Investigative Update of Battery Fire
Japan Airlines B-787 - Jan 7, 2013

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Previous Findings

- Fire
- Thermal runaway
- Short circuiting
Progress

• Determine the origin of the battery fire
• Determine the cause of the fire
• Review certification documentation and testing
Investigative Work

Testing and Examinations
Thermal Damage

Area of most thermal damage
Inside the Battery

Cells on the left side

Cells on the right side

Substantial thermal damage

Moderate thermal damage
Mechanical Damage
Focus on Cell #6

Event battery from JAL airplane
Damaged electrode in Cell #6

Hot Spot

Yellow card is a laboratory marking used for identification purposes.
Ruled Out

• Mechanical impact damage

Damage from firefighting efforts
Ruled Out

- External short circuit of cell or battery
Still Being Evaluated

- Cell charging
- Potential manufacturing issues
- Battery design considerations
Certification of the 787 Battery
Certification of the 787 Battery

A Special Conditions: Boeing Model 787-8 Airplane; Lithium Ion Battery Installation October 11, 2007
Certification of the 787 Battery

Exemplar Battery

JAL Event Battery
Next Steps

• Examine validation methods for certification of battery
• Conduct tests on field replacement batteries
• Open our public docket and provide an interim factual report within 30 days