

SAFETY

It is your responsibility to read, understand and follow all of the safety instructions in this manual before operating your RockVac™. **It is your responsibility** to be sure that **EVERYONE** operating your machine is completely familiar with and follows all of the safety instructions in this manual.

Remember, a safety-minded, informed operator is the most important safety device on your machine. Accidents can be avoided -- do not risk injury or death -- be certain that every operator of your machine is well acquainted with all the safety recommendations and operating instructions in this manual.



KEEP ALL OTHER PERSONNEL AWAY FROM EQUIPMENT!

SAFETY ALERT SYMBOL

The Safety Alert Symbol means **CAUTION! DANGER! YOUR SAFETY IS INVOLVED!**

The Safety Alert Symbol identifies important safety messages in this manual and on your RockVac™. Be sure you are familiar with the messages identified for you with the Safety Alert Symbol. When you see this symbol, be alert to the possibility of serious injury or death. Follow the safety instructions given in this manual and on your machine.



SAFETY ALERT SYMBOL

PROTECT AGAINST NOISE



Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable noise protection to guard against hearing damaging.

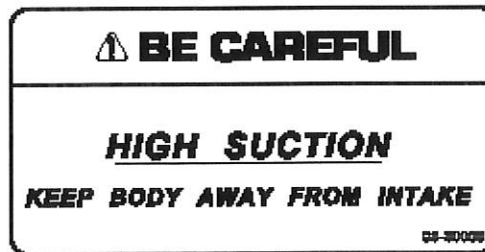
SAFETY GUIDELINES

SAFETY DECALS

READ AND BE SURE THAT YOU COMPLETELY UNDERSTAND THE MEANING OF ALL THE SAFETY DECALS BEFORE OPERATING YOUR MACHINE.

Keep the safety decals clean and legible at all times. Replace any safety decals that become illegible or are missing. If a part with a safety decal on it is replaced, be sure the replacement part also has the current decal in the proper location. You may obtain new decals from Christianson Systems, Inc.

Following are illustrations of the safety decals, which are on your RockVac™.



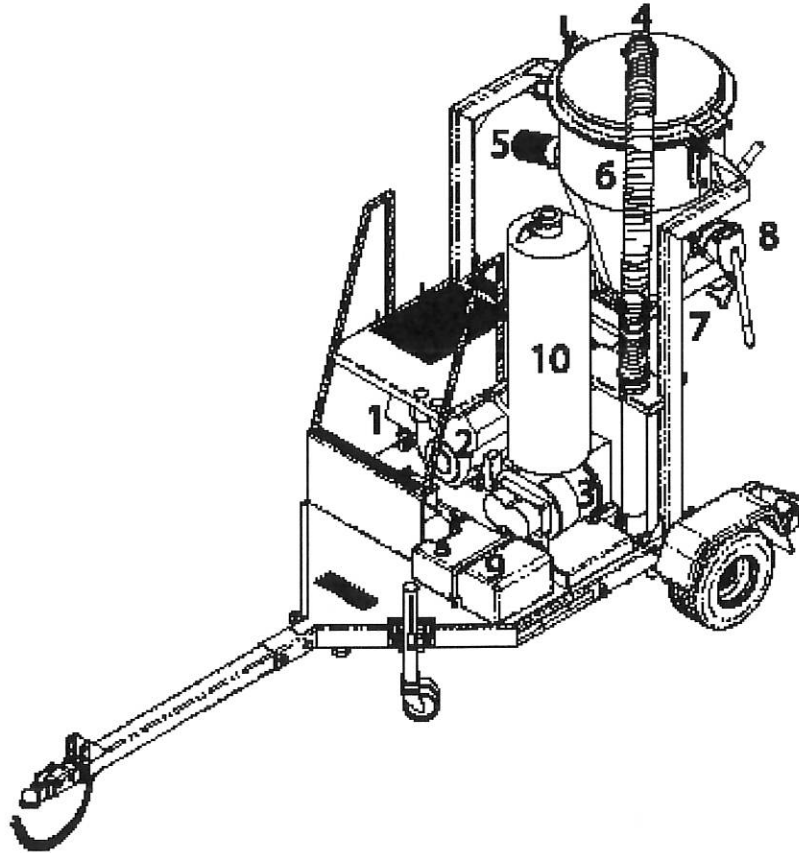
SAFETY GUIDELINES

SAFETY PRECAUTIONS

- Keep hands, feet and loose clothing away from drivelines, machine inlets, and blower.
- Never operate the machine without all shields in place.
- Never inspect or service the machine without shutting off the engine and disconnecting the battery power cables.
- Never allow children or untrained personnel near the machine.
- Wear suitable ear protection such as earmuffs or earplugs to protect against potentially damaging loud noises.
- Never leave the machine running unattended.
- Wait for the blower to cool before servicing.
- Do not move drive belt by hand. Use a wrench or other means. Always shut off the engine and disconnect the battery power cables before adjusting or repairing belt.
- Silencers, engine and associated piping or accessories may become hot enough to cause burns on contact. Wait for components and associated piping to cool before servicing.
- Blower casing and associated piping or accessories may become hot enough to cause burns on contact. Wait for blower casing and associated piping or accessories to cool before servicing.
- Internal and external rotating parts of the blower and driving equipment can produce serious physical injuries. Do not reach into any opening in the blower while it is operating, or while subject to accidental starting. Cover external moving parts with adequate guards.
- Shut off the engine and disconnect battery power cables before doing any service, and avoid bypassing or rendering inoperative any safety or protective devices.
- Use proper care and good procedures in handling, lifting, installing, operating and maintaining the equipment.
- Do not use the RockVac™ in or near explosive gases, fumes or liquids.
- Gasoline is extremely flammable, and its vapors can explode if ignited. Use motor fuel only. Since spilled fuel could ignite if it comes in contact with hot parts or sparks from the ignition, do not fill the fuel tank while the engine is hot or running.
- Gasoline is harmful or fatal if swallowed. Keep out of reach of children. If swallowed, do not induce vomiting. Call a physician at once.
- Keep fuel tank totally closed when not in use. Keep away from heat, spark and open flame.
- Refer to your engine operator's manual for safety recommendations pertaining to the engine.
- Other potential hazards to safety may also be associated with operation of this equipment. All personnel working with this equipment should be trained to exercise adequate general safety precautions.
- *STATIC ELECTRICITY CAUTION:* Various products such as grain and insulation will dissipate static electricity. Use only flex pipe approved by the manufacturer.

KNOW YOUR MACHINE

The RockVac™ is designed to convey a variety of materials to the receiving hopper by means of vacuum air. Before operating the RockVac™, review the illustrations below so you become familiar with the components of the machine and their names.



1. **POWER UNIT:** Houses gas engine, blower and 12-Volt Group U1 battery.
2. **GAS ENGINE:** 24HP electric-start Honda. Belt drives the blower and supplies current to the battery.
3. **BLOWER:** Produces vacuum air to convey product.
4. **AIR HOSE:** Delivers vacuum air from the blower to the Filter Receiver.
5. **PRODUCT HOSE:** Delivers product to the Filter Receiver.
6. **RECEIVER HOPPER:** Holding tank for product.
 - a. **TUBESHEET:** Holds the filters.
 - b. **FILTERS:** BlowerGard™ filters clean the air prior to going through the blower.
 - c. **FILTER CAGES:** Keep the filter bags open to allow air to pass through.
7. **DUMP DOOR:** Dumps material from receiver hopper.
8. **VACUUM BREAKER:** Used to break vacuum when under heavy load conditions.
9. **FUEL TANK**
10. **MUFFLER:** Blower air is exhausted through the top.

SET-UP AND OPERATION

INSTALLATION

Upon receiving your RockVac™, review the packing list to make sure all items are accounted for, and inspect components for shipping damage. If there is damage, it is your responsibility to notify the shipper of damage within 72 hours.

START-UP AND OPERATION

Position the RockVac™ parallel to the product to be conveyed. Uncoil and straighten product hose, making sure the product hose is as straight as possible and not tightly coiled.

Note: Use the correct length hose for the job. The shorter the hose, the better the performance.

Inspect filters to insure they are seated properly.

Start the engine and warm up for two (2) minutes. Bring the engine to full operating RPM.

Move product hose in a "side to side" motion slow enough to allow vacuum to pick up product.

Note: Do not force product into hose.

Engine will slow down considerably, and loss of vacuum is experienced when receiver is full. Remove product hose from product.

Note: Do not attempt to overfill receiver, this will result in killing the engine.

Open the vacuum breaker door on receiver to allow engine to recover. Proceed to discharge product out dump door while vacuum breaker door is latched in the open position.

Ensure product dump door is free of product before closing. Be sure the dump door is securely latched.

Close vacuum breaker door.

Resume conveying product.

SHUTDOWN FOR TRANSPORT

1. Remove product hose from material being conveyed and allow hose to empty.
2. Dump material from receiving hopper.
3. Close dump door.
4. Open filter bag access lid to allow the blower to intake atmospheric air. Operate the blower under a slight load allowing the blower to heat within safe limits. The heat generated by the blower will quickly evaporate residual moisture.
5. For most applications, after the work is completed, simply allow the blower to run at a low speed a few minutes (3-5) with the suction hose attached. The suction hose will provide enough load to the blower to quickly evaporate the moisture. *See maintenance section for complete details.*

NOTE: Do **NOT** transport machine with material in receiving hopper.

OPERATING TIPS/TROUBLESHOOTING

Low Capacity

1. Make sure product hose is as straight as possible. Coiling causes low capacity.
2. Check to be sure the engine is operating at full RPM. Engine RPM is preset at the factory. Do not adjust the engine RPM. If engine RPM is tampered with, your warranty will be voided.
3. Check product and air hoses for cracks, and all connections for air leaks.

Engine Pulling or Slowing Down

1. Receiver is full.
2. Product is being forced into hose not allowing the vacuum to pick up the product.
3. Product hose is plugged.
4. Product has become trapped above the restrictor grate stopping air to filters.
5. Filters need cleaning. *Note: Filters are washable or can just be dusted off.*

Cracked, Broken or Crushed Product Hose

1. Cut off damaged hose as straight as possible. For field repair, a cutoff saw will provide the straightest cut.
2. Slide tube from RockVac™ splice kit **inside** ends of cut hose, centering the splice in the middle of the tube. Make sure flex hose ends meet. Seal with silicone and hose clamps for an airtight seal.
NOTE: Repair with tubing inside the damaged hose is NOT RECOMMENDED. This will create an internal lip that will cause potential plugging and low capacity.

Blower Does Not Rotate Upon Initial Start Up

1. Cause: Foreign material has entered blower.
Solution: Contact Tuthill Pneumatics for a service center in your area.
2. Cause: Moisture in the blower freezes in cold weather.
Solution: Move RockVac to warm area.
3. Cause: Moisture in blower may cause light corrosion, restricting blower rotation.
Solution: Simply place a pipe wrench or strapping wrench on blower shaft and apply slight pressure in the clockwise direction as shown in photo.

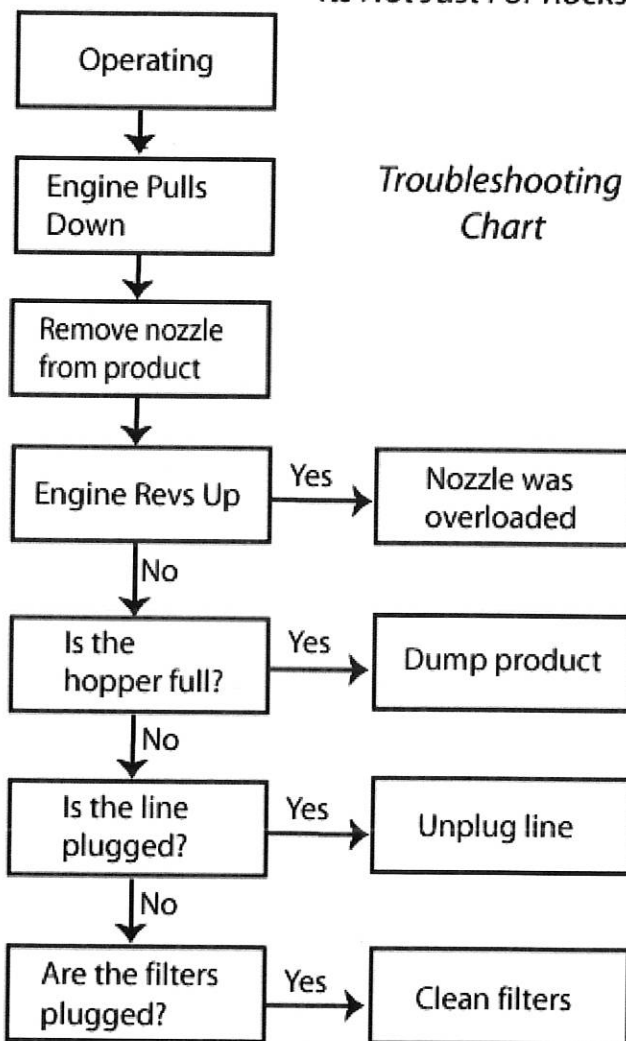


OPERATING TIPS/TROUBLESHOOTING

ROCKVAC™

Its Not Just For Rocks!

*Troubleshooting
Chart*



*Refer to Owner's & Operator's Manual
for complete maintenance information.*

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