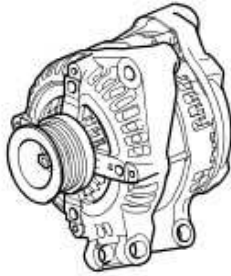


GENERATOR



E47591

The Generator has a multifunction voltage regulator for use in a 14V charging system with 6÷12 zener diode bridge rectifiers.

The ECM monitors the load on the electrical system via PWM signal and adjusts the generator output to match the required load. The ECM also monitors the battery temperature to determine the generator regulator set point. This characteristic is necessary to protect the battery; at low temperatures battery charge acceptance is very poor so the voltage needs to be high to maximize any rechargeability, but at high temperatures the charge voltage must be restricted to prevent excessive gassing of the battery with consequent water loss.

The Generator has a smart charge capability that will reduce the electrical load on the Generator reducing torque requirements, this is implemented to utilize the engine torque for other purposes. This is achieved by monitoring three signals to the ECM:

- Generator sense (A sense), measures the battery voltage at the CJB.
- Generator communication (Alt Com) communicates desired Generator voltage set point from ECM to Generator.
- Generator monitor (Alt Mon) communicates the extent of Generator current draw to ECM. This signal also transmits faults to the ECM which will then sends a message to the instrument cluster on the CAN bus to illuminate the charge warning lamp.

FUEL INJECTORS



E47305

The engine has 8 fuel injectors (one per cylinder), each injector is directly driven by the ECM. The injectors are fed by a common fuel rail as part of a 'return less' fuel system. The fuel rail pressure is regulated to 4.5 bar by a fuel pressure regulator which is integral to the fuel pump module, within the fuel tank. The injectors can be checked by resistance checks. There is a