Daimler Truck North America LLC

Field Service Campaign

November 2022
SF638A-F

Subject: Side Guard Assist

Models Affected: Specific model year 2022 Freightliner Cascadia and Western Star 49X models manufactured June 14, 2021, through October 21, 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 SF638 to modify the vehicles mentioned above.

Certain vehicles, ordered with the optional Side Guard Assist (SGA) feature, were shipped with non-functional short range radar (SRR) sensors due to shortages from the sensor supplier.

The non-functional SRR sensors will be replaced with the new functional sensors.

There are approximately 5,892 vehicles involved in this campaign.

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

Replacement parts are now available and can be obtained by ordering the kit and/or part number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicle(s) involved in campaign number SF638 a list of the customers and vehicle identification numbers will be available on the DTNA Portal. Please refer to this list when ordering parts for this campaign.

Table 1 - Replacement Parts for SF638

Campaign Number	Kit Number	Part Description	Qty. per Kit
SF638A-F	25-SF638-000	DAIMLER SENSOR SHORT RANGE	2 ea
		BLANK COMPLETION STICKER (WAR261)	1 ea

Table 1

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 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
SF638A-F	Replace, program, and calibrate SRR sensors	1.3	996-F140A	12-Repair Recall/Campaign

Table 2

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 parts, labor, and handling (landed cost for Export Distributors) 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 (**SF638-A, SF638-B, etc.**).
- In the Primary Failed Part field, enter **25-SF638-000**.
- In the Parts section, enter the appropriate kit or part number(s) as shown in the Replacement Parts Table.
- 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 November 30, 2023**. Dealers will be notified of any changes to the termination date via Important Campaign Information Letter posted on the DTNA Portal.

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. U.S. and Canadian Dealers: All excess inventory to be returned to the PDC following the conclusion of the campaign must be returned in resaleable condition to the Memphis PDC within 90 days from the termination date. Please submit a PAR to request return to the Memphis PDC. (Canadian dealers should return the kits to their facing PDC.) Export Distributors: Excess inventory is not returnable.

For questions, U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at the DTNA Portal/WSC, or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information. Export distributors, submit a Web inquiry or contact your International Service Manager.

Copy of Notice to Owners

Subject: Side Guard Assist

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 SF638A-F to modify specific model year 2022 Freightliner Cascadia and Western Star 49X vehicles manufactured June 14, 2021, through October 21, 2021.

Certain vehicles, ordered with the optional Side Guard Assist (SGA) feature, were shipped with non-functional short range radar (SRR) sensors due to shortages from the sensor supplier.

The non-functional SRR sensors will be replaced with the new functional sensors.

Please contact an authorized DTNA dealer to arrange to have the campaign performed and to ensure that parts are available at the dealership. The campaign will take approximately two hours and will be performed at no charge to you. To locate an authorized dealer, search online at NorthAmerica.DaimlerTruck.com/contact-us/. Scroll down to “Locate a Dealer,” and select the appropriate brand.

This Field Service Campaign will **terminate on November 30, 2023**. 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, DTNA will not pay for any damage caused by failure to properly maintain your vehicle. DTNA 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, from 7 a.m. to 4 p.m. Pacific Time, Monday through Friday, e-mail address DTNA.Warranty.Campaigns@Daimlertruck.com, or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

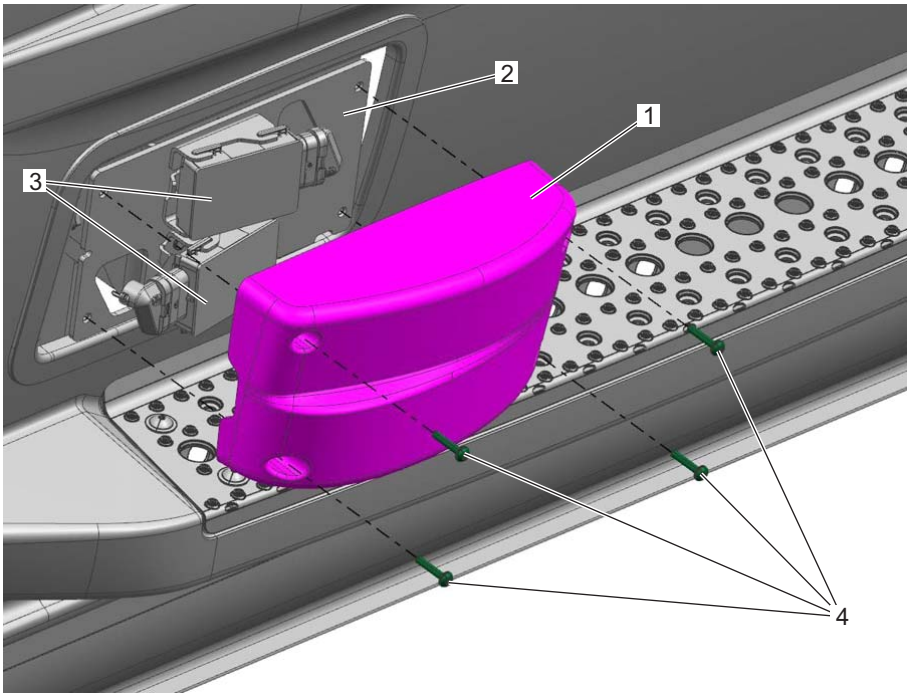
Work Instructions

Subject: Side Guard Assist

Models Affected: Specific model year 2022 Freightliner Cascadia and Western Star 49X models manufactured June 14, 2021, through October 21, 2021.

Side Radar Replacement

1. Check the base label (Form WAR259) for a completion sticker for SF638 (Form WAR261) indicating this work has been done. The base label is usually located on the passenger door about 12 inches (30 cm) below the door latch. If a sticker is present, no work is needed. If there is no sticker, proceed with the next step.
2. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
3. On the right-hand side of the vehicle, remove the four capscrews that attach the side radar cover to the radar mounting plate, then remove the side radar cover. See **Fig. 1**.



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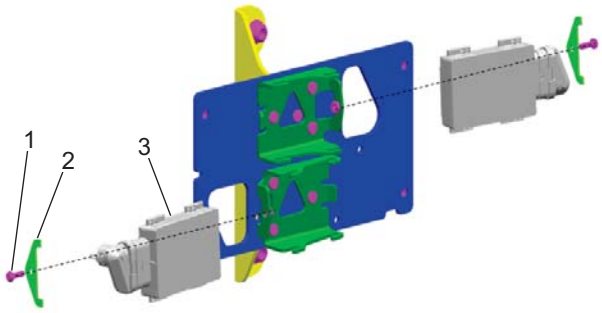
1. Side Radar Cover
2. Radar Mounting Plate
3. Side Radar Sensors
4. Mounting Fasteners

Fig. 1, Side Radar Cover Removal

4. Remove the two fasteners that attach the side radar sensor mounting bracket to the radar mounting plate, then remove the mounting brackets. See **Fig. 2**.

   Remove both side radar sensors from the mounting brackets.



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1. Mounting Fastener
2. Side Radar Sensor Mounting Bracket
3. Side Radar Sensor

Fig. 2, Side Radar Sensors Replacement

NOTE: Do not swap the connectors or harness cables for the upper and lower side radar sensors. Both connectors must remain at their current positions.

5. Release the connector lock tab and disconnect the connector from the side radar sensor. See **Fig. 3**.

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1. Electrical Connector
2. Side Radar Sensor
3. Connector Lock Tab

Fig. 3, Disconnecting the Connectors

6. Remove both side radar sensors from the vehicle.

IMPORTANT: Both side radar sensors must be replaced with only the part numbers identified within this campaign in order to maintain the correct hardware and software versions. Failure to install the correct side radar hardware or software versions of the upper and lower side radar sensors will result in a diagnostic trouble code (DTC) being reported and the side radar will not be operational.

7. Install the new side radar sensor on each connector and engage the locking tab.
8. Position both new side radar sensors on the mounting bracket.
9. Install the two fasteners that attach the side radar sensor mounting bracket to the radar mounting plate. Tighten the fasteners 30 to 42 lbf·in (339 to 475 N·cm).

IMPORTANT: In order for the radar to function properly, the main mounting bracket needs to be installed to a tolerance of ±2 degree accuracy relative to the vertical (90 degree) axis.

10. Inspect the radar assembly. Ensure that the radar sensor is level, and that the mounting bracket is not bent or damaged. Repair any damage before attempting to perform the calibration procedure.
11. Install the four capscrews that attach the side radar cover to the radar mounting plate. Tighten the capscrews 48 to 72 lbf·in (542 to 813 N·cm).
12. Inside the cab, carefully remove the two labels that read 'IMPORTANT SIDE GUARD ASSIST IS NOT FUNCTIONAL ON THIS VEHICLE.' One label is located on the dash A-panel, near the driver instrument panel; and the other label is located on the right-hand A-pillar over the side guard assist (SGA) warning lamp. See **Fig. 4**.

    Carefully remove any remaining adhesive residue from the panels after the labels are removed.

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A. Remove the label located on the dash A-panel.
B. Remove the label located on the right-hand A-pillar.
C. Carefully remove any residue after removing the labels.

Fig. 4, Removing the Labels

ECU Programming

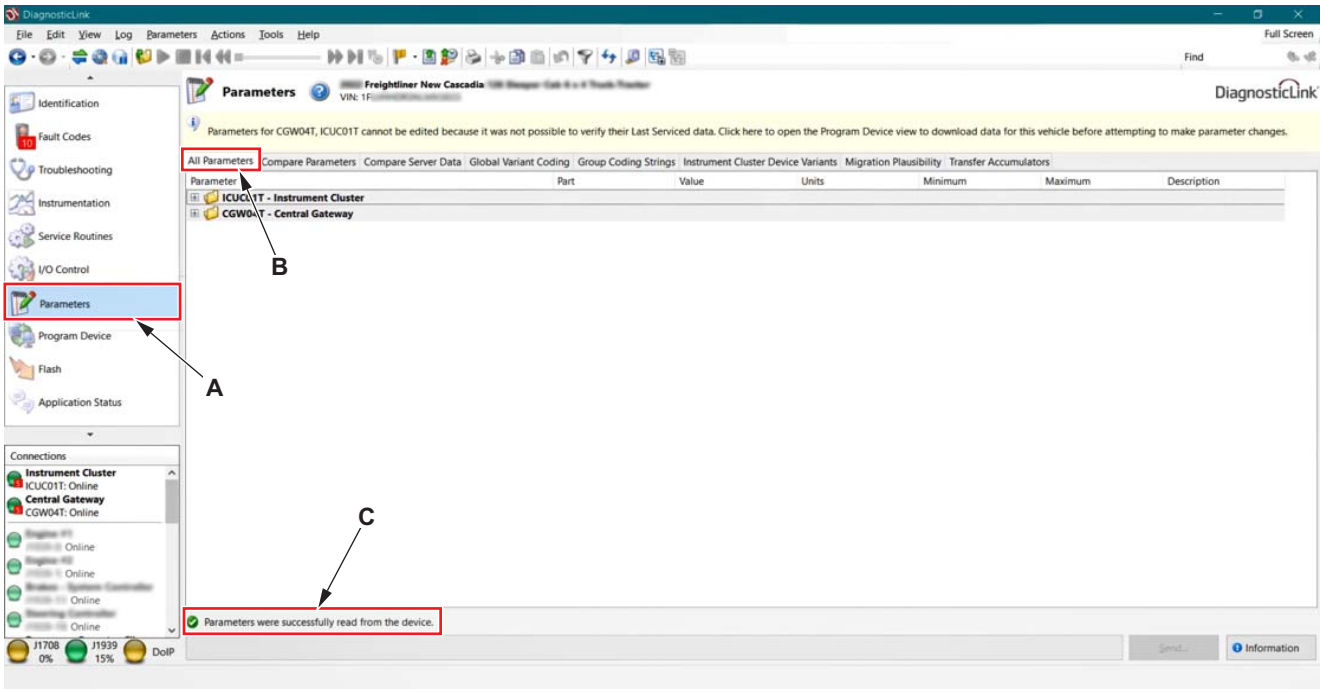
1. Connect an RP1210B-compliant vehicle diagnostic adaptor to the diagnostic connector on the vehicle.
2. Connect the other end of the RP1210B-compliant vehicle diagnostic adaptor to the laptop.
3. Open DiagnosticLink.

IMPORTANT: Make sure that DiagnosticLink® is updated to the latest version (8.16SP4 at the time of publication, or newer) before programming the vehicle.

To update DiagnosticLink, from the menu bar, select 'Tools,' then select 'Update' from the dropdown menu.

4. Connect to the server using the DTNA Connect credentials.
5. Go to the 'Parameters' tab, then select 'All Parameters.' See **Fig. 5**.

   DiagnosticLink will read the parameters of the connected ECUs. Wait for the message 'Parameters were successfully read from the device' to be displayed.



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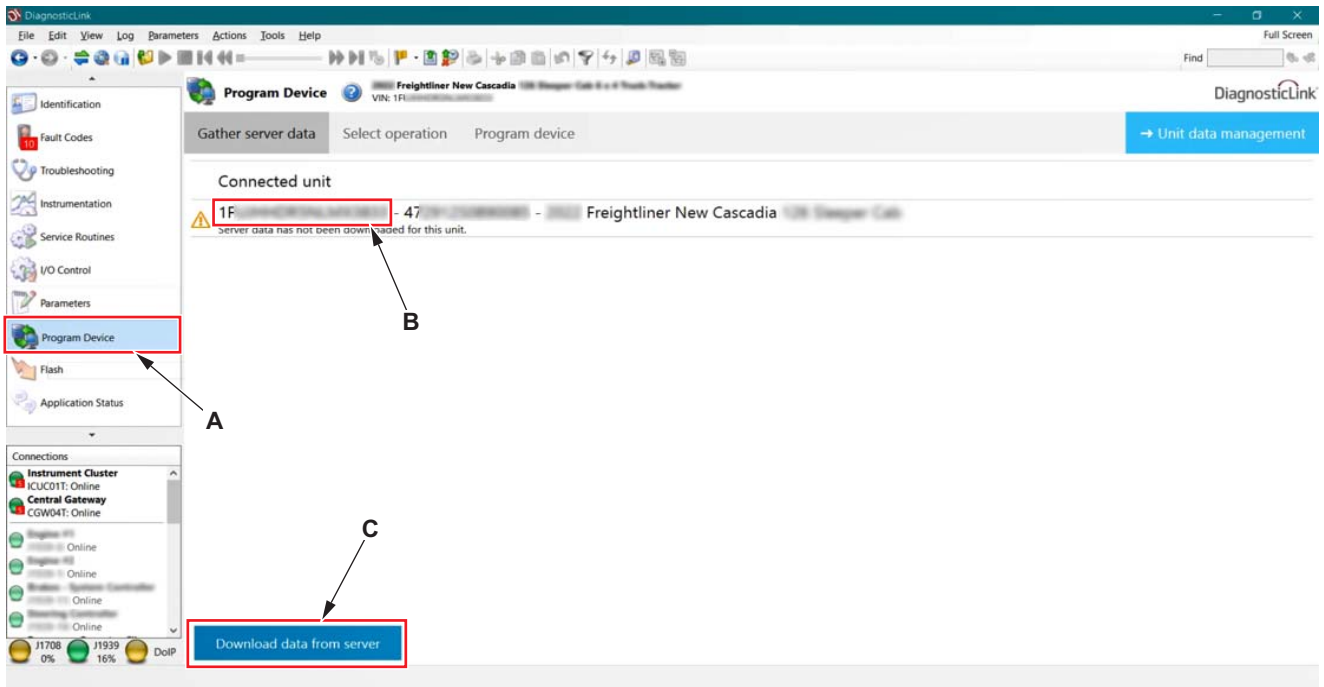
A. Go to the 'Parameters' tab.
B. Select 'All Parameters.'
C. Wait for the parameters to be read from the device.

Fig. 5, Reading the ECU Parameters

NOTE: It is recommended that any high/low voltage faults should be resolved prior to flashing the ECUs. Also, controller area network (CAN) communication errors may impact programming; in some cases third party ECUs may impact CAN communication.

6. Go to 'Program Device,' and make sure that the vehicle identification number (VIN) that appears is correct. Then select 'Download data from server.' See **Fig. 6**.

   DiagnosticLink will document the parameters of the current vehicle on the server, as shown in **Fig. 7**.



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A. Go to the 'Program Device' tab.
B. Verify the VIN that appears is correct.
C. Select 'Download data from server.'

Fig. 6, Downloading the Data from the Server

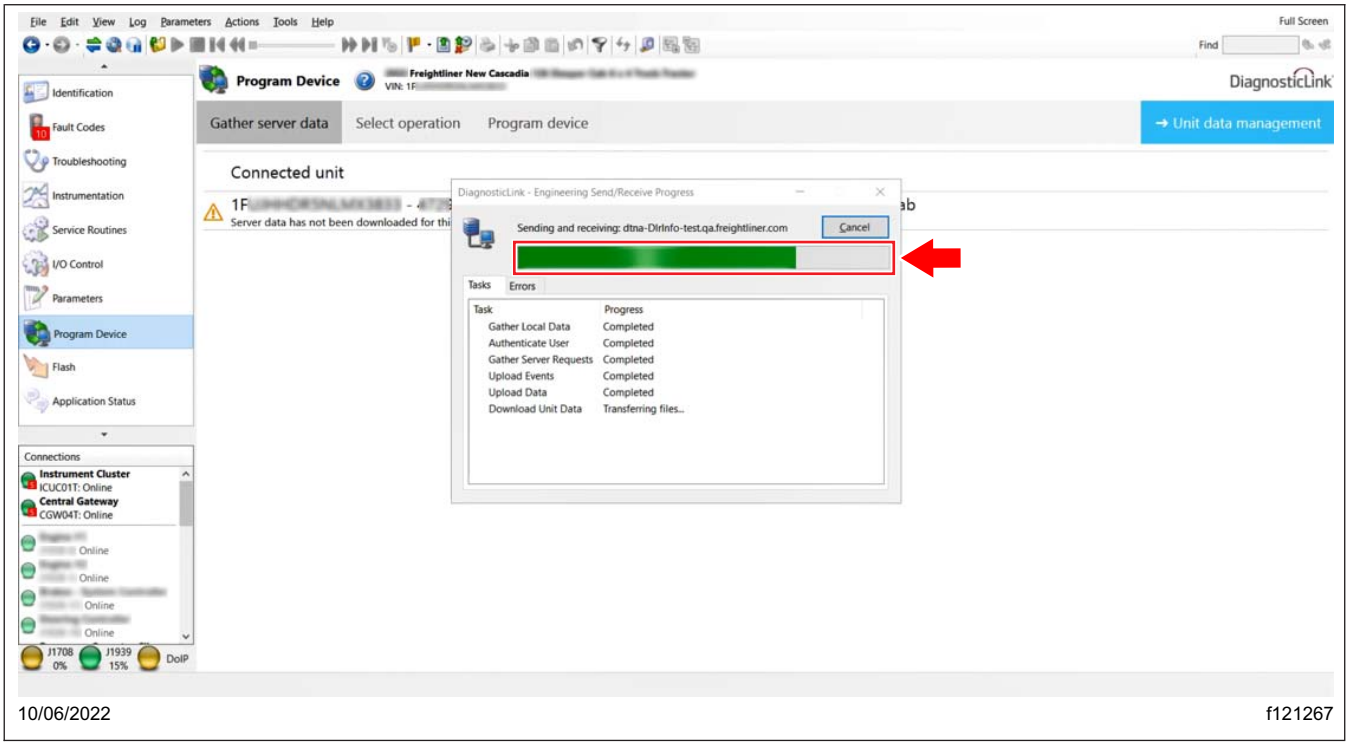

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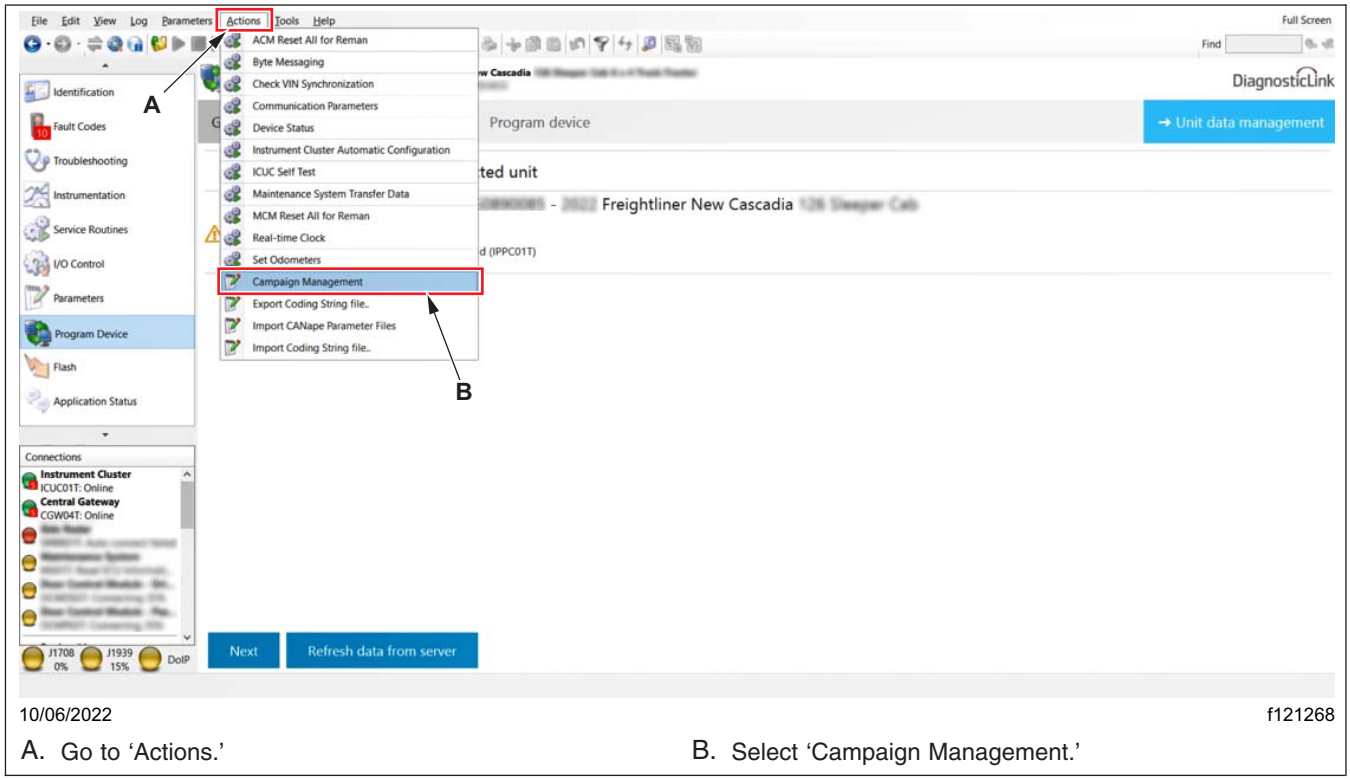
Fig. 7, Data Being Downloaded from the Server

7. Update the vehicle record on the server as follows.

7.1 From the menu bar, select ‘Actions,’ then go to ‘Campaign Management.’ See **Fig. 8**.



A. Go to ‘Actions.’

B. Select ‘Campaign Management.’

Fig. 8, Launching the Campaign Management Window

7.2 Select ‘Update.’ The list of active campaigns corresponding to the VIN, if any, would be displayed. See **Fig. 9**.

Fig. 9, Selecting Update

7.3 Verify the particulars under the ‘Name’ and ‘Description’ columns are displayed correctly. Then select ‘Start.’ See **Fig. 10**.

The ‘Vehicle Status’ would appear as ‘Submitted,’ as shown in **Fig. 11**.

Fig. 10, Selecting Start

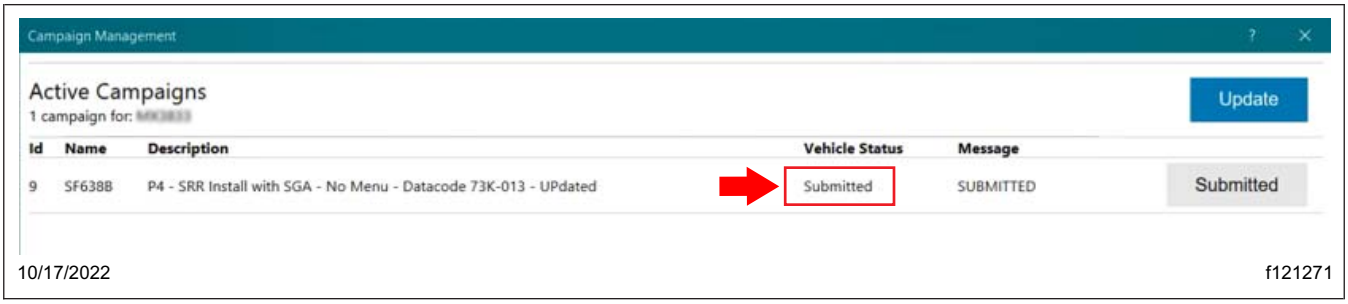


Fig. 11, Vehicle Status Changed to Submitted

7.4 Wait for the ‘Vehicle Status’ to be displayed as ‘Pending.’ See **Fig. 12**.

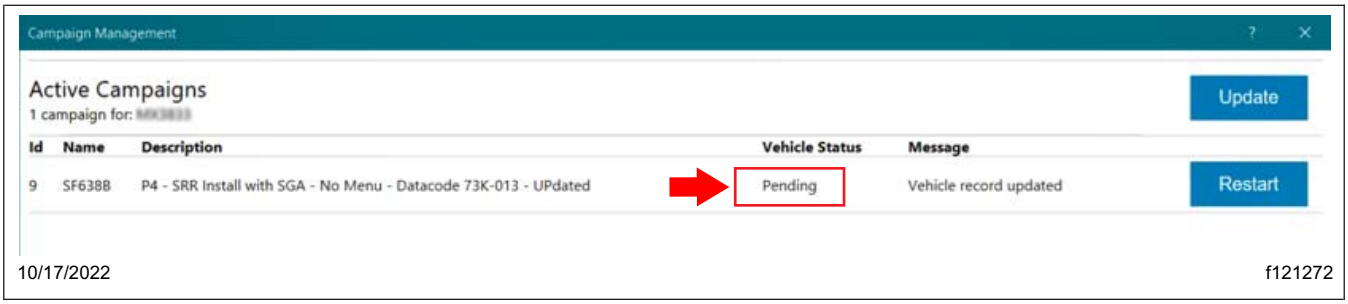


Fig. 12, Vehicle Status Changed to Pending

NOTE: The vehicle server record has been updated on the server (Vehicle record updated) but has not been installed on the vehicle (Vehicle Status Pending). If required, it is possible to restart the campaign to prepare server data for the vehicle.

7.5 Close the ‘Campaign Management’ window.

IMPORTANT: DiagnosticLink will not be able to retrieve the newest record if SRRR01T is not connected, and the device will not be available for flashing.

8. From the menu bar, select ‘File,’ then go to ‘Connect.’ In the ‘Manual Connection’ window, select ‘SRRR01T,’ then select ‘Connect.’ See **Fig. 28**.

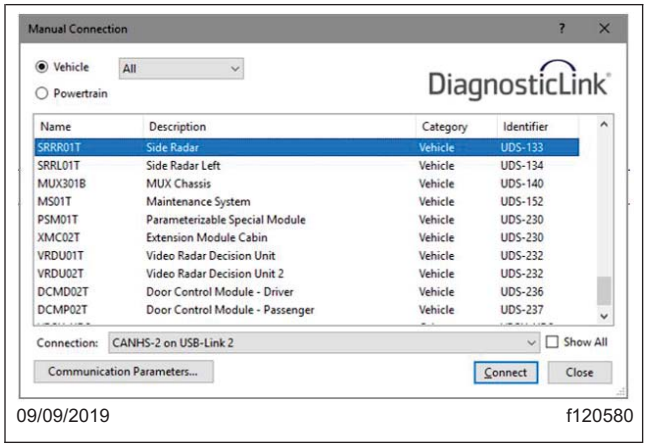
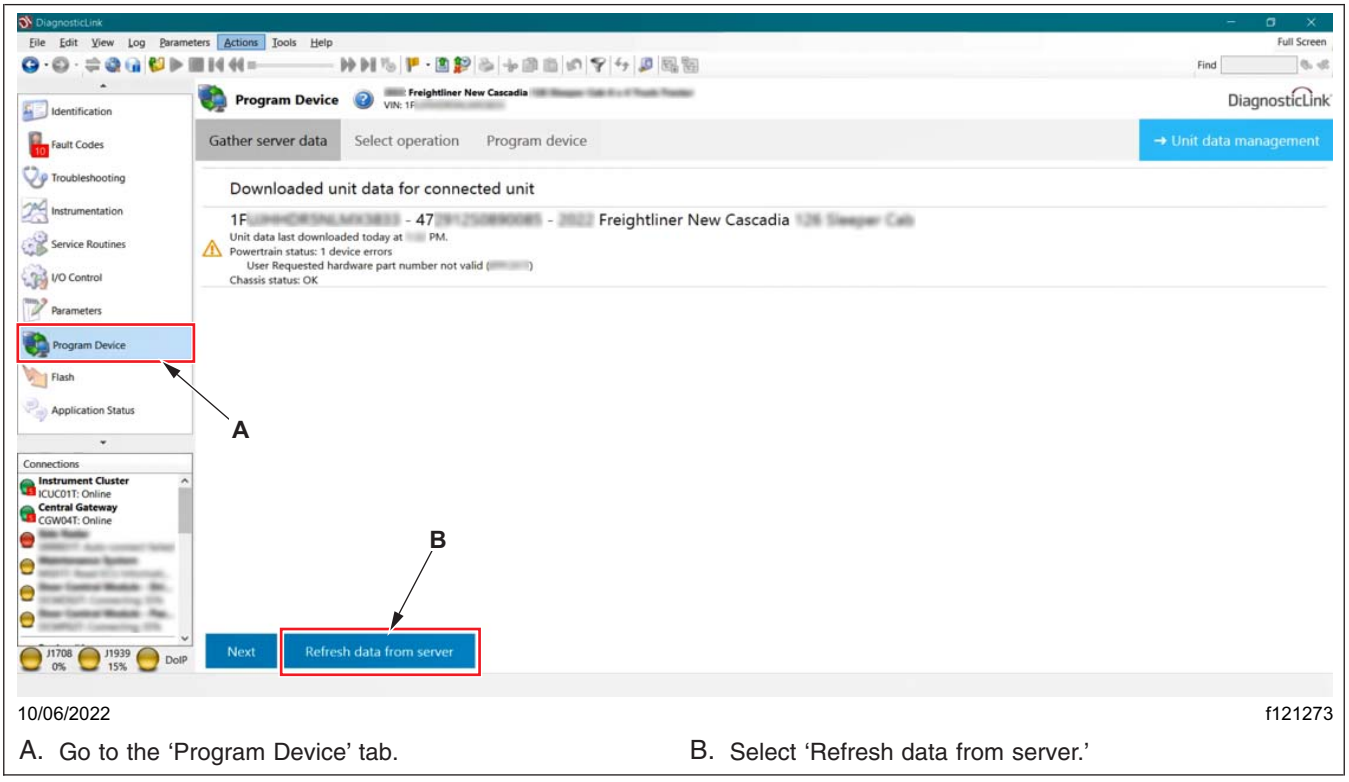


Fig. 28, DiagnosticLink Manual Connection Window

9. Go to the ‘Program Device’ tab, then select ‘Refresh data from server.’ See **Fig. 13**.

   DiagnosticLink would retrieve the latest record of the vehicle, as shown below in **Fig. 7**.



A. Go to the ‘Program Device’ tab.

B. Select ‘Refresh data from server.’

Fig. 13, Refreshing the Data from the Server

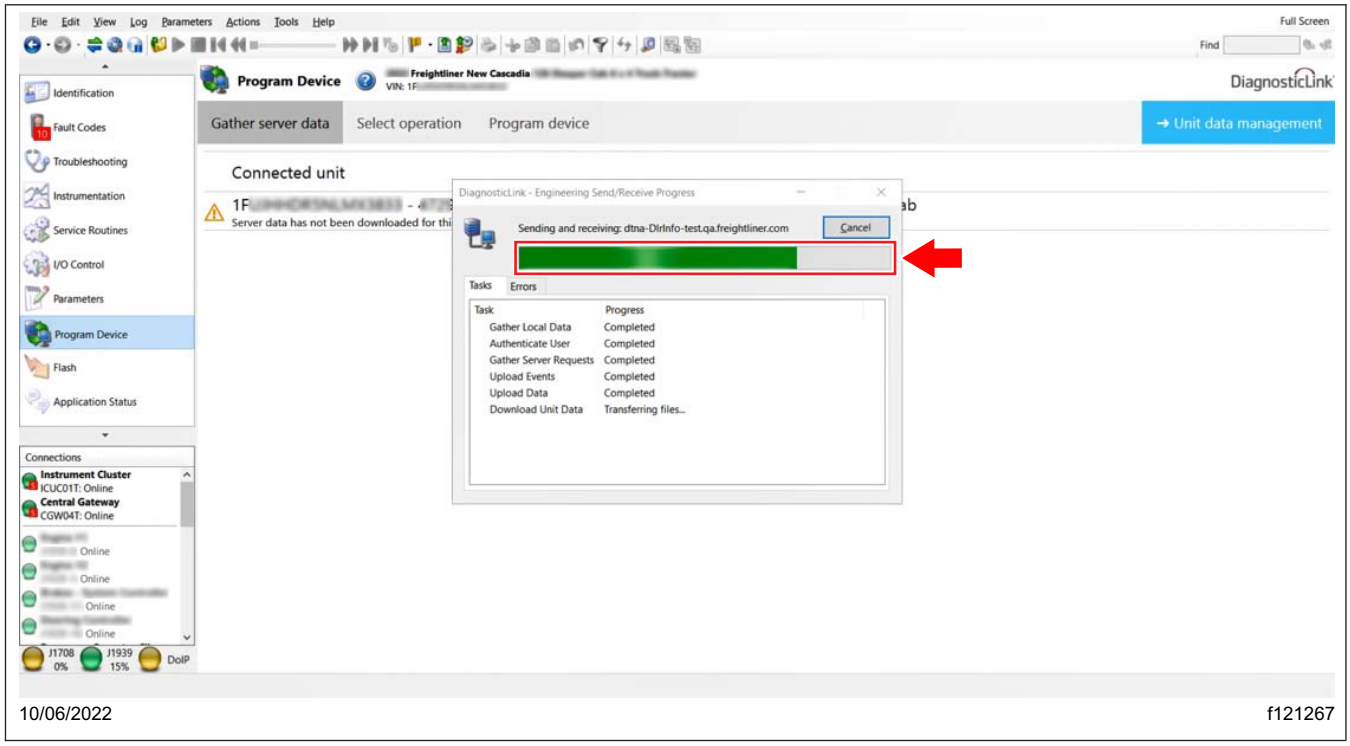


Fig. 7, Data Being Downloaded from the Server

10. Once the latest data is retrieved, select 'Next.' See **Fig. 14**.

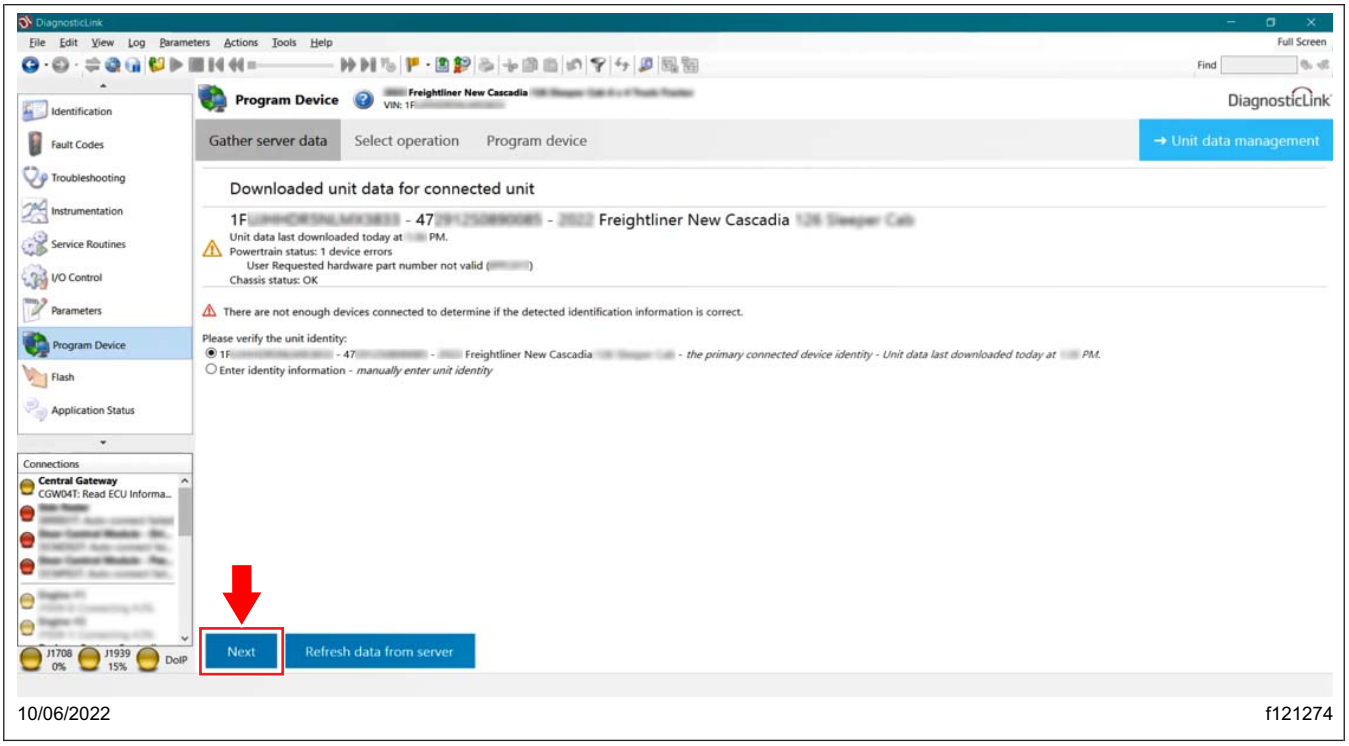


Fig. 14, Selecting Next

IMPORTANT: Failure to flash the modules in the specified order will prevent the ICUC01T/ICC501T automatic configuration from running correctly. Module flashing must be performed only in the order specified as follows:

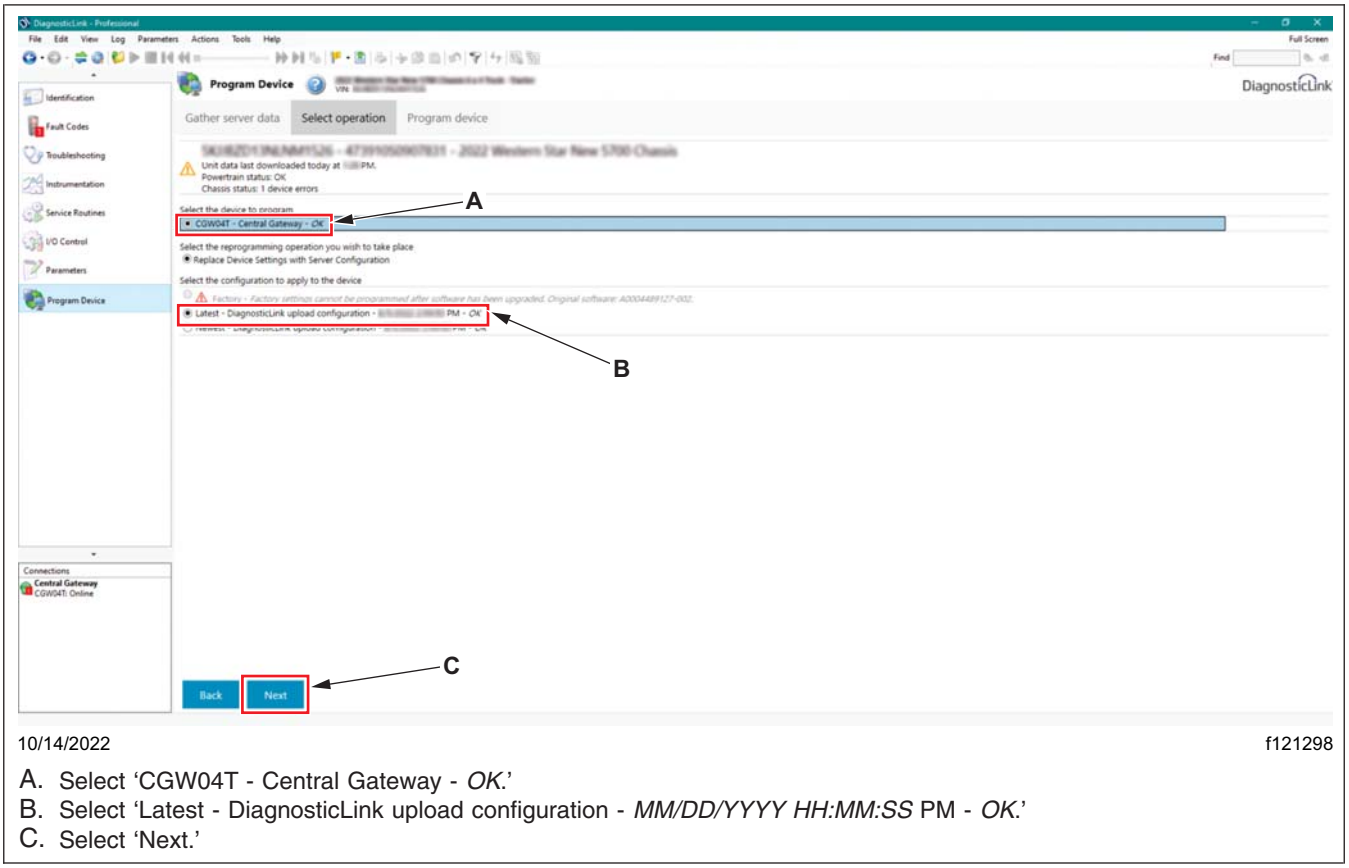
- CGW04T followed by SRRR01T followed by ICUC01T/ICC501T.

11. Flash the CGW04T as follows.

    11.1 Select 'CGW04T - Central Gateway - *OK*' as the device to program. See **Fig. 15**.

    11.2 Select 'Latest - DiagnosticLink upload configuration - *MM/DD/YYYY HH:MM:SS* PM - *OK*' as the configuration to apply to the device. See **Fig. 15**.

    11.3 Select 'Next.' See **Fig. 15**.



A. Select 'CGW04T - Central Gateway - *OK*.'
B. Select 'Latest - DiagnosticLink upload configuration - *MM/DD/YYYY HH:MM:SS* PM - *OK*.'
C. Select 'Next.'

Fig. 15, Selecting the Device Configuration

11.4 Select ‘Start’ to start flashing the CGW04T. See **Fig. 16**.

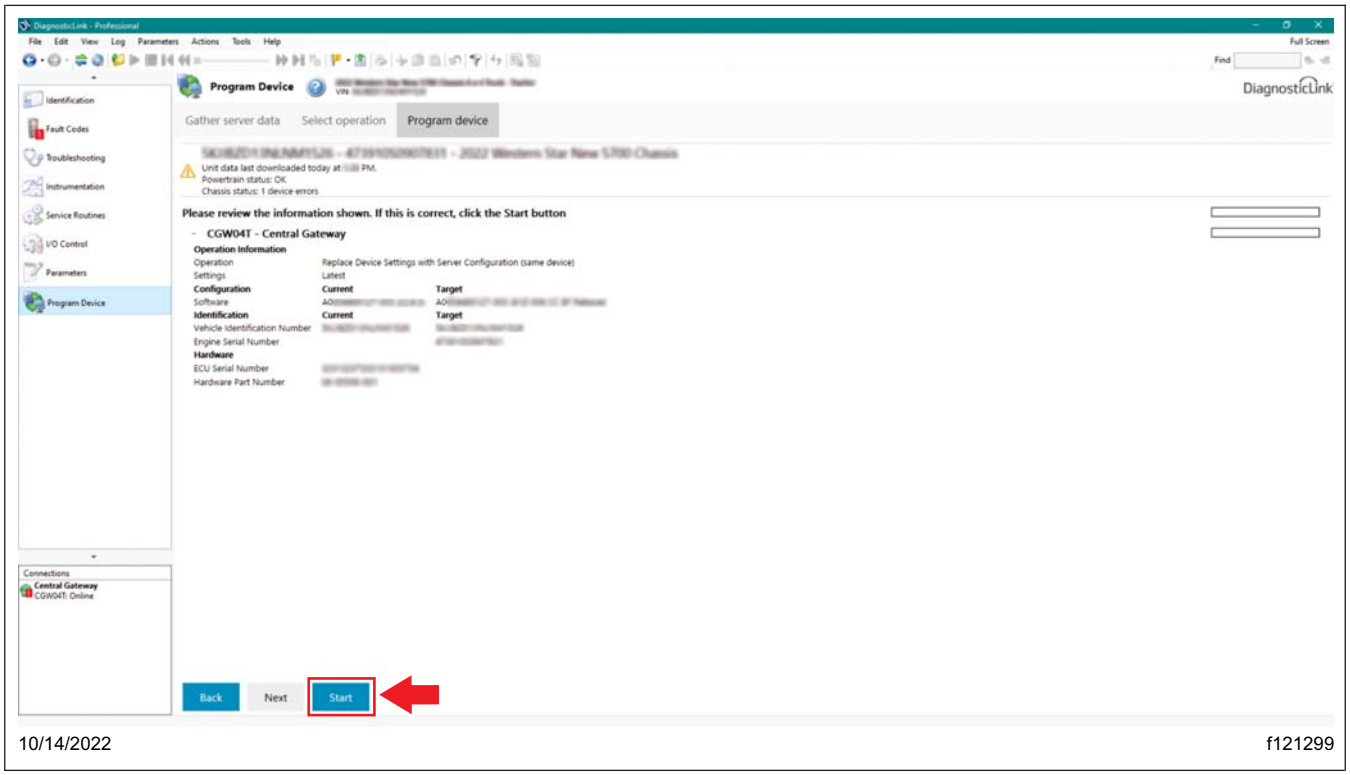


Fig. 16, Starting to Flash CGW04T

11.5 Once the flashing is successful, select ‘Finish.’ See **Fig. 17**.

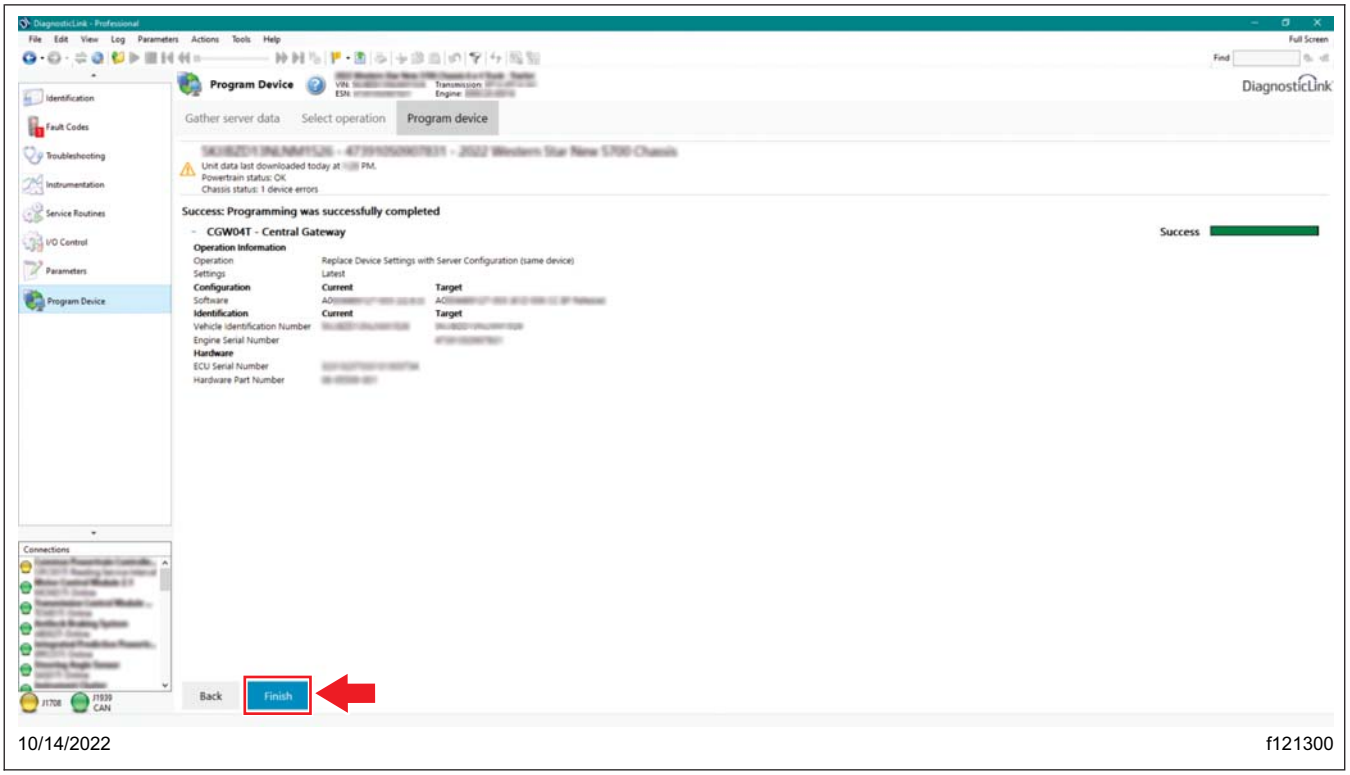


Fig. 17, Flashing Complete

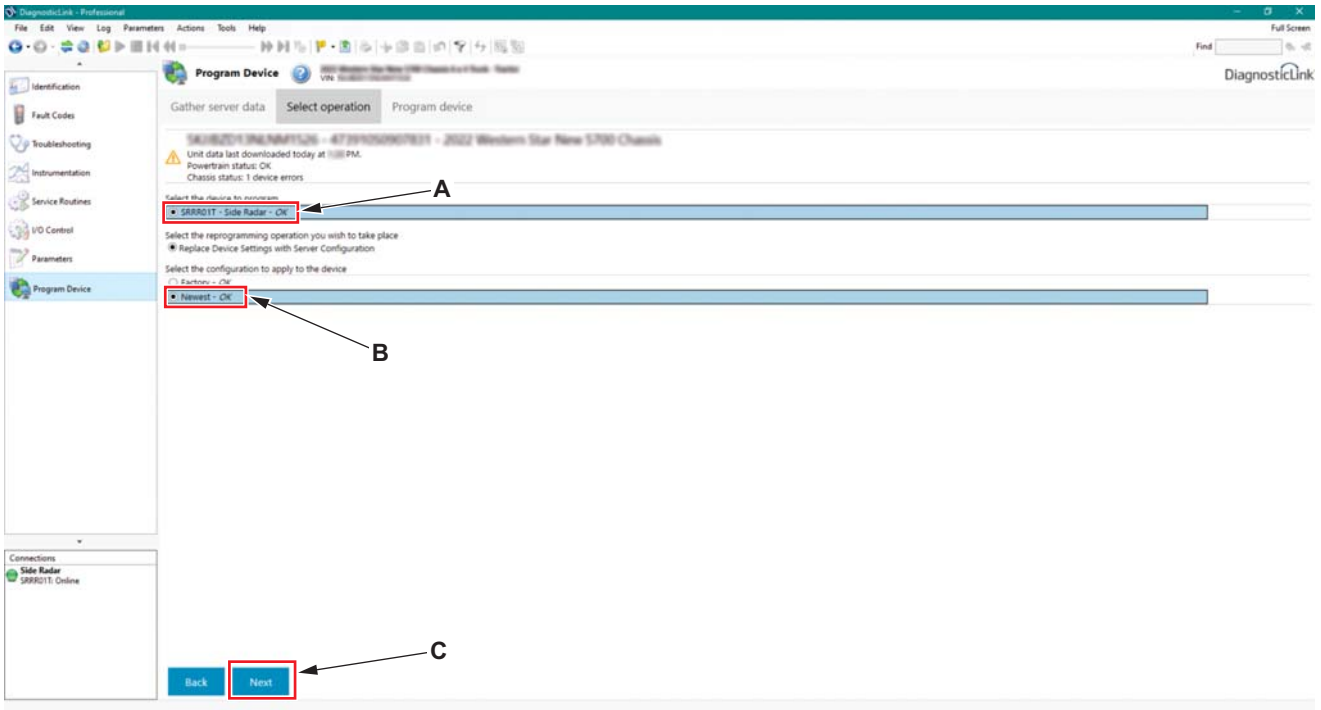
12. Flash the SRRR01T as follows.

NOTE: Since DiagnosticLink has already retrieved data from the server, it is not required to connect to the server again.

12.1 Select 'SRRR01T - Side Radar - *OK*' as the device to program. See **Fig. 18**.

12.2 Select 'Newest - *OK*' as the configuration to apply to the device. See **Fig. 18**.

12.3 Select 'Next.' See **Fig. 18**.



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A. Select 'SRRR01T - Side Radar - *OK*.'
B. Select 'Newest - *OK*.'
C. Select 'Next.'

Fig. 18, Selecting the Device Configuration

12.4 Select ‘Start’ to start flashing the SRRR01T. See **Fig. 19**

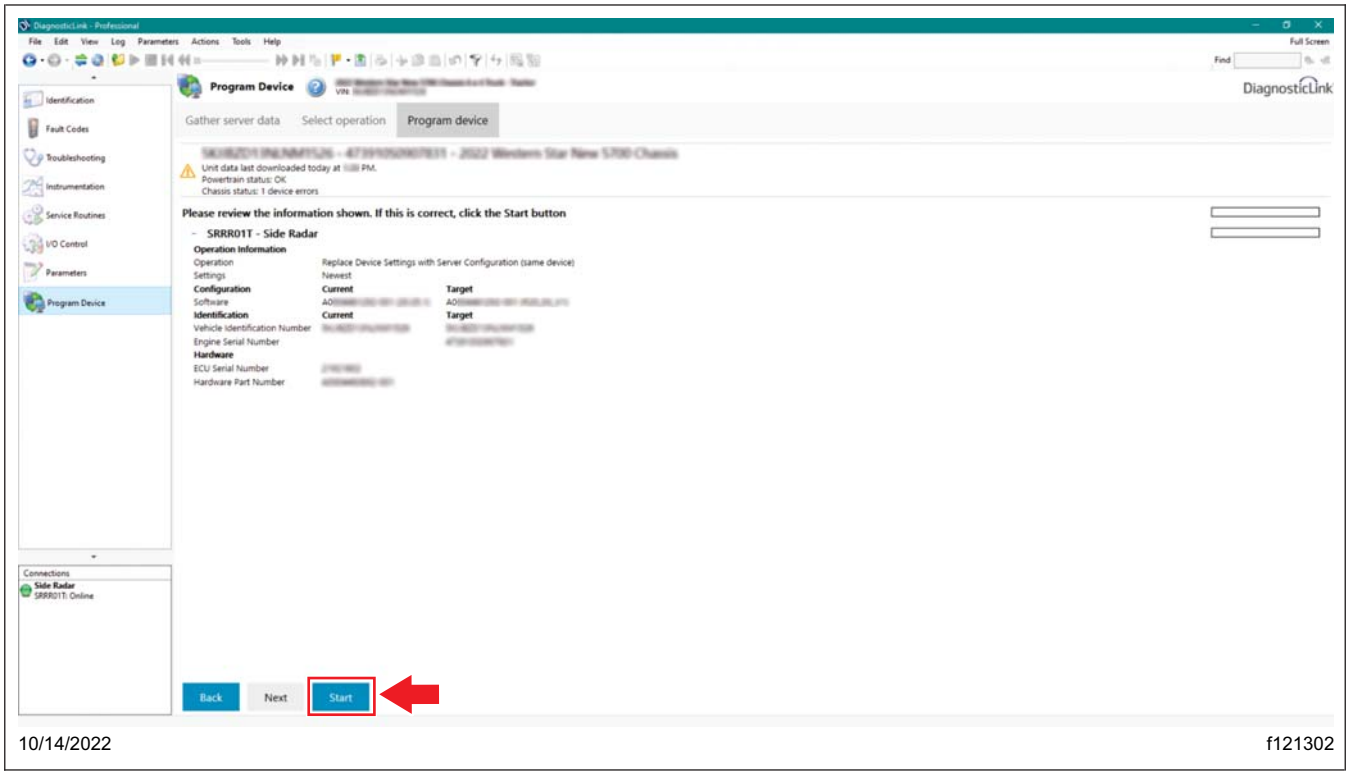


Fig. 19, Starting to Flash SRRR01T

12.5 Once the flashing is successful, select ‘Finish.’ See **Fig. 20**.

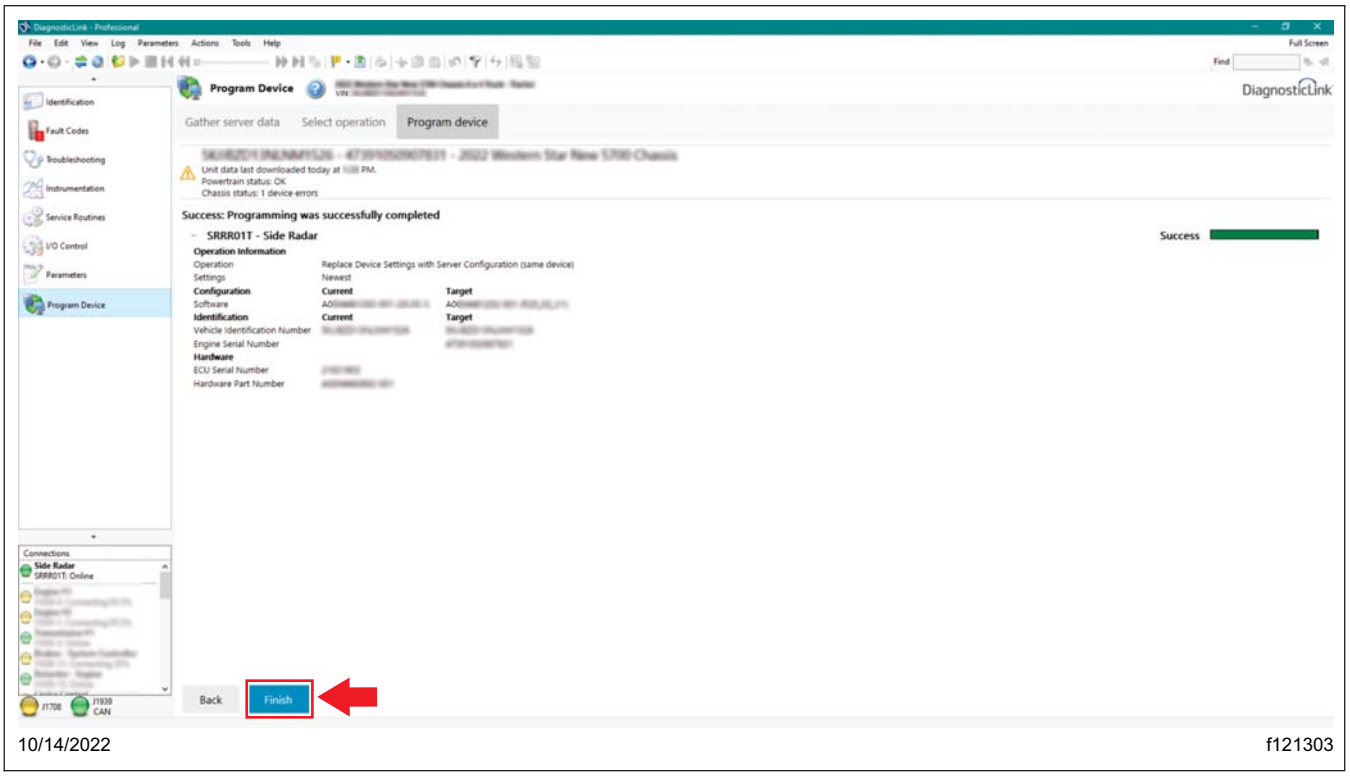
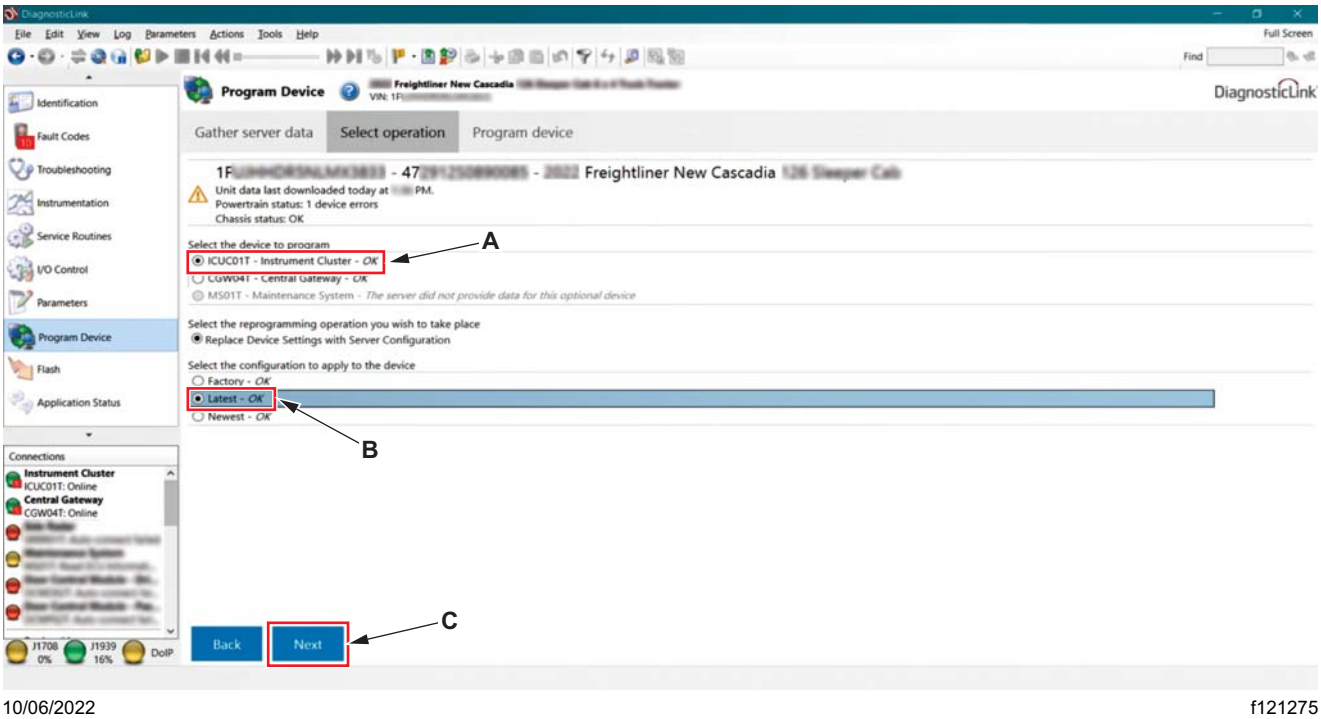


Fig. 20, Flashing Complete

13. Flash the ICUC01T/ICC501T as follows.
    13.1 Select 'ICUC01T - Instrument Cluster - *OK*' as the device to program. See **Fig. 21**.
    13.2 Select 'Latest - *OK*' as the configuration to apply to the device. See **Fig. 21**.
    13.3 Select 'Next.' See **Fig. 21**.



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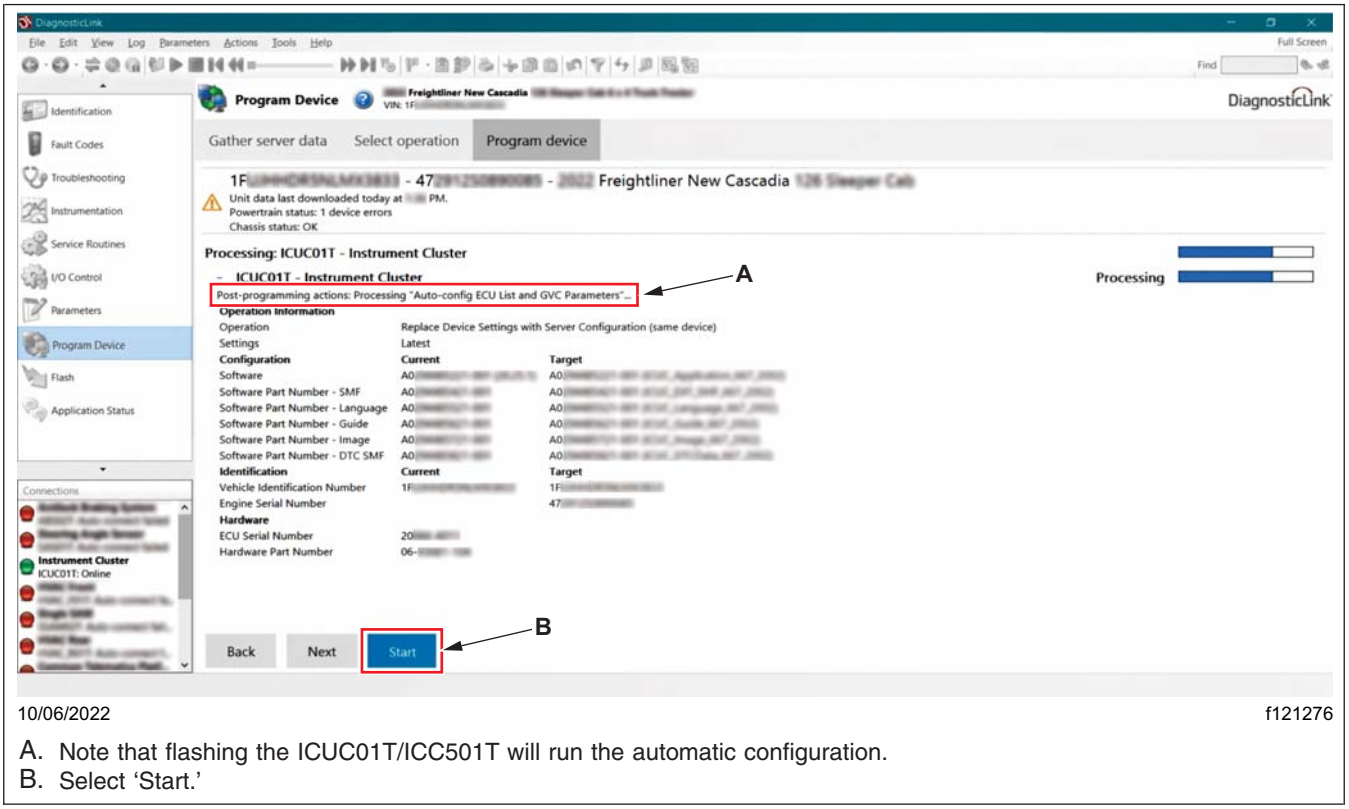
A. Select 'ICUC01T - Instrument Cluster - *OK*.'
B. Select 'Latest - *OK*.'
C. Select 'Next.'

Fig. 21, Selecting the Device Configuration

IMPORTANT: Flashing the ICUC01T/ICC501T will run the automatic configuration.

13.4 Select ‘Start’ to start flashing the ICUC01T/ICC501T. See **Fig. 22**.



A. Note that flashing the ICUC01T/ICC501T will run the automatic configuration.
B. Select ‘Start.’

Fig. 22, Starting to Flash ICUC01T/ICC501T

13.5 Once the flashing is successful, select ‘Finish.’ See **Fig. 23**.

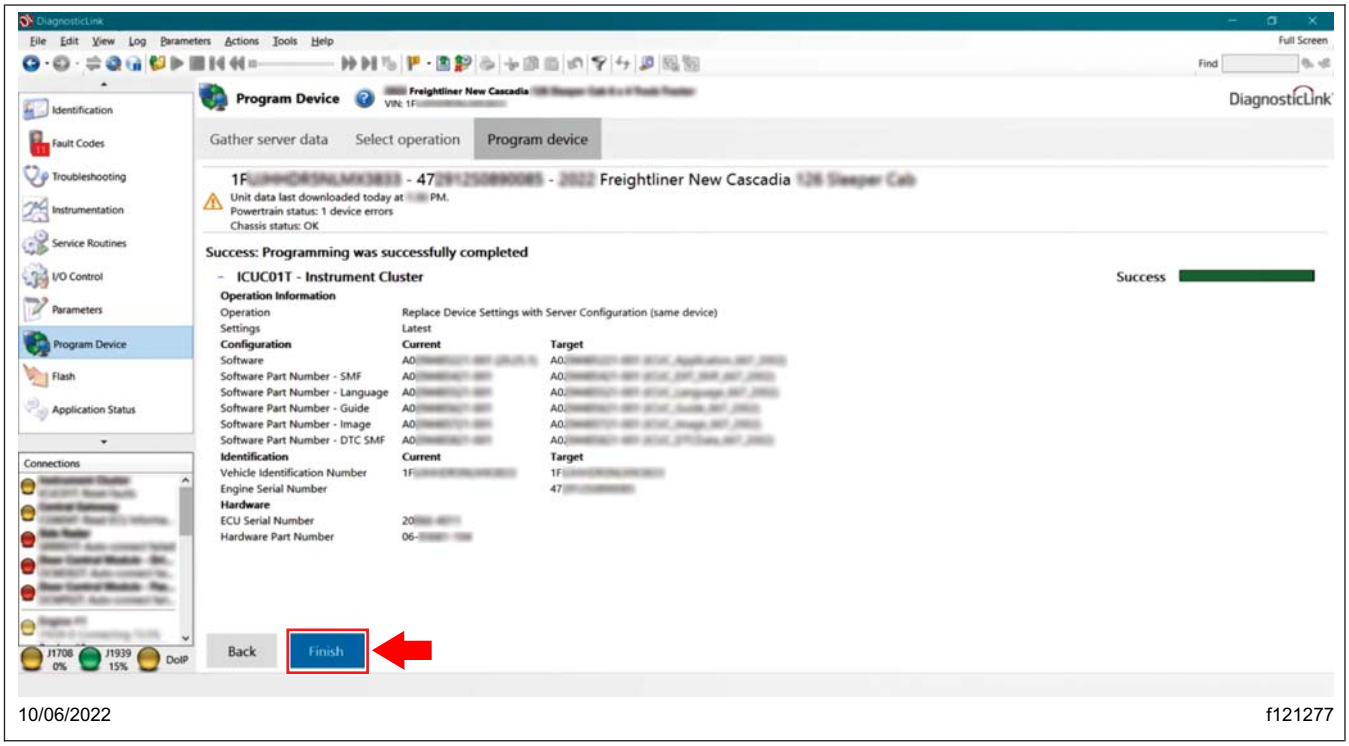


Fig. 23, Flashing Complete

14. Verify the parameter changes, and close the pop-up window.
15. Verify there are no active faults on the vehicle.
16. Check the applicable campaign population of the vehicle.

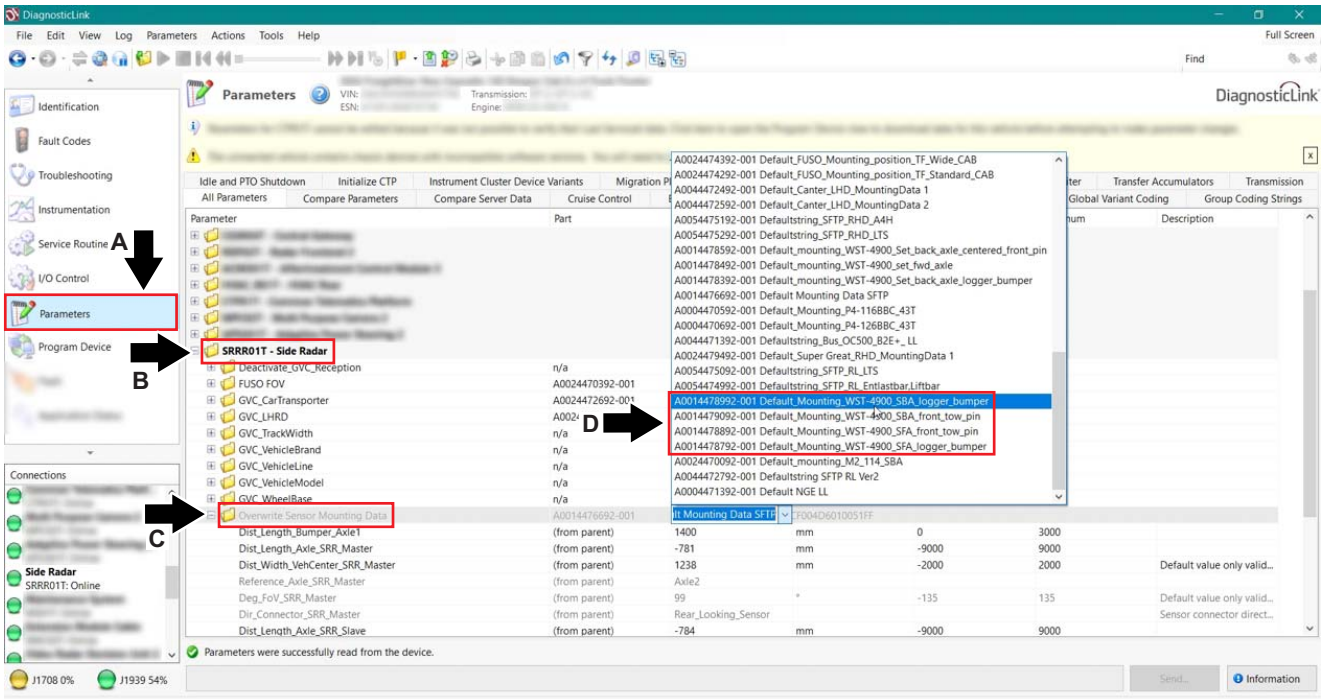
    Does the vehicle belong to campaign populations SF638A or SF638B?

    YES → ECU programming is complete for vehicles belonging to campaign populations SF638A or SF638B. Go to **Side Radar Driving Calibration**.

    NO → Vehicles belonging to campaign populations SF638C, SF638D, SF638E, or SF638F require an additional parameter update. For instructions, follow steps 17 to 21.
17. Go to the 'Parameters' tab. Select the 'SRRR01T – Side Radar' folder, then select the 'Overwrite Sensor Mounting Data' parameter. Set the parameter value for the applicable campaign population shown in **Table 3**. See **Fig. 24**.

SRRR01T Overwrite Sensor Mounting Data Parameter Values	
Campaign Group	**SRRR01T 'Overwrite Sensor Mounting Data' Parameter Setting**
SF638C	A0014478792-001 Default_Mounting_WST 4900_SFA_Logger_bumper
SF638D	A0014478892-001 Default_Mounting_WST 4900_SFA_front_tow_pin
SF638E	A0014478992-001 Default_Mounting_WST 4900_SBA_Logger_bumper
SF638F	A0014479092-001 Default_Mounting_WST 4900_SBA_front_tow_pin

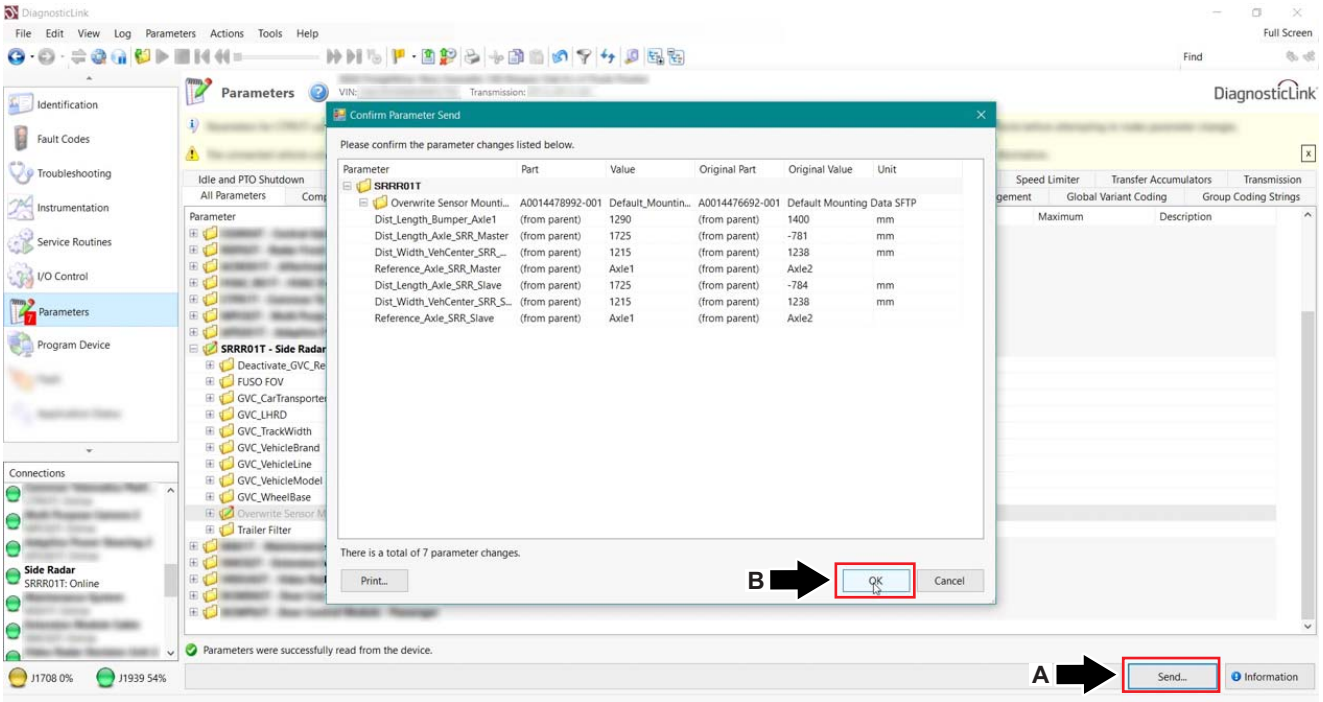
Table 3, SRRR01T Overwrite Sensor Mounting Data Parameter Values



A. Go to the 'Parameters' tab.
B. Select the 'SRRR01T – Side Radar' folder.
C. Select the 'Overwrite Sensor Mounting Data' parameter.
D. Set the parameter value according to the vehicle population.

Fig. 24, Setting Parameter Overwrite Sensor Mounting Data

18. Select the ‘Send’ button to write the parameter changes to the SRRR01T ECU in the vehicle. A window will open asking to confirm the parameter change. Select ‘OK.’ See **Fig. 25**.

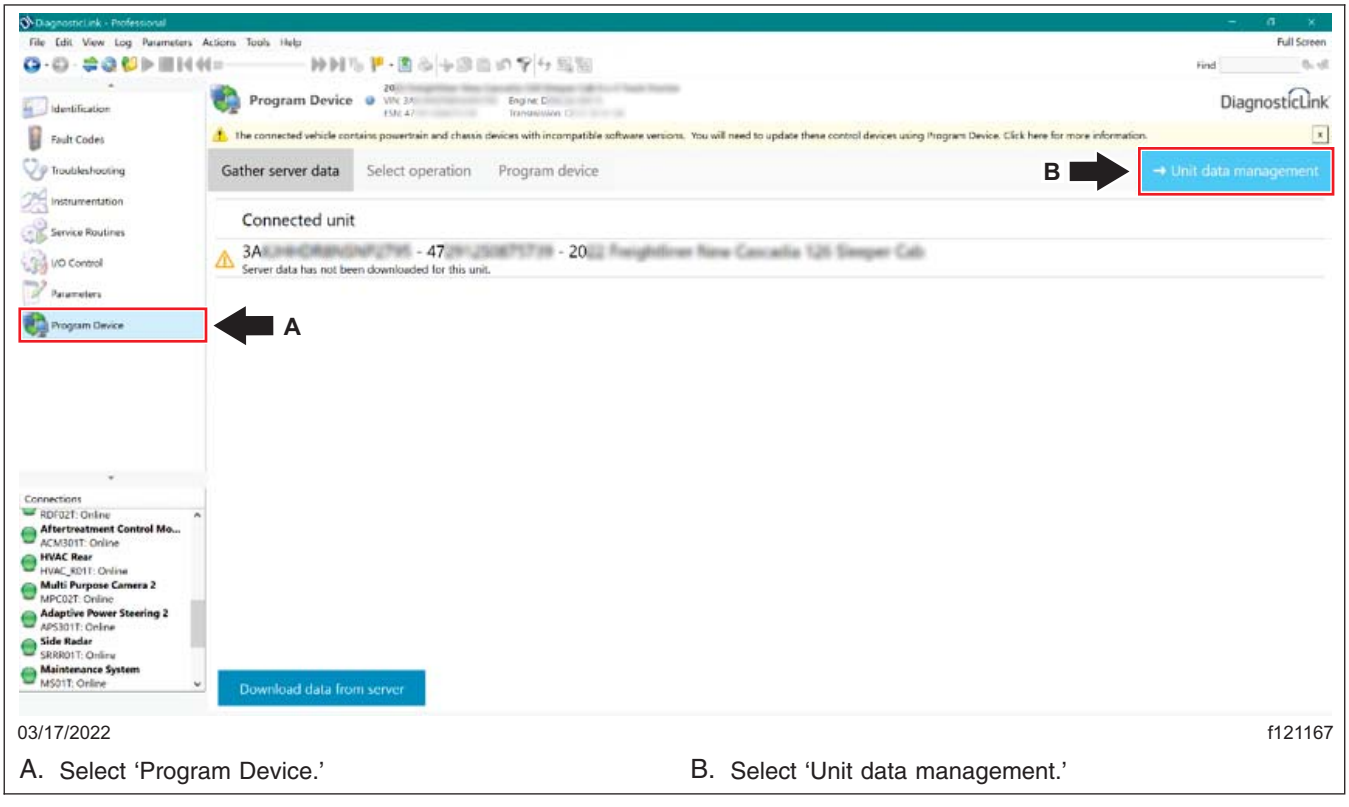


A. Select the ‘Send’ button.

B. Select ‘OK’ to confirm the parameter.

Fig. 25, Selecting the Send Button and Confirming Parameter Send

19. Once the parameter write is complete, go to the ‘Program Device’ tab. Then select ‘Unit data management’ in the upper-right corner. See **Fig. 26**.



A. Select ‘Program Device.’

B. Select ‘Unit data management.’

Fig. 26, Selecting Unit Data Management

20. The information corresponding to the VIN should appear under ‘Unit data for upload.’ Select ‘Connect to server’ to upload the new parameters. See **Fig. 27**.

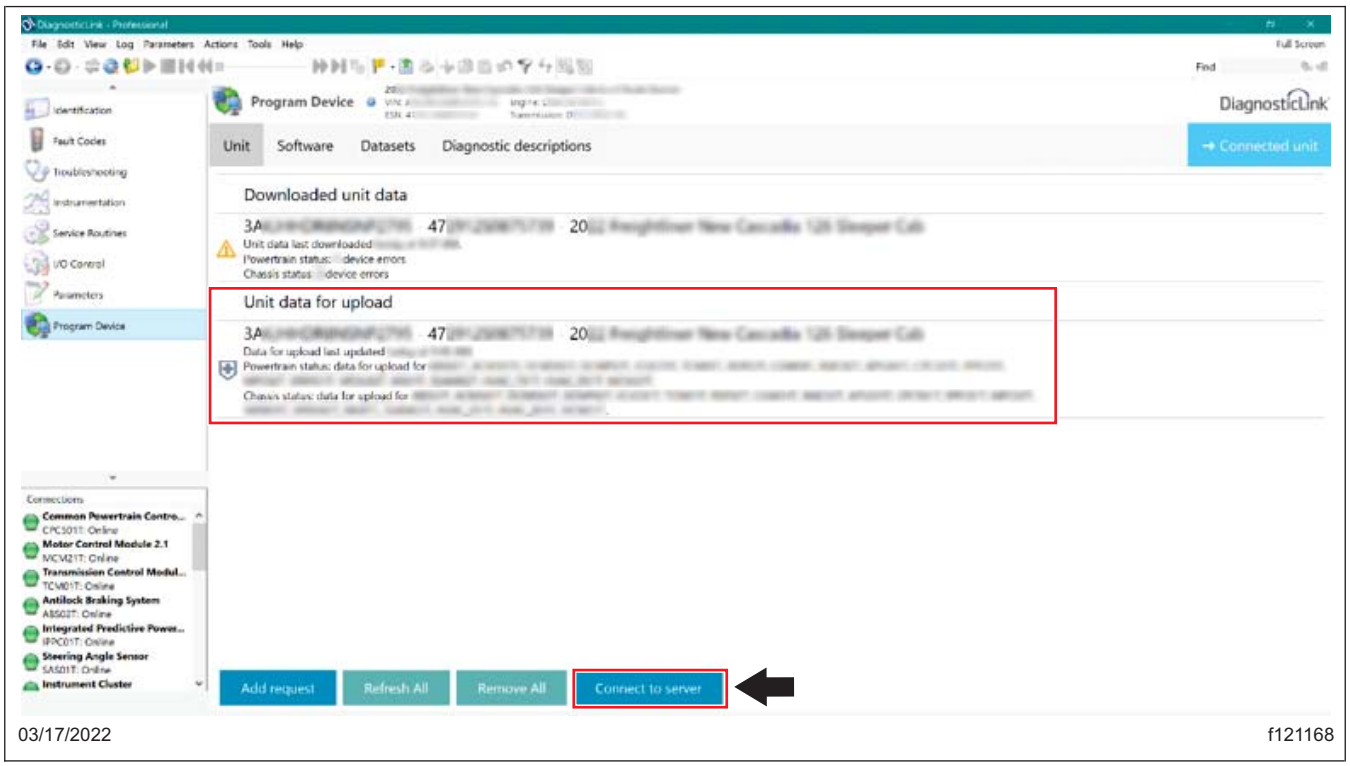


Fig. 27, Uploading the New Parameters

21. Once the parameter updates are uploaded to the server, go to **Side Radar Driving Calibration**.

Side Radar Driving Calibration

1. Turn the ignition to the ON position. Do not start the engine.
2. If the side radar replacement does not auto-connect when a new side radar is installed or replaced, connect manually with DiagnosticLink 8.16SP4 or above.
3. From the menu bar, select ‘File,’ then go to ‘Connect.’ In the ‘Manual Connection’ window, select ‘SRRR01T,’ then select ‘Connect.’ See **Fig. 28**.

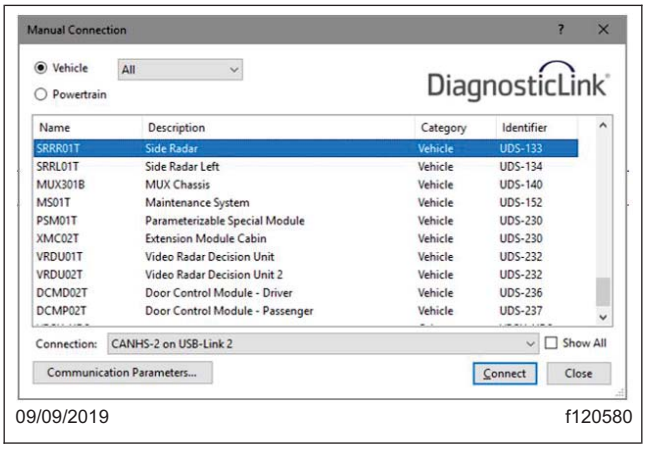


Fig. 28, DiagnosticLink Manual Connection Window

NOTE: The VRDU02T must also be connected in order for DiagnosticLink to be able to communicate with the side radar. The calibration option will only appear under the Detroit Assurance menu if the VRDU02T and SRRR01T are connected.

4. The following conditions must be met before the calibration procedure can be initiated:
   - park brake set
   - engine ON
   - vehicle parked
5. In DiagnosticLink, select ‘Actions’ from the menu bar, then select ‘Detroit Assurance,’ and ‘Side Radar Right Calibration.’ See **Fig. 29**.

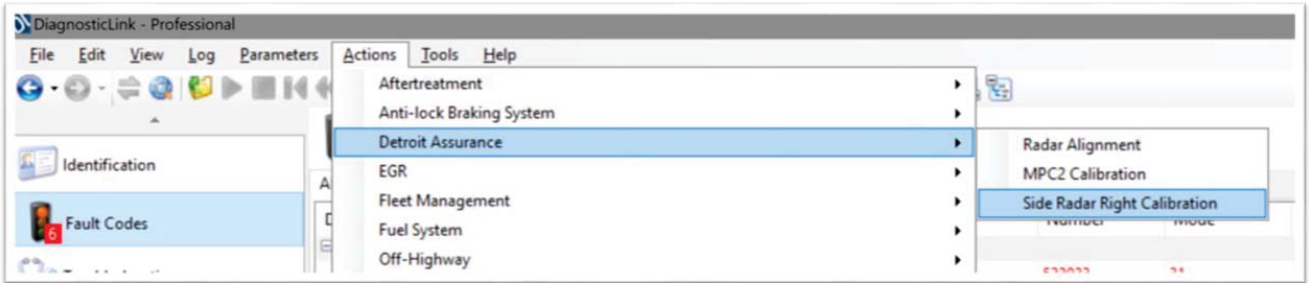


Fig. 29, Selecting Side Radar Right Calibration

NOTE: The ‘Start’ button will not be available until the engine is started.

6. Select ‘Start’ to initiate the calibration. See **Fig. 30**.

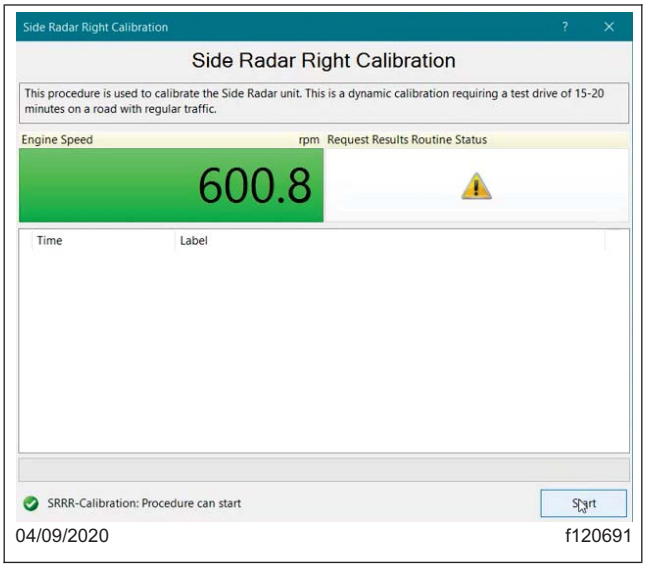


Fig. 30, Initiating Calibration Drive

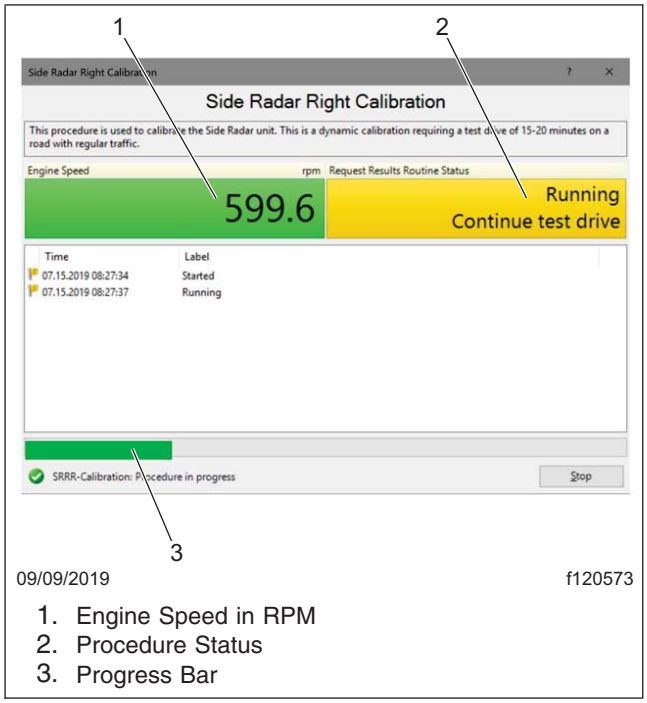
7. Release the parking brake, then start driving. **Figure 31** shows the calibration panel layout.

   The following points are to be noted during the calibration drive:

   - The panel instructions state that the drive should be in regular traffic. This is because the radar must detect objects in close range (1 to 3 m). The radar will calibrate with the presence of trees, signs etc. on the side of the road, but will take approximately to 20 minutes to complete. If vehicle traffic is detected on the right hand side of the truck, the calibration will complete much faster.
   - Unlike the front radar, there is no minimum speed requirement for the calibration.
   - If DiagnosticLink is disconnected during the drive, the key must be cycled and the calibration restarted.

NOTE: The calibration progress is rapid and the percentage values jumps from 32.8% to 100% at the end of the procedure.

8. Continue driving the vehicle until the status bar reaches 100%. See **Fig. 32**.



1. Engine Speed in RPM
2. Procedure Status
3. Progress Bar

Fig. 31, Calibration Layout

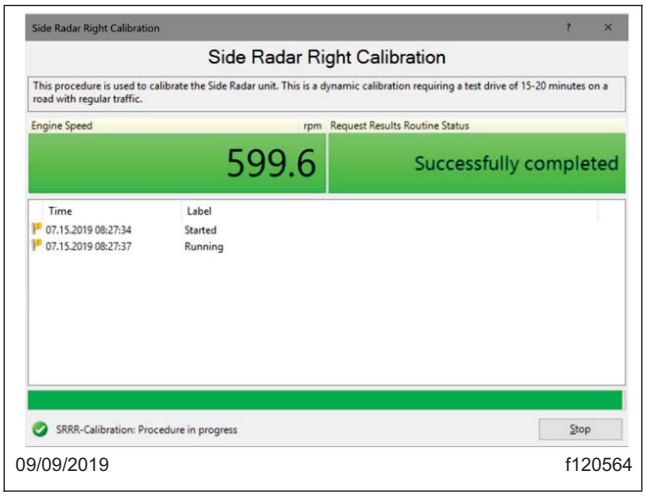


Fig. 32, Completion of Calibration

NOTE: The side radar warning lamp within the right-hand side A-pillar is now active and will illuminate whenever the SGA monitoring system detects an object near the right-front of the vehicle.

9. Once the status bar has reached 100%, park the vehicle and set the parking brake. Leave the ignition ON.
10. Clear any active faults, then disconnect DiagnosticLink from the vehicle. Turn the ignition to the OFF position and wait for one minute.
11. Turn the ignition ON, and start the vehicle to confirm that no fault codes are present.
12. Clean a spot on the base label (Form WAR259), write the campaign number, SF638, on a blank gray completion sticker (Form WAR261), and attach it to the base label, indicating this work has been completed.