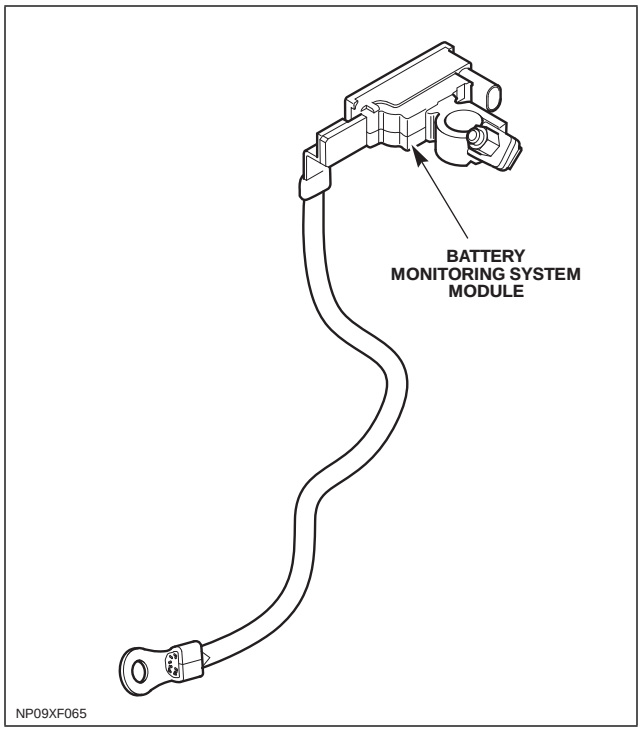
BATTERY MONITORING SYSTEM – LM, LA, AND LS

The Battery Monitoring System (BMS) module measures battery current and voltage and communicates this information to the Central Junction Box (CJB) over a LIN bus connection. The CJB transmits the battery information to the Instrument Cluster over the medium speed CAN bus. The CJB acts as a gateway between the medium and high speed CAN bus networks, and transmits the battery condition information to the ECM over the high speed CAN bus.



Based on the information received from the BMS module, the ECM will control the output from the generator and request the switching off of electrical loads if necessary.

⚠ **CAUTION: Due to the self-calibration routine, it is recommended that all power supply diagnostic testing is carried out using IDS rather than a digital multimeter.**

The BMS module is able to generate DTCs to help diagnose battery or generator power supply issues. These DTCs can be retrieved using IDS. IDS can also be used to implement a battery and generator self-test routine.

If a fault is detected, the ECM will override the BMS module. The BMS module DTCs can be used to help diagnose battery or generator power supply faults. The DTCs are stored in both the CJB and the ECM. IDS has a process for an automated power supply diagnostic procedure, which provides a menu-driven process for locating a fault in a logical sequence. The procedure uses the capability of the Battery Monitoring System and generator LIN bus controlled functions to provide current flow information and will detect if the Battery Monitoring System and/or generator are functioning correctly.

NOTE: When using a Land Rover approved battery charger or maintainer, to ensure that the charge flows through the BMS module, connect the charger to the recommended ground point instead of directly to the negative battery terminal. Failure to observe this will generate a DTC, and incorrect battery condition information will be retained by the BMS module due to unmonitored current flow into the battery. However, the system will recognize and compensate for the change in the battery status after a period of time.

If a new battery is installed in the vehicle, the BMS module will require recalibration to the new battery parameters using the IDS 'Battery Replacement' function. Replacing the BMS module requires no action, as the system will self-calibrate.