ZX5 Alignment Check

How to check and correct the alignment of a ZX5 machine

Difficulty **Very Hard** | Duration **2 day(s)**

Contents

Introduction

The ZX5 machine can be tricky to align as there are many adjustments designed into the table to offset manufacturing tolerances. This step by step guide follows the correct protocol to ensure the starting point and sequence of alignment is correct

Step 1 - Ensure alignment of module A, B and C on machining centre side

- Check backfence roller alignment to infeed
- Check roller heights to infeed and outfeed

Step 2 - Both Linear Beam check - straightness and level

- Straightness of MH side with laser level
- Levelness of MH side with carriage plate. Use the carriage plate to check X and Y levelling
- Straightness of saw side with laser level
- Levelness of saw side with carriage plate
- Parallelism of hepco beams to each other with tape rule

Adjust to get this correct - adjust frames on floor if not parallel

Step 3 - MH Outfeed Roller bed height adjustment to gripper base

- Fixed distance 2-3mm
- Has to be clear of transfer beams in the up position

Step 4 - Saw Roller bed height adjustment to gripper base

- Fixed distance 2-3mm
- Has to be clear of transfer beams in the up position

Step 5 - Popup Alignment MH side

- Alignment of the popup ins on crank C, D, E to hepco
- Using Hepco as datum, ensure they are parallel

Step 6 - Grip jig alignment on MH side

Check with beam at the HOME position (outside machine) and beam in the OUT position (inside machine)
Check pressure - as low as possible
Check gripper gap so the switch is set up correctly ZX5 Datum and Grip Pin Setup

Step 7 - Popup Alignment / Overlap Saw side

Use the linear rail as the datum

Step 8 - Set backfence parallel to hepco and overlap with popup correct

Step 9 - Grip jig alignment to backfence

Adjusting Gripper Y position to suit Jig
Grip pressure as low as possible
Check gripper gap so the switch is set up correctly ZX5 Datum and Grip Pin Setup
Set first and last backfence, then use a string

> ...When setting long backfences be careful not to distort them when fixing the two anchoring points

Step 10 - Channel Bar parallel with saw infeed backfences

Misses gripper by 1mm - should not touch
Parallel all the way down
Channel bar should be just over 1 bar - able to push profile to backfence

> ...Too much pressure will cause the fence to distort

Step 11 - Saw Module Fence Alignment

- Backfences aligned
- Front fences aligned
- Back and front parallel

Step 12 - Infeed to saw module alignment

> ...Moving the saw is a major step, so double check your steps if this becomes necessary

- Saw module level
- Eject beds level and aligned
- Backfence 0-1mm in front of saw infeed backfences
- Beds 0-1mm above infeed rollers

Step 13 - Outfeed push bar alignment

- Pusher bar is behind saw rear rollers
- Pusher bar is straight