

ST02888CH

FAA Supplemental Type Certificate



Installation of an Intermediate Gain Antenna (IGA) Sub-System on Boeing 767 Series Aircraft (FAA STC ST02888CH)

OVERVIEW

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

INTRODUCTION

The STCs govern 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 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.

Contact CarlisleIT for usage rights, derivative configurations, and installation lead time (800) 327-9473 • sales@carlisleit.com

STC CONFIGURATIONS

- » 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.

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.

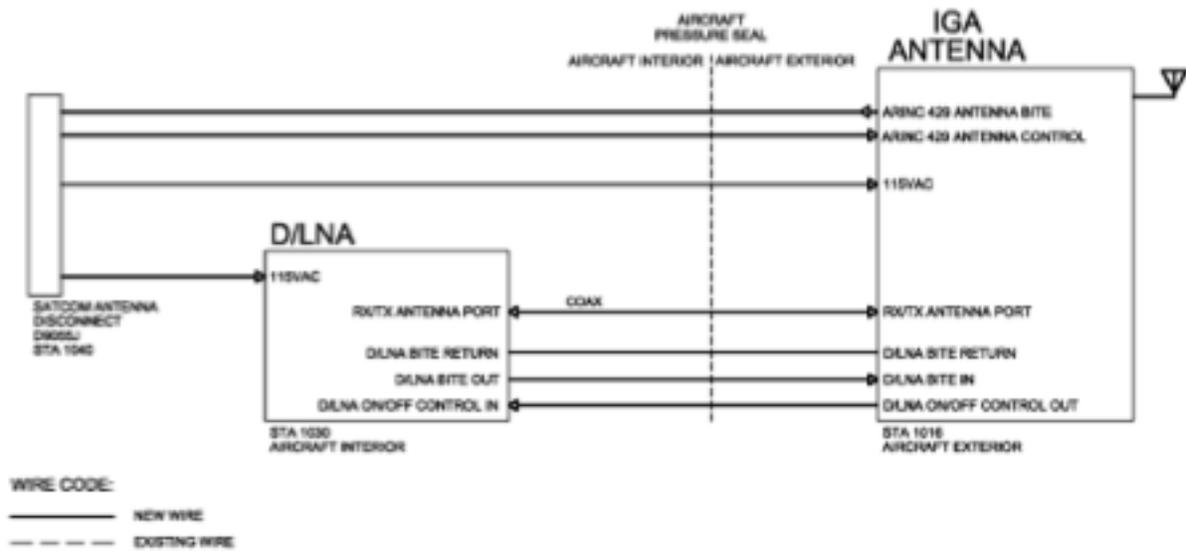


FIGURE 1 - SATCOM ANTENNA SUB-SYSTEM BLOCK DIAGRAM

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 on 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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Configuration 1 Only:

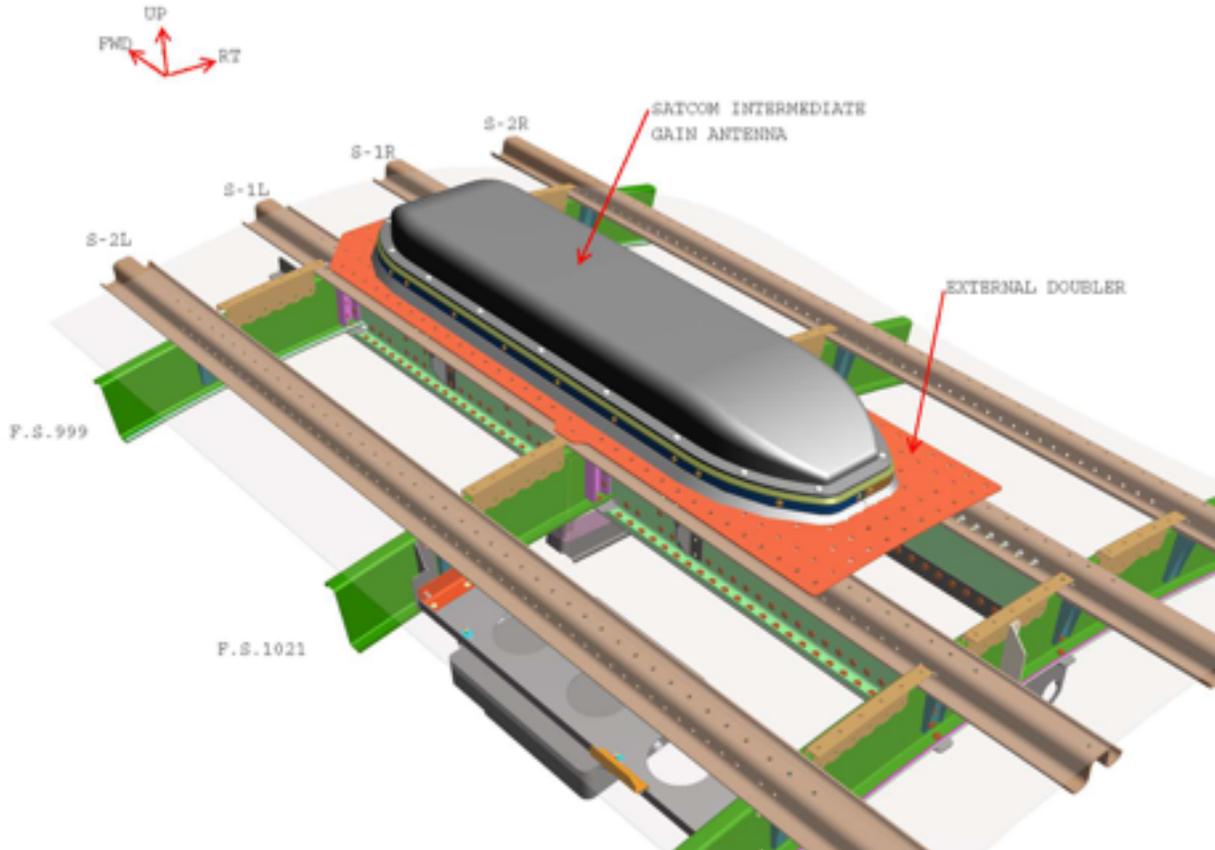


FIGURE 3 – SATCOM IGA ANTENNA INSTALLATION
(AIRCRAFT SKIN REMOVED FOR CLARITY)

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Configuration 3 Only:

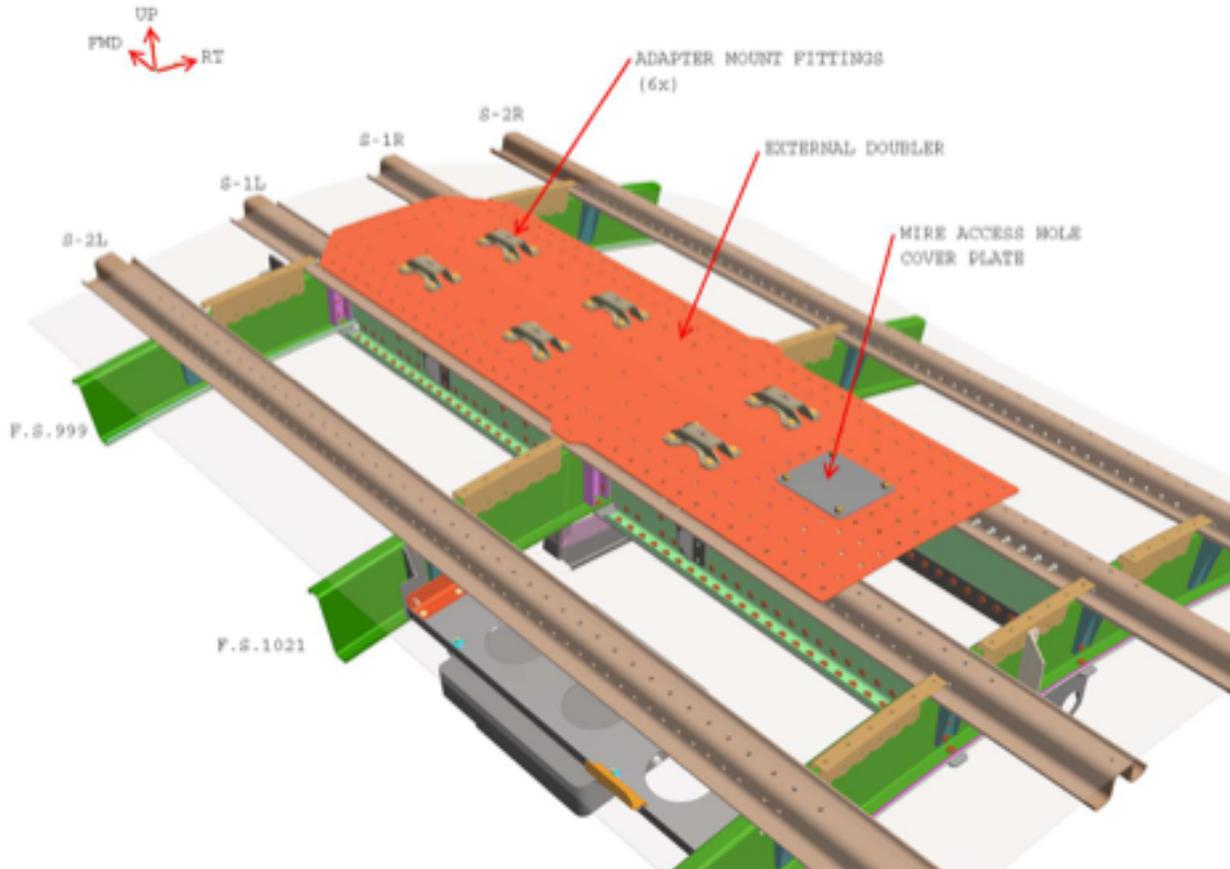


FIGURE 5 – SATCOM ADAPTER PLATE MOUNTING PROVISIONS INSTALLATION
(ANTENNA ADAPTER PLATE REMOVED FOR CLARITY)

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Configurations 1 & 3 Only:

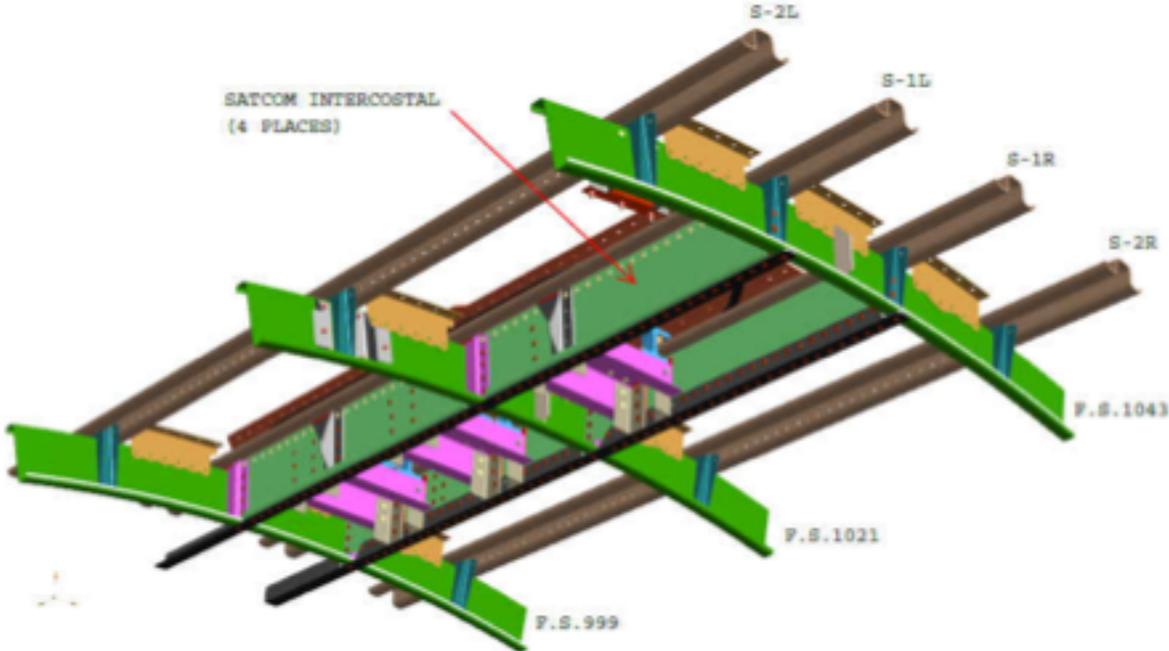


FIGURE 6 – SATCOM ADAPTER PLATE INTERNAL MOUNTING PROVISIONS INSTALLATION

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Configurations 1 & 3 Only:

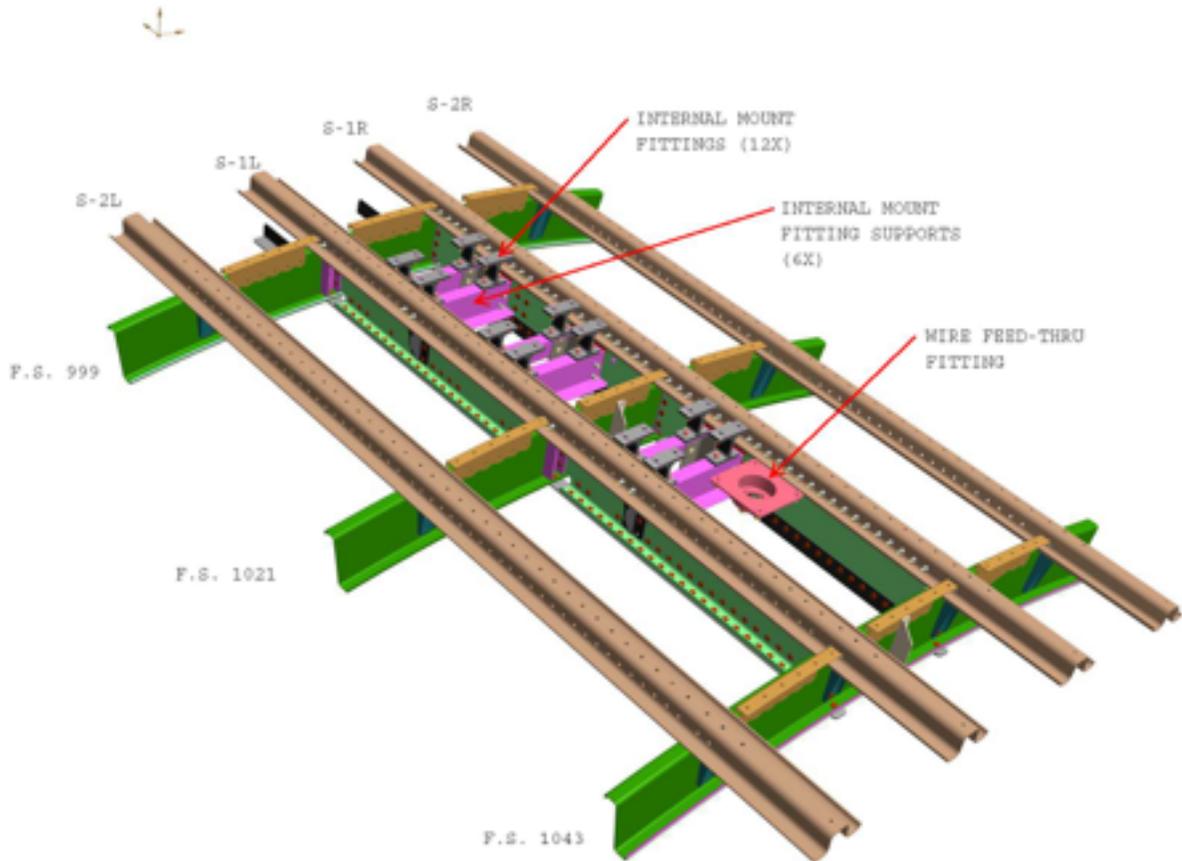


FIGURE 7 – SATCOM ADAPTER PLATE INTERNAL MOUNTING PROVISIONS INSTALLATION
(AIRCRAFT SKIN REMOVED FOR CLARITY)

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Configurations 1 & 3 Only:

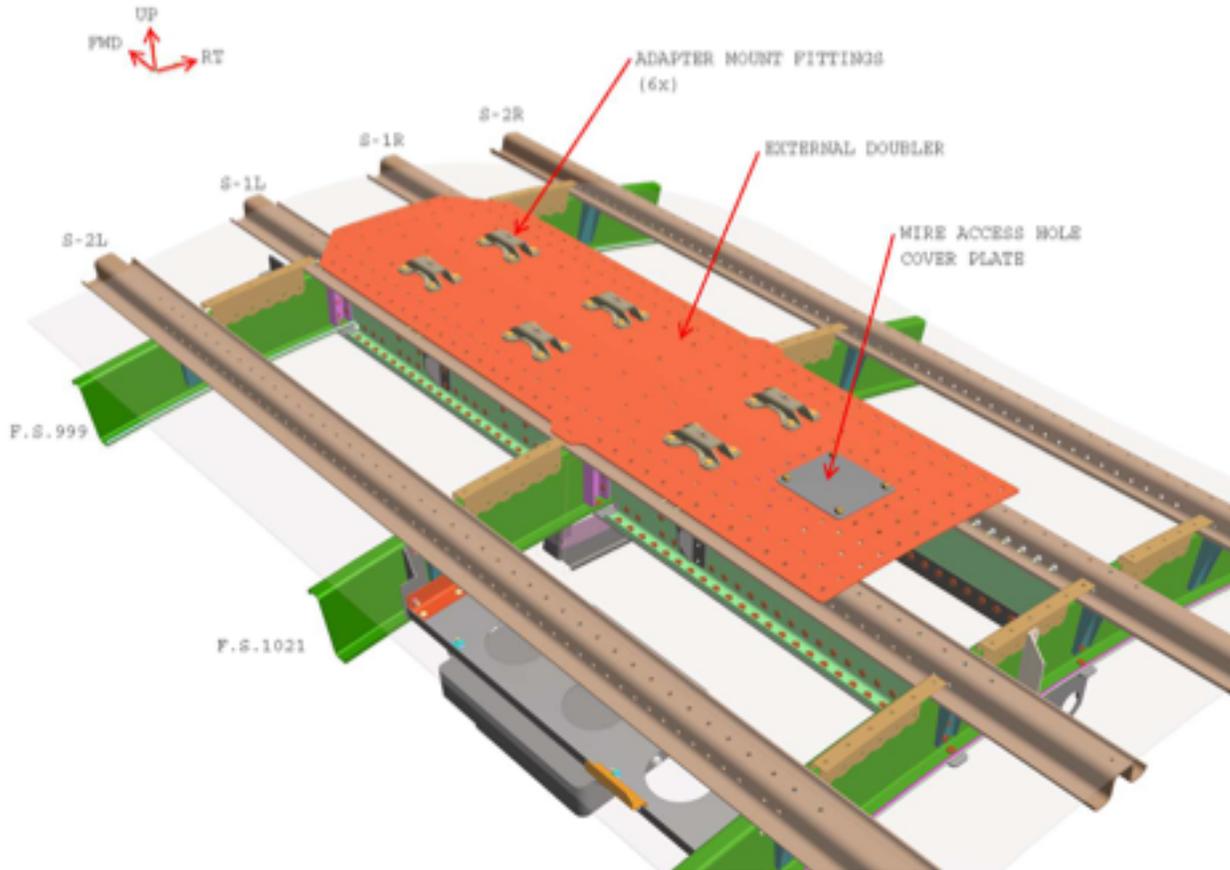


FIGURE 8 – SATCOM ADAPTER PLATE INTERNAL MOUNTING PROVISIONS INSTALLATION
(ANTENNA ADATER PLATE REMOVED FOR CLARITY)

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Configurations 1 & 3 Only:

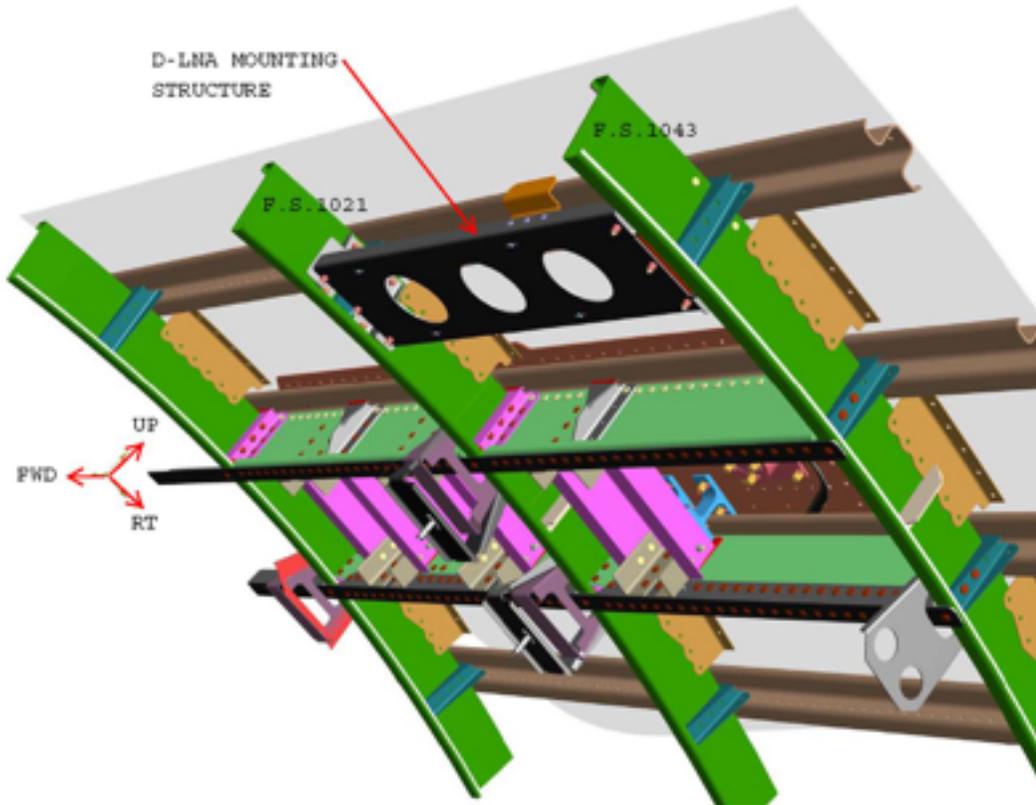


FIGURE 9 – DIPLEXER-LOW NOISE AMPLIFIER (D/LNA) MOUNTING PROVISIONS INSTALLATION

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Configuration 1 Only:

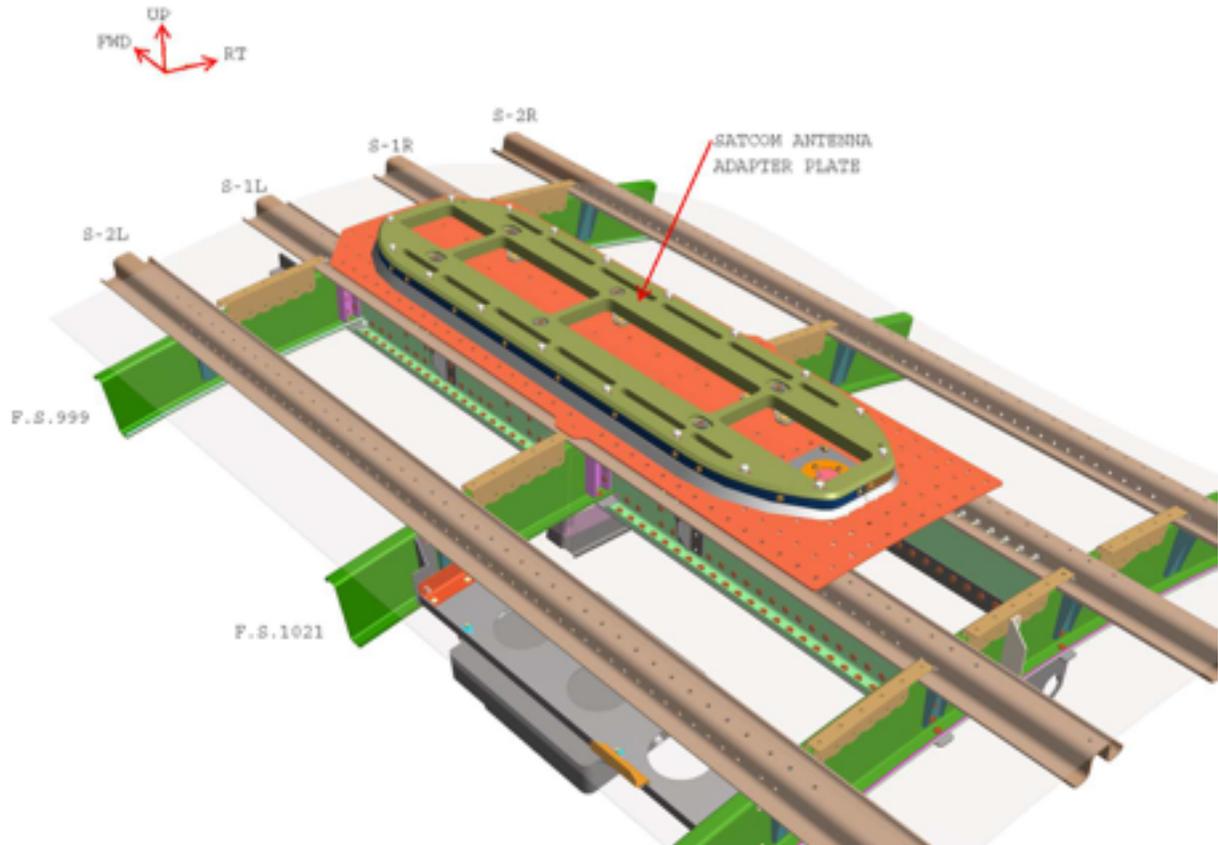


FIGURE 2 - SATCOM IGA ANTENNA ADAPTER PLATE INSTALLATION
(AIRCRAFT SKIN REMOVED FOR CLARITY)

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Configuration 1 Only:

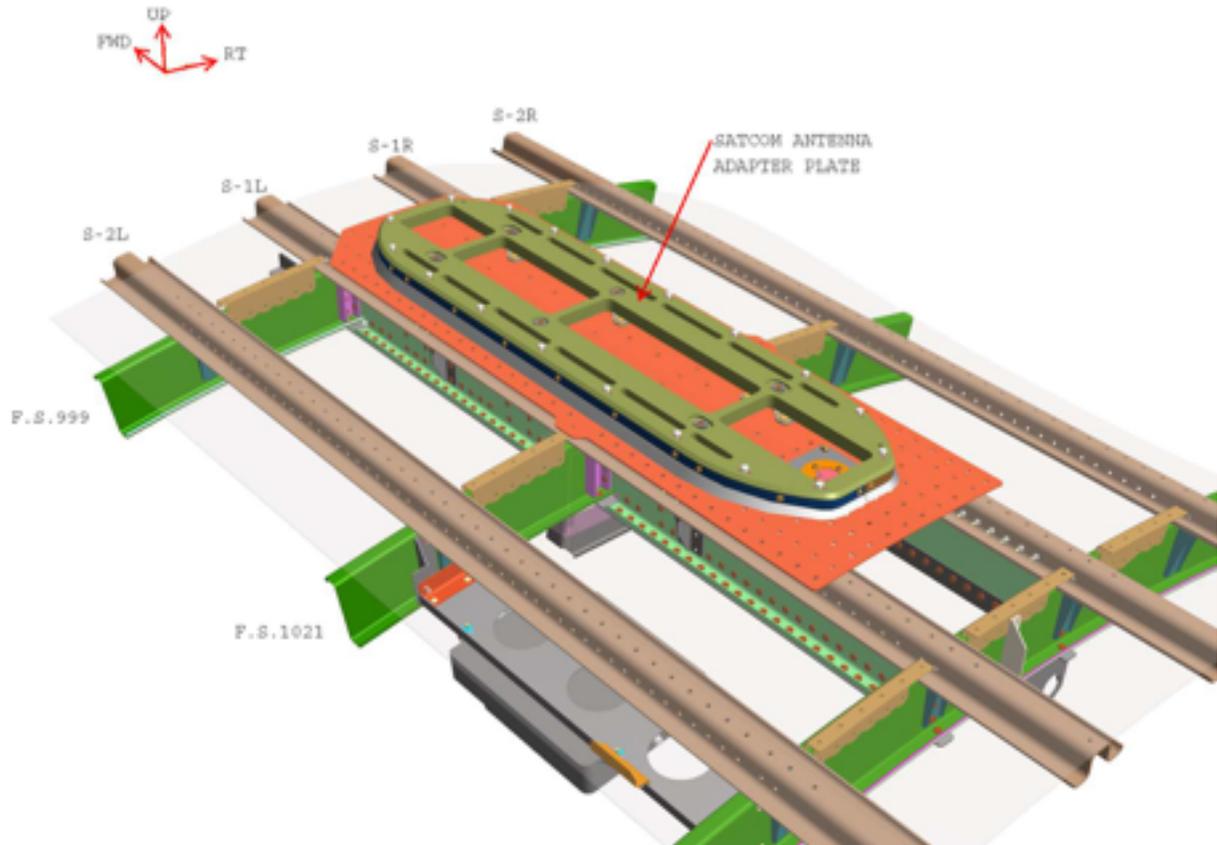


FIGURE 2 - SATCOM IGA ANTENNA ADAPTER PLATE INSTALLATION
(AIRCRAFT SKIN REMOVED FOR CLARITY)

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