


APPLICATION			REVISIONS			
DASH NO.	NEXT ASSY	USED ON	REV	DESCRIPTION	DATE	APPROVED
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**GROUND DATA LINK SYSTEM  
B757 INSTALLATION  
US AIRWAYS TRIAL PROGRAM  
Rev E+**

**REVISION INDEX**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE APPLIED FINISH TOLERANCES  2 PLACE    3 PLACE    ANGLES $\pm$ $\pm$ $\varnothing$	CONTRACT NO.		  <b>AEROSPACE SYSTEMS DIVISION MELBOURNE, FLORIDA 32902</b>  <b>Service Bulletin Ground Data Link - B757</b>			
	DRAWN BY	CHK BY				
	ENGR	ELEC ENGR				
	PROJ ENGR	MFG ENGR				
THIS DRAWING IS PREPARED IN ACCORDANCE WITH MIL-STD-100	RELIABILITY	CONFIGURATION	SIZE	CAGE CODE	DWG NO.	REV
	APPROVAL - DFTG	QA	<b>A</b>	<b>77245</b>	<b>7004257</b>	<b>E+</b>
	APPROVAL	SYS ENGR	SCALE NONE		SHEET 1 of 33	

## Revisions Record

Rev.	Paragraph	Change
A	7.f, 7.k, 7.l, 7.m, 11	Change rivet from NAS1097AD5-5 and NAS1097AD5-6 to MS14218E4-4 and MS14218E4-5
A	Figures 7.1	Change rivet installation notes and rivet type
A	12, drawing 3032703	Replace rev ‘-‘ with rev ‘A’
B	4.e	Change P/N XXXXX to P/N 3032724-001
B	General	Change “Route wire” to “Route wire using existing wire-runs where possible”
C	2.c	Change “P/N 3032707-101” to “3032707-001”
C	11	Delete 3032721-101 and duplicate part no 3032724-001 from Installation Kit List
C	11	Correct typo, Change from “BACC47CN!” to “BACC47CN1”
C	General	Change “3032712-101” to “3032712-appropriate dash no.”
D	Fig 7.1	Change MS14218E4-5 and E4-4 rivet to BACR15BB5D-4
D	Fig 7.2	Change Ms24693-C30 to MS24693-C31
D	Fig 7.3	Change S-2L to S-2R
D	Fig 7.4	Change from sta 440 to 460 and sta 460 to 480
E	2.e	Add #8 screws
E	2.f	Change quantity from 8 to 4, and “bottom” to “top”
E	2.g	Change screw to MS24693-C50, washer to NAS1149DN832J and nut to BACN10JC08CD. Add “Remove three plugs at location labeled A.”
E	2.j	Change from “D11” to “D11A”
E	2.k	Add adapter plate BACA14BH22A
E	Fig 2.1, 2.2 and 2.3	Update figure
E	4.e	Change too from AD91-10-8 to M22520/1-01
E	4.g , 4.f and 4 h	Change “1-320551” to “1-320551-1”, add jumper wire BACJ40K5A5A6
E	Fig 5.1	Update figure
E	Table 5.1	Update table
E	5.i	change from Pin A2 to Pin C2, BACC47ER1 to BACC47J1
E	5.k	change from Pin A3 to Pin C3, BACC47ER1 to BACC47J1
E	5.m	Change from TB160 to YA25
E	Figure 8.1, 8.2 and 8.3	Update figures
E	8.a , 8.c and 8.f	Change sta 440 and sta 460 to sta 460 and sta 480
E	8.d and 8.h	Add pin rivet BACB30FM6-3 and collar BACC30M6 as alternate parts
E	11	Update installation kit list
E	12	Update drawing list

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## 1. Safety Information, Conformity Statement, and User Warnings

### a. Safety

The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radiated frequency (RF) electromagnetic energy emitted by FCC certified equipment. This GE Harris equipment meets the general population/uncontrolled environmental limits for Maximum Permissible Exposure (MPE) found in FCC Bulletin OET-65 and OET-65, Supplement C. Proper installation and operation of this system according to the instructions found in this Service Bulletin will result in human exposure substantially below the FCC recommended limits.

To assure safe operation:

- Do not operate the system when nearby persons are within 20 cm (8 in) of the antenna
- Do not operate the system in an explosive environment
- To avoid damaging system components, do not operate the system unless the antenna(s) are connected

### b. Manufacturer's Federal Communication Commission Declaration of Conformity Statement

This device complies with Part 15 rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.

### c. User Warning

This Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modifications to said product not expressly approved by GE Harris could void the user's authority to operate the equipment.

### d. Professional Installation

The FCC's certification of this system is contingent upon the system being professionally installed in accordance with the instructions contained within this Service Bulletin. GE Harris provides an installation kit that contains special accessories that are necessary to assure compliance with FCC emission limits. It is the responsibility of the installer to use these accessories and perform the installation in accordance with the instructions contained herein. Any deviation from these instructions could void the user's authority to operate the equipment.

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**2. Remove E3-3 Shelf from the aircraft**

- a. Remove Electrical Power from the aircraft.
- b. Gain access to the E3-3 shelf which is located in the E & E Compartment. Remove all equipment from this shelf. Tag equipment as required and retain for re-installation.
- c. Remove the E3-3 shelf from the aircraft. Bag and retain all hardware for re-installation.
- d. Route E3-3 shelf to rework shop for GDL Modification in accordance with Part 2 of this Service Bulletin.

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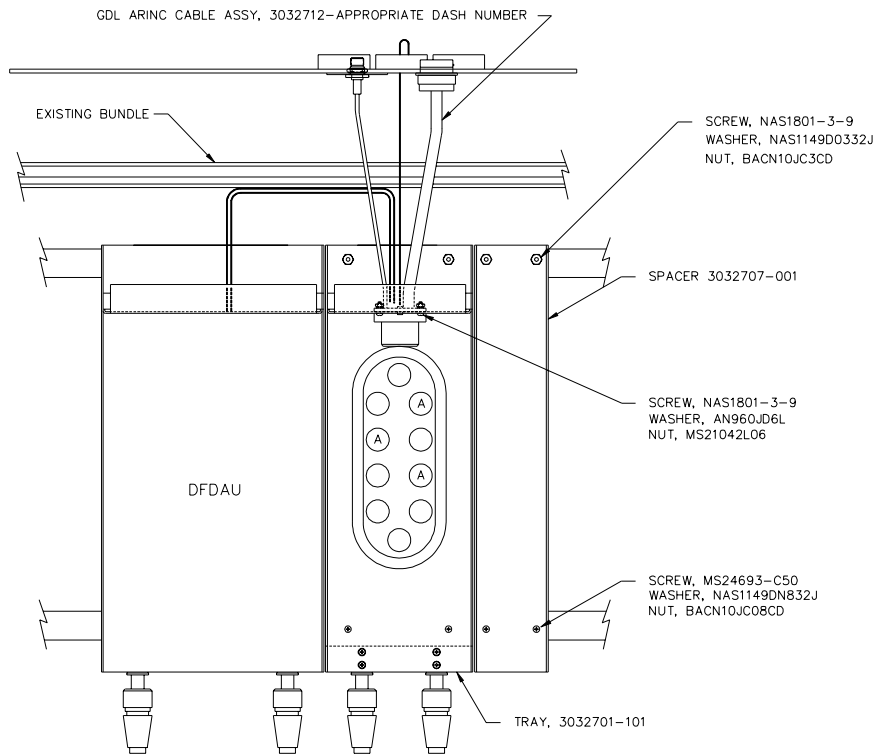
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3. **Modify E3-3 Shelf**

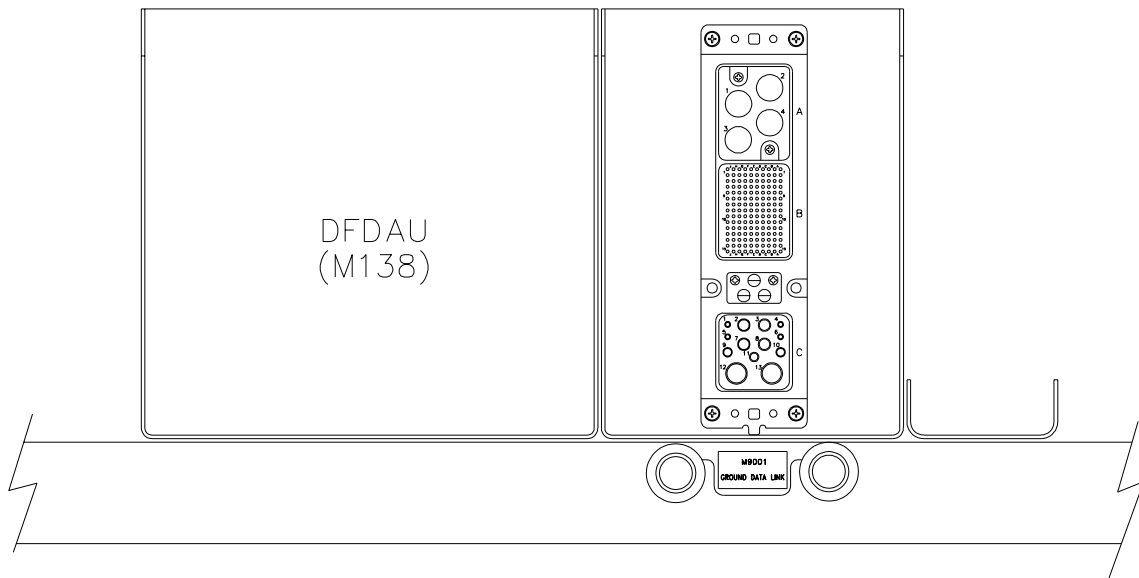
- a. Remove existing 6 MCU blank shelf cover plate from the E3-3 shelf on the right side of DFDAU Tray (M138).
- b. Obtain the GDL Tray Assembly P/N 3032701-101 from the GDL Installation Kit.
- c. Temporarily install GDL Tray P/N 3032701-101 in the vacant shelf space next to the DFDAU and also install the spacer plate P/N 3032707-001 next to the GDL Tray
- d. Reference Figure 2.1 GDL Tray Assembly and Drawing No. 3032715 E3-3 Shelf Assembly Installation.



**Figure 2.1**  
**GDL Tray Assembly**

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- e. Match-drill screw holes for #8 and #10 screws thru the GDL Tray P/N 3032701-101 and the spacer plate P/N 3032707-001. Deburr the drilled holes.
- f. Obtain GDL Connector Assembly 3032712-(appropriate dash no.) from the GDL Installation Kit. Install connector in GDL Tray using 4 each screws P/N NAS1801-06-6, 4 each washers P/N AN960JD6L and 4 each nuts P/N MS21042L06 as illustrated in E3-3 Shelf Installation Drawing 3032715. **Note:** The connector must be pushed against the top of the tray prior to installing the screws.
- g. Insure "Forced Air Cooling" and ventilation integrity by applying a (C/C 188-0329) seal between GDL Tray P/N 3032701-101, the spacer plate P/N 3032707-001 and the shelf.
- h. Install the GDL Tray P/N 3032701-101 and the spacer plate P/N 3032707-001 using screws MS24693-C50, flat washers NAS1149DN832J and nuts BACN10JC08CD in the forward section of the shelf and screws NAS1801-3-9, flat washers NAS1149D0332J and nuts BACN10JC3CD in the back of the shelf per standard Boeing practices. Remove three plugs at locations labeled "A".
- i. Reference Figure 2.2 GDL Tray Assembly - Front View.



**Figure 2.2**  
**GDL Tray Assembly - Front View**

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- j. Install the following two wires between the GDL ARINC connector J1B to the existing DFDAU D11A connector as illustrated GDL Wiring Installation Drawing 3032716.  
Note: These wires are provided as part of the GDL Connector Assembly 3032712-(appropriate dash no.) with pins to directly install wires into the existing DFDAU Tray Connector (M138).
  1. Connect Wire W9500-003-22W to DFDAU (M138) Connector D11A Pin 9F
  2. Connect Wire W9500-004-22W/BLU DFDAU (M138) Connector D11A Pin 9E
  
- k. Install the D9001J connector from ARINC cable assembly 3032712-(appropriate dash no.) in position 12 of E3-3 Shelf Disconnect using adapter plate BACA14BH22A, screws NAS1801-04-9, flat washer AN960JD4L and clip nut BACN10XP2 as illustrated in Figure 2.3 and Drawing No. 3032715 E3-3 Shelf Assembly Installation.
  
- l. Install the D9000J connector from ARINC Cable Assembly 3032712-(appropriate dash no.) in position 11 of E3-3 Shelf Disconnect using Screw NAS1801-04-9 and Washer AN960JD4L as illustrated in Figure 2.3 and Drawing No. 3032715 E3-3 Shelf Assembly Installation.
  
- m. Install the contact on wire W9600-003-20 from ARINC Cable Assembly 3032712-(appropriate dash no.) in the Terminal Block GDX-1953. Routing and Clamping wire per standard Boeing practices.
  
- n. Tag E3-3 Shelf as "GDL Modified" and return shelf to aircraft for re-installation in accordance with Part 3 of this Service Bulletin.

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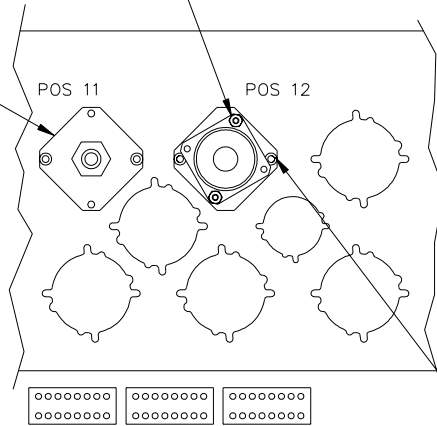
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SCREW, NAS1801-04-9  
WASHER, AN960JD4L

SCREW, NAS1801-04-9  
WASHER, AN960JD4L



WCREW, NAS1801-04-9  
WASHER, AN960JD4L  
NUT, BACN10XP2  
ADAPER PLATE, BACA14BH22A

**Figure 2.3**  
**GDL Tray Assembly - Disconnect**

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**4. Re-install E3-3 Shelf**

- a. Re-install the E3-3 shelf to the aircraft. Ensure proper connection of all connectors and bonding straps. Perform bonding check per BAC5117. The resistance across any joint shall not exceed .001 OHMS.
- b. Re-install all equipment previously removed to the E3-3 shelf per MM as listed below.
  - ATC Transponder MM34-53-03
  - DME MM 34-55-01
  - Controller - Zone Temperature MM 21-61-00
  - Controller - Pack Temperature MM 21-51-14
  - Controller - STBY Pack Temperature MM 21-51-14
  - DFDAU MM 31-31-03
- c. Test all equipment installed on the E3-3 shelf per MM ref. As listed below.
  - ATC Transponder MM34-53-00
  - DME MM 34-55-00
  - Controller - Zone Temperature MM 21-61-00
  - Controller - Pack Temperature MM 21-51-00
  - Controller - STBY Pack Temperature MM 21-51-00
  - DFDAU MM 31-31-00

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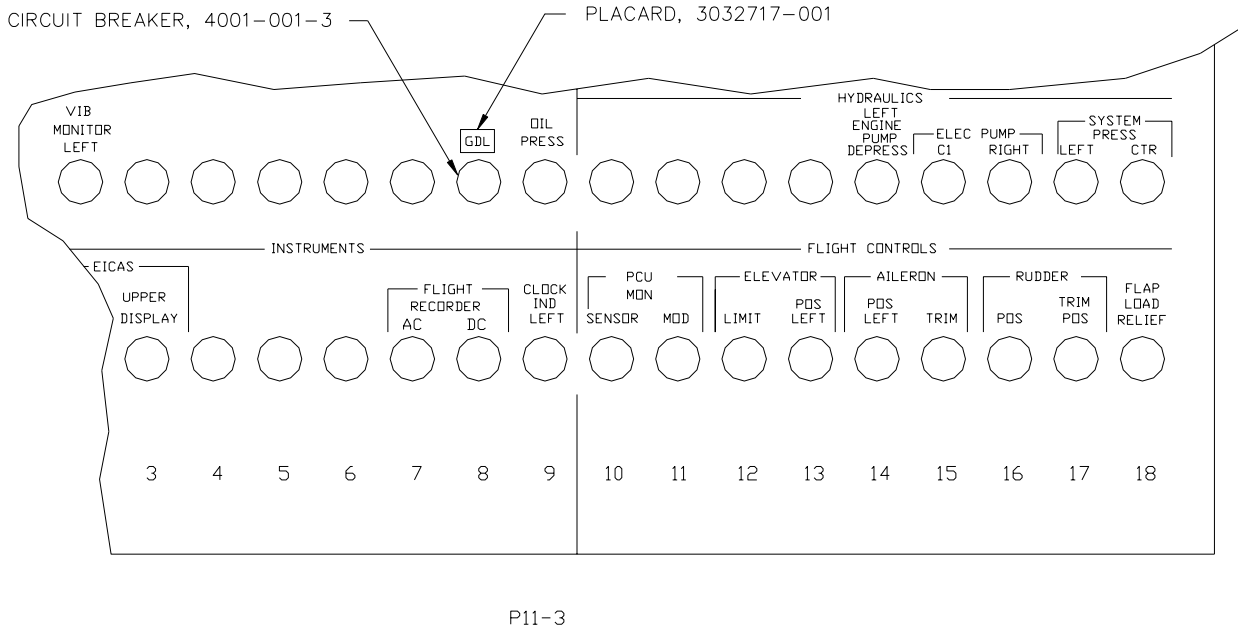
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5. **Install GDL Circuit Breaker and Placard in Cockpit**

- a. Obtain 3A Circuit Breaker P/N 4001-001-3 from GDL Installation Kit.
- b. Install circuit breaker in P11-3 Panel Position K8 per standard Boeing Practice..
- c. Reference Figure 4.1 GDL Circuit Breaker.



**Figure 4.1**  
**GDL Circuit Breaker**

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- d. Obtain GDL Circuit Breaker Placard, P/N 3032717-001 from GDL Installation Kit and attach label on P11-3 panel above installed GDL Circuit Breaker.
- e. Obtain wire M22759/11-20-9 from GDL Installation Kit. Label wire using permanent marking direct on the wire or use pre-printed heat shrinking tubing P/N 3032724-001 from GDL installation Kit to identify the wire with identification number W0126-9001-20. Install socket contact P/N BACC47CPIS on wire using Crimp Tool M22520/1-01. Install contact in disconnect D40610J position 49 as shown in GDL Instruments Wiring Installation Drawing No. 3032716.
- f. Route wire W0126-9001-20 from disconnect D40610J to the GDL Circuit Breaker. Clamp, lace tie along existing wire-runs as required following standard Boeing practices.
- g. Install Terminal Lug P/N 1-320551-1 on W0126-9001-20 using Crimp Tool T2210 59824-1 or equivalent. Connect wire to load side (top) of newly installed 3A GDL Circuit Breaker.
- h. Use Boeing jumper wire BACJ40K5A5A6 or obtain wire M22759/11-16-9 from GDL Installation Kit. Install Terminal Lugs P/N 1-320551 on both ends of wire using Crimp Tool T2210 59824-1 or equivalent. Connect wire between buss side of newly installed 3A GDL Circuit Breaker and the buss side of Flight Recorder DC breaker in position J8 of P11-3.
- i. Reference GDL Instruments Wiring Installation Drawing No. 3032716.

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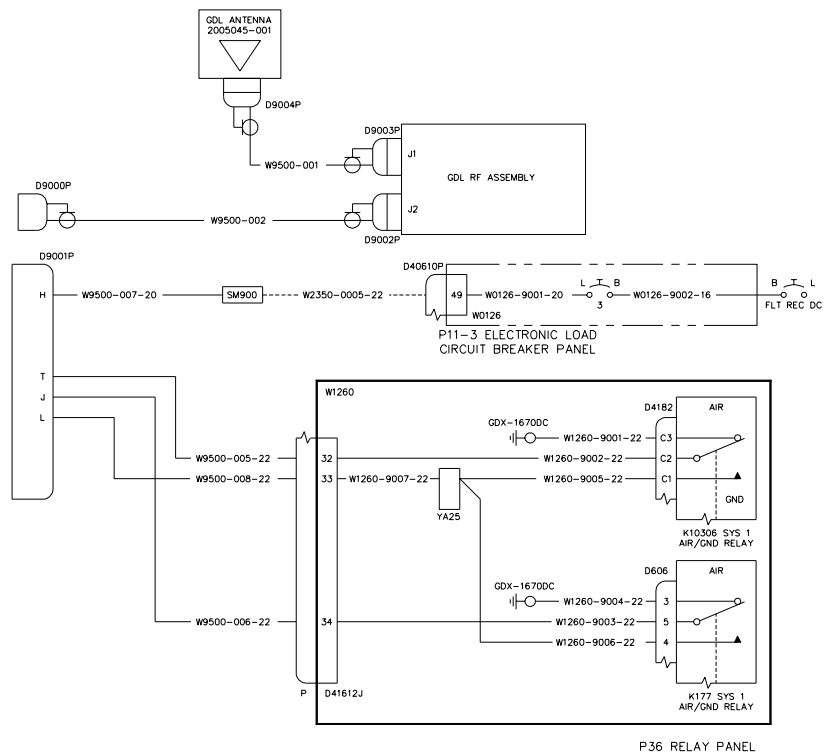
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**6. Install GDL Wiring in E/E Compartment**

- a. Gain access to the E/E Compartment E3 Shelf area. Rear shelf access will be required from the No. 1 Cargo Bay.
- b. Obtain three segments of wire M22759/11-22-9 from GDL Installation Kit. The wires are to be routed from E3-3 shelf Disconnect Position 12 to P36 Relay Panel. Label wire using permanent marking direct on the wire or use pre-printed heat shrinking tubing P/N 3032724-002, P/N 3032724-003 and P/N 3032724-005 from GDL installation Kit to identify the wire with identification number W9500-005-22, W9500-006-22 and W9500-008-22 respectively. Install socket contact P/N M39029/56-351 (part of connector P/N D38999/26WD18SN kit) on one ends of the wires. Install contact BACC47CN1 on the other ends of the wires. Refer to the attached Table 5.1 for tooling information.
- c. Locate E3-1 Shelf Disconnect D40676P and wire W2350-0005-22 connected to Pin 1. Note: This is a spare wire which is routed to the P11 Circuit Breaker Panel.
- d. Extract W2350-0005-22 from D40676P connector and cut off contact. Obtain wire M22759/11-20-9 from GDL Installation Kit. The wires are to be routed from E3-3 shelf Disconnect Position 12 to D40676P position. Label wire using permanent marking direct on the wire or use pre-printed heat shrinking tubing P/N 3032724-004 from GDL installation Kit to identify the wire with identification number W9500-007-20. Install socket contact P/N M39029/56-351 on one end of wire. Refer to the attached Table 5.1 for tooling information.
- e. Splice other end of wire W9500-007-20 to W2350-0005-22 using solder splice D-110-41 from GDL Installation Kit. Clamp, lace and tie as required following standard Boeing practices.
- f. Obtain the connector D9001P (P/N D38999/26WD18SN) and Backshell P/N M85049/38S15W from the GDL Installation Kit. Insert the contacts M39029/56-351 (part of connector P/N D38999/26WD18SN kit) into D9001P as follows:
  - W9500-005-22 to D9001P Pin T
  - W9500-006-22 to D9001P Pin J
  - W9500-008-22 to D9001P Pin L
  - W9500-007-20 to D9001P Pin H
 Install the backshell P/N M85049/38S15W to D9001P and install the connector to D9001J which is located at position 12 of E3-3 Shelf Disconnect.
- g. Route the remaining three wires (W9500-005-22, W9500-006-22 and W9500-008-22 ) to the P36 Relay Panel area. Clamp, lace and tie along existing wire-runs as required following standard practices.
- h. Obtain access to the P36 Panel Disconnect D41612P. Using standard insertion/extraction tool, insert the contacts BACC47CN1 into D41612P as follows:
  - W9500-005-22 to D41612P Pin 32
  - W9500-006-22 to D41612P Pin 34
  - W9500-008-22 to D41612P Pin 33

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**Figure 5.1**  
**GDL E/E Compartment Wiring**

- i. Obtain wire M22759/11-22, contact BACC47CP1S and BACC47DJ1. Using Crimping Tool and Turret as listed in Table 5.1 to terminate the following **AIR/GND** wire within the P36 Relay Panel:

From	Wire	To
D41612J Pin 32 (Contact BACC47CPIS)	W1260-9002-22 (M22759/11-22-9)	K10306 D4182 Pin C2 (Contact BACC47DJ1)

Label wire using permanent marking direct on the wire or use pre-printed heat shrinking tubing P/N 3032724-007 from GDL installation Kit to identify the wire with identification number W1260-9002-22.

- j. Obtain wire M22759/11-22, contact BACC47CP1S and BACC47ER1. Using Crimping Tool and Turret as listed in Table 5.1 to terminate the following **AIR/GND** wire within the P36 Relay Panel:

From	Wire	To
D41612J Pin 34 (Contact BACC47CPIS)	W1260-9003-22 (M22759/11-22-9)	K177 D606 Pin 5 (Contact BACC47ER1)

Label wire using permanent marking direct on the wire or use pre-printed heat shrinking tubing P/N 3032724-008 from GDL installation Kit to identify the wire with identification number W1260-9003-22.

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- k. Obtain wire M22759/11-22, contact BACC47DE7 and BACC47DJ1. Using Crimping Tool and Turret as listed in Table 5.1 to terminate the following **GROUND** wire within the P36 Relay Panel:

<u>From</u>	<u>Wire</u>	<u>To</u>
GDX-1670DC (Contact BACC47DE7)	W1260-9001-22 (M22759/11-22-9)	K10306 D4182 Pin C3 (Contact BACC47DJI)

Label wire using permanent marking direct on the wire or use pre-printed heat shrinking tubing P/N 3032724-006 from GDL installation Kit to identify the wire with identification number W1260-9001-22.

- l. Obtain wire M22759/11-22, contact BACC47DE7 and BACC47ER1. Using Crimping Tool and Turret as listed in Table 5.1 to terminate the following **GROUND** wire within the P36 Relay Panel:

<u>From</u>	<u>Wire</u>	<u>To</u>
GDX-1670DC (Contact BACC47DE7)	W1260-9004-22 (M22759/11-22-9)	K177 D606 Pin 3 (Contact BACC47ERI)

Label wire using permanent marking direct on the wire or use pre-printed heat shrinking tubing P/N 3032724-009 from GDL installation Kit to identify the wire with identification number W1260-9004-22.

- m. Obtain wire M22759/11-22, contact BACC47CP1S, M39029/11-145, BACC47DJ1 and BACC47ER1. Using Crimping Tool and Turret as listed in Table 5.1 to terminate the following **3 28VDC Discrete** wires within the P36 Relay Panel:

<u>From</u>	<u>Wire</u>	<u>To</u>
YA25 (Contact M39029/11-145)	W1260-9005-22 (M22759/11-22-9)	K10306 D4182 Pin C1 (Contact BACC47DJI)
YA25 (Contact M39029/11-145)	W1260-9006-22 (M22759/11-22-9)	K177 D606 Pin 4 (Contact BACC47ERI)
YA25 (Contact M39029/11-145)	W1260-9007-22 (M22759/11-22-9)	D41612J Pin 33 (Contact BACC47CPIS)

- n. Label wires using permanent marking direct on the wires or use pre-printed heat shrinking tubing P/N 3032724-010, P/N 3032724-011 and P/N 3032724-012 from GDL installation Kit to identify the wires with identification number W1260-9005-22, W1260-9006-22 and W1260-9007-22 respectively.

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TABLE II								
CONTACT			CRIMP TOOL PART NO.	TURRET OR LOCATOR PART NO.	LOCATOR COLOR	WIRE		INSERTION/ EXTRACTION TOOL
SIZE	TYPE	PART NO.				SIZE	STRIPPED LENGTH	
20	SOCKET	M39029/56-351	M22520/1-01	M22520/1-04	RED, 4 RED, 3	20 22	0.19" 0.19"	CIET-20-10 CIET-20-10
20	PIN	M39029/11-145	M22520/2-01	M22520/2-08		22	0.38"	M81969/1-02
16	PIN	M39029/1-100	M22520/2-01	M22520/2-11		22	0.19"	M81969/14-02
16	PIN	M39029/1-101	M22520/2-01	M22520/2-11		22	0.19"	M81969/14-02
21	SOCKET	BACC47ER1	M22520/2-01	M22520/2-11		22	0.22"	M83723/31
20	PIN	BACC47CN1	M22520/1-01	M22520/1-02	6	22		DAK20
20	SOCKET	BACC47CPIS	M22520/1-01	M22520/1-02		20 22		DAK20 DAK20
20	SOCKET	BACC47DJ1	M22520/1-01	TP502	5	22		DAK20

**Table 5.1 Tooling Information**

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SIZE  
**A**

CAGE CODE  
**77245**

DWG NO.  
**7004257**

REV  
**E+**

SCALE NONE

SHEET 16



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**7004257**

REV  
**E+**

SCALE NONE

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### 7. Install Coaxial Cable Between E/E Compartment and RF Assembly

- a. Obtain GDL RF Cable P/N 3032710-101 from the GDL Installation Kit. Note: The end with the pre-installed connector labeled D9000P will be connected to the E3-3 Shelf Disconnect. The un-terminated end will be routed up to the ceiling area in the passenger cabin and connects to the GDL RF Assembly which will be installed in the overhead area at STA 470 between stringers S-2R and S-3R.

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SIZE	CAGE CODE
<b>A</b>	<b>77245</b>

DWG NO.
<b>7004257</b>

REV
<b>E+</b>

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CAGE CODE  
**77245**

DWG NO.  
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**E+**

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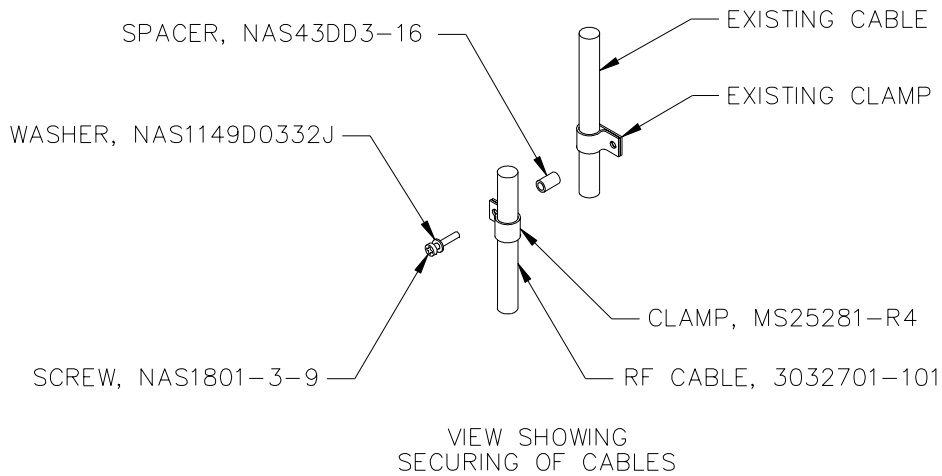
SHEET 19

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### GDL RF Cable

**Figure 6.1**

- b. Connect D9000P to the Disconnect D9000J located at E3-3 Shelf Disconnect position 12.
- c. Route the GDL RF Cable W9500-002 (P/N 3032710-101) from the E3-3 Shelf Disconnect area to the GDL RF Assembly. The cable will be routed with existing cable run W2617 up to the passenger cabin area along the forward side of STA 500 frame.
- d. "Butterfly Clamp" GDL RF Cable W9500-002 (P/N 3032710-101) to the existing cable run as shown in Figure 4.2 using spacer NAS43DD3-16, cable clamp MS25281-R4 ,screw NAS1801-3-8 and washer NAS1149D0332J.



**Figure 6.2**  
**GDL RF Cable Installation**

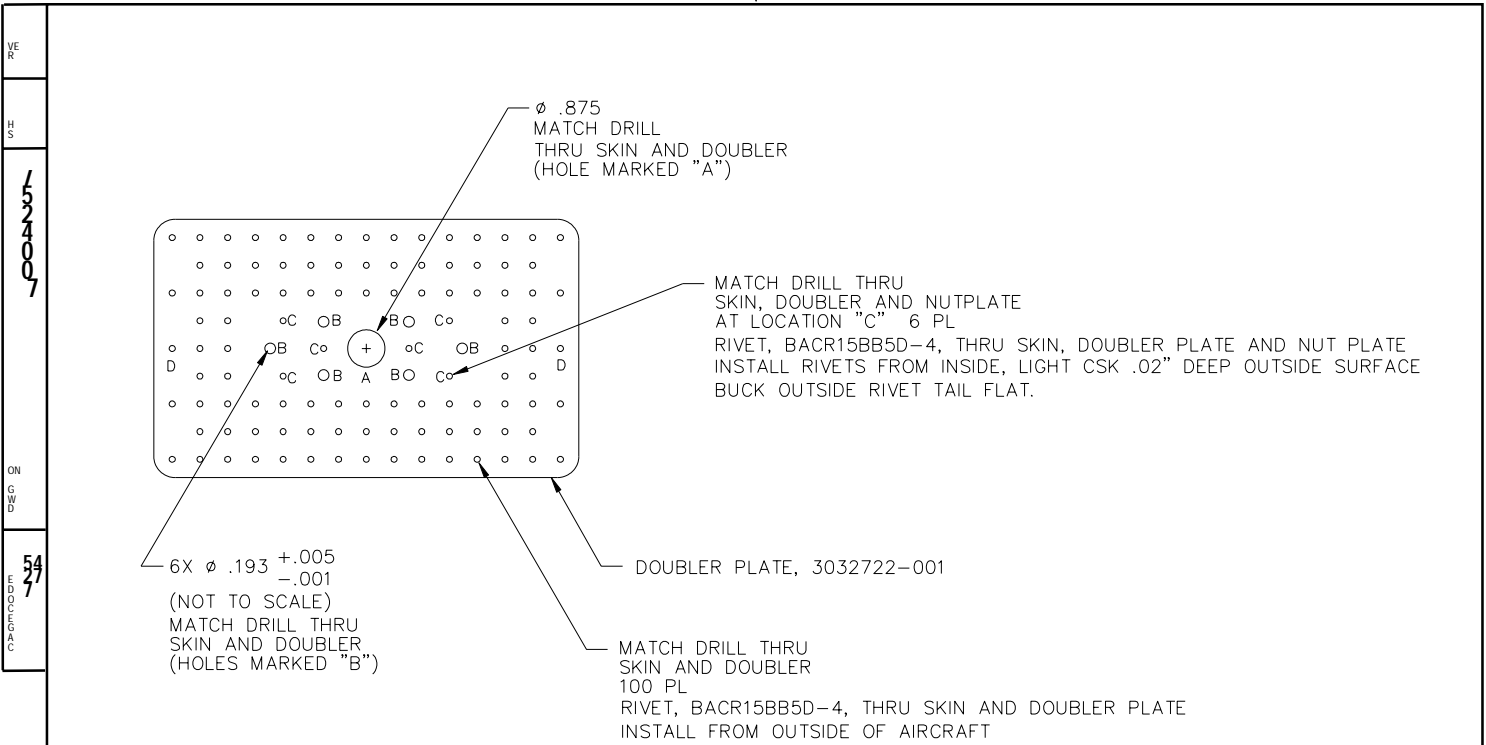
- e. Complete routing of GDL RF cable from E3-3 shelf area to GDL RF Assembly at STA 470 between stringers S-2R and S-3R and temporarily retain at that location. Clamp, lace and tie as required following standard Boeing practices.

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**8. Install GDL Antenna Doubler Plate and GDL Antenna**

- a. Remove insulation between STA 460 and STA 480, also between Stringers S-1 and S-2R per standard Boeing practices.
- b. Obtain the GDL Doubler Plate P/N 3032722-001 from the GDL Installation Kit.
- C. Locate center pilot hole labeled “a” at Doubler plate to the STA 470 midway between stringers S-1 and S-2R. Locate most forward and most aft rivet holes labeled “d” at doubler plate.
- D. Drill the three pilot holes .098” diameter (#40 drill) through aircraft skin and Cleco doubler plate 3032722-001 in place.
- E. Use Doubler Plate P/N 3032722-001 as a template to locate and drill remaining pilot holes .098” diameter (#40 drill) through aircraft skin.
- F. Redrill outer aircraft skin on 98 unlabelled pilot holes, 2 labeled “d” and 6 labeled “c” pilot holes for BACR15BB5D rivets I.A.W. B757 SRM Sec. 51-40-08, Fig. 2, Detail II.
- G. Redrill 6 of the pilot holes labeled “b” to Ø.193 (#10 drill) for screw clearance.
- H. Redrill center pilot holes to Ø.875 (7/8 drill) for antenna connector clearance.
- I. Deburr all drilled holes prior to installation of Doubler Plate P/N 3032722-001 to aircraft skin.
- J. Apply sealant P/N PR870 B1/2-semkit to the contact surface of Doubler Plate P/N 3032722-001 and rivets BACR15BB5D-4 (prior to installation) per Standard Boeing practices.
- K. Install Doubler Plate P/N 3032722-001 in place using rivets BACR15BB5D per Standard Boeing practices. Do not install rivets BACR15BB5D-4 into the location labeled “c”.
- L. Apply sealant P/N PR870 B1/2-semkit to the contact surface of nut plate P/N 3032720-101 and rivets BACR15BB5D-4 (prior to installation) per Standard Boeing practices.
- M. Install nut plate P/N3032720-101 in place using rivets BACR15BB5D-4 through Doubler Plate P/N 3032722-001 and aircraft skin from inside of the aircraft and light CSK .020” deep outside surface. Buck outside rivet tail flat per Standard Boeing practices. Note: Avoid getting sealant inside of self locking nuts.
- N. Clean surface of aircraft, doubler plate and nut plate. Apply approved Corrosion inhibitor to inside surface of aircraft skin, doubler plate and nut plate per Standard Boeing practices.
- o. Refer to Figure 7.1 and GDL antenna installation - US Airways, B757-200 Drawing No. 3032703.

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SCALE NONE		SHEET 21		



**Figure 7.1 GDL Doubler Plate Installation**

- p. Obtain antenna P/N 2005045-001 and screws P/N MS24693-C30 from GDL Installation Kit
- q. Remove tape holding gasket prior to installing antenna. Clean GDL Antenna P/N 2005045-001 base and mating aircraft fuselage skin areas with approved solvent per standard Boeing practices.
- r. Apply sealant PR870 B1/2-SEMKIT to the thread of screws P/N MS24693-C30 prior to installation.
- s. Ensure the gasket is retained on antenna prior to installing antenna. Place GDL Antenna P/N 2005045-001 in position and secure using the six MS24693-C30 screws. Fillet seal around the GDL Antenna P/N 2005045-001 base and aircraft skin using sealant P/N PR870 B1/2-SEMKIT. Remove excess adhesive.
- t. Obtain the RF cable assembly P/N3032709-101 from GDL Installation Kit.
- u. Install the connector labeled D9004P to S-Band Antenna's connector.
- v. Reinstall the insulation per standard Boeing Practice and Route the RF cable to the location between STA 440 and STA 460, also between Stringer S-2R and S-3R below the insulation material. Clamp, lace tie the cable to the existing wire bundle per standard Boeing practice.

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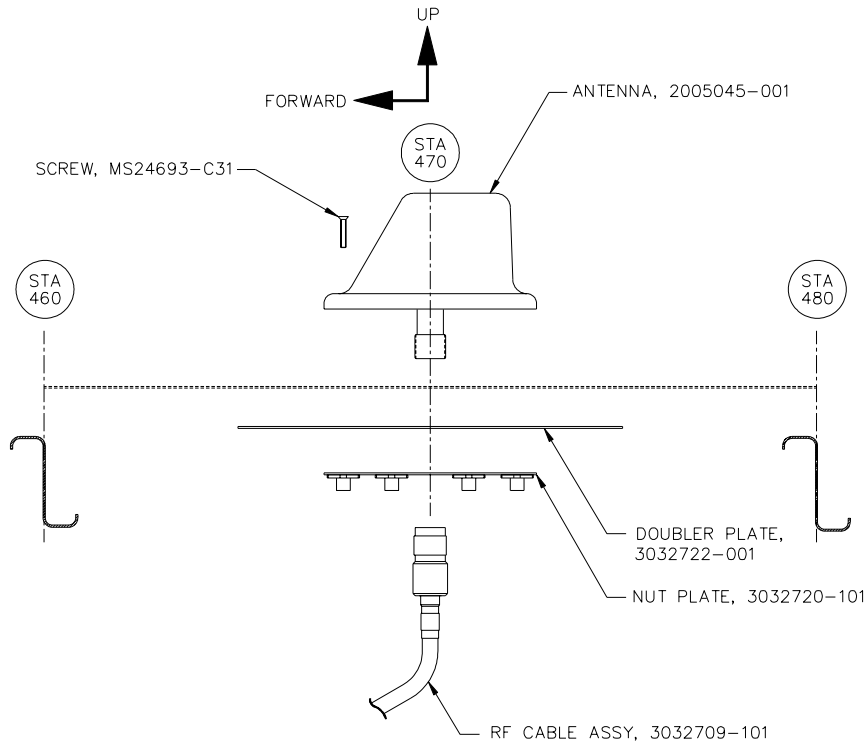
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**GDL Antenna Installation**  
**Figure 7.2**

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DWG NO. **7004257**

REV **E+**

SCALE NONE

SHEET 23

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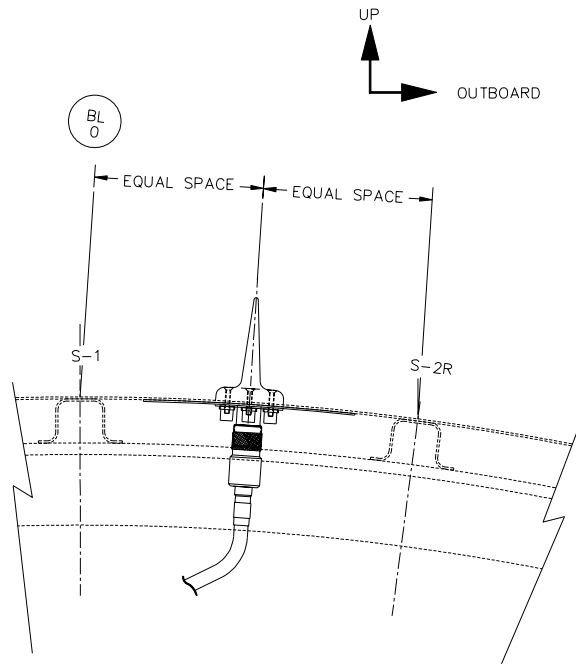
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w. Temporary secure the RF cable for the later installation to RF assembly PN 3032662-101.



VIEW LOOKING FORWARD  
© BS FRAME 480

**STA 470 GDL Antenna Installation**  
**Figure 7.3**

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SIZE  
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CAGE CODE  
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**7004257**

REV  
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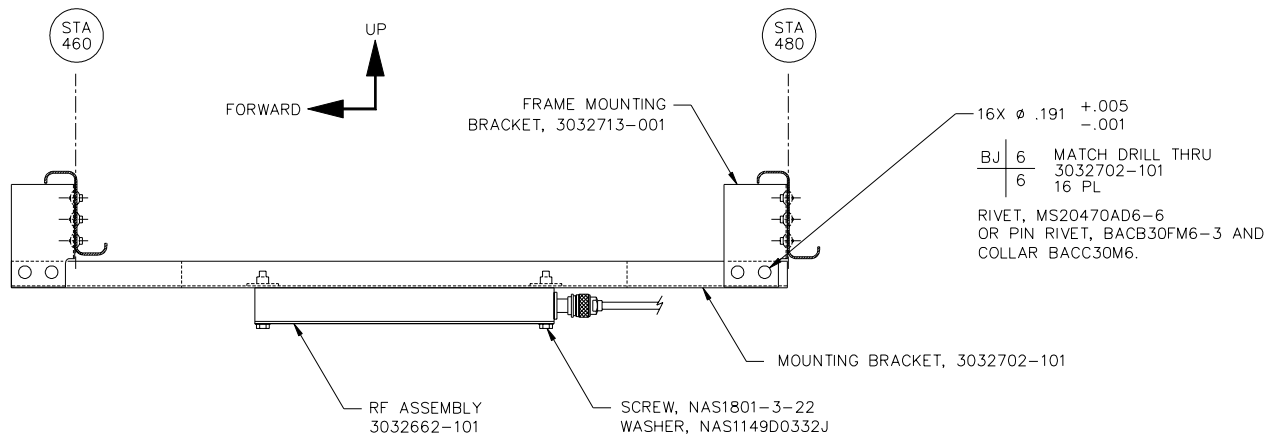
SCALE NONE

SHEET 24



## 9. Install GDL RF Assembly

- a. Perform installation of the RF assembly, P/N. 3032662-101 to aircraft frames using Drawing No. 3032714, GDL RF Assembly Installation - US Airways, B757-200 and this procedure.
- b. Gain access to and remove insulation covering the frames at STA 460 and STA 480 per B757-200 Maintenance Manual.
- c. Refer to Figure 8.1. Using the Mounting Bracket P/N 3032702-101 and the four Frame Mounting Brackets P/N 3032713-001 as templates, match-drill the 12 rivet holes required for rivets MS20470AD6-6 on the frames at STA 460 and STA 480.

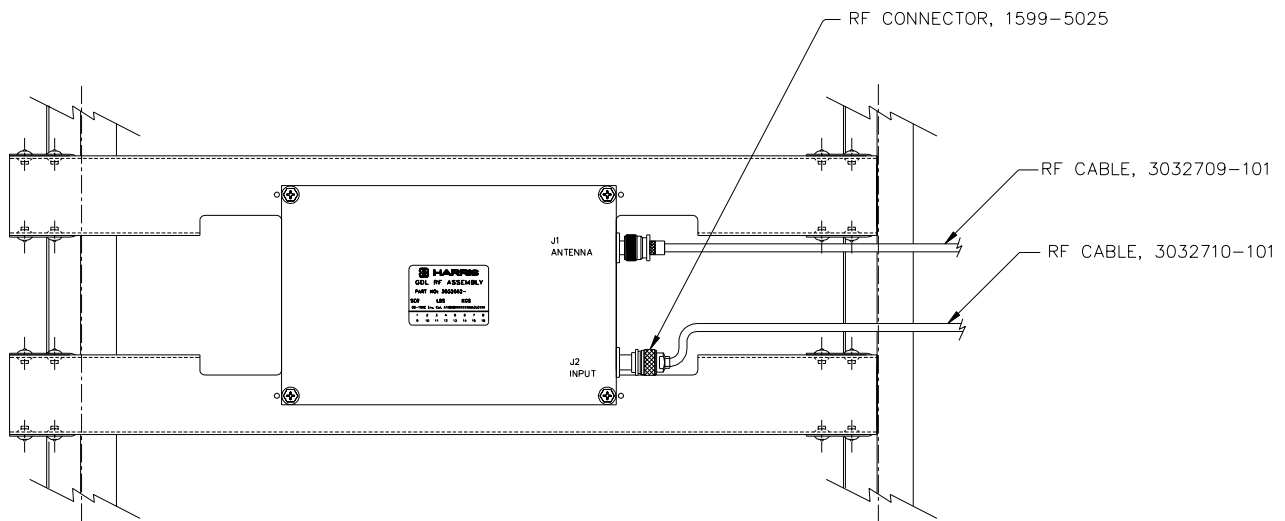


**RF Assembly Mounting Bracket Installation**  
**Figure 8.1**

- d. Match drill the 16 rivet holes required for rivets MS20470AD6-6 or equivalent pin rivet BACB30FM6 on the Mounting Bracket P/N 3032702-101 using the Frame Mounting Bracket P/N 3032713-001 as a template.
- e. Deburr all drilled holes prior to installation of rivets.

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- f. Install 12 rivets MS20470AD6-6 connecting the Frame Mounting Bracket P/N 3032713-001 to the frames at STA 460 and STA 480 per US Airways Maintenance Manual procedures.
- g. Re-install the frame insulation per B757-200 maintenance manual ensuring the lower ends of the Frame Mounting brackets P/N 3032713-001 protrude through the insulation.
- h. Install rivets MS20470AD6-6 or equivalent pin rivet BACB30FM6-3 and collar BACC30M6 connecting the Mounting Bracket P/N 3032702-101 to the Frame Mounting Bracket P/N 3032713-001 per standard Boeing procedures.
- i. Install the RF Assembly P/N 3032662-101 to the Mounting Bracket P/N 3032702-101 using the four hex head screws NAS1801-3-22 and the four flat washers NAS1149D0332J.



**GDL RF Assembly Installation  
Figure 8.2**

- j. Install the connector D9003P of RF cable W9500-001 (P/N 3032709-101) previously installed to S-band antenna to J1 Antenna connector of RF assembly P/N 3032662-101.
- k. Obtain RF cable W9500-002 (P/N 3032710-101) previously routed from E3-3 Shelf Disconnect.
- l. Obtain RF Connector P/N 1599-5025 from GDL Installation Kit

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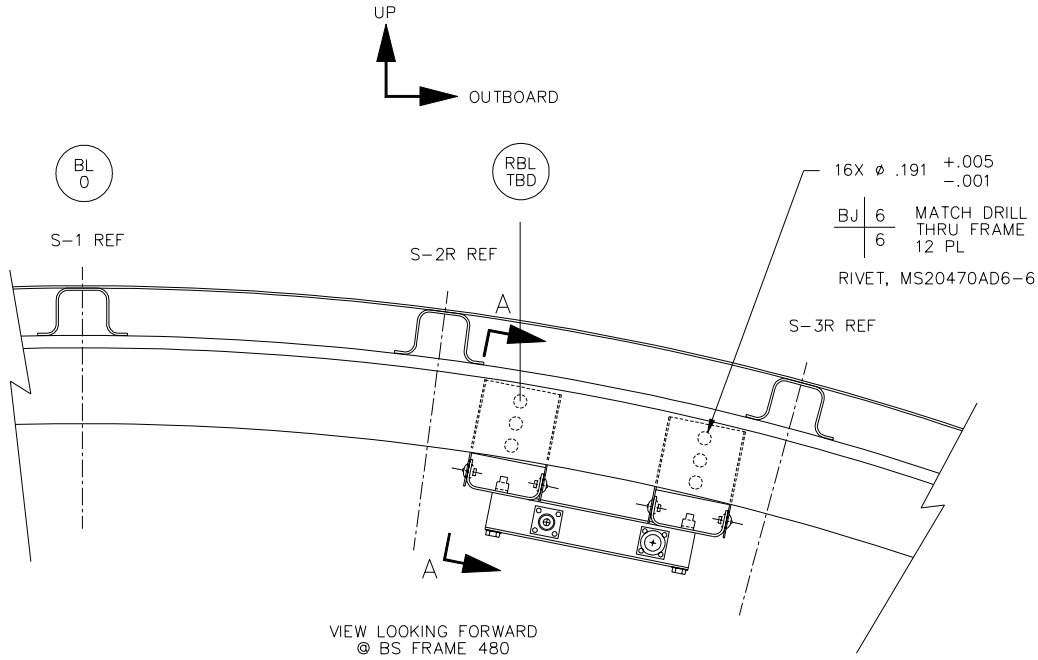
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- m. Cut RF Cable W9500-002 (P/N 3032710-101) to length required to terminate cable to GDL RF Assembly P/N 3032662-101 connector J2. Note: A small service loop of approximately 18" should be included prior to cutting GDL RF Cable.
- n. Terminate RF Cable W9500-002 (P/N 3032710-101) with M/ACOM RF Connector P/N 1599-5025 using M/ACOM spreading tool T-15073-P4, spacer tool T-15075 and standard .324 hex crimp die. Install connector in accordance with instructions outlined in M/ACOM Drawing 1599-5025 sheet 3 of 3 attached to this Service Bulletin
- o. Connect the terminated connector to RF assembly P/N 3032662-101 connector labeled "J2 INPUT".



**GDL RF Assembly Installation  
Figure 8.3**

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SIZE <b>A</b>	CAGE CODE <b>77245</b>
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DWG NO. <b>7004257</b>
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REV <b>E+</b>
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SCALE NONE
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**10. Install GDL Airborne Unit in GDL Tray**

- a. Obtain GDL airborne unit P/N 3026585-102. from GDL installation kit
- b. Verify 28VDC at GDL tray ARINC connector pin C-1.
- c. Install the GDL airborne unit into the E3-3 shelf GDL tray per standard Boeing practices.

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SIZE  
**A**

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**77245**

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SHEET 28

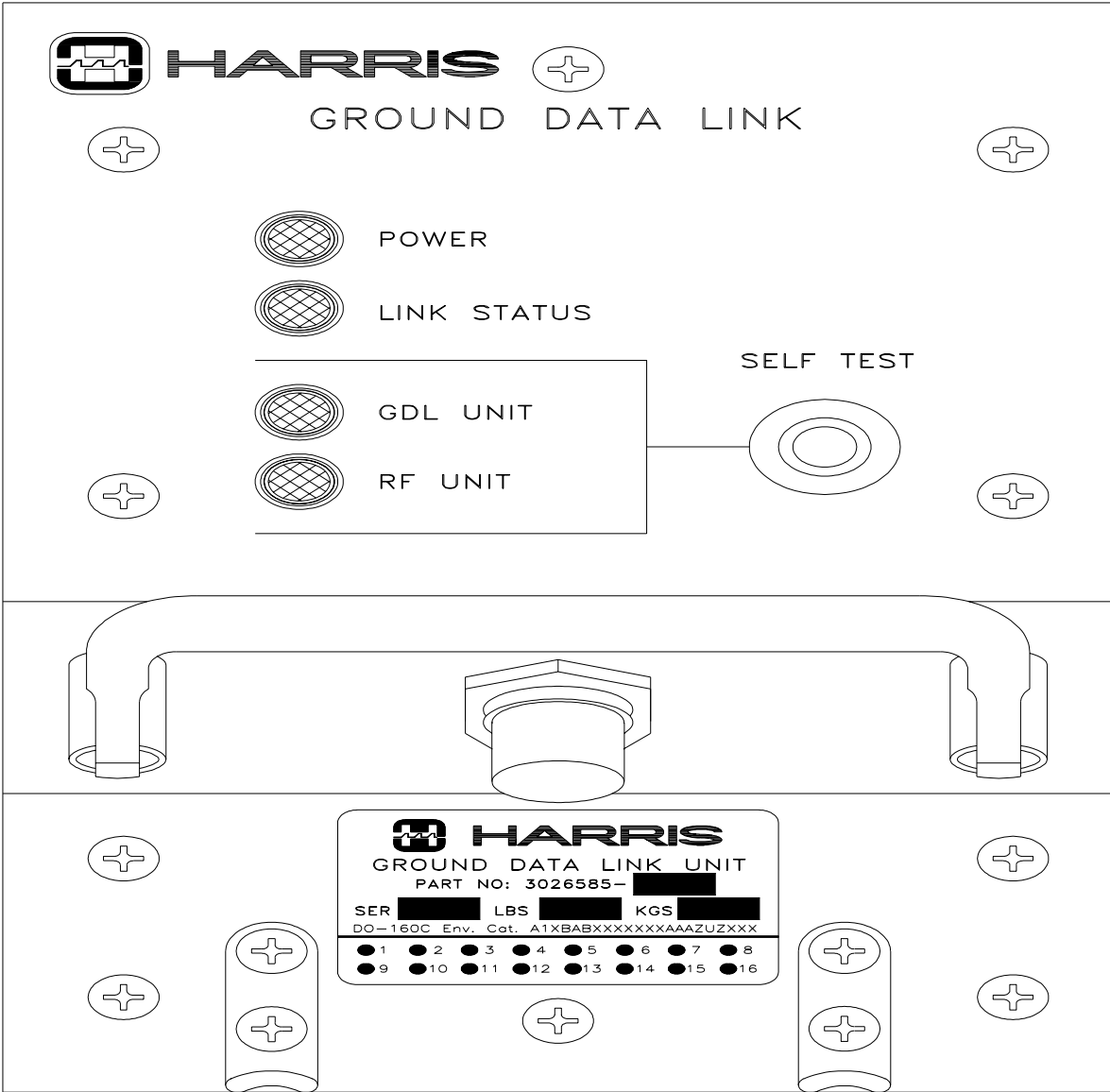
**11. Perform GDL System Checkout****a. GDL UNIT ACTIVATION**

1. Activate GDL Circuit Breaker and observe the following on the front panel of GDL Unit located in E/E Compartment.
2. Verify green LED labeled "POWER" is illuminated.
3. Verify front panel green LED labeled "GDL UNIT" is illuminated within 60 seconds of applying 28VDC power.
4. Verify that the front panel green LED labeled "LINK STATUS" blinks on and off several times and continues to randomly blink a few times per minute.

**b. GDL SELF TEST PROCEDURE**

1. Press and release the "SELF TEST" on front panel.
2. Verify front panel green LED labeled "GDL UNIT" illuminates within 60 sec after the "SELF TEST" button was pushed.
3. Verify front panel green LED labeled "RF UNIT" illuminates. Note that this step can take several minutes and is dependent on the size of the flight file which was recorded during the previous flight.
4. Verify "LINK STATUS" LED start to blinks "On and Off" several times. Also verify that "GDL UNIT" and "RF UNIT" LEDs extinguish after several minutes.
5. Verify front panel green LED labeled "RF UNIT" illuminates almost at the same time as the "GDL UNIT" LED.

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**GDL Airborne Unit**  
**Figure 10.1**

<b>HARRIS CORPORATION</b> GOVERNMENT AEROSPACE SYSTEMS DIVISION MELBOURNE, FLORIDA 32902	SIZE <b>A</b>	CAGE CODE <b>77245</b>	DWG NO. <b>7004257</b>	REV <b>E+</b>
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## 12. GDL Installation Kit List

QTY	PART NUMBER	SOURCE	CLASS/CONTROL	DESCRIPTION
4	1-320551-1	AMP		Lug
1	1599-5025	M/A com		Connector, RF
1	2005045-001	Harris		Antenna, S Band
1	3026585-102	Harris		GDL airborne Unit
1	3032662-101	Harris		RF Assembly
1	3032701-101	Harris		Tray
1	3032702-101	Harris		Bracket, Mnt - RF Assy
1	3032707-001	Harris		Plate, Spacer
1	3032709-101	Harris		Cable Assy, RF/Antenna
1	3032710-101	Harris		Cable Assy - GDL/RF
1	3032712-appropriate dash no.	Harris		Cable Assy, ARINC Connector
4	3032713-001	Harris		Bracket, Mtg, Frame
1	3032717-001	Harris		Placard
1	3032720-101	Harris		Plate, Nut
1	3032722-001	Harris		Plate, Doubler - Antenna
3	3032724-001	Harris		Marker, wire
3	3032724-002	Harris		Marker, wire
3	3032724-003	Harris		Marker, wire
3	3032724-004	Harris		Marker, wire
3	3032724-005	Harris		Marker, wire
3	3032724-006	Harris		Marker, wire
3	3032724-007	Harris		Marker, wire
3	3032724-008	Harris		Marker, wire
3	3032724-009	Harris		Marker, wire
3	3032724-010	Harris		Marker, wire
3	3032724-011	Harris		Marker, wire
3	3032724-012	Harris		Marker, wire
1	4001-001-3	Air Technics		Circuit Breaker
4	AN960JD4L	Various		Washer
8	AN960JD6L	Various		Washer
3	BACC47CN1	Various		Contact
4	BACC47CP1S	Various		Contact
3	BACC47ER1	Various		Contact
16	BACC30M6	Various		Collar
16	BACB30FM6-3	Various		Pin Rivet
1	BACA14BH22A	Various		Adapter plate assembly
3	BACC47DJ1	Various		Contact
4	BACN10JC08CD	Various		Nut
8	BACN10JC3CD	Various		Nut
2	BACN10XP2	Various		Nut, Clip
106	BACR15BB5D-4	Various		Rivet

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SCALE NONE

SHEET 31

VE HS 7004257 ON 54 7	1	D-110-41	Raychem		Solder Sleeving
	1	D38999/26WD18SN	Various		Connector
	A/R	M22759/11-16-9	Various		Wire
	A/R	M22759/11-20-9	Various		Wire
	A/R	M22759/11-22-9	Various		Wire
	2	BACC47DE7	Various		Contact
	1	M39029/1-101	Various		Contact
	3	M39029/11-145	Various		Contact
	4	M39029/56-351	Various		Contact
	1	M85049/38S15W	Various		Backshell
	28	MS20470AD6-6	Various		Rivet
	2	MS21042L04	Various		Nut
	8	MS21042L06	Various		Nut
	4	MS24693-273	Various		Screw
	6	MS24693-C31	Various		Screw
	4	MS24693-C50	Various		Screw
	24	MS25281-R4	Various		Clamp, Cable
	36	NAS1149D0332J	Various		Washer
	4	NAS1149DN832J	Various		Washer
	4	NAS1801-04-9	Various		Screw
	8	NAS1801-06-6	Various		Screw
	4	NAS1801-3-22	Various		Screw
	27	NAS1801-3-9	Various		Screw
	24	NAS43DD3-16	Various		Spacer
	A/R	PR870B1/2-SEMKIT	Courtaulds		Sealing compound

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### 13. Drawing List

#### Drawing Number

#### Title

3032703	GDL Antenna Installation - US Airways, B757-200
3032715	E3-3 Shelf Assembly Installation - US Airways, B757-200
3032714	GDL RF Assembly Installation - US Airways, B757-200
3032726	GDL Circuit Breaker Installation - US Airways, B757-200
3032716	GDL Instruments Wiring Installation - US Airways, B757-200
1599-5025 (SH3)	M/A-COM Connector Termination Instruction Sheet

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SHEET 33