

**Service Call:**

Purging Air from a Hydraulic Cylinder

**Tools Required:**

Basic Wrench Set

Hydraulic Power Source

## Tech Tip Safety Rules




### Danger

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

### Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
  - manufacturer's instructions and safety rules
  - employer's safety rules and worksite regulations
  - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

 **WARNING**



Escaping fluid under pressure can penetrate skin causing serious injury.

Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

Fluid injected into skin must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene will result.

H23877B

## Introduction:

Hydraulic cylinders will be empty of oil and full of air after repair, making the initial operation dangerous if the cylinder is not purged of air.

Also, when new cylinders are ordered, they will generally be shipped without oil and will need to be purged to prevent damage and/or injury.

If possible; cycle the cylinder several times before installation with the ports facing upward to fill with oil.

For units with long hoses use a jumper between the hoses to fill hoses with oil before connecting to the cylinder. If this not possible see the following steps or instructions in the maintenance manual for the specific unit.



Do not allow anyone to ride the platform until all the air is purged and the cylinder is full of oil, serious injury or death could result if cylinder is not full of oil.

**Note:** This Tech Tip is not for purging air out of leveling systems. Reference Tech Tip #3 or #145 for bleeding out leveling systems.

## **Step 1**

Secure the base end of the cylinder to the unit.

## **Step 2**

Making sure the cylinder is properly supported, leave the rod end of the cylinder un-pinned

## **Step 3**

Ensure that when the rod is extended, the weight of the cylinder will be supported and there is enough room for the rod to fully extend without contacting obstructions and causing damage.

## Step 4

Purge air from hoses if they are long relative to the cylinder size by using a jumper hose and cycling the control.

Then attach hydraulic lines to the cylinder.



Escaping fluid under pressure can penetrate skin causing serious injury.

Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

## Step 5

Operate the hydraulic cylinder in the retract position first.



If the cylinder is operated in the extend function first the rod may extend uncontrollably, causing damage or serious injury.

## Step 6

Extend and retract cylinder fully with no load three times to purge out all the air.

## **Step 7**

Remove hoses and pin the rod end to the unit.

## **Step 8**

After purging, fill the hydraulic reservoir to the full level, if needed, with all cylinders retracted and in the stowed position.