

Pratt & Whitney
Flight Safety Investigations
400 Main Street
East Hartford, CT USA 06118



Via Email

16 January 2023

Sathya Silva, Ph.D.
Senior Aviation Accident Investigator/Investigator in Charge (IIC)
Major Investigations Division
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, DC 20594

Subject: Pratt & Whitney Party Submission for DCA21FA174

Reference(s): [1] Rhoades Aviation Inc, dba Transair, Boeing B737-275C Adv. Registration Number N810TA, Ditching Accident in Mamala Bay after Takeoff from Daniel K. Inouye International Airport, Honolulu, Hawaii on 02 July 2021 [U.S. National Transportation Safety Board (NTSB) Investigation Number: DCA21FA174].

[2] Public Docket for NTSB Number DCA21FA174 accessed via:
<https://data.nts.gov/Docket?ProjectID=103407>.

Dear Ms. Silva,

Thank you for inviting Pratt & Whitney's participation as a Party for the NTSB's investigation of the Reference [1] accident. Please accept this document as Pratt & Whitney's Party Submission for the subject investigation.

Factual Reports referenced in this Submission were downloaded from the Reference [2] Public Docket with a modification date of 20 December 2022 10:25AM.

No. 1 engine

With reference to the Powerplants Group Chairman's Factual Report relative to the No. 1 engine, the damage patterns on the aft stages of the Low Pressure Compressor (LPC), specifically the C5 and C6 blades, combined with the location of, and damage to, the surrounding static structure (stator clashing and Intermediate Case skirt deformation) are consistent with the low pressure rotor rotation being arrested in approximately $\frac{3}{4}$ of a revolution as a consequence of the damage induced by the separation of the engine from the airplane during water impact. This damage signature is consistent with an engine operating at idle rotor speeds at impact.

Documentation of the No. 1 engine in the Powerplants Group Chairman's Factual Report did not identify findings consistent with a pre-impact malfunction or any condition that would have precluded the No. 1 engine from producing thrust above the idle level prior to water impact.

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In addition, Figures 9 and 10 in the Flight Data Recorder (FDR) Specialist's Report demonstrate a series of Engine Pressure Ratio (EPR) reductions that occur in a stair-step pattern between 01:35:18 and 01:35:56. The stair-step nature of the EPR reduction is inconsistent with the uncommanded EPR reduction observed in an engine that has experienced an in-flight malfunction.

No. 2 engine

As documented in the Flight Data Recorder Specialist's Report and the Powerplants Group Chairman's Factual Report, the FDR data and damage signature of the No. 2 engine indicates, respectively, engine thrust and rotor rotational speeds higher than idle at the time of water impact.

Best Regards,



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Enclosure(s): None

cc: Pratt & Whitney Flight Safety Investigation File No. 10709