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INSERIMENTO COMPRESSORE

191 - Giulietta

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COMPRESSOR ENGAGEMENT - DESCRIPTION

The special button ("AC") on the climate control system control unit switches on the air cooling and dehumidification circuit, activating the air conditioning compressor.

The above button enables the operation of the air cooling circuit, but the actual compressor activation is also dependent upon the activation of:

- the linear sensor, located on the coolant circuit that stops air conditioner activation if coolant pressure is too low or high;

- 'frost" sensor on the evaporator, that temporarily deactivates the compressor if temperature drops to 0°C, with risk of "frost" on the evaporator.

- the engine control unit that excludes compressor operation in accordance with engine management logic; e.g. in the case of high engine temperatures or high engine load (sudden acceleration);

All engines come with a compressor having outside control, that is equipped with a special adjustment component, that makes it possible to alter the temperature downstream of the evaporator and, if the thermal conditions allow, to reduce the post-heating.

In this way, consumption can be reduced when an intermediate temperature is required, that is a mild one.

For more details

See descriptions 5040 AIR CONDITIONING CASING AND COMPONENTS

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COMPRESSOR ENGAGEMENT - DESCRIPTION OF OPERATION

The relay switch T05 for the engine compartment junction unit B001 controls the compressor engagement circuit.

The supply for the relay switch is via the line for the specific fuse F19 of the engine compartment junction unit B001.

The power supply for the coil for relay switch T05 arrives from the ignition-operated line (INT) protected by fuse F51 of M001.

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.

The compressor engagement request is sent to the climate control system control unit M070, through the CAN, to the Body Computer M001 which sends the enabling signal, through the CAN, to the engine management control unit M010

According to its internal control logic, the control unit M010 sends the command to engage the compressor, from pin 35 of connector A, which energises the relay switch T05: in this way the air conditioning compressor engagement electromagnetic coupling L020A is operated with a 12 V voltage.

If the linear sensor for the fans K120 signals to the control unit M010 - pin 82 of connector A - that the pressure value is too high or too low, then the control unit M010 excludes the engagement of the compressor.

The linear sensor K120 receives a power supply and reference earth from the engine management control unit M010, pins 38 and 42 of connector A.

When the conditions required it, the climate control unit M070 operates the enabling of the compressor L020B adjustment device, through pin 6, to change temperature downstream of the evaporator.

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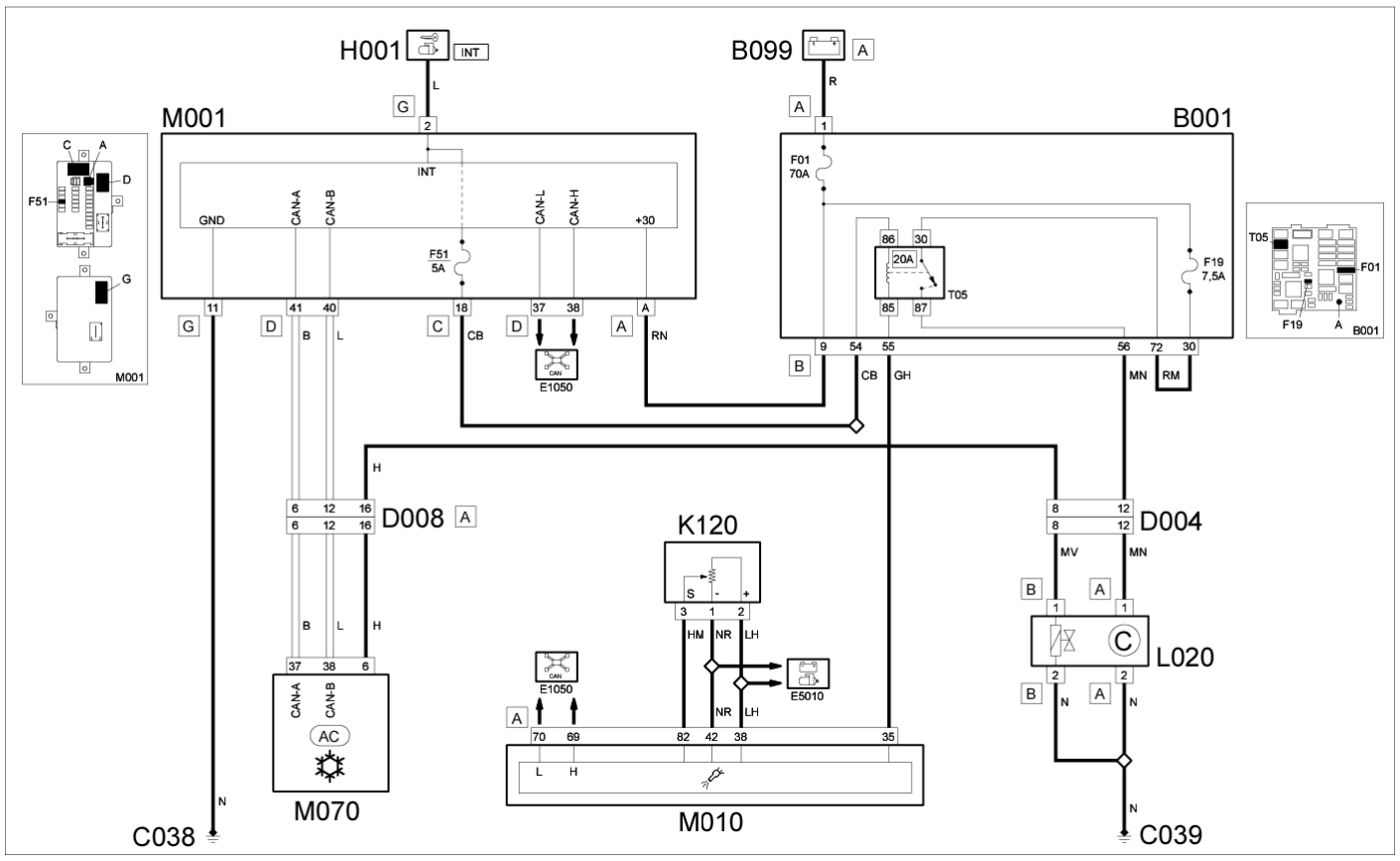
COMPRESSOR ENGAGEMENT - WIRING DIAGRAM



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
C038	EARTH ON CENTRE TUNNEL	-
C039	COMPRESSOR EARTH	-
D004	FRONT/ENGINE COUPLING	
D008	FRONT/AIR CONDITIONING-HEATER COUPLING	-
H001	IGNITION SWITCH	Op. 5520A18 IGNITION SWITCH CONTACT CARRIER LOCK BARREL - R.R.
K120	LINEAR SENSOR FOR FANS	Op. 5040B20 AIR CONDITIONING LINEAR PRESSURE TRANSDUCER - R.R.
L020	AIR CONDITIONING COMPRESSOR ENGAGEMENT SOLENOID	Op. 5040A20 AIR CONDITIONING COMPRESSOR - R.R. INCLUDES CHECKING FLUID LEVEL AND TOPPING UP IF NECESSARY
M001	BODY COMPUTER	Op. 5505A35 MAIN BODY COMPUTER/JUNCTION UNIT - R.R.
M010	ENGINE MANAGEMENT CONTROL UNIT	Op. 1056B82 INJECTION/IGNITION SYSTEM E.C.U. (ONE) - R + R
		Op. 5040D14 CONTROL UNIT WITH AUTOMATIC AIR CONDITIONING CONTROL PANEL - R.R.
M070	CLIMATE CONTROL SYSTEM CONTROL UNIT	or
		Op. 5040D17 CONTROL UNIT WITH MANUAL AIR CONDITIONER KNOBS AND BUTTONS R R

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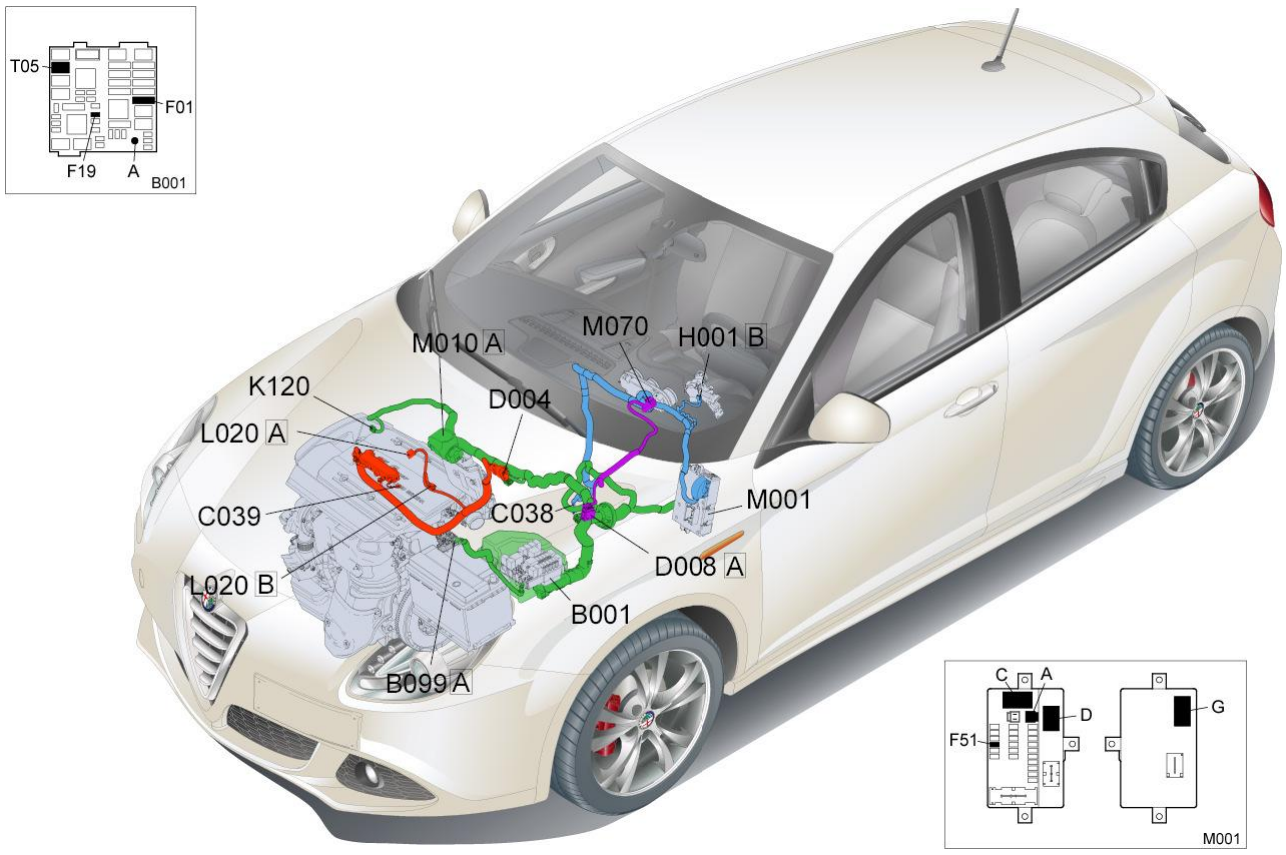
COMPRESSOR ENGAGEMENT - LOCATION OF COMPONENTS



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