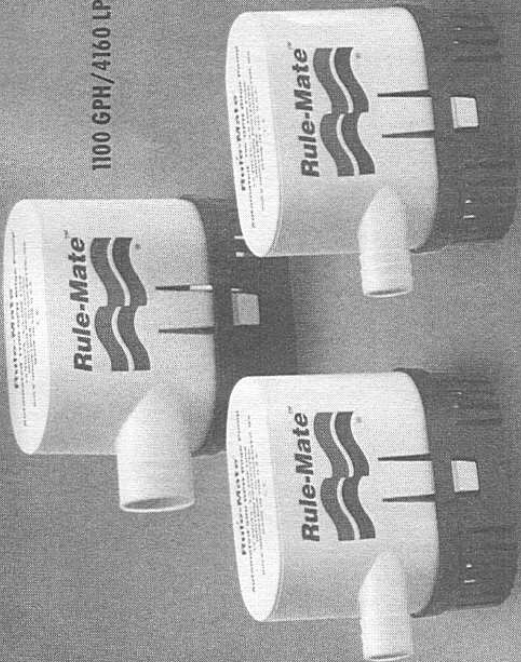


HD1 0982/HD9 05 L

HD1 0681/HD9 005



HD1 0914/HD9 0011

SPWUJ DGE BILTED WUOTUWU FULLY Rule-Mate™



Cape Ann Industrial Park
Gloucester, MA 01930
www.rule-industries.com



ISO 8849 Marine
(Bilge Pumps)
ISO 8846 Marine
(Ignition Protection)

WARNING!

This pump is designed for use with fresh and salt water only. Use with any other medium, including particularly hazardous, caustic or corrosive substances, could result in damage to the pump, the surrounding environment and injury to persons or property, including possible exposure to hazardous substances. **This pump is for water applications only.**

M-1341 3/03



ITT Industries
Engineered for the

INSTALLATION INSTRUCTIONS

Mounting

1. Disassemble Rule-Mate pump as follows:
Press white housing fingers inward to release pump housing. Lift pump housing from strainer.
2. Mount the blue strainer in the lowest point of the bilge. Secure with the stainless steel screws provided or, on a fiberglass boat you may fiberglass a wood block in place onto which you can fasten the strainer. You must keep the strainer 2" from the nearest wall.
3. Reassemble the pump by aligning the pump clasps to accept the strainer base and press down hard to make sure the pump is snapped firmly in place.

Note: the installation must allow for complete drainage of the hose. All air/water pockets must be eliminated by having the discharge hose running level or continuously upward.

HOW THE RULE MATE WORKS

Turn On

When water enters the bilge, the built in float switch will rise until it turns on the pump (at about 2-3/4 inches of water). However, the pump will not turn on until the float switch has been in the raised position for about two seconds. This prevents cycling of the pump caused by the float switch bouncing due to the motion of the boat.

Turn Off

After the pump removes the majority of the water, the impeller will sense that the water level has been lowered and will start to go into its turn off cycle. The pump will then continue to run for about 15 seconds beyond this point in order to maximize the removal of the water.

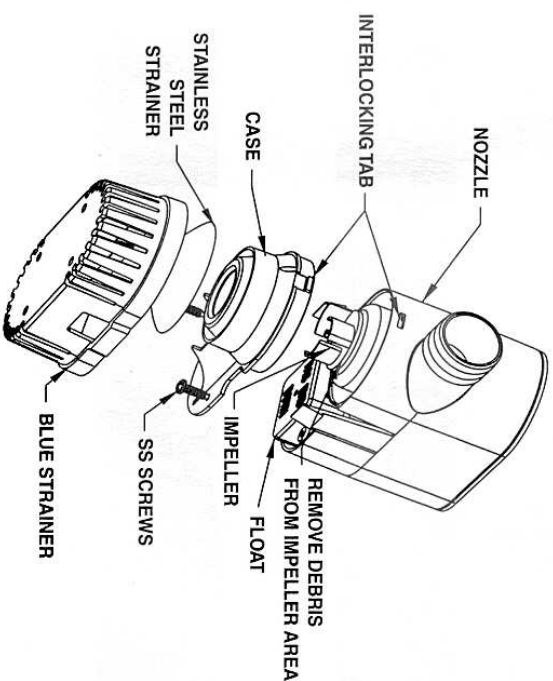
Overload Protection

If ever the impeller becomes jammed because of debris or some other obstruction, the pump will shut off to prevent damage to the pump. After one minute the pump will turn on again to check if the obstruction is still preventing the free motion of the impeller. The pump will continue to test every minute until the pump is shut off and the obstruction removed.

CLEANING THE IMPELLER AND FLOAT SWITCH

It is very important to keep the float and impeller areas as clean as possible. Oil, grease, and debris can potentially accumulate and impede the operation of the pump. It is a good practice to keep your bilge as clean as possible. Routine cleaning with a quality Bilge Cleaner, such as Sudbury® Bilge Cleaner will reduce the amount of oil and grease that can build up on the pump.

1. To clean the impeller area of the pump, remove the two stainless steel screws which hold the impeller case in place. You can also remove the float switch for cleaning when the impeller case is removed.
2. After cleaning, install the float in the float cavity. BE SURE the surface marked "THIS SIDE DOWN" is visible after installation.
3. Reinstall the impeller case by inserting the tab into the tab slot and replacing the two stainless steel screws. Both SS screws must be replaced for proper operation.



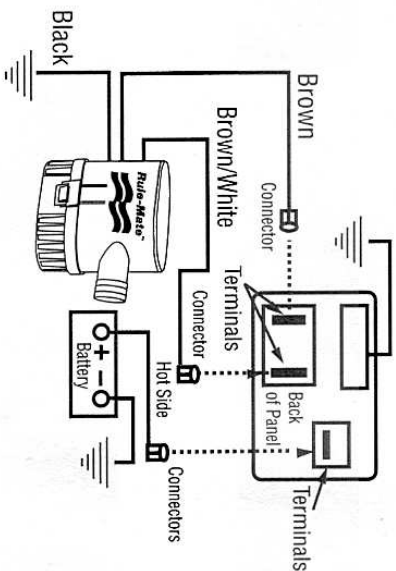
WIRING

1. WIRE - Normal installations require 16 gage wire. For installations over 25 feet from battery, use 14 gage wire.
2. KEEP ALL WIRE CONNECTIONS ABOVE HIGHEST POSSIBLE WATER LEVEL. WIRE CONNECTIONS SHOULD BE SEALED WITH SUDBURY® ELASTOMERIC™ SEALANT TO PREVENT CORROSION.

3. **Rule-Mate Bilge Pumps require a three way panel switch. You may use Rule Model 41, 43, or 45 three-way panel switch.**

TYPICAL THREE WIRE INSTALLATIONS

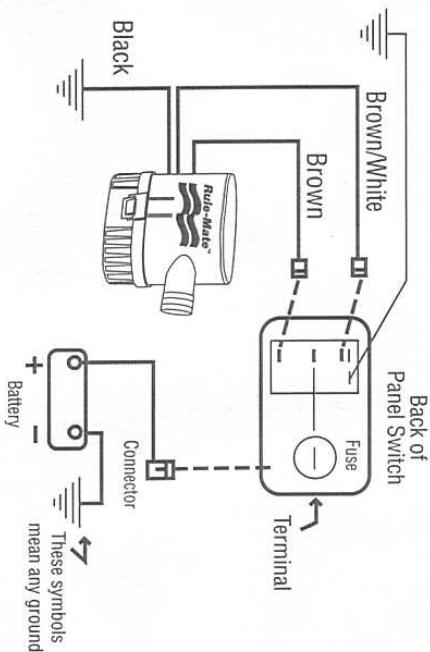
WIRING WITH RULE MODEL 41 THREE-WAY LIGHTED PANEL SWITCH



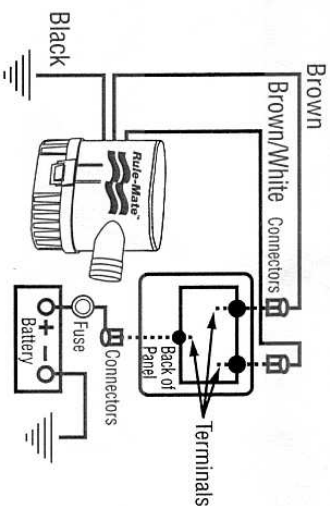
Note:
The brown wire is the automatic lead.
The brown/white wire is the manual lead.

WIRING CONT.

WIRING WITH RULE MODEL 43 THREE-WAY LIGHTED PANEL SWITCH



WIRING WITH RULE MODEL 45 THREE-WAY PANEL SWITCH — NO LIGHT



FUSE

Different fuse sizes are required for each model pump.
The chart below indicates the proper fuse size.

MODEL	CAPACITY	AMP DRAW (13.6v)	FUSE SIZE
RM-500	500 GPH	2.0 amps	2.5 amps
RM-750	750 GPH	4.0 amps	5.0 amps
RM-1100	1100 GPH	5.0 amps	6.0 amps

HOSE AND THRU-HULL

Rule-Mate 500 and 750 GPH pumps require 3/4" i.d. hose (Rule models 81 or 82). The Rule-Mate 1100 requires 1-1/8" i.d. hose (Rule model 80 or 83).

Rule-Mate 500 and 750 GPH pumps require a 3/4" thru-hull fitting (Rule model 61 or 61S). The Rule-Mate 1100 requires a 1-1/8" thru-hull fitting (Rule model 60).

Locate thru-hull fittings at least 12" above the water line to prevent water from coming back into the hull. On sailboats, mount the thru-hull high enough on the center of the transom to be above the anticipated water line.

PERFORMANCE DATA

RM-500	GPH @0' (0Kpa)	GPH@3.35' (10Kpa)	GPH@6.7' (20Kpa)
13.6 volts	500 (1893 LPH)	360 (1363 LPH)	230 (871 LPH)
12.0 volts	480 (1817 LPH)	310 (1173 LPH)	180 (681 LPH)

RM-750	GPH @0' (0Kpa)	GPH@3.35' (10Kpa)	GPH@6.7' (20Kpa)
13.6 volts	750 (2839 LPH)	560 (2120 LPH)	390 (1476 LPH)
12.0 volts	650 (2461 LPH)	480 (1817 LPH)	300 (1136 LPH)

RM-1100	GPH @0' (0Kpa)	GPH@3.35' (10Kpa)	GPH@6.7' (20Kpa)
13.6 volts	1100 (4164 LPH)	860 (3255 LPH)	600 (2271 LPH)
12.0 volts	1050 (3974 LPH)	720 (2725 LPH)	480 (1817 LPH)