



Contents

80 - Heating	1
1 Repairing heating system	1
1.1 Passenger compartment heating	1
1.2 Removing and installing heater unit baffle plate	3
1.3 Removing fresh air blower V2	4
1.4 Removing and installing fresh air blower series resistor with overheating fuse N24	4
1.5 Removing and installing dust and pollen filter	5
1.6 Removing vents	6
1.7 Removing and installing controls for heated and fresh air	9
1.8 Connectors on controls for heated and fresh air	10
1.9 Removing and installing flexible shaft for air distribution	11
1.10 Removing and installing Bowden cable for temperature flap	12
1.11 Removing and installing fresh air and air recirculation flap control motor V154	13
1.12 Removing and installing heat exchanger	13
1.13 Removing and installing auxiliary air heater element Z35 on vehicles up to 1K-7P015628 and 1K-7B084800	17
1.14 Testing, removing and installing auxiliary air heater element Z35 on vehicles from 1K-7P015629 und 1K-7B084801	18
1.15 Checking ventilation	20
1.16 Removing and installing inlet grilles	20
1.17 Removing and installing heater unit	21
2 Dismantling and assembling heater unit	26
2.1 Assembly overview – heater unit	26
2.2 Removing and installing air distribution housing	28
2.3 Dismantling and assembling heater unit	29
2.4 Removing and installing air distribution flap actuator	29
2.5 Removing and installing temperature flap actuator	30
87 - Air conditioning system	31
1 Notes on repair work to vehicles with air conditioning and on handling refrigerant	31
1.1 Notes concerning odours in air conditioned vehicles	31
2 Air conditioning system with manual controls “Climatic”	32
2.1 Air conditioning and heating - passenger compartment	32
2.2 Removing and installing heating and air conditioning controls, “Climatic” with air conditioning system control unit J301	35
2.3 Connectors on controls for heating and air conditioning “Climatic”	36
2.4 Removing and installing flexible shaft for air distribution	37
2.5 Checking condensation water drainage hose on heater and air conditioner unit	38
2.6 Removing and installing air recirculation flap control motor V113	38
2.7 Removing and installing temperature flap control motor V68	39
2.8 Removing and installing footwell vent temperature sender G192	42
2.9 Removing and installing centre vent temperature sender G191	42
2.10 Ambient temperature sensor G17	42
3 Air conditioning system with automatic regulation “Climatronic”	44
3.1 Procedure for checking and adjusting components	46
3.2 Function of operating and display unit for Climatronic air conditioning system E87	46
3.3 Removing and installing operating and display unit for Climatronic air conditioning system E87 with Climatronic control unit J255	48
3.4 Connectors on Climatronic control unit J255	49
3.5 Climatronic - passenger compartment	51
3.6 Indirect ventilation	54
3.7 Assembly overview - evaporator housing	57
3.8 Removing and installing fresh air blower control unit J126	58



3.9	Removing and installing left footwell vent temperature sender G261	59
3.10	Removing and installing right footwell vent temperature sender G262	60
3.11	Removing and installing evaporator temperature sensor G308 or evaporator output temperature sender G263	60
3.12	Ambient temperature sensor G17	61
3.13	Function of air quality sensor G238	61
3.14	Removing and installing air quality sensor G238	63
3.15	Removing left vent temperature sender G150 and right vent temperature sender G151	64
3.16	Removing sunlight penetration photosensor G107 or sunlight penetration photosensor 2 G134	64
3.17	Checking condensation water drainage hose on heater and air conditioner unit	64
3.18	Renewing control motors for air conditioning regulation	64
3.19	Removing and installing air recirculation flap control motor V113	65
3.20	Removing and installing air flow flap control motor V71 for vehicles up to calendar week 17/2007	66
3.21	Removing and installing control motor for fresh air and air recirculation flap and air flow flap V425 for vehicles from calendar week 18/2007	67
3.22	Removing and installing setting unit for fresh air and air recirculation flap and air flow flap	69
3.23	Removing and installing defroster flap control motor V107	70
3.24	Removing and installing left temperature flap control motor V158	71
3.25	Removing and installing right temperature flap control motor V159	73
3.26	Removing and installing central flap control motor V70	74
3.27	Notes on control motors	75
4	Removing and installing ancillary bracket for air conditioner compressor	81
4.1	Engine codes: AZV, BDK, BJB, BKC, BKD, BLS, BMM, BMN, BRM, BRU, BVB, BXE, BXF and BXJ	81
4.2	Engine codes: BCA, BUD	83
4.3	Engine codes: BLG, BMY	85
4.4	Engine codes: BAG, BKG, BLF, BLN, BLP and CAXA	87
4.5	Engine codes: AXW, AXX, BGU, BHY, BLR, BLX, BLY, BPY, BSE, BSF, BVX, BZY, BZV, BWA, BYD, CAWB, CBFA and CCTA	89
4.6	Engine codes: BGP, BGQ, BTK, CBTA and CBUA	91
4.7	Engine codes: BUB, CBRA	93
5	Repair work on refrigerant circuit which may be performed only in appropriate workshops by specially trained mechanics	96
5.1	Testing equipment and tools	97
5.2	Removing and installing heater and air conditioning unit	98
5.3	Dismantling and assembling heater and air conditioner unit "Climatic"	103
5.4	Dismantling and assembling heater and air conditioner unit "Climatronic"	105
5.5	Renewing refrigerant circuit components	107
5.6	Removing and installing high-pressure sender G65	110
5.7	Removing and installing receiver with dryer	110
5.8	Removing and installing receiver with drier, Modine	113
5.9	Removing and installing air conditioner compressor	115
5.10	Assembly overview - poly V-belt pulley (air conditioner compressor from "Denso")	118
5.11	Removing and installing poly V-belt pulley (air conditioner compressor from "Denso")	120
5.12	Checking high-pressure safety valve on air conditioner compressor	121
5.13	Expansion valve, function and removing	121
5.14	Removing and installing evaporator	124
5.15	Removing and installing condenser	124
5.16	Notes on installing air conditioner compressor	127
5.17	Removing evacuating and charging valve, low-pressure side and high-pressure side	128
6	Capacities	131
6.1	Capacities for refrigerant R134a	131
6.2	Refrigerant oil	131
6.3	Oil distribution	131