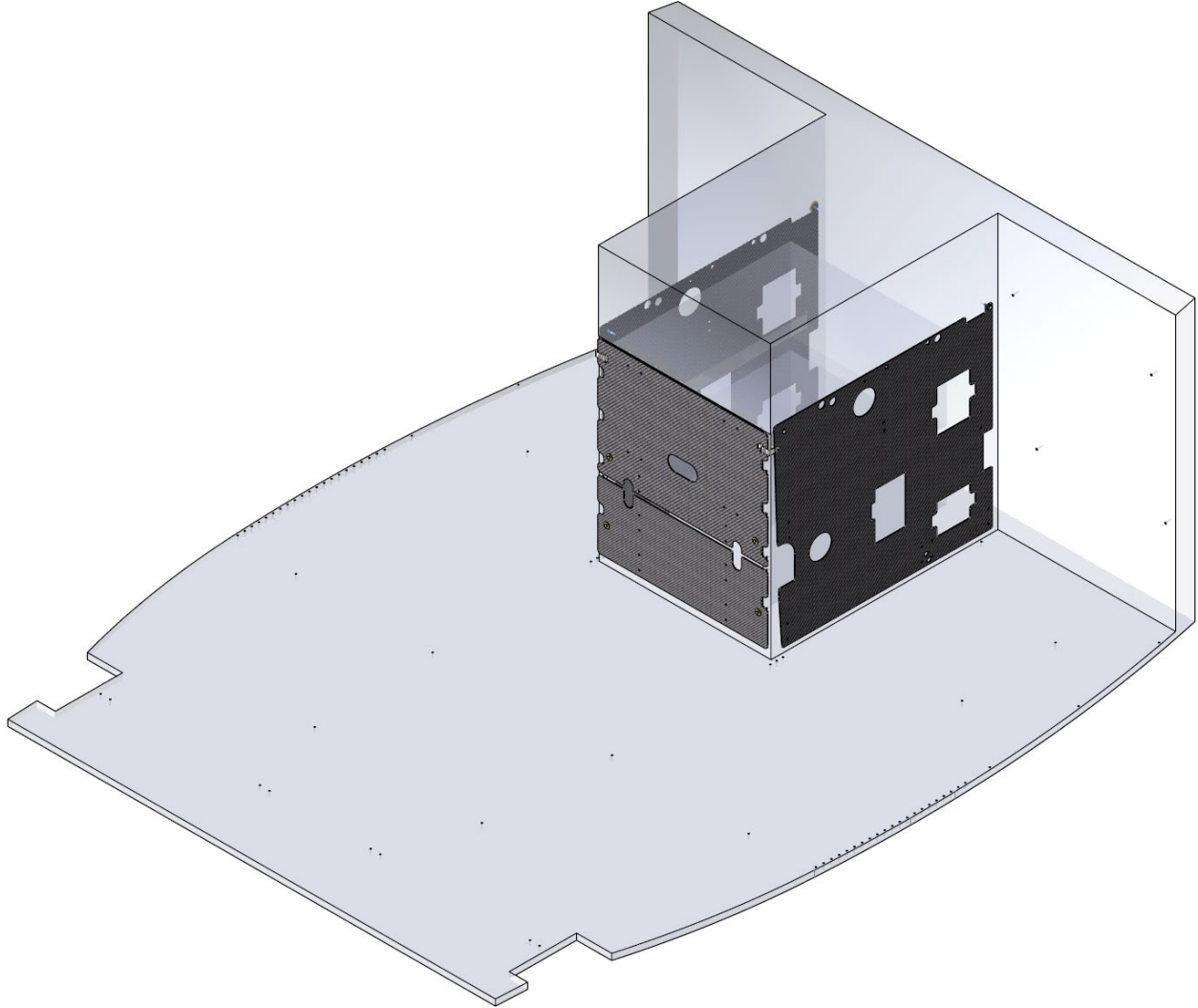




PYLON PANEL PROTECTOR, KIT INSTRUCTIONS FOR CONTINUING AIRWORTHINESS

MODELS: BELL 212, 412, 412EP, 412CF

Read all of the Instructions for Continuing Airworthiness
thoroughly prior to performing any activities relating to this product



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Notes

1. If changes to this document are required, Alpine Aerotech LP shall revise all pages and reissue the entire document.
2. Alpine Aerotech LP shall make any subsequent revisions of this document available free of charge upon request. Alpine Aerotech LP also recommends that the end user of this product periodically verify the revision level of this document.

Section 1: Description

Description

The following information provides a functional description of the Pylon Panel Protector, Kit and FWD Pylon Panel Protector, Kit as defined in Alpine Aerotech LP authority dataset AAL-212-040-901 and AAL-212-080-001.

- Due to the fact that the Bell medium series of aircraft is used as often for cargo transportation as it is for passenger transportation, there is a potential for cargo to damage expensive composite panels. This occurs most frequently during loading and unloading operations, but can also occur during small inflight shifts of said cargo.
- The Pylon Panel Protector, Kit is comprised of individual LHS & RHS kits. Each kit can be installed separately, or together.
- The FWD Pylon Panel Protector, Kit can be installed on its own or together with the Pylon Panel Protector, Kit. The FWD Pylon Panel Protector, Kit is not compatible with airline seating.
- The Pylon Panel Protector, Kit and FWD Pylon Panel Protector, Kit when installed adds additional protection to the panel, as they are manufactured from a material specifically designed to spread and attenuate energy.

Section 2: Maintenance Manual Supplement

General Notes

1. The following information defines the instructions for continuing airworthiness, repair allowances and airworthiness limitations for the item(s) referenced within this document.
2. Refer to the current revisions of the BHT Maintenance Manual BHT-205A1-MM for Instructions for Maintenance/Inspection with respect to the item(s) referenced within this document.
3. Refer to the current revisions of the BHT Maintenance Manual BHT-212-MM for Instructions for Maintenance/Inspection with respect to the item(s) referenced within this document.
4. Refer to the current revisions of the BHT Maintenance Manual BHT-412-MM for Instructions for Maintenance/Inspection with respect to the item(s) referenced within this document.
5. Refer to the current revision of the DND Maintenance Manual, C-12-146-000/MF-001, for the chapter(s) and section(s) referenced within this document.
6. Refer to the Section 3: Installation & Removal Instructions and Section 4: Illustrated Parts Breakdown for the replacement and/or installation of the item(s) referenced within this section.
7. Scheduled inspection for the item(s) referenced within this document shall be accomplished in accordance with (IAW) the Inspection Procedures specified.
8. Repair allowances for the item(s) referenced within this document shall be accomplished IAW the Repair Procedures specified.
9. Limitations for the item(s) referenced within this document are IAW the Airworthiness Limitations specified.

Airworthiness Limitations

The Airworthiness Limitations section is approved by the Minister and specifies maintenance required by any applicable airworthiness or operating rule unless an alternative program has been approved by the Minister.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

Supplement to applicable Maintenance Manual, Chapter 4, Airworthiness Limitations Schedule

Notes

1. Refer to the applicable Maintenance Manual, Chapter 4-3, for general information on airworthiness limitations and airworthiness limitation schedules.
2. Item(s) **not** listed in the Scheduled Airworthiness Limitations section within this document have an unlimited airworthiness life.

Scheduled Airworthiness Limitations

1. There are no airworthiness limitations associated with the item(s) referenced within this document.

Inspection Procedures

Supplement to applicable Maintenance Manual, Chapter 5, Inspection and Component Overhaul Schedule

Notes

1. Refer to the applicable Maintenance Manual, Chapters 5-1, 5-2, & 5-3, for general information on inspections, inspection definitions, inspection intervals, inspection methods and inspection schedules.
2. General Inspections, as indicated within this document, are defined as visual, non-thorough checks.
3. Detailed Inspections, as indicated within this document, are defined as visual and thorough, searching checks.
4. Perform Daily Inspections every day, prior to flight operation. If damage is detected, perform the 100 Hour/12 Month Inspections.
5. Perform 100 Hour/12 Month Inspections every 100 hours or every 12 months, whichever occurs first, prior to flight operation. If damage is detected, refer to the Repair Procedures section within this document.

Scheduled Inspections

1. Daily Inspections

Data Reference: Section 3: Installation and Removal Instructions
Section 4: Illustrated Parts Breakdown

- i. Perform a General Inspection on the Pylon Panel Protector, Kit, and/or FWD Pylon Panel Protector, Kit Installation, as applicable, for general condition.
- ii. Perform a General Inspection on the Pylon Panel Protector, Kit, and/or FWD Pylon Panel Protector, Kit Installation, as applicable, for proper security.

Scheduled Inspections

2. 100 Hour/12 Month Inspections

Data Reference: Section 3: Installation and Removal Instructions
Section 4: Illustrated Parts Breakdown

- I. Perform a Detailed Inspection on all items to ensure proper security.
- II. Perform a Detailed Inspection on all fasteners/hardware to ensure proper security/torque.
- III. Perform a Detailed Inspection on all items/materials to ensure proper integrity.
- IV. Perform a Detailed Inspection on the Pylon Panel Protector Assy and both the FWD Pylon Panel Protector Upper and Lower Assys to ensure that they are not delaminating.
- V. Perform a Detailed Inspection on all surfaces in locations with anti-fretting Velcro applied to ensure no damage has occurred to the honeycomb panel.

Repair Procedures

1. Repairs to the item(s) referenced within this document are **not** permitted. Contact Alpine Aerotech LP for further information if repairs are required to the item(s) referenced within this document.

Section 3: Installation & Removal Instructions

Weight & Balance

<u>Part Number</u>	<u>Description</u>	<u>Weight</u>	<u>Long. Arm</u>	<u>Lat. Arm</u>
AAL-212-040-901	Pylon Panel Protector, Kit	5.850*	146.813	.00
		2.653 (Kg)	3.729 (m)	.00 (m)
AAL-212-080-001	FWD Pylon Panel Protector, Kit	2.682*	128.803	.00
		1.216 (Kg)	3.272 (m)	.00 (m)

* Total increase in weight to aircraft.

General Notes

1. All Installation Instructions shall be accomplished in accordance with (IAW) standard aircraft practices. Refer to the current revision of the FAA manuals AC 43.13-1B and AC 43.13-2B for details on standard aircraft practices.
2. All Fasteners shall be torqued to standard aircraft specifications, unless otherwise specified. Refer to the current revision of the FAA manuals AC 43.13-1B and AC 43.13-2B for details on standard torque specifications.
3. All Dimensions are in imperial measures (inches/pounds).
4. Refer to Section 2: Maintenance Manual Supplement for instructions on maintenance for the item(s) referenced within this section.
5. Refer to the Section 4: Illustrated Parts Breakdown for the part numbers of the item(s) referenced within this section.

Installation Notes

 Typical item number for all like items in this view unless otherwise specified.

Pylon Panel Protector Installation Instructions

NOTE: LHS installation shown, RHS opposite.

1. Gain access to the existing pylon panel. Reference Figure 1.

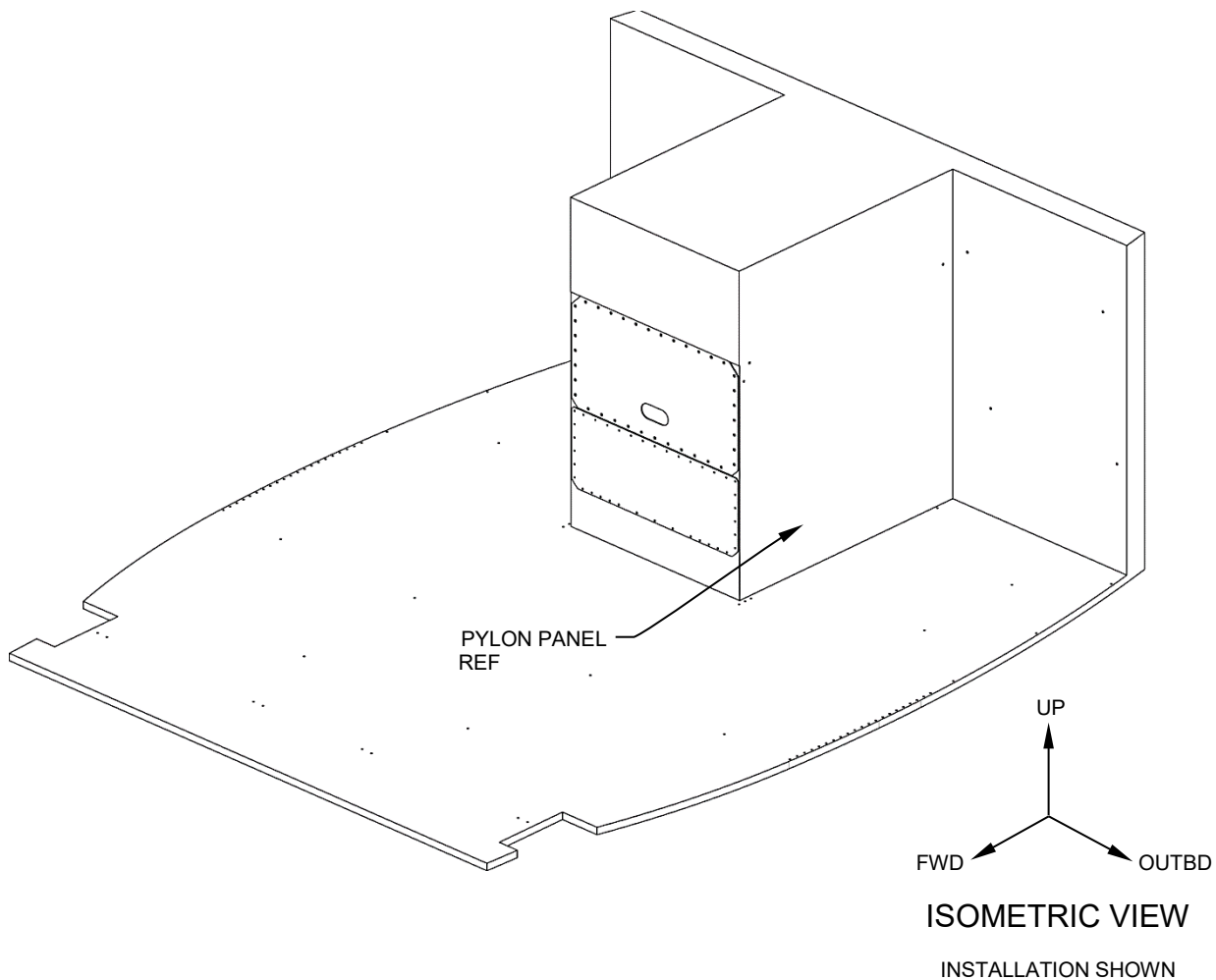
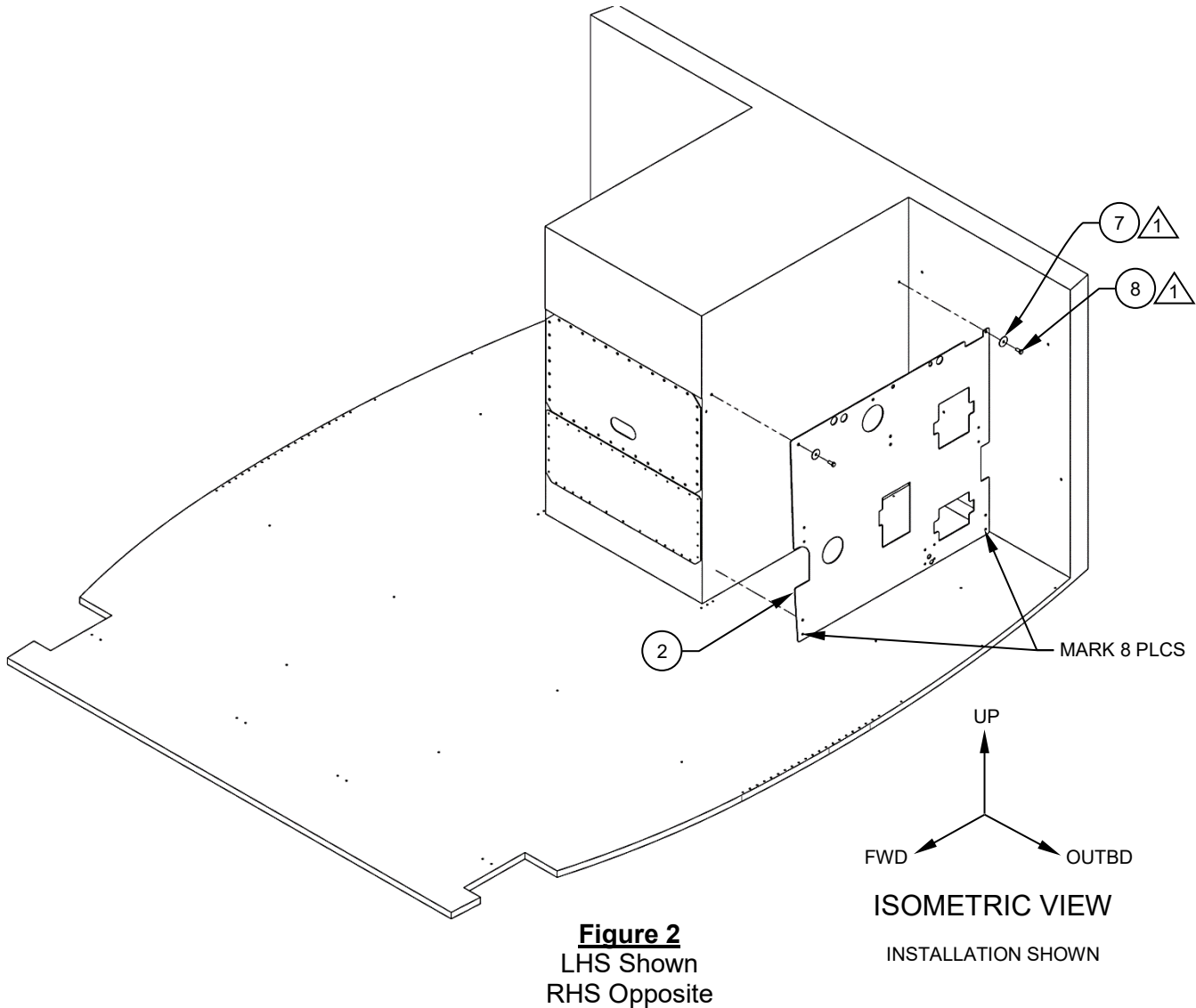


Figure 1
LHS Shown
RHS Opposite

Pylon Panel Protector Installation Instructions (cont.)

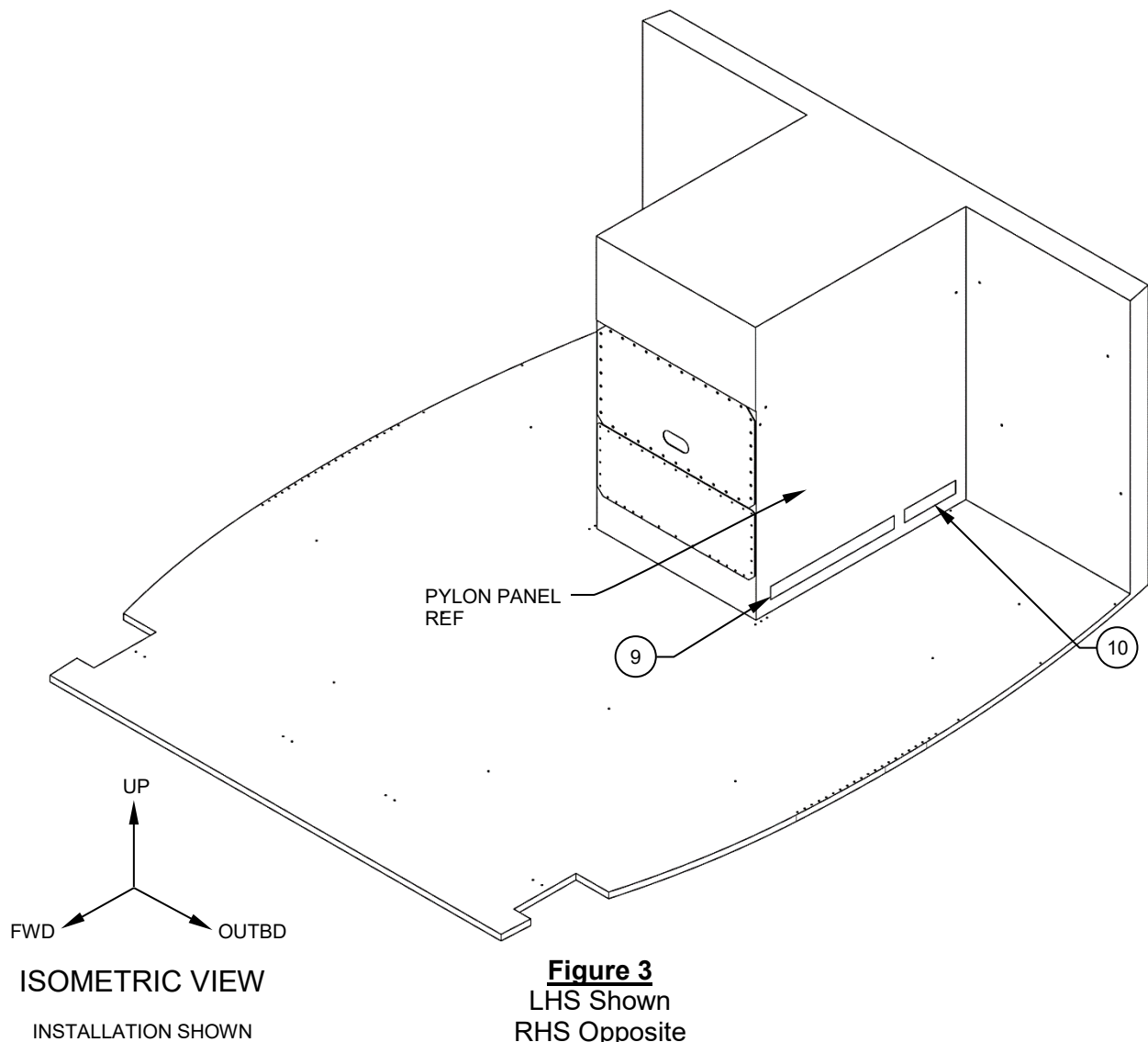
2. Remove any existing fasteners from coordinating inserts. Reference Figure 2.
3. Pre-fit the LHS Pylon Panel Protector, Assy (Item 2), with respect to the coordinating inserts. Temporarily install using supplied hardware, (Items 7 & 8). Reference Figure 2.



4. With the Pylon Panel Protector, Assy (Item 2) lined up use the pre-cut .25 holes and a felt pen to mark out the locations for the Velcro®, Details (Items 9 & 10) and remove the Pylon Panel Protector, Assy (Item 2). Reference Figure 2.

Pylon Panel Protector Installation Instructions (cont.)

5. Clean the areas between the felt pen marks with alcohol taking care not to wipe away the felt pen marks.
6. Individually peel each Velcro®, Detail (Items 9 & 10) off of the LHS Pylon Panel Protector, Assy (Item 2) and peel the paper off the adhesive backing.
7. Using the felt pen marks as reference points, apply the Velcro®, Details (Items 9 & 10) to the pylon panel in their respective locations. Reference Figure 3. Apply adequate pressure to ensure a secure bond.



Pylon Panel Protector Installation Instructions (cont.)

8. Re-install the LHS Pylon Panel Protector, Assy (Item 2), using supplied hardware, (Items 7 & 8). Reference Figure 2.
9. Installation complete.
10. Perform a General Inspection of all items to ensure proper installation.
11. Update the aircraft logbook for the installation of the Pylon Panel Protector, Kit.

FWD Pylon Panel Protector Installation Instructions

1. Gain access to the pylon panel. Reference Figure 1 and 4.
2. Remove the existing fasteners from the specified locations on the panel. Reference Figure 4.

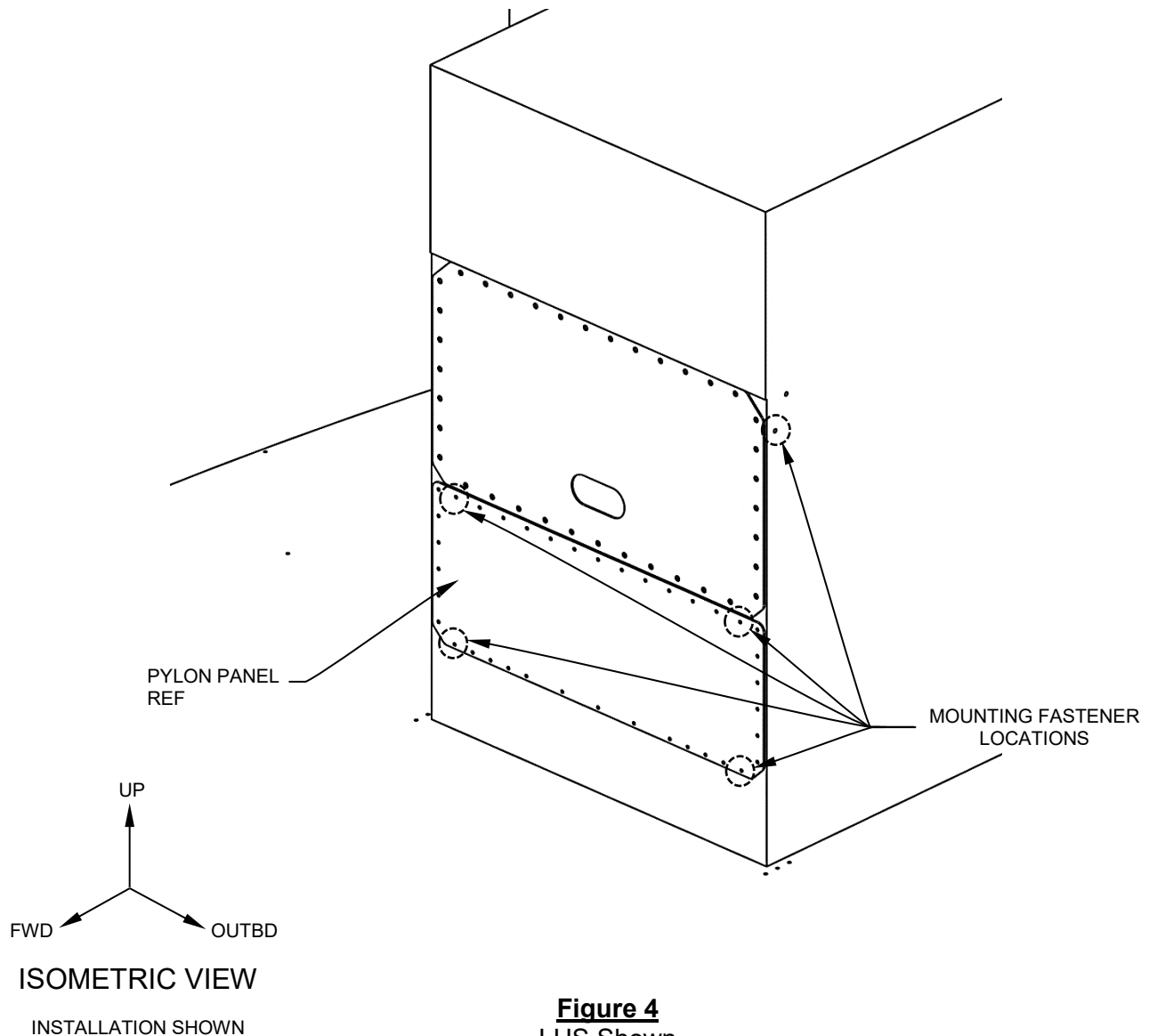


Figure 4
LHS Shown
RHS Opposite

FWD Pylon Panel Protector Installation Instructions (cont.)

3. Pre-fit the FWD Pylon Panel Protector, Upper and Lower Assys (Items 21 & 39), with respect to the mounting fastener locations and the inspection window on the structural panel. Ensure the inspection window is located on the center of the cut-out. Temporarily install using supplied Clip, Assys (Items 27 & 30) and hardware, (Items 33 – 38). Reference Figure 5.

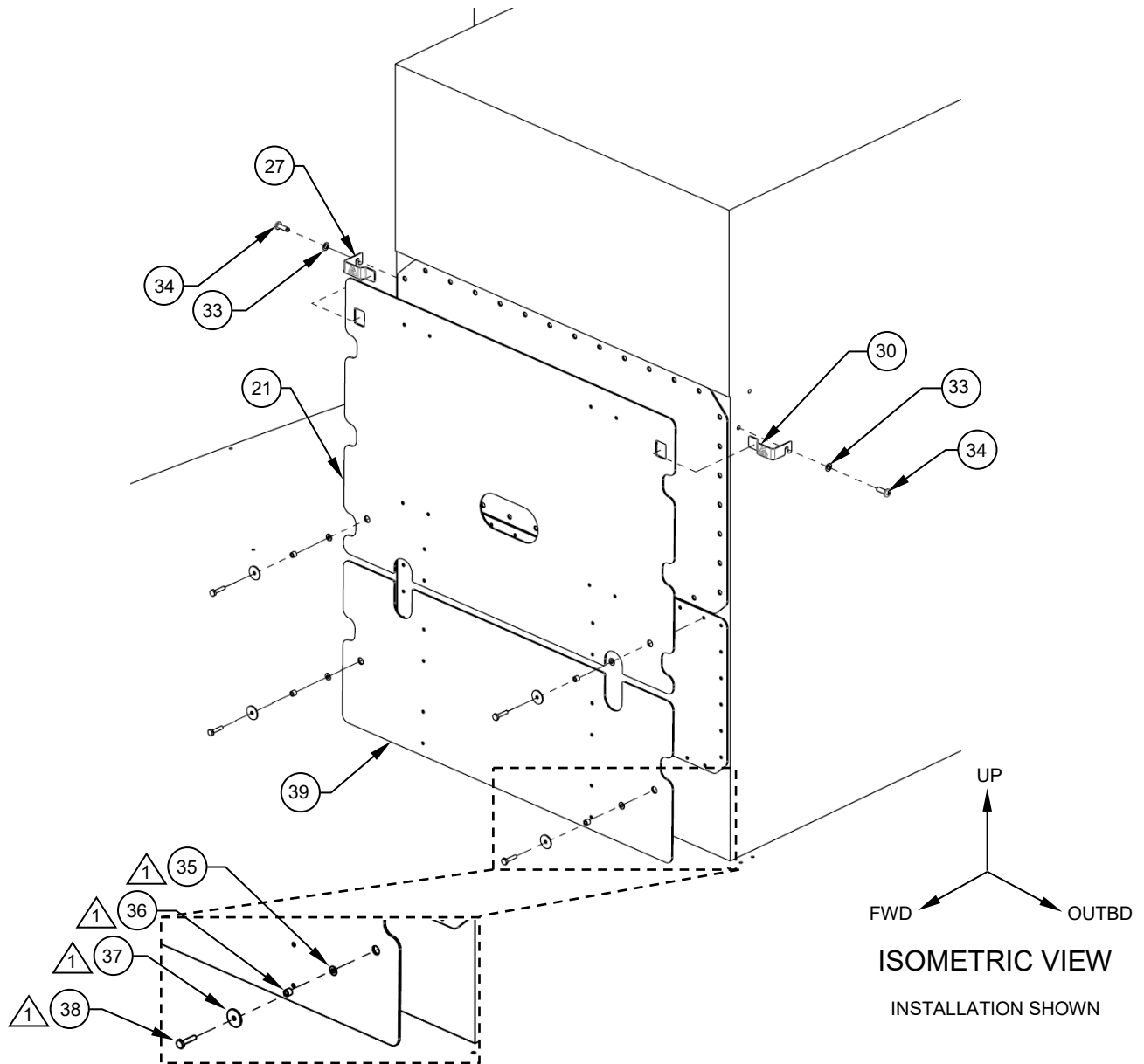


Figure 5

FWD Pylon Panel Protector Installation Instructions (cont.)

4. With the FWD Pylon Panel Protector, Upper and Lower Assys (Items 21 & 39) lined up use the pre-cut .20" holes and a felt pen to mark out the locations for the Velcro®, Details (Items 25 & 26) and remove the FWD Pylon Panel Protector, Upper and Lower Assys (Items 21 & 39). Reference Figure 5.
5. Clean the areas between the felt pen marks with alcohol taking care not to wipe away the felt pen marks.
6. Individually peel each Velcro®, Detail (Items 25 & 26) off of the FWD Pylon Panel Protector, Upper and Lower Assy (Items 21 & 39) and peel the paper off the adhesive backing.
7. Using the felt pen marks as reference points, apply the Velcro®, Details (Items 25 & 26) to the pylon panel in their respective locations. Reference Figure 6. Apply adequate pressure to ensure a secure bond.

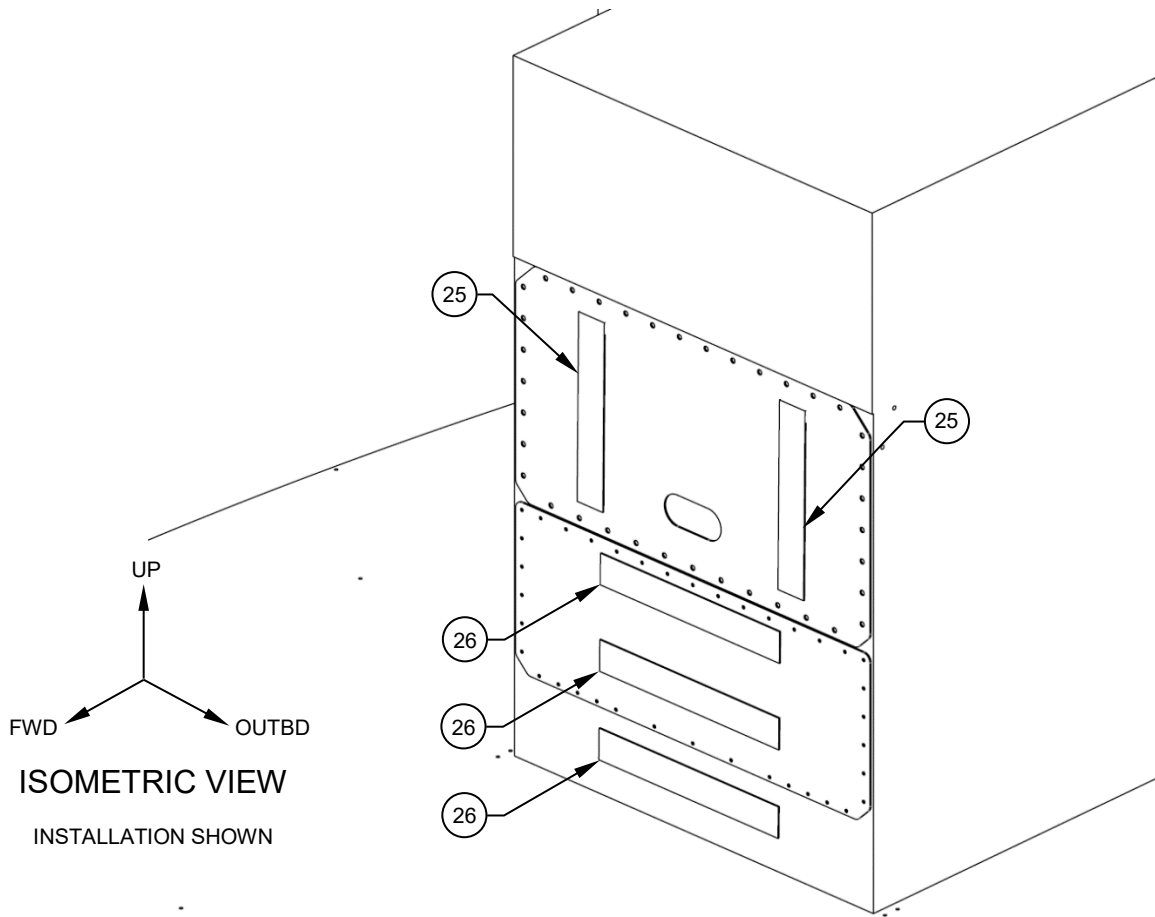


Figure 6

FWD Pylon Panel Protector Installation Instructions (cont.)

8. Re-install the FWD Pylon Panel Protector, Upper and Lower Assys (Item 21 & 39), using supplied Clip, Assy (Items 27 & 30) and hardware, (Items 33 – 38). Reference Figure 5.
9. Installation complete.
10. Perform a General Inspection of all items to ensure proper installation.
11. Update the aircraft logbook for the installation of the FWD Pylon Panel Protector, Kit.

Removal Instructions

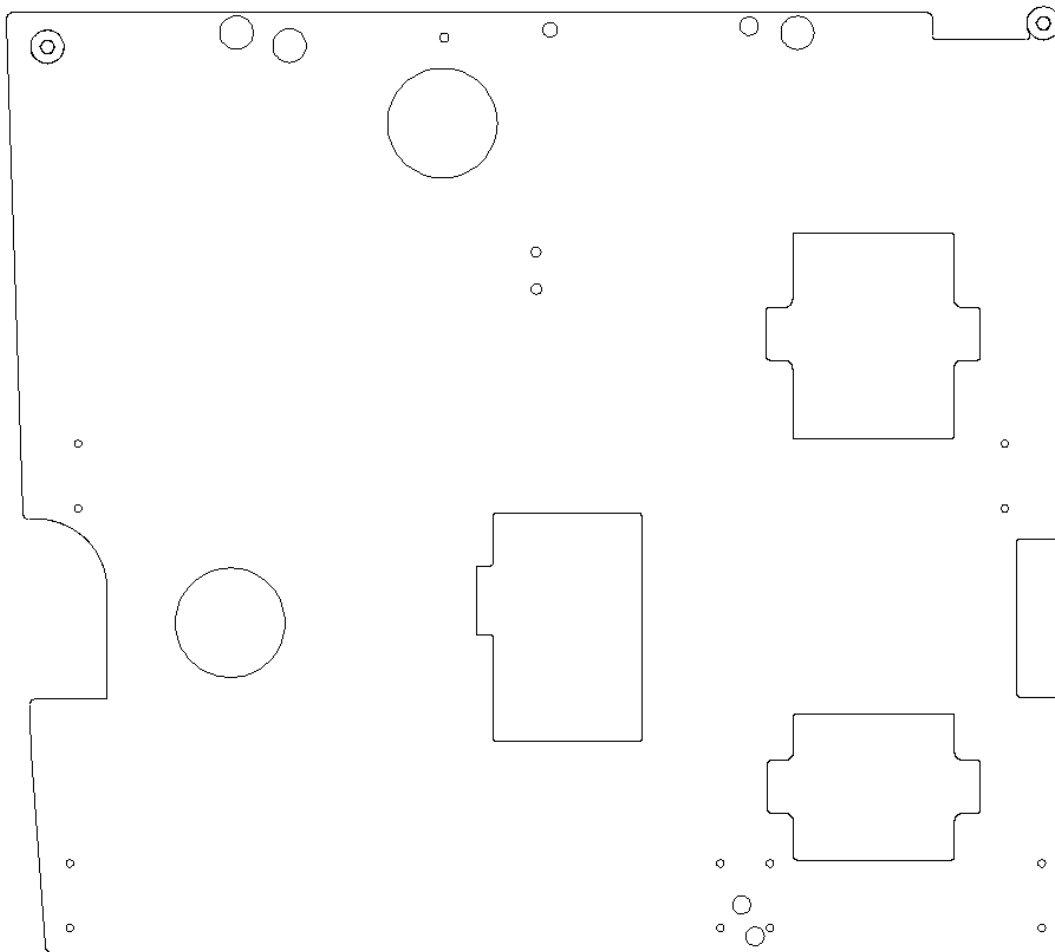
1. As there are no special considerations or additional steps to remove the Pylon Panel Protector, Kit and FWD Pylon Panel Protector, Kit for either inspections, or mission configuration, the removal of these kits can be considered the opposite of installation.
2. Perform a General Inspection of all items to ensure proper removal.
3. Update the aircraft logbook for the removal of the Pylon Panel Protector, Kit and/or the FWD Pylon Panel Protector, Kit, as applicable.

Section 4: Illustrated Parts Breakdown

General Notes

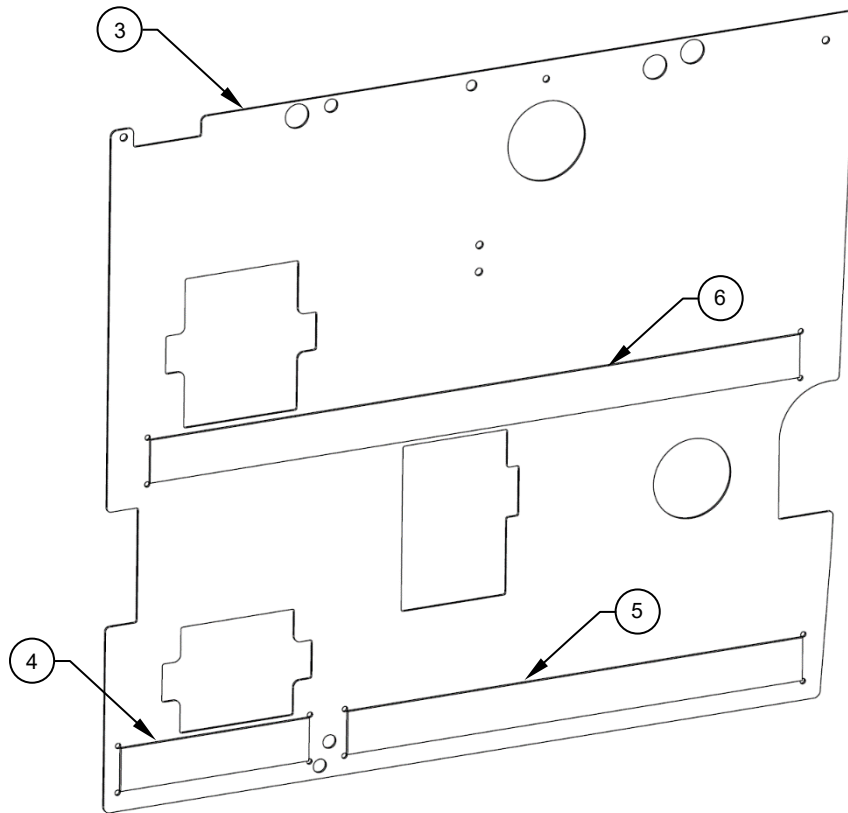
1. Alternate items listed.

 Typical item number for all like items in this view unless otherwise specified.

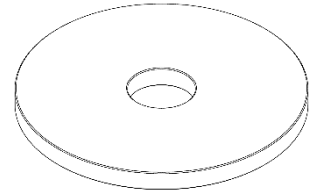


LHS Pylon Panel Protector, Kit Shown
Item 1

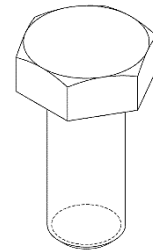
Illustrated Parts Breakdown (cont.)



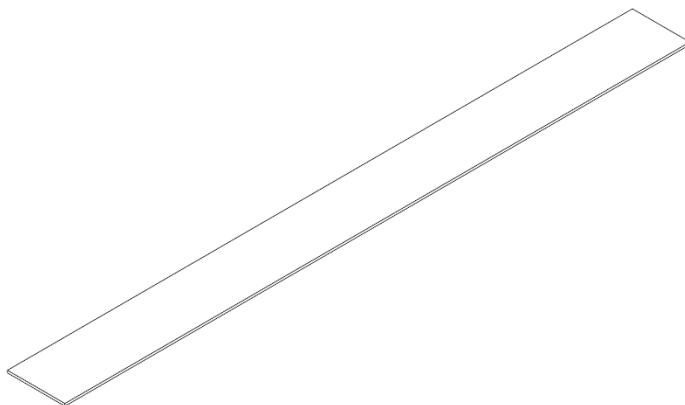
LHS Pylon Panel Protector, Assy Shown
Item 2



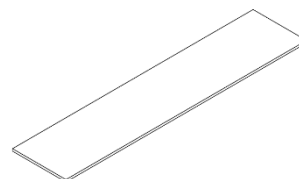
Washer, Flat Shown
Items 7 & 17



Bolt, Machine Shown
Items 8 & 18

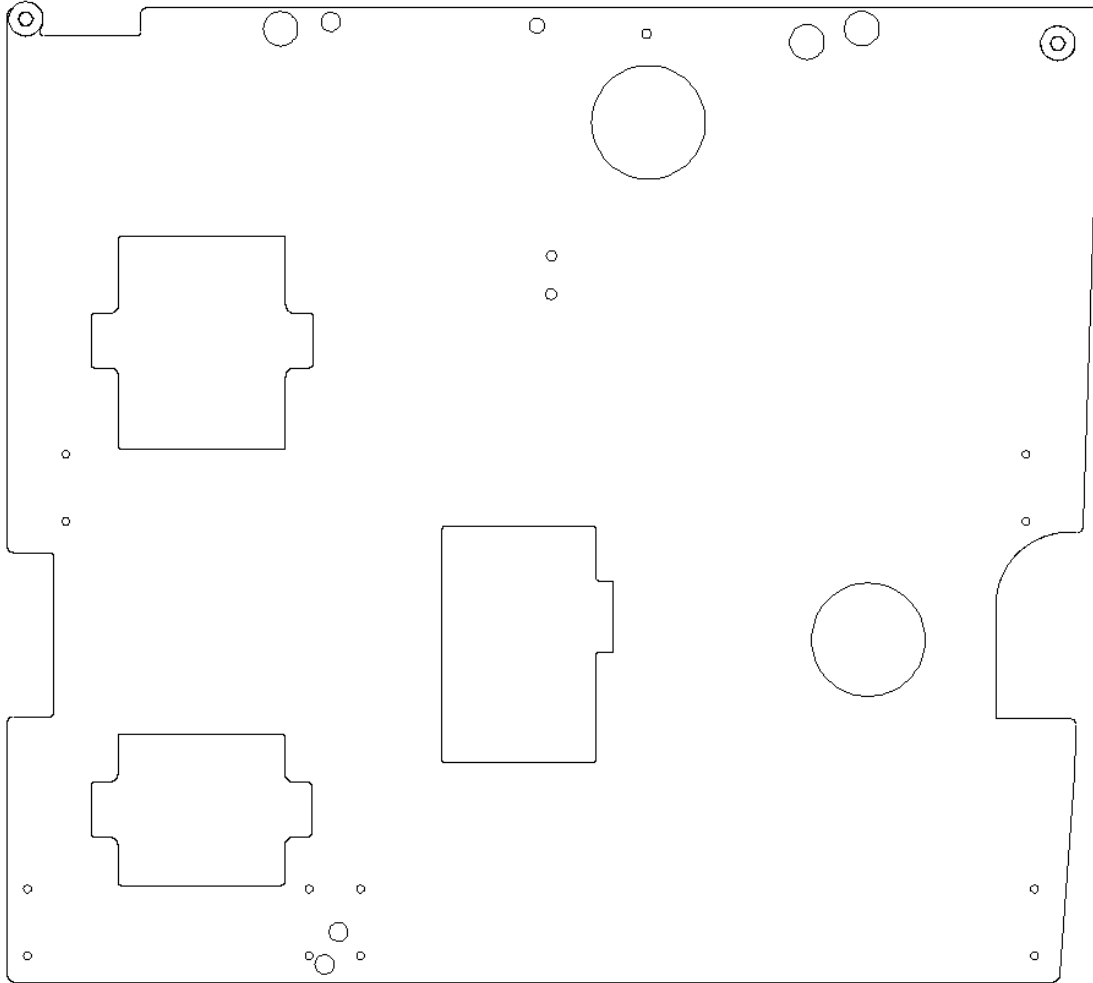


Velcro, Detail Shown
Items 9 & 19



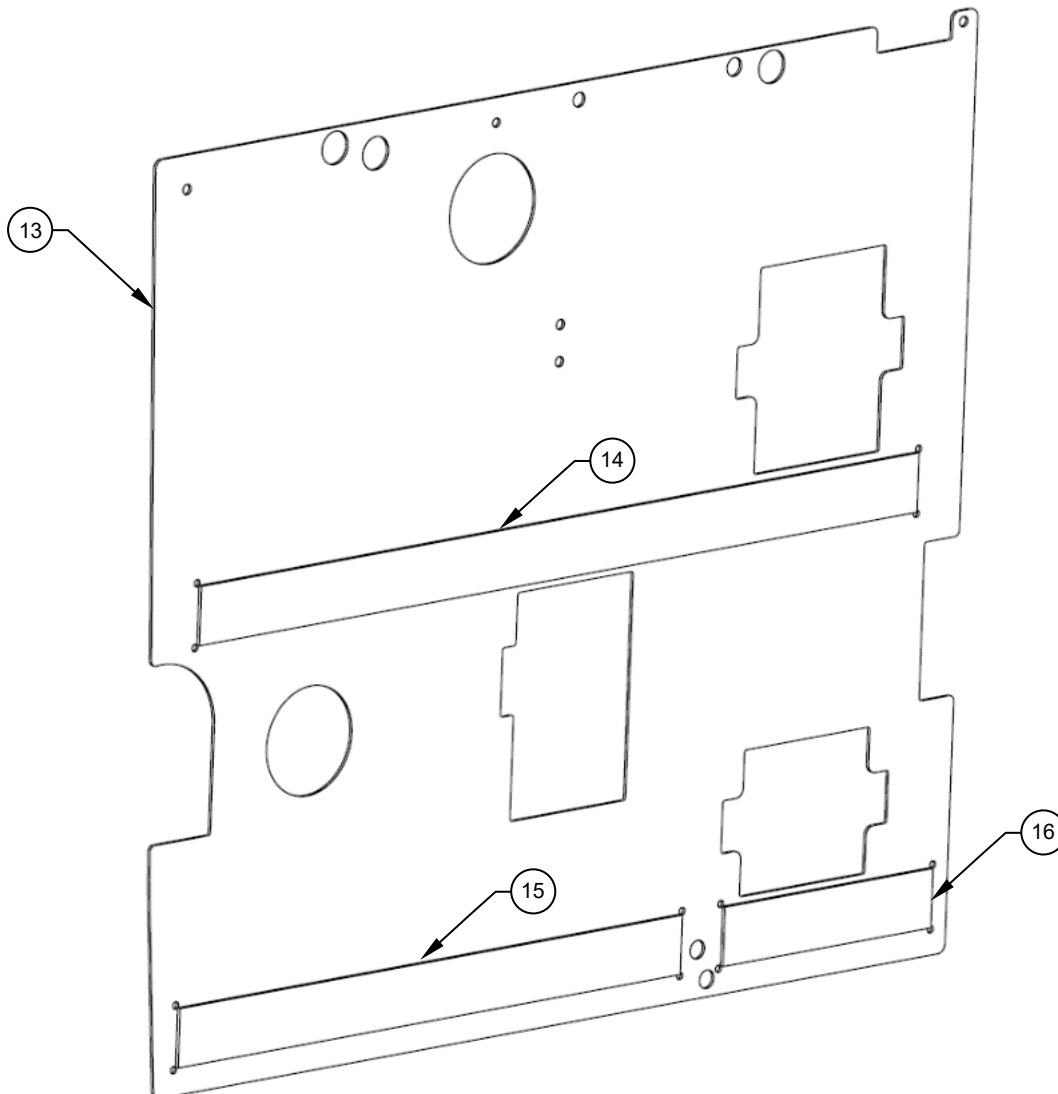
Velcro, Detail Shown
Items 10 & 20

Illustrated Parts Breakdown (cont.)



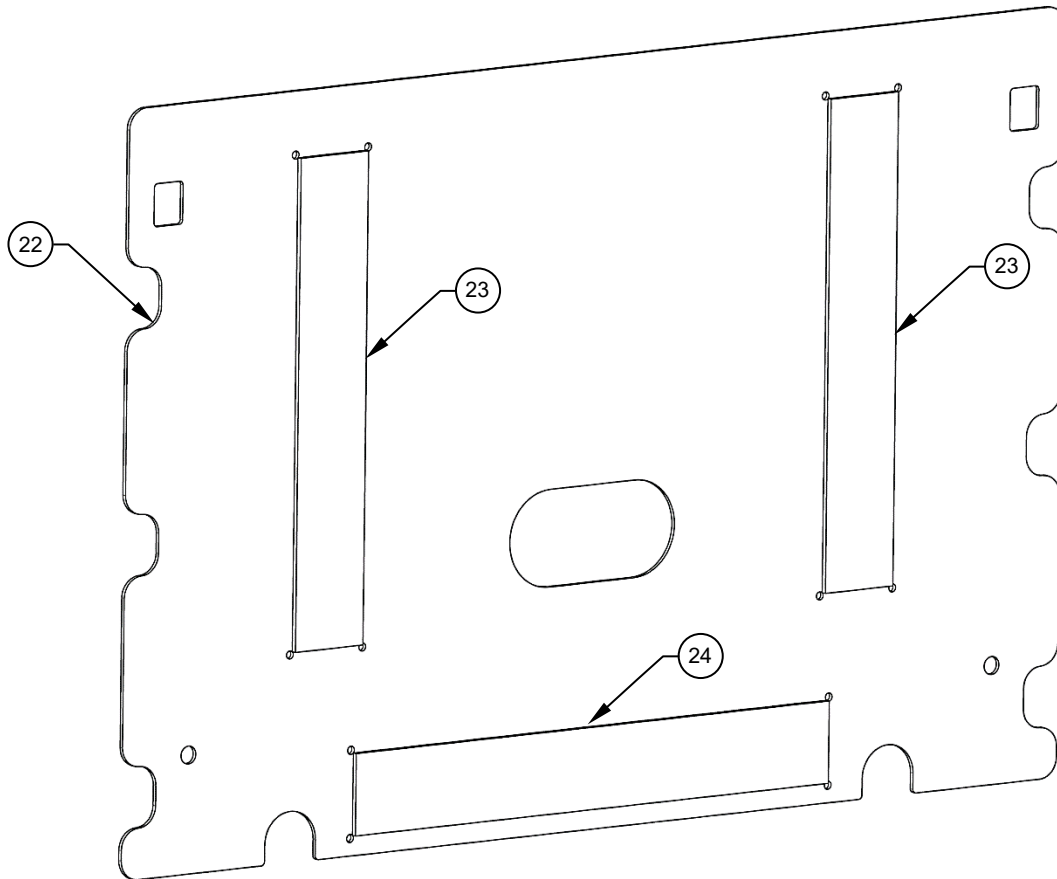
RHS Pylon Panel Protector, Kit Shown
Item 11

Illustrated Parts Breakdown (cont.)

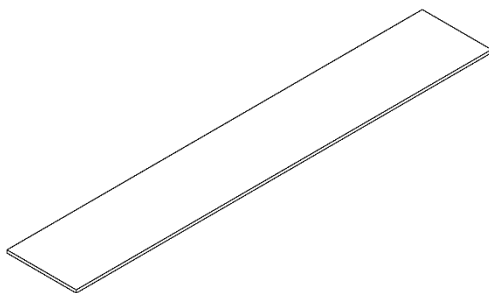


RHS Pylon Panel Protector, Assy Shown
Item 12

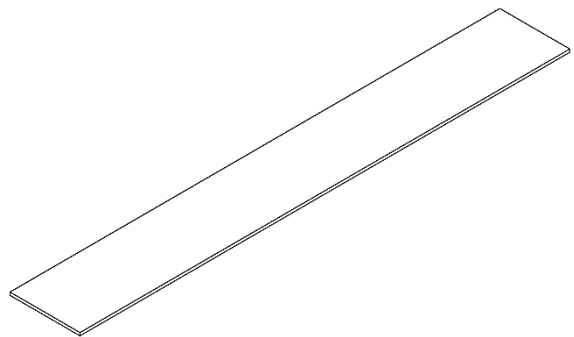
Illustrated Parts Breakdown (cont.)



FWD Pylon Panel Protector, Upper, Assy Shown
Item 21

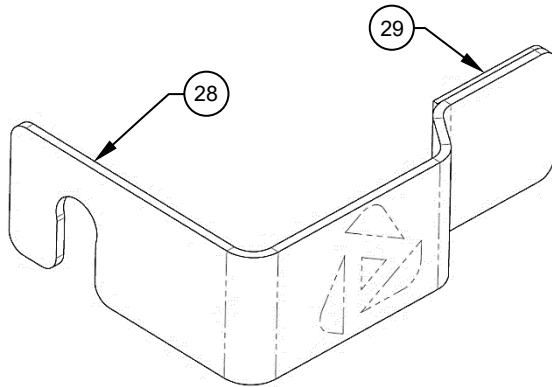


Velcro, Detail Shown
Item 25

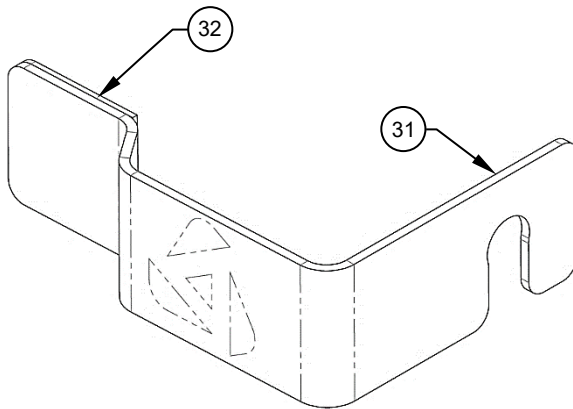


Velcro, Detail Shown
Item 26

Illustrated Parts Breakdown (cont.)



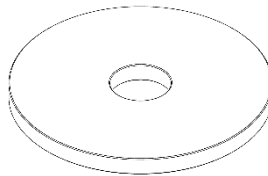
Clip, Assy, RHS Shown
Item 27



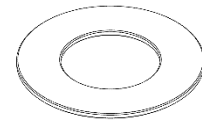
Clip, Assy, LHS Shown
Item 30



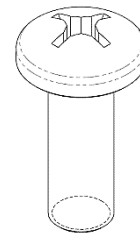
Bushing, Plain Shown
Item 36



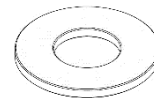
Washer, Flat Shown
Item 37



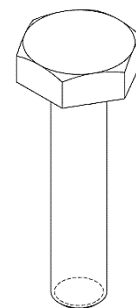
Washer, Flat Shown
Item 33



Screw, Machine Shown
Item 34

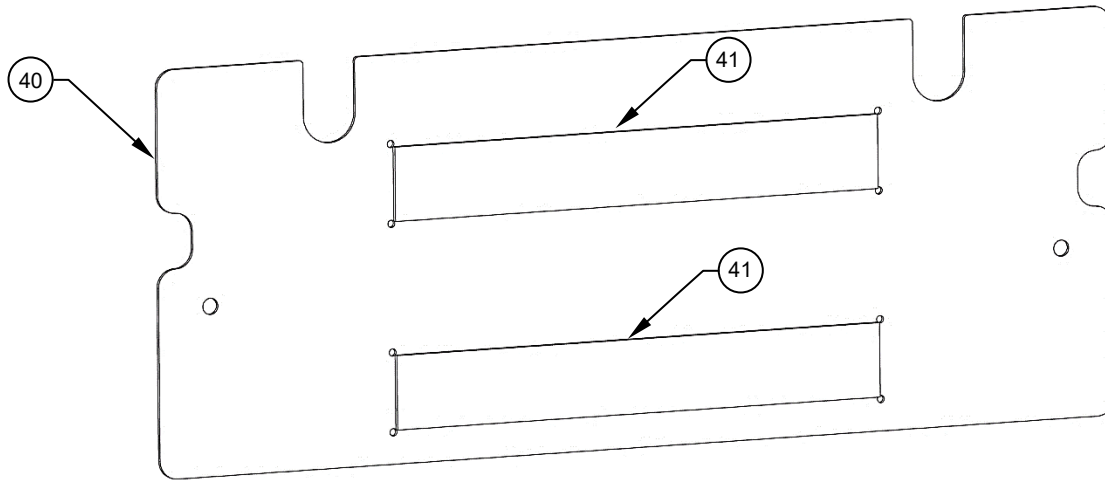


Washer, Flat Shown
Item 35



Bolt, Machine Shown
Item 38

Illustrated Parts Breakdown (cont.)



FWD Pylon Panel Protector, Lower, Assy Shown
Item 39

Illustrated Parts Breakdown (cont.)

ITEM	QTY	NUMBER	DESCRIPTION	MATERIAL	STOCK SIZE	SPEC	FINISH	MANUFACTURER	NCAGE C
-	-	AAL-212-040-901	PYLON PANEL PROTECTOR, KIT	C/O SHADED ITEMS ONLY					
1	1	AAL-212-040-001	LHS PYLON PANEL PROTECTOR, KIT	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
2	1	AAL-212-041-001	LHS PYLON PANEL PROTECTOR, ASSY	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
3	1	AAL-212-042-001	PYLON PANEL PROTECTOR, DETAIL	TEGRIS	0.1	SEE MFR	SEE MFR	ALPINE AEROTECH LP	L0171
4	1	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 X 9.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153
5	1	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 X 21.75	SEE MFR	SEE MFR	VELCRO USA INC.	11153
6	1	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 X 31.066	SEE MFR	SEE MFR	VELCRO USA INC.	11153
7	2	AN970-5	WASHER, FLAT	SEE SPEC	SEE SPEC	AN970	SEE SPEC	SOURCE AS REQUIRED	NA
8	2	AN5-5A	BOLT, MACHINE	SEE SPEC	SEE SPEC	NASM3THRU20	SEE SPEC	SOURCE AS REQUIRED	NA
9	1	151405	VELCRO, DETAIL	HOOK 88, BLACK 8224	2 X 21.75	SEE MFR	SEE MFR	VELCRO USA INC.	11153
10	1	151405	VELCRO, DETAIL	HOOK 88, BLACK 8224	2 X 9.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153
11	1	AAL-212-040-002	RHS PYLON PANEL PROTECTOR, KIT	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
12	1	AAL-212-041-002	RHS PYLON PANEL PROTECTOR, ASSY	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
13	1	AAL-212-042-001	PYLON PANEL PROTECTOR, DETAIL	TEGRIS	0.1	SEE MFR	SEE MFR	ALPINE AEROTECH LP	L0171
14	1	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 X 31.066	SEE MFR	SEE MFR	VELCRO USA INC.	11153
15	1	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 X 21.75	SEE MFR	SEE MFR	VELCRO USA INC.	11153
16	1	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 X 9.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153
17	2	AN970-5	WASHER, FLAT	SEE SPEC	SEE SPEC	AN970	SEE SPEC	SOURCE AS REQUIRED	NA
18	2	AN5-5A	BOLT, MACHINE	SEE SPEC	SEE SPEC	NASM3THRU20	SEE SPEC	SOURCE AS REQUIRED	NA
19	1	151405	VELCRO, DETAIL	HOOK 88, BLACK 8224	2 X 21.75	SEE MFR	SEE MFR	VELCRO USA INC.	11153
20	1	151405	VELCRO, DETAIL	HOOK 88, BLACK 8224	2 X 9.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153

Illustrated Parts Breakdown (cont.)

ITEM	QTY	NUMBER	DESCRIPTION	MATERIAL	STOCK SIZE	SPEC	FINISH	MANUFACTURER	NCAG EC
-	-	AAL-212-080-001	FWD PYLON PANEL PROTECTOR, KIT	C/O SHADED ITEMS ONLY					
21	1	AAL-212-081-001	FWD PYLON PANEL PROTECTOR, UPPER, ASSY	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
22	1	AAL-212-082-001	FWD PYLON PANEL PROTECTOR, UPPER, DETAIL	P2C W/TUFFCOAT B/SIDES	.100"	SEE MFR	SEE MFR	ALPINE AEROTECH LP	L0171
23	2	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 X 12.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153
24	1	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 x 14.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153
25	2	151405	VELCRO, DETAIL	HOOK 88, BLACK 8289 PSA	2 x 12.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153
26	3	151405	VELCRO, DETAIL	HOOK 88, BLACK 8224 PSA	2 x 14.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153
27	1	AAL-212-081-002	CLIP, ASSY, RHS	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
28	1	AAL-212-082-002	CLIP, DETAIL, RHS	301 1/2 HARD SS	.050"	AMS 5518	SEE SPEC	ALPINE AEROTECH LP	L0171
29	1	PTFE Glass Cloth Tape - 5453	PTFE GLASS CLOTH TAPE	PTFE	.500"	SEE MFR	SEE MFR	3M	76381
30	1	AAL-212-081-003	CLIP, ASSY, LHS	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
31	1	AAL-212-082-003	CLIP, DETAIL, LHS	301 1/2 HARD SS	.050"	AMS 5518	SEE SPEC	ALPINE AEROTECH LP	L0171
32	1	PTFE Glass Cloth Tape - 5453	PTFE GLASS CLOTH TAPE	PTFE	.500"	SEE MFR	SEE MFR	3M	76381
33	2	NAS1149F0416P	WASHER, FLAT	SEE SPEC	SEE SPEC	NAS1149	SEE SPEC	SOURCE AS REQUIRED	NA
34	2	MS27039-4-11	SCREW, MACHINE	SEE SPEC	SEE SPEC	NASM27039	SEE SPEC	SOURCE AS REQUIRED	NA
35	4	NAS1149F0332P	WASHER, FLAT	SEE SPEC	SEE SPEC	NAS1149	SEE SPEC	SOURCE AS REQUIRED	NA
36	4	NAS75-3-009	BUSHING, PLAIN	SEE SPEC	SEE SPEC	NAS75	SEE SPEC	SOURCE AS REQUIRED	NA
37	4	AN970-3	WASHER, FLAT	SEE SPEC	SEE SPEC	AN970	SEE SPEC	SOURCE AS REQUIRED	NA
38	4	AN3-7A	BOLT, MACHINE	SEE SPEC	SEE SPEC	NASM3THRU20	SEE SPEC	SOURCE AS REQUIRED	NA
39	1	AAL-212-081-004	FWD PYLON PROTECTION PANEL, LOWER, ASSY	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
40	1	AAL-212-082-004	FWD PYLON PANEL PROTECTOR, LOWER, DETAIL	P2C W/TUFFCOAT B/SIDES	.100"	SEE MFR	SEE MFR	ALPINE AEROTECH LP	L0171
41	2	151394	VELCRO, DETAIL	LOOP 1000, BLACK, 8224 PSA	2 x 14.00	SEE MFR	SEE MFR	VELCRO USA INC.	11153