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Investigator-in-Charge  
National Transportation Safety Board  
490 L'Enfant Plaza East, SW  
Washington, DC 20594 Summary

April 7, 2023

Re: Rhoades Aviation, Inc. dba Transair, flight 810, a B737-200, N810TA, reported engine anomalies in both engines and subsequently ditched into Mamala Bay approximately 5.5 miles southwest shortly after takeoff from Daniel K. Inouye International Airport (HNL), Honolulu, Hawaii. NTSB case number (DCA21FA174).

## Transair Party Submission to NTSB Factual Reports

### A: Synopsis:

On July 2, 2021, at about 0145 local, Rhoades Aviation, Inc. dba Transair, flight 810, a B737-200, N810TA, reported engine anomalies in both engines and subsequently ditched into Mamala Bay approximately 5.5 miles southwest shortly after takeoff from Daniel K. Inouye International Airport (HNL), Honolulu, Hawaii. The two flight crew members were rescued, and the airplane was substantially damaged. The flight was operating under Title 14 *Code of Federal Regulations* Part 121 as a cargo flight from HNL to Kahului International Airport (OGG), Kahului, Hawaii. The flight data recorder (FDR), cockpit voice recorder (CVR), most of both engines and the airframe itself were recovered from the sea floor in the Pacific Ocean off the coast of Honolulu, Hawaii in October 2021, several months after the accident.

### B: Findings:

The following anecdotal and paraphrased information was provided from the investigation:

- Based on pilot interviews shortly after the accident, both pilots stated that:

Shortly after takeoff, the airplane experienced a sudden thrust change, and the crew identified an engine failure (not specified) through a drop in engine pressure ratio (EPR) and exhaust gas temperature (EGT). Shortly after the engine event, there was an initial yaw to the right and the airplane was controllable.

- There was no recollection of engine fire warnings.
- Airspeed and altitude could not be maintained in level flight.
- The airplane remained controllable in all three axes.
- The right engine continued operating until the water impact with high EGT and an unknown EPR at the time of water impact.

Post-event airframe wreckage inspection showed the following:

- Engine 1 thrust lever was near the forward stop.
- Engine 2 thrust lever was near the aft stop, with the thrust reverser handle in full reverse.
- Both fuel control switches were in the IDLE position.
- Both engine fire handles were stowed.
- Engine 1 EPR gauge read approximately 1.02.
- Engine 2 EPR gauge read approximately 1.6.
- Other engine gauges were unreadable for various reasons.
- Post-event detailed engine inspections included the following:
- The left engine (also referred to as 'engine #1' within this report) showed signs of damage consistent with impact with the water at a comparatively low engine rotation speed. Engine teardown by the investigation revealed no significant evidence of pre-

impact mechanical damage to the compressor, turbine sections, the accessory and fuel systems components that were recovered. The two main fuel system components recovered (the Main Fuel Pump and the Fuel Control Unit) were sent out to the OEM for investigation, with no findings.

- The right engine (also referred to as 'engine #2' within this report) showed signs of damage consistent with impact with the water at a comparatively high engine rotation speed. Engine teardown by the investigation revealed that two turbine blades were found fractured in the T1 section. The teardown revealed no significant evidence of pre-impact mechanical damage to the accessory and fuel systems components that were recovered. The two main fuel system components recovered (the Main Fuel Pump and the Fuel Control Unit) were not sent out to the OEM for investigation.

Subsequent to the right engine rapid EPR reduction shortly after takeoff, with no change to the left engine EPR, the accident airplane demonstrated the ability to climb to 1,000 feet, accelerate, climb to 2,000 feet, and maintain altitude. When the left engine EPR was reduced and remained below 1.2, the total airplane engine thrust was less than the thrust required for the airplane to maintain altitude over the recorded range of flight conditions, flight control inputs, left and right engine EPR values, and flap configurations encountered.

**C: Analysis:**

Safety Risk Analysis was performed, and the following Hazards were identified:

- 1) Crew failure to identify proper engine to shut down.
- 2) Multiple checklists were not performed and completed. (After Takeoff, NNC, SEO, Ditching)
- 3) PF and PM duties and communication responsibilities were not in compliance with established company procedures.

**D: Probable Cause/s**

Failure of Flight Crew to diagnose the initial engine failure and did not confirm engine failure on engine #1.

- 1) Failure of Flight-Crew to shut down the #1 engine per the Engine Failure Or Shutdown Checklist.
- 2) Failure to maintain situational awareness regarding the distance away from HNL airport.
- 3) Failure of Flight Crew to avoid overcorrection of rudder inputs during engine #1 problem and throttle mismanagement throughout the flight.
- 4) Failure of Flight crew to stabilize aircraft in flight to allow aircraft to return for a safe landing.

**D: Safety Recommendations/Safety Actions:**

Risk Mitigation strategy will be implemented to include the following:

- 1) Special emphasis, at initial and Recurrent Ground School training, for the following:
  - a) Aircraft Systems
  - b) Integrated CRM simulations, including PF and PM duties and responsibilities. to include non-normal Conditions as well as Single Engine procedures.
  - c) Proper selection, use and completion of all Normal, non-Normal and Emergency Checklist items.
  - d) Area airport familiarization, including alternate airports, landing, and departure procedures.
- 2) Further emphasis on proficiency and training for all pilots to include LOFT training.
- 3) Continue and schedule frequent open-forum meeting to discuss operations at all levels with participation from Operations Maintenance, Ramp, Safety, Flight Operations, and pilots.
- 4) When an emergency is declared, pilots will amend all call signs by adding "Emergency Aircraft" For example, "Rhodes 809 Emergency Aircraft"
- 5) During training, special emphasis to be given to proper reporting of any and all issues related to aircraft, Operations, as well as Ramp Safety in proper format, reported to the Department involved.

  
Orlando Debrum – Director of Safety