
Trailer Landing Gear Inspection And Gearbox Lubrication

1.0 Objective & Scope

The objective of this procedure is to ensure that all trailer landing gear assemblies are inspected for structural integrity, proper operation, and adequate lubrication to prevent mechanical failure during coupling/uncoupling operations. This SOP applies to all fleet drivers and field technicians responsible for pre-trip inspections and routine maintenance of commercial trailers operating under Canadian DOT regulations.

The Lead Driver or Fleet Technician is responsible for performing this inspection and lubrication task at the start of each shift or prior to any trailer movement. Proper execution reduces the risk of landing gear collapse, gearbox seizure, and costly roadside breakdowns.

2.0 Required Equipment & Tools

- Mobile tablet with SiteQueue application installed for digital inspection logging
- Grease gun with NLGI #2 lithium-based grease cartridge
- SAE 30 or SAE 40 gear oil (for gearbox fill if applicable)
- Adjustable wrench or socket set (for gearbox fill plug)
- Flashlight or headlamp for visual inspection
- Clean rags or shop towels
- Personal protective equipment (PPE): safety glasses, high-visibility vest, steel-toed boots, and work gloves
- Penetrating oil (e.g., WD-40) for stuck fittings
- Torque wrench (if specified by manufacturer for gearbox bolts)

3.0 Site Safety & Hazard Assessment

- Park the trailer on level, stable ground and engage the parking brake before beginning any inspection.
- Chock the trailer wheels on both sides to prevent unintended movement.
- Ensure the tractor is disconnected from the trailer and the landing gear is fully lowered and supporting the trailer weight.
- Wear high-visibility vest and steel-toed boots at all times when working near active yard traffic.
- Use safety glasses to protect against grease splatter or debris during lubrication.
- Be aware of pinch points between the landing gear legs and the trailer frame.
- Do not place any body part under the trailer unless the landing gear is confirmed secure and the trailer is properly supported.

4.0 Step-by-Step Execution Procedure

1. Approach the trailer and visually inspect the landing gear legs for any signs of bending, cracking, or corrosion. Pay close attention to welds and attachment points to the trailer frame.

2. Check the landing gear feet (pads) for excessive wear, damage, or missing bolts. Ensure both feet are flat on the ground and not sunk into soft surfaces.
3. Operate the landing gear crank handle through a full cycle (raise and lower) to verify smooth operation. Listen for grinding, clicking, or binding noises that indicate gearbox wear.
4. Inspect the gearbox housing for cracks, oil leaks, or loose mounting bolts. If any leaks are present, note the severity and report for further maintenance.
5. Locate the grease fittings (Zerk fittings) on the landing gear legs and cross-shaft. Wipe each fitting clean with a rag to prevent forcing dirt into the bearings.
6. Attach the grease gun to each Zerk fitting and pump grease until fresh grease purges from the bearing seals. Wipe away excess grease after each fitting.
7. Remove the gearbox fill plug using an adjustable wrench or socket. Check the oil level; it should be at the bottom of the fill hole. If low, add SAE 30 or SAE 40 gear oil until it just begins to seep out.
8. Reinstall the fill plug securely and wipe any spilled oil from the gearbox exterior.
9. Lubricate the crank handle pivot points and any exposed sliding surfaces with a light coat of grease or penetrating oil.
10. Perform a final operational test: raise and lower the landing gear through two full cycles to ensure smooth, quiet operation and confirm the gearbox is properly lubricated.
11. Document all findings in SiteQueue, including photos of any defects, grease application, and oil level check. Record the trailer unit number, date, and technician name.

5.0 Verification, Sign-off & Reporting

1. Complete the digital inspection checklist in SiteQueue, confirming each step was performed and any defects were noted.
2. If any critical defects (e.g., cracked leg, seized gearbox) are identified, tag the trailer as out of service and notify the Fleet Manager immediately via the SiteQueue alert system.
3. Obtain a supervisor or lead technician sign-off in SiteQueue to close the inspection record. If no defects are found, the record is auto-closed after supervisor review.
4. Upload all supporting photos (landing gear condition, grease fittings, oil level) to the SiteQueue work order for permanent record keeping.
5. File the completed inspection report in the fleet maintenance log for compliance with Transport Canada's National Safety Code (NSC) standards.

Regulatory Disclaimer: This document is a generic site management template provided for educational purposes. The end-user assumes all liability for reviewing, adapting, and validating all field protocols against local site requirements.