

FLA COE
FLB COE
FLD Conventional
Business Class

FLC 112 Conventional
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Argosy COE
Cargo

Columbia
Coronado
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> Cascadia

**Freightliner
Service Bulletin**

Description of Revisions: *This bulletin replaces the version dated December 2014. Software version numbers are revised in [Table 1](#), and software update 6.31 is added.*

General Information

Cascadia Cabin CAN electronic control units (ECUs) must have compatible software. See [Table 1](#) for a cross reference of ECU release numbers and compatible software versions. **A software level mismatch in any of the Cabin CAN ECUs can lead to undesired and unpredictable vehicle behavior.**

Use the instructions in this bulletin to bring all Cabin CAN ECUs to compatible levels of software. Affected ECUs include the following:

- SAM Cab
- SAM Chassis
- Modular Switch Field (MSF)
- Central Gateway (CGW)

When a vehicle is in service it is possible for one or more of these ECUs to be replaced or programmed with a software level that is not compatible with the others.

If DiagnosticLink detects a compatibility issue:

- A yellow error message is displayed at the top of the window indicating that the software versions are incompatible. This message remains until the software is updated for all Cabin CAN ECUs. See [Fig. 1](#).
- Clicking the message brings up a window detailing software options for each ECU. See [Fig. 2](#).

If ServiceLink detects a compatibility issue:

- A dialog box appears indicating that the software versions are incompatible. See [Fig. 3](#).
- The incompatible ECUs are displayed on the "Problem ECU" list. The incompatible ECUs remain on this list until they are each updated with compatible software. To view the "Problem ECU" list, click on the "List" icon from the "General Info" screen. See [Fig. 4](#).

NOTE: This bulletin details compatibility of ECU *software* versions only. To identify compatible ECU hardware, see **Service Bulletin 54-231**, *Replacing SAM Cab and SAM Chassis Hardware Assemblies*.

IMPORTANT: Do not downgrade ECUs to older software versions to obtain compatibility. When a software version is updated, it permanently updates the host and vehicle information to that software release.

When upgrading software, always perform the upgrade before adding or changing the parameters. When ECU software is upgraded, DiagnosticLink or ServiceLink will automatically migrate and then write the parameters to complete the upgrade.

Compatible Sets of Cabin CAN ECU Software

The software versions of the four Cascadia Cabin CAN ECUs must be compatible. The software in all four ECUs must be coordinated to one of the release versions shown in [Table 1](#). For the electronics to operate properly, use DiagnosticLink or ServiceLink to check and program any ECU with the software that will make it compatible with the others for the appropriate release.

NOTE: In most instances there is more than one compatible software version that an ECU could have for a release.

Combining SAM Release Versions 5.4 and 6.31

A 6.31 SAM may be used in a 5.4 vehicle without the need to upgrade the other Cabin CAN ECUs. If the vehicle is at a software level lower than the 5.4 release, the Cabin CAN ECUs must first be flashed up to the software levels in version 5.4. DiagnosticLink or ServiceLink will provide the 5.4 release software that is compatible for the vehicle hardware.

When a SAM 6.31 is used on a 5.4 vehicle, DiagnosticLink or ServiceLink is then required to upgrade the host software information and parameters for the new SAM 6.31.

After installing the SAM 6.31, connect DiagnosticLink or ServiceLink in order to upgrade the new SAM. If using DiagnosticLink, use the "Program Device" window. If using ServiceLink, click on the "Flashing" tab. This process permanently upgrades the host and vehicle information for the SAM to release 6.31.

Attempting to Combine SAM Release Versions 6.0 and 6.31

SAM version 6.31 may not be used in a 6.0 vehicle unless the other SAM with release 6.0 software is upgraded to release 6.31.

DiagnosticLink or ServiceLink provides the 6.31 software that is compatible for the vehicle hardware. DO NOT select the newest available version of the software unless it is intended to upgrade the vehicle to 6.31. Use the 6.0 software version identified in [Table 1](#) to keep the SAMs at 6.0.

When a SAM 6.31 is installed on a vehicle with 6.0 software, DiagnosticLink or ServiceLink must upgrade the host software information and parameters for both the new SAM 6.31 and the other CAN ECUs installed on the vehicle.

After replacing the SAM Cab or SAM Chassis, connect DiagnosticLink or ServiceLink to the vehicle. Select the "Program Device" window in DiagnosticLink, or the "Flashing" tab in ServiceLink to program the SAM with the latest available software version. Complete this step for both SAMs. This process permanently upgrades the host and vehicle information for the SAMs to release 6.31.

IMPORTANT: When replacing the CGW on EPA07 vehicles, J1587 wires must be decommissioned on the new CGW to keep ICU and engine odometer values close to each other. Blunt cutting the wires and taping them back is recommended.

When EPA07 CGWs were discontinued, CGWs intended for EPA10 vehicles, and later, were adapted to repair older vehicles. Unlike EPA10 vehicles, and later, EPA07 vehicles broadcast on both J1939 (source address 0) and J1587 (MID 128). When EPA10 engines stopped broadcasting directly on J1587, the new CGW was designed to rebroadcast J1939 engine data on J1587 (as if it were MID 128) to support modules listening only to J1587. Therefore, if an EPA10 CGW is installed on an EPA07 vehicle, and the CGW J1587 wires are not decommissioned, the result will be *two* MID 128 signals; one signal is from the EPA07 engine on J1587, and the other signal is from the new CGW rebroadcasting EPA07 J1939 data as another MID 128 signal on J1587.

NOTE: Decommissioning CGW J1587 wires is required *only* when replacing CGW hardware, not when updating CGW software.

Decommissioning CGW J1587 wires to maintain odometer accuracy will result in the loss of the following features:

- Information broadcast by the CGW on J1587, such as CAN faults and ambient air temperature
- +/- steering wheel ICU control on vehicles equipped with an ICU3 or ICU4; the ICU4M is not affected

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IMPORTANT: If programming a vehicle with release 6.2 software, refer to recall **SF641 - Programming Cascadia Daytime Running Lights** for additional information about programming DRL.

Compatible Sets of Cabin CAN ECU Software				
Release	Software Version/Flash Version			
	SAM Cab	CGW	MSF	SAM Chassis
6.31	14.38.000 A0504480558_001	9.33.000 A0504480127_001 OR 9.48.000 A0504480227_001 OR 12.30.000 A0504480427_001 OR 14.05.000 A0504480527_001	10.10.000 A0504480123_001 OR 12.11.000 A0504480323_001 OR 13.25.000 A0504480423_001	14.28.000 A5004480561_001
6.2*	11.29.005 A0504480458_001	9.33.000 A0504480127_001 OR 9.48.000 A0504480227_001 OR 12.30.000 A0504480427_001 OR 14.05.000 A0504480527_001	10.10.000 A0504480123_001 OR 12.11.000 A0504480323_001 OR 13.25.000 A0504480423_001	11.29.004 A0504480461_001

Compatible Sets of Cabin CAN ECU Software				
Release	Software Version/Flash Version			
	SAM Cab	CGW	MSF	SAM Chassis
6.0	9.31.005 A0504480285_001	9.33.000 A0504480127_001 OR 9.48.000 A0504480227_001 OR 12.30.000 A0504480427_001 OR 14.05.000 A0504480527_001	08.31.000 A0004480623_001 OR 9.51.000 A0504480023_001 OR 10.10.000 A0504480123_001 OR 12.11.000 A0504480323_001 OR 13.25.000 A0504480423_001	9.31.005 A0504480261_001
5.4	8.17.014 A0004484758_001 OR 8.17.015 A0004484758_002	8.42.000 A0004480727_001 OR 9.33.000 A0504480127_001 OR 9.48.000 A0504480227_001 OR 12.30.000 A0504480427_001 OR 14.05.000 A0504480527_001	08.31.000 A0004480623_001 OR 9.51.000 A0504480023_001 OR 10.10.000 A0504480123_001 OR 12.11.000 A0504480323_001 OR 13.25.000 A0504480423_001	8.17.016 A0004481961_003

Cascadia Cabin CAN ECU Compatibility

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Release	Software Version/Flash Version			
	SAM Cab	CGW	MSF	SAM Chassis
5.2	7.36.005 A0004484658_001	07.22.000 A0004480427_001 OR 08.40.000 A0004480627_001	07.24.000 A0004480523_001	07.36.005 A0004481861_001
5.0	07.17.003 A0004484558_001	07.22.000 A0004480427_001 OR 08.40.000 A0004480627_001	07.24.000 A0004480523_001	07.17.003 A0004481761_001
5.4 with a SAM Cab 6.2*	11.29.005 A0504480458_001	8.42.000 A0004480727_001 OR 9.33.000 A0504480127_001 OR 9.48.000 A0504480227_001 OR 12.30.000 A0504480427_001 OR 14.05.000 A0504480527_001	08.31.000 A0004480623_001 OR 9.51.000 A0504480023_001 OR 10.10.000 A0504480123_001 OR 12.11.000 A0504480323_001 OR 13.25.000 A0504480423_001	8.17.016 A0004481961_003

Compatible Sets of Cabin CAN ECU Software							
Release	Software Version/Flash Version						
	SAM Cab	CGW	MSF	SAM Chassis			
5.4 with a SAM Chassis 6.2*	8.17.014 A0004484758_001 OR 8.17.015 A0004484758_002	8.42.000 A0004480727_001 OR	08.31.000 A0004480623_001 OR	11.29.004 A0504480461_001			
		9.33.000 A0504480127_001 OR	9.51.000 A0504480023_001 OR				
		9.48.000 A0504480227_001 OR	10.10.000 A0504480123_001 OR				
		12.30.000 A0504480427_001 OR	12.11.000 A0504480323_001 OR				
		14.05.000 A0504480527_001	13.25.000 A0504480423_001				
		5.4 with a SAM Cab 6.31	14.38.000 A0504480558_001		8.42.000 A0004480727_001 OR	08.31.000 A0004480623_001 OR	8.17.016 A0004481961_003
					9.33.000 A0504480127_001 OR	9.51.000 A0504480023_001 OR	
					9.48.000 A0504480227_001 OR	10.10.000 A0504480123_001 OR	
					12.30.000 A0504480427_001 OR	12.11.000 A0504480323_001 OR	
					14.05.000 A0504480527_001	13.25.000 A0504480423_001	

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Compatible Sets of Cabin CAN ECU Software				
Release	Software Version/Flash Version			
	SAM Cab	CGW	MSF	SAM Chassis
5.4 with a SAM Chassis 6.31		8.42.000	08.31.000	
		A0004480727_001	A0004480623_001	
		OR	OR	
		9.33.000	9.51.000	
	8.17.014	A0504480127_001	A0504480023_001	
		OR	OR	
	A0004484758_001	9.48.000	10.10.000	14.28.000
		OR	OR	
	8.17.015	A0504480227_001	A0504480123_001	A5004480561_001
		OR	OR	
	A0004484758_002	12.30.000	12.11.000	
		A0504480427_001	A0504480323_001	
	OR	OR		
	14.05.000	13.25.000		
	A0504480527_001	A0504480423_001		

* Refer to recall SF641 for additional information about programming daytime running lights (DRL).

Table 1, Compatible Sets of Cabin CAN ECU Software

Warranty

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

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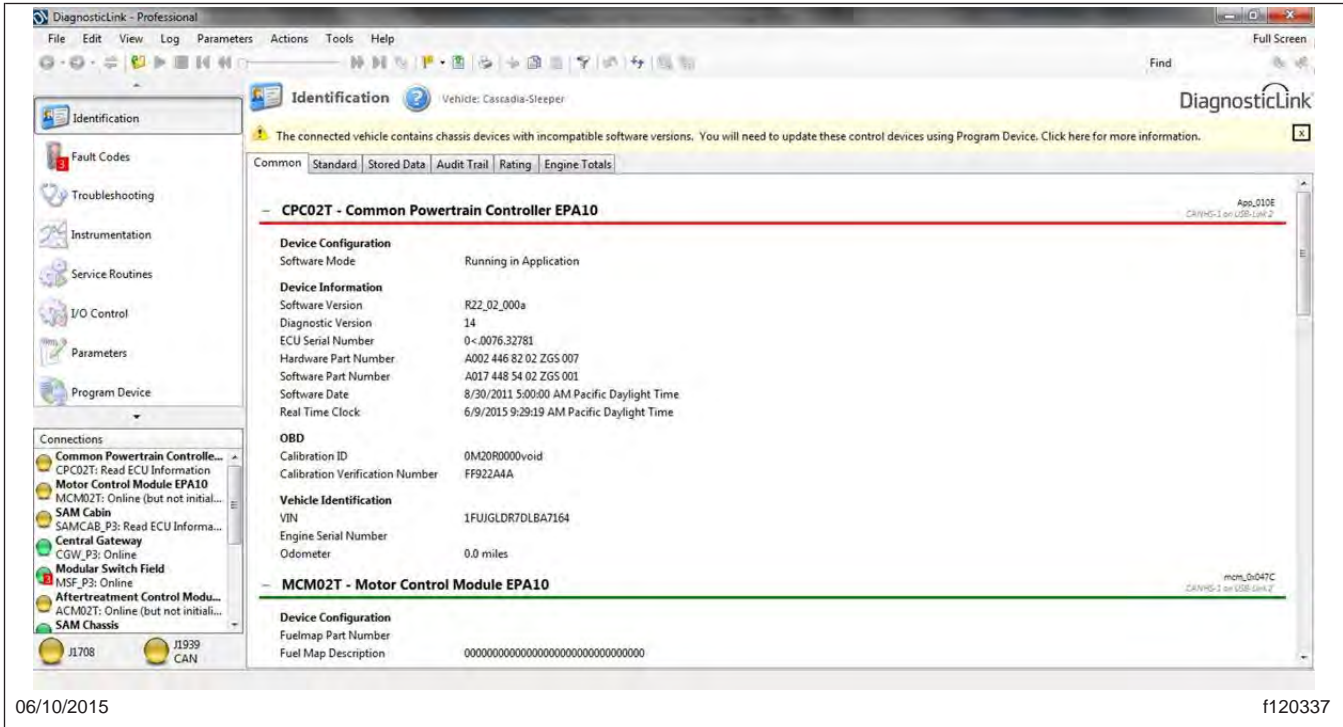
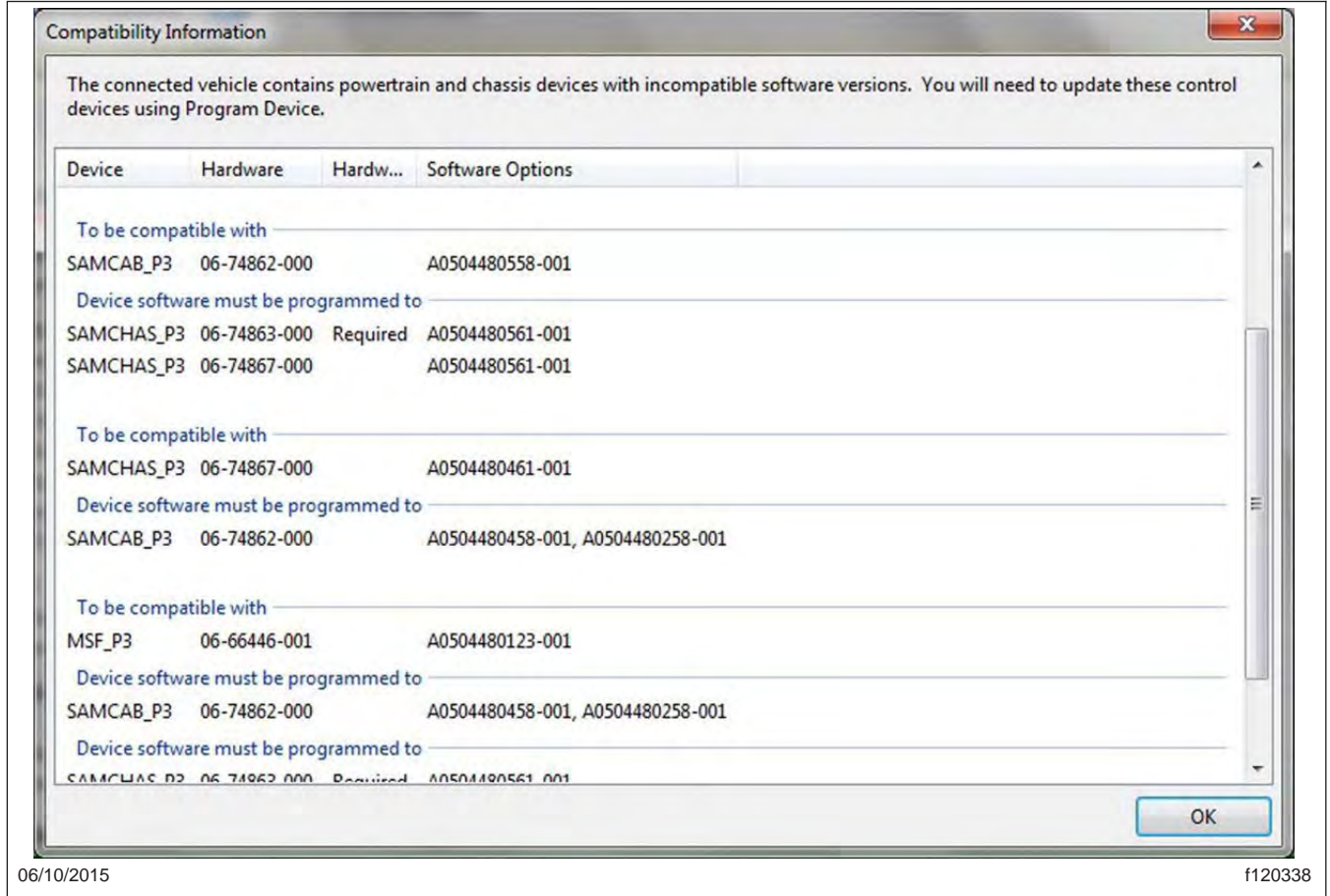


Fig. 1, DiagnosticLink Compatibility Message

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06/10/2015

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Fig. 2, DiagnosticLink Compatibility Details

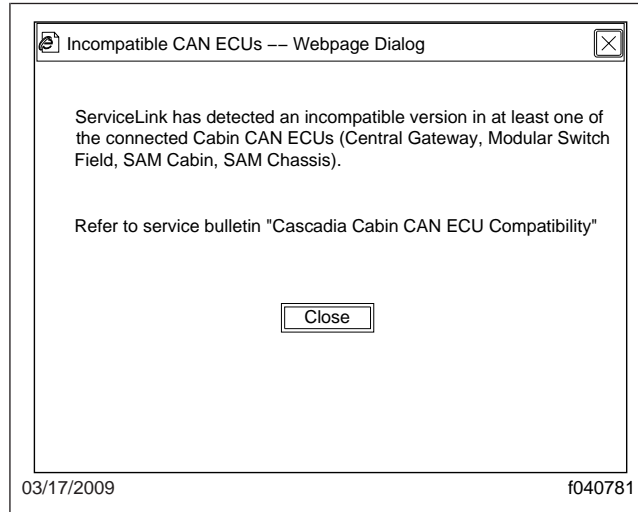


Fig. 3, ServiceLink Compatibility Detection Dialog Box

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J1708 J1939 CAN

Sync ECU List to Host Show ECU History

CAN ECUs detected - 4

ECU ID	ECU Description	Make	Model	Software Version
33	SAM Cabin	Freightliner	highline	07.36.005
37	Central Gateway	Freightliner	baseline	07.05.000
49	Modular Switch Field	Freightliner	baseline	07.13.001
71	SAM Chassis	Freightliner	highline	07.36.005

*Information appearing in gray comes from messages routed by the Central Gateway from ECUs physically connected to a different protocol. To troubleshoot ECUs in gray, select their primary protocol and navigate to the specific ECU icon on the left of the screen.

Problem ECUs: 3

Status	Description	Protocol	ECU	Make	Model	Software Version
MISSING	Engine #1	J1708	128	DTDSC	6067GK60	32.08
MISSING	Brakes, Power Unit	J1708	136	RCKWB	NA-490	D
MISSING	Instrument Cluster	J1708	140	FRGHT	ICU3	U.r.3.2.2
Incompatible	CAN ECUs - Refer to service bulletin "Cascadia Cabin CAN ECU Compatibility"					

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A. The incompatible row is shown on the "Problem ECUs" list.

Fig. 4, CAN ECU List on the General Info Screen