405 Centura Court Spartanburg, SC 29303 (864) 574-7966 Fax (864) 587-5608 www.hoke.com

Hoke, Inc.

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### R6000 ADJUST-ABLE RELIEF VALVE INSTRUCTION SHEET

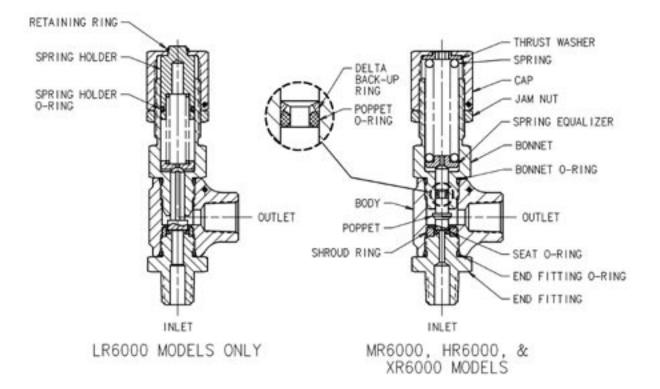


evenly push until the backup has been pushed beyond the

- d. Place the open end of the bullet tool over the poppet on the round nose end. Push the delta back-up ving off the bullet tool and into the poppet o-ring groove.
- e. Push the poppet assembly into the sizing tool with the o-ring side first. Push back and forth three to four times before
- removing to resize the delta back-up ring. 13. Insert poppet into bonnet. Screw bonnet into body and torque
- to 160-170 in-lbs. 14. With spring vertical, place spring equalizer button side down on top of spring and slide into bonnet, spring equalizer first.
- The indent on the spring equalizer should engage the rounded exposed end of the poppet. 15. For LR6000 models: Install spring holder o-ring onto spring
- holder. Reinstall spring holder in cap with retainer ring. 16. With the thrust washer (or spring holder for LR6000 models)
- inside the cap, engage cap onto bonnet 2 or 3 turns. 17. Using a 3/16 Allen wrench keep the thrust washer from
- cap down half the thread length (approximately 4 more turns). For LR6000 models, just screw cap down half the thread length (approximately 4 more turns).
- 18. Re-establish the cracking pressure.

## **For Your Safety**

It is solely the responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. Material compatibility, product ratings, and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.



#### **INSTRUCTIONS FOR SETTING CRACKING PRESSURE**

#### **CAUTION:** A LEAK DETECTION METHOD SHALL BE ESTABLISHED TO DETECT ANY VISIBLE AIR OR N<sub>2</sub> ACROSS THE VALVE SEAT. THIS LEAKAGE DETECTION METHOD SHOULD ENSURE SAFETY DURING TESTING.

- 1. Valves not custom preset by the factory do not have lockwire securing the cap. These valves are nominally set in the middle of the basic crack pressure range.
- 2. Loosen the jam nut and lower to provide sufficient clearance to allow adjustment of the cap.
- 3. On all models except LR6000, insert a 3/16" Allen wrench in the thrust washer hex hole on top of the valve to prevent the thrust washer from turning in the next step.
- 4. Apply pressurized air or N2 at the desired cracking pressure to the valve inlet.
- 5. Using a 7/8" wrench, slowly turn the cap until the valve just starts to leak one bubble per second. Clockwise rotation increases the cracking pressure, counterclockwise decreases the cracking pressure. It might be necessary to temporarily set the cracking pressure higher than that desired in order to adjust until one bubble per second leakage is achieved.
- 6. Recheck the setting by reducing the inlet pressure to zero then re-pressurize to the desired cracking pressure. Repeat step 5 if necessary.
- After the desired cracking pressure is set, reduce inlet pressure to zero. Tighten the jam nut against the cap with 145-155 in-lbs. Do not turn the cap when tightening the jam nut.
- 8. Test for zero outlet leakage for 30 seconds with 95% of cracking pressure applied to inlet.

#### **INSTRUCTIONS FOR SEAL REPLACEMENT**

#### **WARNING:** MAKE SURE THE SYSTEM IS NOT PRESSURIZED WHEN WORKING ON ANY COMPONENT, VALVE OR FITTING. NORMAL SAFTEY PRACTICES REGARDING DEACTIVATED SYSTEMS SHOULD BE FOLLOWED.

- 1. Loosen the jam nut and lower to provide sufficient clearance to allow adjustment of the cap.
- 2. Unscrew the cap keeping thrust washer (spring holder on LR6000 models) inside with the cap. For LR6000 models, temporarily remove retaining ring and discard spring holder o-ring.
- 3. Remove spring and spring equalizer from bonnet.
- 4. Unscrew *bonnet* from *body*.
- 5. Carefully remove *poppet* from *bonnet*. Discard *bonnet o*-*ring*.
- 6. For all models except LR6000: Inspect *delta back-up ring* and *o-ring* for damage or wear. Replace if necessary see step 12.
- 7. Unscrew end fitting from body. Discard end fitting o-ring.
- 8. Gently pry off *shroud ring* to expose *seat o-ring*. Discard *seat o-ring*.

Prior to re-assembling, lubricate all thread and o-rings sparingly with Krytox 206 or equivalent.

#### **CAUTION:** MAKE SURE THE END FITTING AND POPPET SEALING SURFACES ARE NOT DAMAGED DURING RE-ASSEMBLING. TAKE CARE NOT TO NICK OR PINCH O-RINGS DURING RE-ASSEMBLING.

- 9. Place new end fitting and seat o-rings onto end fitting.
- 10. Press the *shroud ring* over the *seat o-ring* until it bottoms out.
- 11. Screw assembled *end fitting* into *body* and torque to 160-170 in-lbs. The *end fitting* goes in the hole opposite the 1/16" diameter lockwire hole.
- 12. If *delta back-up ring* and *poppet o-ring* are to be replaced, re-install as follows (delta back-up ring tools are available from your distributor.):
- a. Lubricate poppet o-ring and delta back-up ring sparingly
- b. Slide *poppet o-ring* onto *poppet* and into groove.
- c. With the lube applied to *delta backup ring*, place with long tapered leg first on tapered end of bullet tool. Slowly and