



PRD-625 Service Instructions

I. Introduction

PRD-625 is a mechanical “pop-off” style pressure relief device, designed to work with CAS mechanical pressure regulators to prevent over-pressurization of downstream components in the event of excessive regulator seat leakage or pressure regulation failure. PRD-625 is factory set to relieve pressure once downstream pressure exceeds 130 psig.

Warning! A downstream PRD must always be used with all CAS systems. Failure to do so may result in catastrophic failure of downstream components causing injury or death.

During End of Line testing the internal leakage (inlet to outlet) of each PRD is checked at CAS to verify a “bubble tight” seal of less than .5 cc/minute. This is accomplished via tightly controlled tolerances and extremely fine surface finishes on the plunger assembly and seat.

PRD-625 will provide consistent leak free performance assuming reasonable care and cleanliness standards are maintained. If the PRD seat becomes contaminated with dirt or debris leakage can increase greatly. If this occurs, the PRD will vent downstream pressure to atmosphere, depleting the contents of your system.

Note: Cycling of the PRD can occur as the result of downstream leakage caused by hoses and/or fittings that are not tightly sealed. This will occur when the system is pressurized but, not flowing. Root cause is that downstream leakage causes outlet pressure to drop significantly below prescribed levels, causing the plunger assembly to cycle open and closed momentarily. This can then produce slight over-pressurization of the outlet and hence PRD venting.

Should the need for disassembly and inspection and/or maintenance be required, the following instructions are provided to guide you through the necessary steps.

II. Disassembly

Warning! When disassembling and re-assembling the PRD, 7/16-in nut must be relocated in the same position (depth wise) that it was removed from. Failure to do so will change the pressure setting at which the device vents. This can render the PRD inoperable. An inoperable PRD may result in catastrophic failure of downstream components causing injury or death.

II. Disassembly Cont'd

1. Remove the PRD from the Regulator Body by loosening with a 1-3/8-in wrench.
2. Measure and record the distance from the end of the Plunger Stud to the face of the 7/16-in Nut using dial calipers. See Figure 1.



3. Insert a 1/2-in socket into the outlet of the PRD and acquire the PRD Cap. Hold securely.
4. Loosen and remove the 7/16-in plunger nut.

Note: The Plunger Nut has approximately 50 lbs of spring pressure against it when fully seated. The Nut and Spring Retainer will be launched if not properly restrained during removal.

5. Remove Spring Retainer, Spring and Stem from PRD Housing.

III. Inspection-Cartridge

1. Clean all components with Mineral Spirits of similar non-aggressive solvent. Dry with compressed air.
2. Examine Seat and PRD Housing sealing surface for contamination and damage. If undamaged, proceed to Re-assembly Instructions Step 5. If PRD Housing sealing surface is damaged it must be replaced. If Seat is damaged proceed to Re-assembly Instructions Step 1.

IV. Re-assembly-Cartridge

1. Unscrew PRD Stem from PRD Cap using a 3/16-in and 1/2-in wrench.
2. Remove damaged Seat and discard.
3. Install new Seat in PRD Cap.
4. Install and tighten Plunger Stem in Plunger Cap.
5. Coat new area of Stem that rides in housing guide with Krytox or similar oxygen compatible lubricant.
6. Insert Stem Assembly into PRD Housing
7. Insert Spring into PRD Housing.
8. Place Spring Retainer on Spring, flat side out.
9. Compress Spring/Retainer so that 7/16-in Nut can be started on Stem threads.
10. Using ½-in socket and 7/16-in wrench return Nut to original axial position.

