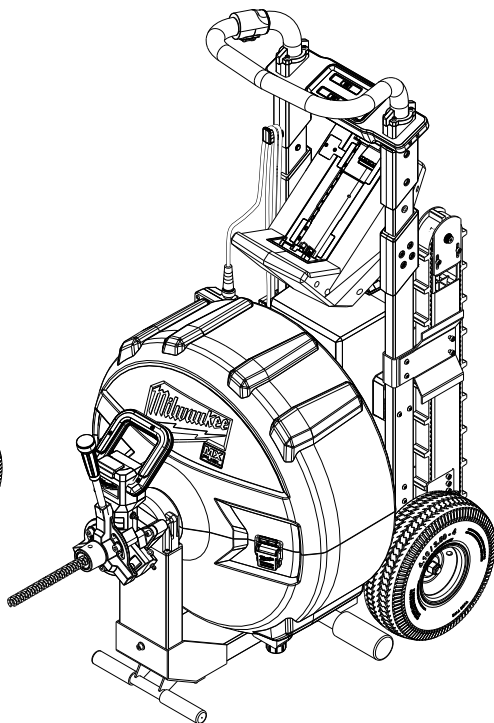
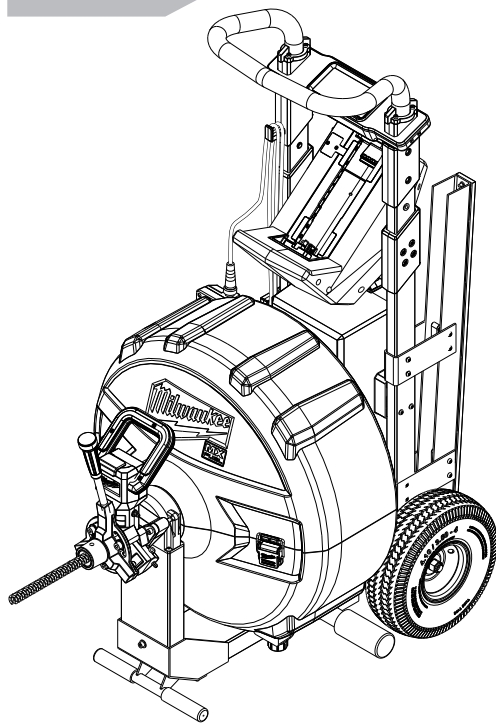




OPERATOR'S MANUAL
MANUEL de L'UTILISATEUR
MANUAL del OPERADOR



Cat. No. / No de Cat.

MXF500

MXF501

MX FUEL™ SEWER DRUM MACHINE

MX FUEL™ SEWER DRUM MACHINE W/ POWERREDZ™ LIFT ASSIST

DEBOUCHEUR ELECTRIQUE MX FUEL™

**DÉBOUCHEUR ÉLECTRIQUE MX FUEL™ AVEC LEVAGE AUXILIAIRE
POWERREDZ™**

MÁQUINA DE TAMBOR PARA ALCANTARILLA MX FUEL™

**ASISTENTE DE ELEVACIÓN DE LA MÁQUINA DE TAMBOR PARA
ALCANTARILLA MX FUEL™ CON POWERREDZ™**



WARNING To reduce the risk of injury, user must read and understand operator's manual.

AVERTISSEMENT Afin de réduire le risque de blessures, l'utilisateur doit lire et bien comprendre le manuel.

ADVERTENCIA Para reducir el riesgo de lesiones, el usuario debe leer y entender el manual.

GENERAL POWER TOOL SAFETY WARNINGS

⚠WARNING Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. **Save all warnings and instructions for future reference.** The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

WORK AREA SAFETY

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres,** such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces,** such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of an GFCI reduces the risk of electric shock.

PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

POWER TOOL USE AND CARE

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
 - **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
 - **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
 - **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
 - **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
 - **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
 - **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
 - **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- ### BATTERY TOOL USE AND CARE
- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
 - **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
 - **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

- **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.
- **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 265°F (130°C) may cause explosion.
- **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

SERVICE

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

SPECIFIC SAFETY RULES FOR SEWER MACHINES

- **Only grasp the rotating cable with gloves recommended by the manufacturer.** Latex or loose fitting gloves or rags can become wrapped around the cable and may result in serious personal injury.
- **Do not allow the cutter to stop turning while the cable is turning.** This can overstress the cable and may cause twisting, kinking or breaking of the cable and may result in serious personal injury.
- **One person must control both the cable and the switch.** If the cutter stops rotating, the operator must be able to turn the tool off to prevent the cable from twisting, kinking and breaking.
- **Use latex or rubber gloves inside the gloves recommended by the manufacturer, goggles, face shields, protective clothing, and respirator when chemicals, bacteria or other toxic or infectious substances are suspected to be in a drain line.** Drains may contain chemicals, bacteria and other substances that may cause burns, be toxic or infectious or may result in other serious personal injury.
- **Practice good hygiene. Do not eat or smoke while handling or operating the tool. After handling or operating drain cleaning equipment, use hot, soapy water to wash hands and other body parts exposed to drain contents.** This will help reduce the risk of health hazards due to exposure to toxic or infectious material.
- **Only use the drain cleaner for the recommended drain sizes.** Using the wrong size drain cleaner can lead to twisting, kinking or breaking of the cable and may result in personal injury.
- **Inspect cable for wear and damage before use.** Replace a worn or damaged cable before using the drain cleaner.
- **Do not twist, kink or over bend cables.** Breaking of the cable may result in serious personal injury.
- **Inspect the drain to be cleaned before use.** If possible, determine the access point(s) to the drain, the size(s) and length(s) of the drain, distance to mainlines, the nature of the blockage, presence of

drain cleaning chemicals or other chemicals, etc. If chemicals are present in the drain, it is important to understand the specific safety measures required to work around those chemicals. Contact the chemical manufacturer for required information.

- **If needed, place protective covers in the work area.** The drain cleaning process can be messy.
- **Make sure cable is fully retracted inside of the drain cleaner.** This will prevent whipping at start up.
- **Place the drain cleaner at a distance no greater than two feet from drain opening.** If the drain cleaner cannot be placed within two feet from the drain opening, the drain opening will need to be extended using a similar size pipe and fittings. Greater distances can cause control problems leading to twisting, kinking, breaking or whipping of the cable.
- **Do not operate the drain cleaner in reverse rotation except as described in this manual.** Running the tool in reverse for extended periods can cause damage to the cable and accessories.
- **Always wear leather gloves to avoid entanglement and snagging on the moving cable.**
- **Keep bystanders away when using the MXF501 POWERTREDZ™ lift assist.** Loss of control could cause injury. Using lift assist is a one-person operation.
- **Use two people whenever it is necessary to lift or carry the machine.** Machine is heavy. Lift with legs, not back.
- **Always clear the area of obstructions before transporting.**
- **Keep tires properly inflated at all times to maintain control and stability.**
- **Do not use cart to transport other loads or add additional product.** For use with recommended cable size/lengths only.
- **Close and latch drum cover before operating.** Moving parts can cause injury.
- **Disassembly of the internal drum when a cable is installed will cause the cable to unwind quickly and could whip around uncontrollably, which may result in injury.** Remove cable before disassembling drum.
- **Always use common sense and be cautious when using tools.** It is not possible to anticipate every situation that could result in a dangerous outcome. Do not use this tool if you do not understand these operating instructions or you feel the work is beyond your capability; contact Milwaukee Tool or a trained professional for additional information or training.
- **Maintain labels and nameplates.** These carry important information. If unreadable or missing, contact a MILWAUKEE service facility for a free replacement.
- **⚠WARNING** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - lead from lead-based paint
 - crystalline silica from bricks and cement and other masonry products, and
 - arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SYMBOLLOGY

n_0 XXXX min⁻¹ No Load Revolutions per Minute (RPM)



CAUTION Risk of Electric Shock



Read operator's manual.



Always wear leather gloves over latex/rubber gloves.



Always wear eye protection.
Use appropriate hearing and respiratory protection.



Two-person lift



Lift assist



Drain cleaning



Ascend



Descend



Forward/OFF/Reverse drum control

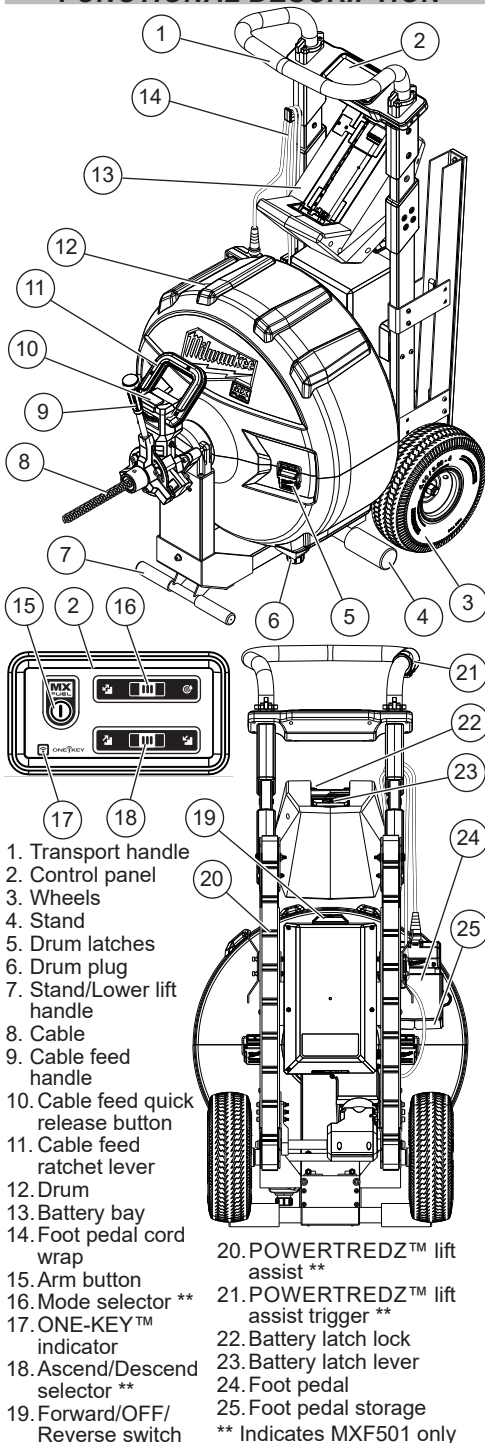


UL Listing for Canada and U.S.

SPECIFICATIONS

Battery Type	MX FUEL™
Charger Type	MX FUEL™
Drain Drive RPM	200
Recommended Ambient Operating Temperature	0°F to 125°F
Tire Air Pressure	30 psi
Cable Size	5/8" & 3/4"
Recommended Pipe Diameter	3" - 8"
Foot Pedal Cat. No.	14-02-0000
Cat. No.	MXF500
Weight (without cable)	110 lbs
Cat. No.	MXF501
Weight (without cable)	120 lbs

FUNCTIONAL DESCRIPTION



1. Transport handle
2. Control panel
3. Wheels
4. Stand
5. Drum latches
6. Drum plug
7. Stand/Lower lift handle
8. Cable
9. Cable feed handle
10. Cable feed quick release button
11. Cable feed ratchet lever
12. Drum
13. Battery bay
14. Foot pedal cord wrap
15. Arm button
16. Mode selector **
17. ONE-KEY™ indicator
18. Ascend/Descend selector **
19. Forward/OFF/Reverse switch

20. POWERREDZ™ lift assist **
 21. POWERREDZ™ lift assist trigger **
 22. Battery latch lock
 23. Battery latch lever
 24. Foot pedal
 25. Foot pedal storage
- ** Indicates MXF501 only

ASSEMBLY

⚠WARNING Recharge only with the charger specified for the battery. For specific charging instructions, read the operator's manual supplied with your charger and battery.

Removing/Inserting the Battery

To **remove** the battery, push the battery latch to the side and squeeze the battery latch lever. Pull the battery pack away from the machine.

⚠WARNING Always remove battery pack before changing or removing accessories.

To **insert** the battery, slide the pack into the body of the machine. Make sure it latches securely into place.

⚠WARNING Only use accessories specifically recommended for this machine. Others may be hazardous.

Selecting the Proper Cable

Cat. No.	Description
48-53-2325	5/8" x 25' Inner Core Drum Cable
48-53-2350	5/8" x 50' Inner Core Drum Cable
48-53-2310	5/8" x 100' Inner Core Drum Cable
48-53-2425	3/4" x 25' Inner Core Drum Cable
48-53-2450	3/4" x 50' Inner Core Drum Cable
48-53-2410	3/4" x 100' Inner Core Drum Cable
48-53-2905	3/4" Anchor Cable
48-53-2902	3/4" x 2' Leader Cable
48-53-2802	5/8" x 2' Leader Cable

Cable Attachments for 5/8" and 3/4" Cables

Cat. No.	Description
48-53-2830	Straight Auger
48-53-2831	Funnel Auger
48-53-2832	3" Root Cutter
48-53-2833	4" Root Cutter
48-53-2834	6" Root Cutter
48-53-2835	Small Opening Tool
48-53-2836	Medium Opening Tool
48-53-2837	3" Grease Cutter
48-53-2838	4" Grease Cutter
48-53-2840	9 pc Head Attachment Kit

CAUTION To prevent damage to the cable and attachments, only use in recommended pipe size.

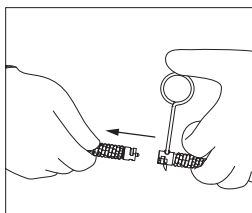
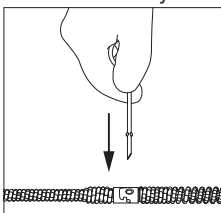
Cable Installation

⚠WARNING To reduce the risk of injury, always wear proper eye protection marked to comply with ANSI Z87.1. Always wear leather gloves over latex/rubber gloves to avoid entanglement. Cable tip may be sharp. Never feed more than 100' of cable into the machine to avoid overloading. Remove the cable for cleaning after each use. Different size and types of cables are available for different applications. The instructions below detail how to remove/install the cable manually.

NOTE: The cable feed can also be used to advance/retrieve the cable during installation (see "Using the Cable Feed" in the Operation section).

To manually remove the cable:

1. Move the Forward/OFF/Reverse switch to OFF **O** and remove the battery pack. Ensure the cable feed is disengaged by pressing down on the ratchet release button.
2. Pull the cable out through the nose of the drum until the anchor cable shows.
3. Remove the cable from the anchor cable by inserting the pin key into the coupling hole and pulling the cable away.



4. To clean or maintain cable, follow the cleaning instructions under "Maintenance".

To manually install the cable:

1. Move the Forward/OFF/Reverse switch to OFF **O**. Ensure the cable feed is disengaged by pressing down on the cable feed quick release button.
2. Attach the cable to the anchor cable by snapping the attachment coupler into the cable coupler.
3. Move the Forward/OFF/Reverse switch to Forward **↑**.
4. Use the foot pedal to start the drum.
5. Manually feed the cable into the drum. **WARNING!** Always wear leather gloves over latex/rubber gloves to avoid entanglement.

Cable Attachment Installation

To install the attachment:

Snap the attachment coupler into the cable coupler. Test the cable before inserting into the drain to make sure the attachment does not fall off during use.

To remove the attachment:

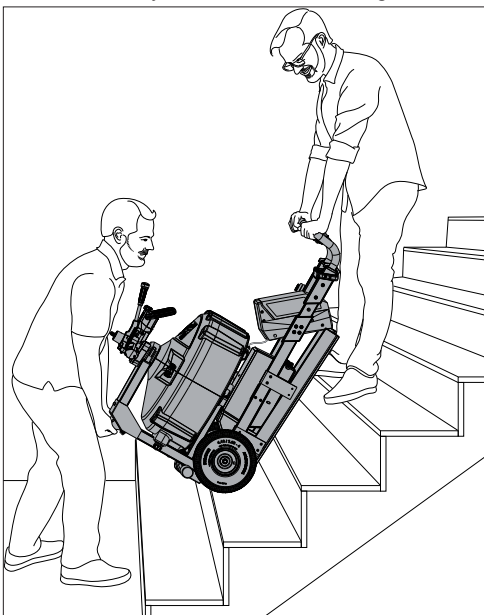
Insert the pin key into the coupling hole and pull attachment off of cable.

Transportation

WARNING Use two people whenever it is necessary to lift or carry the machine. Machine is heavy. Lift with legs, not back. Keep tires properly inflated at all times to maintain control and stability. Do not use cart to transport other loads or add additional product. For use with recommended cable size/lengths only. Always unarm the machine before transporting. Ensure the foot pedal cord is properly wrapped and the pedal is stored before transporting. Always clear the area of obstructions before transporting.

To roll cart from place to place, grasp the transport handle and tilt the machine back onto the tires. Push, don't pull, the machine.

Always use a two person lift when necessary. To lift, grasp the transport handle and tilt the machine back onto the tires. Have a second person grasp the lower lift handle. Always maintain a firm footing.



NOTE: Accessory Loading Wheel Cat. No. 47-53-5002 can be used for a single-person lift into a van or truck bed.




POWERTREDZ™ Lift Assist

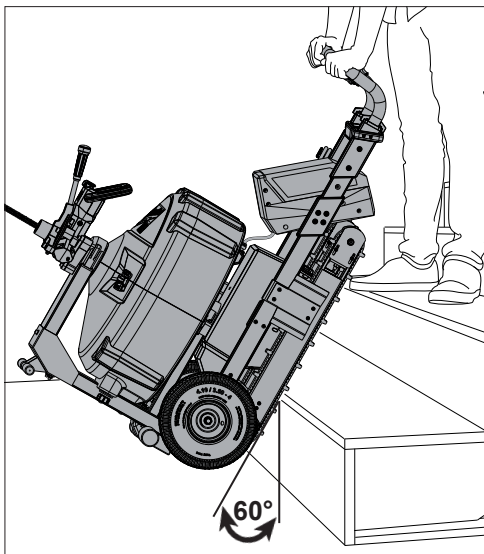
(MXF501 only)

WARNING Keep bystanders away when using the MXF501 POWERTREDZ™ lift assist. Always clear the area of obstructions before use. Loss of control could cause injury. Using lift assist is one person operation.

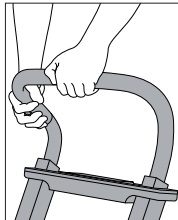
Use the POWERTREDZ™ lift assist to move the machine up and down stairs, into or out of a work vehicle, etc. **NOTE:** The POWERTREDZ™ lift assist will not engage if there is insufficient battery life left to ascend/descend a standard flight of stairs.

To use the POWERTREDZ™ lift assist:

1. Tilt machine back onto the wheels and roll to steps, curb, vehicle, etc. **NOTE:** Only use POWERTREDZ™ lift assist to climb to a max 22" in one lift (i.e., the back of a service vehicle or onto a platform no higher than 22")
2. Arm the machine.
3. Slide the mode selector to Lift Assist .
4. Slide the direction selector to Ascend  or Descend .
5. Tilt the machine back so the treads contact the climbing surface at approximately 60°.



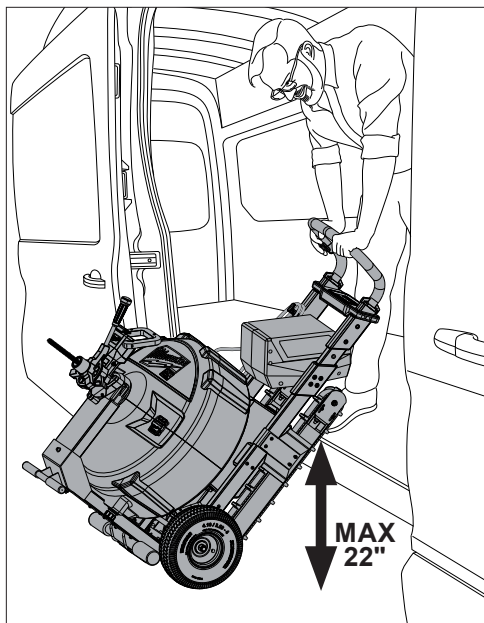
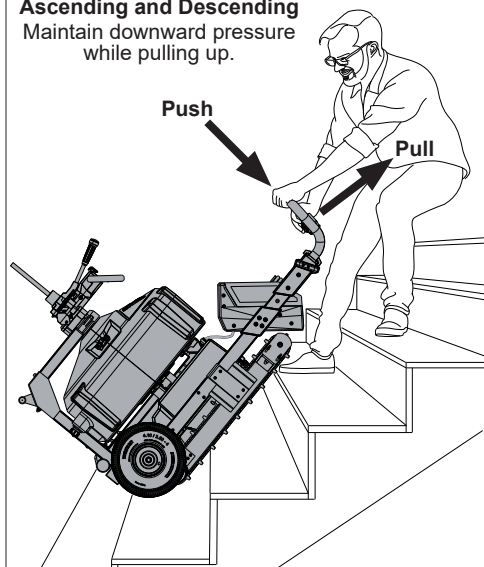
6. Grasp the handle in the center with the left hand, and near the trigger with the right hand for best control. Always use two hands.
7. Slowly pull the trigger and ease the treads onto the inclined surface. The farther the trigger is pulled, the faster the treads will move.
8. Engage as many of the treads with the climbing surface as possible for best control. On stairs, try to contact two steps during the lift.



9. When ascending or descending, pull up the incline and push the handle down into the surface. Allow the lift assist to help move the machine. Guide the treads using the transport handle. Maintain downward pressure.

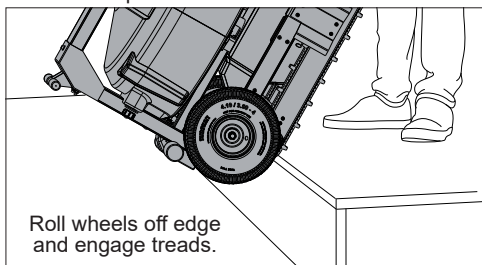
Ascending and Descending

Maintain downward pressure while pulling up.



10. Once a landing is reached, pull up on the machine to engage the wheels.

11. When descending, roll the wheels out past the edge to engage the treads. pull up the incline and push the handle down into the surface. Allow the lift assist to help move the machine. Guide the treads using the transport handle. Maintain downward pressure. Allow the POWERREDZ™ lift assist to pull itself down.



12. Unarm the machine before storing.
13. For additional instruction, please visit the product page at milwaukeeetool.com.

Hoisting

If it becomes necessary to hoist the machine, use the center of the transport handle as the anchor point. Ensure the hoisting strap will not slip or contact other parts, such as the POWERREDZ™ lift assist trigger.

Drain Cleaning Setup

1. Place the sewer drum machine no further than 2' from the drain. **WARNING!** Greater distance can cause twisting, kinking, breaking or whipping of the cable.
2. Remove the foot pedal from storage and unwrap the cord and place to the side, ensuring the cord will not tangle with the cable.

ONE-KEY™

To learn more about the ONE-KEY™ functionality for this machine, please reference the Quick Start guide included with this machine or go to milwaukeeetool.com/One-Key. To download the ONE-KEY™ app, visit the App Store or Google Play from your smart device.

ONE-KEY™ Indicator

Solid Blue	Wireless mode is active and ready to be configured via the ONE-KEY™ app.
Blinking Blue	Machine is actively communicating with the ONE-KEY™ app.
Blinking Red	Machine is in security lockout and can be unlocked by the owner via the ONE-KEY™ app.

OPERATION

⚠WARNING To reduce the risk of injury, always wear proper eye protection marked to comply with ANSI Z87.1. Always wear leather gloves over latex/rubber gloves to avoid entanglement.

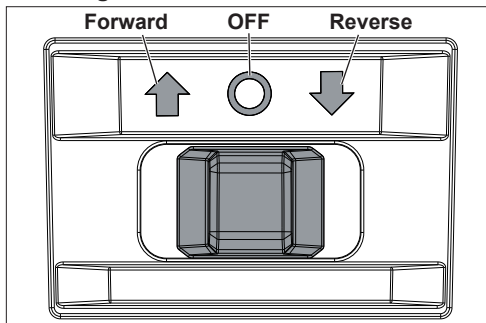
Arming the Machine

The MX FUEL™ machines must be armed prior to use. Even with the battery pack inserted, the trigger and machine functions will not operate until the machine is armed.

To arm the machine:

1. Insert the battery pack.
2. Press and hold the arm button for about 2 seconds. The MX FUEL™ icon will light, and the trigger and LEDs are now operational.
3. After 15 minutes of inactivity, the machine will enter sleep mode. The MX FUEL™ icon will go off and the trigger and LEDs are un-operational.
4. Press and hold the arm button for 1 second to reactivate the machine.
5. Press and hold the arm button for 1 second to unarm (turn off) the machine. The MX FUEL™ icon will go off.

Using Forward/OFF/Reverse Switch



1. For **Forward** ⬆ (clockwise) rotation, move the Forward/OFF/Reverse switch to the arrow pointing towards the nose of the drum ⬆. Check the direction of rotation before use. **NOTE:** Use Forward ⬆ to both feed and retract the cable.
2. For **Reverse** ⬇ (counterclockwise) rotation, turn the Forward/OFF/Reverse switch to the arrow pointing away from the nose of the drum ⬇. Check the direction of rotation before use. **NOTE:** Only use Reverse ⬇ to clear jammed cable. Do **not** use Reverse ⬇ to retract the cable.
3. To turn the rotation **OFF** and **lock** the switch, turn the Forward/OFF/Reverse switch to the center position **O**. The foot pedal will not work while the Forward/OFF/Reverse switch is in the center locked position. Always lock the switch or remove the battery pack before performing maintenance, changing accessories, storing the machine and any time the machine is not in use.

Starting and Stopping Speed

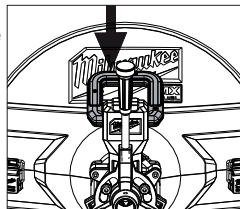
1. To **start** the machine, push the Forward/OFF/Reverse switch to Forward ⬆ and step or kneel on the foot pedal.
2. To **stop** the machine, release pressure on the pedal. Then, push the Forward/OFF/Reverse switch to the center position **O**.

Using the Cable Feed

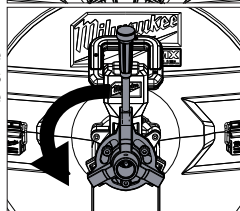
The cable feed can be used to assist in advancing and retrieving the cable.

To use the cable feed:

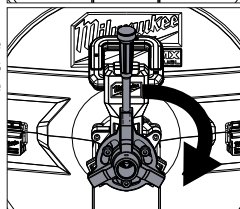
1. Insert the battery pack.
2. Arm the machine.
3. Move the Forward/OFF/Reverse switch to Forward ⬆
4. Use the foot pedal to start the drum.
5. To **engage** the cable feed, press the cable feed ratchet lever down.



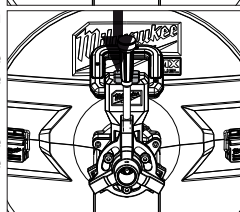
6. To **retract** the cable, push the cable feed handle, as shown. The further the handle is pushed, the faster the cable will retract.



7. To **advance** the cable, push the cable feed handle, as shown. The further the handle is pushed, the faster the cable will advance.



8. To **stop** the cable from advancing or retracting, **disengage** the cable feed by pressing the quick release button. Move the cable feed ratchet lever to the center to slow/stop the cable.



Inserting Cable Into Drain

1. Transport and set the machine up according to these instructions.
2. Ensure the cable feed is disengaged.
3. Grasp the cable close to the machine and feed at least 2' of cable into the drain by hand. **WARNING!** Always wear leather gloves over latex/rubber gloves to avoid entanglement.
4. Move the Forward/OFF/Reverse switch to Forward ⬆ and press the foot pedal to begin rotating the cable.
5. Feed the cable into the drain. Use the cable feed in "advance" if desired. Continue until the obstruction is reached.



NOTE: If more cable is needed to reach the clog, disconnect the original cable from the anchor cable. Then, either load additional cable into the machine and connect the two cables together, or connect the original cable to the cable in another machine.

WARNING! Never feed more than 100' of cable into the machine to avoid overloading.

- When the clog is reached, disengage the auto feed. Manually move the cable in a back and forth motion until the obstruction is cleared. If the machine binds, release pressure from the foot pedal immediately. Repeat until the drain is clear.


To Unbind Cable in the Drain

To relieve torque (twisting) on the cable:

- Disengage the cable feed.
- Move the Forward/OFF/Reverse switch to Reverse  and pulse the foot pedal once to begin rotating the cable. Do not hold down the foot pedal.
- Pull the cable back out from the drain a few inches to free the cable.
- After the cable is freed from the obstruction and the machine has come to a complete stop, switch back to Forward  and continue working the obstruction.

CAUTION Running the machine in Reverse for extended periods can cause damage to the cable and accessories.

Removing Cable From Drain

- Move the Forward/OFF/Reverse switch to Forward  and press the foot pedal to begin rotating the cable.
- Pull the cable away from the drain and feed it into the drum. Use the cable feed in "retract" if desired.
- As the working end of the cable is neared, feed the last 5' of cable into the machine by hand. Do not use cable feed. **WARNING!** Never feed more than 100' of cable into the machine to avoid overloading.
- Remove the drum plug and drain into a suitable location.
- Before storing the machine, wash the cable and drum (see "Cleaning Cables and Drum" in Maintenance).

MAINTENANCE

WARNING To reduce the risk of injury, always unplug the charger and remove the battery pack from the charger or machine before performing any maintenance. Never disassemble the machine, battery pack or charger. Contact a MILWAUKEE service facility for ALL repairs.

Maintaining Machine

Keep your machine, battery pack and charger in good repair by adopting a regular maintenance program. Inspect your machine for issues such as undue noise, misalignment or binding of moving parts, breakage of parts, or any other condition that may affect the machine operation. Return the machine, battery pack, and charger to a MILWAUKEE service facility for repair. After six months to one year, depending on use, return the machine, battery pack and charger to a MILWAUKEE service facility for inspection.

If the machine does not start or operate at full power with a fully charged battery pack, clean the contacts on the battery pack. If the machine still does not work properly, return the machine, charger and battery pack, to a MILWAUKEE service facility for repairs.

ONE-KEY™

WARNING Chemical Burn Hazard.

This device contains a lithium button/coin cell battery. A new or used battery can cause severe internal burns and lead to death in as little as 2 hours if swallowed or enters the body. Always secure the battery cover. If it does not close securely, stop using the device, remove the batteries, and keep it away from children. If you think batteries may have been swallowed or entered the body, seek immediate medical attention.



Internal Battery

An internal battery is used to facilitate full ONE-KEY™ functionality.

If the Bluetooth® communication stops working, remove and reinsert the coin cell battery to reset. Replace the battery if the problem continues.

To replace the battery:

- Remove the battery pack.
- Remove the screw(s) and open the battery door.
- Remove the old battery. Take note of the positive/negative orientation. **WARNING!** Keep battery away from children, and dispose of it properly.
- Insert the new battery (3V CR2032) in the proper positive/negative orientation.
- Close the battery door and tighten the screw(s) securely.

WARNING To reduce the risk of personal injury, electric shock and damage, never immerse your machine in liquid or allow a liquid to flow inside it.

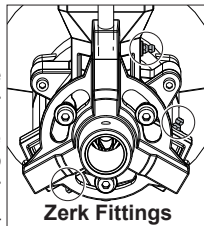
Cleaning

Clean dust and debris from vents. Keep handles clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean, since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around machines.

Greasing the Cable Feed

Apply grease to the cable feed after each use.

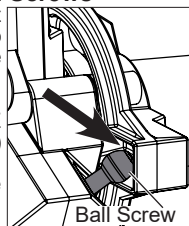
- Unarm the machine.
- Press the quick release button.
- Push the cable feed handle to the left side of the machine.
- Apply MILWAUKEE Grease Type T (49-08-4290) to the upper Zerk fitting, sufficiently covering the fitting.
- Press the cable feed ratchet lever down.
- Push the cable feed handle to the right side of the machine.
- Apply MILWAUKEE Grease Type T (49-08-4290) to the two lower Zerk fittings, sufficiently covering the fittings.



Greasing the Ball Screws

If the feed handle movement begins to stick, apply grease to the three (3) ball screws where they contact the cavity.

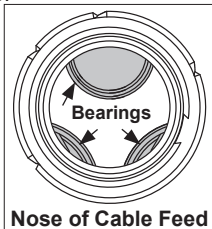
1. Unarm the machine.
2. Apply a dab of MILWAUKEE Grease Type T (49-08-4290) to both sides of cavity in all three locations around the cable feed handle.



Oiling the Cable Feed Bearings

Keep all exposed, moving, and rotating parts cleaned properly oiled after each use.

1. Unarm the machine.
2. Press the quick release button.
3. Use a hose to clean out the cable feed with clean water to remove contaminants. Drain the drum completely.
4. Move the cable feed handle to the left and apply a penetrating oil, like WD-40®, into the nose of the cable feed directly onto all three bearings. Sufficiently cover all the bearing seals.
5. Move the cable feed handle to the right and repeat.
6. Press the ratchet lever down and then feed and retract the cable 1-2 feet multiple times to work the oil around.
7. Repeat after each use.



Cleaning Cables and Drums

The cable and drum should be thoroughly flushed with water after every use to prevent damaging effects of sediment and drain cleaning compounds. **WARNING!** Always wear leather gloves over latex/rubber gloves to avoid entanglement. After washing, dry the cable and drum completely. Then, wipe cable with an oiled rag before returning it to the drum according to the instructions in "Cable Installation".

Bound or Knotted Cable

If the cable cannot be pulled from the nose of the machine, it may be bound or knotted in the drum. To correct this, the drum may need to be disassembled.

WARNING Disassembly of the internal drum when a cable is installed will cause the cable to unwind quickly and could whip around uncontrollably, which may result in injury.

Disassembly should only be performed by properly trained personnel. Contact Milwaukee for assistance.

Replacing the Anchor Cable

Due to the precise torque fastener requirements, MILWAUKEE recommends contacting a MILWAUKEE service facility for anchor cable replacement. If field replacement is necessary:

To replace the anchor cable:

1. Remove all cable from the drum and disengage it from the anchor cable. **WARNING!** Do not open drum with cable installed.
2. Remove the battery pack.
3. Open the drum latches and remove the drum cover.
4. Remove the 10 M5 screws holding the front internal drum to the rear internal drum.
5. Remove the 1/4"-20 nut and bolt holding the anchor cable into the drum.
6. Pull the anchor cable out through the nose of the cable feed by hand. Do not turn on the machine.
7. Feed the new anchor cable in through the nose of the cable feed by hand. Do not turn on the machine.
8. Ensure the cable is following the curve of the feed tube when lying in the drum.
9. Align the anchor cable with the stop and insert the 1/4"-20 bolt. Thread the 1/4"-20 nut onto the bolt and tighten securely.
10. Realign the front and rear internal drums.
11. Install the 10 M5 screws. **Tighten** each screw to 21-23 in-lbs.
- WARNING!** Overtightening screws can lead to stripping bosses and early drum failure.
12. Replace the drum cover and latch securely.

Cleaning the Battery and Battery Bay

Keep battery connections and surfaces between the machine and battery free of debris and materials. Failure to keep surfaces clean may result in misalignment and/or damage to the battery connection.

Repairs

For repairs, return the machine to the nearest authorized service center.

ACCESSORIES

WARNING Use only recommended accessories. Others may be hazardous.

For a complete listing of accessories, go online to www.milwaukeeetool.com or contact a distributor.

SERVICE - UNITED STATES

1-800-SAWDUST (1.800.729.3878)

Monday-Friday, 7:00 AM - 6:30 PM CST

or visit www.milwaukeeetool.com

Contact Corporate After Sales Service Technical Support with technical, service/repair, or warranty questions.

Email: metproductsupport@milwaukeeetool.com

Become a Heavy Duty Club Member at www.milwaukeeetool.com to receive important notifications regarding your tool purchases.

SERVICE - CANADA

Milwaukee Tool (Canada) Ltd
1.800.268.4015

Monday-Friday, 7:00 AM - 4:30 PM CST
or visit www.milwaukeeetool.ca