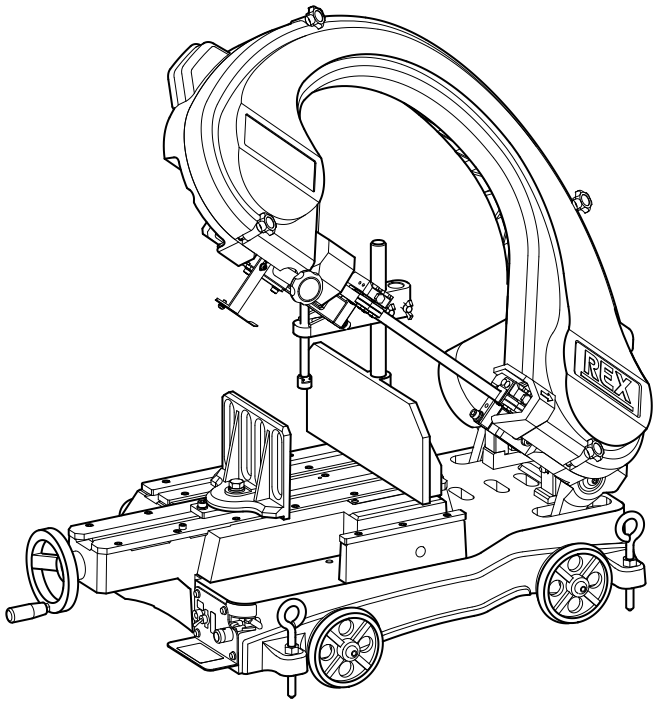
50/60Hz

REX

Band Saw Cutter

MANTIS 270A

XB270A **Operation Manual**



Be sure to read this manual before using the machine.

- Be sure to give this Operation Manual to the user.
- To ensure safe and efficient use, read this Operation Manual carefully before use.
- Keep this manual handy so the user can refer to it when necessary.

Date of Purchase: Year Month

Distributor:

- To prevent fire and electric shock or other injury, be sure to observe the Safety Considerations on pages 1 - 2.
- Before use, read all Safety Considerations carefully and follow the instructions given.
- Do not use the machine for purposes other than those noted in this Operation Manual.

CONTENTS

Definitions of ⚠WARNING and ⚠CAUTION

In this Operation Manual, warnings are divided into ⚠WARNING and ⚠CAUTION.

⚠WARNING : indicates actions that could possibly result in death or severe injury to the user if the machine is used incorrectly.

⚠CAUTION : indicates actions that could possibly result in injury to the user, or physical damage to property or to the machine if the machine is used incorrectly.

Even items described as ⚠CAUTION could have serious results under certain conditions.

Be sure to observe these warnings carefully as they greatly affect safety.

- If this Operation Manual is lost or damaged, promptly order a replacement from our sales office or distributor.
- Due to improvements in quality, performance or safety regulations, parts and specifications are subject to change without prior notice. In such cases, the contents, photographs, illustrations etc. in this manual may differ from the product you have purchased.

Safety Considerations

⚠ WARNING

(1) Make sure the voltage is correct.
- Be sure to use the rated voltage displayed on the label on the unit or in the Operation Manual. Using the wrong voltage may lead to overheating, smoke or fire.

(2) Check to make sure the ON / OFF switch is in the "OFF" position before plugging in the unit.
- Plugging in the unit with the ON/OFF switch in the "ON" position will cause the unit to begin operating unexpectedly possibly resulting in accident or injury. Always check to make sure that the ON/OFF switch is in the "OFF" position before plugging in the unit.

(3) Be careful of electrical shock.
- Do not touch the plug with wet hands.
- Do not use the unit in the rain or in other situations in which water may get inside the machine.
- Be sure to ground the unit. Failure to do so may result in electric shock.

(4) Check to make sure the workplace is safe.
- Do not use this product in the rain or in humid or wet locations, or in any other situation in which water may get inside the unit. Exposure to humidity may also degrade the motor insulation and lead to electrical shock.
- Do not use this product near gasoline, paint thinner or other flammable liquids or gases. Failure to observe this precaution may result in fire or explosion.

(5) Use only the recommended accessories and attachments.
- Do not use accessories and attachments other than the recommended ones listed in the Operation Manual and REX catalogues as doing so may result in accident or injury.

(6) In the event of any of the following, turn the ON/OFF switch to the "OFF" position and unplug the unit.
- When the unit is not in use, or when replacing parts, performing repairs, cleaning or inspection.
- When changing accessories.
- In other potentially dangerous situations (including a power outage)
  If the unit is left plugged in, it may start operating unexpectedly, leading to accident or injury.

(7) Turn the unit of in the event of any abnormality
- Turn off the unit immediately if it seems to be operating strangely, starts vibrating or if you detect an unusual noise or odour.
- Use the table in the "Troubleshooting" section of this manual to determine the cause of the problem and then take the appropriate action. Continuing to use the unit when it is operating abnormally may result in heat, smoke or fire and may lead to accident or injury.
- In the event that the unit heats up or produces smoke, do not attempt to disassemble it yourself. Have it inspected and repaired by an authorised repair technician.

(8) Maintain safety by keeping the workplace neat and clean.
- Make every effort to keep the workbench and work area neat and clean, and make sure the area is well lit.
  A messy work area and workbench may lead to accidents.

(9) Keep unauthorised personnel away from the work area.
- Do not allow unauthorised personnel to touch the unit or cord, or operate the machine.
- Make sure only authorised work personnel are allowed to enter the work area. Be particularly careful of children entering the area during work operations. Failure to observe these precautions may result in injury.

(10) Use the tool properly
- Do not use this tool for anything other than its intended purpose. Using it for other purposes, or for jobs that exceed its capacity, may result in damage to the tool and/or accident or injury.
- Do not use the tool for operations beyond its capacity that may cause the motor to lock. This may result in smoke or fire.

(11) Wear proper clothing.
- Do not wear neckties, clothing with open sleeves, baggy clothing or necklaces or other accessories when operating the unit. Fasten all buttons, zip fasteners etc. on your clothing before beginning any operation. Failure to observe these precautions may result in clothing getting caught in the unit's moving parts, resulting in accident and serious injury.
- When working outdoors, the use of rubber gloves and slip-proof footwear is recommended. Wearing slippery gloves and footwear may result in injury.
- Put long hair inside a cap or hair cover. Do not wear a scarf, etc. during work operations. Long hair, mufflers and the like may get caught in the unit's moving parts, leading to accident and serious injury
- Depending on the work environment, it may also be necessary to wear a safety helmet and work boots.

Safety Considerations

⚠ WARNING

(12) Work in a safe place and in a stable position.
- Always keep both feet firmly on the ground and be sure to maintain a proper balance while working. Failure to do so may result in falling over and injuring yourself.

(13) Be sure to remove wrenches and other tools.
- Before turning on the unit, check to make sure that all tools used for inspection and adjustment have been removed. Operating the unit with tools still attached may result in accident or injury.

(14) Exercise proper caution during use.
- Operate the unit carefully and pay careful attention to how you handle and operate the machine, and to your surroundings and so on. Failure to exercise proper caution during operation may result in accident or injury.
- Do not operate the unit if you are tired, if you are sick and taking medications, if you have consumed alcoholic beverages, or if for any other reason you are unable to concentrate on operating the unit properly. Failure to observe this precaution may result in accident or injury.

(15) Treat the cord with respect.
- Never carry the unit by its cord or pull on the cord to remove it from the outlet.
- Keep the cord away from hot items, oil and grease, blades and sharp corners.
- Plug in the cord at an appropriate location, making sure that the cord will not be stepped on, will not become caught on anything, and will not be subjected to excessive force and damage. Failure to observe these precautions may cause electric shock or short-circuit resulting in fire.

(16) Maintain the unit with care on a regular basis.
- When replacing accessories and parts, do so in accordance with the instructions in the Operation Manual.
- Inspect the power cord and plug regularly. In the event of damage, request repairs from your dealer or a REX sales office. Failure to observe this precaution may cause electric shock or short-circuit resulting in fire.
- When using an extension cord, inspect it regularly and replace it in the event of damage. When using the unit outdoors, use an extension cord designed for outdoor use. Failure to observe this precaution may cause electric shock or short-circuit resulting in fire.
- Keep the handles clean and dry, and do not get oil or grease on them, as this may cause it to slip, resulting in injury.

(17) Inspect the unit to make sure none of the parts is damaged.
- Prior to use, inspect the unit carefully to make sure that protective covers and other parts are not damaged, and check to make sure that it operates properly and performs the prescribed functions.
- Check for proper positioning and tightening of moving parts; check for damaged parts, correct installation and all other points that may affect operation.
- Do not use the unit if the cord or plug is damaged. Failure to observe this precaution may cause electric shock or short-circuit resulting in fire.
- Do not use the unit if it cannot be turned on and off using the ON/OFF switch.
- Follow the instructions in the Operation Manual for repair or replacement of damaged protective covers or other parts. If such operations are not specified in the Operation Manual, ask your dealer or a REX sales office to repair or replace the affected parts.

(18) Store the unit properly when not in use.
- This product should be stored in a dry place that can be locked and is out of the reach of children.

(19) Always have the unit disassembled and repaired at an authorised service centre.
- REX products are designed to meet applicable safety standards. Do not attempt to modify the machine yourself.
- Always have the unit repaired by your dealer or a REX sales office. If this product is repaired by a person who does not have the proper knowledge or technical skill to do so, it may not operate properly, or accident or injury may result.

(20) Do not use the machine for any purpose other than for what it is intended.
- Using the machine for any purpose other than its intended use may result in injury or damage to the machine.

Precautions When Using the Mantis 270A

⚠ WARNING

(1) Keep away from the blade when it is rotating.
- Even after the unit has been turned off, the blade will continue to rotate due to inertia. NEVER TOUCH THE BLADE OR MOVING PARTS WHILE THEY ARE IN MOTION. You may get caught in the mechanism, resulting in accident or serious injury.

(2) Do not wear gloves while operating the unit.
- If gloves are worn during the cutting operation, they may become caught in the moving parts, leading to accident or injury. Avoid wearing gloves while operating the unit.

(3) Do not touch the workpiece or blade with bare hands immediately after it has been cut.
- Immediately after the cutting process, the workpiece and blade will be very hot. You may burn yourself if you touch them with bare hands.

(4) Turn off the unit immediately in the event of an abnormality.
- Turn off the unit immediately and unplug it if it starts acting strangely, or if you notice any other abnormality during operation.

(5) Make sure the frame cover is in place.
- To ensure safety during the cutting operation, always make sure the frame cover is in place. If the framecover is not in place, you may get caught in the blade or rotating parts, leading to accident or serious injury.

(6) Install the unit on level ground and in a stable position.
- Avoid installing the unit on an incline. Always install it on level ground. Failure to observe this precaution may result in the unit toppling over during operation, resulting in accident or injury.
- Be particularly careful of the unit toppling over when performing contour cutting. Check to make sure the frame will not topple forward.

(7) Do not stand the machine on its end.
- If you stand the machine upright on its end, it can fall over and lead to accident or injury.

(8) Check to make sure the unit is turned OFF before changing the blade or clamping the workpiece.
- Particularly when changing the blade, set the ON/OFF switch to the "OFF" position and unplug the unit before changing the blade.

(9) Do not use the machine if the hydraulic cylinder is out of order or if it looks like it might break down.
- If you use the machine when the hydraulic cylinder is out of order or looks like it might break down, the frame will suddenly drop down, which will not only result in a malfunction but can lead to accident or injury.

(10) Do not subject the unit to violent shocks.
- This product contains precision parts that may be damaged if the unit is dropped, hit or otherwise subjected to shock.
- Be particularly careful not to drop the unit during transport. This may result in damage to the machine or injury if it should land on your foot, etc.

(11) Make sure that the voltage is correct.
- Be sure to use a power supply with the proper voltage shown on the label. Using a power supply of a different voltage may not only damage the motor but could also lead to injury.

(12) Clamp the workpiece securely.
- If the workpiece is not fastened securely in place, it may move during the cutting process. This may cause the tool to vibrate or place excessive stress on the blade, resulting in breakage.
- When cutting several workplaces at the same time, check to make sure that none of them moves before beginning the cutting process.

(13) Use a blade of the recommended type that matches the material to be cut.
- Select a blade that is appropriate for the material to be cut.
- Use only the recommended blades.

(14) Use a cutting load setting that matches the workpiece.
- Do not use a load setting that is too high or press the frame against the workpiece while cutting. This may cause slanted cutting or result in blade chipping / breakage, or the motor locking or the like.

(15) Make sure the blade is attached securely.
- If the blade is not attached securely, it may come off during the cutting operation, resulting in accident or injury.

(16) Wipe off any oil from the blade or workpiece before cutting.
- Before shipment from the factory, blades are coated with oil to prevent rust. Be sure to wipe away the oil before attaching.
- If there is any oil on the workpiece, be sure to wipe it off as well.
- Do not apply cutting oil or the like to the blade during use.

Names of Parts, Standard Specifications and Standard Accessories

Names of Parts

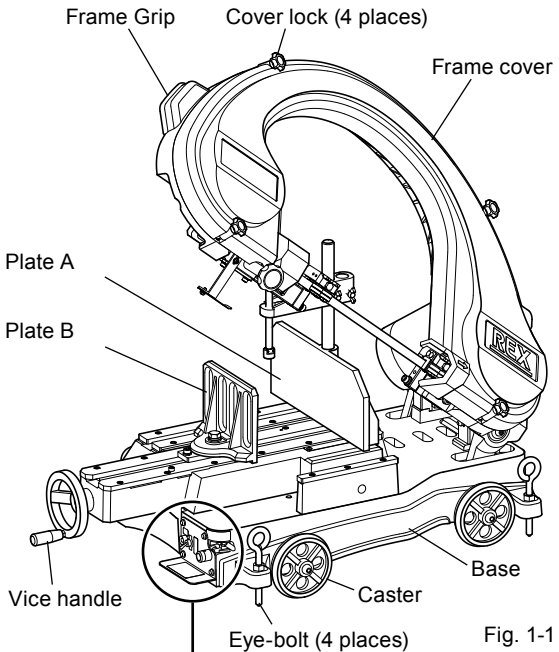


Fig. 1-1

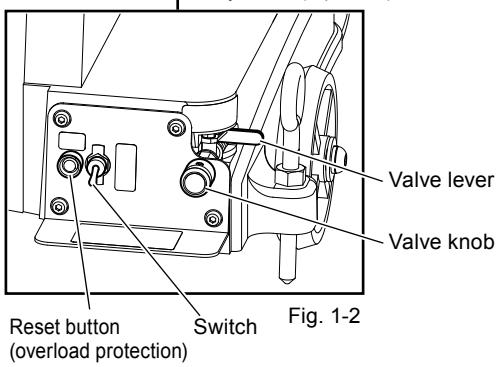


Fig. 1-2

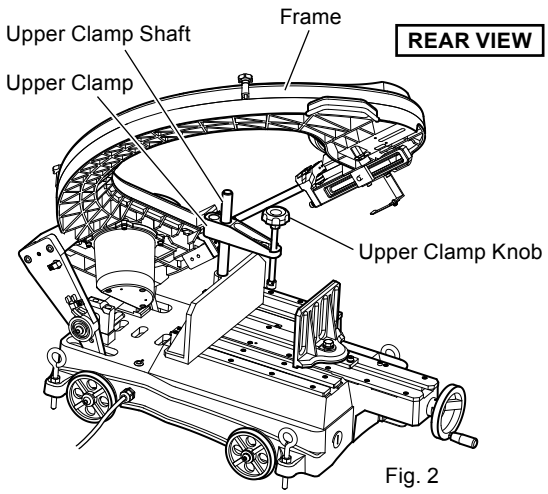


Fig. 2

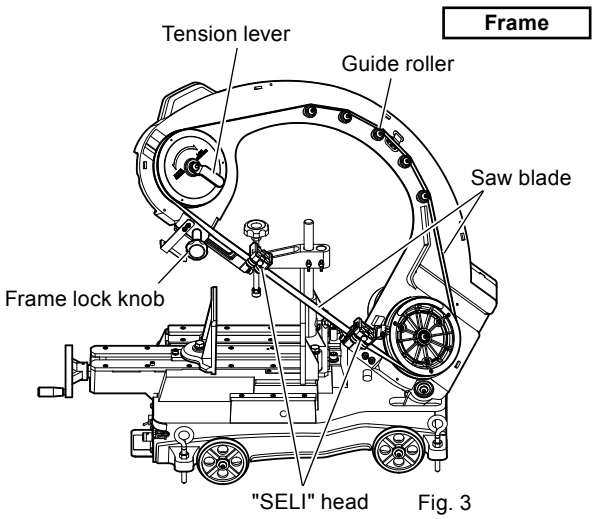


Fig. 3

Standard Specifications and Standard Accessories

Model		XB270A
Vice type		Flat Vice
Cutting capacity	Pipes	φ270mm □250mm
	Round bar (Soft steel bar)	φ80
	45°	φ170mm □150mm
		200kg
Power		Single-phase alternating current 220V (50/60Hz)
Motor		Split-phase induction motor 250W (Output)
Pulley rotation		70min^{-1}(50Hz) / 84min^{-1}(60Hz)
Dimensions		L990 x H600 x W510 mm
Weight		84kg
Standard accessories		Blade for high-speed band saw (14-tooth; product No.475270) : 1
		Socket wrench (19mm) : 1
		Hex wrench (8mm) : 1

Table 1

Types of Blades (Optional extras)

Blades

Code no.	Material	No. of teeth (teeth / inch)	Unit / box	Material
475270	High-speed steel	14-tooth	5	Steel pipe, Stainless steel, Cast iron pipe (more than 3mm thick) Resin pipe (Polyethylene pipe / Vinyl chloride pipe)
475275	High-speed steel	18-tooth	5	Steel pipe, Stainless steel, Cast iron pipe (more than 1mm thick) Resin pipe (Polyethylene pipe / Vinyl chloride pipe)

Cutting Length Guide

You can use the cut-length guide to fix the cutting length from 55 to 300 mm (Fig. 4)

Code no.	Model
475196	Cutting-length guide

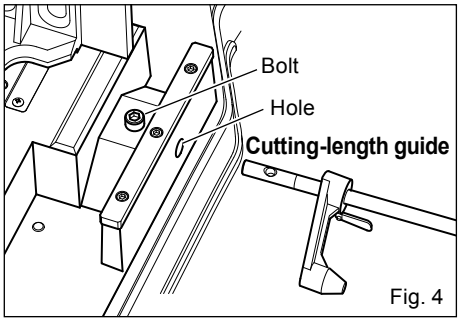


Fig. 4

Assembly

1. Remove the bolts in the base using the 8mm hex wrench provided. Figs. 5 & 6.
2. Insert the shaft of the cutting-length guide into the hole in the base.
3. Screw the bolt into the hole in the cutting-length guide.

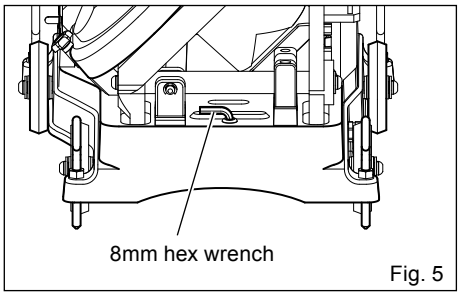


Fig. 5

Pipe support

When cutting either long or heavy workpieces, use a pipe support as shown in Fig. 6.

Code no.	Model
4751Z9	Pipe support

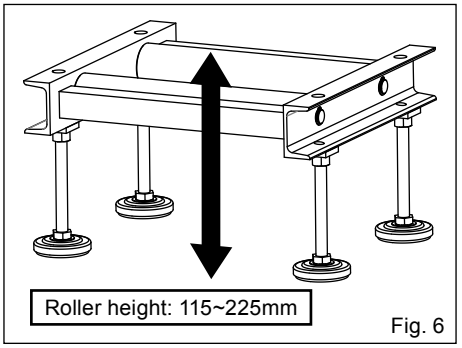


Fig. 6

Use

- Cutting various mild steel materials such as steel pipes, steel bars, etc.

Note: Do not use to cut hard materials such as quenched steel etc. or the blade will become extremely worn.

- Cutting stainless steel and resin pipes.

Note: Do not use heat-sensitive plastic materials. The heat generated when cutting may melt such materials, which may clog the blade and cause the motor to burn.

Getting Ready

1. Hoisting the machine (Fig. 7)

Use a crane or the like to lift the machine. Do not try to lift it by yourself. Attach the hoisting hooks to the 4 eye bolts in the base, ensuring they are hooked on securely. Do not attach to any other parts of the machine. When lifting the machine, try to keep it as level as possible. Fig. 7

⚠ WARNING

Ensure the hooks are attached correctly. If the machine were to fall, it could cause an accident or serious injury.

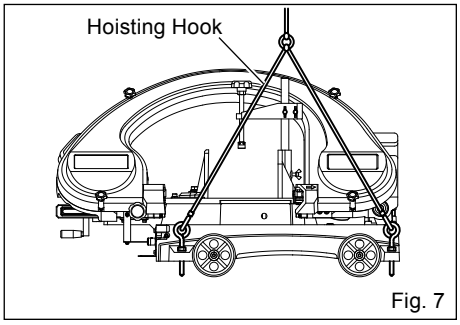


Fig. 7

2. Moving the machine (Fig. 8,9)

Only lift the frame by hand once you have turned the valve lever as far as it will go to the right. You can then push it in the direction you want to move the machine. Before you move the machine, lift the eye-bolts out of the ground and tighten the nuts.

*Note: If you move the machine over rough surfaces by pushing it with the frame, the impact might result in damage to the fulcrum between the base and the frame. In such cases, open the valve lever and, with the frame lowered, move the machine by pushing the base.

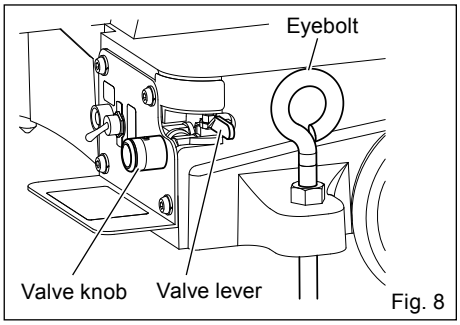


Fig. 8

3. Transportation (Fig. 10)

Turn the valve lever to the left, and turn the valve knob anti-clockwise. Fix the machine in position so that it is stable and does not move about while being transported.

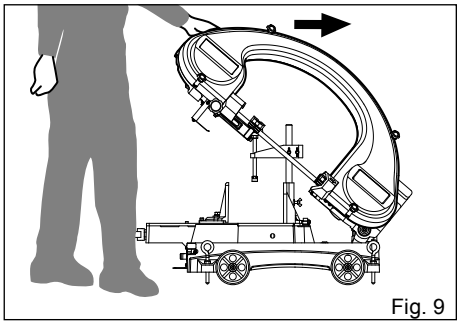


Fig. 9

4. Setting up (Fig. 8,9)

(1) When using the unit with its wheels on.

Place the unit on level ground.

⚠ WARNING

Place the unit on level ground and in a stable position.
If it is placed on an incline, it may topple over during operation, resulting in accident or injury.

(2) Fixing the unit in position.

Whenever you want to fix the machine in position, use the holes in the base for the eye bolts. Remove the wheels and the eyebolts use M8 bolts in each of the positions shown in Fig. 11. Place the machine in position; screw the M8 bolts into the holes for the eyebolts and fix in position.

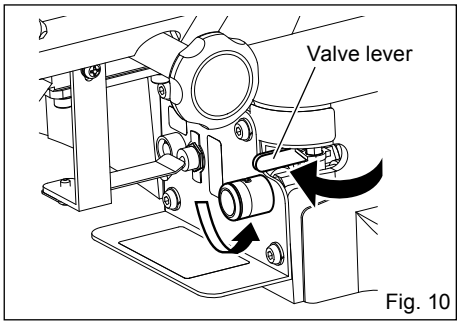


Fig. 10

5. Raising and lowering the frame (Fig. 8)

(1) Raising the frame

Turn the valve lever to the right and then raise the frame by hand. (Fig. 8)

(2) Lowering the frame

Turn the valve lever to the left and the frame will lower automatically under its own weight. The speed with which the frame lowers depends on how far you have turned the valve lever. You can adjust the speed by turning the valve knob. Turn it anti-clockwise to lower it more quickly. Under normal circumstances, have the valve knob turned fully anti-clockwise and then adjust the speed with the valve lever as necessary.

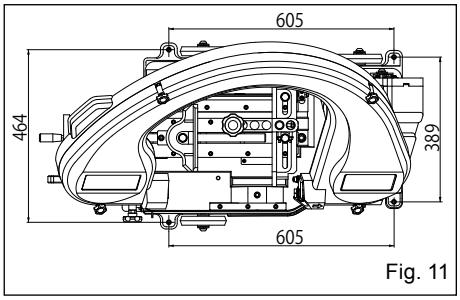


Fig. 11

5. Power Supply (Fig. 12)

Use a 220V AC power supply. Also check the following:

Leakage breaker

To prevent electric shock, check to make sure that the power supply connected to the unit is equipped with a leakage breaker as specified by local regulations governing standards for electrical equipment, worker safety, etc.

Grounding

Be sure to ground the unit prior to use. To ensure safety, be sure to ground the unit even if the power supply is equipped with a leakage breaker.

⚠ WARNING

NEVER GROUND THE UNIT BY CONNECTING IT TO A GAS PIPE.
This may result in an explosion.

Before grounding, check the plug to make sure there are no abnormalities. Use a tester, insulation resistance tester or the like to check for current between the plug and the metal part of the unit base. Always follow local laws and regulations relating to earth leakage breakers and grounding.

When using an extension cord

When the power outlet is at a distance and an extension cord must be used, use one of sufficient thickness that is as short as possible.

If the power supply is not equipped with a leakage breaker, be sure to use a 3-wire cabtyre cable with one ground wire that can be grounded. Never use a cable that is damaged.

⚠ WARNING

Be sure to use an extension cord that is not damaged.

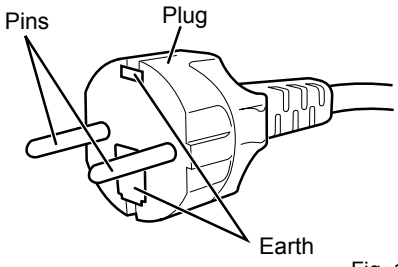


Fig. 12

6. Changing the Blade (Figs. 13 - 16)

⚠ WARNING

-Be sure to unplug the unit from the power supply before changing the blade. If the unit is left plugged in, it may start up unexpectedly, leading to injury.
-Do not touch the blade directly with bare hands. This may result in injury. When changing the blade, wear gloves and protective goggles.

When attaching new blades

(1) To prevent the blade from slipping, wipe away all rust-proofing oil from the blade before attaching the blade. Also wipe away any oil sticking to the pulley and bearings.
(2) New blades tend to be chipped easily or make slanted cuts, so be sure to perform trial cutting.

Trial cutting: set the load to Light (L) and make one or two cuts in a gas pipe measuring 50A or larger.

Removing the frame coverr (Figs. 13)

(1) With the frame in its raised position, remove the 4 cover lock knobs onthe front of the frame by turning them anti-clockwise. (Fig. 13)
(2) Lift off the frame cover.

⚠ WARNING

When removing the frame cover, make sure the blade does not spring out unexpectedly, which could result in accident or injury. This is particularly likely to happen when replacing broken blades, so remove the frame cover slowly and carefully.

Removing the blade (Fig. 14)

(1) Turn the pulley tension lever on the handle side anticlockwise to release the blade tension.
(2) Remove the blade from the pulley.
(3) Remove the blade from the "SELI".

Attaching the blade (Fig. 15)

Attach the blade, using steps (1) through (5) in Fig. 17.
Then turn the tension lever clockwise (6) to apply tension to the blade.

Checking the blade is attached correctly (Fig. 16, 17, 18)

- Check to make sure the blade is properly attached.
- Make sure the "SELI" bearings are inserted all the way.
- Make sure the blade has not climbed up over the pulley flange.
- By hand, turn pulley A (on the wheel side) slowly anticlockwise and check to make sure the blade does not become misaligned or come loose.
- When you have finished attaching the blade, be sure to replace the frame cover.

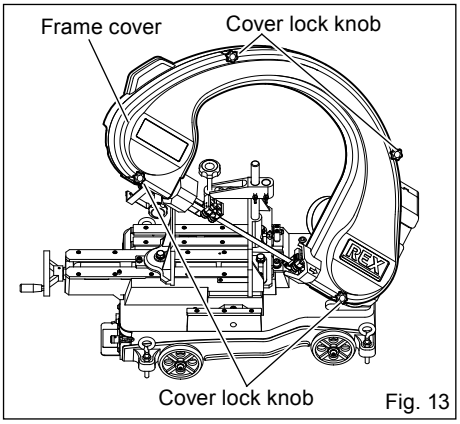


Fig. 13

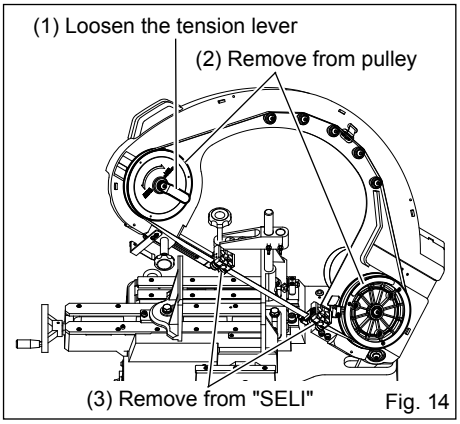


Fig. 14

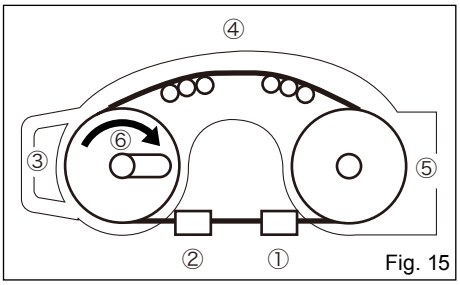


Fig. 15

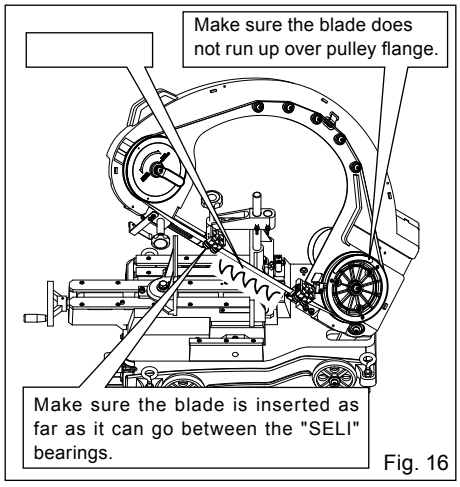


Fig. 16

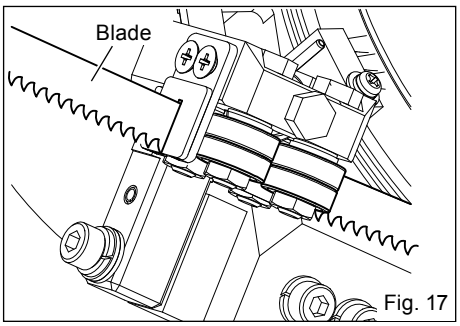


Fig. 17

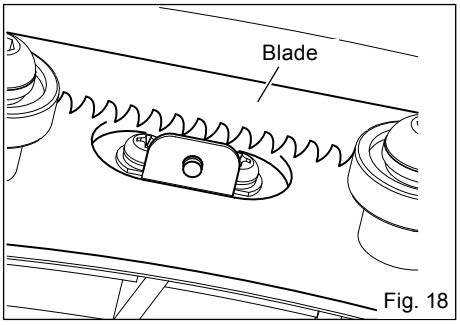


Fig. 18

7. Preliminary Inspection (Fig. 19)

(1) Insert the power plug into the outlet.
(2) With the frame open, set the ON/OFF switch on the right at the front of the base to the "ON" position.
(3) Check the following:
- Make sure there is no abnormal noise coming from the motor or moving parts.
- Make sure the blade does not become misaligned or come loose.
- Lower the frame and make sure the switch moves to the "OFF" position.

(4) When all of the above have been checked, remove the plug from the outlet.

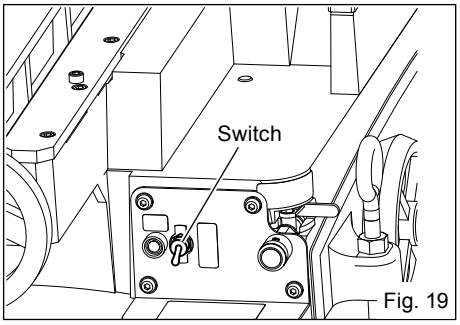


Fig. 19

⚠ WARNING

Be sure to inspect the unit with the frame cover attached.
If the blade should come loose during inspection, it may fly out and strike you in the face or otherwise lead to accident or injury.

1. Adjusting the SELI Slide (Fig. 20)

Adjustment of the SELI slide will affect the cutting precision and life of the blade.Set SELI head B as close as possible to the workpiece. If it is too far away, both cutting precision and the life of the blade will be adversely affected.

⚠ WARNING

After moving SELI head B, always tighten the SELI knob securely. If it is not tight enough, SELI head B will move about when cutting and cutting precision will not only be reduced but the blade could also be damaged.

(1) Turn the SELI adjustment knob anti-clockwise and loosen it until you can move SELI head B.
(2) Move SELI head B with your hands and position it close to the workpiece.
Note: Adjust the workpiece and SELI head B so as not to hit each other.
(3) Tighten the SELI adjustment knob firmly.
Note: Adjusting the SELI slide greatly affects cutting precision. To obtain the highest degree of precision, make sure it matches the size of the workpiece.

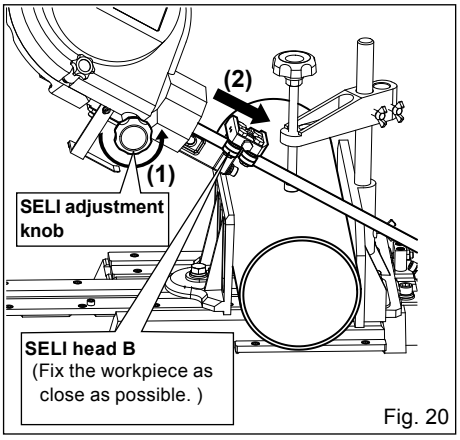


Fig. 20

2. Clamping the Workpiece

⚠ WARNING

Do not mount or remove a workpiece while the blade is still rotating. If the workpiece or your hand etc. get caught in the rotating blade, it can lead to serious accident or injury.

⚠ CAUTION

Make sure the workpiece is clamped securely. If the workpiece is not fastened securely in place, cutting will be unstable, resulting in damage to the machine or in accident or injury.

(1) Turn the valve lever fully to the right, and use the frame grip to raise the frame high enough for you to place the workpiece in position.
(2) Turn the vice handle anti-clockwise and Plates A and B will open up. Open up the vice wide enough for you to insert the workpiece (Fig. 21)
(3) Place the workpiece in the vice alongside Plate A.

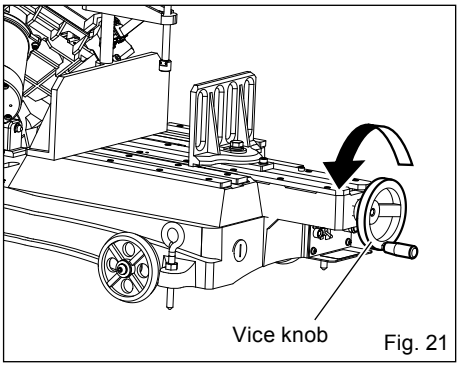


Fig. 21

Notes:
(a) Place the workpiece in a position such that there are no sudden changes in the thickness of the material. If there is a sudden change in the wall thickness of the workpiece, the blade may fail, the cut may be slanted or the motor may lock.
(b) If the workpiece to be cut is very long, rest it on a support at one end to make it level.

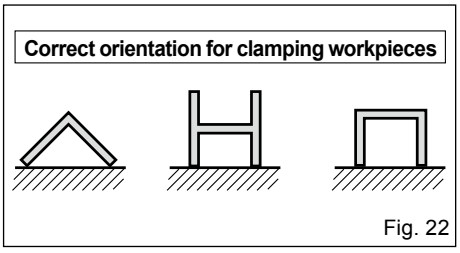


Fig. 22

(4) Turn the vice knob clockwise to engage the material to be cut with Plate B. (Fig. 23)
(5) Set the upper clamp such that the material is centred and there are no obstructions in the way of the frame when it is lowered. There are two holes in the upper clamp: select which one to use depending on the workpiece. Tighten the butterfly screws on the upper clamp. Turn the upper clamp knob clockwise and fasten the workpiece in the vice. (Fig. 24)

Note: If the material to be cut is particularly long or heavy, the upper clamp or Plate A could possibly break, or the workpiece could be deformed. The upper clamp is designed to prevent short or lightweight materials from coming out when clamped. Do not use for any other purpose.

(6) Turn the vice handle clockwise and fix the workpiece securely in position.
Note: Tightening the handle too much may damage the pipe. When cutting a pipe, only tighten as much as is necessary to keep it in place.

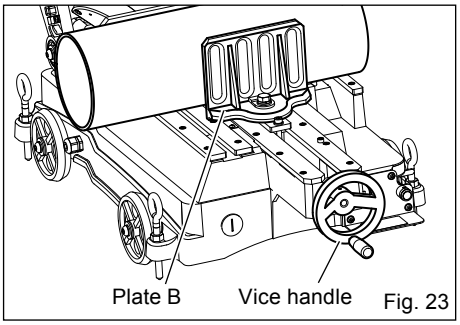


Fig. 23

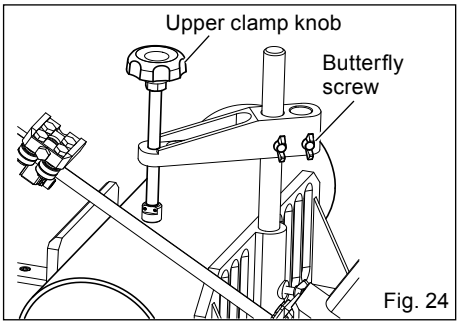


Fig. 24

3. Changing the angle of Plate A (Figs. 25 ~ 27)

When making angled cuts you need to change the position of Plate A. Follow the procedure below.

(1) Loosen the butterfly screw on Plate A and remove the upper clamp. (Fig. 24)
(2) Loosen the two bolts on Plate A with the socket wrench provided. (Fig. 25)
(3) Place Plate A at the desired cutting angle on the scale (Fig. 26) and slide Plate A along the slots as far as it will go in the direction of the arrow and then tighten the bolts securely.
(4) Once the above is ready, fix the workpiece in position.

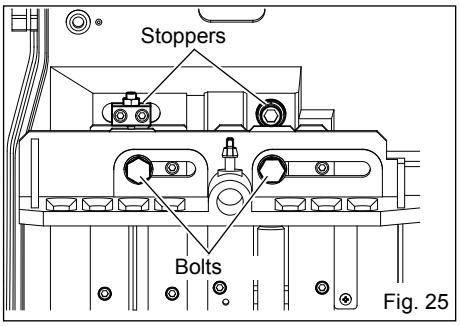


Fig. 25

If you then want to return to cutting at right angles, follow the procedure below.

(1) Loosen the butterfly screw on Plate A and remove the upper clamp.
(2) Loosen the two bolts on Plate A with the socket wrench provided.
(3) Remove any scrap sticking to the stoppers on the vice and on Plate A. (Fig 25)
(4) Move Plate A until the stoppers on the vice and on Plate A come into contact with each other.
(5) Turn the vice knob so that Plate B and Plate A lightly touch.
(6) Loosen the two bolts on Plate A with the socket wrench provided.

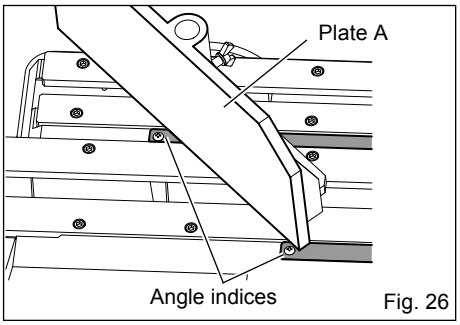


Fig. 26

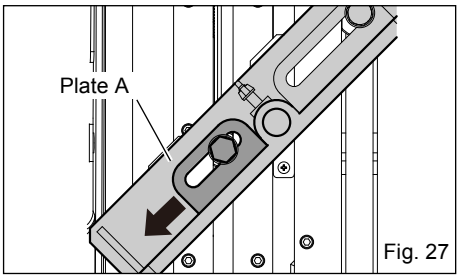


Fig. 27

Cutting

1. Cutting (Fig. 28)

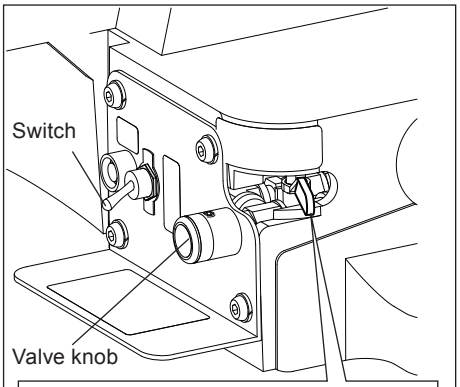
(1) Insert the plug into the outlet.

⚠ CAUTION

- Always check to make sure that the ON/OFF switch is in the "OFF" position before plugging in the unit. If the unit is plugged in with the switch in the "ON" position, the unit will operate unexpectedly, possibly resulting in accident or injury.
- Do not wear gloves while operating the unit. They may become caught in the moving parts, leading toaccident or injury.

(2) Set the ON/OFF switch at the front of the base on the right to the "ON" position. The blade will start turning.

(3) When the blade has reached the proper speed of rotation, turn the valve lever to notch 1 and slowly engage the blade with the workpiece for 5 seconds (Fig. 26)



During the first 5 seconds, cut up to the notch 1 on the valve lever.

Fig. 28

Notes:

- Do not place the blade against the top of the workpiece and then set the ON/OFF switch to the "ON" position. This may damage the blade or result in slanted cutting.
- Do not lower the blade onto the workpiece too suddenly. This may damage the blade or result in slanted cutting.

(4) Cut the workpiece slowly for 5 seconds and, once a groove appears, open the valve lever and cut the workpiece smoothly. Under normal circumstances, turn the valve knob anti-clockwise all the way and open it fully. Use the valve lever to lower or stop the frame.

(5) From this point on, the unit will cut automatically. When cutting is complete, the switch will shift to the "OFF" position and the motor will stop.

Notes: Straight after you finish, the workpiece and blade will be very hot.
Do not handle with bare hands or you could be burned or injured.

No. of notches to set the valve lever at when cutting

Material				Valve lever opening	
				High-speed steel	
				14	18
Steel pipe		Cutting Capacity A/Su	20A-50A	1-2	1-3
			65A-250A	2-4	2-4
Stainless steel	Schedule40		20A-50A	1-2	1-3
			65A-250A	2-4	2-4
	Thin wall stainless steel (SU pipe)		20Su-25Su		0.5
			30Su-75Su		0.5-1
			80Su-25Su		1-2
			150Su		1-3
Resin pipe (Vinyl chloride / Polyethylene pipe)				1-2	1-2
Cast iron pipe				2-4	
Steel	Section steel	Wall thickness	1-2mm		0.5-1
			2-3mm		1-3
			3-4mm	1-2	1-3
			4mm or more	2-4	2-4
	Round bar		15mm or less	1-2	1-3
			16-40mm	2-4	

Note:

- The machine may not stop automatically when cutting is set at 0.5. In such cases, lower the frame by gently pushing it down with the grip and then switch off.
- If the machine continues to run idly, it will shorten the life of the blade. Therefore, do not leave the workplace when cutting at 0.5.
- If you lower the frame too quickly, it may result both in damage to the blade and poor angle cuts. Always lower the frame with care.

2. If the blade slips while cutting

If there is oil, grease or the like on the workpiece or on the machine parts (blade, pulley or bearings), the blade and pulley may slip and the pulley start idling. If this happens, immediately turn the ON/OFF switch to the "OFF" position and remove the plug from the outlet. Then use a rag to wipe the oil from the workpiece and affected machine parts.

Note: Continuing to operate the unit after the blade has slipped may burn the rubber ring on the pulley or damage the pulley.

3. If the motor stops while cutting (Fig. 29)

If an excessive load is applied during cutting or if the blade gets caught in the workpiece and locks, the overload protection unit will be activated and the motor will stop.

If the overload protection unit has been activated, reset the unit as follows:

(1) Set the ON/OFF switch to the "OFF" position.
(2) Eliminate the cause.
(3) Press the RESET button below the ON/OFF switch (Fig. 29)

Note: If the motor has overheated, it may not be possible to reset the unit immediately. In such a case, wait a few minutes and then press the RESET button again.

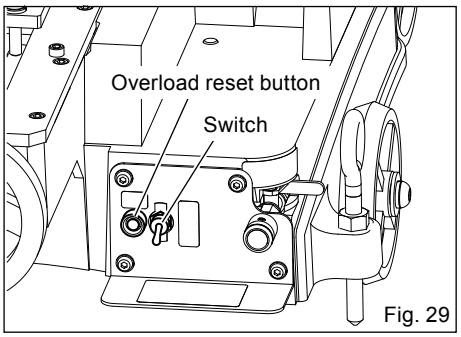


Fig. 29

4. Removing the Workpiece (Fig. 30)

(1) Turn the valve lever all the way to the right and lift the frame with the grip. (Fig. 30)
(2) Turn the upper clamp knob anti-clockwise and then turn the vice handle anti-clockwise too. (Fig. 30)
(3) Remove the workpiece.

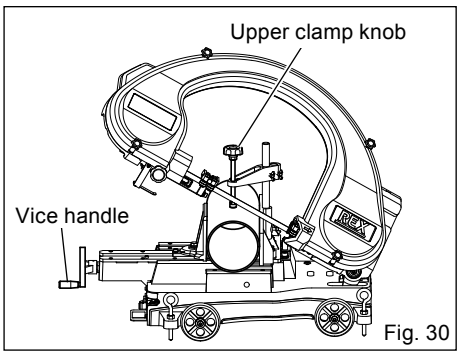


Fig. 30

5. Finishing off (Fig. 31)

(1) With Plate B up against Plate A, fix Plate B in place by lightly turning the vice knob anti-clockwise.
(2) Tighten the butterfly screws on the upper clamp and fix it in place.

Notes:
- Clean away any chips that have been produced while cutting.
- When cladding tubes etc. are cut, resin chips or the like may stick to the pulley inside the frame and cause the blade to slip. Be sure to wipe away these chips etc.

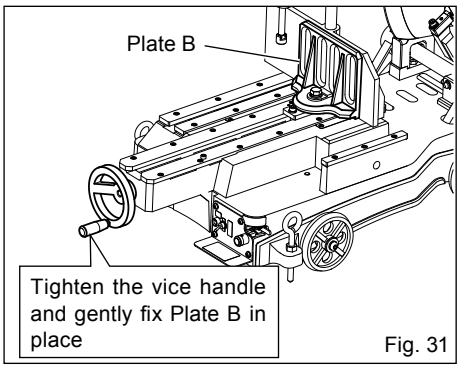


Fig. 31

Maintenance

⚠ WARNING

- Before carrying out any inspections or maintenance, be sure to turn the machine OFF and remove the plug from the mains. If it is still connected, the machine may possibly start unexpectedly, which could lead to serious injury.
- If any abnormality is found during inspection or maintenance, identify the problem referring to the descriptions in "Troubleshooting" and then follow the relevant instructions. Using the product without correcting the problem may generate excessive heat, fumes or fire and result in serious accidents or injury.

1. Maintenance of Parts (Fig. 32)

Check the blade.
- Check to make sure the blade is not chipped or otherwise damaged. If it is, replace it.
- If the blade becomes worn, replace it as soon as possible. Continued use of a worn blade may result in a distorted cut.

Check all bolts.
- Make sure all bolts are fastened tightly. Tighten any that that are loose.

Check the power cord and plug.
- Check the power cord and plug for damage. If the cord is damaged, replace it.

Inspect the "SELI" heads.
- Check to make sure that both "SELI" heads are adjusted properly.
- Check to see if the "SELI" head bearings are worn. If they are, replace them.

Keep the unit clean.
- Using a cloth or rag, periodically wipe away any chips, dust and so on from the frame and pulley sections.

Note: Be careful not to get the motor wet.

Inspecting the hydraulic cylinder
- Check that the frame is secure while in the raised position. If it isn't, replace the hydraulic cylinder or have it repaired. (The hydraulic cylinder is located in the base.)

⚠ WARNING

If you use the machine when the hydraulic cylinder is not functioning properly, the frame may unexpectedly come down resulting in accident or injury.

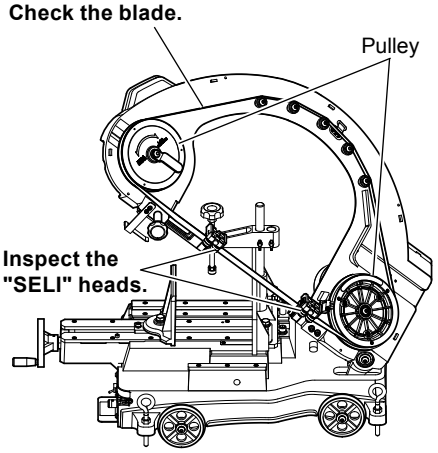


Fig. 32

2. Changing the Brush (Fig. 33)

A brush has been installed on the pulley on the drive-side of the machine, which is designed to reduce blade slippage by removing any resin-based scrap.
As the brush is a consumable, change it when it fails to clean properly.

How to change the brush

(1) Undo the screw with a Phillips-head screwdriver and remove both the screw and the brush.
(2) Replace as before with a new brush and tighten the screw again.

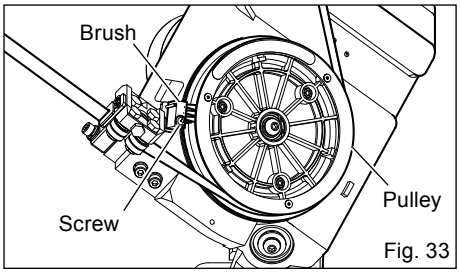


Fig. 33

3. Correcting a Slanted Cut (Figs. 34 & 35)

As this model is different from a factory-installed machine, it has certain features of a portable model. It may be possible that the machine gets knocked about during transportation and its precision may be affected by external forces resulting in oblique cuts.

To overcome this, follow the instructions below to make the required adjustments as necessary.

Vertical adjustment (Figs. 34 ~ 36)

If you get slanted cuts when cutting vertically, use the hexagonal wrench accessory to adjust the bolt located at the rear of the base. (Fig. 34) If the cut is as shown in Figs. 35 and 36, turn the bolt clockwise. If it is in the opposite direction to that shown in Fig. 36, then turn anti-clockwise. If you are cutting 100A gas pipe, a quarter turn of the bolt results in a 0.3 mm change.

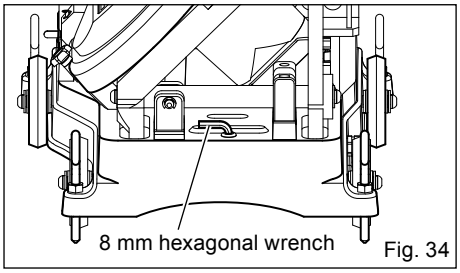


Fig. 34

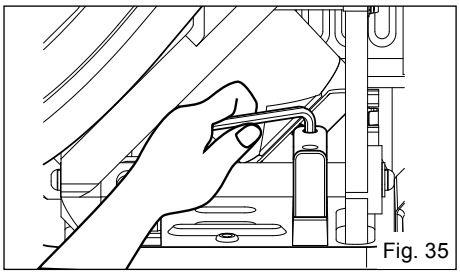


Fig. 35

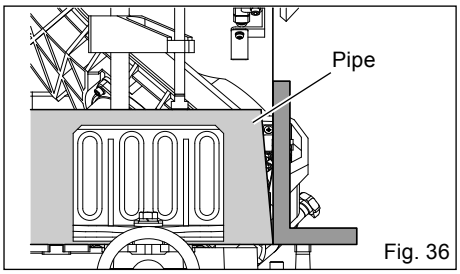


Fig. 36

Horizontal adjustment (Figs. 37 and 38)

If you get oblique cuts when cutting horizontally, use the socket wrench accessory to loosen the two bolts on Plate A. If the oblique cut is as appears in Fig. 38, loosen the nut shown in the diagram above and adjust by turning the set screw in a clockwise direction. If it is in the opposite direction to that shown in Fig. 38, then turn it anti-clockwise. If you are cutting 100A gas pipe, a quarter turn of the bolt results in a 0.3 mm change. After making the adjustment, fix Plate A in position as described in “Changing the Angle of Plate A” on Page 11.

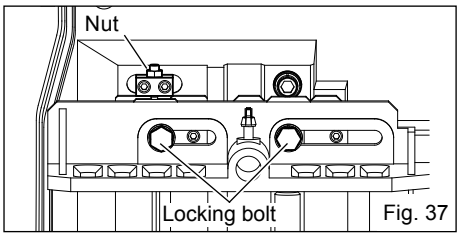


Fig. 37

Note: When you adjust the perpendicularity, the horizontal direction also changes and vice versa. Further, if you adjust for one direction it can affect the other later. Therefore, make adjustments while keeping an overall balance as you go.

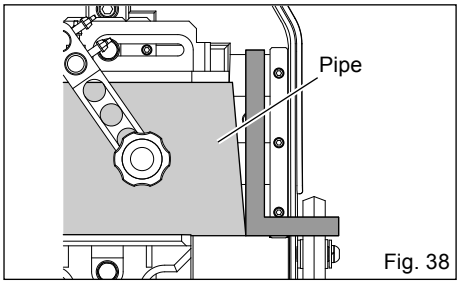


Fig. 38

Servicing & Repair

This unit is a precision instrument. If it fails to function properly do not try to repair it yourself. Contact your local REX dealer, sales office or distributor.
If you have questions or need parts or other supplies, feel free to contact REX Industries Co., Ltd.

Availability of Replacement parts	Replacement parts are maintained for a period of 7 years after production of this model has been terminated. Electrical parts, however, will remain available for a period of 5 years.

Troubleshooting

⚠ WARNING

- If the problem you have and the appropriate remedy are not shown in the table below, do not attempt to disassemble or repair the unit yourself.
- If the problem and remedy are not shown in the table, or if the table indicates that you should have the unit repaired or serviced, consult your dealer or REX.
- If this product is repaired by someone who does not have the proper knowledge or technical skill to do so, the product may not operate properly , or an accident or injury may occur . In the event of a problem, always check the table before contacting REX Industries or your dealer.

Problem	Cause	Remedy
Slanted Cuts	The frame was lowered to quickly.	Reduce the speed with which you lower the frame.
	The blade is not installed correctly.	Install the blade properly on the "SELI" heads, guide rollers and pulley.
	The blade was lowered too suddenly.	Lower the blade gently.
	The blade you are using results in oblique cuts or the blade is worn.	Replace with a new blade.
	The "SELI" head bearings are worn.	Replace the rubber ring on the pulley. (Have the unit repaired or serviced.)
	The workpiece moves during cutting.	Make sure the workpiece is fastened securely in place.
	The workpiece is not clamped properly.	Clamp oblong workpieces so their height is as low as possible.
	The tension lever is not set properly.	Set the tension lever correctly so that it is pointed in the direction of "Reinstate".
	The blade is not one of the recommended type.	Use blades of the recommended type only.
	The bearings on the SELI head are worn.	Replace the bearings
	The "SELI" adjustment knob is either too loose or isn't tightened properly.	Tighten the SELI adjustment knob securely.
	There is a gap between Plate A and the vice stopper.	Reinstall Plate A again.
	The angle when lowering the frame has shifted.	Adjust with the bolts.

Problem	Cause	Remedy
Cutting takes a long time	The frame lowers too slowly.	Adjust to an appropriate speed.
	The blade is worn.	Replace with a new blade.
Saw vibrates during cutting	The tension lever is not set in the direction of the "Reinstate" position.	Set the tension lever in the direction of the "Reinstate" position.
	The workpiece is not clamped securely.	Clamp the workpiece securely.
	The blade is chipped or cracked.	Replace with a new blade.
	The upper clamp has come loose.	Tighten the upper clamp.
Blade slips or comes loose	The blade is not installed properly.	Install the blade properly on the "SELI" heads, guide rollers and pulley.
	There is oil on the blade.	Remove the blade, wipe off any oil and reinstall.
	There is oil on the workpiece	Wipe off any oil on the workpiece.
	There is oil on the pulleys, guide rollers or the "SELI" head bearings.	Wipe off any oil.
	The tension lever is not set properly.	Set the tension lever correctly so that it is pointed in the direction of "Reinstate".
	The rubber ring on the pulley is worn out.	Replace teh rubber ring. (Have unit repaired or serviced.)
	There is resin or chips sticking to the rubber ring on the pulley.	Wipe the rubber ring with a rag.
	The brush is worn.	Replace with a new brush. (Page 15)
The motor does not work	The overload protection unit has been activated.	Use the procedure on Page 13 to reset.
	The power plug has come out of the electric socket.	Insert plug into the socket.
	There is a short in the power cord.	Have the unit repaired or serviced.
	The switch is faulty.	Have the unit repaired or serviced.
	The motor is faulty.	Have the unit repaired or serviced.
	Chips or other foreign bodies are caught in the gap between the SELI head bearing and the blade.	Remove the blade and clear any obstructions.
The motor stops when cutting	The overload protection unit has been activated.	Use the procedure on Page 13 to reset.
	The voltage is too low.	Connect to an appropriate power supply.
	The workpiece moves when cutting.	Make sure the workpiece is fastened securely.
The frame won't stay up when raised.	There is a malfunction of the hydraulic cylinder or other parts.	Have the unit repaired or serviced.
The frame won't lower even when the valve lever is turned to the left.	Tighten the valve knob is too tight.	Turn the valve knob anti-clockwise.
	There is a malfunction of the hydraulic cylinder or other parts.	Have the unit repaired or serviced.

⚠ Guarantee and Exemption from Liability

1. Should the machine happen to break down for no apparent reason despite normal and correct use, repairs and service parts shall be provided free of charge as outlined below.

   Guarantee period, repairing dates, procedures and methods for providing repairs and service parts shall be decided in consultation with the customer and distributor.
   Repairs and service parts may be charged.
   Repairs may be charged even under the following circumstances:
   - if the machine has not been used according to the instructions in the Operation Manual.
   - if it has been used for anything other than its intended purpose.
   - if it has not been repaired according to the Operation Manual or if it has been remodeled.
   - if blades or consumables need replacing.
   - if the machine has been handled in an inappropriate way.

2. REX will accept no responsibility under the following circumstances:
   - fire, damage from flood, earthquakes, lightning or other natural disasters.
   - malfunction or accident resulting from pollution or abnormal voltage.
   - when the machine has not been operated according to the Operation Manual.
   - when the machine has been used incorrectly, repaired or remodelled inappropriately.

3. Any costs incurred by the manufacturer shall not exceed the purchase price of the machine.

REX

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