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ENGINE COOLING

ENGINE COOLING - DESCRIPTION

The radiator and air conditioner condenser cooling system consists of two electric fans operated at two different speeds:

- the first speed is activated at a first engine coolant temperature level and a certain air conditioning refrigerant fluid pressure;

- the second speed comes on at a higher temperature or pressure.

The activation of the fans is achieved by means of two specific relays located in the engine compartment junction unit and a third relay located on the duct for the actual fans.

The supply line for the fans is protected by two special fuses, located in the engine compartment junction unit.

ENGINE COOLING - FUNCTIONAL DESCRIPTION

The relay J30, located on the fan duct, manages the engagement of the fans N11 and N12 at the first speed: the coil and the power line are supplied by the line protected by fuse F6 of the engine compartment junction unit B1.

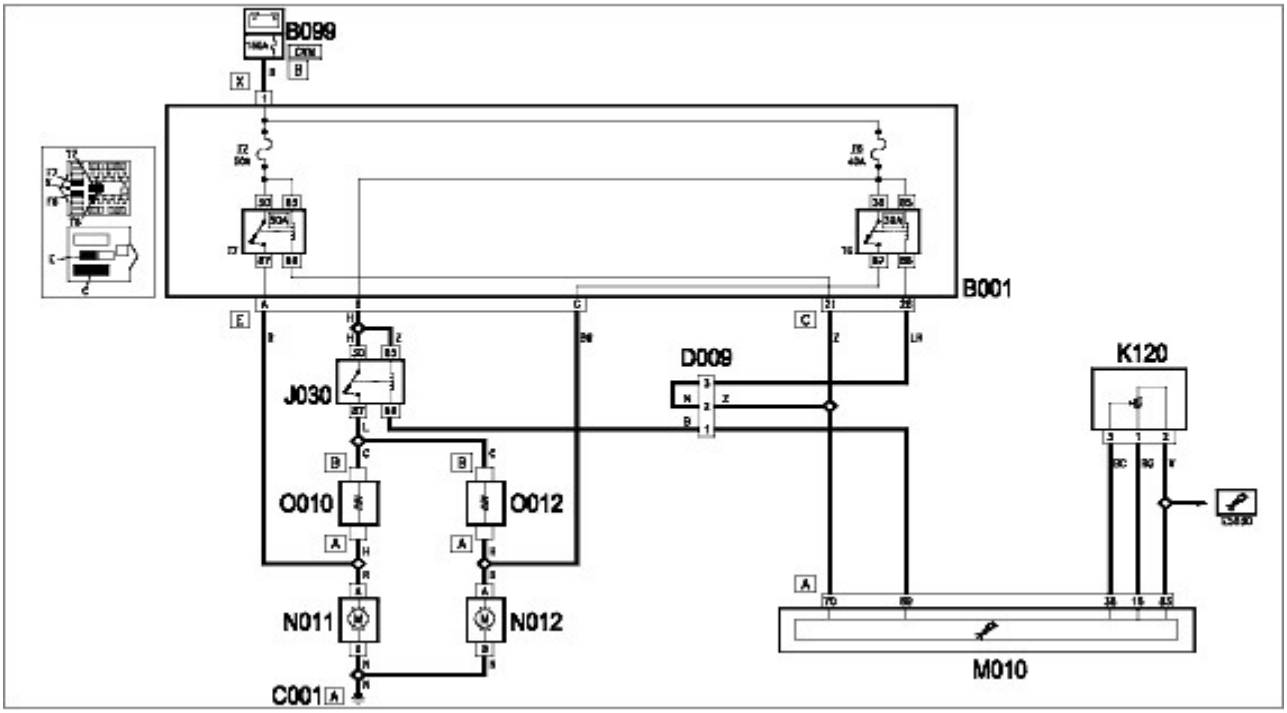
If the engine coolant reaches an initial temperature level, or the linear sensor K120 signals to the control unit M10 - pin 38 of connector A - that a certain pressure level has been reached, then the control unit M10 sends a signal - from pin 89 of connector A - which energizes the relay J30, which sends the power supply to the fans N11 and N12 via the additional resistances O10 and O12: the two fans turn together at the first speed (slow).

The linear sensor K120 receives a power supply and reference earth from the engine management control unit M10, pin 16 and 83 of connector A.

Relays T6 and T7 of the engine compartment junction unit B1 manage the switching on of the two speed fan N11: the coil power lines are protected by fuses F6 and F7 , also in engine compartment control unit B1 .

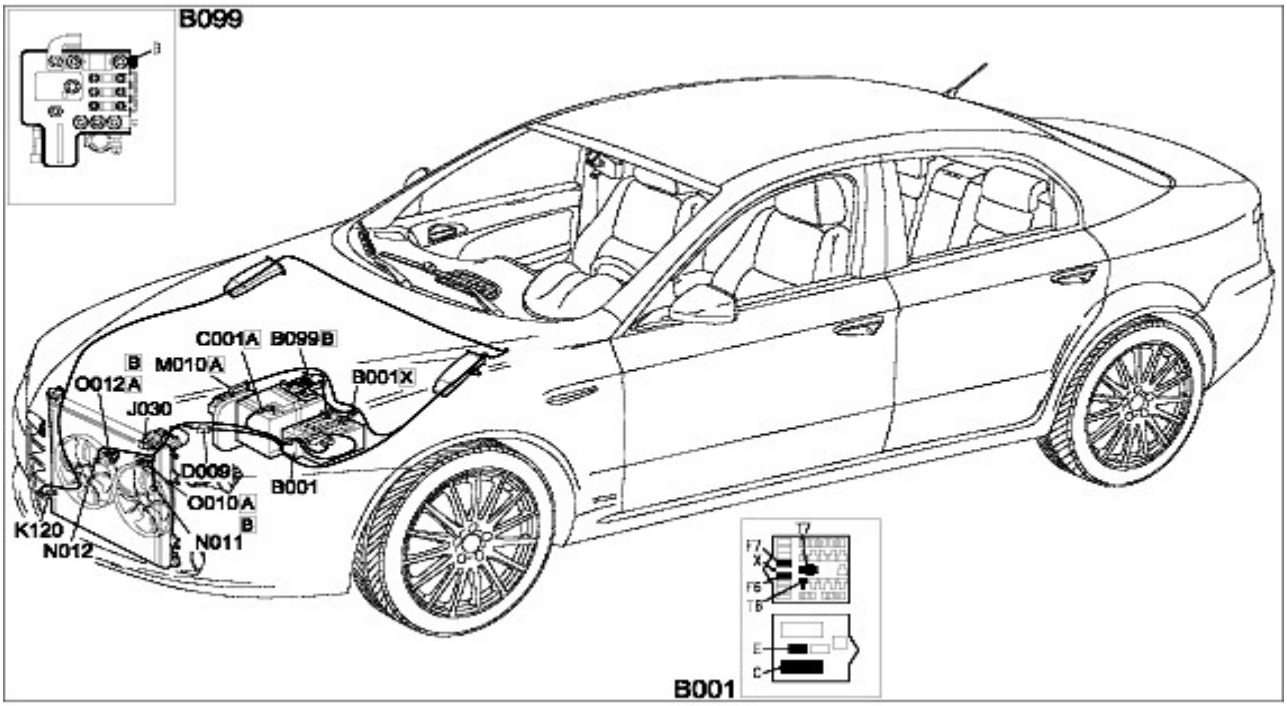
If the engine coolant reaches a higher temperature level, or the linear sensor K120 signals to the control unit M10 - pin 38 of connector A - that a higher pressure level has been reached, then the control unit M10 sends a signal - from pin 70 of connector A - which energizes the two relays T6 and T7 which send the power supply directly to the fans N11 and N12 which turn together at the maximum speed.

ENGINE COOLING - WIRING DIAGRAM



Component code	Description	Reference to the operation
B001	JUNCTION UNIT	Op. 5505A13 ADDITIONAL JUNCTION UNIT IN ENGINE COMPARTMENT - R.R.
B099	MAXIFUSE BOX ON BATTERY	Op. 5530B40 SUPPLY BOX ON BATTERY (LINK BATTERY AND FUSE BOX) - R R
C001	BATTERY EARTH	-
D009	FRONT/RADIATOR COUPLING	-
K120	LINEAR SENSOR FOR FANS	Op. 5040B14 AIR CONDITIONING SYSTEM MULTISTAGE PRESSURE SWITCH - R+R
J030	ENGINE FAN SPEED 1 RELAY	-
M010	ENGINE MANAGEMENT ECU	Op. 1056F82 CONTROL UNIT SINGLE OF INJECTION IGNITION SYSTEM R R
N011	FAN MOTOR	Op. 1088E11 FANS WITH SINGLE ENGINE DUCT - R+R
N012	ENGINE FAN MOTOR - 2	Op. 1088E11 FANS WITH SINGLE ENGINE DUCT - R+R
O010	ENGINE FAN ADJUSTMENT RESISTANCE - 1	Op. 1088E20 RESISTOR FOR RADIATOR COOLING FAN - R + R
O012	ENGINE FAN 2 ADJUSTMENT RESISTANCE	Op. 1088E20 RESISTOR FOR RADIATOR COOLING FAN - R + R

ENGINE COOLING - COMPONENT LOCATION



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O010	ENGINE FAN ADJUSTMENT RESISTANCE - 1	Op. 1088E20 RESISTOR FOR RADIATOR COOLING FAN - R + R
O012	ENGINE FAN 2 ADJUSTMENT RESISTANCE	Op. 1088E20 RESISTOR FOR RADIATOR COOLING FAN - R + R