

RECORD MACHINE DETAILS

MODEL
SERIAL No
DATE of PURCHASE
VOLTAGE
PHASE
CYCLES

QUOTE THIS INFORMATION
WHEN REQUESTING SERVICE
OR SPARES.

DISTRIBUTOR

This machine is engineered to a high standard of construction and performance. Attention to maintenance and service will be repaid by many years' trouble-free operating. Consult your Distributor in the event of difficulty or servicing requirements. Your Distributor is qualified to advise on the proper maintenance of your Machine, to assess any claims under the Guarantee and to supply and fit genuine STARTRITE parts.

STARTRITE®

Model TA1250

TILT ARBOR SAWBENCHES

HANDBOOK

42E

A.L.T. Saws & Spares Ltd

Startrite Machine Specialist

Unit 15, Pier Road Industrial Estate
Gillingham
Kent
ME7 1RZ

Tel/Fax: 01634 850833

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BLADES**

TO SUIT THE T/A1250 MODEL

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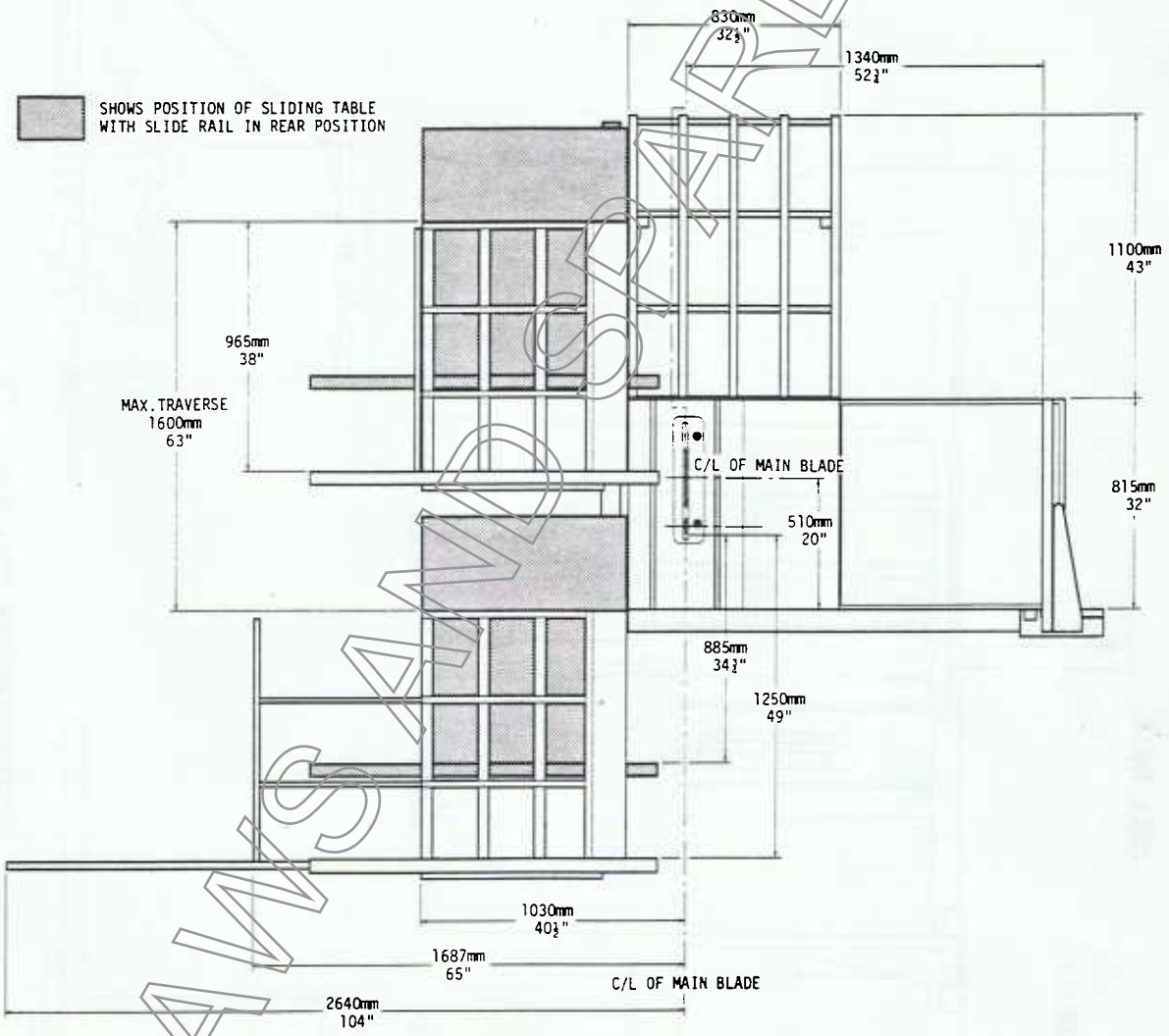
SPECIFICATION FOR TA 1250

*Maximum sawblade diameter.	300mm	12"
*Maximum sawblade diameter when using scoring saw.	250mm	10"
*Sawblade bore.	30mm	
*Maximum scoring saw diameter.	105mm	4"
*Bore of scoring saw.	20mm	
*Maximum rise of saw:- at 90° using. at 45° using at 90° using at 45° using	300mm blade = 102mm 300mm blade = 70mm 250mm blade = 77mm 250mm blade = 54mm	12" blade = 4 " 12" blade = 2½" 10" blade = 3 ½" 10" blade = 2 ½"
Net weight of machine.	255kg	560lbs
Motor power.	1 Phase - 1.5kW - 2h.p. 1 Phase - 2.2kW - 3h.p. 3 Phase - 2.2kW - 3h.p. 3 Phase - 4kW - 5.5h.p.	
Standard voltages.	220/380/440V - 3 Phase - 50Hz 220/240V - 1 Phase - 50Hz	

* Please note these dimensions are given for metric and imperial sawblades and are not conversions.

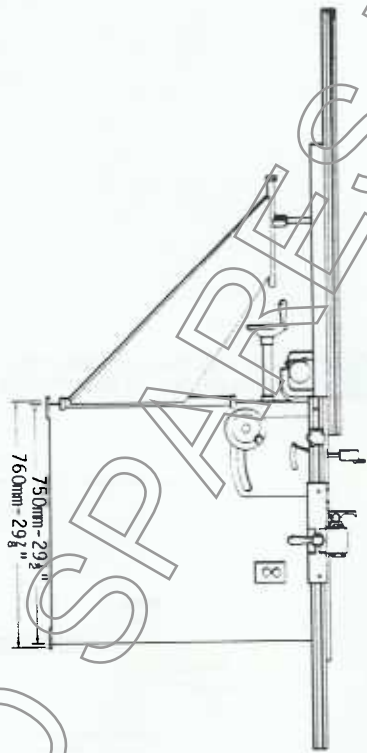
A.L.T. SANS AND SERVICES LTD

SHOWS POSITION OF SLIDING TABLE
WITH SLIDE RAIL IN REAR POSITION



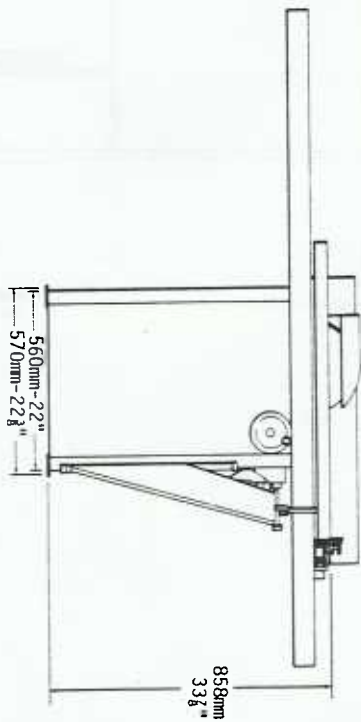
PLAN VIEW OF TA1250
SHOWING ALL SUB-TABLES

SECTION 500



FRONT VIEW

ALL DIMENSIONS ARE APPROXIMATE

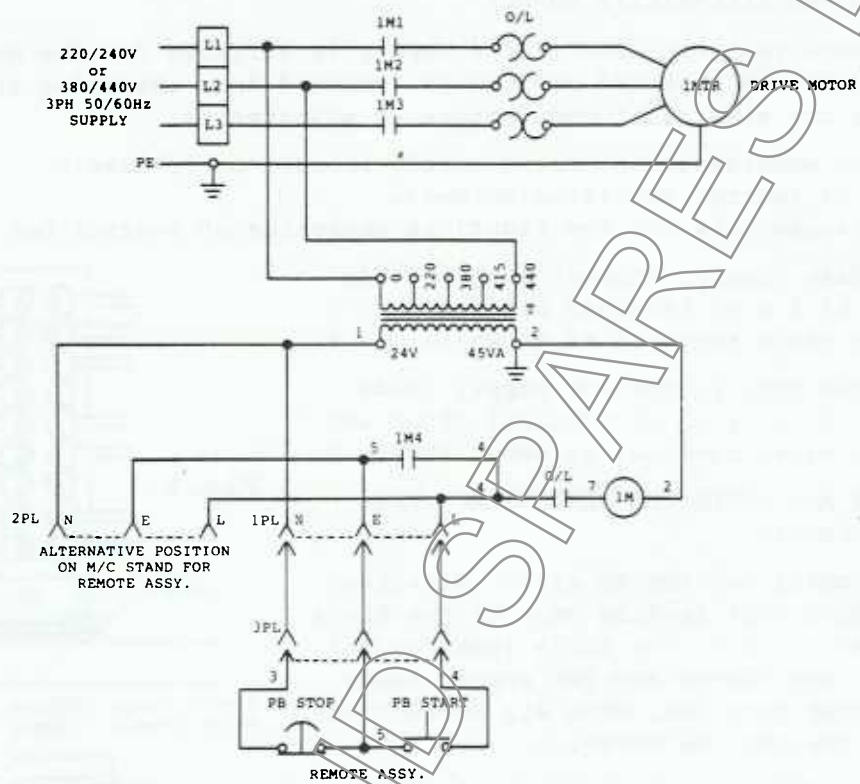


SIDE VIEW

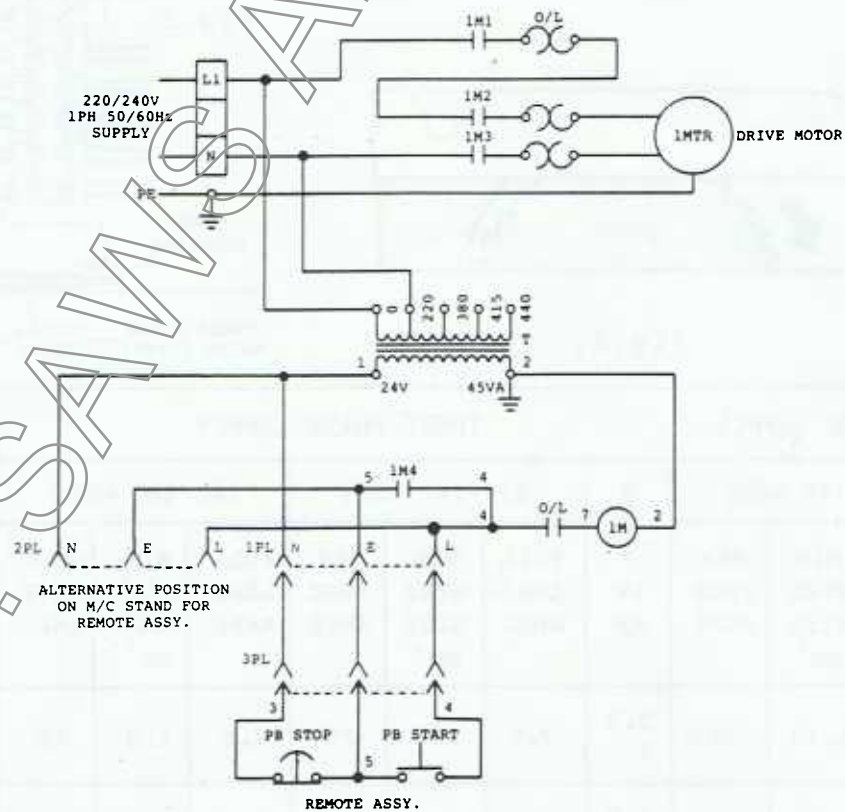


PLAN VIEW

FOUNDATION PLAN FOR MODEL TA1250
TILT ARBOR SAMBENCHES



CIRCUIT DIAGRAM FOR 220/240V AND 380/440V 3PH 50/60Hz MACHINES.



CIRCUIT DIAGRAM FOR 220/240V 1PH 50/60Hz MACHINES

SECTION 505

CONNECTION TO THE ELECTRICITY SUPPLY

IMPORTANT: Check that the electricity supply is suitable for the machine. At all times, ensure that the machine is isolated from the mains supply before making any electrical connections or adjustments.

To connect the machine to the mains supply proceed as follows:-
Remove cover of control box (four screws).
Pass leads through hole (to the right) in underside of control box.

For single phase supply, connect supply leads to terminals L1 & N of terminal block and earth lead to earth terminal as shown in Fig.1.

For three phase supply, connect supply leads to terminals L1, L2 & L3 of terminal block and earth lead to earth terminal as shown in Fig.2.

IMPORTANT: IN ALL CASES THE MACHINE MUST BE EFFECTIVELY EARTHED.

A three phase motor may run in either direction therefore, check that leading edge of saw blade passes downward through the table (see Fig.3.). If necessary interchange any two supply leads to reverse motor rotation. With all connections made replace control box cover.

IMPORTANT: The services of a competent electrical engineer must be obtained if there is any doubt on any point regarding electrical installation.

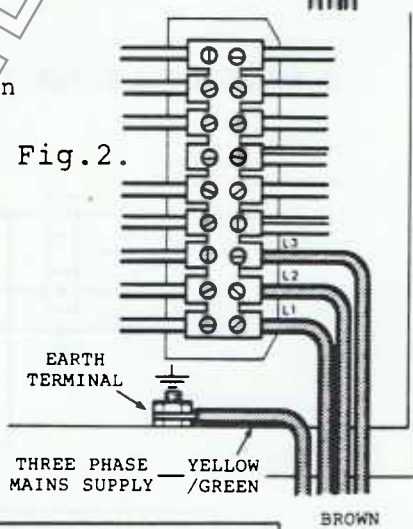
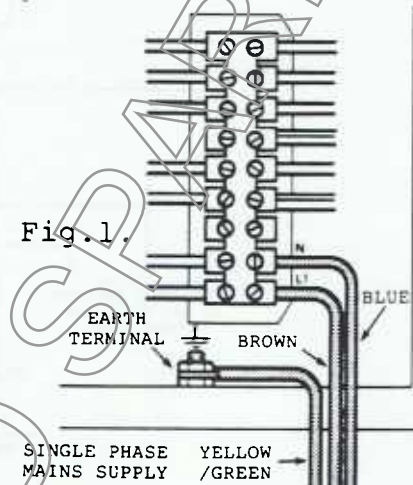


Fig.3.

SINGLE PHASE SUPPLY				THREE PHASE SUPPLY						
MOTOR kW HP	220/240 VOLT			MOTOR kW HP	220/240 VOLT			380/440 VOLT		
	FULL LOAD AMPS	MIN WIRE SIZE mm ²	MAX FUSE AMPS		FULL LOAD AMPS	MIN WIRE SIZE mm ²	MAX FUSE AMPS	FULL LOAD AMPS	MIN WIRE SIZE mm ²	MAX FUSE AMPS
1.5 2	12.4	1.25	35	2.2 3	7.9	1.0	25	4.6	1.0	15
2.2 3	15.3	1.5	35	4.0 5.5	13.0	1.5	35	7.5	1.0	25

OPERATING SAFETY PRECAUTIONS.

BEFORE ATTEMPTING TO OPERATE THE MACHINE BECOME FAMILIAR WITH THE CONTROLS AND OPERATING INSTRUCTIONS.

NO PERSON SHOULD OPERATE THIS MACHINE WITHOUT SUFFICIENT TRAINING AS TO ITS SAFE AND PROPER OPERATION OR WITHOUT SUCH SUPERVISION AS MAY BE NECESSARY.

Before starting the machine, check that it is safe to do so. make sure that all necessary adjustments have been completed and all guards are in position and secure. Never at any time make adjustment to any part of the machine while the saw blade is in motion.

Never put hands near a moving saw blade. When ripping short lengths or making the last 300mm (12") of a cut use a push stick to feed the work. A push stick should be made from strong straight hardwood of rectangular section with one end rounded to form a comfortable grip, and the other end notched to grip the workpiece.

Do not operate the machine with loose cuffs, or with an exposed bandage on the hands. Should it be necessary to wear a tie, prevent ends from hanging loose. For greater safety wear the type of tie that has weak elastic neck band or collar clip.

Always allow saw blade to cut freely, this is particularly important when feeding warped or irregular timber which may not sit firmly on the table.

Only use a saw blade that is in good condition and suitable for the machine (see page 13) and for the work in hand. A saw blade that is distorted, cracked or has mis-shaped teeth is unsafe to use and should be discarded.

Wet or unseasoned wood may tend to close in and grip the saw blade. This may cause the wood to be flung towards the operator or cause the saw blade to distort due the heat generated by friction. Caution is also necessary when cross-cutting to an end stop as the workpiece may cross-lock and jam the saw blade.

When feeding small or slender sections, particularly if knots are present, there is a risk of the saw blade snatching the workpiece and ejecting it with violent force. Jigs, push blocks and other devices which allow the operator to control the workpiece safely should be used under these circumstances.

Take care not to strike the saw blade or guard by careless handling of the workpiece.

Use Extension Tables when handling large sheets.

When a wobble saw, or moulding and grooving cutters are used, a Hold Down Unit with some form of tunnel guard should be used and also a Special Table Insert (Optional Extras).

Any person, other than the operator, who is removing material from the machine should stand only at the delivery end of the machine. Under these circumstances the machine should be fitted with the Feed Off Table Assembly (Optional Extra).

Keep the machine tables and working area free from tools and off-cuts.

There is considerable risk of accidents through tripping or stumbling due to off-cuts being allowed to accumulate on the floor. A convenient bin

SECTION 510

should be provided to enable off-cuts to be safely disposed of as fast as they are produced. Vertical stacks of timber should be kept away from the working area to avoid the possibility of long lengths of wood falling across the machine.

Always stop the machine before leaving it unattended. Where there is a risk of personal injury due to unauthorised use, the machine should be made inoperative by means of a Lockable Switch (Optional Extra) during the operators absence.

Dust Extraction Equipment (Optional Extra) should be used, particularly when some hardwoods are being sawn, to reduce pollution of the atmosphere. Some materials, such as asbestos, give off toxic fumes and dust when machined, and in such cases it is necessary to seek expert advice as to the method of dust extraction.

SETTING UP MACHINE.

IMPORTANT : THE MACHINE MUST BE ISOLATED FROM THE MAINS SUPPLY BEFORE CHANGING OR ADJUSTING SAW BLADES OR GUARD AND RIVING KNIFE.

Set the saw blade tilt upright (0° on tilt scale) and raise the saw blade to its maximum height, remove saw guard, remove table insert and saw blade. Clean spindle nose and thread with a suitable brush and apply a few drops of oil. Place clamping washer on spindle with dished side towards spindle nose giving maximum clamping area. Place suitable saw blade on spindle, ensuring that the central portion is free from dust and dirt. Place second clamping washer on spindle with dished side facing saw blade. Screw on spindle nut and clamp saw blade in position. To prevent spindle turning whilst this is being done, the tommy bar (supplied) should be inserted through the hole in the table so as to engage with the opposite end of the spindle. Undue force should not be used when tightening spindle nut.

The minimum size rip or cross cut saw blade to be used:- 182mm (7.2") Diameter Main Blade.

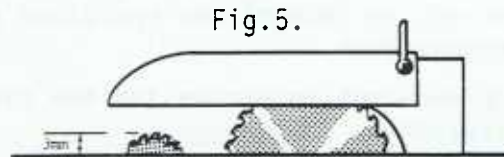
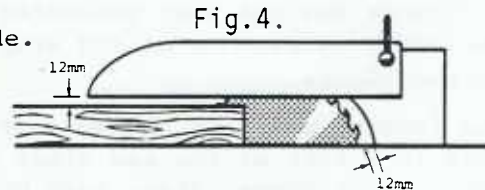
The same setting procedure as above applies for the scoring blade.

The plate thickness of a parallel plate saw blade should be approximately 10% less than the thickness of the riving knife, (splitter). The riving knife should be set so that it is not more than 12mm ($1/2$ ") from blade teeth at the table level (see Fig.4). The saw blade should not be more than 25mm (1") higher than the riving knife. Replace table insert and saw guard.

AT ALL TIMES THE GUARD SHOULD BE SET TO COVER THE GULLETS OF THE TEETH AT SOME POINT (see FIG.4&5).

To set the scoring blade in line with the main blade proceed as follows: Ensure scoring blade is in lowest position, adjust height using the tommy bar/setting tool with the square hole in the end. See Fig.6.

(Always adjust scoring blade to lowest position before raising height of main blade). Raise main blade height to 6.5mm ($1/4$ ") above thickness of test cutting material. Raise scoring blade to height of nominally 3mm ($1/8$ ") above table insert. Take a sample cut, but only feed the wood so that the main blade cuts in a distance of about 50mm (2"). Stop the machine, remove the wood and examine the underside. If the blades are in line the cut will look as



If the cut is as in Fig.8 or 9, remove guard & table insert.

Slacken off scoring blade spindle nut rotate outer ring of micro spacer towards the main blade to reduce its width. Rotate the outer ring away from the main blade to increase the width.

See Figs. 8&9

Note:-

One complete revolution of the outer ring will alter the micro spacer width 1mm.

Note:-

Scoring blade spindle has left hand thread.

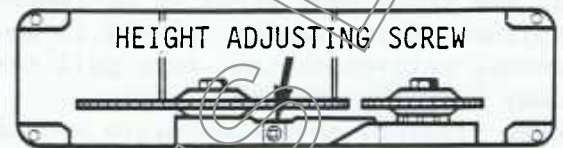


Fig.6. MICRO SPACER

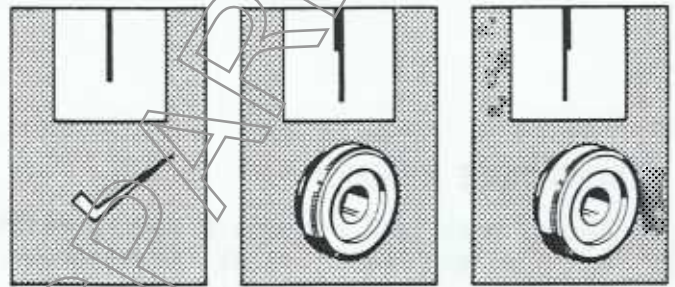


Fig.7. Fig.8. Fig.9.

Re-tighten spindle nut and replace table insert and guard. Repeat test cut and setting procedure until the main blade and scoring blade are in line (see Fig. 7). When scoring blade is not required drop to lowest position.

SETTING UP OF RIP FENCE

Place fence body onto rail making sure clamp bracket is inserted into slot on rail. Rotate handle 'A' to the left; clockwise; which will prevent the fence body from sliding off rail, (see Fig.10). Lock fence to guide rail by pushing down handle 'A'.

ADJUSTING FENCE PARALLEL TO MITRE GAUGE SLOT.

The fence body should be adjusted so it is parallel to the mitre gauge slot, (see Fig.11).

To check and adjust, move fence until the bottom front edge of the fence is in line with the edge of the mitre gauge slot and push down on fence clamping handle 'A'. Check to see if the fence is parallel to the slot. If the rear of the fence must be moved towards the slot, loosen handle 'A' and tighten screw 'B' (see Fig.10). If the rear of the fence must be moved away from slot, tighten screw 'C' after loosening handle 'A'. Any movement of screws 'B' or 'C' should be followed by a similar movement of the heeling screws 'D'.

In order to adjust the jacking screws 'F', first loosen lock nuts 'E' and then set jacking screws to support fence body on rail. Finally, re tighten lock nuts 'E' on jacking screws 'F'.

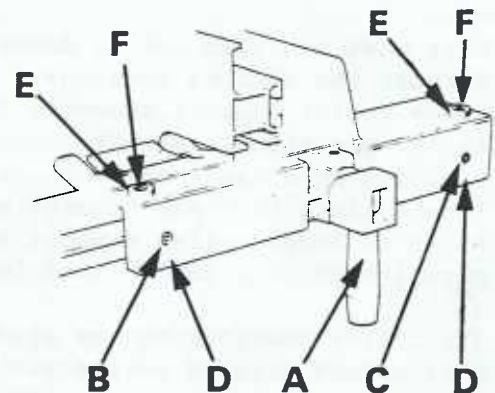


Fig.10.

IMPORTANT : DO NOT OVERTIGHTEN SCREWS 'B' & 'C' VERY LITTLE MOVEMENT OF THESE SCREWS IS NECESSARY WHEN ADJUSTING THE FENCE PARALLEL WITH THE MITRE GAUGE SLOT.

SECTION 510

If the fence body needs to be removed proceed as follows. Raise handle 'A' Fig.10 upwards and rotate anti-clockwise, then pull the assembly away from the machine.

When ripping, the fence plate should not extend more than 50mm (2") beyond the tips of the saw teeth in the direction of feed.

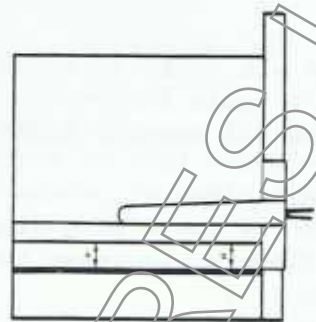


Fig. 11.

SLIDING TABLE ASSEMBLY.

1. Locate both rail support brackets M8439 on underside of cast table by means of the 8mm diameter fixed dowels. Retain loosely in position with M10 cap screws supplied, (see Fig. 12)
2. Place sliding table rail SM1839 onto the rail support brackets. Lock in position with the captive hand knobs in order to align brackets.
3. Tighten cap screws fully to secure brackets to table.
4. Remove M8 cap screw from end of rail which will allow sliding table carriage to be slid onto rail. Replace cap screw.

Note.

Care must be taken not to damage bearing scrapers when rail is passed through the bearing housings.

5. Screw roller support assembly SM1828 into mounting bracket on sliding table, and then lower onto support arm SM1830.
6. Position adjustable angle fence SM1838 on front of sliding table and locate slots in angle bracket over bosses in table. Clamp in position.
7. Raise or lower roller support assembly to bring sliding table fence parallel to cast table, then lock in position using lock nut supplied.

Note.

The roller bearings on the sliding table carriage have been pre-set to give a good sliding action with the minimum of free play.

If adjustment is required, the rollers are mounted on eccentric pillars, therefore slacken off the socket set screw in casting body, rotate mounting pillar to to achieve required fit and re-tighten socket set screw.

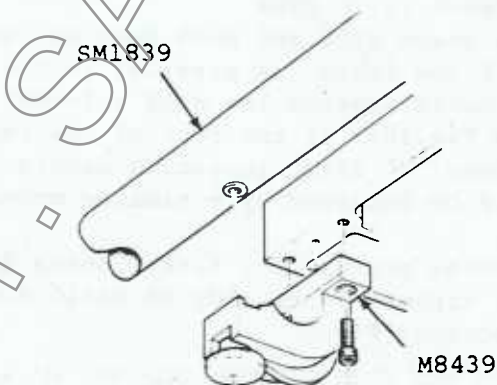


Fig. 12

TABLE CARRIER RAIL (RE-POSITIONING)

When the full cutting capacity or the angle cutting facility is required the table carriage rail must be moved to its forward position or rear position as follows:

1. Move sliding table beyond the rip fence rail. Release the hand knob on the front of the retractable pin and slide to the left so that pin extends out of the end of the rip fence rail.
2. Bring the sliding table forward until the latch locates onto the retractable pin, securing the table carriage.
3. Unscrew the captive hand knobs on underside of both rail support castings and move the rail to its alternative stopped position.
4. Secure the rail into position by re-tightening the captive hand knobs.
5. Lift the locking latch, releasing the sliding table and retract the pin into the rip fence rail and secure.

SETTING UP ADJUSTABLE ANGLE FENCE

The adjustable angle fence SM1838 should be set up square to the mitre gauge slots as follows:-

1. Ensure the stop assembly SM1829 is clamped to the fence extrusion M7342 by the locking handle.
2. Release the stop assembly via the m8 bolt securing it to the angle bracket (see Fig. 13).
3. Set fence square to mitre gauge slots by moving the stop assembly and M8 bolt within the slot in the angle bracket. Retighten bolt.

To move the adjustable angle fence for cutting angles other than 90°:-

1. Loosen both locking handles BQ2528 releasing the angle fence.
2. Pivot angle fence to required angle.
3. Retighten locking handles to secure angle fence in desired position.

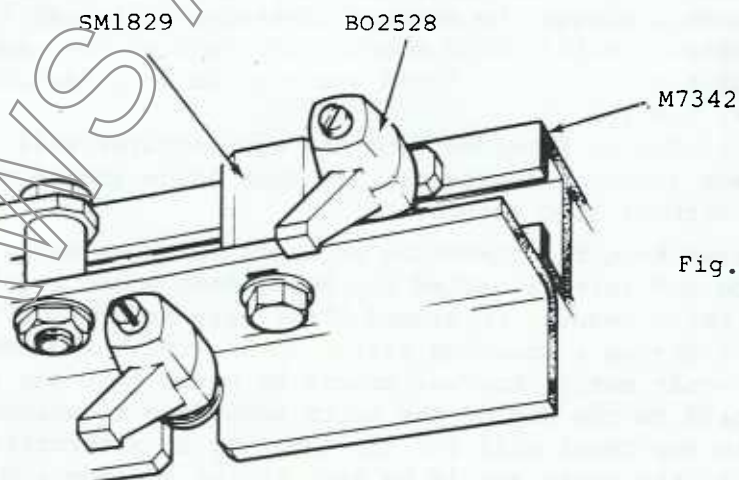


Fig. 13

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RIP & CROSS-CUT SAW BLADES.

NOTE: The most important part of the machine is the blade itself. It is unsafe to use a saw blade that is in bad condition or of the wrong type, and is bound to result in wasted time and material.

A saw blade should be re-sharpened as soon as the teeth lose their keen points, and persistent attempts to force timber through a blunt saw blade will cause the blade to distort through overheating, and may damage the motor and bearings. Such distortion may become permanent and in this event, the saw blade is unfit for further use and should be discarded.

If it is not possible to re-sharpen the saw blade on the premises where it is being used, alternative saw blades should be at hand to prevent the machine from standing idle.

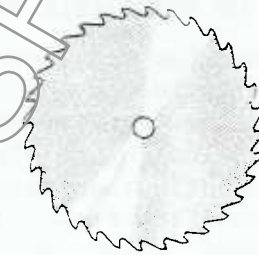
All saw blades not in use should be stored in a dry place and protected from accidental damage.

The rip saw blade, as its name implies, is used for rip sawing timber lengthwise, ie. with grain. It will of course, cut across the grain, but the finish tends to be ragged. The teeth have a fairly coarse pitch and positive hook. The amount of hook, or front rake is approximately 25° for soft woods, decreasing to 15° or even 10° for hard woods. The hook of the blade is defined as the angle subtended by the front edge of the tooth to a radial line touching its tip. Whilst maximum amount of hook is desirable for fast cutting, there is a tendency for the teeth to 'hammer' in hard wood and in knots.

The clearance angle is the back slope of the tooth, and is measured to a line drawn tangential from the tip. This angle is usually around 15° but sometimes, however, it may be increased to 25° for very soft woods. Although the maximum clearance angle and front rake make for easy penetration into soft woods, they tend at the same time to weaken the points of the teeth, and teeth weakened in this fashion will be found to blunt very easily.

The rip saw blades as received from the manufacturer will have the teeth shaped to meet average conditions, and this shape should not drastically be modified without good reason.

Spring set saws have the clearance angle filed at an angle to the axis of the saw blade and this is called top bevel. Soft woods require a top bevel of 15° , this being reduced to around 5° for very hard woods. The top bevel has effect of giving a shearing action to the tooth and tends to produce a cleaner cut. It must, of course, be noted that the top bevel slopes outwards to the tip of the tooth according to which way the hook is set, thus the top bevel will run the same way on alternative teeth only. Front bevel to the teeth should be kept to the minimum and should certainly not exceed 5° for hard woods.

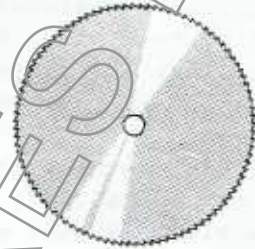


RIP TOOTH
SAW BLADE

RIP & CROSS-CUT SAW BLADES(CONTINUED).

Cross-cut saw blades differ mainly from rip saw blades by their negative hook of up to 10° . They are intended for sawing across the grain and also for cutting plywood, blockboard and other similar materials. They are usually spring set with a clearance angle of up to 60° . Top and front bevels are usually around 15° , but less will be required on very hard woods.

Only the periphery of the saw blade should be in contact with the workpiece and this condition is met on rip saw blades by spring setting, or swaging the tips of the teeth so that they protrude beyond the face of the saw blade. With spring setting the tips of the teeth are bent outwards, either by means of a saw set hammer blow upon a special anvil, adjacent teeth being set in the opposite direction. The set should be made tangential and from a position not more than one third of the way down from the tip of the tooth. It should be remembered that a saw blade with one or two over-set teeth will produce ugly score marks on every piece of wood it cuts. The amount of set required for general purposes is approximately 0.25mm (.010") each side of the saw blade, but the golden rule is to apply the least amount which prevents the saw blade from binding in the cut. Some woods by their nature tend to be woolly or exude resin, and extra care must be allowed in these cases, but it must be borne in mind that the wider the kerf, the more power required to drive the saw blade. To avoid an accumulation of resin building up in the saw blade, the blade should be frequently wiped clean with a rag soaked in petrol or other suitable solvents.

CROSS-CUT
SAW BLADE

NOTE: It is incorrect to set the teeth after the sharpening operation.

SHARPENING SAW BLADES.

General purpose rip and cross-cut saw blades are usually made from carbon steel and these may be easily re-sharpened by hand. Before sharpening, ensure that the saw blade runs true by stoning the teeth. This is done by first lowering the saw blade into the machine until it is below the table. Place a coarse emery stone over the table slot and very gently raise the saw blade until the teeth just make contact with the emery stone. Remove emery stone, and start the machine. Slide the emery stone over the tips of the saw teeth until a witness mark appears on every tooth.

Remove the saw blade from the machine and clamp in a suitable vice. File the top bevel of each tooth in the direction of the set until the witness mark is just removed.

It may be necessary to dress the front bevel, but take care not to remove more of the tooth profile than is required and to dress all teeth equally.

WARNING: Take extra care when stoning saw blades. It is advisable to wear eye protection and use an emery stone large enough to be held firmly on the table by both hands.

HOLLOW GROUND SAW BLADES.

Hollow ground saw blades have their faces relieved by grinding to produce the necessary working clearance, but the shape of the tooth may vary considerably according to the purpose for which it is intended.

One type has teeth of the novelty combination pattern and is called a mitre or planer blade. This saw blade is used mainly for cross-cutting, or cutting thin sections and leaves a surface equal to a planed finish. It should be noted, however, that the planer blade is not intended as a substitute for the planing machine.

Hollow ground saw blades are also available for cutting a wide range of light alloys and plastics. Quite often the correct requirements for sawing these materials may only be determined by experiment, but the following notes should prove a useful guide.

For maximum cutting speed, saw blades of the greatest possible pitch should be used, but it must be ensured that there are at least two teeth in engagement. On harder materials it will be necessary to have more teeth in engagement in order to avoid the blade chattering in the cut. A fine pitch saw blade is essential for cutting very thin sections.

Heavier sections of some plastic materials will cut much more easily if the saw blade is lubricated with soap, or soapy water. Aluminium, zinc and lead based alloys may be sawn in thin sections and a few drops of paraffin or soluble cutting oil makes for easier cutting and a better finish.

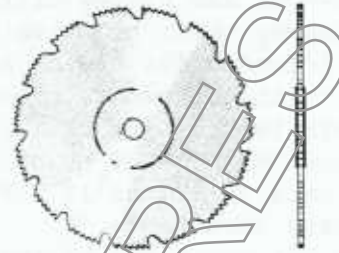
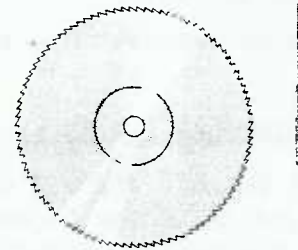
Due to the small working clearance of hollow ground saw blades there is a marked tendency for them to overheat once the teeth have lost their fine edge, and it is important, therefore, that these blades are frequently re-sharpened.

Saw blades with tungsten carbide stellite tipped teeth are available, and for cutting hard or abrasive materials it will be found that their high initial cost is well justified.

When saw blades of other than standard gauge thickness are used it may be necessary to fit a special riving knife of suitable thickness.

It must be borne in mind that the machine is designed primarily for cutting timber, and consequently its spindle speed is usually too great for sawing hard or abrasive materials.

A smaller diameter saw blade will give a lower peripheral speed. In addition, a smaller saw blade is much stiffer due to its reduced diameter, and this is an important factor in preventing blade wander.

HOLLOW GROUND
MITRE SAW BLADEHOLLOW GROUND
CROSS-CUT SAW BLADE

CARBIDE TIPPED SAWBLADES

Due to industry's heavier demands in recent years, the tungsten carbide stellite tipped sawblade has become more popular than ever for normal woodworking operations, hardwoods and abrasive materials.

A 300mm x 30mm x 36 teeth sawblade is suggested for good fast feed rip sawing and also suitable for cross and panel cutting where finish is not important. A 300mm x 30mm x 50 teeth sawblade is suggested for general purpose cutting. This will cut all natural and man made material at reasonable feed, speed and finish. For plastic faced panels a 250mm x 30mm x 3.0mm kerf x 80 teeth main blade should be used with a 105mm split scoring sawblade.

It is important when re-ordering carbide tipped sawblades that the blade body thickness is maintained to 2.0mm (0.080"). The use of a thicker blade body would mean that a thicker riving knife would be necessary.

For specialised work, other carbide tipped saw blades are available.

To ensure that maximum production yield is maintained, care and maintenance of your carbide tipped saw blade is of paramount importance.

CARE:

Never place a carbide tipped saw blade on metal, concrete or other abrasive surfaces. When not in use, the saw blade should be returned to its original packing or a specially prepared storage box.

Always keep the blade clean and free from timber sap and other deposits.

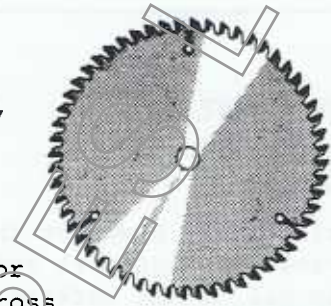
MAINTENANCE:

The most important part of saw blade maintenance is re-grinding or sharpening. A carbide tipped saw blade should never be allowed to become dull; this could cause friction heat and warp or buckle the saw blade. In which case the saw blade is rendered useless and should be discarded. Re-grinding or sharpening is best carried out by professionals. Your local saw doctor will be pleased to help and advise, or return the saw blade to STARTRITE Service Department who will offer a speedy and efficient service.

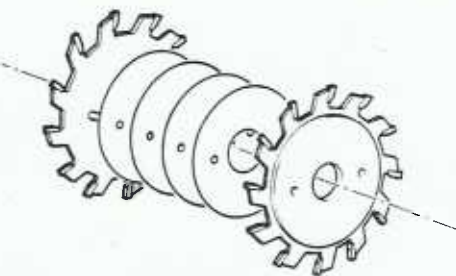
SCORING SAWBLADE

A 105mm x 20mm bore split scoring sawblade with 2 x 12 teeth is recommended in conjunction with a 250mm x 80 teeth main blade when cutting plastic faced panels.

The width of the scoring sawblade cut should be 0.2mm (0.008") wider than that of the main blade. This is achieved by adding or removing shims between the 2 halves of the split scoring sawblade.



CARBIDE TIPPED
SAW BLADES



MAINTENANCE

GENERAL:

Periodically blow out the interior of the machine to clear all moving parts of dirt and dust deposits. Apply a few drops of very thin oil to all working surfaces.

The motor is fitted with sealed-for-life bearings and does not require further lubrication.

SAW SPINDLE:

The saw spindle is mounted on sealed-for-life bearings which do not require further lubrication. Periodically clean the spindle nose and thread with a suitable brush to remove any gummy deposits and apply a few drops of very thin oil.

TENSIONING POLY-VEE BELT:

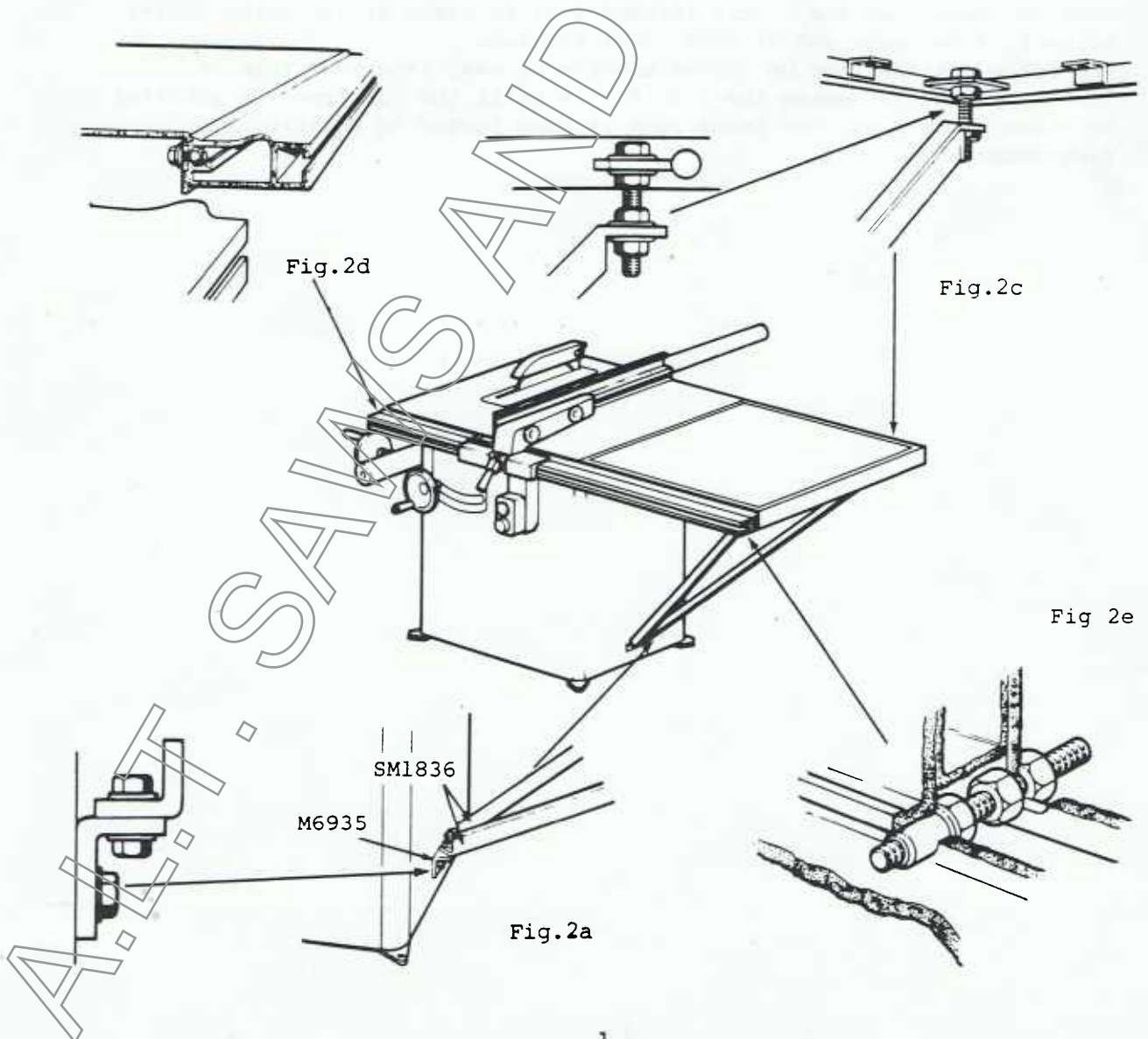
Check the belt tension after the first five hours running, and weekly thereafter. The belt tension is adjusted by slackening off 4 screws and moving the platform up or down as required.

A good guide as to the correct belt tension is that it should be possible to deflect the belt 10mm (3/8") midway between the pulleys.

CAUTION: DO NOT OVER TENSION POLY-VEE BELT, as this may damage both the belt and the bearings.

FITTING OF TABLE AND FENCE EXTENSION SM1837 (OPTIONAL EXTRA)

1. Remove rip fence and front fence rail from machine, (undo the three M10 nuts on the studs in underside of front flange of the machine table).
2. Remove fence support shelf bolted to the right hand side of machine table.
3. Line up two holes in bracket M6935 with captive nuts in right hand side of stand. Secure using bolts and washers supplied. (M10 x 25 LG bolt and M10 washer 2 off each, see Fig 2a).
4. Secure arms SM1836 to bracket M6935 using nuts, bolts and washers supplied (M10 x 25 LG bolt 2 off, M10 nut 2 off and M10 washers 4 off see Fig 2a).
5. Line up holes in extension table SM1835 with the three tapped holes in right hand side of machine main table, secure using bolts and washers supplied (M8 x 16 LG bolt and M8 washer 3 off each).
6. Secure extension table SM1835 to support arm SM1836 with nuts, bolts and washers supplied (M10 x 60 LG bolt 2 off, M10 nut 6 off and M10 washer 8 off see Fig 2c). Fit melamine board into extension table SM1835 and secure with screws provided (No 8 x 1/2" long self tapping screws 10 off).



7. To level the extension table place a straight edge across machine table and extension table, slacken off 3 M8 bolts and adjust inboard end of extension table in line with main table, retighten bolts. Adjust outboard end of extension table level by means of the M10 x 60 bolts between extension table and arms. (see Fig 2c). Slacken off the lower nut and adjust the nut above the arm to jack the table up or down. When level relock the lower nut.
Note:- This is to be done for both arms.
8. To fit long version front fence rail SM1834 remove the 2 studs & nuts from the short fence rail. (Already removed from the machine) and refit in the corresponding holes in long rail. Fit the long version stud and nut (supplied) in remaining hole.
Note:- Slide nuts inside recess in rail until aligned and screw in short end of thread, tighten. Load fence rail onto front of machine, the 3 studs to pass through holes in machine table and extension table, secure using nuts and washers supplied. (Check fence rail is parallel with tables before tightening, use spirit level. See Fig 2d).
9. In order to adjust rip fence parallel to mitre gauge slot, rip fence rail must be set up as follows, using stud, locknut and full nut supplied (M8 x 65 LG stud 1 off, M8 locknut 1 off and M8 full nut 2 off). Screw stud into thread insert in fence rail and lock with nut supplied. Screw full nut onto stud and insert through slot in front of extension table. Screw full nut onto end of stud. (See Fig 2e).
The fence rail may now be jacked towards or away from the table by loosening and tightening the 2 full nuts until the rip fence is parallel to mitre gauge slot. The fence rail is then locked in position by tightening the 2 nuts.

FITTING OF REAR SUPPORT TABLE SM1831 (OPTIONAL EXTRA)

1. Line up two holes in bracket M6935 with captive nuts in rear face of stand. Secure using bolts and washers supplied. (M10 x 25 LG bolt and M10 washer 2 off each see Fig 1a).
2. Secure arms SM1836 to bracket M6935 using nuts, bolts and washers supplied (M10 x 25 LG bolt 2 off, M10 nut 6 off and M10 washer 4 off see Fig 1a).
3. Line up holes in support table SM1832 with the two tapped holes in rear flange of machine main table, secure using bolts and washers supplied (M8 x 16 LG bolt and M8 washer 2 off each, see Fig 1b).
4. Secure support table SM1832 to support arms using nuts, bolts and washers supplied (M10 x 60 LG bolt 2 off, M10 nut 6 off and M10 washer 8 off, see Fig 1c).
5. To level the support table, place a straight edge across machine table and support table, slacken off 2 M8 bolts and adjust inboard end of support table in line with main table, retighten bolts. Adjust outboard end of support table level by means of the M10 x 60 LG bolts between support table and arms. (See Fig 1c). Slacken off lower nut and adjust the nut above the arm to jack the table up or down, when level relock the lower nut.

Note:- This is to be done for both arms.

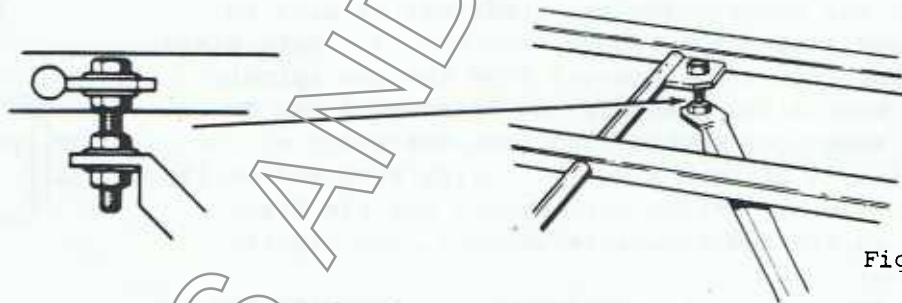


Fig. 1c

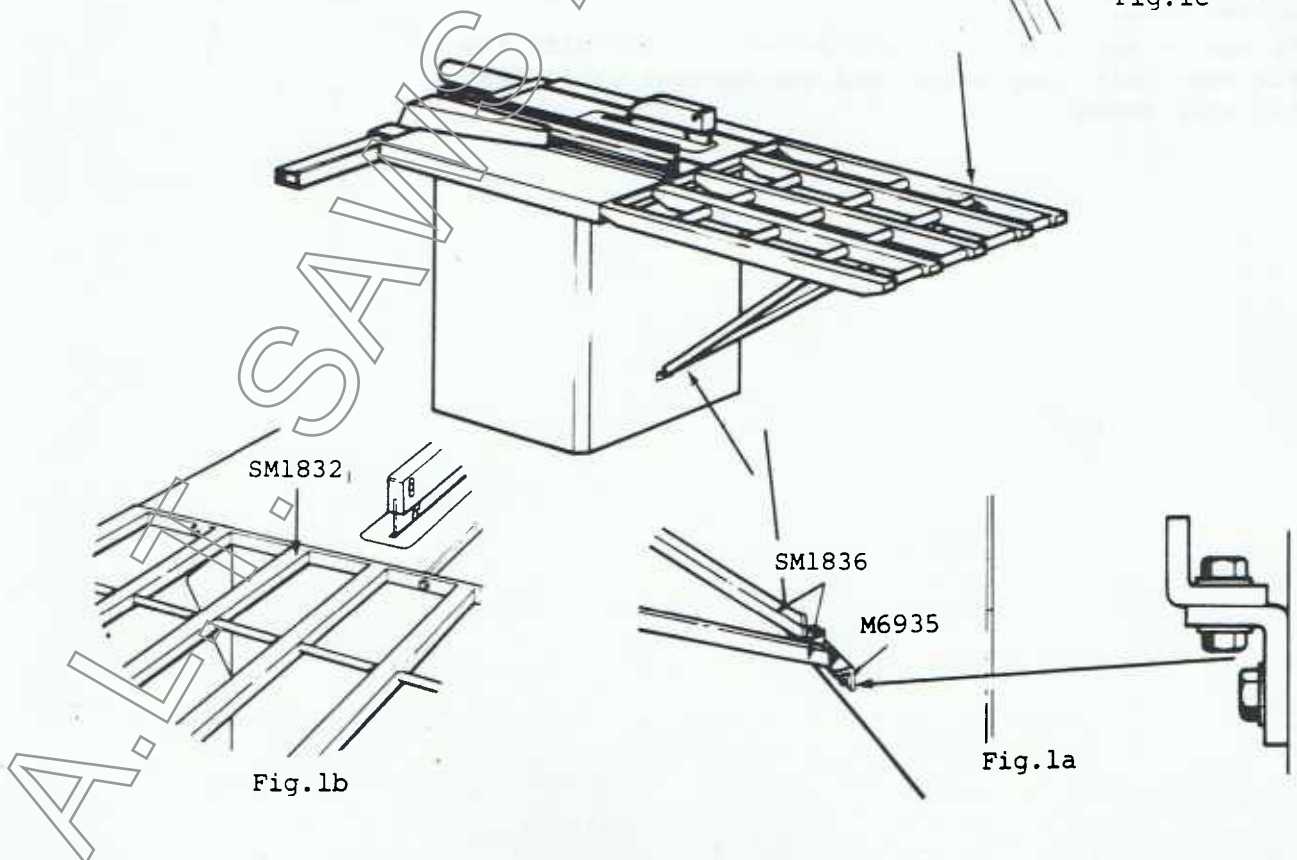


Fig. 1b

Fig. 1a

HOLD DOWN UNIT (OPTIONAL EXTRA).

The hold down unit is a device having leaf springs which hold the workpiece against the rip fence and down onto the table, see Fig.13. It is easily bolted via an adaptor bracket to the top of the special rip fence face plate so that the bearing portion of the springs are more or less over the saw centre.

The unit complies with requirements of the Woodworking Machinery Regulations 1974 (U.K.) when fitted with pressure pads that form an effective tunnel type guard around a wobble saw or moulding block. Suitable pressure pads can be easily made and fitted by the user to suit the nature of work to be carried out.

The unit should be adjusted so that the leaf springs bear down on top and side of the workpiece. Excessive spring pressure should be avoided as this makes it difficult to maintain a smooth and even feed.

WOBBLE SAW (OPTIONAL EXTRA).

The wobble saw comprises of a robust saw blade, complete with a set of tapered washers. By adjusting the relative position of the washers the saw blade may be made to 'wobble', and thus cut a groove (see Fig.14). Both blade clamping washers must be removed from the saw spindle before the wobble saw assembly can be screwed on. To adjust the amount of wobble (and thus the width of the groove), slacken off the slotted locking ring and whilst holding the saw hub stationary, rotate the saw blade together with the two immediate washers, and tighten locking ring.

The wobble saw should be used in conjunction with the Hold Down Unit (see above) and the Special Table Insert (Optional Extra).

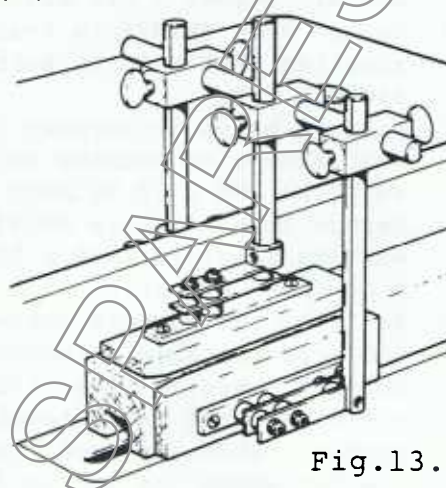


Fig.13.

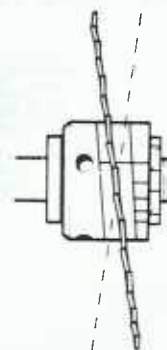


Fig.14.

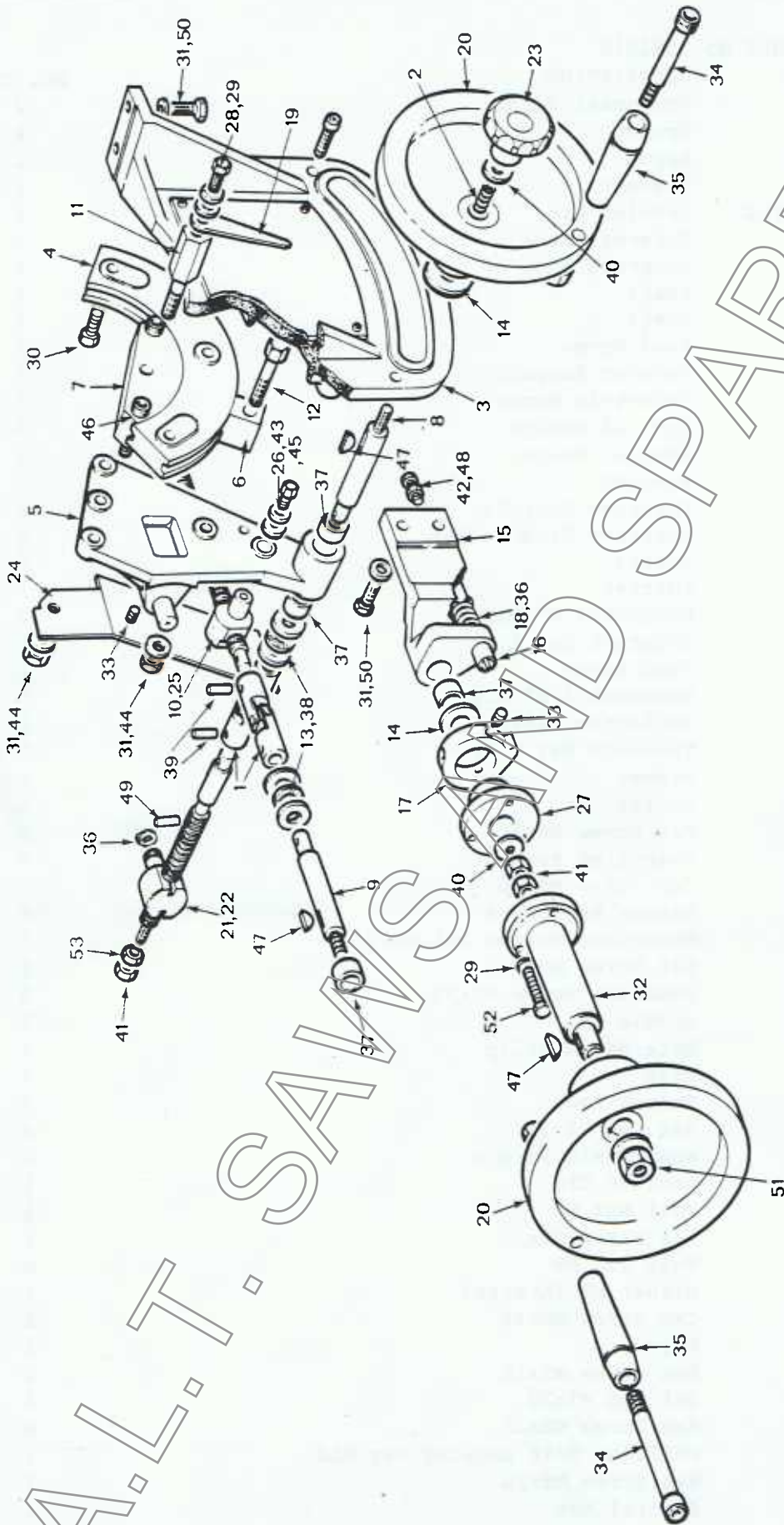
PARTS LISTS

SECTION 520

APRON - ASSEMBLY No. SM1818

ITEM	PART No.	DESCRIPTION	No. OFF
1	SM212	Universal Joint	2
2	1499	Spring	1
3	1736/B	Apron	1
4	1737/B	Segment	1
5	1738/METRIC	Carrier Arm	1
6	1776	External Shoe	1
7	8369	Internal Shoe	1
8	1788	Shaft	1
9	1790	Shaft	1
10	1791	Feed Screw	1
11	8370	Pointer Support	1
12	1794	Eccentric Screw	1
13	1795	Special Washer	4
14	1798	Special Washer	2
15	2069	Bracket	1
16	2070	Positive Stop Pin	1
17	2071/A	Positive Stop Collar	1
18	2072	Spring	1
19	3338	Pointer	1
20	6867/A	Handwheel	2
21	4541	Trunnion Nut	1
22	4542	Feed Screw	1
23	5130	Handknob	1
24	5651	Deflector Plate	1
25	5735	Trunnion Nut	1
26	5736	Washer	1
27	7403	Collar	1
28	B05552	Hex Screw	1
29	B05915	Washer	4
30	B05074	Cap Screw	3
31	B05917	Washer	6
32	SM1816	Extension(Welded Assembly)	1
33	B05194	Set Screw	2
34	B05485	Shoulder Screw	2
35	B02553	Handle	2
36	B06018	External Circlip	2
37	B02326	Bush	4
38	B02066	Thrust Race	2
39	B05352	Sel Loc	4
40	B05919	Washer	2
41	B05754	Locknut	1
42	B05713	Full Nut	1
43	B05592	Hex Screw	1
44	B05715	Full Nut	6
45	B05942	Washer	1
46	B05079	Cap Screw	2
47	B06460	Key	3
48	B05547	Hex Screw	1
49	B05346	Sel Loc	1
50	B05563	Hex Screw	6
51	B05732	Philidas Self Locking Nut	1
52	B05555	Hex Screw	3
53	5634	Special Nut	1

SECTION 520



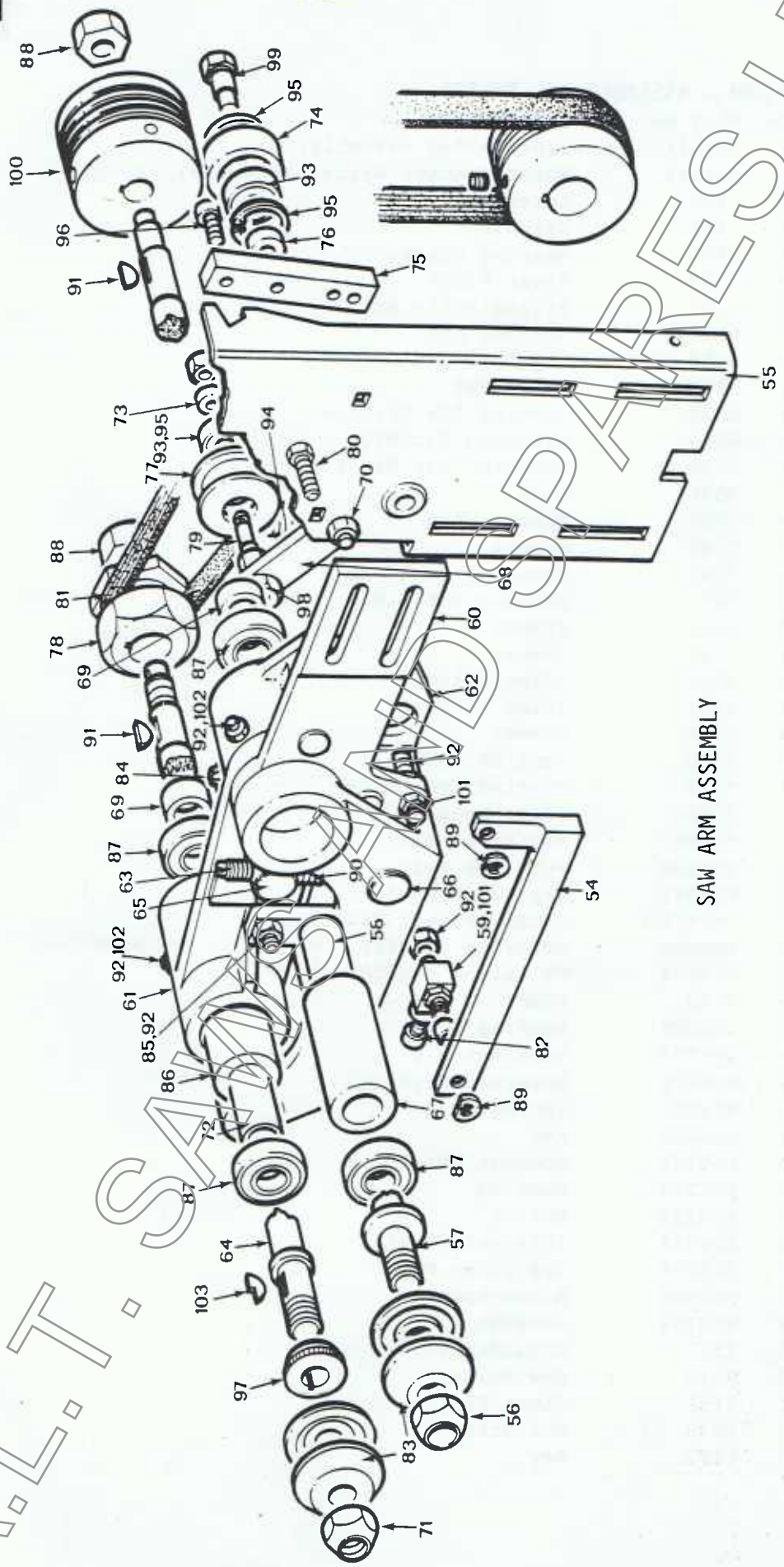
APRON - BLADE HEIGHT & TILT ASSEMBLY

SAW ARM - ASSEMBLY No. SM1821

ITEM	PART No.	DESCRIPTION	No. OFF
54	SM1514	Link(Welded Assembly)	1
55	SM1524	Motor Bracket(Welded Assembly)	1
56	1190	Locknut	1
57	1784	Spindle	1
58	8485	Bearing Spacer	1
59	2147	Pivot Block	1
60	2247	Riving Knife Arm	1
61	8523	Scoring Arm	1
62	8524	Saw Arm	1
63	6919	Screw	1
64	6920	Scoring Saw Spindle	1
65	6924	Trunnion Nut	1
66	6925	Trunnion Nut	1
67	8331	Bush	1
68	7235	Tension Arm	1
69	7240	Spacer	2
70	7241	Shoulder Screw	1
71	7433	Spindle Nut	1
72	8486	Spacer	1
73	7722	Washer	1
74	7724	Idler Pulley	1
75	7725	Idler Plate	1
76	7726	Spacer	1
77	7728	Tension Pulley	1
78	7729	Scoring Saw Pulley	1
79	7731	Idler Spindle	1
80	BO5561	Hex Screw	2
81	BO2158	Poly Vee Belt	1
82	BO5073	Cap Screw	1
83	SM1873/A	Clamp Washers Kit	1
84	BO6006	External Circlip	1
85	BO5207	Set Screw	1
86	8330	Bush	1
87	BO2005	Bearing	4
88	BO5777	Binx Nut	2
89	BO6016	External Circlip	2
90	BO2201	Spring	1
91	BO6460	Key	2
92	BO5753	Locknut	5
93	BO2025	Bearing	2
94	BO2233	Spring	1
95	BO6033	Internal Circlip	4
96	BO5074	Cap Screw	2
97	BO2580	Micro-Spacer	1
98	BO5754	Locknut	1
99	7727	Shoulder Screw	1
100	8245	Saw Pulley	1
101	2151	Pivot Pin	2
102	8332	Set Screw	2
103	8482	Key	1

SECTION 520

2



SAW ARM ASSEMBLY

A.L.T. SAWS & CUTTING TOOLS LTD

MOTOR PLATFORM - ASSEMBLY No. SM1535

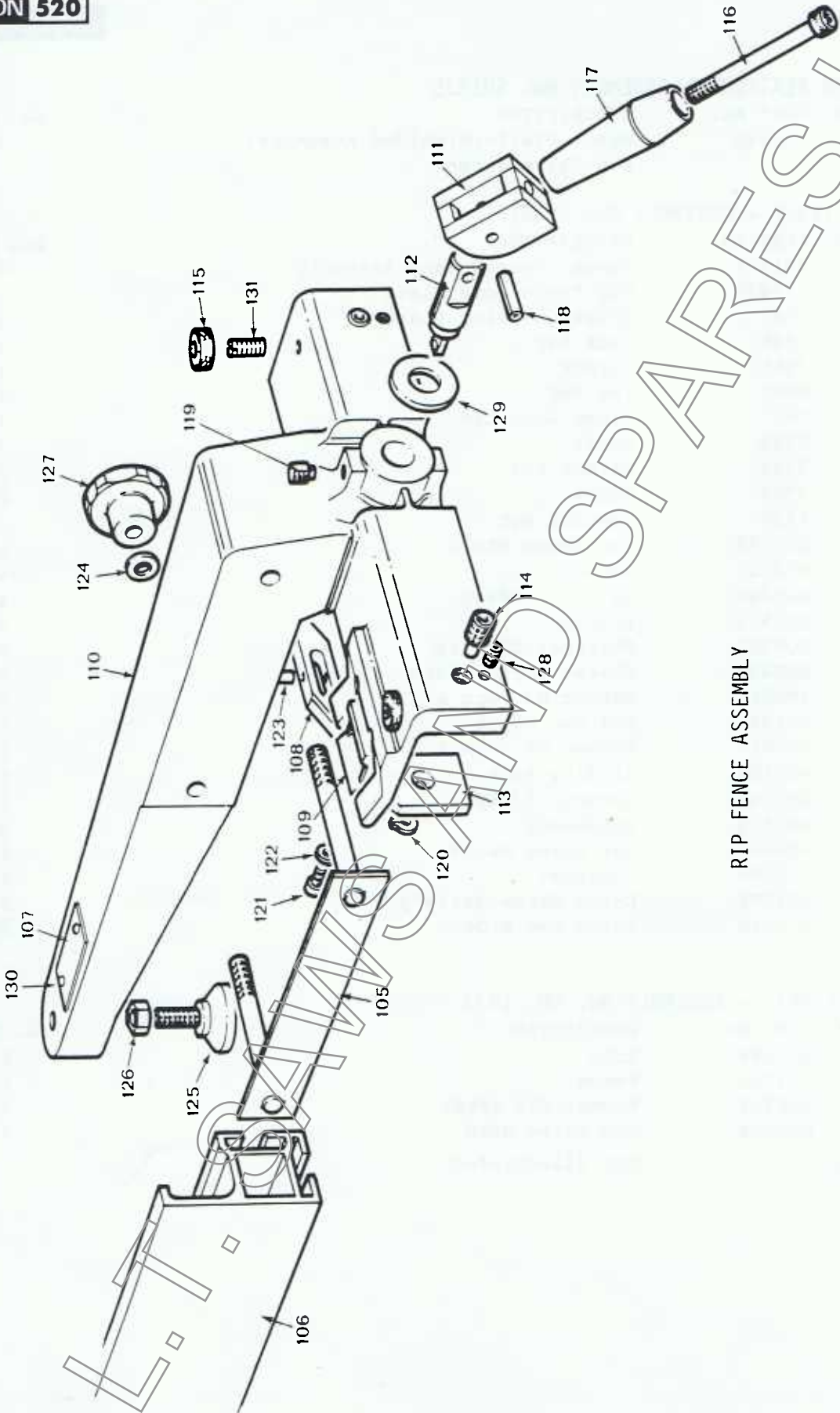
ITEM	PART No.	DESCRIPTION	No. OFF
104	SM1535	Motor Platform(Welded Assembly) Not Illustrated	1

RIP FENCE - ASSEMBLY No. SM1817

ITEM	PART No.	DESCRIPTION	No. OFF
105	SM1511	Fence Clamp(Welded Assembly)	1
106	7338/A	Rip Fence Face Plate	1
107	5045	Safety Warning Plate	1
108	7349	Lock Bar	1
109	7355	Cursor	1
110	8500	Tee Bar	1
111	7357	Clamp Lock Cam	1
112	7359	Shaft	1
113	7364	Slider Pad	2
114	7365	Screw	2
115	8436	Special Nut	2
116	B05084	Cap Screw	1
117	B02527	Handle	1
118	B05364	Sel Loc	1
119	B02585	Plunger	2
120	B06020	External Circlip	2
121	B05472	Cheese Screw	2
122	B05910	Washer	2
123	B05351	Sel Loc	1
124	B05917	Washer	2
125	B02584	Sliding Foot	1
126	B05742	Locknut	1
127	B02533	Handwheel	2
128	B05196	Set Screw	2
129	B02084	T/Washer	1
130	B05871	Drive Screw	2
131	B05218	Nylon Set	2

FENCE RAIL - ASSEMBLY No. SM. 1833

ITEM	PART No.	DESCRIPTION	No. OFF
132	B02588	Rule	1
133	7337/C	Fence	1
134	B05793	Rivnut	3
135	B05058	Cap Screw	2
		Not Illustrated	



RIP FENCE ASSEMBLY

BLADE GUARD & RIVING KNIFE - ASSEMBLY No. SM1874

ITEM	PART No.	DESCRIPTION	No. OFF
136	4938	Clamp (SM1871)	2
137	4939	Spacer (SM1871)	2
138	4940	Stud (SM1871)	2
139	4941/A	Machined Washer (SM1871)	2
140	4942	Spacer (SM1871)	2
	SM1871	Guard Fixing Kit	1
141	4943	Locking Lever	1
142	7242	Blade Guard	1
143	7243	Riving Knife	1
144	7244	Bolt	1
145	B05564	Hex Screw	2
146	B05715	Full Nut	4
147	B05917	Washer	1

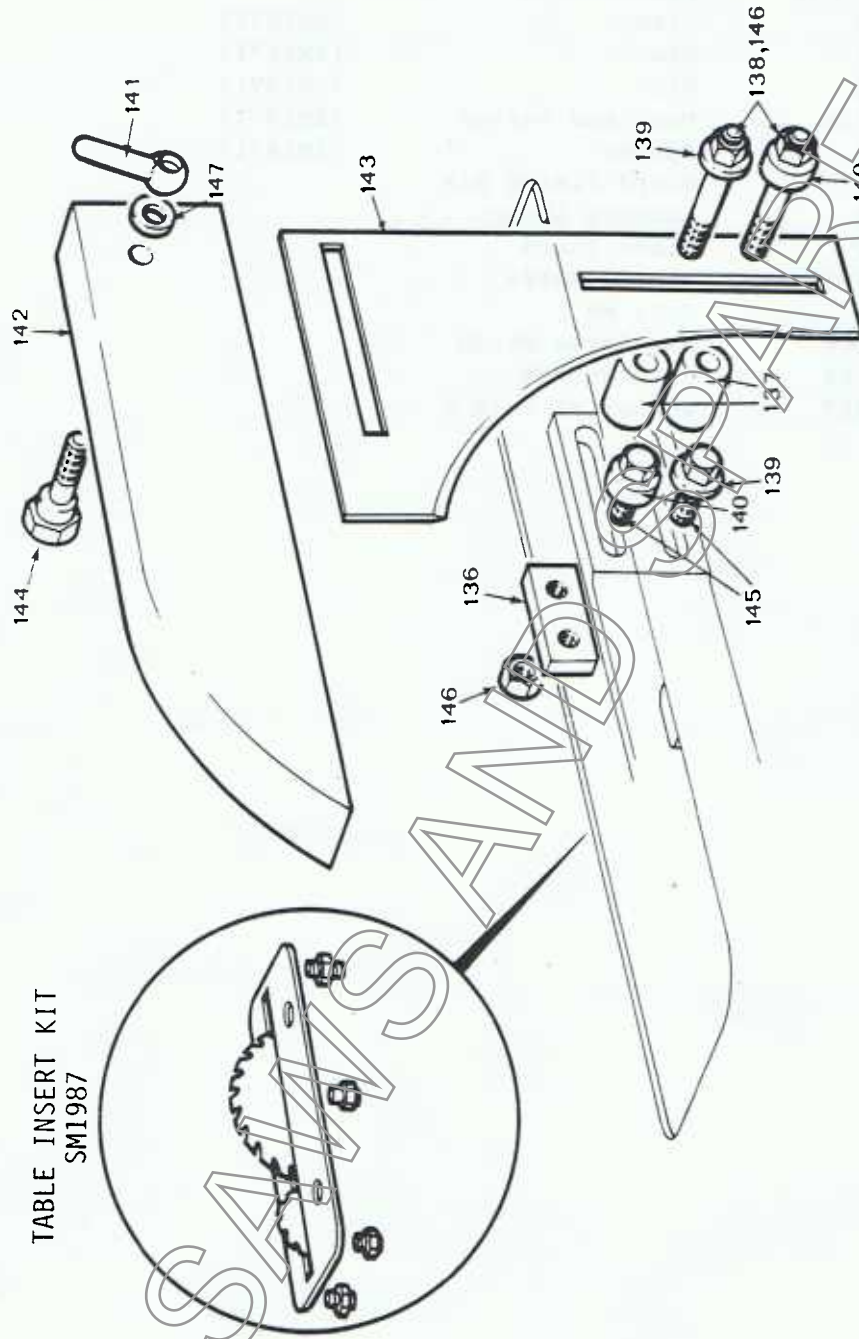


TABLE INSERT KIT
SM1987

BLADE GUARD & RIVING KNIFE ASSEMBLY

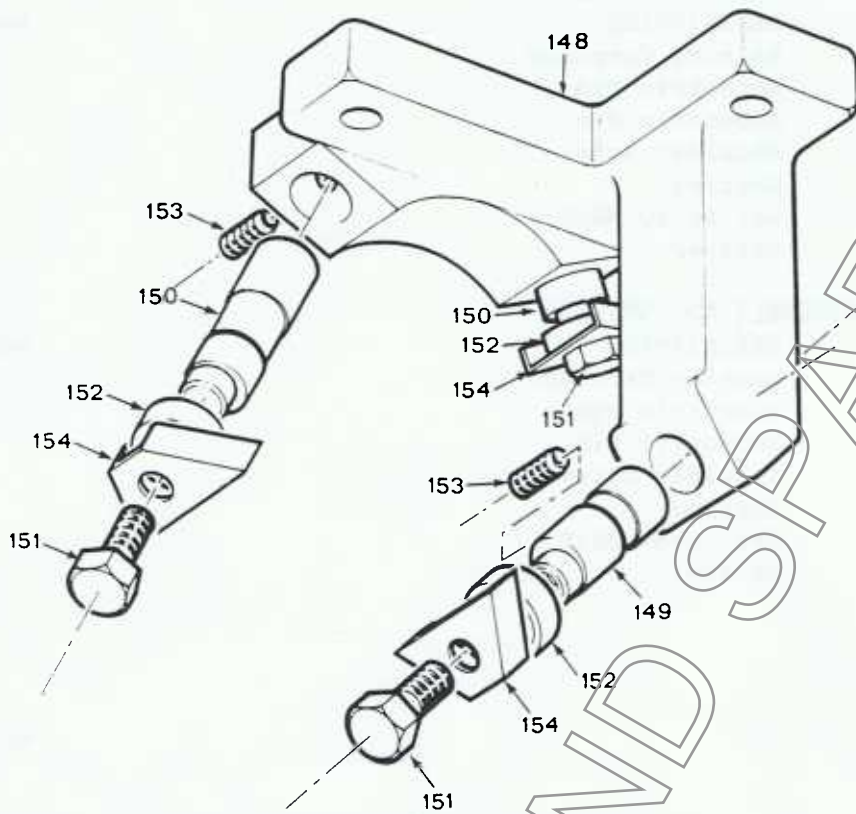
A.L.T.

FRONT BEARING - ASSEMBLY No. SM1825

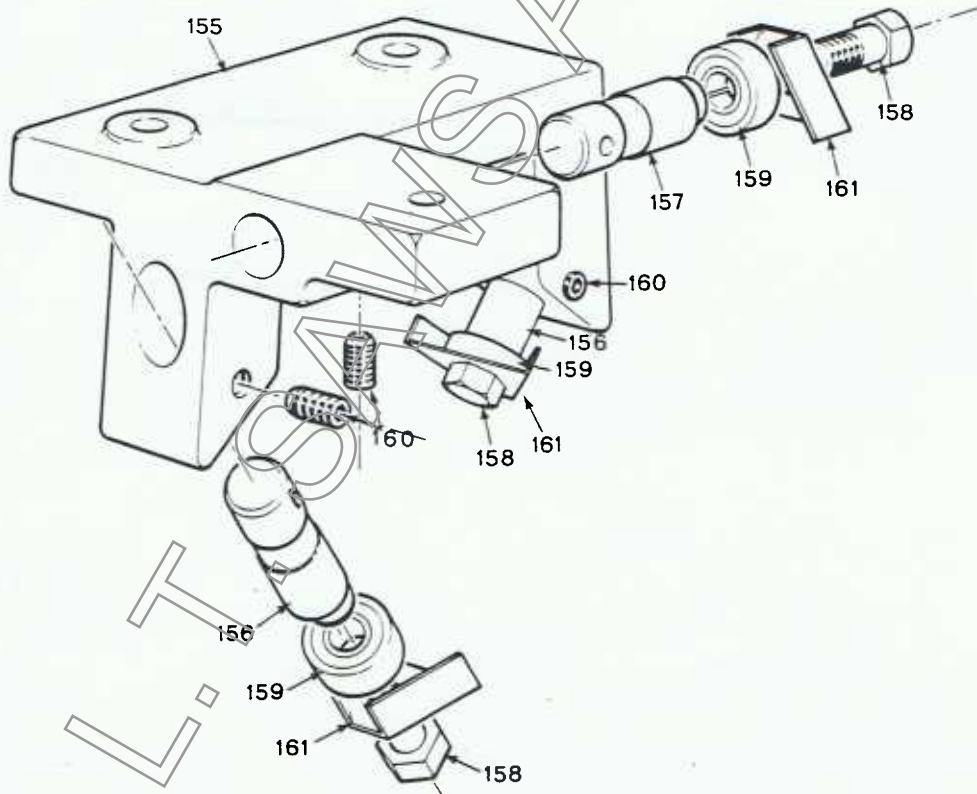
ITEM	PART No.	DESCRIPTION	No. OFF
148	8367	Bearing Carriage	1
149	8491	Eccentric Pin	1
150	8495	Eccentric Pin	2
151	5561	Shoulder Screw	3
152	B02011	Bearing	3
153	B05199	Set Screw	3
154	5559	Scraper	3

REAR BEARING - ASSEMBLY No. SM1826

ITEM	PART No.	DESCRIPTION	No. OFF
155	8368	Bearing Carriage	1
156	8491	Eccentric Pin	2
157	8492	Eccentric Pin	1
158	5561	Shoulder Screw	3
159	B02011	Bearing	3
160	B05199	Set Screw	3
161	5559	Scraper	3



FRONT BEARING ASSEMBLY



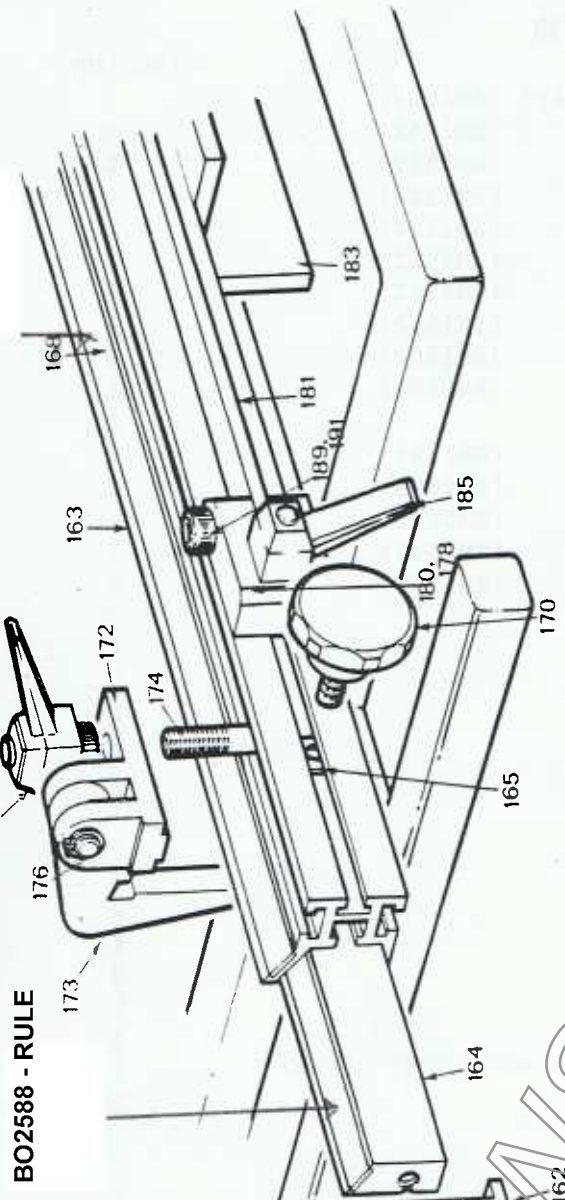
REAR BEARING ASSEMBLY

ADJUSTABLE ANGLE FENCE - ASSEMBLY No. SM1838

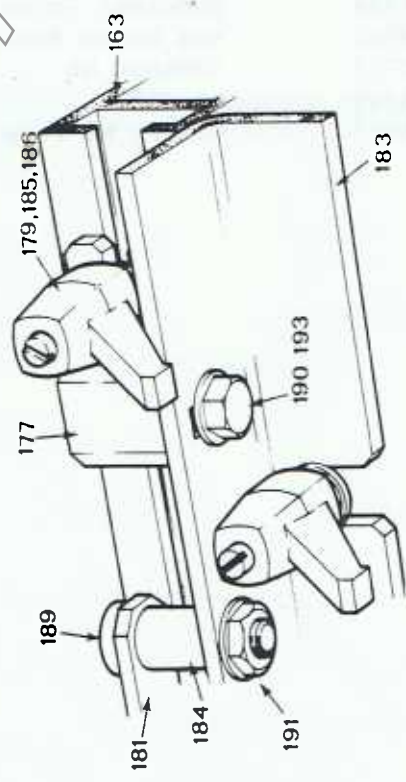
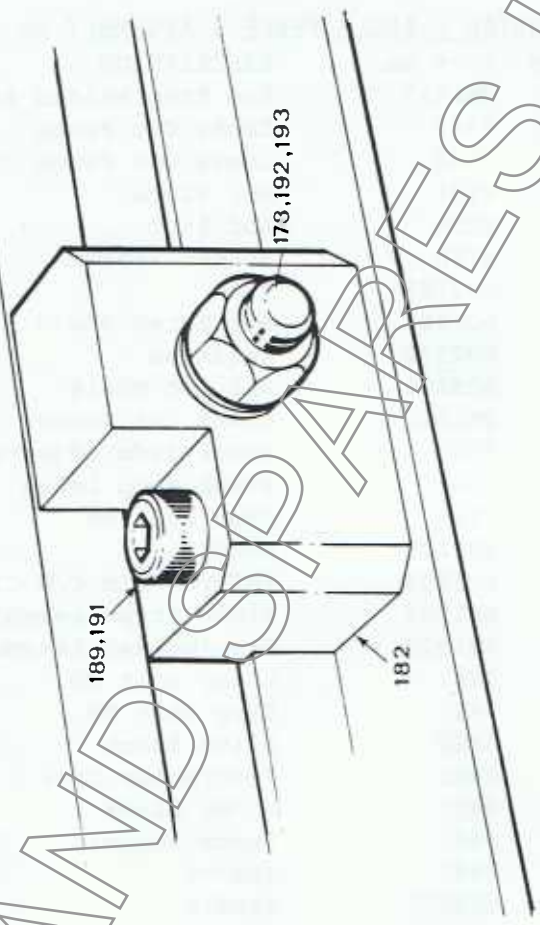
ITEM	PART No.	DESCRIPTION	No. OFF
162	SM1617	End Stop(Welded Assembly) (SM1552)	1
163	7342	Cross Cut Fence (SM1552)	1
164	7343	Cross Cut Fence Ext. (SM1552)	1
165	8181	Nut Plate (SM1552)	1
166	8236	End Stop (SM1552)	1
167	8280	Headed Spacer (SM1552)	1
168	BO2589	Rule (SM1552)	1
169	BO5564	Hex Screw (SM1552)	1
170	BO2552	Handknob (SM1552)	1
171	BO5356	Sel Loc (SM1552)	1
	SM1552	Cross Cut Fence	1
172	7347	Stock Stop Adjuster (SM1593)	1
173	7348	Stock Stop Latch (SM1593)	1
174	7463	Stop Bolt (SM1593)	1
175	BO2528	Handle (SM1593)	1
176	BO5904	Fulcrum Pin C/W Clip (SM1593)	2
	SM1593	Stock Stop Assembly	2
177	SM1829	Stop(Welded Assembly)	1
178	7462	Clamp Bolt	2
179	7463	Stop Bolt	1
180	8422	Slide Block	1
181	8423	Protractor Link	1
182	8431	Pivot Block	1
183	8432	Fence Support	1
184	8443	Spacer	1
185	BO2528	Handle	2
186	4941/A	Washer	1
189	BO5484	Shoulder Screw	3
190	BO5561	Hex Screw	1
191	BO5753	Locknut	3
192	BO5715	Nut	1
193	BO5917	Washer	2

SECTION 520

BO2589 - RULE



BO2588 - RULE

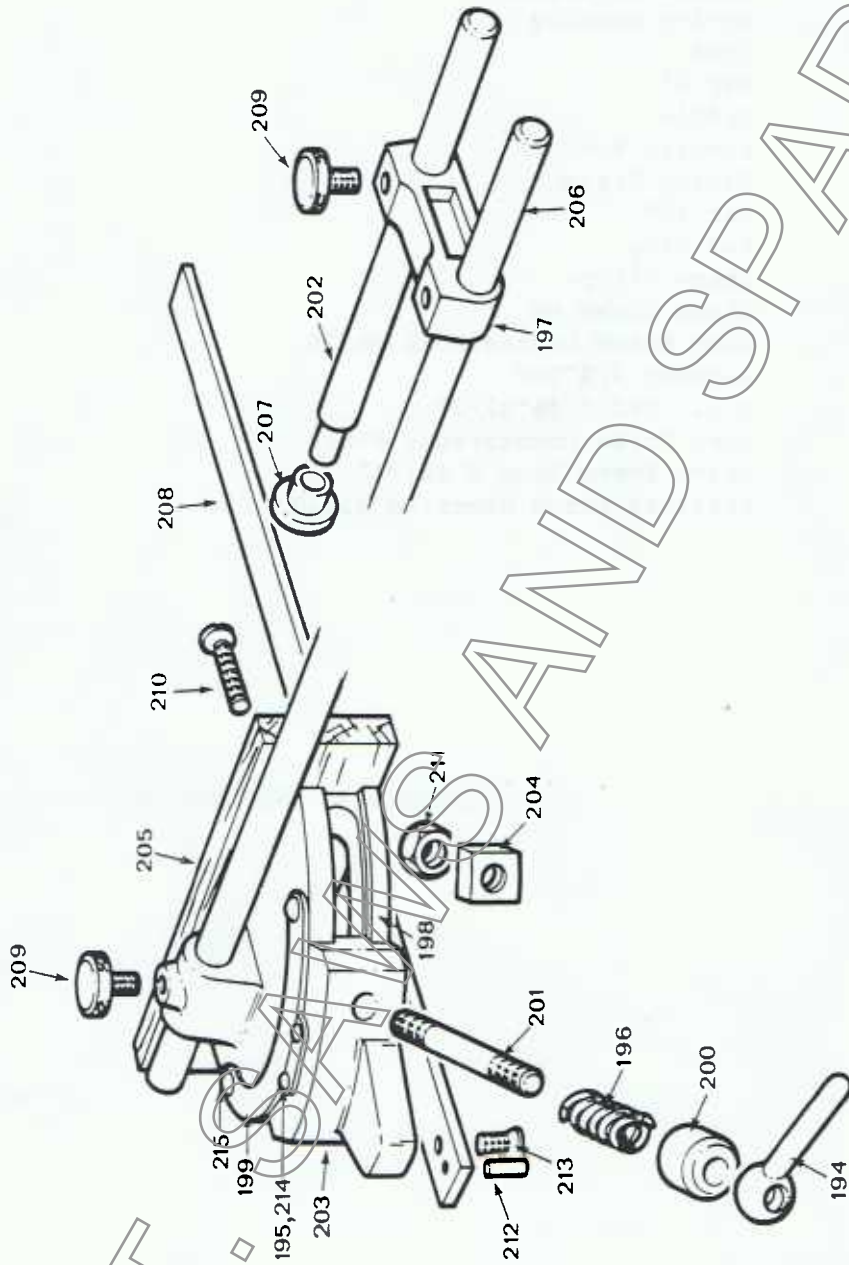


ADJUSTABLE ANGLE FENCE ASSEMBLY

A.L.T. AND SUPPLIES LTD

MITRE GAUGE - ASSEMBLY No. SM210/B

ITEM	PART No.	DESCRIPTION	No. OFF
194	1143/METRIC	Ball Handle	1
195	1388	Zero Plate	1
196	1499	Spring	1
197	1507/A	Bridge Piece	1
198	1511	Body	1
199	1513	Indicator Segment	1
200	1515	Spring Housing	1
201	1516	Stud	1
202	1526	Bar	1
203	1819	Cradle	1
204	1820	Special Nut	1
205	1821	Facing Strip	1
206	1822	Bar	1
207	1837	End Stop	1
208	1817/B	Tenon Strip	1
209	7486	Thumb Screw	3
210	B05311	Slot Screw Countersunk	2
211	B05747	Locknut	1
212	B05330	Mills	2
213	B05306	Slot Screw Countersunk	1
214	B05871	Drive Screw	2
215	B05415	Philidas Screw Recessed	2



MITRE GAUGE ASSEMBLY

A.L.T.

AND SPARES LTD

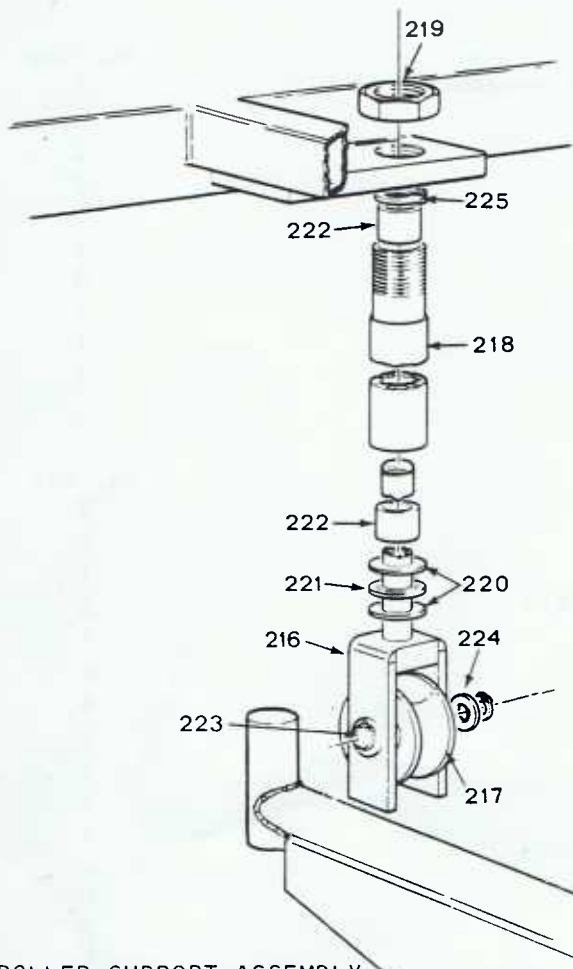
ROLLER SUPPORT - ASSEMBLY No. SM1828

ITEM	PART No.	DESCRIPTION	No. OFF
216	SM1827	Roller Cradle(Welded Assembly)	1
217	7490	Roller	1
218	8441	Support Tube	1
219	8459	Hex Nut	1
220	B02065	Thrust Washer	2
221	B02066	Thrust Race	1
222	B02325	Bush	2
223	B05905	Fulcrum Pin	1
224	B05917	Washer	1
225	B06003	External Circlip	1

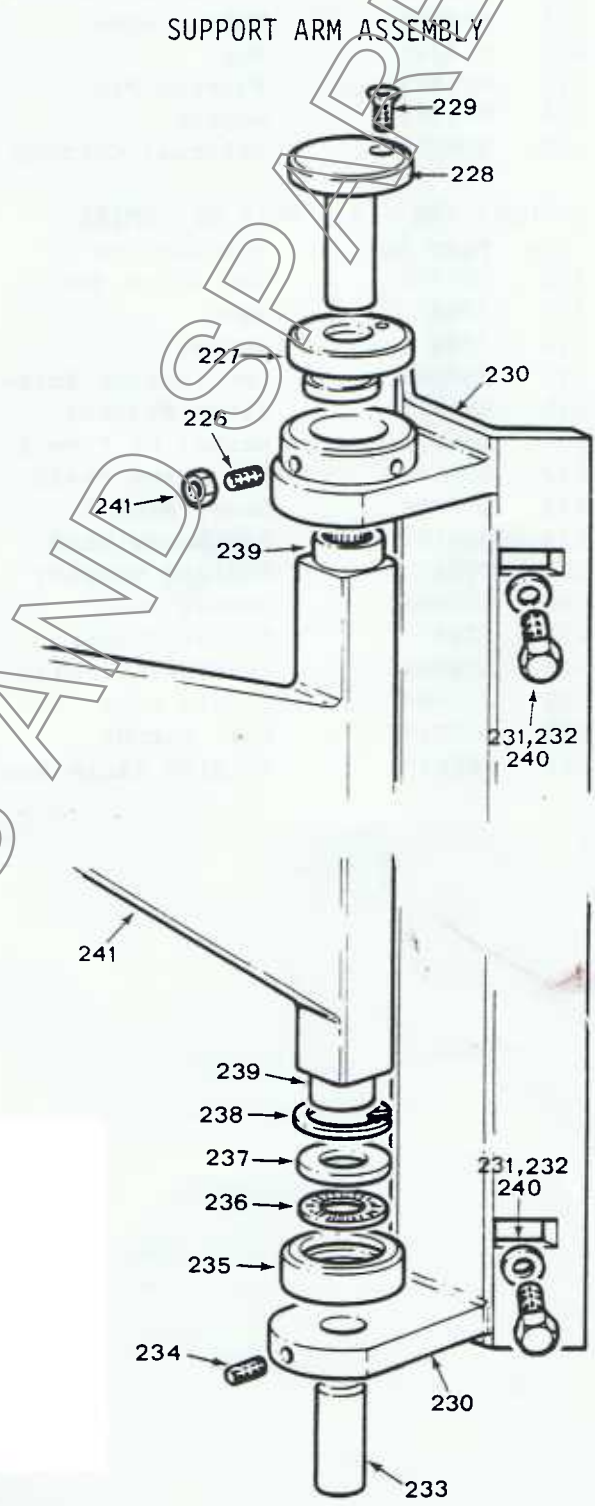
SUPPORT ARM - ASSEMBLY No. SM1861

ITEM	PART No.	DESCRIPTION	No. OFF
226	B05916	Set Screw	3
227	7783	Bush	1
228	7782	Spigot	1
229	B05268	Countersunk Screw	1
230	SM1812	Pivot Bracket	1
231	B05915	Washer	6
232	B05554	Hex Screw	6
233	B05898	Dowel	1
234	B05187	Set Screw	1
235	7784	Bearing Housing	1
236	B02086	Needle Race	1
237	2384	Thrust Washer	1
238	B06034	Internal Circlip	1
239	B02085	Needle Race	2
240	B05714	Full Nut	3
241	SM1830	Sliding Table Arm(Welded Assembly)	1

SECTION 520



ROLLER SUPPORT ASSEMBLY



SUPPORT ARM ASSEMBLY

A.L.T. SAVINS AND SPARES LTD

HEALTH & SAFETY

Any machine can be dangerous if improperly used.

Your STARTRITE machine has been designed and manufactured in a way which will provide maximum safety if properly used. Safe working practice is the responsibility of the owner and user and the following rules should be adhered to:

INSTALLATION

The machine should be properly and safely installed, and the work carried out by a competent person in so far as both mechanical and electrical installation is concerned.

OPERATION

1. The operation of the machine should conform to the requirements of the Woodworking Machines Regulation 1974.
2. Safe working practices should be used as given in Health and Safety at Work Booklet No.41 "Safety in the Use of Woodworking Machines" H.M.S.O.

NB: Users outside the U.K. are required to operate to the standards and regulations applicable in their own country.

3. Operators should be fully trained in the safe use of this machine.
4. All guards should be securely in position and doors closed before the machine is started.
5. The machine should be isolated and all movement ceased before making adjustments or removing dust and chips, etc. or before gaining access to electrical components.
6. Tools and cutters used should be those recommended by STARTRITE and should be securely fixed and run at the correct speed. Tools should be sharp and in good condition.
7. No modification to the machine should be made which will reduce safety.
8. The machine should only be used for the purpose for which it is intended.
9. Appropriate protective clothing should be worn.
10. Dust caused during machining of HARDWOODS can be detrimental to health please check with the Health and Safety Executive for details.

MAINTENANCE

For safe operation your STARTRITE machine should be properly maintained. Our Spares and Service Departments are always at your disposal.