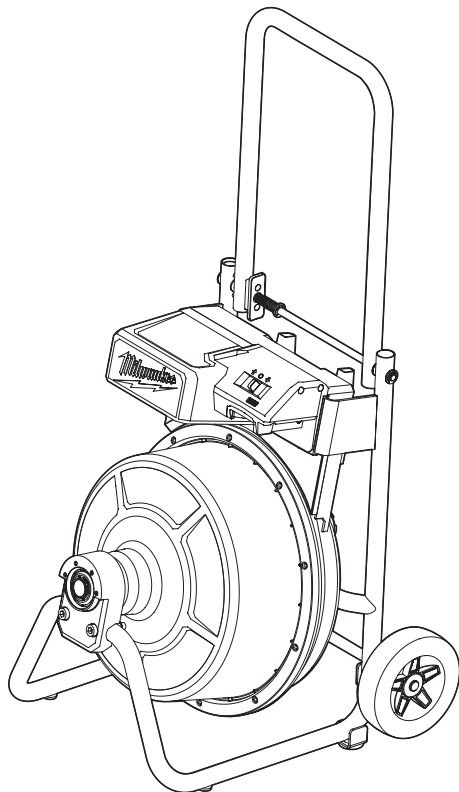




OPERATOR'S MANUAL
MANUEL de L'UTILISATEUR
MANUAL del OPERADOR



Cat. No. / No de Cat.
2817-20

M18™ DRUM MACHINE FOR 3/8"-1/2" CABLES

MACHINE À TAMBOUR M18™ POUR DES CÂBLES DE 9,5 mm À 12,7 mm (3/8"-1/2")

MÁQUINA DE TAMBOR M18™ PARA CABLES DE 9,5 mm A 12,7 mm (3/8"-1/2")



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.

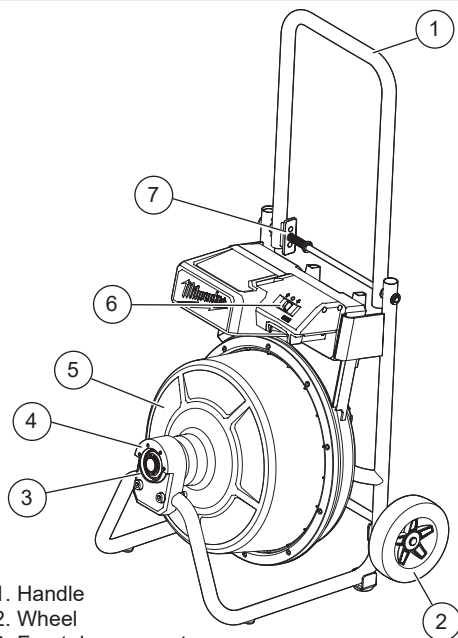
SPECIFIC SAFETY RULES FOR SEWER MACHINES

- **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

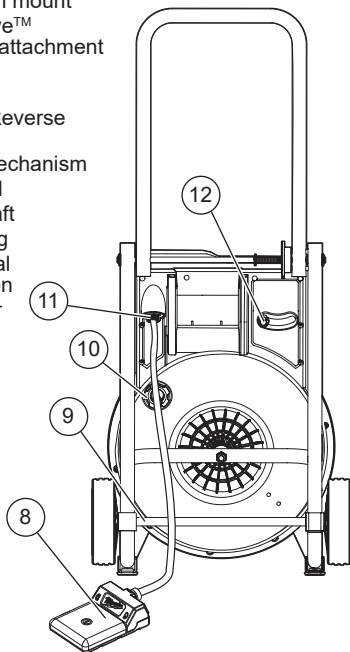
chemicals are present in the drain, it is important to understand the specific safety measures required to work around those chemicals. Contact the chemical manufacturer for required information.

- **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 over latex/rubber gloves to avoid entanglement.**
- **Always clear the area of obstructions before transporting.**
- **Do not use cart to transport other loads or add additional product.** For use with recommended cable size/lengths only.
- **Ensure drum is secure and front drum mount is tightly fastened.** 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 secure the tool and any accessories when operating on uneven or raised surfaces.**
- **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.

FUNCTIONAL DESCRIPTION



1. Handle
2. Wheel
3. Front drum mount
4. Cable Drive™ assembly attachment holes
5. Drum
6. Forward/Reverse controls
7. Folding mechanism
8. Foot pedal
9. Wheel shaft
10. Drum plug
11. Foot pedal connection
12. Tensioner



SYMBOLLOGY



Volts



Direct Current

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



Read operator's manual.



Always wear leather gloves over latex/rubber gloves.



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



Forward/OFF/Reverse drum control



Do not allow battery to contact corrosive or conductive fluid



UL Listing for Canada and U.S.

SPECIFICATIONS

Cat. No.	2817-20
Volts	18 DC
No Load RPM	300
Battery Type	M18™
Charger Type	M18™
Cable Range	3/8" - 1/2"
Weight (without cable)	36.5 lbs
Recommended Ambient Operating Temperature	0°F to 125°F
Drum Cat. No.	47-53-2817
Pedal Cat. No.	14-02-0000

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 the battery pack any time the tool is not in use.

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

NOTICE To prevent damage to the cable and attachments, only use in recommended pipe size.
Remove the anchor cable packaging stop from the front drum mount before use.

Selecting the Proper Cable

Cat. No.	Description	Pipe Diameter
48-53-2776	3/8" x 75' Inner Core Coupling Cable	1-1/2" - 3"
48-53-2777	3/8" x 100' Inner Core Coupling Cable	1-1/2" - 3"
48-53-2778	1/2" x 75' Inner Core Coupling Cable	3" - 4"

Cable Attachments for 3/8" and 1/2" Cables

Cat. No.	Description
48-53-2786	Medium Funnel Head Attachment w/ RUST GUARD™ Plating
48-53-2787	Medium Drop Head Attachment w/ RUST GUARD™ Plating
48-53-2788	1-1/2" Spade Bit Attachment w/ RUST GUARD™ Plating
48-53-2789	1-1/2" C-Cutter Attachment w/ RUST GUARD™ Plating

Cable Installation

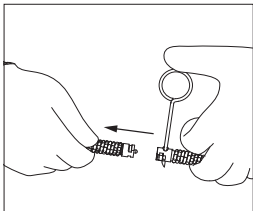
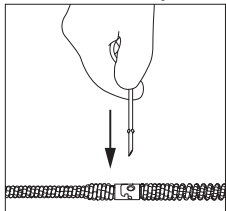
WARNING To reduce the risk of injury, always wear proper eye protection marked to comply with ANSI Z87.1.

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.

To manually remove the cable:

1. Move the Forward/OFF/Reverse switch to OFF **O** and remove the battery pack. Pull the cable out through the nose of the drum until the anchor cable shows.
2. Remove the cable from the anchor cable by inserting the pin key into the coupling hole and pulling the cable away.



3. 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.

Attaching Cable Drive Assembly

1. Align mounting plate to the Cable Drive™ Assembly attachment holes and fasten using four screws with a T-20 bit.

2. Attach Cable Drive™ Assembly to mounting plate on the tool.

Cable Drive™ Assembly for M18™ Drum Machine Sold separately. Refer to manual or Milwaukee Tool website for the Cable Drive™ Assembly instructions.

Wheel Installation

1. Install wheel shaft through frame eyelet holes.
2. Attach wheels with recess facing out to wheel shaft.
3. Attach e-clip to the shaft groove using pliers to clamp e-clip into place.

Using the Handle

Make sure the handle is locked in the upright position before transporting.

1. Pull back on the folding mechanism with one hand while lifting the handle with the other hand.
2. Continue to lift handle to the upright position until the folding mechanism clicks into place.
3. Reverse the process when storing the handle of the tool.

Transportation

Ensure handle is in the locked position before transporting.

Do not use cart to transport other loads or add additional product. For use with recommended cable size/lengths only.

Always turn OFF **O** or remove battery from 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.

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.

OPERATION

WARNING Always remove battery pack before changing or removing accessories.

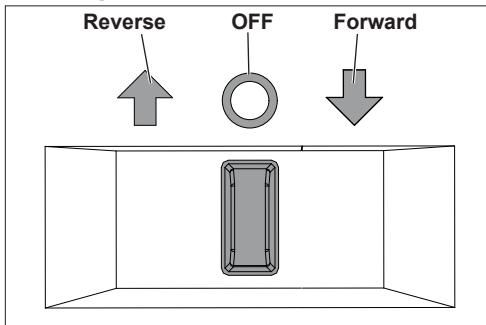
Only use accessories specifically recommended for this tool. Others may be hazardous.

To reduce the risk of short circuit, when setting tool or battery down, do not allow battery to contact corrosive or conductive fluid.

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.

Using Forward/OFF/Reverse Switch



1. For **forward** (counterclockwise) rotation, turn the forward/off/reverse switch to the arrow pointing towards the nose of the drum **↓**. Check the direction of rotation before use.
2. For **reverse** (clockwise) 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.
3. To **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 tool and any time the tool is not in use.

Starting and Stopping Speed

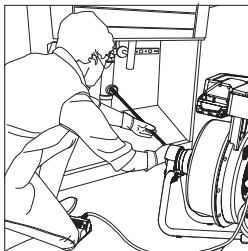
1. To **start** the tool, push the forward/off/reverse switch to either direction and step or kneel on the foot pedal.
2. To **stop** the tool, release pressure on the pedal.

Inserting Cable Into Drain

1. Transport and set the tool up according to the instructions under "Transportation and Drain Cleaning Set up".
2. Grasp the cable close to the tool and feed at least 2' into the drain. **WARNING!** Always wear leather gloves over latex/rubber gloves to avoid entanglement.
3. Turn the forward/off/reverse switch to the forward position **↓** and engage the foot pedal to begin rotating the cable.

4. Continue feeding cable into the drain until the obstruction is reached.

NOTE: If more cable is needed to reach the clog, a second drum may be connected. To do this, turn the forward/off/reverse switch to the **OFF** position **O**. Remove the drum from the powered base and place to the side. Insert a new drum onto the powered base. Disconnect the anchor cable from the original drum and connect it to the anchor cable in the second cable according to instructions under "Cable Attachment Installation".



5. When the clog is reached, move the cable in a back and forth motion until the obstruction is cleared. If the tool binds, release pressure from the foot pedal immediately. Repeat until the drain is clear.

To Unbind Cable

1. Turn the forward/off/reverse switch to the reverse position **↑** and engage the foot pedal to begin rotating the cable.
2. Withdraw the tool a few inches while in reverse to free the cable.
3. Stop the tool.
4. After the tool has come to a complete stop, switch back to the forward position.

NOTICE Running the tool in reverse for extended periods can cause damage to the cable and accessories.

Removing Cable From Drain

1. Turn the forward/off/reverse switch to the forward position **↓** and engage the foot pedal.
2. Pull the cable away from the drain.
3. Wipe the exposed cable with a rag and feed it back into the drum.
4. Repeat steps 2-4 until the cable is free from the drain.
5. Before storing the tool, wash the cable and drum (see "Cleaning Cables and Drums" 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.

⚠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.

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. Remove Drum from tool.
4. Remove the 10 M5 screws holding the front section of the drum to the rear section of the drum.
5. Remove the 2 screws inside 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. The arrow indicates the direction of the cable.
9. Align the anchor cable with the stop and insert the 1/4"-20 bolts. 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. Install drum onto the tool.

Removing Drum

Tools required for removing the drum from the tool are a 11/16" wrench and a 5/16" allen key.

1. To remove, insert 5/16" allen key to the bolt on the Front Drum Mount while 11/16" wrench is securing the nut on the back of the bolt.
2. Place hand on tensioner and pull away from tool while pulling belt from the bottom towards the back of the frame off the drum.
3. Pull drum to the front of the frame away from the belt and slide drum out to the side of the tool.
4. Reverse the process to install the drum.

Replacing Drum Belt

Before removing the belt, make sure the drum is removed from the tool.

1. Remove the battery pack.
2. Remove foot pedal plug from connection.
3. Unscrew tensioner knob in a counterclockwise motion and remove the knob from the tool.
4. Remove screws on housing by inserting a T-20 bit to housing screws and remove housing.
5. Remove belt from pulleys by pulling tensioner away from tool to separate pulleys.
6. Install a new belt by pulling tensioner away from tool sliding the belt into the pulley.
7. Install housing and secure it with the T-20 screws.
8. Install foot pedal to the connection.

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.