



GUIDA ELETTRICA

191 - Giulietta

ELECTRIC STEERING - DESCRIPTION

The EPS (Electrical Power Steering) is a power assisted steering device designed to reduce the effort required for steering the vehicle by using the torque from an electric motor.

This model comes with the new DUAL PINION system:

Dual Pinion electromechanical steering is a system made up of two pinions that are able to transmit the axial force necessary to balance the force on the link. The two pinions are represented by a drive pinion and a power pinion: the drive pinion creates a mechanical link between the steering wheel and the rack while the power pinion transfers the torque generated by the electric motor to the rack. The "Input Shaft" connects the steering wheel and the rack.

A torque sensor detects the torque applied on the steering input shaft and sends this information to the motor, to generate the power for the steering.

Another position sensor, the "Index Sensor" detects the input shaft angle and is indispensable for VDC, active return and inertia compensation.

It is possible to alter the level of power assistance for the electric steering through the "ALFA dna" system settings.

See E7074 ALFA DNA SYSTEM

An "electric power steering failure" warning light is present on the instrument panel.

For more details

See descriptions 41 STEERING

The control unit's power supply line is protected by a MAXIFUSE on the battery.

ELECTRIC STEERING - FUNCTIONAL DESCRIPTION

The electric power assisted steering control unit M086 controls and regulates the electrically operated steering system.

The direct power supply for the control unit arrives from the battery through the line protected by the fuse F71 of the MAXIFUSE box on the battery B099, at pin 2 of connector A of M086. Pin 1 of connector A of M086 is earthed.


The 'ignition-operated' supply (INT) comes from the line protected by fuse F42 of the Body Computer M001, at pin 3 of connector B of M086.

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.

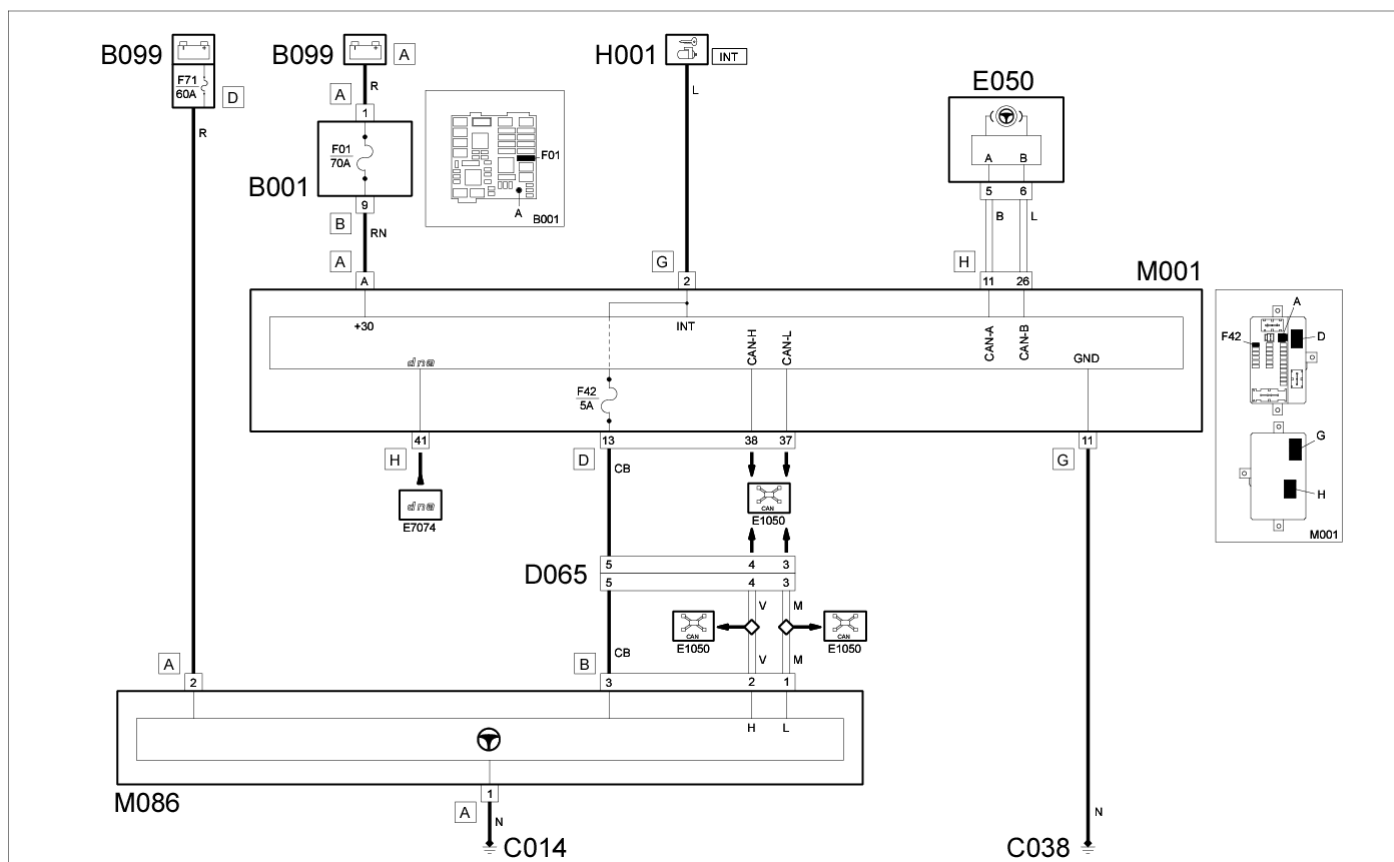
The control unit M086 is connected, through the CAN, pins 2 and 1 of connector B, to the other nodes, in particular the Body Computer M001, the ABS-VDC control unit M050 and the instrument panel E050, to which it sends the signals for the "electric steering failure" warning light.

 The torque sensor and the steering angle sensor are directly connected to the control unit M086.

The signals from the dna system selector H139 reach pin 41 of connector H of M001 and are sent, through the CAN, to the control unit M086 for the adjustment of the steering.

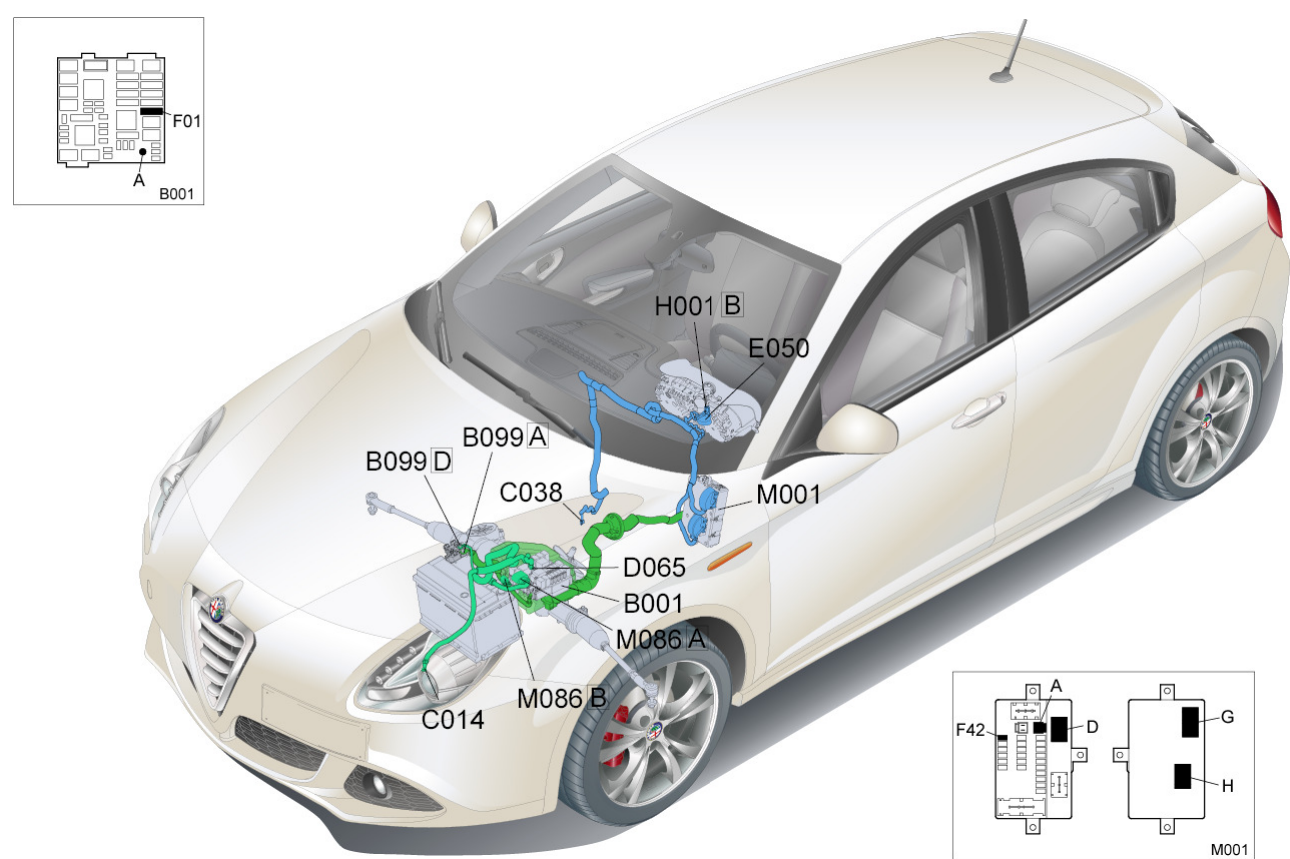
See E7074 ALFA DNA SYSTEM

ELECTRIC STEERING - WIRING DIAGRAM



Component code	Description	Assembly reference
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
C014	ELECTRIC STEERING FRONT EARTH	-
C038	EARTH ON CENTRE TUNNEL	-
D065	ELECTRIC STEERING COUPLING	-
E050	INSTRUMENT PANEL	Op. 5560B10 CONTROL PANEL - R+R
H001	IGNITION SWITCH	Op. 5520A18 IGNITION SWITCH CONTACT CARRIER LOCK BARREL - 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.

ELECTRIC STEERING - LOCATION OF COMPONENTS



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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
C014	ELECTRIC STEERING FRONT EARTH	-
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E050	INSTRUMENT PANEL	Op. 5560B10 CONTROL PANEL - R+R
H001	IGNITION SWITCH	Op. 5520A18 IGNITION SWITCH CONTACT CARRIER LOCK BARREL - 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.