# ATTENTION

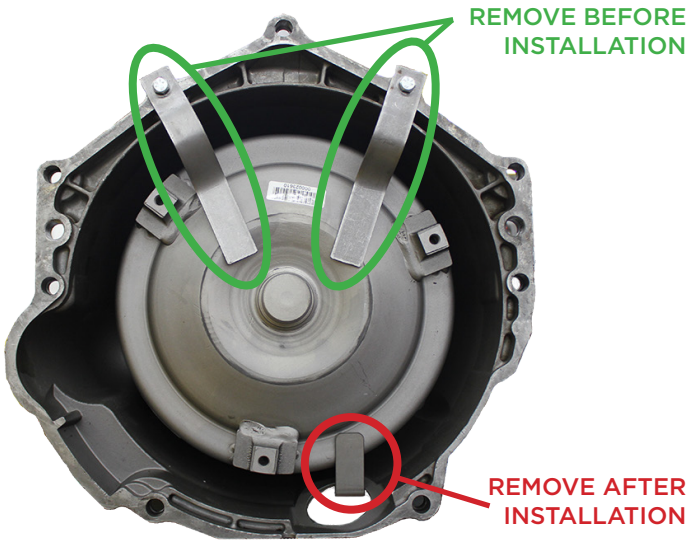
YOUR WARRANTY DEPENDS ON YOUR ADHERENCE TO THESE GUIDELINES

# 4L60E
GM Automatic Transmission

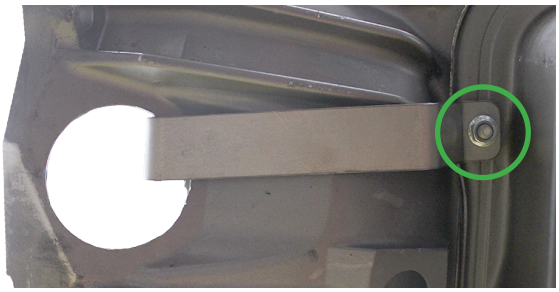
# INSTALLATION GUIDE

## LOWER TORQUE CONVERTER BRACKET REMOVAL

**Lower bracket must be left in place during installation, failure to do so may result in pump damage.**



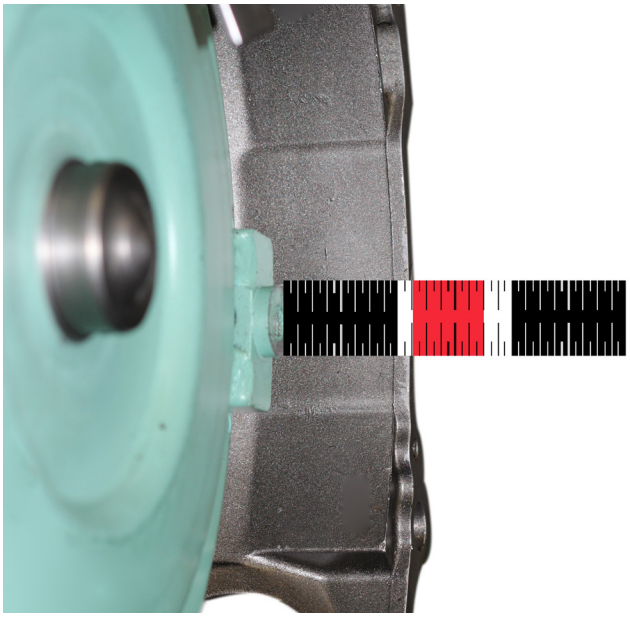

After bolting the transmission to the engine block, use a 10MM socket to remove the nut securing the lower torque converter bracket in place. Return bracket to the remanufacturer with core.



If the lower bracket has been removed prior to installation, verify the torque converter is properly installed using the instructions below.

Measure the distance between the torque converter mounting pad and bell housing face to verify torque converter is fully installed.

- 12” diameter torque converters will measure approximately 1 1/8”
- 10” diameter torque converters will measure approximately 1 3/4”



## GUIDELINES

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

A restricted and/or contaminated transmission cooling system is the #1 cause of transmission failure. If the cooler is plugged, it must be replaced.

This is an electronically-controlled transmission. The following information is VERY important to understand and to perform correctly. Failure to do so may damage your new transmission and/or cause performance problems:

- Verify proper function of the entire electrical system including the battery, alternator, vehicle grounds, mass air flow sensor, and throttle position sensor
- Inspect transmission wiring harness for damaged wires or connectors
- Reset the adaptive memory with a scan tool before operating new transmission for the first time; disconnecting the battery is not sufficient
- A final system scan is required after the road test or if problems are detected during the road test. If codes are still present, compare to original code scan recorded prior to transmission replacement

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## CHECKLIST

- Compare replacement transmission and torque convertor to original before installation
- Scan original transmission computer before removal from vehicle; record for later review
- Verify engine is in good operating condition and that there are no engine performance codes present
- Verify integrity of the vehicle electrical system including: battery, alternator, wiring, and grounds
- Install any supplied gaskets, seals, and/or bushings
- Transfer external sensors and switches from the original transmission, or replace if necessary
- **Verify torque converter is properly and completely installed (see page 1)**
- Hot flush or replace the transmission cooler and lines; **cooler flow must be at least 1-qt per 15-sec**
- Inspect the flex plate for cracks or damage
- Verify both dowel pins are present and in good condition
- Be sure transmission is flush against the engine block before tightening the attaching bolts
- Fill transmission with purchased synthetic, Dexron IV, or Dexron VI fluid
- Reset the adaptive memory with capable scan tool before operating the transmission
- Visit the GM website at https://calid.gm.com to verify that the vehicle's transmission computer has the latest calibration
- Perform the final system scan after the road test. If codes are present, compare them to the original recorded codes

## DIAGNOSIS OF CRACKED OR BROKEN TRANSMISSION CASE

Diagnosing the cause of a cracked or broken transmission case requires additional diagnosis and repair or a repeat failure will occur.

A cracked or broken transmission case is most often the result of abnormal external torsional forces acting on the transmission case.

The following should be considered:

- It is important to inspect the vehicle for signs of an out of line condition, impact damage or foreign material to the following components:
  - The transmission
  - The engine Mounts
  - The transmission rear mount and crossmember
  - Vehicle frame damage that alters the front to rear alignment of the driveshaft
  - The driveshafts (both front and rear)
  - The wheels (caked with mud, concrete, etc...)
  - The tires (roundness, lack of cupping, excessive balance weights)
  - The transfer case (if the vehicle is 4WD)
- A worn or damaged driveshaft U-Joint has shown to be a frequent cause of transmission case cracking, especially on vehicles that see extended periods of highway driving. Always inspect the U-Joint condition when diagnosing this condition
- For driveshaft damage or imbalance, inspect the driveshafts (both front and rear) for dents, straightness/runout or signs of missing balance weights. Also, inspect for foreign material such as undercoat sprayed on the driveshaft
- The driveshaft working angles may be excessive or non-canceling, especially if the vehicle carrying height has been altered (lifted or lowered) or if the frame has been extended or modified
- Damaged or worn upper or lower rear control arms or bushings.
- A rear axle that is not seated in the rear spring properly (leaf spring vehicles)
- Broken rear springs and/or worn leaf spring bushings