ATTENTION

YOUR WARRANTY DEPENDS ON YOUR ADHERENCE TO THESE GUIDELINES

4T40E 4T45E FAMILY

INSTALLATION GUIDE

PURPOSE: This document supplies a general overview of installing a 4T40E or 4T45E transmission. It is not intended to be a step by step manual. Consult the service manual for complete information and safety precautions.

CAUTION:

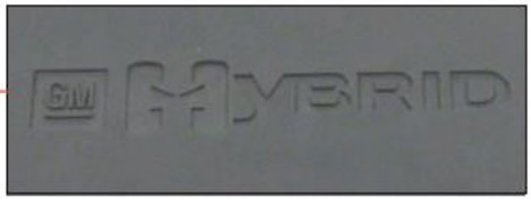
Hybrid Vehicles require additional safety measures and Personal Protection Equipment (P.P.E.) when servicing them. Servicing these vehicles without following the additional safety precautions or using the required P.P.E. may result in personal injury, severe burns, or even death. See and follow the Original Manufacturers Service Information for complete details.

Isolate the High Voltage System during the removal and installation process. Follow ALL of the O.E.M. safety precautions listed in the manufacturer's service manual. A general overview is on the next page.

ATSG Technical Service Information

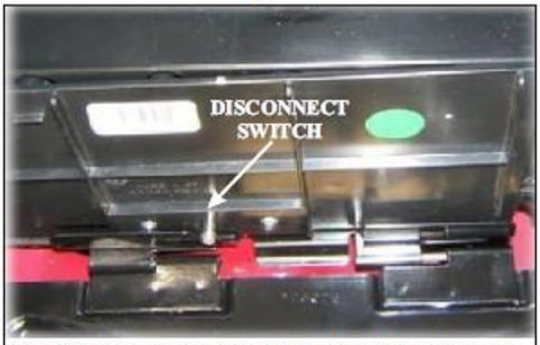
HYBRID BATTERY DISCONNECT PROCEDURE

The 36 Volt Nickel Metal Hydride Battery Pack Is Mounted In The Trunk Compartment Behind The Rear Passenger Seat.



A Hybrid Logo Is Imprinted On The Battery Case Which Indicates That Intermediate Voltage Is Contained Within.

Remove The 10 MM Head Bolt From The Battery Disconnect Switch Cover While Wearing Protective Rubber Gloves.



Swing The Cover Down And Slide It To The Left To Remove It, Once The Cover Is Away From The Hybrid Battery Case, The Disconnect Switch Automatically Disconnects From The Rest Of The System. Wait about 15 minutes for the system to fully Discharge.

Remove The Generator Control Module Cover In Order To Provide Access To The Module In Order To Permit Voltage Checks.

Verify At The Check Points At The Generator Control Module Shown Above That No Voltage Present.

AUTOMATIC TRANSMISSION SERVICE GROUP

4T40E 4T45E FAMILY

INSTALLATION GUIDE

VEHICLE PREP:

- Scan original vehicle computer, record any codes for later review and resolve all codes.
- Inspect flex plate carefully and entirely for cracks or any damage.
- Inspect all engine and transmission mounts for wear and damage.
- **Inspect axle shafts and CV-joints for wear, binding, and damage. Repair or replace as needed.**

PRE-INSTALLATION CHECKLIST:

- Verify that the replacement transmission matches the original. Pay close attention to the bell housing pattern, torque converter bolt pattern, output shaft style, selector shaft, and mounting bosses.
- Retain the cooler line fittings for reuse if the replacement transmission did not come with fittings.
- Make sure the 6-digit serial number on the transmission bell housing matches the number on the included paperwork and shipping pod.
- Verify the torque converter is properly and completely installed (see page 1 for more details).
- Transmission cooler and lines must be hot flushed or replaced.
- Ensure all dowel pins are clean, installed properly, and are in good condition.
- Seat the torque converter completely in the transmission before installation in the vehicle.
- Verify that the engine block and bell housing surfaces are clean and free of paint, grease, oil, and corrosion.
- Verify the proper function of the entire electrical system, including the battery, alternator, vehicle grounds, MAF Sensor, and throttle position sensor. Failure to do so may damage your new transmission and cause performance problems.
- Test all sensors and switches that have been transferred from the original transmission for correct operation.

COOLER FLUSHING & REPLACEMENT:

A restricted and/or contaminated transmission cooling system is the #1 cause of transmission failure after a replacement. Failure to follow these directions will void your warranty.

- Flush the entire transmission cooling system using a hot flush machine.
- Hot flush or replace transmission cooler lines.
- Cooler flow must be at least 1-quart per 15-seconds.
- Replace plugged coolers and lines.

4T40E 4T45E FAMILY

INSTALLATION GUIDE

INSTALLATION STEPS:

- Install any supplied gaskets, seals, and or bushings.
- Apply thread sealant to the threads of the cooler fittings that were removed from the core transmission.
- Install the cooler line fittings from the core into the replacement transmission.
- Transfer external sensors and switches from the original transmission or replace them if necessary.
- Do NOT use air tools to force the transmission against the engine block; this may damage or break the transmission case.
- Tighten all bell housing bolts evenly in a criss-cross pattern.
- Confirm that the torque converter bolts up and rotates before continuing the installation.
- Pull the torque converter into position evenly a few turns of the bolts/nuts at a time. Failure to draw the converter evenly can cause front seal leakage.
- Confirm that the transmission has a good ground connection; reattach all ground straps to the correct location free of paint, grease, oil, and corrosion.
- Adjust gearshift linkage after installation.

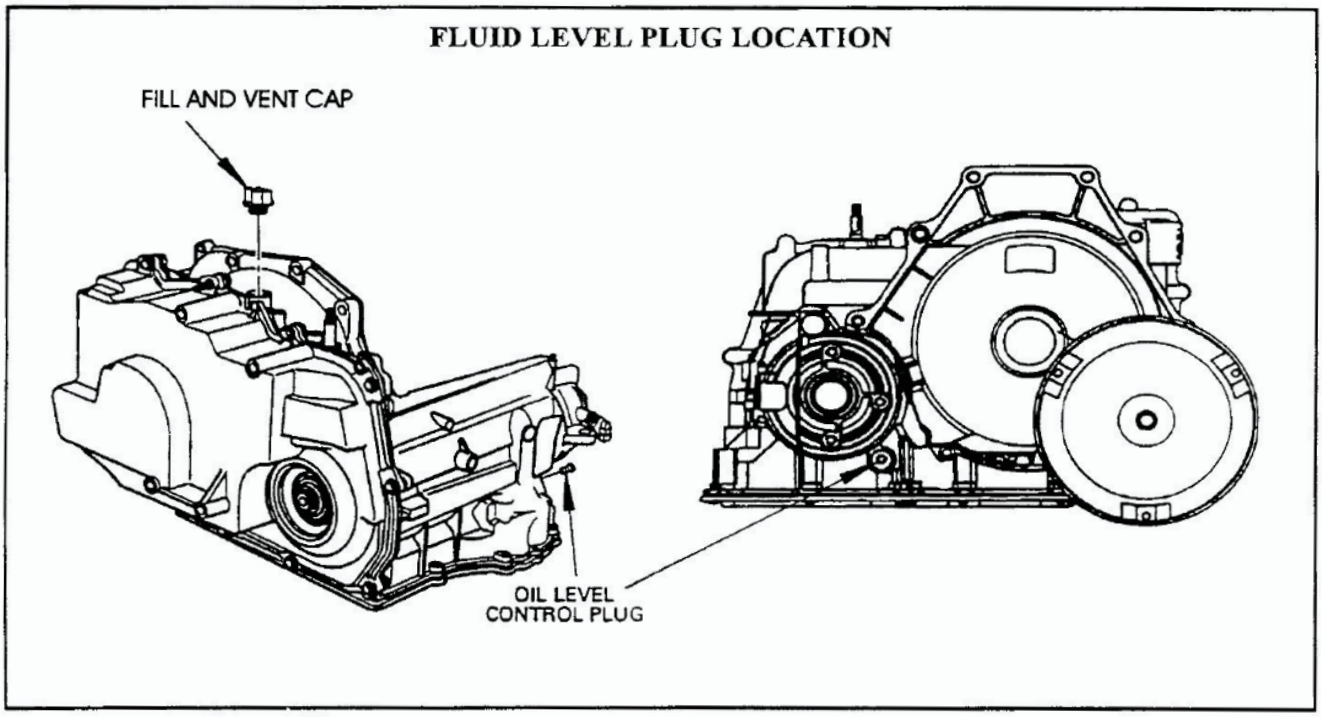
FLUID FILL PROCEDURE:

As per GM T.S.B. #04-07-30-037D dated Nov 21, 2007 DEXRON®-VI Automatic Transmission Fluid (ATF) is the only approved fluid for warranty repairs for General Motors transmissions/transaxles requiring DEXRON®-III and prior DEXRON® transmission fluids.

Fill the transmission with purchased Dexron®-VI or 100% compatible transmission fluid.
The average dry fill capacity of a 4T40E or 4T45E is between 10.0 and 13.0 quarts, depending on the vehicle year, make, and model. The actual amount of fluid needed may vary depending on the size of the internal cooler, length, and diameter of cooler lines, presence of an auxiliary cooler, and residual fluid from the dyno testing process.

- Remove the transmission fill and vent cap.
- Add four quarts of Dexron®-VI or 100% compatible transmission fluid.
- Raise the vehicle on a hoist high enough to get the wheels off the ground. The vehicle must be level, with the engine running and the shift lever in the PARK range.
- Place a suitable drain pan under the transmission fluid level check plug.
- Use a scan tool to check the transmission temperature. Run vehicle to a transmission temperature of at least 104°F.
- Depress the brake pedal and move the shift lever through the gear ranges, pausing a few seconds in each range. Return the shift lever to the PARK range.

USE EXTREME CAUTION! TRANSMISSION FLUID WILL BE HOT. FLUID MAY COME OUT OF THE LEVEL CHECK HOLE WHEN PLUG IS REMOVED. Care must be taken to avoid injury and or burns.



- Remove the transmission oil level control plug.
- Check the fluid level. The fluid level should be even with the bottom of the threaded plug hole.
- Add transmission fluid in small amounts through the Fill and Vent Cap opening until fluid begins to drip from the level check hole if needed.
- Apply thread sealant to the fluid level control plug and re-install the plug.
- Use a scan tool to reset the Transmission Adaptive Pressures (T.A.P.).
- Road test vehicle and verify fluid level is correct.

PROGRAMMING/ADAPTS:

- Reset the adaptive memory with a capable scan tool before operating the transmission. Transmission adaptive pressure (TAP) information is displayed and may be reset using a scan tool. Basic code readers will not likely be able to perform this function. Disconnecting the battery will not always reset the TAP values, either. The only way to be sure it has been done is with a professional-grade scan tool.
- Visit the GM website at https://calid.gm.com, to verify that the vehicle's transmission computer has the latest calibration.