

### KEY EXPLANATION:

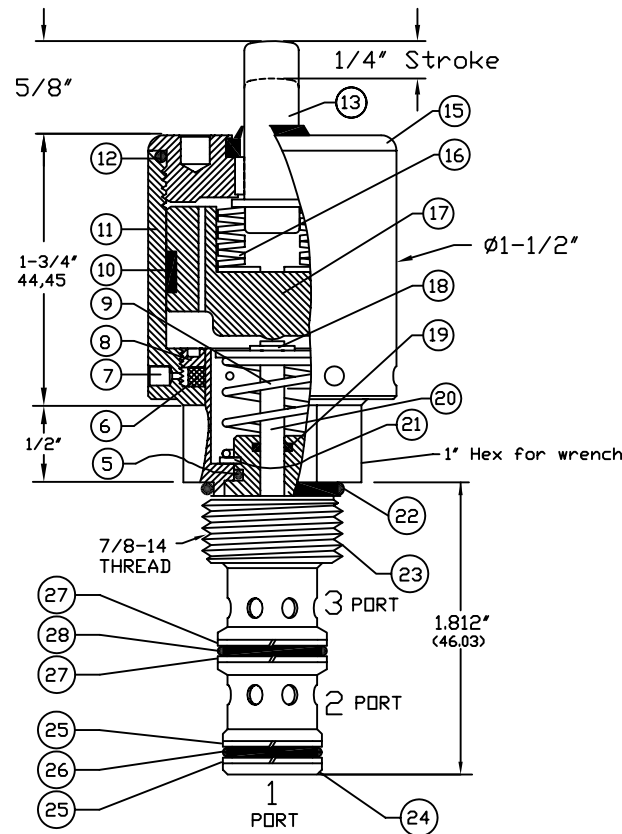
1. Bottom System Port (1)
2. Second from bottom System Port (2)
3. Third from bottom System Port (3)
5. Cartridge Seat Seal (Teflon)
6. Filter, 10 Micron Sintered Bronze (optional SST.)
7. Vents to atmosphere ( 2 Places 180° apart )
8. Filter Retainer, Aluminum (optional SST.)
9. Spool return Spring, Stainless Steel.
10. Piston Wear Ring, UHMW (optional Teflon)
11. Actuator Guide Cylinder, Aluminum (optional SST.)
12. Bonnet O-Ring, Buna-N (also see options)
13. Operator Rod, Heat Treated SST.
15. Upper Actuator Bonnet, Aluminum (optional SST.)
16. Overtravel Protection (this is an option)
- See order Information for Overtravel Protection
17. Operator Follower Assembly, Aluminum (Optional SST.)
18. Spring Retainer Assembly
19. O-Ring Seal, Teflon
20. Spool Connector Linkage ( Stainless Steel )
21. Retaining Ring, Carbon Steel (optional SST.)
22. O-Ring Seal, Buna-N (also see options)
23. Cartridge Mounting Threads (7/8-14)
24. Spool Cage ( Heat Treated Stainless )
25. Back Up Rings, Teflon ( two used )
26. O-Ring Seal, Buna-N ( Also see Options )
27. Back Up Rings, Teflon ( two used )
28. O-Ring Seal, Buna-N ( Also see Options )

### SHIFT FORCE NOTES:

10 to 15 Pounds of Force is required to shift the valve spool with zero pressure on port no. 1.

Any pressure on Port No. 1 will increase Force Requirement by .012 X Port No. 1 PSI.

## CARTRIDGE VALVE



Cartridge Valve Requires Cavity C-8543 ( 10-3 )

### OPERATION

Manually Operated Hydraulic Spool Valve.  
 Three Way, Directional Control or Selector Valve.  
 Maximum System Pressure: Ports 1, 2, and 3 is 3,000 PSIG. See "SHIFT FORCE NOTES"  
 Spool Stroke is 1/4".  
 Overtravel Option allows additional 1/8" Max. Stroke.  
 Stroke and Over Travel dimensions are approximate.  
 Fluid temperatures -40°F (-40°C) to 200°F (93.3°C)  
 Install Cartridge valve using 1" wrench  
 Valve should screw in freely to the Mount Seal.  
 Final tightening 20 to 30 foot pounds torque.  
 Use lubricant on external oil seals and mounting threads.

### OPTIONS

Direct Plunger is illustrated.  
 Hand Button Operator available. See SS# 1202532.  
 Overtravel Protection is illustrated, "MPD".  
 To order without Overtravel Protection "MOD".  
 Optional seals include Viton, Teflon and others.  
 Key 7 vents to atmosphere (2 Places).  
 T Option provides 10-32 Threaded ports at these locations.

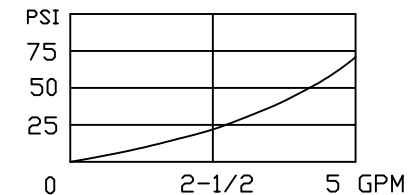
### HOUSING & MANIFOLD INFO.

Single Station Housings (Sub-Plates) illustrated on Spec. Sheet No. 1200706, S8543-\*\*\* Group. Also see Web Sheet S8543 at www.doering.com. Choose from Aluminum or Stainless materials. Multi Station and Custom Housings or Manifolds also available.

### CAVITY & TOOLING

Cavity C-8543 (Industry 10-3)  
 Form Tool: FT-8543 Call for source information.  
 Reference Cavity Spec. Sheet No. 1200023 or Web Sheet C-8543 at www.doering.com

### PRESSURE DROP CHART



### 3PS SERIES

3 Way Spool Valve, Manually Operated.  
 Directional Control or Selector Valve.