

# Conveyor Belt Intralox Tracking Adjustment And Pin Inspection

## 1.0 Maintenance Objective & Frequency

The objective of this procedure is to correct lateral belt drift (tracking) and inspect the condition of Intralox hinge pins on modular plastic conveyor belts. Proper tracking prevents edge wear, product spillage, and belt jams. Pin inspection identifies wear, cracking, or missing pins that could lead to belt separation. This PM is to be performed every 500 operating hours or quarterly, whichever comes first.

## 2.0 Lockout/Tagout (LOTO) & Safety

- Electrical Isolation: Disconnect main power to the conveyor drive motor and apply a personal lock and tag.
- Pneumatic Isolation: If the conveyor has pneumatic tensioners or diverters, close the shut-off valve and bleed residual air from the lines.
- Mechanical Lockout: Ensure the conveyor belt is fully stopped and cannot be moved by gravity or stored energy. Chock any rollers if necessary.
- Mandatory PPE: Safety glasses, steel-toed boots, cut-resistant gloves, and hearing protection (if operating near other equipment).

## 3.0 Required Tools, Parts & Lubricants

- Intralox belt tracking tool (or a straight edge / machinist's square)
- Feeler gauge set (0.001" to 0.030")
- Torque wrench (0-100 in-lbs / 0-11 Nm)
- 5/16" hex key (Allen wrench) for tracking adjustment bolts
- Intralox replacement hinge pins (size as per belt model)
- Pin insertion tool (or needle-nose pliers with smooth jaws)
- Flashlight or inspection mirror
- Clean lint-free rags and approved degreaser (e.g., Simple Green Industrial)

## 4.0 Step-by-Step Maintenance Procedure

1. Perform LOTO as per Section 2.0. Verify zero energy state by attempting to start the conveyor from the local control station.
2. Visually inspect the entire belt for obvious damage: missing modules, cracked hinges, or debris lodged between modules. Remove any foreign objects with pliers or a scraper.
3. Locate the tracking adjustment mechanism (typically slotted bearing blocks or threaded rods on the tail or head pulley). Loosen the locking nuts on both sides of the adjustment bolts using the 5/16" hex key.
4. Measure the current belt gap (clearance between belt edge and frame) on both sides at the same location along the conveyor. Use a feeler gauge to record the gap. The belt should be centered within  $\pm 1/8"$  (3 mm) of the frame centerline.

5. To correct tracking, turn the adjustment bolts equally on the side where the belt is drifting away. For example, if the belt drifts to the right, tighten the right-side bolt by 1/4 turn and loosen the left-side bolt by 1/4 turn. Do not exceed 1/2 turn per adjustment.
6. After each adjustment, manually rotate the belt by hand (or jog the drive with LOTO removed and re-applied) for at least three full revolutions to allow the belt to settle. Re-measure the gap on both sides. Repeat steps 5-6 until the belt is centered.
7. Once tracking is correct, torque the locking nuts to 45 in-lbs (5 Nm) to secure the adjustment. Do not overtighten, as this can distort the bearing block.
8. Inspect all hinge pins along the belt. Look for pins that are protruding, recessed, cracked, or missing. Use the flashlight and mirror to see the underside of the belt if necessary.
9. Replace any damaged or missing pins: remove the old pin using the pin insertion tool or needle-nose pliers. Insert a new pin of the correct length, ensuring it is flush with the belt edge on both sides. Tap gently with a mallet if needed.
10. Check belt tension: the belt should have approximately 1/2" to 1" (12-25 mm) of slack at the center of the longest unsupported span. Adjust tension using the take-up mechanism if necessary, following the OEM manual.
11. Clean the belt surface and sprockets with a degreaser and rags to remove any oil or debris that could affect tracking or cause slippage.
12. Remove all tools and rags from the conveyor area. Verify that no loose items remain on or near the belt.

## 5.0 Verification & Return to Service

1. Remove LOTO devices and restore power to the conveyor.
2. Run the conveyor at normal operating speed for at least five minutes. Observe the belt tracking: it should remain centered within  $\pm 1/8$ " (3 mm) of the frame centerline without any audible rubbing or squeaking.
3. Load the conveyor with a typical product (or simulate load with a weight) and run for an additional two minutes. Confirm no belt drift or pin dislodgement occurs.
4. If tracking or pin condition is satisfactory, sign off on the PM work order in ServiceGrid. Record the date, technician name, and any notes (e.g., number of pins replaced, final gap measurements).
5. If issues persist, escalate to a senior maintenance technician or contact Intralox technical support for further diagnostics.

**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.