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INSTALLATION INSTRUCTIONS

MODEL 400416T

SEWAGE PUMP

Please read these instructions carefully. **Failure** to comply to instructions and **designed** operation of this system, may **void** the warranty.

Your pump has been carefully packaged at the factory to prevent damage during shipping. However, occasional damage may occur due to rough handling. **Carefully inspect your pump** for damages that could cause failures. Report any damage to your carrier or your point of purchase.

SAFETY INSTRUCTIONS:

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This fine pump that you have just purchased is designed from the latest in material and workmanship.

Before installation and operation, we recommend the following procedures:

- A** CHECK WITH YOUR LOCAL ELECTRICAL AND PLUMBING CODES TO ENSURE YOU COMPLY WITH THE REGULATIONS. THESE CODES HAVE BEEN DESIGNED WITH YOUR SAFETY IN MIND. BE SURE YOU COMPLY WITH THEM.
- B** WE RECOMMEND THAT A SEPARATE CIRCUIT BE LEAD FROM THE HOME ELECTRICAL DISTRIBUTION PANEL PROPERLY PROTECTED WITH A FUSE OR A CIRCUIT BREAKER. WE ALSO RECOMMEND THAT A GROUND FAULT CIRCUIT BE USED. CONSULT A LICENSED ELECTRICIAN FOR ALL WIRING.
- C** THE GROUND TERMINAL ON THE THREE PRONG PLUGS SHOULD NEVER BE REMOVED. THEY ARE SUPPLIED AND DESIGNED FOR YOUR PROTECTION.
- D** NEVER MAKE ADJUSTMENTS TO ANY ELECTRICAL APPLIANCE OR PRODUCT WITH THE POWER CONNECTED. DO NOT ONLY UNSCREW THE FUSE OR TRIP THE BREAKER, REMOVE THE POWER PLUG FROM THE RECEPTACLE.

Material required for sewage pump application

- Desired length of ABS/DWV 2" pipe, to link up from pump discharge to waste or drain existing pipe.
- Required quantities of 2" ABS/DWV elbow(s) and/or other fitting(s) to run the discharge line.
- 1 only 2" ABS/DWV male adaptor to 2" slip, to connect the discharge pipe to the pump.
- Desired length of ABS/DWV 3" pipe and required quantities of 3" ABS/DWV elbow(s) and/or other fitting(s) to run the vent line.
- 1 only 2" union check valve # 450457.
- 1 only 18" X 30" minimum size sewage basin like # 400420.
- Teflon tape and ABS cement.

Tools

Screwdrivers, hacksaw to cut pipe, knife to assist in pipe cutting, round file to smooth pipe ends, pipe wrench, adjustable wrench, 1/4" drill bit and drill.

Ensure that you have a gas tight cover for your sewage basin and 3" ABS/DWV vent piping.

NOTICE

This unit is not designed for applications involving salt water or brine .
Use with salt water or brine will void warranty.

APPLICATIONS

- This domestic submersible sewage pump is designed and suitable for raw sewage applications where the total head requirements do not exceed 25 feet, including pipe friction losses.

CAPACITY:

400416T

5'	4200 US GPH
10'	3300 US GPH
15'	2400 US GPH
20'	1500 US GPH
25'	600 US GPH

FRICION LOSS IN
PIPE NOT INCLUDED

FEATURES

- Grinder designed impeller made from cast iron.
- Rugged cast iron pump body.
- Stainless steel motor body.
- Stainless steel mechanical rotary type motor seal.
- 2" NPT pump discharge.
- Thermal and overload protection.
- 1/2HP, 115VAC, 60Hz, 8A, oil filled base.

INSTALLATION STEPS

see typical installation diagram in page 4

STEP 1

We recommend that you install your pump and basin in a clean location where there is adequate room for servicing at a later date. Protection from freezing temperatures and good ventilation should be considered as well, to provide the pump an environment for long life.

Assuming that you have a sump pit located in your basement floor... Your sump pit should be constructed from concrete, brick, tile or more recently a sump basin made from plastic and/or fiberglass. The minimum size of your sump pit must be 18" in diameter and no less than 25" deep. When pit is ready, proceed to next step.

Friction losses in the discharge pipe must be taken into consideration when many elbows and fittings are installed in the discharge line. Each elbows and fittings must be considered as 1 feet of head.

Never run the pump dry. Damage to the seal may occur.

THE RUN OF THE PIPE FROM THE CHECK VALVE TO THE EXISTING WASTE OR DRAIN LINE MUST NEVER BE SLOPING DOWNWARD EXCEPT WHEN CONNECTING TO SAME.

STEP 2

For a new installation, install your sewage basin in the excavation you have provided in the basement floor of your home. Connect the necessary piping from your shower trap, toilet, etc., to the inlet of your sewage basin, with the proper pipe and fittings (see diagram).

STEP 3

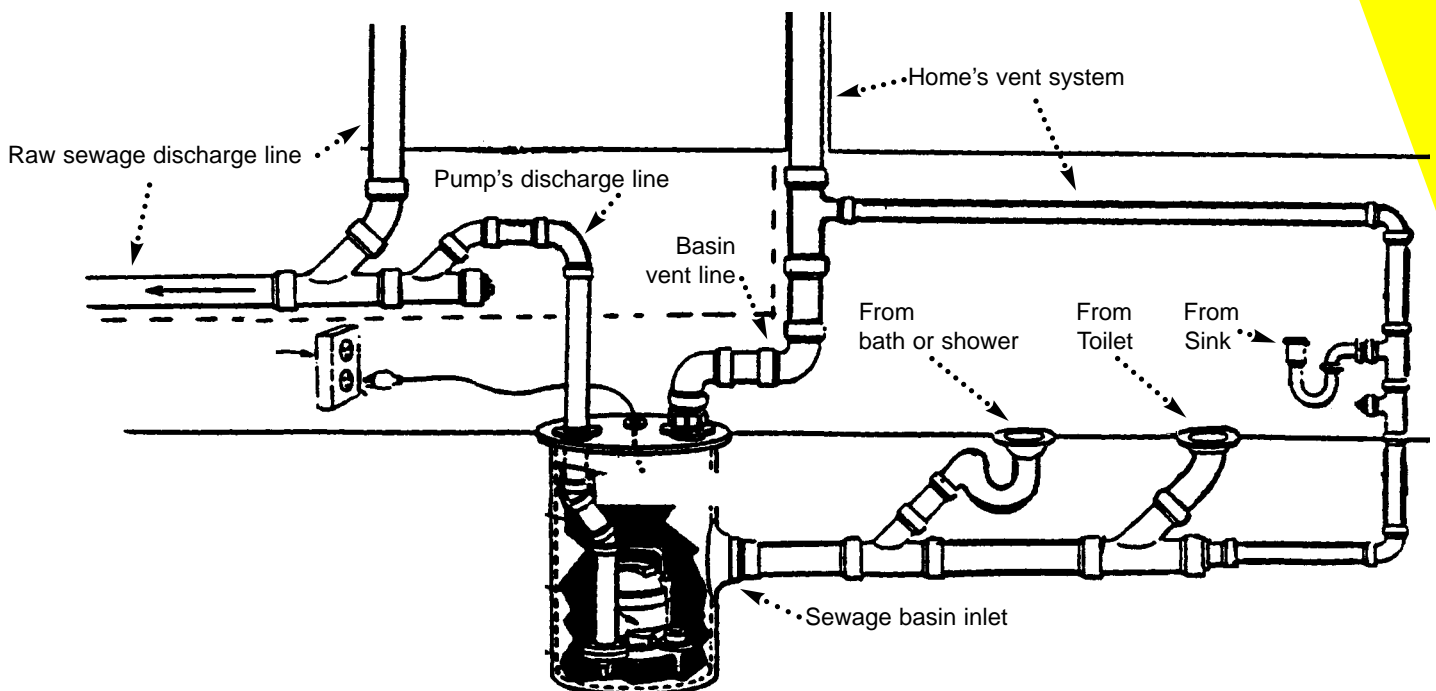
Cut a length of 40" to 42" of 2" ABS/DWV pipe. Cement the 2" ABS/DWV male adaptor to 2" slip to one end of this pipe.

STEP 4

With your drill, make a 1/4" hole in the adaptor previously glued. This hole will prevent any air locking wich might occur.

- STEP 5** Screw the pipe with the male adaptor into the 2" discharge opening in the pump. Lower pump with piping attached into the sewage basin. Make sure that the pump is as close as possible to the centre of the basin. Adjusting the pump in centre of basin will keep mechanical float switch from rubbing on side of basin.
- STEP 6** When you are pumping raw sewage, you must have a gas tight cover on the basin and a vent pipe from basin, connecting to home's vent system (see diagram). Feed the 2" riser pipe from pump's discharge, through the 2" opening in the cover. Secure a 3" vent pipe to the cover and bring the switch and pump motor power cables through the opening in the cover provided.
- STEP 7** Install a 2" check valve (model 450457) union type to the 2" discharge riser pipe coming out of the cover, to a length of 2" ABS/DWV pipe, and run the discharge line as short as possible to the home's waste sewer line. Secure the check valve with the provided clamps. Be sure that the arrow on valve are pointing away from pump.
- STEP 8** Connect the 3 prong plug of the switch in a receptacle. Insert the motor 3 prong plug into female receptacle on exposed piggy-back of switch plug. The mechanical switch provided for automatic operation is preset to pump. No adjustments are necessary.
- STEP 9** Fill the sewage basin with water to test the operation of the submersible sewage pump and switch operation. Pump should start pumping when the water level reaches 12" to 15" above the bottom of the basin and above the pump. Allow the pump to go several "on-off" cycles to assure satisfactory operation.
- STEP 10** Secure the gas tight cover and the plug for electrical cords with the gaskets and screws provided with the cover. Make vent connection to home's vent system.

SEWAGE SYSTEM TYPICAL PIPING



SEWAGE PUMP APPLICATION

STEP 7

Install check valve

STEP 6

Set gas tight cover, discharge and vent pipes

STEP 8

Connect to receptacle

STEP 10

Secure cover and make vent connection

STEP 5

Install discharge pipe and lower pump in centre of basin

STEP 2

Install sewage basin

STEP 4

Drill a 1/4" hole

STEP 3

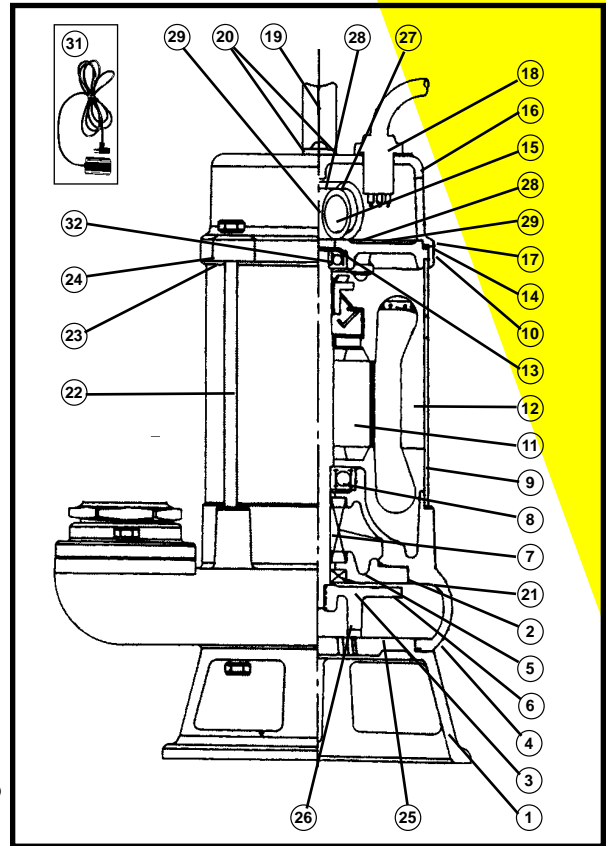
Cement 2" adaptor to pipe

STEP 9

Fill with water and test operation

REPAIR PARTS

#	REF	DESCRIPTION	#	REF	DESCRIPTION
1	450331	Strainer	18	400446	Power cable
2	450332	Oil cover "O" ring	19	300487	Handle
3	400447G	Grinder impeller	20	310312	Handle bolts (2)
4	450333	Pump body	21	450702	Screws (4)
5	400450	Oil cover	22	450020	Long bolts (4)
6	400449	Oil seal	23	450021	Head cover nuts
7	400448	Mechanical seal	24	450022	Head cover spring ring (4)
8	506032	Lower bearing	25	450023	Impeller nut
9	450335	Motor casing	26	450026	Plate capacitor screws (2)
10	450336	Motor housing "O" rings(2)	27	450704	Capacitor clamp
11	400453	Rotor shaft	28	310310	Capacitor screw clamp
12	400454	Stator	29	450025	Capacitor plate
13	506032	Upper bearing	30	450024	Impeller snap ring
14	450338	Inside cover	31	450453	Mechanical switch
15	400451	Capacitor	32	450706	Centrifugal switch
16	450340	Head cover			
17	450341	Inside cover "O" ring			



Repair parts may be ordered from your authorized point of sale or from
BUR-CAM PUMPS

TROUBLE SHOOTING GUIDE CHECKLIST

NEVER MAKE ADJUSTMENTS TO ANY ELECTRICAL APPLIANCE OR PRODUCT WITH THE POWER CONNECTED. DON'T JUST UNSCREW THE FUSE OR TRIP THE BREAKER, REMOVE THE POWER FROM THE RECEPTACLE.

TROUBLE	PROBABLE CAUSE	ACTION
Motor does not run.	Switch is off position Blown fuse Tripped breaker Disconnected plug Corroded plug Float stuck Defective switch Defective motor	Turn switch to on position Replace Reset Re-install Clean Check movement Replace Replace
Motor runs but no water is delivered.	Improper voltage Pump may be airlocked Pump discharge head too high Clogged inlet/impeller	Check voltage Check drilled hole in discharge pipe Wrong pump selection (over 25') Clean
Pump does not deliver to full capacity.	Improper voltage Pump may be airlocked Pump discharge head too high Clogged inlet/impeller	Check voltage Check drilled hole in discharge pipe Wrong pump selection (over 25') Clean
Pump does not shut off.	Defective switch Missing check valve Clogged check valve in open position Float obstruction	Replace Install valve Clean debris Check for movement

TO THE END CONSUMER

If you have any problems with the product, before advising the store, where you've purchased the pump, please contact us at 514 337-4415 , and ask for our sales department, and they will be pleased to help you with any questions you might have, concerning your installation.