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Coding Information

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Title: Excessive Cab and Sleeper Temperature when No-Idle Heater is Operating

Applies To: LT with 16UZL

Change Log

Please refer to the change log text box below for recent changes to this article:

01/03/2018 - Added section - Checking to ensure Diamond Logic® Builder has updated to the most current version - with screen shots for clarification

12/05/2017 - Added Figure 1 to delete VIN from DLB. Added Figure 4 to Get Module Data, prior to Updating Module. Added printable version of the Rear HVAC Controller, so dealer can give to driver if desired.

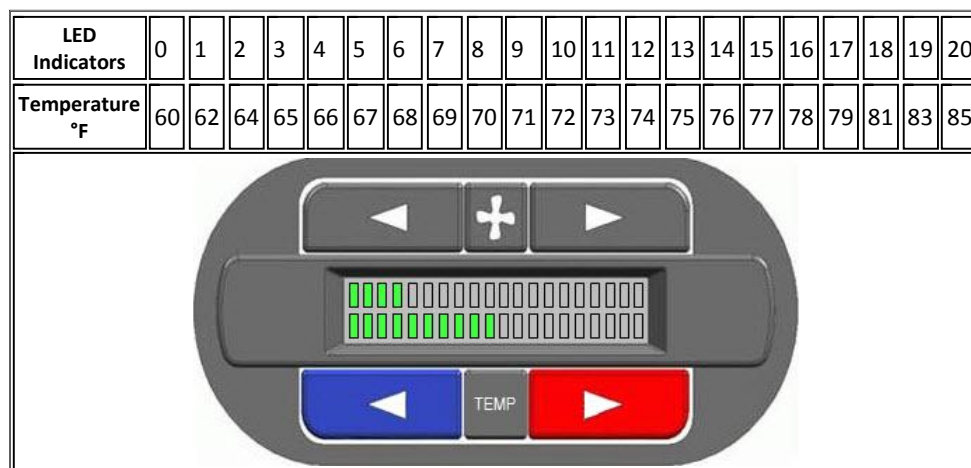
12/01/2017 - Updated images to reflect Front HVAC Control Module for Source Address 25 requiring the update.

11/29/2017 - Removed Temporary Correction 2 information. It should no longer be used. Updated Temporary Correction 1 information to

Description

Operation of the (Eberspaecher) Espar Hydronic No-Idle heater, part of feature code 16UZL, during mild to cool temperatures may result in elevated cab and sleeper temperatures resulting in driver discomfort. This is a result of the front heater automatically setting to full heat, 33% blower speed when the No-Idle Heater is in use. This article will cover the options to help alleviate the excessive temperatures in the vehicle.

- To optimize the sleeper temperature during (Eberspaecher) Espar heater operation, the driver should set the bars in the display to the approximate temperature setting shown below.
 - Set the fan speed to preferred setting
 - Set the temperature to desired sleeper temperature
 - Image below is for representation only
- A printable version of the Sleeper Controller shown below is available - [Click Here](#)
 - You can provide the printout to the driver if desired



Symptoms

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
No Faults or Warning Lights	

Customer Observations or Concerns:

- Excessive sleeper temperature
- Cab temperature noticeably warmer than sleeper temperature when curtain is closed

Special Tools / Software

Tool Description	Tool Number	Comments	Instructions
International® Diamond Logic® Builder (DLB)		EZ-Tech® Software	

Service Parts Information

Kit Description	Part Number	Quantity Required	Notes
Not Applicable			

Diagnostic Steps

Not Applicable

Repair Step(s)

The following steps will outline how to disable the front cab heater system during No-Idle Heater operation, as well as cover the future improvements that will be implemented to the system.

- **Temporary Correction 1** for this concern is to make a programming change in the Front HVAC Control Head Module (Source Address 25)
 - This programming change will allow the driver to override the front cab controls after the No-Idle Heater is in use
 - The front cab system will operate at the front cab controls current setting (what the driver set the controls to override) when the engine enters an Auto Start event
 - The front cab system will go back to default values after an Auto Start/Stop event is completed
 - After the engine auto stops and the No-Idle Heater turns back on, the front cab will return to low blower, floor, fresh air (Temperature will remain at driver selection)

Front HVAC Default Setting		Driver Override Ability
Blower speed	33%	Yes*
Inlet	Fresh Air	Yes*
Mode	Floor	Yes*
Temperature	Driver Selection	Yes^
* After an Auto Start/Stop event: Blower Speed, Inlet and Mode will return to default values.		

^ Temperature will remain at Driver Selection at all times.

NOTE:

Overriding blower to speeds below 3 or changing the inlet to recirculation mode may cause issues with condensation in cab.

- **Temporary Correction 2** is no longer applicable. Temporary Correction 1 should be used.
- **Permanent Correction** is in development
 - Details are listed in the Permanent Correction section below

Front HVAC Control Module Software - Temporary Correction 1

NOTE:

Any vehicle that used Temporary Correction 2 applied will need to be changed back to the vehicle's original programming. Steps are listed to verify programming.

NOTE:

The vehicle must be at its original operating state at the completion of Temporary Correction 1

Checking to ensure Diamond Logic® Builder has updated to the most current version

1. DLB should automatically update when it is opened, and the EZ-Tech® is connected to the internet
 - It is possible your companies' internet may prevent DLB from updating
 - Open the DLB Change Log and verify your DLB version

Figure 1 - Navigate to DLB Change Log

The screenshot shows the International Diamond Logic Builder (DLB) software interface. The 'Help' menu is open, and the 'Change log' option is highlighted with a red box. A callout box points to the 'Change log' option with the number '1'. The main window shows a table of detected modules and a status bar at the bottom indicating 'Waiting for connection...'.

Module	Address	In Configuration	Kernel	Description
ESC	33	✓	708	Serial
Front HVAC Contr...		✓	1642002	Hardware
Instrument Cluster		✓	40102	Configuration
Lighting Control...		✓	16	Kernel
Six Position Swi...		✓	16	Data Version
Six Position Swi...		✓	16	State
Stalk Shifter		✓	54	

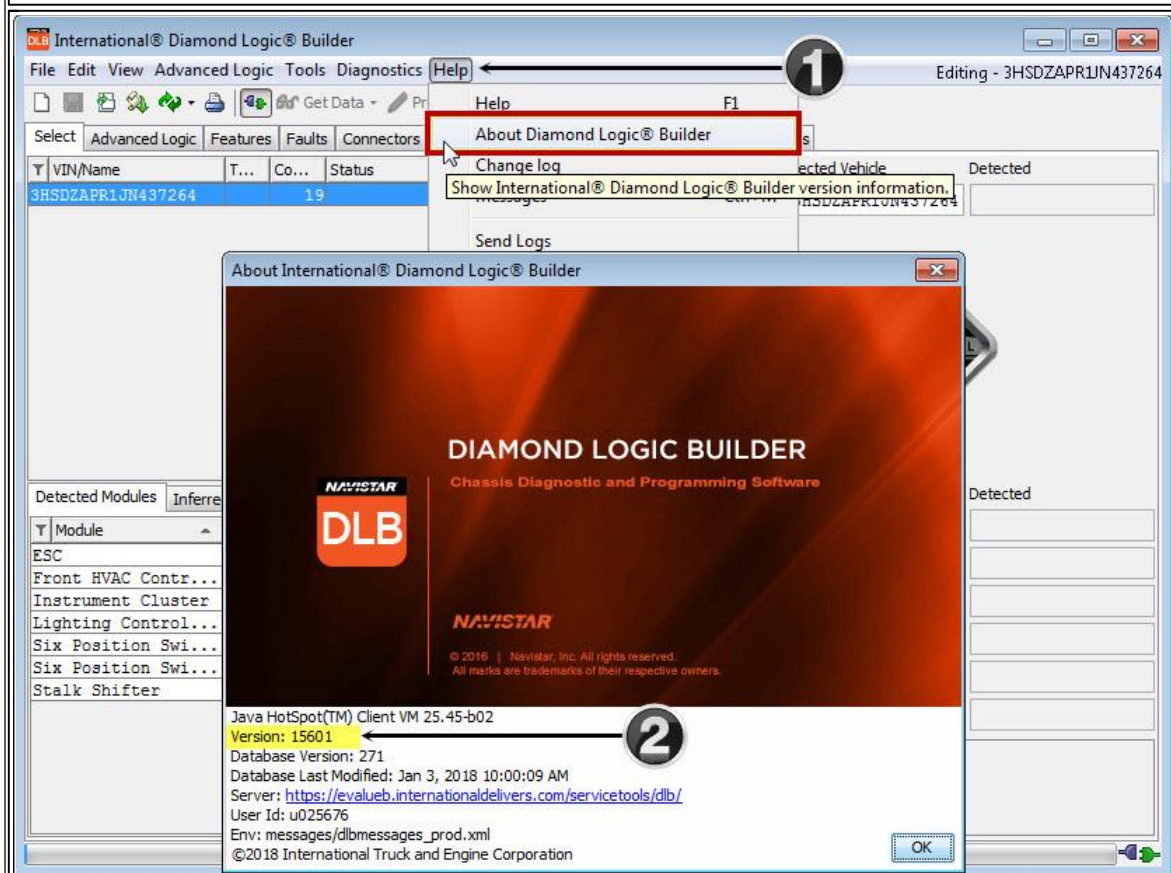
1. Help Menu - Click on Change Log

NOTE:

You can also access the DLB Change Log by [Clicking Here](#)

2. Access the Help Menu - Click on About Diamond Logic® Builder
3. A pop-up box will appear and display the DLB information
 - Reference the Version information that is displayed

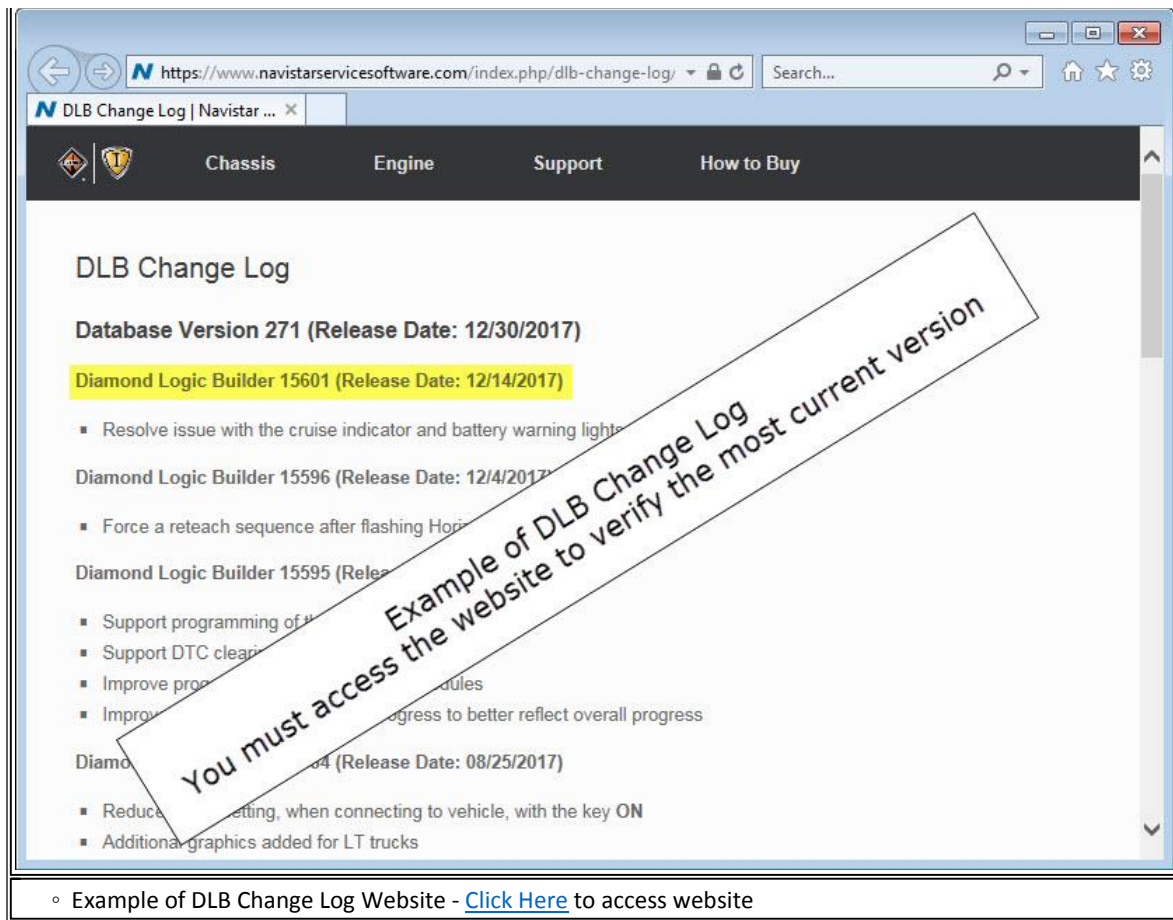
Figure 2 - About Diamond Logic Builder - Check Version



1. Help Menu - Click on About Diamond Logic® Builder
2. Version Information

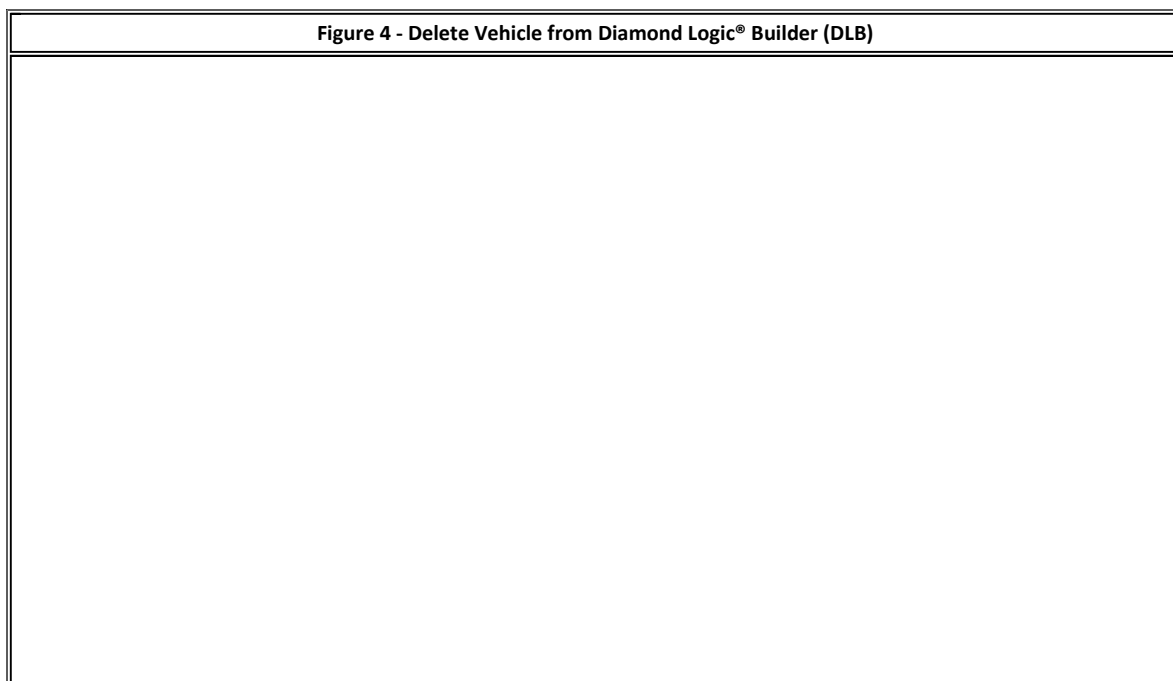
4. Your Version of DLB should match the most recent Version displayed on the DLB Change Log

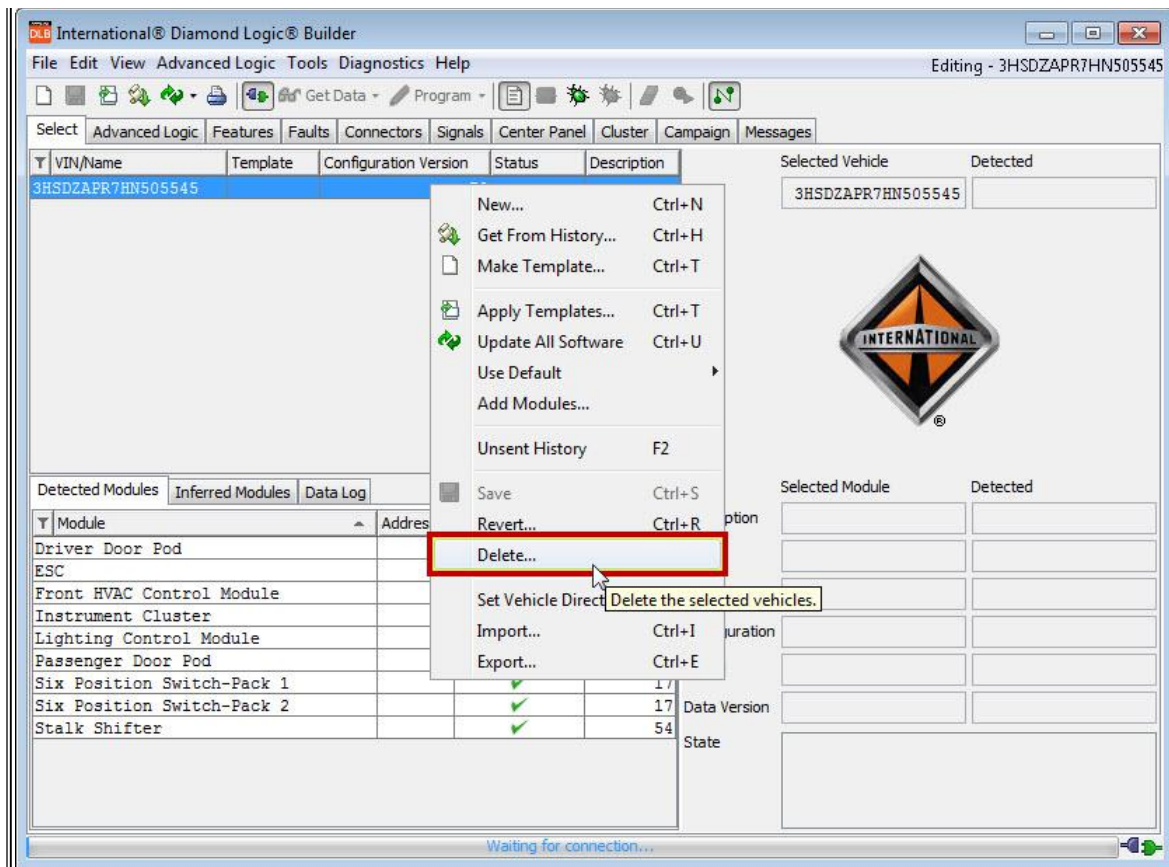
Figure 3 - DLB Change Log Example



Updating the Front HVAC Control Head Software

1. Prior to connecting to the vehicle, DELETE the VIN from DLB if you've ever been connected to the vehicle you're preparing to program
 - This step needs to be performed PRIOR to connecting to the vehicle



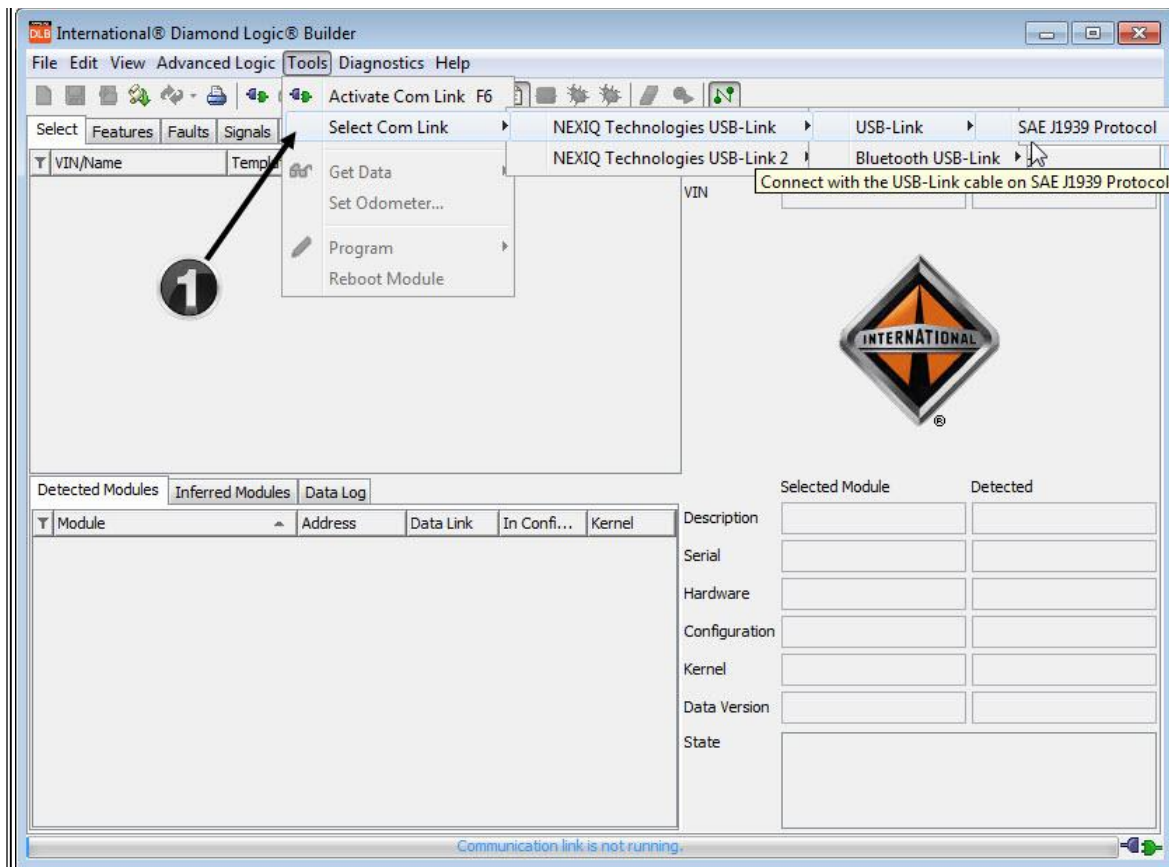


NOTE:

This step needs to be performed PRIOR to connecting to the vehicle

2. Connect to the Body Control Module (BCM) using DLB with the Key OFF (Figure 5, Item 1)
 - You may need to select the com link you are using from the Tools menu

Figure 5 - Tools Menu - Select Com Link



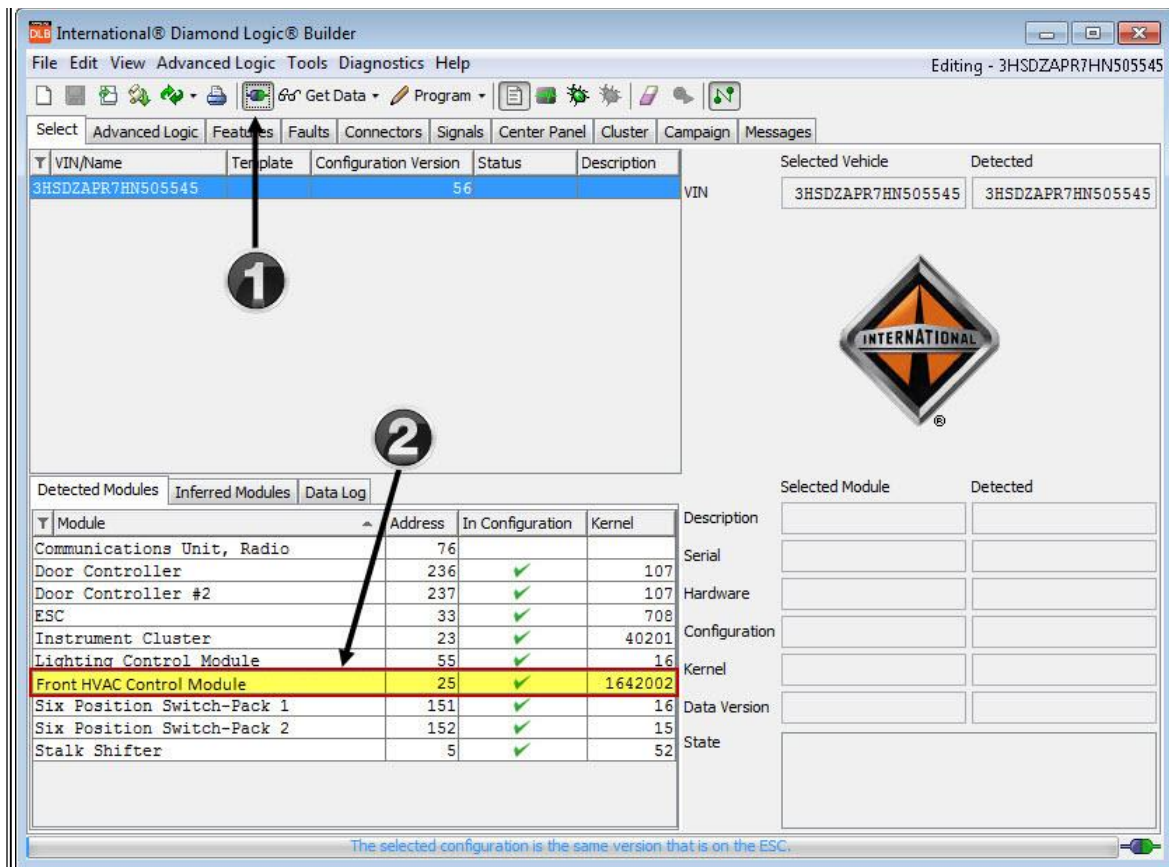
1. Select the appropriate Com Link

NOTE:

Notice no VIN is displayed. The VIN for the vehicle you are preparing to program should have been deleted in step 1, prior to connecting

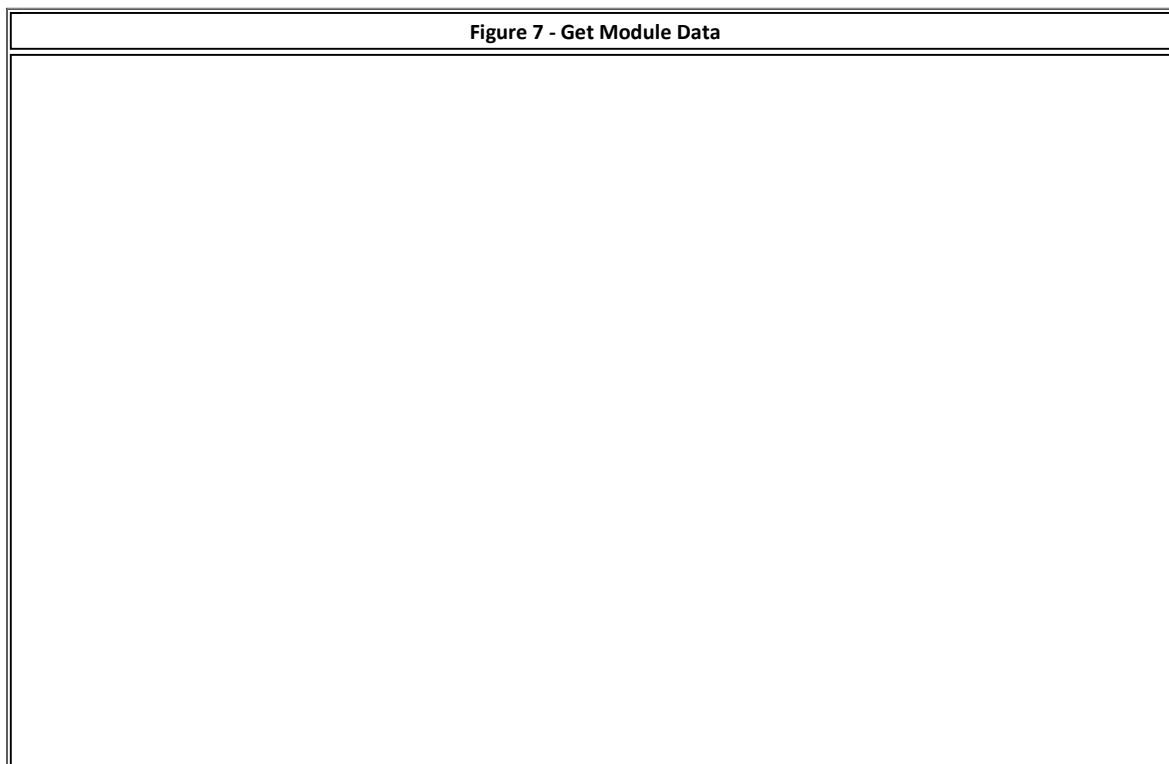
3. Locate Front HVAC Control Module in the Detected Modules tab (Figure 6, Item 2)

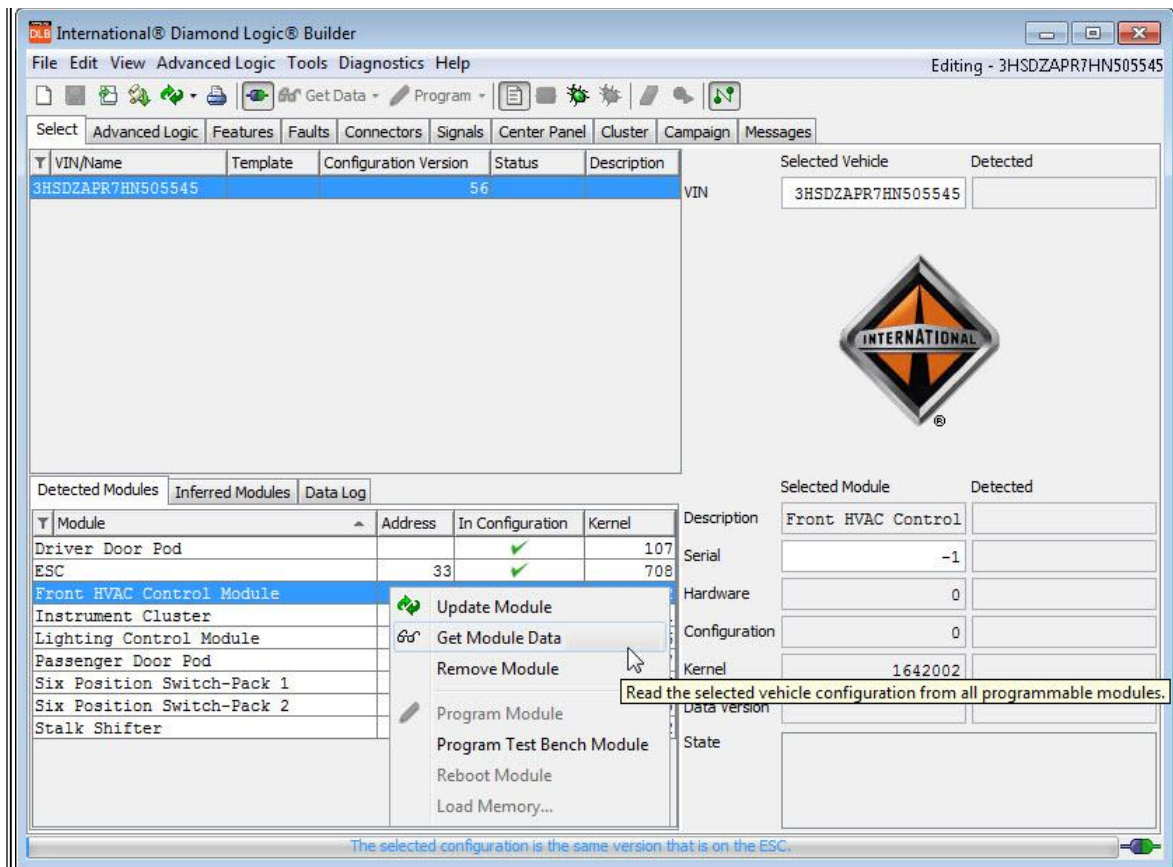
Figure 6 - Connected to BCM Locate Front HVAC Control Module



1. Connected to the Body Control Module
2. Locate Front HVAC Control Module in the Detected Modules tab (Source Address 25)

4. Right Click on Front HVAC Control Module and select Get Module Data
 - This will ensure the Kernel information displayed is what is currently programmed into the module

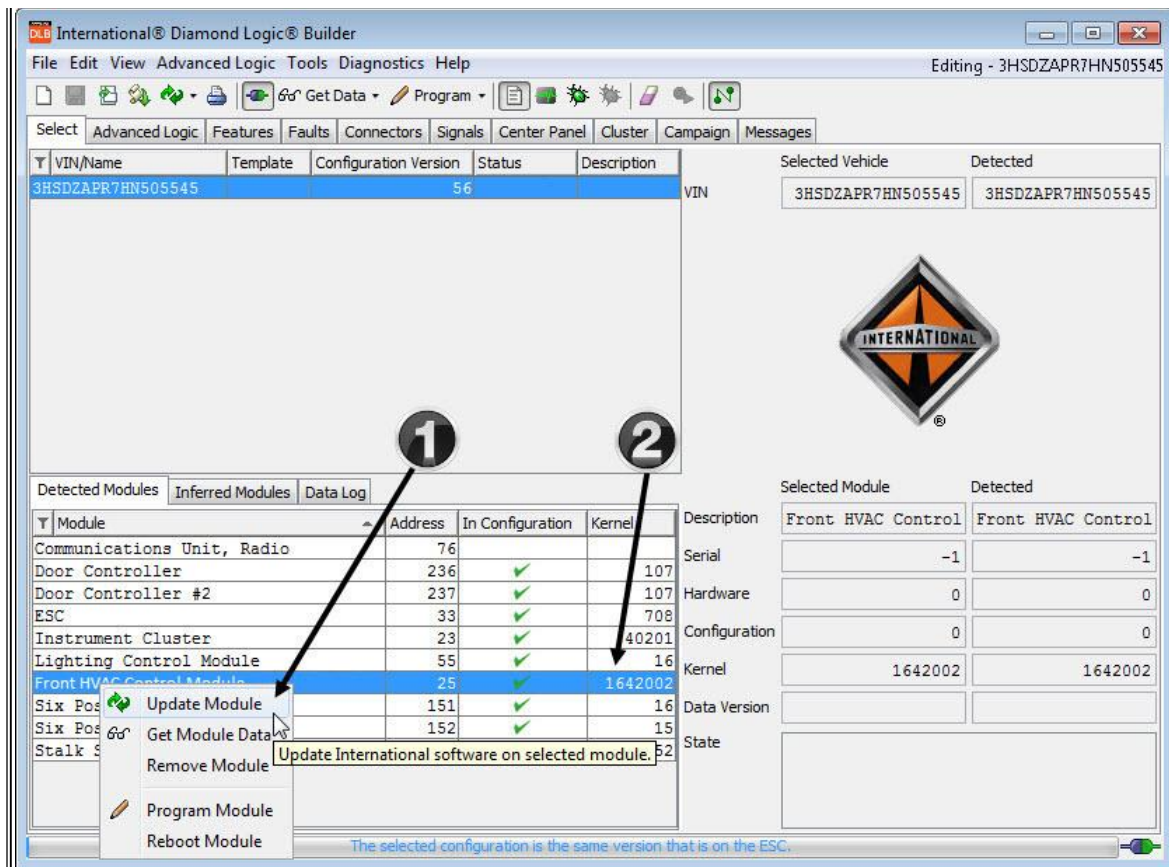




1. Connect to the Body Control Module using Diamond Logic® Builder
2. Locate Front HVAC Control Module in the Detected Modules tab (Source Address 25)

5. Right Click on Front HVAC Control Module and select Update Module
 - The Kernel for the Module will update

Figure 8 - Update Front HVAC Control Module



1. Right Click on Front HVAC Control Module and select Update Module
2. The Kernel will update to the latest available software (1746002) for the Front HVAC Control Module (Source Address 25)

6. Right Click on Front HVAC Control Module and select Program Module
 - This will program the Front HVAC Control Module Only
 - They Key should be OFF for programming

Figure 9 - Program Front HVAC Control Module

Detected Modules

Module	Address	In Configuration	Kernel
Communications Unit, Radio	76		
Door Controller	236	✓	107
Door Controller #2	237	✓	107
ESC	33	✓	708
Instrument Cluster	23	✓	40201
Lighting Control Module	55	✓	16
Passenger-Operator Climate Control			1746002
Six Position Switch-Pack 1			16
Six Position Switch-Pack 2			15
Stalk Shifter			52

Selected Module

Module	Detected
Front HVAC Control	Front HVAC Control
Serial	-1
Hardware	0
Configuration	0
Kernel	1746002
Data Version	
State	

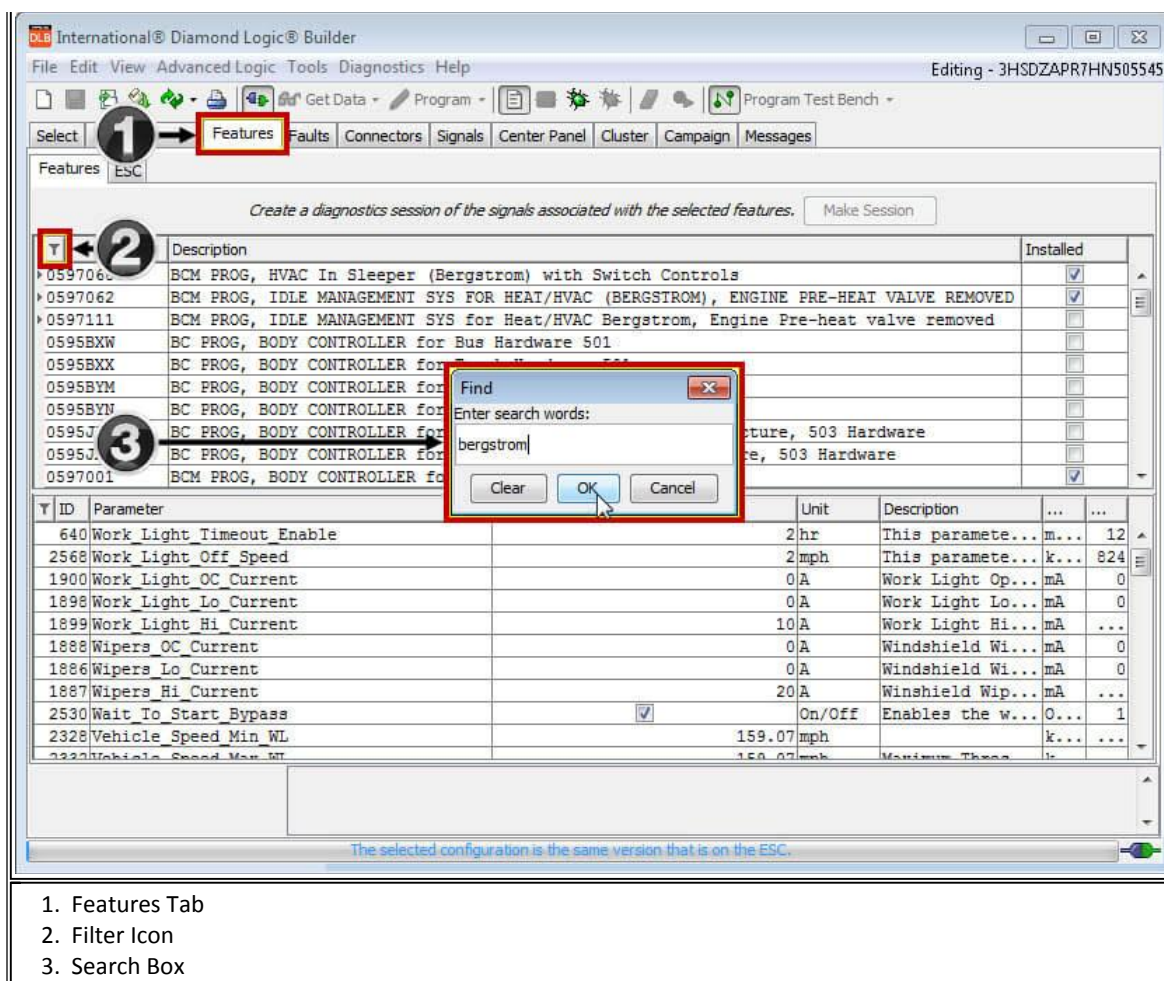
1. Right Click on Front HVAC Control Module and select Program Module

- This will program the Front HVAC Control Module Only

Verify Correct Feature Code in DLB (Temporary Correction 1)

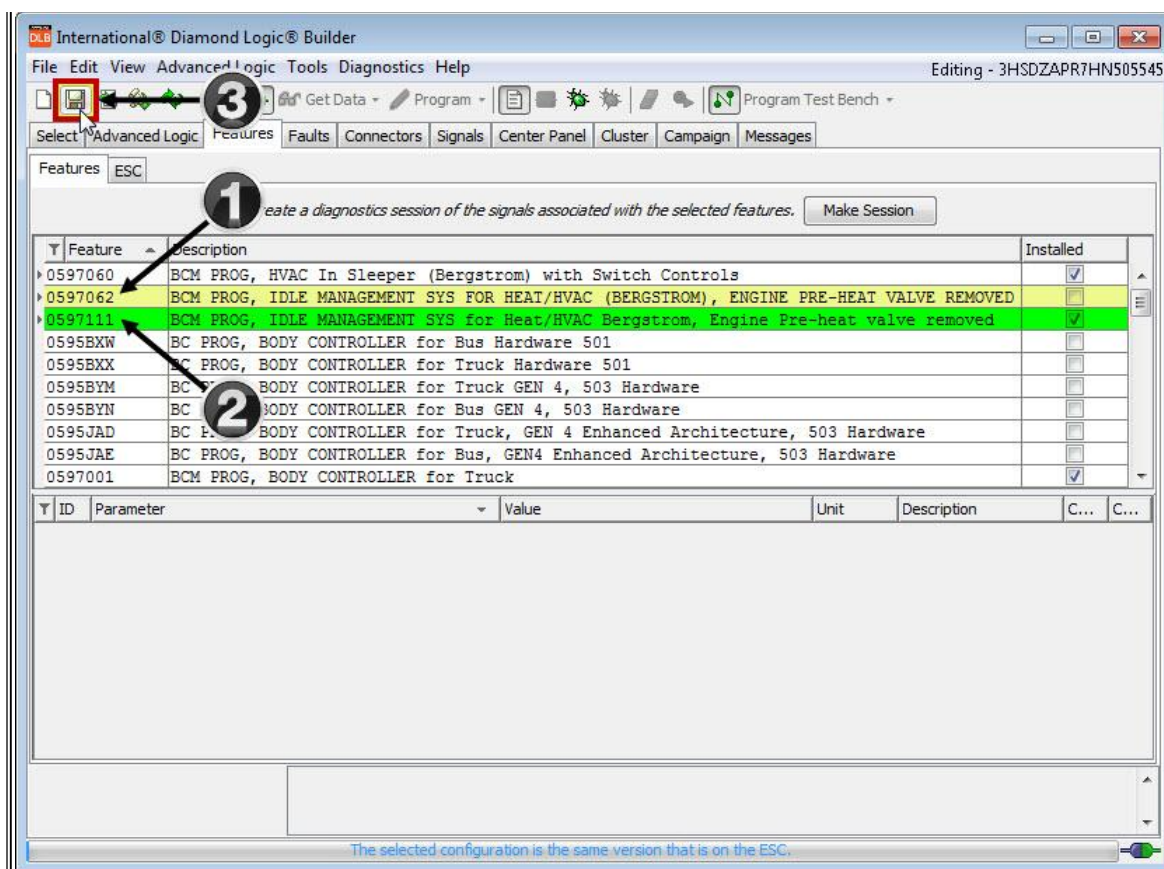
1. Navigate to the Features Tab in DLB
2. Filter to Bergstrom
3. Click OK

Figure 10 - Features Tab



4. If Feature Code 0597111 is already installed, no programming is required.
 - Continue to Figure 13 to verify J6-L has circuit H75WC installed
5. If Feature Code 0597062 is installed:
 - Click on the box to remove Feature 0597062
 - Click on the box to install Feature 0597111
 - Click on the Save Icon to save the changes to the vehicle you are connected to

Figure 11 - Bergstrom Feature Codes



1. 0597062 - This Feature Code should NOT be Installed
2. 0597111 - This Feature Code SHOULD be installed
3. Save Icon

6. Program the Body Control Module (BCM) using the Program Module Option
 - Verify 'ESC' is selected under 'Detected Modules'
 - They Key should be OFF for programming

Figure 12 - Program BCM

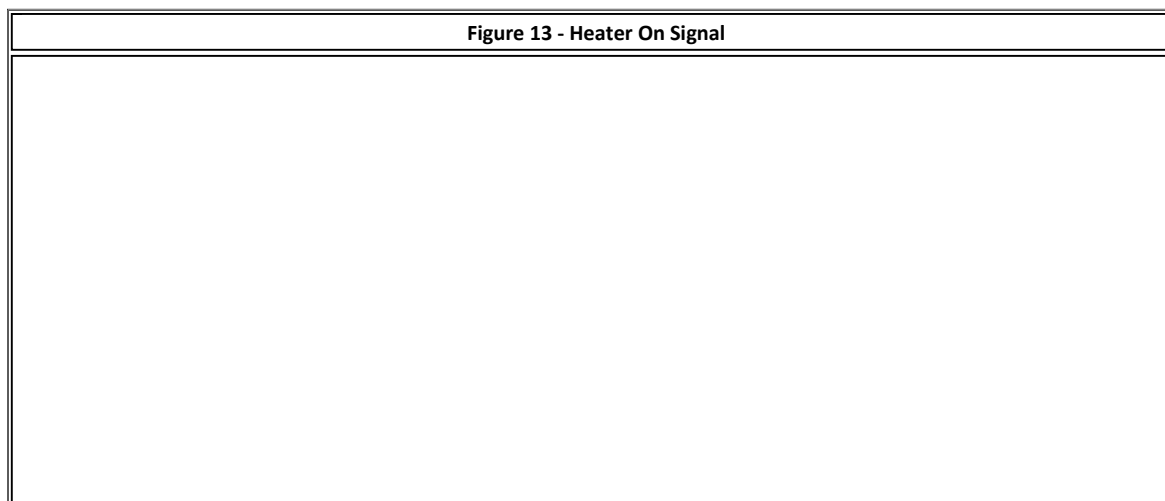
1. Program drop down Icon

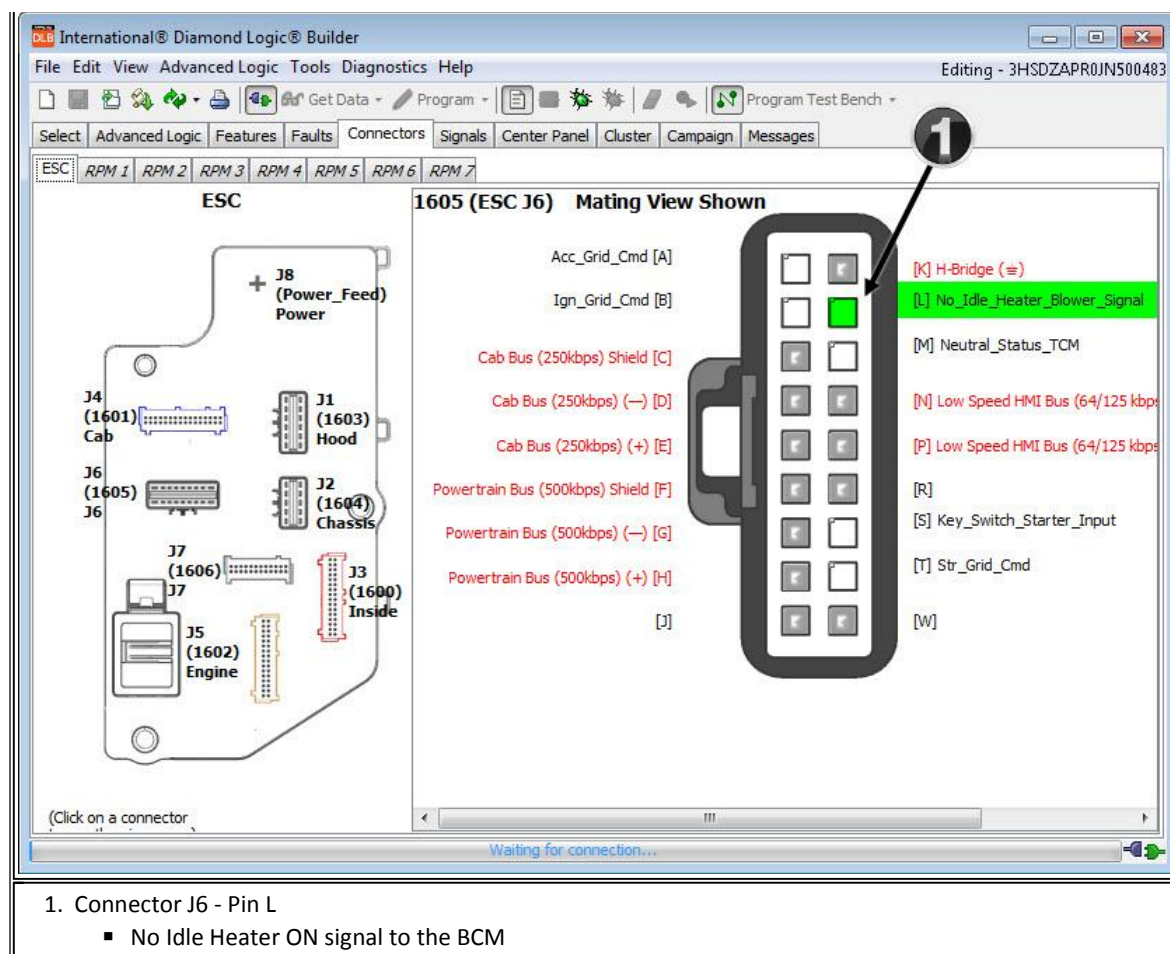
2. Program Module

Verify Circuit H75WC is installed in Connector J6 - Pin L at the BCM (Temporary Correction 1)

After the Front HVAC Control Module Software had been updated to 1746002, and it has been verified Feature Code 0597111 is installed, check the following:

1. Turn on the Espar No-Idle Heater
2. Verify the Front Cab blower motor is running
3. If the Front Cab blower motor is NOT running:
 - Verify fuse B1-H (30 Amp) is installed for the Front Cab blower motor
 - Verify wire H75WC is installed into Connector J6 - Pin L at the BCM (Figure 10)





Disable Front HVAC during No-Idle Heater No-Idle Heater Operation - Temporary Correction 2

NOTE:

Temporary Correction 2 has been removed and should not be used. If the Front HVAC System has been disabled, the functionality of the Front HVAC System needs to be restored, and Temporary Correction 1 should be followed. Temporary Correction 2 had the potential to cause heavy condensation in the cab. Temporary Correction 1 operates to prevent in-cab condensation.

Front HVAC Control Head Software - Permanent Correction

NOTE:

Permanent Correction is under development.

- Permanent correction will be a programming change in the Front HVAC Control Head
- The front cab HVAC will keep the temperature and mode setting at the driver selection
- The front cab HVAC will default the blower to low speed, and the fresh air door will open
 - The driver can override the fresh air door, and put the front cab HVAC into recirc, which will close the fresh air door
- The front cab HVAC will remain at the driver selection for temperature and mode when the No-Idle Heater is in use
- The front cab HVAC will remain at the driver selection for temperature and mode when the engine enters an auto start event
- The front cab HVAC will remain at the driver selection for temperature and mode after the engine auto stops and the No-Idle Heater turns back on

Warranty Information

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

Other Resources

[Master Service Information Site](#)

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