1

⚠ WARNING

Pressure Hazard – Test fixture or airline may contain residual pressure and failure to safely relieve could result in sudden loss of pressure causing serious injury.

Hazardous Material – Relief Valves may contain residual hazardous material from cargo tank. Safely clean relief valves prior to handling.

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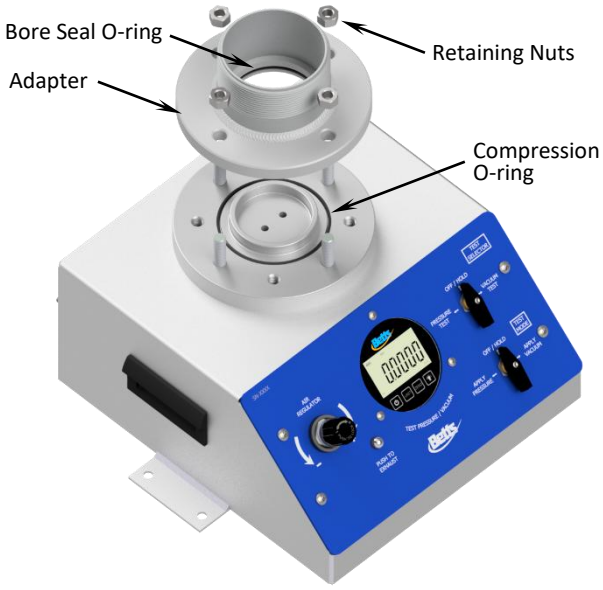
2 **Install Adapter on Test Box:**

1. Select appropriate adapter for the pressure relief valve being tested.
2. Verify the Bore Seal O-ring is in place, in good condition and lubricated. This O-ring is the primary seal for the adapter. **O-ring and bore must be lubricated to facilitate ease of adaptor removal.**
3. Install the Adapter on the studs and push down until it seats on the Compression O-ring.
4. Install the Retaining Nuts snug with wrench to hold the adapter in place. There is no need to excessively tighten these nuts.

Note: To remove the Adaptor, unscrew the four Retaining Nuts and pull up evenly on the Adaptor. If needed, two screwdrivers can be used simultaneously to gentle pry up on opposite sides of the Adaptor to remove.



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3 **Install Relief Valve to Test Box:**

1. Verify the pressure relief valve has a mounting seal/gasket installed and in good condition. Note: It is permissible to use an alternate elastomer mounting gasket for testing purpose if desired.
2. Install pressure relief valve on adapter and tighten to ensure a leak tight seal.

Notes:

- Test procedure for Pressure Relief Valve or Pres/Vac Combo Relief Valve starts at step #4 *"Set Pressure Test".*
- Test procedure for Vacuum Valve starts at step #8 *"Vacuum Set Test".*

Pressure Test

4 **Set Pressure Test**:

1. Rotate the Test Selector to “Pressure Test”.
2. Rotate the Test Mode to “Apply Pressure”.
3. Slowly turn the Air Regulator clockwise to increase pressure in test box.
4. Monitor the Pressure Gauge for the Set Pressure reading.
5. See Maintenance Manual MM-RV002 for pass /fail criteria dependent on PRV being tested.

Set pressure defined as point at which continuous flow is seen, felt, or heard around seat area. *(Nomenclature per ASME section XII part TR-110 and TTMA TB-126).*

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5 **Pressure Re-seal Test**:

1. Rotate the Test Mode to “Off/Hold”.
2. The pressure will bleed down and then stabilize.
3. Monitor the Pressure Gauge for the Re-seal Pressure.
4. See Maintenance Manual MM-RV002 for pass/fail criteria dependent on PRV being tested.

Reseal pressure defined as point at which seat re-seals to a leak tight condition. *(Nomenclature per TTMA TB-126).*

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6 **Relieve Pressure in Test Box** – Push and hold the “Push to Exhaust” button to relieve pressure in the Test Box.

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7 **Remove Valve** - If testing just a Pressure Relief Valve, the test is complete. Remove valve from test fixture.

or

Continue with Vacuum Test - If testing a Pressure/Vacuum Combo Valve, proceed to step #8 for Vacuum Set Test.

Alternate Quick Test Procedure for Testing Additional Pressure Relief Valves with Similar Set Pressure:

1. The Air Regulator has already been set from the previous test.
2. Install Relief Valve on Test Box
3. Rotate the Test Selector to “Pressure Test”.
4. Slowly feather the Test Mode in a counterclockwise position to gradually increase the pressure.
5. Monitor the Pressure Gauge for the Set Pressure reading.
6. Once the Set Pressure is identified, rotate the Test Mode back to “Off/Hold”.
7. Monitor the Pressure Gauge for the Re-seal Pressure.

Vacuum Test

8 **Vacuum Set Test**:

1. Rotate the Test Selector to “Vacuum Test”.
2. Rotate the Test Mode to “Apply Vacuum”.
3. Slowly turn the Air Regulator clockwise to increase the vacuum. (Please note: an internal venturi is used to generate the vacuum. Air will be heard exhausting inside the box during the vacuum test.)
4. Monitor the Pressure Gauge for the Vacuum Set reading.
5. See Maintenance Manual MM-RV002 for pass /fail criteria dependent on PRV being tested.

Vacuum set defined as point at which continuous flow is seen, felt, or heard around seat area. *(Nomenclature per ASME section XII part TR-110 and TTMA TB-126).*

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9 **Vacuum Re-seal Test**:

1. Test selector must be rotated to the “Off/Hold” position first.
2. Next, rotate the Test Mode to “Off/Hold”.
3. The vacuum will bleed down and then stabilize.
4. Monitor the Pressure Gauge for the Re-seal Vacuum.
5. See Maintenance Manual MM-RV002 for pass/fail criteria dependent on PRV being tested.

Reseal vacuum defined as point at which seat re-seals to a leak tight condition. *(Nomenclature per TTMA TB-126).*

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10 **Relieve Vacuum in Test Box** – Push and hold the “Push to Exhaust” button to relieve vacuum in the Test Box.

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11 **Remove Valve** - Test is complete. Remove valve from test fixture.

Alternate Quick Test Procedure for Testing Additional Vacuum Relief Valves with Similar Vacuum Set:

1. The Air Regulator has already been set from the previous test.
2. Install Relief Valve on Test Box
3. Rotate the Test Selector to “Vacuum Test”.
4. Slowly feather the Test Mode in a clockwise position toward “Apply Vacuum” to gradually increase the vacuum.
5. Monitor the Pressure Gauge for the Vacuum Set reading.
6. Once the Vacuum Set is identified, the Test Selector must be rotated back to “Off/Hold” position first.
7. Rotate the Test Mode back to “Off/Hold”.
8. Monitor the Pressure Gauge for the Re-seal Vacuum.