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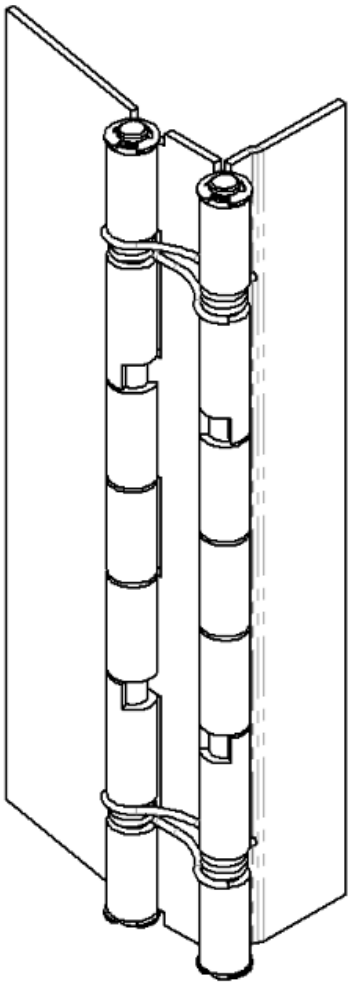

COWLING HINGE R&O
INSTRUCTIONS FOR CONTINUING AIRWORTHINESS

MODELS: BELL 212, 412 & 412CF

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

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General Notes

1. All maintenance 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. If changes to this document are required, Alpine Aerotech LP shall revise all pages and reissue the entire document.

5. 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.

6. This repair/overhaul is accepted in the US as detailed in section 3.3.5.1 of TCCA document “Implementation Procedures for Airworthiness”.

7. This repair/overhaul is accepted in the EU as detailed in section 2.10 of the TCCA / EASA Technical Implementation Procedures for Airworthiness and Environmental Certification.

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SECTION 1: DESCRIPTION

The purpose of the Cowling Hinge, R&O, is to provide an economical method of repairing the cowling hinge while also incorporating features that increase the ability to service the hinge in the future.

SECTION 2: MAINTENANCE INSTRUCTIONS

2.1 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 Tables 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.

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2.2 Maintenance/Inspection Procedures

Maintenance/Inspection Notes

1. Refer to the current revision of the BHT-212-MM Maintenance Manual, Chapter 5 or BHT-412-MM Maintenance Manual, Chapter 5 (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/Pre-Flight Inspections every day, prior to flight operation. If damage is detected, perform a 300 Hour/12 Month Inspection.

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.

2.2.1 Scheduled Inspections

1. Pre-Flight/Daily Inspection

   Data Reference: Section 2.3, Repair & Overhaul Procedures
   Section 4, Illustrated Parts Breakdown

   i. Perform a General Inspection to ensure the presence of retaining rings (Item 5).

2. 300 Hour/12 Month Inspections

   Data Reference: Section 2.3, Repair & Overhaul Procedures
   Section 4, Illustrated Parts Breakdown

   i. Perform a Detailed Inspection on all materials and finishes related to the Cowling Hinge R&O for evidence of corrosion and damage.

   ii. Perform a Detailed Inspection on all items, materials and finishes related to the Cowling Hinge R&O for proper integrity and condition.

   iii. Perform a Detailed Inspection on all hardware and fasteners related to the Cowling Hinge R&O for proper security.

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2.3 Repair & Overhaul Procedures

Repairs to the item(s) referenced within this document are as detailed in the steps below.

1. Make the aircraft ready for maintenance and gain access to the cowling hinge.

2. Using a pin punch, remove the OEM hinge pins and torsion springs. Reference Figure 1. Discard the old pins and springs.

NOTE

As the OEM hinge pins are crimped into the hinges, it may be necessary to open up one of the crimped ends of the hinge slightly to ease removal of the hinge pins.

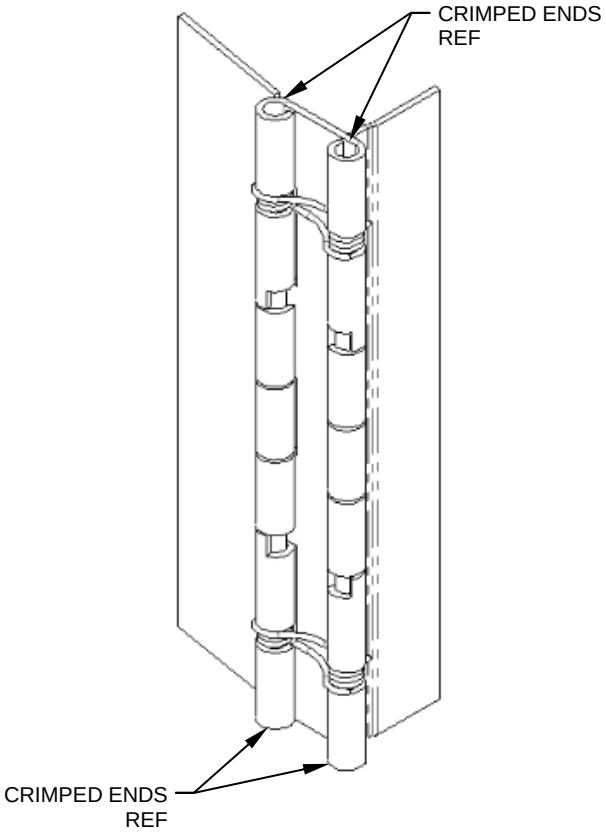

Figure 1
OEM hinge Assy Shown
(existing rivet holes in hinge not shown)

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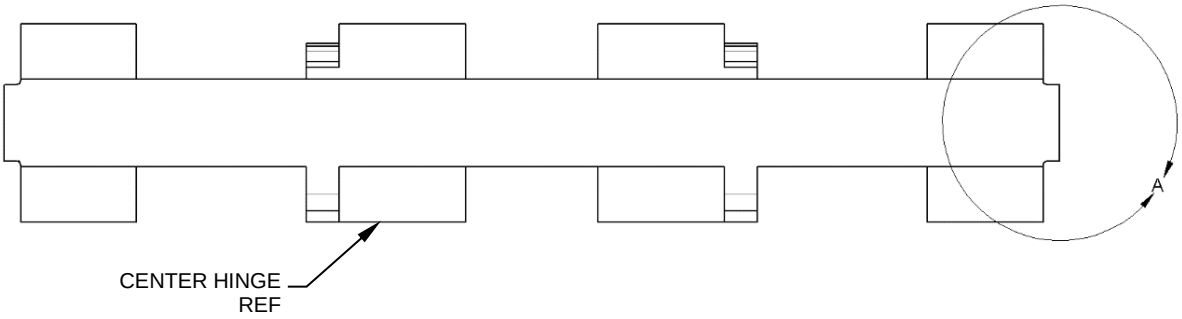
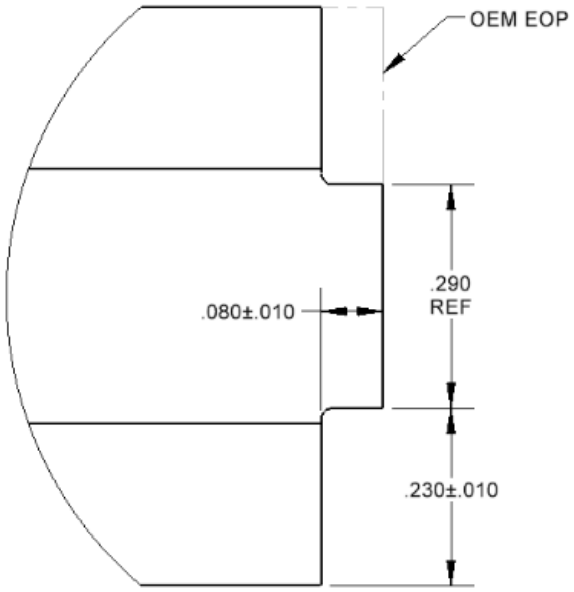
3. Using a file, cut clearance notches in the center hinge segment as detailed in Figure 2 and ensure that the notches are de-burred.





View A

Figure 2
Clearance notch geometry
detailed above

4. Install the new Hinge Pins (Item 2) and Springs (Items 3 & 4). Reference Figure 3. It is recommended to install a Retaining Ring (Item 5) on one end of each Hinge Pin prior to driving them into the hinges. This will prevent damage to the retaining ring groove(s) during installation. Install the remaining retaining ring after the assembly of the hinge is complete.

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5. Install the remaining Retaining Rings (Item 5) in the grooves in the new Hinge Pin (Item 2). Ensure all Retaining rings are properly seated. Reference Figure 3.

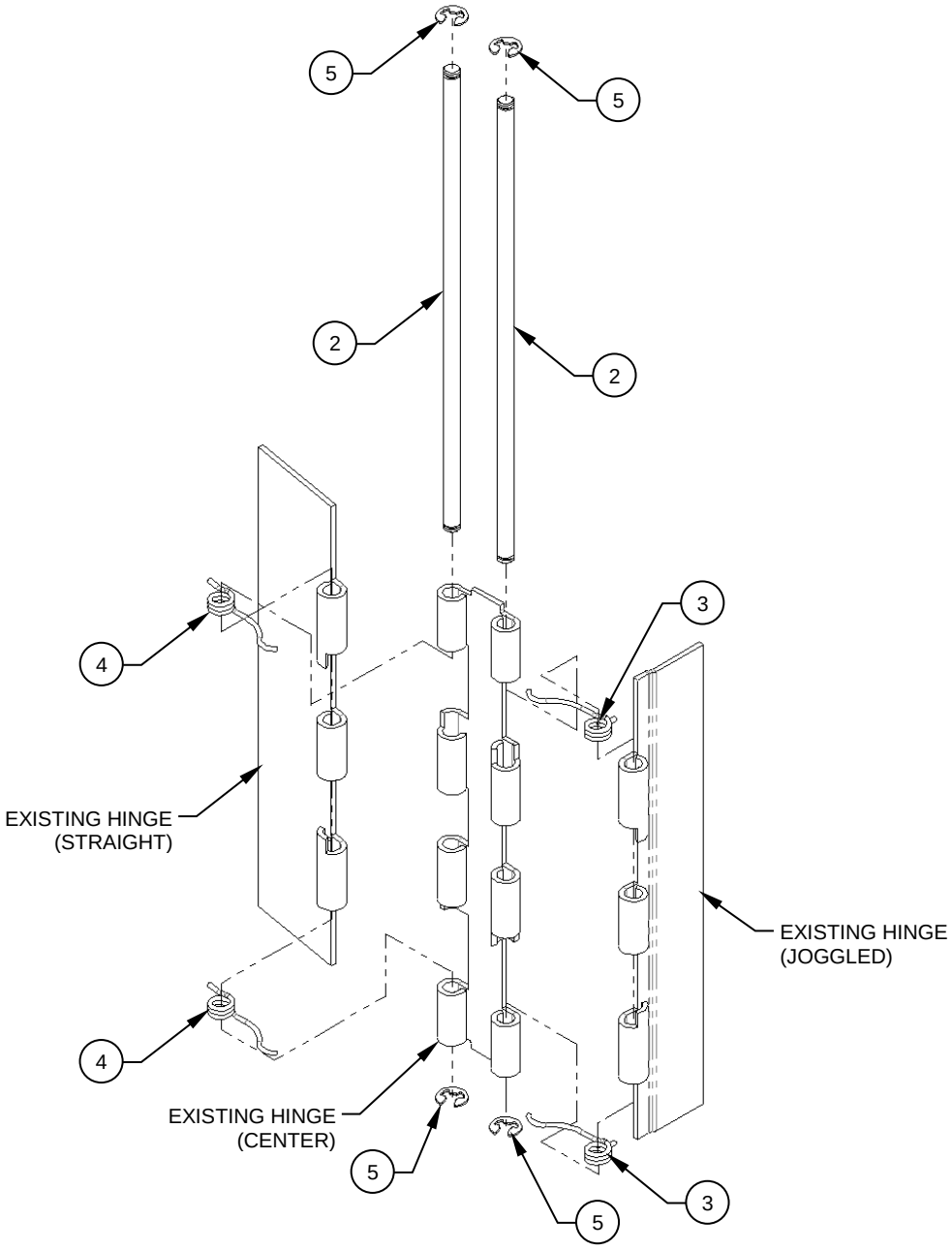

Figure 3

6. Update the aircraft logbook for the repair/overhaul of the Cowling Hinge. Repair/overhaul procedure complete.

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SECTION 3: INSTALLATION/REMOVAL INSTRUCTIONS

3.1 Applicability

The Cowling Hinge R&O is applicable to all Bell 212 & 412 rotorcraft equipped with 212-061-812-101 or -102 sheet metal combining gearbox side cowling doors with the following hinge part number installed as detailed below.

1. MODEL: Bell Helicopter **212**
   SERIAL NO.: 30504 thru 30578, 30579 thru 31311, 35001 thru 35101

2. MODEL: Bell Helicopter **412 (EP/EPI/EPX)**
   SERIAL NO.: 33001 thru 33212, 36001 thru 36157

3. MODEL: Bell Helicopter **412CF**
   SERIAL NO.: 46400 thru 46474

HINGE PART NUMBER
H6099A025A

3.2 Weight & Balance

R&O Scheme	Description	Weight	Long. Arm	Lat. Arm
AAL-233-010-001	Cowling Hinge R&O	no change	no change	no change

3.3 Installation Procedure

1. Installation procedures do not change from the original OEM configuration. Refer to BHT-212-MM, Chapter 71 – Power Plant or BHT-412-MM, Chapter 71 – Power Plant (as applicable) for information regarding combining gearbox side cowling door installation.

3.4 Removal Procedure

1. Removal procedures do not change from the original OEM configuration. Refer to BHT-212-MM, Chapter 71 – Power Plant or BHT-412-MM, Chapter 71 – Power Plant (as applicable) for information regarding combining gearbox side cowling door removal.

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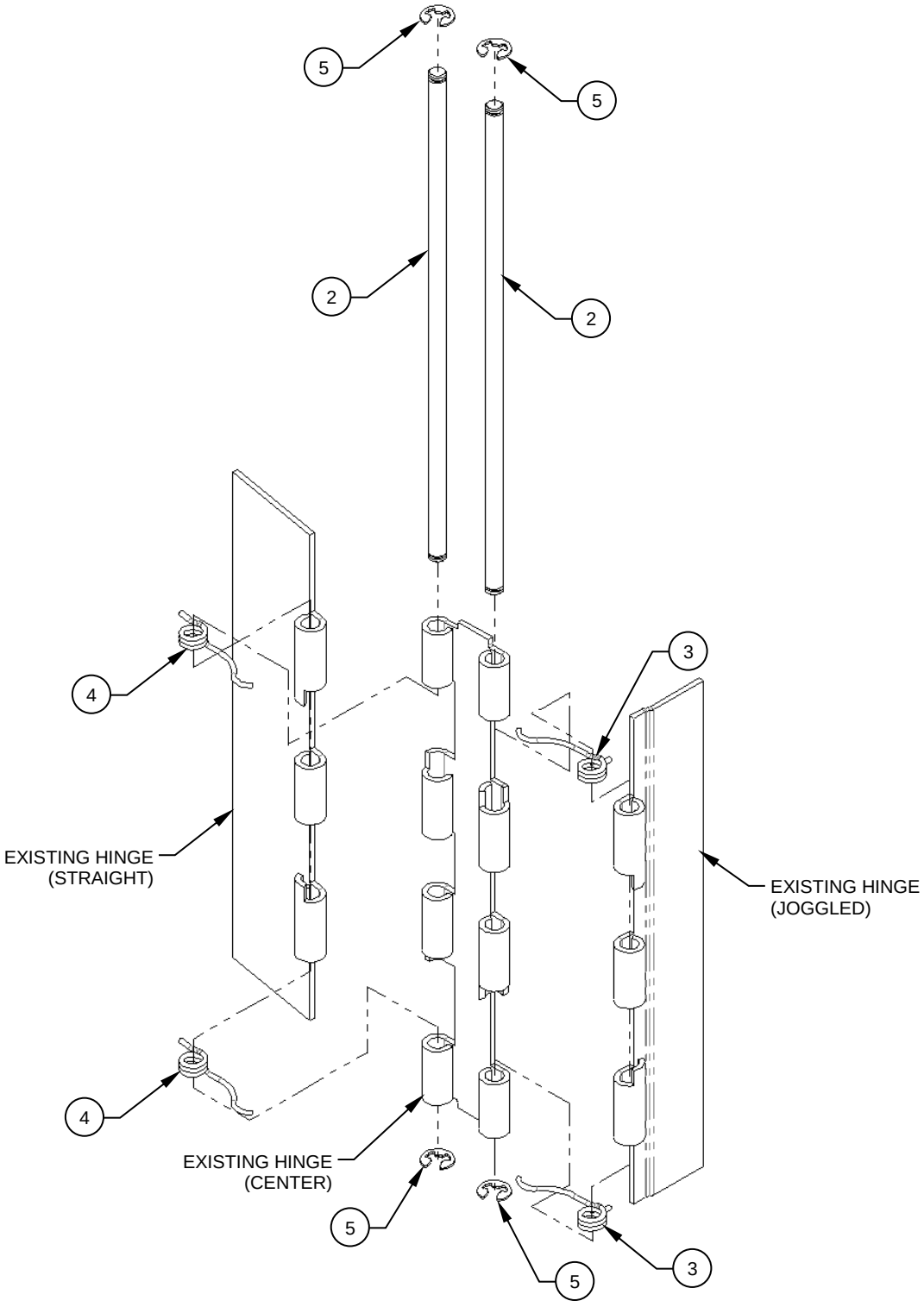
SECTION 4: ILLUSTRATED PARTS BREAKDOWN



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ITEM	QTY	NUMBER	DESCRIPTION	MATERIAL	REF STOCK SIZE	SPEC	FINISH	MANUFACTURER	NCAGEC
-	1	H6099A025A	COWLING HINGE (OEM)						
1	1	AAL-233-010-001	COWLING HINGE R&O (AAL REPAIRED)	N/A				N/A	
2	2	AAL-233-012-001	HINGE PIN, DETAIL	N/A	.125	N/A	N/A	ALPINE AEROTECH LP	L0171
3	2	AAL-233-012-002	SPRING, DETAIL	N/A	.033	N/A	N/A	ALPINE AEROTECH LP	L0171
4	2	AAL-233-012-003	SPRING, DETAIL	N/A	.033	N/A	N/A	ALPINE AEROTECH LP	L0171
5	4	MS16633-4012	RING, RETAINING, E TYPE	SEE SPEC	SEE SPEC	MS16633	SEE SPEC	SOURCE AS REQUIRED	N/A