

# Standard Operating Procedure: Field Warranty Claims & Technician Dispatch Protocol

## Purpose

This standard operating procedure guides Tier-2 and Tier-3 technical support agents and dispatch coordinators in translating customer field failure tickets and telemetry logs into authorized service dispatches ([Technician\\_Dispatches](#)) and formal claims ([Warranty\\_Claims](#)).

## Warranty Eligibility Verification Matrix

| Failure Type              | Qualifying Fault Codes                                         | Telemetry Proof Required                                                            | Coverage Status                                                            | Customer Action / Liability                                                                                                  |
|---------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Cell Manufacturing Defect | <a href="#">ERR_BMS_701</a> ,<br><a href="#">ERR_BMS_708</a>   | Voltage delta $\Delta V$ > 120 mV during rest, no record of continuous over-C-rate. | Covered (100% Parts & Labor)                                               | Full RMA; replacement module dispatched overnight.                                                                           |
| Cooling / Thermal Failure | <a href="#">ERR_COOL_302</a> ,<br><a href="#">ERR_HVAC_502</a> | Coolant pump failure, chiller pressure excursion.                                   | Covered if preventative maintenance records show quarterly filter service. | Void if air filters <a href="#">FLT-AIR-12</a> or glycol cartridges <a href="#">FLT-GLY-701</a> were unserviced > 12 months. |

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|------------------------------|------------------------|---------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------|
| Inverter Commutation / Surge | ERR_INV_404            | IGBT breakdown, transient grid trip.                                      | Covered under ECO-2024-019 program. | Upgrade kit RET-X7-019 issued at zero charge to customer.                    |
| User Abuse / Deep Discharge  | ERR_VOLT_102           | SoC held below 5% for > 7 consecutive days, or ambient discharge > 50 °C. | Rejected / Out of Warranty          | Customer billed for auxiliary charging service or full cassette replacement. |

## Dispatch Workflow

1. **Ticket Initiation:** A ticket is opened in the relational database linking the customer ID, equipment unit serial number (`Equipment_Units`), and initial symptom description.
2. **Telemetry Log Attachment:** Dispatchers must pull and parse the trailing 48 hours of telemetry logs (`bms_telemetry.json`). The logs must be scanned for pre-trip alerts, peak cell temperatures, and bus voltage anomalies.
3. **Parts Pre-Allocation:** Prior to dispatching a service technician, the required replacement parts (e.g., `FLT-GLY-701`, `PCB-DRV-3500`, or `FUS-FAST-600A`) must be allocated in the `Parts_Inventory` table to prevent truck-roll delays.
4. **Safety Clearance Sign-Off:** If any Stage 2 or Stage 3 safety events have occurred, the dispatch coordinator must verify that a site safety clearance certificate has been signed by the facility safety officer before the technician enters the installation perimeter.