

AA: Auto Start Stop

This pinpoint test is intended to diagnose the following:

- PCM (12A650)

AA1 CHECK FOR DTCS

- Carry out the PCM self-test.
- Check for any other module DTCs.

Are any DTCs other than DTC P164C present?

Yes	For PCM DTCs, GO to Section 4, Diagnostic Trouble Code (DTC) Charts and Descriptions . For all other module DTCs, REFER to the applicable Workshop Manual Section to continue diagnosis.
No	GO to AA2 .

AA2 CHECK FOR CORRECT AUTO START STOP SYSTEM OPERATION

Note: Verify the conditions that disable the auto start stop system operation are not present while checking the auto start stop system for correct operation. Refer to Section 1, [Catalyst Efficiency Monitor](#), Auto Start Stop.

Note: When the auto start stop system shuts the engine off, an indicator illuminates in the instrument panel cluster (IPC). Any other engine off conditions should be considered an engine stall.

Note: When the auto start stop system is inhibited, the On Demand Screen indicates why the engine is not turning off.

- Place the gear selector in DRIVE and drive the vehicle over 4 km/h (2.5 mph) until the engine operating temperature is greater than 60°C (140°F).
- Bring the vehicle to a complete stop with the brake pedal fully applied for greater than 5 seconds.
- Monitor the instrument panel cluster and engine for auto start stop shut down.
- After the engine is shut down, release the brake pedal.
- Verify the engine restarts.

Does the engine shut down while stopped and restart when the brake pedal is released?

Yes	The system is operating correctly at this time.
No	GO to AA3 .

AA3 MONITOR ALL THE AUTO START STOP PIDS

- Ignition ON, engine OFF.
- Access the PCM and monitor all the start stop PIDs. Select the START STOP option from the scan tool POWERTRAIN menu (if equipped).
- Check the PIDs for indications the auto start stop system is disabled or inhibited.

Do any of the PIDs indicate that the auto start stop system is disabled or inhibited?

Yes	The system is operating correctly at this time. For additional information, REFER to Section 1, Powertrain Control Software , for the auto start stop system description.
No	REPROGRAM or UPDATE the calibration. REFER to Section 2, Flash Electrically Erasable Programmable Read Only Memory (EEPROM) , Programming the VID Block for a Replacement PCM. VERIFY the repair. If the concern is still present, GO to AA4 .

AA4 CHECK FOR CORRECT PCM OPERATION

- Disconnect all the PCM connectors.
- Visually inspect for:
 - pushed out pins
 - corrosion
- Connect all the PCM connectors and make sure they seat correctly.
- Carry out the PCM self-test.
- Verify the concern is still present.

Is the concern still present?

Yes	INSTALL a new PCM. REFER to Section 2, Flash Electrically Erasable Programmable Read Only Memory (EEPROM) , Programming the VID Block for a Replacement PCM.
No	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.