

MORSE[®]
THE M. K. MORSE COMPANY

Metal Devil[®]

Instructions and Safety Manual
Model: CSM14MB • 14" (356mm)
Steel Cutting Circular Saw

Serial # _____
(for your future reference please write in Serial # located on machine label)



MD140M_0709

IMPORTANT!

The Metal Devil[®] Saw you have purchased is a well-made saw. Used according to the directions it will give you excellent service for a number of metal-cutting applications. Misuse of this saw, however, could result in serious or fatal injury. Please read these operating and safety instructions carefully and completely. Heed all safety information. If you are uncertain about any aspect of using this equipment, contact your distributor.

THE M. K. MORSE COMPANY • CANTON, OHIO U.S.A. • MKMORSE.COM • SAW MADE IN TAIWAN

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WARRANTY REPAIRS

Contact your local Metal Devil® Distributor for assistance with obtaining warranty repairs.

Notice: Normal wear and tear and damage caused by misuse is not covered under the 1 year guarantee.

WARNING

Improper use of this saw can result in serious injury or death. Do not use without proper training. **Read and follow all instructions and warnings in this manual and on the saw.**

Safety Instructions

As with all machinery and equipment, there are certain hazards involved with operation and use of this saw. Using the saw with respect and caution will reduce the risk of personal injury. However, if normal safety instructions are overlooked or ignored, personal injury to the operator may result.

This machine was designed for certain applications only. DO NOT modify this machine or use it for any application other than for which it was designed. Misuse of this saw can result in serious injury or death.

1. FOR YOUR OWN SAFETY, READ THIS ENTIRE INSTRUCTION and SAFETY MANUAL BEFORE OPERATING THE SAW.

Learn the saw's application and limitations as well as the specific hazards peculiar to it.

2. USE the saw **ONLY** with all **GUARDS** in position, in good working order and properly maintained.

3. ALWAYS WEAR EYE PROTECTION.

4. GROUND ALL SAWS. If saw is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used for a two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.

5. REMOVE ADJUSTING KEYS AND WRENCHES.

Make it a habit of checking to see that keys and adjusting wrenches are removed from tool before turning it "ON."

6. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

7. KEEP WORK AREA WELL LIGHTED. A well lighted work area will help you identify potential issues in the work area and operate the saw safely and correctly.

8. DON'T USE IN WET OR DAMP CONDITIONS. Don't use this saw in damp or wet conditions or expose it to rain. You could suffer serious injury or death from electrocution, burns or electrical shock.

9. KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept a safe distance from work area.

10. MAKE WORKSHOP CHILDPROOF with padlocks, master switches, or by removing starter keys.

11. DON'T FORCE SAW. It will do the job better and be safer at a rate for which it was designed.

12. WEAR PROPER APPAREL. No loose clothing, gloves, neckties, rings, bracelets, or other jewelry should be worn while operating machine that could get caught in moving parts. Non-slip foot wear is recommended. Wear protective hair covering to contain long hair.

13. ALWAYS USE SAFETY GLASSES AND

HEARING PROTECTION. Also use face or dust mask if operation is dusty. Wear gloves for handling saw blades and rough material.

WARNING



Ear and eye protection must be worn while operating this equipment.

14. SECURE WORK. Use clamps or a vise to hold work pieces when practical. It's safer than using your hand and frees both hands to operate tool.

15. DON'T OVER-REACH. Keep proper footing and balance at all times.

16. MAINTAIN SAWS IN TOP CONDITION. Keep saws & saw blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

17. DISCONNECT SAWS before servicing and when changing accessories such as blades, bits, cutters, etc.

18. USE RECOMMENDED ACCESSORIES. The use of improper accessories may cause hazards.

19. REDUCE RISK OF UNINTENTIONAL STARTING. Make sure switch is in "OFF" position before plugging in power cord.

20. NEVER STAND ON SAW. Serious injury could occur if the saw is tipped or if cutting saw is accidentally contacted.

21. INSPECT FOR DAMAGE BEFORE USE. Before every use of the saw, carefully inspect the saw for any damage to a guard or other part. This should include a check for alignment of moving parts, binding of moving parts, breakage of parts, proper mounting, and any signs of damage. **DO NOT USE A DAMAGED SAW.** Any damage must be properly repaired before using it or serious injury or death could result.

22. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

23. NEVER LEAVE SAW RUNNING UNATTENDED.

POWER OFF. Don't leave saw until it comes to a complete stop.

24. DRUGS, ALCOHOL, MEDICATION. Do not operate saw while under the influence of drugs, alcohol or any medication.

25. MAKE SURE SAW IS DISCONNECTED FROM POWER SUPPLY while motor is being mounted, connected or reconnected.

WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- 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. Use dust collection systems whenever possible.

Additional Safety Instructions for Metal Cutting Saw

WARNING

Improper use of this saw can result in serious injury or death. Do not use without proper training. **Read and follow all instructions and warnings in this manual and on the saw.**

- 1. WARNING:** Do not operate your metal cutting saw until it is completely assembled and installed according to the instruction.
- 2. IF YOU ARE NOT** thoroughly familiar with the operation of the metal cutting saw, obtain advice from your supervisor, instructor or other qualified person. **You must be fully trained.**
- 3. BE SURE** blade is sharp, runs freely and is free of vibration.
- 4. TIGHTEN** arbor screw and all clamps before operating.
- 5. MAKE SURE** not to reach behind or over the cutting saw with either hand for any reason.
- 6. ALWAYS** keep guards in place and working properly.
- 7. KEEP** hands out of path of saw blade.
- 8. SECURE** work piece properly. Work should be straight and firmly clamped to avoid possible movement and pinching as the cut nears completion.
- 9. NEVER** cut anything freehand.
- 10. NEVER** reach behind or beneath the blade.
- 11. MAKE SURE** the blade has come to a complete stop before removing or securing work piece or changing work piece angle.
- 12. BE SURE** blade and flanges are clean and that arbor screw is tightened securely.
- 13. NEVER** use blades larger or smaller in outside diameter and arbor than recommended.
- 14. USE ONLY** blades rated at 1800 RPM or lower and conform to EN 847-1. Never use blade made only from high speed steel.
- 15. ALWAYS** check the blade for cracks or other damage before operation. Do not use blades which are damaged or deformed.
- 16. SAW BLADE** shall be carried in a holder whenever practical.
- 17. USE ONLY** blade flanges specified for your machine.

18. MAKE SURE blade is not contacting work piece before switch is turned on.

19. ALLOW the motor to come up to full speed before starting cut.

20. AFTER TURNING MACHINE ON, lower blade lightly until it comes in contact with the work piece and then draw blade firmly through the cut. **DO NOT** allow the blade to chatter and jump as this may cause the blade to wear out of round, resulting in poor cutting and possible broken blades.

21. ALWAYS keep the lower blade guard in place.

22. IMPORTANT: After completing cut, release power switch and wait for coasting blade to stop before returning saw to raised position.

23. USE the blade guard at all times.

24. NEVER operate the machine in an area with flammable liquid or gases.

25. DON'T USE IN WET OR DAMP CONDITIONS. Don't use this saw in damp or wet conditions or expose it to rain. You could suffer serious injury or death from electrocution, burns or electrical shock.



**Do not operate
in wet or damp
conditions.**

26. PROVIDE adequate support to the sides of the saw table for long work piece.

27. SHUT OFF power before servicing or adjusting saw.

28. SHOULD any part of your machine be missing, damaged or fail to perform properly, shut-off switch and remove plug from power supply outlet. Replace missing, damaged or failed parts before resuming operation.

29. WATCH FOR BYSTANDERS. Cut material can be thrown and can injure bystanders. Make sure that before you begin cutting, bystanders are a safe distance away. Discontinue cutting immediately if a bystander is no longer a safe distance away.

30. SAVE THESE INSTRUCTIONS. Refer to them often and use them to train others.

Glossary of Terms

Arbor

The shaft a blade is mounted on.

Freehand

Performing a cut without the use of work piece vise, hold down or other proper device to prevent the work piece from twisting during the cutting operation. Twisting of the work piece can cause it to be thrown or cause blade to break.

Revolutions Per Minute (RPM)

The number of turns completed by a spinning object in one minute.

Saw Blade Path

The area of the work piece or table top directly in line with either the travel of the blade or the part of the work piece which will be, or has been, cut by the blade.

Work Piece

The item the cutting operation is being performed to.

Motor Specifications and Electrical Requirements

Power Supply and Motor Specifications

The AC motor used in this saw is a universal. Nonreversible type having the following specifications:

	CSM14MB			
Maximum Developed H.P.	3			
Voltage	110-120	220-240	100-120	220-240
Amperes	15	7.5	15	7.5
Hertz (Cycles)	50-60			
Phase	Single			
RPM	1300			
Rotation of Shaft	Counter-clockwise			

Ground Instructions

WARNING

This tool must be grounded while in use to protect operator from electric shock.

In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This saw is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug is plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided if it will not fit the outlet; have the proper outlet installed by a qualified electrician. Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood if in doubt as to whether the saw is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and 3-hole receptacles that accept the tool's plug as shown in Fig. 5. Repair or replace damaged or worn cord immediately.

This saw is intended for use on a circuit that has an outlet and a plug that looks like the one shown in Fig. 5. A temporary adapter, which looks like the adapter illustrated in Fig. 6, may be used only until a properly grounded outlet can be installed by a qualified electrician.

WARNING

If you fail to follow the instructions and warnings given on this page and page 6 while using the saw, serious injury or death from electrocution, burns or electrical shock may result.

Power Connections

A separate electrical circuit should be used for your saw. This circuit should not be less than #12 wire and should be protected with a 20 Amp fuse. Have a certified electrician replace or repair a worn cord immediately. Before connecting the motor nameplate.

Running low voltage will damage the motor.



Do not operate in wet or damp conditions.

The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground, such as a properly grounded outlet box, as shown in Fig. 6.

WARNING

In all causes, make certain the receptacle in question is properly grounded. If you are not sure, have a certified electrician check the receptacle.

GROUNDING OUTLET BOX

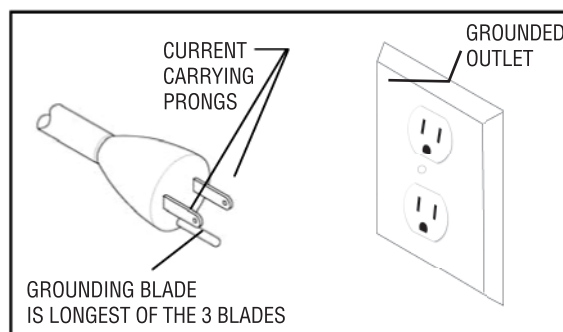


Fig. 5

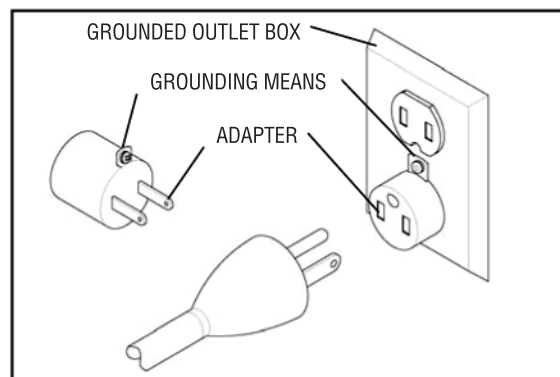


Fig. 6

Motor Specifications and Electrical Requirements (cont.)

Motor Safety Protection

⚠ Important: To avoid motor damage, this motor should be blown out or vacuumed frequently to keep dust from interfering with normal motor ventilation.

1. Connect this tool to a power source with the appropriate voltage.
2. If the motor won't start, release the trigger switch immediately. Unplug the saw. Check the saw blade to make sure it turns freely. If the blade is free, try to start by using the "Motor Trouble-Shooting Chart."
3. If the motor suddenly stalls while cutting, release the trigger switch, unplug the saw, and free the blade from the work piece. The motor may now be restarted and the cut finished.

4. Fuses may "blow" or circuit breakers may trip frequently if:
 - a: Motor is Overloaded – Overloading can occur if you feed too rapidly or make too many start/stops in a short time.
 - b: Line voltages should not be more than 10% above or below the nameplate voltage. For heavy loads, however, the voltage at motor terminals must equal the voltage specified for your model.
 - c: Improper or dull saw blades are used.
5. Most motor troubles may be traced to loose or incorrect connections, overload, low voltage (such as small size wire in the supply circuit) or to overly long supply circuit wire. Always check the connections, the load and the supply circuit whenever motor doesn't work well. Check wire sizes and length with the Wire Size Chart below.

Extension Cords

Use only 3-wire extension cords that are in good condition and that have 3-prong grounding plugs and 3-hole receptacles that accept the tool's plug. When using a power tool at a considerable distance from the power source, use an extension cord heavy enough to carry the current that the tool will draw. An under-sized extension cord will cause a drop in line voltage, resulting in a loss of power and causing the motor to overheat and burn out. Use the chart provided below to determine the minimum wire size required in an extension cord. Only round jacketed cords listed by Underwriter's Laboratories (UL) should be used.

Wire Size Chart

Length of Extension Cord	Wire Size (A.W.G.)
Up to 25 feet	14
26-50 feet	12

When working with the saw outdoors, use an extension cord that is designed for outside use. This is indicated by the letters WA on the cord's jacket.

⚠ CAUTION

Before using an extension cord, inspect it for loose or exposed wires, and cut or worn insulation and any other signs of damage.

Unpacking and checking Contents

⚠ WARNING

To avoid injury from unexpected starting or electrical shock, do not plug the power cord into a power source outlet during unpacking and assembly. This cord must remain unplugged whenever you are working on the saw.

Your saw is shipped complete in one box

⚠ WARNING

Although compact, this saw is heavy. To reduce the risk of injury, including injury to your back, get help whenever you have to lift the saw.

1. Remove the saw from the carton by lifting the saw with the carrying handle.
2. Place the saw on a secure stationary surface and look the saw over carefully.

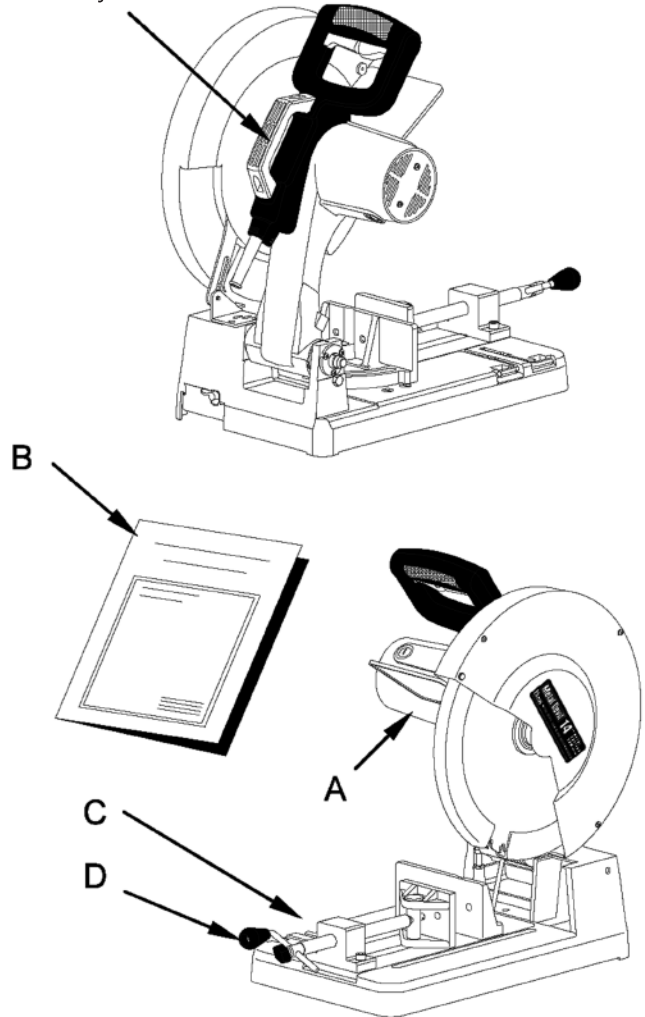
Table of Loose Parts

The following parts are included:

NOTE: Before beginning assembly, check that all parts are included. If you are missing any part, do not assemble the saw.

Part or Assembly	Qty
A. Basic Saw Assembly	1
B. Owners Manual.....	1
C. Arbor Wrench (stored on base)	2
D. Vise Handle.....	1

Carry Handle



Getting to know your saw

1. Warning Label.

2. Chain – For easy carrying and storage, the cut-off saw can be clamped in the down position by means of the hold down chain. To move the cutting head to the up position, simply unhook the chain from the handle housing.

3. Station Adjustable Vise – Clamp the work piece to this vise by turning the handles crank of vise. The stationary vise can be moved or the angle adjusted to accommodate work pieces of many sizes.

4. Lower Guard – This guard is designed to help protect your hands from blade in the raised position. To avoid binding on the work piece, it retracts as the power-head is lowered.

5. D Handle – The D handle contains the trigger switch with a lock button (see #8 and #9 for illustration). The blade can be lowered into the work piece by pushing down on the handle. The saw will return to its upright position when the handle is released unless the hold down (#2) is hooked.

6. Carrying Handle – This handle is built into the unit to move it from one location to another. Before attempting to pick up the unit by the carrying handle always clamp the cut off saw power head in the down position using chain (#2).

7. Protection Plate – To help protect eyes from being injured by metal chips that are generated while cutting materials.

8. Trigger – To turn the saw “ON” first depress lock button then depress switch trigger (#9).

9. Switch – To turn the saw “ON” depress switch trigger. To turn the saw “OFF”, release switch trigger.

10. Arbor Lock – Allows the user to keep blade from rotating while tightening or loosening arbor screw during blade replacement or removal.

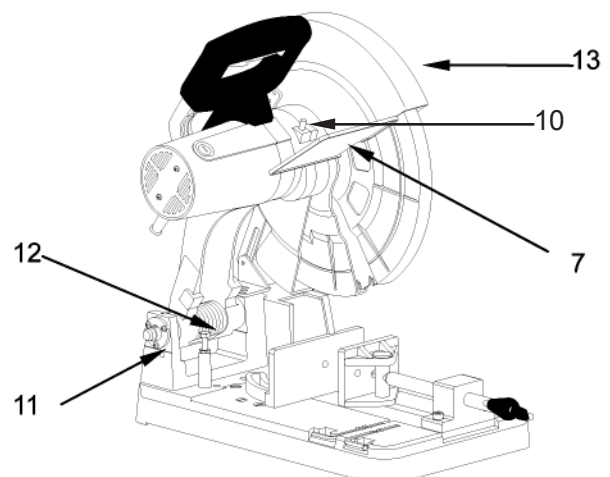
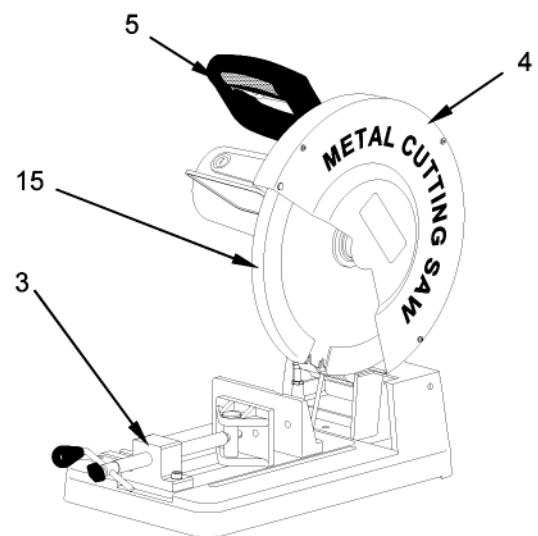
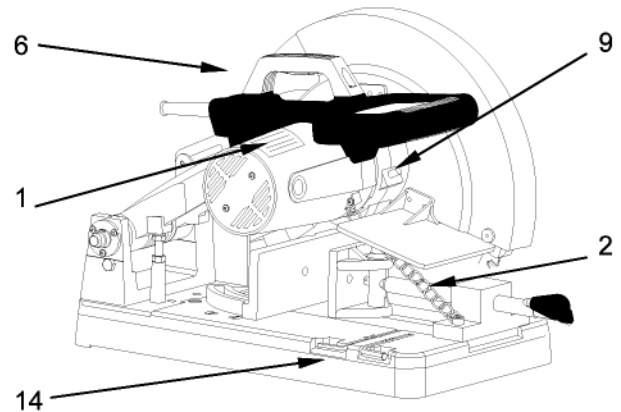
11. Up Stop Screws – In the full up position of the power head. These screws guard against over rotation of the power head.

12. Down Stop – In the down (full cut) position, the pivot arm hits and adjustable stop on the pivot.

13. Upper Guard – Protects users from cutter contact on upper portion of blade.

14. Arbor Wrenches – Used for blade changing and fence angular adjustments.

15. Big Blade Guard and Small Blade Guard – Easy to use with excellent safety.



Alignment (Adjustments)

WARNING



Cut material can be thrown. Eyes can be permanently damaged. Wear your safety goggles.



Down stop Adjustment: The down stop should be adjusted so that maximum cutting capacity is maintained and so that the cut off blade does not hit the saw base or the surface, which the saw is mounted to.

1. Lower cutter head until the arm hits the down stop.
2. Verify maximum cutting capacity and that there is no contact between cut off blade and base or mounting surface.
3. If contact occurs, adjust down stop screw and jam nut until problem is corrected.

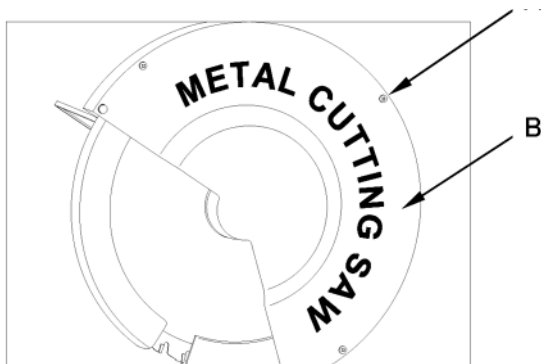
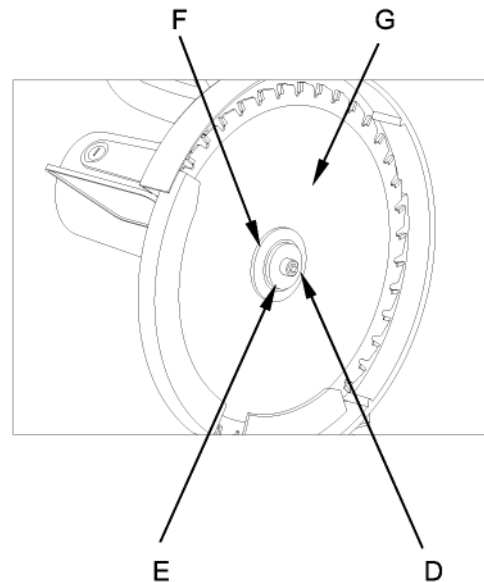
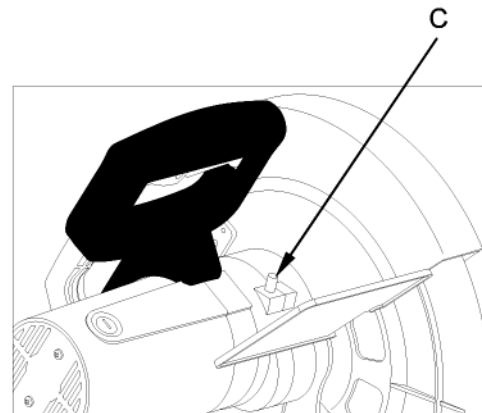
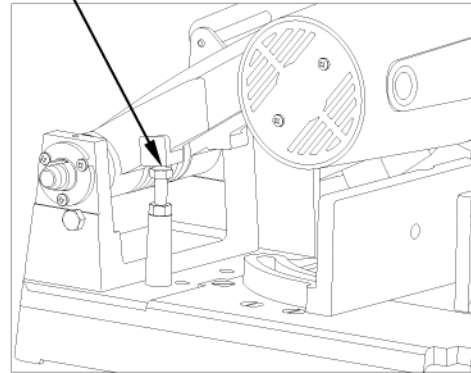
NOTE: All other adjustments are described in the “Basic Saw Operations” section. (pg. 12-14)

Assembly

Changing the Blade

1.  **Always Disconnect the machine from the power source before taking any steps to change the blade.**
2. Loosen the 3 screws (A), and remove the saw blade cover (B).
3. Press in on arbor lock (C) and at the same time rotate blade (G) by hand until the arbor lock is engaged.
4. Using the 8mm hex wrench provided, loosen arbor screw (D) by turning it counter clockwise, and remove arbor screw (D), washer (E), outside blade flange (F) and blade (G).
- Do Not Remove Inside Blade Flange.**
5. Make sure the inside surfaces of both the inside and outside blade flanges are clean and free from any foreign substance.
6. Install new blade (G) **Make sure that teeth of saw blade are pointing down at the front** and re-assemble outside blade flange (F), washer (E) and arbor screw (D). Turn arbor (D) clockwise to tighten.
7. Replace saw blade cover that was removed in STEP 2.
8.  **WARNING: MAKE SURE ARBOR LOCK (C) IS DISENGAGED AND 8MM HEX WRENCH IS REMOVED BEFORE TURNING ON THE POWER.**

Downstop



Safety Instructions for Basic Saw Operations Before using Metal Cutting Saw

WARNING

Adjusting a saw with the power connected could lead to serious injury if the saw started suddenly. Never connect the saw to a power source until all adjustment steps are completed.

- Completely assemble and align saw. (see “Assembly and Alignment” sections within.)
- Learn the use and function of the ON-OFF switch, upper and lower blade guards, lock pin, and work piece clamp. (See “Getting to know Your Metal-Cutting Saw” section within.)
- Review and understand all safety instructions and operating procedures in this manual.
- Review the maintenance methods for this Metal-Cutting Saw. (See “Maintenance” section within.)

To avoid injury or death from electrical shock:

- Make sure your fingers do not touch the plug’s metal prongs when plugging or unplugging the Metal-Cutting Saw.

Before each use:

1. Disconnect the Metal-Cutting Saw. To avoid injury from accidental starting, unplug the saw before inspecting the saw, changing the setup, changing the blade or adjusting anything. Before going further, tighten arbor screw and tighten the cover plate stop screw.

2. Inspect your saw.

3. Check for Damaged Parts. Check for:

- Alignment of moving parts
 - Damaged electric cords
 - Binding of moving parts
 - Broken parts
 - Stable mounting
 - Function of arm return spring and lower guard: Push the arm all the way down, then let it rise up until it stops by itself. Check the lower guard to see if it closed fully. If it did not, follow the instructions in the “Troubleshooting” section
 - Other conditions that may affect the way the saw works:
- If any part of this saw is missing, bent or broken in any way, or any electrical parts don’t work, turn the saw off and unplug it.

4. Make sure Guards are in place, in working order, and in proper adjustment.

5. Inspect the area for Bystanders: Cut material can be thrown and can injure bystanders. Make sure that before you begin cutting, bystanders are a safe distance away.

Contact the Distributor, where you purchased the saw, for assistance in replacing damaged, missing, or failed parts before using the saw again.

WARNING

DO NOT USE A DAMAGED SAW. Any damage must be properly repaired before using it or serious injury or death could result.

Maintain Saw with care. Keep the saw clean for best and safest performance. Follow instructions for lubricating.

Remove Adjusting Keys and Wrenches from machine before turning it on.

To avoid injury from jams, slips or thrown pieces:

- Use only recommended accessories. (See “Accessory” section within.) Consult this Owner’s Manual for recommended accessories. Follow the instructions that come with the accessories. The use of improper accessories may cause risk of injury to person(s).
- Choose the correct 356mm diameter metal cutting blade for the material and the type of cutting you plan to do.
- Make sure the blade is undamaged and properly sharpened. Observe the maximum speed marked on the saw blade.
- With the saw unplugged, push the power-head all the way down. Hand spin the blade and check for clearance. If the blade hits anything, make the adjustments shown in the “Maintaining Maximum Cutting Capacity” section.
- Ensure the blade and arbor collars are clean.
- Ensure the collars’ recessed sides are facing the blade.
- Using the arbor wrench supplied, make sure the arbor screw is firmly hand tightened.
- Make sure all clamps are tight and there is no excessive play in any parts.

Keep work area clean and properly lighted.

Cluttered areas and benches invite accidents. Floor around machine level shall be well maintained and free of loose material chip and cut-off and must not be slippery.

Know your Saw.

Read and understand the owner’s manual and labels affixed to the saw. Learn its application and limitations as the specific potential hazards peculiar to this saw.

To avoid injury from accidental contact with moving parts, don’t do layout, assembly, or setup work on the saw while any parts are moving.

Avoid Accidental Starting.

Make sure switch is “OFF” before plugging Metal-Cutting Saw into a power outlet.

Plan your work.

Use the Correct Saw. Don’t force saw or attachment to do a job it was not designed to do. Use a different tool for any work piece that can’t be held in a solidly braced, fixed position.

 **CAUTION: when cutting any metals, sparks or hot fragments could cause a fire.**

WARNING

Metal chips may be very hot and sharp. Wear eye protection whenever you open the collection chamber. Never touch metal refuse with bare hands.

WARNING



Ear and eye protection must be worn while operating this equipment.

Plan ahead to protect your eyes, hands, face and ears.

Any power saw can throw foreign objects into the eyes.

This can result in permanent eye damage.

Wear safety goggles (not glasses) that comply with ANSI Z87.1 (shown on package). Everyday eyeglasses have only impact resistant lenses. They are not safety glasses. Safety goggles are available at retail stores. Glasses or goggles not in compliance with ANSI Z87.1 could seriously hurt you when they break.

- Noise levels vary widely. To avoid possible hearing damage, wear earplugs or ear muffs.

Dress for Safety.

- **Do not wear loose clothing**, gloves, neckties or jewelry (rings, wrist watches). They can get caught and draw you into moving parts.
- Wear non-slip footwear
- Tie back long hair
- Roll long sleeves above the elbow.
- For dusty operations, wear a dust mask or respirator along with safety goggles.

Plan your work to avoid thrown pieces caused when the work piece binds on the blade and is torn from your hands. Avoid awkward operations and hand positions where a sudden slip could cause fingers or hand to move into the blade.

Don't Overreach. Keep good footing and balance.

Keep your face and body to one side of saw blade, out of line with possible thrown sparks or dust.

Never cut **Freehand:**

- Clamp your work piece solidly against the fence and table top so it will not rock or twist during the cut.
- Make sure there's no debris between the work piece and its supports.
- Keep the cut off piece free to move sideways after it's cut off. Otherwise, it could get wedged against the blade and could be thrown violently.
- Clear everything except the work piece and related support devices off the table before turning the saw on.

Secure Work. Use clamps or a vise to help hold the work when it is practical.

Use extra caution with large, very small or awkward work pieces.

- Use extra supports (tables, saw horses, blocks, etc.) for any work pieces large enough to tip when not held down to the tabletop.

Never use another person as a substitute for a table extension or as additional support for a work piece that is longer or wider than the basic Metal-Cutting saw table or to help feed, support or pull the work piece.

- Do not use this saw to cut pieces too small to let you easily hold the work with the clamp.
- When cutting irregularly shaped work pieces, plan your work so it will not slip and pinch the blade and be torn from the clamp.

WHENEVER SAW IS RUNNING:

WARNING

STAY AWARE AND ALERT: Do not allow familiarity (gained from frequent use of your metal-cutting saw) cause a careless mistake. A careless fraction of a second is enough to cause a severe injury.

Before starting your cut, watch the Metal-Cutting saw while it runs. If it makes an unfamiliar noise or vibrates a lot, stop immediately. Turn the saw off. Unplug the saw. Do not restart until finding and correcting the problem. Do not operate a damaged or malfunctioning saw.

Keep Children Away. Keep all visitors a safe distance from the saw. Make sure bystanders are clear of the saw and work piece.

Never confine the piece being cut off. Never hold it, clamp it, touch it, or use length stops against it while the blade is spinning. It must be free to move sideways on its own. If confined, it could get wedged against the blade and thrown violently.

Let the blade reach full speed before cutting.

- **Don't Force Saw.** It will do the job better and safer at its designed rate. Feed the saw into the work space only fast enough to let the blade cut without bogging down or binding.

WARNING

DO NOT USE A DAMAGED SAW. Any damage must be properly repaired before using it or serious injury or death could result.

Before freeing jammed material.

- Turn saw "OFF" by releasing trigger switch.
- Wait for all moving parts to stop.
- Unplug the Metal-Cutting Saw.

After Finishing a Cut.

- Keep holding the power head down.
- Release the switch, and wait for all moving parts to stop before moving your hands.

Before Leaving the Saw:

Never Leave Saw On and Unattended.

Turn power "OFF" wait for all moving parts to stop.

Make Workshop Childproof. Lock the shop.

Disconnect master switches. Store tool away from children and others not qualified to use the tool.

Basic Saw Operations

General Cutting Instructions

WARNING

Always securely fix the materials to be cut by using the vise.

WARNING

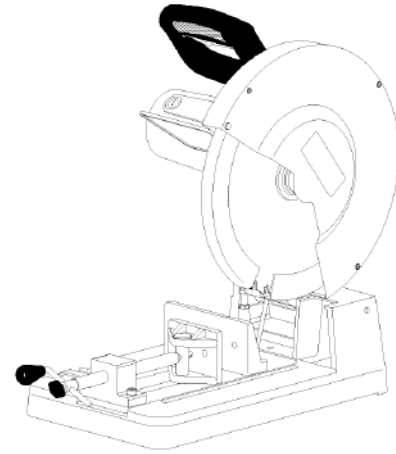
  Always wear safety goggles, hearing protection and protective gloves when operating the Metal-Cutting Saw.

WARNING

Always disconnect the saw from power source before making any adjustment.

Familiarize yourself with the following functions of the Metal-Cutting saw before connecting it to a power source and using it.

1. When starting this Metal-Cutting saw for the first time or after it has been idle for awhile, always let the machine run for one full minute with the blade completely recessed into the guard before making any cuts. If there are any unknown defects in the blade that are not revealed by a visual inspection and that could cause breakage they usually would do so within the first minute of operation. If the blade wobbles or vibrates discard and replace immediately.
2. When beginning a cut with the saw, care should be exercised not to bump or slam the blade into the work; once it has entered, continue the cut with an even smooth stroke. The faster a cut is made the less heat is created in the work piece, preventing discoloring, and blade life is prolonged. Cut with maximum force without overloading the motor.
3. Use an outboard support when cutting long, heavy pieces to prevent them from tipping the saw or falling down after they are cut.
4. When transporting the saw, secure the motor mount to the base to prevent damage.
5. When the cut-off blade comes up to full speed, push the handle to begin cutting. It is important to cut with steady and even pressure (Do Not Force) in order to obtain a



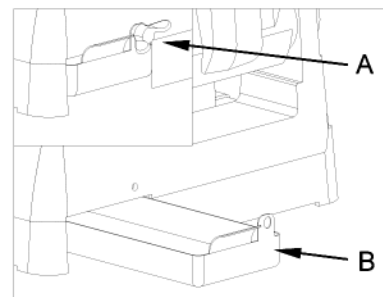
WARNING

To reduce the risk of injury from unexpected saw movement or damage to the saw as a result of relocating the saw:

- a. Before moving the saw, lock the power head in the lower position. Unplug electric cord.
- b. To reduce the risk of back injury, hold the saw close to your body when lifting. Bend your knees so you can lift with your legs, not your back. Lift by using the hand hold areas at each side of the bottom of the base or by the carrying handle.
- c. Never carry saw by the power cord or the trigger grip of the plastic handle. Carrying the saw by the power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.
- d. Place the saw so other people cannot stand behind it. Thrown debris could injure people in its path.
- e. Place the saw on a firm, level surface where there is plenty of room for handling and properly supporting the work piece.
- f. Support the saw so the table is level and the saw does not rock.

Cleaning Dust Tank

Loosen the screw (A), take out the dust tank (8) and clear it. Put the dust tank (8) deck and tighten the screw (A) again.

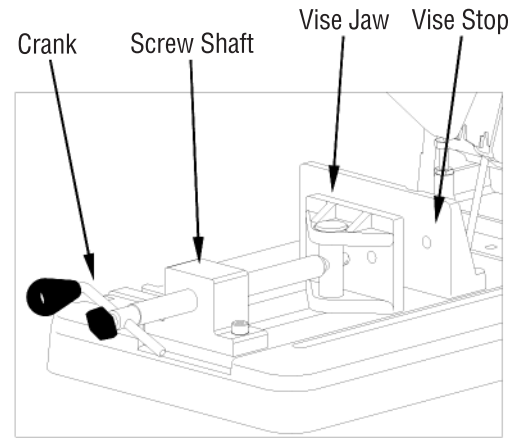


Adjusting the Stationary Vise

The stationary vise can be repositioned by loosening the adjustment bolts, sliding the fence to the desired position and retightening the bolts. The maximum width capacity is approximately 7-1/4" at 90° 5" at 45°.

NOTE: Vise stop is shipped in back position.

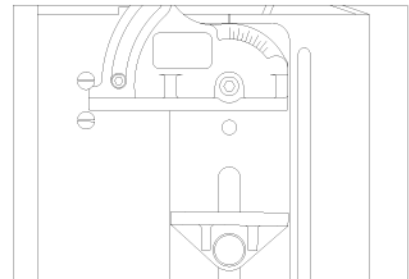
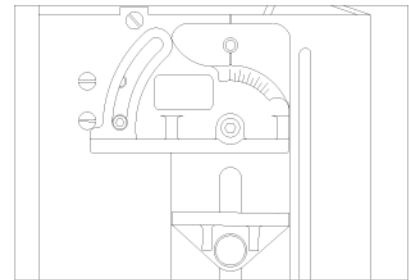
Prior to use review size of material to be cut and adjust vise stop accordingly. Blade should cut as close to center of material as possible.



Changing the Cutting Angle

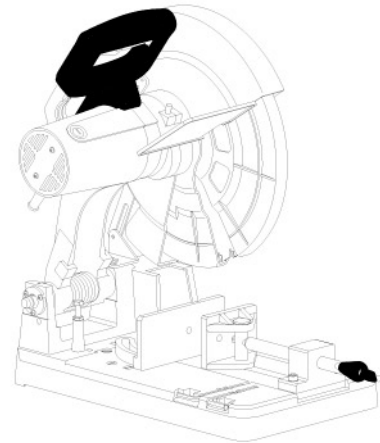
The vise can be adjusted from 0° to 45° right.

1. Using the arbor wrench loosen the two bolts on the vise, then set working surface on the vise at the desired angle.
2. Tighten the two bolts.



Big Blade Guard and Small Blade Guard

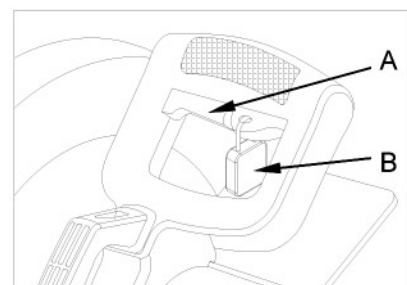
When the saw blade is pressed down, the big blade guard and small blade guard appropriately separate to clear the materials.



Locking Switch in the "OFF" Position

Important: We suggest that when the machine is not in use, the switch be locked in the "OFF" position using a padlock (B) through the holes in the switch trigger (A).

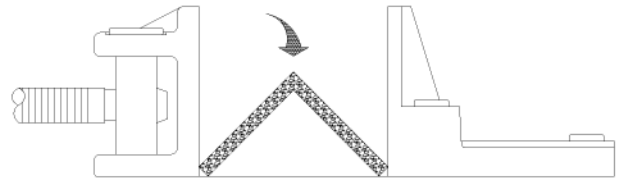
! Pad Lock Not Included



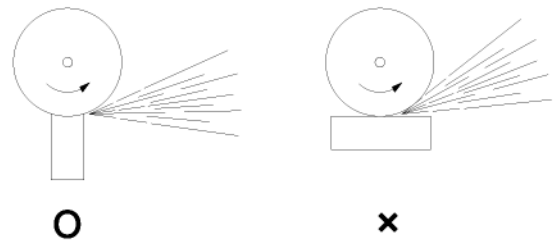
Basic Saw Operations (continued)

Work Piece Clamping

Position work in vise so that if jamming occurs, the blade shall not tend to move the work piece in the vise. Clamp it securely. Angle bar should be clamped in a position as shown.



Generally the saw cuts most efficiently if the blade is cutting the thinnest section at any time.



Recommended Cutting Capacity

WARNING

Use of tool for greater than recommended capacities may lead to motor burnout and possible injury, including electric shock.

NOTE: Cutting through any cross sectional area of material thicker than $\frac{1}{2}$ " tends to load up the blade, and this will cause your tool to work harder.

Applicable Blade Dimensions	14" (356mm) Outer Diameter x 1" (25.4mm) hole diameter					
		At 45 Degrees		At 90 Degrees		
Maximum Cutting Capacity "SOLIDS"	●	■	▬	●	■	▬
		$\frac{1}{2}$ " (12.6mm) "Maximum" thickness for mild steels and aluminum $\frac{1}{8}$ " (3mm) "Maximum" thickness for stainless steels				
Maximum Cutting Capacity "TUBING"	○ 4-1/8" 105mm	□	▭	○	□	▭
		$3\text{-}1/2$ " x $3\text{-}1/2$ " 90mm x 90mm	$3\text{-}1/4$ " x 4" 80mm x 100mm	$5/8$ " 130mm	$4\text{-}3/4$ " x $4\text{-}3/4$ " 120mm x 120mm	$3\text{-}3/4$ " x 7" 95mm x 180mm
$1/4$ " (6mm) "Maximum" Wall thickness for mild steels and aluminum $1/8$ " (3mm) "Maximum" Wall thickness for stainless steels						

Brush Inspection and Replacement

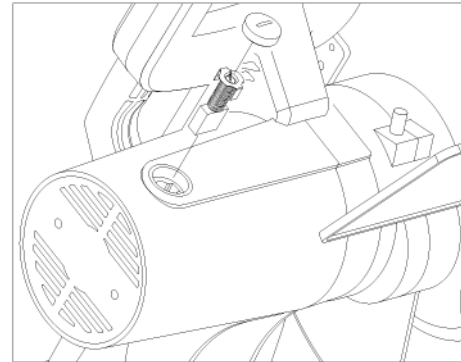
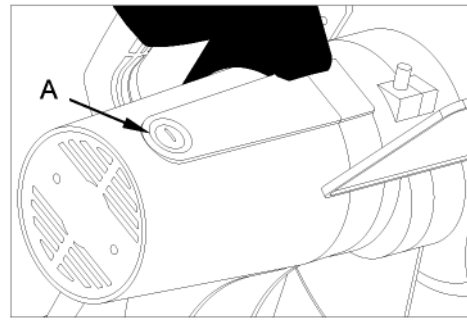
CAUTION

Before inspecting brushes, disconnect the machine from the power source.

Brush life varies. It depends on the load on the motor. Check the brushes after a new set of brushes has been installed.

After the first check, examine them after about 10 hours of use until replacement is necessary.

The brush holders (A) are located on the motor housing opposite each other. Illustration shows one of the brushes removed for inspection. When the carbon on either brush is worn to 1/4" in length or if either spring or shunt wire is burned or damaged in any way, replace both brushes. If the brushes are found serviceable after removing, reinstall them in the same position as removed.



Brush Inspection and Replacement

Maintenance

DANGER

Never put lubricants on the blade while it is spinning.

WARNING

To avoid injury from unexpected starting or electrical shock, unplug the power cord before working on the saw.

Keep the saw clean. Remove accumulated dust from working parts.

Make sure that the saw operates properly. Periodically check screws and bolts for tightness.

Feed oil at the oiling points once a month for extended machine service life (machine oil is suitable for the saw).

Oiling Point

- Rotary part of shaft
- Rotary part of vise
- Slide way vise

Replacing Carbon Brushes

The carbon brushes furnished will last approximately 50 hours of running time or 10,000 on/off cycles. Replace both carbon brushes when either has less than 1/4" length of carbon remaining. **To inspect or replace brushes, first unplug the saw.** Then remove the black plastic cap on the side of the motor (caution, this cap is spring loaded by the brush assembly). Then pull out the brush. Repeat for the other side. To reassemble reverse the procedure. The ears on the metal end of the brush assembly go in the same hole the carbon part fits into. Tighten the cap snugly but do not over tighten.

NOTE: To reinstall the same brushes, first make sure the brushes go back in the same way they came out. Otherwise a break-in period will occur that will reduce motor performance and increase brush wear.

Lubrication

All the motor bearings in this saw are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operation conditions, therefore no further lubrication is required (see below).

Infrequent Lubrication as Required

Chop pivot: Light machine oil or aerosol will penetrate from ends and junction points. Qualified service technician can remove pivot unstop to relieve spring tension in order to drive shaft about 3/4" right. Exposed surfaces are lubricated with automotive type oil.

Central pivot of guard: Use light household oil (sewing machine oil) on metal-to-metal guard contact areas as required for smooth, quiet operation. Avoid excess oil, to which cutting debris will cling and fire hazard from sparks could be caused.

Troubleshooting

Motor

Problem	Probable Case	Suggested Corrective Action
Motor does not start	<ol style="list-style-type: none"> 1. Fuse 2. Brushes worn 3. Other 4. Low voltage 	<ul style="list-style-type: none"> – 15amp time delay fuse or circuit breaker. – See “Maintenance” section – Check power supply for proper voltage and correct as needed.
Brush sparking when switch is released.	<ol style="list-style-type: none"> 1. Normal automatic brake working properly 	<ul style="list-style-type: none"> – None
Motor stalls easily	<ol style="list-style-type: none"> 1. Low voltage 2. Excessive wheel pressure when cutting 	<ul style="list-style-type: none"> – Check power supply for proper voltage and correct as needed – Pull wheel through work at a slower pace

General

Problem	Probable Case	Suggested Corrective Action
Blade hits base or work surface.	<ol style="list-style-type: none"> 1. Misalignment 2. Adjust downstop 	<ul style="list-style-type: none"> – See “Alignment” section
Cut not square.	<ol style="list-style-type: none"> 1. Defective wheel 2. Work not positioned properly 3. Excessive wheel pressure 	<ul style="list-style-type: none"> – Replace immediately – Position work properly – Lessen wheel pressure
Power head won't fully rise or blade guard won't fully close.	<ol style="list-style-type: none"> 1. Lubrication needed 2. Part failure 3. Pivot spring or guard spring not replaced properly after service 4. Dirt sticking to stops 	<ul style="list-style-type: none"> – See “Lubrication” section – Inspect stops
Blade binds, jams, burns work piece. Rough cuts.	<ol style="list-style-type: none"> 1. Improper operation 2. Dull blade 3. Improper blade 	<ul style="list-style-type: none"> – See “Basic Saw Operation” section – Replace or sharpen wheel – Replace with 14” diameter wheel designed for the material being cut
Saw vibrates or shakes.	<ol style="list-style-type: none"> 1. Saw blade not round 2. Saw blade damaged 3. Saw blade loose 4. Other 	<ul style="list-style-type: none"> – Replace wheel – Replace wheel – Tighten arbor screw
Power head hard to pull/push down.	<ol style="list-style-type: none"> 1. Lube needed 	<ul style="list-style-type: none"> – See “Lubrication” section

WARRANTY REPAIRS

Contact your local Metal Devil® Distributor for assistance with obtaining warranty repairs.

Notice: Normal wear and tear and damage caused by misuse is not covered under the 1 year warranty.

PARTS LIST METAL DEVIL CS14MB

DIAGRAM #	DESCRIPTION	MORSE PART#
1	Safety Cover	CSSPMC1401
2	Tooth Lock Washer Countersink	CSSPMC1402
3	Hex Soc Flat HD Screw	CSSPMC1403
4	Spring	CSSPMC1404
5	M4X8mm Pan Head Screw	CSSPMC1405
6	Lever	CSSPMC1406
7	Shoulder Screw	CSSPMC1407
8	Small Blade Guard	CSSPMC1408
9	Lever	CSSPMC1409
10	Spacer	CSSPMC1410
11	Pan Head Screw & Washer	CSSPMC1411
12	Protection Plate	CSSPMC1412
13	Bearing Cover	CSSPMC1413
14	Flat Head Screw	CSSPMC1414
15	Ext. Retaining Ring	CSSPMC1415
16	Spring	CSSPMC1416
18	Big Blade Guard	CSSPMC1418
20	Flange	CSSPMC1420
22	Flange	CSSPMC1422
23	M10 Flat Washer	CSSPMC1423
24	Spacer	CSSPMC1424
25	Hex Soc HD Screw & Washer	CSSPMC1425
26	Flat Washer	CSSPMC1426
27	Cover 14"	CSSPMC1427
28	Pan Head Screw & Washer	<i>same as</i> CSSPMC1411
32	Pan Head Screw	CSSPMC1432
33	Stop	CSSPMC1433
35	Cord Guard	CSSPMC1435
36	Pan Head Screw	CSSPMC1436
37	Tooth Lock Washer Ext.	CSSPMC1437
38	Power Cord	CSSPMC1438
39	Self -Tap Screw	CSP1439
40	Pan Head Screw & Washer	CSSPMC1440
41	Self Tap Pan Head Screw	CSSPMC1441
42	Upper/Lower Handle Set	CSP1442
43	Self Tapping Screw	CSP1443
44	Switch	CSP1444
45	Self Tap Pan Head Screw	<i>same as</i> CSP1439
46	Cord Clamp	CSSPMC1446
47	Lower Handle	See CSP1442
48	Hex Nut	CSSPMC1448
49	Pan Head Screw M5X12	CSSPMC1449
50	Lock Washer	CSSPMC1450
51	End Cover	CSSPMC1451
53	Self Tap Pan Head Screw	<i>same as</i> CSSPMC1441
54	Self Tap Pan Head Screw	<i>same as</i> CSSPMC1441
55	Motor Housing	CSSPMC1455
56	Pin Rubber	CSSPMC1456
57	Holder Brush	CSSPMC1457
58	Brush	CSSPMC1458
59	Cap Brush	CSSPMC1459
60	Shoulder Screw	CSSPMC1460

DIAGRAM #	DESCRIPTION	MORSE PART#
61	Jumper Wire(Blue)	CSSPMC1461
62	Sleeving	CSSPMC1462
63	Chain Hook	CSSPMC1463
64	Field Assembly - 110V	CSSPMC1464
65	Hex Head Screw + Washer	CSSPMC1465
66	Baffle	CSSPMC1466
67	Bearing Ball	CSSPMC1467
68	Armiture - 115V	CSSPMC1468
69	Bearing Ball	CSSPMC1469
70	Pin Rubber	<i>same as</i> CSSPMC1456
71	Inner Gear Housing	CSSPMC1471
72	Stop	CSSPMC1472
73	Ball Bearing	CSSPMC1473
74	Spring	CSSPMC1474
75	Lock Pin	CSSPMC1475
76	E-Ring ETW	CSSPMC1476
77	Stop	<i>same as</i> CSSPMC1472
78	Front Gear	CSSPMC1478
79	Square Key	CSSPMC1479
80	Gear Shaft	CSSPMC1480
81	Ball Bearing	CSSPMC1481
82	Back Gear	CSSPMC1482
83	Stop	<i>same as</i> CSSPMC1472
84	Bearing Ball	<i>same as</i> CSSPMC1467
85	Pin	CSSPMC1485
86	Outer Gear Housing	CSSPMC1486
87	Pin	CSSPMC1487
88	Square Key	<i>same as</i> CSSPMC1479
89	Spindle	CSSPMC1489
90	Ball Bearing	CSSPMC1490
91	Washer Flat	CSSPMC1491
92	Pin	CSSPMC1492
93	Vise Jaw	CSSPMC1493
94	Flat Washer	CSSPMC1494
97	Self Locking Nut Clip	CSSPMC1497
98	Knob	CSSPMC1498
99	Handle	CSSPMC1499
100	Plastic Knob (Wing Screw)	CSSPMC14100
101	Ring	CSSPMC14101
102	Vice Screw	CSSPMC14102
103	Pin	CSSPMC14103
104	Support	CSSPMC14104
105	Chain	CSSPMC14105
107	Hex Soc Head Screw & Washer	CSSPMC14107
108	Setting Up Piece	CSSPMC14108
109	Hex Nut	<i>same as</i> CSSPMC1448
110	Jumper Wire	CSSPMC14110
111	Vice Plate	CSSPMC14111
112	Flat Washer	CSSPMC14112
113	Lock Washer	CSSPMC14113
114	Bolt	CSSPMC14114
115	Hex Soc Head Screw & Washer	CSSPMC14115

PARTS LIST (continued)

DIAGRAM #	DESCRIPTION	MORSE PART#
117	Washer Flat	<i>same as</i> CSSPMC1491
118	Scale	CSSPMC14118
119	Drive Screw	CSSPMC14119
120	Washer	CSSPMC14120
121	Nylon Nut	CSSPMC14121
122	Adj. Bushing	CSSPMC14122
123	Flat Washer	CSSPMC14123
124	Spring	CSSPMC14124
125	Flat Washer	<i>same as</i> CSSPMC14123
127	Hex Soc Head Screw & Washer	CSSPMC14127
128	Flat Washer	CSSPMC14128
129	Set Screw	CSSPMC14129
130	Brace Bracket	CSSPMC14130
131	Connector Wire	CSSPMC14131
132	M8X45mm Hex Head Screw	CSSPMC14132
133	Set Screw	CSSPMC14133
134	Nut Hex	CSSPMC14134
136	Nut	CSSPMC14136
137	Shaft	CSSPMC14137
138	Special Nut	CSSPMC14138
140	8mm Hex Wrench	CSSPMC14140
141	Wrech Holder	CSSPMC14141
142	6mm Hex Wrench	CSSPMC14142
143	Wrech Holder	CSSPMC14143
153	Pad	CSSPMC14153
156	Pan Head Screw & Washer	CSSPMC14156
157	Base	CSSPMC14157
159	Support Plate	CSSPMC14159
160	Chip Box	CSSPMC14160
161	Special Screw	CSSPMC14161
172	Shoulder Screw	CSSPMC14172
173	Shoulder Screw	CSSPMC14173
174	Shoulder Screw	CSSPMC14174
175	Sleeving	CSSPMC14175
176	Sleeving	CSSPMC14176
177	Tie Cable	CSSPMC14177
178	Jumper Wire(Yellow)	CSSPMC14178
179	Fiber Plate	CSSPMC14179
180	Lock Washer	CSSPMC14180
186	Pan Head Screw & Washer	<i>same as</i> CSSPMC14156
187	Handle Carry	CSP14187
188	Hanger Handle	CSP14188
189	Locking Bar	CSP14189
190	Trigger	CSP14190
191	Spring	CSP14191

ACCESSORIES

DESCRIPTION	MORSE PART#
V Block	CSP14A01

CSM14MB SERVICE PARTS DIAGRAM

