



Technical Service Bulletin – 23V057

<u>DATE:</u>	2/24/2023
<u>APPLIES TO:</u>	Specific Maintainer hydraulic cranes equipped with service/mechanics truck bodies produced from March 9, 2019 through February 8, 2023.
<u>NHTSA/TC Id:</u>	23V057
<u>THE PROBLEM:</u>	The affected units are equipped with an Eaton HFX20m CAN control module. The code/programming was designed in such a way that if power is removed from the R260 crane remote receiver, while the crane is being operated, the crane function may continue, without activation on the wireless remote by the customer.
<u>THE REMEDY:</u>	Maintainer will provide a software update to the HFX20m CAN control module free of charge to the customer.
<u>LABOR ESTIMATE:</u>	15 minutes for uploading the software. Should additional labor be required to upload the software, it will be reimbursed by Maintainer.
<u>PURPOSE:</u>	To provide a software remedy that will prevent unintended or continued operation of the crane when not commanded by the operator.

Please read the entire document before proceeding with any work. Follow industry standards regarding safety equipment and procedures.

Tool list:

- 1) Maintainer Provided USB drive with updated software, per truck configuration
- 2) If truck doesn't have a display
 - a) 4.3" CAN display for programming
 - b) Display harness with USB attachment
 - c) Extension harness to plug directly into HFX20 valve well module





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Table of hardware & software, to determine update version & procedure needed

<u>Procedure</u>	<u>HFX body software</u>	<u>Switch panel</u>	<u>Software needed</u>
#1	V3.xx	4.3" Display	v3.12.00
#2	V3.xx	E31 – 8 button	v3.12.00
#3	V2.xx	E31 – 8 button	v2.11
#3	V2.xx	4.3" Display	v2.11
#4	V3.xx	No switch panel (ship out crane or special)	V3.12.00



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Procedure #1 – Software v3.12.00

Video of process:

<https://youtu.be/yHV5m95tbaU>



- 1) Chassis/truck must be parked, ignition and “main power” switch in cab need to be turned on. Main power and ignition must not be shut off during this process.
- 2) In this procedure the truck has a 4.3” compartment display already mounted in the body.
- 3) Press the menu button TWICE



- 4) Confirm the Body software version is v3.xx.xx.
 - a. If the Body version listed is v2.xx, please contact Maintainer before updating.
- 5) Enter customer access password 7 3 6 1 by using the soft keys beside the numbers



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Procedure #1 – Software v3.12.00

- 6) Press enter 5 times



- 7) The upload screen will look like this



- 8) Install the provided USB flash drive with updated software V3.12.00. The connection is in the harness behind the display.

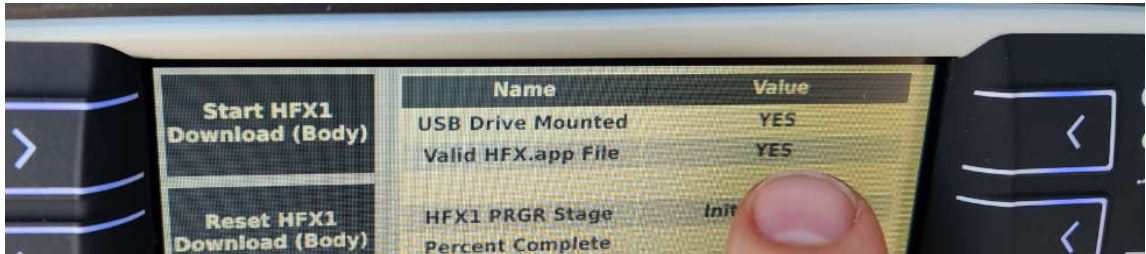




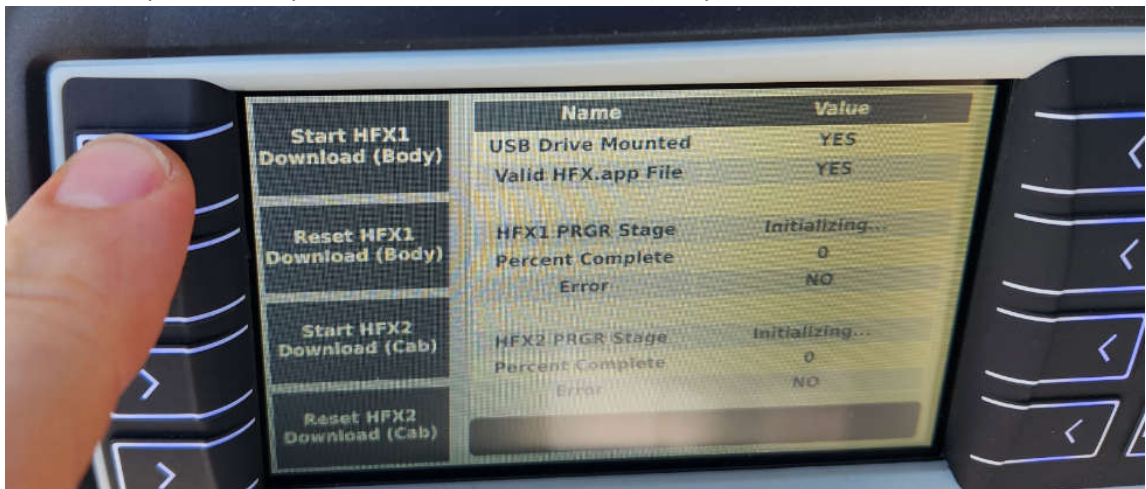
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Procedure #1 – Software v3.12.00

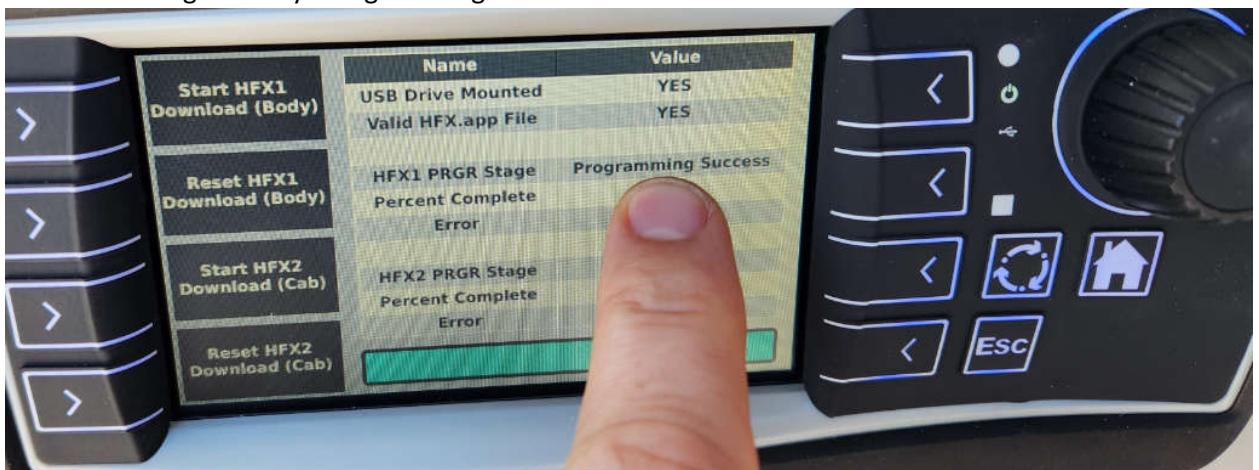
- 9) Wait 10 seconds until the top 2 lines read yes



- 10) Press the top left softkey to start the HFX1 Download (Body)



- 11) The upload will take several minutes. When complete the bar at the bottom will be complete, HFX1 PRGR Stage will say "Programming Success"





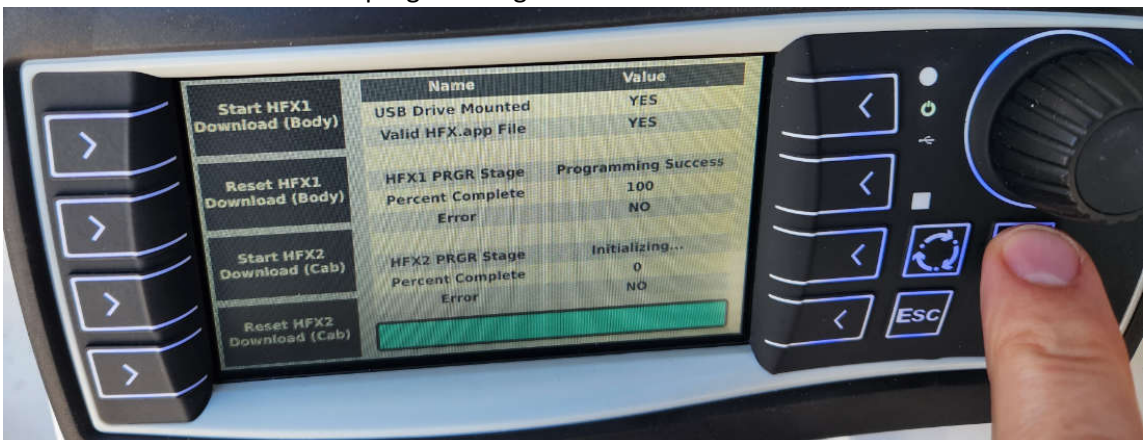
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Procedure #1 – Software v3.12.00

“Percent Complete will be 100”. “Error” will be “NO”.



12) Press the home button to exit programming



13) Remove USB drive

14) Cycle main power switch and ignition

15) To confirm the software has been uploaded, press the enter button TWICE, and the Body software line should read v3.12.00



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Procedure #2 – Software v3.12.00

Video of process:

<https://youtu.be/L8p82FL8lCk>



- 1) Chassis/truck must be parked, ignition and “main power” switch in cab need to be turned on. Main power and ignition must not be shut off during this process.
- 2) In this procedure the truck has a the E31 8-button switch panel mounted in the body.



- 3) Remove the 6 pin Deutsch connector from the back of the E31 switch panel and plug the connector into the provided display harness

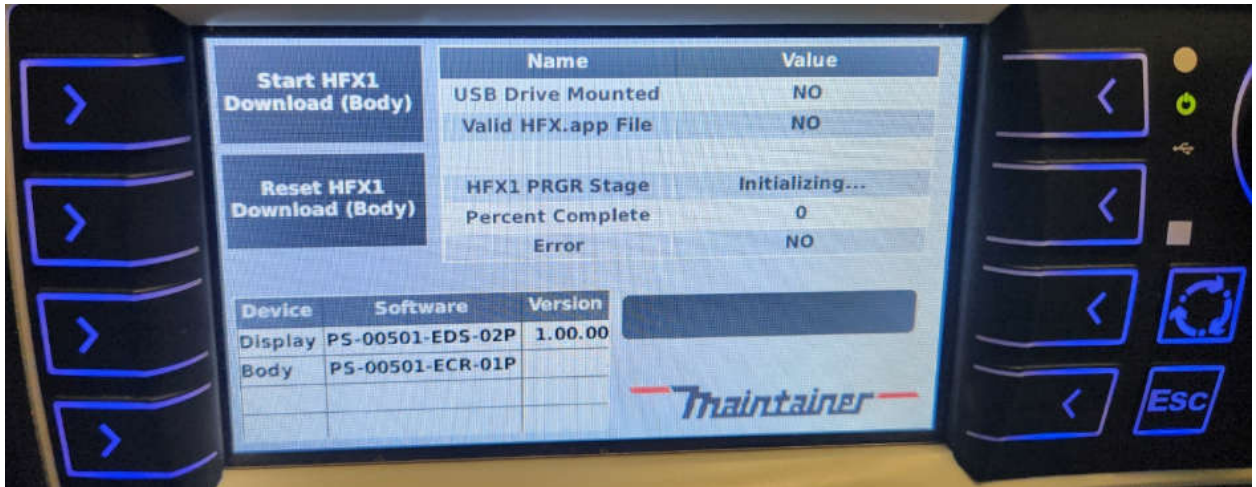




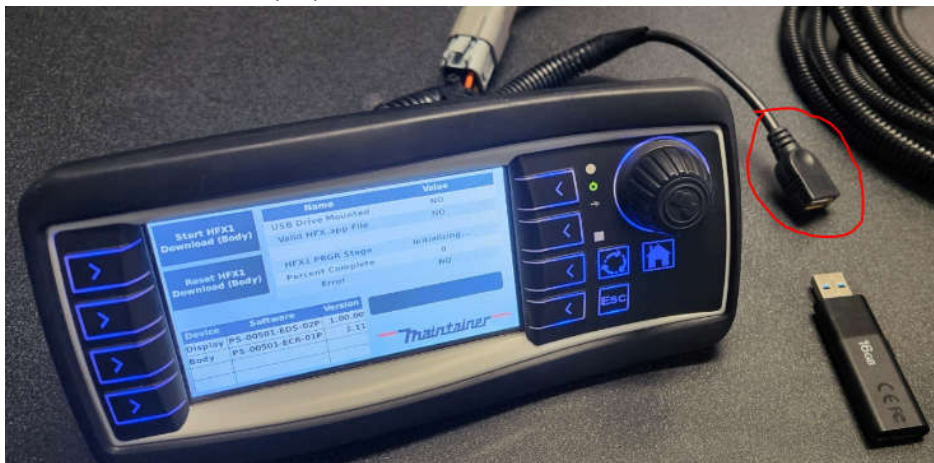
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Procedure #2 – Software v3.12.00

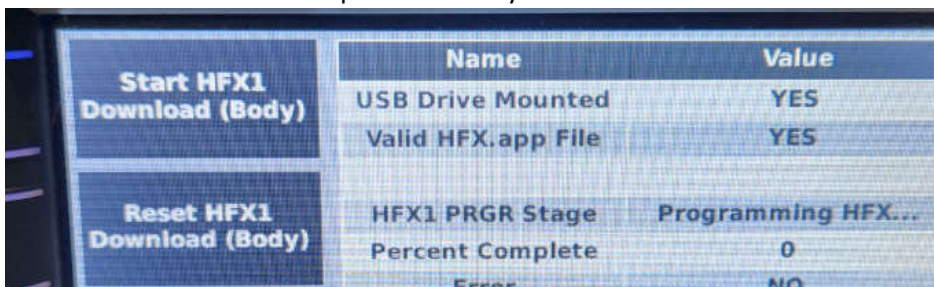
- 4) This display will take ~30 seconds to boot, and should look similar to this



- 5) Confirm the Body software version is v3.xx.xx.
a. If the Body version listed is v2.xx, please contact Maintainer before updating.
- 6) Install the provided USB flash drive with updated software V3.12.00. The connection is in the harness behind the display.



- 7) Wait 10 seconds until the top 2 lines read yes

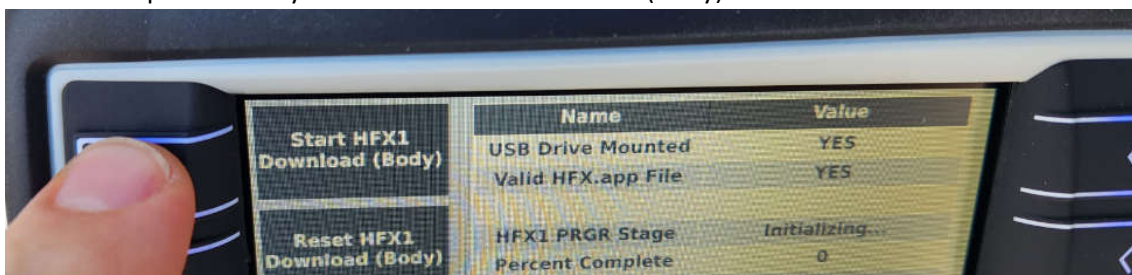




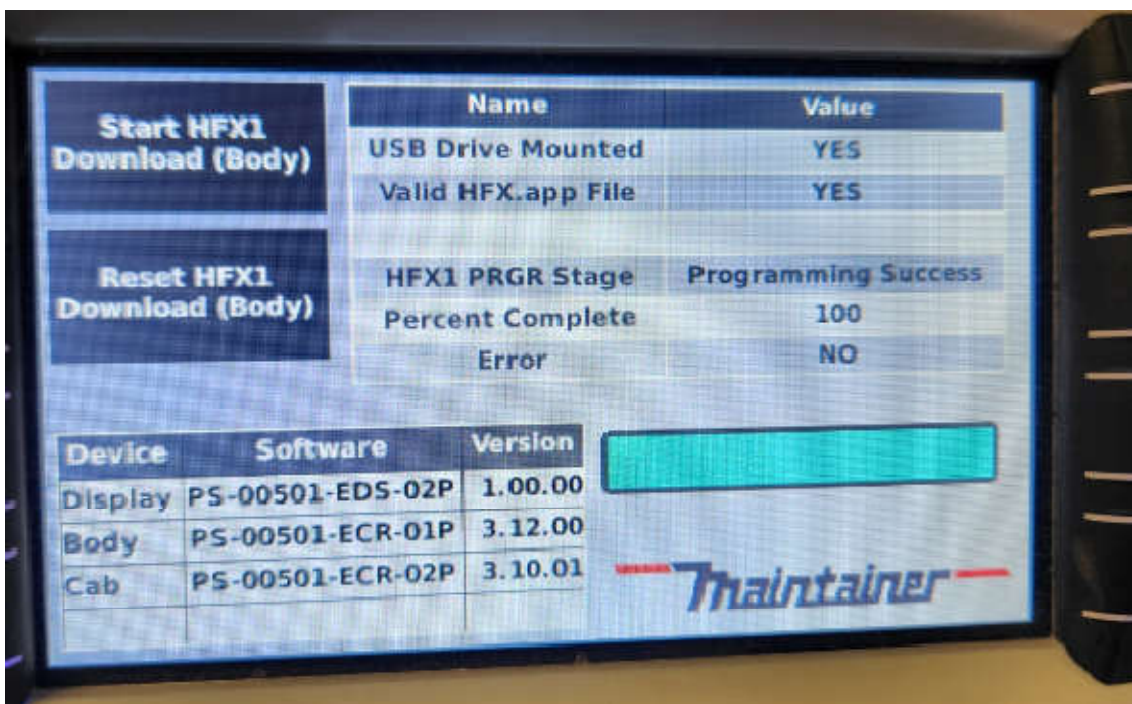
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Procedure #2 – Software v3.12.00

- 8) Press the top left softkey to start the HFX1 Download (Body)



- 9) The upload will take several minutes. When complete the bar at the bottom will be complete, HFX1 PRGR Stage will say "Programming Success" "Percent Complete will be 100". "Error" will be "NO".



- 10) To confirm the software has been uploaded, verify the Body software line reads v3.12.00
- 11) Remove USB drive
- 12) Unplug the display & harness, and reconnect E31 pushbutton switch panel.
- 13) Cycle main power switch and ignition.



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Procedure #3 – Software v2.11

Video of process:

<https://youtu.be/tAt0uK35gdA>



- 1) Chassis/truck must be parked, ignition and “main power” switch in cab need to be turned on. Main power and ignition must not be shut off during this process.
- 2) In this procedure the truck has a the compartment display or the E31 8-button switch panel mounted in the body, but has v2.xx software
- 3) Gain access to the HFX20 control module which is mounted by the crane valve (typically in the centerdeck valve well)

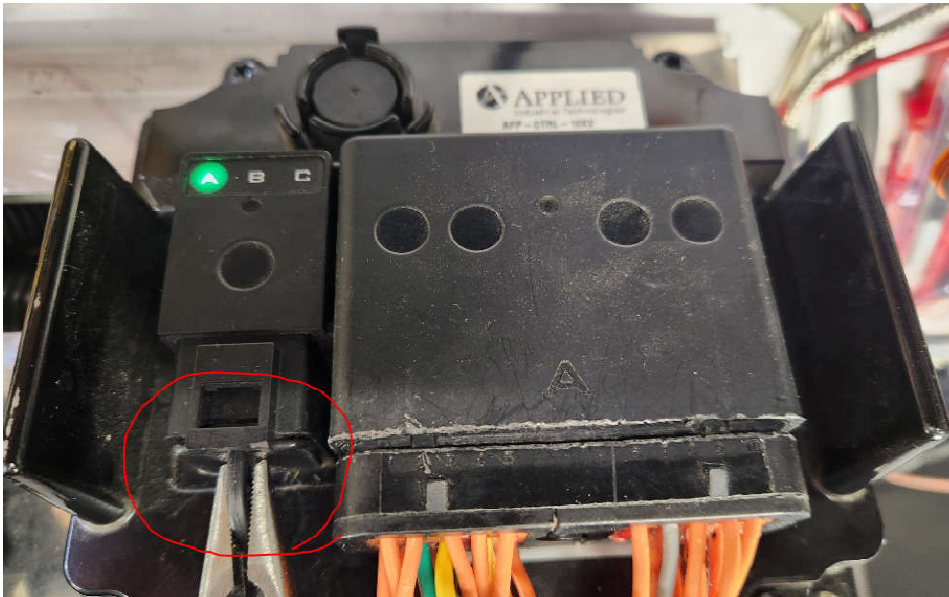




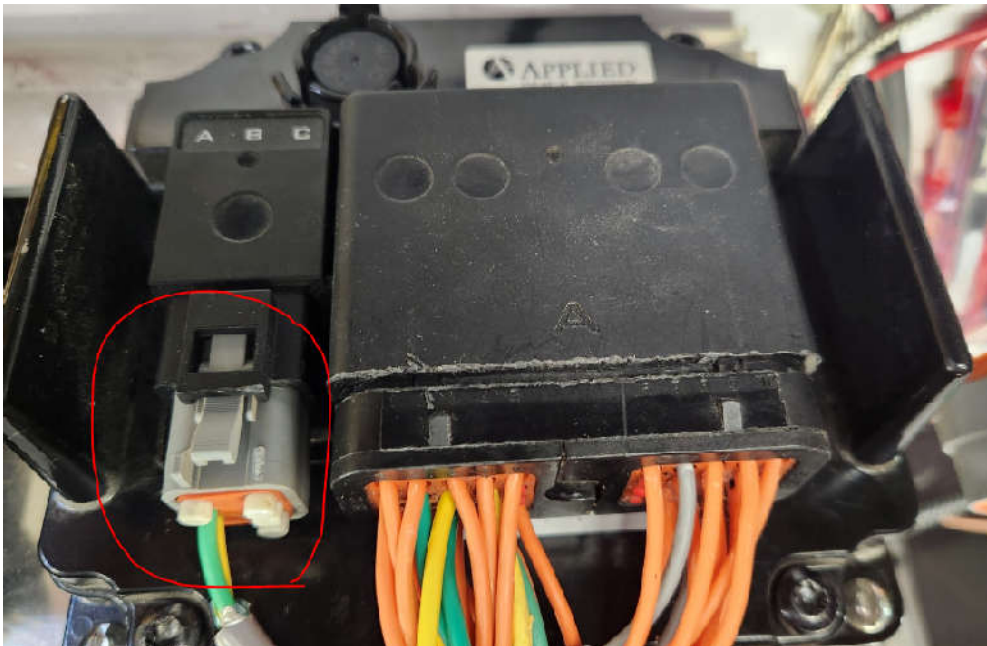
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Procedure #3 – Software v2.11

- 4) Remove the 6 pin Deutsch plug from the HFX module seen below (may take pliers to remove, but just pulls, no lock mechanism)



- 5) Install the extension harness into the display harness, and plug into the HFX service port



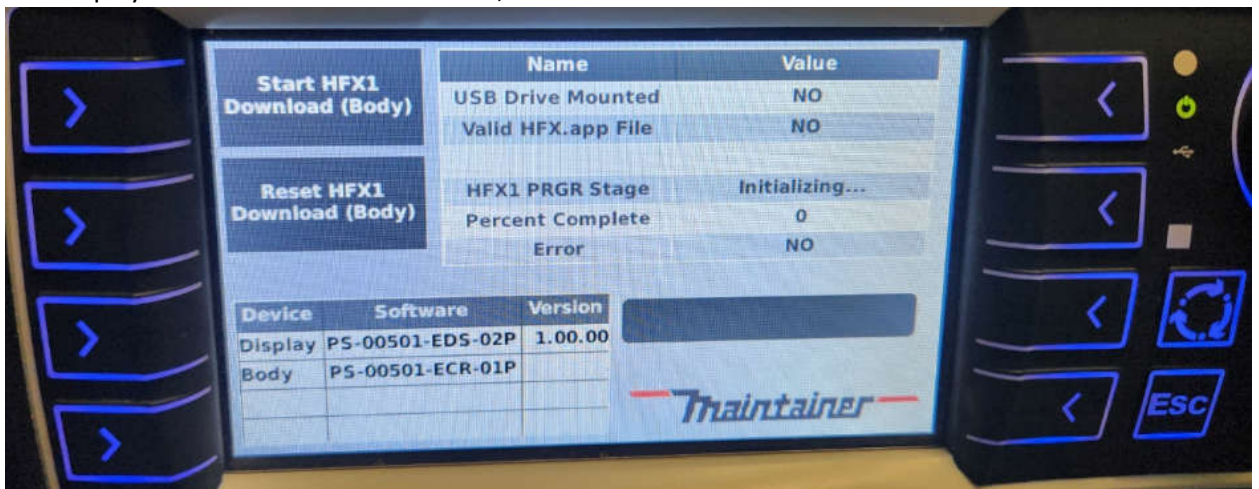


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Procedure #3 – Software v2.11



- 6) Route the extension harness with alligator clips to the chassis battery. Red to +12v, Black to (-) ground
- 7) This display will take ~30 seconds to boot, and should look similar to this



- 8) Confirm the Body software version does NOT say v3.xx.xx.
 - b. If the Body version listed does say v3.xx, please contact Maintainer before updating.



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Procedure #3 – Software v2.11

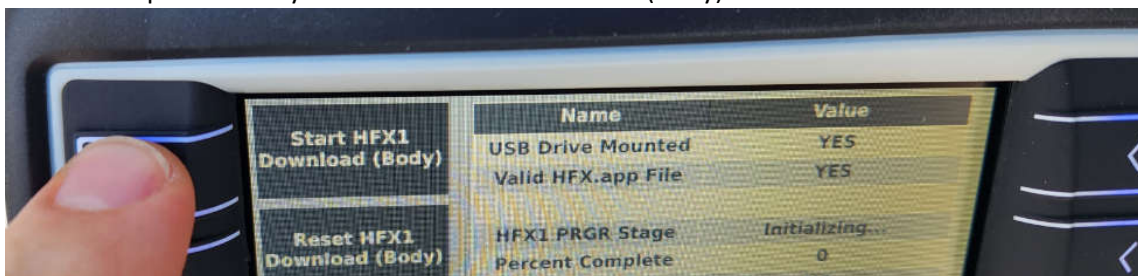
- 9) Install the provided USB flash drive with updated software V2.11. The connection is in the harness behind the display.



- 10) Wait 10 seconds until the top 2 lines read yes

	Name	Value
Start HFX1 Download (Body)	USB Drive Mounted	YES
	Valid HFX.app File	YES
Reset HFX1 Download (Body)	HFX1 PRGR Stage	Programming HFX...
	Percent Complete	0
	Error	NO

- 11) Press the top left softkey to start the HFX1 Download (Body)

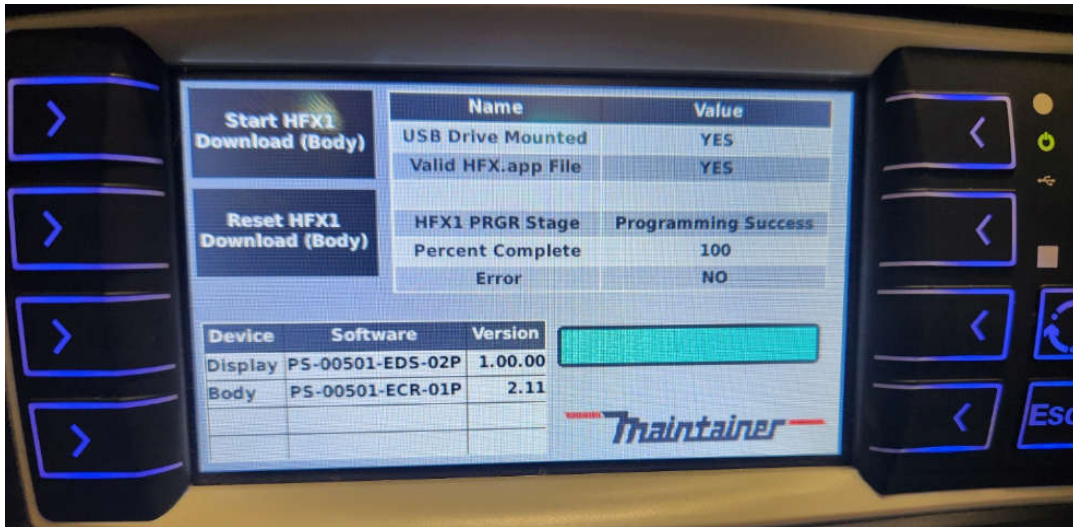




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Procedure #3 – Software v2.11

- 12) The upload will take several minutes. When complete the bar at the bottom will be complete, HFX1 PRGR Stage will say “Programming Success” “Percent Complete will be 100”. “Error” will be “NO”.



- 13) To confirm the software has been uploaded, verify the Body software line reads v2.11
- 14) Remove USB drive
- 15) Unplug the harness from the HFX, and reinstall the Deutsch plug
- 16) Disconnect alligator clips from chassis battery.
- 17) Cycle main power switch and ignition.



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Procedure #4 – Software v3.12.00

Video of process:

<https://youtu.be/tAt0uK35gdA>



- 1) Chassis/truck must be parked, ignition and “main power” switch in cab need to be turned on. Main power and ignition must not be shut off during this process.
- 2) In this procedure the truck has an HFX20 mounted by the valve, but does not have a compartment display or E31 8-button switch panel mounted in the body. It will have v3.xx software
- 3) Gain access to the HFX20 control module which is mounted by the crane valve (typically in the centerdeck valve well, or on the crane)

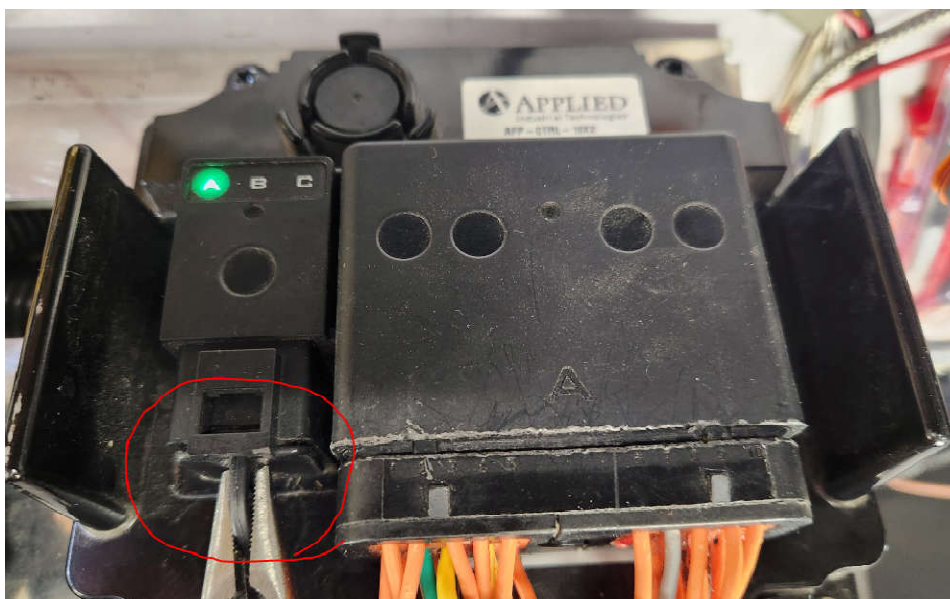




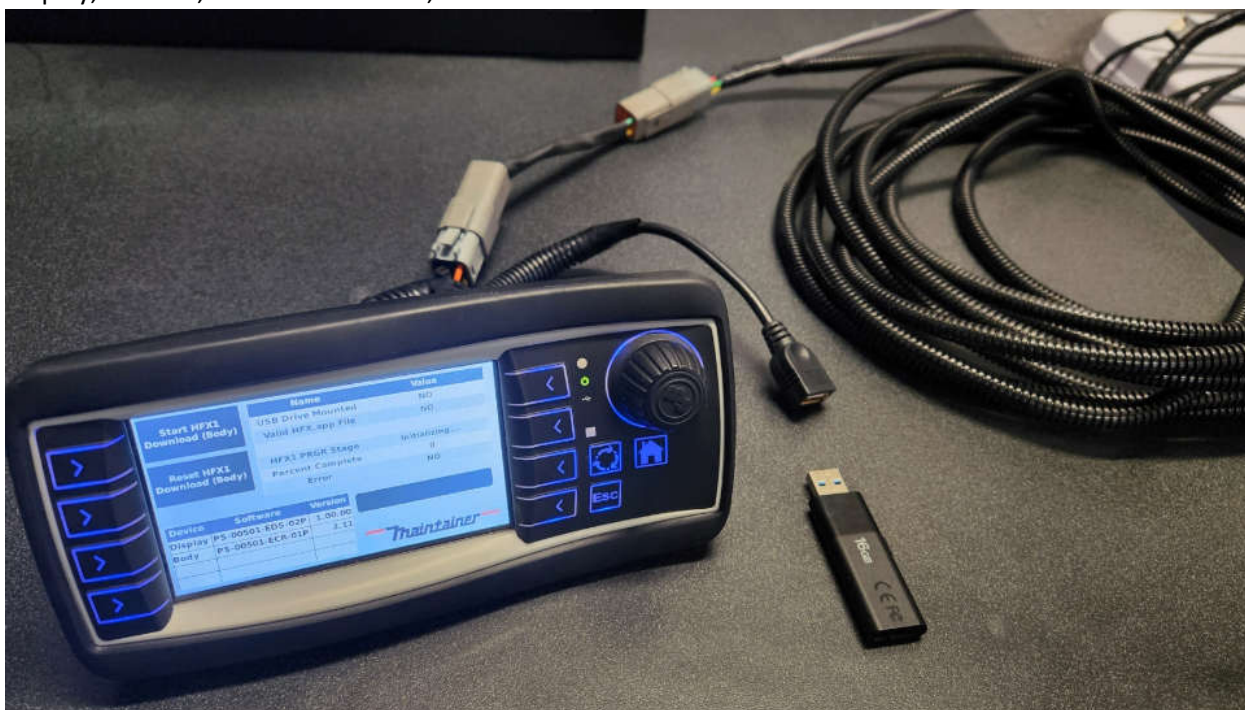
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Procedure #4 – Software v3.12.00

- 4) Remove the 6 pin Deutsch plug from the HFX module seen below (may take pliers to remove, but just pulls, no lock mechanism)



- 5) Display, harness, extension harness, and USB drive shown below

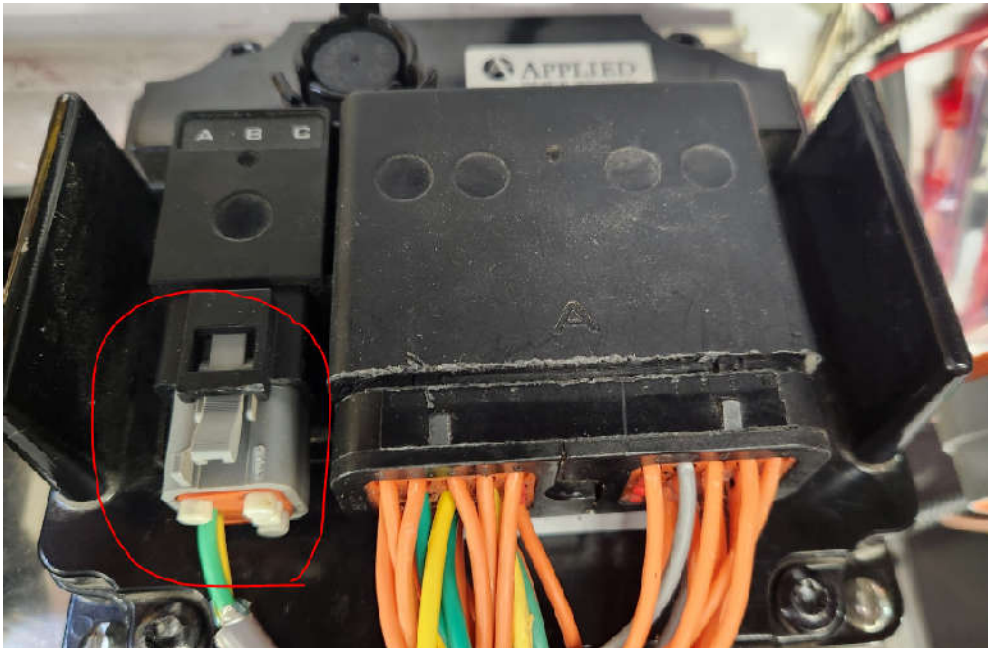




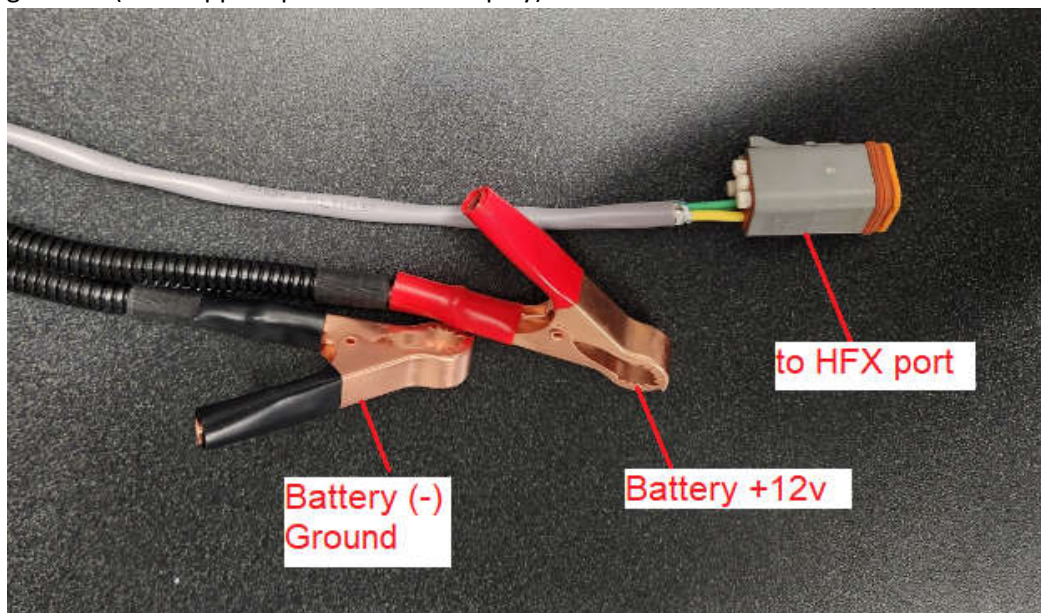
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Procedure #4 – Software v3.12.00

- 6) Install the extension harness into the display harness, and plug the other end into the HFX service port. NOTE: The end going into the HFX module should just have 2 wires (yellow and green)



- 7) Route the extension harness with alligator clips to the chassis battery. Red to +12v, Black to (-) ground. (This supplies power for the display)

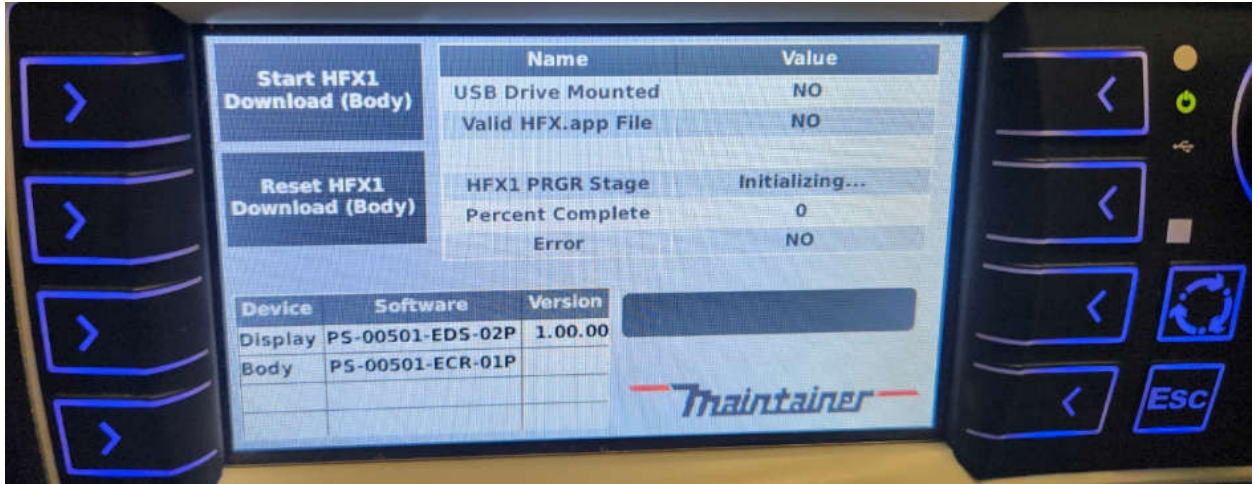




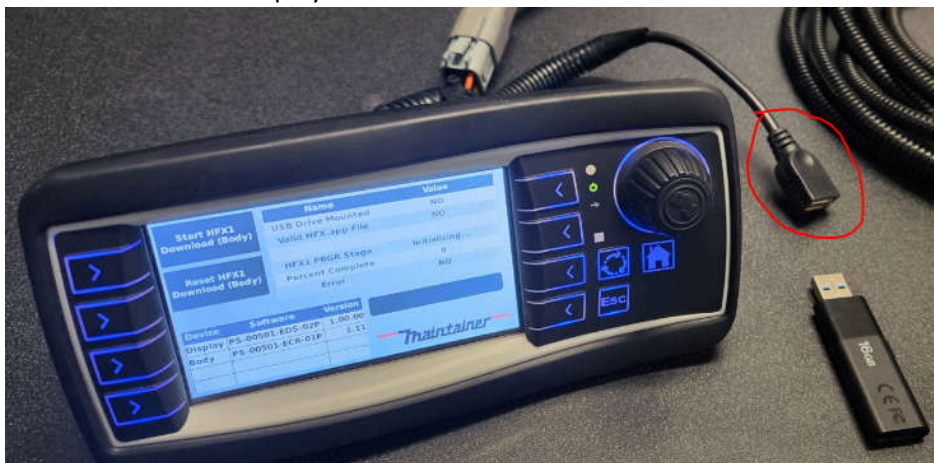
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Procedure #4 – Software v3.12.00

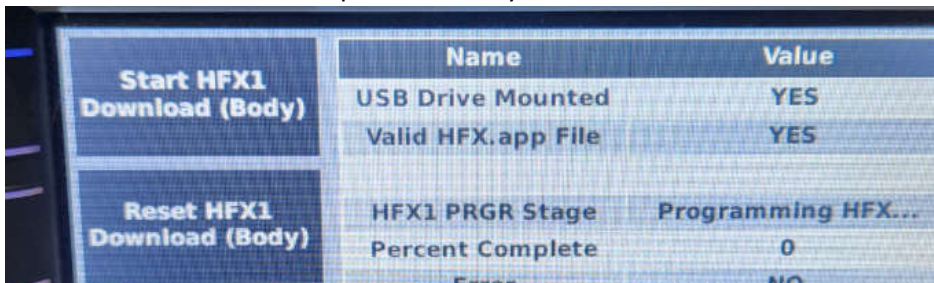
- 8) The display will take ~30 seconds to boot, and should look similar to this



- 9) Confirm the Body software version does NOT say v2.xx.xx.
c. If the Body version listed does say v3.xx, please contact Maintainer before updating.
- 10) Install the provided USB flash drive with updated software V3.12.00. The connection is in the harness behind the display.



- 11) Wait 10 seconds until the top 2 lines read yes





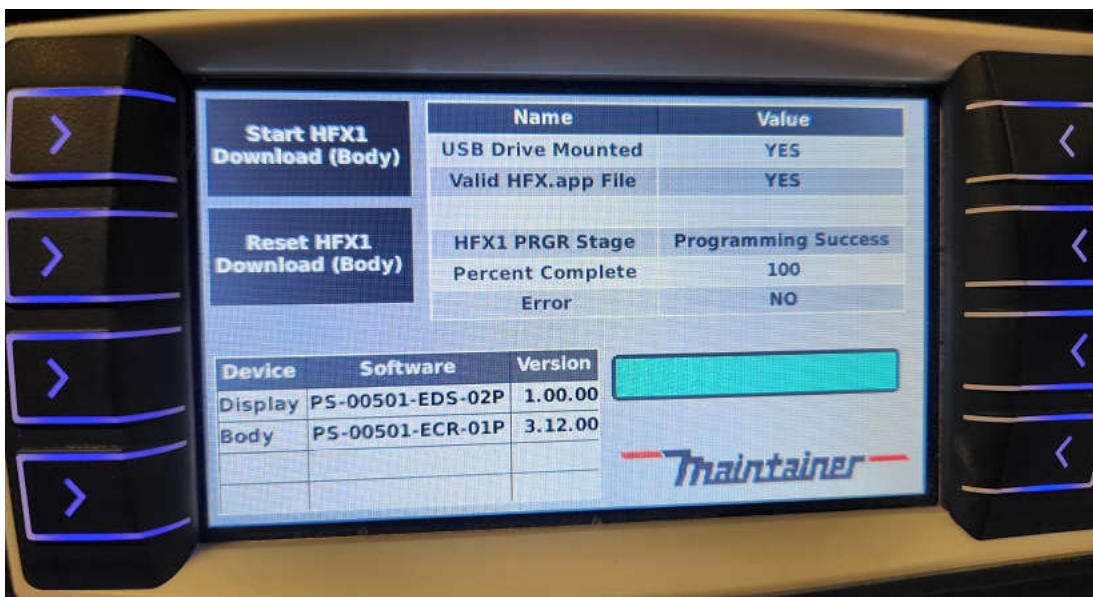
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Procedure #4 – Software v3.12.00

- 12) Press the top left softkey to start the HFX1 Download (Body)



- 13) The upload will take several minutes. When complete the bar at the bottom will be complete, HFX1 PRGR Stage will say "Programming Success" "Percent Complete will be 100". "Error" will be "NO".



- 14) To confirm the software has been uploaded, verify the Body software line reads v3.12.00

- 15) Remove USB drive

- 16) Unplug the harness from the HFX, and reinstall the Deutsch plug

- 17) Disconnect alligator clips from chassis battery.

- 18) Cycle main power switch and ignition.