Mag-Hytec

05/05/17

Installation Recommendations

AA 14-11.5

Please read entirely before installing this new differential cover.

TOOLS REQUIRED

1/2 socket wrench and driver (for removing the old cover)
6 MM allen bit with a 3/8 ratchet drive (6 MM allen key is furnished)
3/16 allen bit with a 3/8 ratchet drive (3/16 allen key is furnished)
5/16 allen bit with a 3/8 ratchet drive (5/16 allen key is furnished)
3/8 drive torque wrench
Gasket scraper
Smooth flat file (8 to 12 in. long)
Oil drain pan (minimum 8 Qt. capacity)
New gear lube API Spec. GL-5, MT-1 **("LE 1605" for severe service and extreme HD applications and temperatures of -20 to 230 deg. F.) ("LE 9920 75w-140 Synthetic" for warranty reasons and extreme low and high temperatures of -50 to 280 deg. F.)**
The **"LE" Gear Oil** can be purchased at **Mag-Hytec.**

PARTS CONTENT

Number	Quantity	Item
1.	1	Mag-Hytec Differential cover with **O-ring ARP 568-278** (installed)
2.	13	8 MM x 30 MM stainless allen cap screws **(Torque 12-16 ft. lbs)**
3.	14	5/16 stainless AN washers
4.	1	Drain plug assembly with magnet and **O-ring ARP 568-910** (installed)
5.	1	Dipstick assembly with magnet and **O-ring ARP 568-910** (installed)
6.	1	Oil level reference plug with **O-ring ARP 586-904** (installed)
7.	1	1/8 pipe plug (for optional temperature sender not included)
		Dipstick, Drain, Reference, and 1/8 pipe plugs **(Tighten with two fingers using the short side of allen wrench)**

THE TOP AND BOTTOM BOLTS HAVE BEEN ELIMINATED FOR SENDING UNIT AND DRAIN PLUG.

A word of caution to the installer / vehicle owner:

The Mag-Hytec cover is designed to fit the factory GM / Dodge axles supplied as original equipment. However, in some applications, or because of the use of certain factory options and/or after market equipment, there may be clearance problems between your Mag-Hytec cover and other vehicle systems (specifically some rear sway bars). It may be necessary to install spacers or shims to lower the sway bar. It is the responsibility of the vehicle owner/cover installer to ensure that no other vehicle component comes in contact with the Mag-Hytec cover. **Contact with any vehicle component, or the making of any modification to the Mag-Hytec cover, automatically voids the warranty. Mag-Hytec assumes no liability, expressed or implied, for damage or injury to persons or property.**

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Installation:

Note: For some installations, removing the spare tire may provide better access to the work area. However, it is not necessary in every case. The installer should determine if there is adequate workspace prior to starting the installation.

1. **Park your vehicle on level ground and apply the parking brake**.
2. Position a drain pan under the differential to catch the old gear lube.
3. Remove the 12 lower existing bolts, starting at the bottom, carefully loosen top 2 bolts.
4. This step can get very messy so use caution. Using a gasket scraper, start at the bottom of the cover and carefully (so as not to gouge the housing metal) insert between the existing cover and gear housing and pry the old cover off. Remove last 2 bolts to remove old cover completely.
5. Allow all of the old gear lube to drain.
6. Using a gasket scraper, carefully remove all of the old gasket material (dried silicone) from the housing.
7. Use clean lint free rags to wipe down the remaining oil from inside the housing and to clean the housing gasket surface. The surface must be clean and flat for the Mag-Hytec's O-ring to seal.
8. Before installing the new Mag-Hytec cover, check the gasket mating surface on the differential housing for dents, irregularities, or gouges. Should any exist, carefully remove the high spots using a smooth flat file. **BE CAREFUL NOT TO "ROUND OFF" THE FLAT GASKET SURFACE.**
9. Using gear lube, apply a thin layer of oil to the Mag-Hytec cover O-ring.
10. Position the cover by aligning the bolt holes and start one of the new stainless steel allen cap screws and stainless steel washers at the top bolt hole and continue around the bolt pattern until all 12 bolts and washers are installed "finger tight." A small dab of RTV silicone on the threads of bolts will help keep bolts from vibrating loose. Lock-tight is not recommended.
11. Using a 6 MM hex bit and 3/8 drive torque wrench, torque the stainless allen cap screws to **(12-16 ft. lbs.)** in a "cross tight" pattern.
12. **Check** the drain plug, oil reference plug, and 1/8 pipe plug for tightness. If you are going to install a temperature sender, do so at this time. Remove the 1/8 pipe plug and install the sender in its place. **Be Sure To Use** LPS All Purpose Anti-Seize or equal **On The Sender's Pipe Threads**. **"TIGHTEN"** all three: **DRAIN PLUG, OIL REFERENCE PLUG** and **1/8 PIPE PLUG (Tighten with two fingers using the short side of allen wrench) DO NOT OVER TIGHTEN**.
13. Remove the dipstick assembly and add in the new gear lube. Your new cover will take approximately **6 qt's.** to fill to bottom of axle tube (lower line on dipstick) and **7.5 - 8 qt's.** to bottom of axle shaft (top line on dipstick) **.** There are two marks on your dipstick. The bottom mark represents the minimum fill line (inside bottom of axle tube) and the top mark is the maximum fill line (bottom of axle). **YOUR OIL LEVEL SHOULD BE BETWEEN THESE LINES**. Note: when checking the oil level, remember to thread the dipstick assembly in by hand until it is snug against O-ring. Remove the dipstick assembly and check the level. If the oil level is ok, apply a thin film of oil to the dipstick assembly O-ring and reinstall. Tighten snugly **(Tighten with two fingers using the short side of allen wrench) DO NOT OVER TIGHTEN THE ASSEMBLY.** Drive at least 25 miles and check oil level.

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14. If you have a special application vehicle, or your vehicle has been modified or "lifted" and the axle has been rotated, You will have to establish the correct oil level for your vehicle as the dipstick marks supplied by Mag-Hytec will not apply. **The correct oil level should be between the bottom of the inside of the axle tube and bottom of the axle shaft.** Once you have established the correct level, scribe a reference line on your dipstick for future reference and fill the differential.

Maintenance:

The Mag-Hytec cover is constructed of high quality aircraft aluminum and has a powder-coated finish. The bolts and washers are stainless steel. These components require no maintenance.

From time to time you may wish to check the oil level and monitor the wear in your differential. With the Mag-Hytec cover, this can easily be accomplished by removing the dipstick assembly using a 3/16 allen wrench. You will probably notice some "fuzzy" metallic particles on the magnetic end of the dipstick. This is normal wear. Wipe the dipstick clean and reinstall **by hand** until it bottoms out on the O-ring. Remove the dipstick and check the oil level. If the level is between the high and low marks on the dipstick, apply a thin film of oil on the dipstick assembly O-ring and reinstall the assembly snugly.
(finger tight using the short side of the allen wrench) DO NOT OVER TIGHTEN.

We suggest you follow the manufacturer's recommendations for the gear lube drain intervals. You may change your gear lube without removing the Mag-Hytec cover. Park your vehicle on level ground with the parking brake applied. Position a drain pan under the drain plug, located at the bottom of the pan, and remove the drain plug assembly. You may notice "fuzzy" metallic particles on the magnetic drain plug. This is normal wear. If you notice any larger chips of metal, further inspection should be performed. We suggest that this inspection be performed by a professional mechanic who, specializes in drive train components. Remember to clean the drain plug assembly prior to reinstallation. Apply a thin layer of oil to the drain plug O-ring and reinstall.
(Tighten with two fingers using the short side of allen wrench) DO NOT OVER TIGHTEN. Follow the procedure for filling the differential.

Should it become necessary to remove your Mag-Hytec cover for any reason, the Mag-Hytec cover O-ring may be reused. **DO NOT USE ANYTHING TO "PRY" THE COVER FROM THE DIFFERENTIAL HOUSING. THIS WILL DAMAGE THE O-RING**. If you have damaged the O-ring, you may obtain a replacement by calling 818-786-8325.
If you need to reinstall the cover and no O-ring is available, you may run a bead of RTV silicone or use a gasket on the Mag-Hytec's mating surface face and reinstall the cover in the conventional manner.

During your vehicle's use, you may come in contact with water above the axle seals or above the axle breather. You should inspect your gear lubricant at the earliest opportunity. Do so by following the oil level check procedure. If water is detected, follow the drain procedure and refill your differential following the fill procedure.

We at Mag-Hytec invite your comments and suggestions. We are continually looking for better ways to provide the highest level of products and service for our customers. You may submit your comments and suggestions by writing or calling our office at:

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With the newer model years 2011 to present GM Trucks, the brackets on your cover holding the brake lines and E-brake cable will either need to be modified or moved to accommodate the new bolt pattern, and the ribs between the bolts.

On the bracket that holds both brake lines you can cut the bracket so only the bolt at 11 O'clock is used. Also you could use zip ties to secure other cables from just hanging. If you use Zip-Ties put a rubber hose on the brake line to insolate it. Take a 2" piece of 1/8" hose cut one side and slip it onto the brake line.