Troubleshooting Tips for ServiceLink Flashing/Programming 54-241

FLA COE	**FLC 112 Conventional**	**Columbia**	**Freightliner Service Bulletin**
FLB COE	**Century Class Conventional**	**Coronado**	
FLD Conventional	**Argosy COE**	**> Business Class M2**	
Business Class	**Cargo**	**> Cascadia**	

Description of Revisions: *This bulletin replaces the version dated May 2012. Information is clarified about ECU compatibility.*

General Information

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 the following parts:

- When is it Appropriate to Flash?
- Tips for a Successful Flash
- What to Do When Flashing Fails
- Common ServiceLink 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. Sometimes additional parameters are available with newer versions of ECU software.
- **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. When ServiceLink is connected to the new ECU, software versions will be identified. If a newer version is available, ServiceLink will show the part number of the new flash file.
- **If the ECU is in boot mode**: Flashing with the current level of software should recover the ECU.

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.

  Using the latest drivers from the device supplier's web site is not recommended, because the latest driver on the supplier's website may not yet be approved for use with ServiceLink.

- Check that the vehicle adapter settings are correct for the data protocols present on the vehicle.
- Disconnect all fleet management ECUs, and related devices. Remove the fuse in the fleet management ECU, if equipped, or remove SAM Cab Fuses F14 (fleet management BAT) and Fuse F23 (fleet management IGN).
- Connect a battery charger to the vehicle. Low battery voltage can fail the flashing process.
- Make sure datalink wiring is OK, including proper resistances from terminating resistors (or from the star-point connector, for the Cabin CAN datalink on a Cascadia). Refer to the applicable vehicle Workshop or Troubleshooting Manual for datalink troubleshooting.
- Review the section "Common ServiceLink Programming Problems and Known Solutions" in this bulletin.
- After an ECU is flashed and all parameters are correct. Clear fault codes. During the flashing process, other ECU's may set a fault for loss of communications with the ECU that is being flashed.

What to Do When Flashing Fails

- Disconnect ServiceLink, then reconnect by clicking on the Connect/Disconnect button. Try to flash again.
- Check for, and disconnect any fleet management ECU, or other customer installed device that is on a databus. Scroll down the left sidebar on ServiceLink to identify any unexpected ECUs.
- Refer to "Common ServiceLink Programming Problems and Known Solutions" section in this bulletin for further details and specific known issues.
- Sometimes a "hard reset" to the vehicle and the PC is necessary. Disconnect ServiceLink, then reboot your computer. Disconnect the batteries, then reconnect them. Connect ServiceLink and try to flash again.
- Disconnect ECUs from the datalink other than the gateway and the one being flashed. Connect ServiceLink and try to flash again.
- Try to flash the ECU using a different VIN. This can aid in verifying the host data for the vehicle is correct. Do not alter any parameters during this test as it would corrupt those for the vehicle with this VIN.
  - Connect to ServiceLink.
  - At the step to confirm the VIN, type in a VIN from a similar vehicle, then click "Continue" and attempt to flash the ECU again.
  - If this VIN is accepted, the problem may be with the original VIN's ServiceLink host data. Contact the Dealer Help Desk at 855-639-8680.
- There may be a problem with the communication adapter driver, or its cable/connection. Use the RP1210 adapter's "Device Tester" program to perform a diagnostic on the adapter and communications. For the NEXIQ USB Link adapter, click on the computer's Start Menu, Programs, NEXIQ, then Device Tester. There may also be an issue on the vehicle such as wiring, connections, or the ECU.
- Some adapter cables from older devices do not have the CAN circuit wired into the connector. Inspect the 9-pin connector. All pins should be populated except for the shield in on pin E, which is optional.

Common ServiceLink Programming Problems and Known Solutions

Incompatible Hardware Causes Flashing to Fail

Models: Cascadia

Protocols: CAN

ECUs: Central Gateway (CGW), Modular Switch Field (MSF), SAM Cab, and SAM Chassis

ServiceLink Functions affected: Flashing

Date Reported: January 2011

Details: Host data for an ECU's Hardware Part Number may be incorrect and cause an ECU flashing error that the connected ECU's hardware is not compatible with the vehicle. The ECU's General Info screen will display the correct Hardware Part Number for both the vehicle and the host.

Workaround: The host data needs to be synchronized. Contact the Dealer Help Desk at 855-639-8680.

Fix: This host data will be correctly programmed.

Incorrect ECU Information is Reported After a CAN ECU is Flashed, Causing Multiple Problems

Models: Cascadia

Protocols: CAN

ECUs: Central Gateway, Modular Switch Field, SAM Cabin, SAM Chassis

ServiceLink Functions affected: Flashing, Parameters, Problem ECU List

Date Reported: April 2009

Details: After a CAN ECU is flashed, an issue in one of the software components used by ServiceLink is causing incorrect ECU information to be reported to ServiceLink for most or all CAN ECUs. This can cause various problems for the ECU(s) that show incorrect data, including being detected in "Base" mode and appearing in the "Problem ECUs" list. This prevents flashing, and prevents parameter viewing or changing.

Workaround: Disconnect and reconnect to ServiceLink using the Connect/Disconnect button, then proceed.

Fix: Under investigation.

Intermittent Modular Switch Field (MSF) Flash Failures Caused by Internal MSF Hardware Issue – EPA07 Vehicles

Models: Cascadia

Protocols: CAN

ECUs: Modular Switch Field (MSF)

ServiceLink Functions affected: Flashing

Date Reported: April 2009

Details: An issue found in the MSF internal hardware causes intermittent MSF flash failures.

Workaround: Retry flashing.

Fix: Replace MSF with part A06-60972-008.

NOTE: The software on MSF part number A06-60972-008 comes at level 5.4. Refer to **Service Bulletin 54-239** "Cascadia Cabin CAN ECU Compatibility" for instructions on ensuring the vehicle has a compatible set of 5.4 software on all necessary ECUs, when this MSF version is used.

General Issues

CAN ECU Reports Incorrect VIN When Connected to ServiceLink

Details: Any new CAN ECU will report its VIN as all "A's" (example: "AAAAAAAAAAAAAAAAA"). This does not cause problems with ECU functionality. However, this does indicate that the ECU has not been flashed yet. Flashing is part of the replacement procedure for all CAN ECUs. Flashing not only insures that the ECU gets the appropriate software version and parameter settings, it also programs the correct VIN in to the ECU.

Solution: Flash the ECU using ServiceLink

SAM Flashing Prevented Due to Different SAM Hardware

Details: SAM Cab and SAM Chassis ECUs are available with several levels of content. The SAM Cab is available in "highline" and "baseline" sizes. The SAM Chassis is available in "highline," "midline," and "baseline" sizes. A "highline" version has the most circuitry. A "baseline" version has the most basic functional capacity. To prevent downgrading, ServiceLink prevents flashing or parameterizing if it detects the type of a newly installed SAM ECU has been downgraded from the previous installation.

Solution: Replace a SAM ECU only with one identified as compatible in **Service Bulletin 54-231**, *Replacing SAM Cab and SAM Chassis Hardware Assemblies*.

ECU Appears in the "Problem ECUs" List in ServiceLink

Details: The "Problem ECUs" list is found at the bottom of the "General Info" screen in ServiceLink. Problem ECUs are identified in Online/Connected mode only. Problem ECUs are only detectable to ECUs that have host data.

Solution: Depending on the ECU's status shown, different actions may be required. For details, refer to the *ServiceLink User Guide* or *Help*, both available in ServiceLink's "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 ECU's Make, Model or Software Version fields.

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

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

Status: "Boot"

Cause: The ECU entered boot mode and cannot function normally. This may be due to an interrupted flash attempt, or low battery voltage. It is a known issue that the Modular Switch Field (MSF) part A06-60972-004 may enter boot mode for no apparent reason, causing both headlights to turn on and causing backlighting of the hazard switch to blink very fast.

Solution: With a battery charger connected, flash the ECU to recover it.

Status: "Base"

Cause 1: A communication error.

Solution 1: Disconnect to ServiceLink, then reconnect.

Cause 2: ServiceLink's files have not been updated recently.

Solution 2: Accept all downloads displayed by ServiceLink upon accessing it through www.AccessFreightliner.com. Also, go to ServiceLink's "Download" page (click "Admin" in the upper menu, then "Download" from the side menu) and click the button "Check for ServiceLink Updates".

NOTE: The solutions presented in this bulletin do not represent a comprehensive list of why ECUs appear in the ServiceLink's "Problem ECU" list or how to resolve them. This bulletin should be used as a quick guide for troubleshooting help. Details on problem ECUs can be found in the *ServiceLink User Guide* or *ServiceLink Help* documents, both available in the ServiceLink "Help" menu. Refer to section "General Info Window" in chapter "Accessing General and Faults Information" for more information.

"MISSING" ECUs on EPA10 Vehicles

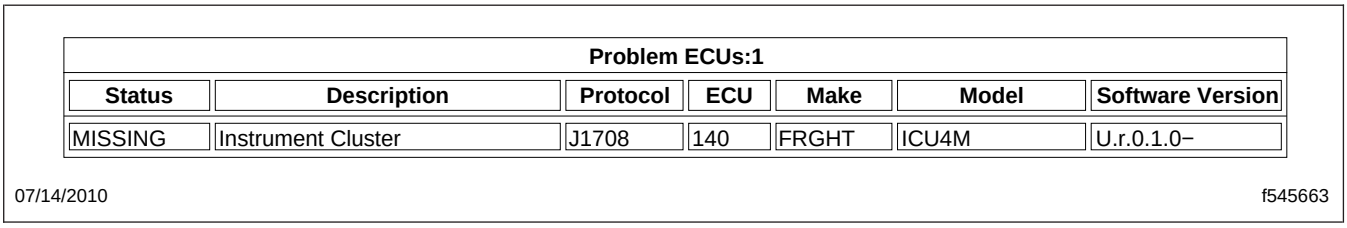
EPA10 vehicles have a host data programming issue that reports the following ECUs as missing:

- ICU
- M2 Chassis Module

This is typically not a valid problem since these ECUs are connected to the J1939 datalink only.

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.

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	ICU4M	U.r.0.1.0−

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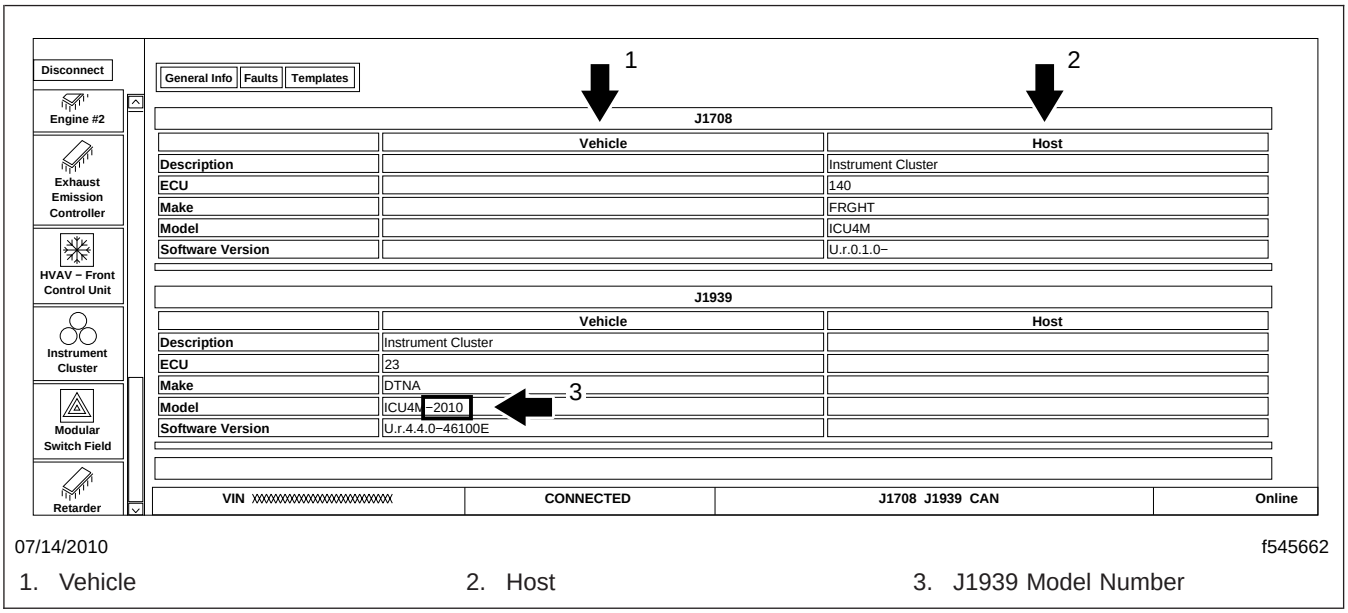
Fig. 1, Instrument Cluster Reported as Missing on J1708

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**.

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.



1. Vehicle
2. Host
3. J1939 Model Number

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

Fix: ServiceLink Host data processes will be updated to reflect the change to J1939-only Host data for these ECUs. This update is expected to be resolved for ServiceLink version 4.90.

Warranty

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