TASK FORCE TIPS®
FIRE FIGHTING EQUIPMENT

5-WAY MANIFOLD

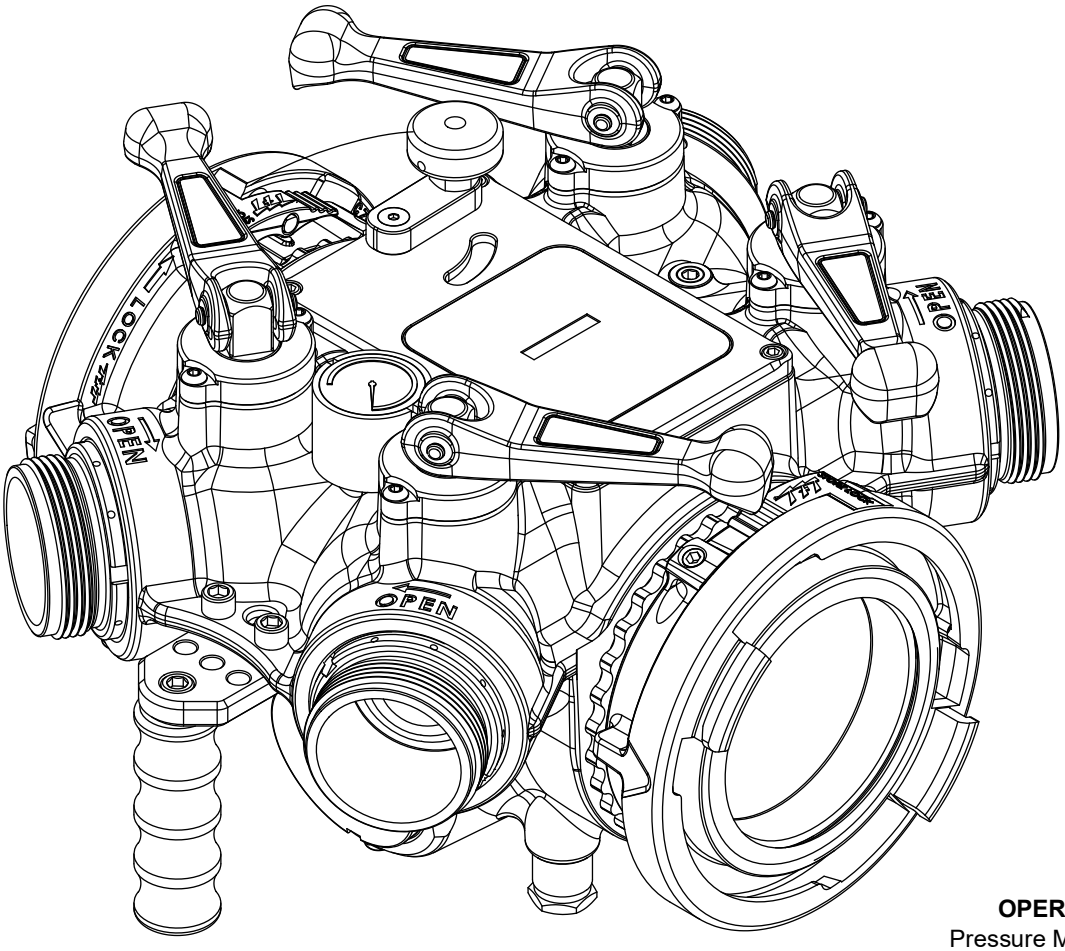
INSTRUCTION FOR INSTALLATION, OPERATION, AND MAINTENANCE

⚠ DANGER

Understand manual before use. Operation of this device without understanding the manual and receiving proper training is a misuse of this equipment. Obtain safety information at tft.com/serial-number.

This equipment is intended for use by trained and qualified emergency services personnel for firefighting. All personnel using this equipment shall have completed a course of education approved by the Authority Having Jurisdiction (AHJ).

This instruction manual is intended to familiarize firefighters and maintenance personnel with the operation, servicing, and safety procedures associated with this product. This manual should be kept available to all operating and maintenance personnel.



OPERATING RANGE
Pressure Max 300 PSI (20 bar)
Pressure Min 10 PSI (0.7 bar)

TASK FORCE TIPS LLC
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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

FEMSA

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1.0 MEANING OF SAFETY SIGNAL WORDS

A safety related message is identified by a safety alert symbol and a signal word to indicate the level of risk involved with a particular hazard. Per ANSI Z535.6, the definitions of the four signal words are as follows:

⚠ DANGER — **DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.**

⚠ WARNING — **WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION — **CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.**

NOTICE — **NOTICE is used to address practices not related to physical injury.**

2.0 SAFETY

⚠ DANGER — **An inadequate supply of pressure and/or flow will cause an ineffective stream and can result in injury or death. Choose operating conditions to deliver adequate fire suppression.**

⚠ WARNING — **Initiation of water flow to this appliance while any valve is open can cause the appliance to become unstable or out of control, resulting in serious injury or death. To avoid an out of control appliance, visually verify all valves are in the closed position by looking into all outlets before connecting hose and flowing water.**

⚠ WARNING — **Minimum operating pressure 10 psi. Inadequate water pressure will prevent valve from opening and may result in a lack of water flow and cause injury or death to persons dependent on water flow. Ensure there is adequate water pressure supplied to inlet of valve.**

⚠ WARNING — **This equipment is intended for use by trained personnel for firefighting. Use of this equipment for other purposes may involve hazards not addressed by this manual. Seek appropriate guidance and training to reduce risk of injury.**

⚠ WARNING — **Equipment may be damaged if frozen while containing significant amounts of water. Such damage may be difficult to detect visually. Subsequent pressurization can lead to injury or death. Any time the equipment is subject to possible damage due to freezing, it must be tested and approved for use by qualified personnel before being considered safe for use.**

⚠ WARNING — **Interrupting flow to the device could cause injury or death. Avoid situations that may interrupt flow to the device such as: hose line kinks, traffic running over hose, and automatic doors or devices that can pinch the hose.**

⚠ WARNING — **Sudden changes in valve position can cause pressure spikes (water hammer) and could lead to hose or pipe failure or an out of control monitor. Open and close the valve slowly to avoid water hammer.**

⚠ CAUTION — **Damage or injury could result from operating the monitor beyond the maximum operating pressure of 300 psi (20 bar). Do not exceed 300 psi (20 bar) on either side of the valve.**

⚠ CAUTION — **Mismatched or damaged waterway connections may cause equipment to leak or uncouple under pressure. Failure could result in injury. Equipment must be mated to matched connections.**

⚠ CAUTION — **Dissimilar metals coupled together can cause galvanic corrosion that can result in the inability to uncouple the connection, or complete loss of engagement over time. Failure could cause injury. Per NFPA 1962, if dissimilar metals are left coupled together, an anti-corrosive lubricant should be applied to the connection and the coupling should be disconnected and inspected at least quarterly.**

NOTICE — **To prevent mechanical damage, do not drop or throw equipment.**

3.0 GENERAL INFORMATION

The 5-Way Manifold is a compact, portable, low friction-loss valve that can be used in many water distribution applications. The hydraulically actuated slide valve combined with four of TFT's 2.5" quarter-turn ball valves with folding handles make for the ultimate in versatility. All four 2.5" valves can be used with or without the LDH valve being open. Valve seats are field replaceable, and quarter-turn folding valve handles require low force to move, even under pressure. The automatic valve lock on the 2.5" valves maintain valve position while flowing at partial openings. Folding handles minimize required storage space. Device includes a pressure gage, PRV, and carrying handle. A polymer bearing ring helps prevents galvanic corrosion on LDH couplings. Storage bracket available.

3.1 SPECIFICATIONS

	US	METRIC
Weight	48.0 lbs	21.8 kg
Length	16.0"	406 mm
Width	17.5"	445 mm
Height	11.5	292 mm
Main LDH Waterway Size (at valve seat) LDH valve meets NFPA Slow-Operating Valve Requirement.	4.5"	114 mm
Side ports (4) waterway Side discharges do not slow-operate.	2.5"	63.5 mm
Minimum Operating Pressure LDH VALVE NOT FOR SUCTION USE	10 psi	0.7 bar
Maximum Operating Pressure psi (bar)	300 psi	20 bar
Hydrostatic Proof Test Pressure	900 psi	62 bar
Operating Temperature Range of Fluid	33° to 120°F	0° to 50°C
Storage Temperature Range*	-25° to 135°F	-32° to 57°C
Materials Used	Aluminum 6000 series hard anodized MIL8625 class 3 type 2, stainless steel 300 series	

*For temperatures below 32°F (0°C), valves must be drained after use to avoid damage.

Table 3.1

3.2 CORROSION

Hose couplings are attached using polymer bearing rings which provides electrical insulation to help prevent galvanic corrosion. The valve body is hard anodized, and powder coated to help prevent corrosion. The effects of corrosion can be minimized by good maintenance practice. See section 3.5 AIR FLUSH PORT & 5.0 MAINTENANCE.

3.3 USE WITH SALT WATER

Use with salt water is permissible provided the equipment is thoroughly cleaned with fresh water after each use. The service life of the equipment may be shortened due to the effects of corrosion, and is not covered under warranty.

3.4 LOW TEMPERATURE USE

The valve is designed with self-draining waterways. In extreme freezing conditions, extra precautions should be taken to ensure control waterways remain free from ice. Residual water should be cleared from the valve after each use. See "AIR FLUSH PORT" on page 5

3.5 AIR FLUSH PORT

The valve is equipped with an air flush port. Remove the cap. Use a Schrader air chuck to apply a minimum of 20 psi (1.4 bar) to the air flush port. Open and close the control valve. Residual water will be forced out through the filter and control valve bleed drain.

⚠CAUTION **The sliding plug is pinch hazard that can cause injury. Keep hands and fingers outside of the valve any time air is applied to air flush port.**

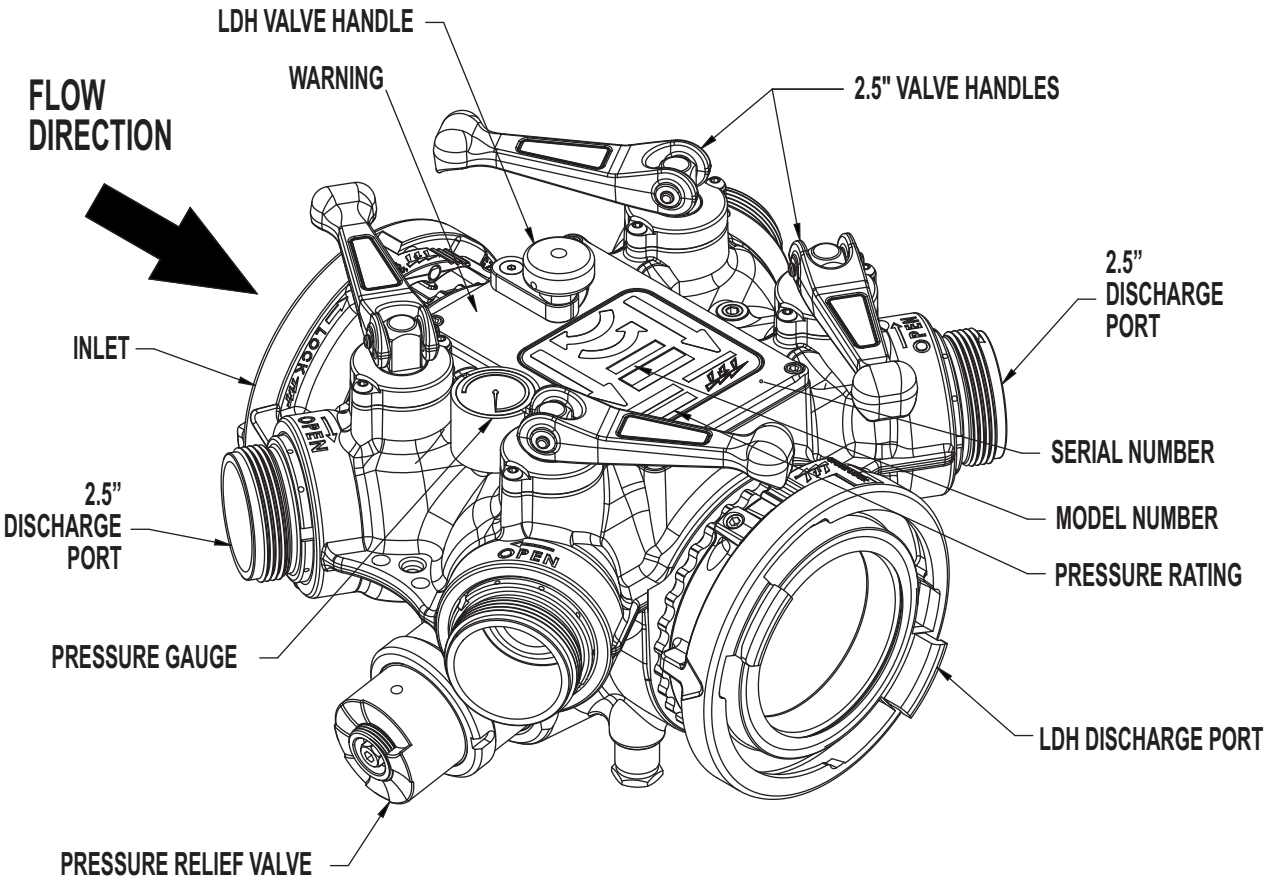
3.6 PRESSURE RELIEF VALVE

LDH valved appliances may be equipped with a pressure relief valve that can be set to any pressure between 90 and 300 psi. Its function is to protect the pump and supply hose from excess pressure. See LIA-202 PRESSURE RELIEF VALVE INSTRUCTIONS FOR SAFE OPERATION AND MAINTENANCE.

3.7 VALVE STORAGE BRACKET

A storage bracket is available for the 5-Way Manifold. The storage bracket can be mounted vertically or horizontally with the included self-tapping stainless steel screws. The bracket requires 12.5" x 11.1" (317.5mm x 281.9mm) of panel space. To purchase a bracket, order TFT part number AU-BRACKET.

3.8 VARIOUS MODELS AND TERMS



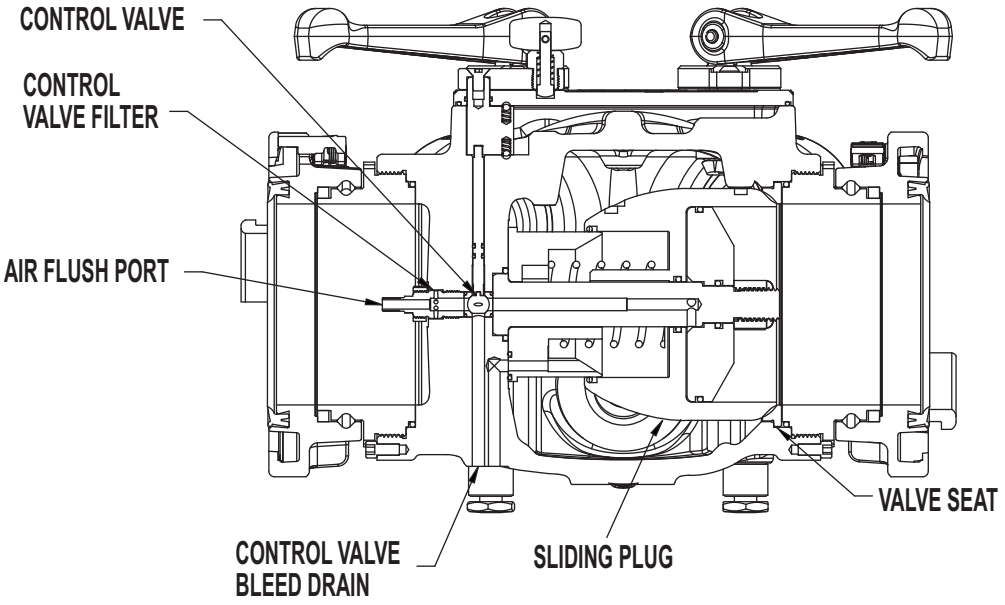


Figure 3.8

4.0 INSTALLATION AND OPERATION

4.1 INSTALLING THE LDH VALVE

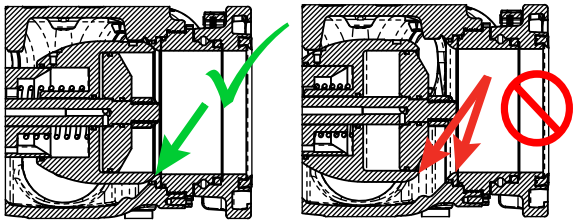
Before each use, verify all valves are in the closed positions.

Verify LDH valve handle is in the closed position and also verify within the outlet that there is no gap between the sliding plug and valve seat.

Verify the 2.5" valve handles are in the closed positions, perpendicular to the discharge ports.

⚠ WARNING

Do not use if a gap is visible between sliding plug and valve seat as viewed from the LDH outlet. A gap indicates a malfunction that will require repair or replacement.

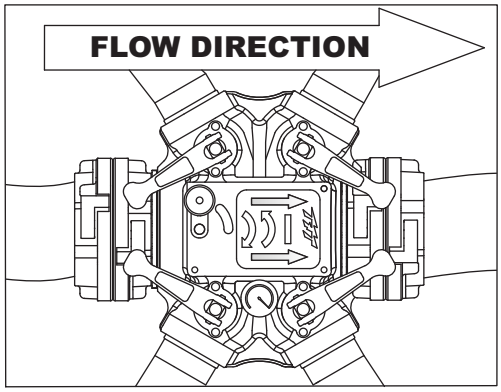


Make connections to each port to be used.

Ensure that flow will move in the direction indicated on the valve.

⚠ WARNING

LDH valve will not properly open or close if flow direction does not match arrow printed on exterior of valve. Reducing or interrupting of flow may cause injury or death to persons dependent on water flow.



Pressurize manifold.

⚠ WARNING

Do not pressurize manifold if any valve is open, which could cause death or serious injury due to unintended flow and sudden projectile motion of unsecured equipment.

4.2 OPERATING THE LDH VALVE

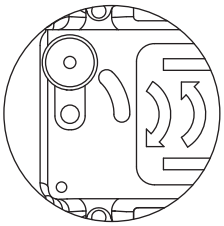
Opening the LDH Valve

When flow from the LDH discharge port is required, rotate the handle clockwise to the first position for a slower opening speed, or to the second position for a normal opening speed.

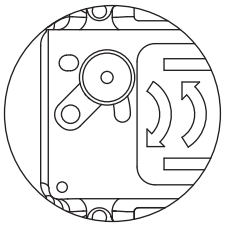
LDH valve handle opens control valve, allowing water pressure to build in control chamber and move sliding plug fully open. Both positions meet NFPA slow operating requirements. Rapid changes to handle position will not defeat the slow-operating feature.

⚠ WARNING

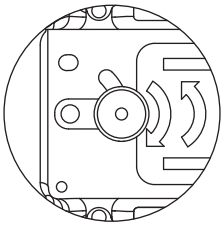
Minimum operating pressure 10 psi. Inadequate water pressure will prevent valve from opening and may result in a lack of water flow and cause injury or death to persons dependent on water flow. Ensure adequate water pressure is supplied to inlet of valve.



Valve Handle in Closed Position



Valve Handle in Slow Open Position



Valve Handle in Normal Open Position

Closing the LDH Valve

To stop flow from the LDH discharge port, rotate the LDH valve handle to the closed position.

LDH valve handle closes control valve, allowing water from control chamber to drain to ground and slowly close sliding plug.

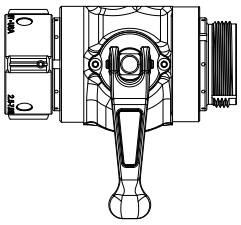
4.3 OPERATING THE 2.5” VALVE

When flow from a 2.5" discharge port is required, slowly rotate the valve handle towards the discharge port.

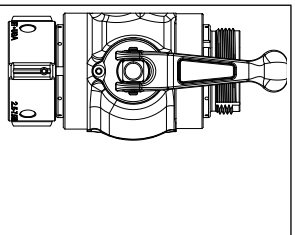
Following use, slowly rotate the valve handle away from the discharge port.

⚠ WARNING

Quick changes to a 2.5" valve position can cause high pressure spikes due to water hammer and may result in damaged equipment which could lead to injury or death.



Valve Handle in Closed Position



Valve Handle in Open Position

4.4 PRESSURE LOSS

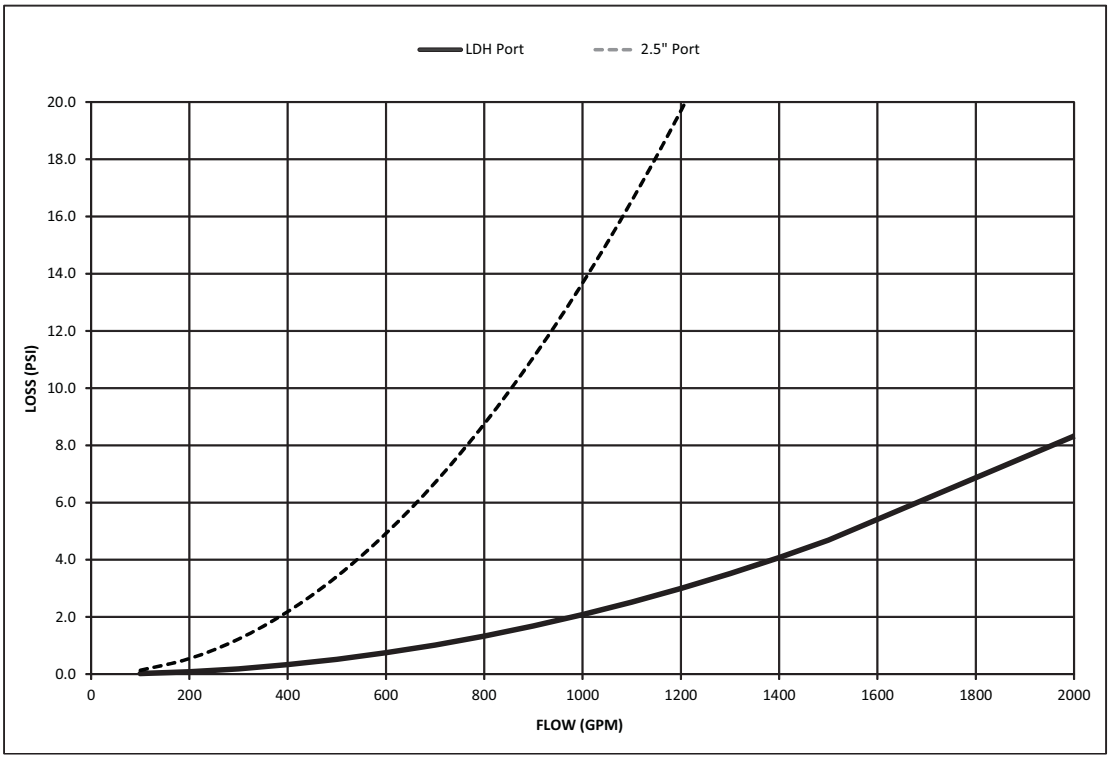


Figure 4.4

5.0 WARRANTY

Go to tft.com for all warranty information.

5.1 MAINTENANCE

TFT products are designed and manufactured to be damage resistant and require minimal maintenance. However, as the primary firefighting tool upon which your life depends, it should be treated accordingly. The unit should be kept clean and free of dirt by rinsing with water after each use. Any inoperable or damaged parts should be repaired or replaced before placing the unit in service. To help prevent mechanical damage, do not drop or throw equipment.

In applications where appliances are left continuously connected to the apparatus or other devices or are used where water is trapped inside the appliance, the appliance must be flushed with fresh water following each use and inspected for damage.

This appliance must be disconnected, cleaned and visually inspected inside and out after each use. Visually inspect the sliding plug to ensure there is no gap between the sliding plug and the valve seat. Test the sliding plug according to "AIR FLUSH PORT" on page 5. Moving parts such as handles, valve ball and couplings should be checked for smooth and free operation. Seals shall be greased as needed with Silicone based grease such as Molykote 112. Any scrapes that expose bare aluminum should be cleaned and touched up with enamel paint such as Rust-Oleum. Replace any missing or damaged parts before returning to service.

Any equipment taken out of service due to failure should be returned to the factory for repair or replacement. If you have any questions regarding the testing or maintenance of your valve, please call Task Force Tips at 800-348-2686.

5.2 SERVICE TESTING

In accordance with NFPA 1962, equipment must be tested a minimum of annually. Units failing any part of this test must be removed from service, repaired and retested upon completion of the repair.

5.3 REPAIR

Factory service is available. Factory serviced equipment is repaired by experienced technicians, wet tested to original specifications, and promptly returned. Call TFT service department at 1-800-348-2686 to troubleshoot and, if needed, directions for return. A return for service form can also be obtained at tft.com/Support/Returning-an-Item-for-Service.

Repair parts and service procedures are available for those wishing to perform their own repairs. Task Force Tips assumes no liability for damage to equipment or injury to personnel that is a result of user service. Contact the factory or visit the web site at tft.com for parts lists, exploded views, test procedures and troubleshooting guides.

Performance tests shall be conducted on the equipment after a repair, or anytime a problem is reported to verify operation in accordance with TFT test procedures. Consult factory for the procedure that corresponds to the model and serial number of the equipment. Any equipment which fails the related test criteria should be removed from service immediately. Troubleshooting guides are available with each test procedure or equipment can be returned to the factory for service and testing.

⚠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).**

⚠CAUTION **Any alterations to the product or its markings could diminish safety and constitutes a misuse of this product.**

NOTICE **All replacement parts must be obtained from the manufacturer to assure proper performance and operation of the device.**

6.0 EXPLODED VIEW AND PARTS LISTS

Exploded views and part lists are available at tft.com/serial-number.

7.0 OPERATION AND INSPECTION CHECKLIST

BEFORE EACH USE, equipment must be inspected to this checklist:

1. There is no obvious damage such as missing, broken or loose parts, damaged labels, etc.
2. Valve operates freely through full range and regulates flow
3. “OFF” position does fully shut off and flow is stopped
4. The waterway is clear of obstructions
5. Coupling is tight and leak free

BEFORE BEING PLACED BACK IN SERVICE, equipment **must be disconnected from the hose** and inspected to this list:

1. All controls and adjustments are operational
2. The sliding plug moves freely. Use the Air Flush Port to test according to "AIR FLUSH PORT" on page 5
3. There are no broken or missing parts
4. Shutoff valve closes off the flow completely
5. There is no damage that could impair safe operation (e.g. detents, cracks, corrosion, or other defects)
6. The waterway is clear of obstructions
7. The equipment is clean and markings are legible
8. Coupling is retightened properly

Equipment failing any part of the checklist is unsafe for use and must have the problem corrected before use or being placed back into service. Operating equipment that has failed the checklist is a misuse of this equipment.

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