

A. INTRODUCTION

Congratulations on your recent VAC-CON purchase. Your new VAC-CON has been custom built to your specifications and will provide you with many years of dependable service.

Please read this manual completely and be sure you understand all the safety, operation, and maintenance procedures that apply to you and your VAC-CON. Should you have questions regarding any information in this manual you may call your local VAC-CON dealer or the VAC-CON factory.

Any misapplication, obvious abuse, neglect or careless operation of your unit may void some or all of the warranties as provided on the official warranty document enclosed in your owner's package.

B. SAFETY PRECAUTIONS

The safety of the operator and crew is of great importance to VAC-CON. Decals, guards, and other protective features designed into all VAC-CON units have been put in place to protect operators, crew members, and mechanics from unnecessary injuries. Your VAC-CON should never be operated in an unsafe manor. All guards must be in place whenever your machine is in use, and everyone involved with the machine should have a complete understanding of all safety features, guards, and decals provided on this machine and explained in this manual.

Please review the following list of general safety precautions:

1. **DO NOT** perform any maintenance or repairs unless truck engine key and auxiliary engine control fuse have been removed.
2. Reference the decals supplied in the accessories section of this manual and then do a walk around of your machine to be sure all decals are in place as described in this manual. Also, look for additional warnings or decals on the machine. Call your selling dealer or VAC-CON if you believe decals are incorrect, missing, or unclear in content.
3. Keep all safety devices in place while operating this machine.
4. **DO NOT** work under debris tank without safety arm in place.
5. **DO NOT** work under truck with engine running.
6. **DO NOT** lubricate, adjust, or attempt to repair the machine unless the engine is shut off and no moving parts are rotating. Replace covers before operating machine.
7. Allow only responsible, properly trained individuals to operate or service this machine.
8. Always keep the machine in good operating condition.
9. Follow all DOT Regulations, as well as City, County, State, and Federal laws and regulations pertaining to cleaning, dumping, and operations.

General Information

10. Be careful to avoid overhead electrical wires, cables, or other obstacles.
11. **DO NOT** operate or repair this machine while wearing loose clothing, watches or rings. **DO NOT** use rags or wipes on moving parts.
12. Periodically check for loose bolts, nuts, and set screws.
13. Periodically check shafts, pins, gears, and other parts for excessive wear, cracking, or breaks.
14. **DO NOT** move the chain drives by hand.
15. When moving belt drives by hand, keep hands flat and on top of belts.
16. **DO NOT** put your hands or other body parts in front of handgun nozzle, or hose reel nozzle.
17. **DO NOT** operate the hose reel if rodder hose is cut, worn or mended. **DO NOT** use excessive force to rewind hose.
18. **DO NOT** operate this machine unless parking brake is on and splitshaft or transfer case (standard or reverse drive units) has disengaged rear axle. Wheel chocks are recommended for steep grades.
19. **DO NOT** stand directly behind debris door to open safety "T" handles, unless hydraulic door latches are engaged and debris tank is lowered.
20. **EXTREME CAUTION** must be exercised while using rodder hose or handgun. Depending on you unit, the water pressure can range from 500-3000 P.S.I.
21. If unit is used in refinery application or vacuuming petroleum products, the VAC-CON unit **MUST** be grounded.
22. **DO NOT** transport unit with boom safety support arm removed.
23. **DO NOT** transport unit with debris tank raised.
24. **DO NOT** use this unit to vacuum any type of flammable liquid.
25. Material in a structure or piping system can suffocate you. Read operator's manual and Material Safety Data Sheets and observe all safety practices before entering the structure. Atmosphere within bin, silo, or tank vessel **MUST** be tested before entry. Respirator **MUST** be worn. When entering the structure, wear a body harness with lifeline or use boatswain chair.

A trained observer **MUST** be stationed outside the structure and **MUST** maintain constant contact with individual inside structure. Rescue equipment **MUST** be available. **DO NOT** enter bin, silo, or tank under a bridging condition. Suction nozzle generates rapid removal of material and may cause avalanche.

WARNING: Failure to comply with any of the above safety instructions or those that follow in this manual and other equipment manuals may result in severe injury or death.

REMEMBER: Safe operation is your responsibility. Use your VAC-CON only for the purpose for which it was intended. When you have questions regarding safe operation consult your supervisor.

VAC-CON RECOMMENDS each operator or helper associated with the operation and/or maintenance of the machine be required to complete "A Field Study Program in the Operation and Maintenance of Wastewater Collections Systems". See recommended training and reference material form in this section.

C. RECEIVING AND INSPECTING YOUR NEW VAC-CON UNIT

Read this manual before operating your VAC-CON. Your VAC-CON has been carefully inspected and tested prior to leaving the factory. However, to be certain that no damage has occurred during shipment, you should carefully inspect your machine as follows:

1. With you Dealer Representative or Factory Representative present, carefully check your VAC-CON against your order to be sure all equipment ordered is present.
2. Remove any parts that may have been shipped in the debris body.
3. As you check your VAC-CON against your specifications you will be able to see each item as it appears on your machine. Should any items be missing, or not what you expected, bring it to the attention of the Representative who will do the necessary follow-up to ensure your complete satisfaction.
4. Pre In Service Inspection - This should be done with a Factory or Dealer Representative with the operator and customer mechanic present.
 - A. Liquid levels have been checked prior to shipment but this is a good time to locate fill points, dipsticks, and discuss proper lubricant types.
 - B. Visually inspect for any loosening of nuts, bolts, set screws, and hoses during shipment.
 - C. Inspect tension and alignment of any belt drives on your unit.
 - D. Familiarize yourself with switches, controls, and gauges.
 - E. Check for any loose hydraulic hose fittings.
 - F. Check inlet structure seals to be sure they are in proper alignment and have a light coating of grease.
 - G. Check all safety guards, lights, and decals for proper placement, visibility, and under standing.

D. REPLACEMENT PARTS ORDER

1. Replacement parts should be ordered through your local authorized VAC-CON dealer. Genuine parts and service are available at their facility to provide the fastest possible delivery.

General Information

2. A complete inventory of standard parts are on hand at our factory-headquarters in Green Cove Springs, Florida, USA.
 - A. This includes placement parts, pumps, and power units.
 - B. Normally, VAC-CON does not stock spare parts for nonstandard options and accessories you may have originally ordered.
3. An order placed for standard parts at our headquarters office will normally be shipped within 24 hours after receipt of order.
4. Orders should be placed prior to 5:00 PM E.S.T. Monday through Friday.
5. When ordering parts, specify your unit serial number and the parts sheet drawing number you are referring to.

E. GENERAL LUBRICATION

The degree of maintenance and lubrication required depends on operating conditions, and the length of time the machine is running. Generally, less problems and down time occur, and fewer repair parts are needed if proper lubrication is maintained. Each unit has a lubrication chart located near the blower on the curb side. For your convenience, the lubrication chart is also shown in this section.

F. TOWING INSTRUCTIONS

CAUTION: Under no circumstances should your VAC-CON be lifted from the front hose reel. In a case that your truck becomes disabled, only lift from the front or rear axle, or tow unit using tow hooks provided.

PROPER START UP PROCEDURES

These do not have to be done in any particular order, but should be done on a daily basis.

1. Check all fluid levels - engine oils, hydraulic oil, engine coolant levels, splitshaft, transfer case and P.D. blower if equipped
2. Walk around your vehicle looking under the truck for any possible leaks.
3. Check and clean if necessary the basket screens at your water filling station. Check and clean P.D. blower final filter screen if equipped.
4. Be sure all safety guards are in place.
5. Operate all safety lights prior to leaving the yard to be sure they work.
6. Check all gauges, controls, and options to be used.
7. Be sure the rodder hose is connected to the swivel at the hose wind guide before transport.
8. If equipped with a P.D. blower, run blower at idle RPM for 3 minutes to ensure splash lubrication of blower bearings.
9. Boom is to be placed in the boom support in the locked and transport position.
8. Be sure you have all necessary traffic control and safety equipment required by your supervisor and your local Department of Transportation.

When complete, proceed to your water filling site.

MAINTENANCE SCHEDULE

DAILY

1. Lubricate vacuum compressor bearings (3).
2. Lubricate vacuum compressor drive bearings (2) (belt driven units).
3. Check hydraulic reservoir oil level, add if necessary.
4. Lubricate water pump plungers (GASO pump only).
5. Check water pump crankcase oil level, add if necessary.
6. Empty debris body.
7. Clean debris body inlet screens and debris body float every time body is dumped.
8. Wash off rear door seals.
9. Wash off inlet & outlet seals.
10. Check for debris in vacuum compressor separator box, clean if necessary.
11. Check water inlet suction strainer, clean if necessary.
12. In freezing temperatures, drain water system per our air purge procedures.
13. Inspect for loose nuts, bolts, and belts.

WEEKLY

1. Grease hose reel rotary union (3 pumps of grease gun).
2. Grease driveline between the splitshaft/PTO and the vacuum drive (3) (belt driven units).
3. Check oil level in splitshaft/PTO (belt driven units), add if necessary
4. Grease front hydraulic pump driveline (3).
5. Grease telescopic boom slide seal (4).
6. Grease pillow block bearing on auxiliary engine water pump drive (1).
7. Inspect for loose nuts, bolts, and belts.

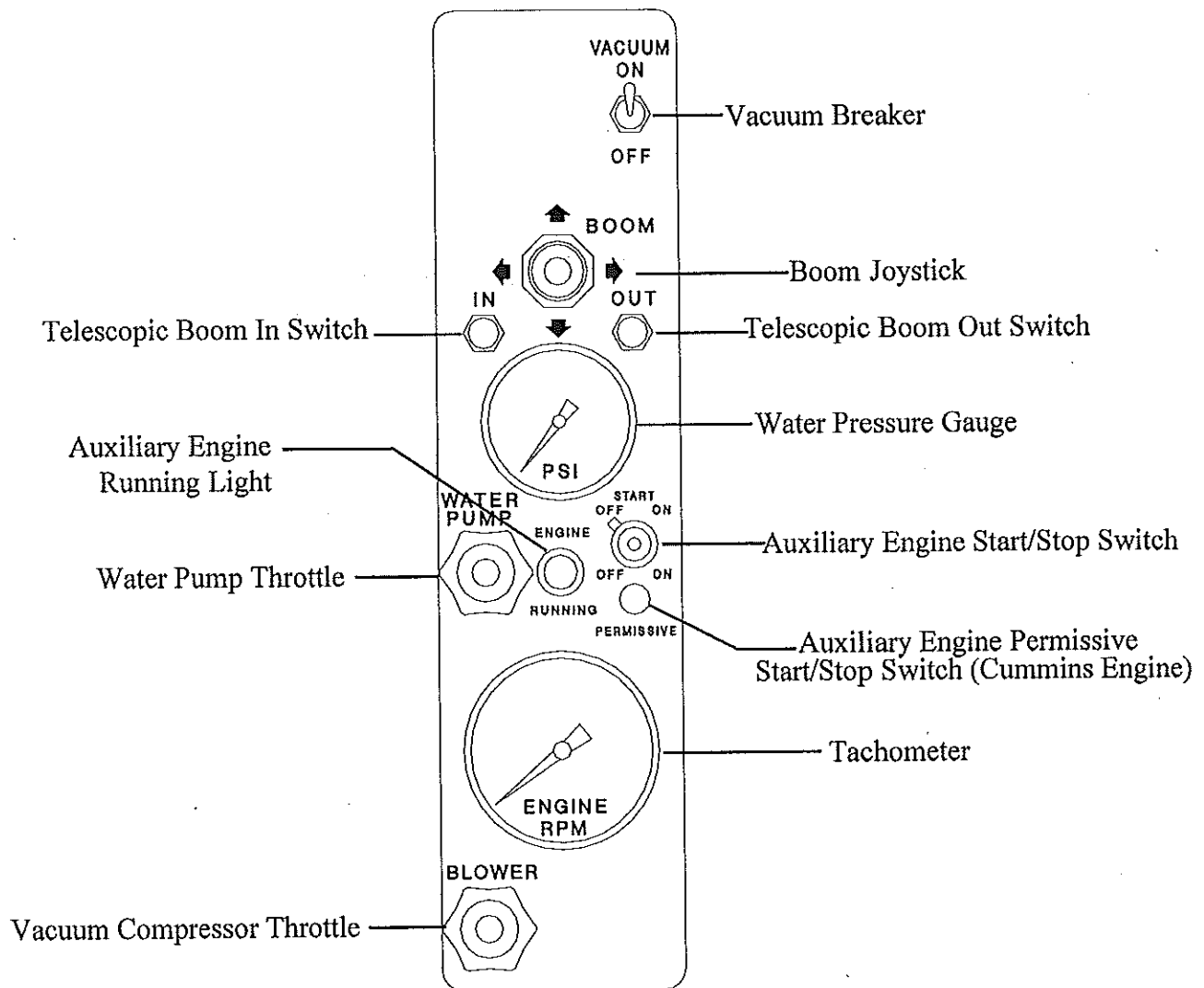
MONTHLY

1. Grease hose reel bearings (2).
2. Grease hose reel pivot pin (2) (articulating hose reel only).
3. Grease scissor lift pivots (8).
4. Grease debris body pivots (2).
5. Grease boom pivots (2).
6. Grease boom turret posts (3).
7. Grease vacuum breaker door shaft (2).
8. Grease float level indicator shaft (1).
9. Inspect for loose nuts, bolts, and belts.

Hose Reel & Bumper

A. OPERATION - STANDARD OR HYDROSTATIC HOSE REEL

1. All VAC-CON rodder hose reels operate similarly. The exception is the articulating reel, which has additional features that will be discussed later in this section.
2. For your safety and convenience, standard controls & gauges are located in the curb side control panel. Shown below is a control panel with an explanation of functions for your unit configuration.



Hose Reel & Bumper

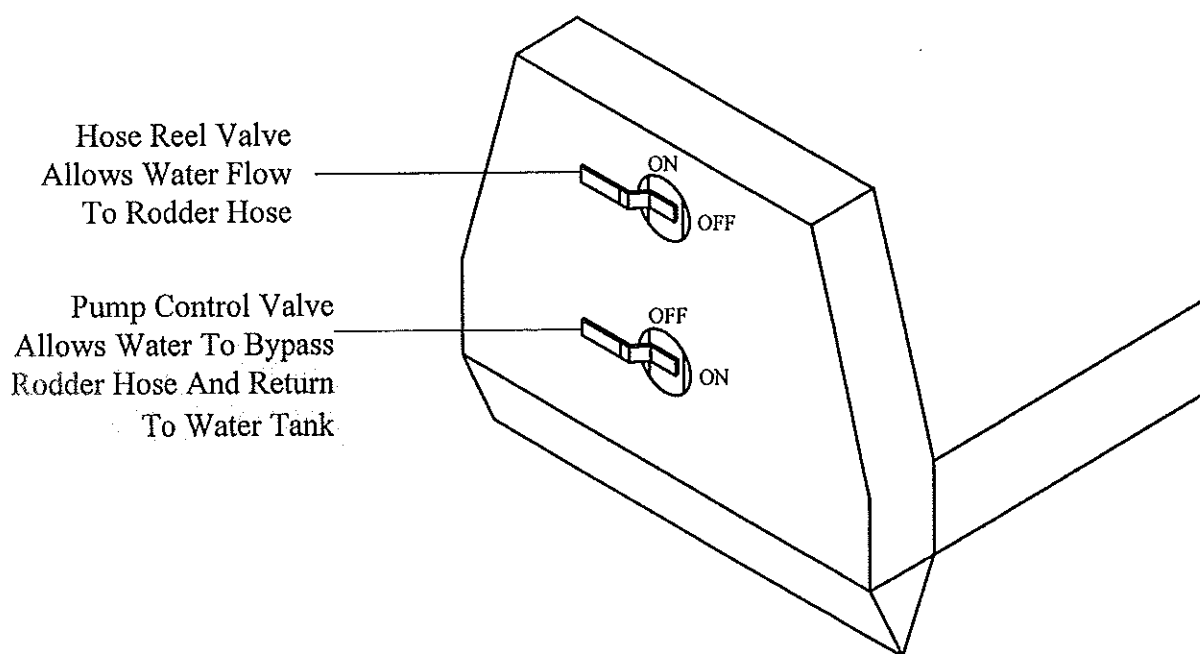
NOTE: The correct way to use these throttles is to screw-in or screw-out knob, not pull and push. However, for emergency shutdown, push center detent button in, and push knob in.

To operate boom joy stick push (center) detent button in and swing joy stick in direction of arrows right/left, up/down.

3. Level Wind Guide: Located curb side below reel, used to guide direction of rodder hose back on to reel in close, tight wraps. It also has a swivel pipe thread adapter located on its arm for use in storing loose end of rodder hose during transport of unit.
4. Hydraulic Control Valve: Located above the control panel, the handle is used to reel-out or reel-in rodder hose and the knob is used to control speed of the reel. Turn the speed control knob counter clockwise to speed up reel, and clockwise to slow down the reel. The speed can be regulated from 0 to 150 ft./min.
5. 12 Volt DC (15 AMP) Electrical Outlet: Located below the control panel.
6. Pendant Outlet: Located drivers side opposite control panel, used for remote operation of the boom.
7. Hand Operated Hydraulic Jack: Located on the driver side at the bumper (standard reel) used for raising & lowering hose reel to service truck engine compartment. (the unit is factory shipped with the jack handle in the truck cab). To lower the hose reel, first close the release valve knob located at the bottom of jack clockwise using flattened end of jack handle. Jack-up slightly to relieve pressure on transport retainer hitch pins. Next, remove both hitch pins, open release valve by slowly turning release knob counterclockwise. To raise the hose reel, close release valve knob clockwise and jack-up. Reinsert both hitch pins. Relieve pressure on jack by turning release knob counterclockwise. **NEVER leave jack under pressure while operating or transporting unit.**
8. Optional Adjustable Hose Footage Counter: Located drivers side at front of reel. The counter only reads an average number of feet out, depending on the original amount of rodder hose on the reel and the number of coils out. The operator can adjust the reading to more accurately reflect normal use in your application. To adjust the counter, loosen the set screw holding the counter mount to the slide bar. To count less feet per revolution of the reel, slide the counter toward the center of the reel. This will give a more accurate count when rodder hose is extended at long distances. If you normally use short runs of the rodder hose, adjust the counter toward the outer edge of the reel. Be sure to retighten set screw.

Hose Reel & Bumper

9. Water Control Valve Handles: Located on the front of the hose reel shown below are valves with explanation of functions.



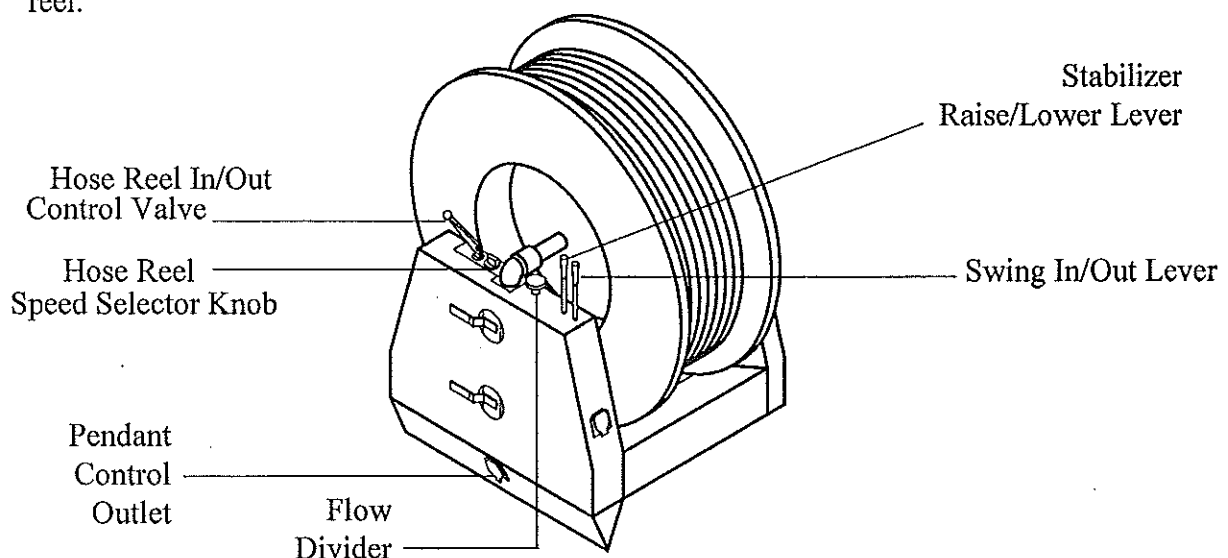
10. Cold Weather Water Drains: Located curb side under the bumper is a bulkhead plate supporting hydraulic and water hoses. The capped tee adapters are the water drains.
11. Optional Winter Recirculation System: Located at the same bulkhead as above. The procedure for operating this system is as follows: Remove pipe plug from pipe swivel adapter attached to first hose on the curb side. Connect rodder hose end to swivel adapter and tighten. Start water pump engine with both water control valves in **OFF** position. Turn top control valve to **ON** position. Turn bottom control valve to the **ON** position, and turn auxiliary engine throttle control cable out to approximately 1500 R.P.M.

Hose Reel & Bumper

12. Handgun Control Valve: Located curb side on end of bumper, the valve directs water to the handgun outlet located at the front curb side corner of the unit main frame.
13. Two Way Valve Rodder Hose Water Operation: The following steps are required to operate the two way valve water system on a standard drive unit.
 - a. Make sure the two water control valves located on front of the hose reel are in the **OFF** position.
 - b. Start auxiliary water pump engine (switch located on hose reel control panel).
NOTE: Read engine manual before starting first time.
 - c. To send water to rodder hose, first turn top hose reel lever to the **ON** position. Next, turn the bottom pump control lever to the **ON** position.
NOTE: Control levers should be shifted with engine at idle only and water pressure not over 1000 PSI.
 - d. To stop rodder hose water flow, first turn the bottom pump control lever to the **OFF** position. Next, turn the top hose reel lever to the **OFF** position.
 - e. For longer turbo engine life, allow engine to idle for two to five minutes before shut down.

B. OPERATION - ARTICULATING OR HYDROARTICULATING HOSE REEL

1. In addition to the controls and features discussed in section A, the articulating hose reel allows the operator to position the reel over manholes and culverts located almost anywhere on the roadway without having to locate the truck in a position that would interfere with, or block traffic. Shown below is an illustration of features and valves on an articulating hose reel.



Hose Reel & Bumper

2. Flow Diverter Pull Knob: Located on the drivers side top, across from the hydraulic control valve used for sending hydraulic fluid to the articulating controls.
3. Located next to the flow diverter knob are two levers. The outer lever controls the in & out swing of the reel. The lever closest to the pull knob raises & lowers the stabilizing leg under the hose reel.
WARNING: Beware of the following equipment operating and safety precautions.
NEVER transport unit without hitchpin in place, retaining hose reel.
NEVER transport unit with red warning light flashing in cab.
NEVER move unit with stabilizing leg down.
NEVER transport unit with hose reel swung away from bumper.
NEVER operate the articulating hose reel (swung away from bumper) without lowering the stabilizing leg.
DO NOT lower stabilizing leg while operating hose reel in transport position.
4. Pendant Outlet: Located on the front bottom of the reel.
5. Cold weather water drain: Same as section A number 10.
6. The articulating reel does not have a hand operated hydraulic jack. When servicing of the truck engine compartment is required, the reel is swung out, away from the bumper for truck hood clearance. To service an inoperable truck engine see step seven below.
7. Located on the driver side bumper is a valve, which when opened allows the operator to manually swing the reel under emergency conditions.
Example: Truck engine is not operating and must be serviced.

BOOM OPERATION

1. Start engine and set parking brake to engage Hydraulic System.

NOTE: If standard blower drive, engage splitshaft/PTO and put transmission into the drive position.

2. Unlatch boom from boom support.
3. The joy stick located on the curb side of the hose reel raises and lowers the boom. Push the detent button in the center of the joy stick and lift up to raise boom, or push down to lower boom. Release the joy stick and the boom action will stop. To move the boom to the right or left, push the detent button in the center of the joy stick and push toward the cab of truck to rotate the boom to the curb side, pull the joy stick toward the front to rotate the boom to the drivers side.
4. If your machine has a telescopic boom, there are two push buttons located at the control panel just below the joy stick control marked **IN** and **OUT**.
5. The boom will rotate 90 degrees from center of truck in each direction.
6. To store the boom for transporting the machine do the following:
 - A. Retract boom all the way in.
 - B. Rotate boom over boom support bracket.
 - C. Lower boom into boom support and guide hose on to lower bracket provided.
 - D. Latch boom to boom support.

NOTE: **NEVER** transport unless boom is latched in the boom support.

VACUUM BREAKER OPERATION

1. The vacuum breaker control is located on the top of the hose reel control panel on the curb side.
2. On units with belt driven compressors, the parking brake must be engaged and the splitshaft/PTO must be engaged for the vacuum breaker doors to function.
3. On units with hydrostatic driven compressors, the parking brake must be engaged for the vacuum breaker doors to function.
4. While vacuuming, the vacuum breaker switch must be in the ON position with vacuum breaker doors open. When the debris body reaches its maximum capacity, the vacuum breaker doors will close, stopping all air flow.
5. When this condition occurs you must either drain off the excess water in the debris body or dump the material out of the debris body to allow the vacuum breaker doors to reopen.
6. With the vacuum breaker switch in the ON position the doors will also close when the operator disengages the parking brake. This feature is to ensure there will be no carry over of material from the debris body to the vacuum compressor during transport.
7. With the vacuum breaker switch in the ON position, if the operator needs to stop the flow of air to dislodge any debris from the end of the air tube he can just reach over and turn the vacuum breaker switch to the OFF position to stop the air flow. Then, turn the switch back to the ON position and continue vacuuming.
8. The vacuum breaker switch should be left in the "ON" position at all times, **except** as described in #7.

Lubrication Note: There are two grease fittings on the vacuum breaker door assembly shaft that requires grease monthly.

VACUUM COMPRESSOR OPERATION

A. Belt Driven Compressor - Standard Transmission

1. Position truck at area to be cleaned.
2. Engage parking brake.
3. With clutch depressed and engine at idle speed, transmission in the neutral position, engage splitshaft only, controls located to the right of the drivers seat.
4. Depress the clutch and shift the transmission into first gear, slowly release the clutch against the foot brake and parking brake to ensure the rear axle is disengaged. Be sure no personnel are in front of the vehicle, during this test only.
5. With the clutch depressed and engine at idle speed, transmission in neutral position, engage blower PTO controls located to right of drivers seat.
6. Rear wheel chocks are optional (recommended on unlevel grades or for additional safety).
7. Put the transmission in the highest gear available.
8. Release clutch slowly to engage vacuum drive.
9. Exit cab.
10. Make sure all personnel are clear of the vacuum nozzle.
11. Slowly increase speed of blower by turning out the throttle control located on hose reel to an operating range of 2200-2500 RPM.
12. To stop compressor, turn throttle cable in until engine reaches idle speed.
13. Enter cab.
14. Depress clutch pedal, and place transmission in the neutral position.
15. Wait one to two minutes until compressor has come to a complete stop.

16. Disengage PTO and splitshaft controls.

NOTE: If you do not follow step 12 & 13 exactly as stated, damage can occur to the splitshaft/PTO arrangement.

17. Truck is now ready for transport.

LUBRICATION NOTE: All grease fittings located at the vacuum compressor **MUST** be greased at least once a day.

VACUUM COMPRESSOR OPERATION

B. Belt Drive Compressor - Automatic Transmission

1. Position truck at area to be cleaned.
2. Engage parking brake.
3. With engine at idle speed and transmission in the neutral position, engage splitshaft only, controls located to the right of the drivers seat.
4. Apply the foot brake and parking brake, then select drive, slowly release the foot brake to ensure the rear axle is disengaged. Be sure no personnel are in front of the vehicle, during this test only.
5. With the engine at idle speed, transmission in the neutral position, engage the blower PTO control located to the right of drivers seat.
6. Rear wheel chocks are optional (recommended on unlevel grades or for additional safety).
7. Put the transmission into the drive position.
8. Exit cab.
9. Make sure all personnel are clear of the vacuum nozzle.
10. Slowly increase speed of blower by turning out the throttle control located on the hose reel to an operating range of 2250-2500 RPM.
11. To stop compressor, turn the throttle cable in until engine reaches idle speed.
12. Enter cab.
13. Place transmission in the neutral position.

14. Wait one to two minutes until compressor has come to a complete stop.

15. Disengage PTO and splitshaft controls.

NOTE: If you do not follow step 11 & 12 exactly as stated, damage can occur to the splitshaft/PTO arrangement.

16. Truck is now ready for transport.

LUBRICATION NOTE: All grease fittings located at the vacuum compressor **MUST** be greased at least once a day.

VACUUM COMPRESSOR OPERATION

C. Hydrostatic Driven Compressor - Automatic or Standard Transmission

1. Position truck at area to be cleaned.
2. Engage parking brake.
3. Put transmission in the neutral position.
4. Exit cab.
5. Make sure all personnel are clear of the vacuum nozzle.
6. With engine at idle speed, engage stroking lever on hydrostatic pump.
7. Slowly increase speed of blower by turning out the throttle control located on the hose reel to an operating range of 1800-2500 RPM depending on system used. At the appropriate RPM the high pressure gauge should read between 5000-6000 RPM on a three stage compressor or 3500-4000 RPM on a two stage compressor.
8. To stop the compressor, turn the throttle cable in until engine reaches idle speed.
9. Disengage the stroking lever on the hydrostatic pump.
10. Truck is now ready for transport.

LUBRICATION NOTE: All grease fittings located at the vacuum compressor **MUST** be greased at least once a day.

HANDGUN OPERATION

1. Position the water pump control valve and the hose reel control valve on the front of the hose reel in the **OFF** position.
2. Start the auxiliary engine and run at idle speed.
3. Remove the quick disconnect plug from the handgun connection located under the main frame just behind the cab on the curb side.
4. Connect the female end of the handgun hose to the handgun, and connect the male end of the handgun hose to the handgun connection on the main frame.
5. Make sure the handgun trigger is in the **OFF** position.
6. To pressurize the handgun, turn **ON** the handgun system ball valve located on the front bumper curb side.
7. Turn the bottom pump control valve on the front of the hose reel to the **ON** position.
8. The pressure of the handgun system is set at 650 PSI at auxiliary engine idle speed.
NOTE: **NEVER** run the auxiliary engine over idle speed while operating the handgun.
9. To depressurize the handgun system, turn **OFF** the bottom pump control valve first, then turn **OFF** the handgun ball valve.

SAFETY NOTE: **NEVER** point the handgun at, or in the direction of another person while it is pressurized. Personal injury could occur.

DEBRIS BODY FLUSHOUT OPERATION

1. Position the water pump control valve and the hose reel control valve on the front of the hose reel in the **OFF** position.
2. Start the auxiliary engine and run at idle speed.
3. Open the debris body flushout ball valve which is located at the water pump.
4. Turn the bottom pump control valve on the front of the hose reel to the **ON** position. You now have water to the flushout head inside the debris body.
5. Turn the water pump control throttle on the hose reel counter clockwise to increase the RPM's of the auxiliary engine, noting the corresponding water pressure increase.
NOTE: Maximum pressure for 30 GPM systems is 2000-2500 PSI, 60 GPM systems and above is 1800-2000 PSI.
6. To depressurize the debris body flushout system, turn the auxiliary engine throttle control on the front hose reel clockwise, reducing the auxiliary engine RPM's to idle speed. The water pressure gauge will come down to 700-1000 PSI.
7. Turn the bottom pump control valve on the front of the hose reel to the **OFF** position.
8. Turn the debris body flushout ball valve to the **OFF** position.
9. You are now ready to use any other water system on your truck. If you are finished with your cleanup procedures, turn **OFF** the auxiliary engine.

WATER RECIRCULATION OPERATION

1. Position the water pump control valve and the hose reel control valve on the front of the hose reel in the **OFF** position.
2. Remove the pipe plug from the bulkhead swivel fitting located below the front bumper on the curb side of the truck.
3. Connect the rodder hose to this swivel fitting, make sure it is tight.
4. Start the auxiliary engine at idle speed.
5. Turn **ON** the top hose reel control valve on the front of the hose reel.
6. Turn **ON** the bottom pump control valve on the front of the hose reel. You now have water traveling through the hose reel and back to the water tanks.
7. Turn the water control throttle counter clockwise until the auxiliary engine reaches 1500 RPM. This will provide ample water circulation and allow the auxiliary engine to burn enough fuel so the engine will not drool.
NOTE: The auxiliary engine tachometer is located in the gauge panel on the auxiliary engine on the drivers side of the truck.
8. To stop the recirculation system, first turn the water control throttle cable clockwise to reduce the RPM's to idle speed.
9. Turn **OFF** the bottom pump control valve on the front of the hose reel.
10. Turn **OFF** the top hose reel control valve on the front of the hose reel.
11. Turn **OFF** the auxiliary engine.
12. Loosen the swivel fitting holding the rodder hose. There will be some system pressure, so you will experience some water exposure.
13. After removing the rodder hose, replace and tighten the plug in the swivel fitting.
14. You are now able to utilize your water system.

WATER FILLING PROCEDURE

The water filling stations on VAC-CON units differ depending on the capacity you requested.

1. Position truck at water source to receive fresh water supply.
2. If filling from a hydrant, charge or purge the hydrant before hooking up your fill hose. Allow the hydrant to run until clean water is running through. Connect your fill hose.
NOTE: Using clear water will help extend water pump valves, valve seats, valve springs, and nozzle life.
3. Turn on the hydrant. As you fill the tanks you will see the water level rise in the sight tube. Fill tanks until water begins to come out of the air vents in either the caps on the lower tanks or the caps on the upper tanks, depending on which water system you have.
NOTE: Should you be required to fill from a source other than a hydrant, such as a creek, try to pump from the top of the water level to avoid sucking gravel into the tank. If this is done on a regular basis it is recommended that you install some sort of pre-strainer to ensure only clean water gets into your water system.
4. While you are still connected to your water source, this is a good time to prime your water pump. This is accomplished by following these easy steps:
 - A. Be sure all pet cocks and drain valves have been closed and remove quick disconnect plug from handgun connection.
 - B. Start the auxiliary engine at idle.
 - C. Turn handgun valve **ON**. (front bumper)
 - D. Turn water pump valve **ON**. (hose reel bottom valve)
NOTE: If you have a 30GPM/3000 PSI system you will have two 1/2 inch ball valves on the right side of your pump. One is connected to your water system and one is connected to the air system, which is connected to an air manifold. Turn both ball valves **ON**. When water begins to flow from the air manifold, close the water valve, wait a few seconds and then close the air ball valve.
 - E. Once you have a solid high pressure stream of water from the open handgun connection, turn water pump valve **OFF**.
 - F. Turn handgun valve **OFF**.
 - G. Turn hose reel valve **ON**.
 - H. Turn water pump valve **ON**.
 - I. Once you have a good flow of water from your hose reel, turn water pump valve **OFF**.
 - J. Turn hose reel valve **OFF**.

- K. Turn auxiliary engine **OFF**.
- L. Replace handgun quick disconnect plug.

SAFETY NOTES:

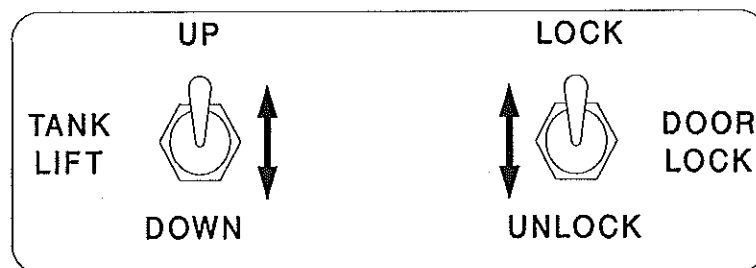
1. Be sure hose reel is connected to the hose swivel provided before turning hose reel on. This will prevent anyone from being struck by the hose.
2. **DO NOT** operate or pressurize your hose reel hose with a nozzle on it unless the nozzle has been inserted into a pipe or a closed container.
3. **NEVER** put your hands in front of, or point a pressurized water hose at someone. High pressure water can cut a persons skin or cause injury to someone attempting to avoid the spray.

Debris Tank, Scissor Lift & Frame Group

DEBRIS TANK OPERATION

A. Door Lock

1. The door lock control switch is located on the curb side of the truck frame, just forward of the vacuum compressor.



2. To open the rear door, press the door lock toggle switch **UP** to be sure the hydraulic latches are fully engaged.
NOTE: The truck engine must be running to supply hydraulic power.
3. Loosen the "T" bolt safety handles and swing them out of the way.
SAFETY NOTE: **DONOT** stand directly behind debris tank when loosening "T" handles.
4. With the debris body in the normal transport position, bump the door lock toggle switch **DOWN** allowing the locks to move a little at a time, and allowing the debris to gradually drain from the tank. Then open the latches fully and raise debris body.
5. To close the door latches, **lower the debris body** to the normal transport position, and close the latches by moving the door lock toggle switch **UP**. Re-engage "T"-bolt safety handles and tighten.
SAFETY NOTE: **NEVER** lift a full debris tank to drain off excess water or to transport without the safety "T" bolt handles securely in place.

Debris Tank, Scissor Lift & Frame Group

B. Debris Body Scissors Lift

1. The debris body control switch is located just to the left of the door lock control switch. (see illustration in section "A")
2. To raise the debris body, press the toggle switch UP. To lower the debris body, press the toggle switch DOWN.
3. Always use the safety arm provided when working on the truck with debris tank raised. To insert safety arm, raise debris body high enough to place safety arm between the upper & lower pivot tube, then lower debris body to secure safety arm.
SAFETY NOTE: **NEVER** work under a raised debris body without the safety arm in place, and the truck engine turned off, with ignition switch key removed.

C. Debris Body Drain Valve

1. A butterfly valve is located on the curb side of the rear door. This valve has a detent handle that **MUST** be disengaged to open or close the valve. Several detent positions are available for metering the flow.

D. Vacuum Inlet Screens

1. The vacuum inlet screens (inside the debris body) **MUST BE CLEANED EVERYTIME THE DEBRIS BODY IS DUMPED**. If these screens are not kept clean, it can cause a loss in vacuum and possible vacuum compressor damage.
2. From time to time it may become necessary to drop the screens to clean the top side of the screens. To accomplish this, remove the two bolts which hold each screen in place. The screens are hinged at the front and will swing forward. Using the handgun, clean any debris which may have collected on the top of the screen. Reinstall the screens.
SAFETY NOTE: Any time you enter the debris body, the safety arm located on the rear door must be in place. This can be done by unlocking the rear door and raising the debris body until the operator can safely step between the rear door and the body. Remove the pin in the safety arm and lower safety arm into place. Lower debris body to the transport position. To close debris body door, raise the body until the safety arm releases, then pin safety arm in the stored position, and lower debris body back to the transport position.