



Lufthansa CityLine
Intern

An BT Mitarbeiterinnen und Mitarbeiter mit einer B1/B2 Lizenz

Von	TO/E-I	Zeichen	KSC	Datum	30.07.12	Tel.	02203596133	Fax		Sita
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Betr.: Engine FADEC Software Update CF34-8C, CF34-10E

Liebe Kolleginnen und Kollegen,

Für die FADECs der CF34-8C und CF34-10E Engines wird CLH demnächst ein Software Update durchführen. In den entsprechenden Service Bulletins für diese Arbeiten empfehlen GE und BAE eine Sensibilisierung vor der Durchführung des Updates.

Dazu findet Ihr auf den folgenden Seiten die CLH Tools, die Procedure und die wichtigsten Kontrollschritte für die Updates beschrieben.

Bei Fragen wendet Euch bitte an:

Karsten Schliemann, TO/E-I, 02203 596133

Alexander Polinowski, TO/E-I, 02203 596420

Mit freundlichem Gruß
Karsten Schliemann

1 Introduction to CF34 FADEC Software Upload and PMAT

This Document should make you familiar to use the Portable Maintenance Access Terminal (PMAT) to perform CF34-8 and CF34-10 Engine FADEC Software Upload. It is an extract of GE Document GEK 115645.

This Document is for Training only. Detailed Procedures for Updating FADEC Software are always provided by the applicable CLH JIC or Service Bulletin.

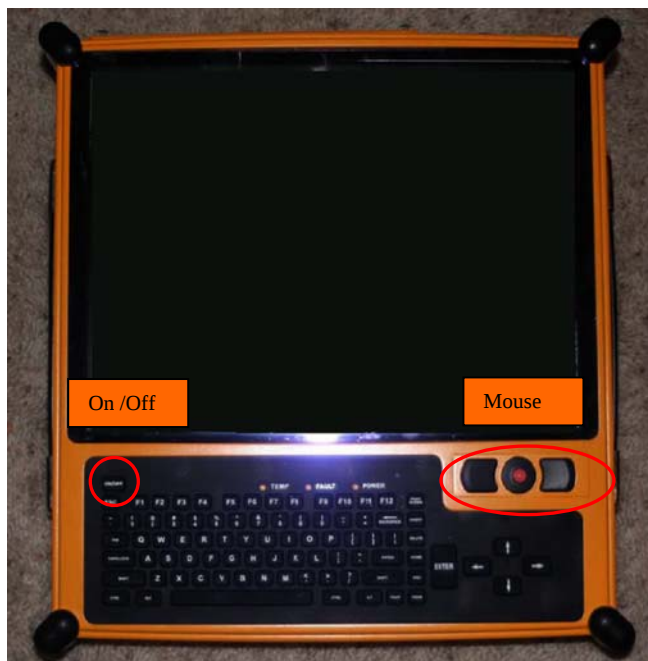
This Documents covers On-wing Software Update Procedure only. If Off-wing Procedure or transfer of a new Software to the PMAT is required refer to the applicable Service Bulletin or contact CLH Powerplant Engineering.

1.1 Tools required for on-wing Software Update

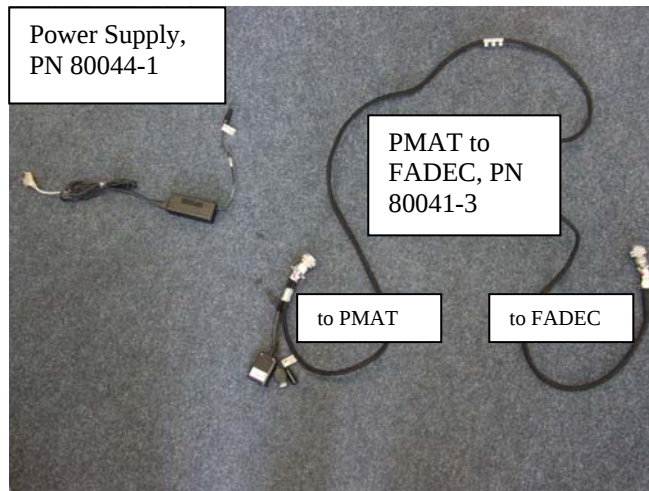
When Updating Engine FADEC Software on a CF34-8 or CF34-10 Engine the use of the Portable Maintenance Access Terminal (PMAT) is required. You also need 1 Cable to connect the PMAT to FADEC and 1 Power Supply Cable for the PMAT.

Parts that CLH is currently using for on-wing Upload:

- Portable Maintenance Access Terminal (PMAT), PN 8000-04
- Cable, PMAT to FADEC, PN 80041-3
- Power Supply Cable (for PMAT), PN 80044-1 (connects to Cable PN 80041-3)



Picture 1



Picture 2

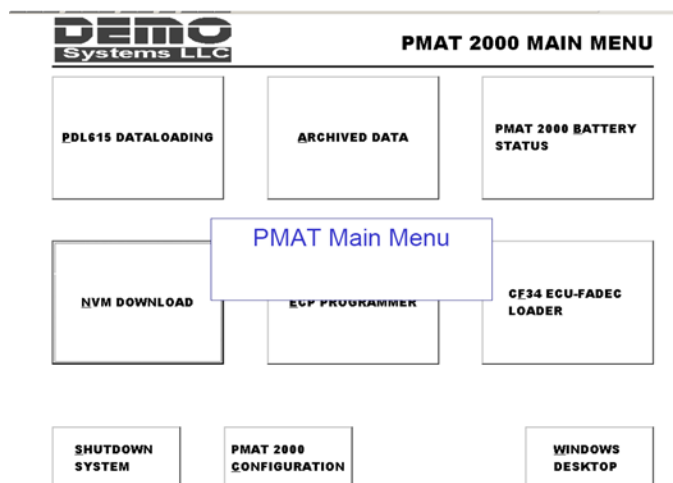
2 FADEC Programming Preparation

Before Loading new Software to the FADEC, confirm:

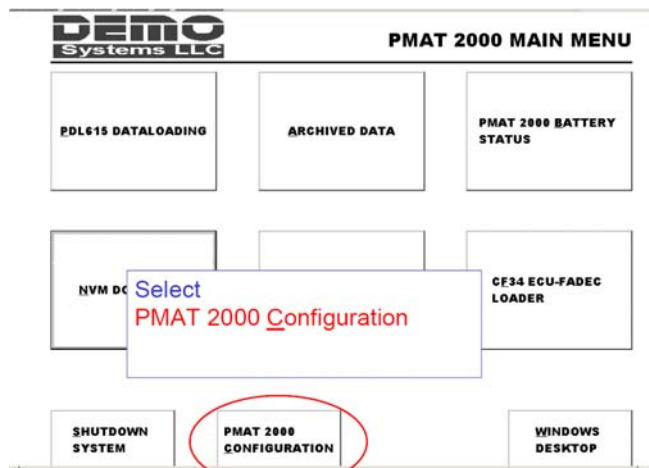
- CF34 ECU-FADEC Loader v3.0.0 or later is installed. Refer to Pictures 3 to 6.
- Correct FADEC Software Version is installed on the PMAT. Refer to Pictures 7 and 9.

Switch on PMAT: press and hold ON/OFF button.

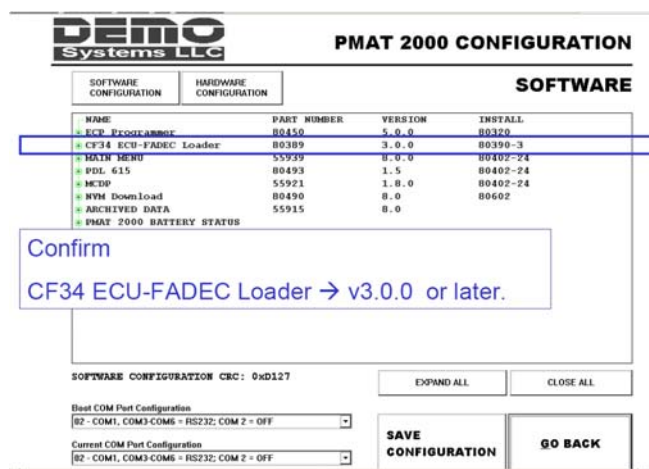
After Windows is loaded “PMAT Main Menu” is automatically booted and the Main Menu is displayed. If not automatically booted start “PMAT Main Menu” from Desktop.



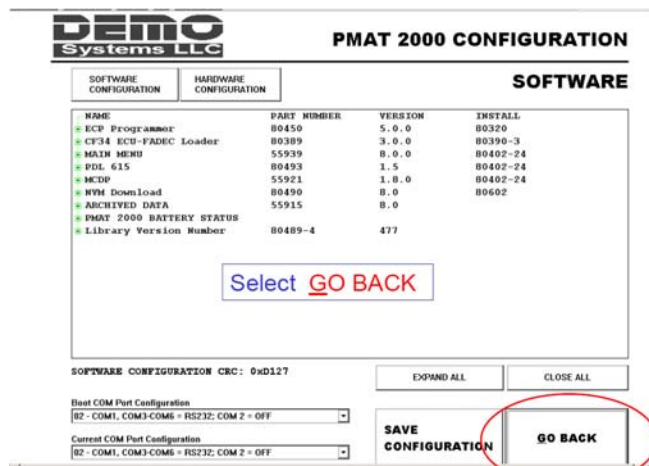
Picture 3



Picture 4

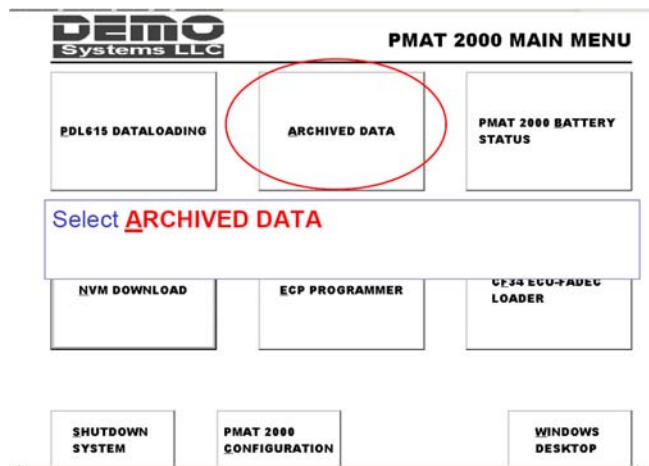


Picture 5

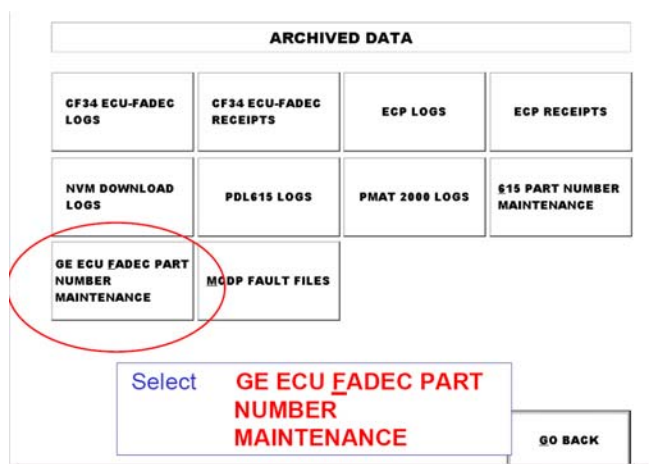


Picture 6

Now confirm correct FADEC software version is loaded onto the PMAT.

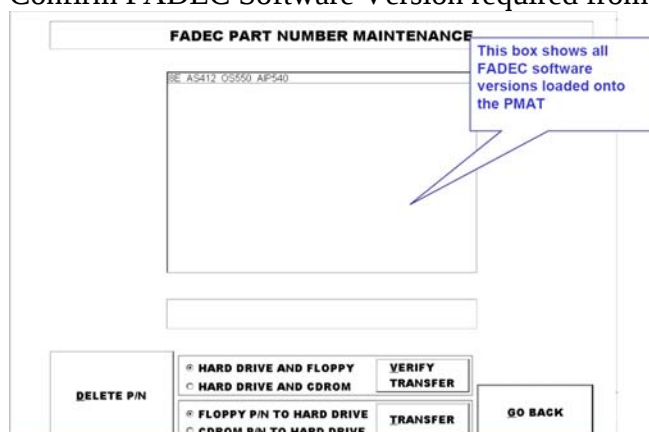


Picture 7



Picture 8

Confirm FADEC Software Version required from SB or CLH JIC is loaded onto the PMAT.



Picture 9

Select "GO BACK" two times.

Before connecting Cables to PMAT and FADEC make sure PMAT is turned off and Power to the FADEC is also off.

Connect Cable PN 80041-3 to PMAT and FADEC. Therefore remove the J5 connector cap from FADEC.



Picture 10



Picture 11



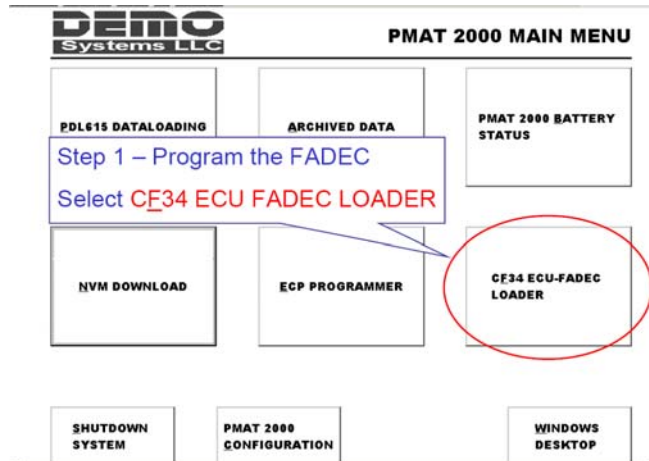
Picture 12

3 Uploading Software to the FADEC

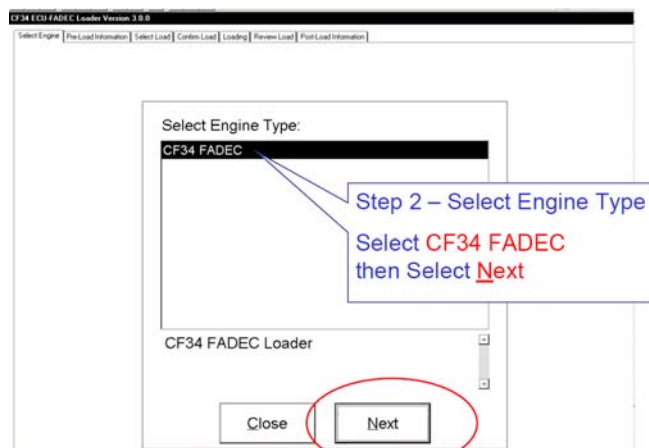
Connect Power Supply Cable PN 80044-1 to Cable PN 80041-3 before Uploading Software to the FADEC.

To Upload new Software to the FADEC refer to Pictures 13 to 28.

Values and Numbers shown in the Pictures are an example only and do not match with the actual SB / CLH JIC.



Picture 13



Picture 14

CF34 ECU FADEC Load Version 3.0.0 Hardware 0.3 Sector

Select Engine | Pre-Load Information | Select Load | Confirm Load | Loading | Review Load | Post-Load Information

Channel State
Channel A: Operational
Channel B: Operational

Pre-Load FADEC Configuration

Channel A: CF34 FADEC TYPE 1		Channel B: CF34 FADEC TYPE 1	
Fadec Part Number	3 Sector	Fadec Part Number	3 Sector
Number of Sector	NA	Number of Sector	NA
BANK Type	0520	BANK Type	0520
AS Version	0560	AS Version	0560
OS Version	NA	OS Version	NA
AS CheckSum	017E0C91 017D93A1 017EF827 01801250	AS CheckSum	017E0C91 017D93A1 017EF827 01801250
OSICPU CheckSum	NA	OSICPU CheckSum	NA
OS Date	NA	OS Date	NA
AS Date	NA	AS Date	NA

Mandatory Information

Tail Number:

FADEC Sn:

Engine Sn:

Operator:

Close Next

The PMAT will read the FADEC information and display what software version is currently loaded in both FADEC channels.

(values shown are an example and may be different than actual values)

Picture 15

CF34 ECU FADEC Load Version 3.0.0 Hardware 0.3 Sector

Select Engine | Pre-Load Information | Select Load | Confirm Load | Loading | Review Load | Post-Load Information

Channel State
Channel A: Operational
Channel B: Operational

Pre-Load FADEC Configuration

Channel A: CF34 FADEC TYPE 1		Channel B: CF34 FADEC TYPE 1	
Fadec Part Number	3 Sector	Fadec Part Number	3 Sector
Number of Sector	NA	Number of Sector	NA
BANK Type	0520	BANK Type	0520
AS Version	0560	AS Version	0560
OS Version	NA	OS Version	NA
AS CheckSum	017E0C91 017D93A1 017EF827 01801250	AS CheckSum	017E0C91 017D93A1 017EF827 01801250
OSICPU CheckSum	NA	OSICPU CheckSum	NA
OS Date	NA	OS Date	NA
AS Date	NA	AS Date	NA

Mandatory Information

Tail Number:

FADEC Sn:

Engine Sn:

Operator:

Close Next

Enter the tracking information (this is for documentation purposes and is recorded in a log file)

**Tail Number
FADEC SN
Engine SN
Operator**

Once entered, Select Next

Picture 16

CF34 ECU FADEC Load Version 3.0.0 Hardware 0.3 Sector

Select Engine | Pre-Load Information | Select Load | Confirm Load | Loading | Review Load | Post-Load Information

Select Engine Family:

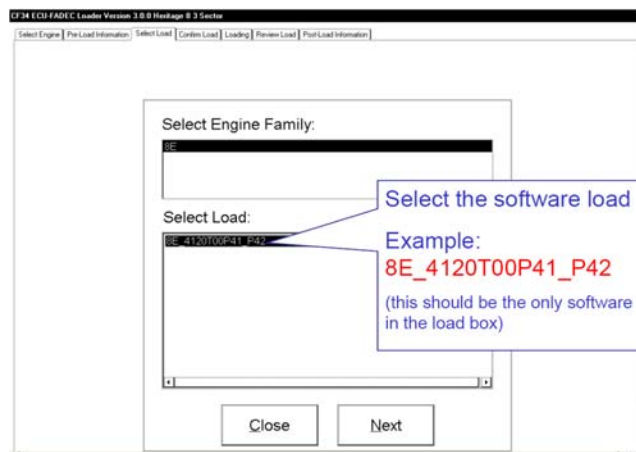
Select Load:

14.55 - 09/27/2005

Close Next

Select Engine Family

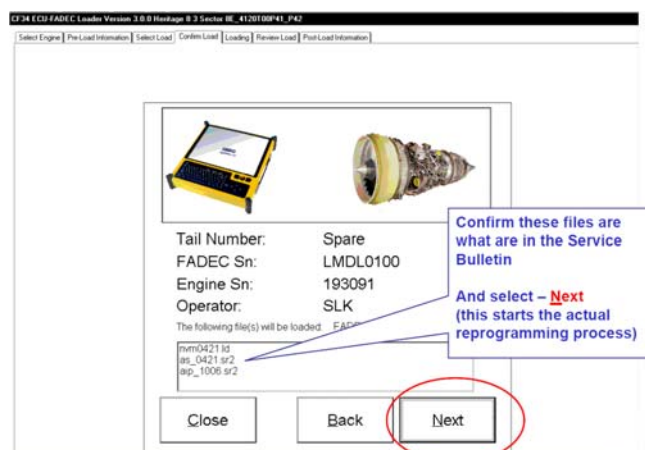
Picture 17



Picture 18

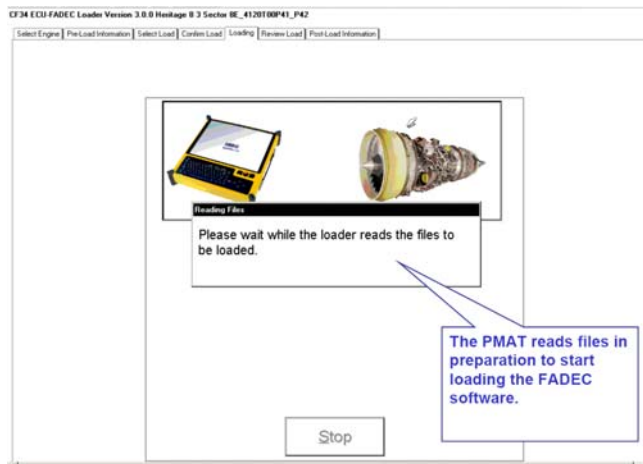


Picture 19



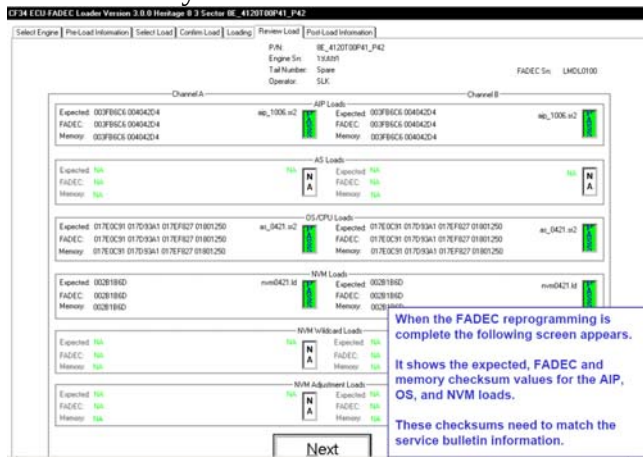
Picture 20

Upload will take about 20 – 30 Minutes.

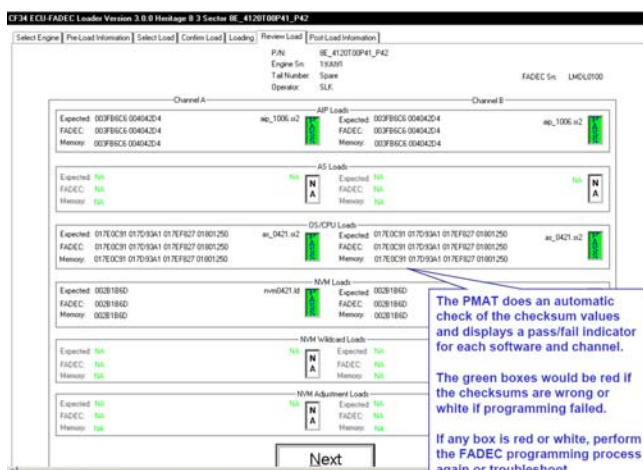


Picture 21

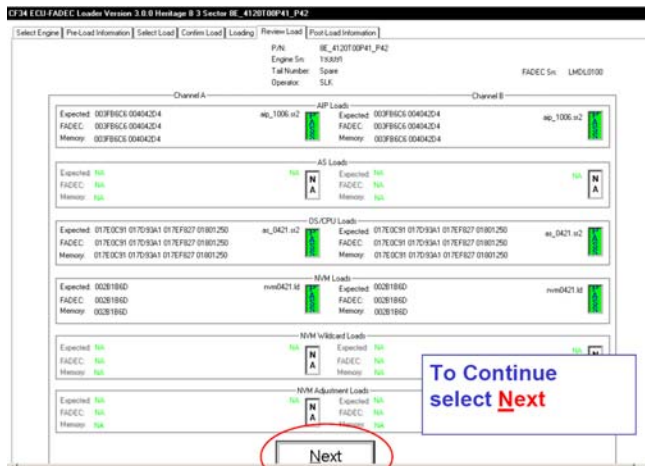
On the following Page you must compare the checksum values displayed with the values in SB / JIC. They need to match the service bulletin information.



Picture 22

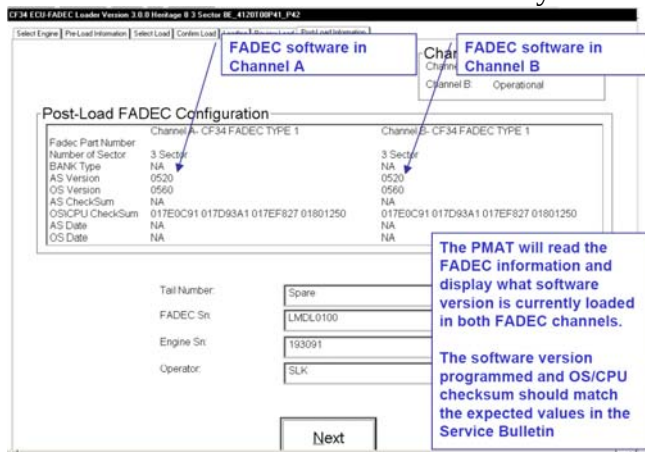


Picture 23

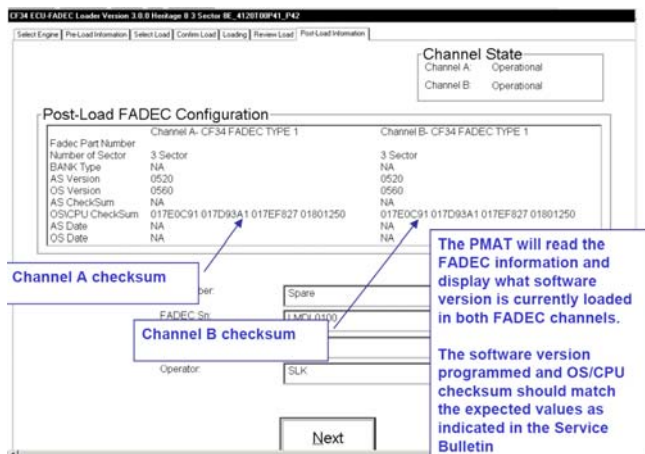


Picture 24

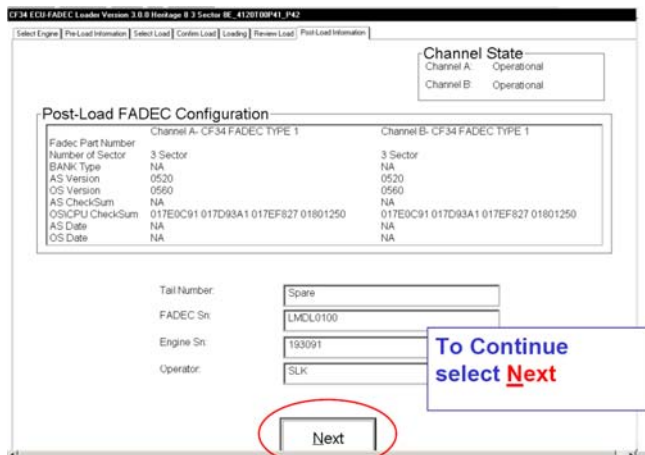
On the following Page you must compare the new FADEC Software and checksums for both channels with the values in SB / JIC. They need to match the service bulletin information.



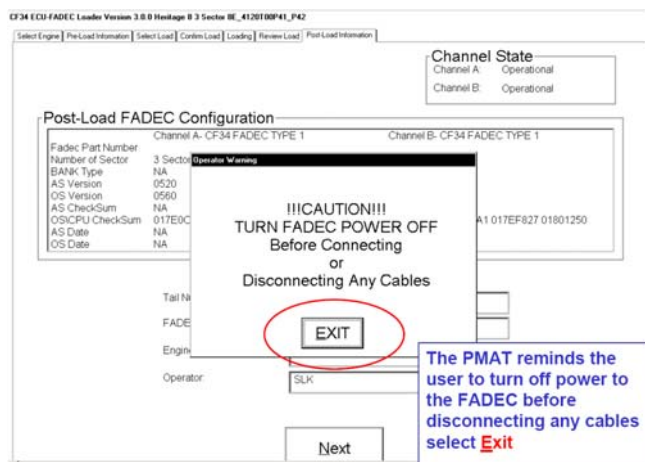
Picture 25



Picture 26



Picture 27



Picture 28

Make sure FADEC Power is turned off before disconnecting.

Perform return-to-service requirements per applicable SB or AMM when FADEC's are programmed or installed. Usually this is a Return to Service Test in Bombardier or EMB AMM.

After Uploading new Software you have to update the FADEC Software PN on the identification Plate.

It is also important to know that both engines on an aircraft must be programmed with the same software.

4 General Information and Troubleshooting

4.1 Troubleshooting:

If you receive an error msg. after selection of CF34 ECU FADEC LOADER:

- Check to ensure all connectors are tight & try again.
- Assure FADEC is powered

If reprogramming fails:

- Check to ensure all connectors are clean and tight & try again.

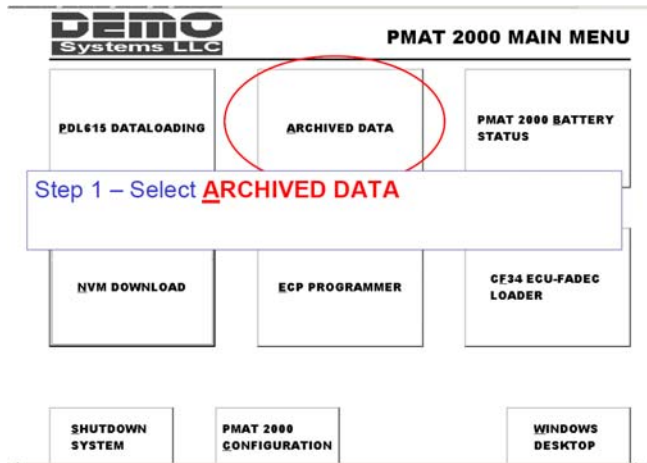
Ansprechpartner:
KARSTEN, SCHLIEMANN

30/07/2012

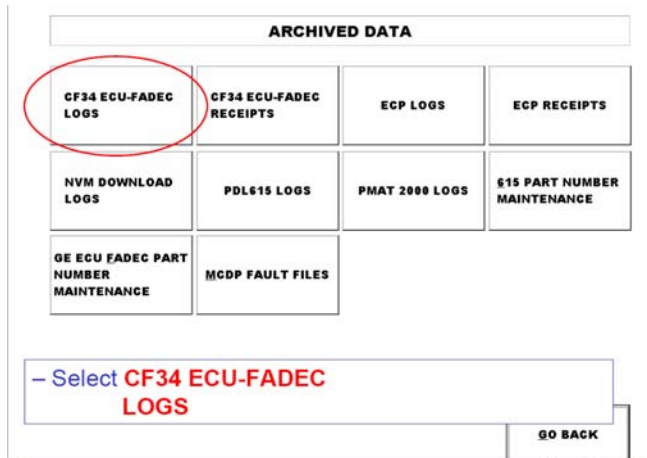
- If it fails again, reload the BAE software onto the PMAT and try again (Contact CLH Powerplant Engineering for this)
- If it fails a 3rd time, call contact CLH Engineering (for contacting GE Field Service Engineer and Product Support Engineering)

4.2 FADEC Programming Logs and Receipts

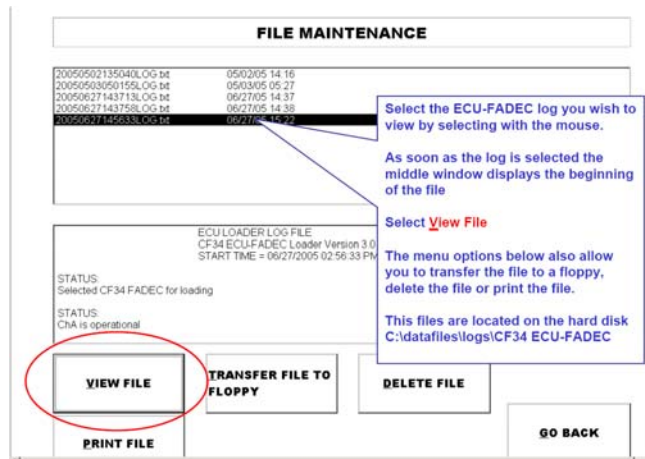
It is possible to review Programming Logs and Receipts. This is not mandatory but you can review all Data and it may be required if an Upload has failed.



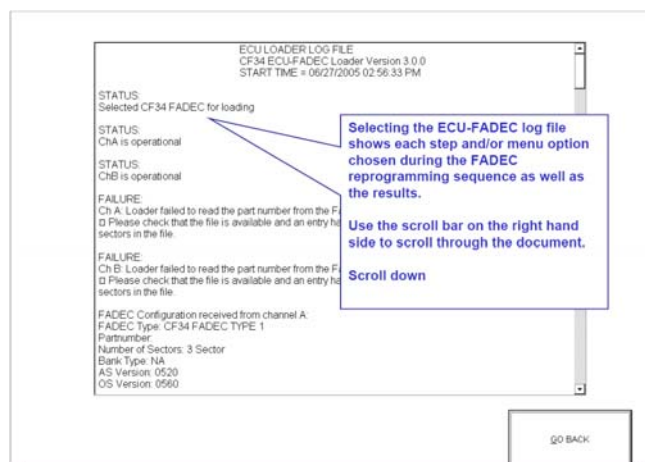
Picture 29



Picture 30

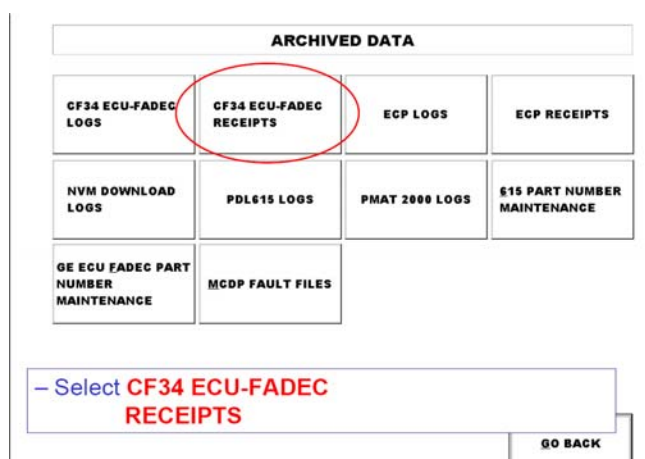


Picture 31

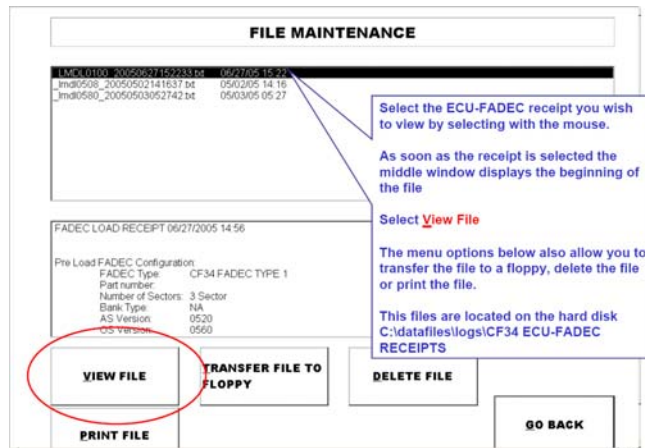


Picture 32

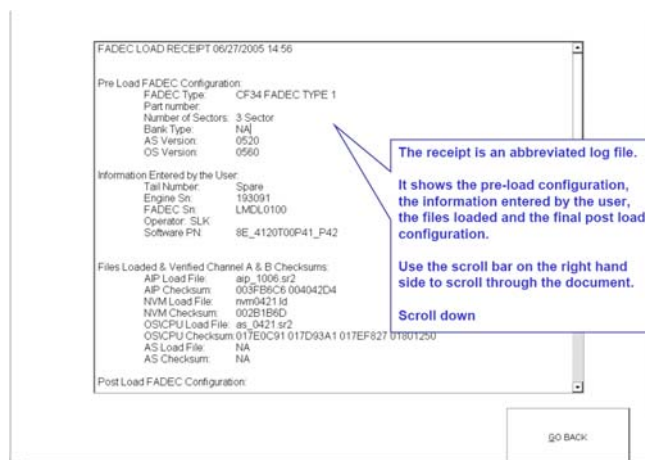
To return to the Main Menu select “GO BACK” on this screen and the next screen.



Picture 33



Picture 34



Picture 35

If there are any more Questions please contact CLH Powerplant Engineering.