

PRO-VAC

Conde

INDUSTRIAL PUMPOUT STATION



Gasoline Powered Unit

Vacuum Technology

OPERATIONS MANUAL

Congratulations on the purchase of your new ProVac Industrial Pumpout Station. Your new ProVac has been manufactured with the best quality components to give you year after year of trouble free service. As you can easily see, it is built to withstand the most extreme conditions. Nevertheless, you will find that your ProVac will continue to give you "brand new" performance by following some simple maintenance procedures.

PRE-OPERATION SETUP

Your ProVac has been completely tested at the factory before you have taken delivery of it. All systems have been checked and rechecked to make sure that everything is working properly and is set up to work right out of the crate. However, due to federal regulations, it is not possible to ship the unit to you with oil in the vacuum pump reservoir. **It is, therefore, imperative for you to add oil to the oil reservoir before starting the unit. Failure to do this can damage the vacuum pump and void the vacuum pump warranty.** To make sure the oiling system is set up properly, follow the instructions below:

First, fill the oil reservoir (item #11) 1.0" from the top. Oil reservoir is located next to the Conde vacuum pump (see picture page # 7). Use a synthetic blend (S.A.E.) 10W-30 motor oil. Synthetic oil will keep the inside of the pump cleaner than standard motor oil, and we recommend it. **Always maintain oil level so it is visible in the sight tube.**

The ProVac system utilizes a trouble free, no-adjustment-required Conde wick oiling system. After the oil reservoir is filled no adjustment is required..

Remember, it is important that the Conde vacuum pump always receives a supply of oil when it is in operation. Therefore, check the oil reservoir periodically to insure that the pump will be getting oil while it is running. Oil level can be seen in oil reservoir sight tube.

Engine Oil and Maintenance

Honda engines are not shipped with oil. Please refer to the Honda Owners Manual for proper specifications.

WARNING: The ProVac should not be used for pumping flammable liquids or gasses.

OPERATION

The ProVac is simple to operate. The complete unit comes with a 60 gallon tank on a frame with wheels, a Conde vacuum/pressure pump, brake assembly, tool box, hose and wand. Please see the enclosed complete parts list (page 7) to identify all items on your ProVac.

After filling the oil reservoir as previously discussed and before operating the ProVac, make sure that all covers and fittings are tightly secured. **If the ProVac is started in the pressure mode, loose or insecure fittings can blow off and serious injury can result.**

Now turn the 2" outlet ball valve (item #12) located on the bottom of the tank to the "off" position and turn the 2" inlet ball valve (item #3) located on the top back of the tank to the "off" position also. This will allow the tank to build up vacuum when the unit is turned on. It is also a good idea to close the 2" ball valve on the wand assembly at this time.

The Vacuum or Suction Mode

To begin pumping in the suction mode, pull the mode positioning handle (item #9) to the vacuum position (see illustration at bottom of page 3). Start engine and the pump will immediately begin to build vacuum. This can be ascertained by looking at the gauge (item #8) located on the front of the ProVac. The gauge is a combination vacuum/pressure gauge, so first make sure the gauge is reading in the vacuum mode. Vacuum is measured by inches of mercury (shown as " Hg") on the gauge. The ProVac is equipped with a vacuum relief valve (item #16) that will allow the unit to build up to 16" Hg, which is enough vacuum to do virtually any job. After the ProVac has built up 16" Hg, the vacuum relief valve will begin to crack and pull atmospheric air into the tank. It will sound as if the unit is leaking, but this is perfectly normal. To begin pumping, open the 2" inlet ball valve (item # 3). Next place the wand into the liquid to be pumped and open the wand assembly 2" ball valve. Pumping will be instantaneous and at a rate of about 120 gallons per minute which means, of course, that it will take only about 30 seconds to fill the ProVac.

The ProVac is equipped with a primary shut-off (item #5) that will shut the vacuum off when it is full. The primary shut-off is designed to prevent moisture or foreign substance from being sucked inside the pump. If, while pumping, the unit suddenly stops pumping, it is full. The ProVac is also equipped with a secondary moisture trap (item #6) to catch any moisture that bypasses the primary trap, and a final filter (item#7) designed to catch any debris that goes past the primary trap.

Pressure or Off-Load Mode

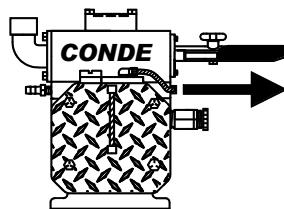
The ProVac is equipped with pressure off-loading capacity. For safety considerations, the ProVac pressure relief valve is factory set to off-load at a maximum of 5 psi. This will offload waste approximately 10 feet high. Higher off load capabilities are possible by adjusting the pressure relief valve (item #14). **The pressure relief valve should never be adjusted to over 10 psi.**

Before attempting to run the ProVac in the pressure or off-load mode, make sure all the fittings and valves are securely closed. Severe injury may result if fittings are not secure when the ProVac is in the pressure mode.

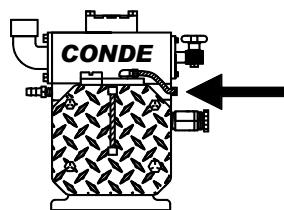
To off-load the ProVac, detach the 2" suction hose from the quick disconnect at the 2" inlet ball valve (item #3). First make sure that the 2" inlet ball valve is **closed** as is the 2" outlet ball valve (item #12). Reattach the 2" suction line to the discharge ball valve, attach or move the hose to the vessel to receive the contents of the ProVac, and open the discharge ball valve. Now, push the mode position handle in (item #9) to the "pressure" position (see illustration below). It is possible to verify that the ProVac is in the pressure mode by observing the gauge (item #8) located on the front of the unit. The gauge should now show pressure rising in the tank and the needle should read pressure or "PSIG". The ProVac will build only enough pressure to completely off load the unit. If, on the other hand, the unit is started in the pressure mode first before opening the discharge ball valve, the unit will begin to build pressure until the pressure relief valve (item #14) on top of the tank opens and begins to relieve air to atmosphere.

The unit can also be off-loaded by attaching a suction line to the 2" outlet ball valve (item #12) from another vacuum pumping source, such as a vacuum truck.

Before pumping out the ProVac unit with another source, make sure that the 2" inlet ball valve (item #3) is open to provide a vent for pumping.



Mode Position Handle Vacuum Position



Mode Position Handle Pressure Position

Cleaning and Maintenance

The easiest way to keep the inside of the ProVac tank clean, is to pump clean water into the tank using the wand and hose attachment. In this way, all parts of the ProVac that are normally exposed to waste are cleaned by the water. Immediately, after filling the tank with water, off-load the unit as previously explained into an appropriate container.

Your ProVac is equipped with two large 6" manway openings located in the lower back of the tank and on the top. These openings enable you to get inside the tank itself to remove any debris that might have been sucked into the unit. It is also possible to use the opening to spray out the unit. To remove cover, simply unscrew the eight hex bolts and lift off cover. When replacing the cover, be sure that the O-ring is properly seated.

CAUTION: Do not remove any fittings while unit is under pressure. Severe injury could result. Check gauge first to make sure gauge reads zero.

OIL CATCH MUFFLER

The oil catch muffler (item #17) is designed to capture oil as it exits the exhaust of the Conde pump. It is necessary to periodically drain the oil catch by turning the petcock located at the bottom of the oil catch muffler. Always dispose of used oil in a responsible way.

Do not put used oil from the oil catch muffler back into the oil reservoir.

FLUSHING INSTRUCTIONS - As preventative maintenance it is recommended to flush the pump periodically, depending on its use.

However unlikely, it is possible that liquid may be inadvertently sucked into the pump while pumping. If this occurs, flush the pump out with kerosene or diesel fuel immediately. If there is liquid in the secondary trap bowl, flush pump immediately.

Never under any circumstance flush out the pump with gasoline or any other highly flammable substance.

To flush the pump, utilize the brass flushing petcock (item #10) located on the top front of the pump. Attach a small line from the petcock to a small cup of kerosene. Turn the pump on in the vacuum or suction mode, and open the petcock. Even though the vanes inside the pump may be stuck in the rotor slots, a small amount of vacuum should draw kerosene into the pump and out the exhaust. Continue to suck kerosene into the pump until the vanes become free which can be audibly detected, and the pump is able to reach full vacuum (16" Hg). After flushing the pump, drain the kerosene out of the oil catch muffler and turn the unit back on in the vacuum mode and run for two minutes.

Note: This is done to lubricate the pump after flushing.

Note: Serious corrosion problems caused by liquid or other foreign substances entering the Pump may require complete disassembly and rebuilding of the pump.

TROUBLE SHOOTING YOUR PROVAC

Problem	Cause	Solution
Loss of pump performance	<ul style="list-style-type: none">- Slide Valve not all the way in.- A ball trap is stopping air flow- Strainer is plugged.- Plumbing and/or other Attachments loose.- Motor is running too slow.- Belt is slipping.- Relief valves faulty.- One or more pump vanes is sticking.- Piston cups on Slide Valve are worn.- Pulley not secure on shaft.- Blockage within plumbing.	<ul style="list-style-type: none">- Put Slide Valve all the way in the right position. Tighten knob if valve moves.- Drain ball trap and/or empty tank.- Check strainer screen. Clean or replace.- Tighten all plumbing connections.- Adjust throttle to full throttle position.- Adjust motor base to allow 1/2" of play at center of pulleys.- Reset if necessary.- Flush pump and replace vanes if necessary.- Install new piston cups.- Re-secure the pulley to shaft.- Locate and remove substance.
Unusual Noises	<ul style="list-style-type: none">- Pulleys not in alignment.- Pulley or belt guard not Properly secured.- One or more vane is sticking.- Leak in the system.	<ul style="list-style-type: none">- Loosen pulleys and align with straight edge.- Re-secure properly.- Flush out pump.- Check all connections.

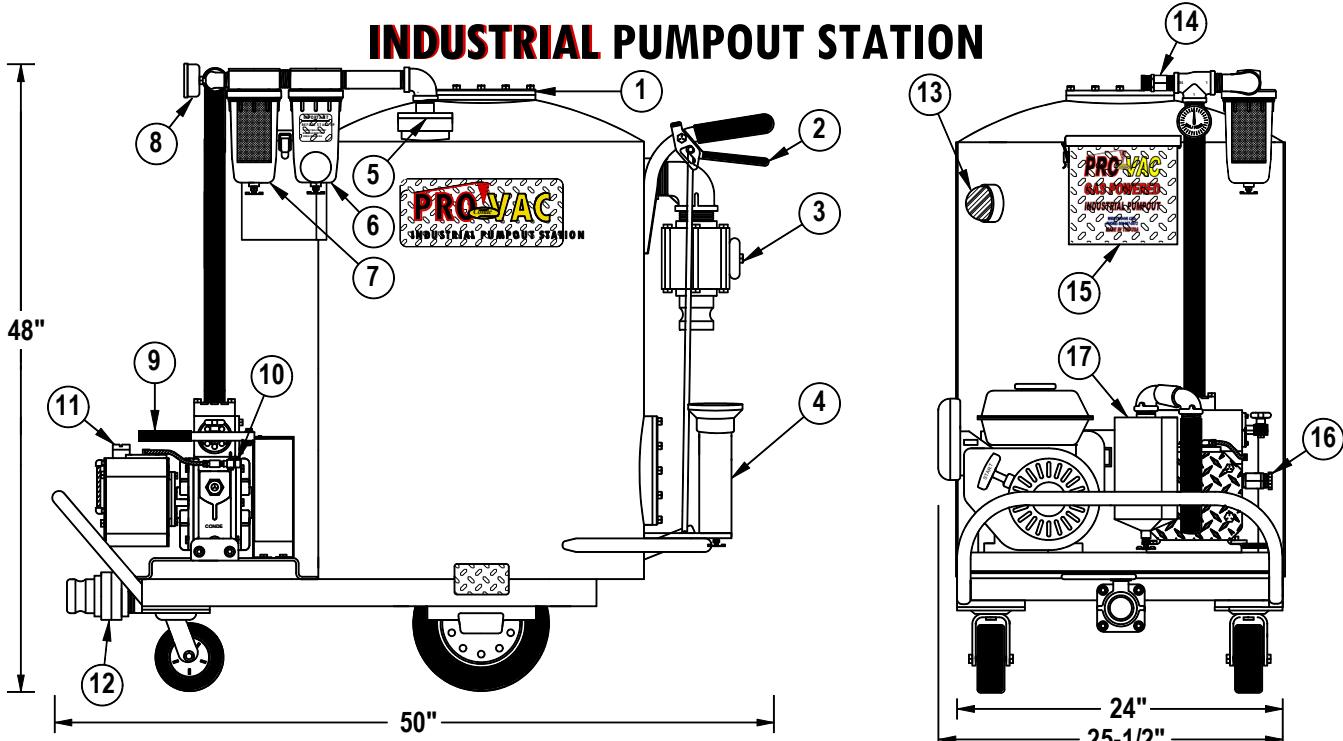
BELT DRIVE CONSIDERATIONS

The ProVac vacuum pump has been factory set up to run at a maximum of 1750 RPM when the Honda motor is running a full throttle. 1750 RPM is the maximum speed allowable for the vacuum pump. Changing pulley combinations to run the pump at a faster speed will damage the pump and void the warranty on the unit. Pulleys have been specified for proper “belt wrap” so that maximum contact of belt to pulley can be achieved and minimize the chance of damage to the pump by over tightening the belts. Always leave about 1/2” of belt play when adjusting the belt. Over tightening the belt can damage the pump and not enough tension can cause belt slip and loss of pump performance.

Thanks again for your purchase. We at Westmoor, Ltd. sincerely feel that we have the best portable liquid waste unit available on the market today.



GAS POWERED INDUSTRIAL PUMPOUT STATION



PART NO.

LWUNP60GAS - PROVAC 60 GALLON (ALUMINUM) GAS POWERED UNIT

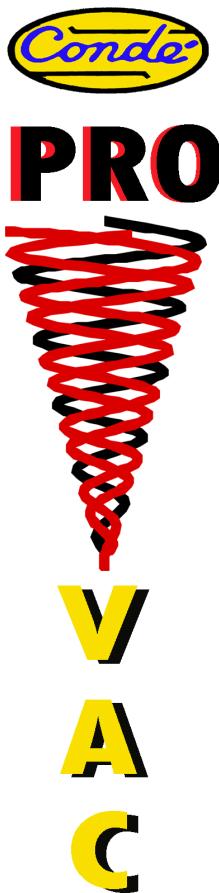
DRY WEIGHT - 250#

STANDARD FEATURES

- CONDE' PROVAC VACUUM/PRESSURE PUMP (35 CFM)
- AUTOMATIC OILING SYSTEM
- 2" SUCTION INLET & DISCHARGE OUTLET
- HONDA (GX100QA2) PULL STAR ENGINE
- PRIMARY & SECONDARY SHUT OFFS
- PUMP PRE-FILTER STRAINER
- OIL CATCH MUFFLER W/ DRAIN
- LIQUID FILLED VACUUM/PRESSURE GAUGE
- 10 FT - 2" PLASTIFLEX SUCTION HOSE W/ WAND ASSEMBLY
- TWO - 6" CLEANOUT MANWAYS
- HEAVY DUTY WHEELS & FRONT CASTORS
- HAND / PARKING BRAKE
- VACUUM & PRESSURE RELIEF VALVES
- PUMP FLUSH VALVE

NO. PART IDENTIFICATION

- | | |
|----|----------------------------|
| 1 | - CLEANOUT MANWAY |
| 2 | - BRAKE HANDLE |
| 3 | - SUCTION INLET BALL VALVE |
| 4 | - WAND HOLDER |
| 5 | - PRIMARY SHUTOFF |
| 6 | - SECONDARY TRAP |
| 7 | - PUMP PRE-FILTER STRAINER |
| 8 | - VACUUM / PRESSURE GAUGE |
| 9 | - MODE POSITIONING HANDLE |
| 10 | - PUMP - FLUSH VALVE |
| 11 | - OIL RESERVOIR |
| 12 | - TANK OUTLET BALL VALVE |
| 13 | - SIGHT GLASS |
| 14 | - PRESSURE RELIEF VALVE |
| 15 | - TOOL BOX |
| 16 | - VACUUM RELIEF VALVE |
| 17 | - OIL CATCH MUFFLER |



Westmoor Ltd.
906 West Hamilton Ave.
Sherrill, New York 13461

800-367-0972

www.westmoorltd.com
FAX: 315-363-0193



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