

Clark•Reliance®

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Date: 7/02
Supersedes: 523H

Installation and Maintenance Instructions for the SIMPLIPORT®

Boil-Out Procedures (Form E-146A) Must be Completed Prior to Start-Up

To Place SIMPLIPORT® in Service:

1. Shut off water gage valves.

2. Make proper connection of SIMPLIPORT end nipples or flanges to water gage valves employed.

NOTE: Where end nipples are furnished, be sure that red lug is at the top and that all SIMPLIPORT window packing nuts point slightly to the **left** as observed by viewer, See Fig. No. 2.

3. With Cold Boiler:

a) Open water gage valves and allow SIMPLIPORT to heat up along with boiler.

b) When operating pressure has been attained, close water gage valves and bleed pressure from SIMPLIPORT. It is now necessary to retorque each window nut to Specified Value (see page 2, Fig. 3). Then double check each port window for leakage. A small mirror held opposite the leak-detector hole (drilled through one face of each window nut) is useful here. If leakage is observed, shut off water gage valves and replace module of affected port, as described on reverse side under "To Maintain SIMPLIPORT."

NOTE: If a mirror is used to detect leaks a small wisp of steam may be seen on the surface of the mirror when held directly opposite of the leak detection hole. This is typical and should not be construed as a failure.

c) Mount illuminator and hood on side lugs of SIMPLIPORT, joining red slot in illuminator with red lug on SIMPLIPORT.

4. With Hot Boiler:

a) Open drain valve. Crack open steam valve to permit gradual warm-up of SIMPLIPORT for about five minutes so as to obtain operating temperature. Close steam valve and make sure all pressure is released from SIMPLIPORT (drain should remain open).

b) It is now necessary to retorque each window nut to the specified torque. (see page 2, Fig 3)

c) Check each port window for leakage. A small mirror held opposite the leak-detector hole (drilled through one face of each window nut) is useful here. If leakage is observed, shut off water gage valves, drain gage and replace module of affected port, as described on reverse side.

NOTE: If a mirror is used to detect leaks a small wisp of steam may be seen on the surface of the mirror when held directly opposite of the leak detection hole. This is typical and should not be construed as a failure.

d) Mount illuminator and hood on side lugs of SIMPLIPORT.

CAUTIONS:

1. NEVER APPLY TORQUE TO SIMPLIPORT UNDER PRESSURE.
2. EXCESSIVE BLOWDOWNS MAY SHORTEN GAGE SERVICE LIFE (Form E-156B).



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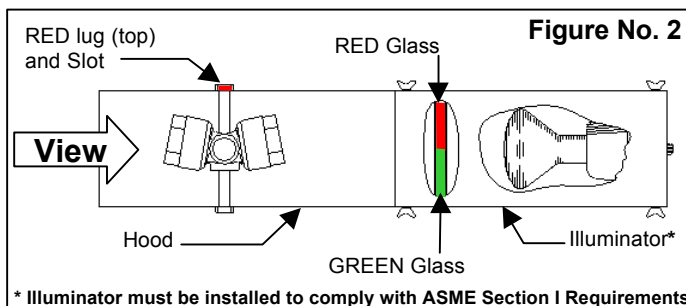
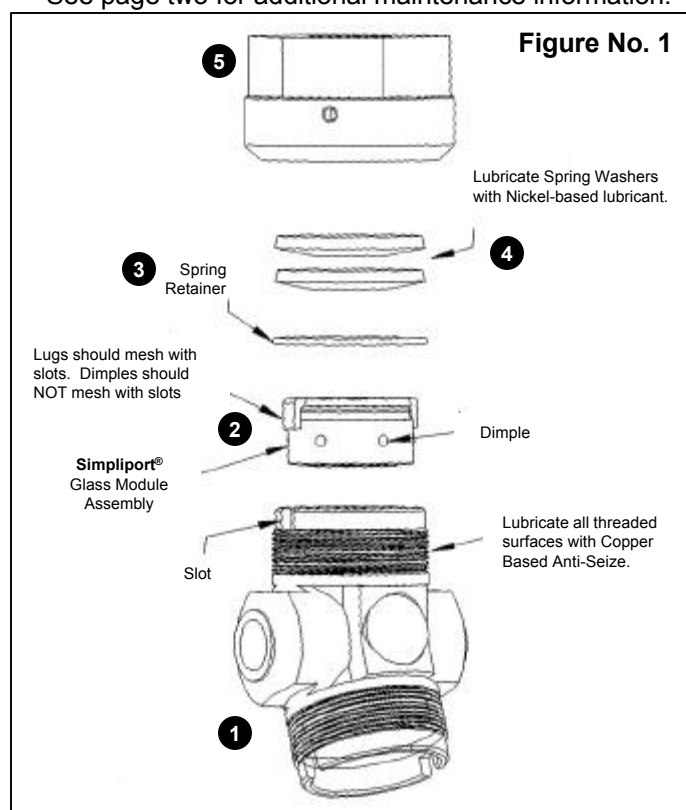
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SIMPLIPORT COMPONENTS (Fig. 1)

1. SIMPLIPORT Body (Single Window Unit)
2. Module (PW-24BR)
3. Spring Retainer (PW-40)
4. Spring Washers (PW-39) Packing Nuts PW-27R and PW-41 (PW-66) Packing Nut PW-68
5. Packing Nut (see Fig. No. 3)
 - Low Pressure - PW-27R
 - High Pressure - PW-41
 - Hi-Lo Pressure - PW-68

Note: Use only OEM replacement modules to retain design and maintain performance safety standards. See page two for additional maintenance information.



Make sure that Illuminator is mounted as shown with respect to the gage

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Sales & Service: Northeast Controls Inc. □

Tel: 201-327-7660 | Fax: 201-327-3242 | clark@nciweb.com □

<http://www.nciweb.com>

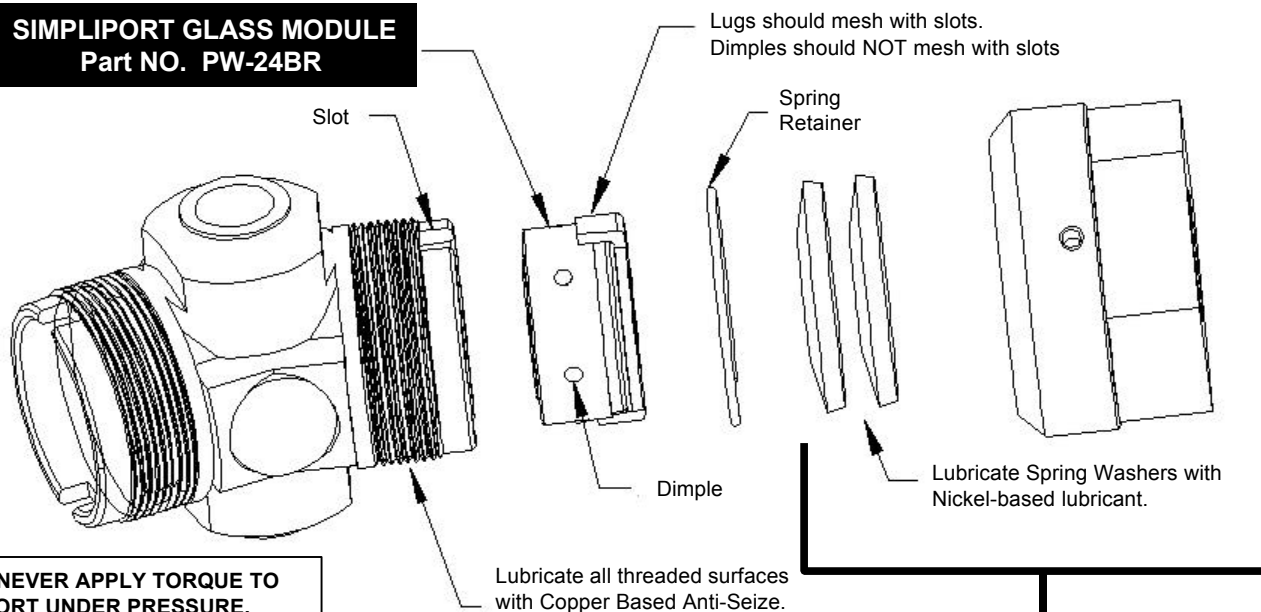


INSTALLING SIMPLIPORT® O.E.M. REPLACEMENT MODULES

(required: Torque Wrench w/ 1-7/8" Socket, Special Pliers - part # PW-35, Lubricant - see steps 7 & 8)

1. Shut off water gage valves and drain gage.
2. Remove packing nut containing Spring Washers - save for re-use.
3. Remove old module and discard. (use Special Pliers, # PW-35)
4. Wipe recess in Body with clean cloth; be sure that the Gasket Groove at bottom is perfectly clean and smooth. An electric drill with a medium grade 1" (25mm) diameter stainless steel wire brush may be used to polish the Gasket Surface, if necessary.
5. Check that the sealing Gasket is centered in the Glass Module.
6. Install Glass Module. Lugs should mesh with Slots / Dimples should NOT mesh with Slots.

SIMPLIPORT GLASS MODULE Part NO. PW-24BR



7. Remove Spring Retainer and Spring Washers from Packing Nut. Clean and inspect Spring Washers for cracks or pitting. Damaged Spring Washers should not be re-used. Lubricate each Washer with Nickel-based lubricant, and re-insert into the Packing Nut as shown below - note the number & position of the Spring Washers for each assembly.

A). Do not sandblast Spring Washers. Clean with solvent only.

B). Packing Nuts may be glass-bead cleaned to remove corrosion and dirt from threads.

8. Lubricate Threads on Gage Body with a Copper-based lubricant.

9. A) Install Packing Nut Assembly and turn Nut "finger-tight".

B) Tighten Nut to Specified Torque - see below (Fig No. 3).

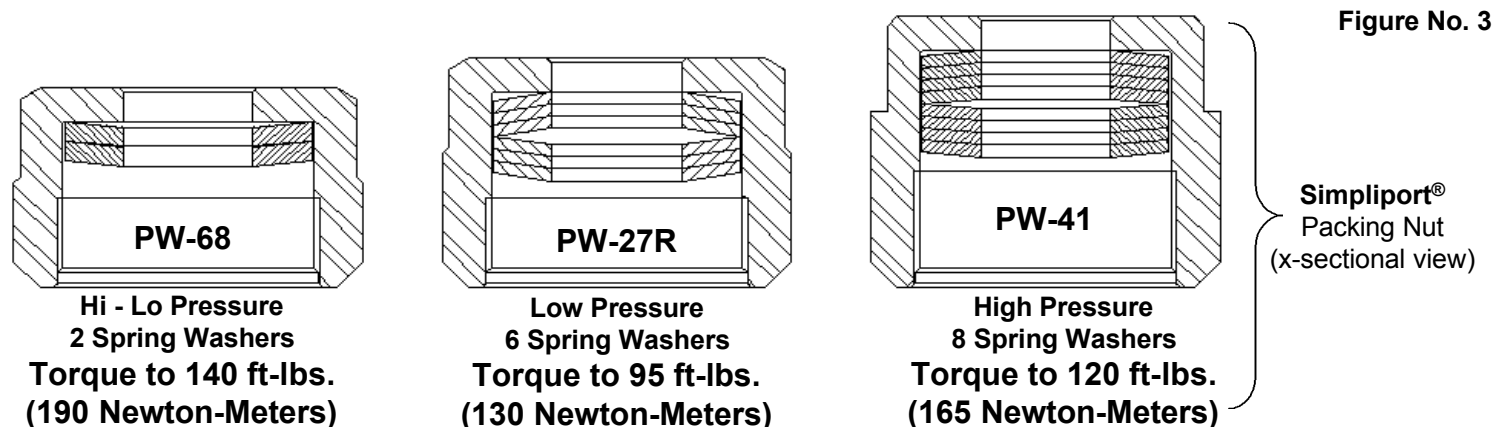
10. Crack open Shut-Off Valves and close Drain Valve to allow Gage to reach operating temperature (approximately 5minutes).

11. Close Shut-Off Valves and re-open Drain Valve.

12. Re-Torque Packing Nuts to Specified Torque - see below (Fig. No. 3).

SIMPLIPORT PACKING NUT ASSEMBLY

Part No. PW-27R (Low Pressure)
Part No. PW-41 (High Pressure)
Part No. PW-68 (Hi-Lo Pressure)



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