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

Fleet Battery Maintenance Inspection Safety Audit Checklist

Operational Scope: This audit protocol governs the mandatory inspection of all fleet vehicle and industrial forklift batteries to mitigate electrical shock, chemical burn, and explosive hydrogen gas hazards. Compliance ensures adherence to federal workplace safety regulations and prevents catastrophic vehicle power failures.

MANDATORY PPE:	Acid-Resistant Chemical Apron, Face Shield (ANSI Z87.1 Approved), Heavy-Duty Neoprene Gloves, Safety Glasses with Side Shields, Steel-Toe Boots (ASTM F2413)
PREREQUISITES:	Verify emergency eyewash station and safety shower are unobstructed and fully operational within 25 feet. | Ensure the charging or testing area is adequately ventilated and clear of all spark sources or open flames. | Power down and lock out/tag out (LOTO) all target vehicles prior to initiating physical battery terminal inspections.

1. PHYSICAL, STRUCTURAL, AND TERMINAL INSPECTION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Battery Case and Housing**	Inspect casing for cracks, swelling, severe bulging, or active electrolyte leaks; no structural deformation permitted.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
2	**Terminals, Posts, and Connectors**	Check for heavy sulfation, corrosion, pitting, or loose cabling; terminals must be clean, tight, and coated with anti-corrosion spray.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
3	**Hold-Down Clamps and Mounting Tray**	Verify battery is securely anchored in the mounting tray with zero lateral movement to prevent vibration damage or short circuits.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**

2. ELECTRICAL TESTING AND FLUID LEVEL VERIFICATION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
4	**Electrolyte Fluid Levels (Flooded Batteries)**	Fluid level must cover internal lead plates entirely; top off exclusively with distilled water if levels are low (do not overfill).	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
5	**Open-Circuit Voltage (OCV) Test**	Measure resting voltage using a calibrated digital multimeter; 12V automotive batteries must read minimum 12.6V fully charged.	**Standard**	**[ ] PASS [ ] FAIL [ ] N/A**
6	**High-Rate Load Test / Conductance Test**	Execute battery analyzer test to determine cold cranking amps (CCA) performance; replace unit if CCA drops below 80% of rated capacity.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**

3. CHARGING INFRASTRUCTURE AND SAFETY ENVIRONMENT

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
7	**Ventilation and Exhaust Systems**	Confirm automated hydrogen extraction fans and sensors are fully functional in enclosed fleet charging bays.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
8	**Spill Neutralization Kits & PPE Stations**	Verify presence and expiration dates of acid spill neutralizer, absorbent pads, and fully stocked emergency PPE cabinets.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
9	**Charger Cables, Plugs, and Insulation**	Inspect charging cables for exposed copper strands, frayed insulation, cracked plugs, or arc damage.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**

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

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