

# Formsprag Backstops for Dodge® Torque-Arm II™ Speed Reducers

## Instruction Manual

P-8627-FC

These instructions must be read thoroughly before installing or operating this product.

**⚠ WARNING** Failure to strictly follow the service and installation instructions set forth herein could result in severe personal injury or property damage. If for any reason you have a question because of reading these instructions or for any other reason not covered by these instructions contact Formsprag Application Engineering Department before attempting to install the clutch into the equipment.

**⚠ WARNING** To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Remove all external loads from drive before removing or servicing drive or accessories. Failure to observe these precautions could result in bodily injury.

**⚠ WARNING** To ensure drive does not unexpectedly start while removing the clutch, turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

### INSTALLATION:

**Caution:** The installation of the replacement backstop must provide for the same rotation as the previous backstop to prevent damage to equipment or bodily injury.

1. Remove backstop shaft cover and gasket (Figure 1). These parts will not be reused. This cover is directly opposite the extended end of the input shaft.
2. Clean the face of the gearbox to remove any gasket material or contamination from the cover mounting surface. It is important that contamination not get into the gearbox or the backstop during the backstop installation/servicing process.
3. Face reducer looking at the side from which the cover was removed. Carefully determine the desired direction of free rotation. It is important that the direction be correctly determined because to reverse the direction after the backstop is installed, it is necessary to remove the backstop, turn it end-for-end and then reinstall it.
4. Match the arrow on the backstop inner race to the direction of free rotation for the desired direction of shaft rotation. Note that reversing the backstop end-for end changes the direction of the arrow. The shaft will rotate in the same direction as the arrow on the backstop.
5. If the backstop kit has a spacer ring included, install it onto the shaft first, adjacent to the bearing inner retaining ring.

6. Install the backstop inner race and sprag cage assembly onto the shaft. DO NOT remove the cage from the inner race or the shipping strap from the sprag set at this time. Insert the key into the Inner race and mating shaft keyway. These parts should slip onto the shaft easily, a light coating of oil may assist in assembly. Do not use a hammer to force the Installation, damage can occur to the shaft and/or the backstop. Slide the race against the spacer or the shaft shoulder and install the retaining ring into the groove in the shaft. Only use the supplied key, as it is specifically designed for each backstop.
7. Apply a thin coating of ATV silicone onto the gearbox mating surface for the outer race (same as the cover area). It is important to apply the sealant around the fastener holes to prevent leakage. Do not allow excessive amounts of silicone to enter the gearbox or to be applied to other parts.
8. Install the outer race by gently rotating it opposite the shaft rotation while pressing lightly inwards. Do not force the outer race into position as backstop damage may occur. Once the outer race is well piloted onto the sprag set, remove the shipping strap from the sprag set by cutting it, being careful not to let the outer race back off the sprags. The outer race should slide easily into position with a slight turning motion. A light coating of oil on the race inner diameter may ease installation.
9. Align the fastener holes in the outer race with the mating holes in the gearbox. Use the supplied grade 5 fasteners and lock washers only. Torque the fasteners in an alternating pattern per Table 1.

**Table 1 - Backstop Fastener Torque Values**

Reducer Size	Fastener Size	Torque in Ft.Lbs.
TA0107L	1/4-20	8 – 7
TA1107H	1/4-20	8 – 7
TA2115H	1/4-20	8 – 7
TA3203H	1/4-20	8 – 7
TA4207H	1/4-20	8 – 7
TA5215H	5/16-18	17 – 15
TA6307H	5/16-18	17 – 15
TA7315H	3/8-16	30 – 27
TA8407H	5/16-18	17 – 15
TA9415H	3/8-16	30 – 27
TA10507H	3/8-16	30 – 27
TA12608H	3/8-16	30 – 27

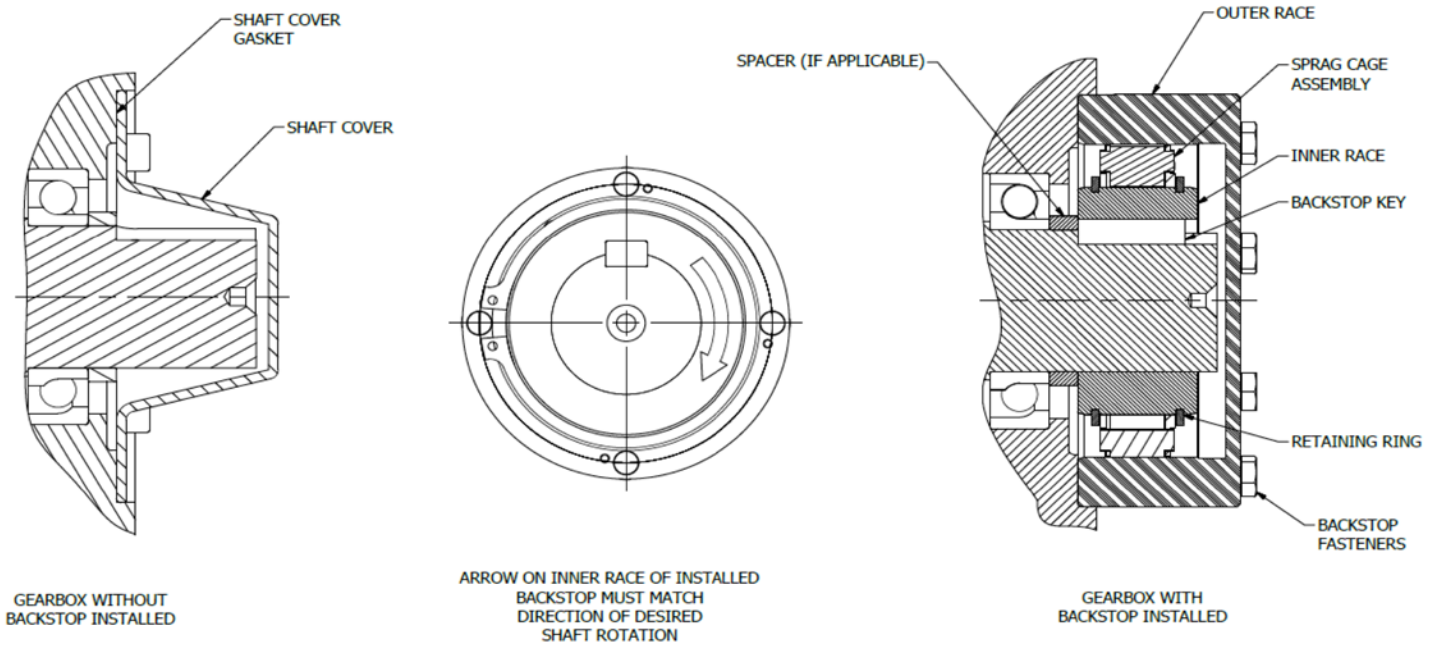


FIGURE 1 - BACKSTOP ASSEMBLY



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for Shaft Mount Gearboxes  
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