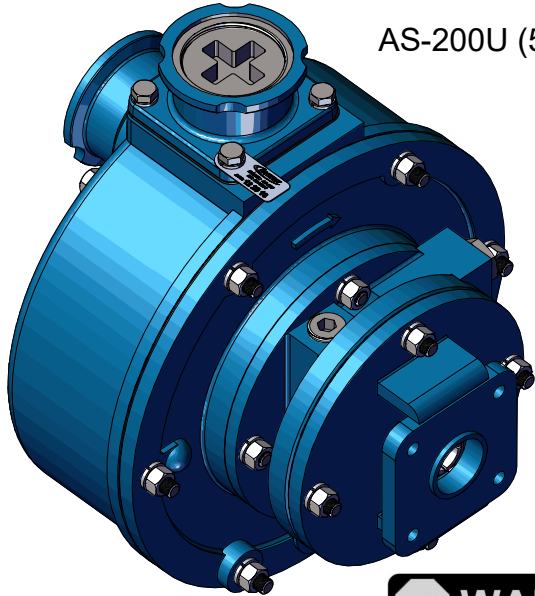
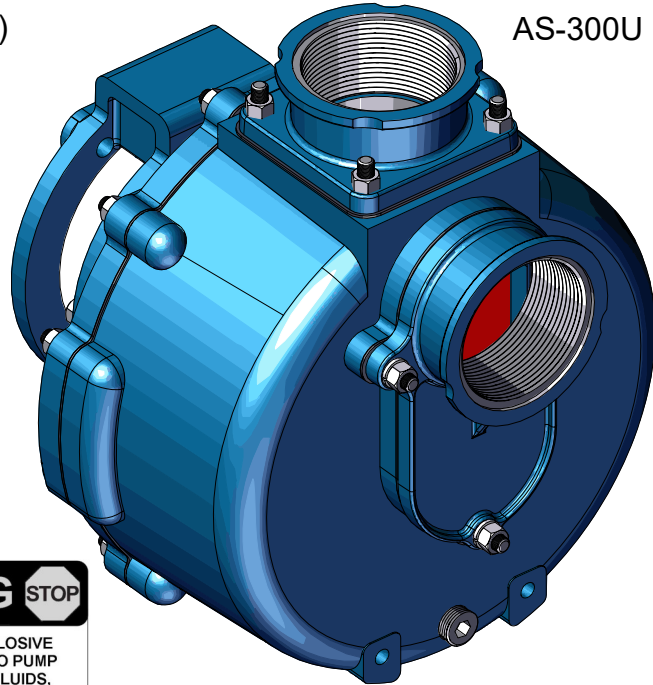


OWNER'S MANUAL

Parts & Instruction Manual Centrifugal Pumps



AS-200U (5281483)



AS-300U (5281484)

STOP WARNING STOP
 DO NOT USE PUMP IN AN EXPLOSIVE ENVIRONMENT. DO NOT USE TO PUMP FLAMMABLE/COMBUSTIBLE FLUIDS, GASOLINE, KEROSENE, FUEL, OIL, ETC.

General Information

Thank you for purchasing this product. The purpose of this manual is to assist you in operating and maintaining your newly purchased product.

Warranty/Parts/Service

Products are warranted for a two year unconditional warranty from date of purchase.

Your authorized dealer is the best source of replacement parts and service, always remember to give the following information...

- Correct Part Description and/or part number
- Model #/Serial # of your sprayer

Part descriptions and numbers can be obtained from the illustrated parts list section(s) of this manual.

Whenever you need parts or service, contact your distributor/dealer first. For warranty work, always take your original sales slip or other evidence of purchase date, to your distributor/dealer.



WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.



WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov



www.agspray.com

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IF YOU SHOULD HAVE A QUESTION OR EXPERIENCE A PROBLEM WITH YOUR AG SPRAY PRODUCT GIVE US A CALL

BAKERSFIELD, CA 877-724-2236	COLUMBUS, NE 800-274-1025	DOTHAN, AL 800-227-4098	FARGO, ND 800-373-4084	HOPKINSVILLE, KY 800-637-7172
MANKATO, MN 800-722-9376	NEWTON, KS 800-394-7662	PASCO, WA 800-634-2026	TEMPE, AZ 877-974-7170	VISIT US ONLINE @ www.agspray.com

BEFORE YOU CALL, PLEASE HAVE THE FOLLOWING INFORMATION AVAILABLE: SALES RECEIPT & MODEL NUMBER. IN MOST CASES, AN AG SPRAY EMPLOYEE CAN RESOLVE THE PROBLEM OVER THE PHONE

Model Number: _____ Serial Number: _____ Purchase Date: _____

INSTALLATION

Mounting

- The pump should be installed in a clean, dry and well ventilated area, preferably close to the fluid supply
- The pump should be mounted so that the sight window is at the top of the seal reservoir. If necessary, it may be moved to one of the other ports on the seal reservoir
- If the seal reservoir fluid is drained for any reason, a 50/50 mixture of ethylene glycol antifreeze and water should be used to replace it. Fill half way up the window
- Be sure to note the direction arrow cast into the pump body and double check the rotation direction of your power source
- For close-coupling to a motor, engine or pedestal, the following must be observed:
 - The pump must NEVER be used on engines or motors with plain bearings. For use on engines/motors with ball bearings ONLY
 - Make sure to clean and pre-lube the shaft with a light oil prior to sliding into the pump shaft. Do not force, it should slide easily. Investigate any interference
 - Tighten the bolts of the clamp evenly, so that the gaps on each side are equal

Piping

- The pump is not designed to support piping. If piping is used, it should be supported independently of the pump and connected to the pump with a flexible pipe/hose
- It is recommended that new clean pipe be used at installation and be of the same size as the pump ports. For long distances, the pipe size may need to be increased
- The suction pipe should always be sloped upward to avoid creating air pockets in the line

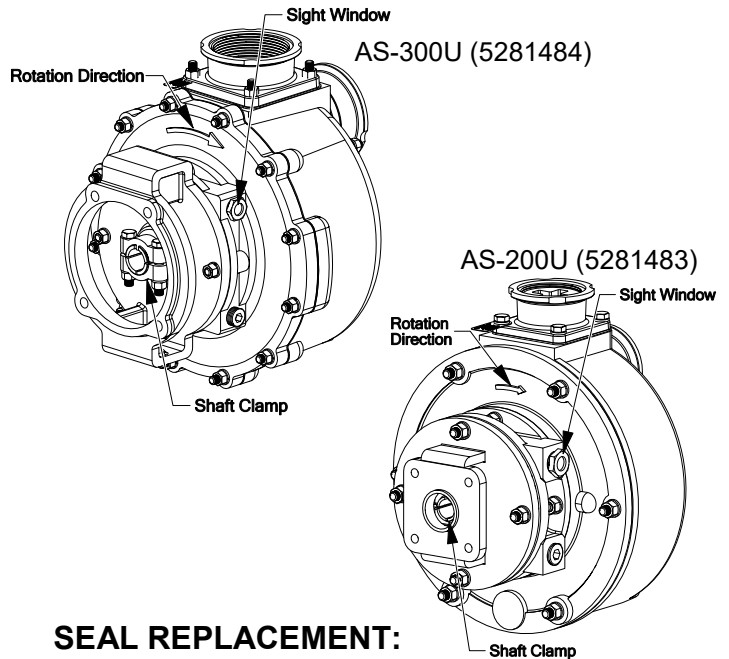
MAINTENANCE:

- Inspect the seal reservoir fluid level using the sight window. It should be above the middle of the window
- If dirty, replace the fluid in the seal reservoir by draining and replacing with a 50/50 mixture of ethylene glycol antifreeze and water. The recommended service interval for this fluid is 100 hours
- If the fluid in the seal reservoir becomes cloudy or loses fluid after use, the impeller seal is leaking and should be replaced
- Inspect the pump frequently for any leaks from the housing gaskets or shaft seal

STORAGE

****IMPORTANT: Keep air out of the pump and keep from freezing**

- Keeping the air out of the pump is the only way to prevent corrosion. Even for short periods of storage, the entrance of air into the pump causes RAPID and SEVERE CORROSION. Freezing temperatures can cause the fluid or water to freeze internally, which can cause severe damage to castings and other components
- To prevent excessive corrosion of the pump's cast iron components, flush the pump thoroughly with FIMCO tank neutralizer and cleaner. Fill with clean water and DO NOT DRAIN. Keep pump sealed to exclude air by placing plugs in the suction and discharge lines to keep the pump full
- For long term storage (more than 2 weeks), use straight RV-antifreeze (which has a corrosion inhibitor) to fill the pump after flushing



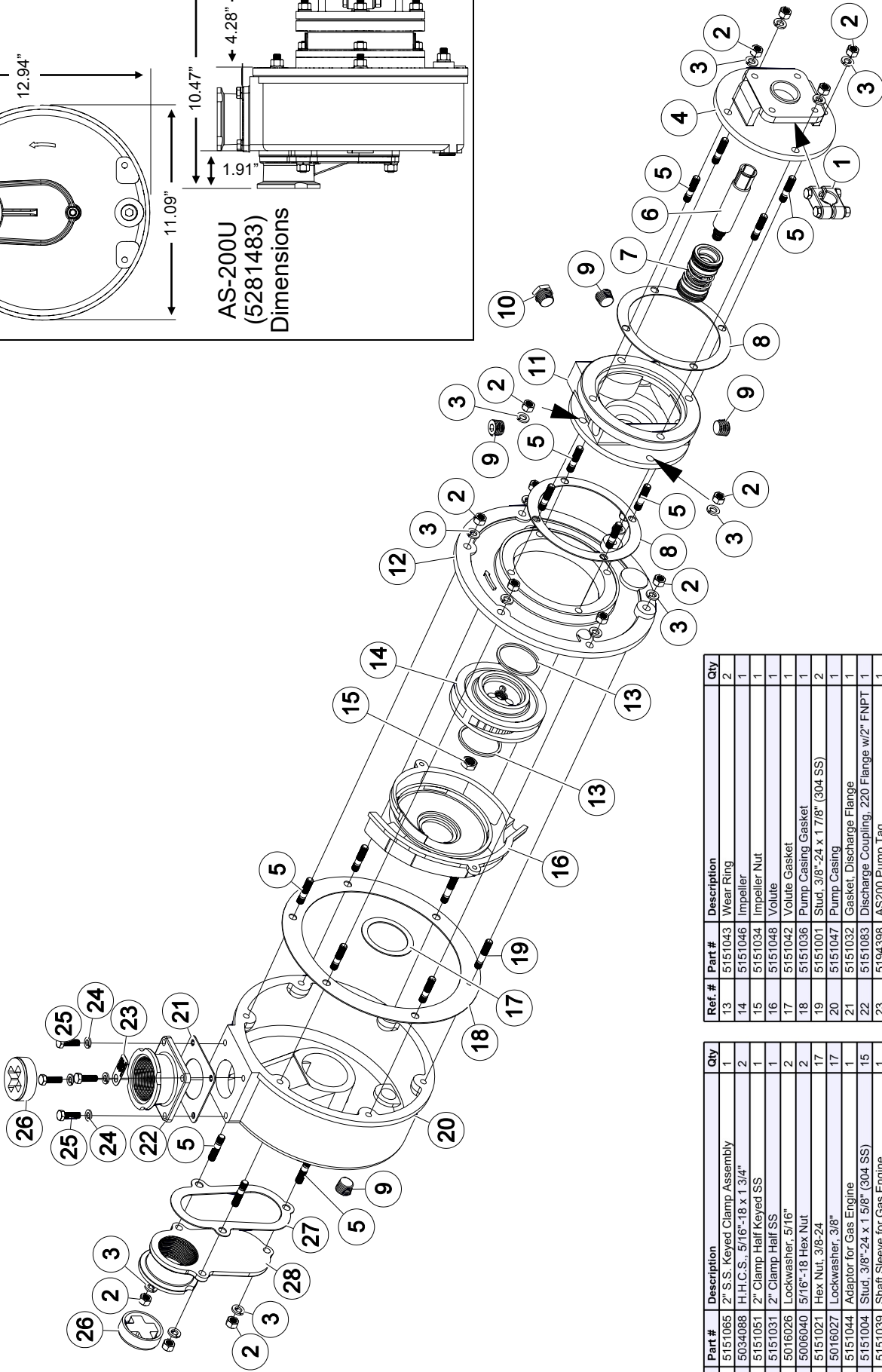
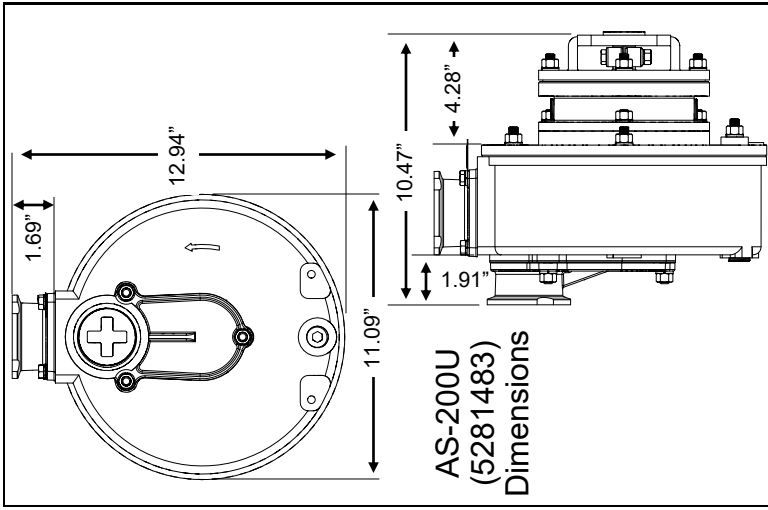
SEAL REPLACEMENT:

1. Loosen the shaft clamp and unbolt the pump adaptor from the engine/motor/pedestal. Penetrating oil should be allowed to soak between the pump shaft and the driving shaft if it is stuck
2. Carefully remove the pump from the engine/motor/pedestal by pulling it straight off the shaft. Do not pry the pump back and forth, as it may bend the tabs of the pump shaft
3. Disassemble the pump by draining the seal reservoir fluid and then removing the motor/engine adapter and reservoir housing
4. Remove the seal seats from the pump castings and carefully clean the counterbores where they fit
5. When re-installing new seal seats, coat the rubber OD with a quality pipe compound and press the seal seat fully into the casting counterbores. The compound will lubricate the seat for installation and prevent corrosion under the seat
6. Using a small hammer and a plastic tube or block on the seal seat, you may lightly tap the seats into the counterbores to make sure they are bottomed out fully
7. Before re-assembly, make sure the ceramic faces (where the rotary seal will touch) are clean
8. Thoroughly clean the shaft and lightly lubricate it with oil or grease before installing the shaft seals and spring onto the shaft
9. Assemble the pump using new rubber gaskets between casting components and replace impeller wear rings as necessary. Note: Wear Rings fit very tightly and must be stretched by hand before being rolled onto the parts
10. Re-install the antifreeze/water mixture as described in the maintenance section

IMPELLER REPLACEMENT:

1. Remove the plumbing from the pump and then the (12) nuts holding the pump housing to the housing back cover. NOTE: the 2" pump has only (6) nuts
2. Remove the housing. Hold the pump shaft stationary and first unscrew the impeller locknut, then the impeller itself (Both have right-handed threads) using a large screw driver inserted in the vanes
 - Be sure to use new rubber gaskets when re-assembling the pump
 - It is also recommended to replace the 2 teflon wear rings on the impeller

AS-200U 2" Centrifugal Pump Exploded View (5281483)



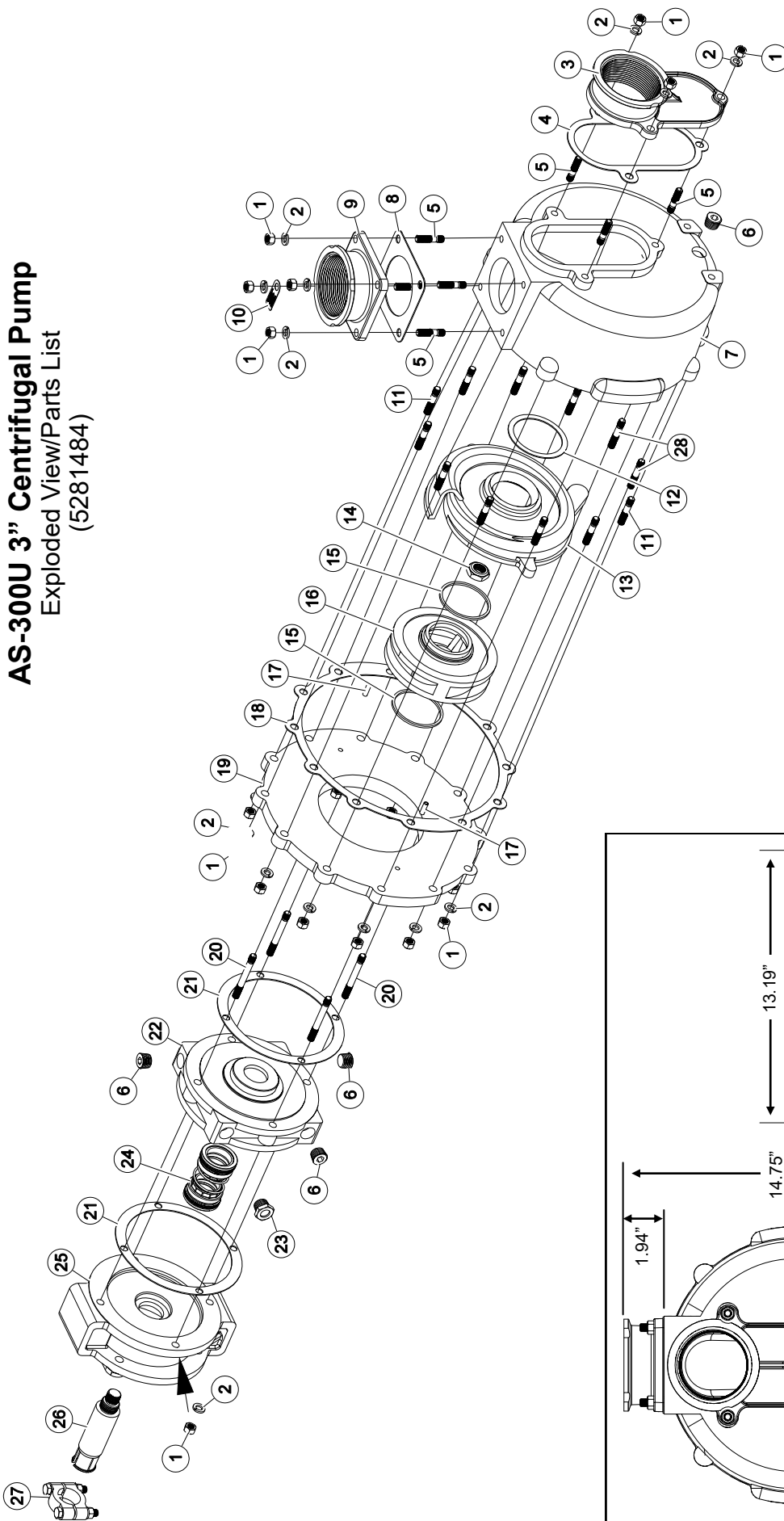
Ref. #	Part #	Description	Qty
13	5151043	Wear Ring	2
14	5151046	Impeller	1
15	5151034	Impeller Nut	1
16	5151048	Volute	1
17	5151042	Volute Gasket	1
18	5151036	Pump Casing Gasket	1
19	5151001	Stud, 3/8"-24 x 7/8" (304 SS)	2
20	5151047	Pump Casing	2
21	5151032	Gasket, Discharge Flange	1
22	5151083	Discharge Coupling, 220 Flange w/2" FNPT	1
23	5194398	AS200 Pump Tag	1
24	5016026	Lockwasher, 5/16"	4
25	5034042	H.H.C.S., 5/16"-18nc x 1"	4
26	5151035	Plug	2
27	5151030	Suction Flange Gasket	1
28	5151084	Inlet Coupling, 220 Flange w/2" FNPT	1

Ref. #	Part #	Description	Qty
1	5151065	2" S. Keyed Clamp Assembly	1
1.1	5034088	H.H.C.S., 5/16"-18 x 1 3/4"	2
1.2	5151051	2" Clamp Half Keyed SS	1
1.3	5151031	2" Clamp Half SS	1
1.4	5016026	Lockwasher, 5/16"	2
1.5	5006040	5/16"-18 Hex Nut	2
2	5151021	Hex Nut, 3/8-24	17
3	5016027	Lockwasher, 3/8"	17
4	5151044	Adaptor for Gas Engine	1
5	5151004	Stud, 3/8"-24 x 1 5/8" (304 SS)	15
6	5151039	Shaft Sleeve for Gas Engine	1
7	5151052	Mechanical Seal	1
8	5151038	Seal Plate Gasket	2
9	5151000	Plug, 1/2" NPT	4
10	5151019	Sight Gauge, 1/2" NPT	1
11	5151049	Seal Plate	1
12	5151037	Pump Cover	1

AS-300U 3" Centrifugal Pump

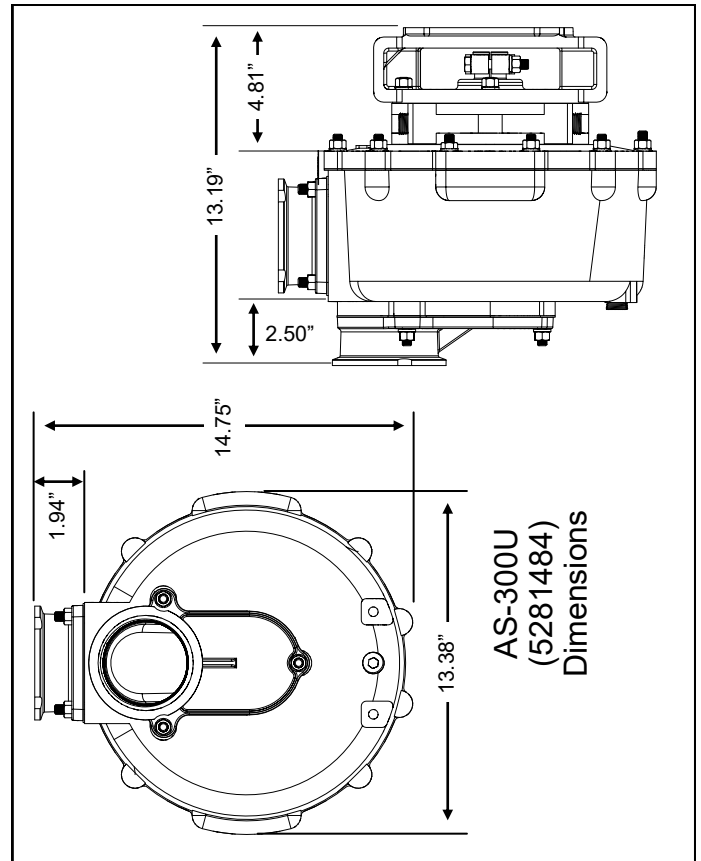
Exploded View/Parts List

(5281484)



Ref. #	Part #	Description	Qty
16	5151012	Impeller	1
17	5151016	Pin, 6.35mm x 19mm	2
18	5151014	Gasket, Casing	1
19	5151015	Pump Cover	1
20	5151022	Stud, 3/8"-24 x 3 1/2" (304 SS)	4
21	5151020	Gasket, Seal Plate	2
22	5151018	Seal Plate	1
23	5151019	Sight Gauge, 1/2" NPT	1
24	5151017	Mechanical Seal 35	1
25	5151023	Adaptor	1
26	5151025	Shaft Sleeve	1
27	5151061	3"-S.S. Keyed Clamp Assembly	1
28	5151085	Stud, 3/8"-24 x 2" (304 SS)	2

Ref. #	Part #	Description	Qty
1	5151021	Hex Nut, 3/8"-24	23
2	5151003	Lock Washer, 3/8"	23
3	5151082	Inlet Coupling, 300 Flange w/3"FNPT	1
4	5151007	Gasket, Suction Flange	1
5	5151004	Plug, 3/8"-24 x 1 5/8" (304 SS)	7
6	5151000	Plug, 1/2" NPT	4
7	5151008	Pump Casing	1
8	5151009	Gasket, Discharge Flange	1
9	5151081	Discharge Coupling, 300 Flange w/3" FNPT	1
10	5194397	AS300 Pump Tag	1
11	5151001	Stud, 3/8"-24 x 1 7/8" (304 SS)	10
12	5151002	Gasket, Volute	1
13	5151011	Volute	1
14	5151005	Impeller Nut	1
15	5151013	Wear Ring	2



TROUBLE SHOOTING

ISSUE	PROBABLE CAUSE
Pump makes rattling noise while running	Cavitation or pump starvation (suction lift is too high or the inlet line is too restrictive)
Reduced pump output or pressure	Clogged impeller or inlet piping (including strainer)
	Leaks in suction line or at inlet gasket
	Collapsed suction line
	Trapped air in sections of suction line
	Suction lift is too great
	Worn or damaged parts (impeller or casing)
Pump fails to prime or slow prime	Leaks in suction line or at inlet gasket
	Suction lift is too great
	Collapsed suction line
	Not enough water in casing to prime pump
Seal reservoir fluid changes level	Leak at input shaft seal if level is low
	Leak at the impeller side seal if level is high
Pump makes screeching or metal on metal noises	Improper installation on motor, engine or pedestal shaft. The shaft (and impeller) have been forced into the pump and against the volute

Notes

Warranty Info

LIMITED WARRANTY FOR NEW AG SPRAY EQUIPMENT

WHO MAY USE THIS LIMITED WARRANTY. This limited warranty (the "Limited Warranty") is provided by Ag Spray Equipment to the original purchaser ("you") of the Equipment (as defined below) from Ag Spray Equipment or one of Ag Spray Equipment's authorized dealers. This Limited Warranty does not apply to any subsequent owner or other transferee of the Equipment. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

WHAT THIS LIMITED WARRANTY COVERS AND FOR HOW LONG. Ag Spray Equipment warrants that any new Equipment will be free from defects in material and workmanship for a period of **one (1) year** (homeowner), **90 days** (commercial user), after delivery of the Equipment to you (the "Warranty Period"). The Warranty Period is not extended if Ag Spray Equipment repairs or replaces the Equipment. The AS-200 and AS-300 centrifugal pumps are warranted for a 2 year unconditional warranty from date of purchase.

WHAT IS NOT COVERED BY THIS LIMITED WARRANTY. This Limited Warranty does not apply to: (1) used Equipment; (2) any Equipment that has been altered, changed, repaired or treated since its delivery to you, other than by Ag Spray Equipment or its authorized dealers; (3) damage or depreciation due to normal wear and tear; (4) defects or damage due to failure to follow Ag Spray Equipment's operator's manual, specifications or other written instructions, or improper storage, operation, maintenance, application or installation of parts; (5) defects or damage due to misuse, accident or neglect, "acts of God" or other events beyond Ag Spray Equipment's reasonable control; (6) accessories, attachments, tools or parts that were not manufactured by Ag Spray Equipment, whether or not sold or operated with the Equipment; or (7) rubber parts, such as tires, hoses and grommets.

HOW TO OBTAIN WARRANTY SERVICE. To obtain warranty service under this Limited Warranty, you must (1) provide written notice to Ag Spray Equipment of the defect during the Warranty Period and within **thirty (30)** days after the defect becomes apparent or the repair becomes necessary, at the following address: Ag Spray Equipment, 1000 Fimco Lane, North Sioux City, SD 57049; and (2) make the Equipment available to Ag Spray Equipment or an authorized dealer within a reasonable period of time. For more information about this Limited Warranty, please call: **800-274-1025** or your local Ag Spray location.

WHAT REMEDIES ARE AVAILABLE UNDER THIS LIMITED WARRANTY. If the conditions set forth above are fulfilled and the Equipment or any part thereof is found to be defective, Ag Spray Equipment shall, at its own cost, and at its option, either repair or replace the defective Equipment or part. Ag Spray Equipment will pay for shipping and handling fees to return the repaired or replacement Equipment or part to you.

LIMITATION OF IMPLIED WARRANTIES AND OTHER REMEDIES. THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES, AND AG SPRAY EQUIPMENT'S SOLE LIABILITY, FOR ANY BREACH OF THIS LIMITED WARRANTY. TO THE EXTENT APPLICABLE, ANY IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE WARRANTY PERIOD, AND THE REMEDIES AVAILABLE FOR BREACH THEREOF SHALL BE LIMITED TO THE REMEDIES AVAILABLE UNDER THIS EXPRESS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. IN NO EVENT SHALL AG SPRAY EQUIPMENT'S LIABILITY UNDER THIS LIMITED WARRANTY EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE DEFECTIVE EQUIPMENT, NOR SHALL AG SPRAY EQUIPMENT BE LIABLE, UNDER ANY CIRCUMSTANCES, FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.