



LOW ANGLE JACK PLANE

Owner's Manual

Record the invoice number and date of purchase in your manual for future reference.

Invoice Number:

Date of Purchase:

Low Angle Jack Plane Specifications: MTC-49421

Sole length	353mm
Solo Width	63mm
Weight	2.5kg
Blade Bed Angle	12°
Blade Steel	M2 HSS
Blade Width	51mm
Blade Thickness	3.5mm
Included Blade	25° Bevel Angle

Additional Blades

Product Code	Bevel Angle	Effective Cutting Angle
MTC-49506	25°	37°
MTC-49513	38°	50°
MTC-49520	50°	62°

CONTENTS

Introduction.....	4
Melbourne Tool Company.....	4
Section 1: Safety.....	6
General Safety Rules.....	6
Section 2: Component Diagram.....	7
Section 3: Operation.....	8
First Use.....	8
Sharpening Blade.....	8
Setting the Blade.....	9
Mouth Adjustment.....	10
Bevel Angles & Grain Direction	11
User Guide	13
Section 4: Maintenance.....	14
Section 5: Troubleshooting.....	15
Ensure the blade is sharp.....	15
Tear-out.....	15
The plane leaves tracks on a board's surface.....	15
The plane is hard to push.....	15
Section 6: Warranty.....	16
Melbourne Tool Company Warranty Statement.....	16
Disclaimer.....	17
Manual Accuracy	17
Technical Support.....	17

INTRODUCTION

Melbourne Tool Company

The most human thing you can do is make things. And there is no more natural way to-do this than work with wood. Yet wood working is not without its challenges, it takes focus and discipline to learn the craft. Good makers stick at it and work hard because nothing else really matters.

Woodworking also requires great tools. Tools that are genuine, accurate and accessible. Knowing this led to the creation of the Melbourne Tool Company. Designed and developed in Melbourne Australia, for all you passionate woodworkers out there.

Low-Angle Jack Plane

Your MTC Low Angle Jack Plane is one of the most versatile tools you can have on your bench. The three blade types available makes switching between shooting end grain through to smoothing figured timbers a breeze. The shaped timber handles and easy blade adjustment will make it hard for you to put this plane down.

Welcome to the MTC family.



SECTION 1: SAFETY

General Safety Rules

For your own safety, please read and understand this instruction manual before installing and operating the tool.

Owner's Manual:

Read and understand this owner's manual before using the tool

Handle With Care:

Hand tools include sharp blades that will cause serious injury if handled improperly. Dropping the tool will likely cause damage to the tool and anything it lands on, including but not limited to your toes.

Keep the Tool Sharp:

A blunt tool will require excessive force to be used, which greatly increases the chance of injury.

Awkward Positions:

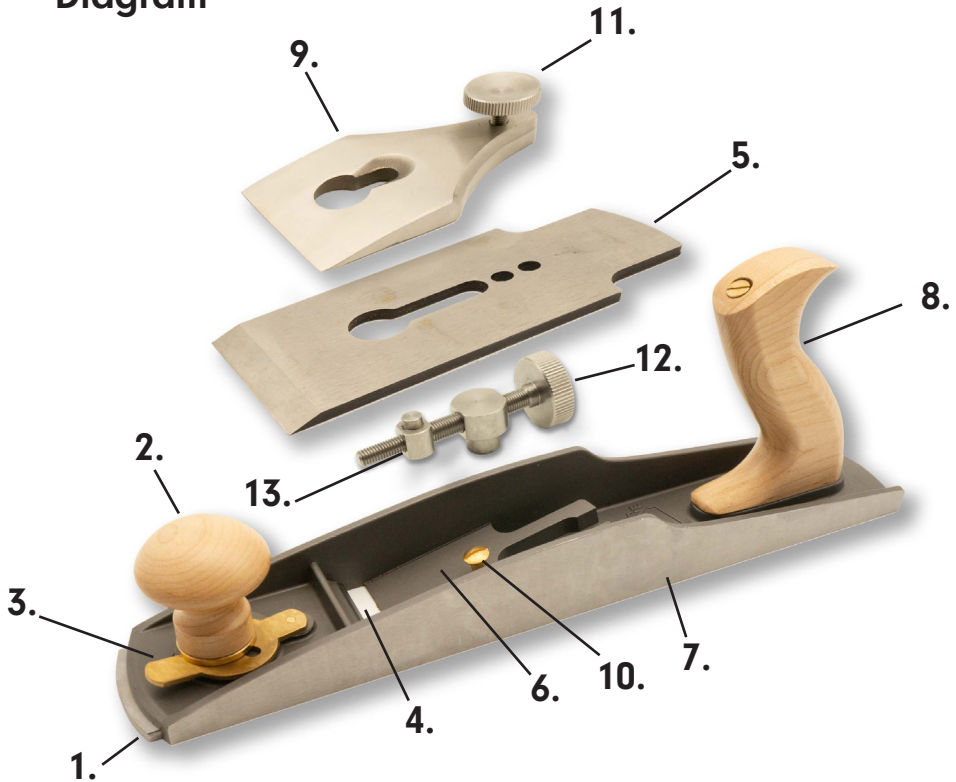
Keep proper footing and balance at all times when using the tool. Arrange the workpiece so that you can bring the tool to the work in a comfortable manner.

Experiencing Difficulties?

If at any time you experience difficulties in performing the intended operation, stop using the tool and consult this owner's manual. For further technical support, please contact **support@melbournetool.com** or the retailer from which you purchased the tool.

SECTION 2: COMPONENT DIAGRAM

Diagram



1. Toe
2. Front Handle
3. Mouth Adjustment Lever
4. Mouth
5. Blade
6. Blade Bed
7. Sole

8. Rear Handle
9. Lever Cap
10. Lever Cap Screw
11. Lever Cap Thumb Screw
12. Depth & Lateral Adjustment Wheel
13. Adjuster Pin

SECTION 3: OPERATION

First Use

Your plane ships with a coating of rust-inhibiting oil to ensure it arrives to you in good condition, but this must be removed prior to use.

Disassemble the plane by loosening the lever cap thumbscrew and removing the lever cap, blade, and adjuster assembly, taking care with the sharp edge of the blade.

Unscrew the Front Handle completely, and remove the Toe and Mouth Adjuster.

Using a clean rag, wipe all components to remove all but the lightest coating of oil.

The blade is ground to the correct angle but will require sharpening before use. The back of the blade may also benefit from final flattening. Reassemble the plane, noting the correct orientation of the blade (bevel facing up) and taking care not to damage the edge.

Do not over-tighten the lever cap thumbscrew – it only needs a quarter-turn or so once the slack is taken out.

Sharpening the Blade

Periodically check the condition of the blade and sharpen as required. A sharp blade is the single biggest factor in enjoying the use of your plane, and the quality of the surface it produces.

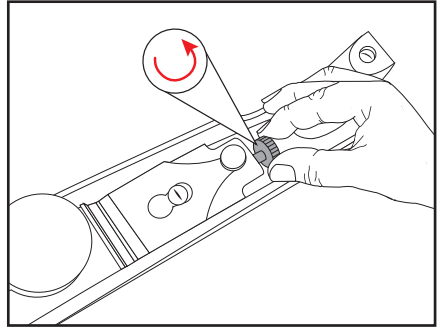
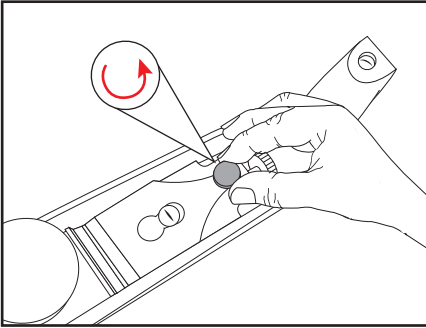
When replacing the blade, check the bed is free from wood shavings and any build-up of wax or oil.

Setting the blade

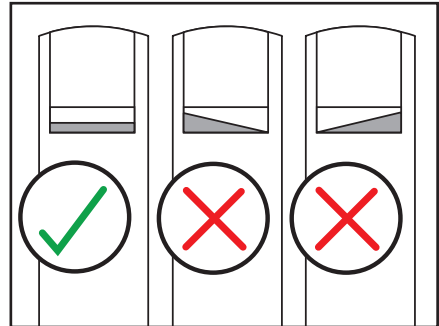
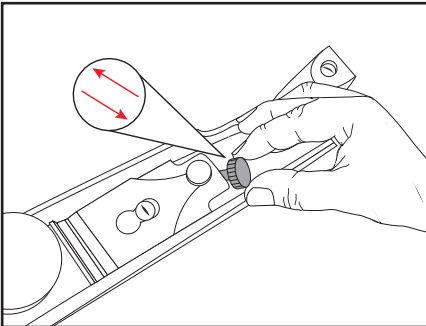
The Depth & Lateral Adjustment Wheel controls both the projection of the blade below the sole and the lateral angle of the blade.

Turning the wheel clockwise lowers the blade, while turning it anticlockwise retracts it. Pushing the wheel to the left skews the blade to the right, and vice versa.

Depth & Lateral Adjustment



Blade Mouth Adjustment



1. Loosen the lever cap thumbscrew just enough so that adjustments can be made without excessive force.
2. Open the mouth of the plane to avoid advancing the blade into the mouth.
3. Place the plane on a flat timber surface and advance the blade until it just touches the surface.
4. Holding the plane upside-down, check the blade is parallel to the mouth opening.
5. Tighten the lever cap wheel (do not over-tighten) and take a test cut. Repeat the procedure to advance the blade as necessary.

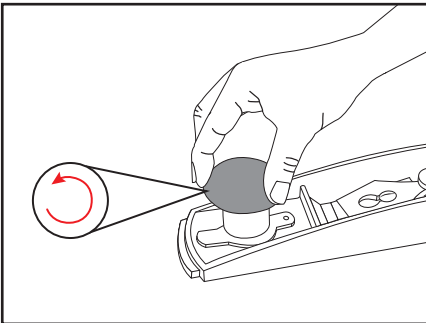
Mouth Adjustment

The Toe pushes down on the wood fibers in front of the blade, preventing the wood from splitting and tearing out ahead of the cut.

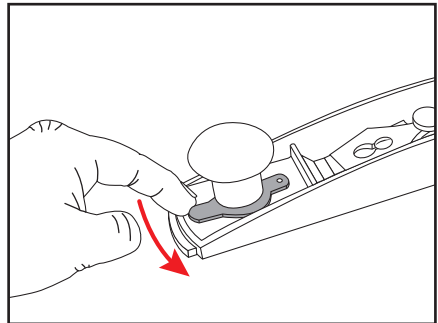
To maximise the effect of the Toe, set it so that the mouth opening is as small as possible while still allowing a shaving to escape. The deeper the cut you are taking, the thicker the shaving will be, and so the wider the mouth will need to be.

To adjust the mouth opening, loosen the front handle and swing the Mouth Adjustment Lever right or left to move the Toe forward or backward. Take care not to move the Toe into the blade. Tighten the front handle to lock the position of the Toe.

Mouth Adjustment



Adjusting the front handle.



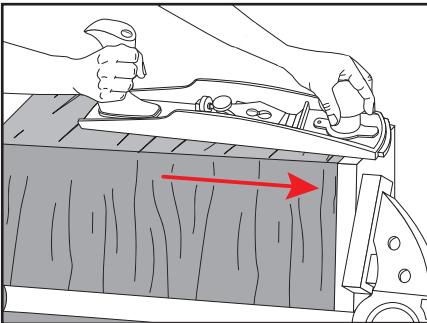
Swinging the mouth lever.

Bevel Angles & Grain Direction

The MTC-49421 has a bed angle of 12° and comes standard with a blade sharpened to 25° , giving a cutting angle of 37° . This angle is well suited for end-grain work and jointing tasks in softwood and some hardwoods where it is possible to plane with the grain.

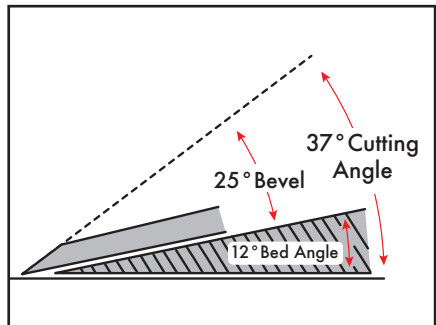
When cutting end grain, the plane should be set for a very light cut. Beware of 'break-out' on the rear edge of the workpiece, where the edge grain breaks away as the blade exits the cut. You can prevent this by clamping a piece of scrap to the rear edge to support the fibers, or by stopping the cut before the end of the board and beginning a new cut from the opposite direction.

End Grain



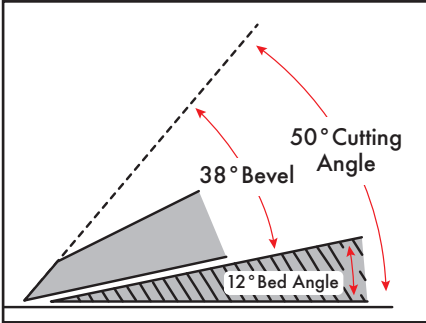
Planing end grain with the 25° blade

25° Bevel Angle



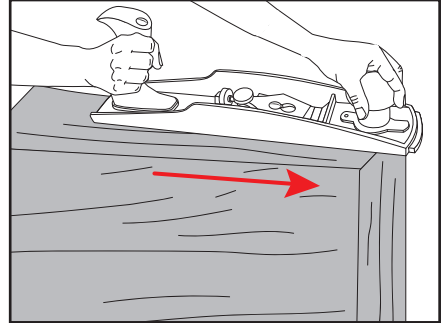
Smoothing jobs are often better handled with a higher cutting angle. The 38° blade gives an overall cutting angle of 50°, an excellent general-purpose smoothing angle. The 38° blade is also ideal when traversing (planing panels across the grain).

38° Bevel Angle



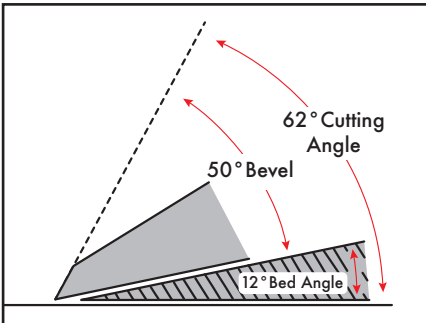
Smoothing using the 38° blade

Planing with grain

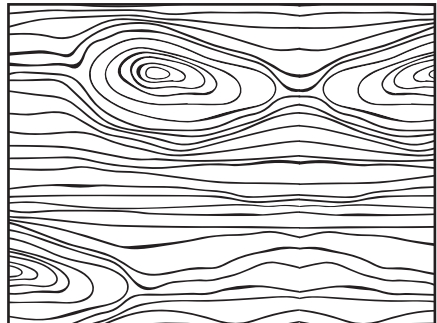


Timbers with birdseye, interlocked grain, fiddleback or other kinds of cranky grain will be more easily smoothed with a 50° blade, yielding an overall cutting angle of 62°.

50° Bevel Angle



Figured grain



Planing figured timber using the 50° blade

While you can change the bevel angle of a single blade, this is very labour-intensive, especially when going from a higher to a lower angle. Additional blades are available from Melbourne Tool Company that come pre-ground to the angles mentioned above. Having multiple blades that can be swapped out allows the user to change cutting angle quickly and will make the MTC-49421 a very versatile tool.

User Guide

Angle	Primary Purpose	Product Code
25°	End grain	MTC-49506
38°	Bevel smoothing	MTC-49513
50°	Smoothing figured timber	MTC-49520

SECTION 4:

MAINTENANCE

Maintenance

- After each use, disassemble the plane and clean off accumulated dirt, grease, resin and rust, especially from the threads and blade bed. An old toothbrush is ideal for this.
- If the plane is stored in damp or humid conditions, or when overnight temperatures drop significantly, the plane should be stored wrapped in cloth or in a plane sack.
- A light layer of paste wax with rust inhibiting ingredients is ideal for protecting the raw metal parts of the plane. Alternatively, a light machine oil can be applied. In either case ensure that any excess is removed, leaving only a very light coating on the tool.
- It is a good idea to also wipe off finger marks after use to minimise the chance of surface rust.

SECTION 5: TROUBLESHOOTING

Ensure the blade is sharp

The first step of any troubleshooting is to ensure that blade is sharp. If sharpening the blade does not resolve the issue, please see below for further suggestions.

Tear-out

Tear-out occurs when the wood splits ahead of the blade. The blade then acts as a wedge and removes chunks rather than shavings.

There are three main causes of tear-out:

1. The mouth opening is too large. Adjust the mouth to be as tight as possible whilst allowing the evacuation of the shaving.
2. The grain direction is incorrect. Ensure that the plane is used with the grain.
3. The cutting angle is too acute. Try a blade with a higher bevel angle.

The plane leaves tracks on a board's surface.

This usually occurs when the blade isn't level, or there's a nick in the blade.

- Align cutting edge of blade with mouth opening using lateral adjustment lever
- Check blade for damage and sharpen to remove any nicks.

The plane is hard to push

Retract the blade slightly to take a lighter cut.

- Retract blade to take a lighter cut
- Lubricate the sole with light oil or an old candle
- Note that the higher angle 50° blade will require greater pushing force than the lower angle 25° blade.

Section 6:

WARRANTY & SUPPORT

Melbourne Tool Company Warranty Statement

The metal parts of this Plane carry a Lifetime Warranty against manufacturing defects. The warranty does not cover modifications, willful misuse, accidental damage, or damage arising from the owner's failure to reasonably maintain the product.

Non-metal parts carry a two-year warranty against defects. The warranty does not cover modifications, willful misuse, accidental damage, or damage arising from the owner's failure to reasonably maintain the product.

If your Melbourne Tool Company product has a warrant-able fault, please contact the retailer that it was purchased from.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Disclaimer

Customers should ensure that they take all reasonable safety precautions when operating MTC products. MTC will not be held liable to you in respect of any personal injury (including without limitation serious injury or death) that you may suffer or sustain directly or indirectly as a result of the use of products sold by us. Nor will we be liable to you in respect of any other losses arising as a result of any such personal injury.

Nothing in this disclaimer shall: limit or exclude our liability for death or personal injury resulting from negligence; limit or exclude our liability for fraud or fraudulent misrepresentation; limit any of our liabilities in any way that is not permitted under applicable law; or exclude any of our liabilities that may not be excluded under applicable law.


Manual Accuracy

We have made every effort to be exact with the specifications, instructions, drawings, and photographs in this manual. Our policy of continuous improvement can sometimes mean that sometimes the machine you receive is slightly different to that shown in the manual.

If you find this to be the case, and the difference between the manual and the product leaves you confused or unsure about something, check the retailer's website for an updated version. Alternatively, you can contact us directly at support@melbournetool.com

Technical Support

If you have a question about your MTC product that isn't covered in this manual, please email us directly at support@melbournetool.com



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