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BULLETIN

LITERATURE FILE NO.

**HCOM-SB-35**

**GENERAL  
SERVICE BULLETIN**

Since the Trane Company has a policy of continuous product improvement, it reserves the right to change specifications and design without notice. The installation and servicing of the equipment referred to in this booklet should be done by qualified, experienced technicians.

12/28/79  
Reviewed 7/1/81

SUBJECT: MODEL "R" COMPRESSOR THRUST BEARING REPLACEMENT

### INTRODUCTION:

The purpose of this service bulletin is to outline the procedure for identification and repair of Model "R" compressor bearing heads and compressor housings damaged by rotating thrust bearings.

### DISCUSSION:

Certain Model "R" compressors may exhibit wear due to rotating thrust bearings. A new style thrust bearing (Figure 1) eliminates this possibility and should be used in all replacement situations. Compressors with serial numbers prior to May, 1976 (6E) and compressors rebuilt in the field prior to October 10, 1979 are prone to this problem. If excessive wear is encountered, it will be necessary to follow a repair procedure. The procedure listed below explains how to identify excessive wear and rectify the problem. This procedure should be initiated only during a routine compressor teardown inspection or compressor rebuild.

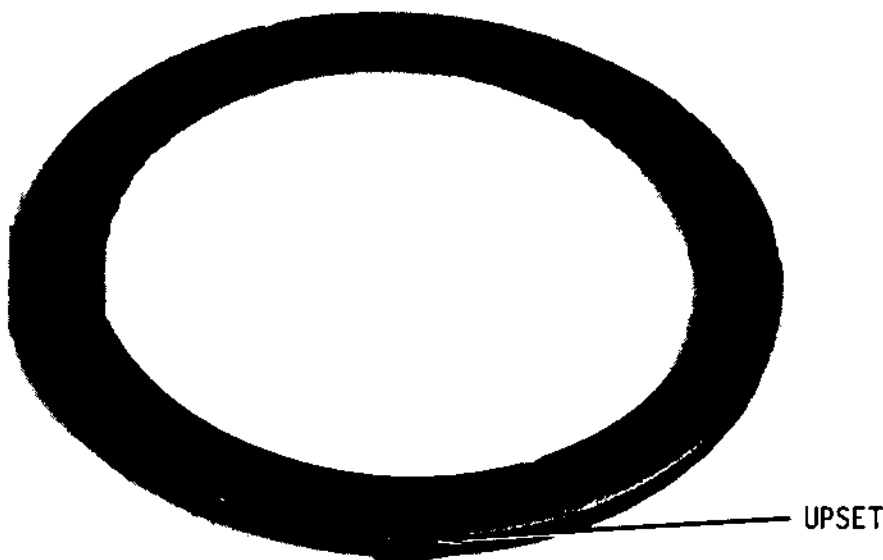


FIGURE 1-New Style Thrust Bearing

CORRECTIVE ACTION:

1. Inspect the four thrust bearing retainer tabs on both the bearing head (pump end) and compressor housing (motor end).
2. If the tabs are excessively worn (Figure 2) it will be necessary to stake the bearings in place. Excessive wear can be identified by placing a new style thrust bearing (upset in O.D., Figure 1) in the housing and bearing head and rotating it 360°. If the bearing can be rotated freely without the thrust bearing upset positively engaging one of the four retaining tabs, excessive wear is indicated.

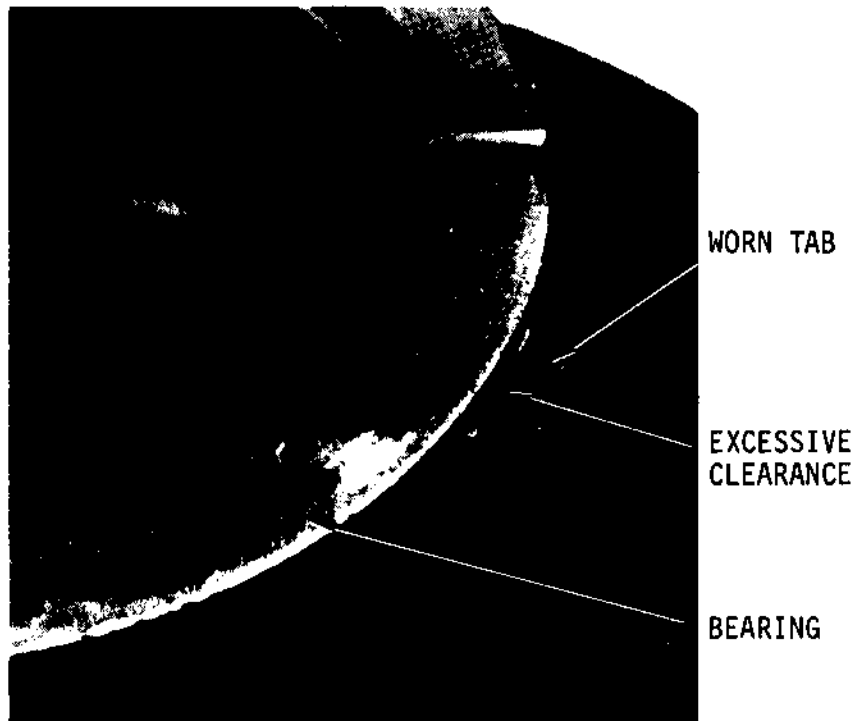


FIGURE 2

3. When the wear rate is shown to be acceptable, merely replace the thrust bearing with a new style bearing.
4. On 6 cylinder housings (motor end) with a solid collar retainer where wear rate is acceptable, it will be necessary to file a slot in the collar to accept the new style bearing upset.

Other housings and bearing heads with acceptable wear may also require filing if the factory machining process has left a ridge around the circumference of the bearing surface. Unless a slot is filed to accept the upset, the bearing will not lie flat.

5. When excessive wear is identified (new style bearing rotates freely) it will be necessary to stake the bearing in place with roll pins. Proceed with steps 6 through 13.
6. Drill two 1/8" pilot holes in the new style thrust bearing (Figure 3). The holes should be located 90° from the upset and 180° from each other. They should be midway between the bearing I.D. and O.D. and approximately 3.6 in. apart.

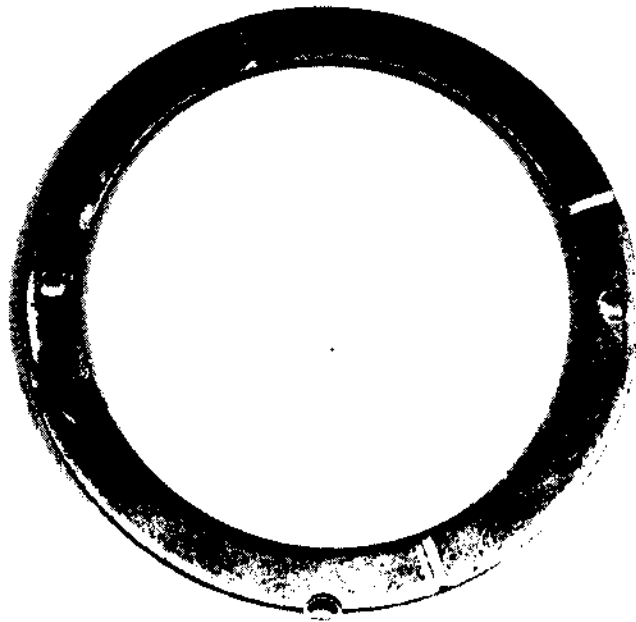


FIGURE 3

7. Place the drilled thrust bearing in the bearing head or compressor housing (procedure identical for both) and position the bearing upset midway between any two bearing retaining tabs. Carefully center the bearing in the casting. The circular centers of the main bearing and thrust bearing should coincide.
8. With the bearing held in place, start two pilot holes in the casting using the bearing as a template. Use a 1/8" drill bit. If difficulty is encountered when trying to hold the bearing while starting the pilot holes in the motor end, it may be necessary to either apply grease or tape to hold the bearing in position while the pilot holes are started.
9. Remove the bearing and drill the holes to a depth of .38/.45 in. (approximately 3/8" - 7/16"). Extreme care should be taken to drill the holes perpendicular to the surface and to the proper depth. Fixing the travel of the drill bit is recommended.
10. Install 1/8" x 1/2" roll pins in the two holes (Figure 4). The pins should protrude approximately 1/16" - 3/32" from the casting surface when installed.
11. Enlarge the two holes drilled in the thrust bearing by redrilling them with an 11/64" bit.
12. File down any burrs or ridges left on the thrust bearing face by the drilling process and place the bearing over the two roll pins. (Figure 5).
13. The roll pins should not extend above the thrust bearing surface. If they do, file the pins down until they are at least 1/32" below the bearing surface.



FIGURE 4

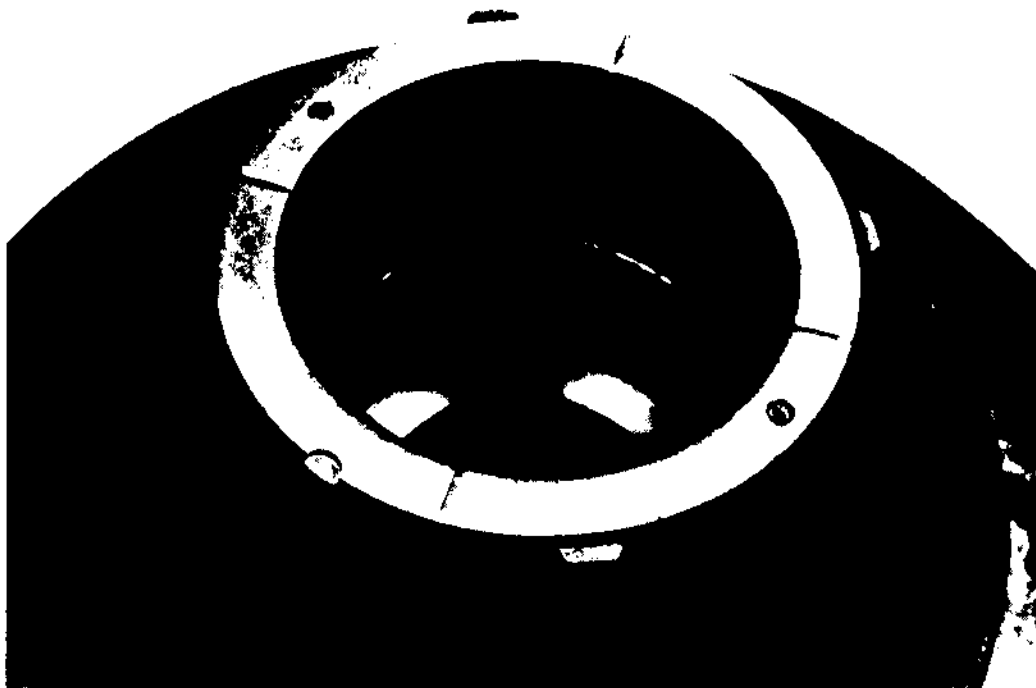


FIGURE 5

NEW PRODUCTION:

All Model "R" compressors manufactured or remanufactured by Trane after May, 1976, (Serial No. 6E) have some means of preventing thrust bearing rotation. All thrust bearings ordered from service parts stock after October 1, 1979 are the new style bearings which prevent bearing rotation.