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Boeing 737-7H4 Engine Failure Report

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Boeing 737-7H4 Engine Failure Report

The report was about a Boeing 737-7H4, N772SW (a southwest airline) that had a failure of its left engine followed by its decompression. This incident happened on 17th April, 2018 at Philadelphia airport of Pennsylvania. According to the NTSB report, the plane which had more than hundred passengers, got its accident on the way from La Guardia to Dallas, Texas. After the plane suffered the uncontained engine failure, it was forced to make an abrupt landing at Philadelphia International Airport since it was the nearest. Among the 144 passengers on board, only one was killed in the accident after the shrapnel engine pieces pricked a window and activated a swift decompression. NTSB argues that most airplane accidents are attributed in one way or the other by human factors (Miyagi, 2015). Back in the days, most of the airplane-related accidents were caused by machines, but NTSB statistics indicate a change of curve, where human factors are aiding more than 70% of airplane accidents. These factors include both communication and decision-making skills that complement the technical decisions needed to run an airplane.

One of the human factors to the Boeing 737-7H4 accident was a miscommunication from the engine company (Marcus & Rosekind, 2017). The main reason the plane had an accident was due to one of the 24 fan blades in the CFM56-7B left side engine had a case its failure upon fracturing its root. This happened when the 300g, 30cm fan blade caused the plane engine to fail tragically. According to the NTSB report, the CFM-56-7B engine operated over 3200 engine cycles since its manufacture and maintained properly. They also noticed that the low cycle fatigue that causes the engine fracture was the same one for a southwest Boeing 737-7H4 engine in August 2016 (Marcus & Rosekind, 2017). The problem lies in the lack of communication of the findings of the investigation between accident reports. This is evident in the NTSB investigation report that had not been released concerning the August 2016 Boeing 737-7H4 engine failure.

Additionally, the insensitivity of the inspection team aided the accident. According to the NTSB report, the failed engine had last been overhauled in October 2012, approximately 10712 cycles before the failure being investigated. On the contrary, the metallurgical examination indicated that the failed blade had already cracked before the last overhaul. In 2012, a fluorescent penetrant inspection was conducted to detect any cracks but maintenance reported that none was visible at the time. When conducting the repairs, such insensitivity and seriousness are what the NTSB calls human factors causing most related airplane accidents and crashes.

Another factor is the failure of the pilots and the crew to listen to the controller. For instance, when the airport controller instructed the Boeing 737-7H7 captain to land at the Harrisburg, Pennsylvania international airport, the captain didn't listen and rather chose Philadelphia (Kharoufah et al., 2018)). The controller instruction was most proper as Harrisburg was a more appropriate option for the plane landing conditions. This is because it the airport is well supplied with resources suitable for any plane emergencies. Despite Harrisburg being the best choice, the controller cleared the Boeing plane's runway to land at Philadelphia airport.

NTSB requires both the controller and the airplane crew to work together during an emergence. The primary goal is to ensure every passenger lands on the ground safely. Negligence from the crew and obstruction of these guidelines have been noted to cause many airplane-related accidents. For instance, if the Boeing 737-7H4 crushed on landing and started burning, then the Philadelphia airport would be incompetent to handle the situation. According to the controller, the captain would be blamed for the loss of lives since he failed to listen to the Harrisburg international airport instructions being most equipped to handle emergency landings. NTSB concludes that it's these human factors that are raising the airplane accident bar (Marcus & Rosekind, 2017).

References

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