<table>
<thead>
<tr>
<th>Bulletin Number</th>
<th>Bulletin Description</th>
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<tbody>
<tr>
<td>2FR100G</td>
<td>Rev. 12 05E Economy, Installation &amp; Service</td>
</tr>
<tr>
<td>2FR100G</td>
<td>Rev. 12 06E “B&amp;C” Compact, Installation &amp; Service</td>
</tr>
<tr>
<td>2R201</td>
<td>Rev. 3 06E “B&amp;C” Compact, Regulator Tamperproof</td>
</tr>
<tr>
<td>1FR100G</td>
<td>Rev. 10 06E Compact, Installation &amp; Service</td>
</tr>
<tr>
<td>2FR100G</td>
<td>Rev. 12 07E “C” Standard, Installation &amp; Service</td>
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<tr>
<td>2R201</td>
<td>Rev. 3 07E “C” Standard, Regulator Tamperproof</td>
</tr>
<tr>
<td>1FR100G</td>
<td>Rev. 10 07E Standard, Installation &amp; Service</td>
</tr>
<tr>
<td>2FR100G</td>
<td>Rev. 12 12E “A” Coalescing Standard, Installation &amp; Service</td>
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<tr>
<td>1R402F</td>
<td>Rev. 12 14E “B &amp; C” Miniature, Installation &amp; Service</td>
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<tr>
<td>1R602</td>
<td>Rev. 7 14E “D” Miniature, Installation &amp; Service</td>
</tr>
<tr>
<td>2FR100G</td>
<td>Rev. 12 27E Precision, Installation &amp; Service</td>
</tr>
<tr>
<td>1FR110</td>
<td>Rev. 2 B34 Miniature, Installation &amp; Service</td>
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<tr>
<td>5FRL100</td>
<td>Rev. 5 Global P3 Air Preparation Systems</td>
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<tr>
<td>P3Y-INC</td>
<td>Rev. 3 Global P3Y Hi-Flow, Installation &amp; Service</td>
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<td>1M107C</td>
<td>Rev. 1 P3AE (8AE) Miniature, Installation &amp; Service</td>
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<tr>
<td>2FR300D</td>
<td>Rev. 9 P3N Hi-Flow, Installation &amp; Service</td>
</tr>
<tr>
<td>Safety Guide</td>
<td>———— PDN Safety Guide</td>
</tr>
</tbody>
</table>

Visit www.pdnplu.com for additional instruction sheets.
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.

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, nor 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.

Bowl guards are recommended for added protection of polycarbonate bowls where chemical attack may occasionally occur.

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

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.

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.
The regulator may be serviced without removing it from the line. Before disassembling FILTER/REGULATOR, SHUT OFF AIR SUPPLY. Turn the adjusting handle counterclockwise to bleed down trapped pressure. For servicing piston or control springs, unscrew bonnet from body. For servicing the poppet and relief tube, remove threaded bowl and filter element assembly.

BEFORE TURNING ON AIR SUPPLY, TURN ADJUSTING HANDLE COUNTERCLOCKWISE UNTIL COMPRESSION IS RELEASED FROM PRESSURE CONTROL SPRING. Turn on air pressure. Then proceed to adjust to desired downstream pressure by turning adjusting handle clockwise. This permits pressure to build up slowly in the downstream line.

Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact 40 Micrometer</td>
<td></td>
</tr>
<tr>
<td>Element Kit</td>
<td>PS111</td>
</tr>
<tr>
<td>(1) Element (Filter)</td>
<td></td>
</tr>
<tr>
<td>(1) Seal (Body to Bowl)</td>
<td></td>
</tr>
<tr>
<td>(2) Gasket (Element)</td>
<td></td>
</tr>
<tr>
<td>Compact 40 Micrometer Element Cartridge Kit</td>
<td>PS114</td>
</tr>
<tr>
<td>(1) Holder (Element)</td>
<td></td>
</tr>
<tr>
<td>(1) Element (Filter)</td>
<td></td>
</tr>
<tr>
<td>(2) Gasket (Element)</td>
<td></td>
</tr>
<tr>
<td>(1) Baffle</td>
<td></td>
</tr>
<tr>
<td>(1) Shroud</td>
<td></td>
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<tr>
<td>(1) Deflector</td>
<td></td>
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<tr>
<td>(1) Seal (Holder)</td>
<td></td>
</tr>
<tr>
<td>(1) Seal (Body to Bowl)</td>
<td></td>
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<tr>
<td>Compact Polycarbonate Bowl Kit</td>
<td>PS166</td>
</tr>
<tr>
<td>(1) Polycarbonate Bowl with Manual Drain</td>
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<tr>
<td>Standard 40 Micrometer</td>
<td>PS214</td>
</tr>
<tr>
<td>Relieving Piston Kit</td>
<td>PS110</td>
</tr>
<tr>
<td>(1) Seal Piston</td>
<td></td>
</tr>
<tr>
<td>Compact Poppet Kit</td>
<td>PS113</td>
</tr>
<tr>
<td>(1) Poppet and Relief Tube Assembly</td>
<td></td>
</tr>
<tr>
<td>Standard Poppet Kit</td>
<td>PS212</td>
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</table>

Accessories

Accessories listed below are available in complete Filter units.

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact Automatic Drain</td>
<td>PS506</td>
</tr>
<tr>
<td>Standard Automatic Drain</td>
<td></td>
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<tr>
<td>Compact 5 Micrometer Element Kit</td>
<td>PS101</td>
</tr>
<tr>
<td>Standard 5 Micrometer Element Kit</td>
<td>PS201</td>
</tr>
<tr>
<td>Compact 25 Micrometer Element Kit</td>
<td>PS102</td>
</tr>
<tr>
<td>Standard 25 Micrometer Element Kit</td>
<td>PS202</td>
</tr>
<tr>
<td>Compact Bowl Guard Kit</td>
<td>PS103</td>
</tr>
<tr>
<td>Standard Bowl Guard Kit</td>
<td>PS203</td>
</tr>
<tr>
<td>Compact Polycarbonate Bowl (Auto Drain)</td>
<td>PS104</td>
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<tr>
<td>Standard Polycarbonate Bowl (Auto Drain)</td>
<td>PS204</td>
</tr>
<tr>
<td>Compact Metal Bowl (Auto Drain)</td>
<td>PS105</td>
</tr>
<tr>
<td>Standard Metal Bowl (Auto Drain)</td>
<td>PS205</td>
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<tr>
<td>Compact Metal Bowl with Sight</td>
<td>PS106</td>
</tr>
<tr>
<td>Standard Metal Bowl with Sight</td>
<td>PS206</td>
</tr>
<tr>
<td>Compact Plastic Knob Adjusting Handle</td>
<td>PS69726</td>
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<tr>
<td>Standard Plastic Knob Adjusting Handle</td>
<td></td>
</tr>
<tr>
<td>Compact Low Pressure Spring 1-60 PSIG</td>
<td>PS78481</td>
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<tr>
<td>Standard Low Pressure Spring 1-60 PSIG</td>
<td>PS207</td>
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<tr>
<td>Compact Standard Pressure Spring 2-125 PSIG</td>
<td>PS78482</td>
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<tr>
<td>Standard Standard Pressure Spring 2-125 PSIG</td>
<td>PS208</td>
</tr>
<tr>
<td>Compact High Pressure Spring 5-250 PSIG</td>
<td>PS78483</td>
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<tr>
<td>Standard High Pressure Spring 5-250 PSIG</td>
<td>PS209</td>
</tr>
<tr>
<td>Compact Panel Mount Nut*</td>
<td>PS78520</td>
</tr>
<tr>
<td>Standard Panel Mount Nut*</td>
<td></td>
</tr>
<tr>
<td>Compact Non-Relieving Piston</td>
<td>PS108</td>
</tr>
<tr>
<td>Standard Non-Relieving Piston</td>
<td>PS208</td>
</tr>
<tr>
<td>Compact Plastic Mounting Bracket Kit*</td>
<td>PS109</td>
</tr>
<tr>
<td>Standard Plastic Mounting Bracket Kit*</td>
<td>PS209</td>
</tr>
</tbody>
</table>

* Not supplied with units, must be ordered separately.
Pneumatic Division
Richland, Michigan 49083
269-629-5000

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

Safety:
Polycarbonate Bowls

Poly carbonate 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, nor 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 di-ester types. Metal bowls are recommended where ambient and/or media conditions are fire-resistant fluids such as phosphate ester and di-ester types. Metal bowls should not be subjected to chlorine, chlorine compounds, chlorinated hydrocarbons, ketones, esters and certain alcohols.

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.

Bowl guards are recommended for added protection of polycarbonate bowls where chemical attack may occur.

WARNING
To avoid unpredictable system behavior that can cause personal injury and property damage:
• Disconnect electrical supply (when necessary) 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

Symbols

Relieving Filter / Regulator
Adjustable

Non-Relieving Filter / Regulator
Adjustable

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

Maximum Recommended Pressure Drop:

<table>
<thead>
<tr>
<th>Particulate Filter</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
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<tbody>
<tr>
<td></td>
<td>70</td>
<td>10</td>
<td>0.7</td>
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Operating Pressure Maximum

<table>
<thead>
<tr>
<th>Polycarbonate Bowl</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Bowl</td>
<td>1034</td>
<td>150</td>
<td>10.3</td>
</tr>
<tr>
<td>Piston Drain</td>
<td>1724</td>
<td>250</td>
<td>17.2</td>
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<tr>
<td></td>
<td>1207</td>
<td>175</td>
<td>12.0</td>
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</table>

Operating Temperature Range

<table>
<thead>
<tr>
<th>Polycarbonate Bowl</th>
<th>Max. 52°C (125°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Bowl</td>
<td>Max. 80°C (175°F)</td>
</tr>
<tr>
<td>Piston Drain</td>
<td>Max. 52°C (125°F)</td>
</tr>
</tbody>
</table>

Installation
1. The Filter/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. Also, new pipe or hose should be installed between the Filter/Regulator and equipment being protected.
2. The upstream pipe work must be clear of accumulated dirt and liquids.
3. Select a Filter/Regulator location as close as possible to the equipment being protected.
4. Install Filter/Regulator so that air flows into port labelled “IN” on body.

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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5. Install Filter / Regulator vertically with the bowl drain mechanism at the bottom. Free moisture will thus drain into the sump (“quiet zone”) at the bottom of the bowl.

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

**Operation**

1. Both free moisture and solids are removed automatically by the filter.
2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the Baffle or End Cap.
3. The Filter Element should be removed and replaced when pressure differential across the filter is 69 kPa (10 PSIG).
4. Before turning on the air supply, disengage the Adjusting Knob by pulling upward. Turn Adjusting Knob counterclockwise until the compression is released from the Pressure Control Spring.
5. Then turn Knob clockwise and adjust regulator to desired downstream pressure. This permits pressure to build up slowly in the downstream line.
6. To decrease regulated pressure settings, always reset from a pressure lower than the final setting required. 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).
7. When desired secondary pressure setting has been reached, push the Knob down to lock this pressure setting.

**Service**

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

⚠️ **Caution:** 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.

### Servicing Filter Element - (Refer to Figure 1)

1. Unscrew and remove Bowl.
2. Unscrew the Element Retainer from Body and then remove Element.
3. Clean all internal parts and bowl before reassembling.
4. Install new element. IMPORTANT: The Filter / Regulator will not operate properly if the Deflector is not installed properly. The Deflector must be installed between the Element Retainer and the Filter Body.
5. Attach Element Retainer and finger tighten firmly.
6. Replace Bowl Seal. Lightly lubricate new seal to assist with retaining it in position.
7. Install Bowl into Body and tighten; hand tight, plus 1/4 turn.

### Servicing Regulator - (Refer to Figure 1)

1. Disengage the Adjusting Knob by pulling upward. Turn Adjusting Knob counterclockwise until the compression is released from the Pressure Control Spring.
2. Remove the Bonnet and Bowl assemblies by unscrewing the Bonnet and Bowl from the body.
3. Remove Diaphragm Assembly from Bonnet Assembly.
4. Remove Valve Seat, Poppet Assembly, Poppet Return Spring.
5. Clean and carefully inspect parts for wear or damage. Wipe parts, clean with soapy water or denatured alcohol but do not use denatured alcohol on plastic bowl or sight gauge. If using compressed air to blow dry, be sure to wear appropriate eye protection. If replacement is necessary, use parts from service kits. Clean Bowl.
6. Lubricate O-rings with grease found in service kits.
7. Install Poppet Return Spring, Poppet Assembly, and Valve Seat.
8. Install Diaphragm Assembly into Body Assembly. Assemble Bonnet Assembly into Body and tighten per Figure 1.

---

**Service / Parts Kits Available**

<table>
<thead>
<tr>
<th>Description</th>
<th>B34 (1/8&quot; &amp; 1/4&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowl Kits</td>
<td></td>
</tr>
<tr>
<td>Polycarbonate</td>
<td></td>
</tr>
<tr>
<td>Polycarbonate (with Piston Drain)</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
</tr>
<tr>
<td>Zinc (with Piston Drain)</td>
<td></td>
</tr>
<tr>
<td>Bowl Seal</td>
<td></td>
</tr>
<tr>
<td>Filter Element (5 Micron)</td>
<td></td>
</tr>
<tr>
<td>Filter Element (40 Micron)</td>
<td></td>
</tr>
<tr>
<td>Gauge, 0 to 60 (0 to 4 bar)</td>
<td></td>
</tr>
<tr>
<td>Gauge, 0 to 160 (0 to 11 bar)</td>
<td></td>
</tr>
<tr>
<td>Mounting Bracket / Nut</td>
<td></td>
</tr>
<tr>
<td>Piston Drain (Max. Pressure 150 PSIG)</td>
<td></td>
</tr>
<tr>
<td>Panel Mount Nut</td>
<td></td>
</tr>
<tr>
<td>Regulator Repair Kit (Relieving)</td>
<td></td>
</tr>
<tr>
<td>Regulator Repair Kit (Non-Relieving)</td>
<td></td>
</tr>
<tr>
<td>Spring, 0-25 PSIG (0 to 1.7 bar)</td>
<td></td>
</tr>
<tr>
<td>Spring, 0-60 PSIG (0 to 4 bar)</td>
<td></td>
</tr>
<tr>
<td>Spring, 0-125 PSIG (0 to 8.6 bar)</td>
<td></td>
</tr>
</tbody>
</table>

- Lightly grease with provided lubricant.
- Inspect for nicks, scratches, and surface imperfections.
- Clean with lint-free cloth.
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- 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.
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Introduction
Follow these instructions when installing, operating, or servicing the product.

Application Limits
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With Polycarbonate Bowl

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>830</td>
<td>120</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Operating Temperature Maximum: 52°C (125°F)

Installation
1. The equipment to which the FILTER / REGULATOR is attached should be internally cleaned to remove all traces of accumulated oil and dirt. Also, new pipe or hose should be installed between the filter and equipment being protected.
2. Blow all upstream pipe work clear of accumulated dirt and liquids.
3. Select a filter / regulator location as close as possible to the equipment being protected.
4. Install filter / regulator so that air flows in the direction of arrow on body.
5. Install filter / regulator vertically with the bowl drain mechanism at the bottom. Free moisture will thus drain into the sump “quiet zone” at the bottom of the bowl.
6. 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.

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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.
Operation & Service

1. Both free moisture and solids are removed automatically by the FILTER / REGULATOR.

2. Drain whenever water level in sump “quiet zone” reaches the lower baffle. Install Automatic Drain if bowl draining is frequent.

3. The filter element should be removed and replaced when the pressure differential across the filter is 10 PSIG.

4. To remove the filter element: SHUT AIR LINE DOWN and exhaust the primary and secondary pressure.
   a. Unscrew threaded bowl.
   b. Unscrew element and remove.
   c. Clean bowl and internal parts before reassembling.
   d. Attach clean element assembly and tighten firmly.
   e. Replace bowl gasket; lubricate gasket to assist in retaining it in position. Use only mineral base oils or grease. Do NOT use synthetic oils such as esters, and do NOT use silicones.
   f. Screw bowl into body and tighten firmly.

5. The regulator may be serviced without removing it from the line. Before disassembling FILTER / REGULATOR, SHUT OFF AIR SUPPLY AND EXHAUST PRIMARY AND SECONDARY PRESSURE. Disengage the adjusting knob by pulling upward. Turn the adjusting knob counterclockwise until compression is released from pressure control spring. For servicing diaphragm, unscrew bonnet from body. For servicing the poppet, remove threaded bowl and filter element assembly.

6. BEFORE TURNING ON AIR SUPPLY, TURN ADJUSTING KNOB COUNTERCLOCKWISE UNTIL COMPRESSION IS RELEASED FROM PRESSURE CONTROL SPRING. Turn on air pressure. Then proceed to adjust the desired downstream pressure by turning adjusting knob clockwise. This permits pressure to build up slowly in the downstream line.

7. To decrease regulated pressure settings, always reset from a pressure lower than then 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.

8. When desired secondary pressure settings have been reached, push the adjusting knob down to lock.

Kits Available

<table>
<thead>
<tr>
<th>Kit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3A-KA00RFN</td>
<td>Filter Repair Kit</td>
</tr>
<tr>
<td>P3A-KA00EEN</td>
<td>Element Kit (5 Micron)</td>
</tr>
<tr>
<td>P3A-KA00RRN</td>
<td>Relieving Diaphragm Kit</td>
</tr>
<tr>
<td>P3A-KA00RNN</td>
<td>Non-Relieving Diaphragm Kit</td>
</tr>
</tbody>
</table>
Pneumatic Division
Richland, Michigan 49083
269-629-5000

Installation & Service Instructions:
1R402F
Economy Regulators 1/4" Ports
ISSUED: May, 2012
Supersedes: July, 2008
Doc.# 1R402, EN# 120286, Rev. 12

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid unpredictable system behavior that can cause personal injury and property damage:</td>
</tr>
<tr>
<td>• Disconnect electrical supply (when necessary) before installation, servicing, or conversion.</td>
</tr>
<tr>
<td>• Disconnect air supply and depressurize all air lines connected to this product before installation, servicing, or conversion.</td>
</tr>
<tr>
<td>• Operate within the manufacturer’s specified pressure, temperature, and other conditions listed in these instructions.</td>
</tr>
<tr>
<td>• Medium must be moisture-free if ambient temperature is below freezing.</td>
</tr>
<tr>
<td>• Service according to procedures listed in these instructions.</td>
</tr>
<tr>
<td>• Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.</td>
</tr>
<tr>
<td>• 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.</td>
</tr>
<tr>
<td>• 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.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product rupture can cause serious injury.</td>
</tr>
<tr>
<td>Do not connect regulator to bottled gas.</td>
</tr>
<tr>
<td>Do not exceed maximum primary pressure rating.</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. Compliance with the rated pressure and temperature is necessary.

<table>
<thead>
<tr>
<th>Maximum Operating (Inlet) Pressure:</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini Regulator (Plastic Body)</td>
<td>827</td>
<td>120</td>
<td>8.32</td>
</tr>
<tr>
<td>Economy Regulator (Metal Body)</td>
<td>1720</td>
<td>250</td>
<td>17.2</td>
</tr>
</tbody>
</table>

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

Symbol

![Economy Regulator Relieving](1R402)

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.

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
</tr>
<tr>
<td>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 assurance that all performance, safety and warning requirements of the application are met.</td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

EXTRA COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FOR INCLUSION IN EQUIPMENT / MAINTENANCE MANUALS THAT UTILIZE THESE PRODUCTS. CONTACT YOUR LOCAL REPRESENTATIVE.
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* Plastic Metal</td>
<td>P78652</td>
</tr>
<tr>
<td>Panel Mount Nuts* 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)
Pneumatic Division
Richland, Michigan 49083
269-629-5000

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, nor 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:

<table>
<thead>
<tr>
<th>Product</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miniature Filter / Regulator (with Plastic Bowl)</td>
<td>1030</td>
<td>150</td>
<td>10.3</td>
</tr>
<tr>
<td>Miniature Filter / Regulator (with Metal Bowl)</td>
<td>1720</td>
<td>250</td>
<td>17.2</td>
</tr>
<tr>
<td>Miniature Regulator (Metal Body)</td>
<td>2000</td>
<td>300</td>
<td>20.0</td>
</tr>
</tbody>
</table>

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.)

WARNING

FAILURES 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.

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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.
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 seal.
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 uncompensated 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 350 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, exhaust system air pressure, 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 1.4 Nm (8 to 12 in-lbs).
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. 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-pressureize 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 relieving units)</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>
<tr>
<td>Springs: 1-30 PSIG Range</td>
<td>P01175</td>
<td>P01175</td>
</tr>
<tr>
<td>1-60 PSIG Range</td>
<td>P01174</td>
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<td>2-125 PSIG Range</td>
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<td>1-15 PSIG Range</td>
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<tr>
<td>Twist Drain Knob</td>
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<td></td>
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</tbody>
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*Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

FIGURE 1: Miniature Filter / Regulator - Un-balanced, Relieving
FIGURE 2: Miniature Regulator - Un-balanced, Relieving Unit Shown
FIGURE 3: Detail of Poppet Seal
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)

SECURITE – Cuves transparentes

ATTENTION:
Les bols en polycarbonates, étant durs et transparents, sont idéaux pour l'utilisation dans les filtres et lubricateurs. 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-dessous de 0°C. 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 certains alcools. Ils ne doivent pas être utilisés en milieu 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 SALOON DOUX : NE PAS UTILISER D'AGENTS NETTOYANTS TELS QUE L'ACÉTONE, LE BENZÈNE, LE TÉTRAHYDROFURAN, DES ÉTHERS, DES ÉTHERS ET DES KÉTONES CAR CES PRODUITS ENDOMMAGERONT CE PLASTIQUE.

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.

Avant de mettre le système sous pression, tourner la poignée de réglage dans le sens inverse des aiguilles d’une montre jusqu’à l’arrêtage 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.

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 laisser 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 l’huile condensée atteignent le bas du support d’éclatement. Les modèles à purge automatique (purge à impulsions) captent et évacuent automatiquement les liquides. Ils sont actionnés par une chute de pression dans le filtre.

AVERTISSEMENT
LA DEFAILLANCE, LE CHOIX ERONE DU USAGE NON CONFORME DES PRODUITS ET/OU SYSTEMES ICI DECritS, PRODUITS Y AFFERANT, PEUVENT ENTRAINER LA MORT, DES BLESSURES AUX PERSONNES ET DES DommAGES MATERIELS.

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 analysiez 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 ici, 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 EXEMPLAIRES SUPPLEMENTAIRES DE CES INSTRUCTIONS SONT DISPONIBLES POUR ACCOMPAGNER LES APPAREILS/Manuelles D’ENTRETIEN CORRESPONDANT À 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 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 réglage 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 un 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 lèvre 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 ressort de rappel du clapet et le siège du clapet.

8. 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.

9. 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).

10. Quand la pression secondaire désirée est atteinte, enfoncer le bouton de réglage pour le verrouiller.

11. 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.

**Intervention sur l’élément filtrant**

**Remarque** : Consulter la figure 1 pour aider avec cette procédure.

1. Dévisser la cuve filetée et le support d’élément. Déposer ensuite l’élément filtrant, le défecteur et les joints.

2. Nettoyer toutes les pièces internes, la cuve et le corps avant de remonter l’appareil. Consulter la section de nettoyage de la cuve en polycarbonate.

3. Installer le défecteur, l’élément filtrant et les joints.

4. Monter le support d’élément. Serrer à un couple de 0,9 à 1,4 Nm (8 à 12 in-lb).

5. Lubrifier le joint torique avec de l’huile minérale ou de la graisse pour faciliter le dévissement du clapet.

6. Avant de mettre le système sous pression, vérifier que le ressort de commande est suffisamment comprimé. Mettre le système sous pression en aval à la pression désirée.

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

8. Nettoyer l’ancienne graisse et vérifier s’il y a des signes d’usure sur les joints (entaille, coupure ou rayure). Des kits d’intervention contiennent les joints appropriés et les pièces nécessaires pour les réparations ordinaires sur place.

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

10. Quand la pression secondaire désirée est atteinte, enfoncer le bouton de réglage pour le verrouiller.

11. 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.

**Liste d’identification des pièces**

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<th>Description</th>
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<tr>
<td>2</td>
<td>Élément filtrant (filtre-régulateur miniature)</td>
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<tr>
<td>3</td>
<td>Défecteur (filtre-régulateur miniature)</td>
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<td>4</td>
<td>Joint torique (filtre-régulateur miniatures), entre la cuve et le corps</td>
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<td>5</td>
<td>Ressort de rappel du clapet</td>
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<td>6</td>
<td>Joint du clapet</td>
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<tr>
<td>7</td>
<td>Joint torique, entre le corps et le clapet</td>
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<tr>
<td>8</td>
<td>Siège</td>
</tr>
<tr>
<td>9</td>
<td>Joint à lèvre, entre le piston et le clapet</td>
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<td>10</td>
<td>Joint torique, entre le piston et le clapet (dispositif d’évacuation du régulateur miniature et du filtre-régulateur)</td>
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<tr>
<td>11</td>
<td>Piston (avec évacuation montré)</td>
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<td>Ressort de commande</td>
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<tr>
<td>16</td>
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<tr>
<td>17</td>
<td>Clapet (régulateur miniature et filtre-régulateur)</td>
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<td>18</td>
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<td>19</td>
<td>Joint (filtre-régulateur miniature), entre le défecteur et le corps</td>
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<tr>
<td>20</td>
<td>Joint (filtre-régulateur miniature), entre le support d’élément et l’élément filtrant</td>
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<tr>
<td>21</td>
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<tr>
<td>22</td>
<td>Joint torique (14E), entre le corps et la purge</td>
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<tr>
<td>23</td>
<td>Purge tournant (filtre-régulateur miniature)</td>
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<tr>
<td>24</td>
<td>Tordre le Bouton d’Egout</td>
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</tbody>
</table>

**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 miniature</th>
<th>Régulateur miniature</th>
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</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>
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<tr>
<td>Kit de piston et clapet, évacuation sans équilibre</td>
<td>PS426</td>
<td>PS426</td>
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<tr>
<td>Kit de piston et clapet, 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>
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<tr>
<td>Ressorts : Plage de 1 à 2,1 bar (1 à 30 psi)</td>
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<tr>
<td>Plage de 1 à 4,1 bar (1 à 60 psi)</td>
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<tr>
<td>Plage de 2 à 6,6 bar (2 à 125 psi)</td>
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<tr>
<td>Plage de 1 à 1,0 bar (1 à 15 psi)</td>
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<tr>
<td>Tordre le Bouton d’Egout</td>
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</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).
Las tasas 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 fuera de su clasificación. Al igual que con la mayoría de los plásticos, ciertos productos químicos pueden ocasionar daños. No se debe exponer las tasas de policarbonato a los hidrocarburos clorinados, la cetonas, los ésteres y ciertos álcool. No se los debe usar en sistemas de aire en donde se lubrifica los compresores de aire usando fluidos resistentes al fuego tal como los tipos de éster fosfato y di-éster.

Para limpiar las tasas de policarbonato, 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 los materiales extraídos. No se debe usar la acetona nunca en altas temperaturas ya que algunas veces pedazos de cinta tienden a separarse y fijarse dentro de las unidades provocando posiblemente mal funcionamiento.

Se recomienda el uso de tubos de metal cuando las condiciones ambientales y del medio no son compatibles con las tasas de policarbonato. Las tasas 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 existan estas condiciones.

PARA LIMPIAR LAS TAZAS DE POLICARBONATO, UTILICE SOLAMENTE UN JABÓN SUAVE Y AGUA. NO USE AGENTES DE LIMPIEZA TALENS COMO LA ACETONA, EL BENCENO, EL TETRACLORURO DE CARBONO, LA GASOLINA O EL TOLUENO, ETC., QUE PUEDEN DAÑAR EL PLÁSTICO.
del elemento. Los modelos con drenaje automático (drenaje por pulsos) recolectan y desechan los líquidos automáticamente. Se activan cuando hay una caída de presión dentro del filtro.

3. Se deben quitar y reemplazar los elementos de los filtros cuando la presión diferencial a través de ellos sea excesiva.

**Servicio**

**PRECAUCIÓN:** Antes de desarmar la unidad, DESACTIVE EL SUMINISTRO DE AIRE y elimine la presión principal y secundaria. (Se puede dar servicio a las unidades sin quitarlas de la línea.)

**Cómo dar servicio a los reguladores:**

**Nota:** Para auxiliarse en este procedimiento, vea las figuras 1, 2 y 3.

1. Desenrosque el tazón y el soporte del elemento. Después saque el elemento del drenaje (17), el muelle para control y el sello del obturador.

2. Quite el bonete del cuerpo. Después quite el aro tórico (7), el pistón, el desviador y los empaques. Los modelos con drenaje automático (drenaje por pulsos) recolectan y desechan los líquidos automáticamente. Se activan cuando hay una caída de presión dentro del filtro.

3. 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 que contienen las piezas de repuesto más comúnmente utilizadas.

4. Coloque una película ligeramente de grasa en los sellos y las superficies deslizantes 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.

5. 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.

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

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

8. Antes de activar el suministro de aire asegúrese de que el muelle para control está todavía sin compresión. Active el suministro de aire, luego gire lentamente la perilla para ajuste en el sentido contrario a las agujas del reloj hasta alcanzar la presión deseada.

9. 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), luego aumentarla a 410 kPa (60 psig) para 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 aumentar a 410 kPa (60 psig).

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

11. 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. Desensamble el tazón y el soporte del elemento. Después saque el elemento del filtro, el desviador y los empaques. Vea la sección acerca de la limpieza de los tazones de policarbonato.

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

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

4. Lubrique el aro tórico (con aceite o grasa de base mineral) para ayudar a retener el elemento del filtro en su lugar.

5. Lubrique el aro tórico (con aceite o grasa de base mineral) para ayudar a retener el elemento del filtro en su lugar.

6. Coloque el elemento de filtro (filtro regulador en miniatura) - soporte del elemento a elemento del filtro.

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

8. Antes de activar el suministro de aire asegúrese de que el muelle para control y el soporte del elemento están todavía sin compresión. Active el suministro de aire, luego gire lentamente la perilla para ajuste en el sentido contrario a las agujas del reloj hasta alcanzar la presión deseada.

9. Para reducir la presión de la unidad, 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 aumentar a 410 kPa (60 psig) para 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 aumentar a 410 kPa (60 psig).

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

11. 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.

**Listado de piezas**

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<td>Elemento de filtro (filtro regulador en miniatura)</td>
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<td>Aro tórico (filtro regulador en miniatura) - tazón a cuerpo</td>
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<td>Muelle para retorno del obturador</td>
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<td>6</td>
<td>Sello del obturador</td>
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<tr>
<td>7</td>
<td>Aro tórico - cuerpo a bonete</td>
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**Descripción**

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<tr>
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<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>P01176</td>
</tr>
<tr>
<td>Tuerca la Perilla del Desagüador</td>
<td>P05117</td>
<td></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.

**Juegos para servicio disponibles.**

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

Safety: Polycarbonate Bowls

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 di-ester 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.

Bowl guards are recommended for added protection of polycarbonate bowls where chemical attack may occur.

WARNING
To avoid polycarbonate bowl rupture that can cause personal injury or property damage, do not exceed bowl pressure of temperature ratings. Polycarbonate bowls have a 150 PSIG (1030 kPa) pressure rating and a maximum temperature rating of 52°C (125°F).

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.

With Polycarbonate Bowl

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>150</td>
<td>10.3</td>
<td></td>
</tr>
</tbody>
</table>

With Metal Bowl

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>150</td>
<td>10.3</td>
<td></td>
</tr>
</tbody>
</table>

Economy Series with Metal Bowl and Auto Drain

<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>150</td>
<td>10.3</td>
<td></td>
</tr>
</tbody>
</table>

Note: The maximum recommended pressure drop for a particulate filter is 70 kPa (10 PSIG, 0.7 bar)

Symbols

Installation and Service Instructions 2FR100G

1/4” & 3/8” Economy
1/4”, 3/8” & 1/2” Compact
1/2” & 3/4” Standard
1/2” & 3/4” Standard Coalescing
1/4” & 3/8” Precision

ISSUED: September, 2012
Supersedes: September, 2006
Doc.# 2R101, EN# 120039, Rev. 12

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.

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Introduction
Follow these instructions when installing, operating, or servicing the product.
Operation
1. Both free moisture and solids are removed automatically by the filter. Units with coalescing elements (e.g., Standard Coalescing series) also remove oil. For coalescing units, a 5 micrometer pre-filter is recommended to protect and prolong the life of the coalescent filter element.
2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the baffle or end cap.
3. The filter element should be removed and replaced when pressure differential across the filter is 69 kPa (10 PSIG).
4. Before turning on the air supply, turn the knob counterclockwise until compression is released from the pressure control spring. Then turn knob clockwise and adjust regulator to desired downstream pressure. This permits pressure to build up slowly in the downstream line.
5. To decrease regulated pressure settings, always reset from a pressure lower than the final setting required. 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).
6. When desired secondary pressure settings have been reached, push the knob down to lock this pressure setting.

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

Servicing Filter Element -
A. Economy, Compact, Standard & Precision Units (Refer to Figure 1.)
1. Unscrew the bottom threaded collar and remove bowl.
2. Unscrew the baffle and then remove element.
3. Clean all internal parts and bowl before reassembling. See polycarbonate bowl cleaning section. IMPORTANT: The Economy, Compact, Standard & Precision Filter / Regulators will not operate properly if the deflector (or rubber spacer if using an Compact adsorber) is not installed properly. The deflector (or rubber spacer) must be installed between the filter stem and the filter body.
4. Install new element.
5. Attach baffle and finger tighten firmly.
6. Replace bowl seal. Lightly lubricate new seal to assist with retaining it in position.
7. Install bowl into body and tighten collar; hand tight, plus 1/4 turn.
B. Standard Coalescing Units (Refer to Figure 2.)
1. Hold bowl collar stationary while unscrewing and removing bowl.
2. Unscrew end cap and then remove element. (Do not remove threaded rod.)
3. Clean all internal parts and bowl before reassembling.
4. Install new element.
5. Attach end cap and finger tighten firmly.
6. Replace bowl seal. Lightly lubricate new seal to assist with retaining it in position.
7. Thread bowl into collar; hand tight until bowl stops against collar.

Servicing Regulator -
A. Economy, Compact, Standard & Precision Units - (Refer to Figure 1.)
1. Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.
2. Remove the bonnet and bowl assemblies by unscrewing the two threaded collars.
3. Remove diaphragm assembly from bonnet assembly.
4. Remove filter stem, filter element, poppet assembly, poppet return spring, (seat) insert and its o-rings.
5. Clean and carefully inspect parts for wear or damage. If replacement is necessary, use parts from service kits. Clean bowl. See polycarbonate bowl cleaning section.
6. Lubricate o-ring and vee packing seals with grease found in service kits.
7. Install poppet return spring, poppet assembly, (seat) insert and its o-rings, and filter stem. IMPORTANT: The Economy, Compact, Standard & Precision Filter / Regulators will not operate properly if the deflector (or rubber spacer if using an Compact adsorber) is not installed properly. The deflector (or rubber spacer) must be installed between the filter stem and filter body.
8. Install filter element and firmly tighten baffle onto the filter stem.
9. Install diaphragm assembly into bonnet assembly. Assemble bonnet assembly to body and tighten threaded collar from 5.4 to 5.9 Nm (48 to 52 in-lbs).
10. Install bowl into body and tighten collar; hand tight, plus 1/4 turn.
B. 12E Units - (Refer to Figure 2.)
1. Disengage the adjusting knob by pulling upward. Turn adjusting knob counterclockwise until the compression is released from the pressure control spring.
2. Remove the bonnet assembly by unscrewing its threaded collar.
3. Remove the bottom collar and bowl as an integral unit. Note: The reverse flow adapter and element assembly should remain in proper alignment with the collar; they are held in place by the o-ring between the adapter and the collar.
4. Remove diaphragm assembly from bonnet assembly.
5. Remove poppet assembly, poppet return spring, (seat) insert and its o-rings.
6. Clean and carefully inspect parts for wear or damage. If replacement is necessary, use parts from service kits.
7. Lubricate o-ring and vee packing seals with grease found in service kits.
8. Install poppet return spring, poppet assembly, (seat) insert and its o-rings.
9. Install diaphragm assembly into bonnet assembly. Assemble bonnet assembly to body and tighten threaded collar from 5.4 to 5.9 Nm (48 to 52 in-lbs).
10. Install bottom collar and bowl subassembly into body. Tighten collar hand tight, plus 1/4 turn.

<table>
<thead>
<tr>
<th>Maintenance Service Kits</th>
<th>Economy</th>
<th>Compact</th>
<th>Standard</th>
<th>Standard Coalescing</th>
<th>Precision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Kits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td>PS902</td>
<td>PS702</td>
<td>PS802</td>
<td>N/A</td>
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<tr>
<td>40 Micron</td>
<td>PS901</td>
<td>PS701</td>
<td>PS801</td>
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<td>Grade 6</td>
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<td>N/A</td>
<td>PS884</td>
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<tr>
<td>Relieving Regulator Repair Kit</td>
<td>PS908</td>
<td>PS710</td>
<td>PS810</td>
<td>PS886</td>
<td>PS907</td>
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<tr>
<td>Non-Relieving Regulator Repair Kit</td>
<td>PS909</td>
<td>PS711</td>
<td>PS811</td>
<td>PS887</td>
<td>N/A</td>
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</tbody>
</table>
Introduction
Follow these instructions when installing, operating, or servicing the product.

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<table>
<thead>
<tr>
<th>Operating Pressure Maximum</th>
<th>kPa</th>
<th>PSIG</th>
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</thead>
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<tr>
<td>1700</td>
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<table>
<thead>
<tr>
<th>Operating Temperature Maximum</th>
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</tr>
</thead>
<tbody>
<tr>
<td>80 (175°F)</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Temperature Minimum</th>
<th>°C (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (32°F)</td>
<td></td>
</tr>
</tbody>
</table>

Note: The maximum recommended pressure drop for a particulate filter is 70 kPa (10 PSIG, 0.7 bar).

Symbols

Installation
1. The filter/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. Also, new pipe or hose should be installed between the filter/regulator and equipment being protected.

2. The upstream pipe work must be clear of accumulated dirt and liquids.

3. Select a filter/regulator location as close as possible to the equipment being protected.

4. Install filter/regulator so that air flows in the direction of arrow on body.

5. Install filter/regulator vertically with the bowl drain mechanism at the bottom. Free moisture will thus drain into the sump (“quiet zone”) at the bottom of the bowl.

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

Operation
1. Both free moisture and solids are removed automatically by the filter.

2. Manual drain filters must be drained regularly before the separated moisture and oil reaches the bottom of the baffle or end cap.

3. The filter element should be removed and replaced when pressure differential across the filter is 69 kPa (10 PSIG).

4. Before turning on the air supply, turn the knob counterclockwise until compression is released from the pressure control spring. Then turn knob clockwise and adjust regulator to desired downstream pressure. This permits pressure to build up slowly in the downstream line.

5. To decrease regulated pressure settings, always reset from a pressure lower than the final setting required. 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).

6. When desired secondary pressure settings have been reached, push the knob down to lock this pressure setting.

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.

⚠️ 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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Service

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

Note: 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.

Servicing Filter Element
Refer to picture for disassembling, servicing, and re-assembling unit.

Servicing Regulator
1. 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 picture for details.
3. Re-assemble unit. Refer to picture for details.

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.

Note: If both mating faces have an o-ring groove, units may need to be assembled with two seals. (One square and one round seal.)

Service Kits Available

<table>
<thead>
<tr>
<th>Description</th>
<th>Kit Number</th>
<th>Contains Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Kits:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Micron</td>
<td>P3NKA00ESE</td>
<td>(5) Bowl Seal and (2) Element</td>
</tr>
<tr>
<td>40 Micron</td>
<td>P3NKA00ESG</td>
<td></td>
</tr>
<tr>
<td>25 Micron Porous Bronze</td>
<td>P3NKA00ESJ</td>
<td></td>
</tr>
<tr>
<td>Relieving Regulator Repair Kit</td>
<td>P3NKA00RR</td>
<td>(1) Piston, (3) O-ring, (4) Poppet Assembly, (6) Poppet Return Spring, (7) Lipseal, (8) O-ring</td>
</tr>
<tr>
<td>Non-relieving Regulator Repair Kit</td>
<td>P3NKA00RN</td>
<td></td>
</tr>
<tr>
<td>Auto Drain Kit</td>
<td>PS506</td>
<td>(9) Auto Drain Assembly</td>
</tr>
</tbody>
</table>

![Diagram of regulator components with labels for each part]
Pneumatic Division
Richland, Michigan 49083
269-629-5000

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)
1- Hex Socket Set Screw
1- Hex Sleeve Insert
1- Key Lock Housing
1- Removable Key
1- Spring Rest
1- 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.

CAUTION: It is important to tighten the hex sleeve insert to .8 to 1.0 Nm (7 - 9 ft. lbs.) torque. Failure to tighten the hex sleeve insert properly will cause the pressure setting to be unstable during pulsating or vibration service. An improperly torqued hex sleeve insert may rotate during pulsed or vibration service causing the pressure to change resulting in injury.
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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**WARNING**

To avoid system malfunction that can cause personal injury or property damage:
- Disconnect electrical supply (when necessary) before, during installation, servicing or conversion.
- Operate within the manufacturer's specified pressure, temperature, and other conditions listed in these instructions.
- Use appropriate fitting to connect to this product before installation, servicing or conversion.
- 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.
- Before installation, servicing or conversion, all air 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 insulating is not possible, contact your local representative for replacement labels.

**MISE EN GARDE**

Pour éviter tout comportement imprévisible du système pouvant entraîner des accidents et des dommages matériels:
- Débrancher l'alimentation électrique (s'il y a lieu) avant de procéder à l'installation, à l'entretien ou à la transformation.
- Effectuer l'entretien conformément aux procédures qui sont indiquées dans ces instructions.
- Les mises en garde et les indications portées sur le produit ne doivent pas être recouvertes par de la peinture, etc. Si le masquage n'est pas possible, contacter le représentant local pour obtenir des étiquettes de remplacement.

**CAUTION**

Polypropylene 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 exposed to nulures where they could be subjected to direct sunlight, or in high temperatures and humidity or where they could be exposed to rain fall. As with most plastics, some chemicals can cause damage. Polypropylene bowls should not be exposed to prolonged immersion in chlorinated hydrocarbons, ketones, esters and certain alcohols. They should not be used in air or other systems where compressors are lubricated with five-resistant fluids such as phosphate ester and diester types.

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

**ATTENTION**

Les bols métalliques sont recommandés lorsque le milieu et/ou le media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but...
警告

人間関係を悪化させることがあり、また物理的な障害を引き起こす懸念があるため、システムの機能を変更する前に、数値値を変更する前に従業員の同意を得てから、システムの機能を変更することに同意することを促進していない。

以下の項目・値を変更してください。・値を変更する前に従業員の同意を得てから、システムの機能を変更することに同意することを促進していない。

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**Warning:**

- Disconnect air & electrical supplies before attempting repair or maintenance. See ISO4414 for safety requirements covering the installation and use of pneumatic equipment.
- Do not exceed maximum primary pressure rating. Product rupture can cause serious injury.
- Do not connect regulator to bottled gas.

**Usage:**

- 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.
- 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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### Fixation - Mounting - Befestigung - Fijacion - Fissaggio

- **UK**: Disconnect air & electrical supplies before attempting repair or maintenance. See ISO4414 for safety requirements covering the installation and use of pneumatic equipment.
- **FR**: Déconnectez les connexions pneumatiques et électriques avant réparation ou maintenance. Voir ISO4414 pour les règles de sécurité des installations et utilisation des équipements pneumatiques.
- **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.
- **ES**: Desconectar las conexiones neumáticas y eléctricas antes de efectuar cualquier reparación o mantenimiento. Voir 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.
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**Association - Combination - Verbindung - Asociacion - Assemblaggio**

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### Réglage - Adjustment - Steverung - Regulacion - Regolazione

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**Service kits**

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

**Connector M12 x 1**

- **Pin 1**: Power supply +24 V ± 10% 0.15 A
- **Pin 2**: Power supply 0 V
- **Pin 3**: Set value output 0-10 V
- **Pin 4**: Reference and mass capacity 0-10 V
- **Pin 5**: Analog actual value output 0-10 V

- **PLC in connection with several potentiometers**

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

**With a single potentiometer**

- **Analog voltage**

- **Reference and mass capacity**

- **Set value output**

- **Analog actual value output**

- **Tolerance ± 0.15 V**

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**WARNING**

- To avoid unpredictable system behavior that can cause personal injury and property damage:
  - Installation, service and conversion of these products must be performed by knowledgeable personnel who understand how the product does not operate properly, do not put into use.
  - Disconnect electrical supply (when necessary) should be connected and the product tested for proper damage.
  - Disconnect air supply and depressurize all air lines connected to this product before installation, servicing or conversion.
  - Warning and specifications on the product should not be covered by painting, etc. If masking is not possible, contact your local representative.

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**WARNING**

- Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.
The allen key adjusts flow through the valve until the set point is reached, after which full pressure is achieved.

Le débit est réglable par la clé Allen, jusqu'à ce que la valeur consignée soit dépassée.

La chiave Allen regola il flusso attraverso la valvola fino al raggiungimento del valore consigne.

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

* For food industry applications - approved oil USDA-H1

Condensate drainage / Purge /Kondensatentleerung //Svuotamento condensati / Vaciado del condensado / odpouštění kondenzátní / spust kondensatu

Condensate drainage / Purge /Kondensatentleerung //Svuotamento condensati / Vaciado del condensado / odpouštění kondenzátní / spust kondensatu

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

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

Auto / MAN / Auto / MAN / Automatik / Automatyczny / Automatique / Automatické

Min. oil level minimaler Füllstand

Lubricator Adjustment - Réglage du lubrificateur - Steverung Regulacion - Regolazione

Lubricator Adjustment - Réglage du lubrificateur - Steverung Regulacion - Regolazione

Oil adjusting screw Ölmengeneinstellschraube réglage de la lubrification vite de dosaggio olio regulador de aceite seřizovací šroub pro olej

Oil adjusting screw Ölmengeneinstellschraube réglage de la lubrification vite de dosaggio olio regulador de aceite seřizovací šroub pro olej

Refill plug kit = P3YKA00PL

Oil VG32 1L = P3YKA00PPBB

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

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Lubrication of airplanes

Lubrication of airplanes

Air Cylinders and Valves Cylindres pneumatiques et valvules

Air Cylinders and Valves Cylindres pneumatiques et valvules

Combined start/stop function

Combined start/stop function with acknowledgement

Filter Maintenance - Maintenance du filtre - Wartung - Mantenimiento - Manutenzione

Filter Maintenance - Maintenance du filtre - Wartung - Mantenimiento - Manutenzione

Ball Valve

Ball Valve
Pneumatic Division
Richland, Michigan 49083
269-629-5000

PDNSG-1
Pneumatic Division Safety Guide
ISSUED: August 1, 2006
Supersedes: June 1, 2006

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.
• Compliance 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, ketones, 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.