

Homag Kfl Edgebander Trimmer Blade Alignment Procedure

1.0 Maintenance Objective & Frequency

The objective of this procedure is to calibrate the top and bottom trimmer blades on the Homag Kfl edgebander to ensure parallel alignment with the panel surface and correct cutting depth. Proper alignment prevents edge chipping, reduces glue line visibility, and extends blade life. This PM is to be performed every 200 operating hours or whenever edge quality degrades.

2.0 Lockout/Tagout (LOTO) & Safety

- Electrical Isolation: Disconnect main power at the machine disconnect switch and apply personal lock and tag.
- Pneumatic Isolation: Close the compressed air supply valve and bleed residual pressure from the trimmer unit using the manual bleed valve.
- Mechanical Lockout: Ensure the trimmer motor brake is engaged (if equipped) and the blade arbor is locked before any adjustment.
- PPE: Wear cut-resistant gloves, safety glasses with side shields, and hearing protection.

3.0 Required Tools, Parts & Lubricants

- 10mm hex key (Allen wrench)
- 13mm combination wrench
- 0.001 inch resolution dial indicator with magnetic base
- Precision straight edge (600mm length)
- Feeler gauge set (0.05mm to 1.0mm)
- Torque wrench (range 10-50 Nm) with 10mm hex bit
- Clean lint-free cloths
- ISO 32 hydraulic oil (for lubricating adjustment screws)

4.0 Step-by-Step Maintenance Procedure

1. Perform LOTO as per Section 2.0. Verify zero energy state by attempting to start the trimmer motor from the control panel.
2. Open the trimmer unit access door. Remove the chip extraction hose and set aside.
3. Using the 10mm hex key, loosen the four M8 cap screws securing the top trimmer blade assembly to the mounting bracket. Do not remove completely.
4. Place the precision straight edge against the panel support table and the trimmer blade tip. Adjust the blade height so the tip is 0.5mm above the panel surface. Tighten the two front cap screws to 20 Nm.

5. Mount the dial indicator on the magnetic base and attach it to the machine frame. Position the indicator plunger perpendicular to the blade face, 10mm from the tip. Zero the dial.
6. Rotate the blade arbor manually (using the arbor lock if available) and record the runout. Maximum allowable runout is 0.05mm. If exceeded, inspect the blade for damage or replace.
7. Using the 13mm wrench, loosen the lock nut on the blade tilt adjustment screw. Turn the screw to achieve a blade angle of 2 degrees relative to the panel surface (measured with a protractor or angle gauge). Retighten the lock nut to 25 Nm.
8. Repeat steps 3 through 7 for the bottom trimmer blade assembly. Note that the bottom blade must be aligned to the panel underside with the same 0.5mm protrusion and 2-degree tilt.
9. Tighten all remaining cap screws on both assemblies to 30 Nm using the torque wrench.
10. Reinstall the chip extraction hose and close the access door. Remove all tools and debris from the work area.

5.0 Verification & Return to Service

1. Remove LOTO devices and restore power to the machine. Reopen the compressed air supply valve.
2. Run a test cycle on a scrap panel of the same thickness as production material. Inspect the trimmed edge for chipping, fuzz, or uneven cut.
3. Measure the trimmed edge width using a caliper. Acceptable tolerance is $\pm 0.2\text{mm}$ from the programmed value.
4. If edge quality is acceptable, sign off on the PM work order in ServiceGrid. If not, repeat alignment steps or replace blades.

Regulatory Disclaimer: This document is a generic maintenance template provided for educational and informational purposes only. It does not constitute professional engineering or reliability advice. The end-user assumes all liability for validating all step sequences, torque specs, and LOTO protocols against specific machinery OEM manuals before deployment to a live production floor.