

**MATERIAL LIST - Sko-Flo Valve
BPR5000MFA CHECK STAGE**

ITEM	QTY	PART NO.	DESCRIPTION	MATERIALS
1	1	20705	OUTLET CAP	NITRONIC 60 SS
2	1	20711	BODY	NITRONIC 60 SS
3	1	20712	CONE RETAINER	NITRONIC 60 SS
4	1	20708	PISTON	NITRONIC 60 SS
5	1	20707	SEAT RETAINER	NITRONIC 60 SS
6	1	20713	SEAT	CARBIDE
7	1	20714	PIN	CARBIDE
8	11	22015	PISTON SPRINGS	316 SS
9	1	20706	SPRING TENSIONER	316 SS
10	1	20531	A E ADAPTER	316 SS
11	1	71002101	SET SCREW	316 SS
12	1	71002130	NPT PLUG	316 SS
13	1	71002083	3/8 A E PLUG	316 SS
14	2	71003528	BODY ALIGNMENT PIN	316 SS
15	1	71002091	OUTLET CAP LOCK BOLT	317 SS
16	4	71002109	TIE ROD	316 SS
17	4	NOT USED	TFE COATED SS NUT	316 SS
18	1	71001763	O-RING CONE RETAINER	EPDM
19	1	71001797	O-RING SEAT	EPDM
20	1	71001766	O-RING PISTON TO CONE	EPDM
21	1	71001763	O-RING SPRING RETAINER	EPDM
22	1	71001807	O-RING OUTLET CAP	EPDM
23	1	71001829	O-RING A E ADAPTER	EPDM
24	1	71001885	BU RING TO ITEM 18	PTFE
25	1	71001941	BU RING TO ITEM 19	PEEK
26	1	71001885	BU RING TO ITEM 21	PTFE
27	1	71001905	BU RING TO ITEM 22	PTFE

SkoFlo Valve Model BPR5000MFA

SkoFlo INDUSTRIES INC.
Woodinville, WA

SCALE: NONE	APPROVED BY:	DRAWN BY: FJG
DATE: 10/2/02		REVISED: 11/28/06
BPR5000MFA BACK PRESSURE REGULATOR ASSEMBLY SECTION / PARTS LIST CHECK STAGE		DRAWING NUMBER SF-0741
		REV A


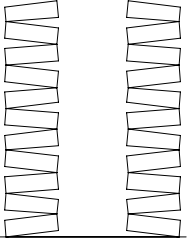



BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

CARBIDE SEAT SUB ASSEMBLY	
	<p>Carbide Seat, PN 20713, Item #6</p> <p>O-Ring, PN 71001797, Item #19</p> <p>BU Ring, PN 71001941, Item #25</p>
	<p>Install O-Ring In Groove of Seat On the Cone Retainer Side of the Seat.</p>
<p>CAUTION - ORIENTATION</p> 	<p>Install Back Up Ring In Groove On the Piston Side of Carbide Seat</p> <p>CAUTION: BACK UP RING HAS A CONTOURED GROOVE THAT MATES TO O-RING</p>
	<p>Insert Carbide Seat, Item #6 Over Threaded End of Cone Retainer, PN 20712, Item #3 As Shown.</p>



BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

	<p>Carbide Seat Shown in Proper Position.</p>
	<p>Slide Carbide Cone, PN 20714, Item #7 Over Threaded End of Cone Retainer and Insert Into Seat PN 20713</p>
	<p>Carbide Cone in Proper Position.</p>
<p>PISTON SUB ASSEMBLY</p>	
	<p>Locate Piston, PN 20708, Item #4</p>





BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

	<p>Stack 11 each Spring Washers PN 22015, Item #8 As Shown Per Diagram Onto Piston Body, PN 20708</p> 
	<p>Install O-Ring, Item #21 Onto Groove of Piston</p>
	<p>Use Razor to Remove Approx 1/8 to 3/16 of Material From Back Up Ring, PN 71001885, Item #26 As Shown.</p>
	<p>Install Back Up Ring, Item #26 In the Groove of Piston and Over the O -Ring.</p>



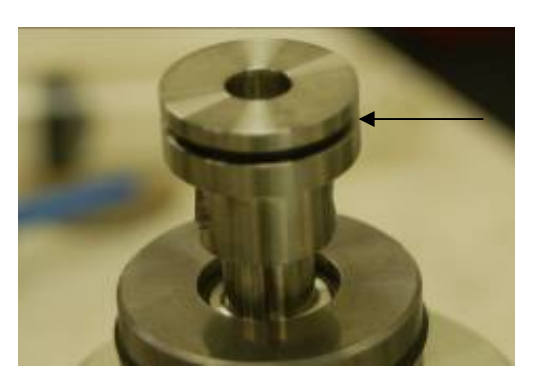

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

	<p>Apply Parker Lube to O-Ring Groove on Top of Piston As Shown.</p>
	<p>Install O-Ring, Item #20 In Groove on Top Surface of Piston Body as Shown.</p>
	<p>Prepare to Insert Piston Assembly Into Seat Retainer, PN 20707, Item #5</p>
	<p>Insert Piston Assembly, PN 20708, Item #4 Into Seat Retainer, PN 20707, Item #5 As Shown.</p>

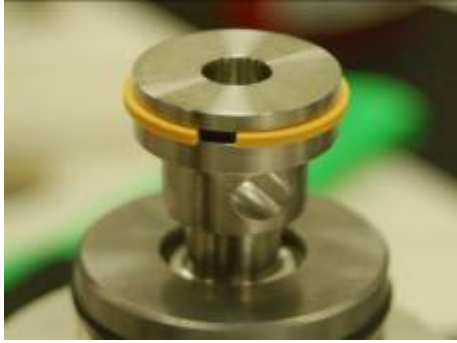
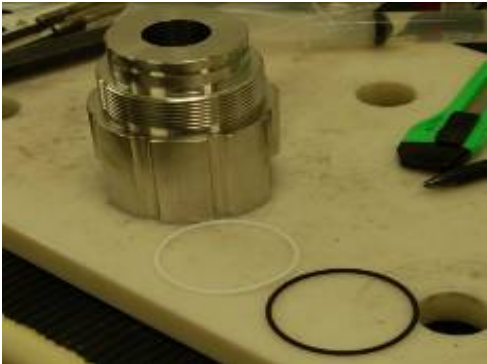

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

 A close-up photograph showing a cylindrical metal piston assembly with a central threaded hole, inserted into a matching hole in a larger metal seat retainer. The assembly is complete.	<p>Piston Assembly Inserted Into Seat Retainer Complete</p>
 A close-up photograph of a cone retainer assembly, which consists of a central shaft with a conical tip and a surrounding sleeve with a threaded end.	<p>Prepare Cone Retainer Assembly to Mate With Piston Assembly</p>
 A close-up photograph showing a hand holding a blue locktite applicator, applying a small amount of blue threadlocker to the threads of the cone retainer assembly.	<p>Apply Blue 242 Locktite On Threads Of Cone Retainer.</p>
 A close-up photograph showing the cone retainer assembly being screwed into the piston assembly. The threads of the retainer are being inserted into the central hole of the piston.	<p>Screw OD Threads of Cone Retainer Assembly Into ID Threads of Piston Assembly As Shown.</p>





BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

	<p>Once Cone Retainer and Piston Assembly Have Been Mated, Pull Out Slightly.</p>
	<p>Use Allen Wrenches to Act as Opposing Forces For the Purpose of Tightening Cone Retainer and Piston Assembly As Shown.</p>
	<p>Insert O-Ring, Item #18 In Groove of Cone Retainer As Shown.</p>
	<p>Use Razor to Remove Approx 1/8 to 3/16 of Material From Back Up Ring, PN 71001885, Item #24 As Shown.</p>

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

	<p>Install Back Up Ring, Item #24 In the Groove of Cone Retainer and Over the O-Ring.</p>
<p>Outlet Cap Sub Assembly</p>	
	<p>Outlet Cap PN 20705, Item #1</p> <p>O-Ring, Item #22</p> <p>Back Up Ring, PN 71001905, Item #27</p>
<p>CAUTION - ORIENTATION</p>	<p>Install Back Up Ring In Groove of Outlet Cap</p> <p>Back Up Ring Shall Be on the Thread Side of the Groove</p> <p>Use Brass Rod to Set Back Up Ring Into Place.</p> <p>CAUTION: BU RING CONTOURED GLAND MUST FACE AWAY FROM THREADS.</p>
	
<p>CAUTION - ORIENTATION</p>	<p>Install O-Ring In Groove of Outlet Cap.</p> <p>O-Ring Needs To Be On the Opposite Side of Threads.</p> <p>CAUTION: O-RING MUST MATE TO CONTOURED GLAND IN BACK UP RING</p>
	

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

	<p>Insert M6 X 10 Set Screw In Outlet Cap As Shown.</p> <p>Screw Set Screw in half way.</p>
FINAL ASSEMBLY - CHECK STAGE	
	<p>Insert Piston, Seat and Retainer Sub Assembly Into Bore of Check Stage Body, 20711</p>
	<p>Apply Parker Lube To O-Ring</p>
	<p>Push Assembly Into Bore As Shown.</p>

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION



Carbide Seat Must Be Completely Imbedded Into Bore As Shown.



Final View of Embedded Carbide Seat Assembly In Bore.



Install Outlet Cap In Check Stage Body
Apply Parker Lube To O-Ring As Shown.



Apply Never Seize To Threads

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION



Install Outlet Cap Into Check Stage Body.



Use Strap Wrench And Tighten Cap Until It Bottoms In Body. Then Back Cap Out To Align Nearest Relief With Screw Hole In Body.



Apply Never Seize to Locks Screw Threads.

Install M8 X 10 SHCS Lock Screw.

Tighten to 10 Ft-Lbs and Record On Traveler.



Apply Never Seize to Threads of Spring Tensioner, PN 20706, Item #9.

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION



Use 7/16 Allen To Install Spring Tensioner.



Turn Spring Tensioner Until It Contacts the Spring.



Once Spring Tensioner Contacts the Spring,
Turn Retainer another 1/2 to 3/4 Turn.

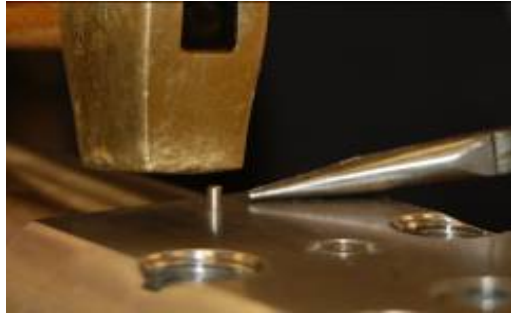


Use Combination Wrench as Shown To Turn
Retainer as needed.

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION

	<p>Apply Teflon Tape To Threads Of on Stainless Steel 1/4 NPT Plug.</p>
	<p>Install 316 Stainless Steel 1/4 NPT With Teflon Tape In Outlet Cap As Shown.</p> <p>Torque to 40 Ft-Lbs and Record on Traveler.</p>
	<p>Install 3-916 O-Rings On SAE Adapters PN 20531.</p> <p>Inspect O-Rings For Tearing From Threads.</p> <p>Install SAE Adapters In Outlet Cap By Placing In Aluminum Jaw Vice. Apply Never Seize To Threads and Torque To 150 Ft-Lbs.</p> <p>Record On Traveler.</p>
	<p>Install 1/8 X 1/2 Dowel Pin, PN 71003373 As Shown.</p>

BPR MF Series CHECK STAGE ASSEMBLY INSTRUCTION



Tap 1/8 X 1/2 Dowel Pin into Valve Body as Shown.

CAUTION: Use Malleable Brass Hammer and Tap Gently into Place.



Clean Out O-Ring Groove on Check stage Body as Shown.



Apply Parker Lube To O-Ring Slots as Shown.



Install 1/8 X 1/2 Dowel Pin, PN 71003373 As Shown.

CHECK STAGE is NOW READY FOR FINAL ASSEMBLY