
Sliding Table Saw – Sliding Table Bearings Lubrication PM

1.0 Maintenance Objective & Frequency

The objective of this procedure is to lubricate the sliding table bearings on a sliding table saw to ensure smooth, friction-free travel of the sliding table. Proper lubrication prevents premature bearing wear, reduces the risk of scoring on the guide rails, and maintains the accuracy of rip cuts and crosscuts. This PM is to be performed every 500 operating hours or quarterly, whichever comes first.

2.0 Lockout/Tagout (LOTO) & Safety

- **Electrical Isolation:** Disconnect the main power supply to the saw and apply a personal lockout/tagout device on the disconnect switch.
- **Pneumatic Isolation:** If the saw has a pneumatic brake or dust collection gate, shut off the compressed air supply and bleed any residual pressure from the lines.
- **Mechanical Lockout:** Ensure the saw blade is fully stopped and the arbor is locked. Remove the blade if necessary to access the sliding table bearings.
- **PPE:** Wear safety glasses, cut-resistant gloves, and hearing protection. Use a dust mask if working in a dusty environment.

3.0 Required Tools, Parts & Lubricants

- Lithium-based grease (NLGI #2) – suitable for linear bearing applications (e.g., Mobilux EP 2 or equivalent)
- Grease gun with flexible hose and needle adapter
- Clean lint-free rags
- Small brush (1-inch) for cleaning debris from bearing tracks
- Isopropyl alcohol (99%) and spray bottle for degreasing
- Torque wrench (if bearing retaining bolts need to be checked)
- Flashlight or inspection mirror

4.0 Step-by-Step Maintenance Procedure

1. Perform LOTO as per Section 2.0. Verify zero energy state by attempting to start the saw (it should not power on).
2. Slide the sliding table fully to the left (away from the blade) to expose the bearing carriage and guide rails. Secure the table in this position using a mechanical stop or clamp if available.
3. Using the brush and a rag, remove all sawdust, chips, and debris from the exposed guide rails and bearing surfaces. Pay special attention to the recirculating ball tracks if visible.
4. Spray isopropyl alcohol onto a clean rag and wipe down the guide rails and bearing surfaces to remove any residual grease, oil, or sticky residue. Allow to dry completely (approximately 2 minutes).

5. Inspect the bearing carriage for signs of wear, damage, or flat spots on the balls or rollers. Check for any play or looseness in the bearing assembly. If damage is found, replace the bearing carriage per OEM instructions before proceeding.
6. Attach the needle adapter to the grease gun and fill the gun with NLGI #2 lithium grease. Purge a small amount of grease to ensure no air is in the line.
7. Locate the grease fittings (Zerk fittings) on the bearing carriage. There are typically 2 to 4 fittings per carriage. Wipe each fitting clean with a rag before attaching the grease gun.
8. Apply 2 to 3 pumps of grease to each fitting. Stop immediately if grease begins to purge from the bearing seals or if resistance increases significantly. Over-greasing can damage seals and attract debris.
9. Wipe away any excess grease that has purged from the seals or fittings using a clean rag. Ensure no grease is left on the guide rails where it could attract sawdust.
10. Manually slide the table back and forth through its full range of travel (left to right) at least 10 times to distribute the grease evenly within the bearing races. The motion should feel smooth and consistent with no binding or roughness.
11. If the saw has adjustable bearing preload, check the preload setting per OEM specifications. Typically, this involves tightening or loosening eccentric bolts on the bearing carriage. Use a torque wrench if specified (common torque: 10-15 Nm for M8 bolts).
12. Re-inspect the guide rails for any grease that may have been pushed out during the distribution cycle. Wipe clean if necessary. Remove the mechanical stop and return the table to its home position.

5.0 Verification & Return to Service

1. Remove all LOTO devices and restore power to the saw. Ensure all guards and covers are reinstalled.
2. Perform a dry run: start the saw and let it reach full speed. Slide the table through its full range of travel while the blade is running (but not cutting). Listen for any unusual noises such as grinding, squeaking, or rattling from the bearing area.
3. Make a test cut on a scrap piece of wood (e.g., a 12-inch rip cut). Check the cut quality for smoothness and accuracy. Measure the cut width with a caliper to ensure it matches the blade kerf within 0.005 inches.
4. If the table travel is smooth, no unusual noises are present, and the test cut is accurate, the PM is complete. If any issues are detected, re-inspect the bearings and guide rails for damage or misalignment, and adjust or replace components as necessary.
5. Record the PM completion in ServiceGrid, including the date, operating hours (if tracked), and any observations or parts replaced. Sign off on the work order.

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.