



SI B33 01 02  
Rear Axle

January 2009  
Technical Service

This Service Information bulletin supersedes SI B33 01 02 **dated March 2008**.

**NEW** designates changes to this revision

## SUBJECT

**Grinding Noise from the Differential during Slow Cornering**

## MODEL

E46 M3 from start of production

E60 M5 from start of production

E63, E64 M6 from start of production

E90, E92 and E93 M3 from start of production

**NEW** E85, E86 with S54 from start of production

## SITUATION

A grinding noise may be heard coming from the differential during slow cornering.

This noise is best heard during tight cornering situations; for example, while parallel parking, driving in a tight circle, etc.

## CAUSE

When the rear wheel speed differential varies during tight cornering, a slip stick effect is created on the lining and steel discs incorporated in the differential locking clutch, causing the grinding noise.

This noise typically goes away as the locking clutch discs in the differential are broken in.

The break-in time varies depending on driving habits; for example, tighter cornering (working the locking clutch) means that it takes less time to break in the locking clutch discs.

## CORRECTION

If a customer complaint is verified as described above on the E46 M3; E60 M5; E63 and E64 M6; or on the E90, E92 and E93 M3 vehicles, the differential oil should be replaced with a specially formulated differential oil, BMW part number 83 22 2 282 583.

## PROCEDURE

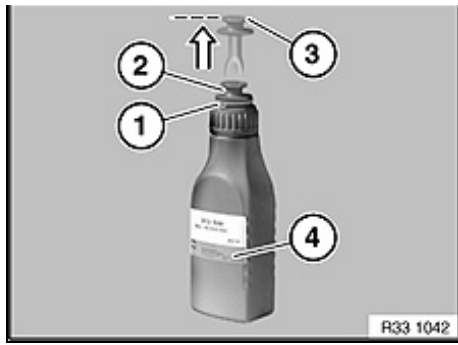
1. Drain the differential oil. Refer to the appropriate model repair instruction in TIS:

Main Group 33 / Subgroup 10 / RA 0011259.

2. Refill the differential with special differential oil as shown in the illustration below.

Differential fill capacity = 1.2 liters (1.3 quarts).

- Remove the seal (1) between the bottle cap and



neck.

- Pull the filler tube (2) out of the bottle.
- Remove the cap (3) from the filler tube (2).
- Insert the filler tube into the fill hole in the differential and with the bottle positioned under the output shaft, squeeze the bottle to transfer the oil into the differential.

### 3. Road test the vehicle.

With the vehicle at operating temperature, drive in tight circles (20 circles in each direction), allowing the special oil to coat the locking clutch discs.

The grinding noise will decrease when the locking clutch discs are sufficiently coated. Some slight noises may still be heard after driving in tight circles. Advise the customer that it will be necessary to drive the vehicle up to 600 miles before all noises are eliminated.

Note: Vehicles that have had the differential oil converted to this special oil should continue to use this oil whenever a service requiring the differential oil replacement is indicated.

### PARTS INFORMATION

| Part Number     | Description                                      | Qty. |
|-----------------|--|------|
| 83 22 2 282 583 | Special differential oil kit                     | 1    |
|                 | Contains 3 bottles - .5 liters (.53 quarts) each |      |
|                 | (order quantity 1 : <b>bill out quantity 3</b> ) |      |

### WARRANTY INFORMATION

Covered under the terms of the BMW New Vehicle Limited Warranty.

|                    |   |
|--------------------|---|
| <b>Defect Code</b> | <b>33 10 92 39 00</b>                     |
|                    | Replace differential oil with special oil |
| Labor Operation:   | 00 53 267                                 |
| Labor Allowance:   | 3 FRU                                     |