



TETTO APRIBILE

191 - Giulietta

## SUN ROOF - DESCRIPTION

The sun roof provides a means of extra passenger compartment ventilation and ensures swift air exchange when necessary for improved passenger comfort.

The large electric sunroof comprises two panes of glass, one of which is mobile and the other fixed. These are equipped with two shutters (front and rear) that can be moved manually.

The system is operated by a dual switch located near the front courtesy light that controls a motor with two different operating modes: "hinged" raising of the roof and sliding opening of the roof.

Roof movement is controlled manually and automatically in accordance with the following logic:


- if the button is pressed for between 60 and 300 milliseconds, operation is manual: the roof moves only with the button pressed;
- if the button is pressed for longer than 300 milliseconds, operation is automatic: even if the button is released, the roof continues to open/close until the end of travel position is reached or until the intervention of the anti-crush safety system;
- pressing the button again whilst the roof is moving stops it in the position that it is in;
- if the button is pressed for less than 60 milliseconds, this is ignored (it is treated as an accidental knock).

The electronic roof control circuit also includes an anti-crush safety function: when the roof is closing, movement is interrupted and reversed for a small distance if an obstacle is detected, by means of a Hall effect sensor located on the motor.

Sun roof movements via the control key are allowed only with key on.

Initialisation of the system:

If the power supply has been disconnected, the following reset procedure must be carried out for the roof:

- turn the ignition key to the MAR position;
- press the close button for at least 10 seconds;
- keep the button pressed in that position: the roof closes in stages;
-  - keeping the button pressed, wait until the roof is completely shut (until the motor has stopped);
- release the button;
- press the close button again within 5 seconds;
- keep the button pressed in that position: the roof carries out a complete opening and closing cycle in automatic mode;
- keeping the button pressed, wait until the roof is completely shut.

The initialisation cycle is complete.

# SUN ROOF - FUNCTIONAL DESCRIPTION

The sun roof motor N035, pin 6, receives a direct power supply via the line protected by fuse F65 of the luggage compartment control unit B045; the ignition-operated power supply (INT) of fuse F49 of the Body Computer M001 reaches pin 3 of N035. The same ignition-operated supply (INT) for fuse F49 is sent to the control button H060, pin 4.

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".

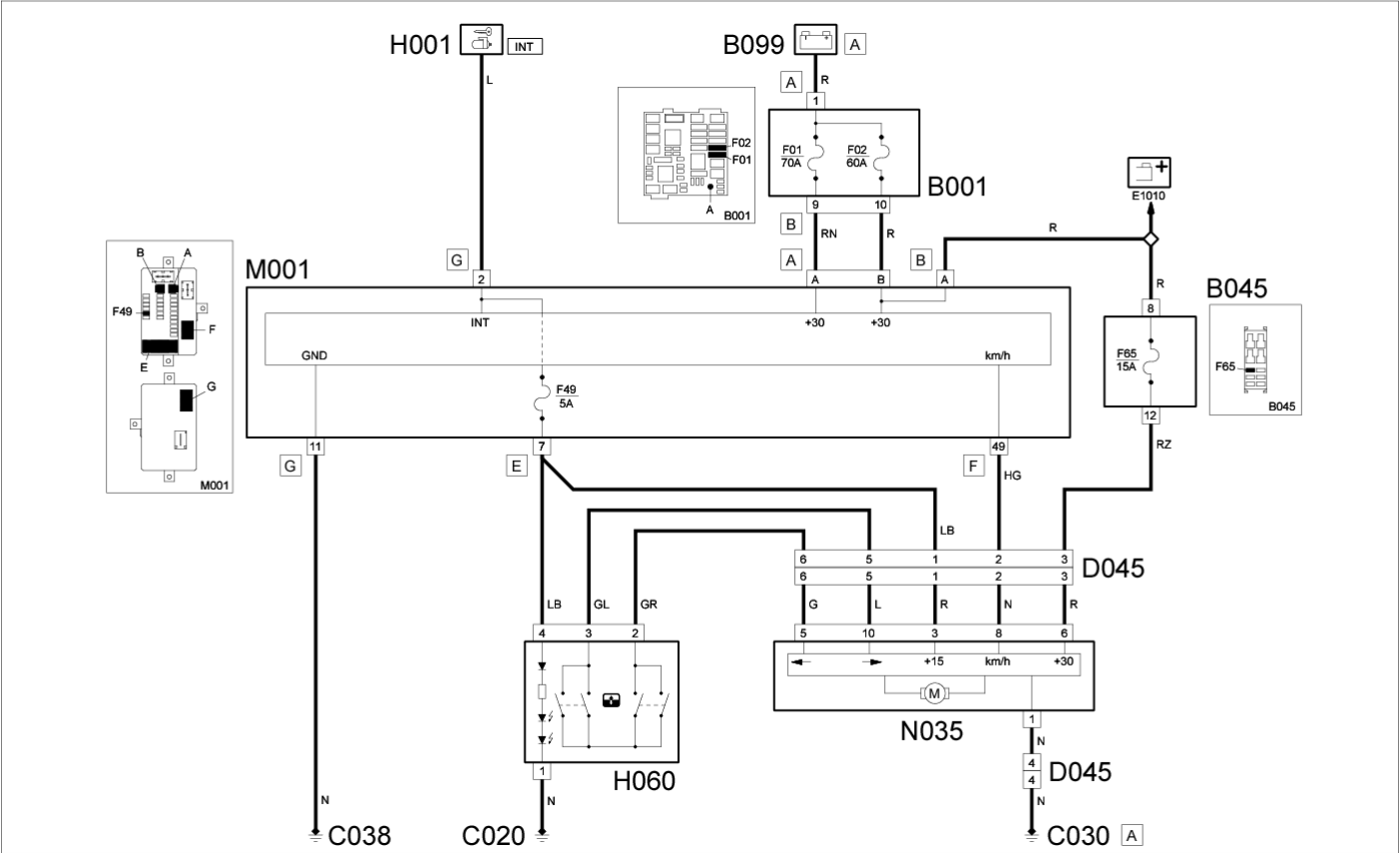
Pin 11 of connector G of M001 provides the Body Computer with a reference earth.

Pin 1 of M035 is earthed.

The speedometer signal from pin 49 of connector F of M001 reaches pin 8 of M035.

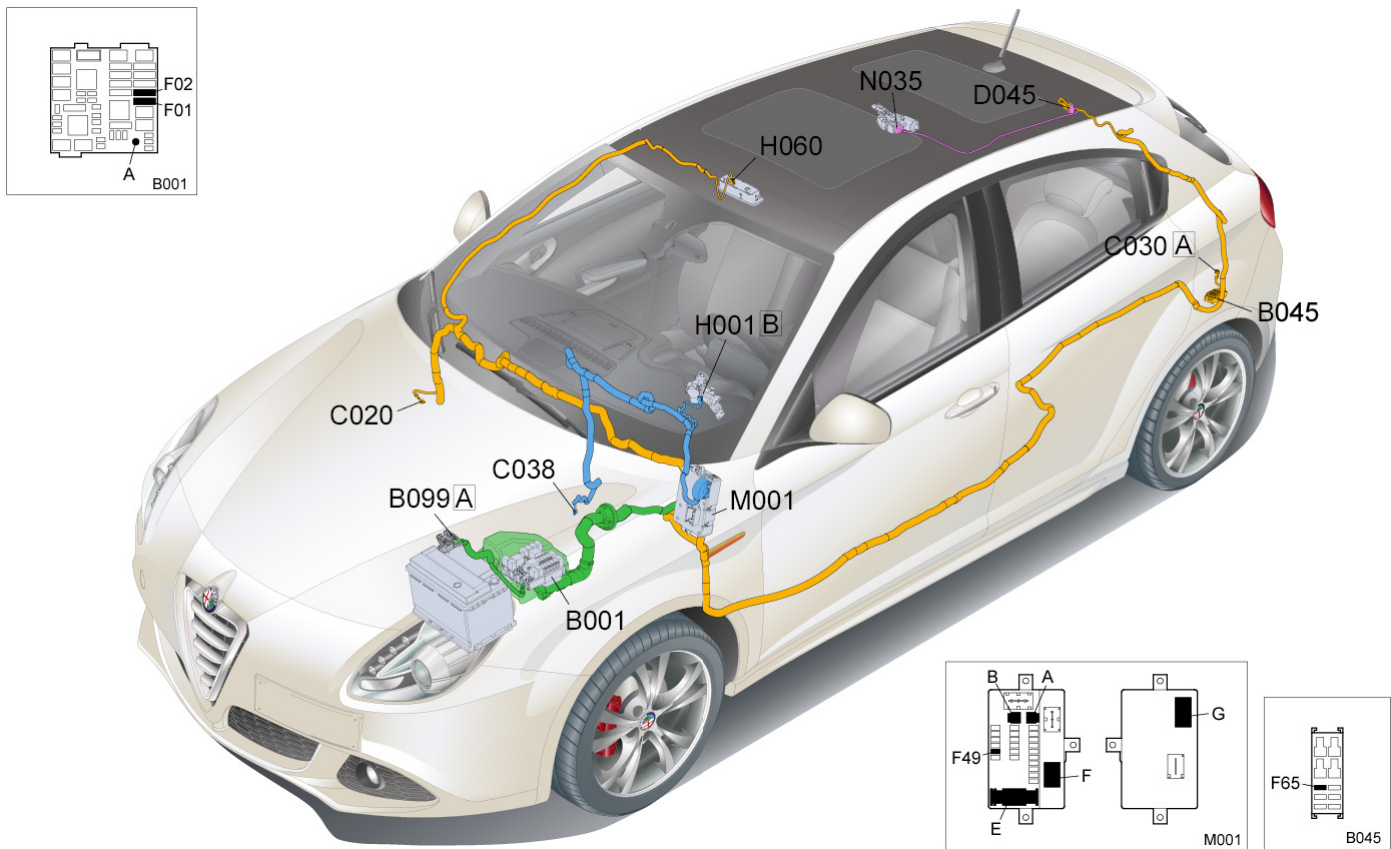
The control signals from the switch H060 are sent to pin 5 (opening) and to pin 10 (closing) of N035.

SUN ROOF - WIRING DIAGRAM



Component Code	Description	Reference to the operation
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
C020	PASSENGER SIDE DASHBOARD EARTH	-
C030	LEFT REAR EARTH	-
C038	EARTH ON CENTRE TUNNEL	-
C015	MASSA PLANCIA LATO GUIDA	-
C020	PASSENGER SIDE DASHBOARD EARTH	-
D045	SUN ROOF COUPLING	-
H001	IGNITION SWITCH	Op. 5520A18 IGNITION SWITCH CONTACT CARRIER LOCK BARREL - R.R.
H060	SUN ROOF SWITCH	Op. 7030B64 SUN ROOF CONTROL SWITCH - R+R
M001	BODY COMPUTER	Op. 5505A35 MAIN BODY COMPUTER/JUNCTION UNIT - R.R.
N035	SUN ROOF MOTOR	Op. 7030B70 SUN ROOF MOVEMENT MOTOR - R+R

SUN ROOF - COMPONENT LOCATION



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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
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H060	SUN ROOF SWITCH	Op. 7030B64 SUN ROOF CONTROL SWITCH - R+R
M001	BODY COMPUTER	Op. 5505A35 MAIN BODY COMPUTER/JUNCTION UNIT - R.R.
N035	SUN ROOF MOTOR	Op. 7030B70 SUN ROOF MOVEMENT MOTOR - R+R