Solenoid Controlled Pilot Operated Directional Valve

DF5S4(L)-16*A/B/C/N-(*)-(E)*-53
See other end of valve for part numbers

"Y" - Pilot Valve drain connection. If alternate connection is used, install the 315932 Plug & "O" Ring into this port.

Assemble type 4 & 8 Spools with wide undercut toward "A" end. "A" end of valve is defined as being closest to cylinder port "A".

Assemble type 1 & 3 Spools with taper toward "B" end. Type 31 Spool is assembled with taper toward "A" end.
<table>
<thead>
<tr>
<th>Valve Model Code</th>
<th>Main Stage Spool Type</th>
<th>Pilot Valve Model Code (See back page)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF5S4-16<em>A-</em>-53</td>
<td>0, 2, 6, 9, 33</td>
<td>DG4S4-012A-*-50-S344</td>
</tr>
<tr>
<td>DF5S4-16<em>B-</em>-53</td>
<td>0, 1, 2, 3, 6, 9, 31, 33</td>
<td>DG4S4-016B-*-50-S344</td>
</tr>
<tr>
<td>DF5S4-16<em>C-</em>-53</td>
<td>4 &amp; 8</td>
<td>DG4S4-0168B-*-50-S344</td>
</tr>
<tr>
<td>DF5S4-16<em>N-</em>-53</td>
<td>0, 2, 6, 9, 33</td>
<td>DG4S4-012N-*-51-S344</td>
</tr>
</tbody>
</table>

Stroke Adjuster Parts

- **363889 Plug**
- **263495 "O" Ring**
- **279241 Spring** (2 req'd)
- **107755 Washer** (2 req'd)
- **274537 Piston**
- **154008 "O" Ring**
- **274631 Adj. Screw**
- **154089 "O" Ring**
- **583204 Cover**
- **1494 Nut**

Spool (See table)

- **Δ263495 "O" Ring**
- **68913 Lockwasher** (8 Req'd)
- **298187 Screw** (8 Req'd)
- **583203 Cover**

SAE straight thread plugs used on exterior of valve

**Note**

- Torque to 488-596 N.m (360-440 lb. ft.)
Solenoid S/A

<table>
<thead>
<tr>
<th>Voltage</th>
<th>S/A Complete</th>
<th>Coil</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Std</td>
<td>F3</td>
</tr>
<tr>
<td>115AC60</td>
<td>281291</td>
<td>317767</td>
</tr>
<tr>
<td>230AC60</td>
<td>281292</td>
<td>317769</td>
</tr>
<tr>
<td>460AC60</td>
<td>281293</td>
<td>317771</td>
</tr>
</tbody>
</table>

For additional Solenoid S/A's See I-3544-S

**Seal Kit Note**
The -53 design pilot valves are manufactured as shown with F3 seals used internally. Interface seals are standard Nitrile material and are converted to F3 in the seal kit. All seals in the pilot valve seal kit are F3.

**Note**
Refer to parts drawing I-3487-S for models with plug-in feature.

**Part Numbers**
- 185645 Screw (4 req’d)
- Torque to 2.1-2.5 N.m (19-23 lb. in.)
- Use on "A" offset models

- 287968 Cover
- \( \Delta 281545 \) Gasket
- Solenoid S/A (See table)

- 185645 Screw (4 req’d)
- Torque to 2.1-2.5 N.m (19-23 lb. in.)
- \( \Delta 281545 \) Gasket
- Use on "B" models

- 287968 Cover
- \( \Delta 262354 \) "O" Ring
- \( \Delta 281545 \) Gasket

- 174638 Screw (4 req’d)
- 26212 Screw
- 286122 Wire & Gasket S/A
- Screw (See main stage for fastener kit)
- \( \Delta 199511 \) "O" Ring (5 req’d) (Nitrile)
- \( \Delta 263496 \) "O" Ring

**Note**
Part numbers included in kits will not be sold separately.

- \( \Delta \) Included in F3 Pilot Valve Seal Kit 919214
- * Included in 942132 Detent Kit
Note
For single solenoid models right hand assembly shown. For left hand assembly all parts are reversed, except body & spool. Ex. LH Model: DG4S4-01**-*-5*-S344-LH

Note
A spool designation of (68B) indicates valve is assembled "LH" & is used as a pilot for two stage valves with "4" or "8" type main stage spools.

<table>
<thead>
<tr>
<th>Spool</th>
<th>Diagram Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Part</td>
</tr>
<tr>
<td>2</td>
<td>213131</td>
</tr>
<tr>
<td>6</td>
<td>213232</td>
</tr>
</tbody>
</table>

416834 Rivet (4 req'd)

Diagram Plate (See table)

64765 Plug

213268 Push Pin

Spool (See table)

237976 Spring

211846 Washer (Omit on "A" models)

237976 Spring (For "A" models only)

290072 Spring used on all models except "A"

281547 Spacer ("A" models omit on "B" & "C")

281423 Washer

Δ262327 "O" Ring

Δ262354 "O" Ring

345825 Screw Torque 3.4-3.9 N.m (30-35 lb. in.)

281422 Guide

Δ262354 "O" Ring

236797 Snap Ring

750024 Retainer

Coil (See table)

298785 Screw Torque to 0.8-1.0 N.m (7-9 lb. in.)

Solenoid Indicator Light Identification Plate

298782 Gasket

Solenoid Indicator Light Kit
Includes all parts identified

<table>
<thead>
<tr>
<th>Voltage Range</th>
<th>Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 thru 127</td>
<td>941615</td>
</tr>
<tr>
<td>192 thru 233</td>
<td>941617</td>
</tr>
</tbody>
</table>

For models with Solenoid Indicator Lights

Use on "N" Detent models

Use on "A", "B", & "C" models

Included in standard Solenoid S/A.
Use "F3" Solenoid S/A for "F3" applications
# Model Code

## Pilot Choke DGMFN-5-Y-AW-BW-20

- 263498 "O" Ring
- 575026 Stop
- 262330 "O" Ring
- 575028 Throttle
- 575031 Spring
- 248868 Rollpin
- 407533 Plug (4 req'd)
  Torque to 3.4-4.0 N.m (30-35 lb. in.)
- 263493 "O" Ring (4 req'd)
- 36212 Rivet (2 req'd)
- 630318 Diagram Plate
- 262334 "O" Ring (5 Req'd)
- 575025 Plug
  Torque 81.3-94.9 N.m (60-70 lb. ft.)
- 587607 Nut
- 591534 Adj. Screw
- 575035 Plate (Bond to plug)

### Seal Material
- **F3** - Seals for mineral oil and fire resistant fluids

### Model Series
- **DF5S** - Directional valve, flange connection, solenoid controlled, pilot operated, sliding spool

### Flow Directions
- 4 - 4 way

### Indicator Lights
- **L** - Solenoid indicator light
  Omitted - None

### Valve Size
- 160 Series

### Type of Main Stage Spool

<table>
<thead>
<tr>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seal Material</td>
<td>F3</td>
</tr>
<tr>
<td>Model Series</td>
<td>DF5S</td>
</tr>
<tr>
<td>Flow Directions</td>
<td>4</td>
</tr>
<tr>
<td>Indicator Lights</td>
<td>L</td>
</tr>
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<td>Valve Size</td>
<td>160 Series</td>
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### Valve Type

<table>
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<td></td>
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<td></td>
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<td></td>
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</tbody>
</table>

### Spool Control Modification (Omit if not required)

<table>
<thead>
<tr>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spool Control Modification</td>
</tr>
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### Pilot Pressure

<table>
<thead>
<tr>
<th>9</th>
</tr>
</thead>
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<tr>
<td>Pilot Pressure</td>
</tr>
<tr>
<td></td>
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</table>

### Voltage and Frequency

<table>
<thead>
<tr>
<th>10</th>
</tr>
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</tr>
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</table>

### Design

<table>
<thead>
<tr>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Plug Feature</td>
</tr>
<tr>
<td>PA - Insta-Plug, male receptacle only</td>
</tr>
<tr>
<td>PB - Insta-Plug, male &amp; female receptors</td>
</tr>
<tr>
<td>PA3 (3 pin) &amp; PA5 (5 pin) - receptacles that meet NFPA hydraulic valve electrical standard T3. 5.29M-1980.</td>
</tr>
</tbody>
</table>

For satisfactory service life of these components, use full flow filtration to provide fluid which meets ISO cleanliness code 20/18/15 or cleaner. Selections from Eaton OFP, OFR, and OFRS series are recommended.