

Step by Step Assembly Instruction

SF5000 HTD Rev A



Step 1

Install "O" Ring, P/N 71001752
Install BU Ring, P/N 71001895
Install "O" Ring, P/N 71001747
Install BU Ring., P/N 71001893
on Seat Holder, P/N 21457



"O" Rings and BU Rings Installed in proper orientation



Step 2

Install Seat, P/N 21614 in
Seat Holder, P/N 21457

CAUTION : Seat fits in recess with very little tolerance.



Step 3

Apply Parker Lube on "O" Ring

Install "O" Ring, P/N 71004951 on
Seat, P/N 21614

Step by Step Assembly Instruction



Step 4 Install Seat Retainer, P/N 21426
on Seat Holder, P/N 21457



Step 5

Tighten Seat Retainer, P/N 21426 snugly with
9/16 Wrench.

Hold back-up with 11/16 wrench



Step 6 Install Wave Spring, P/N 71003395 on
Seat Holder, P/N 21457.



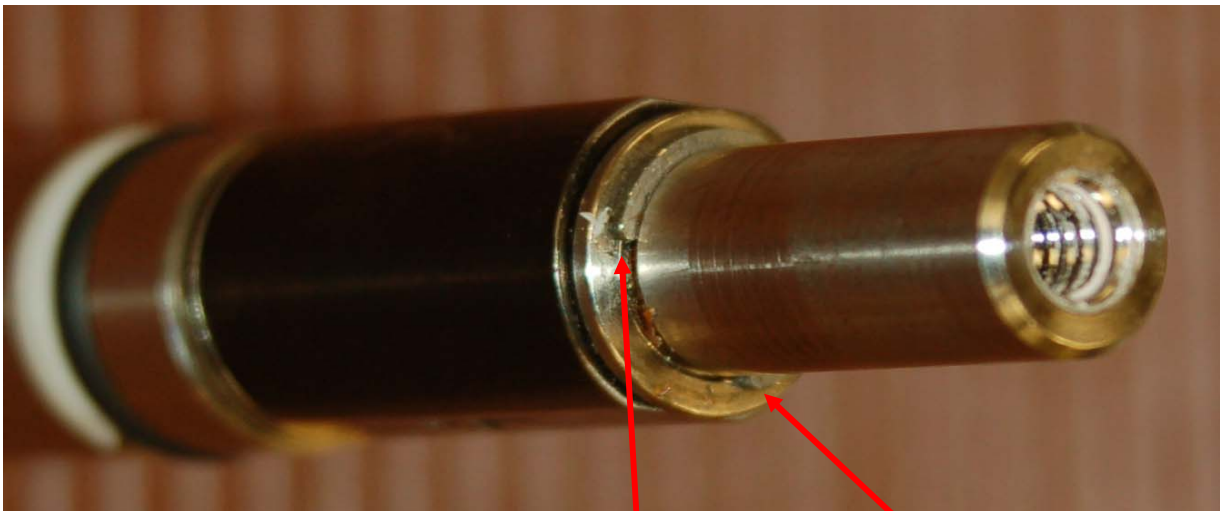
Step 7 Install Gate, P/N 22567
Install Retainer Washer, P/N 21461
on Seat Holder, P/N 21457

Step by Step Assembly Instruction



Step 8 Compress Wave Spring, P/N 71003395 and Install Inconel C-Clip, P/N 21609

USE COMPRESSION TOOL for this Step.



Inconel C-Clip, P/N 21609 properly installed.



Step 9 Apply LocTite Primer 7471 to threads on Seat Holder, P/N 21457 and Lift Rod, P/N 21264

Apply Red LocTite to threads of Lift Rod, P/N 21264

Install Lift Rod, P/N 21264 in Seat Holder, P/N 21457

CAUTION : LEFT HAND THREADS

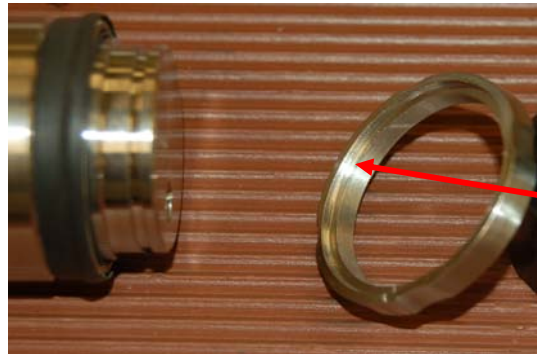
Step by Step Assembly Instruction



Seat Holder Assembly ready is ready to install in Body.



Step 10
Install Cup Seal, P/N 71001872 on
Piston, P/N 21284.



Step 11
Install Retainer, P/N 20184 over
Cup Seal, P/N 71001872
**ORIENTATION : RECESS IN RETAINER
FACES SEAL**



Step 12
Install Spiral Ring, P/N 71001948

Step by Step Assembly Instruction

		<p>Step 13</p> <p>Install Pin Spring, P/N 71002067 in Piston, P/N 21284.</p>
		<p>Step 14</p> <p>Install Ceramic Pin, P/N 21523 in Piston, P/N 21284</p>
		<p>Step 15</p> <p>Apply Blue Loctite to Pin Holder threads</p> <p>Install Pin Holder, P/N 21401 in Piston, P/N 21284</p>
		<p>Step 16</p> <p>Tighten Pin Holder snugly</p>

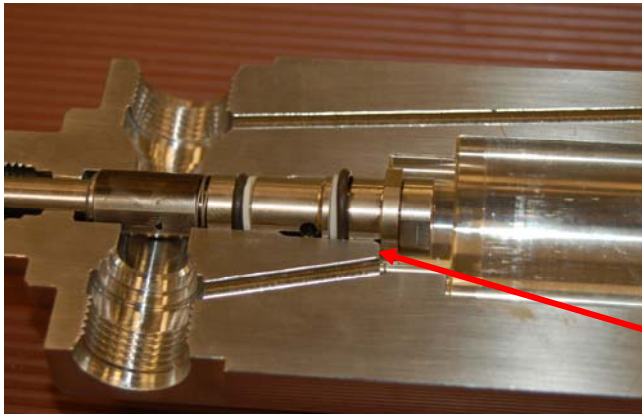
Step by Step Assembly Instruction



Step 17

Install 5 ea. Spring, P/N 71001962 on
Piston, P/N 21284.

**ORIENTATION : Springs should Oppose;
NOT NESTED**



Step 18

Apply Parker Lube on "O" Rings

Install Seat Holder Assembly in
Body, P/N 21262.

**ENSURE SEAT HOLDER CONTACTS
LEDGE of BODY**



Step 19

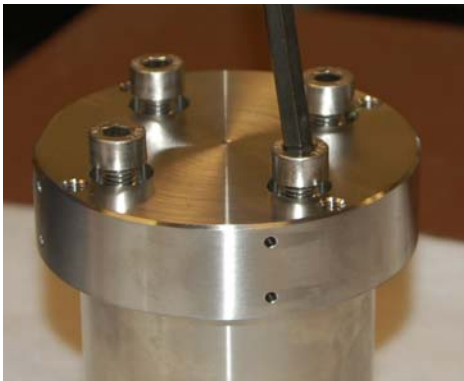
Apply Parker Lube on Cup Seal

Install Piston Assembly in
Body, P/N 21262.

Step by Step Assembly Instruction

	<p>Step 20</p> <p>Install Fluid Passage, "O" Ring on Body, P/N 21262.</p> <p>Apply Parker Lube on "O" Ring</p>
	<p>Step 21</p> <p>Install "O" Ring and BU Ring on Base Cap, P/N 20093.</p> <p>Apply Parker Lube on "O" Ring</p>
	<p>Step 22</p> <p>Apply SynLube to Base Bolt, P/N 71002093 threads.</p>
	<p>Step 23</p> <p>Install Base Cap Assembly on Body.</p> <p>Align "INLET" in Base Cap to be 90° from "OUTLET" as shown</p> <p>INLET</p>

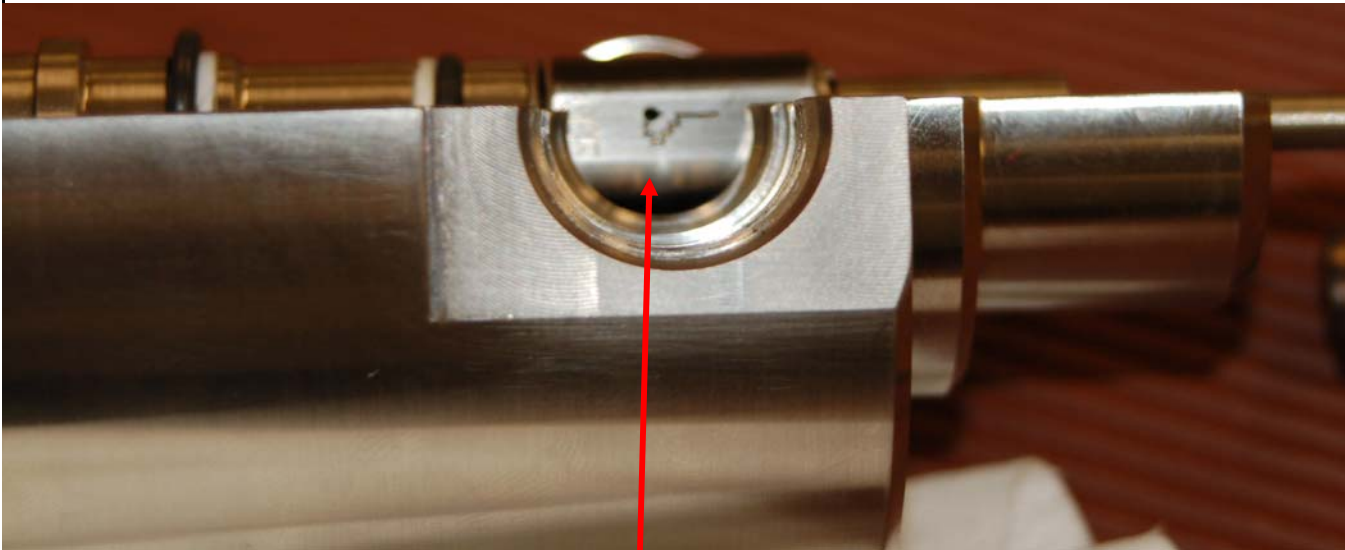
Step by Step Assembly Instruction



Step 24

Install Base Cap Bolts, P/N 71002093 in Base Cap / Body.

Torque to 10 Ft. Lbs.



Step 25

Align Gate so that the Flat Side is visible through the Tensioner Cap Port.



Step 26

Install "O" Ring inside Gate Pad Seal Retainer, P/N 21616

Install "O" Ring on Gate Pad Seal Retainer, P/N 21616

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Step 27

Install Coated Gate Pad, P/N 22475
in Gate Pad Seal Retainer, P/N 21616

(There are 2 ea. Per valve)



Step 28

Install Pad and Retainer in Body

(2 ea. Per valve)



Step 29

Install "O" Ring on
Tensioner Plug, P/N 21456

(2 ea. Per valve)

Step by Step Assembly Instruction



Step 30

Install Tensioner Spring, P/N 21258
in Tensioner Plug, P/N 21456

(2 ea. Per valve)



Step 31

Install Pad Push Rod, P/N 21454
in Tensioner Plug, P/N 21456

(2 ea. Per valve).



Step 32

Install Tensioner Plug Assembly in
Valve Body

(2 ea. Per valve).

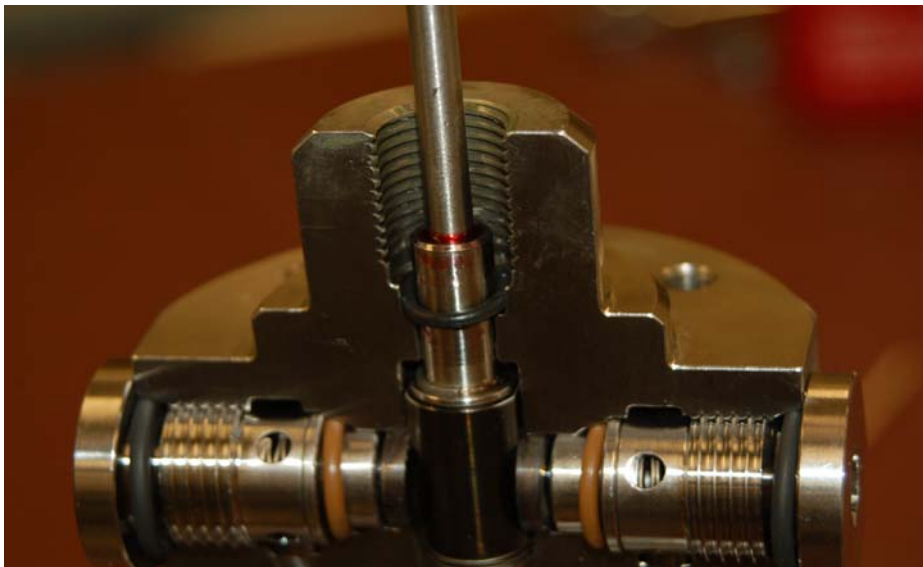
Torque to 30 Ft. Lbs.

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Step 33

Install ATM "O" Ring, around Adjustment Stem, P/N 21263



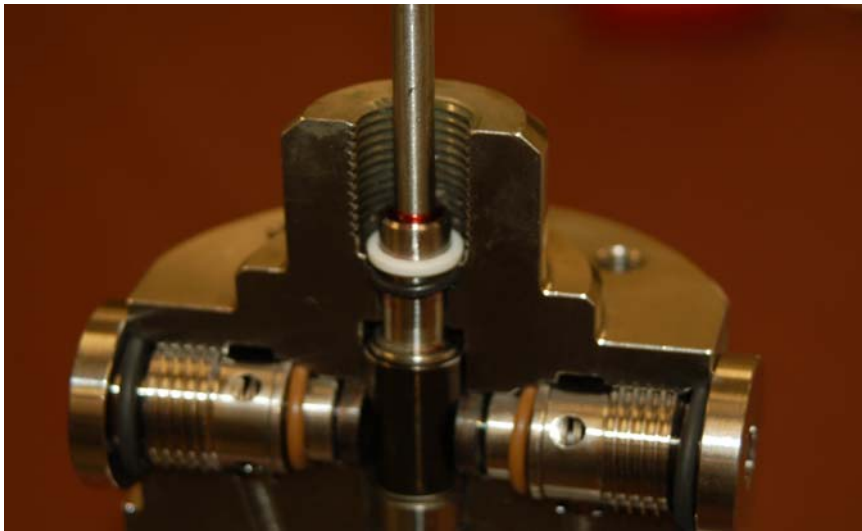
ATM "O" Ring in place



Step 34

Install ATM Solid BU Ring, P/N 21811 around Adjustment Stem, P/N 21263

Step by Step Assembly Instruction



ATM BU Ring in place



Step 35

Apply SynLube to threads on
Gland Nut, P/N 21277



Step 36

Install Gland Nut, P/N 21277
In Body.

Torque to 30 Ft. Lbs.

5/8" Crows Foot Wrench

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Step 37

Apply SynLube to threads on
Adjustment Stem, P/N 21263



Step 38

Install Adjustment Stem, P/N
21263 in Gland Nut.

Turn Adjustment Stem until it
contacts Gland Nut.



Step 39

Install Stem Washer, P/N 21265 on
Adjustment Stem



Step 40

Apply Red LocTite to threads of Lift Rod,
P/N 21264

Install Stem Nut, 10-32, P/N 71005173
on Adjustment Stem.

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Step 41 Back out Adjustment Stem 1/4 turn Counter Clockwise so that it does not touch the Gland Nut

Step 42 Hold the Adjustment Stem firmly so that it does not turn and tighten the 10-32 Stem Nut.

The back-lash between Stem and Lift Rod is now set.



Step 43

Install 10-32 Lock Nut on Stem



Step 44

Hold the Stem Nut firmly in place and tighten the Lock Nut

Step by Step Assembly Instruction



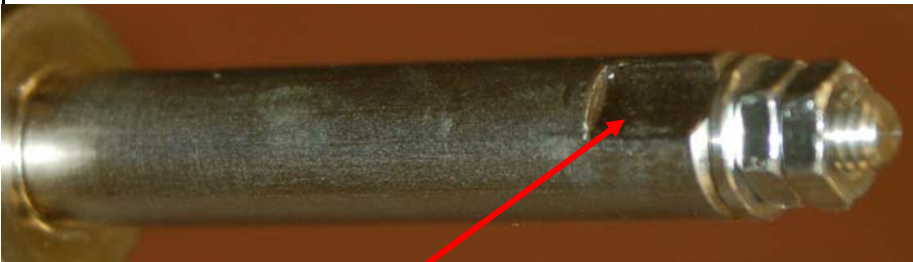
Step 45

Install Vernier Collar, P/N 21267
on Body



Step 46

Install Vernier Sleeve, P/N 21268
on Body



Locate Machined Flat on Adjustment Stem before placing Handle Top on Stem.

Step by Step Assembly Instruction



Step 47

Install Handle Top, P/N 21266 on Stem and securely tighten M8 X 10 Cup Point Set Screw.

Ensure Set Screw contacts Flat on Stem and does not touch Lock Nuts.

COMPLETED UNIT READY FOR TESTING