


## Overview

Follow the instructions below to attach the Sani-Con Turbo to the RV coach.

 **Warning!** Read and understand the warnings listed in this document before you install, operate, or service this system. If you do not obey these warnings there is a risk of property loss, injury, or electrocution. Do not make any changes to this unit as this could result in property damage, injury, or electrocution.

**Thetford Corporation accepts no responsibility or liability for damage to equipment, injury, or death that may result from the system's improper installation, service, or operation.**

**Thetford Corporation recommends that plumbing and electrical work be performed by a licensed tradesperson. Local permit and code compliance is required.**

## Contents

- (1x) Sani-Con Turbo Tank Assembly - with OT (over-temperature) protected pump
- (1x) Hose and Nozzle Assembly with nozzle caps
- (1x) Owners Manual
- (2x) Labels with serial #

## Required Materials (Not Provided)

- Plumbing and End Caps (if necessary)
- Switch
- Relay (Example: American Terminal ER-1200)
- Fuse and Fuse Holder or Breaker
- Wiring
- Mounting Hardware
- 2" Hose Clamp (actual dimension is 1.9")
- Schedule 30, 40, 80, or DWV rated hard pipe fittings for pressure side of pump.

## Questions?

If you have any questions or need assistance, please contact Technical Support at 1-800-444-7210, available Monday through Friday 8 a.m. to 6 p.m., Eastern Standard Time.

## General Guidelines & Considerations

- Gray water bypass can be achieved by plumbing the discharge line in a manner that gravity can allow liquid to flow to the hose with no upward plumbing.
- All systems rely on gravity to move the liquid waste to the pump; therefore, make sure that the pump inlet is mounted *below* the RV holding tank. See line on side of Sani-Con Turbo system - refer to **Fig. 1-A1**.
- Plan the installation so that the pump does not extend beyond the side of the coach
- Consider using 1/4-20 threaded rod (4x) and/or 13" x 13" mounting plate to install unit.
- Each tank assembly comes with two labels. One label should be placed in the hose compartment; the other should be placed in the Owner's Manual.



**Note:** Labels (2x) are specific to each tank based on serial #.

- If black and gray tanks are heated, treat Sani-Con Turbo Tank in same manner.
- Duty Cycle: Intermittent, five minutes continuous operation; 20 minutes off.
- Gray water plumbing should be 2" - 3" pipe to provide fastest pumping. 1 1/2" pipe drains slower than the pump and causes pump to cavitate during use.
- It is important to plumb hose avoiding sharp angles during use or storage.
- Placement of the hose connection **MUST** be serviceable by the customer.

## Warnings and Cautions

Read and understand the warnings and cautions listed in this document before you install or operate this unit.



### CAUTION!

- Do not make any changes to this unit, as this could result in property damage or injury.
- Do not let the pump run dry, as this will damage the macerator.



### CAUTION!

Gray and black water tanks **MUST BE COMPLETELY FREE FROM DEBRIS** before installing and operating the pump. Failure to comply with this warning could result in a voided product warranty and equipment failure.



### CAUTION!

Plumbing from pump to storage compartment **MUST** be hard-plumbed with Schedule 40, Schedule 80, or DWV rated hard pipe.



### CAUTION!

The installation site of the pump **MUST** be able to support a minimum of 30 pounds.



### CAUTION!

Plan for sufficient clearance under the RV once the Sani-Con system is installed. Lowest point of unit **MUST** be above axles of coach.

## Winterizing the Sani-Con Unit

1. Ensure all tanks are empty.
2. Pour RV antifreeze into empty black water tank.



**Note:** Be sure to have container available for capturing system fluid!

3. Turn on pump.
4. Run pump until antifreeze begins to discharge from universal nozzle.
5. Turn off pump; chase out hose.

# Tank Assembly

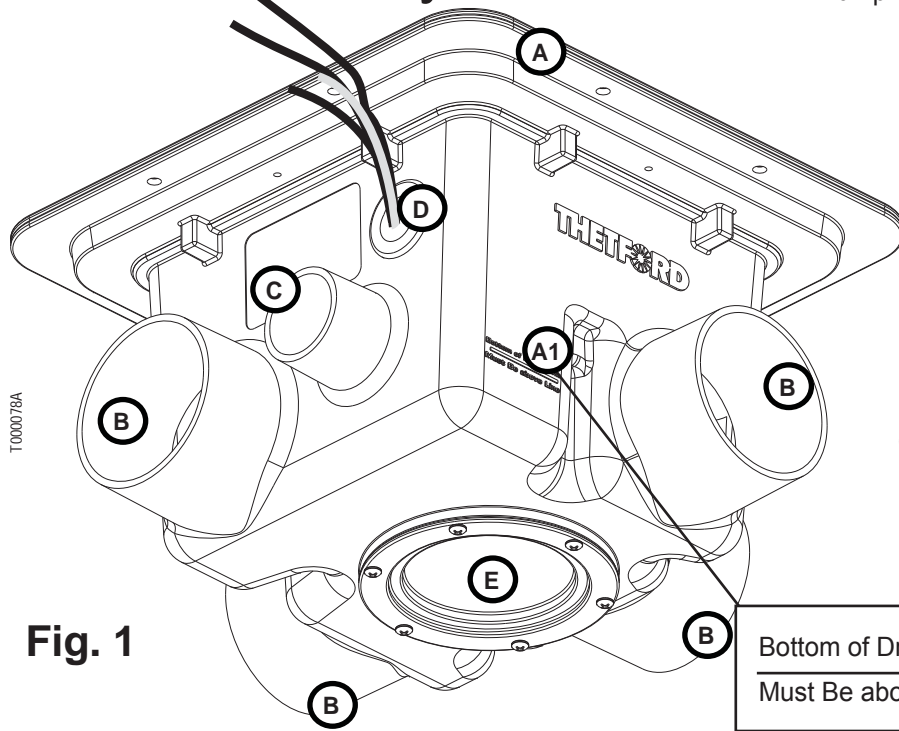
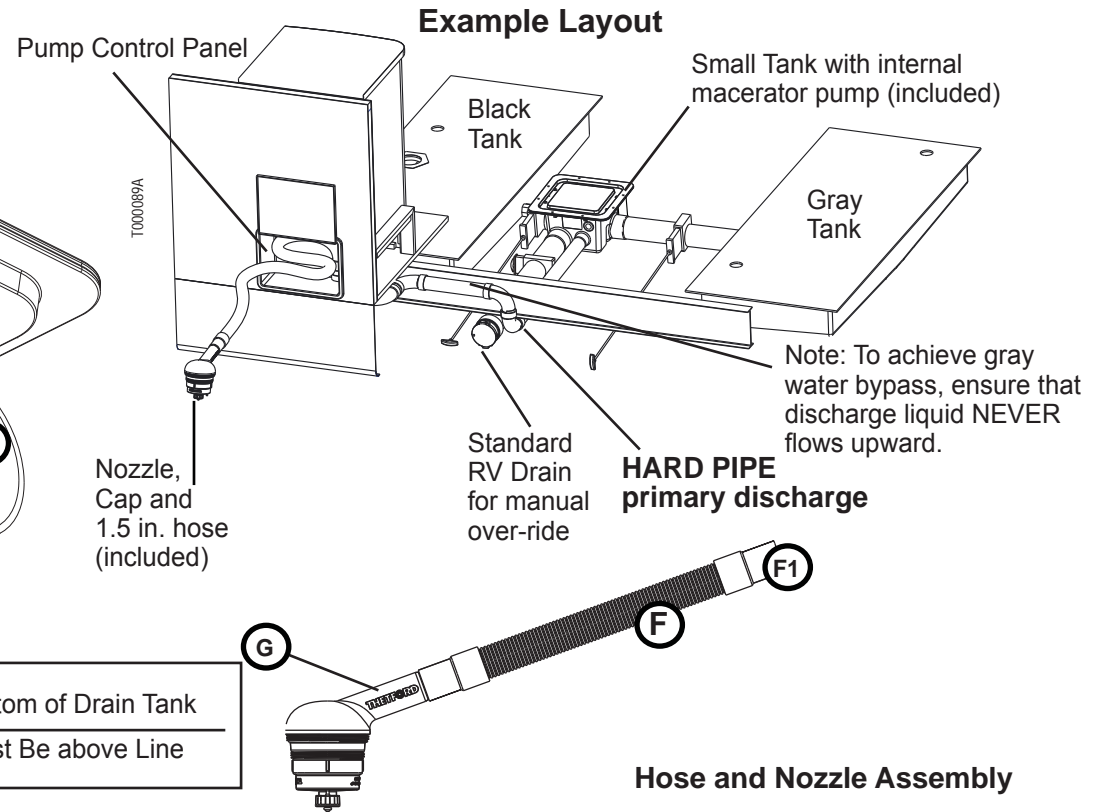


Fig. 1



## Planning the Installation

### A1. Tank Level Elevation Line

Be SURE the bottom of the drain tank remains ABOVE line on the pump. Failure to comply will result in improper functionality and tanks will not drain properly.

### B. Inlet Ports

- 3" inlet ports (4x). One port should be used as gravity bypass having a gate valve and bayonet connector installed.
- Tank material is ABS - solvent bonding is an optional connection method. Recommendation: use rubber couplings for serviceability.
- Inlet port(s) can be reduced to accept 1.5" gray water inlet. To avoid pump speed reduction that results in pump cavitation, **2" OR 3" pipe is RECOMMENDED for gray water plumbing from tank to SaniCon.**

- Orientation of inlet plumbing bypass not important as long as gravity flow from the tank can be achieved.
- C. Discharge Port**
  - 1.5" rubber coupling should be used to connect hard plumbing to hose connection. Solvent bonding is an optional connection method.
  - Hard plumbing should be kept as short as possible to increase pump efficiency.

### D. Wire Lead Exit

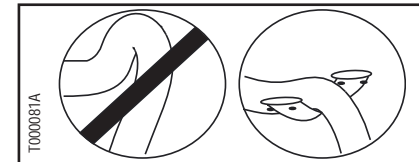
### E. Pump Impeller Access Cover

### F. Discharge Hose

**TIP:** For easy cleaning, recommend removable storage tray for hose and nozzle.

### F1. Discharge Hose Cuff

- Hose cuff accepts 1.5" hose barb, should be clamped (not supplied)
- Hose barb (not supplied) should be securely fastened inside of discharge hose compartment.
- Sharp bends and stress at hose cuffs reduce life of hose and should be minimized. Recommend supporting hose within 2"- 5" of cuff.



### G. Universal Nozzle with Caps

# Recommended Wiring Diagram

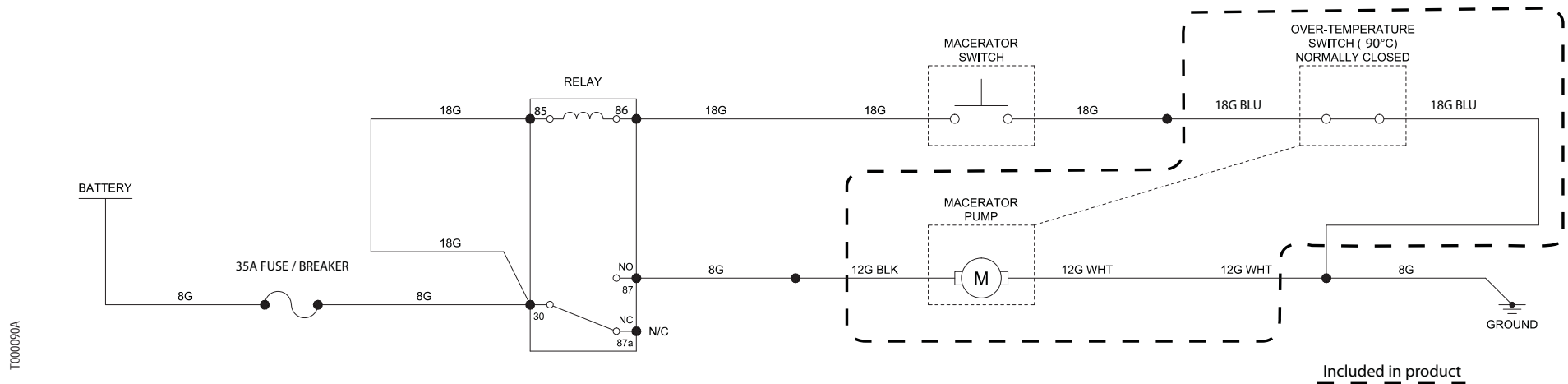


Fig. 2

## Planning the Installation

Fig. 2 represents recommended wiring configuration. Other wiring configurations are possible based on your installation.

- Ensure switch, relay and fuse are sized according to the voltage and current. If wired like the example above, a 1A switch will suffice.
- Wiring configuration MUST include internal over-temperature switch and relay for protection of pump.
- Pump requires a 12-VDC/35 AMP dedicated circuit with 35 AMP breaker or fuse between main bus or battery.
- Wire size is dependent on distance between

pump and power source. Actual wire sizes should be calculated according to installation.



### CAUTION!

While the pump is turned on, verify electrical system by measuring voltage at motor; refer to Fig 1-D (must be 12V). Improper installation may cause damage to motor or decrease pump efficiency.

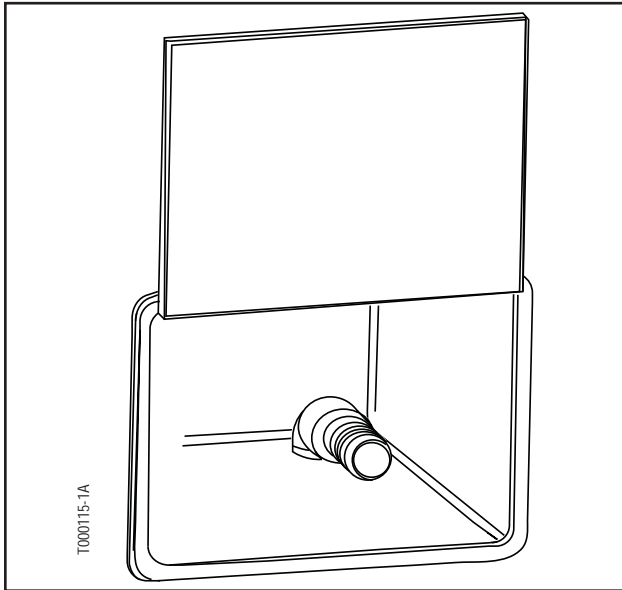


**NOTE:** The positive and negative wires should be braided to prevent radio interference during operation.

## Hose Barb Planning

Regardless of installation selection, plan to minimize stress points on the hose.

### 90° Hose Barb - Plumbed from Bottom

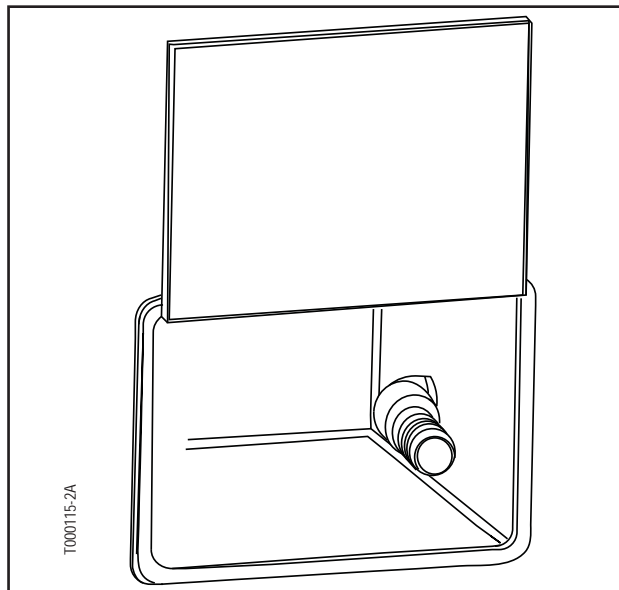


**Fig. 3a**



**RECOMMENDATION:** Plumb the hose barb AT OR NEAR BOTTOM of the compartment with the hose barb pointing AWAY from the RV coach.

### 90° Hose Barb - Plumbed from Side

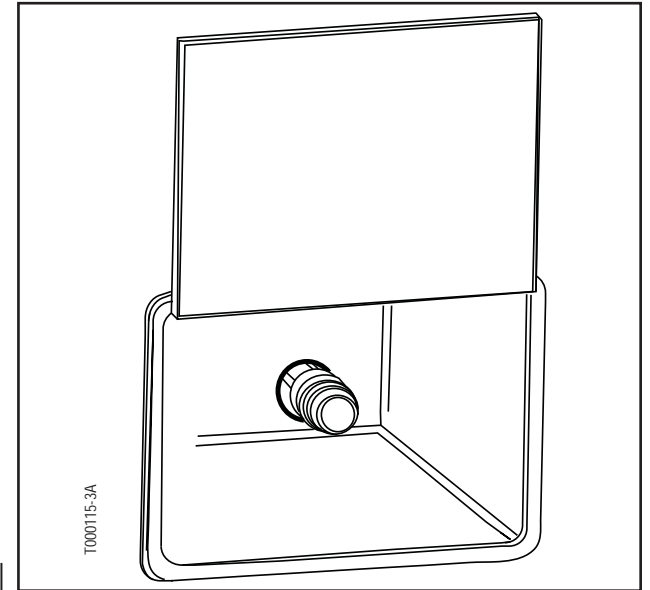


**Fig. 3b**



**RECOMMENDATION:** Plumb the hose barb AT OR NEAR BOTTOM of the compartment with the hose barb pointing AWAY from the RV coach.

### Straight Hose Barb - Plumbed from Back



**Fig. 3c**



**RECOMMENDATION:** Plumb the hose barb AT OR NEAR BOTTOM of the compartment with the hose barb pointing AWAY from the RV coach.