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	STANDARD: **OSHA 29 CFR 1926.602 & ISO 45001**	AUDIT FREQUENCY: **Daily Pre-Shift**

Heavy Equipment Pre Start Sop Template

Operational Scope: This Standard Operating Procedure establishes the mandatory pre-start inspection protocol for all heavy construction machinery to prevent catastrophic mechanical failures and struck-by incidents. Compliance is strictly required prior to every operational shift to satisfy regulatory accountability mandates.

MANDATORY PPE:	Hard Hat (ANSI Z89.1), Steel-Toe Boots (ASTM F2413), High-Visibility Class 3 Vest, ANSI Z87.1 Safety Glasses, Heavy-Duty Leather Gloves
PREREQUISITES:	Machine parked on level, stable grade with parking brake engaged and attachments lowered to ground. | Engine isolated and key removed during initial walk-around phase. | Surrounding 15-meter work radius cleared of unauthorized personnel and obstructions.

VISUAL WALK-AROUND & STRUCTURAL INTEGRITY

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Chrames, Booms, and Structural Welds**	Inspect for visible cracking, structural deformation, excessive rust, or missing structural bolts.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
2	**Tracks, Tires, and Undercarriage**	Check tire inflation pressure, tread depth, and rim integrity; inspect track tension, pins, and bushings for abnormal wear.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
3	**Hydraulic Hoses, Cylinders, and Fittings**	Verify absence of active fluid leaks, bulging hoses, pinched lines, or scored hydraulic cylinder rods.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
4	**Steps, Grab Handles, and Access Platforms**	Ensure all ingress/egress points are free of grease, mud, oil, or loose hardware to prevent slips and falls.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A

FLUID LEVELS & POWER UNIT INSPECTION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
5	**Engine Oil and Coolant Levels**	Verify fluid levels are within safe operating bounds on dipstick/sight glass; check for cap security.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
6	**Hydraulic Fluid Tank Level**	Confirm hydraulic fluid is at operational level with system cold; inspect reservoir sight glass.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
7	**Fuel System and Water Separator**	Check fuel level, ensure tank cap is secure, and drain accumulated water/sediment from the fuel filter bowl.	**Standard**	[ ] PASS [ ] FAIL [ ] N/A
8	**Battery Terminals and Master Disconnect**	Inspect battery cables for secure connection, corrosion, and ensure the master electrical disconnect switch functions.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

OPERATIONAL CONTROLS & SAFETY SYSTEMS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
9	**ROPS / FOPS Cabin Integrity**	Verify Roll-Over and Falling Object Protective Structures are uncompromised and windshield/windows are undamaged.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
10	**Horn, Backup Alarm, and Strobe Lights**	Test functionality of all audible warning devices, reverse alarms, headlights, and rotating beacons.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
11	**Brakes and Steering Responsiveness**	Test service brakes, parking brake holding capability, and steering responsiveness immediately upon engine startup at low idle.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
12	**Emergency Shut-Off / Kill Switch**	Verify engine emergency shut-down switch cuts power immediately when activated from the operator compartment.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

Certified Heavy Equipment Operator Signature: _____	**Date / Time:** _____	**Badge / Cert #:** _____
Site Safety Supervisor / Operations Manager Sign-off: _____	**Review Date:** _____	**Audit Status:** [ ] Approved [ ] Rectify

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