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 zoellerpumps.com

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.



MEETS UPC
 COMPLIES WITH ASME A112.3.4
 AND CSA B45.9.

* MODEL 104 IS NOT
 UPC APPROVED.

2" INLET / HIGH HEAD DRAIN PUMP SYSTEMS

MODELS 105-0010, 135-0005

INSTALLATION INSTRUCTIONS

PREINSTALLATION CHECKLIST

MODEL:	_____
DATE CODE:	_____
DATE INSTALLED:	_____

Notice to Installer: Instructions must remain with installation.

1. Inspect your unit. Occasionally, products are damaged during shipment. If the unit is damaged, contact your dealer before using. **DO NOT** remove the test plugs from the pump.
2. Carefully read the literature provided to familiarize yourself with specific details regarding installation and use. These materials should be retained for future reference.



WARNING

SEE BELOW FOR LIST OF WARNINGS

1. **To reduce the risk of electrical shock**, a properly grounded receptacle of grounding type must be installed and protected by a ground fault circuit interrupter (GFCI) and in accordance with National Electrical Code and local codes.
(SEE WARNING BELOW)
2. **Make certain that the receptacle is within the reach of the pump's power supply cord.** DO NOT USE AN EXTENSION CORD. Extension cords that are too long or too light do not deliver sufficient voltage to the pump motor. But more important, they could present a safety hazard if the insulation were to become damaged or the connection end were to fall into the sump.
3. **Testing for Ground.** As a safety measure, each electrical outlet should be checked for ground using an Underwriters Laboratory Listed circuit analyzer which will indicate if the power, neutral and ground wires are correctly connected to your outlet. If they are not, call a qualified electrician.
4. **For Added Safety.** Pump must be connected to a 3-prong grounded outlet interrupter device (ground fault circuit interrupter).
5. **FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.** Single phase pumps are supplied with a 3-prong grounded plug to help protect you against the possibility of electrical shock. **DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE GROUND PIN.** To reduce the risk of electrical shock, a properly grounded receptacle of grounding type must be installed and protected by a ground fault circuit interrupter (GFCI) in accordance with national electrical code and local codes.
6. Installation and checking of electrical circuits and hardware should only be performed by a qualified licensed electrician.
7. Risk of electric shock - These pumps have not been investigated for use in swimming pool areas.
8. Prop65 Warning for California residents: Cancer and Reproductive Harm-www.P65warnings.ca.gov.

CAUTION

SEE BELOW FOR LIST OF CAUTIONS

1. Check to be sure your power source is adequate for handling the voltage requirements of the motor, as indicated on the pump or basin plate.
2. Make sure the pump electrical supply circuit is equipped with fuses or circuit breakers of proper capacity. A separate branch circuit is recommended, sized according to the National Electrical Code for the current shown on the pump name plate.
3. All plumbing (discharge and vent lines) must be installed to meet local codes. Unit must be vented. **DO NOT USE AN AUTOMATIC PLUMBING VENT DEVICE SIMILAR TO A "PRO-VENT"**. Some states require this product to be installed by a licensed plumber.
4. Repair and service should be performed by Zoeller Pump Company Authorized Service Station only.
5. **CHECK VALVE MUST BE USED TO REDUCE UNNECESSARY CYCLING OF PUMP.**
6. Dewatering pumps are not designed or intended for handling raw sewage.
7. Maximum operating temperature for 105-0010 and 135-0005 Drain Pumps must not exceed 130 °F (54 °C).
8. For health reasons, do not unplug, turn off, or disable pump and use pump tank system as a way to fill up a sink or laundry tray, etc.

NOTE: Pumps with the "UL" mark and pumps with the "US" mark are tested to UL Standard UL778. CSA Certified pumps are certified to CSA Standard C22.2 No. 108.

REFER TO WARRANTY ON PAGE 2.

LIMITED WARRANTY

Manufacturer warrants, to the purchaser and subsequent owner during the warranty period, every new product to be free from defects in material and workmanship under normal use and service, when properly used and maintained, for a period of three years from the date of purchase. Proof of purchase is required. Parts that fail within the warranty period, that inspections determine to be defective in material or workmanship, will be repaired, replaced or remanufactured at Manufacturer's option, provided however, that by so doing we will not be obligated to replace an entire assembly, the entire mechanism or the complete unit. No allowance will be made for shipping charges, damages, labor or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to any material that has been disassembled without prior approval of Zoeller Pump Company, subjected to misuse, misapplication, neglect, alteration, accident or act of God; that has not been installed, operated or maintained in accordance with Zoeller Pump Company installation instructions; that has been exposed to but not limited to the following: sand, gravel, cement, mud, tar, hydrocarbons or hydrocarbon derivatives (oil, gasoline, solvents, etc), wash towels or feminine sanitary products, etc. or other abrasive or corrosive substances. This warranty is in lieu of all other warranties expressed or implied; and we do not authorize any representative or other person to assume for us any other liability in connection with our products.

Contact Zoeller Pump Company, 3649 Cane Run Road, Louisville, Kentucky 40211-1961, Attention: Customer Service Department to obtain any needed repair or replacement of part(s) or additional information pertaining to our warranty.

ZOELLER PUMP COMPANY EXPRESSLY DISCLAIMS LIABILITY FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES OR BREACH OF EXPRESSED OR IMPLIED WARRANTY; AND ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND OF MERCHANTABILITY SHALL BE LIMITED TO THE DURATION OF THE EXPRESSED WARRANTY.

Some states do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you. 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.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

In instances where property damages are incurred as a result of an alleged product failure, the property owner must retain possession of the product for investigation purpose.

SERVICE CHECKLIST



⚠ WARNING

ELECTRICAL PRECAUTIONS- Before servicing a pump, always shut off the main power breaker and then unplug the pump - making sure you are not standing in water and wearing insulated protective sole shoes. Under flooded conditions, contact your local electric company or a qualified licensed electrician for disconnecting electrical service prior to pump removal.

⚠ WARNING

Submersible pumps can become pressurized under normal operating conditions—allow 2-1/2 hours after disconnecting before attempting service.

CONDITION	COMMON CAUSES
A. Pump will not start or run.	Check fuse, low voltage, overload open, open or incorrect wiring, open switch, impeller or seal bound mechanically, defective capacitor or relay when used, motor or wiring shorted. Float assembly held down. Switch defective, damaged, or out of adjustment.
B. Motor overheats and trips overload or blows fuse.	Incorrect voltage, negative head (discharge open lower than normal) impeller or seal bound mechanically, defective capacitor or relay, motor shorted.
C. Pump starts and stops too often.	Float switch stops mislocated (model 135 only), float too tight on rod, check valve stuck, or none installed in long distance line, overload open, switch defective.
D. Pump will not shut off.	Debris under float assembly, float or float rod bound by basin sides or other, switch defective, damaged or out of adjustment.
E. Pump operates but delivers little or no water.	Check strainer housing, discharge pipe, or if check valve is used, the vent hole must be clear. Discharge head exceeds pump capacity. Low or incorrect voltage. Incorrect motor rotation. Capacitor defective. Incoming water containing air or causing air to enter pumping chamber.
F. Drop in head and/or capacity after a period of use.	Increased pipe friction, clogged line or check valve. Abrasive material and adverse chemicals could possibly deteriorate impeller and pump housing. Check line. Remove base and inspect.
G. If tank or fittings leak.	Carefully tighten pipe joints (use pipe dope) and screws. Check gasket location, tighten lid evenly. Do not over tighten fittings or screws.

If the above checklist does not uncover the problem, consult the factory - Do not attempt to service or otherwise disassemble pump. Service must be by Zoeller Authorized Service Stations.

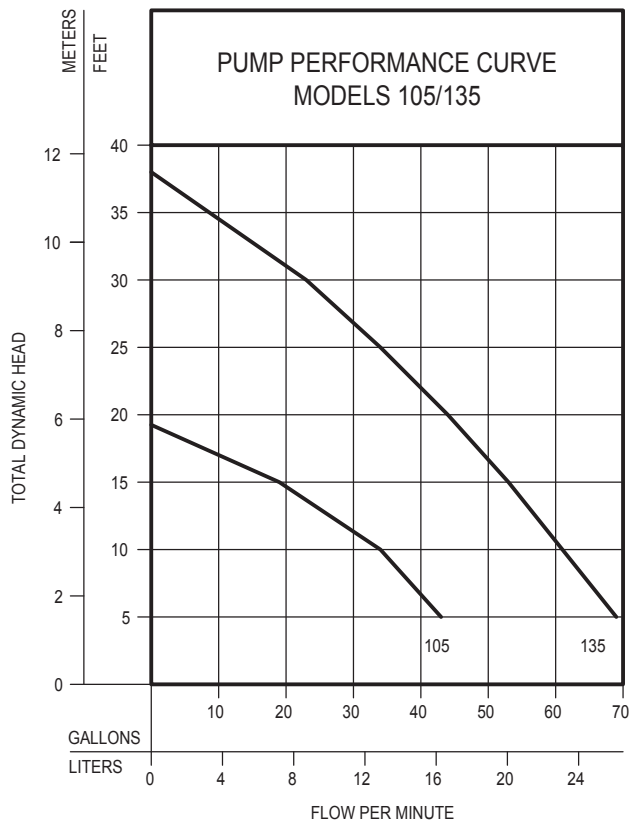
TEN HELPFUL HINTS FOR EASY INSTALLATION

1. Read all instructions before beginning installation.
2. Be certain that basin is on a firm level surface.
3. Do not use an automatic plumbing vent device.
4. Do not over-torque lid attachment screws.
5. Always use a check valve on the discharge line.
6. Test operation of pump per STEP 6, on page 6
7. Always provide some means to disconnect basin from plumbing for maintenance purposes.
8. Run unit at least once a month to verify proper operation.
9. The model number and date code can be found on the lid warning label.
10. Plug pump into a properly grounded GFCI receptacle.

DOS AND DON'TS FOR INSTALLING A UNIT

1. DO read all installation material included with the pump.
2. DO inspect unit for any visible damage caused by shipping. Contact dealer if unit appears to be damaged.
3. DO clean all debris from the basin and pump.
4. DO always disconnect pump from power source before handling. DO always connect to a separately protected and properly grounded ground fault protected circuit. DO NOT ever cut, splice or damage power cord. DO NOT carry or lift pump by its power cord. DO NOT use an extension cord.
5. DO NOT use a discharge pipe smaller than the pump discharge size.
6. DO test pump immediately after installation to be sure that the system is working properly.
7. DO review all applicable local and national codes and verify that the installation conforms to each of them.

PERFORMANCE CHARACTERISTICS



TOTAL DYNAMIC HEAD/FLOW PER MINUTE EFFLUENT AND DEWATERING

MODEL		105		135	
Feet	Meters	Gal.	Liters	Gal.	Liters
5	1.5	43	163	69	261
10	3.0	34	129	61	231
15	4.6	19	72	53	201
20	6.1	--	--	44	167
25	7.6	--	--	34	129
30	9.1	--	--	23	87
Shut-off Head:		19.25 ft. (5.9 m)		38 ft. (11.6 m)	

016301B

016301A

STEP 1

DETERMINE INSTALLATION CONFIGURATION

1.1) Figure 1.1 is a typical configuration for installation of the drain systems. The actual configuration will vary depending on your cabinet and sink configuration.

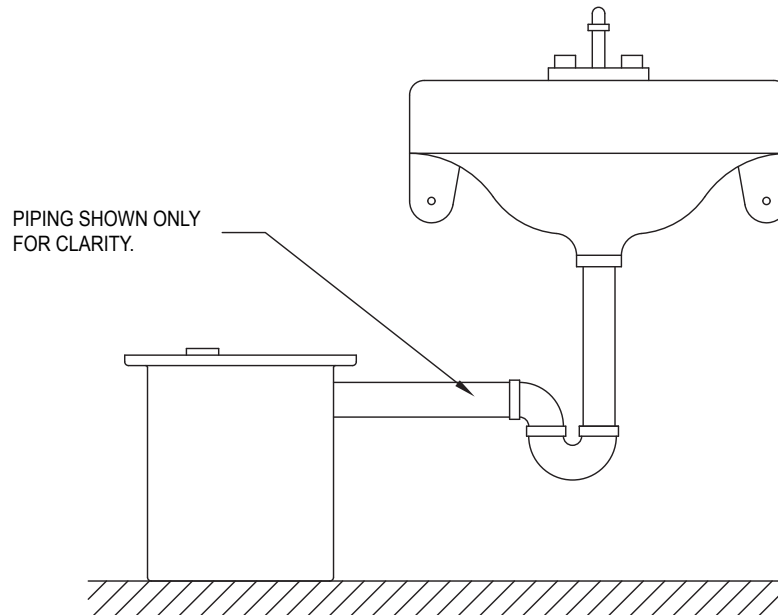
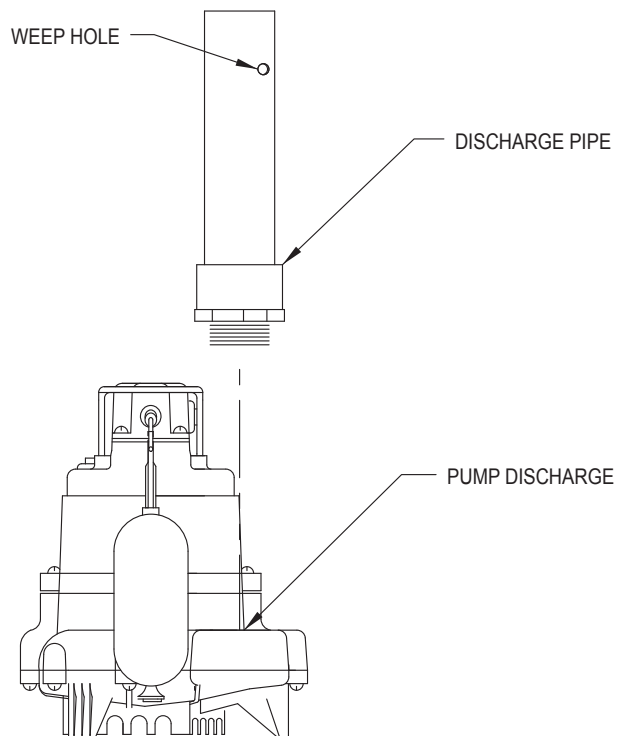


Figure 1.1

SK2367

STEP 2

INSTALL THE DISCHARGE PIPE ONTO THE PUMP (ALL MODELS)



⚠ IMPORTANT BE SURE THAT WEEPHOLE IS NOT DIRECTED TOWARD THE FLOAT!

Water stream will be visible from this hole during pump run periods.

Figure 2.1

Note: Model 105 shown.

SK2002B

STEP 3

INSTALLATION OF THE FLOAT ASSEMBLY (MODEL 135 ONLY)

- 3.1) Assemble switch as shown in Figures 3.1 - 3.3.
- 3.2) Attach float to discharge pipe as shown in Figure 3.4.

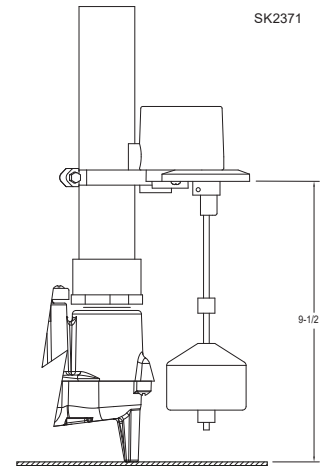
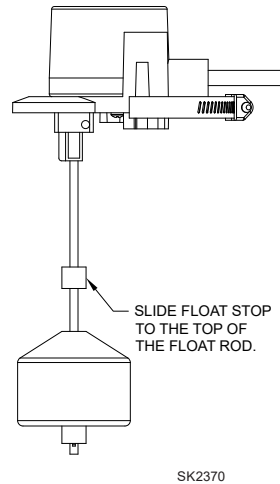
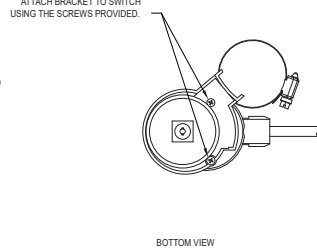
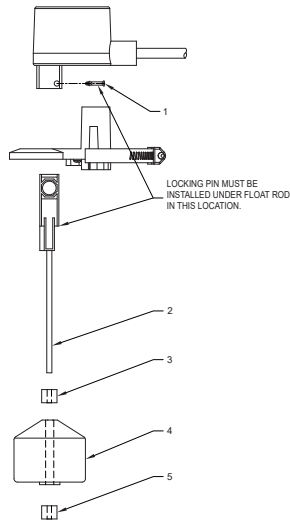


Figure 3.1

Figure 3.2

Figure 3.3

Figure 3.4

STEP 4

INSTALLATION OF THE FOAM GASKET

- 4.1) Install the foam gasket on to the "gasket surface" at the top of the basin, refer to Figure 4.1 for details.

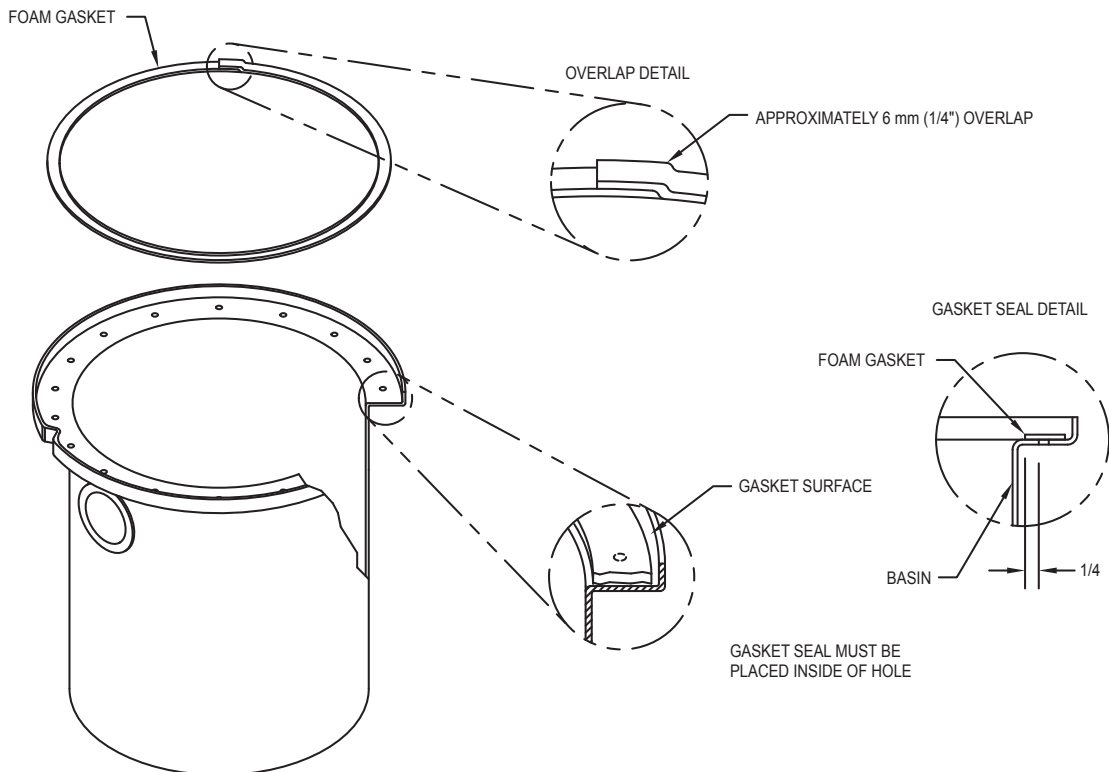


Figure 4.1

STEP 5

FINAL ASSEMBLY

- 5.1 Feed the pump power cord and the attached cord seal through the 2-1/2" hole in the lid. The cord seal must be bent and forced through the hole. Remove slack in the cord, making sure cord does not interfere with the float movement. Do not press cord seal into the lid at this time.
- 5.2 Place model 105 drain pump into basin per Figure 5.1. Place Model 135 drain pump into basin per Figure 5.2. Ensure the float switch is positioned for up and down movement without interference from the power cord or the tank wall.
- 5.3 Slip open end of short discharge pipe into 1-1/2" slip fitting in lid.
- 5.4 Adjust lid and pump so that "keyed" notches on lid and basin are aligned. Push flange head screws through holes and foam seal. Screw lid evenly to basin using supplied flange head screws and nuts. Do not over tighten.
- 5.5 Attach a check valve to discharge pipe with flow away from pump. To avoid unnecessary cycling, check valve should be installed no more than 3" above lid.
- 5.6 Connect 1-1/2" discharge pipe and 2" vent pipe into existing house plumbing. THE UNIT MUST BE VENTED. Do not over tighten the discharge and vent pipe into the threaded connections on the lid.
- 5.7 Press cord seal into cord seal hole in lid. Use soap water for lubricant. Securely tape or clamp cord to discharge pipe or vent pipe.

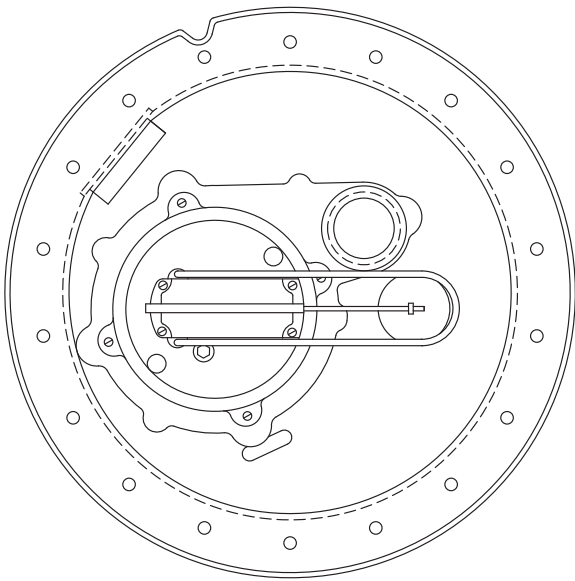


Figure 5.1

SK1028

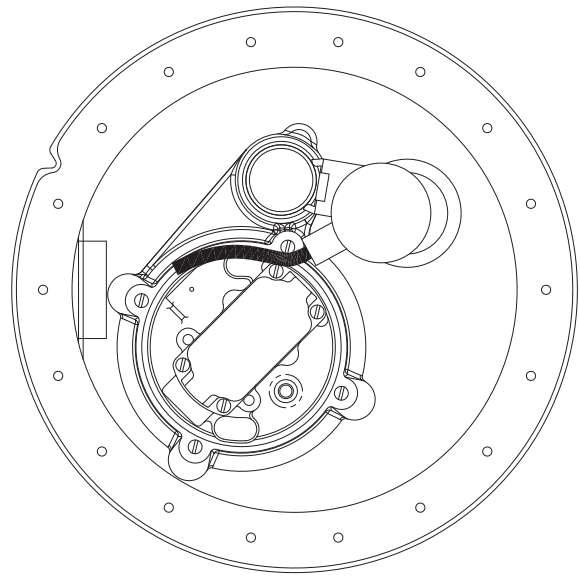


Figure 5.2

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STEP 6

INITIAL TESTING OF DRAIN BASIN SYSTEM

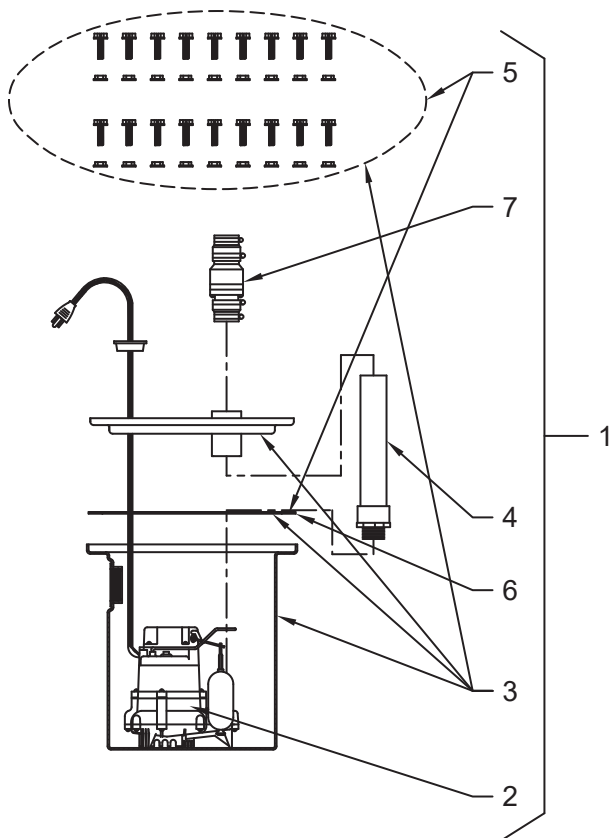
- 6.1 Plug the cord into a properly grounded GFCI receptacle.
- 6.2 Fill tank with water.
- 6.3 Check all plumbing for leaks as the basin fills.
- 6.4 Verify that the pump starts and stops.
- 6.5 Check the discharge line for leaks as the pump empties the basin.
- 6.6 Repeat steps 6.2 to 6.5 as necessary to ensure proper operation.
- 6.7 If problems persist refer to the troubleshooting guide located on page 2 of this manual.

ILLUSTRATED PARTS BREAKDOWN

Drain Pump - 2" Inlet			105-D 07/03 thru Current	135-A 07/03 thru Current
Item	Description	QTY	Part No.	Part No.
1	Drain pump	1	105-0010	135-0005
2	Replacement pump M53	1	007917	N/A
	Replacement pump WM 152		N/A	015480
	Replacement pump WD 152		N/A	N/A
3	Basin, cover & seal	1	004597	004597
4	Discharge tube	1	004400	013732
5	Hardware pack	1	007725	007725
6	Basin seal	1	006302	006302
7	Check valve	1	30-0181	N/A
	Union/check valve "combo"		N/A	30-0102

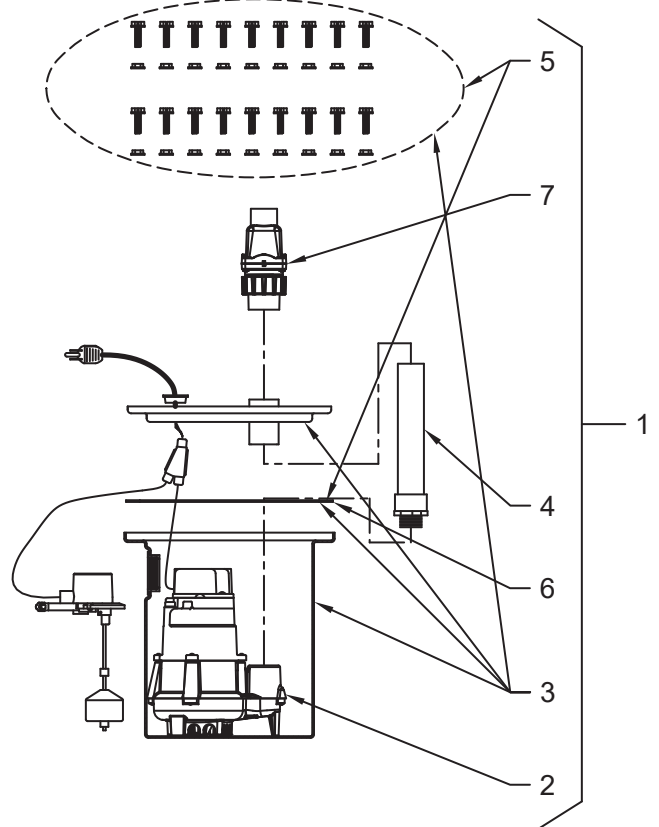
Notes:

1. Hardware pack consists of foam seal, 1/4-20 x 1" long screws, and 1/4-20 nuts.



DRAIN PUMP 105-0010 SHOWN

SK2373



DRAIN PUMP 135-0005 SHOWN

SK2373

NOTES



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