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INSTRUCTIONS

For

CONTINUED AIRWORTHINESS

For

407-881-003 STANDARD
407-881-002 DELUXE
CONSOLE INSTALLATION KIT

STC SR01411AT

FOR

BELL HELICOPTER TEXTRON MODEL 407 HELICOPTERS

Report Number AA-00131

Revision D

April 24, 2012

ECCN <u>9E991</u>

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AERONAUTICAL ACCESSORIES

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS CONSOLE INSTALLATION KIT

LOG OF REVISIONS

Date	Revision	Description	Affected Pages	Approved Date	Accepted / Date
10/16/00	NR	Original Release	All	—	—
08/01/05	A	Reformatted Document Revised brush Alodine Mil-spec from MIL-C-5541 to MIL-DTL-81706 Revised Section 5.0 Removal and Replacement Information Revised Section 10.0 Parts Breakdown Revised Parts Breakdown Tables 3 and 4 Revised Figures 1 thru 5 Moved Tables 5 and 6 to follow Figure 5	All 6 7 8 9 – 10 11 – 15 16 – 17	—	—
06/23/11	B	Revised document format to latest configuration Revised Aeronautical Accessories, Inc. (AAI) references to Aeronautical Accessories / Aeronautical Accessories Bell Helicopter Piney Flats / Bell Helicopter as appropriate Revised Table 4 per revision N to dwg 407-881 Reorganized, renumbered existing figures and figure references according to Console Installation	All All 14 11, 15 – 19, 22 – 25	C.Rowe 06/23/11	R.Lazaroff 06/27/11
12/12/11	C	Revised Table 4 per dwg 407-881 rev O	14	N.Ward 12/12/11	R.Lazaroff 12/19/11
04/24/12	D	Added (new) Section 9.0 Weight and Balance, renumbered Parts Breakdown as Section 10.0	12, 13		

LIST OF EFFECTIVE PAGES

All pages contained herein are at latest revision shown in Log of Revisions.

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1.0 INTRODUCTION

This Instruction for Continued Airworthiness has been created to provide information to inspect, maintain and replace the **AERONAUTICAL ACCESSORIES CONSOLE INSTALLATION KIT** as installed on Bell Helicopter Textron model 407 helicopters installed in accordance with STC SR01411AT.

1.1 DISTRIBUTION

These instructions are provided for use with aircraft equipped with Aeronautical Accessories Console Installation Kits. Any and all airworthiness or flight safety revisions will be immediately made available to affected aircraft operators and owners.

1.2 REVISION

A Log of Revision section is included in these instructions and will be utilized to document all changes. Change recommendations should be submitted to:

Aeronautical Accessories Bell Helicopter Piney Flats
Technical Support
P.O. Box 3689
Bristol, TN 37625-3689
Email: techsupport@aero-access.com

2.0 DESCRIPTION**2.1 SYSTEM OVERVIEW**

The Aeronautical Accessories Console Installation Kit provides a style enhancing center console unit which allows installation of an expanded array of Avionics equipment. The Console Assembly provides the pilot and co-pilot easy access to all installed Avionics equipment. The Deluxe Console includes additional bracing to allow installation of Aeronautical Accessories' Expanded Instrument Panel.

3.0 MAINTENANCE INSTRUCTIONS**3.1 ANNUAL INSPECTION****NOTE**

Removal of Console Assembly from helicopter is not required for inspection. If any damage is noted during inspection, refer to Section 3.3 Repair or Section 4.0 Troubleshooting Information.

The Console Assembly shall receive an Annual visual inspection consisting of the following items.

1. Inspect for proper installation of hardware, any unusual wear patterns, corrosion and/or damage (scratches, nicks, dents, cracks). Ensure the damage limits presented in Table 1 are not exceeded and replace parts as required.

NOTE

The indications of corrosion are 1) corrosion deposits (a white or gray powder on aluminum or rust colored deposits on steel), 2) pits in aluminum or steel surfaces, 3) blisters, bulging or flaking of protective coatings.

2. Inspect the attaching fasteners for security.
3. Inspect Avionics equipment for security.
4. Utilize the Annual Inspection Record provided in Appendix A to document inspection completion.

3.2 CONDITIONAL INSPECTIONS

A conditional inspection does not occur at a specified time. It is caused by known or suspected unusual events, malfunctions, or defects. The Console Assembly shall receive a conditional inspection in cases of known or suspected rotor strikes, hard landings, or lightning strikes.

1. Perform Annual Inspection detailed in Section 3.1.

3.3 REPAIR

1. Repair scratches, nicks, or corrosion to aluminum components as follows:

- Lightly polish the affected area using Scotch-Brite or No. 400 to 600 abrasive paper or cloth. Ensure the limits presented in Table 1 are not exceeded. Take care to remove as little of the component original protective coatings as possible.
- After corrosion removal or damage repair: Clean repaired area with isopropyl alcohol and apply a protective chemical film, Alodine, to bare aluminum areas per MIL-DTL-5541; apply two coats of epoxy polyamide primer to repaired area; paint to match original finish, as applicable.

TABLE 1. DAMAGE AND REPAIR LIMITS

Component	Maximum Allowable Damage And Repair Limits (Damage and corrosion may be repaired as noted in Section 3.3 Repair, if it does not exceed these limits.)	
	Scratches / Nicks / Dents and Corrosion	Cracks
Console Upper Plate, Face Plate, and Side Plates	To a depth of .025 in	None
Mounting and Bracing Supports	To a depth of .010 in	None

4.0 TROUBLESHOOTING

For troubleshooting information, refer to Table 2.

TABLE 2. TROUBLESHOOTING

Problem	Probable Cause	Remedy
Console is loose or vibrates	Fasteners loose or missing	Check Console Support Assemblies fastening hardware for security
	Avionics equipment fastening hardware loose or missing	Tighten any loose hardware

5.0 REMOVAL AND REPLACEMENT INFORMATION**5.1 REMOVAL – CONSOLE ASSEMBLY**

1. Remove Face Plate (item 8, fig 1 or 2 / item, 64 fig 3) and Upper Plate (item 7, fig 1 or 2 / item 53, fig 3). Retain hardware for reinstallation.
2. Remove all Avionics equipment, excluding mounting racks and mounting systems, installed in the Console Assembly in accordance with manufacturer maintenance manuals.
3. Remove the Side Plates (item 13, fig 1 / item 15, fig 2 / item 51, fig 3). Retain hardware for reinstallation. Console Assembly removal complete.

NOTE

If additional access is required, removal of mounting racks, and Upper Support Channel Assemblies (items 3 & 4, fig 1 / items 5 & 6, fig 2 / items 60 & 61, fig 3) may be necessary.

5.2 INSTALLATION – CONSOLE ASSEMBLY**NOTE**

If required, install mounting racks and Upper Support Channel Assemblies (items 3 & 4, fig 1 / items 5 & 6, fig 2 / items 60 & 61, fig 3).

1. With retained hardware, install the Side Plates (item 13, fig 1 / item 15, fig 2 / item 51, fig 3).
2. Install all Avionics equipment into their respective mounting racks or mounting system installed on the Console Assembly in accordance with manufacturer maintenance manuals.
3. With retained hardware, install the Face Plate (item 8, fig 1 or 2 / item, 64 fig 3) and Upper Plate (item 7, fig 1 or 2 / item 53, fig 3). Console Assembly installation complete.

6.0 STRUCTURAL FASTENER DATA

For hardware identification refer to Tables 3 through 6 and Figures 1 through 3.

7.0 RECOMMENDED OVERHAUL PERIODS

No component overhaul required for this type design change.

8.0 AIRWORTHINESS LIMITATIONS

There are no airworthiness limitations associated with this type design change.

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS
CONSOLE INSTALLATION KIT****9.0 WEIGHT AND BALANCE****9.1 407-881-003 STANDARD CONSOLE KIT**

<u>Weight</u>	<u>Station</u>	<u>Lateral Arm</u>
4.0 lbs (1.8 Kg)	50.0 in (1270 mm)	+1.0 in (25 mm)

9.2 407-881-002 DELUXE CONSOLE KIT

<u>Weight</u>	<u>Station</u>	<u>Lateral Arm</u>
5.0 lbs (2.2 Kg)	50.0 in (1270 mm)	+1.0 in (25 mm)

NOTE

Weight and balance data is for Console Assembly only.
Weight and balance data is determined at installation.
The weight of the installed instruments/radios shall not exceed
38 lbs in the vertical stack or 14lbs in the horizontal stack.

10.0 PARTS BREAKDOWN

Table 3 contains Parts Breakdown data for the 407-881-002 and 407-881-003 Console Installation Kits illustrated in Figure 1 and Figure 2, sheet 1.

Table 4 contains Parts Breakdown data for the Console Assembly Bracing Kit as illustrated in Figure 2, sheets 2 thru 4.

Table 5 contains Parts Breakdown data for the superseded 407-881-001 Console Assembly Installation Kit as illustrated in Figure 3, sheet 1 and Table 6 contains Parts Breakdown data for the Console Assembly Bracing Kit for the superseded P/N 407-881-001 Console Assembly Installation Kit as illustrated in Figure 3, sheets 2 thru 4.

The column Availability Code (AV Code) specifies the procurement status for each part. The codes to identify if a part is procurable, procedure details to get an assembly or local manufacture code are as follows:

AV Code	Details
0	Nonprocurable part
1	Procurable part
2	Procure as detail parts only
3	Procurable as Next Higher Assembly
4	Local manufacture. Contact Aeronautical Accessories, Bell Helicopter Piney Flats Product Support Engineering (PSE)
5	Part replacement requires a fixture or special equipment. Contact PSE
6	Non-stock procurable part

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS
CONSOLE INSTALLATION KIT**

**TABLE 3. PARTS BREAKDOWN,
407-881-002 / 407-881-003 CONSOLE INSTALLATION KIT**

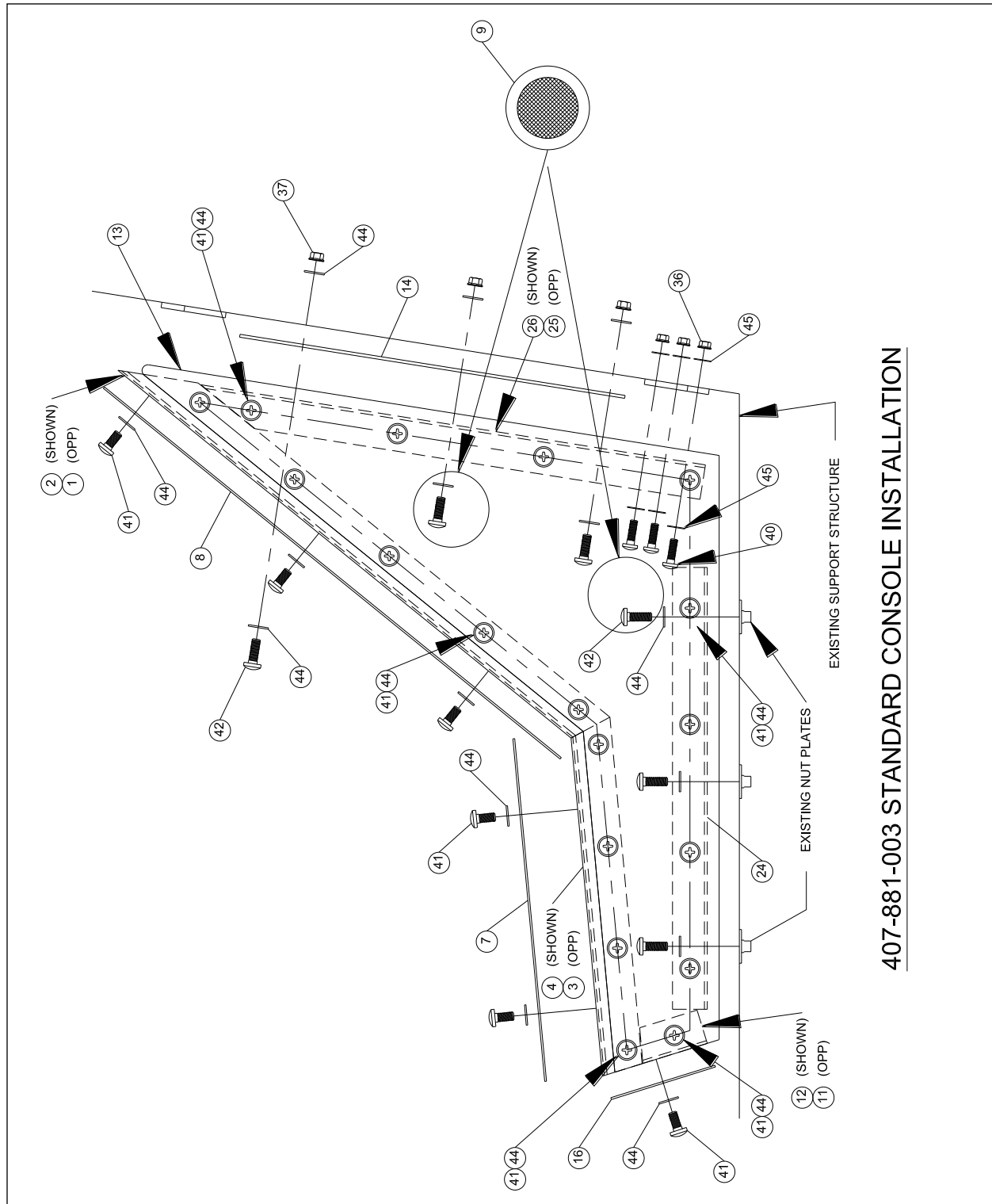
Qty -002	Qty -003	Part Number	Description	Index No.	AV Code
1		407-881-010	Bracing Kit	—	1
	1	206-882-105	Standard Surface Channel Assembly L/H	1	1
	1	206-882-106	Standard Surface Channel Assembly R/H	2	1
	1	206-882-107	Standard Upper Support Channel Assembly L/H	3	1
	1	206-882-108	Standard Upper Support Channel Assembly R/H	4	1
1		206-882-111	Deluxe Upper Support Channel Assembly L/H	5	1
1		206-882-112	Deluxe Upper Support Channel Assembly R/H	6	1
1	1	206-882-142	Upper Plate	7	1
1	1	206-882-143	Face Plate	8	1
4	4	206-882-295	Plug Button	9	1
1	1	407-882-115	Aft support Angle Assembly L/H	11	1
1	1	407-882-116	Aft support Angle Assembly R/H	12	1
	2	407-882-140	Standard Side Plate	13	1
2	2	407-882-141	Shim	14	1
2		407-882-142	Deluxe Side Plate	15	1
1	1	407-882-144	Aft Plate	16	1
2	2	407-882-201	Lower Side Support Angle Assembly	24	1
1	1	407-882-203	Forward Side Support Angle Assembly L/H	25	1
1	1	407-882-204	Forward Side Support Angle Assembly R/H	26	1
1		407-882-209	Deluxe Surface Channel Assembly L/H	27	1
1		407-882-210	Deluxe Surface Channel Assembly R/H	28	1
20	20	MS20426AD3-4	Rivet	35	1
6	6	MS21042L08	Nut, Locking	36	1
6	6	MS21042L3	Nut, Locking	37	1
10	10	MS21069L3	Nut Plate	38	1
6	6	MS27039-0808	Screw	40	1
48	48	MS27039-1-07	Screw	41	1
12	12	MS27039-1-08	Screw	42	1
66	66	NAS1149D0332J	Washer	44	1
12	12	NAS1149DN816J	Washer	45	1

AERONAUTICAL ACCESSORIES

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS
CONSOLE INSTALLATION KIT**

TABLE 4. PARTS BREAKDOWN, 407-881-010 BRACING KIT

Qty	Part Number	Description	Index No.	AV Code
1	407-882-113	Panel Assembly	10	1
1	407-882-145	Brace L/H	17	1
1	407-882-146	Brace R/H	18	1
2	407-882-147	Angle	19	1
1	407-882-149	Support	20	1
1	407-882-150	Support	21	1
1	407-882-151	Cross Brace	22	1
1	407-882-155	Shim	23	1
4	AN3-5A	Bolt	29	1
12	CCR264SS3-2	Rivet	30	1
4	CR3243-4-4	Rivet	31	1
2	CR3522-5-2	Rivet	32	1
9	CR3523-5-2	Rivet	33	1
13	CR3523-5-3	Rivet	34	1
6	MS21069L3	Nut Plate	38	1
7	MS21266-1N	Grommet	39	1
5	MS27039-1-07	Screw	41	1
2	MS27039-1-08	Screw	42	1
1	MS27039-1-15	Screw	43	1
11	NAS1149D0332J	Washer	44	1
1	NAS43DD3-40N	Spacer	46	1
2	HT 3/8 C	Spiral Wrap 10" LG	47	1
2	CR3524-4-02	Rivet	48	1



407-881-003 STANDARD CONSOLE INSTALLATION

FIGURE 1. STANDARD CONSOLE INSTALLATION

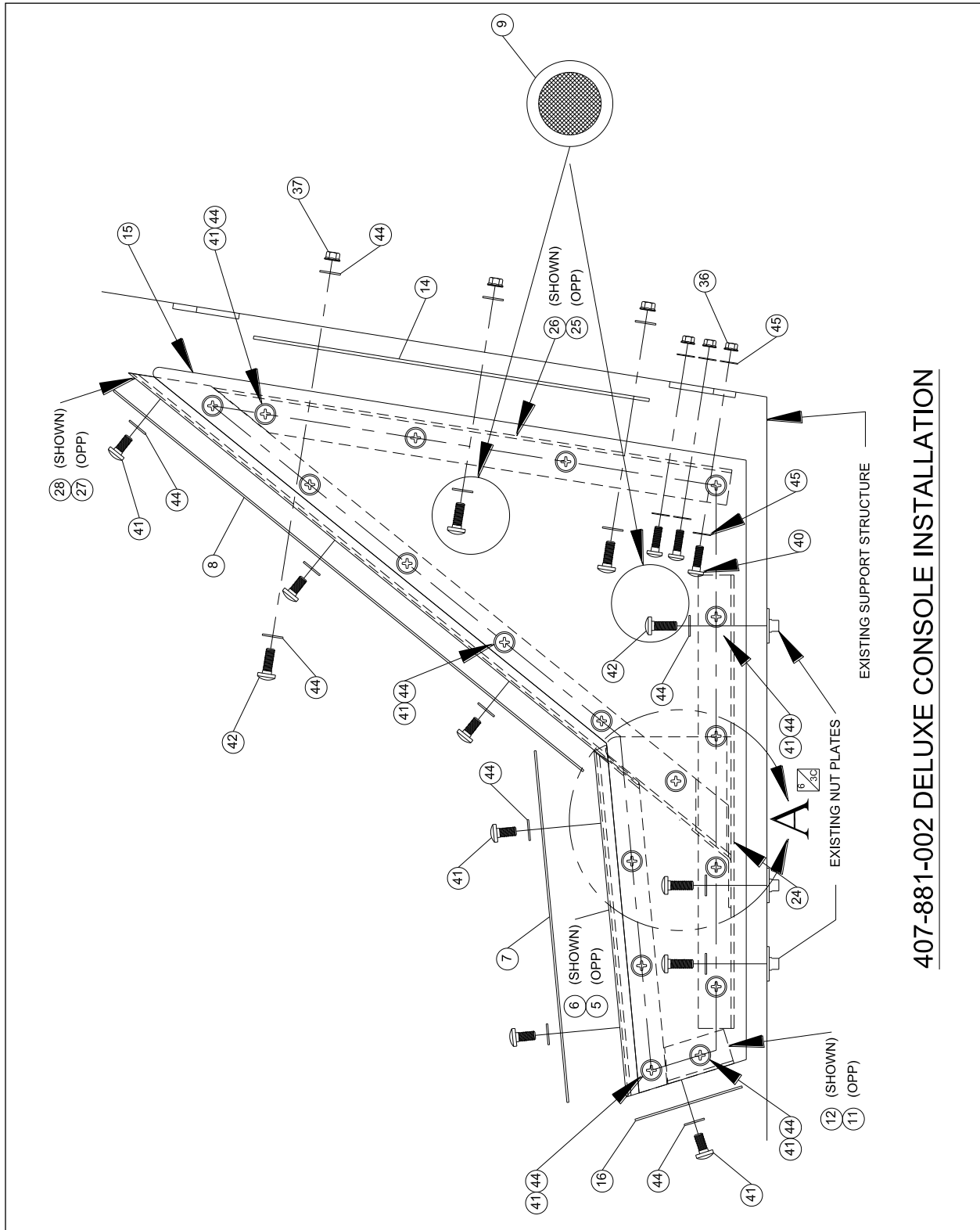


FIGURE 2 (SHEET 1 OF 4). DELUXE CONSOLE INSTALLATION

AERONAUTICAL ACCESSORIES

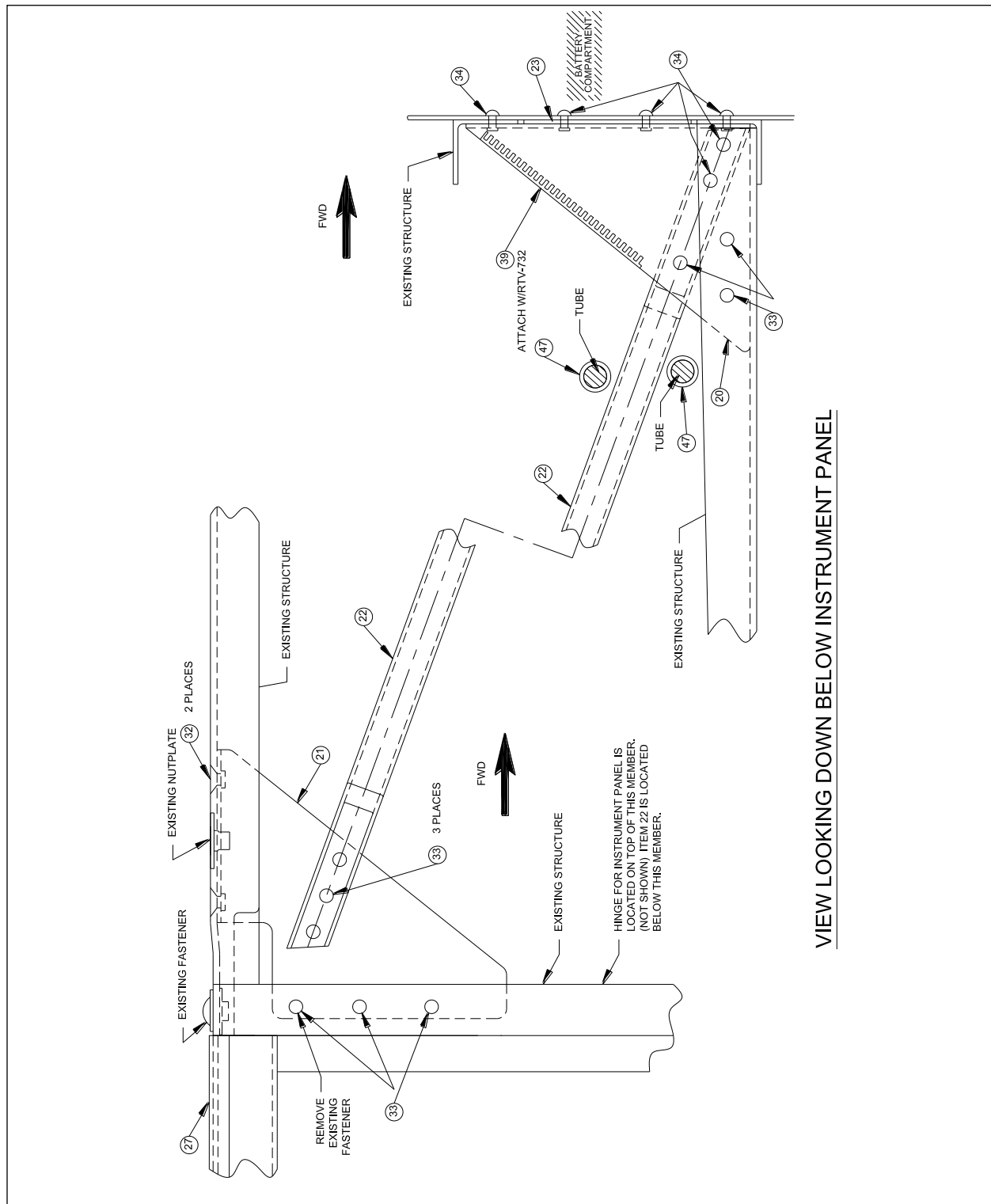


FIGURE 2 (SHEET 2 OF 4). DELUXE CONSOLE INSTALLATION

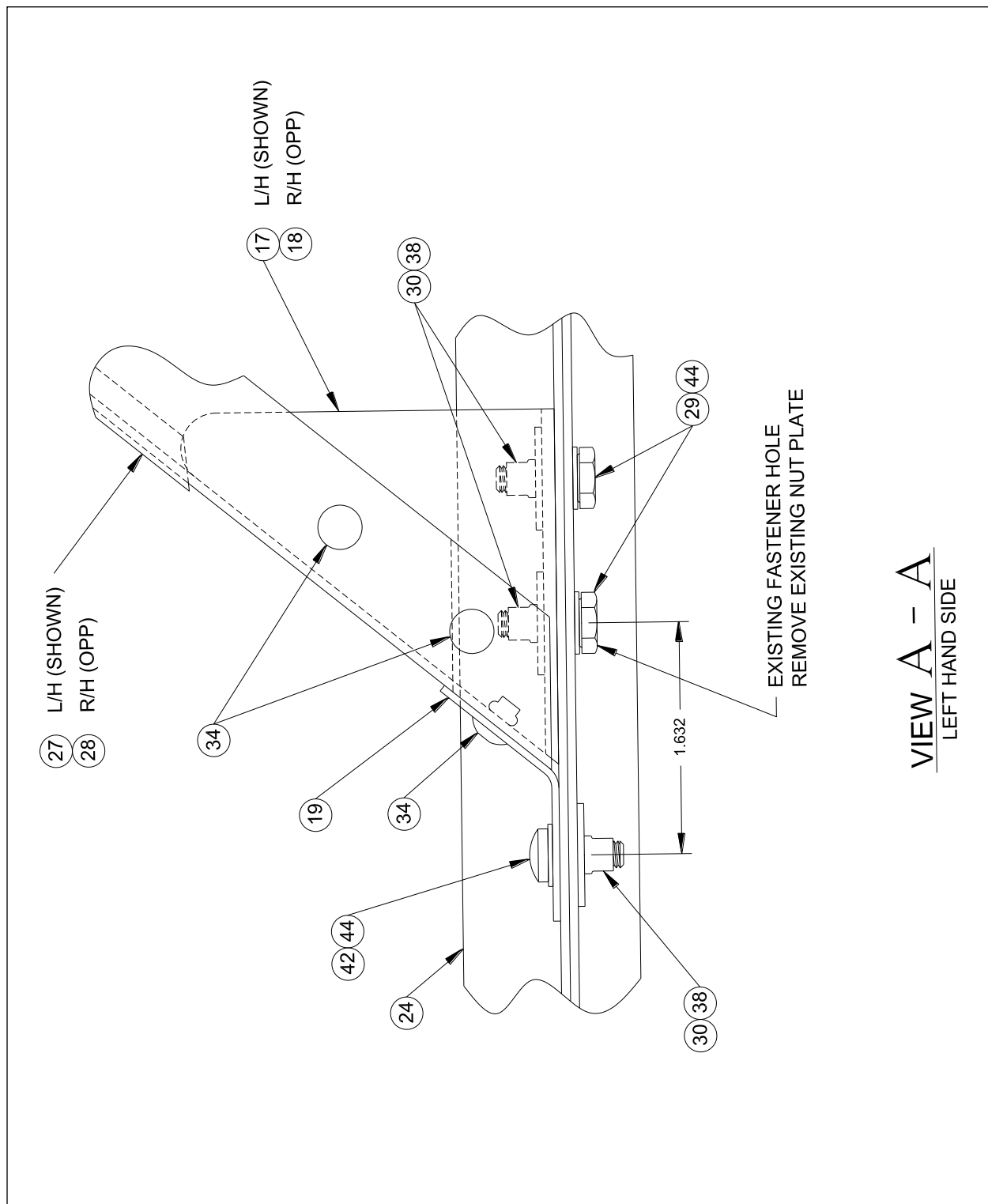


FIGURE 2 (SHEET 3 OF 4). DELUXE CONSOLE INSTALLATION

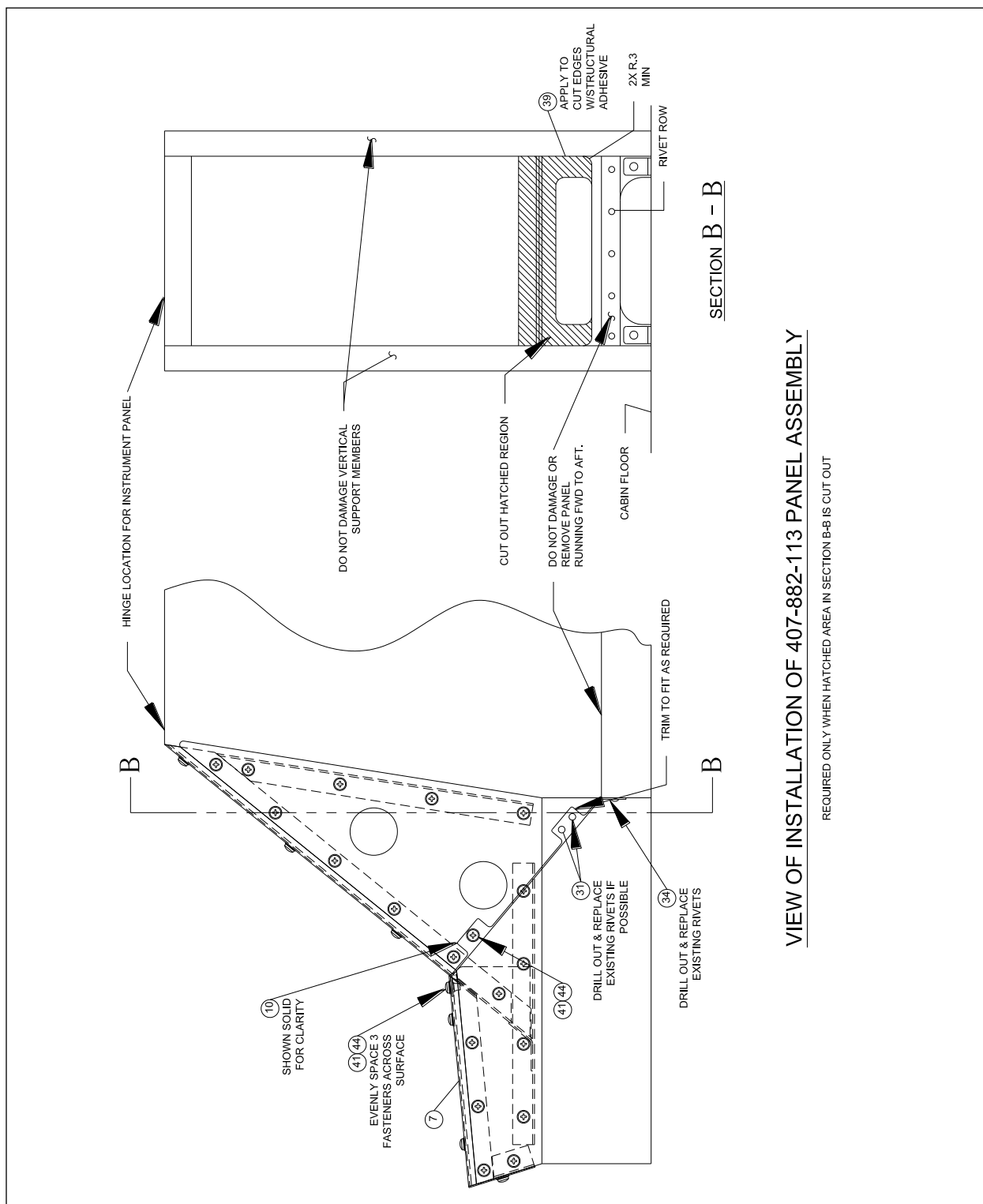


FIGURE 2 (SHEET 4 OF 4). DELUXE CONSOLE INSTALLATION

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS CONSOLE INSTALLATION KIT

**TABLE 5. PARTS BREAKDOWN,
407-881-001 CONSOLE ASSEMBLY INSTALLATION KIT (KIT SUPERSEDED)**

Qty	Part Number	Description	Index No.	AV Code
1	407-881-010	Bracing Kit	—	1
2	407-882-131	Side Plate	51	1
1	407-882-101	Aft Plate Assembly	52	1
1	407-882-133	Upper Plate	53	1
1	407-882-103	Lower Side Support Angle Assembly L/H	54	1
1	407-882-104	Lower Side Support Angle Assembly R/H	55	1
1	407-882-105	Forward Side Support Angle Assembly L/H	56	1
1	407-882-106	Forward Side Support Angle Assembly R/H	57	1
1	407-882-107	Surface Channel Assembly L/H	58	1
1	407-882-108	Surface Channel Assembly R/H	59	1
1	206-882-271	Upper Support Channel Assembly L/H	60	1
1	206-882-272	Upper Support Channel Assembly R/H	61	1
1	407-882-109	Aft Support Angle Assembly L/H	62	1
1	407-882-110	Aft Support Angle Assembly R/H	63	1
1	407-882-161	Face Plate	64	1
2	407-882-141	Shim	65	1
6	MS27039-0808	Screw	66	1
57	MS27039-1-06	Screw	67	1
12	MS27039-1-08	Screw	68	1
12	NAS1149DN816J	Washer	69	1
78	NAS1149DO332J	Washer	70	1
6	MS21042L08	Nut, Locking	71	1
6	MS21042L3	Nut, Locking	72	1
12	MS21069L3	Nut Plate	73	1
4	206-882-295	Plug Button	74	1
1	407-882-145	Brace, L/H	75	1
1	407-882-146	Brace, R/H	76	1
2	407-882-147	Angle	77	1
4	AN3-5A	Bolt	78	1
2	CR3523-5-2	Rivet	79	1
4	CR3523-5-3	Rivet	80	1
24	CCR264SS3-2	Rivet	81	1

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS
CONSOLE INSTALLATION KIT****TABLE 6. PARTS BREAKDOWN,
407-881-010 BRACING KIT FOR 407-881-001 INSTALLATION**

Qty	Part Number	Description	Index No.	AV Code
5	MS27039-1-06	Screw	67	1
5	NAS1149DO332J	Washer	70	1
1	407-882-149	Support	82	1
1	407-882-151	Cross Brace	83	1
1	407-882-113	Panel Assembly.	84	1
9	CR3523-5-2	Rivet	79	1
4	CR3523-5-3	Rivet	80	1
4	CR3243-4-4	Rivet	85	1
2	SP3/8CP58	Spiroband 10" LG	86	1
2	MS21266-1N	Grommet	87	1
1	407-882-150	Support	88	1
1	407-882-155	Shim	89	1
1	NAS43DD3-40N	Spacer	90	1
1	MS27039-1-15	Screw	91	1
3	CR3522-5-2	Rivet	92	1

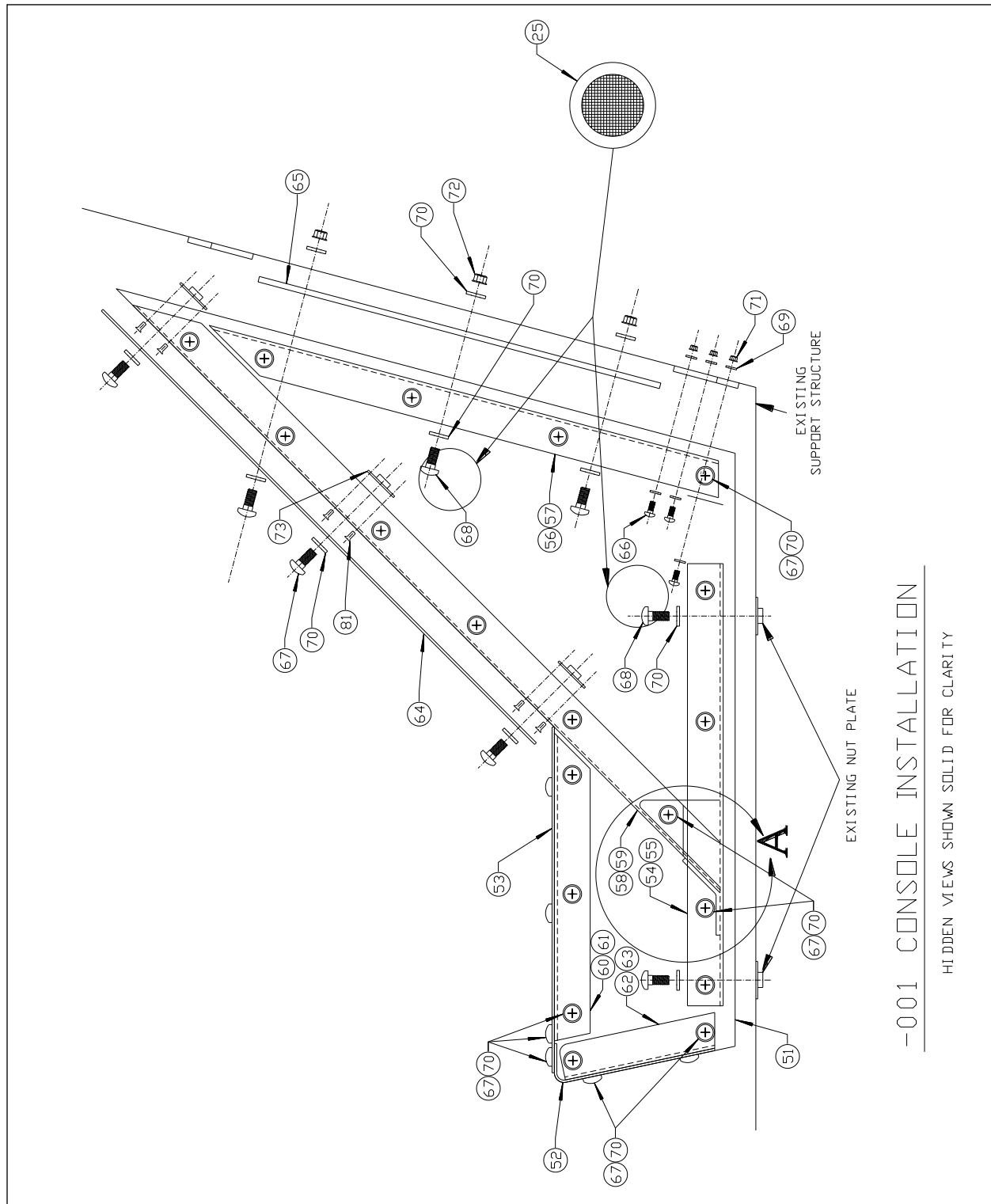


FIGURE 3 (SHEET 1 OF 4). 407-881-001 CONSOLE INSTALLATION

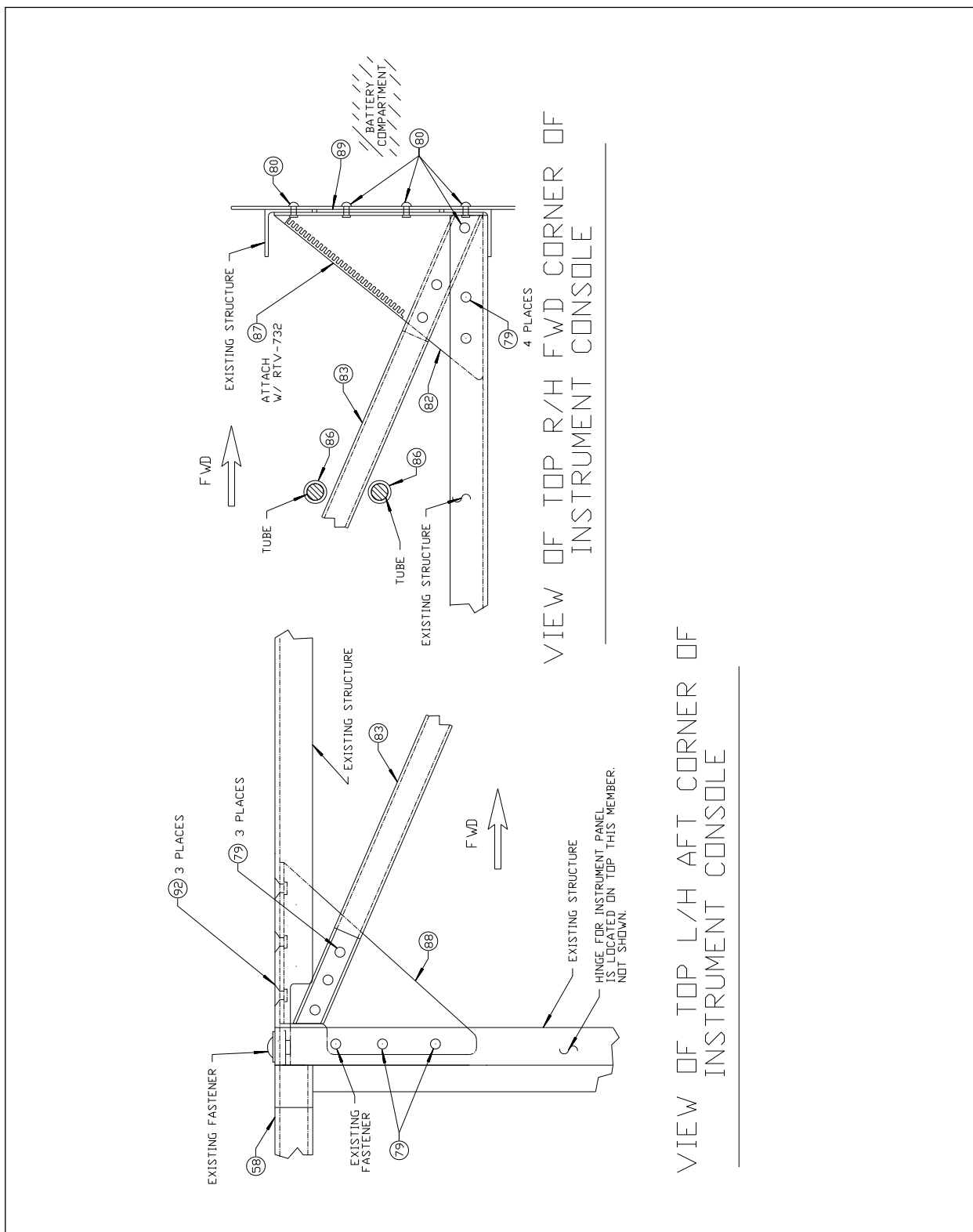


FIGURE 3 (SHEET 2 OF 4). 407-881-001 CONSOLE INSTALLATION

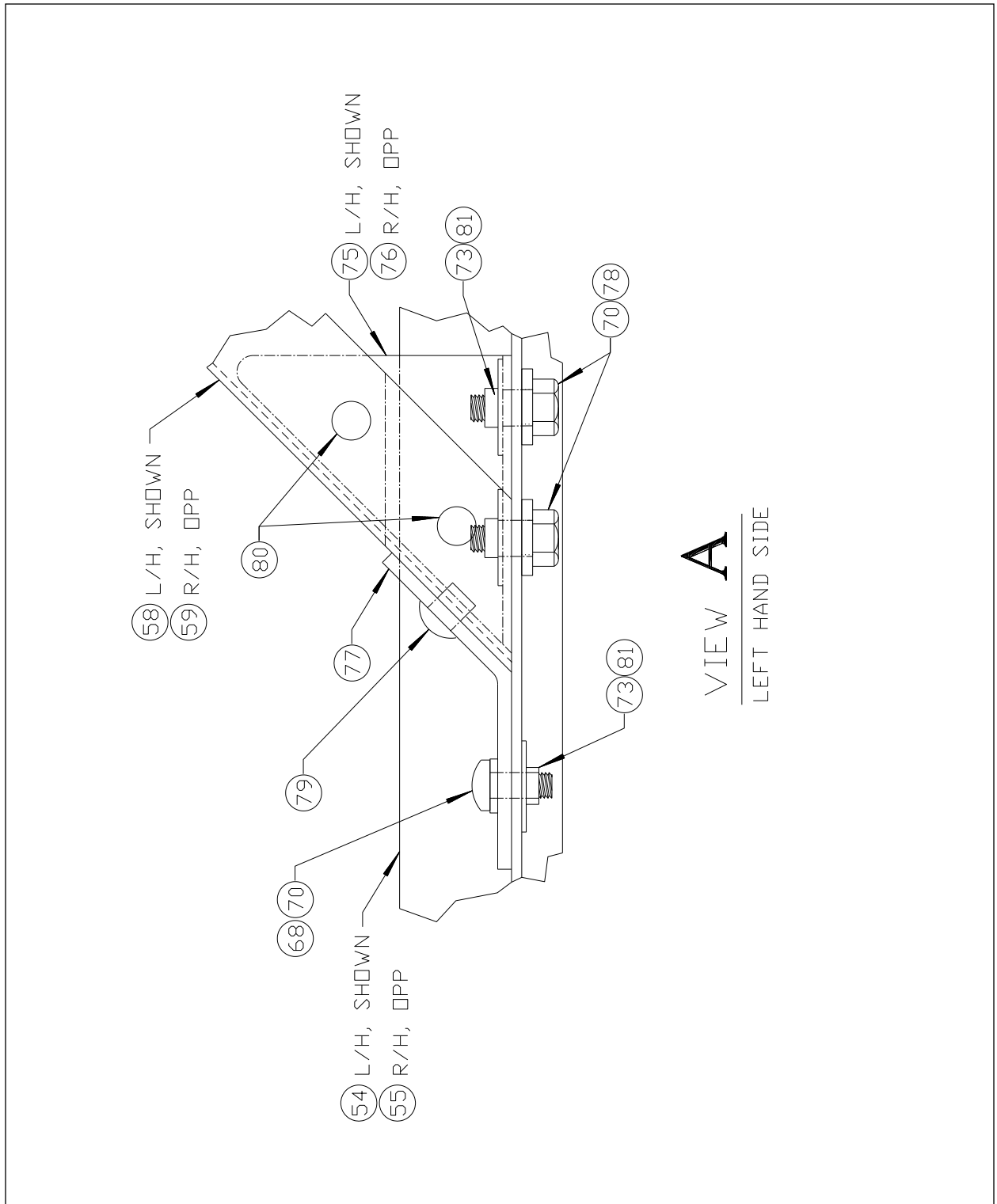


FIGURE 3 (SHEET 3 OF 4). 407-881-001 CONSOLE INSTALLATION

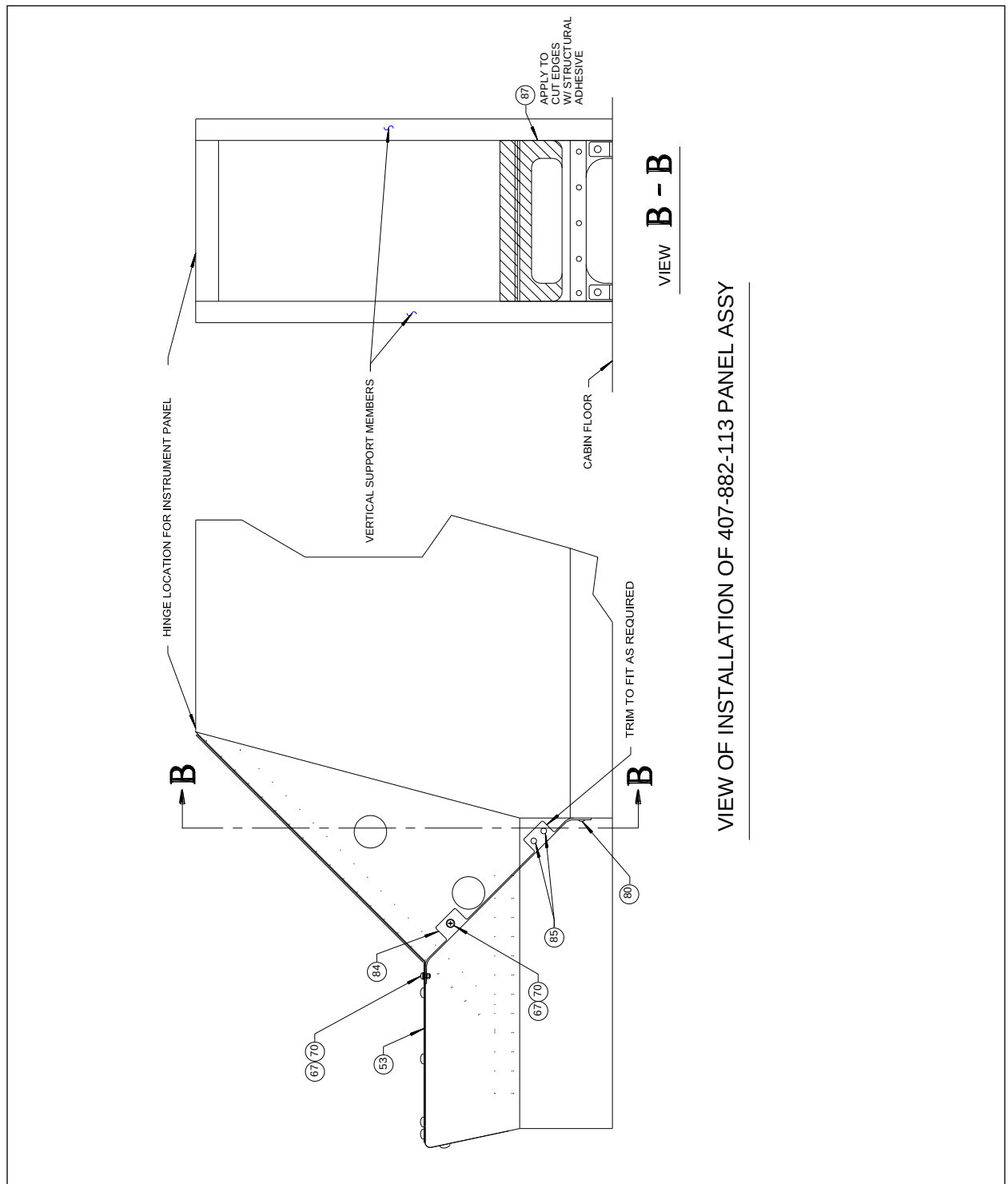


FIGURE 3 (SHEET 4 OF 4). 407-881-001 CONSOLE INSTALLATION

APPENDIX A – ANNUAL INSPECTION RECORD

Annual Inspection Record**Work Order Number:** _____**Registration Number:** _____**Serial Number:** _____**Total Time:** _____**Date:** _____

Inspect the Console Installation Kit in accordance with Section 3.1 Annual Inspection.

1. Inspect for proper installation of hardware, any unusual wear patterns, corrosion and/or damage (scratches, nicks, dents, cracks). Ensure the damage limits presented in Table 1 are not exceeded and replace parts as required.

NOTE

The indications of corrosion are 1) corrosion deposits (a white or gray powder on aluminum or rust colored deposits on steel), 2) pits in aluminum or steel surfaces, 3) blisters, bulging or flaking of protective coatings.

2. Inspect the attaching fasteners for security.

3. Inspect Avionics equipment for security.

Signature _____ **A & P No.** _____**Signature** _____ **Inspector** _____