TROUBLESHOOTING GUIDE

Aftermarket/performance air filters are shipped pre-oiled and can contaminate the Mass Air Flow sensor. MAF sensor must be tested with a voltmeter at the sensor – some vehicle computers may compensate for out-of-range signal. Your scanner will only display compensated values.

Torque converter clutch application must be checked at less than 30% throttle. If there is none present, check the vehicle's brake light bulbs for presence of LED lamps. Aftermarket LED lamps cannot be used.

Where applicable, shift concerns or complaints may sometimes be caused by poorly routed wiring for the manual shift lever mounted on the steering column.
Wiring can be damaged or chafed by steering column cover mounting screws.

Checking Oil in a 6L80E

- The oil level MUST be checked with the engine RUNNING in Neutral at idle.
- The oil level is dependent on fluid temperature.
  - If you are looking at a unit that is **cold, up to 140 deg F**, the oil level should be in **the cold range** on the dipstick.
  - If the transmission is **under 90 deg F**, the oil level should be **near the bottom** of the cold mark.
  - If the transmission is **around 140 deg F** the oil level should be **near the top** of the cold mark.
  - If the transmission is **between 90 and 140 deg F**, the oil level should be **near the middle** of the cold mark.
- The oil level can be verified with a compatible scan tool.
  - If you are looking at a unit that is **hot, between 160 and 200 deg F,** the oil level should be in **the hot range** of the dipstick.
  - If the transmission is **150-170 deg F**, the oil level should be **between the middle and bottom** of the hot mark.
  - If the transmission is **170-200 deg F**, the oil level should be **between the middle and top** of the hot mark.

- The oil level can be verified with a compatible scan tool.

IMPORTANT: The engine MUST be running at Idle in neutral.

LUBRICATION RECOMMENDATIONS

Application	Recommended Lubricant
GM 6 L80E	Mobil LV ATF HD

For Questions or Comments Call 1-800-231-4005

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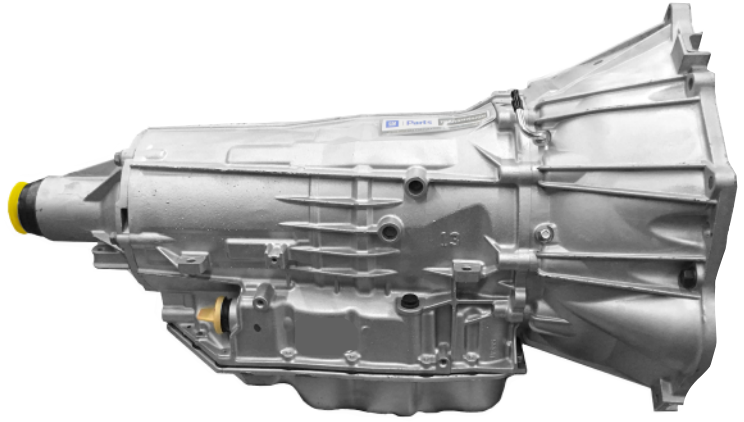

GM 6L80
TRANSMISSION INSTALLATION GUIDE

PRE-INSTALLATION

Prior to installation of the replacement transmission, determine the cause(s) of failure of the previous unit.

Also:
- Check transmission cooler for glycol and/or water contamination
- Scan vehicle computer, record any codes, and fix all causes of codes before installation of replacement transmission

A restricted and/or contaminated transmission cooling system is the #1 cause of transmission failure after a replacement.

If the transmission cooler has evidence of transmission hard parts failure, it must be replaced. Plate-type oil-to-air (OTA) transmission coolers must always be replaced. Entire transmission cooling system must be completely cleaned, hot flushed, and flow tested.

SERVICE FAST LEARN ADAPTS

(Preferred Method)

After installing the replacement transmission and ECM/TCM calibrations are complete, perform a vehicle Service Fast Learn Adapts procedure:
(Driving adaptive shifts must be performed using a scan tool.)

Verify vehicle is on level ground when performing relearn procedure.
Verify drive wheels are blocked and parking brake is applied.
Turn ignition off for no less than 2 minutes giving all modules enough time to power down.
Verify engine is idling at 0% throttle with no external engine rpm control.
Verify transmission fluid temperature (TFT) is between 160°F and 200°F.
Perform three (3) cycles of PARK – REV. When complete, shift vehicle back into PARK.
Initiate Service Fast Learn Adapts procedure using scan tool.
Follow directions on scan tool data display.
When procedure on scan tool is complete, exit to main screen and shut down scan tool.
Unplug scan tool from DLC.
Turn ignition off for no less than 2 minutes giving all modules enough time to power down.
Restart engine.
Service Fast Learn Adapts procedure is now complete.

GARAGE SHIFT ADAPTS

(This method is performed when no scan tool is available. See: Preferred Method.)

Next, the Garage Shift Adapts must be completed:

With engine still running and vehicle still secured, verify transmission fluid temperature is still above 86°F. With engine at idle, shift from REVERSE to DRIVE and leave shift lever in DRIVE for five (5) seconds. After five seconds, shift back to REVERSE and leave shift lever in REVERSE for five seconds. Perform this procedure ten(10) times (R-D-R-D-R-D...). The shift transitions need to be directly between DRIVE and REVERSE – no stopping in Neutral. With engine at idle, shift from NEUTRAL to DRIVE and leave shift lever in DRIVE for five (5) seconds. After five seconds, shift back to NEUTRAL position and leave shift lever in NEUTRAL for five seconds. Perform this procedure five (5) times (N-D-N-D-N-D...). With the engine at idle, shift from NEUTRAL to REVERSE and leave shift lever in REVERSE for five (5) seconds. After five seconds, shift back to NEUTRAL position and leave shift lever in NEUTRAL for five seconds. Perform this procedure five (5) times (N-R-N-R-N-R...). Advise customer that it may take several days of driving for the transmission to fully adapt.

A final system scan is required after the road test or if problems are detected during the test drive. If codes are present, compare to original code scan recorded prior to transmission replacement.

Use a scan tool to check for Diagnostic Trouble Codes (DTCs) stored by the ECM and the TCM. Perform diagnostic and/or repair procedures to correct these codes prior to returning the vehicle to customer.

INSTALLATION CHECKLIST

- Inspect flex plate for cracks or any damage
- Compare bolt pattern on flex plate to bolt pattern on new torque converter
- Inspect crankshaft pilot bore for wear and apply grease to aid with installation
- Compare replacement transmission and torque converter to original before installation
- Verify all dowel pins are present, clean, and in good condition – these are critical for proper alignment!
- Verify torque converter is properly and completely installed onto input shaft (common mistake)
- Do not tighten bell housing bolts with force, torque converter may have shifted
- If 4WD application, inspect and/or replace transfer case input shaft seal
- Inspect transmission mounts, carrier bearing, driveshaft, yoke and U-joints (main causes of broken cases/vibration)
- Verify all battery and chassis ground connections are clean, free of any corrosion, and properly secured.