

GM 6T70 FWD INSTALLATION GUIDELINES

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

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 to validate your warranty.**

Entire transmission cooling system must be completely cleaned, hot flushed, and flow tested

FLUID CHECK & FILL PROCEDURES:

1. Make sure vehicle is on level ground, wheels chocked, and parking brake engaged.
2. Verify engine is idling at 0% throttle.
3. Verify transmission fluid temperature (TFT) is at least 86°F -122°F.
4. Shift transmission thru all gears for a minimum of 3 seconds then back to park.
5. Remove dipstick and check level. If low, add fluid until level is in the cross-hatch. Do not overfill.
6. Use recommended Dexron VI or high quality synthetic transmission fluid.

REFLASHING GUIDELINES:

Failure to properly re-flash will cause damage to your new transmission. You MUST re-flash 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 re-flash. Your local dealership can re-flash for a nominal fee. TCM cannot be re-flashed independently. It must be re-flashed at same time as the ECM.

Check for proper installation of all vehicle ground connections. Erratic transmission performance may be caused by faulty ground(s) at various connection locations under the hood. Inspect transmission wiring harness for damaged wires or connectors.

Verify proper function of the entire electrical system including the battery, alternator, mass air flow sensor, and throttle position sensor.

DO NOT attempt re-flash unless battery has proper charge. (12VDC-16VDC) If battery voltage is low, charge battery BEFORE initiating re-flash process.

DO NOT INSTALL BATTERY CHARGER or ATTEMPT TO CHARGE THE BATTERY AT ANY TIME DURING THE REFLASH PROCESS.

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

Visit the GM web site <http://tis2web.service.gm.com/tis2web> to verify whether or not the vehicle's Engine Control Module (ECM) has the latest software updates and calibrations to ensure proper transmission operation and shift quality. Start and follow prompts on GM Service Programming System (SPS) site. Verify that the Engine Control Module (ECM) and Transmission Control Module (TCM) are programmed to the latest available factory OEM calibrations. If not programmed properly, the Malfunction Indicator Lamp (MIL) warning light on the dash may illuminate, and the powertrain may only operate in failsafe or "limp" mode. The TCM cannot be re-flashed independently – it must be re-flashed at the same time as the ECM.

SERVICE FAST LEARN ADAPTS:

After the replacement transmission is installed and ECM/ TCM calibrations are complete, perform a vehicle Service Fast Learn Adapts procedure using the following procedural steps:

1. Use a suitable scan tool capable of performing the Service Fast Learn Adapts procedure.
2. Apply parking brake.
3. Verify transmission fluid temperature (TFT) is between 158°F – 230°F.
4. With brake pedal applied, move shift selector in and out of gear three times.
5. Use scan tool to clear any adaptive data that might be stored in the TEHCM.
6. Select fast learn process from the scan tool menu.
7. Apply brake pedal.
8. Shift transmission into DRIVE and maintain vehicle in stationary position; TCM will individually apply clutches and calculate clutch volumes.
9. Shift transmission into reverse with vehicle stationary; TCM will individually apply clutches and calculate clutch volumes.
10. Turn engine off for at least 30 seconds.
11. Open and close door to allow Retained Accessory Power to expire or false DTCs may be set.
12. After at least 30 seconds, engine can be restarted and scan tool turned off.

The Service Fast Learn Adapts process is now complete.

The Service Fast Learn Adapts procedure will not be completed if:

- DTC's are not cleared prior to fast learn, or new DTC's are set during fast learn procedure.
- Transmission fluid temperature (TFT) is not between 158°F – 230°F.
- The brake switch is not functioning correctly.
- Throttle position is 0% but engine RPM increases or is fluctuating during the test.
- Park-Neutral switch is not adjusted properly or is not functioning correctly.
- Line pressure control system is not functioning correctly.

GARAGE SHIFT ADAPTS:

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

1. With engine still running, verify transmission fluid temperature is above 86°F.
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. Performs this process for 20 times. 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.
4. 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 ten (10) times (N-R-N-R-N-R...).

After install is complete, advise customer that it may a few days for the system 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.