

Step by Step Assembly Instructions

SF10000 NC

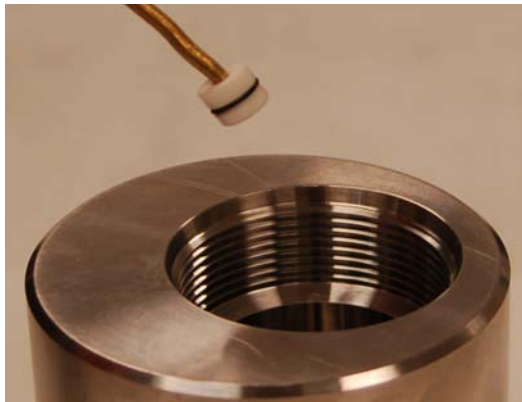
Body Assembly

Body, PN 23333 Seat, PN 20121 Seat "O" Ring, M7 X 1 Seat Retainer, P/N 20704
Spiral Ring, P/N 71001856 Base Cap, PN 23332 Base Cap "O" Ring, 2-125 M8 X 1.25 X 12 Lock Bolt Lock
Plate, P/N 20677 Handle Top, P/N 20693 M8 X10 SHSS Cup, P/N 71002102



STEP 1

Install M1 X 7 "O" Ring on 20121 Seat.



STEP 2

Install Seat in Body.

ORIENTATION : Small Hole faces OUT.

NOTE : Be sure Seat Cavity in Body is clean and free of obstruction for proper Seat placement.



Seat Is properly installed



STEP 3

Install Seat Retainer, P.N 20704 over Seat.

ORIENTATION : Recess in Retainer faces Seat.

Step by Step Assembly Instructions



Seat Retainer Is properly installed



STEP 4

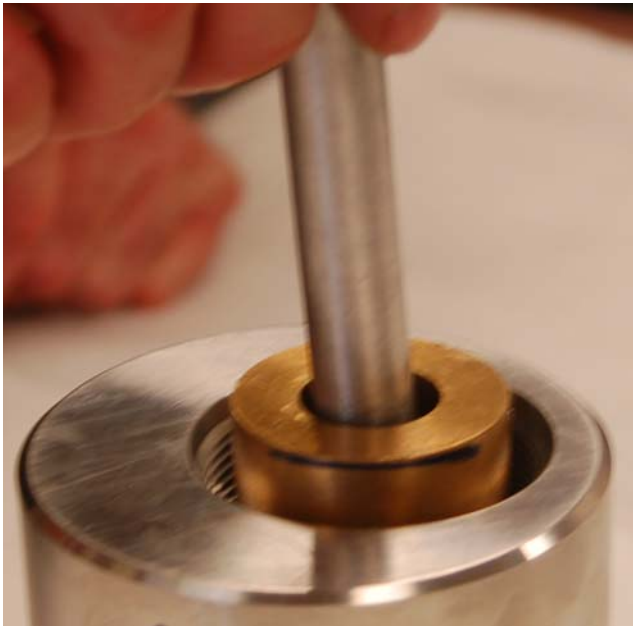
Press WS-78-S16 Spiral Ring into compression tool marked 748



STEP 5

Position Compression Tool #748 in Body with exit lip to Seat.

Step by Step Assembly Instructions



STEP 6

Push WS-78-S16 Spiral Ring out of Compression Tool #748 with aluminum Seat Holder Install Tool.

Ensure Spiral Ring fits properly to secure 20704 Seat Retainer.

NOTE : When properly secure, Retainer will be movable under the Spiral Ring.



Spiral Ring and Seat Retainer properly installed.

Step by Step Assembly Instructions

Piston Assembly

Piston P/N 20803 Pin Holder, P/N 20682 Pin, P/N 21523 Pin Spring, P/N 71002067, Piston Springs (11 ea.), P/N 22109
Spacer, P/N 20682 Cup Seal, P/N 71001872), Cup Seal Retainer, P/N 20184 Spiral Ring, P/N 71001948



Piston P/N 20803

Cup Seal, P/N 71002067

Spiral Ring, P/N 71001948



STEP 7

Install Cup Seal, P/N 71001872 on
Piston, P/N 20803

ORIENTATION : Flat of Seal to Piston - Wire
Ring Facing Out



Step 8

Install Retainer, P/N 20184 over
Cup Seal, P/N 71001872

ORIENTATION : Recessed area of Retainer
faces to Cup Seal

Step by Step Assembly Instructions



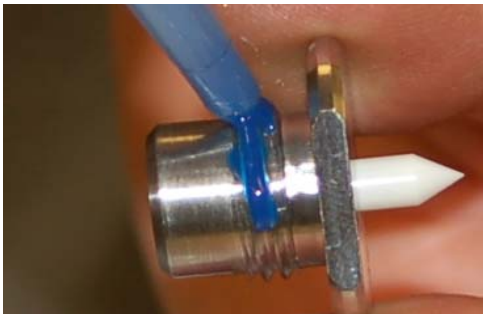
Step 9

Install 95-WST-118-S16 Spiral Ring in
Piston groove next to Retainer, P/N 20184.



Step 10

Install Pin Spring, P/N 71002067 in
Piston, P/N 20803



STEP 11

Place Pin, P/N 21523 in Pin Holder, P/N 20682

Apply Blue LokTite to threads on Pin Holder, P/N
20682



STEP 12

Install Pin Holder, P/N 20862 in
Piston, P/N 20803

Step by Step Assembly Instructions



STEP 13

Place Piston Assembly in Aluminum Jaw Vice and Tighten Pin Holder.

Torque to 15 Ft/Lbs



STEP 14

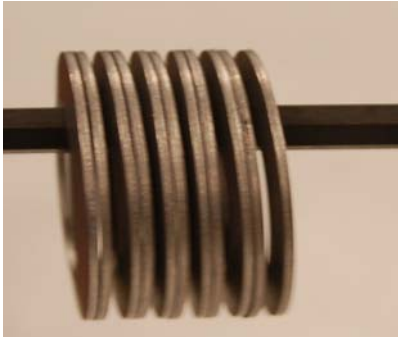
Place Spacer, P/N 20660 in Body, P/N 20221.

ORIENTATION : Flat Side goes in First; Large Bevel goes toward Piston.



20660 Spacer properly placed in Body.

Step by Step Assembly Instructions



11 ea. 71001962 Springs

ORIENTATION : Each Spring opposes the next one.



STEP 15

Place 11 ea. 71001962 Springs in Body.

ORIENTATION : Each Spring opposes the next one.



STEP 16

Apply Parker Lube to Cup Seal

Step by Step Assembly Instructions



STEP 17

Place Piston Assy. in Body.

ORIENTATION : Cup Seal faces out



STEP 18

Piston Assy. Properly placed in Body.

Step by Step Assembly Instructions



Base Cap, P/N 23332



STEP 19

Install BU Ring on
Base Cap, P/N 23332

CAUTION : Contour faces "O" Ring



STEP 20

Install "O" Ring on Base Cap.

Step by Step Assembly Instructions



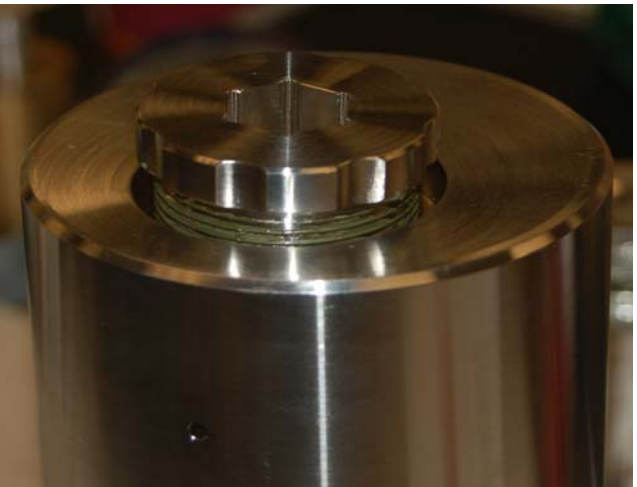
STEP 21

Apply Parker Lube to "O" Ring & BU Ring



STEP 22

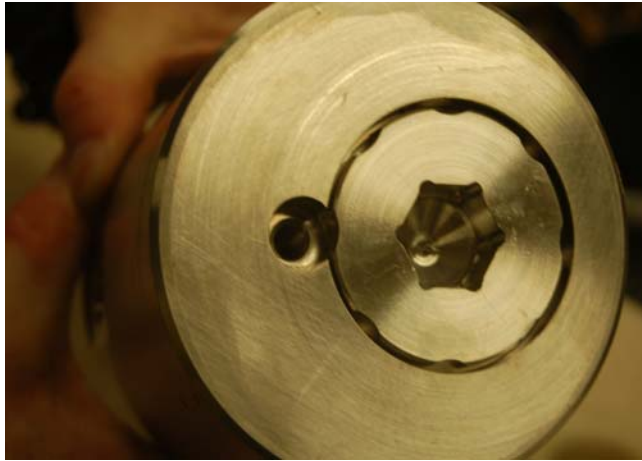
Apply SynLube to threads on Base Cap.



STEP 23

Install Base Cap in Body

Step by Step Assembly Instructions



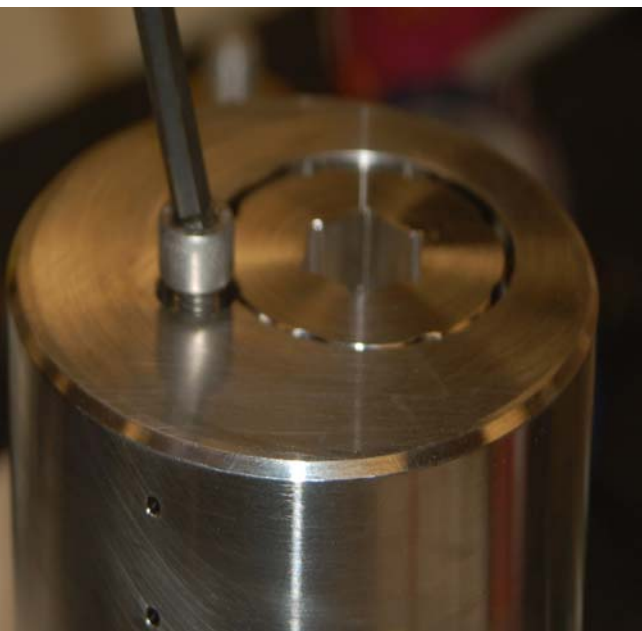
STEP 24

Align Base Cap notch with Lock Bolt hole.



STEP 25

Apply SynLube to Lock Bolt.



STEP 26

Install Lock Bolt in Alignment Hole.

Step by Step Assembly Instructions

Needle Stem Assembly

Needle, PN 20695 "O" Rings, (2 ea.) BU Rings, (2 ea.)

STEP 27

Install "O" Rings and BU Rings on Needle Stem.

ORIENTATION : "O" Rings closest to point of Needle in both locations.



STEP 28

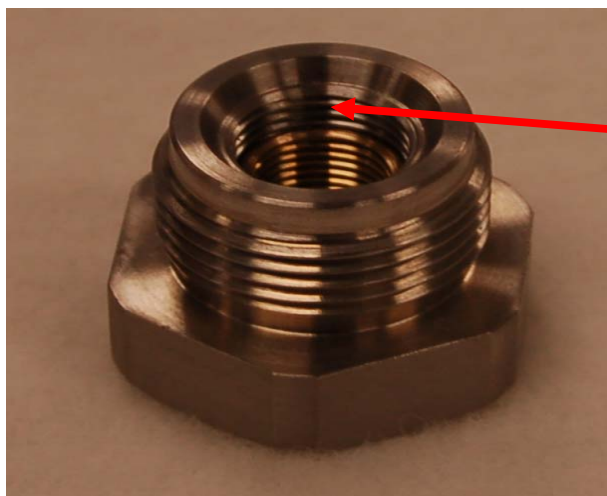
Install "O" Rings and BU Rings on Trim.

ORIENTATION : "O" Rings go closest to small diameter of Trim in both locations.



STEP 29

Apply Red Lottie to Brass Bushing, P/N 20222 and install in Retainer Nut, P/N 20696



NOTE : Bushing must be Flush with or Below chamfer in Retainer Nut.

Step by Step Assembly Instructions



STEP 30

Install M4 X 8 SHSS Cup in Retainer Nut



STEP 31

Install Needle Stem in Retainer Nut



Needle Stem properly installed in Retainer Nut

CAUTION :
Ensure Stem is turned to Full Open Position before installing in valve to prevent damage to Trim and Needle..



STEP 32

Apply Parker Lube to Trim "O" Rings

Step by Step Assembly Instructions



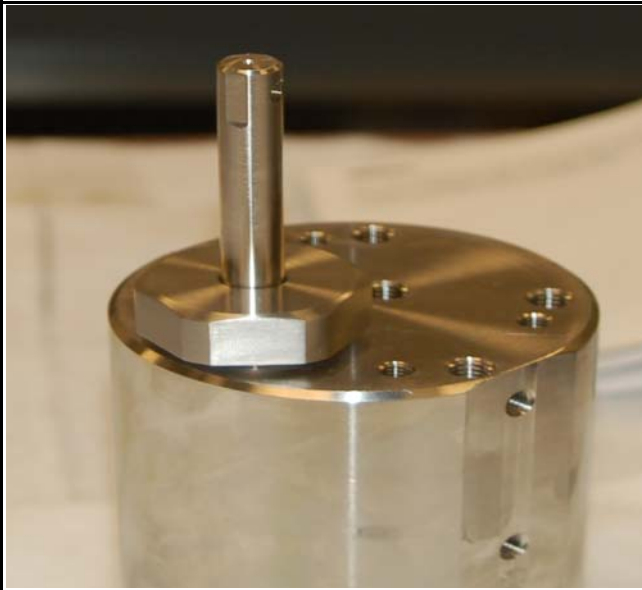
STEP 33

Install Trim in Body



STEP 34

Apply SynLube to Retainer Nut threads.



STEP 35

Install Needle and Retainer Nut Assembly in Body and firmly tighten Retainer Nut.

Step by Step Assembly Instructions



STEP 36

Install Lock Plate, P/N 20677 over Retainer Nut

STEP 37

Install M8 X 1.25 X 10 in Body to secure Lock Plate.



STEP 38

Install Handle Top on Needle Stem and secure with M8 X 10 SHSS Cup.

Set Screw must contact Machined Flat on Stem.

ASSEMBLY PROCESS IS COMPLETE