



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

January 2013

Form FVC 006 - Rev 02

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

WARNING!

- 1. Contact with or inhalation of Liquid Anhydrous Ammonia (NH₃) or of LP Gas, can cause **SERIOUS INJURY OR DEATH**.
- 2. Before installation or removal of any tank valve, the system must be purged of all product.
- 3. Personal Protective Equipment (PPE), safety gloves, goggles and clothing should be worn.
- 4. For proper handling and storage of NH₃, and Liquefied Petroleum Gas, refer to ANSI Standard K61.1. and NFPA Pamphlet 58.
- 5. An abundant supply of fresh water should be available to provide immediate first aid treatment for exposure to NH₃ and LP Gas.
- 6. To prevent the accidental opening of any valve, never grasp or carry a valve by its Hand wheel or handle.
- 7. To ensure a long term and safe operation, the manufacturer recommends that under normal service conditions this product should be inspected at least once every year and be repaired or replaced as required.

TOOLS REQUIRED: Safety Equipment (i.e. Gloves, Goggles, and Clothing), 12" Adjustable Wrench, 7/16" Open End Wrench, 12" & 18" Pipe Wrench, Torque Wrench.

Repair Instructions

WARNING!

VALVE TO BE REPAIRED MUST BE IN FULL OPEN POSITION:

- 1. To prevent unexpected pressure buildup in the system, always keep the Valve handle in the **OPEN POSITION** during installation or removal.
- 2. Safety equipment (i.e. gloves, goggles and clothing) must be worn before continuing with the next step.
- 3. Turn hand wheel counter-clockwise until hand wheel stops to achieve full open position. Remove nut holding hand wheel to stem, then remove hand wheel.

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.

- 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.
- 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 hat gasket. Clean all parts thoroughly to remove dirt, old grease, etc.
- 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.
- 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 condition exist, part or parts must be replaced with new ones.
- 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.
- 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 hand wheel on stem, install screw and tighten.
- 10. Turn hand wheel clockwise to fully closed position.
- 11. Pressurize system, check for leaks using leak detector. Check for proper operation of valve by opening and closing several times.

While this information is presented in good faith and believed to be accurate, Individuals using this literature must exercise their independent judgment in evaluating product selection and determining product appropriateness for their particular purpose, system requirements and certifications. The manufacturer reserves the right to change product designs and specifications without notice.