

**Exemption No. 8701**

**UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

**Gulfstream Aerospace Corporation**

for an exemption from §§ 25.807(g)(1),  
25.807(i)(1), and 25.809(a) of Title 14, Code  
of Federal Regulations

**Regulatory Docket No. FAA-2005-21914**

**GRANT OF EXEMPTION**

By letter dated June 2, 2005, Mr. Richard J. Trusis, Director – Airworthiness/Certification & Data Management, Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, Georgia, 31402-2206, petitioned for an exemption from Title 14, Code of Federal Regulations (14 CFR) 25.807(g)(1), 25.807(i)(1) and 25.809(a).

The requested exemption, if granted, would permit relief from the requirements of these regulations to allow carriage of six non-crewmembers (commonly referred to as supernumeraries) on Gulfstream Model GV-SP (G550) airplanes which have been converted from a passenger to a Compact Airborne Early Warning (CAEW) configuration.

**The petitioner requests relief from the following regulations:**

**Section 25.807(g)(1)**, Amendment 25-94, requires that in airplanes having a passenger seating configuration of 1 to 9 seats, there must be at least one Type IV or larger overwing exit in each side of the fuselage.

**Section 25.807(i)(1)**, Amendment 25-94, requires that airplanes having a passenger seating configuration of 1 to 9 seats must have at least one exit above the waterline in each side of the airplane, meeting at least the dimensions of a Type IV exit.

**Section 25.809(a)**, Amendment 25-94, requires, in part, that each emergency exit, including a flight crew emergency exit, must be a movable door or hatch in the external walls of the fuselage, allowing unobstructed opening to the outside.

**The petitioner's supports its request with the following information:**

Gulfstream Aerospace Corporation petitions for an exemption that is necessary to facilitate the construction and installation of large external fairings and interior equipment. Specifically, relief is sought from 14 CFR 25.807(g)(1) with regard to emergency exit requirements, 25.807(i)(1) with regard to ditching, and 25.809(a) with regard to planned external hatches over the existing emergency exits.

“By their size and shape the CAEW external fairings will cover the existing emergency exits. The two forward emergency exits will be blocked and disabled. The remaining two rear emergency exits will remain undisturbed and functional, except for the addition of external hatches necessitated by the described fairings by which egress may be made once the existing emergency exit is actuated.

“The provisions of this modification have only a military application and only trained and dedicated personnel will be allowed on the aircraft during operation.

**“PUBLIC INTEREST STATEMENT**

“The modified Gulfstream GV-SP (G-550) will be used exclusively as a military aircraft. The crew will consist of trained military personnel who are skilled and familiar with the operation and procedures of this aircraft. The modified airplane is intended only for specialized military use with occupancy limited to 8 total (2 flightcrew, 6 supernumeraries). The general public will not have access to this airplane.

“The CAEW version of the Gulfstream GV-SP (G-550) airplane enhances national and international security by supporting the intelligence gathering, command, and control requirements relating to combat areas and border surveillance. The general public will not be allowed access to the modified airplane.”

The grant of exemption requested is identical to the grant issued on 3 December 2004 (Exemption # 8453).The same need of exemption continues to exist and undue delay could adversely impact the timely entry to service of the modified aircraft.

**FACTORS SUPPORTING THE PETITION**

“Originally certified for 19 passengers as a transport category airplane, the CAEW version of the Gulfstream GV-SP (G-550) airplane will be limited to the specialized service here described and occupied by a total of not more than eight

persons: two flightcrew and six supernumeraries who are appropriately selected and trained. The aircraft will not be operated for commercial purposes or offered for common carriage.

“The forward two emergency exits will be disabled and the remaining two rear emergency exits will remain functional and undisturbed except for the addition of external fairing hatches by which egress is facilitated once the existing emergency exit is actuated.

“The external hatches will be operable from the interior or exterior of the airplane and a means of access to the existing original emergency exit external release will still be provided. The external hatches necessitate an exemption from § 25.809(a) since they impact the obstruction criteria relating to the existing functional emergency exits. The external hatches will be designed to meet the requirements of a Type IV exit as stipulated in Exemption 8453.”

“Appropriate operational requirements and/or limitations are to be employed, with items number 1 through 4 being incorporated into the limitations section of the Airplane Flight Manual (AFM):

“1. The airplane is to be operated for government use only. The government use operation is intended to include the specific ‘military like’ mission activity and any associated training, maintenance and ferry flights. The specific modifications of this airplane interior and exterior are appropriate only for flights related to the specific mission. The airplane may not be used in common carriage or for hire operations.

“2. All crewmembers and supernumeraries are trained regarding the operation of the emergency exit and the external fairing hatch. This petitioner’s proposed training must be acceptable to the FAA Aircraft Certification Office as part of the Supplemental Type Certificate process.

“3. Occupancy in the airplane is restricted to a minimum of two crew, and maximum of six supernumeraries (maximum of eight occupants total). It must be demonstrated with the interior arrangement installed, or an acceptable mock-up that occupants representing the 5th percentile female and the 95th percentile male can open and egress through the over wing elliptical and external fairing hatch exits.

“4. The pilot in command must make the determination that all occupants can operate and egress through the over wing elliptical and external fairing hatch exits prior to each flight.

“5. The design of the external fairing hatch exits must meet the requirements of the Type IV exit and include an adequate viewing window so the airplane

occupants can assess the external conditions, such as a fire, and make a determination of the most appropriate exit to use in the event of evacuation.

“6. The interior arrangement must not interfere with the access to and use of the emergency exits.”

### **The FAA’s public comment determination**

The FAA has determined that good cause exists for waiving the requirement for Federal Register publication. Any delay in acting on this petition would be detrimental to the Gulfstream Aerospace Corporation.

### **The FAA's analysis/summary is as follows:**

Supporting the CAEW Gulfstream GV-SP variant aircraft is considered to be in the public interest for reasons of national and international security. Airborne Early Warning, Command and Control (AEWC&C) systems provide real-time intelligence and command and control needed to achieve and maintain air superiority over a combat area and to enable surveillance of borders in peacetime.

There will be minimal effect on the flying public because the airplane may not be used in common carriage or for hire operations.

This petition is for the same project the FAA issued a partial grant of exemption on 3 December 2004. The same need of exemption continues to exist and undue delay could adversely impact the timely entry to service of the modified aircraft.

The addition of the external fairing hatches is not in compliance with § 25.809(a), which requires an unobstructed opening to the outside. We consider the external fairing hatch to be an exit. The hatch must meet the requirements of an exit. We do not consider the external fairing hatch exits to be acceptable for commercial operations. The FAA considers the proposed external fairing hatch exits acceptable for a government use purpose, provided the limitations below are followed.

The certification regulations for transport category airplanes address airplane occupants as being either “crew” or “passengers.” Due to differences in training, physical capabilities, and other factors (such as familiarity with the airplane), the means required by part 25 to address emergency evacuation and emergency equipment differ for passengers and crewmembers.

Because supernumeraries are not crewmembers, they must be considered “passengers” by default, with respect to part 25. However, supernumeraries do hold a special status because of their training and other factors. The FAA has granted exemptions to allow the carriage of supernumeraries on cargo airplanes. The conditions have varied, depending on the airplane design, the nature of the proposals under consideration, and the number and location of persons to be carried. We view the unique government use operation of

this airplane as similar to a cargo operation and therefore accept using supernumeraries as part of this configuration.

The FAA recognizes that supernumeraries, as opposed to passengers, may be selected and trained appropriately in the use of emergency exit operation. The FAA considers that the petitioner's proposed training of the elliptical and external fairing hatch emergency exit operation, once FAA approved, will provide an adequate level of safety to supernumeraries for the petitioner's airplane configuration.

**The FAA's decision**

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. §§ 40113 and 44701, delegated to me by the Administrator, Gulfstream Aerospace Corporation is granted an exemption, as explained below, from the following sections of 14 CFR:

Section	Amendment Level
§ 25.807(g)(1)	Amendment 25-94
§ 25.807(i)(1)	Amendment 25-94
§ 25.809(a)	Amendment 25-94

This grant of exemption will allow the carriage of up to six supernumeraries, in addition to two crewmembers, in the flight compartment of Gulfstream Model GV-SP (G550) airplanes. The Gulfstream Model GV-SP (G550) airplanes have been converted from a passenger version to a government use Compact Airborne Early Warning (CAEW) configuration. The following conditions and limitations apply. Conditions and limitations number 1 through 4 must be documented in the limitations section of the Airplane Flight Manual (AFM):

1. The airplane is operated for government use only. The government use operation is intended to include the specific 'military like' mission activity and any associated training, maintenance, and ferry flights. The specific modifications of this airplane interior and exterior are appropriate only for flights related to the specific mission. The airplane may not be used in common carriage or for hire operations.
2. All crewmembers and supernumeraries are trained regarding the operation of the emergency exit and the external fairing hatch. This petitioner's proposed training must be acceptable to the FAA Aircraft Certification Office as part of the Supplemental Type Certificate process.
3. Occupancy in the airplane is restricted to a minimum of two crew, and maximum of six supernumeraries (maximum of eight occupants total). It must be demonstrated with the interior arrangement installed, or an acceptable mock-up that occupants representing the 5<sup>th</sup> percentile female and the 95<sup>th</sup> percentile male can open and egress through the overwing elliptical and external fairing hatch exits.

4. The pilot in command must make the determination that all occupants can operate and egress through the overwing elliptical and external fairing hatch exits prior to each flight.
5. The design of the external fairing hatch exits must meet the requirements of the Type IV exit and include an adequate viewing window so the airplane occupants can assess the external conditions, such as a fire, and make a determination of the most appropriate exit to use in the event of evacuation.
6. The interior arrangement must not interfere with the access to and use of the emergency exits.

Issued in Renton, Washington, on March 30, 2006.

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Ali Bahrami  
Manager  
Transport Airplane Directorate,  
Aircraft Certification Service