



Contents

00 - Technical data	1
1 Safety information	1
1.1 Safety precautions when working on air conditioning systems	1
1.2 Safety precautions when handling refrigerants	1
1.3 Safety measures when working on vehicles with a start/stop system	2
1.4 Safety precautions when working on the cooling system	2
2 General information	3
2.1 Notes concerning odours in air conditioned vehicles	3
2.2 Notes for vehicles with start-stop system	3
3 Repair notes	4
3.1 Working on refrigerant circuit	4
3.2 General repair instructions	5
3.3 Refrigerant circuit seals	5
4 Technical data	6
4.1 Refrigerant capacity	6
4.2 Refrigerant oil	6
4.3 Oil distribution	7
80 - Heating	8
1 Heater	8
1.1 Assembly overview – heater unit	8
1.2 Removing and installing fresh air blower V2	10
1.3 Checking fresh air blower V2	11
1.4 Removing and installing fresh air blower series resistor with overheating fuse N24	12
1.5 Removing and installing dust and pollen filter	13
1.6 Removing and installing heat exchanger	15
1.7 Removing and installing heater unit	19
1.8 Dismantling and assembling heater unit	23
1.9 Removing and installing auxiliary air heater element Z35	24
2 Air duct	28
2.1 Removing and installing centre vent, front	28
2.2 Dismantling and assembling centre vent, front	29
2.3 Removing vent on driver or front passenger side	30
2.4 Removing and installing right footwell vent on front passenger side	30
2.5 Removing and installing footwell vents on driver side	31
2.6 Removing and installing rear footwell air duct	31
2.7 Removing and installing air duct for rear vent	32
2.8 Removing and installing rear vents	32
2.9 Checking forced ventilation for passenger compartment	34
2.10 Removing and installing forced ventilation for passenger compartment	34
2.11 Removing and installing fresh air intake	35
3 Control motors	36
3.1 Removing and installing fresh air and air recirculation flap control motor V154	36
3.2 Removing and installing air distribution flap actuator	39
3.3 Removing and installing temperature flap actuator	39
3.4 Removing and installing Bowden cable for temperature flap	39
3.5 Removing and installing flexible shaft for air distribution	40
4 Operating and display unit	42
4.1 Removing and installing operating and display unit	42
4.2 Multi-pin connector pin assignment on back of operating and display unit	42
87 - Air conditioning system	44



1	Overview of fitting locations - air conditioning system	44
1.1	Overview of fitting locations - components not located in passenger compartment	44
1.2	Overview of fitting locations - components located in front section of passenger compartment	47
2	Refrigerant circuit	54
2.1	Removing and installing high-pressure sender G65	54
2.2	Removing and installing expansion valve	55
2.3	Assembly overview - condenser	59
2.4	Removing and installing condenser	60
2.5	Removing and installing receiver	63
2.6	Removing and installing desiccant bag or cartridge	66
2.7	Removing and installing evacuating and charging valves on low and high-pressure side	72
3	Air conditioner compressor	75
3.1	Assembly overview - pulley	75
3.2	Removing air conditioning compressor from and installing on bracket	76
3.3	Removing and installing air conditioner compressor bracket	79
3.4	Removing and installing air conditioner compressor	88
3.5	Checking high-pressure safety valve on air conditioner compressor	92
3.6	Removing and installing pulley	93
4	Front heater and air conditioning unit	99
4.1	Removing and installing evaporator	99
4.2	Dismantling and assembling evaporator housing	100
4.3	Removing and installing heater and air conditioning unit	101
4.4	Dismantling and assembling heater and air conditioning unit	111
4.5	Removing and installing fresh air blower V2	116
4.6	Checking fresh air blower V2	117
4.7	Removing and installing fresh air blower control unit J126	118
4.8	Removing and installing condensation drain	119
4.9	Checking condensation drain	119
4.10	Removing and installing glove box cooling	120
4.11	Removing and installing evaporator temperature sensor G308	120
5	Air duct	121
5.1	Removing and installing left vent temperature sender G150	121
5.2	Removing and installing right vent temperature sender G151	121
5.3	Removing and installing left footwell vent temperature sender G261	122
5.4	Removing and installing right footwell vent temperature sender G262	122
5.5	Removing and installing evaporator output temperature sender G263 or evaporator temperature sensor G308	122
5.6	Removing and installing centre vent temperature sender G191	123
5.7	Removing and installing footwell vent temperature sender G192	123
6	Operating and display unit	124
6.1	Overview of operating and display unit	124
6.2	Removing and installing operating and display unit	137
6.3	Multi-pin connector pin assignment on Climatronic control unit J255	139
7	Control motors	150
7.1	Removing and installing temperature flap control motor V68	150
7.2	Removing and installing centre flap control motor V70 or front air distribution flap control motor V426	151
7.3	Removing and installing air flow flap control motor V71 with potentiometer for air flow flap control motor G113	152
7.4	Removing and installing defroster flap control motor V107	155
7.5	Removing and installing air recirculation flap control motor V113	156
7.6	Removing and installing fresh air/air recirculation, air flow flap control motor V425 with potentiometer for fresh air/air recirculation, air flow flap control motor G644	158
7.7	Removing and installing fresh air/air recirculation, air flow flap actuator	159



7.8	Removing and installing left temperature flap control motor V158	159
7.9	Removing and installing right temperature flap control motor V159	161
7.10	Removing and installing indirect ventilation flap control motor V213	162
7.11	Removing and installing air distribution flap control motor V428	163
7.12	Removing and installing flexible shaft	164
8	Other controlling and regulating components	166
8.1	Removing and installing sunlight penetration photosensor G107 or sunlight penetration photosensor 2 G134	166
8.2	Removing and installing air quality sensor G238	167
8.3	Removing and installing ambient temperature sensor G17	167

