

Introduction

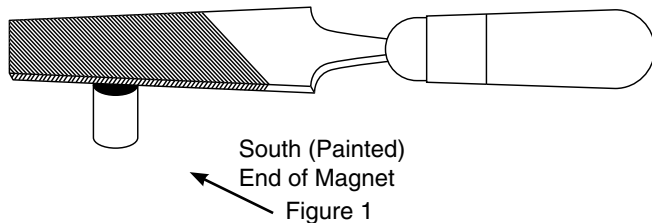
Although it is possible to install magnets without removing the two universal joint bearing caps that are attached to the differential pinion end yoke; it is highly recommended that they be removed. This allows for a better job of cleaning surfaces, and applying the J-B Weld brand adhesive.

Installation

Caution: Use J-B Weld brand adhesive only. Many other brands were tested, and only J-B Weld withstands the centrifugal forces encountered.

1. Remove the U-bolts or straps that retain the universal joint bearing caps to the end yoke on the differential.
2. Slide the driveshaft forward into the transmission while being careful not to allow the bearing caps to fall off the universal joint.
3. Gently slide the two bearing caps that were contained by the end yoke off of the universal joint cross. Be careful not to lose any of the needle bearings.
4. Place needle bearings in a safe place until ready to reassemble.
5. Clean any surface rust or remaining J-B Weld from the bearing end cap with a wire brush attached to a bench grinder or drill.
6. Using the 80-grit emery paper supplied, roughen up the end of the bearing cap to improve J-B Weld adhesion.
7. Using the sharp edge of a file, scratch the yellow end of the magnets so that the end can be identified after the paint is removed during cleaning of the magnets. (See Figure 1.)

NOTE: The magnet is painted yellow on one end to identify the south side. The sensor supplied will only work with this end of the magnet.



8. Using a CLEAN rag, apply acetone or lacquer thinner to the rag. Wipe the bearing cap ends and magnets clean. Allow the cleaner to evaporate.

NOTE: The surfaces must be clean, and free of all residues to provide a strong bond with the J-B Weld.

9. J-B Weld consists of two parts. Squeeze equal parts from each tube onto any clean disposable surface. Mix together thoroughly with the wooden stick provided.
10. Apply a small amount of J-B Weld onto the end of the bearing cap. With the south side of the magnet facing away from the J-B Weld and bearing cap, place the magnet in the center of the J-B Weld on the bearing cap as shown. (See Figure 2.)

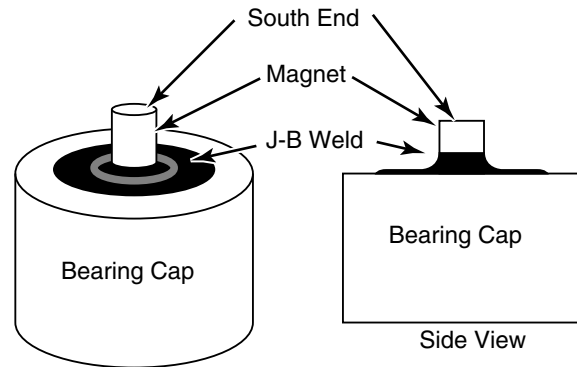


Figure 2

11. Tear off a thin piece of paper, and place it onto the $\frac{5}{8}$ " diameter steel slug. Place the paper and slug onto the south end of the magnets as shown. (See Figure 3.)

NOTE: Since J-B Weld has steel in it, the J-B Weld will be attracted to the south end of the magnet, and will flow away from where its needed most. The steel slug placed on the south end of the magnet prevents this from happening. The paper prevents bonding of the steel slug to the magnet.

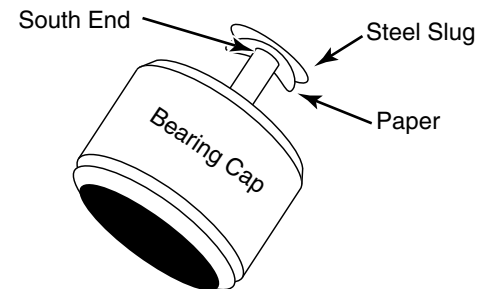


Figure 3

12. Apply a liberal amount of J-B Weld to form a cone shape as shown. (See Figure 4.)

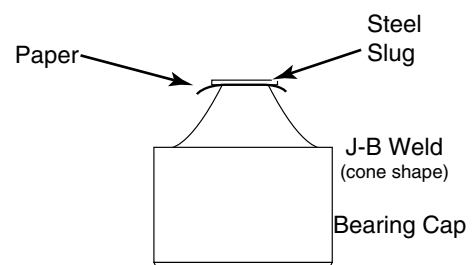


Figure 4

13. Allow the J-B Weld to cure for 24 hours before putting into use. J-B Weld cures slower if used at temperatures below 60°F. After J-B Weld has cured for 6 hours, a heat lamp or light bulb placed near the weld will speed up curing time in cooler temperatures. Do not apply heat before 6 hours of room temperature curing, as this may cause the weld to become brittle.

NOTE: In hot weather, let the J-B Weld set-up for about 15 to 20 minutes after mixing, this lets it thicken and prevents running or sagging.

14. After J-B Weld has cured, remove the steel slugs and paper. Make sure that no J-B Weld protrudes above the magnets, if so a file may be carefully used to remove the excess. Also be sure that the J-B

Weld does not interfere with the bearing cap retainer tang on the end yoke.

15. Assemble the bearing caps. Use an approved grease to hold the needle bearings in the bearing caps. Make sure there are no missing needle bearings. Place the bearing caps onto universal joint cross.

16. Reassemble the driveshaft and universal joint to the end yoke. Replace the U-bolts or straps, and torque to the manufacture specifications.

When magnets are mounted according to these instructions, the magnets will withstand at least 10,000 RPM.

Sensor Mounting for Driveshaft RPM Pickup

Verify that the sensor mounting bracket is mechanically very rigid. Modify or replace as required to insure that the sensor does not come in contact with the magnets under extreme vibration. If the sensor touches the magnets they will break off, and also possibly damage the sensor. We recommend using rigid channel steel for the bracket. The bracket should be bolted directly to the differential case. This insures a constant sensor to magnet clearance with any suspension travel. Adjust the sensor to magnet clearance to $.200'' \pm .030''$, and lock down the jam nuts supplied on the sensor. Verify the clearance is correct for both magnets. (See Figure 5.)

The thread on the sensor is $1\frac{5}{32}$ -32 UNS-2A, therefore every revolution of the nut will move the sensor $.031''$. Rotate the driveshaft by hand to make sure there is adequate clearance between the bracket and sensor assembly and the differential pinion end yoke. (See Figure 6.)

