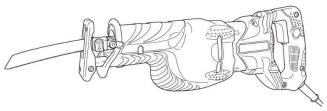
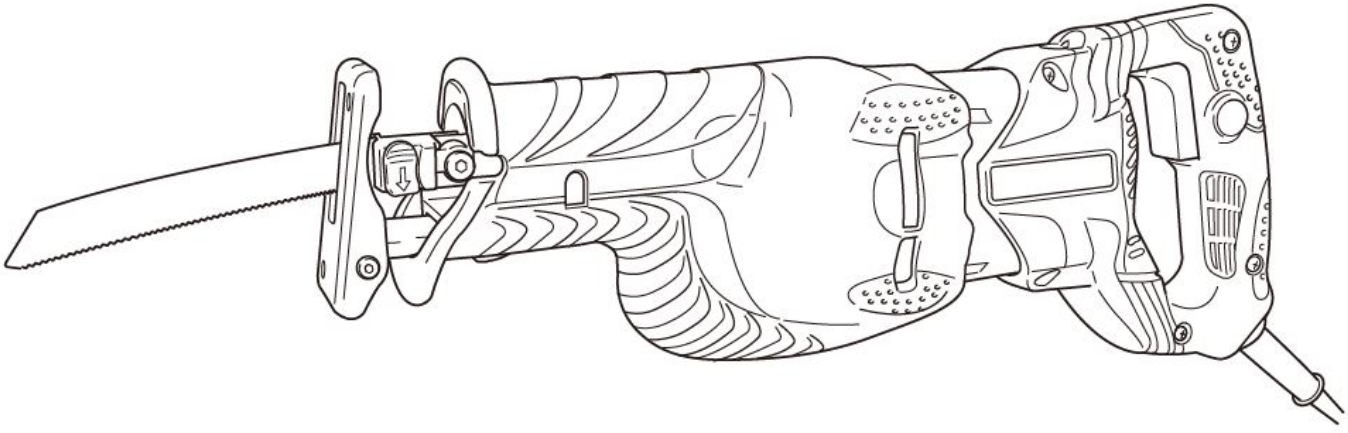


HiKOKI CR13V2 Variable Speed Reciprocating Saw Instruction Manual

Contents

HiKOKI CR13V2 Variable Speed Reciprocating Saw



GENERAL POWER TOOL SAFETY

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

1. **Work area safety**
    - a) Keep work area clean and well lit.
      Cluttered or dark areas invite accidents.
    - b) Do not operate power tools in explosive atmospheres, such as in the presence of fl ammable liquids, gases or dust.
      Power tools create sparks which may ignite the dust or fumes.
    - c) Keep children and bystanders away while operating a power tool.
      Distractions can cause you to lose control.
2. **Electrical safety**
    - a) Power tool plugs must match the outlet.
      Never modify the plug in any way.
      Do not use any adapter plugs with earthed (grounded) power tools.
      Unmodifi ed plugs and matching outlets will reduce risk of electric shock.
    - b) Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.
      There is an increased risk of electric shock if your body is earthed or grounded.
    - c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
    - d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.
      Damaged or entangled cords increase the risk of electric shock.
    - e) When operating a power tool outdoors, use an extension cord suitable for outdoor use.
      Use of a cord suitable for outdoor use reduces the risk of electric shock.
    - f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.
      Use of an RCD reduces the risk of electric shock.
3. **Personal safety**
    - a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the infl uence of drugs, alcohol or medication.
      A moment of inattention while operating power tools may result in serious personal injury.
    - b) Use personal protective equipment. Always wear eye protection.
      Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
    - c) Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your fi nger on the switch or energising power tools that have the switch on invites accidents.

- d) Remove any adjusting key or wrench before turning the power tool on.
  A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) Do not overreach. Keep proper footing and balance at all times.
  This enables better control of the power tool in unexpected situations.
- f) Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.
  Loose clothes, jewellery or long hair can be caught in moving parts.
- g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.
  Use of dust collection can reduce dust-related hazards.
- h) Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.
  A careless action can cause severe injury within a fraction of a second.

4. **Power tool use and care**
   - a) Do not force the power tool. Use the correct power tool for your application.
     The correct power tool will do the job better and safer at the rate for which it was designed.
   - b) Do not use the power tool if the switch does not turn it on and off .
     Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
   - c) Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
   - d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.
     Power tools are dangerous in the hands of untrained users.
   - e) Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may aff ect the power tool’s operation.
     If damaged, have the power tool repaired before use.
     Many accidents are caused by poorly maintained power tools.
   - f) Keep cutting tools sharp and clean.
     Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
   - g) Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.
     Use of the power tool for operations different from those intended could result in a hazardous situation.
     h) Keep handles and grasping surfaces dry, clean and free from oil and grease.
     Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

5. **Service**
   1. a) Have your power tool serviced by a qualified repair person using only identical replacement parts.
      This will ensure that the safety of the power tool is maintained.

PRECAUTION
Keep children and infi rm persons away.
When not in use, tools should be stored out of reach of children and infi rm persons.

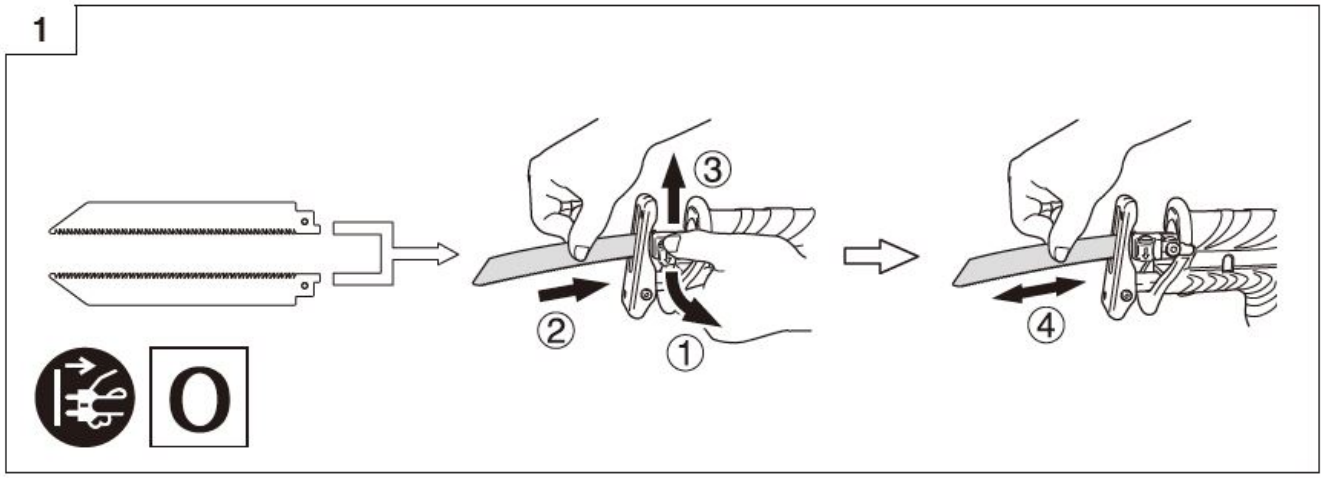
RECIPROCATING SAW SAFETY

WARNINGS

1. Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.
   Cutting accessory contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.
2. Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the workpiece by hand or against your body leaves it unstable and may lead to loss of control.

ADDITIONAL SAFETY WARNINGS

1. Ensure that the power source to be utilized conforms to the power requirements specifi ed on the product nameplate.
2. Ensure that the power switch is in the OFF position.
   If the plug is connected to a receptacle while the power switch is in the ON position, the power tool will start operating immediately, which could cause a serious accident.
3. When the work area is removed from the power source, use an extension cord of suffi cient thickness and rated capacity. The extension cord should be kept as short as practicable.
4. Prior to cutting into walls, ceilings or fl oors, ensure there are no electric cables or conduits inside.
5. Dust produced in operation
   The dust produced in normal operation may aff ect the operator’s health. To wear a dust mask is recommended.
6. Mounting the blade (Fig. 1)

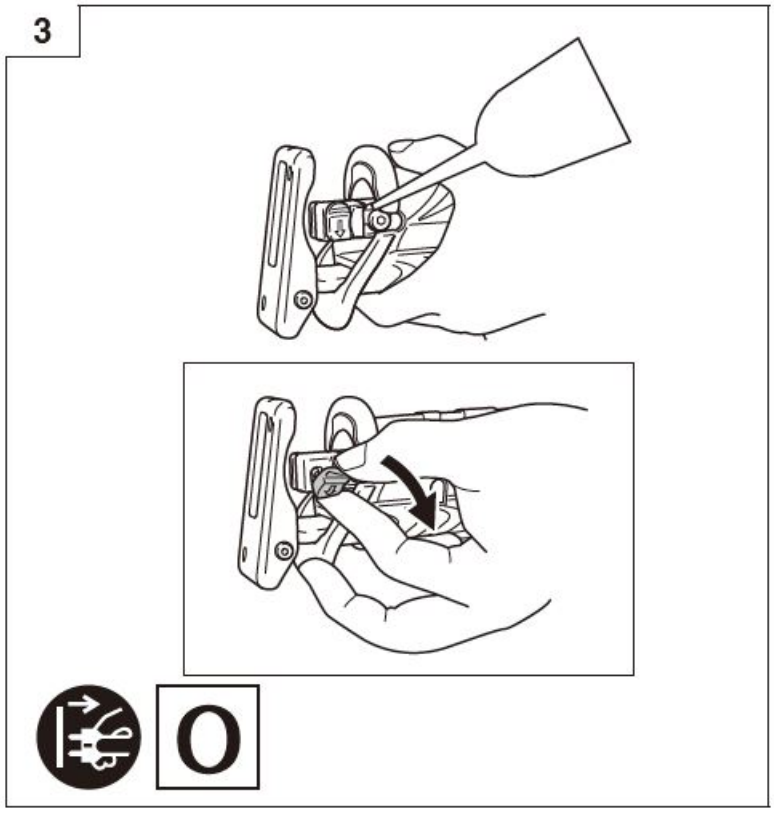


This unit employs a detachable mechanism that enables mounting and removal of saw blades without the use of a wrench or other tools.
Turn on and off the switching trigger several times so that the lever can jump out of the front cover completely. Thereafter, turn off the switch and unplug the power cord.
Be absolutely sure to keep the switch turned off and the power cord unplugged to prevent any accident.
Pull the back of the saw blade two or three times by hand and check that the blade is securely mounted. When pulling the blade, you will know it is properly mounted if it clicks and the lever moves slightly.
When pulling the saw blade, be absolutely sure to pull it from the back. Pulling other parts of the blade will result in an injury.

7. Never touch the saw blade immediately after use. The metal is hot and can easily burn your skin.
8. When the blade is broken

   Even when the saw blade is broken and remains inside the small slit of the plunger, it should fall out if you push the lever in the direction of the arrow mark, and face the blade downward. If it doesn't fall out itself, take it out using the procedures explained below.

   1. If a part of the broken saw blade is sticking out of the small slit of the plunger, pull out the protruding part and take the blade out.
   2. If the broken saw blade is hidden inside the small slit, hook the broken blade using a tip of another saw blade and take it out.
9. Although this unit employs a powerful motor, prolonged use at a low speed will increase the load unduly and may lead to overheating. Properly adjust the saw blade to allow steady, smooth cutting operation, avoiding any unreasonable use such as sudden stops during cutting operation.
10. Maintenance and inspection of saw blade mount
    - After use, blow away sawdust, earth, sand, moisture, etc., with air or brush them away with a brush, etc., to ensure that the blade mount can function smoothly.
    - As shown in Fig. 3, carry out lubrication around the blade holder on a periodic basis by use of cutting fluid, etc.

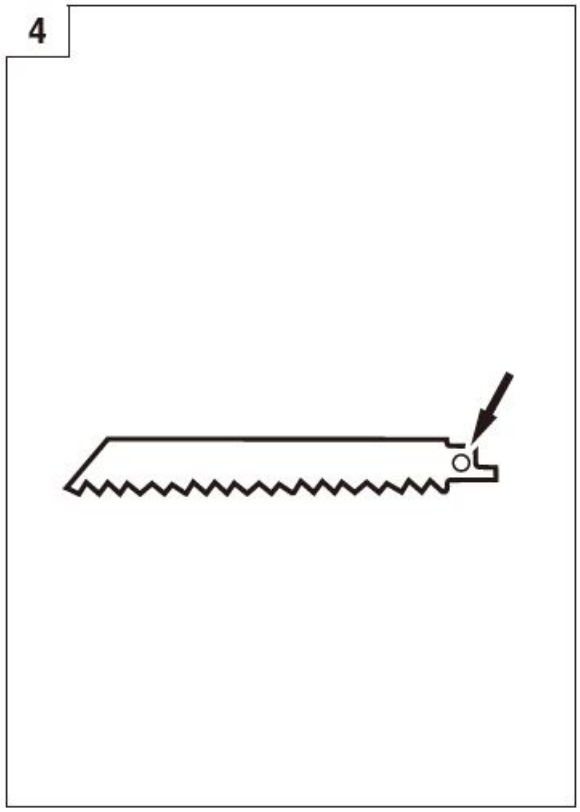


Continued use of the tool without cleaning and lubricating the area where the saw blade is installed can result in some slack movement of the lever due to accumulated sawdust and chips. Under the circumstances, pull a rubber cap provided on the lever in the direction of an arrow mark as shown in Fig. 3 and remove the rubber cap from the lever. Then, clean up the inside of the blade holder with air and the like and carry out suffi cient lubrication.

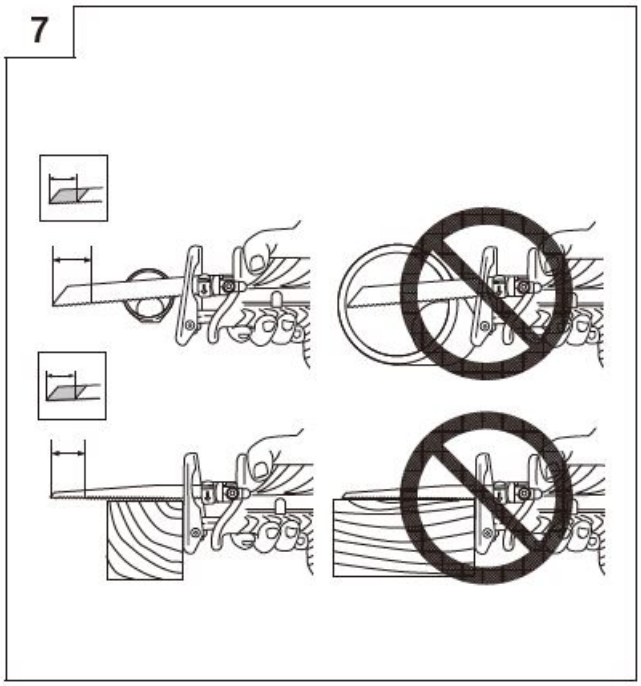
The rubber cap can be fi tted on if it is pressed fi rmly onto the lever. At this time, make certain that there exists no clearance between the blade holder and the rubber cap, and furthermore ensure that the saw-blade-installed area can function smoothly.

- Do not use any saw blade with a worn-out blade hole (A). Otherwise, the saw blade can come off ,

resulting in personal injury. (Fig. 4)



11. How to use
    - Avoid carrying it plugged to the outlet with your fi nger on the switch. A sudden startup can result in an unexpected injury.
    - Be careful not to let sawdust, earth, moisture, etc., enter the inside of the machine through the plunger section during operation. If sawdust and the like accumulate in the plunger section, always clean it before use
    - Do not remove the front cover.
      Be sure to hold the body from the top of the front cover.
    - During use, press the base against the material while cutting.
      Vibration can damage the saw blade if the base is not pressed fi rmly against the workpiece.
      Furthermore, a tip of the saw blade can sometimes contact the inner wall of the pipe, damaging the saw blade.
    - Select a saw blade of the most appropriate length. Ideally, the length protruding from the base of the saw blade after subtracting the stroke quantity should be larger than the material (see Fig. 7).

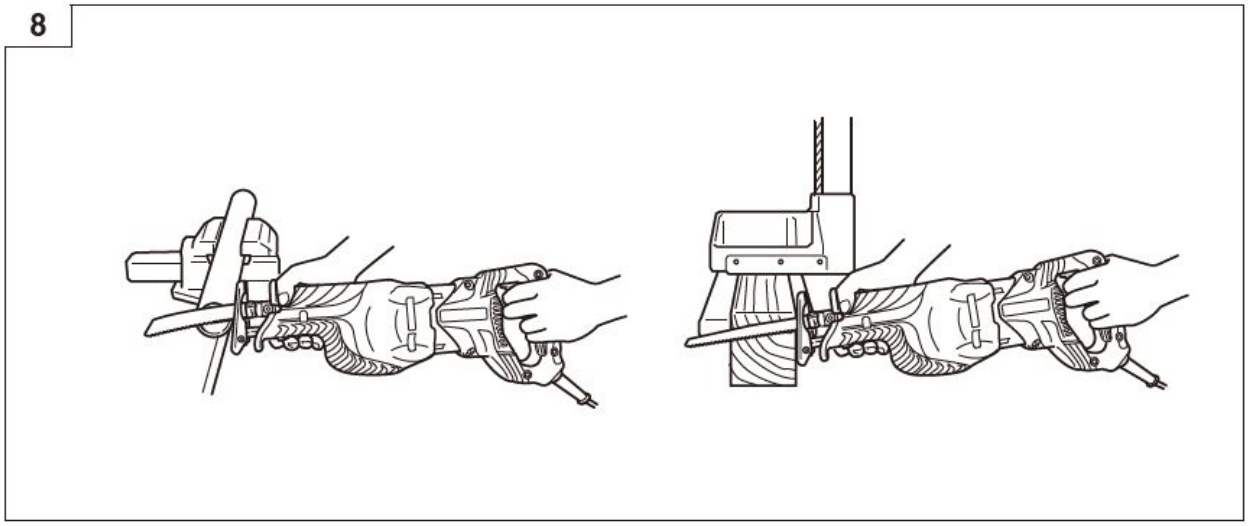


If you cut a large pipe, large block of wood, etc., that exceeds the cutting capacity of a blade; there is a risk that the blade may contact with the inner wall of the pipe, wood, etc., resulting in damage.

- To maximize cutting feciency for the materials you are using and working conditions, adjust the speed of the saw blade and the switching to swing cutting.

Cutting

- Always hold the tool firmly with hand on housing as shown in Fig. 8, Fig. 9 and Fig. 10.
- Press the base fi firmly against the workpiece.
- Never apply any unreasonable force to the saw blade when cutting. Doing so can easily break the blade.
- Fasten a workpiece firmly before operation. (Fig. 8)



- When cutting metallic materials, use proper machine oil (turbine oil, etc.). When not using liquid machine oil, apply grease over the workpiece.

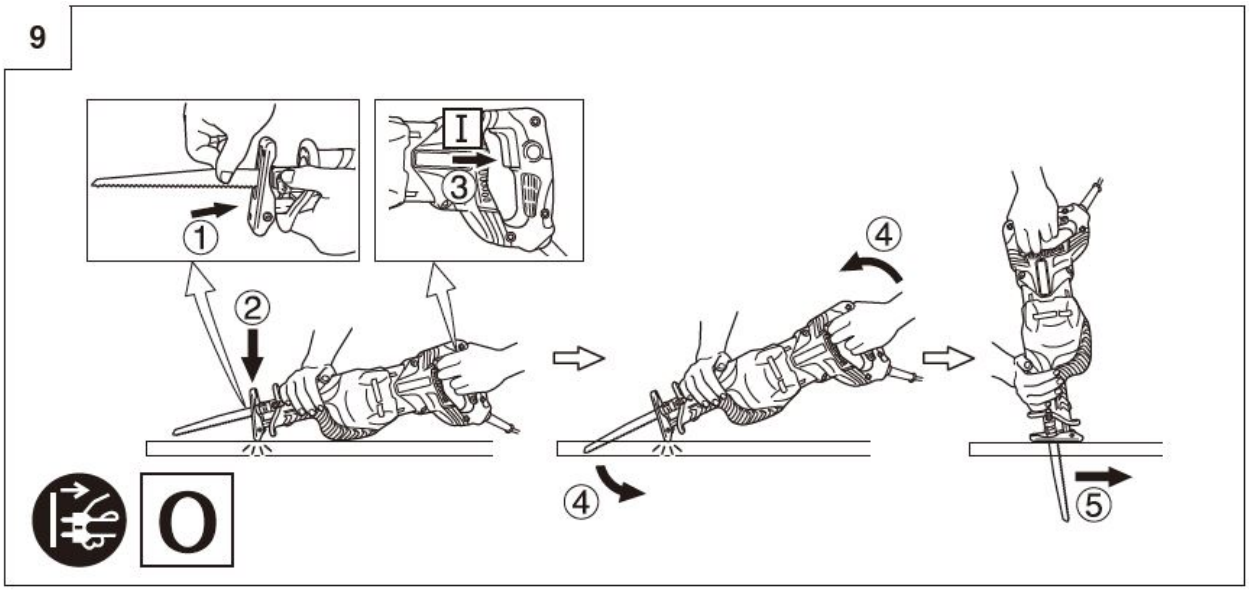
  The service life of the saw blade will be drastically shortened if you don’t use machine oil.
- Never apply any unreasonable force to the saw blade when cutting. Also remember to press the base against the lumber firmly.

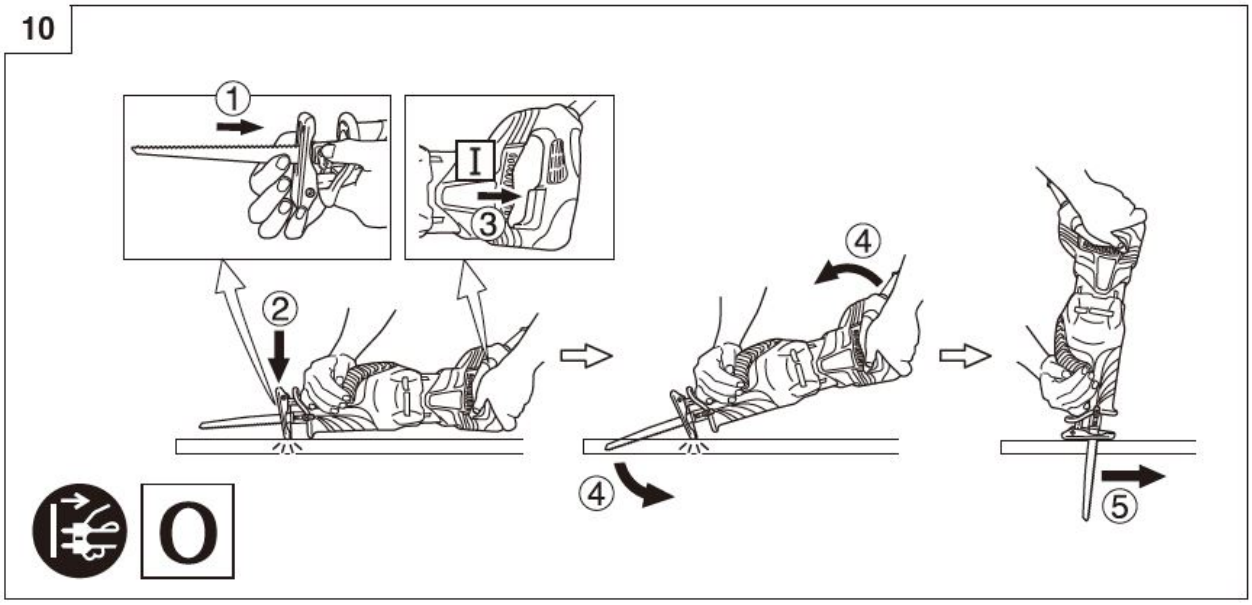
Sawing curved lines

- We recommend that you use the BI-METAL blade mentioned in Table 2 for the saw blade since it is tough and hardly breaks.

- Delay the feed speed when cutting the material into small circular arcs. An unreasonably fast feed may break the blade.

Plunge cutting (Fig. 9 and 10)





- Avoid plunge cutting for metallic materials. This can easily damage the blade.
- Never pull the switch trigger while the tip of the saw blade tip is pressed against the material. If you do so, the blade can easily be damaged when it collides with the material.
- Make absolutely sure that you cut slowly while holding the body firmly. If you apply any unreasonable force to the saw blade during the cutting operation, the blade can easily be damaged.

12. Cut off guide for cutting pipe (optional accessory) Please refer to the cut off guide user's manual for details on how to use it correctly.

SYMBOLS

WARNING

The following show symbols used for the machine. Be sure that you understand their meaning before use.

	CR13V2: Reciprocating Saw
	To reduce the risk of injury, user must read instruction manual.
	Only for EU countries Do not dispose of electric tools together with household waste material! In observance of European Directive 2012/19/EU on waste electrical and electronic equipment and its implementati on in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.
	Switching ON
	Switching OFF
	Stroke
	Disconnect mains plug from electrical outlet
	Class II tool

STANDARD ACCESSORIES

In addition to the main unit (1 unit), the package contains the accessories listed in the below.

- Blade (No. 341) ……1
- Case ……..1
- Hexagonal bar wrench ……..1

Standard accessories are subject to change without notice.

APPLICATIONS

- Cutting pipe and angle steel.
- Cutting various lumbers.
- Cutting mild steel plates, aluminum plates, and copper plates.
- Cutting synthetic resins, such as phenol resin and vinyl chloride.

For details refer to the section entitled “SELECTION OF BLADES”.

SPECIFICATIONS

Voltage (by areas) *		(110 V, 115 V, 120 V, 127 V, 220 V, 230 V, 240 V)
Power Input		1010 W *
Capacity	Mild Steel Pipe	O.D. 130 mm
	Vinyl Chloride Pipe	O.D. 130 mm
	Wood	Depth 300 mm
	Mild Steel Plate	Thickness 19 mm
No-Load Speed		0 – 2800 min–1
Stroke		29 mm
Weight (without cord)**		3.3 kg

Be sure to check the nameplate on product as it is subject to change by areas.
** According to EPTA-Procedure 01/2014

NOTE

Due to HiKOKI’s continuing program of research and development, the specifications herein are subject to change without prior notice.

MOUNTING AND OPERATION

Refer to Table 1, 2, 3 and 4 for use of the blades.

SELECTION OF BLADES

To ensure maximum operating effi ciency and results, it i very important to select the appropriate blade best suited to the type and thickness of the material to be cut.
The blade number is engraved in the vicinity of the mounting portion of each blade. Select appropriate blades by referring to Table 1-2.

Table 1: HCS blades

Blade No.	Uses	Thickness (mm)
No. 4	For cutting and roughing lumber	50 – 70
No. 5	For cutting and roughing lumber	Below 30
No. 95	For cutting stainless pipe less than 100 mm in diameter	Below 2.5
No. 96	For cutting stainless pipe less than 30 mm in diameter	Below 2.5

Table 2: BI-METAL blades

Blade No.	Uses	Thickness (mm)
No. 101 No. 103 No. 109 No. 141(S)	For cutting steel and stainless pipes less than 60 mm in outer diameter	2.5 – 6
No. 102 No. 104 No. 110 No. 142(S) No. 143(S)	For cutting steel and stainless pipes less than 100 mm in outer diameter	2.5 – 6
No. 107	For cutting steel and stainless pipes less than 60 mm in outer diameter	Below 3.5
No. 108	For cutting steel and stainless pipes less than 100 mm in outer diameter	Below 3.5
No. 121	For cutting and roughing lumber	100
No. 131	All purpose	100
No. 132	All purpose	100

Table 3: Selection of blades for other materials

Material to be cut	Material quality	Thickness (mm)	Blade No.
Iron plate	Mild steel plate	2.5 – 10	No. 101, 102, 103, 104, 109, 110, 131, 141(S), 142(S), 143(S)
		Below 3.5	No. 107, 108
Nonferrous metal	Aluminium, Copper and Bra ss	5 – 20	No. 101, 102, 103, 104, 109, 110, 131, 132, 141(S), 142(S), 143(S)
		Below 5	No. 107, 108

Synthetic	Phenol resin,		No. 101, 102,
resin	Melamine resin, etc.	10 – 50	103, 104, 131, 132, 141(S), 142(S), 143(S)
		5 – 30	No. 107, 108,
			109, 110
	Vinyl chloride,		No. 101, 102,
	Acrylic resin, etc.	10 – 60	103, 104, 131, 132, 141(S), 142(S), 143(S)
		5 – 30	No. 107, 108,
			109, 110

MAINTENANCE AND INSPECTION

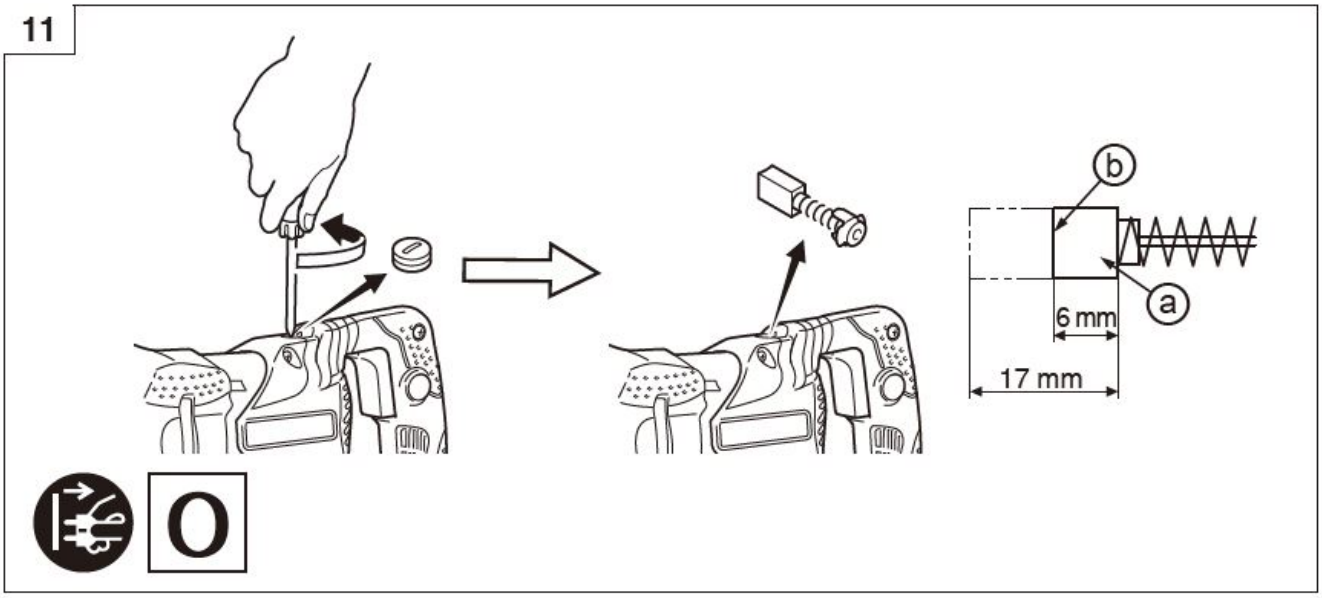
1. Inspecting the blade
   Continued use of a dull or damaged blade will result i reduced cutting e ffi ciency and may cause overloading of the motor. Replace the blade with a new one as soon as excessive abrasion is noted.
2. Inspecting the mounting screws
   Regularly inspect all mounting screws and ensure that they are properly tightened. Should any of the screws be

loose, retighten them immediately. Failure to do so could result in serious hazard.

3. Maintenance of the motor

   The motor unit winding is the very “heart” of the power tool. Exercise due care to ensure the winding does not become damaged and/or wet with oil or water.

4. Inspecting the carbon brushes (Fig. 11)



   The motor employs carbon brushes which are consumable parts. Since an excessively worn carbon brush can result in motor trouble, replace the carbon brushes with new ones having the same carbon brush No. shown in the figure when it becomes worn to or near the “wear limit” . In addition, always keep carbon brushes clean and ensue that they slide freely within the brush holders.

5. Replacing carbon brushes (Fig. 11)

   Disassemble the brush caps with a slotted-head screwdriver. The carbon brushes can then be easily removed.

6. Replacing supply cord6. Replacing supply cord

   If the replacement of the supply cord is necessary, it has to be done by HiKOKI Authorized Service Center to avoid a safety hazard.

CAUTION

In the operation and maintenance of power tools, the safety regulations and standards prescribed in each country must be observed.

GUARANTEE

We guarantee HiKOKI Power Tools in accordance with statutory/country specifi c regulation. This guarantee does not cover defects or damage due to misuse, abuse, or normal wear and tear. In case of complaint, please send the Power Tool, undismantled, with the GUARANTEE CERTIFICATE found at the end of this Handling instruction, to a HiKOKI Authorized Service Center.

IMPORTANT

Correct connection of the plug

The wires of the main lead are coloured in accordance with the following code:

Blue: — Neutral

Brown: — Live

As the colours of the wires in the main lead of this tool may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire coloured blue must be connected to the terminal marked with the letter N or coloured black. The wire coloured brown must be connected to the terminal marked with the letter L or coloured red. Neither core must be

connected to the earth terminal.

NOTE
This requirement is provided according to BRITISH STANDARD 2769: 1984.
Therefore, the letter code and colour code may not be applicable to other markets except The United Kingdom.

Information concerning airborne noise and vibration The measured values were determined according to EN62841 and declared in accordance with ISO 4871.
Measured A-weighted sound power level: 102 dB (A) Measured A-weighted sound pressure level: 91 dB (A)
Uncertainty K: 5 dB (A).
Wear hearing protection.
Vibration total values (triax vector sum) determined according to EN62841.
Cutting boards:
Vibration emission value ah, B = 19.7 m/s2
Uncertainty K = 1.5 m/s2
Cutting wooden beams:
Vibration emission value ah, WB = 24.9 m/s2 Uncertainty K = 1.6 m/s2

The declared vibration total value has been measured in accordance with a standard test method and may be used for comparing one tool with another.
It may also be used in a preliminary assessment of exposure.

WARNING

- The vibration emission during actual use of the power tool can diff er from the declared total value depending in the ways in which the tool is used.
- Identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

NOTE
Due to HiKOKI's continuing program of research and development, the specifi cations herein are subject to change without prior notice.

GUARANTEE CERTIFICATE

1. Model No.
2. Serial No.
3. Date of Purchase
4. Customer Name and Address
5. Dealer Name and Address
   (Please stamp dealer name and address)

Hikoki Power Tools Deutschland GmbH
Siemensring 34, 47877 willich, Germany
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Fax: +49 2154 499350
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Fax: +32 2 460 2542
URL http://www.hikoki-powertools.be
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Tel: +40 371 135 109
Fax: +40 372 899 765
URL: http://www.hikoki-powertools.ro

EC DECLARATION OF CONFORMITY

We declare under our sole responsibility that Reciprocating Saw, identifi ed by type and specifi c identifi cation code *1), is in conformity with all relevant requirements of the directives *2) and standards *3). Technical fi le at *4) – See below.
The European Standard Manager at the representative offi ce in Europe is authorized to compile the technical fi le.
The declaration is applicable to the product affi xed CE marking.

1. CR13V2 C338589S
2. 2006/42/EC, 2014/30/EU, 2011/65/EU
3. EN62841-1:2015

   EN62841-2-11:2016+A1:2020

   EN55014-1:2006+A1:2009+A2:2011

   EN55014-2:1997+A1:2001+A2:2008

   EN61000-3-2:2014

   EN61000-3-3:2013
4. Representative offi ce in Europe

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Siemensring 34, 47877 Willich, Germany
Head offi ce in Japan
Koki Holdings Co., Ltd.
Shinagawa Intercity Tower A, 15-1, Konan 2-chome,
Minato-ku, Tokyo, Japan

Documents / Resources

	HiKOKI CR13V2 Variable Speed Reciprocating Saw [pdf] Instruction Manual CR13V2, Variable Speed Reciprocating Saw, Speed Reciprocating Saw, Reciprocating Saw, C R13V2, Saw