



MANUFACTURER'S REPRESENTATIVE
Specializing in the Water and Wastewater Industry

SERVICE BULLETIN

CLEARANCE ADJUSTMENT – GORMAN-RUPP SUPER T-SERIES PUMPS

This Service Bulletin shows how to properly adjust the impeller to wearplate clearance on a Gorman-Rupp Super T-Series pump. Adjusting the clearance is an important preventative maintenance task to maintain pump flow and efficiency.



Tools Required

- 12-inch adjustable wrench
- $\frac{3}{4}$ -inch wrench or ratchet with $\frac{3}{4}$ -inch socket
- Small putty knife or blade



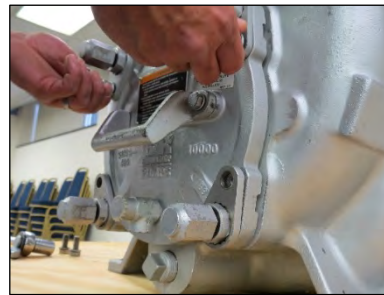
WARNING

Before attempting to adjust pump clearances, disconnect or lockout the power source to ensure that the pump will remain inoperative. Follow proper lockout/tag-out procedures. If the application involves volatile, corrosive or hazardous liquids, wear protective safety equipment, such as goggles, gloves and apron when servicing the pump.

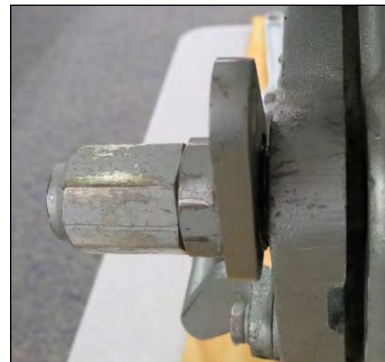
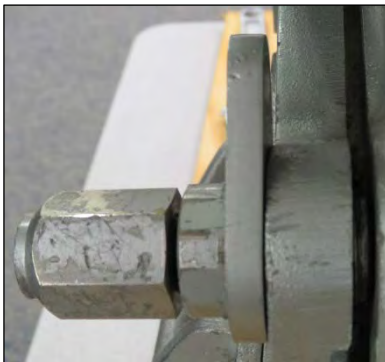


Clearance Adjustment Instructions

1. Isolate pump from the power source and close all valves on suction & discharge piping.
2. Once power is turned off, test pump using the HOA (Hand/Off/Auto) switch to ensure the pump is isolated from the power source
3. On the back cover plate, loosen the four back cover nuts (acorn nuts).
4. Remove the four hex bolts with lock washers that hold the locking collars in place.



5. Rotate each locking collar and adjustment screw counter-clockwise until the adjustment screw does not protrude out of the back cover plate and the hex head bolt holes line up.



6. Install the hex bolt in the upper left and lower right corners of the cover plate (hand tight).



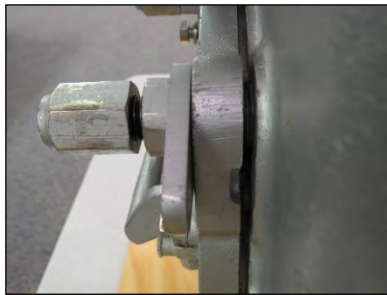
7. Rotate the upper left and lower right back cover nuts (acorn nuts) evenly in a clockwise motion until you are unable to turn the pump shaft by hand. This is zero clearance between the impeller and wearplate. If zero clearance cannot be achieved using steps 1-7, proceed to step 14.



8. Rotate the upper right and lower left locking collar and corresponding adjustment screws clockwise until the adjustment screws touch the pump casing.



9. Without loosening or moving the adjustment screw, remove the locking collar and reinstall so that the hex bolt hole on the back cover plate and locking collar line up. If they do not line up, place the hole on the locking collar on the counter clockwise side of the hole in the back cover plate and adjust (rotating clockwise) to make the bolt hole and locking collar line up.



10. The locking collar is designed such that each v-notch is 5 thousandths of an inch (0.005"). Gorman-Rupp's suggested clearance between the impeller and wearplate is to be between 15-25 thousandths of an inch. On the upper right and lower left locking collar, remove the collar without moving the adjustment screw and rotate counter clockwise three notches to reflect 15 thousandths of an inch of clearance.



11. Loosen the back cover nuts (acorn nuts) on the upper left and the lower right of the back cover plate.



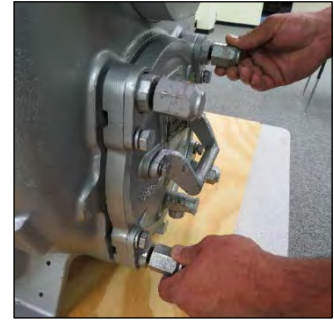
12. Rotate the upper left and lower right adjustment screw and locking collar as one unit clockwise until the hex bolt holes line up. Install the corresponding hex bolts and lock washers using an adjustable wrench.



13. Rotate the upper left and lower right adjustment screws and locking collars until they touch the pump volute. Adjust the locking collar without moving the adjustment screw so that the hex bolt holes line up or are offset to the counter clockwise side. Using an adjustable wrench turn the adjustment screw and locking collar as one unit clockwise to allow the hex bolt and locking washer to be installed. This process ensures that the cover plate is square and true. Once everything is put back together and tightened, perform a shutoff head test to confirm proper adjustment has been completed.



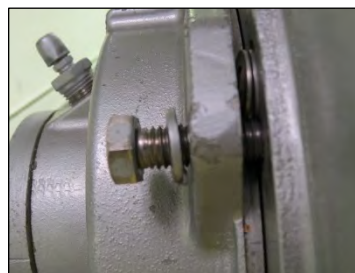
14. If while performing step 7, the back cover plate bottomed out on the pump volute and the pump shaft can still be manually turned, it is because there is no clearance adjustment left on that side of the pump. On Gorman-Rupp's Super-T Series pumps, additional adjustment can be achieved from the shaft side of the pump. Start by loosening the back cover nuts.



15. On the shaft side of the pump, loosen and remove the four $\frac{3}{4}$ -inch hex bolts with lock washers holding the assembly to the pump volute.



16. Install the one of the $\frac{3}{4}$ -inch hex bolts on the other threaded bolt hole next to the one it was removed from and tighten with wrench or socket until spacer between rotating assembly and pump volute becomes loose.



17. Remove spacers from each bolt, one at a time and set aside. These will be needed for future use after an impeller and wearplate replacement.



18. Remove the bolt from step 16 and put it back in the unthreaded hole from where it was removed.



19. Tighten all four bolts to the assembly evenly until the assembly touches the pump volute (bottoms out). This process pushes the rotating assembly into the back cover plate achieving zero tolerance. Once this process is completed, go back to step 8 and proceed.



IF ZERO TOLERANCE CAN NOT BE ACHIEVED AFTER PERFORMING THE ABOVE PROCEDURES, THE PUMP IMPELLER AND WEARPLATE SHOULD BE REPLACED.

*** For more information, please contact Envirep's Service Department @ 717-761-7884 or email a request to service@envirep.com. ***

Envirep maintains a large inventory of genuine factory parts for **Gorman-Rupp** pumps and equipment for the water and wastewater industry. Please call our dedicated parts sales team for assistance in selecting and ordering parts for your equipment.