

August 2021
SF622A
SECOND REVISED NOTICE

Subject: Cascadia/49X ABS MBSP+ Controller Software Update

Models Affected: Specific Model Year 2019-2022 Freightliner Cascadia, and Western Star 49X vehicles, manufactured September 12, 2018, through March 22, 2021.

General Information

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Trucks Division, and wholly owned subsidiary Western Star Truck Sales, Inc., is initiating Field Service Campaign SF622A to modify the vehicles mentioned above.

Certain vehicles have a WABCO Anti-Lock Braking System (ABS) controller that logs excessive 629-11 fault codes which subsequently lead to additional downstream fault codes.

The ABS controller will receive a software update to eliminate erroneous fault codes and ensure its proper function. After the software update, the truck will require a recalibration drive for the steering angle sensor.

There are approximately 96,195 vehicles involved.

REVISION: The work instructions have been revised.

2ND REVISION: For vehicles with an 8x4 configuration, a note has been added to page 26.

Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

Please contact Warranty Campaigns for consideration of additional charges prior to performing the repair.

Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR261).

Replacement Parts

This is a software update; no replacement parts required.

NOTE: In the event that WABCO determines a replacement ECU is needed, it will be provided at no cost.

Removed Parts

U.S. and Canadian Dealers, please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts. Export distributors, please destroy removed parts unless otherwise advised.

Labor Allowance

Table 1 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
SF622A	Update ABS ECU Software	0.6	996-F095A	12-Repair Recall/Campaign

Table 1

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IMPORTANT: When the campaign has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the gray completion sticker provided in the field service kit (Form WAR261). If the vehicle does not have a base completion label, clean a spot on the appropriate location of the vehicle and first attach the base completion label (Form WAR259). If a field service kit is not required or there is no completion sticker in the kit, write the campaign number on a blank sticker and attach it to the base completion label.

Claims for Credit

You will be reimbursed for your labor by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

- Claim type is **Field Service Campaign**.
- In the Campaign field, enter the campaign number and appropriate condition code (**SF622-A**).
- In the Primary Failed Part field, enter **25-SF622-000**.
- In the event that WABCO determines a replacement ECU is needed, it will be provided at no cost.
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table. Administrative time will be included automatically as SRT 939-6010A for 0.3 hours.
- The VMRS Component Code is **F99-999-005** and the Cause Code is **A1 - Campaign**.
- This Field Service Campaign will **terminate on August 31, 2022**. Dealers will be notified of any changes to the termination date via Important Campaign Information Letter posted on DTNACConnect.com.

IMPORTANT: OWL must be viewed prior to beginning work to ensure the vehicle is involved and the campaign has not previously been completed. Also, check for a completion sticker before beginning work.

All claims must be submitted within 30 days of the repair and within 30 days of the termination date of the campaign.

For questions, U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNACConnect.com/WSC, or the Customer Assistance Center at (800) 385-4357. Export distributors, submit a Web inquiry or contact your International Service Manager.

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Copy of Notice to Owners

Subject: Cascadia/49X ABS MBSP+ Controller Software Update

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Trucks division, and wholly owned subsidiary Western Star Truck Sales, Inc., is initiating Field Service Campaign SF622A to modify specific Model Year 2019-2022 Freightliner Cascadia, and Western Star 49X vehicles, manufactured September 12, 2018, through March 22, 2021.

Certain vehicles have a WABCO Anti-Lock Braking System (ABS) controller that logs excessive 629-11 fault codes which subsequently lead to additional downstream fault codes.

The ABS controller will receive a software update to eliminate erroneous fault codes and ensure its proper function. After the software update, the truck will require a recalibration drive for the steering angle sensor.

Please contact an authorized DTNA dealer to arrange to have the campaign performed and to ensure that parts are available at the dealership. To locate an authorized dealer, go to NorthAmerica.DaimlerTruck.com/Contact-Us/. Scroll down to "Locate a Dealer," and select the appropriate brand. The campaign will take approximately one hour and will be performed at no charge to you.

This Field Service Campaign will **terminate on August 31, 2022**. Please make sure the campaign is completed prior to this date. Work completed after this date will be done at the customer's expense.

As stated in the terms of your express limited warranty, Daimler Truck North America LLC will not pay for any damage caused by failure to properly maintain your vehicle. Daimler Truck North America LLC considers the work necessary under this campaign to be proper maintenance and will, therefore, not pay for any damage to your vehicle caused by your failure to have the repairs that are the subject of this campaign performed in a reasonable time.

Contact the Warranty Campaigns Department at (800) 547-0712, e-mail address DTNA.Warranty.Campaigns@Daimler.com, or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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Work Instructions

Subject: Cascadia/49X ABS MBSP+ Controller Software Update

Models Affected: Specific Model Year 2019-2022 Freightliner Cascadia, and Western Star 49X vehicles, manufactured September 12, 2018, through March 22, 2021.

REVISION: The work instructions have been revised.

2ND REVISION: For vehicles with an 8x4 configuration, a note has been added to page 26.

ABS ECU Software Update

1. Check the base label (Form WAR259) for a campaign completion sticker for SF622 (Form WAR261). The base label is usually located on the passenger-side door, about 12 inches (30 cm) below the door latch. If a sticker is present for campaign SF622, no work is needed. If there is no sticker, proceed with the steps below.
2. Confirm that the vehicle's ABS ECU part number is listed in [Table 2](#).

ABS ECU Part Numbers Covered by SF622		
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 2, ABS ECU Part Numbers Covered by SF622

3. Park the vehicle on a level surface, shut down the engine, and apply the parking brakes. Chock the tires.
IMPORTANT: For ECUs recently installed in the vehicle, cycle the ignition and allow several minutes before proceeding with the update process.
4. Check for fault code SPN 520272 FMI 13, **Steering Ratio Parameters-Out of Calibration**.
(This fault code **MUST** be inactive before downloading the flash tool.)
If Active: Refer to **Service Solution 1033682**, *New Cascadia ABS Fault code SPN* for information.
If Not Active: Proceed to Step 5.

NOTE: For issues regarding 'Flash Tool' download and installation process, call WABCO at **1-855-228-3203**, or email at wnacustomer@wabco-auto.com.

5. An mBSP flash tool software version 1.41 (See [Fig. 1](#)), WNA DiagLib Version **V4.0.0.17** is required to perform this ABS ECU software update procedure. If the mBSP flash tool software is already installed, check the mBSP flash tool software version; go to 'Help,' then select 'Info about....' See [Fig. 2](#) and [Fig. 3](#).

Is the mBSP flash tool software version 1.41, WNA DiagLib version **V4.0.0.17** installed in the laptop being used for this update?

YES → Go to step 8, page 18.

NO → Download the latest version of the mBSP Flash tool package as follows.

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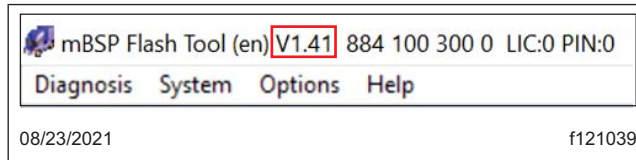


Fig. 1, Confirming mBSP Flash Tool Software Version (1.41)

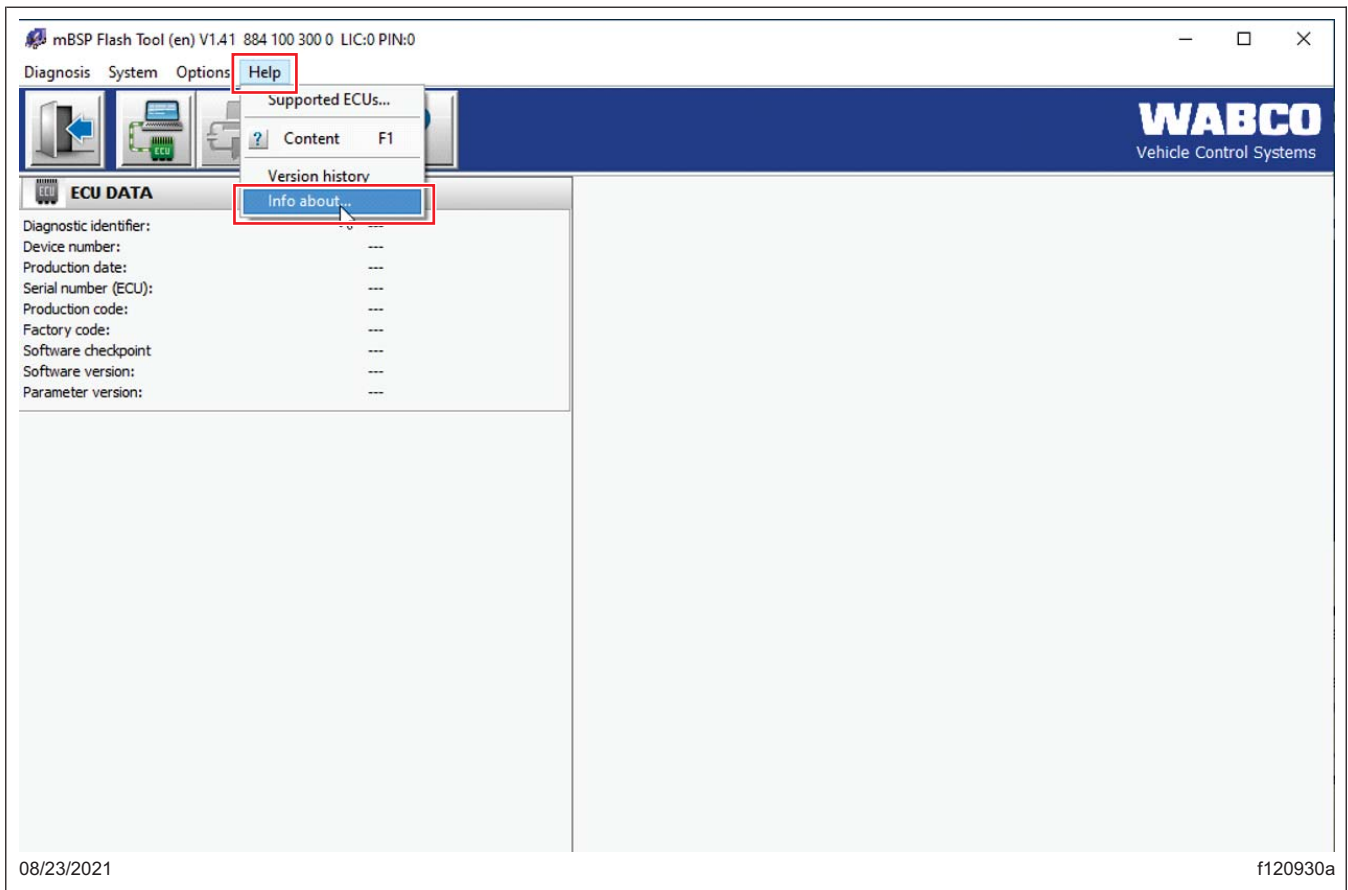


Fig. 2, Opening Info about Diagnostic Software Window

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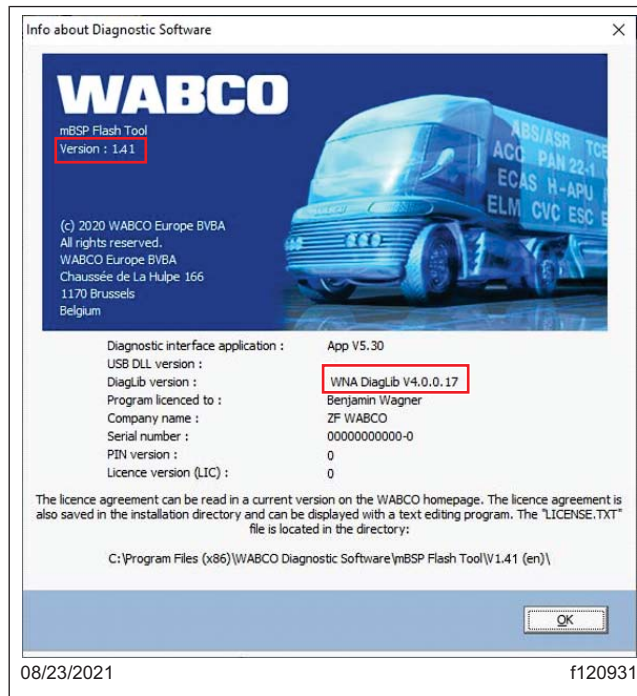


Fig. 3, Info about Diagnostic Software Window

- 5.1 Go to WABCO website https://www.wabco-auto.com/americas_en/Get-in-touch/Literature.

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5.2 Scroll down to the 'Downloads' section, and select 'mBSP Flash Tool' link. See [Fig. 4](#).

Downloads	
Publication Number	Publication Name
TP18054	Application Software Update for WABCO OnGuard® In-Cab Dash Display Unit with OnSide®
TP18032	OnGuardACTIVE® ECR 2.3 Software Update
TP18045	OnLaneALERT™ VDC2 Flash Tool
TP17135	250kBd DTNA Non OnGuardACTIVE®
TP16147	500kBd DTNA Non OnGuardACTIVE® ECR 1.7 Software Update
TP1784	PLC Gateway Disable
None	Bootloader and Application Software Update for the WABCO OnGuard® Display
TP19054	Updating ABS ECU ATC Parameters on Vehicles Equipped with Part Numbers 400 860 851 0 & 400 860 901 0
TP19072	mBSP Flash Tool

03/31/2021 f120923

Fig. 4, mBSP Flash Tool Link in Downloads Section

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5.3 Save the 'mBSP-Flash-Tool.zip' file to a location on the local hard drive. See [Fig. 5](#).

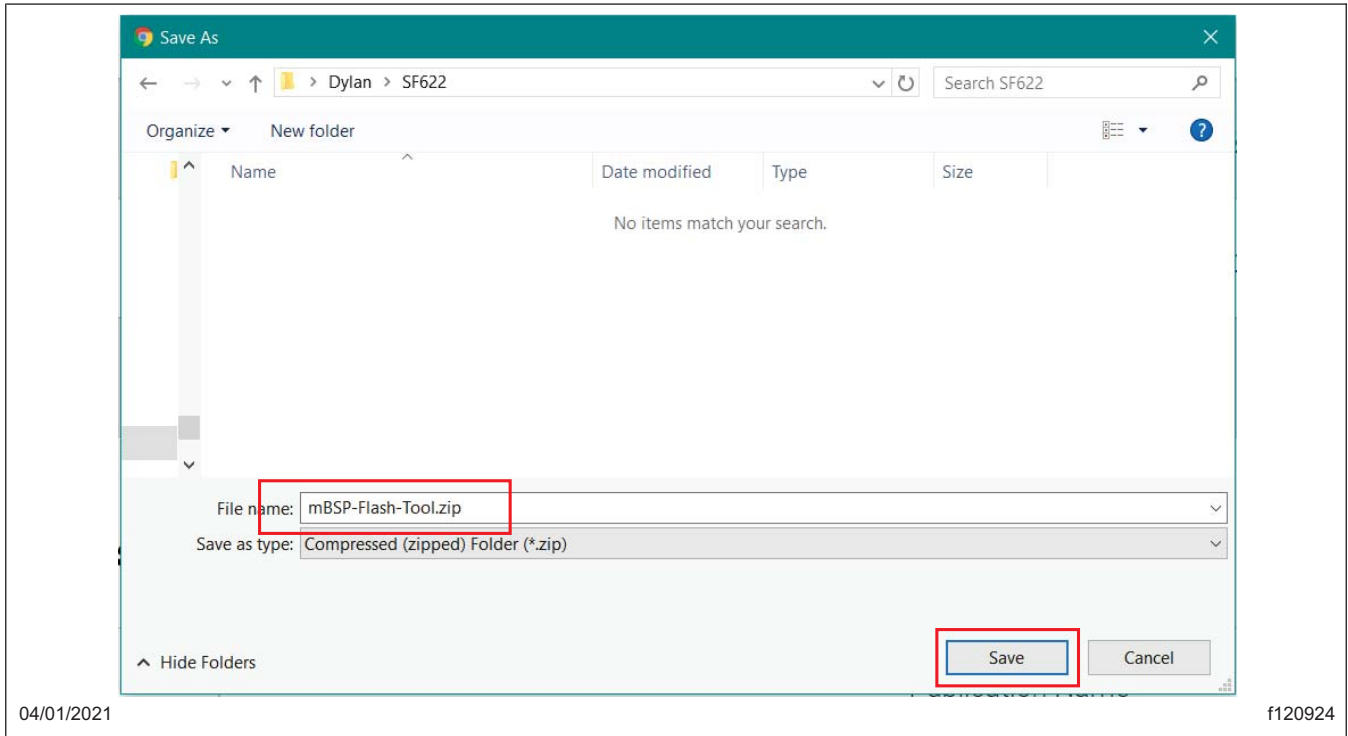


Fig. 5, Saving mBSP Flash Tool Package

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6. Right click on the 'mBSP-Flash-Tool.zip' zip file and select 'Extract all.' See [Fig. 6](#).

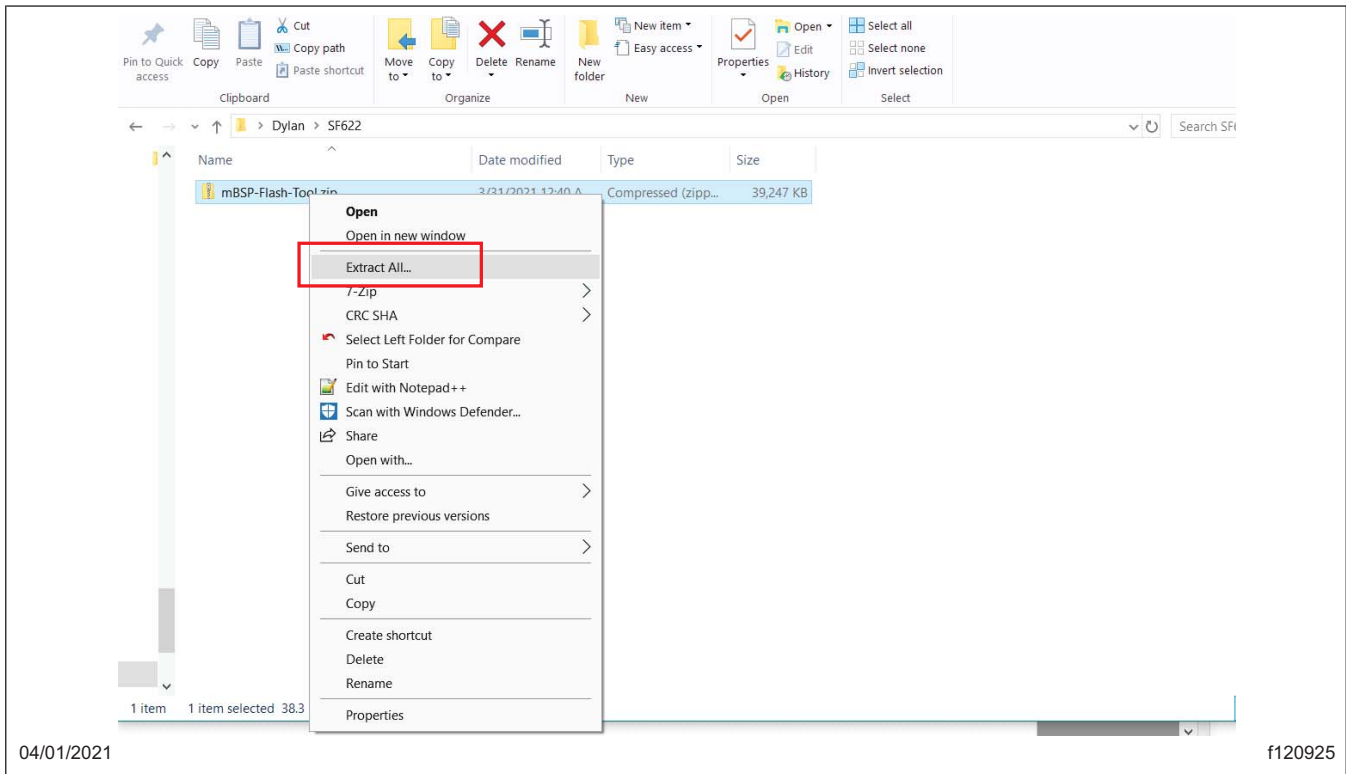


Fig. 6, Extracting the mBSP-Flash-Tool.zip File

IMPORTANT: If 'mBSP Flash Tool (en) V1.30,' or any version other than V1.41 is installed on the laptop, uninstall it. Delete setup files of any other version such as 'mbpsflashtool300en130a.EXE' from the laptop.

NOTE: For additional information regarding the mBSP flash tool installation, minimizing laptop disruption during the installation process, and for links related to adaptor driver software, visit DTNA website, <https://dtnacomponents.com/Downloads/mBSPFlashTool/mBSPFlashTool.htm>.

7. Install the mBSP Flash tool as follows.

7.1 In the extracted folder 'mBSP Flash Tool,' double-click on the 'mbpsflashtool300en141a.EXE' file. See [Fig. 7](#) and [Fig. 8](#).

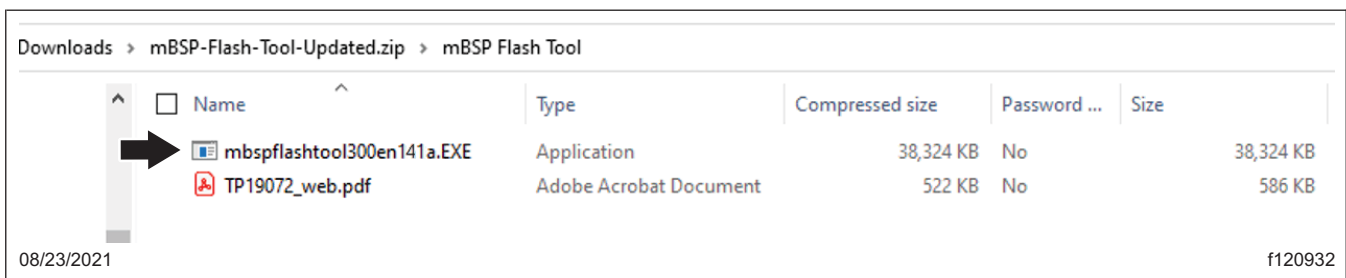


Fig. 7, mbpsflashtool300en141a.EXE File in mBSP Flash Tool Folder

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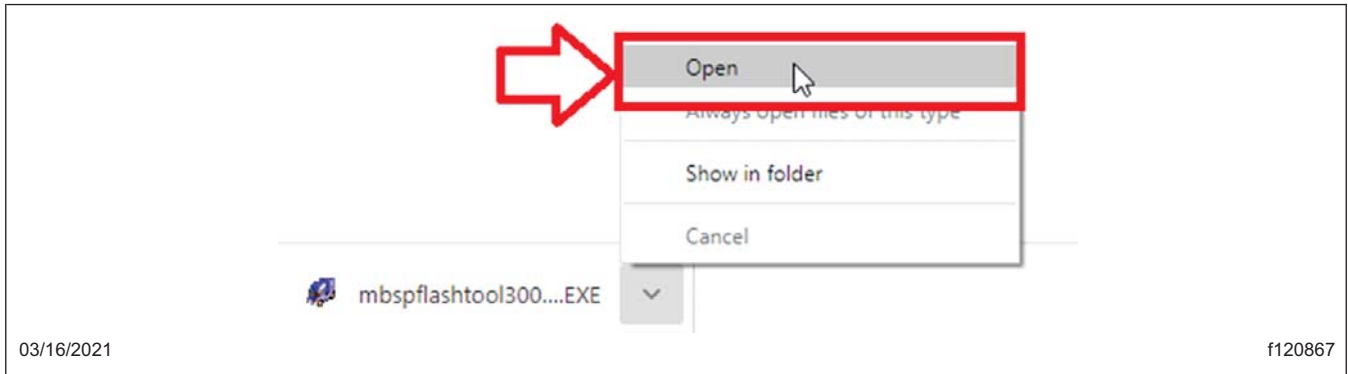


Fig. 8, Opening the mBSP Executable File

- 7.2 Select 'Extract' to extract the files onto your local hard drive.
- 7.3 When the extraction is finished, a window will open asking if the user wants to launch 'Setup.exe.' Select 'Yes.' See [Fig. 9](#).

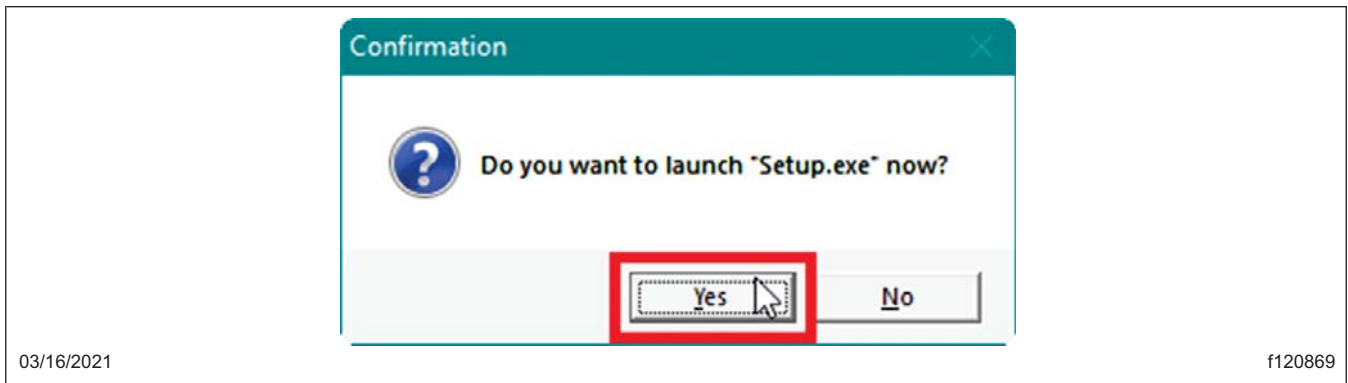


Fig. 9, Launching the Set-Up of the mBSP Executable File

- 7.4 When asked to 'Select Setup Language,' choose English and select 'OK.' See [Fig. 10](#).

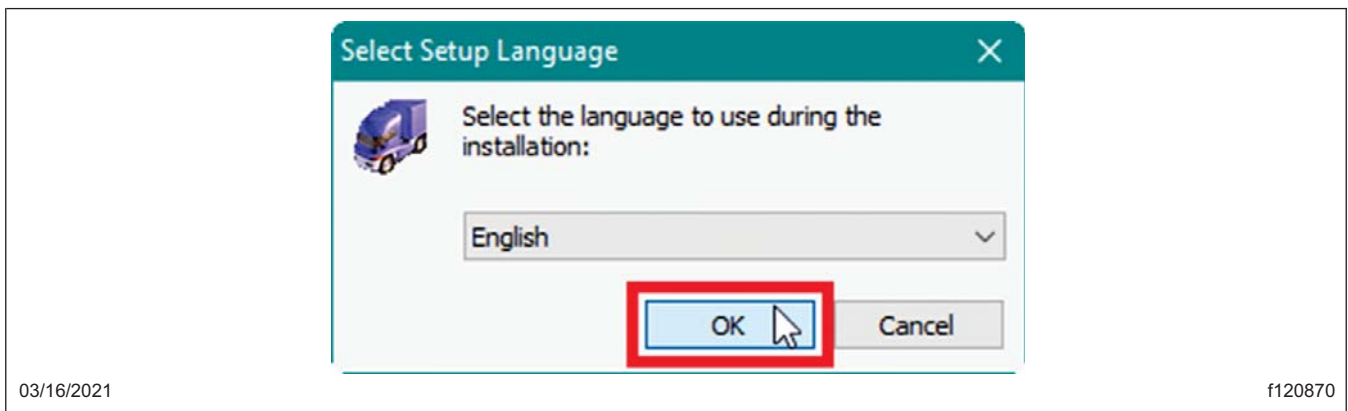


Fig. 10, Language Selection

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7.5 The window 'Welcome to the mBSP Flash Tool Setup Wizard' will appear. Select 'Next.' See [Fig. 11](#).

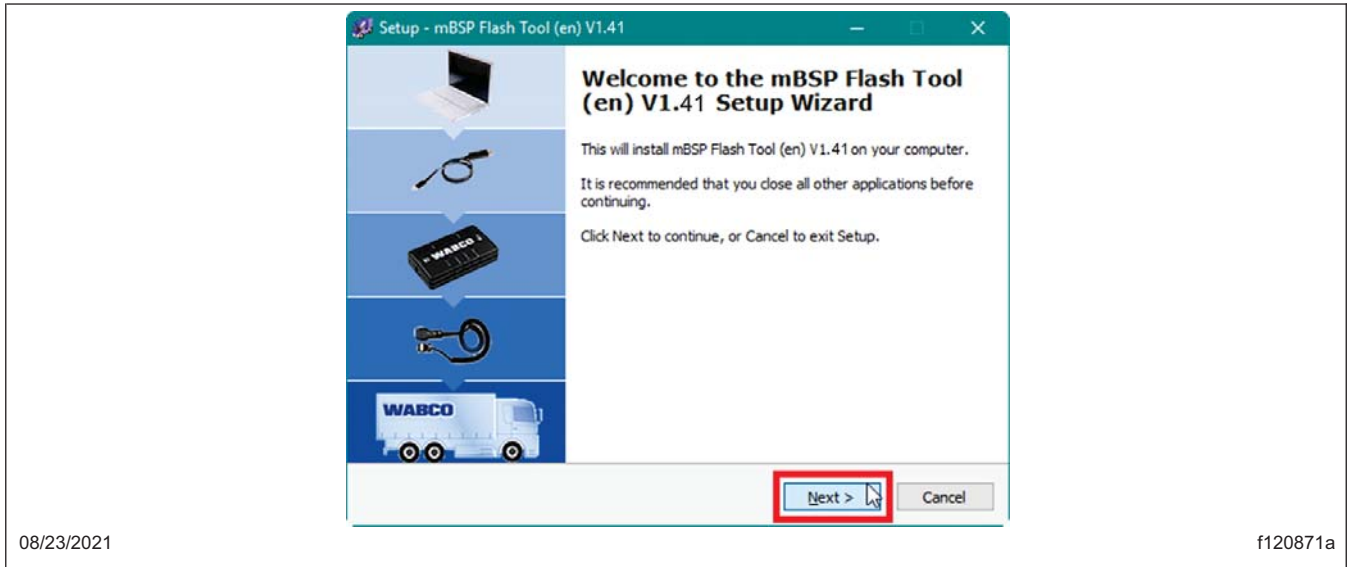


Fig. 11, Navigating the mBSP Flash Tool Setup Wizard

7.6 At the 'License Agreement' window, choose 'I accept the agreement,' then select 'Next.' See [Fig. 12](#).

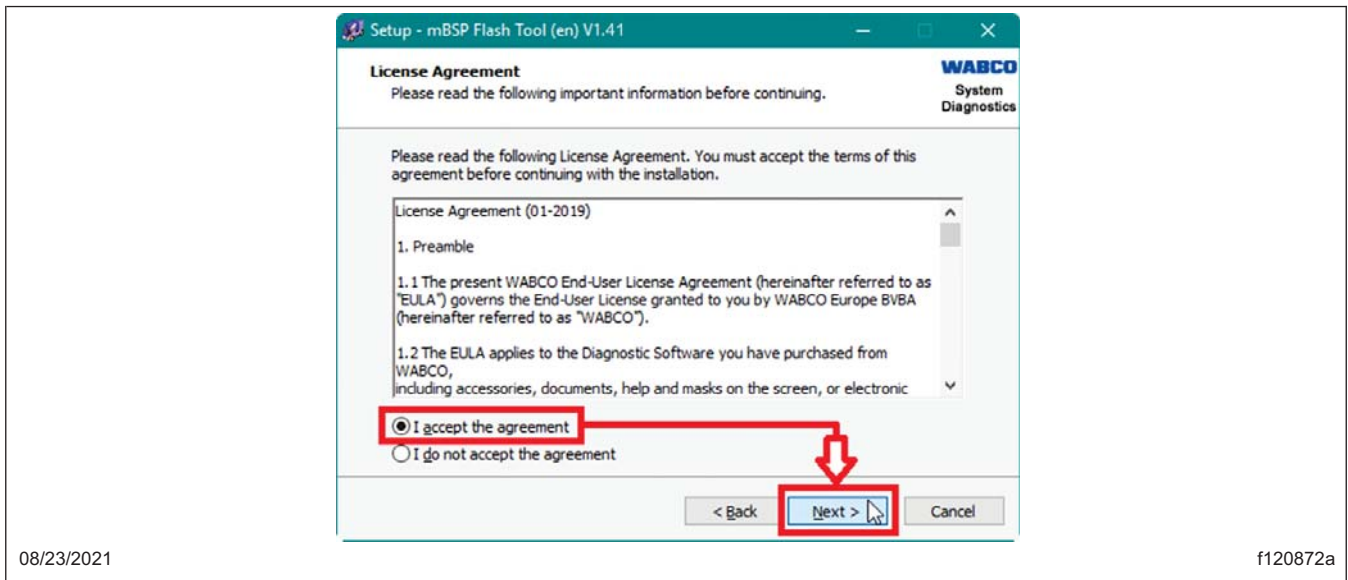


Fig. 12, License Agreement

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7.7 An 'Information' window will appear; read the information, then select 'Next.' See [Fig. 13](#).

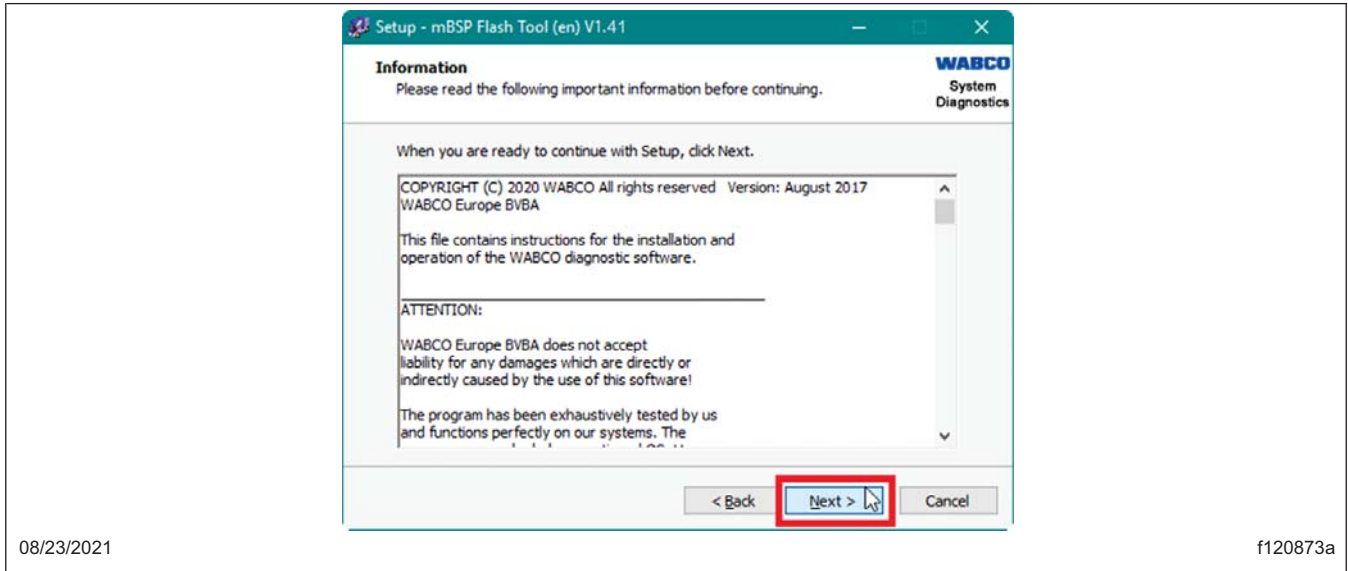


Fig. 13, Navigating Past the Information Window

7.8 The 'Select Destination Location' window will appear. Verify the destination and select 'Next.' See [Fig. 14](#).

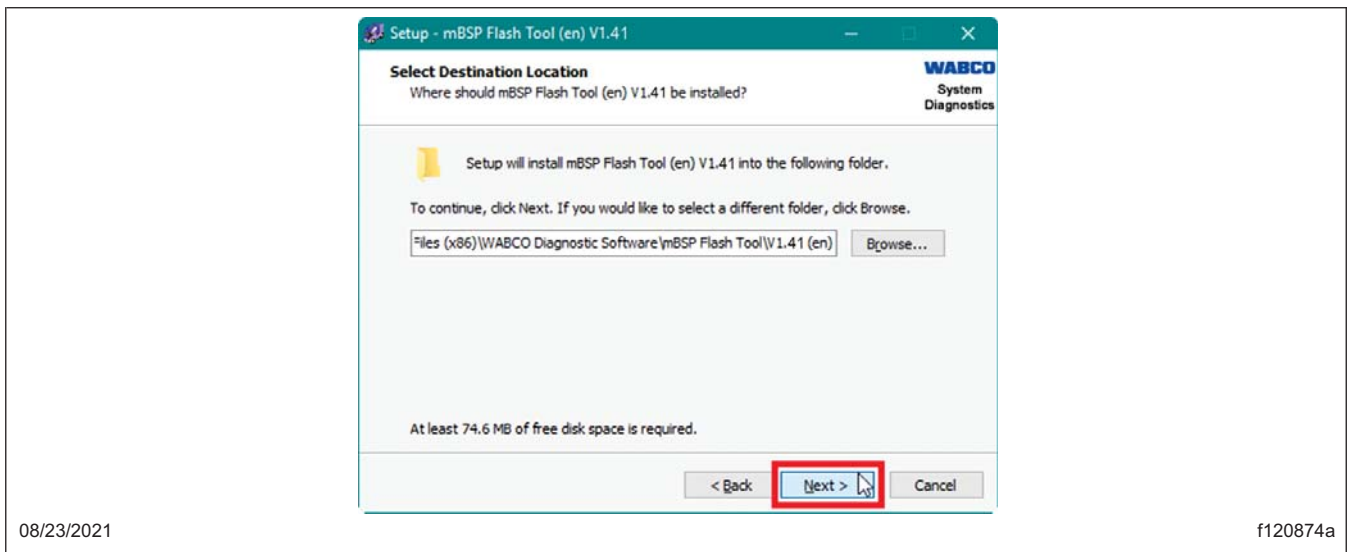


Fig. 14, Selecting the Destination Location of the mBSP Flash Tool

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7.9 The 'Select Start Menu Folder' window will appear, select 'Next.' See [Fig. 15](#).

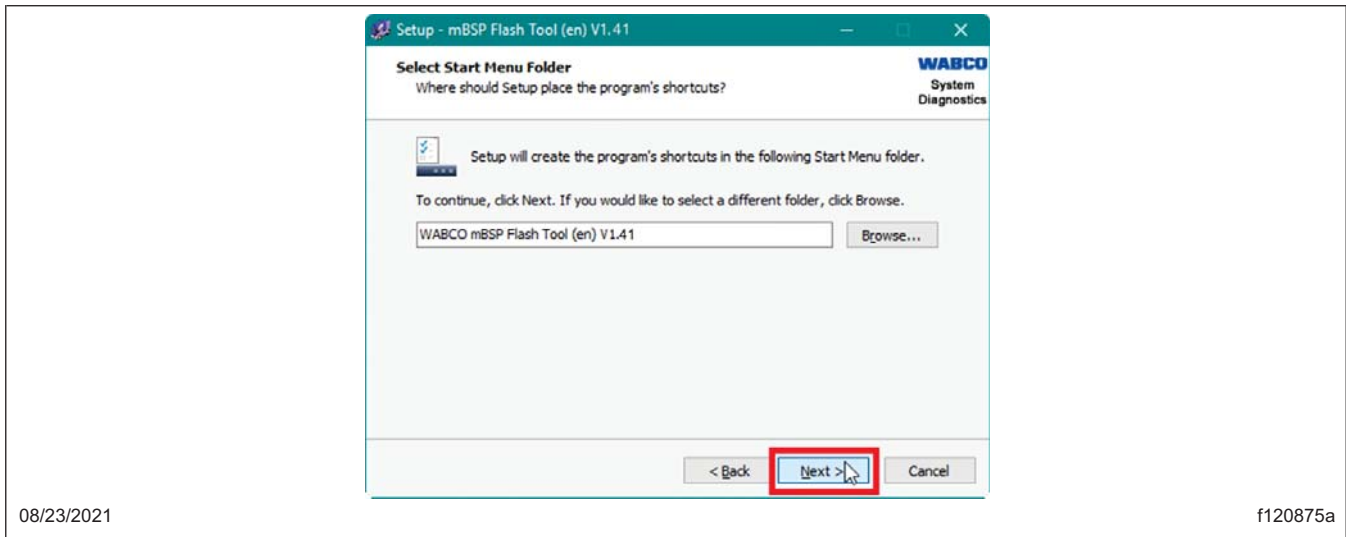


Fig. 15, Selecting the Start Menu Folder

7.10 In the 'Select Additional Tasks' window which will appear next, select 'Create a desktop shortcut,' then select 'Next.' See [Fig. 16](#).

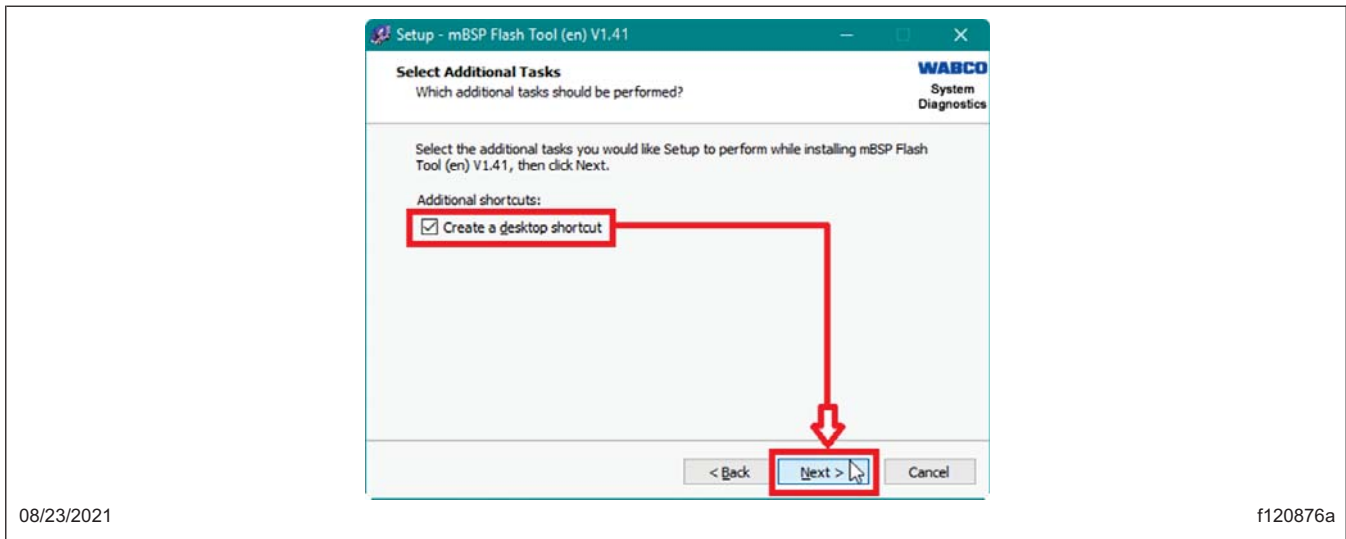


Fig. 16, Creating a Desktop Shortcut

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7.11 The 'Ready to Install' window will appear. Select 'Install.' See [Fig. 17](#).

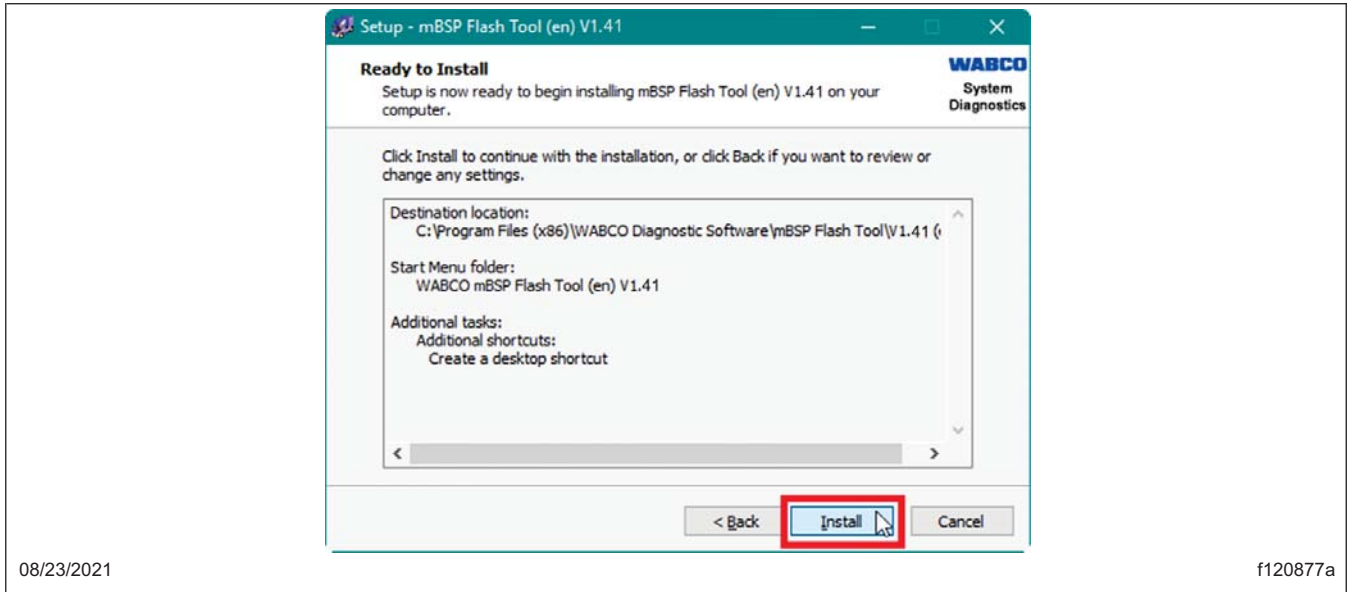


Fig. 17, Starting the Install Process

7.12 If a 'Preparing to Install' dialog window appears stating that the files needed by the setup program are in use by another application, select 'Automatically close the applications,' then select 'Next.' See [Fig. 18](#).

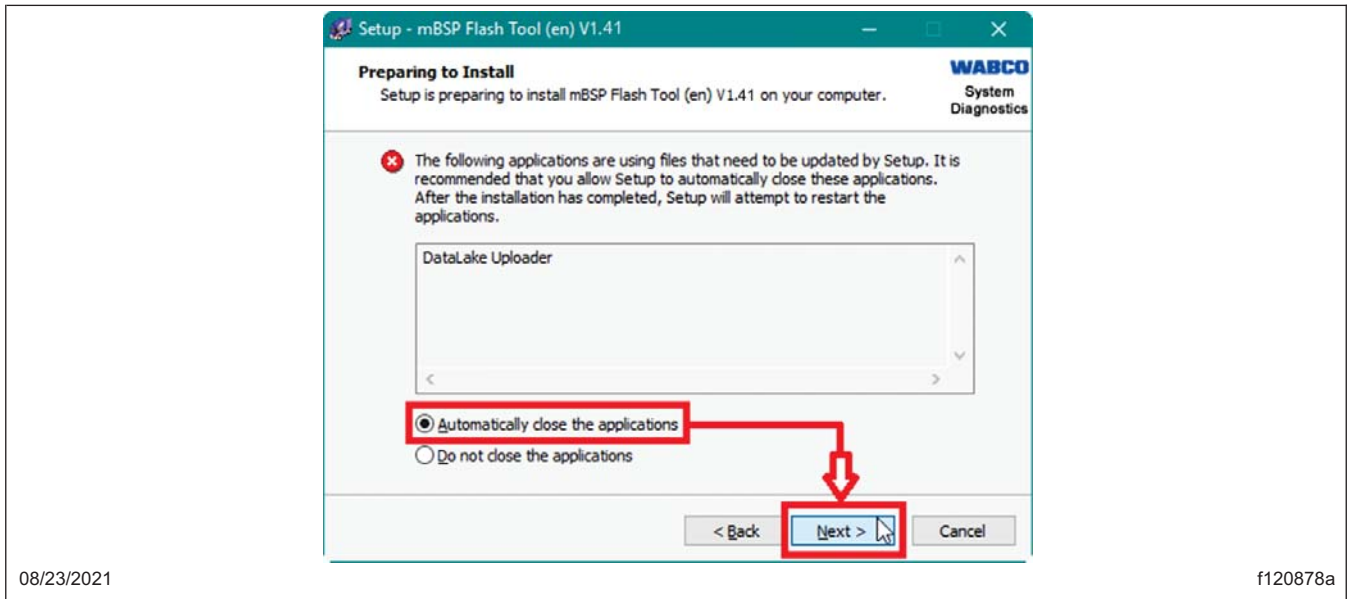


Fig. 18, Closing Applications Blocking Installation

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7.13 The setup program will install the mBSP Flash tool. At the 'Welcome to the WABCO USB devices Setup Wizard' window, select 'Next.' See [Fig. 19](#).



Fig. 19, WABCO USB Devices Setup Window

7.14 In the 'Choose Install Location' window, select 'Install.' See [Fig. 20](#). The setup program will install the files onto the local hard drive.

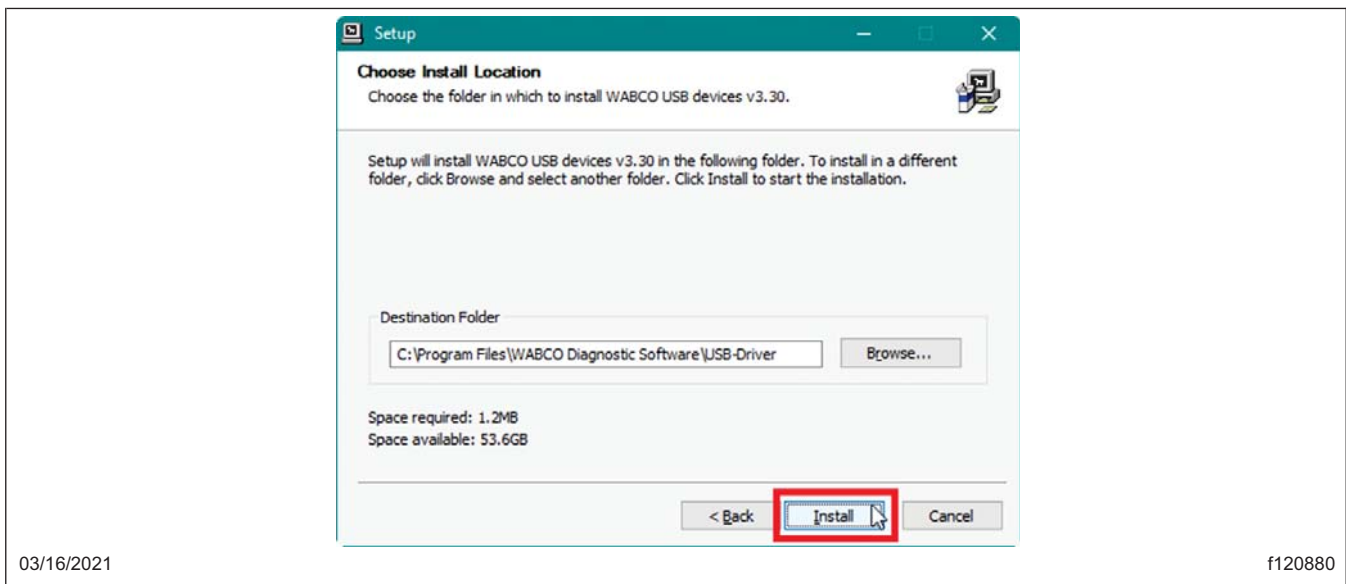


Fig. 20, Choosing the Install Location

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7.15 In the 'Installation Complete' window, select 'Next.' See [Fig. 21](#).

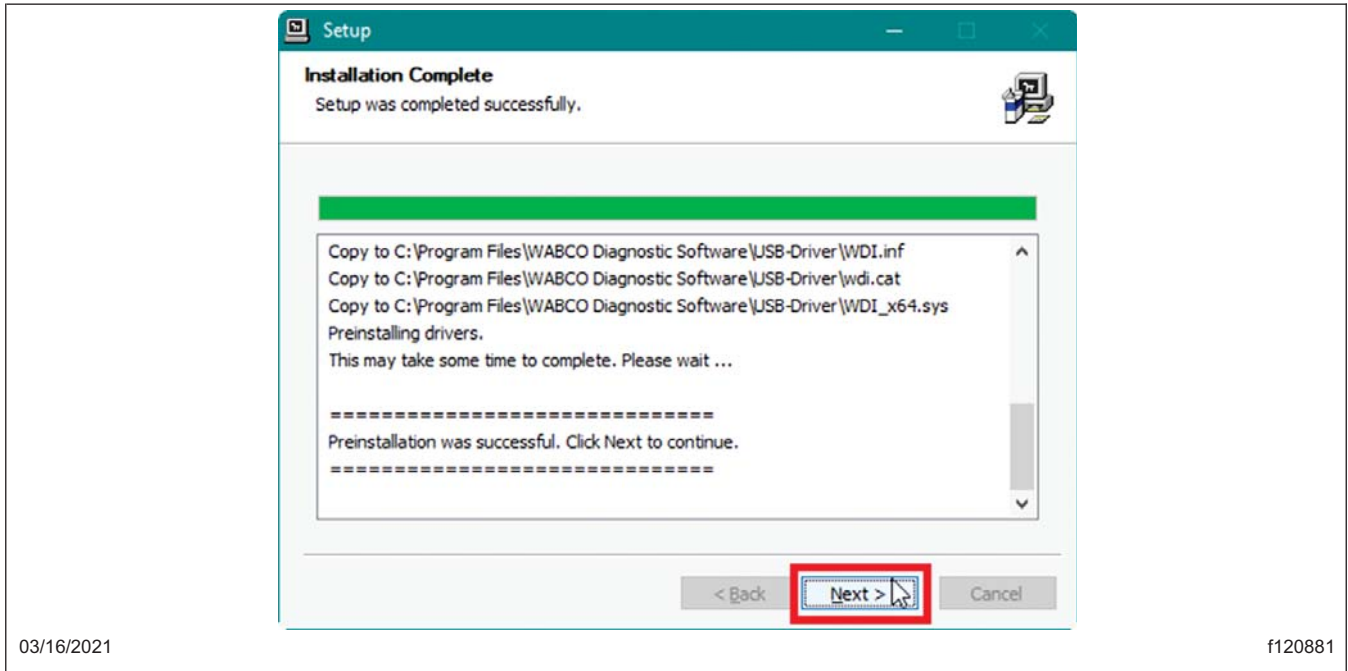


Fig. 21, Acknowledging the Installation is Complete

7.16 In the next window: 'Completing the WABCO USB devices Setup Wizard,' select 'Finish.' See [Fig. 22](#).



Fig. 22, Completing the WABCO USB Setup Wizard

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7.17 When the 'Setup' dialog box appears, select 'Yes.' See [Fig. 23](#).

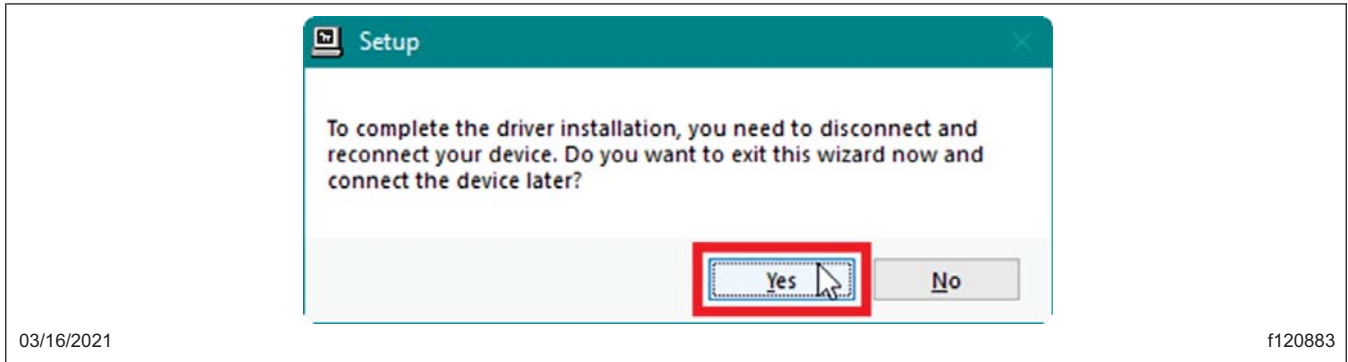


Fig. 23, Completing the Driver Installation Setup

7.18 In the next window: 'Completing the mBSP Flash Tool Setup Wizard' select 'Finish.' See [Fig. 24](#).

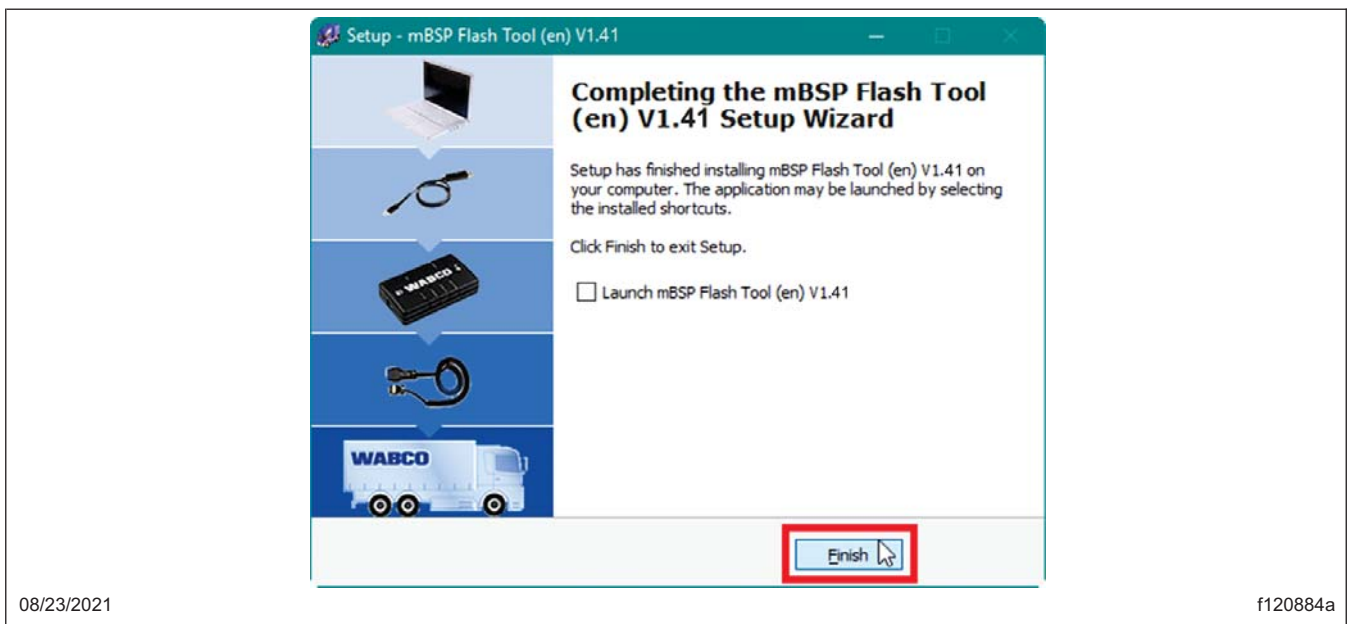


Fig. 24, Completing the mBSP Flash Tool Setup Wizard

NOTICE

Before connecting the laptop to the vehicle, disconnect the laptop from the internet, and close all other software, if running. Make sure the laptop DOES NOT enter sleep mode during the process of software update, by verifying the sleep mode settings. If the laptop enters into sleep mode during the process of software update, the download will fail, and the ABS ECU software may not be recovered resulting in replacement of the ABS ECU, or shipping it to WABCO for repair.

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- Turn the ignition switch to the ON position.

NOTICE

Ensure the cable is in good condition prior to connecting the laptop to the vehicle. A cable in poor condition may lead to a failure of the repair, which could result in replacement of the ABS ECU.

IMPORTANT:

- The vehicle battery voltage must remain at 12.4 volts or above during programming. To ensure good battery voltage during programming, it is recommended to connect an appropriate battery charger to the vehicle batteries.
 - Verify that the selected RP1210 adaptor is updated to the latest driver software. Using an adaptor equipped with an outdated software version may result in update failure.
- Connect a RP1210 adaptor to the vehicle's Deutsch 9-pin connector. The mBSP flash tool software should be closed. If opened, close it before connecting the adaptor. No other diagnostic program should be running on the laptop (ToolBox, DiagnosticLink, etc.).
 - Double-click the mBSP flash tool shortcut titled 'mBSP Flash Tool (en) V1.41' to open the software.
See Fig. 25.

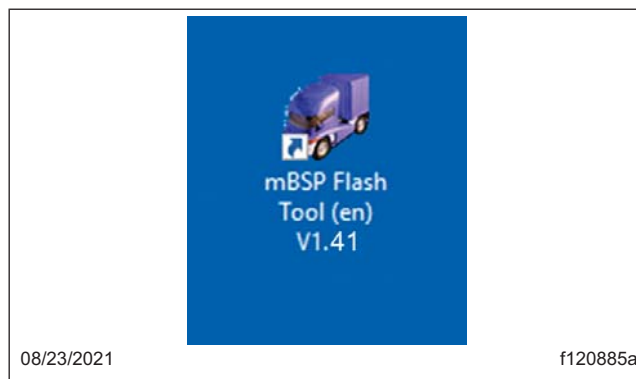


Fig. 25, Opening the mBSP Flash Tool

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11. The program will open with a warning note. See [Fig. 26](#). Read the warning note. If the vehicle is secure, select 'Yes.'

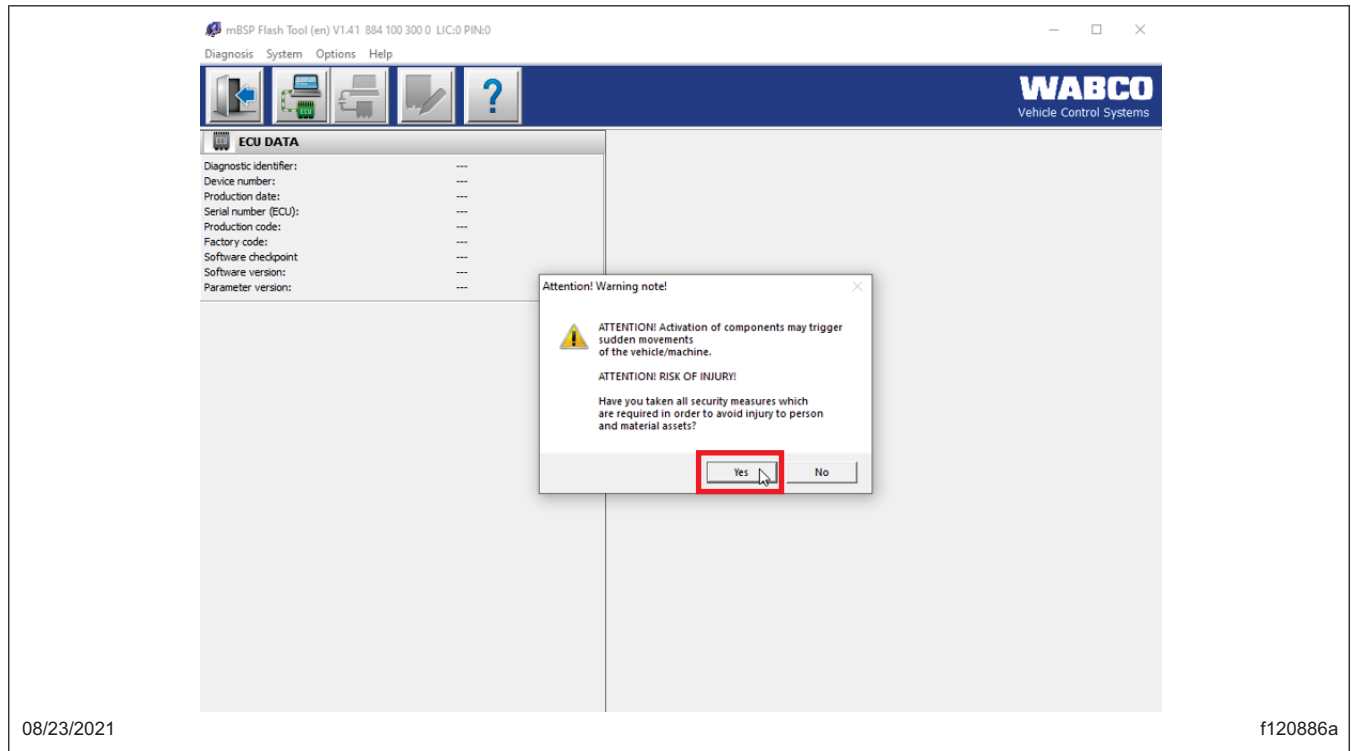


Fig. 26, Accepting the Warning

IMPORTANT: The ECU may not connect automatically due to wrong adaptor settings. To make sure correct adaptor settings are selected, go to 'Options,' 'Settings,' 'Change port.'

NOTE: An error message 'The detected application version is not supported' will appear if the ABS ECU is not listed in [Table 2, page 4](#), or if this mBSP flash tool update has already been installed into the connected ABS ECU, (See [Table 3, page 27](#).)

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12. If the ECU does not automatically connect, select the button in [Fig. 27](#) 'Initialize ECU and switch to diagnostic mode.'

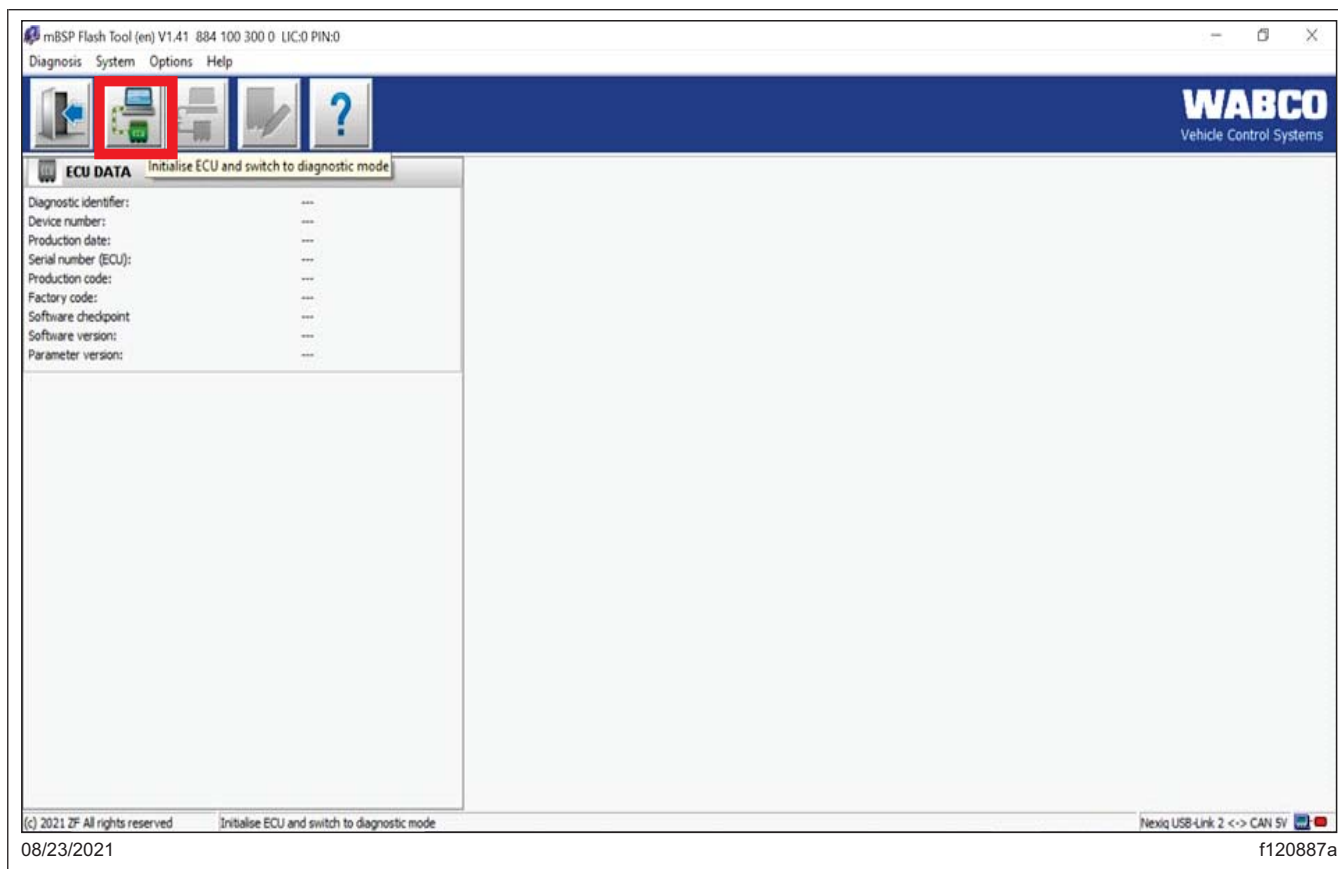


Fig. 27, Initialize ECU and Switch to Diagnostic Mode

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13. A window will now open, requesting the chassis number to be entered. Enter the vehicle chassis number. See [Fig. 28](#).

NOTE: The chassis number is the last six-characters of the VIN which consists of two letters followed by four numbers (also known as serial number).

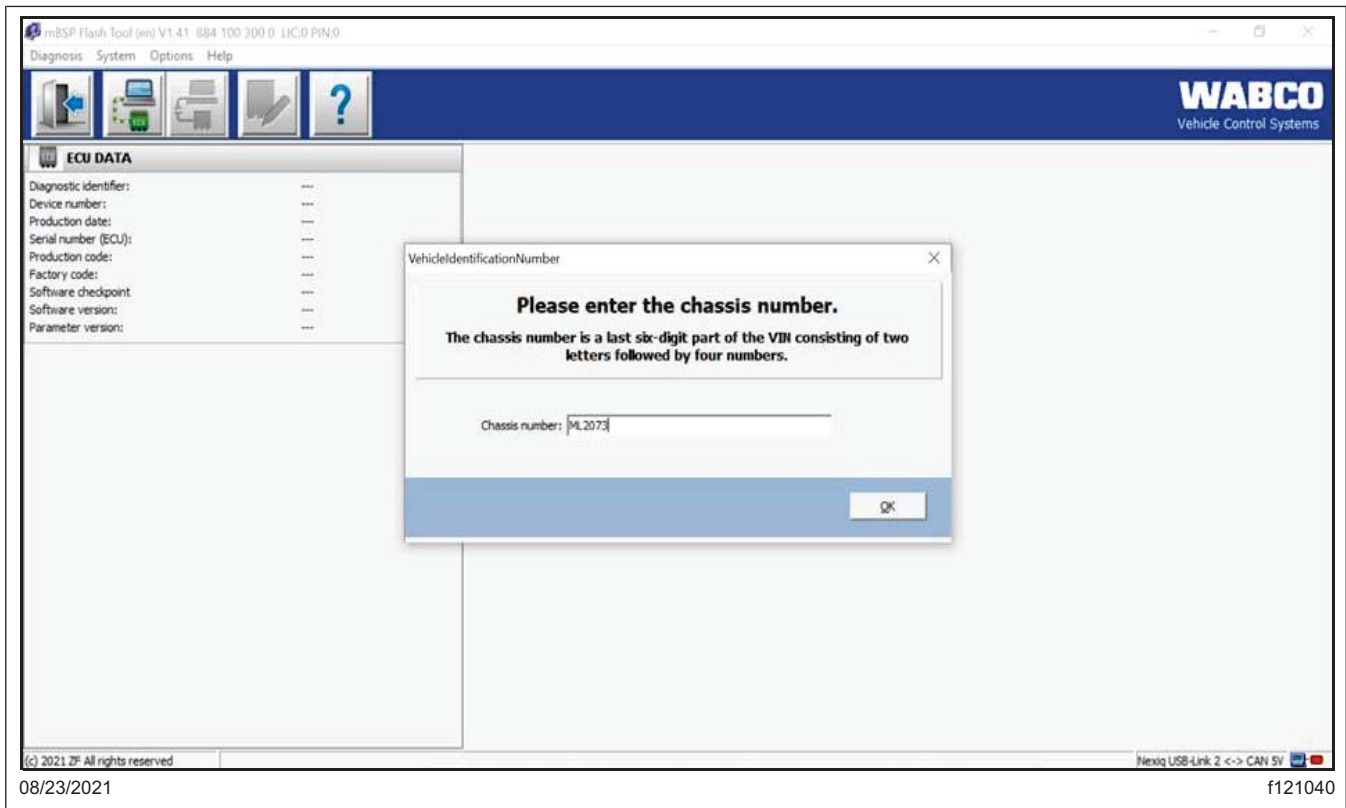


Fig. 28, Entering the Chassis Number

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14. See **Fig. 29**. Select the 'ECU software update,' button to begin the ECU update.

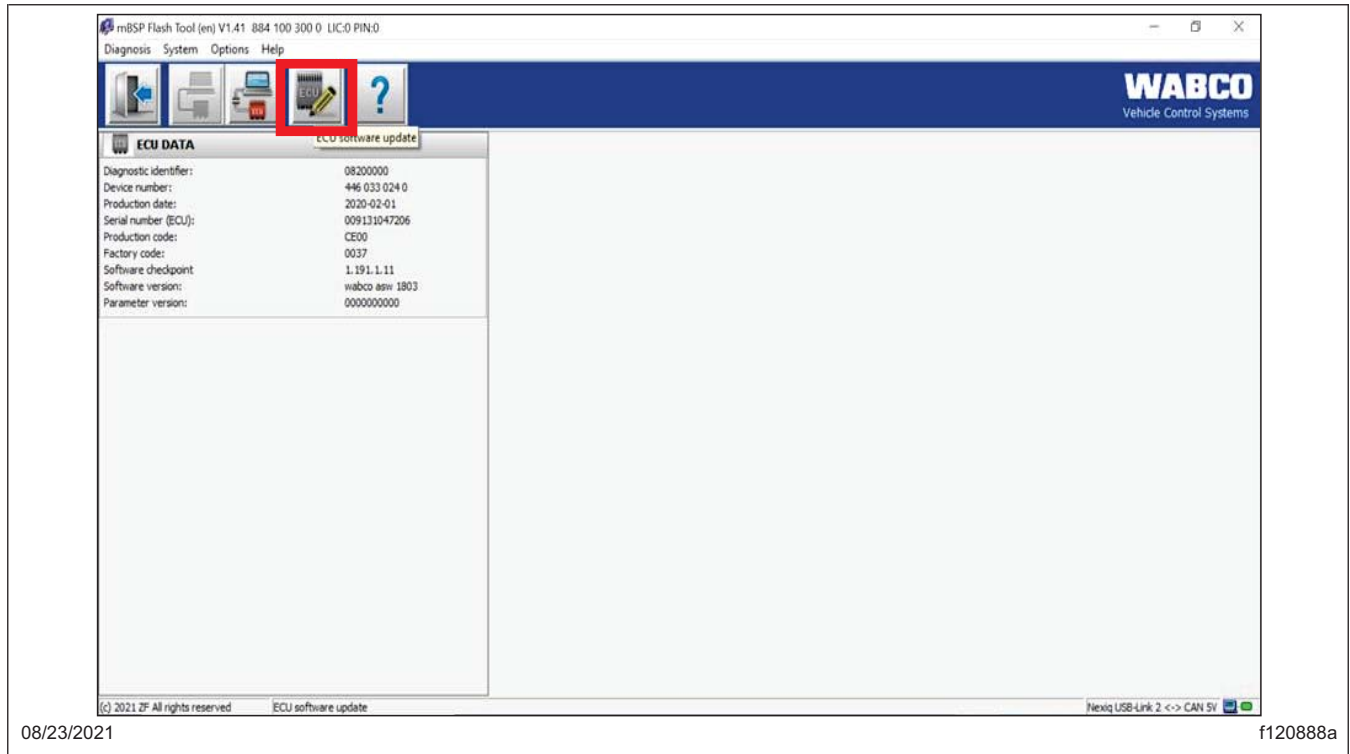


Fig. 29, ECU Software Update

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15. When the 'ECU update' window appears, select 'Write to ECU' button to begin the ECU update.
See Fig. 30.

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

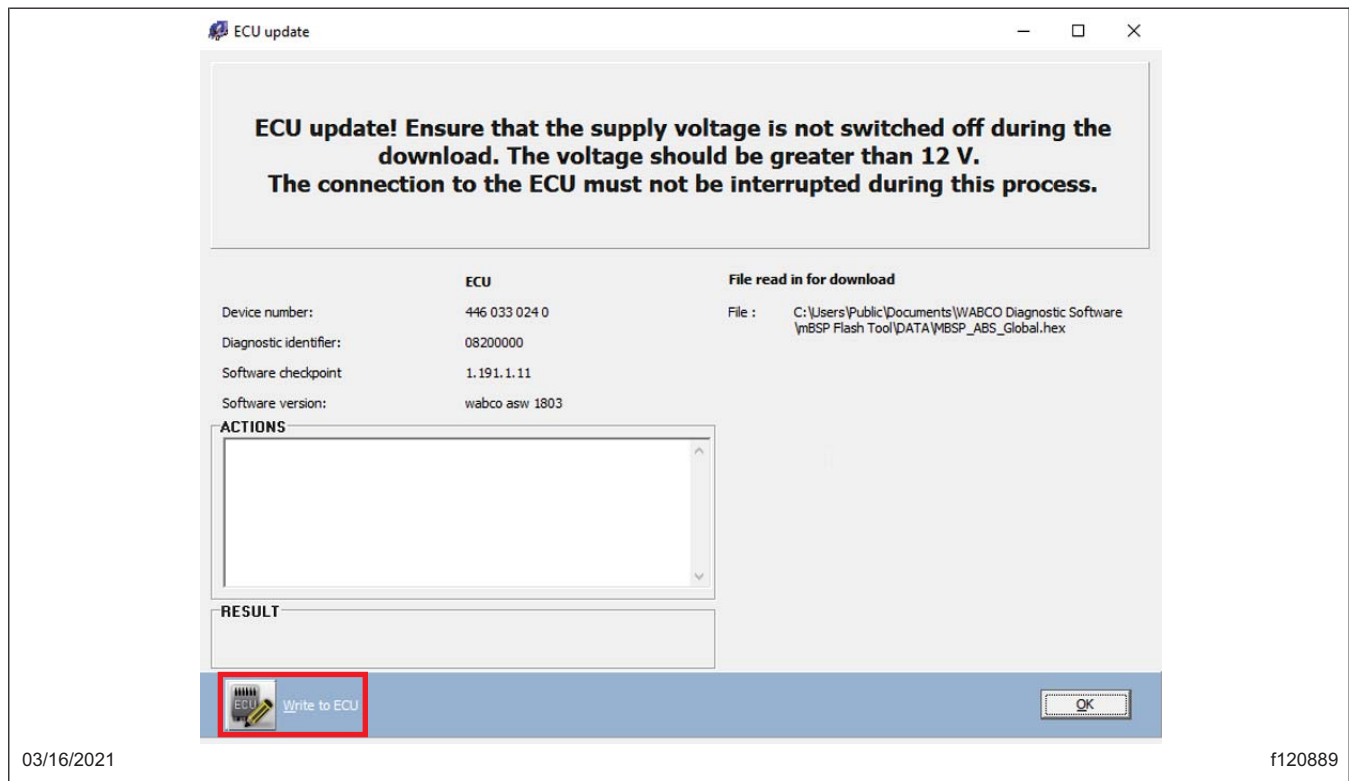


Fig. 30, Starting the ECU Update

IMPORTANT: If the update process fails at any point, close the mBSP Flash Tool program, then cycle the vehicle ignition. Go to step 10.

The update may be attempted multiple times. Ensure the correct chassis number is entered for the vehicle, and the same laptop is used on which the failure occurred. If the failure occurs repeatedly, swap the adaptors and try again.

If the programming is still unsuccessful, note the ECU part number if displayed. Call the WABCO customer care center at 1-855-228-3203, then select option 1 for technical assistance. As WABCO may ship a replacement ECU, have the dealership address available before calling.

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NOTE: ESC calibration will be required after the flashing process is complete.

16. Once the ECU update is complete, some ECU errors may be present. Select 'OK' and close out of the flash tool and start the calibration mode. See [Fig. 31](#).

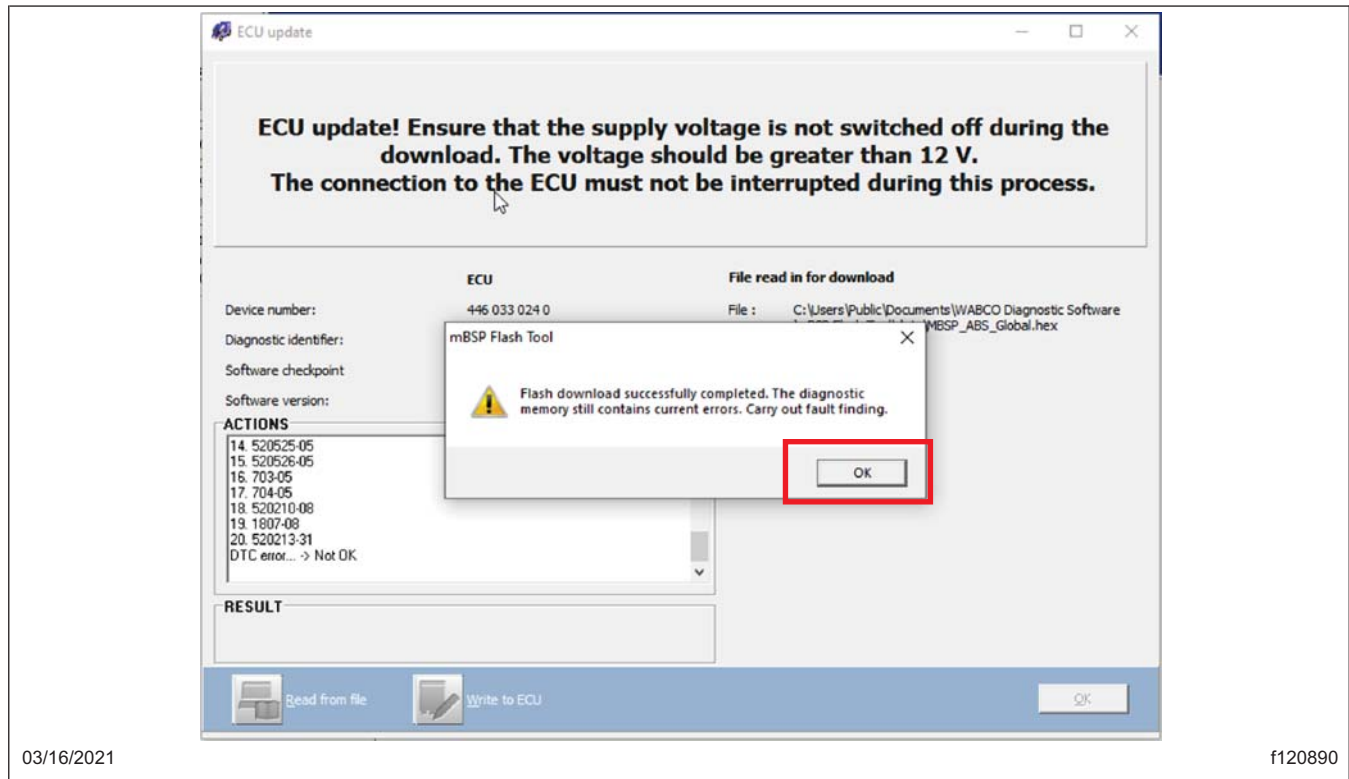


Fig. 31, Carrying Out Fault Finding

17. The ABS ECU is now in ESC calibration mode. Complete the driving portion of the End of Line (EOL) procedure. After approximately 100 yards of straight-line driving, and then a 90 to 180 degree turn is recorded by the ABS ECU, the stability lamp on the dash will turn off.
18. Perform a key cycle that completes a truck sleep cycle to save the calibration data.

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19. Save a parameter file from the ECU as proof that 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/EBS.' See [Fig. 32](#).

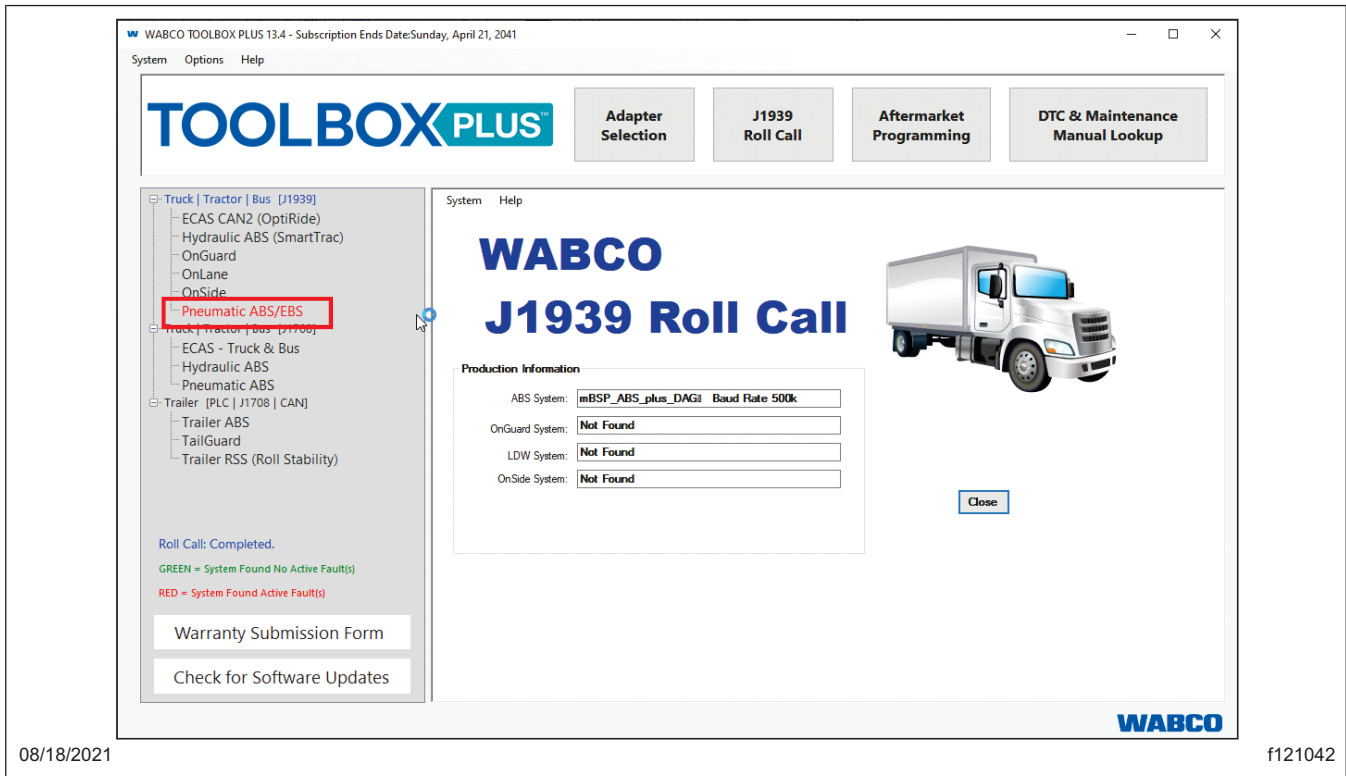


Fig. 32, WABCO TOOLBOX Options

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20. Go to the 'Option" menu and select 'Save Parameters to File.' See [Fig. 33](#).

NOTE: Certain vehicles with 8x4 configuration equipped with a pusher axle may not register a fourth axle within the 'Wheel Sensor Data' screen due to vehicle wheel sensor locations, and Wabco Toolbox Plus screen layout. This will not affect the programming, and the parameter update will be completed successfully.

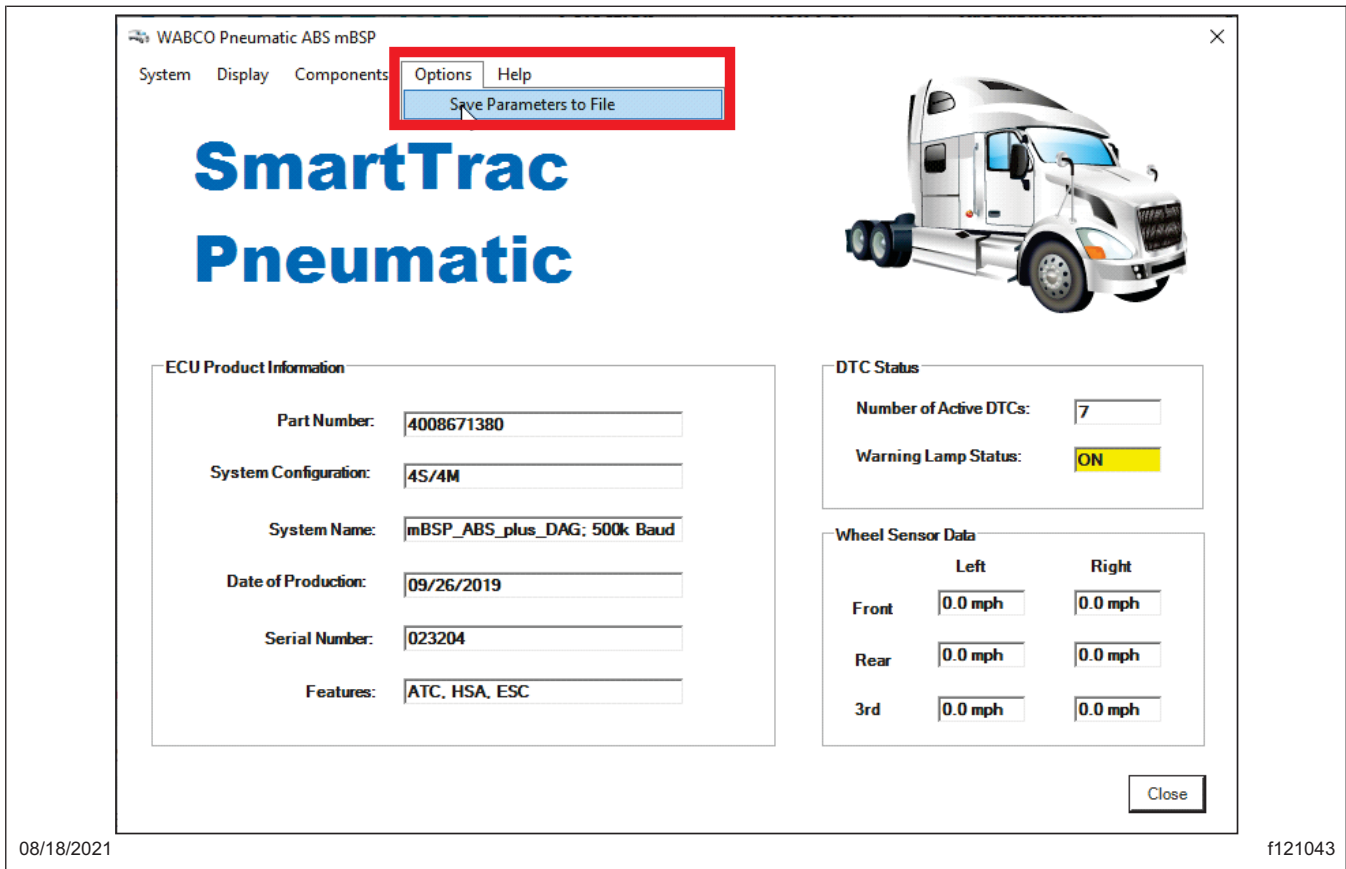


Fig. 33, Choosing the Install Location

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21. 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 3](#).

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 3, ABS ECU Part Number Changes

22. Disconnect the RP1210 adaptor from the vehicle's Deutsch 9-pin connector.
23. Clean a spot on the base label (Form WAR259). Write the recall number, SF622, on a completion sticker (Form WAR261), and attach it to the base label to indicate this recall has been completed.