

CASE Learn Procedure

(Crankshaft Position System Variation Learning Procedure)

The crankshaft position system variation values are stored in the PCM non-volatile memory after a learn procedure has been performed. If the crankshaft position system variation values are not stored in the PCM, DTC P1336 will set. The learn procedure is required after the following service procedures have been performed:

- DTC P1336 is set
- PCM replacement
- Engine replacement
- Crankshaft replacement
- Crankshaft balancer replacement
- Crankshaft position sensor replacement
- Any engine repair that disturbs the crankshaft or the harmonic balancer to crankshaft position sensor relationship

NOTE

The scan tool will not perform the CASE learn until the engine coolant temperature reaches 70C (158F).

Crankshaft Position System Variation Learning Procedure

- Step 1: Turn the key to **ON** position.
- Step 2: Turn Tech II on.
- Step 3: Select the **Diagnostics Menu**.
- Step 4: Select Car Information (Year, Make, Engine, Etc).
- Step 5: Select **Special Functions**.
- Step 6: Select **Variable Crankcase Learn Procedure** then follow on screen directions.

The Crankcase Learn Procedure is going to ask the Technician to do the following:

For 1997 – 2003 year vehicles:

- Step 1: Set the parking brake.
- Step 2: Make sure car is in Neutral or Park.
- Step 3: Start the engine.
- Step 4: Rev the engine to the Rev Limiter (car will hit limiter at 3,000 RPM).
- Step 5: Wait about 5 seconds.
- Step 6: Rev the engine to the Rev Limiter (The engine will this time hit about 5,500 to 6,000 RPM)
- Step 7: Wait about 5 seconds.

For 2004+ year vehicles:

- Step 1: Set the parking brake.
- Step 2: Make sure car is in Neutral or Park.
- Step 3: Start the engine.
- Step 4: Rev engine to the Rev Limiter

Finally, check the DTC status for DTC P1336. If the scan tool indicates that DTC P1336 ran and passed, the crankshaft position system variation learn procedure is complete. If the scan tool indicates DTC P1336 failed or not run, determine if other DTCs have set. If NO DTCs other than P1336 are set, repeat the crankshaft position system variation learn procedure.