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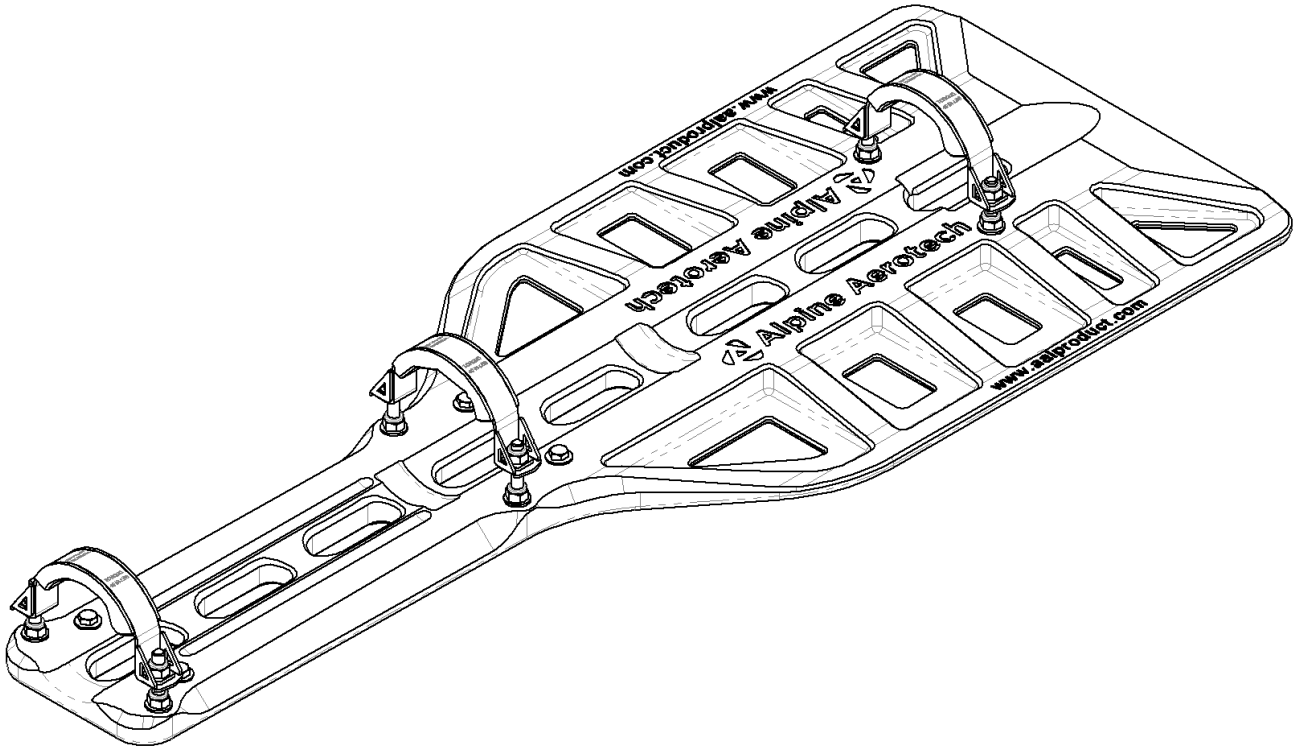


# BEAR PAW, KIT
# INSTRUCTIONS FOR CONTINUING AIRWORTHINESS

## MODELS: BELL 505

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

The following information provides a functional description of the Bear Paw, Kit as defined in Alpine Aerotech LP authority dataset AAL-390-020-001.

- In soft terrain landing situations (i.e. tundra, snow and sand) where the skid tubes can sink into the landing area, balancing issues can occur and in rare cases the tail rotor can strike the ground.

- When installed, the Bear Paw, Kit provides additional flotation to the skid gear AFT of the aircraft's C of G, therefore increasing stability and decreasing the potential of a tail rotor strike.

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## 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 revision of the BHT 505 Maintenance Manual for the chapter(s) and section(s) referenced within this document.

3. 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.

4. Scheduled inspection for the item(s) referenced within this document shall be accomplished in accordance with (IAW) the Inspection Procedures specified.

5. Repair allowances for the item(s) referenced within this document shall be accomplished IAW the Repair Procedures specified.

6. Limitations for the item(s) referenced within this document are IAW the Airworthiness Limitations specified.

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## 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 BHT 505 Maintenance Manual,**
**Chapter 04, Worthiness Limitations**

Notes

1. Refer to the applicable BHT 505 Maintenance Manual, Chapter 04 - Worthiness Limitations, 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.

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## Inspection Procedures

**Supplement to applicable BHT 505 Maintenance Manual,**
**Chapter 05, Scheduled/Unscheduled Maintenance**

Notes

1. Refer to the applicable BHT 505 Maintenance Manual, Chapter 05 - Scheduled/Unscheduled Maintenance as applicable, 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 300 Hour/12 Month Inspections.

5. Perform 300 Hour/12 Month Inspections every 300 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.

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Scheduled Inspections

1. Daily Inspections

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

   i. Perform a General Inspection on all items in the Bear Paw, Kit for general condition.

   ii. Perform a General Inspection on all items in the Bear Paw, Kit for proper security.

2. 300 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, materials and finishes in the Bear Paw, Kit for evidence of corrosion, cracks and damage.

   ii. Perform a Detailed Inspection on all items in the Bear Paw, Kit for evidence of excessive wear.

   iii. Perform a Detailed Inspection on all items, materials and finishes in the Bear Paw, Kit for proper integrity and condition.

   iv. Perform a Detailed Inspection on all hardware and fasteners in the Bear Paw, Kit for proper security and torque.

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## 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.

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## Section 3 Installation & Removal Instructions

### Applicability

The Bear Paw, Kit (AAL-390-020-001) is applicable to all serial numbers.

### Weight & Balance

| Part Number | Description | Weight | Long. Arm | Lat. Arm |
|---|---|---|---|---|
| AAL-390-020-001 | Bear Paw, Kit † | 17.99* | 184.232 | .000 |
| | | *8.16 (Kg)* | *4.68 (m)* | *.00 (m)* |
| AAL-390-020-001 | Bear Paw, Kit ‡ | 17.02* | 184.848 | .000 |
| | | *7.72 (Kg)* | *4.70 (m)* | *.00 (m)* |

† Applicable to installations with Grippers (Item 11) and associated hardware
‡ Applicable to installations without Grippers (Item 11) and associated hardware
* 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 Advisory Circular AC 43.13-1 and AC 43.13-2 for details on standard aircraft practices.

2. Torque fasteners IAW the tension type torque limits indicated in the current revision of the FAA Advisory Circular AC 43.13-1, Table 7-1 unless otherwise specified.

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 Section 4: Illustrated Parts Breakdown for the part numbers of the item(s) referenced within this section.

### Installation Notes

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

△2 Apply Threadlocker (Item 15) to threads IAW manufacturer's recommendations (prior to torquing fastener). Torque to 30-35 INCH LBS.

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## Installation Instructions – Common

**NOTE:** LHS installation shown, RHS opposite.

1. Install the Grippers (Item 11) and supplied hardware on the Bear Paw, Detail (Item 1) as shown. Ensure all serrated surfaces on the Grippers are facing down (serrations must be common to the ground). Ensure Threadlocker (Item 15) is applied (mandatory). Torque all Gripper fasteners IAW General Note 2. Reference Figure 1.

   **NOTE:** Installation of Grippers (Item 11) and associated hardware is optional.

   If Grippers are desired, all Grippers (8X) and associated hardware must be installed. Use applicable Weight & Balance data accordingly.

   If Grippers are not desired, all Grippers (8X) and associated hardware must be removed. Use applicable Weight & Balance data accordingly.

   **CAUTION:** Ensure Threadlocker (Item 15) is sufficiently applied to all Gripper fasteners. Omitting threadlocker is not acceptable and will create a non-airworthy installation.

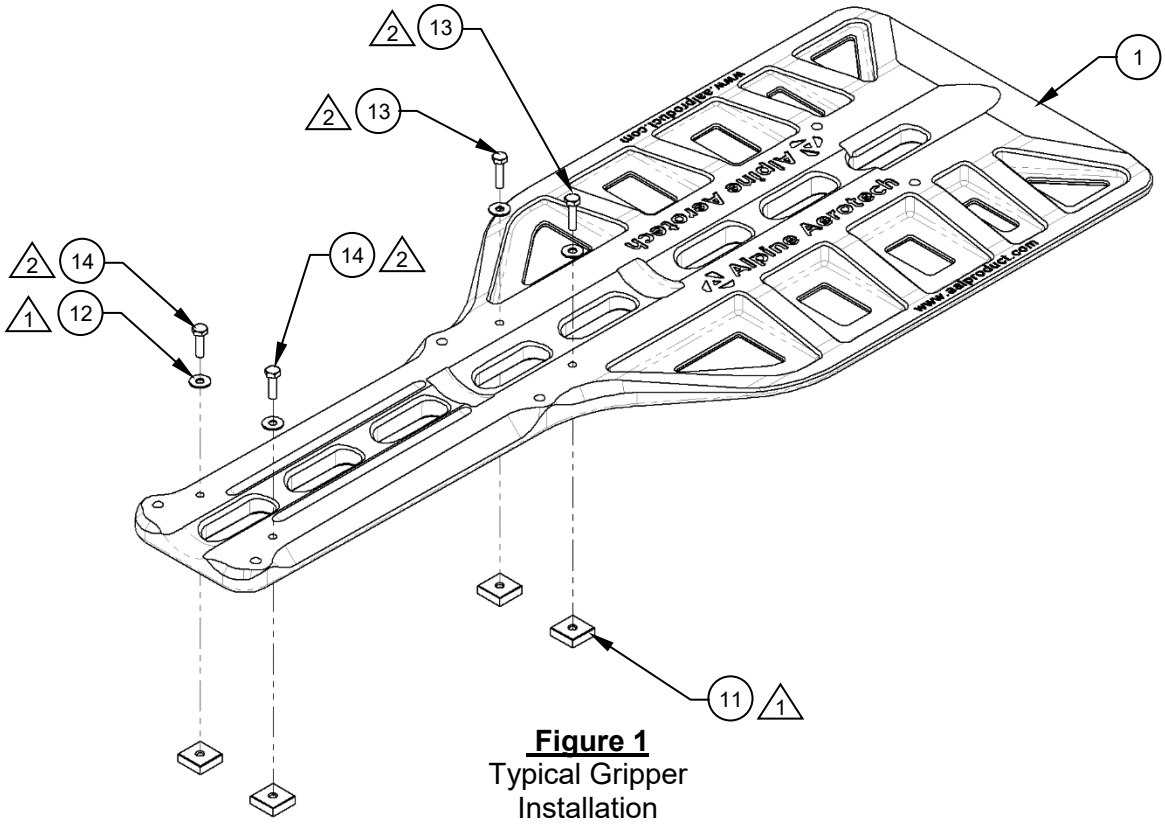


**Figure 1**
Typical Gripper Installation

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**Installation Instructions – Common**

2. Install the supplied hardware on the Bear Paw, Detail (Item 1) as shown. Reference Figure 2.

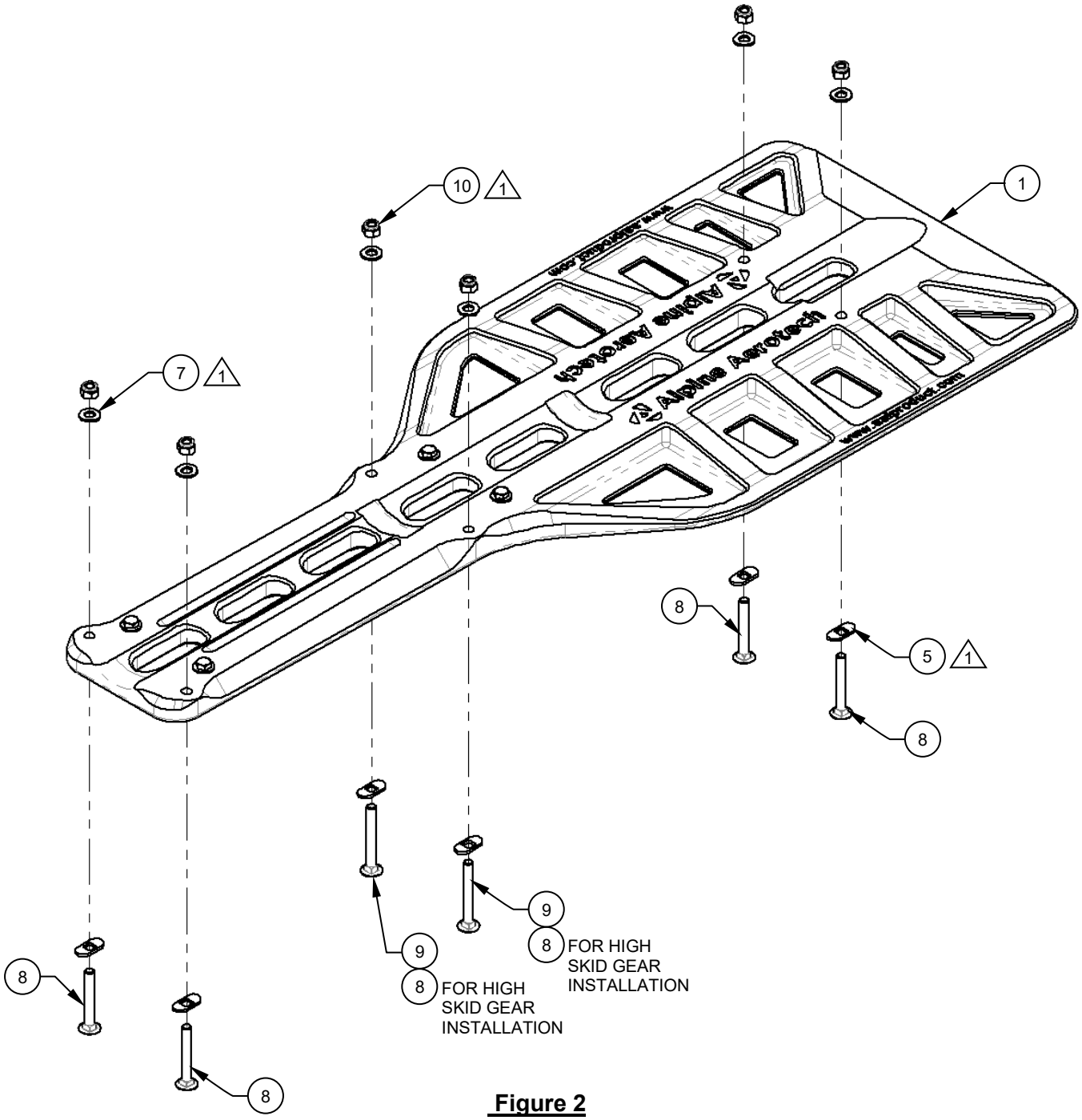


**Figure 2**
Typi cal Hardware
Installation

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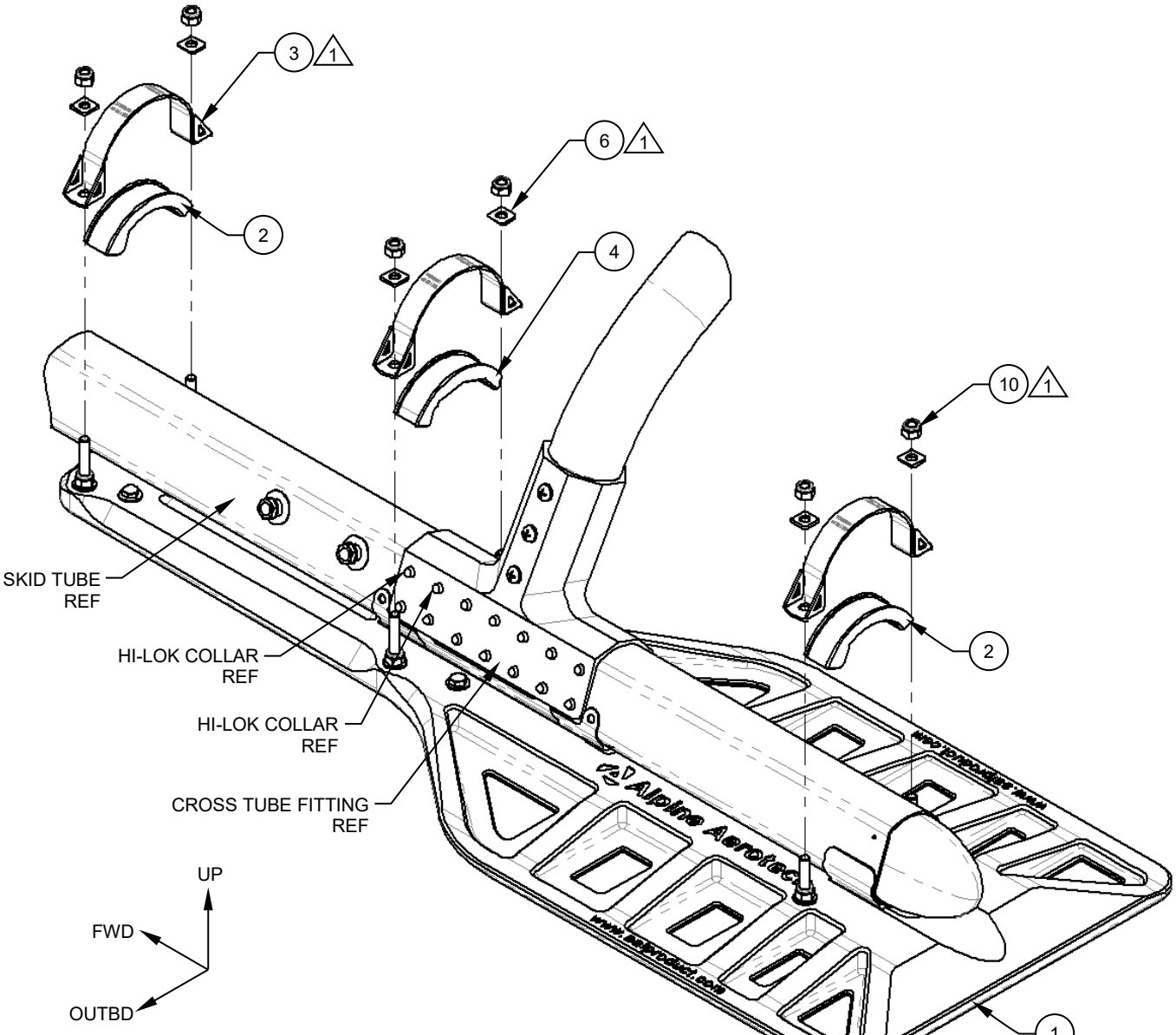
## Installation Instructions – Low Skid Gear

1. Raise the aircraft so the Bear Paw, Detail (Item 1) can be slide under the skid tube. Reference Figure 3.




ISOMETRIC VIEW
LHS INSTALLATION SHOWN

**Figure 3**
LHS Shown
RHS Opposite

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**Installation Instructions – Low Skid Gear**

2. Once the Bear Paw, Detail (Item 1) is under the skid tube in its approximate location, place the Strap, Assys (Item 3) and their respective Cap, Details (Items 2 & 4) on their corresponding bolts. Reference Figure 3.

   **NOTE:** Ensure the Cap, Detail (Item 4) is oriented between the two forward Hi-Lok Collars common to the cross tube fitting.

   **NOTE:** Ensure the Cap, Details (Item 2 & 4) are oriented properly on top of the skid tube and cross tube fitting.

3. Install the supplied Washer (Item 6) and Nut (Item 10) on each bolt. Reference Figure 3.

   **NOTE:** Ensure the radius edge on the Washer (Item 6) is oriented down and towards the skid tube. Reference Figure 4.

   **NOTE:** A “thin-wall” socket may be required to adequately engage the Nut (Item 10).

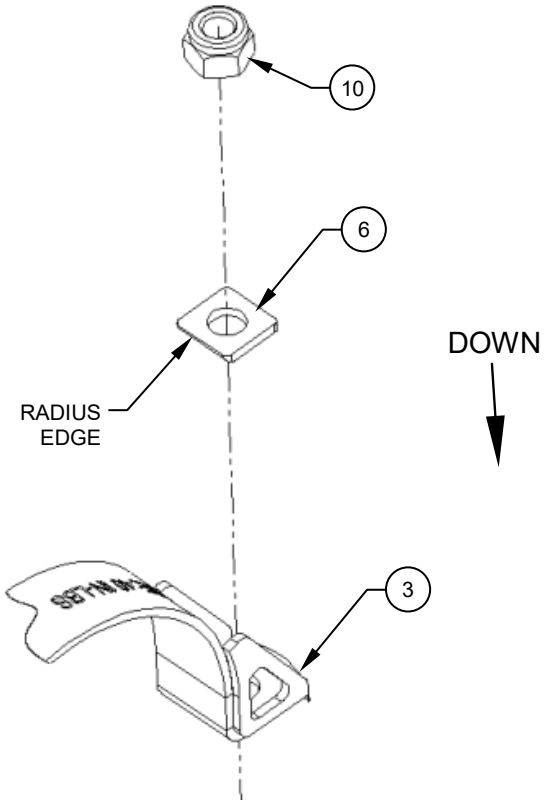


**Figure 4**

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**Installation Instructions – Low Skid Gear**

**CAUTION:** Do **NOT** apply full torque to the fasteners at this stage while the aircraft is raised off the ground. Only apply minimal torque to snug-up the Bear Paw, Detail (Item 1).

4. Lower the aircraft onto the Bear Paw, Details (Item 1) and torque the fasteners equally to 40 in/lbs. Reference Figure 3.

   **CAUTION:** Before applying torque, ensure the Cap, Detail (Item 4) is oriented between the two forward Hi-Lok Collars common to the cross tube fitting. Reference Step 4.

5. Installation complete.

6. Perform a General Inspection of all items to ensure proper installation.

7. Update the aircraft logbook for the installation of the Bear Paw, Kit.

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## Installation Instructions – High Skid Gear

1. Raise the aircraft so the Bear Paw, Detail (Item 1) can be slide under the skid tube. Reference Figure 5.

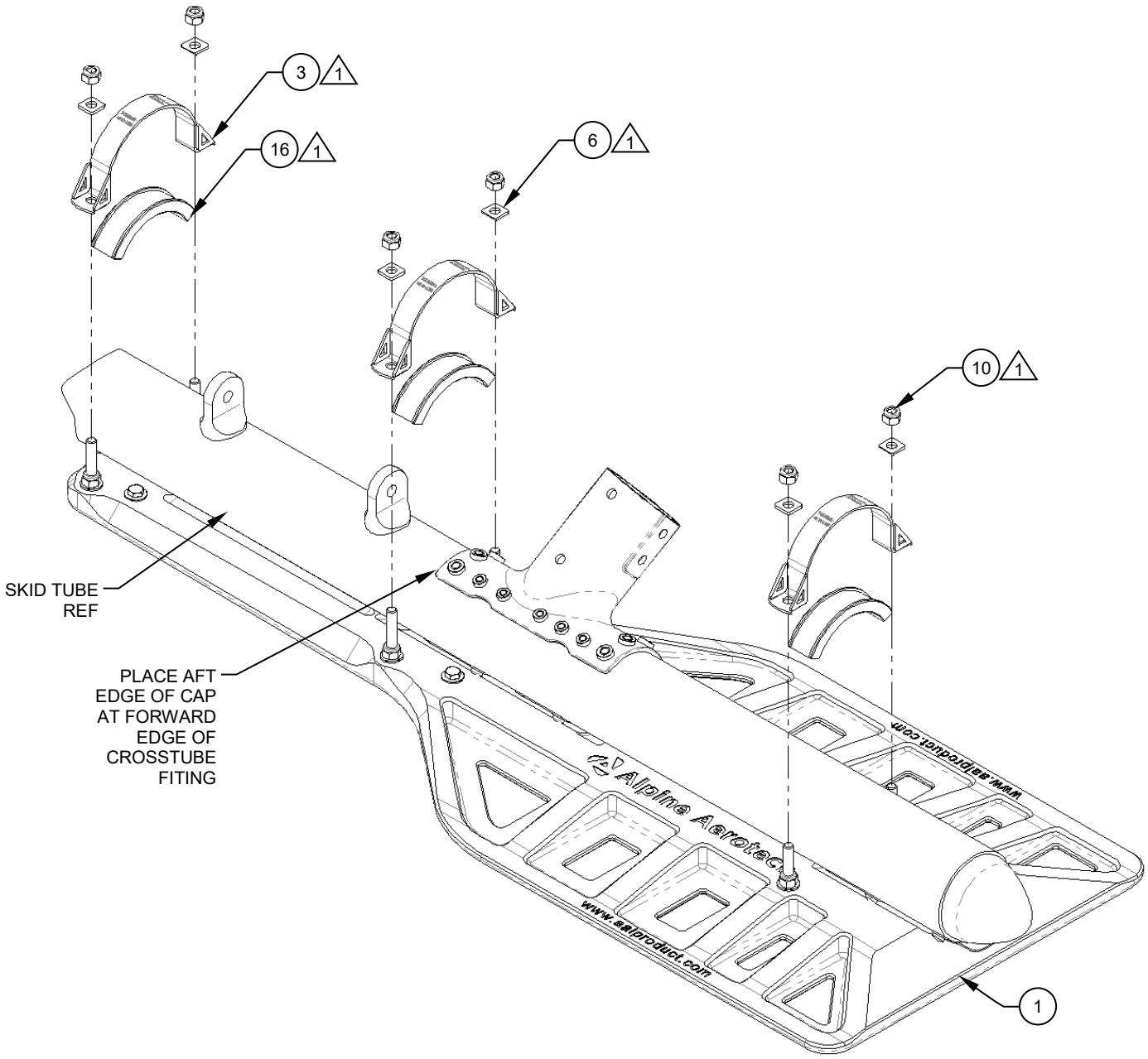


**Figure 5**

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**Installation Instructions – High Skid Gear**

2. Once the Bear Paw, Detail (Item 1) is under the skid tube in its approximate location, place the Strap, Assys (Item 3) and their respective Cap, Details (Item 16) on their corresponding bolts. Reference Figure 5.

   **NOTE:** Ensure the Cap, Details (Item 16) are oriented properly on top of the skid tube and cross tube fitting.

3. Install the supplied Washer (Item 6) and Nut (Item 10) on each bolt. Reference Figure 5.

   **NOTE:** Ensure the radius edge on the Washer (Item 6) is oriented down and towards the skid tube. Reference Figure 4.

   **NOTE:** A “thin-wall” socket may be required to adequately engage the Nut (Item10)

   **CAUTION:** Do **NOT** apply full torque to the fasteners at this stage while the aircraft is raised off the ground. Only apply minimal torque to snug-up the Bear Paw, Detail (Item 1).

4. Lower the aircraft onto the Bear Paw, Details (Item 1) and torque the fasteners equally to 40 in/lbs. Reference Figure 3.

   **CAUTION:** Before applying torque, ensure the Cap, Detail (Item 4) is oriented between the two forward Hi-Lok Collars common to the cross tube fitting. Reference Step 4.

5. Installation complete.

6. Perform a General Inspection of all items to ensure proper installation.

7. Update the aircraft logbook for the installation of the Bear Paw, Kit.

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**Removal Instructions– Common**

1. As there are no special considerations or additional steps to remove the Bear Paw, Kit for either inspections, or mission configuration, the removal of the Bear Paw, Kit 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 Bear Paw, Kit.

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## Section 4 Illustrated Parts Breakdown

### General Notes

1. Alternate items listed where applicable.

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

△2 Threadlocker (Item 15) not shown and not supplied. Procure locally.

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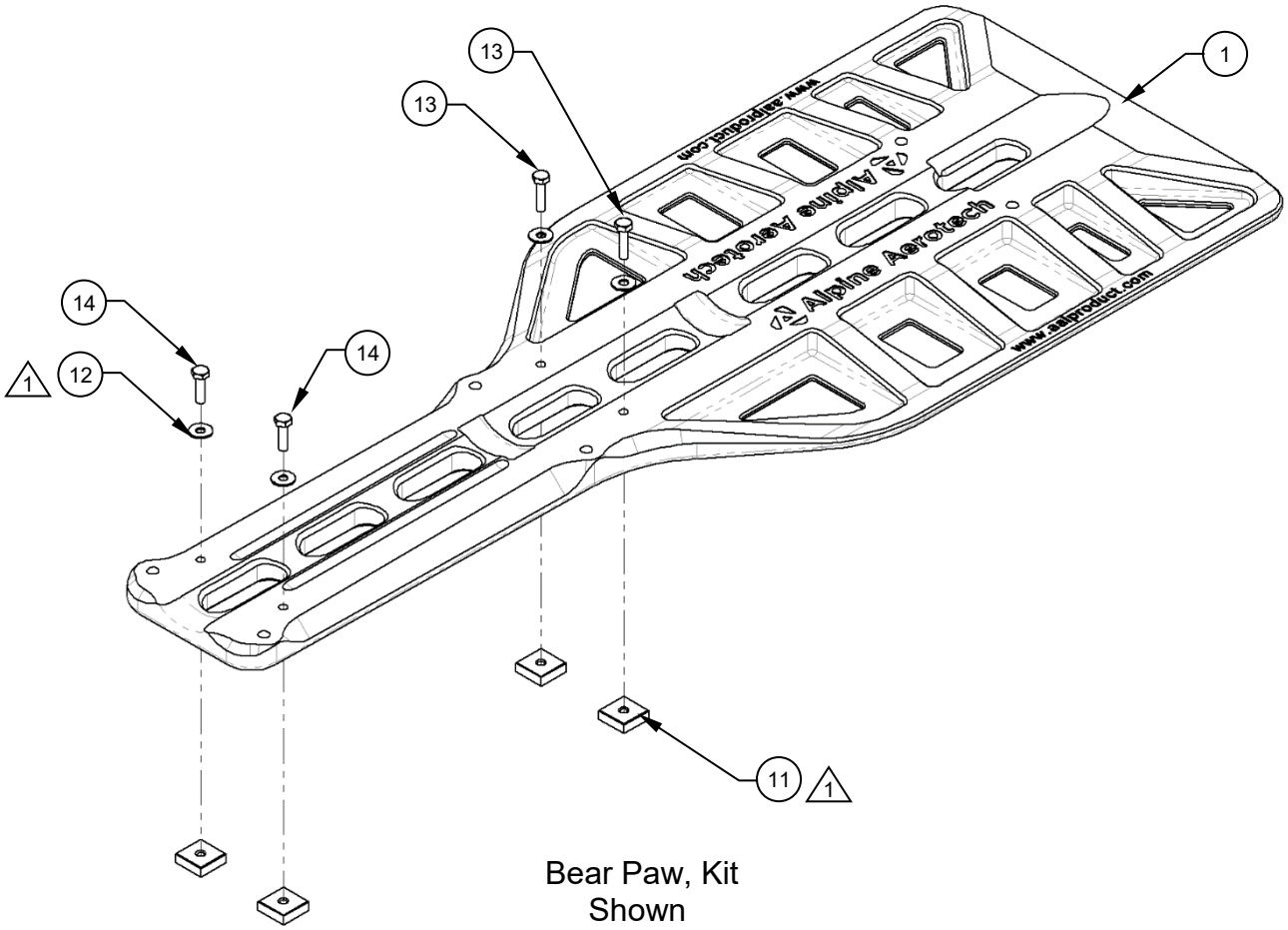
**Illustrated Parts Breakdown** (cont.)




Bear Paw, Kit
Shown
(LHS only)

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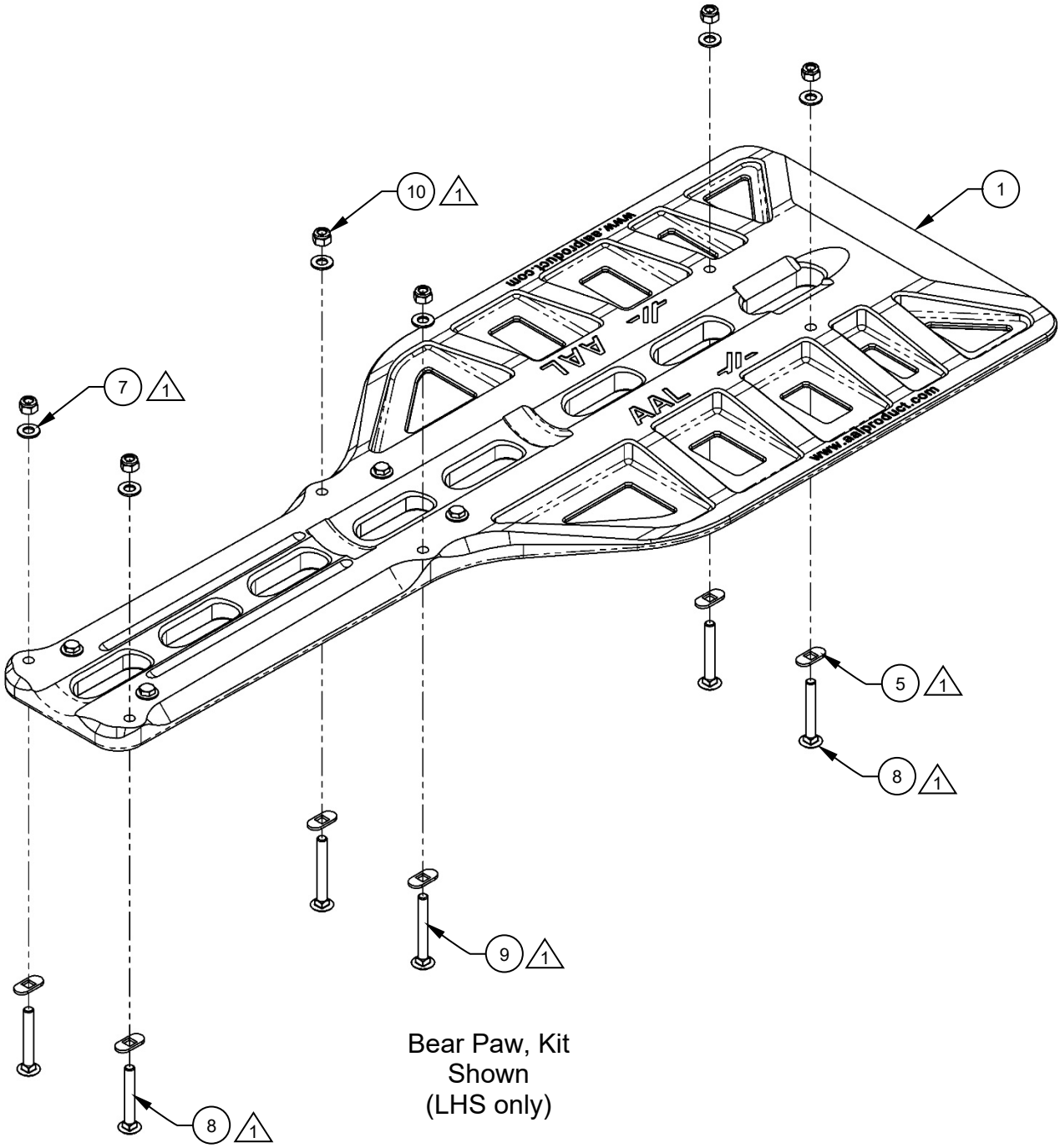
**Illustrated Parts Breakdown** (cont.)

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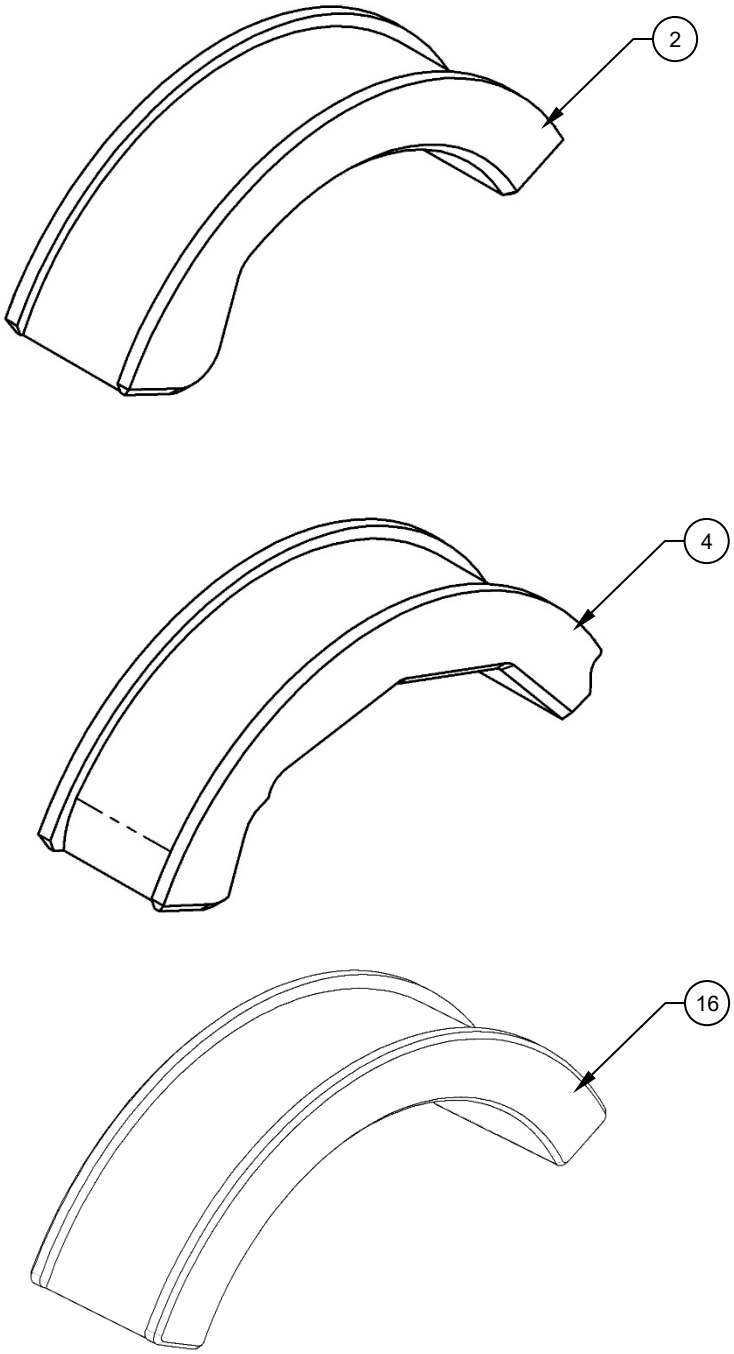
**Illustrated Parts Breakdown** (cont.)



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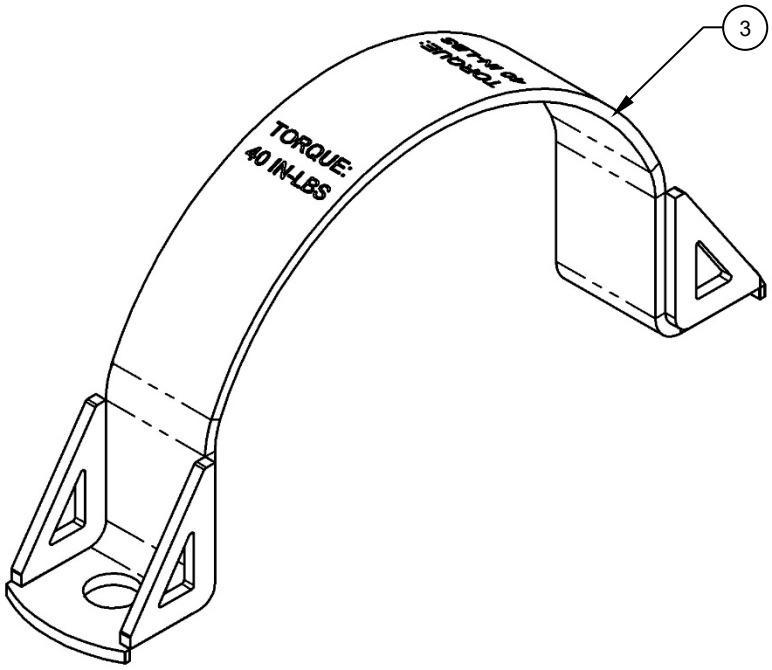
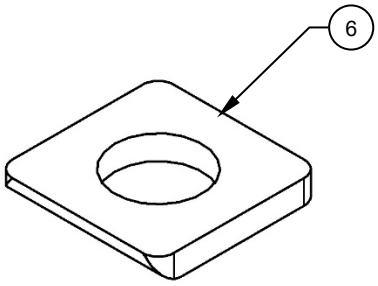
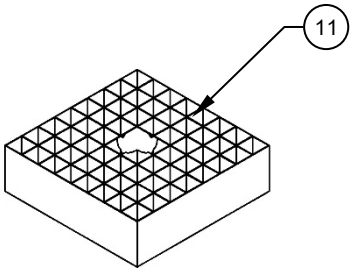
**Illustrated Parts Breakdown** (cont.)



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## Illustrated Parts Breakdown (cont.)

| | | | | | REF | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ITEM | QTY | NUMBER | DESCRIPTION | MATERIAL | STOCK SIZE | SPEC | FINISH | MANUFACTURER | NCAGEC |
| - | - | AAL-390-020-001 | BEAR PAW, KIT | | | | | | |
| | | | | | | | | | |
| 1 | 2 | AAL-390-022-001 | BEAR PAW, DETAIL | NA | NA | NA | NA | ALPINE AEROTECH LP | L0171 |
| 2 | 4 | AAL-390-022-002 | CAP, DETAIL | NA | NA | NA | NA | ALPINE AEROTECH LP | L0171 |
| 3 | 6 | AAL-390-021-001 | STRAP, ASSY | NA | NA | NA | NA | ALPINE AEROTECH LP | L0171 |
| 4 | 2 | AAL-390-022-005 | CAP, DETAIL | NA | NA | NA | NA | ALPINE AEROTECH LP | L0171 |
| 5 | 12 | AAL-290-042-006 | TAB, DETAIL | NA | NA | NA | NA | ALPINE AEROTECH LP | L0171 |
| 6 | 12 | NAS1401-5C3 | WASHER, RADIUS | SEE SPEC | SEE SPEC | NAS1401 | SEE SPEC | SOURCE AS REQUIRED | NA |
| 7 | 12 | MS15795-812 | WASHER, FLAT | SEE SPEC | SEE SPEC | NASM15795 | SEE SPEC | SOURCE AS REQUIRED | NA |
| 8 | 12 | Ø.3125-18 x 2.250 x 2.250 | BOLT, ROUND HEAD, SQUARE NECK | ASTM A307 GRADE A | SEE SPEC | ASME B18.5 | ZINC PLATED | SOURCE AS REQUIRED | NA |
| 9 | 4 | Ø.3125-18 x 2.500 x 2.500 | BOLT, ROUND HEAD, SQUARE NECK | ASTM A307 GRADE A | SEE SPEC | ASME B18.5 | ZINC PLATED | SOURCE AS REQUIRED | NA |
| 10 | 24 | Ø.3125-18, STYLE NE | NUT, HEX, SELF LOCKING | ASME B18.16.6 GRADE N2 | SEE SPEC | ASME B18.16.6 | ZINC PLATED | SOURCE AS REQUIRED | NA |
| 11 | 8 | CL-16-SG | SQUARE, GRIPPER | NA | NA | NA | NA | NA | NA |
| 12 | 8 | MS15795-853 | WASHER, FLAT | SEE SPEC | SEE SPEC | NASM15795 | SEE SPEC | SOURCE AS REQUIRED | NA |
| 13 | 4 | AN4-10A | BOLT, MACHINE | SEE SPEC | SEE SPEC | NASM3THRU20 | SEE SPEC | SOURCE AS REQUIRED | NA |
| 14 | 4 | AN4-7A | BOLT, MACHINE | SEE SPEC | SEE SPEC | NASM3THRU20 | SEE SPEC | SOURCE AS REQUIRED | NA |
| △2 15 | AR | NA | THREADLOCKER, MEDIUM STRENGTH | LOCTITE 243 | SEE MFR | SEE MFR | SEE MFR | HENKEL LOCTITE CORPORATION | 79436 |
| 16 | 6 | AAL-390-022-006 | CAP, DETAIL | NA | NA | NA | NA | ALPINE AEROTECH LP | L0171 |