

# IMPORTANT!

Please read this before performing any maintenance or service work to this equipment!

## WARNING

**If you have not read the Operation and Maintenance Manual and feel you were not properly trained DO NOT ATTEMPT TO OPERATE THIS MACHINE. Serious injury or death may result!**

In order to ensure the safety of your employees, contract maintenance personnel, and yourself it is very important to “Lock Out & Tag Out” this equipment before performing any maintenance or service work on it.

Depending on the equipment there will be two areas that need to be addressed with Lock Out / Tag Out procedures.

- Electric
- Pneumatic

In each of the above areas it is necessary to ensure that it is impossible activate any input to the equipment while it is being worked on. There are a number of ways to accomplish this in each area. Due to this, each individual company should determine what system will work best for them and ensure that each employee strictly adheres to it. If you have any questions on how to start a Lock Out / Tag Out program, you can contact your State Department of Labor office and they would be happy to provide you with information and sources for materials.

## WARNING

**Maintenance is to be performed by trained personnel and while the machine is in a safe state to perform any maintenance. Machine must be in a safe state prior to any maintenance.**

## 3K Water Union Replacement Procedure

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### Description:

A step by step guide on replacing a 3K Titan's water union.

### Tools and supplies you will need:

- Crowsfoot Torque Wrench (recommended)
- Rotary Union Wrench
- 1<sup>5</sup>/<sub>16</sub> Wrench
- Metaflux Gleitmetall - Park Industries PN# 3400037
- Shop towels



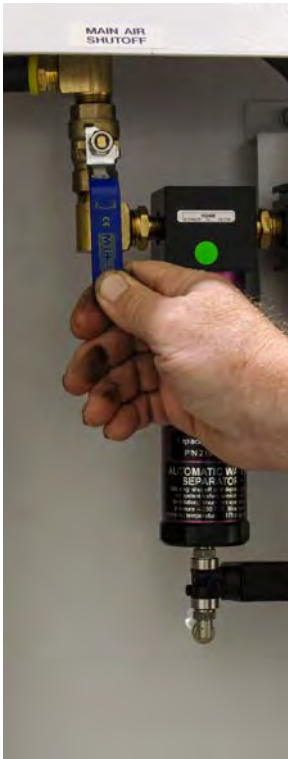
Water Union



## Replacing the Water Union

1. Press the e-stop.
2. Shut off the main water.
3. Unhook the water lines from the water union.
4. Immobilize the spindle with the rotary union wrench, then unseat the water union with a  $\frac{15}{16}$  wrench.

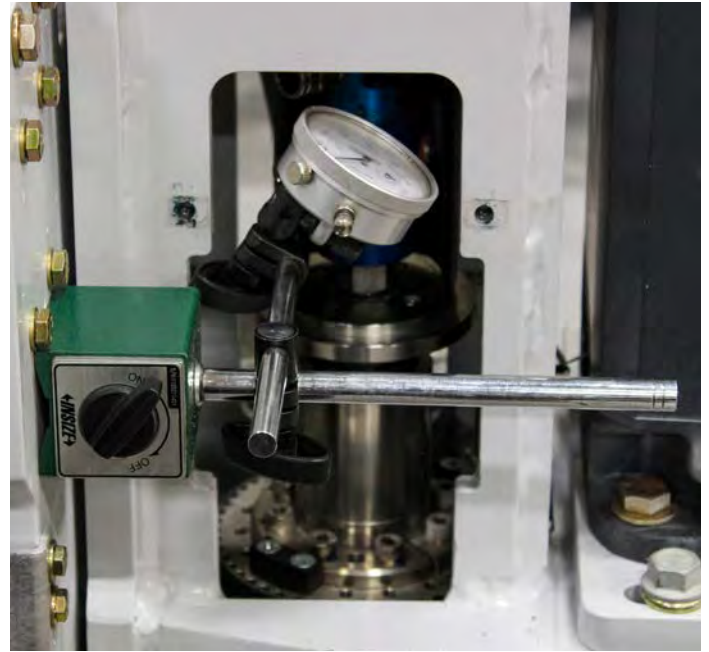
**Note:** The water union has left hand threads (turn clockwise to unscrew).



5. Unscrew the water union.
6. Clean the drawbar threads.
7. Replace the water union and install the fittings.
8. Spray Metaflux on the threads.



8. Tighten the water union to 25 ft lbs with a Crowsfoot torque wrench and the  $\frac{15}{16}$  wrench.
9. Set the dial indicator on the water union and manually turn the spindle. Runout (i.e. slack) should be no more than .003.
10. Reattach the water lines to the fittings.



11. Turn the main water back on.