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Title: Cluster Software Update Instructions

Applies To: CE Bus,DuraStar, TerraStar, WorkStar,TranStar, ProStar, LoneStar, 9900i, PayStar

Change Log

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

10/30/14 - revise instructions to align with production release combined flash tool, revise article format
08/20/14 - add link for software download
06/25/14 - combine cluster software related IKNOWs together(IK0800485 and IK0800469), added procedure for to check/flash cluster software when a cluster is replaced
06/16/14 - add cluster reflash steps
03/20/14 - article created

This article replaces several articles related to cluster software issues.

- The HDDL2 cluster refers to the 5000/9000 (PayStar/9900i) model cluster.
- The Common cluster refers to the NGV model cluster.

THIS ARTICLE DISCUSSES VERY SPECIFIC SYMPTOMS.
FLASHING THE CLUSTER FOR ANYTHING BUT THE SYMPTOMS DESCRIBED BELOW WILL NOT REMEDY THE ISSUE.

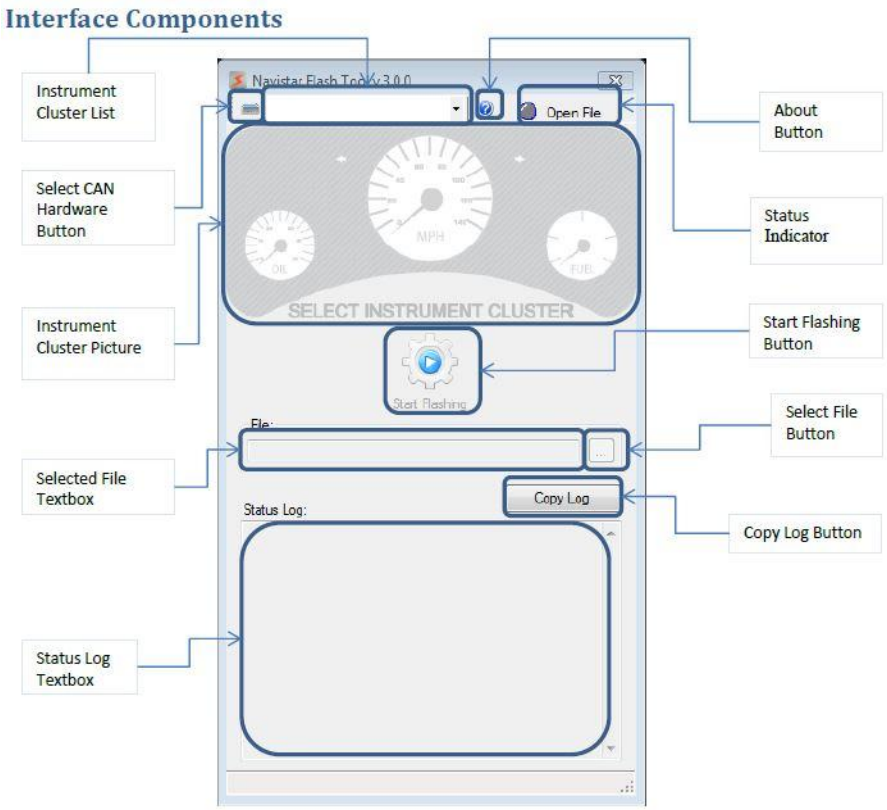
NOTE:

The Reflash procedure is the same with the exception of the drop down menu selection at the beginning of the procedure.

- This procedure involves using a new tool to reflash the cluster.
- This tool will need to be downloaded and installed to the dealers EZTECH computer.
- This part of the process will only need to be performed one time.
- This is done via script which will download the tool, unpack and install it.
- Click Here to download the script
- Once the tool is installed, follow the instructions below to complete the reflash process.

NOTE:

The Nexiq USB Link communication adapter is recommended for this process. The NAVCOM device will work but results in much slower speeds.



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Description

The instrument cluster LCD does not update the outside temperature.

- This is due to a software issue in the cluster.

Symptom(s)

The instrument cluster updates the outside temperature reading only when the ignition key is cycled. No diagnostic trouble codes will be present.

REPLACING THE CLUSTER and/or the AAT sensor WILL NOT REMEDY THIS CONCERN.

Customer Complaint(s)

Instrument cluster will not update the outside temperature reading except when the ignition key is cycled

Inspection Step(s)

1. Determine if the vehicle is equipped with both feature codes:
   a. 0012TSY-viscous fan
   b. 0595ACG
2. Once confirmed, proceed with the repair procedure.

NOTE:

If there is an issue with the temperature display, but the vehicle doesn't have the above feature codes, this procedure will not rectify the issue.
Proceed with standard AAT sensor troubleshooting outline in the service manual located on ISIS.

Repair Step(s)

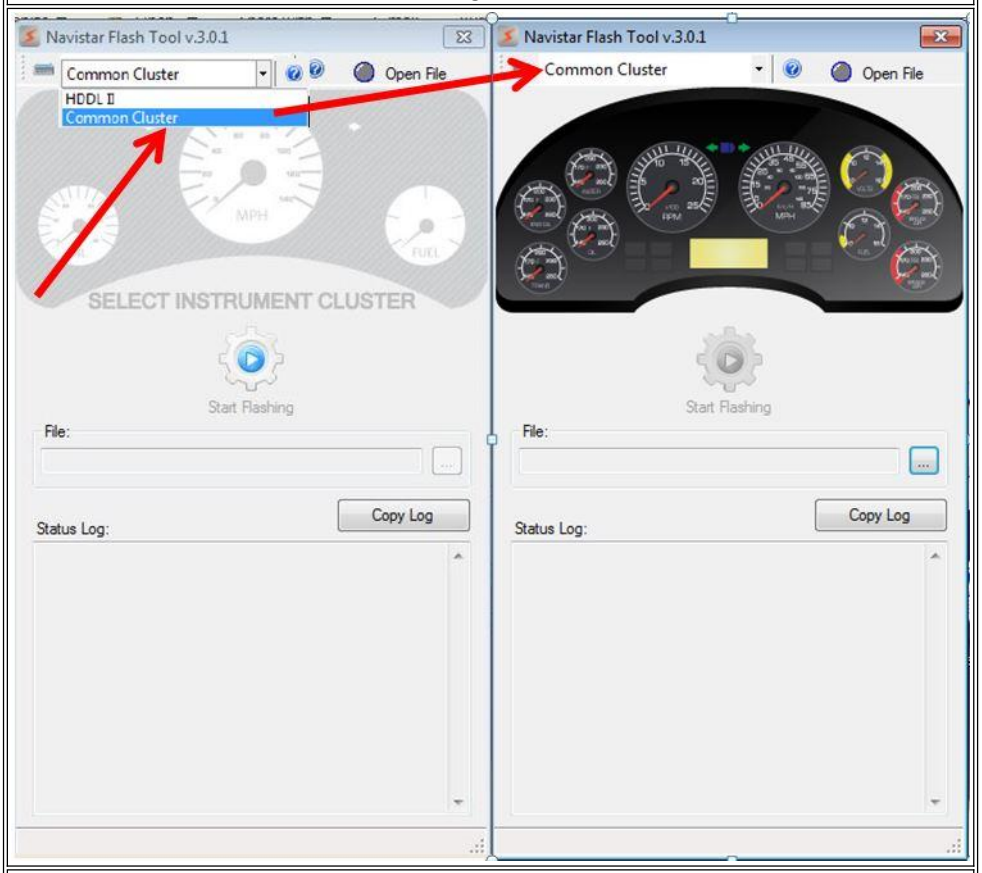
1. Run the application by double click on the application's shortcut on desktop(Figure 1).

Figure 1

Desktop shortcut

2. Select Common cluster as shown in Figure 2

Figure 2



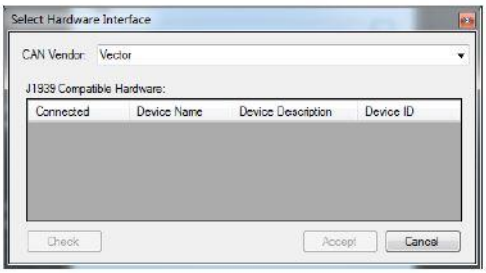
Cluster Flash Tool Main Screen

NOTE:

Steps 3-5 are only necessary the first time the tool is executed.

3. Press the "Select CAN Hardware" button to access this setting (See Figure 3).

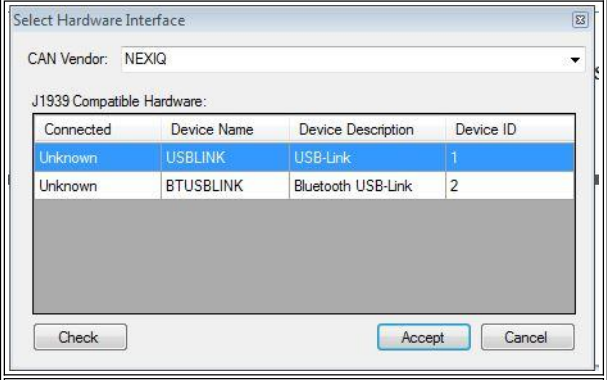
Figure 3



Select hardware interface

4. Select the proper CAN interface (i.e. the vendor's name). If the drivers for the selected CAN interface are properly installed, a list of the compatible hardware devices will appear (See Figure 4).

Figure 4



Select CAN Interface

5. Select the proper J1939 Compatible Hardware device (Figure 4) and click on the "Accept" button.

   NOTES:

   - Click the "Check" button to verify which of the displayed devices are connected to your computer. Take in account that some devices need to be energized in order to be operative.
   - If the list of devices is empty, it means that either, the proper drivers are not installed, or there is no hardware interface physically connected to the computer.
   - This setting can be changed at any time while the flash process is idle.

6. Locate the flash file(EGC7P0).
   - The flash file is located in the following directory: Computer\Windows\Program Files(x86)\stoneridge\common cluster flashtool\bin file
   - After the file is selected, the "Status Indicator" will be yellow, steady and labeled with the text "Ready", and the "Start Flashing" button will be enabled (See Figure 5).
   - The status log window will say "Open image file:EGC7P0.BIN...Image file opened successfully

Figure 5

Select File

7. Make sure that the common cluster unit and the selected CAN interface are properly connected and powered. Press the "Start Flashing" button to start the re-flashing process and the flash tool will display a warning message to turn the key off (See Figure 6).

Figure 6

Dialog Box

- Press "OK" to continue or "Cancel" to abort the operation. While the flash tool is working, the application buttons will be disabled, except for the "About" button; and the "Status Indicator" will be blinking green, and labeled as "Working". The application can't be closed until the flash process is complete.

8. Once the flash process is done, the "Status Indicator" will become steady green, and labeled as "Complete" (See Figure 7)

Figure 7

Process Complete

9. Disconnect Interface from the vehicle
10. Repair complete.

If for some reason the flash process fails, instructions will appear in the box. Follow the instructions carefully and attempt the flash process again. If process still fails, contact tech support for additional assistance. Please note what error is received when the flash process fails.

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HDDL2 Cluster

Fault code 286 on ISX, MIL Light

Description

Cummins ISX 15L SCR engines require fuel level information. The fuel level sender (sensor) is wired to the cluster on PayStar and 9900 as an analog input. The cluster broadcasts fuel level information via J1939 on the public CAN bus, the engine ECM parameters are setup to receive that info from the cluster via J1939.

Triage

- When did the light come on?
- Is the engine running poorly?
- Did the light come on after refuelling the truck?
- Are there any other symptoms?

Symptoms

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

DTC / Light	Cummins Fault	Description
SPN 639 FMI 13 MIL	286	SAE J1939 Multiplexing Configuration Error - Out of Calibration. The ECM expected information from a multiplexed device but **only** received a portion of the necessary information.

Customer Observations or Concerns:

- MIL Light on

Diagnostic Step(s)

- Currently there is a known software issue with the cluster, when the fuel tank is full the cluster may send an error message to the Cummins ECM that can cause a MIL and fault code 286.
- To eliminate this condition a cluster software update is required. Navistar has developed software to reflash the cluster to correct this issue. Before proceeding with cluster software update, please confirm the below steps have been completed **Do NOT replace the cluster or the ECM for this issue.**
- If fault 286 sets when the fuel tank is not full, perform the following:

1. Verify that the following parameter is enabled in the ECM: Under SAE J1939 Multiplexing - Fuel Level Sensor **MUST BE ENABLED** with the source address set to 23 - Gauge Cluster, and Fuel Level Sensor 2 is disabled.

2. Troubleshoot the fuel sending unit circuit. For the most current fuel sending unit wiring diagram CLICK HERE.

If the above steps have been taken and the issue remains, perform the repair procedure.

HDDL2 Cluster Reflash Procedure:

NOTE:

Follow the below procedure after installing the software using the link to download the script found at the top of this article.

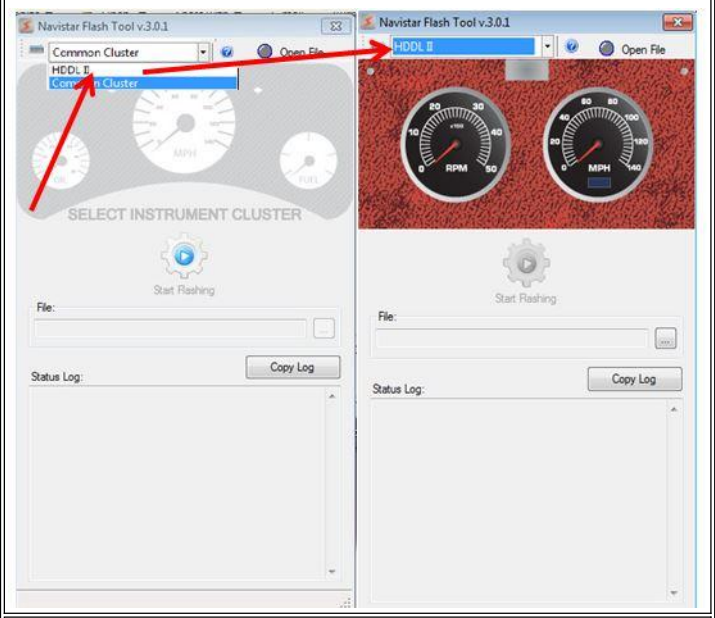
1. Run the application by clicking on the shortcut located on the desktop. (Figure 1)

Figure 1

Desktop Shortcut

2. Select HDDL2 option as show in Figure 2.

Figure 2



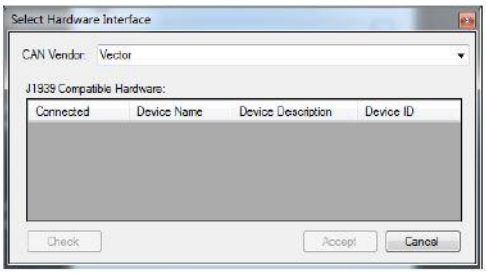
Cluster Flash Tool Main Screen

NOTE:

Steps 3-5 are only necessary the first time the tool is executed.

3. Press the "Select CAN Hardware" button to access this setting (See Figure 1 and 3).

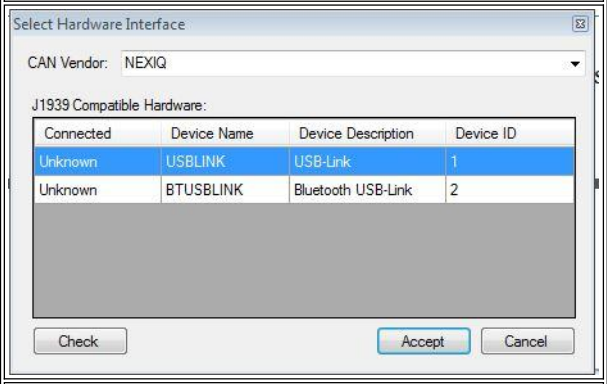
Figure 3



Select Hardware Interface

4. Select the proper CAN interface (i.e. the vendor's name). If the drivers for the selected CAN interface are properly installed, a list of the compatible hardware devices will appear (See Figure 4).

Figure 4



Select CAN Interface

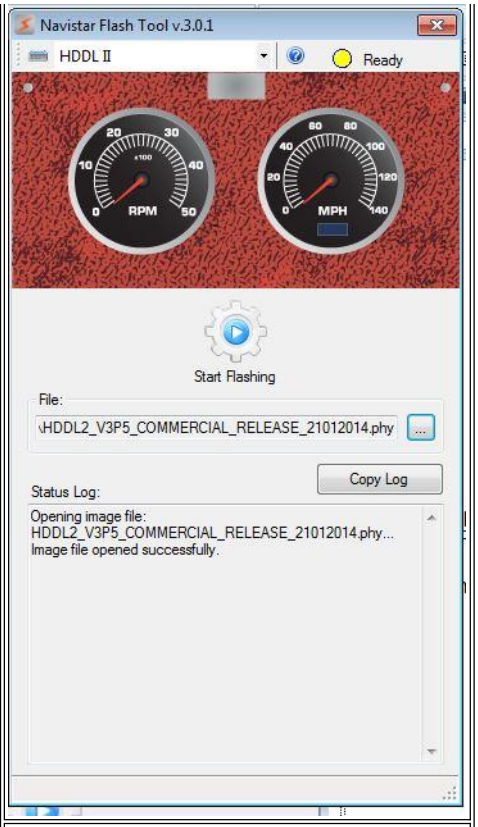
5. Select the proper hardware device and click on the "Accept" button.

NOTES:

- Click the "Check" button to verify which of the displayed devices are connected to your computer. Take in account that some devices need to be energized in order to be operative.
- If the list of devices is empty, it means that either, the proper drivers are not installed, or there is no hardware interface physically connected to the computer.
- This setting can be changed at any time while the flash process is idle.

6. Click on the "Select File"button (Figure 1) to select the file to download (i.e. the *.bin file). This can be done by dragging and dropping an appropriate file from Windows Explorer. The flash file is located in the following directory: Computer\Windows\Program Files(x86)\Stoneridge\HDDL2 Flashtool\PHY File After the file is selected, the "Status Indicator" will be yellow, steady and labeled with the text "Ready", and the "Start Flashing" button will be enabled (See Figure 5).

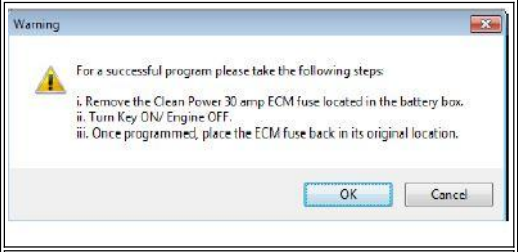
Figure 5



Select File

7. Make sure that the HDDL2 unit is selected, CAN interface is properly connected and powered. Press the "Start Flashing" button (Figure 1) to start the flashing process and the flash tool will display a warning message to turn the key off (See Figure 6).
8. The tool will display a dialog box advising the user to ensure the Clean Power ECM fuse is removed. Click OK once the fuse is removed.

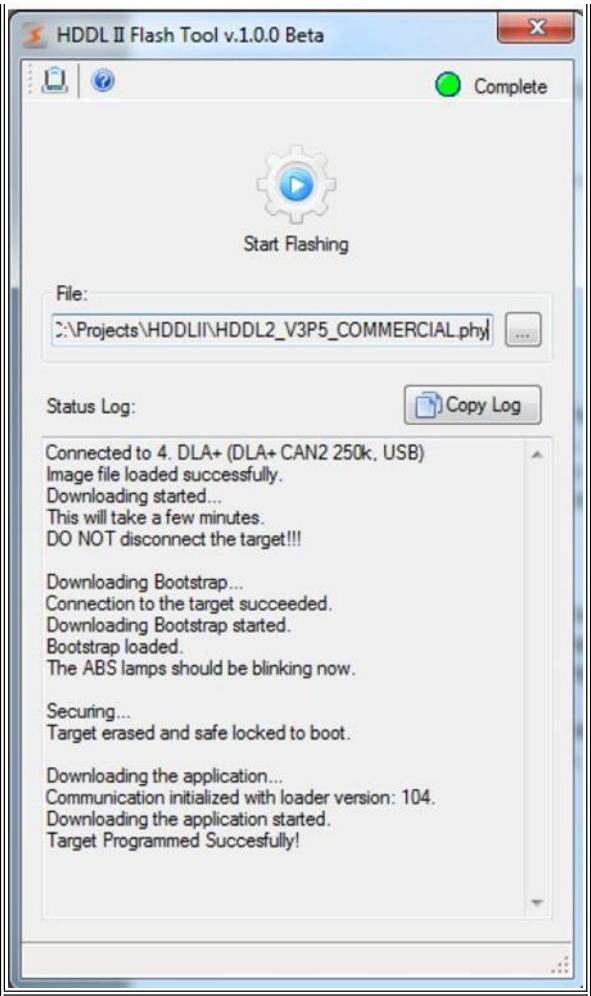
Figure 6



Dialog Box

9. Once the flash process is done, the "Status Indicator" will become steady green, and labeled as "Complete" (See Figure 7)

Figure 7



Process Complete

10. Disconnect Interface from the vehicle
11. Repair complete.

If for some reason the flash process fails, instructions will appear in the box. Follow the instructions carefully and attempt the flash process again. If process still fails, contact tech support for additional assistance. Please note what error is received when the flash process fails.

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Cluster Software Verification/Flash Due to Replacement

This Procedure only applies to 2010 or newer vehicles. Pre-2010 vehicle clusters will have the latest software from the PDC.

When The cluster is received from the PDC, Check the back of the cluster for the current software version.

- Refer to Figure 1 for Common Cluster
- Refer to Figure 2 for HDDL2 Cluster

Figure 1

Common Cluster Software Version Identification Located on Back of circuit board. In this example, the software version is 6.2

- Common Cluster
- The latest software for common cluster is currently **7.1**

Figure 2

HDDL2 Cluster Software version. In this example, the version is 2.0

- HDDL2 Cluster
- Currently, the latest HDDL2 cluster software is **3.5**

If it is determined the cluster needs to be updated, follow the procedure below for the applicable cluster you have.

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Warranty Information

Warranty Claim Coding:

Group:	**08960**
Noun:	**784**

Standard Repair Time(s):

Description	SRT Link	Model	Hours
Instrument Cluster, Reflash	KL08-6887A	4300,4400	0.2
Instrument Cluster, Reflash	N08-6887A	WorkStar	0.2
Instrument Cluster, Reflash	FA08-6887A	9900i	0.2
Instrument Cluster, Reflash	GY08-6887A	CE/BE	0.2
Instrument Cluster, Reflash	T08-6887A	5000	0.2
Instrument Cluster, Reflash	S08-6887A	LoneStar	0.2
Instrument Cluster, Reflash	R08-6887A	ProStar	0.2
Instrument Cluster, Reflash	Q08-6887A	TranStar	0.2
Instrument Cluster, Reflash	M08-6887A	7300, 7400, 7500	0.2

If you experience any issues with the flash process, please start a casefile before replacing the cluster a second time.

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