Honeywell

SERVICE INFORMATION LETTER

Engines, Systems & Services – Phoenix, Arizona

APPLICABLE: ☒ **MAINTENANCE & ENGINEERING** ☐ **FLIGHT OPERATIONS**

FOR ALL AIRFRAME MANUFACTURERS USING GENERAL AVIATION, GENERAL PRODUCTS AND/OR AUXILIARY POWER UNITS, OWNER/OPERATORS, DISTRIBUTORS, SALES AND SERVICE ORGANIZATIONS, AND FIELD SERVICE REPRESENTATIVES.

Applicable To: Auxiliary Power Unit, RE220[GX]

Subject: Implementation of a Combustor Wash Program.

Purpose: To advise the field of recommended combustor wash program and availability of Combustion Chamber Wash Kit (P/N 3700546-2).

Background: In service experience with the RE220[GX] APU has revealed that un-commanded shutdowns may occur from combustor effusion hole plugging.

Effusion holes are used to provide cooling air to control combustor wall temperatures. Once these holes become plugged, the cooling air instead flows to the combustion area, which creates a lean fuel/air mixture. If the effusion holes are plugged severely enough, the lean fuel/air mixture can cause the unit to flame out and shutdown. Honeywell Service Information Letter, APU-80, discusses this condition in more detail.

Discussion: Honeywell has developed a combustor wash procedure designed to clear plugged combustor effusion holes. This procedure documents all materials needed, tooling required and the step by step process to perform the wash. To facilitate cleaning of the APU combustor without removing the APU from the aircraft, Honeywell has developed the Combustion Chamber Wash Kit, part number 3700546-2. This kit contains a two rotary spray nozzles, two ignitor boss adapters, plastic tubing and one tubing adapter.

At the next revision of the AMM, the wash procedure will be included as an on-going maintenance task (TASK 41-21-00-170-801). Wash kits will be provided to Bombardier authorized Service Centers for combustor cleaning during scheduled maintenance intervals or as required.

In order to preclude any un-commanded shutdowns driven by combustor clogging, for APU S/Ns P-101 to P-285, Honeywell recommends the task be performed after every 1000 APU operating hours for APUs incorporating combustor p/n WA3830474-2, (pre SB 49-7813) and after every 2000 APU operating hours for APUs incorporating combustor p/n WE3830493-3, (post SB 49-7813). For APU S/N P-286 and subsequent, Honeywell recommends the task should be performed every 2000 APU operating hours.

However, operators should be aware that factors such as environmental conditions will affect the rate at which the effusion holes will plug. Operators should review their APU removal history in relation to combustor clogging events and determine the optimal wash interval for their particular operations.

At the combustor wash event information pertinent to the aircraft and APU, should be recorded. The information is as follows:

A/C Tail Number	APU Serial Number
A/C Hours	APU Hours
A/C Cycles	APU Cycles

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This information, along with the wash date, should be forwarded to the noted Bombardier and Honeywell contacts listed below. It is imperative that operators provide this information, as it is required to track the effectiveness of the cleaning procedure.

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