



A Textron Company

## **INFORMATION LETTER**

**429-17-03**

11 September 2017  
Revision A, 16 February 2022

**TO: All owners and operators of Model 429 helicopters**

**SUBJECT: CURTISS-WRIGHT SERVICE BULLETIN D51615-31-19 REPLACEMENT UNDERWATER LOCATOR BEACON (90-DAY) KIT PART NUMBERS 112470, 112813 or 112814**

The purpose of this Information Letter is to achieve complete distribution of the attached supplier Service Bulletin to the current affected model Technical Publications distribution list on record by Bell Textron.

Revision A of this Information Letter introduces the latest revision of the Curtiss-Wright Service Bulletin D51615-31-19. The new Bulletin adds new kit numbers that include a new ULB battery with less lithium content.

Refer to BHT-429-MMS-5 Maintenance Manual Supplement, Chapter 97, for the removal and installation instructions of Data Acquisition Flight Recorder (DAFR) from the helicopter.

For any questions regarding the attached Service Bulletin, please contact Curtiss Wright:

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## SERVICE BULLETIN

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### REPLACEMENT UNDERWATER LOCATOR BEACON (90-DAY) KIT PART NUMBERS 112470, 112813 or 112814

**CLASSIFICATION:** FOR INFORMATION ONLY

#### SECTION I: PLANNING INFORMATION

##### 1. Applicability

This Service Bulletin is applicable only to underwater locator beacons (ULB) fitted to Penny & Giles Manufactured flight data recorders detailed in the following list:

<b>Part Number</b>	<b>Build Standard (and Later)</b>	
D51615-142	Issue 2	Mod 2
D51615-202-005	Issue 1	Mod 1
D51615-202-006	Issue 1	Mod 1
D51615-202-011	Issue 1	
D51615-202-013	Issue 1	
D51615-202-021	Issue 4	Mod 1
D51615-202-031	Issue 1	Mod 1
D51615-203-006	Issue 2	Mod 1
D51615-203-007	Issue 1	Mod 1
D51615-203-012	Issue 1	Mod 1
D51615-3411-250	Issue 1	Mod 1

**NOTE:** Units manufactured before 2013 may not suitable for this upgrade Kit and may require further upgrades of the Crash tube (subject to a full evaluation of the unit).

**NOTE:** Curtiss-Wright has no intention to obtain TSO approval for clearance to use the 90-Day ULB option in conjunction with the Types D51615-102, D51615-122 and D51615-133 Flight Data Recorders.

If you have any doubts about the suitability of your unit, please contact Curtiss-Wright (Penny & Giles Aerospace limited) for clarification.

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## SERVICE BULLETIN

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### 2. Reason

This Service Bulletin has been created to inform all operators using Penny & Giles Aerospace Limited Flight Data Recorders that in accordance with FAA Directive TSO C121b which came into force on the 1<sup>st</sup> March 2015, P&G are introducing a ULB which has an operational life in excess of 90 days.

### 3. General

For reference purposes, this Service Bulletin uses the beacon installation to an MPFR. The beacon location procedure will be similar for all Penny & Giles Aerospace Limited manufactured flight recorders (MPFR, EMPFR, DAFR & DIDAFR).

### 4. Existing 30-Day Beacons

With the exception of the Types stated in the note at Paragraph 1 (Applicability), Customers with existing 30-day beacons may, if they wish, have them changed to the new 90-Day beacon.

Contact Curtiss-Wright (Penny & Giles Aerospace Limited) for price and lead time information.

### 5. Beacon Description

The new 90-day beacon is approximately 1 inch (25mm) longer in length than the existing 30-day beacon currently in use. As a result, the mounting brackets which secure the beacon to the recorder have been re-designed and the beacon mounting arrangement has been rotated by 90 degrees to fit the existing size envelope of the recorder unit and beacon combined.

To accommodate the new beacon mounting arrangement, it has been necessary to amend the design of the rear mounting feet of the recorder to aircraft structure as follows:

The two existing mounting feet attached to the recorder outer casing have been replaced by two (handed) foot fittings attached to the recorder rear casing using the existing screw locations.

The recorder is secured to the aircraft structure with a retention plate which is mounted on the aircraft structure and secured to the two new foot fittings on the rear of the recorder by two cap-head screws.

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## SERVICE BULLETIN

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### 6. **Approval**

Issued by Penny & Giles Aerospace Limited under the terms of the Company's international Quality Approvals.

### 7. **Manpower**

Approximately one hour

### 8. **Material, Cost and Availability**

Cost of Kit - TBA

### 9. **Tooling, Price and Availability**

Not applicable

### 10. **Weight and Balance**

The 90-day beacon and bracketry will increase the weight of the Flight Recorder assembly as follows:

Approximately 3.5kg to approximately 4.0kg (EMPFR Kit 112470).

Approximately 3.5kg to approximately 3.8kg (MPFR Kit 112813).

Approximately 3.5kg to approximately 3.8kg (DAFR/DIDAFR Kit 112814).

### 11. **Electrical Load Data**

Not affected

### 12. **References**

FAA Directive TSO C121b.

P&G Component Maintenance Manual – CMM 31-34-22 (MPFR)

P&G Component Maintenance Manual – CMM 31-34-28 (EMPFR)

Dukane DK120-90-Tech-Manual- 03-TM-0063 (Rev A)

**Note:** Persons wishing to obtain further information relating to the DK120-90 ULB should refer to the Dukane User Manual listed above.

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## SERVICE BULLETIN

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### SECTION II: ACCOMPLISHMENT INSTRUCTIONS

#### 1. Beacon Replacement Procedure

Changes to locator beacons fitted to existing (in-service) recorders may be carried out by the customer using the relevant Kit on the provision that they have adequate facilities in order to carry out the modification.

**NOTE: Customers wishing to upgrade their existing 30 Day beacon to the 90-day type will need to contact P&G to be supplied with a new ULB Kit 112470, Kit 112813 or Kit 112814 (as applicable).**

**A photograph of the existing MPFR unit's Identification label must be supplied to P&G prior to the issue of a beacon replacement kit. This will enable us to supply the printed replacement label with the correct information (serial No. etc.).**

The procedure is as follows:

#### 1.1 Beacon Removal (Refer to Figure 1)

- 1) Remove the recorder from the Aircraft.
- 2) Remove and discard the four existing mounting screws which secure the current ULB top and bottom mounting brackets.
- 3) Remove and discard the existing ULB and mounting bracket assembly.
- 4) Remove and discard the two screws and washers which secure the two mounting feet (beacon end) to the recorder external casing.

## SERVICE BULLETIN

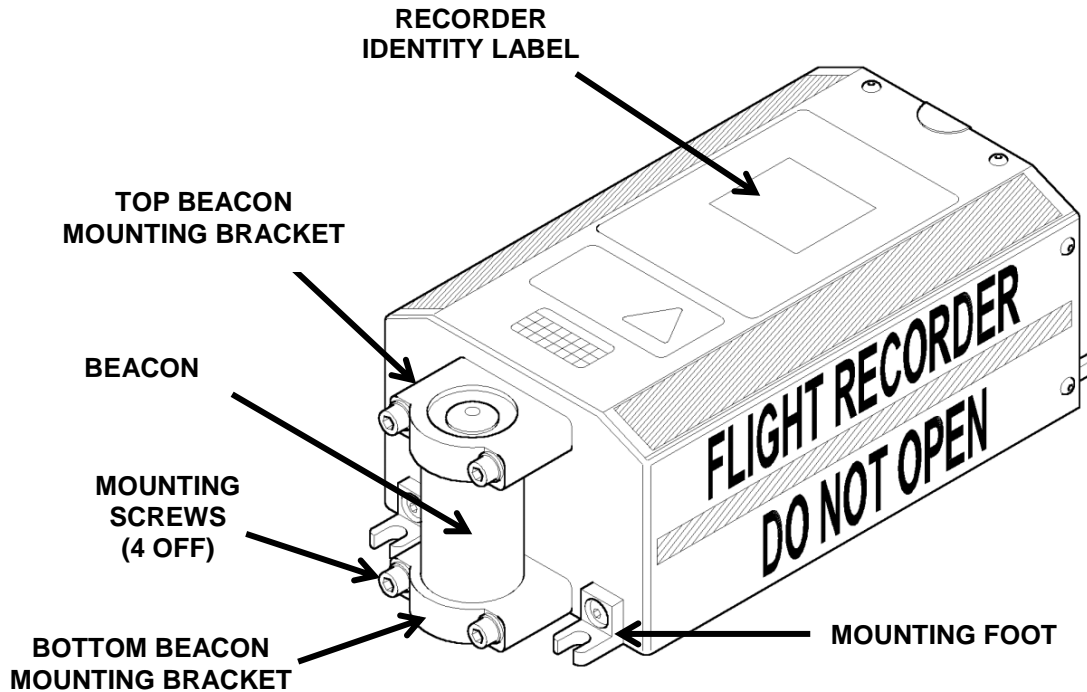


Figure 1 – Existing ULB Mounting Arrangement

### 1.2 Beacon Fitting (Refer to Figure 2)

- 1) Using screws (60), washers (50) & Pins (30) fit recorder retaining foot fittings (40) and (80).
- 2) Apply Loctite 222 (locally sourced) to the threads and torque tighten screws to 2.8-3.0Nm

**Note:** The fittings are 'handed' so ensure that the correct location is selected before securing.

- 3) Secure the RH bracket assembly (10) to the recorder using one of the longer fixing screws (110) and washers (50) in the upper location.
- 4) Secure the RH bracket assembly to the recorder using one of the shorter fixing screws (90) and washers (50) in the lower location.

**Note:** Apply a small amount of Loctite 222 (locally sourced) to both screws before tightening.

- 5) Decide on the orientation of the Beacon (130).

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## SERVICE BULLETIN

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**Note:** The 90-Day beacon may be fitted with the Water Switch end of the beacon in either left or right orientation however it is important that the sealing ring is located at the opposite end of the beacon to the water switch.

**For the purposes of this Service Bulletin the beacon has been orientated to the left.**

- 6) Fit the Silicone rubber cord (140) into the bore of the appropriate mounting bracket into which the base of the beacon (130) is to be located (see Figure 2).
- 7) Slide the beacon into the bracket firmly up against the rubber cord.
- 8) Secure LH bracket (120) to the recorder using screws (90), (110) and washers (50). See steps 3 & 4 above.

**Note:** Apply a small amount of Loctite 222 (locally sourced) to both screws before tightening.

**Note:** Ensure all beacon mounting bracket parts are correctly located before tightening the mounting bracket retaining screws (90) & (110) to 6.5-7.0Nm.

### 1.3 Identification of 90-Day Beacon

- 1) Using a sharp scalpel or craft knife, gently lift one corner of the existing IDENT Label located on the upper surface of the recorder cover. Take care not to damage the surrounding paintwork.
- 2) Remove and discard the existing IDENT Label. If necessary clean the area with a suitable solvent (e.g. Electro-lube LRM Label Remover).
- 3) Carefully apply the new IDENT Label and ensure it is securely fitted.

### 1.4 Fitting the modified MPFR to the aircraft

- 1) Fit the retention plate (70) to the aircraft structure using two cap-head screws (6.35mm Dia.) and washers (locally sourced).
- 2) Locate the foot retention fittings (40) and (80) into the retention plate (70).
- 3) Apply a small amount of Loctite 222 (locally sourced) to the threads of the screws (20).
- 4) Secure assembly with the two cap head screws.
- 5) Torque tighten to 5.0-5.5Nm
- 6) Secure the existing recorder foot fittings (opposite end to the beacon) to the aircraft structure, (fasteners not supplied).

## SERVICE BULLETIN

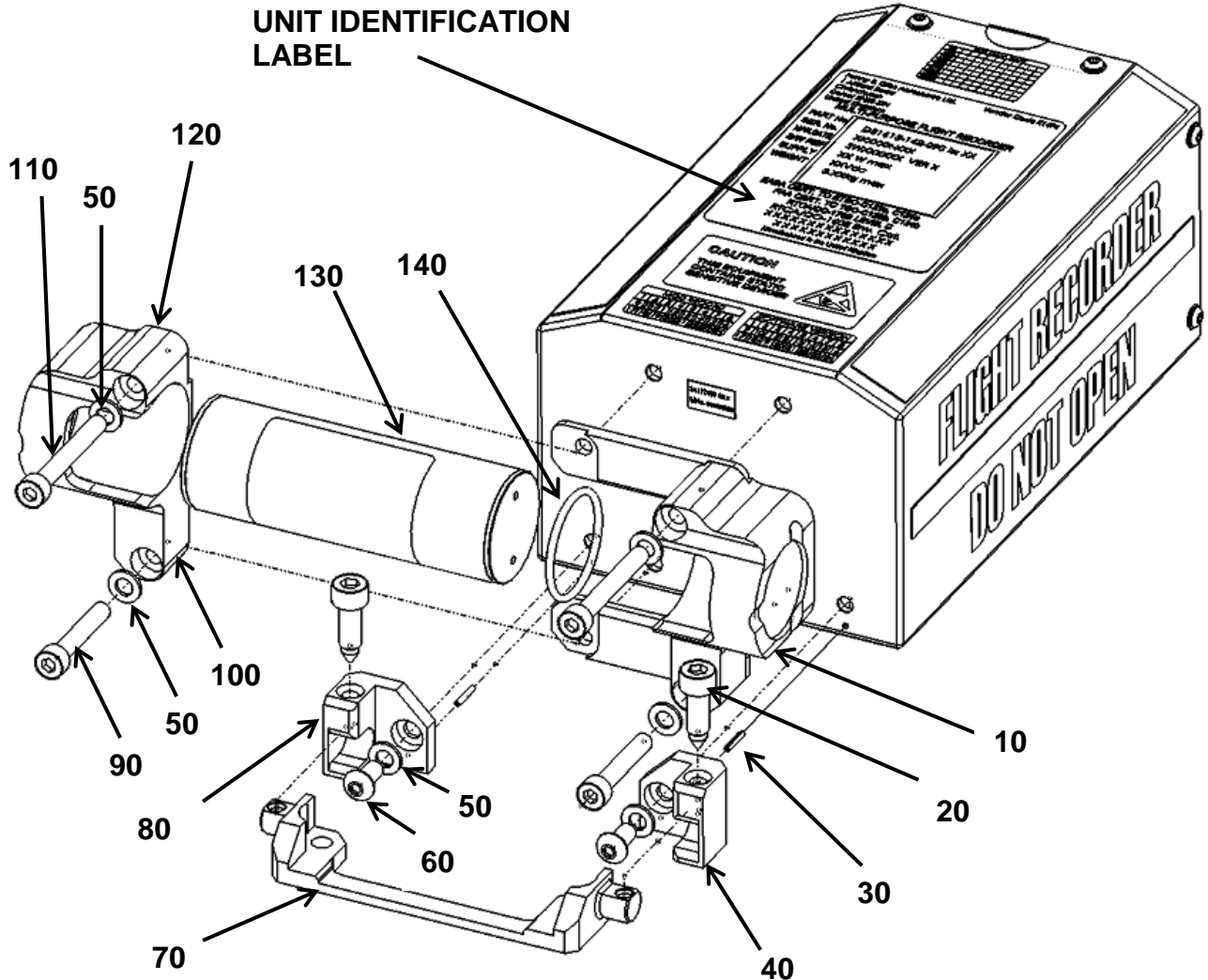


Figure 2 – 90-Day Beacon Mounting Arrangement

### 2. Marking

Recorders modified with a 90-Day beacon will be identified by the Part Number (D51615-XXX-090) indicated on the unit Identification label located on the top cover of the recorder Unit.

Customers modifying the recorder with the new 90-Day beacon will have replaced the IDENT Label as part of the procedure.

### 3. Testing

Test in accordance with the procedures detailed in CMM 31-34-22 or CMM 31-34-28.



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## SERVICE BULLETIN

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### SECTION 3: MATERIAL INFORMATION

#### 1. Materials Required

##### 90-Day ULB KIT Type:

KIT P/N 112470: for use with EMPFR Type D51615-3411-250 units.

KIT P/N 112813: for use with MPFR Type D51615-142 units

KIT P/N 112814: for use with DAFR Type D51615-202 & DIDAFR Type D51615-203 units.




Ensure that you are ordering the correct KIT for your recorder type. Refer to the following KIT details.

**NOTE:** The three types of Kit are similar with the exception of the screws used to secure the Retaining Feet P/N 112298 and 112305 to the rear face of the MPFR unit.



Customers supplied with Kit 112470 may use the screws P/N 435890001 in place of screws listed in the Kit details below.

## SERVICE BULLETIN

### Kit P/N 112470 (EMPFR Type D51615-3411-250)






Part Number	Description	Qty	Image	
<b>SA112457</b>	Beacon Bracket Assy LH	1		
	Comprising:			
	Bracket LH	P112281		1
	Connecting Plate	P112454		1
	Connecting Plate	P112456		1
	Screw, Pozi-Drive	435845026	2	
<b>P112282</b>	Beacon Bracket RH	1		
<b>P112297</b>	Retention Plate	1		
<b>P112298</b>	Retention Foot RH (Beacon end of Recorder Unit)	1		
<b>P112304</b>	Retention Screw	2		

## SERVICE BULLETIN



Part Number	Description	Qty	Image
P112305	Retention Foot LH (Beacon end of Recorder Unit)	1	
220000084	DK120/90 Dukane ULB	1	
250208135	Roll Pin 1.5mm Dia x 10mm Long	2	
230180180	0.070mm Section Fluorosilicone	100mm	
435890000	Screw M5 x 10mm ST ST BTN HD (to secure Retention Feet P112298 & P112305 to Recorder Unit)	2	
680150161	Washer M5 Plain	6	
W107841/0530	Screw M5 x 30mm HI-TENS STL SKT CAP HD	2	
W107841/0540	Screw M5 x 40mm HI-TENS STL SKT CAP HD	2	
TBA	Main Identification Label (customers must supply details of existing Ident. Label i.e. Unit Serial No. Date of Manufacture etc.)	1	
Total weight of 90-Day ULB assembly		510.6g (= increase in weight of 261.8g)	
Overall weight increase (EMPFR) from 3.5kg			4.0kg

## SERVICE BULLETIN

### Kit P/N 112813 (MPFR Type D51615-142)






Part Number	Description	Qty	Image	
<b>SA112457</b>	Beacon Bracket Assy LH	1		
	Comprising:			
	Bracket LH	P112281		1
	Connecting Plate	P112454		1
	Connecting Plate	P112456		1
	Screw, Pozi-Drive	435845026	2	
<b>P112282</b>	Beacon Bracket RH	1		
<b>P112297</b>	Retention Plate	1		
<b>P112298</b>	Retention Foot RH (Beacon end of Recorder Unit)	1		
<b>P112304</b>	Retention Screw	2		

## SERVICE BULLETIN



Part Number	Description	Qty	Image
P112305	Retention Foot LH (Beacon end of Recorder Unit)	1	
220000084	DK120/90 Dukane ULB	1	
250208135	Roll Pin 1.5mm Dia x 10mm Long	2	
230180180	0.070mm Section Fluorosilicone	100mm	
W107842/0512	Screw M5 x 12mm HI-TENS STL (to secure Retention Feet P112298 & P112305 to Recorder Unit)	2	
680150161	Washer M5 Plain	6	
W107841/0530	Screw M5 x 30mm HI-TENS STL SKT CAP HD	2	
W107841/0540	Screw M5 x 40mm HI-TENS STL SKT CAP HD	2	
TBA	Main Identification Label (customers must supply details of existing Ident. Label i.e. Unit Serial No. Date of Manufacture etc.)	1	
Total weight of 90-Day ULB assembly		510.6g (= increase in weight of 261.8g)	
Overall weight increase (MPFR) from 3.25kg			3.8kg

## SERVICE BULLETIN

### Kit P/N 112814 (DAFR Type D51615-202 & DIDAFR Type D51615-203)

Part Number	Description	Qty	Image	
<b>SA112457</b>	Beacon Bracket Assy LH	1		
	Comprising:			
	Bracket LH	P112281		1
	Connecting Plate	P112454		1
	Connecting Plate	P112456		1
	Screw, Pozi-Drive	435845026	2	
<b>P112282</b>	Beacon Bracket RH	1		
<b>P112297</b>	Retention Plate	1		
<b>P112298</b>	Retention Foot RH (Beacon end of Recorder Unit)	1		
<b>P112304</b>	Retention Screw	2		

## SERVICE BULLETIN

Part Number	Description	Qty	Image
P112305	Retention Foot LH (Beacon end of Recorder Unit)	1	
220000084	DK120/90 Dukane ULB	1	
250208135	Roll Pin 1.5mm Dia x 10mm Long	2	
230180180	0.070mm Section Fluorosilicone	100mm	
435890009	Screw M5 x 10mm TORX ST ST (to secure Retention Feet P112298 & P112305 to Recorder Unit)	2	
680150161	Washer M5 Plain	6	
W107841/0530	Screw M5 x 30mm HI-TENS STL SKT CAP HD	2	
W107841/0540	Screw M5 x 40mm HI-TENS STL SKT CAP HD	2	
TBA	Main Identification Label (customers must supply details of existing Ident. Label i.e. Unit Serial No. Date of Manufacture etc.)	1	
Total weight of 90-Day ULB assembly		510.6g (= increase in weight of 261.8g)	
Overall weight increase (DAFR & DIDAFR) from 3.5kg			3.8kg

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## SERVICE BULLETIN

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### 2. Materials Removed

Part Number	Description	Quantity
220000040	Beacon – 30-Day	1
P110318	Beacon Mounting Bracket - Top	1
P109552	Beacon Mounting Bracket - Bottom	1
435890007	Screw, Cap Head, SKT, SS	4
680150161	Washer, M5, SS	4
230180180	0.070mm Section Fluorosilicone	1
P109302	MPFR Mounting foot	2
435890001	Screw, M5, Button Head	2
680150161	Washer, M5, SS	2
A/R	Unit Identification Label	1

### SECTION 4: CONTACT INFORMATION

For further information in relation to this modification, please contact the following:

Email: [CS\\_Technical\\_Services@curtisswright.com](mailto:CS_Technical_Services@curtisswright.com)

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