



## **CARGO MIRROR/PULSE LIGHT, KIT MAINTENANCE MANUAL SUPPLEMENT**

**MODELS: BELL 412, 412EP, 412CF**

Read all of the maintenance Instructions thoroughly  
prior to performing any activities relating to this product

## **Notes**

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

## **Description**

The following information provides a functional description of the Cargo Mirror/Pulse Light, Kit as defined in Alpine Aerotech Ltd. authority dataset AAL-290-010-902.

The AAL Cargo Mirror/Pulse Light, Kit gives the pilot the ability to view external loads as well as providing supplementary recognition lighting in low visibility/high traffic scenarios. It performs this task through the addition of twin convex mirrors attached to an adjustable arm. The arm is in turn clamped into mounting blocks that are fastened to the aircraft using bolts and potted inserts. Once the mirrors are adjusted to the correct angle, the pilot is able to view the sling load in the mirrors through the chin bubble in the floor of the crew compartment. The arm/clamping block union is designed in such a way as to allow the arm to fold flat in the event that the aircraft should experience a wire strike. The recognition lights are secured to the mounting blocks and face forward. The lights are activated by a switch on the instrument panel and may be activated at the pilot's discretion.

## **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-412-MM and C-12-146-000/MF-001 for the chapter(s) and section(s) referenced within this document.
3. Refer to Installation Instructions (AAL-290-015-005) and Illustrated Parts Breakdown (AAL-290-015-105) 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. 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, 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/Pilot Pre-flight Check 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/Pilot Pre-flight Check

Data Reference: Installation Instructions (AAL-290-015-005)  
Illustrated Parts Breakdown (AAL-290-015-105)

- i. Perform a General Inspection on all items in the Cargo Mirror/Pulse Light, Kit for general condition.
- ii. Perform a General Inspection on all items in the Cargo Mirror/Pulse Light, Kit for proper security.
- iii. Perform a General Inspection on the Lamp, Assy's for proper security.
- iv. Perform a General Inspection on the Cargo Mirror/Pulse Light, Kit for proper functionality and operation.

## Scheduled Inspections

### 2. 100 Hour/12 Month Inspections

Data Reference: Installation Instructions (AAL-290-015-005)  
Illustrated Parts Breakdown (AAL-290-015-105)

- i. Perform a Detailed Inspection on all items, materials and finishes in the Cargo Mirror/Pulse Light, Kit for evidence of corrosion, cracks and damage.
- ii. Perform a Detailed Inspection on all items, materials and finishes in the Pulse Light, Kit for proper integrity and condition.
- iii. Perform a Detailed Inspection on all items in the Cargo Mirror/Pulse Light, Kit for proper security.
- iv. Perform a Detailed Inspection on all hardware and fasteners in the Cargo Mirror/Pulse Light, Kit for proper security and torque.
- v. Perform a Detailed Inspection on all electrical items in the Cargo Mirror/Pulse Light, Kit for evidence of arcing and loose connections.
- vi. Perform a Detailed Inspection on all wiring in the Cargo Mirror/Pulse Light, Kit for evidence of chaffing.
- vii. Perform a Detailed Inspection on the Housing, Assy's (Item 34) for proper Lamp, Assy (Item 35) and Retaining Seal security.
- viii. Perform a Detailed Inspection on the Pulselite Control Unit, Assy (Item 15) IAW the Pulselite Installation Manual.
- ix. Perform a Detailed Inspection on the OEM Inverter Bay Panel, Assy for evidence of corrosion and delamination at the wiring, through hole locations.
- x. Perform a Detailed Inspection on the Pulselite Control Unit, Assy (Item 15) and Lamp, Assy's (Item 35) for proper functionality and operation.
- xi. Perform a Detailed Inspection on all breakers and switches in the Pulse Light, Kit for proper functionality and operation.

## **Repair Procedures**

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