MyTana MV84 Dual Cart Mainline Jetter User Manual

MV84 Jetter
User Manual

Contents

MV84 Dual Cart Mainline Jetter

— IMPORTANT —
FOR YOUR SAFETY, AND TO ENABLE MAXIMUM EFFECTIVENESS OF YOUR EQUIPMENT, READ (AND UNDERSTAND) THIS INSTRUCTION MANUAL ENTIRELY BEFORE USING YOUR HIGH-PRESSURE WATER JETTING UNIT
FAILURE TO FOLLOW INSTRUCTIONS AND REGULATIONS CONTAINED IN THIS MANUAL CAN RESULT IN SERIOUS INJURY TO THE OPERATOR
AND/OR TO ANYONE IN CLOSE PROXIMITY TO THE WORK AREA.

The Jetting Process

Sewer jetting (or hydro-jetting) uses a combination of water pressure (psi) and flow (gpm) through a hose and nozzle to flush debris out of drains or sewer lines.
Water jetting is used to penetrate and wash out clogs or ice, potential blockages or to simply clean the walls of drains and sewer lines to prevent future blockages.
Sewer jetting differs from normal pressure washing:

- Sewer jet nozzles direct the flow of water back toward the operator at a 20 to 45 degree angle. This backward stream propels the sewer nozzle and hose forward into the sewer line and also cleans the walls of the pipe.
- Jetting pumps deliver more flow and controlled pressure to clear tough blockages.

Components of hydro jetters: Water pump, motor, hose reel; various sub-components that protect the pump and the operator; various nozzles for various cleaning pplications and situations. Larger jetters use a water storage tank for water supply buffer.
MyTana stocks replacement parts for our jetters. Many are available to purchase online at mytana.com/jetter-parts

https://www.mytana.com/product-category/jetter-parts/

⚠ Safety First!
Instructions and Precautions
Pumps

- Remove “shipping” plug on top side of pumps and replace with vented plug. This is very important for the proper operation of the pumps.
- Do not store or run the pumps on its side or at a sharp angle, since oil can run out of the vent plug.

Vented Plug

Environment

- Use caution in confined, wet areas. Drain cleaning professionals often work directly through non-trapped openings into sewers — make sure that there is adequate ventilation into the work area.
- Neutralize or remove corrosive drain cleaners from drain before starting.
- Do not operate machine in areas where combustible gases, liquids or dust are present. Fire or explosion may occur.

Keep bystanders or unauthorized persons away
Insist they keep a safe distance before operating high pressure equipment.

- Never hold on to nozzle or point it at anyone with machine turned on. High pressure water streams can cause serious bodily harm.

Always insert hose at least 3-4 feet into pipe opening and hold onto hose before turning the machine on.

Shut the machine down:

- When changing nozzles, hose or reels.
- Before disconnecting water supply. Running a water pump “dry” will seriously damage the water pump.

- If it will be unattended.
- If machine fails to run properly.

▶ Read Shut Down instructions on pg 7.

Common Sense

- Don’t operate equipment while smoking, under the influence of drugs, alcohol or if taking medication that alters alertness.
- Wear goggles or a face shield to product your eyes, protective gloves, rubber sole boots, and other protective clothing as required.
- Keep all labels, decals, warnings, cautions, and instructions with machine. For new decals or labels contact Mytana.
- NEVER run flammable liquids or toxic chemicals (such as insecticide or weed killer), acids or hard caustics (such as lye) through the pump. Only water!
- NEVER use chemicals or agents that are not compatible with the Buna-N and PVC (polyvinyl chloride) or neoprene covering of the hose.
- NEVER clean the machine using its own spray. The machine is water-protected, but not water proof. High-pressure spray could damage machine components.

Gas Jetters

- Operate machine in well ventilated environment. Exhaust fumes can be potentially lethal to the operator.
- Do not allow flame or sparks in the area of operation.
- Do not refuel engine when it is running or hot. Spilled gasoline or gas vapor can ignite if it comes in contact with hot engine.
- Be careful not to touch engine block or the manifold/muffler during operation. These areas will become very hot during normal operation.
- Do not operate the machine with the air cleaner cover removed, this can cause a fire.
- Do not lay jetter unit on its side or tilt it backwards more than 30° when transporting. This can cause gas to leak out the cap vent.

  ▶ DO NOT fill the gas tank all the way. Leave several inches of space between the gas and the top of the tank to prevent gas from leaking out when transporting.

Use of diesel fuel in the gas tank may damage the engine.
In case of fuel spill use a cloth to clean up the spilled fuel and move the machine to another area until all vapors have cleared.
Gas jetters that are ordered with an electric starter package will have a battery attached. Batteries contain sulfuric acid. Avoid direct skin contact.

- Wear protective gloves, clothing and eye wear when handling your battery.

Maintenance

- Keep machine clean and dry to maximize performance and longevity.

- Follow maintenance schedules such as changing oil, check for weak spots, slices or cuts in hose, keep inlet screen clean, replace nozzles when worn, see page 7.
- Keep antifreeze in hose and pump in freezing temperatures.

Additional maintenance details follow in this manual.

MV84 Components

Hoses and Nozzles

Your jetter works via the proper blend of water pressure and water volume: the more water that has to pass through the restriction of a hose, the less pressure you will have at the nozzle end.
To optimize cleaning power, use the shortest hose with the largest inside diameter that you can. Pressure is lost as the water travels down the length of the hose. As the length
increases, the pressure decreases. In addition, the smaller the diameter of the hose, the greater of loss of pressure per foot will be. The MV84 jetter is optimized for 250' of 3/8" hose. The orifices (holes) in the nozzle affect pressure. Over time, water pressure will wear the orifices in your nozzle resulting in pressure drop and reduced cleaning effectiveness. Nozzles need to be replaced as normal wear occurs.
When using new hose, run water through it to clean it out before attaching the nozzle.

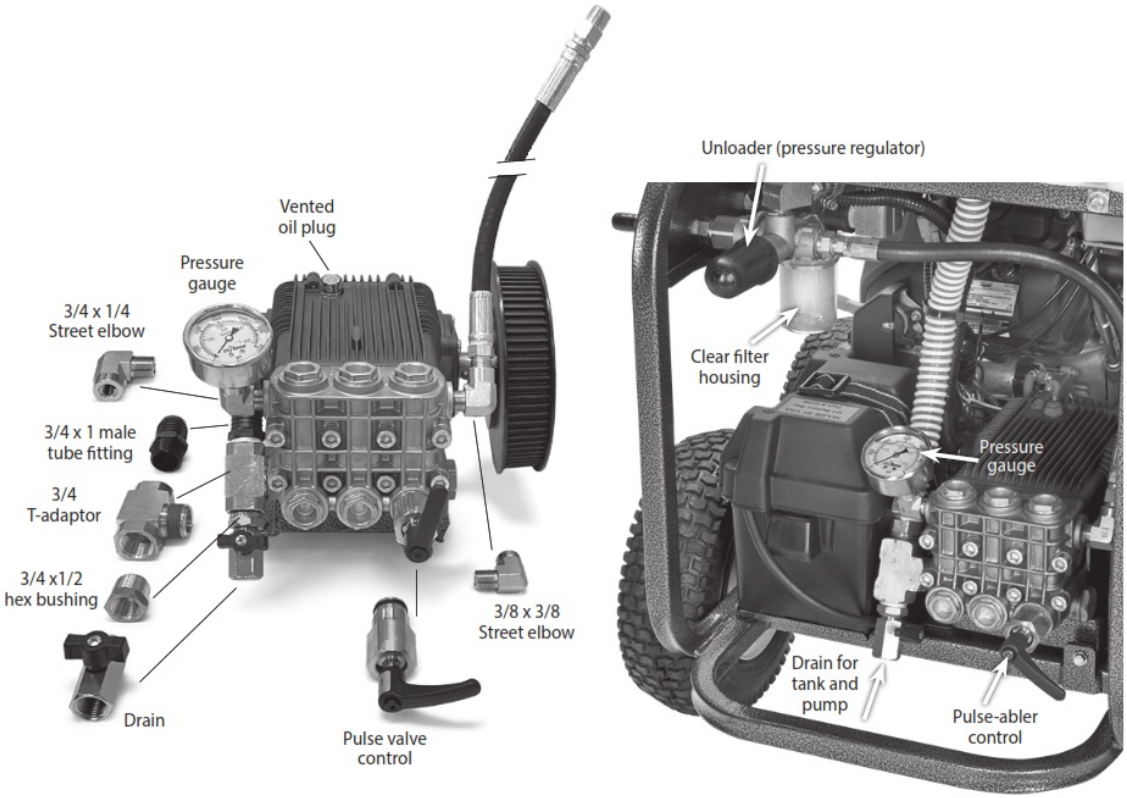
Pumps

Do NOT run pump without water in it. This can damage the cylinder walls, warp or crack the pump casing.
Do not use water more than 140° F. This will damage seals.
Your pump is equipped with a thermal relief valve, however, to optimize pump protection avoid water (or any pumped fluid) that is too hot on the inlet side.
NEVER run pump if there is ice in pump or outlet hose.
See Care Tips section on page 7 for antifreeze procedure.

▶ If the jetting unit will be unused for a period of time (more than several days), even in warm temperatures, we recommend running antifreeze through pump and hose before storage. This helps with lubrication, prevents o-rings from drying out and greatly reduces the chance of rust, minerals and other contaminants damaging the pump during storage.
Periodically change oil in pumps.
See page 7 for additional information.
Pressure Regulating Unloader
The pressure regulating unloader valve both regulates the pressure and relieves pressure on the pump while in bypass. Regulating pressure:
Using the unloader knob
(located above the pump)
Set the engine throttle to a constant motor speed before adjusting pressure. Lower rpm equals lower pressure at the pump, while high rpm delivers higher pressure. Turn the knob to the right to increase pressure, left to decrease.
Using the remote
Set the engine speed to high automatically increases the pressure to 4,000 psi.
Conversely, switching the engine speed to low drops the pressure to less than 1,000 psi.
The Unloader prevents pressure overload in the event that the nozzle is plugged or the ball valve is shut off. When in the by-pass mode, the pump will continue to run.

▶ Avoid running in by-pass mode for more than 2 minutes if the by-pass is not returning to the float tank. It can damage the pump.
Pressure Gauge
The gauge reflects pressure from the pump head only, not pressure at the end of the hose. It is important to select the largest possible hose size in order to have as much pressure as possible at the end of the hose.
Pulse Valve
The stem and handle extending from one cylinder of the water pump enables pulsation of the water stream

through the hose and nozzle.
Turning the pulse control handle clockwise (right), closes one valve of the pump. This creates pulsation or vibration in the hose, allowing the hose to “wiggle” through multiple or tight bends easily. Turn the control left to stop pulsation.
NOTE: Pulsing creates extreme vibration and faster wear on the pump. Use pulsation only as needed, do not use if a blockage or sewer line configuration does not require it.
MV84 Pump Diagram



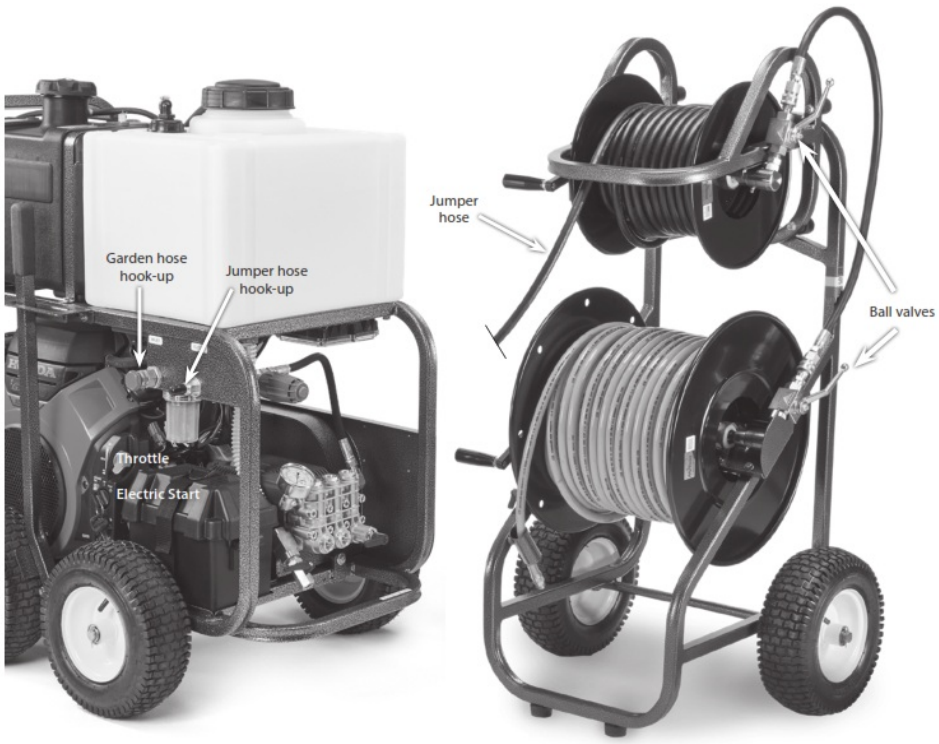
Water Inlet and Filter
Use heavy duty 3/4” hose no more than 50 ft. long. If the unit is run with an inadequate water supply, pump damage will occur. Before attaching source hose to the jetter, run water through the source hose to flush debris out of the faucet and hose. Make sure the water is running clean and clear.
The water inlet has a filter to prevent small debris from running through your pump. However recheck the inlet filter before each use to make sure there is no obstruction.
Unscrew and rinse out screen if necessary.
Remote Control
The MV84 motor can be controlled with a handheld remote. Toggle switches on the side of the jetter frame must be set correctly for the handheld device to work, instructions are on next page.

Pre Operation Checklist

- Be sure you understand all safety precautions (pg 2) and have been trained to use the machine
- Locate jetter on level surface where water won't pool, engage brake
- Check fluid levels— oil in pumps, oil and gas in motor
- Check for adequate water flow (right)
- Check hose for wear or kinks, that all hoses and lines are clear and inlet filter is clean
- Select and inspect nozzle for wear
- Check that hose reel and all connections are tight
- Wear protective clothing: gloves, rubber boots and goggles or face shield to protect your eyes from spray

Check water supply for 8 gpm rate
The water tank has gallon measurements on the side.

- With the supply hose wide open, place it in the tank. At the same time, start a stop watch.
- After 1 minute, remove the water supply hose and read the total gallons, there should be at least 8 gallons in the tank.



Operation Instructions

1. Attach garden hose to water faucet. Check source supply hose is at least 8 gal/minute (see previous page)
    1. Run water to clear air and flush debris out of faucet and hose before connecting to pump.
    2. Shut water off again when water runs clear.
2. Attach other end (male end) of garden hose to water inlet valve at pump.
3. Connect jetter hose to reel.
4. Attach nozzle to end of hose. Finger tighten, don't over tighten.
5. Mark the hose approximately 15 ft back from nozzle with electrical tape. Use this tape as your signal to shut off

machine before retrieving all the hose out of the drain when you are finished.

6. Open ball valve.
7. Open water faucet again to prime pump. An equal amount of water should pass through the orifices of the nozzle.
8. Push jetter hose into drain up to the marker if possible, or minimally 3 to 4 feet.

   Remote Jetting Set Up

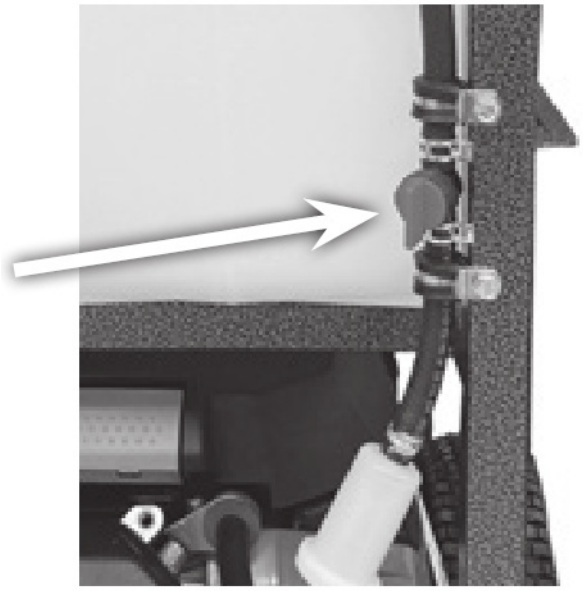
   • Do steps 1-5

   • Position the pressure hose and reel at the drain site.

   • Connect the 50’ jumper hose between jetter and the inlet on the hose reel.

   • Open the ball valve on the reel.

   • Continue from step #6
9. Turn the fuel valve to the “open” position.



10. Start Motor/Engine
    1. use the remote control or key start. See both procedures below.
    2. Be sure pressure is less than 1,000 psi before starting up.

The hose will start to advance down the drain line. Pull from the reel and guide it into the line. After it advances a few feet, pull it back 1/2 way. The actual cleaning of the line takes place when the hose is pulled back. Repeat the forward/back process.
When finishing up, watch for tape marker on hose as you pull the hose out. And shut down machine, see procedures below.
After shutting down the motor

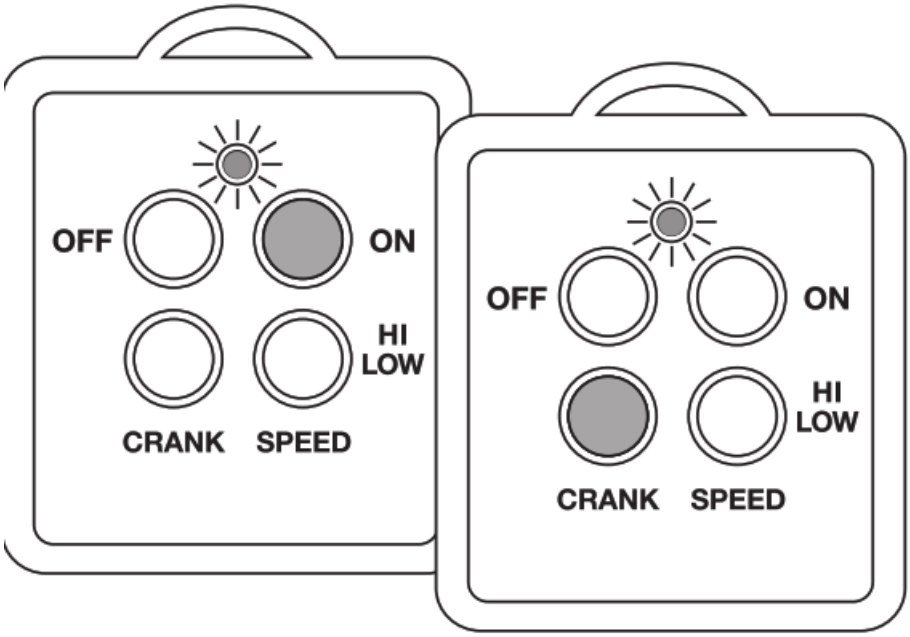
1. Close water faucet and disconnect garden hose from spigot.
2. Close ball valve. Disconnect garden hose from jetter.
3. Pull remaining hose from drain line.
4. Remove nozzle if you choose.
5. Store jetter hose properly on reel or in a coil to avoid damage to hose.

Do not shut off water flow with ball valve until the pressure is reduced to zero. If the ball valve on the reel is shut off then stored or transported under pressure, it can create a pressure lock and will be hard to turn the valve on for the next job.

Using the Remote 

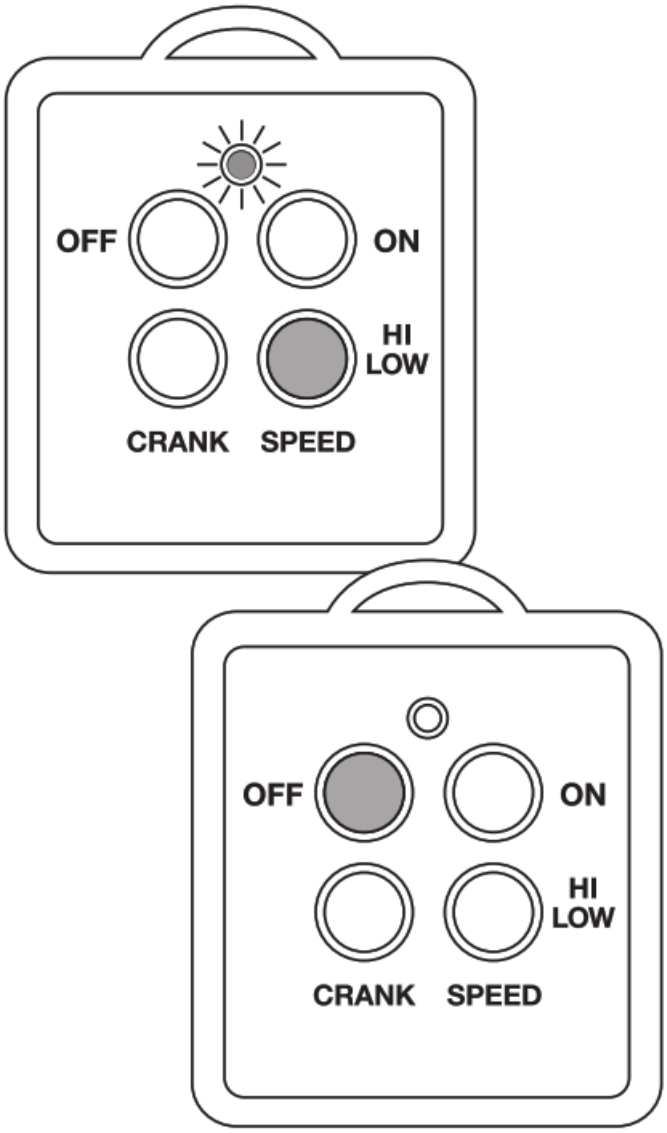
DIR 1 – Set remote panel toggle switches as shown
Start Up Make sure fuel line is open.

- Press the ON button, power light will glow
- Press the CRANK button, motor will start



Throttle

- Press the SPEED (Hi/Low) button to throttle the engine up or down.
  - there may be a 2-4 second delay for the motor to respond
  - the pressure will increase to 4,000 psi when the motor is throttled up, and will drop when the motor is throttled down
  - pressure may also be adjusted with regulator knob during operation



Shutting Down

- Throttle down the motor, press the SPEED button if needed wait for pressure to drop to less than 1,000 psi
- Press OFF to stop motor
- Move remote panel toggle to OFF to save battery

- Turn the fuel valve to the “closed” position

Startup with Key 
DIR 2 – Set remote panel toggle switches as shown
Start Up Make sure fuel line is open.

- Set the throttle about halfway between “MIN” and “MAX”
- Turn key to “start” to start engine
- Move throttle to desired speed
- Adjust pressure with pressure regulator knob

- turn right to increase pressure, left to decrease
- for normal operation, do not exceed 4,000 psi with the 3/8” hose.

Shutting Down
Reduce pressure gradually with regulator knob until gauge is less than 1,000 psi

- Move throttle lever to MIN setting (slowest)
- Turn the key to the “off” position
- Turn the fuel valve to the “closed” position

Operating Tips

- Tight bends and certain blockages are often more easily negotiated by rotating or twisting the jetter hose at drain opening. Once you are through that area, pull back and pass through several times to ensure cleaning.
- Once you have opened any blockage(s), pull hose back very slowly to provide maximum cleaning to wall of pipe.
- Use pulsation only if needed to advance nozzle and hose.
- When operating from the high end to low end (most common) shut off the water flow ball valve on the reel occasionally. This will allow debris to get ahead of the nozzle
  and flush it down the pipe.
- Warm water is effective in cleaning grease and ice blockagesA cold-hot mix from the tap is adequate, but do not exceed 140° Fahrenheit. Hotter water can damage seals in your pump. If you need hot water, use our HotBox water heater.

Antifreeze

If you know there will be a period of 2-3 days when the jetter will be idle OR if the jetter is stored in potentially freezing weather, make sure to run antifreeze into pump and bypass hose as part of your shut down procedure.
We recommend using our Antifreeze Kit for the MV84. It delivers antifreeze to all parts of the pump system: the pump, bypass hose and float valve. Instructions for use are online at **MyTana.com/product-manuals**. The Kit itself is available online at **MyTana.com**.
We recommend using RV antifreeze.

Care and Maintenance

Regular inspection and maintenance are key to preventing breakdowns and prolonging the life of the equipment.
Keep machine clean and dry to maximize performance and longevity. Keep antifreeze in hose and pump in freezing temps or if idle for more than 2-3 days, see procedure at left.
Never let pump run dry! Pump cavitation can occur in only a few seconds of low water supply. Ensure adequate source supply before operating.
Avoid running anything abrasive through pump which will damage pump components, resulting in total malfunction or, minimally, loss of pressure capability.
Do not use pulse valve more than necessary.
Never run pump if there is ice in pump or outlet hose.
Keep jetter hose away from sharp edges and muffler

- The hot muffler can damage the coating on the hose making it prone to bursting.
- Sharp edges can scrape, slice and generally damage hose quickly. While hose is easily replaced, it pays to

take care by buffering sharp edges with rags, tape, cardboard, etc. Or use a TigerTail™ guide, available at MyTana.com.

Maintenance Schedule
Follow this maintenance schedule to maximize the life of your jetting equipment. SHUT OFF ENGINE BEFORE ATTEMPTING ANY REPAIRS OR MAINTENANCE.
Inspect and check for: Frequency

Leaks in discharge or inlet fitting and hose	Daily
Adequate water supply to the pump	Daily
Jet nozzles are not clogged or worn	Daily
Pump oil level, fuel level engine oil level	Daily
PRESSURE HOSE for wear and damage.	Daily
INLET FILTER and FUEL FILTER for dirt and sediment.	Daily
AIR CLEANER for dirt	Weekly
Belt tension	Monthly

Service item: Frequency

Pump Crankcase Oil Change	1st mo. or 25 hours for “break in” Then every year or 50 0 hours If water gets into crankcase, change immediately
Engine Oil Change*	1st mo. or 20 hrs. Then every 6 mo. or 100 hrs.
Air Filter Cleaning *	Every 3 mo. or 50 hrs.
Fuel Filter Change *	Every 6 mo. or 100 hrs.
Spark Plug Change *	Every 6 mo. or 100 hrs.

* Refer to engine manufacturer’s manual for more details.
Recommended oil:
Engine Use SAE 10W30 Motor Oil to full mark on dipstick or to dot on sight glass
Pumps

- Primary – General Pump (GP) Brand
- Secondary – SAE 30W, non-detergent

Troubleshooting

!!Warning!! Before attempting any repairs or maintenance, make sure machine is shut off. For electric start units, disconnect battery cables. Severe injury can occur due to electrical shock.

	CAUSE	**REPAIR**
Pump Malfunction And Pressure Delivery Problems		
	Worn or oversized nozzle	Replace worn nozzle Check nozzle size
	Clogged water and/or chemical inlet strai ner	Clean or replace strainers
	Worn or damaged plunger seals	Replace plunger seals

Low Pressure	Worn or damaged inlet or discharge valve	Replace worn valve poppets or valve springs
	Dirt or foreign particles in valve assembly	Remove any dirt or particles
	Air leak in inlet plumbing or discharge	Locate air leak. Reseal connection or replace damaged port
Rough operation with loss of pressure	Restricted inlet plumbing, or air leak in inlet plumbing	Repair clogged inlet fittings. Check supply hose and ensure adequate water supply
	Damaged plunger seal or pump valve	Replace any damaged pump parts and clean out any foreign particles
	Clogged nozzles	Clean or replace nozzles
Water leakage at intake manifold or crankcase	Worn manifold seals, plungers, O-rings or condensation inside crankcase	Replace seals, sleeves, or O-rings. Change oil at regular interval
	Inadequate water supply to pump creating a vacuum lock	Ensure adequate tap water supply; clear inlet filter
Oil leaks	Worn pistons and/or leaking crank seals, crankcase cover seal or drain plug seal	Replace seals, sleeves or O-rings
Excessive wear	Worn and loose bearings	Replace bearings. Check bearing seals, spacers, and retainers. Replace any worn parts.
	Abrasive particles in fluid being pumped	Replace water and chemical strainers if damaged or missing. Install additional filter if fine abrasives are still evident

Short plunger seal	Operator(s) running pump without water s upply	DO NOT ALLOW UNIT TO RUN WITHOUT ADEQUATE WATER SUPPLY
	Hot water in pump	Do not run in bypass for more than 2 min. Do not let water supply exceed 140° F
Irregular Spray pattern	Worn or partially clogged nozzle	Clean or replace nozzle
Unloader Valve Malfunction		
Unloader cycles	Fitting leaking downstream	Tighten/replace fitting
	Clogged nozzle	Clean or replace
Fluid leaking from body	O-ring worn or cut	Replace part as necessary
Unloader will not turn u p to pressure	Foreign particle in valve	Replace or clean
	Nozzle worn or sized incorrectly	Replace part as necessary
	Plunger or valve worn	Replace part as necessary
Extreme pressure spikes	Adjusting nut turned completely into unlo ader	Loosen adjusting nut
	Clogged nozzle	Clean or replace

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Documents / Resources

	MyTana MV84 Dual Cart Mainline Jetter [pdf] User Manual MV84 Dual Cart Mainline Jetter, MV84, Dual Cart Mainline Jetter, Cart Mainline Jetter, Mainline Jetter, Jetter

References

- Sewer and drain cleaning equipment, parts and tools - MyTana LLC
- Jetter Parts Archives - MyTana LLC
- Product Manuals - MyTana LLC