

Service Call:

Checking Pressures on the TM Series

Tools Required:

Allen Wrench Set

Open End Wrench Set

Pressure Gauge 0-5000 psi

Model(s): All TM's

This instruction will outline the proper procedure for checking and setting all hydraulic pressures for the TM Series.

Stand-by – 550-600 psi

Large Pump Compensator – 3300 psi

Load Sense – 3000 psi

Limit system – 500-700 psi

Pilot system

- Hydrocontrol Control Valve
 - 450-500 psi (2)
- Parker Control Valve (Prior 11-07)
 - 600-800 PSI (2)

Small Pump Compensator – 3000 psi

Tools – 2250 psi (3)

Tool Pressure for use with Intensifier- 1800 psi

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

Step 1

Checking Standby Pressure: 550-600 psi

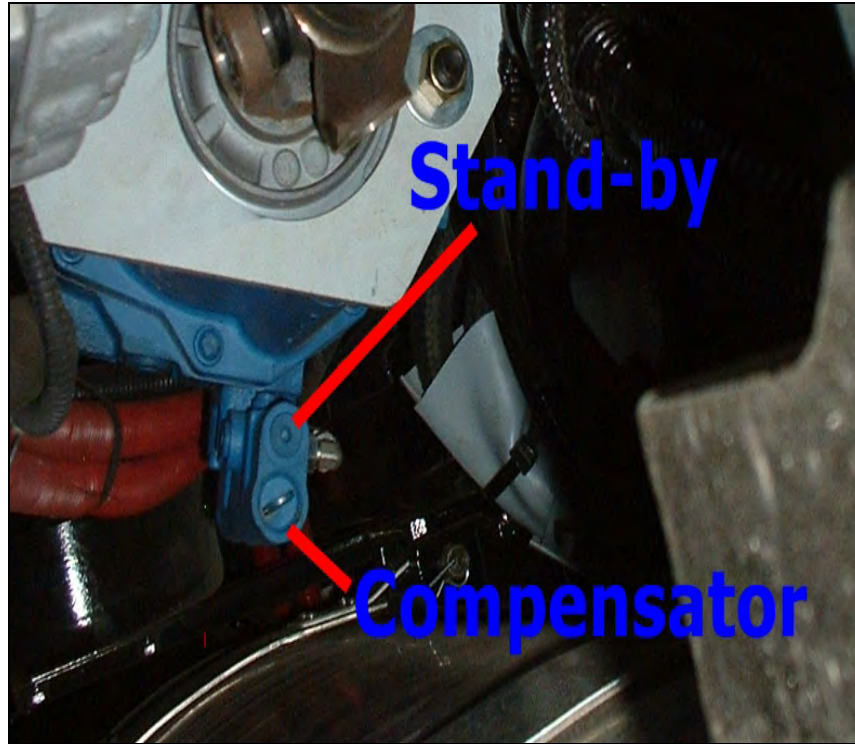
The standby pressure needs to be checked first to ensure all of the other pressures will be set properly. Bring the system up to normal operating temperature before checking pressures.

Install the gauge into the test port on the curbside outrigger. Start the truck, engage the PTO, and make sure the Outrigger/Unit selector is selected to Outrigger. Wait for the reading on the pressure gauge to stabilize (this may take a minute or more). This is the standby pressure and should read 550-600 psi.

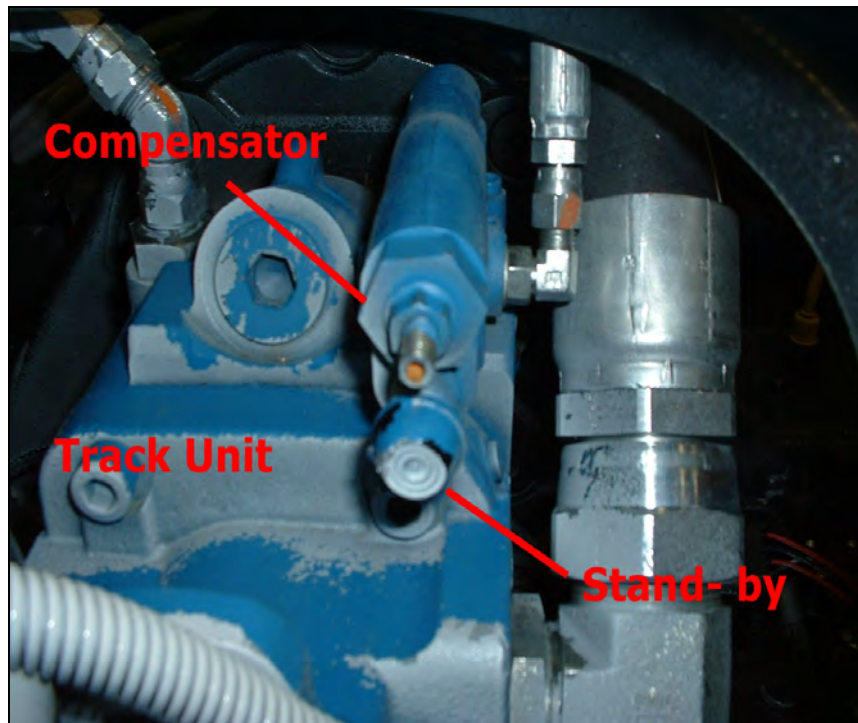


If the standby pressure needs adjustment, go to the pump and locate the adjustment (Reference the pictures on the next page for location). Remove the Allen head plug with a 5/32" Allen wrench and then use a 1/4" Allen wrench to adjust the pressure. When standby pressure is set correctly reinstall the plug.

Truck Chassis



Track unit



Step 2

Checking the Compensator Pressure - Large pump: 3300 psi

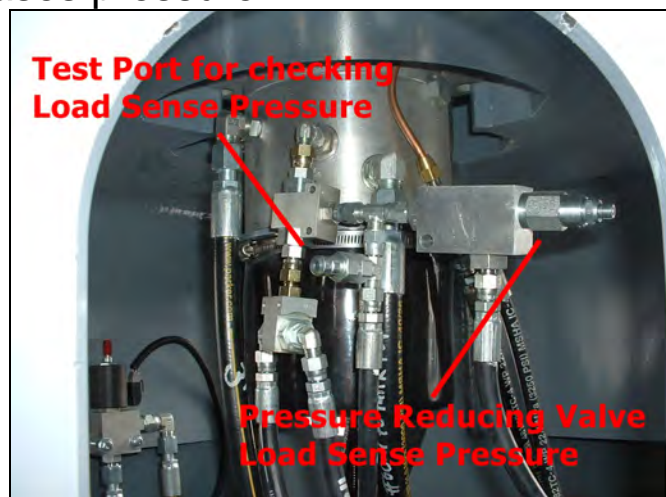
With the pressure gauge still installed in the test port at the curbside outrigger valve, turn the load sense relief located on the bottom of the collector block on port 5 in to the maximum setting (see Step 3 graphics). Run the outrigger up and dead-head the pressure. The reading on the pressure gauge should be 3300 psi for the compensator

Turn the compensator adjustment screw clockwise (CW) to increase and counter-clockwise (CCW) to decrease pressure.

Step 3

Checking and Setting Load Sense Pressure: 3000 psi

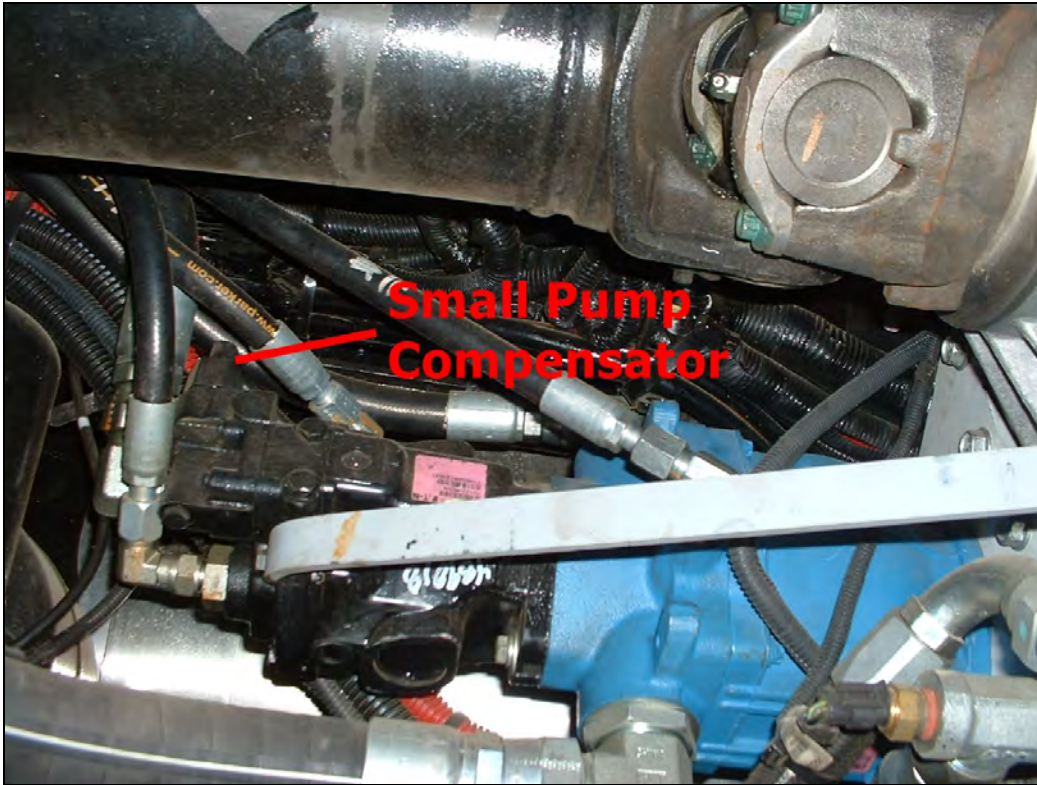
Locate the load sense pressure reducing valve and install the pressure gauge on the quick coupler or remove the quick coupler and plumb in a gauge where the quick coupler was installed. Dead-head the outrigger up and set pressure reducing valve to 3000 psi. CW increases pressure and CCW decreases pressure.



Step 4

Check and Set Small/Leveling Pump Pressure: 3000 PSI

Locate and turn tool pressure reducing valve in on the tools at the top controls. Install the pressure gauge on the tool work port and check pressure. If pressure needs to be adjusted, locate the compensator on the small pump and adjust (CW to increase pressure, CCW to decrease pressure). Reset the tool pressure to the proper tool specifications after the small/leveling pump compensator is set.



Step 5

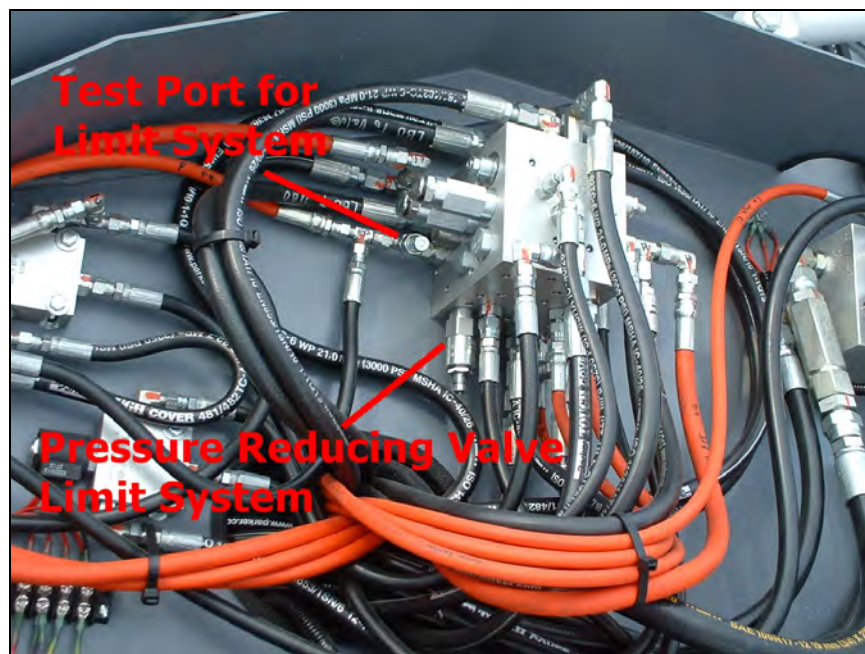
To test/set the remaining pressures, the outriggers must be fully deployed. Set the unit up for operation with the outriggers extended.

Step 6

Checking Limit System Pressure: 500-700 PSI

The pressure for the limit system comes from the small pump which runs the level/options system and runs off of the outrigger interlock system.

Remove the cover located street side on the turret that encloses the limit manifold. Locate the test port and the pressure reducing valve. The test port is located on the left side of the limit manifold and the pressure reducing valve is on the left side on the bottom.



Step 7

Checking the Single Stick and Individual PA (Power Assist):

Hydrocontrol control Valve - 450-500 PSI (2)

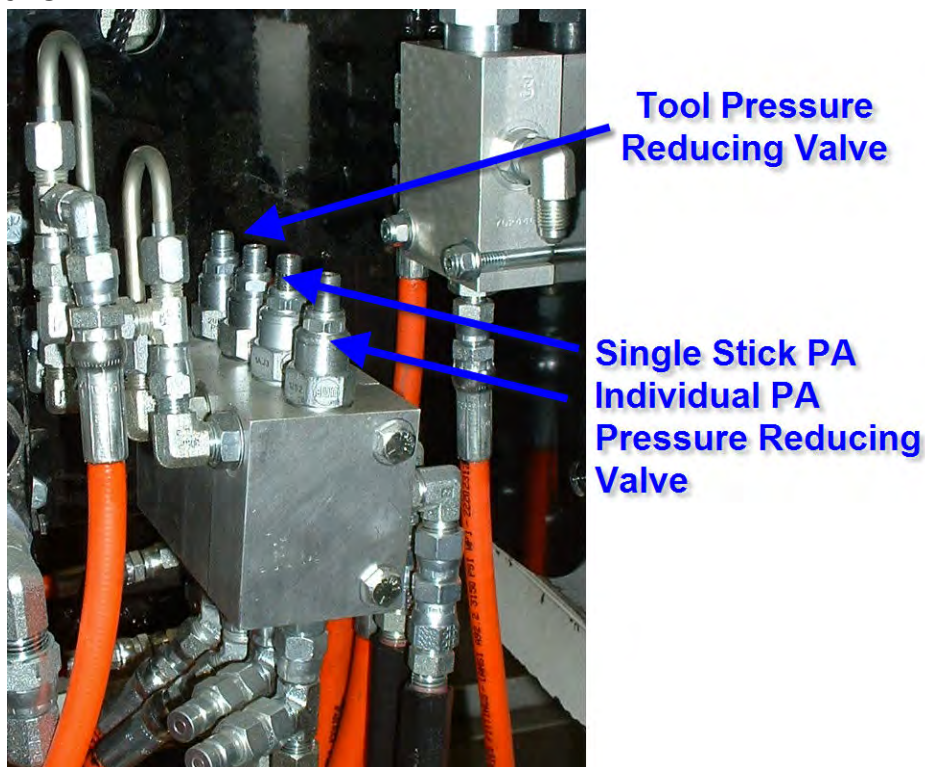
Parker control Valve – 600-800 PSI (2) Prior 11-07

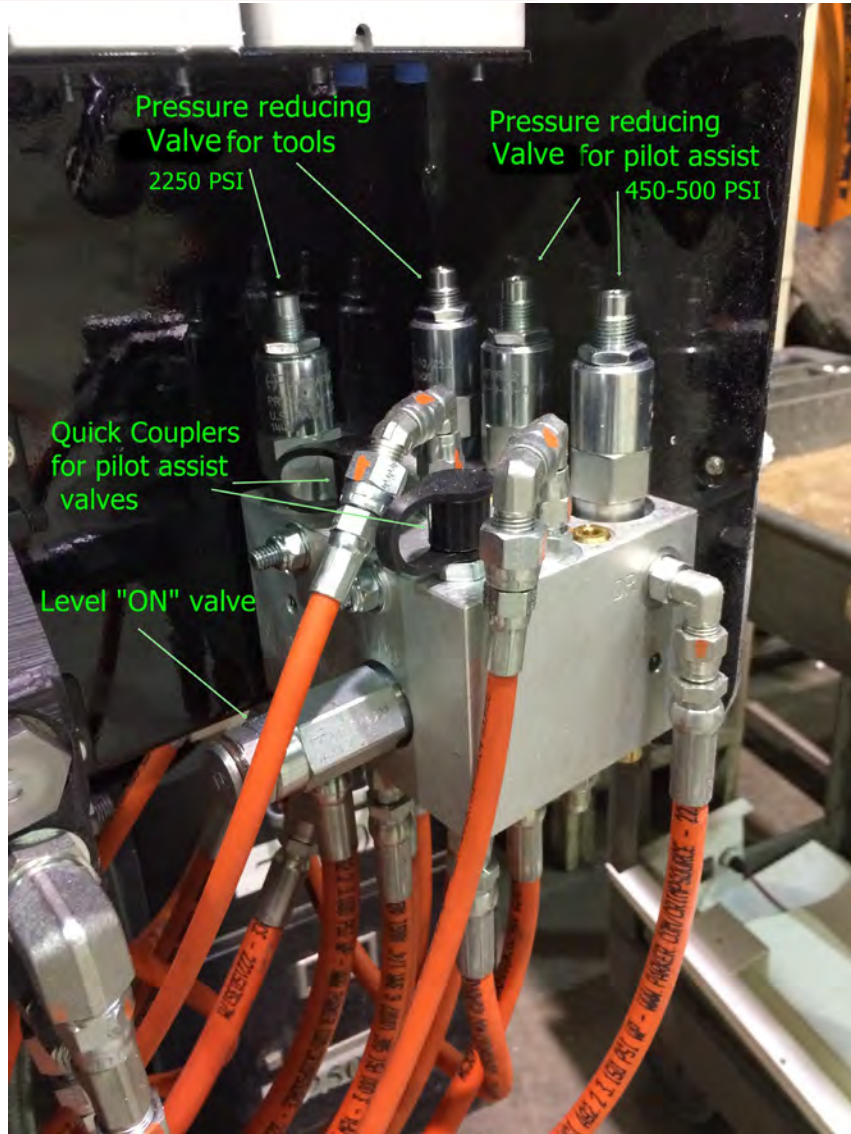
Remove the top control cover to access the pressure reducing valves.

Install a gauge on the test port for the function being tested (trace hose connected to the test port to determine the function).

Engage the function to allow pressure to the pressure reducing valve, (keep it engaged while checking) and set accordingly.

Turn CW to increase the pressure and CCW to decrease the pressure.





Step 8

Reset Tool Pressure at the Bucket and check tool pressure at Jack Valve:

Install a flow meter, with a shut-off valve, on the tool pressure coupler with a gauge on the pressure side of the flow meter and opposite the flow meter to the tool return. Activate the tool valve.

Check pressure by restricting flow to almost zero and adjust to 2250 psi by turning CW to increase and CCW to decrease the pressure.

