



United States of America  
Department of Transportation  
Federal Aviation Administration

# Supplemental Type Certificate

Number: ST01713NY

This certificate issued to: PATS Aircraft, LLC  
21652 Nanticoke Avenue  
Georgetown, DE 19947

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 25 of the Federal Aviation Regulations.

Original Product – Type Certificate Number: A16WE  
Mcng: The Boeing Company  
Mqf gn 737-800 Series

Description of Type Design Change:

Installation of Auxiliary Fuel Systems in Boeing 737-800 (BBJ2) aircraft, 25.981 amendment 25-125 Compliant.

- 1. All Configurations listed below are approved with or without Boeing Nitrogen Generations System (NGS) installed.

See Continuation Sheet 3 thru 7.

Limitations and Conditions:

- 1. This modification affects the aircraft air distribution system.

See Continuation Sheet 7 thru 9.

*This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, and revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.*

Date of application: December 20, 2005

Date reissued: February 9, 2016

Date of issuance: February 6, 2006

Date amended: January 20, 2016

*By direction of the Administrator*

Signature \_\_\_\_\_

Title James N. Olmsted  
STC ODA Administrator - ODA-955292-NE

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***Supplemental Type Certificate***

INSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAA Aircraft Certification Office of the transfer of this Supplemental Type Certificate. The FAA will reissue the certificate in the name of the transferee and forward it to him.

***Transfer Endorsement***

*Transfer the ownership of Supplemental Type Certificate Number: ST01713NY*

**To** (Name and address of transferee)

**From** (Name and address of grantor)

Extent of Authority (if licensing agreement):

*Date of transfer:*

*Signature of grantor:* \_\_\_\_\_

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Effective Date: February 9, 2016

Additional Date Reissued: January 11, 2013, November 8, 2013, January 13, 2015.

Additional Date Amended: December 18, 2007, December 04, 2008, June 11, 2009, June 29, 2009, August 25, 2010, June 6, 2011, October 11, 2012, October 19, 2012, December 5, 2013, December 20, 2013, January 9, 2015, June 18, 2015, November 24, 2015.

## Description of Type Design Change (Continued)

2. Configuration 1: Installation of a Four-Cell Auxiliary Fuel System (One Forward/ Three Aft) in the forward and aft cargo compartments in accordance with PATS Aircraft, LLC Kit Installation Drawing 5140-2811-103-103 for installations with hoses or -105 for installations with double walled tubes as listed on Master Drawing List 5140-2800-001 revision F dated October 5, 2012, or later FAA approved revision.
3. Configuration 2: Installation of a Five-Cell Auxiliary Fuel System (Five Aft) in the aft cargo compartment in accordance with PATS Aircraft, LLC. Kit Installation Drawing 5140-2811-005-103 for installations with hoses or -105 for installations with double walled tubes as listed on Master Drawing List 5140-2800-001 revision F dated October 5, 2012, or later FAA approved revision.
4. Configuration 3: Installation of a Five-Cell Auxiliary Fuel System (Two Forward/ Three Aft) in the forward and aft cargo compartments in accordance with PATS Aircraft, LLC Kit Installation Drawing 5140-2811-213-103 for installations with hoses or -105 for installations with double walled tubes as listed on Master Drawing List 5140-2800-001 revision F dated October 5 2012, or later FAA approved revision.
5. Configuration 4: Installation of a Six-Cell Auxiliary Fuel System (One Forward/ Five Aft) in the forward and aft cargo compartments in accordance with PATS Aircraft, LLC Kit Installation Drawing 5140-2811-105-103 for installations with hoses or -105 for installations with double walled tubes as listed on Master Drawing List 5140-2800-001 revision F dated October 5, 2012, or later FAA approved revision.
6. Configuration 5: Installation of a Six-Cell Auxiliary Fuel System (Two Forward/ Four Aft) in the forward and aft cargo compartments with improved structure in accordance with PATS Aircraft, LLC Kit Installation Drawing 5140-2811-214-107 as listed on Master Drawing List 5140-2800-001 revision G dated October 17, 2012, or later FAA approved revision. To obtain the Cargo Loading Limitations refer to Boeing Weight and Balance Control and Loading Manual and PATS Aircraft Flight Manual Supplement AFMS-ST01713NY-F-35 Section 1 - Limitations 6a applicable to aircraft S/N 60406 and prior serial numbers for 737-800 Aircraft.
7. Configuration 6: Installation of a Six-Cell Auxiliary Fuel System (One Forward/ Five Aft) in the forward and aft cargo compartments with improved structure in accordance with PATS Aircraft, LLC Kit Installation Drawing 5140-2811-105-107 as listed on Master Drawing List 5140-2800-001 revision F dated October 5, 2012, or later FAA approved revision.

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## Description of Type Design Change (Continued)

8. Configuration 7: Installation of double walled metal tubes per PATS Aircraft, LLC Master Drawing List No. 5140-2800-001, Rev. F, dated October, 5, 2012, Service Bulletin ST01713NY-D -28-SB-004\_A dated October 5, 2012, or later FAA approved revision converts an aircraft that has been previously modified by installation of Configuration 1, 2, 3, or 4 (i.e. the installation of an auxiliary fuel system with hoses) of this STC to Configuration 7 of this STC (i.e. installation with double walled tube assemblies) respectively. There is no change to configuration AFMS.
9. Configuration 8: Installation of a Five-Cell Auxiliary Fuel System (Five Aft) in the aft cargo compartment and zero tanks in the forward compartment with structural modifications and fuel plumbing provisions in accordance with PATS Aircraft, LLC. Kit Installation Drawing 5140-2811-005-103 for installations with hoses on Master Drawing List 5140-2800-001 revision H dated August 15, 2013, or later FAA approved revision.
10. Configuration 9: Installation of a Seven-Cell Auxiliary Fuel System (Two Forward, Five Aft) in the forward and aft cargo compartments with improved structure in accordance with PATS Aircraft, LLC. Kit Installation Drawing 5140-2811-215-107 for installations with MIM Tubes on Master Drawing List 5140-2800-001 revision J dated October 14, 2013, or later FAA approved revision.
11. Configuration 10: Conversion of a BBJ2 737-800 from a 2 Fwd, 3 Aft Auxiliary Fuel System (AFS) Configuration to a 0 Fwd, 0 Aft AFS Configuration without provisions per PATS Aircraft, LLC documents Structural De-Modification Instructions Report TO-2925 revision B dated May 19, 2014, System Removal Instructions Report TO-5342 revision A dated May 15, 2014, Deactivation & Removal of AFS Electrical Components & Wiring Report TO-5343 revision A dated May 19, 2013, and Master Data List (Removal) 7278-0001-MDL revision IR dated May 20, 2014, or later FAA approved revisions.
12. Configuration 11: Installation of an Six-Cell ((Two Forward, Four Aft) Auxiliary Fuel System in the forward and aft cargo compartment in accordance with PATS Aircraft Master Drawing List 5140-2800-001 revision M dated Nov. 4, 2015, including 6-Tank System Kit Installation Drawing 6873-2811-100-133 for double-walled metal tubes on new installations, or later FAA approved revision. To obtain the Cargo Loading Limitations refer to Boeing Weight & Balance Control and Loading Manual and PATS Aircraft Flight Manual Supplement AFMS-ST01713NY-F-24 Section 1 - Limitations Table 6b applicable to aircraft S/N 61040 and subsequent installations after May 18, 2015 on 737-800 Aircraft.

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## Description of Type Design Change (Continued)

13. Configuration 12: Installation of a Three-Cell (One Forward, Two Aft) Auxiliary Fuel System in the forward and aft cargo compartment in accordance with PATS Aircraft Master Drawing List No. 5140-2800-001, Rev. L dated Oct. 26, 2015, including 3-Tank System Kit Installation Drawing 6873-2811-100-111 for double walled metal tubes on new installations, or later FAA approved revision. To obtain the Cargo Loading Limitations refer to Boeing Weight and Balance Control and Loading Manual and PATS Aircraft Flight Manual Supplement AFMS-ST1713NY-F-12 Section 1 - Limitations Table 6 applicable to aircraft S/N 40277 and subsequent installations after January 13, 2016 on 737-800 Aircraft.

*Aircraft Flight Manual Flight Manual Supplements applicable to Configurations 1, 2, 3, 4, 5, 6, 8, 9, 10 & 11.*

1. PATS Aircraft, LLC. Airplane Flight Manual Supplement No. 132 for a Four-Cell (1 Fwd/3 Aft) Auxiliary Fuel System, FAA approved revision IR dated February 6, 2006, or later FAA approve revision, is require with Configuration 1.
2. PATS Aircraft, LLC. Airplane Flight Manual Supplement No. 141 for a Five-Cell (5 Aft) Auxiliary Fuel System, FAA approved revision IR dated December 18, 2007, or later FAA approved revision, is required with Configuration 2.
3. PATS Aircraft, LLC. Airplane Flight Manual Supplement No. AFMS-ST01713NY-F-23 for a Five-Cell (2 Fwd/3 Aft) Auxiliary Fuel System, FAA approved revision IR dated Nov. 24, 2015, or later FAA approved revision, is required with Configuration 3.
4. PATS Aircraft, LLC. Airplane Flight Manual Supplement No. 218 for a Six-Cell (1 Fwd/ 5Aft) Auxiliary Fuel System, FAA approved revision IR dated June 11, 2009, or later FAA approved revision, is required with Configuration 4.
5. PATS Aircraft, LLC. Airplane Flight Manual Supplement No. AFMS-ST01713NY-F-24 for a Six-Cell (2 Fwd/4 Aft) Auxiliary Fuel System, FAA approved revision IR dated Nov. 24, 2015, or later FAA approved revision, is required with Configuration 5.

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Description of Type Design Change : (Continued)

*Aircraft Flight Manual Flight Manual Supplements applicable to Configurations 1, 2, 3, 4, 5, 6, 8, 9, 10 & 11 (Continued):*

6. PATS Aircraft, LLC. Airplane Flight Manual Supplement No. AFMS-ST01713NY-F-15 for a Six-Cell (1 Fwd/5Aft) Auxiliary Fuel System, FAA approved revision IR dated November 24, 2015, or later FAA approved revision, is required with Configuration 6.
7. Configuration 7 - None.
8. PATS Aircraft, LLC. Airplane Flight Manual Supplement is AFMS-ST01713NY-F-05P for a Five-Cell (0 Fwd with Provisions/ 5 Aft) Auxiliary Fuel System, FAA approved revision IR dated December 5, 2013, or later FAA approved revision, is required with Configuration 8.
9. PATS Aircraft, LLC. Airplane Flight Manual Supplement is AFMS-ST01713NY-F-25 for a Seven-Cell (2 Fwd / 5 Aft) Auxiliary Fuel System, FAA approved revision IR dated December 20, 2013, or later FAA approved revision, is required with Configuration 9.
10. PATS Aircraft, LLC. Airplane Flight Manual Supplement is AFMS-ST01713NY-F-00 for a 0 Fwd/ 0 Aft Auxiliary Fuel System, FAA approved revision IR dated January 09, 2015, or later FAA approved revision, is required with Configuration 10.
11. PATS Aircraft, LLC. Airplane Flight Manual Supplement No. AFMS-ST01713NY-F-24 for a Six-Cell (2 Fwd/4ft) Auxiliary Fuel System, FAA approved revision IR dated November 24, 2015, or later FAA approved revision, is required with Configuration 11.
12. PATS Aircraft, LLC. Airplane Flight Manual Supplement AFMS-ST01713NY-F-12 for a Three-Cell (One Forward, Two Aft) Auxiliary Fuel System Configuration, Rev. IR FAA approved January 20, 2016, or later FAA approved revision, is required with Configuration 12.

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Description of Type Design Change : (Continued)

*Instructions for Continued Airworthiness (ICA)*

1. PATS Aircraft, LLC. document TM-0667-ICAW revision M, dated September 14, 2015, or later FAA accepted revision, is required for Continued Airworthiness for all configurations.
2. The aircraft must be inspected in accordance with the FAA Approved Airworthiness Limitations and Certification Maintenance Requirements that are documented in the Maintenance Planning Data Supplement (MPDS) Number TO-1771, revision P dated September 14, 2015, or later accepted revision, along with FAA-approved AIRWORTHINESS LIMITATIONS SECTION 4 and 4A dated November 13, 2015.
3. This STC does not require revised Electrical Wiring Interconnection System (EWIS) Instructions for Continued Airworthiness (ICA) per FAA approved EWIS Analysis document TO-0365.

*Limitations and Conditions: (Continued)*

2. The installation of the auxiliary fuel tank system, installed per this supplemental type certificate, has been evaluated in accordance with AC 120-42A, paragraph (8). This installation has no adverse effect on the previously approved ETOPS capability of the type-certificated aircraft.
3. The installer must determine whether this design is compatible with previously approved modifications.
4. If the holder agrees to permit another person to use this certificate to alter a product, the holder must give the other person written evidence of that permission.
5. The Smoke Detection and Fire Suppression STC ST01184LA must be installed in aircraft equipped with configurations 1 through 6, 8, and 9 of this STC.
6. The Smoke Detection and Fire Suppression STC ST01184LA must be removed and the restoration of the forward and aft cargo fire protection equipment to the original TC configuration (Class C) accomplished for configuration 10.
7. The STC does not require a revised Electrical Wiring Interconnection System (EWIS) Instruction for Continued Airworthiness (ICA).

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Certification Basis:

*All Configurations:*

1. Based on 14 CFR §§ 21.115 and 21.101, and the FAA policy for non-significant changes in FAA Order 8110.48, the certification basis for the installation in this aircraft is as follows:

### 14CFR Part 25 Regulations

- a. The type certification basis for The Boeing Company 737-800 aircraft is shown on TCDS A16WE revision 54 dated February 2, 2015 for parts not changed or not affected by the change.
- b. The certification basis for parts changed or affected by the change since the reference date of application July YY, 2015 is based upon part 25 as amended through Amendment 25-77, with exceptions as noted in TCDS A16WE:

(1) Regulations at the amendment level in TCDS A16WE: 14 CFR:

§ 25.301, 25.303, 25.305, 25.307, 25.341, 25.365, 25.581, 25.601, 25.603, 25.605, 25.607, 25.609, 25.611, 25.613, 25.619, 25.623, 25.625, 25.671, 25.685, 25.831, 25.851, 25.857, 25.858, 25.863, 25.901, 25.903, 25.951, 25.952, 25.953, 25.954, 25.955, 25.957, 25.959, 25.963, 25.965, 25.967, 25.969, 25.971, 25.973, 25.975, 25.977, 25.979, 25.993, 25.994, 25.995, 25.997, 25.999, 25.101, 25.1183, 25.1185, 25.1301, 25.1305, 25.1309, 25.1316, 25.1321, 25.1322, 25.1337, 25.1351, 25.1553, 25.1355, 25.1357, 25.1363, 25.1381, 25.1438, 25.1501, 25.1519, 25.1529, 25.1541, 25.1543, 25.1553, 25.1555, 25.1557, 25.1581, 25.1583, 25.1587.

(2) Regulations above the amendment level in TCDS A16WE (\*= latest) 14 CFR § 25.xxx at amendment level:

25.561 at Amdt 25-64  
25.571 at Amdt 25-86\*  
25.855 at Amdt 25-93  
25.981 at Amdt 25-125\*  
25.1353 at Amdt 25-113\*  
25.1431 at Amdt 25-113\*  
25.1585 at Amdt 25-105\*

\*= Latest Amendment

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Certification Basis:(Continued)

14CFR Part 26 Regulations

2. Based on 14 CFR § 21.101(g), applicable provisions of 14 CFR part 26 are included in the certification basis. For any future Part 26 amendments, the holder of this STC must demonstrate compliance with the applicable sections. As of the issuance date of this STC, compliance has been found for the following regulations: 14 CFR § 26.11(c), 26.35, and 26.47 (Amdt No. 26-0, through 26-5):

26.11 at Amdt 26-0\*

26.35 at Amdt 26-35

26.35 at Amdt 26-3

26.47 at amendment 26-1\*

\*= Latest Amendment

...End...

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