

United States of America  
Department of Transportation -- Federal Aviation Administration  
**Supplemental Type Certificate**

*Number* ST03045CH

*This certificate issued to* AAR Aircraft Services  
2825 W Perimeter Road  
Indianapolis, IN 48241

*certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 25 of the Federal Aviation Regulations.* (See Page 3 of 3 for complete certification basis.)

*Original Product - Type Certificate Number :* A20WE  
*Make :* The Boeing Company  
*Model :* 747-400 Series; 747-400F Series

*Description of Type Design Change:*

Crew and Supernumerary Oxygen System Modification in accordance with AAR Aircraft Services Master Data List, Doc. No. ERP 11-026, Revision D, dated July 9, 2012, or later FAA approved revision.

*Limitations and Conditions:*

- 1) The installer must determine whether this design change is compatible with previously approved modifications.
- 2) FAA Approved Airplane Flight Manual Supplement, AAR Aircraft Services Doc. No. ERP 11-031, Revision IR, approved February 8, 2012, or AAR Aircraft Services Doc. No. ERP 11-042, Revision IR, approved July 11, 2012, as applicable, or later FAA approved revision is required as part of this STC.
- 3) 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.

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

*Date of application:* December 20, 2011

*Date reissued:*

*Date of issuance:* February 8, 2012

*Date amended:* July 12, 2012



*By direction of the Administrator*

(Signature)

Adrian P. Honer  
ODA Administrator  
Envoy Aerospace, LLC ODA-831240-CE

(Title)

United States of America  
Department of Transportation - Federal Aviation Administration  
**Supplemental Type Certificate**  
(Continuation Sheet)

*Number* ST03045CH

*Date of issuance:* February 8, 2012

*Date amended:* July 12, 2012

*Certification Basis:* (continued)

The certification basis for the changed Boeing 747-400, -400F Series aircraft as described in this certificate is as follows:

- a. The type certification basis for the Boeing 747-400, -400F Series aircraft is shown on TCDS A20WE for parts not changed or not affected by this change.
- b. The certification basis for the parts changed or affected by this change since the reference date of application, December 20, 2011, is shown on TCDS A20WE. In addition, the applicant has complied with 14 CFR Part 25 as amended by Amendment 25-119 and 14 CFR Part 26 amended by Amendment 26-1.

**14 CFR Part 25 Regulations at the latest amendment 25-0 through 25-119**

25.29(a)-(b); 25.301(a)-(b); 25.303; 25.305(a)-(b); 25.307(a); 25.561(c)-(d); 25.571(a)-(b); 25.601; 25.603(a)-(c); 25.605(a); 25.609(a)-(b); 25.611; 25.613(a)-(b); 25.619 (a)-(c); 25.625(a); 25.785; 25.789(a); 25.791; 25.803(a); 25.807; 25.809; 25.810; 25.811; 25.812; 25.813; 25.815; 25.817; 25.853(a); 25.869(a), (c); 25.981(a); 25.1301(a)-(d); 25.1307(c); 25.1309(a)-(d), (g); 25.1351(a); 25.1353(a), (b), (d); 25.1357(a), (c), (d); 25.1431(a)-(d); 25.1441(a)-(d); 25.1443(b)-(c); 25.1445(a); 25.1447(a)-(c); 25.1449; 25.1453; 25.1501(a)-(b); 25.1529; 25.1581(a)-(b), (d); 25.1585(a)-(b).

**14 CFR Part 26 Regulations**

Based on 14 CFR § 21.101(g), applicable provisions of 14 CFR Part 26 are included in the certification basis. For any future 14 CFR Part 26 amendments, the holder of this STC must demonstrate compliance with the applicable sections. As of the latest amendment date of this STC, compliance has been found for the following regulations: 14 CFR §§ 26.11(c) [Amdt. No. 26-0]; 26.47(c) [Amdt. No. 26-1].

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