



Countries: Document ID: IK2600296
 Availability: Revision: 0
 Major System: PROGRAMMING SUPPORT Created: 10/16/2025
 Current Language: English Last Modified: 12/9/2025
 Other Languages: NONE Author: Matthew Carrigan
 Viewed: 90

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Coding Information

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Title: Vehicle Programming Information Associated With S13 Engines

Applies To: S13, T14, PIM, & ACM

CHANGE LOG

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

12/09/2025 - Initial Article Release

Description

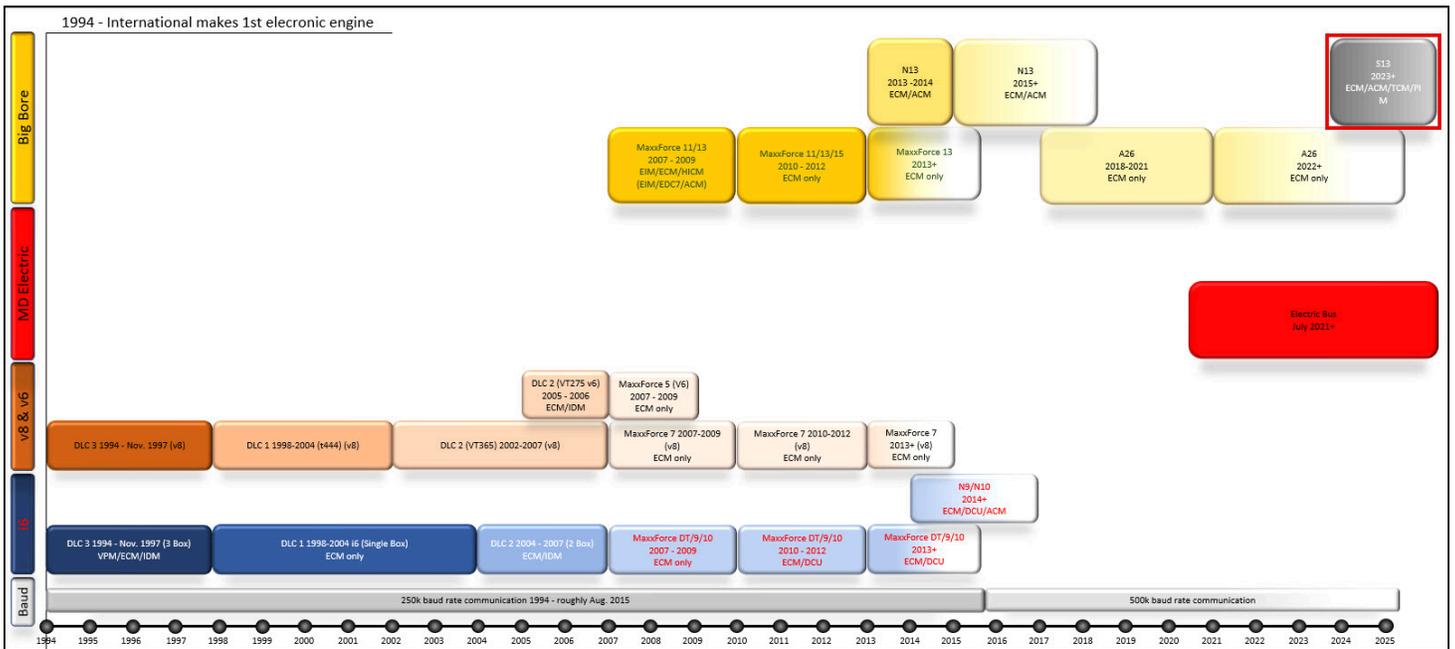
This document aims to enable technicians to:

1. Accurately identify S13 engine control systems.
2. Understand the programming intricacies related to these systems.
3. Autonomously complete programming tasks without needing technical support.

Table Of Contents

Timeline	Connecting To An S13 Engine	S13 Horsepower Quotes
Hardware/Software Integrations	Source Addresses	S13 Engine Swaps
How S13 Modules Work	S13 Module Parts Information	Common Programming Issues With S13 Systems

Timeline



[Return to Top](#)

Software/Hardware Integrations

- **Service Diagnostic Systems (SDS):** Supported. Used for diagnostics & parameter changes.
- **DLB:** Supported.
- **360 Write Up:** Supported.
- The [programming station](#) works with this engine type.

[Return to Top](#)

How S13 Modules Work

Baud Rate: 500k

ECM: Engine Control Module - controls the base engine functions like fuel compensation factor, engine fan control, and overspeed protection. Programming options for ECM functions can be found in the "[Engine](#)" section of the [Body Builder site](#).

PIM: Powertrain Integration Module - controls a variety of functions including ramping the engine with the cruise control switches. Programming options for PIM functions can be found in the "[Engine](#)" section of the [Body Builder site](#).

TCM: Transmission Control Module - controls transmission, power take off (PTO), and a variety of other functions. Programming options for TCM functions can be found in the "[Transmission](#)" section of the [Body Builder Site](#).

ACM: Aftertreatment Control Module - controls aftertreatment function

Functional info:

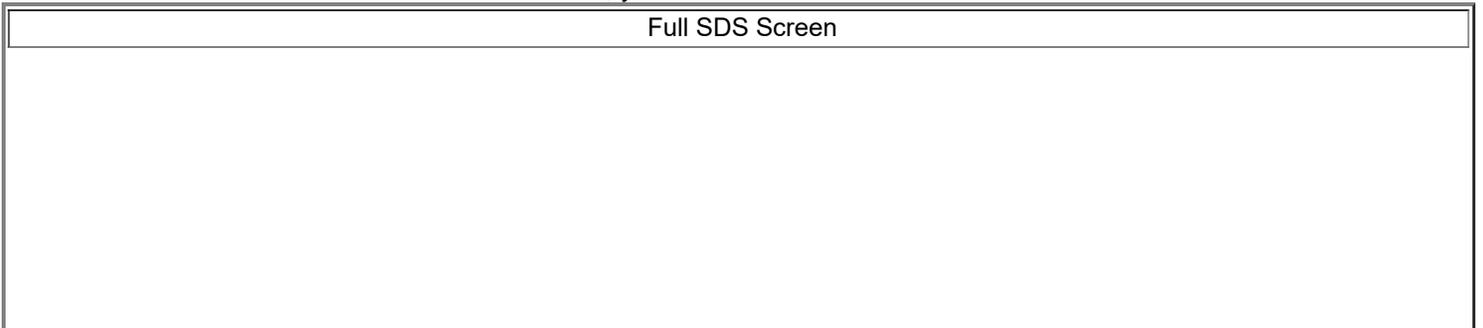
- All 4 modules communicate on the public 1939 data link. They all show up on data link sniffers.

[Return to Top](#)

Connecting To An S13 Engine

When SDS connects to an S13, you should see data similar to the screenshots below

Full SDS Screen



Service Diagnostics Solutions - SDS.1.27.19.202510230911 - SDS Home

International S13

Service Diagnostics Solutions

GUIDE CAN Log Off

Menu Disable Adapter Home Start Search in Session

Stop Vehicle Faults Help

Update Module Software...

VEHICLE STATUS

Engine Speed 0.00 RPM

Engine Coolant Temperature 132.80 F

V: Switch Battery 12.65 v

DPF Soot Load 6.00 %

AFT Regen Status Inactive

Wheel-Based Vehicle Speed 0.00 mph

Secondary Air Tank Pressure 117.77 psi

Engine Fuel Delivery Pressure 0.00 psi

DRIVER OPERATED CONTROLS

Hide All Groups

New Group from Current Selection New Group from Advanced Search... Show Edited Parameters Only

VEHICLE INFORMATION

Vehicle Model International LT62F LT Conventional SBA 6x4

Engine Model S13

VIN 3HSDZ5ZR7SN776146

Odometer 3073.09 miles

Engine Hours 98.65 hr

ECM

Source Address: 0

477.166 messages per second

Module Model S13

Module Make International

ECM	PIM	TCM	ACM
<p>ECM</p> <p>Source Address: 0</p> <p>481.976 messages per second</p> <p>Module Model S13 (2023 - 26)</p> <p>Module Make International</p> <p>Rated Power 450 HP (1750 FT-LBS)</p> <p>Calibration Identification SBEACMKA</p> <p>Engine Serial Number 127KM2Y6999999</p>	<p>PIM</p> <p>Source Address: 39</p> <p>183.211 messages per second</p> <p>Module Model 4269045C1</p> <p>Module Make INT</p> <p>Calibration Identification SXXXBPKA</p>	<p>TCM</p> <p>Source Address: 3</p> <p>258.197 messages per second</p> <p>Module Model T14</p> <p>Module Make International</p> <p>Calibration Identification - TCM SXXXEMKA</p> <p>Remaining Clutch Wear Error</p>	<p>ACM</p> <p>Source Address: 61</p> <p>100.725 messages per second</p> <p>Module Model S13 (2023 - 26)</p> <p>Module Make International</p> <p>Calibration Identification SXXXDGKA</p> <p>Aftertreatment Assembly Serial Number 24139999</p>

[Return to Top](#)

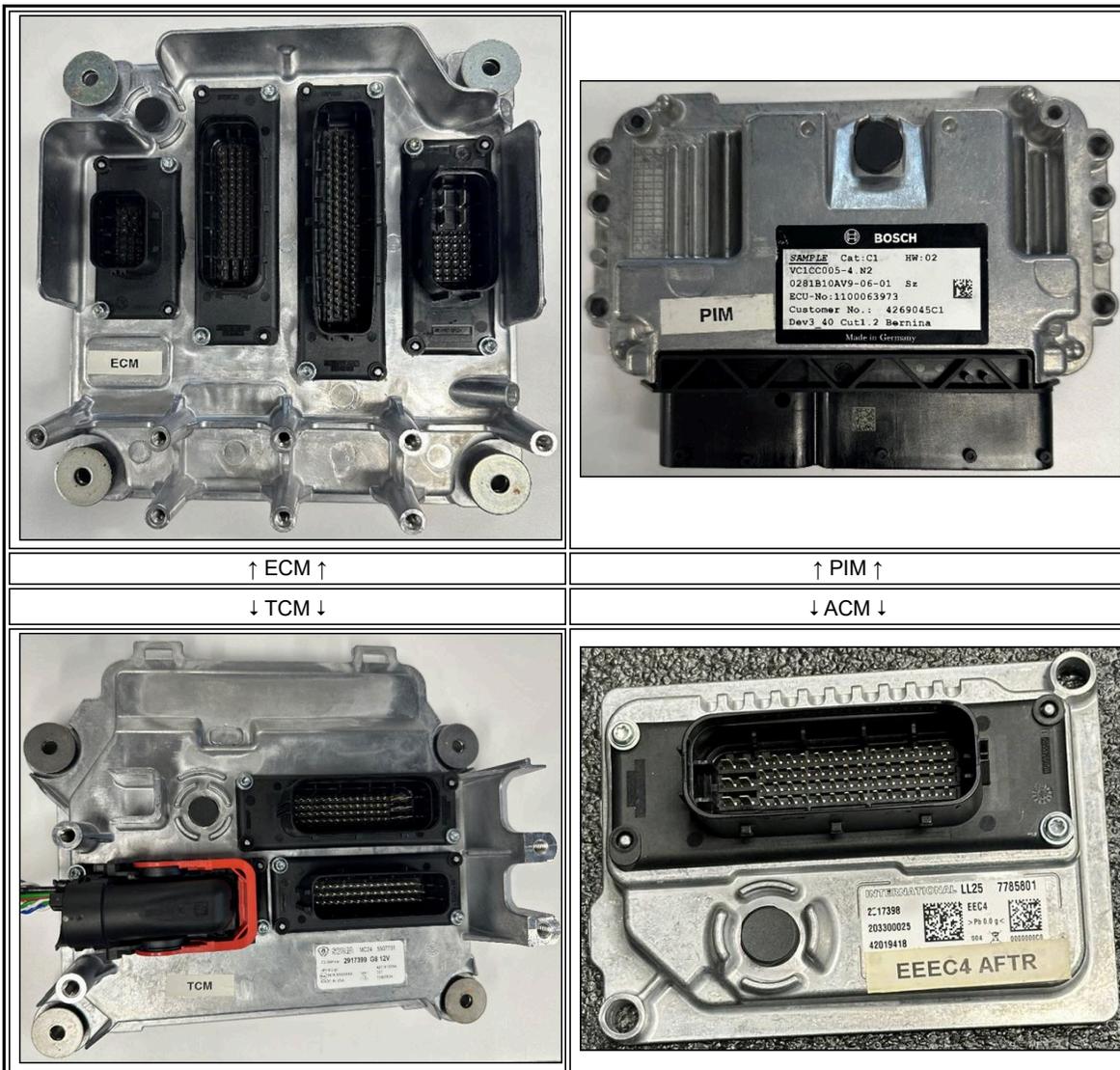
S13 Source Addresses

- The ECM broadcasts source address 0 on the 1939 data link.
- The PIM broadcasts source address 39 on the 1939 data link.
- The TCM broadcasts source address 3 on the 1939 data link.
- The ACM broadcasts source address 61 on the 1939 data link.
- These source addresses can be seen in the SDS sniffer.
- If you are using a Nexiq communication cable, you could check the Nexiq Device Tester to see if the source addresses listed above show on the "1939 data channel 1 link".

[Return to Top](#)

S13 Module Parts Information

- If you need engine identification information, please see [IK2600242](#).
- For more module pictures, please see [IK2600273](#).



[Return to Top](#)

S13 Horsepower Quotes

- Horsepower changes are supported for S13 engines. Follow the process outlined in [IK2600069](#) to submit a case file for a horsepower quote.
- Below is some general ratings information.
 - S13 engines are capable of handling horsepower ratings from 370-515 hp.
- **Even though engines can be programmed within a range of different horsepower ratings, that doesn't mean that every truck qualifies for the highest available horsepower. International will only support horsepower changes that were available for your engine, in your chassis, for your truck's build date.**
- If the engine you're considering already has the highest possible rating, no increases are available. There is no need to submit a case requesting a horsepower quote for an engine that is already at the highest rating. If you submit a request to increase horsepower and your engine is currently rated at 515 hp, your case file will receive the response that "no increases are available".

[Return to Top](#)

S13 Engine Swaps

See [IK2600047](#) for information about engine swaps. Programming changes may be needed in order to accommodate an engine swap. There are some instances where International CANNOT support an engine swap. If you have any doubts about whether your engine swap will be supported by International, please start a case file with the Vehicle Programming group and we will let you know if International will support the swap. It is advisable to do this BEFORE swapping the engine. The potential negative outcome would be that you install an engine that International cannot support – then we would not be able to provide you with the correct programming.

[Return to Top](#)

Common Programming Issues With S13 Systems

1. "Sub Function Not Supported" message in SDS.
Cause: One (or more) of the modules is blank.
Fix: Use SDS to program the blank module (SDS > Menu > find "Programming" option under the module that is blank > select the "Blank Flash" option associated with the module that is blank).
2. If the ECM (or any of the 4 modules) is missing from the right pane in SDS and one of the other modules shows "sub function not supported," then (fix): follow the process documented in item 1 above.
3. "No History" error during blank module flashing
Fix: Open a case file with the Vehcile Programming group.

[Return to Top](#)

OTHER RESOURCES

[Master Service Information Site](#)

[RC2600001 - Vehicle Programming Resource Center](#)

[TEM/Body Builder Resources](#)

[Remote Keyless Entry \(RKE\) Fob Programming](#)

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