

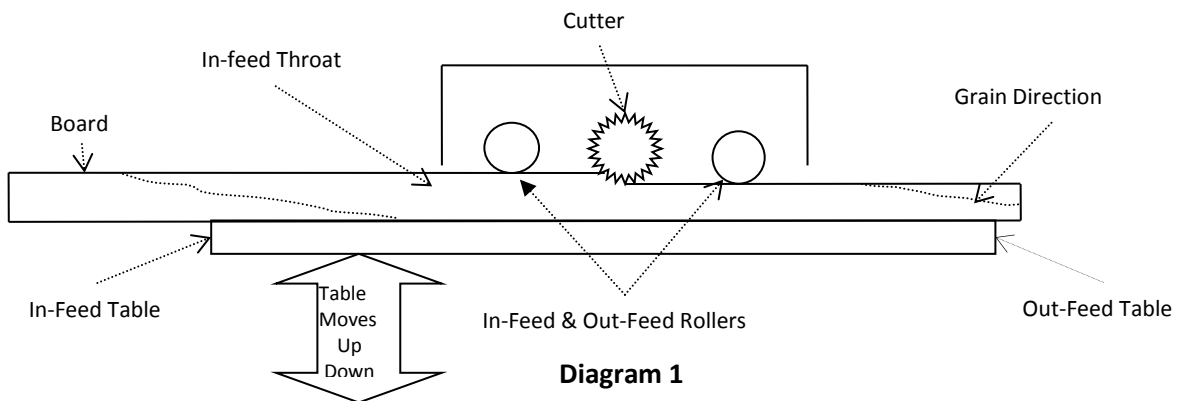
## 20 and 15 inch Thicknessers Safety and Operation SP07

The following must be read in conjunction with SP01 General Workshop Safety Rules.

A thicknesser takes an irregular piece of wood, usually a long board or glued up panel and levels it to a thickness set by the operator. It makes an irregular board a constant thickness but is ineffective in straightening it. In order to achieve a board that is flat and of uniform thickness along its length, it is necessary to start with a board that has at least one perfectly flat reference face. In the Shed, boards 8 inches or less in width can be flattened on the 8 inch Jointer to provide a reference face.

### Principle of Operation

Diagram 1 illustrates the basic operating principle of the thicknesser. In operation, the table is set to the desired height and the machine is switched on. The board is fed into the machine until it makes contact with the in-feed roller, which grips the board and draws it into the machine and past the rotating cutter head. The cutter removes an amount of material on the way through and the out-feed roller pulls the board through and ejects it from the machine at the end of the pass. The depth of cut is determined by the difference between the thickness of the board and the distance between the table and the bottom of the cutter. On the 20 inch Laguna and 15 inch Carba-Tec thicknessers, the latter distance can be read on the scale on the front of each machine.



### General Safety Rules

1. Wear eye and hearing protection. The thicknesser emits noise at a level that can damage your hearing.
2. Never look into the in-feed throat when the thicknesser is running. Wood chips or loose knots can be ejected at high speed.
3. Always stand to the side of the thicknesser when feeding wood into the in-feed throat.
4. Keep hands and fingers well clear of the in-feed throat when the thicknesser is running.
5. Never push a jammed work-piece with your body. The thicknesser can kick the work-piece back at high speed.
6. Never place metal tools and rulers etc. on the in-feed table or on top of the machine. They can accidentally be carried into the machine with consequent damage to the cutters and possibly be ejected at high speed.
7. Never put a work-piece less than 230mm long through the 20inch thicknesser. (200mm long for 15 inch).
8. Never put plywood, MDF or chipboard through the thicknesser.
9. Never try to thin boards across the grain. i.e. where the grain direction is at right angles to the feed-in direction. Thin boards can disintegrate if fed in across the grain.
10. Do not put multiple pieces of different thicknesses through the thicknesser at the same time. The thickest piece will be restrained by the in-feed and out-feed rollers but the thinner pieces will not and can be ejected at high speed.
11. Do not try to thin very thin boards (i.e. less than 6mm thick). The minimum thickness depends on the type of wood but any wood less than 6mm thick is likely to disintegrate inside the machine.

*Continued Pg 2*

Prepared By: Jim Spence Date: 30 November 2019	Approved By: Ian Raper Signature:	Date:	Ver: 03
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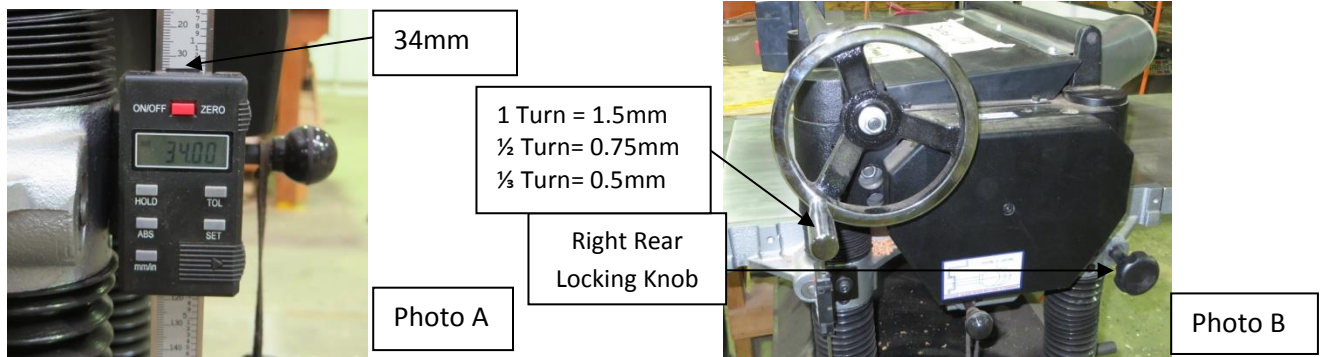
## Hornsby Woodworking Men's Shed

- Do not make cuts deeper than 0.75 mm ( $\frac{1}{2}$  turn of depth adjustment wheel) on softwood and 0.5 mm ( $\frac{1}{3}$  turn of wheel) on hardwood. On all wide boards the depth of cut should be 0.5 mm maximum. Listen to the machine and, if it is slowing down during a pass, reduce the depth of cut on subsequent passes.
- Use a metal detector to check recycled timber for screws and nails before processing on the thicknesser.
- When thinning long boards, seek assistance from another member to remove the boards from the out-feed table as they exit the machine.
- Do not use the thicknesser to remove large amounts of wood. Use a table saw or bandsaw to reduce the size to within a few mm of the desired size. *This avoids subjecting other members to long periods of high noise levels while the machine is running and avoids needless wear on the machine.*

### Planing a Board on the Thicknesser

The following describes the process of planing a board to a desired thickness on the 20 inch Laguna thicknesser. (The process is essentially the same on the 15 inch thicknesser):

- Use the plastic ruler or vernier caliper provided near the machine to measure the thickness of the board at a number of places along its length and mentally record the highest reading Xmm.
- Slacken the front and rear table locking knobs. The right hand side rear locking knob is shown in Photo B and the left hand locking knob is diagonally opposite it on the left hand side near the front of the machine.
- Adopt a crouching position in front of the thicknesser and while observing the measurement scale (See Photo A) on the front of the machine, rotate the table height adjustment wheel (see Photo B) to set the reading on the scale to Xmm by aligning the black bar at the top of the digital readout case with Xmm on the scale. (e.g. 34mm as shown in Photo A) *Note: It is important to view the scale square on. Viewing the scale at an angle from above causes the true setting to be less than that observed due to parallax error. Do not rely on the digital readout to set the depth unless you are sure it has just been calibrated.*



- Tighten the front and rear table locking knobs to lock in the table height. Do not overtighten.
- Check the board's grain direction and, if one face has been previously flattened, prepare to lay that face on the thicknesser table.
- Switch the thicknesser ON, lay the board flat on the in-feed table with the grain direction running down hill as shown in Diagram 1.
- Push the board into the in-feed throat until it is grabbed by the in-feed roller which will now pull it through the machine. Remove hands from the vicinity of the in-feed throat. *Note: If the thickness measurement made in 1 above was accurate, no wood will be removed on the first pass but roller marks will be present on the top face of the board. This strategy is intentional to avoid stalling on the first pass.*
- Repeat 2 to 6, switching board faces if desired after the top face is planed along its length until the desired thickness is achieved, removing no more wood on each pass than the amounts shown in General Rule 12 above.
- If, during a pass, the thicknesser stalls, switch it off immediately, lower the table, re-measure the board thickness and reset the table height to remove 0.5 mm maximum.

If wood chips are accumulating on the in-feed and out-feed tables, they indicate that the dust extraction system was not operating correctly. Stop the machine, disconnect its power lead, remove the dust collection pipe, clean out the internal cavity behind the cutters and check the operation of the dust extractor.