

FAA STC ST02888CH

Installation of an Intermediate Gain Antenna (IGA) Sub-System on Boeing 767 Series Aircraft

OVERVIEW

- » FAA STC ST02888CH
- » Argentina Civil Aviation Administration STC 1205.19
- » Brazil Civil Aviation Administration STC 2011S01-09

Governs the installation of an intermediate gain antenna (IGA) sub-system in accordance with Electronic Cable Specialists (ECS) master data list ECS-207305.

YOUR NEEDS

Provides a standalone antenna sub-system for a future SATCOM system on Boeing 767 series aircraft.

YOUR BENEFITS

Installation of a standalone SATCOM antenna sub-system designed to support various SATCOM systems, which may be installed concurrently or separately.

STC AIRCRAFT EFFECTIVITY

- » Boeing 767-300/-300F series aircraft

STC CONFIGURATIONS & LIMITATIONS

- » **Configuration 1:** 767-300/-300F series aircraft - SATCOM antenna sub-system installation with no existing Boeing structural provisions.
- » **Configuration 2:** 767-300F series aircraft - SATCOM antenna sub-system installation with existing Boeing structural provisions.
- » **Configuration 3:** 767-300/-300F series aircraft - SATCOM antenna sub-system structural provisions installation with no existing Boeing structural provisions.

STC Limitations: The skin thickness at the SATCOM antenna installation location (frame station 977 to frame station 1021 and between stringers S-1L and S-1R) must be 0.100 +/- .005 inches. The skin thickness at the SATCOM antenna installation location (frame station 977 to frame station 1021 and between stringers S-1L and S-1R) must be 0.100 +/- .005 inches.

PRODUCT DESCRIPTION

Configuration 1: SATCOM Antenna Sub-System Installation to include the following:

- » Rockwell Collins IGA-2100B Intermediate Gain Antenna (IGA) and associated mechanical/structural mounting provisions.
- » Rockwell Collins DLNA-2100B Diplexer/Low Noise Amplifier (D/LNA) and associated mechanical/structural mounting provisions.
- » Wiring between the IGA and D/LNA.
- » Coax cable between the IGA and D/LNA

Configuration 2: Reserved for 767-300/-300F series aircraft that are delivered from Boeing with partial SATCOM wiring and antenna provisions.

Configuration 3: SATCOM IGA and D/LNA mechanical/structural provisions only.

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ELECTRICAL CHANGES

- » **Configuration 1:** New wiring and coax cables to be installed between the IGA and D/LNA
- » **Configuration 3:** None

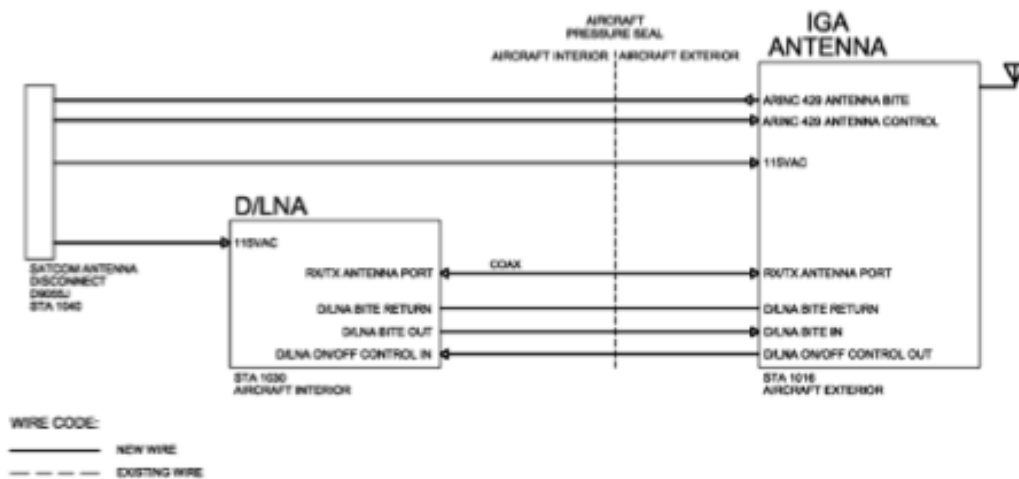


FIGURE 1:
SATCOM Antenna Sub-System
Block Diagram

MECHANICAL CHANGES

The SATCOM IGA will be installed on the top exterior of the aircraft at the over wing area. The D/LNA will be installed near the IGA on the inside of the aircraft. For aircraft with no SATCOM provisions installed, the following physical changes will be accomplished:

Configuration 1 Only: A Rockwell Collins IGA along with an antenna adapter plate and associated adapter mount fittings will be installed on the internal antenna structural provisions (see Figures 2 and 3). A Rockwell Collins Diplexer/Low Noise Amplifier (D/LNA) will be installed on the structural mounting provisions (see Figure 4).

Configuration 3 Only: A coverplate will be mounted over the top of the antenna wire access hole. Also, the external mount fittings shown in Figure 5 are not installed and closeout screws are put in the external mount fitting fuselage attachment holes.

Configurations 1 & 3: SATCOM antenna internal structural provisions will be installed between frame station 999 and frame station 1043 and between stringers S-1L and S-1R (see Figures 6 through 8). D/LNA structural mounting provisions will be installed between frame station 1021 and frame station 1043 centered under stringer S-2L (see Figure 9).

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MECHANICAL CHANGES CONT'D.

Configuration 1 Only:

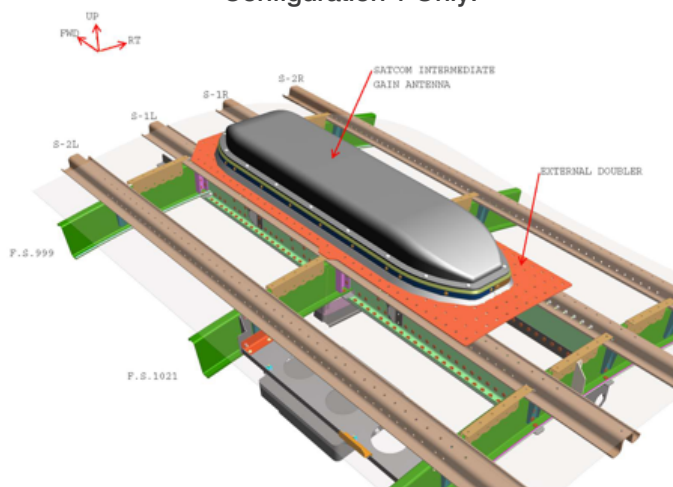


FIGURE 3:
SATCOM IGA Antenna Installation
(Aircraft Skin Removed for Clarity)

Configuration 3 Only:

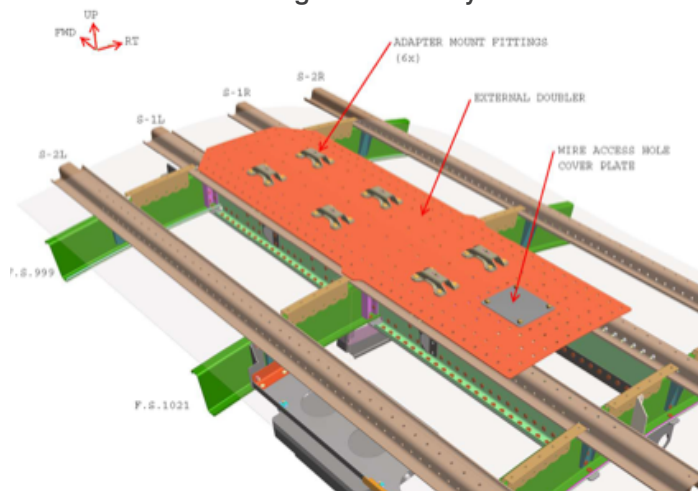


FIGURE 5:
SATCOM Adapter Plate Mounting Provisions Installation
(Antenna Adapter Plate Removed for Clarity)

Configurations 1 & 3 Only:

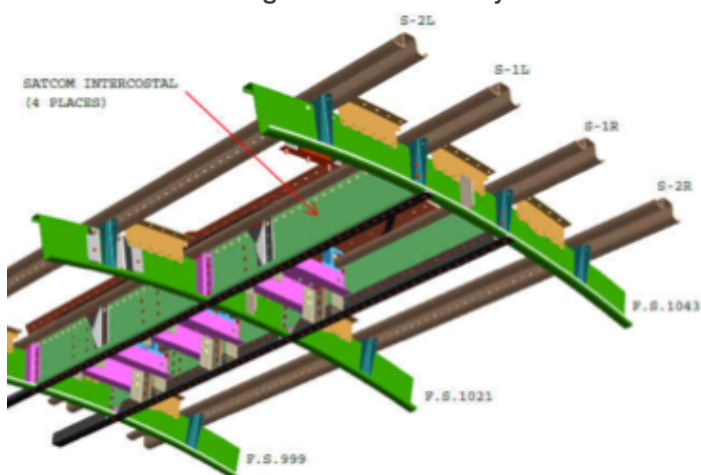


FIGURE 6:
SATCOM Adapter Plate
Internal Mounting Provisions Installation

Configurations 1 & 3 Only:

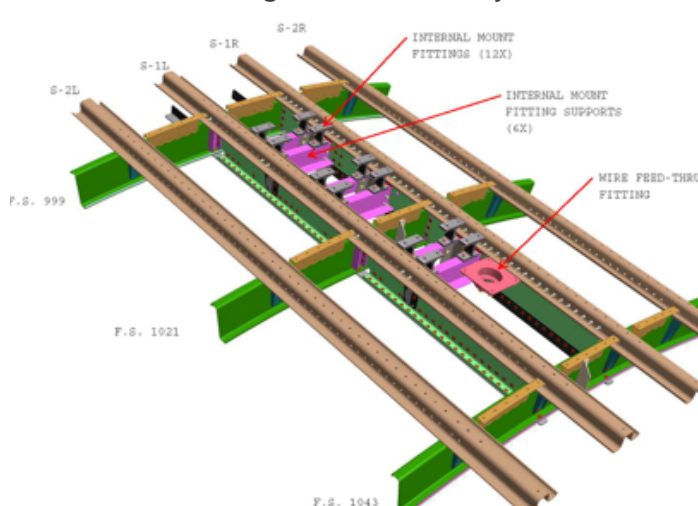


FIGURE 7:
SATCOM Adapter Plate
Internal Mounting Provisions Installation
(Aircraft Skin Removed for Clarity)

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MECHANICAL CHANGES CONT'D.

Configurations 1 & 3 Only:

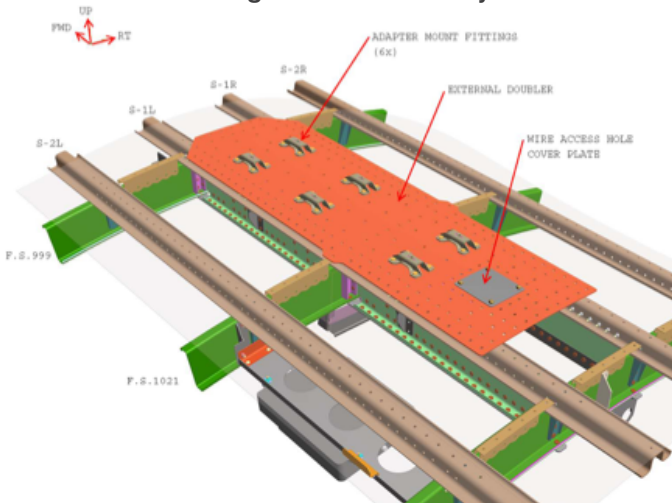


FIGURE 8:
SATCOM Adapter Plate
Internal Mounting Provisions Installation
(Antenna Adapter Plate Removed for Clarity)

Configurations 1 & 3 Only:

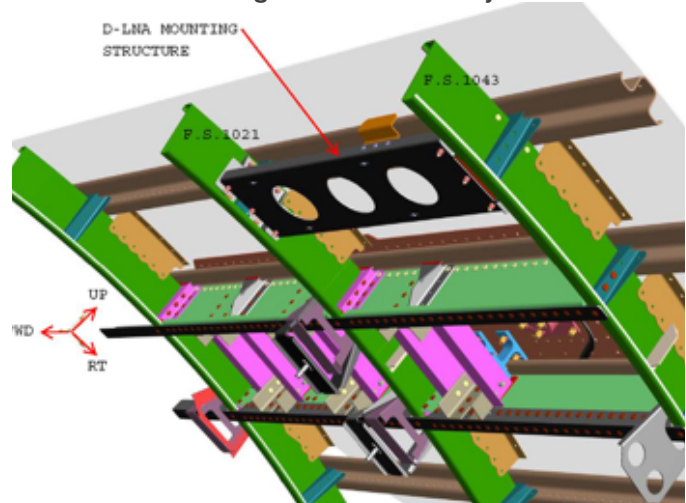


FIGURE 9:
Diplexer Low-Noise Amplifier (D/LNA)
Mounting Provisions Installation

Configuration 1 Only:

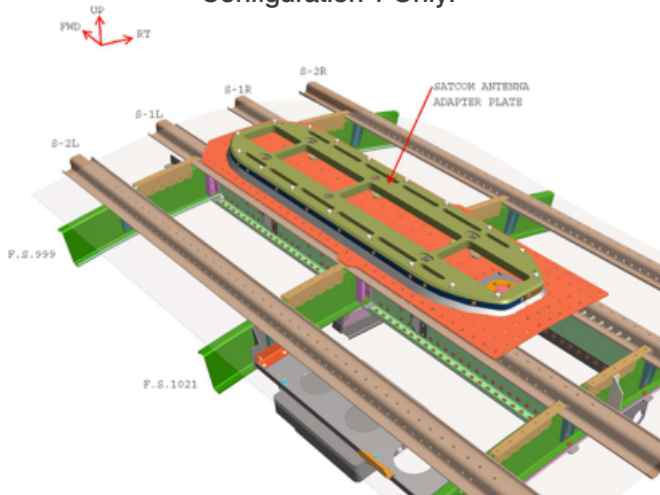


FIGURE 2:
SATCOM IGA Antenna Adapter Plate Installation
(Aircraft Skin Removed for Clarity)