

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



ERA25MA171

MATERIALS LABORATORY

Factual Report 25-077

November 24, 2025

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A. ACCIDENT INFORMATION

Location: Jersey City, New Jersey
Date: April 10, 2025
Vehicle: Bell 206L-4
Investigator: Chihoon Shin
AS-40

Leani Benitez-Cardona
AS-40

B. COMPONENTS EXAMINED

Instrument Annunciator Panel

C. EXAMINATION PARTICIPANTS

Specialist Nancy B McAtee
NTSB/RE-30
Washington DC

D. DETAILS OF THE EXAMINATION

The instrument annunciator panel from the accident aircraft was submitted to the Materials Laboratory for examination. The panel was submitted to determine the filament status for each instrument annunciator. The panel consisted of twenty-four (24) annunciator lights (two rows with twelve lights per row) as shown in the diagram in Figure 1 and an overall photograph shown in Figure 2. Two annunciators were missing (see table), and one was found separated from the panel (TRANS CHIP). Each annunciator light normally contained two light bulbs. The individual annunciator lights were removed from the panel to assist in visualizing the filaments in the x-ray machine. All recovered annunciator lights were then radiographed. The status of each annunciator light is listed in the table below¹. Radiographs of bulbs exhibiting hot filament stretching are shown in Figures 3-11.

¹ Bulb designation (#1 and #2) was arbitrarily assigned by the examiner.

Annunciator (top row)	Bulb #1	Bulb #2
SPARE	Broken; Not stretched	Broken; Not stretched
FUEL LOW	Intact; Stretched	Intact; Stretched
SPARE	Broken; Not stretched	Intact; Not stretched
LITTER DOOR OPEN	Broken; Not stretched	Broken; Not stretched
SPARE	Broken; Not stretched	Broken; Not stretched
GEN FAIL	Annunciator missing	Annunciator missing
R/F FUEL PUMP	Broken; Stretched	Broken; Stretched
FUEL FILTER	Broken; Not stretched	Broken; Not stretched
ENG CHIP	Annunciator missing	Annunciator missing
BATTERY HOT	Intact; Not stretched	Intact; Not stretched
TRANS OIL PRESS	Annunciator missing	Annunciator missing
ENG OUT	Broken; Stretched	Intact; Stretched
Annunciator (bottom row)	Bulb #1	Bulb #2
SPARE	Intact; Not stretched	Intact; Not stretched
SPARE	Annunciator missing	Annunciator missing
SPARE	Broken; Not stretched	Broken; Not stretched
SPARE	Broken; Not stretched	Broken; Not stretched
BAGGAGE DOOR	Broken; Not stretched	Broken; Not stretched
L/F FUEL PUMP	Bulb broken; No filament	Intact; Stretched
T/R CHIP	Broken; Not stretched	Broken; Not stretched
TRANS CHIP	Intact; Not stretched	Intact; Not stretched
BATTERY RLY	Annunciator missing	Annunciator missing
TRANS OIL TEMP	Broken; Not stretched	Intact; Not stretched
ROTOR LOW RPM*	Broken; Not stretched	Intact; Stretched

* ROTOR LOW RPM had one broken, not stretched filament and one intact stretched filament indicating that the broken filament was burned out/broken prior to impact.

Submitted by:

Nancy B McAtee
Senior Chemist

⊕	SPARE	FUEL LOW	SPARE	LITTER DOOR OPEN	SPARE	GEN FAIL	R/FUEL PUMP	FUEL FILTER	ENG CHIP	BATTERY HOT	TRANS OIL PRESS	ENG OUT	CAUTION	⊕
⊕	SPARE	SPARE	SPARE	SPARE	SPARE	BAGGAGE DOOR	L/FUEL PUMP	T/R CHIP	TRANS CHIP	BATTERY RLY	TRANS OIL TEMP	ROTOR LOW RPM	LT TEST	⊕

Figure 1. Typical panel layout for instrument annunciator panel.



Figure 2. Photograph of as-received annunciator panel. The TRANS CHIP annunciator (in the plastic bag) was found separated from the panel.



Figure 3. Radiograph of FUEL LOW Bulb 1.

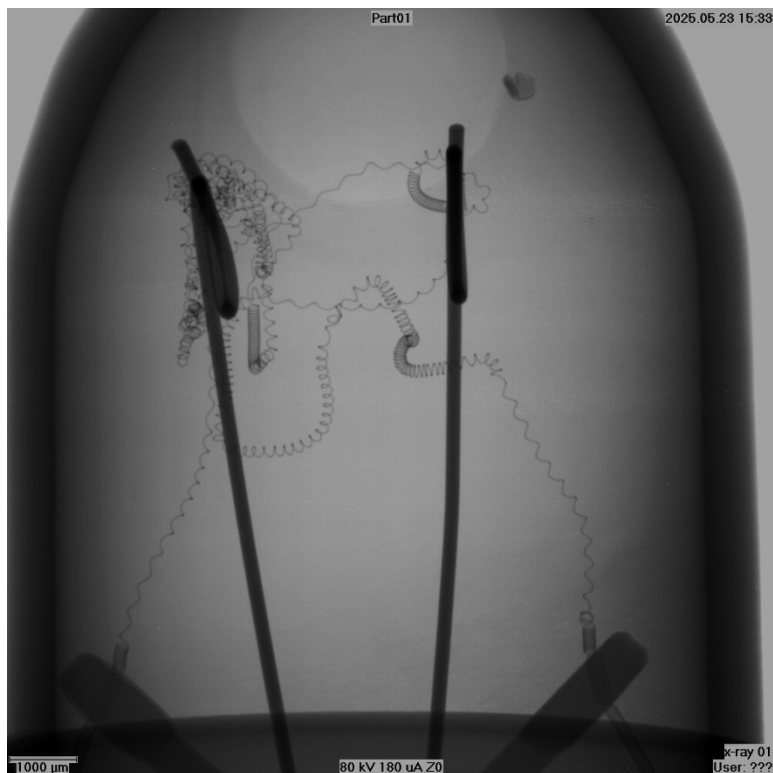


Figure 4. Radiograph of FUEL LOW Bulb 2.

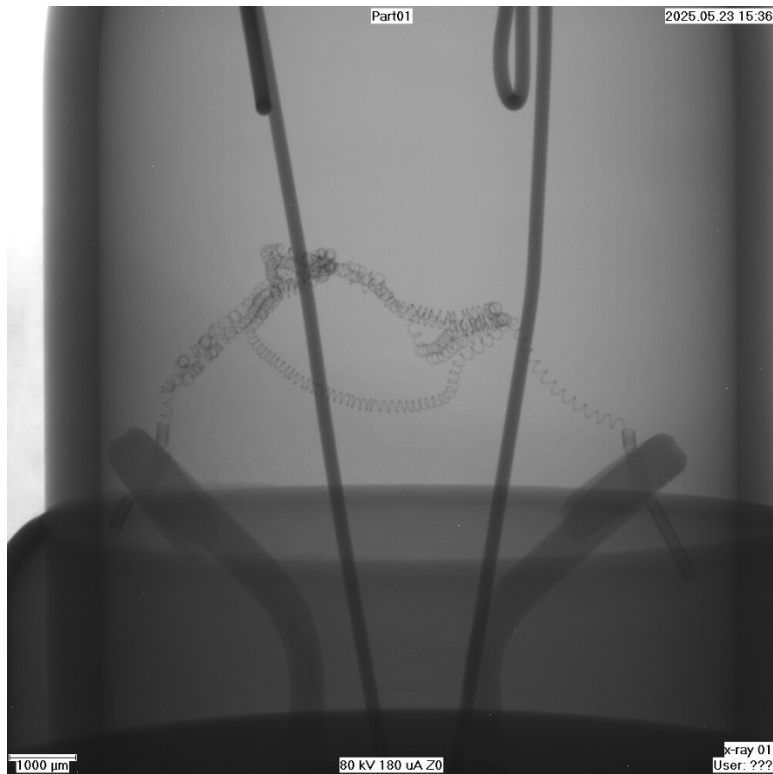


Figure 5. Radiograph of RF FUEL PUMP Bulb 1.

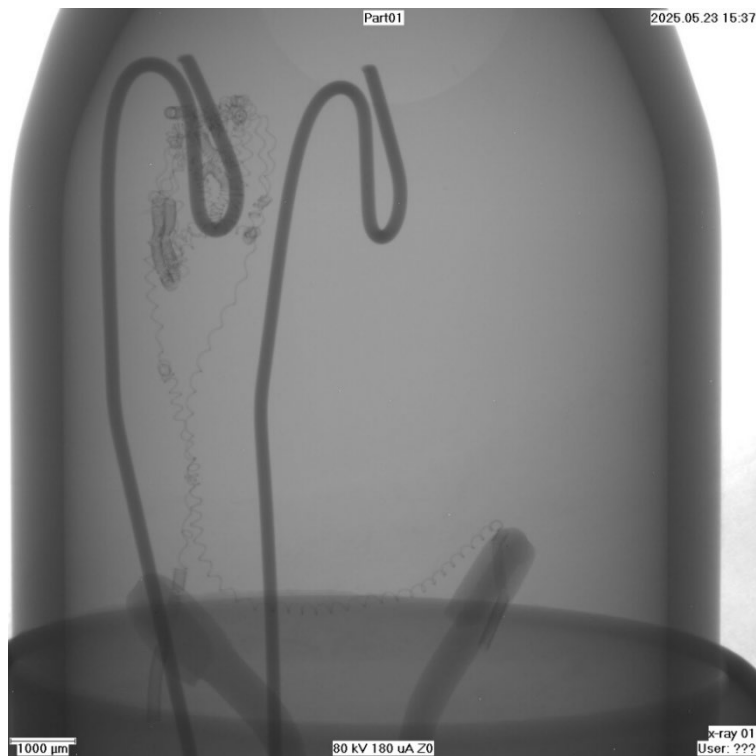


Figure 6. Radiograph of RF FUEL PUMP Bulb 2.

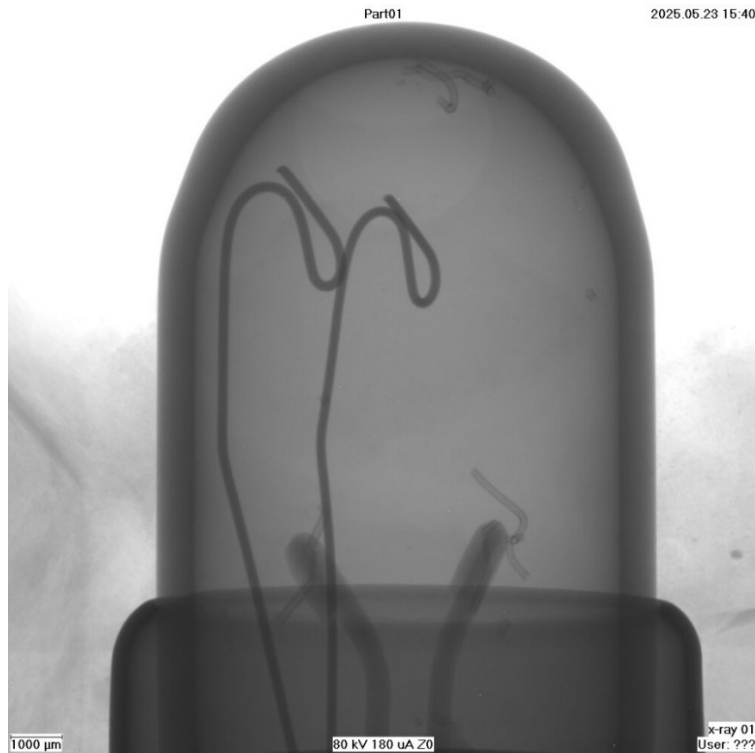


Figure 7. Radiograph of ENG OUT Bulb 1.

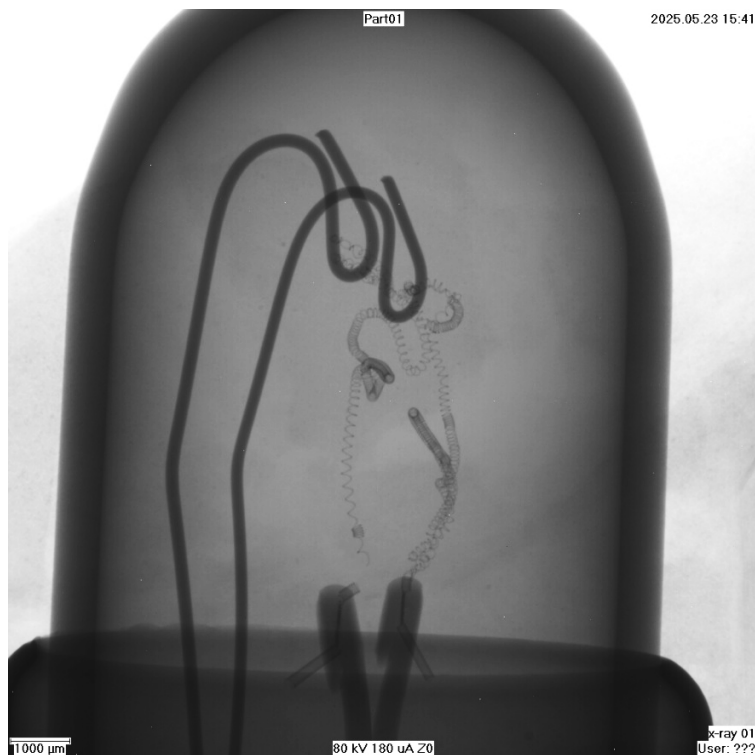


Figure 8. Radiograph of ENG OUT Bulb 2.



Figure 9. Radiograph of LF FUEL PUMP Bulb 2.



Figure 10. Radiograph of ROTOR LOW RPM Bulb 1.

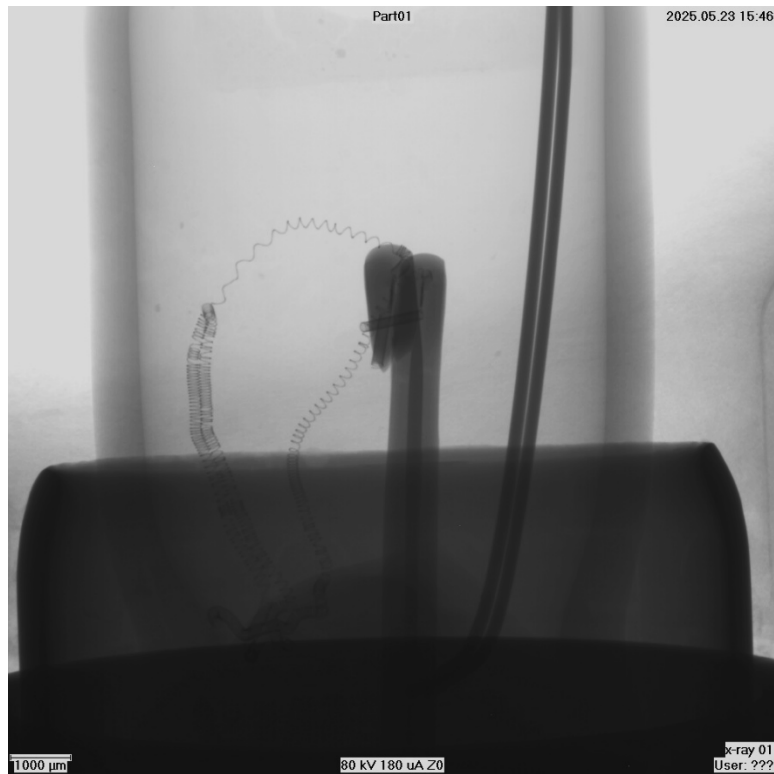


Figure 11. Radiograph of ROTOR LOW RPM Bulb 2.