



Tech TIPS

SUPPORTING TODAY'S PROFESSIONAL TECHNICIAN

GM Crankshaft Variation Relearn

Application:

All 1996 and newer GM vehicles with FLASH reprogramming ECCs.

Problem:

Crankshaft Variation Relearn Procedure must be performed if:

- ECC was reprogrammed.
- Crankshaft position sensor has been replaced.
- ECC has been replaced.

Solution:

Follow the relearn procedure outlined below:

1. Install scan tool on Data Link Connector (DLC) located under the dash. Apply parking brake and block wheels. Insure hood is closed.
2. Place the transmission in park for automatics and neutral for manual transmissions.
3. Start engine and bring up to operating temperature.
4. Apply hydraulic brakes. Select and **enable Crankshaft Variation Relearn procedure** using scan tool.

Caution:

Release throttle to idle position once CKP fuel cut off is activated and engine starts to decelerate.

5. Slowly accelerate the engine to 4000 RPM (or indicated RPM for your vehicle). Hold RPM until engine speed drops back toward idle. Release throttle immediately once procedure is learned! Once the variation values are learned, the ECC will return engine control to the driver. The scan tool should indicate a successful relearn.
6. Turn engine off for at least 15 seconds and remove scan tool. If the relearn procedure was not learned, DTC P1336 will be stored in the memory.
7. If present, insure that the CKP procedure was followed carefully. Perform test procedures and repair as necessary.

Important Note:

Refer to your vehicle's service manual for detailed relearn procedures specific to your application, and also to your scan tools operating procedure.

Visit www.cardone.com for more details on Flash.