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Undercarriage & Track Wear Inspection (Crawler Excavators)

Undercarriage & Track Wear Inspection (Crawler Excavators) interactive checklist. Commentable and export as PDF/Excel. Verify tension, wear & travel motor leaks.

Project:	
Date:	
Filled by:	

Safety and Setup	
1	Park on level ground, lower attachment, apply slew/lock, and chock tracks; shut down and isolate power (LOTO). Acceptance: machine stable, hydraulics de-energized. Evidence: photo of chocks/LOTO tag and operator acknowledgment.
2	Remove mud/rock buildup from undercarriage using scrapers and low-pressure wash. Acceptance: no packed debris exceeding 10 mm at rollers, idlers, or sprocket valleys. Evidence: before/after photos of both track frames.

Track Tension	
3	Drive forward 2–3 m to seat the chain; measure track sag at midspan with a tape. Acceptance: sag within OEM range (typ. 10–30 mm). Evidence: left/right sag in mm with time-stamped photos.
4	Adjust track tension via grease charge/release at the adjuster valve; remeasure sag. Acceptance: final sag within OEM band and equal side-to-side ±5 mm. Evidence: before/after readings and grease strokes logged.
5	Inspect recoil spring/adjuster housing for cracks, bent rods, or grease/oil seepage. Acceptance: no cracks, no wetness at seals, rod straightness visually true. Evidence: close-up photos of housing and seals.

Rollers and Idlers	
6	Rotate bottom rollers by hand using a pry bar; feel for roughness. Acceptance: smooth rotation, no radial play > 1.0 mm. Evidence: video clip or dial indicator reading.
7	Measure bottom roller tread diameter with calipers or diameter tape. Acceptance: ≥ 90% of new diameter (per OEM chart). Evidence: mm reading and percent wear recorded with photo.
8	Check carrier rollers for seal leakage and wobble using a lever and gauge. Acceptance: seals dry; lateral wobble ≤ 0.5 mm. Evidence: photos and measured wobble noted.
9	Inspect front idler wear surfaces and flanges; measure flange thickness with calipers. Acceptance: thickness ≥ OEM minimum; even wear; no cracks. Evidence: thickness in mm and close-ups.

Sprockets	
10	Visually assess sprocket teeth for hooking or sharp points; compare to template if available. Acceptance: tooth wear ≤ 50%; rounded tips; no breakage. Evidence: side-on photos of several teeth.
11	Measure tooth pitch over five teeth with a steel rule; calculate elongation. Acceptance: pitch growth ≤ 2% from new spec. Evidence: span in mm, calculation sheet, and image of measurement.

Track Shoes and Links	
12	Torque-check track shoe bolts with a calibrated wrench. Acceptance: no missing bolts; torque meets OEM value; no elongated holes. Evidence: torque readings, replaced bolt log, and photos.
13	Measure grouser height with a depth gauge at three locations per shoe. Acceptance: ≥ 50% of original height; even wear pattern. Evidence: mm readings and shoe close-ups.
14	Inspect link rails and bushings for flats and cracks; measure bushing flat length. Acceptance: bushing flat ≤ 2 mm and no cracks. Evidence: measurements, macro photos of suspect areas.
15	Measure chain pitch growth across multiple links with a tape; average the result. Acceptance: pitch growth ≤ 0.5% from new. Evidence: span in mm, link count, and calculation.

Debris and Cleanliness	
16	Confirm no debris packed in sprocket valleys, between rollers, or under rock guards. Acceptance: visible clearances; no compacted material > 10 mm. Evidence: photos along full track length.
17	Check track frame guards, rock guards, and guides for securement and alignment. Acceptance: all bolts present; deformation ≤ 5 mm; guides centered. Evidence: photos and note any parts ordered.

Wear Measurements	
18	Calculate wear percentages for rollers, idlers, sprockets, and shoes using OEM charts. Acceptance: components ≤ 75% wear for continued service; plan replacements otherwise. Evidence: annotated chart photo and entries.
19	Ultrasonic thickness-check roller shells if pitting/rust observed. Acceptance: wall thickness ≥ OEM minimum in mm. Evidence: UT readings, instrument ID, and calibration date.
20	Verify track frame alignment using a taut string or laser over 1 m. Acceptance: misalignment ≤ 3 mm over 1 m. Evidence: measurement photos and notes on cause/corrective action.

Travel Motors and Final Drives	
21	Inspect travel motor case drains, hoses, and fittings for leaks or abrasion. Acceptance: surfaces dry; no drips or wetness. Evidence: close-up photos and leak map if found.
22	Check final drive oil level by removing level plug; sample if milky/metallic. Acceptance: oil at plug height; no contamination. Evidence: photo of level and sample ID label.
23	Perform a slow 5 m travel test; record sound level at 1 m with a meter. Acceptance: no abnormal whining/grinding; ≤ 75 dB(A) increase over baseline. Evidence: dB reading and short video.

Records and Evidence	
24	Document left/right sides separately; tag photos, serial numbers, hours, and inspector signature. Acceptance: complete data set with corrective actions and due dates. Evidence: exported PDF/Excel and QR-authenticated link.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Undercarriage & Track Wear Inspection (Crawler Excavators) sets a consistent, field-ready process for evaluating excavator undercarriage condition. This checklist guides a structured track system assessment—covering track tension, rollers, idlers, sprockets, track shoes, links, and final drives—so technicians catch issues early and document them clearly. By focusing on undercarriage components that most influence mobility and stability, it helps prevent accelerated wear, track derailment, uneven travel, and hydraulic or gearbox failures. You will clean out debris packing, measure sag, capture roller and sprocket wear, check shoe grouser height, record pitch growth, and verify travel motor leaks and oil levels with objective readings and photos. The scope excludes structural boom/arm inspections or hydraulic performance testing beyond visible leaks and levels. Outcomes include safer operation, planned replacements, reduced downtime, and lower total cost of ownership. Start in interactive mode, tick items as you go, add comments with photos, and export your signed report to PDF/Excel using the QR-secured share link.	1. Preparation: Gather tape measure, calipers, torque wrench, pry bar, string line/laser, depth gauge, ultrasonic thickness gauge (if needed), sound meter, cleaning tools, PPE (gloves, eye/ear protection, boots). Confirm level ground and safe access. 2. Pre-Inspection: Clean packed debris, park level, lower attachment, chock tracks, and apply LOTO. Brief the operator on slow-travel tests and evidence capture requirements. 3. Using the Interactive Checklist: Open the checklist on a mobile device, start interactive mode, and tick items as completed. Enter measurements in SI units and attach clear photos to each item. 4. Comments and Anomalies: Use the comment field to note out-of-tolerance readings, suspected root causes, and recommended actions. Tag left/right sides and component locations. 5. Export and Share: Generate an export as PDF/Excel for supervisors and maintenance planners. Share the QR-secured link for quick access and verification onsite. 6. Sign-Off and Archive: Obtain digital signatures from the inspector and operator. Archive reports by machine ID and hours for trend analysis and future planning.