

USER GUIDE

Service Diagnostics Solutions (SDS)

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SAFETY INFORMATION

This manual provides general and specific maintenance procedures essential for reliable engine operation and your safety. Since many variations in procedures, tools, and service parts are involved, advice for all possible safety conditions and hazards cannot be stated.

Read safety instructions before doing any service and test procedures for the engine or vehicle. See related application manuals for more information.

Obey Safety Instructions, Warnings, Cautions, and Notes in this manual. Not following Warnings, Cautions, and Notes can lead to injury, death, or damage to the engine or vehicle.

Safety Terminology

Terms are used to stress your safety and safe operation of the engine: Warning, Caution, and Note

Warning: A warning describes actions necessary to prevent or eliminate conditions, hazards, and unsafe practices that can cause personal injury.

Caution: A caution describes actions necessary to prevent or eliminate conditions that can cause damage to the engine or vehicle.

Note: A note describes actions necessary for correct, efficient operation.

Work Area

- Keep work area clean, dry, and organized.
- Keep tools and parts off the floor.
- Make sure the work area is ventilated and well lit.
- Make sure a First Aid Kit is available.

Protective Measures

- Wear protective safety glasses and shoes.
- Wear correct hearing protection.
- Wear cotton work clothing.
- Wear sleeved, heat protective gloves.
- Do not wear rings, watches, or other jewelry.
- Restrain long hair.

Vehicle

- Shift transmission to neutral, set parking brake, and block wheels before doing diagnostic or service procedures.
 - Clear the area before starting the engine.
-

Safety Equipment

- Use correct lifting devices.
- Use wheel chocks and stands.

Engine

- The engine should be operated or serviced only by qualified individuals.
- Provide necessary ventilation when operating engine in a closed area.
- Keep combustible material away from engine exhaust system and exhaust manifolds.
- Install all shields, guards, and access covers before operating engine.
- Do not run engine with unprotected air inlets or exhaust openings. If unavoidable for service reasons, put protective screens over all openings before servicing engine.
- Shut engine off and relieve all pressure in the system before removing panels, housing covers, and caps.
- If an engine is not safe to operate, tag the engine and ignition key.

Fire Prevention

- Make sure charged fire extinguishers are in the work area.

NOTE – Check the classification of each fire extinguisher to make sure that the following fire types can be extinguished:

1. Type A – Wood, paper, textiles, and rubbish
2. Type B – Flammable liquids
3. Type C – Electrical equipment

Batteries

- Always disconnect the main negative battery cable first.
 - Always connect the main negative battery cable last.
 - Avoid leaning over batteries.
 - Protect your eyes.
 - Do not expose batteries to flames or sparks.
 - Do not smoke in workplace.
-

NOTE – This section contains a brief overview of Service Diagnostic Solutions software, and was current at the time of publishing. Due to the automatic update function in Service Diagnostic Solutions software, screens and functions may differ from this manual.

SERVICE DIAGNOSTICS SOLUTIONS

INTRODUCTION

Service Diagnostics Solutions is a diagnostic and programming service tool for Navistar® Engines. A fully-featured PC application. Coverage includes all J-1939 International® electronic engine systems, allowing you to run special tests, change parameters and view and graph engine data. This is the top-of-the-line tool for dealers and fleets. The application updates periodically, enabling you to have the most up-to-date coverage.

NOTE – To diagnose specific electronic control system failures, always refer to the diagnostic manual for the system being serviced.

Software Capabilities

- Control System Monitoring
- View, Snapshot Recording, Save, Playing
- Diagnostic Trouble Codes, View, Clear
- Freeze Frame Data
- HD-OBD Monitors
- Service Bay Tests
- Actuator Tests
- Sensor Intermittent Faults
- Cold Start Test
- Air Management Test
- Cylinder Cutout Test
- Engine Fan Test (If Equipped)
- High Pressure Pump Test
- Aftertreatment System Tests
- Sensor Calibrating
- Part Replacement and Service interval Resets
- Programmable Parameters
- Engine Feature settings
- Read, Write Programmable Parameters

ACRONYMS

Following is a list of acronyms and their meanings used in this document:

DPF

Diesel Particulate Filter

DTC

Diagnostic Trouble Code

ECM

Electronic Control Module

ESN

Engine Serial Number

EST

Electronic Service Tool

FMI

Failure Mode Indicator

SPN

Suspect Parameter Number

KOEO

Key On Engine Off

KEOR

Key On Engine Running

MIN

Minimum

MAX

Maximum

GETTING STARTED

SYSTEM REQUIREMENTS

Minimum Requirements

- Microsoft® Windows® Windows 10
- 1GHz Intel Core 2 Duo, AMD Athlon X2 or better
- 2GB (32-bit) or 4GB (64-bit) of RAM
- 10GB of free hard disk space
- High speed Internet connection needed for software updates
- 1024 x 768 pixel (or better) display
- One or more RP1210A compatible communication devices with SAE J1939 support (See Diagnostic Interface Cable Information)(page 14)

Improved system performance will occur with the installation of increased RAM.

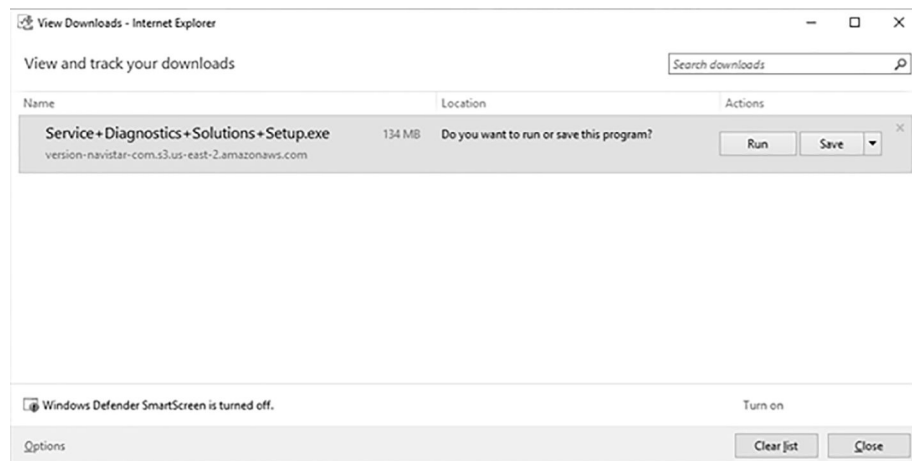
GETTING STARTED

SOFTWARE INSTALLATION

To install the Service Diagnostics Solutions (SDS) software:

1. Prior to installation, a product key must be obtained for each computer on which the software is to be installed. Product keys expire and must be reactivated to allow access to the program.
2. Click on the the following link to open in a web browser:

<https://version-navistar-com.s3.us-east-2.amazonaws.com/sds/Service+Diagnostics+Solutions+Setup.exe>



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Figure 1 Download Screen

3. From the Download screen, select **Service+ Diagnostics+Solutions+Setup.exe**, and select **Run**.

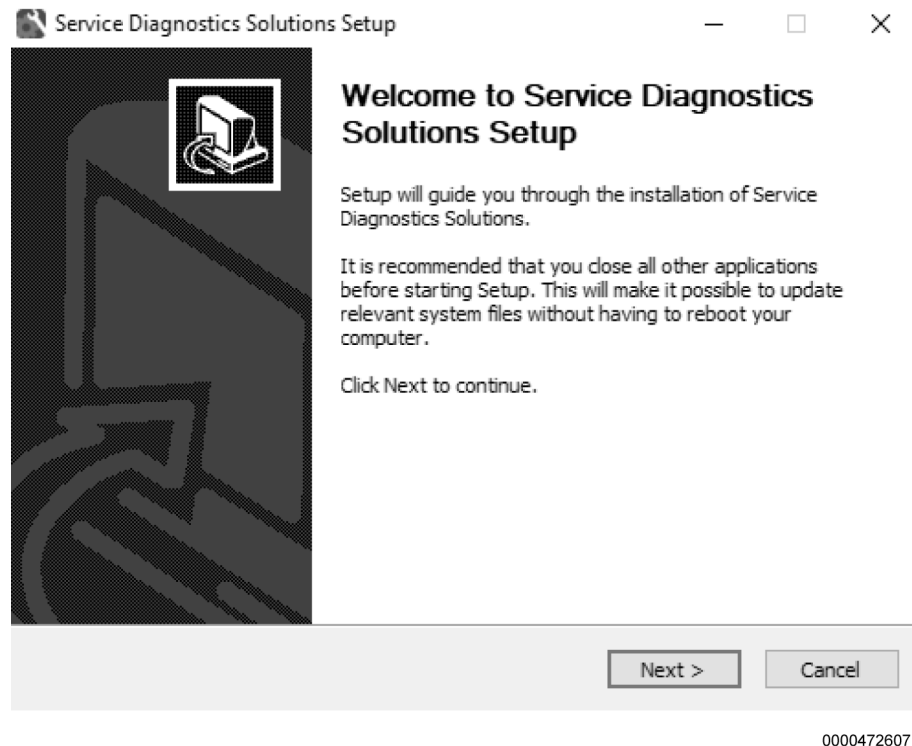
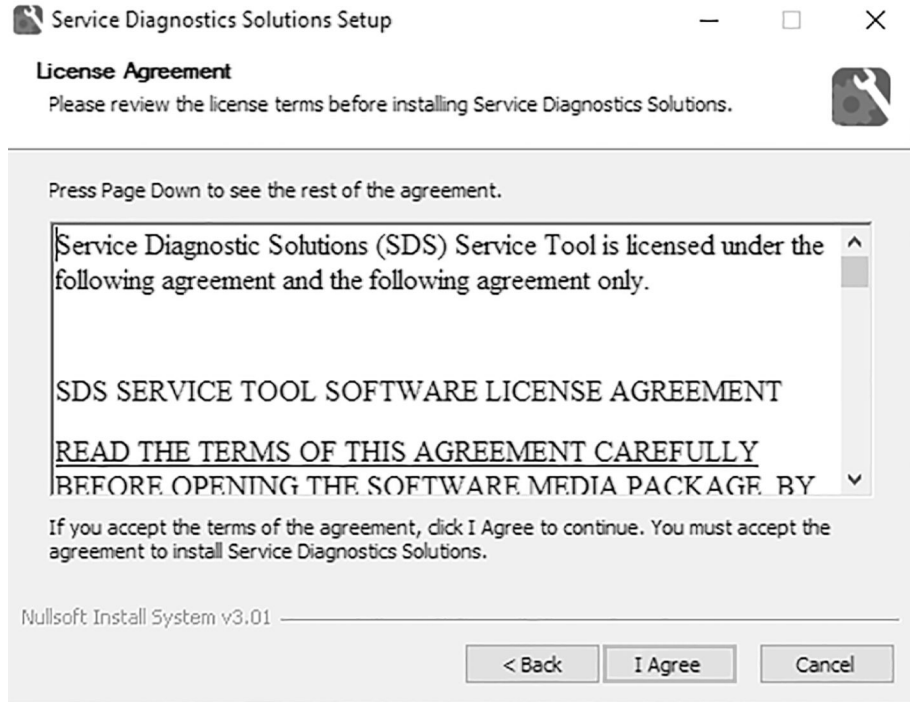


Figure 2 Setup Wizard: Welcome

NOTE – It is recommended that you close all other applications before starting Setup.

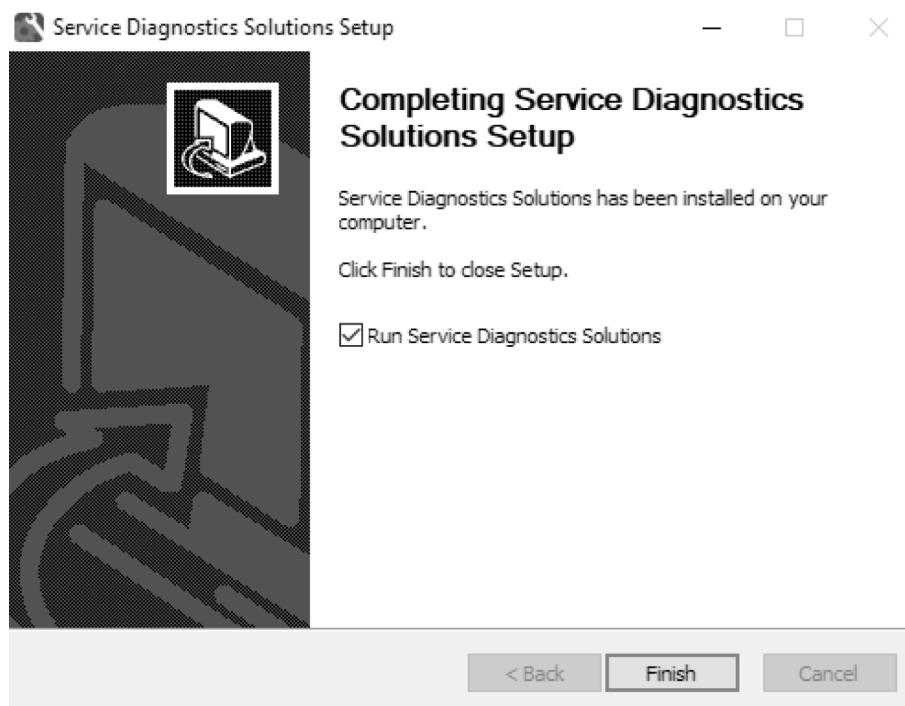
4. Setup will guide you through the installation process.
5. Select **Next** to continue.



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Figure 3 Setup Wizard: License Agreement

6. Read through the License Agreement. When finished, select **I Agree** to continue with the installation.



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Figure 4 Setup Wizard: Finish

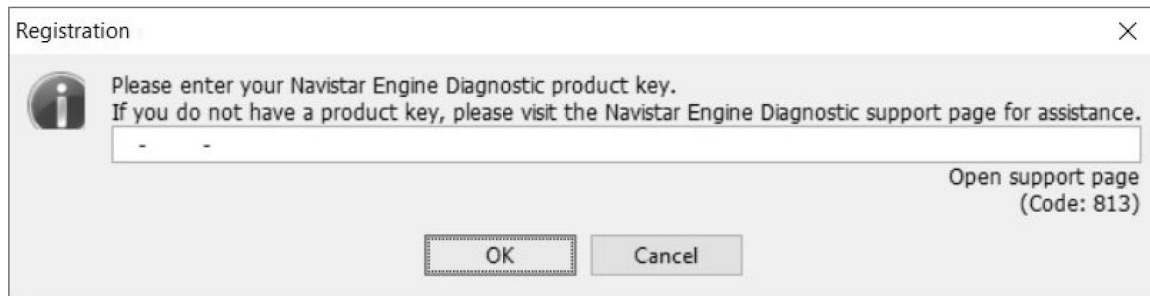
NOTE – Ensure that the Run Service Diagnostics Solutions box is checked.

7. Select **Finish** to launch the program.

NOTE – Automatic software updates are provided directly from Navistar when a newer version is available. The tool checks for updates during startup when connected to the internet.

GETTING STARTED

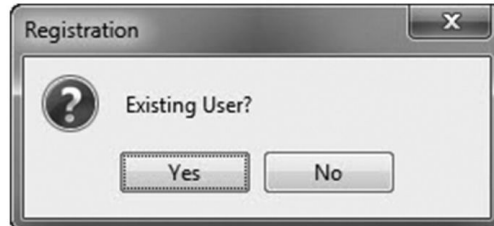
The first time Service Diagnostics Solutions software is installed on a specific computer, you will be prompted to enter your product key.



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Figure 5 Product Key Entry

8. Enter the product key obtained for this computer and then select **OK**.
 - If the key was not entered correctly (or there is some other problem), an error message will be displayed. Refer to Installation Error Messages (page 12) for more information. Resolve the issue indicated before proceeding.
 - If the key was entered correctly, the following window is displayed. Proceed to Step 11.



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Figure 6 Existing User Prompt

9. If you already have a Navistar-issued username and password for applications such as Diamond Logic® Builders (DLB), NavKal™ or Navistar Engine Diagnostics (NED), select **Yes** and proceed to Step 15.

If you DO NOT already have a Navistar-issued username and password, select **NO** and proceed to Step 12.



The image shows a 'Registration' window with a title bar containing a help icon and a close button. Inside the window, there is a list of fields on the left and corresponding input boxes on the right. The fields are: E-mail*, Prefix, First Name*, Middle Initial, Last Name*, Suffix, Company Name*, Street Address 1*, Street Address 2, City*, State*, ZIP Code*, Country* (a dropdown menu showing 'UNITED STATES'), and Phone Number* (with a format '() -'). Asterisks (*) indicate required fields. At the bottom right, there is a note '*Required fields'. At the bottom center, there are 'OK' and 'Cancel' buttons.

Field	Input
E-mail*	
Prefix	
First Name*	
Middle Initial	
Last Name*	
Suffix	
Company Name*	
Street Address 1*	
Street Address 2	
City*	
State*	
ZIP Code*	
Country*	UNITED STATES
Phone Number*	() -

*Required fields

OK Cancel

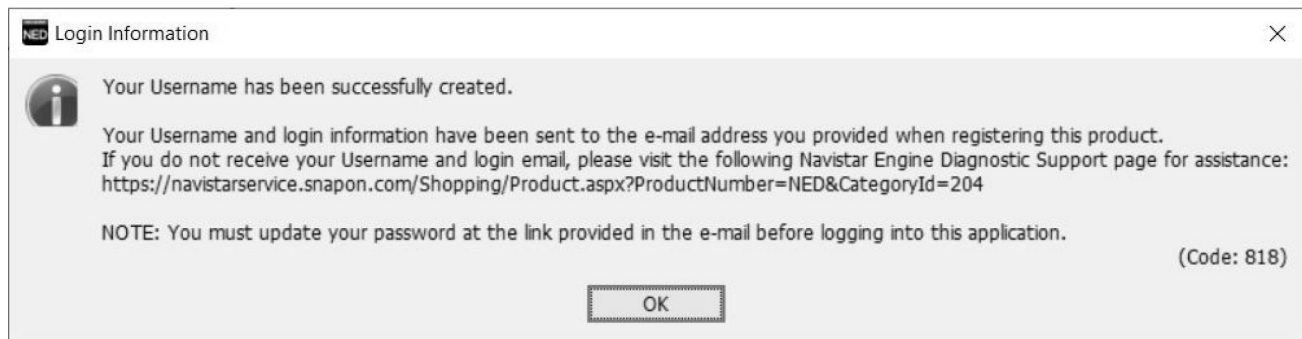
0000472612

Figure 7 New User Registration

10. The Registration window appears. Fill in the information in this window. Required fields are indicated by an asterisk (*).
11. Select **OK**.

GETTING STARTED

Once registration is completed successfully, the following message is displayed:



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Figure 8 Username Successfully Created

12. An email will be sent to the address provided on the registration form. Follow the instructions provided in this email to complete the registration process. When finished, select **OK** in the window shown above.

NOTE – You MUST change your password by following the instructions provided in the email before proceeding. The default password cannot be used to log into the application.

13. The User Authentication window appears. Enter your username and password and select **OK**.



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Figure 9 User Authentication Window

Once you are logged in for the first time, the software will start and begin to update itself.

NOTE – The Service Diagnostics Solutions program or software will not function until the user has successfully logged in at least once while connected to the network. The user may need to consult with the technical computer support staff if the Service Diagnostics Solutions program or software cannot connect to the Navistar site. Error messages will be generated if connection to Navistar fails. Your Internet firewalls must be configured to allow two-way communication to the following Navistar host names:

- d2mutuy95x2dyc.cloudfront.net
- evaluateb.internationaldelivers.com

Be aware that the underlying IP addresses for these hosts are subject to change and may vary by region. When possible, grant access by host name rather than IP address.

GETTING STARTED

Installation Error Messages

The error messages that may appear during the installation process typically contain explanatory text to help in troubleshooting. Some sample messages are shown in the table below. In some cases, the table also includes additional troubleshooting information. For the more information on resolving these messages, please visit the Navistar Service Software support website:

<https://navistarservice.snapon.com/Navistar/Default.aspx>

NOTE – Before attempting to register the software with a product key, please ensure that you have an active User ID with a password that has not expired.

Code	Text
800	The product key provided is terminated. Please visit the support page for assistance.
801	The product key provided does not match the software that you are attempting to activate. Please re-enter the product key to verify or visit the Service Diagnostics Solutions support page for assistance.
802	Your product key has expired. Please visit the support page for assistance.
803	You've exceeded the number of registrations allowed for this product. Please visit the Service Diagnostics Solutions support page for assistance.
804	An unknown error has occurred. Please visit the support page for assistance.
805	Application unsupported. Please visit the support page for assistance.
806	The prior product key provided is terminated. Please visit the support page for assistance.
807	The product key provided was not found. Please re-enter the product key to verify or visit the support page for assistance.
808	An error has occurred while attempting to register the software. Please visit the support page for assistance.
809	We're sorry, we can't connect to the server right now. Please check your connection and try again or visit the support page for assistance.
810	<p>An Internet connection to the Service Diagnostics Solutions server could not be established; press 'OK' to continue in offline mode. Your license will be verified each time you log into the system. You can keep accessing Service Diagnostics Solutions offline for 30 remaining days. If a connection to the Service Diagnostic Solutions Server cannot be established by then, your product will stop working.</p> <p>Verify that the following Navistar hosts are not blocked by a firewall or a web filter:</p> <ul style="list-style-type: none">• evaluateb.internationaldelivers.com• d2mutuy95x2dyc.cloudfront.net
811	<p>An Internet connection to the server could not be established, you must resolve this issue before the application can be used.</p> <p>This error occurs when the license key has expired due to being offline for 30 days or more.</p>

Code	Text
812	<p>An Internet connection to the server could not be established, you must resolve this issue before the application can be used.</p> <p>On some computers, Service Diagnostics Solutions has to be run in administrator mode. Follow these steps:</p> <ol style="list-style-type: none">1. On the Windows desktop, right-click the Service Diagnostics Solutions icon.2. In the right-click menu, select OPEN FILE LOCATION.3. Right-click SERVICE DIAGNOSTICS SOLUTIONS.EXE.4. Select RUN AS ADMIN.
813	<p>Please enter your product key. If you do not have a product key, please visit the support page for assistance.</p> <p>The entered product key was not correct. Be sure to include the entire key. (It should be 19 characters total, not including dashes.)</p>
814	You have already activated your maximum number of Usernames permitted by your license.
815	A server side error has occurred and is being examined. Please visit the support page for assistance.
816	<p>The provided key is a renewal key. Please re-enter a previous product key to continue or visit the support page for assistance.</p> <p>Renewal keys allow the license granted by a full key to the software to be extended past its original expiration date. They cannot be used by themselves (without a full product key). Enter the full product key whose expiration date is to be extended.</p>
817	The Username or Password that you entered was incorrect. Please try again or visit the support page for assistance.

INTERFACE CABLE INFORMATION

The following communication adapters have been verified with all Service Diagnostics Solutions software:

- NEXIQ Technologies – USB Link 2
- Other RP1210A compliant interface devices may work with Service Diagnostics Solutions.

Please refer to each manufacturer's website for further information.

VEHICLE CONNECTION

OPEN SERVICE DIAGNOSTICS SOLUTIONS SOFTWARE

To open Service Diagnostics Solutions software:

1. Start the application. There are three ways to do this:
 - Desktop Icon: Double-click the **SDS** icon.
 - Desktop Icon: Right-click on the SDS icon. Then, select **Open**.
 - Windows Start Menu: **Select Service Diagnostics Solutions**.



Figure 10 Service Diagnostics Solutions Icon

2. The User Authentication window appears. Enter your username and password and select **OK**.

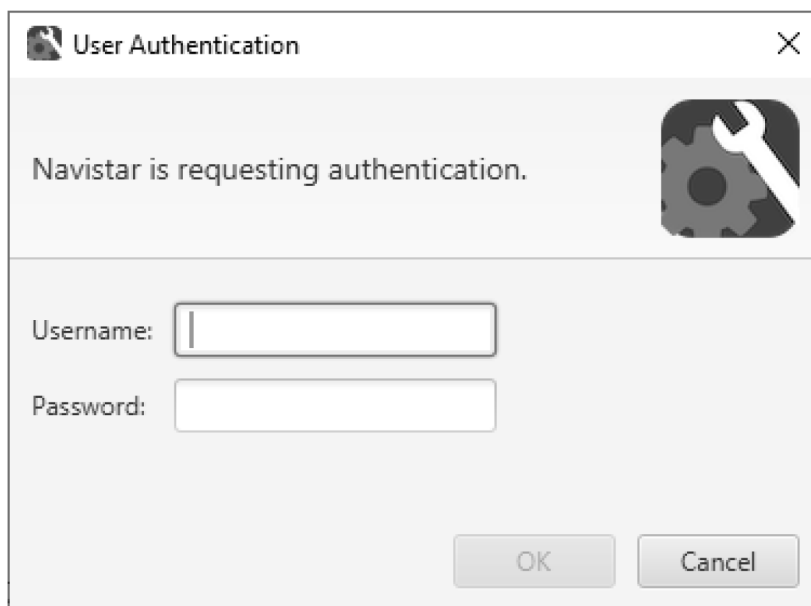
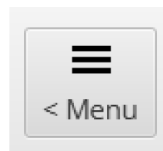


Figure 11 User Authentication Window

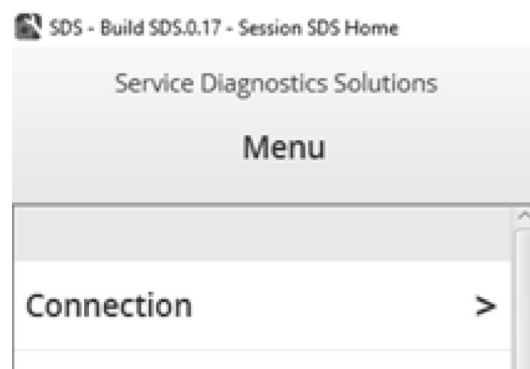
INTERFACE DEVICE SELECTION

1. Turn vehicle ignition to Key ON, Engine OFF.
2. Connect Interface cable between laptop and the vehicle's 9 pin diagnostic connector.
3. Launch SDS software. A detection process will begin and connect automatically.
4. Selecting Interface cable may be necessary, if many different cables are being used.
5. Go to the **Menu+Connection** and select the correct interface cable.



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Figure 12 Menu



0000472565

Figure 13 Menu - Connection Selection

When SDS is started, a Default session displays as the opening screen. The following is a brief description of each area displayed in the Default session.

Adapter Error

Adapter Errors are displayed across the upper portion of the screen. These messages are coming from the Interface Device, Check that your cable is connected and working correctly.



Figure 14 Adapter Error

Rescan

You can rescan all Connected modules for by pressing the **Rescan** from the Menu. This helps when trying to diagnose a module that keeps dropping off the Network.

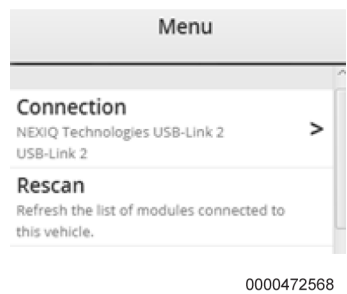


Figure 15 Rescan

HOME SESSION VIEW

The Home session displays as the opening screen. The following is a brief description of each area displayed in the Home Session.

1. Software version number
2. Vehicle information window
3. Session window
4. Action bar
5. Filter control

Vehicle Information Panel

The Vehicle information window provides information on the connected vehicle and all modules communicating on the Public CAN Network.

- Vehicle model
- Vehicle Identification Number (VIN)
- Engine model
- Engine serial number
- Calibration
- Rated power
- All other connected modules and software IDs

ACTION BAR



Figure 16 Action Bar

The Action bar has controls to open Menu, Switch to Home Session, Start Test or Procedure, Stop, Cancel Test or Procedure, Program Parameter, Revert All Edited Parameters, View Vehicle Information, View Faults, View Help.

Menu

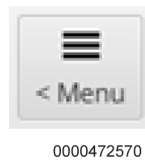


Figure 17 Action Bar Menu

The button opens a Menu list of all features, such as Sessions for Tests, Procedures, Programing, Signals Recording, Recording Playback, Module Tools, Save, Load Parameters, Flash Calibration, Bug Reporting, and list of other settings and tools.

Disconnect and Reconnect



Figure 18 Disconnect / Reconnect

- Disconnect - Disables the interface cable (Figure 18).
- Reconnect - Enables the interface cable.

Home-Multiple Function

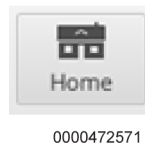


Figure 19 Home Button Multiple Function

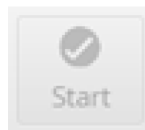


0000472572

Figure 20 Revert All Button Multiple Function

- Home button will switch to the Home session (Figure 19).
- Revert All edits made to any parameter before they are programmed (Figure 20).

Start-Multiple Function



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Figure 21 Start Button Multiple Function



0000472616

Figure 22 Program Button Multiple Function



0000472617

Figure 23 Start Test Button Multiple Function

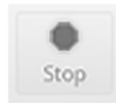


0000472618

Figure 24 Start Procedure Button Multiple Function

- Shadowed default state when no action is enabled (Figure 21).
- Program all edited parameters (Figure 22).
- Start Test in opened session (Figure 23).
- Start Procedure in opened session (Figure 24).

Stop-Multiple Function



0000472619

Figure 25 Stop Button Multiple Function



0000472620

Figure 26 Cancel Test Button Multiple Function



0000472621

Figure 27 Cancel Procedure Button Multiple Function

- Stop, shadowed default state when no action is enabled (Figure 25).
- Cancel Test in the opened session (Figure 26).
- Cancel Procedure loaded in the open session (Figure 27).

Vehicle



0000472623

Figure 28 Vehicle Button Multiple Function

Opens vehicle window displaying vehicle information of the connected vehicle.

Help



0000472624

Figure 29 Help Button Multiple Function

Opens the help window for the current session.

Faults



0000472625

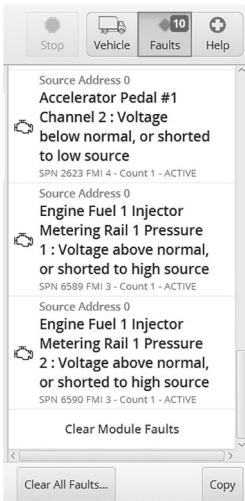
Figure 30 Faults Button

Opens the Faults window displaying all faults from connected modules.

- Red number indicates how many active faults are detected.

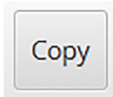
Diagnostic Trouble Codes (DTC)

Fault panel will display faults from all connected modules providing they follow SAE specifications.



0000472790

Figure 31 Diagnostic Trouble Codes



0000472788

Figure 32 Copy Data

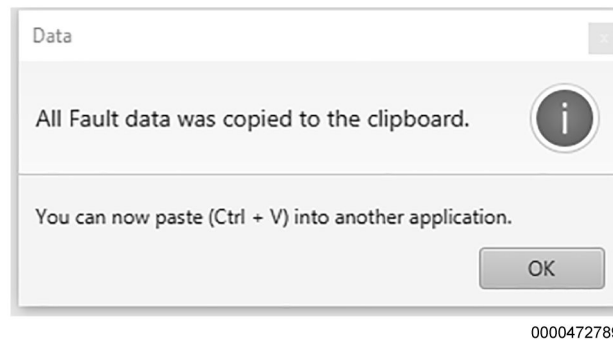


Figure 33 Data Copied to Clipboard

Copies all fault code data (Figure 32) to the clipboard and then paste the data to another application (Figure 33).

Freeze Frame

Click on a fault code will retrieve and display Freeze Frame for that Fault.

Clear All Faults

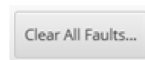


Figure 34 Clear All Faults

This will clear all Faults from all connected modules.

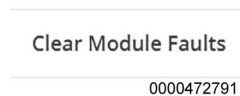


Figure 35 Clear Module Faults

Clear Module Faults

This will clear just the faults the select module.

1. Select Module by clicking on the DTC from that module.
2. Freeze Frame is displayed and the option to Clear Module Faults.

REPORTS

Health Report

After initiating a connection, the Health Report Scan Checkpoint box appears. This information is added to the health report to assist the Warranty group.

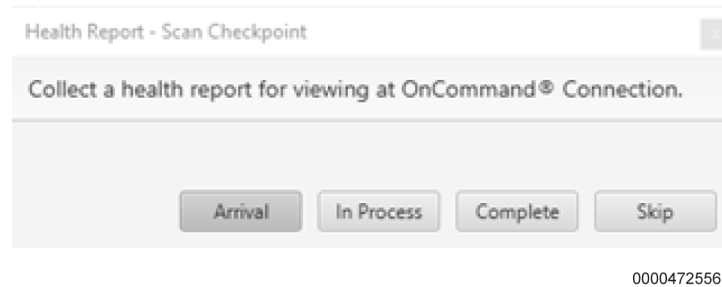


Figure 36 Health Report

1. To collect a health report, select the scan checkpoint in the drop box, and select **OK**.
 - Arrival - The first health report taken by technician.
 - In Process - Used when the vehicle is in the dealership for service and may be having work done.
 - Complete - The last health report after all repairs have been completed by the technician
2. To cancel collection of a health report, select **SKIP**.

NOTE – After each successful collection a health report, the associated health report from the Service Portal will automatically open in your default Internet browser.

NOTE – The Health Report Scan Checkpoint box will appear whenever SDS detects that the VIN changes or if selecting MENU . . . HEALTH REPORT.

Open Saved Data

All saved data, reports and test results are saved in the Desktop folder: SDS Saved Data.

SIGNAL MONITOR

SDS can monitor, record and playback signals sent from the ECM. This section explains how to use these features.

Show Graph



Figure 37 Show Graph

Displays a graph of the first 10 signals in a table.

List Expand / Collapse

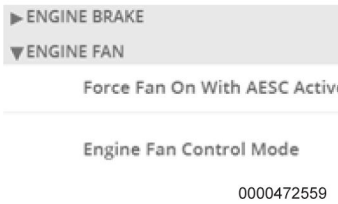


Figure 38 List Expand / Collapse

- Select arrow down will expand list
- Select arrow across will collapse list

Signal Settings



Figure 39 Signal Settings Menu

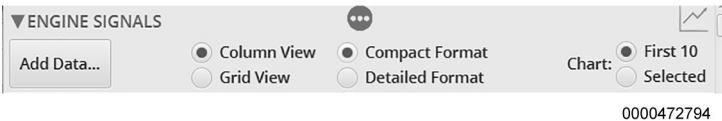


Figure 40 Signal Settings

Select the Settings icon above any signal table will display a list of options:

- Column View - Listed in 1 Column
- Grid View - List is divided into 5 columns
- Compact Format - Name, Value, Units
- Detailed Format - Name, Value, Units, ID, Sample rate, Min-Max, Raw Value
- Chart - Opens chart view of signals.
- Add Data - Opens Quick Edit - Add or move signals to the top of the list, and save for collections for quick loading of favorite choices.

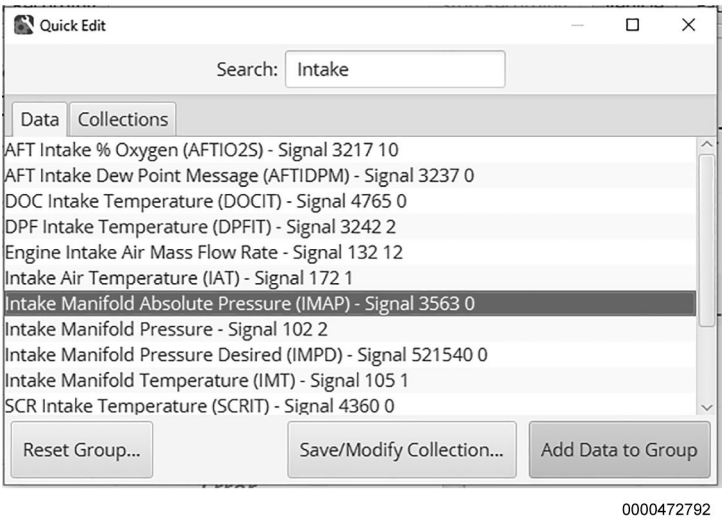
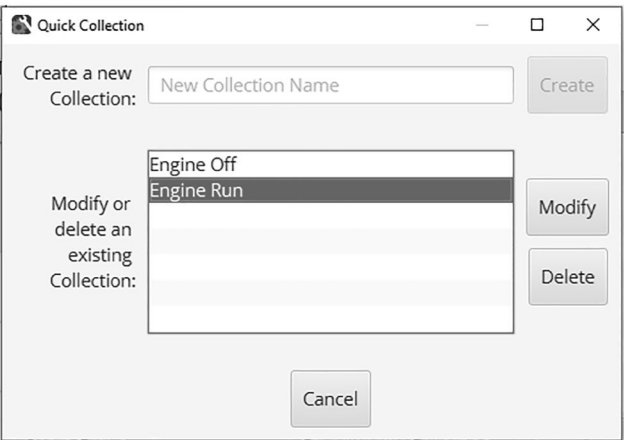


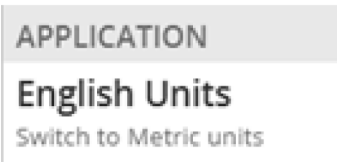
Figure 41 Quick Edit



0000472793

Figure 42 Quick Collection

Units of Measurement

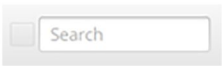


0000472562

Figure 43 Units of Measure

- Change Units of measurement to Metric or English.
- Go to **Menu . . . Application**.
- SDS will save new setting as the default

Search

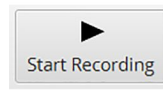


0000472626

Figure 44 Search Box

Search will filter down to search entry.

Start Recording

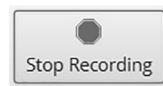


0000472795

Figure 45 Start Recording

Starts recording all signals in the session.

Stop Recording



0000472796

Figure 46 Stop Recording

Stops the recording and saves it to the SDS Saved Data Folder.

DATA RECORDINGS (PLAYBACK)

All tests and most procedures will automatically record signals and some create test results. These are saved in the SDS Saved Data Folder.

Saved Recordings

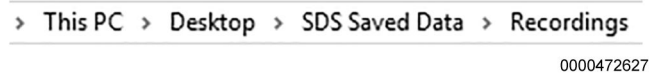


Figure 47 Saved Recordings

All Recordings are saved in the Desktop folder: SDS Saved Data \ Recordings.

Record File Naming Convention

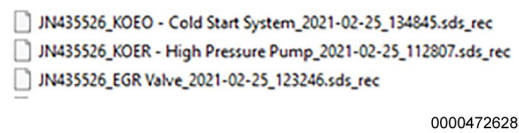


Figure 48 Record File Naming Conventions

Recordings are named using the following method.

- Last 8 digits of VIN - Test Name - Date - Time

Data Recording Playback

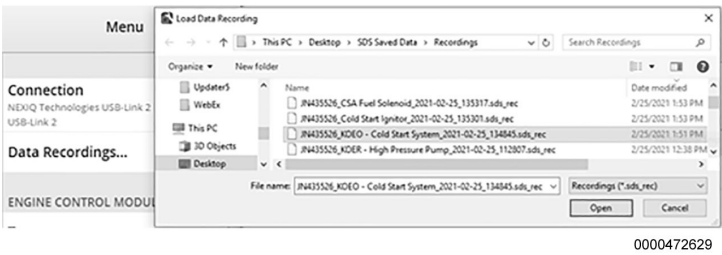


Figure 49 Data Recording Playback 1

1. Go to Menu and select **Open Saved Data**.
2. Select a Recording.

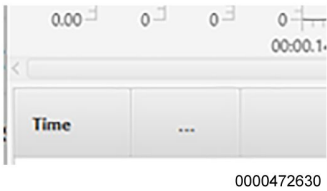


Figure 50 Data Recording Playback 2

3. Select **Add Data** to select signals for the Chart.

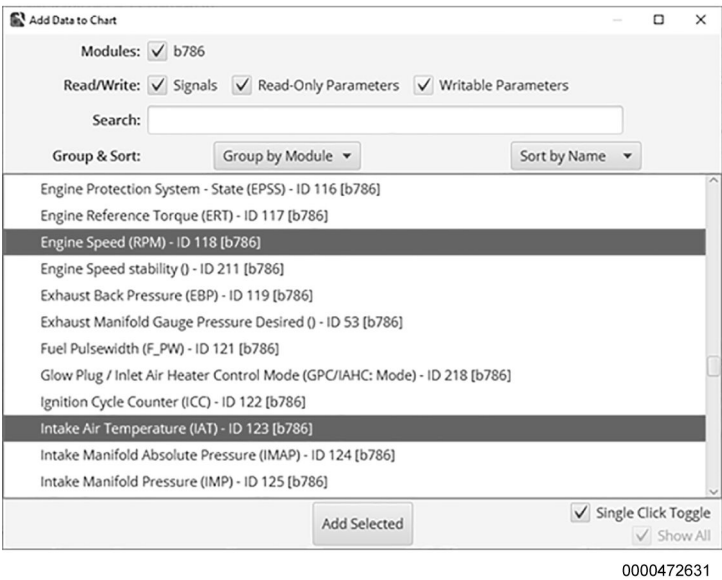
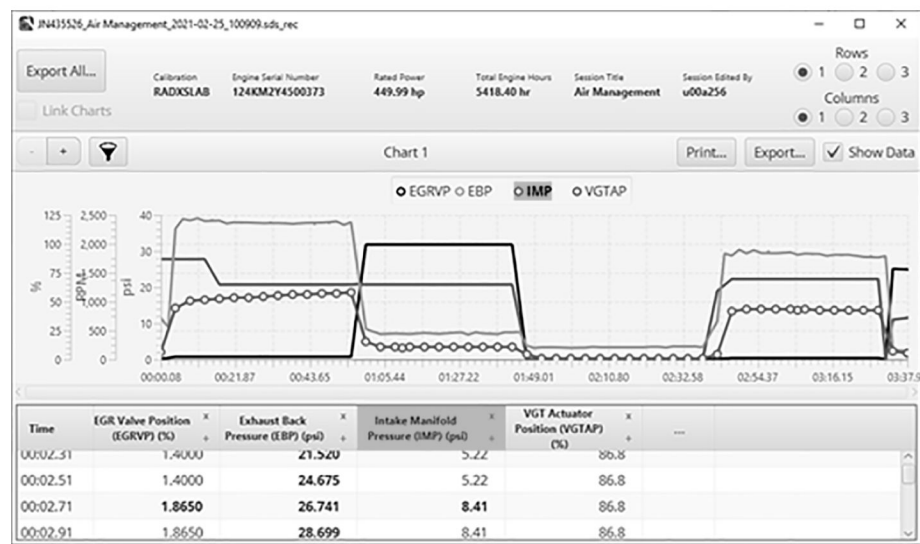


Figure 51 Add Selected Signals

4. Select desired signals. Up to 10 can be selected to a chart.
5. Select **Add Selected** to populate chart with selected signals.

6. Remove any signal by selecting **X** next to a signal name.



0000472632

Figure 52 Signal Trace

7. See signal trace by selecting on **Signal Name**.

Zoom In / Zoom Out



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Figure 53 Zoom In Zoom Out

- Zoom in by selecting the **+** button.
- Zoom out buy selecting the **-** button.

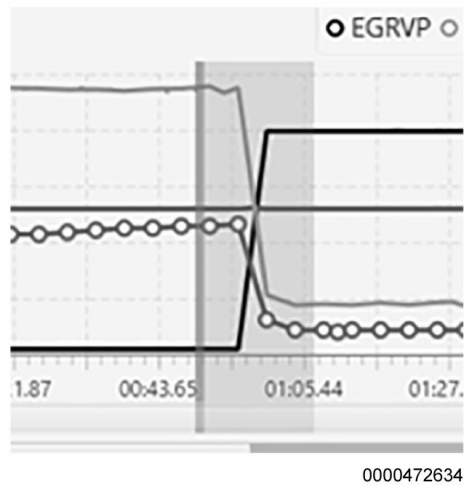


Figure 54 Zoom In Zoom Out Example

- Zoom a selected area by selecting and dragging within the graph.

Using Filters

Filters can be added to any signal in the Data Recording playback.



Figure 55 Using Filters

- 1. Select the + next to the signal name.

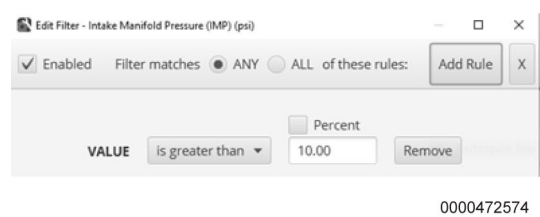


Figure 56 Edit Filter

- 2. Select and enter filter conditions.
- 3. Close filter window and Filter information will set and displayed next to signal name.

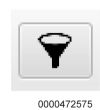
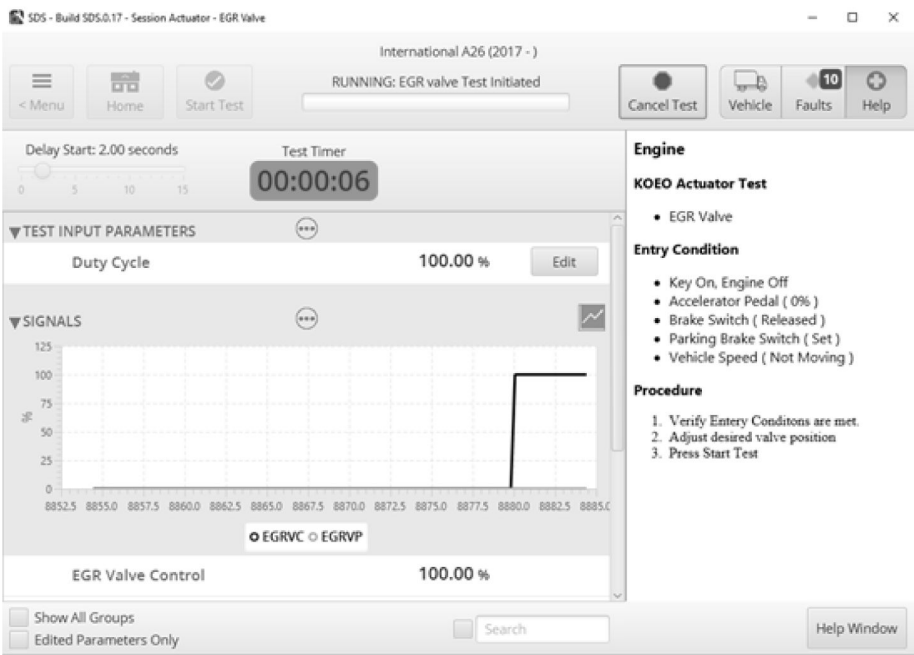


Figure 57 Edit Filter Icon

- 4. Select **Filter Icon** to Enable Filter, select it again to disable it.

TEST SESSION

Test Session View

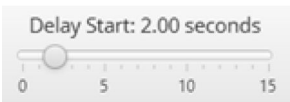


0000472576

Figure 58 Test Session View

This is a Typical Test session and below is a brief description viewed in this screenshot.

Delay Start

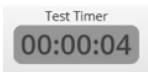


0000472577

Figure 59 Delay Start

Delay Start can be used when extra time is needed to move from SDS to area being tested before the test starts.

Test Timer



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Figure 60 Test Timer

Displays Test Run time.

Help Window



0000472579

Figure 61 Help Window

Help displays information about the Test. Selecting Help Window will enlarge this page.

Test Input Parameters



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Figure 62 Test Input Parameters

Some tests have Input Parameters allowing various test options.

PROGRAMMABLE PARAMETERS

Parameters are used to configure the Engine Module to set all needed features to the connected vehicle.

It is recommended to save the Parameter file before making any Programming changes.

Programming Session

For convenience, Parameters are divided up into sub-systems for easy programming of any select system.

All Parameter Session

Listing of all Parameters to the connected Engine Control Module (ECM).

Programming

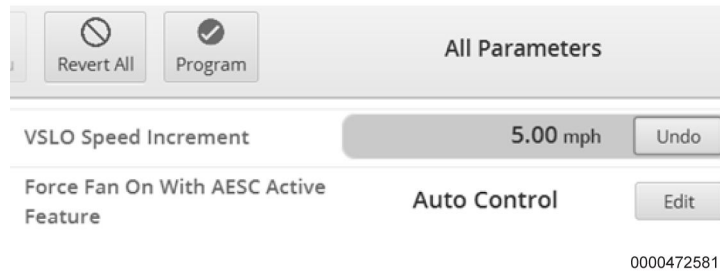


Figure 63 All Parameter Session

1. Select **Edit** to change Parameter value.
2. Press **Enter** the value is locked in and the button now displays Undo.
3. Press the **Program** button to complete the programming.
 - Press the **Revert All** button will undo all edits that haven't yet been programmed.

Save Parameters to a File

1. From Menu, Go to Module Tools, select **Save Parameters to File**.
2. Popup window will display all connected modules that have Parameters.
3. Add a check mark to the **Modules to save Parameters from**.
4. Select the **Save** button.

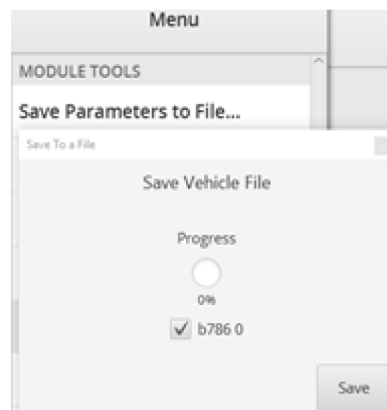
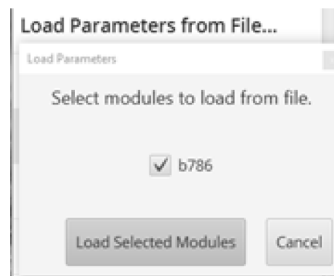


Figure 64 Save Parameters to a File

Load Parameters from File



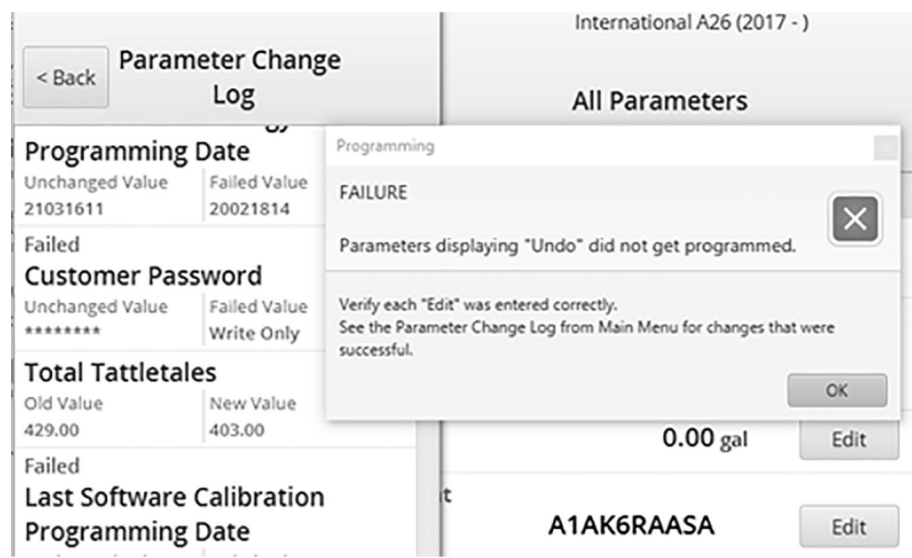
0000472583

Figure 65 Load Parameters from File

1. Select File window will appear. Select Previously saved Parameter file.
2. Add a check mark next to desired Modules to load Parameters into.
3. Select **Load Selected Modules** button.
4. Parameters are loaded into the All Parameters session.
 - If all Parameters do not load, it's possible the new calibration has removed some old Parameters. Take note of what isn't loaded for reference.
5. Press the **Program** button.

Failure Programming

Often Programming all Parameters have a Failure to Program all of them. The reason is the user does not have authorization to Program the Parameters that Failed to Program.



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Figure 66 Parameter Change Log

VEHICLE CONNECTION

1. After Programming Parameters, Programming Failure message appears.
2. Parameter Change Log will also show up in the Menu, displaying Failures.
3. Save Programming Event (Web page) for reference.
4. Press **Revert All** button to Undo the Edits of the Failed Parameters.
5. Send Programming Event Log to Tech Support.

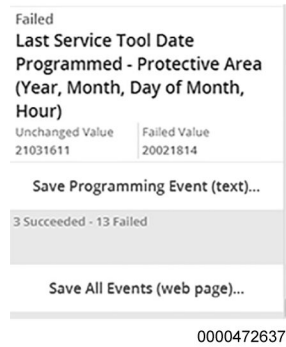


Figure 67 Last Service Tool Date

CALIBRATION UPDATE

Supported modules are automatically checked for calibration updates, if an update is available, a user can start the update by selecting Update Calibration.

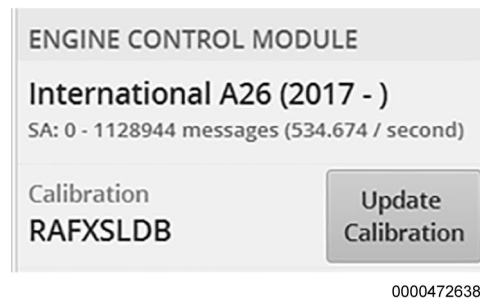


Figure 68 Calibration Update

Update Calibration is in the Vehicle Panel, next to Module Calibration ID.



Figure 69 Update Calibration



Figure 70 Checking for Update

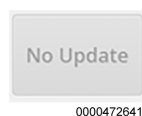
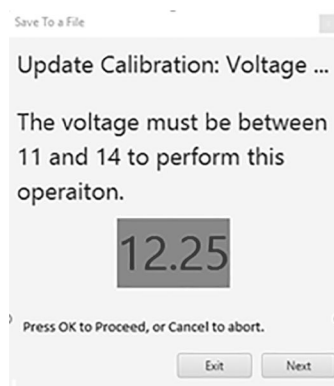


Figure 71 No Update

- Update Calibration – Update is available (Figure 69).
- Checking for update – Scanning Calibration update rules (Figure 70).
- No Update – No Updates are available (Figure 71).
- No button indicated Unsupported Engine.

To start the update

1. Press the **Update Calibration** button (Figure 69).
2. Voltage Monitor is displayed during calibration update.

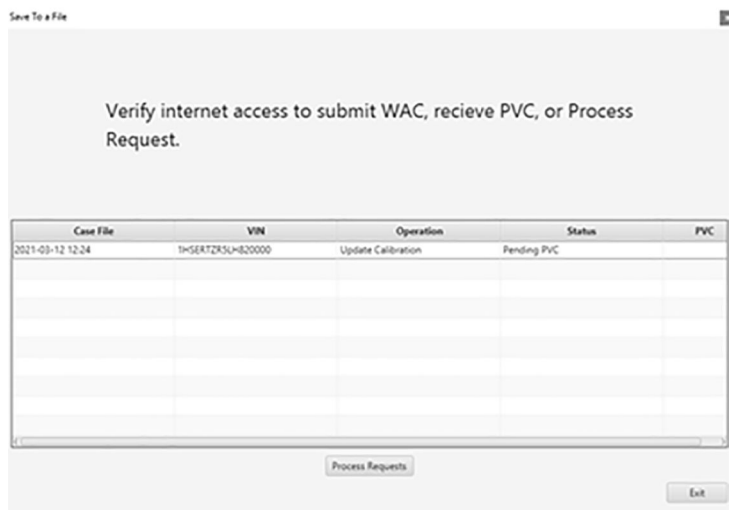


0000472642

Figure 72 Update Calibration Voltage

NOTE – Connect a smart charger before programming.

3. Press **OK** to proceed or **Exit** to Cancel.
4. Press **Process Request**.
 - Internet connection is required to complete the Request Process.



0000472643

Figure 73 Verify Internet Access

BLANK FLASH REQUEST

The Blank Flash Request function allows technician to request programming a blank module.

The screenshot shows a software window titled "Blank Flash Request". Inside the window, there is a text box at the top that reads: "To submit a Blank Flash Request, please fill in the below fields and click Save Request, afterwards the Module Request window will open to process the request." Below this text box are five input fields. To the left of these fields are labels: "Case File (Optional)", "VIN", "Miles", "Hours", and "Fuel". To the right of the input fields, there are numbered callouts: 4 points to the "Case File" field, 5 points to the "VIN" field, 6 points to the "Miles" field, 7 points to the "Hours" field, and 8 points to the "Fuel" field. Below the input fields is a progress indicator showing "0%" and a "Save Request" button. A callout 9 points to the "Save Request" button. In the bottom right corner of the window, the number "0000472644" is displayed.

Figure 74 Blank Flash Request

1. Select **Menu**.
2. Select **Calibration**.
3. Click **Blank Flash Request**.
4. Input Case File Number (Optional).
5. Input VIN or Chassis number.
6. Input vehicle Miles.
7. Input vehicle Hours.
8. Input vehicle Fuel.
9. Select **Save Request**.

NOTE – Vehicle miles, hours, and fuel information must be entered correctly, or the Process Request may fail.

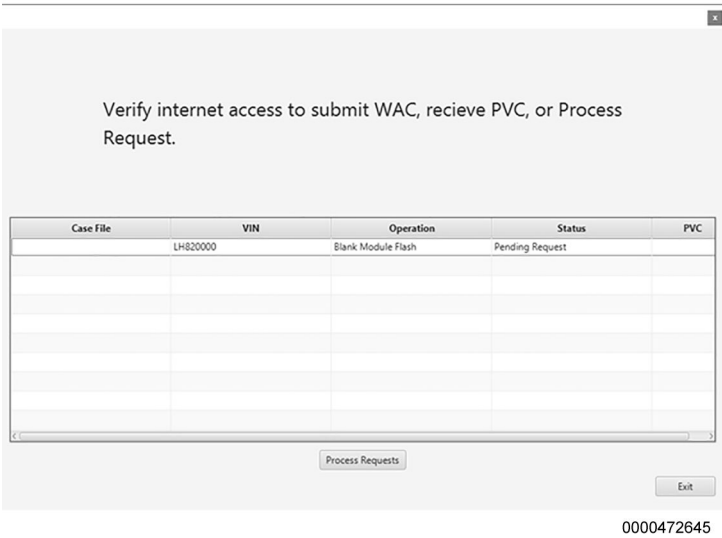


Figure 75 Verify Internet Access to Submit WAC

Module Request Window

Module Request window can be opened from **Menu . . . Module Request**.

From the Module Request window, SDS will upload the designated files to process the request. File upload status will be confirmed.

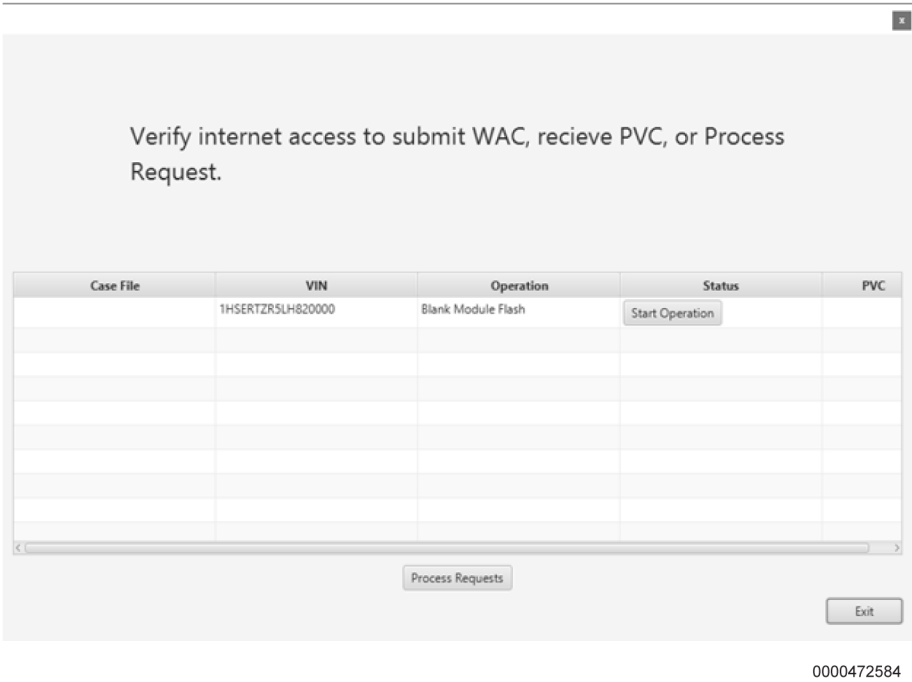


Figure 76 Verify Internet Access to Submit WAC, Receive

1. To process a pending request, select **Process Request**.
2. After the Process Requests task is complete, the Status field will display Start Operation.

NOTE – After the Process Requests task is complete, you will be prompted to collect a health report. Select SKIP to decline collection

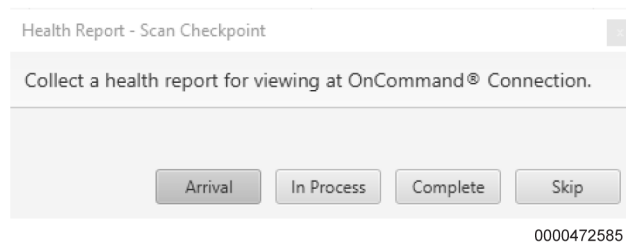


Figure 77 Health Report Scan Checkpoint

PARAMETER UPGRADE (NOT WORKING IN THIS RELEASE)

Parameter upgrades are approved through the Navistar Dealer Network.

Internet Access to Navistar Dealer Network is required.

Programming changes not supported outside of the Navistar Dealer Network:

- Emission Changes Involving Emissions Label Replacement
- Horsepower Upgrade
- Engine Replacement Programming
- Component Serial Number Updates

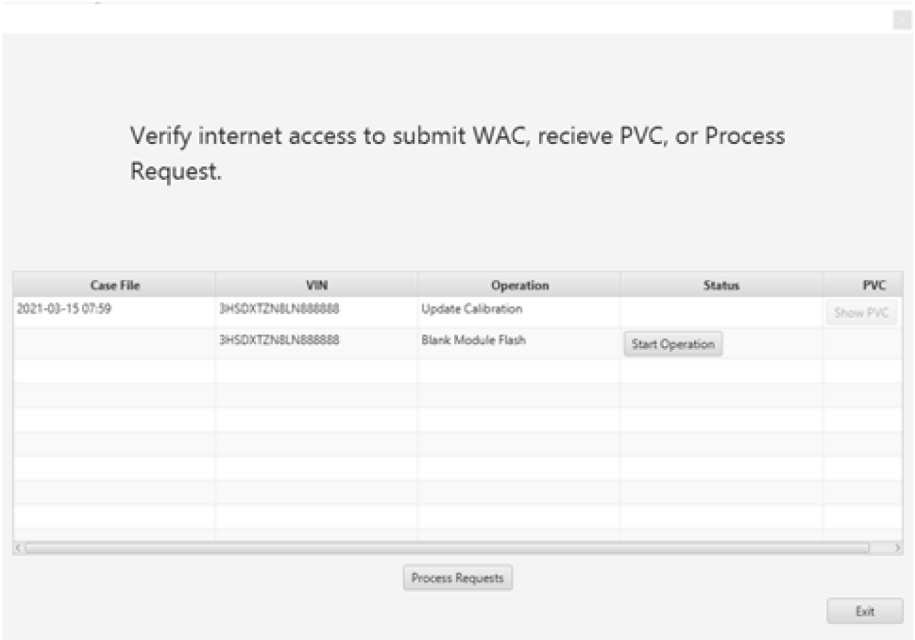
To start up grade request

1. From Menu, Go to **Module Tools . . . Calibration**, select **Parameter Upgrade**.
2. Enter appropriate Case file number, select **Save Request**.

Module Requests

This window displays what Processes haven't been sent up to the Navistar Dealer Network.

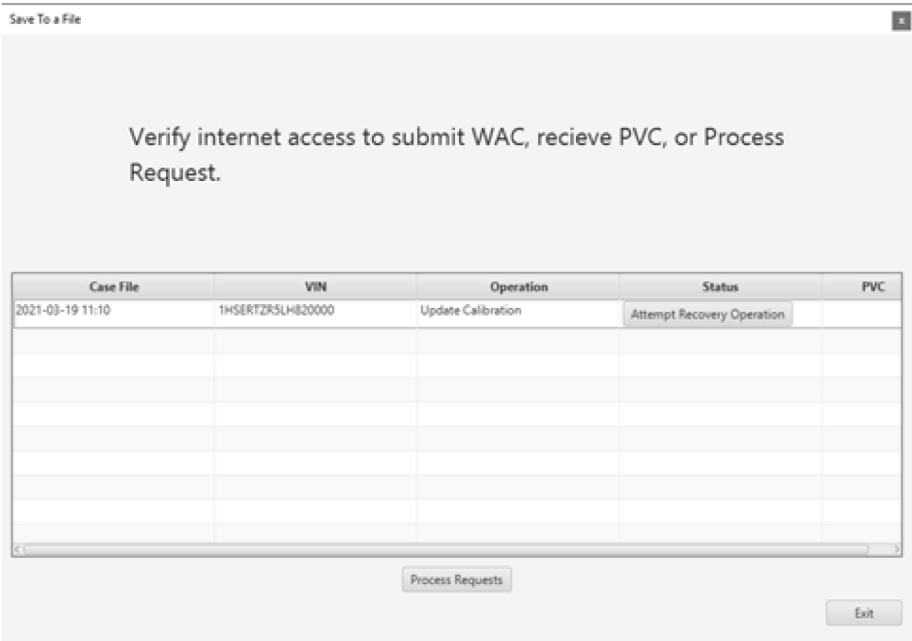
Press **Process Requests** to complete this action.



0000472586

Figure 78 Verify Internet Access Module Requests

This window also displays the recovery option if a failure has occurred. When available, select **Attempt Recovery Operation**.



0000472587

Figure 79 Verify Internet Access Attempt Recovery Operation

REPORT A BUG

In the event the software does not perform as it should, displays any type of Errors. Please take the time to report it by filling out the Bug Report.

The screenshot shows a 'Report a Bug' dialog box with the following fields and instructions:

- * Summary:** A text input field with a cursor, indicated by callout 1.
- Module:** A text input field, indicated by callout 2.
- Module Software Version(s):** Two buttons: 'Current or Old' and 'New (if flashing)', indicated by callout 3.
- Description:** A large text area with the placeholder text 'Please describe the steps taken that led to this issue.', indicated by callout 4.
- Instructions:** A list of steps: '1. Fill in required (*) fields.', '2. Click this link to create an email to: [Create Email Link](#)', '3. (Optional) In the app, press Alt + PrtScn to copy the active window to the clipboard, which you can also paste into the email.', and '4. Send the email.' The 'Create Email Link' is indicated by callout 5.
- Buttons:** An 'Ok, I sent it.' button at the bottom right.

0000472588

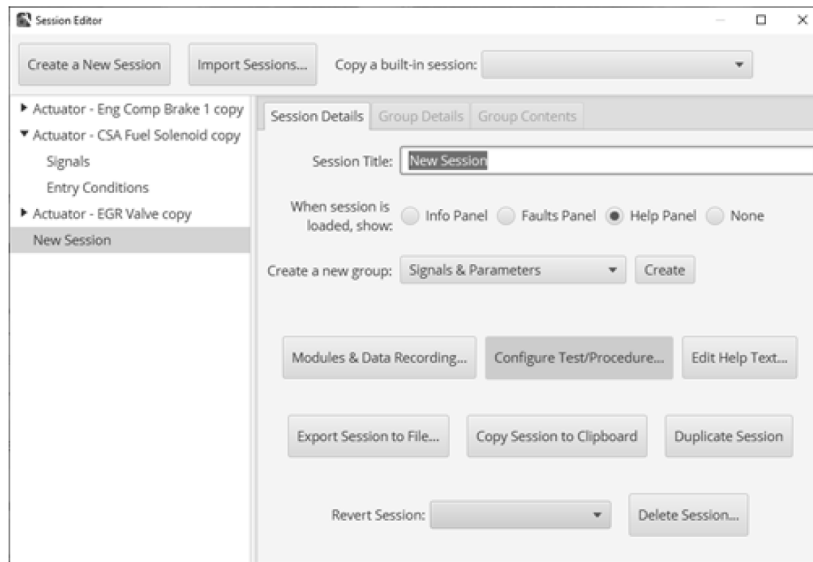
Figure 80 Bug Report

1. Summary of what happened.
2. Module: Which Control Module was the tool connected to.
3. Software version flashed into the connected module.
4. Description: Steps taken that led to this issue.
5. Click on **Create Email Link**.
6. Attach any helpful screenshots to the Email before sending.

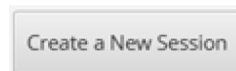
SESSION EDITOR

Session Editor Control Panel

Create, Import, Export or Modify any existing session using Session Editor.



0000472589

Figure 81 Session Editor**Create a New Session**

0000472591

Figure 82 Create a New Session

Start building a session from the ground up.

User Created Sessions

Created Sessions are listed the main Menu and listed on left side of the session Editor. Select expand arrow will display the groups within the session.

Remove User Created Sessions

Open the Session Editor, select any created session on the list side of the Editor and press the **Delete Session**.

Duplicate Session

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Figure 83 Duplicate Session

Creates an exact copy of a session, can be used to make minor changes between 2 sessions.

Save Changes

Changes are saved as they are being made, Close the Session Editor will save all changes made during the editing process.

Session Title

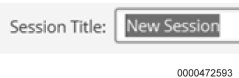


Figure 84 Session Title

Session title is the name that will show up in the Menu and within the Recorded file name.

Import Sessions

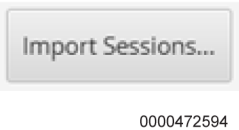


Figure 85 Import Sessions

Load previously saved session file another user has exported.

Export Session to File

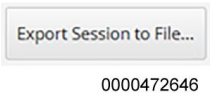


Figure 86 Export Sessions to a File

Exports any created session to file, that can be imported in another users account or computer.

Cop a Built-in Session

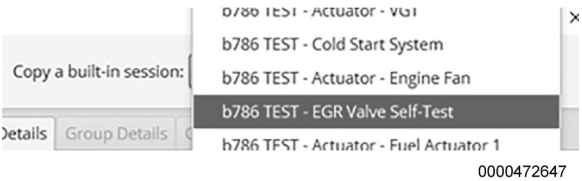


Figure 87 Copy a Built-in Session

Select any built-in session to be edited. Saved sessions will not overwrite built-in sessions, they are added outside of the Test / Procedures menu.

Show Panel When Session is Opened

When session is loaded, show: ☐ Info Panel ☐ Faults Panel ☒ Help Panel ☐ None

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Figure 88 Show Panel When Session is Opened

Select which panel will be shown when session is opened.

Create New Group

Create a new group:

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Figure 89 Create New Group

Groups are signals or Parameters seen in a session. Add a new group by selecting the **Create**.

▶ Actuator - Eng Comp Brake 1 copy
▼ Actuator - CSA Fuel Solenoid copy
 Signals
 Entry Conditions
▶ Actuator - EGR Valve copy
▼ New Session
 New Group

Session Details | Group Details | Group Contents

Group Name:

Order in Session:

When session is loaded: ☒ Show Group ☐ Show Chart

☒ Column View ☐ Grid View ☒ Compact ☐ Detailed

0000472650

Figure 90 Add New Group

1. Select **New Group**.
2. Give a Group Name to the new group.
3. Select the order position of the new group.
4. Select how the new group should be displayed.
5. Select **Group Contents** to add signals or parameters to the new group.

Session Details

Group Details

Group Contents

Show:

☒ Signals

☐ Read-Only Parameters

☐ Writable Parameters

Search:

Clear

List:

No Groups

Sort by List Order

1

Signal 5400 10 (AFTFR)

AFT Fuel Pressure

Big

CEM1

E39

EEC4

G6

PIM

b786

FF55 400021 0 (AFTFR)

AFT Fuel Rate

Big

CEM1

E39

EEC4

G6

PIM

b786

2

FF55 400039 0 (AFTHD)

AFT Hydrocarbon Doser

Big

CEM1

E39

EEC4

G6

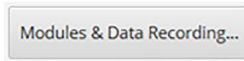
PIM

b786

0000472651

Figure 91 Group Contents

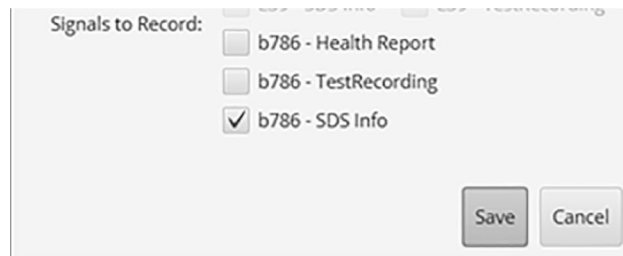
Module & Data Recording



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Figure 92 Module and Data Recording

This offers added data to be included in the session recording file.

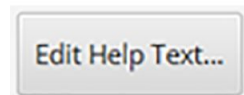


0000472653

Figure 93 Signals to Record

- Health Report Included
- TestRecording, includes all Signals
- SDS Info, include all Vehicle Panel information

Edit Help Text



0000472654

Figure 94 Edit Help Text

Opens a Text editor for the Help Panel.

SIMULATION MODE

Simulation mode will show all Tests, Procedures, Signals, and Parameters that are available for the simulated mode.

Menu Section

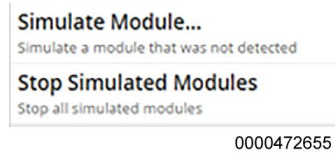
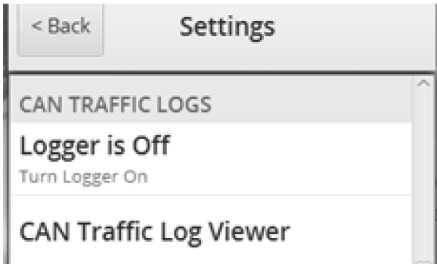


Figure 95 Simulate Mode

1. Start Simulation
2. Go to . . . **Menu** . . . **Settings** . . . **Modules**.
3. Select **Simulate Module**
4. Popup screen displays a list of available simulations.
5. Select desired Engine Model, Press **OK**.
 - Interface cable will turn off communication while running simulation.
6. Stop simulation, will return the tool back to normal operation.

CAN TRAFFIC LOGS

This feature allows the user to: Capture, View, and Export CAN Traffic logs.

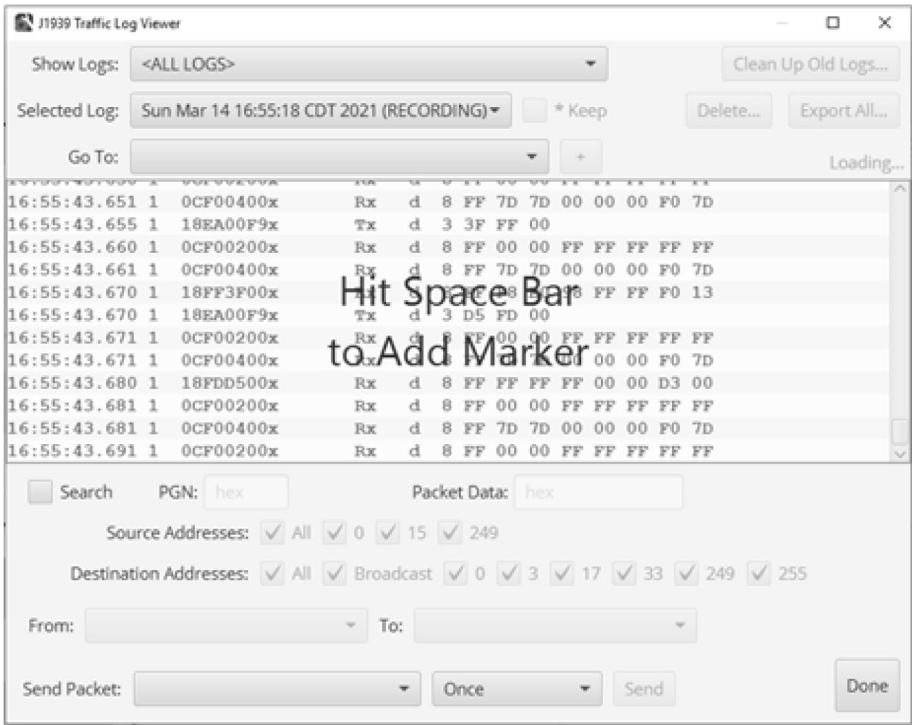


0000472595

Figure 96 CAN Traffic Logs

Open CAN Traffic Log Viewer

- 1. Go to Menu . . . Settings . . . CAN Traffic Logs.
- 2. Open CAN Traffic Log Viewer.



0000472596

Figure 97 CAN Traffic Log Viewer

VEHICLE CONNECTION

3. Turn Logger On / Off.

NOTE – Logger will remain On until user turns it OFF.

- It's good practice to, open viewer, turn Logger On, capture data, turn Logger Off.

Add Markers

Markers can be added in the Data using the Space Bar.

1. Turn Logger On.
2. Move pointer into the Traffic area and select line to highlight signal.
3. Each time you press the space bar will mark a spot in the data.

Show Logs

Select what VIN you collected logs from.

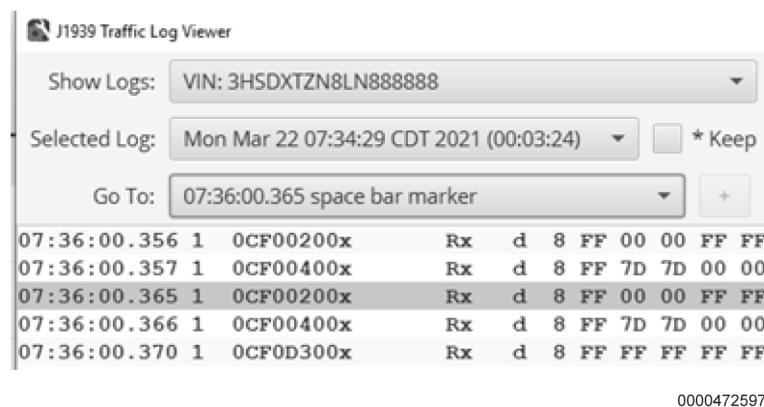


Figure 98 Show Logs

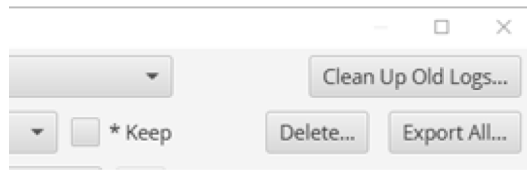
Selected Log

Select the Data and time from the pre-selected log.

Go to

This will locate the marker you placed in the log.

CAN Log Management



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Figure 99 CAN Log Management

Clean Up Oil Logs

This will attempt to upload the captured logs to the Server.

Export All

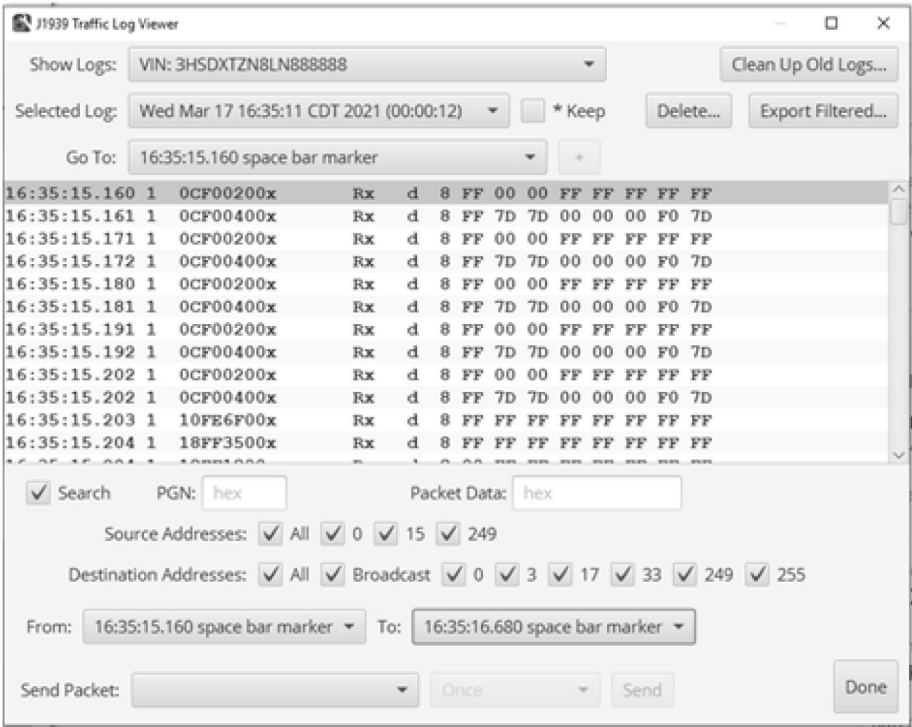
This will Export the Selected Log.

Keep

This will save the selected log for as long as it's marked keep

Search

This allows you to added filters of what to search for in the captured log.



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Figure 100 Search

Use the filters in the search area to pin-point the desired captured data, Press the **Export Filtered** button to save to file.