



**Installation Instructions:**  
**NODULAR CAST IRON DIFFERENTIAL COVER FOR DANA 30**  
Catalog #12310  
Fits Dana 30 front axle differential;  
see Application Guide for specific vehicles.

**INTRODUCTION**

Your B&M Nodular Cast Iron Differential Cover has been designed to work on most vehicles equipped with a Dana 30 front differential. The B&M cover provides several advantages over the stock cover:

- Thick, nodular cast iron construction increases case rigidity, and protects differential from trail hazards.
- Magnetic drain plug allows regular gear oil changes without the usual mess, and reduces circulation of ferrous debris in the differential.
- Built-in dipstick with magnetic tip allows easy checking of oil level and condition anytime.

**Please read and understand these instructions before installing your B&M differential cover.** Installation takes about an hour.

**WORK SAFELY!** Perform the installation on a clean, level surface, with the vehicle's engine turned off, the parking brake engaged, and the transmission in PARK (if automatic) or first gear (if manual). It is suggested that the vehicle be allowed to cool off for a few hours to avoid burns from hot parts and oil. Place chocks both in front of and behind both rear wheels, to prevent vehicle movement. For ease of installation, use jack stands, wheel ramps or a hoist to raise the vehicle 1-2 feet off the ground. **MAKE SURE VEHICLE IS FIRMLY SUPPORTED! NEVER WORK UNDER ANY VEHICLE SUPPORTED ONLY BY A JACK!** Also, have a small box in which to keep removed hardware, and a suitable pan to catch drained oil.

**CAUTION:** To avoid any possibility of bodily injury or damage to vehicle, do not attempt installation until you are certain that the vehicle is securely supported and will not move.

**KIT PARTS**

QTY	ITEM
1	Diff Cover, Dana 30, Cast Iron
10	Cap screws, 5/16"-18 x 3/4"
10	Washers , 5/16" ID
1	Dip stick, magnetic
1	Drain plug, magnetic
1	O-ring, dip stick



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## REQUIRED TOOLS AND MATERIALS

- Jack and jack stands
  - Drain pan (2 qt. capacity)
  - Lint-free rags
  - 3/8" ratchet
  - 3" extension
  - 1/2" socket
  - 1/4" Allen bit
  - Torque wrench
  - Gasket scraper
  - Brake cleaner
  - Scratch awl or needle file
  - Flat head screwdriver
  - Gear oil pump
  - RTV silicone sealant (gear oil-compatible); or replacement gasket
  - Nylon thread tape
  - Gear oil (manufacturer specified)
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## INSTALLATION

1. To avoid contaminating the differential, clean dirt and debris from the area around the cover.

**NOTE:** On some vehicles, access to the cover may be made easier by removal of certain surrounding parts (e.g. sway bar, Panhard rod, etc.).

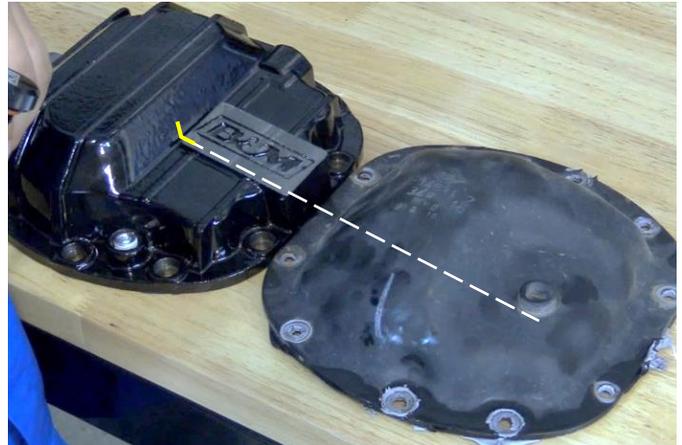
2. Place a drain pan under the differential housing.
3. Remove all cover bolts except the top one. Then loosen, but do not remove, the top bolt.
4. Carefully pry the cover loose with a flat head screw driver, using caution to avoid damaging the seal surface. Allow the oil to drain.
5. Remove the last bolt and the cover after the oil has completely drained. **Inspect oil for metal particles, which may indicate worn gears or bearings.**
6. Using brake cleaner and a lint-free rag to clean the internal components. **Inspect differential components for broken gear teeth, excessive wear, etc.**
7. Use a gasket scraper to clean all the old gasket material from the axle housing flange, then wipe the flange with brake cleaner.



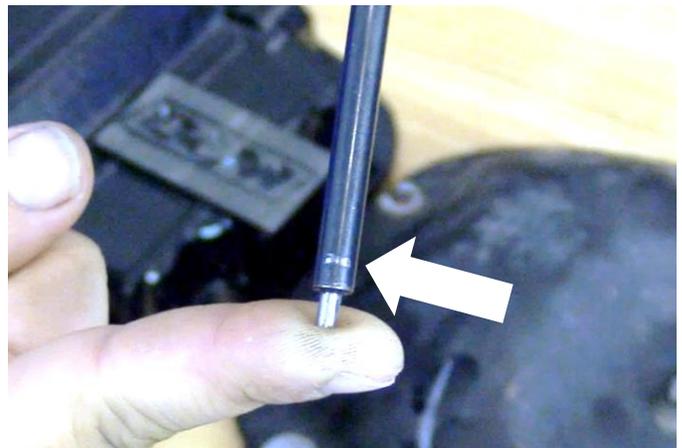
**NOTE:** The following process applies to axles with a standard driveline angle. For custom driveline angles, the “full” mark may be in a different location on the dip stick.

- Place the B&M and stock covers side by side on a bench. Use a straightedge or a length of adhesive tape to transfer a horizontal line from the bottom of the stock cover fill hole to the B&M cover, and make a temporary mark on the B&M cover.

**NOTE:** Mark your B&M cover and dip stick according to the transferred fill line, note the accompanying photographs.



- Lay the dipstick atop the cover so that it is situated at its final installed depth. Use a scratch awl, needle file or other suitable tool to etch a “full” mark on the dipstick. Install O-ring on dip stick, and install dip stick in cover.



**NOTE:** If using RTV silicone sealant, follow all manufacturer’s instructions (e.g., bead width, set time, etc.).

- Install a replacement gasket on, or apply gear oil-compatible RTV silicone sealant to, the flange of the B&M differential cover.



**NOTE:** If using RTV silicone sealant, follow all manufacturer's instructions (e.g., bolt tightening, drying time, etc.).

11. Install the cover on the differential housing using the 10 bolts and washers. Tighten bolts to manufacturer-specified torque.
12. Apply 2 wraps of nylon thread tape to magnetic drain plug and install plug in cover. Tighten to 25-30 ft-lbs.
13. Fill differential with manufacturer-specified gear oil through the dip stick hole. Use the dip stick to verify oil is at the proper level.

**NOTE:** The B&M differential cover maintains the factory oil capacity of the differential.

14. Install and tighten any vehicle parts (e.g., sway bar, Panhard rod) that may have been removed.



**Congratulations, the installation of your B&M differential cover is now complete!**

**NOTE:** Vehicle manufacturer recommends replacing axle lubricant anytime axle is submerged in water. Refer to manufacturer's Owner Manual / Maintenance Booklet for details.

**IMPORTANT: RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

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## TECHNICAL SERVICE

Our highly-trained technical service department is ready to answer your technical questions, provide additional product information and offer various recommendations.

Technical service calls, correspondence, and warranty questions should be directed to:

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