Official resource

Marine Battery Inspection Checklist

SLUG	marine-battery-inspection-checklist
SUMMARY	Printable inspection checklist for yacht marine batteries, covering battery type, location, charging profile, storage condition, visual defects, testing, UPS/start/service banks, portable lithium packs, and escalation triggers.
RESOURCE TYPE	Checklist
RESOURCE AREA	Power & electrical
INTENDED AUDIENCE	ETOs, yacht engineers, AV/IT officers, captains, yacht managers
ESTIMATED USE MINUTES	25
DOCUMENT LABEL	Download PDF
PDF	marine-battery-inspection-checklist-v1-0.pdf
VERSION	1.0
PUBLICATION STATUS	Published resource archive
IMPORTANT NOTE	This resource is practical operational guidance. It does not replace the vessel SMS, flag or class requirements, manufacturer manuals, competent electrical advice, battery supplier instructions, or the authority of the Captain and responsible technical officers onboard.

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Battery identity

- [ ] Battery location recorded.
- [ ] System served recorded: start, emergency, UPS, service, AV/IT, communications, tender, toy, portable, propulsion or ESS.
- [ ] Battery chemistry recorded: flooded lead-acid, AGM, gel, OPzV, OPzS, lithium-ion/LFP, nickel-cadmium or other.
- [ ] Manufacturer, model, serial number and installation date recorded.
- [ ] Voltage, capacity, string arrangement and protected load recorded.
- [ ] Charger, inverter-charger, alternator, DC-DC charger or BMS identified.

Space and installation condition

- [ ] Battery space is clean, dry, ventilated and accessible.
- [ ] Batteries are secured against movement.
- [ ] Battery boxes, trays, racks or containment are intact.
- [ ] No loose items, tools, combustibles or unrelated storage in the battery space.
- [ ] Terminals are protected against accidental short circuit.
- [ ] Cables are supported and protected from chafe.
- [ ] Labels, polarity markings and isolation points are clear.
- [ ] Ventilation path is clear and operating where fitted.

Visual defect check

- [ ] No swelling, cracking, bulging or case deformation.
- [ ] No leakage, acid residue, salt contamination or chemical staining.
- [ ] No unusual smell, heat, smoke, venting or noise.
- [ ] No corrosion on terminals, links, busbars or lugs.
- [ ] No discoloured insulation, heat marks or melted terminal covers.
- [ ] No damaged charger leads, sense wires or BMS communication cables.
- [ ] No signs of water ingress.
- [ ] Photos taken for any abnormal condition.

Charging and configuration

- [ ] Charger profile matches the installed battery chemistry.
- [ ] Absorption, float, equalization and lithium settings checked against known configuration.
- [ ] Equalization disabled unless specifically approved for the battery type.
- [ ] Temperature sensor installed correctly where required.
- [ ] Battery monitor, BMS, UPS or charger alarms reviewed before reset.
- [ ] Charge voltage, charge current and battery temperature recorded.
- [ ] Recent charger changes, replacement batteries or service work reviewed.

Testing and records

- [ ] Open-circuit voltage recorded where appropriate.
- [ ] Specific gravity recorded for flooded cells where applicable.
- [ ] Conductance or internal-resistance test recorded where appropriate.
- [ ] Load test or controlled capacity test scheduled for critical banks where required.
- [ ] UPS runtime or graceful shutdown test confirmed where applicable.
- [ ] Start battery cranking performance reviewed.
- [ ] Test results compared with previous readings.
- [ ] Defects, corrective action and next inspection date recorded.

Storage and portable batteries

- [ ] Spare lead-acid batteries stored charged and inspected at the required interval.
- [ ] AGM and gel batteries stored cool, clean and recharged as required.
- [ ] Lithium packs stored at manufacturer-specified state of charge.
- [ ] Portable batteries not stored or charged in escape routes.
- [ ] Damaged, swollen, hot or suspect lithium packs quarantined.
- [ ] Charger type checked for tenders, toys, tools, radios, laptops and guest devices.
- [ ] Failed or end-of-life batteries marked and removed for approved disposal.

Escalation triggers

- [ ] Stop and escalate any swollen, hot, leaking, smoking or venting battery.
- [ ] Stop and escalate any repeated BMS, UPS, charger or inverter alarm.
- [ ] Stop and escalate damaged lithium packs or unknown lithium chemistry.
- [ ] Stop and escalate failed emergency, generator start, radio, alarm or safety-system batteries.
- [ ] Stop and escalate signs of overheated terminals, loose links or cable damage.
- [ ] Record operational impact and notify the responsible officer where a critical load is affected.