



COMMERCIAL WASTE HANDLING EQUIPMENT

## **Safety Manual & Operating Instructions**

**Pik Rite, Inc. Vacuum Trucks & Tanks**

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## INTRODUCTION

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Congratulations and Thank You for choosing the quality waste handling equipment built by Pik Rite. Whether it's a chassis mounted tanker, a Portable Toilet Service Unit or a Slide-In Unit we believe you'll be very satisfied with the purchase and we appreciate your patronage.

Please review these operating instructions carefully, then sign and date the last page of this document and return it to Pik Rite for processing. This will activate your warranty and show us that you have read and understand the following operation instructions and warnings. You may have questions or encounter other applications not discussed in this manual, if so please give us a call before proceeding.



## SAFETY

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**PRESSURE**



Objects under pressure are dangerous. Never attempt to remove or dislodge objects while under pressure. Always evacuate pressure before attempting to remove or dislodge an object from the vessel. Flying objects can act as projectiles and strike you or a bystander causing serious injury or death. The pressure relief valve is set to 10 psi. Pressurize the tank and watch the vacuum / pressure gauge. If pressure starts to exceed 15 psi, stop immediately and contact Pik Rite, Inc. for information on how to adjust the pressure relief valve. **PRESSURE IS NOT TO EXCEED 15 PSI UNDER ANY CIRCUMSTANCE.**

Prior to doing any work or adjustment on your vacuum tank, ALWAYS PURGE ALL PRESSURE from the tank. This can be done by placing the vacuum pump selector lever in the neutral position. The neutral position is not marked on the pump but is between pressure and vacuum.



Be careful with fluids under pressure . Hydraulic systems are highly pressurized and must be approached with great care. Hydraulic pressure can drive hydraulic fluid through your skin. Check for leaks with a piece of wood or scrap cardboard and not with your bare hands. If a pinhole leak injects hydraulic fluid into your body, see a physician immediately. Be sure to relieve hydraulic pressure prior to working on a hydraulic system.



### **AUXILIARY POWER TAKE OFF SHAFTS**

Rotating shafts can be dangerous. You can snag clothes, skin, hair, hands, etc. This can cause serious injury or death.

Do not go under the vehicle when the engine is running.

Do not work on a shaft when the engine is running.

Do not engage or disengage driven equipment by hand from under the vehicle when the engine is running.

Place wheel chocks under the wheels to prevent accidental rolling.



**WARNING: COLD WEATHER OPERATION**

During extreme cold weather operation [32°F (0°C) and lower] Power Shift power take-offs can momentarily transmit high torque which can cause output shaft rotation in the disengaged position. The high viscosity of the transmission oil causes this when it is extremely cold. As slippage occurs between the power take-off clutch plates the oil will rapidly heat up and the viscous drag will quickly decrease.

Do not engage the driven equipment until the vehicle is allowed to warm up. Power take-off driven equipment should always be left in the disengaged position when not in operation.



Note: Pik Rite, Inc. does not support or encourage entering the tank for any reason; however, if you choose to do so, please refer to OSHA Rule 29 CFR 1910.146 Confined space for safe practices and procedures.

**WEIGHT LIMIT DISCLAIMER**

**WARNING** – THE CAPACITY OF YOUR VACUUM TANK, WHEN FILLED, MAY EXCEED THE WEIGHT LIMITATIONS OF YOUR TRUCK CHASSIS, OR THE WEIGHT LIMITS IMPOSED BY THE DEPARTMENT OF TRANSPORTATION IN YOUR AREA, OR BOTH. THEREFORE, IT IS THE RESPONSIBILITY OF THE OPERATOR TO FILL THIS TANK ONLY TO THE LEVEL ALLOWABLE BY THE LAWS OR RESTRICTIONS GOVERNING YOUR SITUATION. PIK RITE, INC. WILL NOT ASSUME ANY RESPONSIBILITY IN THIS MATTER.



Always use the truck parking brake when parking your truck and block the wheels before performing any service.



**IMPORTANT**

An individual operation manual is furnished with your vacuum pump. Please read it thoroughly.

The oil catch muffler must be drained when it runs for a long period of time (approximately 2 hrs). Excessive use will cause an accumulation of oil within the muffler. Follow this procedure to avoid having oil blown through the muffler and onto the ground.

The secondary shut-off should be drained after every use to avoid accumulation.

When service or repair parts are needed, have the tank and vacuum pump serial number readily available for reference (see the following page).

**DANGER!!!!**  
**Do not weld on tank as this could cause**  
**an explosion!!!**



### **LOADING THE TANK**

Check the oil level of the vacuum pump before starting. Fill oil reservoir with recommended vacuum pump oil – see vacuum pump operator’s manual.

Position the vacuum pump lever to “VACUUM” as labeled on the pump.

Start the engine and engage the PTO slowly. Run the engine up to the recommended rpm’s. This is determined by a decal, from Pik Rite, that indicates the correct engine speed. This decal is located on the truck dashboard.

**WARNING** - TRUCK ENGINE RPM DOES NOT NECESSARILY REPRESENT THE VACUUM PUMP RPM. IMPROPER ENGINE SPEED MAY RESULT IN PREMATURE PUMP AND DRIVELINE FAILURE. IF YOU HAVE ANY QUESTIONS REGARDING THE ENGINE SPEED, CONTACT YOUR SALES REPRESENTATIVE.

Run until 10” of vacuum is shown on the vacuum gauge before opening the fill valve.

Watch the fill indicator (sight glass, sight tube or float lever indicator) to see when the tank is full. When full, close the “Fill” valve and shut down the vacuum pump by disengaging the PTO. If for any reason you can’t visually see when the tank is full, you will be able to hear a sound change in the running pump signifying the primary shut-off has been activated.

**WARNING** – DO NOT LEAVE THE PUMP RUN LONG IN THIS CONDITION. REPEATED VIOLATIONS WILL REDUCE THE LIFE OF YOUR PUMP.

**WARNING** – THE CAPACITY OF YOUR VACUUM TANK, WHEN FILLED, MAY EXCEED THE WEIGHT LIMITATIONS OF YOUR TRUCK CHASSIS, OR THE WEIGHT LIMITS IMPOSED BY THE DEPARTMENT OF TRANSPORTATION IN YOUR AREA, OR BOTH. THEREFORE, IT IS THE RESPONSIBILITY OF THE OPERATOR TO FILL THIS TANK ONLY TO THE LEVEL ALLOWABLE BY THE LAWS OR RESTRICTIONS GOVERNING YOUR SITUATION. PIK RITE, INC. WILL NOT ASSUME ANY RESPONSIBILITY IN THIS MATTER.

Upon PTO disengagement, deactivate the throttle control to reduce the engine rpm's.

### **UNLOADING THE TANK**

Position the pump lever to neutral to relieve any vacuum in the system. The neutral position is not marked or indicated, but it is in the middle of the vacuum / pressure labels on the pump. Position the pump lever to "PRESSURE", open the dump (discharge) valve, start the pump and obtain operating rpm's as indicated.

When the tank is empty, shut down the pump prior to closing the dump valve in order to avoid any pressure build up within the system.

### **HYDRAULIC TOP HATCH AND/OR HYDRAULIC PUMP ACTUATION:**

**Unloading the tank:** With the vacuum pump in pressure mode and the rear discharge valve open, turn the vacuum pump off before closing the rear valve to exhaust all pressure from the tank. Note: switching from pressure to vacuum with an air or hydraulic vacuum pump actuator may cause float balls to seat. This can create a potentially harmful situation when pressure is trapped inside the tank. If you are unsure if pressure is inside the tank, stay clear and open an **unobstructed valve** (remove camlocks **before opening**).



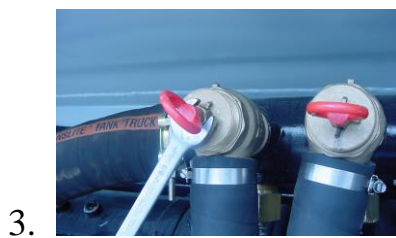
**SETTING THE PRESSURE RELIEF VALVE**

The pressure relief valve should be set from the factory to allow a maximum of 10 psi in the tank. If for any reason the pressure relief valve needs to be re-set follow the instructions below.

1. Make all adjustments when the vacuum pump is not running, the keys are out of the truck and the tank has no vacuum or pressure inside.



Using a wrench, loosen the large, outer nut to allow for adjustment.



With a 5/8” wrench, turn the small hex nut clockwise for more pressure in the tank or counterclockwise to relieve pressure for less pressure in the tank. Never adjust this valve when pressure is in the tank, the end could fly off causing injury or death.

**⚠ DANGER**



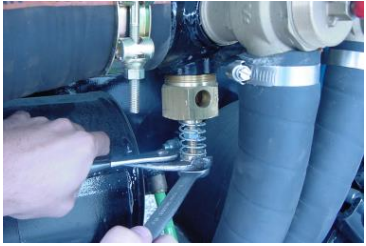
Once the desired, regulated, pressure has been attained, simply secure the outer lock nut that was loosened in step #2.







**SETTING THE VACUUM RELIEF VALVE**

The vacuum relief valve should be set from the factory to allow a maximum of 18 inches of vacuum in the tank. Air cooled vacuum pumps are typically capable of running continuous at eighteen inches of vacuum while liquid cooled pumps can run continuous at higher vacuum levels. *Please read your vacuum pump operators manual for more specific instructions for your pump.* If for any reason the vacuum relief valve needs to be re-set follow the instructions below.

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1. While securing the knurled nut, loosen the hex nut at the end of the spring.
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2. Holding the inner hex nut closest to the main housing, turn the knurled nut clockwise for more vacuum in the tank and counterclockwise for less.
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3. Once the desired vacuum has been attained, simply hold the knurled nut firmly with pliers while tightening the outer hex nut securely against it.

**GEAR BOX OIL SPECIFICATIONS**

80-90 weight, good quality, gear lube.



## REFERENCE INFORMATION

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When requesting information or service, please contact your sales representative first with the following facts.

- The size of the tank (Gallons) \_\_\_\_\_
- The tank serial number \_\_\_\_\_ (located on the front of the drivers side hose tray)
- The pump Brand and Model number \_\_\_\_\_
- The pump serial number \_\_\_\_\_

### **PIK RITE, INC. INFORMATION**

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