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	STANDARD: **OSHA 29 CFR 1910.305 & NFPA 70E**	AUDIT FREQUENCY: **Monthly Audit**

Fleet Battery Maintenance Inspection Sop Template

Operational Scope: This standard operating procedure establishes mandatory guidelines for inspecting and maintaining fleet vehicle batteries to prevent electrical failures, electrolyte leaks, and arc-flash hazards. Compliance ensures adherence to federal safety regulations and minimizes catastrophic vehicle downtime.

MANDATORY PPE:	Chemical Splash Goggles (ANSI Z87.1), Acid-Resistant Rubber Apron, Heavy-Duty Neoprene Gloves, Steel-Toe Safety Boots (ASTM F2413), Face Shield (Full-Face Protection)
PREREQUISITES:	Verify vehicle ignition is completely off and keys are secured in the lockbox. | Ensure the immediate work bay is equipped with a functional eyewash station and spill neutralizer kit. | Confirm vehicle parking brake is fully engaged and wheels are chocked.

VISUAL & PHYSICAL INTEGRITY INSPECTION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Battery Casing & Housing**	Inspect for visible cracks, bulging, warping, or acid residue; casing must be structurally intact without deformation.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
2	**Hold-Down Clamps & Brackets**	Verify battery is securely anchored in the mounting tray with zero lateral or vertical movement during physical nudge.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
3	**Terminal Posts & Connectors**	Check for heavy sulfation, corrosion, pitting, or loose cable clamps; terminals must be clean and torqued to manufacturer specifications.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
4	**Vent Caps & Flame Arrestors**	Ensure all vent plugs are tightly seated and flame arrestor vents are clear of obstructions to prevent hydrogen gas accumulation.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**

ELECTRICAL & PERFORMANCE TESTING

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
5	**Open-Circuit Voltage (OCV)**	Measure resting voltage using a calibrated digital multimeter; 12V flooded batteries must read 12.6V or higher when fully charged.	**Standard**	**[ ] PASS [ ] FAIL [ ] N/A**
6	**Cold Cranking Amps (CCA) Load Test**	Perform carbon pile load test; battery must sustain at least 80% of its rated CCA for 15 seconds without voltage dropping below 9.6V.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
7	**Electrolyte Specific Gravity (Flooded Units)**	Use a temperature-compensated hydrometer to test specific gravity across all cells; readings should be between 1.265 and 1.295 with less than 0.030 variance between cells.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
8	**Charging System Output**	Test alternator voltage output with engine running at 2,000 RPM; output must measure between 13.5V and 14.5V under electrical load.	**Standard**	**[ ] PASS [ ] FAIL [ ] N/A**

Certified Fleet Technician / Inspector Signature: _____	**Date / Time:** _____	**Badge / Cert #:** _____
Fleet Maintenance Supervisor / OpsAuditHub Manager Sign-off: _____	**Review Date:** _____	**Audit Status:** [ ] Approved [ ] Rectify

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