



SAIB: 2025-06

Date: July 22, 2025

SUBJ: High Pressure Turbines

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts owners, operators, and maintainers of airplanes with **Pratt & Whitney Division (P&W) Model PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4062A, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 engines** about a concern related to a failure mode in the high pressure turbine (HPT).

At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

This SAIB was prompted by an engine failure that occurred in the Netherlands on February 20, 2021. During the airplane's climb, components exited the exhaust tailpipe of the engine, injuring two individuals and damaging property on the ground. The crew performed a commanded in-flight shutdown and landed uneventfully. The root cause of the engine failure was determined to be increased temperature exposure and spalling of the coating on the 2nd stage HPT blade outer air seal (BOAS). These conditions then led to failure of the outer transition duct which subsequently resulted in additional blade failures in the low pressure turbine (LPT).

Prior to this incident, P&W issued Service Bulletin (SB) PW-4ENG 72-462, Revision 3, dated April 28, 2000 (SB 72-462) which describes enhanced spalling resistance for the 2nd Stage HPT BOAS and includes modification procedures for improved cooling which reduces the temperature and improves durability of the HPT.

P&W also issued SB PW4ENG 72-488, Revision 3, dated August 13, 2009 (SB 72-488). SB 72-488 addresses a different failure mode impacting the outer transition duct and specifies removing certain 3rd stage LPT duct segments and installing certain parts. The FAA issued AD 2012-22-16 on October 29, 2012, to require removing those 3rd stage LPT duct segments from service due to several reports of damaged or failed segments.

Recommendation

Although the FAA determined that the failure mode addressed by SB 72-462 does not rise to the level of a safety concern warranting an AD, as did SB 72-488, it is recognized that incorporating the modifications specified in SB 72-462 plays an important role in the durability of the HPT Stage 2 BOAS and reduces the failures of the outer transition duct. Therefore, the FAA recommends that operators who have not already done so accomplish the actions specified in P&W SB 72-462.

For Further Information Contact

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