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Machine Setup Guide

InstallVersion1.09

1. Foreword

This Machine Setup Guide is intended as an additional reference to the Operating Manual that is provided with the machine, not as a substitute. Under no circumstance should you use the machine without reading the Operation Manual first.

The correct operating procedures are described within the Operation Manual and these must be rigidly adhered to, along with the guidelines described for safety. In addition to this there is a significant amount of important information to be found in the Operation Manual that is not covered by this Machine Setup Guide including specific information for your particular machine. This Setup Guide is functional for a variety of Hammer machines.

Safety First

Before every use of the machine, perform the safety checks that are detailed in the Operation Manual for your particular machine. It is also important to understand that even with all of the appropriate safety devices correctly installed, there are still risks remaining. Any potential operators of the machine should be fully aware of these risks and must also have read the Operation Manual before using the machine.

Never perform any adjustments to the machine with the tool running. Always switch off the machine before making adjustments. Never work when you are tired and always apply common sense to your working techniques in addition to those techniques outlined in the Operation Manual.

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2.Contents

Contents (2)

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3.Introduction

Congratulations on your purchase and welcome to the world of HAMMER woodworking machinery!

Through the co-operation of professional carpenters and specialists in research and development, we have managed to create a unique range of woodworking machines for the discerning craftsman.

The HAMMER series combines all the important characteristics of woodworking machines in a number of forms: 4-in-1 combinations, 2-in-1 combinations or single machines.In addition to this, an extensive range of accessories and tools leaves nothing to be desired.
You can be sure that with your new HAMMER woodworking machine you can achieve precise, outstanding results every time.

This CD-ROM is aimed at helping you to achieve the highest standards possible in woodworking, by furthering your understanding of the machinery that you will use to do so.
Everything involved in the setup of your machine from delivery through assembly and calibration, all of the equipment and materials you will need, to when you are ready to produce the very first precision workpiece is covered in this CD-ROM.
You will also find this an invaluable asset in keeping your machine in top condition for many years to come as it provides reference information that can be accessed at any time.

Please take the time to study this CD-ROM prior to the delivery of your machine, so that once it arrives, no time will be wasted in getting you up and running with your new HAMMER woodworking machine.
Where appropriate, there are direct links to relevant adjustments and alignment info. and you can also return to the contents page by clicking the home icon in the top right hand corner.

Enjoy your new machine,
From everyone at HAMMER!




4.Process Overview

The Machine is manufactured, assembled and rigourously quality controlled at the factory in Austria.

The machine is fully calibrated and test cuts are made before it is packed for shipping.

The machine is then shipped out to you.

The machine is delivered

You unpack the machine from the container(s) and study the Operation Manual

You then remove the machine from the pallet

Only after reading the Operation Manual, clean all components of preserving oils

Assemble the machine, position it and connect it to the extraction system

Perform some basic checks to ensure accuracy and for peace of mind

Start enjoying your new Hammer!

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5.Delivery

Before We Ship Anything…

Your machine has been manufactured, assembled and rigorously quality controlled at our factory in Austria. The machine was fully assembled and fully calibrated, including making test cuts. Once the quality controlling was completed (Homologation to GS and CE - a guarantee for high quality and safe machines!), it was packed for shipping, including treatment with preserving oils to protect the surfaces from corrosion and to help ensure that the machine will arrive in perfect condition

Delivery

The machine will be delivered in a protective cardboard enclosure. Check for any signs of obvious damage to this enclosure, or for signs of tampering. Machines with sliding tables of length in excess of 78"(2 meters) will have the sliding table shipped in a separate container.
An agreement between the FELDER Group and the shipping companies in the U.S. means that you, as a receiver, are allowed to inspect the shipment(s) for any kind of damage for 30 minutes upon arrival. This agreement also stipulates that any claims filed after this time will not be honored by the shipper.
In the unlikely instance that you believe there is or may be a damaged machine, article or component, please contact FELDER without delay so that this may be further clarified and if necessary, further action taken.

5.Delivery

Pictured above; the machine packed in enclosure, pallet and box size may vary

Pictured above; the sliding table in protective packaging

Once you are satisfied that everything is present and correct, sign for the delivery and begin the installation process!

6.What You Will Need

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What You Will Need to Get Going

- Cutting knife
- Torx head bits
- Power drill
- Wrenches
- 13mm, 17mm Sockets and ratchet drive
- Screwdrivers, Flat and Crossheaded
- Electrical provision*
- Board, 2ft x 4ft x ½”
- Board, 2” x 4” x 2ft
- Pallet jack
- An assistant (for sliding table assembly and to help bring the machine down from it’s pallet)

***Powering Up**

All new Hammer machines arrive with approximately 0,5 meters of cord and no plug, due to the number of variations in plugs/sockets across the market. These machines will therefore require a plug suitable for the electrical system you already have installed.

- Standard Breaker size is 30A. Please consult your electrican for details on arranging this

6.What You Will Need

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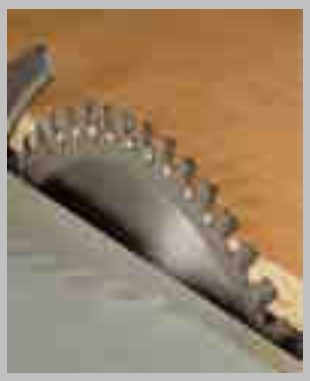
For Making Basic Machine Checks:

Requirements listed by machine type:

For Saws;
- Approx. 3ft x 3ft board (at least ½” thickness for ease)
- Vernier calipers
- Tape Measure
- Precision square
- 45° Engineering Angle / Miter Gauge / Angle gauge
- 1 Meter Straight edge

For Shapers;
- Precision square
- 45° Engineering Angle / Miter Gauge / Angle gauge

For Joiner / Planers;
- Approx. 3ft x 2” x 4” boards; 2 of
- Vernier calipers
- Feeler gauge



7.Taking Off The Pallet

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Removing the machine from the pallet

The cardboard enclosure can be removed by cutting through the plastic ties and pulling the cardboard away from the pallet wherever it is secured.

The machine comes wrapped in a preserving plastic film to protect the cast iron tables and to secure some of the accessory boxes. Pull off the plastic film or carefully cut through it, avoiding scratching the machine or cutting through any cables.

Cardboard boxes that sit on the pallet were stapled to the pallet whilst the box was still open, so these should be emptied of their contents before pulling up the box, this will avoid the contents falling through the bottom of the box when pulling the box off full.

7.Taking Off The Pallet

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You will need a power drill and a torx head bit to remove the screws that secure the machine to the pallet. Extension tables that do not come assembled and rip fence guide bars will also be screwed down onto the pallet. Once these are removed and the rest of the pallet is cleared- check underneath the machine as well - you can remove the machine from the pallet.

Remove all torx screws before moving or pulling up machine and components

7.Taking Off The Pallet

To remove the machine from the pallet you will need some boards, similar to those pictured below, a pallet jack and ideally another person to help ensure the machine comes down from the pallet smoothly and safely.

Creating a Ramp

You may also wish to fix the ramp together with its supporting boards, especially necessary if the ramp seems unsteady or if it does not quite match up to the same height as the pallet. An example is shown with 6 fixing points.

7.Taking Off The Pallet

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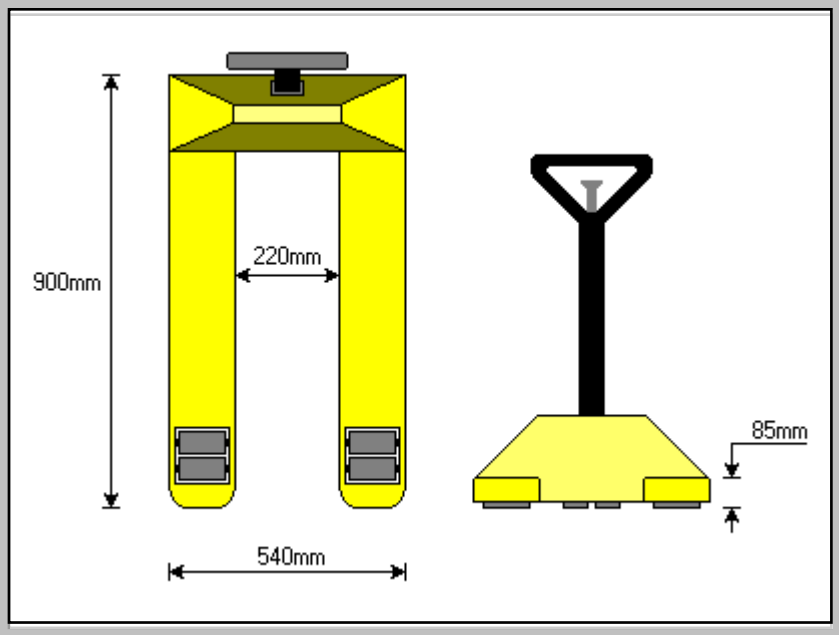
The Pallet Jack

The dimensions of the pallet jack are of obvious significance, because if the forks are too wide or too tall (when fully lowered), they won't fit underneath the machine. NOTE: for Joiner planers, it is almost unavoidable having to use only one of the fork legs. This will therefore require more care and definitely some assistance in bringng the machine into place. Take extra care not to pull the machine by the tables otherwise their alignment could be affected. Try where possible to use the chassis of the machine to manouvre it.

7.Taking Off The Pallet

The approximate dimensions of the pallet jack are shown below:



Check with your Hammer representative if you are uncertain whether your particular pallet jack will fit your new Hammer machine.

8.Positioning Your New Machine

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Positioning Your New Machine

Once the machine is fully assembled and ready to go, you can position it where it will be best suited to the tasks that you want to achieve. The layout of your shop should have at least some form of direction. That is to say from loading stock material to final finishing there should be a distinct process direction in order to achieve maximum efficiency during busy periods. Reducing the number of times a part or workpiece is handled will go a long way to improving build time and will also contribute towards quality control. However, there are always space and shape restrictions and not everyone is blessed with a purpose built woodworking shop, so a compromise on efficiency may well be necessary.

To make certain that you get the most out of your machine, make sure that there is easy access to the operating sides of the machine and that sliding tables or joiner tables are not restricted in their travel. Where outrigger tables are included, make sure this can be used without interference, including the use of the crosscut fence. Check that the entire capacity of the machine can be used for the materials you will be processing. In particular, make sure the infeed and outfeed sides of the machine are suitably clear for the sizes of materials you intend to process. The machine should ideally be placed on a flat surface and leveling it will also be beneficial. Check that the position of the machine is also compatible with the extraction facility you presently have or intend to install.

Also of great importance is that the working area has no hazards at floor level – or even head level, as this will obviously make using the machine hazardous and unsafe. Appropriate lighting should be considered, as should ventilation for when the workload steps up a pace or two! All in all the environment should be conducive to precision woodworking.

9.Extraction

Extraction

Hopefully by now you will already have an extraction system in place, or have organised an appropriate extraction solution for when you are ready to begin machining. It would be unwise to begin machining without suitable extraction already in place as this would not only be a health hazard but will also impair the quality of the workpieces you can produce on your new Hammer. Your Hammer representative can offer further information about the extraction solutions that would be best suited to your needs.







10.Cleaning The Machine

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Cleaning and Protecting the Machine

Once the machine is assembled and ready to be checked for calibration, it should be cleaned thouroughly to remove the various preserving oils that are left on the machine. This will also ensure maximum possible accuracy during the calibration process and will allow test cuts to made under proper working conditions.

Once cleaned, surface protectants should be used to protect the machine against corrosion and to aid various woodworking processes.

Disposable, strong paper towels are most appropriate for this job as they will end up very dirty and greasy.
FELDER offer specialized cleaning fluids and treatments specifically for this purpose:

Universal Cleaner

Ideal for cleaning new machines, the Universal Cleaner is a very strong cleaning substance. It removes dirt, grease, and oil from treated surfaces in seconds. The Universal Cleaner does not affect textiles, plastics, rubber or paint. It comes in a solid spray container with an adjustable nozzle; contents: 0,5 liter. The spray bottle can be refilled with a convenient 3 liter container.

10.Cleaning The Machine

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Cleaner for Plastics

The all purpose detergent for workshop, car, house and office in a handy spray bottle!
The FELDER Cleaner for plastics is an all purpose detergent for all kind of plastics. Whatever you use it for – to clean decorative chipboards or boards with laminated plastic, for machine components, inside or outside cleaning of the car, or to clean plastics in the house or in the office – even very dirty plastics will appear new again

Harzlöser

Removes resin easily from saw blades, tools and machine-elements! Solid spray container, adjustable nozzle; contents: 0,5 liter. The spray bottle can be refilled with a convenient 3 liter container.

10.Cleaning The Machine

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Metall Glanz

Metall-Glanz protects metal surfaces from corrosion. It is a high performance long-term Corrosion Protectant and free of silicones. Metall-Glanz is not aggressive against textiles, plastics, rubber or paint. It comes in a solid spray container with an adjustable nozzle; contents: 0,5 liter. The spray bottle can be refilled with a convenient 3 liter container.

Guideways and Spindle Fluid

The Guideways and Spindle Fluid is ideal for all guidetracks, roller guideways and moving spindles. It is transparent and helps to repel dust and chips. The Guideways and Spindle Fluid contains no silicones and has a low friction factor ensuring slick movement of all treated guideways.

10.Cleaning The Machine

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Super Gleit

Moist and wet timbers have a high resistance and are difficult to machine. Super-Gleit greatly reduces the gliding resistance of timber when shaping, surface and thickness planing. Super-Gleit contains no water or silicone particles ensuring that no residues remain on the timber. This enables later surface treatment without problem. Comes in a solid spray container with an adjustable nozzle; contents: 0,5 liter.

Note Regarding Sliding Tables

To prolong the life of your sliding table and to keep it working it top condition, keep the guideways clean and free from dust. Lubricants such as Super Gleit and Guideways and Spindle Fluid are ideal for cleaning the roller tracks, but the tracks **must** be kept dry, so after applying the lubricant, wipe it off otherwise dust and dirt will cling to the surface.

11.Assembly

Assembly of your Machine

Depending on the chosen configuration of your machine, it may be necessary to assemble various components, for example; sliding tables and rip-fence guide bars. Assembly details are always supplied with these parts, please see the assembly diagrams for finer details of the components. The following text and pictures provide additional information which may be useful to you during the assembly process, as well as links to the Alignment information pages and Adjustment pages.

- **Extension Tables**

- **Rip Fence Guide Bar**

- **Sliding Tables**

11.Assembly

Extension tables

Adjustment Link Alignment Link

Using the exploded assembly diagrams supplied with the machine, determine the correct screws to use for the extension table(s). Begin as shown in the picture below with the support members. Note: Machines with 48" (1250mm) rip capacity also have an additional support member not shown in the pictures below, but in later steps.

(picture shows full length 31" (800mm) Rip capacity)

Continued…

11.Assembly

(picture shows support for half length 31" (800mm) Rip capacity)

Access to the inside of the machine can be gained by removing the access panel at the front of the machine or the back (shapers have access door provided at the rear). The picture below shows the electrical box being removed to gain access.

Continued…

11.Assembly

For machines with additional rip capacity of 48" (1250mm), additional supports need to be assembled (see next step).

For machines with 31" (800mm) capacity, once the supports are in place, with the screws in location, the table can placed on top of the screws and brought into alignment with the cast iron table, ideally using a straight edge as shown below. The exact alignment details can be found in tolerancing information.

(picture showing full length 31"(800mm) Rip capacity)

Continued…

11.Assembly

(picture shows half-length 31"(800mm) Rip capacity)

(Adjusting the table to match the height of the cast iron table)

Continued…

11.Assembly

For machines with 48"(1250mm) rip capacity, an additional bar must be assembled to the front support arm. Once this is assembled the 31"(800mm) table can be brought into place and aligned correctly to the cast iron table before moving on.

Continued…

11.Assembly

Start by securing the table at the two fixing points between the two tables, then at the support arm to table point.

Once the table is in place it can be aligned correctly using a straight edge

When everything is assembled, you may wish to check that it is all within the stated tolerances before moving on to attach the rip fence guide bar

11.Assembly

Rip Fence Guide Bar

Adjustment Link Alignment Link

Once the tables are in place and adjusted correctly, the rip fence guide bar can be installed. Start by lining up the screws on the guide bar with holes provided in the chassis and the extension tables. Make sure that the arrangement of the screws, nuts and washers is the same as that displayed in the exploded assembly diagram. Also adhere to the height information given in the diagram for the rip fence (from the cast iron table).
The procedure is the same for round (800mm rip capacity) or rectangular (700mm rip capacity) section.

(showing round guide bar)

Continued…

11.Assembly

(correct arrangement of screws)

Also make sure that the spherical washers sit on the inside of the cast iron table, where it is not machined. The machined side only requires a washer and nut.
Tighten the two screws that attach the guide bar to the cast iron table first, checking the alignment as described in the adjustment and tolerancing information, then work outwards along the guide bar to secure it across it's entire length.

Continued…

11.Assembly

The rip fence side is complete!

11.Assembly

Sliding Table Assembly

Adjustment Link Alignment Link

- 17mm wrench and Cross-head Screwdriver

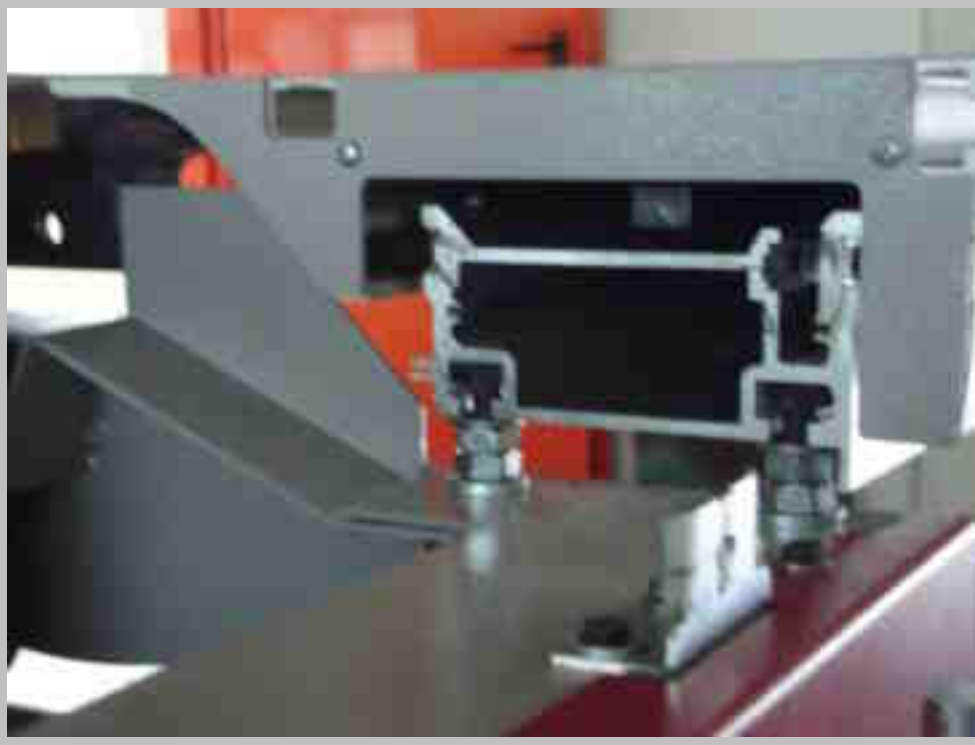
To assemble the sliding table to the machine chassis, you will ideally need someone to help you lift the table out of the container and into situe on the edge of the chassis, as shown in figure ST01.1. If no help is available, then the best help you can give yourself is to support one end of the table as shown in Fig.ST01.1 whilst you guide the table into place over the screwheads.

Figure ST01.1 Sliding table in place ready to be slotted over the securing screws

Continued…

11.Assembly

Once in situe, carefully guide the sliding table over the securing screws as shown in figure ST01.2. If the sliding table does not slide onto the screws easily, make sure the sliding table is being held level and that the screw head is turned so that two of its side faces are parallel to the inside of the sliding table channel.



ST01.2 Sliding table sliding into place over the screw heads

Carefully push the sliding table over all of the screwheads, being careful not to catch your fingers in the process! Figure ST01.3

Figure ST01.3 Sliding the table all the way along

Continued…

11.Assembly

The correct position of the sliding table is determined by first unlocking the sliding part of the table and moving it to the very front of it's travel, as shown in figure ST01.4. The front of the sliding table should be level with the start of the cut-out section in the black plastic insert.

Figure ST01.4 Front of the sliding table travel

This position can be verified by moving the slding table to the very end of the travel, where the sliding table should stop with the back edge of the table level with the centre, or axis, of the saw blade. This is shown in figure ST01.5.

Figure ST01.5 Sliding table at the end of travel, back edge level with saw axis

Continued…

11.Assembly

When you are happy that the sliding table is in the correct position, lock it down by tightening the top nut on each screw only, leaving the two on either side of the chassis alone (otherwise you will alter the alignment of the sliding table to the cast iron table). This screw is shown in figure ST01.6

Figure ST01.6 Showing the three locking nuts. ONLY use the top one to lock the slding table in place!

After the sliding table locke down, you can assemble the end plate(s) to the bed of the slding table, shown in figure ST01.7

ST01.7 Coverplates for sliding table bed

12.Basic Machine Checks

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The Fast-Track to Machining

Before the machine left the factory in Austria, all possible adjustments on the machine had been made and checked. A complete overhaul will therefore not be necessary! However, for peace of mind there are several basic checks which you can make that will verify that after the transport, delivery, assembly and positioning has been done, the machine still works accurately. Follow these links:

Saws

1. 90° Crosscut Fence, (SS05)
2. 45° Crosscut Fence, (SS08)
3. Angle of Sawblade at 90° (both sides) (SR07)
4. Angle of Sawblade at 45° (both sides) (SR08)
5. Rip fence scale (SR09)
6. Crosscut scale (SS07)
7. Cut quality. The cut should be clean, with no breakout on the top surface and none on the bottom when using the scoring blade. The cut should only be made at the front of the blade, not by the teeth at the back of the saw blade.

Shapers

1. 90° Spindle to cast iron (SH02)
2. 45° Spindle to cast iron table (SH03)
3. Cut quality. The finish should be uniform along the length of the workpiece.

Joiners

1. Join two boards: Convex or straight (JR06)
2. No snipe (JR07)
3. Cut quality. The finish should be smooth, the surface flat and unmarked.

Planers

1. Equal thickness on both sides of the table (PL01)
2. No snipe (PL02)
3. Cut quality. The finish should be smooth, the surface flat and unmarked.

Finished? Click Here

You can navigate back here using the Basic icon: ABC

You can find the adjustment info by following the Wrench icon: 

You can then navigate back to the Alignment using the Dial icon: 

How To Make a 5-Sided Cut Check

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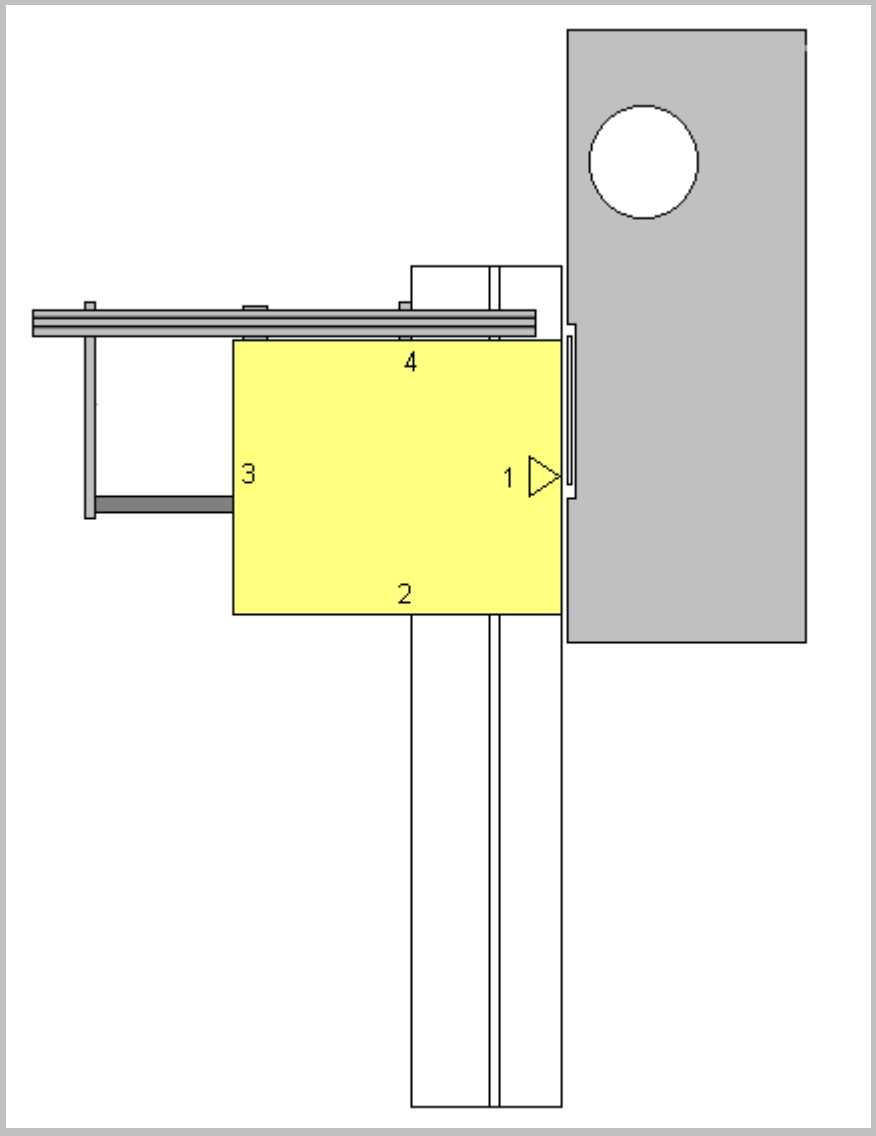
Adjustment Link Alignment Link

How to Make a 5 Sided Cut

Being with a board, ideally 1000mm x 1000mm, preferably of MDF as the chippings from cutting a board of chipboard can interfere with the result if not done carefully. You will also need a pair of vernier calipers to accurately measure the off-cut, and a 13mm wrench to adjust the 90° crosscut stop if necessary.

Place the board on the outrigger table against the fence and label each side 1, 2, 3 and 4. Side number one can also be given an arrow to indicate the direction of the offcut once it is made.



Continued…

How To Make a 5-Sided Cut Check

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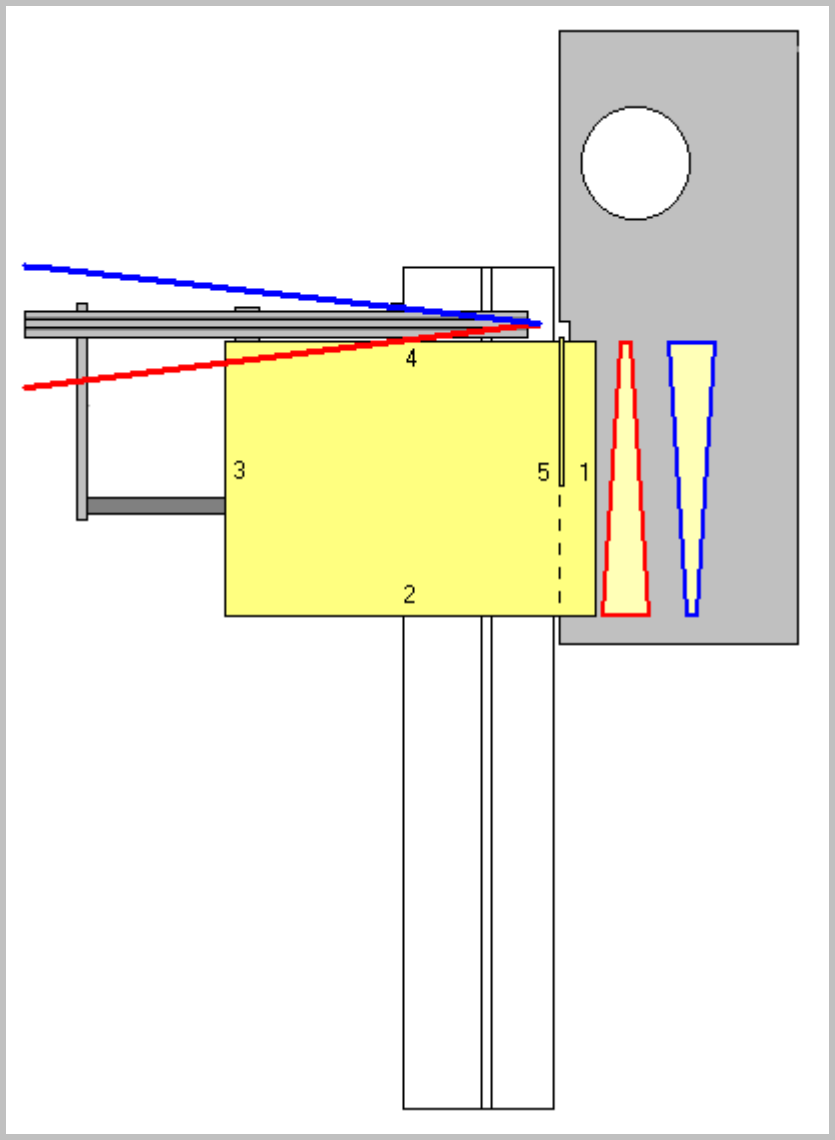
Cut each side of the board in numerical order, you only need to trim off 6mm or so each time. The numbering works so that the fresh cut face of the board always goes against the crosscut fence. Continue until you reach number 1 side again and this time take off approximately 1" / 25mm.



Measure each end of the offcut. If the workpiece does not have the arrow on at this stage it can easily lead to an incorrect judgement of how the crosscut fence is presently aligned. See the alignment and adjustments sections for further details of accuracy.

Alignments

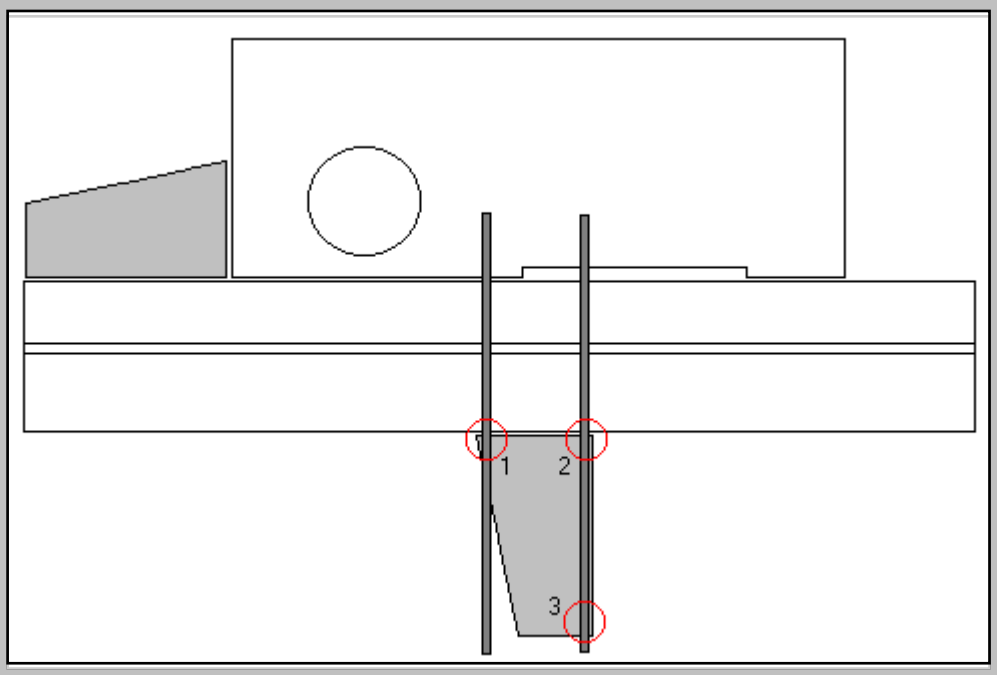
Feature not available in this Version

This section contains all of the alignments and tolerancing information relevant to each of the machine checks. At the top of each page where applicable, underneath the Hammer logo, you will find an Adjustment link which will lead you directly to a description, with diagrams and photographs of how the adjustment on the machine can be made. Please note: the diagrams are for illustrative purposes only.

The machines are calibrated at the factory well within these operating tolerances, but occasionally, due to lengthy transport and frequent handling, some elements of the machine may require a minor refinement.

Alignments

EX01 Additional Extension Tables



Check the alignment of the extension table at it's mounting points and at the extremity of the table.

Test Point	Unit type	Tolerance
Parallel to the table it is mounted on (below mounting table)	Metric Imperial	0.0mm to 0.40mm 0.000″ to 0.016″

Alignments

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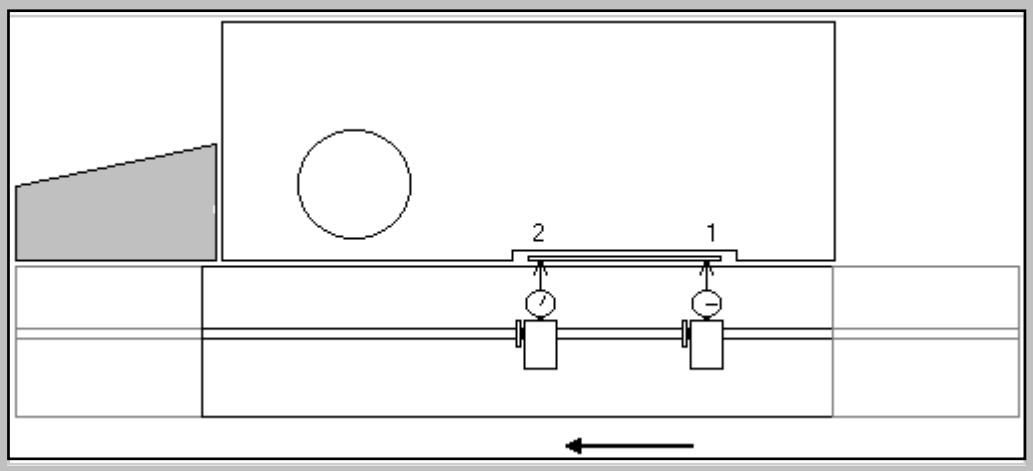
Adjustment Link

No Dial Indicator?

SS01 Free cut from the Sliding Table



Sliding table should be further away from the blade at position 2

Test Point	Unit type	Tolerance
Increase from 1 to 2 of (over Ø300mm Saw Blade)	Metric Imperial	0.05mm to 0.10mm 0.002″ to 0.004″

Alignments

Sliding Table:

Rip Fence:

Checking the Freecut Without a Dial Indicator

It is possible to setup the freecut on a saw without a dial indicator, however it will not be possible to adust it to as high a level of accuracy.

The knock-on effect of this will mostly impact saws with scoring / slitting blades. If the freecut is not the same on either side of the saw, then when you come to use the scoring blade, the scoring cut will be very slightly different depending on which fence you cut from.

To start with, we shall look at setting up the sliding table free cut.

Using a board of width at least equal to the saw blades diameter (if not greater), make a cut off the crosscut fence through the board, then once the back edge of the workpiece has passed the front tooth of the saw, stop the saw and isolate the machine, for added safety. Be very careful not to move the workpiece. It should then be in the same position as shown in figure FC01.1.

FC01.1 Checking freecut on the sliding table

Continued…

Alignments

Sliding Table:

Rip Fence:

It may be blatantly obvious if the back tooth is touching the workpiece, in which case, follow the link to the adjustment page.

Very carefully, rotate the saw blade and look to see of the back tooth of the saw is touching the workpiece. Rotate the blade until you find the closest point to the workpiece. There should be less than a hairs breadth between the sawblade and the workpiece at the back tooth at this point. It should not however, be touching the workpiece. Adjust the freecut as necessary (follow link).

To check the free cut on the rip fence side, you will need a board approximately as long as the rip fence. Make a cut off the rip fence through the board, but stop before the back edge of the workpiece reaches the back tooth of the saw blade. This is shown in figure FC01.2. Stop the saw and isolate the machine for additional safety.

FC01.2 Rip fence freecut step one

Continued…

Alignments

Sliding Table:
Rip Fence:

Keeping the rip fence in the same position, now turn over the workpiece so that it faces the opposite direction, as shown in FC01.3.

FC01.3 Rip fence freecut step two

It should be possible to slide the workpiece onto the saw blade from the back, whilst keeping the workpiece against the rip fence. If you cannot do this then the rip fence freecut will either be too much or not at all (toe-in). Adjust it closer if necessary.

With the workpiece in the position shown in FC01.3 and against the rip fence, carefully rotate the saw blade to see if the back tooth hits the workpiece **on the rip fence side of the cut.** The rip fence side of the cut should be clear of the back tooth by less than a hairs breadth, but definately not touching. Follow the link to the adjustment page as necessary.

Alignments

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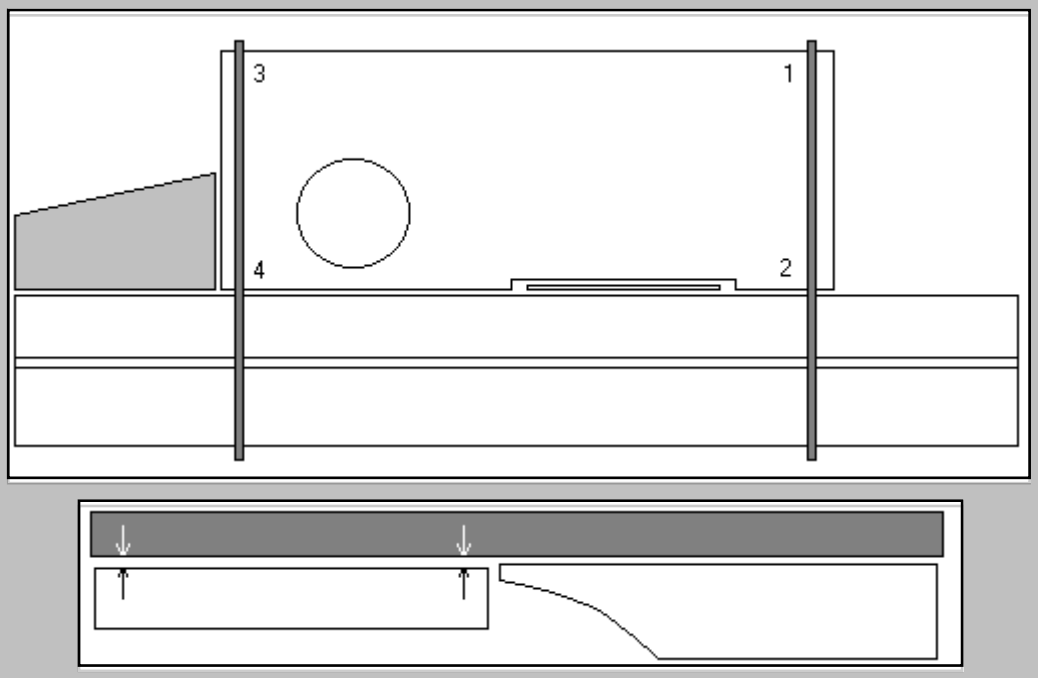
Adjustment Link

SS02 Sliding Table - Centre Locked Position



Check the gap at points 1, 2, 3 and 4 with a feeler guage.

Test Point	Unit type	Tolerance
Sliding table above the cast iron table	Metric Imperial	0.0mm to 0.35mm 0.000″ to 0.014″

Alignments

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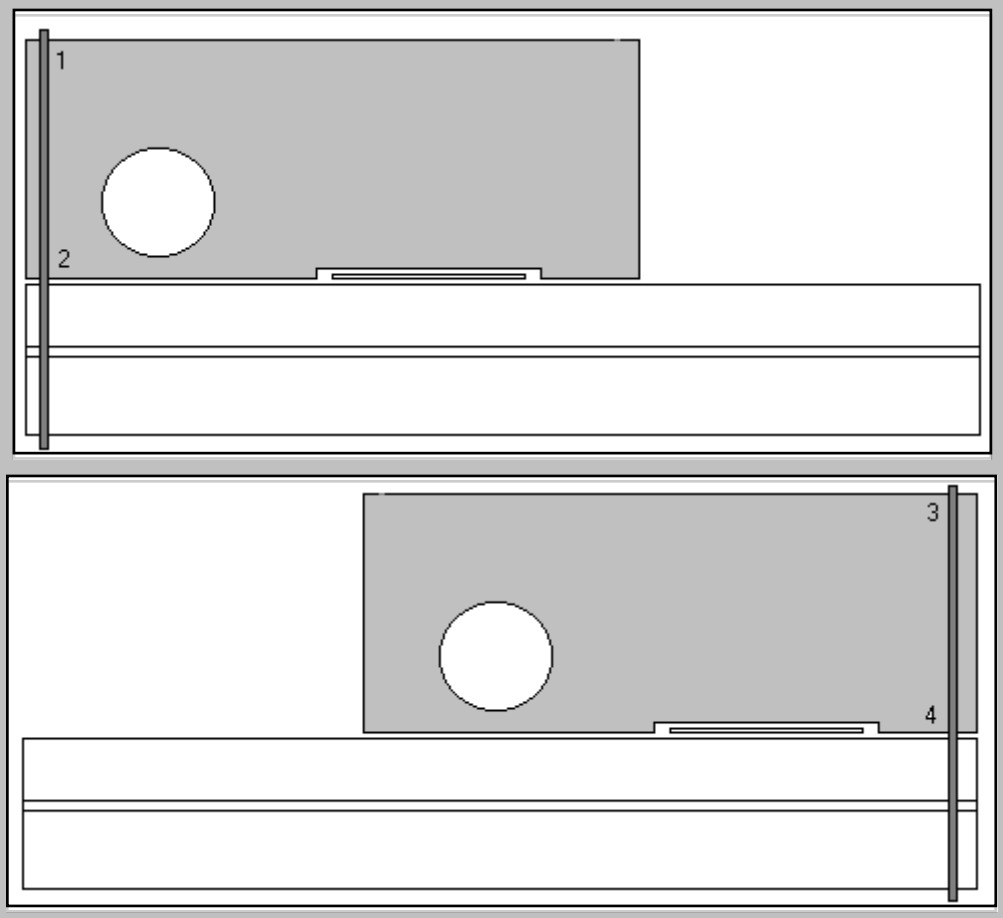
Adjustment Link

SS03 Sliding Table - End Positions



Test Point	Unit type	Tolerance
Sliding table above the cast iron table	Metric Imperial	0.0mm to 0.40mm 0.000″ to 0.016″

Alignments

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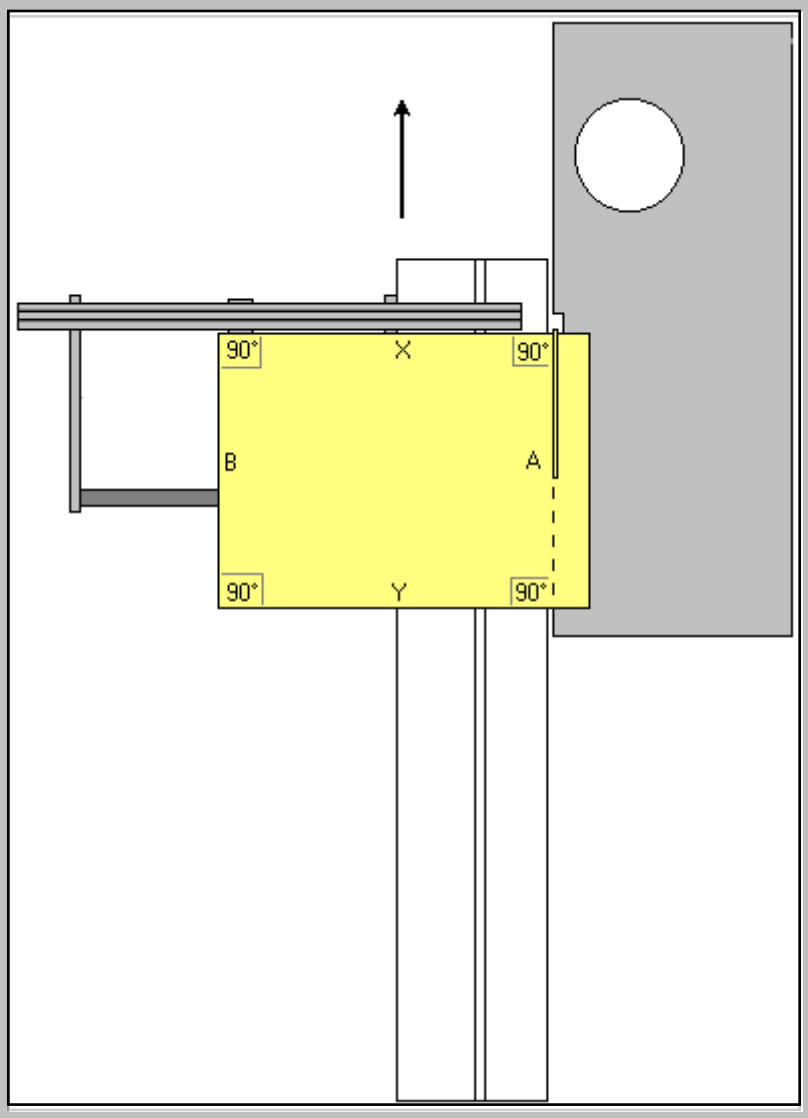
Adjustment Link

ABC

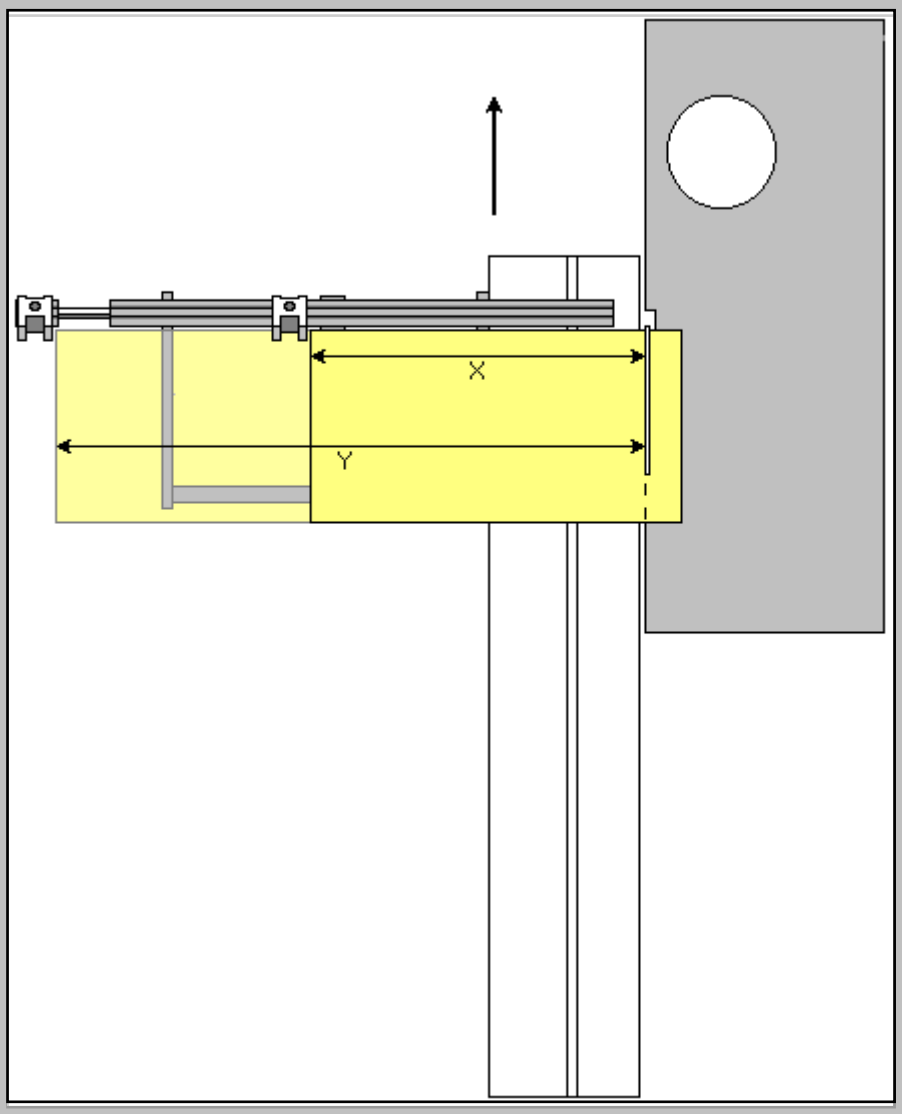
SS05 Crosscut Fence on Outrigger, Position A



Measure length of sides X and Y after making cuts A and B. Ideally, make cuts A and B 1000mm apart

Test Point	Unit type	Tolerance
Difference between X and Y to be within	Metric Imperial	+/- 0.2mm per 1000mm +/- 0.008" per 1000mm

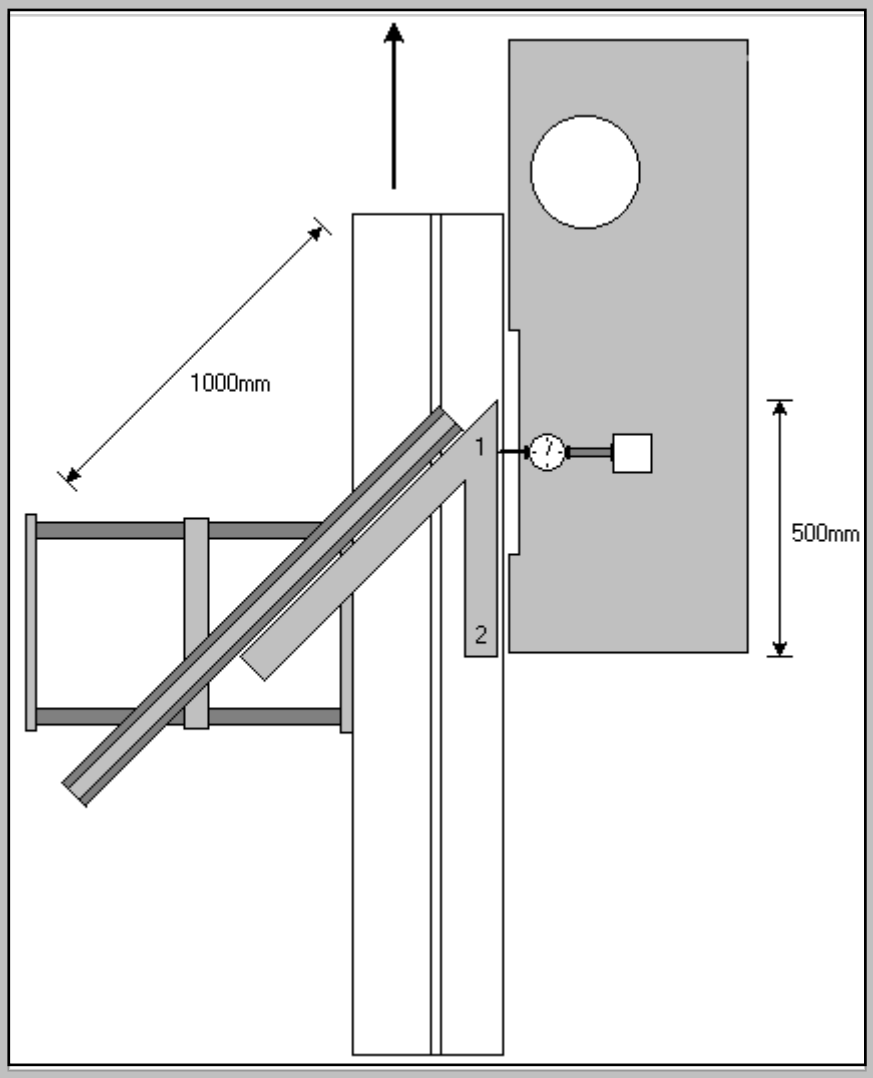
SS07 Crosscut Fence Scales



Check the accuracy of the crosscut fence scales. Make a cut and measure the boards new length.

Test Point	Unit type	Tolerance
Lengths X and Y equal to readout on scale	Metric Imperial	+/- 0.5mm +/- 0.020″

SS08 Angled Cut From Outrigger



Check the alignment of the 45° position on the outrigger angle scale.

Test Point	Unit type	Tolerance
From point 1 to 2 (From 1000mm x 500mm, 45° angle)	Metric Imperial	+/- 0.1mm +/- 0.004"

Alignments

Hammer®
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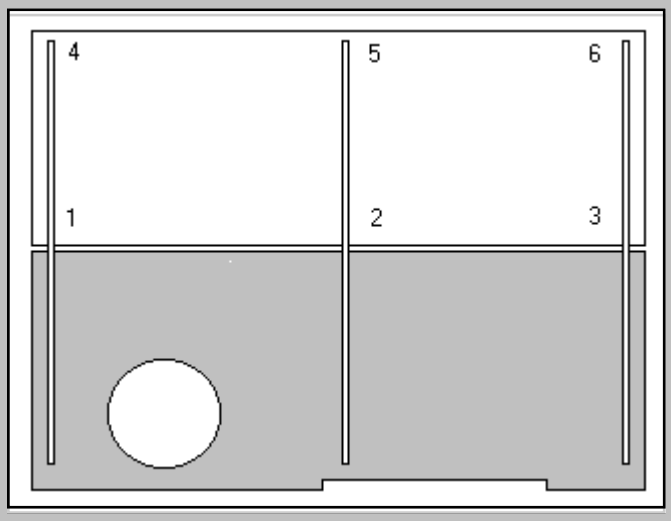
Adjustment Link

SR01.1 Rip Capacity Extension Tables

All extension tables should be aligned to the cast iron table, using a straight edge and a feeler guage. Check the alignment across the whole of the table using a straight edge and a feeler guage to ascertain the difference in height between the two.



For the rip fence extension table, make checks at the points indicated above with a straight edge and feeler guage.

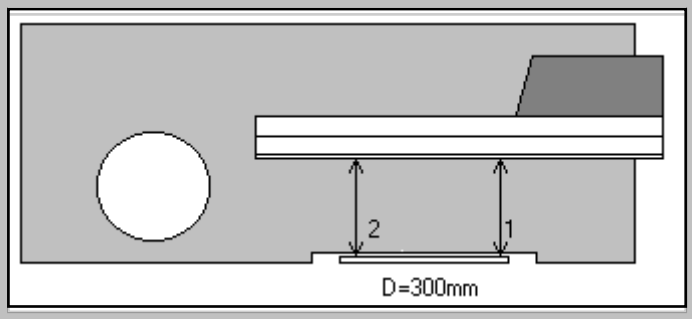
Test Point	Unit type	Tolerance
Parallel to cast iron table (Extension table below cast iron)	Metric Imperial	0.0mm to 0.40mm 0.000″ to 0.016″

Alignments

Hammer®
www.hammer.at

Adjustment Link

SR04 Rip Fence Free cut at 90°



From point 1 to 2 there should be an increase in the distance between the saw blade and the rip fence.

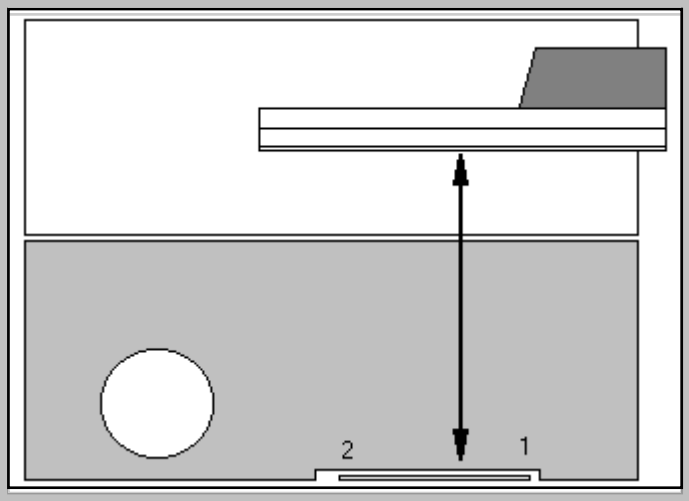
Test Point	Unit type	Tolerance
Increase from 1 to 2 of (over Ø300mm Saw Blade)	Metric Imperial	0.05mm to 0.10mm 0.002″ to 0.004″

Alignments

Hammer®
www.hammer.at

Adjustment Link

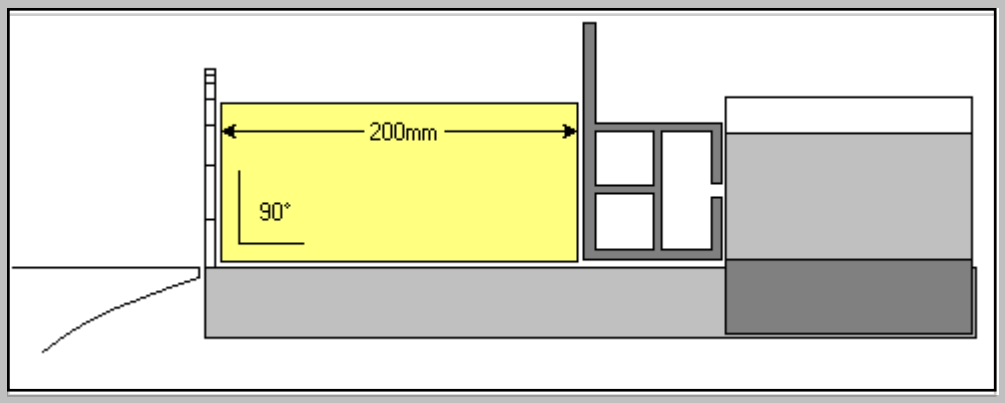
SR05 Free cut Across All Tables

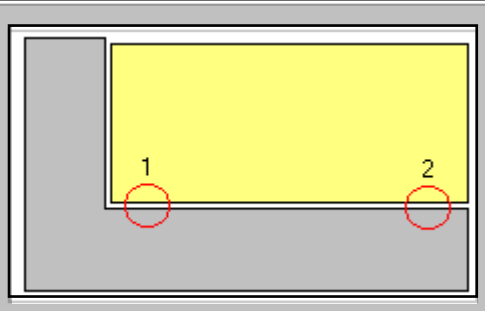


Check the free-cut across the entire rip capacity. With a Ø300mm Saw blade.

Test Point	Unit type	Tolerance
Increase from 1 to 2 of (over Ø300mm Saw Blade)	Metric Imperial	0.05mm to 0.10mm 0.002″ to 0.004″

SR07 Saw Blade Alignment at 90°





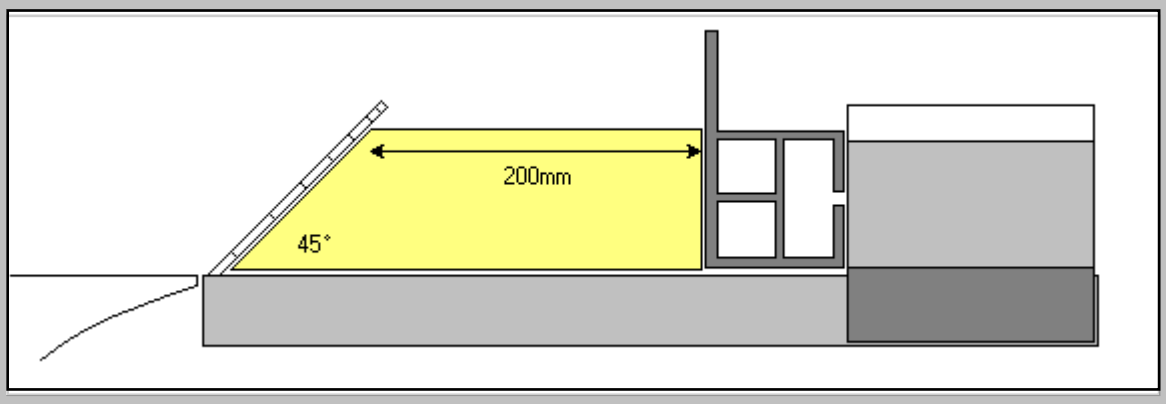
Using an engineers square, 200mm long, check for any space at positions 1 and 2.

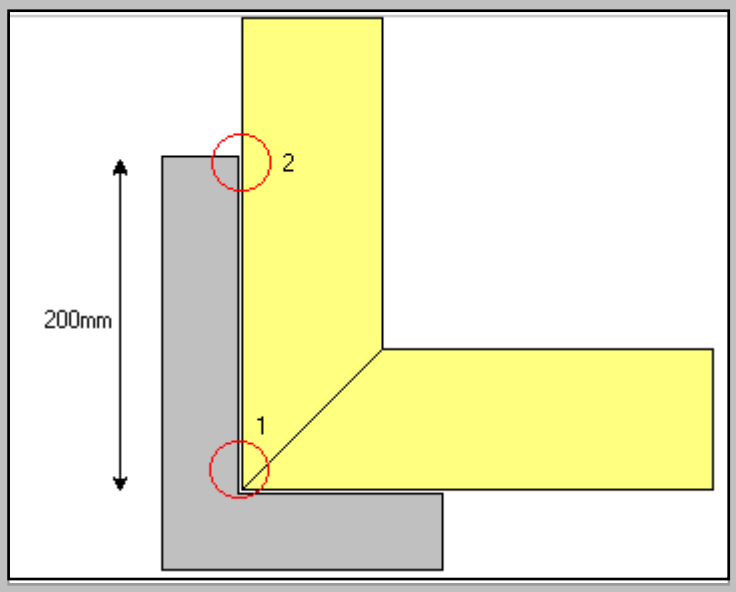
Test Point	Unit type	Tolerance
Permissible gap per 200mm	Metric Imperial	0.00mm to 0.20mm 0.000″ to 0.008″

Alignments

Hammer®
www.hammer.at
Adjustment Link
ABC

SR08 Saw Blade Alignment at 45°

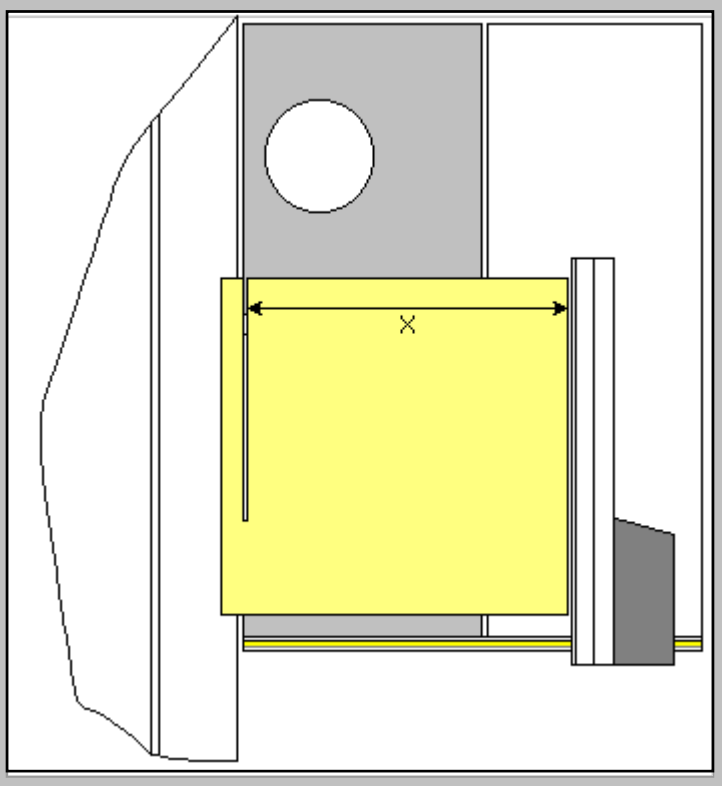




Using to two workpieces, place the 45° cuts together to create a miter joint. Using an engineers square, 200mm long, check for any space at positions 1 and 2.

Test Point	Unit type	Tolerance
Permissable gap per 200mm	Metric Imperial	0.00mm to 0.20mm 0.000″ to 0.008″

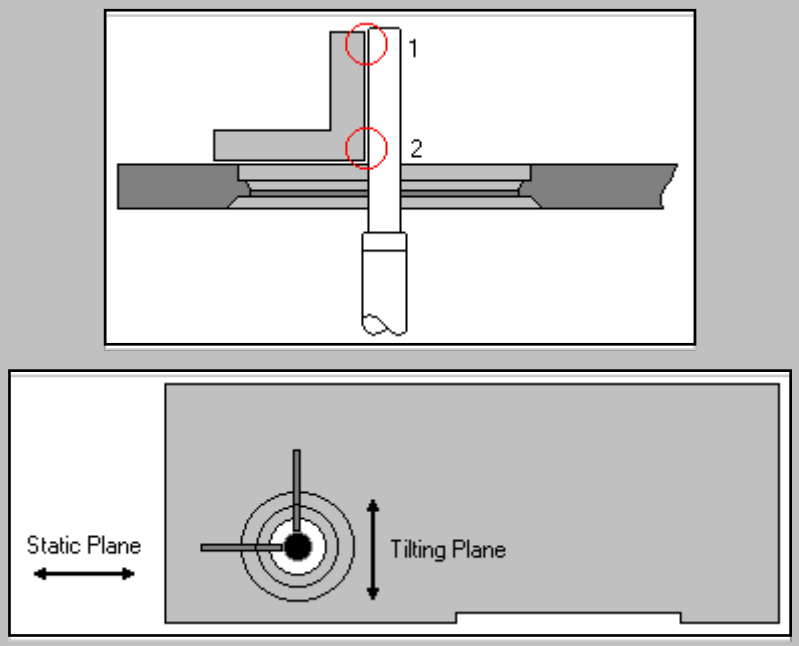
SR09 Calibration of the Scale



Check the calibration of the Rip side scale

Test Point	Unit type	Tolerance
Width X equal to readout on scale	Metric Imperial	+/- 0.50mm +/- 0.020″

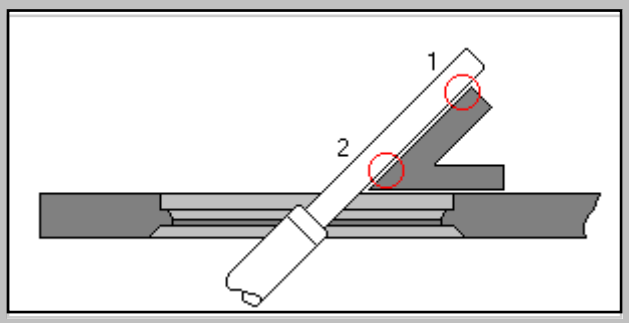
SH02 Shaper Spindle Alignment at 90°

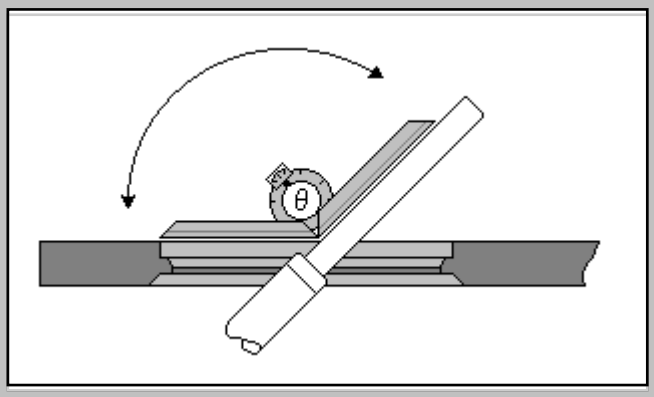


Using an engineers square and a feeler gauge, check the 90° alignment of the spindle in the two planes indicated above.

Test Point	Unit type	Tolerance
Permissable gap at 1 or 2	Metric Imperial	0.0mm to 0.20mm 0.000″ to 0.008″

SH03 Shaper Spindle Alignment at 45°





Using a 45° engineering angle (or an angle gauge set to 135°) and a feeler gauge, check the 45° tilt position.

Test Point	Unit type	Tolerance
Permissable gap at 1 or 2	Metric Imperial	0.0mm to 0.20mm 0.000″ to 0.008″

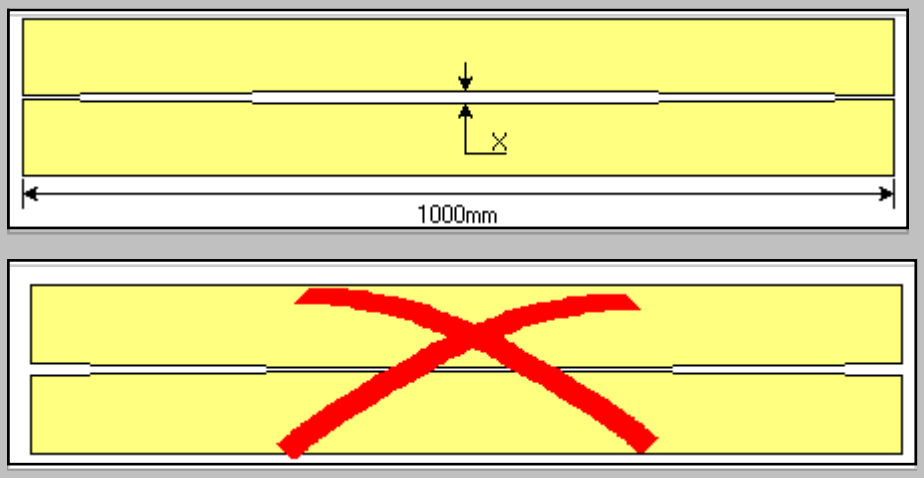
Alignments

www.hammer.at

Adjustment Link

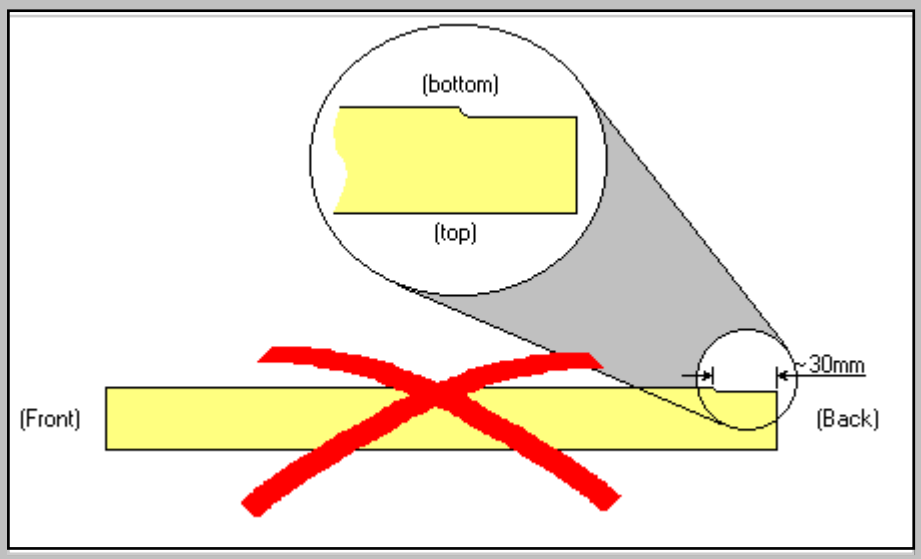
ABC

JR06 Joiner Test Cuts



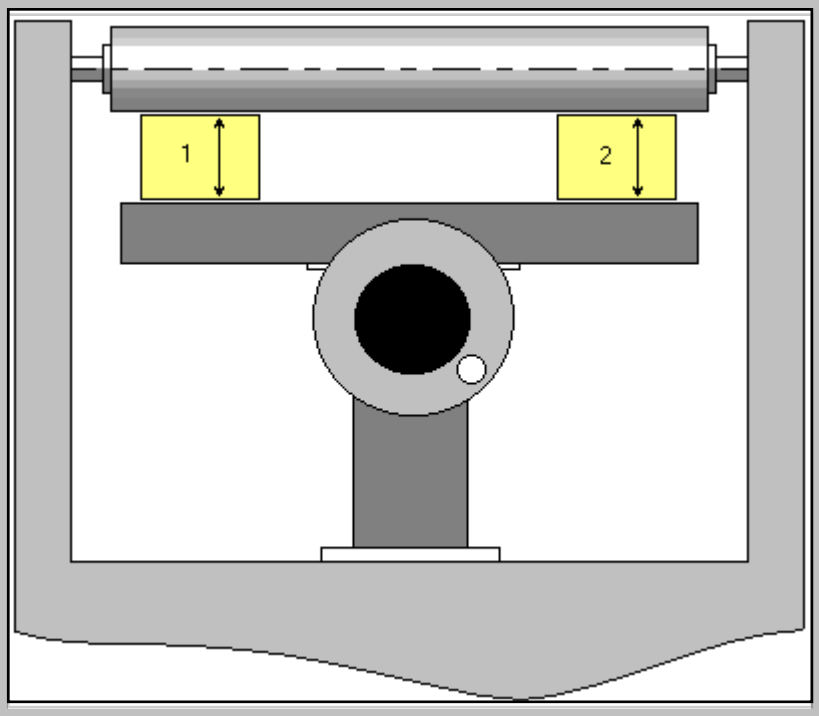
Test Point	Unit type	Tolerance
Gap in the middle, X	Metric Imperial	0.0mm to 0.20mm 0.000" to 0.010"

JR07 Snipe Check



Test Point	Unit type	Tolerance
Target = No snipe	Metric Imperial	- -

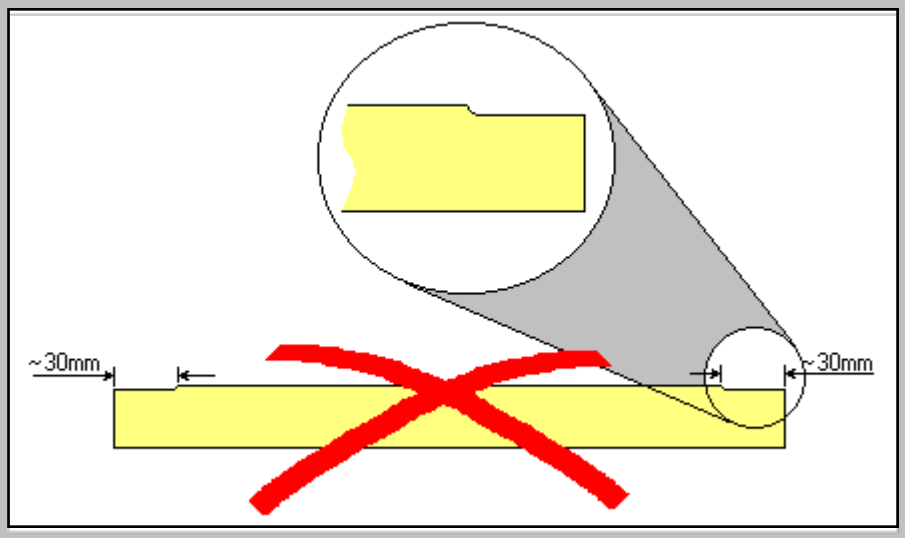
PL01 Planer Test



Check the thickness of workpieces 1 and 2 with vernier calipers.

Test Point	Unit type	Tolerance
310mm table, thickness difference from 1 to 2	Metric	+/- 0.10mm
	Imperial	+/- 0.004"
410mm table, thickness difference from 1 to 2	Metric	+/- 0.015mm
	Imperial	+/- 0.006"

PL02 Test for Snipe

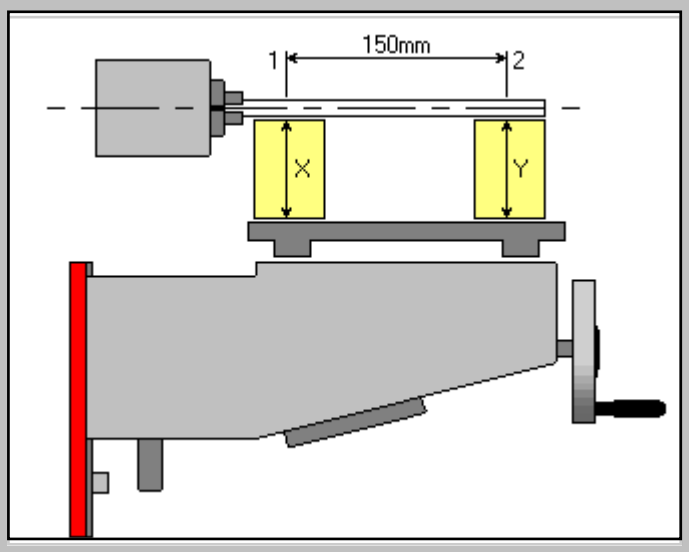


Check workpiece from planer at both ends for snipe.

Test Point	Unit type	Tolerance
Target = No snipe	Metric Imperial	- -

Alignments

MR01 Mortiser Table, Z axis

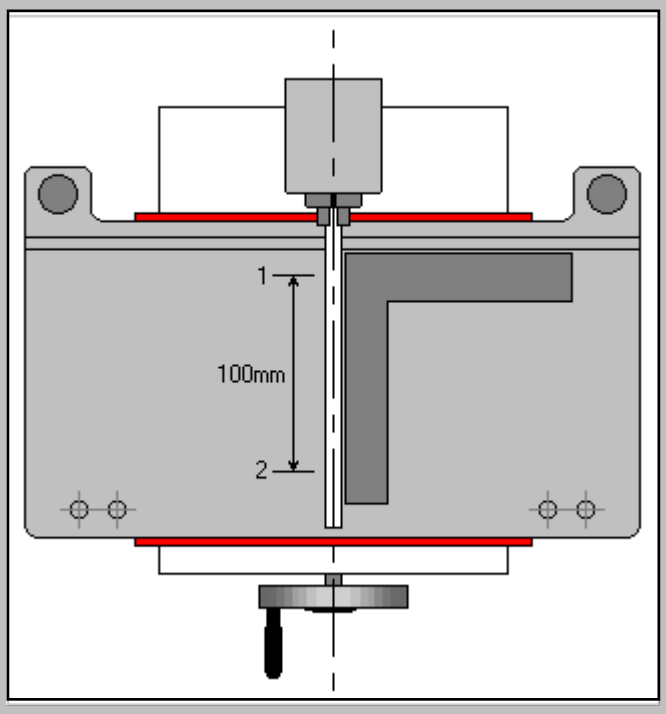


Check the alignment of the table to the mortiser bit at the front and back of the table

Test Point	Unit type	Tolerance
Difference between X and Y	Metric Imperial	+/- 0.20mm +/- 0.008"

Alignments

MR02 Mortiser Table, X+Y axes



Check the alignment of the table to the mortiser bit with a square and a feeler gauge.

Test Point	Unit type	Tolerance
Difference from point 1 to point 2	Metric Imperial	+/- 0.20mm +/- 0.008″

Adjustments

Feature not available in this Version

This section contains all of the adjustments relevant to each of the machine checks. At the top of each page, underneath the hammer logo, you will find an Alignment link which will lead you directly to a description, with diagram(s) of the alignment and what the corresponding setting should be within.

Before making adjustments to the machine, satisfy yourself that the way in which you are checking the alignment is correct and does not itself include errors, which would otherwise produce inaccurate measurements.

Help is always available if the information contained within this CD-ROM does not help you.

Contact details can be found here

SS01 Freecut from the sliding table

To measure the free-cut you will need a dial indicator. Place the indicator on the sliding table, with the needle touching the saw blade at the front of the blade, but not the teeth, as shown in figure SS01.1

Figure SS01.1 Start position of the dial indicator

Rotate the saw blade several times and find it's lowest value. This effectively gives us a reference point that we will be able to check at the other end of the blade. You can zero this low-point on the scale or use arithmetic to calculate what the next reading must be within. For a Ø300mm saw blade, there should be between 0.05mm and 0.1mm of toe-out. (0.002"-0.004" Imperial).

Keeping the dial indicator perfectly stationary on the sliding table, move the sliding table until the needle of the dial indicator is close to the back tooth of the saw blade, shown in figure SS01.2. Now rotate the saw blade to find the same low point. This low-point value subtracted from the previous value equals the current free-cut amount (LET 0 = 1).

Continued…

SS01 continued

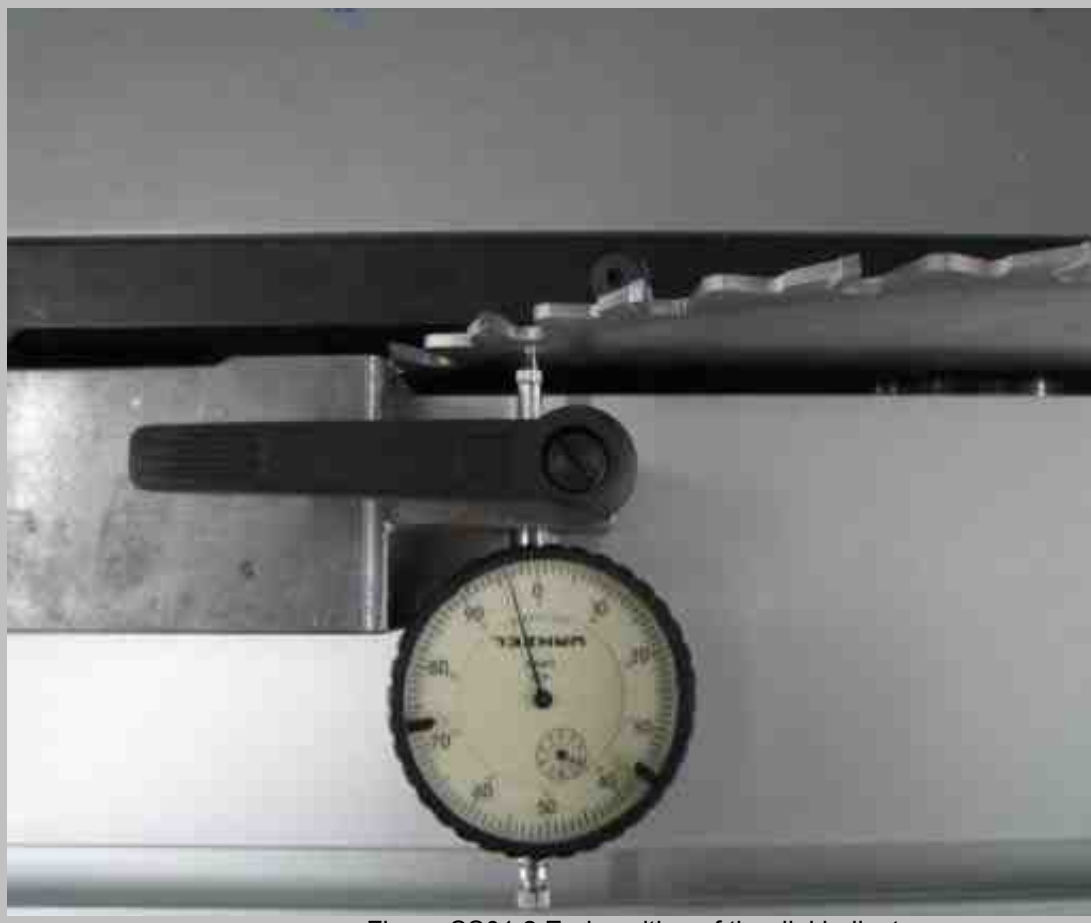


Figure SS01.2 End position of the dial indicator

If we had zero'd the scale in the previous position, we should now read between 0.90mm and 0.95mm (not 0.05mm-0.10mm as we should be moving away from the saw blade). (0.096"-0.098" Imperial). Figure SS01.2 shows that the saw blade has 0.004" toe-out to the sliding table.

The toe-out of the sliding table in relation to the saw blade is what provides the 'free-cut'. Therefore, the position that the table is tightened down in controls this. The best way to adjust the table to this level of accuracy is to loosen all lower-most nuts (inside the chassis) at each point where the sliding table attaches to the chassis. Then, without yet moving the table, measure the distance between the sliding table and the cast iron table at the very front and the very back of the cast iron table. This way you have created a reference from which to move the table before re-tightening it. Try to move the table at one end only by no more than 0.25mm each time. Re-tighten the table, check the free-cut again and re-adjut as necessary

This will also then require the sliding table to be checked for it's alignment to the cast iron table, once it is re-tighened down. This is covered in the following sections, SS02 and SS03.

SS02 Centre locked position

The sliding table can be a fairly tricky aspect of the machine to adjust, but if the following technique is applied it will be possible to adjust the sliding table to within the tight tolerances specified by the FELDER group.

First, a quick description of the functions of the securing nuts (see figure SS02.1)

1. The main fuction of the rectangular washers is to help to spread the load that the screw head would otherwise place directly onto the slidng table bed.
2. The function of the top nut is to secure the sliding table bed to the screw
3. The middle nut (just above the chassis) controls the hieght of the sliding table, moving the nut down will raise the table, moving it up the screw will lower the table (at that point)
4. The lower nut (underneath the chassis) is for tightening the entire sliding table assembly to the chassis.

Figure SS02.1 Sliding table securing nuts

Depending on the length of the sliding table, the locations of the adjustments vary slightly. The permutations are shown in the following diagrams:

Continued…

Adjustments

Hammer®
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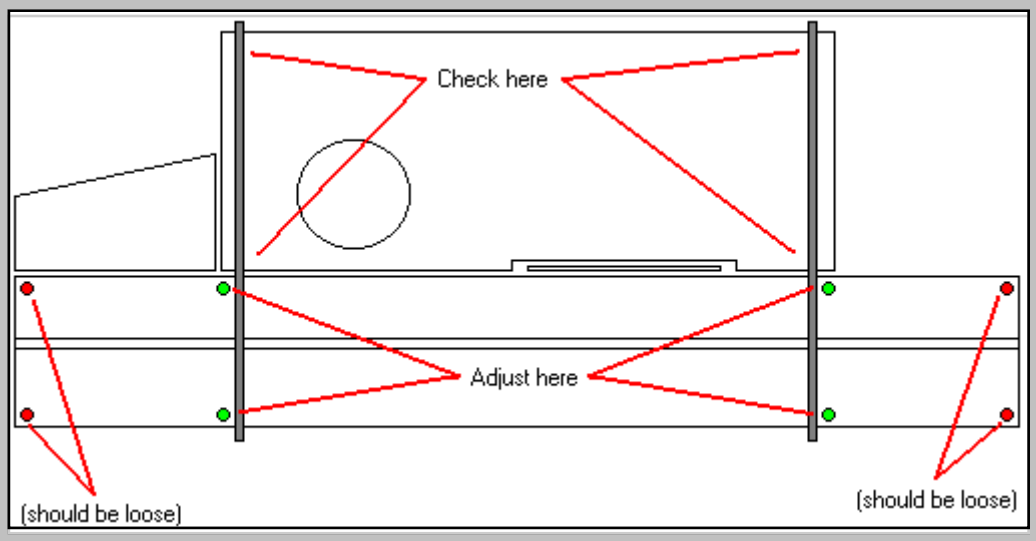
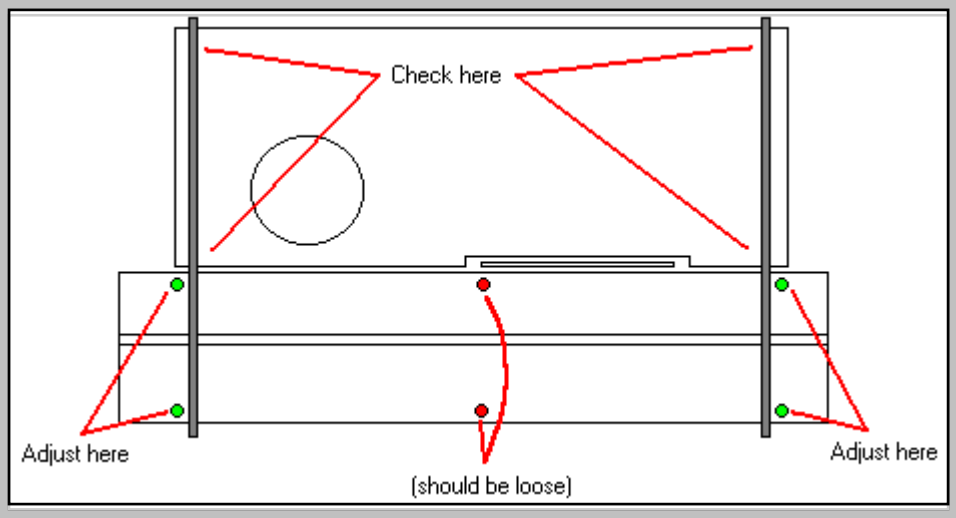
Alignment Link

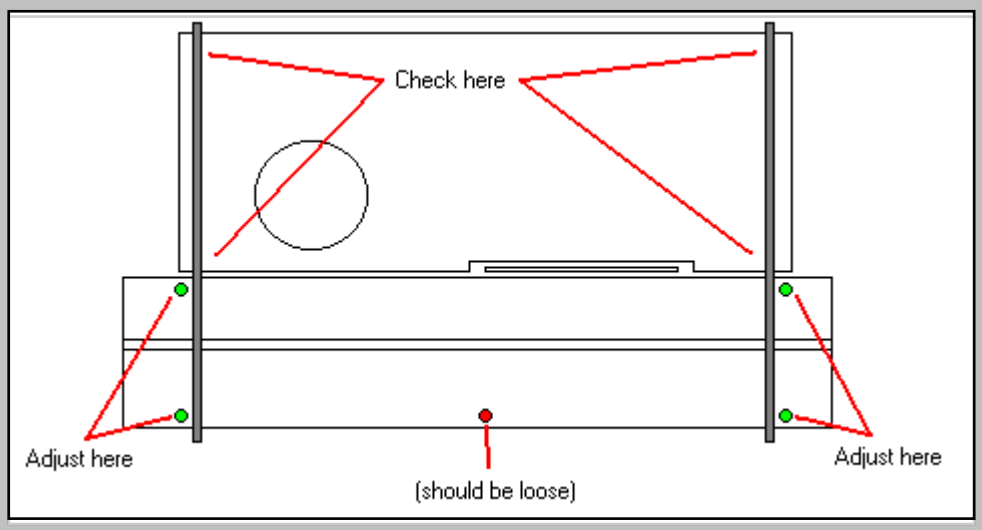
SS02 continued



:Long chassis Sliding tables



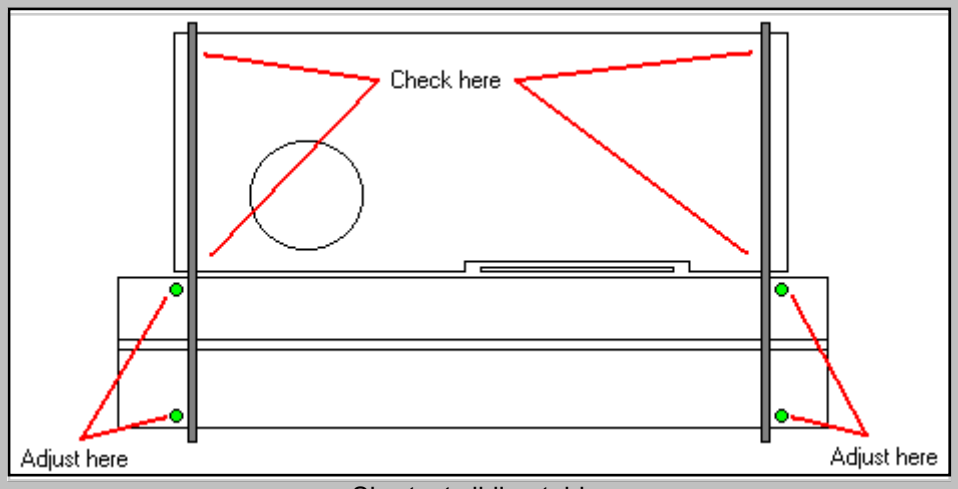
:Mid to long size sliding tables



:Short sliding tables

Continued…

SS02 continued



:Shortest sliding tables

Start by loosening the lower and middle nuts that attach the middle of the sliding table to the chassis. Only the outer 4 points should remain tight. Then place a straight edge along the tables, as shown in figure SS02.2. Check the alignment of the sliding table here with the specified tolerances. Make any adjustments with the two fixing points closest (shown in figure SS02.2)

Figure SS02.2 Step One

Continued…

SS02 continued

Once that position is correct according to the alignment information, move the straight edge to the next position, as shown in figure SS02.3. Make the necessary adjustments in light of the specified tolerances then once correct, move back to the previously checked position and check the alignment again. It is likely that if adjustments are made at both positions, because they have an effect on each other, the first position will now be out of tolerance. Continue to re-adjust and check as necessary.

Figure SS02.3 Step two

Adjustments

Hammer®
www.hammer.at
Alignment Link

The Sliding Table… A Second Approach

If you find adjusting the sliding table especially difficult then try something slightly different. This will also work well for cases when the sliding has to be assembled to the machine and the fixing screws have been either removed or loosened – but in either case no longer have any useful settings to work with. It may also work better for longer sliding tables, 6ft in particular.

If you have been trying to adjust the sliding table for hours on end then it is recommended to loosen the sliding table so that it is not under stress and leave it for 24 hours to prevent any permanent damage being caused.

When re-starting, follow the same procedures as described before but this time begin with only 3 fixing points, not 4. Try to adjust the slding table with 3 of the 4 points shown in the graphic illustrations in SS02. This will ensure that the sliding table begins co-planar and then will not be twisted or distorted by subsequent minor adjustments.
Once within tolerance – or close to – tighten up the 4th nut, being careful not to change the current setting. Hand tighten to begin with and make any small adjustments necessary. Then, where applicable, move to the outer four fixing points or the inner fixing point. These points are described in SS03, Sliding Table End Positions.

SS03 Sliding Table End Positions

Once the sliding table has been adjusted in the centre locked position, we can look at the table in its end positions. The best way to do this is by putting the sliding table and the straight edge in the position shown in figure SS03.1. Check the alignment here and make any adjustment using the centre fixing points also shown in the picture.

Figure SS03.1 End position 1

When making any adjustments, always check the table at both ends. The other position is shown in figure SS03.2. Because the two end postions are adjusted at the same position, if it is not possible to adjust both ends to within tolerance, it is due to a mis-alignment in the centre locked position. Even if the centre locked position indicated that both sides were within tolerance, if one side was at the lower limit of the tolerance and the other at the higher limit, it would cause the sliding table to move out of tolerance.

Continued…

SS03 continued

Figure SS03.2 End position 2

SS05 Crosscut Fence on Outrigger, Position A

To check the accuracy of the crosscut fence, perform the test as shown in the tolerancing information. Alternatively, as most tape measures cannot be accurate beyond 0.5mm, make a five sided cut and measure the off-cut with a pair of vernier calipers.

Figure SS05.1 shows the five sided cut for this side of the outrigger, the possible mis-alignments and the relative position of the crosscut fence (greatly exaggerated!).

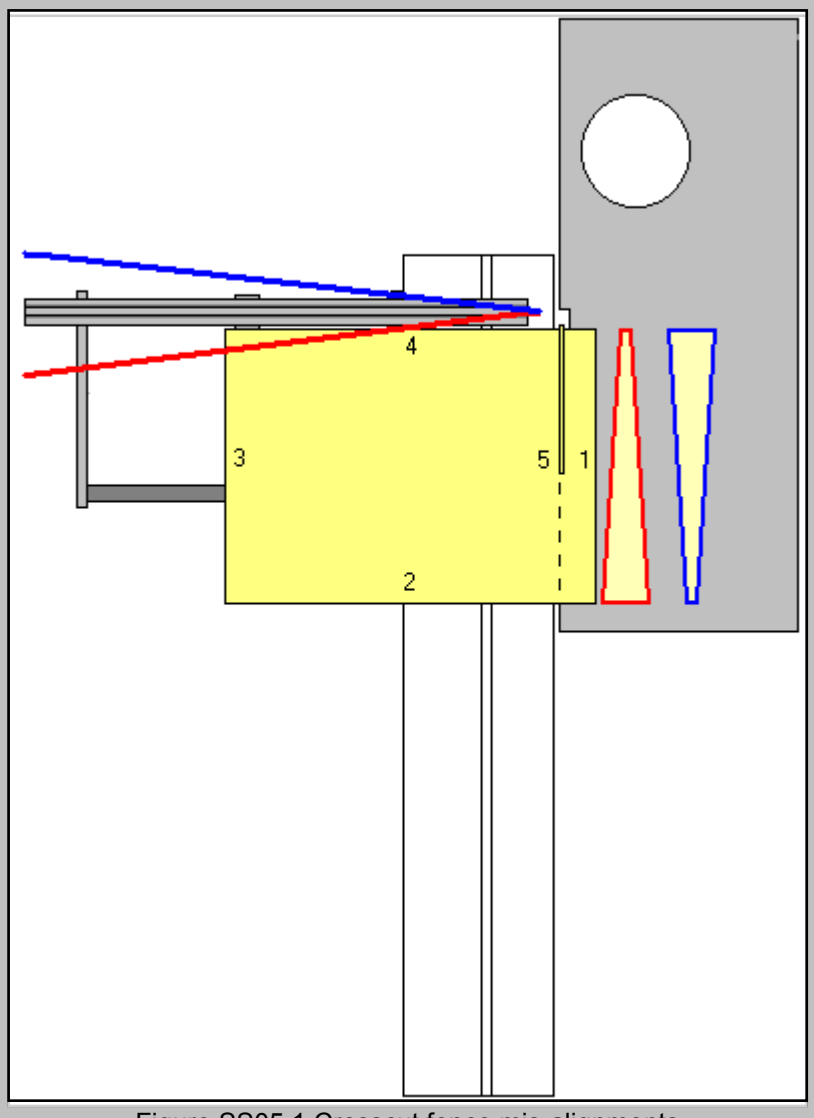


Figure SS05.1 Crosscut fence mis-alignments

Continued…

SS05 continued

To make adjustments to the position of the crosscut fence, the stop in figure SS05.2 must be moved in the appropriate direction. Start by making no more of an adjustment than a quarter of a revolution to the nuts on either side of the stop. After tightening, make sure that the stop can still be turned up and down but also so that there is no play in the stop.

Figure SS05.2 Crosscut fence 90° adjustment

SS07 Crosscut Fence Scales

To calibrate the crosscut fence scale(s) you will need a workpiece (say, 12” long) and an additional measuring instrument, such as a tape measure. Using the crosscut stop, make a cut through the workpiece; it will be helpful to set the crosscut stop at an integer position such as 11” or 12”. After the cut is made, compare the width of the work piece with the readout on the fence scale. The scale can be adjusted by loosening the allen screw that secures the scale and shifting the scale by the required amount (shown in figure SS07.1). Tip: Leave the crosscut stop locked in place and move the scale until the correct reading is shown by the stop.

N.B.Check that the fence cuts square sides before starting! See SS05 and SS06: 90° adjustments of the crosscut fence.

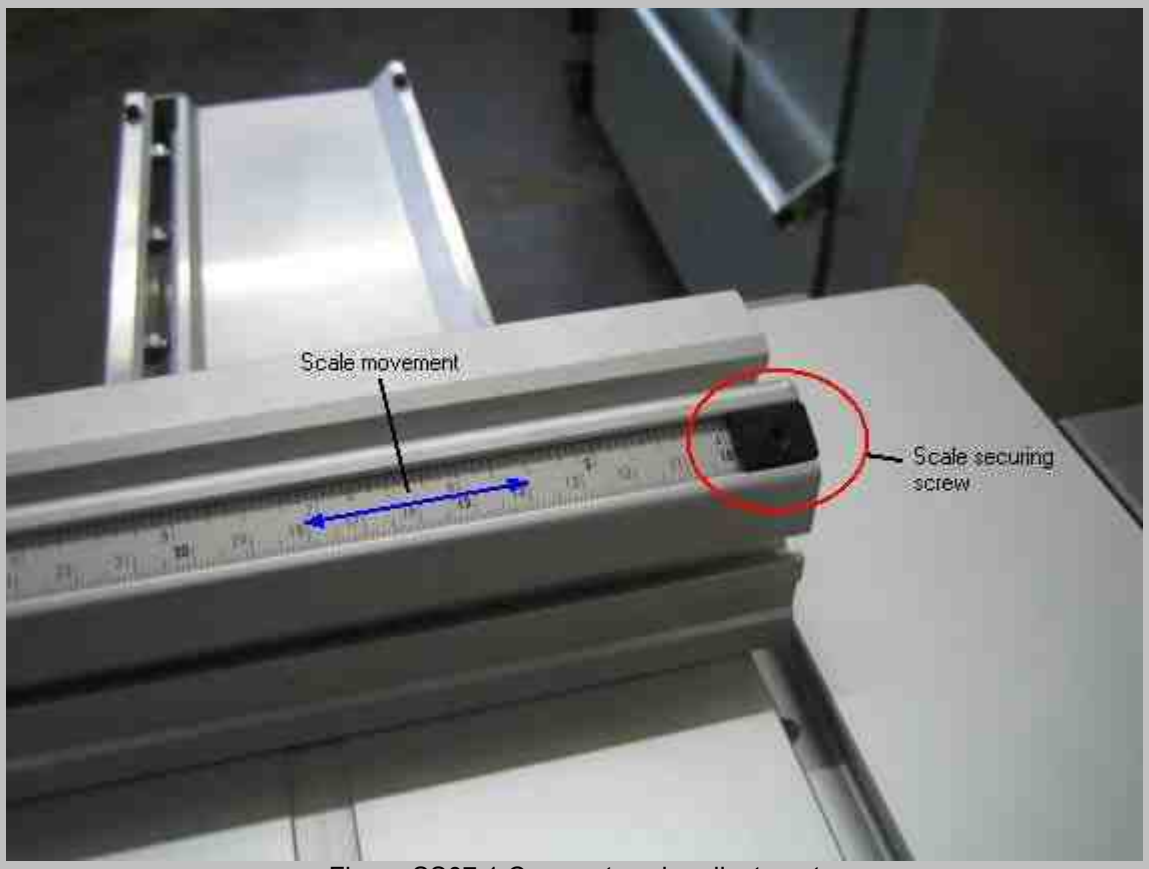


Figure SS07.1 Crosscut scale adjustment

If the telescopic extension is in use, check that the scale reads accurately here too. You will need a workpiece long enough to use the telescopic extension with. Make a cut using the stop and compare the actual cut width with the readout from the scale.

Continued…

SS07 continued

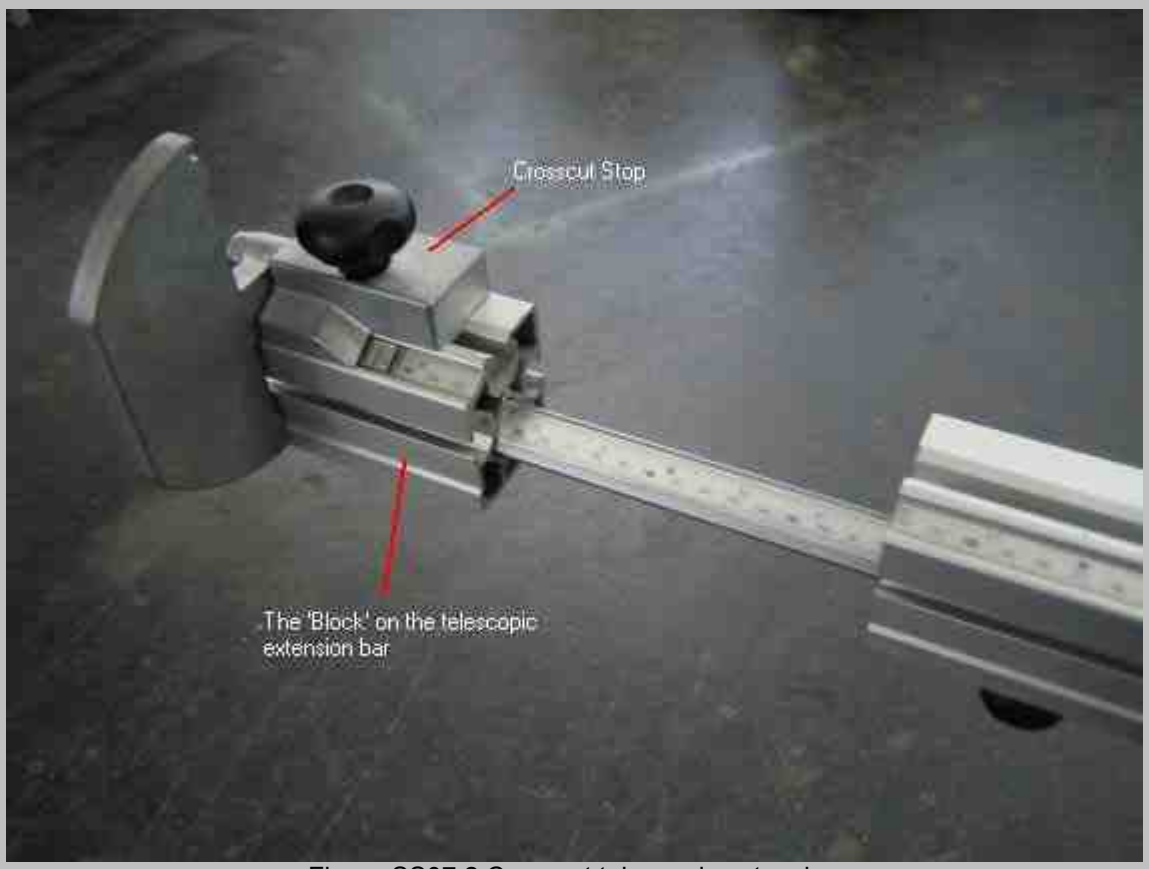


Figure SS07.2 Crosscut telescopic extension

If necessary, the stop and block (Figure SS07.2) can moved along the telescopic extension bar. Figure SS07.3 shows the location of the allen screw which, if slackened off slightly, will permit the movement of the stop and block. Make an adjustment to the position of the stop and block and lock it back into place, then re-check the new alignment.

Continued…

SS07 continued

Figure SS07.3 Crosscut stop and block adjustment

SS08 Angled Cut From Outrigger

To adjust the angled cut from the outrigger, you can use a dial indicator and a large 45° angle. However, this can be done without the 45° Angle. You will need a workpiece (say, 3ft x 10”, with at least 1 straight edge), an angle gauge and a 5mm Allen key.

The first step would be to move the crosscut fence into the 45°position, from the front of the outrigger (Figure SS08.1). Lock it down and proceed to make a cut through the workpiece.

Figure SS08.1 From the front of the outrigger

When the cut is made, bring the angle gauge into place along the side previously against the fence and the new cut side. The offcut can also be used if the angle gauge does not permit internal 45° measurements of this size. Be sure to use the same edges (Fenced surface and cut surface). Figure SS08.2 shows the correct angles to check. Unless you can be certain the two edges are completely parallel, it is best to check this way so as not to combine errors.

Continued…

SS08 continued

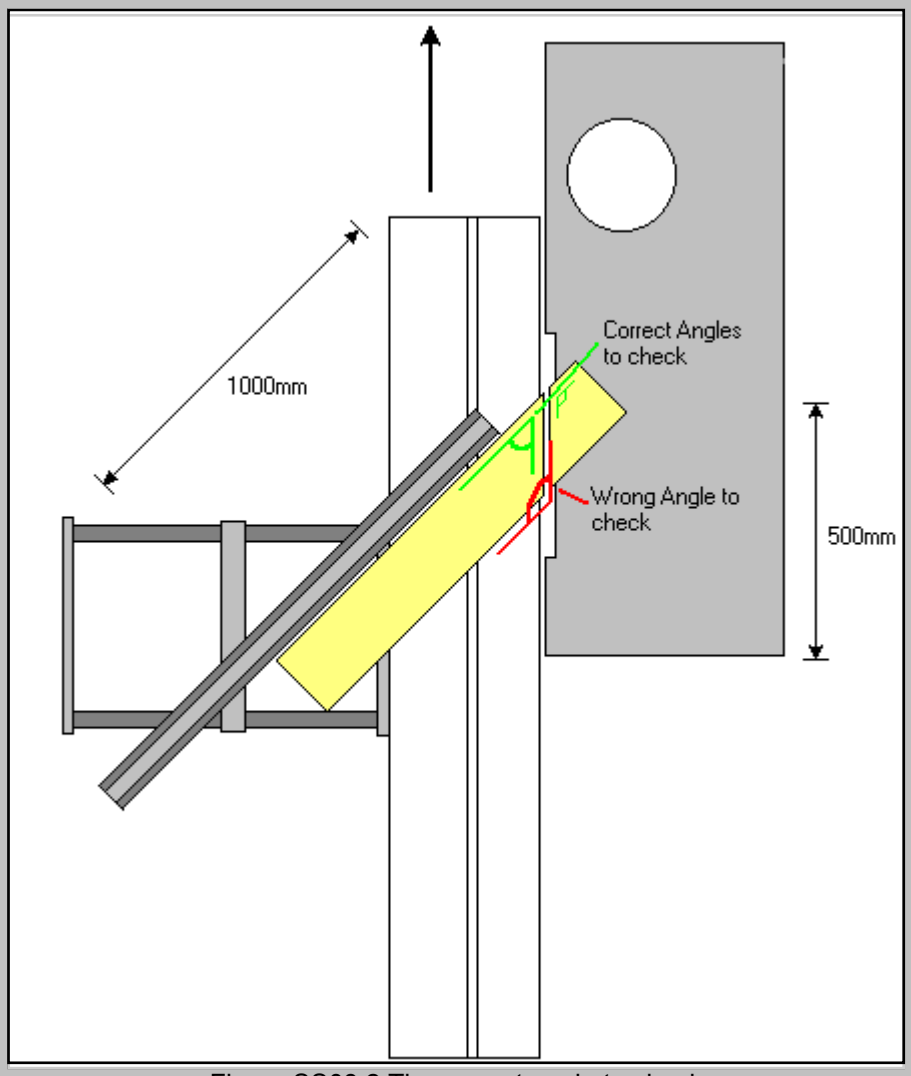


Figure SS08.2 The correct angle to check

Note the measured angle, but do not yet make any adjustment as we also need to check the 45° angle from the other side of the outrigger, as shown in figure SS08.3. Repeat the cut and measure the 45° angle produced from this position.

Continued…

SS08 continued

Figure SS08.3 From the back of the outrigger

If, on checking the 45° angle at both sides, the measured angle does not read (at any time) 45° accurately, the outrigger centre section will have to be adjusted. The possible adjustments are illustrated in figures SS08.4 and SS08.5. If the 90° crosscut stops have both been adjusted correctly, then when the fence is locked down at 0° it should read 0° on the scale. If it does not, then this is a good indication of the direction the centre section will have to move in order to produce the correct angled cut.

To make adjustments to the centre section, carefully loosen the allen screws underneath the outrigger and make a small adjustment (max. 1mm) at a time. After each adjustment check the new alignment with a test cut and re-adjust as necessary.

For adjusting the miter index, perform all of the previous checks and adjustments for the scale printed on the centre section, then when this is correct, align the miter index to the scale until the pin can drop into place at the correct angles each time. Be sure not to move the centre section once it is correctly aligned however!

Continued…

Adjustments

SS08 continued

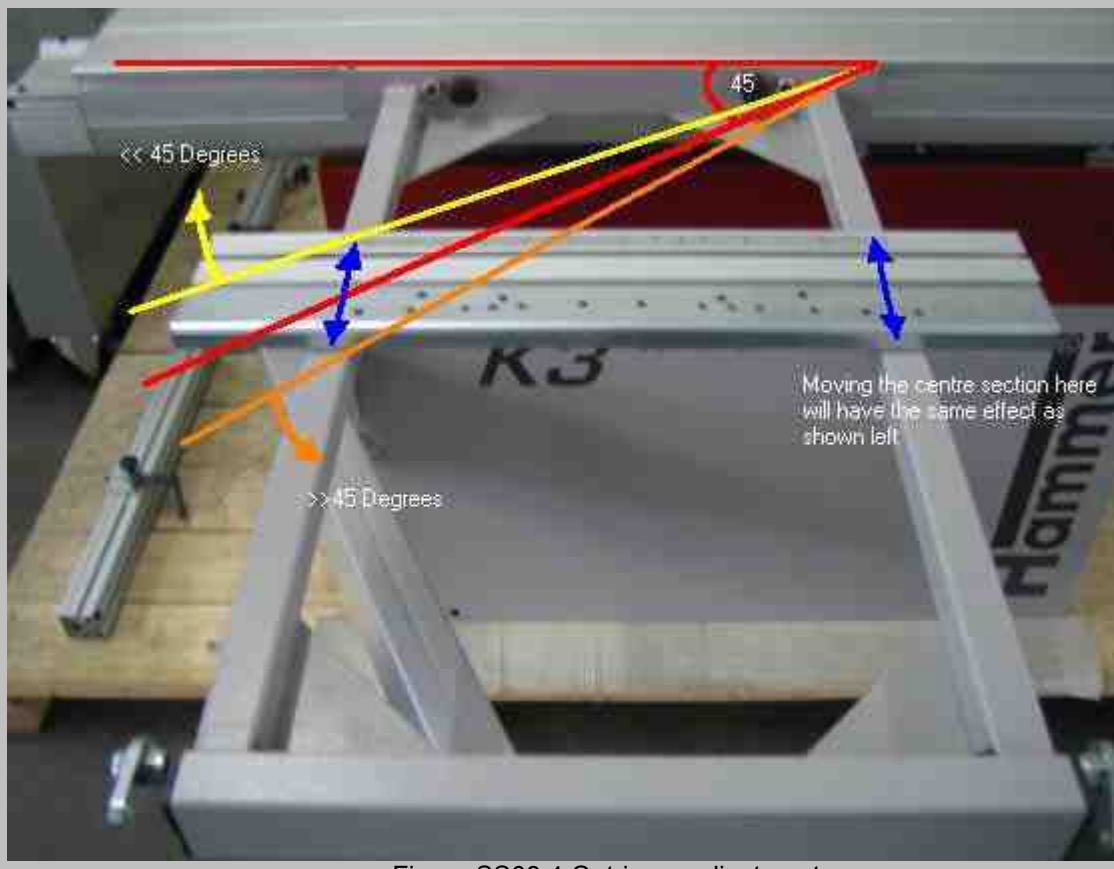


Figure SS08.4 Outrigger adjustments

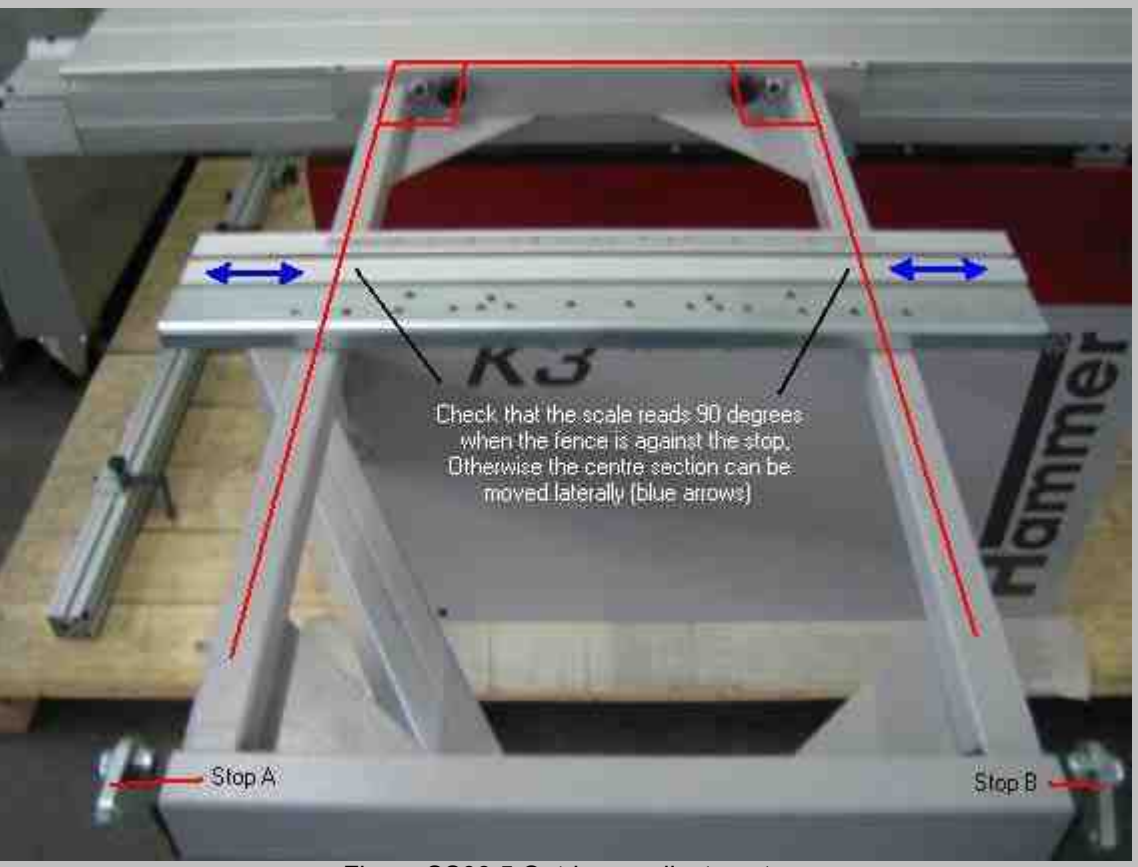


Figure SS08.5 Outrigger adjustments

SR01.1 Rip Capacity Extension Tables

You will need a 1000mm straight edge and a feeler gauge for this. All extension tables should be aligned within the specified tolerance. Figure SR01.1.1 show the functions of the main supporting screws and nuts.

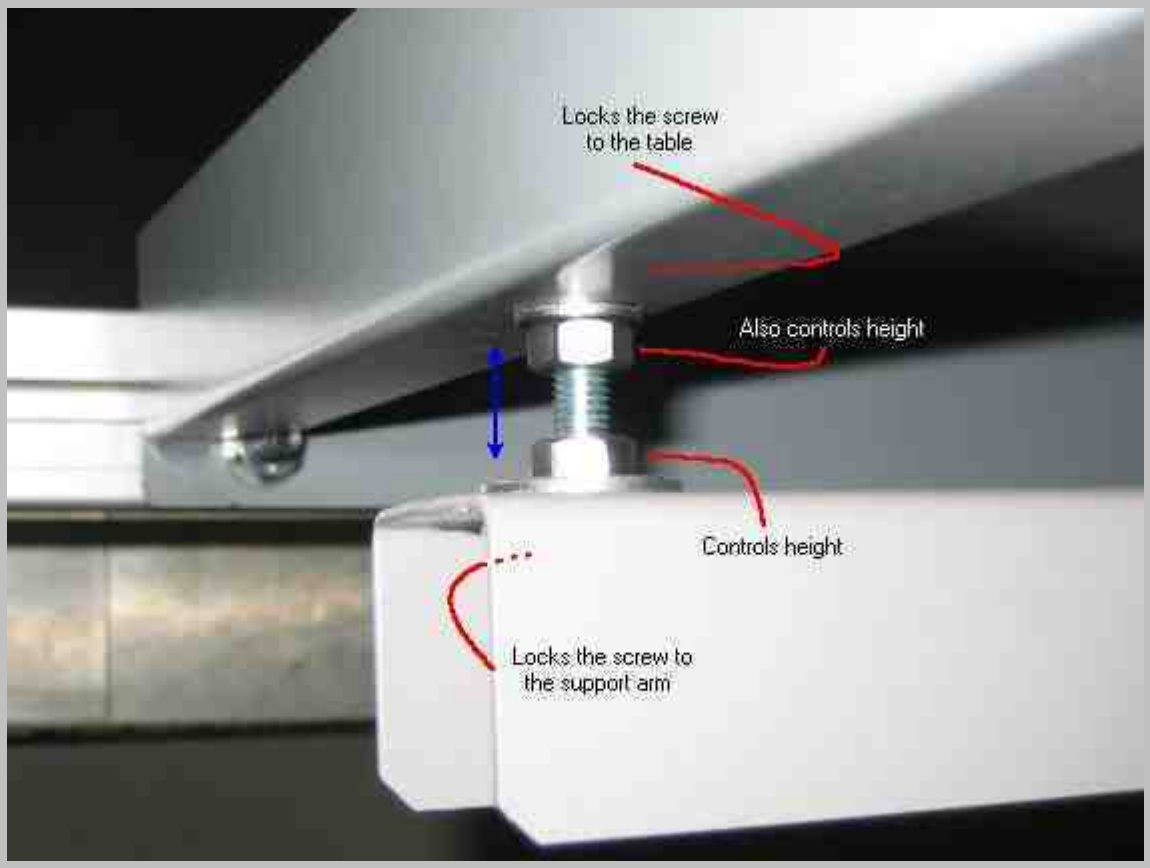


Figure SR01.1.1

The additionsl screws that support the table obviously do not attach to the table, but provide support under the table to take-up any out-of-tolerance gaps. They are shown in figure SR01.1.2.

Continued…

SR01.1 continued

Figure SR01.1.2

When adjusting the height of the tables, make sure that the nuts securing the rip fence bar to the extension tables are loose. These nuts are shown in figure SR01.1.3

Continued…

SR01.1 continued

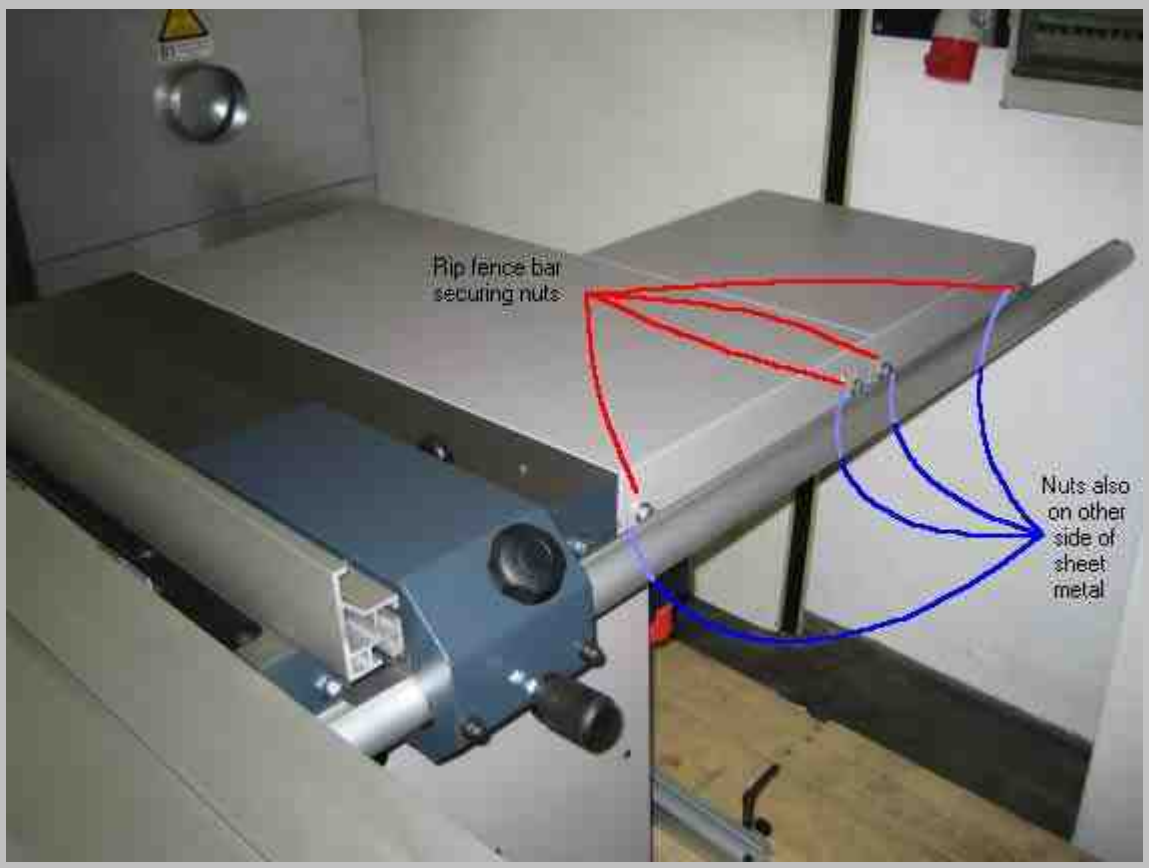


Figure SR01.1.3

After adjusting the tables, the nuts can be re-tightenend. Check that the rip fence moves easily across the extension tables once finished.

Adjustments

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Alignment Link

SR04 Rip Fence Free-cut at 90°
And SR05 Rip Fence Free-cut across all tables

The best way to check the free cut of the saw blade at 90° is to do it with a dial indicator. You will also need a Ø300mm saw blade.

Turn the machine off for this exercise as it involves handling the saw blade.
Set the dial indicator up in position 1 as shown in figure SR04.1

First, we must remove any error in the calculation brought about by the tolerance of the saw blade. In position 1, very carefully spin the saw blade through several revolutions and zero the dial indicator on the lowest value (the closest point on the saw blade to the rip fence). Check the new zero before moving on.

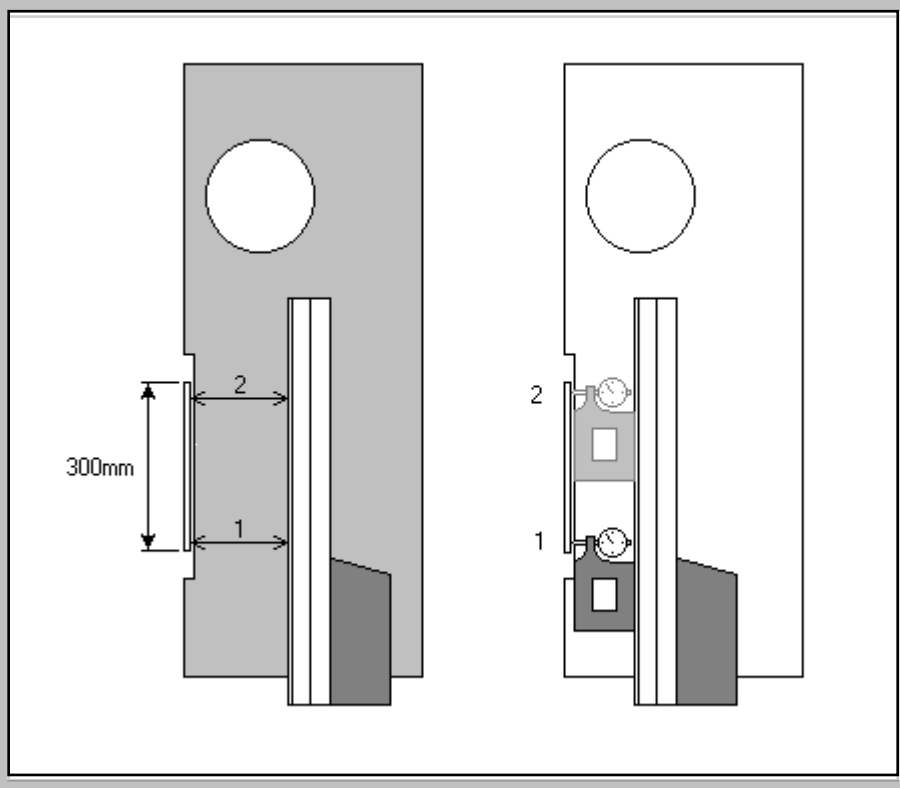


Figure SR04.1

Once zero'd, slide the dial indicator to position 2, as shown in figure SR04.1. Again, spin the saw blade through several revolutions in order to find the same low point, where the saw blade is again closest to the rip fence. Note this value.

Point 2 should be further away from the saw blade than point 1, by the specified tolerance.

If it is not within tolerance there are adjustments available at the positions shown in figure SR04.2. Figure SR04.3 illustrates how adjusting the rip fence bar will affect the freecut.
When making adjustments here, first loosen off the outer bolts, shown in figure SR04.4 and then adjust the rip fence bar. After checking the free cut again, these bolts can be re-tightened.

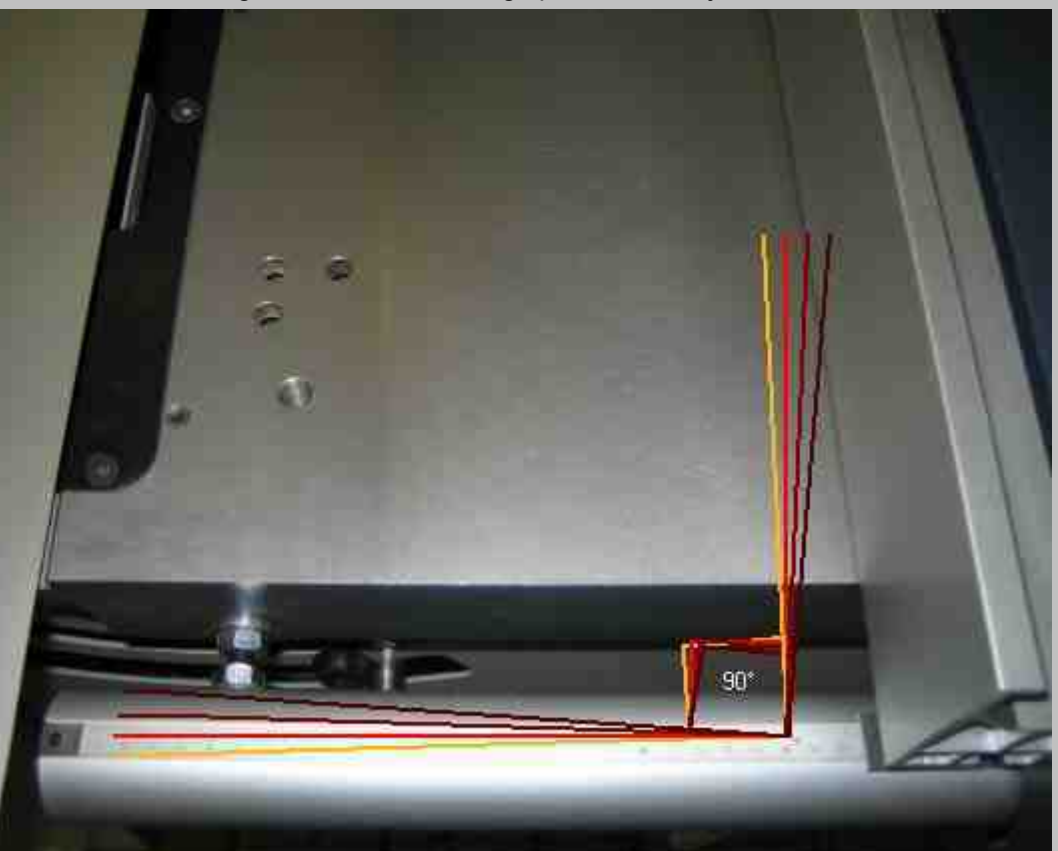
Continued…

Adjustments

SR04 continued
+ SR05 continued

Figure SR04.2 Free cut adjustment.

Figure SR04.3 Illustrating rip fence bar adjustments



Continued…

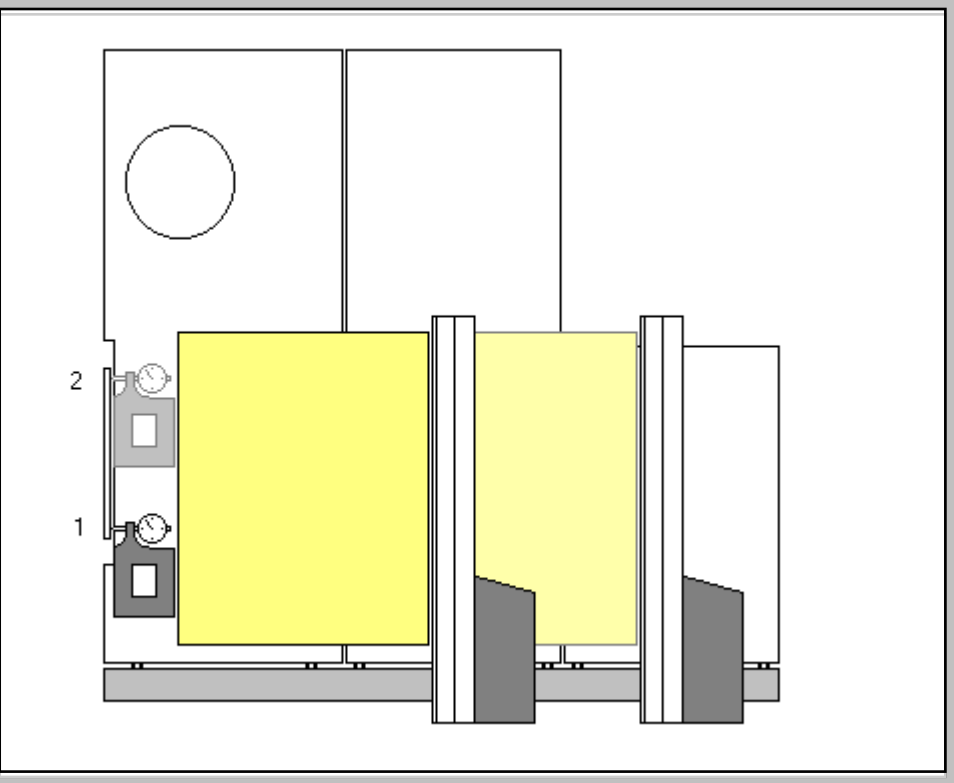
SR04 continued
+ SR05 continued

Figure SR04.4 Rip fence bar securing points

So far the freecut has only been checked across the rip fence bar per the width of the cast iron table. The next step is to check the free cut across the extension tables. Figure SR04.5 illustrates the two positions you would need to check and also shows how with two boards (both rip-cut off the rip fence) the check can be made in the same way as before. This clearly requires that both of the boards have near-perfect parallel edges, so they must be ripped with great care in order for this check to be accurate.

Continued…

Adjustments



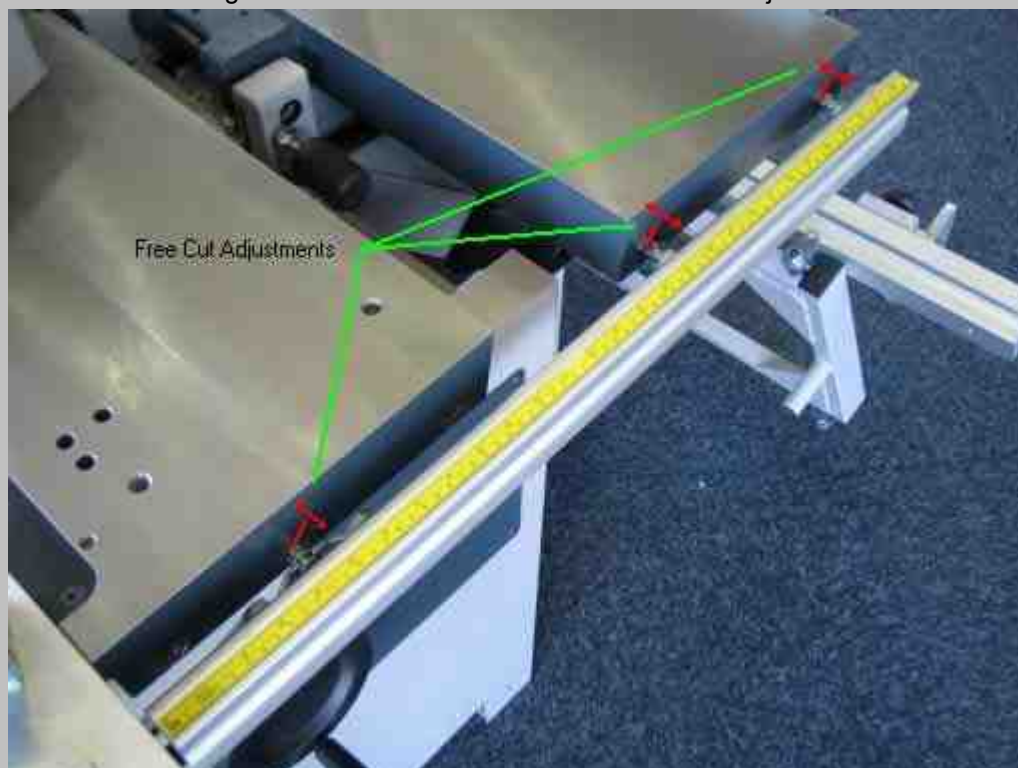
SR04 continued
+ SR05 continued

Figure SR04.5

The adjustments for these positions are the points where the guide bar fixes to the tables (shown in SR04.4).

For combination machines, the adjustments are shown in figure SR04.6

Figure SR04.6 Combination machine freecut adjustment



SR07 Alignment of the Saw Blade at 90°

To check the alignment of the saw blade at 90°, you will need an engineers square at least 200mm long on one of the inside edges. The best way to check the alignment of the saw blade is to cut through a workpiece and measure the angle produced. The workpiece must have a flat bottom surface (the surface which faces the cast iron) for the subsequent measurement to be completely accurate.

Place the square along the cut face and the face that was against the cast iron table and check for any gaps. If the cut is within the specified tolerance, no further action is necessary.

To make any adjustments to this angle, see figure SR07.1 for the location of the adjustment. The stop can be accessed from the cut-out in the chassis with an allen key. Once an adjustment is made, check the alignment once more and re-adjust as necessary.

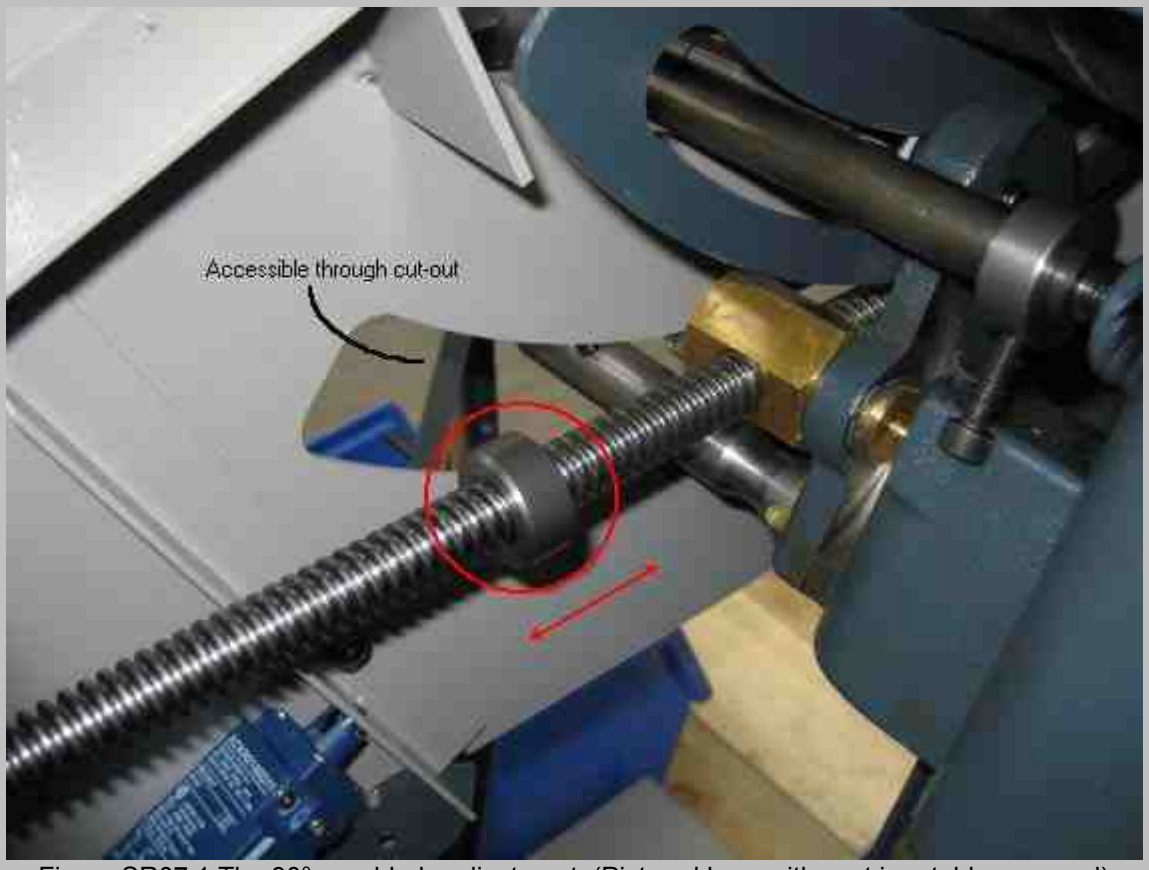


Figure SR07.1 The 90° saw blade adjustment. (Pictured here with cast iron table removed)

SR08 Alignment of the Saw Blade at 45°

To check the alignment of the saw blade at 45°, you will need an engineers square at least 200mm long on one of the inside edges. The best way to check the alignment of the saw blade is to cut through a workpiece and measure the angle produced. The workpiece must have a flat bottom surface (the surface which faces the cast iron) for the subsequent measurement to be completely accurate.

Make two cuts at 45° and join them together as shown in the tolerancing information. Place a square along the outside of the joint and check for any gaps between the workpieces and the square. Compare any gaps to the specified tolerance. If the angle is within tolerance then no adjustment is necessary.

To make an adjustment to the 45° alignment, the mechanical stop will have to be moved in the appropriate direction. See figure SR08.1 for the location of the stop.

Figure SR08.1 Showing the 45° Mechanical Stop

SR09 Calibration of the Rip Fence Scale

Calibration of the rip fence scale is quick and easy for whichever Hammer you own. The first step would be to set the rip fence at a given position (say 12”), lock it down and make a cut from it. Measure the cut workpiece and adjust as necessary:
For machines with the round guide bar, see figure SR09.1, for combination machines, see figures SR09.2 and 9.3.

Figure SR09.1 Scale adjustment on the Guide bar

Continued…

SR09 continued

Figure SR09.2 Combination machine scale adjustment

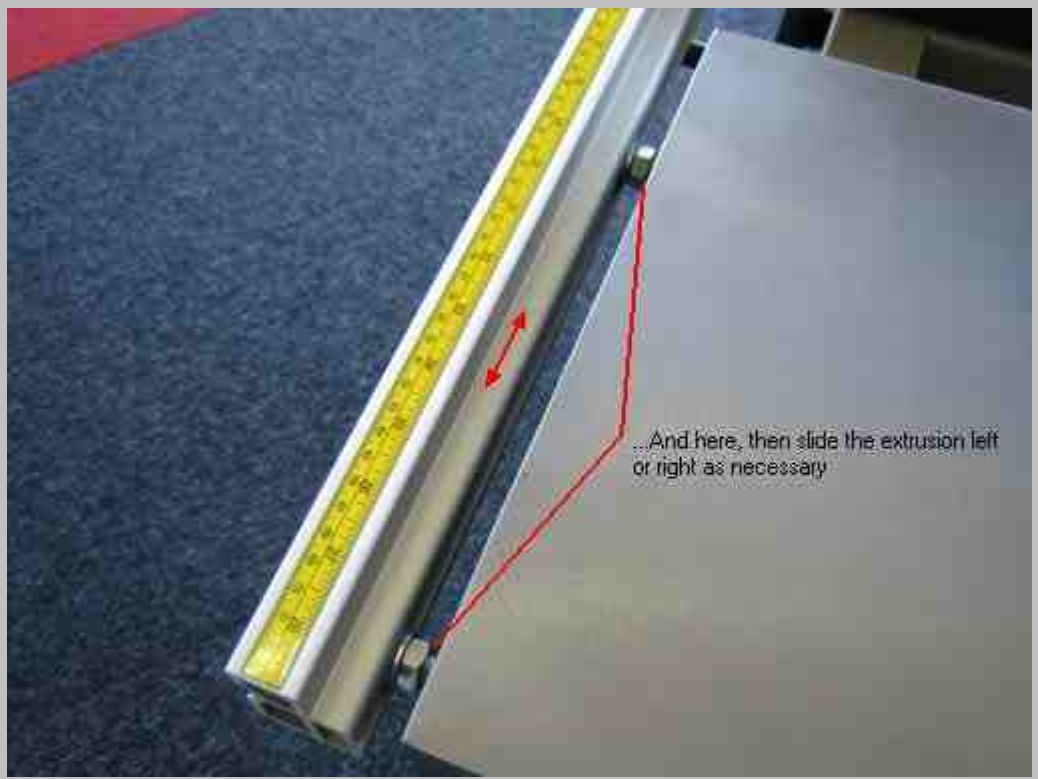


Figure SR09.3 Combination machine scale adjustment

SH02 Shaper Spindle at 90° (for tilting spindles)

If the 90° angle that the shaper makes to the cast iron table (in the tilting plane only) is not aligned to within the specified tolerance limits, then an adjustment can be made to the 90° stop on the tilt-controlling axle. It is pictured in figure SH02.1 and can be accessed through the cutout or from the access hatch for the shaper. You will need to loosen off the stop with an allen screw first, turn it along the axle in the required direction, lock it back into place and then return the shaper back to 90° to check the new alignment. Once checked, re-adjust as necessary.

Figure SH02.1 The 90° stop on the tilt-controlling axle

SH03 Shaper Spindle at 45° (for tilting spindles)

If the alignment of the spindle appears incorrect at 45° , then you will need to make an adjustment to the 45° stop on the tilt-controlling spindle / axle. The stop is shown in figure SH03.1 and requires loosening with an allen key to be able to then turn it to the required position. Tighten the allen screw to secure it and return the shaper to 45°. Check the new alignment and re-adjust as necessary.

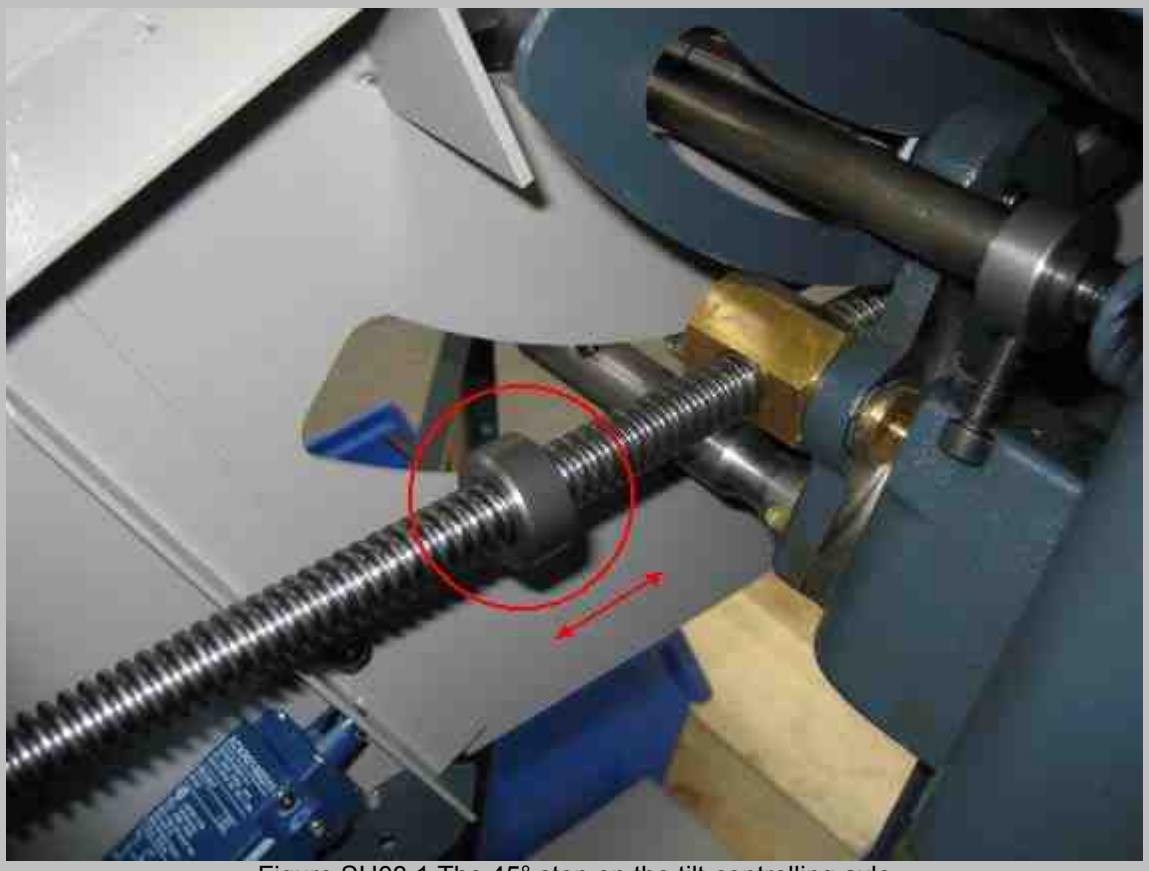


Figure SH03.1 The 45° stop on the tilt-controlling axle

Adjustments

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JR06 Joiner Test Cuts

You will need two 2” x 4” x 1 meter boards to do this test.

Join one face of each board, then place the two jointed faces together. You should have a slightly concave joint that produces a small gap between the boards at the centre of the joint. If you have gaps at each end of the joint, then the cut is convex and is not acceptable.

What to do if:
The concave cut is too large:

1. Use a dial indicator to measure the height of the knives above the outfeed table.
2. Keeping the dial indicator in place, use the fine adjustment knob for the outfeed table to raise the outfeed table (effectively lowering the knives) by 0.025mm (0.001”).
3. Lock the table in this position and perform the test once more.
4. This adjustment can be repeated if the subsequent joint is still too concave, until the knives are just underneath level (-0.025mm, -0.001”) with the outfeed table. At this point, the infeed table should be checked for its alignment to the outfeed table and adjusted as necessary.

The cut is convex:

1. Check that the tables are parallel to each other using a 2 meter straight edge.
2. Check that both of the tables do not tilt when locked into position.
3. If these checks prove nothing is out of alignment, start with the knives at 0.10mm (0.004”) above the outfeed table and make successive test cuts, each time moving the table up by 0.025mm (0.001”), until a concave cut is obtained.

N.B. Always raise the tables to the desired final position and lock into place

Adjustments

Hammer®
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Alignment Link

JR07 Snipe Check

To check for snipe, you will need a board, say 2” x 4” x 2 ft long (although these dimensions are not necessarily important). Join the board on one face and check the back end of the workpiece for a deeper cut similar to that illustrated in the tolerancing information. This cut is called snipe and occurs when the knives are too high above the outfeed table. The solution is to move the table up (effectively moving the knives down) using the fine adjustment knob. It is best to take a measurement of the present height of the knives, and make adjustments of 0.025mm (0.001”) at a time until the snipe dissappears.

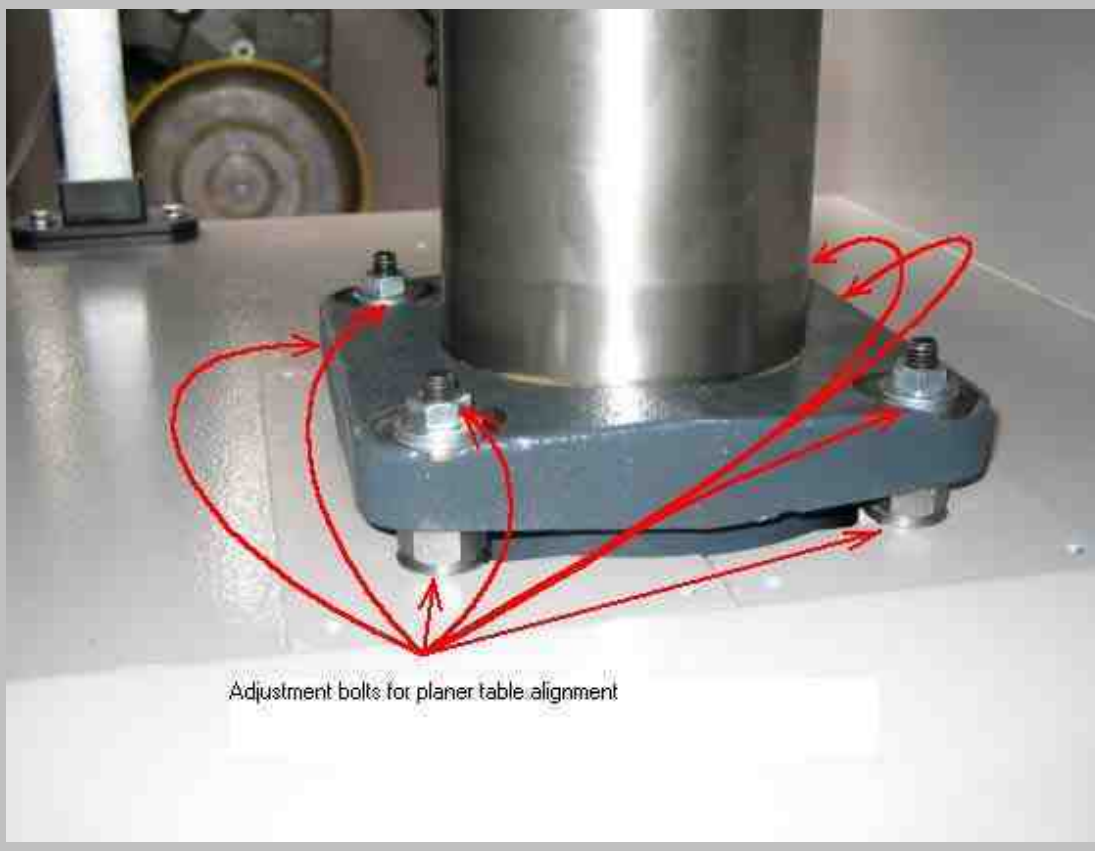
PL01 Planer Test

You will need two boards approximately the same size, both approx. 2” x 4” and at least 2ft long. If the boards do not have planed faces, then join one side of each board first.

Make sure that the feed rollers are engaged and there is suitable extraction. With the joined surface always facing the cast iron table, plane the two workpieces, one at either side of the table (as shown in the tolerancing information). Keep passing the workpieces through until the top surface is completely planed. Always pass the same workpiece through on the same side of the table. Be sure sure to lock the table in position each time after raising or lowering it.

When the workpieces have been planed, using a pair of vernier calipers, measure the thickness of both workpieces. Check that the two measurements are the same within tolerance.

If the measurements indicate that the planer is out of tolerance, then an adjustment is necessary. Figure PL01.1 shows 3 of the 4 adjustment positions fo table. To move one side of the table up or down, make an adjustment at both of the screws on that side by an equal amount.



PL01.1

After adjusting, perform the test again and re-adjust as necessary.
N.B. Always raise the table to the desired final position and lock it in place

PL02 Test for Snipe

You will need two boards; both 2” x 4” x 1 ft would be acceptable. If they have no planed surfaces, you will need to plane one face of each board on the joiner first.

Set the appropriate height for the planer table and lock it into place. Pass the boards through the planer, one on either side of the table, then check the front and end of the workpiece for a slightly deeper cut than is elsewhere. Snipe will occur 30 to 60mm from either end of the workpiece if it occurs at all.

If there is no sign of snipe, the next machine check can be made.

If snipe does occur, it will be necessary to make an adjustment to the feed rollers. The feed rollers are mounted onto springs. If the springs on one of the feed rollers are set too tight, there will be too much pressure on one side of the table, causing the table to tip when the workpiece first moves underneath it and then when the workpiece leaves that feed roller. Contrary to this, if one of the feed rollers is not set tight enough, there will not be enough force to hold the workpiece down flat on the table, meaning the workpiece will tip.

This is what causes snipe – the movement of the workpiece (not necessarily the table) under the cutterblock

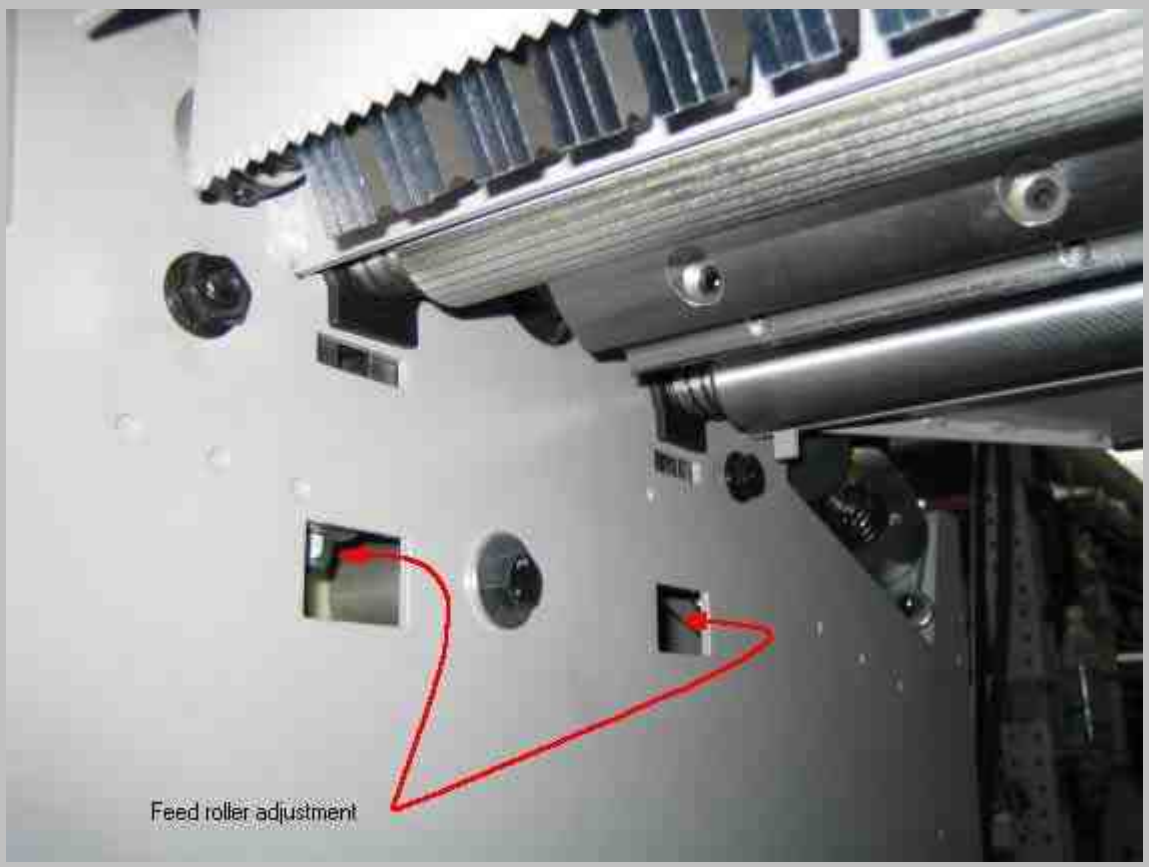


Figure PL02.1

15.Completion

Good to Go…

The machine is in place. The extraction is up and running. The test cuts you made told you everything you needed to know. There's a stack of lumber in the corner waiting for a job to do and a plan (of some sorts!) for something on paper or in your head. So, now you've seen what your machine can do, lets see what you can do!

Go safely and enjoy your new Hammer!

16.FAQ's

Frequently Asked Questions

These are some of the most frequent questions customers ask us when setting up their new Hammer. For any other questions related to the cutting quality of your machine, please work through the Basic Machine Check setup process first to find or eliminate the cause of the issue. Of course, if the answer to your question cannot be found within this Machine Setup Guide or the Operation Manual, you can always contact your Hammer Service Department.

Machine Won't Turn On

Try asking yourself a few basic questions to eliminate some of the possible reasons for the machine not starting:

- Are the emergency stop buttons still depressed? If so, you need to twist them slightly to make them 'pop' back out again.
- Are the access doors closed correctly and have you placed the corresponding switches (where applicable) in the correct place?
- Is the main switch on?
- Are you pressing the start button for long enough (single phase machines in particular)?
- For full combination machines, is the selector switch engaged correctly and for the machine unit you are trying to use?
- Is there power coming from the mains supply? Are all the trip switches okay?
- Is the machine wired up correctly?

Motor Rotation is Backwards (3 phase Machines Only)

Swap two phases of the power supply cord. The electrical compartment may not be opened without the express instruction of the Hammer service department. This would otherwise void the warranty.

Saw Burns the Workpiece

The freecut is not setup properly. Which side does it burn on – Rip fence side (when cutting off the rip fence) or on the crosscut side (when cutting off the crosscut fence)? See *SS01 Freecut From the Sliding Table* or *SR04 Rip Fence Freecut* for details of the correct alignment and links to the adjustments.

Any other questions?

Please feel free to contact the FELDER GROUP service department.

17.Links

Linked Websites

www.hammerusa.com

www.felderusa.com

www.format-4usa.com

www.felder-group.com

Latest Hammer developments: http://docs.felder-it.info/hammer_report_usa.pdf

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HAMMER USA WEST
1851 Enterprise Blvd.
W. Sacramento, CA 95691
info@hammerusa.com
http://www.hammerusa.com
Toll-free: 800-700-0071
Tel. 916-375-3190
Fax: 916-375-3199