



## **ENGINE, FUEL AND CONTROL - GOODRICH ELECTRONIC CONTROL UNIT (ECU) - OVERSPEED PROTECTION SYSTEM (OSPS) POWER SUPPLY DESIGN IMPROVEMENT**

### **1. PLANNING INFORMATION**

#### **A. Effectivity**

##### **(1) Engines**

All Rolls-Royce Model M250®-C47B engines installed on Bell 407 aircraft, Model M250-C47M engines installed on MDHI Model 600N aircraft, Model M250-C30R/3 engines installed on Bell OH58D aircraft, Model M250-C30R/3M engines installed on the Boeing AH/MH6 MELB aircraft, and Model M250-C40B engines installed on the Bell 430 aircraft with Goodrich Pump & Control Systems Model EMC-35A or EMC-35R Electronic Control Units (ECUs) are affected by this bulletin.

##### **(2) Spares - Not affected**

#### **B. Reason**

Incorporate improvements to the overspeed protection system.

#### **C. Description**

This service bulletin gives you the procedure to remove the old ECU (23075229, 23072950, 23074015, 23080490, 23088484, 23088905, or 23080491) and install the new ECU (23088849, 23088851, 23088853, 23088856, 23089311, or 23088805).

#### **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**

M250-C30R/3, M250-C47 Series: Compliance Code 2. To be complied with no later than March 31, 2015.

M250-C40B: Compliance Code 6. To be complied with at next Goodrich shop visit.

#### **G. Interchangeability**

P/N 23088851 ECU is to be installed on M250-C30R/3 engines

P/N 23088853 ECU is to be installed on M250-C30R/3M engines

P/N 23088849 ECU is to be installed on M250-C40B engines.

P/N 23088856 ECU is to be installed on M250-C47B engines.

P/N 23088805 or 23089311 ECU is to be installed on M250-C47M engines.

December 03, 2012

M250-C30R/3 Series CEB 73-3129

M250-C40B CEB 73-5035

M250-C47 Series CEB 73-6052

# Rolls-Royce

## COMMERCIAL ENGINE BULLETIN

## H. Material Availability

NEW P/N	NAME	QTY/ENG
23088851	Electronic Control Unit (ECU) – M250-C30R/3	1
23088853	Electronic Control Unit (ECU) – M250-C30R/3M	1
23088849	Electronic Control Unit (ECU) – M250-C40B	1
23088856	Electronic Control Unit (ECU) – M250-C47B	1
23088805	Electronic Control Unit (ECU) – M250-C47M	1
23089311	Electronic Control Unit (ECU) – M250-C47M	1

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 M250-C30R/3 (OMM).
- (2) CSP 21006 Operation and Maintenance Manual, Turboshift Model M250-C30R/3M (OMM).
- (3) CSP 23003 Illustrated Parts Catalog, Turboshift Model M250-C30R/3, -C30R/3M (IPC).
- (4) CSP 21000 Operation and Maintenance Manual, Turboshift Model M250-C40B (OMM).
- (5) CSP 21001 Operation and Maintenance Manual, Turboshift Model M250-C47B (OMM).
- (6) CSP 21004 Operation and Maintenance Manual, Turboshift Model 250-C47M (OMM).
- (7) CSP 23001 Illustrated Parts Catalog, Turboshift Models M250-C40B, -C47B and C47M (IPC).

M. Other Publications Affected – None

N. Prerequisites – None

## 2. ACCOMPLISHMENT INSTRUCTIONS

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

## A. M250-C30R/3 – Bell Model OH58D:

When a replacement unit is delivered to the operator, remove old ECU and install ECU (23088851).

## B. M250-C30R/3M – Boeing AH/MH6 MELB

When a replacement unit is delivered to the operator, remove old ECU and install ECU (23088853).

## C. M250-C40B – Bell Model 430

When a replacement unit is delivered to the operator, remove old ECU and install ECU (23088849).

## D. M250-C47B – Bell Model 407

When a replacement unit is delivered to the operator, remove old ECU and install ECU (23088856).

December 03, 2012

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M250-C40B CEB 73-5035  
M250-C47 Series CEB 73-6052

## Rolls-Royce



### COMMERCIAL ENGINE BULLETIN

E. M250-C47M – MDHI Model 600N:

When a replacement unit is delivered to the operator, remove old ECU and install ECU (2308805 or 23089311).

F. Return ECU to Goodrich Pump & 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 Pump & Control Systems  
Talcott Road  
West Hartford, CT 06110

Point of Contact:  
Russell Anderson  
Phone:   
FAX: 

G. 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) Do 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<sub>p</sub>.
- (4) Return throttle position to IDLE.
- (5) Switch from AUTO MODE to MANUAL MODE. Verify that MANUAL MODE indication in the cockpit is ON.
- (6) Increase throttle to 90% N<sub>p</sub> 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.

H. Record compliance in the Engine Log Book, ECU Assembly (yellow pages), Part III, Modification Record, as applicable with the following:

M250-C30R/3 Series	CEB 73-3129
M250-C40B	CEB 73-5035
M250-C47 Series	CEB 73-6052

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COMMERCIAL ENGINE BULLETIN

## 3. MATERIAL INFORMATION

## A. Configuration Chart

NEW P/N	QTY/ ENG	NAME	OLD P/N	QTY/ ENG	INSTRUCTIONS/ DISPOSITION
23088851	1	Electronic Control Unit (M250-C30R/3)	23072950	1	1,2
23088853	1	Electronic Control Unit (M250-C30R/3M)	23074015	1	1,2
23088849	1	Electronic Control Unit (M250-C40B)	23075229	1	1,2
23088856	1	Electronic Control Unit (M250-C47B)	23080490 23088484	1	1,2
23088805 23089311	1	Electronic Control Unit (M250-C47M)	23080491 23088905	1	1,2

## INSTRUCTIONS/DISPOSITION NOTES:

1. Return to Goodrich Pump & 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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