# REGULATORS

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<td>11R “B” Pilot Controlled - Compact, Installation &amp; Service</td>
</tr>
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<td>1R200E</td>
<td>13R “B” Hi-Flow, Installation &amp; Service</td>
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<td>1R402F</td>
<td>14R “C” Miniature, Installation &amp; Service</td>
</tr>
<tr>
<td>1R602</td>
<td>14R “D” Miniature, Installation &amp; Service</td>
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<td>1M102G</td>
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<tr>
<td>3R101</td>
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<tr>
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<td>R24, R25, R45, R46 Air / Water Miniature, Installation &amp; Service</td>
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<tr>
<td>Safety Guide</td>
<td>PDN Safety Guide</td>
</tr>
</tbody>
</table>

Visit www.pdnplu.com for additional instruction sheets.
WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

**WARNING**
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>1700</th>
<th>250</th>
<th>17.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature Range:</td>
<td>-23°C to 52°C (-10°F to 125°F)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Installation**
1. Install REGULATOR so that fluid flow is in direction of arrow. Installation must be upstream from devices it is to service (lubricator, valve, cylinder, or tool), and mounted closely to the other devices. Mounting may be in any position.
2. Gauge ports are located on both sides of the REGULATOR body for your convenience. It is necessary to install a gauge or socket pipe plugs into each port during installation. (Note: Miniature units use 1/8 NPT, and Economy units use 1/2 NPT).
3. For protection against rust, pipe scale, and other foreign matter, install a FILTER on the upstream (high pressure) sides as close to the REGULATOR as possible.

**Operation & Service**
1. BEFORE INSTALLING OR DISASSEMBLING REGULATOR FOR SERVICING, SHUT OFF FLUID SUPPLY PRESSURE TO REGULATOR.

2. To service the Regulator, disengage the yellow lock sleeve by pulling upward. Turn adjusting knob counterclockwise until compression is released from the pressure control spring. Remove bonnet assembly to service the piston area, the poppet assembly area, or both.
3. After servicing the Regulator, or upon installing the Regulator, turn on air supply. Then proceed to adjust the desired downstream pressure by turning adjusting knob clockwise. This permits pressure to build up slowly, preventing any unexpected operation of valve, cylinders, tools, etc. in the downstream line.
4. To decrease regulated pressure settings, always reset from a pressure lower than the final setting required. Example, lowering the secondary pressure from 80 PSI to 60 PSI is best accomplished by dropping the secondary pressure to 50 PSI, then adjusting upward to 60 PSI.
5. When desired, secondary pressure settings can be reached by pushing the yellow locking sleeve down to lock the adjusting knob.

**WARNING**
FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.
## Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonnet Assembly</td>
<td>L00715B</td>
</tr>
<tr>
<td>Control Springs</td>
<td></td>
</tr>
<tr>
<td>5 to 125 PSI (Air Only)</td>
<td>P78648</td>
</tr>
<tr>
<td>1 to 15 PSI</td>
<td>P78659B</td>
</tr>
<tr>
<td>2 to 60 PSI</td>
<td>P78660B</td>
</tr>
<tr>
<td>1 to 30 PSI</td>
<td>P00411</td>
</tr>
<tr>
<td>Non-Relieving Piston Kit</td>
<td></td>
</tr>
<tr>
<td>(1) Piston (Black)</td>
<td>PS411P</td>
</tr>
<tr>
<td>(1) Piston Seal</td>
<td></td>
</tr>
<tr>
<td>Relieving Piston Kit</td>
<td></td>
</tr>
<tr>
<td>(1) Piston (Black)</td>
<td>PS412BP</td>
</tr>
<tr>
<td>(1) Piston Seal</td>
<td></td>
</tr>
<tr>
<td>Poppet Kit</td>
<td>PS414P</td>
</tr>
<tr>
<td>Gauges</td>
<td></td>
</tr>
<tr>
<td>0 to 60 PSI (0 to 414 kPa)</td>
<td>K4520N14060</td>
</tr>
<tr>
<td>Panel Mounting Nut</td>
<td>P78652</td>
</tr>
<tr>
<td>Mounting Bracket</td>
<td>PS417BP</td>
</tr>
</tbody>
</table>
Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

Maximum Operating Pressure:  
<table>
<thead>
<tr>
<th>Inlet Water Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1030</td>
<td>150</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Water Temperature Range:  
40°F to 125°F (4°C to 52°C)

ANSI Symbol
Adjustable; Non-Relieving

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - a repair service kit is available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt, chips, and scale. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.
2. Install regulator so that water flow is in the direction of arrow.
3. Installing a filter upstream of the regulator (as close to the unit as possible) will provide added protection against rust, pipe scale, and other foreign matter.
4. Fitting Assembly - For proper assembly, fittings must be installed hand-tight and tightened by a wrench no more than 1-2 turns.

Caution: Excessive turning of fitting with a wrench may result in permanent damage and render the regulator inoperative.

Service Procedures
Caution: Shut off water supply and relieve the water pressure trapped within the regulator.

NOTE: The low cost of these regulators makes replacement of the regulator seals uneconomical. If regulator shows signs of wear, discard and replace unit. However, if repairing is deemed necessary, see Service Kit section.

1. To service the regulator disengage the adjusting knob by pulling it upward. Then turn it counterclockwise until compression is released from the control spring. Unscrew bonnet assembly and replace items found in the service kit.

NOTE: Tighten seat to body from 5 to 7 in-lbs (.6 to .8 Nm) of torque.

2. After replacing items from the kit, attach the bonnet assembly and tighten it from 10 to 15 in-lbs (1.1 to 1.7 Nm) of torque.

3. Test for proper function by turning on water supply and slowly build up downstream pressure by turning adjusting knob clockwise. Check for any internal or external leakage.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

WARNING
Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

Extra copies of these instructions are available for inclusion in equipment / maintenance manuals that utilize these products. Contact your local representative.
Mini Series Water Regulator

Service Kit Available
Service Kit for balanced units
(consists of items # 2, 3, 4, 9, 11, 12, & 13) PS470

Parts Identification List

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
</tr>
<tr>
<td>2</td>
<td>Poppet Seal</td>
</tr>
<tr>
<td>3</td>
<td>Poppet Stem - balanced</td>
</tr>
<tr>
<td>4</td>
<td>Seat</td>
</tr>
<tr>
<td>5</td>
<td>Aspirator</td>
</tr>
<tr>
<td>6</td>
<td>Control Spring</td>
</tr>
<tr>
<td>7</td>
<td>Bonnet Assembly</td>
</tr>
<tr>
<td>8</td>
<td>Piston</td>
</tr>
<tr>
<td>9</td>
<td>Diaphragm</td>
</tr>
<tr>
<td>10</td>
<td>Thrust Plate</td>
</tr>
<tr>
<td>11</td>
<td>Return Spring</td>
</tr>
<tr>
<td>12</td>
<td>Washer - balanced units</td>
</tr>
<tr>
<td>13</td>
<td>O-ring - balanced units</td>
</tr>
</tbody>
</table>
Operating Temperature Range:
-40°C* to 74°C (-40°F to 165°F)
* Temperatures below 0°C (32°F) require moisture free air.

Installation
1. Regulator should be installed with reasonable accessibility for service whenever possible — repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe — never into the female port. Do not use PTFE tape to seal pipe joints — pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.
2. Install regulator so that air flows from “IN” to “OUT” as marked on the regulator. Installation must be upstream from devices it is to service (lubricator, valve, cylinder or tool), and mounted closely to these devices. Mounting may be in any position.
3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plug into each port during installation.
4. For protection against rust, pipe scale and other foreign matter, install a filter on the upstream (high pressure) side as closely to the regulator as possible.

ANSI Symbols

Operation
With the adjusting knob turned fully counterclockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (J) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load
Prep-Air® I Air Line Regulator

causes the diaphragm (E) and the valve poppet assembly (J) to move downward allowing flow across the seat area (M) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm (E) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (J) and the diaphragm (E) move upward against control spring (C) by the amount of opening the downstream demand. The flow of downstream air is metered downward opening seat area (M) allowing air to flow to meet the downstream demand. A reduced output pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a balance. A reduced outlet (E) under the diaphragm only.)

Shoud downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (E) to move upward against control spring (C), poppet assembly (J), and vent the excess pressure to atmosphere through the hole in the bonnet (P). (This occurs in the relieving type regulator only.)

Regulator Spring Conversion
Turn the control knob (A) fully counterclockwise. Remove upstream air supply. Remove downstream air also for non-relieving type regulators.

Compact Regulators:
1. Turn bonnet (B) counterclockwise and remove along with spring (C).
2. Turn the control knob clockwise 2 1/2 turns (from fully counterclockwise).
3. Screw the bonnet (B), with the new spring (C) inside, into the regulator base and tighten to 35-45 ft-lb.

Standard and Full Size Regulators:
1. Remove (6) screws (G), bonnet (B) and spring (C).
2. Turn the control knob clockwise 4 turns (from fully counterclockwise).
3. Place the bonnet (B), with the spring (C) inside, over the diaphragm and hold in place until the (6) screws are reassembled. Tighten screws in progressive steps using a crisscross pattern. Final torque to be as follows:
   Standard Regulators (1/4", 3/8" or 1/2" pipe) 45-55 in-lb
   Full Size Regulators (3/4" or 1" pipe size) 65-75 in-lb

Service
1. Turn the control knob (A) fully counterclockwise. Remove upstream air supply. Remove downstream air also for non-relieving type regulators.
2. Compact Regulators - Turn bonnet (B) counterclockwise and remove along with spring (C), washer (D) and diaphragm assembly (E). Discard diaphragm assembly and o-ring (F) (relieving type regulators only).
3. Standard and Full Size Regulators - Remove (6) screws (G), bonnet (B) and spring (C). Remove and discard diaphragm assembly (E) and o-ring (F) (relieving type regulators only).
4. Remove bottom plug (H) along with head and guide assembly (J) and spring (K). Discard head and guide assembly. Remove and discard o-ring (L) from bottom plug.
5. Clean retained parts with mild soap and water.
6. Lubricate new o-rings (F & L) and head and guide assembly (J) with Sunaplex 781.
7. Assemble o-ring (L) to bottom plug (H). Assemble head and guide assembly (J), spring (K) and bottom plug back into the regulator base.
8. Compact Regulators - Place the diaphragm assembly (E), with the center plate facing out, into the regulator base making sure it is centered on the valve stem and seated into the recess provided. Place the washer (D) on top of the diaphragm. Turn the control knob clockwise 2 1/2 turns. Screw the bonnet (B), with the spring (C) inside, into the regulator base and tighten to 35-45 ft-lb.

Standard and Full Size Regulators - Place the diaphragm assembly (E) into position over the bolt holes and guide pins and make sure the center plate is facing outward. Turn the control knob clockwise 4 turns. Place the bonnet (B), with the spring (C) inside, over the diaphragm and hold in place until the (6) screws are reassembled. Tighten screws in progressive steps using a crisscross pattern. Final torque to be as follows:
   Standard Regulators (1/4", 3/8" or 1/2" pipe) 45-55 in-lb
   Full Size Regulators (3/4" or 1" pipe size) 65-75 in-lb

Service Kits

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<thead>
<tr>
<th>Model</th>
<th>Compact</th>
<th>Standard</th>
<th>Full Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relieving</td>
<td>03560 8000B</td>
<td>03562 8000B</td>
<td>03566 8000B</td>
</tr>
<tr>
<td>Non-Relieving</td>
<td>03560 8009B</td>
<td>03562 8009B</td>
<td>03566 8009B</td>
</tr>
<tr>
<td>Relieving</td>
<td>—</td>
<td>03562 8010B</td>
<td>03566 8010B</td>
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<tr>
<td>High Pressure</td>
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<td>—</td>
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Accessories

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<thead>
<tr>
<th></th>
<th>Compact</th>
<th>Standard</th>
<th>Full Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Springs (Color)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5-50 PSIG (Blue)</td>
<td>03560 7021</td>
<td>03562 7021</td>
<td>03566 7021</td>
</tr>
<tr>
<td>2-125 PSIG (Black)</td>
<td>50640 0000</td>
<td>03562 7019</td>
<td>03566 7019</td>
</tr>
<tr>
<td>5-250 PSIG (Silver)</td>
<td>03560 7022</td>
<td>03562 7022</td>
<td>03566 7022</td>
</tr>
<tr>
<td>Gauges</td>
<td>K4520N14060</td>
<td>K4520N14060</td>
<td>K4520N14060</td>
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<tr>
<td>0-60 PSIG</td>
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<td>0-160 PSIG</td>
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<tr>
<td>Mounting Brackets</td>
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<tr>
<td>Pipe Mounting</td>
<td>00902 0400B</td>
<td>00902 0400B</td>
<td>00906 0400B</td>
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<tr>
<td>Right Angle Mounting</td>
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<tr>
<td>Panel Mounting Nut</td>
<td>03562 0602B</td>
<td>03562 0602B</td>
<td>03562 0602B</td>
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</tbody>
</table>

† Panel Mount Nut included.
Installation Instructions:
#035600500 Tamperproof Option for Use with 3500 Series Regulators.

A. Removing Hand Wheel and Lock Knob Assembly:
   1. Turn red lock knob in a counter clockwise direction until free of adjusting screw. This will free complete hand wheel and lock assembly.
   2. Remove the hand wheel & lock knob assembly from the regulator.

B. Installing Tamperproof Option:
   1. Select the small spacer for use with all 1/4" to 1/2" regulators and the larger spacer with 3/4" and 1" regulators.
   2. Place steel spacer over the adjusting screw and flush with the top of the regulator bonnet.
   3. Install plastic tamperproof device over adjusting screw threads by tapping gently with a hammer, wrench, etc. Make sure all threads are covered by the plastic cap and that it is free to rotate.

Properly installed, the plastic tamperproof device cannot be removed without destroying it. To re-adjust regulator, use pliers to crush the plastic shelf, remove steel insert from regulator adjusting screw, re-adjust regulator, and install new plastic tamperproof device.

WARNING
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.
Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

Maximum Operating Pressure:

<table>
<thead>
<tr>
<th>KPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet</td>
<td>1720</td>
<td>250</td>
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</tbody>
</table>

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Symbols

Relieving Regulator Adjustable
Non-Relieving Regulator Adjustable

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE (tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.

2. Install regulator so that air flow is in the direction of arrow. Installation must be upstream of and close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.

4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation
1. BEFORE TURNING ON AIR SUPPLY, TURN ADJUSTING HANDLE COUNTERCLOCKWISE UNTIL COMPRESSION IS RELEASED FROM PRESSURE CONTROL SPRING. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting handle clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.

2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG).

Use the hex nut, located on the adjusting screw, to lock the pressure setting.

WARNING
FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.
Service
To service regulator use the following procedure:

**Caution: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit.** (The regulator may be serviced without removing it from the air line.)

1. To service piston or control springs, turn the adjusting handle counterclockwise until compression is released from pressure control spring.
   a. To remove bonnet, remove retaining spring by lifting out and pulling on the exposed loop.
   b. Clean and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from the service kits.
   c. Lubricate the piston's o-ring (Item 17) with a mineral base oil or silicone grease. DO NOT use synthetic oils such as esters.
   d. Install piston, piston's o-ring, control spring, and spring retainer (Item 12). Place bonnet into body, allowing the projecting notches on bonnet to mate with depressions in the body. Then feed retaining spring into the joint groove until it completely encircles the joint. See figure on page two.

2. To service poppet assembly:
   a. Exhaust system air pressure as described above.
   b. Remove cap (Item 1) by unscrewing it from body. Remove poppet assembly, lip seals, cap's o-ring (Item 4) and poppet return spring.
   c. Clean and carefully inspect parts for wear and damage. If replacement is necessary, use new parts from a service kit. (See Service Kits Available section.)
   d. Lubricate lip seals and sliding surfaces.
   e. Re-install parts as shown in figure. Note orientation of open lips on lip seals (Items 3 & 7).
   f. Lubricate cap’s o-ring and install it in o-ring groove on cap. Then screw cap into body until the cap bottoms out in body.

3. Turn on air supply and adjust to desired secondary pressure as described in the Operation section. Check for leaks. If leaks occur, shut off the air supply, depressurize the air system and make necessary adjustments to eliminate leakage.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

### Service Kits Available
- Body Service Kit (Balanced Poppet) PS312B
- Mounting Bracket Kit PS309
- Relieving Piston Kit PS310
- Non-Relieving Piston Kit PS311

**Gauges:**
- Low Pressure
  - 0 to 410 kPa (0 to 60 PSIG) K4520N14060
- Standard Pressure
  - 0 to 1100 kPa (0 to 160 PSIG) K4520N14160
- High Pressure
  - 0 to 2070 kPa (0 to 300 PSIG) K4520N14300

**Control Springs:**
- 7 to 410 kPa (1 to 60 PSIG) P78695B
- 21 to 860 kPa (2 to 125 PSIG) P78696B
- 34 to 1720 kPa (5 to 250 PSIG) P78697B

---

**Figure: 08R Regulator**
(Relieving Regulator Shown)
Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

Maximum Operating Pressure:

<table>
<thead>
<tr>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1720</td>
<td>250</td>
<td>17.2</td>
</tr>
</tbody>
</table>

Ambient Temperature Range:
0°C to 80°C (32°F to 175°F)

Symbols

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.
2. Install regulator so that air flow is in the direction of arrow. Installation must be upstream of and close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.
3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.
4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation
1. These air pilot regulators are designed to provide quick response and accurate pressure regulation from a remote installation. With pressure supplied to the regulator’s inlet port and no pilot signal, the poppet assembly is closed. Increasing the pilot port pressure increases the regulator’s secondary pressure.
2. Pressurizing the pilot port applies a load to the piston. This then causes the piston and valve poppet assembly to move downward, allowing flow to occur. Pressure in the downstream line offsets the load on the piston.
3. Creating a demand downstream of the unit results in a reduced pressure under the control piston. The load on the control piston now causes the poppet assembly to move downward allowing air to flow downstream.
4. Should downstream pressure exceed the desired regulated pressure, this excess pressure will cause the piston to move upward. This causes the valve poppet assembly to shut off air flow and the excess pressure is vented to the atmosphere. (This occurs with relieving type regulators only. Non-relieving units require secondary air demand in order to reduce excess secondary pressure.)

WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

WARNING
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.

WARNING
Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage.

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Extra copies of these instructions are available for inclusion in equipment/maintenance manuals that utilize these products. Contact your local representative.
Service

![CAUTION: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (The regulator may be serviced without removing it from the air line.]

Servicing Air Pilot Assembly:

1a. **For Compact and Standard Units** - Remove bonnet by turning it counterclockwise. Remove piston and seals. If the upper balancing seal is being serviced, remove the retaining ring and seal below it.

1b. **For Hi-Flow Units** - Remove bonnet by first removing the retaining spring. This is accomplished by lifting the end out and pulling on its exposed loop. Remove piston and seals. If the upper balancing seal is being serviced, remove the retaining ring and seal below it.

2. Clean and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.

3. Lubricate seals for the piston with a mineral based oil or silicone grease. DO NOT use synthetic oils such as esters.

4. Install pistons and seals (and upper balance seal and retaining ring if applicable). Orient lip seals (items 7, 12, or 16) as shown in figure.

5a. **For Compact and Standard Units** - Assemble bonnet to body by rotating it clockwise. Tighten bonnet from 5.6 to 8.5 N-m (50 to 75 in-lbs) of torque.

5b. **For Hi-Flow Units** - Place bonnet into body, allowing the projected notches on bonnet to mate with depressions in the body. Then feed retaining spring into joint groove until it completely encircles the joint.

Servicing Poppet Assembly:

1. Remove cap (item 1) by unscrewing it from body. Remove poppet assembly, lip seal, cap’s o-ring (item 5) and poppet return spring.

2. Clean and carefully inspect parts for wear and damage. If replacement is necessary, use new parts from a service kit. (See Service Kits Available section.)

3. Lubricate lip seal and sliding surfaces.

4. Reinstall parts as shown in figure. Orient lip seal (items 3 or 15) as shown in figure of unit being serviced.

5. Lubricate cap’s o-ring and install it in o-ring groove on cap. Then screw cap into body until the cap bottoms out in body.

- Turn on air supply and adjust to desired secondary pressure as described in the Operation section. Check for leaks. If leaks occur, shut off the air supply, depressurize the air system and make necessary adjustments to eliminate leakage.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

Service Kits Available

<table>
<thead>
<tr>
<th>Kit Description</th>
<th>Compact</th>
<th>Standard</th>
<th>Hi-Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting Bracket Kit*</td>
<td>PS109</td>
<td>PS209</td>
<td>PS309</td>
</tr>
<tr>
<td>Relieving Piston Kit</td>
<td>PS110</td>
<td>PS110</td>
<td>PS110</td>
</tr>
<tr>
<td>Non-Relieving Piston Kit</td>
<td>PS111</td>
<td>PS111</td>
<td>PS111</td>
</tr>
<tr>
<td>Poppet Kit</td>
<td>PS112</td>
<td>PS212</td>
<td>PS312</td>
</tr>
<tr>
<td>Regulator Cap &amp; Seal Kit</td>
<td>PS116</td>
<td>PS210</td>
<td>N/A</td>
</tr>
<tr>
<td>Air Pilot Control Piston Kit</td>
<td>N/A</td>
<td>N/A</td>
<td>PS313</td>
</tr>
</tbody>
</table>

* Not supplied with units, must be ordered separately.
Installation & Service Instructions:
1R402F
Economy Regulators 1/4" Ports
ISSUED: May, 2012
Supersedes: July, 2008
Doc.# 1R402, EN# 120286, Rev. 12

Pneumatic Division
Richland, Michigan 49083
269-629-5000

Safety Guide
For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the Pneumatic Division Safety Guide at: www.parker.com/safety

WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only. Compliance with the rated pressure and temperature is necessary.

Maximum Operating (Inlet) Pressure: kPa PSIG bar
Mini Regulator (Plastic Body) 827 120 8.32
Economy Regulator (Metal Body) 1720 250 17.2

Ambient Temperature Range: 0°C to 52°C (32°F to 125°F)

Symbol

Installation
1. This unit should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compounds should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.
2. Install unit so that air flow is in the direction of arrow. Installation must be upstream of and close to devices it is to service (valve, cylinder, tool etc.) Mounting of Regulators may be in any position.
3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plug into each port during installation.
4. To protect Regulator units against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Caution: For proper assembly of units having plastic bodies, fittings must be installed hand-tight and then tightened by wrench 1/2 turn. To prevent leakage past threads, apply thread sealant to fitting. Prestolok fittings are recommended. Use of hard pipe is not recommended.

EXCESSIVE TURNING OF FITTINGS BY WRENCH MAY RESULT IN PERMANENT DAMAGE AND RENDER THE REGULATOR INOPERABLE.

Operation of Regulator
1. Before turning on air supply, turn adjusting handle counterclockwise until compression is released from control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting handle clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.
2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG).

Service
Caution: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling unit. (Units may be serviced without removing them from the air line.)

Servicing Regulator:
Note: See Figure 1 to aid with this procedure.
1. Unlock the adjusting knob by pulling upward (with the unit in an upright position.) Then turn adjusting knob counterclockwise until compression of the control spring has been removed.
2. Remove the bonnet from body. Then remove o-ring (3), piston, lip seal (5), and control spring (8) to service the bonnet subassembly. Unscrew seat (4) to service the poppet (13), return spring (1), and or poppet seal (2), o-rings (16 & 18), and washer (17).
3. Clean old grease from unit and inspect seals for sign of wear (nicks, cuts, and scratches). Repair kits are available which contain the parts which are typically replaced.

Symbol

Economy Regulator
Relieving

WARNING
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4. Apply a light film of grease to all seals and sliding surfaces using the grease packet supplied with repair kit.

**Note:** Refer to Figure 1 to determine the correct position and orientation of the various parts during assembly.

5. Gently and firmly press vent seal into piston using a blunt instrument.

6. Install lip seal onto piston with the lips of the seal facing away from the support flange. Then insert control spring and piston assembly into bonnet.

7. Place balancing o-ring (18) and washer (17) into body’s bore. Then insert poppet return spring and poppet assembly, followed by seat o-ring (16) and seat.

8. Tighten seat from 0.6 to 0.8 Nm (5 to 7 in-lbs). Tighten bonnet onto body from 5.6 to 7.3 Nm (50 to 65 in-lbs) of torque.

9. Make sure that the control spring is still uncompressed before turning on the air supply. Turn on air supply, then slowly adjust the knob clockwise to increase downstream pressure until the desired pressure has been reached.

10. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG).

11. When the desired secondary pressure setting has been reached, push the adjusting knob down to lock it.

12. Check for leaks. If leaks occur, shut off the air supply, exhaust system air pressure, and make necessary adjustments to eliminate leakage.

### Parts Identification List

<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poppet Return Spring</td>
</tr>
<tr>
<td>2</td>
<td>O-ring - body to bonnet</td>
</tr>
<tr>
<td>3</td>
<td>Seat</td>
</tr>
<tr>
<td>4</td>
<td>Lip Seal - piston to bonnet</td>
</tr>
<tr>
<td>5</td>
<td>Piston (relieving shown)</td>
</tr>
<tr>
<td>6</td>
<td>Control Spring</td>
</tr>
<tr>
<td>7</td>
<td>Knob</td>
</tr>
<tr>
<td>8</td>
<td>Hex Nut</td>
</tr>
<tr>
<td>9</td>
<td>Adjusting Screw</td>
</tr>
<tr>
<td>10</td>
<td>Bonnet Assembly</td>
</tr>
<tr>
<td>11</td>
<td>Poppet (Mini Regulator) and Poppet Assembly (Economy Regulator)</td>
</tr>
<tr>
<td>12</td>
<td>Body</td>
</tr>
<tr>
<td>13</td>
<td>Vent Seal - poppet assembly to piston (relieving units) (Economy Regulator)</td>
</tr>
<tr>
<td>14</td>
<td>O-ring - seat to body (Economy Regulator)</td>
</tr>
</tbody>
</table>

### Service Kits Available

The following service kits contain the appropriate seals and parts necessary for ordinary field service.

<table>
<thead>
<tr>
<th>Description</th>
<th>Economy Regulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonnet Assembly</td>
<td>L01369</td>
</tr>
<tr>
<td>Mounting Bracket Kit* (plastic ring)</td>
<td>PS417B</td>
</tr>
<tr>
<td>Mounting Bracket Kit* (aluminum ring)</td>
<td>PS466</td>
</tr>
<tr>
<td>Panel Mount Nuts*</td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td>P78652</td>
</tr>
<tr>
<td>Metal</td>
<td>P01531</td>
</tr>
<tr>
<td>Piston &amp; Poppet Kit - Unbalanced Non-Relieving</td>
<td>PS428</td>
</tr>
<tr>
<td>Piston &amp; Poppet Kit - Unbalanced - Relieving</td>
<td>PS426</td>
</tr>
<tr>
<td>Poppet Kit - Unbalanced</td>
<td>PS454</td>
</tr>
<tr>
<td>Tamperproof Kit</td>
<td>P01265</td>
</tr>
</tbody>
</table>

*Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

---

**FIGURE 1: Economy Regulator -**

(Balanced, Relieving Unit Shown)
WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:
• Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
• Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
• Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
• Medium must be moisture-free if ambient temperature is below freezing.
• Service according to procedures listed in these instructions.
• Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
• After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
• Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

CAUTION
Polycarbonate bowls, being transparent and tough, are ideal for use with Filters and Lubricators. They are suitable for use in normal industrial environments, but should not be located in areas where they could be subjected to direct sunlight, an impact blow, or temperatures outside of the rated range. As with most plastics, some chemicals can cause damage. Polycarbonate bowls should not be exposed to chlorinated hydrocarbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids such as phosphate ester and diester types.

Metal bowls are recommended where ambient and/or media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but should not be used where strong acids or bases are present or in salt laden atmospheres. Consult the factory for specific recommendations where these conditions exist.

TO CLEAN POLYCARBONATE BOWLS USE MILD SOAP AND WATER ONLY! DO NOT USE CLEANSING AGENTS SUCH AS ACETONE, BENZENE, CARBON TETRACHLORIDE, GASOLINE, TOLUENE, ETC., WHICH ARE DAMAGING TO THIS PLASTIC.

WARNING
To avoid polycarbonate bowl rupture that can cause personal injury or property damage, do not exceed bowl pressure or temperature ratings. Polycarbonate bowls have a 150 PSIG pressure rating and a maximum temperature rating of 125°F.

Safety Guide
For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the Pneumatic Division Safety Guide at www.parker.com/safety

Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

Maximum Operating (Inlet) Pressure:

| Miniature Filter / Regulator (with Plastic Bowl) | 1030 | 150 | 10.3 |
| Miniature Filter / Regulator (with Metal Bowl) | 1720 | 250 | 17.2 |
| Miniature Regulator (Metal Body) | 2000 | 300 | 20.0 |

Ambient Temperature Range: 0°C to 52°C (32°F to 125°F)

Symbols

Installation
1. This unit should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compounds should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.
2. Install unit so that air flow is in the direction of arrow. Installation must be upstream of and close to devices it is to service (valve, cylinder, tool etc.). Mounting of regulators may be in any position; mounting of filter/regulators must be vertical as shown in figure.
3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plug into each port during installation.
4. To protect regulator units against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation of Regulator
1. Before turning on air supply, turn adjusting handle counterclockwise until compression is released from control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting handle clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.
2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG).

Operation of Filter / Regulator
1. Both free moisture and solids are removed automatically by the Filter / Regulator.
2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the element holder. Automatic drain models (pulse drain) will collect and dump liquids automatically. They are actuated when a pressure drop occurs within the filter.
3. The filter element should be removed and replaced when the pressure differential across the filter is excessive.

Service
Caution: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling unit. (Units may be serviced without removing them from the air line.)

FAILSAFE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Servicing Regulator:
Note: See Figure 1, 2, & 3 to aid with this procedure.
1. Unlock the adjusting knob by pulling upward (with the unit in an upright position).
   Then turn adjusting knob counterclockwise until compression of the control spring has been removed.
2. Remove the bonnet from body. Then remove o-ring (7), piston, lip seal (9), and control spring to service the bonnet subassembly. Unscrew seat (8) to service the poppet (17), return spring (5), and for poppet seal (6).

Note: On filter / regulator units, the poppet assembly & poppet return spring may be accessed by removing filter element.
3. Clean old grease from unit and inspect seals for sign of wear (nicks, cuts, and scratches). Repair kits are available which contain the parts which are typically replaced.
4. Apply a light film of grease to all seals and sliding surfaces using the grease packet supplied with repair kit.

Note: Refer to Figures to determine the correct position and orientation of the various parts during assembly.
5. Install lip seal onto piston with the lips of the seal facing away from the support flange. Then insert control spring and piston assembly into bonnet.
6. Place poppet return spring and poppet assembly into bore, followed by poppet seal and seat.
7. Tighten seat to body from 0.9 to 1.1 Nm (8 to 10 in-lbs) of torque. Tighten bonnet onto body from 5.6 to 7.3 Nm (50 to 65 in-lbs) of torque.
8. Make sure that the control spring is still uncompresssed before turning on the air supply. Turn on air supply, then slowly adjust the knob clockwise to increase downstream pressure until the desired pressure has been reached.
9. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG), then adjusting upward to 410 kPa (60 PSIG).
10. When the desired secondary pressure setting has been reached, push the adjusting knob down to lock it.
11. Check for leaks. If leaks occur, shut off the air supply, de-pressurize the system and make necessary adjustments to eliminate leakage.

Servicing Filter Element:
Note: See Figure 1 to aid with this procedure.
1. Unscrew threaded bowl and element holder. Then remove filter element, deflector, and gaskets.
2. Clean all internal parts, bowl, and body before re-assembling unit. See Polycarbonate bowl cleaning section.
3. Install deflector, filter element, and gaskets.
4. Attach element holder. Torque 0.9 to 1.1 Nm (8 to 10 in-lbs).
5. To assist with retaining bowl’s o-ring while installing bowl, lubricate the o-ring (with a mineral based oil or grease). Then place it on the bowl.
6. Screw bowl into body until it is stopped by body; then back off bowl 1/8 turn.
7. Apply pressure to the system and check for leaks. If leaks occur, shut off the air supply, de-pressurize the system and make necessary adjustments to eliminate leakage.
If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

Parts Identification List

<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bowl (Miniature Filter Regulator)</td>
</tr>
<tr>
<td>2</td>
<td>Filter Element (Miniature Filter Regulator)</td>
</tr>
<tr>
<td>3</td>
<td>Deflector (Miniature Filter Regulator)</td>
</tr>
<tr>
<td>4</td>
<td>O-ring (Miniature Filter Regulator) - bowl to body</td>
</tr>
<tr>
<td>5</td>
<td>Poppet Return Spring</td>
</tr>
<tr>
<td>6</td>
<td>Poppet Seal</td>
</tr>
<tr>
<td>7</td>
<td>O-ring - body to bonnet</td>
</tr>
<tr>
<td>8</td>
<td>Seat</td>
</tr>
<tr>
<td>9</td>
<td>Lip Seal - piston to bonnet</td>
</tr>
<tr>
<td>10</td>
<td>O-ring - piston to poppet (Miniature Regulator &amp; Filter / Regulator relieving units)</td>
</tr>
<tr>
<td>11</td>
<td>Piston (relieving shown)</td>
</tr>
<tr>
<td>12</td>
<td>Control Spring</td>
</tr>
<tr>
<td>13</td>
<td>Knob</td>
</tr>
<tr>
<td>14</td>
<td>Hex Nut</td>
</tr>
<tr>
<td>15</td>
<td>Adjusting Screw</td>
</tr>
<tr>
<td>16</td>
<td>Bonnet</td>
</tr>
<tr>
<td>17</td>
<td>Poppet (Miniature Filter Regulator &amp; Filter / Regulator)</td>
</tr>
<tr>
<td>18</td>
<td>Body</td>
</tr>
<tr>
<td>19</td>
<td>Gasket (Miniature Filter Regulator) - deflector to body</td>
</tr>
<tr>
<td>20</td>
<td>Gasket (Miniature Filter Regulator) - element holder to filter element</td>
</tr>
<tr>
<td>21</td>
<td>Element Holder (Miniature Filter Regulator)</td>
</tr>
<tr>
<td>22</td>
<td>O-ring (14E) - body to drain</td>
</tr>
<tr>
<td>23</td>
<td>Twist Drain (Miniature Filter Regulator)</td>
</tr>
<tr>
<td>24</td>
<td>Twist Drain Knob</td>
</tr>
</tbody>
</table>

Service Kits Available
The following service kits contain the appropriate seals and parts necessary for ordinary field service.

<table>
<thead>
<tr>
<th>Description</th>
<th>Miniature Filter / Regulator</th>
<th>Miniature Regulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adsorber</td>
<td>PS452</td>
<td>PS452</td>
</tr>
<tr>
<td>5 Micron Element Kit</td>
<td>PS403</td>
<td>N/A</td>
</tr>
<tr>
<td>40 Micron Element Kit</td>
<td>PS401</td>
<td>N/A</td>
</tr>
<tr>
<td>Metal Bowl w/Manual Drain</td>
<td>PS447B</td>
<td>N/A</td>
</tr>
<tr>
<td>Metal Bowl w/Automatic Drain</td>
<td>PS451B</td>
<td>N/A</td>
</tr>
<tr>
<td>Mounting Bracket Kit* (plastic ring)</td>
<td>PS417B</td>
<td>PS417B</td>
</tr>
<tr>
<td>Mounting Bracket Kit* (aluminum ring)</td>
<td>PS466</td>
<td>PS466</td>
</tr>
<tr>
<td>Panel Mount Nut - Metal*</td>
<td>P01531</td>
<td>P01531</td>
</tr>
<tr>
<td>Piston &amp; Poppet Kit - Unbal. Rel.</td>
<td>PS426</td>
<td>PS426</td>
</tr>
<tr>
<td>Piston &amp; Poppet Kit - Unbal. Non-Rel</td>
<td>PS428</td>
<td>PS428</td>
</tr>
<tr>
<td>Polycarbonate Bowl w/Manual Drain</td>
<td>PS404</td>
<td>N/A</td>
</tr>
<tr>
<td>Polycarbonate Bowl w/Automatic Drain</td>
<td>PS408B</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Springs: 1-30 PSIG Range
|                | P01175        | P01175 |
| 1-60 PSIG Range | P01174        | P01174 |
| 2-125 PSIG Range | P01173        | P01173 |
| 1-15 PSIG Range  | P01176        | P01176 |

Twist Drain Knob | P05117

*Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.
AVERTISSEMENT
Afin d'éviter un fonctionnement imprévu du système pouvant occasionner des blessures aux personnes et des dommages matériels :
• Débrancher l'alimentation électrique (si nécessaire) avant toute installation, entretien ou conversion.
• Débrancher l'alimentation en air et dépressuriser toutes les canalisations d'air connectées à cet appareil avant installation, entretien ou conversion.
• Utiliser l'appareil conformément aux normes de pression, température, et autres conditions spécifiées par le fabricant dans ces instructions.
• Le médiocre doit être exempt d’humidité si la température descend en dessous de 0°C.
• L'entretien doit se faire conformément aux procédures décrites ici.
• L'installation, l'entretien, et la conversion de ces appareils doivent être effectués par des personnels qualifiés, au fait des techniques pneumatiques.
• Après installation, entretien, ou conversion, les alimentations en air et en électricité (si nécessaire) seront connectées et l’appareil testé pour vérifier son fonctionnement correct et l’absence de fuites. Si l’appareil présente une fuite audibl ou ne fonctionne pas correctement, ne pas l'utiliser.
• Les inscriptions concernant les avertissements et spécifications sur l’appareil ne devront pas être recouvertes de peinture, etc. Si le masquage est impossible, contactez votre représentant local pour des étiquettes de remplacement.

SECURITE – Cuves transparentes

ATTENTION:
Les bols en polycarbonate, étant durs et transparents, sont idéaux pour l'utilisation dans les filtres et lubrificateurs. Ils conviennent aux environnements industriels normaux, mais ne devront pas être placés dans des endroits où ils pourraient être soumis à une exposition à la lumière directe du soleil, aux chocs, ou aux températures en-dehors de la plage normale d’utilisation. Ce plastique est, comme tout autre, susceptible d’être endommagé par l’action de certains produits chimiques. Les bols en polycarbonate ne doivent pas être exposés aux hydrocarbures chlorés, cétones, éthers, et certains alcools. Ils ne doivent pas être utilisés dans des systèmes pneumatiques dont les compresseurs sont lubrifiés par des fluides résistant au feu, tels que les esters et diesters de phosphate.

Les bols métalliques sont recommandés quand les conditions ambiantes et celles du médium sont incompatibles avec les bols en polycarbonate. Les bols métalliques sont résistants à la plupart de ces solvants mais ne doivent pas être utilisés dans un environnement fortement acide ou basique, ou dans une atmosphère salée. Si de telles conditions existent, contactez le fabricant pour des recommandations spécifiques.

NETTOYEZ LES BOLS EN POLYCARBONATE UNIQUEMENT A L’EAU ET AU SAVON DOUX ! NE PAS UTILISER D’AGENTS NETTOYANTS TELS QUE L’ACETONE, LE BENZÈNE, LE TÉTRACHLORURE DE CARBONE, L’ESSÈCE, LE TOLUÈNE, LE TRICHLORURE DE CARBONE, L’ÉTHANOL, LE LU-CHLORATE DE CARBONE NE DOIVENT PAS ÊTRES EXPOSÉS AUX HYDROCARBURES CHLORÉS, CÉTONES, ÉTHÈRES, ET CERTAINS ALCOOLS.

AVERTISSEMENT
Une rupture de l’appareil peut occasionner des blessures graves. Ne pas utiliser ce régulateur pour du gaz en bouteille. Ne pas dépasser la norme de pression primaire maximum.

Guide de sécurité
Pour obtenir de plus amples informations sur les directives à appliquer recommandées, prière de vous reporter à la section Guide de sécurité des catalogues de la Pneumatic Division ou de télécharger le Guide de sécurité de la Pneumatic Division sur le site: www.parker.com/safety

Introduction
Suivez ces instructions pendant l'installation, l'utilisation ou l'entretien du produit.

Limites d'utilisation
Ces produits sont construits pour utilisation uniquement dans les systèmes d'air comprimé pour service général.

Pression d'admission maximale de fonctionnement kPa psi bar
Filtre-régulateur miniature (avec cuve en plastique) 1030 150 10,3
Filtre-régulateur miniature (avec cuve métallique) 1720 250 17,2
Régulateur miniature (corps métallique) 2000 300 20,0

Plage de température ambiante 0 °C à 52 °C (32 °F à 125 °F)

Instructions d’installation et d’entretien
1R602 (French)
Filtre-régulateur miniature, régulateurs miniatures avec des orifices de 1/8 in et 1/4 in
PUBLICATION: Juillet, 2008
Remplace: Mars, 2008
Doc.# 1R602, ECN# 080525, Rev. 7

Symboles

Installation
1. Il faut installer cet appareil dans un endroit raisonnablement accessible pour faciliter l'entretien. Un kit de réparation est offert. Les tuyaux et tubes doivent être aussi courts que possible et ils doivent être propres et sans saleté ni copeaux à l'intérieur. Il faut utiliser modérément la pâte à joint et l’appliquer uniquement sur le tuyau, jamais dans l'orifice. Il ne faut pas utiliser de ruban de PTTE pour assurer l'étanchéité des connexions de tuyaux. Les pièces ont tendance à se fracturer et se loger à l'intérieur de l'appareil, ce qui peut causer un mauvais fonctionnement.
2. Installer l’appareil pour que l’air circule dans la direction de la flèche. L’installation doit être en amont et aussi proche que possible de l’appareil qu’il faut protéger (vanne, vérin, outil, etc.). Le régulateur peut être monté dans n’importe quelle position. Le filtre-régulateur doit être monté verticalement, comme montré sur l’illustration.
3. Pour être plus pratique, un orifice de manomètre se trouve de chaque côté du corps du régulateur. Pendant l’installation, il est nécessaire d’installer un manomètre ou un bouchon de tuyau dans chaque orifice.
4. Pour protéger le régulateur de la rouille, la calamine et autres matières étrangères, installer un filtre en amont du régulateur, aussi proche que possible de celui-ci.

Utilisation du régulateur
1. Avant de mettre le système sous pression, tourner la poignée de réglage dans le sens inverse des aiguilles d’une montre jusqu’à l’élimination de toute la compression du ressort de commande de pression. Mettre le système sous pression et tourner la poignée dans le sens des aiguilles d’une montre pour régler le régulateur à la pression secondaire désirée. Ceci permet à la pression de monter lentement, évitant le fonctionnement inattendu de la vanne, des vérins, des outils, etc., montés sur la conduite. Il n’est possible de faire le réglage de la pression secondaire que si le régulateur est soumis à la pression primaire.
2. Pour réduire la pression du système, il faut toujours faire le réglage à partir d’une pression plus basse que la valeur désirée. Par exemple, pour abaisser la pression secondaire de 5,5 à 4,1 bar (550 à 410 kPa ; 80 à 60 psi), il est préférable de faire tomber la pression secondaire à 3,5 bar (350 kPa ; 50 psi) et de la régler, en montant à 4,1 bar (410 kPa ; 60 psi).

Utilisation du filtre et régulateur
• L’humidité libre et les solides sont éliminés automatiquement par le filtre et régulateur.
• Il faut purger régulièrement les filtres à purge manuelle avant que la condensation et/ou l’huile condensée atteignent le bas du support d’élément. Les modèles à purge automatique (purge à impulsion) captent et évacuent automatiquement les liquides. Ils sont actionnés par une chute de pression dans le filtre.

AVERTISSEMENT
LA DEFAILLANCE, LE CHOIX ERRONE OU L’USAGE NON CONFORME DES PRODUITS ET/OU SYSTEMES ICi DECRIPTS, OU PRODUITS Y AFFERANT, PEUVENT ENTRAINER LA MORT, DES BLESSURES AUX PERSONNES ET DES DOMMAGES MATÉRIELS.
Ce document et autres informations de « The Company », ses filiales et distributeurs autorisés offre des options complémentaires d'utilisation du produit et/ou système pour des utilisateurs ayant l'expertise technique requise. Il est important que vous analysez tous les aspects de l'usage prévu, y compris les conséquences de toute défaillance, et que vous passiez en revue les informations concernant les produits et systèmes dans le catalogue actuel des produits. En raison de la diversité des conditions de fonctionnement et d’utilisation de ces produits ou systèmes, l’utilisateur, et lui seul, selon ses propres analyses et tests, porte la responsabilité du choix final des produits et systèmes. Il est aussi de sa responsabilité pleine et entière de s’assurer que les produits soient utilisés conformément aux normes de sécurité et avertissements d’usage.

Les produits décrits ci, y compris, mais non exclusivement, les caractéristiques des produits, spécifications, aspects, disponibilité et prix, sont susceptibles de modification à tout moment et sans préavis par « The Company » et ses filiales.

DES EXEMPLES SUPPLEMENTAIRES DES INSTRUCTIONS SONT DISPONIBLES POUR ACCOMPAGNER LES APPAREILS/MANUELS D’ENTRETIEN CORRESPONDANT A CES PRODUITS. CONTACTEZ VOTRE REPRÉSENTANT LOCAL.
3. Il faut remplacer l'élément filtrant quand la différence de pression dans le filtre est excessive.

**Entretien**

**ATTENTION – COUPER L’ALIMENTATION D’AIR et évacuer la pression primaire et secondaire avant de démonter l'appareil. Il est possible de réparer ces appareils sans les déposer de la conduite d’air.**

**Intervention sur le régulateur**

**Remarque :** Consulter les figures 1, 2 et 3 pour aider avec cette procédure.

1. Lever le bouton de dégagement pour le débloquer (quand l'appareil est en position verticale). Tourner ensuite le bouton de réglage dans le sens inverse des aiguilles d'une montre jusqu'à l'élimination de toute la compression du ressort de commande.

2. Déposer le chapeau du corps. Déposer ensuite le joint torique (7), le piston, le joint à lèvre (9) et le ressort de commande pour réparer le sous-ensemble du chapeau. Dévisser le siège (8) pour atteindre le clapet (17), le ressort de rappel (5) et le siège du clapet (6).

**Remarque :** Sur les filtres-régulateurs, il est possible de déposer l'élément filtrant pour obtenir accès au clapet et au ressort de rappel du clapet.

3. Nettoyer l'ancienne graisse et vérifier s'il y a des signes d'usure sur les joints (entailles, coupures ou rayures). Des kits de réparation contenant les pièces typiquement remplacées sont offerts.

4. Appliquer une pellicule de graisse sur tous les joints et surfaces coulissantes, en utilisant le paquet de graisse fourni avec le kit de réparation.

**Remarque :** Pendant le remontage, consulter les illustrations pour déterminer la position et l'orientation des diverses pièces.

5. Installer le joint à lèvres sur le piston, les lèvres du joint à l'opposé de la bride de support. Insérer ensuite le ressort de commande et le piston dans le chapeau.

6. Mettre le ressort de rappel du clapet et le clapet dans l'alésage, puis le joint du clapet et le siège.

7. Serrer le siège dans le corps à un couple de 0,9 à 1,1 Nm (8 à 10 in-lb). Serrer le joint torique du clapet (6).

8. Mettre le ressort de rappel du clapet et le clapet dans l'alésage, puis le joint du clapet et le siège.

9. Avant de mettre le système sous pression, vérifier que le ressort de commande n'est pas comprimé. Mettre le système sous pression et tourner le bouton dans le sens des aiguilles d'une montre pour faire monter la pression en aval jusqu'à la pression désirée.

10. Pour réduire la pression du système, il faut toujours faire le réglage à partir d'une pression plus basse que la valeur désirée. Par exemple, pour abaisser la pression secondaire de 5,5 à 4,1 bar (350 kPa ; 50 psi) et de la régler, en montant à 4,1 bar (410 kPa ; 60 psi).

11. Serrer le siège dans le corps à un couple de 0,9 à 1,1 Nm (8 à 10 in-lb). Serrer le joint torique du clapet (6).


13. Visser la cuve à fond sur le corps et reculer la cuve d'un huitième de tour.

14. Mettre le système sous pression et vérifier qu'il n'y a pas de fuites. S'il y a des fuites, couper l'alimentation d'air, faire tomber la pression du système et faire les réglages nécessaires pour éliminer les fuites.

**Kits d’intervention offerts**

Les kits de réparation suivants contiennent les joints appropriés et les pièces nécessaires pour les réparations ordinaires sur place.

<table>
<thead>
<tr>
<th>Description</th>
<th>Filtre- régulateur</th>
<th>Régulateur miniature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Élément absorbant</td>
<td>PS452</td>
<td>PS452</td>
</tr>
<tr>
<td>Kit d’élément de 5 microns</td>
<td>PS403</td>
<td>N/A</td>
</tr>
<tr>
<td>Kit d’élément de 40 microns</td>
<td>PS401</td>
<td>N/A</td>
</tr>
<tr>
<td>Cuve métallique avec purge manuelle</td>
<td>PS447B</td>
<td>N/A</td>
</tr>
<tr>
<td>Cuve métallique avec purge automatique</td>
<td>PS451B</td>
<td>N/A</td>
</tr>
<tr>
<td>Kit de patte de montage* (bague en plastique)</td>
<td>PS417B</td>
<td>PS417B</td>
</tr>
<tr>
<td>Kit de patte de montage* (bague en aluminium)</td>
<td>PS466</td>
<td>PS466</td>
</tr>
<tr>
<td>Ecrou métallique de montage sur le panneau*</td>
<td>P01531</td>
<td>P01531</td>
</tr>
<tr>
<td>Kit de piston et clapet, évacuation sans équilibre</td>
<td>PS426</td>
<td>PS426</td>
</tr>
<tr>
<td>Kit de piston et clapet, sans évacuation sans équilibre</td>
<td>PS428</td>
<td>PS428</td>
</tr>
<tr>
<td>Cuve en polycarbonate avec purge manuelle</td>
<td>PS404</td>
<td>N/A</td>
</tr>
<tr>
<td>Cuve en polycarbonate avec purge automatique</td>
<td>PS408B</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Serrer l'écrou de montage du panneau à un couple de 2,8 à 3,4 Nm (25 à 30 po/lb).
La Seguridad: Las Tazas Transparentes

**PRECAUCIÓN:**
Las tazas de policarbonato, al ser transparentes y resistentes, son ideales para usar con filtros y lubricadores. Son aptas para usar en ambientes industriales normales, pero no se deben ubicar en zonas donde queden expuestas a luz solar directa, un golpe de impacto, o una temperatura por debajo del punto de congelación. Al igual que con la mayoría de los plásticos, ciertos productos químicos pueden ocasionar daños. No se debe exponer las tazas de policarbonato a los hidrocarburos clorados, las cetonas, los éteres y ciertos alcohol. No se les debe usar en sistemas de aire en donde se lubrifican los compresores de aire usando fluidos resistentes al fuego tal como los tipos de ester fosfatado y di-ester.

Se recomienda el uso de tazas de metal cuando las condiciones ambientales y del medio no son compatibles con las tazas de policarbonato. Las tazas de metal son resistentes a la acción de la mayoría de esos solventes, pero no deben usarse cuando existe la presencia de ácidos o bases fuertes, ni en atmósferas cargadas de sal. Consulte con la fábrica por recomendaciones específicas para cuando existen estas condiciones.

**PARA LIMPIAR LAS TAZAS DE POLICARBONO, UTILICE SOLAMENTE UN JABÓN SUAVE Y AGUA. NO use agentes de limpieza tales como la acetona, el benceno, el tetracloruro de carbono, la gasolina o el tolueno, etc., que pueden dañar el plástico.

**ADVERTENCIA**
La ruptura del producto puede ocasionar lesiones graves. No conecte el regulador al gas embotellado. No exceda la clasificación de presión primaria máxima.

**Guía sobre la seguridad**
Para obtener información más completa acerca de los lineamientos recomendados acerca del uso, vea la sección Guía sobre la seguridad en los catálogos de la división neumática o puede bajar la Guía sobre la Seguridad de la División Neumática (Pneumatic Division Safety Guide) en www.parker.com/safety

Introducción
Observe las siguientes instrucciones al instalar, operar o dar servicio al producto.

Límites de aplicación
Estos productos han sido diseñados para usarse solamente en sistemas de aire comprimido para propósitos generales.

**Máxima presión (de entrada) para funcionamiento kPa PSIG barras**
- Filtro / regulador en miniatura (con tapón plástico) 1030 150 10,3
- Filtro / regulador en miniatura (con tapón de metal) 1720 250 17,2
- Regulador en miniatura (cuerpo de metal) 2000 300 20,0

**Rango de temperatura ambiental:** 0°C a 52°C (32°F a 125°F)

**Símbolos**
- Filtro / regulador en miniatura
- Filtro con drenaje manual
- Regulador en miniatura

**Instalación**
1. Siempre que sea posible, al instalar estas unidades se les debe colocar en lugares de fácil acceso, para poder darles servicio. Hay disponibles juegos de servicio para reparación. Se deben usar tuberías o conductos tan cortos como sea posible, manteniendo su interior limpio y sin desechos o astillas. Los compuestos para unir tuberías deben usarse moderadamente y se les debe aplicar a las tuberías macho solamente, nunca a los puertos hembra. No use cinta PTFE para sellar las junturas de tuberías ya que algunas veces pedazos de cinta tienden a separarse y fijarse dentro de las unidades provocando posiblemente mal funcionamiento.
2. Inste las unidades de manera que el flujo de aire ocurra en la dirección de las flechas. La instalación se debe hacer flujo arriba y cerca de los dispositivos que han de servir (válvulas, cilindros, herramientas, etc.). Los reguladores pueden montarse en cualquier posición; los filtros / reguladores deben montarse verticalmente tal y como se muestra en la figura.
3. Para su conveniencia, hay puertos para medidores en ambos lados de los cuerpos de los reguladores. Al hacer la instalación, es necesario colocar un medidor o un tapón de caquis en cada uno de esos puertos.
4. Inste filtros en el lado flujo arriba (alta presión) tan cerca a los reguladores como sea posible para protegerlos contra el mofo, las escamas de las tuberías y otros materiales extraños.

**Funcionamiento de los reguladores**
1. Antes de activar el suministro de aire, gire la manija para ajuste en contra de las agujas del reloj hasta liberar la compresión del muelle para control. Luego active el suministro de aire y ajuste el regulador a la presión secundaria deseada girando la manija en el sentido de las agujas del reloj. Con esto se permite que la presión se acumule lentamente, evitando todo funcionamiento inesperado de las válvulas, cilindros, herramientas, etc. unidas a la línea. Sólo se puede ajustar la presión secundaria deseada cuando hay presión principal aplicada al regulador.
2. Para disminuir la graduación de la presión del regulador, comience siempre con una presión menor que la graduación final deseada. Por ejemplo, para reducir la presión secundaria de 550 a 410 kPa (80 a 60 psig) lo mejor es reducir la presión secundaria a 350 kPa (50 psig) y luego aumentarla a 410 kPa (60 psig).

**Funcionamiento de los filtros / reguladores**
1. Los filtros / reguladores eliminan automáticamente tanto la humedad libre como los sólidos.
2. Se deben drenar regularmente los filtros con drenaje manual antes de que la humedad y el aceite desalosados lleguen a la parte baja del soporte.

**ADVERTENCIA**
EL FALLO O LA SELECCIÓN INCORRECTA O EL USO INCORRECTO DE LOS PRODUCTOS Y/O SISTEMAS AGUÍ DESCritos U OTROS ARTÍCULOS RELACIONADOS PUEDE RESULTAR EN MUERTE, LESIONES PERSONALES Y DANO A LA PROPIEDAD.
Este documento y demás información de la compañía, sus subsidiarias y distribuidores autorizados ofrecen opciones de productos y sistemas para mayor investigación por parte de los usuarios que cuentan con conocimientos técnicos. Es importante que analice todos los aspectos de su aplicación, incluyendo las consecuencias de cualquier fallo y que revise la información concerniente al producto o los sistemas que se encuentran en el catálogo actual de productos. Debido a la variedad de condiciones de funcionamiento y aplicaciones para estos productos o sistemas, el usuario, mediante su propio análisis y pruebas, es unicamente responsable por la selección final de los productos y sistemas, y por garantizar que se cumpla con todos los requisitos de funcionamiento, seguridad y advertencia de la aplicación.
Los productos aquí descritos, incluyendo pero sin limitarse, a las características del producto, las especificaciones, los diseños, la disponibilidad y los precios, están sujetos a cambios por parte de la compañía y de sus subsidiarias en cualquier momento sin aviso.

SE PUEDE OBTENER COPIAS ADICIONALES DE ESTAS INSTRUCCIONES PARA INCLUIR CON EL EQUIPO / LOS MANUALES DE MANTENIMIENTO QUE UTILIZAN ESTOS PRODUCTOS. COMUNÍQUESE CON SU REPRESENTANTE LOCAL.
Paso 1.

Desenrosque el tazón y el soporte del elemento. Después saque el elemento del asiento para dar servicio al obturador (17), el muelle (5), y el conjunto de muelle para retorno del obturador (6).

Paso 2.

Quite la grasa vieja de la unidad y verifique que los sellos no estén desgastados (mellados, cortados o rayados). Se encuentran disponibles juegos para reparación usando el paquete de grasa que se suministra con el juego para reparación. 

Nota: Vea las figuras para averiguar la posición y orientación correctas de las piezas durante el ensamblaje.

Paso 3.

Coloque el sello con labios en el pistón con los labios del sello hacia afuera del borde para soporte. Luego introduzca en el bonete el conjunto de muelle para control y pistón.

Paso 4.

Coloque en el hueco el conjunto de muelle para retorno de la unidad y el obturador, seguido del sello y el asiento del obturador.

Paso 5.

Aporte el asiento al cuerpo con una torsión de 0,9 a 1,1 Nm (8 a 10 libras pulgada). Aporte el bonete al cuerpo con una torsión de 5,6 a 7,3 Nm (50 a 65 libras pulgada).

Paso 6.

Antes de activar el suministro de aire asegúrese de que el muelle para control esté todavía sin compresión. Active el suministro de aire, luego gire lentamente la perilla en el sentido de las agujas del reloj para aumentar la presión flujo abajo hasta alcanzar la deseada.

Paso 7.

Para disminuir la graduación de la presión del regulador, comience siempre con una presión menor que la graduación final deseada. Por ejemplo, para reducir la presión secundaria de 550 a 410 kPa (80 a 60 psig) lo mejor es reducir la presión secundaria a 350 kPa (50 psig), y luego aumentarla a 410 kPa (60 psig).

Paso 8.

Al alcanzar la presión secundaria deseada, presione la perilla para ajuste hacia abajo para fijarla.

Paso 9.

Verifique que no hay fugas. Si las hay, desactive el suministro de aire, saque la presión de aire del sistema y haga los ajustes necesarios para eliminarlas.

CÓMO DAR SERVICIO AL ELEMENTO DEL FILTRO:

Nota: Para auxiliarse en este procedimiento, vea la figura 1.

1. Desenrosque el tazón y el soporte del elemento. Después saque el elemento del filtro, el desviador y los empaques.

2. Antes de ensamblar de nuevo la unidad, limpie las piezas internas y el cuerpo. Vea la sección acerca de la limpieza de los tazones de policarbonato.

3. Coloque el desviador, el elemento del filtro y los empaques.

4. Coloque el soporte del elemento. Aplique una torsión de 0,9 a 1,4 Nm (8 a 12 libras pulgada).

5. Lubrique el aro tórico (con aceite o grasa de base mineral) para ayudar a retener el aro tórico del tazón durante el ensamblaje. Luego colóquelo en el tazón.

6. Enrosque el tazón en el cuerpo hasta que haga contacto con él; luego regreséelo 1/8 de revolución.

7. Presurice el sistema y verifique que no tenga fugas. Si las hay, desactive el suministro de aire, saque la presión del sistema y haga los ajustes necesarios para eliminarlas.

Si tiene alguna pregunta acerca de cómo dar servicio a esta unidad, póngase en contacto con el concesionario autorizado de su localidad o con el representante de servicio al cliente.

LISTA PARA IDENTIFICACIÓN DE PIEZAS

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<th>Descripción</th>
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<td>Tazón (filtro regulador en miniatura)</td>
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<tr>
<td>2</td>
<td>Elemento de filtro (filtro regulador en miniatura)</td>
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<td>3</td>
<td>Desviador (filtro regulador en miniatura)</td>
</tr>
<tr>
<td>4</td>
<td>Aro tórico (filtro regulador en miniatura) - tazón a cuerpo</td>
</tr>
<tr>
<td>5</td>
<td>Muelle para retorno del obturador</td>
</tr>
<tr>
<td>6</td>
<td>Sello del obturador</td>
</tr>
<tr>
<td>7</td>
<td>Aro tórico - cuerpo a bonete</td>
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<tr>
<td>8</td>
<td>Asiento</td>
</tr>
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<td>9</td>
<td>Sello con labios - pistón a bonete</td>
</tr>
<tr>
<td>10</td>
<td>Aro tórico - pistón a obturador (unidades con descarga, reguladores en miniatura)</td>
</tr>
<tr>
<td>11</td>
<td>Pistón (se muestra uno con descarga)</td>
</tr>
<tr>
<td>12</td>
<td>Muelle para control</td>
</tr>
<tr>
<td>13</td>
<td>Perilla</td>
</tr>
<tr>
<td>14</td>
<td>Tuerca hexagonal</td>
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<td>15</td>
<td>Tornillo para ajuste</td>
</tr>
<tr>
<td>16</td>
<td>Bonete</td>
</tr>
<tr>
<td>17</td>
<td>Obturador (regulador y filtro regulador en miniatura)</td>
</tr>
<tr>
<td>18</td>
<td>Cuerpo</td>
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<td>19</td>
<td>Empaque (filtro regulador en miniatura) - desviador a cuerpo</td>
</tr>
<tr>
<td>20</td>
<td>Empaque (filtro regulador en miniatura) - soporte del elemento a filtro</td>
</tr>
<tr>
<td>21</td>
<td>Soporte del elemento (filtro regulador en miniatura)</td>
</tr>
<tr>
<td>22</td>
<td>Aro tórico (14E): cuerpo a drenaje</td>
</tr>
<tr>
<td>23</td>
<td>Drenaje de giro (filtro regulador en miniatura)</td>
</tr>
<tr>
<td>24</td>
<td>Tuerca la Perilla del Desagüadero</td>
</tr>
</tbody>
</table>

JUEGOS PARA SERVICIO DISPONIBLES.

Los siguientes juegos para servicio contienen los sellos apropiados y las piezas necesarias para dar servicio correcto en el campo.

<table>
<thead>
<tr>
<th>Description</th>
<th>Filtros / reguladores en miniatura</th>
<th>Reguladores en miniatura</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extractor</td>
<td>PS452</td>
<td>PS452</td>
</tr>
<tr>
<td>Juego de elemento de 5 micrones</td>
<td>PS403</td>
<td>N/A</td>
</tr>
<tr>
<td>Juego de elemento de 40 micrones</td>
<td>PS401</td>
<td>N/A</td>
</tr>
<tr>
<td>Tazón de metal con drenaje manual</td>
<td>PS447B</td>
<td>N/A</td>
</tr>
<tr>
<td>Tazón de metal con drenaje automático</td>
<td>PS451B</td>
<td>N/A</td>
</tr>
<tr>
<td>Juego de soporte para montaje* (anillo plástico)</td>
<td>PS417B</td>
<td>PS417B</td>
</tr>
<tr>
<td>Juego de soporte para montaje* (anillo de aluminio)</td>
<td>PS466</td>
<td>PS466</td>
</tr>
<tr>
<td>Tuerca para montaje en tablero, de metal*</td>
<td>P01531</td>
<td>P01531</td>
</tr>
<tr>
<td>Juego de pistón y obturador, sin balance, con descarga.</td>
<td>PS426</td>
<td>PS426</td>
</tr>
<tr>
<td>Juego de pistón y obturador, sin balance, sin descarga</td>
<td>PS428</td>
<td>PS428</td>
</tr>
<tr>
<td>Tazón de policarbonato con drenaje manual</td>
<td>PS404</td>
<td>N/A</td>
</tr>
<tr>
<td>Tazón de policarbonato con drenaje automático</td>
<td>PS408B</td>
<td>N/A</td>
</tr>
<tr>
<td>Muelles: Rango de 1 a 30 PSIG</td>
<td>P01175</td>
<td>P01175</td>
</tr>
<tr>
<td>Rango de 1 a 60 PSIG</td>
<td>P01174</td>
<td>P01174</td>
</tr>
<tr>
<td>Rango de 2 a 125 PSIG</td>
<td>P01172</td>
<td>P01173</td>
</tr>
<tr>
<td>Rango de 1 a 15 PSIG</td>
<td>P01176</td>
<td>N/A</td>
</tr>
<tr>
<td>Tuerca la Perilla del Desagüadero</td>
<td>TS4117</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Apriete la tuerca de soporte del tablero de 2.8 a 3.4 Nm (Newtons por metro) (25 a 30 pulgadas por libra [63.5 cm a 76.2 cm por Kg.]) del par de torsión.

FIGURA 1: Filtro / regulador en miniatura - sin balance, con descarga

FIGURA 2: Regulador en miniatura - se muestra unidad sin balance, con descarga

FIGURA 3: Detalle del sello del obturador
Introduction

Follow these instructions when installing, operating, or servicing this product.

Application Limits

These products are intended for use in general purpose compressed air systems only.

Operating Pressure:

<table>
<thead>
<tr>
<th>Maximum Inlet Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1720</td>
<td>250</td>
<td>17.2</td>
<td></td>
</tr>
</tbody>
</table>

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

Symbols

![Relieving Regulator Adjustable](image1)

![Non-Relieving Regulator Adjustable](image2)

Installation

1. This unit should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces of tape - or pressure test pipes before breaking off and lodge inside unit, possibly causing malfunction.

2. Install unit so that air flow is in the direction of arrow. Installation must be upstream of and close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.

4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation

1. Before turning on the air supply, turn the adjusting knob counterclockwise until compression is released from the control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting knob clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.

2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG). Tighten the hex nut against the bonnet to lock the pressure setting.

WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.
Maintenance Procedures

**CAUTION:**
SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the knob counterclockwise reduces regulator’s setting, but does not vent downstream pressure on non-relieving regulators.)

1. The regulator can be disassembled for servicing without removal from line.

2. **TO DISASSEMBLE** – Shut off air to regulator and vent air line on both sides of regulator. Turn adjusting screw counterclockwise to relieve compression on spring. Remove adjusting screw, retainer ring, bonnet, spring disc and regulating spring. Piston assembly and o-ring can now be removed. By removing screws from bottom plate, the bottom plate, the valve assembly, and the o-rings can be removed from bottom of regulator. When assembling relubricate o-rings with Parker O-Lube®. Replace valve assembly, valve spring and bottom plate. Insert piston assembly into body, place spring disc and bonnet in position, and install retaining ring.

**CAUTION:** Retainer ring MUST be fully seated in groove.

3. Occasionally disassemble and clean body and valve seat.

4. **IF UNIT WILL NOT REGULATE TO REQUIRED PRESSURE OR IF PRESSURE BECOMES EXCESSIVE** – Disassemble, Clean and check, o-ring, valve stem and valve seat for wear or damage. Replace worn or damaged parts.

5. **IF UNIT LEAKS AT RELIEF PORT** – Install proper repair kit as listed below.

**Kits and Parts Available**

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS602</td>
<td>Regulating Springs: 10-125 PSI</td>
</tr>
<tr>
<td>PS603</td>
<td>Valve, Valve Spring, and Seal Kit</td>
</tr>
<tr>
<td>PS604</td>
<td>Nonrelieving Piston Kit (piston only)</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS605</td>
<td>Pipe Mounting Bracket</td>
</tr>
</tbody>
</table>

**CAUTION**

EXCEPT as otherwise specified by the manufacturer, this product is specifically designed for compressed air service only, and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous liquid or gases in the system (such as alcohol or liquid petroleum gas) could be harmful to the unit or result in a combustible condition or hazardous external leakage. Manufacturer’s warranties are void in the event of misapplication, and manufacturer assumes no responsibility for any resulting loss.

The relief flow capacity of relieving type regulators is limited. Under some operating conditions, the secondary (outlet) pressure could increase above the initial setting. If overpressure conditions could cause malfunctions or failure of downstream equipment, additional external pressure relief devices of suitable capacity must be installed.

Before using with fluids other than air, or for nonindustrial applications, or for life support systems, consult manufacturer for written approval.
Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

Maximum Operating Pressure:

<table>
<thead>
<tr>
<th>Inlet Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1720</td>
<td>250</td>
<td>17.2</td>
<td></td>
</tr>
</tbody>
</table>

Ambient Temperature Range: 0°C to 66°C (32°F to 150°F)

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.

2. Install regulator so that air flow is in the direction of arrow. Installation must be upstream of and close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.

4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.
Operation

1. These air pilot regulators are designed to provide quick response and accurate pressure regulation from a remote installation. With pressure supplied to the regulator's inlet port and no pilot signal, the poppet assembly is closed. Increasing the pilot port pressure increases the regulator's secondary pressure.

2. Pressurizing the pilot port applies a load to the piston. This then causes the piston and valve poppet assembly to move downward, allowing flow to occur. Pressure in the downstream line offsets the load on the piston.

3. Creating a demand downstream of the unit results in a reduced pressure under the bentrol piston. The load on the control piston now causes the poppet assembly to move downward allowing air to flow downstream.

4. Should downstream pressure exceed the desired regulated pressure, this excess pressure will cause the piston to move upward. This causes the valve poppet assembly to shut off air flow and the excess pressure is vented to the atmosphere. (This occurs with relieving type regulators only. Non-relieving units require secondary air demand in order to reduce excess secondary pressure.)

Maintenance Procedures

⚠️ CAUTION: SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (The regulator may be serviced without removing it from the air line.)

1. Remove bottom plate occasionally and clean body, valve seat, and main valve. Relubricate main valve o-ring with Parker O-Lube®. Grease whenever regulator is cleaned.

2. TO DISASSEMBLE – Shut off air and vent air lines on both sides of regulator. Remove retaining ring and lift cover and piston out of body. Remove bottom plate and pull out main valve.

3. TO ASSEMBLE – Relubricate all seals and sealing surfaces with Parker O-Lube® grease. Assemble main valve, main valve spring, and bottom plate. Insert piston into body and install cover and retaining ring. Ensure retaining ring is fully locked into retaining groove in body.

4. IF UNIT WILL NOT REGULATE TO REQUIRED PRESSURE, OR IF PRESSURE DROP BECOMES EXCESSIVE –
   A. Check pilot air line for leaks, crimps, etc., and the pilot regulator for proper operation. If the pilot regulator is suspect, follow the maintenance instructions.
   B. Remove bottom plate and main valve. Clean and check o-rings, valves and valve seats for wear and damage. Relubricate o-rings with Parker O-Lube®. If main valve is worn or damaged, install the proper repair kit.

5. IF UNIT LEAKS AT RELIEF HOLE – The cause may be a dirty or worn main valve seat, valve o-rings or piston o-ring. Install the proper repair kit listed below. A small, constant bleed of up to 5 scfh is normal.

Kits and Parts Available

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Description</th>
</tr>
</thead>
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<td>PS623</td>
<td>Repair Kit – Bottom piston and seal</td>
</tr>
<tr>
<td>PS624</td>
<td>O-Ring Kit</td>
</tr>
<tr>
<td>PS622</td>
<td>Main Valve Assembly (Remote)</td>
</tr>
<tr>
<td>PS621</td>
<td>Main Valve Spring</td>
</tr>
</tbody>
</table>

NNR = NOT NORMALLY REPLACED

THE FACTORY PACKS ALL MOVING SEALS WITH A HEAVY LUBRICATING GREASE. UNDER NORMAL CONDITIONS THIS WILL LAST THROUGH MILLIONS OF CYCLES. HOWEVER, POOR AIR QUALITY WILL CAUSE THE ORIGINAL LUBRICANT TO BE WASHED OUT IN A RELATIVELY SHORT TIME. PROPER LUBRICATION OF REGULATORS IS ABSOLUTELY ESSENTIAL.


**WARNING**

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

**WARNING**

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

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**Safety Guide**

For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the Pneumatic Division Safety Guide at: www.parker.com/safety

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**Introduction**

Follow these instructions when installing, operating, or servicing the product.

**Application Limits**

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**Operating Pressure:**

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<td>250</td>
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</tr>
</tbody>
</table>

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

**Symbols**

- Relieving Regulator Adjustable
- Non-Relieving Regulator Adjustable

**Installation**

1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.

2. Install regulator so that air flow is in the direction of arrow. Installation must be upstream (high pressure) side and as close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.

4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

**Operation**

1. Before turning on the air supply, turn the adjusting knob (Economy, Precision, Compact, Standard) counterclockwise until compression is released from the control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting knob/handle clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.

2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 psig) is best accomplished by dropping the secondary pressure to 350 kPa (50 psig), then adjusting upward to 410 kPa (60 psig).

On Economy, Precision, Compact and Standard units, push the adjusting knob down to lock the pressure setting. And on the Hi-Flow unit, tighten the hex nut against the bonnet to lock setting.

**Service**

**CAUTION:**

SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the knob/handle counterclockwise reduces regulator's setting, but does not vent downstream pressure on non-relieving regulators.)

**CAUTION:**

Lubricate parts with a mineral based oil/grease or silicone grease. DO NOT use synthetic oils/greases such as esters.

---

**WARNING**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

**EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.**
A. Use the following procedure to service Economy, Precision, Compact and Standard units, see Figures 1 & 2:

1. Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.

2. Unscrew the threaded collar and remove the bonnet assembly. Next, disassemble, clean, and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.

3. Lubricate o-ring and lip seals with grease (supplied with kits).

4. Install diaphragm assembly into bonnet. Then install bonnet assembly to body and tighten threaded collar hand tight plus 1/4 turn.

B. Servicing the Poppet Assembly:

1. Exhaust system air pressure as previously described. Then remove cap by unscrewing it from body. Next, remove poppet assembly, o-ring (Economy, Precision), cap’s o-ring and poppet return spring.

2. Next, disassemble, clean, and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.

3. Lubricate o-ring (Economy, Precision) and sliding surfaces using grease supplied with service kit.

4. Turn on air supply and adjust to desired secondary pressure as described in the Operation section.

Turn on air pressure and check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

Lightly grease with provided lubricant.

Inspect for nicks, scratches, and surface imperfections.

If present, reduced service life is probable and future replacement should be planned.

Clean with lint-free cloth.

| Figure 1: Economy & Precision |

| Figure 2: Compact & Standard |
2. Before turning on the air supply, turn the adjusting knob on the master regulator until compression is released from the pressure control spring. Turn on air supply to the master regulator and the pilot controlled regulator. Adjust the downstream pressure by turning adjusting knob on the master regulator until the desired downstream pressure is obtained.

2. To decrease regulated pressure setting, always reset from a pressure lower than the final setting required. Example, lowering the secondary pressure from 80 PSIG to 60 PSIG is best accomplished by dropping the secondary pressure to 50 PSIG, then adjusting upward to 60 PSIG.

Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

Operating Pressure:

<table>
<thead>
<tr>
<th>Maximum Inlet Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1720</td>
<td>250</td>
<td>17.2</td>
</tr>
</tbody>
</table>

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe or tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside the unit, possibly causing malfunction.

2. Install regulator so that air flow is in the direction of arrow. Installation must be upstream (high pressure) side and as close to the devices it is to service (lubricator, valve, cylinder or tool). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or socket pipe plug into each port during installation.

4. For protection against rust, pipe scale and other foreign matter, install a filter on the upstream (high pressure) side as closely to the regulator as possible.

Symbols

<table>
<thead>
<tr>
<th>Relieving</th>
<th>Non-Relieving</th>
</tr>
</thead>
</table>

Operation and Service
1. Before turning on the air supply, turn the adjusting knob on the master regulator until compression is released from the pressure control spring. Turn on air supply to the master regulator and the pilot controlled regulator. Adjust the downstream pressure by turning adjusting knob on the master regulator until the desired downstream pressure is obtained.

2. To decrease regulated pressure setting, always reset from a pressure lower than the final setting required. Example, lowering the secondary pressure from 80 PSIG to 60 PSIG is best accomplished by dropping the secondary pressure to 50 PSIG, then adjusting upward to 60 PSIG.
3. To service the regulator piston, poppet assembly and seat insert (10R, 11R & 12R):
   A. Shut off air supply and depressurize the unit. Turn the adjusting knob on the master regulator until pilot pressure is relieved on the pilot controlled regulator.
   B. Unscrew the threaded collar and remove the bonnet assembly.
   C. Disassemble, clean and carefully inspect parts for wear or damage. If replacement is necessary, use parts from the service kits.
   D. Lubricate poppet bore, poppet stem, lower balancing seal, and all o-rings with grease found in kit.
   E. Lubricate bonnet bore with grease found in kit. Carefully install piston seals as shown in assembly drawing. The V side of each seal must be installed facing the end of the piston. Install vent seal if repairing a relieving regulator. Install piston assembly into bonnet.
   F. (10R) Install poppet assembly, cap’s o-ring to o-ring groove on cap. Then screw cap into body until the cap bottoms out in body.
      (11R & 12R) Install poppet return spring, poppet assembly, o-rings, and seat insert.
   G. Assemble bonnet assembly to body and tighten threaded collar hand tight plus 1/4 turn.
4. Turn on air pressure and check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again.
   If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

### Service Kits Available

<table>
<thead>
<tr>
<th></th>
<th>Economy 10R</th>
<th>Compact 11R</th>
<th>Standard 12R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulator (Standard)</td>
<td>PS949</td>
<td>PS749</td>
<td>PS849</td>
</tr>
<tr>
<td>Repair Kit (Relieving)</td>
<td></td>
<td>N/A</td>
<td>PS749R</td>
</tr>
<tr>
<td>Regulator (Reverse Flow)</td>
<td>PS849R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair Kit (Relieving)</td>
<td>PS947</td>
<td>PS747</td>
<td>PS847</td>
</tr>
<tr>
<td>Regulator (Standard)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair Kit (Non-Relieving)</td>
<td>PS947</td>
<td>PS747R</td>
<td>PS847R</td>
</tr>
<tr>
<td>Seat Insert Repair Kit (Standard)</td>
<td>N/A</td>
<td>PS713</td>
<td>PS813</td>
</tr>
<tr>
<td>Gauges:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Pressure</td>
<td>K4515N18060</td>
<td>K4520N14060</td>
<td>K4520N14060</td>
</tr>
<tr>
<td>0 to 410 kPa (0 to 60 psig)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Pressure</td>
<td>K4515N18160</td>
<td>K4520N14160</td>
<td>K4520N14160</td>
</tr>
<tr>
<td>0 to 1100 kPa (0 to 160 psig)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Pressure</td>
<td>K4515N18160</td>
<td>K4520N14160</td>
<td>K4520N14160</td>
</tr>
<tr>
<td>0 to 2070 kPa (0 to 300 psig)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Lightly grease with provided lubricant.
- Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.
- Clean with lint-free cloth.

![Figure 1: 10R Regulator](image1)

![Figure 2: 11R & 12R Regulator](image2)
**WARNING**

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

**Introduction**

Follow these instructions when installing, operating, or servicing the product.

**Conversion Kit PS737**

Conversion of 06 and 07 Series Regulators from standard knob type adjustment to Tamperproof Type Regulator.

**Kit Consist Of:**

1. Bonnet Assembly (Hex Nut Installed)
2. Hex Socket Set Screw
3. Hex Sleeve Insert
4. Key Lock Housing
5. Removable Key
6. Spring Rest
7. Grease Tube

Conversion Instructions

A. Shut off air supply and depressurize the unit.
B. Disengage adjusting knob by pulling upward. Turn adjusting knob counterclockwise until compression is released from the pressure control spring. Turning the knob counterclockwise does not vent downstream pressure on non-relieving regulators. Downstream pressure must be vented before servicing or conversion of the regulator.
C. Unscrew the threaded collar and remove the bonnet assembly.
D. Disassemble the diaphragm assembly and control spring.
E. Apply grease to the male thread of the hex socket set screw and in the pocket of the spring rest.
F. Install spring rest, control spring and diaphragm assembly into bonnet assembly.
G. Assemble bonnet assembly to body and tighten threaded collar hand tight plus 1/4 turn.
H. Install hex socket set screw into bonnet assembly. Adjust set screw to the desired downstream pressure setting.
I. Assemble hex sleeve insert over set screw by turning hex sleeve insert clockwise until hex sleeve insert bottoms on bonnet. Tighten hex sleeve insert to .8 to 1.0 Nm (7 to 9 ft. lbs.) torque. It may be necessary to use a 3/16 hex wrench to prevent the set screw from turning while tightening the hex sleeve insert.
J. Slip key lock housing over insert. Do not turn key.
K. Remove key. Downstream pressure is now set and tamperproof.

**WARNING**

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.

**WARNING**

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Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation & Service Instructions
2R300C
1” Regulator Series
ISSUED: August, 2006
Supersedes: April, 2006
Doc. # 2R300C, ECN #060900, Rev 8

Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed air systems only.

Operating Pressure:

<table>
<thead>
<tr>
<th>Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Inlet Pressure</td>
<td>1720</td>
<td>250</td>
<td>17.2</td>
</tr>
</tbody>
</table>

Ambient Temperature Range: 0°C to 80°C (32°F to 175°F)

Symbols

- Relieving Regulator
- Non-Relieving Regulator

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.

2. Install regulator so that air flow is in the direction of arrow. Installation must be upstream (high pressure) side and as close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body. It is necessary to install a gauge or pipe plugs into each port during installation.

4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation
1. Before turning on the air supply, turn the adjusting knob or “T” handle counterclockwise until compression is released from the control spring. Then turn on air supply and adjust regulator to desired secondary pressure by turning adjusting knob/handle clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.

2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 psig) is best accomplished by dropping the secondary pressure to 350 kPa (50 psig), then adjusting upward to 410 kPa (60 psig).

Push the adjusting knob down to lock the pressure setting. On the “T” handle units, tighten the hex nut against the bonnet to lock setting.

Service

CAUTION:
SHUT OFF AIR SUPPLY and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the knob/handle counterclockwise reduces regulator’s setting, but does not vent downstream pressure on non-relieving regulators.)

WARNING

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**CAUTION:**

Lubricate parts with a mineral based oil/grease or silicone grease. DO NOT use synthetic oils/greases such as esters.

A. Use the following procedure to service bonnet assembly and components.

1. (Adjustable Regulator only) Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.

2. Disassemble and service as required. Refer to pictures for details.

3. Reassemble Unit. Refer to pictures for details.

B. Servicing the Poppet Assembly

1. (Adjustable Regulator only) Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.

2. Remove bottom cap:
   a) Remove screw
   b) Turn cap and pull down counter clockwise.

3. Disassemble parts and services as required. Refer to pictures for details.

4. Reassemble unit. Refer to pictures for details.

Turn on air pressure and check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again.

- Lightly grease with provided lubricant.
- Inspect for nicks, scratches, and surface imperfections.
  If present, reduced service life is probable and future replacement should be planned.
- Clean with lint-free cloth.

Adjust to desired secondary pressure as described in the operation section.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

### Service Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Number</th>
<th>Contains Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulator (Standard)</td>
<td>P3NKA00RR</td>
<td>(1) Piston, (2) Lipseal, (3) O-Ring, (4) Poppet Assembly, (5) O-Ring, (6) Poppet Return Spring, and (7) Seal</td>
</tr>
<tr>
<td>Repair Kit (Relieving)</td>
<td>P3NKA00RN</td>
<td>(1) Piston, (2) Lipseal, (3) O-Ring</td>
</tr>
<tr>
<td>Repair Kit (Non-Relieving)</td>
<td>P3NKA00RD</td>
<td>(1) Piston, (2) Lipseal, (3) O-Ring</td>
</tr>
<tr>
<td>Air Pilot Control Piston Kit</td>
<td>P3NKA00PD</td>
<td>(1) Piston, (2) Lipseal, (3) O-Ring</td>
</tr>
<tr>
<td>Mounting Bracket Kit</td>
<td>P3NKA00MW</td>
<td>Not Shown</td>
</tr>
</tbody>
</table>

**Gauges:**

- **Low Pressure** 0 to 410 kPa (0 to 60 PSIG) K4520N14060 Not Shown
- **Standard Pressure** 0 to 1100 kPa (0 to 160 PSIG) K4520N14160 Not Shown
- **High Pressure** 0 to 2070 kPa (0 to 300 PSIG) K4520N14300 Not Shown

Adjust to desired secondary pressure as described in the operation section.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.
Pneumatic Division
Richland, Michigan 49083
269-629-5000

Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.

2. Install regulator so that media flow is in the direction of arrow. Installation must be upstream (high pressure) side and as close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.

4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation
1. Before turning on the media source, disengage the Adjusting Knob by pulling upward. Turn the Adjusting Knob counterclockwise until compression is released from the Control Spring. Then turn on media source and adjust regulator to desired secondary pressure by turning Adjusting Knob clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.

2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG).

Push the Adjusting Knob down to lock the pressure setting.

Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed media systems only.

Operating Pressure:

<table>
<thead>
<tr>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>550</td>
<td>80</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Ambient Temperature Range: 4°C to 82°C (40°F to 180°F)

Symbols

- Relieving Regulator
- Non-Relieving Regulator

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available.
Service

CAUTION:
SHUT OFF MEDIA SOURCE and exhaust the primary and secondary pressure before disassembling regulator unit. (Turning the Knob counterclockwise reduces regulator’s setting, but does not vent downstream pressure on non-relieving regulators.)

CAUTION:
Lubricate parts with a mineral based oil / grease or silicone grease. DO NOT use synthetic oils / greases such as esters.

A. Servicing the Bonnet and Diaphragm assembly-
1. Disengage the Adjusting Knob by pulling upward. Turn Adjusting Knob counterclockwise until the compression is released from the Pressure Control Spring.
2. Unscrew the threaded Bonnet Assembly. Next, disassemble, clean, and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from service kits.
3. Lubricate O-ring and Lip Seals with grease (supplied with kits).
4. Install Diaphragm Assembly into Body. Then install Bonnet Assembly to Body and tighten to 4.5 to 5.6 Nm (40 to 50 in. lb.).

B. Servicing the Poppet Assembly-
1. Exhaust system media pressure as previously described. Then remove Cap by unscrewing it from Body. Next, remove Bottom Cap, O-ring, Poppet Return Spring and Poppet Assembly.
2. Next, disassemble, clean, and carefully inspect parts for wear and / or damage. If replacement is necessary, use parts from service kits.
3. Lubricate O-ring and sliding surfaces using grease supplied with service kit.
4. Install parts as shown.
5. Lubricate Bottom Cap O-ring and install it in o-ring groove on cap. Then screw cap into Body until the cap bottoms out in body. Tighten to 3.5 to 5.1 Nm (35 to 45 in. lb.).
6. Turn on media source and adjust to desired secondary pressure as described in the Operation section.

Turn on media pressure and check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again. If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

Service Kits Available

<table>
<thead>
<tr>
<th>20RC / 058 1/8&quot; &amp; 1/4&quot; Regulators</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulator Repair Kit (Relieving)</td>
<td>PRKR164Y</td>
</tr>
<tr>
<td>Regulator Repair Kit (Non-Relieving)</td>
<td>PRKR163Y</td>
</tr>
<tr>
<td>Spring Gauge &amp; Knob Assembly</td>
<td>PCKR364Y</td>
</tr>
<tr>
<td>Panel Mount Nut</td>
<td>PR05X51</td>
</tr>
<tr>
<td>Mounting Bracket</td>
<td>PSA161X57</td>
</tr>
</tbody>
</table>

Lightly grease with provided lubricant.

Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.

Clean with lint-free cloth.
WARNING
To avoid system failure, be sure that your operating pressure and temperature will never exceed the rated pressure and temperature of this product.
- Disconnect the air supply and depressurize all lines connected to this product before servicing or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be free from oil and moisture before being supplied to the system.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic systems are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the system leakage test performed to ensure the product does not operate properly or leak into the system.
- Warning: specifications on the product should not be covered by any material that would interfere with proper operation.

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EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INSERTION IN EQUIPMENT MAINTENANCE MANUALS THAT USE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE FOR MORE INFORMATION.

MISE EN GARDE
Pour éviter que le boulon de polynylon se soit délicat et provoque des défauts préjudiciables au final du produit, il est nécessaire de le couvrir avec une couche de lubrifiant appropriée.

DESCRIPTIEVEN VAN DEZE INSTRUCTIES ZIJN DISPOZIBEL VOOR INLEIDING IN HET MATERIAAL OF DE MAATREKEN HIERIN ONDERwerp ZIJN VOOR DEZE INSTRUCTIES. MET DEZE INSTRUCTIES ZIJN DE NUMERIELE EN Kun, 150 PSIG (10 bar) and no more than 52°F (28°C) if possible.

Extra copies of these instructions are available for inclusion in equipment maintenance manuals that use these products. Contact your local representative for more information.

Safety Lockout Valves
- Safety Lockout Valves
- Sicherheitsabschaltventile
- Válvulas de bloqueo - seguridad
- 安全关闭阀
- Sicherhetsavstängningsventiler
- Säkerhetsavstängningsventiler
- 安全泄压阀
- 安全锁闭阀
- 安全锁闭阀

Screw Valve
- Screw Valve
- Visvalve
- Válvulas de tornillo
- 螺纹阀
- Visvalve
- Visvalve

Ball Valve
- Ball Valve
- Ball valve
- Valvula a sfera
- 球阀
- Kulventil
- 油泵
- 球阀

Safety Valve
- Safety Valve
- Sicherheitsventil
- Válvula de seguridad
- 安全阀
- Sikkerhetsventil
- 安全阀

Slide Valve
- Slide Valve
- Tiroir
- Válvula de empuje
- 滑阀
- Slidventil
- 滑阀

Tirfor valve
- Tiroir
- Válvula de empuje
- 滑阀
- Slidventil
- 滑阀

Tiroir
- Tiroir
- Válvula de empuje
- 滑阀
- Slidventil
- 滑阀
ATENZIONE

Per evitare comportamenti imprevedibili del sistema che potrebbero causare gravi danni personali, morte e danni alle cose.

- Sciolgere l'alimentazione dell'aria e disattivare tutte le condutture collegate al prodotto prima di iniziare qualsiasi manutenzione.
- Utilizzare il prodotto alla pressione, alla temperatura e a tutte le altre specificazioni.

Esempio

- Il mezzo deve essere privo di condensa se la temperatura è inferiore al punto di congelamento.

- Scollegare l'alimentazione dell'aria e depressurizzare tutte le condutture collegate al prodotto prima di installazione, manutenzione o conversione.

ATTENZIONE

La scelta oppure l'installazione del prodotto e/o sistema ivi descritti oppure di altri articoli correlati può provocare gravi lesioni personali, morte e danni alle cose.

I prodotti ivi descritti, inclusi ma non limitati a, caratteristiche dei prodotti, specifiche, design, disponibilità e prezzo, sono soggetti a modifica senza preavviso.

La presente documentazione e la presente versione sono state redatte e approvate da Parker Hannifin Corporation, Sede di Visalia, 2600 W. North Street, Visalia, CA 93291. Per ulteriori informazioni, consultare Parker Hannifin Corporation o altre fonti di informazione.

La presente documentazione è destinata a persone che si specializzano nella manutenzione e installazione dei prodotti, per la ricerca e la verifica delle funzionalità e del comportamento dei prodotti. La presente documentazione non può essere utilizzata per scopi commerciali.

ATENZIONE

Gli esempi forniti sono solo di riferimento e non devono essere utilizzati come sostituti delle linee guida e delle normative per la sicurezza.

La presente documentazione e la presente versione sono state redatte e approvate da Parker Hannifin Corporation, Sede di Visalia, 2600 W. North Street, Visalia, CA 93291. Per ulteriori informazioni, consultare Parker Hannifin Corporation o altre fonti di informazione.
Para evitar comportamientos del sistema que puedan causar accidentes y daños materiales:
- Cuando proceda, desconectar la electricidad antes de la instalación, servicio o modificación.

- Desechar el aire o desgasar todos los líneas conectadas a este producto antes de la instalación, servicio o modificación.

- Trabajar con la presión, temperatura y demás condiciones que sean correctas para el equipo y la instalación.

- El aire no debe ser húmedo si la temp. ambiente es 52 °C (125 °F).

- Los recipientes de policarbonato tienen un límite de presión de 10 bar (150 PSIG) y de temperatura de 52°C (125°F). Evite la rotura de los recipientes de policarbonato que pueden causar heridas o averías.

SE PUEDEN OBTENER COPIAS EXTRAS DE ESTAS INSTRUCCIONES PARA USO PERSONAL O COMERCIAL, DE LA MANERA QUE UTILIZEN ESTOS PRODUCTOS. TOQUE CONTACTO CON EL REPRESENTANTE LOCAL.

ADVERTENCIA

OBSERVAI

Behalte und günstige, als polykarbonat, die sind bei gegebenen und geplanten, die gerechten und sicher haftbaren Verpackungen für den Anwender, einschließlich Ein- und Ab-teile abzubrechen.

Die DPI Wert ist unter Betriebsbedingungen abzulesen. Das Element austauschen, wenn die Anzeige im Betrieb rot ist.

Los receptores de poliéster, transparentes y translúcidos, son adecuados para su uso en aplicaciones donde los límites de presión y temperatura no sean superados, y en aplicaciones industriales donde puedan ser colocados en lugares expuestos, encendido de gases, líneas de temperatura fuera del rango estipulado. Como la mayoría de los plásticos, algunos productos sintéticos, pueden ser polimerizables. Los receptores de políester, polímeros, productos químicos, productos de alto rendimiento, etc. No deben ser usados en sistemas de aire que estén en contacto con los compuestos de flúor o de hojas de hojas de compuesto de flúor o de hojas de compuesto de flúor.

Metal de recuperación cuando las condiciones de trabajo del dispositivo se degradan en el uso, necesitando el mantenimiento de las condiciones de trabajo del dispositivo.

Las condiciones correctas de uso impiden la rotura de los recipientes de policarbonato que pueden causar heridas o averías.

Una vez que el producto ha sido desmontado, se debe dejar de consumir el material.

Para una información más detallada consultar la sección Guía de Seguridad de los catálogos de la Pneumatic Division o descargar la guía desde: www.parker.com/safety

Guía de Seguridad

AVERTENCIA

Uns utlotta systembeteckning som kan leda till person- och delskador.

- Koppla ur utlotta från förstörs av installerings-,

- Service- eller ombyggnadarbete påfalls.

- Koppla ur utlotta från förstörs av installerings-,

- Service- eller ombyggnadarbete påfalls.

- Se till att överläkar ren huvudtryckväg, temperatur- och press-lägenheter som avsedde för detta produktarbete

- Medel måste vara bedrivit av omgivareningsförbindelser är lägre än noll grade.

- Service ska utföras på det som beskrivs i de här instruktionerna.

- Installation, service och ombyggnad av dessa produkter ska utföras av en person som har utfört erfarenheten inför pneumautillverkning.

- Här installations-, service- eller ombyggnadarbete klart utlotta och strömförsörjning (var som krävs) kopplas in och produkten funktionsprovas och tillsökas. Produkten får inte tas i drift vid hörbar läckage eller om den inte fungerar korrekt.

- Varningar och specifikationer på produkten får inte modifieras. Om en specifik omständighet avverkar produkten från det publicerade, bör du kontakta vår lokala representant för att ta de nödvändiga åtgärderna.

P32 Compact + P33 Standard

P32 Compact + P33 Standard

P32 Compact + P33 Standard

Filter Element Replacement

Schmiermittel

Reinigungsfeinheit

Element filtrante di ricambio

Element filter de remplacement

Elemento filtrante

Filterelement

Filterkuppel

Schmiervorrichtung

Lubricator

Sicht-Demos-Assembly

Mонтаж на фильтр

Montaje del elemento filtrante

Montage Elemente

Crianciamento do elemento filtre

Filterkuppel

Kit di controllo DPI

Filtre DPI

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

Filtre DPI

Filtre DPI

Filtre DPI

Filtre DPI

Filtre DPI

Filtre DPI

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10

P1 PI P2 P3 P4 P5 P6 P7 P8 P9 P10
Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed media systems only.

Operating Pressure:
Maximum Inlet Pressure
- kPa: 1034
- PSIG: 150
- bar: 10.3

Ambient Temperature Range:
- 4°C to 52°C
- (40°F to 125°F)

Symbols
- Relieving Regulator Adjustable
- Non-Relieving Regulator Adjustable

Installation
Before installing, blow out pipe line to remove all foreign matter. This unit has DRYSEAL pipe threads; use pipe compound or tape sparingly to male threads only. Install regulator in pipe line so that water will flow in direction of arrow stamped on body, install as near as possible to equipment serviced.

CAUTION: DO NOT OVERTIGHTEN FITTINGS.
- 60 lbs-in (6.8Nm) Maximum - R45 & R46
- 40 lbs-in (4.5Nm) Maximum - R24 & R25

Reduced Pressure Adjustment
To adjust reduced pressure settings, pull knob out and turn knob clockwise to increase pressure setting and counter-clockwise to lower setting. Push knob in to lock adjustment. For best adjustment, set pressure on the rise by turning knob clockwise. With relieving type regulators (air use only), the reduced pressure follows adjustment of the screw. With non-relieving regulators, adjustment for lower reduced pressure will not be obtained until the reduced pressure system is “bled-off”, or until air flow (or water flow) starts.

Maintenance – Cleaning
Note: To clean, it is not necessary to remove regulator from line. Refer to drawing as guide in reassembly. If the supply is kept the regulator should provide long periods of uninterrupted service. Erratic regulator operation or loss of regulation is most always due to dirt in the poppet area. To clean, shut off air line pressure and disassemble the regulator. Refer to drawing as a guide to disassembly and subsequent reassembly. Clean parts with mild soap and water or denatured alcohol and blow out body with compressed air. When reassembling, make sure the seat if firmly in place. For R24, R25, tighten spring cage slightly more than hand tight (60 - 70 inch pounds torque). For R45 and R46, tighten spring cage to 150 inch pounds torque.

WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

WARNING
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.

Safety Guide
For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the Pneumatic Division Safety Guide at: www.wattsfluidair.com

Failure or Improper Selection or Improper Use of the Products and/or Systems Described Herein or Related Items Can Cause Death, Personal Injury and Property Damage.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.
Service Kits / Parts Available

<table>
<thead>
<tr>
<th>Description</th>
<th>R24</th>
<th>R25</th>
<th>R45</th>
<th>R46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Relieving Repair Kit</td>
<td>RKR24KY</td>
<td>RKR25KY</td>
<td>RKR45KY</td>
<td>RKR46KY</td>
</tr>
<tr>
<td>Relieving Repair Kit</td>
<td>N/A</td>
<td>RKR25Y</td>
<td>RKR45Y</td>
<td>N/A</td>
</tr>
<tr>
<td>Spring Cage Repair Kit</td>
<td>CKR366Y</td>
<td>CKR364Y</td>
<td>CKR45Y</td>
<td>CKR45Y</td>
</tr>
<tr>
<td>Adjusting Knob</td>
<td>R35-0545P</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Mount Bracket and Nut</td>
<td>SA161X57</td>
</tr>
<tr>
<td>Panel Mount Nut</td>
<td>R05X51</td>
</tr>
</tbody>
</table>

Air Flow Characteristics

R25-02C & R45-03C

Water Flow Characteristics

R24-02CK, R25-02CK, R45-03CK & R46-03CK
WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:
• Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
• Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
• Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
• Medium must be moisture-free if ambient temperature is below freezing.
• Service according to procedures listed in these instructions.
• Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
• After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
• Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

WARNING
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

Safety Guide
For more complete information on recommended application guidelines, see the Safety Guide section of Pneumatic Division catalogs or you can download the Pneumatic Division Safety Guide at: www.parker.com/safety

Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
These products are intended for use in general purpose compressed media systems only.

Operating Pressure:
<table>
<thead>
<tr>
<th>Maximum Inlet Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2068</td>
<td>300</td>
<td>21.0</td>
</tr>
</tbody>
</table>

Ambient Temperature Range: -40°F to 125°F (4°C to 52°C)

Installation
1. The regulator should be installed with reasonable accessibility for service whenever possible - repair service kits are available. Keep pipe and tubing lengths to a minimum with inside clean and free of dirt and chips. Pipe joint compound should be used sparingly and applied only to the male pipe - never into the female port. Do not use PTFE tape to seal pipe joints - pieces have a tendency to break off and lodge inside unit, possibly causing malfunction.

2. Install regulator so that media flow is in the direction of arrow. Installation must be upstream (high pressure) side and as close to the devices it is to service (valve, cylinder, tool, etc.). Mounting may be in any position.

3. Gauge ports are located on both sides of the regulator body for your convenience. It is necessary to install a gauge or pipe plugs into each port during installation.

4. For protection against rust, pipe scale, and other foreign matter, install a filter on the upstream (high pressure) side as close to the regulator as possible.

Operation
1. Before turning on the media source turn the T-handle counterclockwise until compression is released from the Control Spring. Then turn on media source and adjust regulator to desired secondary pressure by turning the T-handle clockwise. This permits pressure to build up slowly, preventing any unexpected operation of the valve, cylinders, tools, etc., attached to the line. Adjustment to desired secondary pressure can be made only with primary pressure applied to the regulator.

2. To decrease regulator pressure setting, always reset from a pressure lower than the final setting desired. For example, lowering the secondary pressure from 550 to 410 kPa (80 to 60 PSIG) is best accomplished by dropping the secondary pressure to 350 kPa (50 PSIG), then adjusting upward to 410 kPa (60 PSIG). Tighten the Locking Nut on the T-handle to lock the pressure setting.

Reduced Pressure Spring Ranges
- "A" Range = 1 – 25 PSI (1/4", 3/8", 1/2" Only)
- "B" Range = 2 – 60 PSI (1/4", 3/8", 1/2" Only)
- "C" Range = 2 – 125 PSI (ALL)
- "D" Range = 5 – 250 PSI (ALL)

Service
Caution: Disconnect or shut off air supply and exhaust the primary and secondary pressures before servicing unit. Turning the T-handle counterclockwise does not vent downstream pressure on non-relieving regulators. Downstream pressure must be vented before servicing regulator.

WARNING
FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.
This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.
The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

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Warning: Grease packets are supplied with kits for lubrication of seals. Use only mineral based grease or oils. Do not use synthetic oils such as esters. Do not use silicones.

Note: After servicing unit, turn on air supply and adjust regulator to the desired downstream pressure. Check unit for leaks. If leakage occurs, do not operate - conduct repairs and retest.

A. Servicing the Bonnet and Diaphragm Assembly
1. Turn the T-handle counterclockwise until the compression is released from the Pressure Control Spring.
2. Remove Bonnet Mounting Screws, Bonnet Assembly, Pressure Control Spring and Spring Button. Remove Diaphragm Assembly. Next, disassemble, clean, and carefully inspect parts for wear and/or damage. Wipe parts, clean with soapy water or denatured alcohol. If using compressed air to blow dry, be sure to wear appropriate eye protection. If replacement is necessary, use parts from service kits.
3. Install Diaphragm Assembly, Pressure Control Spring, Spring Button as shown below. Then, install Bonnet Assembly to Body with Mounting Screws and tighten in an alternating or star pattern to the following torque specifications:
   - 1/4", 3/8", 1/2" 2.3 to 4.5 Nm (20 to 40 in. lb.)
   - 3/4", 1-1/4", 1-1/2" 6.8 to 7.9 Nm (60 to 70 in. lb.)

B. Servicing the Poppet Assembly
1. Exhaust system media pressure as previously described. Then remove Bottom Plug by unscrewing it from Body. Next, remove Bottom Plug, O-ring, Bottom Spring and Inner Valve Assembly.
2. Next, disassemble, clean, and carefully inspect parts for wear and/or damage. If replacement is necessary, use parts from service kits.
3. Lubricate O-ring and sliding surfaces using grease supplied with service kit.
4. Install parts as shown.

5. Lubricate Bottom Plug O-ring and install it in o-ring groove on Bottom Plug. Be sure Inner Valve Stem fits into center area of Diaphragm Assembly before installing Bottom Plug. Then screw Bottom Plug into Body until it bottoms out in body. Tighten to 3.5 to 5.1 Nm (35 to 45 in. lb.).
6. Turn on media source and adjust to desired secondary pressure as described in the Operation section. Check regulator for leakage. If leakage occurs, DO NOT OPERATE — conduct repairs again.

If you have questions concerning how to service this unit, contact your local authorized dealer or your customer service representative.

Service Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Number</th>
<th>Regulator Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom Plug Only</td>
<td>118Y2</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td></td>
<td>118A2</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td></td>
<td>119B2-2</td>
<td>3/4&quot; thru 1-1/2&quot;</td>
</tr>
<tr>
<td>Bottom Plug O-ring Only</td>
<td>118Y102</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td></td>
<td>118A101</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td></td>
<td>118B101</td>
<td>3/4&quot; thru 1-1/2&quot;</td>
</tr>
<tr>
<td>Mounting Bracket Kit</td>
<td>SA15Y57</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td></td>
<td>18A57</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td></td>
<td>18B57</td>
<td>3/4&quot; thru 1-1/2&quot;</td>
</tr>
<tr>
<td>Panel Mount Conversion Kit</td>
<td>4202</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td></td>
<td>4204</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Knob &amp; Hardware Only</td>
<td>PK16Y</td>
<td>1/4&quot;, 3/8&quot;, 1/2&quot;</td>
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<tr>
<td>Regulator Repair Kit*</td>
<td>RK119Y</td>
<td>1/4&quot;, 3/8&quot;</td>
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<tr>
<td>(Relieving)</td>
<td>RK119A</td>
<td>1/2&quot;</td>
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<tr>
<td></td>
<td>RK119A250</td>
<td>1/2&quot; (&quot;D&quot; Range)</td>
</tr>
<tr>
<td></td>
<td>RK119B</td>
<td>3/4&quot;, 1&quot;</td>
</tr>
<tr>
<td></td>
<td>RK119D</td>
<td>1-1/4&quot;, 1-1/2&quot;</td>
</tr>
<tr>
<td>Regulator Repair Kit*</td>
<td>RK118Y</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td>(Non-Relieving)</td>
<td>RK118A</td>
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<tr>
<td></td>
<td>RK118A250</td>
<td>1/2&quot; (&quot;D&quot; Range)</td>
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<tr>
<td></td>
<td>RK118B</td>
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<tr>
<td></td>
<td>RK118D</td>
<td>1-1/4&quot;, 1-1/2&quot;</td>
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<tr>
<td>Spring Cage Kit</td>
<td>RK1C119Y</td>
<td>1/4&quot;, 3/8&quot;</td>
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<tr>
<td>T-handle Kits</td>
<td>TK119A</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td></td>
<td>TK119B</td>
<td>3/4&quot; thru 1-1/2&quot;</td>
</tr>
<tr>
<td>Check Valve Assembly for</td>
<td>SAN263Y116-2</td>
<td>1/4&quot;, 3/8&quot;, 1/2&quot;, 3/4&quot; thru 1-1/2&quot;</td>
</tr>
<tr>
<td>Reverse Flow Option</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Gauges</th>
<th>K4520N14060</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 60 PSI</td>
<td>0 to 11 bar</td>
</tr>
<tr>
<td>0 to 160 PSI</td>
<td>0 to 30 bar</td>
</tr>
<tr>
<td>0 to 300 PSI</td>
<td>0 to 4 bar</td>
</tr>
</tbody>
</table>

Kits 4202 & 4204 include Bonnet. For Knob & Hardware only, order Kit Number PK16Y

R119 Regulator with Panel Mount Conversion Kit

Kits 4202 & 4204 include Bonnet. For Knob & Hardware only, order Kit Number PK16Y

Check Valve Assembly X80 Option Reverse Flow Only

R119 Regulator with X80 Option Reverse Flow Feature

Lightly grease with provided lubricant.
Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.
Clean with lint-free cloth.
Introduction

Follow these instructions when installing, operating, or servicing the product.

Application Limits

These products are intended for use in general purpose compressed media systems only.

Operating Pressure:

<table>
<thead>
<tr>
<th>Maximum Inlet Pressure</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2068</td>
<td>300</td>
<td>21.0</td>
</tr>
</tbody>
</table>

Ambient Temperature Range:

4°C to 49°C

(40°F to 120°F)

Maintenance

If the main supply or pilot air supply are kept clean, the regulator should provide long periods of uninterrupted service. Erratic regulator operation, or loss of regulation, is most always due to dirt accumulating in the disc area. To remedy, clean the regulator as outlined below.

Cleaning

Depressurize, remove bottom plug, spring and disc. Clean parts with alcohol, wipe off seat and blow out body with compressed air. Reassemble parts as a unit and screw into regulator (disc bottom plug, make sure disc is in center hole in body).

See reverse side for Service Kits / Parts Available.

ANSI Symbols

![ANSI Symbol]

Installation

Installation of the R119-J requires the use of an additional pilot regulator to control the reduced pressure output of the R119-J unit. A typical installation is shown on reverse side, where a Type R119, R10 or R384 regulator is used to furnish the pilot operating supply pressure. With the flexibility provided by this typical installation, the R119-J regulator may be used in a remote and inaccessible location while the pilot regulator can be placed in a convenient location to control operation of the R119-J regulator.

Either a rigid pipe or flexible tubing may be utilized to connect the R119-J unit to the pilot regulator. Before installing, blow out pipe line to remove scale and other foreign matter. This unit has DRYSEAL pipe threads. Use pipe compound or tape sparingly to make threads only. Install regulator in pipe line so that air will flow from IN to OUT. Install as near as possible to equipment being supplied. Connections R and L are normally for gauge use, but may be used for outlet purposes in certain applications. To ensure trouble-free performance, a filter (Type F602) should be installed upstream of the regulator.

Adjustment

Since the reduced or regulated pressure is controlled by the pilot regulator, an increase in pilot pressure into the R119-J unit will produce a corresponding increase in the regulated pressure from the R119-J regulator. All R119-J series regulators (excluding models with X71 option) are of the constant bleed design. The system pressure is internally “bled-off” permitting adjustment for lower reduced pressure settings without the necessity of waiting for the flow to start.

NOTE: A small internal constant bleed device permits accurate fine point setting capability. This constant air bleed may be audible and is a perfectly normal characteristic of the regulator.

Cleaning

Depressurize, remove bottom plug, spring and disc. Clean parts with alcohol, wipe off seat and blow out body with compressed air. Reassemble parts as a unit and screw into regulator (disc bottom plug, make sure disc is in center hole in body).

See reverse side for Service Kits / Parts Available.

ANSI Symbols

![ANSI Symbol]

Installation & Service Instructions

IS-R119J

R119 - J Series

Remote Control Regulators

ISSUED: April, 2006

Supersedes: September, 2005

Doc. #ISR119J, ECN #060313, Rev. 2

WARNING

To avoid unpredictable system behavior that can cause personal injury and property damage:

- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

! WARNING

Product rupture can cause serious injury.

Do not connect regulator to bottled gas.

Do not exceed maximum primary pressure rating.

Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure and review the information concerning the product or systems in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

Extra copies of these instructions are available for inclusion in equipment/maintenance manuals that utilize these products. Contact your local representative.
Lightly grease with provided lubricant.

- Inspect for nicks, scratches, and surface imperfections. If present, reduced service life is probable and future replacement should be planned.

Clean with lint-free cloth.

**Service Kits / Parts Available**

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Number</th>
<th>Regulator Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulator Repair Kit (Relieving)</td>
<td>RK119X20Y</td>
<td>1/4&quot;, 3/8&quot;</td>
</tr>
<tr>
<td>Includes: Diaphragm Assembly Top, Disc Assembly, Bottom Plug Gasket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RK119X20A</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>RK119X20B</td>
<td>3/4&quot;, 1&quot;</td>
<td></td>
</tr>
<tr>
<td>RK119X20D</td>
<td>1-1/4&quot;, 1-1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

| Regulator Repair Kit (Non-Relieving)              | RK118X20Y  | 1/4", 3/8"     |
| Includes: Diaphragm Assembly Top, Disc Assembly, Bottom Plug Gasket |            |                |
| RK118X20A                                         | 1/2"       |
| RK118X20B                                         | 3/4", 1"   |
| RK118X20D                                         | 1-1/4", 1-1/2" |

| 2-1/2" Regulator Repair Kit                        | RK119G     | 2-1/2"         |
| Includes: Piston O-Rings, Cylinder O-Rings, Disc Assembly, Strainer, Bottom Plug Plug Gasket |            |                |

**Accessories**

**Gauges**

- 0 to 60 PSI (0 to 4 bar) K4520N14060
- 0 to 160 PSI (0 to 11 bar) K4520N14160
- 0 to 300 PSI (0 to 20 bar) K4520N14300

**Suggested Installation or Mounting for the 2" and 2-1/2" R119-16 and 20J**

1. The top two are the best way of mounting for all applications.
2. For best results at low pressure, mount inverted as shown above.
3. Use a precision regulator, R216, R230, or R210 for low pressure.
**P3Y 3/4” & 1” Series**

**Fixation - Mounting - Befestigung - Fijacion - Fissaggio**

**UK** Disconnect all air & electrical supplies before attempting repair or maintenance. See ISO4414 for safety requirements covering the installation and use of pneumatic equipment.

**FR** Débranchez les connexions pneumatiques et électriques avant réparation ou maintenance. Voir ISO4414 pour les règles de sécurité des installations et utilisation des équipements pneumatiques.


**SE** Koppla ifrån luft och elektriska anslutningar innan reparation eller underhållsarbeten påbörjas. Se ISO4414 för säkerhetsbestämmelser lätande installation och användning av pneumatisk utrustning.

**ES** Desconectar las conexiones neumáticas y eléctricas antes de efectuar cualquier reparación o mantenimiento. Ver ISO4414 para reglas de seguridad de las instalaciones y utilización de equipos neumáticos.

**IT** Prima di eseguire interventi di manutenzione verificare che sia l’alimentazione elettrica che pneumatica siano disattivate. Attenersi alla normativa ISO4414 che regola l’installazione e l’uso di componenti pneumatici.

**WARNING**

To avoid unpredictable system behavior that can cause personal injury and proper damage.

- Ensure that all air and electrical supplies are disconnected before installation.
- Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.
- Install for continuous (ambient) temperature is below freezing.
- Service according to procedures listed in these instructions.
- Take the necessary steps to ensure that any external noise produced by the product does not exceed maximum primary pressure rating.
- To prevent personal injury and proper damage.
- Product rupture can cause serious injury. Do connect regulator to bottled gas. Do not exceed maximum primary pressure rating.
- Failure or improper selection or improper use of the products and/or systems described herein or related items can cause death, personal injury and property damage.

**Association - Combination - Verbindung - Asociacion - Assemblaggio**

**Service kits**

- Diaphragm kit - relieving type = P3YKA00RR
- Diaphragm kit - non-relieving type = P3YKA00RN

**Connector M12 x 1**

- Pin 1: Power supply +24 V DC ± 10% 0.15 A Residual ripple 10%
- Pin 2: Power supply 0 V Reference and mass capacity for set value and actual value
- Pin 3: Set value output 0-10 V
- Pin 4: 0 V target signal (connected on board with pin 2 as standard)
- Pin 5: Analog actual value output 0-10 V Tolerance ± 0.15 V

**With a single potentiometer**

- The resistance of the potentiometer should range between 500 Ω and 100 Ω

- The total resistance of the potentiometer series should not be less than 500 Ω

**Réglage - Adjustment - Steuerung - Regulación - Regolazione**

**Service kits**

- Diaphragm kit - relieving type = P3YKA00RR
- Diaphragm kit - non-relieving type = P3YKA00RN

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**With a single potentiometer**

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- The total resistance of the potentiometer series should not be less than 500 Ω
Condensate drainage / Purge / Kondensatentleerung / Svuotamento condensati / Vaciado del condensado / odpouštění kondenzátu / spust kondensatu

OFF ON AUTO

Automatic fully automatic complètelement automatique completamente automático automatický

Min. oil level

Recommended Lubricants / Lubrifiants recommandés / Empfohlene Ölsorten / Lubrificanti consigliati / Lubrantes recomendados / Rekomenderade oljor för dimsmörjare

Lubrication of airlines

The allen key adjusts flow through the valve once the set point is reached, after which full pressure is achieved.

Le débit est réglable par la clé Allen, jusqu'à la valeur consignée qui déclenche le plein passage.

The use of synthetic oils and antifreeze with a Glycol concentration of 100% can be used.

* For food industry applications: approved oil USDA-H1

Recommended Lubricants

<table>
<thead>
<tr>
<th>Oil Company</th>
<th>ISO Grade</th>
<th>Grade</th>
<th>ISO Grade</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guff</td>
<td>Harmony 38AW</td>
<td>15</td>
<td>Harmony 43AW</td>
<td>32</td>
</tr>
<tr>
<td>Shell (UK) Oil</td>
<td>Teftex 22</td>
<td>22</td>
<td>Teftex 7</td>
<td>31</td>
</tr>
<tr>
<td>Barmah Castor</td>
<td>Hyspin AWES15</td>
<td>15</td>
<td>Hyspin AWES3</td>
<td>32</td>
</tr>
<tr>
<td>Edgar Vaughan</td>
<td>K50 SL</td>
<td>10</td>
<td>Hydrodrive HP100</td>
<td>32</td>
</tr>
<tr>
<td>Exxon Petroleum</td>
<td>NUTO 1115</td>
<td>15</td>
<td>NUTO H32</td>
<td>32</td>
</tr>
<tr>
<td>B.P.</td>
<td>HLP 22</td>
<td>22</td>
<td>HLP 32</td>
<td>32</td>
</tr>
<tr>
<td>Mobile Oil Company</td>
<td>Velocite No.6</td>
<td>10</td>
<td>DTE Oil - Light</td>
<td>32</td>
</tr>
<tr>
<td>Shell</td>
<td>Cassida Fluid HF*</td>
<td>32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lubricator Adjustment - Réglage du lubrificateur - Steuerung Regulación - Regolazione

Oil adjusting screw

Ömengeneinzelschraube

réglage de la lubrification

Tappo di bloccaggio olio

Refill plug kit

P3YKA00PL

Oil VG32 1L = P3YKA00PPBB

Combined Soft Start & Dump Valve / Soft Start Valve / Vannes de mise en pression progressive et de purge / Sanftanlauf + Abschalt-Ventile / Mjukstartventiler / Válvulas de arranque progresivo / Valvole Avviamento Progressivo

Combined start/stop function

Combined start/stop function with acknowledgement

Ball Valve
Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

⚠️ WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS (“PRODUCTS”) CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters, Pressure Regulators, and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.


1.4. Distribution: Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Parker valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Parker and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
- Assuring that all user’s performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
- Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
- Assuring compliance with all applicable government and industry standards.

1.6. Safety Devices: Safety devices should not be removed, or defeated.

1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.

1.8. Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

2.1. Flow Rate: The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.

2.2. Pressure Rating: Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.

2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.

2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.

2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.

2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
- Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.
2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.  
- Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.  
- Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.  
- Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

3.2. Installation Instructions: Parker published Installation Instructions must be followed for installation of Parker valves, FRLs and vacuum components. These instructions are provided with every Parker valve or FRL sold, or by calling 1-800-CPARKER, or at www.parker.com.

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.10.

4.2. Installation and Service Instructions: Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Parker valve and FRL sold, or are available by calling 1-800-CPARKER, or by accessing the Parker web site at www.parker.com.


4.4. Visual Inspection: Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
- Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
- Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
- Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
- Any observed improper system or component function: Immediately shut down the system and correct malfunction.
- Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:
- Remove excessive dirt, grime and clutter from work areas.
- Make sure all required guards and shields are in place.

4.6. Functional Test: Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.

4.7. Service or Replacement Intervals: It is the user’s responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
- Previous performance experiences.
- Government and / or industrial standards.
- When failures could result in unacceptable down time, equipment damage or personal injury risk.

4.8. Servicing or Replacing of any Worn or Damaged Parts: To avoid unpredictable system behavior that can cause death, personal injury and property damage:
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
- Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
- Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.

4.9. Putting Serviced System Back into Operation: Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.