

acceptable range.

Possible Causes:

Diagnostic Aids: The PCM did not receive a valid vehicle identification number (VIN) during reprogramming. Refer to FLASH ELECTRICALLY ERASABLE PROGRAMMABLE READ ONLY MEMORY (EEPROM) , Programming The VID Block For A Replacement PCM, to reprogram the PCM.

Application	Key On Engine Off	Key On Engine Running	Continuous Memory
All	Refer to the Description, Possible Causes and Diagnostic Aids for the DTC.		

DIAGNOSTIC TROUBLE CODE (DTC) CHARTS AND DESCRIPTIONS > P0642 - SENSOR REFERENCE VOLTAGE A CIRCUIT LOW - DTC CHART

P0642 - SENSOR REFERENCE VOLTAGE A CIRCUIT LOW - DTC CHART

Description: This DTC sets when the VREF circuit is less than VREF minimum.

Possible Causes:

- VREF circuit short to ground
- Damaged sensor
- Incorrect harness connection

Diagnostic Aids: This DTC sets due to an under voltage condition on the VREF circuit.

Application	Key On Engine Off	Key On Engine Running	Continuous Memory
All	GO to Pinpoint Test C :		

DIAGNOSTIC TROUBLE CODE (DTC) CHARTS AND DESCRIPTIONS > P0643 - SENSOR REFERENCE VOLTAGE A CIRCUIT HIGH - DTC CHART

P0643 - SENSOR REFERENCE VOLTAGE A CIRCUIT HIGH - DTC CHART

Description: This DTC sets when the VREF circuit is greater than VREF maximum.

Possible Causes:

- VREF circuit short to voltage
- Damaged sensor
- Incorrect harness connection

Diagnostic Aids: This DTC sets due to an over voltage condition on the VREF circuit.