

# **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Research and Engineering  
Materials Laboratory Division  
Washington, D.C. 20594



March 11, 1993

## **METALLURGISTS FACTUAL REPORT**

Report No 93-059

### **A. ACCIDENT**

Place : La Palma, Republic of Panama  
Date : June 6, 1992  
Vehicle : Boeing B-737-200, HP1205  
NTSB No. : DCA92-R-A038  
Investigator : Tom Haueter (AS-10)

### **B. COMPONENTS EXAMINED**

Wire segment with detached connector reported to be the wire for the pitch signal from vertical amplifier to ADI.

### **C. DETAILS OF THE EXAMINATION**

Examination of the wire was confined to the end marked as broken from the connector. Visual examination of the wire with a stereo microscope disclosed that the 18 fractured wire elements were heavily necked down indicative of a ductile tensile overstress separations. Microscopic examination inside the mating connector disclosed 18 wire elements displaying similar fracture features. The fracture of the wire was just outside the crimp position in the connector and all the wire elements were still retained in the crimp. There was no evidence of electrical arcing inside the connector or at the wire elements.

A handwritten signature in black ink, which appears to read "Michael L. Marx", is written over a black rectangular redaction box.

Michael L. Marx  
Supervisory Metallurgist