

# 2005 Corvette: Service Bulletin: Mis-Machined Transmission Countershaft Snap

**DATE:** October 21, 2004

**SUBJECT:** Service Bulletin 04-07-29-003  
Mis-Machined Transmission Countershaft Snap  
Ring Groove (Inspect/Replace the Transmission)

**MODELS:** 2005 Chevrolet Corvette  
2005 Cadillac CTS-V with 6-speed manual transmission  
Corvette Transmission, Manual 6-SPD, Tremec (RPO MM6 or MZ6)  
CTS-V Transmission, Manual 6-SPD, Tremec (RPO M12) and included in the attached VIN list

**TO:** All Cadillac and Chevrolet Dealers

**ATTENTION:** Dealer, General Manager, Sales Manager,  
Service Manager, Parts Manager and  
Warranty Administrator  
**IMMEDIATE ACTION REQUIRED**

Advanced Service Bulletin 04-07-29-003 is being released today and advises dealers to inspect for the mismachined transmission countershaft snap ring groove. Dealers will perform a transmission snap clutch maneuver and if necessary, replace the transmission.

In addition to using this procedure to repair vehicles with this complaint, we are requesting that this repair be performed on all vehicles currently in your inventory that are included in this Administrative Message VIN list. Completion of this procedure prior to vehicle sale or delivery will help ensure customer satisfaction and reduce the possibility of future complaints.

We are also requesting you contact the DBC to report owner information for any recently delivered vehicles.

Please see the attached VIN list and bulletin for detailed instructions. The list of involved vehicles is also included in the attached bulletin.

Subject: Mismachined Transmission Countershaft Snap Ring Groove  
(Inspect/Replace Transmission)

**Models:** 2005 Chevrolet Corvette with Manual 6-Speed Tremec Transmission (RPOs MM6, MZ6)

## 2005 Cadillac CTS-V with Manual 6-Speed Tremec Transmission (RPO M12)

**Attention:** This correction should be performed on all vehicles currently in your inventory that are included in the Administrative Message (U.S.) or Dealer Communication(Canada) VIN list prior to sale or delivery. In Canada, the Dealer Communication and VIN list is distributed to affected dealers only.

File In Section: 07 - Transmission/Transaxle

Bulletin No.: 04-07-29-003

Date: October, 2004 Service Bulletin

### Condition

Some of the 6-speed transmissions in the subject vehicles may have been assembled with an extension countershaft snap ring groove dimension that was machined out of specification. This condition may result in fore and aft / back and forth movement of the shift lever when in 5th gear, then 5th or 6th gear clash noise, and eventual premature wear of the 5th and/or 6th gear synchronizer.

### Correction

Dealers will inspect for this condition by performing a transmission snap clutch maneuver and, if necessary, replace the transmission.

### Transmission Snap Clutch 5th Gear Test Procedure

1. Raise and support the vehicle so that the rear wheels are safely off the ground. Refer to Lifting and Jacking the Vehicle in General Information:

- Corvette – SI Document ID #104056.
- CTS-V – SI Document ID #813128

2. Start the vehicle. **Important: Ensure that the transmission is not in Reverse and that the wheel speed is zero.**

3. Depress the clutch pedal to the floor.

4. Shift the transmission into 5th gear and remove your hand from the shift knob.

5. Increase the engine speed to 2,000 RPM.

#### **Important:**

- The shift lever should have NO fore-aft / back and forth motion when the clutch is released.
- On a very small number of vehicles, the shift lever may move slightly rearward only once. This is a normal characteristic.
- The shift lever WILL have some lateral / side to side motion which will occur due to torque roll of the powertrain.
- If the shift lever moves, it will be toward 6th gear (rearward) and the magnitude could be 4 mm – 8 mm (0.16 in – 0.31 in) at the shift lever knob and will repeat each time the clutch is snapped.

6. Quickly release the clutch pedal and watch to see if the shift lever has any fore-aft movement.

- If the shift lever DOES NOT move fore-aft, or moves very slightly, about 2 mm (0.079 in), repeat the test sequence Steps 3 to 6 for a total of 10 times to ensure there is no shifter lever movement. If the shift lever does not move other than once very slightly after 10 cycles of test sequence, the transmission is OK. No additional repair is necessary and the inspection labor operation may be claimed.

- If the shift lever DOES move fore-aft, repeat the test sequence Steps 3 to 6 to confirm the shifter lever movement. If the shifter lever does move fore-aft, continue with the next step.

Important: The following test is for comparison purpose only. The 3rd gear amount of fore-aft movement is allowable.

7. Perform a comparison test with the shifter in 3rd gear. Compare the amount of fore-aft movement with the shifter in 3rd gear and 5th gear while performing test sequence Steps 3 to 6.

- If the amount of fore-aft shifter lever movement is the same in 3rd gear as 5th, or if only slight movement occurs once in 5th gear, no additional repair is necessary and the inspection labor operation may be claimed.

- If the amount of fore-aft shifter lever movement is greater in 5th gear than in 3rd gear, continue with the next step.

8. Replace the transmission. Refer to Transmission Replacement:

- Corvette — Document ID #1399623

- CTS-V — Document ID #1523514

### **Dealer Action For Sold Units On VIN List**

It is possible that some vehicles on the VIN list may have been sold. For sold units in the U.S., the dealer is to call the Dealer Business Center (DBC) and provide them with the customers' information. In Canada, the dealer is to send the customers' information by fax to the GM of Canada.

General Motors bulletins are intended for use by professional technicians, not a "do-it-yourselfer". They are written to inform those technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions and know-how to do a job properly and safely. If a condition is described, do not assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See a General Motors dealer servicing your brand of General Motors vehicle for information on whether your vehicle may benefit from the information.

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