


EASA	COMMENT RESPONSE DOCUMENT
	<p style="text-align: center;">EASA PAD No. 14-159 [Published on 29 October 2014 and officially closed for comments on 19 November 2014]</p>

Commenter 1: GE Aviation – Pedro Santos, Fausto Cesare – 06/11/2014

Comment # 1

As for the Required Action(s) and Compliance Time(s) block, require “Within 3 months after the effective date of this AD”, instead of the proposed “Within 6 months after the effective date of this AD”.

Since a dual engine flameout is a very critical event, possibly leading to a catastrophic event, the idea is to accomplish the subject proposed AD on an accelerated basis.

EASA response:

The compliance time has been determined in relation to the risk associated to this unsafe condition and it is not an invitation to wait until the end of the period.

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

Commenter 2: Boeing – Pamela Hicks – 13/11/2014

Comment # 2

1. Water-borne contaminants are believed to cause the problem. Water itself does not cause a control problem. On the CFM56-7B, the fuel metering valve is in the hydro-mechanical unit (HMU). Therefore, make a wording revision in the Reason section as described below:

Current: Several thrust instability events have occurred in service on the CFM56-7B fleet resulting from water contamination of the fuel supply causing a lag in the response of the control valve in the fuel metering unit (FMU).

Proposed change: Several thrust instability events have occurred in service on the CFM56-7B fleet resulting from **water-borne contamination** of the fuel supply causing a lag in the response of the **fuel metering** valve in the **hydro-mechanical unit (HMU)**.

2. On the CFM56-7B, the fuel metering valve is in the hydro-mechanical unit (HMU). Therefore, make a wording revision in the Reason section as described below:

Current: CFM has developed new EEC software to address the lag in the response of the FMU control valve, thereby mitigating the thrust instability effect.

Proposed Change: CFM has developed new EEC software to address the lag in the response of the **HMU fuel metering** valve, thereby mitigating the thrust instability effect.

EASA response: *Comment partially agreed as Final AD has already been amended following similar comments received from SAFRAN- CFM (see Comment #3).*

Commenter 3: Safran – Anthony DAUVERGNE – 20/11/2014

Comment # 3

1. **Current:** Several thrust instability events have occurred in service on the CFM56-7B fleet resulting from water contamination of the fuel supply causing a lag in the response of the control valve in the fuel metering unit (FMU).

Proposed change: Several thrust instability events have occurred in service on the CFM56-7B fleet resulting from fuel containing water-borne contaminants being supplied to the engine which had an adverse effect on the response of the fuel control valve in the hydro-mechanical unit (HMU).

2. **Current:** This condition, if not corrected, could lead to overspeed

Proposed change: This condition, if not corrected, could potentially lead to engine overspeed

3. **Current:** This condition, if not corrected, could lead to overspeed and IFSD of one or more engines, loss of thrust control, damage to the engine, and damage to, or reduced control of, the aeroplane.

Question to EASA: What damage to the aeroplane is foreseen or is this standard language?

4. **Current:** To address this potentially unsafe condition, CFM has developed new EEC software to address the lag in the response of the FMU control valve, thereby mitigating the thrust instability effect.

Proposed change: To address this potentially unsafe condition, CFM has modified its EEC (Electronic Engine Control) software to compensate for compromised fuel within the hydro-mechanical unit and improve the response of the fuel control valve, thereby mitigating these thrust instability events.

EASA response:

Your Point 1: *Comment agreed. Final AD amended.*

Your point 2: *Comment agreed. Final AD amended.*

Your Point 3: *This unsafe condition could lead to uncontained engine failure and subsequent release of high energy debris, which could damage the aeroplane and possibly injure persons on the ground. Indeed, this is 'standard' AD wording.*

Your point 4: *Comment agreed. Final AD amended.*