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Investigator-In-Charge
National Transportation Safety Board

Sub: Ref FedEx Flight 910 FLL OCT28, 2016- Analysis and recommendations

Background:

Referencing the National Transportation Safety Board (NTSB) factual report, on October 28, 2016, at about 1751 eastern daylight time, FedEx flight 910, a McDonnell Douglas MD-10-10F, experienced a left main landing gear collapse and subsequent fire in the left wing after landing at Ft. Lauderdale-Hollywood International Airport. The two flight crewmembers evacuated the airplane after it came to rest on the side of the runway. The left landing gear cylinder assembly (P/N ARG7002-505) had fractured during landing.

Analysis:

The NTSB Materials Laboratory Addendum Report shows the thumbnail crack at the radius transition of the Schrader valve bore in a main landing gear (MLG) cylinder. The thumbnail crack, originating at a corrosion pit at the radius transition, exhibited alternating bands of fatigue and overstress, as well as a band of intergranular fracture. The analysis shows that the left hand MLG outer cylinder failure occurred at the fill valve bore. There was no evidence of the presence of cadmium or cadmium compounds, nickel or chromium plating in the valve bore. As shown in the NTSB maintenance factual report, the overhaul record shows the application of stylus brush cadmium plating in the valve bore.

Hawker Pacific Aerospace feedback and conclusions:

Cadmium plating is intended to protect the base metal of the fill valve port against any corrosion. Cadmium is intended to be self-sacrificial. Due to the possibility of the cleaning of the bore for inspection and humidity collected in the radius, there is a possibility for corrosion to be initiated over the 9 year time-between-overhauls period. Based on previous years of experience of inspection and overhauling the MLGs, corrosion is found to be present in several areas of the gear due to environmental conditions. Hawker would like to review the possibility of prime coating the bore after brush cad plate procedure to provide further environmental protection.

Hawker Pacific Aerospace thanks the NTSB for giving the opportunity to be a party member to this investigation.

Sincerely,


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Hawker Pacific Aerospace Part Coordinator