

CRYSTEEL MFG. INC.
TRIPLE TIPPER CYLINDER TROUBLE SHOOTING GUIDE

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This document describes the steps to trouble shoot a potentially leaking Triple Tipper Cylinder.

Telescopic cylinders have an inherent trait of weeping. This weeping is a gradual collection of oil on the stages, which occurs from normal usage. Each time the cylinder is cycled the total amount of oil on the stages has increased. After several cycles, a ring of oil will be evident at the top of each stage. When this ring of oil gets heavy enough it will start to pool on the top of the heads and run down the outside of the tubes creating the appearance of a leak. Through doing the following checks we hope to be able to distinguish between an actual leak and a weeping effect. If the cylinder is not actually leaking, a new cylinder will not solve what the customer thinks is a problem. The new cylinder will also have the weeping characteristic.

1. Before going under a raised body, engage the body prop to its seated position. It is also a good idea to use an overhead crane to secure the dump body or to put blocking under the body.
2. Check all fittings to make sure they are not loose. Specifically, check the bleeder port at the top of the cylinder. If the bleeder plug were loose, it could leak and oil would travel down the side of the cylinder. This could be mistaken for oil leaking from one of the stages. If the cylinder is leaking at the bleeder plug, remove it, apply pipe dope and retighten. Be sure there is no pressure on the cylinder when the plug is removed.
3. The correct position of the cylinder is to have the bleeder plug towards the front of the body and the beveled side of the pivot assembly towards the rear.
4. Clean the cylinder in order to establish where any fresh oil is coming from. The cleaning method will be dependent on the condition of the cylinder. If the cylinder is not very old, one may only need to wipe it clean. If the cylinder is caked with oily dirt, use of a pressure washer may be required.
5. Raise the cylinder to its full height. Pressurize the cylinder at its full height for only a few seconds at a time. By doing this, if there is an actual leak, one should be able to see exactly where the oil is coming from. If there is not a steady flow of oil coming from anywhere, the cylinder would not have an actual leak but would be characteristically weeping.
6. There are two types of seals in the Triple Tipper cylinder where oil could potentially leak. There is a Static O-ring and a Dynamic Seal. See Illustration (ID# 10427). The Static O-ring is located on the O.D. of each head. The Static O-ring is stationary in that there is no part of the cylinder that moves across its surface. The Dynamic Seal is located in the I.D. of each head. The Dynamic Seal travels along the O.D. surface of each next smaller stage.