



G-Force
by: TASK FORCE TIPS

G-Force Valve Plug (G903-KIT) Field Installation Procedure

⚠ WARNING

It is the responsibility of service technicians to ensure the use of appropriate protective clothing and equipment. The chosen protective clothing and equipment must provide protection from potential hazards users may encounter while servicing equipment. Requirements for protective clothing and equipment are determined by the Authority Having Jurisdiction (AHJ).

⚠ WARNING

After any maintenance or service, equipment must be inspected and tested for proper operation and function per:

- NFPA 1962 test procedures.
- FLOW CHARACTERISTICS and OPERATION and INSPECTION CHECKLIST in the equipment's original operator manual.

Product operating and safety information is available in the original operator manual or at tft.com.

NOTICE



This publication is intended for those who prefer to perform service on their own equipment. Factory service is available. Factory serviced products are repaired by experienced technicians, fully tested, and promptly returned functioning to original specifications. Task Force Tips assumes no liability for damage to equipment or injury to personnel that is a result of user service.

0.1 REQUIRED TOOLS

Tools (user provided)
3/16" Hex Key
7/32" Hex Key
Seal Pick
Needle Nose Pliers






G903-KIT Contents			
1	G903 - Valve Plug Subassembly contains:	3	VO-222 - O-ring-222
1	G610 - Valve Plug Holder	1	VO-134 - O-ring-134
1	G611 - Valve Element	1	Red Loctite Mini Dispenser
3	VO-011 - O-ring-011	1	Blue Loctite Mini Dispenser
1	VO-111 - O-ring-111	1	MolyKote112 High Performance Lube



1.0 DISASSEMBLY

<p>1</p> <p>Use a seal pick to remove the rubber Port Plug, located on the lower side of the Valve Body at the inlet.</p> <p>Place a container under the opening and rotate the Coupling to remove (34) bearing balls.</p> <p>Remove the Coupling and associated parts.</p> <p>Retain the Port Plug, balls, Coupling, Gasket, and Debris Screen for reassembly.</p> <p>Discard the O-ring.</p>	
<p>2</p> <p>Use a 7/32" Hex Key to remove (2) Button Head Screws from either side of the Valve Handle.</p> <p>These are retained with red Loctite. Some force may be required to remove these screws.</p> <p>Retain the screws for reassembly.</p>	




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<p>3</p>	<p>Use Needle Nose Pliers to remove the Cam Pin from each side of the Valve Handle.</p> <p>Retain pins for reassembly.</p>	
<p>4</p>	<p>Hold your thumbs over the Detent Balls and Springs on the Handle to keep them from popping out.</p> <p>Pull the handle upward and off using your thumbs to capture the balls and springs.</p> <p>Retain the Handle, Springs, and Detent Balls for reassembly.</p>	
<p>5</p>	<p>Use your fingers to pull out the Slider.</p> <p>There will be some resistance due to internal seals.</p> <p>DO NOT USE A TOOL TO GRAB THE SLIDER. DOING SO WILL DAMAGE THE LEADING EDGE.</p>	
<p>6</p>	<p>Inspect the tapered leading edge of the Slider. This is the edge that seals against the Valve Plug.</p> <p>If this edge is damaged, replace the Slider. (Order TFT Part # G605)</p> <p>If the part is not damaged, retain for reassembly.</p>	
<p>7</p>	<p>Push on the Valve Discs to remove them through the Valve Body.</p> <p>Retain discs for reassembly.</p>	



8	<p>Use a seal pick to remove the O-rings (VO-222) that seal the slide valve.</p> <p>NOTE: Early versions utilized two O-rings; one front and one rear. Later versions used three O-rings; one front and two rear.</p> <p>Discard O-rings.</p>	
9	<p>Using the 3/16" Hex Key in the center of the holder, remove the Valve Plug Subassembly.</p> <p>Discard the Valve Plug Subassembly.</p>	

2.0 REASSEMBLY

1	<p>Apply blue Loctite to the threads of the Valve Plug Subassembly.</p>	
2	<p>Thread the new subassembly into the body until snug.</p> <p>DO NOT TIGHTEN.</p>	
3	<p>Lightly grease the O-rings (VO-222) that are provided in the kit.</p> <p>Install the O-rings in the grooves where they were removed in DISASSEMBLY Step 8.</p>	

<p>4</p>	<p>Place one Valve Disc in each side of the body.</p> <p>Install from the inside of the body, with the larger side toward the center.</p>	
<p>5</p>	<p>Lightly grease the entire outside of the Slider with the grease provided in the kit.</p> <p>Install the Slider with the tapered leading edge facing the Valve Plug.</p>	
<p>6</p>	<p>Push the Slider in until it contacts the plug, then pull back about 3/8".</p> <p>When viewed from the side, the groove in the side of the Slider will align with the center hole in the disc.</p> <p>Turn each disc so the pin hole in the disc is at the highest point in the detent arc.</p> <p>This will align the pin hole with the groove in the Slider.</p>	
<p>7</p>	<p>Verify that the Detent Springs and Balls are in the handle.</p> <p>Retain the springs and balls with your thumbs.</p> <p>Position the Handle over the Valve Body vertically with the pin hole toward the nozzle exit as compared to the center hole.</p> <p>Install the Handle over the body, snapping it into place.</p>	
<p>8</p>	<p>Align the pin holes in the Handle and disc.</p> <p>Install a Cam Pin in each pin hole and into the groove in the Slider.</p> <p>The pin face should be flush with the surrounding handle when properly installed.</p>	

9	<p>Apply red Loctite to the threads of the button head screws that retain the handle.</p> <p>Install one on each side of the handle until hand tight.</p>	
10	<p>To set the proper tension between the Valve Plug and Slider:</p> <ol style="list-style-type: none"> 1. Fully close the Valve Handle. 2. Use the 3/16" Hex Key to back the Valve Plug out (unscrew) until it makes firm contact with the Slider. 3. Open the valve handle part way and unscrew the valve plug 11.25 degrees (about 1/32-turn). 	
11	<p>Lightly grease the ball groove on the Valve Body.</p> <p>Lightly grease VO-134 (provided in the kit).</p> <p>Install The O-ring on the inlet end of the Valve Body.</p>	
12	<p>Install the Debris Screen over the Valve Body so the concave portion protrudes into the body.</p>	
13	<p>Lightly and evenly press the Coupling straight down onto the body.</p> <p>Confirm that the O-ring is not pushed out of place or pinched.</p>	

14	<p>Install the (34) ball bearings through the port on the bottom side of the body.</p> <p>Use a seal pick insure the balls are pushed to either side of the port plug path. A ball in the path will make it difficult to install the Port Plug.</p>	
15	<p>Lightly grease the Port Plug.</p> <p>Press the Port Plug back into the body until it is fully seated and flush with the valve body.</p>	
16	<p>With the valve in the closed position, pour a cup of water into the valve.</p> <p>If water leaks through the valve plug, back the plug out a little further and recheck.</p>	

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