


EASA	COMMENT RESPONSE DOCUMENT
	EASA PAD No. 14-068 [Published on 08 April 2014 and officially closed for comments on 06 May 2014]

Commenter 1: Cairoaviation — 16.04.2014
Comment # 1

Is this PAD No (14-068) applicable on the company's engines (RB211-535E4B-75)?

notes

1-NMSB (73-E355) Compliance

EASA response:

The PAD clearly specifies, in section 'Applicability', that it applies to "RB211-535E4-37, RB211-535E4-B-37 and RB211-535E4-C-37 engines, all serial numbers", which means the Model RB211-535E4B-75 is not affected.

No changes have been made to the Final AD in response to this comment.

Commenter 2: American Airlines – John Beavers – 02.05.2014
Comment # 2

This proposed AD addresses the possibility of fuel leaks from the low pressure fuel tube assembly between the Low Pressure (LP) fuel filter and High Pressure (HP) fuel pump on the RB211-535 engine. The fuel leaks could potentially lead to critical fuel imbalance and in-flight fuel starvation. The proposed AD would require replacement of the fuel tube at either the next shop visit, when the fuel tube is removed due to condition or due to schedule requirements of SB RB.211-73-E355. This AD also prohibits the installation of SB 73-C297 standard fuel tubes.

AAL proposes the AD be revised to allow the installation of a 73-C297 standard LP Fuel tubes on-wing if parts or ground time are not sufficiently available to modify the engine to accept the 73-H131 standard. AAL proposes to allow the replacement of a 73-C297 standard tube for several reasons.

First, installation of a serviceable 73-C297 standard fuel tube provides an equivalent level of safety provided the fuel tubes are managed in accordance with the requirements 73-E355. The failure mode of the 73-C297 fuel tube is understood and the hard time program defined by 73-E355 provides a definitive management program for the fuel tube failure mode. Operators managing their 73-C297 standard fuel tubes to the requirements of 73-E355 do not experience fuel leaks in the LP tubes in service.

Second, SB 73-H131 is a significant engine modification requiring extensive ground time and the estimated time of 11 hours is only possible under the most ideal conditions. In the event of a remote site LP fuel tube leak, the AD's current wording requires operators to assemble, transport and install a significant number of parts to modify an engine. This is not a practicable requirement when a proven, serviceable 73-C297 fuel tube could be quickly installed and the airplane returned to service. Finally, Rolls-Royce has continually demonstrated their supply chain is not always capable of supplying modification kits in a timely manner. The requirement to upgrade to the 73-H131 fuel tube standard whenever a replacement is needed on-wing puts operators at the mercy of the unreliable Rolls-Royce supply chain. Forcing the accomplishment of 73-H131 on-wing when a tube is replaced for cause will not have a significant effect on the fleet accomplishment rate. Allowing the installation of a 72-C297 standard tube, managed to the time requirements in 73-E355, provides an equivalent level of safety.

EASA response:

Comment not agreed. In-service experience has shown that the instructions of SB RB.211-73-E355 were not sufficient to prevent fuel leaks from occurring with 73-C297 standard fuel tube installed.

No changes have been made to the Final AD in response to this comment.

Commenter 3: UPS – Bart Law – 05.05.2014

Comment # 3

UPS is submitting this letter in response to Notification of a Proposal to Issue an Airworthiness Directive PAD No. 14-068. The referenced PAD proposes to replace the Low Pressure (LP) fuel tube assembly P/N 163521545 and P/N 163521539 in accordance with the instructions of Rolls-Royce SB RB.211-73-H131. The tube replacement is to occur during the next shop visit, or on-wing during the next occasion when the part requires removal due to condition or to accomplish SB RB.211-73-E355, whichever occurs first. The PAD proposes preventing the installation of any LP fuel tube assembly P/N 163521545 and P/N 163521538 after the effective AD date.

In UPS's 21 year history of operating its 89 RB211-535E4-37 engines, only four LP fuel tube assemblies have been replaced on installed engines due to fuel leaks. None of these events resulted in an inflight shut down.

Requested action:

1/ UPS requests the AD remove the requirement to incorporate SB RB.211-73-H131 while the engine is installed on-wing. Per UPS's operational history, UPS believes the risk of a critical fuel unbalance or in-flight fuel starvation occurring is minimal and therefore should not mandate an on-wing service bulletin configuration change. The incorporation of SB RB.211-73-H131 requires rerouting of line fuel lines and installation of new solid block assemblies which would be best accomplished in an engine shop environment. Forcing this SB configuration change while the engine is installed on an aircraft will put an unnecessary burden and reduction of aircraft operational capabilities due to increased out of service time.

2/ UPS requests Required Action(s) and Compliance Time(s): paragraph (2) be removed to allow installation of LP fuel tube assemblies P/N 163521545 and P/N 163521538 as long as the applicable installed LP fuel tube assembly does not exceed the life limit of 15,000 hours or 4,750 cycles, whichever occurs first. This is the life described in SB RB.211-73.E355 for currently installed LP fuel tube assemblies. UPS does not feel there should be a difference in life between installed and non-installed parts. If a part is determined to be safe for continued operation on wing, for a specified period of time, a part sitting on the shelf should be considered safe for operation for the same specified engine operating time upon part installation.

3/ UPS is requesting that if EASA determines that P/N 163521545 and P/N 163521539 Low Pressure (LP) Fuel Tube assemblies must be removed from engines, currently installed on aircraft, the draw down period of 750 flight hours detailed in SB RB.211-73-E355 paragraph 1.C (1) must be accomplished within 750 flight hours

after the effective date of the AD. If the 750 flight hours is based on the May 10, 2013 date of SB RB.211-73-E355 revision 3, UPS will not be able to comply with the AD without grounding several aircraft.

EASA response:

Comment not agreed. In answer to requested actions 1 and 3 and in case of severe operational disruption, it is noted that operators can apply for an Alternative Method of Compliance (AMOC) to the AD or, request the authority of the State of Registry of the affected aircraft for an extension of the compliance time. With respect to requested action 2, see answer to Comment #2 above.

No changes have been made to the Final AD in response to these comments.

Commenter 4: Rolls Royce – Zaki Mahroof – 8/5/2014

Comment # 4

Rolls-Royce has the following response to EASA PAD 14-068:

Required Action and Compliance Times

Item (2) From the effective date of this AD, do not install on any engine a P/N 163521545 or P/N 163521538 LP Fuel Filter to HP Fuel Pump Tube

Rolls-Royce would like the action to be more specific in regards to the next shop visit. The concern is that if a fuel tube is taken off when having to replace the FFG, by letter of the AD, we would not be able to refit the old standard of pipe. However this could be the only option due to the unplanned nature of an FFG fault.

Proposed Wording

(2) From the effective date of this AD, do not install on any engine a P/N 163521545 or P/N 163521539 LP fuel filter to HP fuel pump tube **during planned maintenance**.

EASA response:

Comments partially agreed. EASA agrees that the replacement of the Fuel Flow Governor (FFG) should not necessarily require the incorporation of the rigid fuel tube SB RB.211-73-H131. The intent of paragraph (2) is to prevent the reversal of the modified fuel tube configuration to the earlier standard after the rigid fuel tube has been installed. Paragraph (2) of the Final AD has been re-formulated as follows:

- (2) **After modification of an engine as required by paragraph (1) of this AD,** do not install a P/N 163521545 or P/N 163521539 LP fuel filter to HP fuel pump **tube on that engine.**