

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 Work that requires high-voltage system to be de-energised	4
2.3 Safety precautions when working on the high-voltage system	5
2.4 Safety precautions when working in the vicinity of high-voltage components	6
2.5 Safety precautions when working on the cooling system	6
2.6 Safety precautions when using testers and measuring instruments during a road test	6
3 Repair instructions	8
3.1 Important notes	8
3.2 General notes	8
3.3 Information on handling fine dust, aluminium dust and steel dust	9
3.4 Routing and attachment of pipes, hoses and wiring	10
3.5 Contact corrosion	10
3.6 Bonding surfaces for adhesive strips	10
3.7 Self-locking bolts	10
3.8 Identification plates	10
3.9 Impact wrenches	11
3.10 Moulded foam inserts	11
3.11 Dent removal	13
3.12 Surface treatment	13
3.13 Repairing joints with flow-drill screws	14
3.14 Contact corrosion	15
3.15 Matching the surface contour	16
3.16 Galvanised body panels, high-strength and extra-high-strength steel	16
4 Extraction systems for steel/aluminium body repair station ("multi-material-mix" workplace)	22
5 Vehicle identification data	24
5.1 Vehicle data sticker	24
5.2 Type plate	24
6 Using edge milling unit -VAS 882 005-	25
6.1 General information	25
6.2 Assembling unit/changing milling tool	28
6.3 Separating flanged edges	38
6.4 Separating panels at corners and along surfaces	44
6.5 Separating outer edges	47
6.6 Roof - Renewal	50
6.7 Separating laser weld seams using round head milling unit	52
6.8 Aluminium panels	54
7 Processing body structure adhesive D 180 004 M2	57
7.1 Helicoil plus Twinert	57
8 What is CFRP (carbon fibre-reinforced plastic)?	58
8.1 Work on CFRP components	58
8.2 Body	58
8.3 Fibre-reinforced plastics (FRP) from a design point of view	59
8.4 Important notes relating to the use of CFRP in series-production vehicles	59
8.5 Safety measures	61
9 Overview of attachment pairings	63
10 Overview of rivets and tools	64

10.1	Overview of rivets used for repair measures	69
10.2	Inserting pop rivet bolts WHT 005 180	70
10.3	Thread repair for M6 pop rivet nut	70
11	Body dimensions	71
11.1	Body - front	71
11.2	Floor group	73
11.3	Body - rear	75
12	Tools	77
13	Straightening jig	82
13.1	Procedure for repairing structural body damage on Audi vehicles	82
50 - Body - front		83
1	Safety information	83
2	Upper wheel housing longitudinal member - Renewal	84
2.1	Tools	84
2.2	Procedure	85
3	Suspension turret - Renewal	93
3.1	Tools	93
3.2	Procedure	94
4	Front longitudinal member - Renewal	102
4.1	Tools	102
4.2	Procedure	103
5	Front longitudinal member - Partial renewal	118
5.1	Tools	118
5.2	Procedure	119
6	Cross member for bulkhead - Partial renewal	128
6.1	Tools	128
6.2	Procedure	129
51 - Body - centre		139
1	Safety information	139
2	Permitted separating cuts on complete side frame	140
3	Roof - Renewal	141
3.1	Tools	141
3.2	Procedure	143
4	Roof - Renewal (vehicles with panoramic tilting sunroof)	165
4.1	Tools	165
5	Roof side member - Renewal	187
5.1	Tools	187
5.2	Procedure	188
6	Renewing roof cross member (front)	198
6.1	Tools	198
6.2	Procedure	199
7	Roof cross member (rear) - Renewal	206
7.1	Tools	206
7.2	Procedure	207
8	Outer A-pillar - Renewal	212
8.1	Tools	212
8.2	Procedure	213
9	A-pillar reinforcement - Renewal	224
9.1	Tools	224
9.2	Procedure	225
10	Upper inner A-pillar - Partial renewal	229

10.1	Tools	229
10.2	Procedure	230
11	Upper inner A-pillar - Renewal	241
11.1	Tools	241
11.2	Procedure	242
12	Outer B-pillar - Renewal	250
12.1	Tools	250
12.2	Procedure	251
13	Inner B-pillar - Renewal	258
13.1	Tools	258
13.2	Procedure	259
14	Outer side member - Renewal	266
14.1	Tools	266
14.2	Procedure	267
15	Inner side member - Partial renewal	274
15.1	Tools	274
15.2	Procedure	275
16	Inner side member - Renewal	280
16.1	Tools	280
16.2	Procedure	281
17	Inner side member reinforcement - Renewal	284
17.1	Tools	284
17.2	Procedure	285
18	Inner side member (base section) - Renewal	289
18.1	Tools	289
18.2	Procedure	290
19	Back panel (CFRP component) - Renewal	300
19.1	Tools	300
19.2	Procedure	301
53 - Body - rear		342
1	Safety information	342
2	Permitted separating cuts on complete side frame	343
3	Renewing rear lock carrier	344
3.1	Tools	344
3.2	Procedure	345
4	Tail light mounting - Renewal	351
4.1	Tools	351
4.2	Procedure	352
5	Upper cross panel - Renewal	358
5.1	Tools	358
5.2	Procedure	359
6	Rear longitudinal member - Partial renewal	364
6.1	Tools	364
6.2	Procedure	365
7	Side panel - Renewal	373
7.1	Tools	373
7.2	Procedure	374
8	Inner side panel - Renewal	383
8.1	Tools	383
8.2	Procedure	384
9	C-pillar reinforcement - Renewal	390
9.1	Tools	390



9.2	Procedure	391
10	Rear wheel housing - Renewal	398
10.1	Tools	398
10.2	Procedure	399
11	Rear wheel housing - Partial renewal	406
11.1	Tools	406
11.2	Procedure	407
12	Inner rear wheel housing - Renewal	412
12.1	Tools	412
12.2	Procedure	413
13	Luggage compartment floor - Renewal	420
13.1	Tools	420
13.2	Procedure	421