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Columbia
122SD and Coronado

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

**Freightliner
Service Bulletin**

Description of Revisions: *This bulletin replaces the version dated 12/20/2018. Information is added about configuring vehicle hardware.*

General Information

DiagnosticLink supports programming of both chassis and powertrain ECUs. It may be necessary to perform additional steps prior to the programming of a chassis ECU. When a chassis ECU is programmed using "Program Device" in DiagnosticLink, the ECU will be programmed with the most recent parameter sets and software from the server. This process will overwrite the parameters and software previously installed on the ECU.

When it is necessary to retain the parameter information contained within a chassis ECU on the vehicle, vehicle parameters should be read and uploaded to the server prior to downloading unit data and flashing the ECU. The data can then be re-downloaded from the server before programming the controller.

IMPORTANT: This process should not be performed if there are parameters on the vehicle that are not intended to be recorded in a service record. Only 1 service record per ECU, per vehicle, can be stored on the server. Once a new service record is created, the old record is lost.

DO NOT follow the process described in this document:

- when performing the initial programming of a spare part ECU; and
- when attempting to recover an incorrectly parameterized ECU.

Programming ECUs in DiagnosticLink

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](#).

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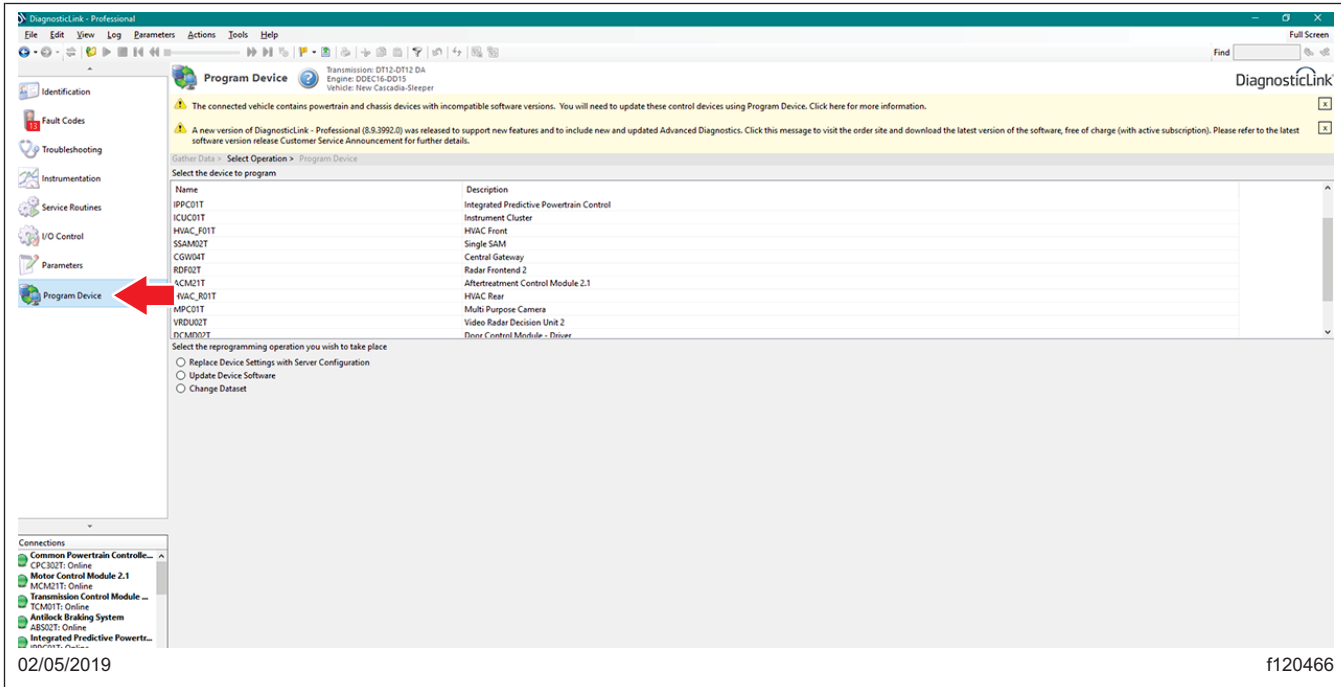


Fig. 1, Updating DiagnosticLink to the Latest Version

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 it is specifically needed 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 like the cTP or the steering angle sensor.

To make this change in DiagnosticLink:

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

Find and select the "Connection" tab.

Click the "Select Defaults" box on the right side of the tab, and hit "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](#).

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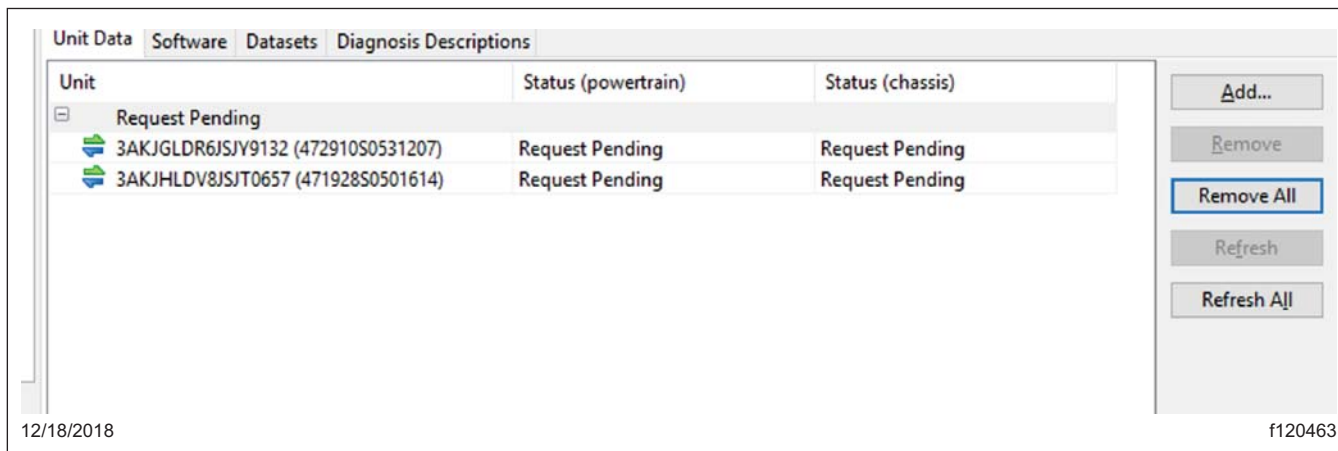


Fig. 2, Removing Pending Requests

4. Once all controllers are connected, read the vehicle parameters. See Fig. 3.

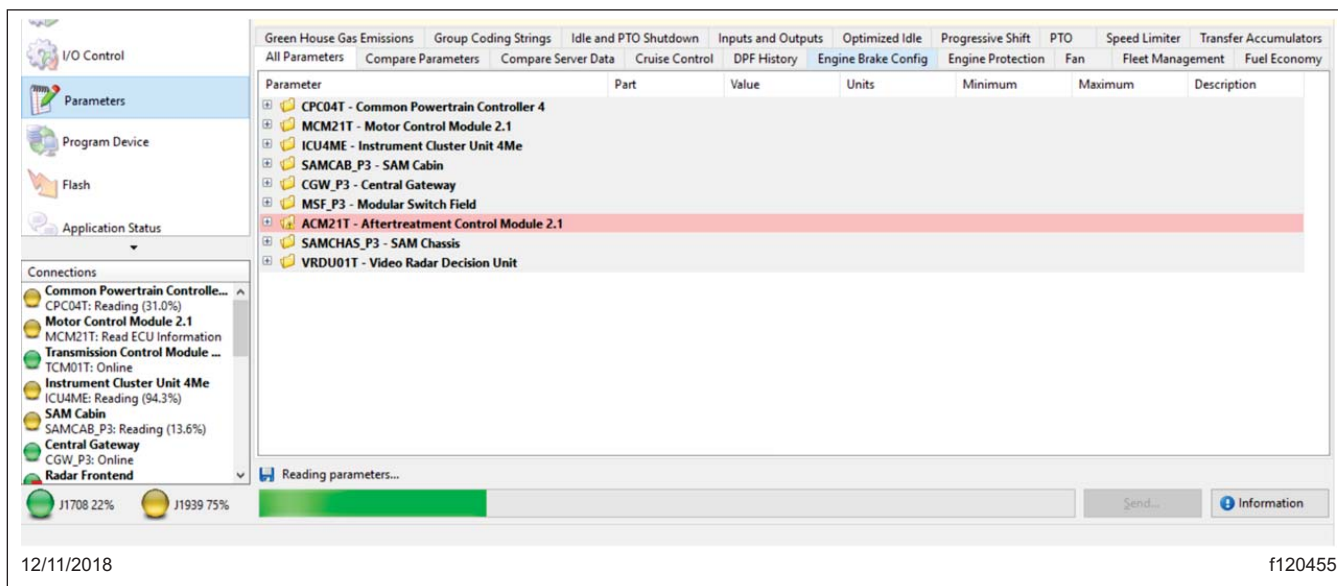


Fig. 3, Reading Vehicle Parameters on DiagnosticLink

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

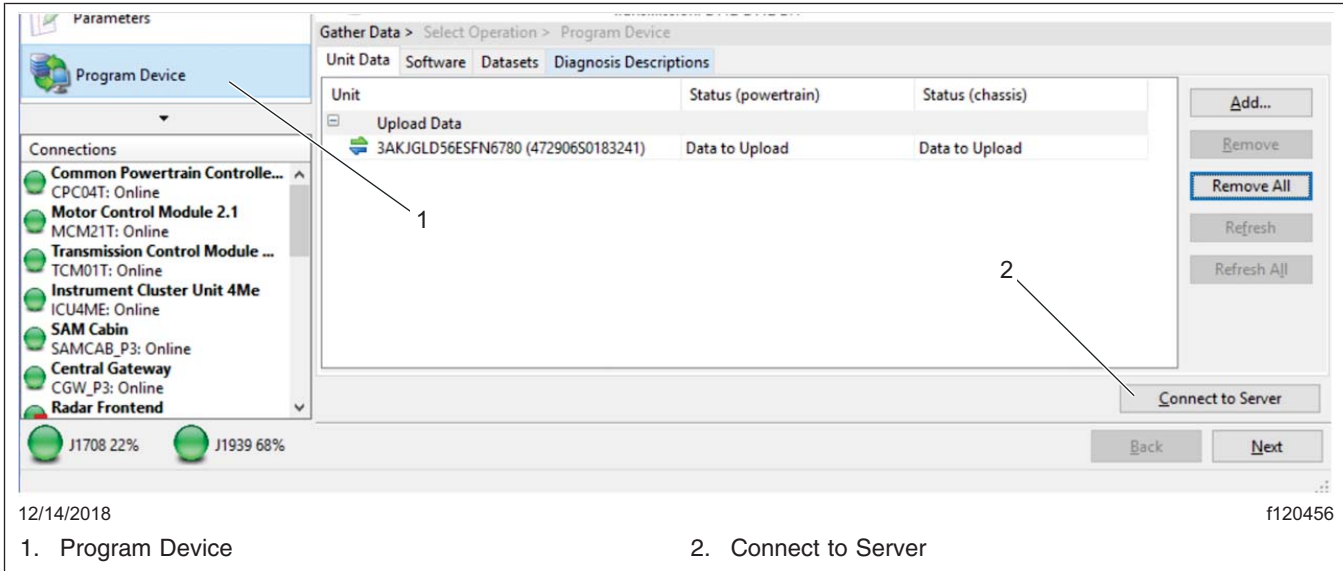


Fig. 4, Uploading Vehicle Parameters

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

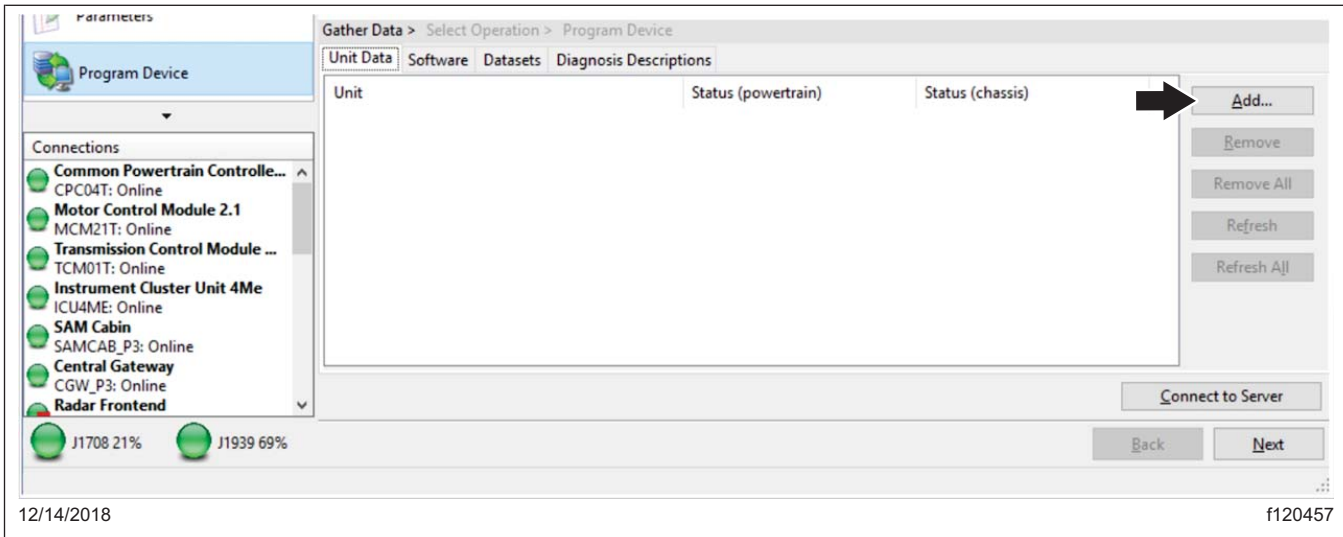


Fig. 5, Adding the VIN to Download Updated Server Data

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

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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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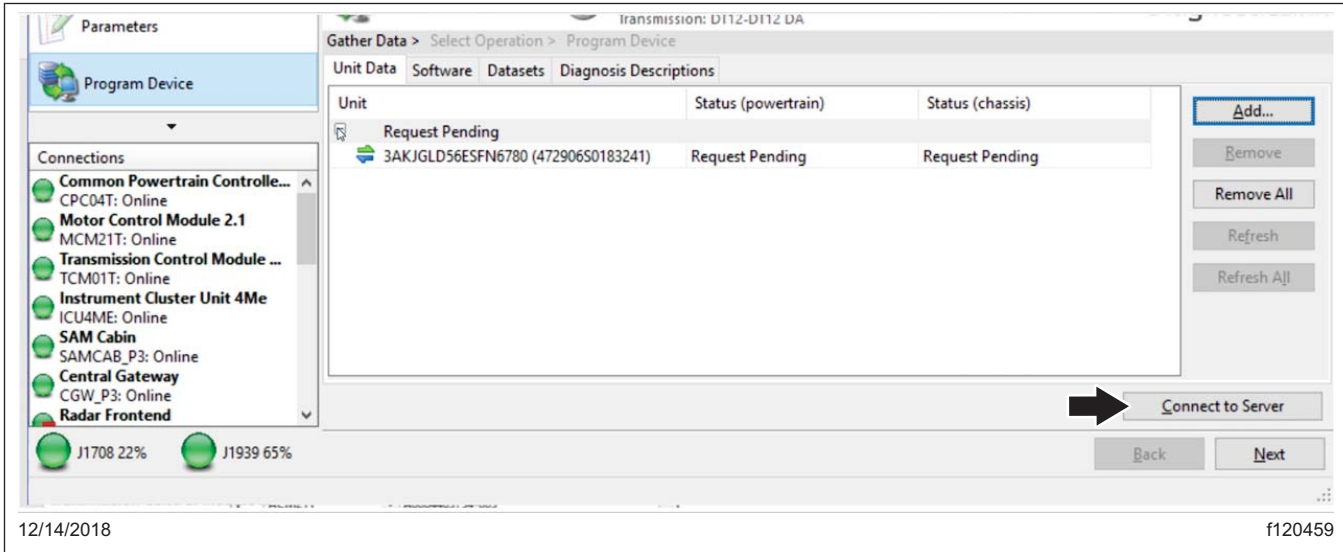


Fig. 7, Downloading Updated Unit Data

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

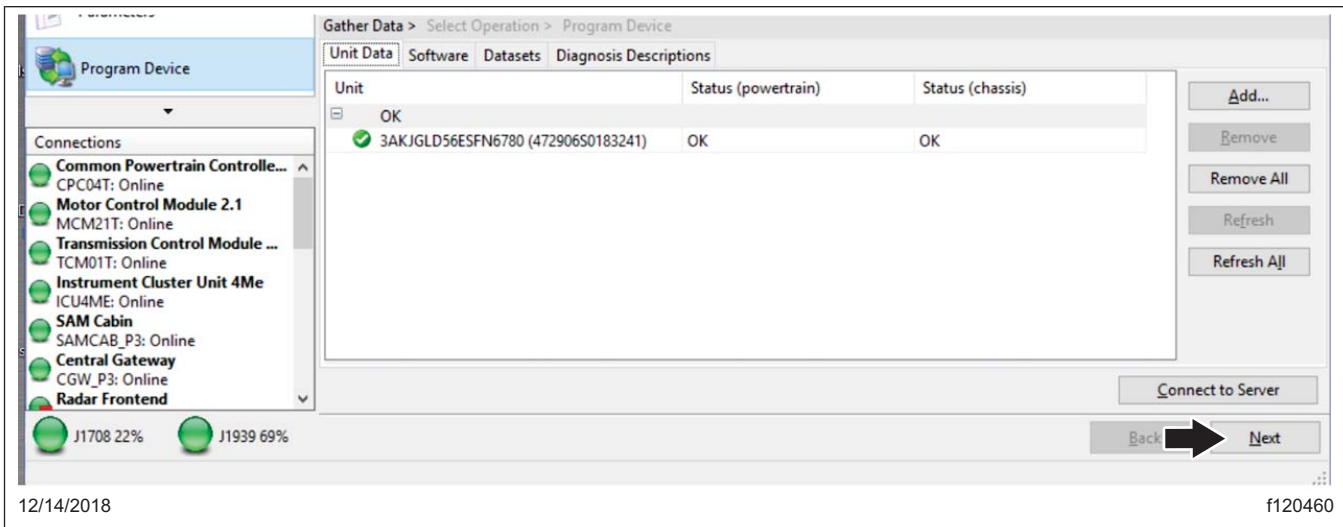


Fig. 8, Clicking Next

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.

10. Select the controller to program, select the VIN, and select either "Latest" or "Newest." Click "Next." See [Fig. 9](#).

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The screenshot shows the 'Program Device' step in the software. The left sidebar contains navigation options: Parameters, Program Device (selected), Flash, and Application Status. Below the sidebar is a 'Connections' list showing various vehicle modules like CPC04T, Motor Control Module 2.1, Transmission Control Module, Instrument Cluster Unit 4Me, SAM Cabin, Central Gateway, and Radar Frontend, all with 'Online' status. The main window is titled 'Gather Data > Select Operation > Program Device' and has a progress indicator '1'. It contains three main sections:

- Select the device to program:** A table with columns 'Name' and 'Description'. The rows are: MSF_P3 (Modular Switch Field), ACM21T (Aftertreatment Control Module 2.1), SAMCHAS_P3 (SAM Chassis), VRDU01T (Video Radar Decision Unit), and BHM_J1939 (Manual connection required for programming).
- Select the reprogramming operation you wish to take place:** Radio buttons for 'Replace Device Settings with Server Configuration' (selected), 'Update Device Software', and 'Change Dataset'.
- Select the unit and settings data to apply to the device:**
 - A table for 'Unit' with columns 'Unit' and 'Status'. The row shows '3AKJGLD56ESFN6780 (47290650183241)' with status 'OK'. A callout '2' points to this row.
 - A table for 'Settings' with columns 'Settings' and 'Status'. The rows are: 'Factory' (status: 'Factory settings cannot be programmed after software has been upgraded. Original software: A0504480461-001.'), 'Latest' (status: 'OK'), and 'Newest' (status: 'OK'). A callout '3' points to the 'Settings' column.

At the bottom of the main window are 'Back' and 'Next' buttons. The footer of the screenshot shows the date '12/14/2018' on the left and the ID 'f120461' on the right. Below the screenshot, three numbered callouts are provided:

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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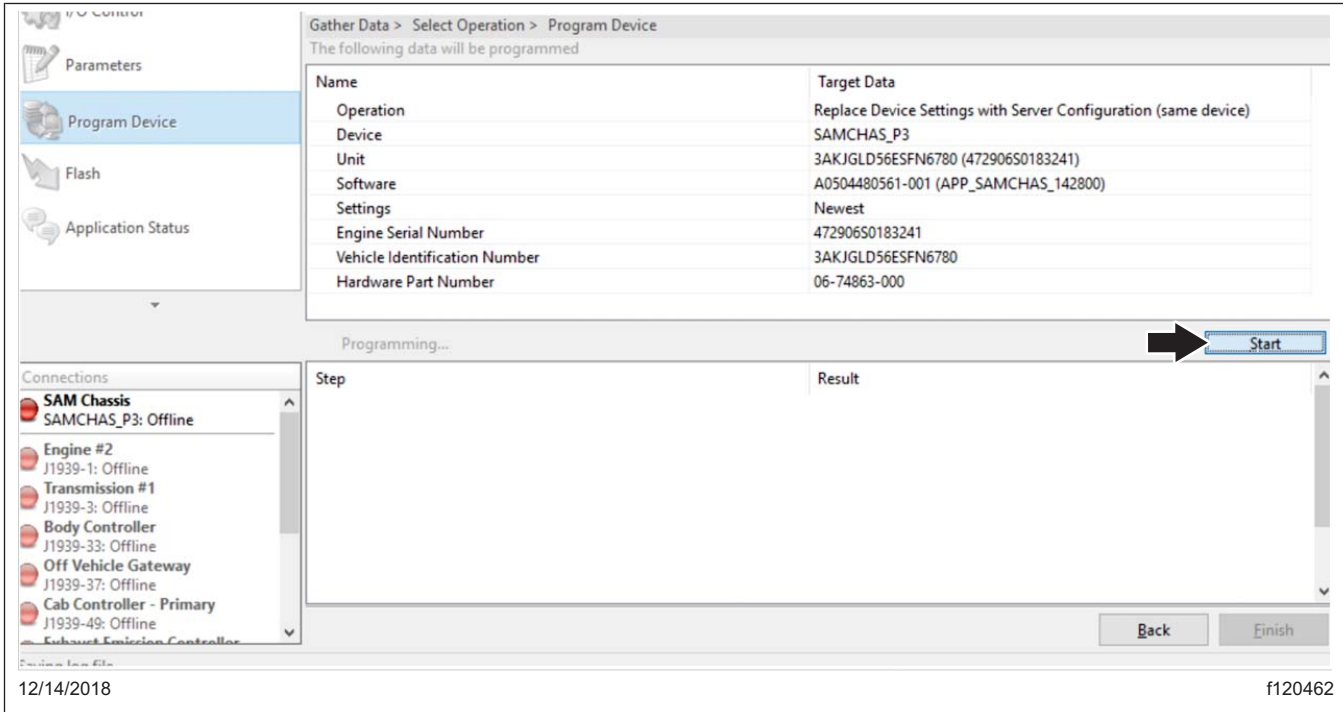


Fig. 10, Programming the Controller

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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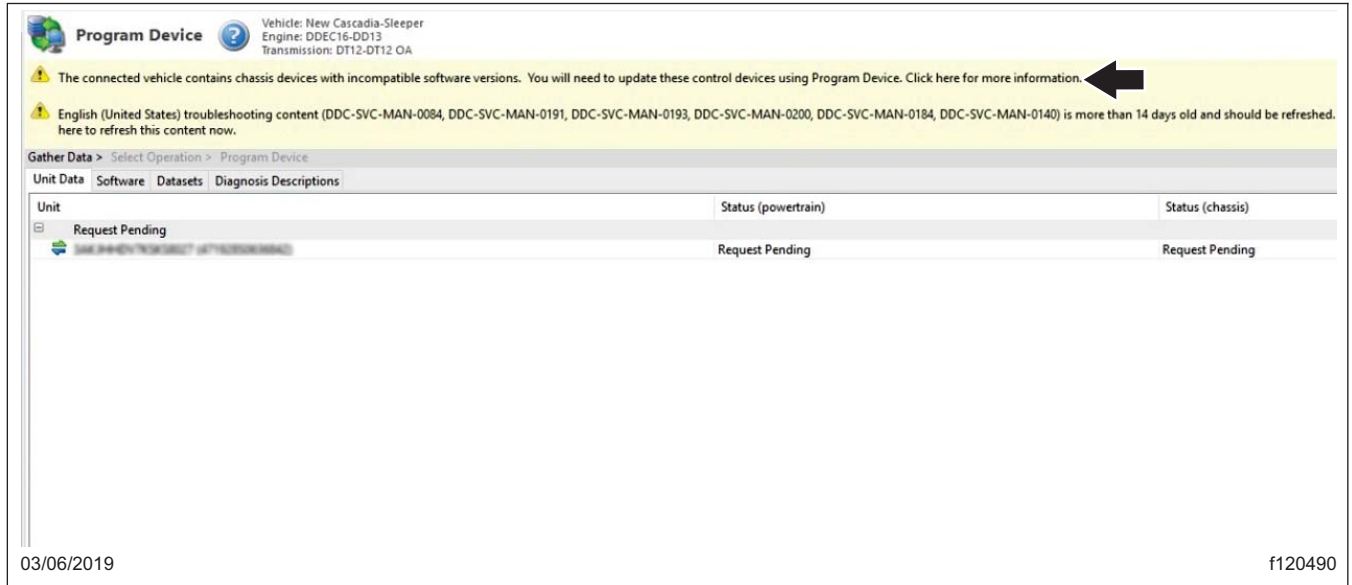


Fig. 11, Clicking on the Banner Message

13. Print or take a screen shot of the incompatible ECUs. See [Fig. 12](#).


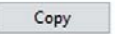
Compatibility Information X

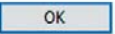
The connected vehicle contains chassis devices with incompatible software versions. You will need to update these control devices using Program Device.

VIN: 3AK3HLDV1L534100 ESN: 47162030488291

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

Data Source	Device	Hardware	Software	Issue
Edex	CGW04T	06-80261-002	A000488227-001	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	A000488732-001	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	A000488719-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	SSAM02T	A00-94904-000	A000488816-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	ICUC01T	06-80261-101	A0134882921-002	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	HVAC_F01T	06-94732-000	A000488728-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.
Edex	RDF02T	A0004882349	A0004883349-001	The set of software returned from the server for programming does not appear in the compatibility table supplied from the server.



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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. Go to "Actions" and select "ICUC Automatic Configuration." Click "Start."

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.

Warranty

This is an informational bulletin only. Warranty does not apply.