



Hand Held Ball Valve (D, F, and J series) and Detent Style Hand Held Ball Valve Maintenance and Service Procedure

⚠ WARNING

Service technicians bear responsibility for ensuring 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 and the FLOW CHARACTERISTICS and OPERATION and INSPECTION CHECKLIST in the operator manual.

NOTICE

This publication is intended for those who prefer to perform service on their own equipment. Factory service is available and repair time seldom exceeds one day in our facility. Factory serviced nozzles 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.

DANGER

PERSONAL RESPONSIBILITY CODE

The member companies of FEMSA that provide emergency response equipment and services want responders to know and understand the following:

1. Firefighting and Emergency Response are inherently dangerous activities requiring proper training in their hazards and the use of extreme caution at all times.
2. **IT IS YOUR RESPONSIBILITY** to read and understand any user's instructions, including purpose and limitations, provided with any piece of equipment you may be called on to use.
3. **IT IS YOUR RESPONSIBILITY** to know that you have been properly trained in Firefighting and/or Emergency Response and in the use, precautions, and care of any equipment you may be called upon to use.
4. **IT IS YOUR RESPONSIBILITY** to be in proper physical condition and to maintain the personal skill level required to operate any equipment you may be called upon to use.
5. **IT IS YOUR RESPONSIBILITY** to know that your equipment is in operable condition and has been maintained in accordance with the manufacturer's instructions.
6. Failure to follow these guidelines may result in death, burns or other severe injury.

Fire and Emergency Manufacturers and Service Association, Inc.
PO Box 147, Lynnfield, MA 01940 • www.FEMSA.org

© 2020 FEMSA. All Rights Reserved.

FEMSA

TASK FORCE TIPS LLC
MADE IN USA • tft.com

3701 Innovation Way, Valparaiso, IN 46383-9327 USA
800-348-2686 • 219-462-6161 • Fax 219-464-7155

1.0 GENERAL INFORMATION

1.1 THREADED JOINTS

Threaded joints have been secured at the factory using Loctite® brand red or blue thread locking adhesive.

- Disassembly of joints where red Loctite is used requires a minimal application of heat with a oxyacetylene torch to break the bond.
- The threads should be heated to approximately 450°F. Excessive heat application will cause damage to adjacent seals and labels.
- Replacement parts must be reinstalled using either red or blue Loctite where specified, or equivalent. Small vials of Loctite for field service are available. Order part V5010 (Loctite #271 Red Mini Dispenser) or VSA-125 (Loctite #242 Blue Mini Dispenser).
- Threads must be clean, dry, and free of grease or oil when applying Loctite.
- Allow Loctite to set up for at least one hour before using or subjecting to water.

1.2 LUBRICANTS

Before reassembling, apply Molykote #112 High Performance Silicone Grease to all O-rings and surfaces that the O-rings contact.

1.3 LABEL REPLACEMENT

If labels become damaged, remove old labels with razor knife. Remove adhesive with acetone or methyl ethyl ketone (MEK). Surface must be clean, dry, and free from grease. Remove protective backing and carefully apply new label.

1.4 ORDERING PARTS

Always specify the serial number when ordering parts. Be sure to use complete DESCRIPTION and PART #, as printed on parts list. All requests for couplings must specify thread size. Pricing information will be given at time of order.

2.0 D, F, AND J SERIES HAND HELD BALL VALVES

2.1 REQUIRED TOOLS

Tools NOT Supplied in Repair Kit	Repair Kits and Mandrels			
	Waterway Size	Mandrel*	Repair Kit (parts, mandrel & drill bits included)	Repair Kit (parts only, no tools included)
Bench Vise				
Hammer	3/4" (D75)	D07535	D75-HRK	D75-HDL
1/8" Diameter Punch	1.0" (F100)	F10035	F100-HRK	F100-HDL
Drill Press (or electric drill)	1-1/4" exit (F125)	F14035	F125-HRK	F125-HDL
Safety Glasses	1-3/8" (F140)	F14035	F140-HRK	F140-HDL
Loctite® #263 or #271 (red) Thread Locking Adhesive	1-3/8" (J140)	F14035	J140-HRK	J140-HDL
2 L-shaped hex key sets with 1/8", 3/16", 1/4", and 5/16" sizes	* Included in -HRK repair kits			
	Valve Ball and Valve Body are NOT included in repair kits.			

3.0 SERVICE PROCEDURE

Refer to the exploded views and part lists for specific models.

3.1 GENERAL

- Occasional replacement of GASKET (20), REAR SEAT (19), and O-RING (18) is recommended.
- Coupling service kits, which include all hardware and Loctite are available. Couplings with special or standard threads are available. Specify desired threads when ordering.

3.2 DISASSEMBLY

- Remove and discard GASKET (20), REAR SEAT (19), and O-RING (18).
- Set the vise so there is a gap between the jaws of 1/4" to 3/8".
- Position Valve HANDLE (5) over gap so that SPIROL PINS (5) can be driven into the gap between the vise jaws.
- Drive out the pins using a 1/8" diameter punch.

NOTICE

Do not use a nail set or pointed punch. This may cause pins to expand, making it very difficult to remove.

- If possible, remove the HANDLE (5) at this time.
- Pad vise jaws with several rags.
- Insert appropriate hex key into the TRUNNION (2) and rotate to open handle. Place Repair Mandrel through VALVE BALL (16).
- Gently clamp valve in vise with one TRUNNION pointing up.
- Using a hex key, unscrew and discard trunnion along with O-RING (3). It may be necessary to use a breaker bar for additional leverage.
- Repeat steps 6-9 for the other side.
- Remove the valve from the vise and remove the following from the valve:
 - Repair Mandrel
 - COUPLING (F140 and J140 series only) (Retain)
 - BALL (16) (Retain)
 - FRONT VALVE SEAT (15) (Discard)
 - BELLEVILLE WASHER (14) (Discard)

NOTICE

Earlier models may have an O-ring in place of the Belleville Washer.

3.2.1 F140 AND J140 SERIES COUPLING REMOVAL

- Apply heat to the 1/4"-28 SOCKET SET SCREW (13), then remove using 1/8" hex key.
- Turn coupling so that hole faces down over a container, and rotate back and forth to allow the 3/16" STAINLESS STEEL BALLS (12) to drop out. End pressure may be needed to remove and install coupling balls.
- When all balls are out of the groove, the coupling can be removed.

3.3 REASSEMBLY

3.3.1 VALVE BALL INSTALLATION

1. Stand the valve vertically on the drill press and clamp in the vise with coupling end up.
2. Place the BELLEVILLE WASHER in the VALVE BODY so the large diameter is touching the valve body and the small diameter (raised) is facing up.
3. Install the VALVE SEAT in the VALVE BODY, flat side touching the BELLEVILLE WASHER.
4. Place the VALVE BALL in the VALVE BODY and insert the Repair Mandrel through the VALVE BALL.
5. Rotate the VALVE BALL until the threaded holes in the ball align with the trunnion holes in the side of the VALVE BODY.

3.3.2 HANDLE INSTALLATION

1. Place new HANDLE in position over VALVE BODY. Make sure that "OFF" on the handle faces the coupling end of the valve.
2. Install O-RINGS on the threads of the TRUNNIONS and apply a thin film of grease (supplied) being careful to avoid the threaded area.
3. Apply red Loctite (supplied) on trunnion threads. As the threads are a potential leak point, ensure there is enough Loctite to seal the threads.
4. Press down on the Repair Mandrel with the drill press chuck to compress the BELLEVILLE WASHER to fully align the holes in the HANDLE, VALVE BODY, and VALVE BALL. Begin to thread the TRUNNION into the VALVE BALL. DO NOT TIGHTEN YET.
5. Repeat step 4 on the other side.
6. Remove the assembly from the vise.
7. Clamp one hex key in vise with approximately 3/8" of the short end above the vise jaws.
8. Place one TRUNNION on the hex key in the vise and second hex key in the other TRUNNION. Assure the Repair Mandrel is still in the VALVE BALL.
9. Tighten both Trunnions hand tight.

NOTICE

To avoid damage to the trunnion threads, hand tighten ONLY. Do not use a wrench or pipe (breaker bar) on the hex key.

10. With the Repair Mandrel still in the VALVE BALL, pull the HANDLE back to the open or "ON" position. Support the HANDLE below the TRUNNIONS on the edge of the drill press table or on a pile of boards to insure that the HANDLE maintains position while drilling.
11. Locate the small dimple on the HANDLE above the TRUNNIONS. Using a #22 drill (supplied), drill through the dimple, through the center of the TRUNNION, and out the other side.
12. Insert a new SPIROL PIN in the drilled hole and press, or gently tap flush with the HANDLE.
13. Repeat step 12 for the other side.
14. Remove Repair Mandrel.
15. Lubricate and install O-RING on REAR VALVE SEAT. Press the REAR VALVE SEAT into VALVE BODY, O-RING side first.
16. Install coupling if needed ([see section 3.3.3](#)).
17. Install new hose gasket in the coupling.
18. Place ball valve on a pressurized water system and check for leaks and proper operation.

3.3.3 F140 AND J140 COUPLING INSTALLATION

1. Inspect and if necessary replace O-rings.
2. Clean and grease the ball bearing race and O-ring groove in the COUPLING.
3. Put the coupling onto the mating part and load the correct number of balls into the ball groove (SEE PARTS LIST ON EXPLODED VIEW OF NOZZLE TO DETERMINE CORRECT NUMBER OF 3/16" STAINLESS STEEL BALLS FOR YOUR COUPLING).
 - A. Insertion of the balls is easier if the coupling is rotated slightly back and forth as the balls are loaded.
4. Apply Loctite #271 and install the 1/4"-28 SOCKET SET SCREW until flush with the surface of the coupling.
 - A. If the coupling is difficult to turn, or feels rough when turned, the set screw is in too far. Back set screw off 1 turn and try again.
 - B. If the feel is still rough or difficult to turn, recheck the number of balls in the coupling.

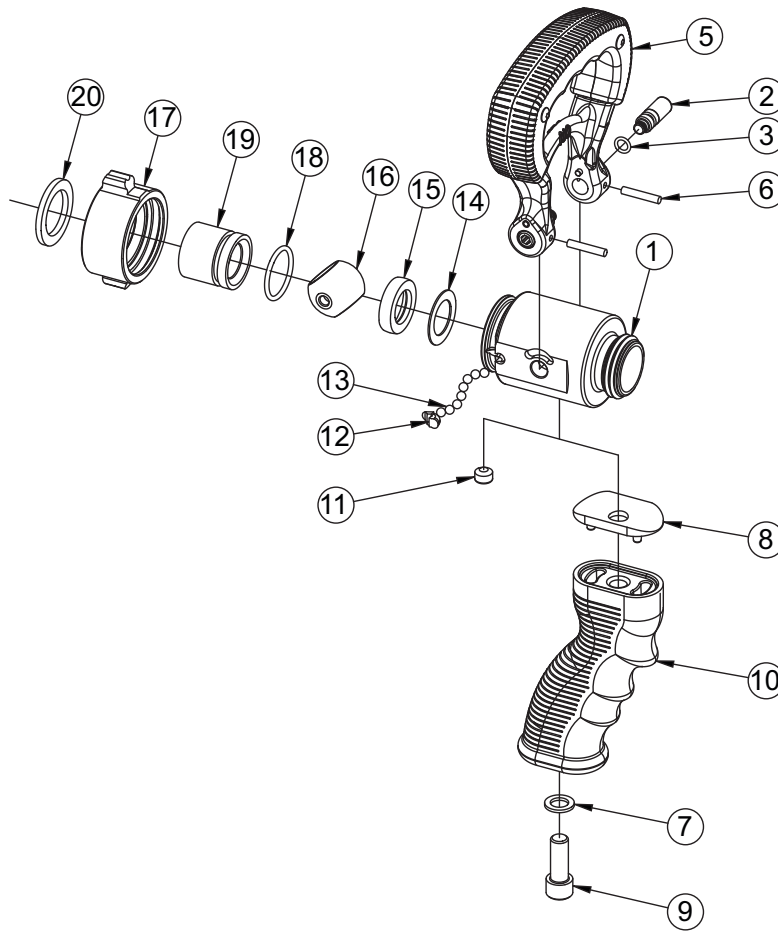
4.0 TESTING

Confirm flow rates and smooth operation.

Always perform NFPA 1962 operational testing and the Operation and Inspection Checklist in the nozzle operator manual prior to returning the nozzle to service.

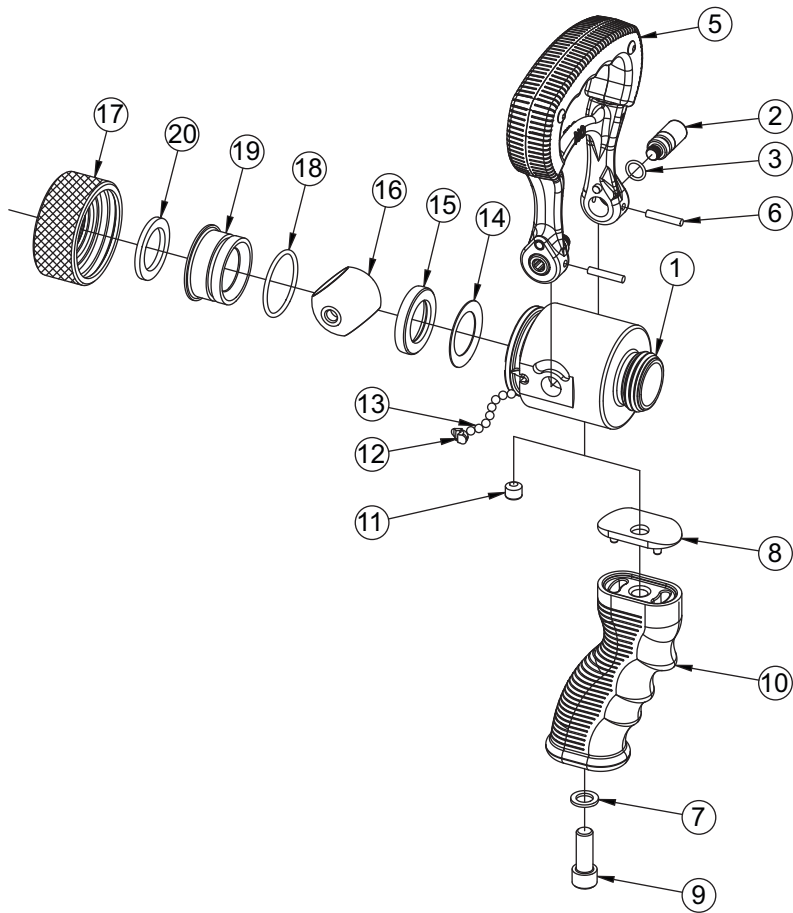
See pages 5-10 for exploded views and parts lists for modes described in Section 3.

D75 1" BALL VALVE



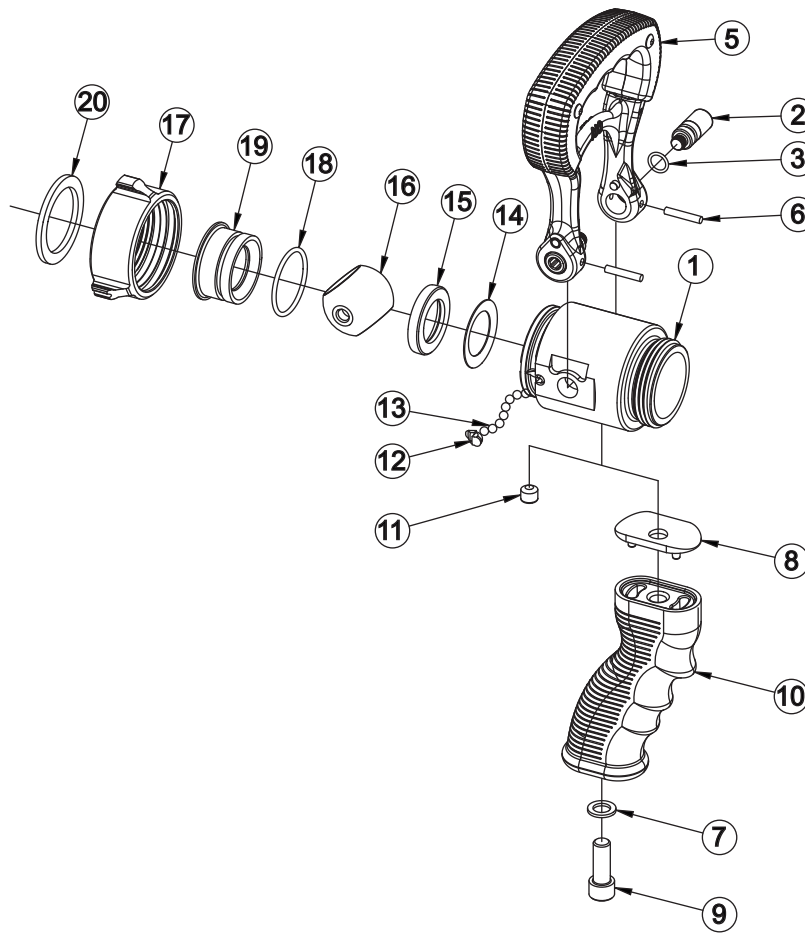
ITEM	DESCRIPTION	QTY	PART #
1**	75 VALVE BODY 1.0"	1	D07520
2	75 TRUNNION	2	D07540
3	O-RING-010	2	VO-010
5	DQ HANDLE SUBASSEMBLY	1	DQ860
6	SPIROL PIN	2	V1900
7	WASHER	1	VM4901
8	GRIP SPACER D075	1	HM693-D
9	3/8-16 X 1 SOCKET HEAD SCREW	1	VT37-16SH1.0
10	PISTOL GRIP - BLACK	1	HM692-BLK
11	3/8-16 X 5/16 SET SCREW	1	VT37-16SS312
12	PORT PLUG	1	B770
13	3/16" SS BALL	26	V2120
14	BELLEVILLE WASHER	1	D07590
15	75 FRONT SEAT	1	D07570
16	75 BALL	1	D07530
17**	COUPLING 1.0"	1	D07597
18	O-RING-120	1	VO-120
19	75 REAR SEAT	1	D07580
20	GASKET - 1.0"	1	V3040
** -SPECIFY DESIRED THREAD WHEN ORDERING			

D100D 1" BALL VALVE



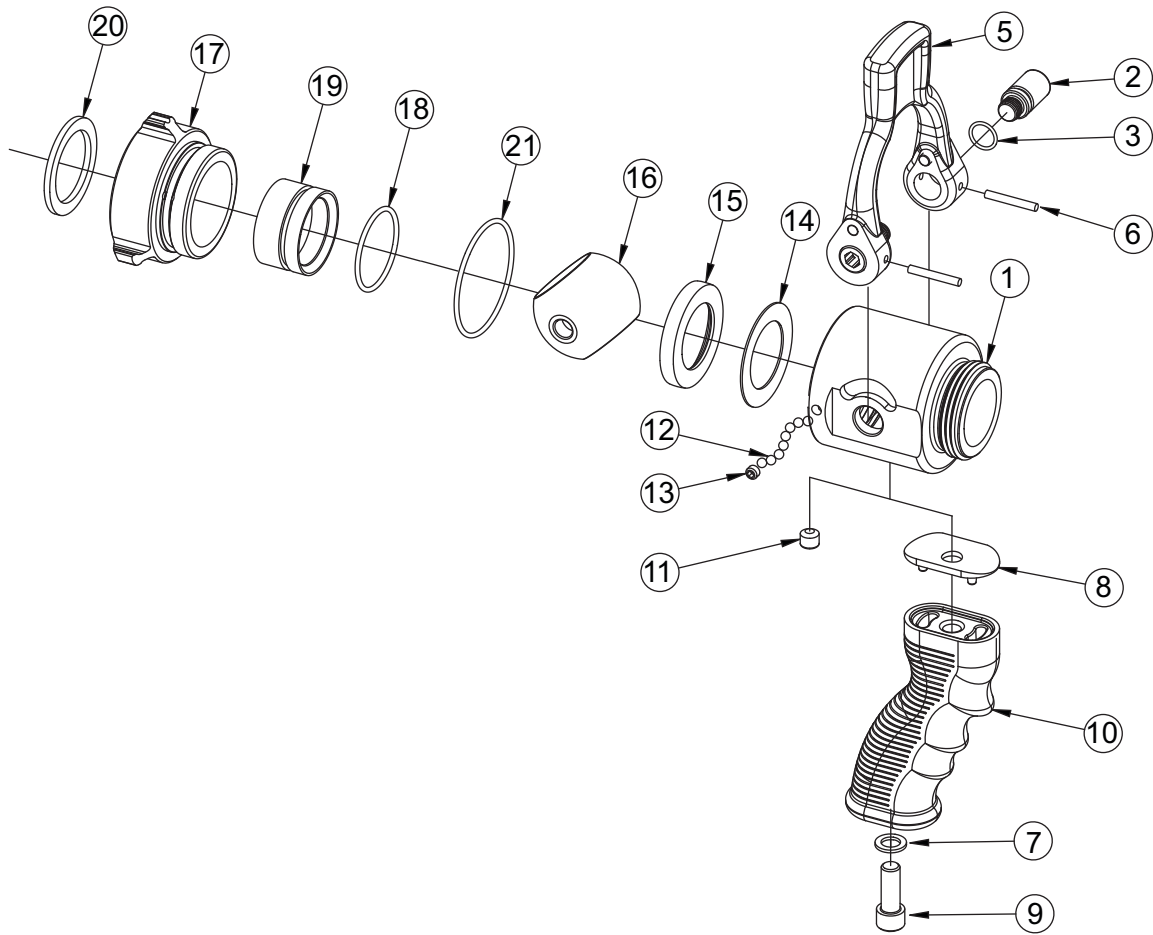
ITEM	DESCRIPTION	QTY	PART #
1**	100 VALVE BODY 1.0"	1	D10020
2	100 TRUNNION	2	F10040
3	O-RING-012	2	VO-012
5	FQ HANDLE SUBASSEMBLY	1	FQ860
6	SPIROL PIN	2	V1900
7	WASHER	1	VM4901
8	GRIP SPACER F100	1	HM693-F
9	3/8-16 X 1 SOCKET HEAD SCREW	1	VT37-16SH1.0
10	PISTOL GRIP - BLACK	1	HM692-BLK
11	3/8-16 X 5/16 SET SCREW	1	VT37-16SS312
12	PORT PLUG	1	B770
13	3/16" SS BALL	34	V2120
14	BELLEVILLE WASHER	1	F10090
15	100 FRONT SEAT	1	F10070
16	100 BALL	1	F10030
17**	COUPLING 100 1.0"	1	F10097
18	O-RING-126	1	VO-126
19	100 REAR SEAT	1	D10080
20	GASKET - 1.0"	1	V3040
** -SPECIFY DESIRED THREAD WHEN ORDERING			

F100 1.5" BALL VALVE



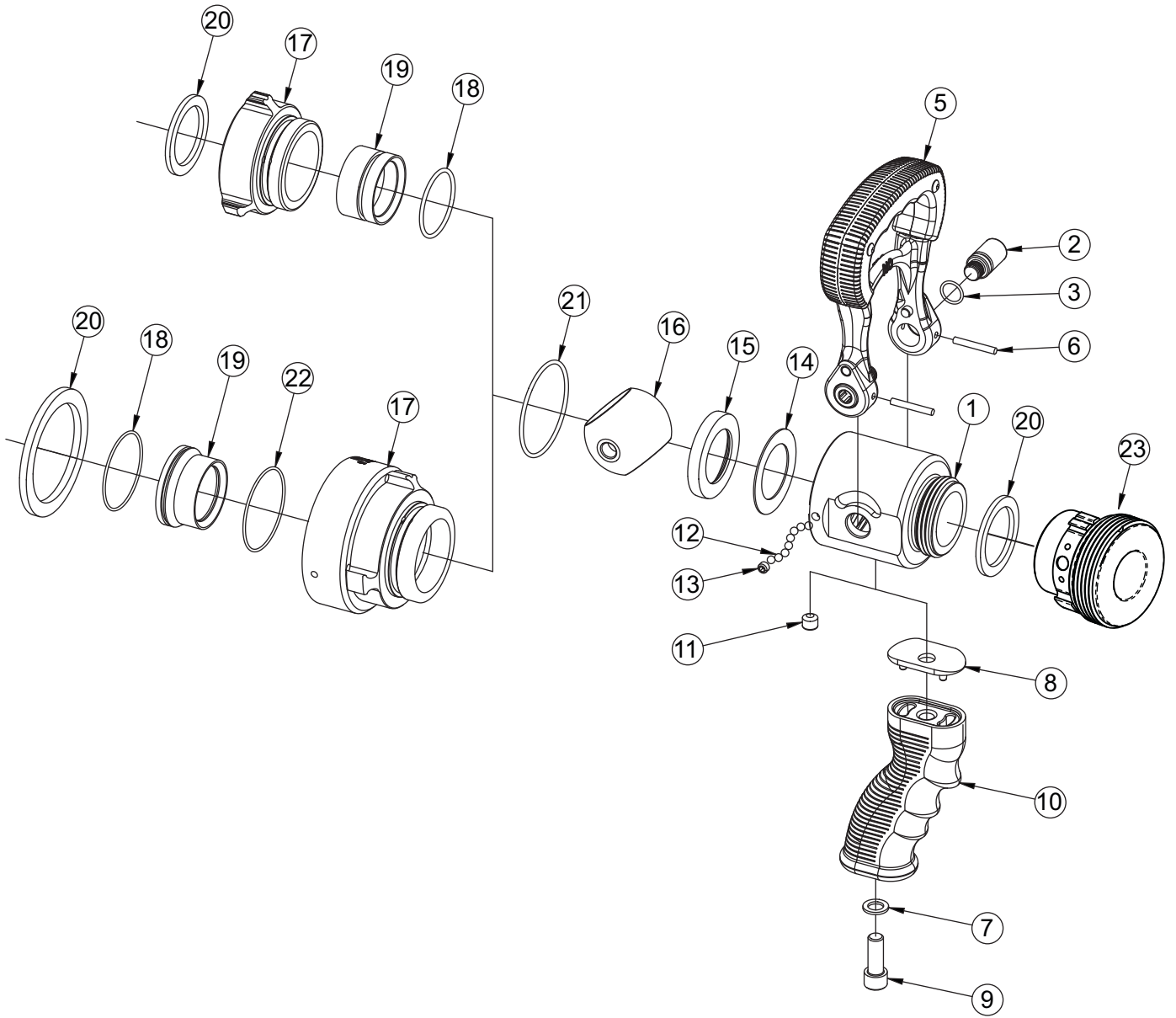
ITEM	DESCRIPTION	QTY	PART #
1**	100 VALVE BODY 1.5"	1	F10020
2	100 TRUNNION	2	F10040
3	O-RING-012	2	VO-012
5	FQ HANDLE SUBASSEMBLY	1	FQ860
6	SPIROL PIN	2	V1900
7	WASHER	1	VM4901
8	GRIP SPACER F100	1	HM693-F
9	3/8-16 X 1 SOCKET HEAD SCREW	1	VT37-16SH1.0
10	PISTOL GRIP - BLACK	1	HM692-BLK
11	3/8-16 X 5/16 SET SCREW	1	VT37-16SS312
12	PORT PLUG	1	B770
13	3/16" SS BALL	34	V2120
14	BELLEVILLE WASHER	1	F10090
15	100 FRONT SEAT	1	F10070
16	100 BALL	1	F10030
17**	COUPLING 1.0"	1	F10097
18	O-RING-126	1	VO-126
19	100 REAR SEAT	1	F10080
20	GASKET - 1.5"	1	V3130
** -SPECIFY DESIRED THREAD WHEN ORDERING			

F125F & F125FP BALL VALVE



ITEM	DESCRIPTION	QTY	PART #
1**	125 VALVE BODY 1.5"	1	F12520
2	140 TRUNNION	2	F14040
3	O-RING-014	2	VO-014
5	125 TAB HANDLE SUBASSEMBLY	1	F12560
6	SPIROL PIN	2	V1920
7	WASHER	1	VM4901
8	GRIP SPACER F140	1	HM693-J
9	3/8-16 X 1 SOCKET HEAD SCREW	1	VT37-16SH1.0
10	PISTOL GRIP - BLACK	1	HM692-BLK
11	3/8-16 X 5/16 SET SCREW	1	VT37-16SS312
12	3/16" SS BALL	36	V2120
13	1/4-28 X 3/16 SET SCREW	1	VT25-28SS187
14	BELLEVILLE WASHER	1	F14090
15	140 FRONT SEAT	1	F14070
16	140 BALL	1	F14030
17**	COUPLING 1.5"	1	F14097
18	O-RING-129	1	VO-129
19	140 REAR SEAT	1	F14080
20	GASKET - 1.5"	1	V3130
21	O-RING-140	1	VO-140
** -SPECIFY DESIRED THREAD WHEN ORDERING			

F140 1.5" & J140 2.5" BALL VALVE



ITEM	DESCRIPTION	QTY	PART #
1**	140 VALVE BODY 1.5"	1	F14020
2	140 TRUNNION	2	F14040
3	O-RING-014	2	VO-014
5	FT HANDLE SUBASSEMBLY	1	FQ860
6	SPIROL PIN	2	V1920
7	WASHER	1	VM4901
8	GRIP SPACER F140	1	HM693-J
9	3/8-16 X 1 SOCKET HEAD SCREW	1	VT37-16SH1.0
10	PISTOL GRIP - BLACK	1	HM692-BLK
11	3/8-16 X 5/16 SET SCREW	1	VT37-16SS312
12	3/16" SS BALL	36	V2120
13	1/4-28 X 3/16 SET SCREW	1	VT25-28SS187
14	BELLEVILLE WASHER	1	F14090

ITEM	DESCRIPTION	QTY	PART #
15	140 FRONT SEAT	1	F14070
16	140 BALL	1	F14030
17**	COUPLING 1.5"	1	F14097
	140 COUPLING 2.5"		J14097
18	O-RING-129	1	VO-129
	O-RING-032		VO-032
19	140 REAR SEAT 1.5"	1	F14080
	140 REAR SEAT 2.5"		J14080
20	GASKET - 1.5"	1	V3130
	GASKET - 2.5"		V3190
21	O-RING-140	1	VO-140
22	O-RING-033	1	VO-033
23	ADAPTER 1.5"NHF X 2.5"NHM	1	J14021NFNJ
** -SPECIFY DESIRED THREAD WHEN ORDERING			

5.0 DETENT STYLE HAND HELD BALL VALVES

This Service Procedure is intended for use with the HVIT, H-VIT, H-VO, H-VOI, H-2VO, H-2VOI, H-2VPPIT, H-3VO, and H-3VOI, series of 1.5" and 2.5" inlet Ball Valves.

Tools NOT Supplied in Repair Kit
Bench Vise
T-Handle Hex Key Set
Loctite® #263 or #271 (red) Thread Locking Adhesive

Repair Kits	
H-VO Ball Valve Repair Kit	P690-KIT
Playpipe Handle with Hardware	P920-KIT

5.1 SERVICE PROCEDURE

Refer to the exploded views and part lists for specific models.

5.2 GENERAL

- Occasional replacement of GASKET, REAR SEAT, and related O-RINGS is recommended.
- Coupling service kits, which include all hardware and Loctite, are available. Couplings with special or standard threads are available and may be exchanged on new equipment. Specify desired threads when ordering.

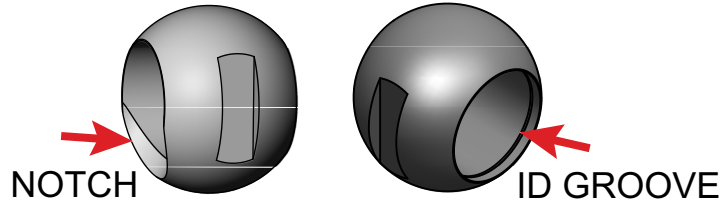
5.3 VALVE SEAT AND BALL REPLACEMENT

5.3.1 DISASSEMBLY

1. Remove (2) SET SCREWS (27 or 28) from the exit end of the BODY (26 or 74).
2. Grasp the FRONT RING (36, 44, 52, or 78) in padded vise and remove by unthreading.
3. Remove the VALVE BALL SEAT (33 or 75) from the male threaded section.
4. Place the BAIL HANDLE in the OFF position. Remove the VALVE BALL (34 or 76) by pushing through the female coupling and out the exit end of the VALVE BODY.
5. Remove the remaining VALVE BALL SEAT (33 or 75).
6. Inspect the O-RING (35 or 77) in the front of the valve for damage and replace if required.

5.3.2 REASSEMBLY

1. Place a VALVE BALL SEAT in the FRONT RING, flat side down.
2. Install VALVE BALL SEAT into the VALVE BODY, flat side down.
3. Install the VALVE BALL with the ID groove facing away from the bail handle side of the valve.
 - A. If the ball has a notch cut into one end of the bore, install the ball with the notch down and towards the bail handle side of the valve.



4. Confirm the O-RING is installed in the front of the VALVE BODY.
5. Install FRONT RING until the shoulder is firmly seated in the front of the body. Compression on the valve is adjusted with the front ring.
6. Cycle BAIL HANDLE to check for smooth operation. Required force to cycle bail handle is 3 to 15 lbs.
 - A. If the handle is tight, un-thread the front ring.
 - B. If the handle is loose, tighten the front ring.
7. Back the FRONT RING out to align the threaded holes in the Valve Assembly with the nearest pocket in the FRONT RING.
8. Apply blue Loctite to the threads of two (2) SET SCREWS. Tighten SET SCREWS on each side of VALVE body evenly, iteratively alternating sides until they bottom out gently. Torque both screws to 10 in/lb. Uneven tightening may cause leaking around the front ring seal.
9. Place ball valve on a pressurized water system and check for leaks and proper operation.

5.4 BAIL HANDLE REPLACEMENT

5.4.1 DISASSEMBLY

1. Perform Steps 1-6 of Section 5.3.1 for valve disassembly.
2. Remove BUTTON HEAD SCREW (20 or 65) from each side of the BAIL HANDLE.
3. Push each TRUNNION (25 or 73) with TEFLON WASHER (24 or 72) into the VALVE BODY then fully remove them, one side at a time. The left and right trunnions are mirror images. Newer parts marked L for left and R for right, however parts made prior to 2016 are not marked. Ensure each trunnion stays on the correct side of the valve for reinstallation.
4. Remove O-RING (23 or 71) from each side of the VALVE BODY.
5. Place thumbs over the detent pockets on the bail handle. Lift handle upward with fingers while capturing the DETENT SPRINGS (21 or 67) and BALLS (22 or 66) with thumbs.

5.4.2 REASSEMBLY

1. Insert 1 DETENT SPRING followed by 1 BALL in each stop lug on the BAIL HANDLE.
2. While holding the DETENT SPRINGS and BALLS in the stop lugs, position the BAIL HANDLE with the belly shaped side facing the exit end of the VALVE BODY. Push BAIL HANDLE onto VALVE BODY over detent area.
3. As preventative maintenance, it is recommended to install a new O-RING (23 or 71) and TEFLON WASHER (24 or 72) to each TRUNNION. Apply lubricant to O-RING
4. Align the ROLL PIN (18 or 69) in the TRUNNION with the hole in BAIL HANDLE and push in place from the inside. Repeat for the other side
5. Place a TRUNNION DRIVER (19 OR 70) over each ROLL PIN.
6. Apply Loctite #263 or #271 to the threads on the BUTTON HEAD SCREWS.
7. Install screws until tight.
8. Complete Steps 1-8 in section 5.3.2.

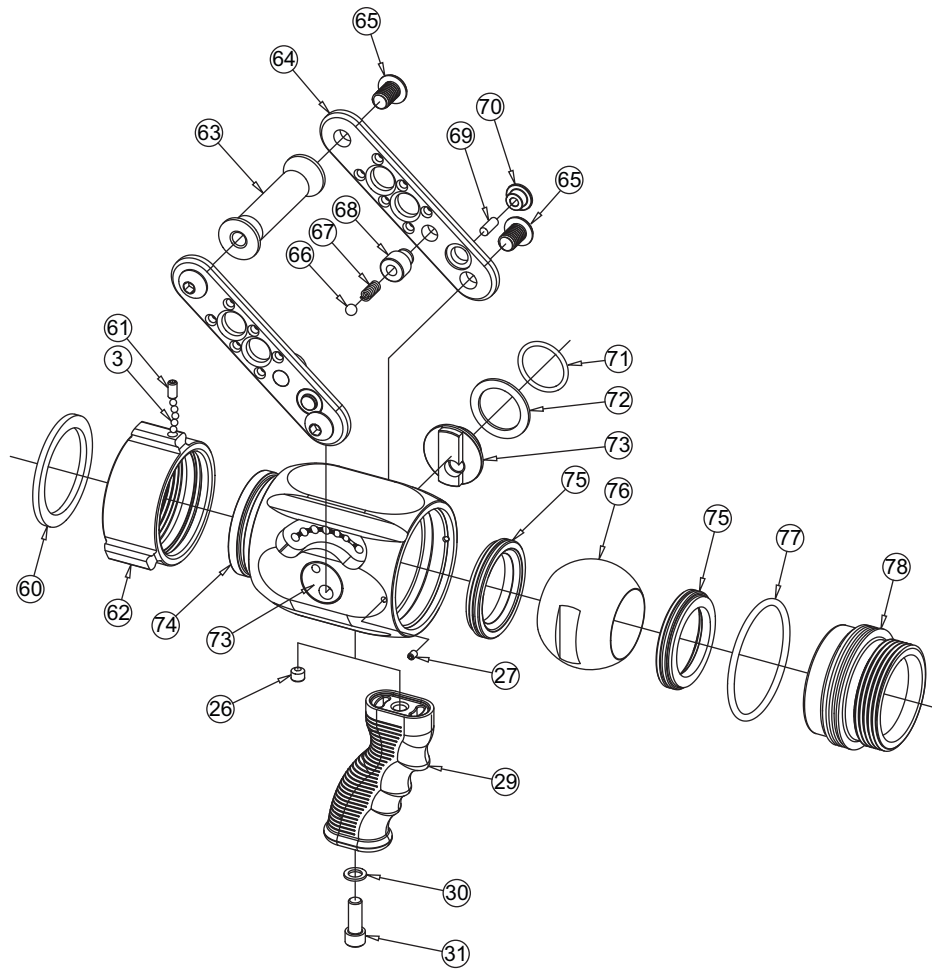
6.0 TESTING

Confirm flow rates and smooth operation.

Always perform NFPA 1962 operational testing and the Operation and Inspection Checklist in the nozzle operator manual prior to returning the nozzle to service.

See pages 13-15 for exploded views and parts lists for modes described in Section 5.

H-3VO AND H-3VOI 2.5" BALL VALVE

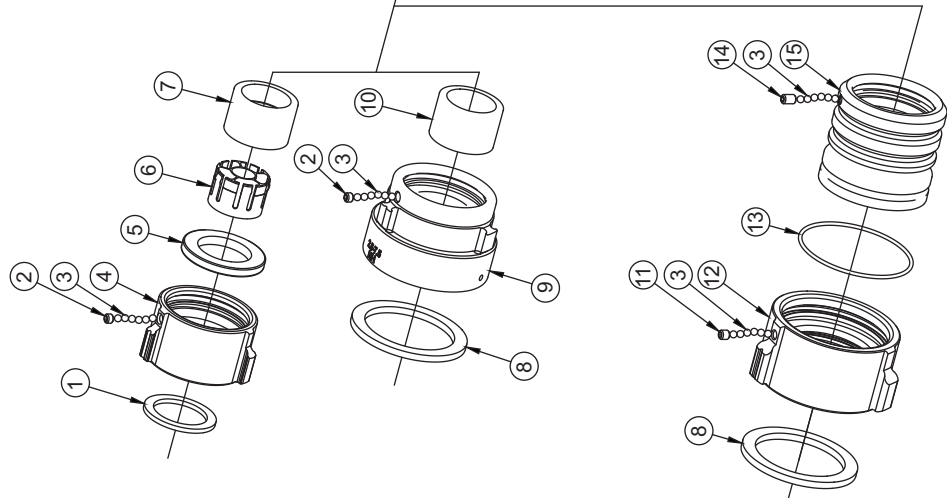
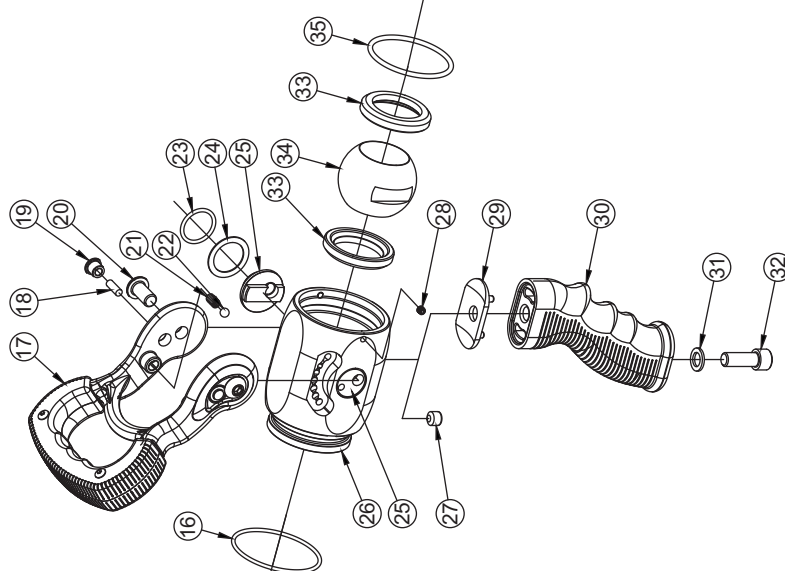
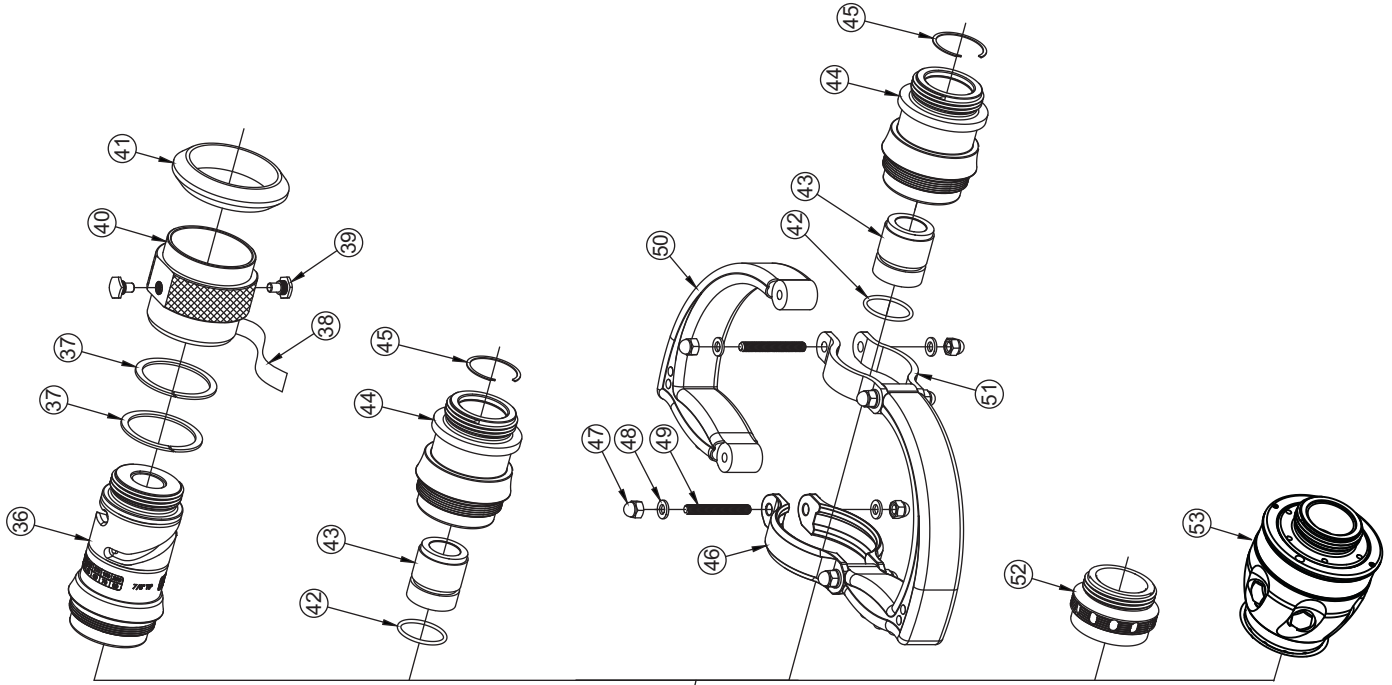


ITEM	DESCRIPTION	QTY	PART #
3	3/16" SS BALL	48	V2120
26	3/8-16 X 5/16 SET SCREW	1	VT37-16SS312
27	10-32 X 1/4 SET SCREW	2	VT10Y32SS250
29	PISTOL GRIP - BLACK	1	HM692-BLK
30	WASHER	1	VM4901
31	3/8-16 X 1 SOCKET HEAD SCREW	1	VT37-16SH1.0
60	GASKET - 2.5"	1	V3185
61	1/4-28 X 1/2 SET SCREW	1	VT25-28SS500
62**	COUPLING 2.5"	1	M307
63	TOP BAR	1	P345
64	SIDE BAR	2	P340
65	1/2-13 X 3/4 BUTTON HEAD SCREW	4	VT50-13BH750
66	5/16" TORLON BALL	2	VB.312TO

ITEM	DESCRIPTION	QTY	PART #
67	DETENT SPRING	2	P360
68	STOP LUG	2	P350
69	SPIROL PIN	2	VP250X.625H
70	TRUNNION DRIVER	2	P335
71	O-RING-219	2	VO-219
72	TRUNNION SHIM	2	P330
73	TRUNNION LEFT	1	P325L
	TRUNNION RIGHT	1	P325R
74	DETENT VALVE BODY	1	P320
75	VALVE BALL SEAT 2.5"	2	P315
76	BALL VALVE 2.5"	1	P310
77	O-RING-388	1	VO-388
78**	FRONT RING VO3 2.5"NH	1	P355

**** -SPECIFY DESIRED THREAD WHEN ORDERING**

HVIT, H-VIT, H-VO, H-VOI, H-2VO, H-2VOI, AND 1.5" BALL VALVE



ITEM	DESCRIPTION	QTY	PART #
1	GASKET - 1.5"	1	V3130
2	1/4-28 X 3/16 SET SCREW	1	VT25-28SS187 (SWIVEL)
	1/4-28 X 3/8 SET SCREW		VT25-28SS375 (LOCK-OUT)
3	3/16" SS BALL	38	V2120
4*	COUPLING 1.5"	1	H694
5	ANTI GG RING VO	1	P147
6**	STREAM STRAIGHTENER	1	P116
7	REDUCTION INSERT F	1	P119F
8	GASKET - 2.5"	1	V3190
9*	COUPLING 2.5"	1	P198
10	REDUCTION INSERT J	1	P199J
11	1/4-28 X 1/4 SET SCREW	1	VT25-28SS250
12*	COUPLING 2.5"	1	P197
13	O-RING-151	1	VO-151
14	1/4-28 X 3/8 SET SCREW	1	VT25-28SS375
15	BLITZ BASE 2.5	1	H675
16	O-RING-141	1	VO-141
17	HANDLE SUBASSEMBLY	1	HX920
18	SPIROL PIN	2	V2005
19	TRUNNION DRIVER	2	HX650
20	HANDLE SCREW	2	VT37E24BH750
21	DETENT SPRING	2	HM770
22	.243" TORLON BALL	2	VB243TO
23	O-RING-118	2	VO-118
24	TEFLON TRUNNION SHIM	2	P170
25	TRUNNION - LEFT	1	P120L
	TRUNNION - RIGHT	1	P120R
26	DETENT VALVE BODY	1	P110
27	3/8-16 X 5/16 SET SCREW	1	VT37-16SS312
28	10-32 X 3/16 SET SCREW	2	VT10Y32SS187
29	GRIP SPACER HANDLINE	1	HM693-H
30	PISTOL GRIP - BLACK	1	HM692-BLK

ITEM	DESCRIPTION	QTY	PART #
31	WASHER	1	VM4109
32	3/8-16 X 1 SOCKET HEAD SCREW	1	VT37-16SH1.0
33	VALVE BALL SEAT	2	P104
34	DELTRIN VALVE BALL	1	P103
35	O-RING-227	1	VO-227
36	FRONT END - 7/8" TIP	1	P181
	FRONT END - 15/16" TIP		P182
	FRONT END - 1.0" TIP		P183
	FRONT END - 1 1/8" TIP		P184
	FRONT END - 1 1/4" TIP		P185
	FRONT END - 1 3/8" TIP		P186
37	TEFLON WEAR RING	2	P172
38	VIT FRONT RING LABEL	1	P163
39	CAM SCREW	2	HD780
40	THREAD PROTECTOR RING	1	P175
41	GAUGE BUMPER	1	G262
42	O-RING 123	1	VO-123
43	7/8" SMOOTH BORE INSERT	1	F14031
	15/16" SMOOTH BORE INSERT		F14032
	1" SMOOTH BORE INSERT		F14033
	1-1/8" SMOOTH BORE INSERT		F14034
44*	FRONT RING VPP 1.5"	1	P160
45	VH-143-S02 SMALLEY RING	1	V4232
46	BLITZ BRACKET	2	H676
47	1/4-20 SS ACORN NUT	8	VT25E20AC
48	WASHER	8	VW500X265-63
49	1/4-20 X 2 STUD FULL THREAD	4	VT25-20ST2.0
50	PLAYPIPE HANDLE	2	P220
51	SMALL PLAYPIPE BRACKET	2	P210
52*	FRONT RING VO 1.5"	1	P150
53	VORTEX FRONT END	1	
* -SPECIFY DESIRED THREAD WHEN ORDERING			
** -CONTACT THE FACTORY FOR USE WITH 2.5" CONNECTIONS			

For questions regarding troubleshooting, parts, or repair, contact your local dealer or TFT's service department.

TASK FORCE TIPS LLC
MADE IN USA · tft.com

3701 Innovation Way, Valparaiso, IN 46383-9327 USA
800-348-2686 · 219-462-6161 · Fax 219-464-7155