

PROJECT HYPERION: FLIGHT TESTING & VALIDATION LOG

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Classification:	Internal Confidential	Lead Engineer:	Dr. Elena Vance

1. Executive Summary & Environmental Constraints

This validation log compiles environmental endurance and flight dynamic outcomes for the Hyperion Unmanned Aerial Vehicle (UAV) platform. Testing was executed across three distinct field environments to benchmark structural payload limits and thermal dissipation profiles under extreme load factors.

2. Environmental Run Logs & Discrepancies

Run ID	Location / Ambient	Duration	Status / Core Error Code
RUN-044A	Yuma Desert (42°C)	118 min	SUCCESS / None
RUN-044B	Yuma Desert (45°C)	14 min	CRITICAL FAILURE / ERR_ESC_THERMAL_OVERFLOW
RUN-045X	Chugach Range (-12°C)	85 min	WARNING / WARN_BATT_CELL_IMBALANCE_0x44

3. Specific Anomaly Analysis

CRITICAL DIAGNOSTIC TARGET: Investigation revealed that the contract assembly team erroneously swapped the standard isolation dampeners with **unrated silicone gaskets sourced from Vendor Part #SG-990-X**, causing high-frequency harmonic feedback into the IMU.

4. Propeller Assembly Stress Vectoring