

CRD – Proposed Airworthiness Directive 05-001

<i>Comment</i>	<i>Response</i>
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Paragraph	Entire PAD
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Cmt	FAA, Rosa James
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<p>Cancel PAD JUSTIFICATION: The FAA agrees with International Aero Engines (IAE) assessment regarding the lack of an unsafe condition in this matter. Mandating a filter cap modification will provide no appreciable improvement in safety because the tasks currently in place (DFL inserts) are adequate to address concerns of heavy fuel loss. Please refer to IAE email, sent to Mr. Klaus Bowing, subject "IAE Comments to EASA PAD No. 05-001", dated February 23, 2005.</p>	<p>Noted , not agreed</p>
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Paragraph	Entire PAD
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Cmt	International Aero Engines, John Rawlins
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<p>Klaus, The attachment provides IAE's position on the need for Mandatory Regulatory action with regards to the V2500 Fuel Cooled Oil Cooler (FCOC) Cover. This and similar information has been supplied to the FAA at the time of the issuance of DGAC 2003-355(B)R2 as well as the current PAD No : 05-001.</p> <p>Please feel free to contact me if you need any further information.</p> <p>1.0 Appendices Appendix A Airworthiness Directive U2003-355(B) R2 Appendix B "FCOC AD" Presentation sent to Airbus on 24th Sept 03</p>	<p>Noted</p> <p>Subject discussed with IAE. (Initiated 24 Feb. 2005)</p> <p>Even after more requests, no confirmation available (after a month) from IAE whether there are still 70 engines in service without the DFL Mod.</p> <p>Position from Airbus A320 PCM:</p> <p>At aircraft level, an important fuel leak has always been considered as a potential unsafe condition in worse cases. Indeed, even if different improvements in procedures have already been</p>
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<p>2.0 Discussion</p> <p>2.1 The purpose of this document is to provide background information on the FCOC Fuel Filter Cap modification (SB79-0085 on V2500-A1 and SB 79-0086 on V2500-A5). IAE would like to provide a history of the two instances of fuel loss on V2500 A1 FCOCs that did not have Dry Film Lubricant inserts fitted. IAE would then like to describe the consequent action and the justification for IAE's recommended changes.</p> <p>2.2 Background Two instances of fuel loss from V2500 FCOCs have resulted in aircraft diversions. They were both on A1 engines, one in October 1998 and one in June 1999. Both units had the pre-Dry Film Lubricant (DFL) standard of modification on the inserts. The DFL inserts assist in the proper installation of the bolts into the housing. Without them the bolts may seize in the housing. Mis-installation can lead to an over-torque being applied which causes the inserts to unscrew and protrude out. This prevents proper seating of the cap on the housing. This was the mechanism that caused the two events.</p> <p>2.3 Problem solution IAE promoted the introduction of Dry Film Lubricant inserts to the remainder of the A1 fleet as a solution to the problem. AOW1048 and SB79-0079 emphasised this action on the A1.</p> <ul style="list-style-type: none"> • 200 A1 FCOC units were built to the pre-mod (non-DFL) standard. • 130 out of batch of 200 now (Sept 03) have DFL mod in place. • 291 out of all 361 A1 engines now have DFL mod in place (80% of A1 engines). <p>All A5s have the Dry Film Lubricated inserts. IAE added inspections for the insert integrity and cap flatness into the AMM and CMM, in addition to the leak inspections in AOW1048</p>	<p>applied on aircraft, past experiences has shown that fuel leaks were not always properly managed by the crews (mainly due to the fact that they were not always correctly identified) and that this led to incidents which could have had hazardous or catastrophic consequences.</p> <p>Therefore, I confirm that we consider that there is still a need for a mandatory corrective action on this subject.</p>
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2.4 Additional work

Following Airbus experience on the CFM engine, a request was made for IAE to launch a product improvement programme for a more robust cap design. The intention of this modification was to prevent cap distortion if an insert failed. The A5 showed marginal intolerance to the same conditions but was included in the redesign to introduce best practice.

IAE introduced a re-designed FCOC Filter Cap - SB79-0085 (A1) and SB79-0086 (A5) which included the following features:

- A revised filter cap with increased doming for stiffness
- An adaptor between the housing and the cap
- Fitted once so no damage done to housing inserts by repeat removal
- Loss of one of ten bolts will not lead to cap deflection

The above SBs were available in June and July 2002, the new engine production incorporation was from V11375.

3.0 Conclusions

There have been no confirmed reports of FCOC leakage for this cause since introduction of units with DFL inserts (>14 million hours A1 and A5). There have been no confirmed reports of FCOC leakage since the inspection was introduced.

The Filter Cap product improvement modification addresses potential cap weakness after loss of one bolt. Mandating the Filter Cap modification provides no appreciable improvement in flight safety, since the tasks currently in place adequately address the concern of "heavy fuel loss".

Paragraph	Entire PAD
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Cmt	Rolls-Royce, Douglas Johnston
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Klaus How can this be a proposed AD with an effective date from 17 January 2005 -	Noted and agreed, Will be adjusted when transferring PAD into real AD.
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(last Week) and it's currently an active AD2003-355(B)R2 it is to supersede	
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Paragraph	Entire PAD
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Cmt	FAA-Brussels Belgium, Monica Nemecek
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<p>Dear Klaus,</p> <p>I was looking at the website and noticed the subject AD. I have one question about it. It is titled as "Proposed Airworthiness Directive", but the effectivity date was Monday. Is it just a proposed AD or is it an officially issued AD? The terminology is confusing to me.</p> <p>Thanks for any clarificaiton that you can provide!</p>	<p>Noted and answered already. Will be adjusted when transferring PAD into real AD.</p>
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Paragraph	Entire PAD
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Cmt	CAA-UK, Graham Boles
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<p>Dear Klaus,</p> <p>These are the combined comments of CAA-UK Propulsion and Aircraft Certification Departments on the above EASA PAD.</p> <p>As Lead Authority for the V2500 engine, we have already stated in our letter ref: 9/80/V2500/C07/1 dated 15 June 2004 that we do not support retention of DGAC CN 2003-355(B)R2. We therefore do not agree in principle to the publication of this EASA AD.</p> <p>However, since EASA proposes to issue the AD, we offer the following comments.</p> <p>PAD Specific comments.</p>	<p>Noted and partly agreed. Final AD will address these comments.</p>
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<p>* The applicability box should be revised to be consistent with the engine models stated in the compliance box i.e. to include (IAE) V2500-A1 engines. Also, since the IAE AOW covers all V2500 engines, consideration should be given to including the V2500-D5 installed in the Boeing MD-90 aircraft.</p> <p>* We suggest the Reason box should be revised to read: "Potential of heavy fuel loss. The fuel filter cover of the Fuel Cooled Oil Cooler (FCOC) is retained with six bolts inserted into helicoil inserts. Overtightening of these bolts caused loosening of the inserts and led to heavy fuel loss on two aeroplanes."</p> <p>* The effective date of the PAD is the same as the issue date i.e. 17 January 2005. If this date is not revised by the time this PAD is published as an AD some operators will be very close to or may have exceeded the 500hr inspection threshold. This would not allow very much, or any time to plan and obtain the necessary spares to implement the SB.</p> <p>* We suggest the wording in Paragraph 1 of the compliance section is revised to read: "Within 500 flight hours, for V2500-A1 engines not modified in accordance with Service Bulletin IAE 79-0085 and for V2500-A5 engines not modified in accordance with Service Bulletin IAE 79-0086, inspect the area surrounding the fuel filter cover of the Fuel Cooled Oil Cooler (FCOC). If fuel leakage is observed, comply with instructions of IAE All Operator Wire (AOW) 1048.</p> <p>Note: At every opening of the fuel filter cover strictly apply AMM procedures."</p> <p>General.</p> <p>The EASA AD website does not explain the proposed AD consultation process, who may comment or if any feedback will be provided.</p> <p>The consultation period for the above PAD is not defined, therefore</p>	
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commenters do not know how much time they have in which to submit any comments they wish to make.	
Kind regards	

Paragraph	Entire PAD
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Cmt	Airbus Industries, Claude Schmitt
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<p>Dear Dear Mr. Boewing,</p> <p>We have noted the publication of Proposed Airworthiness Directive PAD n° 05-001 (see attached copy) on the EASA website.</p> <p>According to EASA Management Board Decision n°7-20 04 (DECISION OF THE MANAGEMENT BOARD CONCERNING THE GENERAL PRINCIPLES RELATED TO THE CERTIFICATION PROCEDURES TO BE APPLIED BY THE AGENCY FOR THE ISSUING OF CERTIFICATES FOR PRODUCTS, PARTS AND APPLIANCES ("PRODUCTS CERTIFICATION PROCEDURES"), Article 12.5, an envisaged airworthiness directive must "be published for comment in the Official Publication of the Agency and through the airworthiness directives distribution system, specifying in particular the required form of the comments and response time. The duration of the comment period shall determined by the Agency, taking into account the urgency of the corrective action and the need for a proper consultation".</p> <p>The above mentioned publication of Proposed Airworthiness Directive PAD n°05-001 apparently does not comply with above men tioned decision in that it does not contain any indication about the allowed response time for comments.</p> <p>Furthermore, it seems that the proposed effective date for the Airworthiness Directive would be identical to the date of publication of the proposed AD, which does not seem to be possible.</p>	<p>Agreed and answered already.</p> <p>Future PAD's will indicate time frame for response.</p> <p>Effectivity date will be adjusted when transferring PAD into real AD.</p>
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<p>I would be grateful to have your views on this matter. Thank you.</p> <p>Best regards</p>	
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Paragraph	Entire PAD
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Cmt	Airbus Industries, Eric Blancaneaux
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<p>Klaus,</p> <p>We have found the above mentioned PAD.</p> <p>Can you tell us when the definitive AD is to be issued? What will be the definitive number?</p> <p>As general question, do you have the guideline EASA will follow for PAD and AD issuance? And where ADs will be accessible on the EASA web site.</p> <p>Thanks for your support.</p>	<p>Noted and answered already. Definitive AD number will just be the next free sequential number.</p>
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