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Periodic Service (250h/500h/1000h) (All Excavators) Guide

Periodic Service (250h/500h/1000h) (All Excavators) interactive checklist: commentable steps, measurable tolerances, and evidence. Export as PDF/Excel with QR-secured records for audit-ready maintenance.

Project:
Date:
Filled by:

Pre-Service Preparation

1	Park level, isolate energy, validate hour meter, and clean service points.
2	Park on level ground; lower attachment; apply parking brake; place chocks; perform lockout/tagout; acceptance: isolation verified; evidence: photo of LOTO tag and chocks.
3	Record hour meter; verify interval due within ± 10 h; evidence: photo of display and entry in log.
4	Blow off dirt from fill/drain points with clean compressed air (≤ 0.5 MPa) and wipe with lint-free cloth; acceptance: no visible debris; evidence: close-up photo.

250-Hour Service

5	Drain engine oil warm; replace oil filter; refill to dipstick MAX with specified grade per approved project specifications and authority requirements; acceptance: no leaks, level at MAX; evidence: volume ± 0.2 L, filter lot number, photos.
6	Grease all pivot pins and joints with NLGI-2 lithium complex grease until clean purge observed; acceptance: fresh grease visible, no contamination; evidence: before/after photos.
7	Replace fuel pre-filter/water separator, drain water, prime until bubble-free; acceptance: no leaks, engine starts smoothly; evidence: filter lot number and photo of clear bowl.
8	Clean radiator, charge air, and hydraulic coolers by reverse-blowing fins with ≤ 0.5 MPa air; acceptance: fins straight, core light visible, coolant-air $\Delta T < 10$ °C; evidence: photos.
9	Inspect accessory belt condition; set tension to 10–12 mm deflection under 100 N at midpoint; replace if cracks or glazing; evidence: photo and tension reading.
10	Check and adjust track sag to 30–40 mm between idler and first carrier roller; acceptance: even sag both sides; evidence: measurement photo with scale.

500 Hour Service	
11	Replace hydraulic return filter element; reset bypass indicator; acceptance: indicator normal at idle; evidence: element lot number and photo of gauge/indicator.
12	Replace pilot/auxiliary hydraulic filter or strainer; acceptance: differential pressure < 20 kPa at 1500 rpm; evidence: pressure readings and photo.
13	Replace main fuel filter; bleed system per manual hand primer; acceptance: stable rail/injection pressure at idle; evidence: filter lot number, photo of no-leak joints.
14	Check swing gearbox oil level; top up with correct gear oil per approved project specifications and authority requirements; acceptance: level at check plug, oil clear/amber; evidence: photo and volume added.
15	Drain and refill final drive gearboxes (both sides) warm; replace seals if damaged; torque plugs to manufacturer spec; acceptance: volume within ± 0.1 L, no leaks; evidence: photos and volumes.
16	Measure swing bearing axial play with dial indicator at boom tip; acceptance: within manufacturer limit, no notchiness; evidence: indicator reading (mm) and photo.

1000 Hour Service	
17	Replace engine air primary element; inspect safety element; reset restriction indicator; acceptance: restriction < 2.5 kPa at rated idle; evidence: lot numbers and indicator photo.
18	Replace hydraulic tank breather/desiccant; acceptance: no restriction, gasket seated; evidence: part/lot number and installation photo.
19	Remove and clean hydraulic tank suction strainer; inspect for debris; reinstall with new gasket; torque to manufacturer spec; acceptance: no debris retained; evidence: debris photo and reassembly photo.
20	Take oil samples: engine, hydraulic, swing, and finals using vacuum pump and sample bottles; acceptance: lab ISO code $\leq 18/16/13$ and acceptable wear metals; evidence: lab report attached.
21	Test coolant with refractometer and strips; replace if out of spec; acceptance: freeze point $-37\text{ }^{\circ}\text{C} \pm 3$ and inhibitor within pass range; evidence: readings, liters replaced, and batch details.
22	Inspect electrical harnesses, connectors, and battery; clean terminals; tighten clamps to 10 N·m; acceptance: crank voltage drop < 0.5 V; evidence: multimeter photo and notes.
23	Spot-check 10% swing bearing/upperstructure bolts for torque at manufacturer spec; acceptance: no rotation at target torque; evidence: fastener locations and torque values.

Finalization and Records	
24	Run machine 10 minutes; check for leaks, noises, temps; acceptance: no active alarms, hydraulic oil < 75 °C at idle; evidence: panel photo and leak inspection photos.
25	Dispose of oils/filters per environmental rules; wipe spills; acceptance: zero residue on ground; evidence: waste manifest numbers and cleanup photos.
26	Update service sticker and digital log; include volumes, parts, signatures; attach photos and QR-linked export reference; acceptance: complete, reviewer signed; evidence: technician and supervisor e-signatures.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Periodic Service (250h/500h/1000h) (All Excavators) gives technicians a single, structured interval servicing workflow for any brand and model. This checklist standardizes excavator scheduled maintenance, interval servicing, and preventive maintenance into three clear bands so field teams can execute consistently and document compliance. Scope includes engine oils, fuel and air filtration, hydraulic filters and strainers, swing gearbox and final drive oil checks, belts and cooling, and progressively deeper inspections at 500h and 1000h. By following these steps, crews reduce contamination, catch wear and looseness before failures, control temperatures, and maintain hydraulic cleanliness targets. It avoids common risks like cavitation, gear pitting, premature seal failure, and electrical intermittence, while supporting warranty requirements and maintaining uptime. The checklist emphasizes acceptance cues, tolerances, and evidence capture—photos, readings, lot numbers, and signatures—so results are auditable. Start in interactive mode to tick items, add comments on findings, and export the completed record as PDF/Excel with a secured QR code.</p>	<p>1. Preparation: Assemble tools (torque wrench, dial indicator, refractometer, tension gauge), PPE (gloves, glasses), clean containers, approved fluids, filters, and spill kits. Park level, isolate energy, and review manufacturer specs. 2. Open the checklist, select the due interval (250h, 500h, or 1000h), and confirm the hour meter photo. Add machine ID, ambient temperature, and technician name. 3. Execute tasks in order. For each item, capture required evidence: readings, photos, batch/lot numbers, volumes, and torque confirmations. Add comments for anomalies. 4. Using the Interactive Checklist: Tick completed items, mention helpers, attach photos, and flag follow-ups. Use comment threads to note findings and corrective actions. 5. Export and Share: Generate an export as PDF/Excel with embedded QR code for authentication. Distribute to the supervisor and asset manager. 6. Sign Off: Obtain digital signatures from the technician and reviewer. Archive the record in the equipment file for audits and warranty support.</p>