



X30 Apollo | System



INGENUITY. SIMPLICITY. DURABILITY.

 **TOPCON**
Precision Agriculture



X30 Apollo System
Upgrading Monitor
Software & ECU
Firmware V-3.18.517





Updating X30 Software

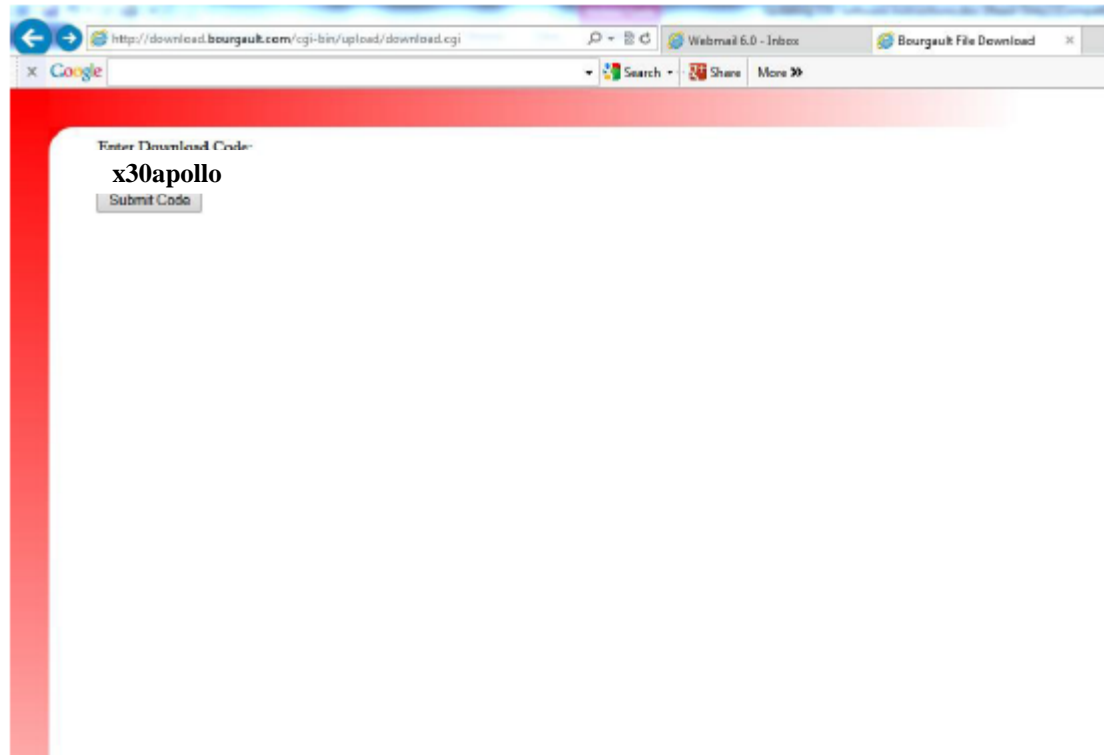
Bourgault Industries has supplied your dealership with a thumb drive loaded with the required files. Please use this thumb drive and skip to step 4.

The files may also be downloaded, listed below are the instructions how to download.

Please go to our download site at **download.bourgault.com**.

Enter code | **x30apollo** *code is case sensitive and must be entered exactly.*

Press the submit code button





1. Download zip file attachment to a folder on your computer. File name will be [3.18.517.zip](#)
2. Extract files from the zip and put onto an empty thumb drive.
3. These will be the 15 files on the thumb drive make sure these files are extracted like below do not leave in a file folder. There may be additional backup folders as one will be created each time an Upgrade is performed. These backup folders will not affect the upgrade.

Name	Type	Compressed size	Password ...	Size	Ratio	Date modified
bzImage-initramfs-x30	File	6,132 KB	No	6,146 KB	1%	9/11/2015 6:49
install_mbr.cmd	Windows Command Script	1 KB	No	1 KB	25%	9/11/2015 6:49
install_syslinux.txt	Text Document	1 KB	No	1 KB	34%	9/11/2015 6:49
mongoose_io_aux_fw.hex	HEX File	24 KB	No	74 KB	69%	9/11/2015 6:50
mongoose_io_fw.hex	HEX File	67 KB	No	204 KB	68%	9/11/2015 6:50
mongoose_slave_fw.hex	HEX File	97 KB	No	298 KB	68%	9/11/2015 6:50
mongoose-ecu_aux_upgrade.tar.gz	GZ File	185 KB	No	185 KB	1%	9/11/2015 6:49
mongoose-ecu_upgrade.ipk	IPK File	1,901 KB	No	1,912 KB	1%	9/11/2015 6:50
README.html	HTML Document	1 KB	No	2 KB	62%	9/11/2015 6:50
rootfs.ext2	EXT2 File	36,199 KB	No	49,152 KB	27%	9/11/2015 6:50
syslinux.cfg	CFG File	1 KB	No	1 KB	53%	9/11/2015 6:49
syslinux.exe	Application	19 KB	No	28 KB	36%	9/11/2015 6:49
vesamenu.c32	C32 File	76 KB	No	143 KB	48%	9/11/2015 6:49
x30-image-x30.tar.gz	GZ File	154,473 KB	No	155,388 KB	1%	9/11/2015 6:49
x30-rescue.sh	SH File	2 KB	No	6 KB	69%	9/11/2015 6:49



- Put thumb drive into X30 to provision it for upgrade. Go to settings page (wrench symbol bottom left corner of X30) Select "User", "Access Level" touch "Provision USB for Upgrade" when confirm tab pops up select Yes.



- Remove thumb drive.
- Turn X30 off. Install thumb drive.
- Start up X30.
- Wait until you get a notification at top of screen to remove thumb drive. Then remove the thumb drive.



9. System will reboot and ask you if you want to do a touchscreen calibration but not necessary. **Select No.**
10. System will ask if you want to retain user settings. **Always select yes.**



11. On main screen, click the Bourgault button in the top left hand corner. Ensure that the software version shown is correct. **(3.18.517bg)**



12. Upgrade complete.

13. Check your profile and timings to make sure they are set properly. **If using sectional control, section timing must be set.**

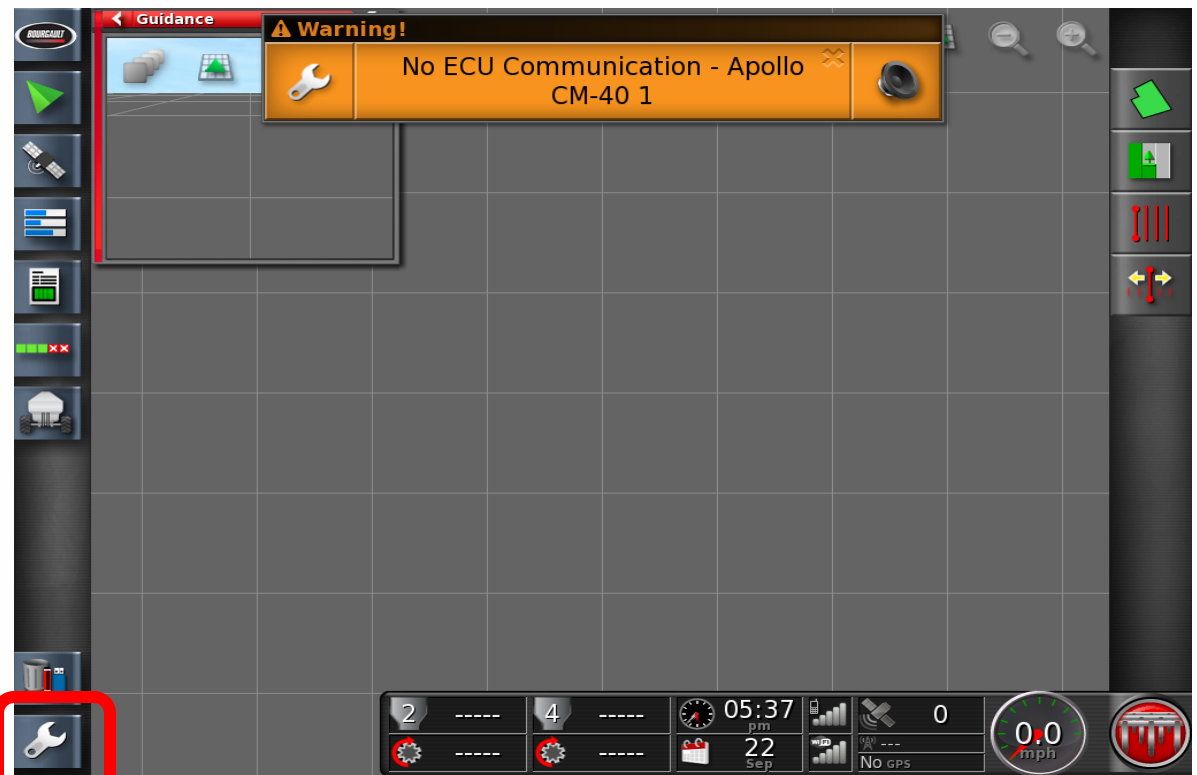
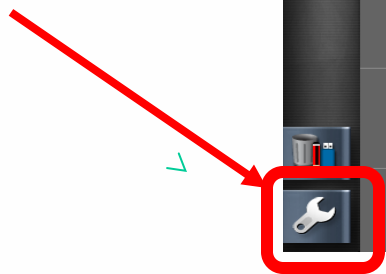
14. When updating Software in monitor the firmware in the ECU(s) must also be updated . Follow the procedure in the following pages to upgrade firmware.

15. The procedure will be the same software and firmware versions will vary from pictures make sure you know the versions that you are installing. If you are not sure contact your service rep.



Before upgrading firmware ensure that the ECU's are detected. If the ECU's are not detected refer to Detecting Apollo ECU's

Go to settings page by touching wrench in lower left of X30 screen





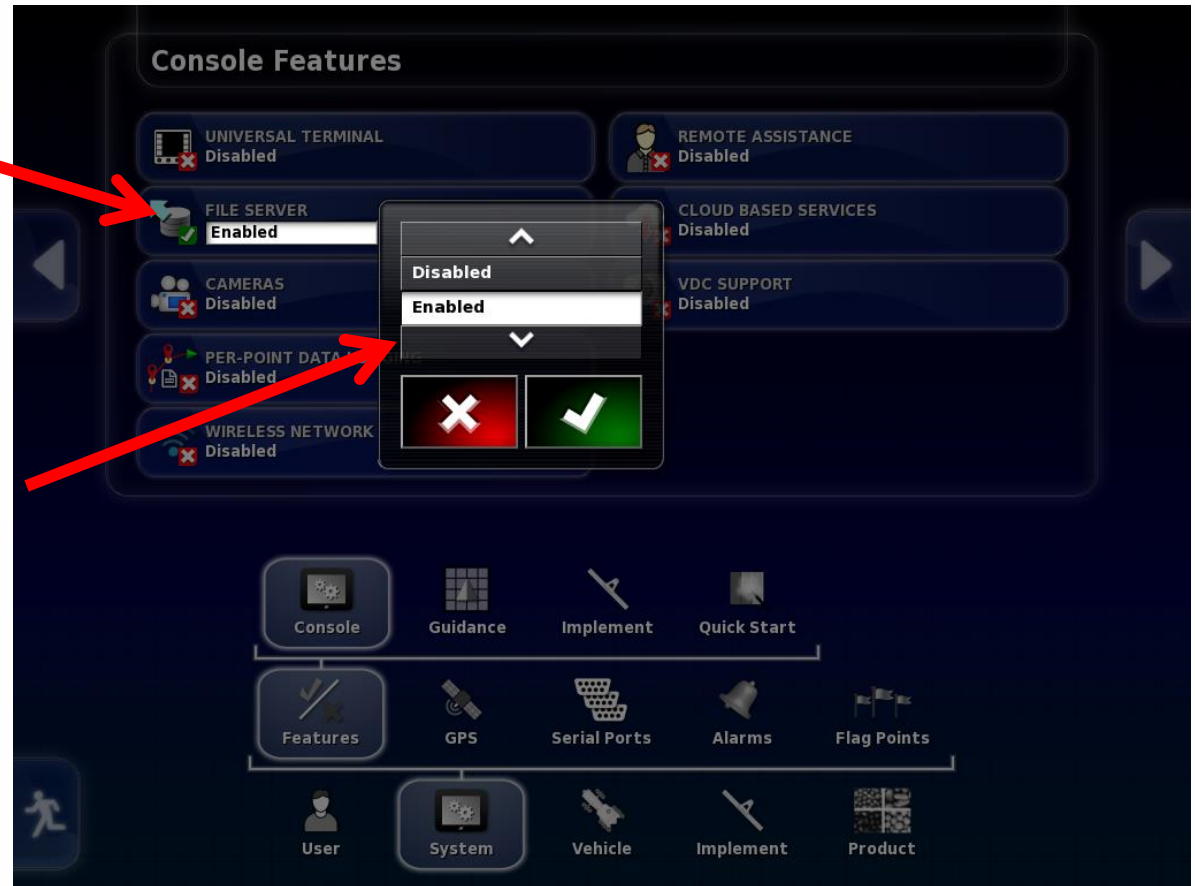
The first step is to Ensure that the file Server is enabled. Go to System/ Features/ Console





Ensure File Server Is Enabled

If not select Enabled and then press check mark





Once the file server is enabled the next step is to check whether the ECU's have been properly detected

Upgrade ECU (Apollo) - 71300 5TANK-MTRG(SCN) LIQ(SCN)_3320-86 10SPCG(GRAN SCN) HF 2015+

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

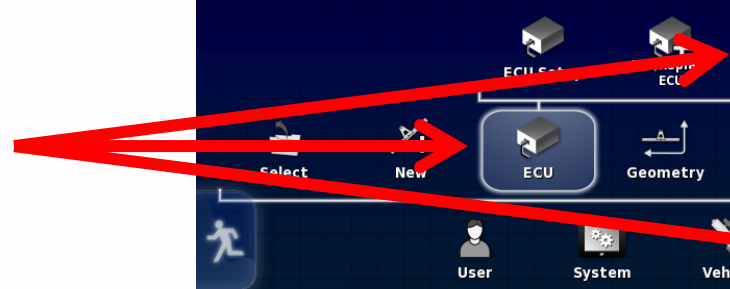
ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40 1	Apollo CM-40	a00880081cf67edb	2.13-r1,1.0.4
2	Apollo CM-40 1	Apollo CM-40	a00880081cf47ee0	1.0.4
3	Apollo EM-24 1	Apollo EM-24	a00880101ce87efa	0.1.6
4	Apollo EM-24 2	Apollo EM-24	a00880101ce87ee2	0.1.6

Select ECU Upgrade ECU

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

User System Vehicle Implement Product

Select Implements/
ECU/
Upgrade ECU





If the ECU's have been detected an Id will be present under ECU ISO Name. It will also display the firmware version once ECU information is uploaded.

Upgrade ECU (Apollo) - 71300 5TANK-MTRG(SCN) LIQ(SCN)_3320-86 10SPCG(GRAN SCN) HF 2015+

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40 1	Apollo CM-40	a00880081cf67edb	2.13-r1,1.0.4
2	Apollo CM-40 1	Apollo CM-40	a00880081cf47ee0	1.0.4
3	Apollo EM-24 1	Apollo EM-24	a00880101ce87efa	0.1.6
4	Apollo EM-24 2	Apollo EM-24	a00880101ce87ee2	0.1.6

ECU Setup Add/Replace ECU Upgrade ECU

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

User System Vehicle Implement Product



In the right column under Firmware version, select green tab for ECU to be upgraded.

This will vary based on options selected with tank. There will be from one to four ECU's that may need to be upgraded

Upgrade ECU (Apollo) - 7700 5TANK-MTRG(SCN)_3320-60 10SPCG(GRAN SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081ce7ec5	2.11-r6
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	0.0.18
3	Apollo EM-24 1	Apollo EM-24	a00880101cfd7ef9	0.0.15

Navigation icons: Select, New, ECU, Geometry, Section Control, Operator Inputs, Seeder, Speed, User, System, Vehicle, Implement, Product



After the green tab has been selected the upgrade option will come up. For Apollo CM-40 (Master) select Upgrade both Then press check mark



Upgrade ECU (Apollo) - 7950 5TANK-MTRG(SCN)_3320-60 10SPCG

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40		Upgrade both
2	Apollo CM-40 1	Apollo CM-40		N/A
3	Apollo EM-24 1	Apollo EM-24		N/A

- Show version
- Upgrade Main CPU
- Upgrade Aux CPU
- Upgrade both

Buttons: [X] [Checkmark]

Navigation: ECU Setup, Add/Replace ECU, Upgrade ECU

Bottom Menu: Select, New, ECU, Geometry, Section Control, Operator Inputs, Seeder, Speed, User, System, Vehicle, Implement, Product



After the check mark has been pressed the green tab that had been selected will become red and display the upgrade type you selected. Press the Upgrade ECU Firmware tab at the top of the page.

You will get warning that System will need to restart. Press Check mark.



Upgrade ECU (Apollo) - 7700 5TANK-MTRG(SCN)_3320-40 10SPCG(GRAN SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7ec	Upgrade both
2	Apollo CM-40 1	Apollo CM-40	Please replace ECU	N/A
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A

Operation Requires Restart
This change requires the system to be restarted. Click OK to continue, or Cancel to undo the change.

ECU Setup Add/Replace ECU Upgrade ECU

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

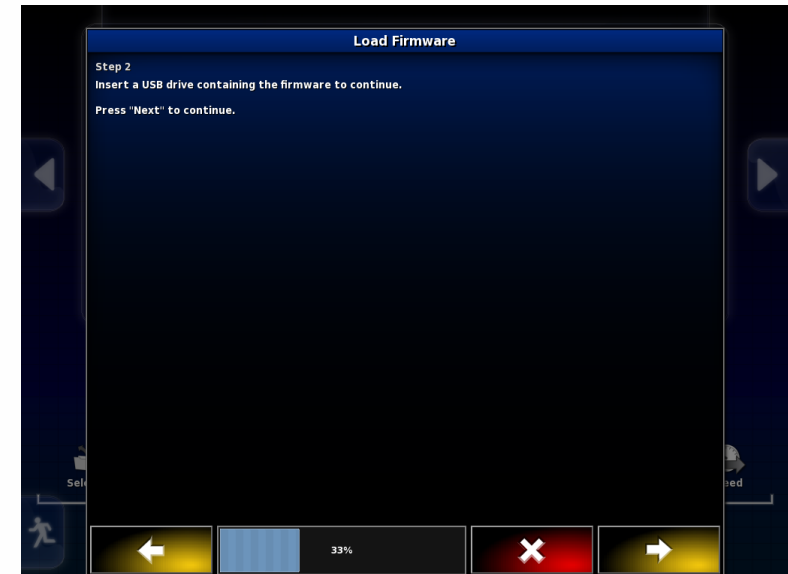
User System Vehicle Implement Product



You will be guided through the firmware upgrade with the help of a wizard.
Read instructions and press right arrow when it turns yellow.
Step 1 starts the upgrade procedure
You will be able to track progress here.



Step 2
To start the upgrade insert the provisioned thumb drive into the left side of the X30 when right arrow turns yellow it is ready right arrow can be pressed.





Step 3

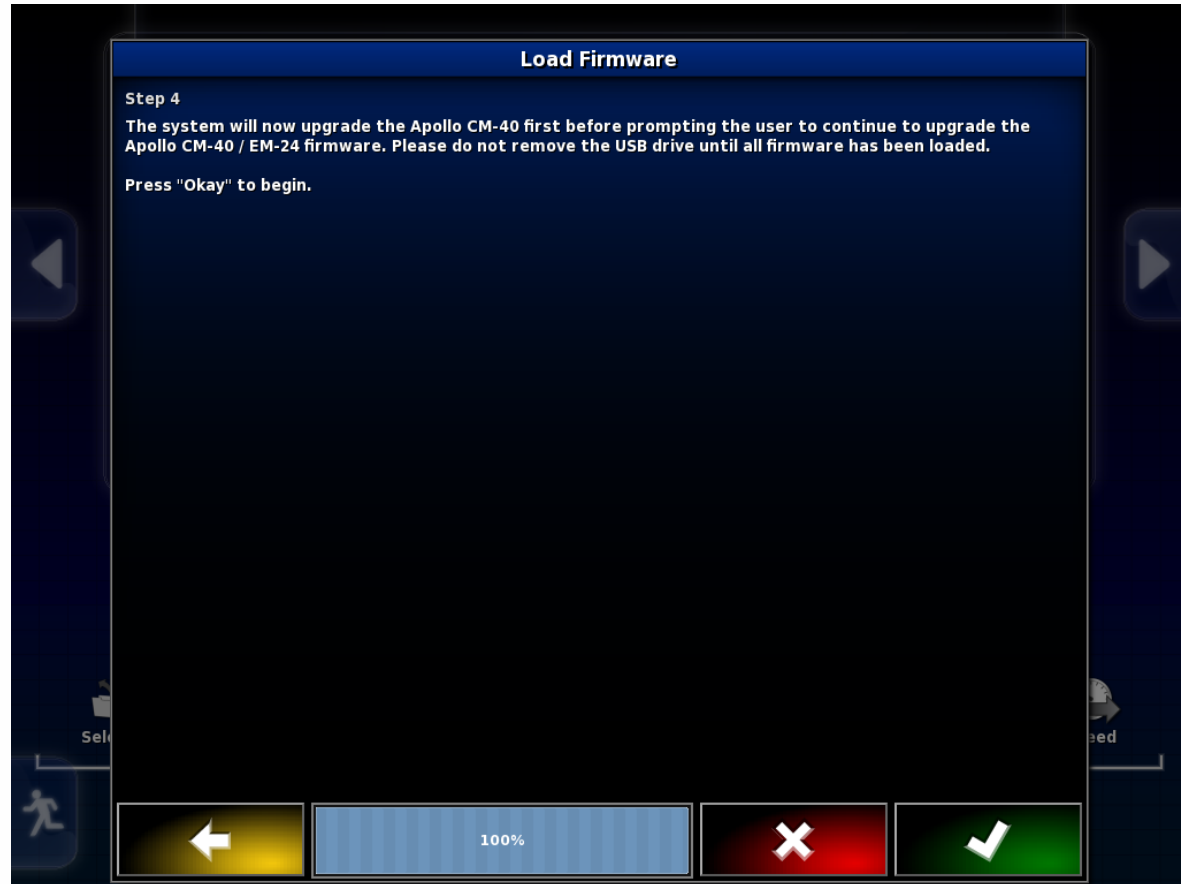
A list of files on the thumb drive should show up listed on screen

press the right arrow button to continue.





Step 4
The upgrade will now
begin
Press Check mark
To start Upgrade





Firmware transfer will begin. (This may take up to twenty minutes to complete.). This is upgrading the main part of the ecu





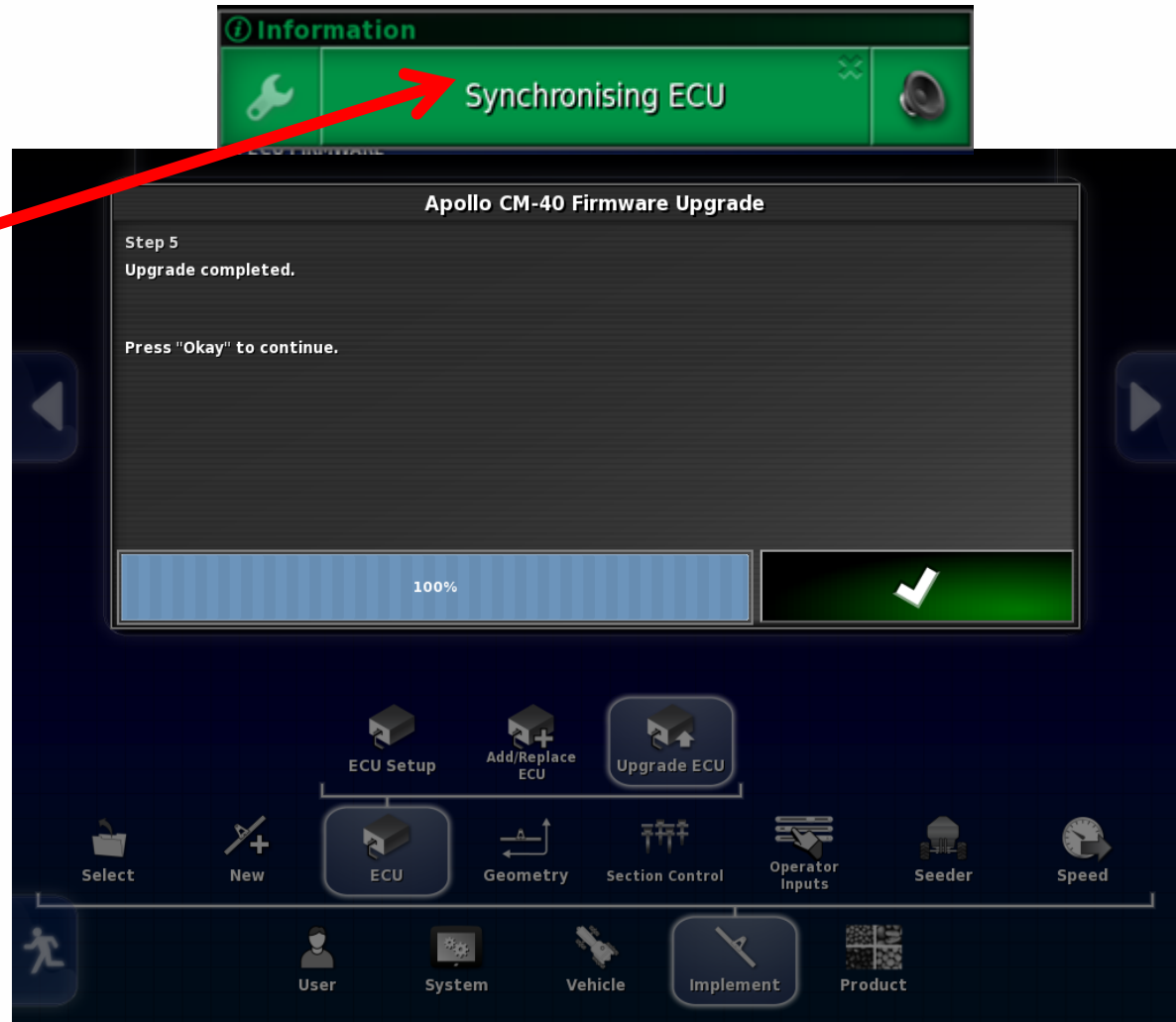
Once the Upgrade is complete you will see this screen.

Wait until the Green Synchronizing bar (this will appear at the top center of the screen) goes away before pressing check mark.



The monitor will now shut down and restart.

Note: if you selected upgraded both the auxiliary firmware will now update. It will be an hour glass on the screen but only takes a short time and then it will shut down.





If the firmware version does not upload after the monitor restarts, (this can take a few minutes). It will be necessary to power the ECU down by shutting tractor off or unplugging the ISO plug at the back of the tractor. (See next page)

Upgrade ECU (Apollo) - 7700 5TANK-MTRG(SCN)_3320-40 10SPCG(GRAN SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	N/A
2	Apollo CM-40 1	Apollo CM-40	Please replace ECU	N/A
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A

ECU Setup Add/Replace ECU Upgrade ECU

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

User System Vehicle Implement Product



If monitor fails to upload information from ECU unplug This ISO plug at the back of the tractor to cut power to the ECU.





Monitor will show that it is Synchronising and Configuring ECU once this is complete both the Main and Aux. Firmware should be displayed and match what was uploaded. If one or both are not correct this process must be repeated for the one(s) not matching the desired firmware.

Main Aux

Information

Upgrade I [Synchronising ECU] (N SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,N/A
2	Apollo CM-40 1	Apollo CM-40	Please replace ECU	N/A
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A

ECU Setup Add/Replace ECU Upgrade ECU

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

User System Vehicle Implement Product



Main Aux

If both Main and Aux. firmware are correct the upgrade for the Apollo CM-40 (Master) is complete.

If you only have one ECU on the tank, (four tank metering or less) Upgrade is complete.

If your tank has 5 tank metering, sectional control, or blockage follow procedure following for ECU's present.

Upgrade ECU (Apollo) - 7700 5TANK-MTRG(SCN)_3320-40 10SPCG(GRAN SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18
2	Apollo CM-40 1	Apollo CM-40	Please replace ECU	N/A
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A

Navigation menu: Select, New, ECU, Geometry, Section Control, Operator Inputs, Seeder, Speed, User, System, Vehicle, Implement, Product



If tank has more than one CM-40 follow this upgrade procedure

Go to Implement/
ECU/
Upgrade ECU
Press tab for CM-40 1
(slave)
select upgrade, press
Check mark.

Upgrade ECU (Apollo) - 7700 5TANK-MTRG(SCN)_3320-60 10SPCG(GRAN SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cac7aca	N/A
2	Apollo CM-40 1	Apollo CM-40	a00880081cac77ec5	Show version
3	Apollo EM-24 1	Apollo EM-24	1c1d78f9	N/A

Context menu for ECU 1:

- Show version
- Upgrade
- Cancel (X)
- Confirm (Checkmark)

Navigation menu:

- Select
- New
- ECU
- Geometry
- Section Control
- Operator Inputs
- Seeder
- Speed
- User
- System
- Vehicle
- Implement
- Product



Tab will turn red
Operation Requires Restart
warning will come up,
press the check mark

Upgrade ECU (Apollo) - 7700 5TANK-MTRG(SCN)_3320-60 10SPCG(GRAN SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	N/A
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	Upgrade
3	Apollo EM-24 1	Apollo EM-24	a00880101cfd7ef9	N/A

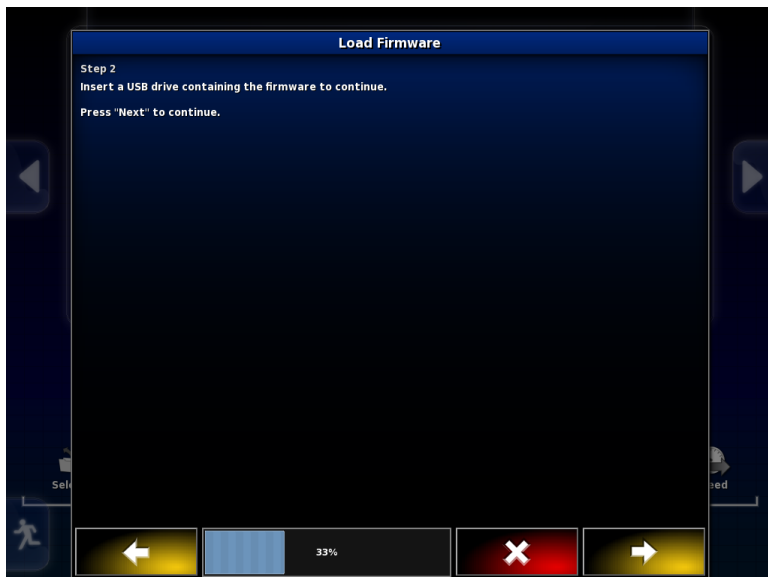
Operation Requires Restart
This change requires the system to be restarted. Click OK to continue, or Cancel to undo the change.

Buttons: [X] [Checkmark]

Navigation: ECU Setup, Add/Replace ECU, Upgrade ECU, Select, New, ECU, Geometry, Section Control, Operator Inputs, Seeder, Speed, User, System, Vehicle, Implement, Product



Follow steps of wizard like the procedure for the master.

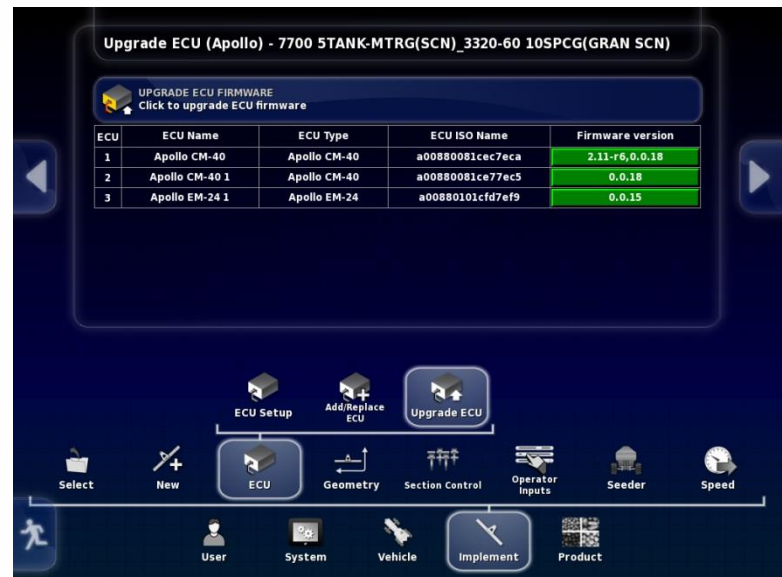




When firmware has completely loaded
Press the green check mark.

The monitor will restart.

The ECU should synchronize and the
firmware version is only visible for the Aux
firmware. You may have to shut
the tractor off or unplug the ISO Plug at the
back of the tractor, and plug it back in if it
does not upload the info from the ECU.

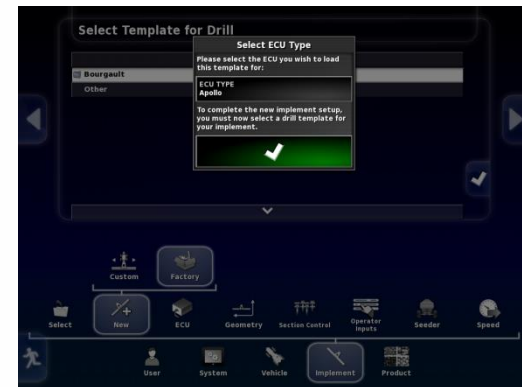
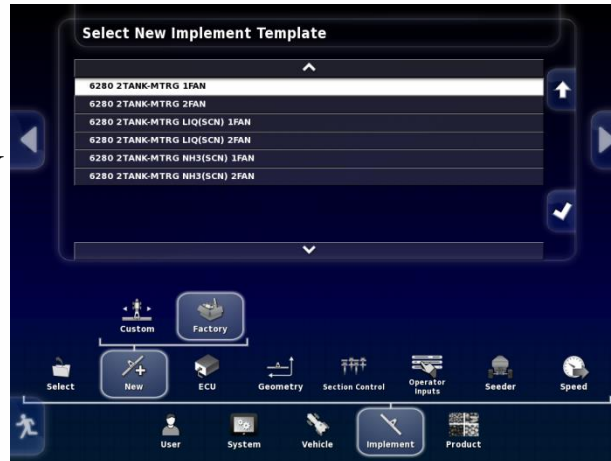
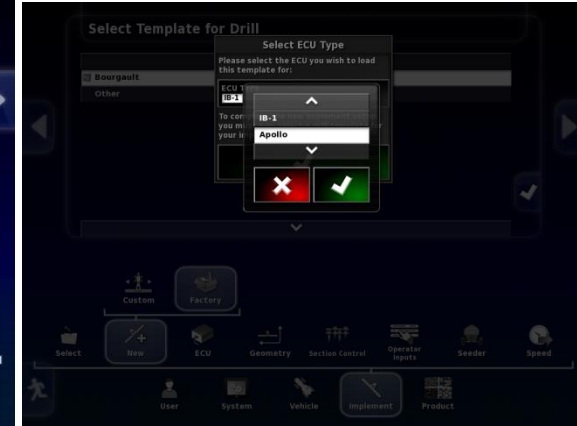
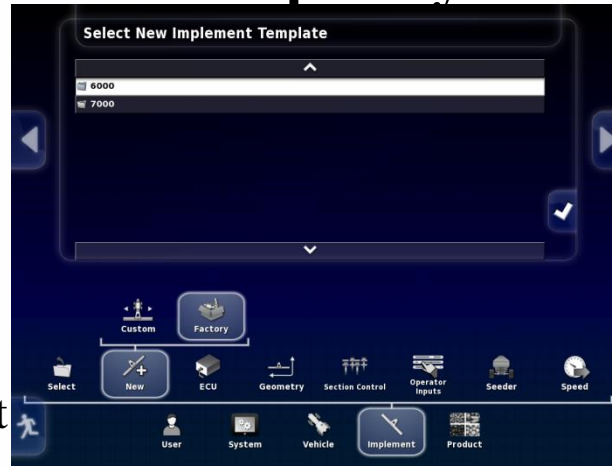




In order to Upgrade the Main Firmware you will have to create a “dummy” profile. Do this after you have Upgraded all ECU’s on machine. (Once Upgrade is complete you must then return to original profile)

Go to Implement/
New/
Factory
Select a new implement
with only one ECU select
The first item in each list

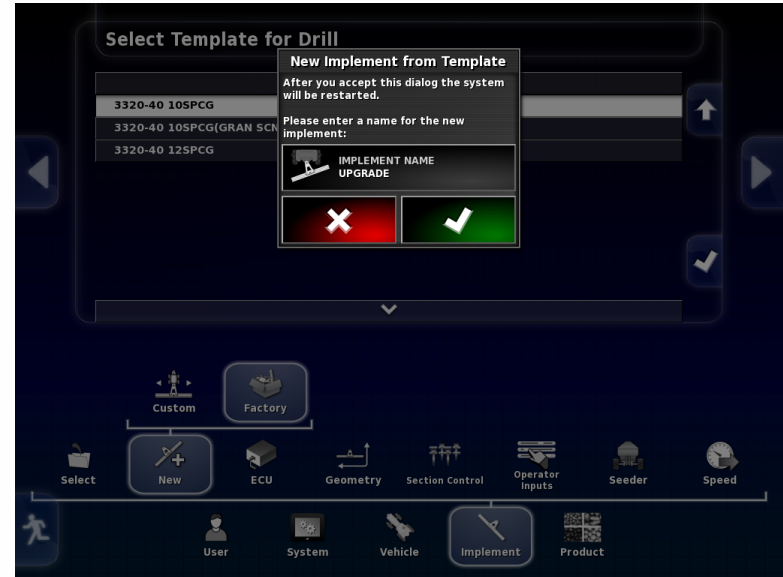
6000/
6280/
6280 2 TANK MTRG 1FAN
Select Apollo for ECU type





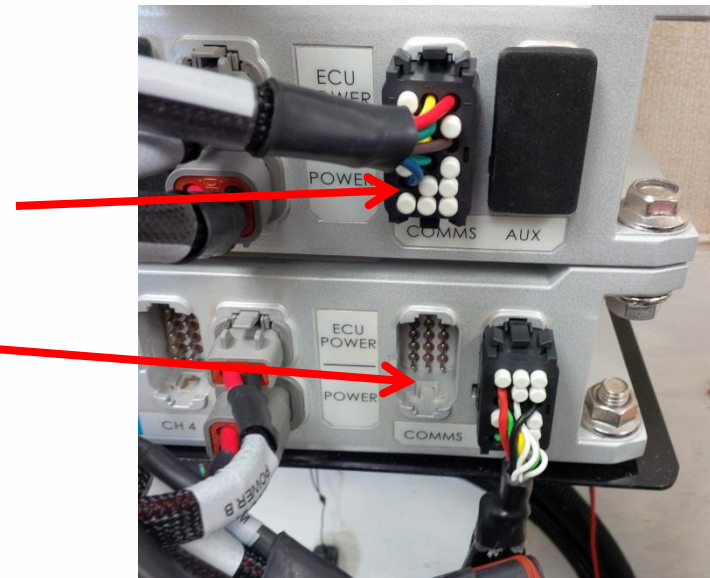
Name new profile UPGRADE

While the system is re-starting
unplug all of the COMMS
connectors from all ECU's except
the one you want to Upgrade,
CM-40 (Slave)(the slave only has 1 or 2
Channels used if you have a slave the
Master will have all 4 Channels used)



COMMS Port being Detected

COMMS Unplugged





Go to Implement/
ECU/
Add/Replace ECU

Add/Replace ECU (Apollo) - UPGRADE

ADD NEW ECUS
Click to add new ECUs

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version	Status
1	Apollo CM-40	Apollo CM-40	Please replace ECU	N/A	Aux CPU Enabled

Navigation Menu:

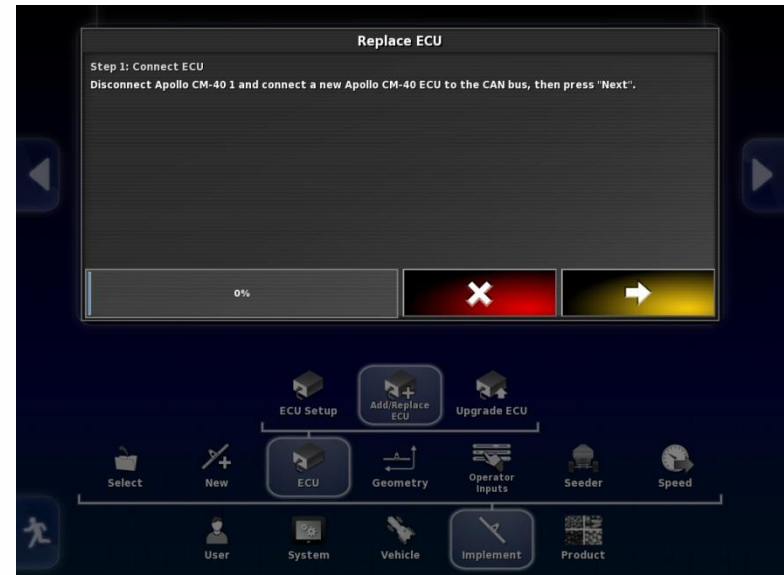
- ECU Setup
- Add/Replace ECU**
- Upgrade ECU
- Select
- New
- ECU**
- Geometry
- Operator Inputs
- Seeder
- Speed
- User
- System
- Vehicle
- Implement**
- Product



Select Replace CM-40
Press check mark.

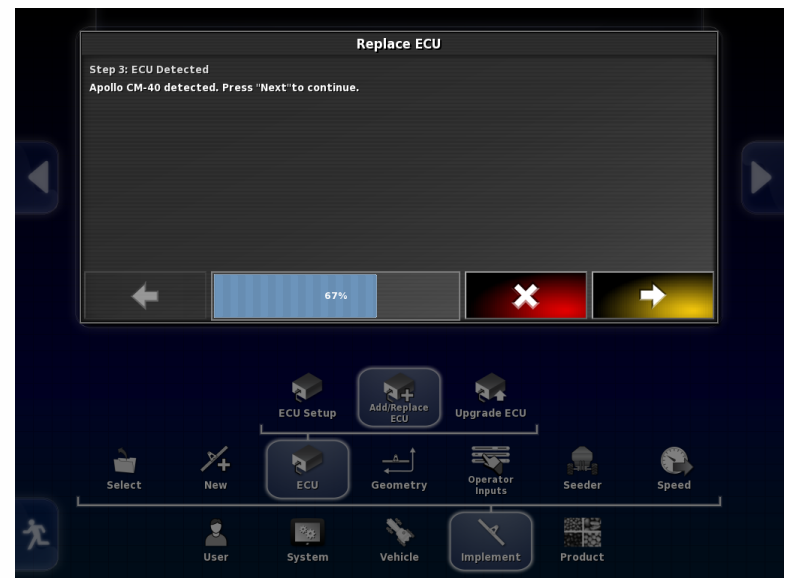
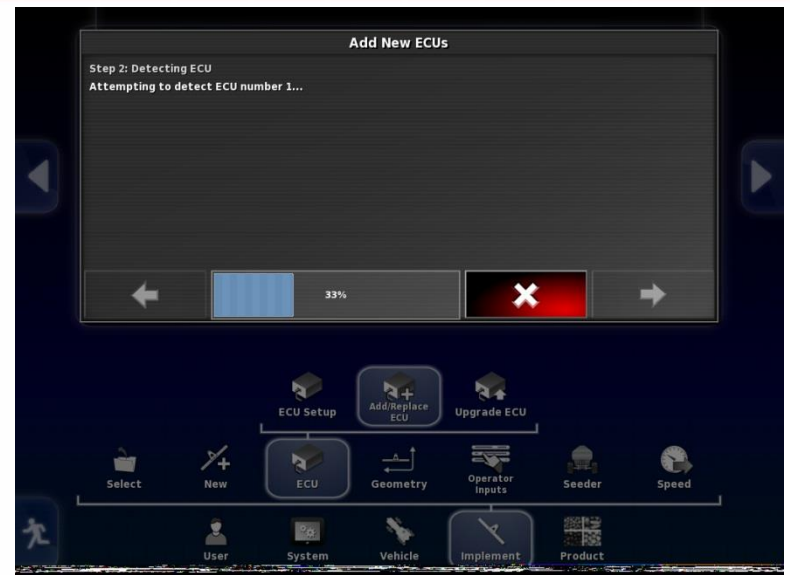


Follow directions of wizard
to replace ECU.



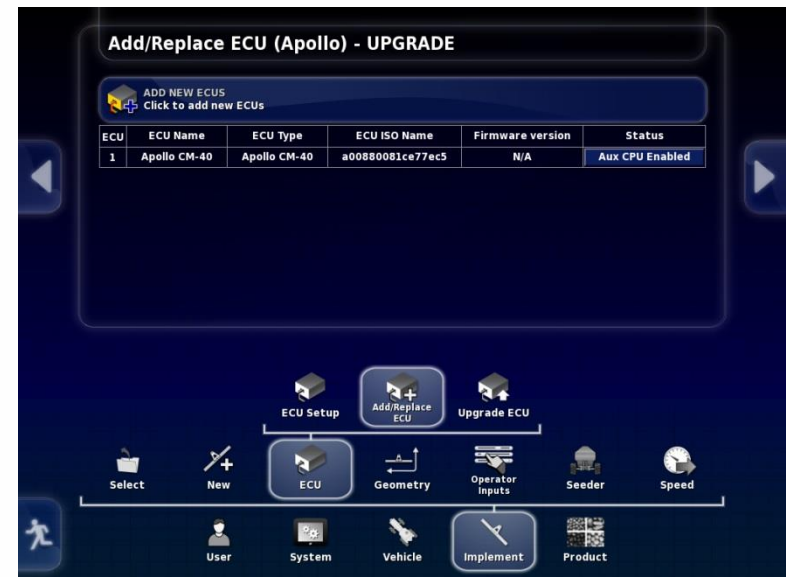


Press the Arrow when it turns yellow to advance to next step.



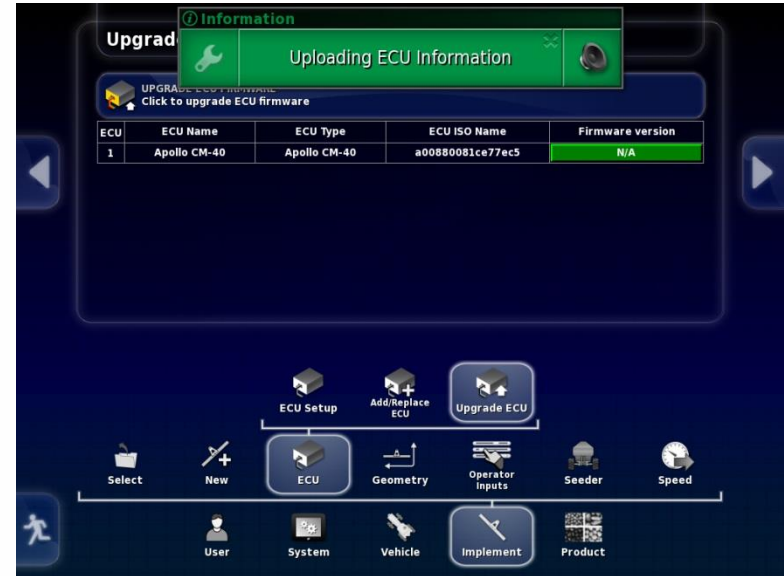


Once complete press green tab with Check mark.
Monitor will re-start.
If ECU is not detected unplug ISO plug at back of tractor

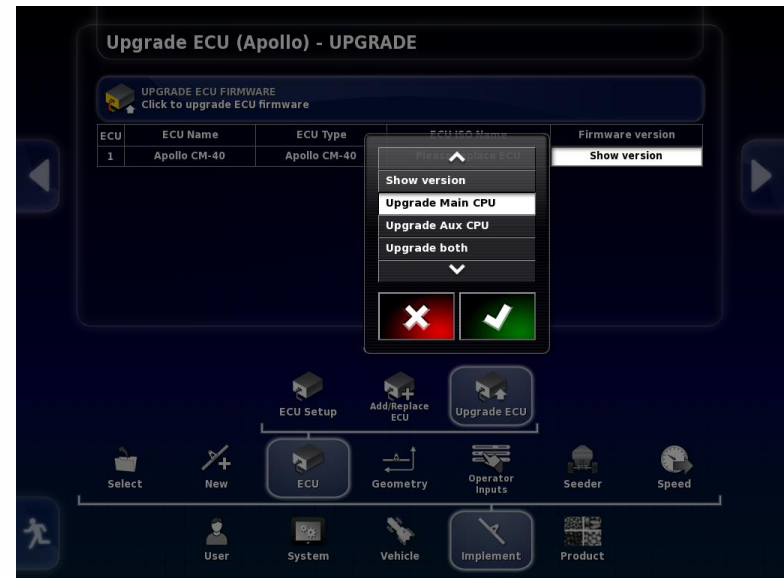




If ECU is selected should get a green tab indicating the ECU information is being uploaded.

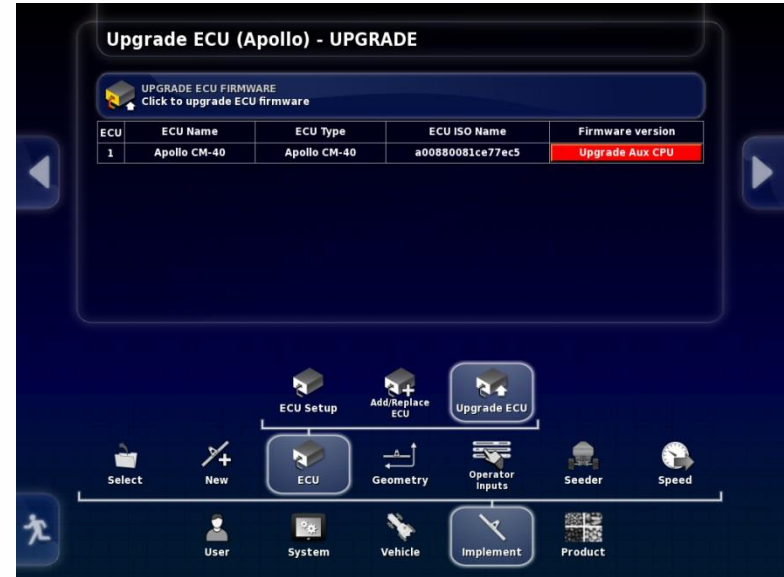


Once this is complete you can now Upgrade the firmware, select Update Main CPU, press check mark.

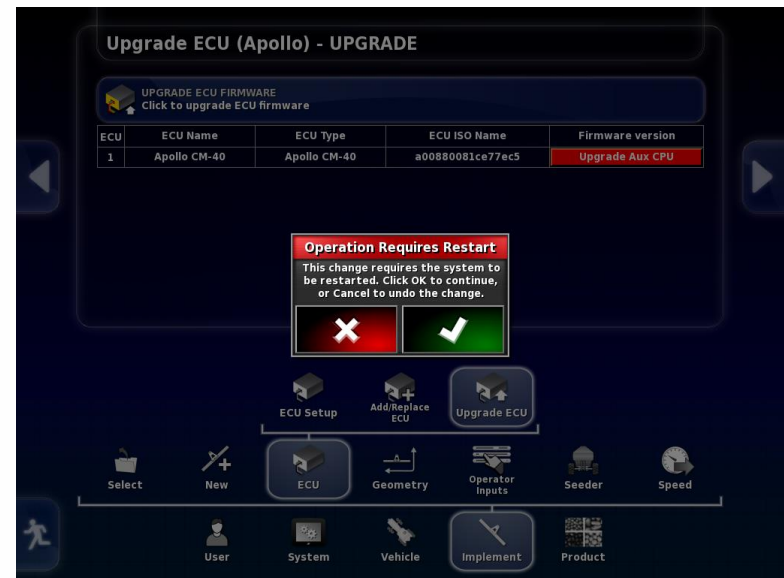




The right tab will turn red.
Press the Upgrade ECU Firmware tab
at the top to begin Upgrade.



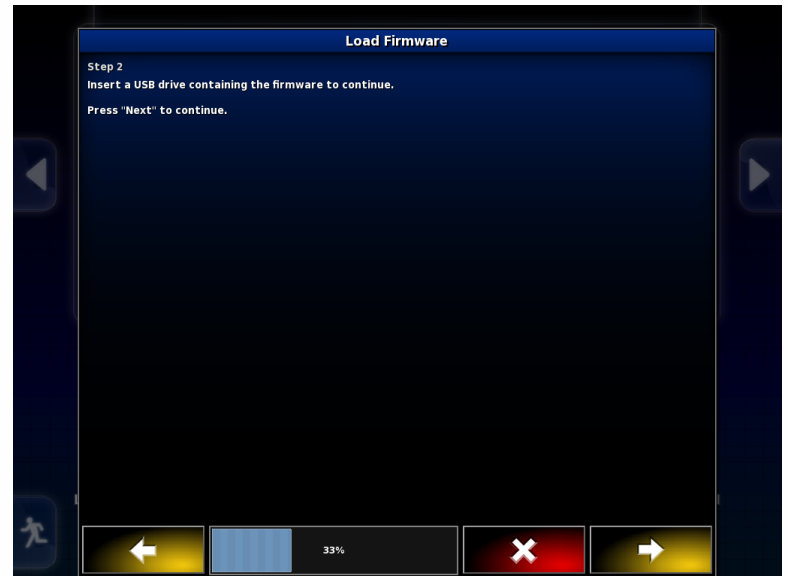
Will get warning that a restart must occur
if you proceed. Press the check mark.





Wizard will guide you through the Firmware update.

Insert Thumb drive with Upgrade into USB port on side of X30





Upgrade files should be visible.



Once complete press check mark to initiate restart.

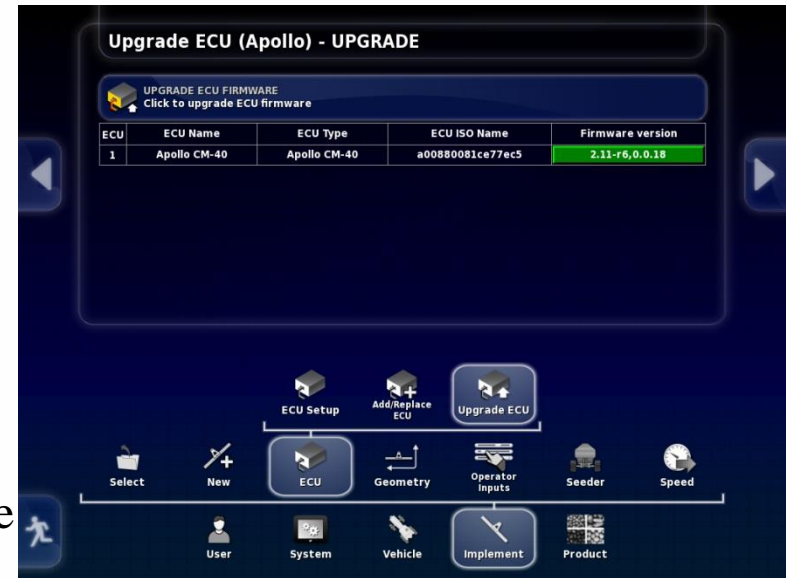




Once firmware is detected check both Main and Aux firmware to make sure they are the correct versions.

You will now have to switch profiles back to the original profile of your actual machine.

Re-plug all of the COMMS connectors into the proper ECU's.



You may have to shut down/unplug ISO connector at the back of the tractor to get ECU information to upload.

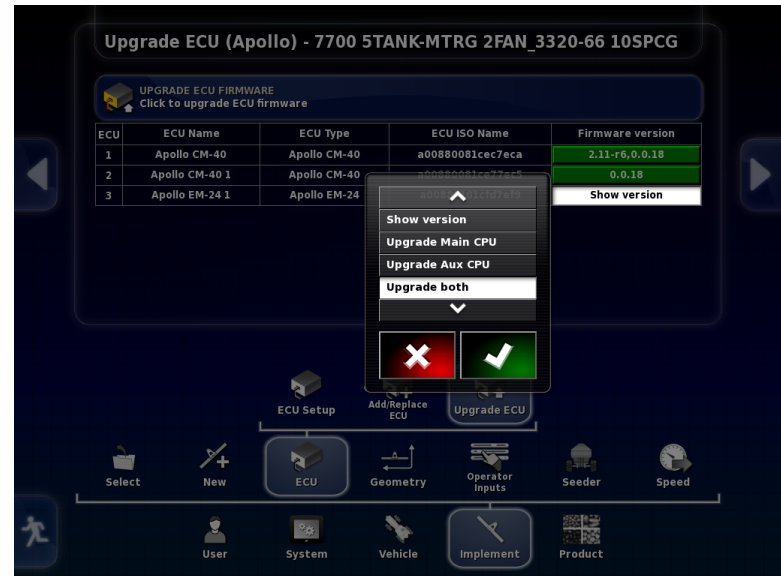
This completes the Upgrade for the Main portion of the CM-40 1 (slave Master ECU, 5 tank and 6 tank machines)



If tank has either sectional control or blockage or both firmware for Apollo EM-24 must also be completed. This must be done for each EM-24 on machine. There will be one EM-24 for sectional control and one EM-24 for blockage. (blockage EM-24 mounted on drill)

Go to Implement/
ECU/
Upgrade ECU

Press tab to right of EM-24 to be Upgraded, select Upgrade both, press the check mark





Tab selected will turn red.

Press the tab labelled Upgrade ECU Firmware to initiate Upgrade

Upgrade ECU (Apollo) - 7700 5TANK-MTRG 2FAN_3320-66 10SPCG

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	0.0.18
3	Apollo EM-24 1	Apollo EM-24	a00880101cfd7ef9	Upgrade both

Navigation Menu:

- ECU Setup
- Add/Replace ECU
- Upgrade ECU
- Select
- New
- ECU
- Geometry
- Operator Inputs
- Seeder
- Speed
- User
- System
- Vehicle
- Implement
- Product



Should get warning that a restart is required.
Press the check mark.

Upgrade ECU (Apollo) - 7700 5TANK-MTRG 2FAN_3320-66 10SPCG

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	0.0.18
3	Apollo EM-24 1	Apollo EM-24	a00880101cfd7ef9	Upgrade both

Operation Requires Restart

This change requires the system to be restarted. Click OK to continue, or Cancel to undo the change.

✖✔

ECU Setup Add/Replace ECU Upgrade ECU

Select New ECU Geometry Operator Inputs Seeder Speed

User System Vehicle Implement Product



Follow steps given by wizard.





Once firmware is loaded press the check mark at bottom right of X30 screen.





Monitor will restart
If monitor does not detect ECU power down by shutting tractor off or unplugging the ISO plug at the back of the Tractor.

Once synchronized the firmware should be visible, Check that it is the correct version.

If only one EM-24 you are finished.

If you have a second EM-24 repeat procedure for second EM-24. (Second EM-24 will be named Apollo EM-24 2)
Upgrade complete

Upgrade ECU (Apollo) - 7700 5TANK-MTRG(SCN)_3320-60 10SPCG(GRAN SCN)

UPGRADE ECU FIRMWARE
Click to upgrade ECU firmware

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	0.0.18
3	Apollo EM-24 1	Apollo EM-24	a00880101cfd7ef9	0.0.15

ECU Setup Add/Replace ECU Upgrade ECU

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

User System Vehicle Implement Product



The X30 software version for spring 2016: **3.18.517bg**

The firmware version for Apollo ECU's for spring 2016:

CM-40 main: **2.13-r1**

CM-40 auxiliary: **1.0.4**

EM-24: **0.1.6**



X30 Apollo System Detecting ECU's





Procedure for detecting Master ECU

For the X30 Apollo system each ECU must be “Detected” before the X30 will recognize it.

This means that each tank will have to have the following procedure done for X30 to run the tank.

If there is no ECU ISO Name a Detect must be performed.

Add/Replace ECU (Apollo) - 7700 5TANK-MTRG NH3(SCN) 2FAN_3320-76 10SPCG(GRAN SCN)

ADD NEW ECUS
Click to add new ECUs

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version	Status
1	Apollo CM-40	Apollo CM-40	Please replace ECU	N/A	Aux CPU Enabled
2	Apollo CM-40 1	Apollo CM-40	Please replace ECU	N/A	Enabled
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A	Enabled

ECU Setup Add/Replace ECU Upgrade ECU

Select New ECU Geometry Section Control Operator Inputs Seeder Speed

User System Vehicle Implement Product

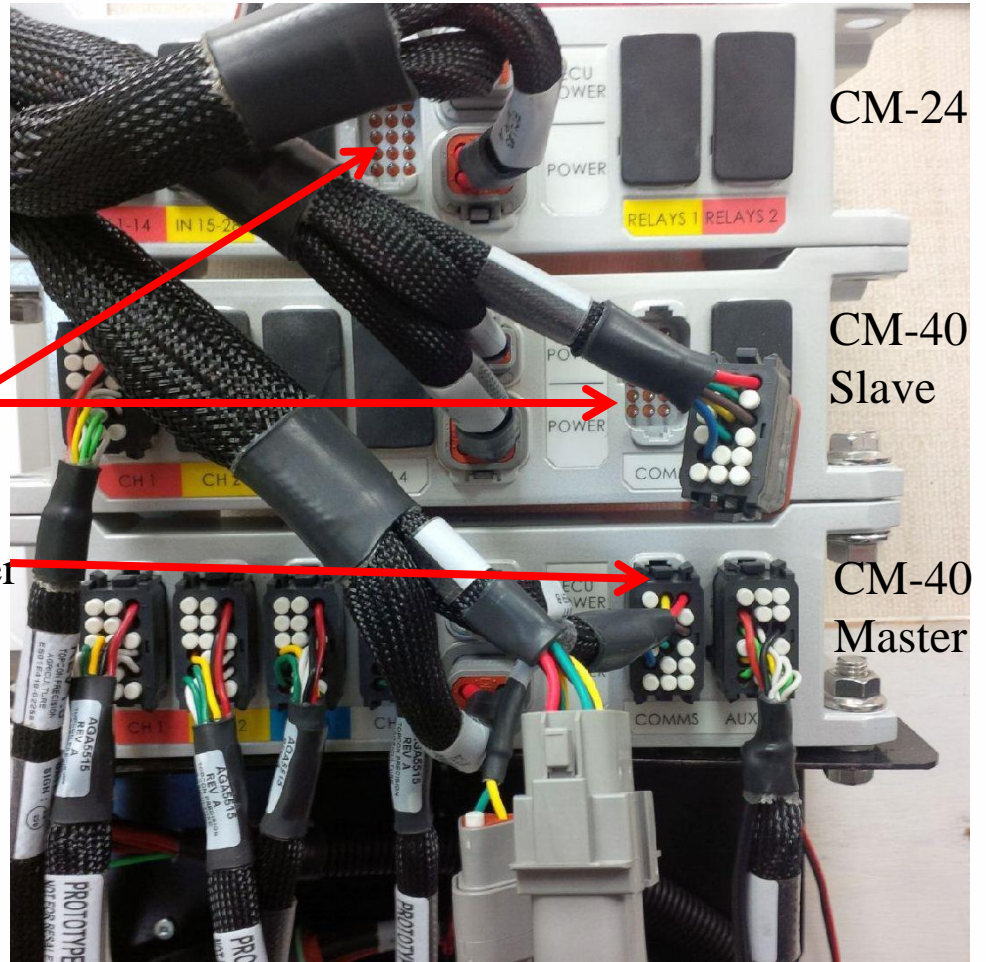


Procedure for detecting Master ECU

Unplug all COMMS connectors in all of the ECU's except for the one to be detected.

COMMS Unplugged CM-40 slave and CM-24

COMMS Plugged in CM-40 Master





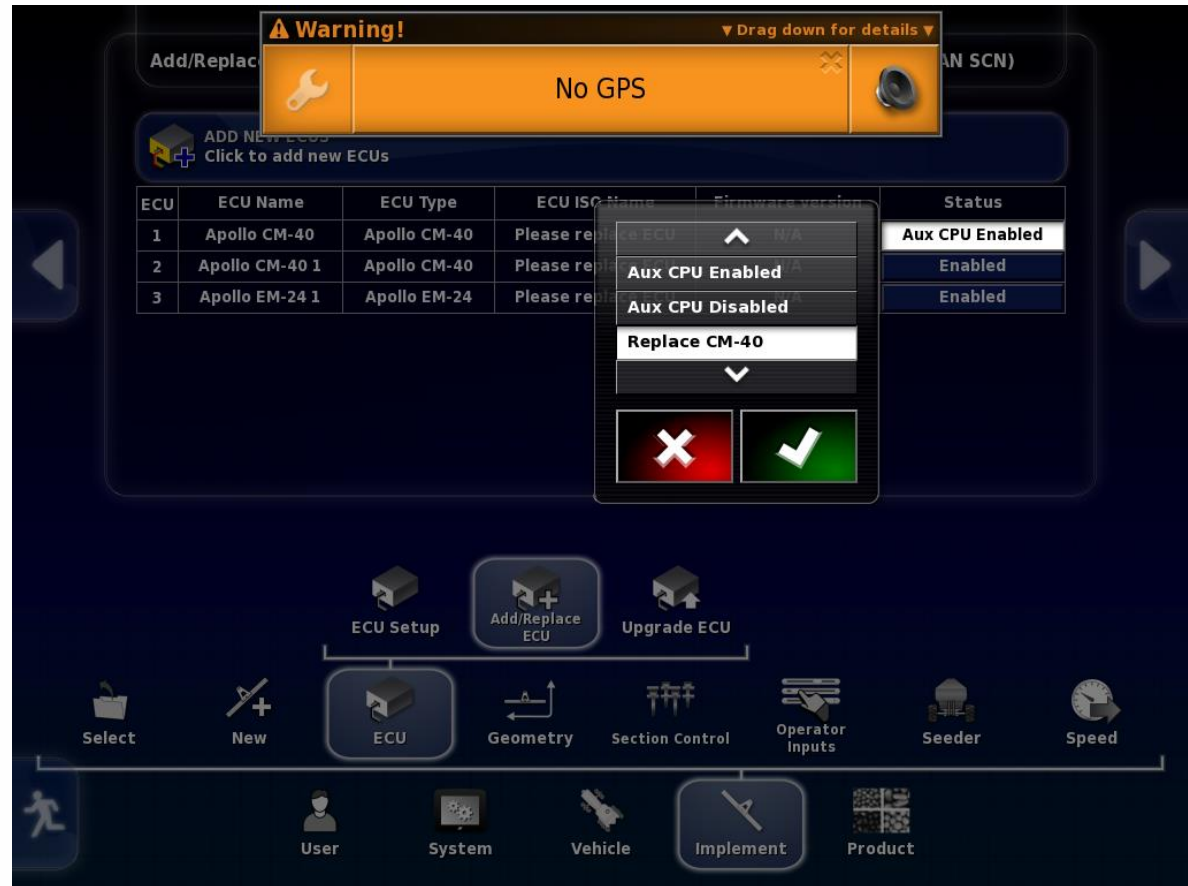
Procedure for detecting Master ECU

Go to Implement/
ECU/
Add/Replace ECU

Press tab under Status
corresponding to the
ECU to be detected,

Select Replace CM-40

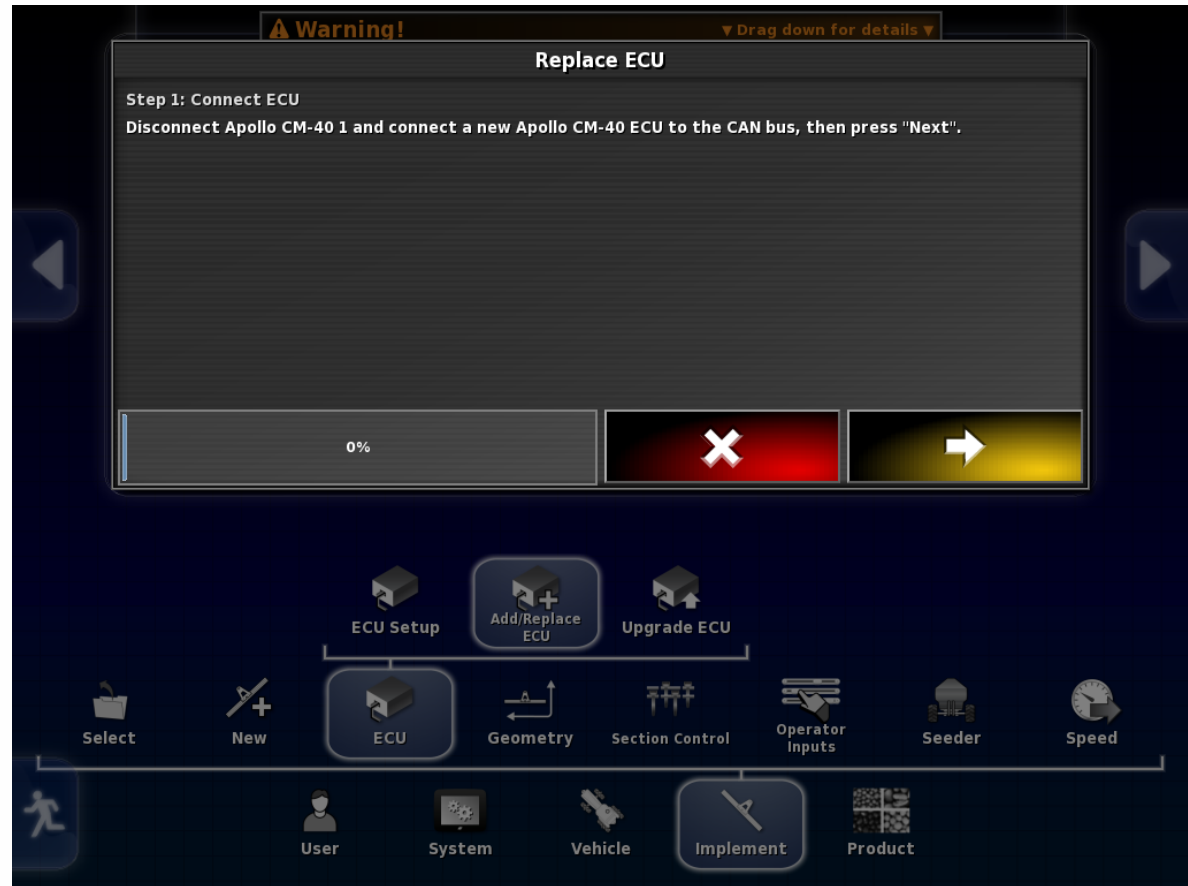
Press the Check mark





Procedure for detecting Master ECU

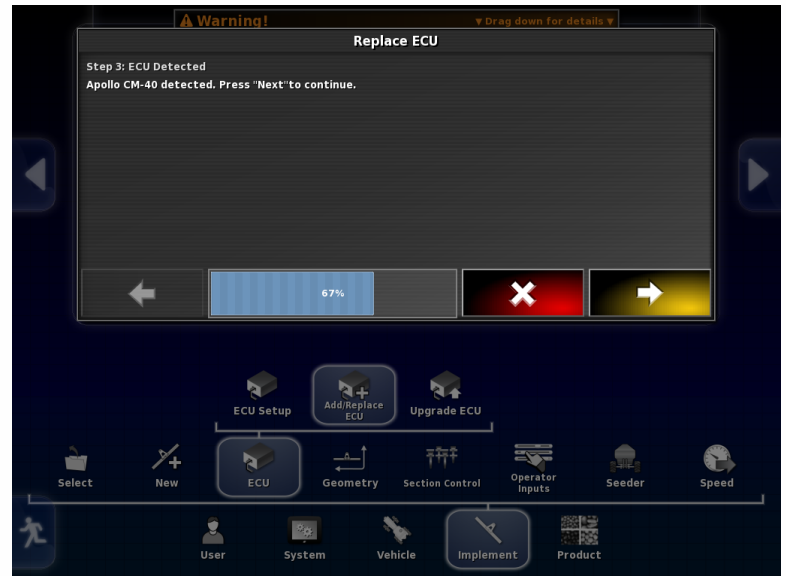
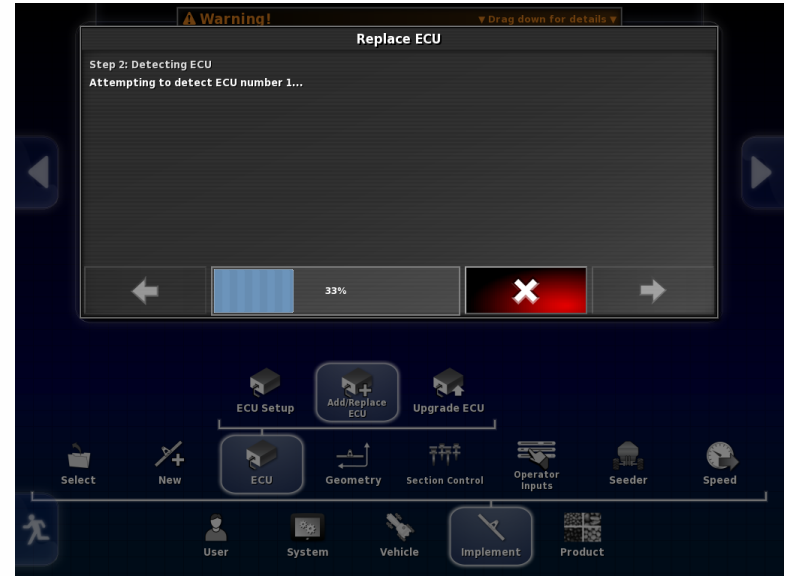
Follow the wizard instructions, when conditions met press the arrow at lower right.





Procedure for detecting Master ECU

Once the ECU is detected and arrow turns yellow press to advance.





Procedure for detecting Master ECU

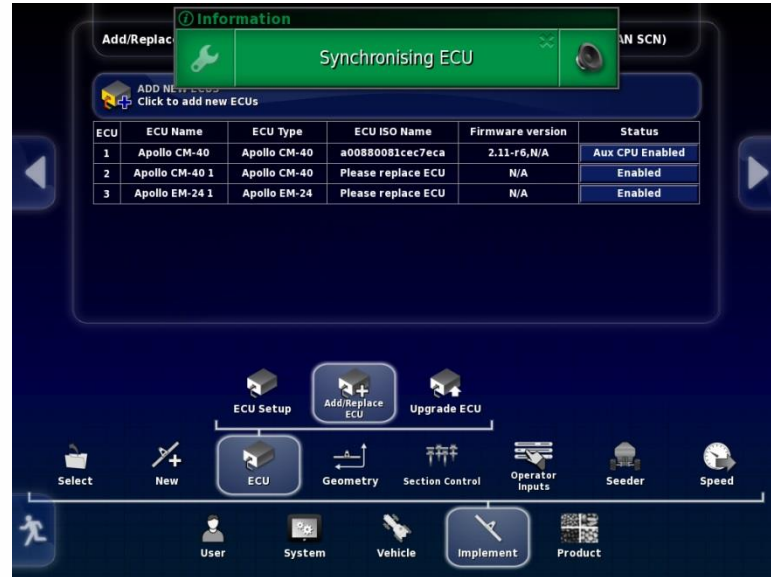
Once the ECU is detected
Name and Type of ECU
will be displayed.
Press green check mark
to advance.





Procedure for detecting Master ECU

The system should upload/
Configure/Synchronize



If this does not start within a couple of minutes it may be necessary to unplug the ISO plug at the back of the tractor and plug it back in.





Procedure for detecting Master ECU

When the upload is complete, the ECU ISO Name will be listed as well as the Firmware version currently on ECU.

If there is only one ECU on tank you are done.
If there is more than one ECU follow the appropriate procedure for additional ECU's

The screenshot displays the 'Add/Replace ECU' interface for an Apollo tank. At the top, it shows the tank identification: 'Add/Replace ECU (Apollo) - 7700 5TANK-MTRG NH3(SCN) 2FAN_3320-76 10SPCG(GRAN SCN)'. Below this is a button labeled 'ADD NEW ECUS Click to add new ECUs'. The main part of the interface is a table with the following data:

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version	Status
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18	Aux CPU Enabled
2	Apollo CM-40 1	Apollo CM-40	Please replace ECU	N/A	Enabled
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A	Enabled

Below the table is a navigation menu with icons for: Select, New, ECU, Geometry, Section Control, Operator Inputs, Seeder, and Speed. The 'ECU' icon is highlighted. At the bottom, there are additional icons for User, System, Vehicle, Implement, and Product.

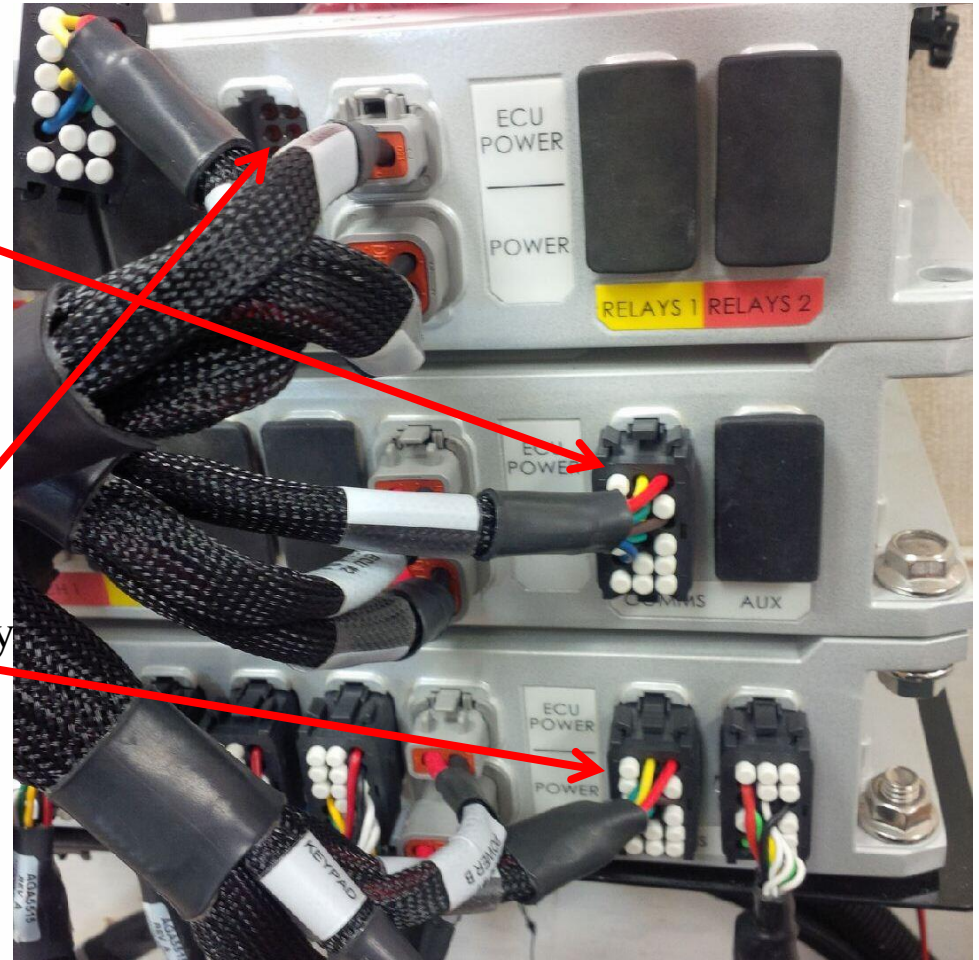


Procedure for second CM-40 ECU

Plug the COMMS plug into the second CM-40 (slave)

CM-24 (I/O ECU) not detected

CM-40 (Master ECU) previously detected.

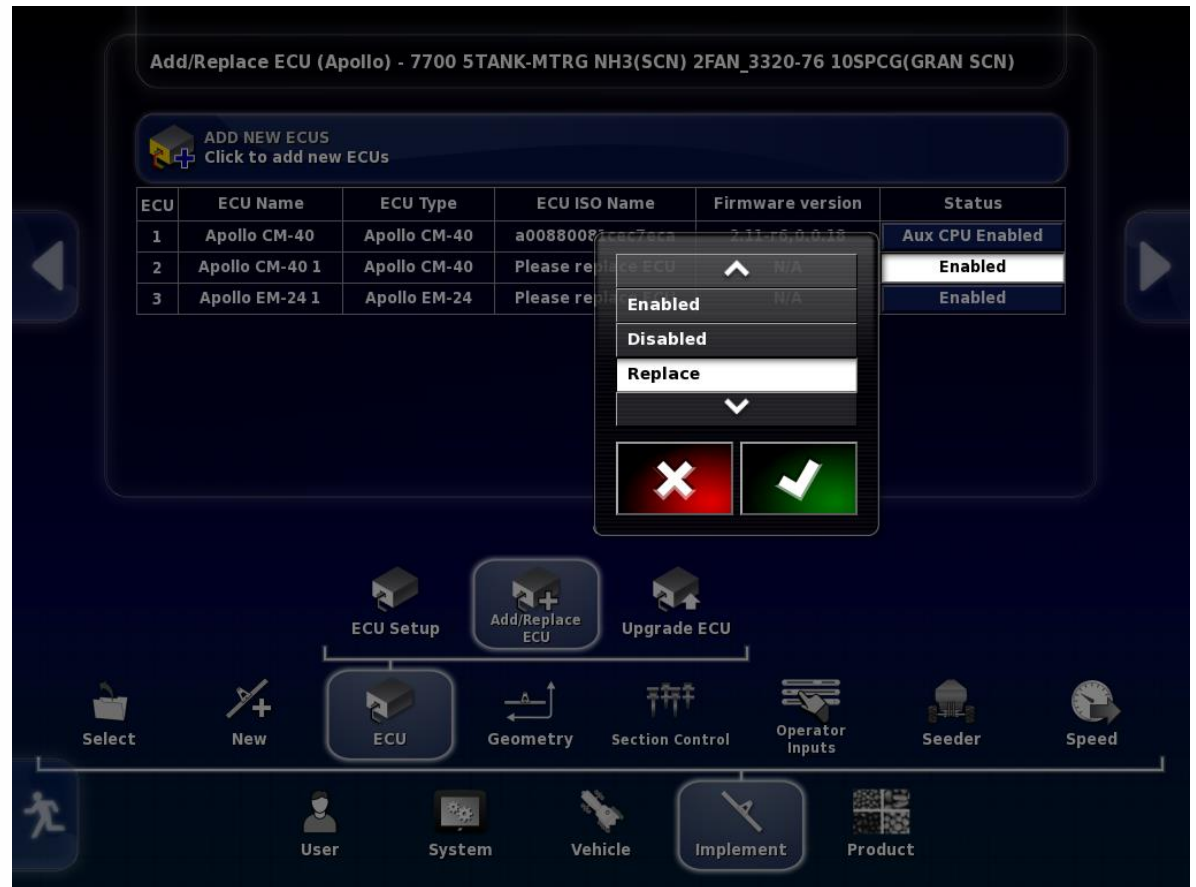




Procedure for second CM-40 ECU

In settings go to
Implement/
ECU/
Add/Replace ECU

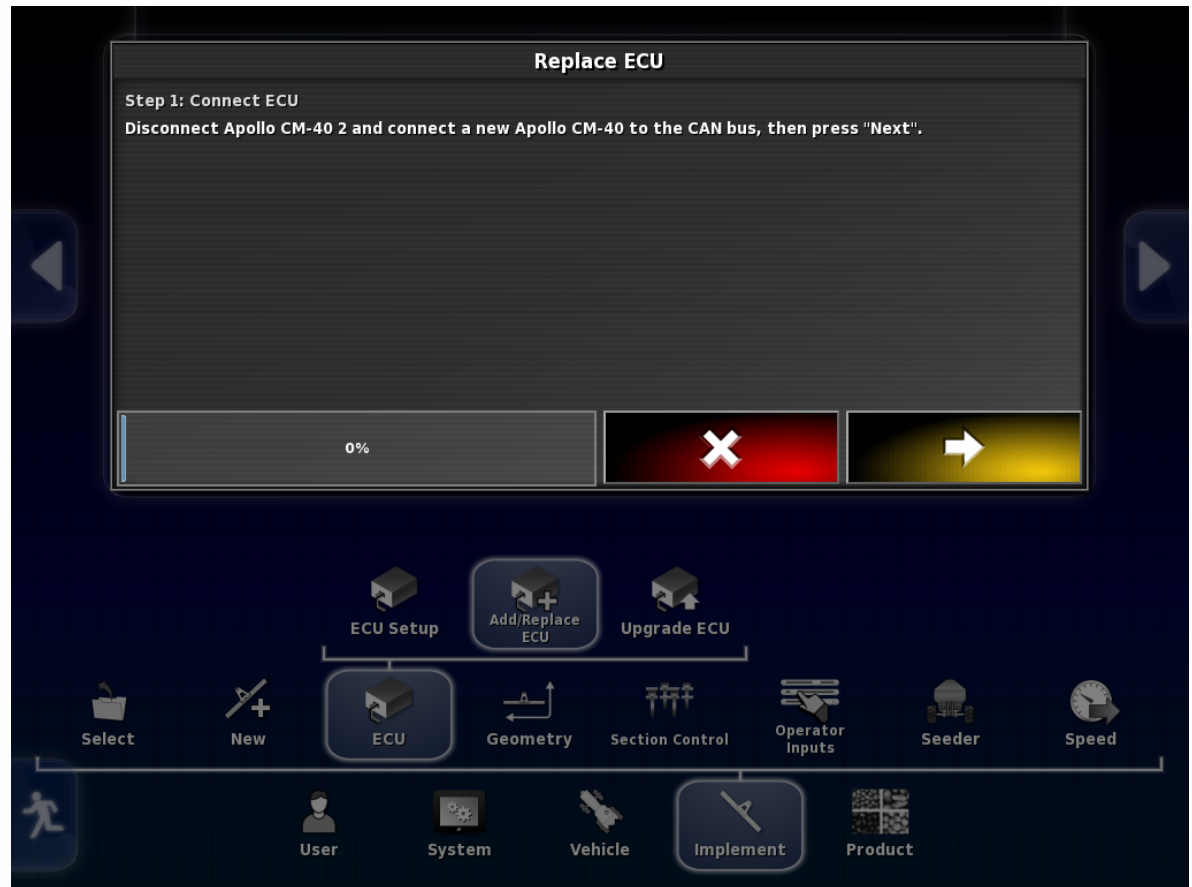
Press tab under status
for the second CM-40
named CM-40 1,
select replace and then
press the check mark





Procedure for second CM-40 ECU

Make sure the second CM-40 is plugged in before pressing the arrow to advance.





Procedure for second CM-40 ECU

ECU is being detected

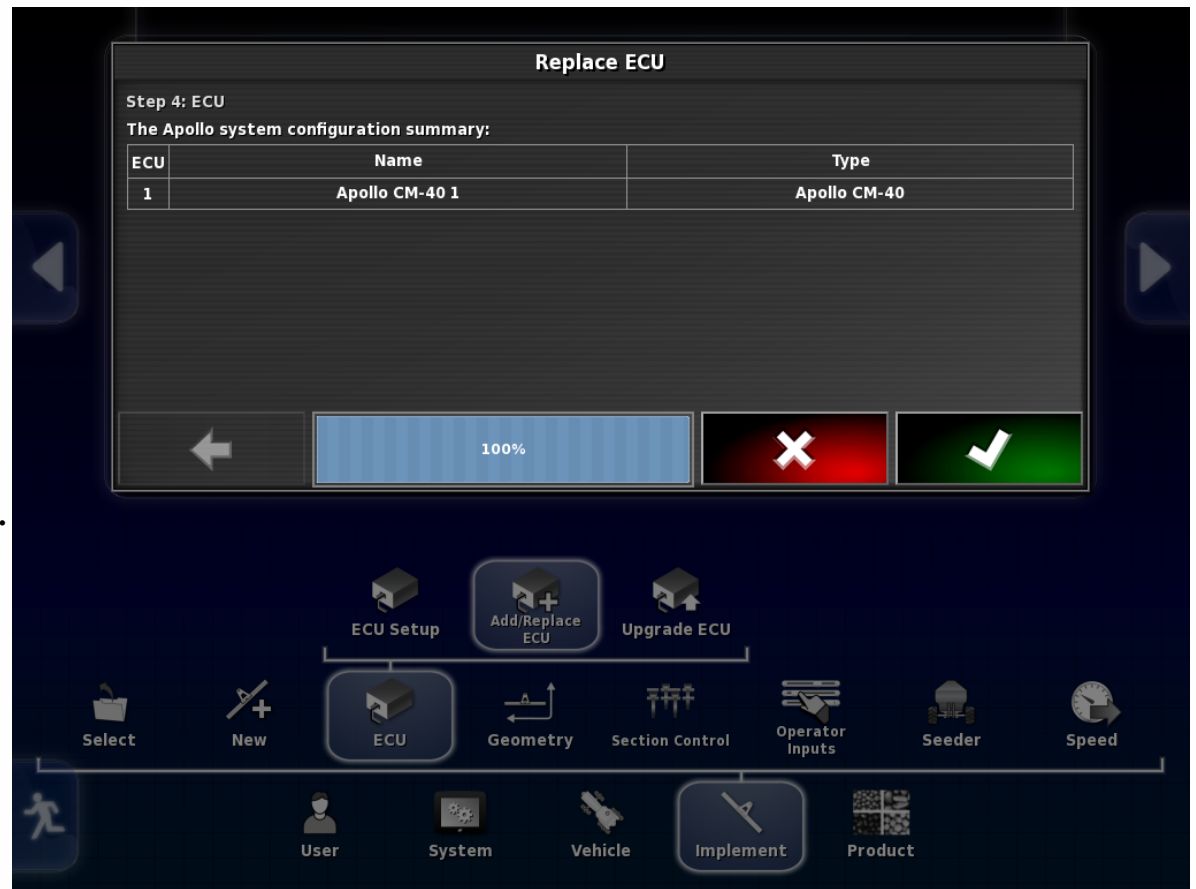




Procedure for second CM-40 ECU

When detect is complete
Name and Type are
displayed. Name for
second CM-40 that is
detected is Apollo CM-40 1

Press check mark to advance.





Procedure for second CM-40 ECU

The system should upload/
Configure/Synchronize
When complete ISO Name
and Firmware version will
be displayed.

If this does not start within a
couple of minutes it may be
necessary to unplug the ISO
plug at the back of the tractor
and plug it back in.

The screenshot shows the BOURGAULT system interface. At the top, a green banner indicates "Synchronising ECU". Below this, a table lists the ECU details:

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version	Status
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18	Aux CPU Enabled
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	0.0.18	Enabled
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A	Enabled

The interface also features a navigation menu at the bottom with icons for Select, New, ECU, Geometry, Section Control, Operator Inputs, Seeder, and Speed. A secondary menu includes User, System, Vehicle, Implement, and Product.

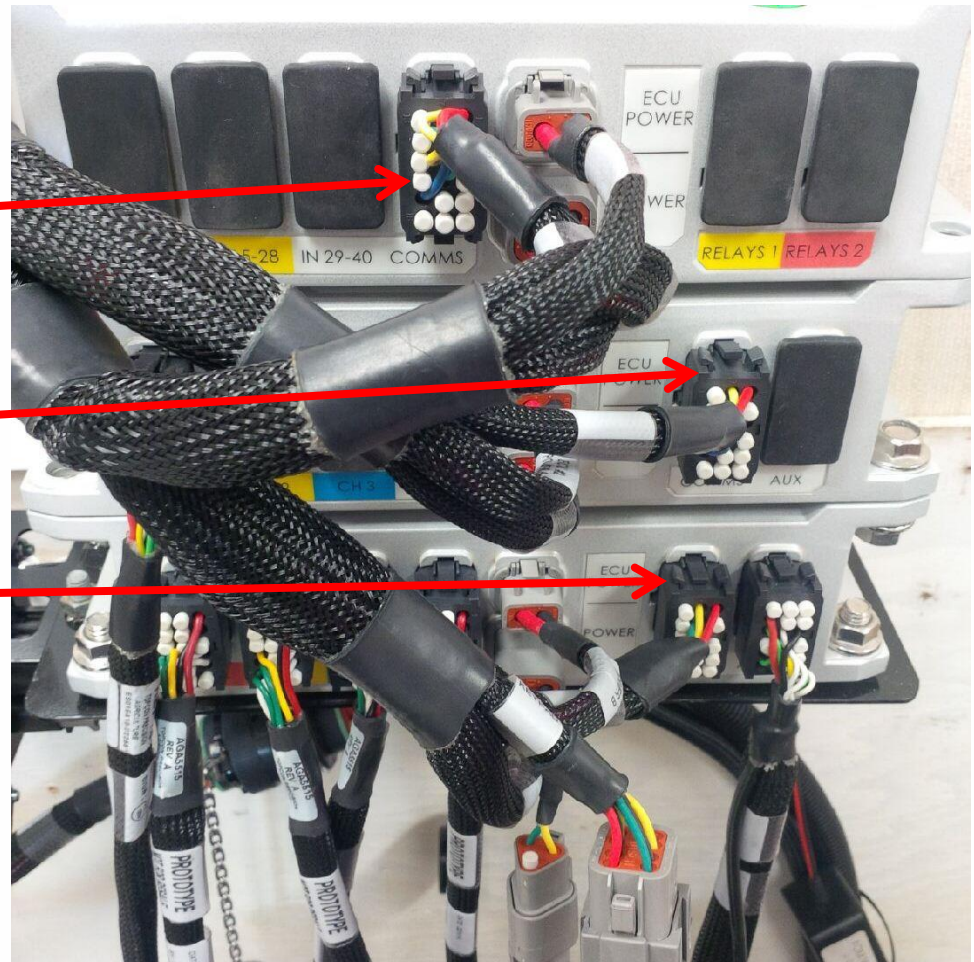


Procedure for CM-24 (I/O ECU)

Plug COMMS connector into
CM-24

CM-40 (Master ECU) slave
(previously detected)

CM-40 (Master ECU)
(previously detected)





Procedure for CM-24 (I/O ECU)

In settings go to
Implement/
ECU/
Add/Replace ECU

Press tab under Status
for Apollo EM-24 1,
select Replace,
press check mark.

The screenshot shows the 'Add/Replace ECU' screen in the BOURGAULT software. The title bar reads 'Add/Replace ECU (Apollo) - 7700 5TANK-MTRG NH3(SCN) 2FAN_3320-76 10SPCG(GRAN SCN)'. Below the title bar is a button labeled 'ADD NEW ECUS Click to add new ECUs'. The main area contains a table with the following data:

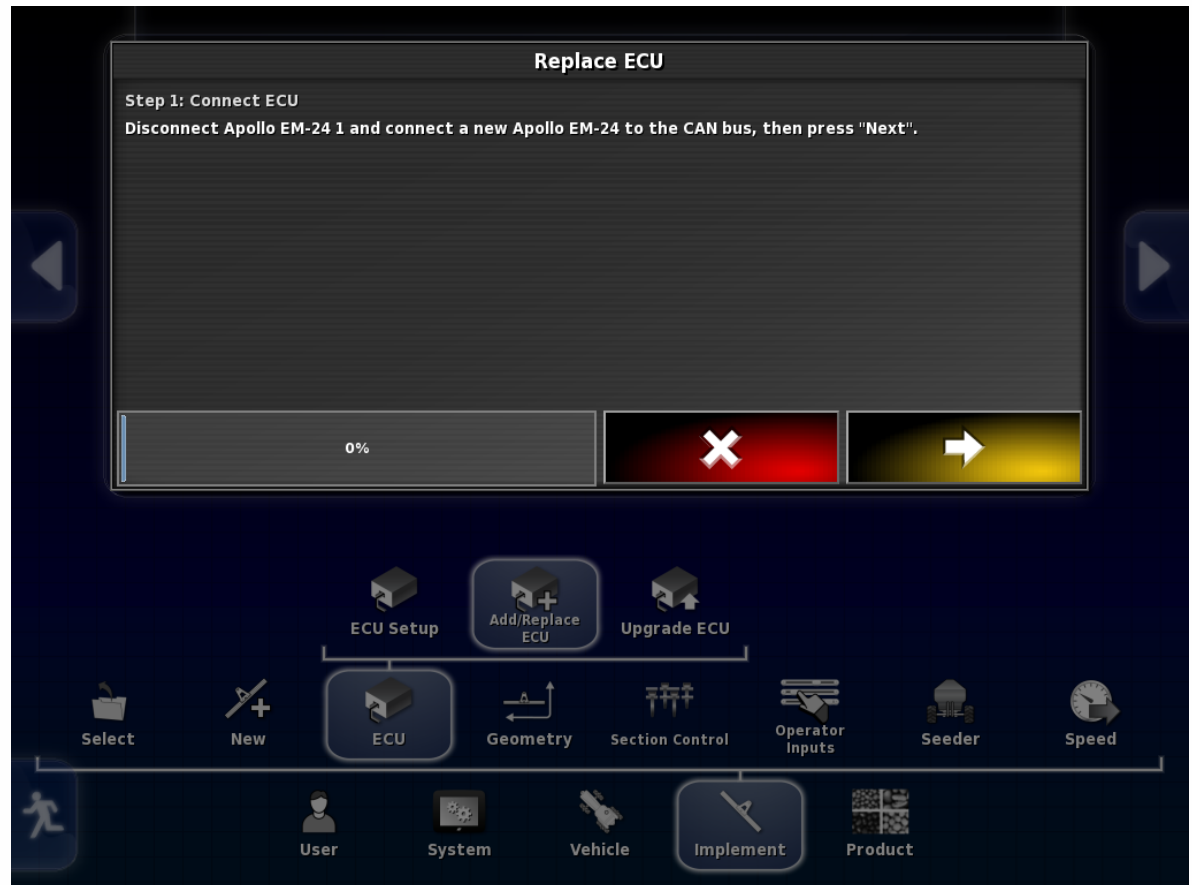
ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version	Status
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18	Aux CPU Enabled
2	Apollo CM-40 1	Apollo CM-40	a00880081cec7eca	0.0.18	Enabled
3	Apollo EM-24 1	Apollo EM-24	Please replace ECU	N/A	Enabled

A context menu is open over the 'Apollo EM-24 1' row, showing options: 'Enabled', 'Disabled', and 'Replace'. Below the menu are two buttons: a red 'X' (cancel) and a green checkmark (confirm). The bottom navigation bar includes icons for 'Select', 'New', 'ECU', 'Geometry', 'Section Control', 'Operator Inputs', 'Seeder', 'Speed', 'User', 'System', 'Vehicle', 'Implement', and 'Product'. The 'Implement' icon is currently selected.



Procedure for CM-24 (I/O ECU)

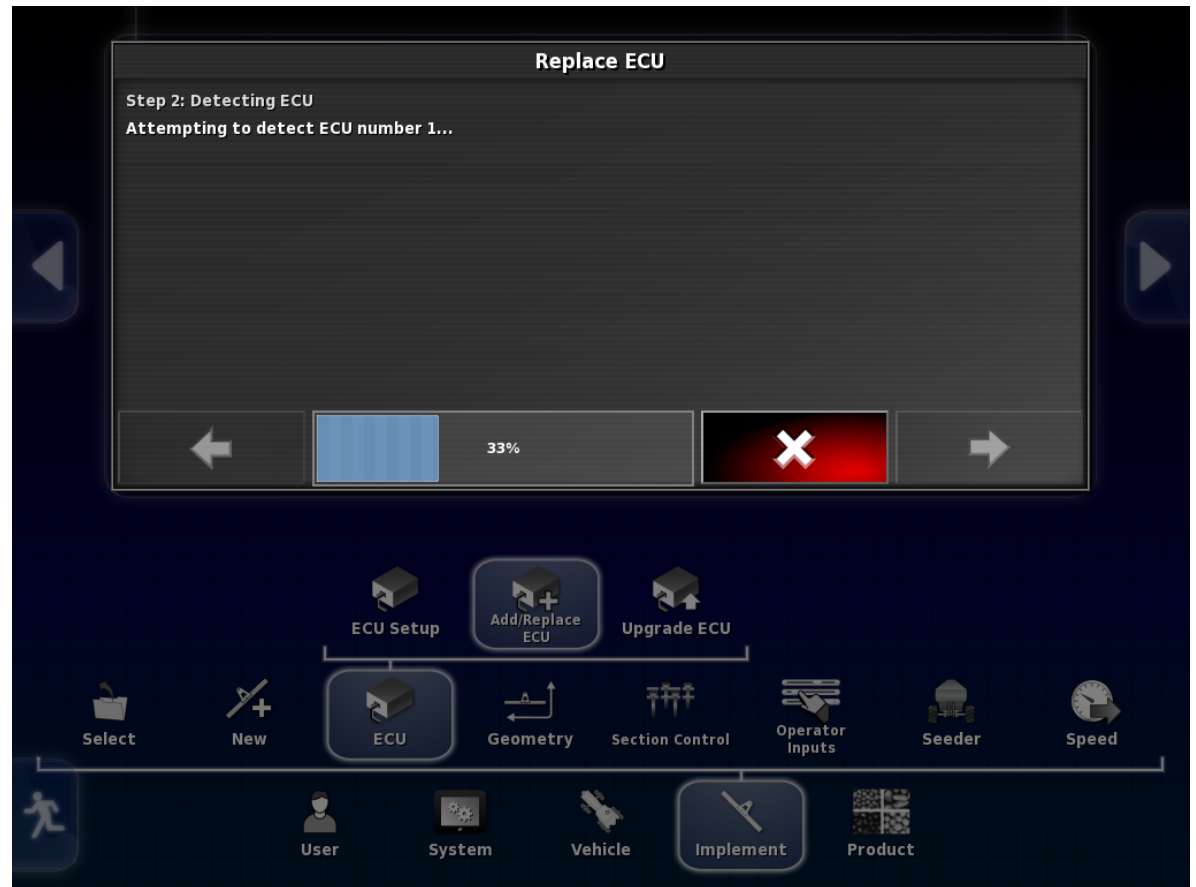
Make sure EM-24 1 is connected.
Press the arrow to advance.





Procedure for CM-24 (I/O ECU)

Attempting to detect ECU





Procedure for CM-24 (I/O ECU)

ECU has been detected
Name and Type displayed

Press check mark to
advance.





Procedure for CM-24 (I/O ECU)

The system should upload/
Configure/Synchronize

If this does not start within a couple of minutes it may be necessary to unplug the ISO plug at the back of the tractor and plug it back in.

The screenshot displays the BOURGAULT system interface. At the top, there is a green banner with the text "Synchronising ECU" and a close button. Below this, there is a blue button labeled "ADD NEW ECUS" with a plus sign icon and the text "Click to add new ECUS". A table lists the installed ECUs:

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version	Status
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18	Aux CPU Enabled
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	0.0.18	Enabled
3	Apollo EM-24 1	Apollo EM-24	a00880101cfd7ef9	0.0.15	Enabled

Below the table, there are several navigation buttons: "ECU Setup", "Add/Replace ECU", and "Upgrade ECU". At the bottom of the screen, there is a main menu with icons for "Select", "New", "ECU", "Geometry", "Section Control", "Operator Inputs", "Seeder", "Speed", "User", "System", "Vehicle", "Implement", and "Product".



Procedure for CM-24 (I/O ECU)

When Synchronizing is complete ISO Name and Firmware version will be displayed for Apollo EM-24 1

If there is only one CM-24 on the machine you are finished.

If there is both ASC and Blockage there will be a second CM-24. Repeat the procedure for CM-24 for the second ECU.

ECU	ECU Name	ECU Type	ECU ISO Name	Firmware version	Status
1	Apollo CM-40	Apollo CM-40	a00880081cec7eca	2.11-r6,0.0.18	Aux CPU Enabled
2	Apollo CM-40 1	Apollo CM-40	a00880081ce77ec5	0.0.18	Enabled
3	Apollo EM-24 1	Apollo EM-24	a00880101cfd7ef9	0.0.15	Enabled