

Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number **ST00080SE***This certificate, issued to:***Aviation Partners Incorporated
7299 Perimeter Road South
Seattle, WA 98108-3806**

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.

| | |
|--|---|
| <i>Original Product Type Certificate Number:</i> | A12EA |
| <i>Make:</i> | Gulfstream Aerospace Corporation |
| <i>Model:</i> | G-1159 |

Description of the Type Design Change: Installation of winglets, revised vortex generator shape, addition of 6 vortilons, removal of the wing fences, and related changes to the navigation/position lights. The manufacturing and installation of the components are to be accomplished in accordance with the FAA approved Aviation Partners Master Drawing List FAA077. Revision 2 or later FAA approved revision.

Limitations and Conditions: The limitations and conditions of Type Certificate TC A12EA apply except as outlined in Pages 2 and 3 of this STC. A copy of this Certificate must be included in the permanent records of each aircraft modified in accordance with this STC. Approval of this change in type design applies to the Gulfstream G-1159 (GII) aircraft that are otherwise unmodified. (See Continuation Sheet).

Limitations and Conditions continued on page 3.

This certificate and the supporting data which are 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.

| | |
|-----------------------------|-----------------------|
| <i>Date of application:</i> | May 1, 1990 |
| <i>Date of issuance:</i> | April 22, 1994 |

| | |
|-----------------------|---|
| <i>Date reissued:</i> | April 20, 2010 |
| <i>Date amended:</i> | November 2, 1994 November 29, 1994 |

By direction of the Administrator



(Signature)

Acting Manager, Seattle Aircraft Certification Office
(Title)

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

Supplemental Type Certificate

(Continuation Sheet)

Number **ST00080SE**

Limitations and Conditions (continued):

This approval should not be extended to aircraft of this model on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in the type design, will introduce no adverse effect upon the airworthiness of the aircraft.

Engines: 2 Rolls Royce Spey RB (163-25) 511-8 Type E2EU

Airspeed Limits: $V_{mo} = 340 \text{ CAS}/M_{mo} = 0.85$

For other airspeed limits, see the FAA approved Flight Manual.

C.G. Range: See Type Certificate Data Sheet A12EA.

Maximum Weights: See Type Certificate Data Sheet A12EA.

Eligible Serial Numbers: S/N 1 through 258, except not including S/N 249 and 252, and not including those aircraft modified by Aircraft Service Change 200 or 300.

Operational Requirements: The inspections and maintenance detailed in the Aviation Partners document AP-084-C, "Maintenance and Inspection document: GII Performance Enhancement System," are essential to Gulfstream G-1159 (GII) aircraft modified in accordance with this STC.

The Federal Aviation Regulations (FAR) 21.50 requires that maintenance procedures for continued airworthiness (maintenance & inspection program), as applicable to this change in type design be made available to the U.S. operators and their regulatory authority at the time the aircraft is returned to service.

United States of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate
(Continuation Sheet)
Number **ST00080SE**

Certification Basis:

For unmodified systems and structures, the same as shown on Type Certificate Data Sheet A12EA for the Gulfstream G-1159 (GII). For new or extensively modified systems or structures, the same as shown on Type Certificate Data Sheet A12EA for the G-1159 except the following additional rules apply:

FEDERAL AVIATION REGULATION PART 25 – AIRWORTHINESS STANDARDS:

Part 25 Appendix G – Gust Loads
Section 25.581, Amendment 25-23 – Lightning

Note 1: The airplane operation must be in accordance with the FAA approved Aviation Partners Airplane Flight Manual (AFM) Supplement AP-200. All placards required in either the FAA approved AFM Supplement, the applicable operating rules or the certification basis must be installed on the airplane

Note 2: Incorporation of this modification does not increase the noise level of the aircraft

Note 3: The service life of the wing is not increased due to the installation of winglets. The following parts are life limited in the Gulfstream GII maintenance manual and must be retired (scrapped) 20,000 flight hours after the installation of the part, not on the installation of the winglet:

Part Number

1159WM20000 Cover, Wing, Upper Forward Plank
1159WM20001 Cover, Wing, Upper Aft Plank
1159WM20002 Cover, Wing, Lower Forward Plank

Note 4: The service life of the winglet components is contained in Aviation Partners document AP-116-C, "G-II Winglet Fatigue Substantiation."

----- **END** -----

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