

 **EUROBOOR**

FOR PROFESSIONALS BY PROFESSIONALS

Manual **EDC.135**

Sawing Machine

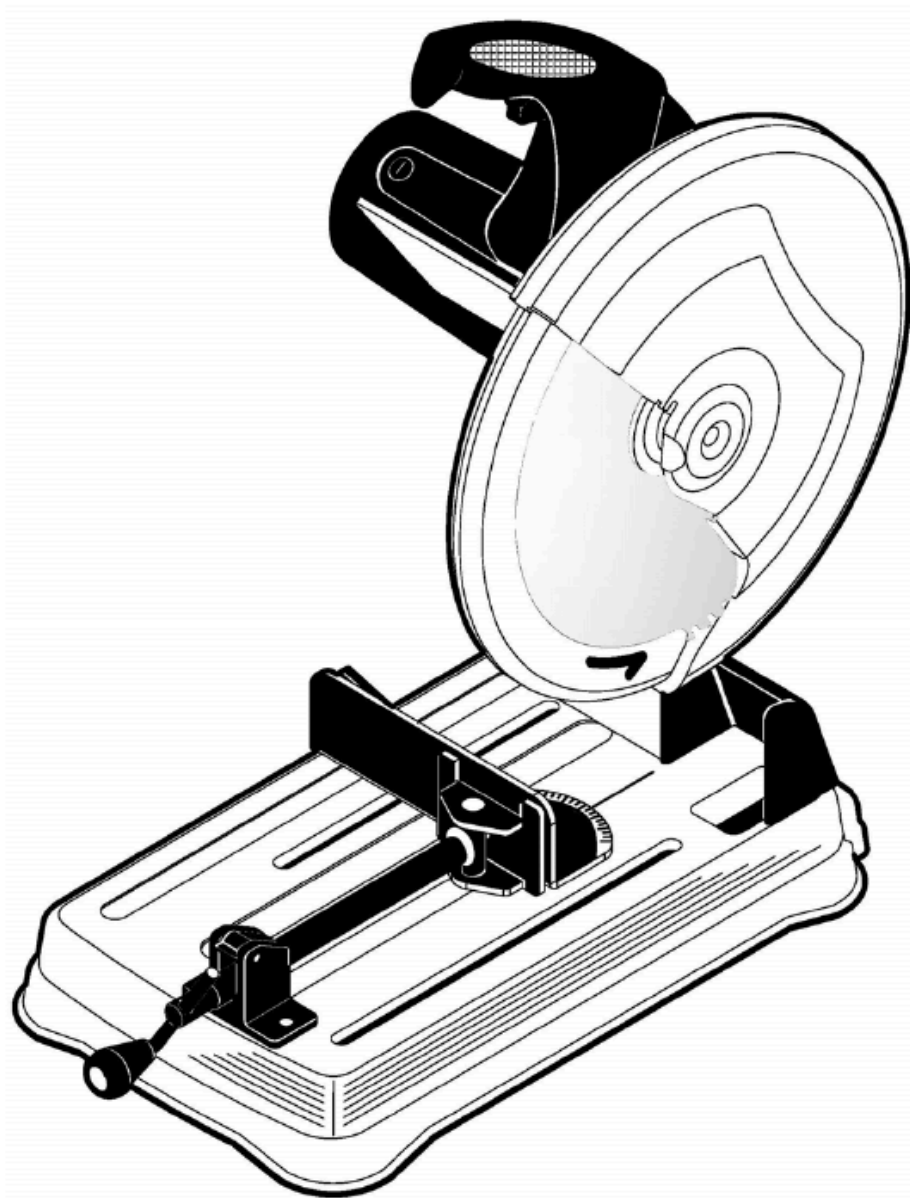


Table of contents

SECTION	PAGE
Safety Rules -----	2
Warning: Failure to follow these rules may result in serious personal injury-----	2
Additional Safety Rules for Metal Cutting	
Saws -----	3
Glossary Of Terms -----	3
Motor Specifications and Electrical	
Requirements -----	4
Power Supply and Motor Specifications-----	4
Ground Instructions -----	4
Motor Safety Protection -----	5
Wire Sizes -----	5
Unpacking and Checking Contents -----	5
Unpacking -----	6
Table of Loose Parts -----	6
Getting to Know Your Saw -----	7
Alignment (Adjustments) -----	8
Assembly -----	8

Safety Rules

As with all machinery there are certain hazards involved with operation and use of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

Warning-----Failure to follow these rules may result in serious personal injury.

- 1. FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL.** Learn the tool's application and limitations as well as the specific hazards peculiar to it.
- 2. DO NOT USE** the saw without the guards in position, in good working order and properly maintained.
- 3. ALWAYS WEAR EYE PROTECTION.**
- 4. GROUND ALL TOOLS.** If tool 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 lug must be attached to a known ground. Never remove the third prong.
- 5. REMOVE ADJUSTING KEYS & WRENCHES.** Have 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. DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet location, or expose them to rain. Keep work area well lighted.
- 8. KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.
- 9. MAKE WORKSHOP CHILDPROOF-** With padlocks, master switches, or by removing starter keys.
- 10. DON'T FORCE TOOL.** It will do the job better and be safer at the rate for which it was designed.
- 12. WEAR PROPER APPAREL.** No loose clothing, gloves, neckties, rings, bracelets, or other jewelry could get caught in moving parts. Non-slip foot wear is recommended. Wear protective hair covering to contain long hair.

SECTION	PAGE
Changing The Blade-----	8
Safety Instructions For Basic Operation -----	9
Before Using The Metal -Cutting Saw-----	9
Before Each Use-----	9
Whenever Saw Is Running-----	10
Before Leaving The Saw-----	10
Basic Saw Operation -----	11
General Cutting Instruction-----	11
Clean Dusk Tank-----	11
The Quick Vise-----	12
Changing The Cutting Angle-----	12
Big Blade Guard And Small Blade Guard-----	12
Basic Saw Operations-----	13
Workpiece clamping-----	13
Recommended Cutting Capacity-----	13
Brush Inspection And Replacement-----	14
Maintenance And Lubrication -----	14
Maintenance-----	14
Lubrication-----	14

This machine was designed for certain applications only. It is strongly recommended that this machine NOT be modified and/or used for any application other than for which it was designed.

- 13. ALWAYS USE SAFETY GLASSES AND HEARING PROTECTION.** Also use face or dust mask if cutting operation is dusty. Wear gloves for handling saw blades and rough material.
- 14. SECURE WORK.** Use clamps or a vise to hold workpieces when practical. It's safer than using your hand and frees both hands to operate tool.
- 15. DON'T OVERREACH.** Keep proper footing and balance at all times.
- 16. MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 17. DISCONNECT TOOLS** 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 THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in "OFF" position before plugging in power cord.
- 20. NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
- 21. CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function -check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other part that is damaged should be properly repaired or replaced.
- 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 TOOL RUNNING UNATTENDED. POWER OFF. Don't leave tool until it comes to a complete stop.

24. DO NOT operate tool while under the influence of drug, alcohol or any medication.

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

Additional Safety Rules For Metal Cutting 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 metal cutting saw, obtain advice from your supervisor, instructor or other qualified person.

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 reach behind or over the cutting tool 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 workpiece 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 workpiece or changing workpiece 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 1500 mm⁻¹ or higher and conform to EN 847-1. Never use blade 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 practicable.

17. USE ONLY blade flanges specified for your machine.

Glossary Of Terms

Arbor--

The shaft a blade is mounted on.

Freehand

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

Revolutions Per Minute (RPM)

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

26. WARNING: The dust generated by certain products can be injurious to your health. Always operate machinery in well-ventilated areas and provide for proper dust removal. Use dust collection systems whenever possible.

27. BLADE GUARD: Do Not touch after long time use because the temperature of guard will raise cause of the dust.

18. MAKE SURE blade is not contacting workpiece 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 with the workpiece 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 cut 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. TO AVOID electric shock, do not use under damp conditions or expose to rain.

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

27. SHUT OFF power before servicing or adjusting tool.

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

29. SAVE THESE INSTRUCTIONS. Refer to them often and use them to instruct others

Saw Blade Path

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

Workpiece or Material

The item on which the cutting operation is being perform.

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:

Model No.	51306	
Maximum Developed (W)	2200	
Voltage	110	220-240
Amperes	20	9.5
Hertz (Cycles)	50	
Phase	Single	
RPM	1300 ⁻¹	
Rotation of Shaft	Counter-clockwise	

Ground Instructions

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

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool 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 tool 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.

Repair or replace damaged or worn cord immediately.

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

Power Connections

A separate electrical circuit should be used for your tools. This circuit should not be less #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.

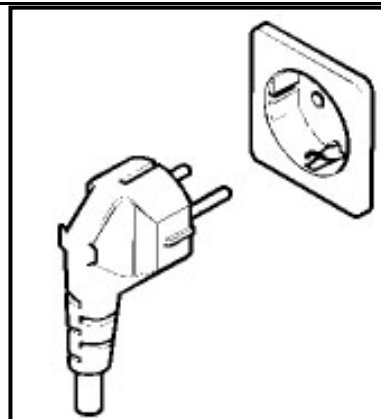
Running low voltage will damage the motor.

WARNING: DO NOT EXPOSE THE TOOL TO RAIN OR OPERATE THE TOOL IN DAMP

THIS ADAPTER IS NOT APPLICABLE IN CANADA.

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.

Caution: In all causes, make certain the receptacle in question is properly ground. If the tool is not in use, have a certified electrician check the receptacle.



Motor Specifications and Electrical Requirements

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 for your model and a 20-amp branch circuit with wrong size fuse can damage the motor.
2. If the motor won't start, release the trigger switch immediately. **Unplug The Tool.** Check the saw blade to make sure it turns freely. If the blade is free, try to start the "Motor Trouble-Shooting Chart."
3. If the motor suddenly stalls while cutting, release the trigger switch, unplug the tool, and free the blade from the workpiece. The motor may now be restarted and the cut finished.

Wire Sizes

Note: Make sure the proper extension cord is used and is in good condition.

The use of any extension cord will cause loss of power. To keep this to a minimum and prevent overheating and motor burnout, use the table below to determine the minimum wire size A.W.G. extension cord.

EXTENSION CORDS

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole 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 undersized extension cord will cause a drop in line voltage, resulting in a loss of power and causing the motor to overheat. 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 (TUV) should be used.

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 blade 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 Cord Length	Wire Sizes Required	
	220-240V	110V
0-7.5 m	1.5 mm ²	3.0 mm ²
7.5-15 m	2.0 mm ²	3.5 mm ²
Over 15 m	NOT RECOMMENDED	NOT RECOMMENDED

Unpacking and Checking Contents

Unpacking

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 avoid back injury, get help whenever you have to lift the saw.

1. Remove the saw from the carton by lifting the saw with the carrying handle as shown Fig.3.
2. Place the saw on a secure, stationary work surface and look the saw over carefully.

Table of Loose Parts

The following parts are included as shown Fig.4 :

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

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

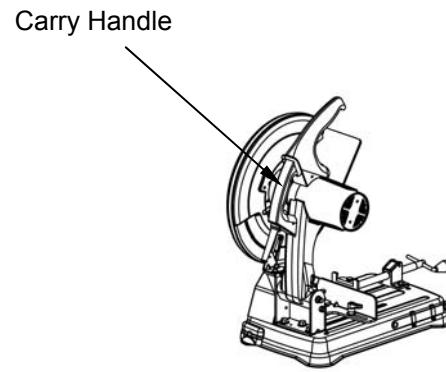


Fig.3

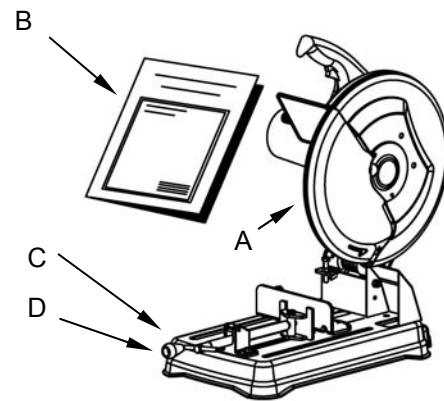


Fig.4

Getting to Know Your Saw

1. Warning Label- Please read the **warning label** before use as shown Fig. 5.

2. Chain- For easy carrying and storage, the Metal-Cutting 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 as shown Fig. 5.

3. Quick Vise- Clamp the workpiece can be accomplished quickly and easily as shown Fig. 6.

4. Upper Guard- This guard helps protect your hands from blade in the raised position. To avoid binding on the workpiece, it retracts as the power-head is lowered as shown Fig. 6.

5. Handle- The handle contains the trigger switch with a lock button (see #8 for illustration). The blade can be lowered into the workpiece 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 as shown Fig. 6.

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) as shown Fig. 5.

7. Protection Plate- To protect our eyes been injured from the spar and iron filings occurred while cutting materials as shown Fig. 6.

8. Switch- To turn the saw "ON" depress switch trigger To turn the saw "OFF", release switch trigger as shown Fig. 6.

9. Arbor Lock- Allows the user to keep blade from rotating while tightening or loosening arbor screw during blade replacement or removal as shown Fig. 5.

10. Up stop Screws- In the full up position of the power head. These screws prevent over rotation of the power head as shown Fig. 7.

11. Down stop- In the down (full cut) position, the pivot arm hits an adjustable stop on the pivot as shown Fig. 7.

12. Upper Guard- Protects users from cutter contact on upper portion of blade. Please Do Not touch after long time use because the temperature of guard will raise cause of the dust as shown Fig. 7.

13. Arbor Wrench- Used for blade changing and fence angular adjustments as shown Fig. 7.

14. Blade Guard- Easy to use with excellent safety as shown Fig. 7.

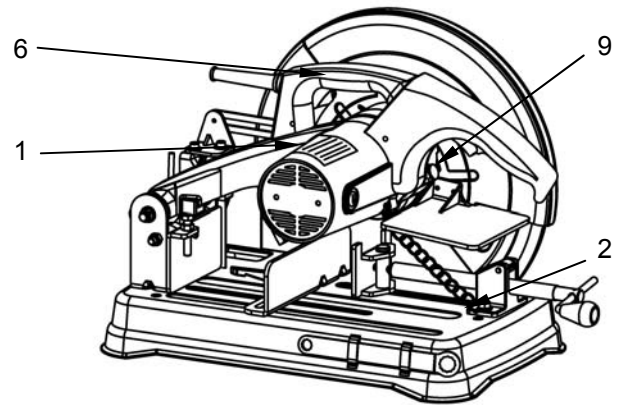


Fig.5

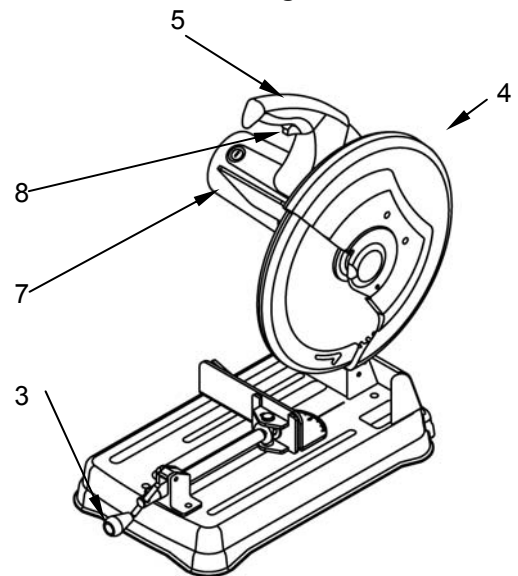


Fig.6

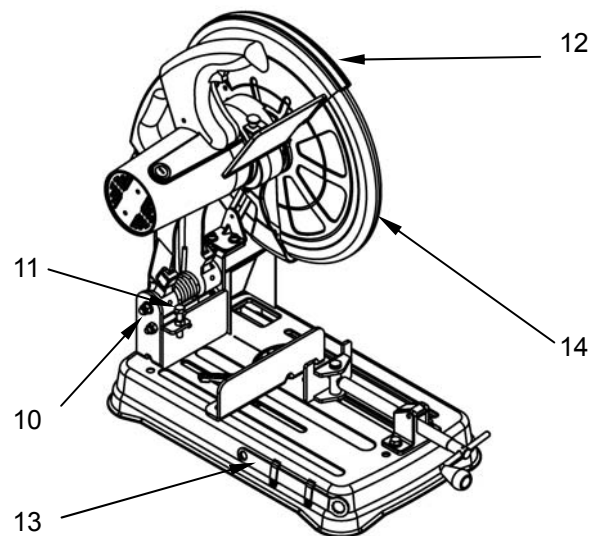


Fig.7

Alignment (Adjustments)

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

Down stop Adjustment: The down stop as shown Fig. 8 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 tool 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.

Assembly

Changing The Blade

1. Disconnect The Machine From The Power Source.

2. Loosen the screw (A), and remove the saw blade cover (B) as shown Fig. 9.
3. Press in on arbor lock (C) as shown Fig. 10 and rotate blade (G) by hand until the arbor lock (C) engaged.
4. Using the provided arbor wrench, loosen arbor screw (E) by turning it counter clockwise, and remove arbor screw (E), outside blade flange (F). Push up the big blade guard and remove the blade (G) as shown Fig. 12.

Do Not Remove Inside Blade Flange.

5. Make sure the inside and outside blade flanges are clean.
6. Install new blade (G). **Make sure Teeth of Saw Blade are Pointing Down At The Front** and re-assemble Outside blade flange (F), and arbor screw (E). Turn arbor screw (E) clockwise to tighten.
7. Re-assemble blade cover that was removed in STEP 2.

WARNING: MAKE SURE ARBOR LOCK (C) IS DISENGAGED BEFORE TURNING ON THE POWER.

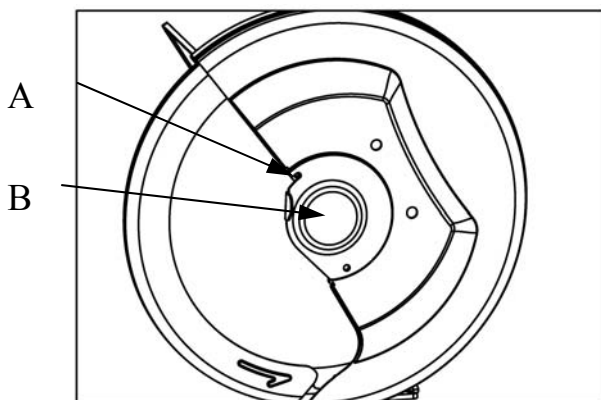


Fig.9

Down stop

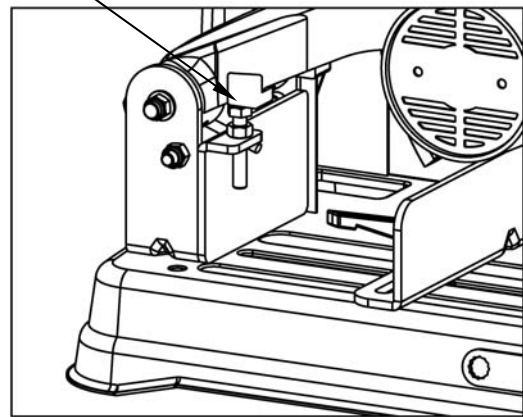


Fig.8

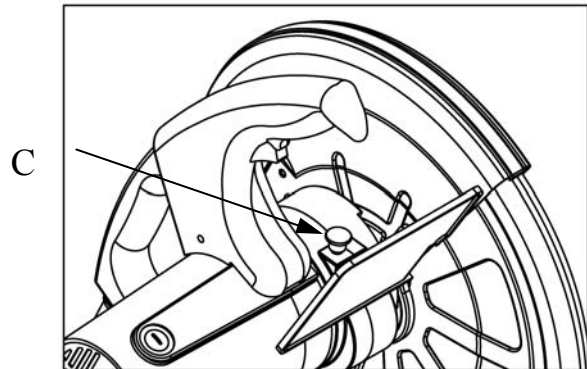


Fig.10

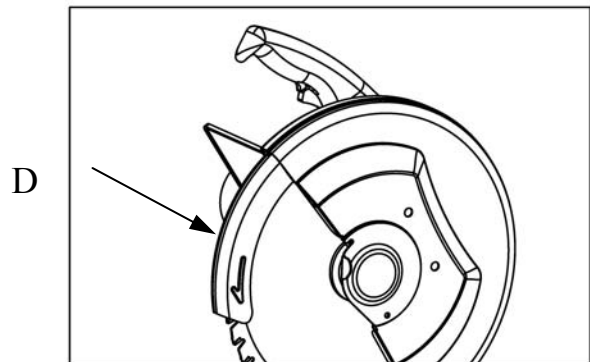


Fig.11

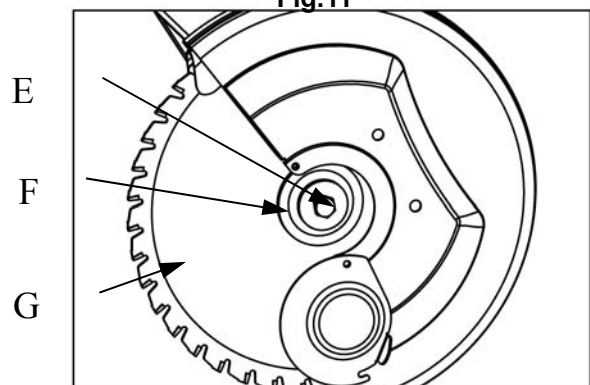


Fig.12

Safety Instructions for Basic Saw Operations

Before Using Metal Cutting Saw

WARNING: To avoid mistakes could cause serious, permanent injury, do not plug the following steps have been satisfactorily 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 workpiece 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:

Inspect your saw.

Disconnect The Metal-Cutting Saw. To avoid injury from accidental starting, unplug the saw, before changing the setup, changing the blade or adjusting anything.

Tighten the arbor screw.

Tighten the cover plate stop screw.

Check 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. **Report to the sales store to replace** damaged, missing, or failed parts before using the saw again.

Keep Guards In Place, in working order, and in proper adjustment

Maintain Tools With Care. Keep the saw clean for best and safest performance Follow instructions for lubricating

Remove Adjusting Keys And Wrenches from tool 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 persons.
- Choose the right 350mm 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 tool. Learn its application and limitations as the specific potential hazards peculiar to this tool.

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 Right Tool. Don't force tool or attachment to do a job it was not designed to do. Use a different tool for any workpiece that can't be held in a solidly braced, fixed position.

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

Plan Ahead To Protect Your Eyes, Hands, Face, Ears. Any power saw can throw foreign objects into the eyes. This can result in permanent eye damage.

Never remove any cut-offs or other parts of the work piece from cutting area **while the machine is running and the saw head is not in rest position.**

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 no slip footwear-
- Tie back long hair.
- Roll long sleeves above the elbow.
- Noise levels vary widely. To avoid possible hearing damage, wear earplugs or muffs.
- For dusty operations, wear a dust mask or respirator along with safety goggles.

Plan you work to avoid thrown pieces caused when the workpiece 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 dusts.

Never cut **Freehand:**

- Clamp your workpiece 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 workpiece and its supports-
- Make sure no gaps between the workpiece, fence and table will let the workpiece shift after it is cut in two-
- 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 workpiece and related support .devises off the table before turning the saw on.
- **Secure Work.** Use clamps or a vise to help hold the work when it's practical.

Use extra caution with large, very small or awkward workpieces:

- Use extra supports (tables, saw horses, blocks, etc.) For any workpieces 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 workpiece that is longer or wider than the basic Metal-Cutting saw table or to help feed, support or pull the workpiece.
- Do not use this saw to cut pieces too small to let you easily hold the work with the clamp.
- When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade and be torn from the clamp.

Whenever Saw Is Running:

Warning: Don't 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.

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

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 Tool. It will do the job better and safer at its designed rate. Feed the saw into the workspace only fast enough to let the blade cut without bogging down or binding.

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 Tool Running 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 other not qualified to use the tool.

Basic Saw Operations

General Cutting Instructions

WARNING: Always securely fix the material to be cut by using the vise.

WARNING: Always wear safety glasses and protective gloves when operating the Metal-Cutting saw.

WARNING: Always disconnect the tool 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 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 workpiece, preventing discoloring, and blade life is prolonged. Cut with maximum force without overloading the motor.
3. Use an outboard support when cutting long, heavy piece 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 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 uniform cut.

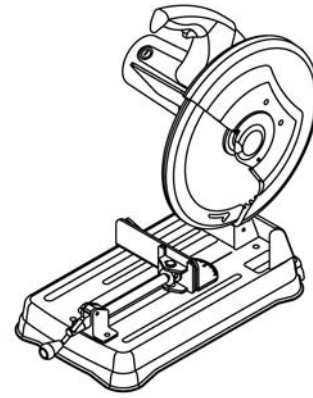


Fig.13

WARNING: To avoid injury from unexpected saw movement:

- a. Before moving the saw, lock the power head in the lower position. Unplug electric cord.
- b. To avoid back injury, hold the tool close to your body when lifting. Bend your knees so you can lift with your legs, not your back. Lift by using the handhold 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 tool 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 workpiece.
- f. Support the saw so the table is level and the saw does not rock.
- g. Bolt or clamp the saw to its support.

Clean Dust Tank

Take out the dust tank (A) as shown Fig.14 and clear it. Put into the dust tank deck again.

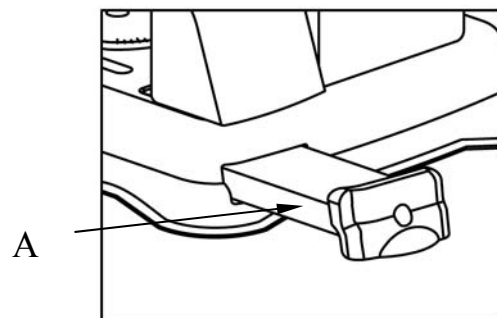


Fig.14

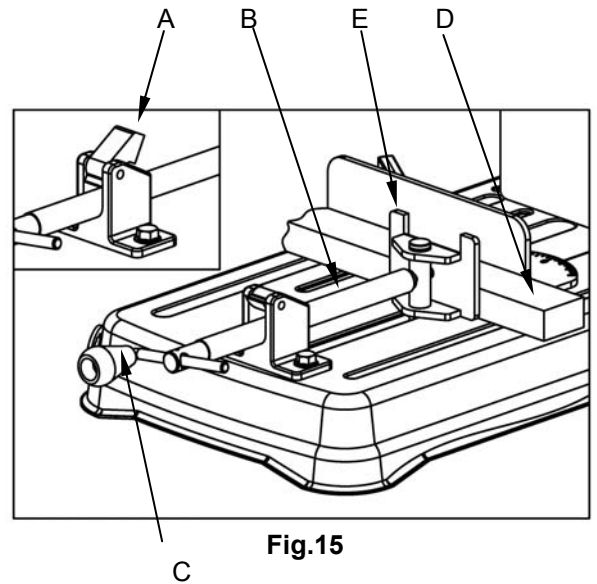
Adjusting the Stationary Vise

Clamping the workpiece can be accomplished quickly and easily as shown Fig.15. :

- 1.Lift thread-nut(A)
2. Pull out screw handle (C) far enough to allow workpiece (D) to be placed in vise opening against rear vise jaw (E) as shown.

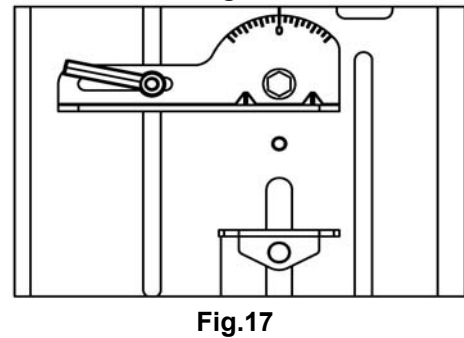
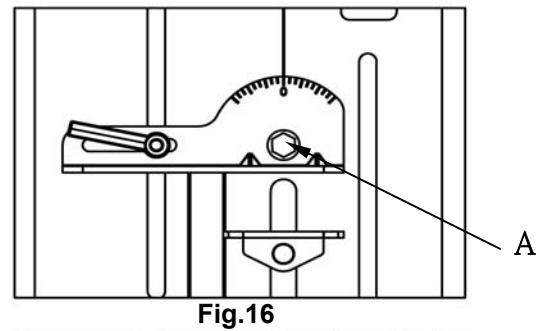
NOTE: It is not necessary to thread screw handle (C) when the thread-nut (A) is in the raised position. The screw handle (C) can be rapidly pulled out or pushed in.

3. Push screw handle (C) until front vise jaw (E) contacts the workpiece (D).
4. Flip thread-nut (A) over to engage vice screw (B) and tighten screw handle (C) to securely clamp workpiece (D) in the vise.



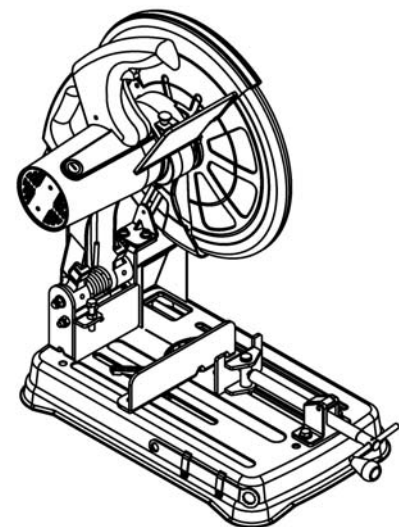
Changing the Angle Bracket

1. Release screw A show as Fig.16 then push upper shown as Fig.17.
2. Tighten the screw again then the cutting capacity would be larger.



Big Blade Guard and Small Blade Guard

When the saw blade pressed down, the big blade guard and small blade guard appropriately separate to out the materials as shown Fig.18.



Basic Saw Operations (continued)

Workpiece clamping

Position work in vise so that if jam occurs. The blade shall not tend to move the workpiece in the vise. Clamp it securely.

Angle bar should be clamped in position as shown Fig.19.

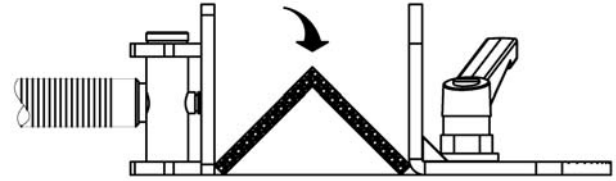


Fig.19

Generally the saw cut most efficiently if the blade is cutting the thinnest section at any time as shown Fig.20.

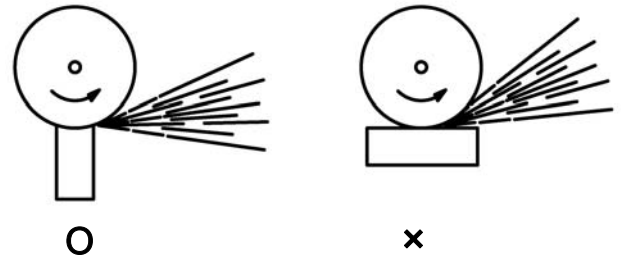








Fig.20

Recommended Cutting Capacity

WARNING: Use of tool for greater than recommended capacities may lead to motor burnout and possible electric shock.

Note: Cutting through any cross sectional area of material thicker than 12.7 tends to load up the blade, and this will cause your tool to work harder.

Applicable Blade Dimensions	355mm(14") Outer Diameter x25.4mm(1") hole diameter					
	AT 45 Degrees			AT 90 Degrees		
Work pieces Configuration (Cross-Section)						
Maximum Cutting Capacity (Shown as Fig.16)	4.4" (112mm)	3.6"×3.6" (92×92mm)	4.4"×3.6" (112×92mm)	4" (102mm)	4.7"×7.4" (120×120mm)	7"×3.6" (178×92mm)
Maximum Cutting Capacity (Shown as Fig.17)	N/A	N/A	N/A	5" (127mm)	3.7"×3.7" (95×95mm)	8.6"×3.6" (220×92mm)

Brush Inspection and Replacement

CAUTION: Before Inspecting Brushes, Dis-connected 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 such time that replacement is necessary.

The brush holder cap (A) as shown Fig.21 is located on the motor housing opposite each other. Illustrates one of the brushes removed for inspection. When the carbon on either brush is worn to 6.35mm length of it 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 as shown Fig.22.

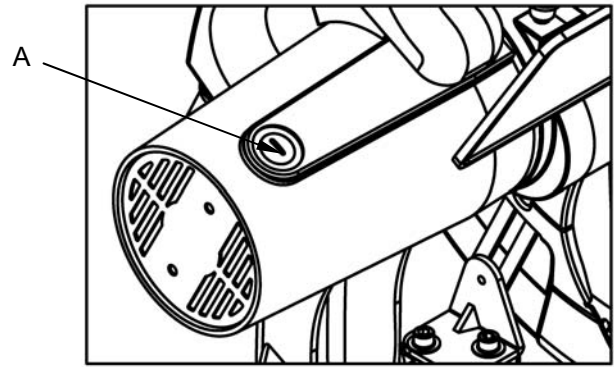


Fig.21

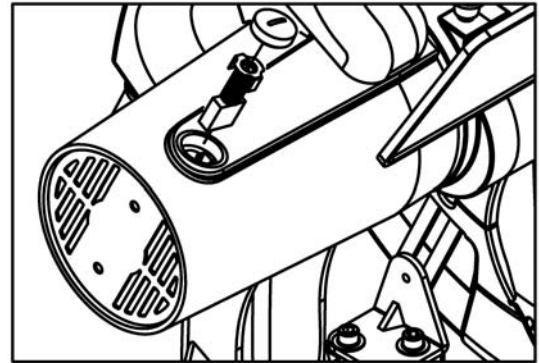


Fig.22

Maintenance and Lubrication

Maintenance

DANGER: Never put injury from 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 tool clean. Remove accumulated dust from working parts.

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

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

Oiling point

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

Replacing Carbon Brushes

The carbon brushes furnished will last approximately 50hours of running time or 10,000 on/off cycles. Replace both carbon brushes when either has less than 6.35mm 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 assemble 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 way they came out. Otherwise a break-in period will occur that will reduce motor performance and in crease brush wear.

Lubrication

All the motor bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operation condition, 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 19mm 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 Guide

Motor

Problem	Probable Case	Suggested Corrective Action
Motor does not start	1.Fuse 2.Brushes worn 3.Other 4.Low voltage	-15amp time delay fuse, or circuit breaker. -See "Maintenance" section -Check power supply for proper voltage and Correct as needed
Brush sparking when switch released.	1.Normal automatic brake working properly	-None
Motor stalls easily	1.Low voltage 2.Excessive wheel pressure when cutting	-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	1.Misalignment 2.Adjust down stop	-See "Alignment" section
Cut not square	1.Defective wheel 2.Work not positioned properly 3.Excessive wheel pressure	-Replace immediately -Position work properly -Lessen wheel pressure
Power head won't fully rise or blade guard won't fully close	1.Lubrication needed 2.Part failure 3.Pivot spring or guard spring not replaced properly after service 4.Dirt sticking to stops	-See "Lubrication" section -Inspect/clean stops
Blade binds, jams, burns workpiece. Rough cuts	1.Improper operation 2.Dull blade 3.Improper blade	-See "Basic Saw Operation" section -Replace or sharpen wheel -Replace with 14" diameter wheel designed for the material being cut
Tool vibrates or shakes	1.Sawblade not round 2.Sawblade damaged 3.Sawblade loose 4.Other	-Replace wheel -Replace wheel -Tighten arbor screw
Power head hard to pull/push down	1.Lube needed	-See- "Lubrication" section

NOISE

A-weighted sound pressure level measuring under load

51306 :Position 1-5 Lp,eq =92.2 dB(A)
51306-1:Position 1-5 Lp,eq =94.4 dB(A)

A-weighted sound power level measuring under load

51306 :Calculated Lw,eq = 103.5dB(A)
51306-1:Calculated Lw,eq = 105.1dB(A)

The Hand-Arm Vibration Level of 51306 Metal cutting saw

No Load Acceleration at handle When the vibration total value does not exceed 2,5 m/s² $a_h = 1.28 \text{ m/s}^2$

Uncertainty $K = 1.5 \text{ m/s}^2$

Load Acceleration at handle Vibration emission value $a_h = 2.33 \text{ m/s}^2$

Uncertainty $K = 1.5 \text{ m/s}^2$

The Hand-Arm Vibration Level of 51306-1 Metal cutting saw

No Load Acceleration at handle When the vibration total value does not exceed 2,5 m/s² $a_h = 1.47 \text{ m/s}^2$

Uncertainty $K = 1.5 \text{ m/s}^2$

Load Acceleration at handle Vibration emission value $a_h = 2.46 \text{ m/s}^2$

Uncertainty $K = 1.5 \text{ m/s}^2$

Specification

Model	51306	51306-1
Max. Developed H.P	3	3
Voltage	220-240	110
Amperes	9.5	20
Hertz (Cycles)	50	50
Phase	Single	Single
Rev/Min (RPM)	1300 mm ⁻¹	1300 mm ⁻¹
Rated Input	2200 W	2200 W
Rotation of Shaft	Counter-clockwise	Counter-clockwise
Blade	350mm * 25.4mm	350mm * 25.4mm
Weight	23kg	23kg