TRIANGLE ENGINEERING, INC.

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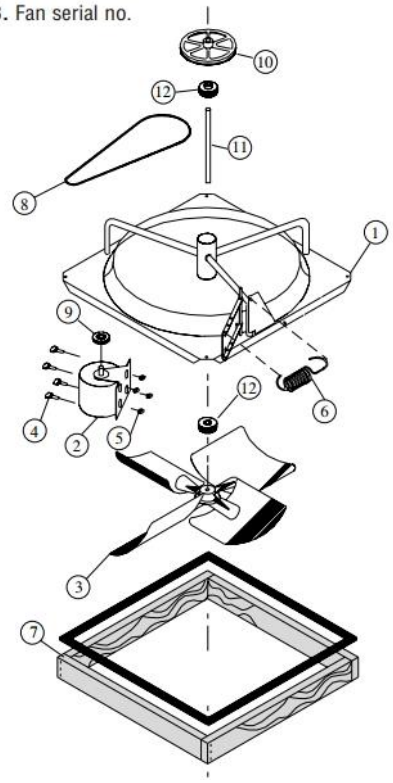
Replacing Bearings : Whole House Fans

Note: It may be easier to replace the bearings if the fan is removed, and the replacement performed on a workbench.

REPAIR PARTS

When ordering repair parts, always give the following information:

1. Part description
2. Fan model no.
3. Fan serial no.



1 Fan Frame
2 Fan Motor
3 Fan Blade
4 Motor Mounting Bolts
5 Motor Mounting Nuts
6 Motor Tension Spring
7 Wood Frame
8 V-Belt
9 Motor Pulley
10 Fan Pulley
11 Fan Shaft
12 Bearing w/ Rubber Bushing

1 Turn off the circuit breaker for the fan and lock it out. If it cannot be locked, attach a note to the breaker that it is turned off for maintenance

2 Remove the belt from the motor and fan pulley. As the belt is tensioned by the motor springs, no tools are required for this.

3 Remove the set screw from the fan pulley.

4 Remove the fan pulley from the fan shaft. This may require a bearing puller. Lightly lubricate between the pulley and the shaft with a light oil or WD40 to make removal easier. If the pulley is damaged in this process it will need to be replaced. This is also a good time to see if the pulley is worn. If the bottom of the belt groove is worn, the pulley is worn out and should be replaced.

5 Remove the blade from the fan shaft, this may require a bearing puller. Lightly lubricate between the blade hub and the shaft with a light oil or WD40 to make removal easier. Take care not to damage the blade in this process.

6 The set screws from the pulley and the blade will have left dimples on the shaft. Filing these smooth now will make removal of the bearings easier.

7 Remove the set screws from both bearings. Each bearing will have two set screws. Lightly lubricate between the bearing and the shaft with a light oil or WD40 to make removal easier.

8 Drive the shaft out of the bearings. Use a wood block on the end of the shaft (or a rubber hammer) to drive the shaft. It probably will be very difficult to drive. If it is block the bearing tube up to prevent damage to the fan frame.

9 With the shaft out of the bearings, insert one end of the shaft about 3/4" into the bearing, and use the shaft to pry the bearing out of the bearing tube. The rubber bushing should come out with the bearing. Do this for both bearings.

10 If the shaft is to be reused, file all nicks and burrs from the shaft. Pay particular attention to the dimples made by the set screws on the blade, pulley and both bearings.

11 Place one new bearing on the shaft about 1" from the end. Tighten one set screw very lightly. Make sure the set screws are on the outboard side of the bearing.

12 Insert the shaft and bearing into the bearing tube, from the blade end. It will make insertion of the bearings into the tube easier if you lubricate the rubber bushing with dish soap lightly. Do not hit the shaft to seat the bearing, if necessary tap on the rubber bushing itself.

13 Insert the fan end bearing onto the shaft and slide it into the bearing tube. Do not hit the shaft to seat the bearing, if necessary tap on the rubber bushing itself. Lightly tighten one set screw.

14 Mount the blade onto the shaft with the end of the shaft flush with the hub of the blade. Tighten the blade set screw.

15 Mount the pulley onto the other end of the shaft, but do not tighten the set screw yet.

16 If necessary, loosen the set screws on the bearings and adjust the shaft within the bearings for proper blade placement. When this is done, securely tighten both set screws on both bearings.

17 Using a straight edge (like a yardstick) align the fan pulley with the motor pulley. After this is done tighten the fan pulley set screw.

18 Check all sets screws for tightness : blade, both bearings, and fan pulley.

19 Install the belt onto both pulleys.

20 Spin fan by hand to check for smooth, free rotation of blade. Ensure no tools or other obstructions are in the way.

21 Turn circuit breaker back on, turn fan on and listen for any unusual noises.

