Daimler Truck North America LLC

Field Service Campaign

November 2022
SF658A-E

Subject: Integrated Predictive Powertrain Control ECU

Models Affected: Specific model year 2022 Freightliner Cascadia; and Western Star 49X and 5700 vehicles manufactured June 6, 2021, through January 13, 2022.

General Information

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Trucks Division, and its wholly owned subsidiary, Western Star Truck Sales, Inc., is initiating Field Service Campaigna SF658A-E to modify the vehicles mentioned above.

Certain vehicles requesting Intelligent Powertrain Management, were shipped without the Integrated Predictive Powertrain Control (IPPC) module required to enable the feature.

The IPPC module will be installed and software updated.

There are approximately 22,000 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 SF658A-E, a list of the customers and vehicle identification numbers will be available on DTNA Portal. Please refer to this list when ordering parts for this campaign.

Table 1 - Replacement Parts for SF658A-E

Campaign Number	Kit/Part Number	Part Description	Qty. per Kit
SF658A-E	25-SF658-000	KIT - SERVICE IPPC	1 ea
	WAR261	BLANK COMPLETION STICKER	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
SF658A-D	INSTALL IPPC MODULE	1.0	996-F141A	12-Repair Recall/Campaign
SF658E	INSTALL IPPC MODULE	0.8	996-F141B	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 (**SF658-A, SF658-B, etc.).**
- In the Primary Failed Part field, enter **25-SF658-000**.
- In the Parts section, enter the appropriate kit 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 DTNAConnect.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. 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 DTNAConnect.com/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: Integrated Predictive Powertrain Control ECU

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Trucks Division, and its wholly owned subsidiary, Western Star Truck Sales, Inc., is initiating Field Service Campaign SF658A-E to modify specific model year 2022 Freightliner Cascadia; and Western Star 49X and 5700 vehicles manufactured June 6, 2021, through January 13, 2022.

Certain vehicles requesting Intelligent Powertrain Management, were shipped without the Integrated Predictive Powertrain Control (IPPC) module required to enable the feature.

The IPPC module will be installed and software updated.

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 one hour 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

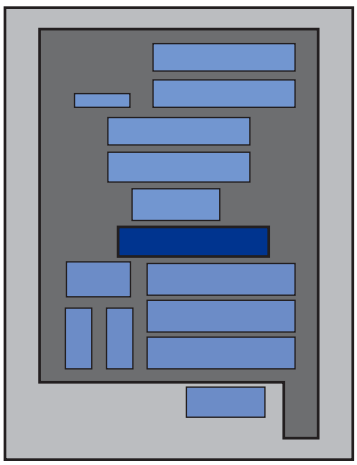
Subject: Integrated Predictive Powertrain Control ECU

Models Affected: Specific model year 2022 Freightliner Cascadia; and Western Star 49X and 5700 vehicles manufactured June 6, 2021, through January 13, 2022.

SF658A-D – ECU Installation and Programming

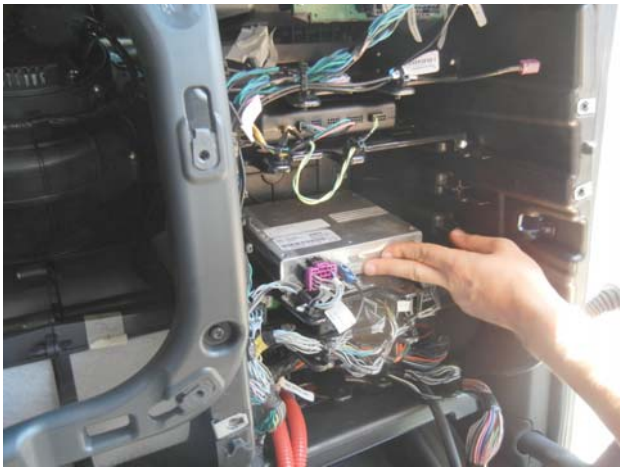
1. Check the base label (Form WAR259) for a completion sticker for SF658 (Form WAR261) indicating this work has been done. The base label is usually located on the passenger door about 12 inches (30 cm) below the door latch. If a sticker is present, no work is needed. If there is no sticker, proceed 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. Disconnect the batteries.
4. Remove the electronics bay cover and the passenger-side lower dash cover. For instructions, see **Section 60.06** of the *New Cascadia workshop manual*.
5. Lower the vehicle power distribution module (VPDM) to the cab floor. For instructions, see **Section 54.08, Subject 100** of the *New Cascadia workshop manual*.
6. Position the new integrated predictive powertrain control (IPPC) ECU (000 446 41 75) in the electronics bay, as shown in **Fig. 1**, then press the ECU firmly towards the back of the shelf. See **Fig. 2**.

   Lower the front of the ECU on to the surface of the shelf and adjust its position horizontally until the tabs on the ECU are fully seated in the mounting slots. For detailed instructions, see **Section 54.02, Subject 100** of the *New Cascadia workshop manual*.



07/25/2016 f546437

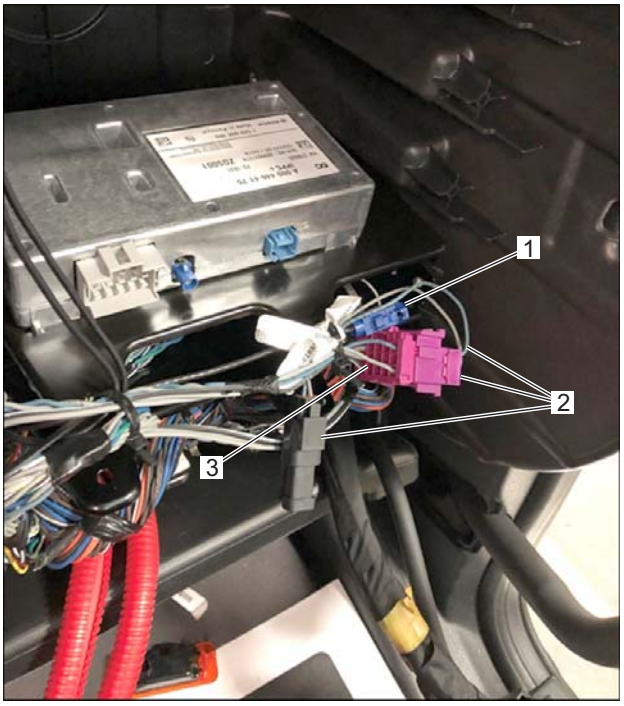
Fig. 1, IPPC ECU Location (schematic)



08/10/2016 f546475

Fig. 2, Installing the IPPC ECU

7. Locate the 15-pin IPPC connector in the electronics bay. Remove the existing terminating resistor jumper (A66-26792-000) from the 15-pin IPPC connector, and discard it. See **Fig. 3** and **Fig. 4**.



10/17/2022 f548013

1. GPS Antenna
2. Terminating Resistor Jumper
3. 15-Pin IPPC Connector

Fig. 3, 15-Pin IPPC Connector Location

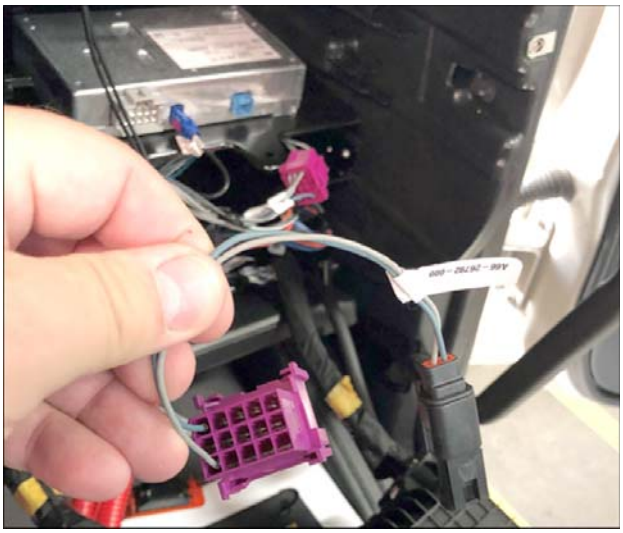


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Fig. 4, Terminating Resistor Jumper Removal

8. Connect the 15-pin IPPC connector and the GPS antenna connector to the IPPC.
9. Install the VPDM. For instructions, see **Section 54.08, Subject 100** of the *New Cascadia workshop manual*.
10. Install the electronics bay cover and the passenger-side lower dash cover. For instructions, see **Section 60.06** of the *New Cascadia workshop manual*.
11. Connect the batteries.
12. Connect an RP1210B-compliant vehicle diagnostic adaptor to the diagnostic connector on the vehicle.
13. Connect the other end of the RP1210B-compliant vehicle diagnostic adaptor to the laptop.
14. Open DiagnosticLink®.

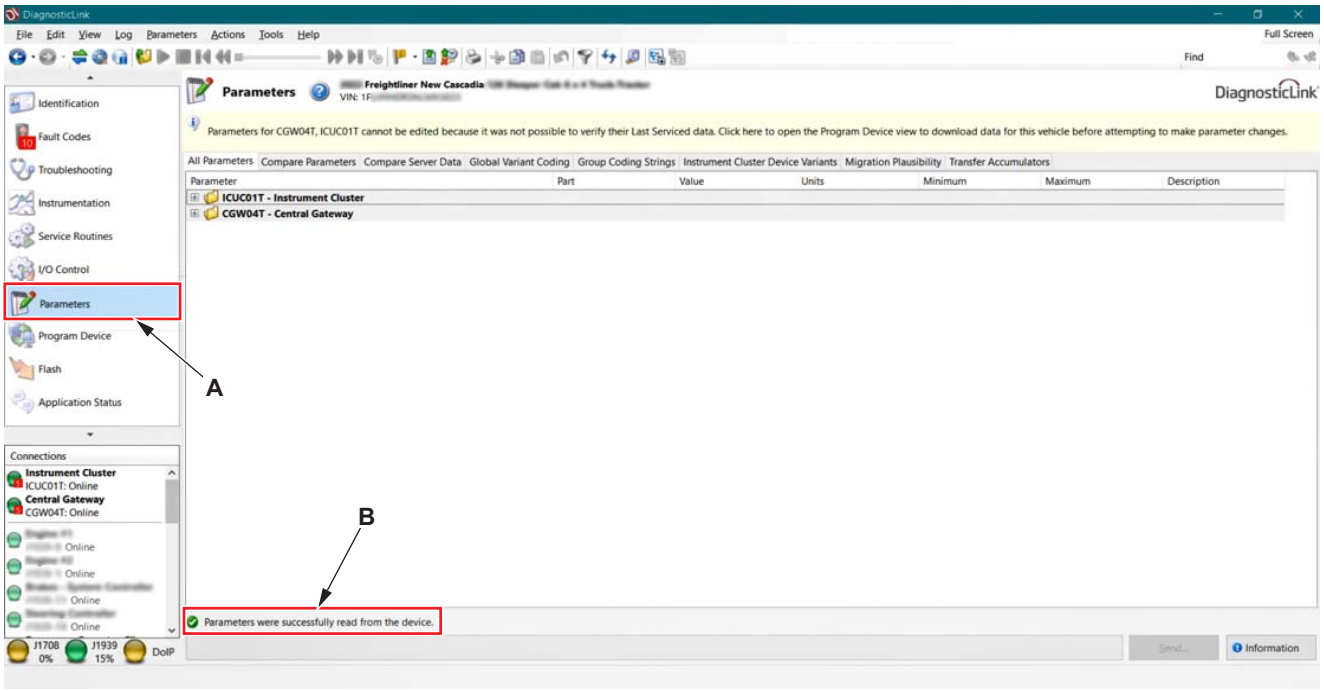
IMPORTANT: Make sure that DiagnosticLink is updated to the latest version (8.16SP4 at the time of publication, or newer) before programming the vehicle.

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

15. Connect to the server using the DTNA Connect credentials.

16. Go to the ‘Parameters’ tab. 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.



10/18/2022 f121305

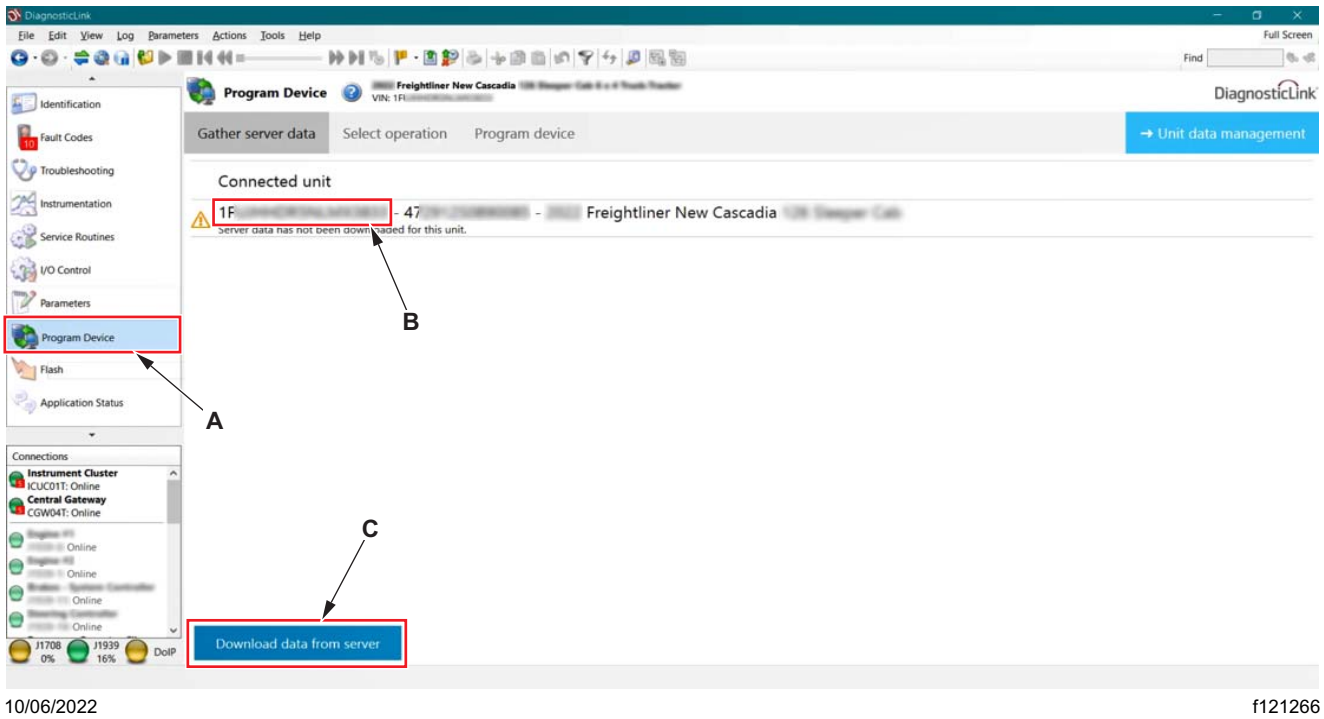
A. Go to the ‘Parameters’ tab.

B. 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.

17. 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**.



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

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

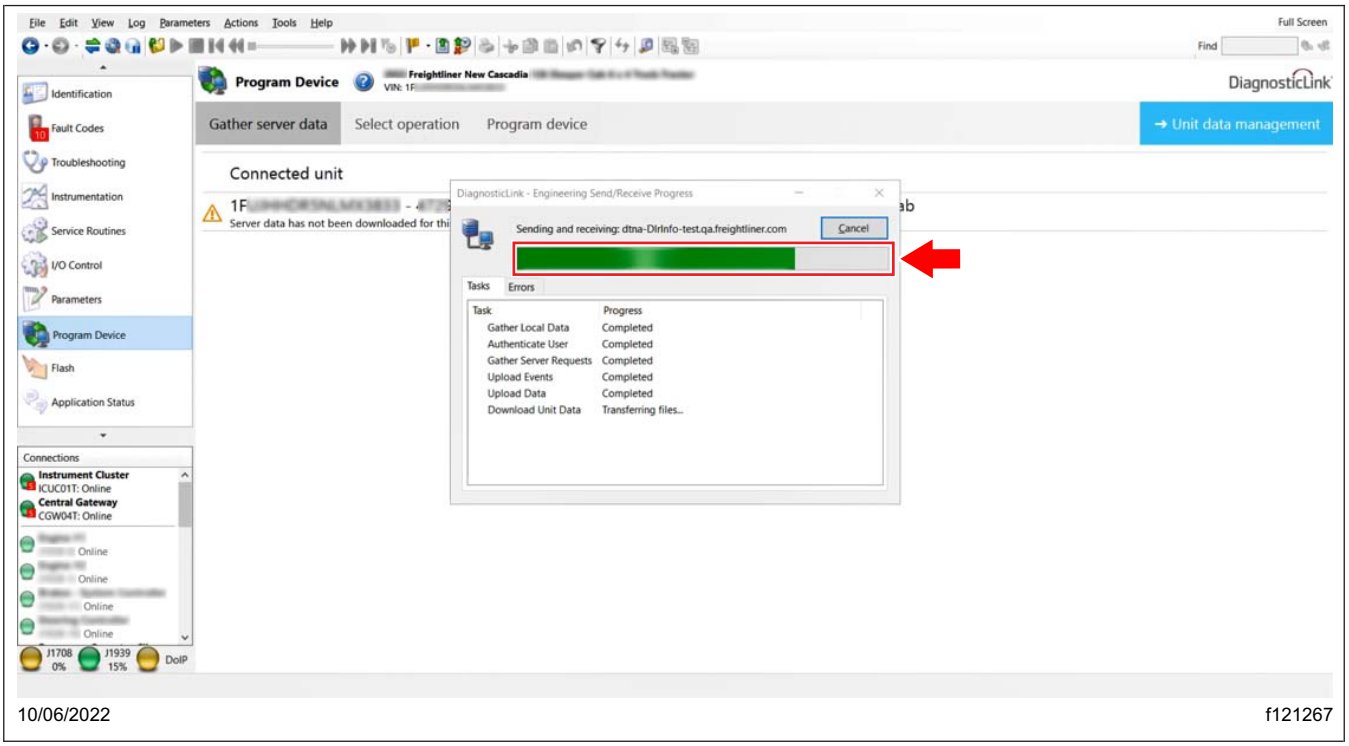
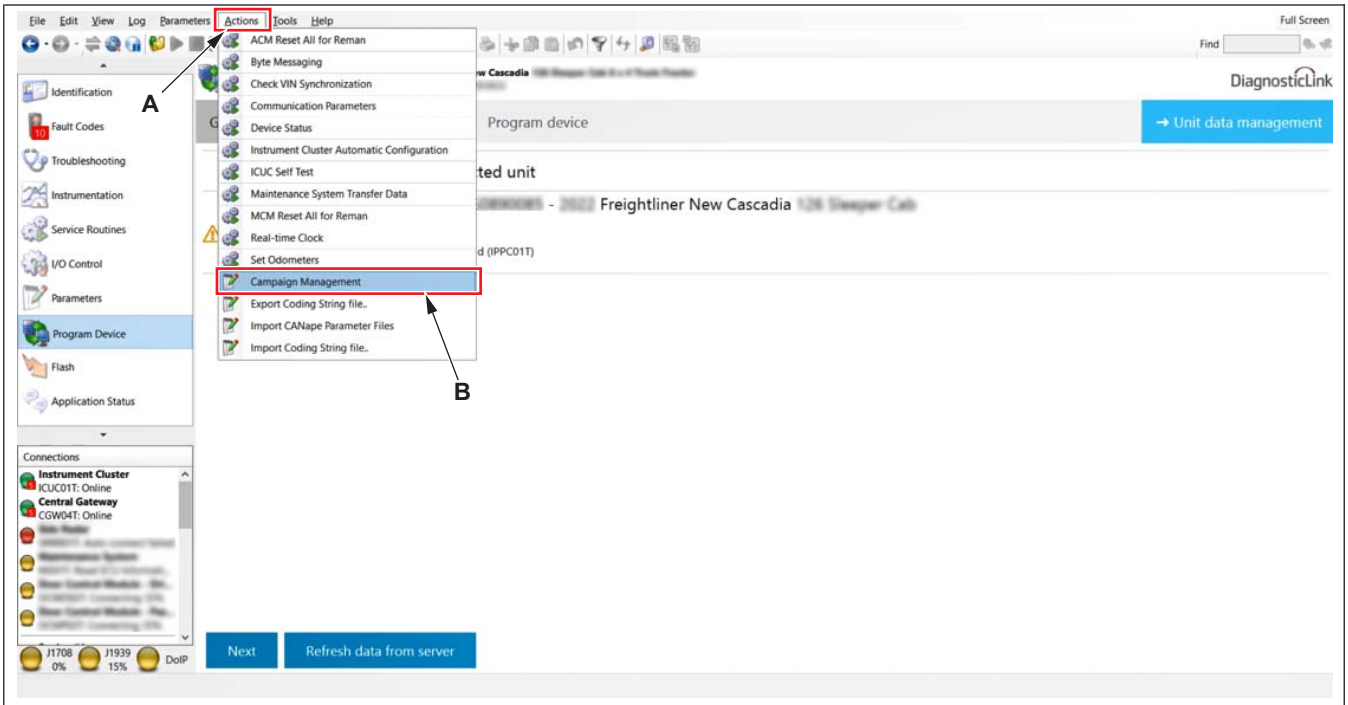


Fig. 7, Data Being Downloaded from the Server

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

18.1 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

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

Fig. 9, Selecting Update

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

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

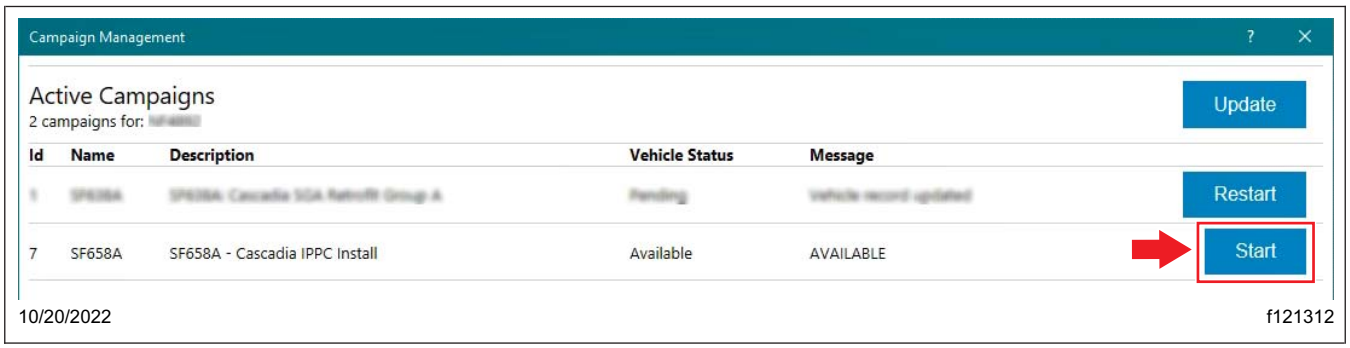


Fig. 10, Selecting Start

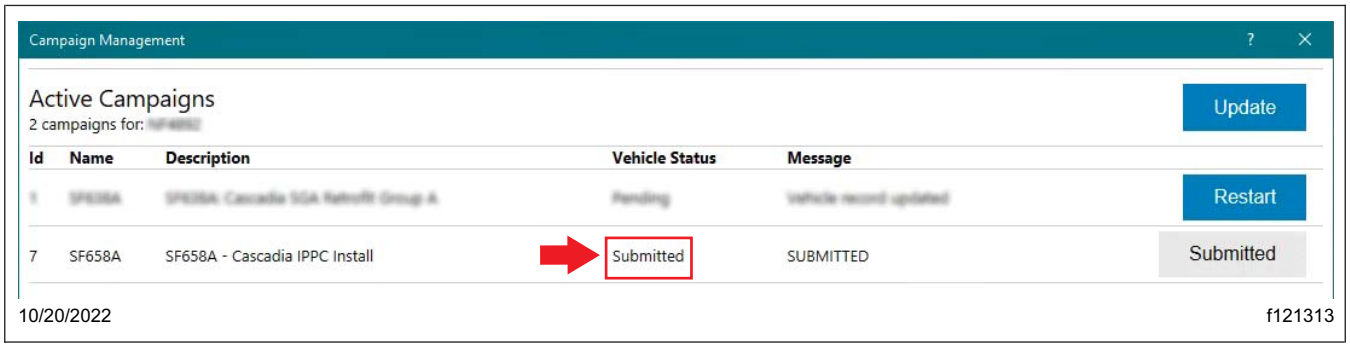


Fig. 11, Vehicle Status Changed to Submitted

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

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.

18.5 Close the ‘Campaign Management’ window.

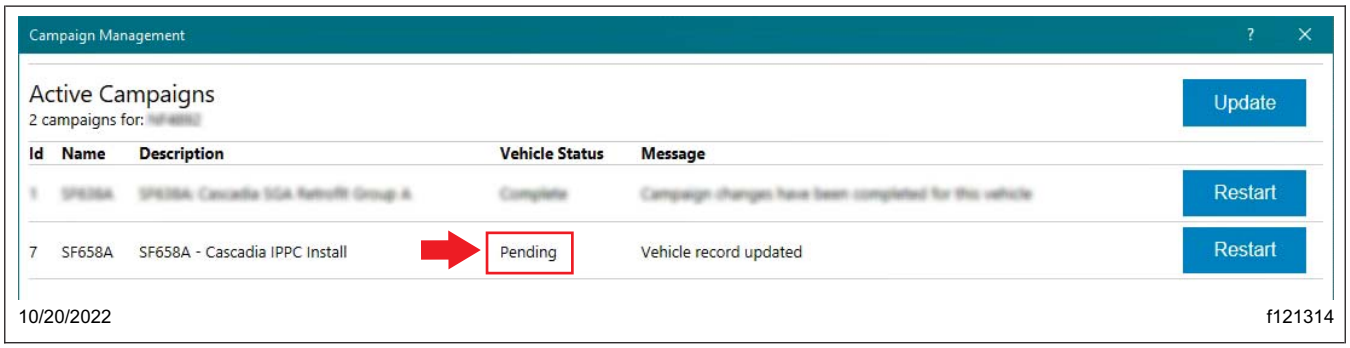
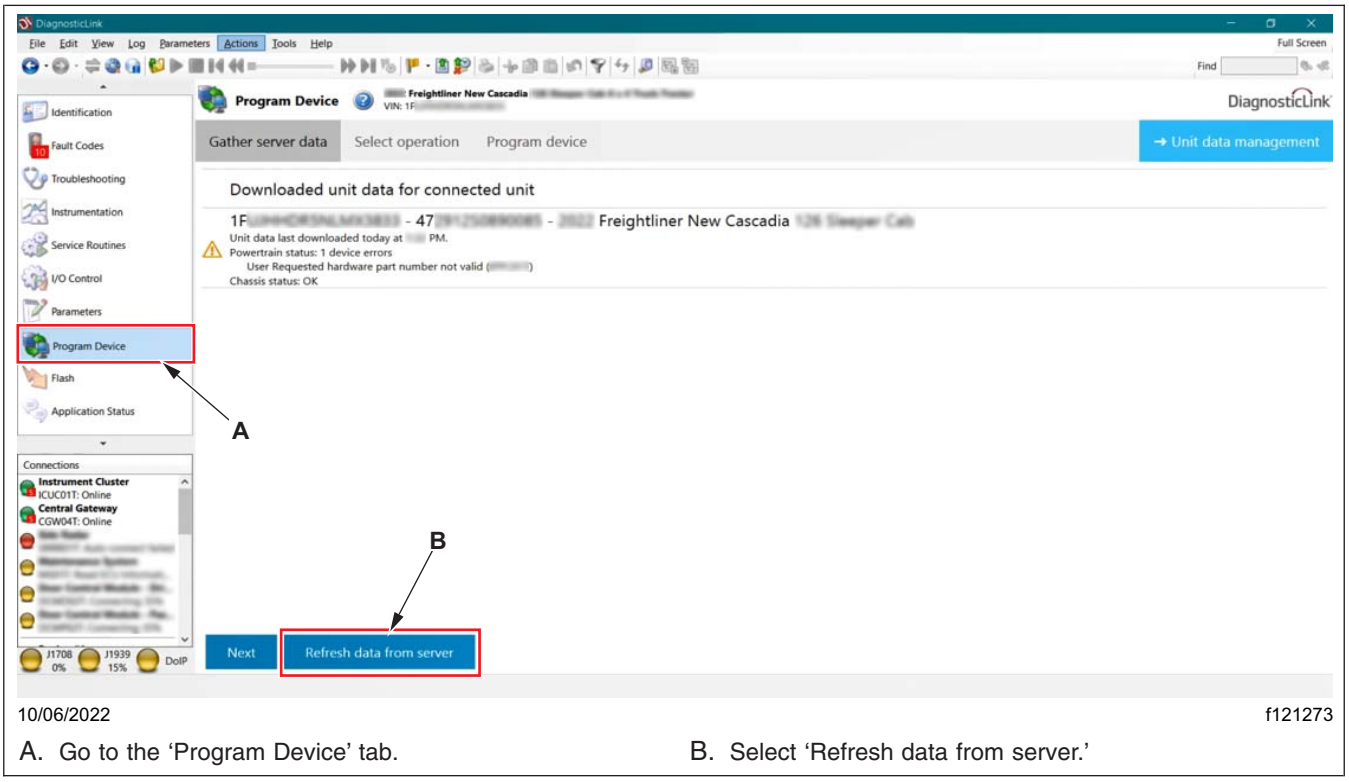


Fig. 12, Vehicle Status Changed to Pending

19. Go to the ‘Program Device’ tab, then select ‘Refresh data from server.’ See **Fig. 13**.
    DiagnosticLink will retrieve the latest record of the vehicle, as shown in **Fig. 7**.



A. Go to the ‘Program Device’ tab.

B. Select ‘Refresh data from server.’

Fig. 13, Refreshing the Data from the Server

20. Once the latest data is retrieved, select ‘Next.’ See **Fig. 14**.

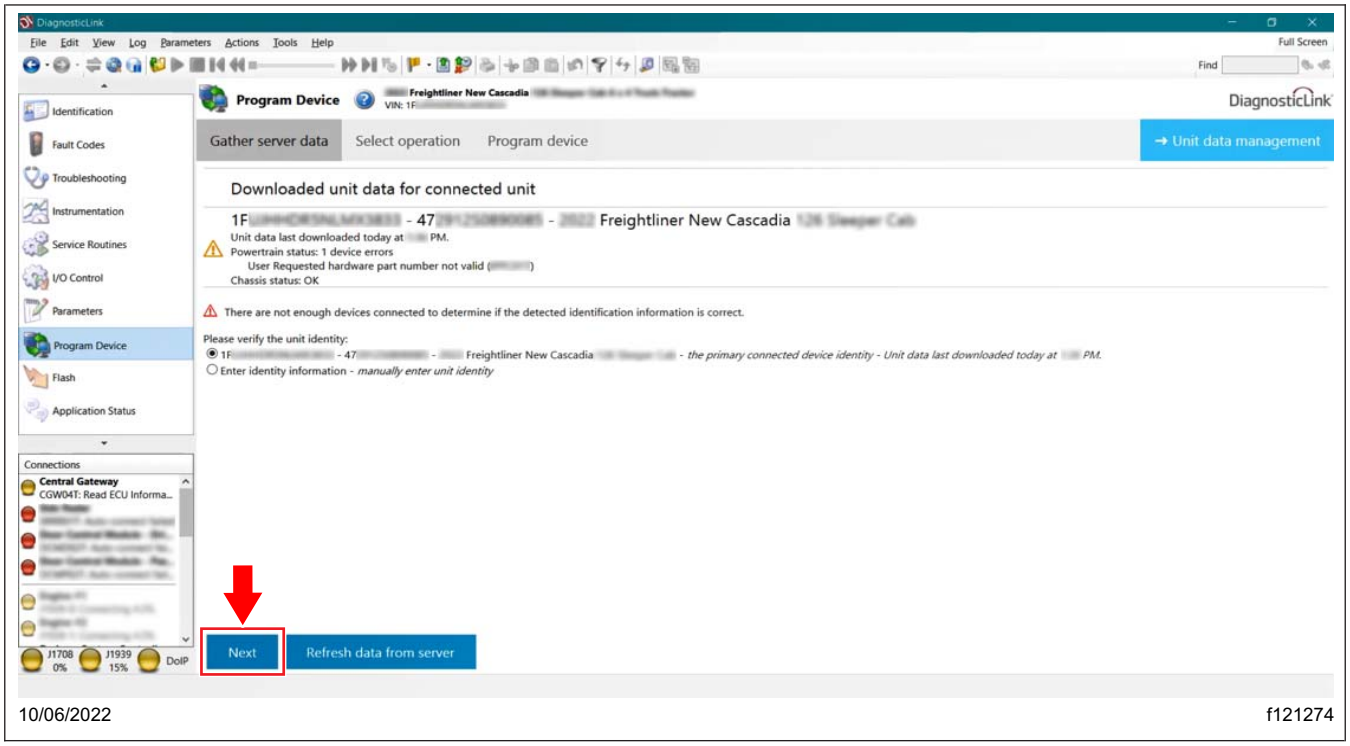
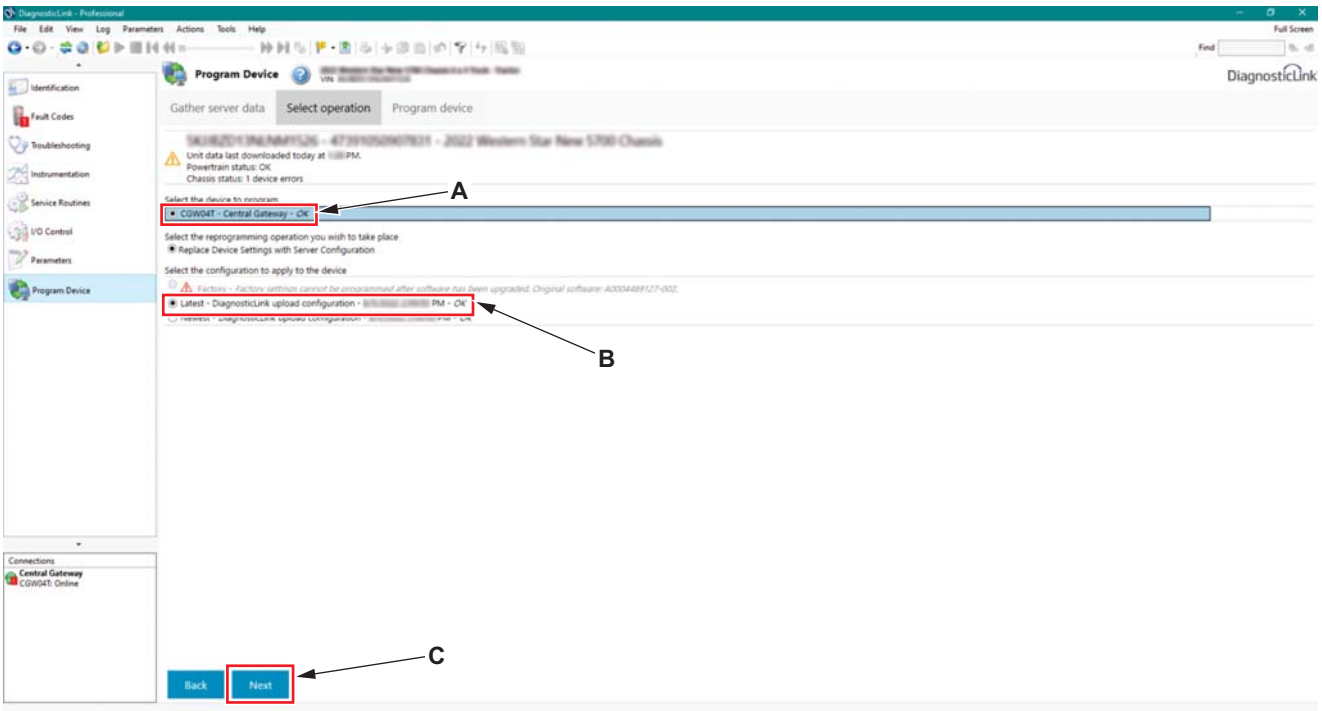


Fig. 14, Selecting Next

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 CPC501T followed by IPPC01T followed by ICUC01T/ICC501T.

21. Flash the CGW04T as follows.
    21.1 Select 'CGW04T - Central Gateway - *OK*' as the device to program. See **Fig. 15**.
    21.2 Select 'Latest - DiagnosticLink upload configuration - *MM/DD/YYYY HH:MM:SS* PM - *OK*' as the configuration to apply to the device. See **Fig. 15**.
    21.3 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

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

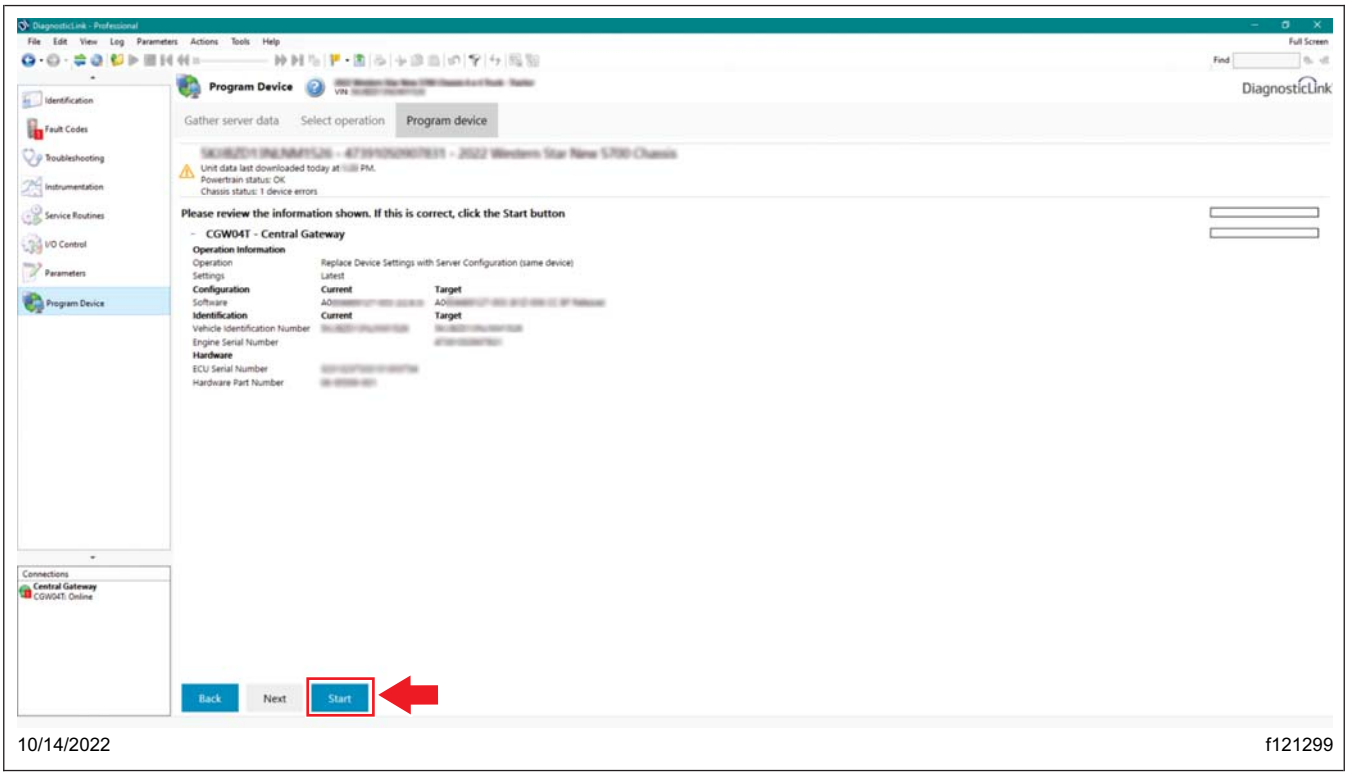


Fig. 16, Starting to Flash CGW04T

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

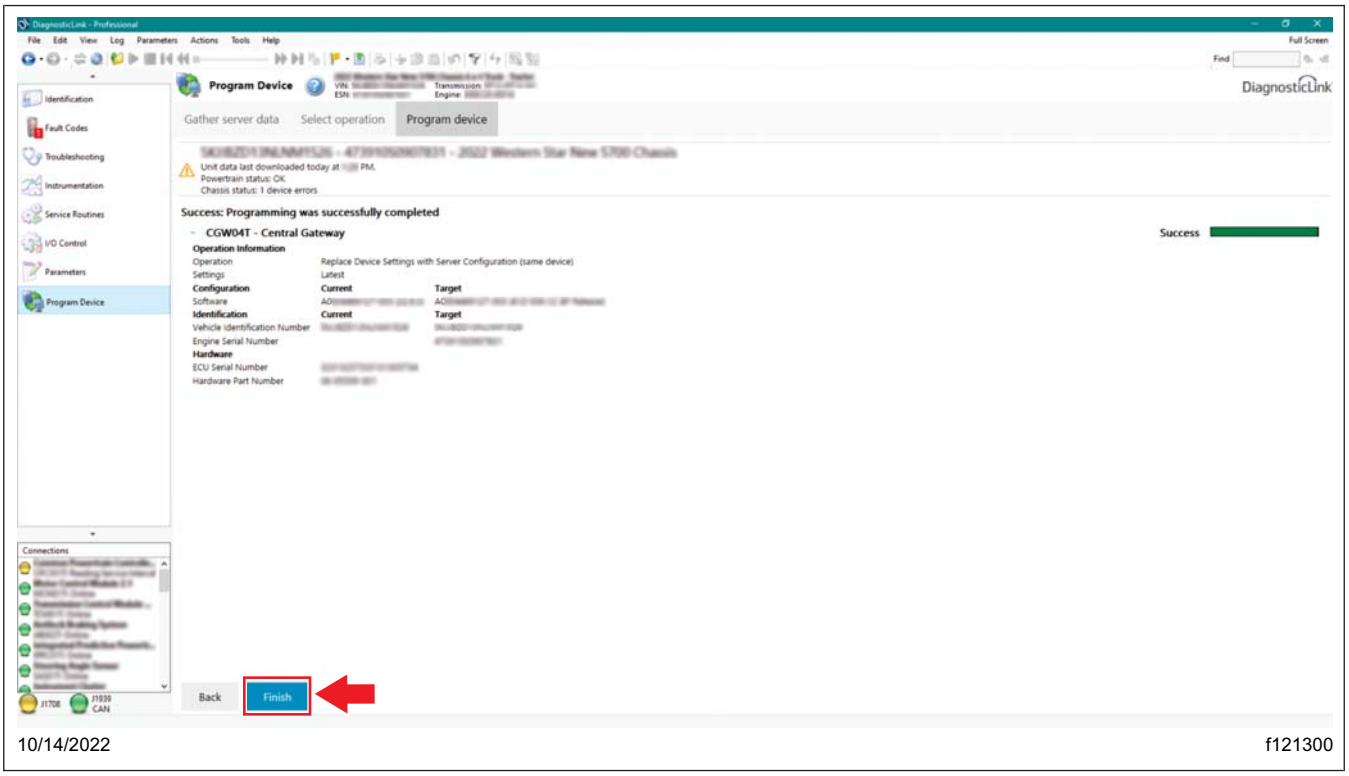


Fig. 17, Flashing Successful

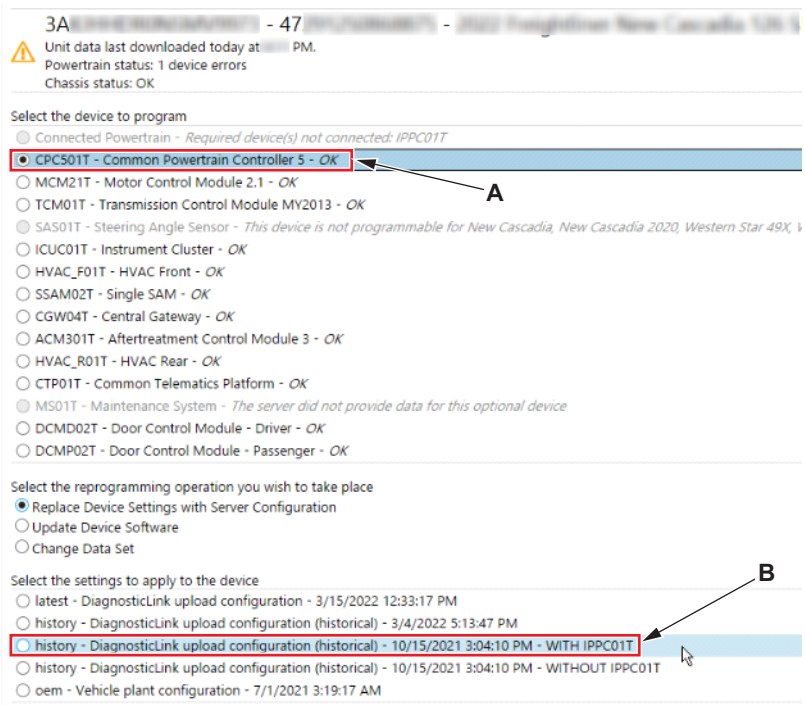
22. Flash the CPC501T as follows.

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

22.1 Select 'CPC501T - Common Powertrain Controller 5 - *OK*' as the device to program. See **Fig. 18**.

22.2 Select 'history - DiagnosticLink upload configuration (historical) - *MM/DD/YYYY HH:MM:SS* PM - WITH IPPC01T' as the configuration to apply to the device. See **Fig. 18**.

22.3 Select 'Next.'



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A. Select 'CPC501T - Common Powertrain Controller 5 - *OK*.'
B. Select 'history - DiagnosticLink upload configuration (historical) - *MM/DD/YYYY HH:MM:SS* PM - WITH IPPC01T.'

Fig. 18, Selecting the Device Configuration

22.4 Select 'Start' to start flashing the CPC501T.

22.5 Once the flashing is successful, select 'Finish.'

23. Flash the IPPC01T as follows.

23.1 Select 'IPPC01T - Connected Powertrain - *OK*' as the device to program.

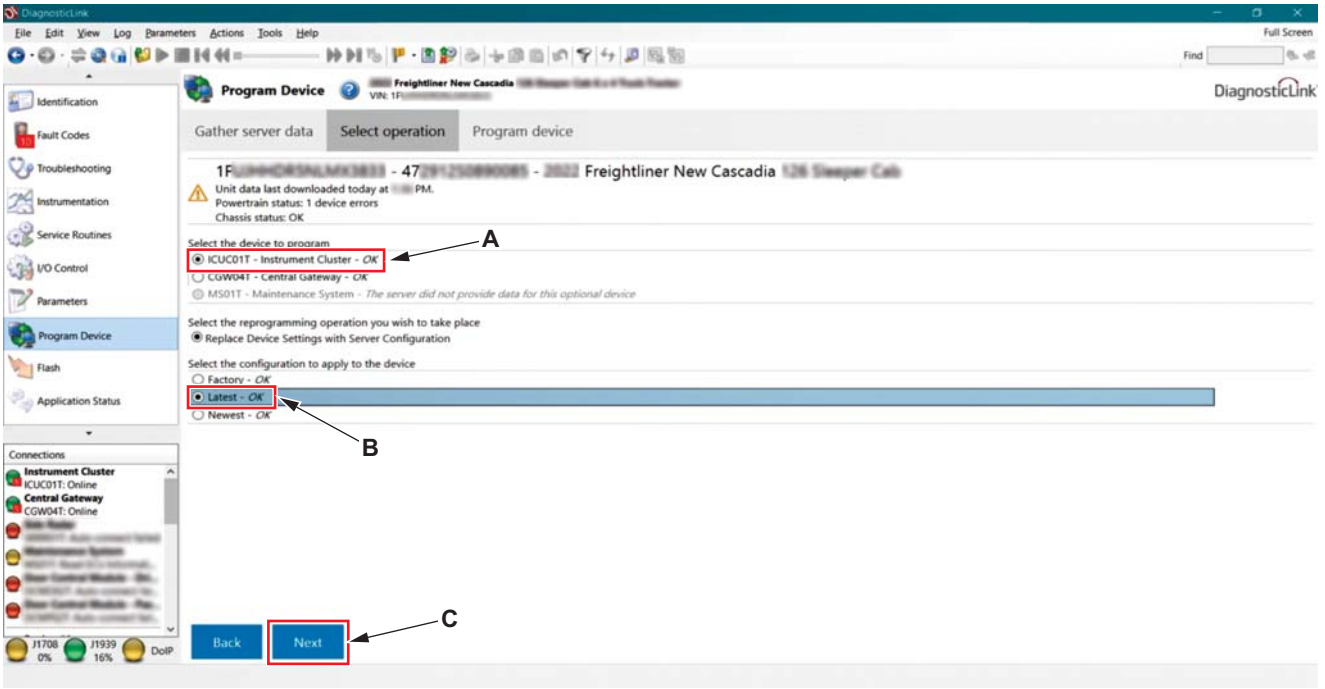
23.2 Select 'Factory - *OK*' as the configuration to apply to the device.

23.3 Select 'Next.'

23.4 Select 'Start' to start flashing the IPPC01T.

23.5 Once the flashing is successful, select 'Finish.'

24. Flash the ICUC01T/ICC501T as follows.
    24.1 Select 'ICUC01T - Instrument Cluster - *OK*' as the device to program. See **Fig. 19**.
    24.2 Select 'Latest - *OK*' as the configuration to apply to the device. See **Fig. 19**.
    24.3 Select 'Next.' See **Fig. 19**.



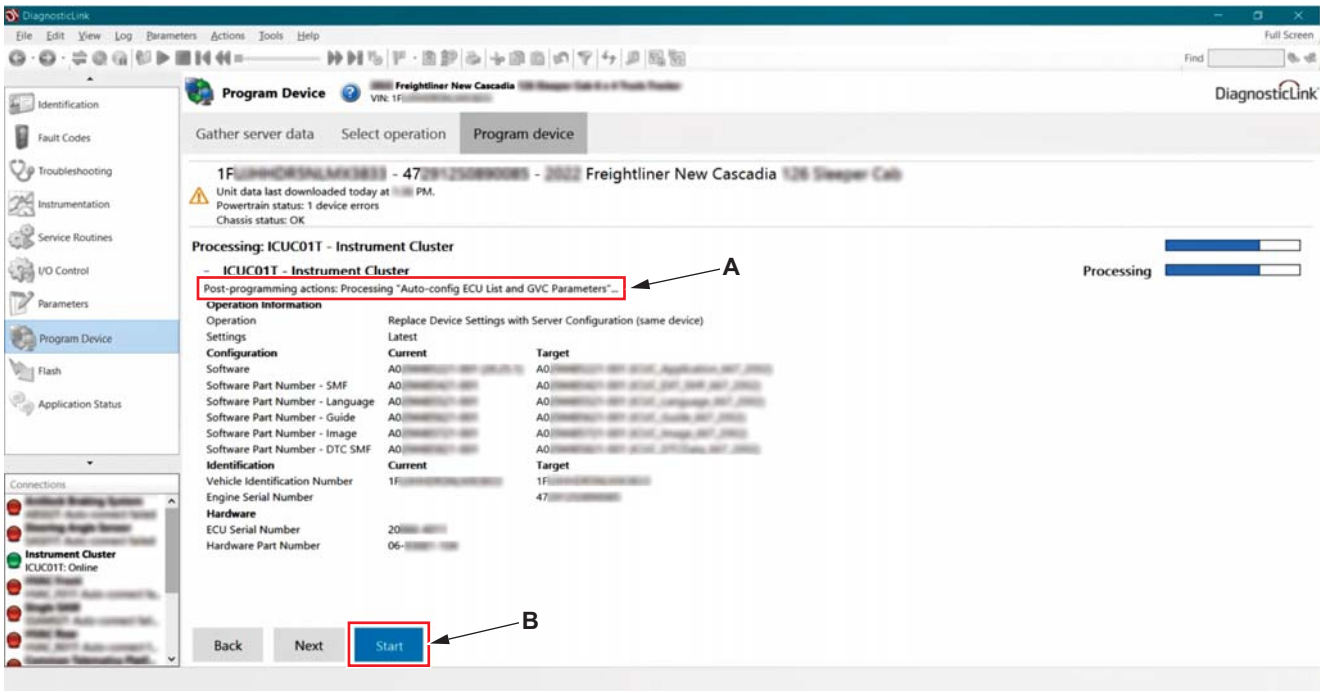
10/06/2022 f121275

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

Fig. 19, Selecting the Device Configuration

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

24.4 Select ‘Start’ to start flashing the ICUC01T/ICC501T. See **Fig. 20**.



10/06/2022 f121276

A. Flashing the ICUC01T/ICC501T will run the automatic configuration.
B. Select ‘Start.’

Fig. 20, Starting to Flash ICUC01T/ICC501T

24.5 Once the flashing is successful, select ‘Finish.’ See **Fig. 21**.

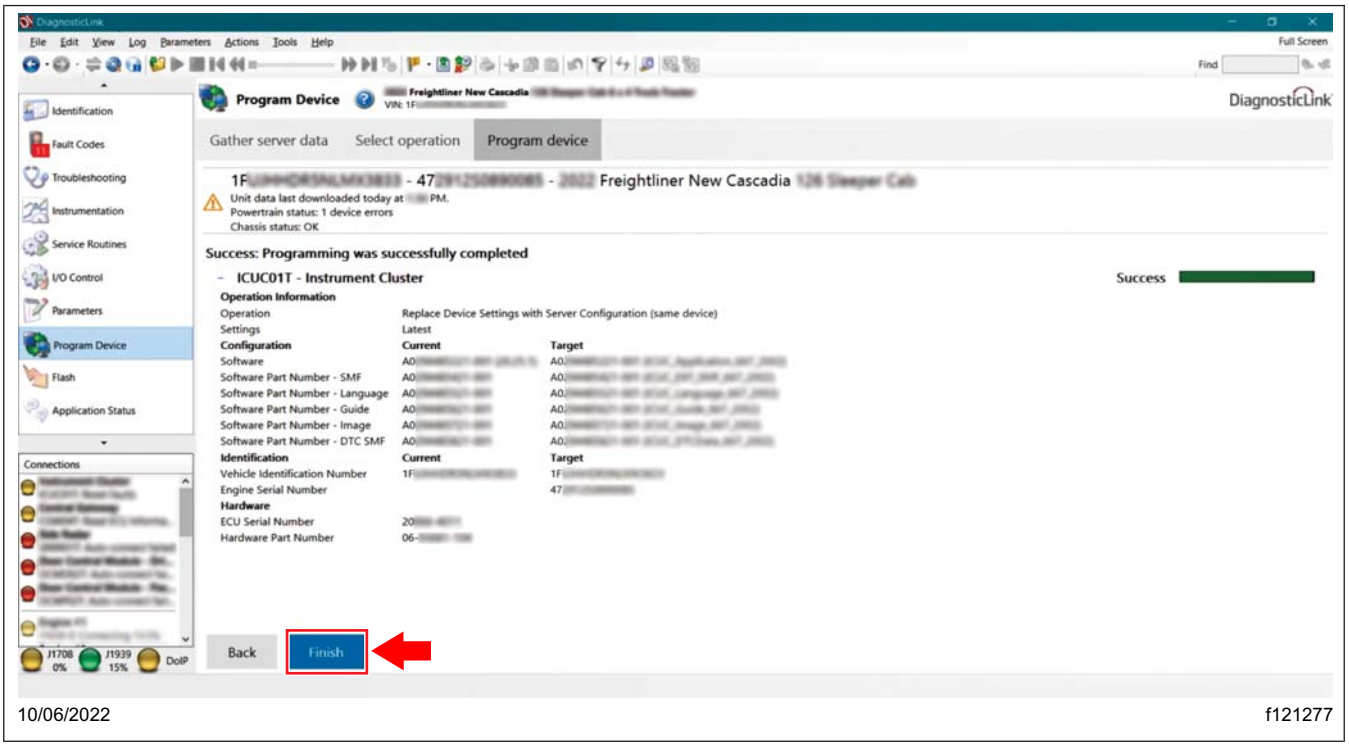


Fig. 21, Flashing Successful

25. Verify the parameter changes, and close the pop-up window.
26. Verify there are no active faults on the vehicle.
27. Clean a spot on the base label (Form WAR259), write the campaign number, SF658, on a blank gray completion sticker (Form WAR261), and attach it to the base label, indicating this work has been completed.

SF658E – ECU Installation and Programming

1. Check the base label (Form WAR259) for a completion sticker for SF658 (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. Disconnect the batteries.

NOTE: It is not necessary to remove any dash panels to access the integrated predictive powertrain control (IPPC) bracket.

4. Check if the IPPC bracket is installed on the top of the engine cover. See **Fig. 22**.

   Is the IPPC bracket installed on the top of the engine cover?

   YES → Install the new IPPC ECU (000 446 41 75) on the IPPC bracket, then secure the IPPC ECU with a cable tie. See **Fig. 23**.

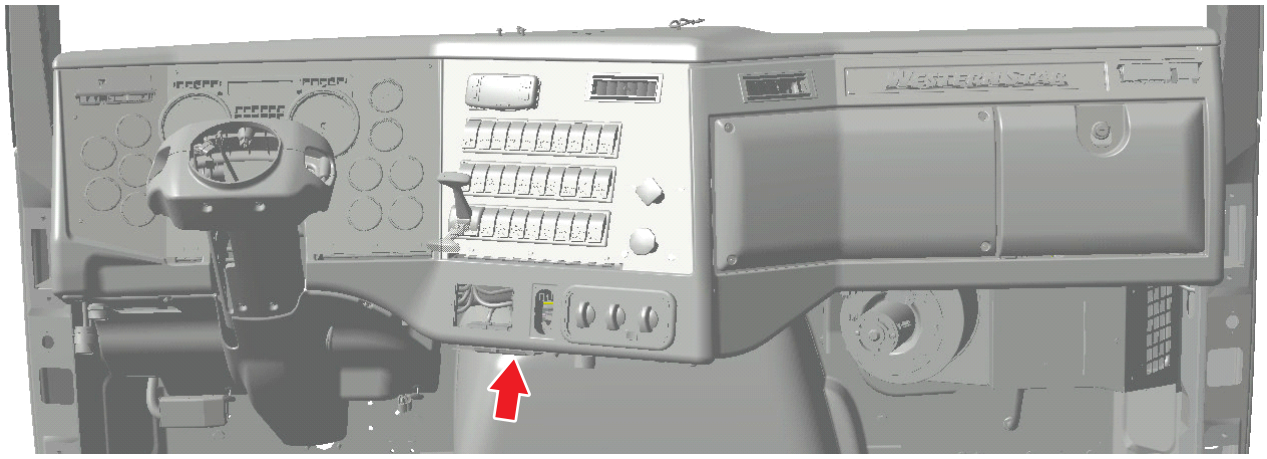


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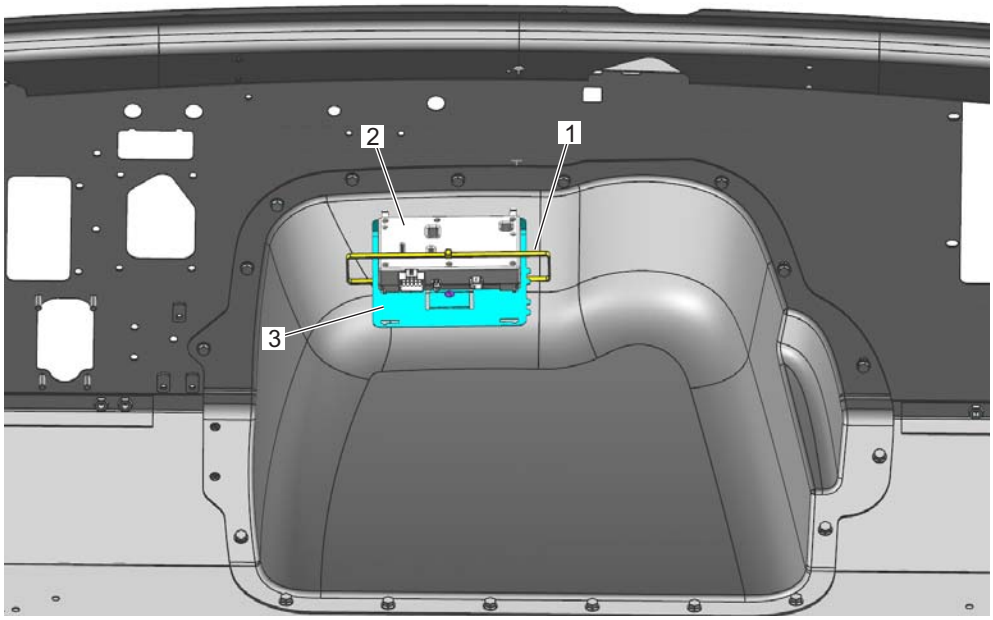
Fig. 22, IPPC Bracket Location



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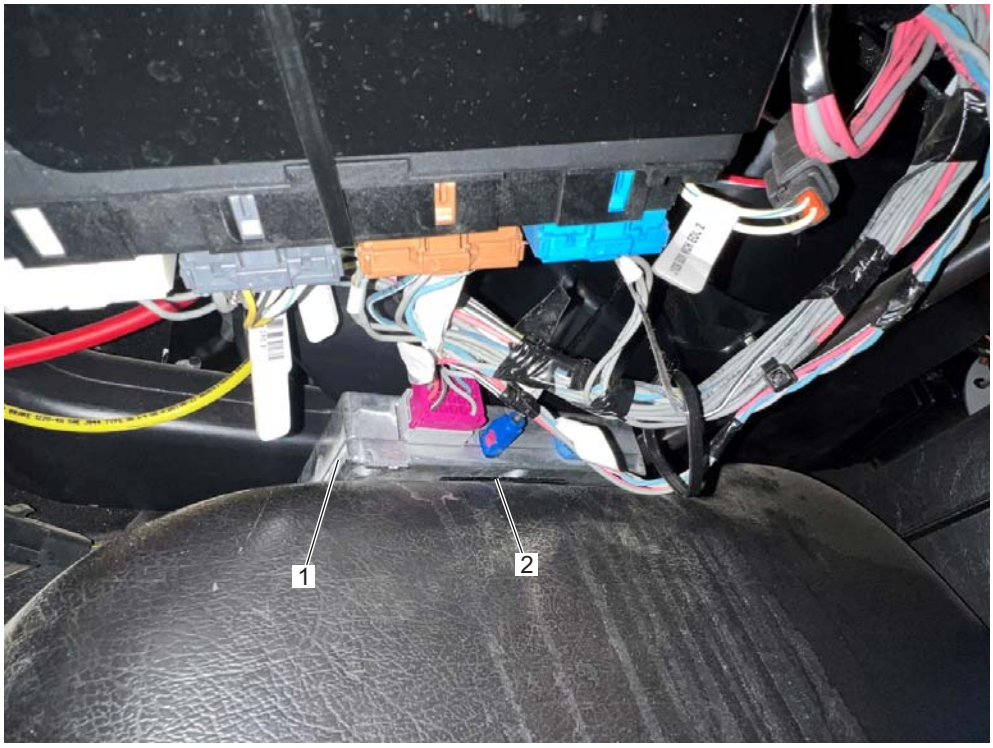
1. Cable Tie
2. IPPC ECU
3. IPPC Bracket

Fig. 23, Securing the IPPC ECU using a Cable Tie

NO → Install the new IPPC ECU (000 446 41 75), using a locally-procured velcro tape, in the location shown in **Fig. 24**.

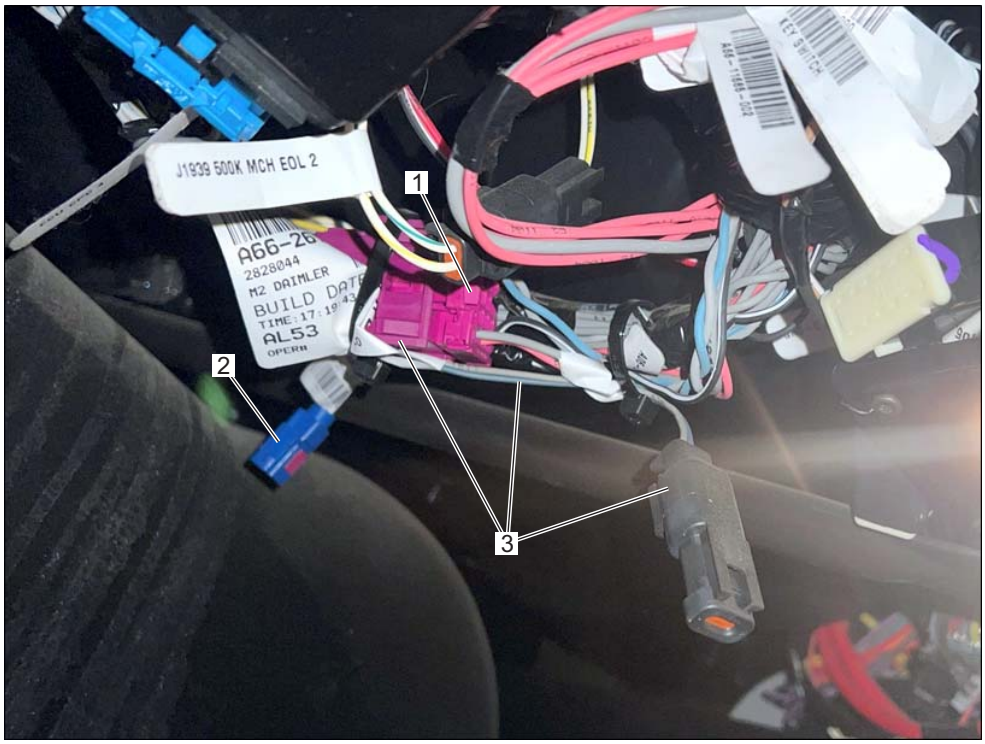


10/20/2022 f548023

1. IPPC ECU
2. Velcro Tape

Fig. 24, Securing the IPPC ECU using a Velcro Tape

5. Locate the 15-pin IPPC connector near the IPPC mounting. Remove the existing terminating resistor jumper (A66-26792-000) from the 15-pin IPPC connector, and discard it. See **Fig. 25** and **Fig. 26**.



10/20/2022 f548024

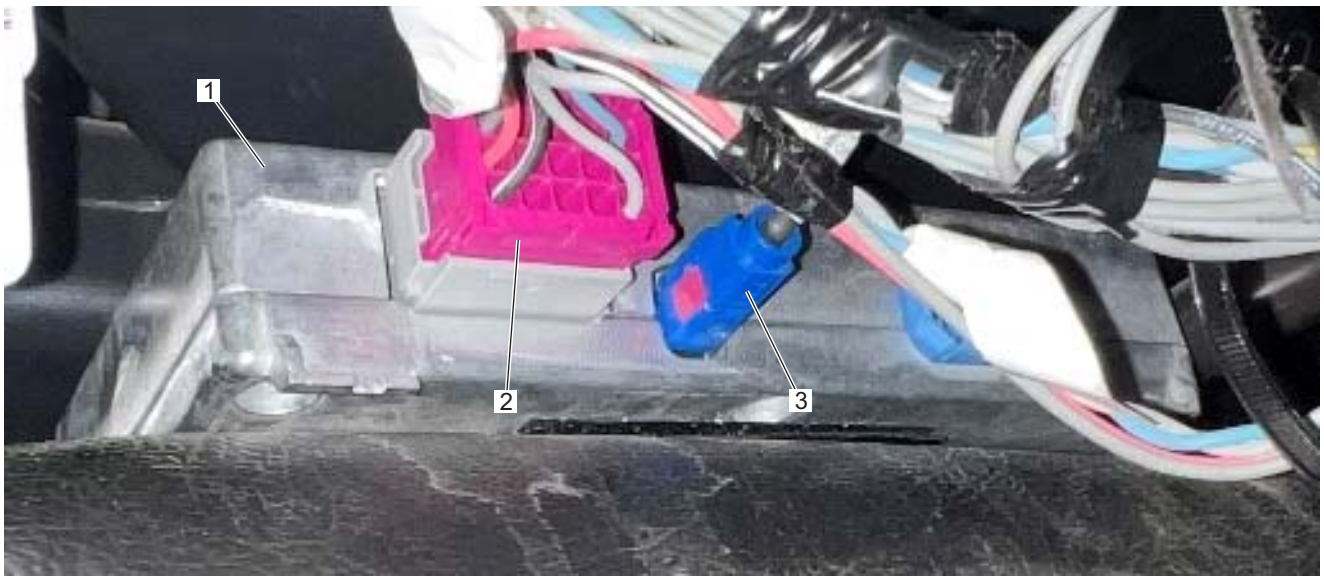
1. 15-Pin IPPC Connector
2. GPS Antenna
3. Terminating Resistor Jumper

Fig. 25, 15-Pin IPPC Connector Location

10/20/2022 f548025

Fig. 26, Terminating Resistor Jumper Removal

6. Connect the 15-pin IPPC connector and the GPS antenna connector to the IPPC ECU, as shown in **Fig. 27**.



1. IPPC ECU
2. 15-Pin IPPC Connector
3. GPS Antenna

Fig. 27, IPPC ECU Connections

7. Connect the batteries.
8. Connect an RP1210B-compliant vehicle diagnostic adaptor to the diagnostic connector on the vehicle.
9. Connect the other end of the RP1210B-compliant vehicle diagnostic adaptor to the laptop.
10. Open DiagnosticLink®.

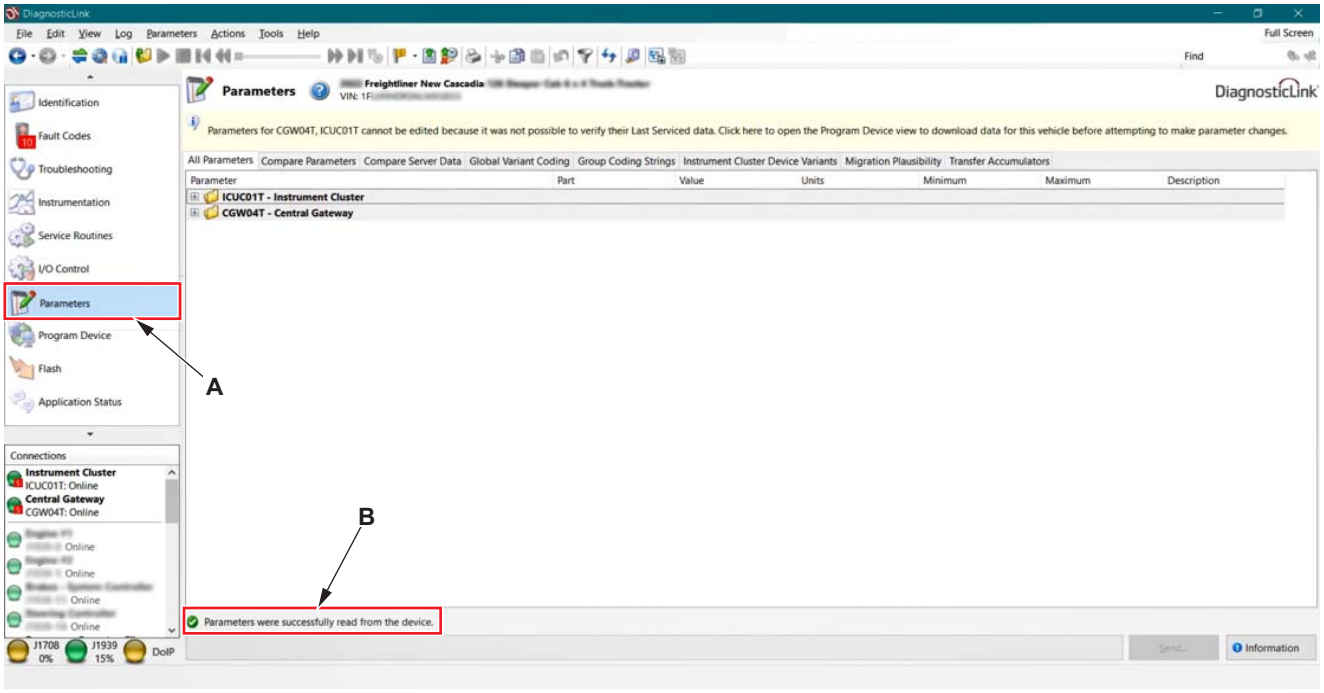
IMPORTANT: Make sure that DiagnosticLink is updated to the latest version (8.16SP4 at the time of publication, or newer) before programming the vehicle.

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

11. Connect to the server using the DTNA Connect credentials.

12. Go to the ‘Parameters’ tab. See **Fig. 28**.

    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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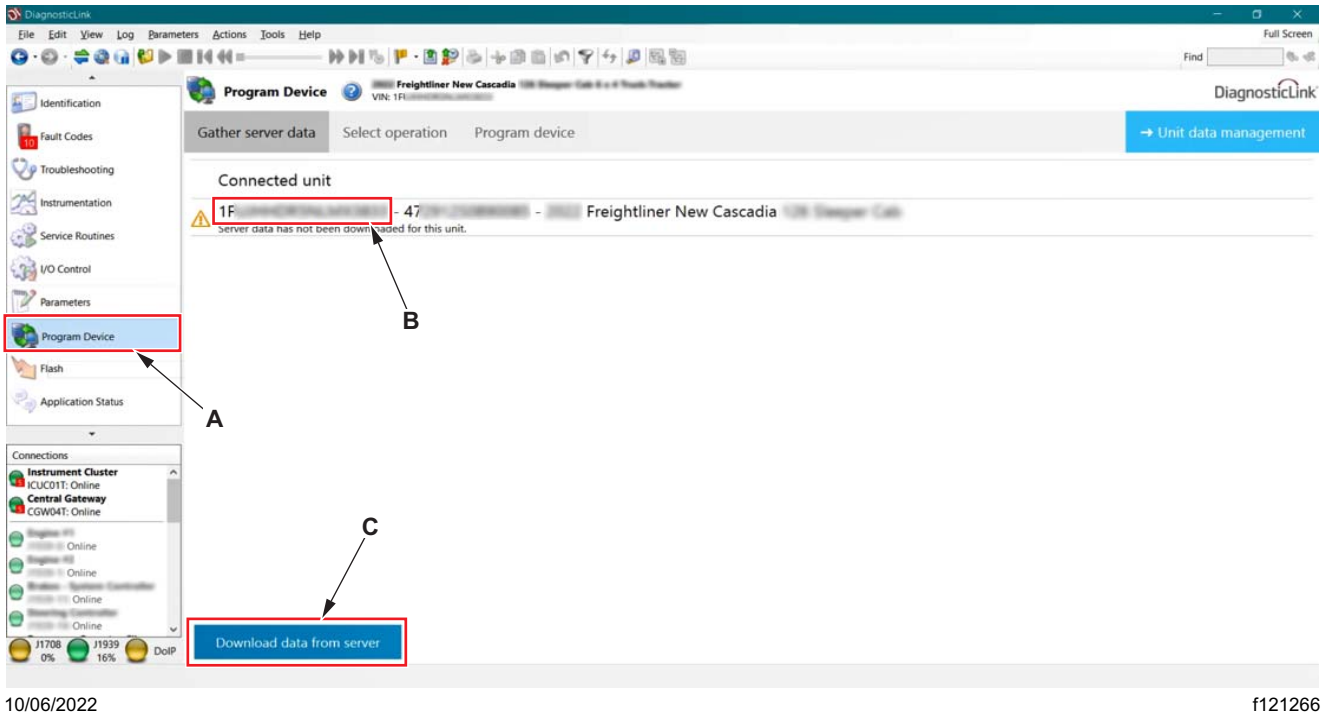
A. Go to the ‘Parameters’ tab.

B. Wait for the parameters to be read from the device.

Fig. 28, 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.

13. 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. 29**.



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

Fig. 29, Downloading the Data from the Server

DiagnosticLink will document the parameters of the current vehicle on the server, as shown in **Fig. 30**.

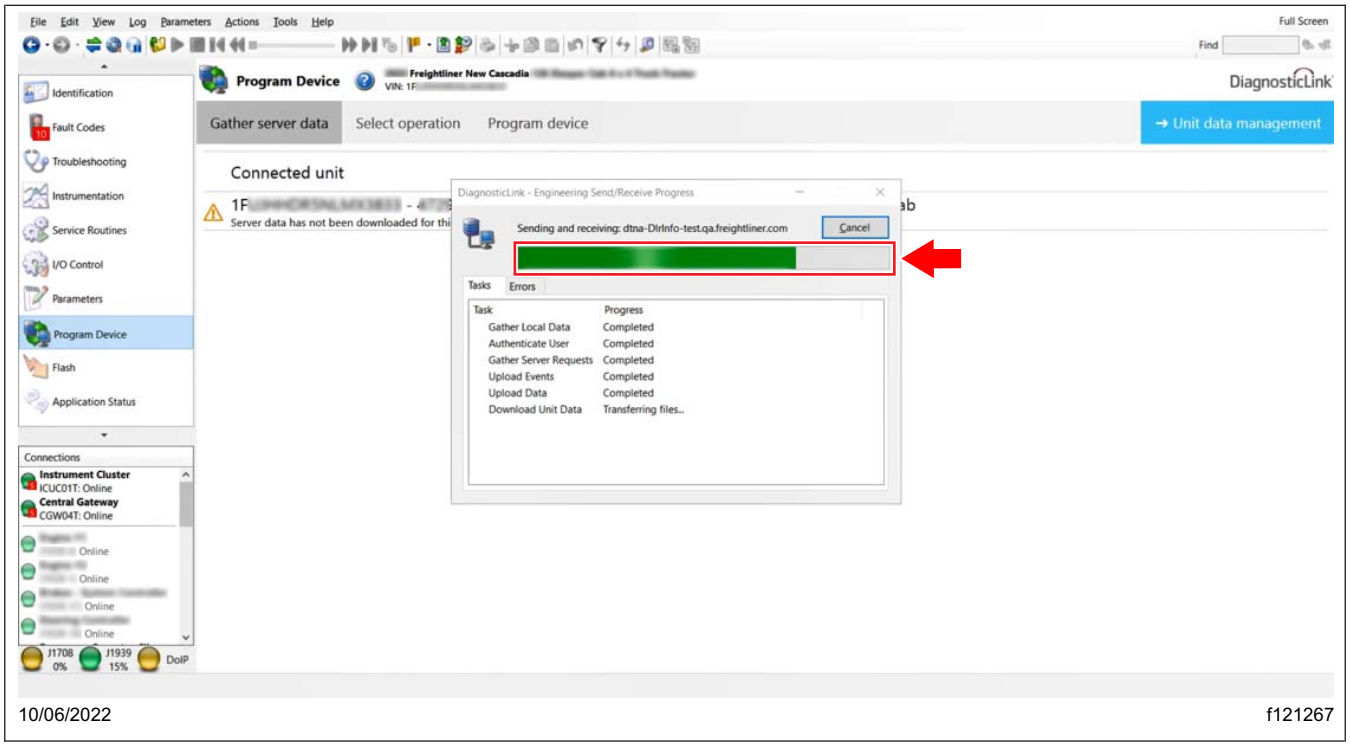


Fig. 30, Data Being Downloaded from the Server

14. Once the latest data is retrieved, select ‘Next.’ See **Fig. 31**.

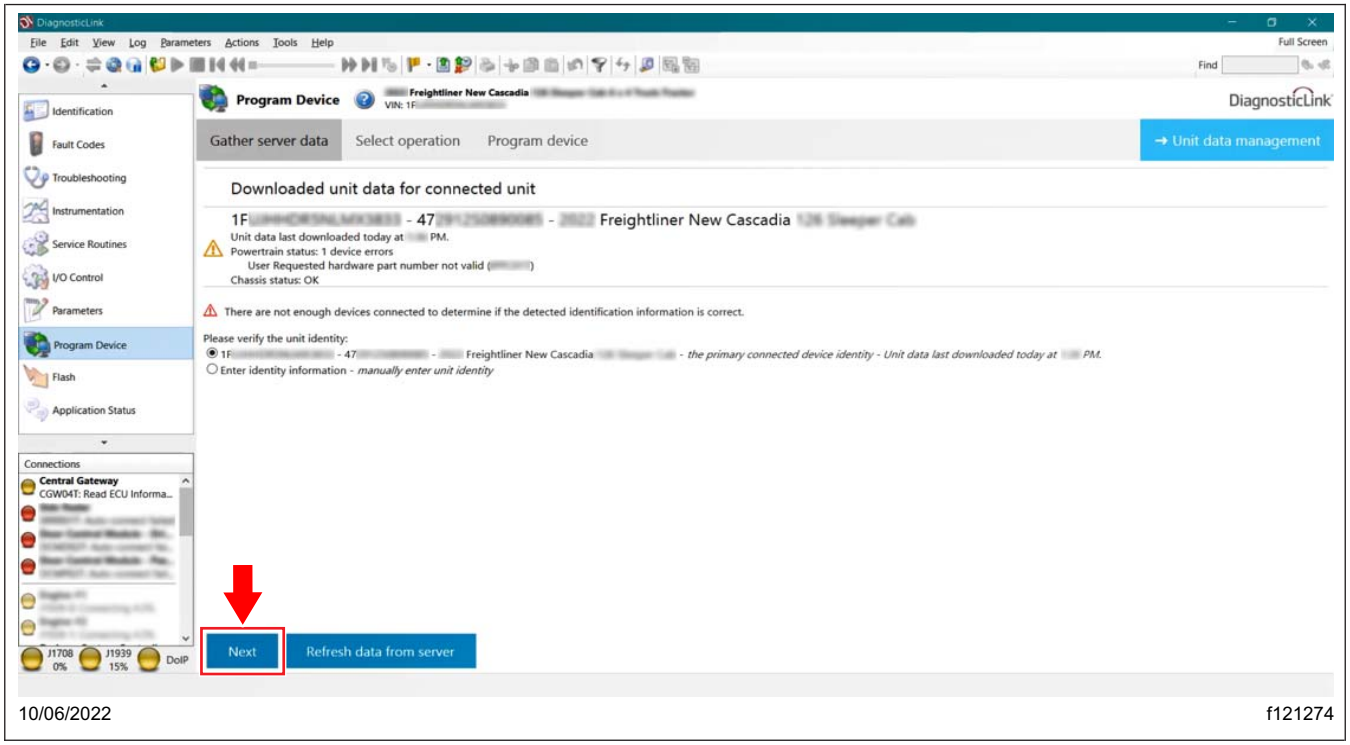


Fig. 31, Selecting Next

15. Flash the IPPC01T as follows.
    - 15.1 Select ‘IPPC01T - Connected Powertrain - *OK*’ as the device to program.
    - 15.2 Select ‘Factory - *OK*’ as the configuration to apply to the device.
    - 15.3 Select ‘Next.’
    - 15.4 Select ‘Start’ to start flashing the IPPC01T.
    - 15.5 Once the flashing is successful, select ‘Finish.’
16. Verify there are no active faults on the vehicle.
17. Clean a spot on the base label (Form WAR259), write the campaign number, SF658, on a blank gray completion sticker (Form WAR261), and attach it to the base label, indicating this work has been completed.