

Clutch Adjustment Procedure for Barranca Diamond HP18, HP24 and HP30 Slab Saws

The clutch system on HP Slab Saw is comprised of three main components: a bronze clutch shoe (fig. 1) that is raised and lowered by a lever activated cam (not shown), the feed screw (fig. 2) that drives the vise carriage when the clutch assembly is engaged, and the brass pressure block (fig. 3) that applies downward pressure against the feed screw to keep it engaged with the clutch block.



Fig. 1: Clutch block.



Fig. 2: Clutch block & feed screw.

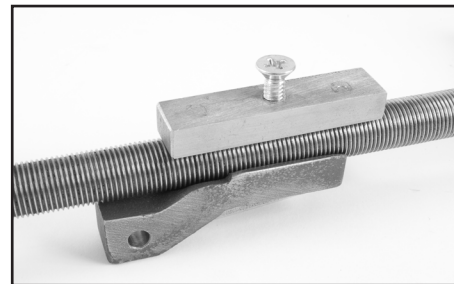


Fig. 3: Clutch assembly with Pressure block.

Over time, the brass pressure block can wear due to contact with the rotating feed screw. This can cause the clutch block to not properly engage the feed screw. Should the clutch block not fully engage the carriage will not travel properly and the position of the pressure block will need to be adjusted. To access the pressure block adjustments use the cross feed handle to move the center slot in the vise assembly (fig. 4) so that the clutch block adjustment screws are visible through the slot (fig. 5). In Figure 6 the vise has been removed from the carriage assembly to clearly show the clutch block adjustment screws.

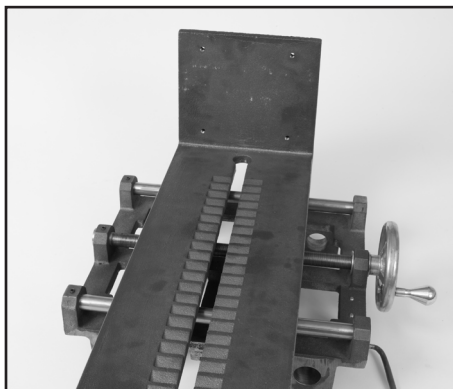


Fig 4. Vise assembly.

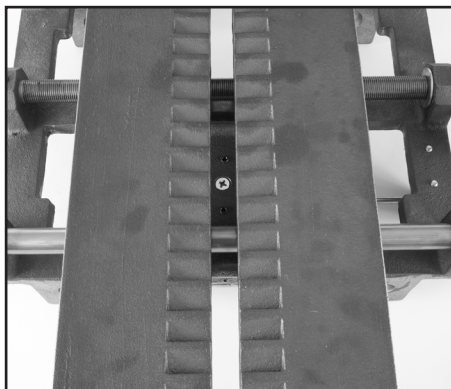


Fig 5. Vise assembly centered over clutch block adjustment screws.

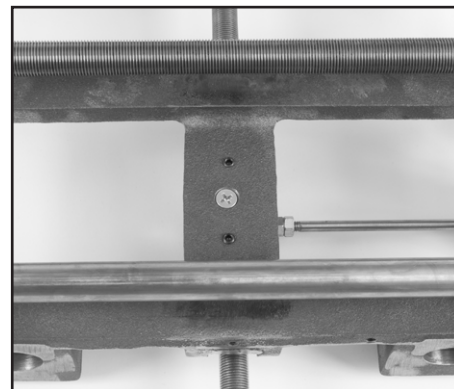


Fig 6. Clutch block adjustment screws.

Above the pressure block in the carriage, there are two allen head set screws that are used to adjust the height of the pressure block. There is also a flat head machine screw that locks the pressure block in place (fig. 6).

To adjust the pressure block, first, loosen the flat head machine screw that locks the pressure block (fig. 7). Then use an allen wrench (fig. 8) to rotate each of the two set screws one-quarter turn (fig. 9) in a clock-wise direction..

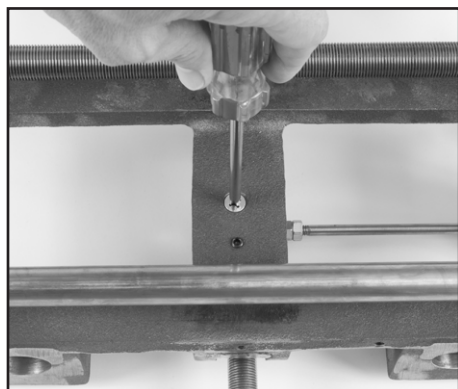


Fig. 7: Pressure Block Locking Screw

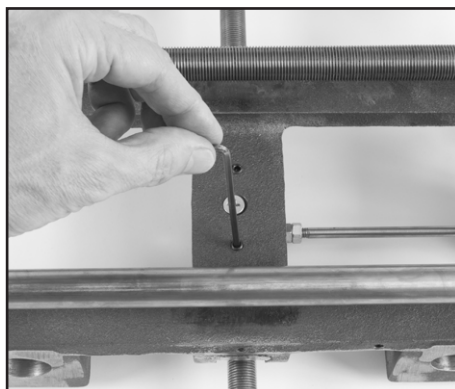


Fig. 8: Allen head wrench in front set screw

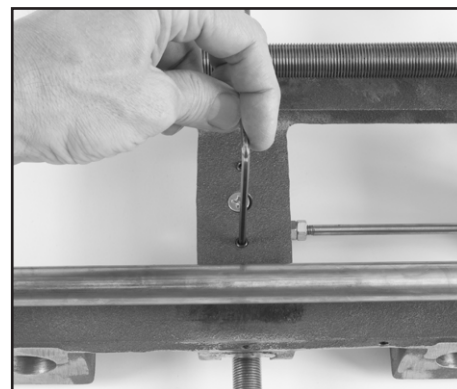


Fig. 9: Allen head set screw rotated 1/4 turn

Retighten flat head screw after adjusting the two set screws. Re-engage the clutch and restart saw to check if feed is working properly. If the carriage feed is still not working properly, repeat the adjustment procedure and restart saw to check feed.

Adjustment of the clutch and pressure block must result in an even, flat position against the feed screw when clutch block is engaged (fig. 10). Uneven adjustment of set screws will put pressure on one end of clutch (fig. 11) causing premature part failure and/or binding of the feed screw.

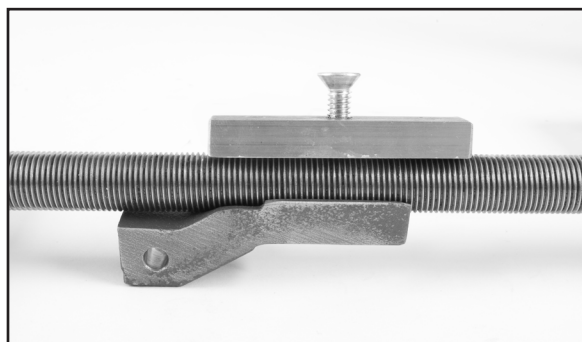


Fig. 10: Pressure block flat against feed screw.



Fig. 11: Pressure block improperly adjusted.