

Model: All Commander™ Drawworks Serial #: All	Mar. 5, 2015
Product Bulletin # DW-002	

Johnson Brakes 68HHH Upgrade

Follow these procedures to upgrade Johnson brakes 68HHH on all Commander™ Drawworks according to manufacturer's instructions.

Issue

The air gap for brake pads is critical, but difficult to set. Therefore, it's recommended to upgrade the brakes to make the setting of the air gap easier.

Recommendation

Upgrade Johnson brakes 68HHH as indicated below. Order one kit, Canrig part number AY19515 from RigLine 24/7™ Support.



Warning! Follow proper lock-out/tag-out procedures before performing any work on the drawworks.

Procedure

1. Remove the drill line per rig procedure.



Warning! Ensure the drill line has been removed from the drum before beginning.

2. Start the upgrade with the brake in the **SET** position.
3. Loosen, but do not remove trunnion nuts (x 2). See Figure 1 on page 2.
4. Set the brakes to the **RELEASE** position and cage the actuators. Support the weight of the actuators.

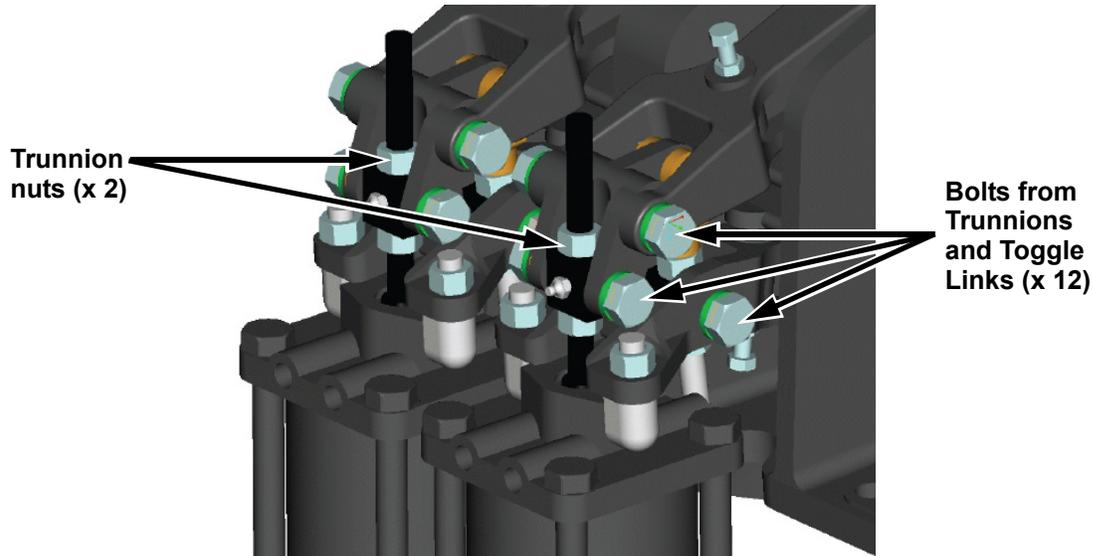


Figure 1: Trunnion and Toggle Links Nuts and Bolts

5. Remove all bolts from the trunnions and toggle links (x 12). See Figure 1.
6. Pull out the following as one sub-assembly: both sets of toggle links, clevis, clevis pin, rod and trunnion.
7. Tighten the tensioning nut against the base of the piston rod See Figure 2 on page 3.



Note: Do not torque nut.



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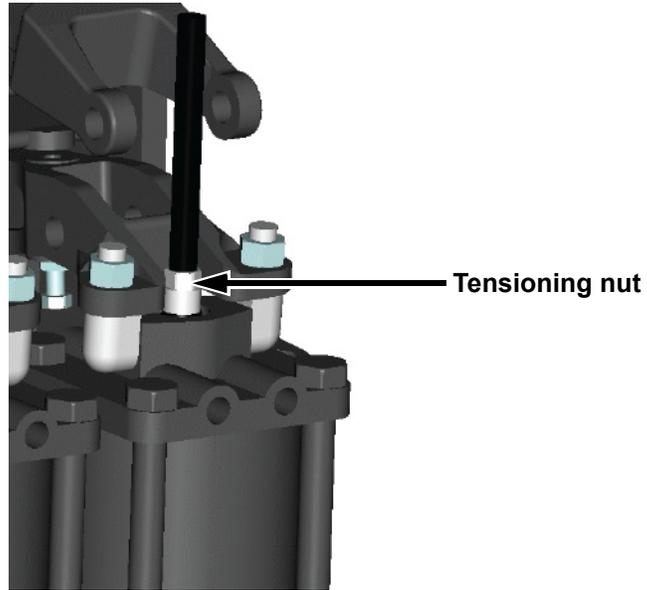


Figure 2: Rod Tensioning Nut

8. Replace toggle levers with the upgrade parts. See Figure 5 on page 6.



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9. Perform steps below in the following sequence:

- a. Tighten nut.
- b. Slide trunnion block back on.
- c. Fix toggle link in place. Follow order A, B, C as indicated in Figure 3.

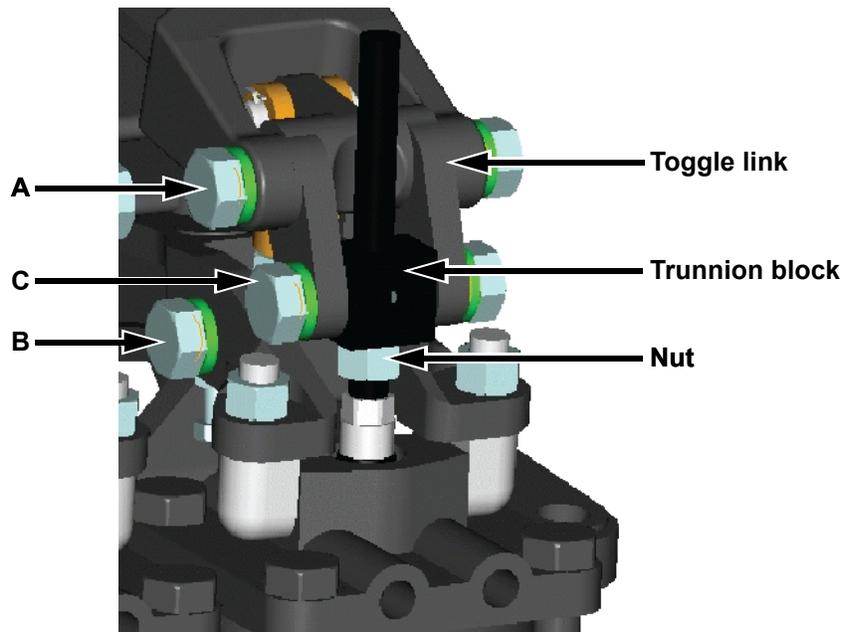


Figure 3: Toggle Link, Trunnion Block, and Nut



Warning! Ensure the drill line has been removed from the drum before beginning.

10. Torque all trunnion bolts to 410 ft-lb.
11. Tighten all bolts. Torque tension nuts to 200 ft-lb. See Figure 3.



Note: Tensioning nuts must be torqued last. See Figure 4 on page 5.

12. Proceed to adjust the air gap as per Johnson manual.
13. Replace the drill line per rig procedure.

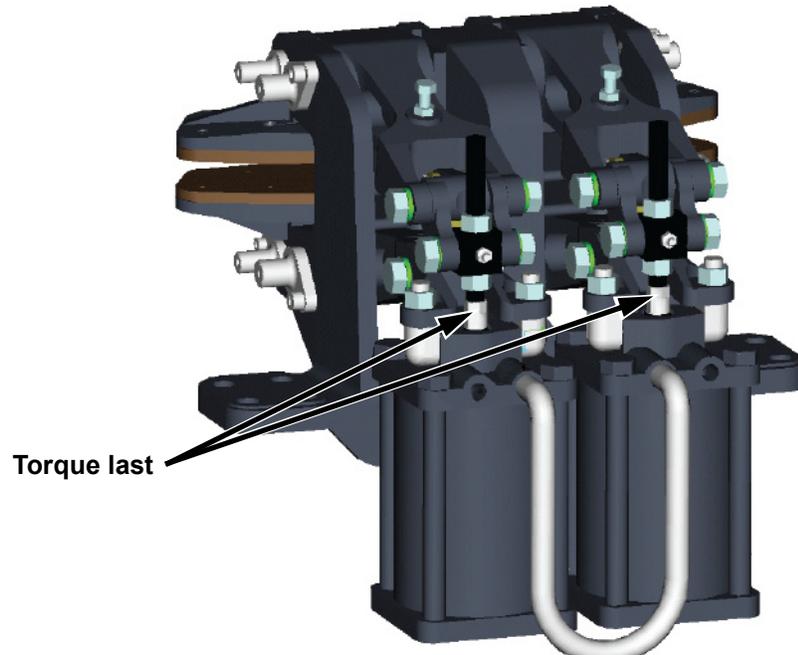


Figure 4: Torque tensioning nuts last.



Warning! Ensure the drill line has been removed from the drum before proceeding.

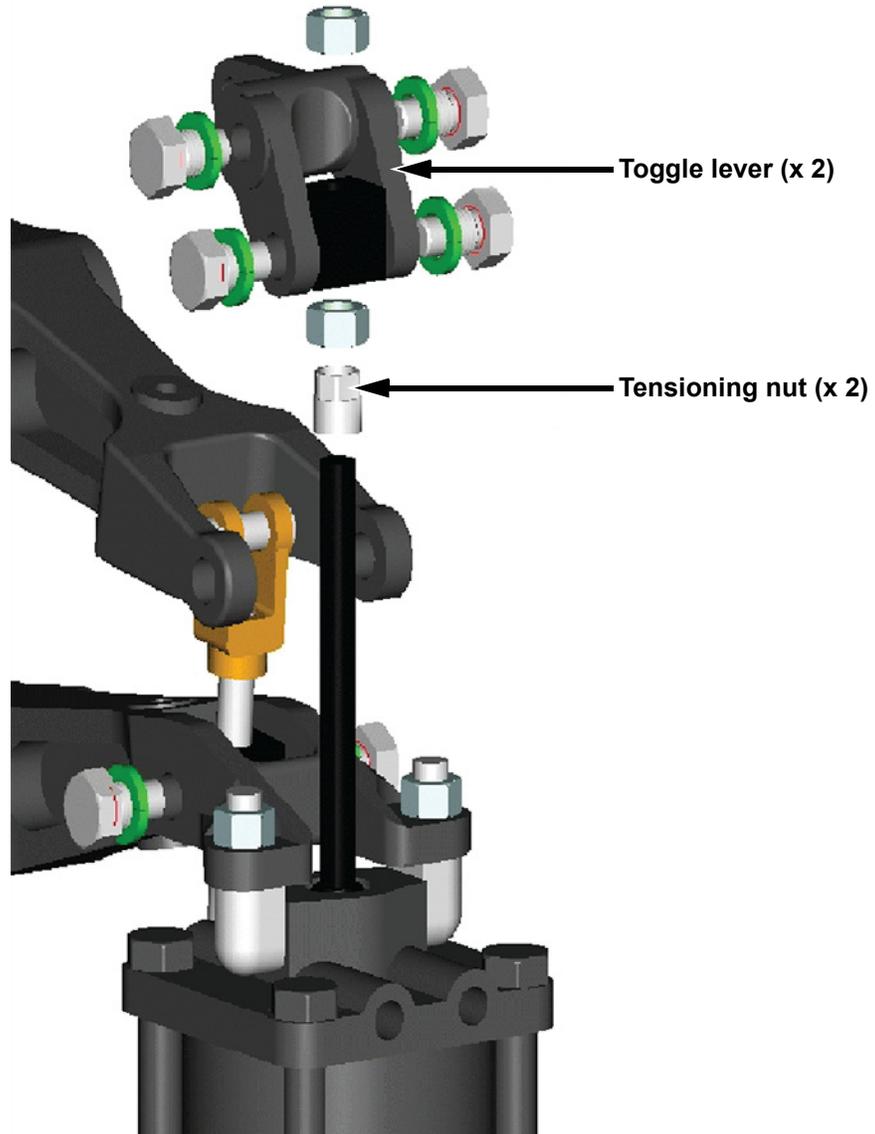


Figure 5: Exploded View



Warning! Ensure the drill line has been removed from the drum before beginning.