



International Civil Aviation Organization

**FOURTH MEETING OF THE ASIA PACIFIC ACCIDENT INVESTIGATION GROUP
(APAC-AIG/4)**

Tokyo, Japan, 1-2 September 2016

Agenda Item 4: Regional Cooperation

**ROYCE ROLLS LARGE GAS TURBINE GENERAL
FAMILIARISATION TRAINING COURSE**

(Presented by Singapore)

SUMMARY

To build and maintain investigation skills of our investigators in the Asia Pacific (APAC) region, Singapore, together with Rolls Royce, had organized a Large Gas Turbine General Familiarisation Training Course for safety investigation agencies from 24 May to 27 May 2016. This training was attended by 16 participants from 8 countries including Singapore.

1. INTRODUCTION

1.1 This paper highlights the benefits of specific training customized to address the needs of safety investigation agencies. It also reflects the importance of cooperation between the industry and safety investigation agencies within the APAC region.

2. DISCUSSION

Objectives

2.1 During the investigation of aircraft engines, it is often that investigators do not have the necessary expertise to do a quick assessment on the engine damage and plan for evidence collection before the engine technical representatives can arrive on time. As the subject matter is highly technical, the training course is crucial for bridging the knowledge gap the safety investigators and to assist them in fruitful discussion on the root cause of engine with the engine technical representatives.

2.2 In order to build and maintain investigation skills of investigators with APAC region, the Transport Safety Investigation Bureau (TSIB) of Singapore, together with Rolls Royce, had organized a Large Gas Turbine General Familiarisation Training Course for safety investigation agencies from 24 May to 27 May 2016 in Rolls Royce Regional Training Centre (RTC) Seletar in Singapore. The objectives of these trainings are:

- To introduce the basic construction and function of the Rolls Royce Trent 1000 that powers the Boeing B787 Dreamliner;
- To appreciate the capabilities of the Rolls Royce Seletar facility and technical expertise that could be offered in an investigation;
- To exchange experience and knowledge in engine investigation.

Participants of the Large Gas Turbine General Familiarisation Training 2016

2.3 Counterparts from the following administrations and agencies have been invited and attended the Large Gas Turbine General Familiarisation Course:

- Air Accident Investigation Bureau of Malaysia (AAIB Malaysia)
- Australian Transport Safety Bureau (ATSB)
- Civil Aviation Authority of the Philippines (CAAP)
- Civil Aviation Authority of Vietnam (CAAP)
- National Transportation Safety Committee of Indonesia (NTSC)
- State Secretariat of Civil Aviation of Cambodia (SSCA)
- Vietnam Aviation Academy

2.4 This training was attended by total of 16 participants from 8 countries including Singapore.

Training Agenda

2.5 The agenda of the four day course are as follows:

- General familiarisation of in-service large (high bypass) gas turbine engines (Trent 1000)
- Hands-on experience in engine workshop
- Engine containment and Bird strike investigation
- Annex 13 Investigations: Accredited Representatives and Technical Advisors - Theory vs Reality
- Onsite investigations
- Engine data availability for investigations
- Numerical risk analysis methods
- Detailed component analysis
- Case Studies
 - Controlled Engine Strip
 - Engine Investigation of Cathay Pacific A330 Loss of thrust control
- Tour of Rolls Royce Seletar Campus

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the content of this paper.