Overview

Follow the instructions below to attach the Sani-Con Turbo 500 to the RV coach.

**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.

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

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 500 Assembly - with OT (over-temperature) protected pump
- (1x) Hose and Nozzle Assembly with nozzle caps
- 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 or minimum 10 PSI flexible pipe rating for pressure side of pump.

**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.
- Plan the installation so that the pump does not extend beyond the side of the coach.
- Consider using 5/16-18 threaded rod or a solid strap pipe hanger and a 3.5" pipe hanger (4" inner diameter) to install unit.
- Each assembly comes with two labels. One label should be placed in the hose compartment; the other should be placed in the Owner's Manual.
- Labels (2x) are specific to each pump based on serial #.

**Winterizing the Sani-Con Unit**
1. Ensure all tanks are empty.
2. Pour RV antifreeze into empty black water tank.
3. Turn on pump.
4. Run pump until antifreeze begins to discharge from universal nozzle.
5. Turn off pump; chase out hose.

**OEM Installation Manual**

Do not make any changes to this unit, as this could result in property damage or injury.

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.

Plumbing from pump to storage compartment MUST be plumbed with Schedule 30, 40, 80, or DWV rated hard pipe fittings or minimum 10 PSI flexible pipe rating for pressure side of pump.

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

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

Be sure to have container available for capturing system fluid!
Pump Assembly

Planning the Installation

A. Inlet Port
- 3” inlet port
- Pump material is polypropylene - solvent bonding is NOT RECOMMENDED.
- RECOMMENDATION FOR SERVICING. Use rubber coupling.
- Support with 3.5” (4” inner diameter) hanger 1” from pump inlet.
- Recommend Wye or Tee before pump to allow manual over-ride, easy service access, or to dislodge something from the pump.

B. Discharge Port
- 1.25” rubber coupling should be used to connect hard plumbing to discharge port connection.
- Plumbing should be kept as short as possible to increase pump efficiency.

C. Wire Lead Exit
- Wires should be covered to protect from foreign objects and water

D. Discharge Hose
- Hose cuff accepts 1.5” hose barb, should be clamped with supplied clamp
- 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.

D1. Discharge Hose Cuff
- Hose cuff accepts 1.5” hose barb, should be clamped with supplied clamp
- 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.

E. Universal Nozzle with Caps

Tip: For easy cleaning, recommend removable storage tray for hose and nozzle.
Recommended Installation

- 3.5" pipe hanger (4" inner diameter)
- Gate valve
- Wye or tee with threaded cap for service
- 3" rubber coupling with clamps
- Pump assembly
- Pump gate valve
- 3.5" pipe hanger (4" inner diameter)
- Wye or tee for optional manual over-drive
- Manual over-drive gate valve
- Bayonet RV drain (manual over-ride)
- 3" rubber coupling with clamp
Recommended Wiring Diagram

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.

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

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

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

Fig. 3a

90° Hose Barb - Plumbed from Side

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

Fig. 3b

Straight Hose Barb - Plumbed from Back

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

Fig. 3c