Introduction

Scope of the Manual
This manual provides instructions and parts lists for 67C Series instrument supply regulators. Instructions and parts lists for other equipment mentioned in this instruction manual, as well as for other 67C Series regulators, are found in separate manuals.

Product Descriptions
The 67C Series direct-operated regulators are typically used to provide constantly controlled, reduced pressures to pneumatic and electro-pneumatic controllers and other instruments. They are suitable for most air or gas applications. Other applications include providing reduced pressures to air chucks, air jets and spray guns.

• The Types 67C and 67CS are the standard instrument supply regulators without a filter or internal relief.

• The Types 67CF and 67CFS are equipped with a filter for removing particles from the supply gas.

• The Types 67CR and 67CSR have an internal relief valve with a soft seat for reliable shutoff with no discernible leakage.

• The Types 67CFR and 67CFSR have a filter and internal relief valve with a soft seat for reliable shutoff with no discernible leakage.

Principle of Operation
Downstream pressure is registered internally on the lower side of the diaphragm. When the downstream pressure is at or above the set pressure, the valve plug is held against the orifice and there is no flow through the regulator. When demand increases, downstream pressure drops slightly allowing the spring to extend, moving the stem down and the valve plug away from the orifice. This allows flow through the regulator.
Specifications

The Specifications section gives some general specifications for the 67C Series regulator. A label on the spring case gives the control spring range for a given regulator as it comes from the factory.

**Body Size, Inlet and Outlet Connection Style**

1/4 NPT

**Maximum Inlet Pressure (Body Rating)**

- **All except Types 67CS and 67CSR:**
  - 250 psig / 17.2 bar
- **Types 67CS and 67CSR:**
  - 400 psig / 27.6 bar

**Outlet Pressure Ranges**

See Table 1

**Maximum Emergency Outlet Pressure**

- 50 psi / 3.4 bar over outlet pressure setting

**Wide-Open Flow Coefficients**

<table>
<thead>
<tr>
<th>Main Valve</th>
<th>Internal Relief Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cg: 11.7; Cv: 0.36; C1: 32.2</td>
<td>Cg: 1.45; Cv: 0.045; C1: 32.8</td>
</tr>
</tbody>
</table>

**IEC Sizing Coefficients**

<table>
<thead>
<tr>
<th>Main Valve</th>
<th>Internal Relief Valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>XT: 0.66; FL: 0.89; FD: 0.50</td>
<td>XT: 0.72; FL: 0.90; FD: 0.50</td>
</tr>
</tbody>
</table>

**Accuracy**

- **Inlet Sensitivity for Nitrile (NBR) and Silicone (VMQ) Elastomers:** Less than 0.2 psig / 14 mbar change in outlet pressure for every 25 psig / 1.7 bar change in inlet pressure
- **Inlet Sensitivity for Fluorocarbon (FKM) Elastomers:** Less than 0.4 psig / 28 mbar change in outlet pressure for every 25 psig / 1.7 bar change in inlet pressure
- **Repeatability for Nitrile (NBR) and Silicone (VMQ) Elastomers:** 0.1 psig / 7 mbar
- **Repeatability for Fluorocarbon (FKM) Elastomers:** 0.3 psig / 21 mbar
- **Air Consumption:** Testing repeatedly shows no discernible leakage

**Types 67CR, 67CSR, 67CFR and 67CFSR Internal Relief Performance**

Low capacity for minor seat leakage only; other overpressure protection must be provided if inlet pressure can exceed the maximum pressure rating of downstream equipment or exceeds maximum outlet pressure rating of the regulator.

**Temperature Capabilities**

- **With Nitrile (NBR)**
  - Standard Bolting: -20 to 180°F / -29 to 82°C
  - Stainless Steel Bolting: -40 to 180°F / -40 to 82°C
- **With Fluorocarbon (FKM):**
  - Polyethylene Filter (standard): 0 to 180°F / -18 to 82°C
  - Polyvinylidene (PVDF), Stainless steel or Glass Filter (Optional): 0 to 300°F / -18 to 149°C
- **With Silicone (VMQ) Diaphragm and Low Temperature bolting:**
  - -60 to 180°F / -51 to 82°C
  - **With Gauges:** -40 to 180°F / -40 to 82°C

**Types 67CR, 67CSR, 67CFR and 67CFSR Filter Capabilities**

- **Free Area:** 12 times pipe area
- **Micron Rating:**
  - Polyethylene Filter (standard): 5 microns
  - Glass Fiber Filter (Optional): 5 microns
  - PVDF or Stainless Steel Filter (Optional): 40 microns

**Drain Valve and Spring Case Vent Location**

Aligned with inlet standard, other positions optional

**Pressure Registration**

- Internal

**Options**

- **All Types**
  - Handwheel adjusting screw
  - Inlet screen
  - NACE MR0175 or NACE MR0103 construction
  - Panel mount (includes spring case with 1/4 NPT vent, handwheel and panel mounting nut)
  - Closing cap (available on spring case with 1/4 NPT vent)
  - Fluorocarbon (FKM) elastomers for high temperatures and/or corrosive chemicals
  - Silicone (VMQ) elastomers for cold temperatures
  - Fixed Bleed Restriction
  - Triple scale outlet pressure gauge (Brass or Stainless steel)
  - Stainless steel stem on the valve plug
  - Tire valve or pipe plug in second outlet
- **Types 67CFR and 67CFSR only**
  - Smart Bleed internal check valve
  - Large dripwell with manual or automatic drain
- **Types 67CF and 67CFR only**
  - Stainless steel drain valve

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1. The pressure/temperature limits in this Instruction Manual and any applicable standard or code limitation should not be exceeded.
2. Repeatability is the measure of the regulator’s ability to return to setpoint consistently when traveling from steady state to transient to steady state.
3. Silicone (VMQ) is not compatible with hydrocarbon gas.
4. Product complies with the material requirements of NACE MR0175. Environmental limits may apply.
5. Do not use in high aromatic hydrocarbon service.
Internal Relief (Types 67CR, 67CSR, 67CFR and 67CFSR)

If for some reason, outside of normal operating conditions, the downstream pressure exceeds the setpoint of the regulator, the force created by the downstream pressure will lift the diaphragm until the diaphragm is lifted off the relief seat. This allows flow through the token relief. The relief valve on the Type 67CR, 67CSR, 67CFR or 67CFSR is an elastomer plug that prevents leakage of air from the downstream to atmosphere during normal operation, thereby conserving plant air.

Smart Bleed Airset

In some cases, it is desired to exhaust downstream pressure if inlet pressure is lost or drops below the setpoint of the regulator. For example, if the regulator is installed on equipment that at times has no flow demand but is expected to backflow on loss of inlet pressure. The Types 67CFR and 67CFSR can be ordered with the Smart Bleed option which includes an internal check valve for this application. During operation, if inlet pressure is lost or decreases below the setpoint of the regulator, the downstream pressure will back flow upstream through the regulator and check valve. This option eliminates the need for a fixed bleed downstream of the regulator, thereby conserving plant air.

Note

During normal operation the check valve's metal to metal seat allows limited flow through the regulator from the inlet to outlet, even when there is no downstream demand. To prevent downstream pressure buildup, the Smart Bleed option is only available with the internal relief version of the 67C Series.

Overpressure Protection

The 67C Series regulators have maximum outlet pressure ratings that are lower than their maximum inlet pressure ratings. A pressure relieving or pressure limiting device is needed if inlet pressure can exceed the maximum outlet pressure rating.

Types 67CR, 67CSR, 67CFR and 67CFSR have a low capacity internal relief valve for minor seat leakage only. Other overpressure protection must be provided if the maximum inlet pressure can exceed the maximum pressure rating of the downstream equipment or exceeds the maximum outlet pressure rating of the regulator.
A regulator may vent some gas to the atmosphere. In hazardous or flammable gas service, vented gas may accumulate and cause personal injury, death or property damage due to fire or explosion. Vent a regulator in hazardous gas service to a remote, safe location away from air intakes or any hazardous area. The vent line or stack opening must be protected against condensation or clogging.

Before installing a Type 67C, 67CR, 67CS, 67CSR, 67CF, 67CFR, 67CFS or 67CFSR regulator, be sure the installation complies with the following installation guidelines:

1. Regulator operation within ratings does not preclude the possibility of damage from debris in the lines or from external sources. Regulators should be inspected for damage periodically and after any overpressure condition.

2. Only personnel qualified through training and experience should install, operate and maintain a regulator. Make sure that there is no damage to or foreign material in the regulator. Also ensure that all tubing and piping is free of debris.

3. Install the regulator so that flow is from the IN to the OUT connection as marked on the regulator body.

4. For best drainage, orient the drain valve (key 2) to the lowest possible point on the dripwell (key 5). This orientation may be improved by rotating the dripwell with respect to the body (key 1).

5. A clogged spring case vent hole may cause the regulator to function improperly. To keep this vent hole from being plugged (and to keep the spring case from collecting moisture, corrosive...
chemicals or other foreign material) orient the vent to the lowest possible point on the spring case or otherwise protect it.

Inspect the vent hole regularly to make sure it is not plugged. Spring case vent hole orientation may be changed by rotating the spring case with respect to the body. A 1/4 NPT spring case vent may be remotely vented by installing obstruction-free tubing or piping into the vent. Protect the remote vent by installing a screened vent cap on the remote end of the vent pipe.

6. For use in regulator shutdown, install upstream block and vent valves and downstream block and vent valves (if required) or provide some other suitable means of properly venting the regulator inlet and outlet pressures. Install a pressure gauge to monitor instruments on startup.

7. Apply a good grade of pipe compound to the external pipe threads before making connections, making sure not to get the pipe compound inside the regulator.

8. Install tubing fitting or piping into the 1/4 NPT inlet connection on the body (key 1) and into the 1/4 NPT body outlet connection.

9. The second 1/4 NPT outlet can be used for a gauge or other use. If not used, it must be plugged.

Installing a 67CF Series Regulator in an Existing Installation

When installing a 67CF Series regulator in an existing installation, it may be necessary to use spacers (key 34, Figure 13) to adapt the installation. If the mounting bolts are too long, place a spacer on the bolt (see Figure 13). To be sure the regulator is secure, the bolts should have at least two full threads of engagement.

Startup and Adjustment

Key numbers are referenced in Figures 3 through 9.

1. With proper installation completed and downstream equipment properly adjusted, slowly open the upstream and downstream shutoff valve (when used) while using pressure gauges to monitor pressure.

2. If outlet pressure adjustment is necessary, monitor outlet pressure with a gauge during the adjustment procedure. The regulator is adjusted by loosening the locknut (key 18), if used, and turning the adjusting screw or handwheel (key 19) clockwise to increase or counterclockwise to decrease the outlet pressure setting. Retighten the locknut to maintain the adjustment position.

Shutdown

First, close the nearest upstream block valve and then close the nearest downstream block valve (when used). Next, open the downstream vent valve. Since the regulator remains open in response to the decreasing downstream pressure, pressure between the closed block valves will be released through the open vent valve.

Maintenance

Regulator parts are subject to normal wear and must be inspected and replaced as necessary. The frequency of inspection and replacement of parts depends on the severity of service conditions and applicable codes and government regulations. Open the Type 67CF, 67CFR, 67CFS or 67CFSR drain valve (key 2) regularly to empty accumulated liquid from the dripwell (key 5).

Note

If sufficient clearance exists, the body (key 1) may remain mounted on other equipment or in a line or panel during maintenance unless the entire regulator will be replaced.
**WARNING**

To avoid personal injury, property damage or equipment damage caused by sudden release of pressure or explosion of accumulated gas, do not attempt any maintenance or disassembly without first isolating the regulator from system pressure and relieving all internal pressure from the regulator.

**Types 67C, 67CR, 67CS and 67CSR**

*Trim Maintenance*

Key numbers are referenced in Figures 3, 4 and 12.

1. Remove four bottom plate screws (key 3) from the bottom plate (key 39) and separate the bottom plate and O-ring (key 4) from the body (key 1).
2. Inspect the removed parts for damage and debris. Replace any damaged parts.
3. To remove the valve cartridge assembly, grasp the end of cartridge (key 10) and pull it straight out of body (key 1). Replace with new cartridge assembly. The cartridge assembly may be disassembled and parts may be cleaned or replaced. If the soft seat (key 15) was removed, make sure it is properly snapped into place before installing the valve cartridge assembly.
4. Check O-ring (key 14) for wear and replace, if necessary. Apply lubricant to the O-ring and place in the body. Align cartridge key to keyway in body and insert. Reinstall the O-ring (key 4), secure the bottom plate (key 39) with screws (key 3) and torque to 15 to 30 in. lbs. / 1.7 to 3.4 N·m.

**Diaphragm Maintenance**

Key numbers are referenced in Figures 3 and 4.

1. Back out the adjusting screw or handwheel (key 18) until compression is removed from the spring (key 17).
2. Remove the spring case screws (key 3) to separate the spring case (key 7) from the body (key 1). Remove the upper spring seat (key 20) and spring (key 17).
3. Remove the diaphragm assembly (key 16), inspect the diaphragm and replace the assembly, if necessary.
4. Place the diaphragm assembly (key 16) on the body (key 1) as shown in Figure 3 or 4. Push down on the diaphragm assembly to make sure the valve plug (key 11) strokes smoothly and approximately 1/16 in. / 1.6 mm.

**Note**

In step 5, if installing a control spring of a different range, be sure to delete the spring range originally appearing on the label and indicate the new spring range.

5. Stack the control spring (key 17) and upper spring seat (key 20) onto the diaphragm assembly (key 16).
6. Install the spring case (key 7) on the body (key 1) with the vent oriented to prevent clogging or entrance of moisture. Install the six spring case screws (key 3) using a crisscross pattern and torque to 15 to 30 in. lbs. / 1.7 to 3.4 N·m.

**Note**

On Types 67CS and 67CSR, lubricate the adjusting screw (key 18) thread to reduce galling of the Stainless steel.

7. When all maintenance is complete, refer to the Startup and Adjustment section to put the regulator back into operation and adjust the pressure setting. Tighten the locknut (key 19) if used and install the closing cap (key 33) if used.

**Types 67CF, 67CFR, 67CFS and 67CFSR**

*Filter Element and Trim Maintenance*

Key numbers are referenced in Figures 5, 6 and 12.

1. Remove four dripwell screws (key 3) from the dripwell (key 5) and separate the dripwell and O-ring (key 4) from the body (key 1). The filter retainer (key 9), thrust washer (key 37), filter element (key 6) and gasket (key 26) may come off with dripwell. If not, remove these parts.
2. Inspect the removed parts for damage and debris. Replace any damaged parts. If a replacement is not available, the filter element may be cleaned.
3. To remove the valve cartridge assembly, grasp the end of cartridge and pull it straight out of body (key 1). Replace with new cartridge assembly. The cartridge assembly may be disassembled and parts may be cleaned or replaced. If the soft seat (key 15) was removed, make sure it is properly snapped into place before installing the valve cartridge assembly.
Diaphragm Maintenance

Key numbers are referenced in Figures 5 and 6.

5. Back out the adjusting screw or handwheel (key 18) until compression is removed from the spring (key 17).

6. Remove the six spring case screws (key 3) to separate the spring case (key 7) from the body (key 1). Remove the upper spring seat (key 20) and spring (key 17).

7. Remove the diaphragm assembly (key 16), inspect the diaphragm and replace the assembly, if necessary.

8. Place the diaphragm assembly (key 16) on the body (key 1) as shown in Figure 5. Push down on the diaphragm assembly to make sure the valve plug (key 11) strokes smoothly and approximately 1/16 in. / 1.6 mm.

Note

In step 5, if installing a control spring of a different range, be sure to delete the spring range originally appearing on the label and indicate the new spring range.

9. Stack the control spring (key 17) and upper spring seat (key 20) onto the diaphragm assembly (key 16).

10. Install the spring case (key 7) on the body (key 1) with the vent oriented to prevent clogging or entrance of moisture. Install the six spring case screws (key 3) using a crisscross pattern and torque to 15 to 30 in. lbs. / 1.7 to 3.4 N•m.

Note

On Types 67CFS and 67CFSR, lubricate the adjusting screw (key 18) thread to reduce galling of Stainless steel.

11. When all maintenance is complete, refer to the Startup and Adjustment section to put the regulator back into operation and adjust the pressure setting. Tighten the locknut (key 19) if used and install the closing cap (key 33) if used.

Parts Ordering

When corresponding with the local Sales Office about this regulator, include the type number and all other pertinent information printed on the label. Specify the eleven-character part number when ordering new parts from the following parts list.

Parts List

<table>
<thead>
<tr>
<th>Key Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parts Kits</td>
<td></td>
</tr>
<tr>
<td>Types 67C, 67CR, 67CS and 67CSR Includes valve cartridge assembly (contains keys 10, 11, 12, 13, 14 and 15), O-ring (key 4), diaphragm assembly (key 16), and four screws (key 3)</td>
<td>R67CX000012</td>
</tr>
<tr>
<td>Type 67C (without relief) Brass stem with Nitrile (NBR) plug</td>
<td>R67CX000012</td>
</tr>
<tr>
<td>Aluminum stem with Nitrile (NBR) plug (NACE)</td>
<td>R67CX000N12</td>
</tr>
<tr>
<td>Type 67CR (with relief) Brass stem with Nitrile (NBR) plug</td>
<td>R67CRX000012</td>
</tr>
<tr>
<td>Aluminum stem with Nitrile (NBR) plug (NACE)</td>
<td>R67CRX000N12</td>
</tr>
<tr>
<td>Type 67CS (without relief) Stainless steel stem with Nitrile (NBR) plug (NACE)</td>
<td>R67CSX00012</td>
</tr>
<tr>
<td>Type 67CSR (with relief) Stainless steel stem with Nitrile (NBR) plug (NACE)</td>
<td>R67CSRX00012</td>
</tr>
<tr>
<td>Types 67CF, 67CFR and 67CFSR Includes valve cartridge assembly (contains keys 10, 11, 12, 13, 14 and 15), diaphragm assembly (key 16), O-ring (key 4), filter element (key 6), filter gasket (key 26), thrust washer (key 37) and four screws (key 3)</td>
<td>R67CFX000012</td>
</tr>
<tr>
<td>Type 67CF (without relief) Brass stem with Nitrile (NBR) plug</td>
<td>R67CFX000012</td>
</tr>
<tr>
<td>Aluminum stem with Nitrile (NBR) plug (NACE)</td>
<td>R67CFX000N12</td>
</tr>
<tr>
<td>Type 67CFR (with relief) Brass stem with Nitrile (NBR) plug</td>
<td>R67CFRX0012</td>
</tr>
<tr>
<td>Aluminum stem with Nitrile (NBR) plug (NACE)</td>
<td>R67CFRX0012</td>
</tr>
<tr>
<td>Type 67CFSR (with relief) Stainless steel stem with Nitrile (NBR) plug (NACE)</td>
<td>R67CFSRX0012</td>
</tr>
<tr>
<td>Valve Cartridge Assembly Only(1) Type 67C, 67CR, 67CF or 67CFR Brass stem with Nitrile (NBR) plug with Nitrile (NBR) O-ring</td>
<td>T14121T0012</td>
</tr>
<tr>
<td>with Silicone (VMQ) O-ring</td>
<td>T14121T0032</td>
</tr>
<tr>
<td>Aluminum stem with Fluorocarbon (FKM) plug</td>
<td>T14121T0022</td>
</tr>
<tr>
<td>with Nitrile (NBR) plug</td>
<td>T14121T0042</td>
</tr>
<tr>
<td>Aluminum stem (NACE) with Nitrile (NBR) plug</td>
<td>T14121T0052</td>
</tr>
<tr>
<td>with Fluorocarbon (FKM) plug</td>
<td>T14121T0062</td>
</tr>
<tr>
<td>Stainless steel stem with Nitrile (NBR) plug</td>
<td>T14121T0072</td>
</tr>
<tr>
<td>Type 67CS, 67CSR, 67CFS or 67CFSR 316 Stainless steel stem with Nitrile (NBR) plug and O-rings (NACE)</td>
<td>T14121T0092</td>
</tr>
<tr>
<td>with Fluorocarbon (FKM) plug and O-rings</td>
<td>T14121T0102</td>
</tr>
<tr>
<td>with Nitrile (NBR) plug and Silicone (VMQ) O-rings</td>
<td>T14121T0112</td>
</tr>
</tbody>
</table>

*Recommended Spare Part.  
1. Valve cartridge assembly includes keys 10, 11, 12, 13, 14 and 15.
**Key Description**  

**Part Number**

### Automatic Drain Conversion Kits
- **Types 67CF, 67CFR, 67CFS and 67CFSR**
- Includes auto-drain (key 2), four flange screws (key 3), dripwell O-ring (key 4) and dripwell (key 5).
- Note: Temperature rating is 40 to 175°F / 4 to 79°C.

#### Types 67CF and 67CFR
- **Nitrile (NBR)**  
  R67ADNNX0012
- **Fluorocarbon (FKM)**  
  R67ADFX0012

#### Types 67CFS and 67CFSR
- **Nitrile (NBR)**  
  R67ADNNX0022
- **Fluorocarbon (FKM)**  
  R67ADFX0022

### 1 Body
- **Type 67C or 67CR, Aluminum**  
  T406430R0G2
- **Type 67CS or 67CSR, CF3M/CF8M Stainless steel**  
  GE00909X012
- **Type 67CF or 67CFR, Aluminum**  
  T80510T0012
- **Type 67CFS or 67CFSR, CF3M/CF8M Stainless steel**  
  40C1887X012
- **Type 67CFR with Smart Bleed™, Aluminum**  
  GE03477X012

### 2 Drain Valve
- **Manual Type 67CF or 67CFR**  
  Brass  
  1K418918992
- **Type 67CFS or 67CFSR**  
  316 Stainless steel  
  AH3946X0052
- **Type 67CFR with Smart Bleed™**  
  Aluminum  
  GE03477X012

### 3 Flange Screw
- **Type 67C, 67CR, 67CF or 67CFR**  
  Standard spring case and spring case with 1/4 NPT vent (10 required)  
  T13526T0012
- **For wire seal**  
  Zinc-plated steel (9 required)  
  T13526T0012
  Steel (with hole) (1 required)  
  14B3987X012
- **Type 67C, 67CS, 67CFS or 67CFSR**  
  (10 required)  
  T13526T0042

### 4 O-ring
- **Type 67C, 67CR, 67CS or 67CSR**  
  Nitrile (NBR)  
  GG00554X012
  Fluorocarbon (FKM)  
  GG00554X022
- **Type 67CF, 67CFR, 67CFS or 67CFSR**  
  Nitrile (NBR)  
  T14380T0012
  Fluorocarbon (FKM)  
  T14380T0022
  Silicone (VMQ)  
  T14380T0032
- **Type 67CFS or 67CFSR**  
  316 Stainless steel (40 microns)  
  15A5967X022

### 5 Dripwell
- **Type 67C or 67CF, Aluminum**  
  T20140T0012
  Large Capacity, manual drain  
  GE34605X012
  Large Capacity, automatic drain  
  GE34606X012
- **Type 67CFS or 67CFMR, CF3M/CF8M Stainless steel**  
  Standard  
  20C1726X012
  Large Capacity, manual drain  
  GE34607X012
  Large Capacity, automatic drain  
  GE31792X012
- **Filter Element**  
  (Types 67CF, 67CFR, 67CFS and 67CFSR)  
  Polyethylene (5 microns) (standard)  
  GE32761X012
  Glass fiber (5 microns)  
  17A1457X012
  Polyvinylidene fluoride (PVDF) (40 microns)  
  GE32762X012
  316 Stainless steel (40 microns)  
  15A5967X022

*Recommended Spare Part.

1. Valve cartridge assembly includes keys 10, 11, 12, 13, 14 and 15.
2. Inconel® is a mark owned by Special Metals Corporation.
3. Rynite® is a mark owned by E.I. du Pont de Nemours and Co.
**67C Series**

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**Figure 4. Type 67CS or 67CSR Assembly**

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>16*</td>
<td>Diaphragm Assembly&lt;br&gt; Type 67C or 67CF (without relief)&lt;br&gt; Nitrile (NBR)</td>
<td>T14119T0022</td>
</tr>
<tr>
<td></td>
<td>Fluorocarbon (FKM)</td>
<td>T14119T0042</td>
</tr>
<tr>
<td></td>
<td>Type 67CR or 67CFR (with relief)&lt;br&gt; Nitrile (NBR)</td>
<td>T14119T0012</td>
</tr>
<tr>
<td></td>
<td>Fluorocarbon (FKM)</td>
<td>T14119T0032</td>
</tr>
<tr>
<td></td>
<td>Silicone (VMQ)</td>
<td>T14119T0052</td>
</tr>
<tr>
<td></td>
<td>Type 67CS or 67CFS (without relief)&lt;br&gt; Nitrile (NBR)</td>
<td>T14119T0062</td>
</tr>
<tr>
<td></td>
<td>Fluorocarbon (FKM)</td>
<td>T14119T0072</td>
</tr>
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<td></td>
<td>Type 67CSR or 67CFSR (with relief)&lt;br&gt; Nitrile (NBR)</td>
<td>T14119T0082</td>
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<tr>
<td></td>
<td>Silicone (VMQ)</td>
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**Figure 5. Type 67CF or 67CFR Assembly**

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Spring (continued)&lt;br&gt; Type 67CR or 67CFR (NACE), Inconel® (NACE)&lt;br&gt; 0 to 35 psig / 0 to 2.4 bar, Silver stripe</td>
<td>T14113T0012</td>
</tr>
<tr>
<td></td>
<td>0 to 60 psig / 0 to 4.1 bar, Blue</td>
<td>T14114T0012</td>
</tr>
<tr>
<td></td>
<td>0 to 125 psig / 0 to 8.6 bar, Red</td>
<td>T14115T0012</td>
</tr>
<tr>
<td></td>
<td>Type 67CS, 67CSR, 67CFS or 67CFSR, Inconel® (NACE)&lt;br&gt; 0 to 20 psig / 0 to 1.3 bar, Green</td>
<td>T14113T0012</td>
</tr>
<tr>
<td></td>
<td>0 to 35 psig / 0 to 2.4 bar, Silver stripe</td>
<td>T14114T0012</td>
</tr>
<tr>
<td></td>
<td>0 to 60 psig / 0 to 4.1 bar, Blue</td>
<td>T14114T0012</td>
</tr>
<tr>
<td></td>
<td>0 to 125 psig / 0 to 8.6 bar, Red</td>
<td>T14115T0012</td>
</tr>
<tr>
<td></td>
<td>0 to 150 psig / 0 to 10.3 bar, Black</td>
<td>10C1730X012</td>
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</tbody>
</table>

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Adjusting Screw<br>Type 67C, 67CR, 67CF or 67CFR, Zinc-plated steel<br>For standard spring case<br>Square head (standard) | T14061T0012 |
| Handwheel | T14102T0012 |
| Wire seal (not shown) | T14104T0012 |
| For spring case with 1/4 NPT vent, Zinc-plated steel<br> Square head for closing cap | T14101T0012 |
| Handwheel | T14103T0012 |
| Wire seal (not shown) | T14198T0012 |

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*Recommended Spare Part.*<br>Inconel® is a mark owned by Special Metals Corporation.
Figure 7. 67C Series Optional Panel Mount

Figure 6. Type 67CFS or 67CFSR Assembly

Figure 8. 67C Series Spring Case Vent Positions

Figure 9. Types 67CF, 67CFR, 67CFS and 67CFSR Drain Valve Positions

APPLY LUBRICANT (L):
L1 = MULTI-PURPOSE POLYTETRAFLUOROETHYLENE (PTFE) LUBRICANT
L2 = ANTI-SEIZE COMPOUND

Vent position:
- Vent position 1: Standard
- Vent position 2
- Vent position 3
- Vent position 4

Drain valves:
- Drain valve position 1: Standard
- Drain valve position 2
- Drain valve position 3
- Drain valve position 4

Gauge:
- Maximum 240 PSI

Apply lubricant L1 or L2 as per the diagram.
**Figure 10.** Diaphragm Assembly (key 16)

**Figure 11.** Optional Closing Cap
(Only Available with the 1/4 in. / 6.4 mm Spring Case Vent)

**Figure 12.** Valve Cartridge Assembly

**Figure 13.** Spacer Diameter and Assembly
(For Installing in an Existing Installation if the Mounting Bolts are Too Long)
### 67C Series

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Part Number</th>
<th>Key</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
</table>
| 18 | Adjusting Screw (continued)  
Type 67CS, 67CSR, 67CFS or 67CFSR  
Square head with or without closing cap, 316 Stainless steel | T14101T0022 | 26 | Filter Gasket  
Type 67CF, 67CFR, 67CFS or 67CFSR  
with Nitrile (NBR) O-ring, with Fluorocarbon (FKM) O-ring | T14081T0012 |
| 19 | Locknut  
Type 67C, 67CR, 67CF or 67CFR  
Zinc-plated steel 316 Stainless steel | T14103T0012 | 30 | NACE Tag (not shown), 18-8 Stainless steel  
1A603X4012 |
| 20 | Upper Spring Seat  
Type 67C or 67CR only  
1/4 NPT Vent | T14051T0042 | 31 | Panel Mounting Nut, 303 Stainless steel | T14123T0012 |
| 22 | Pressure Gauge (not shown)  
Type 67C, 67CR, 67CF or 67CFR, Brass 0 to 30 psig / 0 to 2.1 bar / 0 to 0.2 MPa 0 to 60 psig / 0 to 4.1 bar / 0 to 0.4 MPa 0 to 160 psig / 0 to 11.0 bar / 0 to 1.1 MPa | T14051T0012 | 33 | Closing Cap, Resin | 23B9152X012 |
| 23 | 1/4 in. / 6.4 mm Pipe Plug (not shown)  
Type 67C, 67CR, 67CF or 67CFR  
Socket head, Steel | 1C333528992 | 34 | Spacer (2 required) (Figure 13)  
Type 67CF or 67CFR, Steel  
Type 67CFS or 67CFSR, 18-8 Stainless steel | T14123T0012 |
| 24 | Tire Valve (not shown)  
Type 67C, 67CR, 67CF or 67CFR  
Hex head, Stainless steel | 1A767535072 | 35 | Mounting adaptor plate, Steel (not shown) | T21043T0012 |
| 316 Stainless steel | 1A946342122 | 36 | O-ring, Nitrile (NBR) (not shown) | 1E591406992 |
| 316 Stainless steel | 1A9463X0042 | 38 | Gasket, Neoprene (CR) (not shown) | 1C898603012 |

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*Recommended Spare Part.*

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**Parts for Mounting on Fisher™ 2500 Series Controller (Type 67CF or 67CFR)**

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<td>35</td>
<td>Mounting adaptor plate, Steel (not shown)</td>
<td>T21043T0012</td>
</tr>
<tr>
<td>36</td>
<td>O-ring, Nitrile (NBR) (not shown)</td>
<td>1E591406992</td>
</tr>
<tr>
<td>38</td>
<td>Gasket, Neoprene (CR) (not shown)</td>
<td>1C898603012</td>
</tr>
</tbody>
</table>

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