

Service Call:

Optima TC Boom Comp Adjustment

Tools Required:

Open End Wrench - 3/8", 7/16", 1/2",
5/8", 3/4"

3/8" Socket Drive Set

Allen Wrench - 3/32"

Model(s):

Optima TC with Compensation

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.

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Step 1

This adjustment is made to keep the upper boom at or just above horizontal when the lower boom is operated up or down.

This adjustment works best with two technicians when adjusting the compensation. One person operates the unit from the platform while the second person observes the boom orientation and adjusts the compensation. One person can do it, but it requires climbing in and out of the platform multiple times until the adjustment is correct.

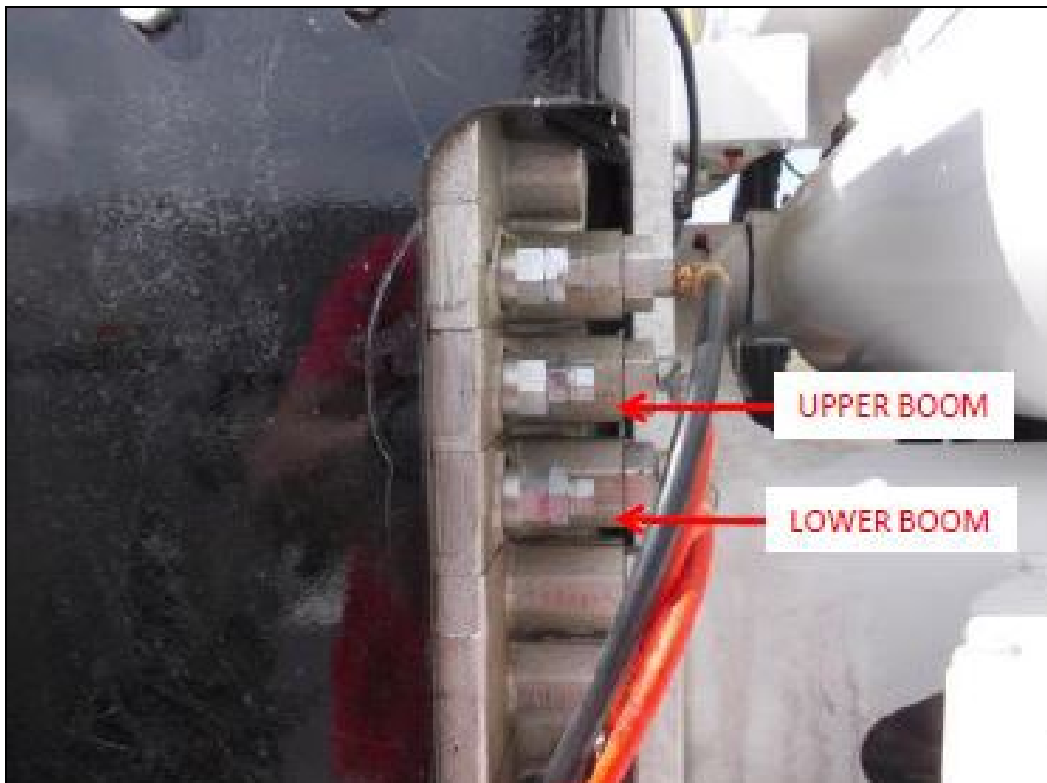
Step 2

Disconnect the boom overload light and remove the lower control valve cover.



Step 3

Loosen the jam nut and adjust the pressure compensators on the upper and lower boom sections so that two (2) threads are showing on the adjustment plug. Tighten the jam nut adjustment.



Step 4

Loosen the upper boom pilot fitting and rotate it slightly to gain access to the handle travel adjustment. Be careful not to interfere with the lower boom control handle travel. Retighten the fitting.

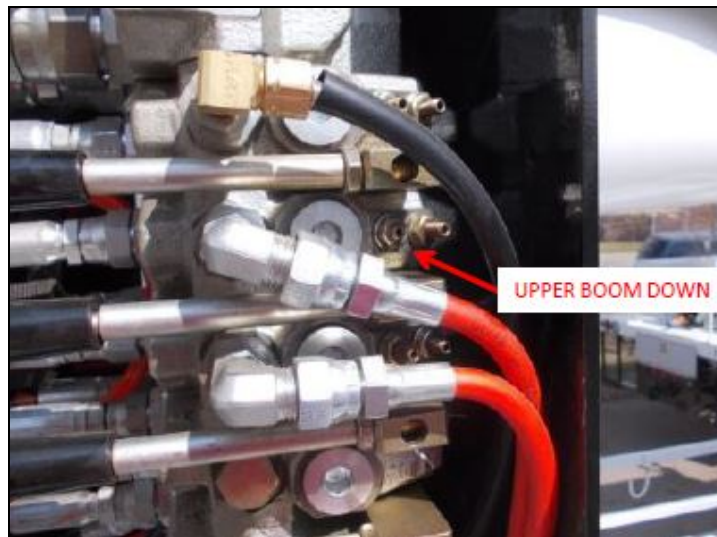


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Step 5

Loosen the jam nut on the upper boom section and back it off until two threads are showing on the set screw. Screw in until the jam nut makes contact with the valve and tighten the jam nut.



Step 6

Position the booms slightly out of the boom rest. Using demand throttle or high throttle on a 2 speed system, operate the lower boom at full speed through the full travel of the boom.

Step 7

Observe the position of the upper boom after Step 6.

If the upper boom is below horizontal:

Slow the **lower** boom down by turning the compensator adjustment counter-clockwise 1/2 of a turn.

Do not adjust the **lower** boom down more than twice. If the **lower** boom has been slowed down twice, then adjust the **upper** boom 1/2 of a turn clockwise to speed up the **upper** boom.



If the upper boom is above horizontal:

Slow the **upper** boom down by turning the compensator adjustment counter-clockwise 1/2 of a turn.

Do not adjust the **upper** boom speed down more than twice. If the **upper** boom has been slowed down twice, then adjust the **lower** boom 1/2 of a turn clockwise to speed up the **lower** boom.

Note: The lower boom will speed up when past vertical. If the upper boom isn't slightly above horizontal at this point it will end below horizontal when the lower boom is at full travel.



Be careful not to turn the compensators in too far to increase boom speed. The unit can begin to demand more flow than the pump is capable of and result in inconsistent boom movement.



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Step 8

Position the unit with the lower boom fully extended, the upper boom horizontal, and high throttle (demand or two-speed) engaged. Operate the lower boom at full speed through the full travel of the boom until either boom is just out of the boom rest.

Step 9

Observe the position of the upper boom after Step 8.

If the upper boom is below horizontal:

Slow the **upper** boom down by turning the handle travel limit screw clockwise 1/4 of a turn.

If the upper boom is above horizontal:

Speed the **upper** boom up by turning the handle travel limit screw counter-clockwise 1/4 of a turn.



Note: Adjust so when the lower boom gets to the rest the upper boom is 1-2 feet out of the rest. Adjust lower boom up first as lower boom down will change.



Verify that the upper boom down works from the lower controls before operating from the platform. The adjustment is very sensitive and may prevent the boom from coming back down after the adjustment is performed.



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Step 10

Perform Step 8 and 9 again as needed to check boom position and adjust as necessary.