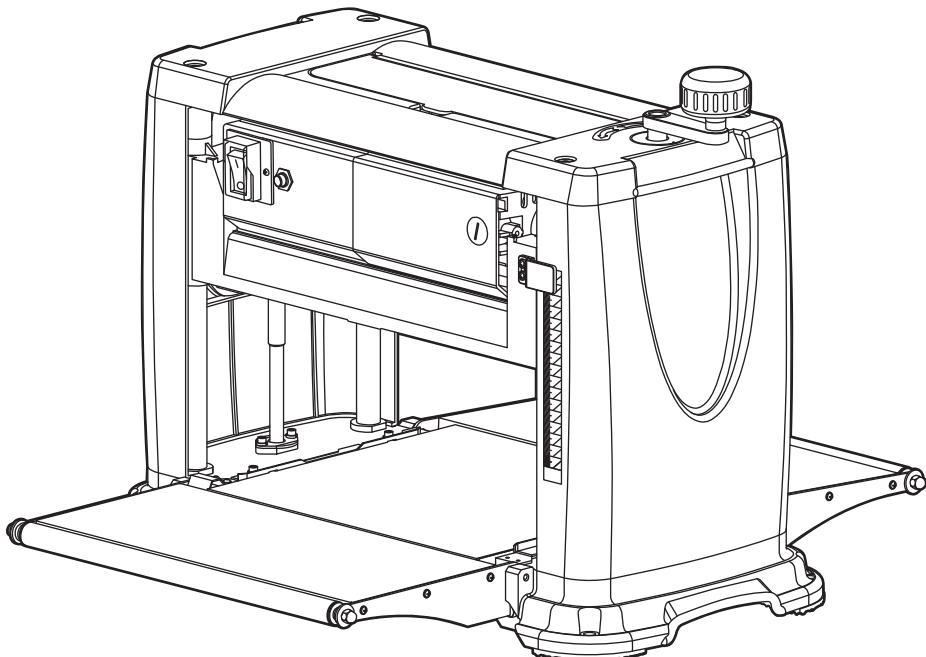


RYOBI®

RAP1500G

DRAFT

THICKNESS PLANER WITH ANTI-KICKBACK OPERATOR'S MANUAL



DESCRIPTION

1. Top guard
2. Cutterhead height adjustment crank handle
3. Depth of cut scale
4. Power switch
5. Overload switch
6. Table extension
7. Base lock screws
8. Feet
9. Elevation knob lock screw
10. Push stick
11. Blade setting gauge
12. Hex keys
13. Open end wrench
14. Plastic pointer
15. Dust chute
16. Hexagonal socket head cap screws
17. Forcing screws
18. Blade setting gauge
19. Lock bar
20. Lock screws
21. Blades
22. Spring
23. Allen screws
24. Height adjustment nut

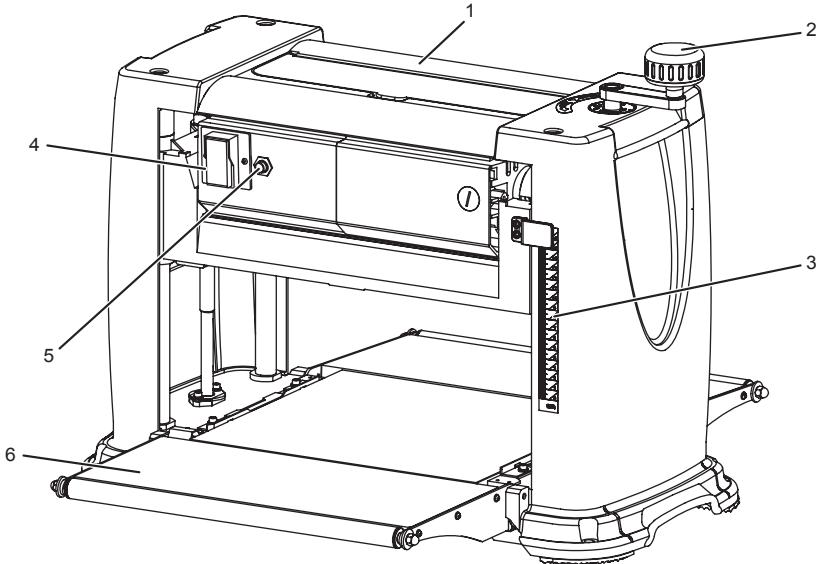


Fig. 1

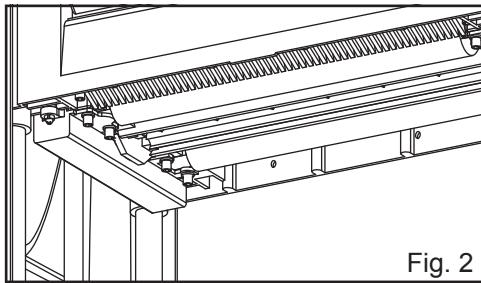


Fig. 2

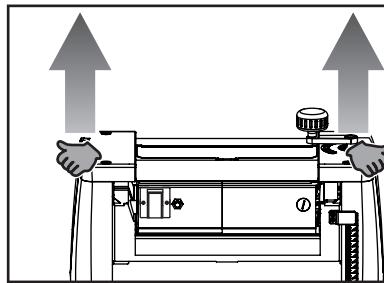


Fig. 3

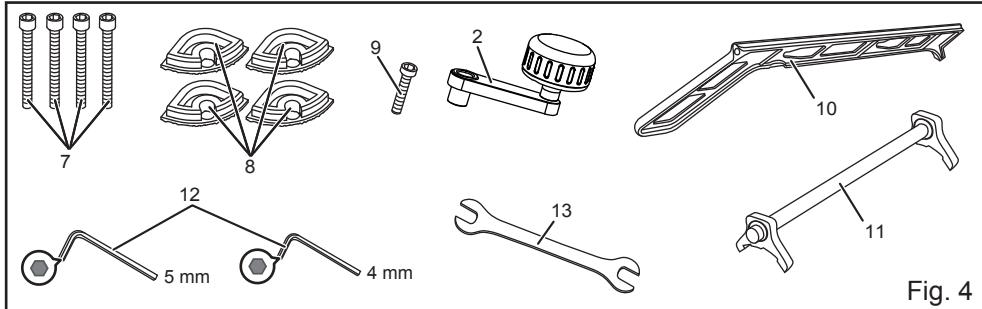


Fig. 4

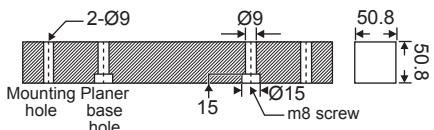


Fig. 5

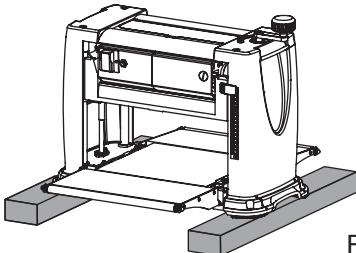


Fig. 6

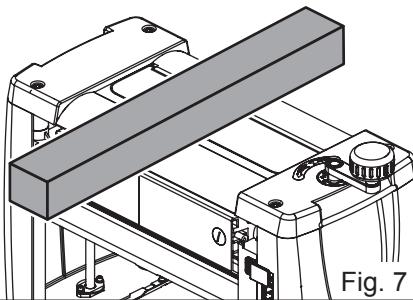


Fig. 7

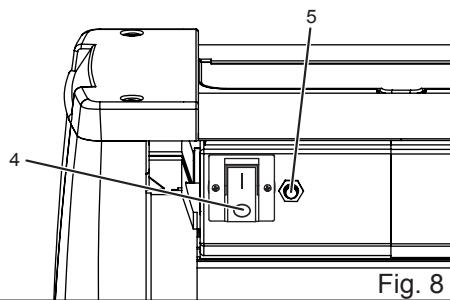


Fig. 8

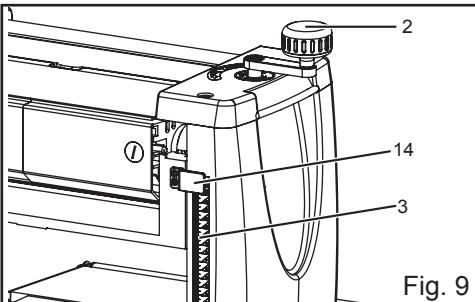


Fig. 9

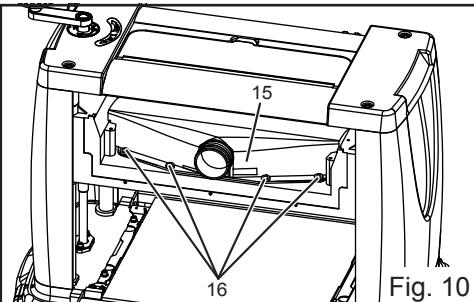


Fig. 10

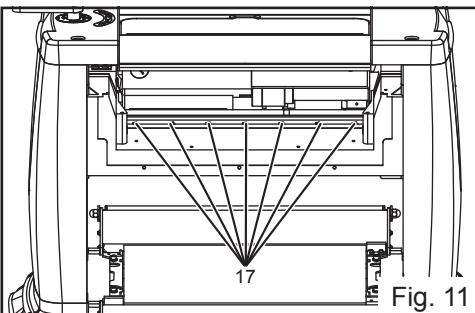


Fig. 11

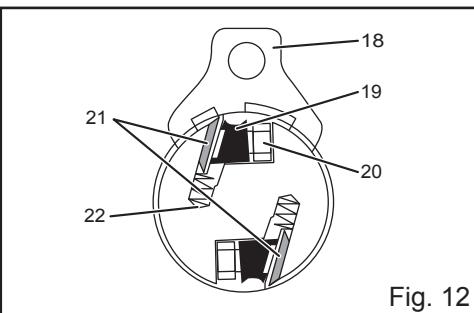


Fig. 12

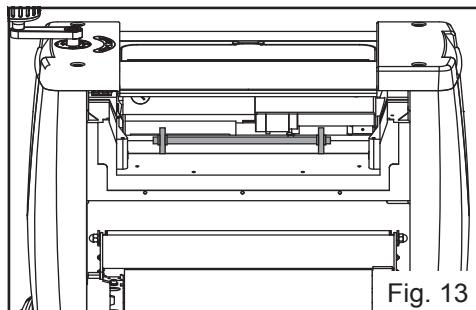


Fig. 13

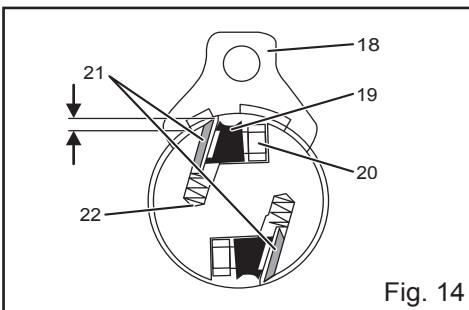


Fig. 14

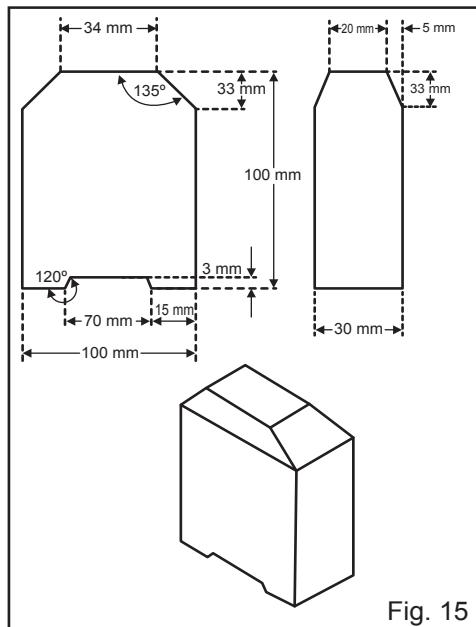


Fig. 15

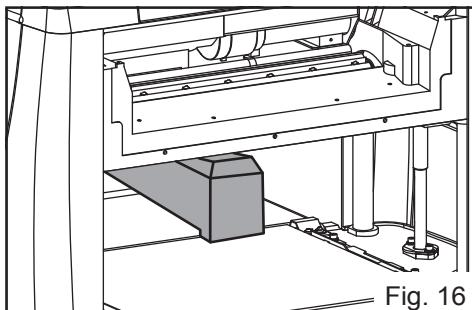


Fig. 16

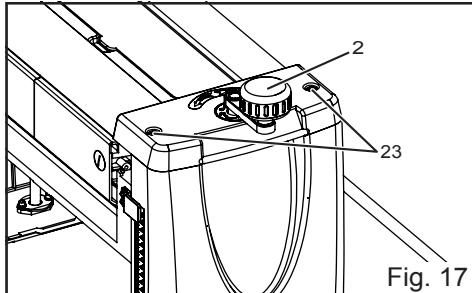


Fig. 17

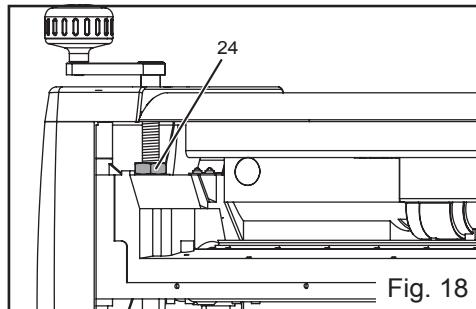


Fig. 18

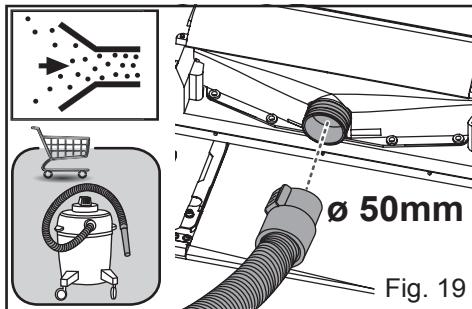


Fig. 19

Important!

It is essential that you read the instructions in this manual before assembling, operating and maintaining the product.

Subject to technical modifications.

Safety, performance, and dependability have been given top priority in the design of your thickness planer.

INTENDED USE

The planer is intended for planing wood.

Do not use this product in any other way other than those stated for intended use.

GENERAL POWER TOOL SAFETY WARNINGS

⚠ WARNING

When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury.

Read all these instructions before attempting to operate this product and save these instructions.

- **Know your power tool.** Read the operator's manual carefully. Learn the applications and limitations as well as the specific potential hazards related to this tool.
- **Guard against electrical shock by preventing body contact with grounded surfaces.** For example: pipes, radiators, ranges and refrigerator enclosures.
- **Keep guards in place** and in good working order.
- **Remove adjusting keys and wrenches.** Form a habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- **Keep work area clean.** Cluttered areas and benches invite accidents. Do not leave tools or pieces of wood on the tool while it is in operation.
- **Do not use in dangerous environments.** Do not use power tools in damp or wet locations or expose it to rain. Keep the work area well lit. Do not use the tool in the presence of flammable liquids or gases.
- **Keep children and visitors away.** All visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord while operating. Children should be supervised to ensure that they do not play with the tool.
- This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety.
- **Make workshop childproof** with padlocks, master switches, or by removing starter keys.
- **Don't force the tool.** It will do the job better and safer at the feed rate for which it was designed.
- **Use the right tool.** Do not force the tool or attachment to do a job for which it was not designed.
- **Dress properly.** Do not wear loose clothing, gloves, neckties, or jewellery that can get caught and draw you into moving parts. Rubber gloves and nonskid footwear are recommended when working outdoors. Also wear protective hair covering to contain long hair.
- **Always wear safety glasses with side shields.** Everyday eyeglasses have only impact-resistant lenses; they are not safety glasses.
- **Secure work.** Use clamps or a vice to hold work when practical. It is safer than using your hand and frees both hands to operate the tool.
- **Do not overreach.** Keep proper footing and balance at all times.
- **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
- **Store idle tools.** When not in use, tools should be stored in a dry locked-up place, out of reach of children.
- **Disconnect tools.** When not in use, before servicing, or when changing attachments, blades, bits, cutters, etc., all tools should be disconnected from the power source.
- **Avoid accidental starting.** Be sure switch is off when plugging in any tool.
- **Use recommended accessories.** Consult the operator's manual for recommended accessories. The use of improper accessories may result in injury.
- **Never stand on tool.** Serious injury could occur if the tool is tipped.
- **Check for damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine 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 conditions that may affect its operation. A guard or other part that is damaged must be properly repaired or replaced by an authorised service centre to avoid risk of personal injury.
- **Use the right direction of feed.** Feed work into a blade, cutter, or sanding spindle against the direction or rotation of the blade, cutter, or sanding spindle only.
- **Never leave tool running unattended. Turn the power off.** Don't leave tool until it comes to a complete stop.
- **Protect your lungs.** Wear a face or dust mask if the operation is dusty.
- **Protect your hearing.** Wear hearing protection during extended periods of operation.
- **Do not abuse cord.** Never carry tool by the cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
- **Use outdoor extension cords.** When tool is used outdoors, use only extension cords with approved

ground connection that are intended for use outdoors and so marked.

- **Stay alert and exercise control.** Watch what you are doing and use common sense. Do not operate tool when you are tired. Do not rush.
- **Do not use tool if switch does not turn it on and off.** Have defective switches replaced by an authorised service centre.
- **Always turn switch off** before disconnecting it to avoid accidental starting.
- **Never use in an explosive atmosphere.** Normal sparking of the motor could ignite fumes.
- **Inspect tool cords periodically.** If damaged, have them repaired by a qualified service technician at an authorised service facility. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Repair or replace a damaged or worn cord immediately. Stay constantly aware of cord location and keep it well away from the rotating blade.
- **Keep tool dry, clean, and free from oil and grease.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any solvents to clean tool.
- **Never start a tool when any rotating component is in contact with the workpiece.**
- **Do not operate a tool while under the influence of drugs, alcohol, or any medication.**
- **When servicing,** use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.
- **Use only recommended accessories** listed in this manual or addendums. Use of accessories that are not listed may cause the risk of personal injury. Instructions for safe use of accessories are included with the accessory.

PLANER SAFETY WARNINGS

- Always wear eye protection when operating the machine.
- **Wear gloves when handling the cutter block and rough material to reduce injuries from sharp edges.**
- Check to make sure all holding screws are tight before starting machine.
- Always stop the motor and disconnect from the power source before making any adjustments.
- Be sure all guards are in place before operation.
- Read operator's manual thoroughly and familiarise yourself with the machine before operation.
- Do not force work through the machine. Allow the planer to apply the proper feed rate.
- Check feed rollers occasionally to be sure sawdust and chips are not lodged between any components. If

rollers are not seated firmly, the feed rolls will not hold timber firmly against the bed, allowing kickback.

- Check and make sure the roller tables are on the same plane with the work table when planing wood, and the rollers can rotate freely when planing long workpieces.
- Only plane wood boards.
- Use sound timber, with no loose knots and as few tight knots as possible.
- Never stand directly in line with either the infeed or outfeed sides. Always stand off to one side of the machine.
- Make sure the workpiece is free of nails, screws, stones and other foreign objects which could damage the blades.
- Make sure the blades are attached correctly as described in the instructions.
- Use caution when handling the blades and cutterhead assembly. The blades are sharp and can easily cut your hand.
- Allow the cutterhead to reach full speed before using.
- Use the push stick instead of your hands to push the workpiece when its end approaches the blades. The push stick should be stored on the work table when not in use.
- **Use blades which are well sharpened and maintained.**
- **Use only cutting blades designed for the product.**

WARNING

Never conduct the following operations:

- Stopped work (i.e., any cut which does not involve the full length of the workpiece)
- Planing recesses, tenons or moulds
- Planing badly bowed wood with inadequate contact with the infeed table

ANTI-KICKBACK PAWLS

See figure 2.

- An anti-kickback pawl is a device which, when properly installed and maintained, is designed to stop the workpiece from being kicked back toward the front of the blade during a planer operation.

AVOIDING KICKBACK

- Always use the correct blade depth setting. Inspect the work for knots or nails before beginning a cut. Knock out any loose knots with a hammer. Never cut into a loose knot or nail.
- Always use clean, sharp, and properly-set blades.
- Never use planer with dull blades.
- To avoid pinching the blade, support the work properly before beginning a planer operation.

- When planing use steady, even pressure. Never force the planer.
- Do not plane wet or warped timber.
- Always hold your workpiece firmly with both hands, keep your body in a balanced position to be ready to resist kickback. Never stand directly in line with timber.

SPECIFICATIONS

Product Specifications	
Input	220-240 V ~, 50 Hz 1,500 W, 6.25 Amp
No load speed	9,000 min ⁻¹
Min. planing length	127 mm
Max. planing width	318 mm
Planing height	7 - 153 mm
Max. planing depth per pass	3 mm
Feeding speed	8 m/min
Weight	30 kg

LOOSE PART LIST

Item	Description	Qty
7	Base lock screws	4
8	Feet	4
9	Elevation knob lock screw	1
10	Push stick	1
11	Blade setting gauge	1
12	Hex keys	2
13	Open end wrench	1

ASSEMBLY

MOVING THE PLANER

See figure 3.

- The planer can be carried using the handles on both sides of the frame. Make sure the table extensions are closed before moving the planer.

INSTALLING FEET

- Attach the feet to the corners at the bottom of the planer.

MOUNTING THE PLANER ONTO A WOOD BASE

See figures 5-6.

- When the planer is not mounted on a planer stand, it is suggested that it be mounted onto two pieces of timber. This will ensure maximum stability.
- Choose two pieces of wood according to the sizes shown in the figure. Mount the planer onto the wood surface.
- Use the four base lock screws (supplied) to mount the planer base onto the wood.

STOCK REST

See figure 7.

- The stock rest on the top of the planer provides convenient handling of stock for consecutive cutting operations. Stock placed on the top of the machine can be easily pulled to the operator for planing.

OPERATION

ON / OFF SWITCH

See figure 8.

- To turn on the planer, push the **I** button. To turn off, push the **O** button.

WARNING

Always be sure the switch is in the OFF position before connecting the planer to the power source.

CIRCUIT OVERLOAD SWITCH

See figure 8.

- The machine is provided with an overload switch for overload protection. If an overload occurs, the switch will pop out. If this happens, wait several minutes and press the switch to reset the machine.

ADJUSTING DEPTH OF CUT

See figure 9.

WARNING

Never plane more than 3 mm in one pass and never attempt to plane a board under 127 mm (5") in length. Always wear a protective face shield.

- To adjust the depth of cut, turn the cutterhead height adjustment crank handle in the directions marked on top of the planer. The depth of cut adjustment can be read from the depth of cut scale. The adjustment gradation is 1.6 mm per revolution of the crank.
- Always start your work by making a light planing cut. The depth of cut on subsequent passes may be increased by up to 3 mm, but remember that a light cut creates a finer finish than a heavier cut.
- The thickness of timber running through the planer is

controlled by the distance you adjust the cutting blade from the table.

- Do not plane timber that is less than 7 mm thick.
- Do not plane timber that is thicker than 153 mm (6").

ADJUSTING THE DEPTH OF CUT SCALE

See figure 9.

For the safe operation of your planer, it is very important that the depth of cut scale reads accurately. To adjust the depth of cut scale, follow the steps below:

- Feed a board for planing. Compare the measured thickness of the board to the reading on the depth of cut scale.
- If the reading on the depth of cut scale is incorrect, loosen the screw which tightens the plastic pointer and adjust accordingly.
- When you have properly adjusted the depth of cut scale, test the reading by planing a piece of scrap timber. After planing, measure the planed thickness and double check it against the scale reading. The two measurements should be the same. Re-adjust the depth of cut scale to read the planed thickness if necessary.

REMOVING THE PLANER BLADES

See figure 10-12.

To remove the planer blades, follow the steps below:

⚠ WARNING

Unplug your planer from the power source before removing the planer blades.

- Remove the dust chute by removing the four hexagonal socket head cap screws on it.
- Loosen the lock bar and blade by turning the forcing screws clockwise. The blades are spring loaded, and will push out when the assembly is loosened.
- Take out the blade, and then the blade lock bar.

INSTALLING / REPLACING THE PLANER BLADES

See figure 12.

To install the planer blades, follow the steps below:

- Remove the blades according to the instructions in "REMOVING THE PLANER BLADES".
- Clean away all debris from the planer cutterhead.
- Fit the blade lock bar into the slot on the cutterhead.
- Fit the blade into the slot on the cutterhead, and tighten the lock bar blade assembly by turning the forcing screws counter clockwise. Make sure the blade is facing the correct direction and is centred in the slot.
- Set the blade heights according to the instructions in "SETTING THE BLADE HEIGHT". The blade height

must be reset every time the blades are taken out for any reason.

- Be sure to replace the dust chute after blades are installed.

SETTING THE BLADE HEIGHT

See figure 13-14.

- To obtain a blade projection of 1.1 mm, place the blade setting gauge on the cutterhead with both guides resting firmly against the blade.
- Loosen the assembly by turning the seven forcing screws clockwise with an open end wrench.
- When the blade is pressed to the required height by guides on the gauge, retighten the assembly by turning the forcing screws counter clockwise. Make sure all seven forcing screws are tightened securely.

⚠ WARNING

The blade edge is very susceptible to chipping. Use caution when handling the gauge near the blades to avoid damaging them.

⚠ WARNING

The assembly must be tightened securely to prevent accidents during planing.

CONNECTING A DUST COLLECTION SYSTEM

See figure 19.

The dust produced when using this tool may be harmful to health. Use a dust absorption system and remove deposited dust thoroughly, e.g., with a vacuum cleaner.

To connect a dust collection system:

- Unplug the tool.
- Connect the nozzle of the dust collection system to the dust chute.

Clean the hose of the dust collection system frequently to avoid the accumulation of dust.

ADJUSTMENT

MAKING THE CUTTERHEAD AND WORK TABLE PARALLEL

See figures 15-18.

Plane a workpiece and measure the thickness after the cut. If the thicknesses are different on both sides of the workpiece, perform the following:

Adjust the cutter shaft and the worktable so they are parallel. The tools used for checking are shown in figure 15. Use hardwood to make a tool gauge block according to the size shown in the figure. Make the adjustments as per the following procedures.

- Remove the height adjustment crank handle and both top and side covers by removing allen screws to expose the height adjustment lock nuts.
- Loosen the adjustment lock nuts.
- Adjust the height adjustment lock nuts up or down as required to suit the gauge block.
- When the desired height setting is reached, tighten the lock nuts in position.
- Reassemble side and top covers and replace the height adjustment crank handle.

NOTE: Remove gauge block before starting machine.

Thickness planing is the sizing of the material to a desired thickness, while creating a smooth surface parallel to the opposite side of the board.

The art of thickness planing consists mainly of using good judgement about the depth of cut in various situations. You must take into account:

1. The width of the timber
2. The hardness of the timber
3. The dampness of the timber
4. The straightness of the board
5. The grain direction
6. The grain structure

How these factors can affect the quality of the work can only be learned through experience. Whenever working with a new type of wood, or one with unusual problems, always make test cuts on scrap material prior to working on the actual piece.

FOR ADDITIONAL PLANING

If additional planing is needed to obtain the desired thickness of finish, hand crank the cutterhead no more than 3 mm (at any given time) and complete another pass.

⚠ WARNING

Never plane more than 3 mm in one pass and never attempt to plane a board under 127 mm (5") in length. Always wear a protective face shield.

MAINTENANCE

LUBRICATION

- The recommended lubrication for roller chains used in medium to low operation is to simply wipe the chain clean. When there is an excess build-up of dust or wood shavings, etc., coat the chain with a light film of oil but never pour the oil directly on the chain. Over-oiling tends to hasten the collection of dust and woodshavings and works them into members of the chain leading to increased wear and premature replacement. This applies to the speed reduction and height adjustment chains as well as the elevation screws.
- The bearings on the cutterhead are factory lubricated and sealed. They require no further attention.

PERIODIC MAINTENANCE

- The build-up of sawdust and other debris can cause your machine to plane inaccurately. Periodic cleaning is mandatory for precision planing and is highly recommended.
- Close fitting parts, such as the lockbars and the planer cutterhead slots, should be cleaned with a brush; remove clinging foreign matters. Then replace all parts in their respective positions slightly dampened with oil.
- Remove resin and other accumulations from feed rollers and table with a non-flammable solvent.

ENVIRONMENTAL PROTECTION



Recycle raw materials instead of disposing of as waste. The machine, accessories and packaging should be sorted for environmental-friendly recycling.

SYMBOL



Safety alert



CE conformity



Please read the instructions carefully before starting the product.



Class II tool, double insulation



Wear ear protection



Always wear eye protection



Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Grain is fuzzy.	1. Planing wood with high moisture content. 2. Blades are dull.	1. Dry the wood. 2. Sharpen the blades.
Grain is torn.	1. The cut is too heavy. 2. Blades are cutting against the grain. 3. Blades are dull.	1. Review proper depth of cut. 2. Feed the workpiece with the grain, or turn workpiece around. 3. Sharpen the blades.
Grain is rough / raised.	1. Blades are dull. 2. Cut is too heavy. 3. Moisture content is too high. 4. Cutterhead bearings are damaged.	1. Sharpen the blades. 2. Review proper depth of cut. 3. Dry the wood. 4. Replace the bearings.
Uneven depth of cut from side to side.	1. Blade projection is not uniform. 2. Cutterhead is not levelled to planer bed.	1. Adjust the blade projection. 2. Level the cutterhead to table.
Board thickness does not match depth of cut scale.	1. Depth of cut scale is incorrect.	1. Adjust the depth of cut scale.
Chain is jumping.	1. Sprockets are misaligned. 2. Sprockets are worn.	1. Align the sprockets. 2. Replace the sprockets.
Tool will not start / restart.	1. Tool is not plugged in. 2. Motor failure. 3. Wire is loose. 4. Overload reset has failed. 5. Motor starter failure.	1. Check the power source. 2. Check the motor. 3. Have the motor checked by an authorised service agent. 4. Allow machine to cool down and restart. 5. Have motor starter checked by authorised service agent.
Repeated circuit tripping resulting in motor stoppage.	1. Extension cord is too long or too thin. 2. Blades are too dull. 3. Low voltage running.	1. Use a shorter or thicker extension cord. 2. Sharpen or replace the blades. 3. Check the voltage.
Poor feeding of timber.	1. Planer table is dirty. 2. Feed roller is damaged. 3. Sprocket is damaged. 4. Gear box malfunctions.	1. Clean off the pitch and residue, and lubricate the planer table. 2. Replace the feed roller. 3. Replace the sprocket. 4. Check the gear box.
Workpiece is jammed.	1. Inadequate blade setting height.	1. Set the blade to the correct height.

AUTHORISED SERVICE CENTRES

ACD PLANT LTD

145 Southbank Road
Coundon
Coventry, West Midlands
CV6 1FG
Phone: 02476 594348
Email: danmcgungie@acdplant.co.uk
Web: www.acdplant.co.uk

CBS Power Tools Limited

Unit 4, V P Square
Storeys Bar Rd, Fengeate
Peterborough, Cambridgeshire
PE1 5YS
Phone: 01733 343031
Email: steve@cbspowertools.co.uk
Web: www.cbspowertools.com

C D Powertools

76 Old Road
Churnwell Morley, Leeds
LS27 7TH
Phone: 0113 2718494
Email: info@cdpowertools.co.uk
Web : www.cdpowertools.co.uk

C J Sinclair Limited

44 Victoria Road
St Peters
Broadstairs, Kent
CT10 2UG
Phone: 01843 869400
Email: repairs@cjsinclairtd.co.uk
Web: www.cjsinclairtd.co.uk

ToolTech Industrial Equipment

227 E Dunhill Road, Macosquin
Coleraine, Co Londonderry
BT514LQ
Phone: 028 70359493
Email: john@toolttech.org.uk

Powertech Ind Ltd

Unit 2C, Ellison Road
Norwood Ind, Killamarsh
Sheffield, South Yorkshire
S21 2JG
Phone: 01142 474080
Email: stores@powertech-industrial.co.uk
Web: www.powertech-industrial.co.uk

RYCKO Technical Services LTD

104 Green Lane
St Albans, Herts
AL3 6EX
Phone: 08458 678790
Email: info@ryckotechnical.com
Web: www.ryckotechnical.com

For an updated list of authorised service centres, visit <http://uk.ryobitools.eu/header/service-and-support/service-agents>.

GUARANTEE

In addition to any statutory rights resulting from the purchase, this product is covered by a guarantee as stated below.

1. The guarantee period is 24 months for consumers and commences on the date when the product was purchased. This date has to be documented by an invoice or other proof of purchase. The product is designed and dedicated to consumer and private use only. So there is no guarantee provided in case of professional or commercial use.
2. There is, in some cases (i.e. promotion, range of tools), a possibility to extend the warranty period over the period described above using the registration on the www.ryobitools.eu website. The eligibility of the tool is clearly displayed in stores and/or on packaging. The end user needs to register his/her newly-acquired tools online within 8 days from the date of purchase. The end user may register for the extended warranty in his country of residence if listed on the online registration form where this option is valid. Furthermore, end users must give their consent to the storage of the data which are required to enter online and they have to accept the terms and conditions. The registration confirmation receipt, which is sent out by e-mail, and the original invoice showing the date of purchase will serve as proof of the extended warranty. Your statutory rights remain unaffected.
3. The guarantee covers all defects of the product during the warranty period due to defaults in workmanship or material at the purchase date. The guarantee is limited to repair and/or replacement and does not include any other obligations including but not limited to incidental or consequential damages. The warranty is not valid if the product has been misused, used contrary to the instruction manual, or being incorrectly connected. This guarantee does not apply to
 - any damage to the product that is the result of improper maintenance
 - any product that has been altered or modified
 - any product where original identification (trade mark, serial number) markings have been defaced, altered or removed
 - any damage caused by non-observance of the instruction manual
 - any non CE product
 - any product which has been attempted to be repaired by an non-qualified professional or without prior authorization by Techtronic Industries
 - any product connected to improper power supply (amps, voltage, frequency)
 - any damage caused by external influences (chemical, physical, shocks) or foreign substances
 - normal wear and tear of spare parts
 - inappropriate use, overloading of the tool
 - use of non-approved accessories or parts
 - carburettor after 6 months, carburettor adjustments after 6 months
 - power tool accessories provided with tool or purchased separately. Such exclusions include but is not limited to screw driver bits, drill bits, abrasive discs, sand paper and blades, lateral guide
 - components (parts and accessories) subject to natural wear and tear, including but not limited to carbon brushes, chuck, power cord, auxiliary handle, sanding plate, dust bag, dust exhaust tube
4. For servicing, the product must be sent or presented to a RYOBI authorized service station listed for each country in the following list of service station addresses. In some countries your local RYOBI dealer undertakes to send the product to the RYOBI service organisation. When sending a product to a RYOBI service station, the product should be safely packed without any dangerous contents such as petrol, marked with sender's address and accompanied by a short description of the fault.
5. A repair/replacement under this guarantee is free of charge. It does not constitute an extension or a new start of the guarantee period. Exchanged parts or tools become our property. In some countries delivery charges or postage will have to be paid by the sender.
6. This guarantee is valid in the European Community, Switzerland, Iceland, Norway, Liechtenstein, Turkey and Russia. Outside these areas, please contact your authorized RYOBI dealer to determine if another warranty applies.

DECLARATION OF CONFORMITY

Techtronic Industries GmbH
Max-Eyth-Straße 10, 71364 Winnenden, Germany

Herewith we declare that the product

Thickness planer with anti-kickback

Brand: Ryobi

Model number: RAP1500G

Serial number range: ##### - #####

is in conformity with the following European Directives and harmonized standards

2006/42/EC, 2014/30/EU, 2011/65/EU,

EN 55014-1:2006+A1:2009+A2:2011; EN 55014-2:1997+A1:2001+A2:2008;

EN 61000-3-2:2014; EN 61000-3-3:2013;

EN61029-1:2009+A11:2010; EN61029-2-3:2011

Notified body 2140, DEKRA Testing and Certification GmbH Enderstraße 92b 01277 Dresden Germany, has carried out EC type approval, and the certificate no. is XXXXXXXX.XXXXX

Andrew John Eyre (BEng, CEng, MIET)
Vice President, Regulatory & Safety
Winnenden, **Jul. 31, 2013**

Authorised to compile the technical file:

Alexander Krug, Managing Director

Techtronic Industries GmbH

Max-Eyth-Straße 10, 71364 Winnenden, Germany



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Max-Eyth-Straße 10,
71364 Winnenden, Germany