

DEEP SNOW, KIT INSTRUCTIONS FOR CONTINUING AIRWORTHINESS

MODELS: BELL 429

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

Table of Contents

<u>Section</u>	<u>Description</u>	<u>Page</u>
1	Description	2
2	Maintenance Manual Supplement	3
3	Installation & Removal Instructions	8
	Applicability	8
	Installation Instructions	9
	Hoist Configuration Installation Instructions	12
	Removal Instructions	16
4	Illustrated Parts Breakdown	17

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 Deep Snow, Kit as defined in Alpine Aerotech LP authority dataset AAL-490-010-901.

- In soft terrain landing situations (i.e. tundra, snow and sand) where the skid tubes can sink into the landing area, The Deep Snow, Kit provides increased floatation and damage tolerance.
- When installed, the Deep Snow, Kit provides additional flotation to the skid gear in the center of the aircraft's C of G, therefore increasing stability and flotation.

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 Maintenance Manual, BHT-429-MM, for the chapter(s) and section(s) referenced within this document.
3. Refer to the current revision of the AAL-490-015-701, Bear Paw, Kit, AAL-490-025-701, Traction Paw, Kit and AAL-490-035-701, Yeti Paw, Kit for reference to perform ICA activities of the individual kits.
4. 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.
5. Scheduled inspection for the item(s) referenced within this document shall be accomplished in accordance with (IAW) the Inspection Procedures specified.
6. Repair allowances for the item(s) referenced within this document shall be accomplished IAW the Repair Procedures specified.
7. 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 4-1 and 4-2, 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, thru 5-14, for general information on inspections, inspection definitions, inspection intervals, inspection methods and inspection schedules.
2. Refer to the current revision of the AAL-490-015-701, Bear Paw, Kit, AAL-490-025-701, Traction Paw, Kit and AAL-490-035-701, Yeti Paw, Kit to reference general information on inspections, inspection definitions, inspection intervals, inspection methods and inspection schedules.
3. General Inspections, as indicated within this document, are defined as visual, non-thorough checks.
4. Detailed Inspections, as indicated within this document, are defined as visual and thorough, searching checks.
5. Perform Daily Inspections every day, prior to flight operation. If damage is detected, perform the 400 Hour/12 Month Inspections.
6. Perform 400 Hour/12 Month Inspections every 400 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/ Pre-Flight Inspections

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

- i. Perform a General Inspection on all items in the Deep Snow, Kit for general condition.
- ii. Perform a General Inspection on all items in the Deep Snow, Kit for proper security.
- iii. Visually confirm the condition of the torque lacquer on the nuts securing the Bear Paw to the skid-tube. If the torque lacquer is broken, perform the 400 hour/12-month inspection.

2. 400 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 Deep Snow, Kit for evidence of corrosion, cracks and damage.
- ii. Perform a Detailed Inspection on all items in the Deep Snow, Kit for evidence of excessive wear.
- iii. Perform a Detailed Inspection on all items, materials and finishes in the Deep Snow, Kit for proper integrity and condition.
- iv. Perform a Detailed Inspection on all hardware and fasteners in the Deep Snow, Kit for proper security and torque.

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

Applicability

The Deep Snow, Kit (AAL-490-010-901) is applicable to all serial numbers, equipped with standard (low) landing gear only.

Weight & Balance

<u>Part Number</u>	<u>Description</u>	<u>References</u>
AAL-490-010-901	Deep Snow, Kit	AAL-490-015-701 Section 3 AAL-490-025-701 Section 3 AAL-490-035-701 Section 3

General Notes

1. Please install the AAL Deep Snow, Kit (AAL-490-010-901) in this order; Bear Paw Assy, Kit (AAL-490-010-001), then the Traction Paw, Assy (AAL-490-020-001), lastly the Yeti Paw, Assy (AAL-030-001).
2. 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.
3. Torque fasteners IAW the tension type torque limits indicated in the current revision of the FAA Advisory Circular 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.
4. All Dimensions are in imperial measures (inches/pounds).
5. Refer to Section 2: Maintenance Manual Supplement for instructions on maintenance for the item(s) referenced within this section.
6. Refer to 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.

Installation Instructions

NOTE: LHS installation shown, RHS opposite.

1. Install the Bear Paw Assy, Kit (Item 1) first as per AAL-490-015-701 Section 3. Reference Figure 1.

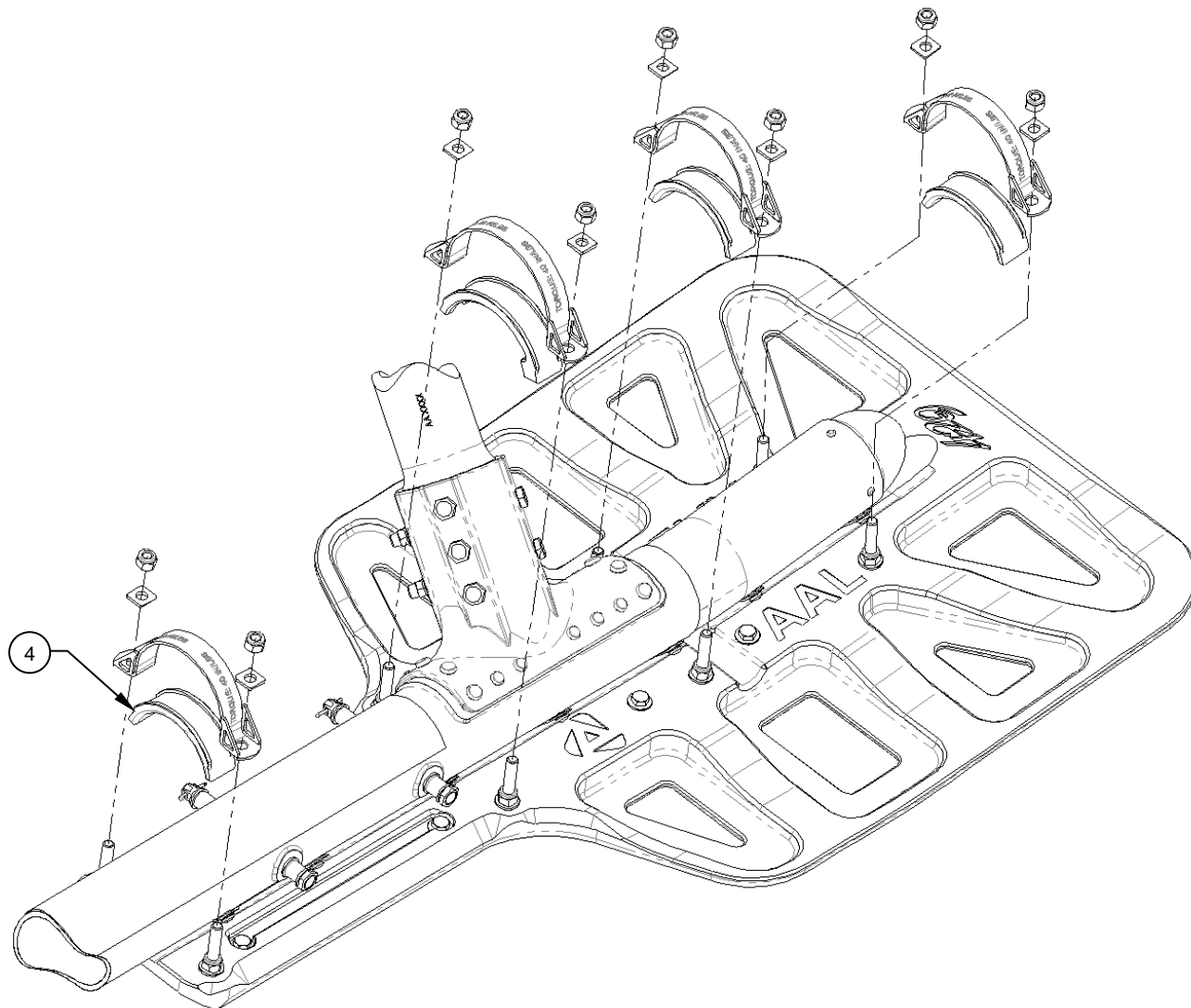


Figure 1
Modified
Installation of Item 1

Installation Instructions

2. One variation of the standard install is to be made. Reference page 11 of 20 in AAL-490-015-701 Section 3, remove the Cap, Detail (Item 2) and replace it with Cap, Detail (Item 4). Reference Figure 1.
3. Install the Traction Paw, Assy normally as per AAL-490-025-701 Section 3. Reference Figure 2.

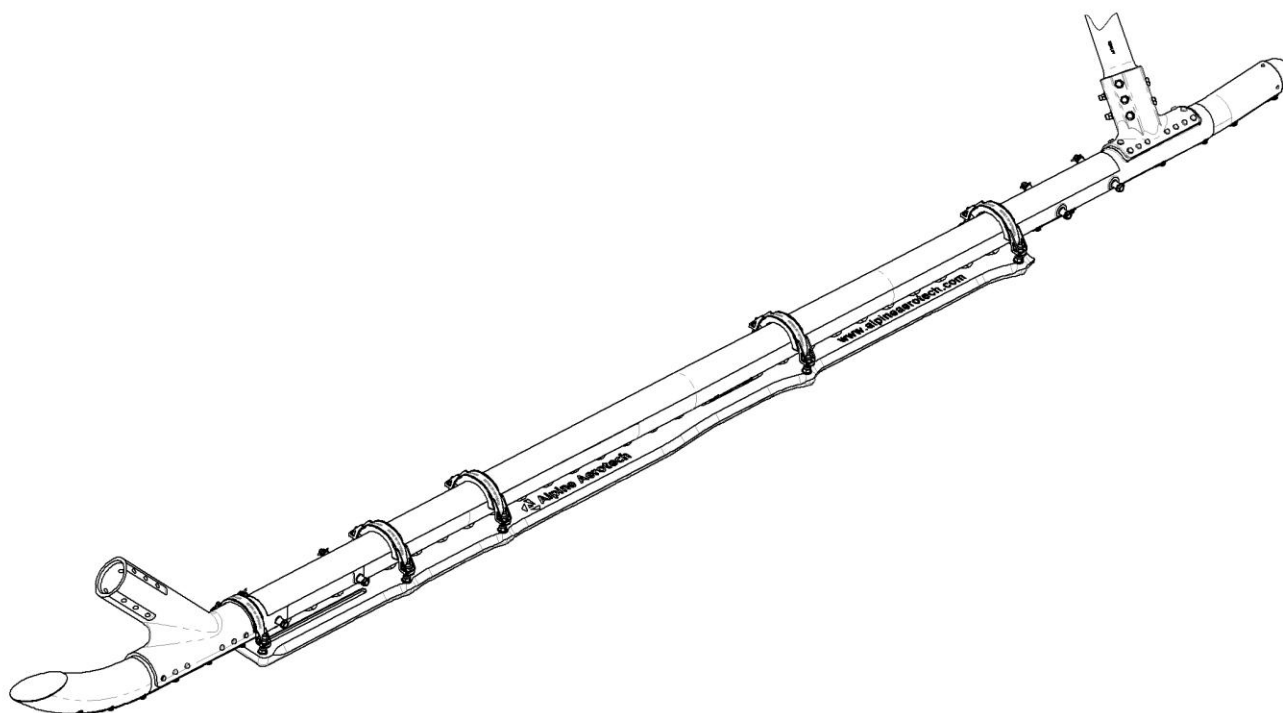


Figure 2
Traction Paw, Assy
Shown

Installation Instructions

4. Install the Yeti Paw, Assy normally as per AAL-490-025-701 Section 3. Reference Figure 3.

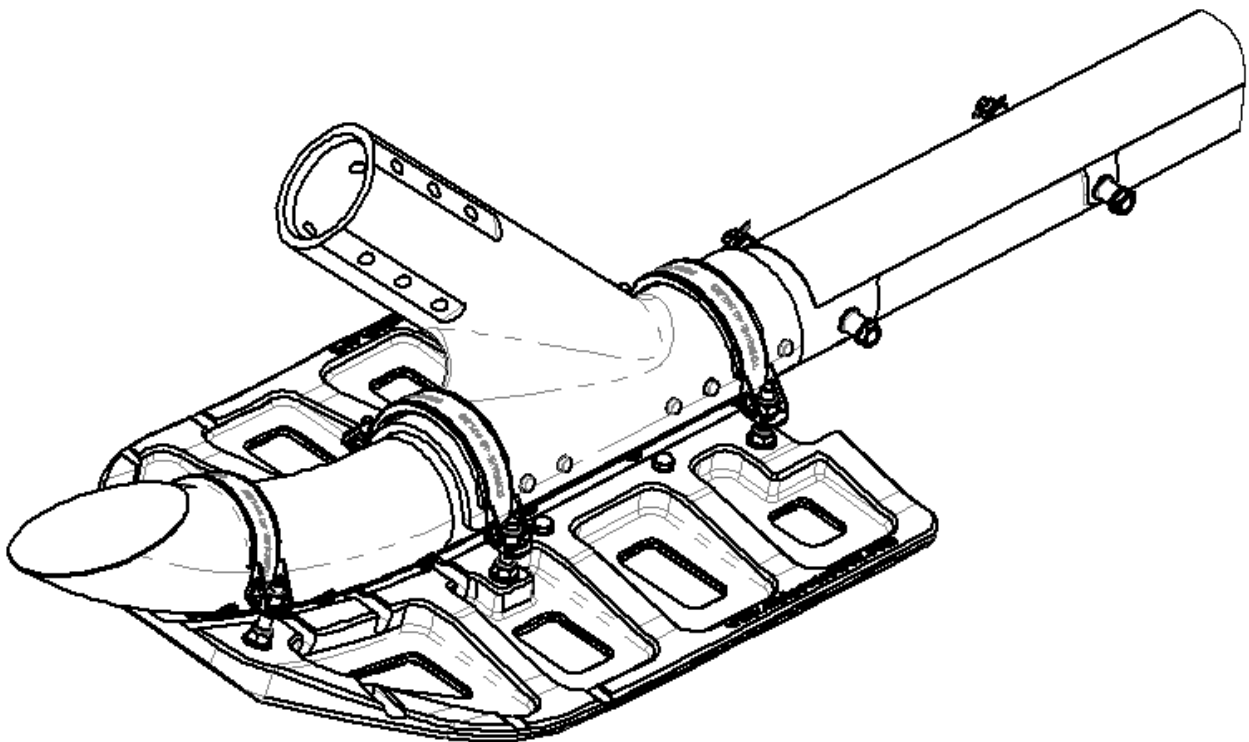


Figure 3
Yeti Paw, Assy
Shown

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 Traction Paw, Kit.

Installation Instructions – Hoist Configuration

1. For aircraft configured for hoisting operations, temporarily remove the RHS AFT INBD and OUTBD nut and washer retaining the carriage bolts on the Traction Paw, Assy, (Item 2). See Figure 4.
2. Temporarily remove the RHS FWD INBD and OUTBD nut and washer, retaining the carriage bolts on the Bear Paw, Assy, Kit, (Item 1). See Figure 4.

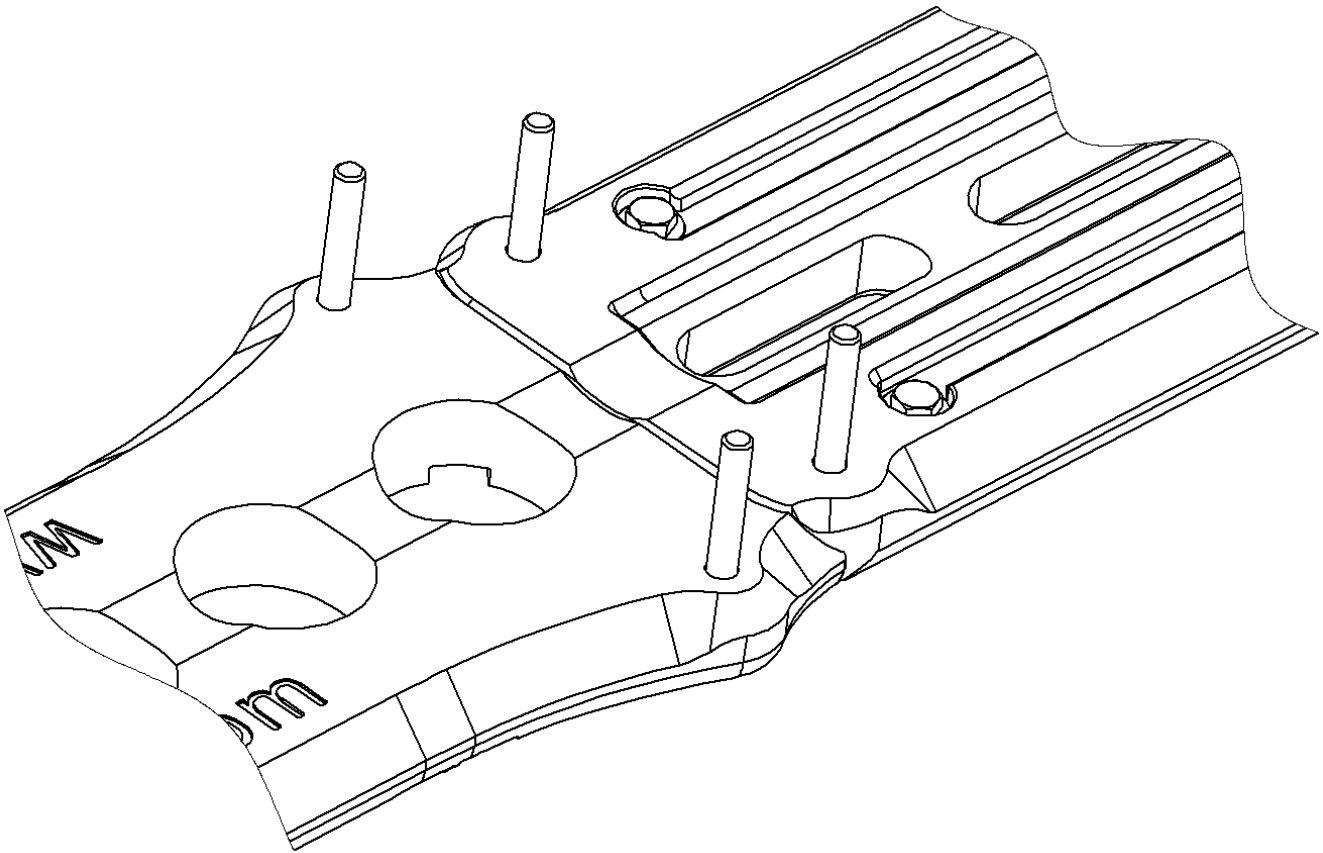


Figure 4
RHS Removal of Retention Nut
and Washer Shown

Installation Instructions – Hoist Configuration

3. On the OUTBD side install 1x Splice, Detail (Item 5), on the two OUTBD carriage bolts, and 1x Connector, Detail, (Item 6), on the AFT end of the Traction Paw, Assy & FWD end of the Bear Paw, Assy, Kit, (Item 1). See Figure 5.
4. On the INBD side install 1x Connector, Detail, (Item 6), on the AFT end of the Traction Paw, Assy & FWD end of the Bear Paw, Assy, Kit, (Item 1). See Figure 5.
5. Re-install the appropriate washers and nuts and apply the appropriate torque IAW the tension type torque limits indicated in the current revision of the FAA Advisory Circular AC 43.13-1, Table 7-1 plus tare torque.
6. This will lock the Traction Paw, Assy, (Item 2), & the Bear Paw, Assy, Kit, (Item 1) together and will require them to be positioned under the skid tube as a unit.
7. Continue installation IAW AAL-490-025-001 & AAL-490-015-001.

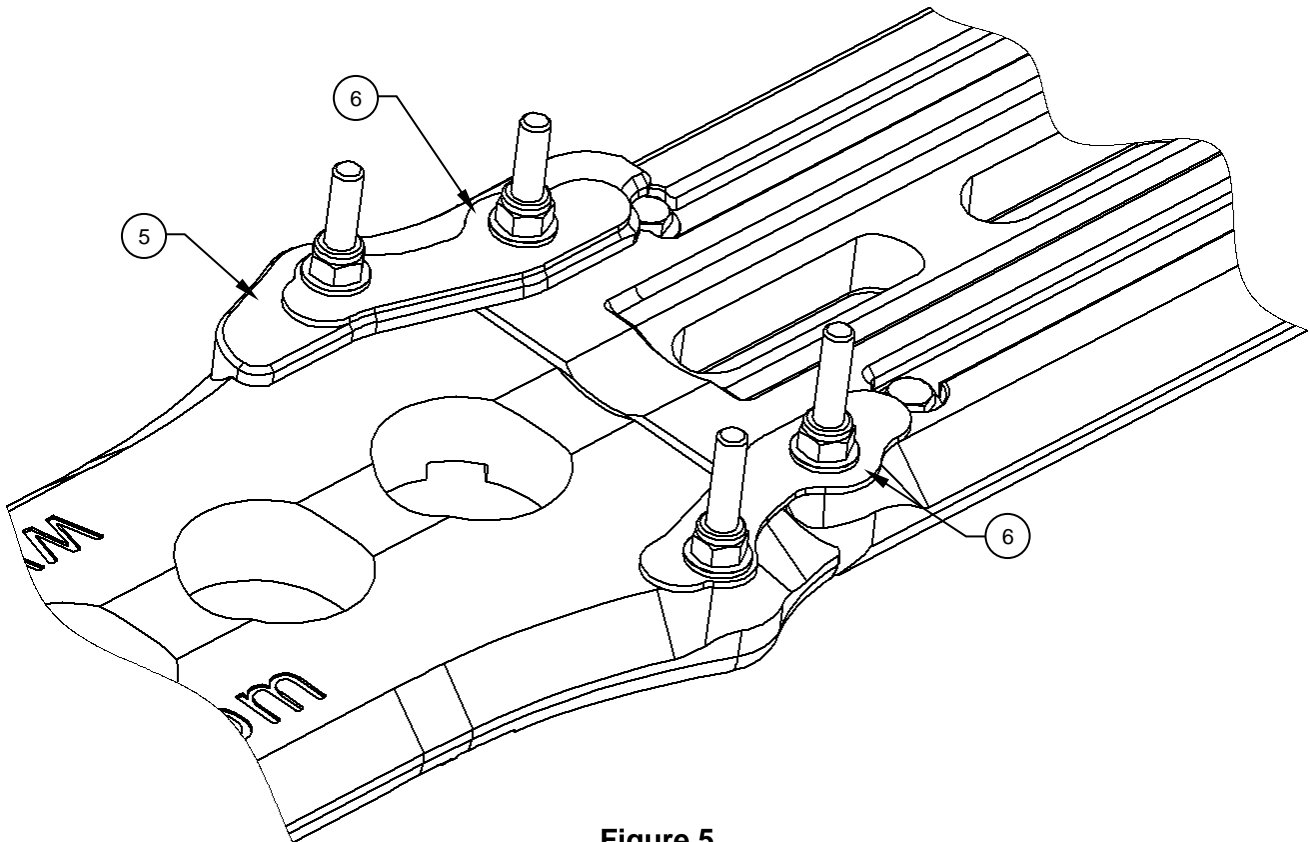


Figure 5
RHS Installation of Hoist Configuration
Components Shown

Installation Instructions – Hoist Configuration

8. For aircraft configured for hoisting operations, temporarily remove the LHS AFT INBD and OUTBD nut and washer retaining the carriage bolts on the Traction Paw, Assy, (Item 2). See Figure 6.
9. Temporarily remove the LHS FWD INBD and OUTBD nut and washer, retaining the carriage bolts on the Bear Paw, Assy, Kit, (Item 1). See Figure 6.

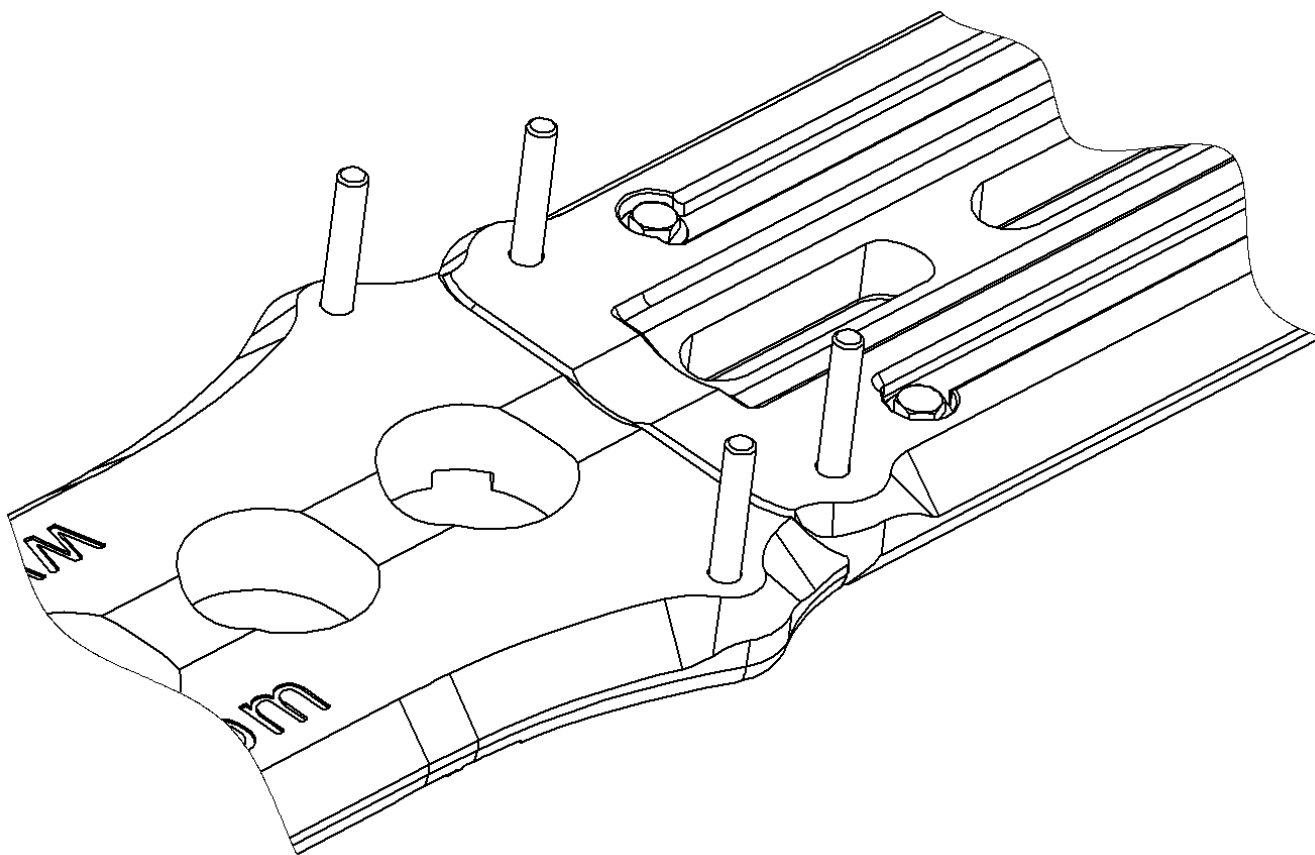


Figure 6
LHS Removal of Retention Nut
and Washer Shown

Installation Instructions – Hoist Configuration

10. On the OUTBD side install 1x Connector, Detail, (Item 6), on the AFT end of the Traction Paw, Assy & FWD end of the Bear Paw, Assy, Kit, (Item 1). See Figure 7.
11. On the INBD side install 1x Connector, Detail, (Item 6), on the AFT end of the Traction Paw Assy & FWD end of the Bear Paw, Assy, Kit, (Item 1). See Figure 7.
12. Re-install the appropriate washers and nuts and apply the appropriate torque IAW the tension type torque limits indicated in the current revision of the FAA Advisory Circular AC 43.13-1, Table 7-1 plus tare torque.
13. This will lock the Traction Paw, Assy, (Item 2), & the Bear Paw, Assy, Kit, (Item 1) together and will require them to be positioned under the skid tube as a unit.
14. Continue installation IAW AAL-490-025-001 & AAL-490-015-001.

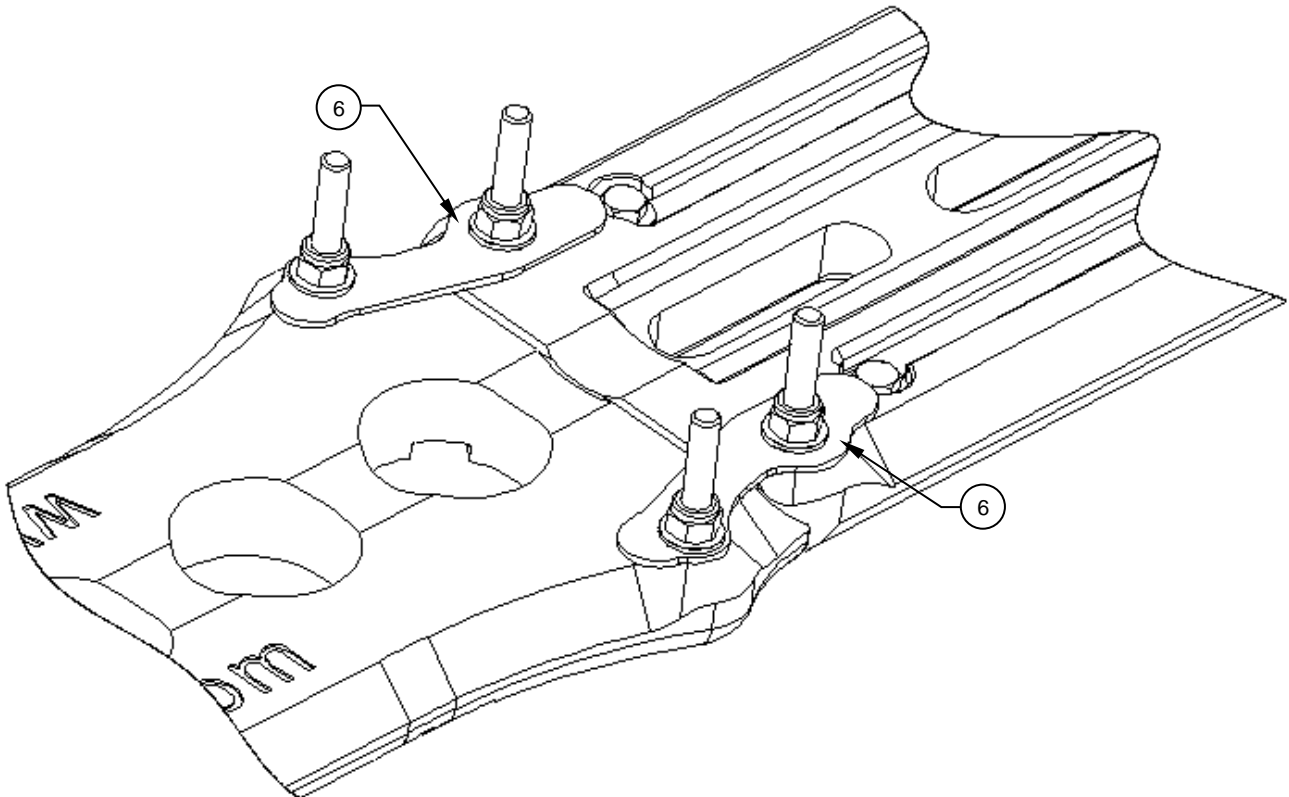


Figure 7
LHS Installation of Hoist Configuration
Components Shown


Removal Instructions

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

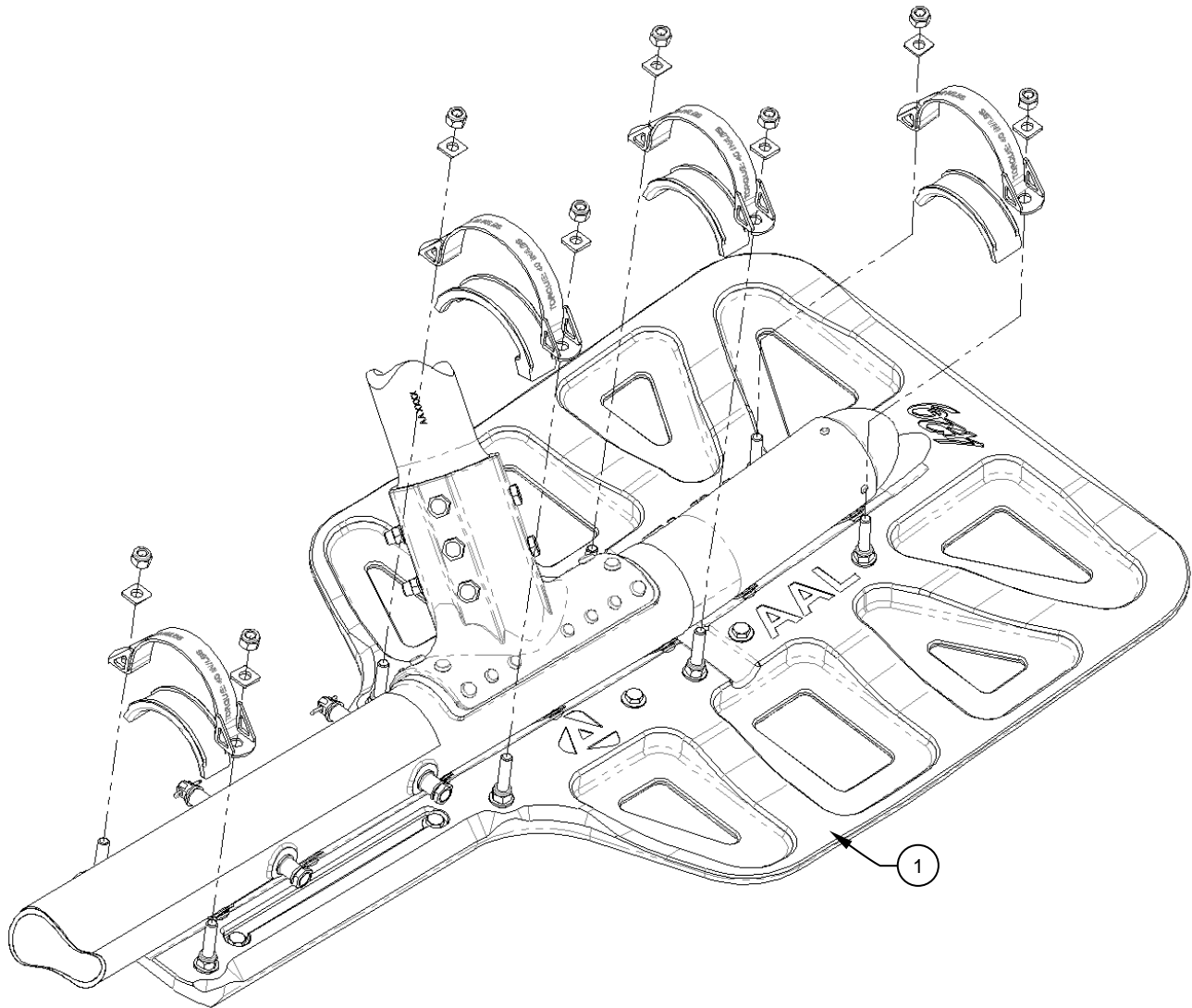
SECTION 4: ILLUSTRATED PARTS BREAKDOWN

General Notes

1. Alternate items listed where applicable.

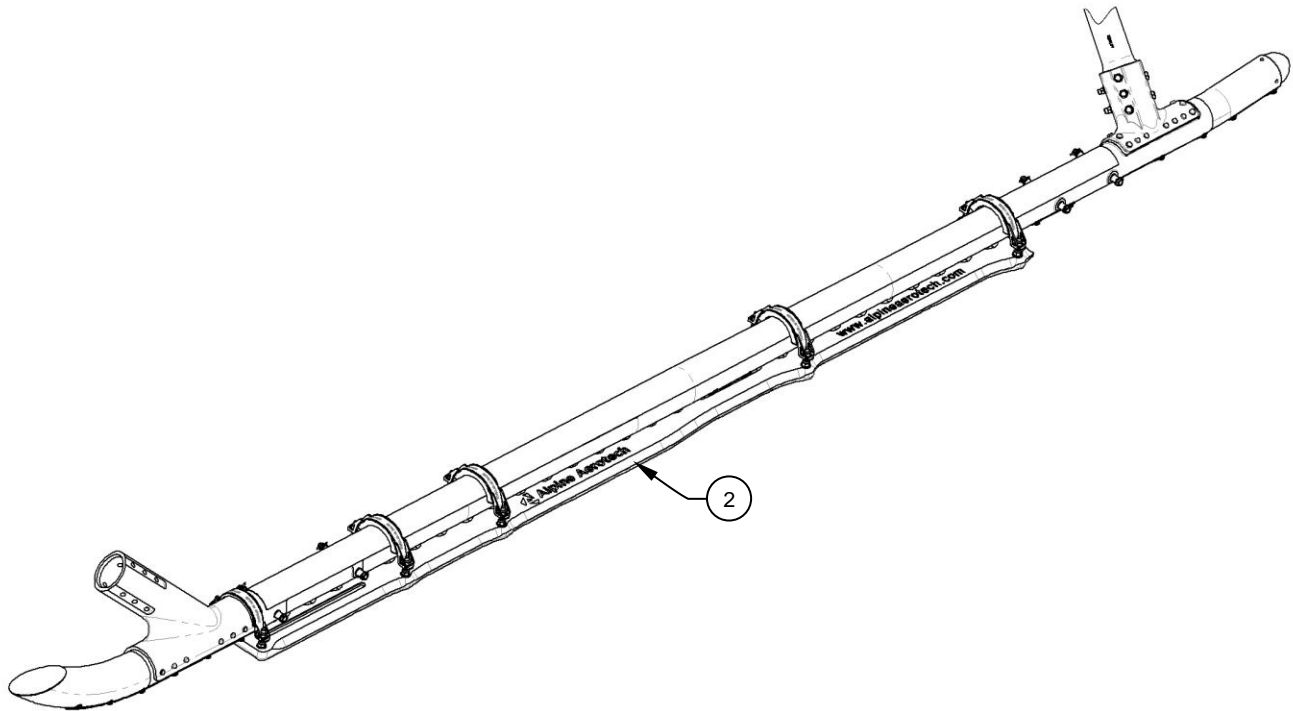
 Typical item number for all like items in this view unless otherwise specified.

Illustrated Parts Breakdown (cont.)



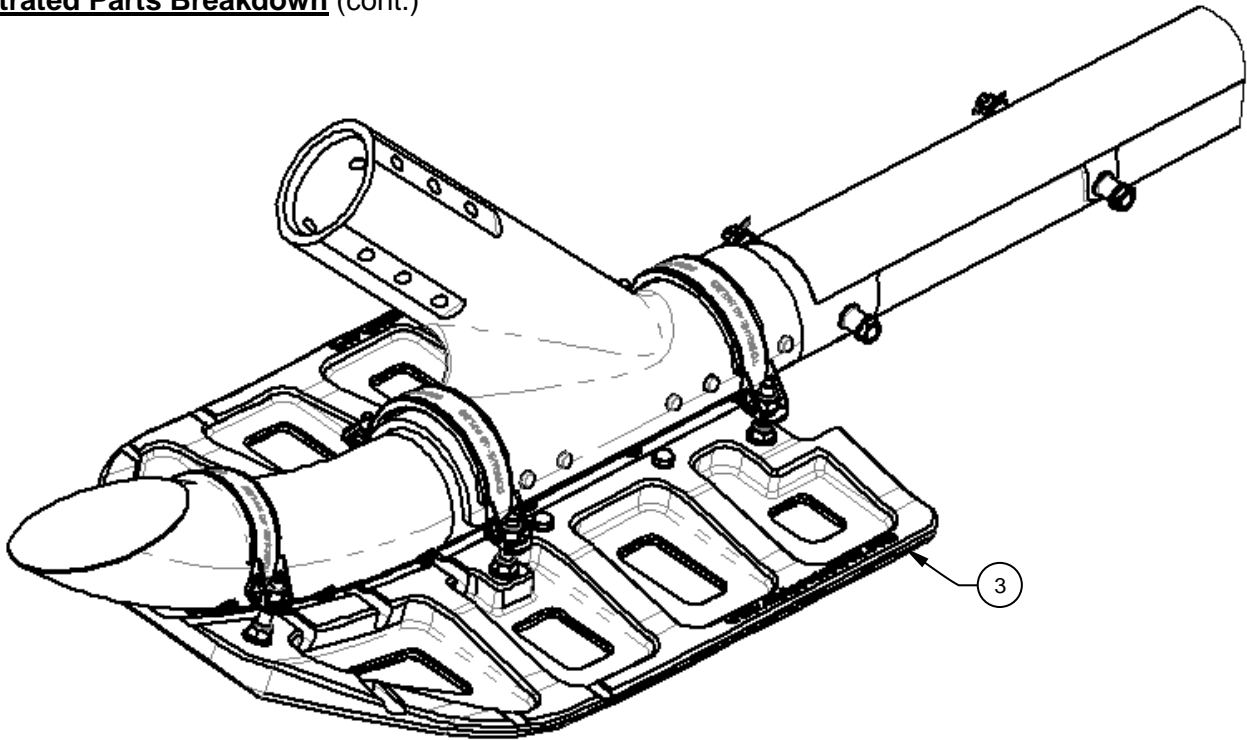
Bear Paw, Assy, Kit
Shown
(LHS only)

Illustrated Parts Breakdown (cont.)

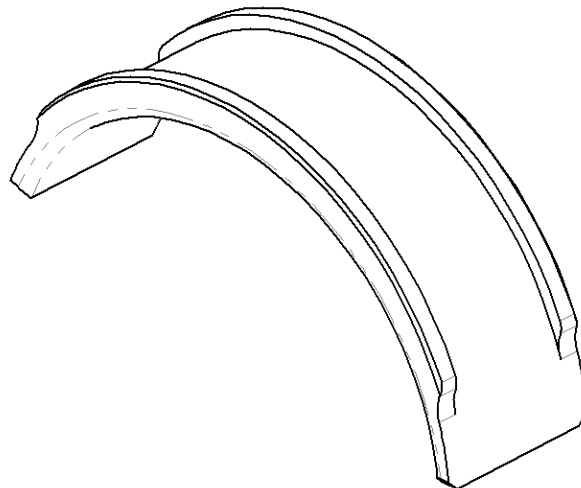


Traction Paw, Kit
Shown

Illustrated Parts Breakdown (cont.)



Yeti Paw, Kit
Shown



Cap, Detail
Item 4
Shown

Illustrated Parts Breakdown (cont.)

					REF				
ITEM	QTY	NUMBER	DESCRIPTION	MATERIAL	STOCK SIZE	SPEC	FINISH	MANUFACTURER	NCAGEC
-	-	AAL-490-010-901	DEEP SNOW, KIT						
1	1	AAL-490-010-001	BEAR PAW, ASSY, KIT	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
2	1	AAL-490-020-001	TRACTION PAW, ASSY	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
3	1	AAL-490-030-001	YETI PAW, ASSY	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
4	2	AAL-490-012-008	CAP, DETAIL	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
5	1	AAL-490-012-009	SPLICE, DETAIL	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171
6	4	AAL-490-012-010	CONNECTOR, DETAIL	NA	NA	NA	NA	ALPINE AEROTECH LP	L0171