 Fault finding - communication systems	1
1.3 Notes on performing repair work on communication systems	1
1.4 Assembly overview - battery, transmitter and receiver unit, fuse and wiring harness	3
1.5 General notes on operating mobile telephones and two-way radios	4
1.6 Implementation of suppression measures	5
2 Radio system "R 100"	6
2.1 General description - radio system "R 100"	6
2.2 Fitting location overview - radio system "R 100"	6
2.3 Removing and installing radio system "R 100"	8
2.4 Anti-theft coding - radio system "R 100"	10
2.5 Connector pin assignment - radio system "R 100"	12
2.6 Adapting components - radio system "R 100"	14
3 Radio system "R110"	16
3.1 General description - radio system R 110	16
3.2 Fitting location overview - radio system "R 110"	16
3.3 Removing and installing radio system "R 110"	18
3.4 Connector pin assignment - radio system "R 110"	20
3.5 Anti-theft coding - radio system "R 110"	22
3.6 Adapting components - radio system "R 110"	24
4 Radio system "RCD 210"	26
4.1 General description - radio system "RCD 210"	26
4.2 Overview of fitting locations - radio system "RCD 210"	27
4.3 Removing and installing radio system "RCD 210"	28
4.4 Connector pin assignment - radio system "RCD 210"	30
4.5 Anti-theft coding - radio system "RCD 210"	32
4.6 Adapting components - radio system "RCD 210"	34
5 Radio system "RCD 300"	36
5.1 General description - radio system "RCD 300"	36
5.2 Overview of fitting locations - radio system "RCD 300"	37
5.3 Removing and installing radio system "RCD 300"	38
5.4 Connector pin assignment - radio system "RCD 300"	41
5.5 Anti-theft coding - radio system "RCD 300"	42
5.6 Adapting components - radio system "RCD 300"	44
6 Radio system "RCD 310"	46
6.1 General description - radio system "RCD 310"	46
6.2 Overview of fitting locations - radio system "RCD 310"	47
6.3 Removing and installing radio system "RCD 310"	48
6.4 Connector pin assignment - radio system "RCD 310"	50
6.5 Anti-theft coding - radio system "RCD 310"	53
6.6 Adapting components - radio system "RCD 310"	54
7 Radio system "RCD 500"	56
7.1 General description - radio system "RCD 500"	56
7.2 Overview of fitting locations - radio system "RCD 500"	57
7.3 Removing and installing radio system "RCD 500"	58
7.4 Activating transport protection device of CD changer in radio system "RCD 500"	61
7.5 Connector pin assignment - radio system "RCD 500"	61
7.6 Anti-theft coding - radio system "RCD 500"	63
7.7 Adapting components - radio system "RCD 500"	65
8 Radio system "RCD 510"	68



8.1	General description - radio system "RCD 510"	68
8.2	Overview of fitting locations - radio system "RCD 510"	69
8.3	Removing and installing radio system "RCD 510"	71
8.4	Activating/deactivating transport protection device of CD changer in radio system "RCD 510"	73
8.5	Connector pin assignment - radio system "RCD 510"	73
8.6	Anti-theft coding - radio system "RCD 510"	76
8.7	Adapting components - radio system "RCD 510"	78
9	Radio navigation system "RNS 300"	80
9.1	General description - radio navigation system "RNS 300"	80
9.2	Overview of fitting locations - radio navigation system "RNS 300"	81
9.3	Removing and installing radio navigation system "RNS 300"	83
9.4	Pin assignment - radio navigation system "RNS 300"	85
9.5	Anti-theft coding - radio navigation system "RNS 300"	88
9.6	Adapting components - radio navigation system "RNS 300"	90
10	Radio navigation system "RNS 315"	92
10.1	General description - radio navigation system "RNS 315"	92
10.2	Overview of fitting locations - radio navigation system "RNS 315"	93
10.3	System overview - radio navigation system "RNS 315"	95
10.4	Removing and installing radio navigation system "RNS 315"	96
10.5	Pin assignment - radio navigation system "RNS 315"	99
10.6	Anti-theft coding - radio navigation system "RNS 315"	101
10.7	Adapting components - radio navigation system "RNS 315"	103
11	"Radio navigation system 2" with multifunction display (MFD)	105
11.1	General description - "radio navigation system 2" with multifunction display (MFD)	105
11.2	Fitting locations overview - "radio navigation system 2" with multifunction display (MFD)	106
11.3	Removing and installing "radio and navigation system 2" with multifunction display (MFD)	108
11.4	Connector pin assignment - "radio navigation system 2" with multifunction display (MFD)	110
11.5	Anti-theft coding - radio navigation system "RNS-MFD 2" with multifunction display (MFD)	114
11.6	Adapting components - "radio navigation system 2" with multifunction display (MFD)	116
12	Radio navigation system "RNS 510"	118
12.1	General description - radio navigation system "RNS 510"	118
12.2	Overview of fitting locations - radio navigation system "RNS 510"	119
12.3	Removing and installing radio navigation system "RNS 510"	120
12.4	Pin assignment - radio navigation system "RNS 510"	123
12.5	Anti-theft coding - radio navigation system "RNS 510"	126
12.6	Adapting components - radio navigation system "RNS 510"	128
13	Radio navigation system "DX-R4" (Blaupunkt)	130
13.1	General description - radio navigation system "DX-R4" (Blaupunkt)	130
13.2	Fitting locations overview - radio navigation system "DX-R4"	131
13.3	Removing and installing radio navigation system "DX-R4"	133
13.4	Connector pin assignment - radio navigation system "DX-R4"	134
13.5	Anti-theft coding - radio navigation system "DX-R4"	137
13.6	Adaption - radio navigation system "DX-R4"	138
13.7	Fault finding - radio navigation system "DX-R4"	139
14	CD changer	142
14.1	Removing and installing CD changer	142
15	Connection for external audio sources	144
15.1	General description - connection for external audio sources	144
15.2	Removing and installing connection for external audio sources	144
15.3	Connector pin assignment - connection for external audio sources	145



16	Multimedia system control unit	146
16.1	General description - multimedia system control unit	146
16.2	Fitting location overview - multimedia system control unit	146
16.3	Removing and installing multimedia control unit	147
17	Sound system	149
17.1	General description - sound system	149
17.2	Removing and installing loudspeakers in front door	149
17.3	Removing and installing front treble loudspeakers	150
17.4	Removing and installing rear loudspeakers	151
18	Telephone system	154
18.1	General description - telephone system	154
18.2	System overview - telephone system and preparation for mobile telephone, vehicles up to model year 2010	155
18.3	System overview - preparation for mobile telephone, vehicles as of model year 2011	157
18.4	Removing and installing telephone bracket	162
18.5	Removing and installing telephone transmitter and receiver unit	166
18.6	Removing and installing mobile telephone operating electronics control unit	167
18.7	Removing and installing telephone system microphone	168
19	Aerial systems, vehicles up to model year 2010	170
19.1	General description - aerial systems, vehicles up to model year 2010	170
19.2	Overview of fitting locations - aerial systems	171
19.3	Transmitting power - aerial systems	174
19.4	Removing and installing aerial selection control unit	174
19.5	Removing and installing aerial amplifier	175
19.6	Removing and installing roof aerial	176
19.7	Renewal of aerial wiring	178
20	Aerial systems, vehicles as of model year 2011	179
20.1	General description - aerial systems, vehicles as of model year 2011	179
20.2	Overview of fitting locations - aerial systems	181
20.3	Removing and installing aerial film for FM2/DAB	188
20.4	Removing and installing GPS aerial	190
20.5	Removing and installing telephone aerial (GSM)	192
20.6	Removing and installing aerial for AM/FM	194
20.7	Renewal of aerial wiring	197
21	Multifunction steering wheel	198
21.1	General description - multifunction steering wheel	198
21.2	System overview - multifunction steering wheel	199
21.3	Removing and installing steering wheel operating unit	200
21.4	Removing and installing tiptronic switch	202
21.5	Removing and installing multifunction steering wheel control unit	203
21.6	Adapting multifunction steering wheel	204