

GM 6L80 and 6L90 Installation Guidelines

WARNING: DO NOT operate vehicle without completing a REFLASH – If you do not have the necessary equipment, have the vehicle towed on a flatbed to the dealership for REFLASH.

Pre-Installation:

Prior to install, you must determine the previous cause of failure.

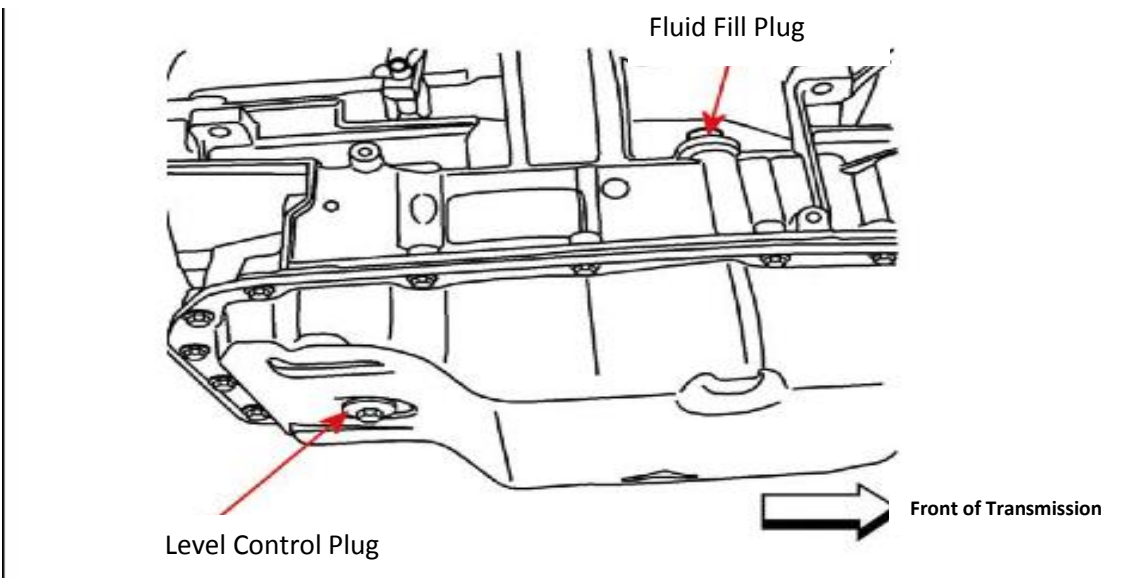
- Be sure to check for a damaged/busted trans cooler or coolant/water contamination. Transmission contamination and/or cooler failure is a primary cause of failure for this type of transmission.
- Scan and record any codes.

DO NOT take any chances. Go ahead and replace the cooler and/or radiator now. Flushing the cooler will not guarantee a quality install. Replace the cooler in order to validate your warranty.

Most 6L80 or 6L90 transmissions do not have a dipstick. To verify proper fluid fill level:

1. Vehicle must be on level ground, wheels chocked, and parking brake engaged
2. Idle engine at 0% throttle
3. Bring trans temp between 86-122 degrees F.
4. Shift transmission thru all gears for a minimum of 3 seconds then back to park. (Keep brake applied)
5. Remove Fill Plug & Level Control Plug
6. If fluid does not drip, level is Low. Add fluid until there's a slight drip.
7. If fluid leaks heavily from Level Control Plug, let drain until it is reduced to a slight drip.
8. Re-install both plugs.

Use on GM approved fluid (Synthetic or Dexron VI). Capacity is approximately 10 quarts.



Reflashing Guidelines:

Failure to properly reflash will cause damage to your new transmission. You MUST reflash prior to moving the vehicle. If you do not have the proper equipment, have the vehicle towed on a flatbed to a local dealership for reflash. Your local dealership can reflash for a nominal fee. TCM cannot be reflashed independently. It must be reflashed at same time as the ECM.

Verify ECM and TCM have latest OEM calibrations. If not, malfunction light will come on and the transmission will go into "limp" mode.

DO NOT attempt reflash unless battery has proper charge. (12VDC-16VDC)

REFLASH equipment requirements: (Search the web for more information)

- Dealer level J2534 pass-thru programming
- Works with all OEM J-2534 applications and supports J2534-1 and J2534-2
- Compatible with Windows XP, 7, 8 and 10
- Support for GM GDS2 and Tech 2 WIN
- High Speed Internet connection

Service Fast Learn Adapts:

After installation of the new transmission and ECM/TCM calibrations are complete, perform a vehicle Service Fast Learn Adapts procedure.

1. Be sure vehicle is on level ground and wheels chocked.
2. Engine is at idle with 0% throttle.
3. Trans temp is warm (158-239 F)
4. Perform 3 cycles of PARK – REV. When complete, shift back to PARK.
5. Initiate Service Fast Learn Adapts with scan tool.
6. Follow scan tool directions.
7. Exit when complete and unplug scan tool.
8. Shut off engine.
9. Restart engine.
10. Fast learn is complete.

Garage Shift Adapts:

After SFLA is complete, you must complete Garage Shift Adapts (GSA).

1. Verify trans fluid temp is above 86F.
2. At idle, shift from REV to DRIVE, leaving in DRIVE for 5 seconds. After 5 seconds, shift back to REV and leave in REV for 5 seconds. Perform this process for 20 times (R-D-R-D-R-D...). Do not stop shift transitions in NEUTRAL.
3. With engine at idle, shift from N to D and leave shift lever in D for 5 seconds. After 5 seconds, shift back to N position and leave for 5 seconds. Perform this procedure 10 times.

After the installation and vehicle is delivered to customer, advise customer that it may take a few days/miles of driving for the transmission/vehicle to relearn.

After a road test, please scan vehicle for any trouble codes.

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)

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.