DTC P0500 the TCM. When the ECM detects very low vehicle speed, while the vehicle is in motion

Circuit Description

The transmission control module (TCM) provides the engine control module (ECM) vehicle speed through high-speed communications on the controller area network (CAN). Vehicle speed is produced by the AC current generated through the transmission output shaft speed (OSS) sensor as the output shaft rotates. The ECM continuously monitors the vehicle speed signal supplied by the TCM. When the ECM detects very low vehicle speed, while the vehicle is in motion, DTC P0500 sets. DTC P0500 is a type B DTC.

Conditions for Running The DTC

- No communication DTC U0100.
- Engine speed is 1,800–2,200 RPM.
- ECM deceleration fuel shutoff is active.
- Engine coolant temperature is greater than 65°C (149°F).
- TCM commanded gear is 4th .

Conditions for Setting The DTC

Vehicle speed is less than 5 km/h (3 mph) for a total of 50 seconds.

Action Taken When the DTC Sets

- The ECM illuminates the malfunction indicator lamp (MIL) during the second consecutive trip in which the Conditions for Setting the DTC are met.
- The ECM records the operating conditions when the Conditions for Setting the DTC are met. The ECM stores this information as Freeze Frame and Failure Records.
- The ECM stores DTC P0500 in ECM history.

Conditions for Clearing the DTC

- The ECM turns off the MIL during the third consecutive trip in which the diagnostic test runs and passes.

- A scan tool can clear the DTC.
- The ECM clears the DTC from ECM history if the vehicle completes 40 warm-up cycles without an emission related diagnostic fault occurring.

Diagnostic Aids

- If vehicle speed is not detected by the ECM, the ECM will set DTC P0500.
- A communication error, U-code, may exist between the ECM and TCM, which may cause DTC P0500 to set.
- If TCM DTC P0722 or P0723 are set, diagnose these DTCs first. The ECM may also set a DTC P0700, requesting the MIL illumination from the TCM.

Test Description

The number below refers to the step number on the diagnostic table. 3. Because the TCM supplies the ECM with vehicle speed, the TCM will also have set a DTC.

DTC P0500

Step	Action	Value(s)	Yes	No
1	Did you perform the Diagnostic System Check – Vehicle?	—	Go to Step 2	Go to Diagnostic System Check - Vehicle in Vehicle DTC Information

Step	Action	Value(s)	Yes	No
2	1. Install a scan tool. 2. Turn ON the ignition, with the engine OFF. **Important:** Before clearing the DTC, use the scan tool in order to record the ECM Freeze Frame and the TCM Failure Records. Using the Clear Info function erases the Freeze Frame and Failure Records from the ECM and TCM. Using the Clear Info function erases stored DTCs in both the ECM and TCM. 3. Record the Freeze Frame and Failure Records. Did you record Freeze Frame or Failure Records for DTC U0100?	—	Go to U0100 in Data Link Communications	Go to Step 3
3	Did you record Freeze Frame or Failure Records for DTC P0722 or P0723?	—	Go to DTC P0722 or DTC P0723	Go to Intermittent Conditions in Engine Controls – 4.6L