

Update on Impact on the Company's Financial Results of Additional Inspection Program for PW1100G-JM Engines



October 25, 2023

I H I Corporation

Introduction

Pursuant to the ongoing additional inspection program for delivered PW1100G-JM engines, shop visits will increase over the next few years.

An average of 350 aircraft are expected to be grounded (AOG) from 2024 to 2026. IHI, as a participant in this engine program with a share of around 15%, expects to incur additional expense as a result.

Today, we will explain why this issue arose and how we are mitigating it.

Contents

- 1. Background on Incremental Shop Visits**
- 2. Additional Inspection Program**
- 3. How AOGs Happen**
- 4. Financial Impact and Mitigating Action Plans**

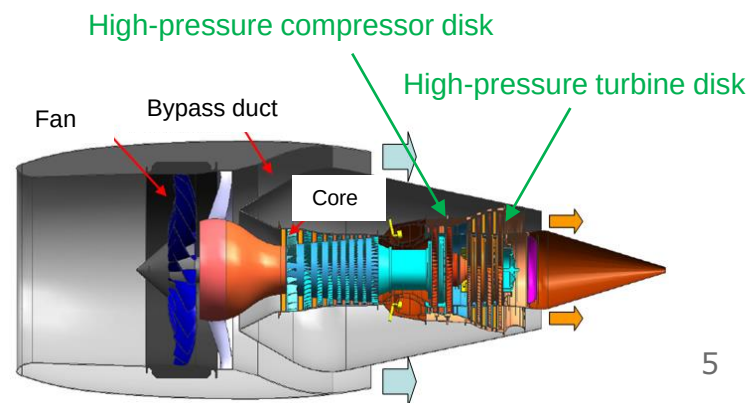
- A rare condition in powdered metal*¹ used to manufacture certain engine parts at Pratt & Whitney has caused the need for incremental shop visits.
- Such rare condition in powdered metal was detected on rare occasions in engine parts produced from Q4 2015 to Q3 2021.
- In September 2023, following a technical review at Pratt & Whitney, a fleet management policy was developed for the affected PW1100G-JM GTF engines, requiring a recurrent inspection protocol and shorter life limits for high-pressure turbine disks and high-pressure compressor disks. This policy is expected to result in incremental shop visits.
- Effective measures have already been implemented in the manufacturing process for the powder metal, and the rare condition has not occurred since then.

*1: The powder metallurgy technique entails spraying molten metal to create metal powder that solidifies and is forged to manufacture components.

2. Additional Inspection Program

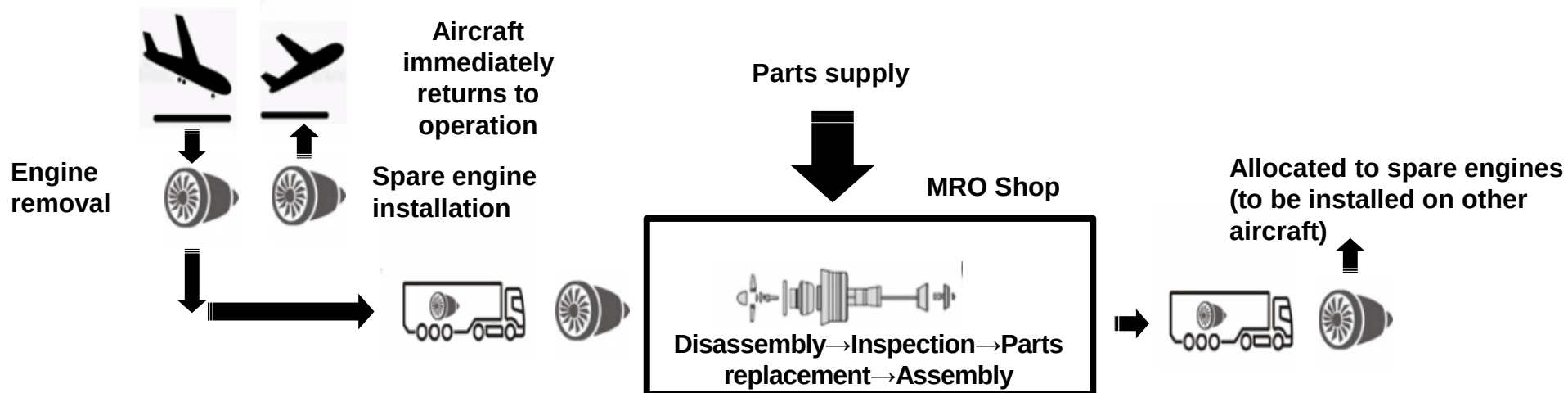
- Parts subject to inspection are high-pressure turbine disks and compressor disks containing powder metal.
- Repetitive inspection protocol to be implemented at intervals of 2,800 cycles for high thrust and 3,800 cycles for low thrust. Part replacements before 5,000/7,000 cycles.
- Approximately 3,000 engines need to be inspected.
- Approximately 600 to 700 engines will be removed for shop visits between 2023 and 2026 in excess of the original plan.
- The projected engine removal to return time is 250 to 300 days.
- AOGs^{*2} should peak at 600 to 650 in the first half of 2024.
- The average AOGs from 2024 through 2026 should be 350.

*2: Aircraft On Ground (See next page)



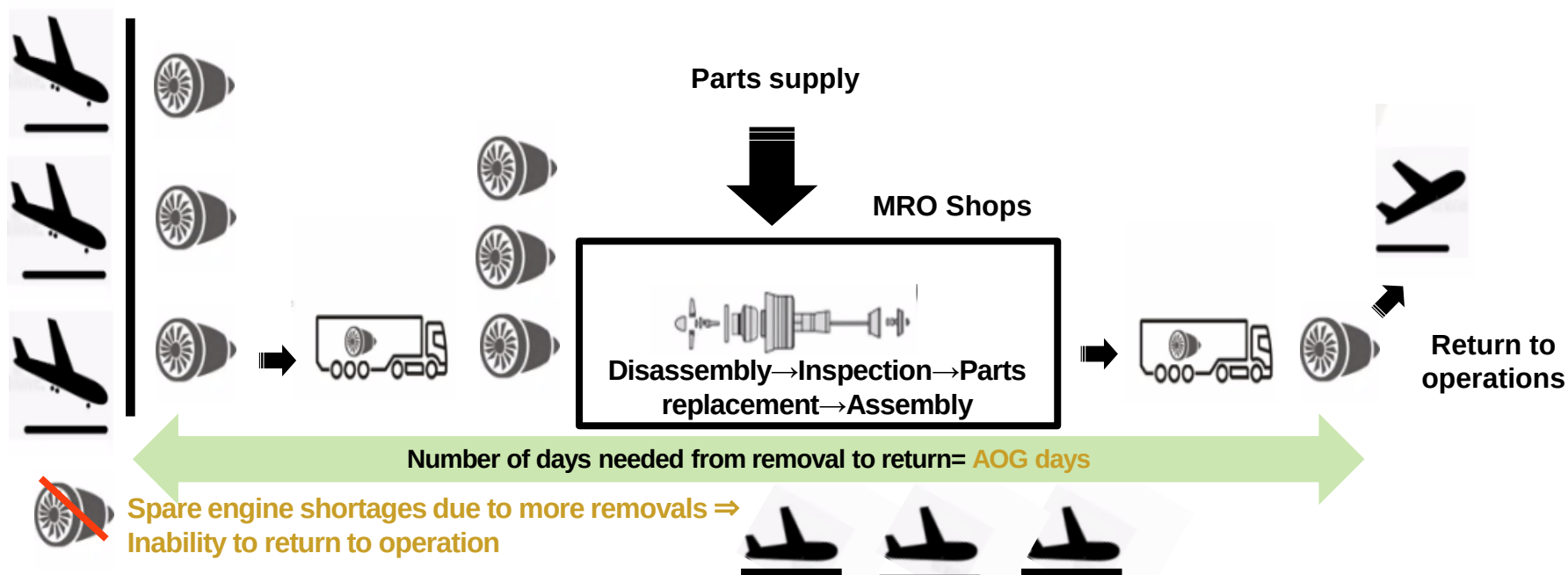
3. How AOGs Happen

Normal Situation



This Situation for PW1100G-JM

More engine removals



Financial Impact

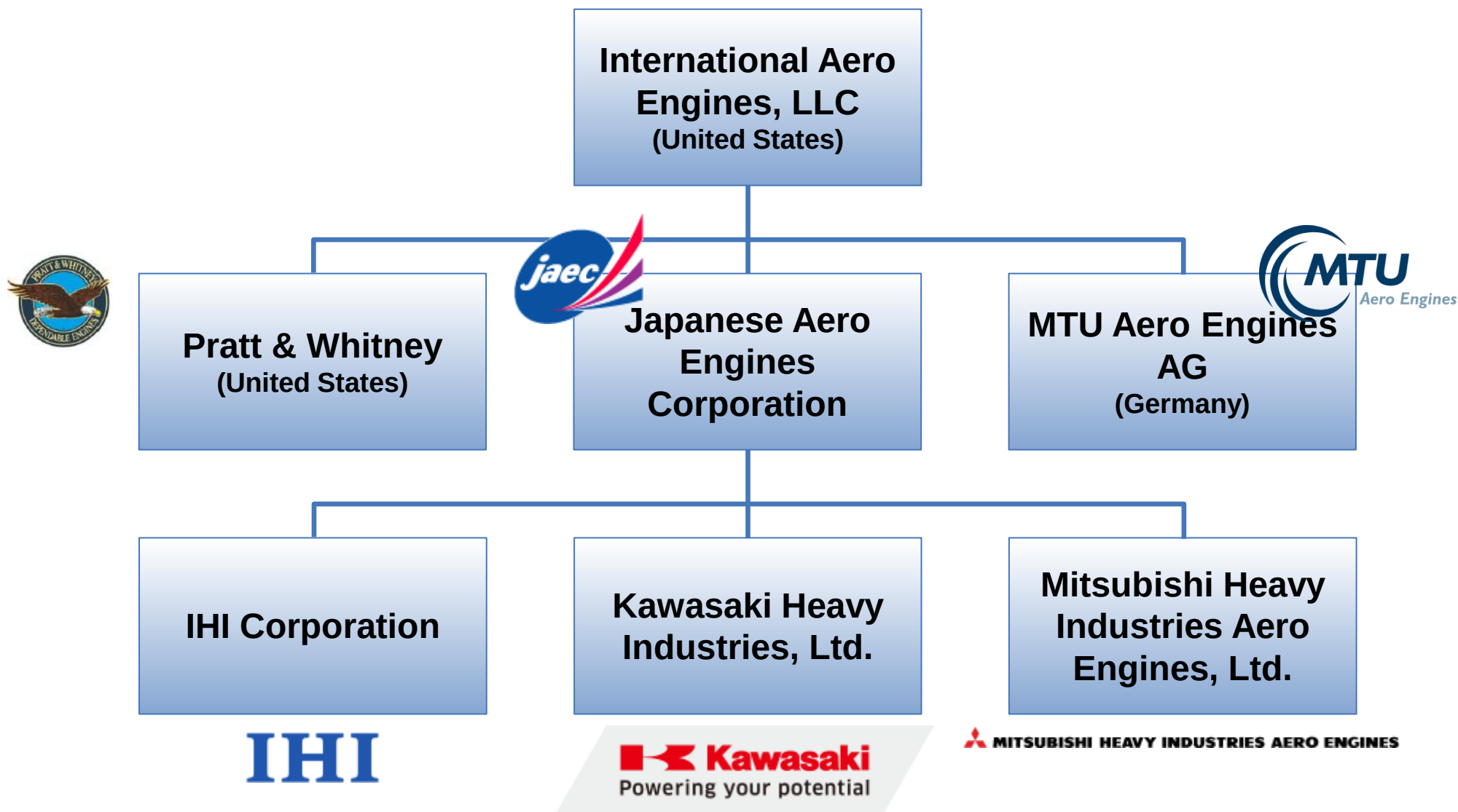
- Total cost for the entire program, including customer support and additional maintenance expenses, is expected to be around \$7 billion.
- IHI has booked its program share (about 15%) of these costs, including future maintenance costs, in 2Q 2023.

Mitigating Action Plans

- We will collaborate with program partners to increase network maintenance capacity. We plan to double capacity at Tsurugashima Works over the next three years.
- We continue to deliberate with our program partners to minimize the impact of this issue.

Reference: Structure of International Collaboration Program for PW1100G-JM Engine

IHI





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