



# ALOFT AeroArchitects CUSTOMER SERVICE NEWSLETTER

**ALOFT AeroArchitects** offers a number of Product Improvements for the PATS Aircraft, LLC Auxiliary Fuel System. Following are details on several Product Improvement Service Bulletins which are available for installation on your aircraft. We hope you find these articles informative and an aid to your 2016 / 2017 maintenance planning. Please contact ALOFT AeroArchitects Customer Service with any questions or for SB Kit pricing.

## PRODUCT IMPROVEMENT - FWD AUXILIARY FUEL SYSTEM FUEL SUMP AND SHROUD HOSE ASSEMBLY REPLACEMENT

These Service Bulletins introduce a new, more durable Teflon Fuel Sump and Shroud Hose Assembly. This is a Product Improvement for B737-700IGW/-800 aircraft equipped with an Auxiliary Fuel System (AFS) installed by PATS Aircraft, LLC under STC's ST00936NY, ST01716NY, ST01384NY and ST01713NY. This Hose Assembly is located in the Air Conditioning Bay at STA 540, WL 127.00 to STA 661.5. ALOFT recommends this SB should be accomplished if the time in-service for the existing hose is greater than nine years.

These Service Bulletins provide the steps required to remove the existing Hose Assembly and replace it with the new, more durable, Teflon Hose Assembly.

*Airplanes Affected:* YG001-YG088, YG090-YG098, YG099, YG111-YG128, YD401-YD410, YD412-YD419

*Applicable Service Bulletins:*

ST00936NY-28-SB-053\_IR    ST01716NY-28-SB-025\_IR  
ST01384NY-28-SB-024\_IR    ST01713NY-28-SB-019\_IR



## BARRIER BULKHEAD PANEL ASSEMBLY ACCESS COVER PLATE PRODUCT IMPROVEMENT



For 737-700IGW Aircraft equipped with a PATS Aircraft. 5-Cell Aft Tank installation under STC ST00936NY or ST01716NY, PATS has developed an Aft Bulkhead Maintenance Access Cover Product Improvement. This modification allows access to the AFT Master Fuel Cell Cabin Air Tube and Filter without disassembly of the AFT Barrier Bulkhead. This is a simple but effective product improvement to perform.

*Airplanes Affected:* YG099, YG111, YG116-YG128, YG130-YG137, YG139-YG143 with PATS Aircraft 5-Cell Auxiliary Fuel System installed.

*Applicable Service Bulletins:*

ST00936NY-53-SB-054 or ST01716NY-53-SB-027





### AFS FUELING VALVE PRODUCT IMPROVEMENT

These Service Bulletins introduce a Product Improvement for Boeing 737-700IGW aircraft with an Auxiliary Fuel System (AFS) installed under STC's ST00936NY or ST01716NY. The mini dry-bay (containment can) fuel valve (s) installed in the Mix Bay (STA 540) have a jam nut to secure the electrical connector to the can cover plate which could possibly come loose if not properly tightened. These Service Bulletins provide the steps required to install a locking mechanism and associated hardware to the fueling valve electrical connector to prevent the connector jam nut from coming loose.

#### Airplanes Affected:

All 737-700IGW aircraft equipped with PATS Aircraft, Auxiliary Fuel Cell Systems with approved configurations for STC ST00936NY or ST01716NY.

#### Applicable Service Bulletins:

- ST00936NY-28-SB-056
- ST01716NY-28-SB-029

### AUXILIARY FUEL SYSTEM INTERCONNECT GLAND PRODUCT IMPROVEMENT

These Service Bulletins introduced improved interconnect gland assemblies as a Product Improvement, for Boeing 737-700IGW, 800 and 900ER aircraft with an installed PATS Aircraft Auxiliary Fuel System (AFS) under STCs ST00936NY, ST01716NY, ST01384NY, ST01713NY and ST01725NY.

These new Auxiliary Fuel System (AFS) interconnect gland assemblies incorporate multiple changes that improve their effectiveness and ease their installation. The new interconnect gland assemblies are manufactured from an extruded material, incorporates the prod and provides a multiple bonding surface area which eliminates the need for the installation of spring clips. These features are incorporated into one assembly instead of three separate parts.

These Service Bulletins provide the steps necessary to remove the AFS Cells, install new interconnect gland assemblies, install the AFS Cells and perform any checks required to return the aircraft to service.

#### Applicable Service Bulletins:

ST00936NY-D-28-SB-042\_A      ST01716NY-D-28-SB-014\_A  
 ST01384NY-D-28-SB-015\_A      ST01713NY-D-28-SB-006\_A  
 ST01725NY-D-28-SB-007\_A



### PRODUCT IMPROVEMENT MODIFICATION TO AUXILIARY FUEL SYSTEM RS-422 DATA WIRING BETWEEN THE CAPTAIN P1-1 DISPLAY UNIT AND THE FIRST OFFICER P3-3 DISPLAY UNIT.

These Service Bulletins are a product improvement for the B737-700IGW/-800 which modifies the RS-422 data wiring between the Captain's Auxiliary Fuel System (AFS) display unit (DU) located on the P1-1 panel and the First Officer's DU located on the P3-3 panel. The Auxiliary Fuel System, installed by PATS Aircraft, under STC's ST00936NY and ST01384NY, included RS-422 data supplied from the Auxiliary Fuel Control Unit (AFCU) to each of the flight deck DUs. Redundant data was also installed from the Captain's DU to the First Officer's DU. Accomplishment of this SB is recommended to eliminate the redundant supply of RS-422 data to the First Officer display unit which has been noted to cause display flickering on some aircraft.

These Service Bulletins provide the instructions to modify (cap and stow) the existing RS-422 data wiring between the Captain and First Officer display units.

Airplanes Affected: YG044-YG059, YG065, YG085-YG088, YG090-YG098, YG101, YG102, YD401-YD410, YD413

#### Applicable Service Bulletins:

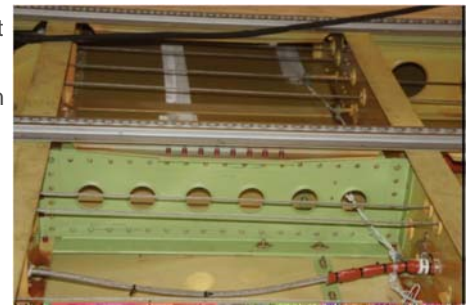
- ST00936NY-28-SB-055\_IR
- ST01384NY-28-SB-025\_IR

## Mandatory AFS Structural Modification Service Bulletins

ALOFT is repeating this article to remind those Owner/Operators who will be performing 12 year inspections in the near future of this structural modification. It is important for operators to incorporate these structural changes now, rather than be faced with a possible Mandatory Airworthiness Directive (AD) completion date at some point in the near future. During the previous Boeing Owner Operator Conference, ALOFT was asked to clarify why the AFS Barrier Bulkhead Structural Modification Service Bulletins have been classified as "Mandatory." As mentioned during the last four Boeing Owner Operator Conferences, ALOFT, in conjunction with a request from Boeing, has conducted thorough and exacting reviews of the forward and aft barrier bulkhead structural installations installed on the B737NG (BBJ) aircraft. These reviews consisted of an assessment of the forward barrier bulkhead's capability to transmit loads safely to the airframe structure during a 9G event and the forward and aft barrier bulkhead's ability to transmit these loads safely during a decompression event. Although time has proven that these are highly unlikely events on BBJ aircraft and there have been none to date, the reviews encompassed the various decompression analyses conducted over the years dating back to the original Auxiliary Fuel System certification in 1996.



Upon completion of this review, and in conjunction with thorough FAA and Boeing briefings, it was determined that a modification to the forward and aft bulkheads and closeouts is required on certain B737-700IGW/-800/-900ER aircraft. ALOFT, as the Original Equipment Manufacturer of these AFS bulkheads, deemed these structural modifications to be important. To help flag the importance of these modifications to Operators, ALOFT ODA, with FAA concurrence, issued mandatory FAA Approved Service Bulletins to provide Operators with a committed, yet extended, timeframe in which to implement these changes. Although ALOFT has specified that these Service Bulletin modifications occur during an Operator's next heavy maintenance event, if a sufficient level of voluntary Operator compliance is not evident to the FAA, it is possible the FAA may issue an Airworthiness Directive requiring the installation of these SB Kits by a specific "Mandatory Completion Date."



In most cases, these modifications will require partial removal of the AFS along with selective floorboards/interior components, thus they are best performed at the next scheduled heavy maintenance check requiring AFS and/or interior removal. Kit lead times are normally 90 days after order. To ensure parts availability, ALOFT recommends that those Operators who are scheduled for heavy maintenance checks during the next 12 to 18 months, notify ALOFT Customer Service of their upcoming maintenance schedules and downtimes. For any questions or pricing, please contact ALOFT Customer Service.

## OPTIONAL CARGO COMPARTMENT CLOSEOUT IMPROVEMENT SERVICE BULLETINS

In addition to the Mandatory AFS Structural Modifications, as a product improvement, PATS has generated optional Service Bulletin Kits which allow Operators to install the latest smoke and flammability improvements on their aircraft. These improvements have been incorporated on new AFS installations to meet current regulatory guidelines. These Service Bulletin Kits provide the necessary parts and instructions to install a more robust cargo compartment closeout assembly on aircraft equipped with PATS AFS. These improvements consist of:

- New improved rail covers and support strap
- Modification of the barrier bulkhead for new inserts
- Installation of a barrier bulkhead flame resistant fabric

For any questions or pricing, please contact PATS Customer Service for more information

# Rubber/Composite Fuel Hoses - Discontinuance

As of January 1, 2016, ALOFT no longer supplies shipsets of rubber/composite fuel hoses to our BBJ Customers.

In 2011, in response to a military research lab finding that rubber/composite fuel hoses were subject to possible failure due to material ageing and handling issues, ALOFT implemented a recommended 12 year time-change replacement interval for aircraft equipped with rubber/composite fuel hoses.

At that time, PATS developed and certified Metal-In-Metal Fuel and Vent Transfer Lines for installation on all new BBJ Auxiliary Fuel Systems and made this improvement available to existing BBJ operators as a product improvement via PATS service bulletin kits. The Metal-In-Metal design has now been in service for over four years and has already proven to be a more robust design that is stronger and lighter weight than the rubber/composite hose design. Metal-In-Metal lines are not life limited and utilize Hydra-flow fittings and standard MS O-Rings to simplify fuel line removal and installation.

As there are a large number of BBJ Operators who presently have the rubber/composite fuel hoses installed on their aircraft, PATS will continue to carry the individual fuel hoses in our Spares Inventory for the foreseeable future to help minimize the potential consequences of missed flights and/or unscheduled down time should an individual fuel hose issue develop prior to your 12 year maintenance event. We encourage operators with upcoming maintenance requirements to contact ALOFT's Sr. Vice President of Sales, John Eichten, at 302-253-6132 for their maintenance and installation quotation and additional information.



## AUXILIARY FUEL CONTROL UNIT (AFCU) DRIP PAN PRODUCT IMPROVEMENT

When released this fall, these Product Improvement Service Bulletins for ST00936NY or ST01716NY will modify those Boeing 737-700IGW aircraft equipped with a PATS Aircraft Auxiliary Fuel Cell System where the Auxiliary Fuel Control Unit (AFCU) is located in the E&E Bay (J9 Panel Location) (Door 117A).

On these aircraft, the Auxiliary Fuel Control Unit (AFCU) is at risk of being damaged from a leaking Boeing installed waste tube cap. The cap is secured above the existing Boeing drip pan; however, should the cap leak, fluid can travel along the bottom of the waste tube and drip onto the AFS AFCU.

This product improvement will install a drip pan and associated hardware to extend the existing Boeing drip pan to protect the AFCU from water and moisture damage.

### Airplanes Affected:

737-700IGW aircraft equipped with PATS Aircraft Auxiliary Fuel Cell Systems with all approved configurations of STC ST00936NY or ST01716NY, where the Auxiliary Fuel Control Unit (AFCU) is located in the E&E Bay (J9 Panel Location) (Door 117A).



To report a service difficulty and/or obtain ALOFT Technical or Spare Parts support, please contact us via one of the following methods:

### **ALOFT Customer Service/Technical Support**

#### Main Contact Numbers

Monday thru Friday: 8:00am to 4:30pm EST

Phone: 302-855-5888, 877-225-8265 (US)  
or 877-728-7278 (US)

Fax: 302-855-9196

Email: [customerservice@aloftmail.com](mailto:customerservice@aloftmail.com)

#### AOG - After Hours Support 24/7

Phone: 443-691-2966



**We hope you find this Newsletter informative and an aid to your future maintenance planning activities.**

**Please feel free to contact us directly with any additional questions you may have.**

**Best Regards,**

*Duncan Clark*

**Director, Customer Service**  
**302-253-6144**  
[duncan.clark@aloftmail.com](mailto:duncan.clark@aloftmail.com)