

6T70 & 6T75 Installation Guide

**Read This Entire Document Before Installing Your
Transmission**



Extremely Important

Warranty Requirements

This Transmission has critical installation requirements. Failure to adhere to these requirements VOIDS your warranty

BEFORE REMOVING THE OLD TRANSMISSION

You MUST have a scanner and scan the vehicle for any codes. All codes MUST be fixed BEFORE installing the new transmission.



MANDATORY INSTALLATION REQUIREMENTS

1. The cooling system on this vehicle **MUST** be replaced. The plate cooler in this vehicle cannot be properly flushed and is a non-serviceable component which must be replaced with new.

This transmission is an electronically controlled unit with an internal TCM (transmission control module) that must be Reprogrammed before operating the vehicle. Failure to do so will destroy the transmission. If an in shop reflash cannot be accomplished the vehicle must be flat bedded to a dealership for Reprogramming

DO NOT OPERATE VEHICLE UNTIL REPROGRAMMING PROCEDURE IS COMPLETE

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Reprogramming Procedure

If you do not have the proper tools or resources do not attempt to operate the vehicle. Flatbed the vehicle to a GM Dealership where they perform all steps required for a reasonable fee.

1. Visit the GM website <https://tis2web.service.gm.com/tis2web> enter the VIN and make sure that you have the latest software for the vehicle.

SPS Info

To obtain the latest electronic controller calibration information for your vehicle, enter the vehicle's 17 character Vehicle Identification Number (VIN) and select 'Get CAL ID'.

To obtain the Calibration Verification Number (CVN) for any calibration part number, enter the part number of the calibration ID and select 'Get CVN.'

VIN:

Part Number:

Visit the General Motors site to see the entire GM family of brands.

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The TIS software application does not support the use of the browser's Forward and Back buttons. Errors will occur. Please only use the buttons that are displayed on the application screens and not on the toolbar.

2. Start and follow the prompts on GM's Service Programming System site
3. Verify that the Engine Control Module (ECM) and the Transmission Control Module (TCM) are programmed to the latest available OEM calibrations. If not programmed properly the Malfunction Indicator Lamp on the dash may illuminate and the powertrain may only operate in fail safe (limp) mode. Both the TCM and ECM must be Reprogrammed during the same

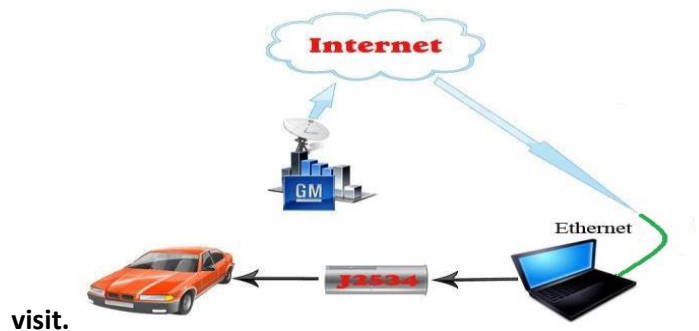
Reprogramming Tools required:

- Dedicated Laptop with cable connection to internet

- SAE compatible J2534 pass through device

- Power supply for the laptop

- Power supply for vehicle must be designed for reprogramming

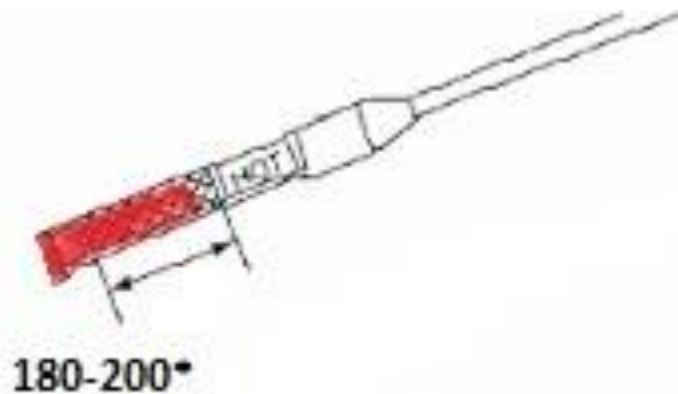


Properly fill with Dexron VI Automatic Transmission Fluid:

- **BEFORE YOU START THE VEHICLE** fluid must be touching the bottom of the stick.
- **Make sure the Vehicle is on level ground**
- **Start the vehicle and move the shift through all ranges pausing for 3 secs in each range.**
- **Final level check, engine idling, transmission in park, temperature must be 180-200***
 - if temp is too low select manual 2 and stall test for a max of 15 seconds at a time till temp is reached

Fluid should read in the cross hatches on the dipstick. 1/8" above the full mark could be 1.5qts over full.

DO NOT OVERFILL-TRANSMISSION WILL OVERHEAT



Garage Shift Adapts

1. With the engine running and the vehicle in park verify the ATF is above 86° F.
2. With the engine at idle, shift from REVERSE to DRIVE and leave the shift lever in DRIVE for 5 seconds. After 5 seconds, shift back to REVERSE and leave the shift lever in REVERSE for 5 seconds. Perform this procedure 20 times—(R to D to R to D, etc.). The shift transitions must be made directly between Drive and REVERSE with momentary pause in neutral.
3. With the engine at idle, shift from NEUTRAL to DRIVE and leave the shift lever in DRIVE for 5 seconds. Perform this procedure 10 times.
4. With the engine at idle shift from NEUTRAL to REVERSE and leave the shift lever in REVERSE for 5 seconds. After 5 seconds shift back to NEUTRAL and leave the lever in NEUTRAL for 5 seconds. Perform this procedure 10 times.

After this procedure it still may take several days of driving the vehicle for the transmission to fully adapt and begin to shift properly.

Once the reprogramming and relearn steps are complete, perform a thorough test drive with multiple accelerations and from a stop with light throttle application.

Rescan the vehicle. If codes are present, compare these to the original codes. Use a scan tool for DTC's and correct the codes and re-road test the vehicle.

INSTALLATION CHECKLIST

- ☐ Scan vehicle and fix all codes
- ☐ Replace the cooling system (Radiator) and replace or clean cooling lines
- ☐ Inspect flex plate for cracks or breakage. Damaged flex plates are common
- ☐ 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
- ☐ Do not tighten bell housing bolts with force; may damage torque converter if shifted in transit
- ☐ Inspect wiring harness and connector for damage and /or corrosion
- ☐ Inspect entire electrical system including ground, battery, alternator, mass air flow sensor and throttle position sensor.
- ☐ Inspect axle shaft splines and check transmission/engine mounts
- ☐ Install supplied tail shaft housing gaskets and seals
- ☐ If 4WD application, replace transfer case input shaft seal
- ☐ Inspect transmission mounts, carrier bearing, driveshaft, yoke and U-joints. Excessive vibration due to defective mounts and other faulty driveline parts is the main cause of broken cases.

Road Test Check list

- ☐ Does vehicle hold in park
- ☐ Engagement into reverse
- ☐ Acceleration in reverse
- ☐ Does engine free spin in neutral
- ☐ Engagement into Over Drive
- ☐ Acceleration in Over Drive
- ☐ 1-2 shift in Over Drive
- ☐ 2-3 shift in Over Drive
- ☐ 3-4 shift in Over Drive
- ☐ 4-5 shift in Over Drive
- ☐ 5-6 shift in Over Drive
- ☐ 6-5 downshift in Over Drive
- ☐ 5-4 downshift in Over Drive
- ☐ 4-3 downshift in Over Drive
- ☐ 3-2 downshift in Over Drive
- ☐ 2-1 downshift in Over Drive
- ☐ Engine braking in manual 1
- ☐ Engine braking in manual 2
- ☐ Torque Converter lock up and release