



Concorde Battery Corporation

2009 San Bernardino Road, West Covina, CA 91790 USA | Telephone (626)813-1234 | Fax (626)813-1235

TECHNICAL BULLETIN

Subject: Paragraph 1353 Compliance

June 4, 2002

Number: 4

Federal Airworthiness Regulations paragraph 1353 in Parts 23, 25, 27 and 29 sets forth the requirements for installation of a battery in type certified aircraft. Concorde has demonstrated compliance with the requirements of paragraph 1353 of by performing the following tests on our Turbine Starting and Helicopter series batteries.

1. In order to demonstrate that safe cell temperatures and pressures are maintained during any probable charging or discharging condition the Induced Destructive Overcharge Test in IEC Standard 60952-1 is conducted. In this test, the battery is intentionally driven into thermal runaway by charging the battery at 3.0 volts/cell and continuing to charge until the battery fails. The battery must contain any flame within the battery both during and after the test, not release any electrolyte from the battery casing, and contain any debris resulting from an explosion either during or after the test. See Technical Bulletin #2 for typical results.
2. To demonstrate that no explosive or toxic gases are emitted Concorde conducts the gas emission test found in Mil-B-8565. In this test, a fully charged battery is placed in a 15 cubic foot chamber (0.45 cubic meters), heated to 55°C, charged at a voltage 2.67 volts/cell for 1 hour. A sample of the gas from the chamber is taken at the end of the test period and must contain less than 3.5% hydrogen.
3. To demonstrate that the valve regulated lead-acid battery fails safely in the event of a short circuit, the Short Circuit Test in IEC Standard 952-1 is conducted. In this test, the battery is subjected to a direct short circuit across the battery terminals. The battery must contain any debris and there must be no ignition of the battery.

Results of these tests and complete test reports are available to Original Airframe Manufacturers by request.