CARRIER BUILDING SERVICES

To

DISTRICT MANAGERS

SERVICE MANAGERS

SERVICE ENGINEERS

TECHNICAL REPRESENTATIVES

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JOE CATRAMBONE

Date: MARCH 11, 1986

From: MIKE DE CHIARO

Office: CBS CRANFORD

Subject: 19DM COMPRESSOR DIS-ASSEMBLY
F.E.R. 86-3

Purpose:

To inform the field about proper dis-assembly/re-assembly procedures for DM compressors.

Machines Affected:

All 19DM and 19DR machines using DM compressors.

Background:

It has recently been discovered that considerable difficulty was experienced when trying to re-couple the compressor base to the dis-charge volute on 19DM compressors. When attempting to "slide" the compressor inside the volute cavity it was found that the compressor would not mate fully against the volute if the diffuser wall was partially or fully closed, (diffuser wall moved towards motor end of the machine).

Despite considerable force & effort, the compressor would not mate up snugly with the volute even if the compressor was "started" inside the cavity. In fact, it was witnessed that the compressor would "bounce" back in each of our attempts.

The reason for this problem was that the spring tension was pushing against us from the (19)-(20) diffuser vanes. With the diffuser wall closed or partially closed this spring tension is considerable and will prevent the compressor from being re-assembled. Only when the diffuser wall was moved fully opened, (increased - diffuser wall moved toward suction elbow), did the compressor snug up with the discharge volute. By having the diffuser wall increased this relieved the spring tension which was pushing against us and allowed us to attach the V-band.

Note - By viewing the 19DM dis-assembly tape you will note that they recommend moving the diffuser wall fully open to remove the feedback bellows assembly. This must be followed if you are removing the discharge volute and guide vane assembly.

However, if you are only dis-assembling the machine from the compressor base. (for motor changeouts, bearing inspections, and wheel changes etc.), on back towards the motor, you must still run the oil pump to drive the diffuser wall to the full increase position. This will allow for a quicker and much more trouble free compressor re-assembly.

Procedure

DM Compressors with 32SM Controls:

1. Shut machine down.
2. Jumper 88 to LI on the diffuser module.
3. Run the oil pump until the diffuser wall is fully opened. (Feedback pot is fully extended towards suction elbow)

DM Compressors with 32MP Controls:

1. Shut machine down.
2. Enter the controls test by pressing the POR button
3. Cycle the controls check till you get to step 18.
4. Run the diffuser wall till it reaches the full open position. (Feedback pot is fully extended towards suction elbow)

If there are any further questions or comments concerning this procedure please call this office.

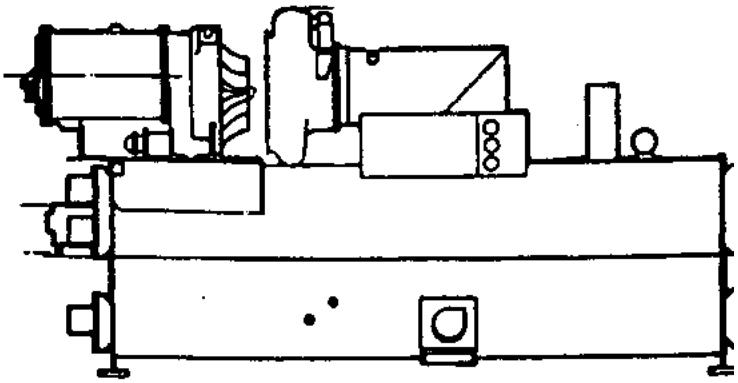
Regards,

Mike

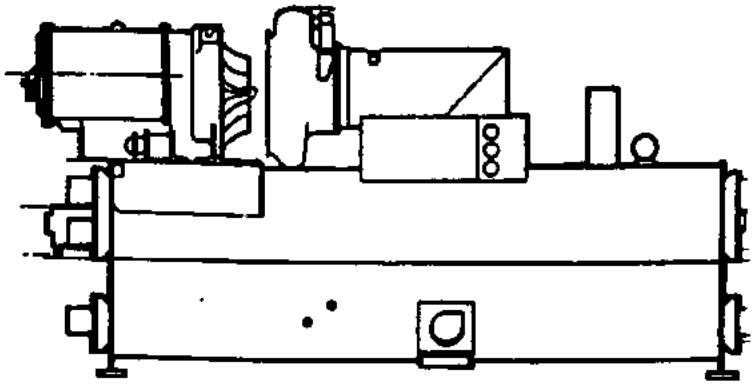
Mike DeChiaro
MD:bg

FILE IN CENTRIFUGAL F.E.R. BOOK UNDER TAB - COMPRESSORS

1) Typical 19DM Application.



2) 19DM machine having, compressor and motor dis-assembled. This applies for bearing, wheel, or motor repairs. (Note discharge volute still in place).



3) When dis-assembling machine as in step 2 the discharge wall must be fully <u>open</u>, as shown at right. You will note that the diffuser wall is <u>flush</u> against the impeller shroud.

To insure that the diffuser wall is in this position, run the oil pump & increase the wall position <u>before</u> dismantling the compressor.

If the wall is not in this position prior to re-assembly you will not be able to slide the compressor back together.