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SISTEMA ALFA DNA

191 - Giulietta

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ALFA DNA SYSTEM - DESCRIPTION

Alfa dna system is being used for the first time on this model; it is an innovative device that acts on the vehicle dynamic control systems.

Alfa dna acts on the engine, brakes, suspension, steering and gearbox allowing 3 different behaviour modes for the car to emphasize the most suitable driving style for the conditions or the desires of the customer

These modes are Dynamic (super sports), Normal (urban) and All Weather (maximum safety even in difficult grip conditions).

- Dynamic: sports driving mode.

- Normal: driving mode for normal conditions.

- All Weather: driving mode for poor grip conditions (rain, snow).

The system acts on the vehicle dynamic control components:

- engine management control unit: the accelerator pedal is more or less reactive depending on the Alfa dna mode selected. In "Dynamic" mode, a higher engine torque level (overboost) is available;

- ABS-ESP system control unit: the system has three specific settings for each of the three Alfa dna system positions: e.g. in "Dynamic" mode the intervention of the ESP function is delayed to allow a more active driving style; in "All Weather" mode braking on surfaces with low grip is improved.

- electric power steering control unit: the dna system communicates with the Dual Pinion and adapts the steering response and sensitivity to the selected mode.

- gear change (ONLY FOR VERSIONS WITH TCT TRANSMISSION): in "Dynamic" mode, the dna system changes gear at a higher engine rpm level;

The system also communicates with the display systems:

- instrument panel: the display shows specific trip computer information consistent with the mode selected (e.g. turbocharger pressure in "Dynamic" mode).

- navigator display: it displays the change of the mode selected with the dna through a special screen.

The three positions can be selected using a lever next to the gear lever.

The lever is monostable type, in other words it always remains in a middle position (normal).

The vehicle configuration engaged is displayed by the LED lit up in the panel and by the instrument panel indication.

To engage the Dynamic mode, move the lever upwards; the lever will return to the middle position once it is released. To disengage the Dynamic mode, and return to Normal, repeat the same movement with the lever.

It is not possible to switch directly from Dynamic mode to All Weather mode and vice versa, it is always necessary to pass through Normal mode and then select the other configuration.

If Dynamic mode was engaged before a key-off, then the configuration will automatically return to Normal mode at the next key-on.

If, on the other hand, All Weather or Normal mode was engaged before switching off, the configuration will be maintained when the engine is next started.

Dynamic mode is automatically disengaged when the vehicle speed exceeds 110 Km/h and then engaged again when the speed drops below this level.

If there is a system or selector failure, no configuration can be engaged and the message "mode not available" will be shown in the panel display.

For more details

See descriptions 1056 PETROL INJECTION SYSTEM

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ALFA DNA SYSTEM - FUNCTIONAL DESCRIPTION

The dna system selector H139 sends an analogue signal to pin 41 of connector H of M001 depending on the selected mode.

Signals to light up the "d" and "a" LEDs of H139 leave pins 31 and 1 respectively of connector B 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 Body Computer M001 is connected, via the CAN, to the other nodes, in particular the steering control unit M086, the ABS-VDC control unit M050 and the engine management control unit M010.

It is also connected to the instrument panel E050 to which it sends the signals to display the mode engaged and system failure.

If installed it is also connected to the radio navigator P020.

The dna system selector H139 is lit when the key is on MAR:

See E2535 CONTROL LIGHTS

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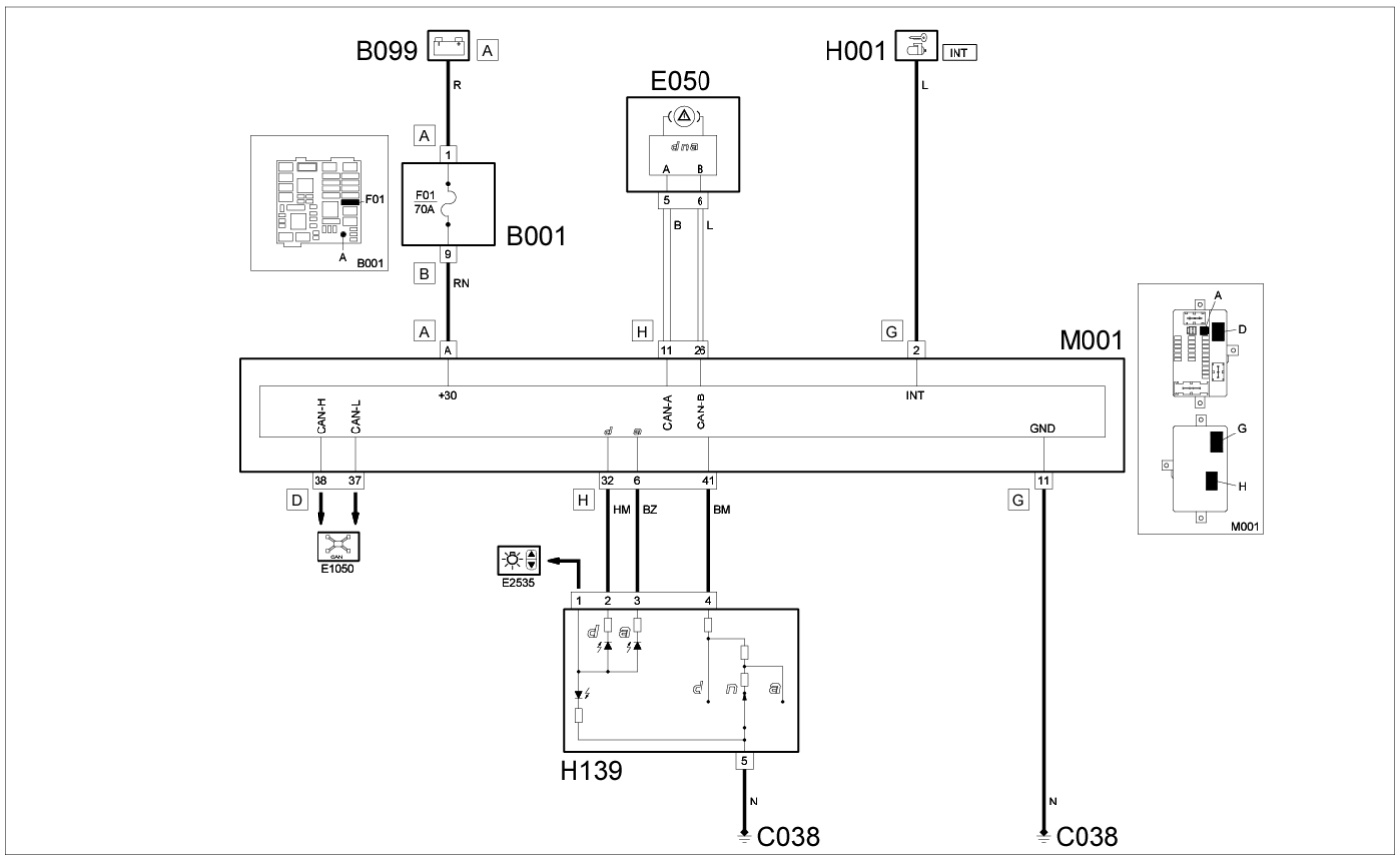
ALFA DNA SYSTEM - WIRING DIAGRAM



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
C038	EARTH ON CENTRE TUNNEL	-
E050	INSTRUMENT PANEL	Op. 5560B10 CONTROL PANEL - R+R
H001	IGNITION SWITCH	Op. 5520A18 IGNITION SWITCH CONTACT CARRIER LOCK BARREL - R.R.
H139	ALFA DNA SYSTEM SELECTOR	Op. 7040L53 VEHICLE DYNAMIC CONTROL SELECTOR - R.R.
M001	BODY COMPUTER	Op. 5505A35 MAIN BODY COMPUTER/JUNCTION UNIT - R.R.

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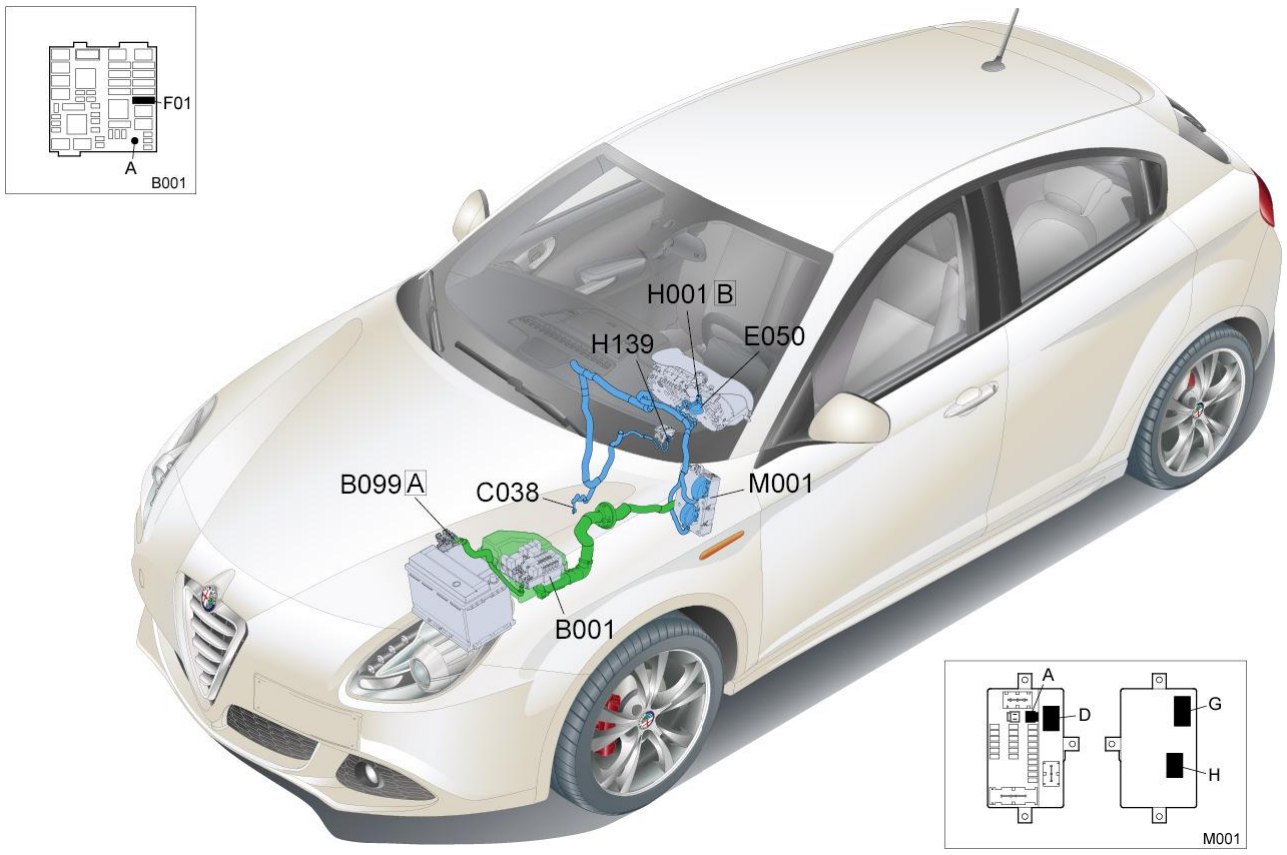
ALFA DNA SYSTEM - COMPONENT LOCATION



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