



Technical Bulletin # 1392

Transmission: 6L45, 6L50, 6L80, 6L90

Subject: Service Fast Learn Adapts

Application: 6 Speed GM

Issue Date: July, 2011

6L45, 6L50, 6L80, 6L90

Service Fast Learn Adapts

Service Fast Learn Adapts is a procedure for 6-speed automatic transmissions in which a series of tests are run to allow the transmission control module (TCM) to learn individual clutch characteristics. Once the clutch data is learned, Service Fast Learn Adapts translates it into the adaptive data cells, which the TCM uses for clutch control during shifts. The scan tool provides initiation of the Service Fast Learn Adapts procedure. This procedure is to be used following transmission repair.

The Service Fast Learn Adapts procedure must be performed when one of the following repairs have been made to the vehicle. Failure to perform the procedure after one of the following repairs may result in poor transmission performance, as well as transmission DTCs being set:

- Transmission internal service/overhaul
- Valve body repair or replacement
- Control solenoid valve assembly replacement
- TCM software/calibration update
- Any service in response to a shift quality concern

NOTE: Ensure the following conditions are met before performing the Service Fast Learn Adapts procedure:

- Drive wheels are blocked
- Parking brake is applied
- Service brake is applied
- Zero percent throttle and no external engine RPM control
- Transmission fluid temperature (TFT) is between 70-115°C (158-239°F)
- Transmission gear selector has been cycled from Park to Reverse 3 times in order to purge air from the reverse clutches.

NOTE: If at any time during the procedure, required conditions are not met, Service Fast Learn Adapts may abort and the process may need to be started again from the beginning. If this occurs, the transmission will be left in a neutral state until the controller is shut down, key OFF and remove the scan tool and wait for more than 30 seconds prior to re-try procedure. If the procedure repeatedly fails, a limit that engineering set is being exceeded and there is possibly a transmission

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hardware issue.

1. Use the scan tool to perform the Service Fast Learn Adapts procedure. As the procedure is being performed, the scan tool data display will provide operator instructions. Follow the scan tool instructions as required.
2. Once the procedure is complete, shut OFF the engine and power down the TCM. You will lose communication to the scan tool.

Ensure you exit back to the main screen in the scan tool, shut the scan tool OFF, and unplug it from the DLC or the controller will not shut down leaving the vehicle in a neutral state.

NOTE: When the Service Fast Learn Adapts procedure is completed, the transmission will remain in a neutral state until the controller shuts down. If after 1-2 minutes of sitting, with the key OFF and scan tool removed, the vehicle remains in a neutral state, disconnect the battery and wait 5-10 minutes and then hook the battery back up. Reverse and drive should return.

3. Restart the engine. This will complete the Service Fast Learn Adapts procedure.