

Service Data

Vickers®

# Directional Controls

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## Solenoid Controlled Pilot Operated Directional Valve

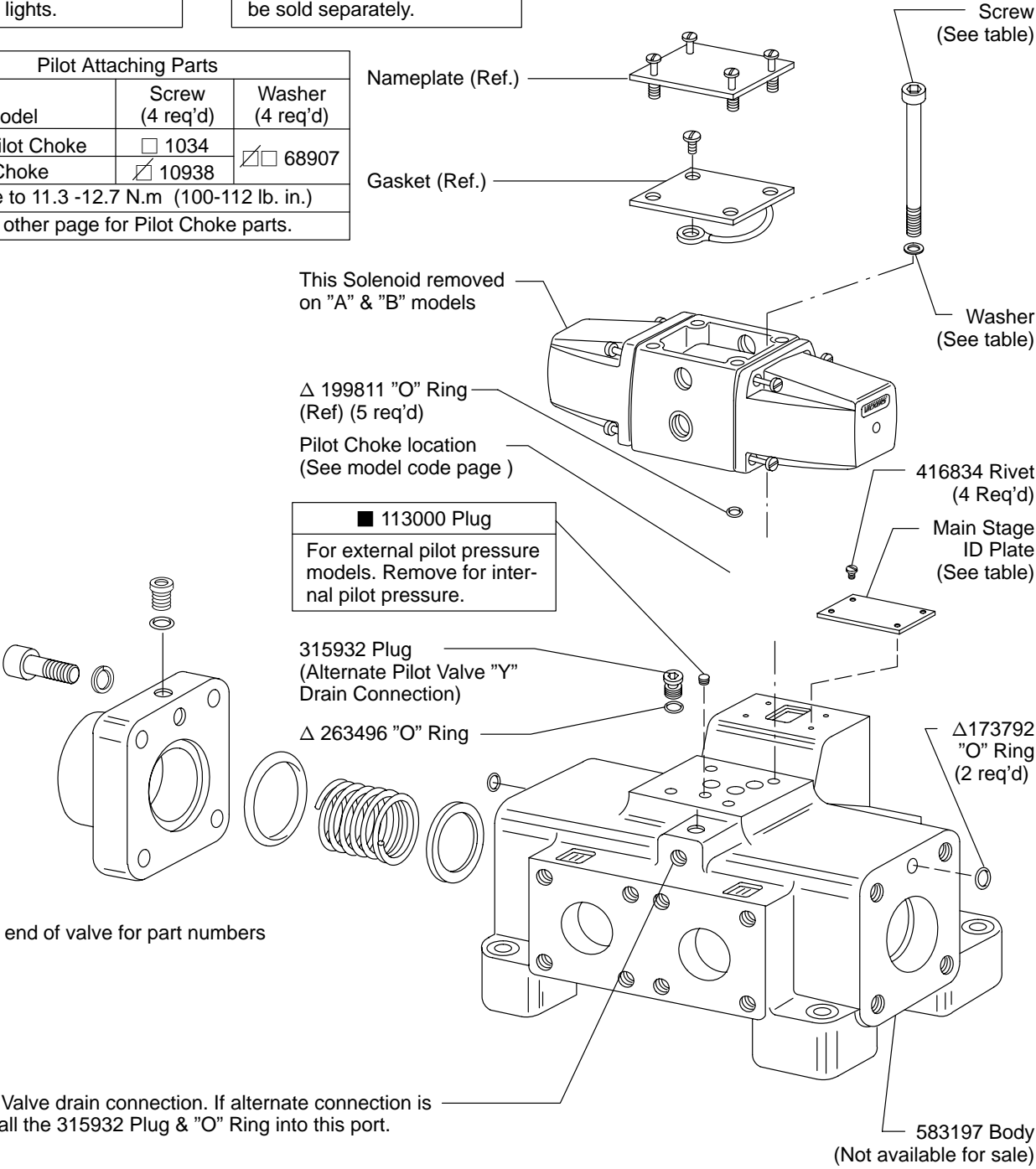
DF5S4(L)-16\*A/B/C/N-(\*)-(E)\*-53



**Note**  
See back page for solenoid indicator lights.

**Note**  
Part included in Kits will not be sold separately.

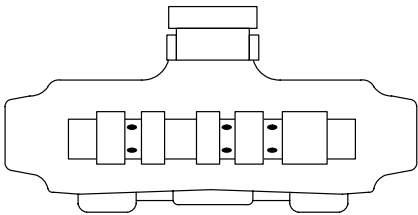
Pilot Attaching Parts		
Model	Screw (4 req'd)	Washer (4 req'd)
W/Out Pilot Choke	□ 1034	∕□ 68907
W/Pilot Choke	∕□ 10938	□ 68907
Torque to 11.3 -12.7 N.m (100-112 lb. in.)		
See other page for Pilot Choke parts.		



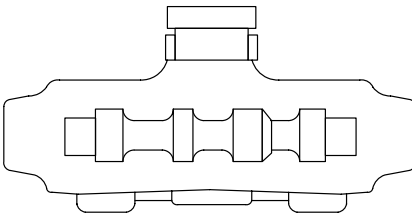
See other end of valve for part numbers

"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.



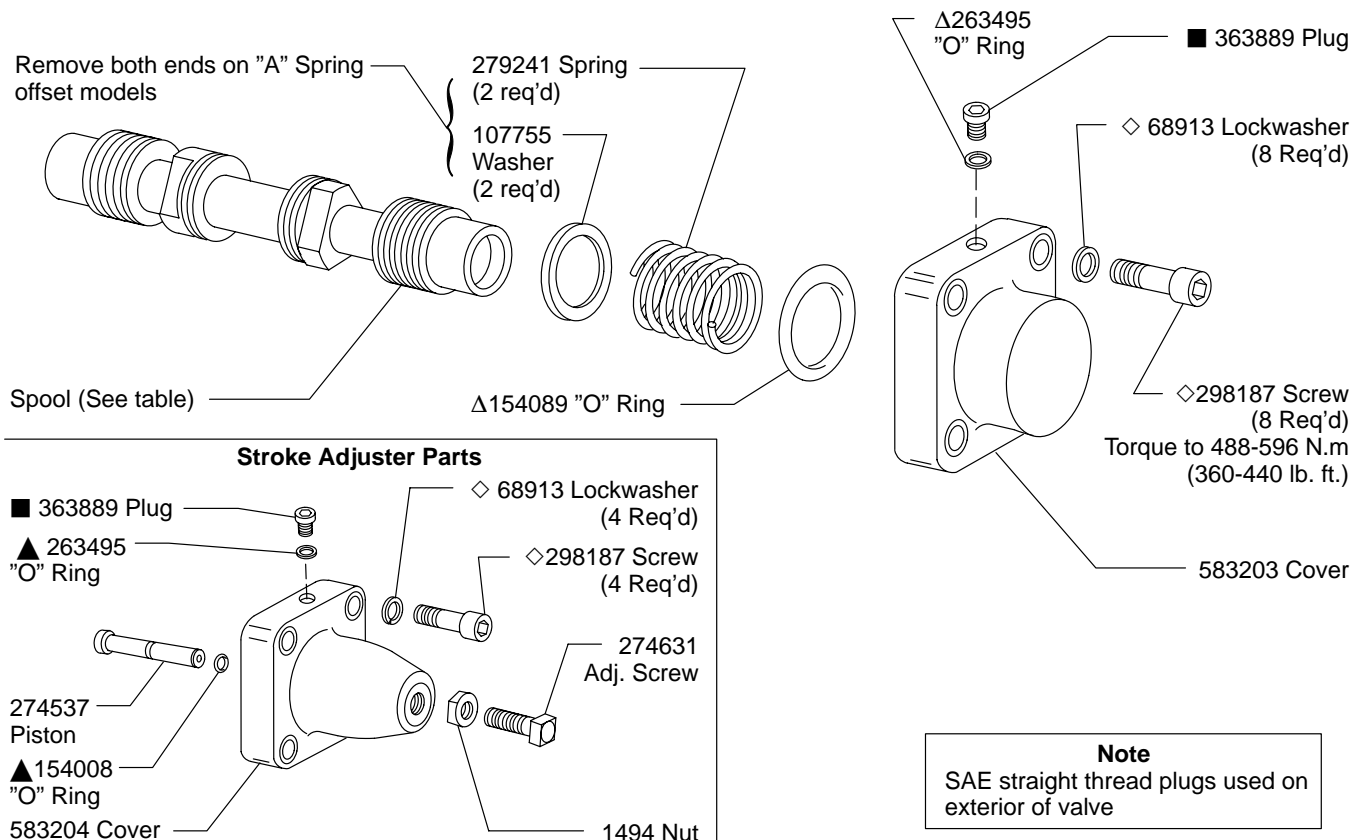
\*Spool Assembly

- ▲△ Included in Seal Kit 919405
- F3 equivalent Seal Kit 919434
- Included in Bolt Kit 255633
- ∕□ Included in Bolt Kit 255654
- ◇ Included in Fastener Kit 941309
- Plug Torques (See table)

Valve Model Code	Main Stage Spool Type	Pilot Valve Model Code (See back page)
DF5S4-16*A*-53	0, 2, 6, 9, 33	DG4S4-012A*-50-S344
DF5S4-16*B*-53	0, 1, 2, 3, 6 9, 31, 33	DG4S4-016B*-50-S344
	4 & 8	DG4S4-0168B*-50-S344
DF5S4-16*C*-53	0, 1, 2, 3, 6 9, 31, 33	DG4S4-016C*-50-S344
	4 & 8	DG4S4-0168C*-50-S344
DF5S4-16*N*-53	0, 2, 6, 9, 33	DG4S4-012N*-51-S344

Valve Model Code		Spool	Main Stage ID Plate w/Circuit Diagram	
Model	Valve Type		"A" only	B/C/N
DF5S4-160-	A/B/C/N	273677	400975	400976
DF5S4-161-	B/C	*386581		400977
DF5S4-162-	A/B/C/N	273676		400978
DF5S4-163-	B/C	*275803		400979
DF5S4-164-		*273720		400980
DF5S4-166-	A/B/C/N	275804		400981
DF5S4-168-	B/C	*275805		400980
DF5S4-169-	A/B/C/N	275806		400976
DF5S4-1631-	B/C	*275803		580475
DF5S4-1633-	A/B/C/N	317777		400981

\*See Spool Assembly Note

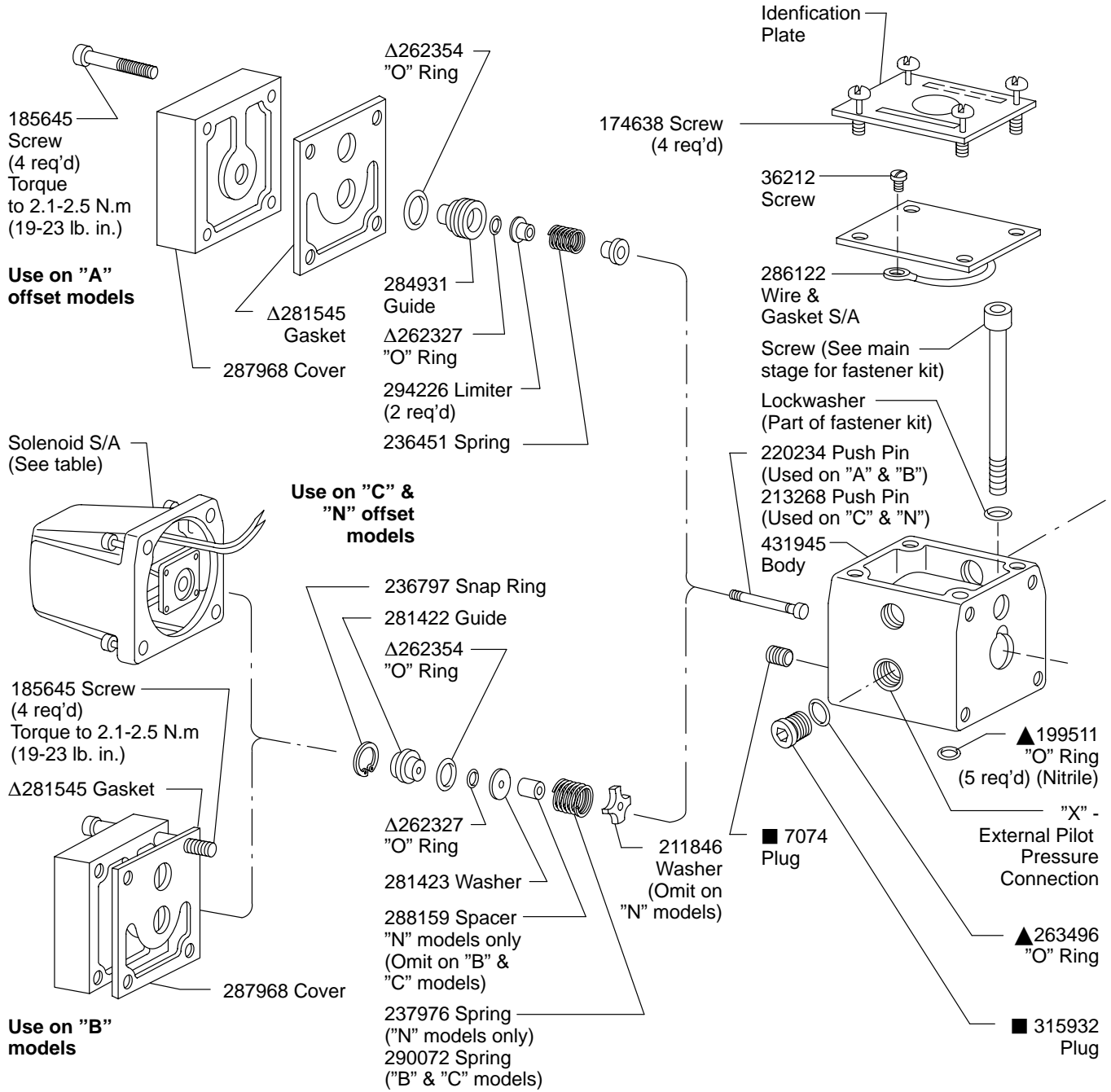


Voltage	Solenoid S/A			
	S/A Complete		Coil	
	Std	F3	Std	F3
115AC60	281291	317767	316011	317768
230AC60	281292	317769	298721	317770
460AC60	281293	317771	298722	317772

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.



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

\* Included in 942132 Detent Kit

Δ Included in F3 Pilot Valve Seal Kit 919214

**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.

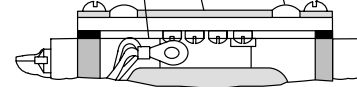
Spool		Diagram Plate			
Type	Part	"A"		"B" & "C"	"N"
		LH	RH		
2	213131	577490	290348	—————	577486
6	213232	—————	—————	290345	—————
68				577480	

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

Solenoid Indicator Light

Identification Plate

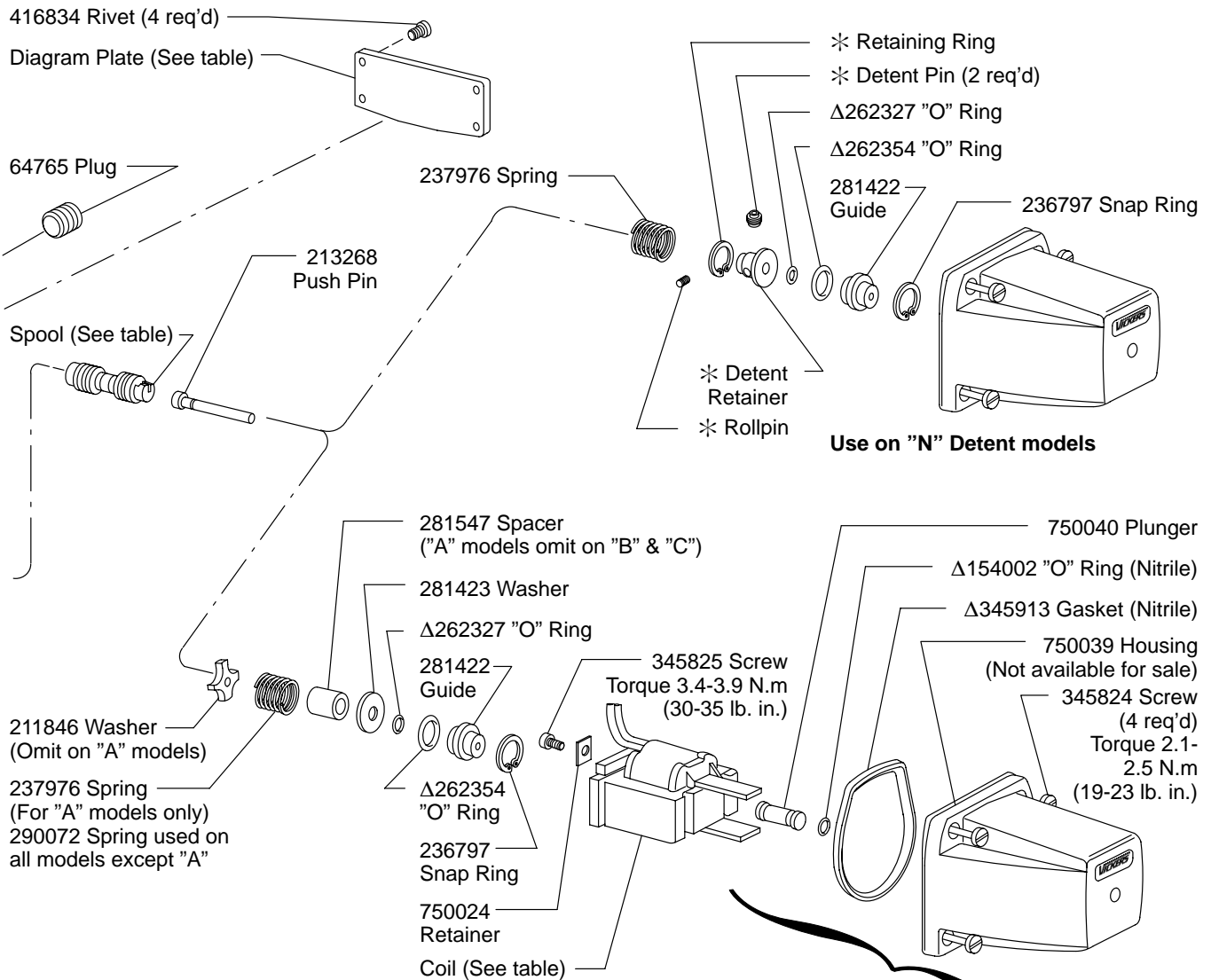
298782 Gasket



Solenoid Indicator Light Kit  
(Includes all parts identified)

Voltage Range	Kit
100 thru 127	941615
192 thru 233	941617

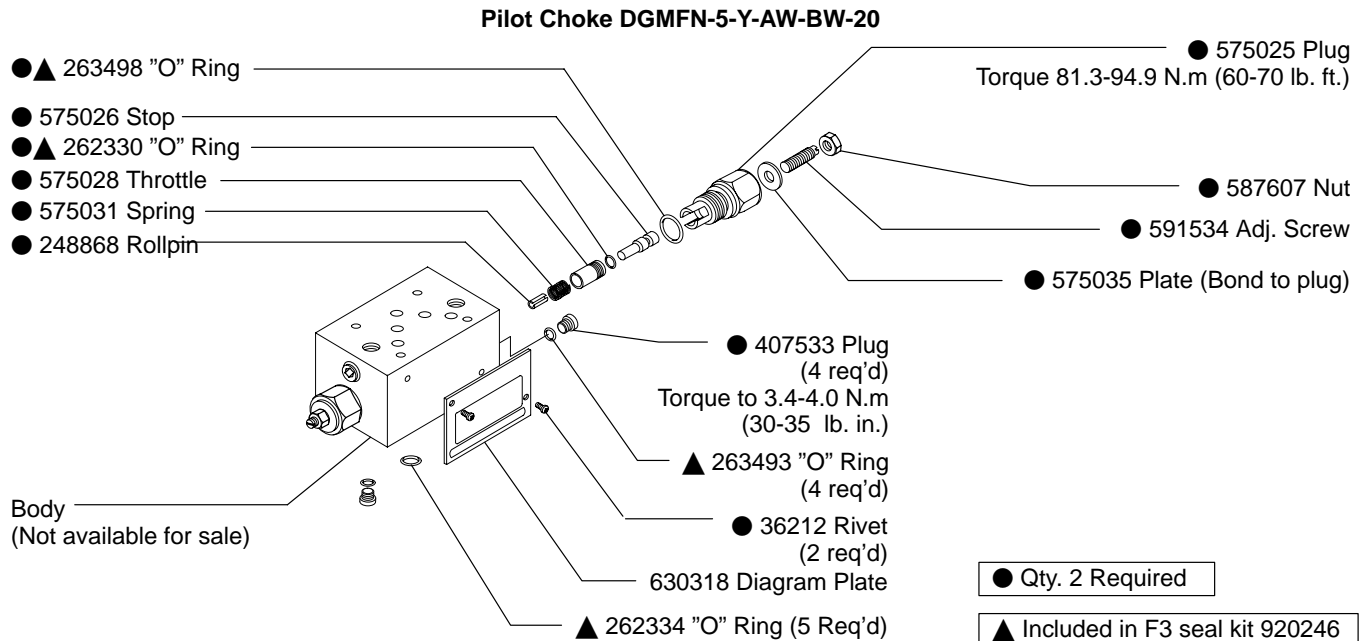
For models with Solenoid Indicator Lights



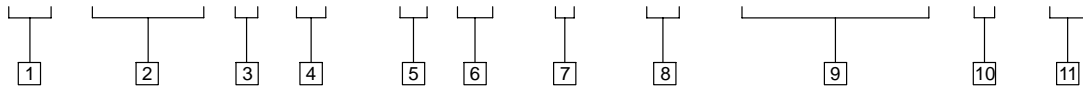
Included in standard Solenoid S/A. Use "F3" Solenoid S/A for "F3" applications

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

# Model Code



**(F3) DF5S 4 (L) - 16 \*\* - (\*) - (E) - (\*\*AC\*\*) - 53**



<p><b>1 Seal Material</b></p> <p><b>F3</b> - Seals for mineral oil and fire resistant fluids</p>	<p><b>6 Type of Main Stage Spool</b></p>	<p><b>9 Pilot Pressure</b></p> <p><b>E</b> - External Omitted - Internal pilot pressure</p>
<p><b>2 Model Series</b></p> <p><b>DF5S</b> - Directional valve, flange connection, solenoid controlled, pilot operated, sliding spool</p>	<p><b>7 Valve Type</b></p> <p><b>A</b> - Spring offset <b>B</b> - Spring centered (one solenoid) <b>C</b> - Spring centered <b>N</b> - Detented</p>	<p><b>10 Voltage and Frequency</b></p> <p>Omitted - 115AC60 standard</p>
<p><b>3 Flow Directions</b></p> <p><b>4</b> - 4 way</p>	<p><b>8 Spool Control Modification (Omit if not required)</b></p> <p><b>1</b> - Stroke adjustments <b>2</b> - Pilot choke <b>3</b> - Pilot choke &amp; stroke adjustment <b>7</b> - Stroke adjustment "A" end only <b>8</b> - Stroke adjustment "B" end only</p>	<p><b>11 Design</b></p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Electrical Plug Feature (Omit if not required)</b></p> <p><b>PA</b> - Insta-Plug, male receptacle only <b>PB</b> - Insta-Plug, male &amp; female receptors <b>PA3</b> (3 pin) &amp; <b>PA5</b> (5 pin) - receptacles that meet NFPA hydraulic valve electrical standard T3. 5.29M-1980.</p> </div>
<p><b>4 Indicator Lights</b></p> <p><b>L</b> - Solenoid indicator light Omitted - None</p> <p><b>5 Valve Size</b></p> <p>160 Series</p>		

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 OFF, OFR, and OFRS series are recommended.