XOMOX®

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Installation & Adjustment Instructions

CRANE ChemPharma, Tufline® Severe Service Valves

CRANE
ChemPharma Flow Solutions

www.cranechempharma.com

Trouble-free operation.

Tufline® valves have proven themselves with long-term, trouble-free service in a wide variety of applications. Properly installed, adjusted, and operated, these valves should require minimum attention.

Questions? If there are any questions, contact your Xomox representative, Xomox Service Center, or the factory.

⚠WARNING

Carefully read and follow all instructions. The following instructions have been prepared to assist in the installation and adjustment of Xomox Severe Service valves. Read all instructions carefully and completely.

⚠WARNING

READ AND UNDERSTAND INSTRUCTIONS BEFORE SERVICING VALVE. Failure to follow instructions could result in death or serious injury. If there is any question, contact the factory at 513-745-6000.

⚠WARNING

PERSONNEL PROTECTION. Be sure to follow personnel protective procedures and safety practices for protection against hazardous media. Failure to do so could result in death or serious injury.

⚠WARNING

This valve should not be used in service conditions where materials of construction are not suitable. Failure to heed this warning could result in death, serious injury, or property damage.

Installation.

1. Before installing the valve, be sure to read carefully all tags that may be attached to the valve.

2. Using a calibrated torque wrench, check the valve cover bolt torques per the table below.

3. Check the optional grease injection/lantern-ring purge connection to assure it is fully tightened.

Cover Bolt Torques

Size (inches)		Nominal Torque for Non-Coated	Nominal Torque for PTFE-Coated
Valve	Stud or Nut	ft-lb	ft-lb
½ - 1	⅜ - 16	20	18
1½	7/16 - 16	35	30
2 - 3	½ - 13	45	38
4 - 6	⅝ - 11	95	80
8	¾ - 10	130	110
10	1 - 8	180	151
12	1 - 8	180	151

Adjustment instructions.

All Tufline® Severe Service valves are thoroughly tested before leaving the factory.

Further adjustments should not be necessary.

However, if leakage problems should develop, the following adjustments can be made.

⚠CAUTION

Tufline Severe Service valves have separate in-line and external seal adjustments. Consult the photo on the following page to help assure proper adjustment. Failure to follow this caution may result in improper valve adjustment.

Adjustment for loss of in-line seal.

1. Loosen the locknut under the bottom valve cover.

2. Tighten the bottom adjusting bolt one quarter turn.

3. Tighten the locknut.

4. Operate the valve and check for leakage.

Frequent adjustments.

The need for frequent adjustments and/or many adjustment turns indicates the need for replacement parts.

Excessive tightening of the adjustment bolt will cause an increase in the valve turning torque.

Adjustment for loss of external seal.

1. Using a calibrated torque wrench, tighten the top adjustment nut (located on the top of the hub). Tighten to the torque indicated in Table 1.

Table 1.
Top adjustment nut

Size (Inches)		Torque
Valve	Nut	ft-lb
½ - ¾	⅜ - 16	15
1 - 3	7/16 - 14	25
4 - 10	½ - 13	35
12	⅝ - 11	73

These adjustments will fully compress the spring washers.

2. Loosen the top adjustment nut one-half turn. This seats the packing and allows for its expansion during thermal cycling.

If leakage persists after this adjustment, the adjustment nut may be tightened an additional one-quarter turn.

If leakage still persists, tighten the adjustment nut one final one-quarter turn.

⚠CAUTION

Never exceed the recommended stem nut tightening torque. If leakage still persists after these adjustments have been completed, packing is worn and must be replaced as soon as possible.

Initial adjustment for low-pressure or low-temperature applications.

Tufline Severe Service valves in certain applications may require initial adjustment of the stem packing after the valve has reached the low temperature of the thermal cycle.

Typically these applications are:
- Low pressure (less than 60 psig).
- Low ambient temperature (less than –20°F).
- Low process media temperature (less than –20°F).

For these applications:

1. Adjust the top adjustment nut to the specific torque indicated in Table 1.

2. Loosen the top adjustment nut one-half turn.

3. Using a calibrated torque wrench, re-torque to the values indicated in Table 2.

Table 2.
*Top Adjustment Nut Torque adjustments for low pressure / low temperature. Use **AFTER** external seal loss adjustment.*

Size (Inches)		Torque
Valve	Nut	ft-lb
½ - ¾	⅜ - 16	10
1 - 3	7/16 - 14	20
4 - 10	½ - 13	25
12	⅝ - 11	58

More information.

Xomox Severe Service Valves.

Xomox publishes a comprehensive 16-page catalog which details the unique and patented features of the Xomox Severe Service Valve. To receive your copy, phone 1-800-749-1735 or visit our website: **www.xomox.com**.

Valve torque.

Valves should be operated under service conditions for at least twelve hours before any torque adjustments are made.

After the initial break-in period, the following adjustments can be made if the valve torque is high when compared to the values listed in Table 3.

1. Loosen the bottom locknut.

2. Loosen the bottom adjustment bolt one-quarter turn.

3. Tighten the locknut.

4. Operate the valve and check the torque.

5. Repeat this procedure as necessary up to 3 times. **DO NOT** repeat this procedure more than 3 times or in-line leakage may occur.

Table 3. Operating Torques
Torques listed below are for valves with PTFE sleeves and seals.

Valve Size	Break ft-lb	Run ft-lb
½	19	10
¾	19	10
1	55	28
1½	110	55
2	151	76
2½	165	83
3	165	83
4	330	165
6	688	344
8	1073	536
10	1980	990
12	2888	1444

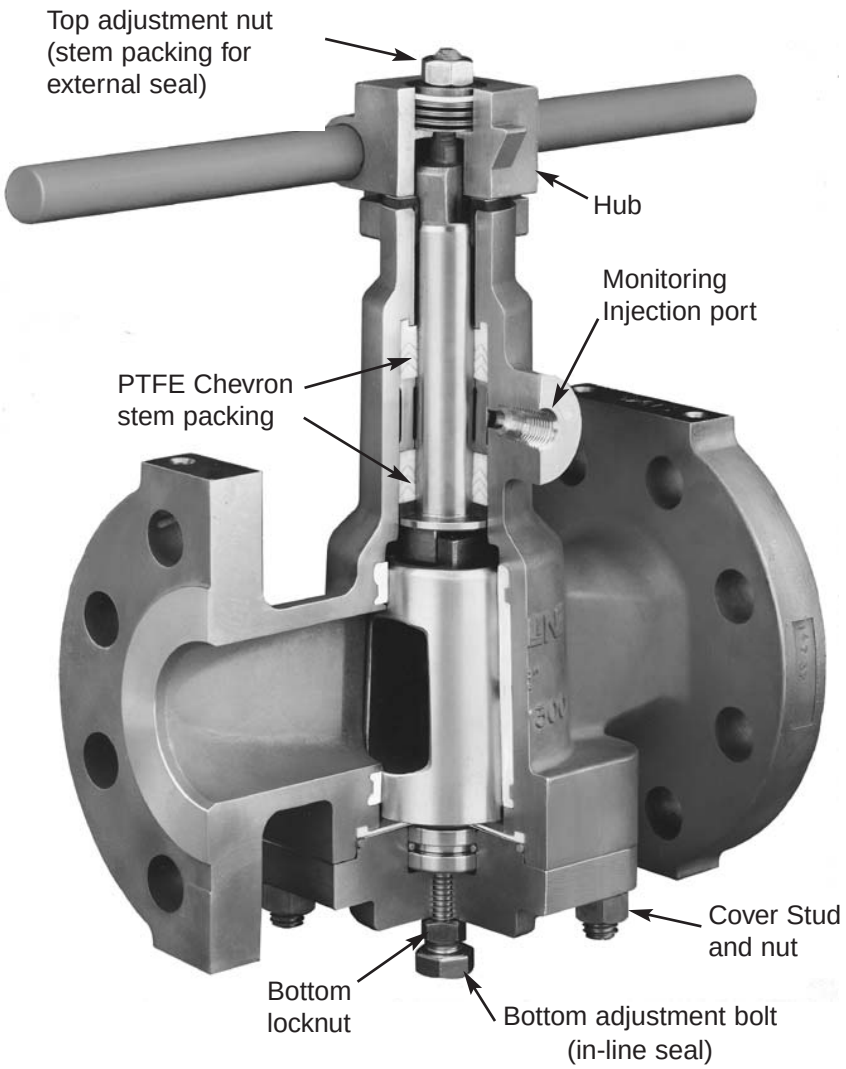
Valve repair.

Tufline Severe Service valves should be returned to a Tufline Automation & Service Center for repair.

Because of specialized equipment available at service centers, repairs can be performed more safely and economically.

New valve warranty.

Factory and service center repaired valves are tested to the same specifications as new valves. Repaired valves carry the standard new valve warranty.



⚠WARNING

Depressurize, clean, and neutralize any media that may remain in the valve and pipeline.

If the valve is in the pipeline, you must follow your line entry procedures.

Always wear appropriate personal protective equipment.

Failure to follow these warnings could result in property damage, personal injury, or death.

⚠WARNING

MASSIVE LEAKAGE! DO NOT loosen cover retaining nuts while the valve is pressurized. Property damage, personal injury, or death could result.

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