



PT255
PLANER THICKNESSER
OPERATION AND MAINTENANCE
INSTRUCTIONS



Designed & Manufactured in the U.K.

MACHINE SERIAL NO.

KEEP SAFE FOR FUTURE USE



DECLARATION OF CONFORMITY ORIGINAL

Business Name and Full Address of Manufacturer

M. Sedgwick & Co. Ltd. - Stanningley Field Close, Leeds LS13 4QG

Description of product (Commercial Name)

Model PT255 Planer Thicknesser

Function, Model, Type

Function: Woodworking Machine
Type: Planer Thicknesser

Model: PT255

Standards Used

BS EN 861 - 2007 + A2 2012

Place of Declaration

M. Sedgwick & Co. Ltd.

Date of Declaration 09 May 2017

Name, Address and ID No of Notified Body

TUV SUD BABT Octagon House, Concorde Way, Segensworth North, Fareham PO15 5RL
NB # 0168

No of EC Type Examination Certificate

MAC000012 i01

Declaration

I declare that the machinery fulfils all the relevant provisions of the following Directives:- Machinery Directive 2006/42/EC, Electromagnetic Compatibility Directive 2014/30/EU

Person Empowered to Draw Up Declaration

Name: G. Sedgwick

Position: Managing Director Signature:

List of Contents

Introduction: Design, Purpose and Technical Specification

1.0 Safety

1.1 Personal Protective Equipment

1.2 Residual risks

2.0 Machine Handling

2.1 Positioning

2.2 Storage

2.3 Disposal

3.0 Connection to a Dust Extraction System

3.1 Chip Extraction Hood

4.0 Electrical Installation

5.0 Switchgear

5.1 The Padlockable Isolator

5.2 Start/Stop Buttons

5.3 Circuit Protection

5.4 Optional Emergency Foot Operated Stop Switch

6.0 Guarding

6.1 The Front Cutterblock Guard

6.2 The Rear Cutterblock Guard

6.3 The Rear Drive Guard

6.4 The Anti Kickback Fingers

7.0 The Cutterblock

7.1 Replacing the planer knives

7.2 Optional Monobloc with Tersa Cutters

8.0 Preparations for machining

8.1 Pilot Checks

9.0 Surface Planing

9.1 Flatting

9.2 Planing Wide Boards

9.3 Planing Bowed Boards

9.4 Edge Planing (Squaring)

9.5 Bevelling or Chamfering

9.6 Push Blocks and Push Sticks

10.0 Thicknessing

11.0 Diagnosing Faults in Planing

12.0 Limitations of Use and Safe Working Practices

12.1 Noise Reduction

12.2 Warning Labels

12.3 Machine Data Plates

13.0 Maintenance

13.1 Lubrication

13.2 Cutterblock & Bearings

13.3 Vee Belt and Pulleys

13.4 Adjusting The Thicknessing Feed Rollers

13.5 Planer Tables

13.6 The Fence

13.7 Brake Motor Installation & Maintenance

14.0 Parts Illustration

14.1 Spare Parts List

15.0 Wiring Diagrams

Introduction

This instruction manual is designed for you in accordance with current UK regulations and EU law, in particular the European Machinery Directive 2006/42/EC. It describes how to operate the machine properly and safely. This manual is an integral part of the machine and must therefore be kept accessible at all times. If the machine is transferred to another party, a copy of the manual must accompany it.

Before beginning any work on the machine, ensure that this manual has been read in its entirety and fully understood. All those appointed to work on or with the machine must have fully read and understood this manual together with relevant local health and safety requirements (including with respect to workplace safety and operation of machinery) before commencing any work. This requirement must be met even if the appointed person is familiar with the operation of such a machine or a similar one, or has been trained by the manufacturer. The manufacturer cannot be held liable for damages resulting from a failure to follow the instructions set out in this manual. Should you have any questions on this manual, please contact the manufacturer.

Design and Purpose

The PT Planer Thicknesser is a dual-purpose machine designed to plane wood and similar materials by means of a horizontally rotating cutterblock. When surfacing, the workpiece is passed over the top of the cutterblock and the lower surface is planed. The infeed table of the surface-planing unit is adjustable in height. When planing material to a set thickness, the wood is passed underneath the cutterblock, supported by the thicknessing table, and the top surface is planed.

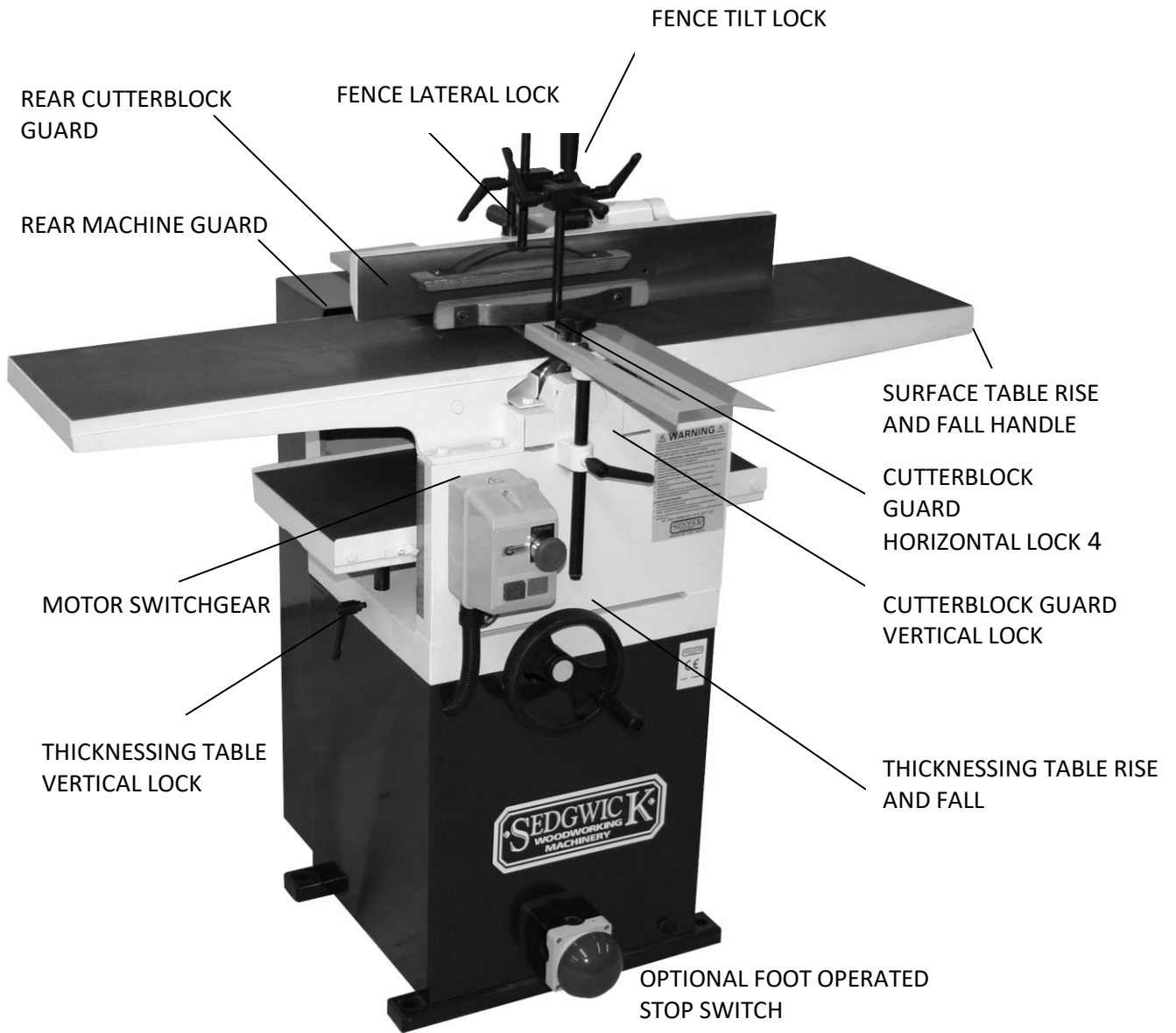
The following operations can also be performed on the machine, and guidelines on how these should be performed safely are provided in this manual: flattening, edging, chamfering and bevelling.



The machine is not designed for any other purposes except as set out above. The operator of the machine shall be solely liable for any damage that results from improper use of the machine.

The machine should not be modified in any way without the written consent of the manufacturer. Please also refer to Section 14.1 regarding use of unauthorised spare parts.

Illustration



Technical Specification

SURFACE CAPACITY	255 mm
THICKNESSING WIDTH	255 mm
THICKNESSING DEPTH	180 mm
SURFACE TABLE LENGTH	1200 mm
INFEED TABLE LENGTH	600 mm
SURFACE TABLE HEIGHT	830 mm
THICKNESSING TABLE LENGTH	600 mm
CUTTERBLOCK DIAMETER	80 mm
CUTTERBLOCK KNIVES	3
CUTTERBLOCK SPEED	4000 rpm
FEED ROLLER DIAMETER	40 mm
FEED SPEEDS	5.5 m/min
FENCE SIZE	550 x 90 mm
TILTING ANGLE OF FENCE	0° - 45°
CHIP EXTRACTION OUTLET DIA.	125mm
VOLTAGE / FREQUENCY	3 PHASE + EARTH; 400/230 V - 50/60 Hz 1 PHASE + N + EARTH ; 230V / 50/60 Hz
MOTOR RATING	1.5Kw
MOTOR FULL LOAD CURRENT IN AMPS	3 PH 3.6A 1 PH 9.0A
STARTING CURRENT IN AMPS	3 PH 21.6A/ph 1 PH 56.0A
REQUIRED FUSE SIZE IN AMPS	3 PH 16A/ph 1 PH 25A
REQUIRED CABLE SIZE	3 PH 2.5 mm ² 1 PH 2.5 mm ²

Dimensions and weight of the machines are set out in section 2.0 below (Machine Handling).

1.0 Safety

To ensure that this machine is operated safely, machinists must be properly trained and must read, understand and observe the requirements of this manual. Hazards may arise if the machine is used by untrained individuals or if it is used for purposes other than for those for which it was designed. The machine should be inspected prior to each operation and the machine should not be used unless so inspected. Operators should also have regard to general health and safety advice on safe machine operation.

This manual is designed to ensure that the operators have clear guidance on how to operate and maintain the machine, including in relation to transportation, positioning and environmental conditions. The machine should not be altered in any way without the prior written consent of the manufacturer. Only parts made by the manufacturer should be used in this machine and to do otherwise, may compromise the safety features of this machine.

Refer also to Section 12 (Limitations of Use and Safe Working Practices)

1.1 Personal Protective Equipment (PPE)

Operators of the machine should use observe Health & Safety guidance as to use of PPE when operating the machine, in particular:

- **Use of protective clothing** - wear tear-resistant sturdy overalls;
- **Use of protective footwear** - wear safety shoes with protective toes and sturdy grips which are also penetration resistant;
- **Gloves** - avoid wearing gloves when operating the machine to avoid the gloves getting caught;
- **Hair** - persons with long hair should tie their hair up and wear a hairnet (to avoid the risk of hair being tangled on the machine); and
- **Ears** - wear hearing protection such as earplugs or earmuffs to avoid exposure to noise.

1.2 Residual Risks

The machine is considered operationally safe when used in accordance with this manual however the following residual risks should be considered and adequate steps taken to ensure such risks are minimised:

- The machine is powered by electricity. Before carrying out any maintenance, cleaning or repair work to the machine, ensure the machine is switched off and cannot be inadvertently switched on again. If work is required on any electrical component of the machine, ensure that the voltage supply is completely isolated. ***Do not remove any safety devices or alter them to prevent them from functioning correctly.***



Electrical energy can cause serious risk to health. Damaged or broken electrical insulation materials (e.g. cabling) or individual components (e.g. the motor/starter) can cause electrical shocks/death.

- Risk of injury from contact with the planer knives - take care and observe instructions on changing the knives;

- Risk of injury through accidental contact with the rotating cutterblock - ***do not attempt to remove any guarding from the machine during machining;***
- Risk of injury due to ejected workpieces;
- Risk of injury from workpiece kickback when surface planing;
- Hearing damage as a result of exposure to high noise levels - take precautions;
- Damage to lungs due to the inhalation of dust, which can vary when working with different types of wood/wood with varying moisture content.

Always stop the machine when it is unattended.

2.0 Machine Handling

The following section offers a guide to transporting, assembling and installing the machine, which should be done following an adequate risk assessment. Movement, adjustment or installation of the machine should not be attempted without proper training in the handling of heavy machinery.



There is a risk of physical injury when moving the machine. The machine could be damaged or written-off if not handled properly during transportation.

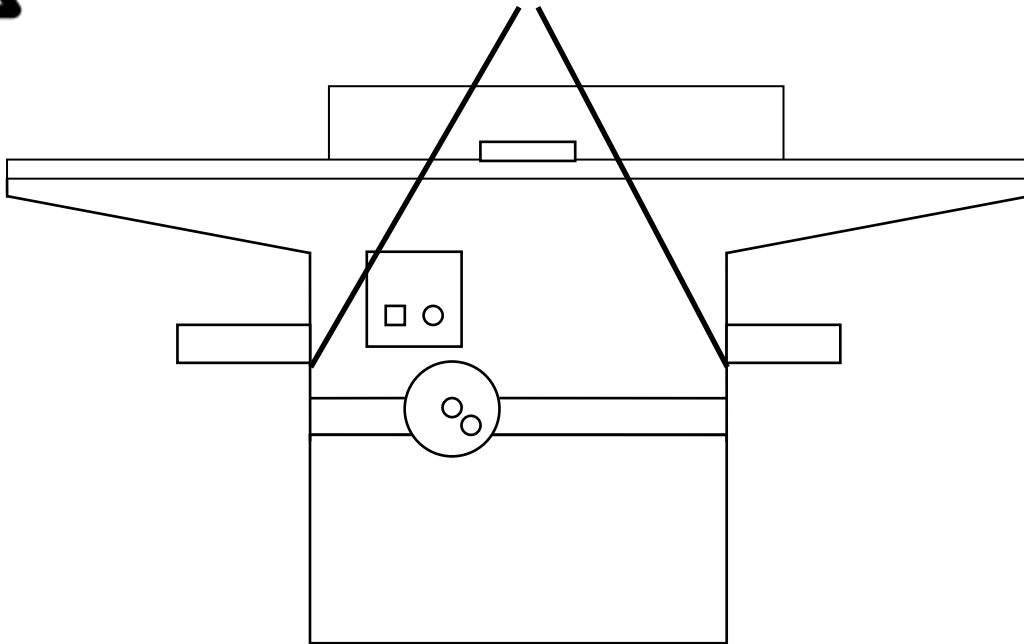
The machine dimensions and weights are as follows:

DIMENSIONS - Length x Width x Height	1400 x 800 x 1160
MACHINE WEIGHT	170 Kg
Total Weight, including Packing Crate	262 Kg

Always use a sling or hoisting device equipped with safety hooks within the safe working load of the machine weight. Check the sling is in good condition before starting the handling operation. Before lifting, place a piece of wood onto the thickening bed, sufficiently long to lock up against the cutterblock (ensure that it does not foul the knives) and both feed rollers. Wind the bed up using the Thickening Rise and Fall Handwheel until the wood is locked firmly in position. Sling underneath the machine's thickness table extension rollers. Do not walk or stand under the machine during lifting.



Never lift the machine by its planer tables. To do so would seriously damage their alignment.

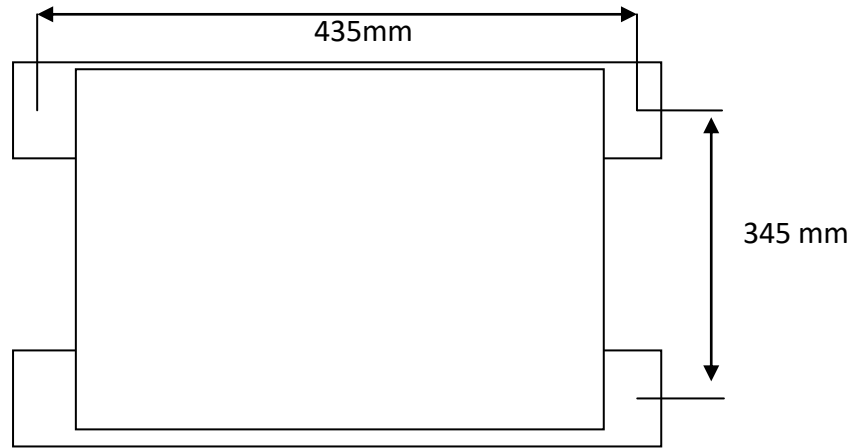


Upon arrival, check that the machine has not suffered any damage during transit. Reuse or recycle any packaging materials, e.g. wooden pallet, and where not possible to do so, dispose of them in accordance with local refuse requirements.

2.1 Positioning

Around every aspect of all woodworking machines there should be clear and unobstructed space to enable the work being done at the machine to be done without risk of injury to operators. Consider the position of the machine, with regard to other fixed equipment and walls.

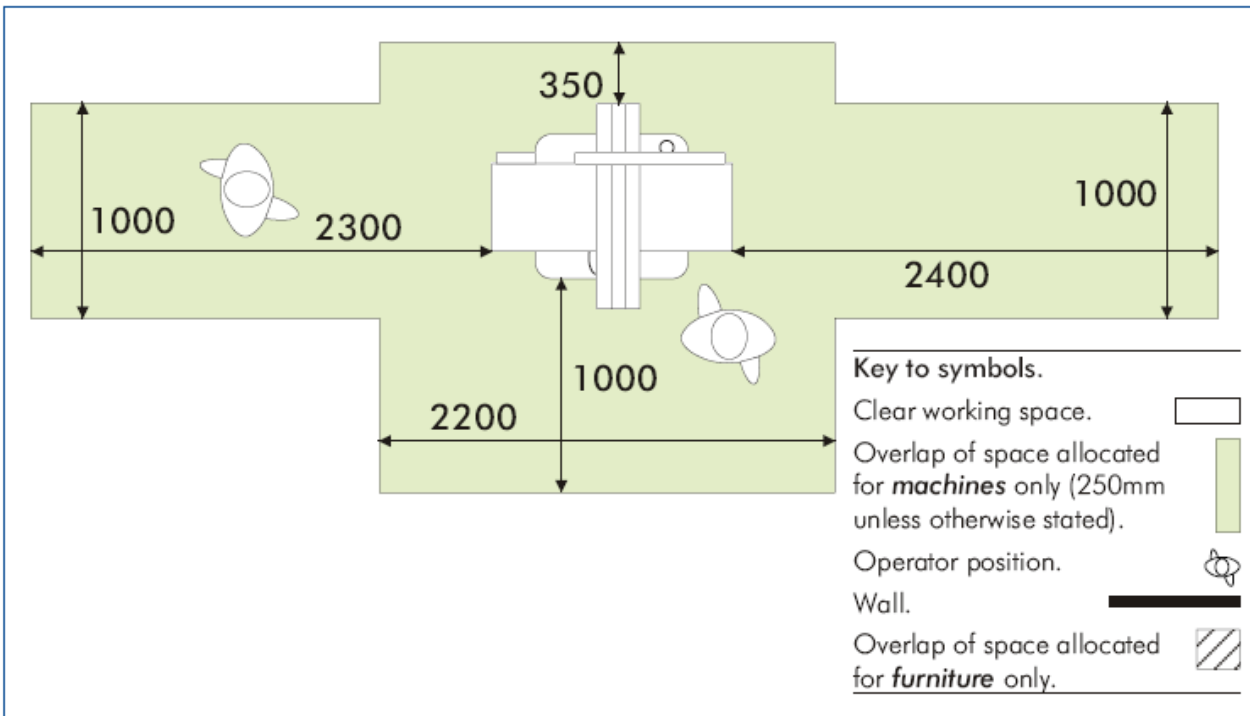
The chosen floor space on which to site the machine should be in good and level condition to enable the machine to be anchored at four points, and should be free from material e.g. chips. Holes for M10 foundation bolts (not supplied) are provided in the machine base. Level the tabletop by packing under the feet of the base as required. The following drawing shows a layout of the anchor openings:



You must ensure that there is an ample power supply available to operate the machine, together with good lighting and ventilation. Do not operate or store the machine outdoors. Ensure the environment for operating woodworking machinery is kept clean and tidy and damp-free. Only operate the machine in ambient temperatures.

Remove the protective grease using turpentine or paraffin. Do not use any solvent, petrol or gas oil, which might dull or oxidise the paintwork. Lightly oil cleaned surfaces to prevent rusting.

Safe Working Distances



2.2 Storage

Keep the machine sealed in its original packaging until required for assembly/installation and be sure to observe the machine handling advice on the outside of the packaging.

Store under the following conditions:

- Store indoors in a dry and dust-free environment;
- Do not expose to toxic substances or direct sunlight;
- Store in ambient temperatures and ensure environment is not damp; avoid exposure to condensation; and
- If storing for a period of several weeks, apply a coat of oil to all machine parts that might rust before storing. Always inspect condition of machine before operating for the first time after being in long-term storage.

2.3 Disposal

If disposing of the machine, separate all components into piles of the same material. The main structure is made of cast iron and steel and can therefore be safely dismantled and recycled. Always comply with local environmental regulations when disposing of machinery.



Be aware of your environmental obligations. Carefully consider the disposal of any electrical components e.g. motors, starters, and ensure any lubricants etc. are treated as hazardous waste and disposed of safely in accordance with environmental laws.

3.0 Connection to a Dust Extraction System



Exposure to dust can damage lung health and this machine must be connected to a compatible dust extraction unit using a suitable size and grade of vacuum hose before operation.

Wood dust can be harmful to health by inhalation and skin contact and concentrations of small dust particles in the air can be a hazard (wood dust is highly combustible and can spontaneously explode). Wood dust should be managed by a dust extraction system and the machine must be connected to a vacuum system with sufficient capacity, to generate required pressure and air speed.

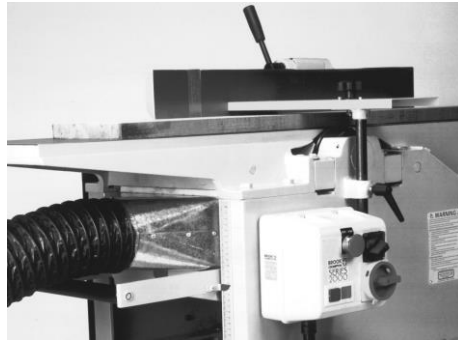
Build up of dust and shavings/chips around the machine should be avoided by regular removal. Health & Safety Executive Guidance is available on how to assess possible risks to health associated with wood dust particularly when machining hardwoods. Specialist help and information can be obtained from P&J Dust Extraction - www.pjdust.co.uk / 01795 582600.

The minimum recommended air volume required to effectively exhaust this machine at the recommended speed of 20m/sec is 775 m³/h.

3.1 Chip Extraction Hood

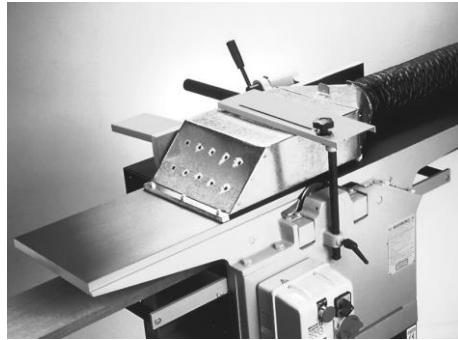
A chip extraction unit is supplied as a standard feature of this machine, and guidance for its use is as follows:

For Surfacing



The hood is designed to sit on the thickening bed, and should be inserted hollow side up, with the exhaust outlet below the fixed outfeed table. The lug on the underside of the hood, attached to the exhaust outlet, should locate against the end of the thickening bed, with care being taken that the anti-kickback fingers are not fouled when the bed is wound up.

For Thickening



Position the fence to the rear of the surfacing table. Place the hood centrally over the cutterblock, hollow side down, with the exhaust outlet pointing toward the in-feed table rise and fall handle. Bring the bridge guard down over the hood and lock it in position between the two welded straps.

The diameter of the connection point is 125mm and reducers are not recommended.

4.0 Electrical Installation



Electrical wiring should only be carried out by a fully qualified electrician taking in account the following safety instructions.

Please follow these directions when connecting to the mains:

- The motor and control gear have been wired in at the factory and tested before despatch. Do not open the switch box on the machine without the written consent of the manufacturer. Violating this stipulation could invalidate the machine's warranty. All that is required is to connect the power supply to the starter from your isolator.
- First check that the supply details on the motor nameplate correspond with the site supply. If the motor is operated on a voltage outside (plus or minus 6%) of the spot voltage, then premature failure will occur.
- Refer to the machine specification sheet at the front of the operator's handbook to establish the correct size of cable required. Undersize cable will lead to voltage drop at the motor terminals.
- Do not attempt to wire single-phase machines into a 13-amp plug socket.
- Ensure that there is no voltage at the supply lead before connecting.
- It is important to check rotation of the cutterblock, which should be clockwise when viewed from the starter side of the machine. If necessary you can change the rotation by swapping any two brown wires on the supply side.

Should you encounter problems on start-up check for the following likely causes:

PROBLEM	LIKELY CAUSE	CORRECTIVE ACTION
Fails to start	Main supply switched off	Check main switch
	Overload tripped	Reset overload
	Fuse blown	Check and replace fuses (check all three on three phase)
	Loose wire	Check all connections
	Coil failure	Check circuit of hold in coil
Overload trips during starting	Low voltage	Check supply-voltage both on no load and on moment of switch on. Allowed variation +/-minus 6%
	Low voltage	Check that correct cable size has been used to install the machine. Change if necessary.
	Low voltage	Long runs of cable can cause voltage drop. Check that voltage is not outside the minus 6% tolerance. Re-site the machine nearer supply or increase the cable size to compensate.
	Three phase machines only: 1 fuse blown	It is possible for 3 phase machines to operate with only 2 phases of the supply. This will create an overload situation and will eventually cause premature failure, this is known as single phasing. Check all fuses.
	Machine jammed	Check spindle is free to rotate, clean as necessary.
Slow acceleration	Low voltage	For a motor (particularly a single-phase permanent capacitor motor) to reach its required starting torque a healthy line voltage is essential.

5.0 Switch Gear

5.1 The Padlockable Isolator

When this switch is in the OFF position, the machine is effectively isolated from the electrical supply to allow personnel safe access for maintenance or repair work and to prevent dangerous restarts. In order to prevent unauthorised use of the machine the switch can also be secured in the OFF position using a padlock.

To operate the machine for the first time, turn the isolator to the ON position.



5.2 Start / Stop Buttons

The cutterblock motor is then started by pushing the green (power on) button on the starter panel, and stopped using the red (power off) button. The mushroom headed lock-off stop switch, once pressed will remain locked in the off position. To restart the machine it is necessary to release the off button by twisting it in a clockwise direction. Carry out a functional test of this button works after installation and prior to first machining.

5.3 Circuit Protection

In case of a mains failure, the starter is fitted with no volt release protection and will not restart without being switched on again. On restart, always ensure that the brake is released. The starter is also fitted with an overload protection device. An electrical overload occurs where an electric motor is subjected to a greater load than it was designed for. This can be caused by short circuit, by incorrect installation or by misuse (including poor machine maintenance). The in-built breaker will therefore help prevent damage to the motor should such a situation occur. The motor cannot be restarted until the breaker has reset itself.

5.4 Optional Emergency Foot Operated Stop Switch

This switch is provided for use in emergency situations only. We do not recommend that it is used in lieu of the mushroom headed lock-off stop switch on the front of the starter panel.



6.0 Guarding

All guards should be checked at the beginning of each working shift for damage etc.

6.1 The Front Cutterblock Guard

The yellow pillar mounted guard at the front of the machine is known as the bridge guard. The bridge guard covers the cutterblock when surface planing. It is designed for use when surfacing, and it is important that all operators are familiar with its use. Accidents can occur where the guard is not properly adjusted or, in most cases, is not mounted on the machine. The guard is provided with two hand locking arrangements, one for the vertical plane and one for the horizontal. The former is positioned on the front frame of the machine, the latter on the guard's mounting block. The pillar mounting is grooved to receive the 8mm vertical adjustment locking-lever, and the guard has been set in the factory so that when this is the case the guard then sits centrally over the axis of the cutterblock.

This guard should be maintained through regular cleaning and lubrication, and if it becomes distorted through misuse then it should be replaced.

6.2 The Rear Cutterblock Guard

To the rear of the fence a hinged guard is mounted which is known as the rear cutterblock guard. This is designed to guard that part of the cutterblock that is on the side of the fence remote from the bridge guard. **Do not remove the rear cutterblock guard from the fence.**

6.3 The Rear Drive Guard

The rear drive guard should only be removed for maintenance and cleaning.

6.4 The Anti-Kickback Fingers

The anti-kickback fingers are an essential safety feature of the machine when thicknessing. Their purpose is to drop and lock into the face of the workpiece in the event of kickback, thereby preventing it being ejected from the machine.

The movement of the fingers may in time become restricted due to a build-up of waste, and their freedom to move freely should be checked at least once every working shift and cleaned as necessary to ensure that the fingers fall freely under their own weight.

7.0 The Cutterblock

The concept of the TERSA cutterblock is to allow the automatic clamping of the cutters using centrifugal force. The exactness of the position is $\pm 0.02\text{mm}$, guaranteed on all the sharp edges and on the whole length of the planing shaft. For correct use of the tool it is recommended that a suitable product is used to occasionally clean the support runner of the cutters.

To replace the knives on your PT the following guidelines should be followed:

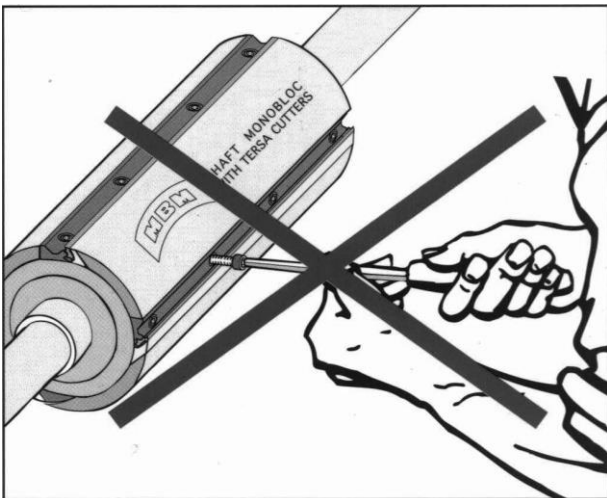


Planer knives are razor sharp. Please handle them with the utmost care, especially when turning the cutterblock by hand.

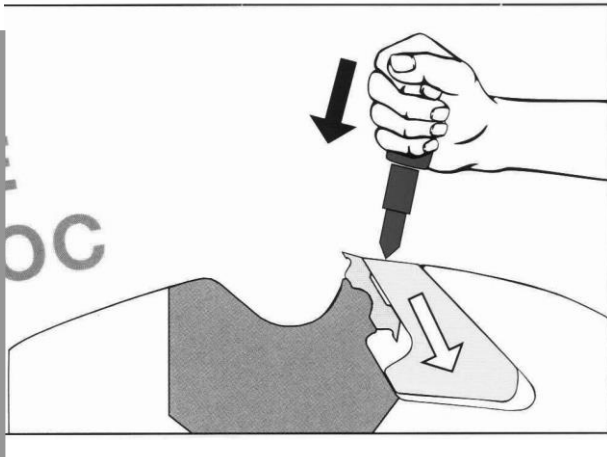
First isolate the machine at the mains. It is not sufficient just to shut off power at the machine. Next put up a notice saying “cutters being changed”, in case you have to leave the machine for any reason and someone else might try to use it not knowing the knives are loose. Clean off any chippings and dust from the machine tables and move the fence and front cutterblock guard out of the way.

Points to check on the cutterblock are

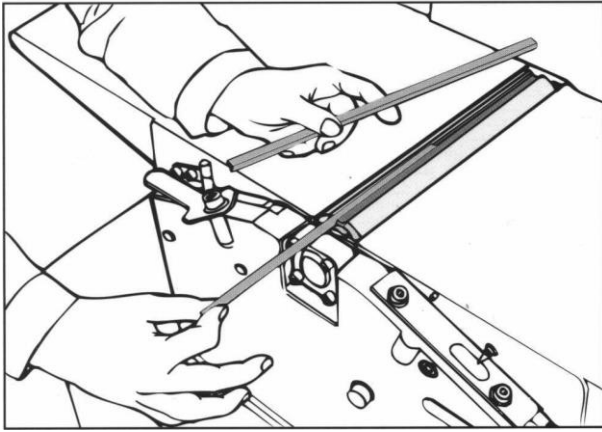
1. Excessive wear of the block surface.
2. Damage or distortion to the block.
3. Damage to the threads on the retaining screws. Rounded corners within the allen heads.
4. The condition of the bearings - check for movement and listen for noisy bearings.



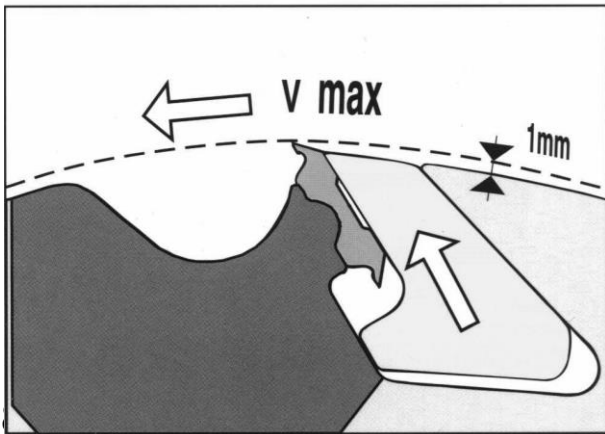
AT NO STAGE SHOULD YOU ATTEMPT TO UNTIGHTEN THE CUTTERBLOCK SCREWS.



TO DISENGAGE THE CUTTERS WITHIN THE BLOCK FIRST DISCHARGE THE GIBS USING THE BRASS HAMMER PROVIDED.



SLIDE THE BLUNT KNIFE FROM OUT OF THE SIDE OF THE CUTTERBLOCK AND EITHER REINSERT IT WITH AN UNUSED SIDE UP OR REPLACE IT WITH A NEW ONE.



THE CUTTERS WILL AUTOMATICALLY CLAMP ON START UP. IN ORDER TO ENSURE THAT THEY ARE CORRECTLY SEATED THICKNESS A 300 OR 410mm WIDE PIECE OF TIMBER INTENSIVELY ACROSS THE FULL CUTTING SURFACE.

In preparation for all processes, examine the workpiece carefully for faults that may affect the machining process, particularly foreign bodies such as nails, staples etc.. There are many different kinds of timber, with many different working characteristics. A skilful wood machinist must consider the grain direction, the shape of the timber, whether it is bowed or twisted, and the positions of defects such as knots, wavy edges etc. He should also consider any other peculiar characteristics of the material, such as salicaceous or calceous deposits, which could cause severe blunting and chipping of the cutters. If a number of abrasive pieces are to be planed, use the ends of the cutter rather than the middle if possible.

8.1 Pilot Checks

Details on the correct setting of the guards, fence etc., together with the use of the necessary safety devices, are detailed in the following sections of this manual. Prior to operation however the following checks should be carried out (after having first isolated the machine):

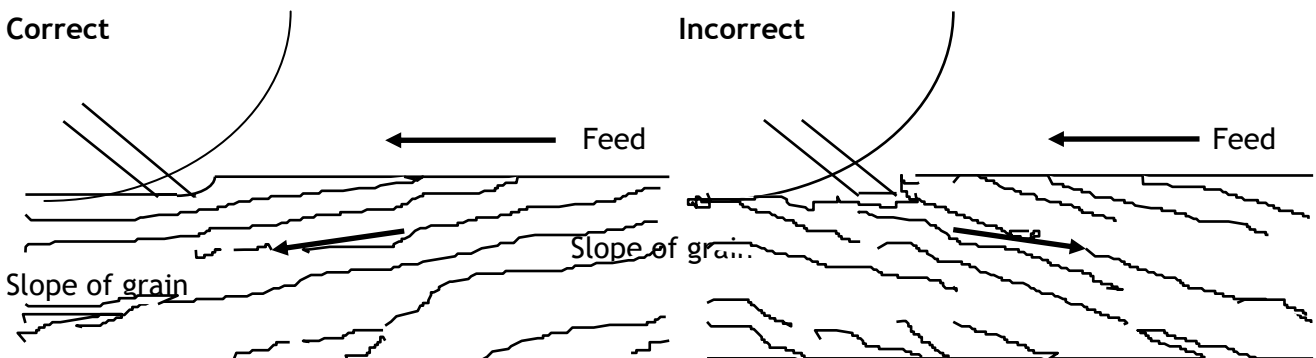
1. The blades are not cracked or distorted;
2. The cutterblock guards are secure;
3. The timber is free of grit, nails or other foreign bodies; and
4. The tables are free of spanners, rules etc., and that all tools are returned to their rightful place.

9.0 Surface Planing

Caution: Ensure that all stock is clear of the blades before start-up.

When surfacing, the depth of cut is set by adjusting the height of the infeed table, using the Surface Table Rise and Fall Handle. The outfeed table is already set level with the cutting circle of the cutterblock. The sawn finish and the straightness of the timber determine the amount of cut required. **For normal working it is good practice to set the amount of cut to 1.5mm.** When planing rough sawn or bowed timber the amount of cut can be increased to 3mm, so as to obtain a clean finish with one pass over the cutters.

The timber should be fed in with consideration to the grain direction. The following illustration shows how timber fed through the cutters against the grain will cause it to tear out, producing a ragged finish. **Always feed with the grain running down towards the front of the table when in the planing mode, and the opposite when thicknessing.**



9.1 Flattening

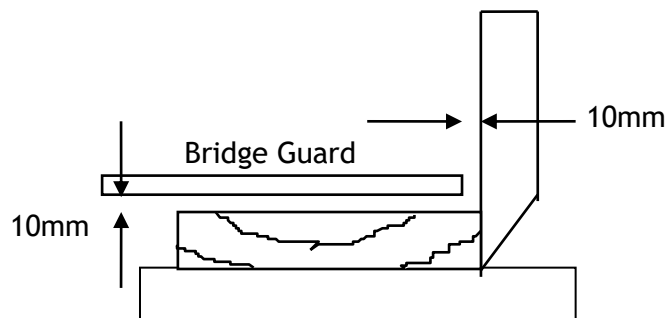
Workpiece dimensions:

Length	< 250mm	Only work with a push stick
	>1500mm	Extn rollers or 2 nd person reqd
Width	Max 255mm	
Thickness	Min 10mm	



If a workpiece is smaller than 10mm it may split if the depth of cut is too large (4mm). The finished planed workpiece must not be thinner than 6mm.

When flattening, the wood is passed below the bridge guard, which should be within 10mm of the timber and 10mm of the fence, as shown below:

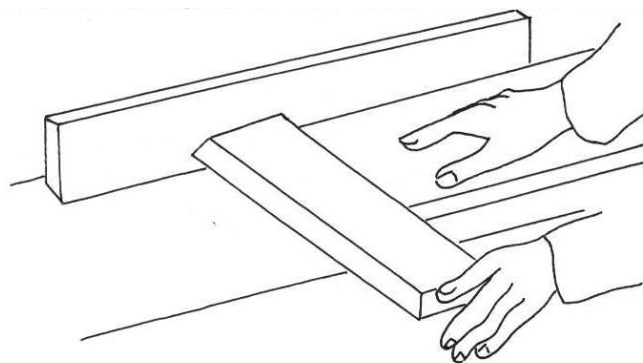


Workpieces longer than the in and out-feed surfacing tables should be supported, e.g. by extension tables or roller supports. Unless very thick material is being planed, flattening should be the safest of operations on a hand fed planer, provided that all necessary precautions are taken. In an attempt to justify the incorrect use of the bridge guard (many wrongly pass the timber between the end of the guard and the fence) machinists often assert that the left hand has to jump the guard as the wood is passed over the cutters, the consequent interruption in the progress of the cut preventing the production of accurate work. It is also claimed that the left hand must exert pressure on the wood immediately over the cutterblock. Only in the case of flattening short pieces of wood might it be necessary to pass the wood between the end of the bridge guard and the fence in order to maintain adequate control. In this event, the wood should be fed up and over the cutters by means of a push block as described in the relevant section of this manual. Small pieces are the most difficult to control, so consider, do you really need to face and edge them?

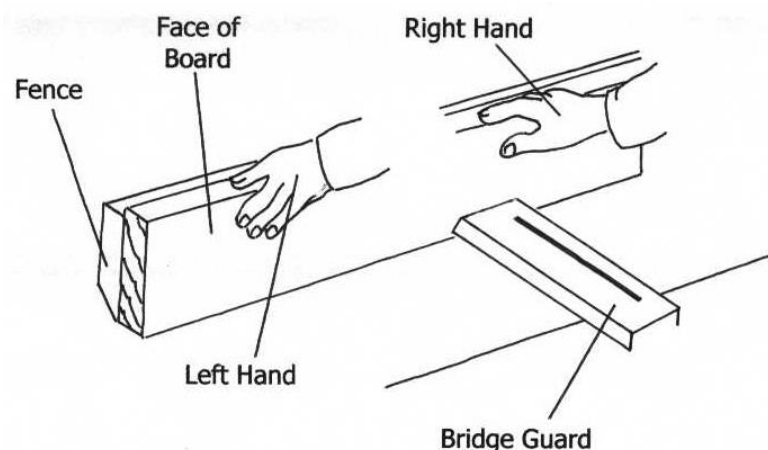
The HSE has published guidelines on the ergonomically correct use of hand fed planers, some of which is reproduced here:

Hand positioning

Preparatory: Using the left hand, with the guard resting on the outfeed table, adjust the guard horizontally up to the fence and then lift the guard to just accommodate the thickness of the workpiece. Push the workpiece with the right hand only a little under the guard and let the latter rest upon the workpiece. This stage should not be carried out while the cutterblock is in motion.



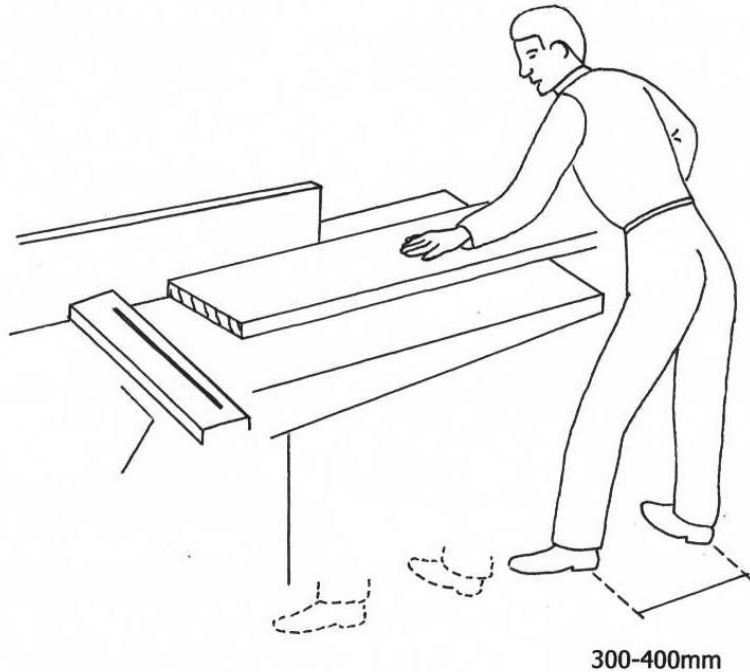
The work should be fed by the right hand, and if the knives are sharp and the tables are properly set the main functions of the left hand are to assist feeding by drawing the wood along the delivery table towards the end of the cut, and to remove the planed piece.



When flattening a workpiece of more than 75mm thickness the bridge guard must be lowered on to the table and adjusted horizontally to the workpiece. The workpiece should be straightened, with flat hands beside the guard, along the fence.

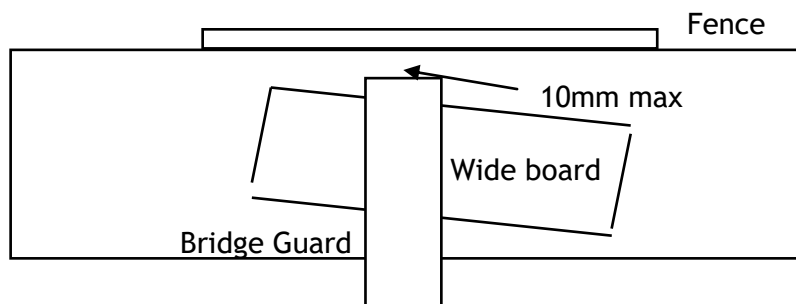
Foot positioning

It is important that a good firm and balanced base is made and maintained by the feet during planing. The feet should move forward with the work piece giving good control of the work piece as illustrated in positions 1 and 2:



9.2 Planing Wide Boards

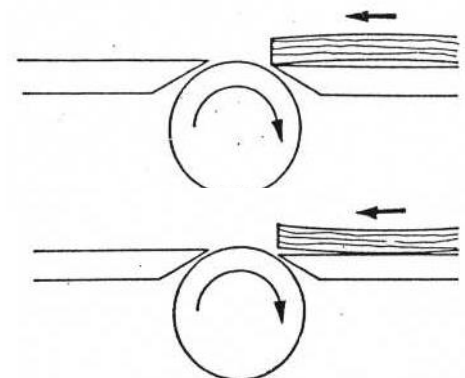
Wide boards should be fed at an angle to reduce initial impact and the risk of throwback.



9.3 Planing Bowed Boards

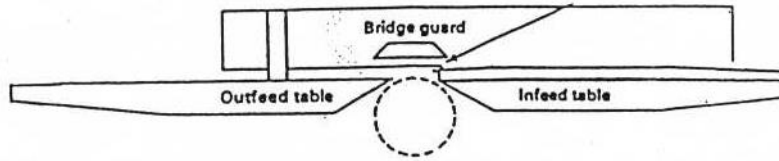
Slightly bowed boards may be planed by the method shown below, but care must be taken to ensure two point contact on the infeed table to avoid throwback. Badly bowed boards should not be planed in this method and should be cut up for jobs requiring shorter lengths.

Always plane the board hollow side down, as shown

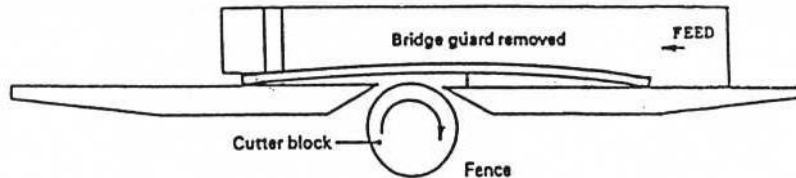


Working round side down causes timber to rock, thus making it very difficult to obtain a straight parallel face.

The bridge guard must always be in position when planing bowed boards, as shown:



DO NOT operate the surface planer without the bridge guard. The long accepted way of placing the front portion of timber on the outfeed table and taking several cuts off the other

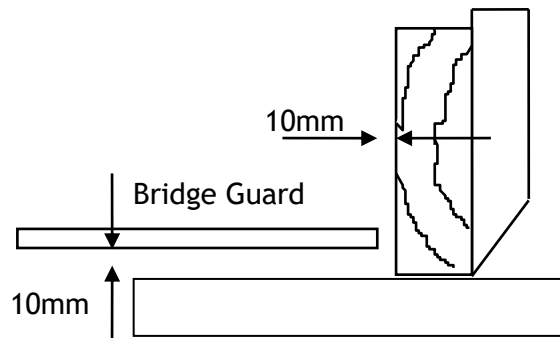


ILLEGAL OPERATION

end then reversing the timber should not be used.

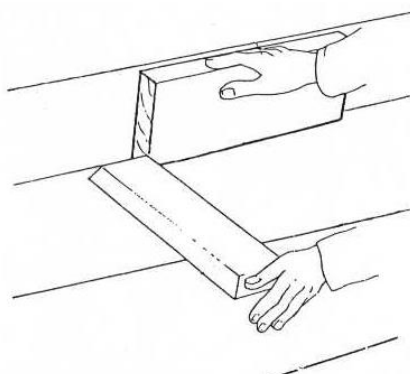
9.4 Edge Planing (Squaring)

When edging, the wood is passed between the end of the bridge guard and the fence. The bridge guard should be adjusted both horizontally and vertically to leave only 10mm from both the feed table and the workpiece, as shown below:

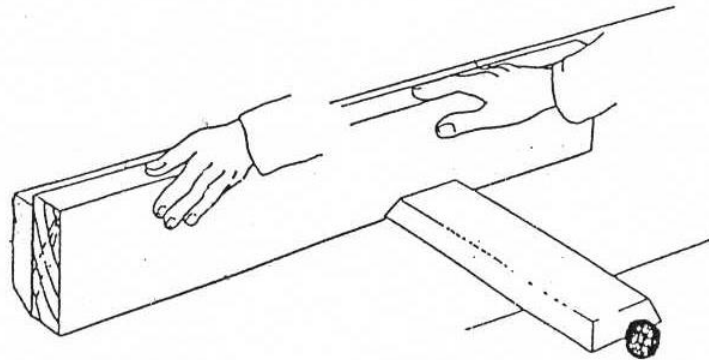


When edge planing, follow these guidelines regarding the correct positioning of hands:

Preparatory: Place the workpiece against the fence and move it with the right hand forward to about the front edge of the infeed table lip. With the left hand bring the guard up to the workpiece. The guard should be positioned as previously shown. This stage should not be carried out while the cutterblock is in motion.

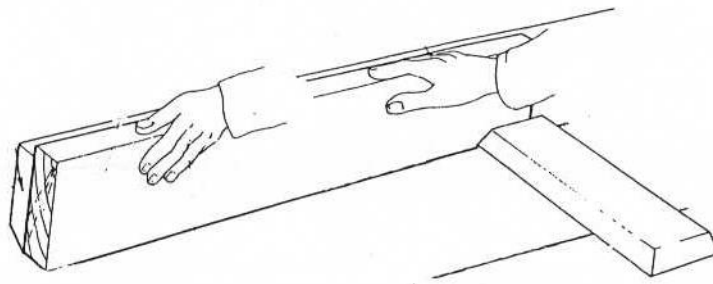


During operation the workpiece is pressed up against the fence and the outfeed table by the left hand, fingers closed (thumb on workpiece). This will produce an edge that is square to the face of the timber. The workpiece is moved forward regularly by the right hand, again with the



fingers closed and thumbs on workpiece.

When edging a workpiece of more than 75mm thickness, move the piece forward with both hands. In doing so, the left hand, fingers closed presses the workpiece against the fence and the outfeed table. The right hand lies upon the workpiece.

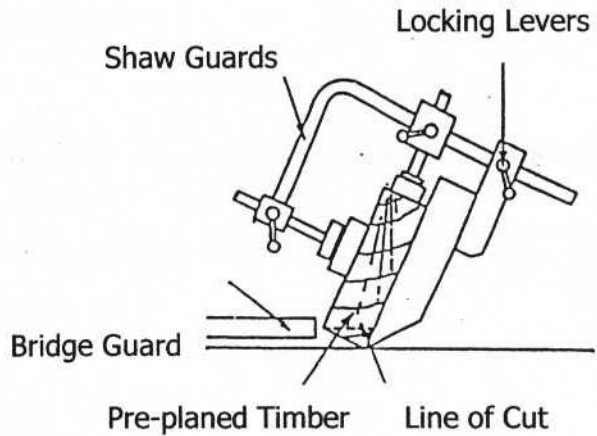
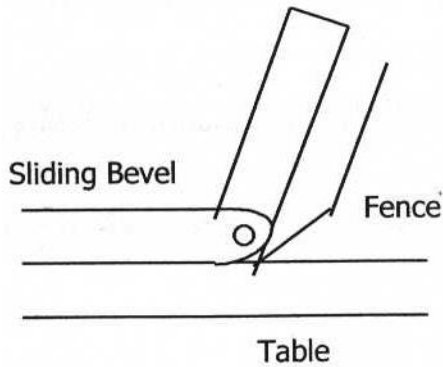


Edge planing of plywood, chipboard and blockwood

Plywood and chipboard have a severe blunting effect on cutters due to the abrasive nature of the glue line. For this reason, when edge planing, keep well over to the far side of the cutter, leaving the rest of the cutter for other work. Plywood, chipboard and the like are best cut on a dimension saw using a tungsten tipped blade, which gives an excellent finish. Another alternative is to place the material on a vertical spindle moulder, using tungsten tipped cutters.

9.5 Beveling or Chamfering

This can be achieved by angling the fence with the aid of a sliding bevel to the angle required. This operation can be done as for edge planing, but the use of the shaw guards provided will prevent the workpiece from slipping. The workpiece is fed through the tunnel formed by the shaw guards. The size and angle of bevel will determine whether it can be worked at one pass, or whether a second or third cut is required for safety in working.

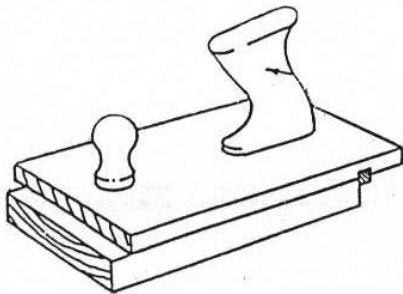


9.7 Push Blocks and Push Sticks

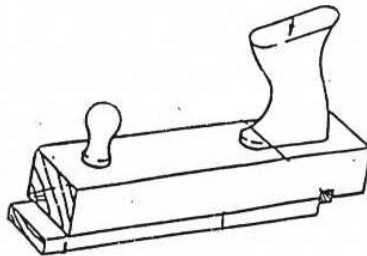


When planing smaller workpieces always use a push stick or push block.

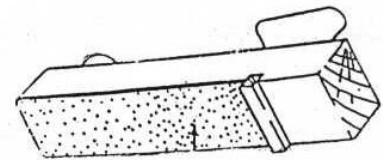
In some operations push blocks should be used, especially when planing short or narrow pieces of timber where it is necessary to pass the workpiece between the edge of the bridge guard and fence. They should be constructed so as to give the machinist a firm grip and so reduce the risk of his hands coming into contact with the cutters. A push block will reduce the risk of a short workpiece dipping as it passes the lip of the feed table, thus making such abrupt contact with the cutters that a throwback will be almost inevitable. Alternatively, consider planing a longer piece of timber and cutting off the required length.



Handle doweled and glued to pushstick therefore no metal contact possible with the cutters. Hardwood strip housed and glued to body of pushblock



Narrow pushblock for short narrow thin material



Abrasive paper glued to base to give better frictional grip and prevent the workpiece moving sideways

10.0 Thicknessing

Raising or lowering the thicknessing bed alters the depth of cut. Use the Thicknessing Table Rise and Fall Handwheel and read off the thicknessing depth scale. Remember to lock the table in position once the depth is set. **3mm should be the maximum.**

Feed rollers at the front and rear of the cutterblock push and pull the wood through the rotating cutter knives. The infeed roller is located at the front of the block and is made of serrated steel. In order for it to operate effectively it must be kept free of resin. Clean off any build up of resin using a stiff brush with a proprietary cleaner or solvent. The metal serrations will be imprinted on the timber as it is forced under the cutterhead, and these marks are then removed by the cutting of the planer knives. At the back of the cutterblock is a smooth metal roller. A flat belt powers both rollers through a gear-reduction mechanism, and each roller is spring loaded to accommodate variations in wood thickness. These roller springs are adjustable to enable you to vary the degree of pressure that they exert. For further details see 'Maintenance'.

For thickness planing thin stock or making finish cuts, it is a good idea to make an auxiliary table with a smooth plastic laminate top. The table can be a straight piece of plywood with a cleat on each end. Wax the laminate surface often with a non-silicon wax.

11.0 Diagnosing Faults

All faults should be reported as soon as they are discovered.

Fault	Cause	Diagnosis
<i>The timber rocks, and the edge is rounded in length after being surfaced.</i>	The cutters are out of alignment with the table.	Re-set the cutters and check the edge for straightness, wear or maladjustment of the slides on the table.
	Chippings lie between the timber and table.	Isolate the machine and clear the chippings.
	The timber is placed round-edge down.	Place the timber hollow edge down.
<i>Uneven finish.</i>	Dull cutters causing chatter marks on the timber.	Re-sharpen the cutters.
	An uneven feed rate.	Feed the timber into the cutters at the correct rate.
<i>A pronounced cuttermark pattern.</i>	Too fast a feed rate.	Reduce the feed rate.
	One knife is set higher than the other	Re-set the cutters.
<i>An unplanned line is left on an otherwise smooth finish</i>	Chipped cutter	Replace the cutters.
<i>The timber 'drops' at the end of the cut and gouges out the end of the timber.</i>	The knives are too high above the cutterblock.	Re-set the cutters.
<i>Excessive vibration causing a poor finish.</i>	Unbalanced cutters or block.	Check the balance of the cutters on a balancing stand, and grind the heavier one so as to balance correctly. Run the block without cutters to see if it still vibrates.
	Worn bearings.	Renew the bearings.
<i>The edge of the timber is not square to the face.</i>	The fence is not square.	Adjust the fence square to the table.
	The cutters are out of line with the table.	Re-adjust the cutters.
<i>Timber hits the outfeed table</i>	Knives are too low in the cutterblock.	Re-set the cutters
<i>Timber becomes wedge shaped over full length.</i>	Knives are too low in the cutterblock.	Re-set the cutters.
<i>End snipe when thicknessing</i>	End of timber is not being held down against the table by the outfeed roller.	Adjust roller settings. For long boards, use an auxiliary table on the thicknessing bed.

12.0 Limitations of Use and Safe Working Practices

The following operations shall not be attempted on planer thickening machines, as they cannot be performed safely:

- stopped work, i.e. any cut which does not involve the full workpiece length,
- planing of badly bowed timber where there is inadequate contact of the timber on the in-feed table,
- planing tapers which involves 'dropping on' where the bridge guard cannot be correctly positioned,
- thickening of more than one piece of timber at the same time. Accidents can be caused by the thickening operation where the timber being thrown back by the knives. This can occur when a heavy cut is being attempted on difficult material, but it happens more commonly when a number of pieces are being thickened together. Because of inevitable variations in the thickness of the pieces, the feed roller cannot grip each piece equally, and a thinner piece travelling towards the cutter block between two thicker ones is liable to be ejected violently when it comes into contact with the knives.

Only trained personnel should work on the machine. All local laws and regulations regarding age and training should be met by any potential operator. This machine is not designed for use by children. It is essential that all operators of planer / thickener machines are adequately trained in the use, adjustment and operation of the machine, this covers in particular:

- The dangers associated with the operation of the machine;
- The principles of machine operation, correct use and adjustment of the fence, jigs and safeguards;
- The safe handling of the workpiece when cutting;
- The position of the hands relative to the cutters and the safe stacking of the workpieces before and after cutting.

Under no circumstances should anyone operate the machine while under the influence of drugs, alcohol or any medication which may render them drowsy.

Persons who install this machine for use at work have a duty under safety laws and regulations to ensure, as far as is reasonably practicable, that nothing about the way in which it is installed makes it unsafe or a risk to health at any time during setting, use, cleaning, and maintenance. This includes such aspects as correct assembly, electrical installation, construction of enclosures, and the fitting of guards and ventilation equipment. When installing this machine consideration must be given to the provision of adequate lighting and working space.

Repairs and maintenance must only be undertaken by competent technicians. Ensure that all power supplies are isolated before maintenance work begins. Instructions for routine maintenance work are included in this manual. All spare parts should be supplied by the manufacturer.

12.1 Noise

Noise levels can vary widely from machine to machine depending on conditions of use. Persons exposed to high noise levels, even for a short time, may experience temporary partial hearing loss and continuous exposure to high levels can result in permanent hearing damage. Local laws require employers to take measures to reduce noise levels where any person is likely to be exposed to loud or continuous noise. Additionally, suitable ear protectors must be provided, maintained and worn.

The information below sets out some of the variables that directly affect the noise level of the machine:

VARIABLE	RELEVANT FACTOR	EFFECT
Timber	Species	Hard stiff timber can mean more noise (approx. 2dB(A) difference when cutting oak and pine) & more transmitted noise.
	Width	Wide work pieces radiate noise over a greater area increasing the noise level.
	Thickness	Thin workpieces generally vibrate more increasing the noise level.
	Length	Long workpieces transmit noise away from the cutting area towards the operator.
Tooling	Width of Blade	This affects the windage noise and increases roughly in proportion to the width of cut.
	Blade Sharpness	Dull and worn blades exert more force on the timber thus creating more noise.
	Balance	Out of balance blades mean vibration and changes in cutting conditions, resulting in increased noise levels.
Extraction	Air Velocity/ System Design	Resonant conditions can lead to high noise levels, excessive turbulence and chip impact can increase noise levels substantially.

The following noise levels were recorded at a distance of one metre from the machine (operator side), using varying feed rates and depths of cut.

OPERATION	TIMBER	DEPTH OF CUT	NOISE LEVEL dB(A) @ 1M
None	None	No load	76
Surfacing	Softwood 75mm wide	-	80
Surfacing	Softwood 300mm wide	2mm	86
Surfacing	Hardwood	2mm	84
Thicknessing	Softwood 77mm wide	2mm	87
Thicknessing	Softwood 300mm wide	2mm	90
Thicknessing	Hardwood 75mm wide	2mm	87

Using correctly designed extraction hoods and a compatible system the compound effect on this machine was to increase the readings by 1dB(A).

The figures quoted for noise are emission levels and not necessarily safe working levels. Whilst there is a correlation between emission levels and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual

level of exposure to the work force include the duration of exposure, the characteristics of the workroom, the other sources of dust and noise, etc., i.e. the number of machines and other adjacent processes. Also the permissible exposure levels can vary from country to country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.

12.2 Warning Label

The warning label fixed to the machine gives the following advice. Please ensure that all operators read it carefully.

Ensure that you fully understand the manufacturer's instruction manual and have received sufficient training in the use of this machine and the particular safety precautions to be observed.

BEFORE OPERATING THIS MACHINE ENSURE THAT:

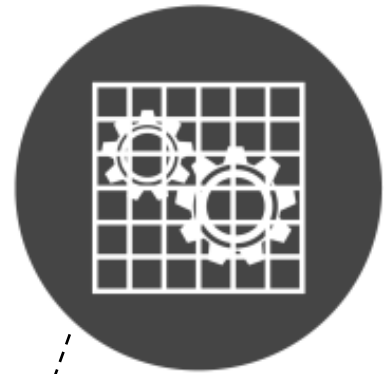
- 1. All guards and fences are securely fitted and correctly set in accordance with the current regulations.**
- 2. Tooling is of the correct type, sharpness and direction of cut and is securely fastened.**
- 3. Correct spindle speed and feed is selected (for the cutter equipment) where appropriate.**
- 4. Loose clothing is either removed or fastened and jewellery removed.**
- 5. Suitable jigs and push sticks are available for use where appropriate.**
- 6. The working area is well lit, clean and unobstructed.**
- 7. Extraction equipment where appropriate is switched on, properly adjusted and working efficiently.**

DURING MACHINING:

- 1. Wear suitable protective equipment where necessary, e.g. goggles, ear defenders and dust mask.**
- 2. Ensure all moving parts of the machine are stationary before setting, cleaning or making any adjustments.**
- 3. Ensure all power sources are isolated before any maintenance work commences.**



General caution



Check guard



Refer to instruction manual



Use hearing protection



Use protective eyewear



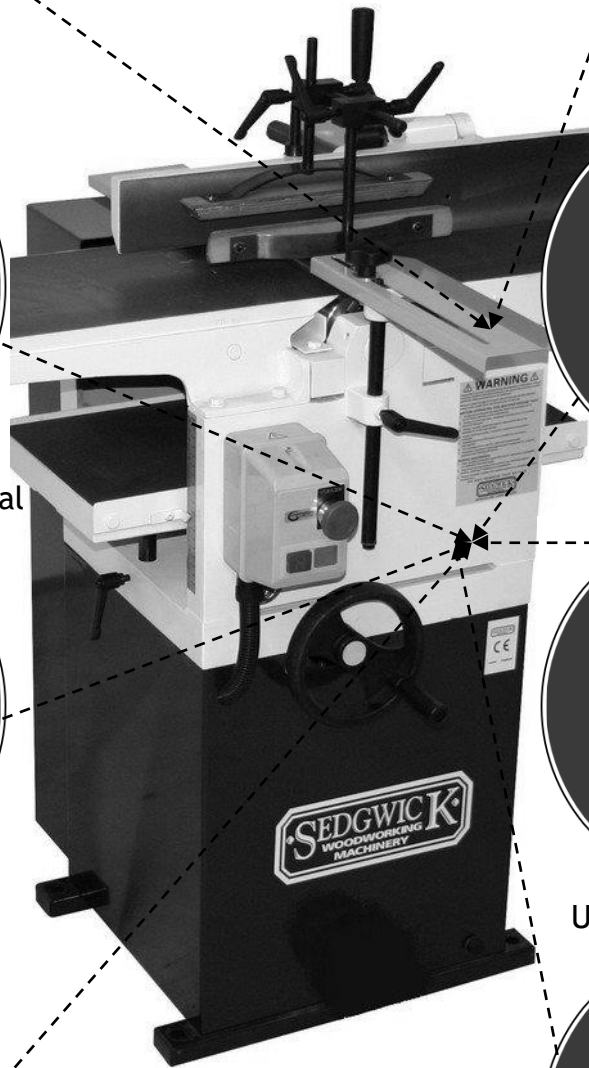
Use protective footwear



Use protective apron






Wear a mask



All notices and labels which are affixed to the machine must be kept readable and may not be removed. Any that have become damaged or unreadable must be replaced promptly.

12.3 Machine Data Plate

The data plate is displayed on the back of the machine and provides the following information:

M. SEDGWICK & CO. LTD STANNINGLEY FIELD CLOSE LEEDS LS13 4QG UNITED KINGDOM Tel.: 0044 (0) 1132 570637 Fax.: 0044 (0) 1132 393412			
MODEL / TYPE:		SERIAL NO:	
VOLTAGE:	PHASE:	FREQUENCY (Hz):	
POWER RATING (Kw):		RATED CURRENT (A):	
YEAR OF MANUFACTURE:		WEIGHT:	
ADDITIONAL INFORMATION:			
			
 <i>Please refer to the Operation and Maintenance Instructions</i>			

13.0 Maintenance

In order to ensure long life, maximum reliability and optimum performance, the following monthly maintenance and lubrication schedule should be carried out, otherwise the machines warranty could be invalidated.



Improper maintenance can cause serious injury or damage. For this reason it should only be carried out by authorised, trained personnel who are familiar with how to operate the machine and taking into account all safety instructions.



Work on electrical fittings may only be carried out by qualified personnel and in strict observance of the safety instructions.

Note. Electrically isolate the machine and ensure that all movement has ceased before carrying out any of the maintenance operations.

13.1 Lubrication

Since your planer thicknesser is constructed of cast iron, which is a porous metal, care should be taken when cleaning. Use mineral spirits and steel wool on all metal parts. Avoid contact with anything moist. Do not set drinks on the table top or leave green wood on it. These will leave permanent marks.

Waxing the table surface will help resist moisture, as well as reducing friction on the workpiece. Avoid products that contain silicone, anti-slip additives or abrasives.

Clean the interior of the machine frequently to prevent the accumulation of chips and sawdust around the motor and rise and fall mechanisms.

Once clean, lubricate moving parts using a lubricant that does not pick up a lot of sawdust. Pay particular attention to the following: the drive chain, thickness table rise and fall barrel, thickness table rise and fall screw, thickness table rise and fall gears, surface table screw and slide assembly, fence table bar, fence swivel screw, and the front cutterblock guard vertical support bar. Powdered graphite, hard wax or white lithium spray is ideal. Do not use an oil-based product. These will collect sawdust and congeal into a gummy substance, making working parts hard to operate. Drive belts will also deteriorate if they come into contact with oil.

13.2 Cutterblock and Bearings

The cutterblock needs very little maintenance, but it should be checked for wear, burrs and any play in the bearings that the arbor rides in.

First check the cutterblock, the chipbreakers, and the cutterblock screws for dirt, burrs or raised nicks. Slight imperfections can be removed carefully with a fine-cut file.

The cutterblock bearings are sealed for life and require no lubrication. To check their condition, turn the block by hand while feeling for any roughness. Grasp the arbor on the drive side of the block and gently pull up and down to check for any play. Roughness or slack in the bearings means that they need to be replaced.

13.3 Vee Belts and Pulleys

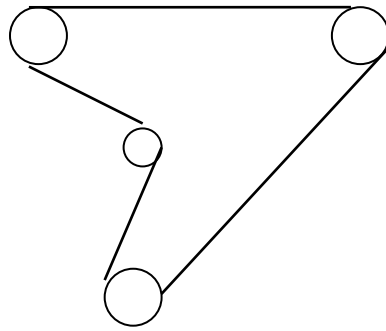
The spindle is driven via an A64 vee belt and the feed mechanism by a flat belt. To prevent loss of power and/or belt slip these belts should be correctly tensioned and regularly checked for wear.

When the belts begin to show signs of wear replace them. Frayed belts will cause vibration, putting unnecessary strain on the arbor bearings. Instructions on changing the drive belt are as follows:

You will need an A64 vee belt, a rule, a 13mm spanner and a 19mm spanner.

Electrically isolate the machine and remove the back-guard. Next remove the gear train (or banjo). To ensure that it is replaced correctly first take a measurement from the machine side frame to the outside of the gear wheel (part no. PT9035). Remove the chain. You may need to wedge the chain tensioning sprocket to do this. Next remove the gear chain by undoing the 13mm fixing bolt located on the underside of the cast base (part no. PT9010) and the flat belt. Replace the vee belt and then build the machine

back up, replacing firstly the chain, gear train (as per your measurement), and flat belt. Ensure that the chain tensioning sprocket is replaced as follows:

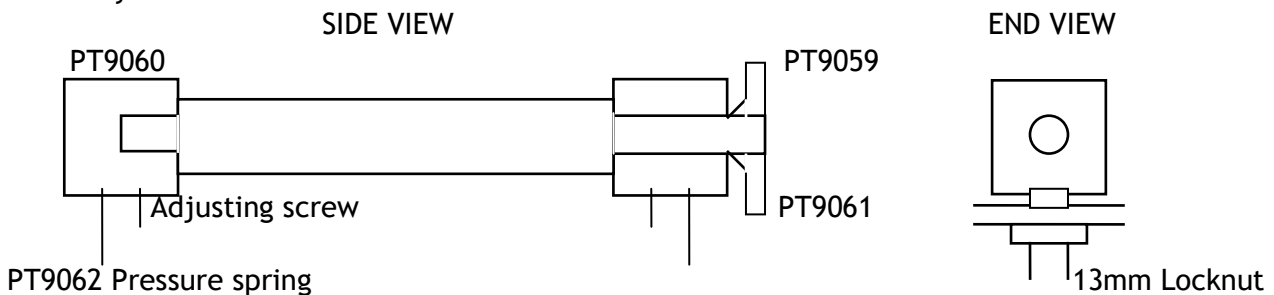


Excessive belt wear, vibration and noise may be the cause of poorly aligned or loose pulleys. Check alignment by placing a straight edge across the faces of the two pulleys. If necessary adjust the motor pulley by loosening the allen screw locking the pulley onto the shaft. If you cannot get the pulleys to align it may be because the shafts are not in line. Loosen the motor mounting bolts and shift the motor until you get the required results. Position the pulley as near as possible to the motor bearing. If it is set too far along the motor shaft it will put unnecessary strain on the shaft and bearings.

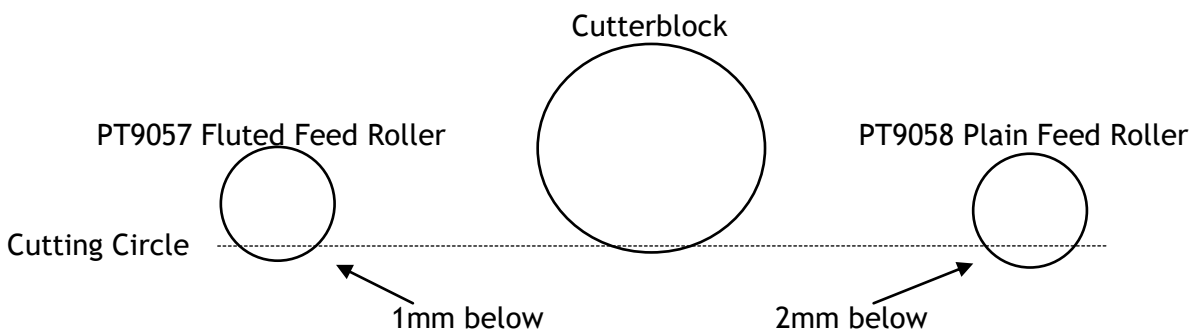
13.4 Adjusting the Thickening Feed Rollers

As the planer knives are sharpened and re-set you may find it necessary to adjust the thickener feed rollers to ensure that timber is fed through smoothly. These are set at the right height and pressure at the factory, but may require adjustment to compensate for slight changes to the knife height in the cutterblock.

Assembly:



The height of the rollers is set to the cutting circle as follows:



Before adjusting the height of the feed rollers first check that there are no saw shavings trapped beneath the bearing blocks. Adjustment is made using the 8mm adjusting screws located beneath the bearing blocks. Surface-plane a piece of hardwood flat and to square. Next thickness it to give you an exact measure of the cutting circle. Wind the thickening table down 1mm and set the bottom of the fluted feed roller to the top of your hardwood setting piece. The height of the roller should be set equally at both ends. Use the same technique to set the plain roller to 2mm below the cutting circle.

The pressure springs are mounted on studs and tensioned by 13mm locknuts. The pressure on each spring is factory set. On the chain side of both rollers the spring should measure 65mm, while on the non-drive side of the rollers the springs should measure 55mm when compressed (the reason for having more pressure on the non-drive side is to compensate for the pressure exerted by the chain). These settings may not be ideal for every cutting operation and we therefore recommend that you experiment to find those that best suit you. If the pressure on these springs is too light for example, the rollers may slip and not feed the wood through the cutterhead. If the pressure is too great on the serrated feed roller, the serrations may be deeper than the cutterhead can plane off, especially on thin soft stock. In such cases the pressure should be reduced. Rollers do not require a lot of pressure for light cuts. If you plan to take deep cuts, you will have to increase the pressure. If increased spring pressure does not propel the wood through the cutterhead, the rollers need cleaning, or the thickening table needs to be waxed.

13.5 Planer Tables

The surface tables are formed from cast iron, and may become warped or bent as a result of neglected maintenance and excessive wear. The dust and vibration from surfacing miles of hard maple or pitch pine, will loosen adjustments and make slideways sticky. A sloppy fit hammers adjoining precision surfaces, and poorly lubricated slideways wear quickly. Never place anything on these tables which doesn't belong there. An excessive weight laid to rest on a table could, over time, cause the table to sag, necessitating a re-grind. Also take great care when handling the machine (refer to Handling Instructions). Any attempt to lift or drag the machine by its top tables could result in them coming out of true.

If at any time you suspect that your top tables are out of true, first check them for flatness using a long straightedge. Raise the infeed table until it is level with the outfeed table. Check the individual tables first, longitudinally for parallelism and then diagonally for flatness. Measure any space under the straight edge with an engineer's feeler gauge - any gap should be less than 0.010 in. Next, check both tables as a unit. Check next to the fence and on the opposite side, and then check the diagonals for twist. Ideally the tables should be less than 0.010 in. out of parallel end to end.

Should you find that adjustment is necessary, begin by removing the infeed table (sometimes dirt between the slideways can build up and cause alignment problems). Clean all surfaces and lubricate with a light lithium grease. Reassemble using a 19mm AF Spanner to tighten the gib screws. If they are not tightened correctly the table will sag at the end. If they are over tightened the table will not rise and fall. The rise and fall action should only require moderate action.

If this method fails to align the tables, shim underneath the feet of the fixed outfeed table until it is aligned with the infeed table at its highest point. Brass or sheet steel shim stock is the best choice for this.

13.6 The Fence

The squareness of the fence relative to the infeed table is adjusted via a back stop. First tighten the fence lateral lock, untighten the fence cant lock, and push the fence into the vertical. Use an engineer's square to check the angle between the fence and the infeed table. If necessary release the 8mm lock nut at the back of the fence using a 13mm spanner, and adjust the stop using the 4mm allen key supplied.

13.7 Brake Motor Installation & Maintenance

Installation

It is the responsibility of the machine installer to ensure that:

- The brake functions correctly after final installation;
- Earthing has been carried out according to local regulations before connection to the mains;
- The supply of motor, rectifier/brake, and auxiliary equipments (if any) has been made using cables of suitable section so as to avoid overheating and/or too high voltage drop; and
- In case of inverter supply the wiring instructions of the inverter manufacturer have been correctly followed for the motor and a separate supply (directly from the mains) has been provided for the rectifier/brake.

Note: *due to poor supply characteristics we do not recommend use with phase converters.*

Maintenance

Brake reliability & lifetime is dependent upon good periodic maintenance. All maintenance work on brake motors should be carried out by qualified personnel, always with the machine out of operation, disconnected and secured against starting. Low-torque DC brake motors (with electromagnetic braking in case of supply failure) have a fixed braking torque; it is not possible to adjust the stopping times of these motors.

If a brake motor is running excessively hot it is likely to be caused by the brake not releasing. This is probably as a result of one of the factors below:

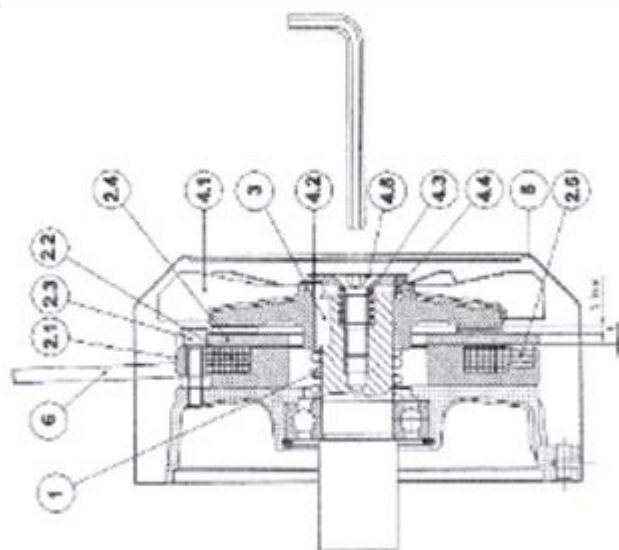
- Brake air-gap setting incorrect
- Use with phase converter
- Blown or damaged rectifier
- Poor rectifier supply connection
- Dust, wood chipping etc. locking the mechanism
- Worn or damaged parts

Air-gap Adjustment

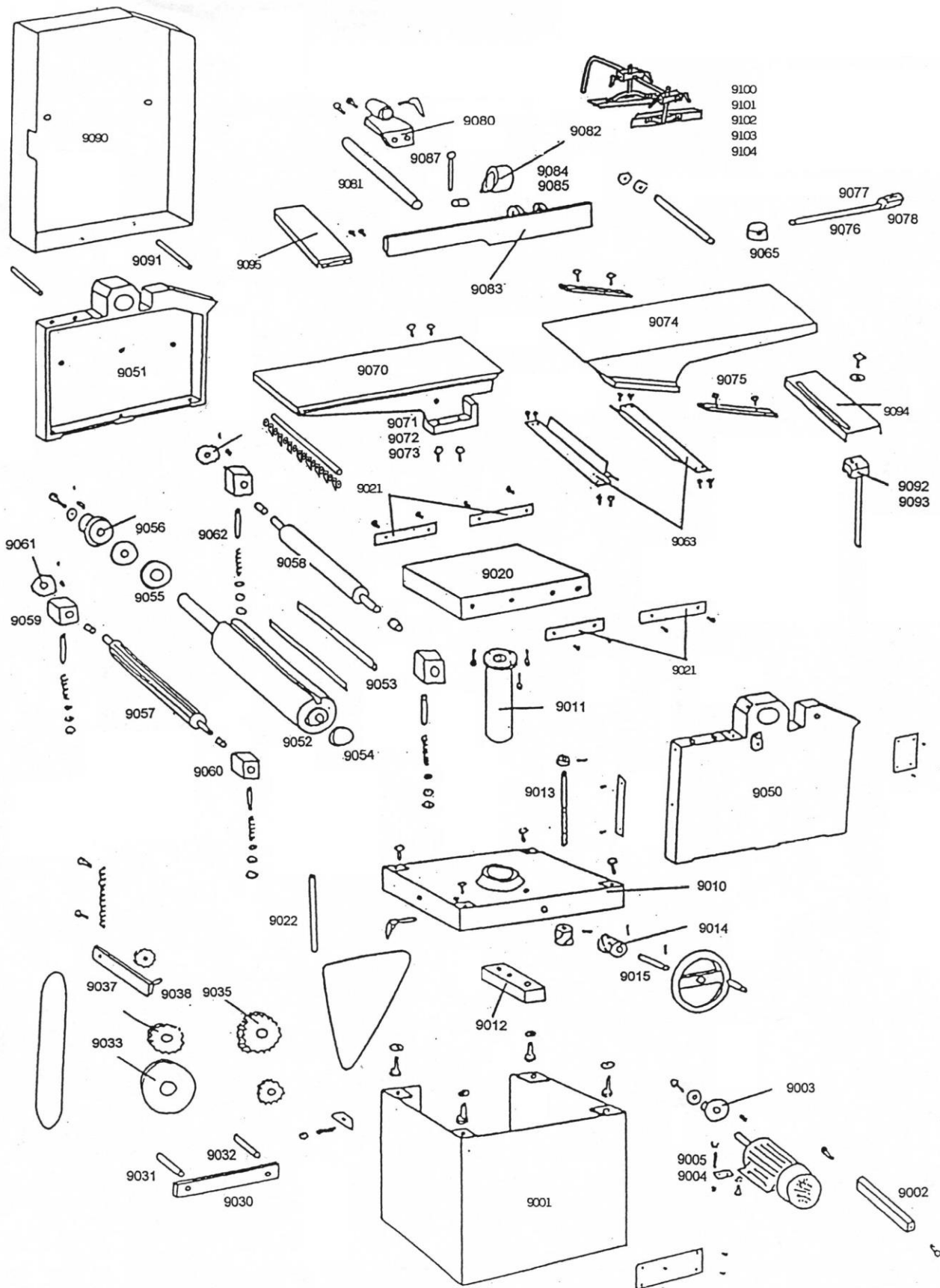
1. Tighten down the hexagon head bolt in the centre of the fan cover completely (without forcing) then unscrew by one third of a turn (with the exception of the TE/TESH motors which need adjusting by one half of a turn). For a more accurate setting remove the fan cover & tighten down the hexagon head bolt, again without forcing, then unscrew until the air-gap (between 2.1 & 2.3) is between 0.3mm & 0.5mm.
2. We recommend the occasional use of an air jet to eliminate dust or other particles that may have settled on the braking surface.
3. After several air-gap adjustments verify that the thickness of the friction surface is no less than 1mm, if it is then replace the fan with an original manufacturer's part.

Parts List:

- 1 Main contrast spring
- 2.1 Magnet casing
- 2.2 Brake coil
- 2.3 Fastening screw
- 2.4 Mobile anchor / friction surface
- 2.5 Braking spring
- 3 Key
- 4.1 Fan
- 4.2 Washer with spigot
- 4.3 Auxiliary contrast spring
- 4.4 Elastic pin
- 4.5 Screw TSPEI UNI 5933
- 5 Fan cover



14.0 PT255 Planer Thicknesser Parts Diagram



Planer Thicknesser Parts List

PART NO.	PART DESCRIPTION		
9002	MOTOR MOUNTING	9077	SWIVEL BLOCK
9003	MOTOR PULLEY	9078	TABLE HANDLE
9004	MOTOR ADJUSTING STRAP	9080	FENCE TABLE BRACKET
9005	ADJUSTING STUD	9081	FENCE TABLE BAR
9010	BASE	9082	FENCE SLOTTED BRACKET
9011	RISE AND FALL PILLAR	9083	FENCE
9012	RISE AND FALL NUT	9084	FENCE SWIVEL SHAFT
9013	RISE AND FALL SCREW	9085	FENCE WASHER
9014	GEAR PINION	9086	FENCE LOCKNUT
9015	HANDWHEEL SHAFT	9087	FENCE LOCKING LEVER
9020	THICKNESSING TABLE	9091	REAR GUARD STUD
9022	THICKNESS TABLE SUPPORT	9092	GUARD PILLAR SHAFT
9030	FEED SWIVEL STRAP	9093	GUARD BRACKET
9031	FEED 1ST SHAFT	9010	SHAW GUARD SHAFT
9032	FEED 2ND SHAFT	9101	SHAW GUARD BRACKET
9033	FLAT BELT PULLEY	9102	SHAW GUARD SHAFT END
9035	GEAR WHEEL	9103	SHAW GUARD SHAFT SIDE
9036	CHAIN PINION	9104	SHAW GUARD WOOD
9037	CHAIN TENSION ARM		
9038	CHAIN TENSION SPINDLE		
9039	CHAIN TENSION SPROCKET		
9040	CHAIN TENSION SPACER		
9050	FRONT FRAME		
9051	REAR FRAME		
9052	CUTTERBLOCK		
9053	CHIPBREAKER		
9054	BEARING COVER FRONT		
9055	BEARING COVER REAR		
9056	CUTTERBLOCK PULLEY		
9057	FEED ROLLER FLUTED		
9058	FEED ROLLER PLAIN		
9059	FEED ROLLER BEARING THRU		
9060	FEED ROLLER BEARING BLIND		
9061	CHAIN SPROCKET		
9062	SPRING STUD		
9064	STRETCHER BAR		
9065	RISE AND FALL NUT		
9070	OUTFEED TABLE		
9071	ANTI KICK SHAFT		
9072	ANTI KICK FINGERS		
9073	ANTI KICK SPACERS		
9074	INFEEED TABLE		
9075	TABLE RETAINING PLATES		
9076	RISE AND FALL SCREW		

3SE0021 PT-1 STARTER 10/12A

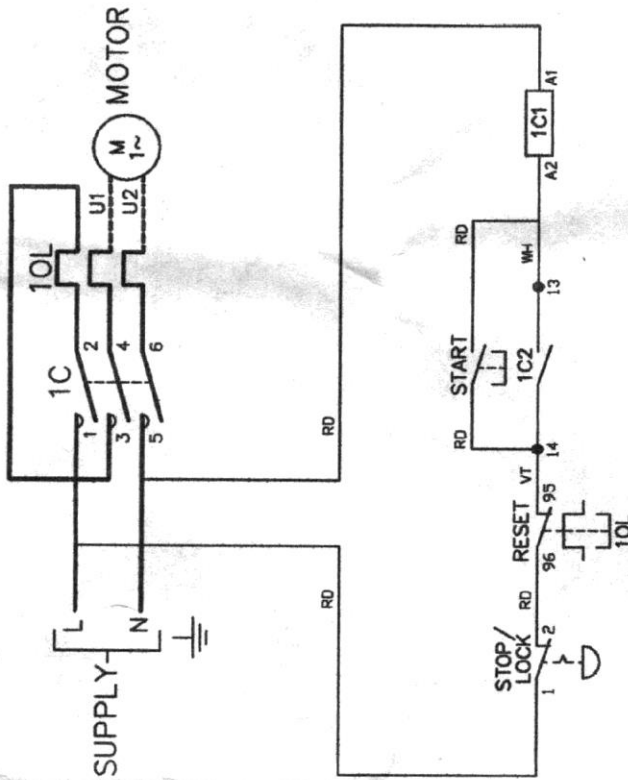
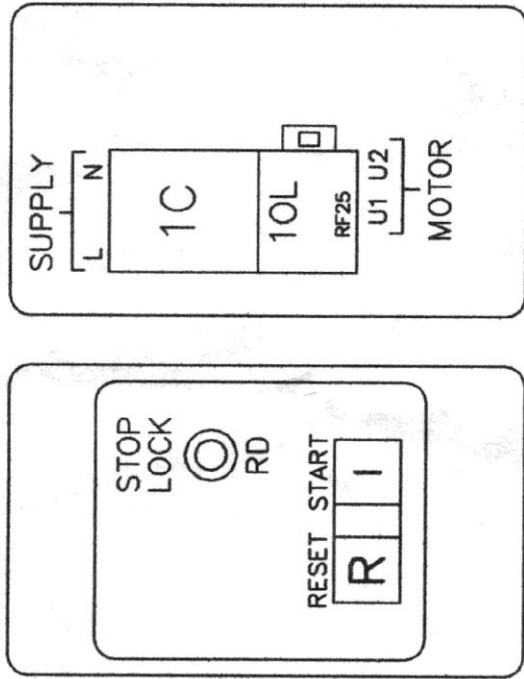
Component	UOM	Description
AC051	EACH	PUSH BUTTON ASSEMBLY FOR DL1-S & DL2-S PBDL1S
BA004	EACH	BASE SIZE 1 TO DRG.A1/2311-3 - (TEXT) C119002
CB056	EACH	START CONTACT CSC09-25B TO SUIT RELAY CR09-25
CO349	EACH	CONTACTOR CC0910-230P7 50/60HZ
DR028	EACH	DIN RAIL REF CAR001 FOR NEW 3DL1S, 3DL2S, 3DL3S STARTERS
FP84	EACH	YELLOW LEGEND PLATE E-STOP AS A4/FP84 MADE IN HOUSE
LI004	EACH	LID SIZE 1 PUNCHED 1 HOLE A1/2311-4 REF.A REV.2 C119007
OL183	EACH	THERMAL OVERLOAD RELAY CR12/13 10-13A
PB039S	EACH	CONTACT BLOCK N/O GREEN
pb040s	EACH	CONTACT BLOCK N/C RED
pb088s	EACH	EMERGENCY STOP OPERATOR 40MM TWIST TO RELEASE IESTR-R
PB093S	EACH	ADAPTOR IP-COUPLING

3SE0006 PT-3 STARTER 4/6A

Component	UOM	Description
AC051	EACH	PUSH BUTTON ASSEMBLY FOR DL1-S & DL2-S PBDL1S
BA004	EACH	BASE SIZE 1 TO DRG.A1/2311-3 - (TEXT) C119002
CB056	EACH	START CONTACT CSC09-25B TO SUIT RELAY CR09-25
CO350	EACH	CONTACTOR CC0910-400V7 50/60HZ
DR028	EACH	DIN RAIL REF CAR001 FOR NEW 3DL1S, 3DL2S, 3DL3S STARTERS
FP84	EACH	YELLOW LEGEND PLATE E-STOP AS A4/FP84 MADE IN HOUSE
LI004	EACH	LID SIZE 1 PUNCHED 1 HOLE A1/2311-4 REF.A REV.2 C119007
OL180	EACH	THERMAL OVERLOAD RELAY CR09/6 4-6A
PB039S	EACH	CONTACT BLOCK N/O GREEN
pb040s	EACH	CONTACT BLOCK N/C RED
pb088s	EACH	EMERGENCY STOP OPERATOR 40MM TWIST TO RELEASE IESTR-R
PB093S	EACH	ADAPTOR IP-COUPLING



Use only original spare parts supplied by the manufacturer. The use of unauthorised, counterfeit or inferior parts may result in damage or malfunction.



ISO 9001, QUALITY IS YOUR RESPONSIBILITY, IF IN DOUBT ASK.

All mains wiring BLACK
 All a.c. control wiring RED
 All d.c. control wiring BLUE
 As EN60204 Part 1.
 Unless otherwise stated.

CURRENT REVISION No.

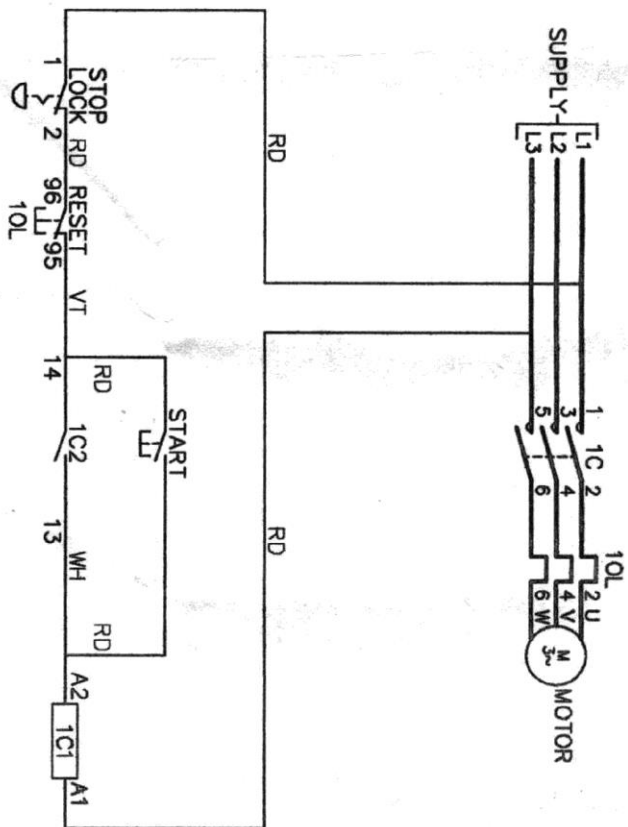
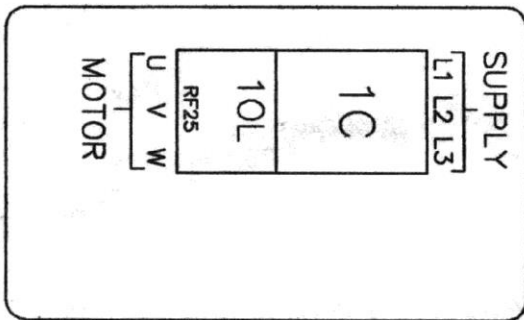
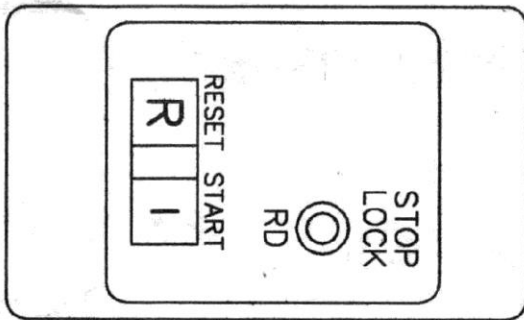
ALT	CKD	DATE
FINISH		

TITLE CIRCUIT DIAGRAM FOR SPECIAL STARTER

Crompton Controls Ltd
 Monahan Road, Wetherfield
 West Yorkshire WF2 7AL
 Tel: (0284) 362251 Fax: (0284) 367274



RECORDED ISSUE No.	DRN	APPD	JMD	APPD	JMD
DATE	9.4.97	SCALE			
DRAWING NUMBER			A4/2301/56		



LINE & NEUTRAL CONTROL:
REMOVE LINK BETWEEN A1 ON 1C-5 ON 1C. CONNECT NEUTRAL TO A1 ON 1C

SEPARATE NO-VOLT SUPPLY:
REMOVE LINKS BETWEEN 1 ON 1C-1 ON STOP/LOCK & 5 ON 1C-A1 ON 1C.
CONNECT SEPARATE SUPPLY TO 1 ON STOP/LOCK & A1 ON 1C.

ISO 9001. QUALITY IS YOUR RESPONSIBILITY. IF IN DOUBT ASK.

All mains wiring BLACK
All a.c. control wiring RED
All d.c. control wiring BLUE
AS ENG0204 Part 1.
Unless otherwise stated.

TITLE C.D. DL1/2..C, DL1/3..S - STOP/LOCK.
CURRENT REVISION No.

AI T CKD IDATF



Crompton Controls Ltd
Hendon Road, Welhamfield
West Yorkshire WF2 2NL

RECORDED ISSUE No.
DRN No CKD JMD APPD JMD
DATE 20.10.94 SCALE
DRAWING NUMBER
AA 12301/57A