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CAL FTL 54-010 Version 3

**Subject: ABS Warning Light Illumination with  
ABS code SA 11, SPN 629, FMI 11**

**Models Affected: Freightliner New Cascadia and Western Star 49X  
vehicles built from September 2019 through April 2021**

Our records indicate that you are the owner of certain vehicles and therefore DTNA has decided to share the following documentation with you.

We hope you find this information helpful.

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## Work Instructions

### Subject: ABS Warning Light Illumination with ABS code SA 11, SPN 629, FMI 11

**Models Affected: Freightliner New Cascadia and Western Star 49X  
vehicles built from September 2019 through April 2021**

REVISED: This CAL revises the CAL issued August 10th, 2020. Western Star 49X vehicles have been added to the CAL scope and instructions for downloading and installing software to address the ABS warning light illumination with ABS code SA 11, SPN 629, FMI 11 have replaced the corrective action of the previous CAL.

## General Information

NOTE: ECUs with error codes SPN 520272 FMI 13 should be updated with aftermarket programming before performing the Flash Tool update described below.

DTNA and WABCO have arrived at a long-term corrective plan for the automatic braking system (ABS) warning light illumination with ABS code SA 11, SPN 629, FMI 11

This customer advisory letter provides instructions for updating mBSP electronic control units (ECUs) in response to SPN 629 FMI 11 and SPN 523000 FMI 2 error codes on vehicles equipped with the following part numbers:

ABS ECU Part Numbers Covered by CAL 54-010		
400 864 815 0	400 864 821 0	400 864 825 0
400 864 816 0	400 864 822 0	400 864 826 0
400 864 817 0	400 864 823 0	400 864 827 0
400 864 818 0	400 864 824 0	400 864 828 0
400 867 119 0	400 867 128 0	400 867 130 0
400 867 120 0	400 867 129 0	400 867 131 0
400 867 121 0	400 867 125 0	400 867 132 0
400 867 122 0	400 867 126 0	400 867 133 0

Table 1, ABS ECU Part Numbers Covered by CAL 54-010

## Tool and Software Required

The following tool and software are required to update the vehicle:

1. Nexiq RP1210 Communications Adaptor
2. mBSP Flash Tool (en) V1.30
3. WABCO Toolbox

## Corrective Action Work Instructions

1. Confirm that the vehicle's ABS ECU part number is listed in [Table 1](#).
2. Park the vehicle on a level surface, shut down the engine, and apply the parking brakes. Chock the tires.
3. Download the mBSP Flash tool.

NOTE: The first two figures were created when using Google Chrome as a web browser. Other web browsers (I.E. Internet Explorer, Microsoft Edge, etc.) will look similar.

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- 3.1 Go to the following address: <https://www.dtnaecomponents.com/Downloads/mBSPFlashTool/mBSPFlashToolDownloads.htm>.
- 3.2 Click on the 'Download mBSP Flash Tool' link. See Fig. 1.

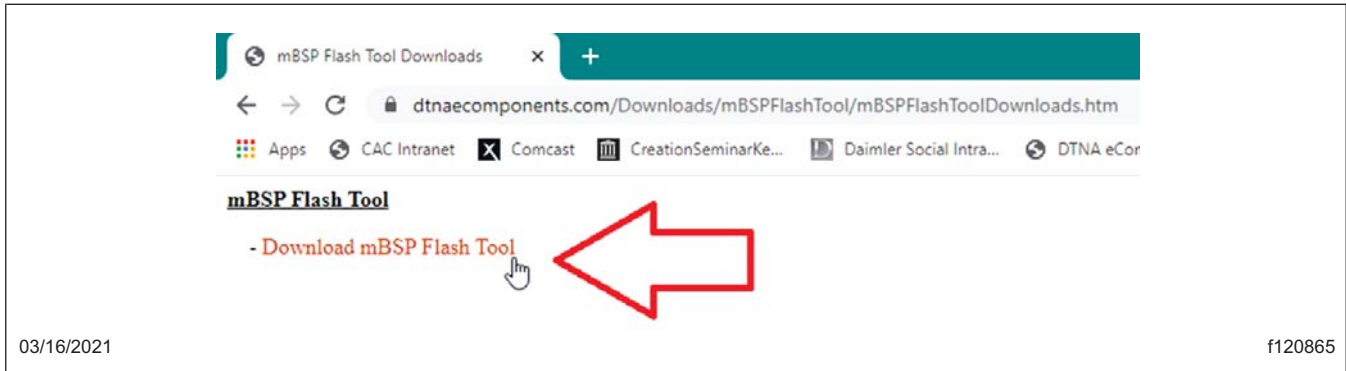


Fig. 1, Download mBSP Flash Tool Link

- 3.3 Save the 'mbspflashtool300en130.EXE' file to a location on your local hard drive. See Fig. 2.

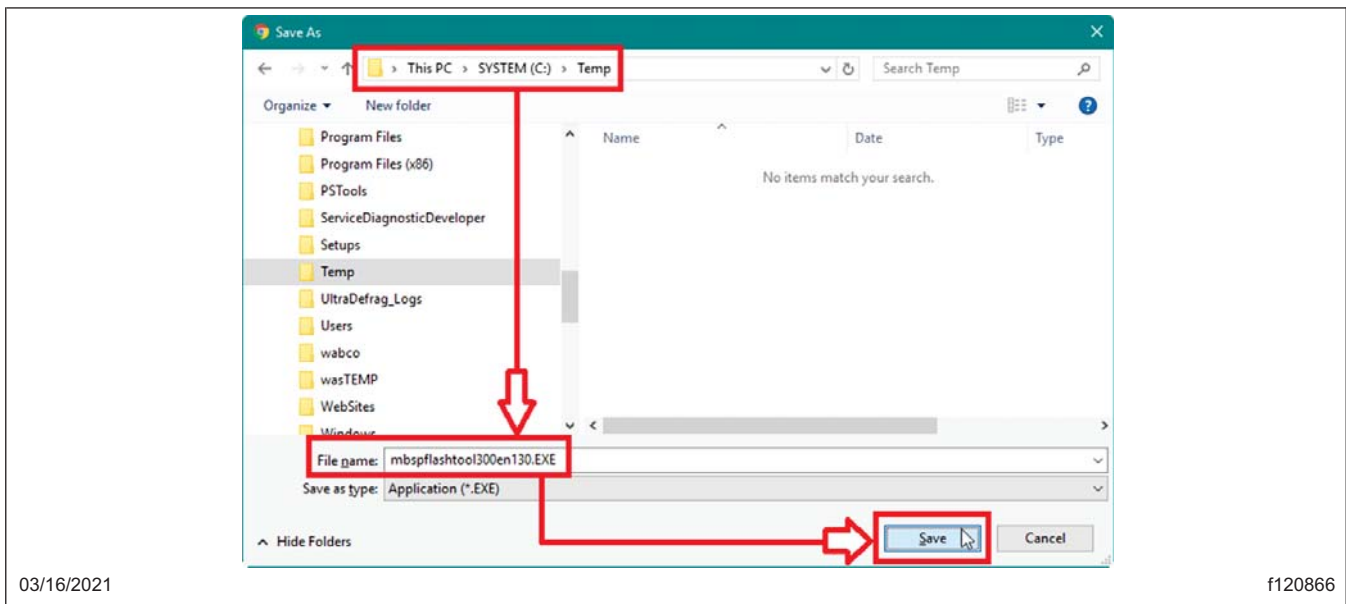
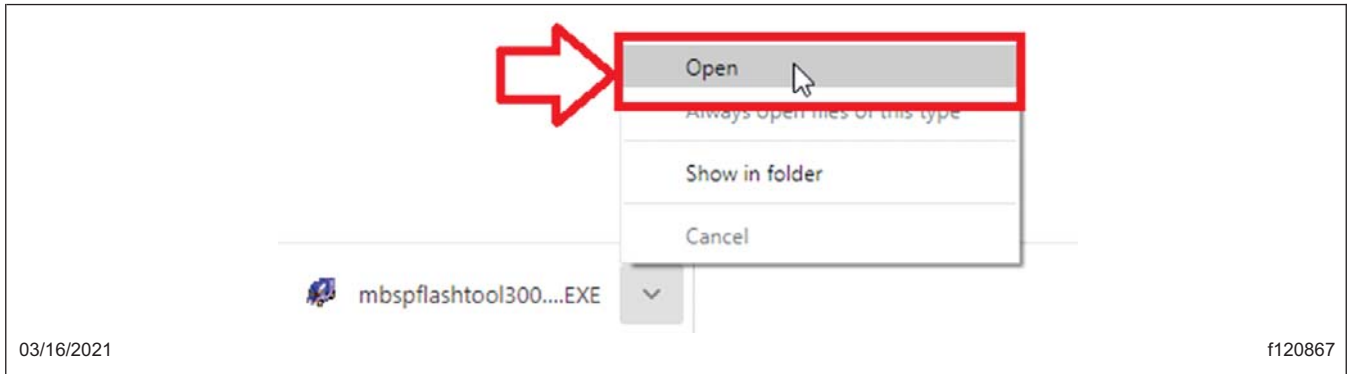


Fig. 2, Saving the mBSP Executable File

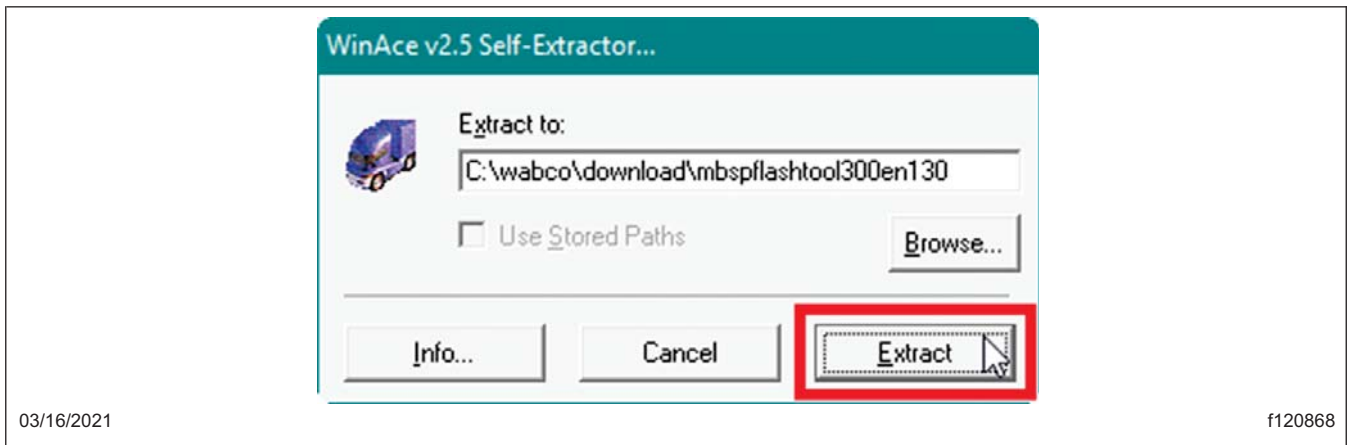
- 3.4 After the 'mbspflashtool300en130.EXE' file has downloaded, select the option to open the file. See Fig. 3.

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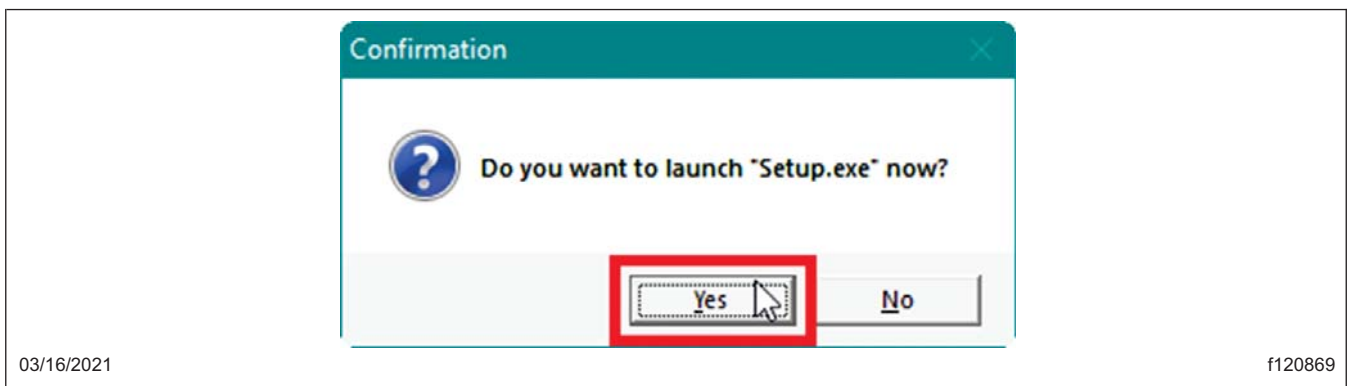
**Fig. 3, Opening the mBSP Executable File**

3.5 Select 'Extract' to extract the files onto your local hard drive. See [Fig. 4](#).



**Fig. 4, Extracting the mBSP Executable File**

3.6 When the extraction is finished, a pop-up window will ask if you want to launch 'Setup.exe.' Select 'Yes.' See [Fig. 5](#).



**Fig. 5, Launching the Set-Up of the mBSP Executable File**

3.7 When asked to 'Select Setup Language,' choose English and select 'OK.' See [Fig. 6](#).

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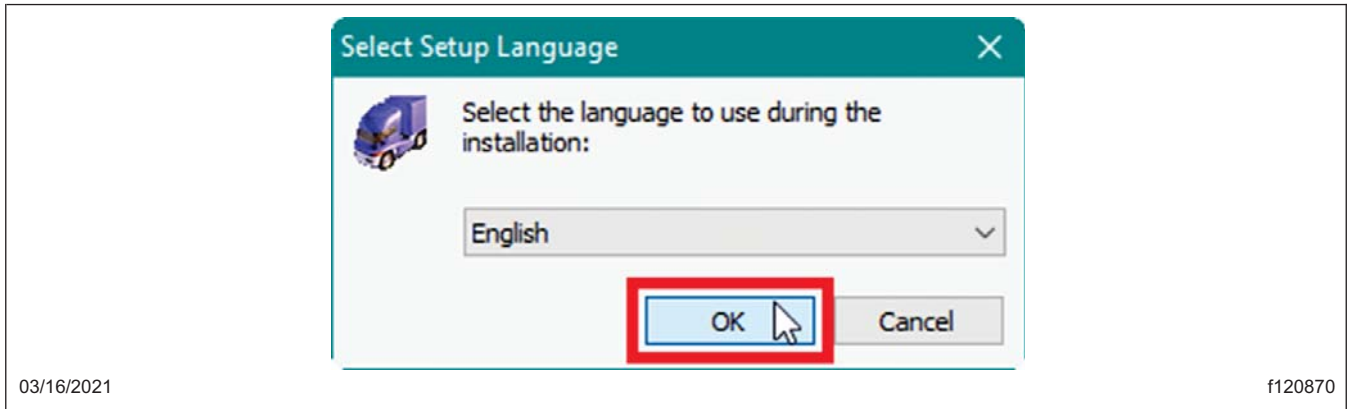


Fig. 6, Selecting the Language English

- 3.8 The pop-up window 'Welcome to the mBSP Flash Tool Setup Wizard' will appear. Select 'Next.' See [Fig. 7.](#)

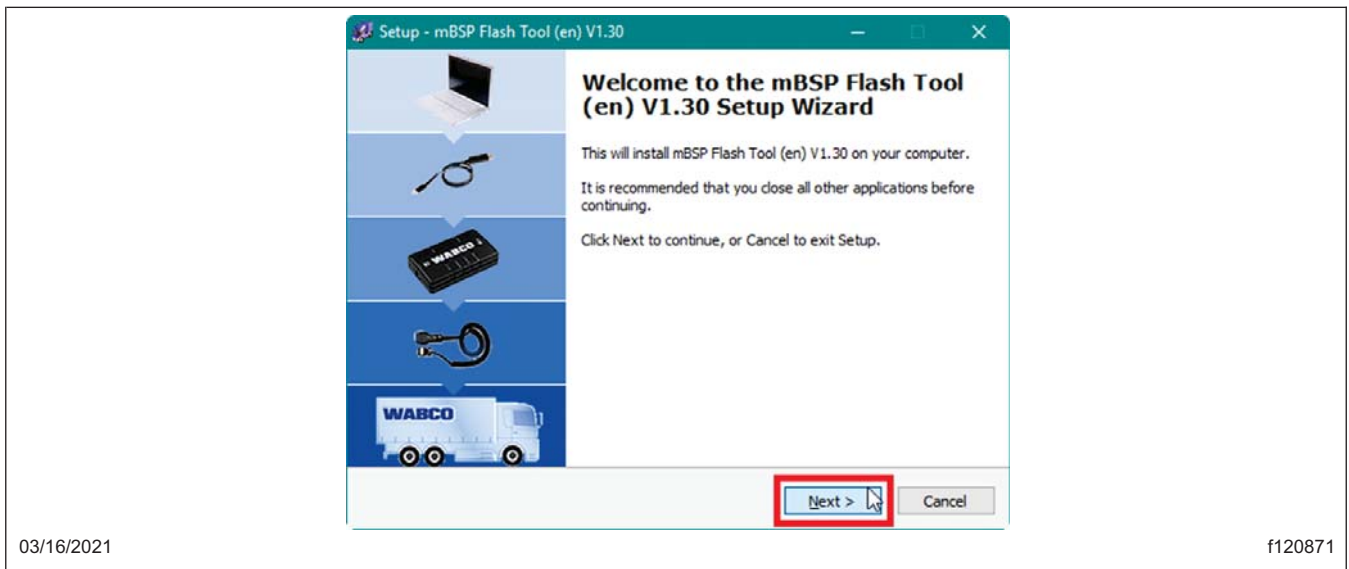
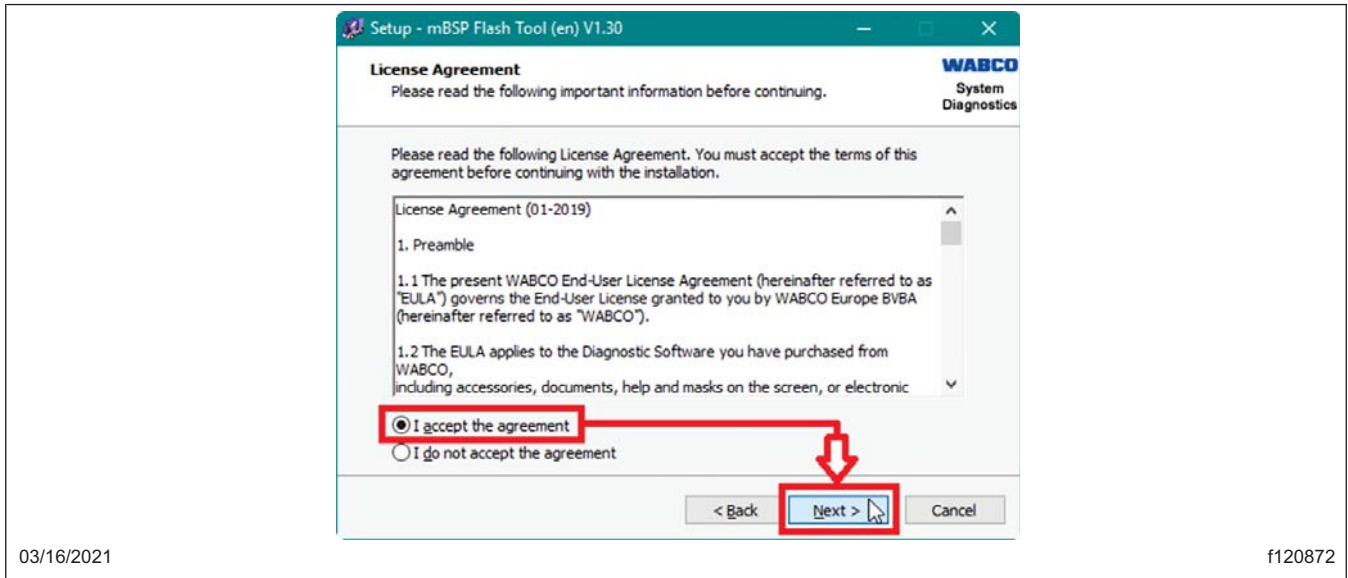


Fig. 7, Navigating the mBSP Flash Tool Setup Wizard

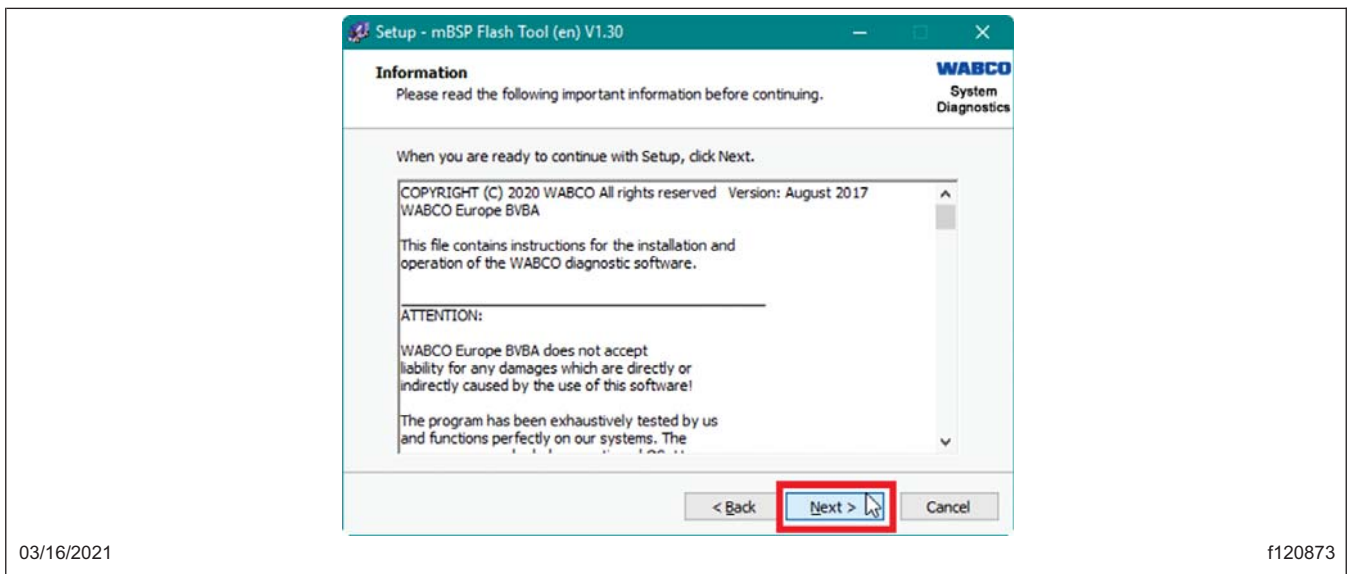
- 3.9 At the 'License Agreement' pop-up window, choose 'I accept the agreement' and then select 'Next.' See [Fig. 8.](#)

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**Fig. 8, Agreeing to the License Agreement**

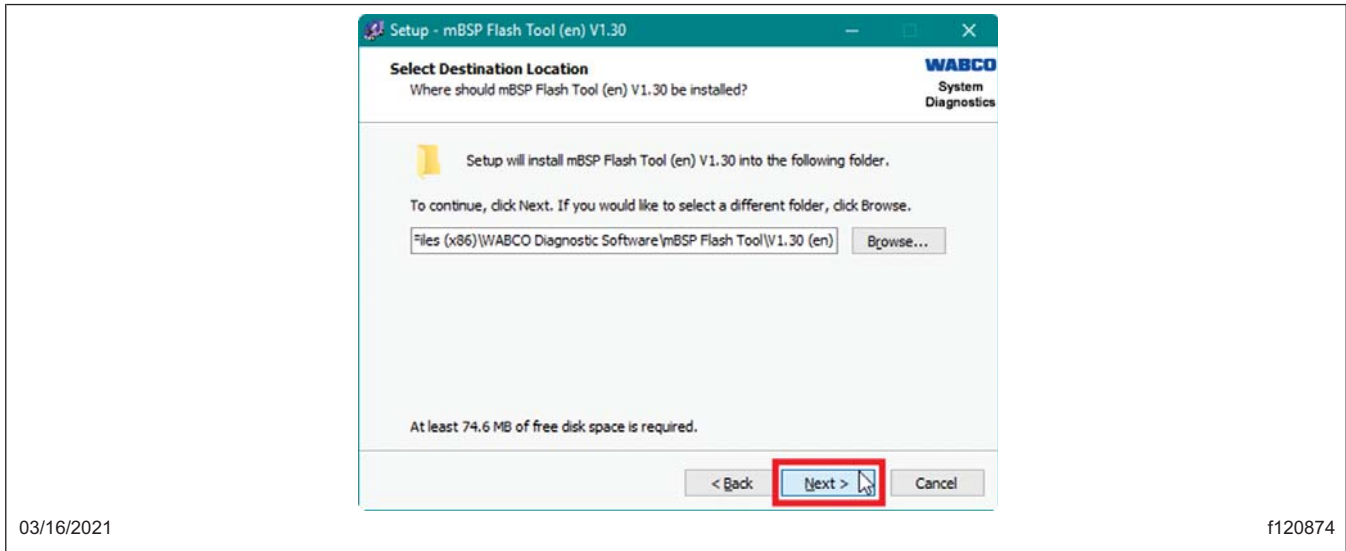
3.10 An 'Information' window will appear; read the information and then select 'Next.' See [Fig. 9](#).



**Fig. 9, Navigating Past the Information Window**

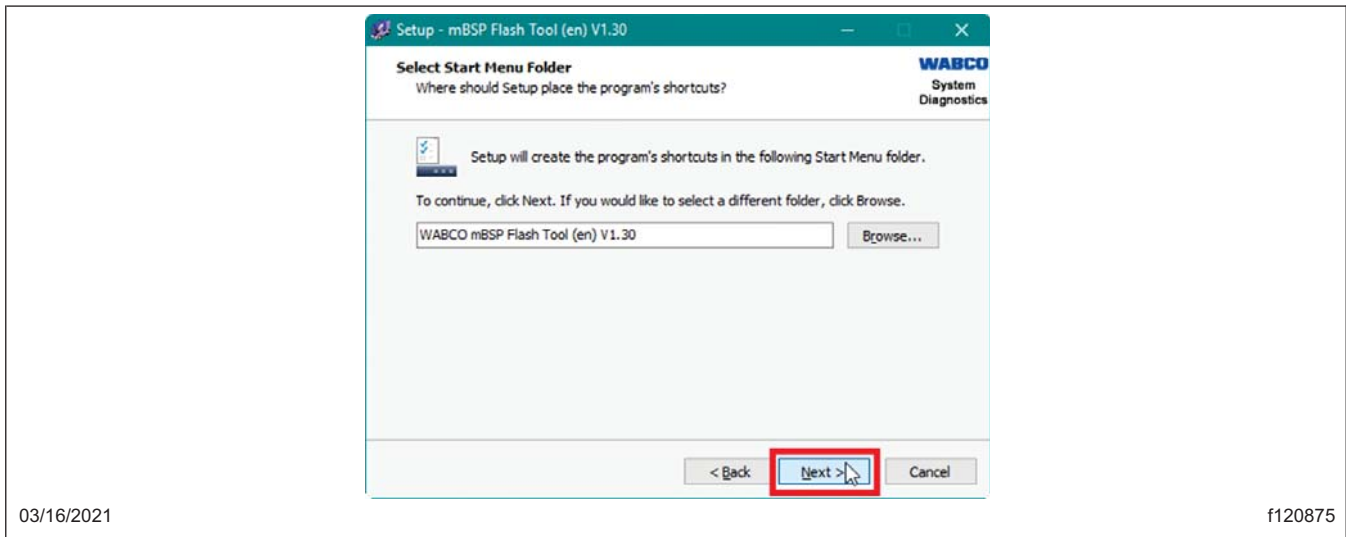
3.11 The 'Select Destination Location' window will appear. Verify the destination and select 'Next.' See [Fig. 10](#).

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**Fig. 10, Selecting the Destination Location of the mBSP Flash Tool**

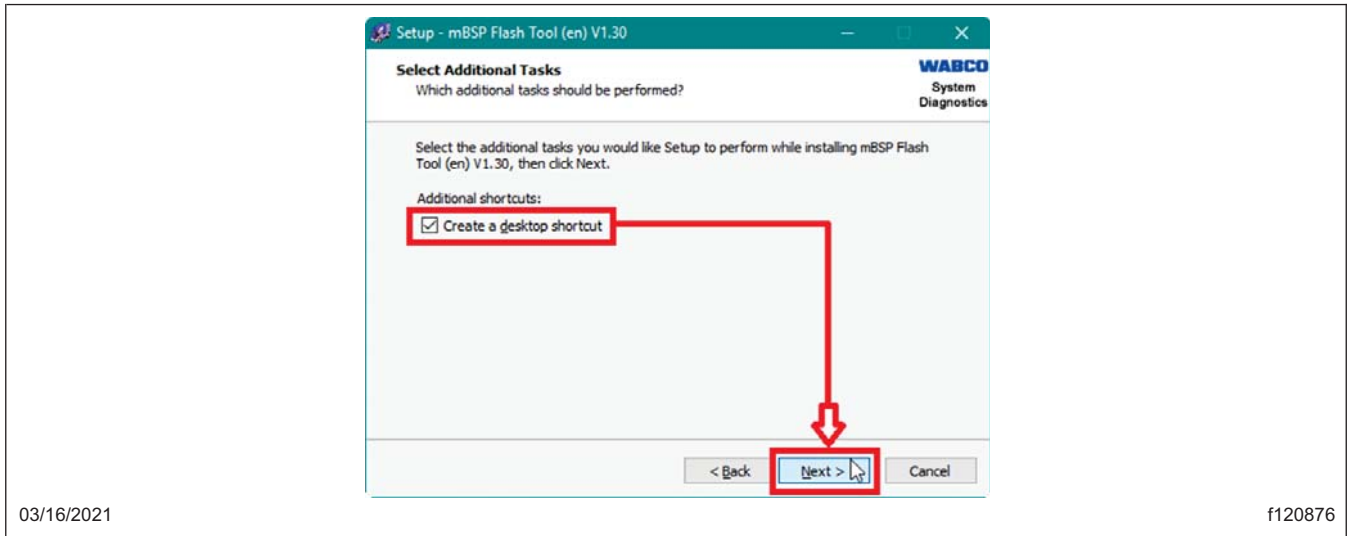
3.12 The 'Select Start Menu Folder' window will appear, select 'Next.' See [Fig. 11](#).



**Fig. 11, Selecting the Start Menu Folder**

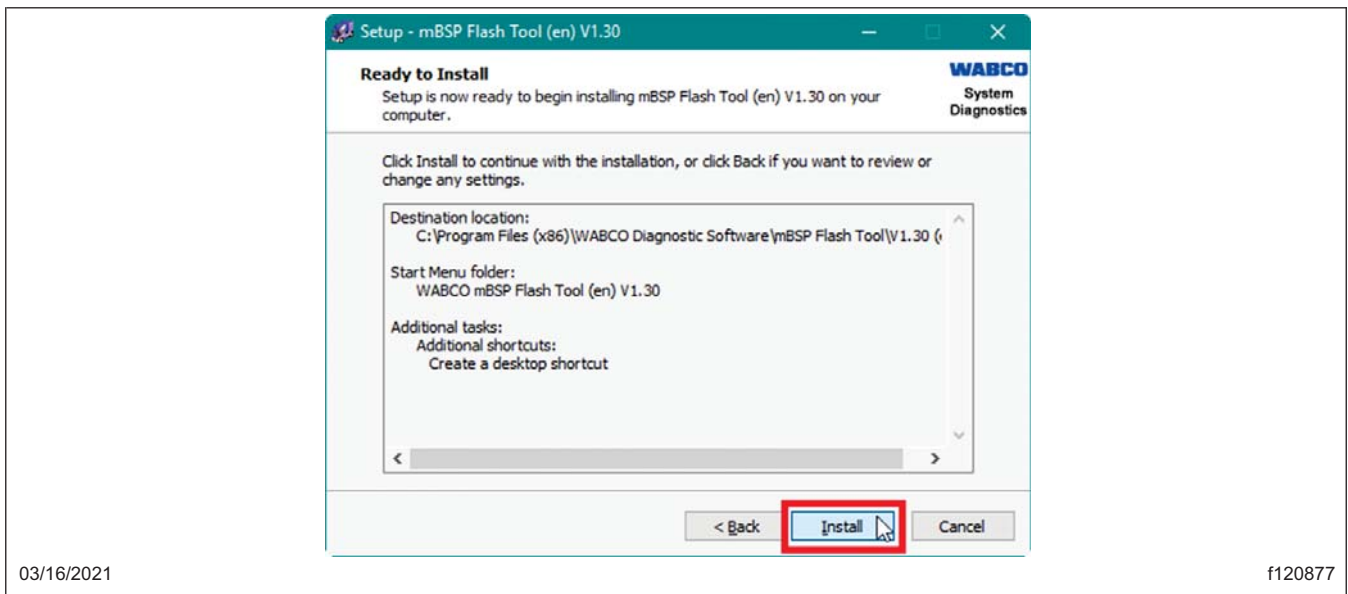
3.13 At the 'Select Additional Tasks' window which will appear next, select 'Create a desktop shortcut' and then select 'Next.' See [Fig. 12](#).

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**Fig. 12, Creating a Desktop Shortcut**

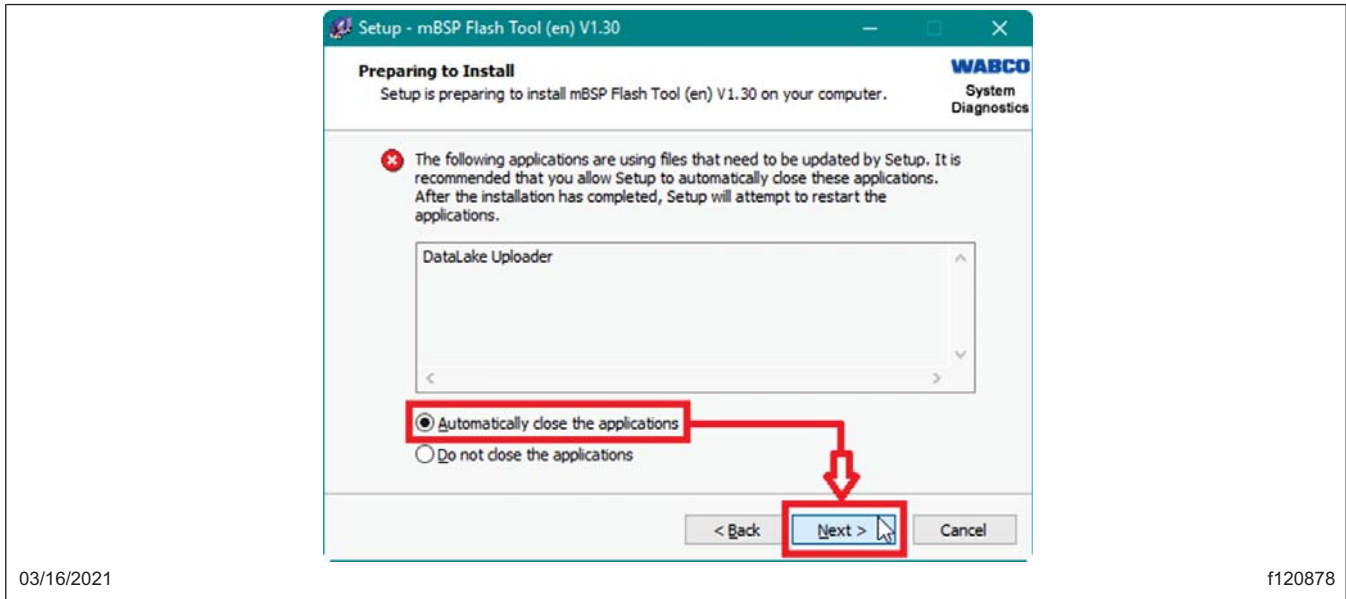
3.14 The 'Ready to Install' window will appear. Select 'Install.' See [Fig. 13](#).



**Fig. 13, Starting the Install Process**

3.15 If a 'Preparing to Install' dialog window appears stating that files needed by the setup program are in use by another application, select 'Automatically close the applications' and then select 'Next.' See [Fig. 14](#).

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**Fig. 14, Closing Applications Blocking Installation**

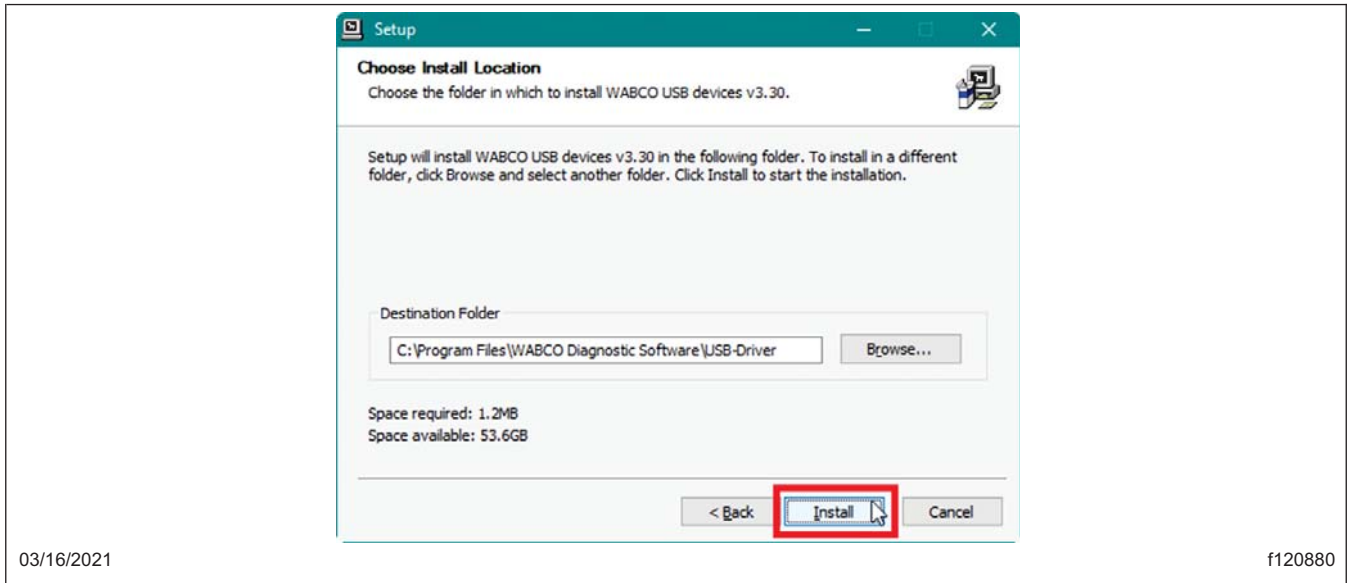
3.16 The setup program will install the mBSP Flash tool. At the 'Welcome to the WABCO USB devices Setup Wizard' window, select 'Next.' See [Fig. 15](#).



**Fig. 15, WABCO USB Devices Setup Window**

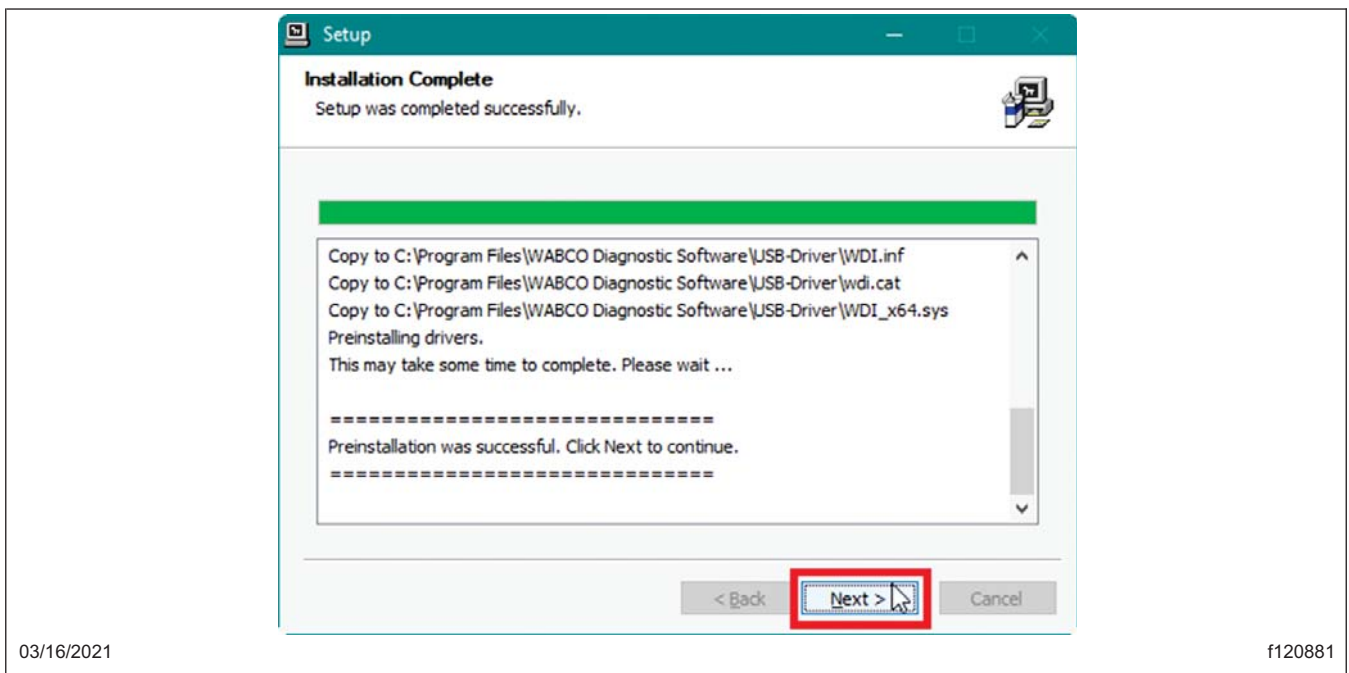
3.17 At the 'Choose Install Location' window, select 'Install.' See [Fig. 16](#). The setup program will install the files onto your local hard drive.

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**Fig. 16, Choosing the Install Location**

3.18 At the 'Installation Complete' window, select 'Next.' See [Fig. 17](#).



**Fig. 17, Acknowledging the Installation is Complete**

3.19 At the next window: 'Completing the WABCO USB devices Setup Wizard,' select 'Finish.' See [Fig. 18](#).

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Fig. 18, Completing the WABCO USB Setup Wizard

3.20 When the 'Setup' dialog box appears, select 'Yes.' See [Fig. 19](#).

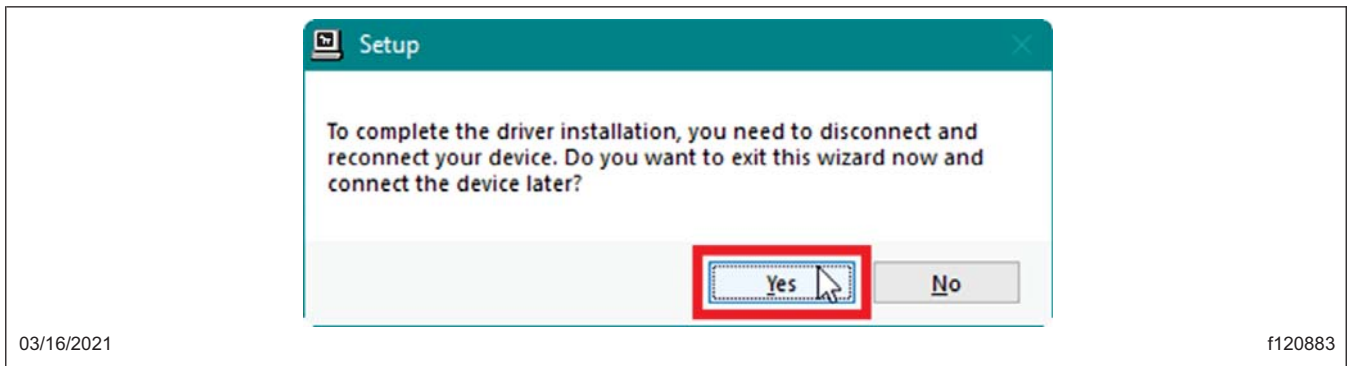


Fig. 19, Completing the Driver Installation Setup

3.21 In the next window: 'Completing the mBSP Flash Tool Setup Wizard' select 'Finish.' See [Fig. 20](#).

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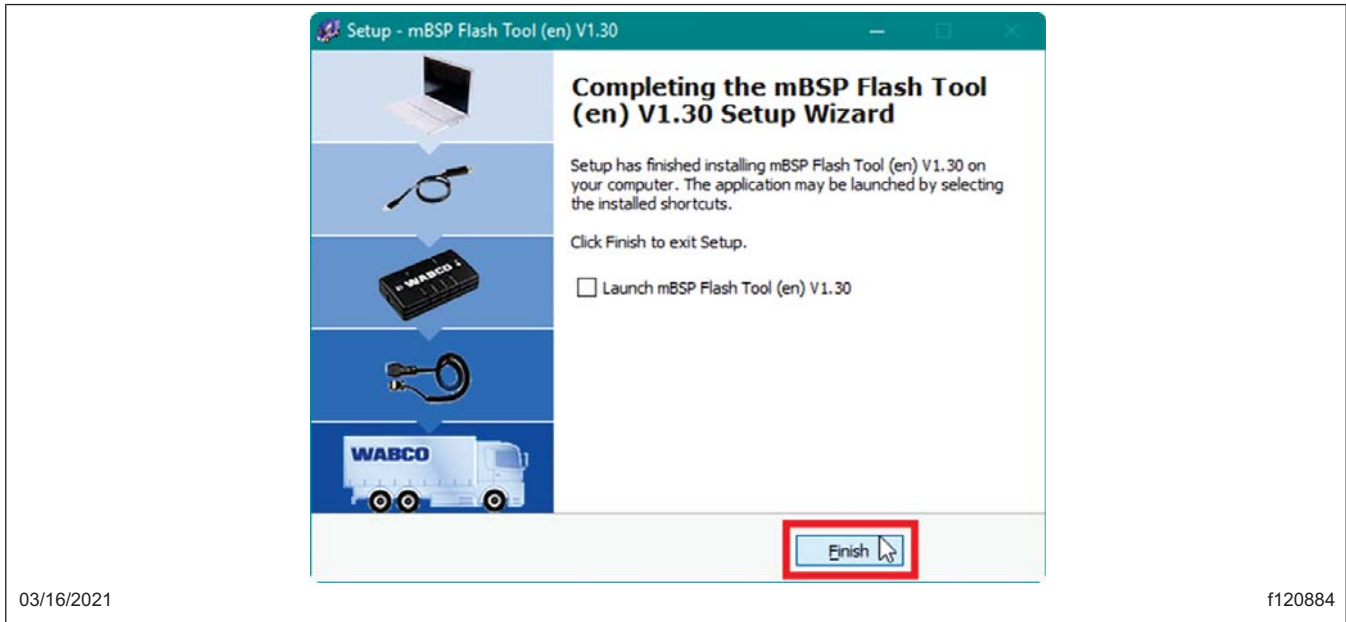


Fig. 20, Completing the mBSP Flash Tool Setup Wizard

4. Turn the ignition switch to the ON position.
5. Connect a Nexiq RP1210 adaptor to the vehicle's Deutsch 9 Pin Connector. The mBSP Flash Tool Software should be closed. If you opened it, close it before connecting the adaptor. No other diagnostic program should be running (ToolBox, DiagnosticLink, etc.).
6. Double-Click the mBSP Flash Tool shortcut titled 'mBSP Flash Tool (en) V1.30' to open the software. See [Fig. 21](#).

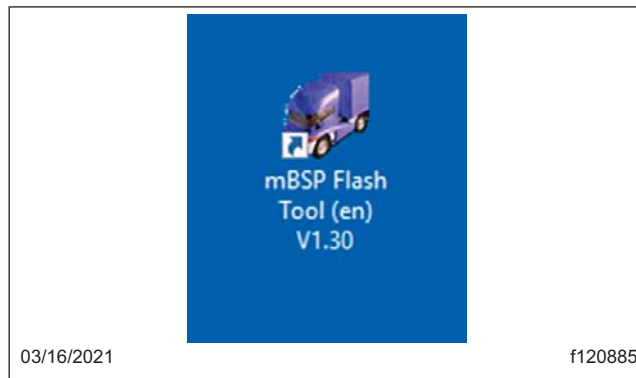


Fig. 21, Opening the mBSP Flash Tool

7. The program will open with a warning note. See [Fig. 22](#). Read the warning note. If the vehicle is secure, select 'Yes'

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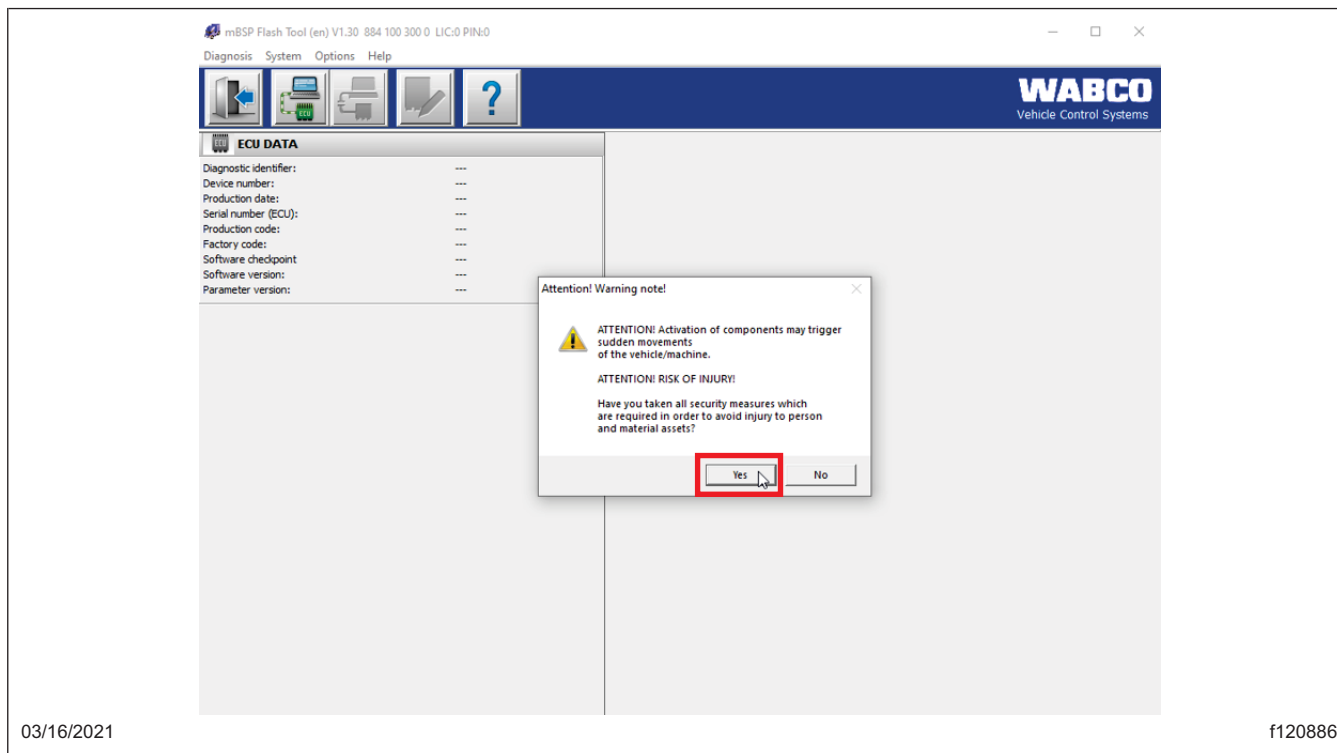


Fig. 22, Accepting the Warning

8. If the ECU does not automatically connect, select the button in [Fig. 23](#) to 'Initialize ECU and switch to diagnostic mode.'

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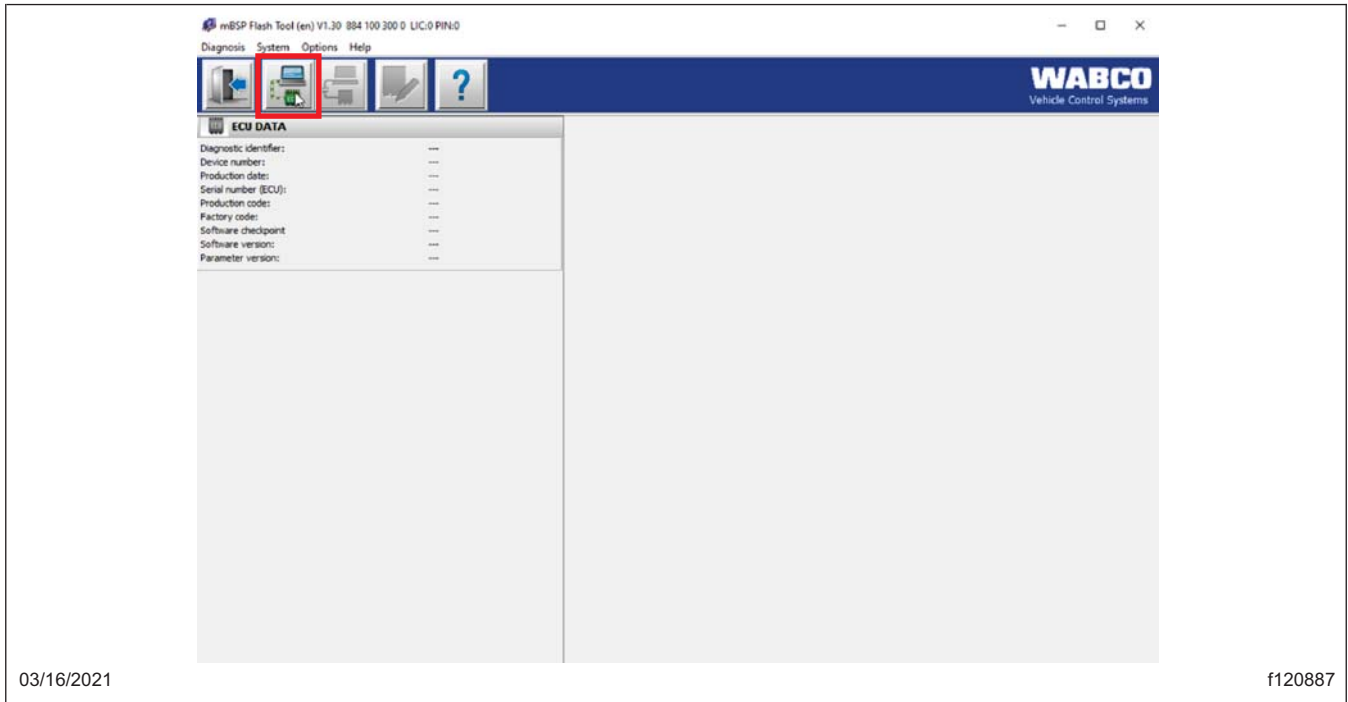


Fig. 23, Initialize ECU and Switch to Diagnostic Mode

9. Select the button in Fig. 24, 'ECU software update,' to begin the ECU update.

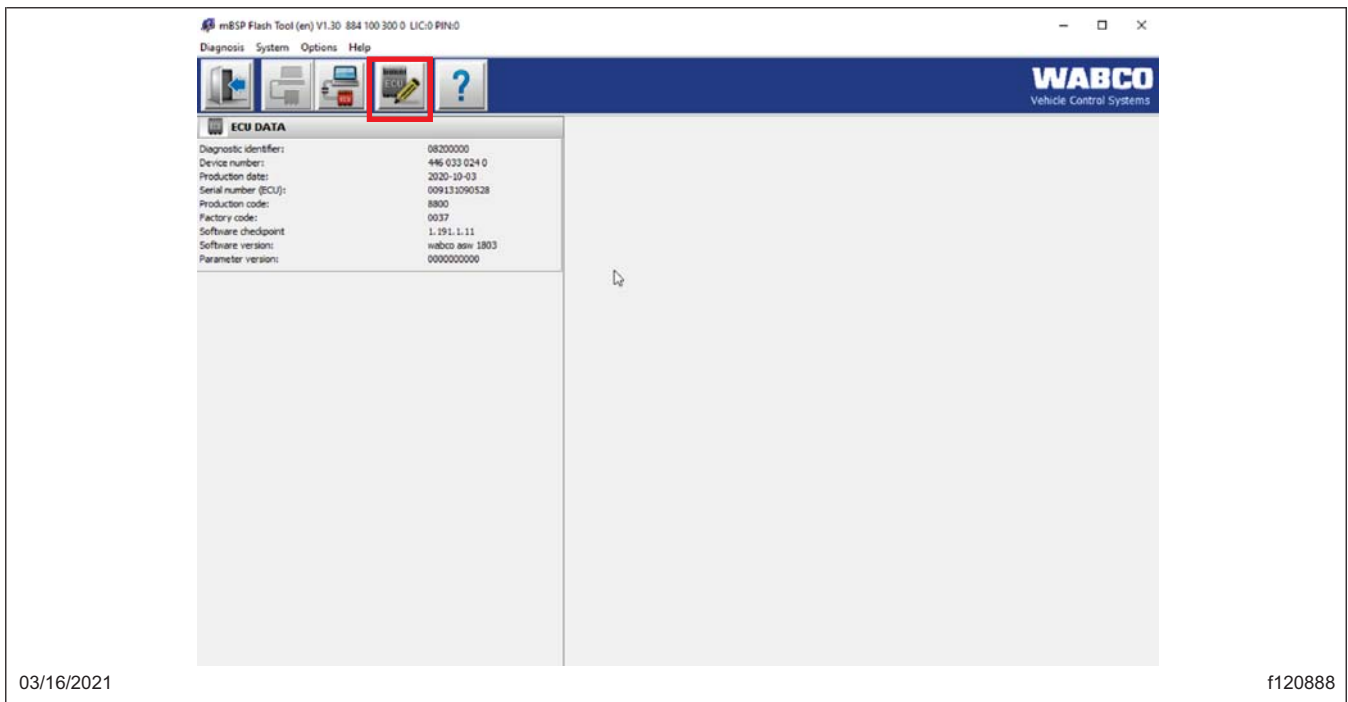
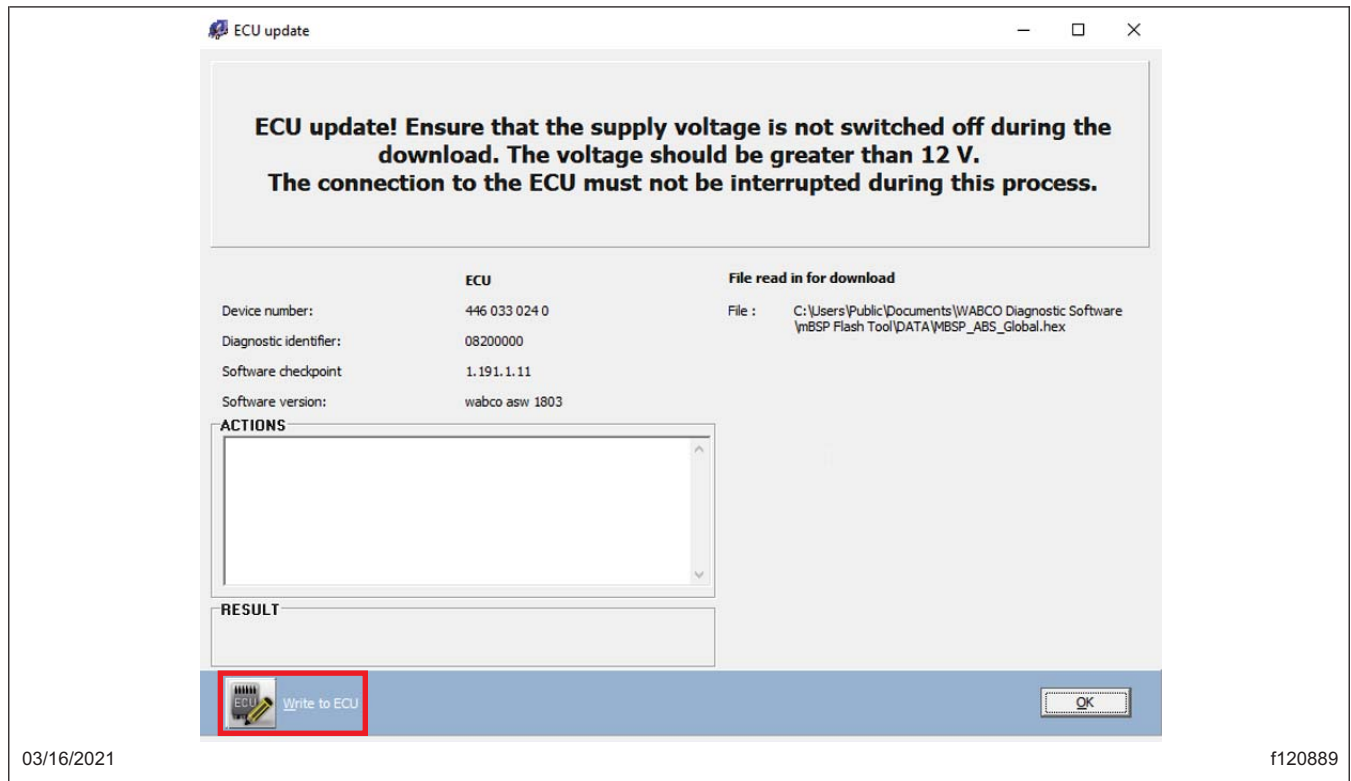


Fig. 24, ECU Software Update

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10. When the 'ECU update' window appears, select "Write to ECU" button to begin the ECU update. See [Fig. 25](#).

The update may take several minutes. Do not disconnect the vehicle, turn the key to the OFF position, or allow the computer to go to sleep during this process.



**Fig. 25, Starting the ECU Update**

NOTE: ESC Calibration will be required after the flashing process is completed.

11. Once the ECU update has completed some ECU errors may be present. Select 'OK' and close out of the Flash Tool and start calibration mode. See [Fig. 26](#).

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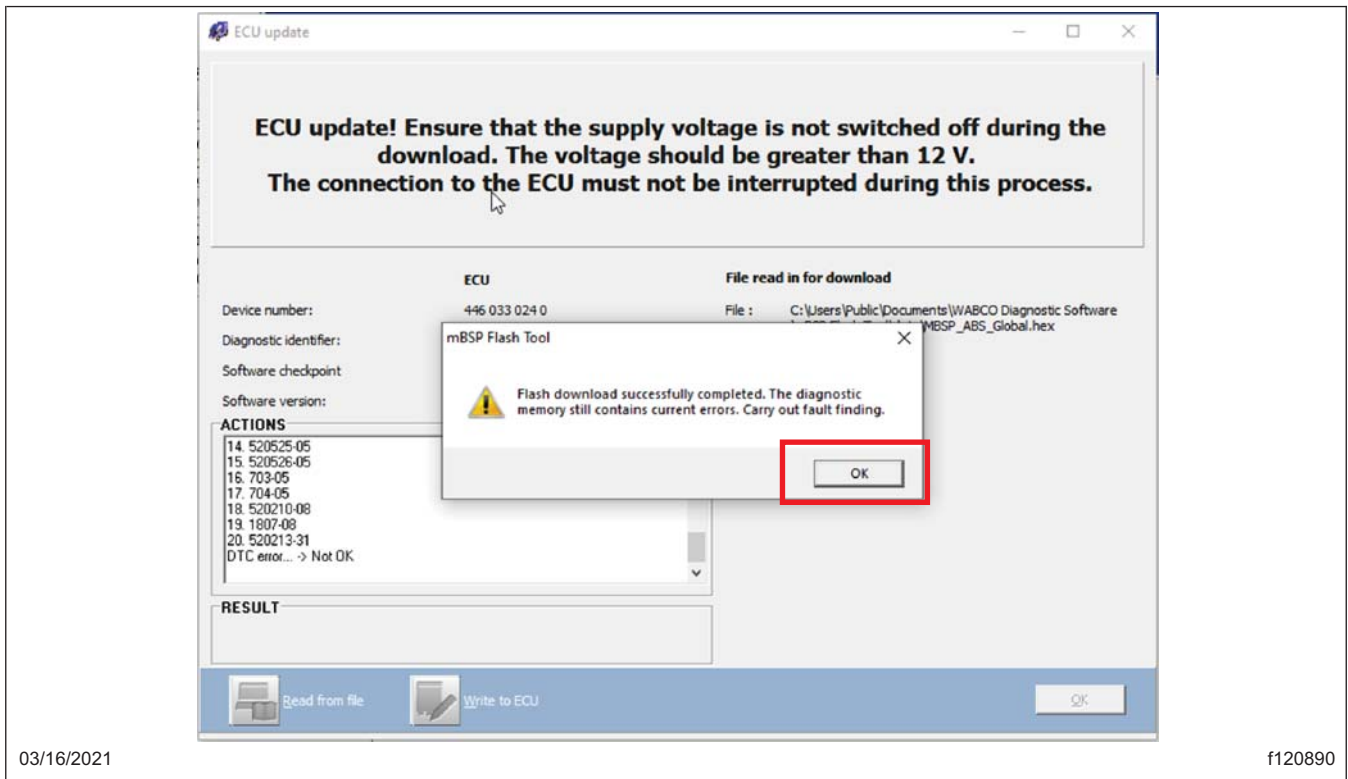


Fig. 26, Carrying Out Fault Finding

12. The ABS ECU is now in ESC calibration mode. Complete the driving portion of the EOL. When enough straight-line driving and a turn is recorded by the ABS ECU, the stability lamp on the dash will go out.
13. Perform a key cycle that completes a truck sleep cycle to save the calibration data.
14. Save a parameter file from the ECU as proof the parameter update was successfully completed and add it to the Vehicle Repair Order. This can be done in WABCO Toolbox. Launch the Toolbox software and select 'Pneumatic ABS/ST Hydr J1939.' See [Fig. 27](#).

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Fig. 27, WABCO TOOLBOX Options

15. Go to the 'Options' menu and select 'Save Parameters to File.' See [Fig. 28](#).

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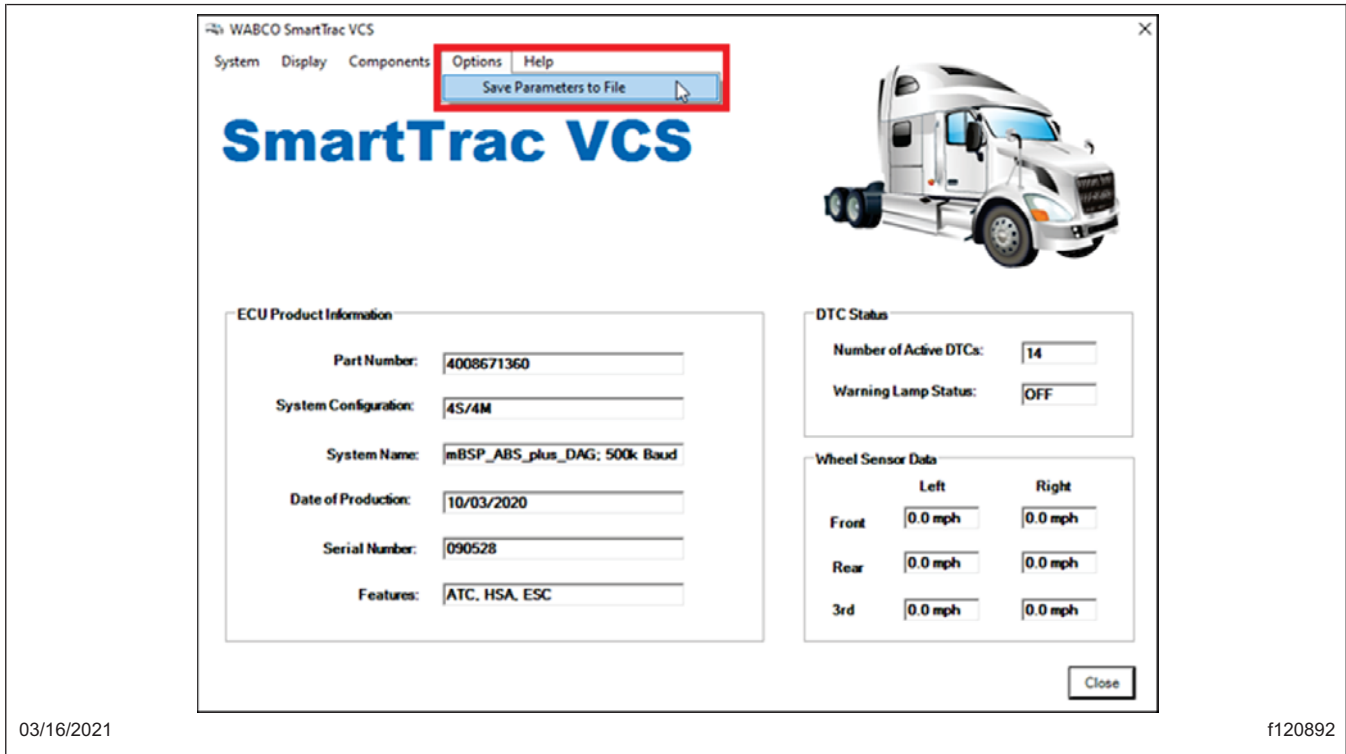


Fig. 28, Choosing the Install Location

16. The ABS ECU update is now complete. Verify that no faults are present and that the ABS ECU part numbers have been updated as shown in [Table 2](#).

ABS ECU Part Number Changes								
Original Part Number	To	New Part Number	Original Part Number	To	New Part Number	Original Part Number	To	New Part Number
400 864 815 0	>>	400 864 831 0	400 864 821 0	>>	400 864 831 0	400 864 825 0	>>	400 864 831 0
400 864 816 0	>>	400 864 832 0	400 864 822 0	>>	400 864 832 0	400 864 826 0	>>	400 864 832 0
400 864 817 0	>>	400 864 833 0	400 864 823 0	>>	400 864 833 0	400 864 827 0	>>	400 864 833 0
400 864 818 0	>>	400 864 834 0	400 864 824 0	>>	400 864 834 0	400 864 828 0	>>	400 864 834 0
400 867 119 0	>>	400 867 135 0	400 867 128 0	>>	400 867 135 0	400 867 130 0	>>	400 867 135 0
400 867 120 0	>>	400 867 136 0	400 867 129 0	>>	400 867 136 0	400 867 131 0	>>	400 867 136 0
400 867 121 0	>>	400 867 137 0	400 867 125 0	>>	400 867 137 0	400 867 132 0	>>	400 867 137 0
400 867 122 0	>>	400 867 138 0	400 867 126 0	>>	400 867 138 0	400 867 133 0	>>	400 867 138 0

Table 2, ABS ECU Part Number Changes