



# Repair Instructions for Seal Replacement Kits No. 407-0021 and 410-0021

June 2000

Form FVC 006

**KEEP THIS DOCUMENT WITH THE PRODUCT UNTIL IT REACHES THE END USER.**

## WARNING

Use proper safety equipment at all times. Purge system completely of all product.

**CAUTION:** Contact with or inhalation of Liquid Anhydrous Ammonia or LP-Gas or their vapors can cause serious injury or death. Dispersement must be in accordance with local regulations.  
For the proper handling and storage of Anhydrous Ammonia refer to ANSI Standard K61.1  
For the proper handling and storage of Liquified Petroleum Gas refer to NFPA Pamphlet 58.

## Repair Instructions

### VALVE TO BE REPAIRED MUST BE IN FULL OPEN POSITION:

- Step 1: Safety equipment (i.e. gloves, goggles and clothing) must be worn before continuing with the next step.
- Step 2: Turn handwheel counter-clockwise until handwheel stops to achieve full open position. Remove screw holding handwheel to stem, then remove handwheel.
- Step 3: Make sure system has been purged before continuing. Using proper wrenching, loosen and remove bonnet assembly from valve body. Remove and discard old bonnet to body gasket.
- Step 4: Clamp hex of bonnet assembly in a vise with disc holder up or facing you. Hold disc holder with a pair of channel locks, loosen disc nut and remove washer and old seat disc from disc holder. Install new seat disc with flat side facing disc holder. Install old washer and new disc nut to disc holder. Hold disc holder with channel locks and tighten disc nut. Stake nut at disc holder threads to hold in place.
- Step 5: Clamp hex of bonnet assembly in a vise with packing nut up or facing you. Loosen and remove packing nut from bonnet. Turn stem clockwise and remove from bonnet. Remove o-ring from packing nut. Remove hat gasket from bonnet. Discard old o-ring and hat gasket. Clean all parts thoroughly to remove dirt, old grease, etc.
- Step 6: Install new o-ring in I.D. groove of packing nut. Push in place with finger tips. Do not use sharp object as you may cut o-ring. Set aside for later assembly.
- Step 7: Inspect stem surface for smoothness. Scratches, pitting, etc. are unacceptable in sealing area. Inspect threads of stem and bonnet for signs of wear. If any of these conditions exist, part or parts must be replaced with new ones.
- Step 8: Lubricate threads of stem with a good type grease. Screw stem and disc holder assembly back into bonnet until disc holder rests against bottom of bonnet. Lubricate exposed surface area of stem with a good pump and packing sealing type lubricant (John Crane style 279A, or equal, is recommended). Place assembly into vise and clamp on hex of bonnet. Very carefully start hat gasket, small end first, over stem and push straight downward until small end engages bonnet. Place packing nut over stem and engage threads of bonnet. Tighten packing nut to 55 ft. / lbs. torque.
- Step 9: Place bonnet to body gasket in recess of body. Lightly lubricate bonnet threads with grease and install bonnet assembly into body. Tighten to 55 ft. / lbs. when using 407-0021 and 95 ft. / lbs. torque for 410-0021. Place handwheel on stem, install screw and tighten.
- Step 10: Turn handwheel clockwise to fully closed position.
- Step 11: Pressurize system, check for leaks using leak detector. Check for proper operation of valve by opening and closing several times.