



## Contents

<b>00 - Technical data</b> .....	<b>1</b>
<b>1 Safety information</b> .....	<b>1</b>
1.1 Safety measures when working on vehicles with a start/stop system .....	1
<b>2 General information</b> .....	<b>2</b>
2.1 Notes concerning odours in air conditioned vehicles .....	2
2.2 Notes for vehicles with start-stop system .....	2
2.3 Notes on repair work to vehicles with air conditioning and on handling refrigerant .....	3
<b>3 Repair instructions</b> .....	<b>4</b>
3.1 Checking cooling output .....	4
3.2 Opening refrigerant circuit .....	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 .....	7
<b>80 - Heating</b> .....	<b>8</b>
<b>1 Overview of fitting locations - heating</b> .....	<b>8</b>
1.1 Overview of fitting locations - components located in front section of passenger compartment .....	8
<b>2 Heater</b> .....	<b>10</b>
2.1 Assembly overview – heater unit .....	10
2.2 Removing and installing fresh air blower V2 .....	11
2.3 Removing and installing fresh air blower series resistor with overheating fuse N24 .....	11
2.4 Removing and installing dust and pollen filter .....	12
2.5 Removing and installing heat exchanger .....	12
2.6 Removing and installing heater unit .....	15
2.7 Dismantling and assembling heater unit .....	20
<b>3 Control motors</b> .....	<b>21</b>
3.1 Removing and installing air recirculation flap control motor V113 .....	21
3.2 Removing and installing air distribution flap actuator .....	21
3.3 Removing and installing temperature flap actuator .....	22
<b>4 Air duct</b> .....	<b>23</b>
4.1 Removing and installing centre console air duct, vehicles with Comfort equipment only ..	23
4.2 Removing right/left and centre vents in dash panel .....	23
4.3 Removing and installing footwell vents .....	24
4.4 Removing and installing vents of right and left rear footwell air ducts .....	25
4.5 Removing and installing air distribution housing .....	26
4.6 Checking ventilation .....	27
4.7 Removing and installing air intake grille .....	27
<b>5 Operating and display unit</b> .....	<b>28</b>
5.1 Removing and installing operating and display unit .....	28
5.2 Multi-pin connector pin assignment on back of operating and display unit .....	29
5.3 Removing and installing flexible shaft, checking .....	29
5.4 Removing and installing Bowden cable for temperature flap .....	30
<b>6 Other controlling and regulating components</b> .....	<b>32</b>
6.1 Removing and installing ambient temperature sensor G17 .....	32
<b>87 - Air conditioning system</b> .....	<b>33</b>
<b>1 Overview of fitting locations - air conditioning system</b> .....	<b>33</b>
1.1 Overview of fitting locations - components not located in passenger compartment .....	33
1.2 Overview of fitting locations - components located in front section of passenger compartment .....	35



<b>2</b>	<b>Refrigerant circuit</b>	<b>44</b>
2.1	General notes on the refrigerant circuit	44
2.2	Assembly overview - condenser	45
2.3	Renewing refrigerant line between air conditioner compressor and condenser	47
2.4	Renewing refrigerant line between condenser and expansion valve	48
2.5	Renewing refrigerant line between expansion valve and air conditioner compressor	50
2.6	Renewing bracket of refrigerant lines	52
2.7	Removing and installing high-pressure sender G65	53
2.8	Removing and installing expansion valve	54
2.9	Removing and installing evacuating and charging valves on low and high-pressure side	56
2.10	Removing and installing receiver with dryer, Caddy ►2011	57
2.11	Renewing desiccant bag for condenser, Caddy 2011 ►	60
2.12	Removing and installing condenser	62
2.13	When is it necessary to purge the refrigerant circuit with refrigerant	67
<b>3</b>	<b>Air conditioner compressor</b>	<b>69</b>
3.1	Assembly overview - drive unit of air conditioner compressor	69
3.2	Assembly overview - air conditioning system magnetic clutch, Sanden	70
3.3	Removing and installing air conditioner compressor	71
3.4	Checking high-pressure safety valve on air conditioner compressor, Denso	79
3.5	Checking high-pressure safety valve on air conditioner compressor, Sanden	80
3.6	Notes on installing air conditioner compressor	80
3.7	Repairing air conditioning system magnetic clutch, Sanden	81
<b>4</b>	<b>Control motors</b>	<b>85</b>
4.1	Removing and installing temperature flap control motor V68	85
4.2	Removing and installing centre flap control motor V70	87
4.3	Removing and installing defroster flap control motor V107	88
4.4	Removing and installing air recirculation flap control motor V113	89
4.5	Removing and installing left temperature flap control motor V158	90
4.6	Removing and installing right temperature flap control motor V159	92
4.7	Removing and installing fresh air/recirculated air, air flow flap control motor V425	93
4.8	Removing and installing adjusting unit for fresh air/air recirculation, air flow flap control motor V425	94
4.9	Removing and installing front air distribution flap control motor V426	95
<b>5</b>	<b>Front heater and air conditioning unit</b>	<b>96</b>
5.1	Assembly overview - heater and air conditioning unit	96
5.2	Assembly overview - evaporator housing	99
5.3	Removing and installing heater and air conditioning unit	100
5.4	Dismantling and assembling heater and air conditioning unit	108
5.5	Removing and installing evaporator temperature sensor G308 / evaporator output temperature sender G263	112
5.6	Removing and installing evaporator	112
5.7	Checking condensation drain	113
5.8	Removing and installing baffle plate	114
5.9	Removing and installing fresh air blower control unit J126	114
<b>6</b>	<b>Operating and display unit</b>	<b>115</b>
6.1	Overview of fitting locations - operating and display unit	115
<b>7</b>	<b>Other controlling and regulating components</b>	<b>127</b>
7.1	Removing and installing sunlight penetration photosensor G107	127
7.2	Removing and installing photo sensor 2 for sunlight penetration G134	128
7.3	Principle of operation of air quality sensor G238	128
7.4	Removing and installing air quality sensor G238	129
7.5	Removing and installing left vent temperature sender G150	130
7.6	Removing and installing right vent temperature sender G151	130
7.7	Removing and installing centre vent temperature sender G191	130



7.8	Removing and installing footwell vent temperature sender G192	131
7.9	Removing and installing left footwell vent temperature sender G261	131
7.10	Removing and installing right footwell vent temperature sender G262	132
<b>8</b>	<b>Removing and installing bracket for ancillaries</b>	<b>133</b>
8.1	Removing and installing ancillary bracket, Caddy 2011▶	133
8.2	Removing and installing ancillary bracket, engine codes: BCA, BUD	133
8.3	Removing and installing ancillary bracket, engine codes: BDJ, BJB, BLS, BMM, BST, BSU	136
8.4	Removing and installing ancillary bracket, engine codes: BGU, BSE, BSF, BSX	139