



## Contents

<b>00 - Technical data</b>	<b>1</b>
<b>1 Safety information</b>	<b>1</b>
1.1 Safety precautions when handling refrigerants	1
1.2 Safety precautions when working on high-voltage system	1
1.3 Safety precautions when working in the vicinity of high-voltage components	2
1.4 Safety precautions when working on the cooling system	3
<b>2 General information</b>	<b>4</b>
2.1 Notes concerning odours in air conditioned vehicles	4
2.2 Type plates	4
<b>3 Repair notes</b>	<b>5</b>
3.1 Working on refrigerant circuit	5
3.2 Refrigerant circuit seals	5
<b>4 Technical data</b>	<b>6</b>
4.1 Capacities for refrigerant R134a	6
4.2 Refrigerant oil	6
4.3 Oil distribution	6
<b>80 - Heating</b>	<b>7</b>
<b>1 Heating</b>	<b>7</b>
<b>87 - Air conditioning system</b>	<b>8</b>
<b>1 Overview of fitting locations - air conditioning system</b>	<b>8</b>
1.1 Overview of fitting locations - components not located in passenger compartment	8
1.2 Overview of fitting locations - components located in front section of passenger compartment	11
<b>2 Refrigerant circuit</b>	<b>13</b>
2.1 System overview - refrigerant circuit	13
2.2 Removing and installing high-pressure sender G65	15
2.3 Removing and installing expansion valve	17
2.4 Removing and installing condenser	19
2.5 Removing and installing desiccant bag or cartridge	20
2.6 Removing and installing evacuating and charging valves on low and high-pressure side	22
2.7 Commissioning of air conditioning system after filling refrigerant circuit	24
<b>3 Air conditioner compressor</b>	<b>25</b>
3.1 Assembly overview - drive unit of air conditioner compressor	25
3.2 Removing electrical air conditioner compressor V470 from and attaching to bracket	25
3.3 Removing and installing electrical air conditioner compressor V470	27
3.4 Removing and installing air conditioner compressor fuse S355	30
<b>4 Control motors</b>	<b>33</b>
4.1 Overview of fitting locations - front control motors	33
4.2 Removing and installing temperature flap control motor V68	34
4.3 Removing and installing centre flap control motor V70	36
4.4 Removing and installing air flow flap control motor V71	38
4.5 Removing and installing defroster flap control motor V107	40
<b>5 Front heater and air conditioning unit</b>	<b>43</b>
5.1 Assembly overview - add-on parts of heater and air conditioning unit and of air intake box	43
5.2 Assembly overview - evaporator housing	46
5.3 Removing and installing evaporator	47
5.4 Removing and installing evaporator temperature sensor G308	54
5.5 Removing and installing heater and air conditioning unit	55



5.6	Dismantling and assembling heater and air conditioning unit .....	63
5.7	Removing and installing dust and pollen filter .....	65
5.8	Removing and installing fresh air blower V2 .....	66
5.9	Removing and installing fresh air blower control unit J126 .....	69
5.10	Removing and installing heat exchanger .....	71
5.11	Removing and installing condensation drain .....	73
5.12	Checking condensation drain .....	73
<b>6</b>	<b>Air duct .....</b>	<b>74</b>
6.1	Assembly overview - air duct and air distribution in passenger compartment .....	74
6.2	Removing and installing centre vent .....	75
6.3	Removing and installing defroster vent .....	75
6.4	Removing and installing dash panel vent, side .....	76
6.5	Removing and installing right or left vent .....	76
6.6	Removing and installing air duct for defroster vent .....	76
6.7	Removing and installing air duct for centre vent .....	77
6.8	Removing and installing footwell air vents on driver and front passenger sides .....	77
6.9	Checking forced ventilation for passenger compartment .....	77
6.10	Removing and installing forced ventilation for passenger compartment .....	78
6.11	Removing and installing fresh air intake .....	78
<b>7</b>	<b>Coolant circuit .....</b>	<b>81</b>
7.1	Overview of fitting locations – coolant circuit .....	81
7.2	Removing and installing high-voltage heater (PTC) Z115 / high-voltage heater (PTC) J848 .....	81
<b>8</b>	<b>Operating and display unit .....</b>	<b>85</b>
8.1	Overview - operating and display unit .....	85
8.2	Removing and installing operating and display unit .....	86
<b>9</b>	<b>Other controlling and regulating components .....</b>	<b>87</b>
9.1	Removing and installing ambient temperature sensor G17 .....	87
9.2	Removing and installing sunlight penetration photosensor G107 .....	87
9.3	Removing and installing humidity sender for air conditioning system G260 .....	88
9.4	Repairing humidity sender for air conditioning system G260 .....	90
9.5	Removing and installing centre vent temperature sender G191 .....	91
9.6	Removing and installing footwell vent temperature sender G192 .....	91