



Rogue Engineering E36 Finned Differential Cover Installation Directions

Thank you for purchasing the Rogue Engineering Finned Differential Cover. Please seek professional help for installation if you are unsure about the procedure of removing the rear differential. When working under a vehicle, be sure that the vehicle is secure or injury may result.

Included Parts

- Two (2) BMW OEM Differential Bushings (BMW # 33 17 1 134 911), installed
- Grade 12.9 Hardware
 - Two (2) M10 x 25mm socket head cap screws
 - Three (3) M10 x 70mm socket head cap screws
 - Three (3) M10 x 110mm socket head cap screws
 - Eight (8) M10 Stainless Steel Washers
- M10 x 1.0mm pipe plug with copper washer
- Factory BMW gasket

Recommended Supplies

- Three (3) Quarts of BMW compatible differential fluid (75W90)

Be sure to clean the entire Rogue Engineering Differential Cover by spraying the interior and exterior surfaces with brake clean or carburetor cleaner before installation.

Removal and Installation of Differential

Remove rear swaybar completely.

Completely drain differential of original fluid.

Disconnect driveshaft from input flange of the factory differential using a 16mm wrench.

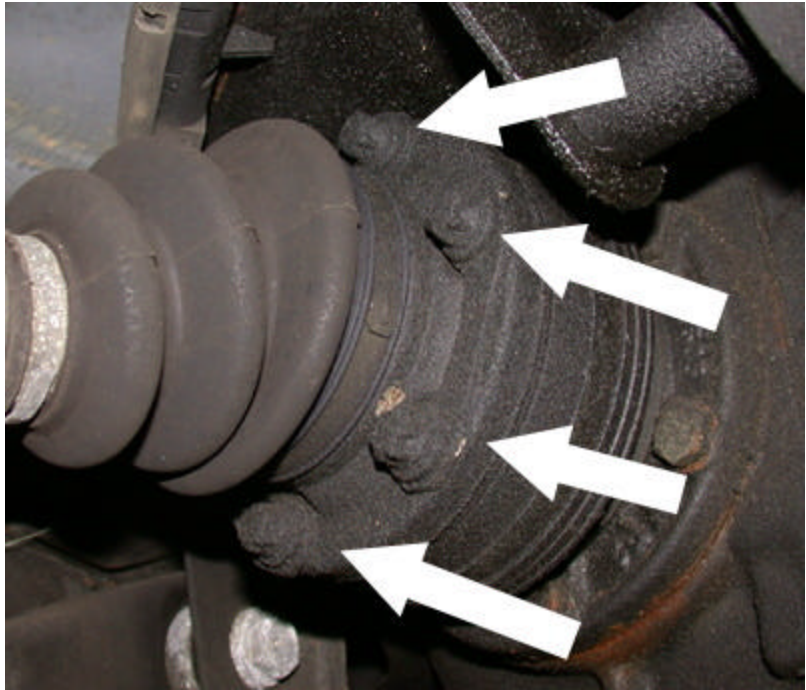
Note: 95-96 M3s have six (6) nuts whereas 97 and newer M3s have only four (4).

Disconnect speedometer signal plug from back of differential.



Unbolt and suspend left and right output shafts from the car using a torx socket and ratchet.

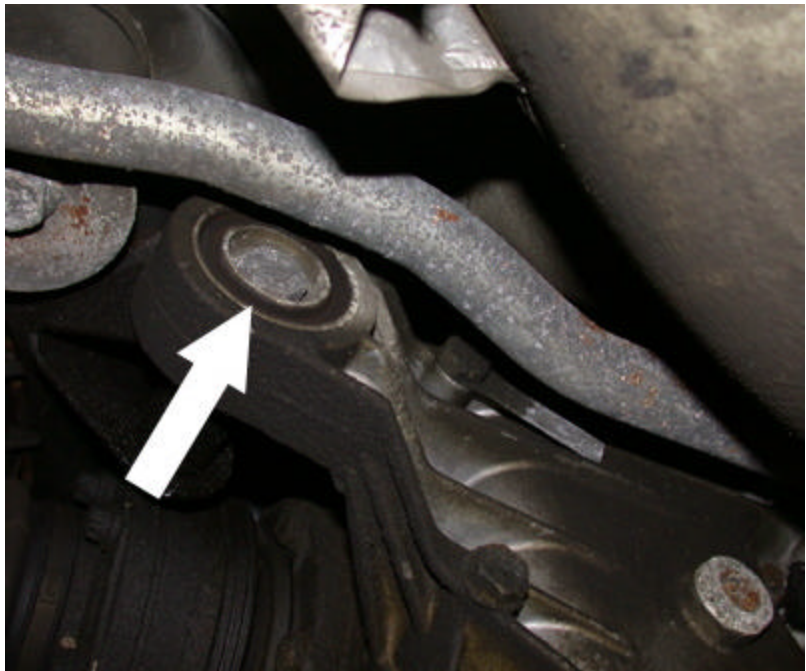
During reinstallation, be sure to torque to 50-60 ft. lbs.



Using a 18mm socket, unbolt the two (2) rear bolts that secure the rear of the differential to the subframe.

During reinstallation of the differential, be sure to install the rear swaybar **FIRST** before securing the back of the differential with the rear bolts.

During reinstallation, be sure to torque to 50-60 ft. lbs.



Unbolt the front bolt which secures the front of the differential to the subframe.

During reinstallation, be sure to torque to 65-75 ft. lbs.

Remove differential from car with caution due to its weight (which can weigh over 85 lbs.).

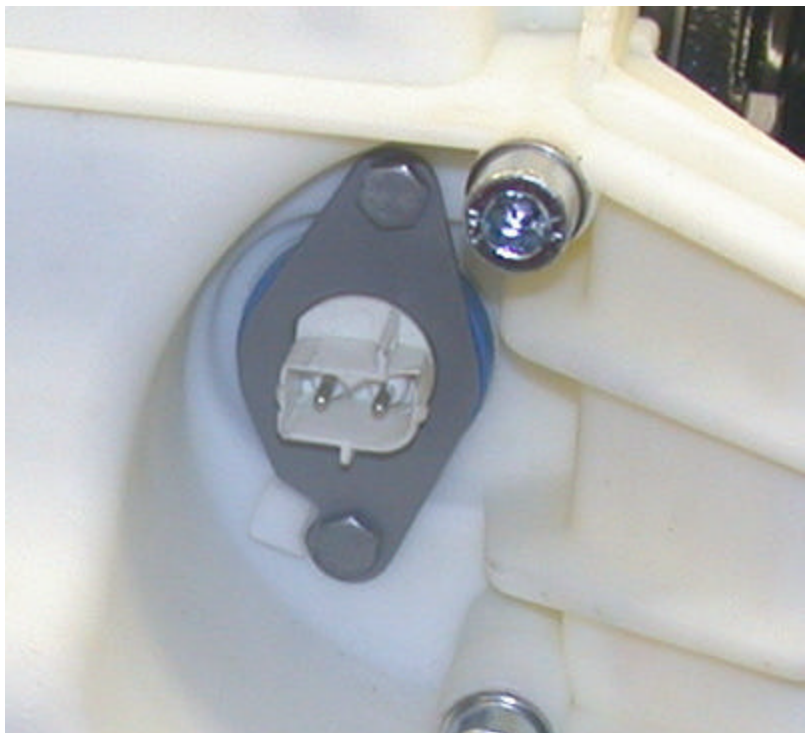


Preparing for Rogue Engineering Differential Cover installation

Remove the two (2) fill and drain plugs from original differential cover. These will be reused on the Rogue Engineering Differential Cover.

Completely remove factory differential cover.

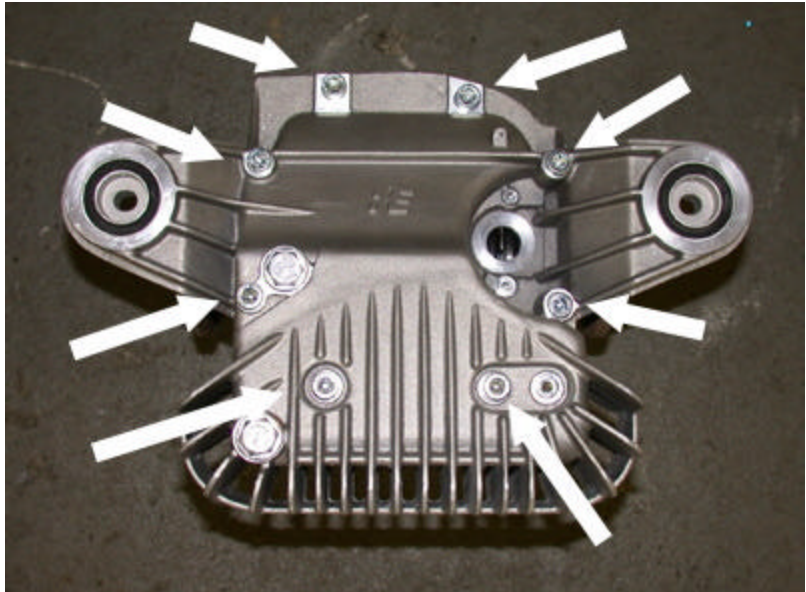
Using a 10mm socket, remove factory speedometer sensor.



Install Rogue Engineering Differential Cover onto differential, using the included BMW paper gasket.

Using supplied hardware, secure cover onto differential.

Torque bolts to 40 ft. lbs.



Install speedometer sensor previously removed from original differential cover.

If not using the temperature sensor port, install the supplied M10 plug with copper washer using an M5 hex key.

Fill differential with 3 quarts of BMW approved differential fluid.

Install drain and fill plugs removed from original differential cover.

Differential is now ready for reinstallation.

