Solenoid Controlled Pilot Operated Directional Valve

DG5S-4-*D(L)-(*)(X)-(*)-(E)-(T)(*)-(V)M-(S*)-*(**)**(L)-***-***-30/40
**Parts shown included in stroke adjuster kit 941154. Stroke adjuster cylinder "B" end only.**

135369 Adjuster Screw
470843 Screw (4 req’d)
Torque 49-59 N.m.
(36-44 lb. ft.)
289339 Cover
▲262330 "O" Ring
▲262402 "O" Ring
223075 Piston
1489 Nut

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**Main Stage Spool Type | Spool | ID Plate**
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DG5S-8-0D  | 363495  | 400967
DG5S-8-1D  | 276623  | 400968
DG5S-8-2D  | 363496  | 400969
DG5S-8-3D  | 276625  | 400970
DG5S-8-4D  | 276626  | 400971
DG5S-8-6D  | 363498  | 400972
DG5S-8-8D  | 363499  | 400971
DG5S-8-9D  | 363500  | 400967
DG5S-8-11D | 276623  | 573685
DG5S-8-31D | 276625  | 573685
DG5S-8-33D | 363501  | 400972

See pilot valve service drawing for parts breakdown.

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**Valve Model Code | Main Stage Spool Type | Pilot Valve Model Code**
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DG5S-8-*D-30 | 0, 1, 2, 3, 6, 9, | DG4V-3S-7C-60
DG5S-8-*D-40 | 11, 31, 33 | DG4V-3-7C-60
DG5S-8-*D-30 | 4 & 8 | DG4V-3S-78C-60
DG5S-8-*D-40 | | DG4V-3S-78C-60

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***Spool Assembly Note***
Assemble type “1” and “3” spools with narrow center land toward “A” end of valve. “A” end of valve is defined as being closest to cylinder port “A”. Type “11” and “31” spools are installed in reverse of type “1” and “3”, with narrow center lands toward “B” end of valve.

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**Plug Torques (oiled)**

<table>
<thead>
<tr>
<th>Plug</th>
<th>Torques (oiled)</th>
<th>N.m.</th>
<th>lb. in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>113000</td>
<td>5.0-5.9</td>
<td>45-52</td>
<td></td>
</tr>
<tr>
<td>237588</td>
<td>15.0-16.0</td>
<td>133-142</td>
<td></td>
</tr>
<tr>
<td>343740</td>
<td>9.8-10.2</td>
<td>87-90</td>
<td></td>
</tr>
<tr>
<td>398071</td>
<td>12.1-12.4</td>
<td>107-110</td>
<td></td>
</tr>
</tbody>
</table>

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**400983 Cover (2 req’d)**
470851 Screw (4 req’d)
(Torque 49-59 N.m. (36-44 lb. ft.)

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**287639 Piston**
287638 Sleeve

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Pilot Stage Bolt Kit (includes 4 attaching bolts)

- Model: Bolt Kit
- Without Pilot Choke: 696892
- W/Pilot Choke: 696893

(Torque to 4.5-5.7 N.m)(39.8-50.4 lb. in.)

See pilot choke service drawing for parts breakdown.

**Plug Installation Table**

<table>
<thead>
<tr>
<th>Model</th>
<th>&quot;A&quot; Plug</th>
<th>&quot;B&quot; Plug</th>
<th>&quot;C&quot; Plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>DG5S-8-<em>D-</em>*</td>
<td></td>
<td>237588</td>
<td></td>
</tr>
<tr>
<td>DG5S-8-*D-**-E</td>
<td>Does Not</td>
<td>113000</td>
<td>237588</td>
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<tr>
<td>DG5S-8-*D-**-X</td>
<td>Exist</td>
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<td></td>
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<tr>
<td>DG5S-8-*D-**-X-E</td>
<td></td>
<td>113000</td>
<td></td>
</tr>
<tr>
<td>DG5S-8-*D-**-KRS</td>
<td></td>
<td></td>
<td>237588</td>
</tr>
<tr>
<td>DG5S-8-*D-**-E-KRS</td>
<td></td>
<td>113000</td>
<td></td>
</tr>
<tr>
<td>DG5S-8-*D-**-X-KRS</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DG5S-8-*D-**-X-E-KRS</td>
<td></td>
<td>113000</td>
<td></td>
</tr>
</tbody>
</table>

113000 Solid Plug: 237588 Orifice Plug

**Pilot Valve**

(See table and refer to service drawings for more detailed information.)

- • 262342 "O" Ring (2 req’d)
- ★ 398071 Plug (See table)
- ▲ 263492 "O" Ring (2 req’d)
- ★ 263492 "O" Ring (2 req’d)
- ★ 263492 "O" Ring (2 req’d)
- ★ 343740 Plug (3 req’d)
- ★ 398071 Plug (3 req’d)
- ★ 407533 Plug
- ★ 471119 Set screw plug (Remove for internal drain, "T" in model code). Bond in place with Loctite H/S or equivalent, on external pilot drain models.

**Color Code**

- DG5S-8-K: 398130 —
- DG5S-8-R: 398131 Yellow
- DG5S-8-S: 398132 Red
**Model Code**

(F3) DG5S-8- D (L) (X) - (E) - (T) (V) M - (S) * (**) L - *5* *30/40*

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

2. **Model Series**
   - DG5S - Directional control valve, manifold or subplate mounted, solenoid controlled pilot, operated, rated pressure 210 Bar (3000 psi)

3. **Interface**
   - 8 - NFPA-D06 (ISO-4401-08)

4. **Spool Type**
   - (See table)

5. **Spool/Spring Arrangement**
   - D - Pressure centered

6. **Left Hand Assembly**
   - L - Left hand (single solenoid only)
   - Blank - Omit when not required

7. **Manual Override option**
   - Blank - Plain override solenoid ends only
   - H - Waterproof override solenoid ends only
   - H2 - Waterproof override both ends of single solenoid
   - P2 - Plain override both ends of single solenoid
   - Y - Lockable manual overrides solenoid ends only/DC only
   - Z - No overrides in either end

8. **Response Type**
   - X - Fast response
   - Blank - Standard low shock models

9. **Spool Control Modifications**
   - 2 - Pilot choke adjustment
   - 8 - Stroke adj cylinder "B" end
   - 2-8 - Dual pilot choke & stroke adjustment port "B" end only
   - Blank - Omit when not required

10. **Pilot Pressure**
    - E - External pilot pressure
    - Blank - Internal pilot pressure

11. **Pilot Drain**
    - T - Internal pilot drain
    - Omitted - External pilot drain

12. **Pressure Port Check Valve**
    - K - 0.35 bar (5psi) cracking pressure
    - R - 3.45 bar (50psi) cracking pressure
    - S - 5.20 bar (75psi) cracking pressure
    - Blank - Omit when not required

13. **Solenoid Energization Identity**
    - Blank - Standard arrangement for ANSI, B93.9 (energise solenoid "A" for flow "P" to "A" port)
    - V - Solenoid identification determined by position of solenoid.
      (Solenoid "A" at port "A" end and/or solenoid "B" at port "B" end. All 4 & 8 spools are always V code.)

14. **Flag Symbol**
    - M - Electrical options & features

15. **Spool indicator switch**
    - (Available on high performance models, DG4V-3 only.)
    - Omit when not required.
    - S1 - Options available on U only
    - S2 - Options available on U only
    - S3 - Options available on P* only
    - S4 - Options available on P* only
    - S5 - Options available on FW/FJ only

16. **Coil Type**
    - U - ISO 4400
    - F - Flying lead
    - SP1 - Single 6.9MM spade to IEC760
    - SP2 - Dual 6.3MM spade to IEC760

17. **Electrical Connections**
    - (F type coil only) Omit if not required.
    - T - Wired terminal block
    - PA - Instaplug male receptacle only
    - PB - Instaplug male & female receptacle
    - PA3 - Three pin connector
    - PA5 - Five pin connector

18. **Housing**
    - (F type coil only)
    - W - 1/2 NPT thread wiring housing
    - J - 20 MM thread wiring housing

19. **Electrical Options**
    - 1 - ISO with fitted plug, U type coils only
    - 6 - ISO with fitted plug & lights U type coils only

20. **Solenoid Indicator Lights**
    - (F build only) used with T terminal block models. (Omit if not required)

21. **Coil Identification**
    - (tank pressure rating)
    - 2 - 10 bar (145 psi) DG4V3-60
    - 5 - 100 bar (1450 psi) DG4V3S-60
    - 6 - 160 bar (2285 psi) DG4V3-60
    - 7 - 210 bar (3000 psi) DG4V3-60

22. **Pilot Valve Code**
    - 30 - DG4V3S-60 pilot valve
    - 40 - DG4V3-60 pilot valve

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