M81 Owners Manual

- IMPORTANT -

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

IF ANYONE ELSE THAN THE ORIGINAL BUYER OF OUR EQUIPMENT IS TO USE THE MACHINE, THEN HE or SHE IS TO BE FURNISHED WITH AN INSTRUCTION BOOK.

Replacement manuals are available online at mytana.com/product-manuals

Please inspect your machine carefully upon receipt.
Let us know immediately if you note any damage.

M81 base unit: no cable, reel or rev arm

M81 shown with optional cable, reel and rev arm. Autofeed (not shown) is optional

063022

Manufacturers of Quality Sewer & Drain Cleaning Equipment since 1957

www.MyTana.com

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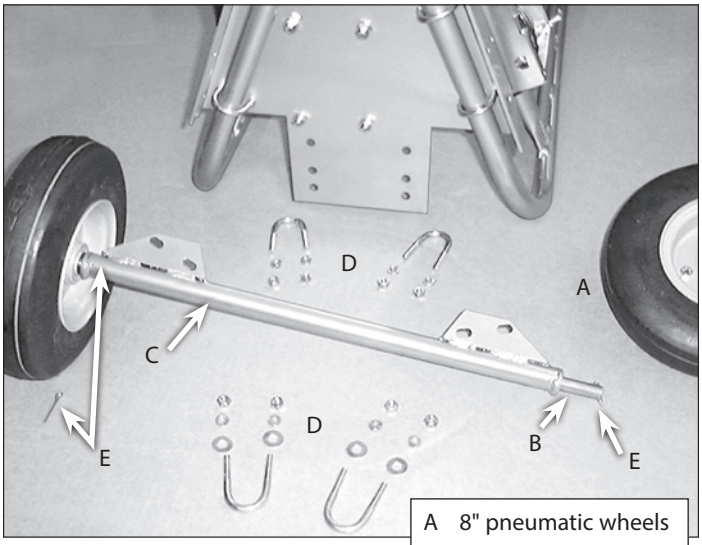
Assembly Instructions

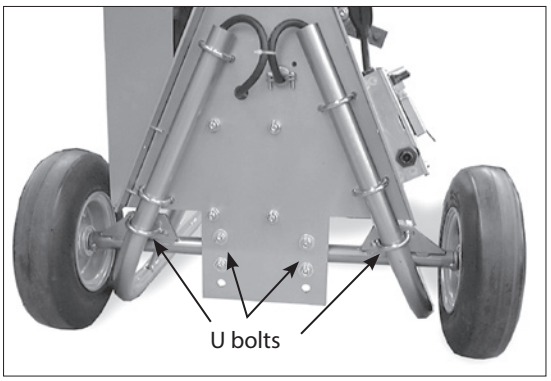
Install wheel axle kit

Make sure that the M81 is on a level surface or work-bench so that the axle kit is installed properly and evenly.



A	8" pneumatic wheels
B	Axle (slides through axle housing)
C	Axle housing
D	1/4" U-bolts, lock-washers and nuts
E	1/8" x 1" Cotter pins

1. Slip axle (B) through axle housing (C)
2. Install one wheel (air stem facing outward) onto end of axle and lock into place with cotter pin (E).
3. Slide axle/housing unit through M81 runners and inside the large triangle frame as shown below.



4. Attach 2nd wheel (air stem facing outward) onto other end of axle and lock into place with cotter pin. **Make sure to "open" the stem of the cotter pin so that it stays in place on both wheels.**
5. Install U-bolts (D) as shown above.

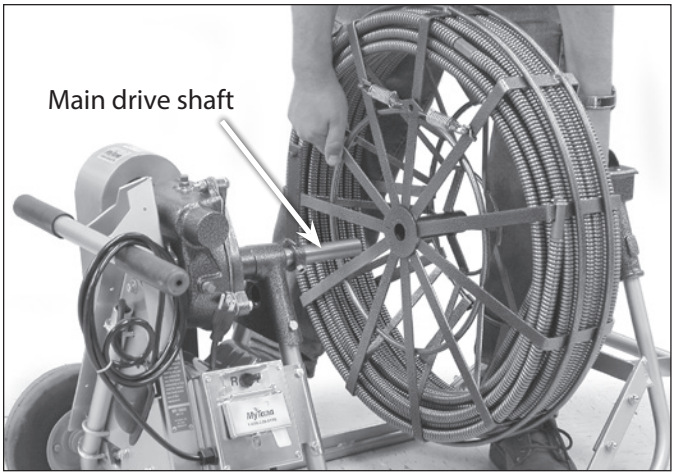
Ensure the wheels are level and rotate freely.

Attach the front pull handle

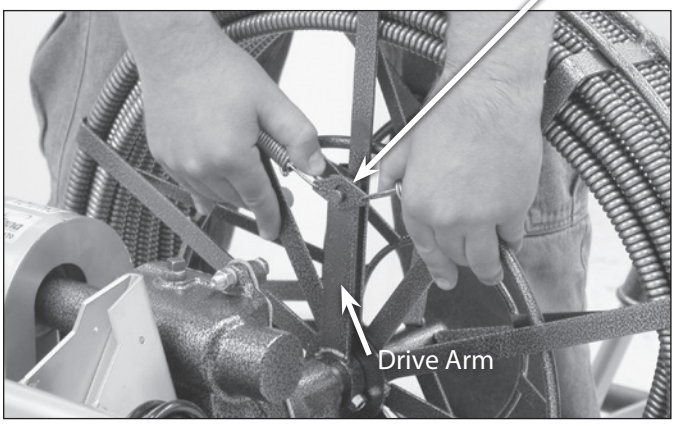
Match the drilled holes on handle holes on M81 runner braces and attach using the supplied bolts and washers.

Mount reel onto machine

Grasp the reel firmly and lift it up so that the back center of the hub aligns with the main drive shaft. Slide reel all the way onto shaft. (Figure 1)

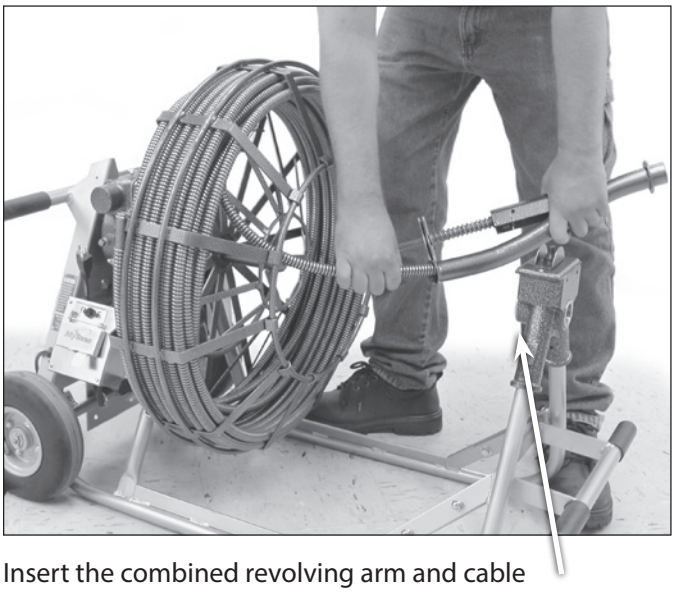


Hook the diamond shaped piece at the center of the drive spring on the back of the reel to the cleat on the drive arm/rod which extends from the main shaft.



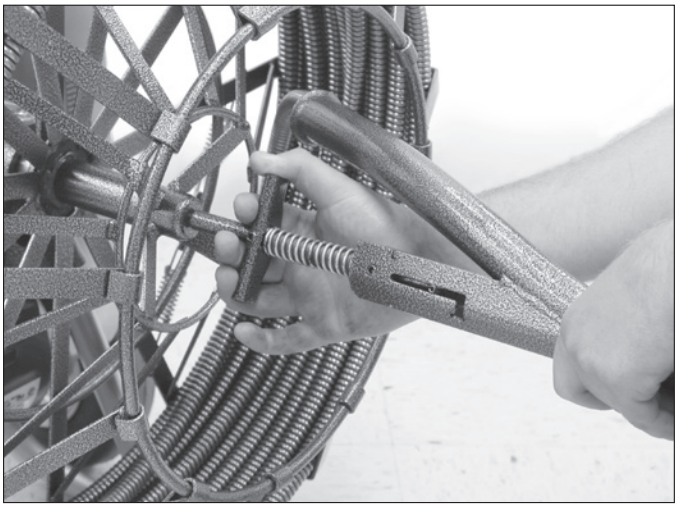
Install the Revolving Feed Arm

Carefully pull the end of cable out of the reel taking care to not let it spring out of the reel. Holding revolving arm in one hand and cable in the other hand, push the cable through curved end of the arm in a twisting motion until it just reaches the front opening (see below).



Insert the combined revolving arm and cable into the opening in the head casting below the front toggle switch.

At the other end of the revolving arm, pull back on the center spring loaded shaft of the arm and insert into the drive shaft opening in the center hub of the reel.



If you locked the center shaft back and out or your way while feeding the cable, release the J-Lock now to insert it into the drive shaft opening.

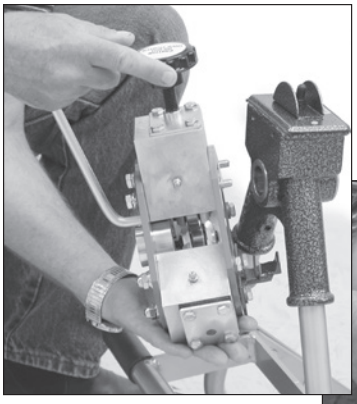
Install Automatic Feed/Retriever

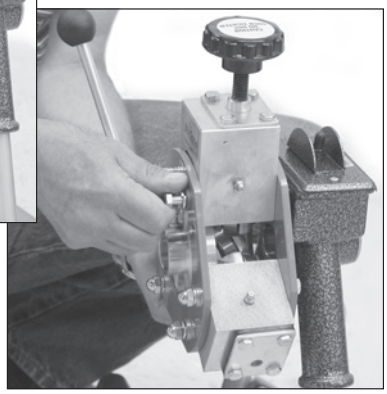
(optional)

If you ordered an Automatic Feed/Retriever, attach that to the front casting of your machine at this time.

You will have received a separate instruction manual on how to install and operate the Autofeed. Follow those instructions to mount the Feed onto the M81.

Be sure the Feed is mounted securely.





The machine is now assembled except for attaching a blade to cable.

- **Wait to attach blades to cable until you have the machine in place at your pipe-opening or clean-out.** The blades are sharp and are potentially dangerous if left on during transportation. Always remove blades after you have completed the job.

Foot Pedal

Your machine is equipped with an air-actuated foot switch, which is installed at the factory.

Should you need to attach a new foot pedal in the future, connect the air-hose to the air-switch stem protruding from electrical box next to motor and lock it in place with the pressure nut that is at the end of the hose.

See page 7 for tips to extend the life of your Foot Pedal.

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

- **BEFORE STARTING** your first job – Read the paragraph on "**Building up Torque**" (page 6)
- **SHUT OFF THE MOTOR WHEN NOT IN USE** – Never walk away from the machine when it is running
- **SAFETY** Operators should wear protective eyewear and heavy-duty gloves when operating this machine. Tuck in any loose clothing and tie up long hair.

Operation

Mastering the machine occurs by carefully following these procedures during on-the-job operation. Each job is a new problem in itself, and an operator must be ready to deal with any situation as it arises.

When operating the machine, place it about 3 feet from the opening in the pipe. An experienced operator may find it more comfortable to vary the distance, but only slightly (figure 1).

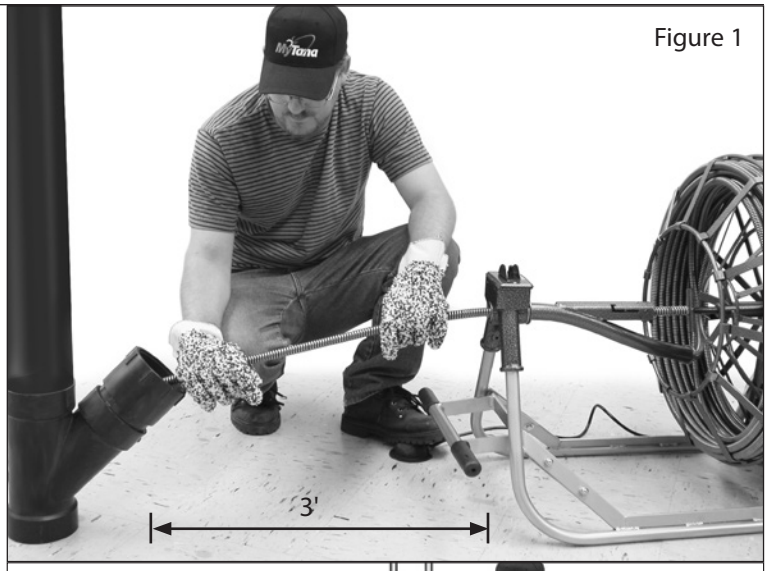


Figure 1

Attach blade. Any of the single-unit blades may be used, but it is best to use a blade much smaller than the inside diameter of the pipe or sewer to start.

Remove the clean-out plug and insert the cable, with blade attached, into the pipe by hand with a twisting motion. When you have passed the bend, continue to rotate and push the blade about 5 or 6 ft into the pipe, making sure it is not caught or bound so that it can rotate freely (figure 2).

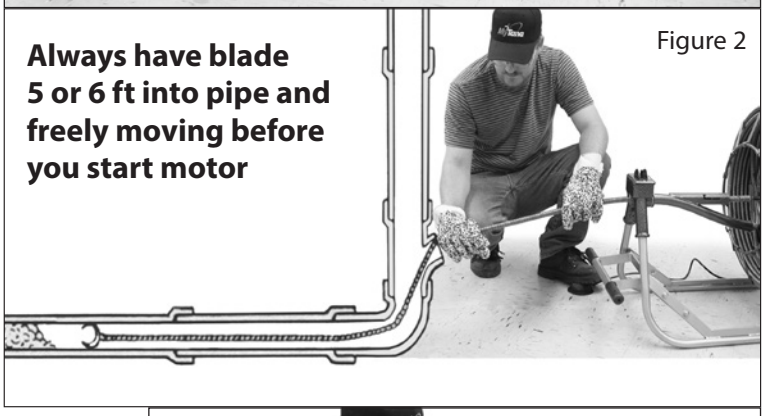


Figure 2

- **DO NOT** start machine before inserting blade 5 to 6 ft into pipe.

Start Up

When starting the machine, the operator should have his foot ready to press on the air-switch foot pedal.

The **front toggle switch** must be in the "on" position for the foot pedal to work.

As you press on the pedal, you can aid the startup by rotating the reel with your hand in a **counter-clockwise direction**. This allows for much easier starting and longer life for the motor (fig 3).

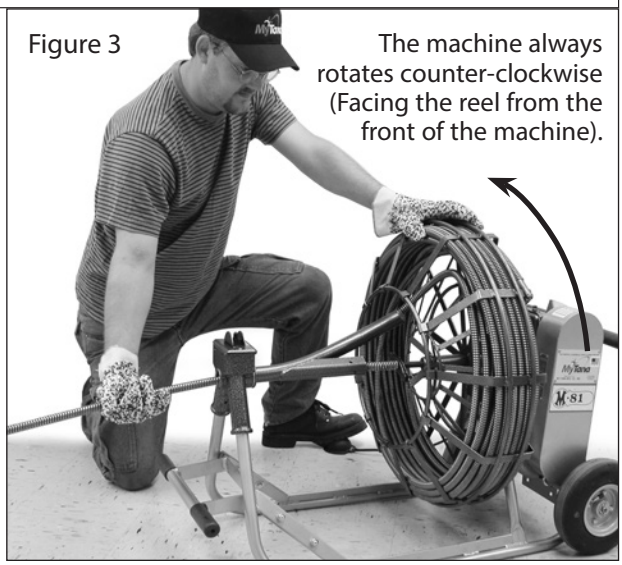


Figure 3 The machine always rotates counter-clockwise (Facing the reel from the front of the machine).

- On the machine, the **forward/ reverse switch** near the electrical box should be in the forward position, even when pulling (retrieving) the cable out of a line. See "Difficulties" on next page for use of reverse setting.
- If you have a Large Autofeed, refer to those instructions for startup.

As you operate the machine, place one hand on the cable close to the switch or Autofeed (figure 4) to prevent any throwing of the cable.

Gently pull the cable out of the machine a little at a time. You will find that it will move itself into the sewer.

▶ If you have a Large Autofeed, refer to those instructions for feeding cable.

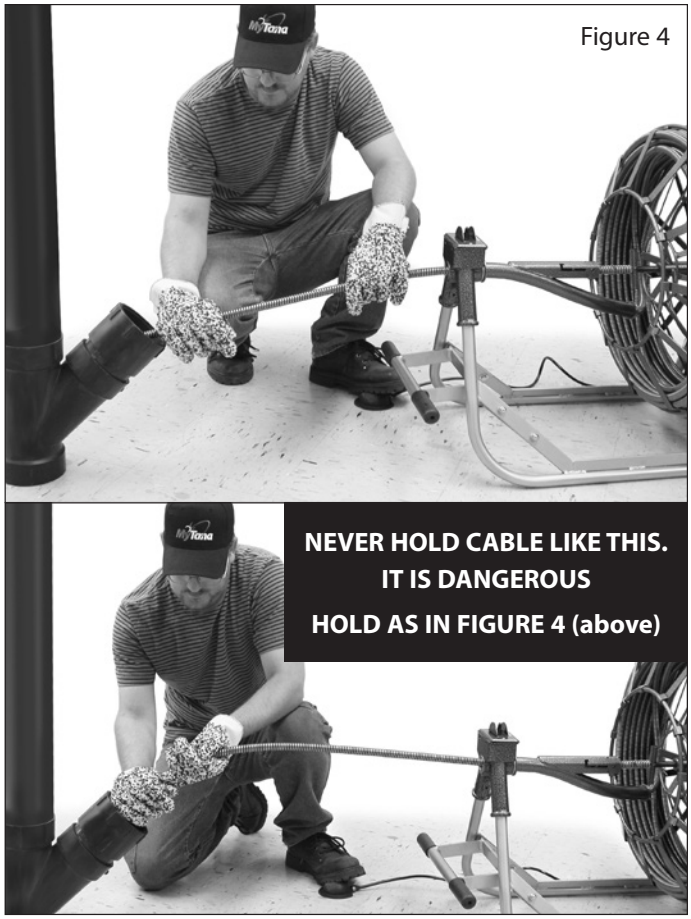


Figure 4

Obstructions

When the blade hits an obstruction, it can be readily felt by the operator. Give the blade a few seconds to release.

When the operator has had sufficient experience, his "touch" will tell him the extent of torque allowed to build in the cable before pulling back from the obstruction. However, **inexperienced operators** should be cautious and allow the cable only about 5 seconds to cut through.

- If the blade doesn't release, pull it away from the obstruction and try again.
- Freed blades spin rapidly when torque is released. Use the combined force of the reel rotation and cable torque to let the blade "jump" forward into the obstruction and optimize your cutting power.

Difficulties

If at anytime the cutting blades become stuck and cannot be released, shut off machine immediately.

Hold cable close to the switch to prevent the cable from coming out of the machine. Continue holding cable with one hand and unhook the spring cleat with the other hand (figure 5). Let the reel spin backwards, removing the strain on the cable.

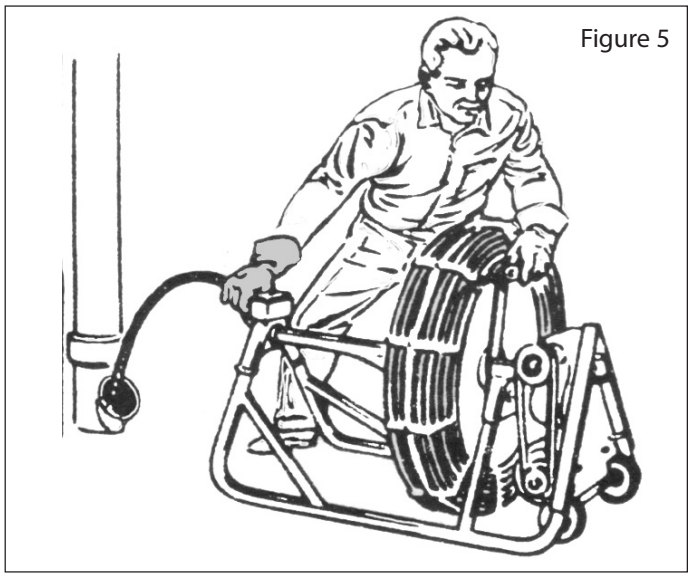


Figure 5

After the reel stops, spin it backwards a few more turns. This may release obstructions that can be wrapped around the cutting blades.

If you need to rewind the cable, see instructions on next page. Always remember to stack the cable snugly against the outer diameter of the reel while rewinding cable.

Clean off any obstruction accumulated on the blades or cable, and insert it into the sewer again, still using the smaller blades.

Reverse

The **reverse** setting for reel rotation may be used in 2 situations:

- If the cable/blade gets through a broken pipe and digs in to earth, reverse rotation may help to back it out
- Using reverse reel rotation can temporarily loosen the torque slightly on the cable, allowing it to get around a bend

Continuing

After the first opening is made, turn on the nearest faucet so that water will flush the loosened debris. Allow the water to run continuously during the entire job. Continue until you have reached the end of the pipe.

Follow the first cleaning with slightly larger blades until you can use a blade that will actually scrape the sidewalls of the pipe or sewer.

- ▶ Shut off the motor when you change blades!

Rewinding the cable

- ▶ If you have a Large Autofeed, refer to those instructions for retrieving cable.

When you need to retrieve the cable, either after releasing from an obstruction or you are finished with the job, withdraw the cable gently from the line and feed it into the machine.

Use the same counter-clockwise rotation to rewind it while snugly stacking it into the reel.

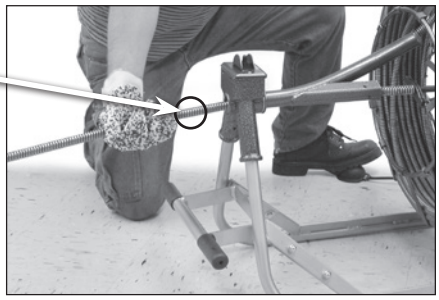
- ▶ **DO NOT** use reverse rotation of the reel to rewind cable.

Always remember to stack the cable snugly against the outer diameter of the reel while rewinding cable.

Changing Reels

If the line is longer than the amount of cable you have on the reel, MyTana makes it easy to swap in a new reel so you can push farther, see below.

When back end (anchor) cable fitting is about in this location, it is time to add another reel.



Disconnect the back end cable from the main cable and push stub back into empty reel. Then connect the new reel of cable to the section in the line.

See this process at **Youtube.com/videoMyTana**

⚠ CAUTION - READ CAREFULLY!!

Building up Torque

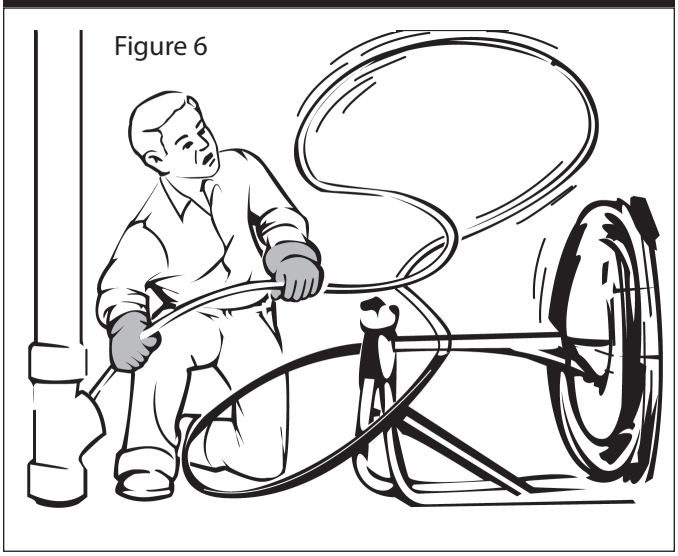
As the reel revolves, it generates power and stores up energy in the cable if the blade at the front of the cable has been stopped by an obstruction.

When the rotating blade contacts an obstruction that it cannot cut through quickly, or at all, the cable naturally continues to wind up with the rotation of the reel. This wind up builds up torque, or tension, which acts as a powerful spring motor.

If too much tension is allowed in the cable, it will lash in the operator's hands or can whip wildly and dangerously out of control (figure 6).

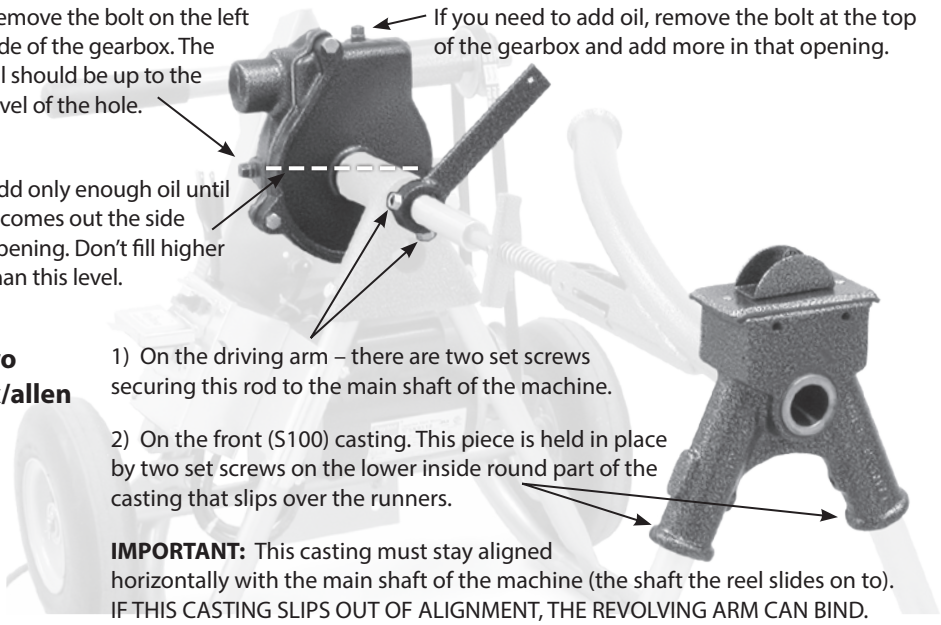
Torque build up is an extremely powerful force and the operator must always be warned of its potential danger.

NEVER LET THIS HAPPEN



Maintenance and Tips

Check the oil level in the gearbox from time to time.



Check set screws in two places using a 5⁄32" hex/allen wrench.

Regular Maintenance

As with any mechanical device, keeping your cable machine clean and all moving parts properly lubricated is essential.

Don't damage the machine's frame –remove the cable reel when transporting to avoid dropping the machine (off vehicles, down stairs, off curbs, etc).

CABLE CARE

- Regularly inspect your cable. If it becomes kinked or wavy due to fatigue or over-stress, either repair the cable with splicing cores or replace the cable.
- Make sure that the cable stacks snugly to the outermost part of the reel when retrieving cable. This helps prevent kinking or twisting inside the reel.
- If you are not using your machine every day, treating your cable with a cleaner/rust inhibitor extends cable life dramatically. You can also hose down the cable (remove reel from machine first) and spray it with WD40 or any light oil.

Things to check occasionally

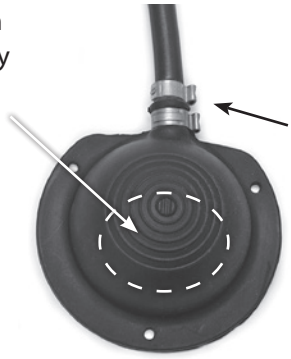
Cable ends / fittings get worn with use, check periodically and replace as needed.

Check the S100 bushings under the toggle switch at the front of the machine for wear. The rotation of the revolving arm, and cable sliding against it, can wear these bushings very thin. If not replaced, the cable can start wearing on the housing. There is a steel front bushing, and brass rear bushing. Both are available online at MyTana.com/cm-parts.

Test the ground fault interrupter by pushing the test button in the center of it. If the GFI is working properly, the reset button will pop out, breaking the current when the test button is pushed. Push the reset button back in to restore power.

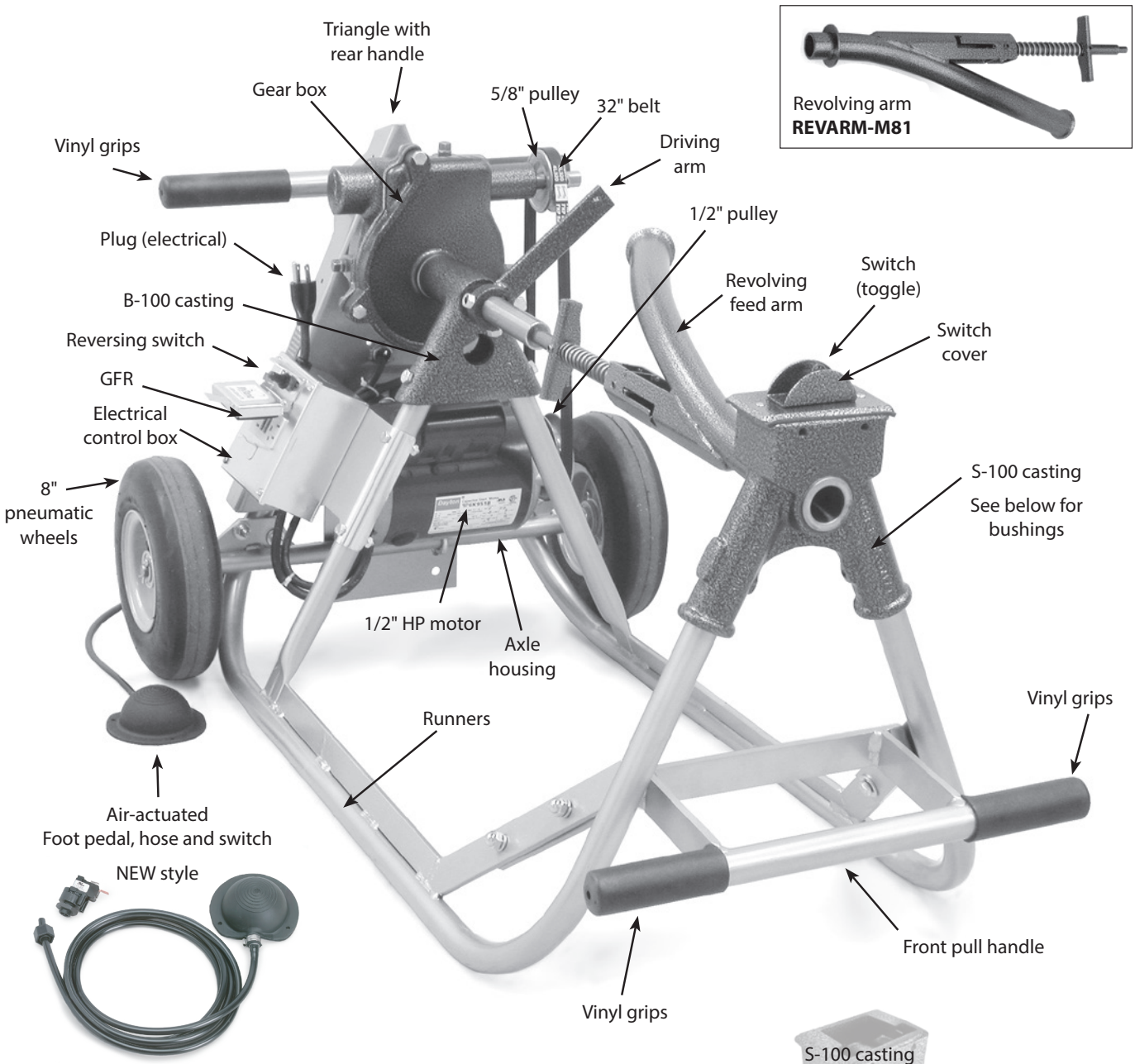
Extend the life of your pneumatic foot pedal

Place foot on pedal directly opposite the hose fitting.



Continuous foot pressure near or on the hose fitting can cause small fissures around the fitting, which results in air leaks and loss of pressure.

Parts breakdown of the M81



MyTana stocks replacement parts for the M81. Many are available online at mytana.com/cable-machine-parts

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