

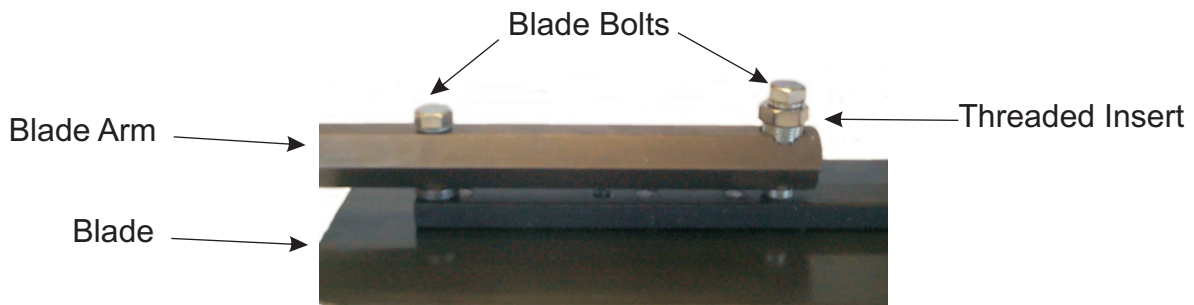


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TROWELLING MACHINES BLADE ADJUSTMENT

Master Finish and Bartell trowelling machines have a blade level adjustment incorporated into the outside bolt hole on the blade arm. This adjustment is a threaded insert in the blade arm, the blade bolt goes through the middle of the insert. (pic 1)



pic 1

Do not turn the threaded insert when you put new blades onto the trowelling machine if you do you will put the machine out of balance, these inserts are used to adjust the height of the outside of the trowelling machine's blades. This allows you to keep all blades level on the same plane. There are many reasons why adjustment may be necessary, such as, a slightly bent blade arm or wear between the blade arm and the base assembly or the threaded insert was turned when new blades were put onto the machine.

One symptom of misaligned blades is uneven wear along the blade's edge, ideally the blade will wear evenly but if either the inside or outside wears more adjustment will be necessary. (pic 2)



Excessive wear on
outside of blade



Correct blade wear



Excessive wear on
inside of blade

pic 2

Another symptom can be the handle bar moving up & down as the blades rotate (pic 3). A misaligned arm will either lift or drop the handle bar as it comes around, the machine will feel like it is bouncing. Note: if this is severe it may indicate a bent arm that needs repairing or replacing.

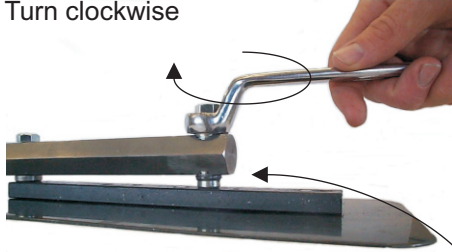


pic 3

HOW IT WORKS

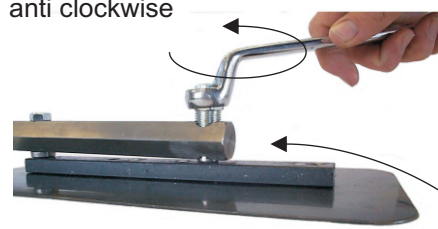
The bottom of the threaded insert is what the blade is bolted up to. If you turn the threaded insert clockwise you screw the threaded insert through the blade arm and increase the distance between the blade arm and the blade and therefore lower the outside of the blade. Conversely you will raise the outside of the blade if you turn the threaded insert anti clockwise and reduce the distance between the blade arm and blade.

Turn clockwise



Clockwise increases distance between blade arm and blade.

Turn anti clockwise



Anti Clockwise decreases distance between blade arm and blade.

ADJUSTING BLADES BECAUSE OF EXCESS WEAR (pic 2 above)

1. Number the blade arms 1 to 4. Decide if you need to raise or lower the outside of the blade and note down what adjustment needs to be made to each blade.
2. Turn finishing blades around to new edge or replace with new blades if both edges are worn.
3. Loosen outside blade bolt & turn threaded insert in desired direction a $\frac{1}{4}$ turn (remember a little goes a long way). Tighten blade bolt.
4. Run machine on hard concrete using water as a lubricant for 30 seconds with blades slightly tilted. Turn machine off and tilt forward onto safety ring edge (pic 4) and look at the underneath of the blades. You will be able to see where the blade has been in contact with the concrete, obviously the shined up strip should be all the way along the edge in a uniformed strip (pic 5), if not ie more inside or outside repeat from step 3 until correct.

Tilted forward on safety ring



pic 4

Shined up strip showing uniformed wear.



pic 5

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ADJUSTING BLADES BECAUSE OF HANDLE MOVEMENT

1. Turn finishing blades around to new edge or replace with new blades if both edges are worn.
2. Spray a spot of dazzle or tie a bright piece of cloth on to a blade arm ("the marker"), see picture below.
3. Run the machine on hard concrete using water as a lubricant. Decide if you need to raise or lower the outside of the blade, if the handle lifts you need to turn the threaded insert anti clockwise to decrease the distance between the blade arm and the blade conversely if the handle drops you need to turn the threaded insert clockwise to increase the distance between the blade arm and the blade.
4. Alter speed of the machine so you are able to see "the marker" and still feel the handle bar moving. Note where "the marker" is when the handle bar moves, is "the marker" inline with the handle bar stem, 1 before, 1 after or opposite the handle bar stem. The blade that is inline with the handle bar stem is the blade that needs adjusting, from the above you know how far from "the marker" the offending blade is.
5. Loosen outside blade bolt & turn threaded insert in desired direction a ¼ turn (remember a little goes a long way). Tighten blade bolt.
6. Repeat from step 3 until handle bar is steady. More than 1 blade may need adjusting.



Cloth tied to blade arm as marker.

The handle bar moved up when "the marker" was in this position, this is the blade we need to adjust.

We need to turn the threaded insert anti clockwise to raise the outside of the blade. This will raise the blade in relation to the others and stop it from lifting the machine as it comes around.

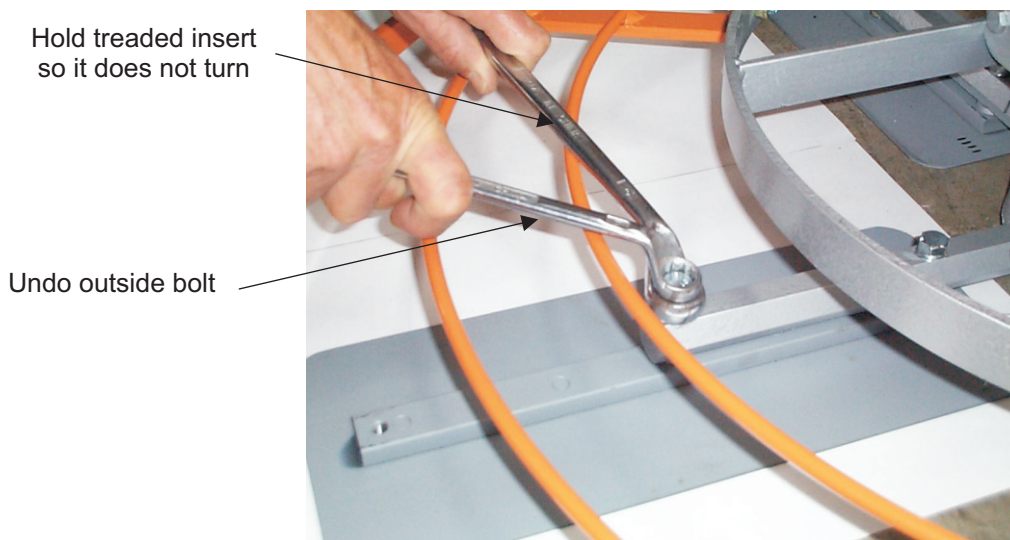
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Changing Blades

It is recommended that blades are not removed from the trowelling machine unless it is to replace them. If for some reason you must remove the blades number each one so they go back onto the same blade arm. The blades have through wear levelled themselves exactly, if you alter the order of the blades you put the machine out. It is also suggested that under normal wear conditions you replace all 4 blades not just 1 or 2. If one or more blades has worn unusually refer to the “Blade Adjustment” section.

CHANGING BLADES

1. Use a ring spanner and remove inside bolt.
2. Use a ring spanner to hold the threaded insert so it does not turn
3. Undo the outside blade bolt
4. Either turn around finishing blades to new edge or fit new blades into place.
5. Replace inside bolt and partially tighten.
6. Replace outside bolt and partially tighten making sure the threaded insert does not turn.
7. Tighten both bolts again making sure the threaded insert does not turn.



If you find the threaded insert has been turned you will need to refer to the “Blade Adjustment” section and reset the blade heights.

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