

Bulletin No. 37

November 2010

## HIGH FAME CONTENT - EMERGENCY PROTOCOL

**For use in situations where FAME concentration in jet fuel at airports is above 5 mg/kg but below 30 mg/kg and where the contracted fuel supplier has authorised release.**

### Purpose

This JIG Bulletin follows others on the subject of FAME, including JIG Bulletin No. 26 which describes how the industry is trying to prevent FAME contamination in jet fuels from reaching airports.

The purpose of this Bulletin is to clarify the situation with regard to supplying fuel to aircraft when jet fuel at an airport has been shown to contain more than the current specification limit of 5 mg/kg FAME but less than 30 mg/kg.

### Background

In JIG Bulletin No. 26, dated June 2009, the possibility was raised of agreeing a protocol to cover situations where FAME content in jet fuel at an airport is found to be in the range 5 – 30 mg/kg. As a result of developments since then, and following recent discussions with engine and aircraft OEMs, it is now clear that limited fuelling operations in such situations may be possible.

It is very important to note that it is the decision of the relevant contracted fuel supplier whether to release jet fuel with a FAME content in excess of 5mg/kg to aircraft and their approval must be obtained in writing before such fuel is delivered to aircraft. Supplier approval is required for each customer.

### Protocol for fuelling aircraft with fuel containing up to 30 mg/kg FAME

The major engine and aircraft manufacturers have confirmed to the JIG Product Quality Committee that they have protocols in place that will allow limited aircraft fuelling operations to continue under certain, well-defined conditions. This is important for airport joint ventures operating to JIG Guidelines because there is now a way to manage this situation to enable airlines to continue to fly (with restricted conditions).

The restrictions and requirements associated with these emergency protocols are the domain of the engine and aircraft manufacturers and airlines will need to consult them for detailed guidance. However, these emergency protocols mean that individual aircraft may be able to undertake two uplifts of jet fuel containing FAME in the range 5 – 30 mg/kg.

As a result of the publication of emergency protocols by the major aircraft and engine manufacturers, it should be possible to reduce the disruption of fuelling services following a FAME contamination incident, whilst at all times having due regard to all safety and product quality requirements.

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**Recommended procedure in the event of an incident**

If evidence (such as retrospective results from a supply terminal) or test results from the airport itself indicate that jet fuel at the airport contains > 5mg/kg FAME, the storage tanks at the airport should either be sampled (or re-sampled whichever is appropriate) by the operator using new, clean sample containers, which are rinsed 3 times, labelled carefully and submitted to a recognised laboratory for testing according to IP 585 or IP 590.

**If the test results confirm that the FAME content is > 5 mg/kg, fuelling operations shall be suspended and airline and supplier representatives informed immediately.**

Airlines should be advised to contact their customer support representatives and their respective aircraft and engine manufacturers. If the FAME content is less than 30 mg/kg, airlines should also be advised to seek guidance on how to implement the requirements of the appropriate airframe and engine OEM Emergency Protocols.

The supply of fuel to individual airlines can continue once each of two conditions has been fulfilled:

- the airline has confirmed that they have made the necessary arrangements and changes to flight operations to accommodate the requirements of all appropriate airframe and engine OEM Emergency Protocols, and
- the fuel supplier contracted to that individual airline has confirmed in writing that the fuel may be released to them.

To ensure that all airlines are aware of the restrictions and conditions on using the fuel containing FAME in the range 5 – 30 mg/kg, it is strongly recommended that Joint Venture into-plane fuelling operators ask airlines to sign a letter acknowledging the emergency situation. This letter will need to be developed to meet local/regional legal requirements and it is suggested that some preparation is undertaken by suppliers and airlines to agree this in advance to allow the smooth operation of this emergency protocol.

To assist airlines and aircraft operators to manage the emergency situation, into-plane fuelling operators shall provide a written statement specifying the concentration of FAME, the date and time of delivery and the tail number and flight number for each aircraft that is fuelled with the fuel containing FAME which should be signed by the airline or aircraft operator prior to any delivery by way of acknowledgement of the emergency situation.

An example of such a statement is attached.

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**Example***(to be modified as necessary for local application)***STATEMENT THAT FUEL CONTAINED FAME IN THE  
RANGE 5-30 mg/kg**

This is to record that the following aircraft was fuelled with jet fuel containing FAME at the concentration specified. This information is provided for inclusion with aircraft records (eg aircraft tech log) to assist airlines with managing a FAME contamination incident at an airport.

Airport	
Airline/Operator	
Aircraft type	
Aircraft tail number	
Flight number	
Date	
Time	
FAME concentration	
Volume of fuel delivered	
Into-plane Organisation	
Name and Signature of supplier representative	
Name and signature of airline representative	

**WARNING**

*Only use this agreement for deliveries of fuel with FAME content in the range 5 - 30 mg/kg if approval to the delivery has been given in writing by a representative of the contracted supplying company in line with the requirements of the supplying company. This may include local management, head office sales management and the company's legal department.*