

**Description of Revisions:** *This bulletin replaces the version dated August 2010. Information is updated about ServiceLink flashing and programming.*

## General Information

ServiceLink programming can be difficult due to open product issues, or confusion about how to use the tool or related processes. This bulletin covers basic tips for resolving ServiceLink programming issues. Refer to these tips before calling a help desk.

"Programming" includes flashing ECU software, and changing or applying ECU parameters or features.

This bulletin is separated into three parts:

- When is it Appropriate to Flash?
- Tips for a Successful Flash
- What to Do When Flashing Fails
- Common Programming Problems and Known Solutions

## When is it Appropriate to Flash?

Software flashing should be performed on ECUs in the following cases:

- **To fix an existing problem:** When a new ECU software version is needed to fix an existing problem, ServiceLink automatically makes any needed software upgrades available.
- **To upgrade a feature:** Adding a new feature to a vehicle may require a newer version of ECU software. ServiceLink automatically makes any needed software upgrades available.
- **When replacing an ECU, as specified in the Workshop Manual:** Flashing ensures that the most recent software is on the ECU. The flashing process also guarantees that the appropriate parameters are applied to the vehicle for that VIN.
- **As a last step before ECU replacement:** When troubleshooting has narrowed the problem down to a specific ECU, and no other mechanical or electrical causes for the symptom have been identified (all inputs, interlocks, parameter settings, and output circuitry have been verified as working and correct), flashing the ECU software with the same version may help in the rare case it was corrupted during the course of normal vehicle operation.

For instructions on how to use ServiceLink to flash ECU software, refer to the *ServiceLink User Guide* or *ServiceLink Help*, both available in the ServiceLink "Help" menu.

## Tips for a Successful Flash

- Check that ServiceLink is up to date:

**What is the latest version?** The latest ServiceLink version is displayed on the "notices" page that appears when the "ServiceLink" icon on AccessFreightliner.com is clicked. This is usually in a heading. For example: *ServiceLink 4.0 SP7 Available*.

**What version is installed?** To determine which ServiceLink version is installed on the computer, open ServiceLink; it is not necessary to connect to a vehicle. Click the "Help" link at the top of the screen, then click the "About" link and the current ServiceLink version will be displayed.

- Check that vehicle adapter drivers are up to date:

Go to the ServiceLink download page to get the latest drivers approved for use with ServiceLink. From the upper menu click "Admin", then click "Download" on the left-hand side bar.

The drivers can also be obtained by going to the device suppliers website.

NOTE: The latest driver on the supplier website may not yet be approved for use with ServiceLink.

The following supplier websites provide drivers of approved devices:

*Nexiq USB-Link or Magikey:* <http://www.nexiq.com/support/downloads.asp>

*Noregon Systems DLA:* <http://www.jprofleetproducts.com/downloads/drivers/default.asp?prod=12202>

- Connect a battery charger to the vehicle.
- Make sure datalink wiring is OK, including proper resistances from terminating resistors.

## What to Do When Flashing Fails

- Disconnect ServiceLink, then reconnect using the Connect/Disconnect button.
- Try to flash multiple times. Sometimes a retry is the solution. Try to flash again.
- Disconnect the batteries, then reconnect them. Connect in ServiceLink and try to flash again.
- Disconnect ECUs from the datalink other than the one being flashed. Connect ServiceLink and try to flash again.
- Try to Flash the ECU using a different VIN.
  - Connect to ServiceLink.
  - At the step to confirm the VIN, type in a VIN from a similar vehicle, then click "Continue."
  - If this works, the problem may be with the original VINs ServiceLink host data. Contact the Dealer Help Desk at 855-639-8680.
  - If it does not work, the problem may be with the communication adapter driver, or its cable/connection. There may also be an issue on the vehicle such as wiring, connections, or the ECU.
- Try to Flash with a known working ECU off the shelf or from another vehicle to verify ECU hardware.
  - Replace the problem ECU with a known working ECU.
  - Connect to ServiceLink, and be sure to use the VIN of the truck being worked on.
  - Attempt to Flash the ECU.

NOTE: Be sure to keep the same software version. DO NOT attempt to flash a newer software version. Doing so will migrate vehicle data to the newer ECU software, and the original (earlier) software will be permanently blocked.

- If the above procedure works, the problem may be with the hardware of the original ECU, or a loose power, ground, or datalink connection that was fixed during installation of the known working ECU.
- If the above procedure does not work, the problem was not the original ECU hardware. The problem may be with connections, BAT voltage, or cable connections. Reinstall the original ECU and troubleshoot elsewhere.

## General Issues

### Bulkhead Module Reports Incorrect VIN When Connected to ServiceLink

**Details:** A new Bulkhead Module (BHM) will report its VIN as a pattern (e.g. "ABCDEFGHJKLMN0P1") instead of the expected VIN. This does not cause problems with BHM functionality. However, this does indicate that the BHM has not been flashed yet. Flashing is part of the BHM replacement procedure. Flashing not only insures that the BHM gets the appropriate software version and parameter settings, it also programs the correct VIN into the BHM.

**Solution:** Flash BHM in ServiceLink

### ECU Appears in the "Problem ECUs" List in ServiceLink

**Details:** The "Problem ECUs" list is found at the bottom of the "General Info" screen for the "List" icon. Problem ECU functionality is available in Online/Connected mode only. Problem ECU criteria apply only to ECUs that have host data.

**Solution:** Depending on the ECUs status shown, different actions may be required. For details, refer to the *ServiceLink User Guide* or *Help*, both available in ServiceLinks "Help" menu, in the chapter "Accessing General and Faults Information," "General Info Window" section.

Typical causes and solutions for problem ECUs:

#### Status: "Problem"

Cause: Host data and vehicle data do not match for the ECUs Make, Model or Software Version fields.

Solution: Depending on the situation, one of the following may help:

- Disconnect and reconnect to ServiceLink using the "Connect"/"Disconnect" button.
- Disconnect and reconnect the batteries.
- Flash the problem ECU, especially if the ECU was just installed.
- Perform a "Sync ECU List to Host."

### EPA10 ECUs Reported as "MISSING" in ServiceLink

EPA10 vehicles have a host data programming issue that reports the following ECUs as missing:

- ICU
- C2 Chassis Module

This is typically not a valid problem since these ECUs are connected to the J1939 datalink only. The pre-EPA10 design of these ECUs may have also used the J1708 datalink.

An issue has been found where ServiceLink J1708 Host data is being populated for ECUs that are no longer connected to the J1708 datalink. This results in the affected ECU being mistakenly reported as "MISSING" in ServiceLink's Problem ECU list. Also, the ECU General Info screen will show a mismatch between Vehicle data and Host data.

The following is a description of this issue using the example of 2010-model instrument clusters (ICUs). This ServiceLink behavior would be similar for other ECUs whose pre-EPA10 design relied on J1708 Host data.

When connecting to a 2010-model instrument cluster, ServiceLink reports it as missing from J1708, as seen in [Fig. 1](#).

Problem ECUs:1						
Status	Description	Protocol	ECU	Make	Model	Software Version
MISSING	Instrument Cluster	J1708	140	FRGHT	ICU3M2	U.r.0.1.0-

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Fig. 1, Instrument Cluster Reported as Missing on J1708

Upon selecting the "Instrument Cluster" icon, the General Info screen displays a mismatch between the ICU Vehicle and Host data, as seen in Fig. 2.

NOTE: 2010-model instrument clusters are identified as reporting a J1939 Model ending in "-2010", also seen in Fig. 2.

General Info			
J1708			
Vehicle			Host
Description	Instrument Cluster		
ECU	140		
Make	FRGHT		
Model	ICU4M		
Software Version	U.r.0.1.0-		
J1939			
Vehicle			Host
Description	Instrument Cluster		
ECU	23		
Make	DTNA		
Model	ICU4M-2010		
Software Version	U.r.4.4.0-46100E		
VIN xxxxxxxxxxxxxxxxxxxx			
CONNECTED		J1708 J1939 CAN	Online

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1. Vehicle 2. Host 3. J1939 Model Number

Fig. 2, Example of 2010 Instrument Cluster Vehicle and Host Data Mismatch and J1939 Model

**Workaround:** If it is an EPA10 vehicle, and the "missing" ECU functions as expected on the vehicle and reports J1939 Vehicle information, ignore the "missing" notification. ServiceLink functionality for the connected ECU will not be affected.

If the "missing" ECU is not functioning on the vehicle and does not report information on any of the connected protocols in ServiceLink, troubleshoot for the missing ECU.

**Fix:** ServiceLink Host data processes will be updated to reflect the change to J1939-only Host data for these ECUs. This is scheduled to be implemented in the summer of 2010.

## Warranty

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