A Textron Company

INFORMATION LETTER 429-21-15

8 June 2021

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

SUBJECT: **DATA ACQUISITION FLIGHT RECORDER (DAFR) TYPES D51615-202-011 AND D51615-202-011-090 CONFIGURATION FILE SW110920 UPDATED TO RELEASE 6**

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

The Curtiss-Wright SB D51615-31-26 applies to Bell model 429 helicopters equipped with the Cockpit Voice/Flight Data Recorder (CV/FDR) Kit 429-706-058.

For any questions regarding this letter, please contact:

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SERVICE BULLETIN

INDICATING/RECORDING SYSTEMS

DATA ACQUISITION FLIGHT RECORDER (DAFR) TYPES D51615-202-011 AND D51615-202-011-090

CONFIGURATION FILE SW110920 UPDATED TO RELEASE 6

DOCUMENT No.:	SB D51615-31-26
DATE OF ISSUE:	21st January 2019
REVISION:	Revision 1
DATE OF REVISION:	27th April 2021
CLASSIFICATION:	MANDATORY

NOTE:

Before performing any of the tasks defined by this Service Bulletin, please ensure that you are using the latest (current) version of this document. Check the revision/issue status by accessing the following link:

https://www.curtisswrightds.com/support/technical/christchurch.html

You will be able to view the Technical Publications Registers and, if necessary, request a copy of the current revision/issue.

SECTION 1: PLANNING INFORMATION

1.1 Effectivity

This Service Bulletin is only applicable to the Data Acquisition Flight Recorder (DAFR) Type D51615-202-011 and Type D51615-202-011-090 loaded with configuration file SW110920 REL.04 (or earlier), as installed on the Bell 429 aircraft.

Part Number	Build Standard
D51615-202-011	Issue 1 MOD 0
D51615-202-011	Issue 1 MOD 1
D51615-202-011-090	Issue 1 MOD 10

Accomplishment of this Service Bulletin will raise the Issue status of the Type D51615-202-011 DAFR to Issue 3 MOD 0. The issue / modification status of the Type D51615-202-011-090 DAFR will remain unchanged.

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1.2 Concurrent Requirements

In order to be raised to Issue 3 MOD 0, the Type D51615-202-011 DAFR at the Issue 1 MOD 0 build standard first requires the now obsolete Type SA111144 Crash Survivable Memory Module (CSMM) to be replaced with the Type SA111733 Replacement Crash Survivable Memory Module (RCSMM).

Replacement of the Crash Protected Memory is only carried out at the customer's request, or if the existing CSMM is found to be unserviceable.

If the existing memory module is serviceable, this Service Bulletin may still be accomplished, but the unit will need to be released under an approved Production Permit and identified accordingly.

1.3 Reason

This Service Bulletin has been created to inform all operators of the Bell 429 aircraft using Penny & Giles Aerospace Limited Data Acquisition Flight Recorder (DAFR) Type D51615-202-011 or Type D51615-202-011-090 that configuration file SW110920 has been updated to Release 6.

1.4 Description

It has been discovered that when the SW110920 configuration file was originally created, 26 flight data parameters were defined with the incorrect Source/Destination Identifier (SDI) information. As a result, the recorded values for each of the affected parameters is only ever at minimum or maximum reflection. For a full list of the affected parameters, see *SECTION 5:*.

The SDI information for all affected parameters has been corrected in SW110920 Release 6, which has been formally tested and approved for use on the Type D51615-202-011 and Type D51615-202-011-090 DAFR variants.

Several of the affected parameters, such as Wind Speed, Wind Angle and Drift Angle, are considered mandatory parameters, as defined by EUROCAE ED-112. As such, it is important that all Type D51615-202-011 and Type D51615-202-011-090 DAFR units have the configuration file updated to SW110920 REL06 as soon as is practical.

1.5 Compliance Recommendation

This Service Bulletin may be accomplished at the next suitable planned maintenance period.

1.6 Approval

This Service Bulletin has been issued by Penny & Giles Aerospace Limited (an agent of Curtiss-Wright Controls (UK) Limited) under the terms of the Company's international Quality Approvals.

1.7 Manpower

Not applicable. Accomplishment of this Service Bulletin must be performed by Penny & Giles Aerospace Limited personnel.

1.8 Weight and Balance

Not changed.

1.9 Electrical Load

Not changed.

1.10 Software Accomplishment Summary

Configuration File SW110920 for the Data Acquisition Flight Recorder (DAFR) Type D51615-202-011 and Type D51615-202-011-090 has been developed in accordance with the criteria of RTCA DO-178B DAL D and company procedures.

Table 1 Firmware Release Summary

Firmware Release	Service Bulletin No.	Service Bulletin Rev.	Change Summary
SW110920 REL01	Not applicable	N/A	First formal Configuration release for integration testing.
SW110920 REL02	Not applicable	N/A	Minor changes following customer feedback .
SW110920 REL03	Not applicable	N/A	Minor changes following customer feedback.
SW110920 REL04	Not applicable	N/A	Final changes implemented following completion of integration testing. First Production release.
SW110920 REL05	Not applicable	N/A	Activates 3rd ARINC 429 Input Channel to capture Yaw Rate. This release was abandoned as it creates a permanent false FDR caution on aircraft that have not been modified to Bell Technical Bulletin 429-TB-17-55. Type D51615-202-013(-090) variant created for modified aircraft, SB D51615-31-31 refers.
SW110920 REL06	SB D51615-31-26	2	Corrects the SDI information of 52 flight data parameters.

1.11 References

Penny & Giles Aerospace Limited (P&G) drawing D51615-202-011 Issue 3, Dated: Mar 28/17

P&G drawing D51615-202-011-090 Issue 3.02, Dated: Mar 06/20

P&G Service Bulletin SB D51615-31-19 Revision 10, Dated: Mar 22/21

P&G Service Bulletin SB D51615-31-31 Initial Issue, Dated: Feb 26/20

1.12 Other Publications Affected

None.

1.13 Interchangeability or Interminability of Parts

The Type D51615-202-011 and Type D51615-202-011-090 DAFR units are interchangeable, as they are identical in terms of fit and function, with the only changes to the form being the introduction of the 90-Day ULB and fixings on the Type D51615-202-011-090 variant. SB D51615-31-19 (Revision 10, Dated: Mar 22/21) refers.

SECTION 2: MATERIAL INFORMATION

2.1 Material, Price and Availability

Not applicable.

2.2 Industry Support Information

All new Type D51615-202-011-090 DAFR units will have Configuration file SW110920 REL06 installed during manufacture.

The modifications herein will be applied to any applicable unit that has been returned to Penny & Giles Aerospace Limited for general repair or servicing at no additional charge, regardless of warranty status.

2.3 Material Necessary for Each Component

None.

2.4 Tooling, Price and Availability

Not applicable.

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SECTION 3: ACCOMPLISHMENT INSTRUCTIONS

3.1 Equipment Required

Not applicable.

3.2 Accomplishment Procedure

Accomplishment of this Service Bulletin will require that the unit be returned to Penny & Giles Aerospace Limited at the address shown in Section 4.

The modifications herein will be applied to any applicable unit that has been returned for general repair or servicing.

3.3 Marking

Accomplishment of this Service Bulletin will be identified by an issue status of Issue 3 for Type D51615-202-011 variants (unless a Production Permit applies, in which case the Production Permit reference number will be identified on the Main Identification Label, located on the top cover of the DAFR unit).

All Type D51615-202-011 and Type D51615-202-011-090 units will be identified by the inclusion of “SW110920 REL06” on the “CONFIG.” line of the Main Identification Label.

SECTION 4: CONTACT INFORMATION

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

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SECTION 5: APPENDIX

Table 2 Full List of Affected Flight Data Parameters

Display Unit	DAFR ARINC Input Channel	Parameter Name	ARINC Label No.
C-DU	CH #1	Selected ADIU VNE 1	207
R-DU	CH #2	Selected ADIU VNE 2	207
C-DU	CH #1	RAD ALT – Self Test Inhibit	164
C-DU	CH #1	RAD ALT	164
R-DU	CH #2	RAD ALT – Self Test Inhibit	164
R-DU	CH #2	RAD ALT	164
C-DU	CH #1	FMS Desired Track	114
R-DU	CH #2	FMS Desired Track	114
C-DU	CH #1	FMS Distance to Go	251
R-DU	CH #2	FMS Distance to Go	251
C-DU	CH #1	FMS Cross Track Distance	116
R-DU	CH #2	FMS Cross Track Distance	116
C-DU	CH #1	GPS Discrete Word – DEV SCALING IN TRANSITION	261
R-DU	CH #2	GPS Discrete Word – DEV SCALING IN TRANSITION	261
C-DU	CH #1	GPS Discrete Word – LIN/ANG (FINAL APPR)	261
R-DU	CH #2	GPS Discrete Word – LIN/ANG (FINAL APPR)	261
C-DU	CH #1	GPS Discrete Word – APPR INTEGRITY (FINAL APPR)	261
R-DU	CH #2	GPS Discrete Word – APPR INTEGRITY (FINAL APPR)	261
C-DU	CH #1	GPS Discrete Word – GPS RAIM INTEGRITY	261
R-DU	CH #2	GPS Discrete Word – GPS RAIM INTEGRITY	261
C-DU	CH #1	GPS Discrete Word – GPS ANNUNCIATION	261
R-DU	CH #2	GPS Discrete Word – GPS ANNUNCIATION	261

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Display Unit	DAFR ARINC Input Channel	Parameter Name	ARINC Label No.
C-DU	CH #1	Wind Angle	316
R-DU	CH #2	Wind Angle	316
C-DU	CH #1	Wind Speed	315
R-DU	CH #2	Wind Speed	315
C-DU	CH #1	Drift Angle	321
R-DU	CH #2	Drift Angle	321
C-DU	CH #1	Ground Speed	312
R-DU	CH #2	Ground Speed	312
C-DU	CH #1	VOR/ILS Frequency – VOR DIG COM BRG FILTER	034
R- DU	CH #2	VOR/ILS Frequency – VOR DIG COM BRG FILTER	034
C-DU	CH #1	VOR/ILS Frequency – ILS Mode	034
R-DU	CH #2	VOR/ILS Frequency – ILS Mode	034
C-DU	CH #1	VOR/ILS Frequency	034
R-DU	CH #2	VOR/ILS Frequency	034
C-DU	CH #1	VOR BRG / MB – Outer Marker Beacon 400 Hz	222
R-DU	CH #2	VOR BRG / MB – Outer Marker Beacon 400 Hz	222
C-DU	CH #1	VOR BRG / MB – Middle Marker Beacon 1300 Hz	222
R-DU	CH #2	VOR BRG / MB – Middle Marker Beacon 1300 Hz	222
C-DU	CH #1	VOR BRG / MB – Inner Marker Beacon 3000 Hz	222
R-DU	CH #2	VOR BRG / MB – Inner Marker Beacon 3000 Hz	222
C-DU	CH #1	VOR Bearing	222
R-DU	CH #2	VOR Bearing	222
C-DU	CH #1	ILS LOC DEV – Tune Inhibit	173
R-DU	CH #2	ILS LOC DEV – Tune Inhibit	173
C-DU	CH #1	ILS LOC DEV	173

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Display Unit	DAFR ARINC Input Channel	Parameter Name	ARINC Label No.
R-DU	CH #2	ILS LOC DEV	173
C-DU	CH #1	ILS GS DEV – Tune Inhibit	174
R-DU	CH #2	ILS GS DEV – Tune Inhibit	174
C-DU	CH #1	ILS GS DEV	174
R-DU	CH #2	ILS GS DEV	174