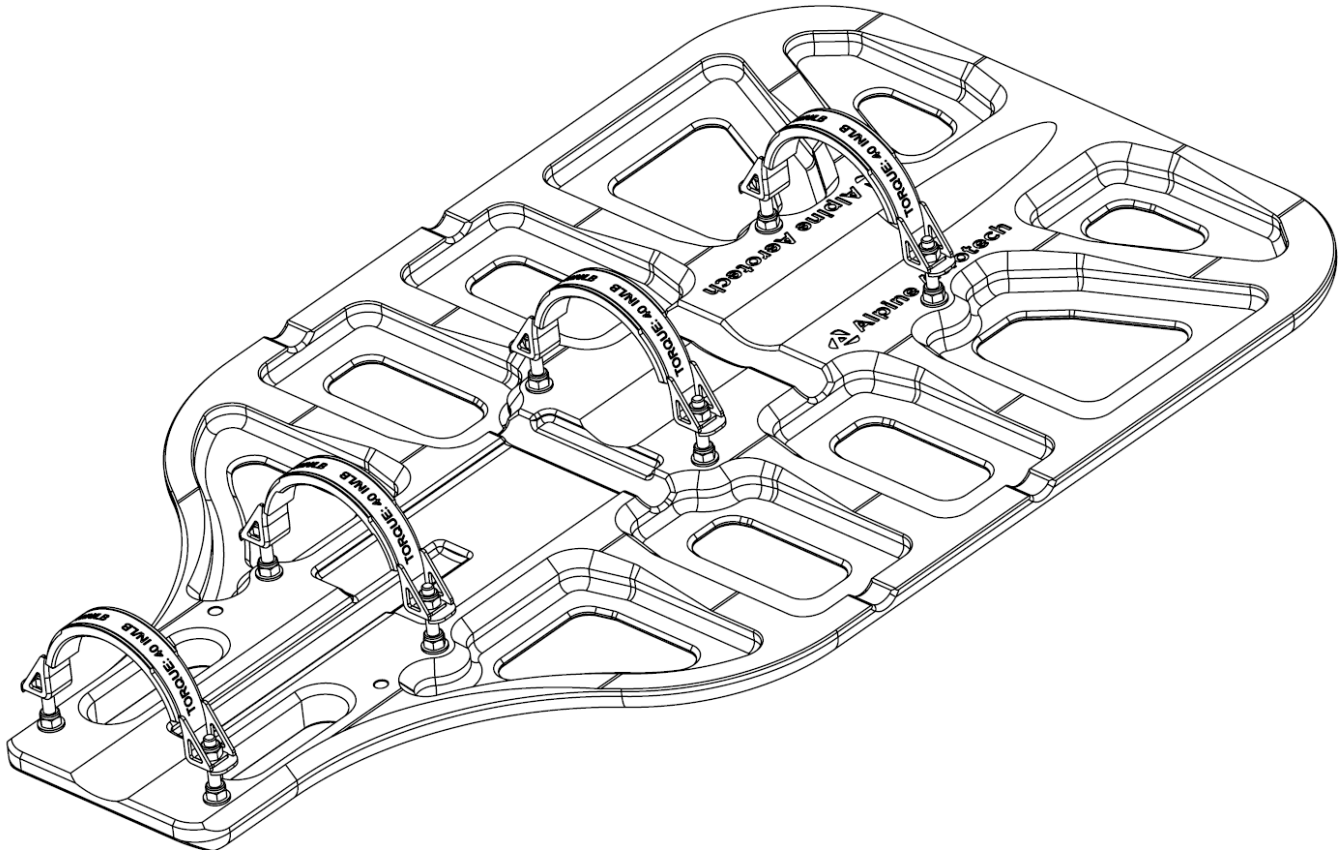




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BEAR PAW, KIT INSTALLATION INSTRUCTIONS

MODELS: BELL 205, 212, 214, 412 & 412EP

Read all of the installation instructions thoroughly
prior to the installation of this product



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Weight & Balance

<u>Part Number</u>	<u>Description</u>	<u>Weight</u>	<u>Long. Arm</u>	<u>Lat. Arm</u>
AAL-290-040-001	Bear Paw, Kit	30.140*	166.807	.00
		17.75 (Kg)	4.24 (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. Torque fasteners IAW the tension type torque limits indicated in the current revision of the FAA publication AC 43.13-1B, Table 7-1 plus tare torque, unless otherwise specified. Tare torque is defined as the amount of torque required to overcome the resistance of self-locking nuts against mating bolts or studs.
3. All Dimensions are in imperial measures (inches/pounds).
4. Refer to the current revision of the Bear Paw, Kit Instructions for Continued Airworthiness Section 1: Maintenance Instructions (AAL-290-045-701) for instructions on continuing airworthiness for the item(s) referenced within this document.
5. Refer to the current revision of the Bear Paw, Kit Instructions for Continued Airworthiness Section 3: Illustrated Parts Breakdown (AAL-290-045-701) for the part numbers of the item(s) referenced within this document.
6. If changes to this document are required, Alpine Aerotech Ltd. shall revise all pages and reissue the entire document.
7. 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 verify the revision level of this document on a yearly basis.



Installation Notes

- △₁ Typical item number for all like items in this view unless otherwise specified.
- △₂ Align the AFT side of the Cap, Assy (Item 12) with the FWD face of the saddle, detail.
- △₃ Prior to final torque ensure that there is zero gap between the Bear Paw, Detail and the skidtube.
- △₄ Align the Cap, Assy (Item 12) with the FWD edge of the lifting fitting as shown.
- △₅ Apply Torque Lacquer (Item 22) or equivalent, to Nut, Hex, Self-locking (Item 17) and Bolt, Round Head, Square Neck (Items 15, 19, & 20) common to Strap, Assys only (Items 4, 7, 8, & 11) per manufacturer's recommendations.



Installation Instructions

Installation on OEM Skidtube:

NOTE: LHS installation shown, RHS opposite.

1. Pre-install the supplied hardware as shown. Reference Figure 1.

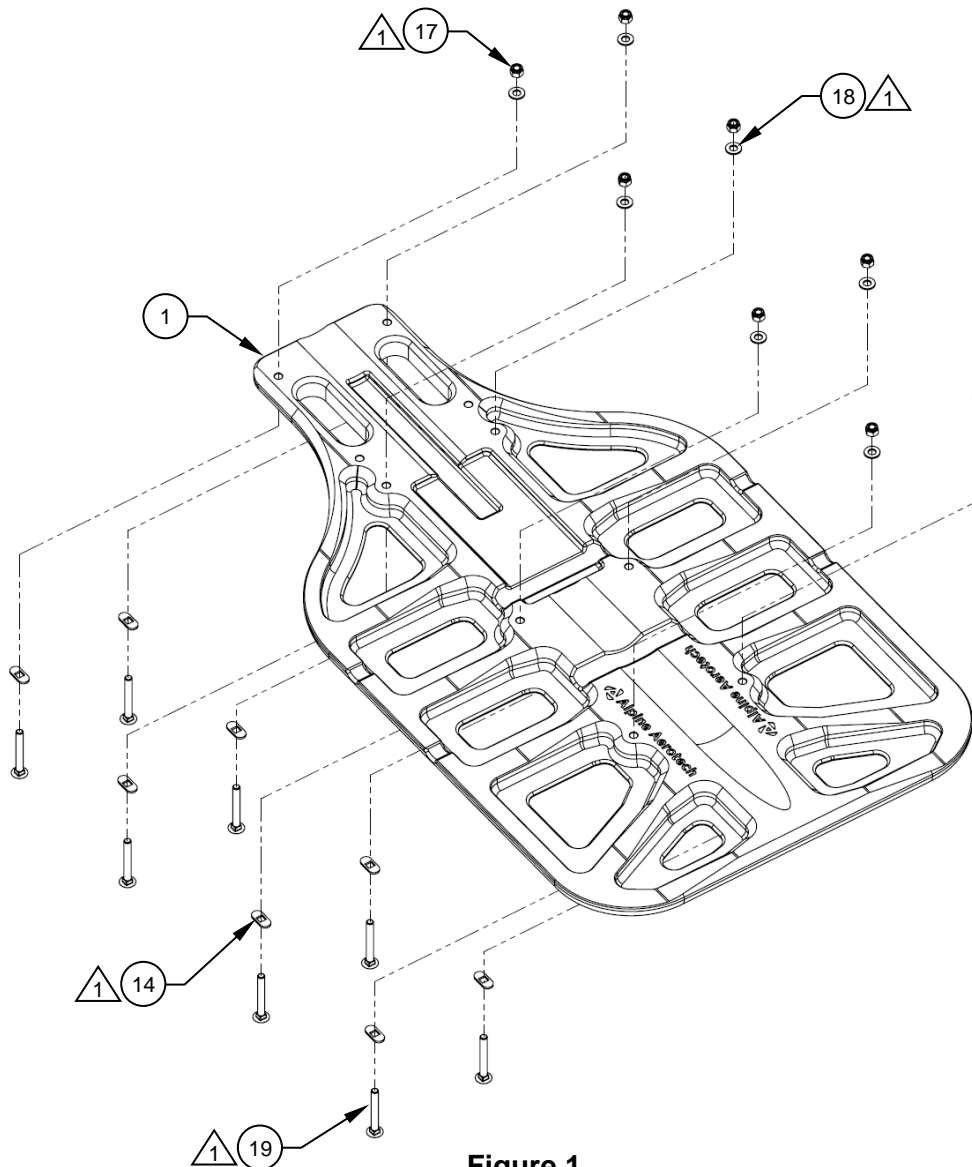
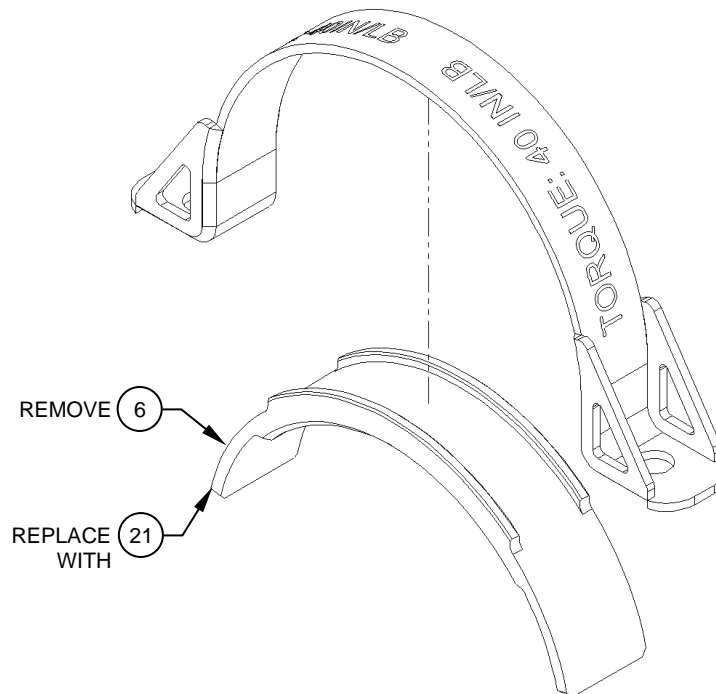


Figure 1
LHS Shown
RHS Opposite



Installation Instructions

2. Modify the Cap, Assy (Items 5), by removing the Cap, Detail (Item 6) and replacing it with 2 each Cap, Details (Items 21) effectively turning them into Cap, Assy (Items 2)



Cap, Assy
Shown
Item 5



Installation Instructions

3. Raise the aircraft, so that the Bear Paw, Detail (Item 1) can slide under the skidtube.
4. Once the Bear Paw, Detail (Item 1) is under the skidtube in its approximate location place the Cap, Assy's (Item 2) on their corresponding studs and capture the stud with its respective self-locking nut (Item 17) and washer (Item 16). Reference Figures 2 & 3.
5. Align the AFT side of the Cap, Assy (Item 2) with the FWD side of the saddle fitting. Reference Figure 3.

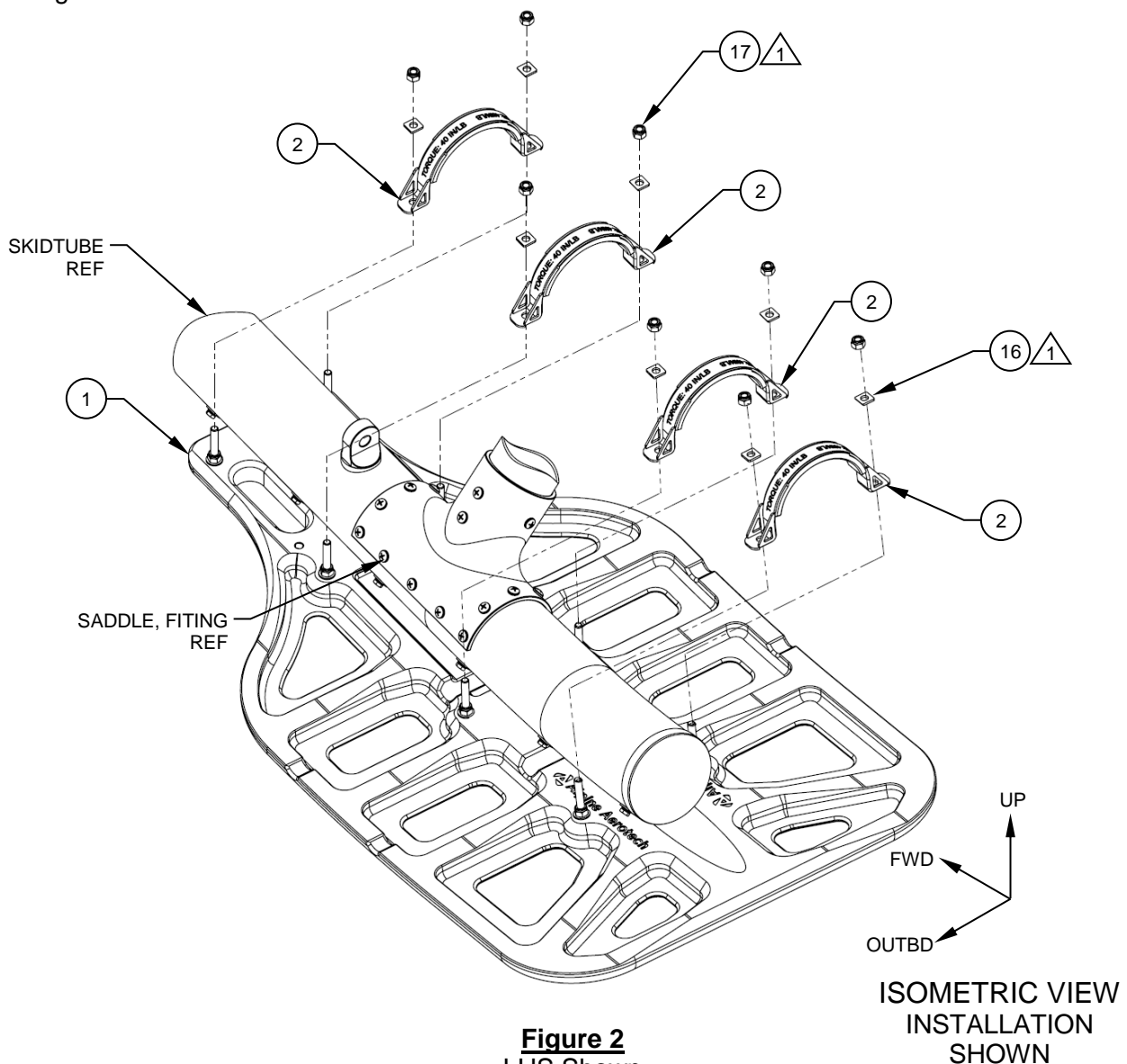
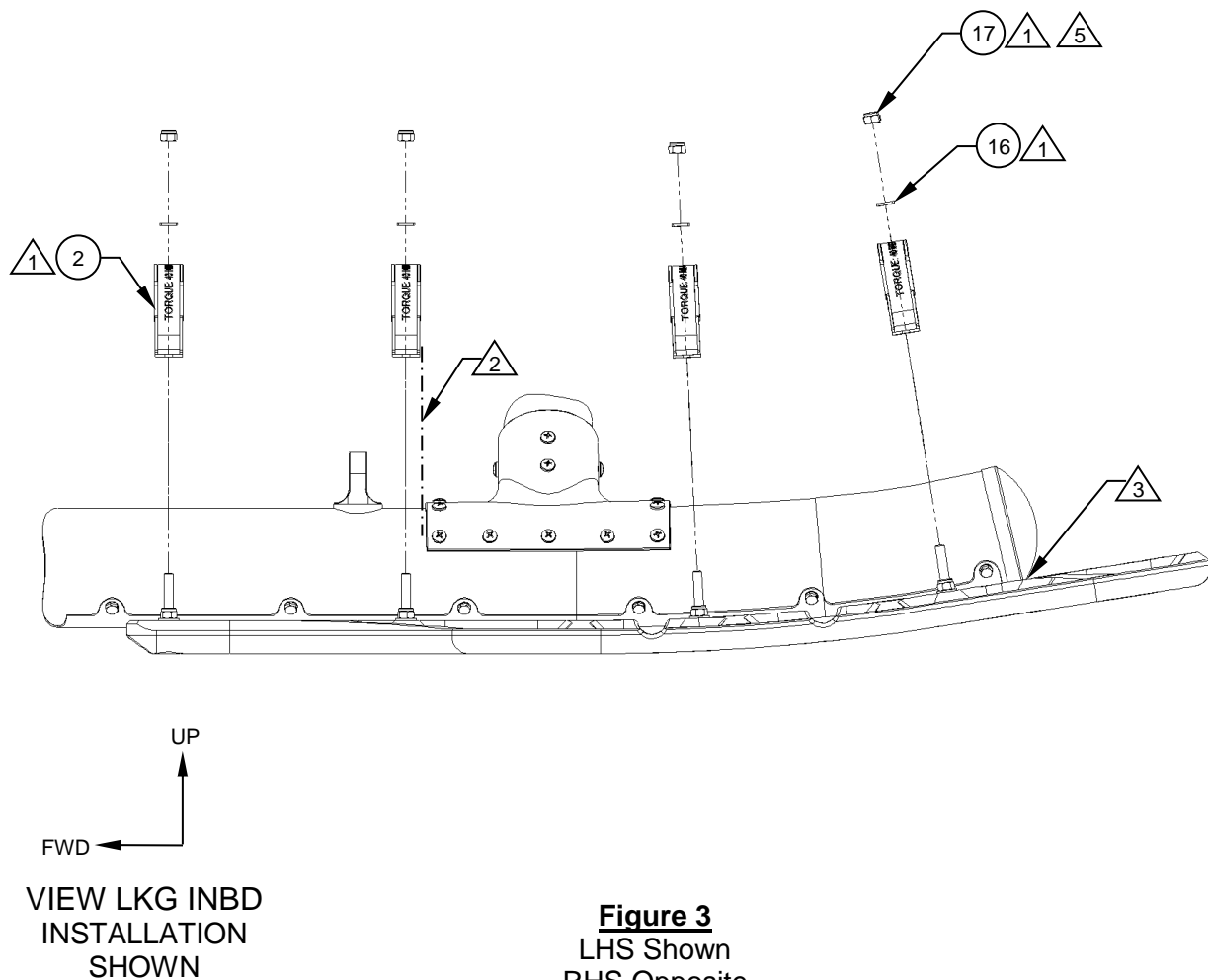


Figure 2
LHS Shown
RHS Opposite



Installation Instructions

6. Lower the aircraft onto the Bear Paw, Detail (Item 1) and torque fasteners equally to 40 in/lbs. (plus tare torque). For the AFT most Cap, Assy (Item 2), prior to final torque of the fasteners ensure there is zero gap between the Bear Paw, Detail (Item 1) and the skidtube. Reference Figures 2 & 3.





Installation Instructions

This Figure has been removed

Figure 4

7. Installation complete.
8. Perform a General Inspection of all items to ensure proper installation.
9. Update the aircraft logbook for the installation of the Bear Paw, Kit.



Installation Instructions

Installation on DART skidtube:

NOTE: LHS installation shown, RHS opposite.

1. Pre-install the supplied hardware as shown. Reference Figure 5.

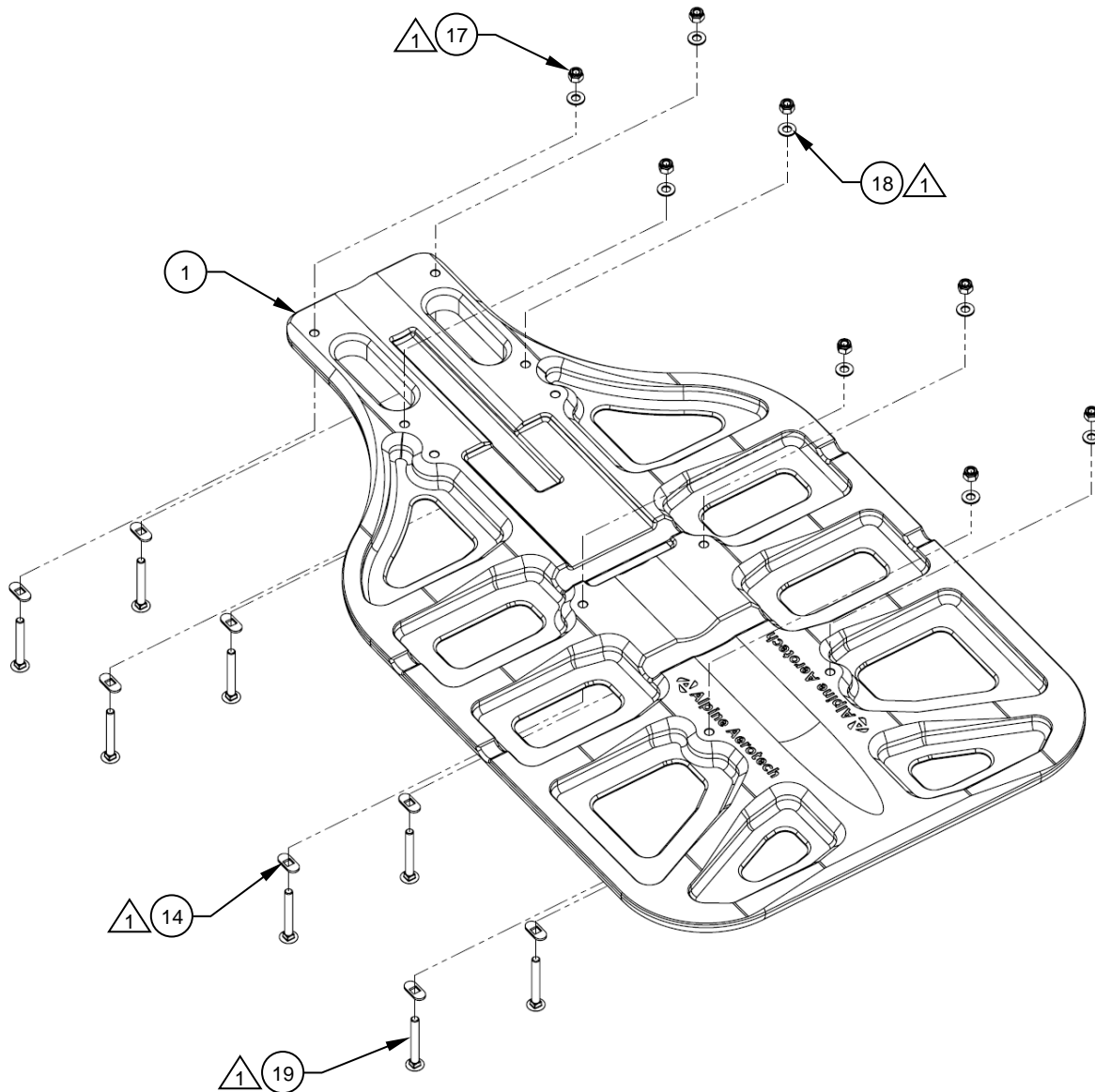
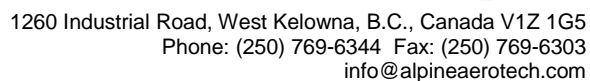
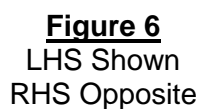


Figure 5
LHS Shown
RHS Opposite



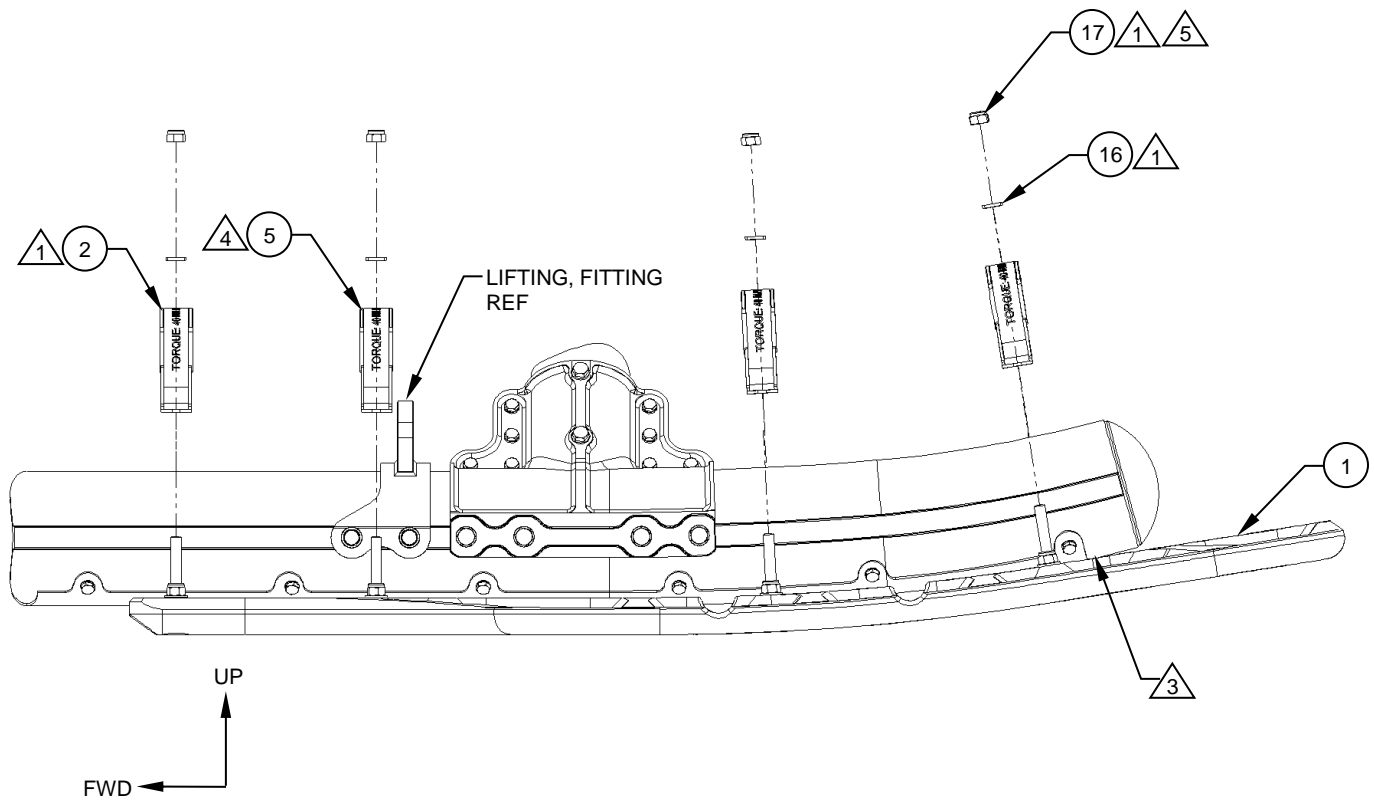
2. Raise the aircraft, so that the Bear Paw, Detail (Item 1) can slide under the skidtube.
3. Once the Bear Paw, Detail (Item 1) is under the skidtube in its approximate location place the Cap, Assy's (Items 2 & 5) on their corresponding studs and capture the stud with its respective self-locking nut (Item 17) and washer (Item 16). Reference Figures 6 & 7.
4. Align the Cap, Assy (Item 5) in relation to the forward edge of the Lifting Fitting as shown. Reference Figure 7.





Installation Instructions

5. Lower the aircraft onto the Bear Paw, Detail (Item 1) and torque fasteners equally to 40 in/lbs. (plus tare torque). For the AFT most Cap, Assy (Item 2), prior to final torque of the fasteners ensure there is zero gap between the Bear Paw, Detail (Item 1) and the skidtube. Reference Figures 6 & 7.



**VIEW LKG INBD
INSTALLTION
SHOWN**

Figure 7
LHS Shown
RHS Opposite



Installation Instructions

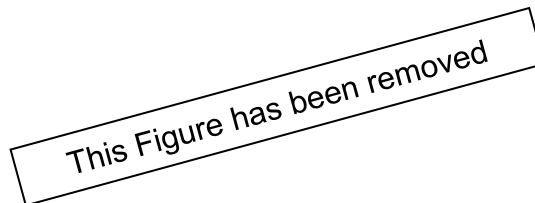


Figure 8

6. Installation complete.
7. Perform a General Inspection of all items to ensure proper installation.
8. Update the aircraft logbook for the installation of the Bear Paw, Kit.



Installation Instructions

Installation on OEM Float Skidtube:

NOTE: LHS installation shown, RHS opposite.

NOTE: Installing AAL Bear Paw, Kit on an OEM **Float** Skidtube is the same as for an OEM Skidtube except as follows.

1. Gain access to the AFT portion of the skid tube, this may require the temporary removal of the float bag, assy.
2. Install the FWD **three** Cap, Assy's (Item 2) as per pages 4 & 5, steps 2 thru 5 of this document.
3. Install the AFT Strap, Assy (Item 11). The Strap, Assy may need to be bent slightly to fit it over the tube. Reference Figure 9.
4. The remainder of the installation instructions are the same as steps 6 thru 9 on pages 6 & 7 of this document.

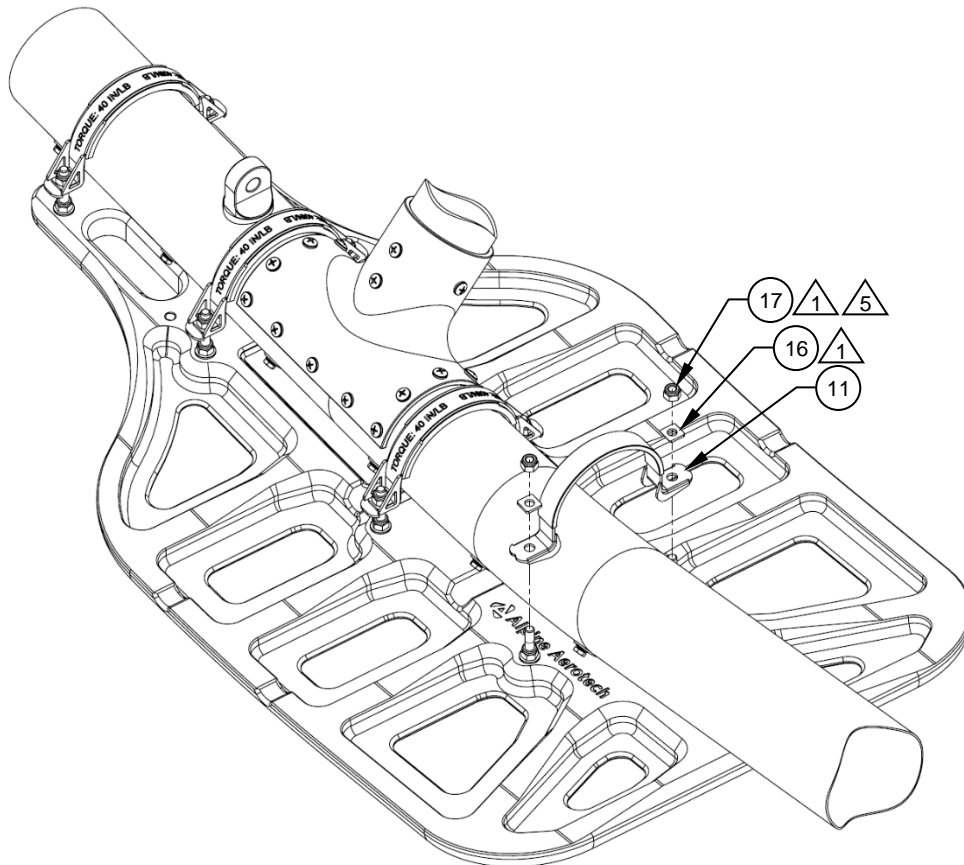


Figure 9



Installation Instructions

Installation on DART Float Skidtube:

NOTE: LHS installation shown, RHS opposite.

NOTE: Installing AAL Bear Paw, Kit on a DART Float Skidtube is the same as for a DART Skidtube except as follows.

1. For the Cap, Assy AFT of the saddle fitting, use Carriage, Bolt (Item 15) in both holes. For the AFT most Cap, Assy position use Carriage, Bolt (Item 20) in both holes. Reference Figure 10.

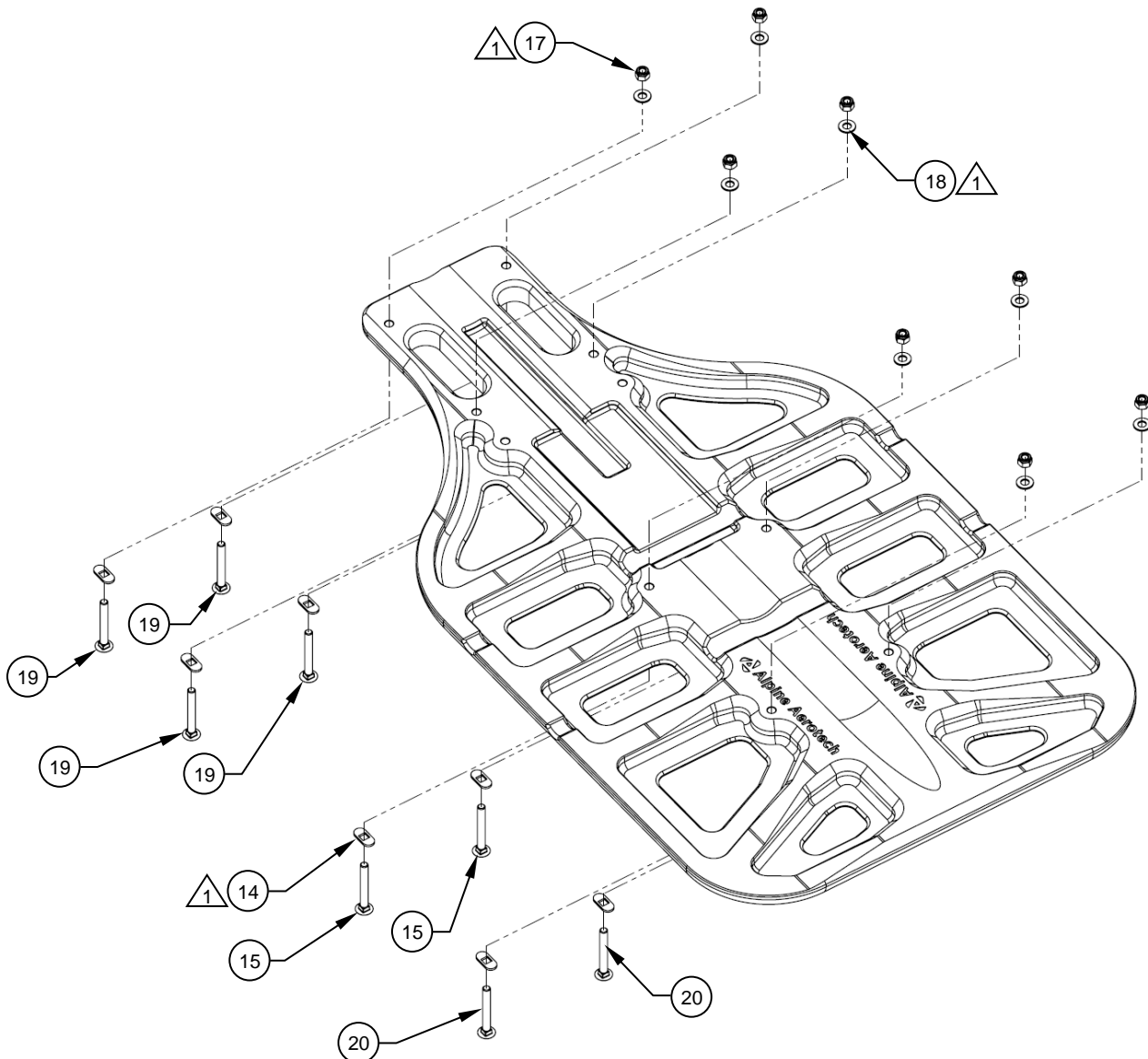


Figure 10



Installation Instructions

2. Gain access to the AFT portion of the skid tube, this may require the temporary removal of the float bag, assy.
3. Install the FWD **three** Cap, Assy's (Item 2) as per pages 9 & 10, steps 2 thru 5 of this document.
4. Install the AFT Strap, Assy (Item 8). The Strap, Assy may need to be bent slightly to fit it over the tube. Reference Figure 11.
5. The remainder of installation instructions are the same as steps 5 thru 8 on pages 10 & 11 of this document.

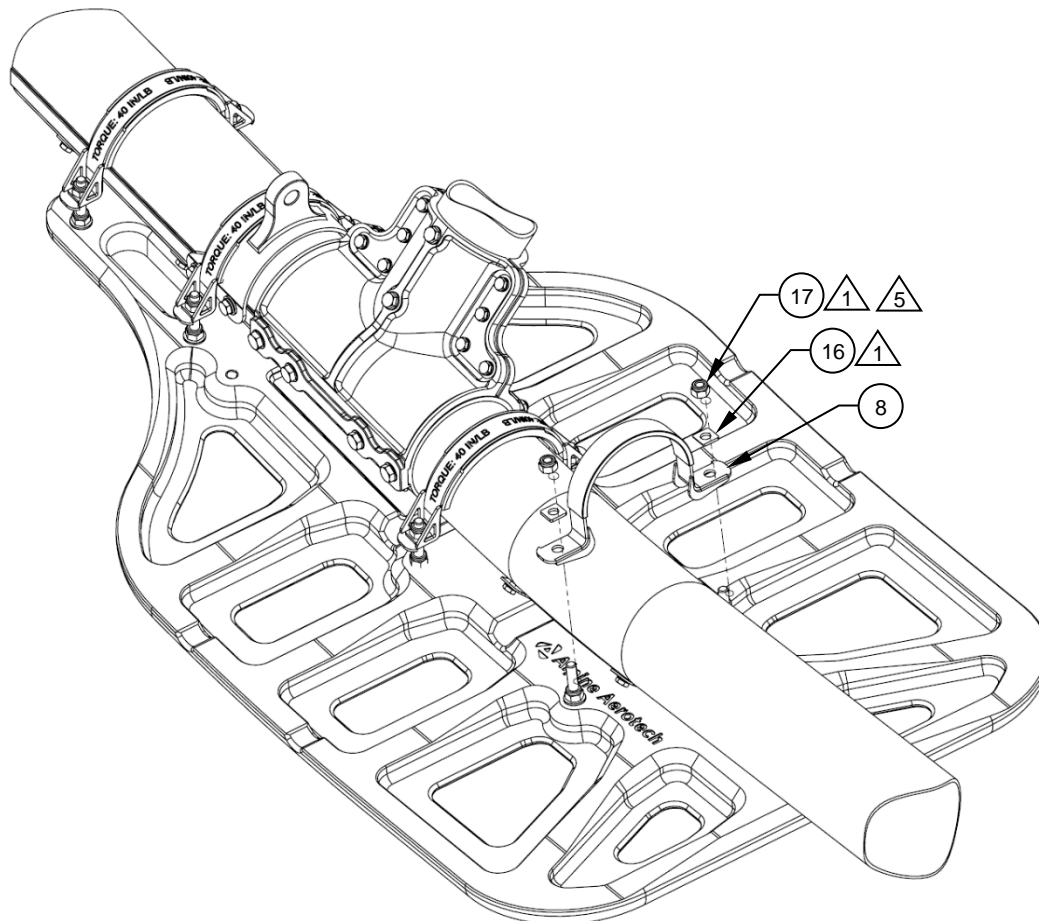


Figure 11