

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

Attachment 43 - FAA Response to Fire Main Deck Checklist AFM Differences

**OPERATIONS/HUMAN PERFORMANCE SUPPORT TO
THE U.S. ACCREDITED REPRESENTATIVE**

DCA10RA092



U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of Accident Investigation and Prevention

800 Independence Avenue SW
Washington DC 20591

FEB 28 2011

David Lawrence
National Transportation Safety Board (NTSB), AS-30
490 L'Enfant Plaza East, SW
Washington, DC 20594

Dear Mr. Lawrence:

The Federal Aviation Administration (FAA) Flight Standards Service, in response to your accident investigation information support requests 11.016 and 11.067, is providing a response that encompasses both requests in support of the NTSB investigation of the United Parcel Service accident that occurred on September 3, 2010, in Dubai, United Arab Emirates. Specifically you asked:

NTSB 11-016:

1. Request a history of, and FAA authorization of the change to the UPS Boeing 747-400 Main Deck Fire checklist from the original FAA approved AFM version to the current UPS version that added procedure to turn the pack switches to off after the cargo fire switch was depressed.
2. Request the results of the analysis, documentation, and validation (as defined by FAA 8900.1, Section 5 paragraph I) that authorized the change of the UPS Boeing 747-400 Main Deck Fire checklist from the version in the FAA approved AFM to the version used by UPS, specifically the change that added the step to turn the pack switches to off after the cargo fire switch was depressed.

NTSB 11-067: The NTSB requested the following information:

1. Request a history of, and FAA (AEG/ACO) authorization of the change to the Boeing 747-400 Main Deck Fire checklist from the original FAA approved AFM version to the current version that added the procedure to turn the pack switches to off after the cargo fire switch was depressed.

2. Request the AEG/ACO results of the analysis, documentation, and validation (as defined by FAA 8900.1, Section 5, paragraph I) that authorized the change of the Boeing 747-400 Main Deck Fire checklist from the version in the FAA approved AFM to the current version, specifically the change that added the step to turn the pack switches to off after the cargo fire switch was depressed.

FAA Response:

The Flight Standards Service, Air Transportation Division (AFS-200) contacted the Seattle Aircraft Evaluation Group (AEG), the Central Region Air Carrier-Technical Support Branch (ACE-240), and the UPS Certificate Management Office (CMO) to assist in providing a response to the NTSB's request.

The UPS CMO and ACE-240 indicated there has been no change to the B747-400 Main Deck Fire checklist since the aircraft was brought onto the UPS certificate. The Seattle AEG also indicated there has been no change to the Boeing AFM as far as actual steps in the procedure. The only thing that has been revised is the verbiage to assist in international user understanding of the procedure.

The NTSB IIC provided copies of the documents in question. The concern is over the Boeing AFM which appears to lack the step of turning the pack switches to the off position. An excerpt from the Boeing 747 AFM Non-Normal Procedures is copied below followed by an explanation for the difference between the AFM and the UPS checklist.

FIRE MAIN DECK (Class E compartments)

Upon detection of fire or smoke on the main deck use the following procedure:

Oxygen masks and regulators – ON 100%
 Smoke goggles (if required) – ON
 Supernumerary oxygen switch (if required) – ON
 Crew communications – ESTABLISH
ARM switch to main deck – Depress *[emphasis added]*
 DISCH/DEPRESS switch - Depress

Climb or descend, as required, to obtain 25,000 feet pressure altitude.

Land at the nearest suitable airport.

The Non-Normal Procedure copied above indicates all of the necessary steps in responding to a Class E main deck fire. We agree it does not match the checklist exactly. When the bolded step above is completed, the system shuts down two packs automatically by closing the valves and respective PACK EICAS messages are displayed to the pilots. The step that follows the bolded step in the UPS Quick Reference Handbook mirrors the step in the Boeing 747 Flight Crew Operations Manual, which directs the pilots to turn the pack control

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selectors noted on the EICAS to off. This step is in the checklist for the purpose of moving the switch position to match the valve position, which changed with the previous step. The procedure to shut down two packs has always been a part of the Class E Main Deck Fire checklist for the B747-400.

If you require additional information, please contact Ms. Kimberly Burtch, Accident Investigation Division, [REDACTED]

Sincerely,

[REDACTED]

B. Hooper Harris
Manager, Accident Investigation Division