



**UNITED
TECHNOLOGIES
CARRIER**

Commercial Division
Carrier Corporation

BULLETIN: CA-SB-19-D-74-72

DATE: 4/19/74

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SERVICE BULLETIN

SUBJECT:

19D, 19DA, DG, DH

THRUST BEARING AND SHAFT REPLACEMENT

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PURPOSE:

To give information necessary to use 19DH thrust assemblies on all 19D series machines when repair or replacement is required.

MACHINES

AFFECTED:

19D, 19DA machines, and those 19DG machines with 19D impellers.

19DG machines with 19DH compressors (machines with 10 digit machine model numbers) have the new 19DH thrust assembly.

MATERIALS

REQUIRED:

Thrust assembly replacement

1. 19DH thrust assembly
2. 19DH high speed shaft labyrinth (19D31 size only)

Thrust shaft replacement

1. 19DH thrust shaft
2. Long impeller locknut
3. 19DH impeller keys

Bearing and pin package replacement (if 19D31 part is used)

1. 19DH31 bearing and pin package
2. 19DH31 high speed shaft labyrinth.



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BACKGROUND:

All 19D, DA and DG thrust assemblies have been superseded in Parts Center stock by the 19DH thrust assembly. The 19DH thrust assembly is similar to earlier 19D, DA and DG assemblies except that it has a shorter thrust shaft (Fig. 2) and the 31 size bearing and pin assembly has a thinner flange (Fig. 5). To make the 19DH assembly fit a compressor with a 19D impeller, it is packaged with a long impeller locknut (Fig. 3) and three shorter 19DH impeller keys.

When either the complete thrust assembly or just the bearing and pin assembly is used on a 31 size compressor, a 19DH31 high speed shaft labyrinth is required (Fig. 4).

PROCEDURE:

11 and 21 size compressors (19D, 19DA, 19DG)

Replacement of entire assembly requires no modifications.* Existing labyrinths will bolt into place. In event a new labyrinth is required for some other reason, the 19DH is now stocked as a standard replacement.

Replacement of the shaft only, requires no modifications to existing assemblies other than use of the new keys and locknut. (See figure 2.)

31 size compressors

Replacement of entire assembly or the bearing and pin assembly requires the use of the 19DH labyrinth. This is due to negative clearance encountered between the slinger and the old labyrinth resulting in a binding effect. (See figure 4.)

Replacement of shaft only, requires no modifications except the use of the new keys and longer locknut. (See figure 2.)

*Except on 19D machines which do not have the klixon in the bearing assembly. This modification is described in Bulletin no. CA-SB-19-D-74-72



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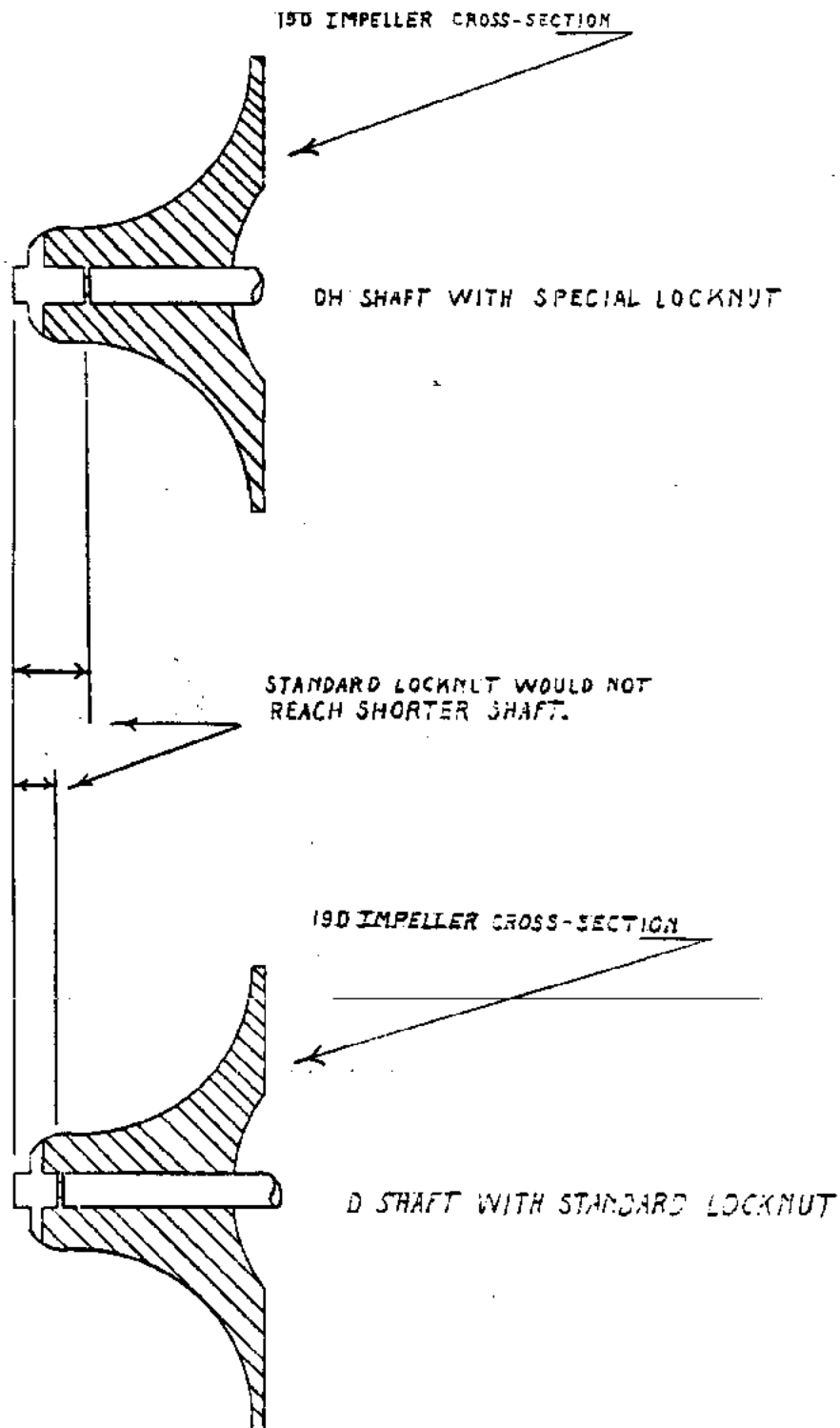
FIG I

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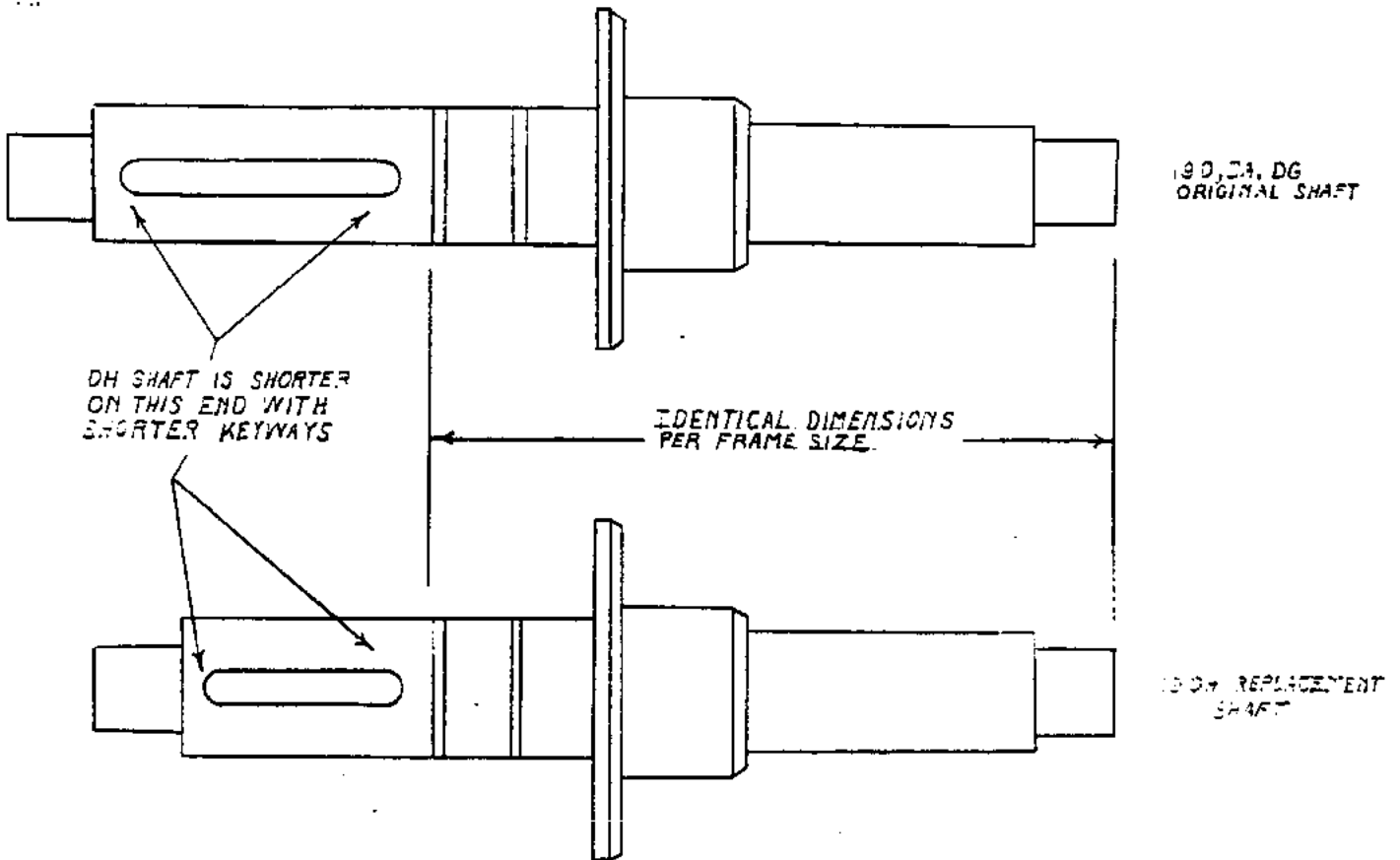
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FIG 2





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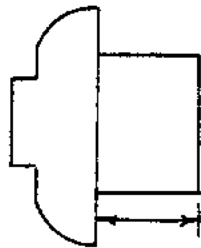
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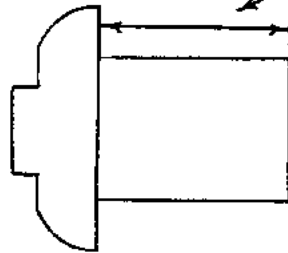
FIG 3

STANDARD LOCKNUT



SPECIAL LOCKNUT DIMENSIONALLY LONGER TO
MAKE UP FOR SHORTNESS OF DH SHAFT

SPECIAL LOCKNUT



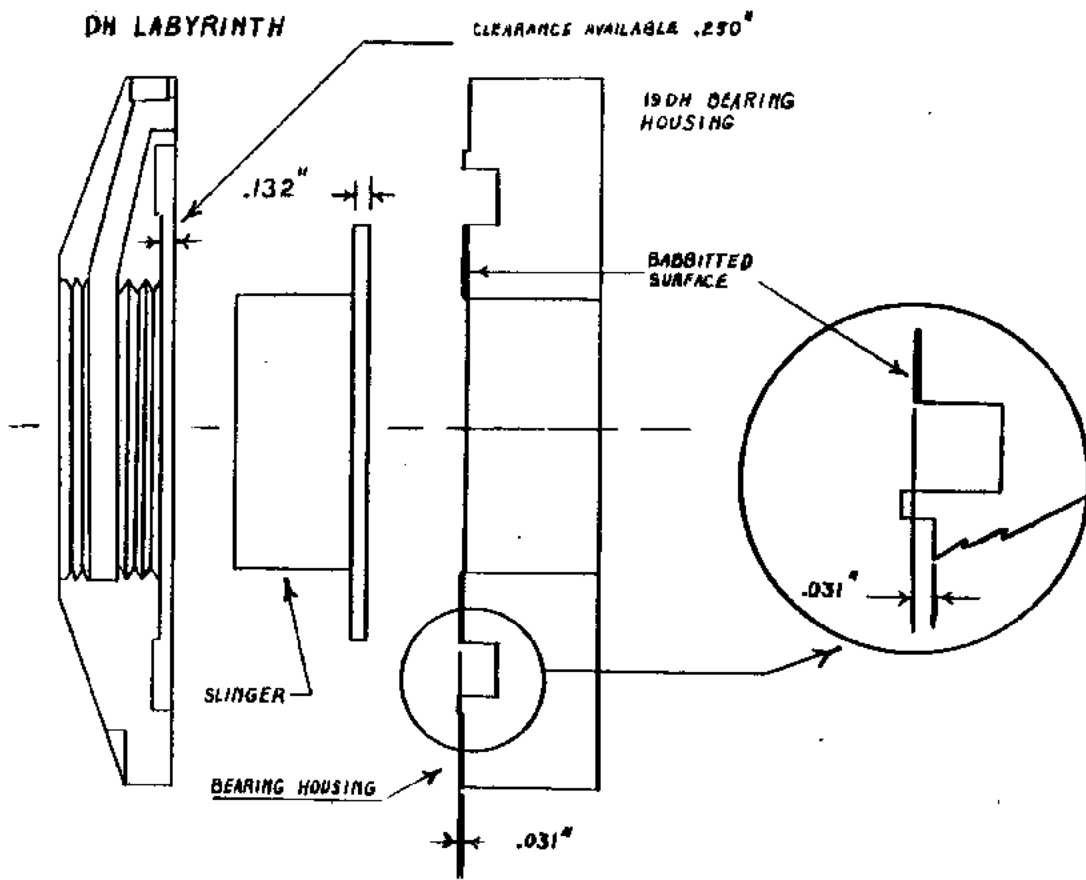


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FIG. 4

19D, 19DA, 19DG-31 SIZE COMPRESSORS



.250" CLEARANCE AVAILABLE IN DH LABYRINTH
MINUS BEARING HOUSING INDENTATION DEPTH
(.031" AS IN ILLUSTRATION) EQUALS .219"
TOTAL CLEARANCE AVAILABLE.

TOTAL CLEARANCE ----- .219"
MINUS SLINGER THICKNESS - .132"
RUNNING CLEARANCE ----- .087"



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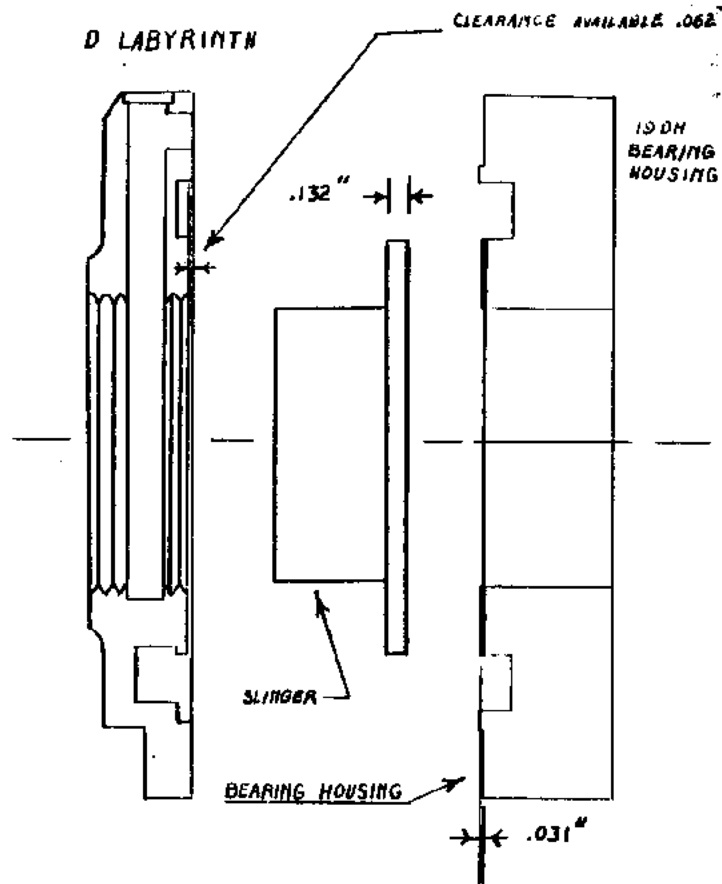
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FIG. 4

19D, 19DA, 19DG-31 SIZE COMPRESSORS



.062" CLEARANCE AVAILABLE IN D LABYRINTH
MINUS BEARING HOUSING INSERTION DEPTH
(.031" AS IN ILLUSTRATION) EQUALS .031"
TOTAL CLEARANCE AVAILABLE.

TOTAL CLEARANCE .031"

MINUS SLINGER THICKNESS .132"

RUNNING CLEARANCE NONE

TO BOLT THIS ASSEMBLY TOGETHER WOULD
RESULT IN BINDING.