



M224 Owners Manual

High-Speed Flexible Drive Shaft Cleaner

IMPORTANT!!

WARNING! Failure to follow these warnings could result in serious injury or death.

THIS MACHINE IS NOT TO BE OPERATED BY ANYONE UNTIL HAVING CAREFULLY READ THIS INSTRUCTION BOOK ON ITS USE.

IF ANYONE ELSE OTHER THAN THE ORIGINAL BUYER OF OUR EQUIPMENT IS TO USE THE EQUIPMENT, THEN THAT PERSON IS TO BE FURNISHED WITH AN INSTRUCTION BOOK.

Replacement manuals can be found online at mytana.com/product-manuals.

Follow appropriate safety procedures, your company's policies and applicable safety codes and/or laws.

Do not expose machine (excluding shaft and cleaning tool) to rain or moisture.

Do not expose to hazardous chemicals, hazardous gas or explosive environments.

SHOCK HAZARD - Significant levels of electricity remain in the circuitry of this machine even when disconnected from power source. Read warnings inside.

DISCLAIMER OF LIABILITY

MYTANA LLC SHALL NOT BE LIABLE TO ANY PERSON FOR ANY INCIDENTAL, INDIRECT, SPECIAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, OR INJURY OF ANY TYPE WHATSOEVER, CAUSED DIRECTLY OR INDIRECTLY BY PRODUCTS SOLD OR SUPPLIED BY MYTANA LLC.



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ALL OPERATORS: Read the operating instructions on the these pages before operating equipment.

- ▶ **BEFORE STARTING** your first job – Read the “**Safety First**” section below.
- ▶ **SHUT OFF THE MOTOR WHEN NOT IN USE** – Never walk away from the machine when it is running
- ▶ **PROTECTIVE EQUIPMENT** Operators should wear protective eyewear and gloves when operating this machine. Tuck in any loose clothing and tie up long hair.

! Safety First

DO NOT OPERATE HIGH SPEED CLEANER if the flex drive shaft is not inserted into a pipe

- ▶ The spinning shaft and spinning cutting tools can be hazardous to the operator, bystanders, or may damage objects in the immediate vicinity.
- ▶ Spinning cutting tools and chain flails can be unbalanced and hard to control when not constrained inside a pipe.

! DO NOT REMOVE THE OUTER PANEL OR THE CENTER HUB COVER DURING OPERATION.

⚡ You may need to remove the outer panel or center hub cover if you need to repair or replace the flexible shaft cable.

CAUTION MUST BE USED AS THESE COVERS PROTECT THE OPERATOR FROM ROTATING MACHINERY HAZARDS AND ELECTRICAL SHOCK.

- ▶ Before doing any work to the shaft, disconnect the machine from the power source.

LET UNIT STAND 5-10 MINUTES BEFORE REMOVING PANELS TO DE-CHARGE THE CIRCUITRY.

- ▶ Continue to use caution as you remove the center cover as the circuit board can remain energized for a period of time.

ALWAYS ASSUME THE CIRCUIT BOARD IN THE M224 IS ENERGIZED AND DANGEROUS. DO NOT TOUCH WITH HANDS OR METAL TOOLS THAT COULD SHORT OR DISCHARGE THE CAPACITORS. THIS POWER SUPPLY STORES ENERGY FOR A PERIOD OF TIME AFTER BEING CONNECTED TO POWER AND SHOULD ALWAYS BE ASSUMED TO BE A RISK FOR ELECTRICAL SHOCK.

Getting Started

The M224 arrives fully assembled from the factory, except for attaching a cutting tool.

The luggage style handle telescopes to make rolling the unit easy. You should never lift the M224 with the luggage handle. Use the carry handle on top of the frame to lift.

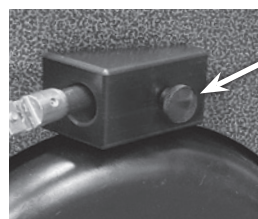
Basic Operation

Attach a cleaning tool

Do not attach a cleaning tool until you are at the job site.

Blades are sharp and could cause injury, or the extra weight of an attachment could damage the shaft if transported while attached.

Position the M224 Cleaner near the opening and retract the luggage handle.



Loosen the shaft lock knob on the shaft feed and pull out enough cable to attach the tool.

It is good practice to start with a smaller blade or attachment to clear blockages first, then come back with

larger ones to clean the pipe walls.

Use a 5/32" hex key/allen wrench to attach:

- a blade with a slip-joint fitting
- our chain flail attachment
- our universal whip, which will let you attach the tool of your choice.

Be sure to tighten the screws on the slip-joint fitting or whip securely before inserting in to the pipe.

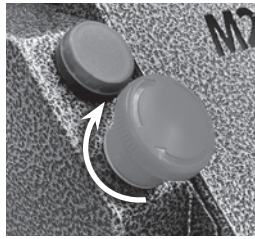
Power up the machine

Plug the power cable to extension cord to supply standard residential 120V AC/15-amp service to the machine.

The cooling fan will start immediately regardless of the position of the emergency e-Stop switch.

Uncoil the foot pedal and locate it on a flat surface where pressure can easily be applied and released.

Twist the e-Stop switch until it pops. The green LED light will illuminate meaning the M224 is ready to operate.



Insert the flexible shaft into the pipe

Loosen the shaft lock knob on the shaft feed again if necessary, and pull/unwind a length of flex drive shaft that will reach and get into the opening of the pipe to be cleared.

Never run the machine with the flex drive shaft with attachment outside of the pipe as any cutting tools can interfere with the machine housing or injure the operator or bystanders.

Once the cutting tool end is safely into the pipe, hold the shaft with both hands and depress the foot pedal to begin rotation of the shaft.

- ▶ There is a normal short delay when the foot pedal is depressed for safety reasons to avoid inadvertent spinning of the shaft/tool.

For general cleaning, continue to feed the flex shaft into the pipe being aware of resistance or blockages encountered.

- ▶ If at anytime you need to stop rotation of the shaft, lift up on the foot pedal or depress the e-Stop switch in emergencies.

Obstructions

Holding the shaft lets the operator feel when it hits an obstruction. Pull back a bit and stop rotation of the shaft.

It is best to use rotation on obstructions as you **PULL THE SHAFT BACK TO YOU**.

Try to work the cutting tool through the blockage without spinning. **Use the smallest tool available, and DO NOT FORCE the tool into a blockage.**

You may need to spin the tool a bit as you work it past the obstruction. Experience will teach you how much rotation can be used while avoiding the torque controller shutting down the motor (see below) or spinning off the tool head.

Each job will be different depending on the type and level of obstruction or scaling, the inside diameter reduction due to debris, and the tool type and size that is mounted on the flex drive shaft.

Difficulties, SmartDrive controller

When the attachment encounters a tough blockage, the SmartDrive controller will monitor the torque level and may stop the machine momentarily. This is normal and helps to prevent damage to the flex drive shaft.

If the machine stops during heavy cleaning remove the shaft from the blockage slowly until the motor restarts. If the foot pedal is not engaged, repress to start the motor.

If the machine is continually stopping, it means the feed rate is too fast, or possibly the wrong tool was selected. Slow down the advance rate, or try a smaller diameter tool.

Complete the cleaning work in steps from smaller to larger tool size. Be careful to not run the cable in to a line larger than the attachment is suited for. This will cause the tool to flop and it could twist off damaging the shaft.

Finishing up

Wipe down the flexible shaft as it is pulled from the pipe, and feed it back in to the drum. This keeps the drum clean and helps avoid the shaft sticking together.

Remove any attachment and clean.

Re-tighten the shaft lock knob.

Maintenance

Use these maintenance tips to keep the M224 Cleaner running well and to avoid repairs.

If there are ever audible, uncommon noises, stop operation and contact MyTana service department.

- Always wipe down the flexible shaft as it is pulled out of the pipe. It should be re-loaded in to the drum relatively clean and dry.
- DO NOT power wash the shaft.
- Remove attachments, hose off and allow to air-dry.
- Inspect shaft for wear after every job, especially near the slip-joint connector.
- Check attachments and connector for snug fit.
- Periodically check slip-joint connector's set screws for proper tightness.
- Cable can be re-lubricated with Bio-Air Tool Lubricant ISO 32.

Warranty

The M224 is warranted against defects in material and workmanship for one year from date of purchase. All units are individually tested prior to shipment. Let us know immediately of any damage from shipping.

Damage due to negligence, abnormal usage, accidents, or alteration is not covered by this warranty, including damage to the flexible drive shaft cable.

Field repairs or replacement of the shaft can be made. Instructions are included with this manual, and can be downloaded from MyTana.com/product-manuals.

Any repair to the electronics or motor need to be done at our Repair Center. Please call for return instructions.

