



# Repair Instructions for Seal Replacement Kit No. 479-0022

June 2000

Form FVC 007

**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 Liquefied 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 nut holding handwheel to stem, then remove handwheel.
- Step 3: Make sure system has been purged before continuing. Valve may be repaired in line or by securing valve in a holding fixture such as a large, heavy-duty bench vise. Using a heavy duty wrench, clamp on hex of bonnet and loosen bonnet by pulling or turning counterclockwise. Remove the bonnet assembly from valve body. Check seat area for damage (nicks, severe or deep scratches, etc.). Replace valve body or install new valve if nicks or scratches cannot be polished out by hand. Remove gasket from body. Take care not to scratch sealing area where new gasket will rest.
- Step 4: Clamp bonnet assembly in a vise with packing nut and stem up, or facing you. Loosen and remove packing nut from bonnet. Remove packing, male adapter, spring, and gasket from stem and bonnet. Remove packing (if packing did not stay on stem when packing nut was removed) and o-ring from packing nut. Take care not to scratch or mar inside diameter of packing nut when removing packing and o-ring. Discard old packing, o-ring, and packing nut gasket. Using handwheel, turn stem clockwise and remove stem and disc holder assembly from bonnet.
- Step 5: Place stem and disc holder assembly in vise. Clamp on under side of disc holder. Loosen and remove disc nut and washer. Remove old seat disc and discard. At this point, clean all parts thoroughly to remove dirt, old grease, etc.
- Step 6: 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 7: Place stem and disc holder assembly back in vise. Clamp on under side of disc holder. Install new disc with mold marks down and facing disc holder. Install old washer / disc nut and tighten to 20 ft. / lbs. Restake disc nut at disc holder threads in two (2) places.
- Step 8: 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. Install new packing rings into packing nut. Place male adapter into packing. Set aside for later assembly.
- Step 9: 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. Drop packing nut gasket down into bonnet making sure that gasket rests on shoulder inside of bonnet. Place spring over stem and drop into 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 place packing nut assembly over end of stem. Push straight down on packing nut with a slight twisting motion to avoid cutting packing and engage threads of packing nut to threads of bonnet. Great care must be taken not to cross thread. Tighten packing nut to 90 ft. / lbs.
- Step 10: Place valve body back into vise (if repaired out of line system). Place body gasket in gasket recess of body. Lightly grease O.D. threads of bonnet and screw bonnet assembly into valve body making sure body gasket stays in body recess until contact is made by bonnet. Using a heavy duty wrench, clamp on hex of bonnet and tighten clockwise to 150 ft. / lbs. torque. Place handwheel on stem, washer on handwheel, start nut on stem threads, and tighten.
- Step 11: Turn handwheel clockwise to fully closed position.
- Step 12: Pressurize system, check for leaks using leak detector. Check for proper operation of valve by opening and closing several times.