SERVICE INFORMATION
FOR
5100 SERIES RELIEF VALVES

CIRCLE SEAL CONTROLS

INSTALLATION

Install with flow arrow pointing in direction of flow. Use pipe sealant sparingly, if at all — apply with care behind first thread on the male pipe connection.

TECHNICAL DATA FOR PART NUMBER .....

Part Number Designation _____ _____ _____

Basic Model Number _____

Material _____

End connections-inlet/outlet _____

O-ring material _____

Temperature Range _____

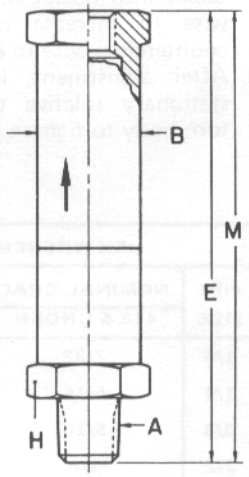
Maximum Operating Pressure _____ psi

REPLACEMENT SPRING DATA AND ADJUSTMENT RANGE

VALVE SIZE (PIPE)	10-450 PSI	451-1200 PSI	1201-2400 PSI
⅛	10515	10525	525
¼, ⅜	515	525	525
½	535	545	545
¾, 1	565	575	575
1 ¼	10555	20209	—

Springs in the 10-450 PSI range are interchangeable
Springs in the 451-1200 PSI range are interchangeable
Springs in the 1201-2400 PSI range are interchangeable

DIMENSIONS



E (10-450 P.S.I. NOM. C.P.) ±.03
M (451-2400 P.S.I. NOM. C.P.) ±.03

MODEL & CONNECTIONS	A SIZE	E	M	B-DIA H-HEX
5100-1MP	⅛	2.89	3.49†	.81†
5100-2MP	¼	3.34	4.24	1.00
5100-3MP	⅜	3.36	4.26	1.00
5100-4MP	½	4.15	5.05	1.25
5100-6MP	¾	5.61	7.11	1.50
5100-8MP	1	5.79	7.29†	1.50
5100-10MP	1¼	7.46	10.22†	2.00

† Exception: ⅛" Size, C.P. 1201-2400 psi. "M" dim. 3.95, "B" 1.00. — 1" size, C.P. 1201-2400 psi, "M" dim. 7.32. — 1¼" size, 10.22 for 451-1200 range. (no 1201-2400 range)

Representatives in Principal U.S. Cities

CIRCLE SEAL CONTROLS
BRUNSWICK CORPORATION
POST OFFICE BOX 3666
ANAHEIM • CALIFORNIA • 92803
(714) 774-6110

CIRCLE SEAL CONTROLS

Replacement Parts Kits

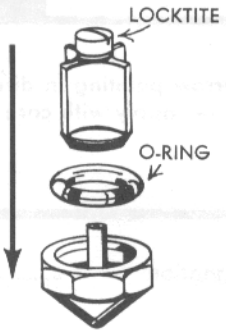
5100 Series "G" Change & Subsequent

Specify by ordering "KIT_____"
(insert valve number)

1.

POPPET ASSEMBLY

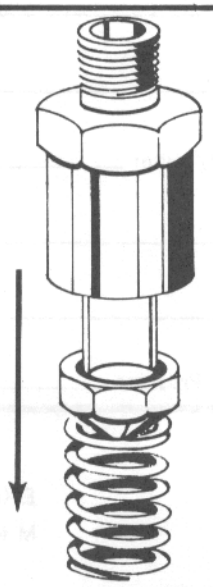
After disassembling the valve, CAREFULLY reassemble with new replacement kit parts. Install dynamic O-ring on poppet (all valves except 5120 Series). Apply Loctite* thread sealant to screw and install into poppet nut. Note: Kit for 5120 Series includes complete poppet assembly made ready at factory.
*Trade Name.



2.

SEAT THE POPPET

Hold valve end vertically with inlet connection up, as illustrated. Place poppet assembly on top of spring, with cone down. Look thru inlet connection and guide poppet into seat. (CAUTION: Take special care. Avoid making nicks in the raised seat.)



Valves Ordered In This Range (psi)	Will Normally Use This Spring (NOMINAL)* OR DASH NUMBER	Which Adjusts Over This Range
10-15	—13	10-16
16-25	—20	15-25
26-41	—32	24-41
42-57	—50	40-60
58-81	—70	56-84
82-117	—100	80-120
118-162	—140	112-168
163-230	—200	160-240
231-285	—250	200-300
286-345	—300	240-360
346-450	—400	320-450
451-575	—500	400-600
576-710	—625	500-750
711-999	—850	680-1020
1000-1200	—1000	690-1200
1201-1400	(1250)—625	1070-1410
1401-1900	(1700)—850	1250-1940
1901-2400	(2000)—1000	1530-2400

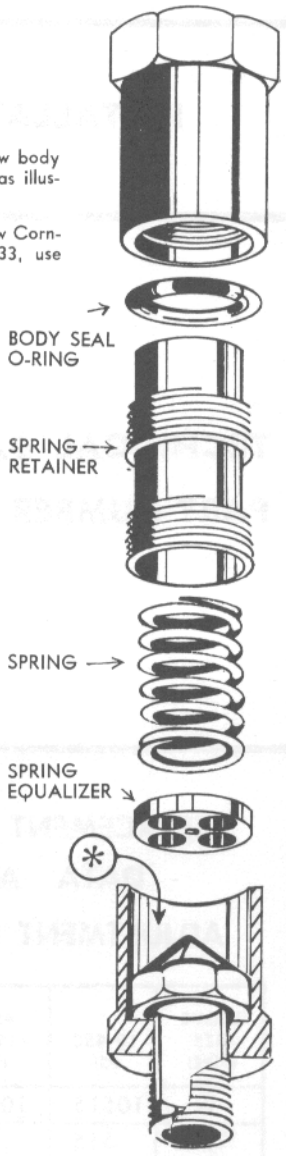
*Nominal and dash numbers are the same up to 1200 psi.

3.

TURN VALVE END OVER, REMOVE SPRING, THEN COMPLETE ASSEMBLY

Install spring equalizer, spring, spring retainer, new body seal O-ring and end piece. Complete assembly as illustrated at right.

LUBRICATION: Lubricate O-rings lightly with Dow Corning DC-7. Exceptions — Models 5130 and 5133, use Fluorolube S-30. Model 5120, use no lubricant.



4.

ADJUSTING INFORMATION

The 5100 Series relief valve is adjustable to ±15% of its nominal cracking pressure, as follows:

1. Remove discharge line (in-line mounted unit) or over-ride ring & rod (ASME type).
2. "Break" body joint by wrenching hexes. DO NOT USE PIPE WRENCH.
3. Insert proper size hex wrench (see table) into outlet end and turn clockwise to increase cracking pressure, counterclockwise to decrease.
4. After adjustment, hold hex wrench stationary relative to inlet end and turn body to tighten joint.

HEX WRENCH SIZE		
PIPE SIZE	NOMINAL CRACKING PRESSURE	
	450 & UNDER	451 & OVER
1/8	7/32	7/32
1/4	5/16	1/4
3/8	5/16	1/4
1/2	1/2	3/8
3/4	9/16	1/2
1	9/16	1/2
1 1/4	3/4	3/4

* 5100 Series
1201 psi C.P. and higher
and
5100 (R) Resonance
damped 10 to 1200 psi
Install dampening bars
and ball.

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