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122SD and Coronado

Business Class M2
> Cascadia
108SD/114SD
New Cascadia

Freightliner
Service Bulletin

General Information

On some Cascadia vehicles, when a request for wiper activation is made the wipers may not function. This can result from an overcurrent condition, which causes the wipers to stop functioning and immediately set fault code **SPN 522215 FMI 6**. Any additional change to the wiper request will result in the wipers operating normally.

SAM Cab software R6.4 incorporates the additional request within SAM Cab controls for the wiper, prior to generating fault code **SA 33 SPN 522215 FMI 6**. This eliminates the possibility of the wipers not running due to an invalid current above normal condition. If SAM Cab software is at R6.4, or later, and the wipers are not operating as expected, refer to the troubleshooting for fault code **SA 33 SPN 522215 FMI 6** in **Section C06.01 - Windshield Washer/Wiper** in the *Cascadia Troubleshooting Manual*.

SAM Cab Software Update

1. Park the vehicle, shut down the engine, and apply the parking brakes. Chock the tires.
2. Connect the vehicle to DiagnosticLink. Make sure that DiagnosticLink is updated to the latest version, 8.09sp2. To update DiagnosticLink, select "Update" from the dropdown menu under "Tools." See [Fig. 1](#).

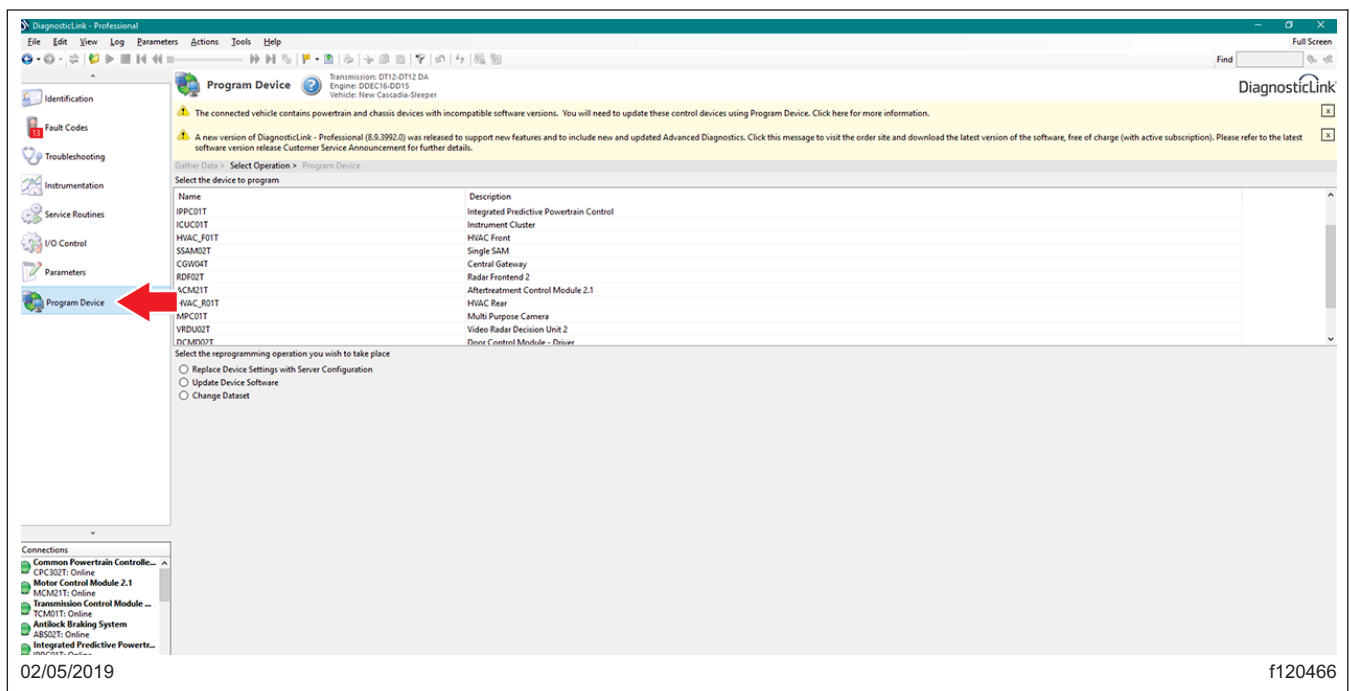


Fig. 1, Updating DiagnosticLink to the Latest Version

IMPORTANT: Before performing this procedure, make sure to address any pre-existing conditions or fault codes first.

It is recommended when flashing to configure DiagnosticLink to connect only to "Default" modules, and stay in this configuration unless there is a specific need to manually connect to the Common Telematics Platform (cTP) ECU. Default modules allow DiagnosticLink to connect only to the modules that need flashing, and ignores things components the cTP or the steering angle sensor.

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To make this change in DiagnosticLink:

- From the drop-down menu click "Tools", and select "Options."

Find and select the "Connection" tab.

Click the "Select Defaults" box on the right side of the tab, and click "Apply."

3. Select "Program Device." If there are any items in the section "Request Pending" downloads, they should be removed. To remove them, select the "Request Pending" list item, then press the "Remove" button. See [Fig. 2](#).

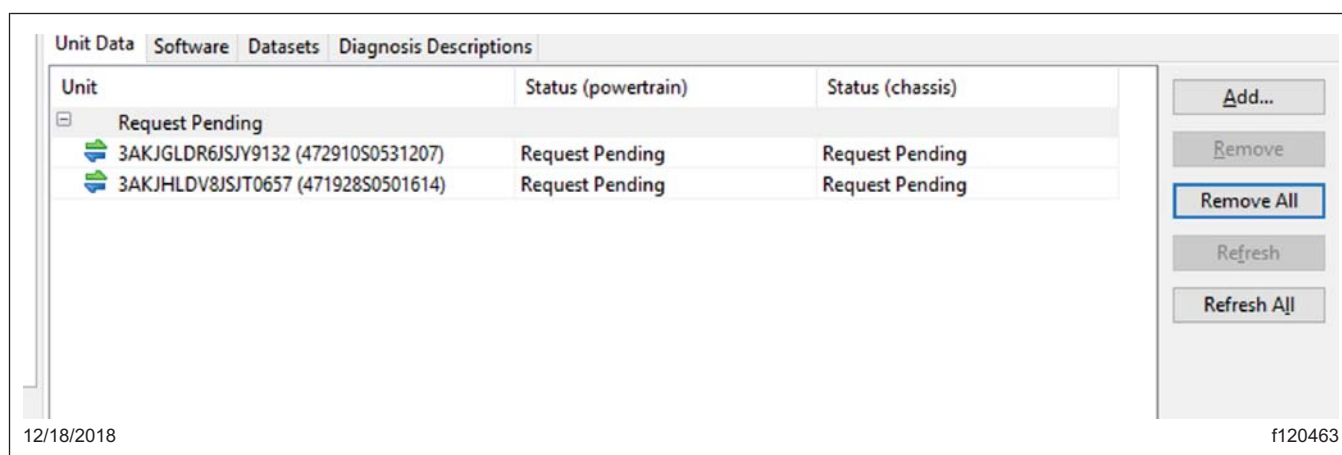


Fig. 2, Removing Pending Requests

4. Once all controllers are connected, read the vehicle parameters. See [Fig. 3](#).

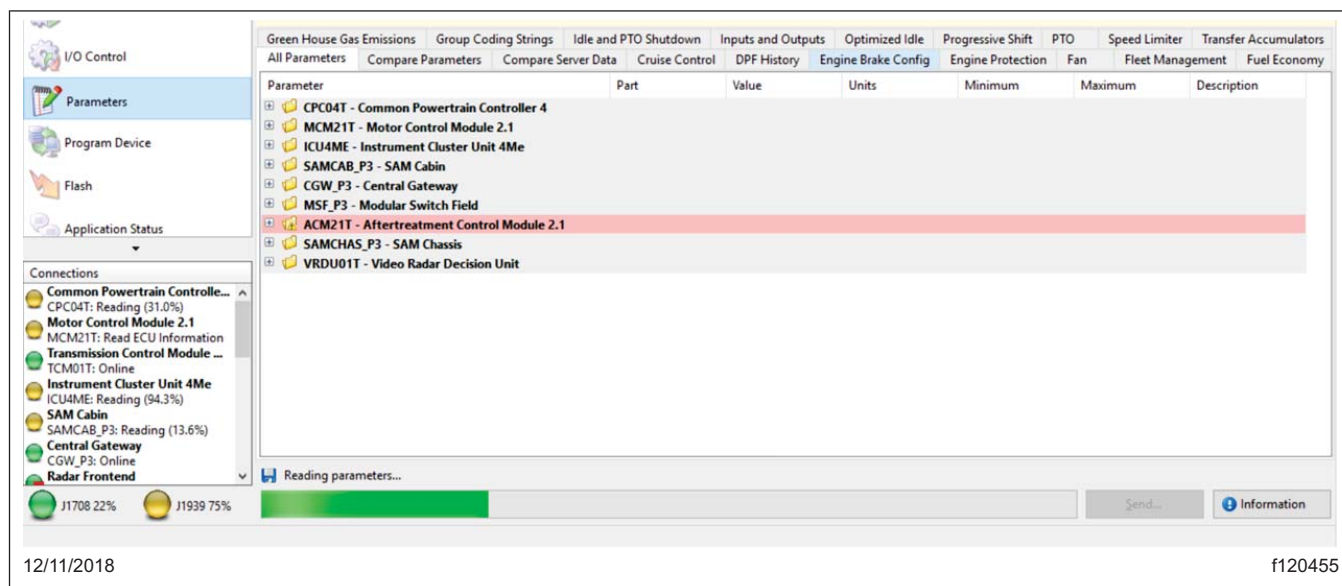


Fig. 3, Reading Vehicle Parameters on DiagnosticLink

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5. Select "Program Device." There should be data to upload. Click "Connect to Server" to upload vehicle parameters to the server. See [Fig. 4](#).

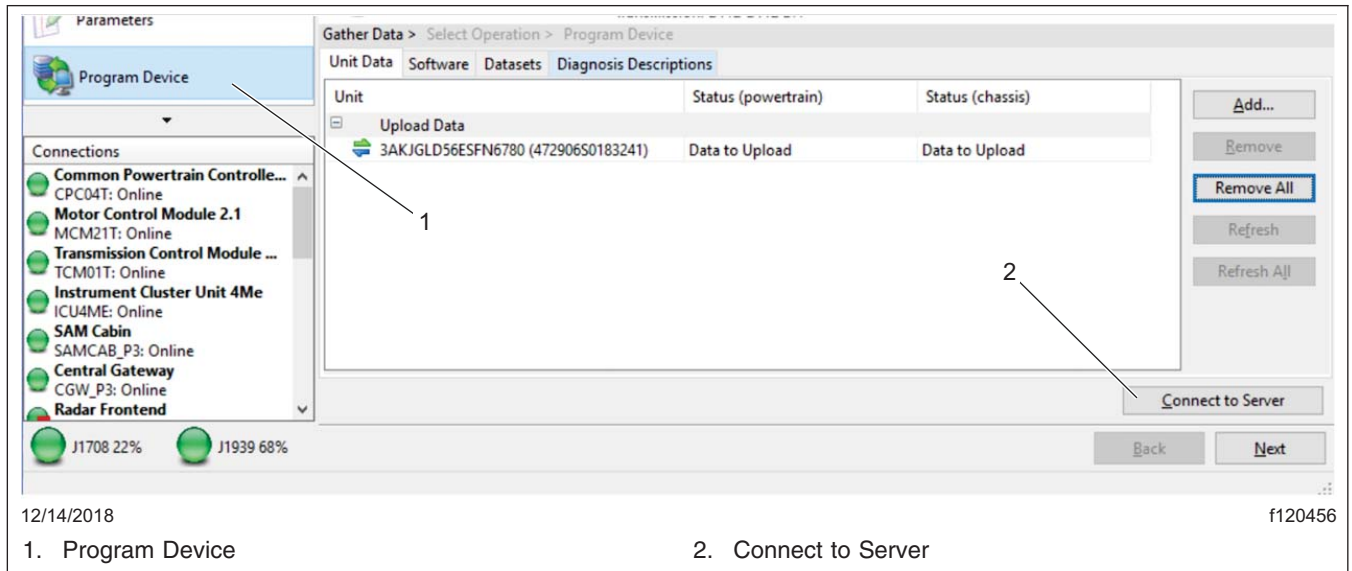


Fig. 4, Uploading Vehicle Parameters

6. Click "Add" to add a download request for the vehicle. See [Fig. 5](#).

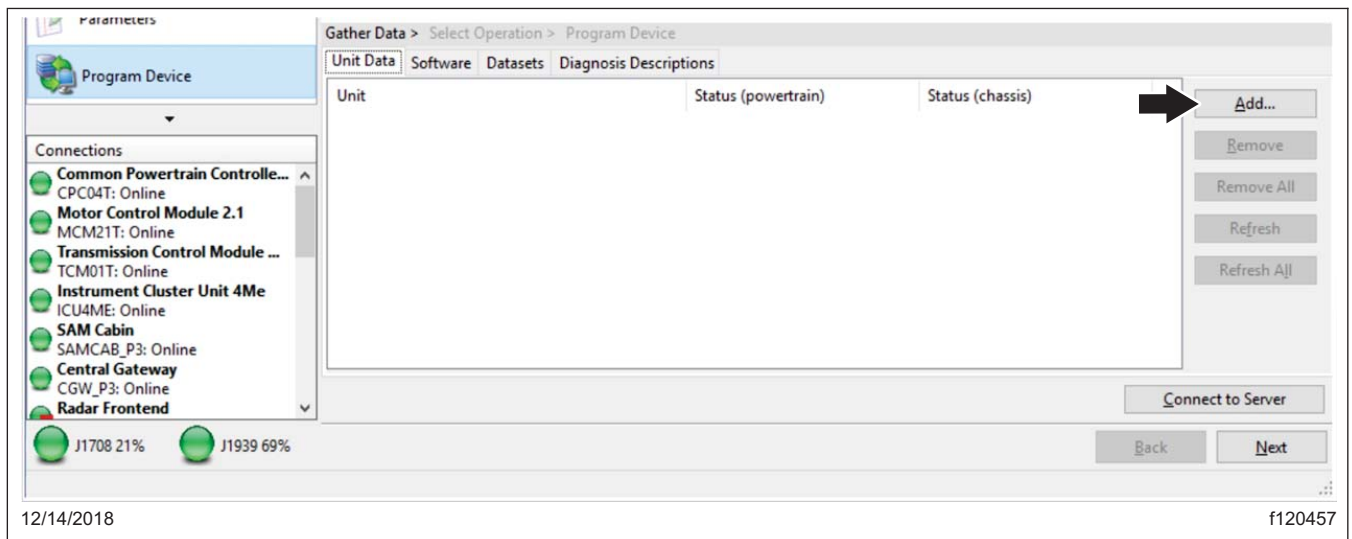


Fig. 5, Adding the VIN to Download Updated Server Data

7. Make sure the correct VIN and hardware is populated, then click OK. See [Fig. 6](#).

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Request Equipment Data Download

Enter the identity of the equipment you wish to program.

Vehicle Identification ☒ VIN ☐ PIN

3AKJGLD56ESFN6780

Engine Serial Number (Unit Number)

472906S0183241

Device controllers for this equipment

+ Add - Remove

Device	Hardware Part Number
CPC04T	A0034461002-001
MCM21T	A0004469135-001
TCM01T	A0504460109-001
ICU4ME	06-84378-000
SAMCAB_P3	06-74862-000
CGW_P3	06-73829-003
MSF_P3	06-66446-002
ACM21T	A0004463754-003
SAMCHAS_P3	06-74863-000

Clear All OK Cancel

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Fig. 6, Verifying Correct VIN Hardware

8. There should be a request pending status for the VIN. Click "connect to server" to download the updated unit data. See Fig. 7. The server will provide any new software available on the server as well as updated parameter sets for the new software, adjusted for the parameter set that was just uploaded from the vehicle.

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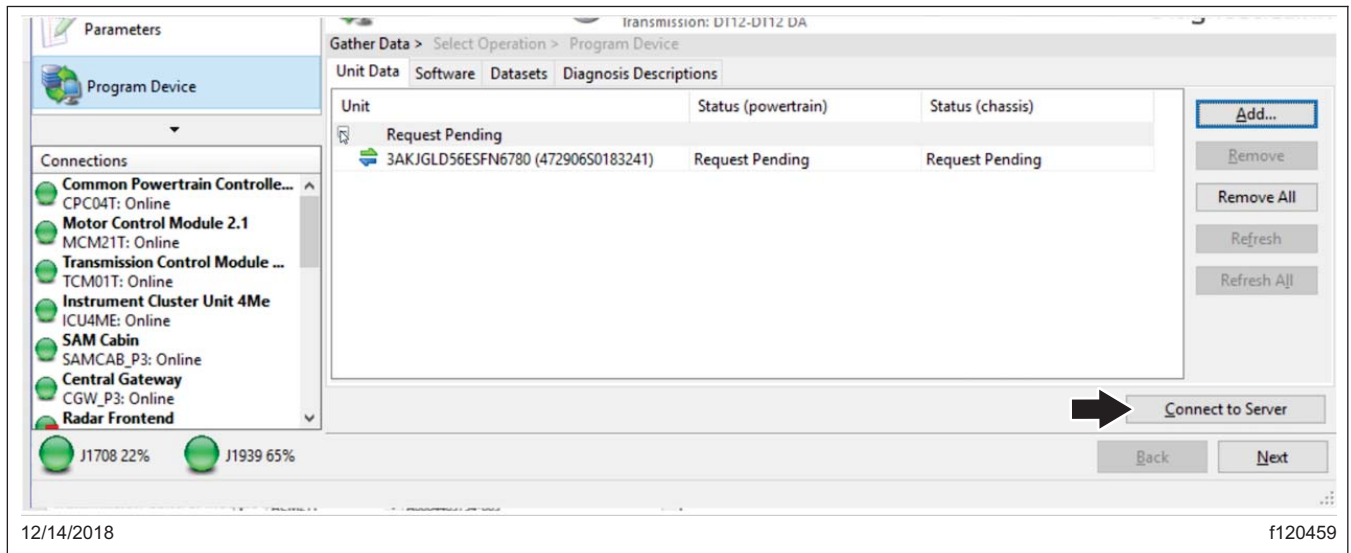


Fig. 7, Downloading Updated Unit Data

- Once the data has been downloaded, click "Next". See [Fig. 8](#).

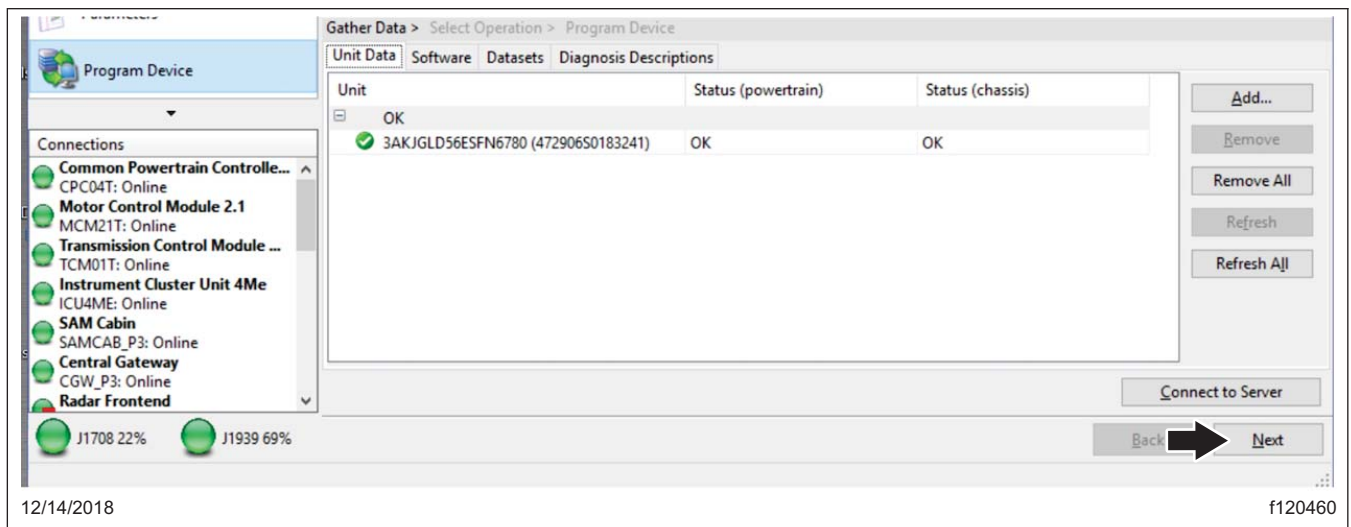


Fig. 8, Clicking Next

NOTE: "Latest" is the last service record (may be older software) and "Newest" is the most up to date software available for the installed hardware. Both will have parameter sets that have been updated relative to the upload from the vehicle.

- Select the SAM Cab controller to program, select the VIN, and select "Newest." Click "Next." See [Fig. 9](#).

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Gather Data > Select Operation > Program Device

Select the device to program

Name	Description
MSF_P3	Modular Switch Field
ACM21T	Aftertreatment Control Module 2.1
SAMCHAS_P3	SAM Chassis
VRDU01T	Video Radar Decision Unit
BHM_J1939	Manual connection required for programming

Select the reprogramming operation you wish to take place

☒ Replace Device Settings with Server Configuration
☐ Update Device Software
☐ Change Dataset

Select the unit and settings data to apply to the device

Unit	Status
3AKJGLD56ESFN6780 (472906S0183241)	OK

Settings	Status
Factory	Factory settings cannot be programmed after software has been upgraded. Original software: A0504480461-001.
Latest	OK
Newest	OK

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1. Device to Program 2. Vehicle Identification Number (VIN) 3. Settings

Fig. 9, Selecting "Latest" or "Newest" Software

11. Review and verify the VIN and hardware part number. Click "Start" to program the controller. The software will be flashed and the new parameter set will be written to the controller on the vehicle. See [Fig. 10](#).

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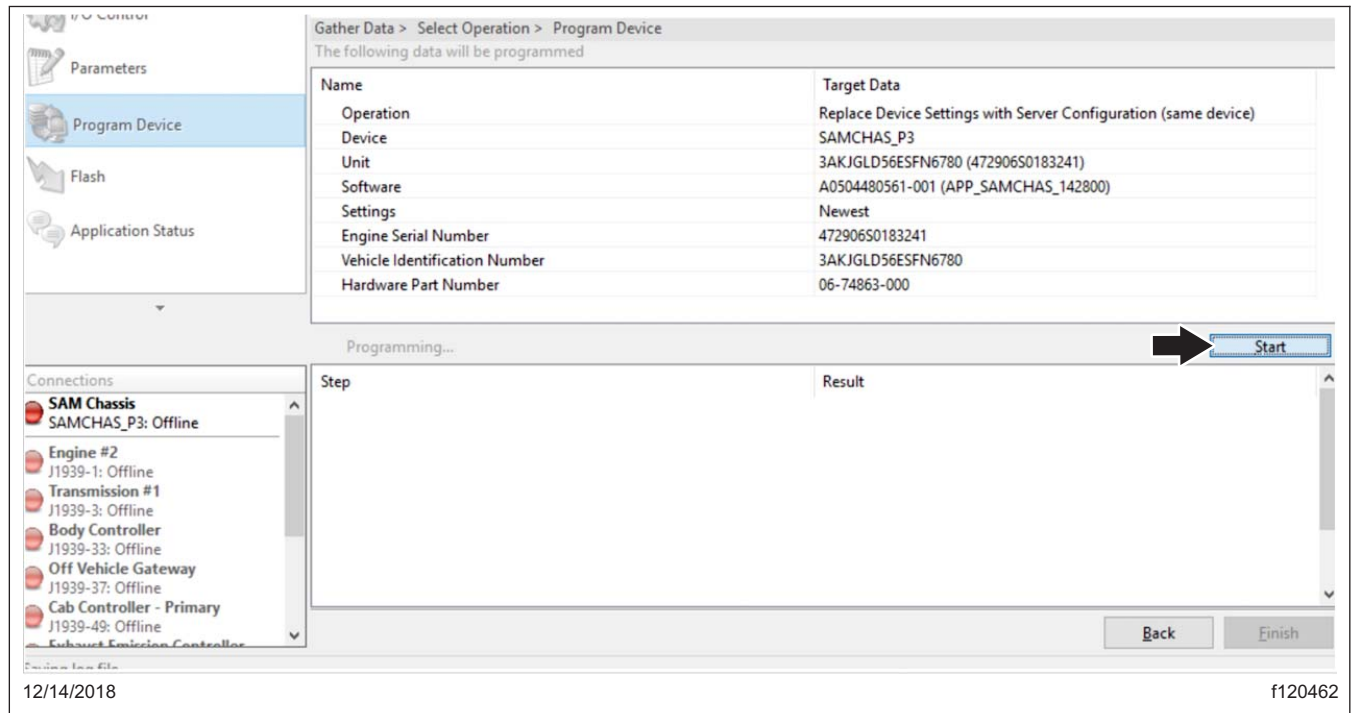


Fig. 10, Programming the Controller

IMPORTANT: After programming is complete, the following message may appear in DiagnosticLink: "The connected vehicle contains powertrain and Chassis devices with incompatible software versions, you will need to update these control devices using Program Device. Click here for more information." If this message is shown, continue with the next step. Otherwise, go to step 15.

12. Click on the banner message. See [Fig. 11](#).

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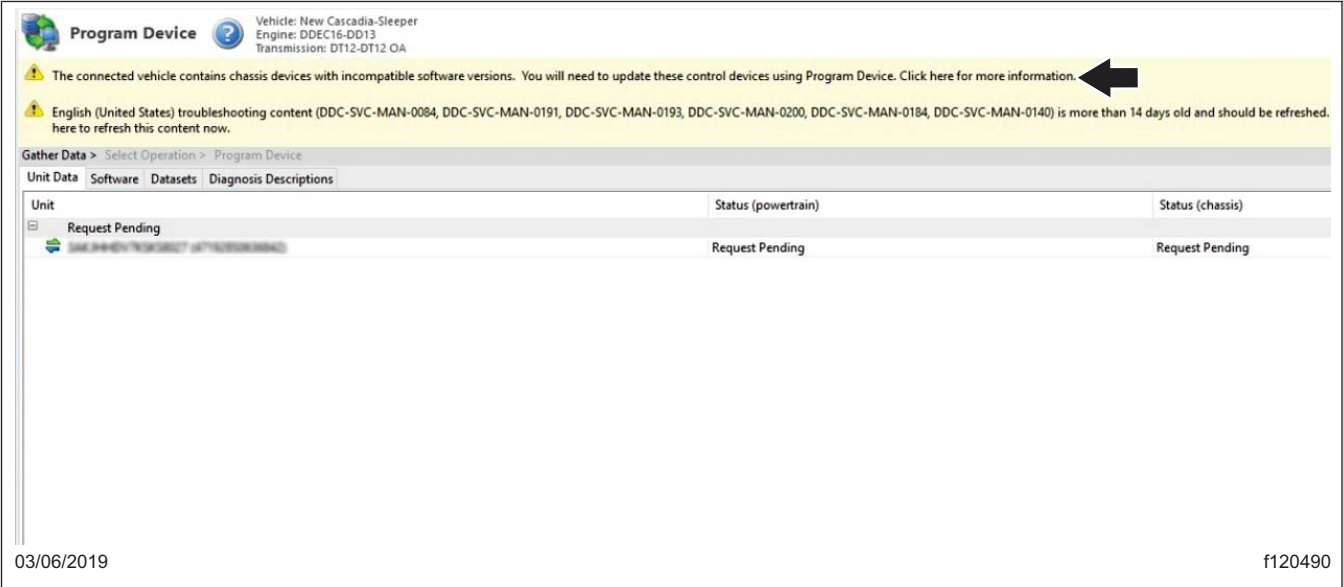


Fig. 11, Clicking on the Banner Message

13. Print or take a screen shot of the incompatible ECUs. See Fig. 12.

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Compatibility Information

The connected vehicle contains chassis devices with incompatible software versions. You will need to update these control devices using Program Device.

VIN: 3AKCHL2V15J54100 ESN: 4715050480291

Compatibility information may not be complete due to the following issues:

Data Source	Device	Hardware	Software	Issue
Edex	CGW04T	06-90361-002	A000448027-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	DCMD02T	06-01126-000	A000448132-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	DCMP02T	06-01126-000	A000448019-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	SSAM02T	A00-04904-000	A000448016-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	ICUC01T	06-90361-101	A013448021-002	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	HVAC_F01T	06-04732-000	A000448128-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	RDF02T	A0004482340	A0004480340-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.

Print...

Copy

OK

03/06/2019

f120491

Fig. 12, Printing the List of Incompatible ECUs

14. Program all devices listed as incompatible from the previous step.

IMPORTANT: After a programming, some fault codes may become active and some ECUs may not auto connect. Cycling the ignition may clear the faults and reconnect the ECUs.

15. Cycle the ignition 3 times, waiting 30 seconds between key off and key on.

16. Turn the key to the ON position and connect the vehicle to DiagnosticLink.

17. Verify that Sam Cab SW is now R6.4 by clicking on the "Identification" page, locate "SAMCAB_P3 Sam Cabin" and confirm that the Software Part Number is A002 448 34 58 ZGS 001, and that the Diagnostic Variant Part Number is A0004445658-002. See [Fig. 13](#).

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The screenshot displays the DiagnosticLink - Professional software interface. The top menu bar includes File, Edit, View, Log, Parameters, Actions, Tools, and Help. The left sidebar contains a tree view with categories: Identification, Fault Codes, Troubleshooting, Instrumentation, Service Routines, I/O Control, Parameters, and Program Device. Below this is a 'Connections' section listing various vehicle components and their status (Online/Offline). The main window is titled 'Identification' and shows vehicle details for VIN 3AKJGLDV0HSHY0244 (Vehicle: Cascadia-Sleeper, Engine: DDEC16-0013). It includes tabs for Common, Standard, Audit Trail, Compare Configuration, Engine Totals, Rating, and Stored Data. The 'Common' tab is active, displaying fields for Make (Freightliner), Model (baseline), Software Version (16.24.0), ECU Serial Number (AE46054049), Hardware Part Number (06-84378-001), Software Part Number (A050 448 07 21 ZGS 002), and Dataset Part Number (A050 448 14 21 ZGS 001). Below this, it shows the 'Diagnostic Variant' (A0504440321-003) and 'Vehicle Identification' (VIN 3AKJGLDV0HSHY0244). A red line separates this section from the 'UDS-33 SAMCAB_P3 - SAM Cabin' section, which shows 'Device Configuration' (Software Mode: Running in Application) and 'Device Information' (Make: Freightliner, Model: highline, Software Version: 17.41.0, ECU Serial Number: 06759810031602290009, Hardware Part Number: 06-74862-000, Software Part Number: A002 448 34 58 ZGS 001). Another green line separates this from the 'UDS-37 CGW03T - Central Gateway' section, which shows 'Device Configuration' (Software Mode: Running in Application) and 'Device Information' (Model: baseline, Software Version: 15.43.0, Diagnostic Version: 1, ECU Serial Number: 30303030303237303838, Hardware Part Number: 06-93359-001, Software Part Number: A000 448 49 27 ZGS 001). The bottom status bar shows the date 08/01/2019 and the identifier f120541.

Fig. 13, SAM Cab Parameter

18. Turn the ignition to the OFF position, unplug DiagnosticLink, and wait one minute.
19. Connect DiagnosticLink, turn the key to the ON position. Clear inactive faults, and troubleshoot any active faults.
20. Disconnect vehicle from DiagnosticLink.

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Warranty

This procedure is warrantable only if the described condition exists and the repair is performed within the applicable base or extended coverage warranty period. If a failure is not found, this procedure is considered preventive and warranty does not apply.

Normal warranty applies. See [Table 1](#) for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the *Service Bulletin #* field.

OWL VMRS Codes and Labor Allowance					
Primary Failed Part	Component Code	Cause Code	SRT Code	Description	Time: Hours
Software Update, SAM Cab	003-006-016	23	32A-5021A	Software Update, SAM Cab	0.5
Each Additional Module for Compatibility		23	32A-5021B	Software Update for Compatibility	0.2

Table 1, OWL VMRS Codes and Labor Allowance

NOTE: Add the digital photo instructions only if requested by Warranty in their approval routing. Otherwise, delete the content for approval routing. Attach digital photos directly to the claim on the Attachments tab.