

## ENGINE, ASSEMBLY - ENGINE MONITORING UNIT (EMU) SOFTWARE UPGRADE

### 1. PLANNING INFORMATION

#### A. Effectivity

##### (1) Engines

Only Rolls-Royce Model RR300/A1 engines with Engine Monitoring Unit (EMU) P/N RR3000537 installed are affected by this bulletin.

#### B. Reason

Rolls-Royce released Engine Monitoring Unit (EMU) P/N RR30000537 in 2014. Once installed in the aircraft it was reported that a slow blinking EMU caution light was activated in the cockpit. Rolls-Royce Controls and Data Services (CDS) issued Service Information Letter (SIL 0237) to advise operators of the nuisance fault which results in the slow blinking light.

#### C. Description

This Service Bulletin (SB) gives the instructions for the procedure for the field reprogramming of the RR300 EMU to add software version SWR18823.

#### D. Approval

Technical aspects are FAA approved.

#### E. Compliance

Compliance Code 5: To be complied with at a time when the affected part(s) are directly available for removal and an EMU loader rig is available on-site.

#### F. Interchangeability - Not affected

#### G. Material - Not affected

#### H. Tooling

- (1) Laptop Computer with Windows 7 Operating System
- (2) EMUStandaloneLoader.exe (software)
- (3) Data Download Unit Cable - P/N RR30000284 or P/N RR30000541

#### I. Weight and Balance - Not affected

#### J. Electrical Load Data - Not affected

#### K. References

- (1) Advanced Engineering Memorandum (AEM), CL500023816745.

**Note:** The document above is referenced for the internal use of Rolls-Royce only.

- (2) RR300 Operation and Maintenance Manual (OMM), CSP21009.
- (3) RR300 Line Illustrated Parts Catalog (LIPC), CSP23004.
- (4) RR300 Engine Illustrated Parts Catalog (EIPC), CSP 23006.

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- L. Other Publications Affected - None
- M. Prerequisites - None

2. ACCOMPLISHMENT INSTRUCTIONS

A. EMU Portable Reprogramming System Setup.

- (1) Remove power from aircraft.
- (2) Gain access to engine monitoring unit (EMU).
- (3) Disconnect aircraft harness from EMU and remove EMU from aircraft (Ref. OMM TASK 77-51-00-000-801).
- (4) Connect Data Download Cable (P/N RR30000284 or RR30000541) to EMU.
- (5) Connect Data Download Cable (P/N RR30000284 or RR30000541) to laptop.
- (6) Turn on laptop (EMUStandaloneLoader.exe already installed).
- (7) Confirm the red light for the EMU illuminates (indication of connectivity).

B. EMU Reprogramming.

- (1) Launch the application EMUStandaloneLoader.exe.
- (2) The application will initiate communication with the EMU and complete the programming process automatically.
- (3) A dialog screen will appear similar to the one below.

About to replace SWR1005 with SWR18823  
 If you wish to do so close this window now.  
 Starting programming process.....  
 Please wait as this may take a few minutes to load the EMU...  
 Programming successful!  
 EMU Identifiers:  
 Boot ID: AEC08007  
 Boot CRC: A44803EB  
 OPS ID: AEC0133C  
 OPS CRC: 71F935EC  
 Exceedance Table ID: 4A000002  
 Exceedance Table CRC: D8314C82  
 Select this command prompt box and push any button to close....

- (4) Close the dialog box when prompted.
- (5) Programming is complete.

C. EMU Reprogramming Verification

- (1) The programming operation generates a LOG file as a record of the operation.
- (2) Verify that a log file was generated in the directory as follows:  
 C:\Users|<WindowsUserName>\AppData\AeroEngineControls\Temp\Standalone\_Loader\_SWR18823
- (3) The log file for the session will be named as shown below:  
 "ProgrammedRecord\_<EMU\_Serial\_Number>\_<Date\_Timestamp>.txt"

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- (4) Open the applicable log file and verify the serial number and the correct software load is indicated. Below is a sample log file content.

Programmed serial number (S/N of unit being re-configured) with SWR18823 EMU Identifiers:

Boot ID: AEC08007  
 Boot CRC: A44803EB  
 OPS ID: AEC0133C  
 OPS CRC: 71F935EC  
 Exceedance Table ID: 4A000002  
 Exceedance Table CRC: D8314C82

- (5) Provide the log file information (hardcopy or electronically) in an email to Rolls-Royce Helicopter Customer Support.
- (6) Disconnect the EMU and re-identify the EMU.
- (7) Remove the ID tag from the EMU.
- (8) Install new provided ID tag in same location as the removed ID tag.
- (9) Return removed (old) ID tag to Rolls-Royce Corporation at the following address:

Rolls-Royce Corp.  
 ATTN: RR300 Helicopter Customer Support  
 Speed Code: MC-N4-07  
 450 S. Meridian Street  
 Indianapolis, IN 46225-1103  
 U.S.A.

- (10) Reinstall the EMU into aircraft (Ref OMM Task 77-51-00-400-801).
- (11) Apply power to aircraft to initiate an EMU self-test. The EMU requires approximately ten seconds to complete the self-test; a successful self-test will result in a steady (on) illumination of the EMU segment of the annunciator panel.

D. Upon completion of maintenance, record compliance to Service Bulletin 77-002 in the Engine Log Book.

**3. MATERIAL INFORMATION**

**A. Configuration Chart**

NEW P/N	QTY/ ENG	NAME	OLD P/N	QTY/ ENG	INSTRUCTIONS/ DISPOSITION
RR30000553	1	Engine Monitoring Unit	RR30000537	1	1, 2

**INSTRUCTION/DISPOSITION**

- 1. New Item
- 2. Reprogrammed EMU

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