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RISCALDATORE ADDIZIONALE

191 - Giulietta

ADDITIONAL HEATER - DESCRIPTION

Vehicle climate control via the heater unit is insufficient when the engine is cold.

On these versions there is also an additional heating system which is activated when the engine is first running, depending on the temperature of the engine coolant.

The system consists of an additional heating device, located inside the heater unit: this device contains two resistances (PTC1 - 250 W and PTC2 - 500 W).

The operation of the resistances is controlled by the climate control system control unit which operates either only one of them or both thereby providing gradual heating with a maximum power of 750 W according to a control logic that depends on:

- the outside temperature (below 20°C)

- the temperature of the engine coolant (about 70°C);

- the engine speed (which should be above 700 rpm);

- the battery voltage (which should not drop below 12.6 V).

For more details

See descriptions 5040 AIR CONDITIONING CASING AND COMPONENTS

The power supply for one, two or three resistances is operated by means of two relays located on the heater unit itself:

- 1. Level: activated by the first relay switch (250W);

- 2. Level: activated by the second relay switch (500W);

- 3. Level: activated by both relay switches (750W)

The power supply line is protected by two fuses in the engine compartment fuse box.

ADDITIONAL HEATER - FUNCTIONAL DESCRIPTION

The relay switch J036 controls the engagement circuit for the first resistance of the additional heater O025; the power supply for the relay switch comes from the line for fuse F05 of the fuse box B001.

The relay switch J037 controls the engagement circuit for the other other resistances of the additional heater O025; the power supply for the relay switch comes from the line for fuse F82 of the fuse box B001.

The coil for relay switch J036 is energised by a signal for the engagement of the first resistance for O025 - from pin 39 of the climate control system control unit M070.

The coil for relay switch J037 is energised by a signal for the engagement of the resistances for O025 - from pin 40 of the climate control system control unit M070.

The control unit M070 - pin 3 - and the coils for the two relay switches J036 and J037 are ignition-operated (INT) by the line for fuse F51 of M001.

The climate control system control unit M070 is connected – from pins 37 and 38 - through the CAN line, to the Body Computer M001 and to the other network nodes.

The Body Computer M001 - connector A - receives a direct power supply from the battery through the line protected by maxi fuse F01 of the engine compartment junction unit B001.

The Body Computer M001 receives an ignition-operated power supply (INT) at pin 2 of connector G: this signal is used, amongst other things, to "wake up the network".

Pin 11 of connector G of M001 provides the Body Computer with a reference earth.

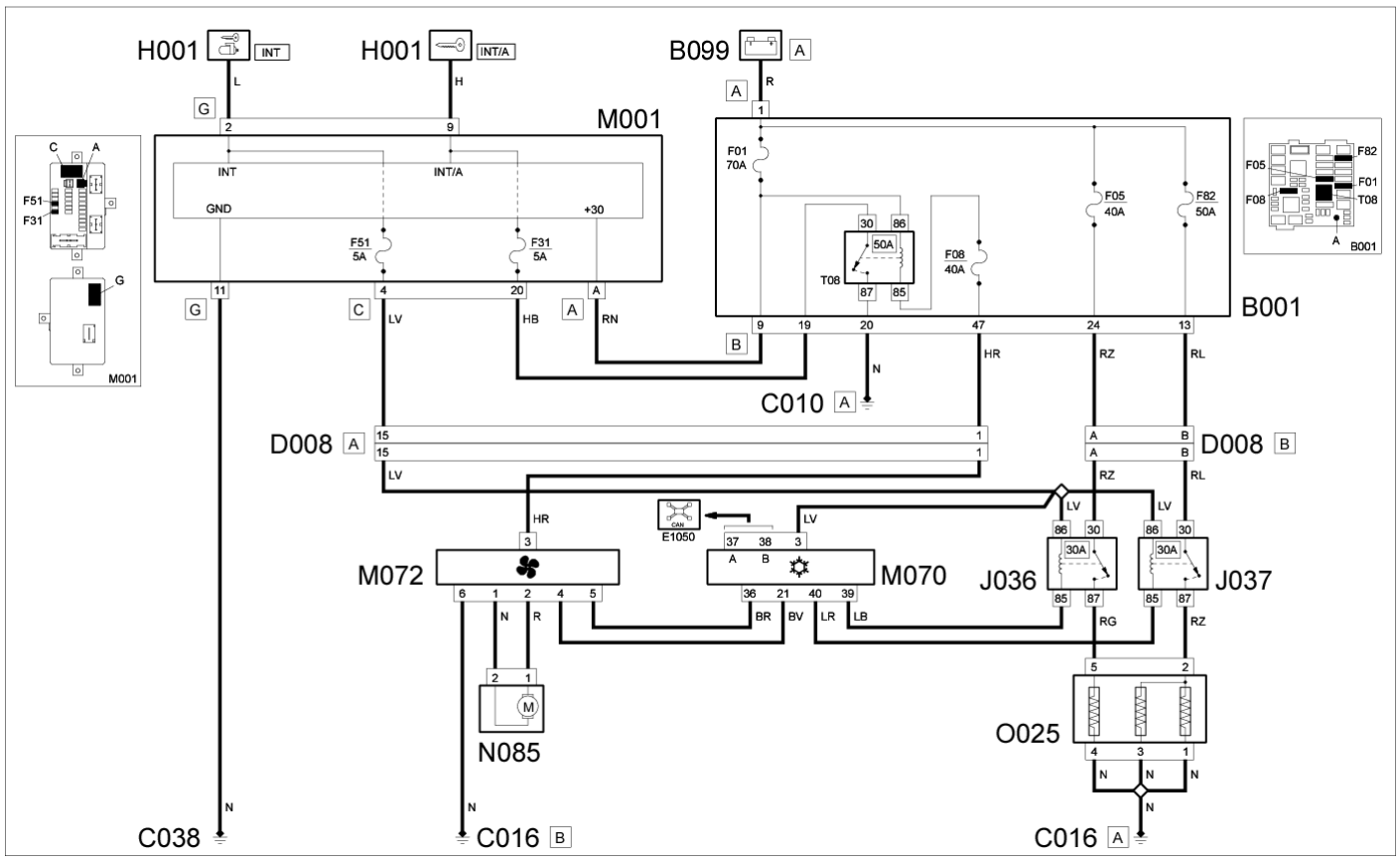
When the heater is on, pin 36 of M070 controls the fan N085 through the regulator M072.

See E6020 AIR CONDITIONING

The fan N085 is supplied, via through the electronic governor M072 - by the dedicated fuse F08 in the engine compartment junction unit B001 from the line supplied by relay switch T08 in B001: it is and "ignition-controlled starting exclusion" power supply (INT/A) controlled by pin 20 of connector C of the Body Computer M001 through the line protected by fuse F31 of M001.

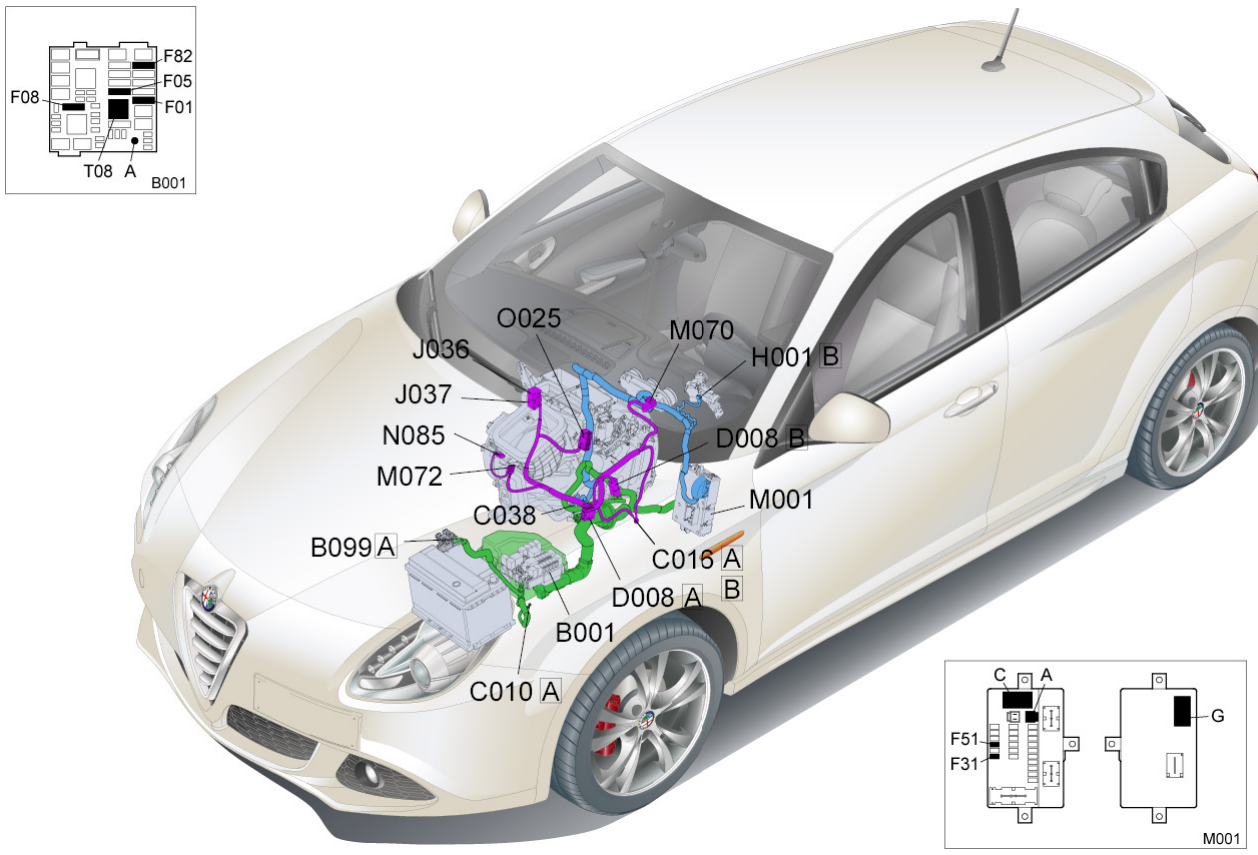
It receives commands for the various speeds from electronic governor M072: the latter receives the PWM adjustment signal from pin 365 of control unit M070 and sends a feedback signal to pin 21 of M070.

ADDITIONAL HEATER - WIRING DIAGRAM



Component Code	Description	Reference to the operation
B001	JUNCTION UNIT	Op. 5505A28 CONTAINER FOR ADDITIONAL JUNCTION UNIT IN ENGINE COMPARTMENT - R.R.
B099	MAXI FUSE BOX ON BATTERY	Op. 5530B40 SUPPLY BOX ON BATTERY (LINK BATTERY AND FUSE BOX) - R R
C010	LEFT FRONT EARTH	-
C016	AIR CONDITIONING UNIT EARTH	-
C038	EARTH ON CENTRE TUNNEL	-
D008	FRONT/AIR CONDITIONING-HEATER COUPLING	-
H001	IGNITION SWITCH	Op. 5520A18 IGNITION SWITCH CONTACT CARRIER LOCK BARREL - R.R.
J036	ADDITIONAL HEATER RELAY - 1	-
J037	ADDITIONAL HEATER RELAY -2	-
M001	BODY COMPUTER	Op. 5505A35 MAIN BODY COMPUTER/JUNCTION UNIT - R.R.
M070	CLIMATE CONTROL SYSTEM CONTROL UNIT	Op. 5040D14 CONTROL UNIT WITH AUTOMATIC AIR CONDITIONING CONTROL PANEL - R.R.
M072	FAN SPEED VARIATOR	Op. 5040C44 FAN MOTOR ELECTRONIC VARIATOR - R+R
O025	ADDITIONAL HEATER RESISTANCE	Op. 5020E60 ADDITIONAL HEATER P.T.C. - R.R.

ADDITIONAL HEATER - COMPONENT LOCATION



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