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Installation of GPS Antenna Provisions on Boeing 747 Series Aircraft (FAA STC ST01841CH)

#### **OVERVIEW**

- » FAA STC ST01841CH.
- » European Aviation Safety Agency (EASA) STC 01660.

#### INTRODUCTION

The STCs govern the installation of GPS antenna provisions in accordance with Electronic Cable Specialists (ECS) Master Data List ECS-201551.

#### **YOUR NEEDS**

Provides GPS antenna mounting provisions for Boeing 747 series aircraft.

#### **YOUR BENEFITS**

The complete system installation, which requires both the antenna provisions and activation packages, will provide precise GPS signals to any Flight Management System.

#### **STC AIRCRAFT EFFECTIVITY**

» Boeing 747-100/-100B/-200B/-200C/-200F/-300/-SR/-SP series aircraft.

#### **STC LIMITATIONS**

» None.

#### **STC CONFIGURATIONS**

- » Configuration 1: 747-100/-100B/-200B/-200C/-200F/-300/-SR/-SP series aircraft. Left side GPS antenna structural provisions.
- » Configuration 2: 747-100/-100B/-200B/-200C/-200F/-300/-SR/-SP series aircraft. Right side GPS antenna structural provisions.
- » Configuration 3: 747-100/-100B/-200B/-200C/-200F/-300/-SR/-SP series aircraft. Left side GPS antenna coax cable routing (antenna side coax cable with right angle TNC connector; LRU side coax cable with 180 degree BMA plug; total coax cable system loss of approximately 6 dB).

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- » Configuration 4: 747-100/-100B/-200B/-200C/-200F/-300/-SR/-SP series aircraft. Right side GPS antenna coax cable routing (antenna side coax cable with right angle TNC connector; LRU side coax cable with 180 degree BMA plug; total coax cable system loss of approximately 6 dB).
- » Configuration 5: 747-100/-100B/-200B/-200C/-200F/-300/-SR/-SP series aircraft. Left side GPS antenna coax cable routing (antenna side coax cable with right angle TNC connector; LRU side coax cable with ARINC 600 Size 5 socket; total coax cable system loss of approximately 11.2 dB).
- » Configuration 6: 747-100/-100B/-200B/-200C/-200F/-300/-SR/-SP series aircraft. Right side GPS antenna coax cable routing (antenna side coax cable with right angle TNC connector; LRU side coax cable with ARINC 600 Size 5 socket; total coax cable system loss of approximately 11.2 dB).
- » Configuration 7: 747-200B/-200C/-200F/-300 series aircraft. GPS antenna structural provisions installation at frame station 1383.
- » Configuration 8: 747-200B/-200C/-200F/-300 series aircraft. GPS antenna structural provisions Installation at frame station 1405.

#### **PRODUCT DESCRIPTION**

Depending upon the configuration, this modification consists of structural provisions, either single or dual, installed on the upper fuselage for mounting a GPS antenna. Coax cables are installed and routed from the upper fuselage the electronics bay. The possible Configurations for this modification are listed in the STC Configuration Section.

#### **ELECTRICAL CHANGES**

» Configurations 3 – 6: Antenna coaxial cables are run from the GPS antennas to the E&E compartment.

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### MECHANICAL CHANGES

» Configuration 1: Install left GPS antenna structural provisions.

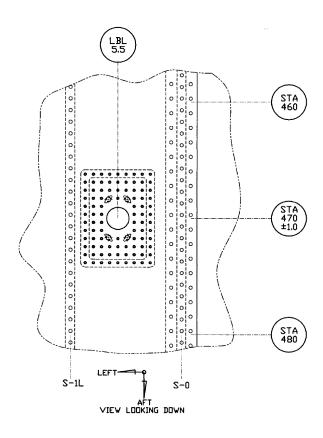


FIGURE 1 - LEFT GPS ANTENNA STRUCTURAL PROVISIONS

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» Configuration 2: Install right GPS antenna structural provisions.

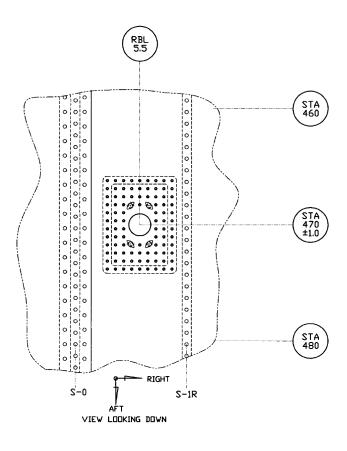


FIGURE 2 - RIGHT GPS ANTENNA STRUCTURAL PROVISIONS

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» Configuration 7: GPS antenna structural provisions installation at frame station 1383.

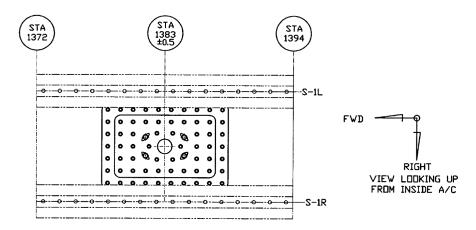


FIGURE 3 - GPS ANTENNA STRUCTURAL PROVISIONS - STA 1383

» Configuration 8: GPS antenna structural provisions installation at frame station 1405.

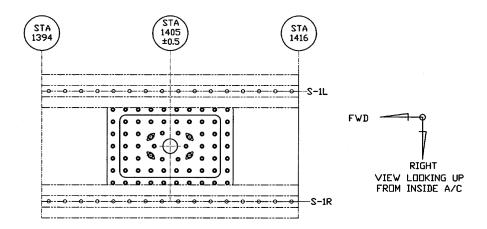


FIGURE 4 - GPS ANTENNA STRUCTURAL PROVISIONS - STA 1405

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