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This group: "146 - ELECTRIC SYSTEM DIAGNOSIS" only contains the sections which are specific to the car in question. For all the sections not contained herein - marked with * in the index below -, refer to: "145 - ELECTRIC SYSTEM DIAGNOSIS" because the items or systems described are the same as those for the 145 model.

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For all the other sections not contained herein - marked with *
- refer to: "145 - ELECTRIC SYSTEM DIAGNOSIS"



WARNING!



From chassis no. ____ the 146 models are fitted with the "ALFA ROMEO CODE" system as a **standard** item: this is an **innovative electronic anti-theft protection system** which inhibits the operation of the engine management control unit (Petrol versions) or of the engine stop solenoid valve (TD version).

BEFORE PROCEEDING WITH ANY WORK ON THE ELECTRIC SYSTEM OF THE VEHICLE, IN PARTICULAR ON THE ENGINE CONTROL SYSTEMS, CAREFULLY READ THE SPECIAL SECTION: "ALFA ROMEO CODE".

POWER SUPPLY

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GENERAL DESCRIPTION

All the electric systems and devices are supplied by the battery A1 at 12 V.

The lines through which the battery voltage is distributed to the various services are shown in the wiring diagrams corresponding to the various functions and systems.

This general diagram shows all the lines as they branch from the battery and from the branch terminal box G56, for further details, reference should be made to the specific diagrams.

Some circuits are supplied continuously, also when the vehicle is stopped and the key disengaged, as they are connected directly to the battery A1.

Other circuits are supplied turning the key in the ignition switch B1 to the different positions:

- inserting the key and turning it to the first position the key moves to "DRIVE" and supplies a number of circuits, which are in fact known as "key-operated";
- the second position "START" - supplies the starter motor, while disconnecting some other circuits (those that absorb more power) thereby ensuring the highest flow of current to the motor itself;
- removing the key and turning it in the opposite direction (and pressing the special button) the "PARK" position is engaged which supplies the side-lights also when the key has been removed.

In the wiring diagrams these different types of supply are shown schematically by the following symbols:



- line always supplied



- line supplied with the ignition key at "DRIVE"



- line supplied with the ignition key at "START"



- line supplied with key engaged (in both the previous positions).



- line supplied with the ignition key at "PARK"

NOTE: this general wiring diagram makes it possible to easily locate the circuits supplied by the same line: this simplifies fault-finding in the case of problems involving more than one system.

NOTE: (Boxer and TD version) the terminal branch box G56 has been newly designed and is highly reliable and safe. The procedure for removing and connecting the single connectors in the terminal box is described at the end of this section.

The T.SPARK version has a branch terminal box with incorporated fuses (see following pages).

Protection and safety systems

The entire electric system of the 146 has been designed and made taking account of the latest directives on the subject of safety and protection, especially against the possibility of fire.

There are two main types of protection:

- **active protection**, to reduce possible causes of faults "at the source"
- **passive protection**, to minimise the effects of any faults.

The first category involves attentive design of the wiring harnesses, positioning and fastening them accurately and carefully defining suitably shielded and protected routes.

For this reason the alternator and starter motor cables have been suitably modified, with the adoption of protective caps, etc.

Passive protections include all measures, which have always been adopted on cars, to reduce high fault currents (overload and short circuit).

All the fuses of the system have been sized according to the nominal absorption of the loads that can be operated contemporaneously, and in such a way as to ensure that they cut in in the event of short circuit.