

Contents

27 - Starter, current supply, CCS	1
1 Battery	1
1.1 Basics about batteries	1
1.2 Battery types	1
1.3 Warning instructions and safety precautions when working on the battery	4
1.4 Working on the airbag system	5
1.5 Screwed connections of battery poles	6
2 Checking battery	7
2.1 Check battery with a magic eye	7
2.2 Checking fleece battery (AGM)	9
2.3 Visual inspection of the battery	9
2.4 Notes on battery replacement and battery degassing	10
2.5 Perform a battery test with the battery tester with printer VAS 6161	11
2.6 Check current drain when charging	12
2.7 No-load voltage measurement - Demonstration vehicles and stock vehicles	13
3 Charge battery	14
3.1 Charging battery	14
3.2 Severely discharged batteries	16
4 Cruise control system (CCS)	17
4.1 General description	17
4.2 Activate/deactivate cruise control system	17
92 - Windscreen wash/wipe system	18
1 Repairing washer fluid level pipes	18
1.1 Repair solution for plain ended pipe	18
1.2 Repair solution for corrugated pipe	19
2 Washer fluid lines	22
2.1 Connections of washer fluid level pipes	22
3 Joint-free wiper blades	24
3.1 Distinguishing features of joint-free wiper blades	24
94 - Lights, bulbs, switches - exterior	25
1 Gas discharge lamps	25
1.1 Use and safety instructions for gas discharge lamps	25
2 LED headlights	27
2.1 Application and safety instructions for LED headlights	27
96 - Lights, bulbs, switches - interior	28
1 12V power sockets, cigarette lighter	28
1.1 Removing and installing the 12 V power socket/cigarette lighter in the centre console	28
97 - Wiring	30
1 Vehicle diagnosis, testing and information systems	30
1.1 Safety instructions	30
1.2 Connect vehicle diagnosis, measurement and information system VAS 505x	30
2 Wiring harness repair	32
2.1 General instructions for the repair on the vehicle electrics	32
2.2 General instructions for wiring harness and plug repair	33
2.3 Tool descriptions	34
2.4 Repair of airbag and belt tensioner cables	37
2.5 Repair of CAN bus lines	39
2.6 Crimp new contacts	40



2.7	Repair of 0.13 mm ² / 0.35 mm ² / 0.5 mm ² cable	42
2.8	Repair a 10 mm ² - or 16 mm ² cable with an individual joint butt splice connector	46
2.9	Line break with single repair point	50
2.10	Line break with two repair points	52
2.11	Repairing aerial cables	53
3	Repairing socket housings and connectors	65
3.1	Notes on repairing socket housings and connectors	65
3.2	Repairing contacts in socket housings	65
3.3	Assembly of single cable seals	66
4	Unlocking and disassembling socket housings	69
4.1	Notes on unlocking and disassembling socket housings	69
4.2	Secondary lock	69
4.3	Primary lock	70
5	Repairing optical fibres	75
5.1	General points	75
5.2	Preparing optical fibres	75
5.3	Removing and installing optical fibre in the housing	80
6	Contact surface cleaning set VAS 6410	81
6.1	Use contact surface cleaning set VAS 6410	81
6.2	Repairing the cable eyes	81
6.3	Repairing screwed connections	83
6.4	Cleaning the battery pole terminals and battery poles	84
6.5	Preserving	85
7	Replace the lambda probe	87
7.1	Replace the LSF lambda probe (4-pole)	87
7.2	Replace the LSU lambda probe (6-pole)	88
7.3	Protective pipe variants of the unit lambda probes	88