

ALERT SERVICE BULLETIN

Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

NO. 407-03-60

DATE September 4, 2003

PAGE 1 of 2

DATE

REV

MODEL AFFECTED: 407

SUBJECT: ROLLS-ROYCE CORPORATION 250-C47B
ENGINE, FUEL AND CONTROL – RELEASE OF
NEW ELECTRONIC CONTROL UNIT (ECU)

HELICOPTERS AFFECTED: All model 407 helicopters.

COMPLIANCE: In accordance with Rolls-Royce Corporation
Commercial Engine Bulletin CEB 73-6036 (Revision
2) dated July 30, 2003.

DESCRIPTION:

Rolls-Royce Corporation has released Revision 2 of the Commercial Engine Bulletin (CEB) 73-6036, which changes the compliance statement of the CEB.

Rolls-Royce Corporation Commercial Engine Bulletin CEB 73-6036 (Revision 2) provides instructions on how to remove the old ECU (23070254, 23070264 or 23071644) and install the new ECU (23072790).

APPROVAL:

Not required.

MANPOWER:

Approximately 1.0 man-hour is required to comply with Rolls-Royce Corporation Commercial Engine Bulletin CEB 73-6036 (Revision 2) dated July 30, 2003. The man-hours are based on hands-on time, and may change with the personnel and the available facilities.

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AN APPROPRIATE ENTRY SHOULD BE MADE IN THE AIRCRAFT LOG BOOK UPON ACCOMPLISHMENT
IF OWNERSHIP OF AIRCRAFT HAS CHANGED PLEASE FORWARD TO NEW OWNER

MATERIAL:

Refer to Rolls-Royce Corporation Commercial Engine Bulletin CEB 73-6036 (Revision 2) dated July 30, 2003.

SPECIAL TOOLS:

Refer to Rolls-Royce Corporation Commercial Engine Bulletin CEB 73-6036 (Revision 2) dated July 30, 2003.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

Refer to Rolls-Royce Corporation Commercial Engine Bulletin CEB 73-6036 (Revision 2) dated July 30, 2003.

PUBLICATIONS AFFECTED:

Refer to Rolls-Royce Corporation Commercial Engine Bulletin CEB 73-6036 (Revision 2) dated July 30, 2003.

ACCOMPLISHMENT INSTRUCTIONS:

1. Comply with Rolls-Royce Corporation Commercial Engine Bulletin CEB 73-6036 (Revision 2) dated July 30, 2003.

Rolls-Royce Corporation
P.O. BOX 420
Indianapolis, IN 46216 USA
Phone: 317-230-6400
Fax: 317-230-6084



Rolls-Royce

P U B L I C A T I O N T R A N S M I T T A L

July 30, 2003

TO: Recipients of 250-C30 and -C47 Commercial Engine Bulletins

SUBJECT: ENGINE, FUEL AND CONTROL – RELEASE OF NEW ELECTRONIC CONTROL UNIT (ECU).

This letter transmits Revision 2 to the subject commercial engine bulletins:

<u>Model</u>	<u>Bulletin Number</u>
250-C30 Series	CEB 73-3109
250-C47 Series	CEB 73-6036

This is a complete revision. Replace Revision 1 with Revision 2.

Revision 2 changes the compliance statement.

If you have complied with the previous issue of this bulletin, no additional work is required.

The following list includes the original issue date and all revisions to this bulletin:

Original issue	June 23, 2000
Revision 1	March 17, 2003
Revision 2	July 30, 2003

CUSTOMER SUPPORT
ROLLS-ROYCE

ENGINE, FUEL AND CONTROL – RELEASE OF NEW ELECTRONIC CONTROL UNIT (ECU)

1. PLANNING INFORMATION

A. Effectivity

(1) Engines

All Rolls–Royce Model 250–C47B engines installed on Bell 407 aircraft, Model 250–C47M engines installed on Boeing Model 600N aircraft and Model 250–C30R/3 engines installed on Bell OH58D aircraft with Goodrich Control Systems Model EMC–35A Electronic Control Units (ECUs) are affected by this bulletin.

(2) Spares – Not affected

B. Reason

Incorporate improvements to the power supply circuitry.

C. Description

This service bulletin gives you the procedure to remove the old ECU (23070259, 23070266, 23070254, 23070264 or 23071644) and install the new ECU (23072949, 23072950 or 23072790).

D. Approval

Technical aspects are FAA approved.

E. Manpower

In Service Approximately 1.0 man–hour is necessary to do this service bulletin.

Engine Removed Not applicable.

F. Compliance

Compliance Code 2. To be complied with no later than June 30, 2004.

G. Interchangeability

P/N 23072949 ECU is to be installed on C47M engines.

P/N 23072950 ECU is to be installed on C30R/3 engines

P/N 23072790 ECU is to be installed on C47B engines.

NOTE: ECU 23072790 must be installed on Bell 407 aircraft that have incorporated Bell Alert Service Bulletin 407–99–31.

Incorporation of this bulletin supercedes the requirements of CEB 73–6032 (C47B only).

H. Material Availability

NEW P/N	NAME	QTY/ENG
23072790	Electronic Control Unit (ECU) – C47B	1
23072949	Electronic Control Unit (ECU) – C47M	1
23072950	Electronic Control Unit (ECU) – C30R/3	1

June 23, 2000
Revision 2
July 30, 2003

250–C30R/3
250–C47

CEB 73–3109
CEB 73–6036

Rolls-Royce

COMMERCIAL ENGINE BULLETIN

- I. Tooling – Not applicable
- J. Weight and Balance – Not affected
- K. Electrical Load Data – Not affected
- L. References
 - (1) CSP 21003 Operation and Maintenance Manual, Turboshift Model 250–C30R/3 (OMM).
 - (2) CSP 23003 Illustrated Parts Catalog, Turboshift Model 250–C30R/3 (IPC).
 - (3) CSP 21004 Operation and Maintenance Manual, Turboshift Model 250–C47M (OMM).
 - (4) CSP 21001 Operation and Maintenance Manual, Turboshift Model 250–C47B (OMM).
 - (5) CSP 23001 Illustrated Parts Catalog, Turboshift Models 250–C40B, –C47B and C47M (IPC).
- M. Other Publications Affected
 - (1) CSP 21003 Operation and Maintenance Manual, Turboshift Model 250–C30R/3 (OMM).
 - (2) CSP 23003 Illustrated Parts Catalog, Turboshift Model 250–C30R/3 (IPC).
 - (3) CSP 21004 Operation and Maintenance Manual, Turboshift Model 250–C47M (OMM).
 - (4) CSP 21001 Operation and Maintenance Manual, Turboshift Model 250–C47B (OMM).
 - (5) CSP 23001 Illustrated Parts Catalog, Turboshift Models 250–C40B, –C47B and C47M (IPC).
- N. Prerequisites

ECU P/N 23072790 must be installed only on Bell 407 aircraft that have included Bell ASB 407–99–31. ECU P/N 23070254 and 23070264 must have CEB 73–6032 included at the same time.

2. ACCOMPLISHMENT INSTRUCTIONS

NOTE: Comply with the appropriate procedures in the referenced Operation and Maintenance Manual and Illustrated Parts Catalog.

- A. C47M – Boeing Model 600N:

When a replacement unit is delivered to the operator, remove ECU (23070259) and install ECU (23072949).
- B. C30R/3 – Bell Model OH58D:

When a replacement unit is delivered to the operator, remove ECU (23070266) and install ECU (23072950).
- C. C47B – Bell Model 407

When a replacement unit is delivered to the operator, remove ECU 23071644, 23070254 or 23070264 and install ECU P/N 23072790. If ECU P/N 23070254 or 23070264 is removed, Bell ASB 407–99–31 must be included in conjunction with the installation of the new ECU.

Rolls-Royce
COMMERCIAL ENGINE BULLETIN

- D. Return ECU to Goodrich Control Systems at the address listed below for modification. Make sure that the ECU accessory log card(s) are returned with the unit. The accessory log cards must show total time and reason for removal. PLEASE EXPEDITE RETURN OF UNITS. (A prepaid return shipping label will be provided.)

Goodrich Control Systems
Talcott Road
West Hartford, CT 06110

Point of Contact:
Russell Anderson
Phone: 860-231-2785
FAX: 860-231-2781

- E. In addition to the Check Run procedure from the Operation and Maintenance Manual, Chapter 72-00-00, Engine – Adjustment/Test, perform the following operational check:
 - (1) Perform engine start per applicable aircraft Flight Manual.
 - (2) Check all engine instruments to verify proper operation.
 - (3) In AUTO MODE, increase throttle position to 100% N_p.
 - (4) Return throttle position to IDLE.
 - (5) Switch from AUTO MODE to MANUAL MODE. Verify that MANUAL and AUTO RELIGHT lights are ON.
 - (6) Increase throttle to 90% N_p to verify engine response.
 - (7) Return throttle position to IDLE.
 - (8) Switch from MANUAL MODE to AUTO MODE.
 - (9) Shut down engine using overspeed shutdown test.
- F. Record compliance in the Engine Log Book, ECU Assembly (yellow pages), Part III, Modification Record, as applicable with the following:

250-C30R/3
250-C47

CEB 73-3109
CEB 73-6036

Rolls-Royce
COMMERCIAL ENGINE BULLETIN

3. MATERIAL INFORMATION

A. Configuration Chart

NEW P/N	QTY/ ENG	NAME	OLD P/N	QTY/ ENG	INSTRUCTIONS/ DISPOSITION
23072949	1	Electronic Control Unit (C47M)	23070259	1	1,2
23072950	1	Electronic Control Unit (C30R/3)	23070266	1	1,2
23072790	1	Electronic Control Unit (C47B)	23070254 23070264 23071644	1	1,2

INSTRUCTIONS/DISPOSITION NOTES:

1. Return to Goodrich Control Systems for inspection and rework to new part number.
2. New Item.

NOTE: Make sure that Log Book accessory cards are returned with the ECU. The log cards must show total time and reason for removal.

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