

United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number ST00181SE

This certificate, issued to

Ontic Engineering and Manufacturing
20400 Plummer Street
Chatsworth, CA 91311

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: A20WE

Make: Boeing

Model: 747-100 Series, -200 Series, -300 Series, 747SP Series and 747 SR Series

Description of the Type Design Change: Installation of Model 4033, 4034, and 4038 Transient Suppression Units on Boeing 747 Classic Airplanes fitted with Smiths digital fuel gauging systems in accordance with Smiths Industries Document No. 0121-ED, "Supplemental Type Certificate, Top Level Drawing", Revision D, dated April 11, 2000, or later Federal aviation Administration (FAA) approved revision.

Limitations and Conditions: Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated, unless it is determined that the relationship between this change and those previously approved modifications will introduce no adverse effect on the airworthiness of airplane. A copy of this certificate shall be maintained as a part of the permanent records for the modified aircraft. Modified aircraft shall be maintained in accordance with the instructions and limitations of GE Aviation Document No. 0193-ED "Installation of Transient Suppression Units Instructions for Continued Airworthiness Supplement, Chapter 28, Fuel", Revision A, dated October 4, 2011, or later FAA-accepted revision. Changes to the Airworthiness Limitations/Certificate Management Requirement section of the GE Aviation Document No. 0193-ED require prior approval of the FAA Aircraft Certification Office.

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: February 26, 1999

Date reissued: March 29, 2012; February 14, 2014

Date of issuance: June 26, 2000

Date amended: 11/29/00; 12/26/13



By direction of the Administrator

(Signature)

Steven L. Lardinois
Manager, Systems and Flight Test Branch
Chicago Aircraft Certification Office

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.