



**UNITED  
TECHNOLOGIES  
CARRIER**

Commercial Division  
Carrier Corporation

BULLETIN: CA-SB-19-E-73-66  
DATE: 1/19/73  
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## SERVICE BULLETIN

SUBJECT:

**CENTRIFUGAL MACHINES: GEAR LOCKING METHOD**

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### PURPOSE

To advise that a new method of locking the gear locknut assembly into place is now being used.

### MACHINES AFFECTED

19EAs built since April 1972.

When any 19EA built before April 1972 is opened for service, the new method should be used. It can also be used on any centrifugal (19D, etc.) with a gear locknut when the gears are changed or the transmission is opened.

### PROCEDURE

The new locking method involves installing a set screw into the threads between the rotor shaft and the locknut. To install this screw, the compressor cap must be removed as well as the impeller and thrust bearing assembly. Refer to Fig. 1 for item numbers and proceed as follows:

1. Tighten the locknut to design torque.
2. Locate the hole for the set screw (Item 7) 30° from any axial hole for mounting the cover plate (Item 4) on the demister (Item 2). See View A-A.
3. Drill 0.50 in. deep with a #7 (0.201 in.) drill.
4. Tap 0.40 in. deep with a 1/4-20 UNC-2B tap.
5. Install a 1/4-20 x 3/8" long set screw (Item 7). AE24AV164 is a self-locking screw. Its body is twisted after the screwdriver slot is cut so that it drags coming out. Regardless of the type of screw used, it should be staked in place. DO NOT USE LOCTITE.
6. Install the demister cover (Item 4), and stake its six screws.

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| Item | No. Req. | Description                             |
|------|----------|---|
| 1    | 2        | Pinion Key                              |
| 2    | 1        | Demister                                |
| 3    | 4        | Nozzle                                  |
| 4    | 1        | Cover, Demister                         |
| 5    | 1        | O-Ring, 3 x 3-1/8 x 1/16"               |
| 6    | 6        | Flat Head Mach. Screw, 10-24 x 1/2 Lg.  |
| 7    | 1        | Set Screw, 1/4-20 x 3/8 Lg. (AE24AV164) |

