Tech Tips

Service Call:
Transmission TL Leveling Circuit Bleed Procedure

Tools Required:
13mm Wrench or Socket with Ratchet Side Cutter

Items Needed:
3/16” wide Zip Tie

Model(s):
TL80, TL100, & TL80/112
Early models had a bleed valve installed under the upper control cover at the boom tip as part of Z1584 for bleeding out the leveling system. A production change was made eliminating the bleed valve. The hoses coming from the slave cylinder have quick disconnect fittings on the ends that will now have to be connected and disconnected.

Reference the following to determine which system is installed:

Hoses with the Quick Disconnects
Push/Pull Style Selector Valve
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.
Step 1
Properly set-up the unit in a safe working environment with no overhead obstructions.

Step 2
Using the lower controls, position the boom so that the upper controls can be accessed from the ground.

Step 3
Remove the upper control valve cover on the side of the platform to access the bleed valve or hoses.
Step 4
Level the platform all the way “UP” using the platform level function clockwise (CW) from the lower controls.

Step 5
Remove the lockout zip tie from the bleed valve spool.
Step 6
Push the knob on the bleed valve all the way in or connect the bleed hoses.

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Step 7
On a TL80/112 only, raise both the lower and upper elevators to a minimum of 45 degrees.

Note: Only the TL80/112 model will have lower and upper elevators.

Step 8
Make sure the upper boom is down all the way so that the master cylinder is fully retracted.
Step 9
Operate and hold platform level up using the CW function for 2-3 minutes.

Note: Holding the function cycles oil through the system. When the valve is shifted, or the couplers are connected it basically puts the circuit in bypass creating a loop to bleed the system.
**Step 10**
If this unit is not equipped with an elevator, skip to **Step 14**.

**Step 11**
For TL80/112 units only: Lower both elevators so that the platform is accessible from the ground.

**Step 12**
For TL80/112 units only: Pull the knob out or disconnect the bleed hoses and “DUMP” the platform all the way using the counterclockwise (CCW) function at the lower controls.

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Step 13
Push the knob in all the way or connect the bleed hoses and raise elevators to a minimum of 45 degrees and raise the upper boom all the way. At this point, the master leveling cylinder will be fully extended.

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Step 14
Operate and hold the platform level function in the CCW position for 2-3 minutes.

Step 15
Lower the elevators (if equipped) and the upper boom to the ground access position to operate the unit from the upper controls.
Step 16
Pull the knob on the bleed valve out or disconnect the bleed hoses.

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Step 17
From the upper control valve, operate the platform leveling all the way in the LEVEL position.
Step 18
Push the knob in all the way or connect the bleed hoses and operate and hold the platform leveling in the LEVEL position for 2-3 minutes.

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Step 19
Pull the knob out all the way or disconnect the bleed hoses and Dump the platform all the way using the platform level DUMP.
Step 20
Push the knob in or connect the bleed hoses and operate and hold platform leveling in the DUMP position for 2-3 minutes.

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Step 21
Pull the knob out or disconnect the bleed hoses and level platform using the upper controls.

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Step 22
Fully operate the unit from the lower controls and then the upper controls to verify it has been properly bled.
Step 23
If the unit is equipped with a bleed valve, install a zip tie on the spool to prevent the knob from being pushed in. If unit has bleed hoses, secure the hoses out of the way.

Step 24
Reinstall cover and stow unit.