

Instructions for replacing the vacuum blower motor shaft seal

1. Remove the bolts around the perimeter of the blower housing and remove housing cover.



2. Remove the nut clamping the impeller to the motor shaft.



3. Remove the hydraulic hoses going to the motor. Plug hoses if possible to prevent dirt from getting in. Make sure you know which hose goes where when you're ready to reinstall.
4. Loosen the nuts attaching the motor to the housing.



5. If you have the right puller equipment, use the 3/8-16 threaded holes and a puller to pull the impeller off the motor shaft. This device can also easily be made Otherwise, go to step 6.



6. If you don't have the right pulling equipment, have an assistant pry on the impeller while you tap on the motor shaft to break free the impeller from the motor shaft. Be careful not to damage the motor shaft threads as you tap.



7. Once the impeller breaks free, remove the motor completely from the assembly and take to a clean work area.
8. Remove the 4 bolts clamping the motor together.



9. Carefully pull the shaft housing apart from the rest of the motor.



10. Remove the snap ring in front of the shaft seal.



11. Drive the shaft seal out of the housing. Be careful not to gouge the housing.



12. Clean the housing before installing the new seal.



13. Use a socket slightly smaller than the diameter of the seal to carefully drive new seal into the housing. Make sure the seal goes in straight.



14. Reassemble in the reverse order as disassembly. Make sure none of the other seals fall out of place as you put the motor back together. If you notice any damage to any of the other seals, replace them as well with the parts included in the seal kit.
15. When installing the impeller on the shaft, tighten as tightly as you are able without using any leverage to prevent the impeller from rotating.
16. Check to make sure all bolts are tight.
17. Start blower slowly to make sure there are no leaks or issues with the assembly.

Here are some ways to reduce the risk of future seal failures:

1. Reduce back pressure on case drain line
 - a. Make sure it's connected to the tractor sump.
 - b. Make sure you're using 3/8" (-06) or larger hose.
 - c. Check to make sure there are no obstructions in the hose near the crimp connections and fittings at each end.
 - d. Use a flat face quick coupling instead of a standard pioneer coupling at the tractor sump connection. These couplings have less pressure drop. Parker FF series is a good option. Nipple P/N: FF-372-8FO and Coupler P/N: FF-371-8FO.
2. Minimize vacuum speed
 - a. When starting the blower for the first time, turn the hydraulic flow control way down and gradually ramp up the blower speed until the vacuum pressure is around 13" (meter disks unloaded). This should roughly be equivalent to 20" of vac with the meters loaded and planting. Do not increase the hydraulic flow beyond this unless it proves to be insufficient when planting.
 - b. Check to make sure there are no major vacuum leaks. This can be done by feeling with your hands for air flow around all couplings and other likely leak sources. Repair leaks as much as possible.
 - c. Rarely should you ever need vacuum pressure in excess of 20" while planting. Only if you're seeing a lot of skips should you increase your vacuum beyond that. Otherwise, you may want to even reduce your vacuum pressure as long as skipping doesn't become excessive.