



450 INDUSTRIAL PARK RD. PINEY FLATS, TN 37686-4419 USA
TELEPHONE: 423-538-5151 TOLL FREE: 800-251-7094 TELEFAX: 423-538-8469
EMAIL: sales@aero-access.com techsupport@aero-access.com

TECHNICAL BULLETIN

AA-12096

Revision A
September 10, 2014



SUBJECT: 429 HUMS Software

PARTS AFFECTED: Aeronautical Accessories Health and Usage Monitoring System (HUMS) Kit
P/N 429-260-001

MODELS AFFECTED: Bell Helicopter Textron Canada Limited model 429 helicopters with subject HUMS Kit installed in accordance with FAA STC SR09536RC-D.

COMPLIANCE: Compliance with this bulletin is per Customer's option.

DESCRIPTION: This Technical Bulletin is issued to allow owners to upgrade their HUMS processor to the current software configuration, V5.5 SP4, Database Configuration V36.

FAA/ODA APPROVAL: The engineering aspects of this Technical Bulletin are FAA/ODA approved.

MANPOWER: Approximately 2.0 man-hours.
(Man-hours are based on hands-on time and may vary with personnel or available facilities)

IF OWNERSHIP OF AIRCRAFT HAS CHANGED, PLEASE FORWARD THIS BULLETIN TO NEW OWNER

RESTRICTED DISCLOSURE NOTICE

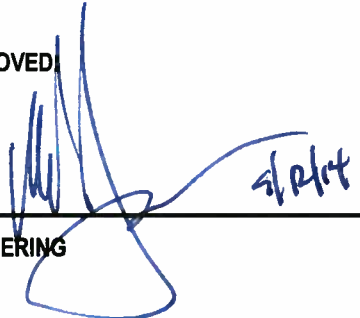
THE DRAWINGS, SPECIFICATIONS, DESCRIPTIONS, AND OTHER TECHNICAL DATA ATTACHED HERETO ARE PROPRIETARY AND CONFIDENTIAL TO BELL HELICOPTER TEXTRON INC. (BHTI) AND CONSTITUTE TRADE SECRETS FOR PURPOSES OF THE TRADE SECRET AND FREEDOM OF INFORMATION ACTS. NO DISCLOSURE TO OTHERS, EITHER IN THE UNITED STATES OR ABROAD, OR REPRODUCTION OF ANY PART OF THE INFORMATION SUPPLIED IS TO BE MADE, AND NO MANUFACTURE, SALE OR USE OF ANY INVENTION OR DISCOVERY DISCLOSED HEREIN SHALL BE MADE, EXCEPT BY WRITTEN AUTHORIZATION OF BHTI. THIS NOTICE WILL NOT OPERATE TO NULLIFY OR LIMIT RIGHTS GRANTED BY CONTRACT. THE DATA SUBJECT TO THIS RESTRICTION IS CONTAINED IN ALL SHEETS AND IS DISCLOSED TO PERSONNEL OF BHTI FOR THE PURPOSE(S) OF INTERNAL USE AND DISTRIBUTION ONLY.

© (2014) BHTI UNPUBLISHED
ALL RIGHTS RESERVED

LOG OF REVISIONS

| REVISION | DATE | DESCRIPTION | PAGES |
|----------|-----------|---|-------|
| NR | 9/25/2012 | PC-GBS Release 5.4 SP4; Bell 429 V35 Configuration File (software update) | All |
| A | 9/10/2014 | Revised for Bell 429 V36 Configuration File (software update) | All |

APPROVED

 9/12/14

ENGINEERING

1.0 MATERIALS REQUIRED

1. Bell 429 V36 Configuration File
2. Label P/N 1209-3196-PF
 - Material Type: Brady Label THT-17-425-3 or equivalent
 - Text Color / Font Size: Black / 9 point
 - Background Color: White
 - Dimensions: Per Figure 1
3. Label P/N 1209-3198-PF (*if required*)
 - Material Type: Brady Label THT-166-424-2 or equivalent
 - Text Color / Font Size: Black / 9 point
 - Background Color: White
 - Dimensions: Per Figure 2

2.0 WEIGHT AND BALANCE

Not affected.

3.0 PUBLICATIONS AFFECTED

None

4.0 ADDITIONAL INFORMATION

Any questions regarding this bulletin should be addressed to:

Aeronautical Accessories Bell Helicopter Piney Flats

Attn: Technical Support

450 Industrial Park Rd.

Piney Flats, TN 37686-4419

Email: techsupport@aero-access.com

Toll free: 1-800-251-7094

5.0 ACCOMPLISHMENT INSTRUCTIONS

5.1 DOWNLOAD INSTRUCTIONS

1. Go to Bell Helicopter Vibration Monitor website: <https://bhti-imds.iac-online.com/index.asp>
If customer does not have a username and password, contact Bell Helicopter Product Support Engineering at pseinter@bh.com
2. Download PC-GBS release 5.5 SP4 from the website (*5.5_SP4_Bell429_V36.zip*).

5.2 INSTALLATION INSTRUCTIONS

1. Unzip the downloaded PC-GBS release 5.5 SP4 using Winzip.
2. Open the 'GBS' folder.
3. Follow the Honeywell Software Installation Instructions (Document No. 1796-0012-GP, revision B, or later approved revision) to install the Bell 429 V36 Configuration File on the HUMS Processor (see Appendix A).

Refer to the following information when verifying the system configuration:

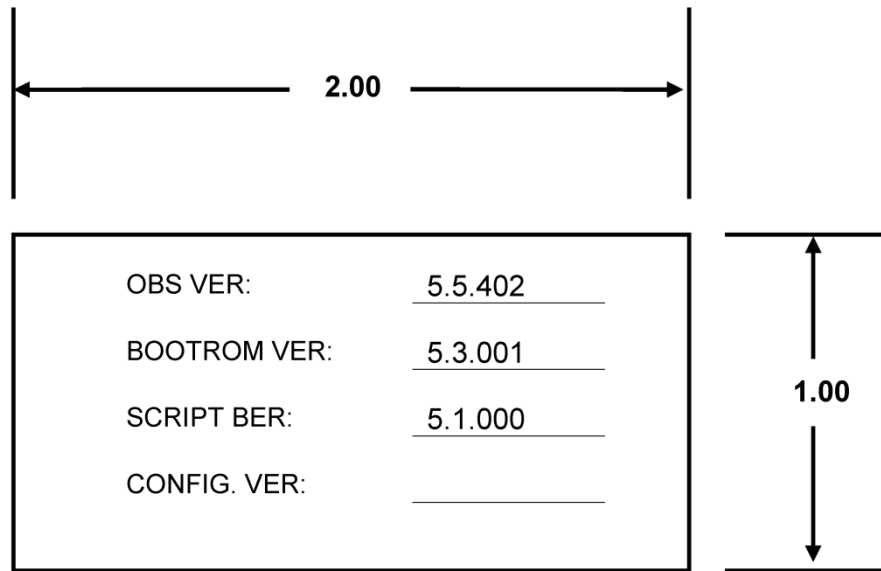
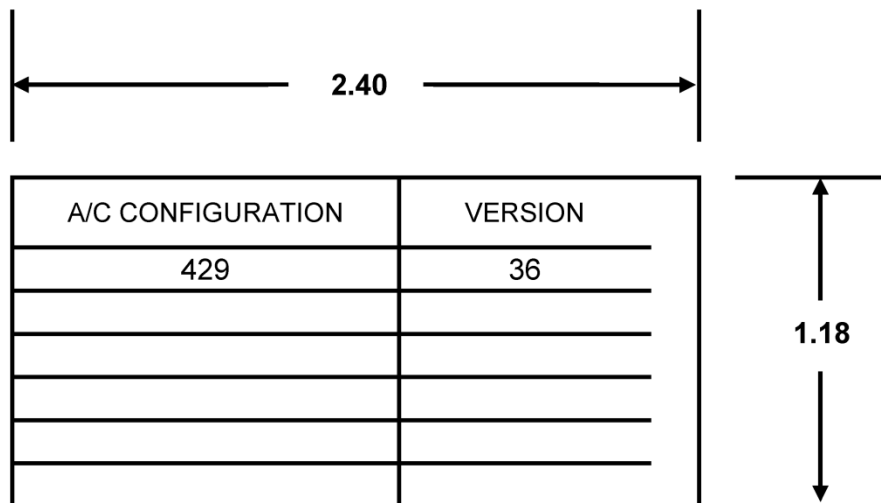
Tail Number: (*Aircraft Serial Number*)

Aircraft Setup File: **Setup_429_36**

OBS Version: **5.5.402**

5.3 PROCESSOR LABELING

1. Fill in the required data on the 429 HUMS Processor Label (1209-3196-PF) as shown in Figure 1. Install Label per Document No. 1796-0012-GP.
2. Verify the information on the existing Label (1209-3198-PF) reflects the current software version. Update the Label if necessary as shown in Figure 2.
3. Software update complete.

**Figure 1: Label, P/N 1209-3196-PF****Figure 2. Label, P/N 1209-3198-PF**

APPENDIX A

Document No. 1796-0012-GP

ECA Software Installation Instructions for Bell 429 & PC-GBS

Honeywell

Document No. 1796-0012-GP

ECA Software Installation Instructions For Bell 429 & PC-GBS

Revision B

Date: 11 Feb 2014

Prepared by
Honeywell Aerospace
13475 Danielson Street, Suite 100
Poway, CA 92064

This data has been approved by
BHTI ODA-710621-SW, IAW the
FAA-approved ODA Procedures Manual
 22 JUL 2014
Authorized Signature/Date

Applications
Development
Manager:



Dennis Martin / HON

Date: 14 Feb 14

Quality Assurance
Manager:



Roger Zetterberg / HON

Date: 2/14/14

Engineering Manager:



Rance Myers / HON

Date: 2/14/14

HONEYWELL CONFIDENTIAL: This copyrighted work and all information is the property of Honeywell, contains trade secrets, and may not, in whole or in part, be used, duplicated, or disclosed for any purpose without prior written permission of Honeywell. All rights reserved.

This technical data is controlled by the U.S. Department of Commerce Export Administration Regulations under ECCN EAR 9D990. Diversion contrary to U.S. export regulations is prohibited.

Revision History

| Revision Number | Date | Prepared By | Description |
|-----------------|-------------|-------------|--|
| - | 23 Feb 2011 | Chuck Kemp | Initial Release |
| A | 26 Jan 2012 | JP Cain | Update to add Re-import instructions for data collected if engines are not started. Instructions formatted to be generic and not specific to software version. |
| B | 11 Feb 2014 | RR/JV | Updated the document to be more user friendly for 5.4 to 5.5 software upgrade. Incorporated customer feedback. |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

TABLE OF CONTENTS

| | | |
|----------|--|-----------|
| 1 | INTRODUCTION | 4 |
| 1.1 | Overview | 4 |
| 2 | DESCRIPTION OF ACRONYMS AND ABBREVIATIONS | 5 |
| 3 | PRE-REQUISITES AND SEQUENCE OF UPGRADING HUMS SOFTWARE | 5 |
| 3.1 | Copying the installation files | 5 |
| 3.1.1 | Copying Installation package from Bell iMDS server (zipped version)..... | 6 |
| 3.2 | Upgrading to version 5.5 or later | 11 |
| 3.2.1 | Installing PC-GBS version 5.5.402 or later (as specified in the Bell Instruction)..... | 11 |
| 3.2.2 | Installing Bell 429 configuration Setup | 15 |
| 3.2.3 | Installing Bell 429 OSIF | 19 |
| 3.2.4 | Verify the Current file version loaded on the HUMS 1134 before upgrading. | 21 |
| 3.2.5 | Connect via GBS Management to Update OBS/setup file..... | 24 |
| 3.2.6 | Verify load complete and versions correct. | 27 |
| 3.2.7 | Downloading BIT check information and Flight Data..... | 29 |
| 3.2.8 | Completing 1134 processor Identification Tag..... | 32 |
| 4 | APPENDIX | 33 |
| 4.1 | Enabling Windows Compatibility Mode on Windows 7 to run in Windows XP mode: | 33 |
| 4.2 | Installing more than one version of PC-GBS (Not Recommended)..... | 34 |
| 4.3 | Downgrade Instructions for 5.5, back to 5.4 | 38 |

1 INTRODUCTION

NOTE

This instruction outlines the information necessary to install the ground based software and to upgrade the onboard system. When installing the aircraft configuration file, the user is reminded to use the versions specified in the Bell Instruction. The following document uses PC-GBS v5.5.402, OSIF v5.5.402, 429_35.CSIF as examples throughout the document for the upgrade. Final validation shall be done against versions specified.

Important:

The following upgrade instructions assume that the system being upgraded is loaded with OBS and PC-GBS **V5.4.XXX** production releases.

1.1 Overview

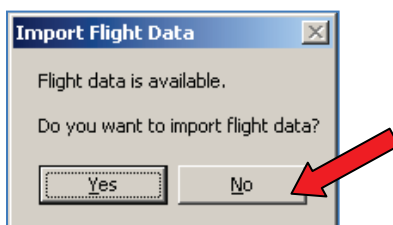
The HUMS 1134 system may require up to three software elements to be configured correctly in order to successfully accomplish a software update:

1. PC-GBS (the Ground Station Software)
2. Configuration Setup Installation File (*.csif file)
3. On-Board System Setup File (*.obs, extracted from the .osif; this may include firmware updates)

The PC-GBS software including CSIF and OSIF components needed to perform this update can be downloaded from the Bell iMDS Server as a single zipped file '5.5_SP4_Bell429_V35.zip' or located on a Honeywell provided CD. Please follow steps elaborated in Section 3.1.

NOTE

1. PC-GBS is delivered as an archive file and must be extracted before use. To extract the files from the archive, first create a temporary directory on your local hard drive (for example C:\Installer-PCGBS). Then extract the files from the .zip archive to that location using WinZip or any other available program that will process *.zip files. WinZip is available from <http://www.winzip.com/>.
2. The onboard software (.OSIF) and the configuration information file (.CSIF) may also be delivered as an archive (zip) file due to FTP browser preferences, but need to have the proper extensions. This should be detected and corrected upon download. Save the file as 'All Files' file type and fill in the file extension to match the type being downloaded (e.g. .CSIF or .OSIF).
3. During the upgrades, if existing flight data is present, you will be asked if you want to re-import the existing data. It is recommended that you select 'No'.



4. Depending on the amount of data present, the importing process could take hours. Data can be imported at a later time using the Import Data -> Raw Data menu selection if 'No' is selected.
5. If prompted to re-map sensors, it is recommended to select 'Ignore' and pressing 'OK'.

2 DESCRIPTION OF ACRONYMS AND ABBREVIATIONS

| | |
|--------|---------------------------------------|
| CSIF | Configuration Setup Information File |
| ECA | Embedded Common Architecture |
| HUMS | Health and Usage Monitoring System |
| OBS | On Board Software |
| OSIF | On-Board Software Installation File |
| PC-GBS | Personal Computer-Ground Based System |
| XSVF | Xilinx Serial Vector Format |

3 PRE-REQUISITES AND SEQUENCE OF UPGRADING HUMS SOFTWARE

Be sure that you have administrative rights to install PC-GBS. These instructions are to be used for Windows XP installation. If using Windows 7, please refer to Section 4.1 to enable Windows Compatibility mode. It is also suggested that the user's PC conforms with the US Date Format.

The following steps are covered in detail:

- Installing version 5.5 PC-GBS or later, as specified in the Bell Instruction.
- Loading CSIF Bell 429 v35 or later, as specified in the Bell Instruction.
- Loading OSIF Bell 429 OBS v5.5 or later, as specified in the Bell Instruction.
- Checking the existing software versions.
- Connecting to the box and uploading software and configuration setup.
- Verifying the load completion and software versions.

3.1 Copying the installation files

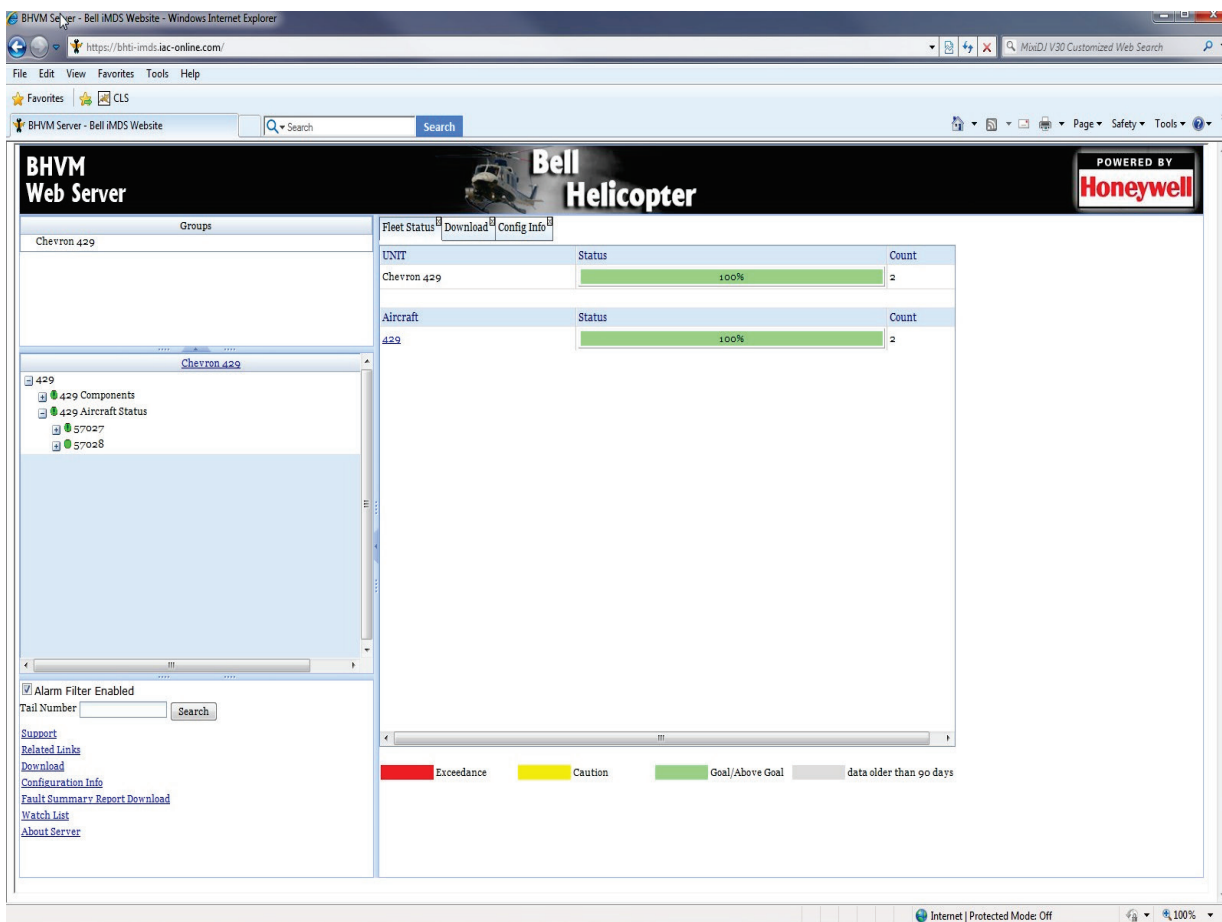
The Software package is installed from either of these 2 locations:

- The Bell iMDS server
- Honeywell provided CD

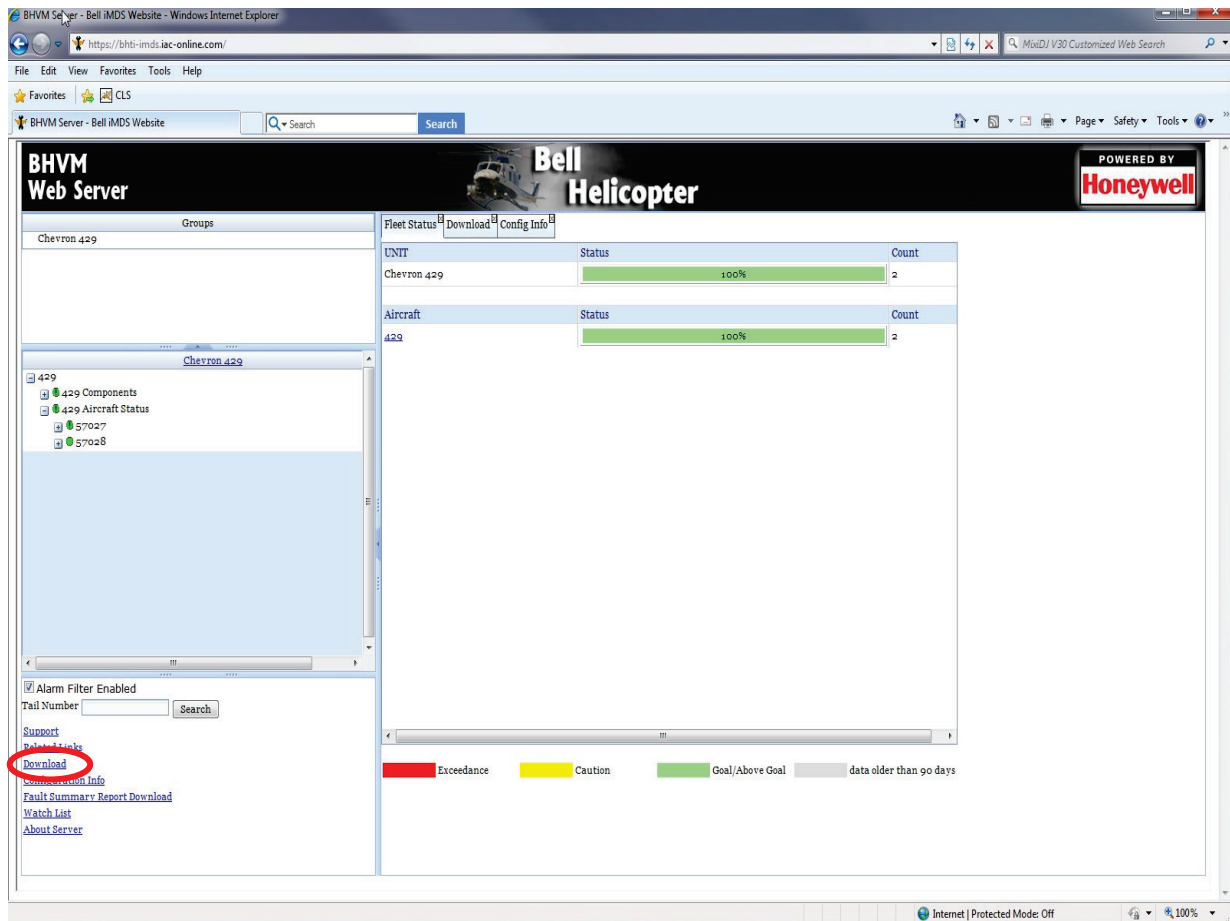
3.1.1 Copying Installation package from Bell iMDS server (zipped version)

- 1) To download the software from the Bell iMDS server, please navigate to this address and login with your credentials: <https://bhvi-imds.iac-online.com/>

The main page will appear similar to the below screenshot.



- 2) Click on 'Download' at the bottom left of the window.



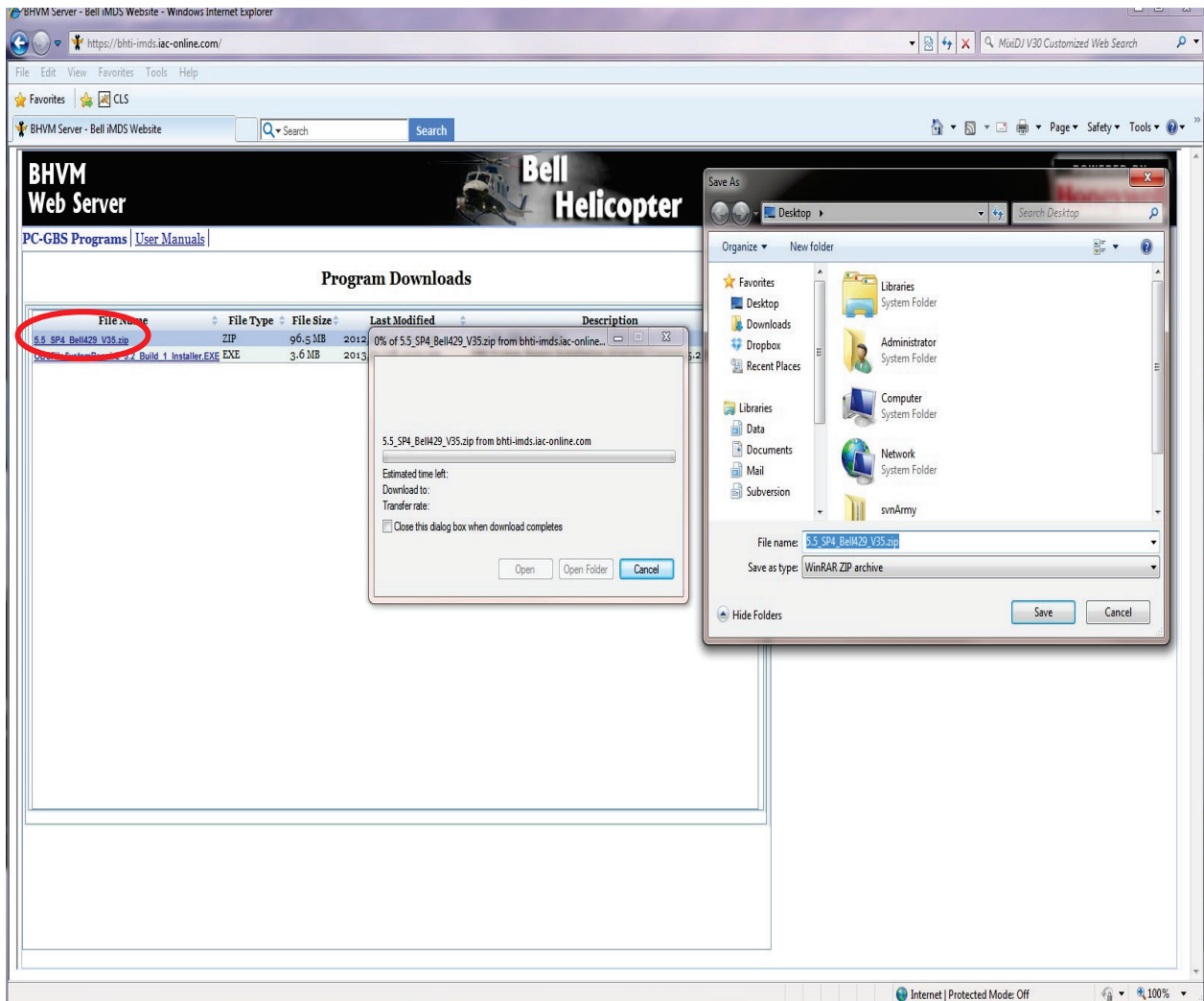
- 3) Select 'PC-GBS Programs' tab.

The screenshot shows a web browser window displaying the BHVM Web Server interface. The page has a header with the 'Bell Helicopter' logo and 'POWERED BY Honeywell'. The main content area is divided into a left sidebar and a right main panel. The left sidebar contains a 'Groups' section with 'Chevron 429' and a tree view showing '429' with sub-items '429 Components', '429 Aircraft Status', '57027', and '57028'. The right main panel has a navigation bar with tabs: 'Fleet Status', 'Download', 'Config Info', 'Flight Data', 'PC-GBS Programs' (which is circled in red), and 'User Manuals'. Below the navigation bar, the 'Program Downloads' section contains a table with the following data:

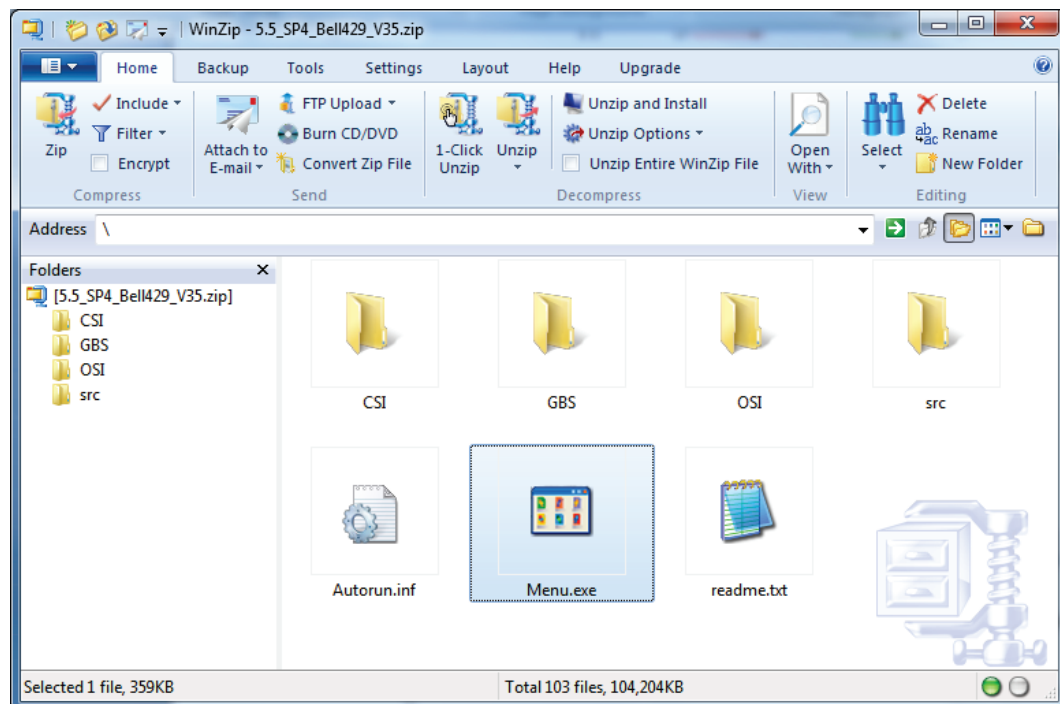
| File Name | File Type | File Size | Last Modified | Description |
|---|-----------|-----------|---------------------|--|
| 5.5 SP4 Bell429 V35.zip | ZIP | 96.5 MB | 2012/10/23 12:10:31 | 429 PC-GBS V5.5 SP4 |
| OBSFileSystemRepair_5.2_Build_1_Installer.EXE | EXE | 3.6 MB | 2013/01/08 10:21:59 | OBS System Repair Installation program (version 5.2 Build 1) |

At the bottom of the left sidebar, there is a section for 'Alarm Filter Enabled' with a 'Tail Number' input field and a 'Search' button. Below this are several links: 'Support', 'Related Links', 'Download', 'Configuration Info', 'Fault Summary Report Download', 'Watch List', and 'About Server'.

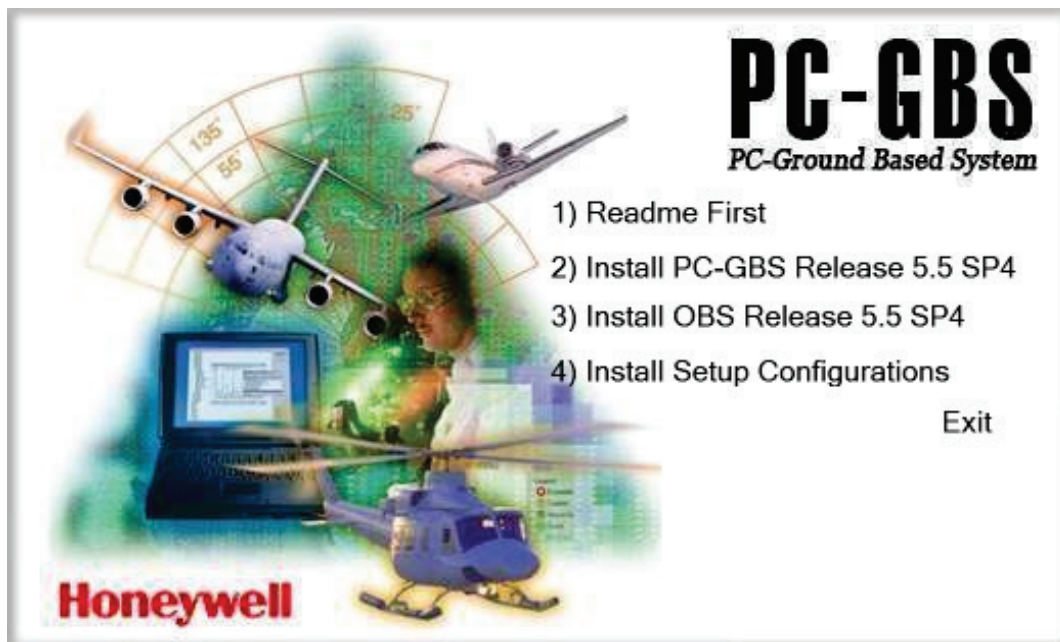
- 4) Save '5.5_SP4_Bell429_V35.zip' on the local machine.



- 5) The file should be unzipped using WinZip or other unzip utility to the Desktop.



- 6) Once unzipped and saved on a local computer, double click on the 'Menu.exe' to open the installation utility.



3.2 Upgrading to version 5.5 or later

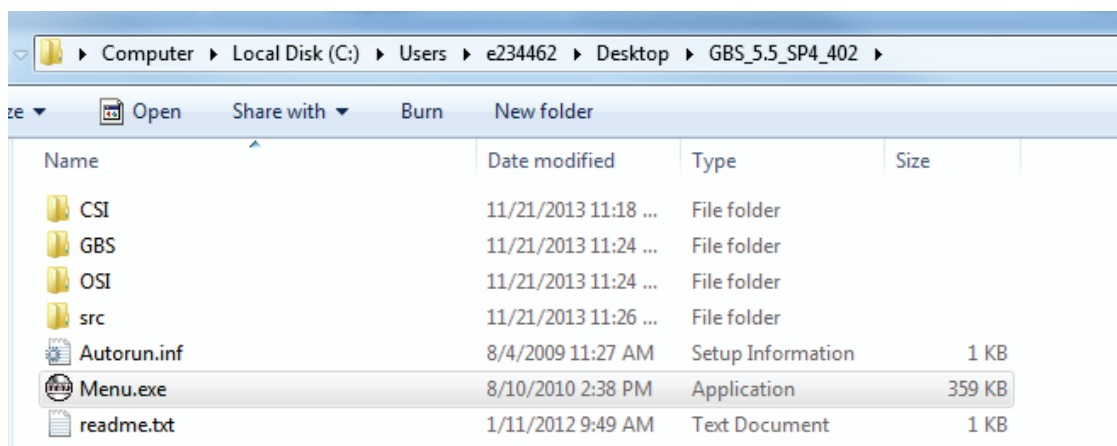
3.2.1 Installing PC-GBS version 5.5.402 or later (as specified in the Bell Instruction)

From the Honeywell CD image or Bell iMDS Server:

- Use Option 2 of the Menu to Install PC-GBS 5.5.402.

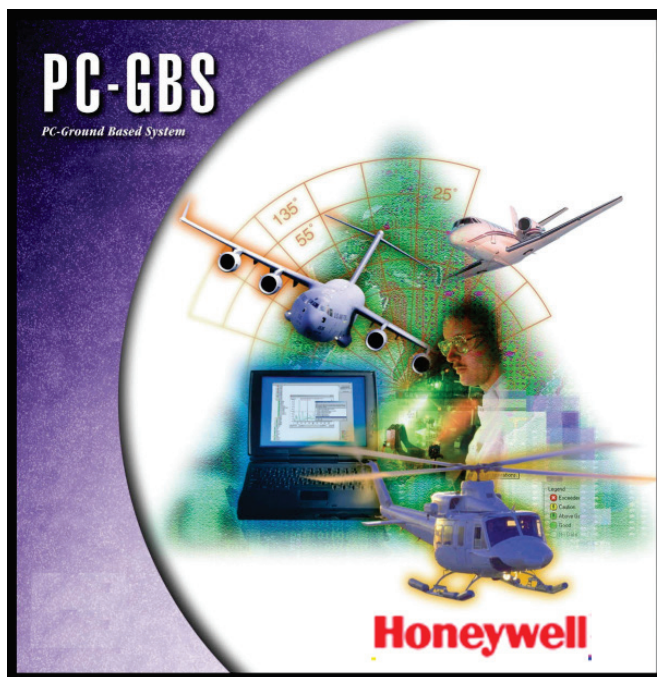
Procedure for installing from the Menu (Bell iMDS server file):

- 1) Navigate to the unzipped 5.5_SP4_Bell429_V35 on the desktop and double-click on 'Menu.exe'. Follow from step 5 in the 'Procedure for installing from the Menu (CD image)' below.



Procedure for installing from the Menu (CD image):

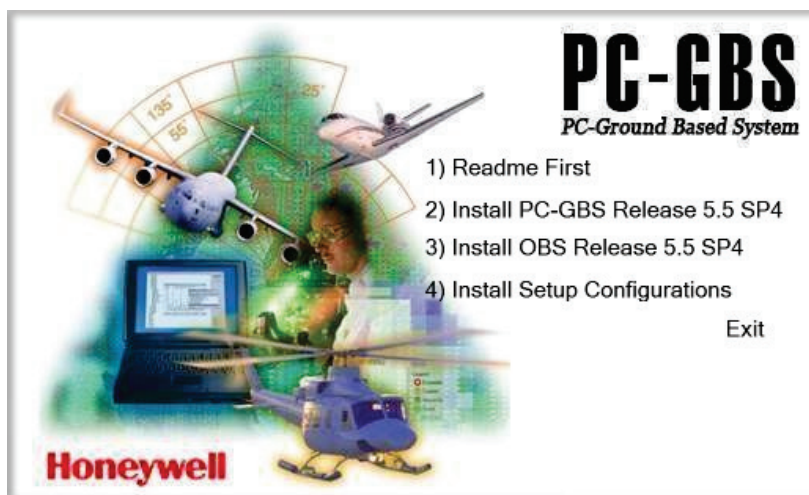
- 1) The user will use the following CD image.



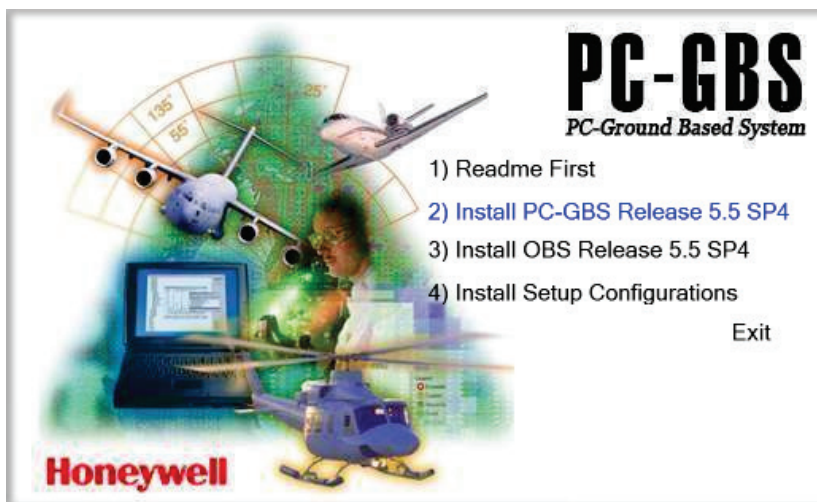
- 2) If the PC-GBS installer utility is not already running, insert the CD into the PC and 'Autorun' will start. The CD includes instructions and a Product Key inside the CD cover if required.
- 3) Enter the Product Key if prompted during the installation.
- 4) If 'Autorun' does not start automatically the user can navigate to the 'Menu.exe' on the CD and upon double-clicking on that the installation utility will open.

| Name | Date modified |
|-------------|-------------------|
| CSI | 11/8/2013 1:03 PM |
| GBS | 11/8/2013 1:03 PM |
| OSI | 11/8/2013 1:03 PM |
| src | 11/8/2013 1:03 PM |
| Autorun.inf | 8/4/2009 11:57 PM |
| Menu.exe | 8/11/2010 3:08 AM |
| readme.txt | 2/2/2012 2:58 AM |

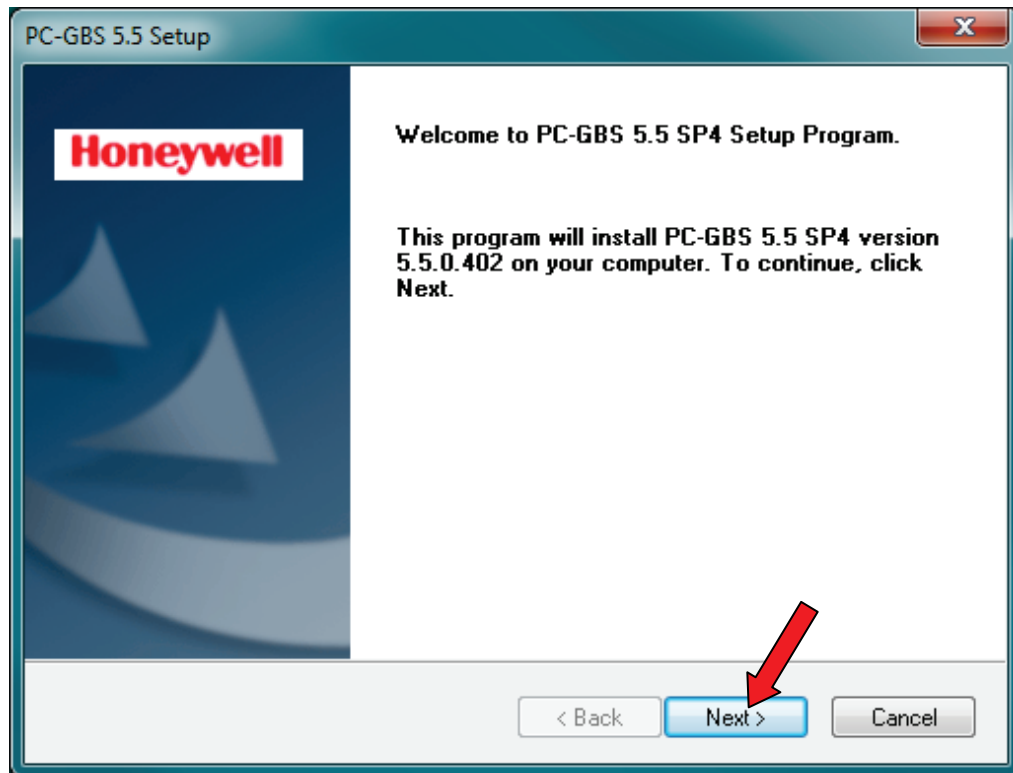
- 5) This will launch the menu screen of PC-GBS installation utility.



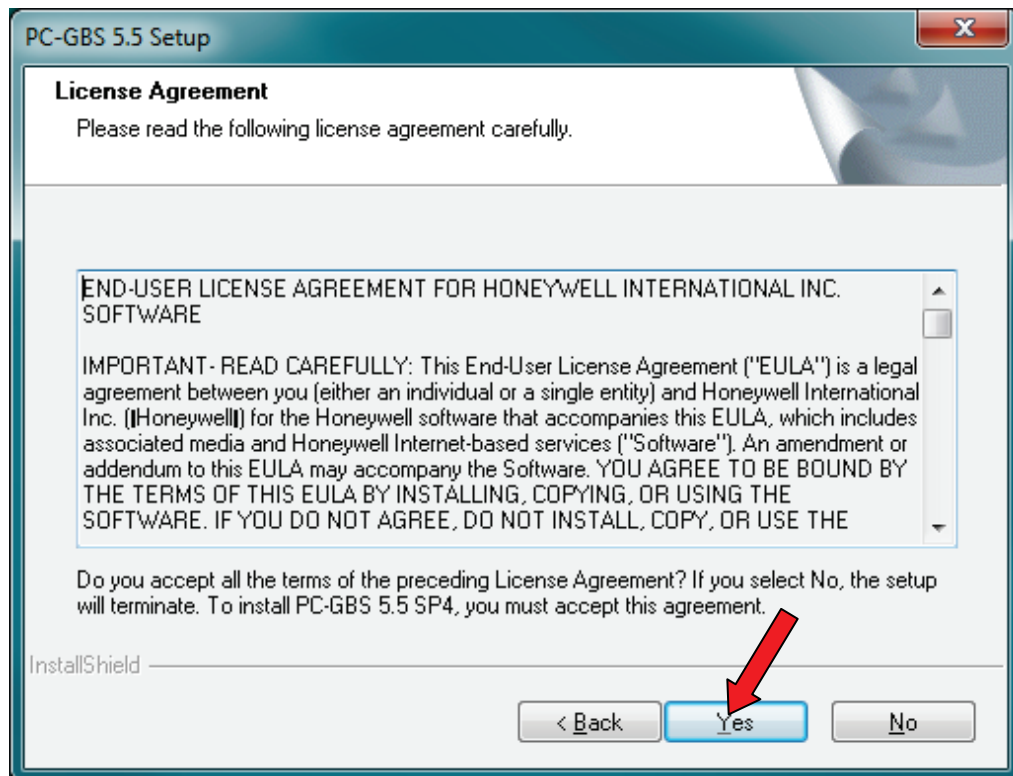
- 6) Click Option 2 to install PC-GBS.



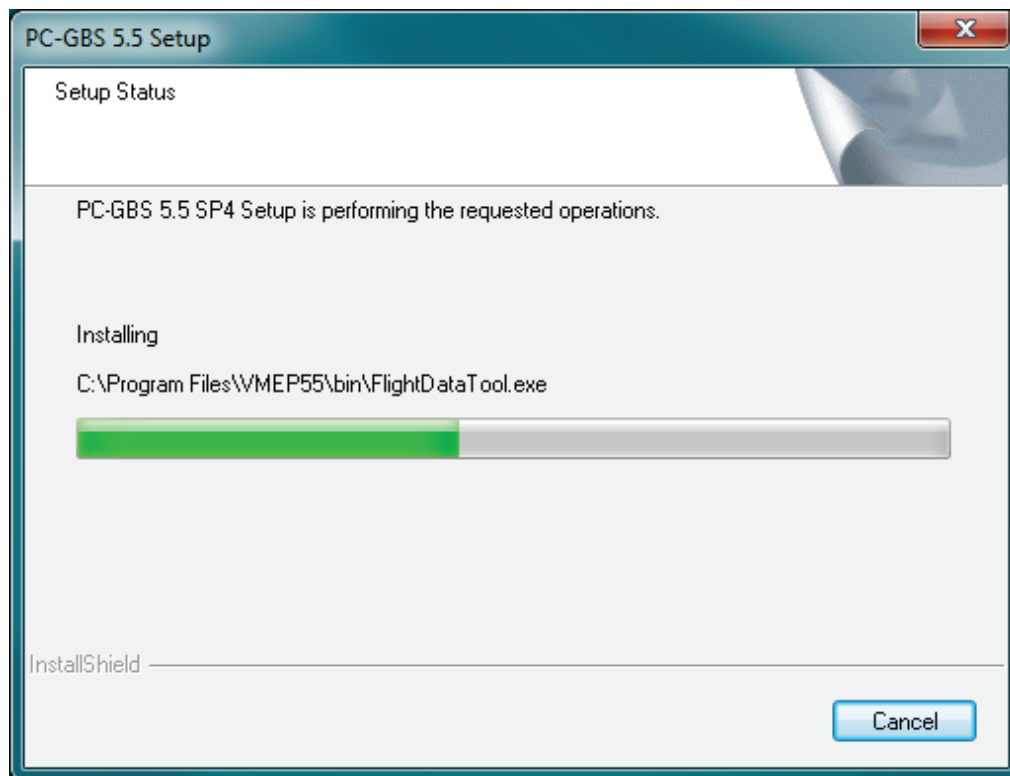
- 7) Click the 'Next >' button. (This will upgrade and overwrite the existing PC-GBS 5.4.004. If loading more than one version of PC-GBS, refer to Appendix Section 4.3.)



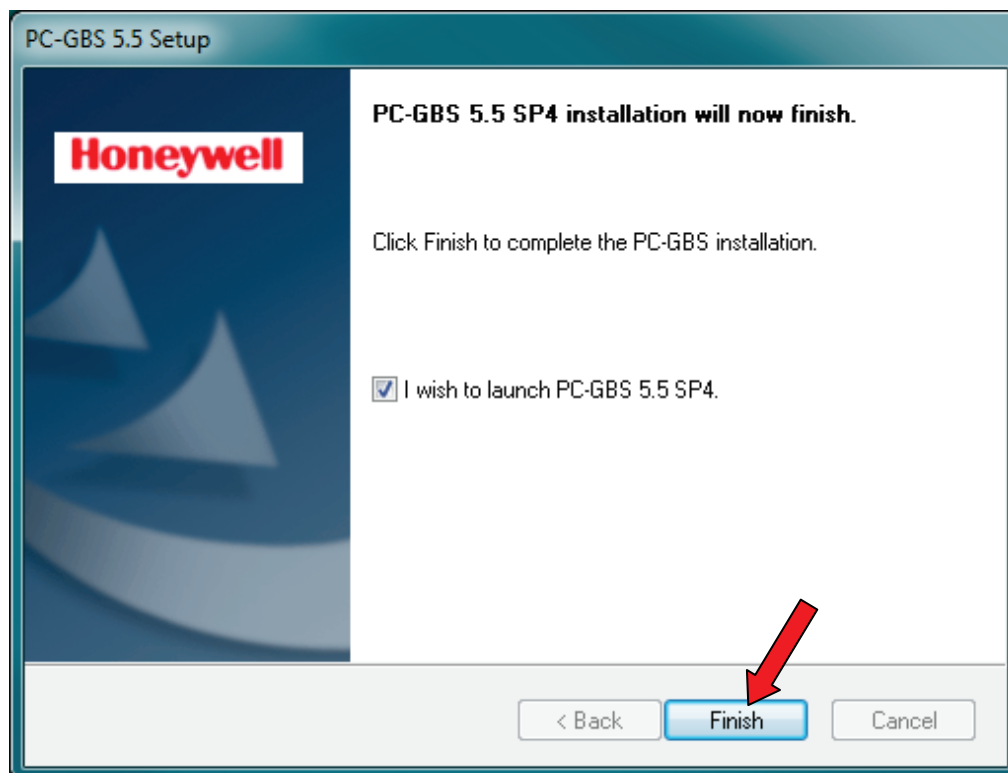
- 8) To proceed, click 'Yes'. The Setup will start installing the PC-GBS.



- 9) It shall start the installation.



- 10) Check 'I wish to launch PC-GBS' checkbox and click 'Finish' to start the PC-GBS application.



- 11) This will launch PC-GBS. Verify that the splash screen shows the expected version (as per the Bell Instruction).



- 12) Exit out of PC-GBS program.

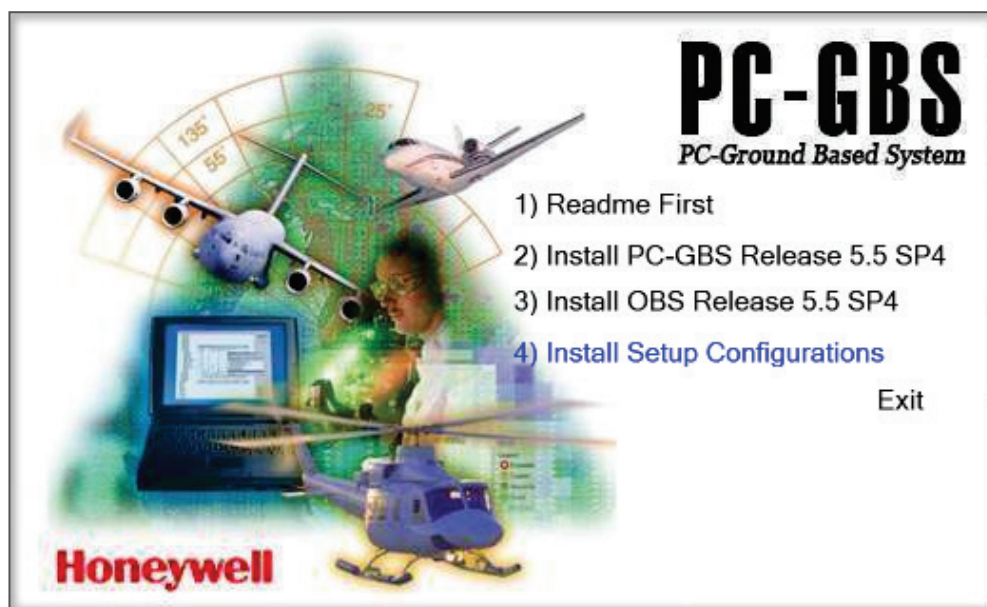
3.2.2 Installing Bell 429 configuration Setup

From the Honeywell CD image or Bell iMDS Server:

- Use Option 4 of the Menu to Install Setup Configuration (429_35.csif).

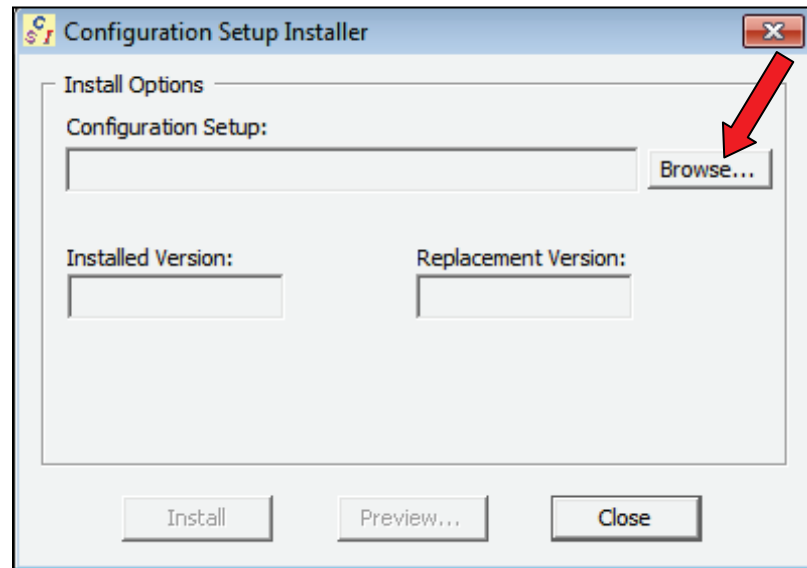
Procedure for installing from the Menu:

- 1) Use Option 4 of the PC-GBS installer Menu to Install the Configuration Setup 429_35.csif.

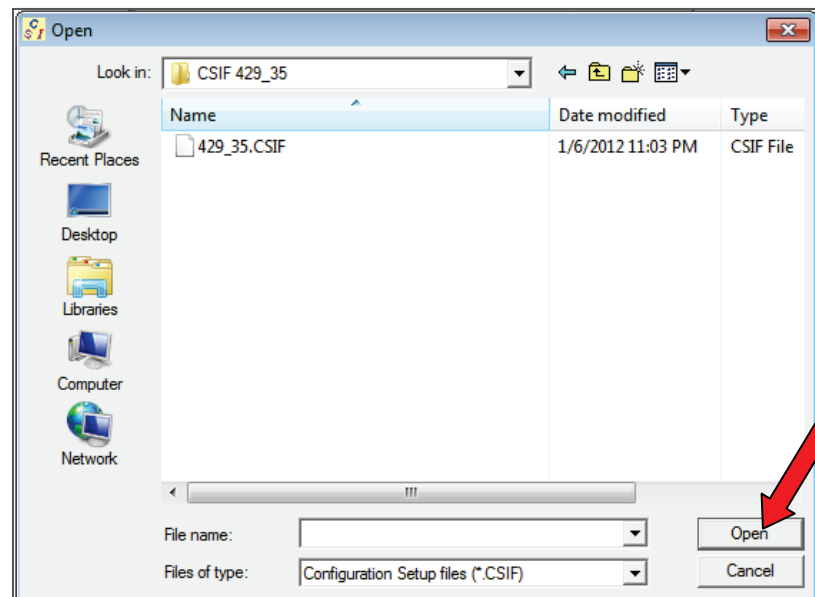


- 2) Select 'Browse...' and navigate to the CSIF file either previously downloaded from the Bell Helicopter iMDS web server or from a CD-ROM.

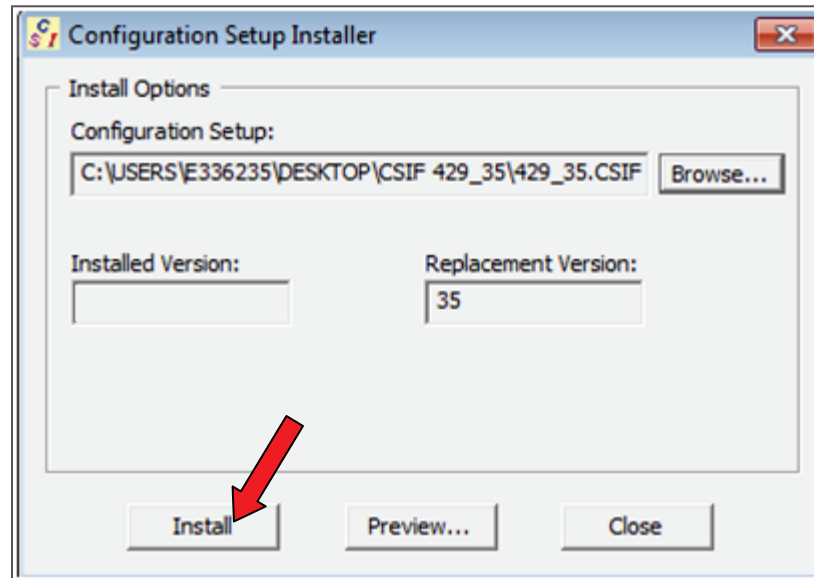
Note: If the 'csif' file is automatically selected by the tool, you can ignore this step.



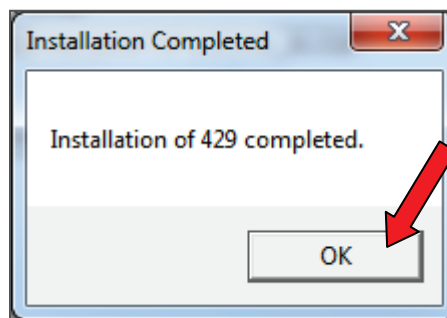
- 3) Select '429_35.CSIF' and click 'Open'.



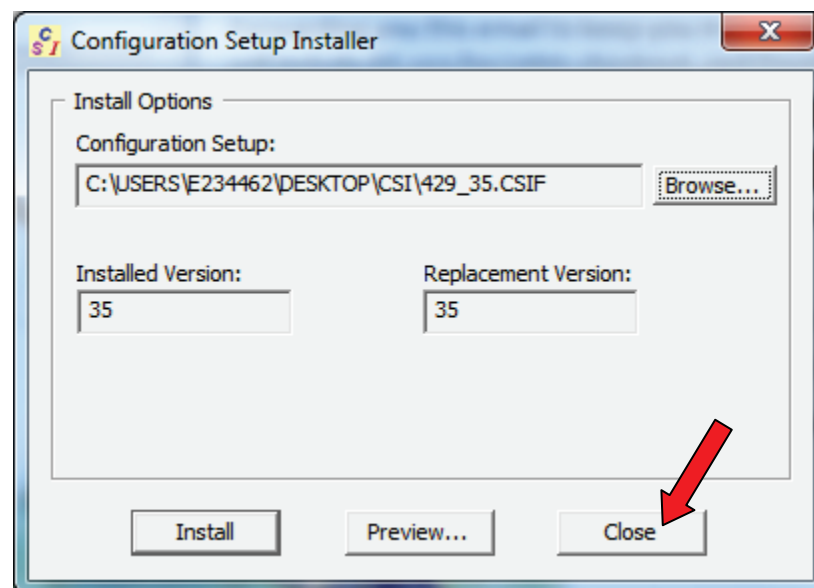
- 4) Click 'Install'.



- 5) Click 'OK'.



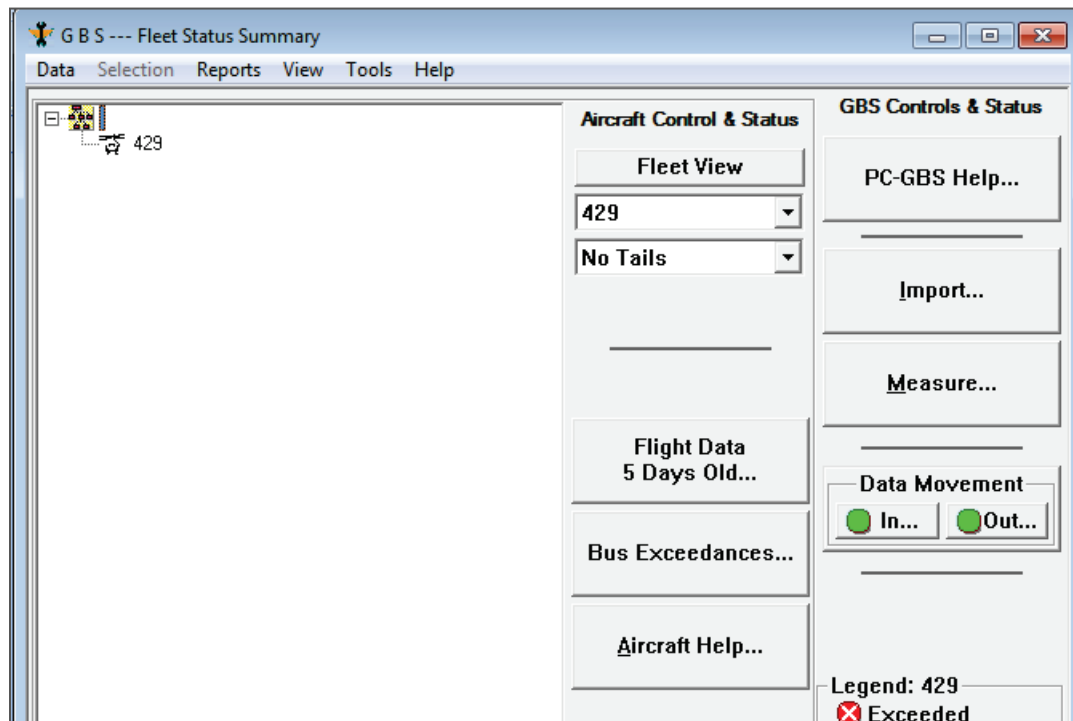
- 6) Click 'Close'.



- 7) PC-GBS will automatically restart.



- 8) Bell 429 v35 is now installed to PC-GBS.



3.2.3 Installing Bell 429 OSIF

From the Honeywell CD image or Bell iMDS Server:

- Use Option 3 of the Menu to Install OBS Release (OBS_5_5_402.osif).

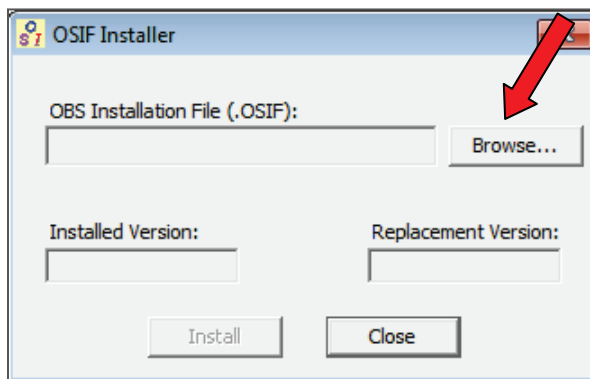
Procedure for installing from the Menu:

- 1) Use Option 3 to Install OBS Release 5.5.402 or later (as specified in the Bell Instruction).

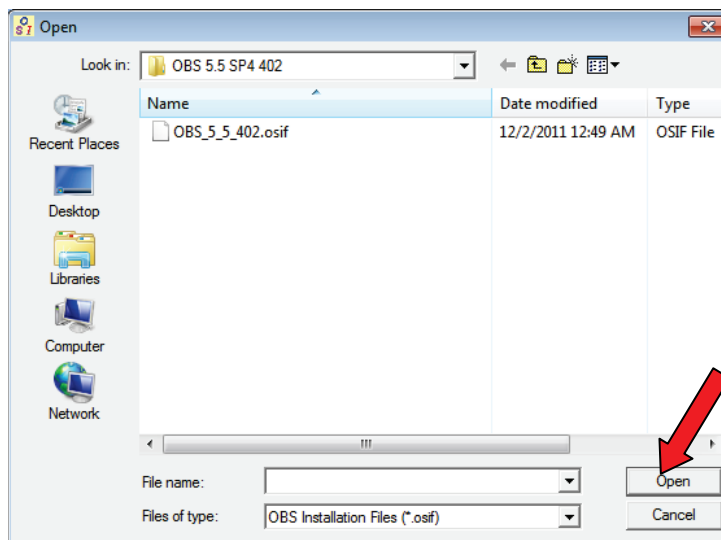


- 2) Browse to the target OSIF file (OBS_5_5_402.osif or later) and click Open.

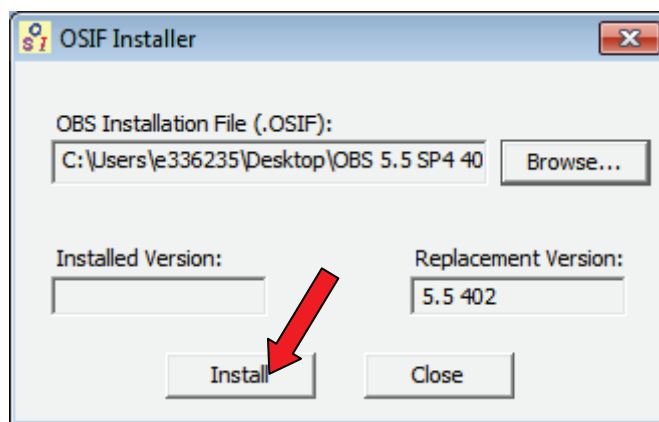
Note: If the 'osif' file is automatically selected by the tool, you can ignore this step.



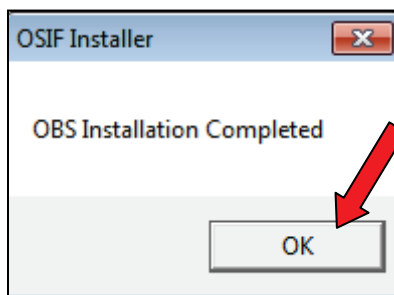
- 3) Select 'OBS_5_5_402.osif' and click 'Open'.



- 4) Click 'Install'.

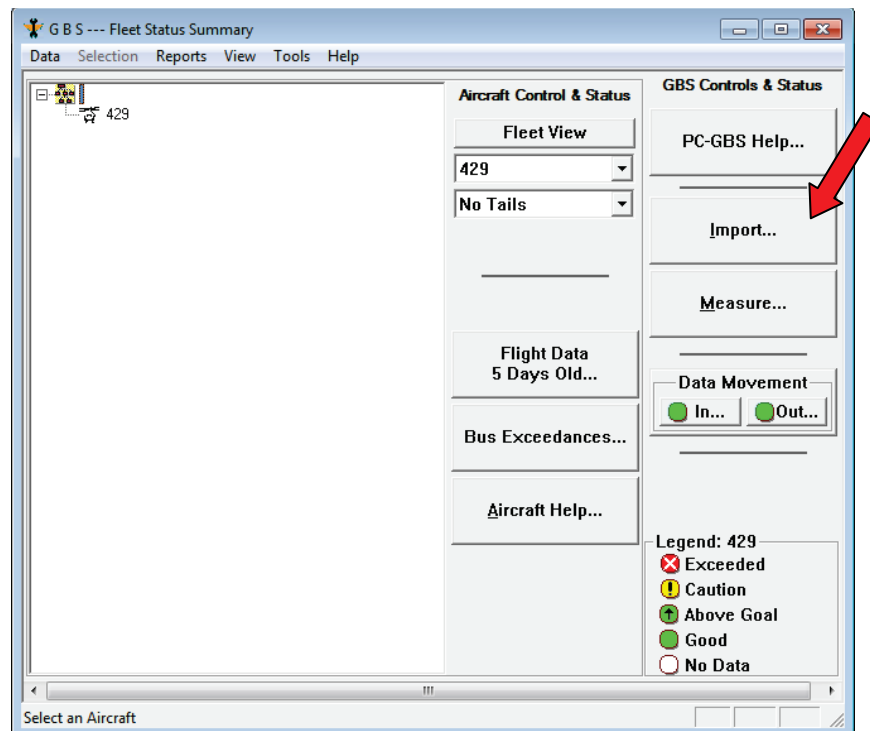


- 5) Click 'OK' then 'Close' all the way back to the main menu.

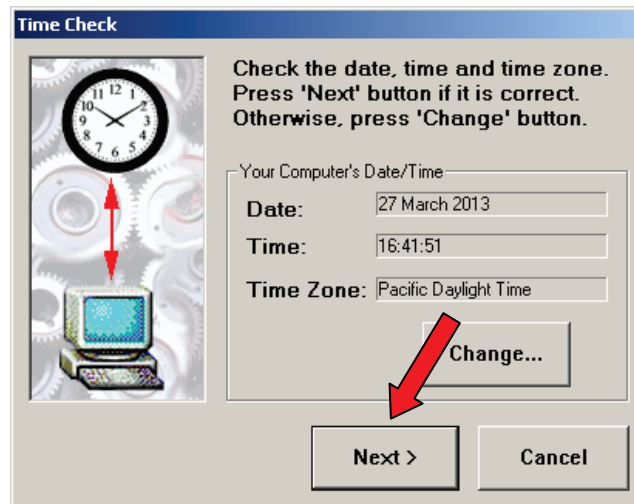


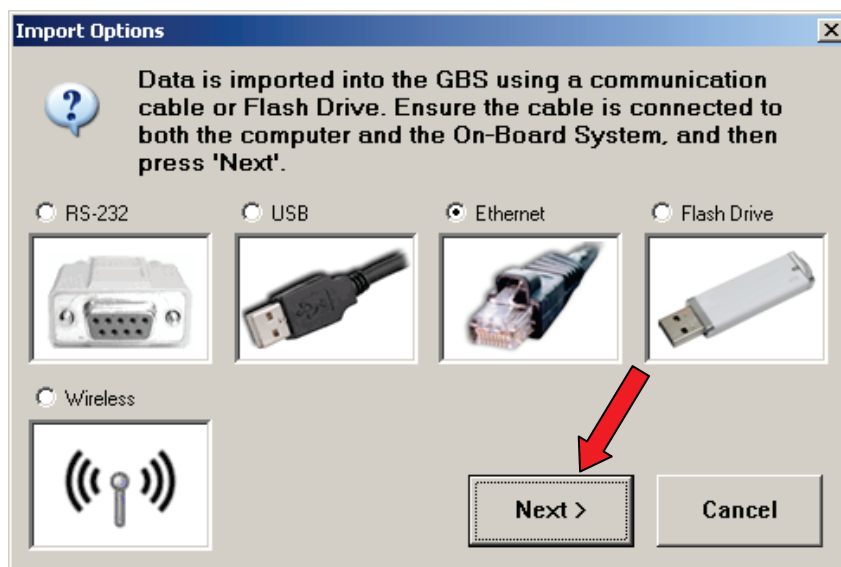
3.2.4 Verify the Current file version loaded on the HUMS 1134 before upgrading.

While connected to the HUMS 1134 via an Ethernet cable, open PC-GBS and Click 'Import'



- 1) Connect to the HUMS 1134 via the Ethernet cable.

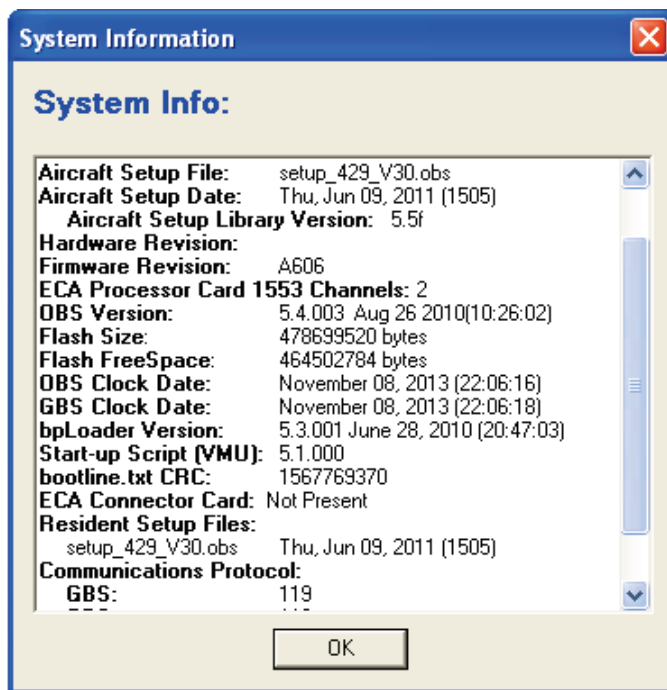




- 2) 'Download flights' dialog will appear. Click on 'System Info'.



- 3) Verify current software installed on the unit. The following screenshot is an example.

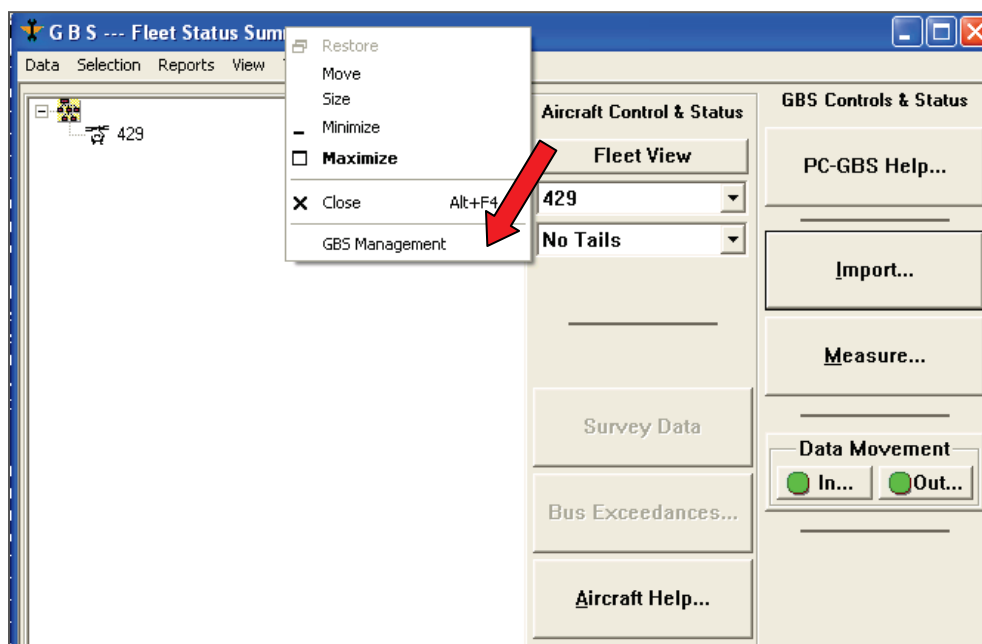


- 4) Click "OK" and then click on "Cancel" on the Download screen.

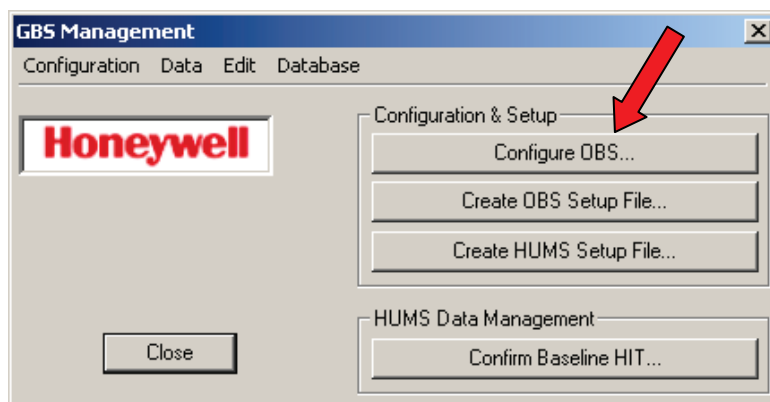
3.2.5 Connect via GBS Management to Update OBS/setup file

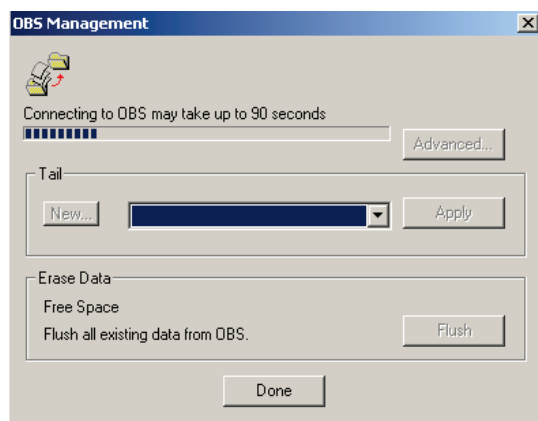
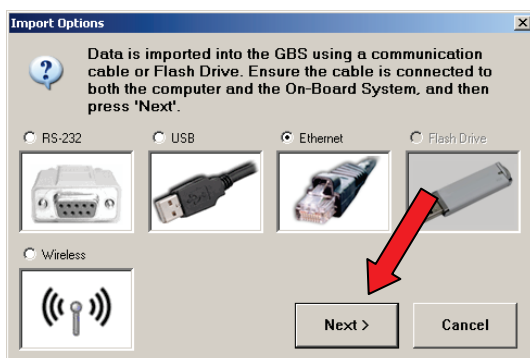
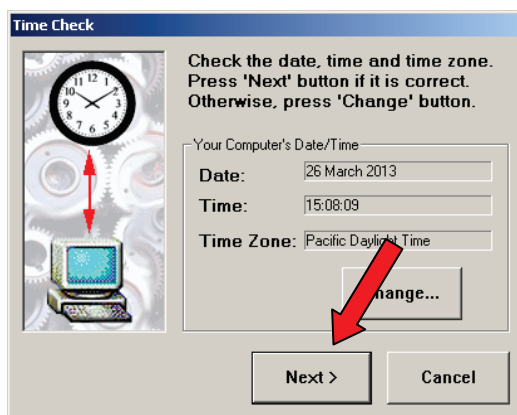
- 1) While connected to the HUMS 1134 with an Ethernet cable, right click on the menu bar, select GBS Management and enter the password as shown in the text box and click 'OK'.

PASSWORD: iac.vmep

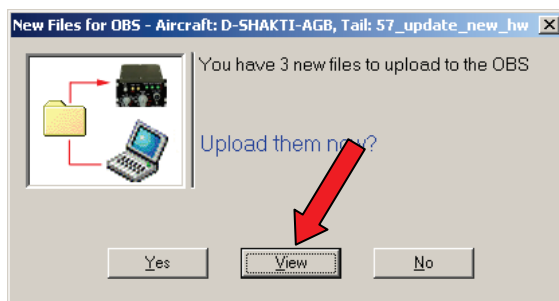


- 2) Click on 'Configure OBS...' and connect as shown.

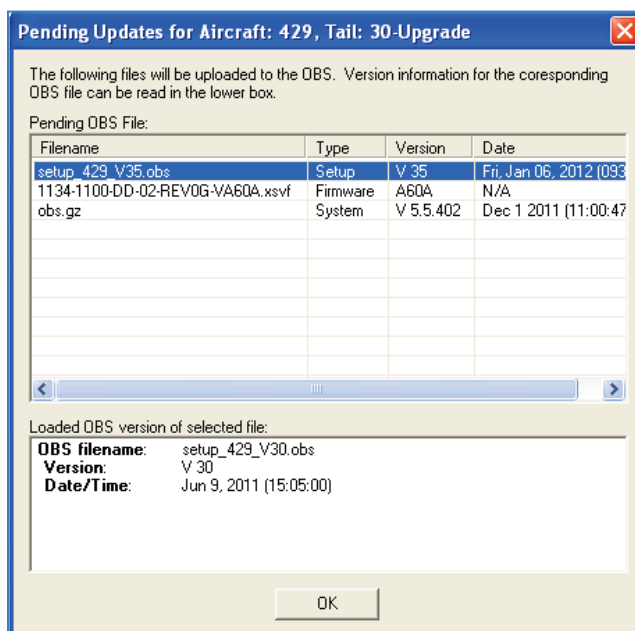




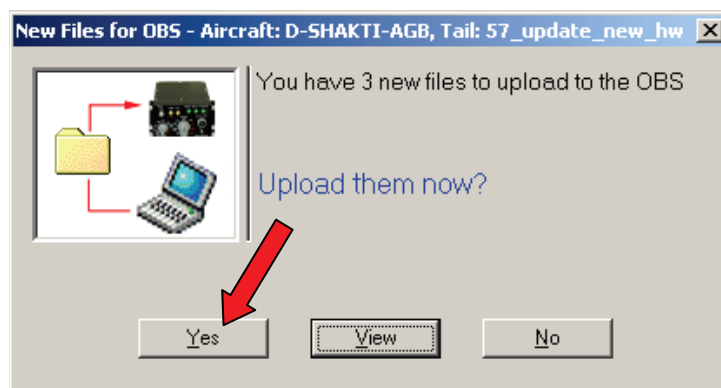
- 3) The following dialog offering upload of several files to the HUMS 1134 will pop up. Click 'View'.



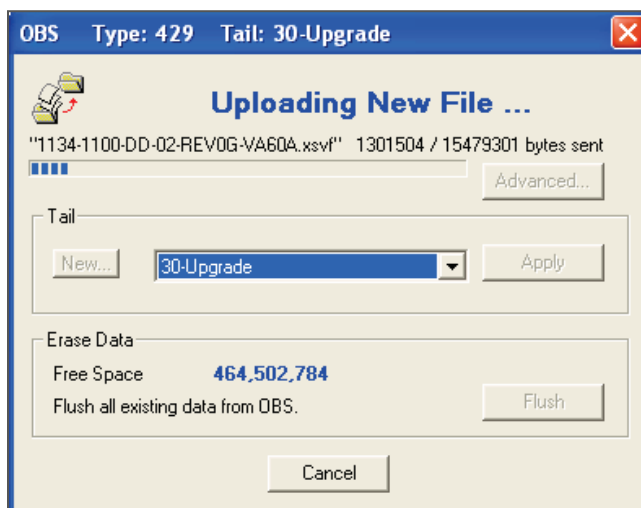
- 4) Confirm the files to be uploaded. The files can be a combination of a '.xsvf' firmware file, the 'obs.gz', and the setup file. The screenshot below is an example.

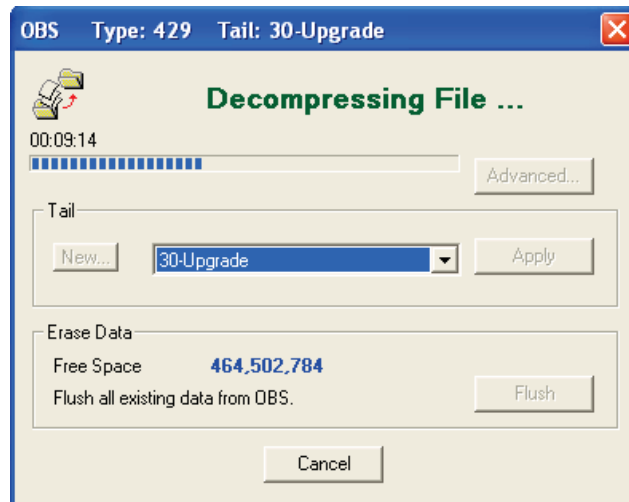


- 5) Upon verifying the files click 'Ok', and 'Yes' to upload the software onto the HUMS 1134.



Note: The loading will take around 12 minutes. Please DO NOT interrupt the power at this stage.

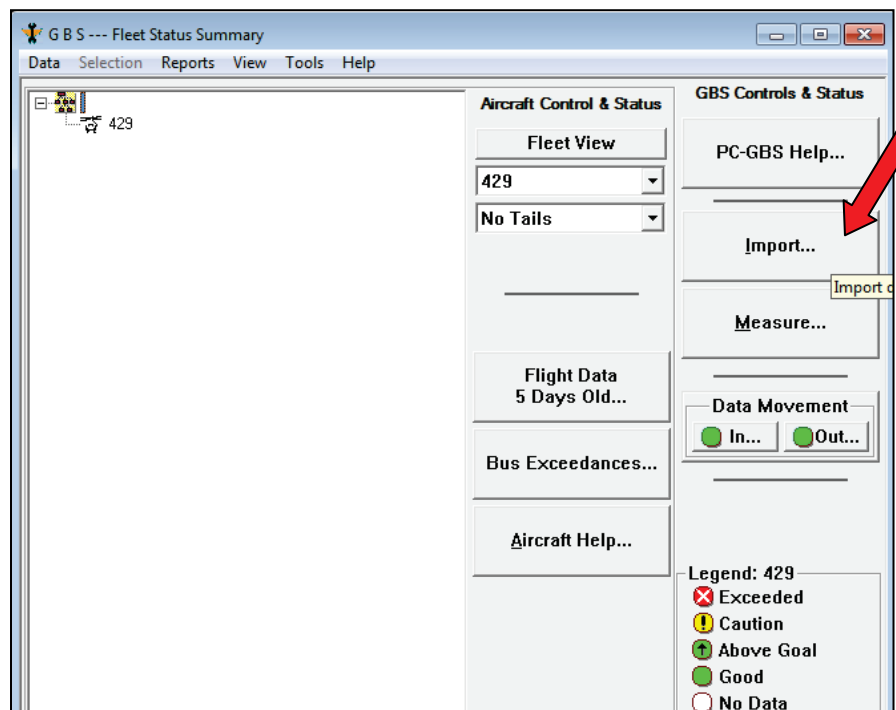




- 6) After the files are successfully uploaded, **Cycle Power** of the HUMS 1134.

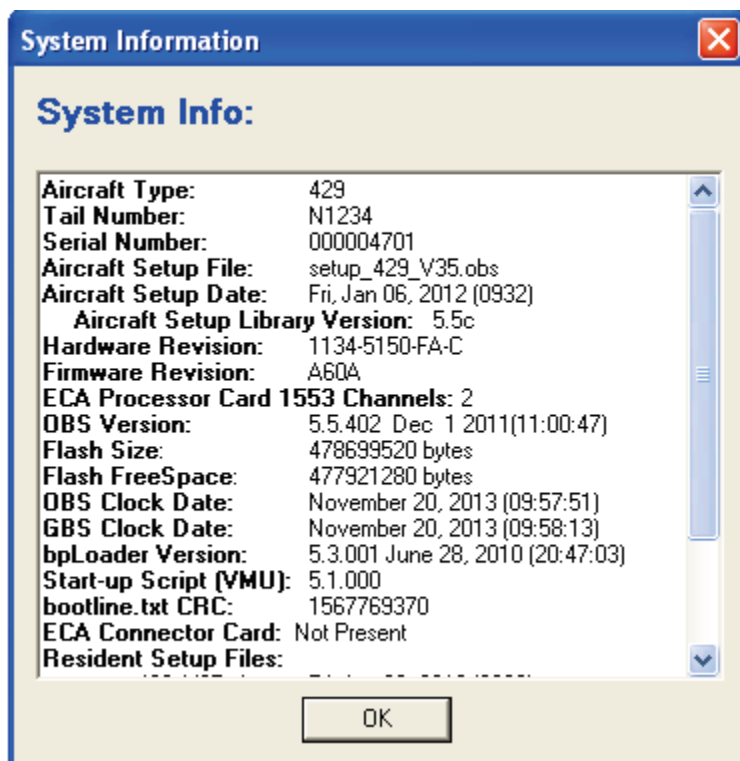
3.2.6 Verify load complete and versions correct.

- 1) If not previously done during the update, **Cycle Power** to the HUMS 1134 (this will ensure the firmware load is finalized).
- 2) Connect to the HUMS 1134 through the 'Import...' button as shown and click 'System Info'.





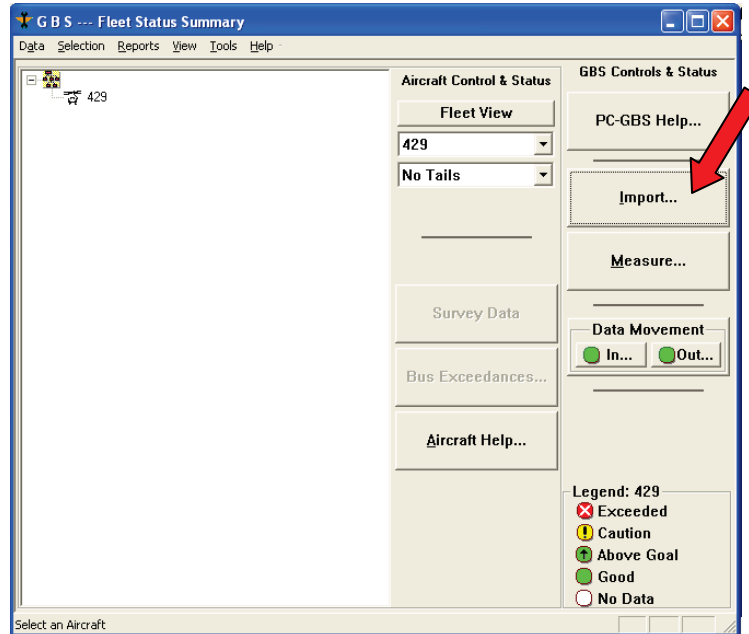
- 3) Select 'System Info' and verify software versions as per the Bell instruction. The following screenshot is an example.



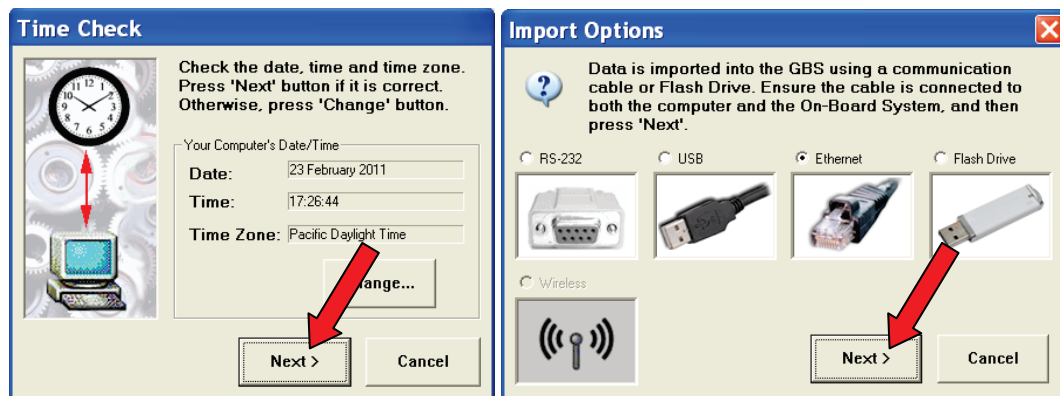
- 4) Click "OK" and then click on "Cancel" on the Download screen.

3.2.7 Downloading BIT check information and Flight Data

- 1) Connect the Ethernet cable between the Laptop with PC-GBS and to the 1134 processor.
- 2) Power the processor. Boot time takes about 2 minutes.
- 3) Press 'Import...' button on the PC-GBS main page.

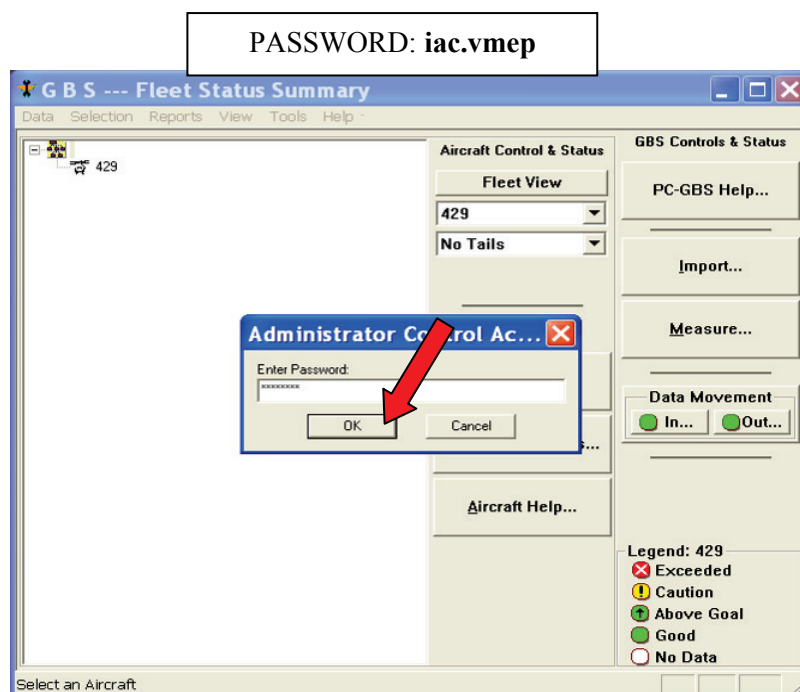


- 4) Click 'Next >' on time check if time is correct, if not click change and set the time. Then click 'Next >', after ensuring Ethernet is selected.

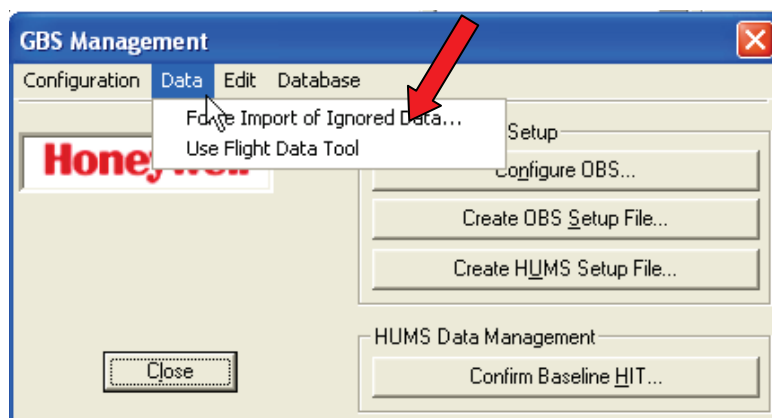


- 5) Click 'Download Flights' button so that the latest BIT check can be downloaded.
- 6) At the completion of the download you will be returned back to the PC-GBS main screen. In order to view the recent BIT status one more step must be accomplished in order to import a BIT when an engine has not been started or a vibration acquisition taken.

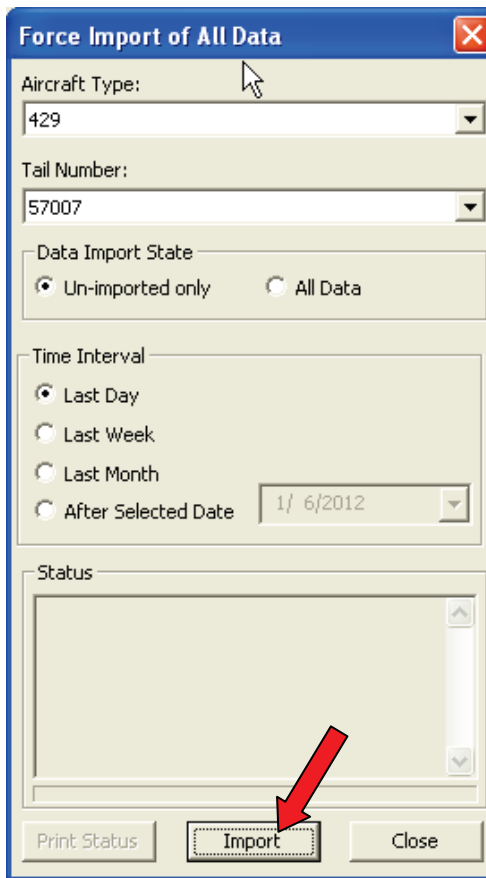
- 7) Right click on the window title bar, select GBS Management, and enter the password as shown in the textbox and click 'OK'.



- 8) At the 'Data' drop down, select 'Force Import of Ignored Data...'.



- 9) The 'Force import of All Data' dialog will now open. Ensure the proper aircraft type, tail number, Data Import State, and Time Interval are selected as indicated below. Press the 'Import' button and any new BIT checks and vibration test will now be imported into the PC-GBS database.

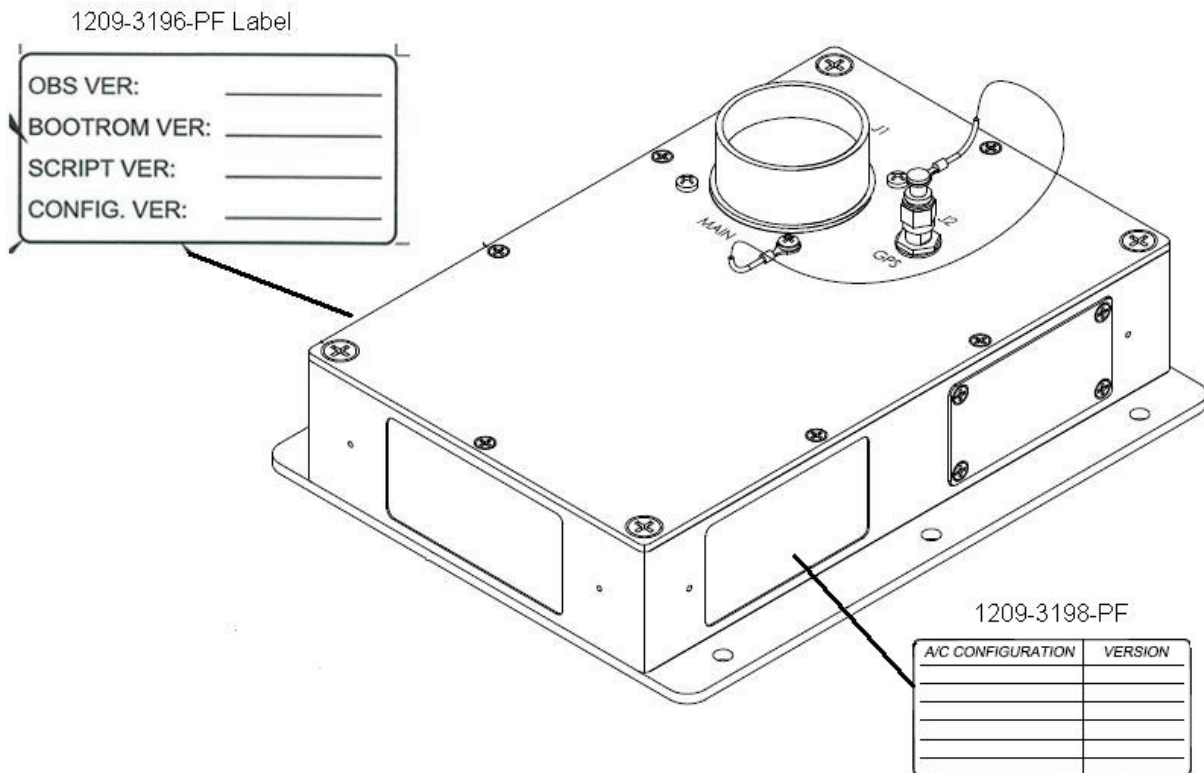


- 10) Press the 'Close' button and return back to PC-GBS main screen ensuring the 'HVM' icon is showing a green status.
- 11) Updating both PC-GBS and the onboard system is now complete.

3.2.8 Completing 1134 processor Identification Tag

When applicable in Bell Instruction, perform software label updates as follows (refer to the figure below):

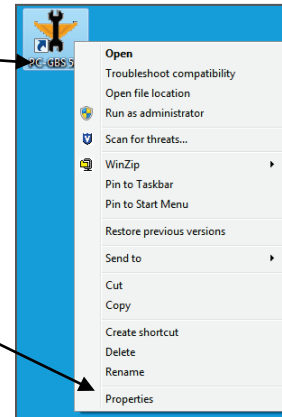
- 1) Change or install 1209-3196-PF label to reflect the software versions of the software just previously installed and verified in Section 3.2.6 step 3 above. Leave the 'Config Ver:' line blank or strike through.
- 2) Write CSIF aircraft type and version onto 1209-3198-PF label.



4 APPENDIX

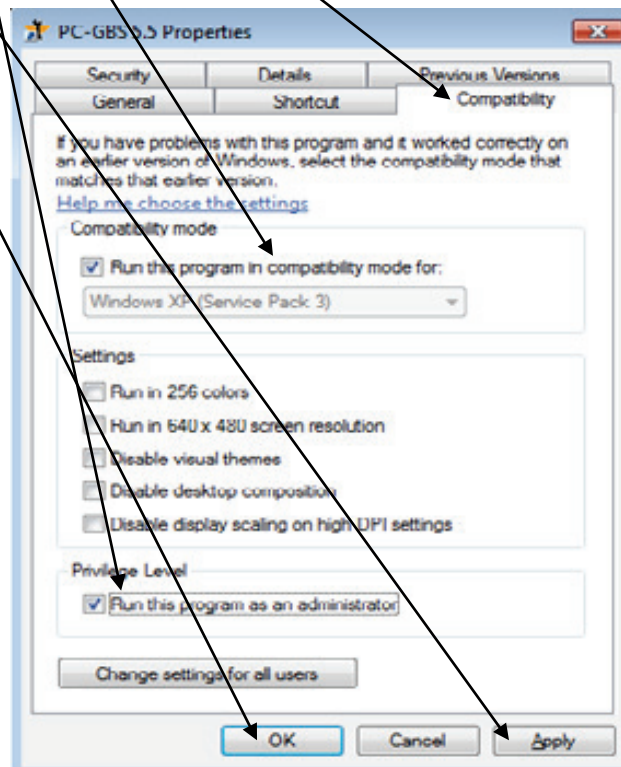
4.1 Enabling Windows Compatibility Mode on Windows 7 to run in Windows XP mode:

- 1) Right click on the PC-GBS icon on your Desktop.
- 2) Select 'Properties'.



- 3) Select the 'Compatibility' tab.
- 4) Check 'Run the program in compatibility mode for: Windows XP'.
- 5) Check 'Run this program as an administrator.'
- 6) Select Apply.
- 7) Select OK.

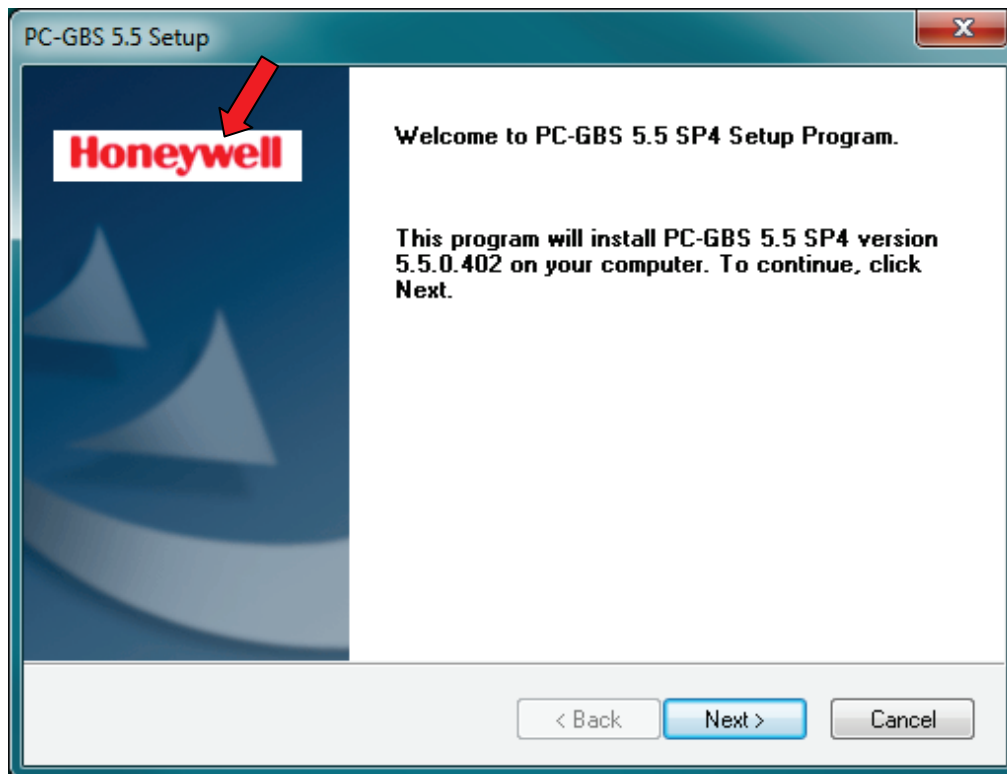
This will cause the Windows 7/XP/Vista to start PC-GBS in administrator mode every time the program is run.



Upon completion of the above steps, installation of PC-GBS software can be done by following the instructions for Windows XP PC-GBS installation.

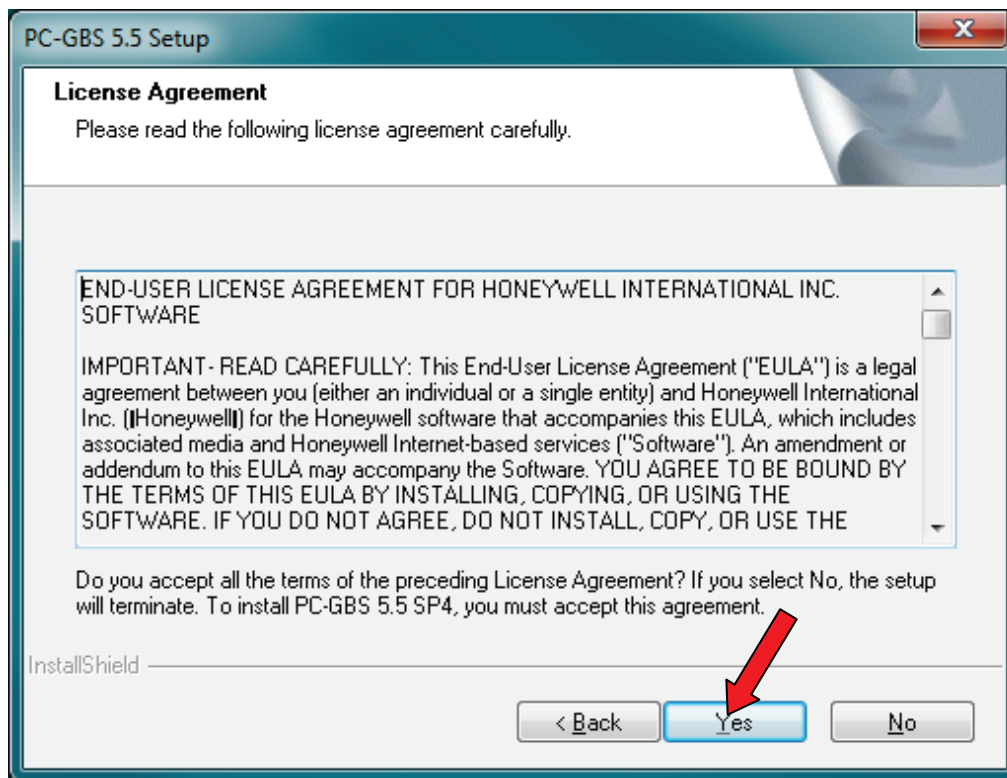
4.2 Installing more than one version of PC-GBS (Not Recommended)

- 1) Although not recommended, it is possible to load more than one version of PC-GBS by double left clicking on the 'Honeywell' logo. This allows multiple versions of PC-GBS to be installed on a single computer.

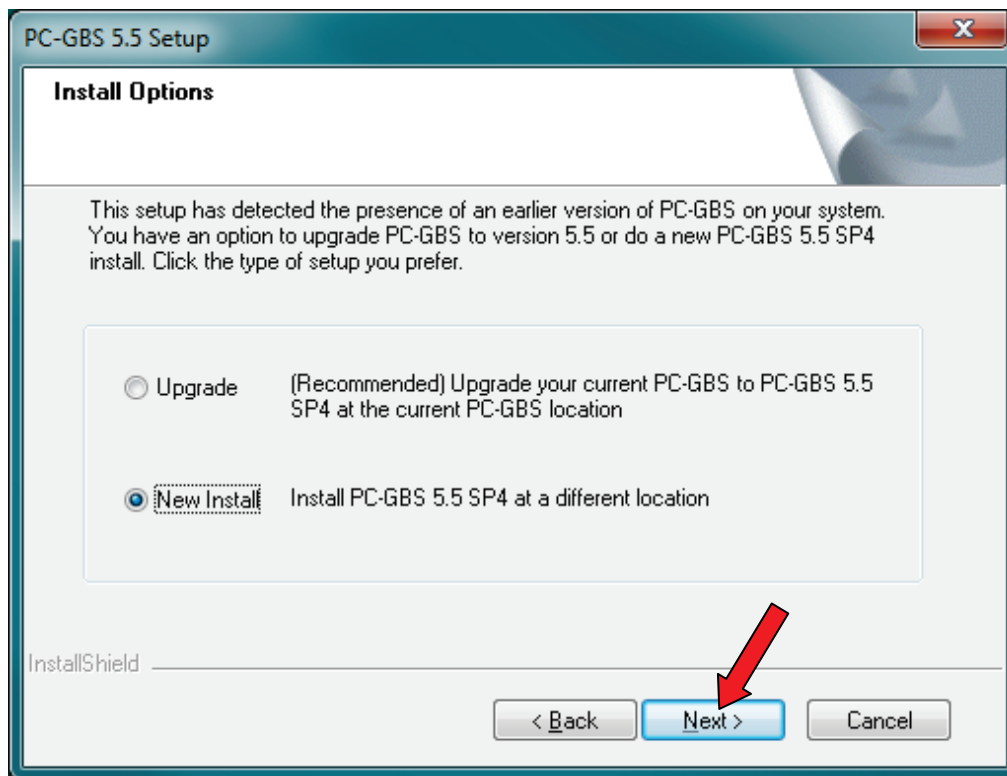


Note: This is an unsupported approach. Honeywell does not recommend installation of more than one version of PC-GBS on a single computer.

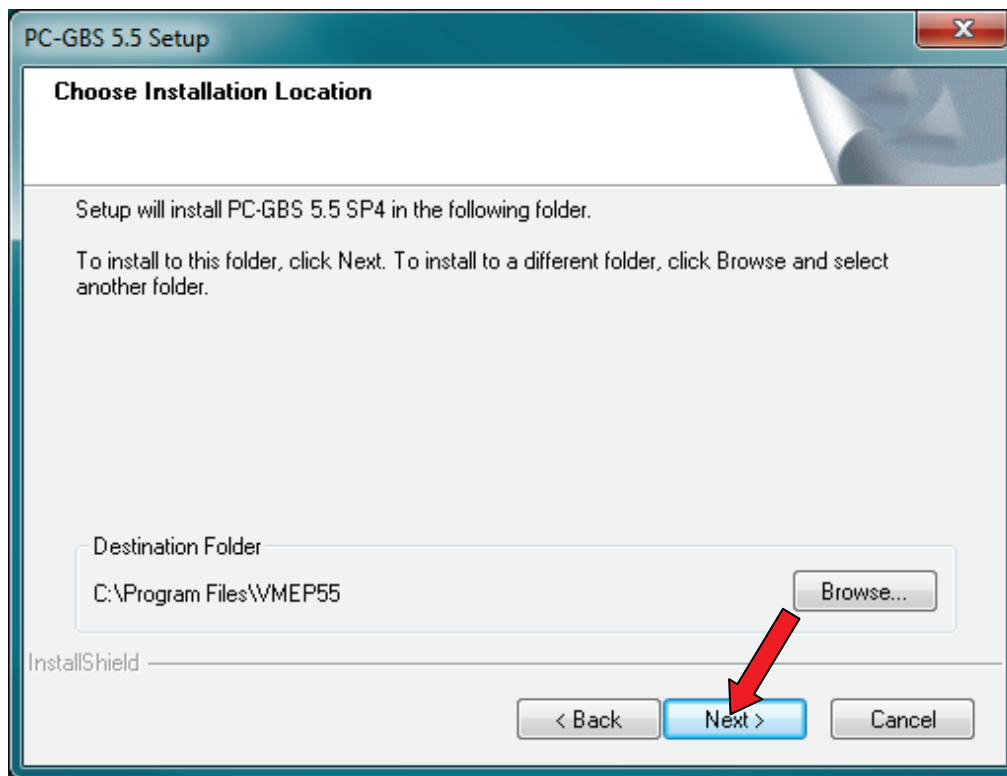
- 2) To proceed, click 'Yes'.



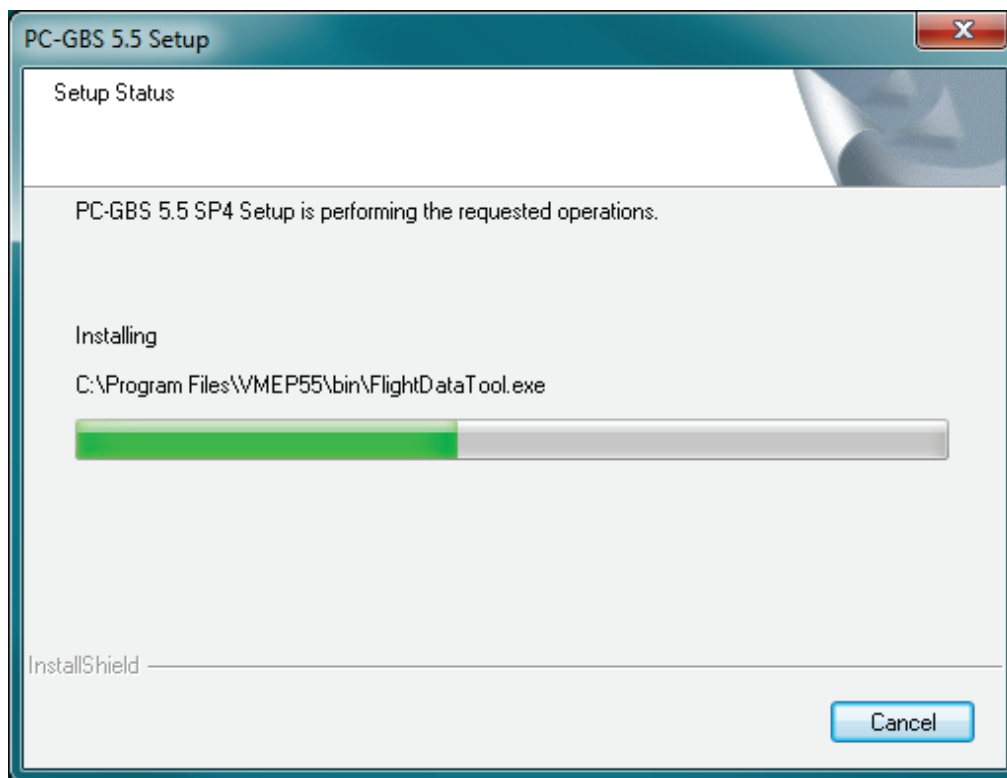
- 3) Select 'New Install' and click 'Next >'.



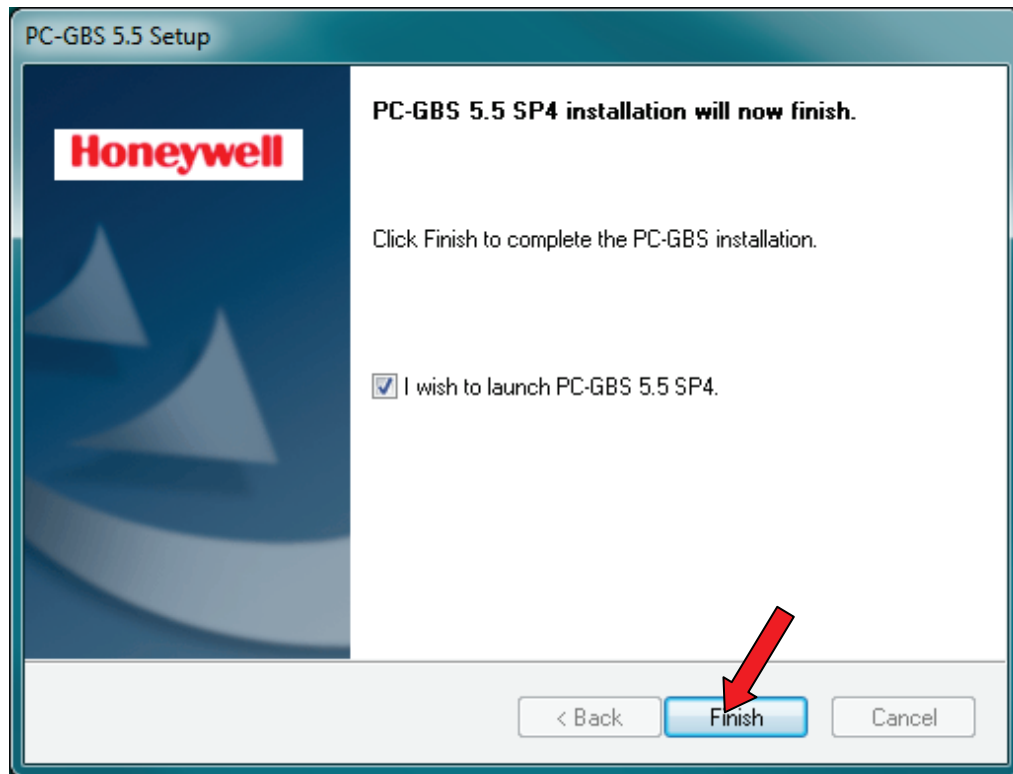
- 4) Click 'Next >' (recommend using the default path).



- 5) This shall start the installation.



- 6) Check 'I wish to launch PC-GBS' checkbox. Click 'Finish' to start the PC-GBS application.

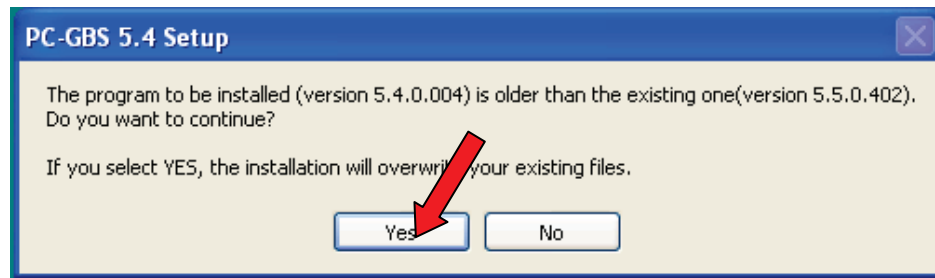


- 7) This will launch PC-GBS.



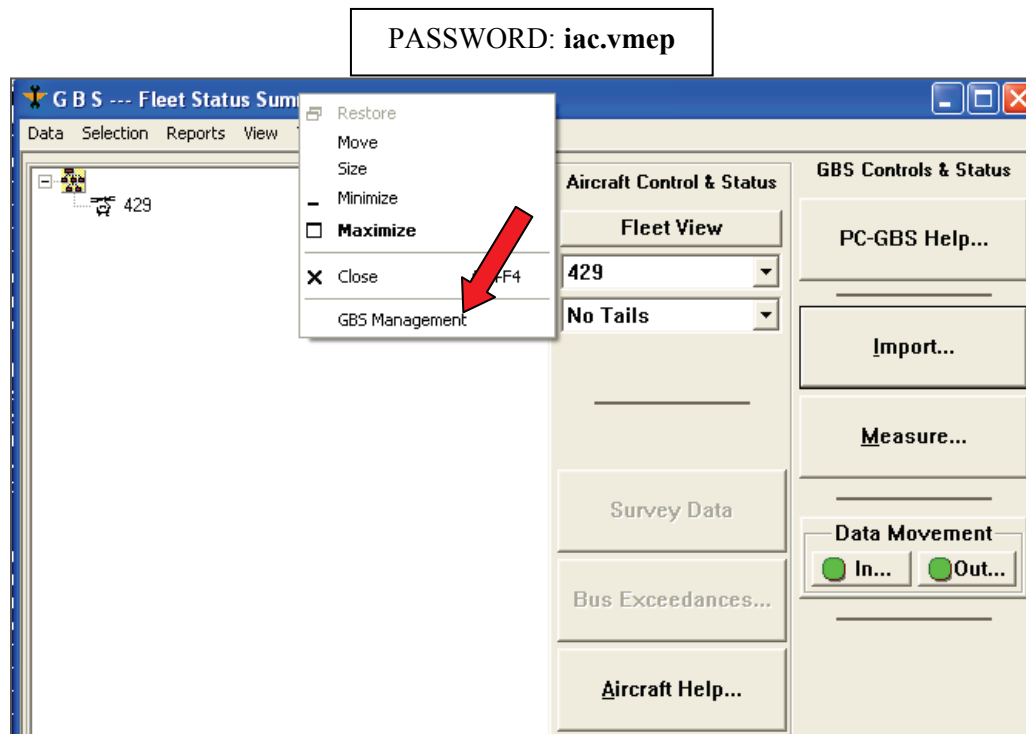
4.3 Downgrade Instructions for 5.5, back to 5.4

- 1) Install PC-GBS 5.4 if not done already. Refer to Section 4.4 on how to install the PC-GBS. (The steps in Section 4.4 are for PC-GBS 5.5, so ensure that installation files of PC-GBS 5.4 are used. Refer to Bell Instruction for the same.)
- 2) When downgrading, a warning ‘The program to be installed is older than...’ will prompt for user response. Please click ‘Yes’ to proceed.



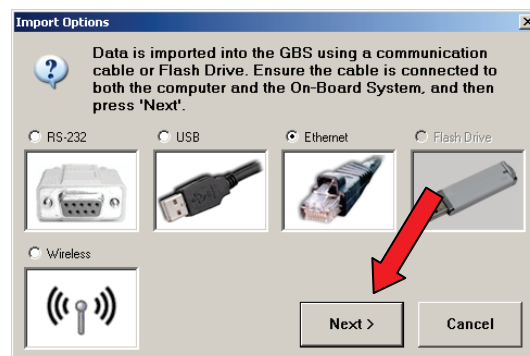
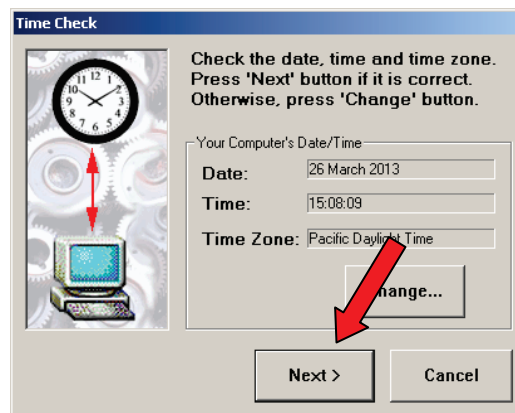
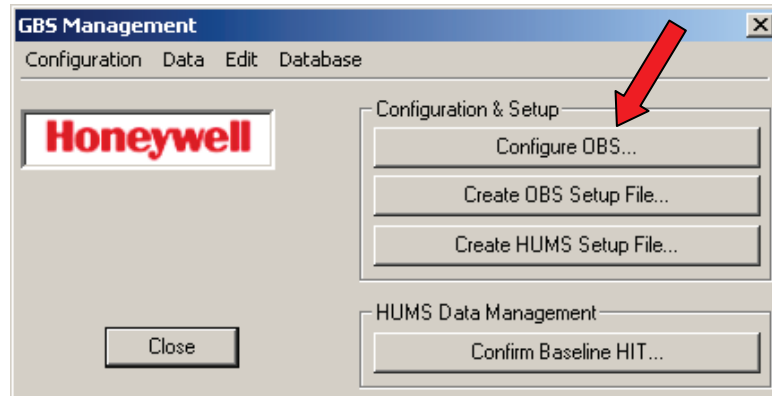
Note: Delete PC-GBS 5.5 Desktop shortcut manually post-downgrade.

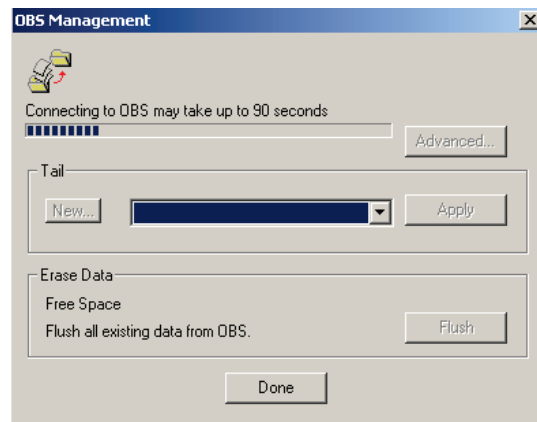
- 3) Open the PC-GBS 5.4 and install the CSIF and OSIF files using the steps in Sections 4.5 and 4.6. (The steps in Section 4.5 and 4.6 are for selecting 5.5 versions. Ensure that the CSIF and OSIF files are selected for 5.4 versions. Refer to Bell Instruction for the same.)
- 4) Please refer to Section 3.2.4 for steps to check for ‘bpLoader’ and ‘Start-up Script (VMU)’ file versions. If the current and target versions are the same, as per the Bell Instruction, skip steps 13 and 14 below.
- 5) While connected to the HUMS 1134 with an Ethernet cable, right click on the menu bar, select GBS Management and enter the password as shown in the textbox and click ‘OK’.



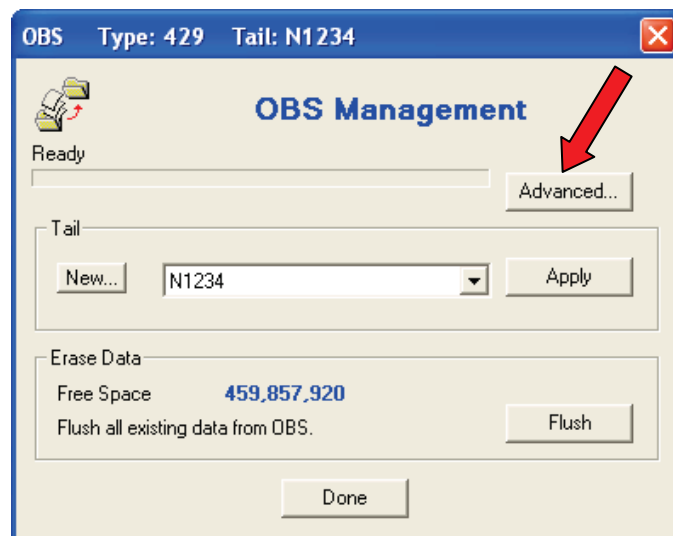


6) Click on 'Configure OBS...' and connect as shown.

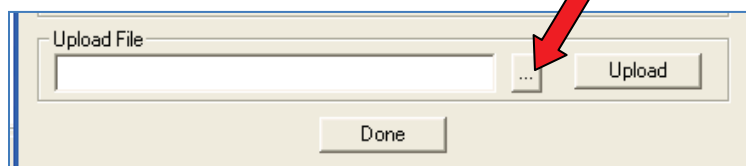




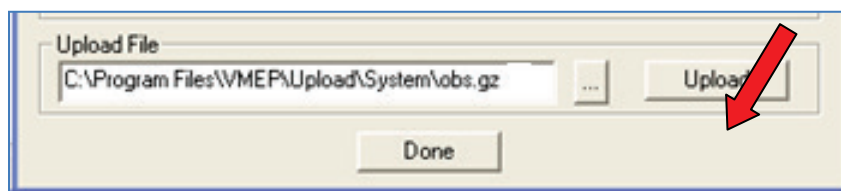
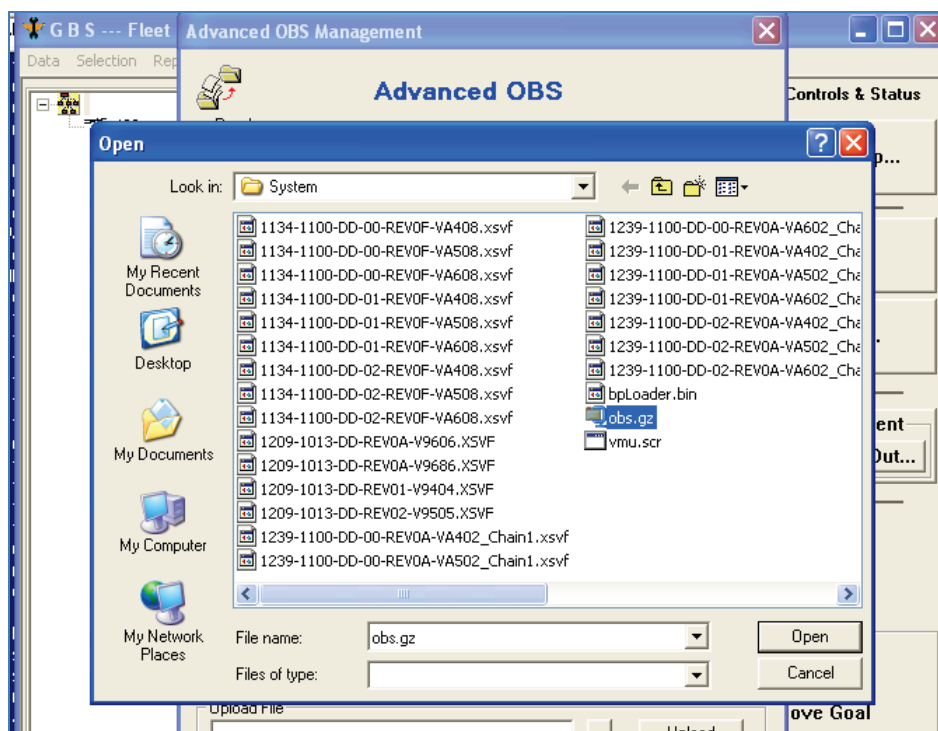
7) Click 'Advanced'.



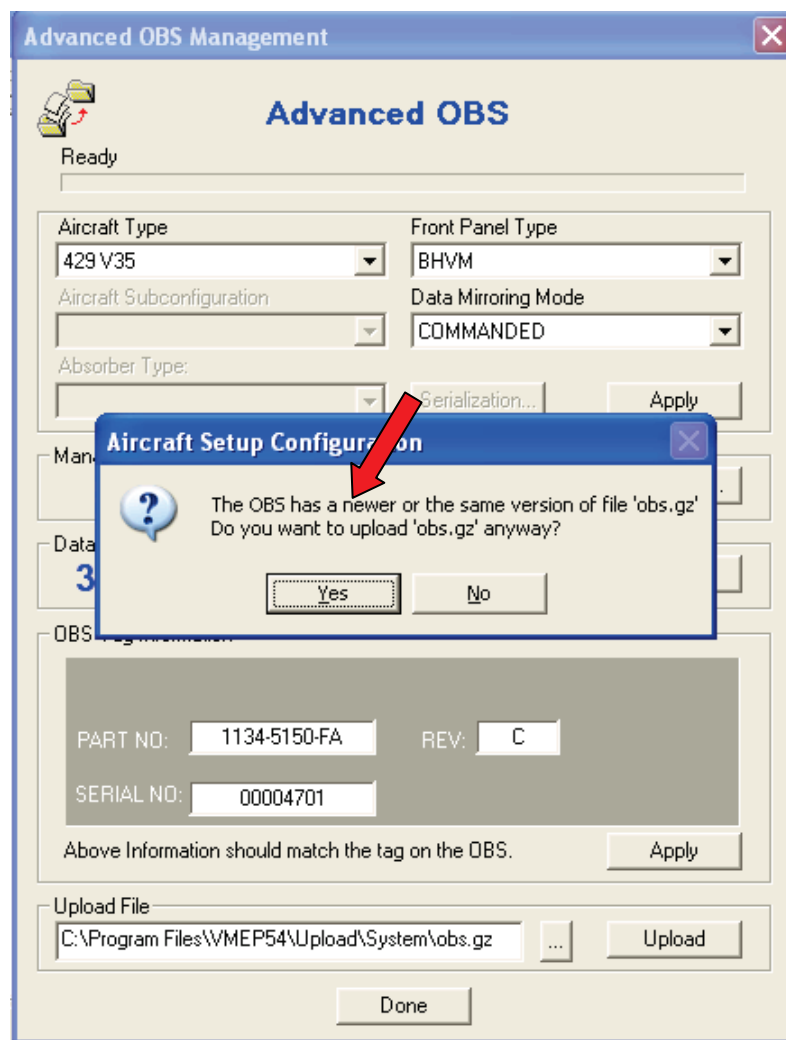
8) Select the '...' button to browse to the 'VMEP' folder.



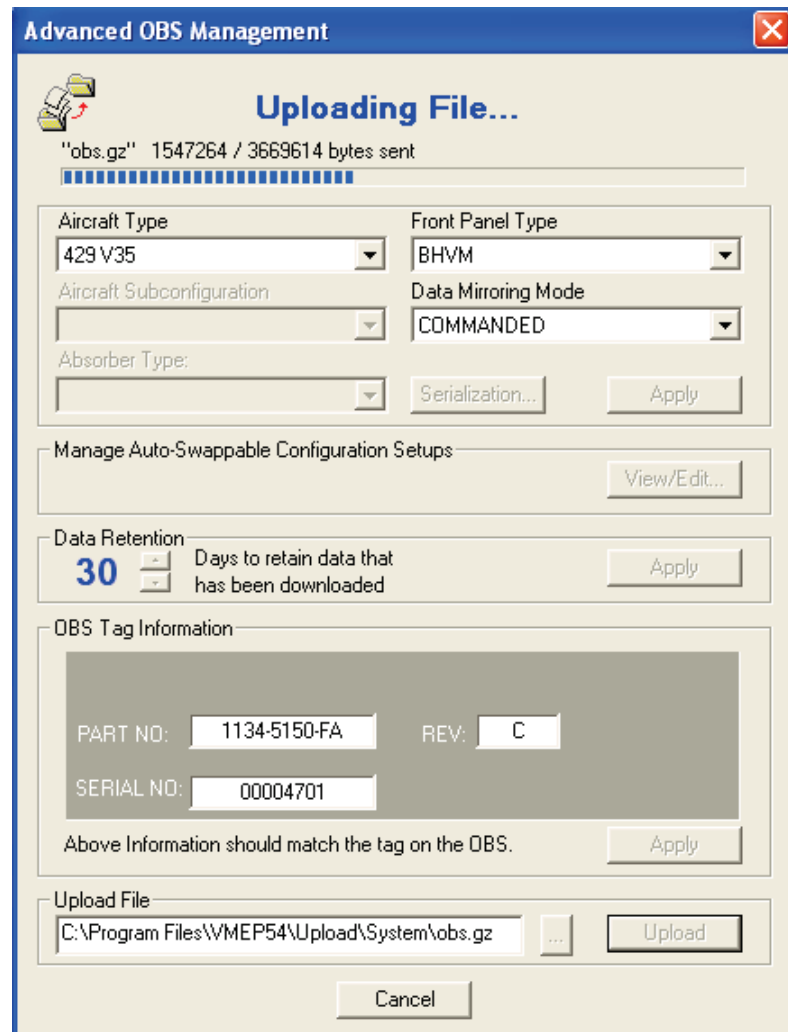
- 9) Select the appropriate 'OBS.gz' file from 'C:\Program Files\VMEP\Upload\System' (Refer to Bell Instruction) and click 'Upload'.



- 10) Message appears 'The OBS has a newer version.....' Click 'Yes' on the dialog box to proceed with the downgrade.

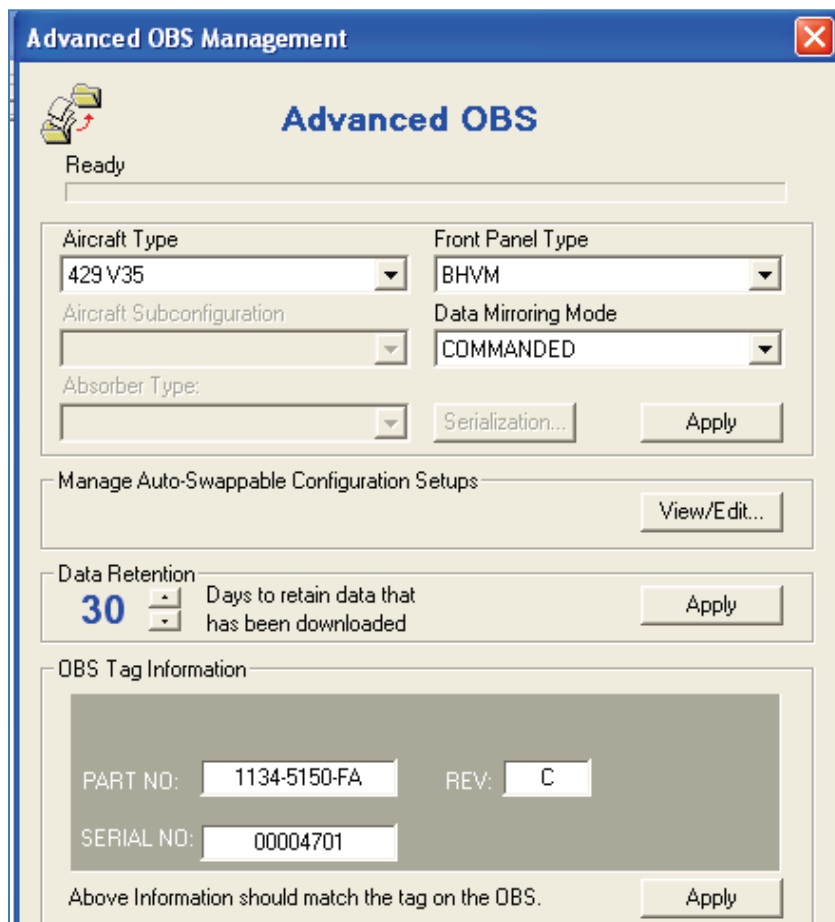


- 11) The file is uploaded as seen from the status 'Uploading File.'

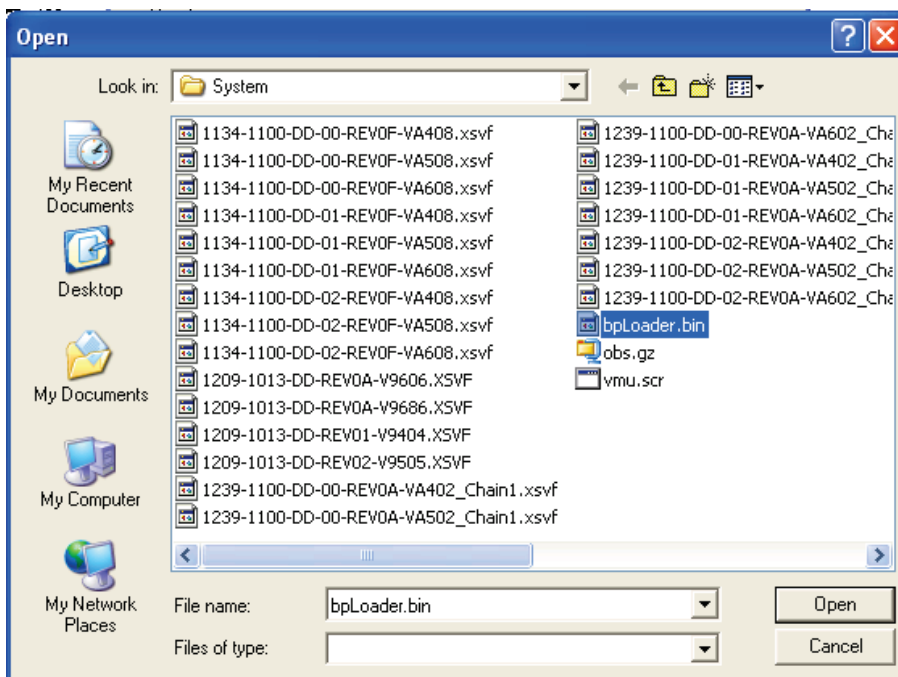


The screenshot shows the 'Advanced OBS Management' dialog box with the title 'Uploading File...'. It displays the upload progress for 'obs.gz' as 1547264 / 3669614 bytes sent, with a progress bar. Below this, there are configuration sections: 'Aircraft Type' (429 V35), 'Front Panel Type' (BHVM), 'Aircraft Subconfiguration', 'Data Mirroring Mode' (COMMANDED), and 'Absorber Type'. There are 'Serialization...' and 'Apply' buttons. The 'Manage Auto-Swappable Configuration Setups' section has a 'View/Edit...' button. The 'Data Retention' section shows '30' days to retain data, with an 'Apply' button. The 'OBS Tag Information' section contains fields for 'PART NO:' (1134-5150-FA), 'REV:' (C), and 'SERIAL NO:' (00004701), with an 'Apply' button and a note: 'Above Information should match the tag on the OBS.' The 'Upload File' section shows the file path 'C:\Program Files\VMPE54\Upload\System\obs.gz' and an 'Upload' button. A 'Cancel' button is at the bottom.

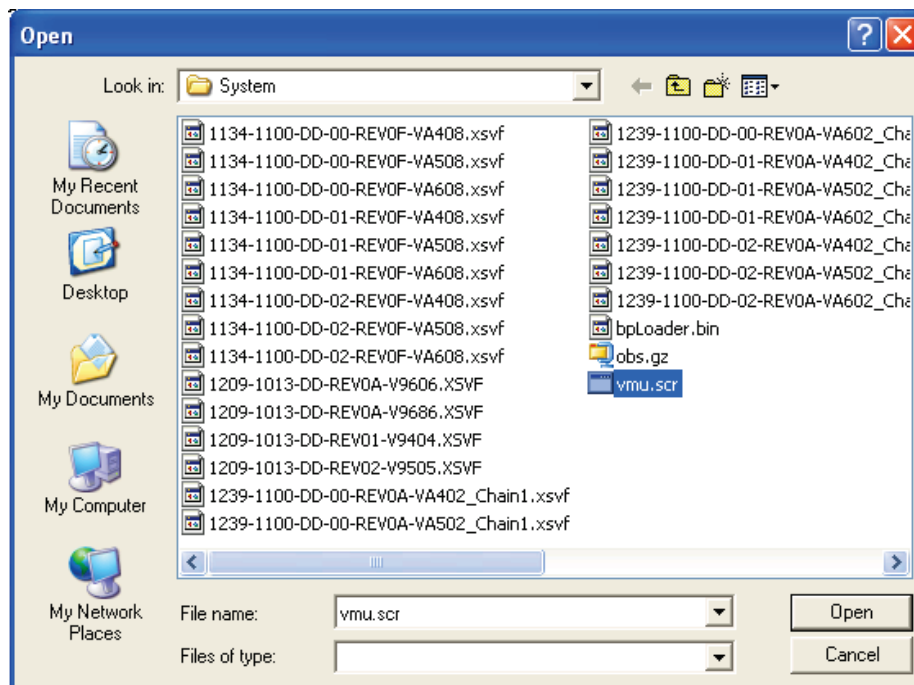
- 12) Wait for the upload. Once done, it shows 'Ready'.



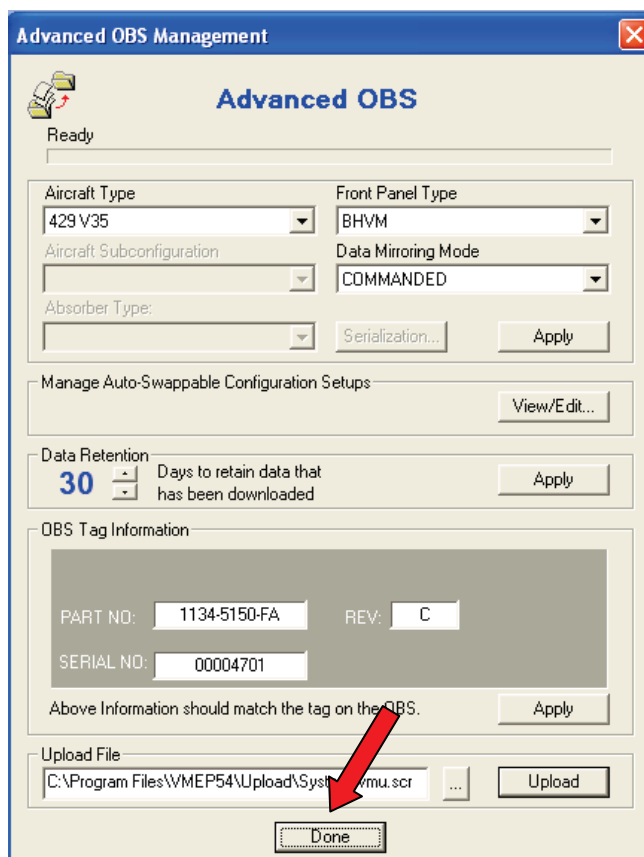
- 13) Similarly, select 'bploader.bin' from the same path as in step 9 and click 'Upload'.



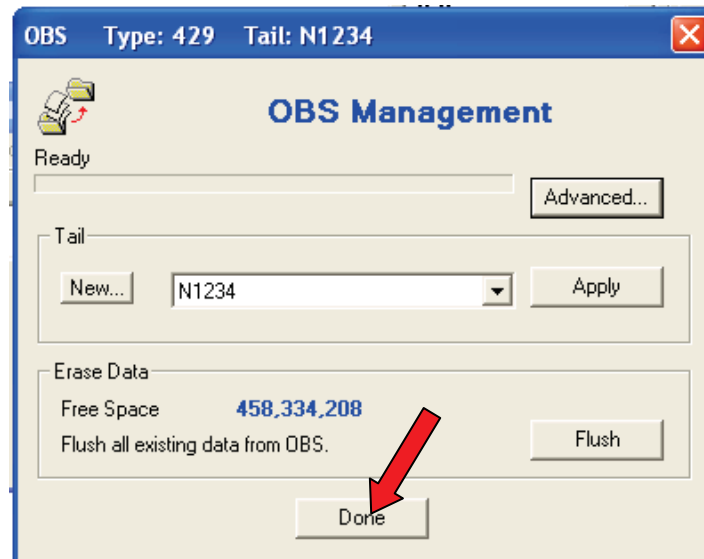
- 14) When ready, select 'vmu.scr' and click upload.



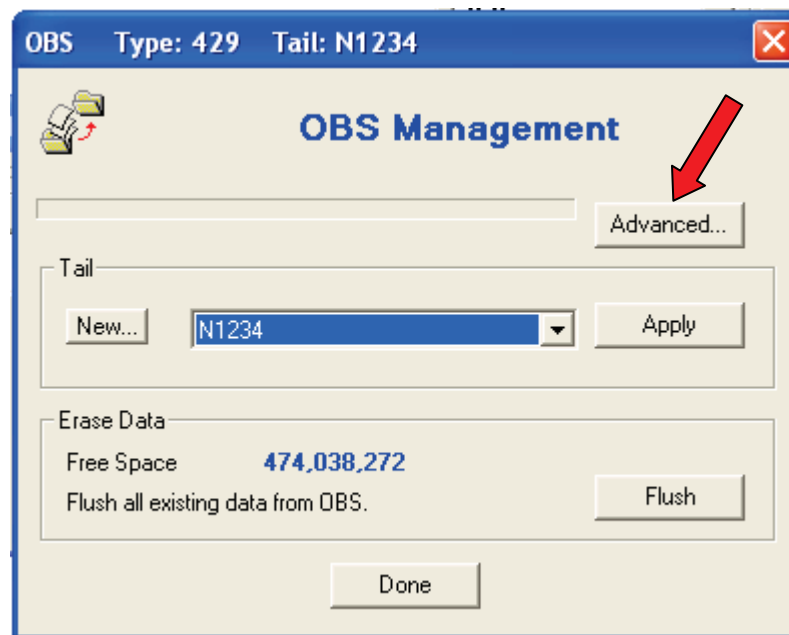
- 15) Click 'Done'.



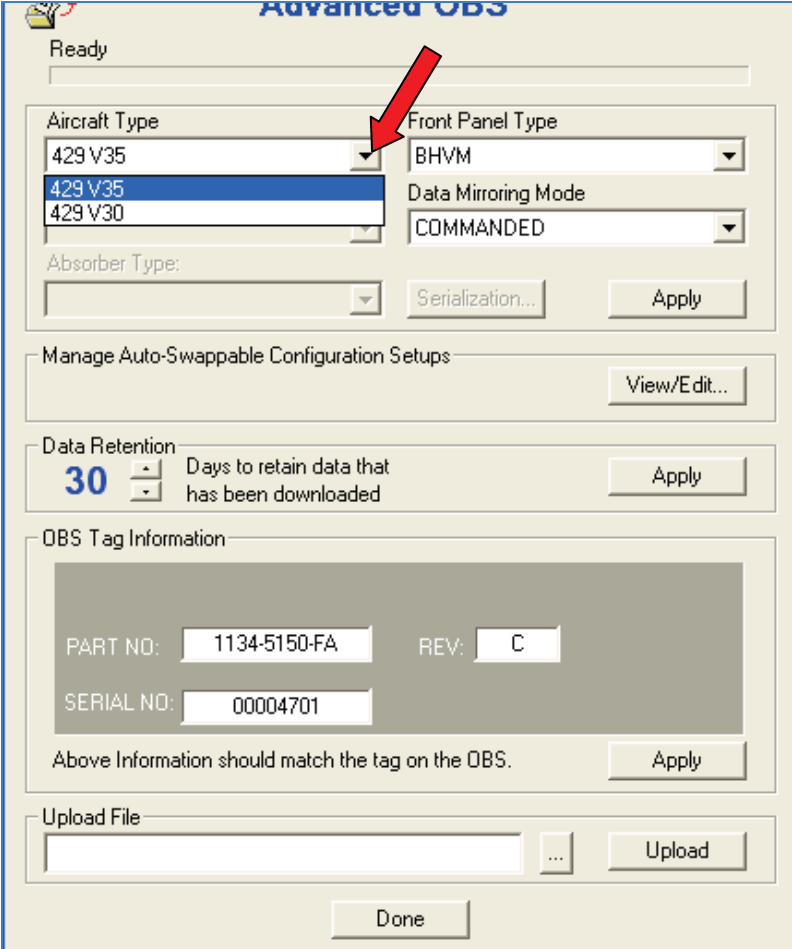
- 16) Click 'Done'.



- 17) The OBS reboots automatically.
- 18) After reboot completion, connect to OBS again and select 'Advanced' to set the aircraft configuration file.



- 19) Select the 5.4 compatible CSIF from 'Aircraft type' drop down menu, as per the Bell Instruction. Example uses '429 V30'.



Advanced OBS

Ready

Aircraft Type: 429 V35 (selected), 429 V30 (highlighted), 429 V30

Front Panel Type: BHVM

Data Mirroring Mode: COMMANDED

Absorber Type:

Serialization...

Apply

Manage Auto-Swappable Configuration Setups: View/Edit...

Data Retention: 30 Days to retain data that has been downloaded. Apply

OBS Tag Information

PART NO: 1134-5150-FA REV: C

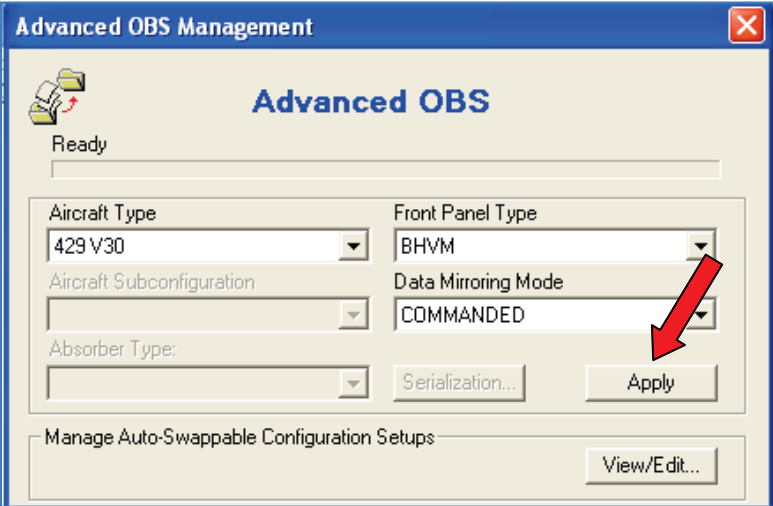
SERIAL NO: 00004701

Above Information should match the tag on the OBS. Apply

Upload File: Upload

Done

- 20) Click 'Apply'.



Advanced OBS Management

Advanced OBS

Ready

Aircraft Type: 429 V30

Front Panel Type: BHVM

Aircraft Subconfiguration:

Data Mirroring Mode: COMMANDED

Absorber Type:

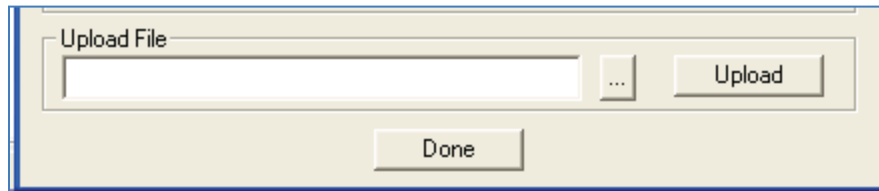
Serialization...

Apply

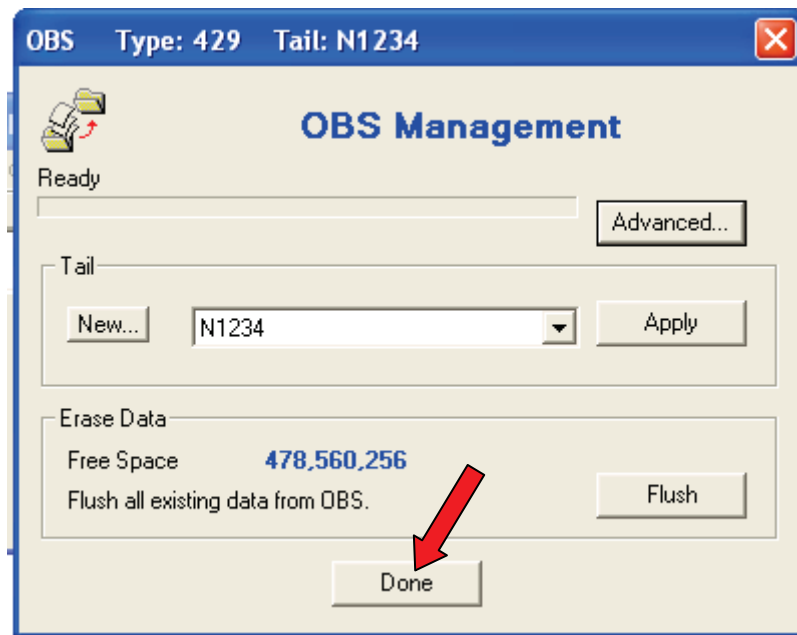
Manage Auto-Swappable Configuration Setups: View/Edit...

Upload

21) Click 'Done'.



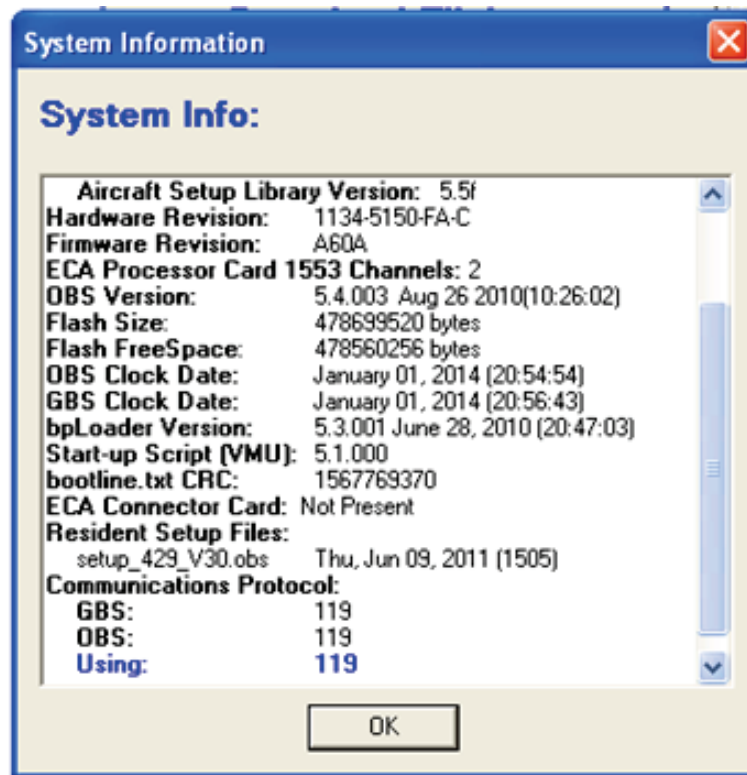
22) Click 'Done'.



23) The OBS reboots automatically.

- 24) Refer to Section 3.2.6 to check for the load completion and correct versions, as per the Bell Instruction.

The screenshot below is an example of a successful downgrade.



- 25) Click "OK" and then click on "Cancel" on the Download screen.