

FORD MOTOR COMPANY (FORD) RESPONSE TO RQ24014-2 Request 6Request 6

Provide a list of each modification or change made by the updated Body Control Module (BCM) and Powertrain Control Module (PCM) calibrations implemented in the subject recall remedy, including those which relate to the detection of 12V battery state of charge. For each such modification or change, provide the following information:

- a. A detailed description of the modification or change;
- b. The original condition/threshold (if applicable);
- c. The new or modified condition/threshold (if applicable); and
- d. The intended outcome of the modification or change as it relates to the alleged defect.

Answer

The Powertrain Control Module (PCM) calibration change increased the vehicle alternator minimum output voltage set point from 12.4V to 12.75V. The alternator minimum voltage setpoint limit was increased to raise the alternator minimum electrical contribution to cover engine operation electrical needs. This change provides additional alternator 12V electrical power during an alternator smart regen charging condition. It also allows the alternator to respond more quickly to support 12V electrical power supply loads in the event of an instantaneous loss of battery power and prevent the running engine from stalling.

There were four calibration changes to the Body Control Module (BCM). The "Charging System Service Now" Diagnostic Trouble Code (DTC) warning message was enabled to alert the driver when an open/failed battery is detected. The open battery disconnect count was reduced from 10 to 3 to more quickly detect an open/failed battery. The "inhibit smart regeneration charging (SRC)" was changed from True to False to inhibit SRC when an open/failed battery is detected. The "enable failed battery detection" was changed from False to True to trigger the following actions when open/failed battery is detected: Start/Stop inhibited and will not re-activate until there are 3 successful engine cranks, Smart Regen Charging inhibited, and BCM DTC B11D9-09 is set.

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