ALOFT
AeroArchitects

Installation and Integration of TIOS Jetwave Ka Band System on Boeing 737-700, YG132 Aircraft

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (TM-8363-ICAW)

DEVELOPED FOR:
BOEING 737-700

SERIAL NUMBER: 38751

THIS DOCUMENT SUPPLEMENTS THE BASIC BOEING AIRCRAFT MANUALS FOR THE 737-700 SERIES AIRCRAFT. THIS DOCUMENT IS NOT COMPLETE WITHOUT THE BASIC BOEING MANUALS.

ORIGINAL ISSUE DATE: May 30, 2022

ALOFT AeroArchitects
21652 Nanticoke Avenue
Georgetown, Delaware 19947 USA

This document is acceptable to the FAA per an FAA-approved process delegated to ODA-955292-NE.

HIGHLIGHTS

LOCATION	DESCRIPTION
All	Initial Release

LIST OF EFFECTIVE PAGES

CHAPTER SECTION SUBSECTION	C	PAGE	DATE
Cover		1	May 30/22
HIGHLIGHTS		1	May 30/22
LOEP		1	May 30/22
TOC		1	May 30/22
ROR		1	May 30/22
Chapter 00 Tab			Not Dated
INTRODUCTION		1	May 30/22
		2	May 30/22
		3	May 30/22
Manual		(See Chapter LOEPs)	
Appendix A (IPL)		(See App. A LOEP)	
Appendix B (WDMS)		(See App. B LOEP)	
Appendix C (EWIS)		1	May 30/22
		2	May 30/22
		3	May 30/22

CHAPTER SECTION SUBSECTION	C	PAGE	DATE

CODES IN COLUMN C: N = NEW Page, R = REVISED Page, D = DELETED Page

TABLE OF CONTENTS

RECORD OF REVISIONS

REVISION	DESCRIPTION	DATE	INITIAL
IR	Initial Release	May 30, 2022	MM

NOTE: Revision Service

This publication set is kept current by a revision service. The List of Effective Pages (LOEP) reflects the latest revision changes. An effective date in the lower RH corner of the page will indicate the latest revision. A revision (change) bar will be placed in the left margin to identify specifically what portion of the page was revised. If a new page was added, or an existing page moved because of the addition/deletion of pages, a revision (change) bar will be located opposite of the effective revision date. Change bars will be removed during concurrent revisions. The existing change bars will be removed, changes implemented, and new change bars added to identify revised information.

For more information refer to the ICA Distribution section of the Introduction.

CHAPTER

00

INTRODUCTION

INSTALLATION AND INTEGRATION OF TIOS JETWAVE KA BAND SYSTEM - INTRODUCTION

1. Purpose

   A. This manual is intended to demonstrate compliance to the requirements of 14 CFR Part §25.1529 and Part 25, Appendix H by providing Instructions for Continued Airworthiness contained in the following ALOFT AeroArchitects Maintenance Manual Supplement Set for STC: ST04251NY

   B. This document (TM-8363-ICAW) is part of the manual set and is the principal manual and supplements the existing data provided by the Original Equipment Manufacturer (OEM). This manual set is considered incomplete when not accompanied by the manufacturer's (Boeing) manuals. (Refer to Para. 4B).

2. General

   A. This Aircraft Instructions for Continued Airworthiness (TM-8363-ICAW) contains information on component location, function, control, and operation. The ICAW also contains information required to service, functionally and operationally check, and repair/replace systems and equipment installed as part of the ALOFT AeroArchitects Ka Band Modification.

   B. The Illustrated Parts Listing (Appendix A) provides systematic illustrations (break-downs) of the different assemblies, sub-assemblies, and hardware required to maintain the Ka Band Modification.

   C. The Wiring Diagram (Appendix B) contains all of the applicable wiring information associated with the Ka Band Modification.

   D. The Electrical Wiring Interconnection System (EWIS ICA) (Appendix C) contains all of the applicable wiring information associated with the Ka Band Modification.

3. Applicability

   A. The maintenance information provided in this ICA obligates the aircraft operator to incorporate the instructions into their aircraft maintenance planning document, approve aircraft scheduled maintenance program, and/or other manuals, as necessary.

   B. This manual is applicable for the Boeing 737-700 (S/N 38751) modified by ALOFT AeroArchitects per the following Master Drawing List (MDL), or later FAA approved revisions:

Master Drawing List (MDL)	STC
ALOFT AeroArchitects - 8363-0001-MDL	

4. Reference Material

   A. FAA Documents:

      (1) 14 CFR Part §25.1529.

      (2) Part 25 Appendix H, Instructions for Continued Airworthiness.

      (3) FAA Order 8110.54 (as amended) Instructions for Continued Airworthiness.

B. Aircraft Manufacturer's Documents (or later approved):

Doc Number	Title
D626A009-MRBR	Maintenance Review Board Report *(latest available at time of approval)*
D6-54446	Standard Wiring Practices Manual
D280A115	Wiring Diagram Manual
D633A101	Aircraft Maintenance Manual
D626A012	Electrical Wiring Interconnection System (EWIS) Instructions for Continued Airworthiness *(latest available at time of approval)*
737-EB55-0035	Lufthansa Technik MCS-800 Antenna Provisions Installation

C. ALOFT AeroArchitects Documents

Doc Number	Title
TM-8363-ICAW	Instructions for Continued Airworthiness

5. ICA Distribution

A. For the initial release, the documents listed in section 4B of the ICAW Introduction will be provided in hard copy and electric formats to the owner, operator, or any person obligated by regulator requirement to comply with stipulations of the Supplemental Type Certificate (STC).

B. Revisions, (annual and temporary) to this document will be transmitted electronically to the owner, operator, or any other person obligated by regulatory requirements, once released. Notifications will be sent, and electronic copies will be made available via web-based access when revisions are released. Other documentation applicable to this modification but not listed in the ICAW may be available electronically as well. If any further information is required, or to request additional copies, or to establish the web-based access, please contact:

ALOFT AeroArchitects
21652 Nanticoke Ave.
Georgetown, DE. 19947
Ph: (855) 236-1638
Fax: (302) 855-9196
www.aloftaeroarchitects.com

6. System Maintenance Procedures

A. The maintenance instructions for removal/installation and troubleshooting are identified in Chapter 20, 24, and 44 of this document.

B. The FAA accepted versions of these documents will be provided to the owners and/or operators upon issuance of the Supplemental Type Certificate (STC).

7. Removal/Installation/Modification Process

   A. Maintenance tasks for the removal/installation and general troubleshooting are identified in Chapter 20, 24, and 44 of this document. The FAA-accepted versions of these documents will be provided to the owners/operators upon issuance of the Supplemental Type Certificate (STC).

8. Airworthiness Limitations

   A. *"The ALOFT AeroArchitects Executive Interior Modification Airworthiness Limitations Section Is FAA-Approved And Specifies Maintenance Required Under 14 CFR §43.16 And §91.403 Unless An Alternative Program Has Been FAA Approved".*

   B. No Airworthiness limitations requirements exist from the interior modification.

9. Electrical Wiring Interconnection System (EWIS)

   NOTE: ALOFT AeroArchitects Wire Harnesses and other EWIS components are installed per Boeing SWPM Chapter 20.

   A. This modification has been reviewed per the guidance provided in FAA AC25-27A. It has been determined that the modification does necessitate a revision to the EWIS ICA that was required to be developed by the Aircraft Type Certificate Holder to meet §26.11 (b).

   B. The wire harnesses installed by this modification shall be inspected per the guidance outlined in the established Boeing EWIS Zonal Maintenance requirements.

CHAPTER

20

STANDARD PRACTICES

CHAPTER 20 - STANDARD PRACTICES
LIST OF EFFECTIVE PAGES

CODES IN COLUMN C: N = NEW Page, R = REVISED Page, D = DELETED Page

CHAPTER 20 - GENERAL MAINTENANCE PRATICES
TABLE OF CONTENTS

GENERAL WIRING MAINTENANCE PRACTICES – INSPECTION REQUIREMENTS

1. Purpose

   A. The General Wiring Practices section provides a General Visual Inspection and a Detailed Inspection of the modified interior wiring. Included are selected detailed pictures of how the wiring looks when it is improperly and properly installed.

   B. Wire harness and wiring inspections shall be accomplished if an area is opened or accessed for repair/maintenance actions. Wiring shall be inspected for general condition, cleanliness, and security per the procedures outlined in this section. Any discrepancies noted during the inspection(s) will be corrected per the applicable manufacturer's Standard Wire Practices Manual (SWPM) or equivalent documentation.

2. General

   A. One or several of these practices shall be used whenever any area of the passenger compartment interior where electrical wiring is located, is opened or accessed for maintenance.

   B. The general procedures include:

      (1) Interior Wiring - General Visual Inspection Guidelines – Task 20-53-01-210-801.

      (2) Interior Wire Harness General Cleaning – Task 20-53-01-160-801.

INTERIOR WIRING - GENERAL VISUAL INSPECTION GUIDELINES

TASK 20-53-01-210-801

1. Purpose

   A. The purpose for these general maintenance practices is to establish standard inspection criterion for a General Visual Inspection (GVI) of the Executive Interior wire harnesses. These practices shall be used when any area is opened or component of the modified interior is removed or replaced. All wiring that is located in these areas shall be inspected for general overall condition.

   B. This procedure contains the following task:

      (1) Interior Wire Harness General Visual Inspection, TASK 20-53-01-210-801.

2. General

   A. The following inspection covers various defects that can occur over the life of the aircraft wiring.

3. Cabin Interior Wiring - General Visual Inspection (GVI)

   A. The GVI consists of, but not limited to, the following inspections:

      (1) General Condition

         (a) Check for discolored, frayed, broken wires, broken bundle tie-wrap straps, evidence of moisture, and/or cracks on the insulation of the wiring.

         (b) Make sure connectors are properly tightened on mating jack or receptacle.

         (c) Check connector back-shell(s) for evidence of arcing, corrosion, and loose/broken wires.

      (2) Security

         (a) Check clamps for proper spacing and condition. The insulators should show no signs of cracking, deformity, or hardness.

         (b) Make sure individual wires are not pinched in support clamps.

         (c) Check tie-wrap straps for proper installation.

      (3) Routing

         (a) Make sure the wire or wire bundles are properly aligned and routed per installation drawings.

         (b) Sufficient clearance: make sure the wire or wire bundles have proper clearance from adjacent flight control cables (if applicable), aircraft structures, and fluid lines.

INTERIOR WIRING HARNESS - GENERAL CLEANING

TASK 20-53-01-160-801

1. Purpose

   A. The purpose for this general maintenance practice is to provide guidance for general cleaning procedures for interior wiring harness. These practices shall be used when any area is opened or components of the modified interior are removed or replaced. All items that are located in these areas shall be inspected for general condition and cleanliness. Normally, superficial accumulation of dirt, dust and grime can be removed with the use of a commercially available vacuum cleaner, soft bristle brush, and/or a dry cloth. Heavier accumulations may be loosened and removed with isopropyl alcohol.

      CAUTION: EXERCISE CAUTION WHEN USING ALCOHOL TO CLEAN WIRING HARNESSES. DAMAGE TO THE WIRE/HARNESS IDENTIFICATIO NUMBER MARKING CAN OCCUR.

2. General

   A. This procedure outlines the procedure to clean wire harnesses and the surrounding area to remove the build-up of accumulated dust, dirt, and grime, significantly reducing the amount of combustible material.

3. Interior Wiring Harness - General Cleaning

   A. Procedure

      (1) Remove loose contamination by hand.

      (2) Use a vacuum cleaner to remove accumulations of dust and debris.

      (3) Use a soft bristle brush to loosen light accumulations of dust that remain and vacuum the area again.

      (4) For heavier accumulations, a clean cloth moistened with isopropyl alcohol may be used to clean the wire harness.

         NOTE: It is permissible to remove wire ties / lacing to ensure complete cleaning of harnesses.

      (5) If wire ties or lacing are removed, install new items per the OEM SWPM.

      (6) Repair any noted discrepancies as required per the OEM SWPM. (Refer to Boeing AMM Task 20-60-02-100-801 for further guidance).

GENERAL MAINTENANCE PRACTICES - ELECTRICAL BONDING

1. Purpose

   A. The motion of an aircraft through the atmosphere can create an electrostatic charge. If a structure is isolated from the aircraft ground, this charge could build up to the point where air breaks down electrically. This could result in an electrical spark. To prevent such an occurrence, it is necessary to provide low-resistance paths for this static electricity to reach the frame of the aircraft. The discharge of electrostatic charge to aircraft ground is accomplished by using a series of bonds consisting of grounding jumpers connected to the many metallic pipes, valve assemblies, stiffeners, structural tubes, brackets and other metal structures.

   B. The jumper assemblies are examined and tested before they are installed to ensure that the electrical bonds between the cable and the attached lugs meet resistance specifications. Faying surfaces of any materials used to provide an electrical bond must be properly prepared to ensure the bond meets the resistance specifications in this document. These jumpers are attached at strategic points to ground studs, clamps, brackets, clips, structure, or ground blocks.

   C. Should a bond or bonds exceed the specified resistance limits, those electrical connections are disassembled. The whole ground assembly (all hardware), together with the metallic surface, is examined. If needed, the metallic surface is re-cleaned. If a bonding jumper is used, its mounting hardware is examined for the correct sequence of washers and nut(s). The proper torque driver or wrench shall be used to ensure that the hardware is tightened to the torque values listed in this specification. The electrical bond is then retested.

2. General

   A. These general maintenance practices contain the following tasks:

      (1) Bonding New Installation

      (2) Maintaining Existing Bonding Installations

      (3) Cleaning Bonding Surfaces

      (4) Bonding Jumper Attachments

ELECTRICAL BONDING NEW INSTALLATION

TASK 20-54-01-420-801

1. Bonding New Installation

   A. Electrical bonding surfaces clamps, studs, grounding jumpers, and associated hardware shall be prepared, installed and tested in accordance with methods listed within the AMM.

ELECTRICAL BONDING - MAINTAINING EXISTING BONDING INSTALLATIONS

TASK 20-54-01-910-801

1. Maintaining Existing Bonding Installations

   A. It will be necessary to remove certain electrical bonds and/or ground stud connections when maintenance is required on valves, switches, tubing, o-rings, fuel lines, etc. (Refer to the respective procedures for details).

   B. When electrical bonds and/or grounds are disconnected and then reconnected, it is required that a retest of the ohm resistance be performed; refer to Bonding Resistance Test 20-54-02-760-801. Failure to pass this test shall require that all related surfaces be re-cleaned before the bonds are reinstalled and tested.

ELECTRICAL BONDING - CLEANING BONDING SURFACES

TASK 20-54-01-160-801

1. Cleaning Bonding Surfaces

   A. Surface Cleaning Methods

      (1) Prepare only the surfaces that need to provide a low resistance electrical bond or ground connection. These surfaces are those that will be:

         (a) Under the bottom washer (closest to aircraft structure) in screw or bolt mounting.

         (b) Under the clamp in tubular mounting.

         (c) Faying surfaces of brackets, clips or ground blocks.

      (2) The following cleaning process applies to aluminum alloys that have any of the following surface finishes:

         (a) Bare, clad terminals anodized, or chemical coatings in accordance with MIL-DTL-5541F. The latter refers to chemically deposited coatings resulting from Alodine® treatment.

         (b) Use a manual or pneumatic power drill when using a stainless-steel rotary brush or abrasive disc to electrical bond areas.

            NOTE: Anodic films vary greatly in thickness and steel brushes may not do the job. In this case, abrasive discs are recommended but only on bond areas outside of fuel tanks. In order to limit debris, only use stainless steel brushes inside of fuel tanks to clean bonding surfaces. When preparing bonding surfaces within fuel tanks ensure all resulting debris has been removed.

         (c) Use stainless steel brushes only on the same kind of material on which they were originally used. The same is true of abrasive discs.

         (d) Maintain a circular motion when using abrasive materials such as Scotch-Brite®.

         (e) Apply the wire brush or abrasive disc with light, intermittent pressure, keeping the cutting face parallel with the surface being prepared.

         (f) Continue the operation until all surface finishes are removed and a bright aluminum-bonding surface is visible throughout the required area. Remove a minimum amount of aluminum.

            WARNING: THE USE OF SOLVENTS MAY BE HAZARDOUS TO YOUR HEALTH AND CAN PRESENT A FIRE HAZARD. ALWAYS USE SOLVENTS IN A WELL-VENTILATED AREA AND AVOID INHALATION OF VAPORS. PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED WHEN WORKING WITH SOLVENTS.

         (g) Transfer the solvent to be used from its original container only to new or dedicated clean containers. Transfer equipment (funnels, pumps, etc.) must also be new or dedicated for this purpose.

         (h) Dispense solvent onto a clean white lint-free cotton towel. Do not dip towel into solvent container. Do not splash solvent onto surface to be cleaned.

         (i) Rub the surface to be cleaned with the solvent soaked white towel. Immediately wipe dry with a clean, dry white towel. Do not allow solvent to evaporate to dryness.

         (j) Frequently exchange soiled towel for a clean one.

(k) Continue this process until the towel shows no soiling.

(l) Do not allow the cleaned bonding surface to be contaminated.

B. Surface Resealing

(1) Damaged prepared finishes shall be repaired or touched-up after bonding and/or grounding hardware has been installed.

NOTE: It is important that surface refinishing of bare metal be completed within 24 hours after the original finish was removed.

(2) The bright bare aluminum bonding surface shall be brushed coated or treated with Alodine.

C. Flat Surface Preparation (Figure 201)

(1) Clean bonding surface down to the aluminum alloy.

(a) The area should be no more than 1.5 times the area of the washer or terminal lug that is in contact with the bonding surface.

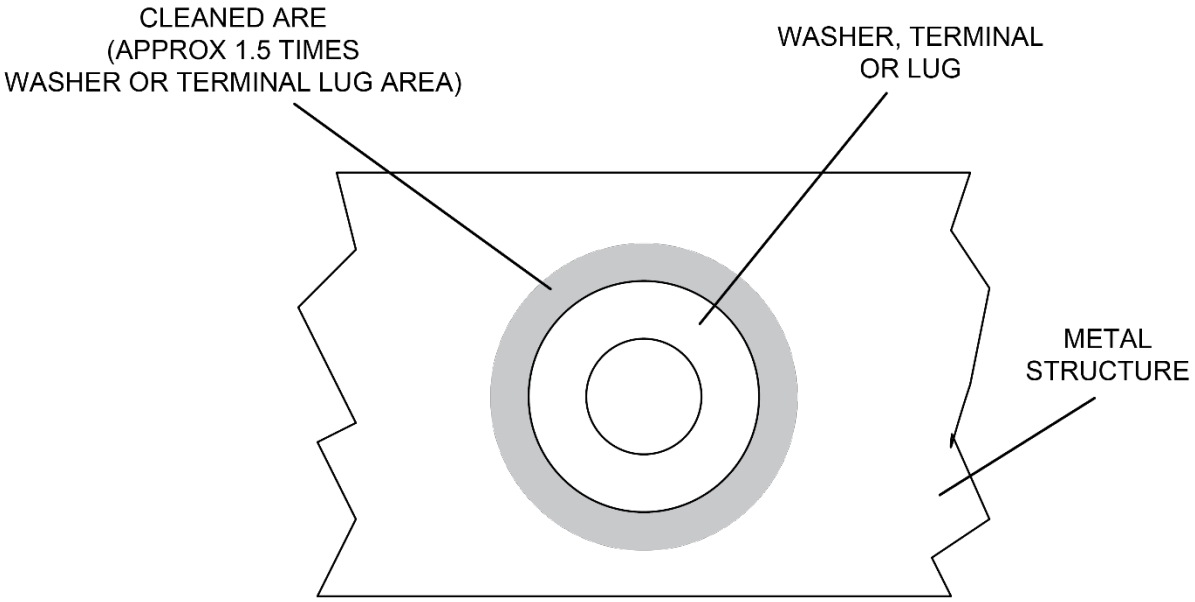
(b) Treat the exposed bonding surface with Alodine®.

ELECTRICAL BONDING - BONDING JUMPER ATTACHMENT

TASK 20-54-01-420-802

1. Bonding Jumper Attachment
   A. Bonding jumper attachments are as follows:
      (1) Flat surface, (Figure 202)
      (2) Pre-installed standard ground stud, (Figure 203)
      (3) Nut-Plate, (Figure 204)

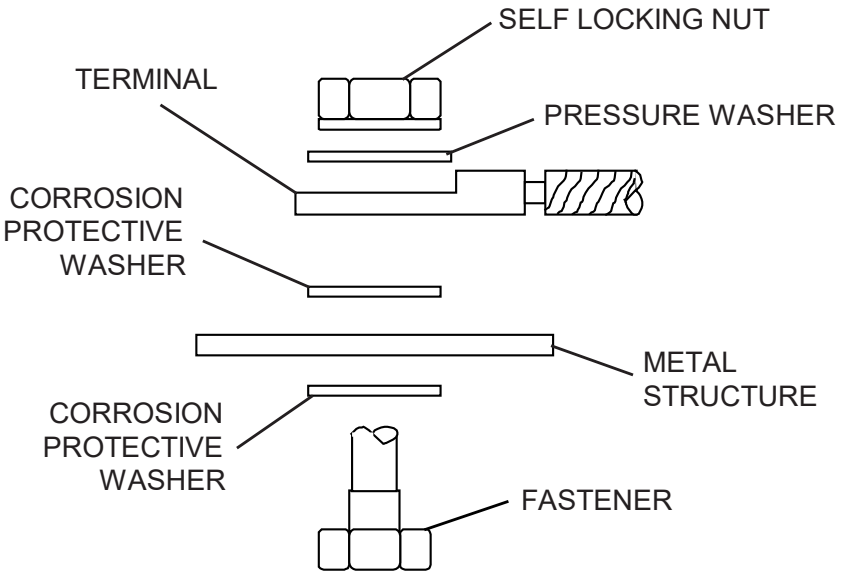
      CAUTION: NEVER USE DISSIMILAR METALS IN DIRECT CONTACT (SUCH AS COPPER WASHER TO ALUMINUM TERMINAL).



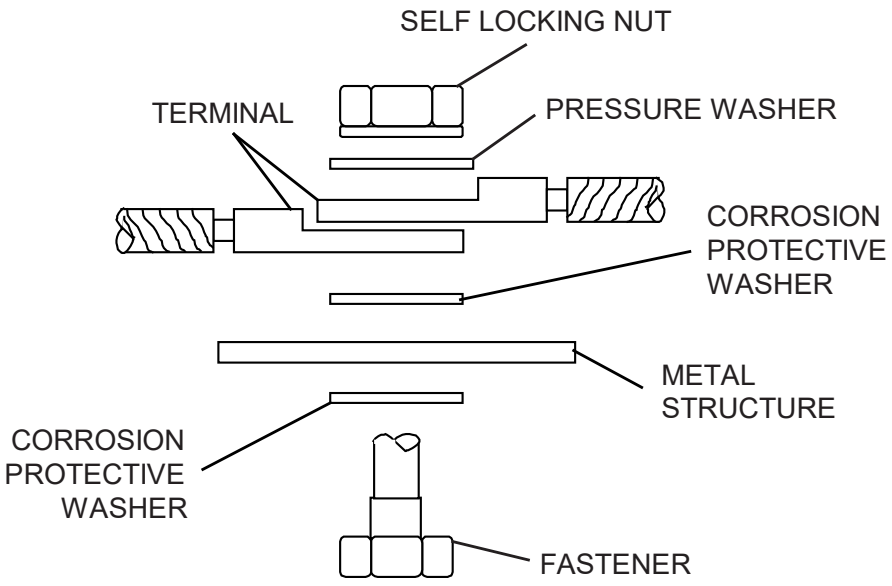
FLAT SURFACE PREPARATION

TM8180-018

Surface Preparation
Figure 201



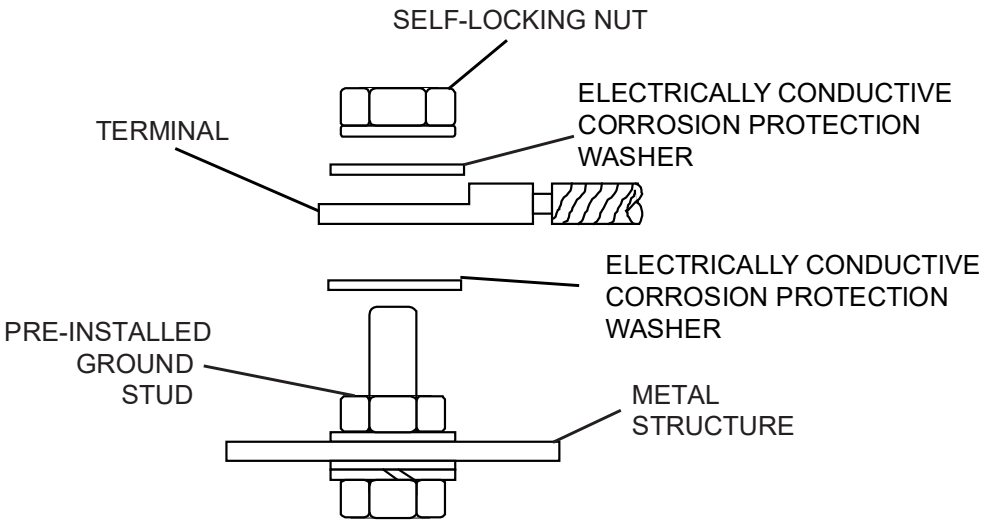
FLAT SURFACE BONDING
BOLT AND NUT
SINGLE TERMINAL



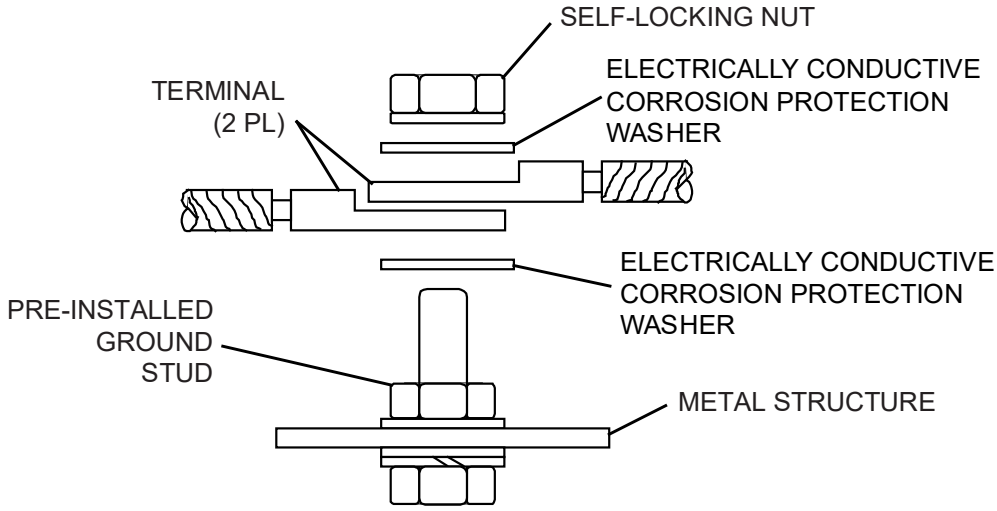
FLAT SURFACE BONDING
BOLT AND NUT
MULTIPLE TERMINALS

PM58882004

Flat Surface Bonding
Figure 202



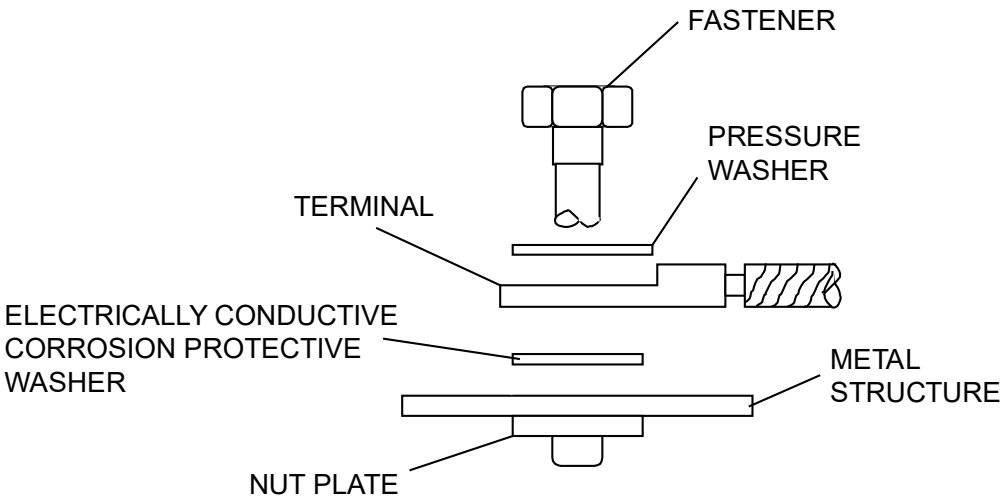
TERMINAL INSTALLATION ON PRE-INSTALLED STANDARD GROUND STUD



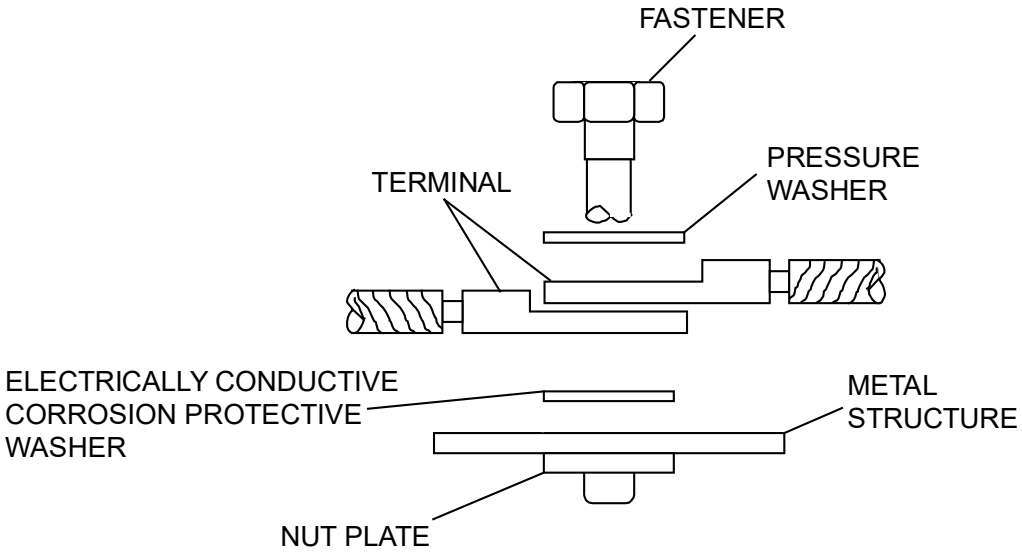
MULTIPLE TERMINAL INSTALLATION ON PRE-INSTALLED STANDARD GROUND STUDS

PM58882002_ C

Pre-Installed Standard Ground Stud Bonding
Figure 203



NUT - PLATE GROUND STUD WITH SINGLE TERMINAL



NUT - PLATE GROUND STUD WITH MULTIPLE TERMINALS

PM58882003

Nut Plate Bonding
Figure 204

GENERAL MAINTENANCE PRACTICES - BONDING RESISTANCE CHECK

TASK 20-54-02-760-801

1. Purpose

   A. The bonding jumpers (when installed) provide low-resistance paths for built-up static electricity to reach the frame of the aircraft. The discharge of electrostatic charge to aircraft ground is accomplished by using a series of bonds to maintain equal electrical potential between the aircraft and grounded components. Bonding meters, capable of reading low resistance, are used to measure the effectiveness of bonds. If the bonding jumpers are not properly bonded, the static build-up could cause a spark and result in an explosion if ignitable vapors are present.

2. General

   A. This general maintenance practice contains the following task:

      (1) Bonding - Resistance Check, TASK 20-54-02-760-801.

3. General Maintenance Practices - Bonding - Resistance Check

   A. Special Tools and Equipment.

      (1) AVTRON T477W Bonding Meter or M1 Milliohm Meter or equivalent (as required).

      NOTE: Type of Bonding Meter - the test equipment used to determine electrical bonding resistance must meet the qualifications of Underwriter's Laboratory (UL) Standard 913 for Class I, Group A, B, C or D atmospheres. This includes atmospheres containing flammable and/or explosive hydrogen and petroleum vapors. An example of an approved Bonding Meter:

NOMENCLATURE	SPECIFICATIONS	NOTES
AVTRON T477W Bonding Meter (or equivalent)	Milliohm Meter	The Bonding Meter is an AC resistance meter, specifically designed for the measurement of very low resistance electrical bonds.
Display	Digital readout	Liquid Crystal, or LED display or equivalent.
Accuracy	±1% of Reading	
Sensitivity:	3 1/2 Digits	
Ranges	0 to 1.999 milliohms 0 to 19.99 milliohms 0 to 199.9 milliohms 0 to 1999.0 milliohms	
Output	0.1 Vac (RMS) Maximum or 200 mA Maximum	

NOTE: Test probes designed for use with a particular meter model may not be used with another model of the same meter or a different vendor's meter.

B. Procedure

(1) Ground Studs with Installed Grounding Jumper(s) (Figure 601):

(a) Place one probe on the lug terminal.

(b) Place second probe on metal structure, approximately 0.25 inches from lug terminal.

(c) Read resistance on bonding meter.

(d) The measured resistance values for ground studs shall not exceed 0.010 Ohm.

(e) If resistance value exceeds 0.010 Ohm:

1) Remove mounting hardware and terminal lug(s).

2) Inspect the bonding surface for corrosion and dirt.

3) Re-clean the bonding surface per TASK 20-54-01-160-801.

4) Re-install bonding hardware and terminal lug(s).

5) Refinish any exposed bonding surface.

6) Repeat resistance measurement check.

NOTE: If necessary, remove a small amount of the surface finish to allow the probe to make good electrical contact with the bonding surface.

(2) Nut Plate Ground Stud Resistance (Figure 601):

(a) Place one probe on the lug terminal.

(b) Place second probe on the metal surface, approximately 0.25 inches from lug terminal.

(c) Read resistance on bonding meter.

(d) Resistance value shall not exceed 0.010 Ohm.

(e) If resistance value exceeds 0.010 Ohm:

1) Remove mounting bolt and terminal lug(s).

2) Inspect the bonding surface for corrosion and dirt.

3) Re-clean the bonding surface per TASK 20-54-01-160-801.

4) Remount mounting bolt and terminal lug(s).

5) Refinish any exposed bonding surface.

6) Repeat resistance measurement check.

NOTE: If bonding surface is covered with a finish, remove enough of the finish to allow one of the probes to contact the surface.

NOTE: If necessary, pierce the surface finish with the bonding meter probe or make contact with the bonding surface.

(3) Clamp Terminal to Tubing or Conduit (Figure 601):

(a) Place one probe on the terminal.

(b) Place second probe on the tubing, approximately 0.25 inched from clamp.

(c) Read resistance on bonding meter.

(d) Resistance value shall not exceed 0.010 Ohm.

(e) If resistance value exceeds 0.010 Ohm:

1) Remove mounting hardware, lug and clamp.

2) Inspect tubular bonding surface for proper cleaning.

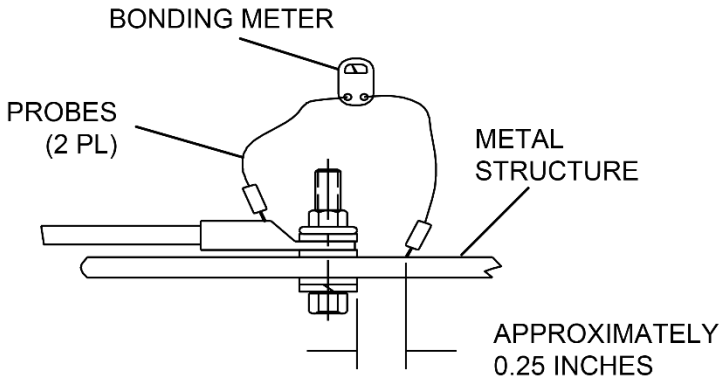
3) Re-clean the bonding surface and inner clamp per TASK 20-54-01-160-801.

4) Remount the clamp, hardware and terminal lug.

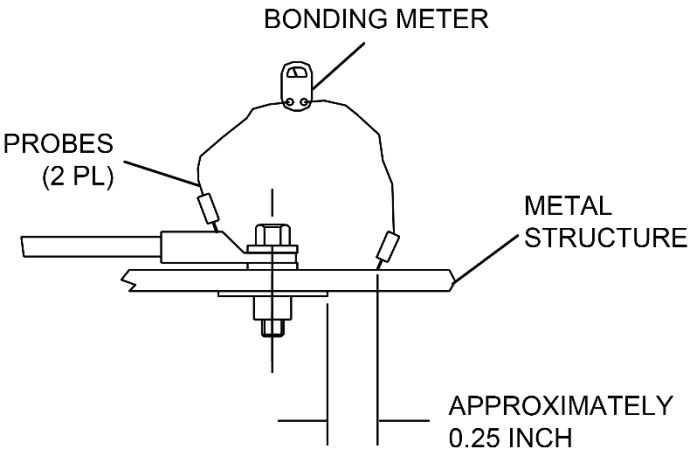
5) Repeat resistance measurement check.

NOTE: If bonding surface is covered with a finish, remove enough of the finish to allow one of the probes to contact the surface.

NOTE: If necessary, pierce the surface finish with the bonding meter probe or make contact with the bonding surface.



GROUND STUD WITH INSTALLED BONDING JUMPER



NUT PLATE GROUND STUD RESISTANCE

TM8180-019

Resistance Check
Figure 601

CHAPTER

24

ELECTRICAL POWER

CHAPTER 24 – ELECTRICAL POWER
LIST OF EFFECTIVE PAGES

SECTION	C	PAGE	DATE	SECTION	C	PAGE	DATE
24 Tab			Not Dated				
24 LOEP		1	May 30/22				
		2	May 30/22				
24 TOC		1	May 30/22				
24-22-00		1	May 30/22				
		101	May 30/22				
		102	May 30/22				

CODES IN COLUMN C: N = NEW Page, R = REVISED Page, D = DELETED Page

PAGE INTENTIONALLY LEFT BLANK

CHAPTER 24 – ELECTRICAL POWER
TABLE OF CONTENTS

KA BAND ELECTRICAL POWER – SYSTEM DESCRIPTION

1. Purpose

   A. The Ka Band modification includes electrical wiring and cabling necessary for power distribution. New circuit breakers have been installed on the flight compartment P6-1 electrical load center. Five (5) circuit breakers for Ka Band are added. These newly-installed circuit breakers interface with the OEM power distribution system to provide operating power for the Ka Band components. The Ka Band system power may be shed by the IFE Switch on the P5 Overhead Panel.

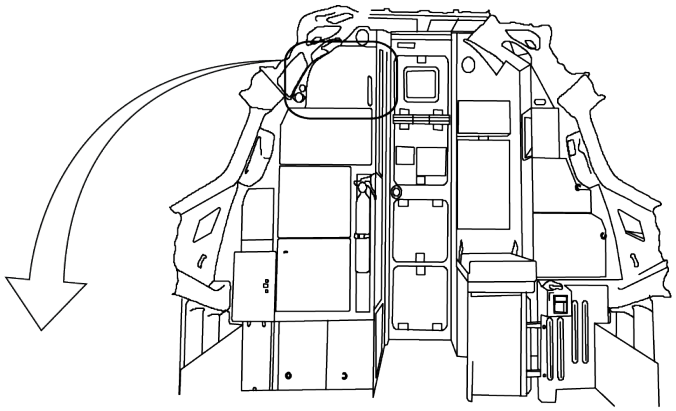
2. General

   A. The existing P6-1 circuit breaker panel is modified with the following Ka Band circuit breakers:

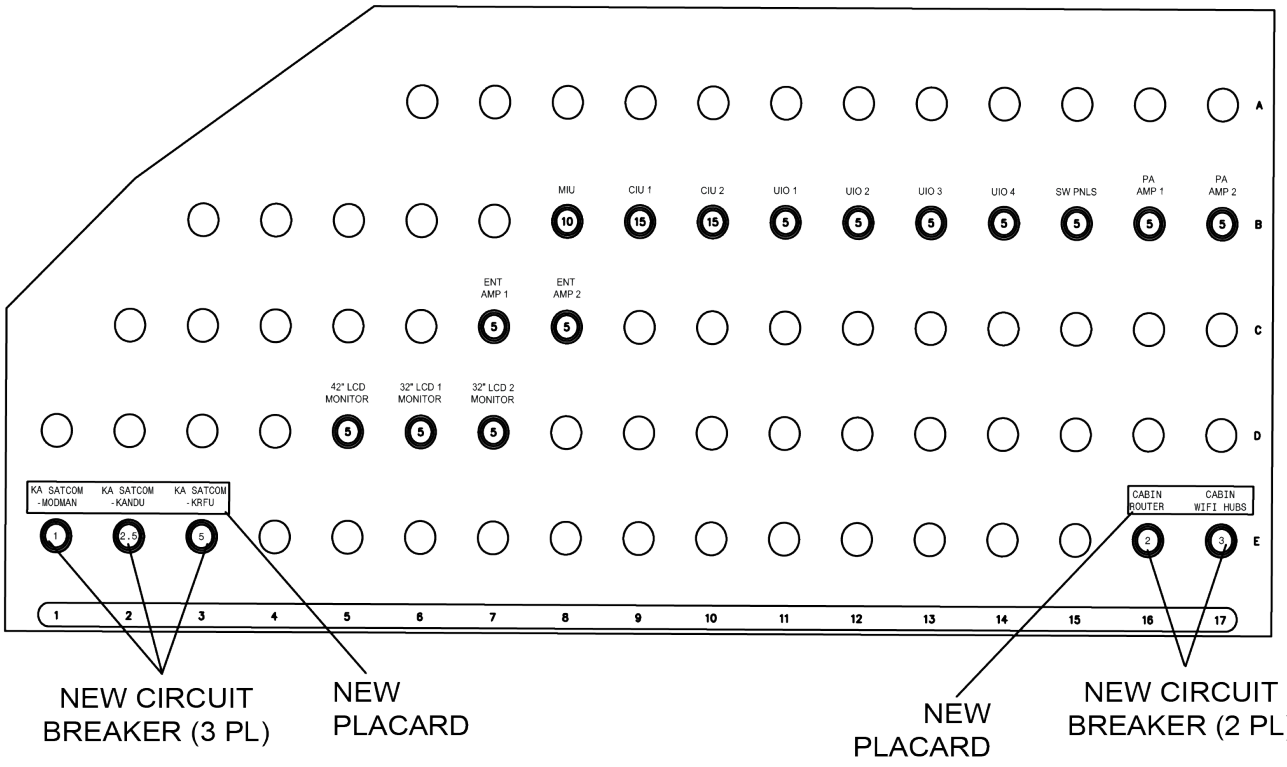
GRID	CIRCUIT BREAKER	REF DES	SOURCE
E1	KA SATCOM - MODMAN	C99001	28VDC Bus 1
E2	KA SATCOM – KANDU	C99002	
E3	KA SATCOM - KRFU	C99003	
E16	CABIN ROUTER	C99004	
E17	CABIN WIFI HUBS	C99005	

3. Component Location (Figure 101)

   A. The P6-1 load control center is located in the flight deck, starboard side directly behind the First Officer's seat.



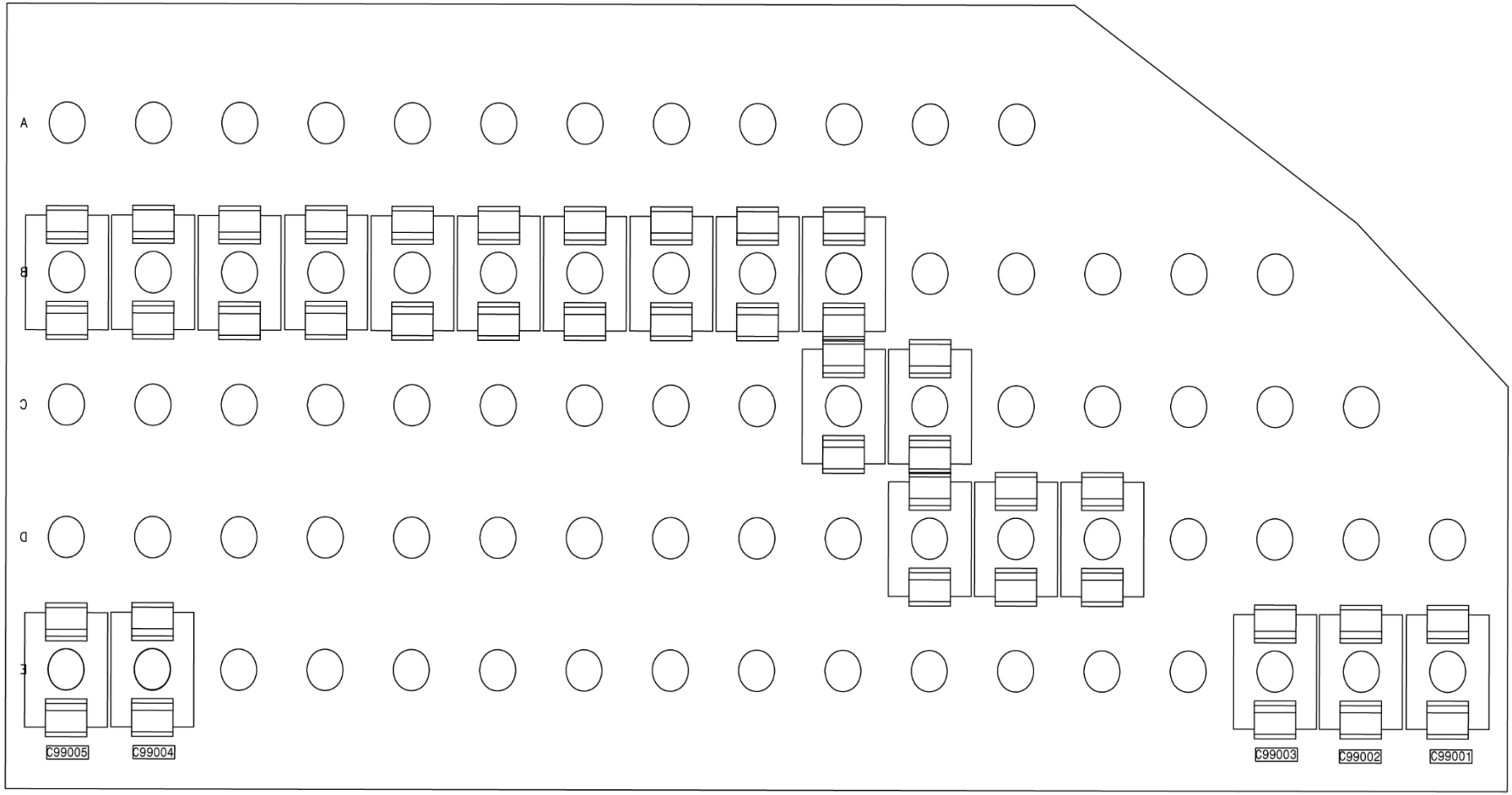
FLIGHT COMPARTMENT
LOOKING AFT



P6-1 LOAD CONTROL CENTER
(FRONT SIDE)

TM8363ICAW24_001

Ka Band System – Circuit Breakers
Figure 101 (Sheet 1 of 2)



P6-1 LOAD CONTROL CENTER
(LOOKING DOWN WITH PANEL DOOR OPEN)

TM8363ICAW24_002

Ka Band System – Circuit Breakers
Figure 101 (Sheet 2 of 2)

CHAPTER

44

CABIN SYSTEMS

CHAPTER 44 – CABIN SYSTEMS
LIST OF EFFECTIVE PAGES

CODES IN COLUMN C: N = NEW Page, R = REVISED Page, D = DELETED Page

CHAPTER 44 – CABIN SYSTEMS
TABLE OF CONTENTS

P5 PANEL WIFI SWITCH - REMOVAL

TASK 44-10-01-000-801

1. Purpose
   A. This procedure contains the following task:
      (1) P5 Panel WIFI Switch - Removal, TASK 44-10-01-000-801.
2. Removal Procedures
   A. Access
      (1) Location – P5 Overhead Panel
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E17	C99005	CABIN WIFI HUBS	P6-1 Circuit Breaker Panel

      (2) Gain access to the P5 Panel.
   C. Removal (Figure 401)
      (1) Open the P5 Panel.
      (2) Carefully remove the electrical connector from the back of the WIFI Switch.
      (3) Slide the WIFI Switch out of the P5 Panel
      (4) Protect electrical connectors and ports with protective caps.

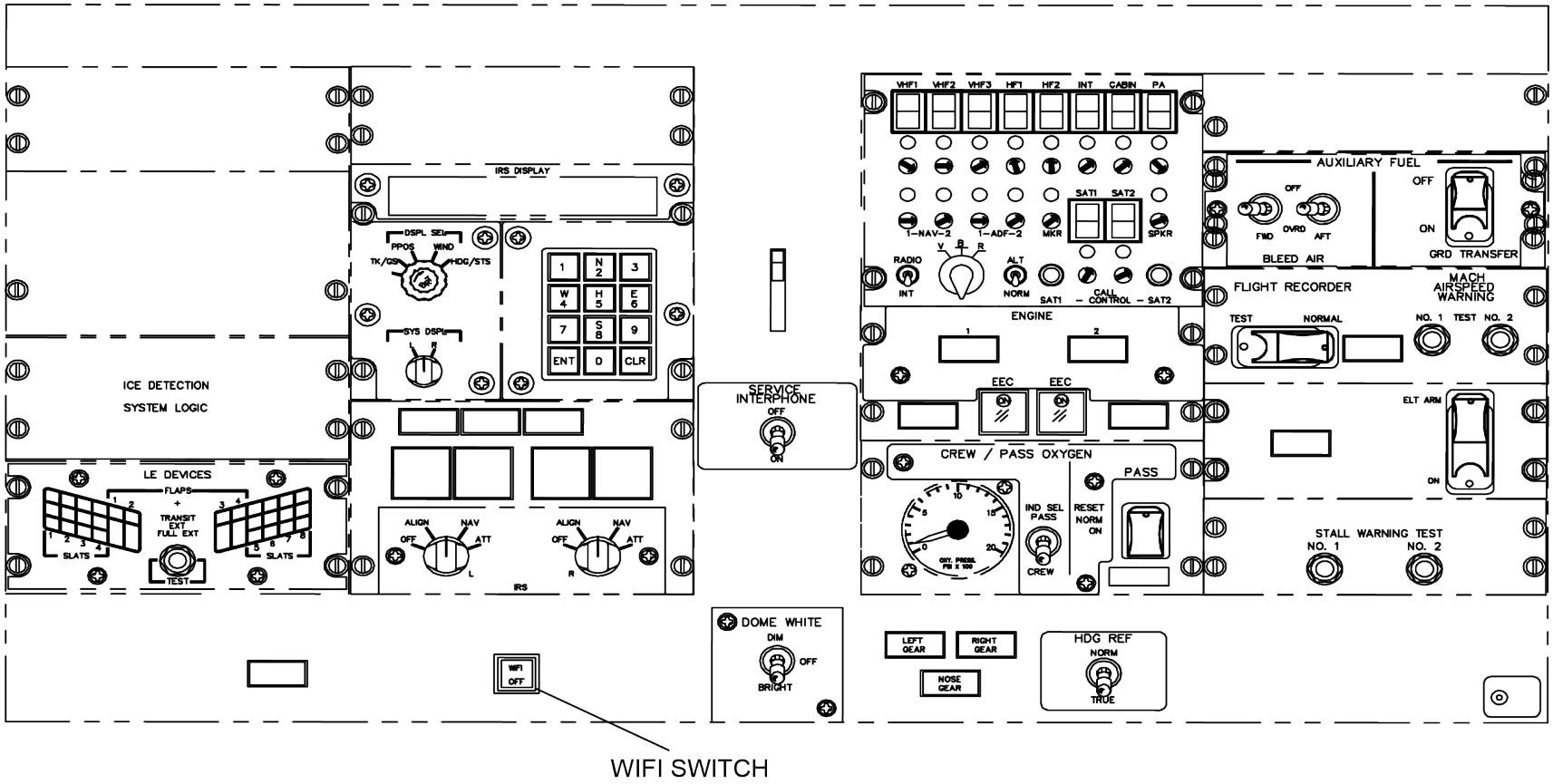
P5 PANEL WIFI SWITCH - INSTALLATION

TASK 44-10-01-400-801

1. Purpose
   A. This procedure contains the following task:
      (1) P5 Panel WIFI Switch - Installation, TASK 44-10-01-400-801.
2. Installation Procedures
   A. Access
      (1) Location – P5 Overhead Panel
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E17	C99005	CABIN WIFI HUBS	P6-1 Circuit Breaker Panel

      (2) Gain access to the P5 Panel.
   C. Installation (Figure 401)
      (1) Open the P5 Panel.
      (2) Carefully Slide the WIFI Switch into the P5 Panel
      (3) Connect the electrical connector from the back of the WIFI Switch.



P5 CONTROL PANEL
(VIEW LOOKING UP)

TM8363ICAW24_002

Mod – P5 Panel WIFI Switch – Removal and Installation
Figure 101

KA BAND NETWORK DATA UNIT (KANDU) – REMOVAL

TASK 44-10-02-000-801

1. Purpose

   A. This procedure contains the following task:

      (1) KA Band Network Data Unit (KANDU) - Removal, ICAW Task 44-10-02-000-801.

2. Removal Procedures

   A. Access

      (1) Location – Door 311BL

   B. Task Preparation

      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E2	C99002	KA SATCOM - KANDU	P6-1 Circuit Breaker Panel

      (2) Gain access to TIOS equipment rack by opening door 311BL.

   C. Removal (Figure 401)

      (1) Remove electrical connector and cabling from the Kandu unit.

      (2) Remove four screws and washers securing the Kandu to the equipment pallet; retain the hardware for the installation procedure.

      (3) Remove the Kandu.

      (4) Protect electrical connectors and ports with protective caps.

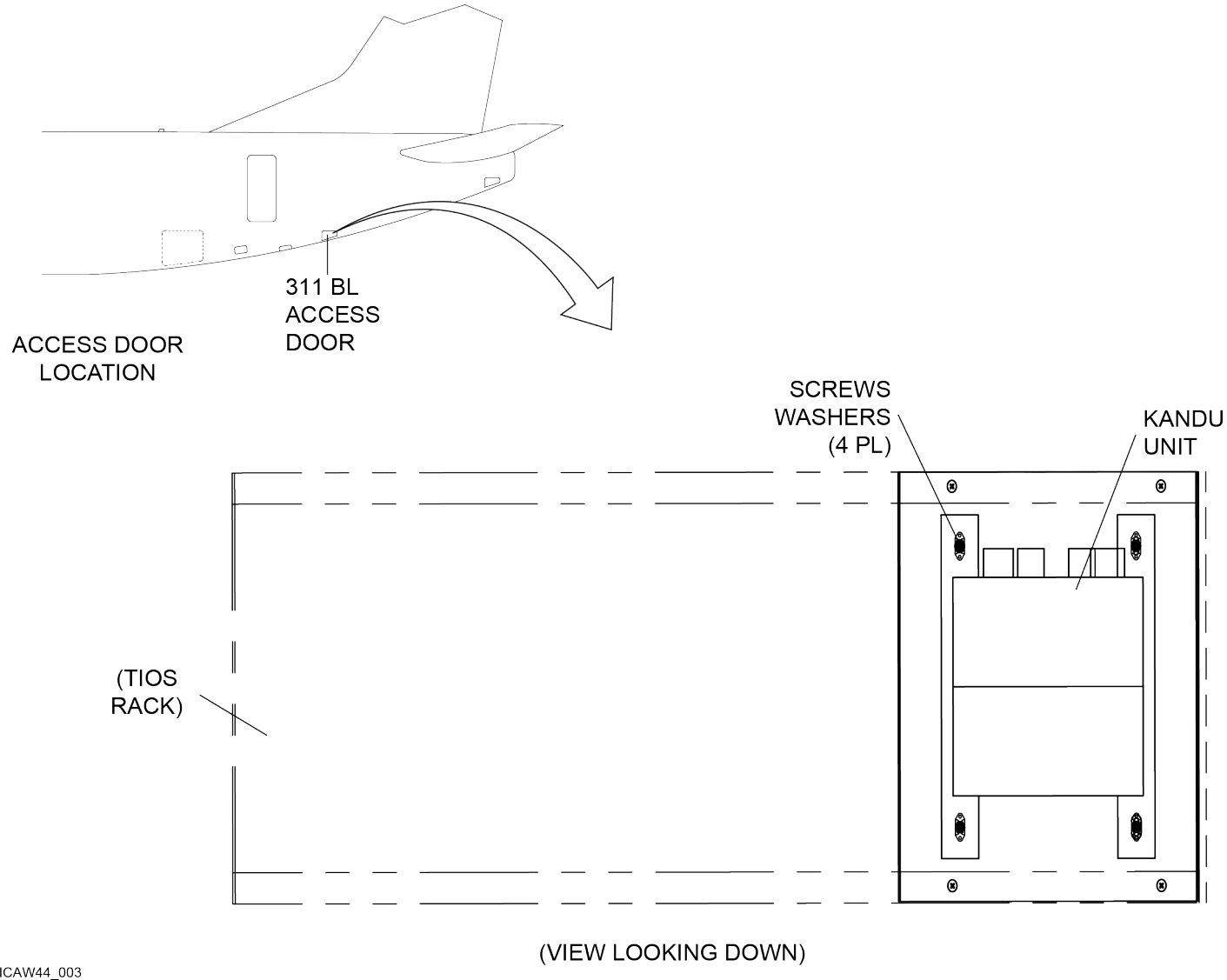
KA BAND NETWORK DATA UNIT (KANDU) – INSTALLATION

TASK 44-10-02-400-801

1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band Network Data Unit (KANDU) - ICAW Task 44-10-02-400-801.
2. Installation Procedures
   A. Access
      (1) Location – Door 311BL
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E2	C99002	KA SATCOM - KANDU	P6-1 Circuit Breaker Panel

      (2) Gain access to the overhead equipment pallet by opening door 311BL.
   C. Installation (Figure 401)
      (1) Remove the protective caps from the Kandu unit and aircraft connectors.
      (2) Install the Kandu unit onto the equipment pallet using retained screws and washers to secure the unit in place.
      (3) Connect the electrical connector and cabling to the Kandu.
   D. Job Closeout
      (1) Perform a Ka Band System Operational Check; refer to ICAW Task 44-10-10-710-801.
      (2) Close previously opened circuit breakers.
      (3) Clean work area as necessary; remove all tools, test equipment and inspect for FOD.
      (4) Return aircraft to service.



Ka Band Network Data Unit (KANDU) – Removal and Installation

Figure 401

KA BAND - MODEM MANAGER (MODMAN) – REMOVAL

TASK 44-10-03-000-801

1. Purpose

   A. This procedure contains the following task:

      (1) Ka Band - Modem Manager (MODMAN) Removal - ICAW Task 44-10-03-000-801.

2. Removal Procedures

   A. Access

      (1) Location – E6 Equipment Rack

   B. Task Preparation

      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E1	C99001	KA SATCOM - MODMAN	P6-1 Circuit Breaker Panel

      (2) Gain access to the E6 equipment rack in the aft cargo compartment.

   C. Removal (Figure 401)

      (1) Loosen the hold-down retractor securing the ALRU in the mounting tray, and remove retractor from the ALRU mounting hooks.

      (2) Lift the ALRU away from the mounting tray.

      (3) Protect removed connectors with caps and/or protective bags.

KA BAND - MODEM MANAGER (MODMAN) – INSTALLATION

TASK 44-10-03-400-801

1. Purpose

   A. This procedure contains the following task:

      (1) Ka Band - Modem Manager (MODMAN) - ICAW Task 44-10-03-400-801.

2. Installation Procedures

   A. Access

      (1) Location – E6 Equipment Rack

   B. Task Preparation

      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E1	C99001	KA SATCOM - MODMAN	P6-1 Circuit Breaker Panel

      (2) Gain access to the E6 equipment rack in the aft cargo compartment.

   C. Installation (Figure 401)

      (1) Remove protective coverings from electrical connectors.

      (2) Slide ALRU onto the mounting tray.

      (3) Tighten the hold-down retractor securing the ALRU in the mounting tray.

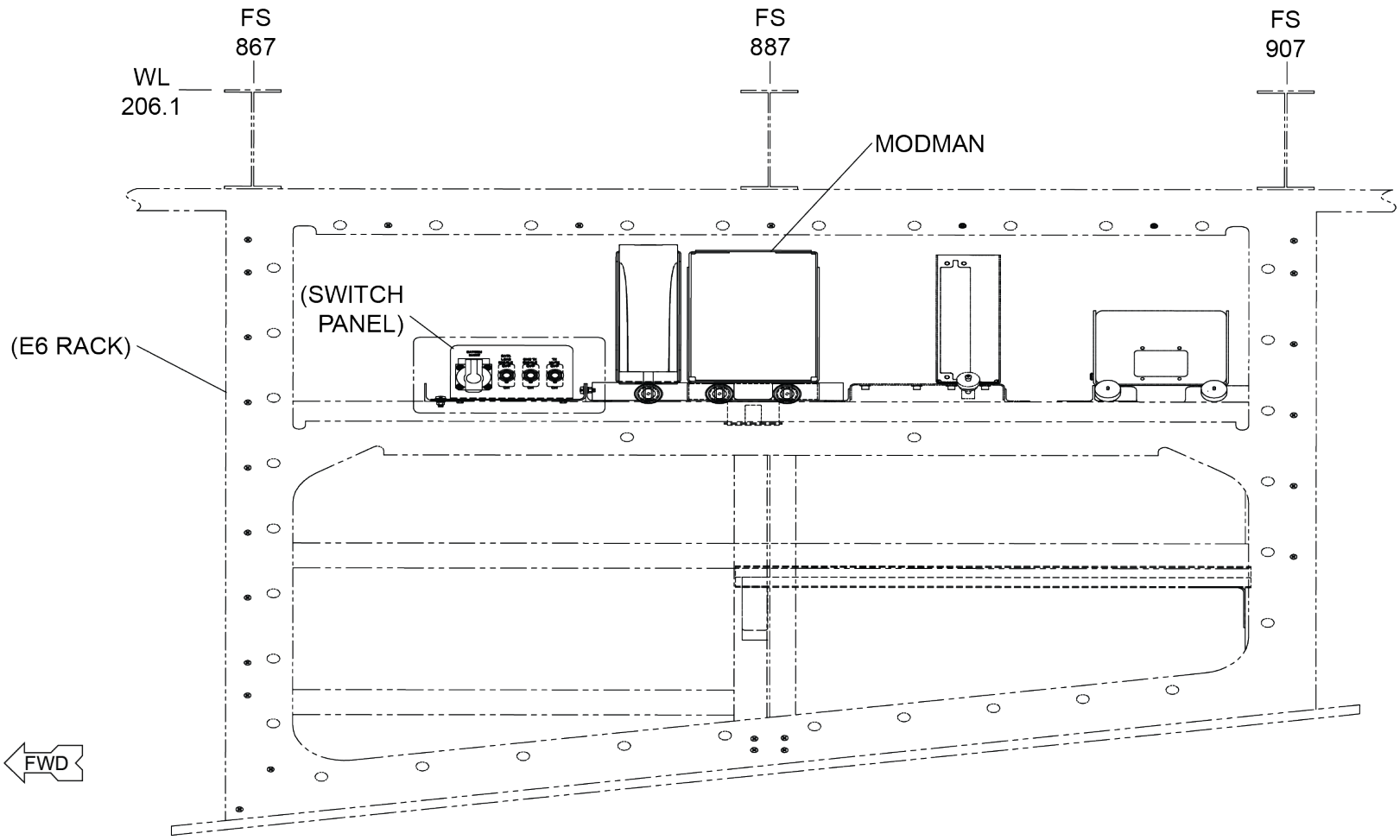
   D. Job Closeout

      (1) Perform a Ka Band System Operational Check; refer to ICAW Task 44-10-10-710-801.

      (2) Close previously opened circuit breakers.

      (3) Clean work area as necessary; remove all tools, test equipment and inspect for FOD.

      (4) Return aircraft to service.



E6 EQUIPMENT RACK
(VIEW LOOKING OUTBD RHS)

TM8363ICAW44_004

Ka Band - Modem Manager (MODMAN) – Removal and Installation

Figure 401

KA BAND - AIRPLANE PERSONALITY MODULE (APM) – REMOVAL

TASK 44-10-04-000-801

1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band - Airplane Personality Module (APM) Removal - ICAW Task 44-10-04-000-801.
2. Removal Procedures
   A. Access
      (1) Location – E6 Equipment Rack
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E1	C99001	KA SATCOM - MODMAN	P6-1 Circuit Breaker Panel

      (2) Gain access to the E6 equipment rack in the aft cargo compartment.
   C. Removal (Figure 401)
      (1) Remove electrical connector.
      (2) Remove screws and washers securing the APM to the electrical rack.
      (3) Remove the APM.
      (4) Protect removed connectors with caps and/or protective bags.

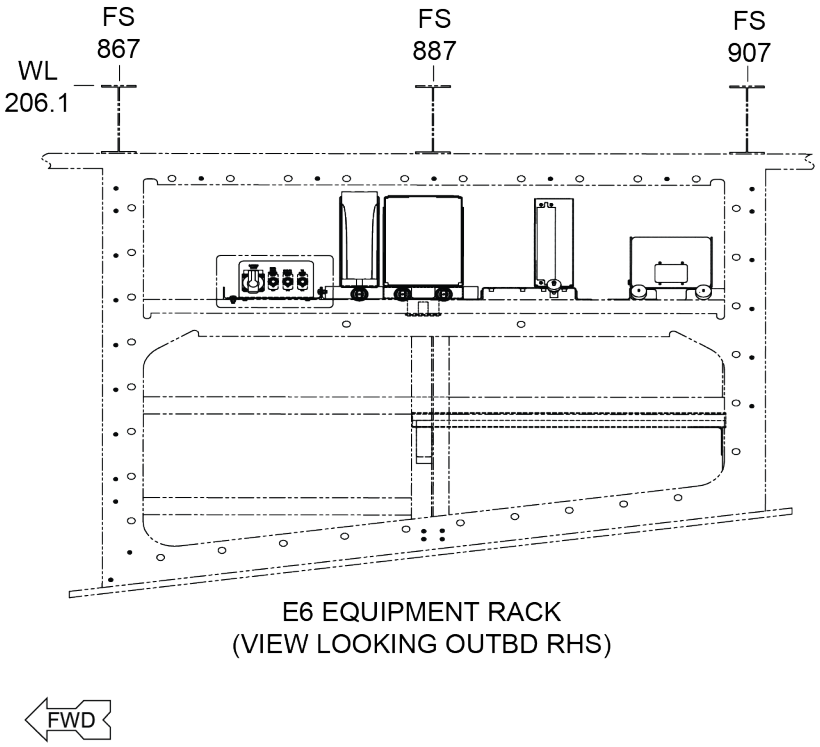
KA BAND - AIRPLANE PERSONALITY MODULE (APM) – INSTALLATION

TASK 44-10-04-400-801

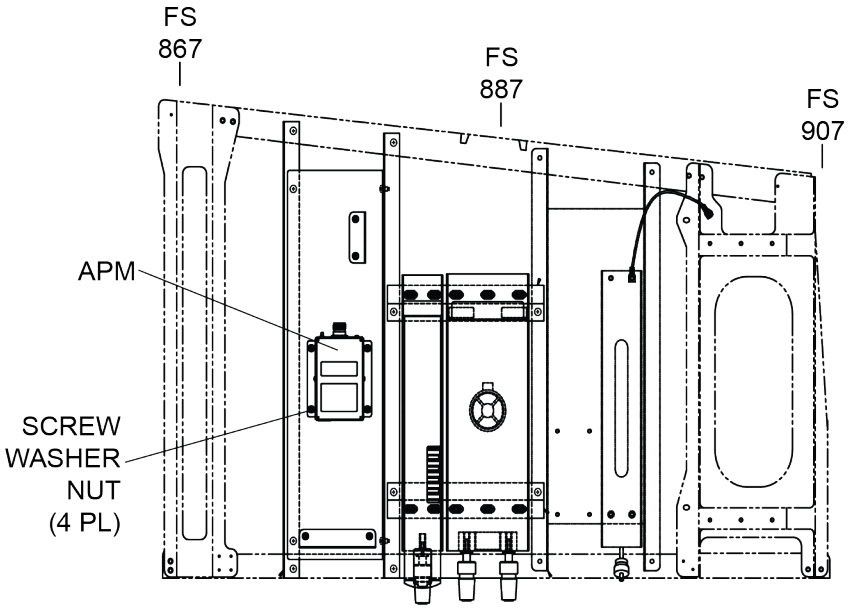
1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band - Airplane Personality Module (APM) Installation - ICAW Task 44-10-04-400-801.
2. Installation Procedures
   A. Access
      (1) Location – E6 Equipment Rack
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E1	C99001	KA SATCOM - MODMAN	P6-1 Circuit Breaker Panel

      (2) Gain access to the E6 Equipment Rack located in the aft cargo compartment.
   C. Installation (Figure 401)
      (1) Remove protective coverings from electrical connectors.
      (2) Install APM with previously removed screws and washers.
      (3) Connect electrical connector.
   D. Job Closeout
      (1) Perform a Ka Band System Operational Check; refer to ICAW Task 44-10-10-710-801.
      (2) Close previously opened circuit breakers.
      (3) Clean work area as necessary; remove all tools, test equipment and inspect for FOD.
      (4) Return aircraft to service.



E6 EQUIPMENT RACK
(VIEW LOOKING OUTBD RHS)



E6 EQUIPMENT RACK
(VIEW LOOKING DOWN)

TM8363ICAW44_005

Ka Band - Airplane Personality Module (APM) – Removal and Installation

Figure 401

KA BAND - SWITCH PANEL– REMOVAL

TASK 44-10-05-000-801

1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band - Switch Panel Removal - ICAW Task 44-10-05-000-801.
2. Removal Procedures
   A. Access
      (1) Location – E6 Equipment Rack
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E1	C99001	KA SATCOM - MODMAN	P6-1 Circuit Breaker Panel

      (2) Gain access to the E6 equipment rack in the aft cargo compartment.
   C. Removal (Figure 401)
      (1) Remove electrical connector.
      (2) Remove screws and washers securing the Switch Panel to the electrical rack.
      (3) Remove the Switch Panel.
      (4) Protect removed connectors with caps and/or protective bags.

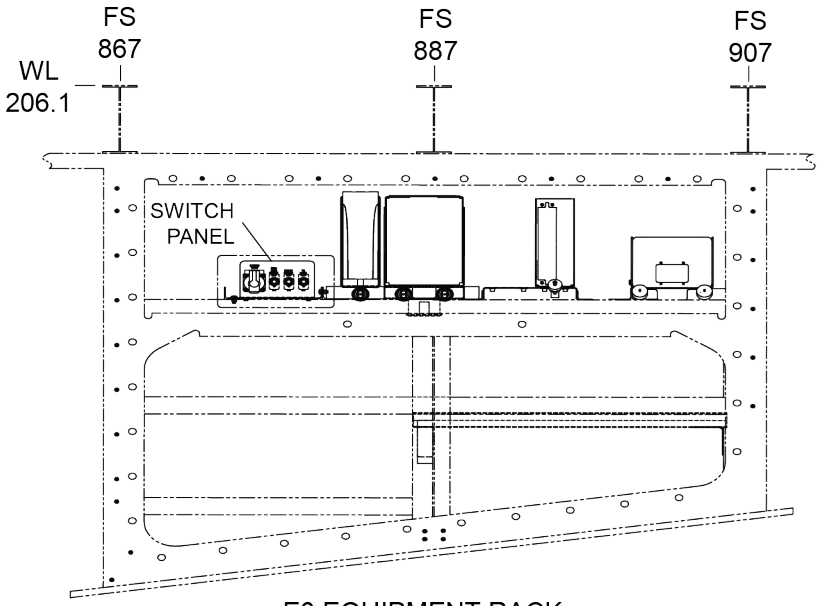
KA BAND - SWITCH PANEL– INSTALLATION

TASK 44-10-05-400-801

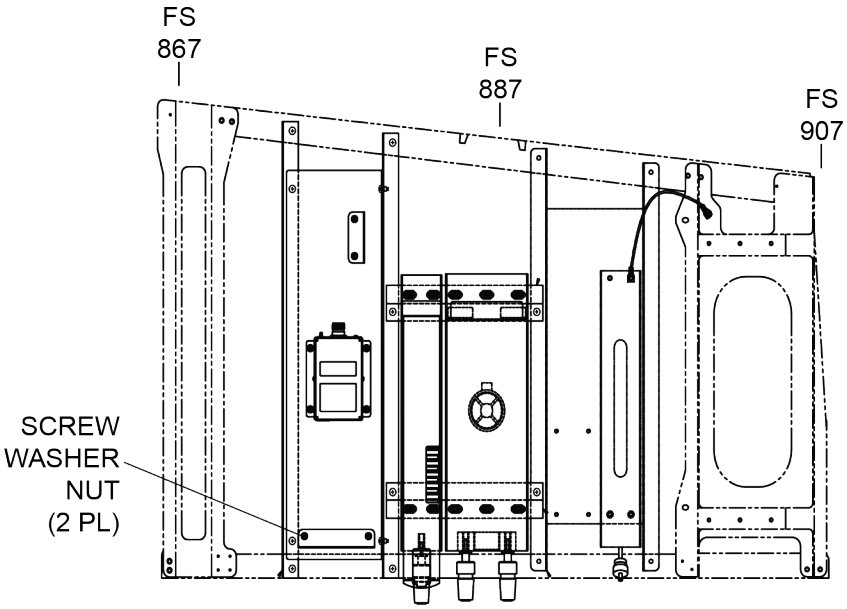
1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band - Switch Panel Installation - ICAW Task 44-10-05-400-801.
2. Installation Procedures
   A. Access
      (1) Location – E6 Equipment Rack
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E1	C99001	KA SATCOM - MODMAN	P6-1 Circuit Breaker Panel

      (2) Gain access to the E6 equipment rack in the aft cargo compartment.
   C. Installation (Figure 401)
      (1) Remove caps or bags protecting electrical connectors.
      (2) Install electrical connectors.
      (3) Install screws and washers securing the Switch Panel to the electrical rack.
   D. Job Closeout
      (1) Perform a Ka Band System Operational Check; refer to ICAW Task 44-10-10-710-801.
      (2) Close previously opened circuit breakers.
      (3) Clean work area as necessary; remove all tools, test equipment and inspect for FOD.
      (4) Return aircraft to service.



E6 EQUIPMENT RACK
(VIEW LOOKING OUTBD RHS)



E6 EQUIPMENT RACK
(VIEW LOOKING DOWN)

TM8363ICAW44_006

Ka Band - Switch Panel – Removal and Installation

Figure 401

KA BAND – WIDEBAND ANTENNA – REMOVAL

TASK 44-10-06-000-801

1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band – Wideband Antenna Removal - ICAW Task 44-10-06-000-801.
2. Removal Procedures
   A. Access
      (1) Location – Cabin Ceiling Panels – Forward STA 419 / Mid STA 601 / Aft STA 787
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E16	C99004	CABIN HUB	P6-1 Circuit Breaker Panel

      (2) Gain access to the Cabin Ceiling Panels.
   C. Removal (Figure 401)
      (1) Lower the appropriate Ceiling Panel.
      (2) Remove electrical connector.
      (3) Carefully remove the appropriate wideband antenna from the hook and loop material.
      (4) Protect removed connectors with caps and/or protective bags.

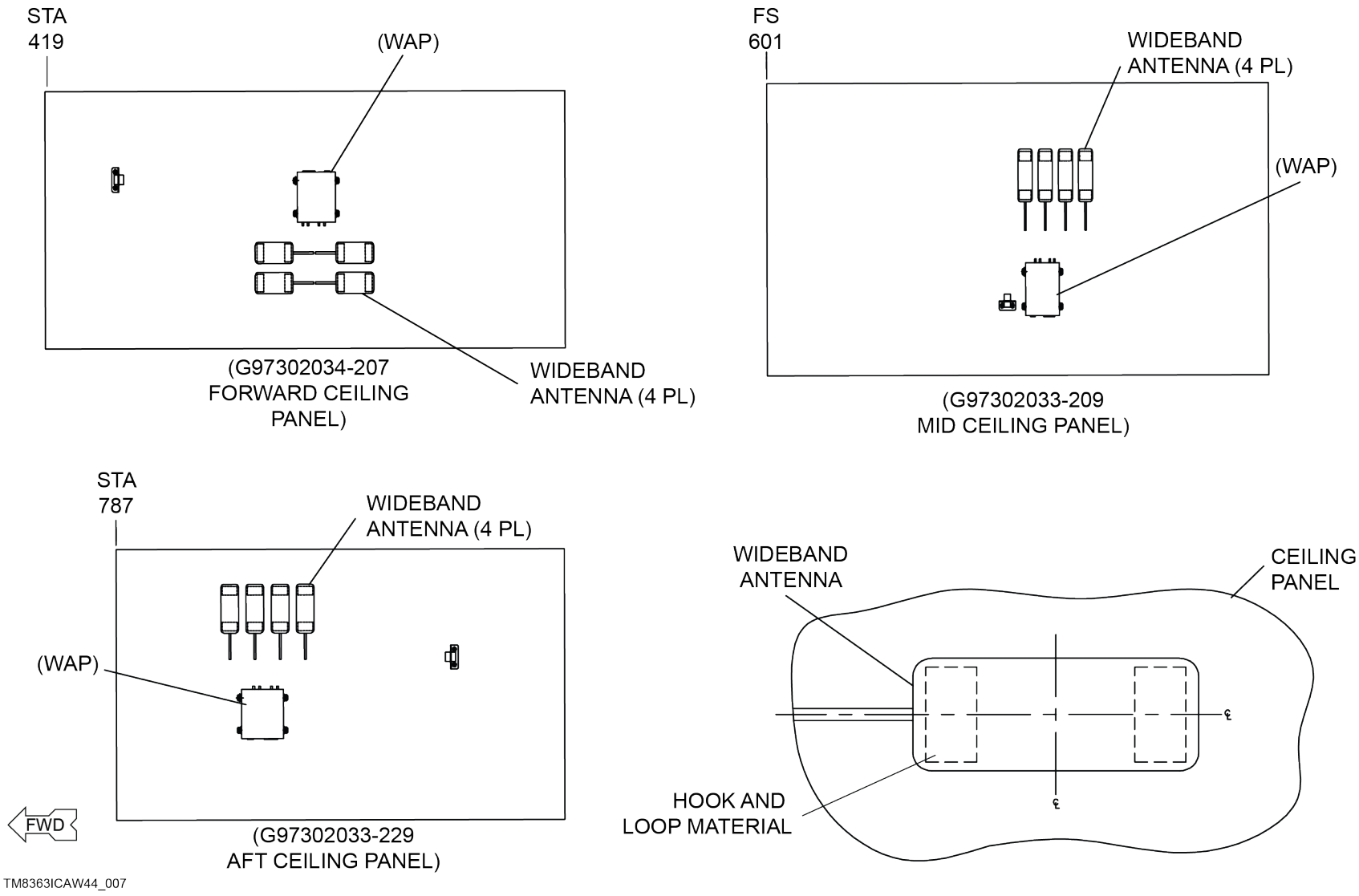
KA BAND – WIDEBAND ANTENNA – INSTALLATION

TASK 44-10-06-400-801

1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band – Wideband Antenna Installation - ICAW Task 44-10-06-400-801.
2. Installation Procedures
   A. Access
      (1) Location – Cabin Ceiling Panels – Forward STA 419 / Mid STA 601 / Aft STA 787
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E16	C99004	CABIN ROUTER	P6-1 Circuit Breaker Panel

      (2) Gain access to the Cabin Ceiling Panels.
   C. Installation (Figure 401)
      (1) Lower the appropriate Ceiling Panel.
      (2) Carefully install the appropriate wideband antenna using hook and loop material.
      (3) Install electrical connector.
   D. Job Closeout
      (1) Perform a Ka Band System Operational Check; refer to ICAW Task 44-10-10-710-801.
      (2) Close previously opened circuit breakers.
      (3) Clean work area as necessary; remove all tools, test equipment and inspect for FOD.
      (4) Return aircraft to service.



Wideband Antenna Removal / Installation
Figure 401

KA BAND – WIRELESS ACCESS POINT (WAP) – REMOVAL

TASK 44-10-07-000-801

1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band – Wireless Access Point - Removal - ICAW Task 44-10-07-000-801.
2. Removal Procedures
   A. Access
      (1) Location – Cabin Ceiling Panels – Forward STA 419 / Mid STA 601 / Aft STA 787
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E17	C99005	CABIN WIFE HUBS	P6-1 Circuit Breaker Panel

      (2) Gain access to the Cabin Ceiling Panels.
   C. Removal (Figure 401)
      (1) Lower the appropriate Ceiling Panel.
      (2) Remove electrical connector.
      (3) Remove screws and washers (4 PL) securing the WAP to the ceiling panel.
      (4) Protect removed connectors with caps and/or protective bags.

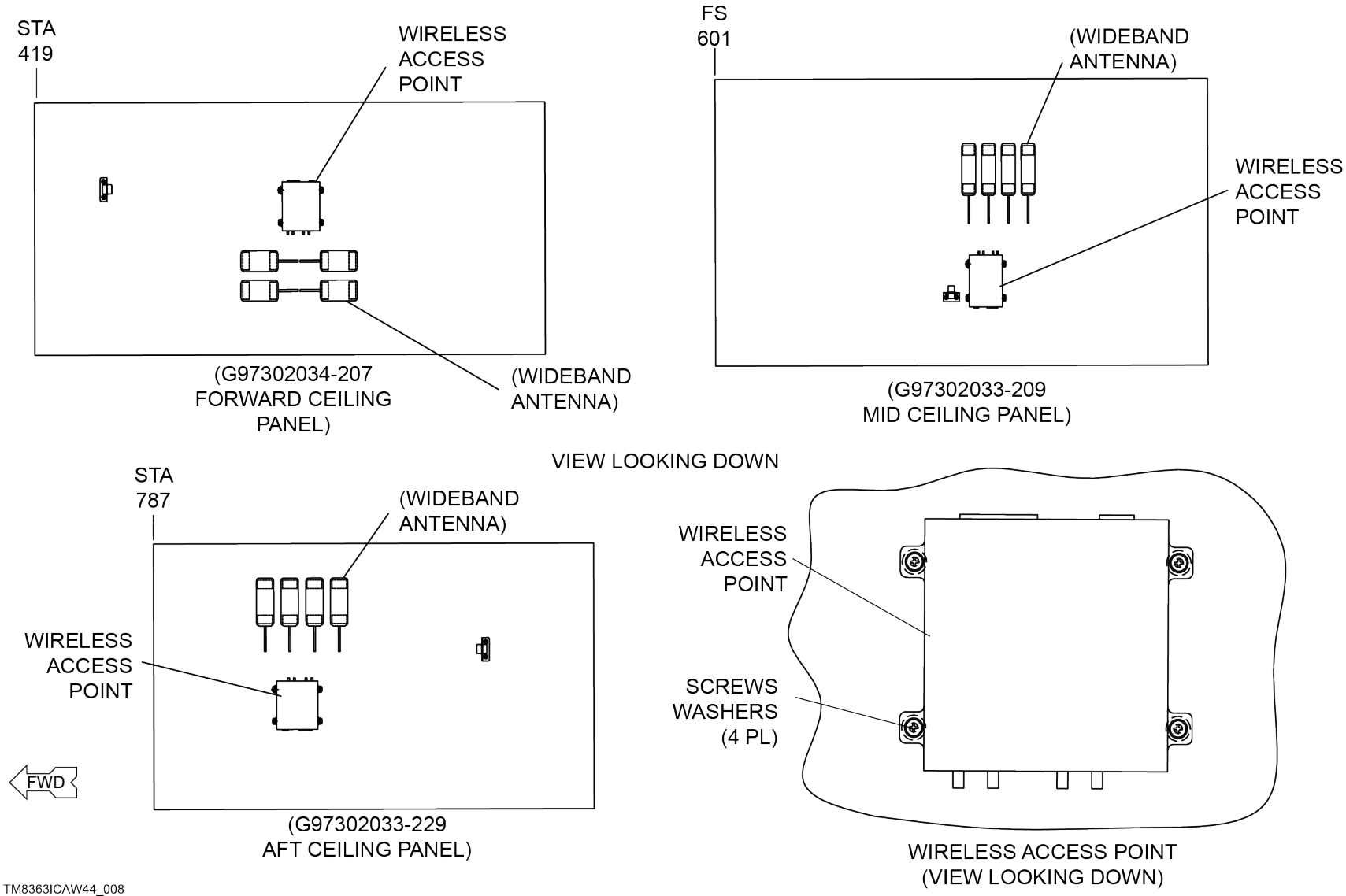
KA BAND – WIRELESS ACCESS POINT (WAP) – INSTALLATION

TASK 44-10-07-400-801

1. Purpose
   A. This procedure contains the following task:
      (1) Ka Band – Wireless Assess Point – Installation - ICAW Task 44-10-07-400-801.
2. Installation Procedures
   A. Access
      (1) Location – Cabin Ceiling Panels – Forward STA 419 / Mid STA 601 / Aft STA 787
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E17	C99005	CABIN WIFE HUBS	P6-1 Circuit Breaker Panel

      (2) Gain access to the Cabin Ceiling Panels.
   C. Installation (Figure 401)
      (1) Lower the appropriate Ceiling Panel.
      (2) Removed connector caps and/or protective bags.
      (3) Install electrical connector.
      (4) Install screws and washers (4 PL) securing the WAP to the ceiling panel.
   D. Job Closeout
      (1) Perform a Ka Band System Operational Check; refer to ICAW Task 44-10-10-710-801.
      (2) Close previously opened circuit breakers.
      (3) Clean work area as necessary; remove all tools, test equipment and inspect for FOD.
      (4) Return aircraft to service.



TM8363ICAW44_008

Wireless Access Point – Removal and Installation
Figure 401

SATCOM DIRECT ROUTER (SDR) – REMOVAL

TASK 44-10-08-000-801

1. General

   A. The SATCOM direct router (SDU) interfaces the aircraft SATCOM. The SDR is also connected to the cabin access points and telephone system router.

   B. This procedure contains the following task:

      (1) SATCOM Direct Router (SDR) Removal, ICAW Task 44-10-08-000-801.

2. Removal Procedures

   A. Access

      (1) Location – E6 Equipment Rack

   B. Task Preparation

      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E16	C99004	CABIN ROUTER	P6-1 Circuit Breaker Panel

   C. Removal (Figure 401)

      NOTE: Mark or identify electrical harnesses and cabling to facilitate re-installation of the SATCOM direct router; protect connectors upon removal.

      NOTE: Retain removed hardware for use during the SDR installation procedure.

      (1) Loosen the hold-down retractor securing the ALRU in the mounting tray, and remove retractor from the ALRU mounting hooks.

      (2) Lift the ALRU away from the mounting tray.

      (3) Protect removed connectors with caps and/or protective bags.

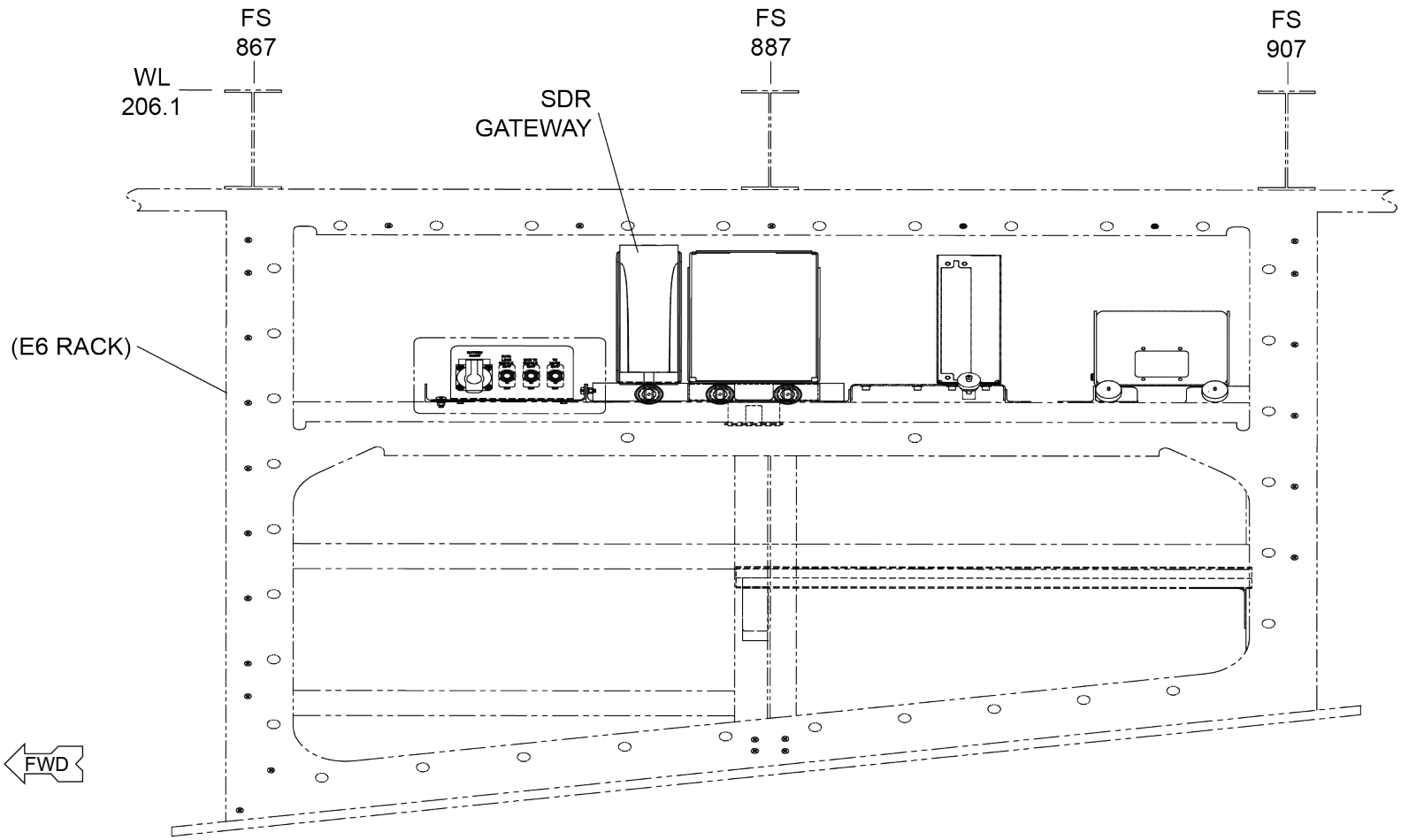
SATCOM DIRECT ROUTER (SDR) - INSTALLATION

TASK 44-10-08-400-801

1. General
   A. This procedure contains the following task:
      (1) SATCOM Direct Router (SDR) Installation, ICAW Task 44-10-08-400-801.
2. Installation Procedures
   A. Access
      (1) Location – E6 Equipment Rack
   B. Task Preparation
      (1) Make sure the following circuit breakers are open, collared, and tagged:

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E16	C99004	CABIN ROUTER	P6-1 Circuit Breaker Panel

   C. Installation (Figure 402)
      (1) Gain access to the E6 Equipment Rack.
      (2) Remove protective coverings from electrical connectors.
      (3) Slide ALRU onto the mounting tray.
      (4) Tighten the hold-down retractor securing the ALRU in the mounting tray.
   D. Job Close-Up
      (1) Perform a cabin network system Operational Check; refer to ICAW Task 44-10-10-710-801.
      (2) Clean work area as necessary; remove all tools and test equipment.
      (3) Inspect immediate surrounding work area for cleanliness and FOD.
      (4) Return aircraft to serviceable and original configuration.



E6 EQUIPMENT RACK
(VIEW LOOKING OUTBD RHS)

TM8363ICAW44_009

MCS-8000 ANTENNA AND KRFU – REMOVAL AND INSTALLATION

TASK 44-10-09

1. General

   A. Refer to Lufthansa Document ARS02-55AF-ID-001 for MCS-800 Antenna Removal and Installation Procedures

   B. Refer to Lufthansa Document ARS02-55AF-ID-002 and ARS02-55AF-ID-004 for KRFU Removal and installation Procedures.

KA BAND SATCOM – OPERATIONAL CHECK

TASK 44-10-10-710-801

1. Purpose

   A. This procedure will determine the operational status of the KA Band SATCOM.

2. KA Band SATCOM Operational Check

   NOTE: The Ka Band SATCOM system supplies a broadband communication link that can be used to supply data, video, and voice communications for passenger communications and entertainment. The AES communicates to the ground station through a satellite network. A Modman is provided within the AES to enable two-way communications.

   The forward channel provides a communication path from the ground station to the AES. The return channel provides a communication path from the AES to the SAS.

   A. Preparation

      (1) Apply electrical power to aircraft. Refer to Boeing AMM Task 24-22-00-860-811.

      (2) Make sure the following circuit breakers are closed.

GRID	REF DES	CIRCUIT BREAKER	SOURCE / PANEL
E1	C99001	KA SATCOM - MODMAN	115VAC XFR Bus 1 IFF / PASS Seat P6-1 Circuit Breaker Panel

      (3) Make sure the aircraft telephone system is operational.

      (4) Laptop (x2) with Windows 7 or greater and Ethernet cables (x2) are required to accomplish this test.

   B. Checkout

      (1) In the flight deck, select the Ka Band System from OFF to ON:

         (a) Wait a minimum of 4 (four) minutes.

      (2) At the Galley and FWD attendant's touchscreen verify the following:

         (a) SDR KA STATUS – Green

         (b) KA SYSTEM STATUS – Green

         (c) MODMAN NOT AVAILIBLE – No Color

         (d) MODMAN STATUS - Green

      (3) Select the Flight Deck Ks Band switch to OFF, verify the SDR KS STATUS indicator on the touchscreen changes to RED.

      (4) Select the Flight Deck Ka Band switch to ON.

         (a) Wait a minimum of 4 (four) minutes.

      (5) Verify the SDR KA STATUS indicator on the touchscreen changes from RED to GREEN.

      (6) Connect the laptops to separate ports in the aircraft.

      (7) Make sure the Wi-Fi is selected OFF on each laptop.

(8) Using a web browser (Microsoft Edge, Firefox, Chrome) navigate to a website. The website must not be a search engine.

(a) Verify that each laptop can reach the requested website.

C. Job Close-Up

(1) Remove tools, test equipment, and inspect area for cleanliness and FOD.

(2) Return the aircraft to service.

APPENDIX

A

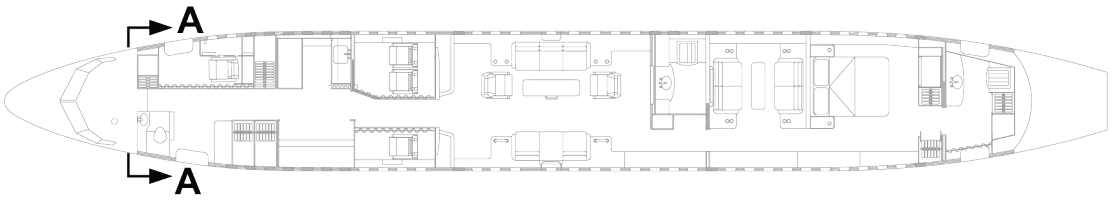
ILLUSTRATED PARTS LIST

APPENDIX A – ILLUSTRATED PARTS LIST
LIST OF EFFECTIVE PAGES

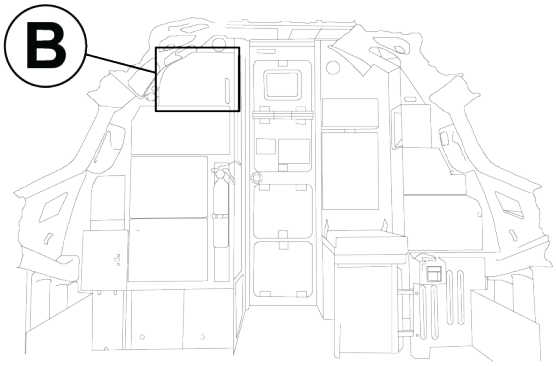
CHAPTER SECTION SUBSECTION	C	PAGE	DATE
APPENDIX A - IPL			Not Dated
LOEP		1	May 30/22
CONTENTS		2	May 30/22
44-24-00		3	May 30/22
		4	May 30/22
44-60-01		5	May 30/22
		6	May 30/22
44-60-02		7	May 30/22
		8	May 30/22
44-60-03		9	May 30/22
		10	May 30/22
44-60-04		11	May 30/22
		12	May 30/22
44-60-05		13	May 30/22
		14	May 30/22

CODES IN COLUMN C: N = NEW Page, R = REVISED Page, D = DELETED Page

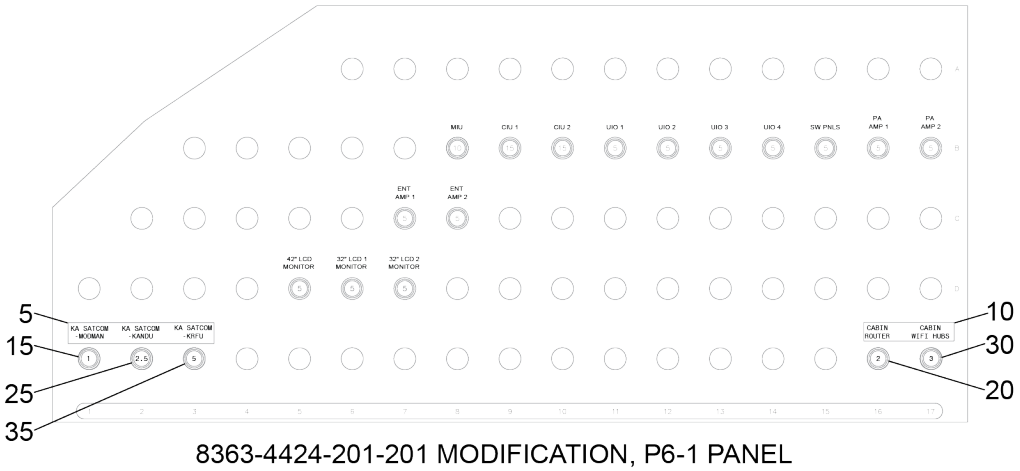
APPENDIX A – ILLUSTRATED PARTS LIST
TABLE OF CONTENTS



737-7ZHBJ AIRCRAFT LAYOUT



VIEW LOOKING AFT
VIEW **A-A**



8363-4424-201-201 MODIFICATION, P6-1 PANEL

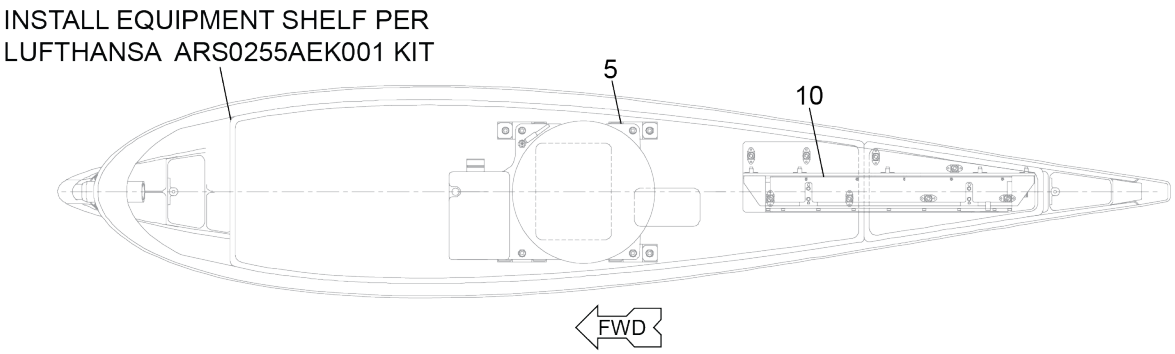
B

TM8363001

Modification, P6-1 Panel
Figure 1

FIG. ITEM	PART NUMBER	1 2 3 4 5 6 7 NOMENCLATURE	EFFECTIVITY	UNITS PER ASSY
1 – 1	8363-4424-201-201	MODIFICATION, P6-1 PANEL		REF
5	8363-4424-401-1	• P6-1 MODIFICATION PLACARD		1
10	8363-4424-401-3	• P6-1 MODIFICATION PLACARD		1
15	MS3320-1	• CIRCUIT BREAKER, SINGLE PHASE, 1 AMP		1
20	MS3320-2	• CIRCUIT BREAKER, SINGLE PHASE, 2 AMP		1
25	MS3320-2-1/2	• CIRCUIT BREAKER, SINGLE PHASE, 2.5 AMP		1
30	MS3320-3	• CIRCUIT BREAKER, SINGLE PHASE, 3 AMP		1
35	MS3320-5	• CIRCUIT BREAKER, SINGLE PHASE, 5 AMP		1

– ITEM NOT ILLUSTRATED



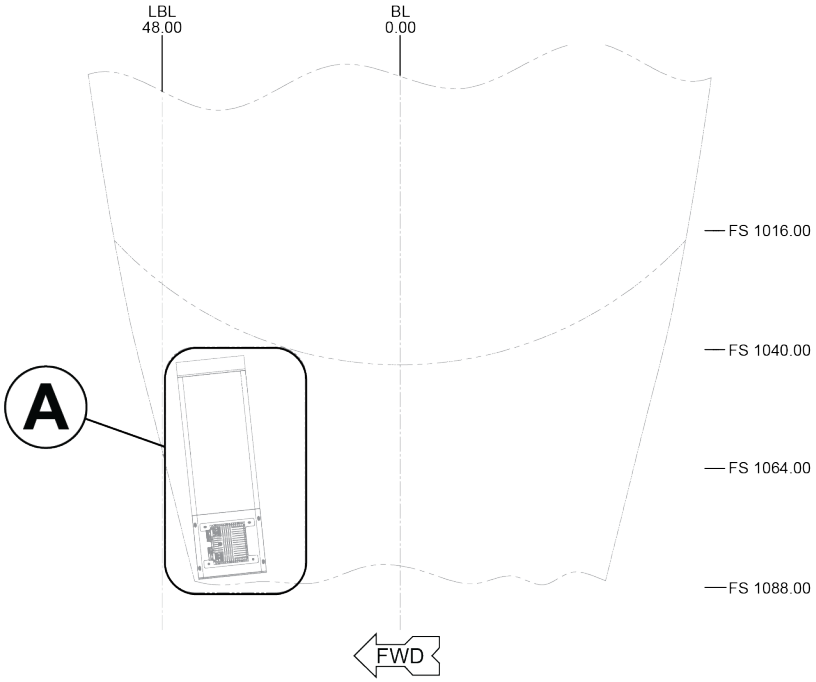
8363-4460-101-001 COMPONENT INSTL - KRFU & TMA

TM8363002

Component Instl - KRFU & TMA
Figure 1

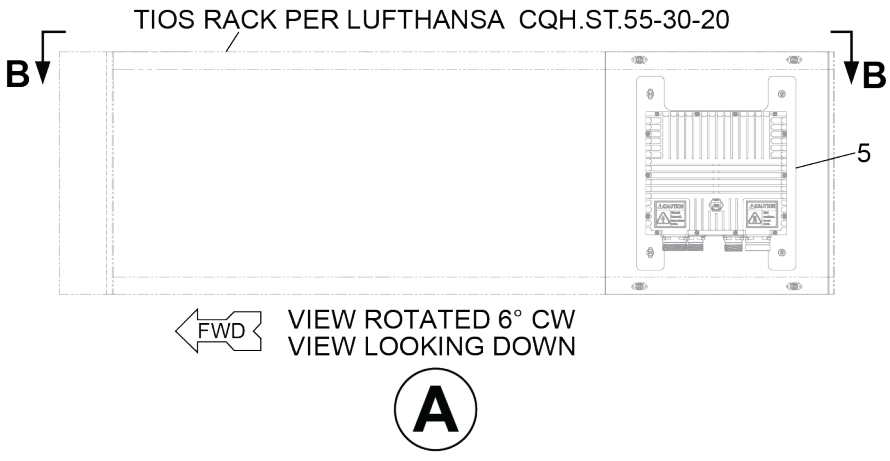
FIG. ITEM	PART NUMBER	1 2 3 4 5 6 7 NOMENCLATURE	EFFECTIVITY	UNITS PER ASSY
1 – 1	8363-4460-101-001	COMPONENT INSTL - KRFU & TMA		REF
5	90400013-0001	• ANTENNA		1
10	90402346	• KRFU		1
–15	90405972	• BBJ, TIOS + RF KIT		1

– ITEM NOT ILLUSTRATED



8363-4460-103-001 COMPONENT INSTL - KANDU

VIEW ROTATED 180°
VIEW LOOKING OUTBOARD
VIEW **B-B**

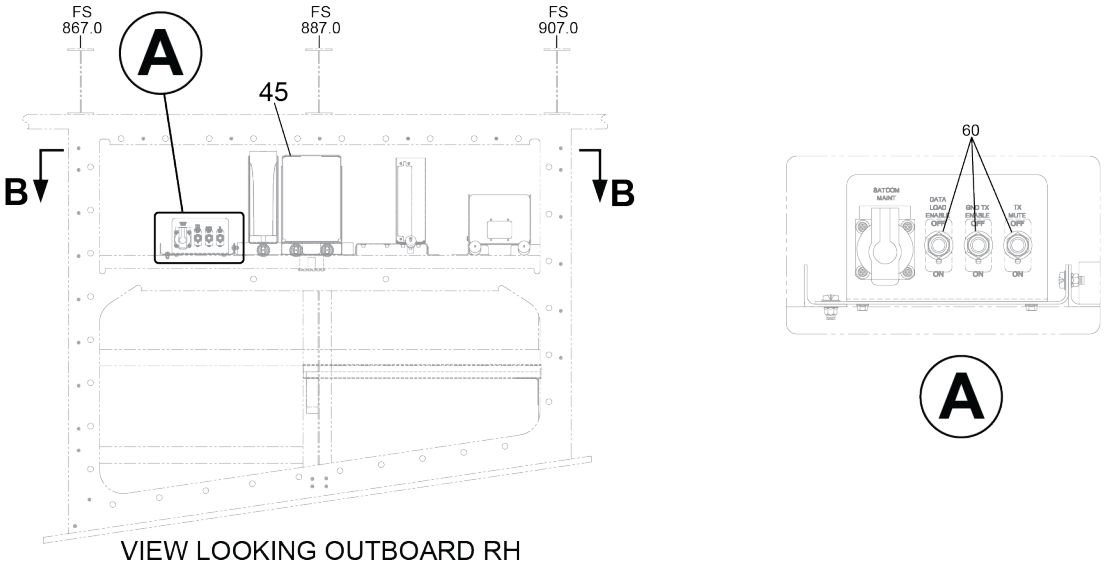


TM8363003

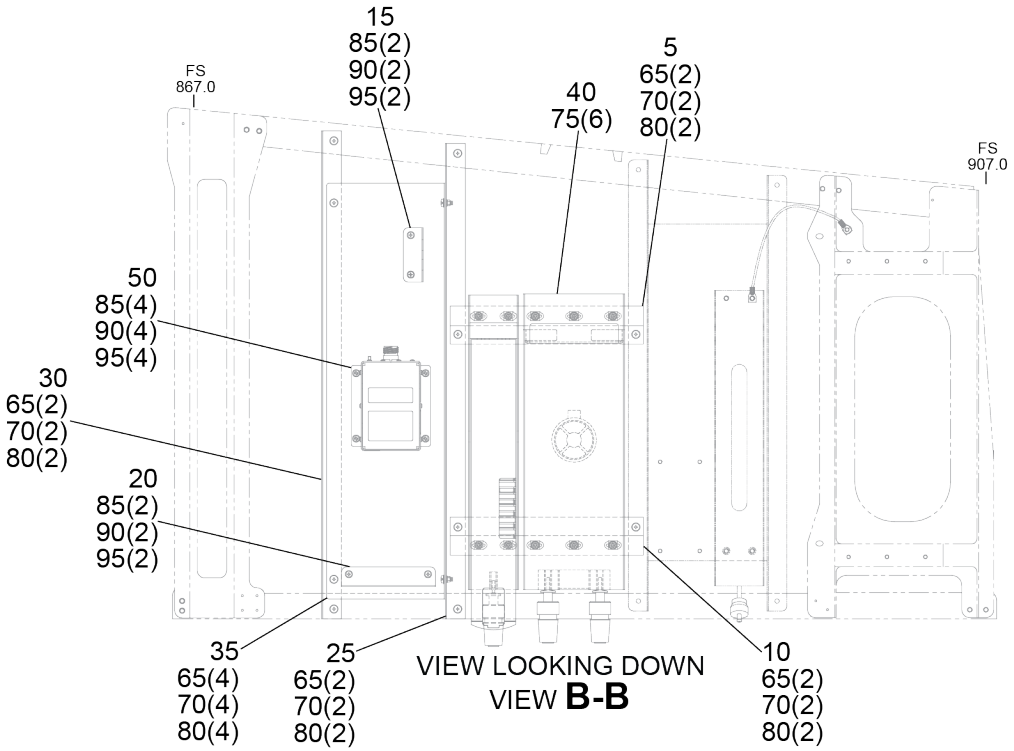
Component Instl – KANDU

FIG. ITEM	PART NUMBER	1 2 3 4 5 6 7 NOMENCLATURE	EFFECTIVITY	UNITS PER ASSY
1 – 1	8363-4460-103-001	COMPONENT INSTL - KANDU		REF
5	90404518	• KANDU		1

– ITEM NOT ILLUSTRATED



VIEW LOOKING OUTBOARD RH
8363-4460-107-001 COMPONENT INSTL - MODMAN & APM

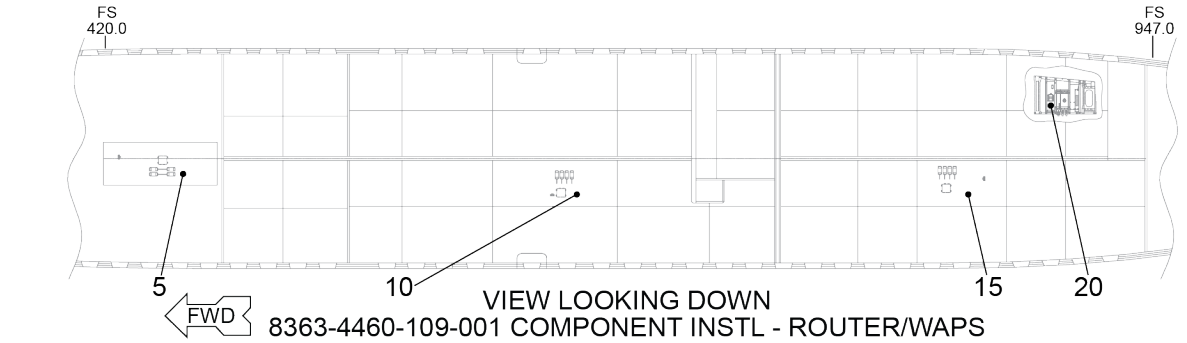


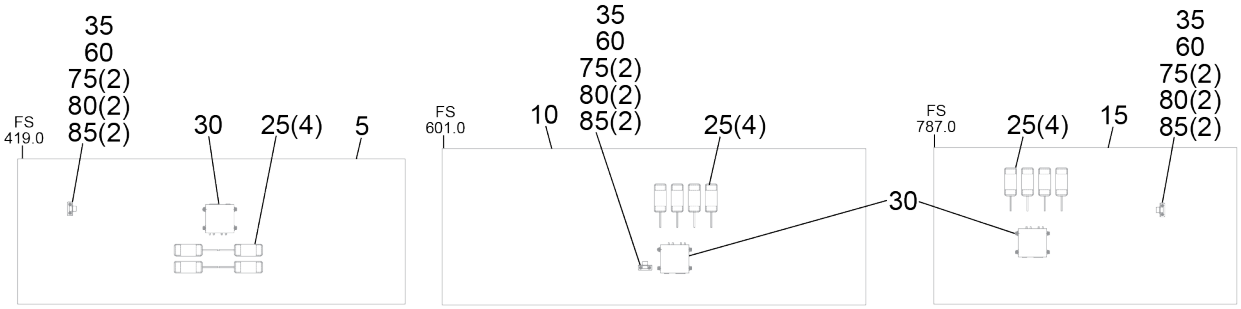
TM8363004

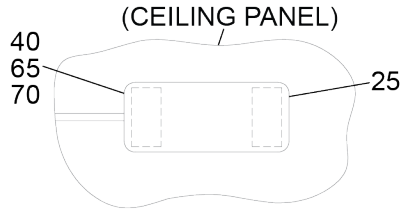
Component Instl MODMAN & APM
Figure 1

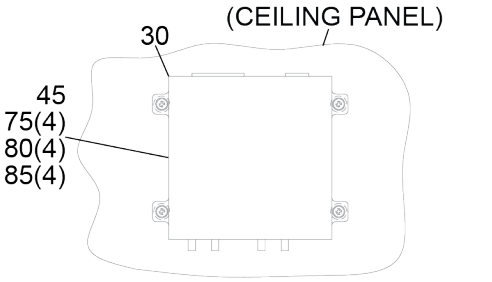
FIG. ITEM	PART NUMBER	1 2 3 4 5 6 7 NOMENCLATURE	EFFECTIVITY	UNITS PER ASSY
4 – 1	8363-4460-107-001	COMPONENT INSTL MODMAN & APM		REF
5	8363-4400-301-051	• ZEE BRACKET ASSY		1
10	8363-4400-301-053	• ZEE BRACKET ASSY (OPPOSITE)		1
15	8363-4400-301-305	• DISCONECT BRACKET		1
20	8363-4400-301-307	• BRACKET		1
25	8363-4400-301-309	• ANGLE		1
30	8363-4400-301-311	• ANGLE		1
35	8363-4400-301-313	• PLATE		REF
40	200-35313-101	• TRAY		REF
45	90400012-0001	• MODMAN		REF
50	90401121	• APM		REF
55	RJF21BSCC	• RJ-45 JACK		REF
60	MS24523-23	• TOGGLE SWITCH		REF
65	NAS1149F0332P	• WASHER		12
70	MS21042L3	• NUT		12
75	NAS517-3-1	• COUNTERSUNK SCREW		6
80	MS27039-1-06	• SCREW		12
85	MS21042L08	• NUT		8
90	MS27039-0806	• SCREW		8
95	NAS1149FN832P	• WASHER		8
100	NAS600-6	• SCREW		4
105	MS21042L04	• NUT		4
110	NAS1149DN416J	• WASHER		4

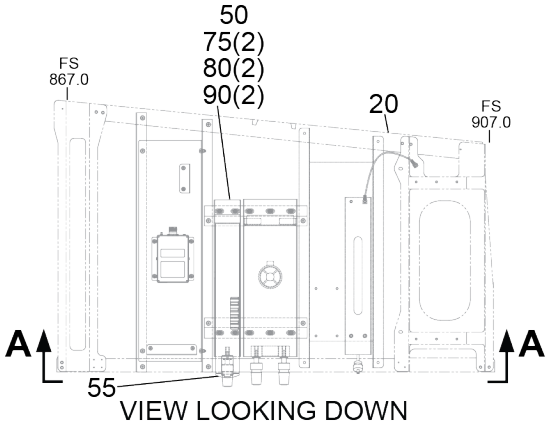
– ITEM NOT ILLUSTRATED

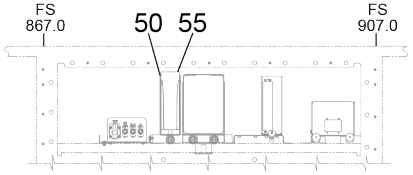










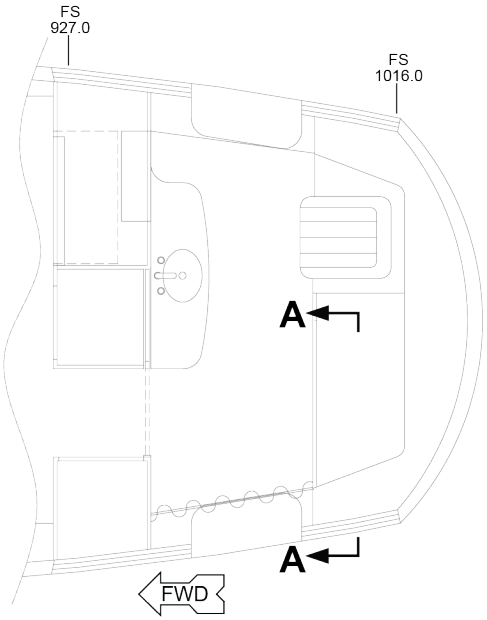


TM8363005

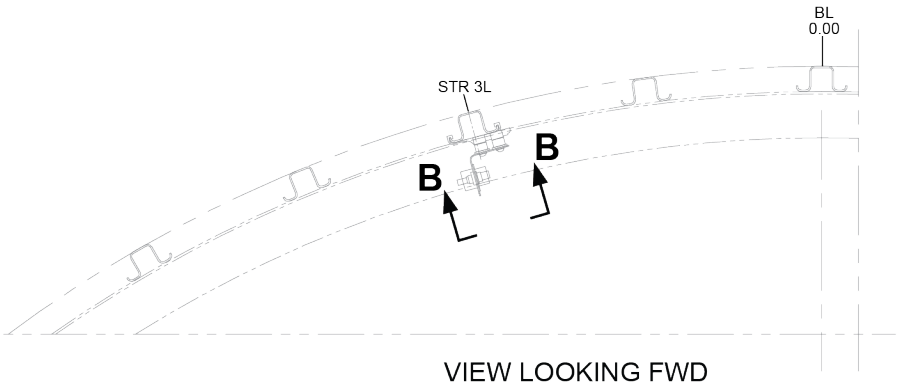
Component Instl ROUTER/WAPS
Figure 1

FIG. ITEM	PART NUMBER	1 2 3 4 5 6 7 NOMENCLATURE	EFFECTIVITY	UNITS PER ASSY
4 – 1	8363-4460-109-001	COMPONENT INSTL ROUTER/WAPS		REF
5	003	• FWD CEILING PANEL INSTL		1
10	005	• MID CEILING PANEL INSTL		1
15	007	• AFT CEILING PANEL INSTL		1
20	009	• SDR GATEWAY INSTL		1
25	101	• WIDEBAND ANTENNA INSTL	-003 -005 -007	4 4 4
30	103	• WIRELESS ACCESS POINT INSTL	-003 -005 -007	1 1 1
35	201	• DISCONECT BRACKET	-003 -005 -007	1 1 1
40	900110	• WIDEBAND ANTENNA	-101	REF
45	900023	• WIRELESS ACCESS POINT (WAP)	-103	REF
50	820-00153	• TRAY ASSY	-009	REF
55	TN2000-7772	• SDR GATEWAY	-009	REF
60	MS24264R16B24PN	• CONNECTOR		REF
65	SJ3526-1BL	• VELCO (HOOK)		AR
70	SJ3527-1BL	• VELCRO (LOOP)		AR
75	MS27039-(10-32)	• SCREW	-003 -005 -007 -009 -103	2 2 2 2 4
80	NAS1149F0332P	• WASHER	-003 -005 -007 -009 -103	2 2 2 2 4
85	NAS1832-3-X	• INSERT	-003 -005 -007 -103	2 2 2 4
90	BACB30VF3KXXX	• BOLT	-009	2

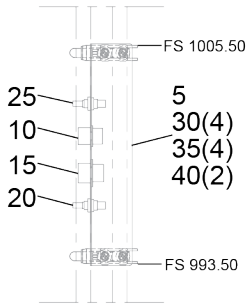
– ITEM NOT ILLUSTRATED



8363-4460-115-001 INSTL - BULKHEAD DISCONNECT



VIEW LOOKING FWD
VIEW ROTATED 90° CW
VIEW **A-A**



VIEW LOOKING UP
VIEW ROTATED 15° CW
VIEW **B-B**

TM8363006

Instl Bulkhead Disconnect
Figure 1

FIG. ITEM	PART NUMBER	1 2 3 4 5 6 7 NOMENCLATURE	EFFECTIVITY	UNITS PER ASSY
4 – 1	8363-4460-115-001	INSTL BULKHEAD DISCONNECT		REF
5	8363-4460-401-201	• DISCONNECT BRACKET		1
10	D99001J	• CONNECTOR		REF
15	D99002J	• CONNECTOR		REF
20	D99003J	• CONNECTOR		REF
25	D99004J	• CONNECTOR		REF
30	MS27039-(10-32)	• SCREW		4
35	NAS1149F0332P	• WASHER		4
40	BACS38P7	• STRINGER CLIP		2

– ITEM NOT ILLUSTRATED

APPENDIX

B

WIRING DIAGRAM

CHAPTER

23

COMMUNICATION

CHAPTER 23 COMMUNICATION – WIRING DIAGRAM
LIST OF EFFECTIVE PAGES

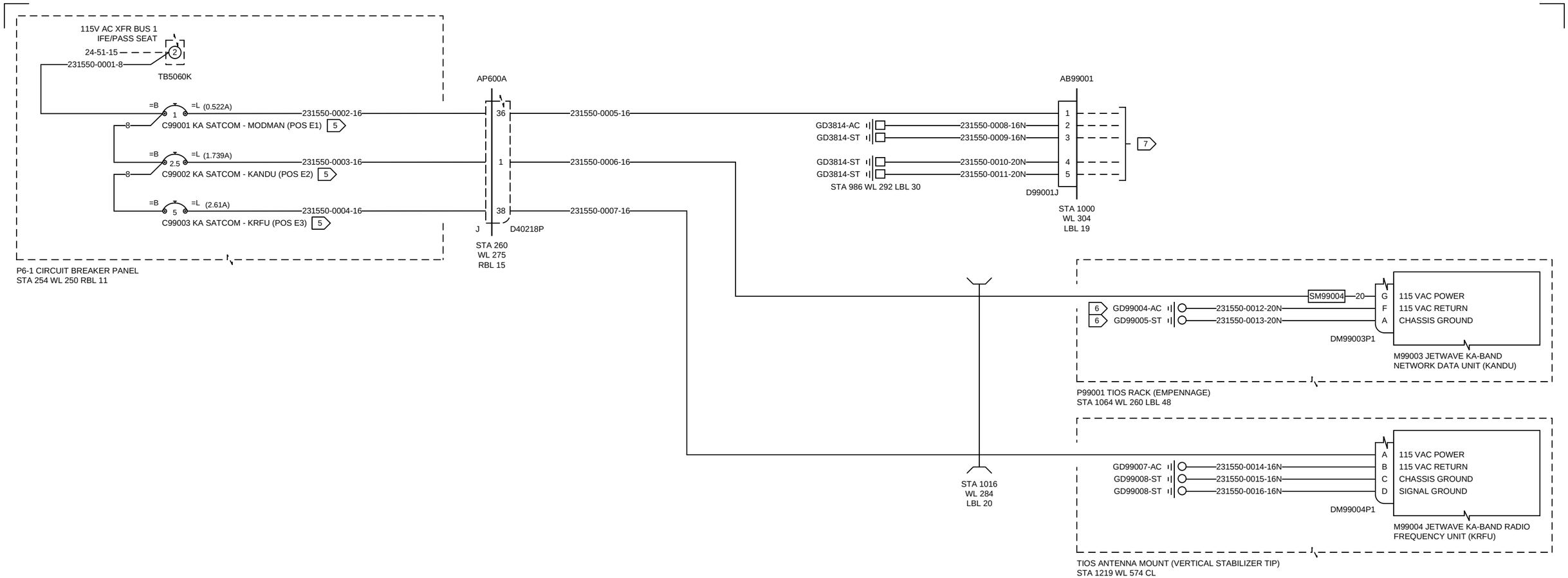
CHAPTER SECTION SUBJECT	WD REV LEVEL/ DATE	C	PAGE/ SHEET	EFF DATE	CHAPTER SECTION SUBJECT	WD REV LEVEL/ DATE	C	PAGE/ SHEET	EFF DATE
23 - TAB				Not Dated					
23 - LOEP			1	May 30/22					
23 - TOC			1	May 30/22					
23-15-50	D/May 17/22		1 of 1	May 30/22					
	D/May 17/22		1 of 2	May 30/22					
	D/May 17/22		1 of 3	May 30/22					
23-15-51	B/Apr 19/22		1 of 1	May 30/22					
	B/Apr 19/22		1 of 2	May 30/22					

CODES IN COLUMN C: N = NEW Page, R = REVISED Page, D = DELETED Page

CHAPTER 23 COMMUNICATION – WIRING DIAGRAM
TABLE OF CONTENTS

ALOFT AeroArchitects

WIRING DIAGRAM



5 REFERENCE DRAWING 8363-4424-201, MODIFICATION, P6-1 PANEL.

6 ATTACH GROUND TO HARDWARE MOUNTING BOLT.

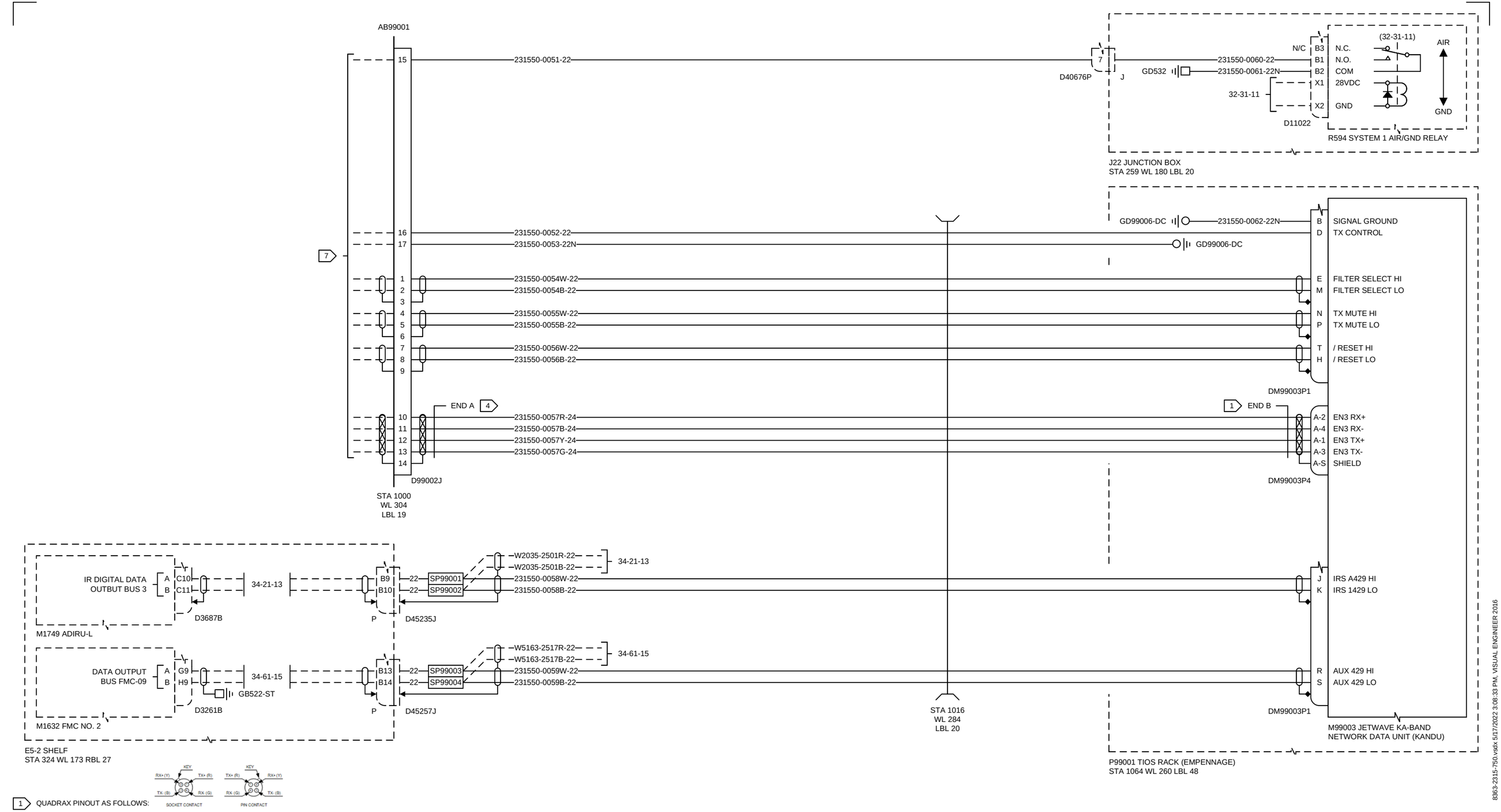
7 REFERENCE AIRCRAFT SPECIFIC "WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, CABIN'.

Block:ALL S/N:ALL	TITLE: WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, TAIL
300-FM-028 REV B	DWG NO. 8363-2315-750

23-15-50
PAGE 1
SHEET 1 OF 3
REV D

8363-2315-750.vsdx 5/17/2022 3:08:33 PM, VISUAL ENGINEER 2016

WIRING DIAGRAM



1 QUADRAX PINOUT AS FOLLOWS:

PINOUT SHOWN AS VIEWED FROM MATING FACE. COLOR CODE ROTATION SHOWN IS FOR END A. ROTATION IS 1-2-3-4; CLOCKWISE FOR PIN, COUNTER-CLOCKWISE FOR SOCKET. END A ROTATION IS R-Y-B-G. END B ROTATION IS Y-R-G-B.

4 MAINTAIN NATURAL WIRE TWIST AS CLOSE TO THE CONNECTOR AS POSSIBLE.

7 REFERENCE AIRCRAFT SPECIFIC "WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, CABIN'.

8363-2315-750.vsdx 5/17/2022 3:08:33 PM, VISUAL ENGINEER 2016

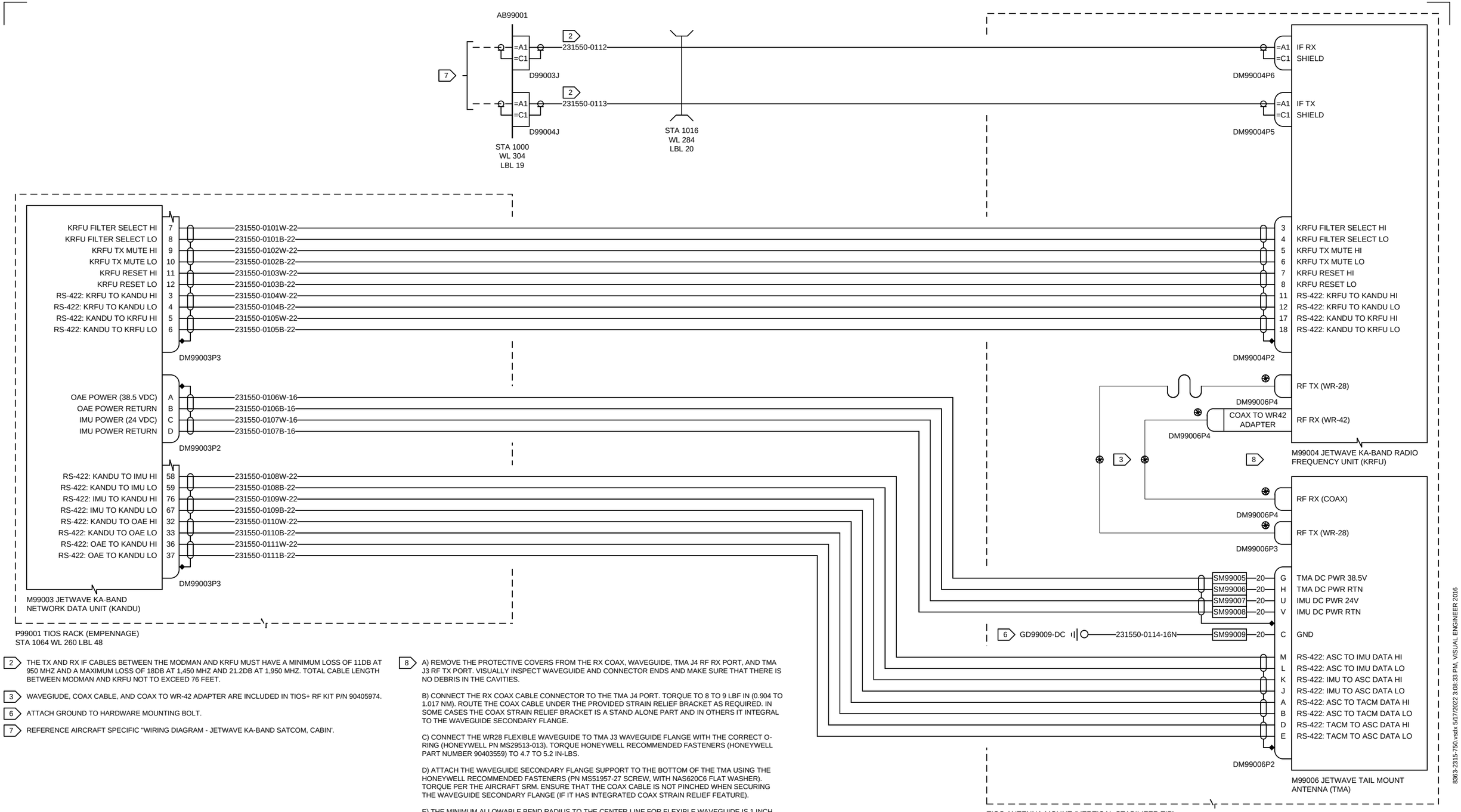
Block:ALL	TITLE: WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, TAIL
S/N:ALL	DWG NO. 8363-2315-750

300-FM-028 REV B

23-15-50
PAGE 1
SHEET 2 OF 3
REV D

ALOFT AeroArchitects

WIRING DIAGRAM



2 THE TX AND RX IF CABLES BETWEEN THE MODMAN AND KRFU MUST HAVE A MINIMUM LOSS OF 11DB AT 950 MHZ AND A MAXIMUM LOSS OF 18DB AT 1,450 MHZ AND 21.2DB AT 1,950 MHZ. TOTAL CABLE LENGTH BETWEEN MODMAN AND KRFU NOT TO EXCEED 76 FEET.

3 WAVEGIUDE, COAX CABLE, AND COAX TO WR-42 ADAPTER ARE INCLUDED IN TIOS+ RF KIT P/N 90405974.

6 ATTACH GROUND TO HARDWARE MOUNTING BOLT.

7 REFERENCE AIRCRAFT SPECIFIC "WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, CABIN'.

8 A) REMOVE THE PROTECTIVE COVERS FROM THE RX COAX, WAVEGUIDE, TMA J4 RF RX PORT, AND TMA J3 RF TX PORT. VISUALLY INSPECT WAVEGUIDE AND CONNECTOR ENDS AND MAKE SURE THAT THERE IS NO DEBRIS IN THE CAVITIES.

B) CONNECT THE RX COAX CABLE CONNECTOR TO THE TMA J4 PORT. TORQUE TO 8 TO 9 LBF IN (0.904 TO 1.017 NM). ROUTE THE COAX CABLE UNDER THE PROVIDED STRAIN RELIEF BRACKET AS REQUIRED. IN SOME CASES THE COAX STRAIN RELIEF BRACKET IS A STAND ALONE PART AND IN OTHERS IT INTEGRAL TO THE WAVEGUIDE SECONDARY FLANGE.

C) CONNECT THE WR28 FLEXIBLE WAVEGUIDE TO TMA J3 WAVEGUIDE FLANGE WITH THE CORRECT O-RING (HONEYWELL PN MS29513-013). TORQUE HONEYWELL RECOMMENDED FASTENERS (HONEYWELL PART NUMBER 90403559) TO 4.7 TO 5.2 IN-LBS.

D) ATTACH THE WAVEGUIDE SECONDARY FLANGE SUPPORT TO THE BOTTOM OF THE TMA USING THE HONEYWELL RECOMMENDED FASTENERS (PN MS51957-27 SCREW, WITH NAS620C6 FLAT WASHER). TORQUE PER THE AIRCRAFT SRM. ENSURE THAT THE COAX CABLE IS NOT PINCHED WHEN SECURING THE WAVEGUIDE SECONDARY FLANGE (IF IT HAS INTEGRATED COAX STRAIN RELIEF FEATURE).

E) THE MINIMUM ALLOWABLE BEND RADIUS TO THE CENTER LINE FOR FLEXIBLE WAVEGUIDE IS 1 INCH (25.4MM) IN H PLANE (BEND ALONG THE LONG AXIS OF THE WAVEGUIDE) AND 0.5 INCH (12.7 MM) IN E PLANE (BEND ALONG THE SHORT AXIS OF THE WAVEGUIDE). THE MINIMUM ALLOWABLE BEND RADIUS FOR THE COAX CABLE IS 0.25 INCH (6.35 MM).

8363-2315-750.vsdx 5/17/2022 3:08:33 PM, VISUAL ENGINEER 2016

Block:ALL

S/N:ALL

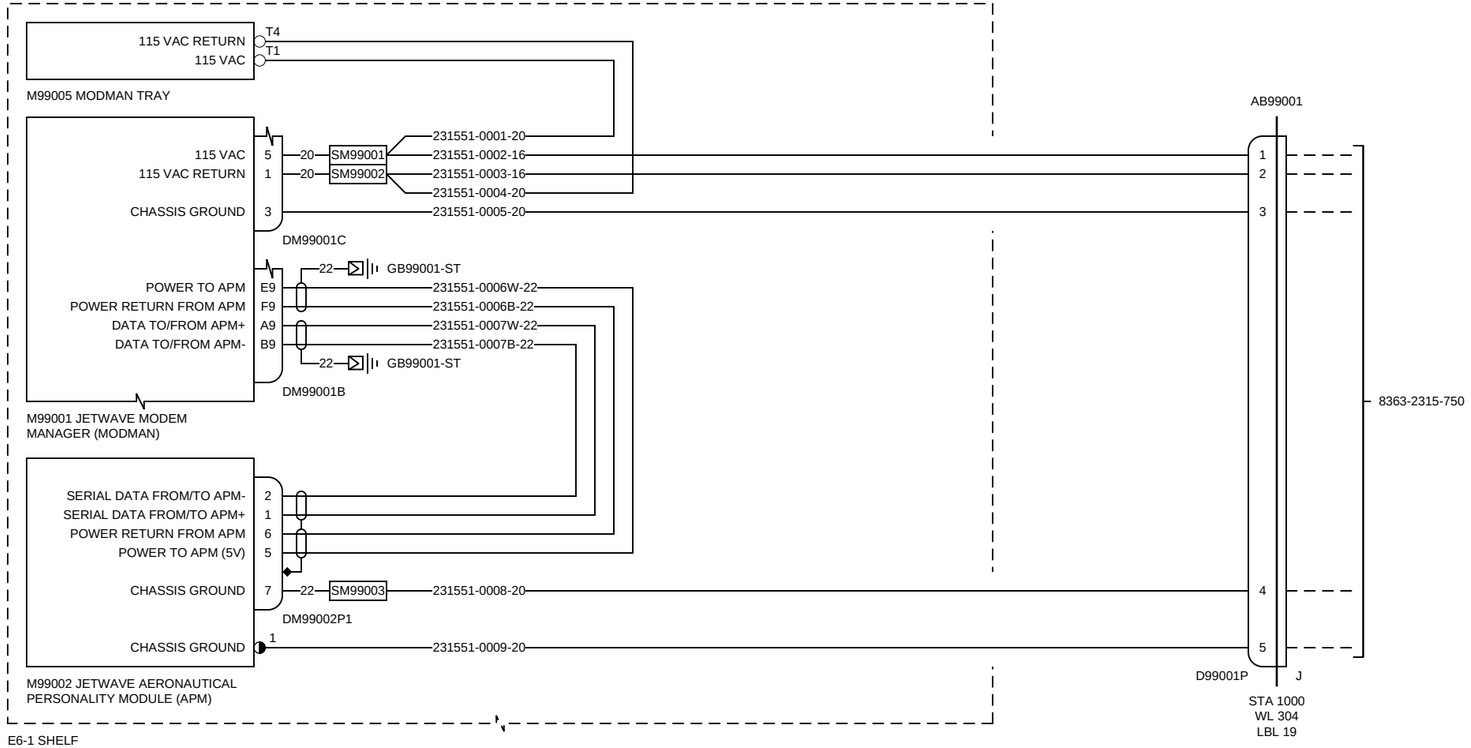
TITLE: WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, TAIL

DWG NO. 8363-2315-750

23-15-50
PAGE 1
SHEET 3 OF 3
REV D

ALOFT AeroArchitects

WIRING DIAGRAM



8363-2315-751.vsdx 4/19/2022 10:34:51 AM, VISUAL ENGINEER 2016

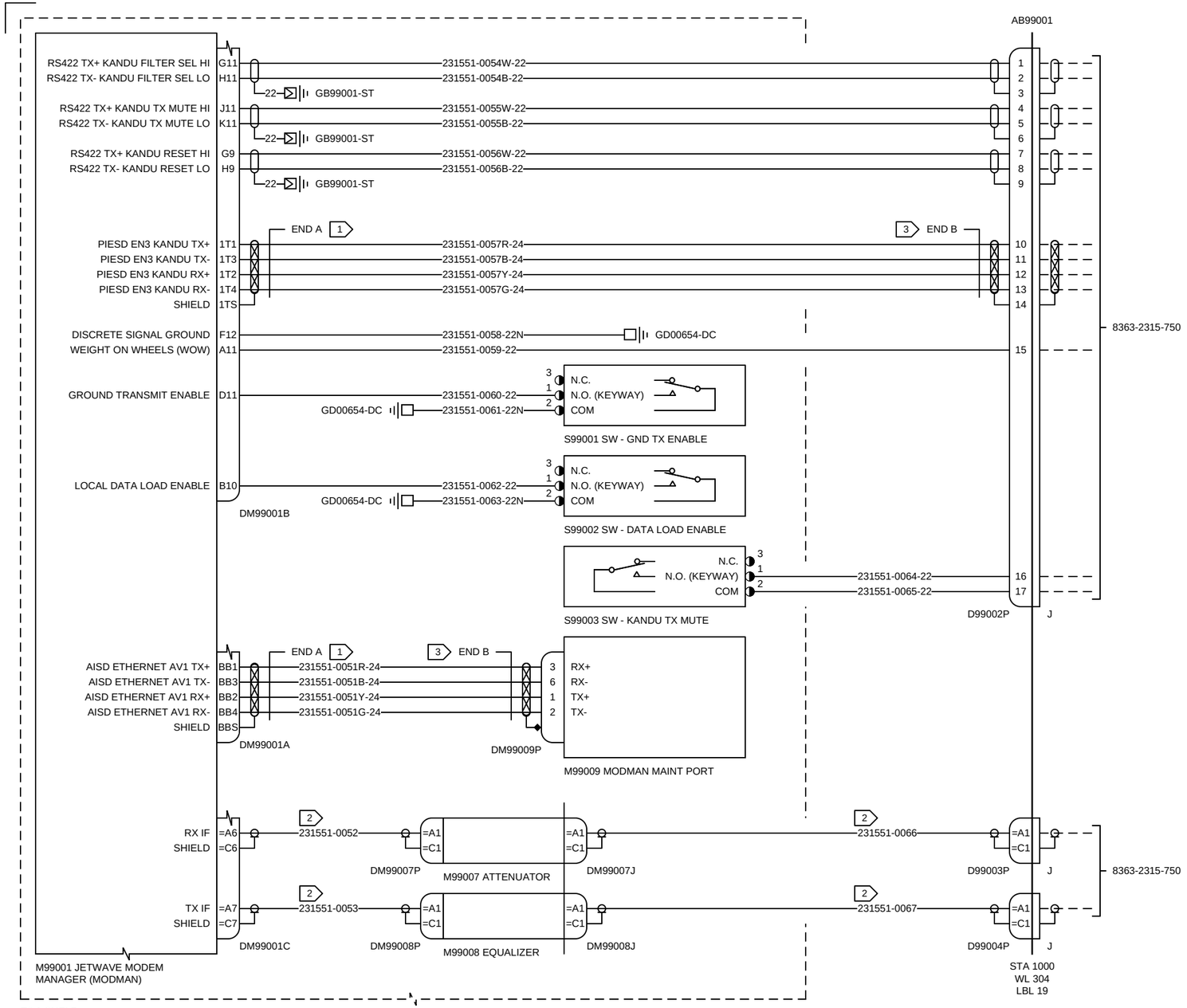
Block:ALL	TITLE: WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, CABIN
S/N:ALL	DWG NO. 8363-2315-751

300-FM-028 REV B

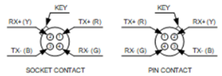
23-15-51
PAGE 1
SHEET 1 OF 2
REV B

ALOFT AeroArchitects

WIRING DIAGRAM



1 QUADRAX PINOUT AS FOLLOWS:



PINOUT SHOWN AS VIEWED FROM MATING FACE. COLOR CODE ROTATION SHOWN IS FOR END A. ROTATION IS 1-2-3-4; CLOCKWISE FOR PIN, COUNTER-CLOCKWISE FOR SOCKET. END A ROTATION IS R-Y-B-G. END B ROTATION IS Y-R-G-B.

2 THE TX AND RX IF CABLES BETWEEN THE MODMAN AND KRFU MUST HAVE A MINIMUM LOSS OF 11DB AT 950 MHZ AND A MAXIMUM LOSS OF 18DB AT 1,450 MHZ AND 21.2DB AT 1,950 MHZ. TOTAL CABLE LENGTH BETWEEN MODMAN AND KRFU NOT TO EXCEED 76 FEET.

3 MAINTAIN NATURAL WIRE TWIST AS CLOSE TO THE CONNECTOR AS POSSIBLE.

Block:ALL S/N:ALL	TITLE: WIRING DIAGRAM - JETWAVE KA-BAND SATCOM, CABIN DWG NO. 8363-2315-751

300-FM-028 REV B

23-15-51
PAGE 1
SHEET 2 OF 2
REV B

23-15-51
PAGE 1
SHEET 2 OF 2
REV B

8363-2315-751.vsdx 4/19/2022 10:34:51 AM, VISUAL ENGINEER 2016

CHAPTER

44

CABIN SYSTEMS

CHAPTER 44 CABIN SYSTEMS
LIST OF EFFECTIVE PAGES

CHAPTER SECTION SUBJECT	WD REV LEVEL/ DATE	C	PAGE/ SHEET	EFF DATE
44 - TAB				Not Dated
44 - LOEP			1	May 30/22
44 - TOC			1	May 30/22
44-60-50	C/May 04/22		1 of 1	May 30/22
	C/May 04/22		1 of 2	May 30/22
	C/May 04/22		1 of 3	May 30/22
	C/May 04/22		1 of 4	May 30/22
8363-4420-113	A/Mar 11/22		1 of 23	May 30/22
	A/Mar 11/22		2 of 23	May 30/22
	A/Mar 11/22		3 of 23	May 30/22
	A/Mar 11/22		4 of 23	May 30/22
	A/Mar 11/22		5 of 23	May 30/22
	A/Mar 11/22		6 of 23	May 30/22
	A/Mar 11/22		7 of 23	May 30/22
	A/Mar 11/22		8 of 23	May 30/22
	A/Mar 11/22		9 of 23	May 30/22
	A/Mar 11/22		10 of 23	May 30/22
	A/Mar 11/22		11 of 23	May 30/22
	A/Mar 11/22		12 of 23	May 30/22
	A/Mar 11/22		13 of 23	May 30/22
	A/Mar 11/22		14 of 23	May 30/22
	A/Mar 11/22		15 of 23	May 30/22
	A/Mar 11/22		16 of 23	May 30/22
	A/Mar 11/22		17 of 23	May 30/22
	A/Mar 11/22		18 of 23	May 30/22
	A/Mar 11/22		19 of 23	May 30/22
	A/Mar 11/22		20 of 23	May 30/22
	A/Mar 11/22		21 of 23	May 30/22
	A/Mar 11/22		22 of 23	May 30/22
	A/Mar 11/22		23 of 23	May 30/22

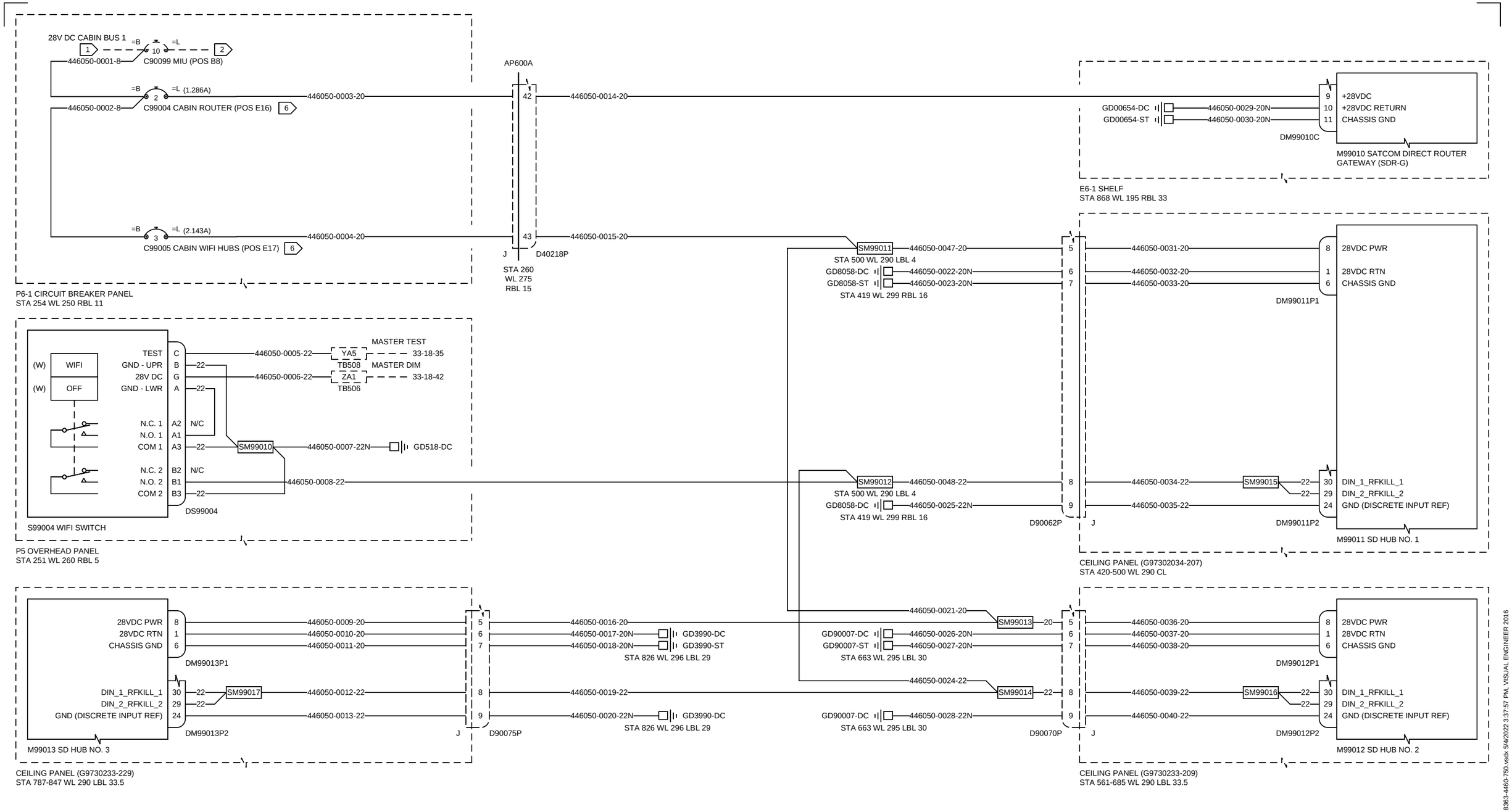
CHAPTER SECTION SUBJECT	WD REV LEVEL/ DATE	C	PAGE/ SHEET	EFF DATE
8363-4460-105	B/Mar 03/22		1 of 17	May 30/22
	B/Mar 03/22		2 of 17	May 30/22
	B/Mar 03/22		3 of 17	May 30/22
	B/Mar 03/22		4 of 17	May 30/22
	B/Mar 03/22		5 of 17	May 30/22
	B/Mar 03/22		6 of 17	May 30/22
	B/Mar 03/22		7 of 17	May 30/22
	B/Mar 03/22		8 of 17	May 30/22
	B/Mar 03/22		9 of 17	May 30/22
	B/Mar 03/22		10 of 17	May 30/22
	B/Mar 03/22		11 of 17	May 30/22
	B/Mar 03/22		12 of 17	May 30/22
	B/Mar 03/22		13 of 17	May 30/22
	B/Mar 03/22		14 of 17	May 30/22
	B/Mar 03/22		15 of 17	May 30/22
	B/Mar 03/22		16 of 17	May 30/22
	B/Mar 03/22		17 of 17	May 30/22

CODES IN COLUMN C: N = NEW Page, R = REVISED Page, D = DELETED Page

CHAPTER 44 CABIN SYSTEMS
TABLE OF CONTENTS

ALOFT AeroArchitects

WIRING DIAGRAM



1 REFERENCE GREENPOINT DRAWING G97305109, 28V DC BUSSES.

2 REFERENCE GREENPOINT DRAWING G97305124, IFE SYSTEM.

6 REFERENCE DRAWING 8363-4424-201, MODIFICATION, P6-1 PANEL.

Block:ALL S/N:ALL	TITLE: WIRING DIAGRAM - MOD, LOCAL AREA NETWORK DWG NO. 8363-4460-750

300-FM-028 REV B

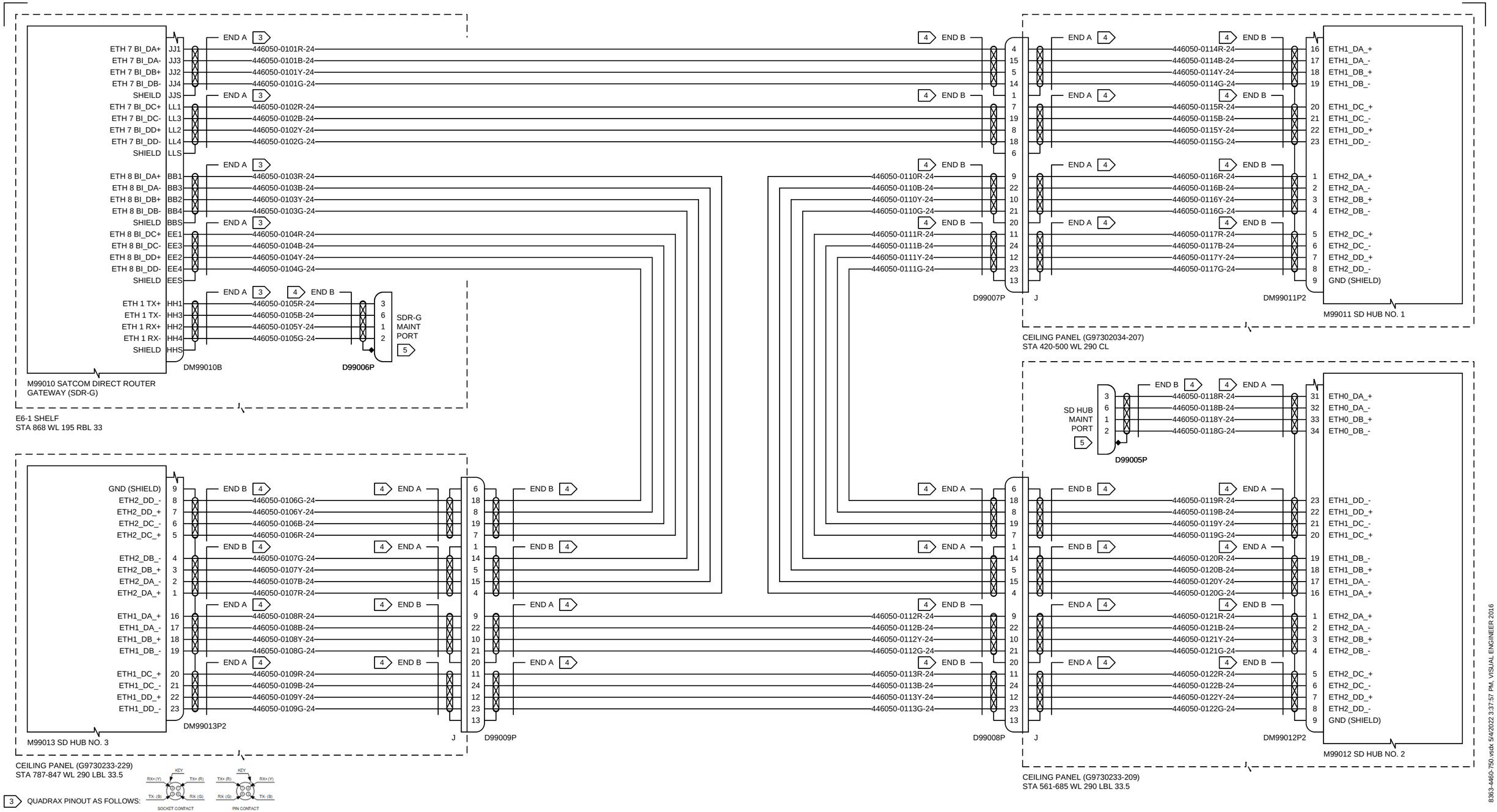
44-60-50
PAGE 1
SHEET 1 OF 4
REV C

44-60-50
PAGE 1
SHEET 1 OF 4
REV C

8363-4460-750.vsdx 5/4/2022 3:37:57 PM, VISUAL ENGINEER 2016

ALOFT AeroArchitects

WIRING DIAGRAM



3 QUADRAX PINOUT AS FOLLOWS:

PINOUT SHOWN AS VIEWED FROM MATING FACE. COLOR CODE ROTATION SHOWN IS FOR END A. ROTATION IS 1-2-3-4; CLOCKWISE FOR PIN, COUNTER-CLOCKWISE FOR SOCKET. END A ROTATION IS R-Y-B-G. END B ROTATION IS Y-R-G-B.

4 MAINTAIN NATURAL WIRE TWIST AS CLOSE TO THE CONNECTOR AS POSSIBLE.

5 COIL AND STOW 6 FEET OF MAINTENANCE CABLE NEAR LRU.

Block:ALL S/N:ALL	TITLE: WIRING DIAGRAM - MOD, LOCAL AREA NETWORK DWG NO. 8363-4460-750

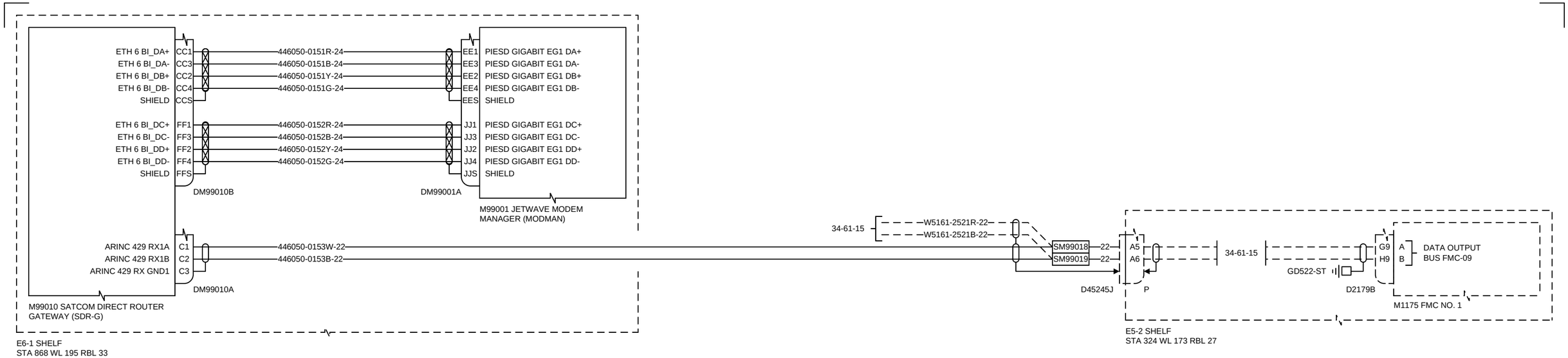
300-FM-028 REV B

44-60-50
PAGE 1
SHEET 2 OF 4
REV C

8363-4460-750.vsdx 5/4/2022 3:37:57 PM, VISUAL ENGINEER 2016

ALOFT AeroArchitects

WIRING DIAGRAM



8363-4460-750.vsdx 5/4/2022 3:37:57 PM, VISUAL ENGINEER 2016

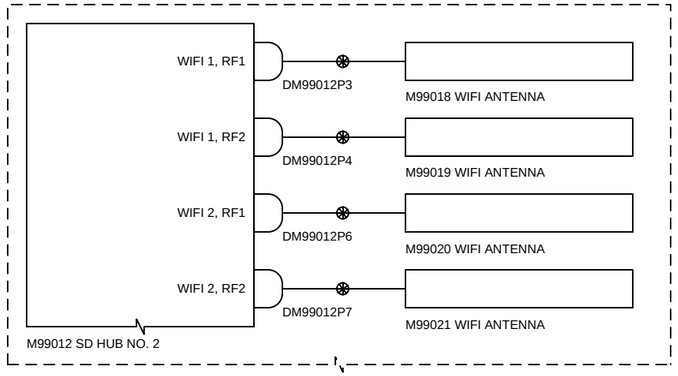
Block:ALL	TITLE: WIRING DIAGRAM - MOD, LOCAL AREA NETWORK
S/N:ALL	DWG NO. 8363-4460-750

300-FM-028 REV B

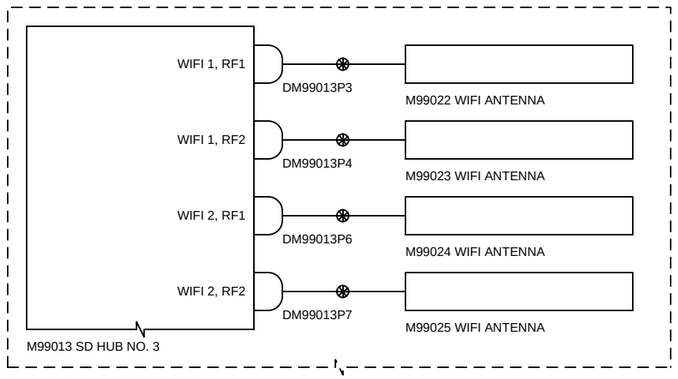
44-60-50
PAGE 1
SHEET 3 OF 4
REV C

ALOFT AeroArchitects

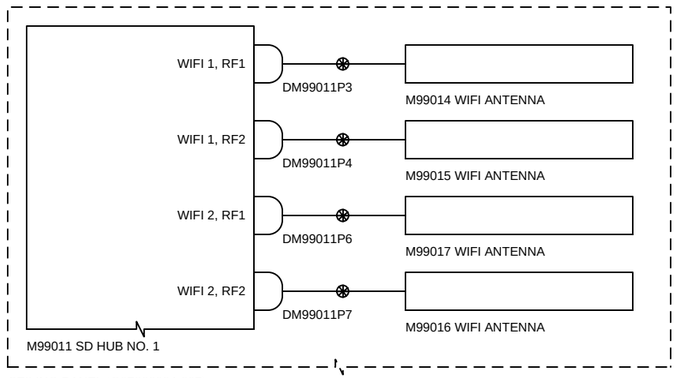
WIRING DIAGRAM



CEILING PANEL (G9730233-209)
STA 561-685 WL 290 LBL 33.5



CEILING PANEL (G9730233-229)
STA 787-847 WL 290 LBL 33.5



CEILING PANEL (G97302034-207)
STA 420-500 WL 290 CL

8363-4460-750.vsdx 5/4/2022 3:37:57 PM, VISUAL ENGINEER 2016

Block:ALL

S/N:ALL

300-FM-028 REV B

TITLE: WIRING DIAGRAM - MOD, LOCAL AREA NETWORK

DWG NO. 8363-4460-750

44-60-50
PAGE 1
SHEET 4 OF 4
REV C

44-60-50
PAGE 1
SHEET 4 OF 4
REV C

REV	REVISIONS	DATE	APPROVED
A	SH 2: ADDED FN 24. REVISED TABLE 1 AND QTY'S IN PL. SH 3: REVISED -101 WIRE ROUTING VIEW. SH 4: REVISED SECTION A-A GROUND STUD LOCATIONS. SH 5: MOVED AC/DC WIRE RUNS TO LH SIDE. SH 7: REVISED E6 AND TIOS RACK GROUND STUDS. ADDED SHEET 8: WIRE ROUTING	04/13/22	

NOTES: (CONT. ON SHT 2)

1. SOME HIDDEN DETAIL OMITTED FOR CLARITY.
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2009.
3. REMOVE ALL BURRS AND SHARP EDGES .015 RAD. OR CHAMFER UNLESS OTHERWISE SPECIFIED.
4. MARK PART IN ACCORDANCE WITH "PATS AIRCRAFT, LLC" SPEC PS-002-1.
5. UNLESS OTHERWISE SPECIFIED:
   5.1) ACCEPTABLE TO CHANGE FASTENER LENGTHS ± 2 SIZES.
   5.2) HOLE PREPARATION PER SRM 51-40-05.
   5.3) INSTALLATION AND REMOVAL OF FASTENERS PER SRM 51-40-02.
   5.4) FASTENER SUBSTITUTION PER SRM 51-40-03.
   5.5) ACCEPTALBE TO OVERSIZE FASTNERS 1 SIZE.
   5.6) LOCATION AND INSTALLATION OF ALL FASTENERS ARE TO HAVE A MIN EDGE DISTANCE OF 2X FASTENER DIAMETER AND A MIN CTR TO CTR DISTANCE OF 4X FASTENER DIAMETER.
   5.7) TORQUE ALL FASTENERS PER SRM 51-40-04.
6. LOCATION AND ORIENTATION OF HARNESS ATTACHMENT TO RING POSTS AND CLAMPED HARNESS ATTACHMENT WILL BE DETERMINED AT INSTALLATION. ACCEPTABLE TO USE EXISTING HARDWARE IN LIEU OF NEW HARDWARE WHERE APPLICABLE.
7. SECURE WIRE BUNDLES WITH 287A4015-82 AND BACN10GH WIRE HARNESS SUPPORT ASSEMBLY. ACCEPTABLE TO SUBSTITUTE WITH MATERIALS FOUND IN STANDARD WIRING PRACTICES MANUAL D6-54446 20-10-12. ACCEPTABLE FOR RING POSTS TO BE STACKED TWO (2) HIGH TO ALLOW HARNESS SEPARATION FROM OBSTRUCTIONS BETWEEN FRAME STATIONS, PROVIDED STACKED POSTS DO NOT INTERFERE WITH CABIN CEILING. WHERE UTILIZING CLAMP, FINAL CLAMP SIZE TO BE DETERMINED UPON INSTALLATION.
8. DEPICTED DUCT ASSY AND EXISTING PROVISIONS FOR REFERENCE PURPOSES ONLY. MAY NOT EXIST IN ALL LOCATIONS.
9. ACCEPTABLE TO USE BACS38Y3, BACS38Y4, 411A4902-6 FRAME CLIPS AND MS21919WDG(X)/MS21919WCH(X) CLAMPS AS NEEDED IN LIEU OF WIRE HARNESS SUPPORT ASSEMBLY. FINAL CLAMP SIZE TO BE DETERMINED AT INSTALLATION.
10. INSTRUCTIONS FOR WIRE SUPPORT.
    10.1) WIRES AND WIRE BUNDLES MUST BE SUPPORTED BY USING TIE BLOCKS OR CLAMPS. SUPPORT DEVICES MUST BE CONSTRUCTED OF MATERIALS THAT ARE COMPATIBLE WITH THEIR INSTALLATION AND ENVIRONMENT, IN TERMS OF TEMPERATURE, FLUID RESISTANCE, EXPOSURE TO ULTRAVIOLET (UV) LIGHT, AND WIRE BUNDLE MECHANICAL LOADS. SUPPORT DEVICES SHOULD BE SPACED AT INTERVALS NOT EXCEEDING 24 INCHES. CLAMP SIZE SHOULD BE SELECTED SO THAT THE CLAMP WILL FIT THE BUNDLE SNUG WITHOUT PINCHING WIRES, AS SHOWN ON SHEET 6, DETAIL G.
    10.2) TIE DOWN STRAPS SHOULD BE USED BETWEEN SUPPORT DEVICES AT INTERVALS OF APPROXIMATELY 6-8 INCHES, BUT SHOULD NOT BE CONSIDERED AS A SUBSTITUTE FOR ADEQUATE SUPPORT.
    10.3) IF THE SUPPORT DEVICE DOES NOT PROVIDE SUFFICIENT SEPARATION BETWEEN WIRE BUNDLE AND STRUCTURE THEN STAND-OFFS MUST BE USED TO MAINTAIN THE NEEDED SEPARATION.
    10.4) WHEN A WIRE BUNDLE IS CLAMPED INTO POSITION, IF THERE IS LESS THAN 3/8 INCH CLEARANCE BETWEEN THE BULKHEAD CUTOUT AND THE WIRE BUNDLE, A SUITABLE GROMMET SHOULD BE INSTALLED. THE GROMMET MAY BE CUT AT A 45 DEGREE ANGLE TO FACILITATE INSTALLATION, PROVIDED IT IS BONDED IN PLACE AND THE SLOT IS LOCATED AT THE TOP OF THE CUTOUT.
11. INSTALLATION PROCEDURE FOR TC5345A ADHESIVE BASE:
    A. CABINETRY / STRUCTURE DO NOT REMOVE EXISTING PROTECTIVE COATING.
       1. CLEAN SURFACE WITH ISOPROPYL ALCOHOL.
       2. APPLY A BED OF 3M CO. SCOTCH WELD DP-100FR ADHESIVE TO SURFACE. ALLOW ADHESIVE TO EXTEND APPROX 1/8" BEYOND FOOTPRINT OD TC5345A BASE.
       3. INSTALL TC5345A ONTO ADHESIVE WHILE APPLYING UNIFORM PRESSURE.
       4. ENSURE THAT THE ADHESIVE OVERLAPS ALONG EDGES OF TC5345A BASE. IF THE ADHESIVE DOES NOT OVERLAP EDGES, APPLY BEAD OF DP-100FR AROUND ALL 4 EDGES.
       5. ALLOW DP-100FR TO CURE BEFORE INSTALLING STRAP.
12. NO ALTERATIONS TO AIRFRAME WITHOUT ENGINEERING APPROVAL.
13. FOR EXISTING AIRCRAFT HARNESS RUN INFORMATION REFERENCE APPROPRIATE BOEING 737-700 AIRCRAFT WIRING MANUAL, CHAPTER 91.
14. INSTALL HARNESSES IN ACCORDANCE WITH BOEING CHAPTER 20 STANDARD WIRING PRACTICES MANUAL, D6-54446, AND FOLLOW RECOMMENDATIONS FOUND IN AC 43.13-1B WITH CHANGE 1, SECTION 11.XX(xx).
15. WIRING TERMINATIONS TO BE INSTALLED IN ACCORDANCE WITH BOEING WDM CHAPTER 20, STANDARD WIRING PRACTICES MANUAL (D6-54446), THE APPROPRIATE MIL STANDARDS OR THE APPROPRIATE VENDOR INSTRUCTIONS.
16. WHERE WIRING IS ROUTED WITH EXISTING WIRE HARNESS, SECURE IN THE SAME MANNER USING EXISTING WIRE PATHS, TIE DOWNS, AND CLAMPS. ONCE ADDED, IF HARNESS REQUIRES EXISTING CLAMPS TO BE CHANGED USE A LARGER CLAMP OF THE SAME TYPE.
17. ACCEPTABLE TO MAKE MINOR DEVIATIONS FROM THE ROUTING SHOWN IN THIS DRAWING.
18. LOCATIONS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED TO AVOID INTERFERENCE WITH EXISTING COMPONENTS.
19. ACCEPTABLE TO ROUTE WIRING AROUND EXISTING BOEING WIRE BUNDLES AS REQUIRED, MEETING REQUIREMENTS OF GEN NOTES 10 & 20.
20. INSTRUCTIONS FOR WIRE ROUTING:
    20.1) WIRES AND CABLES ARE TO BE SUPPORTED BY SUITABLE TIE BLOCKS, CLAMPS, GROMMETS, OR OTHER DEVICES AT INTERVALS OF NOT MORE THAN 24 INCHES, EXCEPT WHEN CONTAINED IN TROUGHS, DUCTS, OR CONDUITS. THE SUPPORTING DEVICES SHOULD BE OF A SUITABLE SIZE AND TYPE, WITH THE WIRES AND CABLES HELD SECURELY IN PLACE WITHOUT DAMAGE TO THE INSULATION. CLAMPS LINED WITH NONMETALLIC MATERIAL MAY BE USED TO SUPPORT THE WIRE BUNDLE ALONG THE RUN.
    20.2) ENSURE CABLE SUPPORTS DO NOT RESTRICT THE WIRES OR CABLES IN SUCH A MANNER AS TO INTERFERE WITH OPERATION OF EQUIPMENT SHOCK MOUNTS.
    20.3) DO NOT USE TAPE OR CORD FOR PRIMARY SUPPORT.
    20.4) ENSURE THAT WIRES AND CABLES ARE ROUTED IN SUCH A MANNER THAT CHAFING WILL NOT OCCUR AGAINST THE AIRFRAME OR OTHER COMPONENTS. INSTALL FOAM, CONDUIT, OR SPIRAL WRAP AS REQUIRED TO PREVENT CHAFING.
    20.5) ENSURE THAT A TRAP OR DRIP LOOP IS PROVIDED TO PREVENT FLUIDS OR CONDENSED MOISTURE FROM RUNNING ON TO WIRES AND CABLES DRESSED DOWNWARD TO A CONNECTOR, TERMINAL BLOCK, OR JUNCTION BOX.
    20.6) SEPARATION MUST BE MAINTAINED BETWEEN HIGH CURRENT CARRYING CABLES AND NEW WIRING. NEW WIRING MUST NOT BE ROUTED IN THE SAME CLAMPS OR WIRE RUNS WITH HIGH CURRENT CARRYING CABLES.
    20.7) THE MINIMUM RADIUS OF BENDS IN WIRE GROUPS OR BUNDLES MUST NOT BE LESS THAN 10 TIMES THE OUTSIDE DIAMETER OF THE LARGEST WIRE OR CABLE, EXCEPT AT TERMINAL STRIPS WHERE WIRES BREAK OUT AT TERMINATIONS OR REVERSE DIRECTION IN A BUNDLE. WHERE WIRE IS SUITABLY SUPPORTED, THE RADIUS MAY BE 3 TIMES THE DIAMETER OF THE WIRE OR CABLE. ENSURE THAT RF CABLES, E.G., COAXIAL AND TRIAXIAL ARE BENT AT A RADIUS OF NO LESS THAN 6 TIMES THE OUTSIDE DIAMETER OF THE CABLE.
    20.8) ENSURE THAT WIRES AND ELECTRICAL CABLES ARE SEPARATED FROM MECHANICAL CONTROL CABLES. IN NO INSTANCE SHOULD WIRE COME CLOSER THAN 1/2 INCH TO SUCH CONTROLS WHEN LIGHT HAND PRESSURE IS APPLIED TO WIRES OR CONTROLS. IN CASES WHERE CLEARANCE IS LESS THAN THIS, ADEQUATE SUPPORT MUST BE PROVIDED TO PREVENT CHAFING.
    20.9) ENSURE THAT WIRES AND CABLES ARE PROVIDED WITH ENOUGH SLACK TO MEET THE FOLLOWING REQUIREMENTS:
       a) PERMIT EASE OF MAINTENANCE.
       b) PREVENT MECHANICAL STRAIN ON THE WIRES, CABLES, JUNCTIONS, AND SUPPORTS.
       c) PERMIT FREE MOVEMENT OF SHOCK AND VIBRATION MOUNTED EQUIPMENT.
       d) ALLOW SHIFTING OF EQUIPMENT, AS NECESSARY TO PERFORM ALIGNMENT, SERVICING, TUNING, AND REMOVAL OF COMPONENTS INSTALLED IN AIRCRAFT.
       e) WIRING AT TERMINAL LUGS OR CONNECTORS SHOULD HAVE SUFFICIENT SLACK TO ALLOW TWO RE-TERMINATIONS WITHOUT REPLACEMENT OF WIRES.
21. GROUND STUD LOCATIONS ARE APPROXIMATE AND FOR REFERENCE ONLY. LOCATIONS ARE TO BE DETERMINED AT INSTALLATION AND MUST COMPLY WITH "PATS AIRCRAFT, LLC" PS-34 FOR BONDING SPECS, BUILD-UP, AND VERIFICATION AFTER INSTALLATION.
    21.1) IF ATTACHING TO AIRCRAFT STRUCTURE, PICK UP EXISTING TOOLING HOLE IF POSSIBLE. IF EXISTING TOOLING HOLE IS NOT AVAILABLE, DRILL Ø.194 THRU CENTER WEB OF FRAME ±.25" (VERTICAL) FOR GROUNDING STUD INSTALLATION. ENSURE THAT STUD LOCATION IS MINIMUM 4X DIA FROM ANY EXISTING FASTENER/STRUCTURE/EOP. REF PS-34 FOR CORRECT SURFACE PREPARATION AND RESISTANCE MEASURING.
    21.2) FABRICATE GROUND STUD ID DESIGNATION LABELS AS SHOWN IN NOTE 23-2 PER TABLE 1 ON SHT 2.
    21.3) ALL GROUND STUDS MUST BE LOCATED AT LEAST 3-5 INCHES APART.
22. EXISTING FUEL SYSTEM WIRING IS UNAFFECTED BY ELECTRICAL WIRING INSTALLED BY PATS IN SUPPORT OF THIS MODIFICATION AND MEETS THE WIRE SEPARATION RECOMMENDATIONS FOUND IN FAA AC25.981-1A,B,C.

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2009	
APPROVED	
APPROVED	
APPROVED	
APPROVED	
OTHER	
ADDITIONAL APPROVALS	DATE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
DECIMALS ANGLES
.X ±.1 ±.5°
.XX ±.03 SURFACE FINISH
.XXX ±.010 125
DO NOT SCALE DRAWING
THIRD ANGLE PROJECTION

CONTRACT NO.

APPROVALS	DATE
DRAWN D. SPISAK	03/11/22
CHECKED H. DANFORD	03/11/22
LEAD ENGR	
QUALITY	
CERTIFICATION	

ALOFT AeroArchitects
21652 Nanticoke Ave, Georgetown, DE 19947

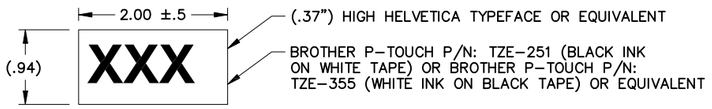
TITLE
WIRE ROUTING INSTL - CABIN

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE	AUTOCAD DRAWING	CALC.WT	ACT.WT	SHEET
NONE		-	-	1 OF 23

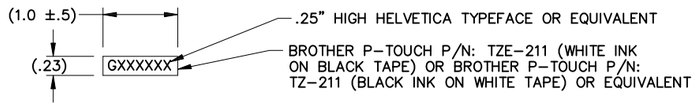
NOTES: (CONT. FROM SHT 1)

23. FABRICATE PLACARD FOR CLAMP,ELECTRICAL FUNCTION AS SHOWN BELOW:
    23.1) FUNCTIONS ARE AS FOLLOWS: AC, DC, DIG (DIGITAL), VID (VIDEO), AND ST (SHIELDS).



REFER TO APPROPRIATE INSTALLATION FOR CLAMP/GROUND BLOCK LETTER DESIGNATION. LOCATE APPROXIMATELY AS SHOWN ON INSTALLATION DWG OR IN CLEAR VIEW.

23.2) FABRICATE GROUND BLOCK/STUD ID DESIGNATION LABELS AS SHOWN BELOW:



ORIENT GROUND BLOCK/STUD LABELS TO ACCOMMODATE LABEL LEGIBILITY AND GROUND BLOCK/STUD FUNCTIONALITY, PLACE IN CLEAR VIEW.

24. RE-USE EXISTING GROUND BLOCK.

25. QUANTITIES IN LIST OF MATERIALS ARE FOR PLANNING AND PURCHASING, ACUTAL QUANTITIES USED DURING INSTALL MAY VARY.

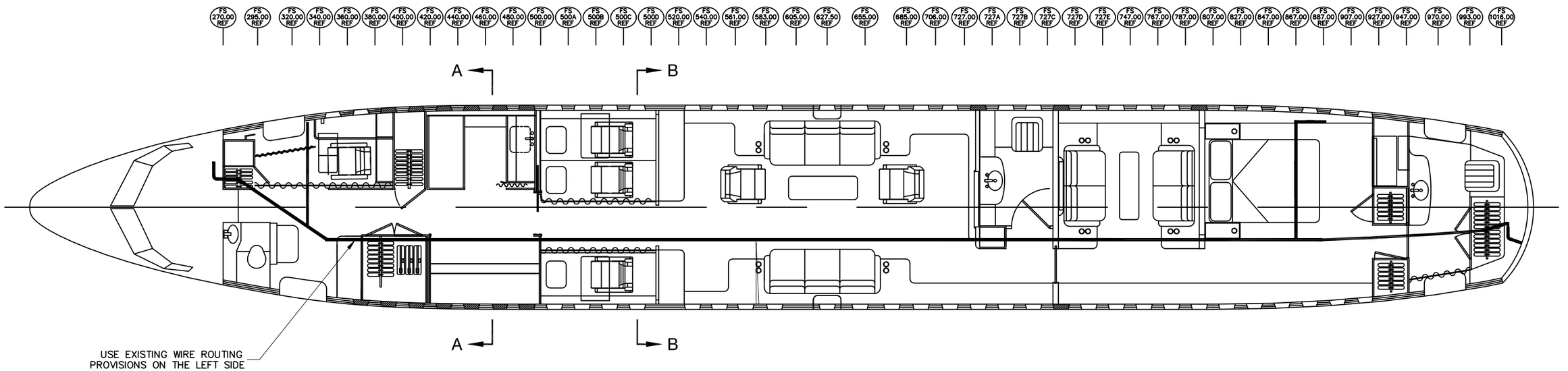
TABLE 1 GROUND STUDS

REF DES	TYPE	LOCATION	FRAME STA	WL	STRINGER	DRAWING
GD03814 24	AC	AIRFRAME	1000	304	3L-4L	8363-2315-750
GD03814 24	ST	AIRFRAME	1000	304	3L-4L	8363-2315-750
GD08058 24		AIRFRAME	500	298	4L-5L	8363-4460-750
GD99004-AC	AC	TIOS RACK	1064	260	N/A	8363-2315-750
GD99005-ST	ST	TIOS RACK	1064	260	N/A	8363-2315-750
GD99006-DC	DC	TIOS RACK	1064	260	N/A	8363-2315-750
GD00654-DC	DC	E6 RACK	868	195	N/A	8363-4460-750
GD00654-DC	DC	E6 RACK	868	195	N/A	8363-2315-751

QTY	CAGE CODE	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL & SPECIFICATION	NOTES / FINISH	WEIGHT	ITEM
3		PS870B2-654	SEALANT-SEMKIT				9
24		P-29	TAPE, 2", CLEAR, BOEING NUMBER				8
5		NAS43DD3-36FC	SPACER				7
1		NAS1096-3-20	SCREW				6
5		NAS1096-3-18	SCREW				5
1		NAS1096-3-12	SCREW				4
15		NAS1096-3-10	SCREW				3
5		BACC10GE8A	CLAMP				2
60		BACC10GE10A	CLAMP				1
X		8363-4420-113-101	WIRE ROUTING INSTL - CABIN				
-101	←INST		LIST OF MATERIALS				

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 2 OF 23

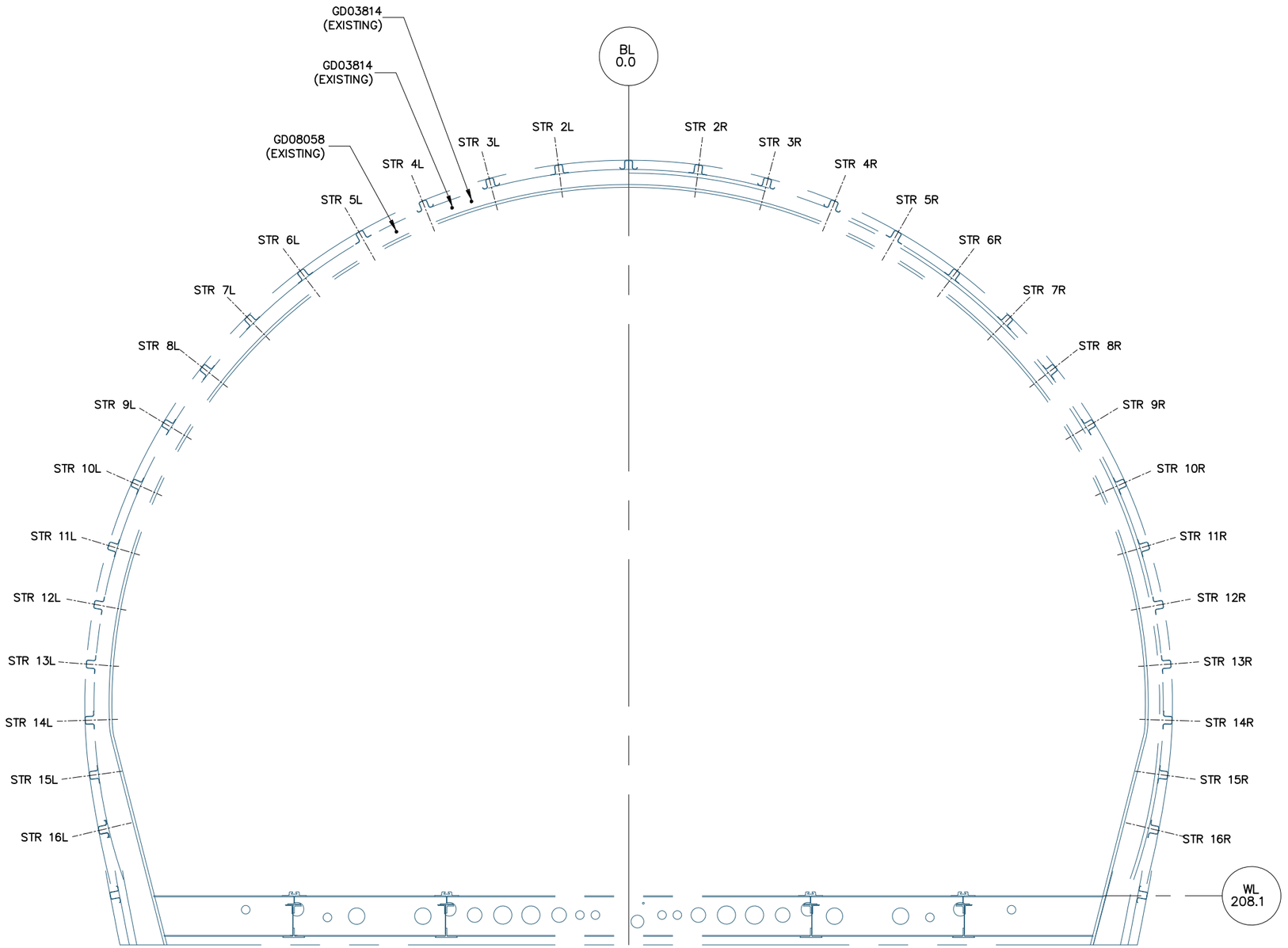


–101 WIRE ROUTING INSTL – CABIN

PLAN VIEW

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 3 OF 23

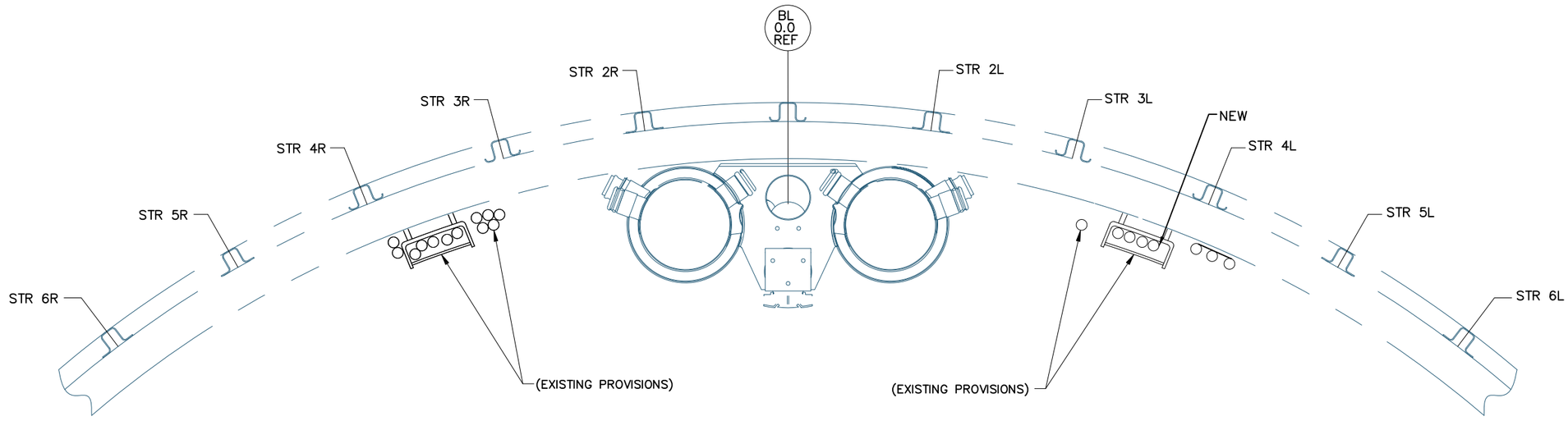


SECTION A—A
ROTATED 90°CW
GENERIC CROSS SECTION
GND STUD LOCATIONS
VIEW LKG FWD
21

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 4 OF 23

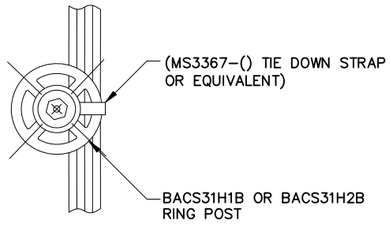
300-FM-055
REV A 12/08/2020



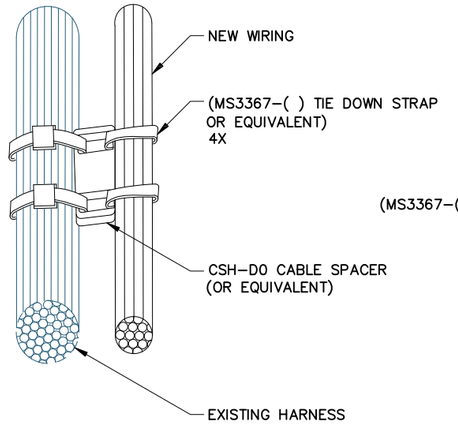
SECTION B–B
ROTATED 90°CCW
GENERIC CROSS SECTION
VIEW LKG AFT
8

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

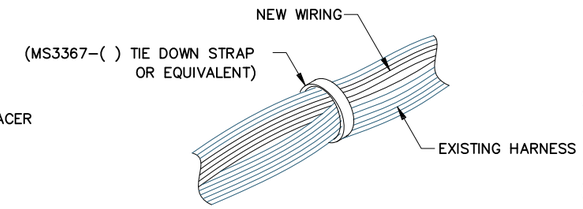
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 5 OF 23



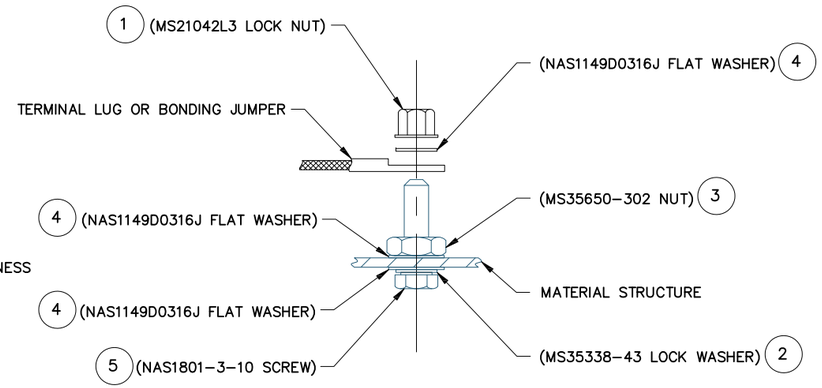
DETAIL C
(TYPICAL HARNESS INSTL
SUPPORTED WITH RING TERMINAL)



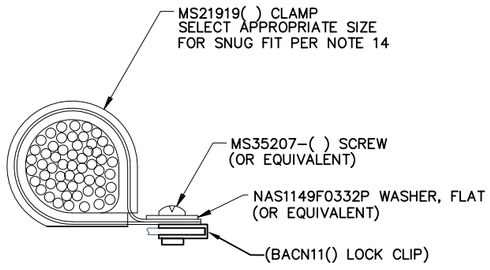
DETAIL D
(TYPICAL CABLE SPACER INSTL)



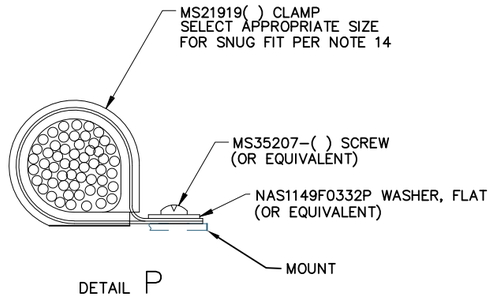
DETAIL E
(ACCEPTABLE IF NEW WIRING HAS
SAME FUNCTION AS EXISTING HARNESS)



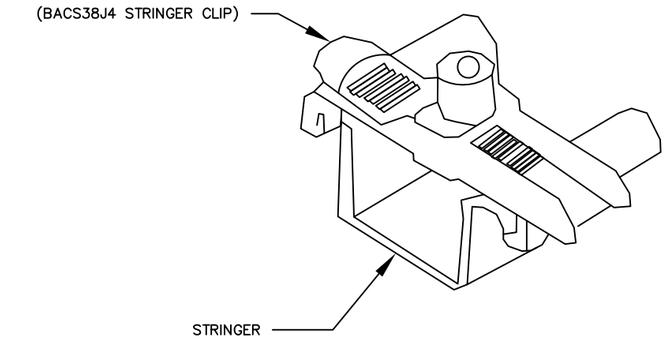
DETAIL F
(SINGLE TERMINAL INSTALLATION ON
PRE–INSTALLED GROUND STUD INSTL)



DETAIL G
PROPER CLAMPING DETAIL



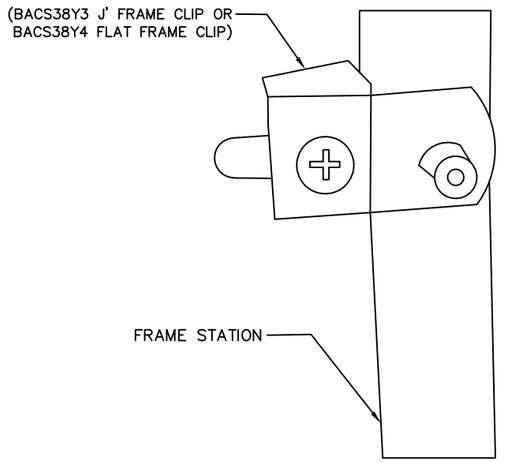
DETAIL P
PROPER CLAMPING DETAIL



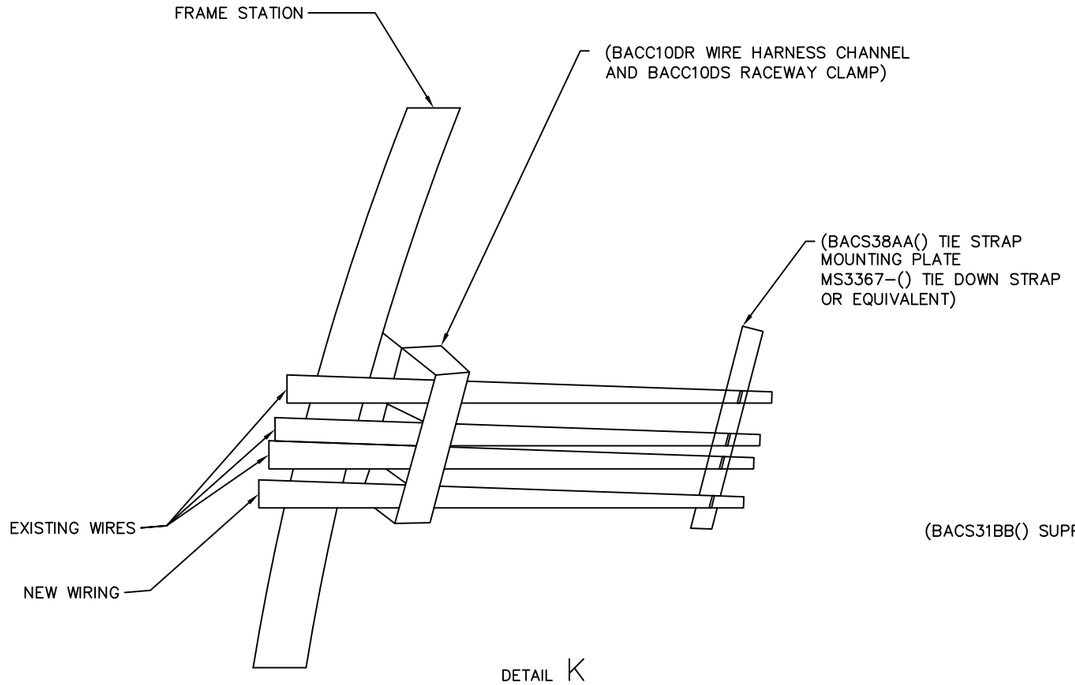
DETAIL H
STRINGER CLIP ASSEMBLY

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

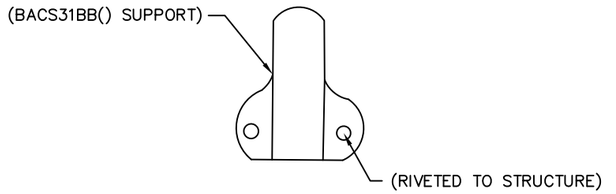
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 6 OF 23



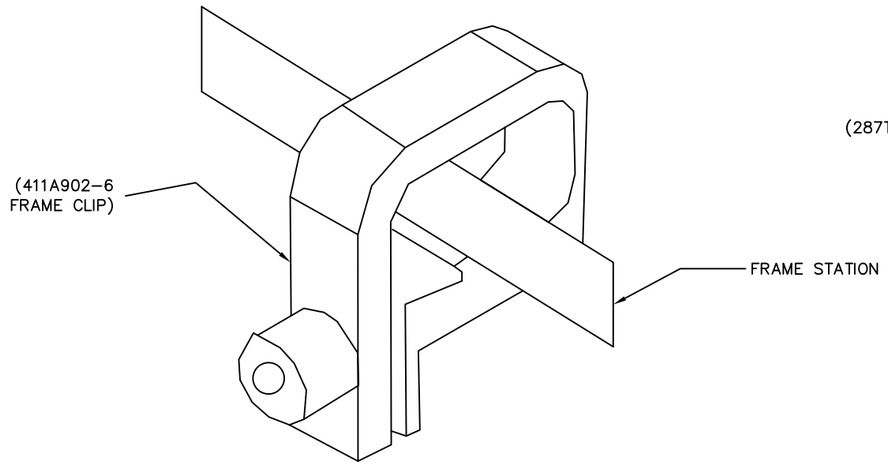
DETAIL J
FRAME CLIP ASSEMBLY



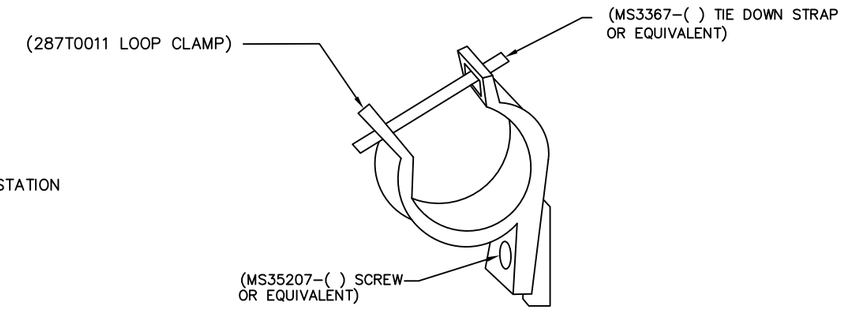
DETAIL K
CABIN ROUTING DETAIL



DETAIL N
WIRE HARNESS SUPPORT



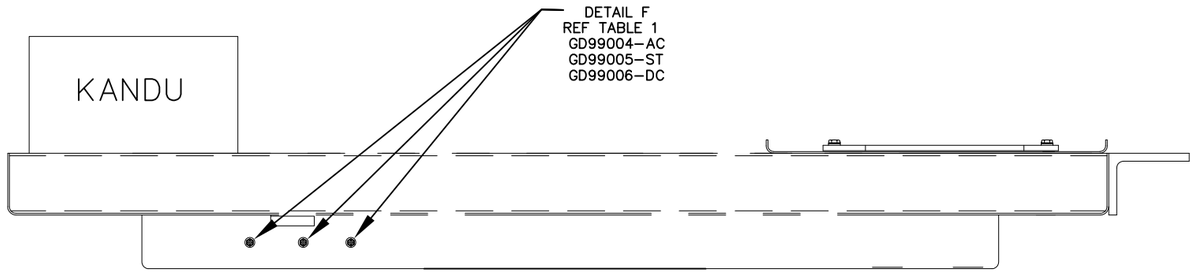
DETAIL L
FRAME CLIP ASSEMBLY



DETAIL M
LOOP CLAMP DETAIL

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 7 OF 23

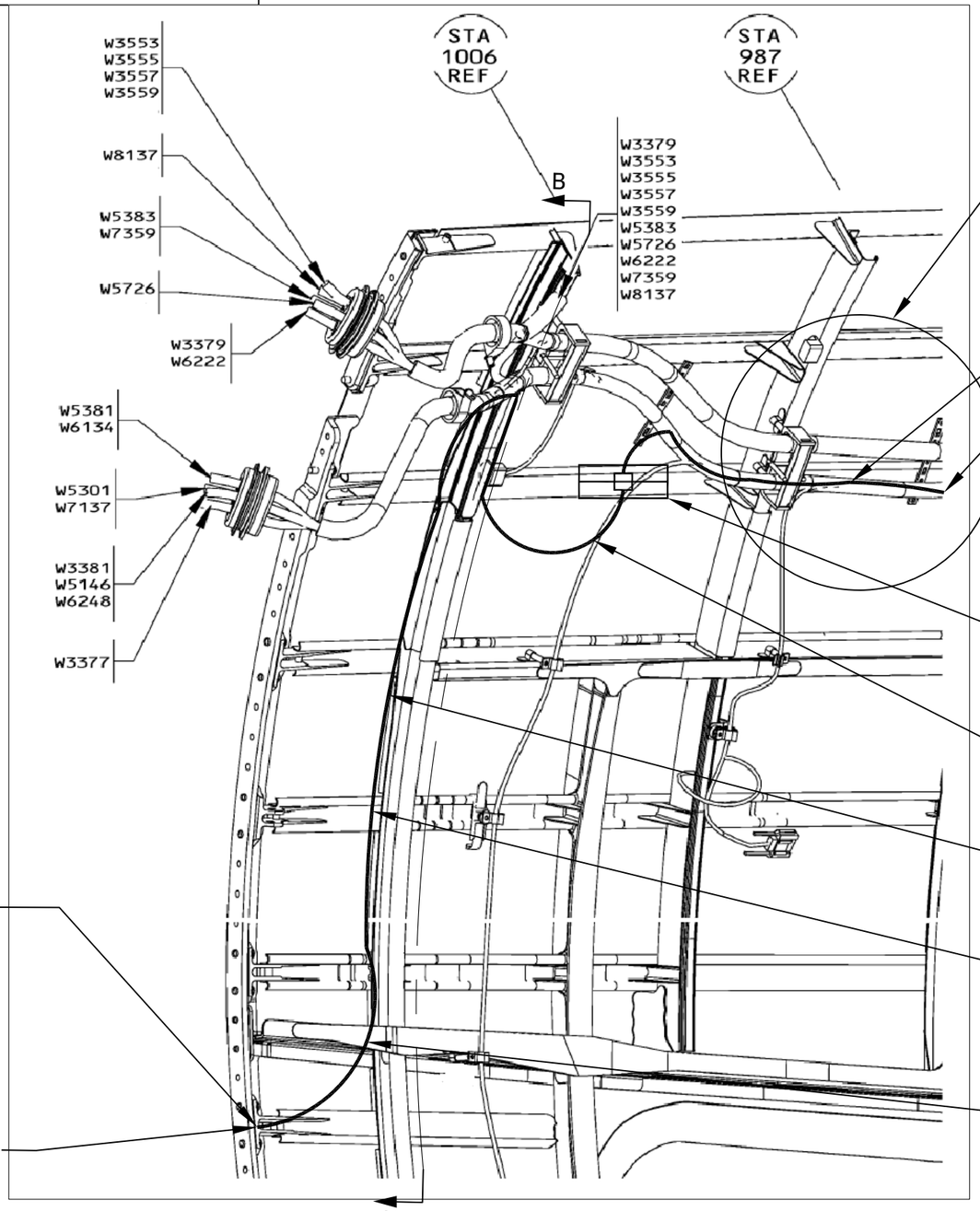


TIOS RACK
GROUND STUD INSTL

FWD

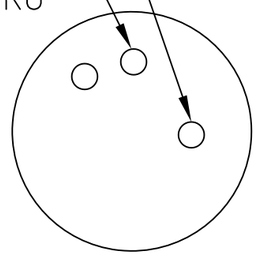
SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 8 OF 23



NEW PRESSURE FEEDTHRU

PRESSURE FEEDTHRU



VIEW B–B

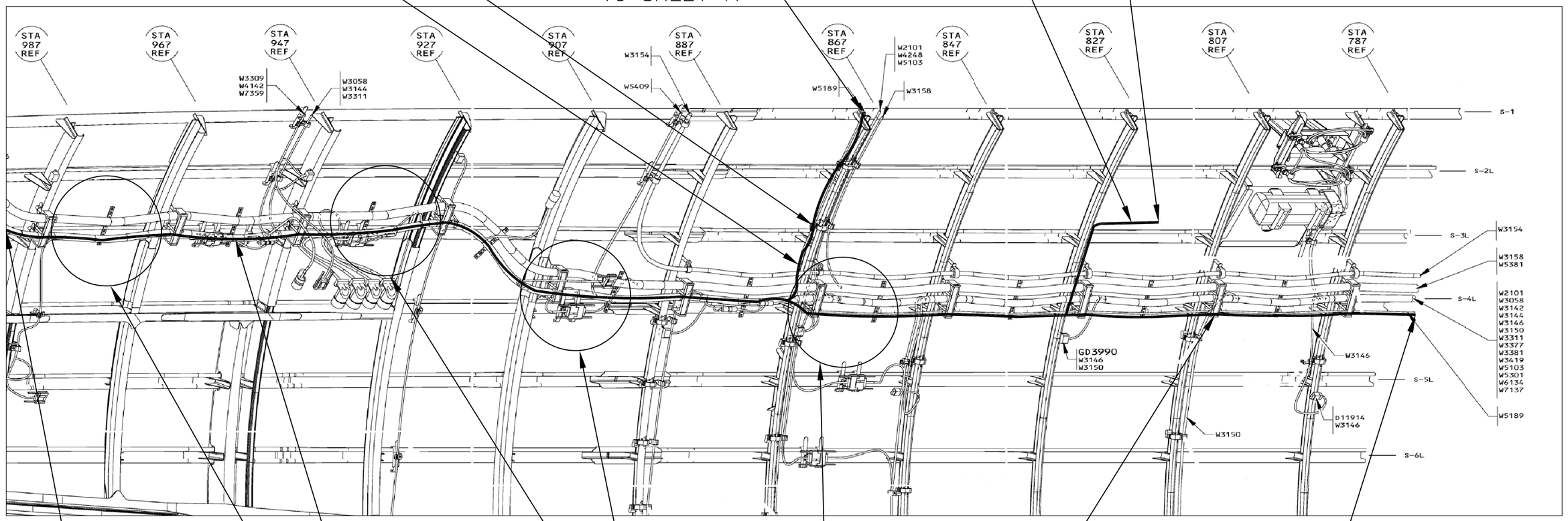
LOOKING AFT
(NOT TO SCALE)
PRESSURE BULKHEAD

8363–4420–113–101 WIRE ROUTING INSTL – CABIN

VIEW LOOKING LH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 9 OF 23

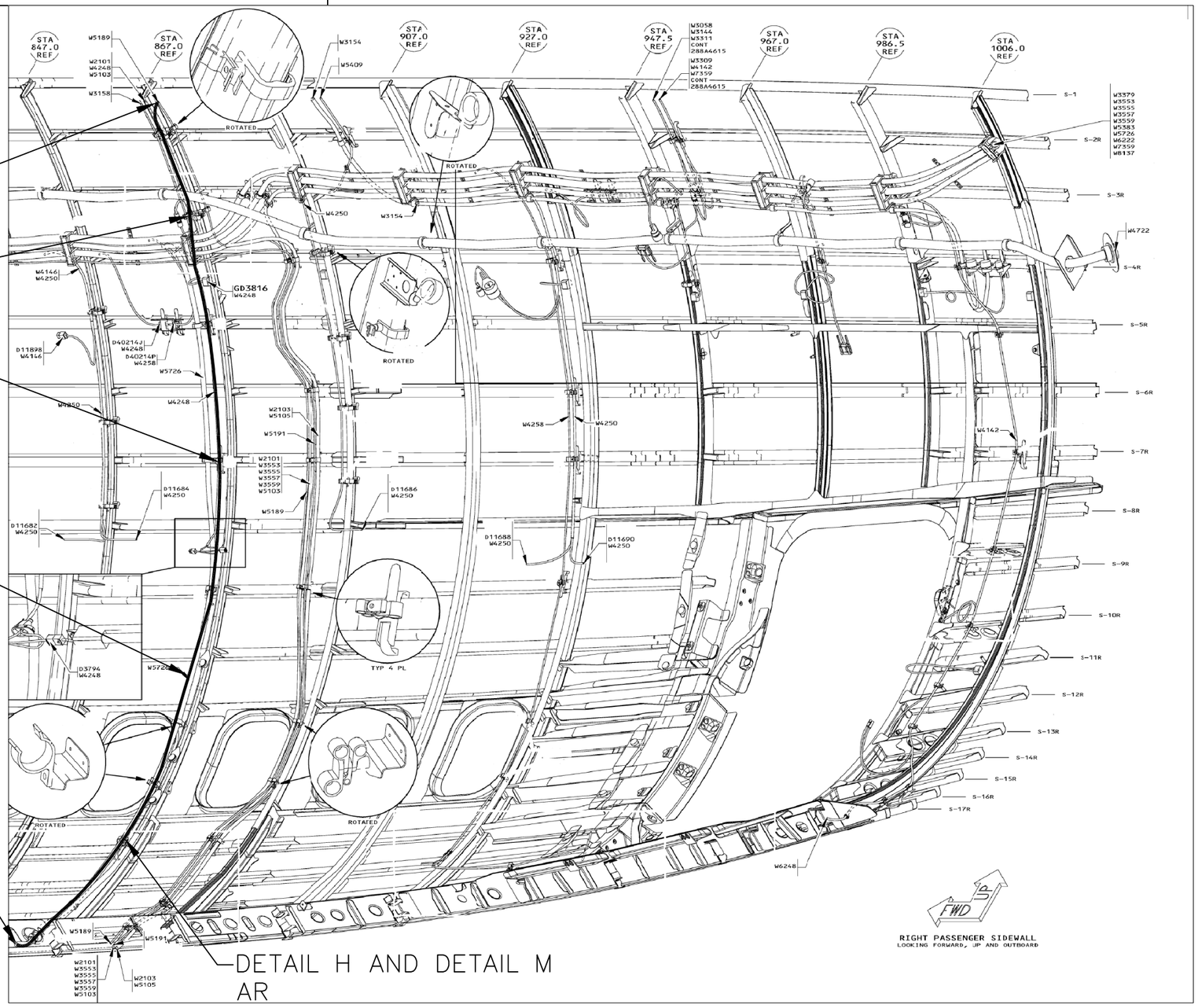


8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING LH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 10 OF 23



8363-4420-113-101 WIRE ROUTING INSTL – CABIN

AFT VIEW LOOKING RH

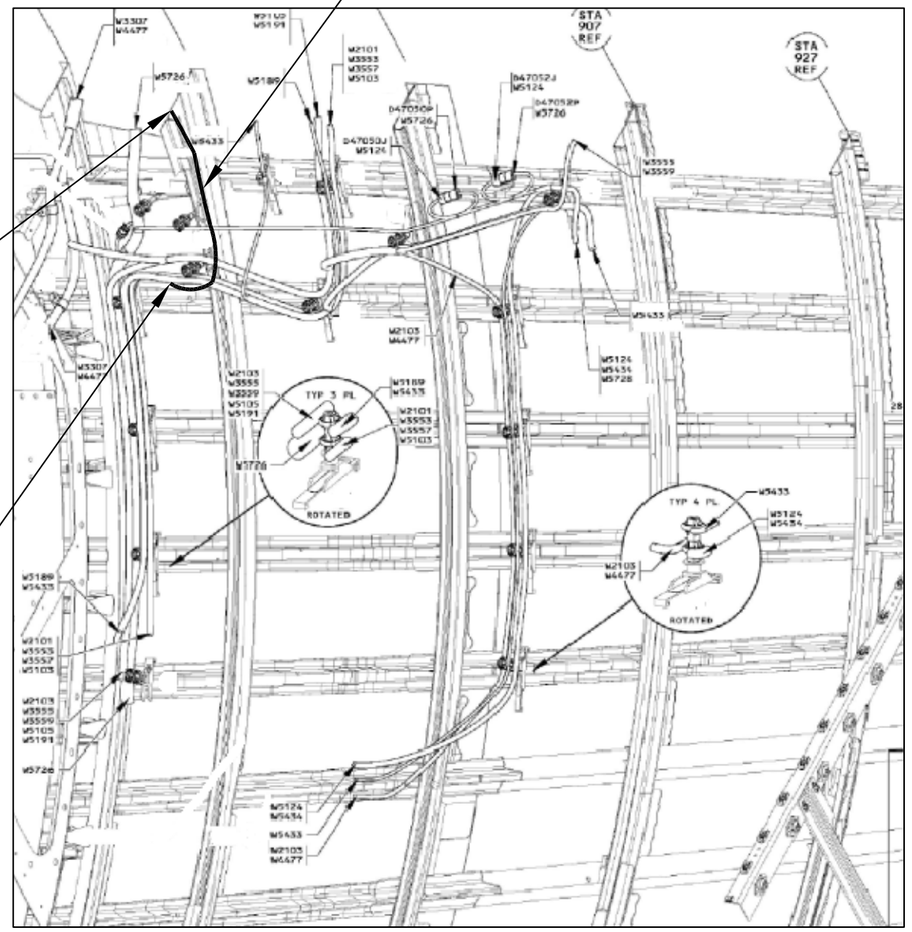
SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 11 OF 23

231551, 44605
(ROUTE WITH EXISTING HARDWARE)

FROM SHEET 11

TO E6-1 SHELF
(BREAKOUT FIRST
STR BELOW FLOOR)

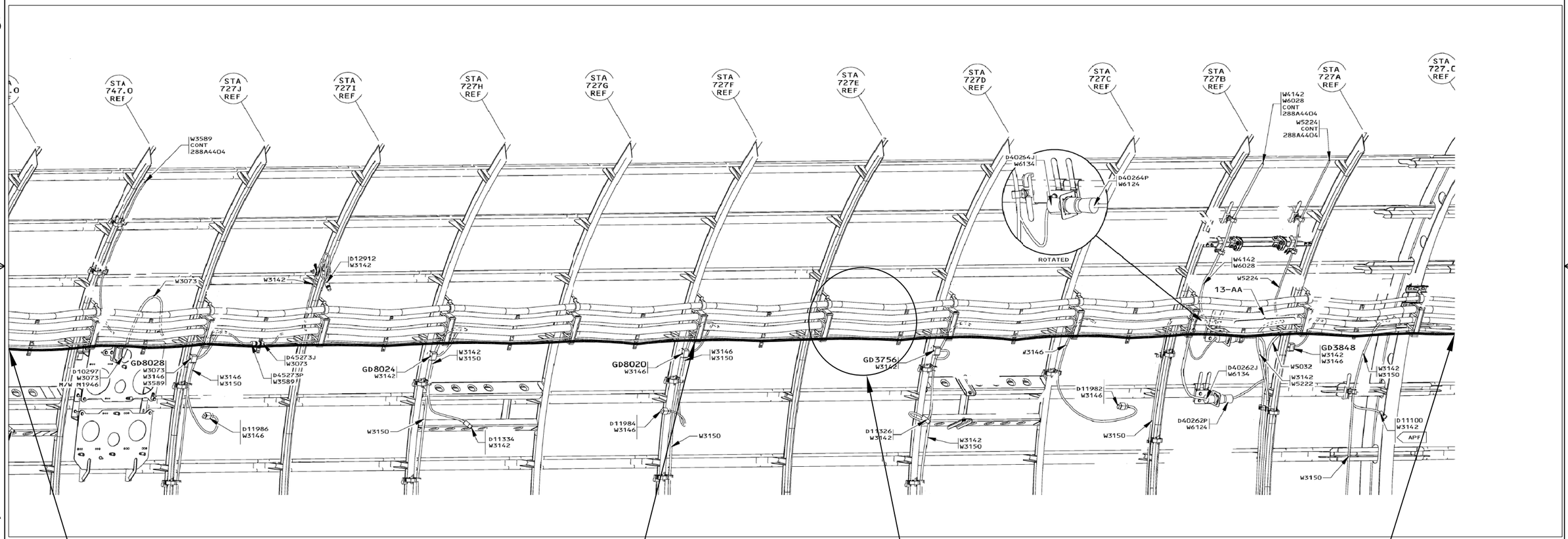


8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING RH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 12 OF 23

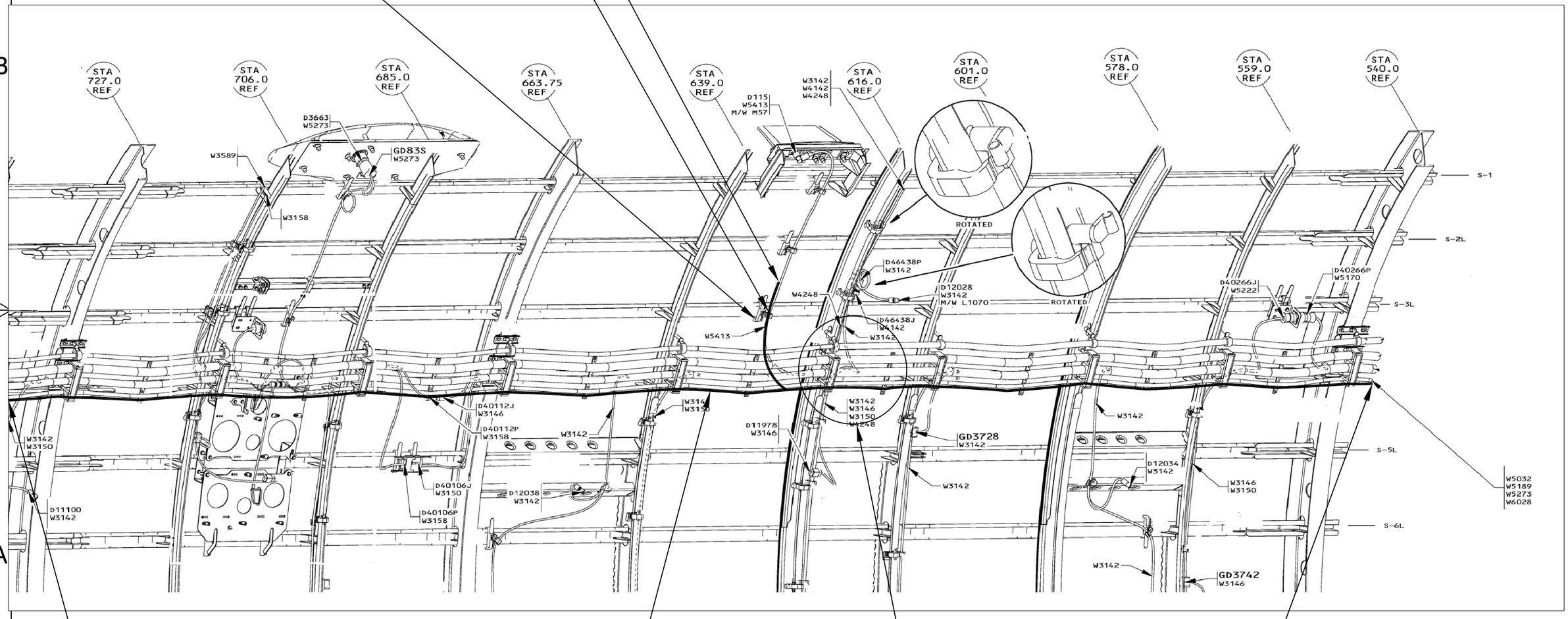


8363-4420-113-101 WIRE ROUTING INSTL – CABIN

VIEW LOOKING LH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 13 OF 23



DETAIL H AND DETAIL M
AR

TO CEILING PANEL

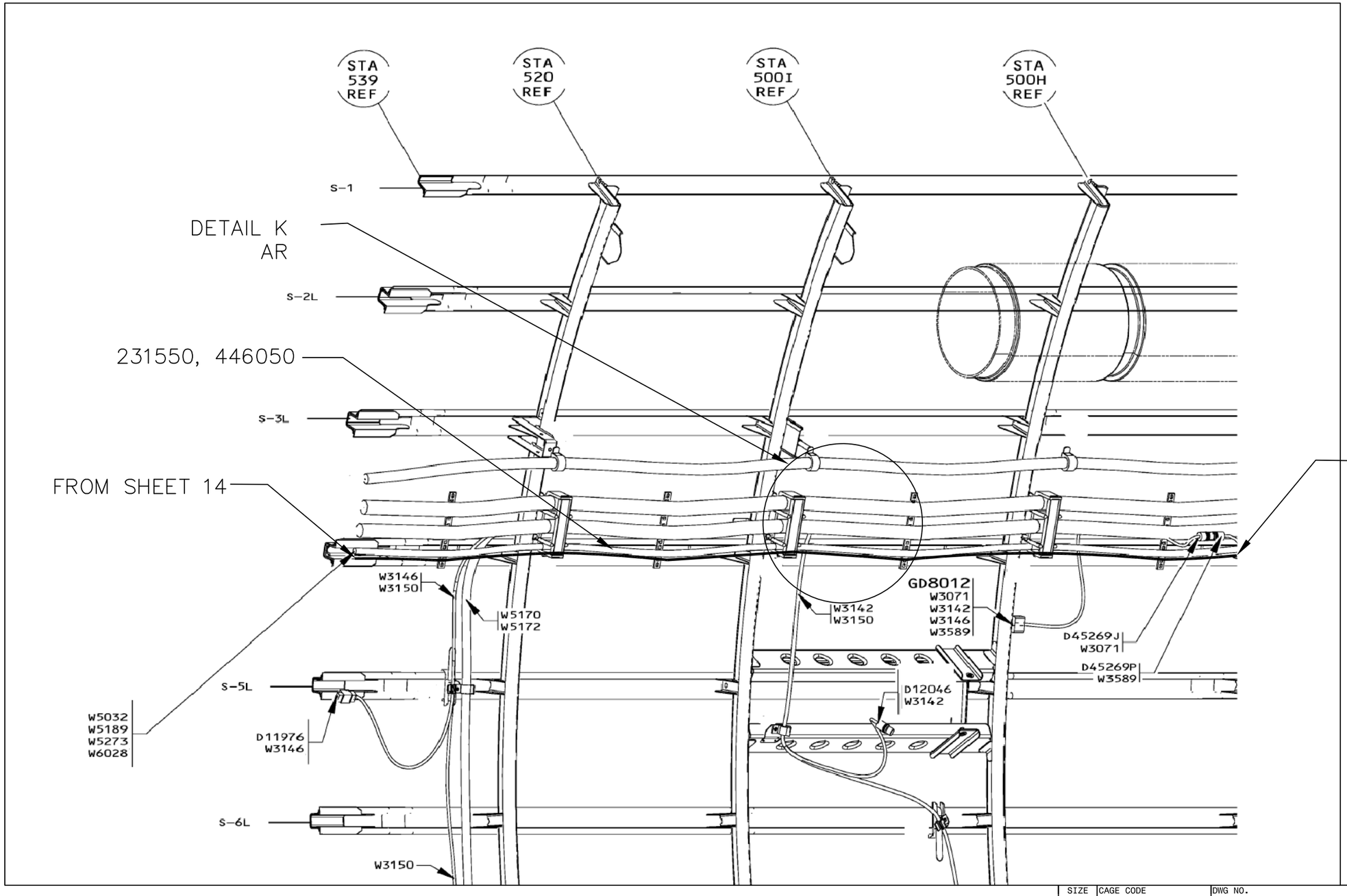
446050

8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING LH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 14 OF 23

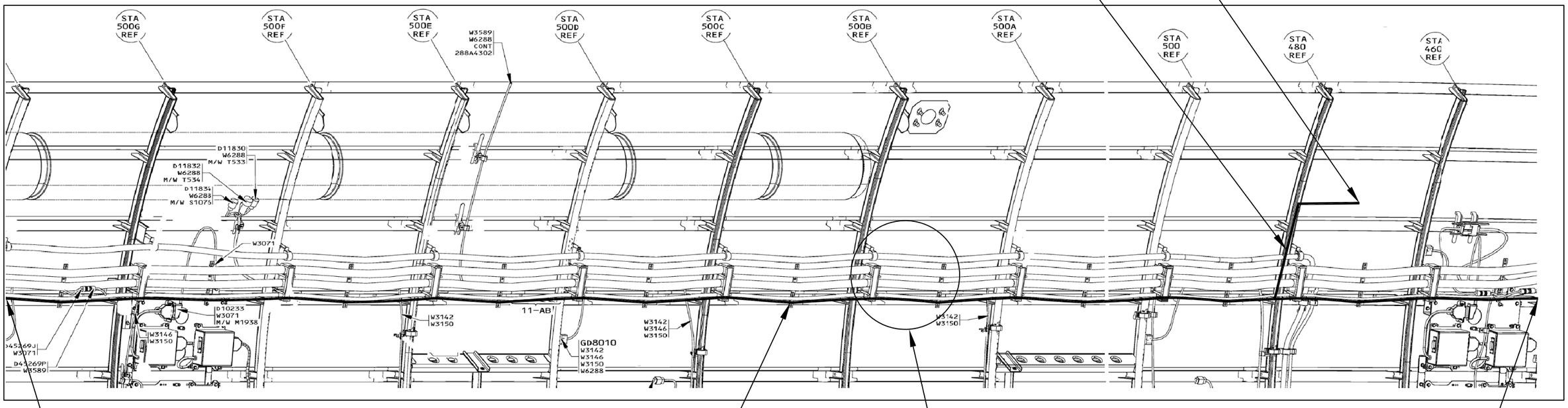


8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING LH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 15 OF 23

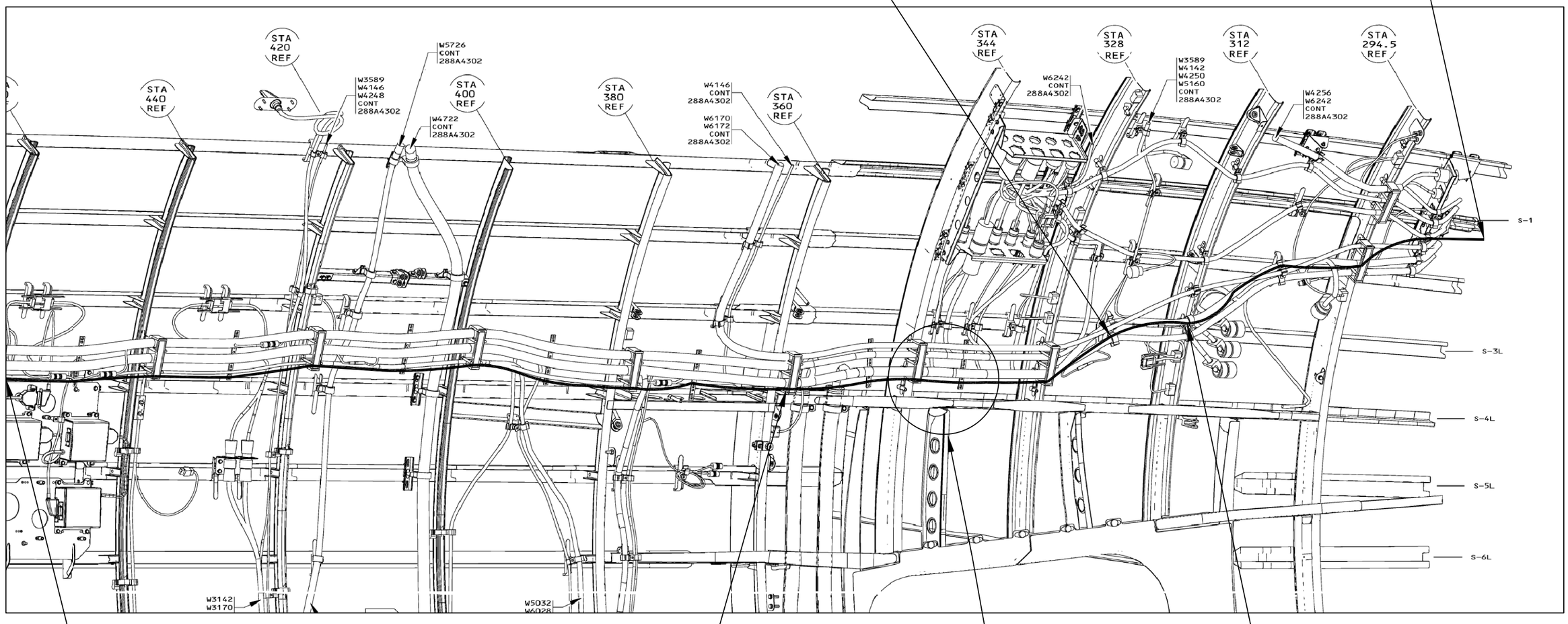


8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING LH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 16 OF 23



8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING LH

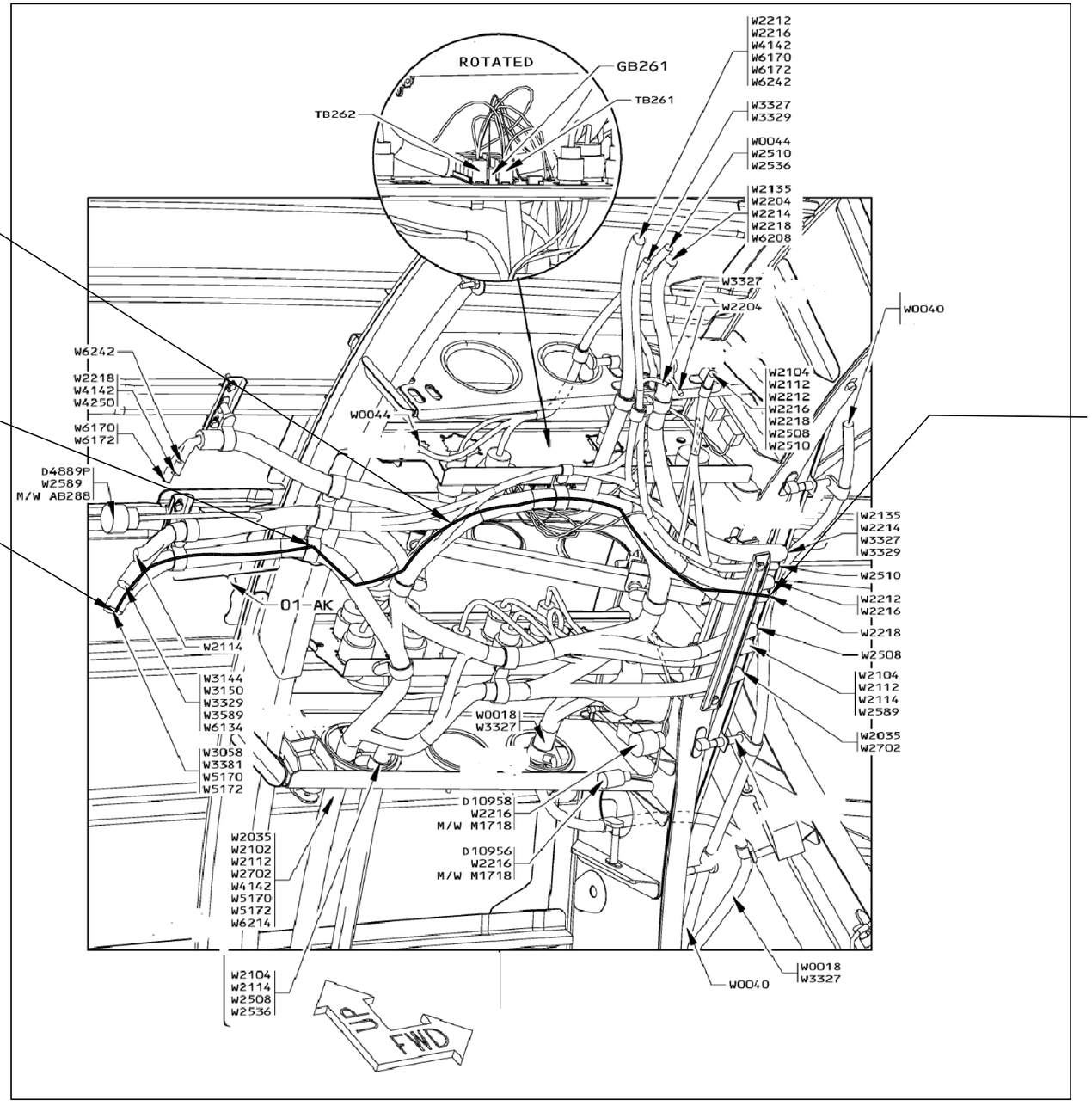
SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 17 OF 23

231550, 446050

DETAIL P
(MOUNT TO
EXISTING HARDWARE)
AR

FROM SHEET 17



TO SHEET 19

8363-4420-113-101 WIRE ROUTING INSTL - CABIN

STA 250-STA 280 VIEW LOOKING LH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 18 OF 23

FROM SHEET 18

TO P6-1
ZN B2

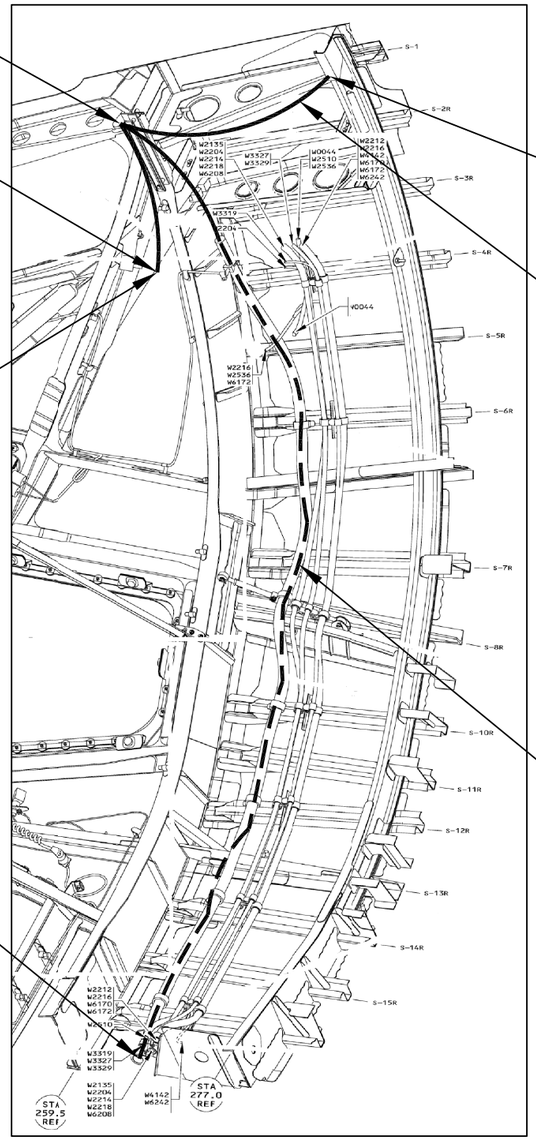
446050

TO SHEET 23
P5 OVERHEAD PANEL

446050

231550, 446050
(ROUTE WITH
EXISTING HARDWARE
CONDUIT)

TO SHEET 20
E5-2 AND
SHEET 22 J22



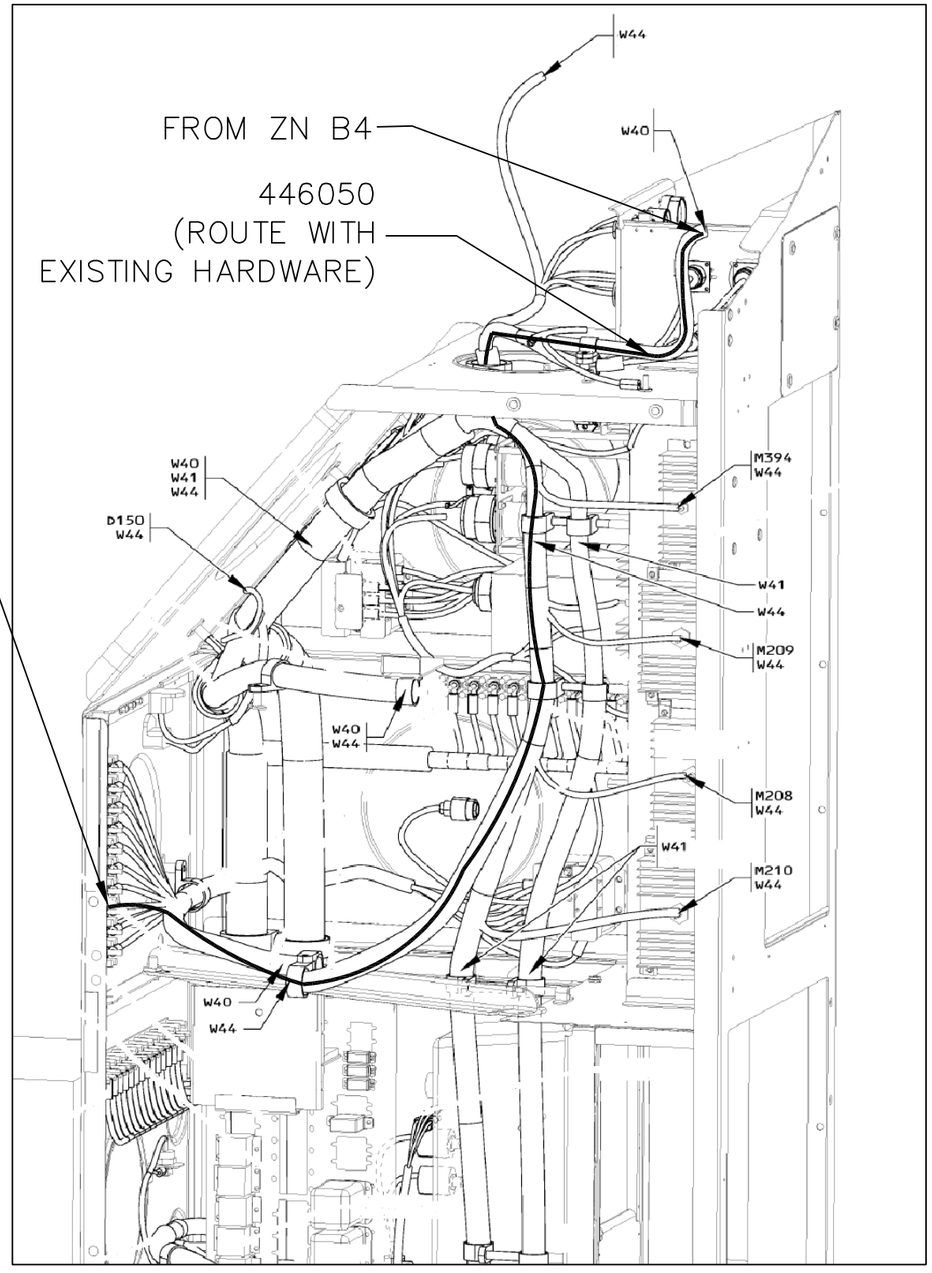
8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING RH

FROM ZN B4

446050
(ROUTE WITH
EXISTING HARDWARE)

TO CB99004,
CB99005, P6-1



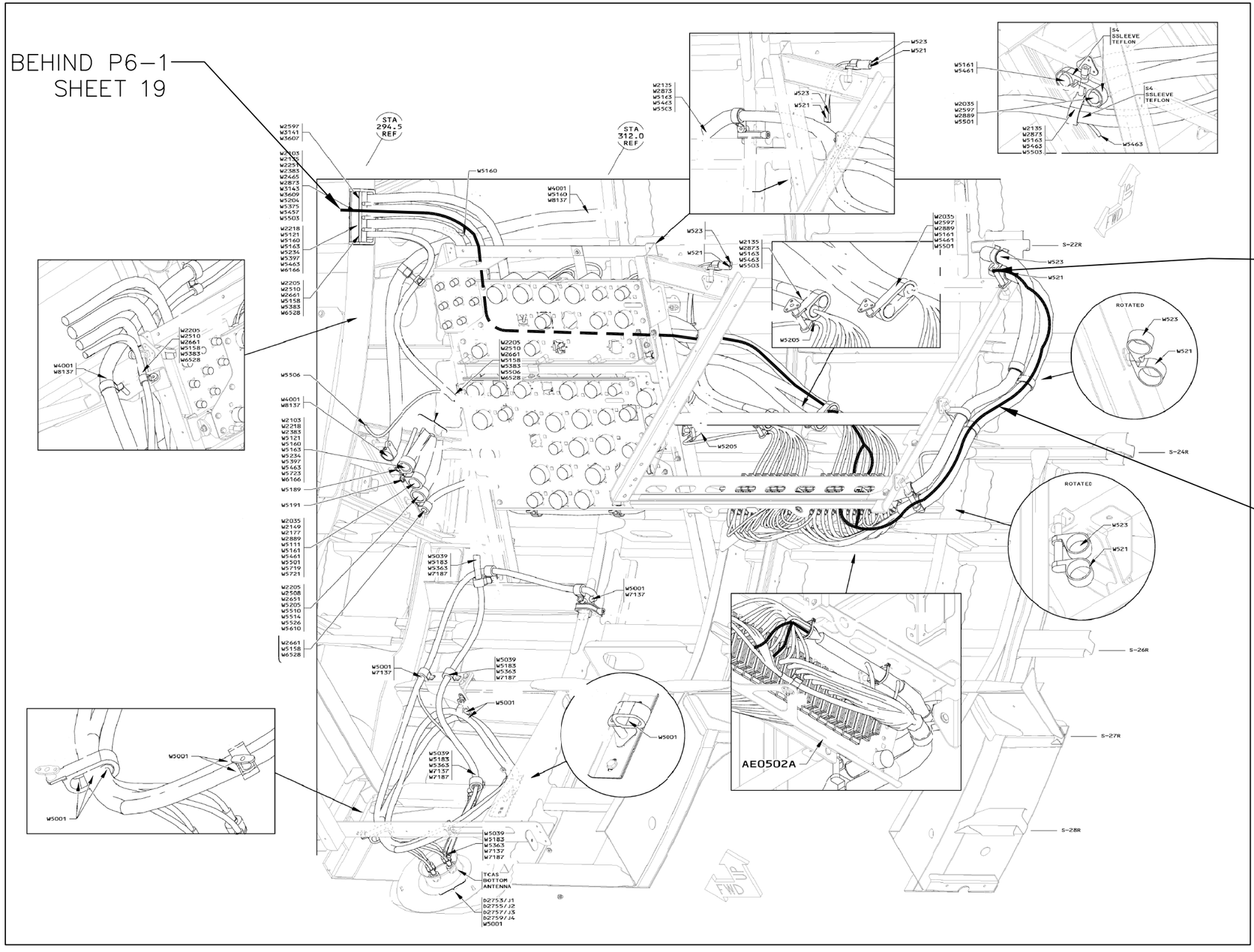
8363-4420-113-101 WIRE ROUTING INSTL - CABIN

P6-1 LOAD CONTROL CIRCUIT BREAKER

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 19 OF 23

FROM CONDUIT BEHIND P6-1
SHEET 19

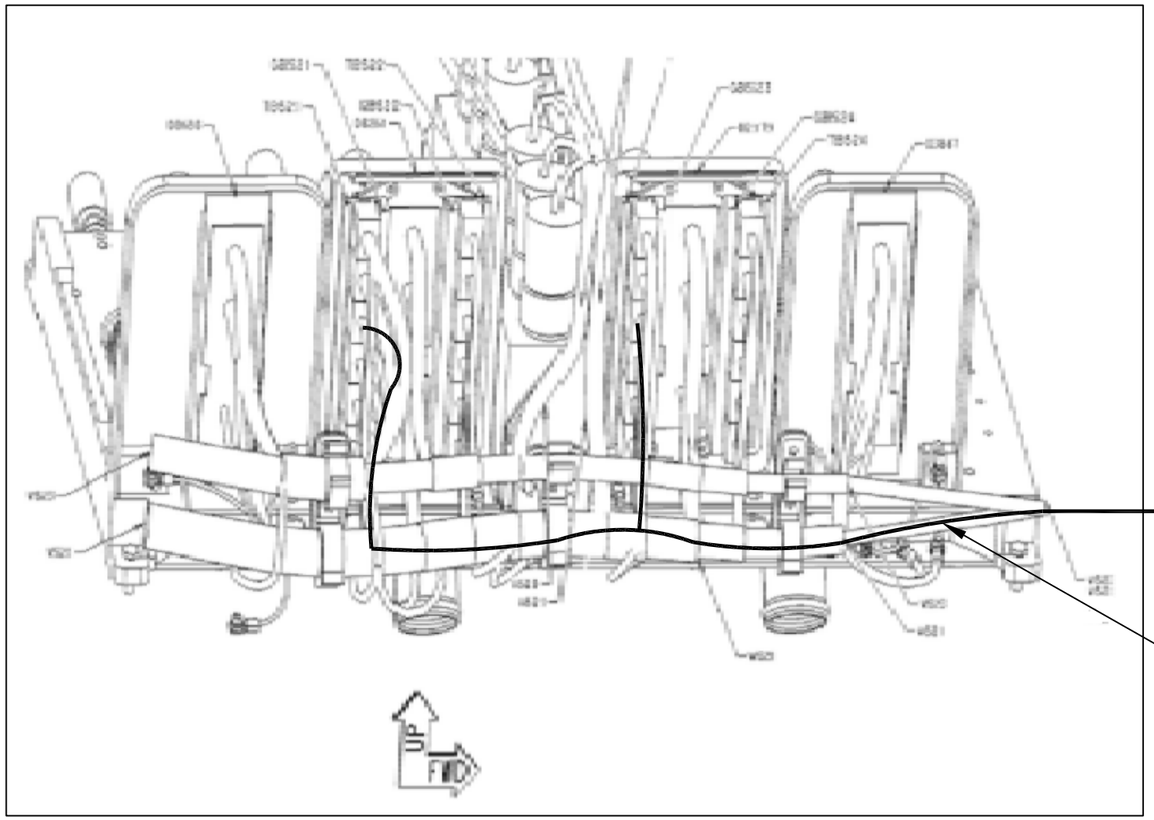


8363-4420-113-101 WIRE ROUTING INSTL - CABIN

VIEW LOOKING RH

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 20 OF 23



FROM AE0502A
SHEET 20

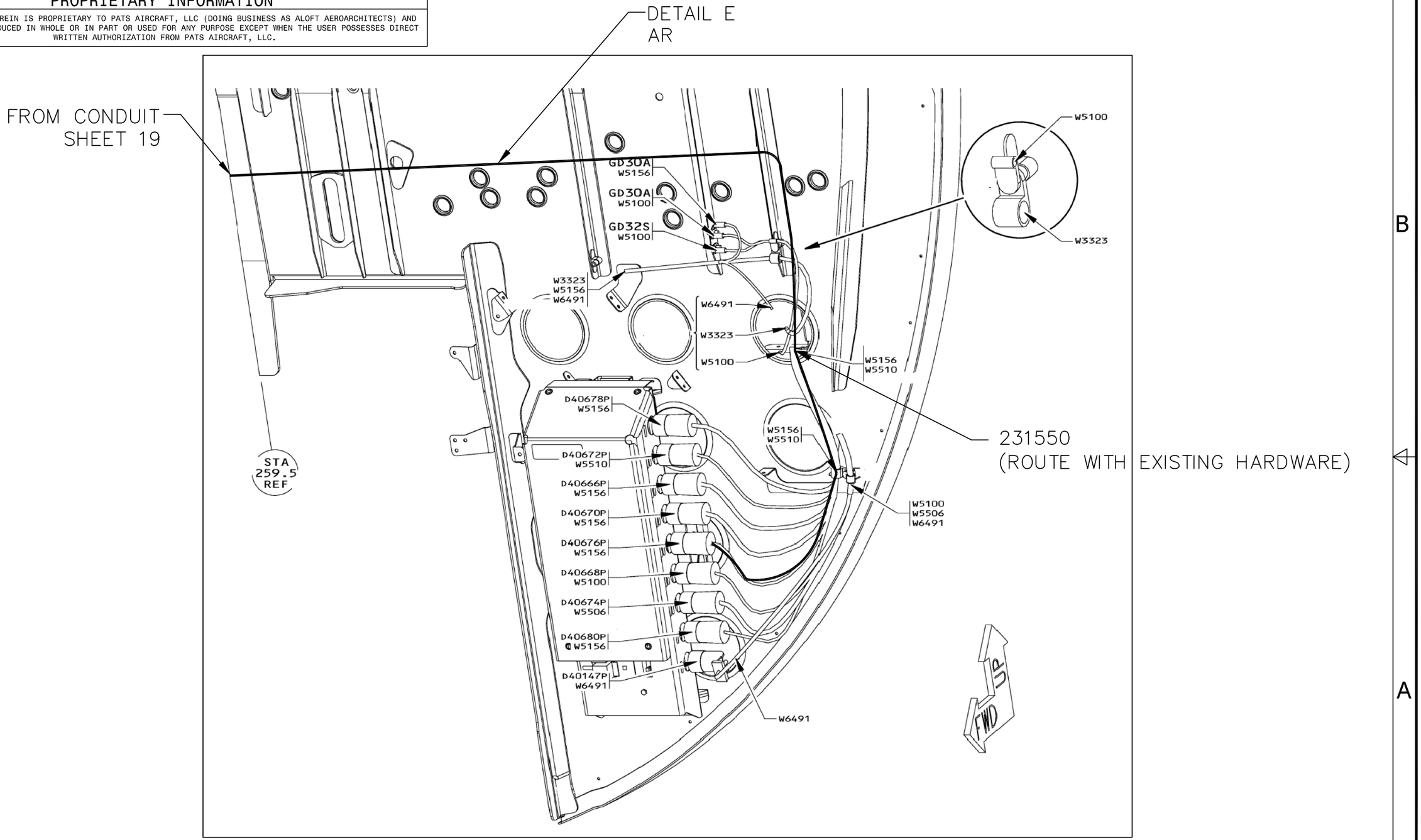
231550, 446050
(ROUTE WITH
EXISTING HARDWARE)

8363-4420-113-101 WIRE ROUTING INSTL - CABIN

E5-2 SHELF, VIEW FROM BACK

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 21 OF 23

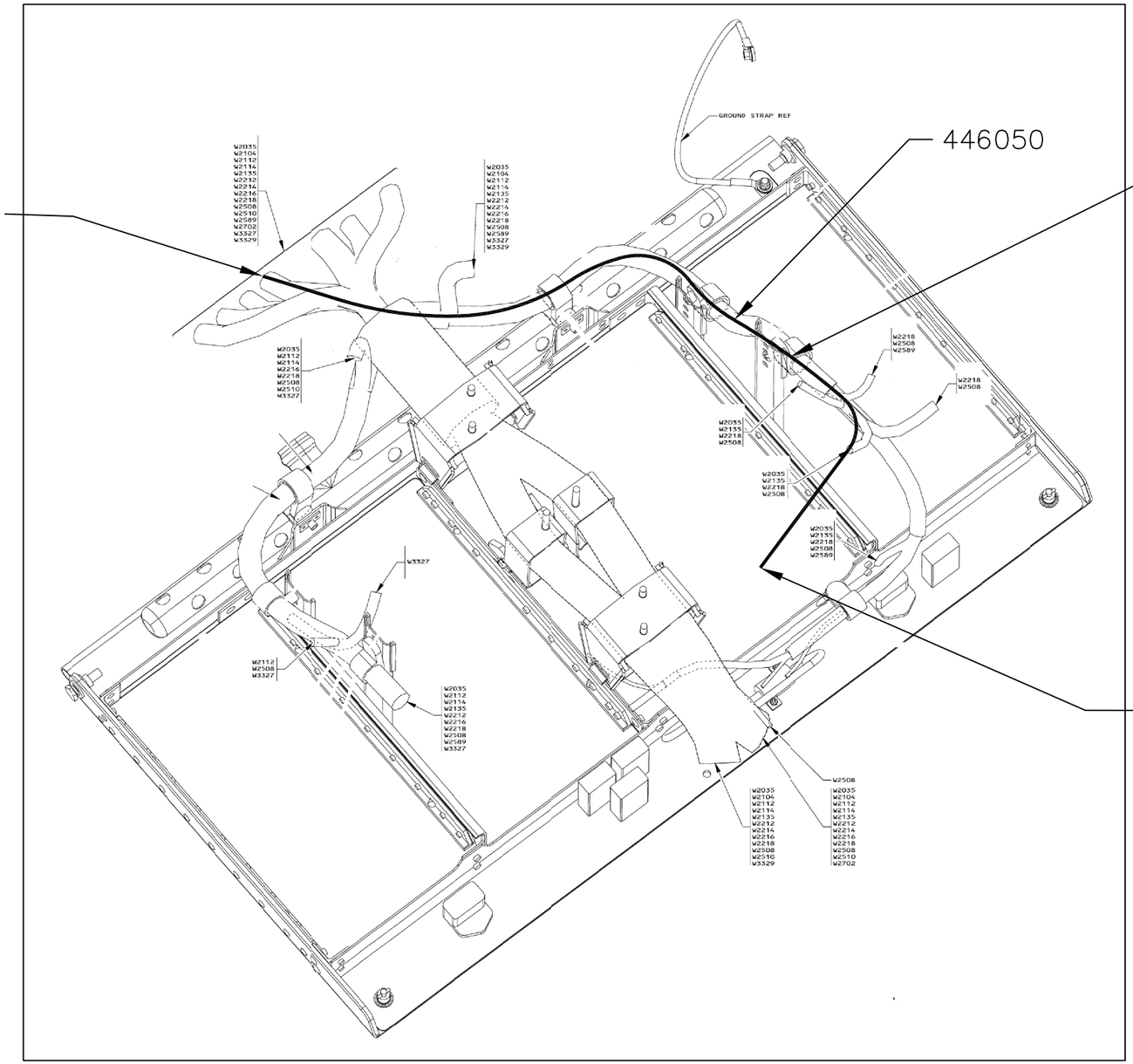


8363-4420-113-101 WIRE ROUTING INSTL - CABIN

STA 259.5 VIEW LOOKING AFT

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 22 OF 23



8363-4420-113-101 WIRE ROUTING INSTL - CABIN

AFT, OVERHEAD INSTRUMENT PANEL VIEW LOOKING DOWN

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4420-113	A
SCALE NONE	AUTOCAD DRAWING	CALC.WT - / ACT.WT -	SHEET 23 OF 23

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	SH2: CORRECTED CLAMP PN. SH5-8: REPLACED PICTURES WITH CAD.	03/31/22	T. VILLEGAS
B	SEE DCN FOR CHANGES		

NOTES:

1. PERMISSIBLE TO ATTACH WIRE RUNS TO EXISTING WIRING HARNESS OR TUBING PER DETAIL M OR DETAIL N.
2. MAINTAIN MINIMUM .5 SPACING BETWEEN EXISTING WIRE RUNS AND NEW WIRE RUN.
3. SEE WIRING DIAGRAM FOR WIRE NUMBERS.
4. ROUTE AND INSTALL WIRE BUNDLES IN ACCORDANCE WITH BOEING SWPM D6-54446 CHAPTER 20: 20-10-11 INSTALLATION OF ELECTRICAL WIRES AND WIRE HARNESSES AND 20-10-12 WIRE HARNESS SUPPORTS.
5. REFER TO BAC5152 FOR CONNECTOR IDENTIFICATION. INSTALL LABELS AFTER CONNECTOR TERMINATION.
6. CONNECTOR LOCATIONS SHOWN ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.
7. PERMISSIBLE TO ROTATE ANY BACS38P5 STRINGER CLIP INSTALLED ON THIS DRAWING BY 180° FROM VIEW SHOWN.
8. PERMISSIBLE TO USE EXISTING BOEING STRINGER/FRAME CLIPS PROVIDED THAT 1/2" PHYSICAL SEPARATION IS MAINTAINED FROM BOEING BUNDLES.
9. INSTALL BOLTS, SCREWS, AND NUTS PER BAC5009.
10. PERMISSIBLE TO USE +/- TWO GRIP LENGTHS ON ALL FASTENERS.
11. INSTALL BACS31H1B RING POSTS AND ATTACH WIRE TO RING POST PER D6-54446, 20-10-12. PERMISSIBLE TO STACK UP TO 4 RING POSTS TOGETHER AT ANY LOCATION. PERMISSIBLE TO USE BACS31H1B TO SPACE WIRE HARNESS AWAY FROM EXISTING STRUCTURE OR OTHER OBSTRUCTIONS AS REQUIRED.
12. NO NEW WIRING INSTALLED PER THIS DRAWING MAY COME WITHIN 6.5 INCHES OF ANY FQIS WIRING UNLESS THE NEW WIRING IS WIRE TYPE BMS 12-48, BMS 13-60, OR BMS 13-58.
13. PERMISSIBLE TO SUB NAS623-3-X FOR NAS1096-3-X.
14. UNLESS OTHERWISE STATED, ALL OF THE FOLLOWING CLAMPS MAY BE SUBSTITUTED FOR EACH OTHER: BACC10GU(X), BACC10GE(X), AND MS21919WDG(X).
15. PERMISSIBLE TO PICK UP EXISTING WIRE ATTACH HARDWARE IN LIEU OF WIRE ATTACH HARDWARE CALLED OUT PER THIS DWG.
16. PERMISSIBLE TO USE MTP(X)H-E10 AND T50R AS REQUIRED TO SEPARATE WIRE BUNDLES.
17. PERMISSIBLE TO USE CR4H ATTACHED WITH T50R AS REQUIRED TO SPACE WIRE BUNDLES OFF OF EXISTING WIRE BUNDLES. PERMISSIBLE TO USE CR4H ATTACHED WITH T50R AS REQUIRED TO PROVIDE SEPARATION BETWEEN BUNDLES INSTALLED PER THIS DRAWING. PERMISSIBLE TO ADD UP TO THREE CR4H ATTACHED WITH T50R AS REQUIRED TO PROVIDE ADDITIONAL WIRE SEPARATION.
18. PERMISSIBLE TO SUBSTITUTE T50R FOR PLT4S-M100.
19. QUANTITIES IN LIST OF MATERIALS ARE FOR PLANNING AND PURCHASING, ACTUAL QUANTITIES USED DURING INSTALL MAY VARY.

FLAG NOTES:

51. LOCATE TO MATCH EXISTING CLAMP. PERMISSIBLE TO REUSE EXISTING HARDWARE.
52. SEE 1009-25560-1 FOR DETAILED INFORMATION ON EQUIPMENT LOCATIONS AND INSTALLATIONS.
53. PERMISSIBLE TO ADD UP TO TWO ADDITIONAL CR4H ATTACHED WITH PLT4IS-M100 TO PROVIDE ADDITIONAL WIRE SEPARATION.
54. UNLESS OTHERWISE NOTED, ROUTE WIRE AS SHOWN AND ROUTE TO DISCONNECTS/ CONNECTORS CALLED OUT IN THIS INSTALL. ROUTE WIRE TO GROUND STUDS AND GROUND BLOCKS AS REQUIRED. ATTACH WIRE TO AIRCRAFT STRUCTURE PER DETAILS U, W, X, Y, Z, AND AA. UNLESS OTHERWISE NOTED, PERMISSIBLE TO ROUTE WIRE IN EXISTING WIRE BUNDLES. PERMISSIBLE TO PICK UP EXISTING AIRCRAFT ATTACH POINTS IN LIEU OF BACS38P5 AND BACS38Y3.
55. CLAMP SIZE TO BE DETERMINED AT INSTALL. SIZE CLAMP TO MATCH WIRE BUNDLE.
56. INSTALL AS REQUIRED IN ACCORDANCE WITH BOEING SWPM D6-54446 CHAPTER 20: 20-10-11 INSTALLATION OF ELECTRICAL WIRES AND WIRE HARNESSES AND 20-10-12 WIRE HARNESS SUPPORTS.
57. NAS43DD3-64 (1.0 INCH) MAX SPACER LENGTH. PERMISSIBLE TO TRIM SPACER TO DESIRED LENGTH.
58. INSTALL NOMEX SLEEVING AS REQUIRED FOR ABRASION PROTECTION. IF SLEEVING LENGTH EXCEEDS 73 INCHES, IDENTIFY ALL WIRE HARNESSES COVERED BY SLEEVING PER BAC5152 SECTION 8.5.4. USE PART NUMBER 5676001907, 5676001307, 5676000507, OR 5676002507.
59. INSTALL NOMEX SLEEVING FOR WIRE ABRASION PROTECTION LOCALLY TO PROTECT WIRING HARNESS FROM EXISTING PASS THRU.
60. NAS43DD3-64 (1.5 INCH) MAX SPACER LENGTH. PERMISSIBLE TO TRIM SPACER TO DESIRED LENGTH.
61. PERMISSIBLE TO REUSE EXISTING HARDWARE.
62. PERMISSIBLE FOR MS21919WDU(X) TO BE INSTALLED EITHER ABOVE OR BELOW ADJACENT, EXISTING CLAMP.
63. VIEW IS NOT TO SCALE. VIEW ONLY SHOWN TO LOCATE DETAIL CALLOUTS FOR WIRE RUN INSTALLED PER THIS DRAWING. VIEW ONLY REPRESENTS APPROXIMATE AIRCRAFT LOCATION FOR NEW WIRE RUN INSTALLED PER THIS DRAWING. SEE DETAIL VIEWS FOR SPECIFIC INFORMATION ON WIRE ROUTING AND WIRE SUPPORT HARDWARE. LINE WORK REPRESENTING EXISTING STRUCTURE AND EXISTING WIRE ROUTING IS FOR REFERENCE ONLY.
64. INSTALL RING POSTS AND ATTACH WIRE TO RING POST PER D6-54446, 20-10-12. PERMISSIBLE TO STACK UP TO 4 RING POSTS TOGETHER AT ANY LOCATION. ATTACH WIRE BUNDLE TO BACS31H1B RING POST APPROXIMATELY AS SHOWN. BACS31H1B MAY HAVE ONLY ONE WIRE BUNDLE ATTACHED IN SOME LOCATIONS. PERMISSIBLE TO ATTACH WIRE BUNDLE TO ONE OR BOTH BACS31H1B RING POSTS AS SHOWN. PERMISSIBLE TO OMIT ONE BACS31H1B IN LOCATIONS WHERE WIRE BUNDLE IS ATTACHED TO A SINGLE BACS31H1B.
65. NOT USED
66. PERMISSIBLE TO MARRIAGE-CLAMP A SECOND 287T0011-X AND T17S AS REQUIRED TO ACCOMMODATE A SECOND WIRE BUNDLE.
67. PERMISSIBLE TO MARRIAGE-CLAMP A SECOND BACC10GU(X) AS REQUIRED TO ACCOMMODATE A SECOND WIRE BUNDLE.
68. PERMISSIBLE TO SUBSTITUTE T18L FOR T50R TIE WRAP.

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2009	
APPROVED	
APPROVED	
APPROVED	
APPROVED	
OTHER	
ADDITIONAL APPROVALS	DATE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS: .X ± .1; .XX ± .03; .XXX ± .010 — ANGLES: ±.5° — SURFACE FINISH: 125

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

CONTRACT NO.

APPROVALS	DATE
DRAWN D. SPISAK	03/09/22
CHECKED H. DANFORD	03/09/22
LEAD ENGR	
QUALITY	
CERTIFICATION	

ALOFT AeroArchitects
21652 Nanticoke Ave, Georgetown, DE 19947

TITLE

WIRE ROUTING INSTL - TAIL

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

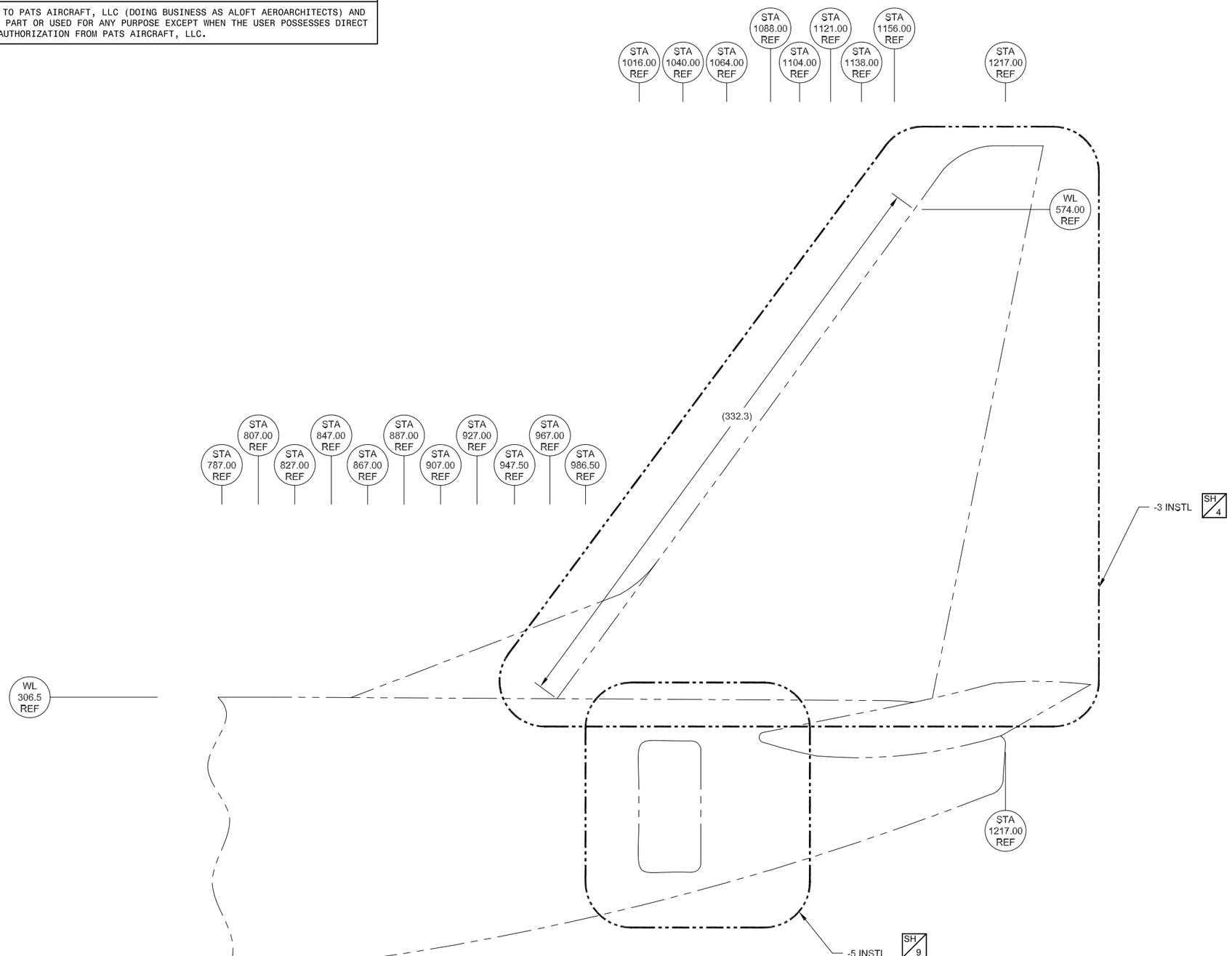
SCALE	AUTOCAD DRAWING	CALC.WT	ACT.WT	SHEET
NONE		-	-	1 OF 17

-5	-3	-1	PART NUMBER	NOMENCLATURE	STOCK SIZE	MATERIAL	SPEC/VENDOR	SHEET	NOTE
		25	NAS1801-3-10	SCREW					
		75	NAS1149D0316J	WASHER					
		25	MS35650-302	NUT					
		25	MS35338-43	LOCK WASHER					
		4	MS21919WCH6	NUT					
		25	MS21042L3	NUT					
		1	BACS31H2B	RING POST					
		50	BACC10KS1	SEPERATOR					
2	54		MS21919WDG(X)	CLAMP					FN55
60			PLT4S-M100	ZIP TIE					
20			BACS38J4	STRINGER CLIP			BOEING		
25			69B47961-2	FILLER ROD			BOEING		FN56
\		1	-5	INSTL				9	
	\	1	-3	INSTL				4	
		\	-1	INSTL - WIRE ROUTING				3	

PARTS LIST

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

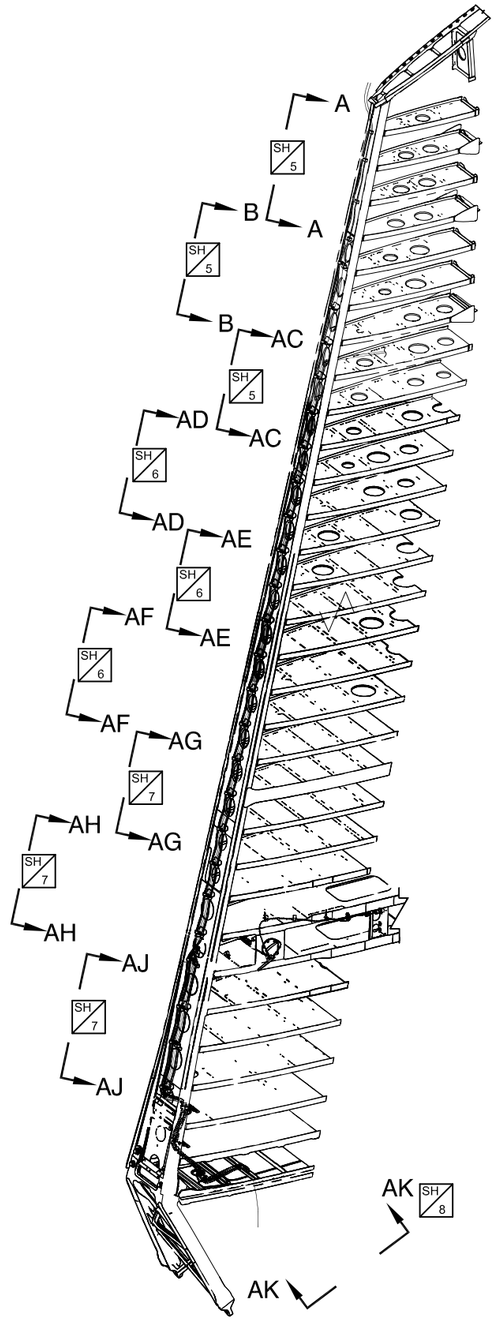
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 2 OF 17



-1 INSTL - WIRE ROUTING

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 3 OF 17

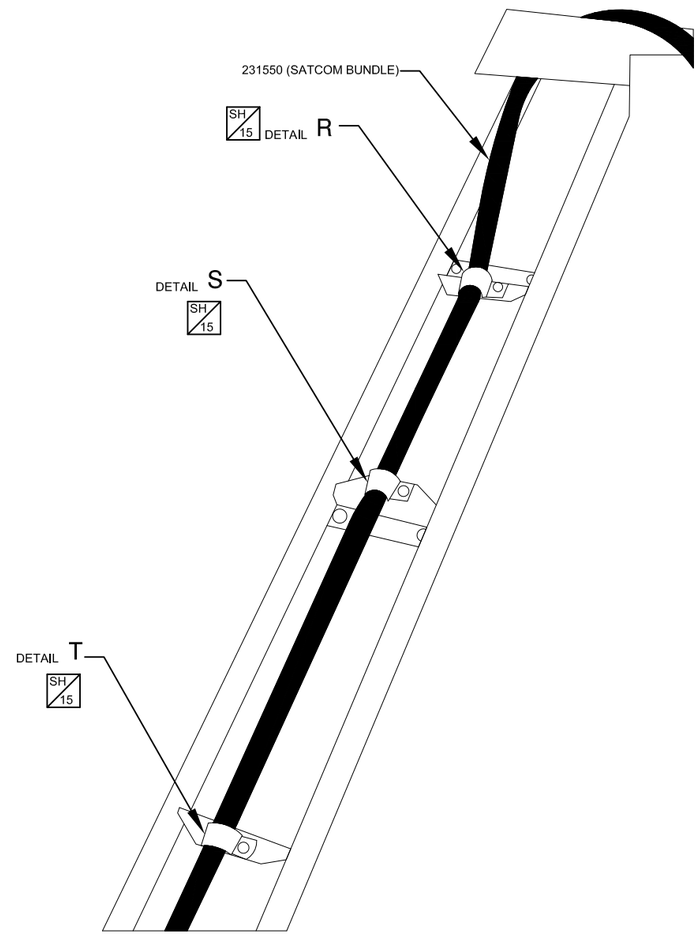


-3 INSTL SH 3 58 63

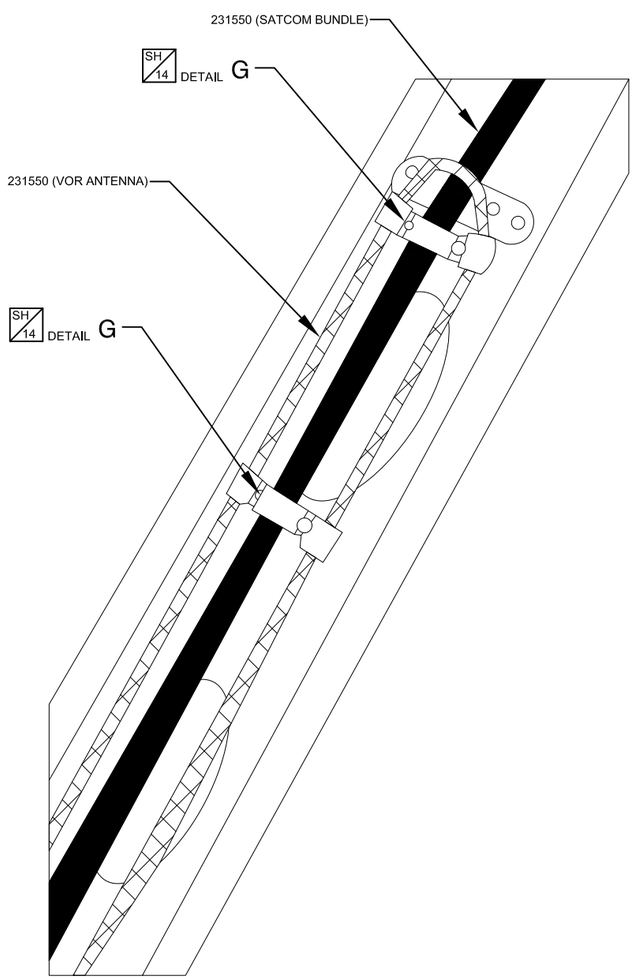
ISOMETRIC VIEW OF VERTICAL STABILIZER STRUCTURE
EXISTING WIRE SUPPORT HARDWARE OMITTED FOR CLARITY

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

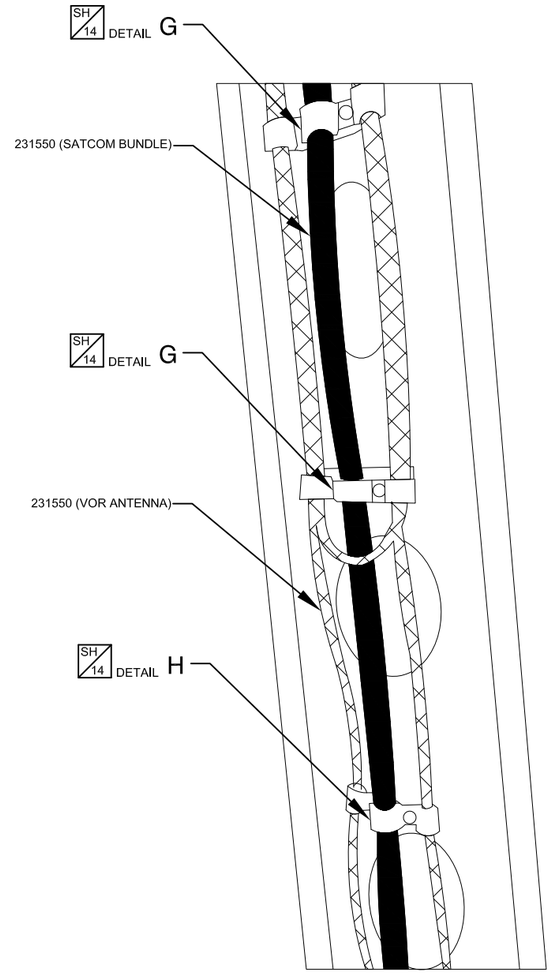
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 4 OF 17



VIEW A-A SH 4



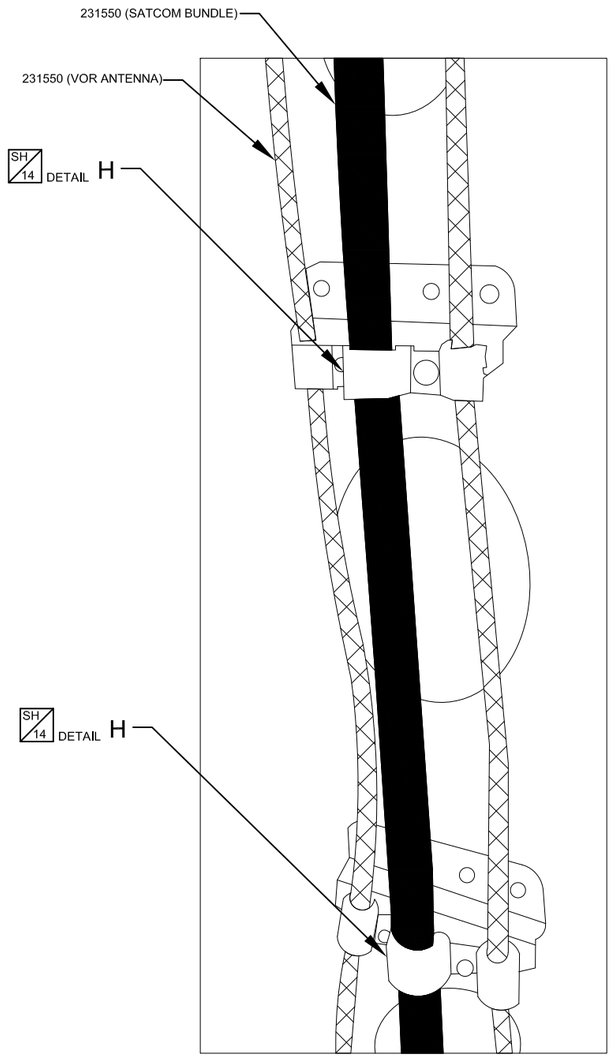
VIEW B-B SH 4



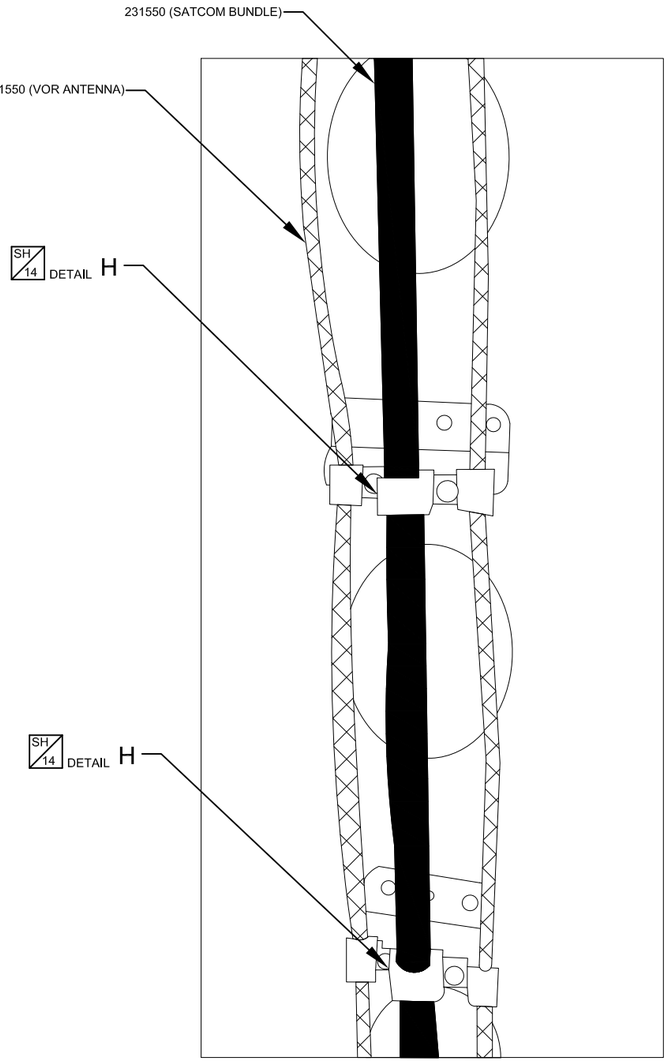
VIEW AC-AC SH 4

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

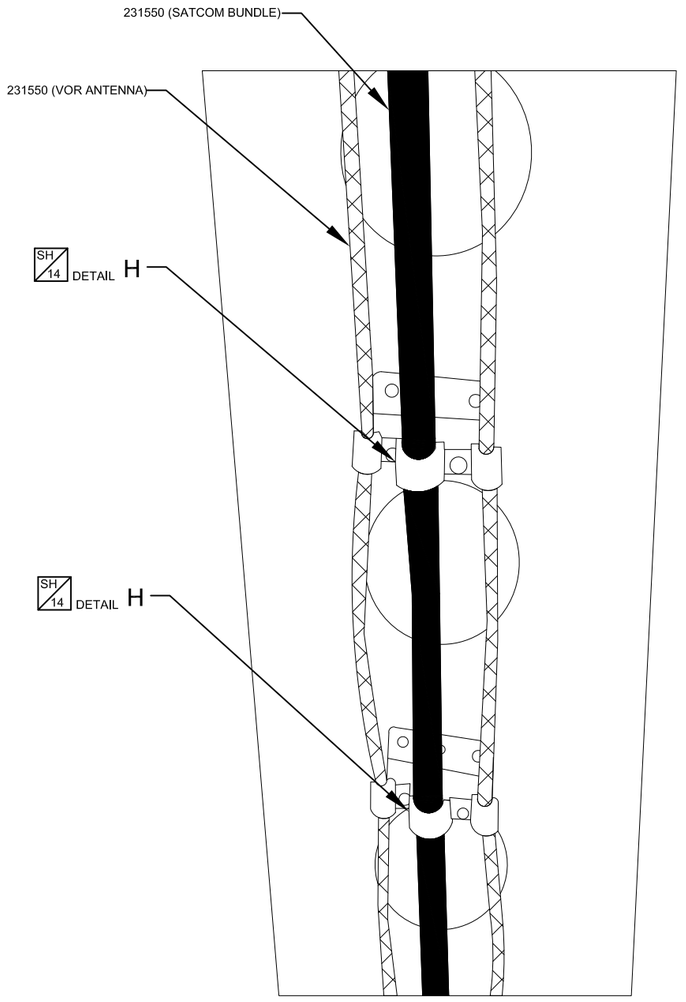
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 5 OF 17



VIEW AD-AD SH 4



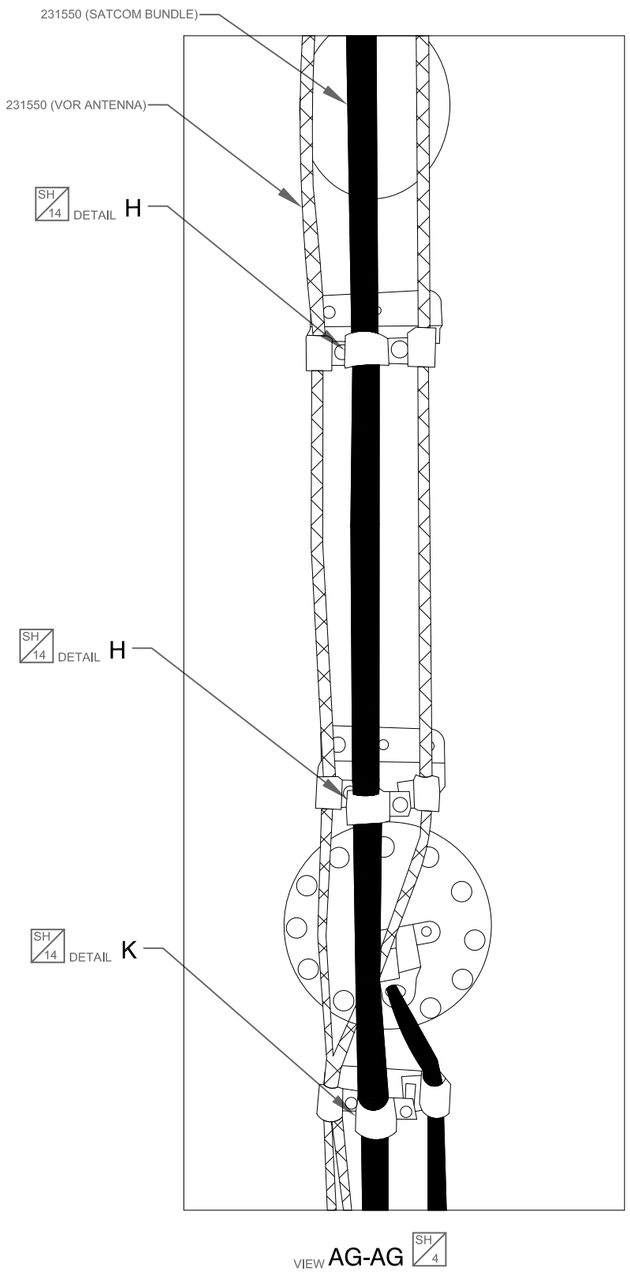
VIEW AE-AE SH 4



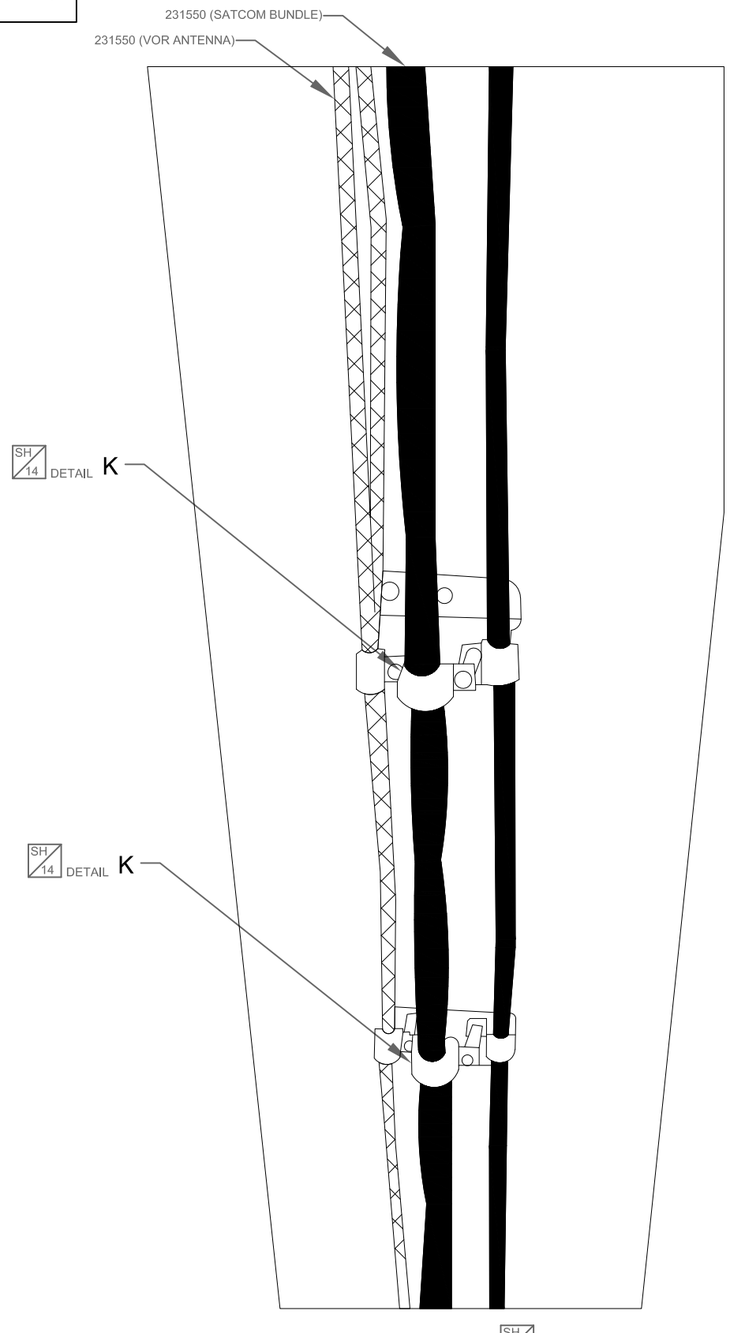
VIEW AF-AF SH 4

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

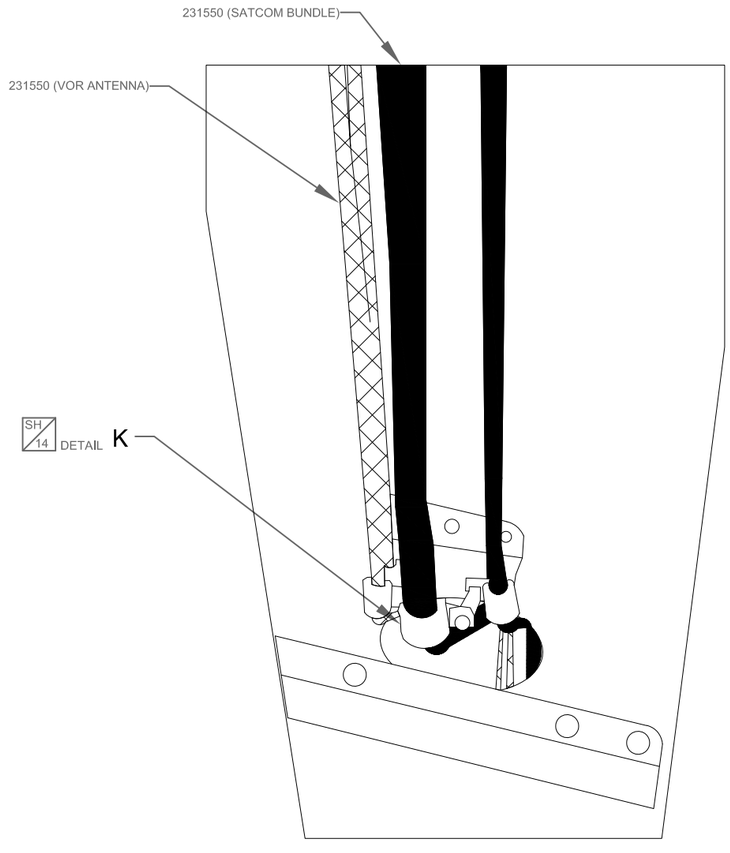
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 6 OF 17



VIEW AG-AG SH 4



VIEW AH-AH SH 4

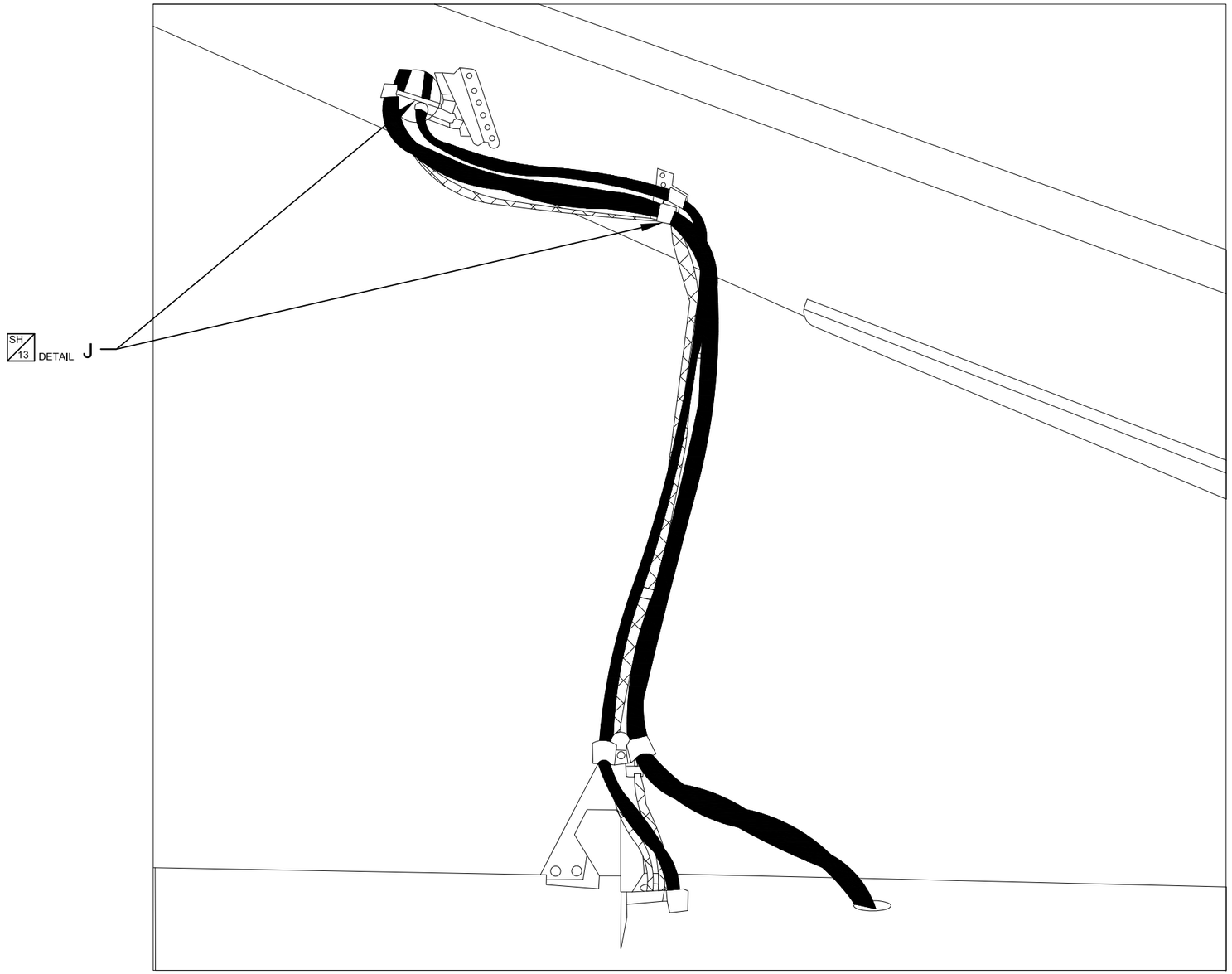


VIEW AJ-AJ SH 4

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 7 OF 17

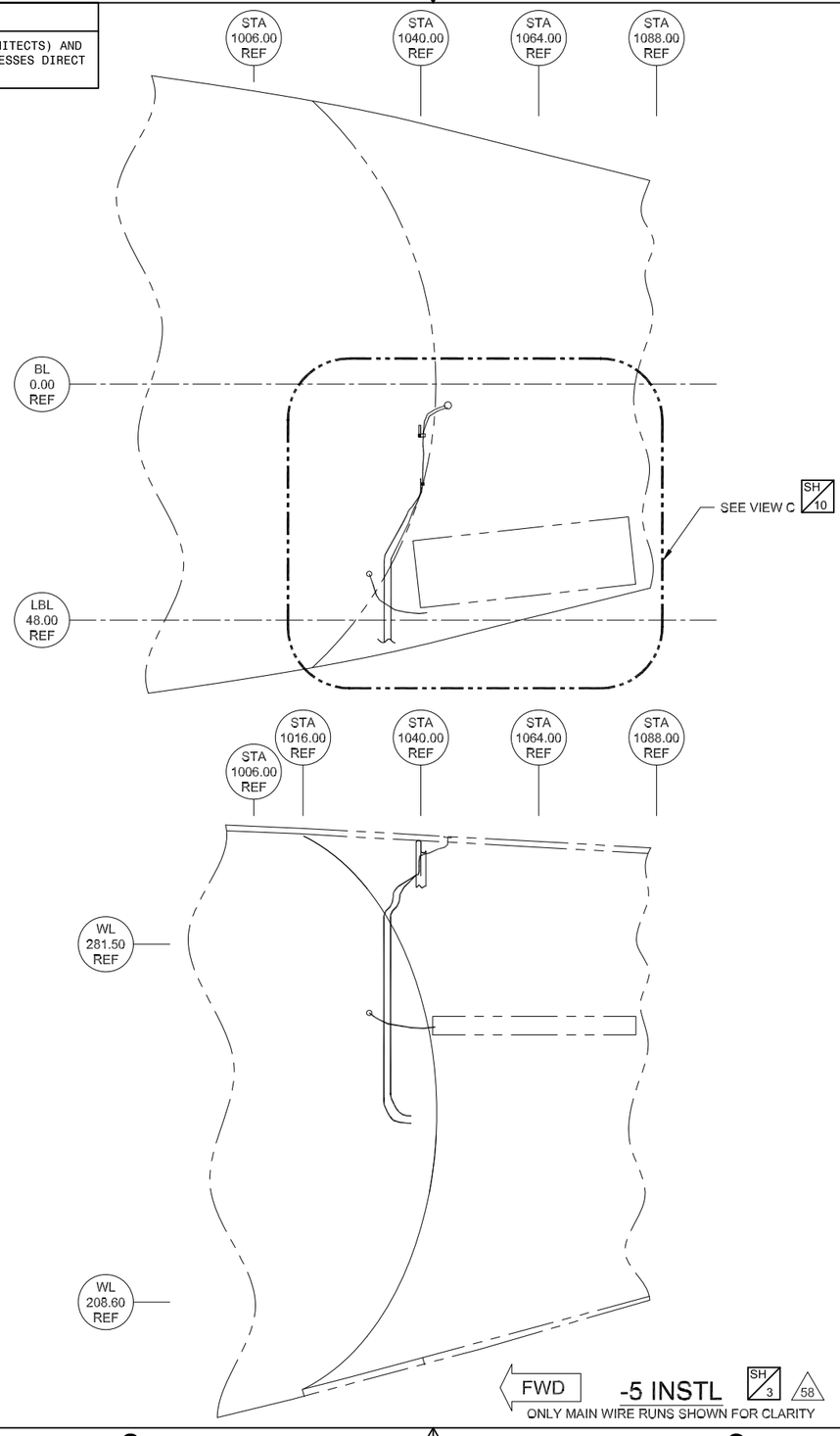
300-FM-055
REV A 12/08/2020



VIEW AK-AK SH 4

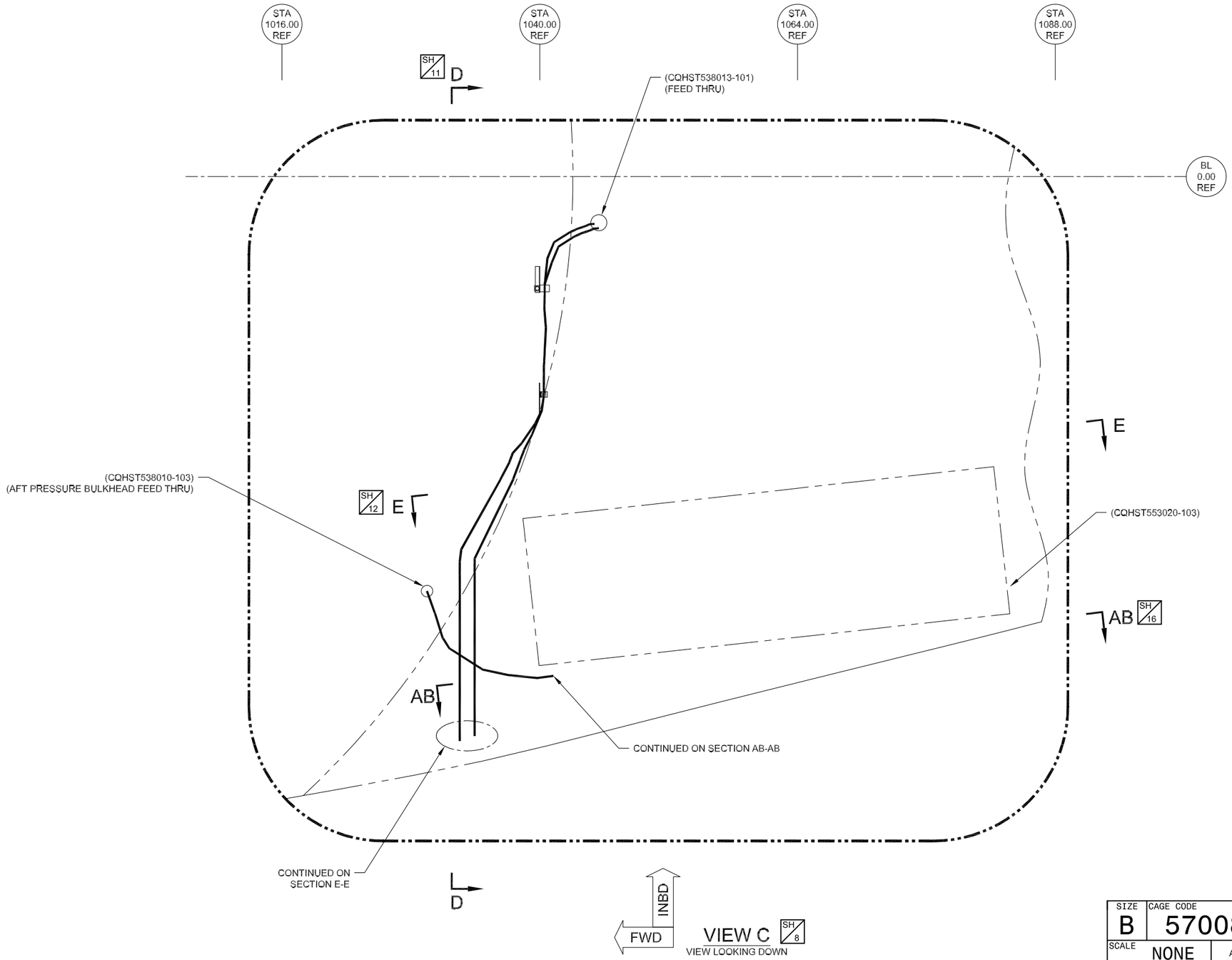
SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 8 OF 17



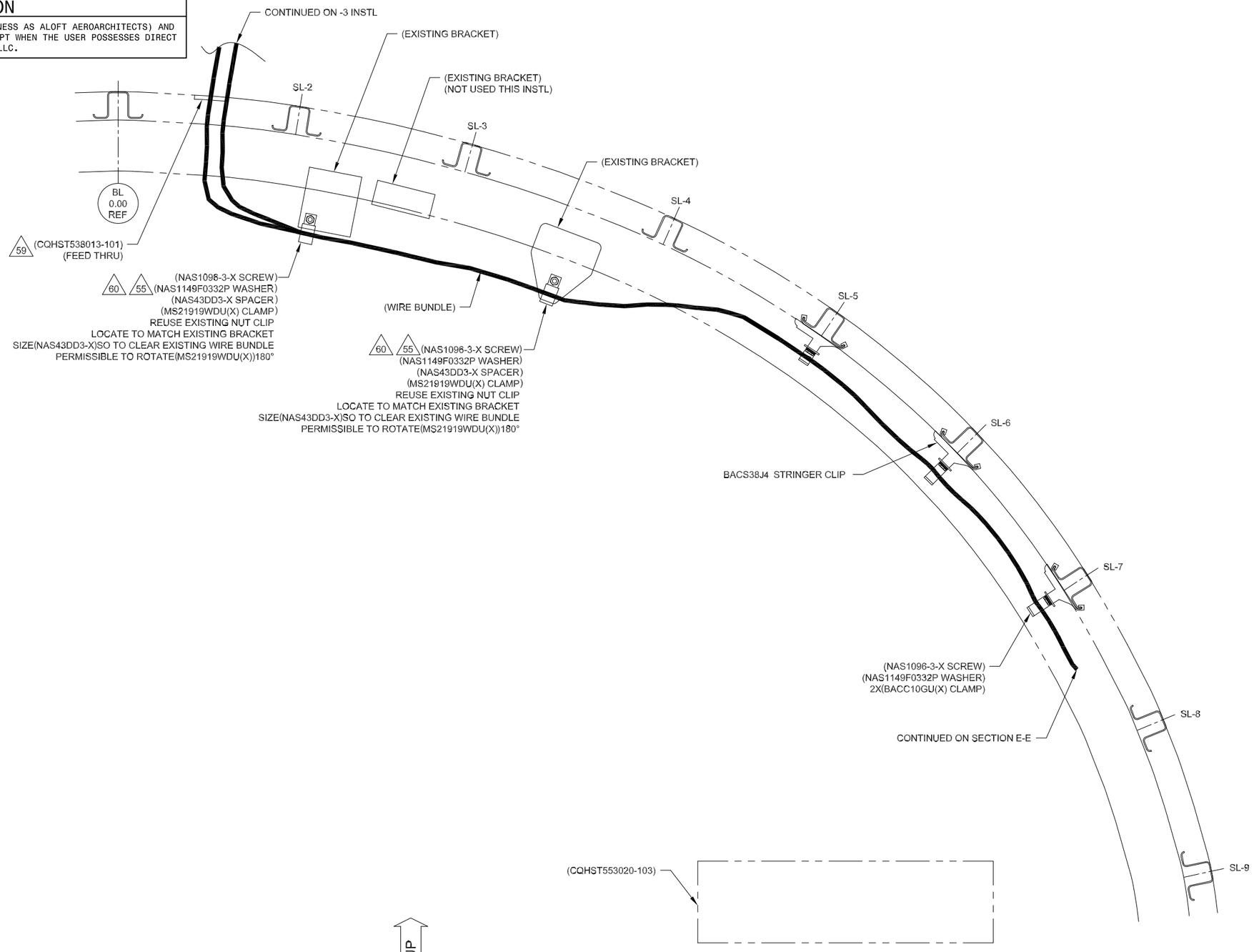
SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 9 OF 17



SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 10 OF 17

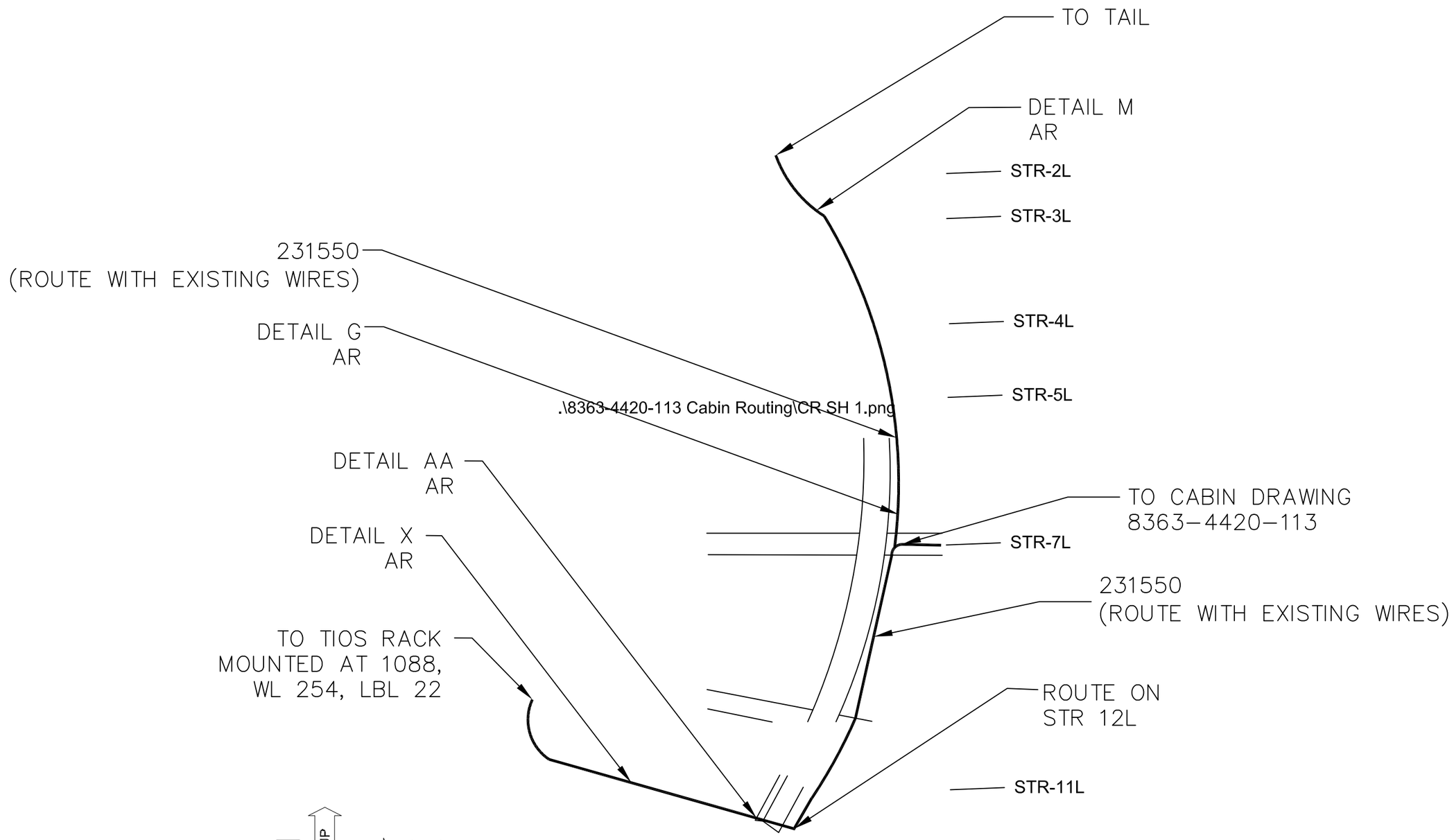


SECTION D-D (SH 10)
VIEW ROTATED 90° CCW
VIEW LOOKING AFT

UP
OUTBD (69)

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 11 OF 17

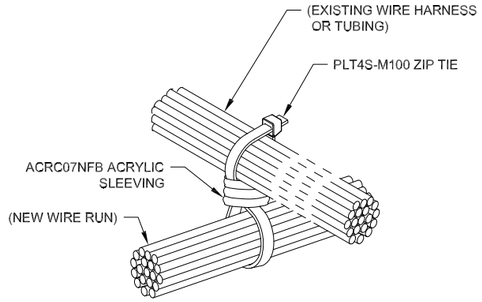


SECTION E-E
VIEW ROTATED 180° CCW
VIEW LOOKING OUTBD
SEE TABLE 1 FOR WIRE NUMBER AND DISCONNECT INFORMATION

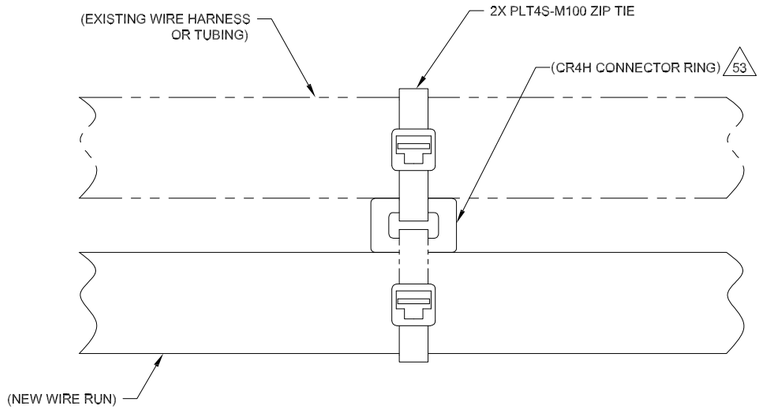
SH 10 UP FWD 69 52

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

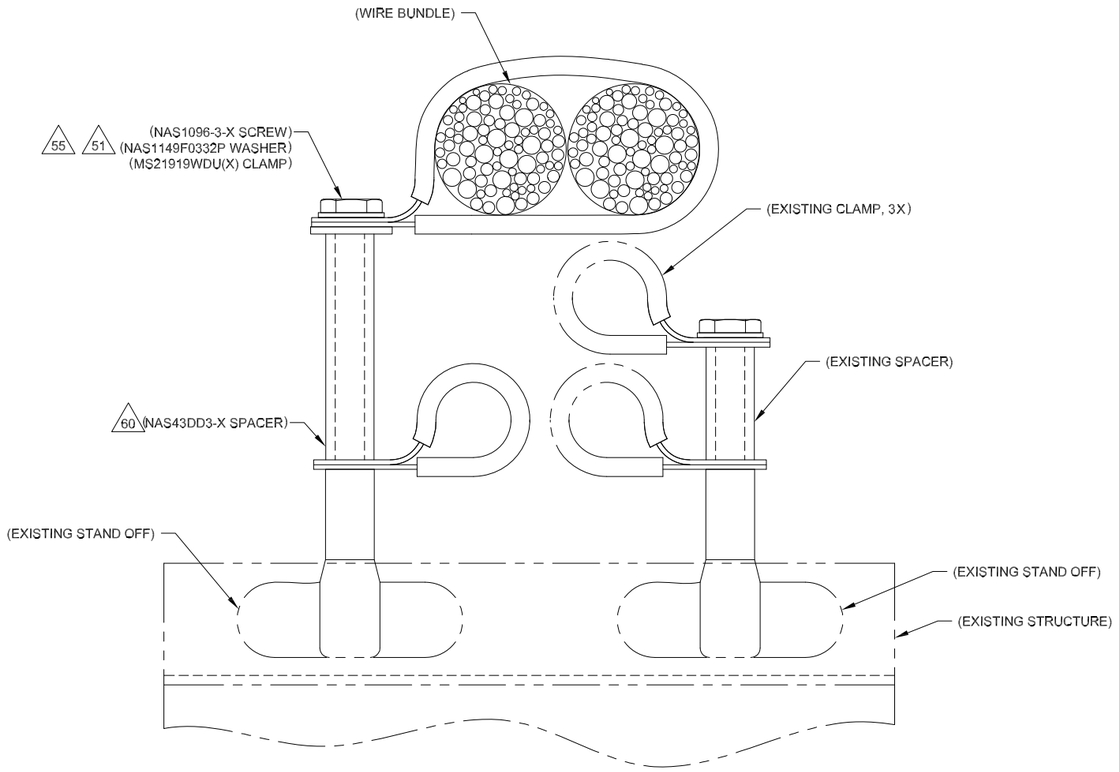
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 12 OF 17



DETAIL N SH 1
SCALE: NONE



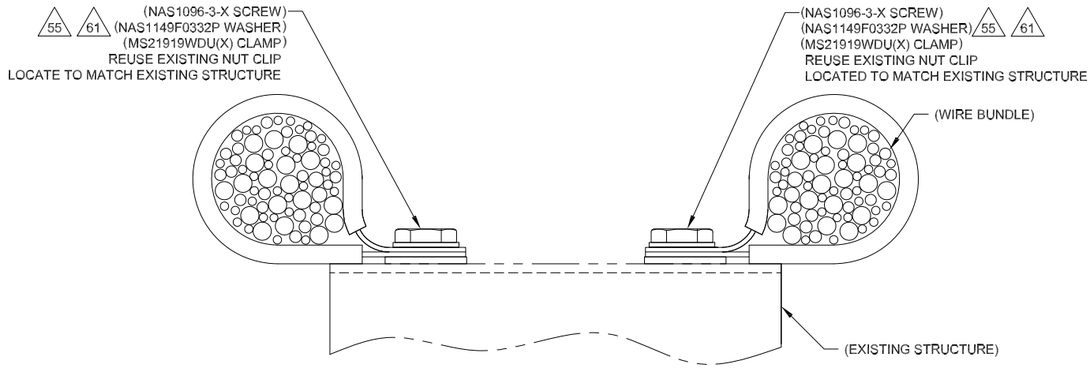
DETAIL M SH 1
SCALE: NONE



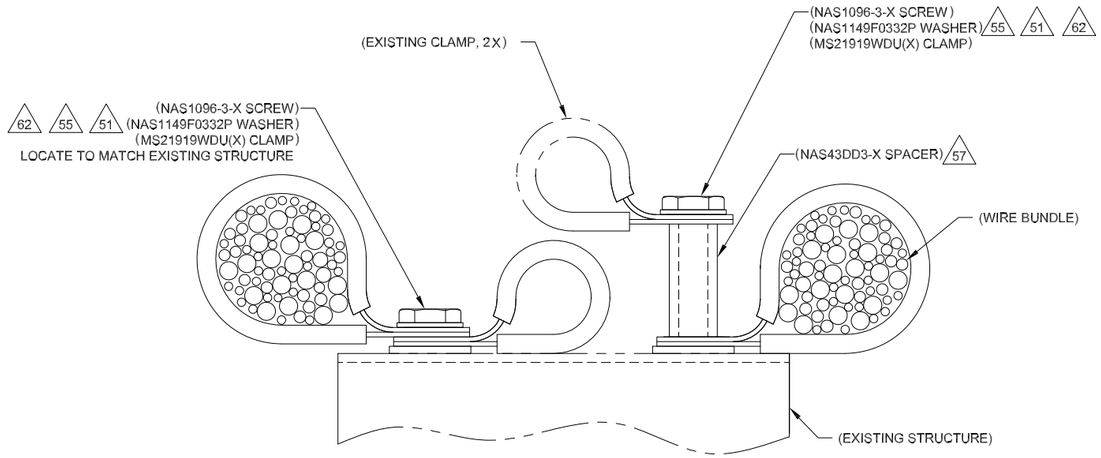
DETAIL J SH 6
VIEW LOOKING DOWN IN LINE WITH VERTICAL FIN
2X

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

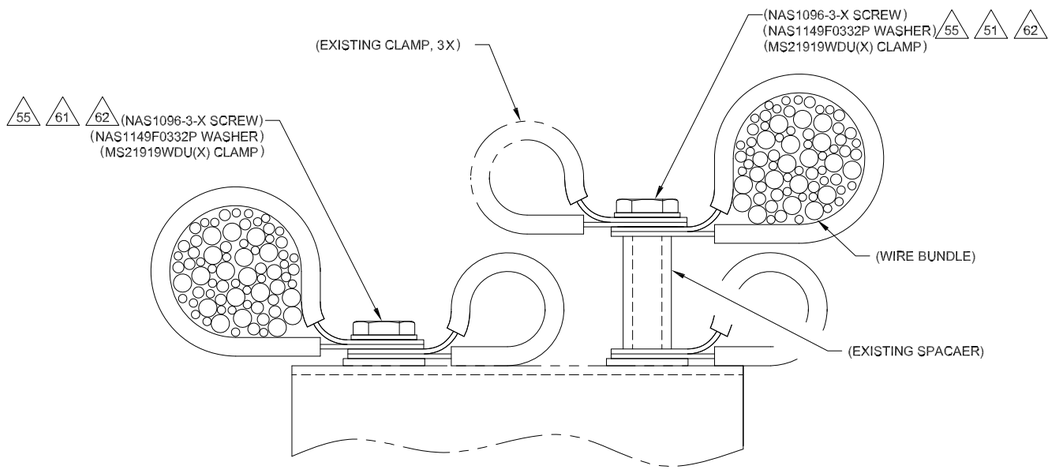
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 13 OF 17



DETAIL G SH 5
VIEW LOOKING DOWN IN LINE WITH VERTICAL STABILIZER
3X



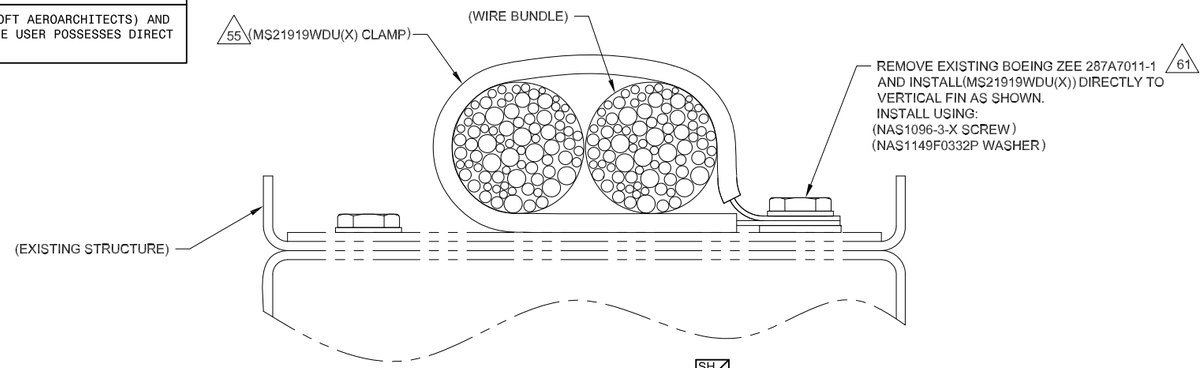
DETAIL H SH 5
VIEW LOOKING DOWN IN LINE WITH VERTICAL STABILIZER
17X



DETAIL K SH 6
VIEW LOOKING DOWN IN LINE WITH VERTICAL STABILIZER
4X

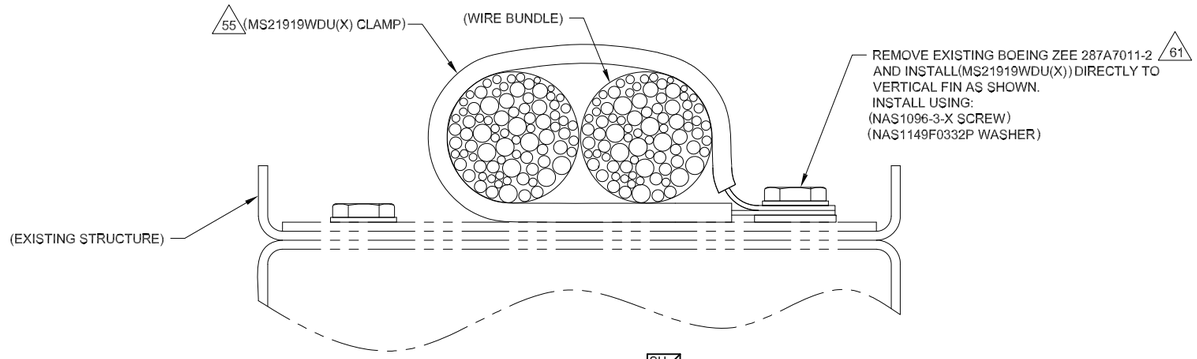
SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 14 OF 17



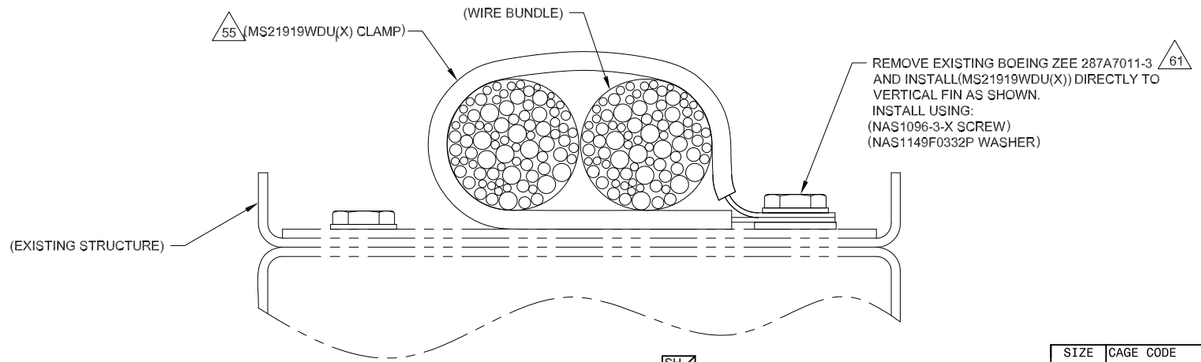
DETAIL R SH 5

VIEW LOOKING DOWN IN LINE WITH VERTICAL FIN



DETAIL S SH 5

VIEW LOOKING DOWN IN LINE WITH VERTICAL FIN

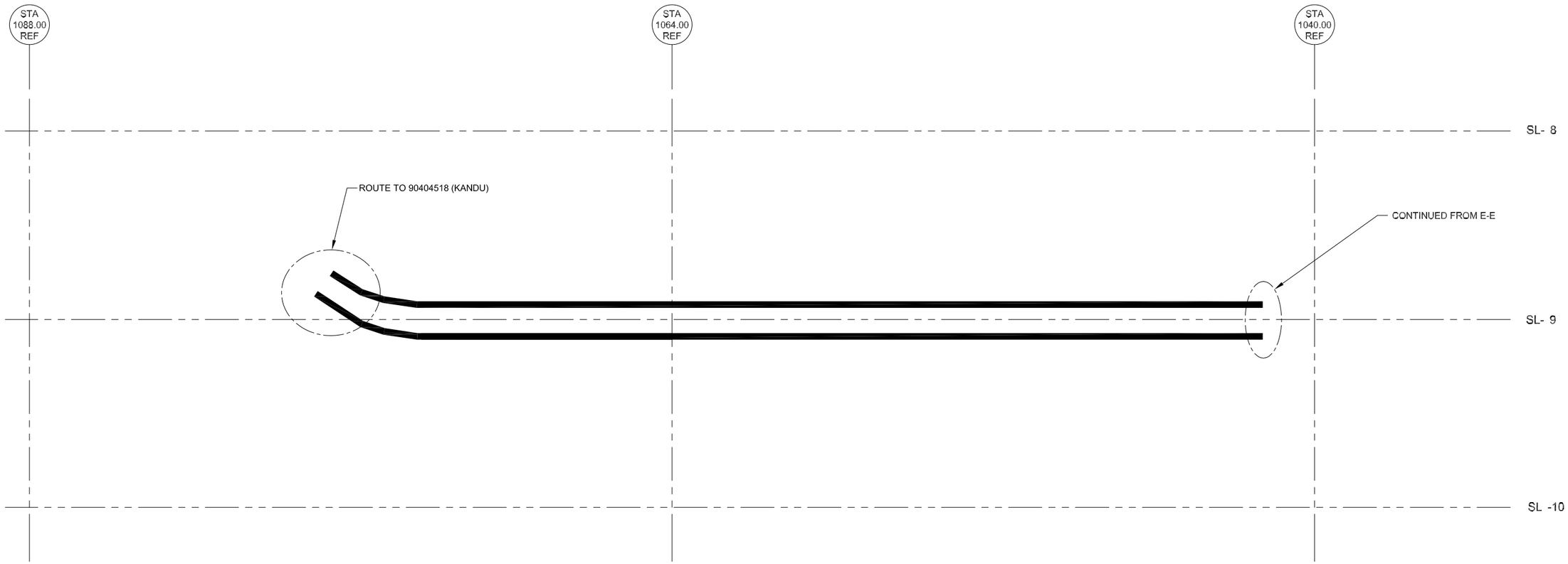


DETAIL T SH 5

VIEW LOOKING DOWN IN LINE WITH VERTICAL FIN

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 15 OF 17

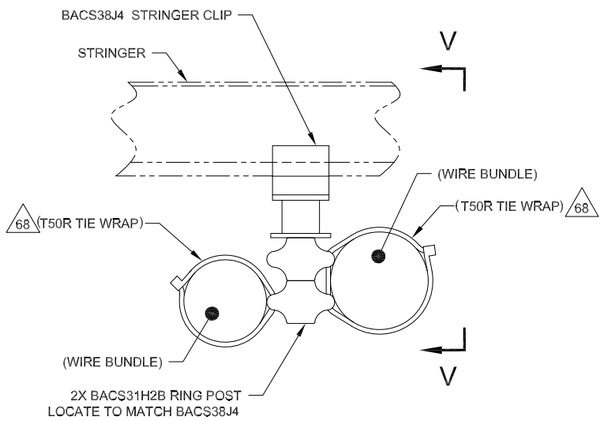


SECTION AB-AB (SH 10)
VIEW ROTATED 180° CCW
VIEW LOOKING OUTBD

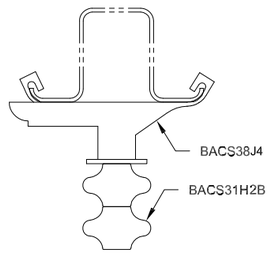
UP
FWD
69

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

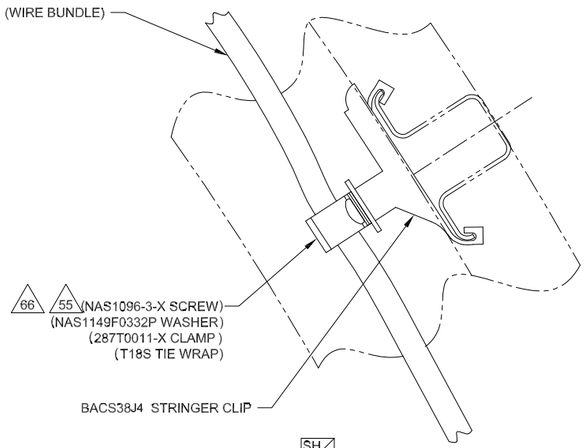
SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 16 OF 17



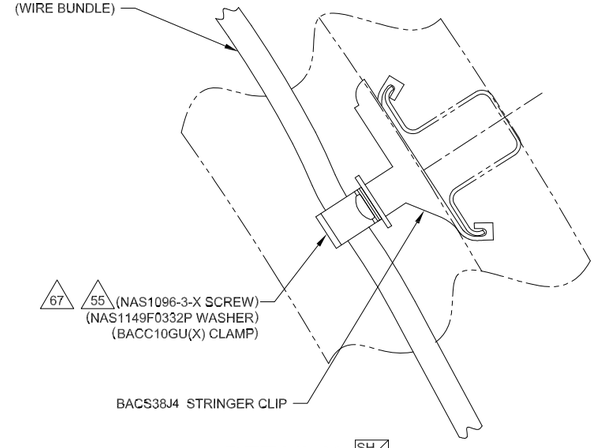
DETAIL U △64 SH/1
TYPICAL RING POST ATTACH



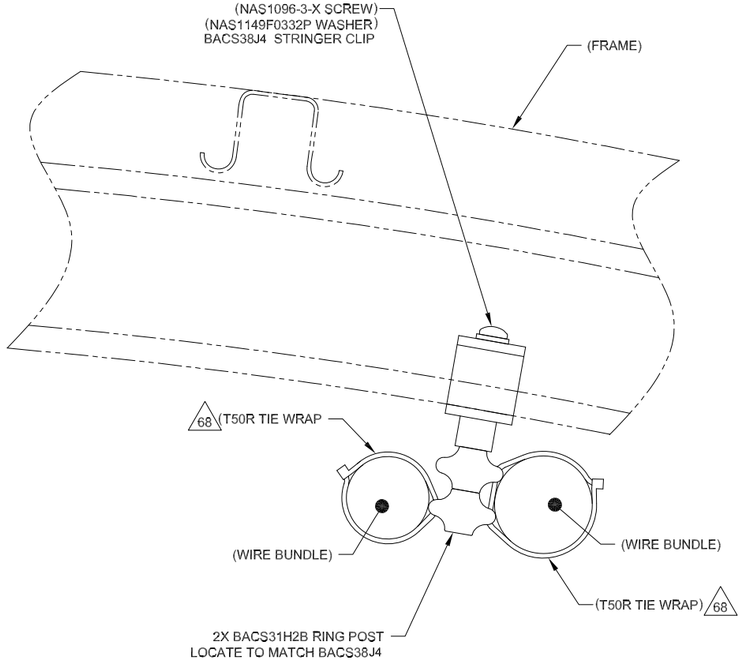
VIEW V
WIRE BUNDLES NOT SHOWN



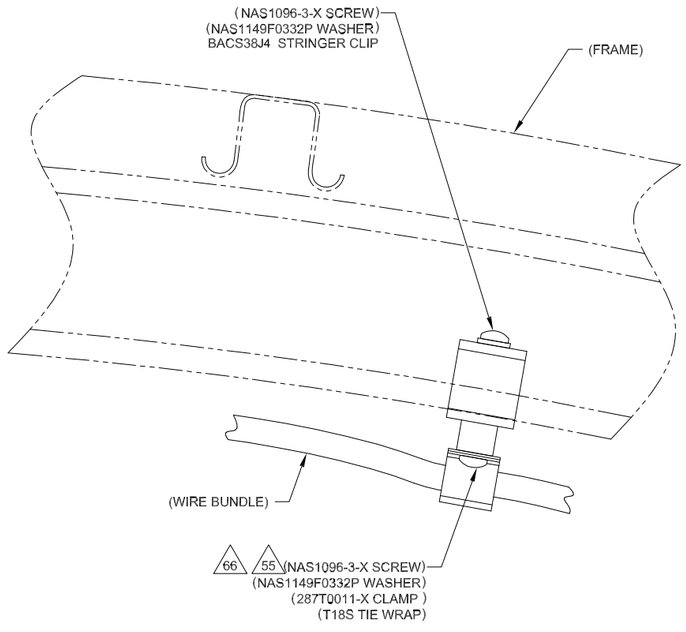
DETAIL Y SH/1
TYPICAL STRINGER ATTACHMENT



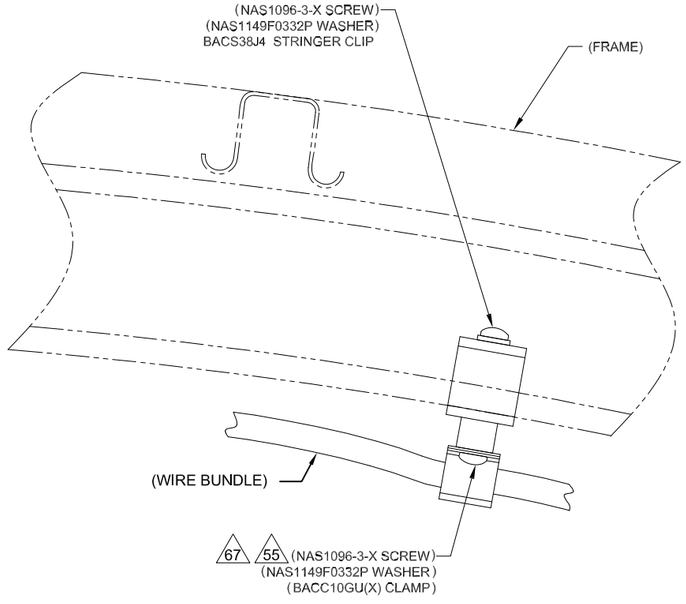
DETAIL X SH/1



DETAIL W SH/1 △64



DETAIL Z SH/1



DETAIL AA SH/1

SIZE	CAGE CODE	DWG NO.	REV.
B	57008	8363-4460-105	B

SCALE		CALC.WT	ACT.WT	
NONE	AUTOCAD DRAWING	-	-	SHEET 17 OF 17

300-FM-055
REV A 12/08/2020

APPENDIX C:
ELECTRICAL WIRING INTERCONNECT SYSTEM (EWIS)

1. Purpose

   A. Appendix C, Electrical Wiring Interconnect System (EWIS), outlines the mandatory inspection intervals and maintenance actions determined as necessary by ALOFT AeroArchitects and ensures that unsafe conditions do not exist and cannot be introduced resulting from maintenance actions, repairs, or alterations.

   B. The modification has been reviewed per the guidance provided in FAA AC25-27A, and in Document 8363-44-EWIS-001, EWIS Impact Analysis.

2. Federal Aviation Administration Organization Designation Authorization (FAA/ODA) Approval:

   NOTE: The signature block below signifies the most current revision affecting the EWIS ICA section of this manual. Other parts of this manual may reflect a later revision; however the EWIS ICA section may not require revision.

TO/ REVISION LEVEL/ DATE:	SUBMITTED BY:	FAA/ODA APPROVAL:
TM-8363-ICAW_IR May 30, 2022	ALOFT AeroArchitects	Signed: Date:

EWIS TASK NUMBER	INTERVAL	AIRCRAFT AREA	ZONE	TASK DESCRIPTION	TYPE INSPECTION
55-804-00	6600 Flight Cycles 48 MO	Vertical Fin Leading Edge	322 Panel 322AL	**Electrical Wiring Interconnect System (EWIS)** *Internal – Zonal (GVI) – Vertical Fin – Leading Edge* *Perform a General Visual Inspection of the HF Electrical Harness for damage, cleanliness, and security inside the Vertical Fin - Leading Edge.*	GVI