

Stationary Battery – Recommended Inspection Schedules

	General appearance battery area, rack or cabinet <input checked="" type="checkbox"/>	Cracks in the cover or jar (container)	Excessive bulging or distortion of cover or jar (container)	Electrolyte leakage	Corrosion at posts or connections	Corrosion on rack or cabinet <input checked="" type="checkbox"/>	Check that ventilation is functional	Electrolyte level of each cell	General visual inspection of cells/monoblocs	Detailed visual inspection of each cell/monobloc	Detailed inspection of the rack or cabinet <input checked="" type="checkbox"/>	Visual check of cable connections (including cable in terminal)		Pilot cell voltage	Pilot cell temperature	Pilot cell electrolyte specific gravity	Ambient temperature	Charger output voltage & current	Float voltage at the battery terminals	Battery charge current	Electrolyte specific gravity of 10% of cells	Electrolyte specific gravity of each cell	Voltage of each cell/monobloc	Temperature of 10% of cells/monoblocs	Temperature of each cell/monobloc	Temperature at the negative terminal of each cell/monobloc	Inter-cell connection torque	10% of intercell connection resistance	Intercell and terminal connection resistance	Internal cell/monobloc resistance, impedance or conductance	AC ripple voltage	AC ripple current	DC voltage positive and negative to ground (ungrounded systems)	AC voltage to ground (ungrounded systems)	Unintentional battery grounds (ungrounded systems)	Battery monitoring system is operational (if installed)		
Vented lead-acid battery																																						
▪ Baseline at installation	●	●		●	●	●	●	●		●	●	●					●	●	●	●		●	●						●	+	*	*	◆	*	◆	●		
▪ General (recommended monthly)	●	●		●	●	●	●	●	●				●	●	*		●	●	●	●															◆	*	◆	●
▪ Quarterly	●	●		●	●	●	●	●	●	*							●	●	●	●	*		●	●				*						◆	*	◆	●	
▪ Annual	●	●		●	●	●	●	●	●	●	●	●					●	●	●	●		*	●	●									◆	*	◆	●		
▪ Special	●	●		●	●	●	●	●	●	●	●	●					●	●	●	●		*	●	●									◆	*	◆	●		
Valve regulated lead-acid																																						
▪ Baseline at installation	●	●	●	●	●	●	●		●	●	●	●					●	●	●	●			●		●				●	●	●	●	◆	*	◆	●		
▪ General (recommended monthly)	●	●	●	●	●	●	●		●				*	●			●	●	●	●														◆	*	◆	●	
▪ Quarterly	●	●	●	●	●	●	●		●								●	●	●	●							*							◆	*	◆	●	
▪ Annual	●	●	●	●	●	●	●		●	●	●	●					●	●	●	●			●		●								◆	*	◆	●		
▪ Special	●	●	●	●	●	●	●		●	●	●	●					●	●	●	●			●		●								◆	*	◆	●		
Nickel-cadmium vented or valve regulated																																						
▪ Baseline at installation	●	●	×	●	●	●	●	●		●	●	●					●	●	●	●			●		**	×			⊗				◆	*	◆	●		
▪ General (recommended quarterly)	●	●	×	●	●	●	●	●	●				*	●			●	●	●	●														◆	*	◆	●	
▪ Semi-annual	●	●	×	●	●	●	●	●	●	*				●			●	●	●	●														◆	*	◆	●	
▪ Annual	●	●	×	●	●	●	●	●	●	●	●	●					●	●	●	●			●		**	×	●		⊗				◆	*	◆	●		
▪ Special	●	●	×	●	●	●	●	●	●	●	●	●					●	●	●	●			●		**	×	●		⊗				◆	*	◆	●		

Legend:

- Recommended check
- ⊕ Optional check
- ◆ Batteries that are not intentionally grounded (i.e., ungrounded battery systems)
- * Vented NiCd
- ⊗ Measurements may be limited to cable connections at terminals

- Rack and cabinet checks include ground connections and spill containment
- * Optional if battery charge current is being measured, but preferred on lead-antimony and lead-selenium cells
- * Batteries used in UPS applications (also refer to IEEE Std 1184™)
- × Valve regulated NiCd

References: IEEE Std 450™, vented lead-acid; IEEE Std 1188™, VRLA; IEEE Std 1106™, NiCd; IEEE Std 1184™, UPS Batteries