



2" Cast Iron Wet Seal 201 Series Pump Instruction Manual

201PIH5W, 201PI6PROW,
201POIW, 201PBIW

Read these instructions and the instructions covering the operation of the pump drive unit. Do not operate the gas engine (if so equipped) until you have put oil in the engine. Do not operate the wet seal pump until you have filled the wet seal reservoir 3/4 full (the seal assembly should be submerged) with a 50% ethylene glycol (anti-freeze) and 50% water mixture.

Check the coolant mixture level in the wet seal reservoir after every 5 hours of use, fill reservoir as necessary. Check oil level in the gas engine (if so equipped) after every 5 hours of use, fill reservoir as necessary. Change coolant mixture in reservoir after every 100 hours of use or annually, whichever comes first.

Always fill the pump body with the liquid to be pumped before starting pump. It is not necessary to drain the pump body after use, unless there is a danger of freezing.

Make certain that all hose and pipe connections are air tight. An air leak in the suction line may prevent priming and will reduce the capacity of the pump.

Always place the pump as close to the liquid to be pumped as possible. Keep the suction line short and with few bends. Keep the pump and engine on a level foundation. A poor foundation and a heavy suction hose (made heavier when "primed" full of liquid) could result in a pump "down the hole".

There are important instructions regarding preparing the engine for long periods without use. (Read the engine instruction manual). Under these conditions, drain the pump and wet seal. Refill wet seal with fresh coolant mixture and reinstall fill and drain plugs. Leave all plugs (filter and drain) out of the pump. Always try to store the unit in a heated and dry building.

When pumping dirty water or other liquids containing solids, always use a pump strainer on the end of the suction line. There are no points on the pump which need lubrication. The wet seal assembly is cooled and lubricated by the ethylene glycol/water mixture.



201PIH5W



201PI6PROW

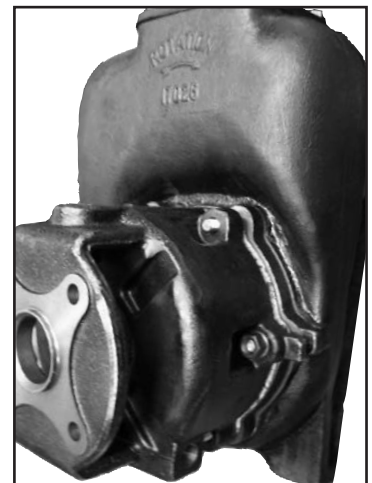
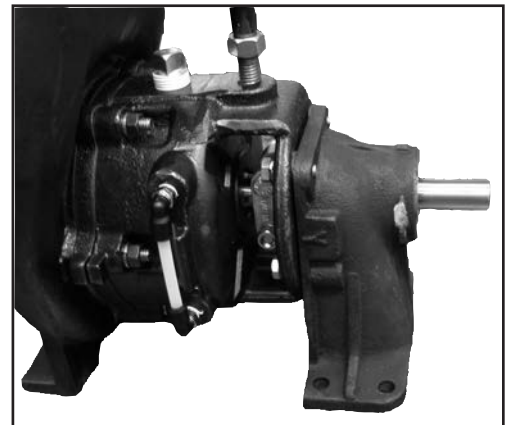
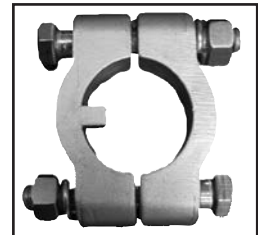
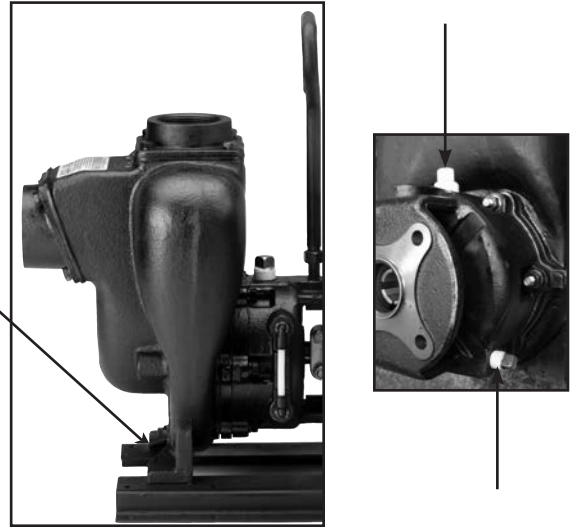
Disassembly Instructions:

1. Drain all fluids from the pump. Remove the drain plug from the lower front of the pump housing to drain the pump. Remove fill plug from top of reservoir. Remove drain plug from lower side of reservoir.

2. Using a 9/16" socket or wrench, remove the impeller clamp assembly from the pump.

3. Remove drive unit from the pump. This is done by using a 9/16" wrench to remove the four 3/8" bolts that hold the drive unit to the wet seal reservoir adapter. Once the bolts are removed, separate the drive unit from the pump.

4. Remove wet seal assembly from pump housing. This is done by removing the six 3/8" nuts and 3/8" lock washers from the wet seal reservoir adapter. The wet seal assembly can then be pried away from the pump housing and removed. Remove the handle from the wet seal adapter.

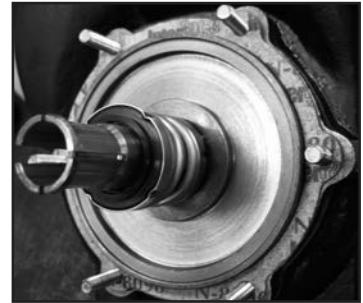


Disassembly Instructions:

5. Remove impeller from the wet seal assembly by pushing the wet seal shaft from the back of the assembly.



6. Remove cover plate from the wet seal assembly. It may be necessary to pry the cover plate away from the reservoir by using the pry tabs located on the cover plate.

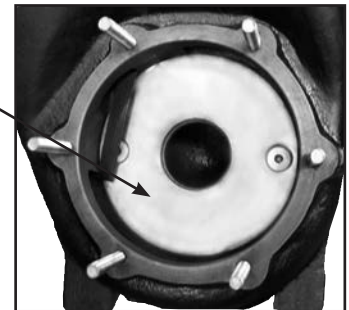


7. Remove the seal assembly from the wet seal assembly at this time.



8. Inspect the wear plate and replace or repair as necessary.

9. The inlet and outlet flanges and gaskets can be inspected and replaced as necessary.



Assembly Instructions:

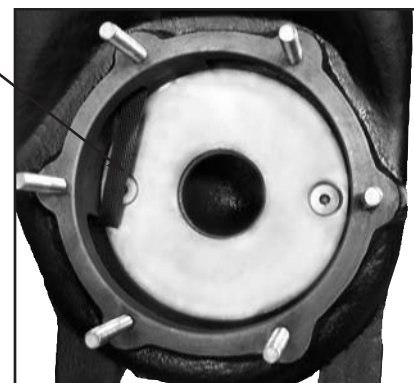
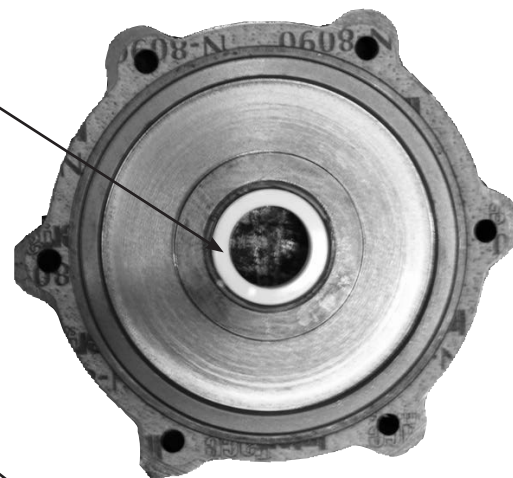
Clean all parts being reused in parts washing solvent before reassembly. Remove all remnants of old gaskets. Rinse and clean pump of all residue from liquids previously pumped. It may also be necessary to sandblast corroded components to remove rust from mating surfaces.

1. Install inlet and outlet flanges with new gaskets as necessary.

2. Replace wear plate as necessary. It is highly recommended that the wear plate bolts be secured with Loctite 241 (blue). Securing the bolts in this fashion will not allow the bolts to vibrate loose during pump operation.

3. Install the ceramic/viton seal halves into the reservoir and cover plate. Lubricate the O. D. of the viton seal with petroleum jelly and install the seal halves into the bores of the respective components by using a slight pressure with your thumbs. DO NOT STRIKE THE SEAL HALVES AT ANY TIME, OTHERWISE SEAL FAILURE WILL OCCUR.

4. A shim is used to set the clearance between the impeller and wear plate. Any shim with a thickness of .030/.040 can be used. An ideal shim is 1/2" wide piece of No. 21 gauge sheet metal.



Assembly Instructions:

5. Install gaskets to front and back of cover plate and install cover plate on the pump housing.

6. Install seal spring assembly on the impeller shaft. Lubricate the shaft and viton portion of the seal with petroleum jelly. Slide onto shaft using your thumbs.

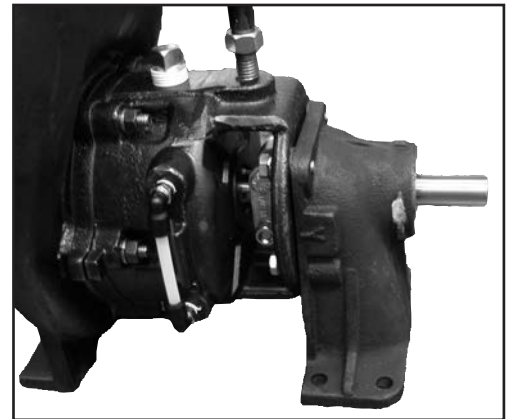
7. Mate the reservoir adapter with the cover plate. This is done by sliding the reservoir over the shaft and onto the cover plate. Align the bolt patterns of the two parts, also align the components such that the fill plug hole of the reservoir is facing up.

8. Install six 3/8 lock washers and 3/8" nuts onto the six wet seal housing studs and tighten.

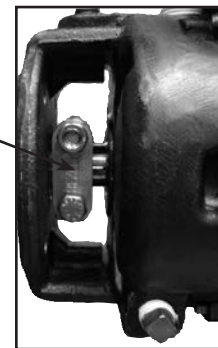


Assembly Instructions:

9. Mate the wet seal and pump assembly to the drive unit. Insert the shaft of the drive unit into the wet seal shaft. Install four 3/8" bolts with lock washers through the wet seal adapter and into the drive unit.

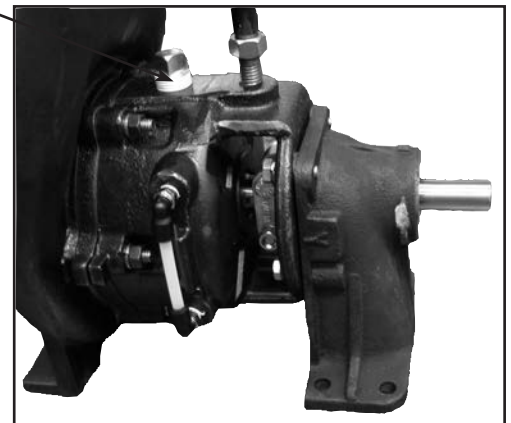


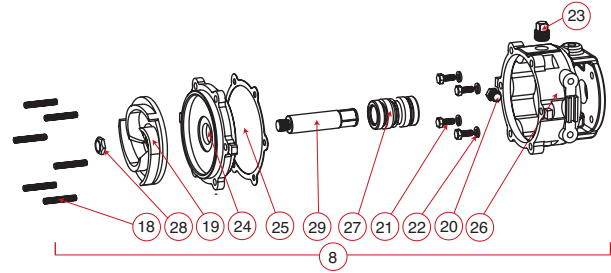
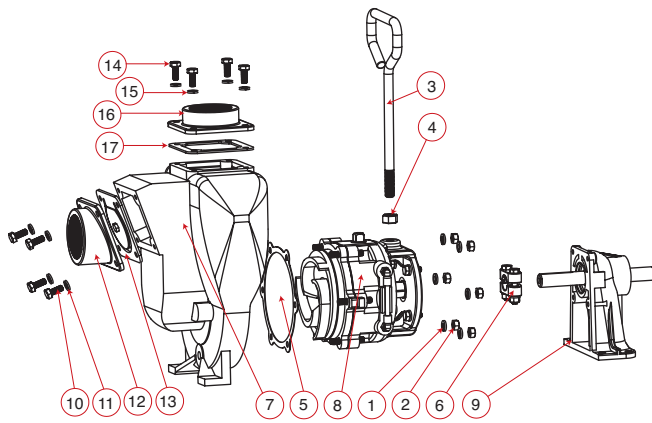
10. Install the impeller shaft clamp over the serrated tines of the wet seal shaft. Lubricate the clamp bolts with anti-seize thread lubricant and tighten to 40 ft.lb. minimum. It may be necessary to further tighten the clamp depending upon drive unit size and pump load during operation.



11. Fill the reservoir $\frac{3}{4}$ full with a 50% water & 50% ethylene glycol (anti-freeze) mix. The fluid level should cover the top of the seal assembly. Install the $\frac{3}{4}$ " fill plug using a thread sealant.

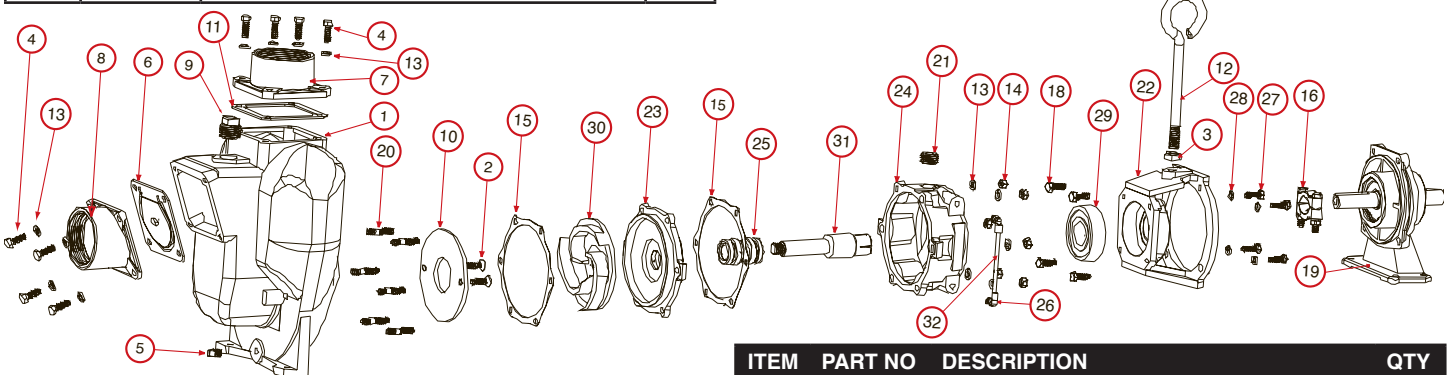
12. Remove the shim from the pump.





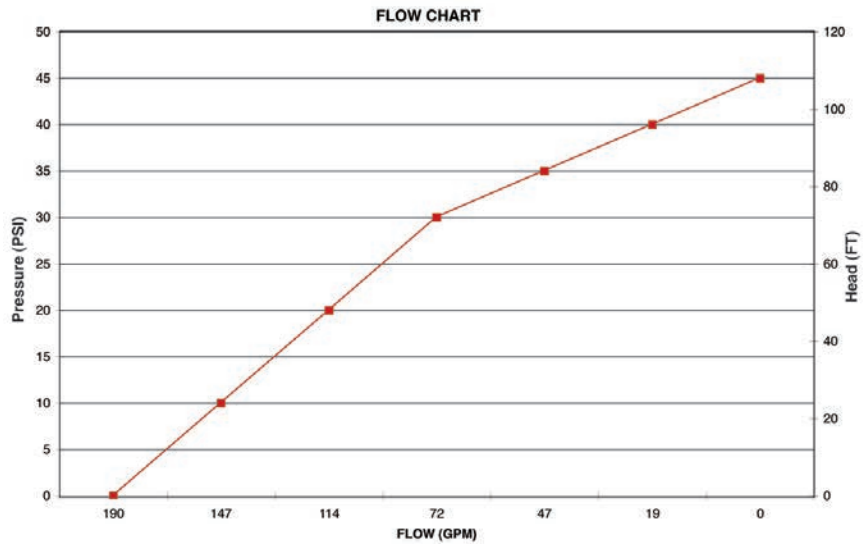
ITEM	PART NO	DESCRIPTION	QTY
1	V10118	5/16" Lock Washer	6
2	V10119	5/16" -18 Hex Nut	6
3	15022	Handle	1
4	17010	1/2" Hex Nut	1
5	17018	Gasket Adapter	1
6	17123	5/8" Clamp, 3/4" Shaft Assembly Keyed	1
7	17226	Pump Housing	1
8	17200A	Wet Seal Assembly	1
9	12882A	Bearing Pedestal	1
10	17019	5/16" -18 x 3/4" HHCS	4
11	V10118	5/16" Lockwasher	4
12	17002	Inlet Flange	1
13	17016	EPDM Check Valve Gasket Assembly	1
14	17019	5/16" - 18 x 3/4" HHCS	4
15	V10118	5/16" Lockwasher	4

ITEM	PART NO	DESCRIPTION	QTY
16	17000	Outlet Flange	1
17	17013	EPDM Outlet Gasket	1
18	17242	Housing Stud	6
19	17208	Impeller	1
20	17032	1/4" Pipe Plug	1
21	17019	5/16" - 18 x 3/4" Cap Screw	4
22	V10118	5/16" Lockwasher	4
23	17210	1/2" Fill Plug	1
24	17202	Cover Plate	1
25	17018	Gasket Adapter	1
26	17201A	Reservoir	1
27	17235	FKM (viton type) Mechanical Seal Assembly	1
28	17009B	5/8" -18 Impeller Nut	1
29	17206A	Adapter Shaft	1



ITEM	PART NO	DESCRIPTION	QTY
1	17026	Pump Housing	1
2	17130	Flat Head C Sink Screw	2
3	17010	1/2" Hex Nut	1
4	17019	5/16" Cap Screw	8
5	17032	1/4" Drain Plug	1
6	17016	EPDM Gasket	1
7	17000	2" Outlet Flange	1
8	17002	2" Inlet Flange	1
9	18002	1" NPT Plug	1
10	17011	Wear Plate	1
11	17013	EPDM Outlet Gasket	1
12	15022	Handle	1
13	V10118	5/16" Lockwasher	18
14	V10119	5/16" -18 SS Hex Nut	8
15	17018	Gasket Adapter	2
16	17023	5/8" Clamp for 3/4" Shaft Assembly	1
16	17123	5/8" Clamp for 3/4" Shaft Assembly Keyed	1

ITEM	PART NO	DESCRIPTION	QTY
16	17024	7/8" Clamp for 3/4" Shaft Assembly	1
18	17040	5/16" - 24 x 1" HHCS	4
19	12882A	Bearing Pedestal	1
20	17242	Housing Stud	6
21	17210	1/2" Fill Plug	1
22	17203A	Wet Seal Adapter	1
23	17202	Cover Plate	1
24	17201	Reservoir	1
25	17235	FKM (viton type) Seal Assembly	1
26	17211	3/16" Legris Male Elbow	2
27	17019	5/16" - 18 x 3/4" Bolt	4
28	V10118	5/16" Lockwasher	4
29	12213A	Bearing	1
30	17208	Impeller	1
31	17206	3/4" Sleeve Drive	1
32	17212	Liquid Level Tube	1
33	17200	Wet Seal Assembly Conversion	1
N/S	17100W	Pump Repair Kit(consists of 2, 10,15,25,29-32)	1



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