

Contents

00	Technical data	1
1	Safety briefing/employee qualification	1
1.1	Qualification	1
2	Safety information	2
2.1	Safety information	2
2.2	Safety precautions when working on the high-voltage system	4
2.3	Safety precautions when working in the vicinity of high-voltage components	5
2.4	Safety precautions when working on the cooling system	6
2.5	Safety precautions when using testers and measuring instruments during a road test	6
2.6	Work that requires high-voltage system to be de-energised	6
3	Important notes	8
4	Vehicle identification data	9
4.1	Vehicle identification number	9
4.2	Type plate	9
4.3	Vehicle data sticker	9
5	Repair instructions	10
5.1	Information on handling fine dust, aluminium dust and steel dust	10
5.2	Routing and attachment of pipes, hoses and wiring	11
5.3	Contact corrosion	11
5.4	Bonding surfaces for self-adhesive components	11
5.5	Secure threaded connections	11
5.6	Identification plates	12
5.7	Impact wrenches	12
5.8	Repairing joints with flow-drill screws	12
5.9	Bonded joints	15
5.10	Moulded foam inserts	17
5.11	Surface treatment	18
5.12	Dent removal	19
5.13	Using edge milling unit -VAS 882 005-	19
6	Extraction systems for steel/aluminium body repair station ("multi-material-mix" workplace)	52
7	Galvanised body panels, high-strength and extra-high-strength steel, aluminium sheet panels	54
7.1	Aluminium sheet panels, aluminium extrusions, cast aluminium profiles	56
8	Overview of attachment pairings	61
9	Overview of rivets and tools	62
9.1	Overview of rivets used for repair measures	67
9.2	Removing rivets accessible from one side only	68
9.3	Renewing studs	68
9.4	Thread repair for M6 pop rivet nut	69
9.5	Fitting pop rivet bolt WHT 005 180	70
10	Body dimensions	71
10.1	Body - front	71
10.2	Body - centre	73
10.3	Body - rear	77
10.4	Floor group	78
11	Processing body structure adhesive D 180 004 M2	81
11.1	Preparing bonding surfaces	82
12	Tools	96
12.1	Straightening jig	101
50	Body - front	103



1	Safety information	103
2	Renewing upper longitudinal member for wheel housing (front section)	104
2.1	Tools	104
2.2	Procedure	105
3	Renewing upper wheel housing longitudinal member	114
3.1	Tools	114
3.2	Procedure	115
4	Renewing suspension turret	122
4.1	Tools	122
4.2	Procedure	123
5	Renewing front longitudinal member	131
5.1	Tools	131
5.2	Procedure	132
6	Renewing front longitudinal member - partial renewal	145
6.1	Tools	145
6.2	Procedure	146
7	Renewing front longitudinal member (with support piece) - partial renewal	154
7.1	Tools	154
7.2	Procedure	155
8	Renewing upper footwell cross member	170
8.1	Tools	170
8.2	Procedure	171
9	Renewing outer footwell cross member	177
9.1	Tools	177
9.2	Procedure	178
51 - Body - centre		186
1	Safety information	186
2	Permitted separating cuts on complete side frame	187
3	Renewing roof	188
3.1	Tools	188
3.2	Procedure	194
4	Renewing roof (vehicles with panoramic tilting sunroof)	211
4.1	Tools	211
4.2	Procedure	212
5	Renewing roof side member	230
5.1	Tools	230
5.2	Procedure	231
6	Renewing front roof cross member	239
6.1	Tools	239
6.2	Procedure	240
7	Renewing rear roof cross member	245
7.1	Tools	245
7.2	Procedure	246
8	Renewing outer A-pillar	251
8.1	Tools	251
8.2	Procedure	252
9	Renewing lower inner A-pillar	260
9.1	Tools	260
9.2	Procedure	261
10	Renewing upper inner A-pillar - partial renewal	266
10.1	Tools	266

10.2	Procedure	267
11	Renewing outer B-pillar	278
11.1	Tools	278
11.2	Procedure	279
12	Renewing inner B-pillar - partial renewal	288
12.1	Tools	288
12.2	Procedure	289
13	Renewing outer side member	301
13.1	Tools	301
13.2	Procedure	302
14	Renewing inner side member	309
14.1	Tools	309
14.2	Procedure	310
15	Renewing front seat cross member	314
15.1	Tools	314
15.2	Procedure	315
16	Renewing rear seat cross member	320
16.1	Tools	320
16.2	Procedure	321
17	Renewing centre tunnel	326
17.1	Tools	326
17.2	Procedure	327
53 - Body - rear		335
1	Safety information	335
2	Permitted separating cuts on complete side frame	336
3	Renewing rear cross panel	337
3.1	Tools	337
3.2	Procedure	338
4	Renewing rear cross panel reinforcement	346
4.1	Tools	347
4.2	Procedure	347
5	Renewing rear longitudinal member - partial renewal	354
5.1	Tools	355
5.2	Procedure	355
6	Renewing rear longitudinal member	377
6.1	Tools	377
6.2	Procedure	378
7	Renewing side panel	437
7.1	Tools	437
7.2	Procedure	438
8	Renewing C-pillar reinforcement	446
8.1	Tools	446
8.2	Procedure	447
9	Renewing outer wheel housing	454
9.1	Tools	454
9.2	Procedure	455
10	Renewing inner wheel housing	462
10.1	Tools	462
10.2	Procedure	463
11	Renewing luggage compartment floor - partial renewal	471
11.1	Tools	472
11.2	Procedure	472



12	Renewing luggage compartment floor	479
12.1	Tools	480
12.2	Procedure	480