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ALIMENTAZIONE

191 - Giulietta

POWER SUPPLY SYSTEM - DESCRIPTION

The electrical system is designed to increase the car's safety level and prevent the possibility of fires and other consequences of electrical malfunctions. State-of-the-art connectors have been introduced to rule out the possibility of many connection defects.

Power is distributed via the junction units and/or fuse boxes. These are connected to control elements (relays and static actuators) to ensure maximum electrical protection and minimum complexity.

All wiring looms have been made modular (sub-assembly composition) by changing the way functions are distributed inside the connectors and replacing welds with short-circuiting joints.

The main safety solutions adopted are as follows:

- power supplies protected by maxi fuses to interrupt the electrical system in the event of a short circuit (see detail below);

- the layout of the whole system is optimised to reduce the risk of damage in the event of failures or accidents;

- wiring installation has been optimised to reduce incorrect positioning and noise due to vibrations

- all wires offer high resistance to abrasion;

- the wires in the engine are specially designed to be resistant to high temperatures and are protected by sheaths or piping;

- the wires in the passenger compartment are protected by corrugated pipes and felt tape to reduce noise levels;

- the main connections come with secondary lock terminals and lever locks or CPA to prevent terminal deformation.

All systems and electrical equipment are supplied by the battery at a voltage of 12 V.

The battery is recharged by the alternator during engine operation

See E5010 STARTING AND RECHARING

In the Start&Stop versions, the battery status is continuously monitored by a battery charge sensor fitted on the negative terminal of the battery itself.

The main power supply lines are protected by MAXIFUSES contained in the engine compartment junction unit.

Some circuits are continuously supplied, even with the car at a standstill and the key out because they are connected directly to the battery.

Other circuits are supplied by turning the ignition key to various positions:

- insert the key and turn it through one click to the MAR position. This supplies numerous circuits that are described as ignition-operated (INT and 15/54 lines);

- the second click - AVV position - supplies the starter (line "50"). Other circuits (those that absorb most power) are now disconnected to ensure maximum current flow to the motor (INT/A line).

The lines that distribute power to the various appliances are represented by wiring diagrams for the various functions and systems.

This general diagram shows all the lines as they leave the battery and maxi fuse boxes. Refer to specific diagrams for more details.

POWER SUPPLY SYSTEM - FUNCTIONAL DESCRIPTION

All the electrical systems and circuits are supplied by the battery A001.

The main supply lines are protected by maxifuses in the engine compartment junction unit B001, in particular:

- F01: Body Computer M001 supply;

- F02: auxiliary fuse box casing supply, luggage compartment B045;

- F03: ignition switch H001 power supply;

- F87: battery charge sensor supply K059;

In addition, the maxifuse box B099 on the battery with fuse F71 protects the electric steering control unit supply M086.

The ignition switch H001 is supplied by the engine compartment junction unit B001 via the line protected by fuse F03;

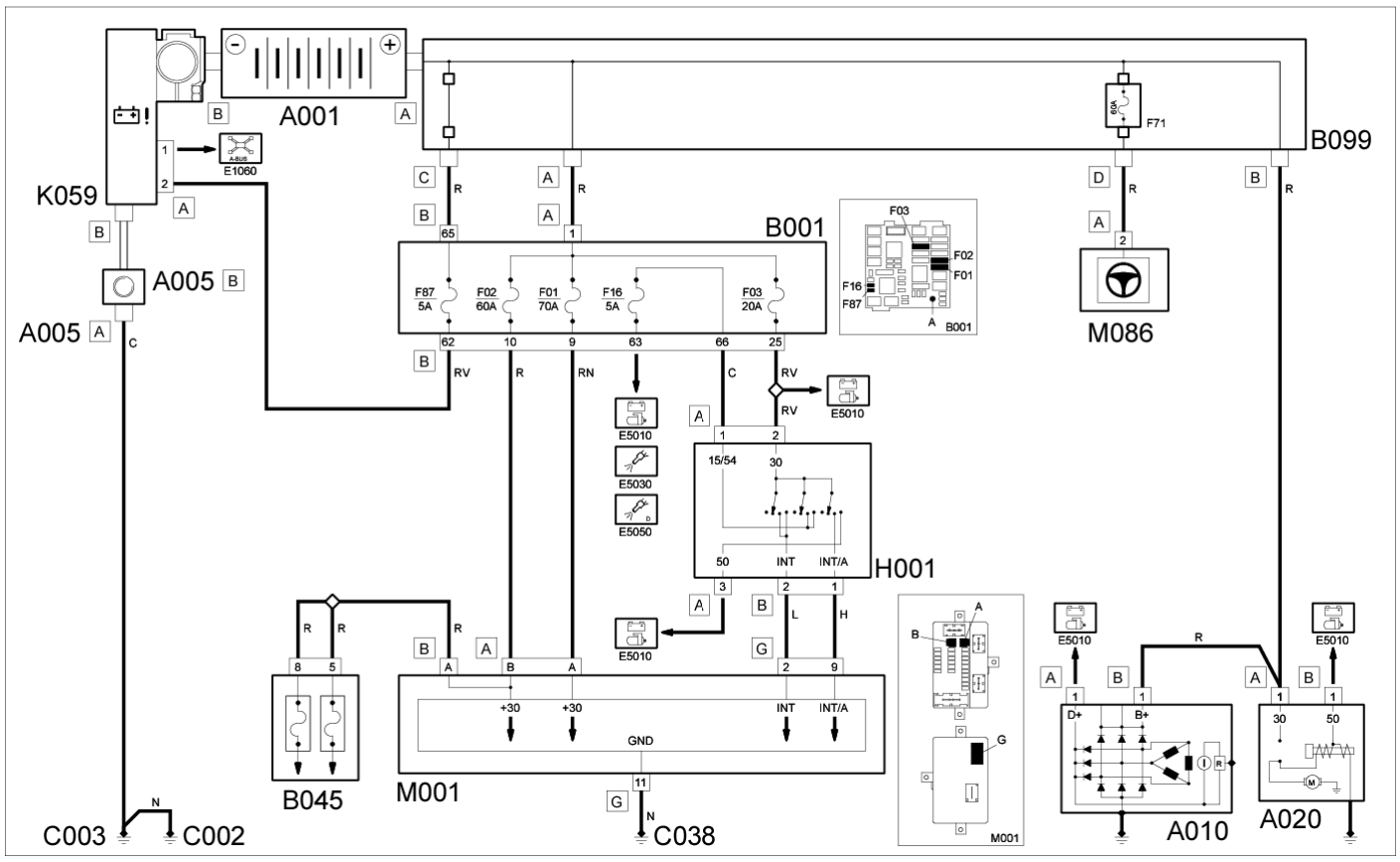
- In the MAR position, numerous protected ignition-operated circuits and services are supplied (INT and 15/54 lines): the ignition-operated signal 15/54 is sent to the engine compartment junction unit B001 (fuse F16), whilst the INT signal is sent to the Body Computer M001, to pin 2 of connector G;

- the starter is supplied in the AVV position (line 50)

See E5010 STARTING AND RECHARING

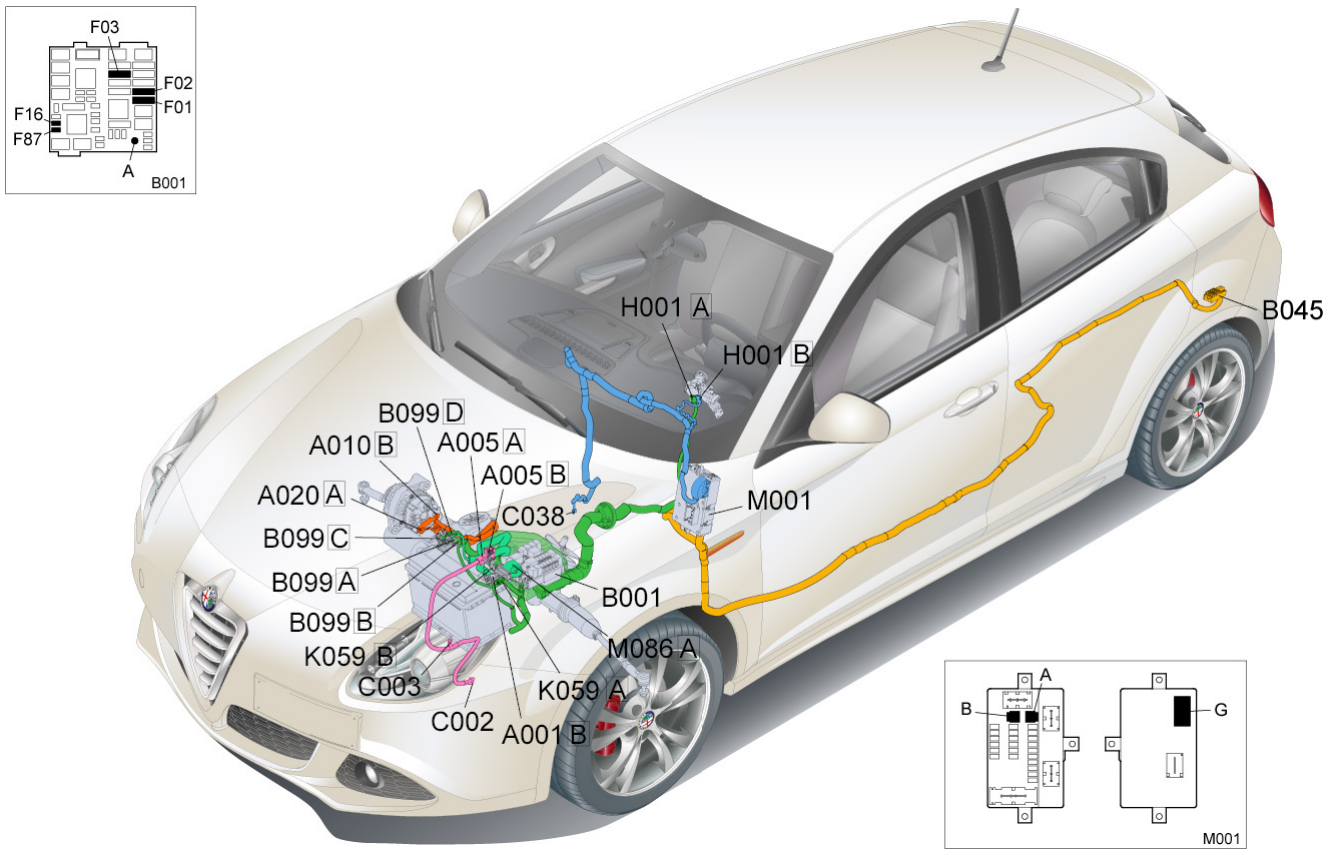
- in this position some circuits are disconnected, with the signal INT/A sent to Body Computer M001 to pin 9 of connector G.

POWER SUPPLY SYSTEM - WIRING DIAGRAM



Component Code	Description	Reference to the operation
A001	BATTERY	Op. 5530B10 BATTERY - R+R
A005	Contact board	Op. 5530B22 BATTERY EARTH LEAD - R+R
A010	ALTERNATOR	Op. 5530A10 ALTERNATOR - R.R.
A020	STARTER MOTOR	Op. 5520B10 STARTER MOTOR - R.R.
B001	JUNCTION UNIT	Op. 5505A28 CONTAINER FOR ADDITIONAL JUNCTION UNIT IN ENGINE COMPARTMENT - R.R.
B045	LUGGAGE COMPARTMENT JUNCTION UNIT	Op. 5505A14 SUPPLEMENTARY JUNCTION BOX IN LUGGAGE COMPARTMENT - R.R
B099	MAXI FUSE BOX ON BATTERY	Op. 5530B40 SUPPLY BOX ON BATTERY (LINK BATTERY AND FUSE BOX) - R R
C002	BATTERY EARTH ON ENGINE	Op. 5530B22 BATTERY EARTH LEAD - R+R
C003	BATTERY EARTH ON BODYSHELL	Op. 5530B22 BATTERY EARTH LEAD - R+R
C038	EARTH ON CENTRE TUNNEL	-
H001	IGNITION SWITCH	Op. 5520A18 IGNITION SWITCH CONTACT CARRIER LOCK BARREL - R.R.
K059	battery charge status sensor	Op. 5520D01 BATTERY STATUS MONITORING SENSOR - R.R.
M001	BODY COMPUTER	Op. 5505A35 MAIN BODY COMPUTER/JUNCTION UNIT - R.R.
M086	ELECTRIC STEERING CONTROL UNIT	Op. 4110D50 WIRING HARNESS OF STEERING ELECTRIC CONTROL SYSTEM - R.R.

POWER SUPPLY SYSTEM - COMPONENT LOCATION



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