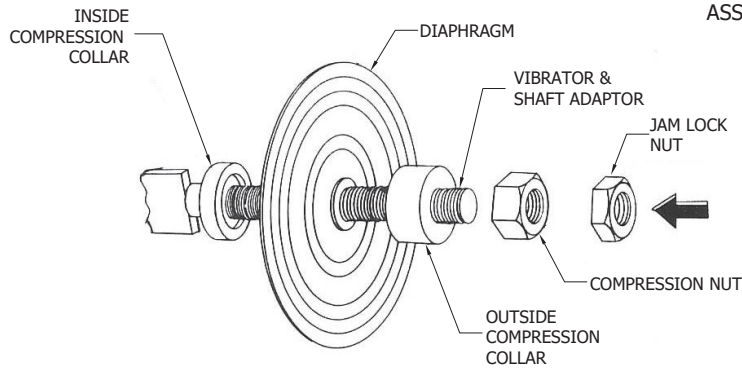


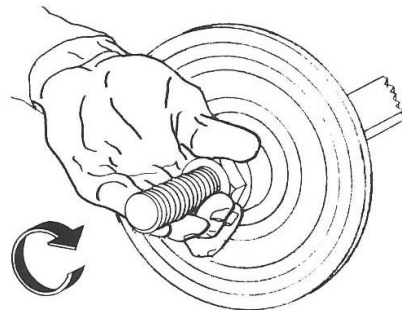


ASSEMBLY INSTRUCTIONS FOR VIBRATOR DIAPHRAGM



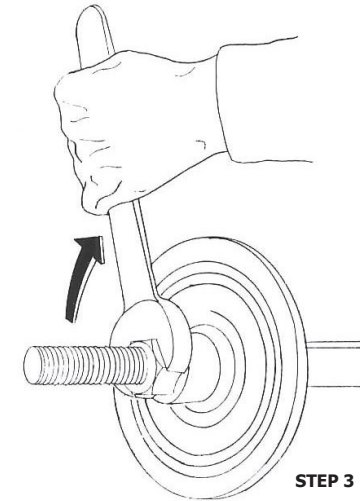
STEP 1

- A. SLIDE INSIDE DIAPHRAGM COMPRESSION COLLAR (COUNTER-BORE FACING TOWARDS END OF THREADED SHAFT) ON SHAFT.
- B. PULL DIAPHRAGM UP TO INSIDE COMPRESSION COLLAR.
- C. SLIDE THE OUTSIDE COMPRESSION COLLAR (COUNTER-BORE FACING TOWARDS DIAPHRAGM) ON SHAFT.



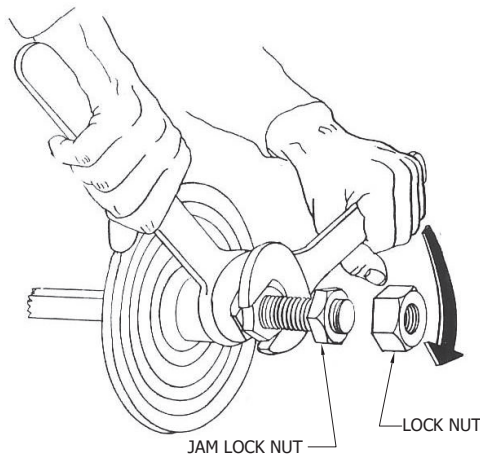
STEP 2

- A. SCREW COMPRESSION NUT HAND TIGHT AGAINST COMPRESSION COLLAR.



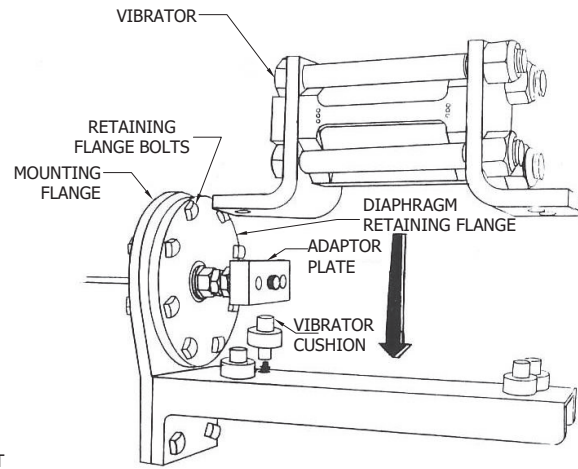
STEP 3

- A. USING AN OPEN END WRENCH TIGHTEN COMPRESSION NUT 1/2 TURN TIGHTER. IMPORTANT - DO NOT TIGHTEN ANY TIGHTER THAN THIS.



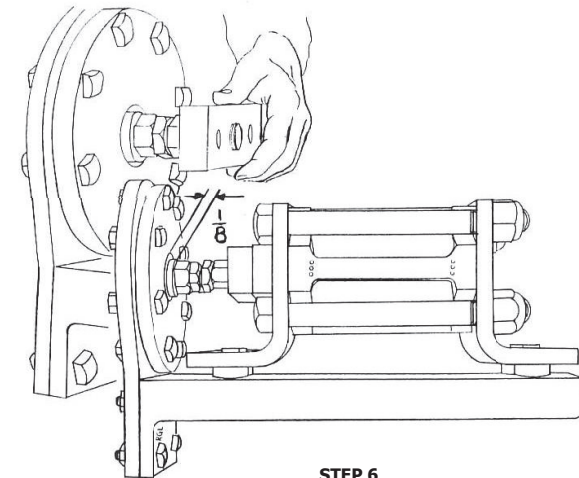
STEP 4

- A. RUN JAM LOCK NUT TIGHT AGAINST DIAPHRAGM COMPRESSION NUT WITHOUT ROTATING THE LATTER, AS SHOWN IN ABOVE ILLUSTRATION



STEP 5

- A. INSERT VIBRATOR ADAPTOR HOLE IN VIBRATOR MOUNTING FLANGE ON FILTER. ADAPTOR BAR SHOULD BE HORIZONTAL (FLAT SIDE UP).
- B. NOW CENTER RETAINING FLANGE OVER SHAFT AND LINE UP HOLES. INSERT BOLTS (IMPORTANT) RECHECK CENTERING OF DIAPHRAGM ASSEMBLY. SCREW ON NUTS AND TIGHTEN EVENLY. NOTICE! EXCESS TORQUE NOT REQUIRED - TIGHTEN ONLY TO PREVENT LEAKING
- C. SCREW ON ADAPTOR PLATE AND LOCK NUTS. NOW SEAT VIBRATOR ON CUSHIONS.



STEP 6

- A. INSERT THREADED SHAFT INTO VIBRATOR AND ADJUST PLATE UNTIL DIAPHRAGM COMPRESSION COLLAR EXTENDS TO 1/8 OF AN INCH THROUGH THE HOLE IN THE DIAPHRAGM RETAINING FLANGE. (THIS DIMENSION MUST BE HELD TO INSURE MAXIMUM LIFE OF THE DIAPHRAGM).
- B. NOW INSERT THE ADAPTOR PLATE MOUNTING BOLTS INTO THE ADAPTOR PLATE AND TIGHTEN FIRMLY.
- C. NOW SCREW ADAPTOR PLATE LOCK NUT AGAINST ADAPTOR PLATE AND LOCK WITH JAM LOCK NUT.



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## **VIBRATOR DIAPHRAGM TROUBLE SHEET**

### **DIAPHRAGM SERVICE LIFE**

Diaphragm life will vary depending on service conditions, use, temperatures, etc.; however, a good preventative maintenance rule should be to replace the diaphragm seal annually.

### **CAUSES OF DIAPHRAGM FAILURE**

The diaphragm seal is designed to be as trouble free as possible, affording “Zero Leakage” under adverse shaft sealing conditions and free-floating vibration transmission (no shaft binding). Should diaphragm failure occur, the following factors are usually the cause:

- 1. Incorrect Axial Adjustment (abrasion or stretch/fold failure)**  
This adjustment (see assembly instruction diagram) must be made with all leaf-securing bolts loose. A “Box type couple” is set up when vibration bar is firmly secured to leaves which places a strain on vibrator cushions and makes axial movement difficult. Free vibrator adjusting plate movement is also impaired.  
  
Type 122 Filters: it is important that the 1/8” collar reference dimension be maintained when leaves are firmly secured, and the filter cover is locked up.
- 2. Axial Adjustment changes when cover is locked up (Type 122 Filters)**  
Abrasion failure can result with this condition. Check cover alignment- top face of cover should have approximately 1/4” gap at gasket surface when bottom of cover face just touches gasket. If gap is excessive, cover must be aligned.
- 3. Diaphragm compression nut too tight (compression failure at hub)**  
Compression nut should only be tightened 1/2 turn tighter than hand tight. (See Steps 2 and 3 in assembly instructions diagram.)
- 4. Diaphragm retaining flange bolts overtightened (compression failure)**  
Only tighten retaining flange bolts to prevent leaking – excess torque is not required. (See Step 5 in assembly instructions diagram.)
- 5. Operating vibrator with pressure on vessel (abrasion/shear failure)**