

# 2005 - 2008 Corvette: Service Bulletin: Rear Axle Clunk and/or Chatter Type Noise on Turns

**Subject: Rear Axle Clunk and/or Chatter Type Noise on Turns  
(Drain/Refill Rear Differential Fluid) #07-04-20-002A - (01/09/2008)**

**Models:** 2004-2008 Cadillac XLR (Including V-Series and Export)  
2005-2008 Chevrolet Corvette (Including Z06 and Export)

**This bulletin is being revised to change the fluid recommendation and to remove the requirement of adding friction modifier.**

## **Condition**

Some customers may comment on a clunk and/or chatter type noise from the rear of the vehicle while making turns.

## **Cause**

This condition may be caused by slip/stick of the posi-traction clutch plates due to insufficient limited-slip axle additive. As plates slip and stick, a jumping or jerking feel occurs accompanied by a clunk noise.

## **Correction**

**Important: DO NOT remove the differential cover from the rear or the two sides. It is not necessary to flush the old fluid from the differential.**

Drain and refill the rear differential fluid

Raise and support the vehicle.

Clean any dirt from around the differential drain plug.

If not equipped with a differential cooler, remove the drain plug (1) and washer (2) from the differential.

If equipped with a differential cooler:

4.1. Using a bent tip screwdriver, remove the quick connect fitting retaining ring (3) from the quick connect fitting (4) and discard the retaining ring.

4.2. Remove the differential cooler inlet pipe from the differential nut.

Drain the fluid.

Filling Procedure

If not equipped with a differential cooler, install the drain plug (1) and washer (2) to the differential.

Tighten

Tighten the differential drain plug to 35 N•m (26 lb ft).

If equipped with a differential cooler:

2.1. Install a new retaining ring.

2.2. Connect the differential cooler pump inlet pipe (2) to the differential. A distinct snap should be heard or felt when assembling the cooler pipe to the fitting.

2.3. To ensure the cooler line is properly installed, give the cooler pipe a gentle pull.

Clean any dirt from around the differential fill plug.

Remove the fill plug and washer from the differential.

Important: DO NOT add any limited-slip additive (friction modifier). With this new fluid (Dexron LS Gear Oil 75W-90) it is no longer required to add friction modifier. If friction modifier is added, it will cause the fluid to lose some of its friction reducing properties as well as reducing seal life.

Fill the differential with the new DEXRON® LS gear oil, P/N 88862624 (Canadian P/N 88862625). Refer to the table listed below for lubrication specifications.

Check the fluid level to ensure it is even with the bottom of the fill plug hole to no lower than 6 mm (0.25 in) below the opening.

Install the fill plug and washer to the differential.

Tighten

Tighten the differential fill plug to 35 N•m (26 lb ft).

Important: Steps 8-13 are for vehicles equipped with the differential cooling system. For vehicles not equipped with the cooling system, proceed to step 14.

- Raise the vehicle so the wheels are about a foot off the floor. Make sure the wheels can spin freely without obstruction from the hoist or any nearby items.
- Start the vehicle and put the transmission in second gear. Slowly accelerate to 10 mph and hold this speed for one minute.
- Turn the vehicle off.
- Raise the vehicle.
- Check the fluid level in the differential. Add fluid until the recommended level is reached.
- Lower the vehicle.
- Once the differential fluid has been changed, the vehicle must be driven in 8-10 tight figure eight maneuvers to heat the fluid and allow the fluid to be worked into the clutch plates.

## **Lubrication Specifications Application**

Quantity

Metric

English

2004-2005 XLR (Including Export) and 2005 Corvette (Non Export)

1.72 liters

1.85 quarts

2006-2008 XLR (Including V-Series and Export) and 2006-2008 Corvette

(Non Z06)(Non Export)

2.0 liters

2.11 quarts

2005 Corvette Export

1.88 liters

1.99 quarts

2006-2008 Corvette Export (Non Z06)

2.16 liters

2.28 quarts

2006-2008 Corvette Z06

2.75 liters

2.91 quarts

### **Parts Information - Part Number - Description**

88862624 (US-1 Quart)

88862625 (Canada-1 Liter) DEXRON® LS Gear Oil

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.

**© Copyright General Motors Corporation. All Rights Reserve**

Online URL:

<https://www.corvetteactioncenter.com/tech/knowledgebase/article/2005-2008-corvette-service-bulletin-rear-axle-clunk-and-or-chatter-type-noise-on-turns-150.html>