ALFA 159 1.9 JTD 16V CLIMATE CONTROL NOT WORKING (UNDER ANY CIRCUMSTANCES) L001

Valid for versions with:Automatic Air Conditioning

When the on/off switch is pressed, the climate control does not work

Valid for versions with:Automatic Air Conditioning

0	PRELIMINARY CHECKS	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check: • the condition of climate control system protective fuses **See E6020 AIR CONDITIONING** • that the climate control system gas pressure is correct **See Test 5040OB Air conditioning system operational check (pressure)** • the correct operation of the engine cooling fan.	Move on to Step 1	1.Fuses blown	1.Change the blown fuses
			2.Relay damaaged	2.Replace the relay
			3.Gas pressure not correct	3.Search for and eliminate leaks and top up climate control system to correct level
			4.Incorrect operation of engine cooling fan.	4.Carry out the test. **See Test 5040AB REFRIGERANT CIRCUIT CHECK**
1	CHECK ON OPERATION OF COMPRESSOR BY CLIMATE CONTROL SYSTEM CONTROL UNIT	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check the following conditions: ambient temperature at least 5° C and outside temperature sensor reading > 5°C . With the engine started and the compressor on (check that the snowflake symbol lights up), set the control unit to the AUTO position, the temperature to maximum cold LO and the distribution to the front position. Check, using the Examiner, that the instrument does not show any short circuits for the compressor circuit. In these conditions, check that the compressor comes on by opening the bonnet	End of diagnosis	1.The snow flake symbol in the display does not light up (but the compressor is on).	1.Move on to Step 3
			2.The LED with the snowflake symbol comes on (but the compressor does not switch on).	2.Move on to Step 2
			3.The outside temperature reading is incorrect.	3.Move on to Step 3
			4.Compressor short circuit.	4.Move on to Step 3

	and taking a look.		5.Errors on CAN line	5.Move on to Step 3
2	CHECKS USING DIAGNOSTIC EQUIPMENT	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Keeping the diagnostic equipment connected check that there are no errors: • at the climate control node; • at the CAN line • at the Engine management control unit.	Move on to Step 3	1.Climate control node not working.	1.Move on to Step 4
			2.CAN line error.	2. Continue as instructed by the diagnostic equipment
			3.The engine management control unit does not give the go ahead.	3. Continue as instructed by the diagnostic equipment
3	CHECKS USING DIAGNOSTIC EQUIPMENT	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Keeping the Examiner diagnostic equipment connected, check the following at the engine management control unit: • that there are no errors at the compressor operating relay • that there are no errors at the climate control system pressure sensor check at the climate control node: • that there are no faults in the evaporator temperature sensor; • that there are no faults in the outside temperature sensor; • that there are no errors at the fan; • check the condition of the compressor operating wiring (no short circuits or open circuits).	Move on to Step 5	1.Relay not working	1. Replace the compressor operating relay
			2.Error at the linear sensor	2. Carry out the **Op. 5040BC CHECK ON ENGAGEMENT/DISENGAGEMENT OF COMPRESSOR THROUGH LINEAR SENSOR**
			3. Error (short circuit or open circuit) at the evaporator temperature sensor.	3. Restore the correct wiring for the evaporator temperature sensor.
			4. Error in the evaporator temperature sensor.	4.Replace the evaporator temperature sensor **Op. 5040B64 SENSOR ON EVAPORATOR FOR A/C ECU - R + R**
			5. Error (short circuit or open circuit) at the outside temperature sensor.	5. Restore the correct wiring for the outside temperature sensor.
			6. Error at the outside temperature sensor.	6. Replace the outside temperature sensor **Op. 5010D12**
			7. Error at the fan.	7. Move on to Step 5
			8. Compressor wiring broken.	8. Restore the correct wiring.
4	CHECK ON CLIMATE CONTROL NODE ELECTRICAL CONNECTIONS	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	With the engine switched off, remove the control from the dashboard support and disconnect the cables connector from the control unit visually inspecting for any damage at the	Move on to Step 5	1.Electrical connections loose or damaged.	1.Restore the loose or damaged electrical connections
			2. The electrical connections are not	2.Replace the climate control system control unit **Op. 5040D15 CONTROL UNIT**

	connector contacts and reconnect it correctly for check for any false contacts.		loose and the LED with the snowflake symbol does not light up.	**WITH AUTOMATIC DUAL ZONE AIR CONDITIONER KNOBS AND BUTTONS - R.R.**
5	CHECK ON CORRECT OPERATION OF FAN BY CLIMATE CONTROL SYSTEM CONTROL UNIT	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	With the engine started, set the climate control system control unit to the AUTO position, adjust the temperature to 22 °C, place the recirculation at the outside air intake and the distribution to the front position. Adjust the fan button (+ side) gradually increasing the speed set and then decrease the speed using the button (- side), thereby checking the effect of the air flow rate variation.	End of diagnosis	There is no variation in the air flow rate.	Move on to Step 6
6	CHECK ON ELECTRICAL CONNECTIONS AND FAN OPERATION	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check whether the electrical wiring connections are loose. Disconnect/reconnect the connection to the engine mounting. Disconnect the connector and connect to a feeder. In these conditions the motor should rotate at the maximum speed indicating that the operating module is not working	End of diagnosis	1.Electrical connections loose	1.Renew the correct connections **See E6020 AIR CONDITIONING**
			2.The fan does not work.	2.Replace the fan **Op. 5040C30 AIR CONDITIONING FAN - R.R.**
			3.The operating module does not work.	3.Replace the fan operating module **Op. 5040C40 AIR CONDITIONING FAN MOTOR SWITCH - R.R.**

Valid for versions with:Manual Air Conditioning

When the on/off switch is pressed, the climate control does not work.

Valid for versions with:Manual Air Conditioning

0	PRELIMINARY CHECKS	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check: • the condition of climate control system protective fuses **See E6020 AIR CONDITIONING** • that the climate control system gas	Move on to Step 1	1.Fuses blown	1.Change the blown fuses
			2.Relay damaaged	2.Replace the relay
			3.Gas pressure not correct	3.Search for and eliminate leaks and top up climate control system to correct

	pressure is correct **See Test 5040OB Air conditioning system operational check (pressure)** • the correct operation of the engine cooling fan.			level
			4.Incorrect operation of engine cooling fan.	4.Carry out the test. **See Test 5040AB REFRIGERANT CIRCUIT CHECK**
1	CHECK ON COMPRESSOR OPERATION BY MANUAL CONTROL	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check the following conditions: with the ambient temperature at least engine 5 °C. With the engine started and the compressor on (check that the snowflake symbol lights up), set the temperature to maximum cold and the distribution to the front position. Also check that there are no short circuits to earth for the compressor circuit by connecting the diagnostic equipment. In these conditions, check that the compressor comes on by opening the bonnet and taking a look.	End of diagnosis	1. The snowflake symbol in the display does not light up (but the compressor is on).	1.Move on to Step 4
			2. The LED with the snowflake symbol comes on (but the compressor does not switch on).	2.Move on to Step 2
			3. Compressor short circuit.	3.Move on to Step 3
2	CHECKS USING DIAGNOSTIC EQUIPMENT	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Connect the Examiner diagnostic equipment and check that there are no errors at the Engine Management Control Unit	Move on to Step 3	The engine management control unit does not give the go ahead.	Continue as described by the diagnostic equipment
3	CHECK USING DIAGNOSTIC EQUIPMENT	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Keeping the diagnostic equipment connected, check: • that there are no errors at the compressor operating relay; • that there are no errors at the climate control system pressure sensor	Move on to Step 5	1.Relay not working	1.Replace relay T5 (it is the middle one in the right row)
			2.Error at the linear sensor	2.Carry out the test **See Test 5040BC Climate control compressor linear sensor on / off check**
4	CHECK ON CLIMATE CONTROL SYSTEM CONTROL UNIT ELECTRICAL CONNECTIONS	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	With the engine switched off, remove the control from the dashboard support and disconnect the cable connector		Electrical connections	Renew the electrical connections

	visually inspecting for any damage at the connector contacts and reconnect it correctly for check for any false contacts.	Move on to Step 5	loose or damaged.	**See E6020 AIR CONDITIONING**
5	CHECK ON CORRECT OPERATION OF FAN	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check whether the electrical wiring connections are loose. **See E6020 AIR CONDITIONING** Disconnect and visually inspect for damage at the connector contacts and reconnect the connection to the motor mounting. Check that it rotates at all speeds by activating it using the switch. If it does not turn at maximum speed, check the fan maximum speed relay. **See J041 PASSENGER COMPARTMENT AIR FAN MAXIMUM SPEED RELAY** Disconnect the connector for the fan and connect to a feeder. In these conditions the motor should rotate at the maximum speed indicating that the operating module is not working	Move on to Step 6	1.Electrical connections loose or damaged	1. Renew the electrical connections **See E6020 AIR CONDITIONING**
			2.Fan not working.	2.Replace the fan **Op. 5040C30 AIR CONDITIONING FAN - R.R.**
			3.Fan only turns at the maximum speed supplied directly by the vehicle battery.	3.Move on to Step 6
6	CHECK ON CORRECT OPERATION OF MAXIMUM SPEED RELAY	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check whether the electrical wiring connections are loose, disconnect visually inspecting for any damage at the connector contacts. Reconnect the connection to the resistor. Check the operation of the fan at the maximum speed: if it only works at the maximum speed, the relay is broken. Check whether the resistor is broken by checking the electrical continuity in accordance with the test. **See Test 5040CF Sequential procedure for checking air conditioner fan resistor operation**	Move on to Step 7	1.Electrical connections loose or damaged.	1. Renew the electrical connections **See E6020 AIR CONDITIONING**
			2.Relay broken.	2.Replace the ceramic resistor **Op. 5040C48 A/C FAN MOTOR RESISTOR - R+R**
			3.Resistance values faulty	3.Replace the ceramic resistor **Op. 5040C48 A/C FAN MOTOR RESISTOR - R+R**
7	CHECK ON CORRECT OPERATION OF SPEED SELECTOR AT THE CLIMATE CONTROL SYSTEM CONTROL UNIT	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check whether the electrical wiring connections are loose, disconnect visually		1.Electrical connections loose or damaged.	1. Renew the electrical connections **See E6020 AIR CONDITIONING**

	inspecting for any damage to the connector contacts. Reconnect the connection to the selector on the climate control system control unit. Check whether the selector at the control unit is broken by measuring the electrical continuity in accordance with the test **See Test 5040DF Sequential procedure for checking air conditioner fan operation**	Move on to Step 8	2.Fan not working.	2.Replace the speed selector knob **Op. 5040D23 KNOB (ONE) FOR ANY OF THE AIR CONDITIONING CONTROLS - R.R.**
			3.Power supply to the relays not correct.	3.Replace the climate control system control unit **Op. 5040D17 CONTROL UNIT WITH MANUAL AIR CONDITIONER KNOBS AND BUTTONS R R**
8	CHECK ON CORRECT OPERATION OF FAN MAXIMUM SPEED OPERATING RELAYS	ALL OK	PROBLEMS ENCOUNTERED	ACTION
	Check whether the electrical wiring connections are loose. Disconnect visually inspecting for any damage to the connector contacts. Reconnect the connection to the relay. Check that the relay is working properly by providing it with a direct 12 V supply.	End of diagnosis	1.Electrical connections loose or damaged	1. Renew the electrical connections **See E6020 AIR CONDITIONING**
			2.Maximum speed operating relay not working.	2.Replace the maximum speed operating relay **Op. 5040C48**