

Shaft Fan Installation

Introduction

Shaft driven cooling fans provide a simple and inexpensive way to utilize the full mechanical rating of gear drives by lowering the operating temperatures, thus increasing thermal power capacity. Shaft fans have been successfully used on gear reducers and other related machinery for many years. They eliminate the need for electrically powered cooling devices. The sound level at standard motor rpm is about the same as that from fans on totally enclosed, fan cooled driving motors. Less than 0.25% of cataloged power rating is required to drive the shaft fan. Dimensions, arrangements, and clearance for shaft driven fans are shown in the selection guide.

The following instructions apply to the installation of the shaft fan kits available for unit sizes 5215J-5315J. Figure 1 shows the general layout of the shaft fan kit installed on the unit.

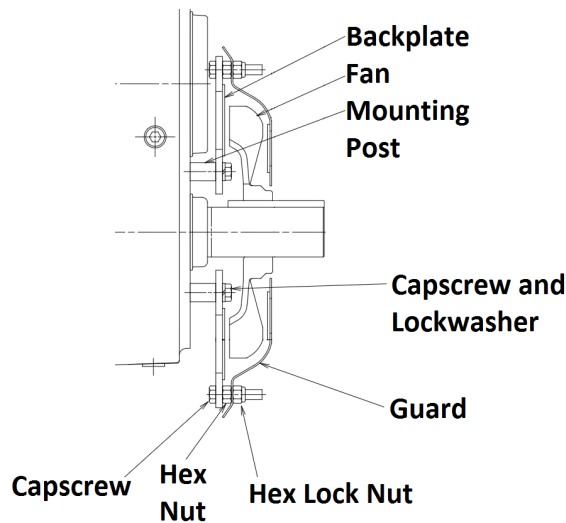


FIGURE 1 SHAFT FAN KIT INSTALLED ON UNIT

Assembly Instructions

WARNING: Consult applicable local and national safety codes for proper guarding.

Switch off the main power supply and lock out, de-energize, remove all external loads from drive before servicing drive or accessories.

1. Begin by arranging capscrews and lock washers through the backplate and mounting posts. Refer to Figure 1 for a depiction of the finished assembly. Torque

the 0.375"-16 UNC capscrews to 25-30 lb-ft (or 28-35 lb-ft with a nylon pellet).

2. Assemble shaft fan to fan hub, apply Loctite 242 or equivalent to fastener threads and tighten.

CAUTION: Do not over-tighten fasteners into plastic fan as fan may crack.

3. Mount the fan hub on the gear drive high speed shaft such that the set screw hole in the hub is towards the end of the shaft. Locate the hub axially at the values listed in Table 1. Check the gap distance (X) depicted in Table 1 and Figure 3, between the backing plate and the fan.
4. Once the fan is correctly positioned, use Loctite 222 on the set screw.
5. Torque the 0.250"-20 UNC set screw to 6.5-8 lb-ft.
6. Install the capscrews and hex nuts in the outer bolt circle of the backplate. The 0.375"-16 UNC can be tightened to a torque of 25-30 lb-ft at this time.
7. Place the guard over the capscrews, and tighten the 0.375"-16 UNC nylon collar lock nuts to 28-35 lb-ft.

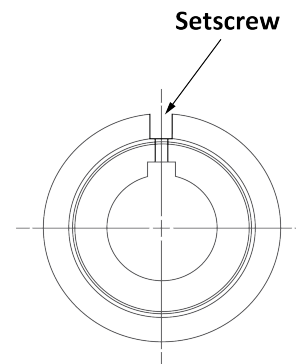
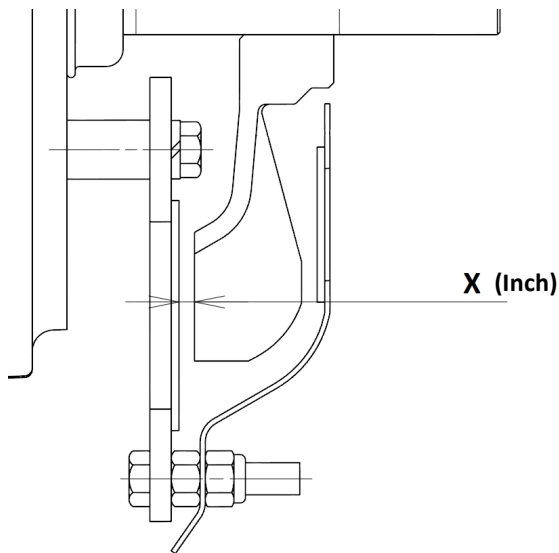


FIGURE 2 FAN HUB ASSEMBLY

**TABLE 1 GAP DISTANCE FOR
FAN PLACEMENT ON SHAFT**

Unit Size	Gap (X) (Inch)
5215	0.18
5307	0.25
5315	0.25

**FIGURE 3 FAN GAP MEASURED FROM INSTALLED
BACKING PLATE**

NOTE: When a V-Belt guard is used with the shaft fan, the lock nut must be reused in the inside of the V-Belt guard enclosure. See the section entitled “**OSHA V-Belt Guard Installation For Drives With Shaft Fan**” of publication 378-910.