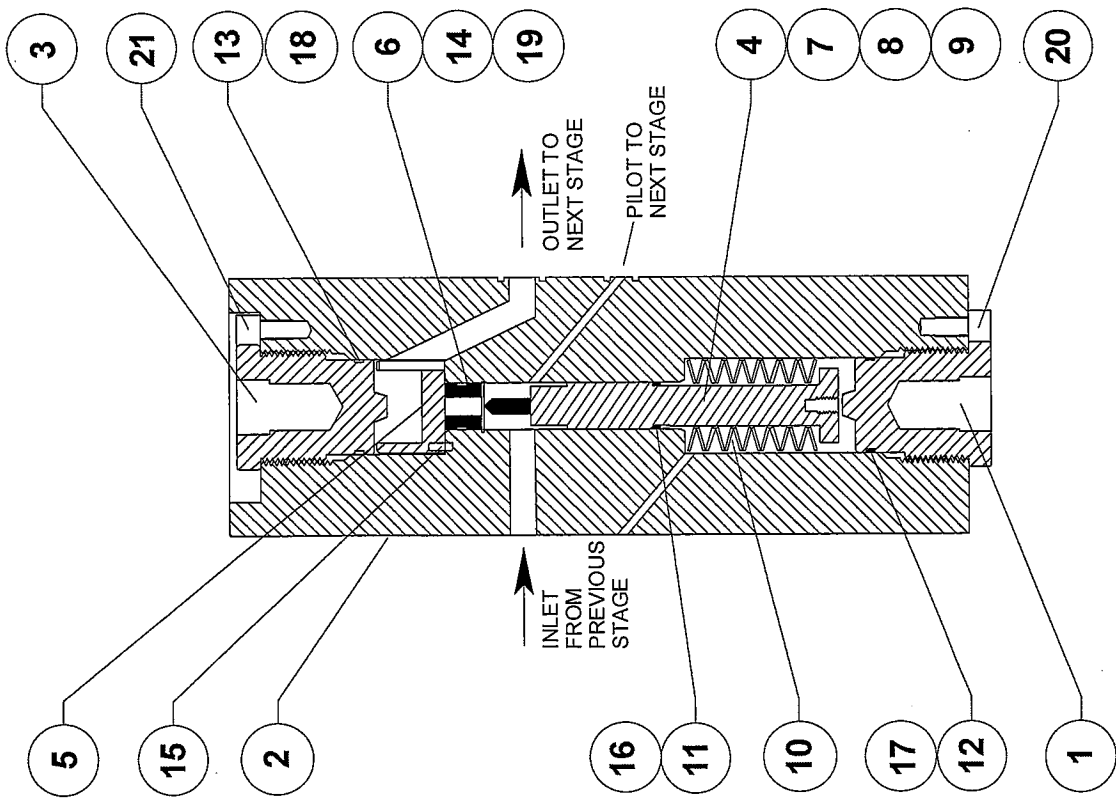


MATERIAL LIST - SkoFlo Valve
BPR MF SECOND STAGE



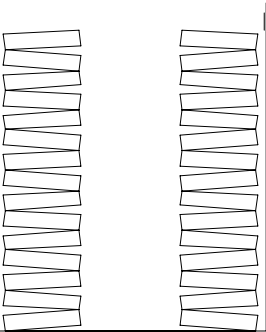


| ITEM | QTY | PART NO. | DESCRIPTION | MATERIALS |
|------|-----|------------------|--------------------------|--------------------------|
| 1 | 1 | BPR15000MFB-S-1 | BASE CAP | NITRONIC 60 SS |
| 2 | 1 | BPR15000MFB-S-2 | BODY | NITRONIC 60 SS |
| 3 | 1 | BPR15000MFB-S-3 | TOP CAP | NITRONIC 60 SS |
| 4 | 1 | BPR15000MFB-S-4 | PISTON | NITRONIC 50HS SS |
| 5 | 1 | BPR15000MFB-S-5 | SEAT RETAINER | NITRONIC 60 SS |
| 6 | 1 | BPR15000MFB-S-6 | SEAT | CERAMIC |
| 7 | 1 | BPR15000MFB-S-7 | PIN HOLDER | NITRONIC 50HS SS |
| 8 | 1 | BPR15000MFB-P-8 | PIN | CERAMIC |
| 9 | 1 | BPR15000MFA-9 | PIN SPRING | 316 SS |
| 10 | 15 | BPR15000MFB-S-10 | PISTON SPRINGS | 17-7 SS |
| 11 | 1 | BPR15000MFB-S-11 | CUP SEAL (PISTON) | TEFLON/ GRAPHITE/ 316 SS |
| 12 | 1 | BPR15000MFB-S-12 | O-RING (BASE CAP) | EPDM |
| 13 | 1 | BPR15000MFB-S-13 | O-RING (TOP CAP) | EPDM |
| 14 | 1 | BPR15000MFB-S-14 | O-RING (SEAT) | EPDM |
| 15 | 1 | BPR15000MFB-S-14 | GUIDE PIN | 316 SS |
| 16 | 1 | BPR15000MFB-S-27 | BACK UP RING FOR ITEM 11 | PEAK |
| 17 | 1 | BPR15000MFB-S-28 | BACK UP RING FOR ITEM 12 | PEAK |
| 18 | 1 | BPR15000MFB-S-29 | BACK UP RING FOR ITEM 13 | PEAK |
| 19 | 1 | BPR15000MFB-S-30 | BACK UP RING FOR ITEM 14 | PEAK |
| 20 | 1 | BPR15000MFB-S-24 | BASE CAP LOCK SCREW | 316 SS |
| 21 | 1 | BPR15000MFB-S-25 | TOP CAP LOCK SCREW | 316 SS |







| | | | |
|--|--------------|---|---------|
| SkoFlo Valve Model BPR MF | | SkoFlo INDUSTRIES INC. Woodbury, VA | |
| SCALE: NONE | APPROVED BY: | DRAWN BY: FJG | REV: A |
| DATE: 10/2/01 | | REVISED: 3/1/04 | |
| BPR MF BACK PRESSURE REGULATOR ASSEMBLY SECTION / PARTS LIST SECOND STAGE | | DRAWING NUMBER | SF-0579 |

NOTE: SEE DWG SF-0577 FOR ENTIRE ASSEMBLY





BPR MF Series Secondary Stage Assembly Instruction

| PISTON ASSEMBLY | |
|---|--|
|  | <p>Piston PN 20535, Item #4</p> <p>Bellville Spring PN 22018, Item #10</p> |
|  |  <p>Stack 15 Each Piston Spring, PN 22018, Item #10 Onto Piston Per Diagram.</p> |
|  | <p>Cup Seal PN 71001874, Item #11</p> <p>BU-Ring PN 71001877, Item #16</p> <p>Spring PN 71002071, Item #9</p> <p>Piston Pin PN 20544, Item #8</p> <p>Pin Holder PN 20561, Item #7</p> |
| <p>CAUTION</p>  | <p>Install Cup Seal, Item #11 On Piston, Item #4 As Shown</p> <p>CAUTION: CUP SEAL HAS ORIENTATION</p> <p>BACK FACE of CUP SEAL MUST BE VISIBLE LOOKING DOWN FROM THREADS</p> |



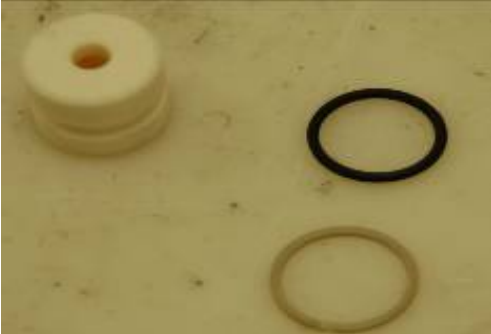
BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|--|
|  | <p>Install Back Up Ring, Item #16 Onto Piston, Item #4 As Shown</p> |
|  | <p>BU Ring being Installed</p> |
|  | <p>Cup Seal and Back Up Ring Installed</p> |
|  | <p>Insert Pin PN 20544, Item #8 Into Pin Holder PN 20561, Item #7 As Shown</p> |

BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|--|
|  | <p>Pin and Pin Holder</p> |
|  | <p>Insert Pin Spring PN 71002071, Item #9 Into Pin Holder As Shown</p> |
|  | <p>Prep Piston Threads with Blue 242 Locktite</p> |
|  | <p>Install Pin Holder Onto Piston As Shown</p> |

BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|---|
|  | <p>Pin Holder and Piston and Spring Stack Assembly Complete</p> |
|  | <p>Place Piston Assembly Into Aluminum Jaw Vice and Torque To 40 Ft-Lbs</p> <p>Record Torque on Traveler</p> |
| SEAT SUB ASSEMBLY | |
|  | <p>Ceramic Seat PN 20628, Item #6</p> <p>O-Ring, Item #14</p> <p>BU Ring, Item #19</p> |
| CAUTION | <p>Place O-Ring Onto Groove Of Seat. O- Ring Must Be FACING Small Diameter Side of Seat.</p> <p>Place Back Up Ring Onto Groove of Seat.</p> <p>Back Up Ring Must Be on the Large Diameter Side of the Seat.</p> <p>CAUTION: Contoured Gland on Backup Ring Must Mate to O-Ring.</p> |

BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|--|
|  | <p>Seat Retainer PN 20562, Item #5</p> <p>Dowel Pin PN 71003373, Item #15</p> |
|  | <p>Arbor Press 1/8 X 1/2 Dowel Pin Into Seat Retainer As Shown.</p> |
|  | <p>Dowell Pin properly installed.</p> |
|  | <p>Install "C" Clip PN 71001949, Item #26 Into Intermediate Stage Valve Body</p> <p>Top Side of Intermediate Body has Recess for Cap Assembly.</p> |

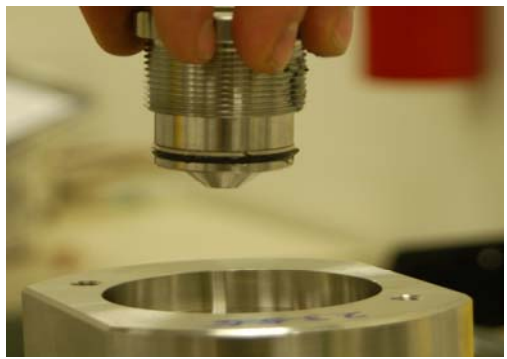



BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|--|
|  | <p>Use "C" Clip Pliers to Install Into Bore</p> |
|  | <p>Installed "C" Clip In Bore "C" Clip Must Be Completely Into Groove In Valve Body.</p> |
|  | <p>Install Seat Sub Assembly Into Valve Body Apply Parker Lube To O-Ring. Insert Seat Into Bore With Small Diameter Towards the C-Clip. Seat Must Contact the C-Clip</p> |
|  | <p>Install Seat Retainer Sub Assembly Over Seat Sub Assembly. Align Dowel In Retainer With Hole In Body and Press Retainer Into Place</p> |
| <p>TOP CAP SUB ASSEMBLY</p> | |





BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|---|
|  A photograph showing three components on a light-colored surface: a conical top cap with a threaded section, a black O-ring, and a thin, light-colored backup ring. | <p>Top Cap PN 20653, Item #3</p> <p>O-Ring, Item #13</p> <p>BU Ring, Item #18</p> |
| <p>CAUTION</p>  A close-up photograph of the top cap with the backup ring installed on its threaded section. | <p>Install Backup Ring, Item #18 Onto the Thread Side of Groove</p> <p>CAUTION: Contoured Gland Faces Up Toward Cone</p> |
| <p>CAUTION</p>  A close-up photograph of the top cap with the O-ring installed on its conical side. | <p>Install O-Ring, Item #13 Onto the Cone Side of Groove</p> <p>CAUTION: Contoured Gland On Backup Ring Must Mate to O-Ring</p> |
|  A photograph showing a hand holding the top cap, which has been coated with a grey substance (Parker Lube) on the O-ring and anti-seize on the threads. | <p>Prep "Coned" Top Cap With Parker Lube on O-Rings.</p> <p>Prep Threads with Anti Seize</p> |



BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|---|
|  | <p>Position "Coned" Top Cap As Shown</p> |
|  | <p>Screw Top Cap In Until It Contacts Valve Body. Back Out To Align Nearest Relief On Cap With Lock Screw Hole.</p> |
|  | <p>Align Top Cap with Lock Screw Hole as Shown. Arrow Points to Lock Screw Hole</p> |
|  | <p>Apply Never Seize To Threads on M8 X 10 Lock Screw.</p> |





BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|---|
|  | <p>Turn M8 X 10 Lock Screw into threaded hole.</p> |
|  | <p>Torque To 10 Ft-Lbs and Record on Traveler</p> |
|  | <p>Flip Valve Body over Install Spring Spacer, PN 20542, Item #27 .210" Thick Chamfer End Goes in First as Shown.</p> |
|  | <p>Apply Parker Lube to Cup Seal.</p> |




BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|--|
|  | <p>Press Piston Assembly Into Bore.</p> |
|  | <p>Installed Piston Assembly</p> |
| <p>BASE CAP SUB ASSEMBLY</p> | |
|  | <p>Base Cap PN 20576, Item #1 O-Ring, Item #12 BU Ring, Item #17</p> |
| <p>CAUTION</p>  | <p>Install Backup Ring, Item #17 Onto the Thread Side of Groove</p> <p>CAUTION: Contoured Gland Faces Up Toward Cone</p> |

BPR MF Series Secondary Stage Assembly Instruction

| | |
|---|--|
| <p>CAUTION</p>  | <p>Install O-Ring, Item #12 Onto the Dished Side of Groove</p> <p>CAUTION: Contoured Gland On Backup Ring Must Mate to O-Ring</p> |
|  | <p>Apply Parker Lube To O-Ring on Cupped Base Cap Assembly As Shown.</p> |
|  | <p>Apply Never Seize To Threads.</p> |
|  | <p>Screw In Until Base Cap Makes Contact with the Body.</p> <p>There is NO Recess in Body for Bottom Cap</p> |

BPR MF Series Secondary Stage Assembly Instruction

| | |
|--|--|
|  | <p>Back Out To Align Nearest Relief on Cap with Screw Hole.</p> |
|  | <p>Apply Never Seize To Threads. Torque to 10 Ft-Lbs and Record on Traveler.</p> |
|  | |

INTERMEDIATE STAGE is NOW READY FOR FINAL ASSEMBLY