



Global Diagnostic System 2

Introduction

GDS 2 Reference Guide

The Global Diagnostic System (GDS 2) Quick Reference Guide provides an overview of the GDS 2 System.

Everything contained in this manual is based on the latest product information available at the time of publication. The right is reserved to make changes at any time without notice.

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General Information

GDS 2 is designed for use by trained service personnel to diagnose and repair automotive electronic systems. Every attempt has been made to provide complete and accurate technical information based on factory service information available at the time of publication. However, the right is reserved to make changes at any time without notice.

To familiarize yourself with GDS 2 and its capability, and how to use it, please read through the User's Guide before putting the GDS 2 to work.

GDS 2 provides the following capabilities in multiple languages:

- Read codes, code status, Freeze Frame data and Clear Codes.
- Read VIN, ECU part numbers and software numbers.
- Record, store and replay Stored data.
- Control and monitor Output Control functions.
- Configure and Reset functions.
- Record or display history of the previous vehicle diagnostic sessions.

Important:

SPS programming of vehicle controllers is not supported in GDS. For SPS Pass Through programming with the MDI use the TIS2Web / GlobalTIS SPS application.

Customer Support Overview

To obtain assistance with a question or problem concerning the operation of your GM-Techline product and its attached products, or to arrange for warranty and non-warranty repairs, telephone your local Customer Support Center. To order replacement parts, contact GM Dealer Equipment.

Before Calling

Before making a call to the Helpdesk, be sure to have the following information ready:

- Dealership name, address and dealer code number.
- Serial number of MDI or Notebook if applicable.
- Name, part number, and quantity of the item to be requested.
- Telephone number where the technician may be reached.

Prepare a brief description of the problem:

- Tell when the problem occurred.
- List any error codes displayed.

- Tell what accessories were being used when the problem occurred, and vehicle information.
 - Telephone number where the technician may be reached.
-

IDENTIFYING YOUR MDI

The GM MDI assembly label is located on the back of the unit. The assembly identification number has two parts: a manufacturing code for traceability and a unique serial number. The serial number is used to identify the MDI in the software.

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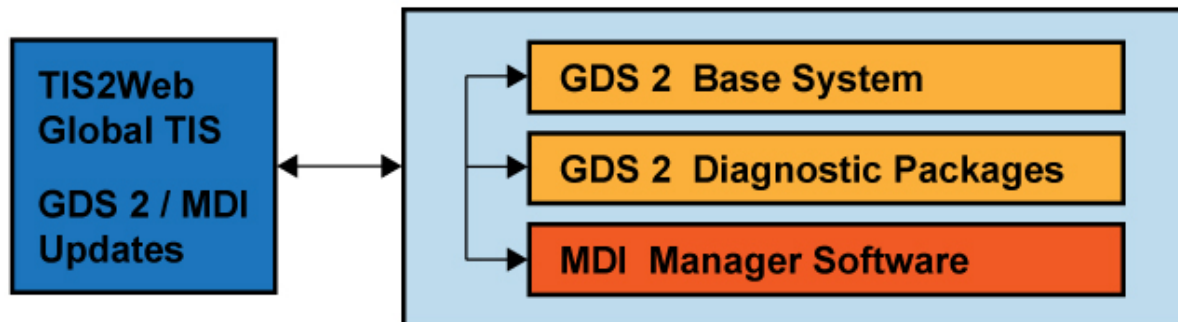
GDS 2 Installation

GDS 2 Component Overview:

The GDS 2 software contains the following modules which will be initially installed and updated frequently in certain periods.

- **GDS 2 Base System**
Installed GDS 2 base software in the PC.
- **GDS 2 Diagnostic Packages :**
Diagnostic data packages for vehicle models which execute the diagnostic routines with the vehicle controllers.
- **MDI Software (separate Application):**
Application for update and configuration of the MDI Device (Multiple Diagnostic Interface).

GDS 2 Component Overview Diagram :




Installation:

GDS 2 can be installed directly as a download from TIS2Web / Global TIS.

Important:

A minimum of 2 GB of RAM is required to run GDS 2. Download and installation time is dependent upon the internet bandwidth available during the download process. **The GDS 2 application needs to be loaded on each shop PC individually.** Once the initial application installation is complete, GDS 2 will run in either a standalone mode when launched from the PC desktop icon or from TIS2Web.

Installation of GDS 2

- PC must be started in Admin mode.
- Enter the TIS2Web application. Click "**Continue**".
- A software version screen will be displayed. Click "**OK**".
- Select GDS 2 from the TIS2Web home page  [I].
- Select "**Start GDS 2**" from the "**BEFORE YOU START SCREEN**" screen.
- A pop-up window will appear with an update data bar. The GDS 2 installation may go through several steps.
- Once GDS 2 is installed, select the appropriate language and Click "**OK**". The main application screen will be displayed next [II]. A GDS 2 logo will now also be displayed on your desktop. GDS 2 Software Version and GM Global Version will appear at the bottom left hand corner of the screen (12).
- You must install the Diagnostic Package prior to using the application. If a Diagnostic Package is not installed, a "**No Diagnostic packages installed in application**" message appears on the GDS 2 main menu. See **Download and Update GDS 2 Diagnostic Packages**, below.

Installation from TIS2Web / Global TIS:

Important:

During the installation from TIS2Web, approximately 50 MB of data is downloaded via the internet. Depending on your computer's security, your firewall may require reconfiguration to perform TIS2Web functions.

Important:

The described update processes require that the PC is running always in Admin mode.

GDS 2 License Control System (Lease)

The GDS 2 lease prevents the unauthorized use of GDS 2. To renew the GDS 2 lease it is required to launch GDS 2 from TIS2Web or Global TIS. The GDS 2 lease requires renewal after 7 days if the application was launched during that time in standalone mode only.

If the GDS 2 lease renewal fails, the error message "No valid lease found" [III] prompts the user to launch the GDS 2 application from TIS2Web / Global TIS for lease renewal. If the lease agreement fails, click on the Diagnostic Client (2) [I-2], and delete the Software Key and launch the Application. If difficulty persists, ensure the computer is in **admin mode** by returning to the desktop **GDS 2 Shortcut** icon, **right click**, and select "**Run as administrator**".

Download and Update GDS 2 Diagnostic Packages

GDS 2 Diagnostic Packages are diagnostic applications, which control the communication and the diagnostic services between GDS and the vehicle controller.

Download and Update of the GDS 2 Diagnostic Packages.

- Click on "**Manage Diagnostic Packages**" (2) to install a diagnostic package [II-2].
- Valid Diagnostic package(s) will appear below the **Update Diagnostic Package** heading [IV].
- Select the diagnostic package (1) you want to download from the list on the screen. Model Year, Make, and Model will appear towards the bottom of the screen for the package highlighted (2). When you find the diagnostic package desired, select "**Download Release**" (3).
- As a diagnostic package is loaded, installation will be displayed on the screen [IV]. Loading time will vary depending upon the size of the diagnostic file(s) to be installed.
- After the diagnostic package is installed GDS 2 will close itself and restart automatically. Please wait until the GDS 2 window comes up again showing the startup screen. This may take a while. Don't try to manually restart GDS 2 during this timeframe [I-3]. The word "**Current**" will now appear on the Update Diagnostic Package screen for the application selected.

Uninstallation of GDS 2:

GDS 2 can be uninstalled by starting the following programs:

For Windows 7:

"Start" (Windows 7 Logo) - Control Panel - Programs - Programs and Features - Uninstall a program - Double click on "**GDS 2**" - Select "**Yes**".

For Windows XP:

"Start" - Programs - GDS 2 - Uninstall GDS 2.

Change the GDS 2 Language / Regional Settings:

Select **Language** (4) from the GDS 2 main application screen [II-3] . A list of available languages will be displayed. Select the appropriate language and exit the screen by selecting "**back**"(8).

Getting Started

Prior to using GDS 2

It is important to observe the following precautions:

Notice:

- To help avoid Vehicle Module damage only use current versions of MDI software. The GDS 2 and Multiple Diagnostic Interface (MDI) must have the latest software. Failure to update the MDI with the latest software may result in misdiagnosis of vehicle.
 - Make sure the vehicle battery is fully charged. Battery voltage for GDS 2/MDI should be between 12 and 14 volts for a 12 volt vehicle. Due to the time requirements of diagnosing a controller, install EL-49642 SPS Programming Support Tool (North American Usage) or CX Pro 25/CX Pro 50 (European Usage - distributed by SPX) to maintain system voltage. Stable battery voltage is critical during programming. Any fluctuation, spiking, over voltage or loss of voltage will interrupt programming.
 - If SPS Programming Support Tool EL-49642 or CX Pro 25/CX Pro 50 is not available, **DO NOT** connect a regular battery charger. Connect a fully charged 12V jumper or booster pack disconnected from AC voltage supply.
 - Make sure the cable connections are secured.
 - In using a laptop computer/other display device for GDS 2, ensure that the power supply is properly connected. If powered by an AC power cord, ensure computer is receiving power. If the laptop is operating from its internal power source (battery), then make sure it is adequately charged to utilize the GDS 2 program.
-

Important:

In order to reduce the potential for signal loss, the MDI should be configured for the most stable communication option at your location. You can choose from USB, Ethernet, or Wireless Ethernet.

GDS 2 Start - Up Procedure

Starting GDS 2

GDS 2 can be started through TIS2Web/Global TIS by clicking the "**GDS 2**" icon [I-1]. Alternatively GDS 2 can be launched in standalone mode through the Windows Start menu.

Navigation Selections

There are five main navigation selections available towards the bottom of all GDS 2 screens [II-4]. Selections not active for the current screen will be displayed in grey. The selections have the following functions:

- Back** (7) returns you to the previous screen
- Feedback** (8) This selection will be available at some time in the future. This selection (8) is your opportunity to provide feedback on any problems that you may have experienced with the application, or suggestions of any improvements that you would like to see. We would also like to hear comments on what we are doing right. When describing problems please be as descriptive as possible. Explain exactly what you were doing when the problem occurred and if the problem is reproducible.
- Home** (9) returns you to the main application screen
- Module** (10) takes you back to a previous menu for the selected vehicle
- Enter** (11) allows you to make a selection.

Entering Vehicle/MDI Information

1. Select the **Diagnostics** icon (1) from the main application screen [II-5].
2. The Vehicle Selection Menu will be displayed.
 - **[V] MDI Selection:** All MDIs available on the various networks at the dealership are displayed. You can select the MDI that you are using to perform vehicle diagnostics. For MDI connection, highlight the available MDI (1) by clicking on it and select "**Connect**". Choose "**Select Device**" to check for new MDIs on the available networks. To continue GDS 2 without any connected MDI, select "**Navigate Without Device**" (1) [VI]. After the initial connection to an MDI by a specific PC, the subsequent connections will be made automatically when the specific MDI is available.
 - **[VI] VIN Entry:** Given the MDI is connected to the vehicle, the VIN number (2) will be automatically be received by the GDS 2 software. If not, the Vehicle Identification Number (2) can be manually entered (MDI connection required). After the VIN is entered, the vehicle's Make, Model, and Model Year will be displayed on the screen. The VIN can also be read by selecting "**Read VIN**" (4), then "**Decode VIN**" (3). "**Timestamp**" (5) provides a record of when the data was originally viewed/stored. To proceed in the diagnostics process,

Select "**Enter**" (6).

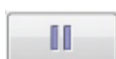
- **Vehicle Identification Selection:** If you do not want to enter a VIN, the vehicle Make, Model and Model Year can be selected through a series of screens. You are also able to select a number of diagnostic options, depending upon the function(s) you want to explore. Module Diagnostics, Diagnostic Trouble Codes, Identification Information, Control Functions, Configure/Reset Functions etc.
- [VII] **Vehicle Diagnostic History :** If a vehicle has been diagnosed previously with GDS 2, the VIN and associated information will be stored towards the bottom of the screen. Entire diagnostic sessions for multiple VINs can be displayed and stored. Highlight the vehicle you want to diagnose (1) and select "**Enter**" (2).

Diagnostics

Diagnostic Data Display

To enter Diagnostics, select the **Diagnostics** icon (1) from the main application screen [II-6].

The Diagnostic Data Display application provides real-time status of the vehicle controller data and signals. On the GDS 2 Diagnostic Data Display, available data lists are available from a drop down menu [VIII].



Pause Selection (1) : Click on this selection to pause the display of data.



Up Arrow (2): Click the up arrow, to scroll the highlighted bar one parameter up. Selection not available from the first parameter.



Down Arrow (3) : Click the down arrow, to scroll the highlighted bar one parameter down.



Plus Magnifying Glass (4): Click on the plus magnifying glass to increase the size of highlighted displayed data



Minus Magnifying Glass (5): Click on the minus magnifying glass to decrease the size of the highlighted displayed data.



Eye Icon (6): This selection opens another set of icons that allow you to change the display properties of graphed data [IX] .



Light Switch (7) : Click on the light switch to change the data from English to Metric Units.



Lock (8): Will move highlighted data to the top of the data list.



Graph Icon (9) : Marks data points (with hash marks) on graphed data lines.



Add Snapshot Bookmark (10): Can be used to "tag" the data as a bookmark for future retrieval.



Line Graph Tab (11) : Can be used to provide a graph of previously stored data for the selected data list.



Module (12): Can be used to return to the list of available vehicle modules.



Provides additional directional selections for graphical displays [X].

The **Scroll Bar** is located between the graph display and selection drop down menu and allows you to scroll up or down in the data lists.

DTC Display

When **Diagnostic Trouble Codes (DTC)/DTC Display** is selected, a summary screen with a list of **Control Module Name** (1), **Control Module Status** (2), and **DTC Count** (3) is displayed [XI].

Details Selection

If **Details** [XI] (4) is selected, a detailed DTC display screen appears [XII]. **Control Module** (1), **DTC** (2), **Symptom Byte** (3), **Description** (4), **Symptom Description** (5), and **Status Byte** (6) are all displayed at the top of the chart. At the bottom of the chart **Category** (7) and **Decoded Value** (8) are shown. **Back** (9) returns you to the DTC display.

Refresh DTCs

If **Refresh** [XII] (10) is selected, GDS 2 will request a DTC update from the controller.

Clear DTCs

If **Clear DTCs** [XIII] (11) is selected, a DTC Display screen will appear [XIII].

Use **Add** (1) or **Add All** (2) to select the ECUs you want to clear. Some ECUs can only be cleared together, in which case they will be selected together. Select **Remove** (3), to start the process to clear the selected ECUs. Select **Remove All** (4), to start the process to clear all the ECUs. Select **OK** (5), to clear selected ECUs. Select **Cancel** (6), if you do not want to clear any ECUs at the current time. If **OK** is selected, a message to clear DTC's will appear. The deleted code(s) will disappear with the next refresh.

Leave the DTC Application

Leave the DTC Application via the **Back** and then **Home** selections.

Important:

Only the **Close Application** (6) selection allows you to completely leave the **Diagnostic Application** [II-7]. It is not possible to exit GDS 2 while diagnostic applications are being performed. To Exit GDS 2 navigate back to the GDS 2 Application page by selecting **Home** when it is available.

GDS 2 Stored Data (snapshot)

In GDS 2 there is no conventional snapshot as there has been in the past. GDS 2 will save all of the past 20 VINs and diagnostic data for future viewing. While viewing live data, the user has the option to "tag" the data with bookmarks. To view previously stored data:

- Select **Review Stored Data** (3) from the GDS home screen [II-8].

- Select **Export Session** (1) [XIV], if you want to send this session to Customer Support, etc. Select this option. Select the session you want to export. Next, Select you target directory of where you what to save it. Select "**Open**" and the file will be saved. This file can be sent in an email, etc.
 - Choose **Import Session** (2) [XIV], if you want to bring in a Snapshot file to view in GDS 2, select this option. The Snapshot file will be sent to a directory for viewing in GDS 2.
 - Select **Delete** (3) [XIV], to delete a session.
 - Select **Snapshot** (4) [XIV], to display the highlighted snapshot event.
-

Configuration and Reset Functions:

The configuration and reset functions are specific controller functions which need to be executed when system actuators are replaced or when they require a reset. For more details refer to the applicable Service Manual of the system.

Troubleshooting

MDI Connection Problems

If the MDI connections are loose or not properly connected to the vehicle/computer, a loss of communications message will be displayed. Perform the following steps:

- Make sure the MDI Manager Software is not running at the same time GDS 2 is being used.
- Make sure the MDI is properly connected to the vehicle and computer.
- Insure sufficient voltage is available for proper function of the MDI vehicle interface.
- Use a known "good USB cable" from another MDI unit, if available. Confirm all connections and try again.
- Use a known "good MDI DLC connection cable" from another MDI unit, if available. Confirm all connections and try again.
- If the condition is still present, contact Customer Support.
- Make sure that the firewall does not block GDS 2/MDI communication.

Important:

MDI Manager Software can not be in use when attempting to use GDS 2.

Screen Images

The following screens are the associated Help screens as linked in the above document.

The screenshot displays the Opel TIS software application interface. At the top, there is a menu bar with the following items: Home, SI, LT, SWDL, SPS, SPS Info, Security, Snap, T2 View, TL Print, GDS, GDS 2, RPO. On the right side of the menu bar, there are several icons, including a question mark icon. Below the menu bar, the text "Opel" is visible on the left, and "GM Service and Parts Operations" is visible on the right. A red circle with the number "2" is placed over the "Service and Parts Operations" text.

The main area of the interface contains a grid of help screens, each represented by an icon and a label:

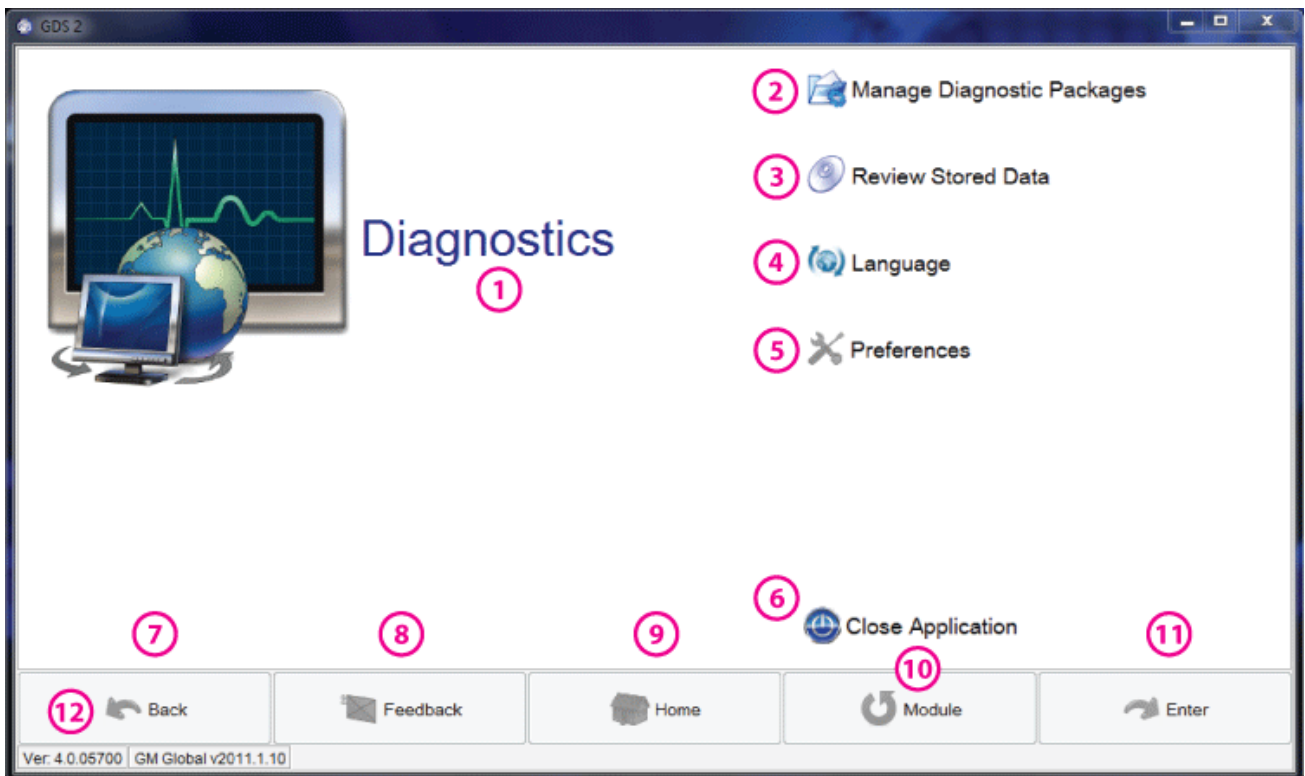
- Service- and Diagnostic-Information (SI)
- Labour Times (LT)
- Software Download (SWDL)
- Service Programming System (SPS)
- Calibration Information (SPS Info)
- Security Access (Security)
- Snapshot (Snap)
- Tech2 View (T2 View)
- Techline Print (TL Print)
- Global Diagnostic System (GDS)
- Global Diagnostic System 2 (GDS 2)
- RPO Code Display (RPO)

A red circle with the number "1" is placed over the "Global Diagnostic System 2 (GDS 2)" icon.

The TIS software application does not support the use of the browser's Forward and Back buttons. Errors will occur. Please only use the buttons that are displayed on the application screens and not on the toolbar.

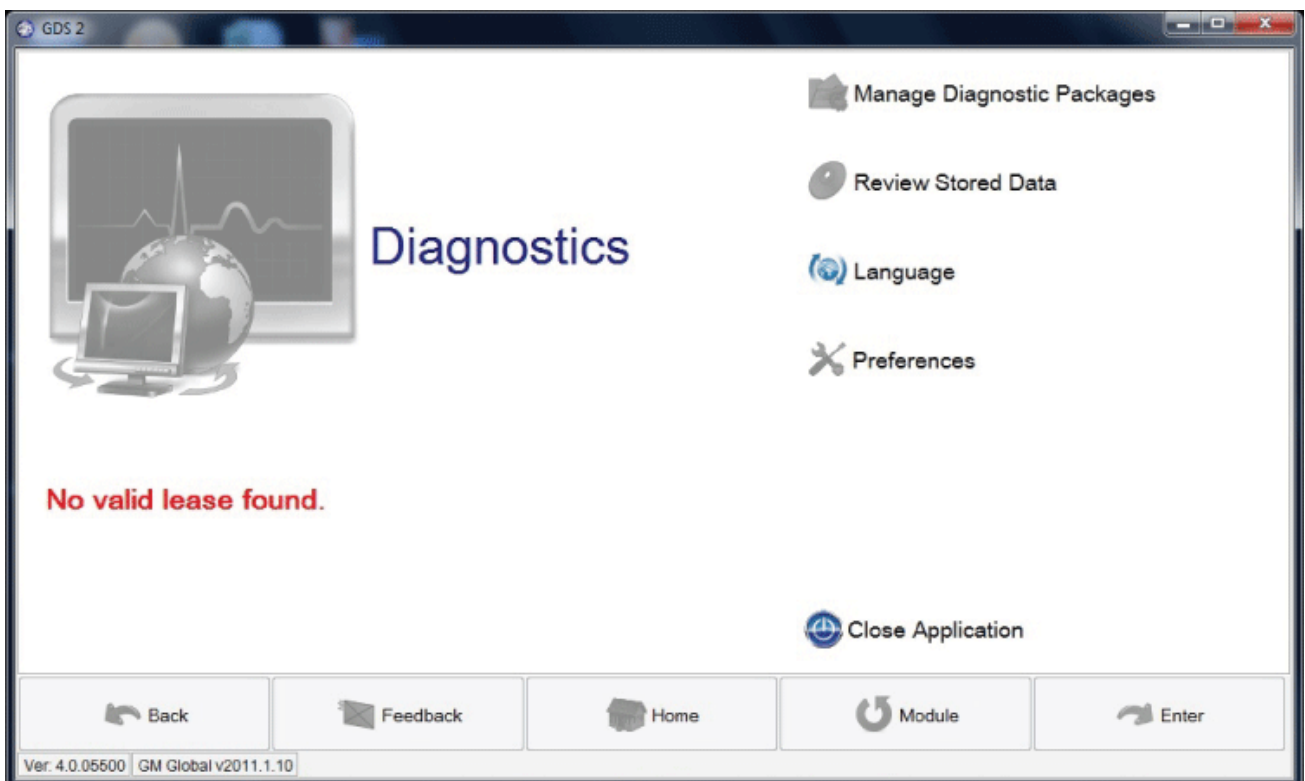
I

Return to [\[I\]](#) [\[I-2\]](#) [\[I-3\]](#)



II

Return to [\[I\]](#) [\[II-2\]](#) [\[II-3\]](#) [\[II-4\]](#) [\[II-5\]](#) [\[II-6\]](#) [\[II-7\]](#) [\[II-8\]](#)



III

Return to [\[III\]](#)

GDS 2

Update Diagnostic Package

①

Diagnostic Package	GDS2 Version Compatibility	Hardware Version Compatibility
Server GM Global v2011.1.10 2011-02-26 09:38:08	✔ GDS2 Version - 4.0.05600	✔ GM MDI Version - 7.10.87
Server GM China v2011.2.0 2011-02-28 15:28:15	✔ GDS2 Version - 4.0.05700	✔ GM MDI Version - 7.10.87
Server GM Global v2011.2.0 2011-02-28 14:49:05	✔ GDS2 Version - 4.0.05700	✔ ③ Version - 7.10.87

②

[Download Release](#)

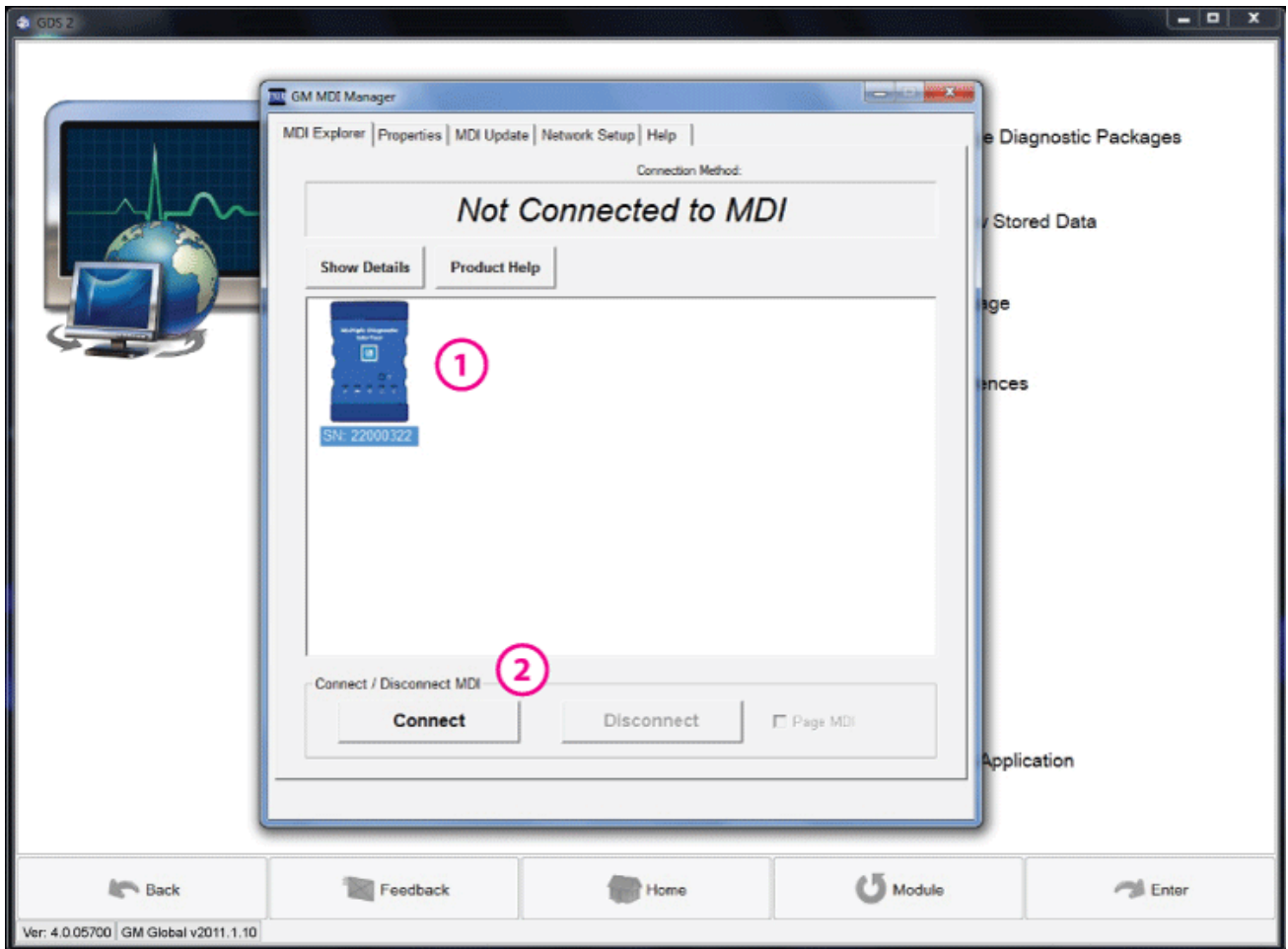
Model Year	Make	Model
2008	Chevrolet	HHR (Europe)
2009	Chevrolet	HHR (Europe)
2009	Daewoo	Lacetti
2010	Buick	Allure

[Back](#)
[Feedback](#)
[Home](#)
[Module](#)
[Enter](#)

Ver: 4.0.05700 | GM Global v2011.1.10

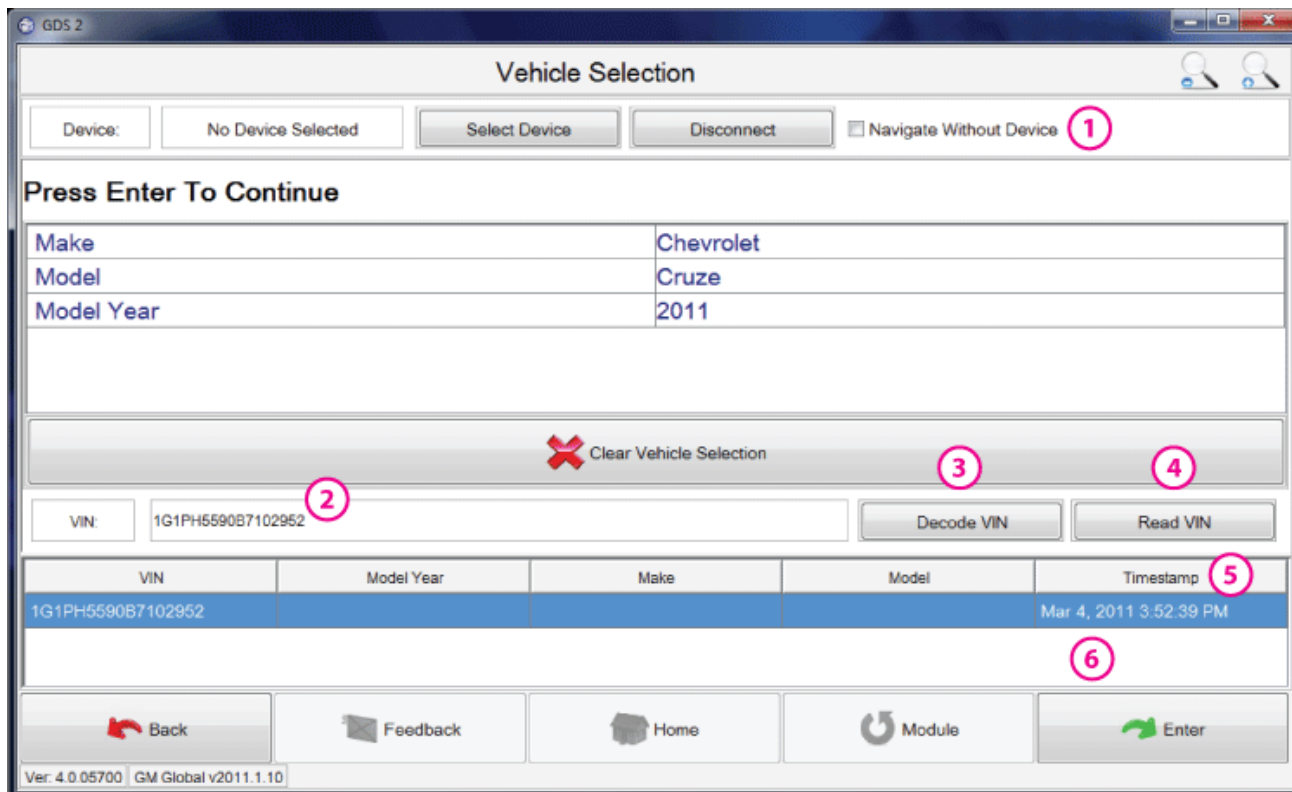
IV

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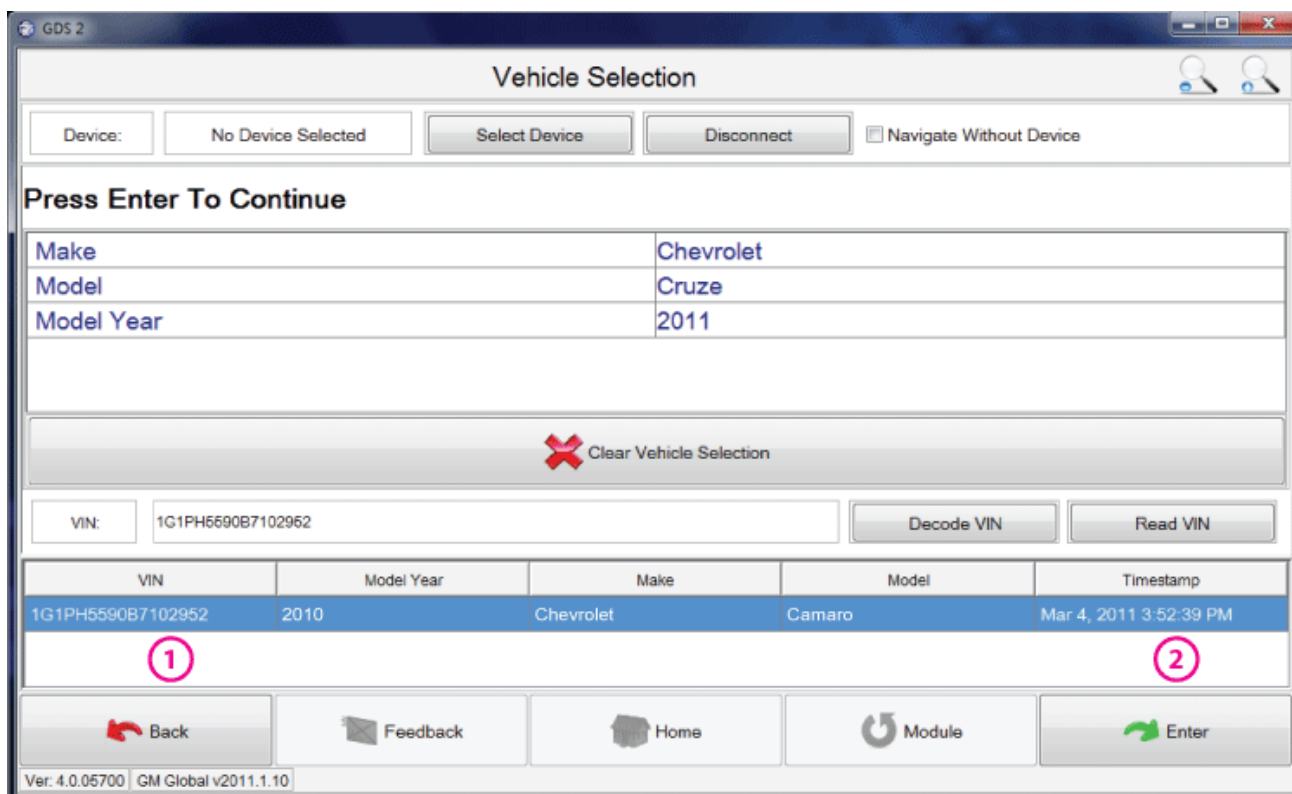
V

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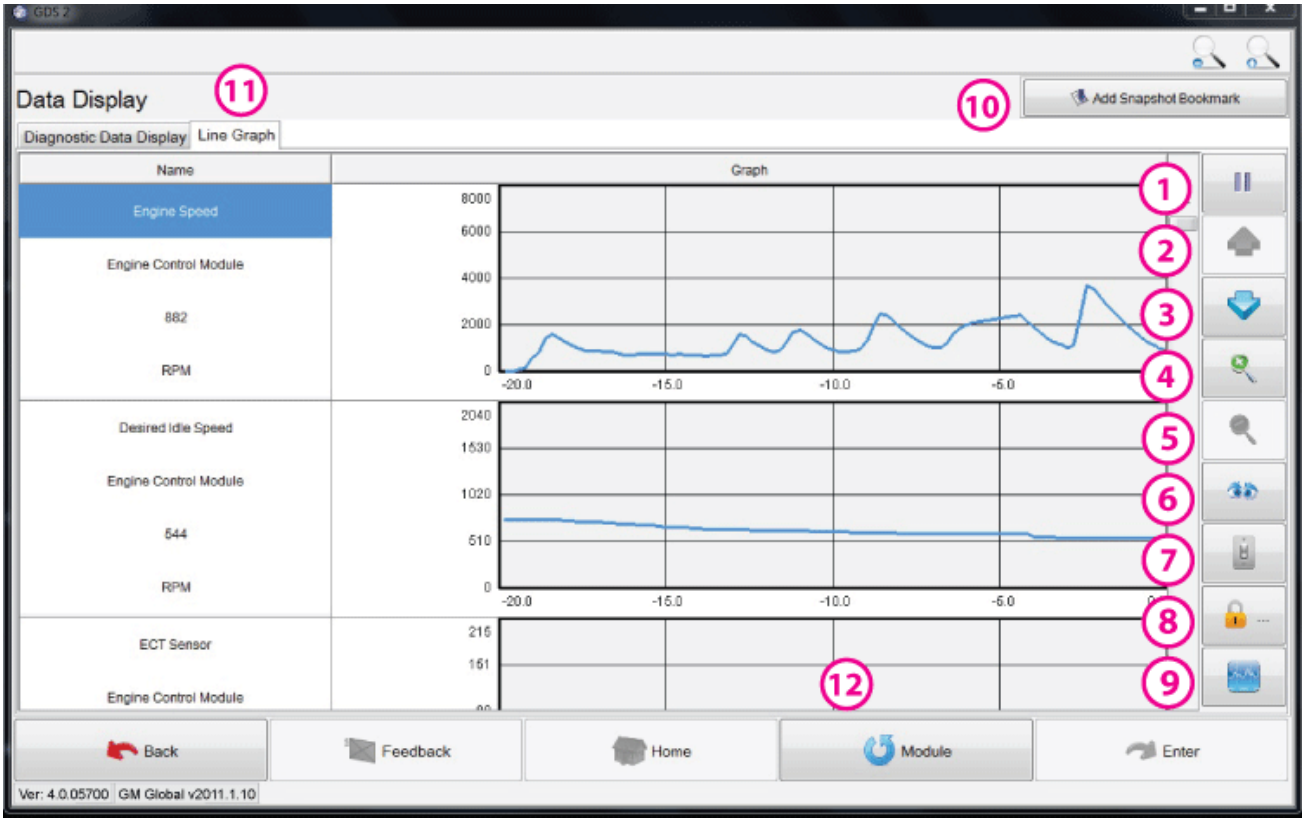
VI

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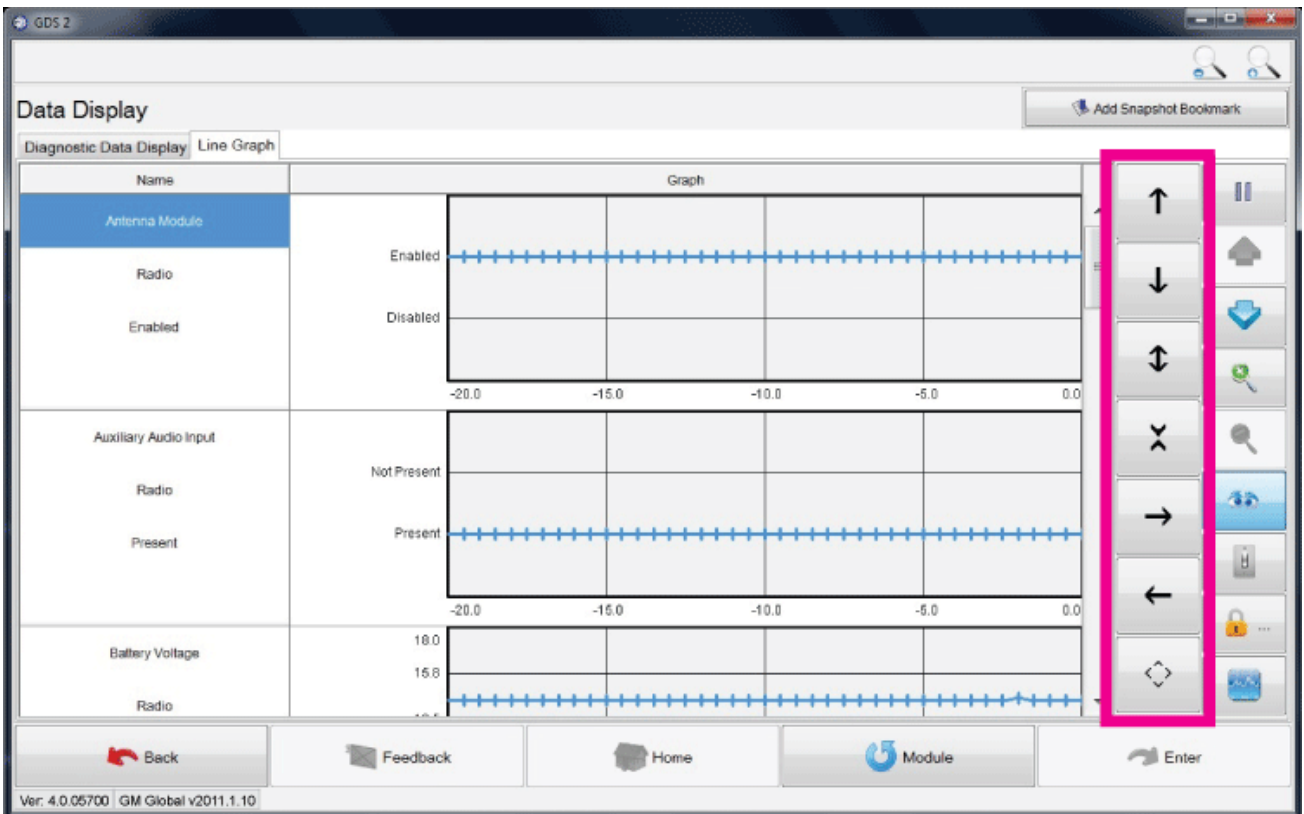
VII

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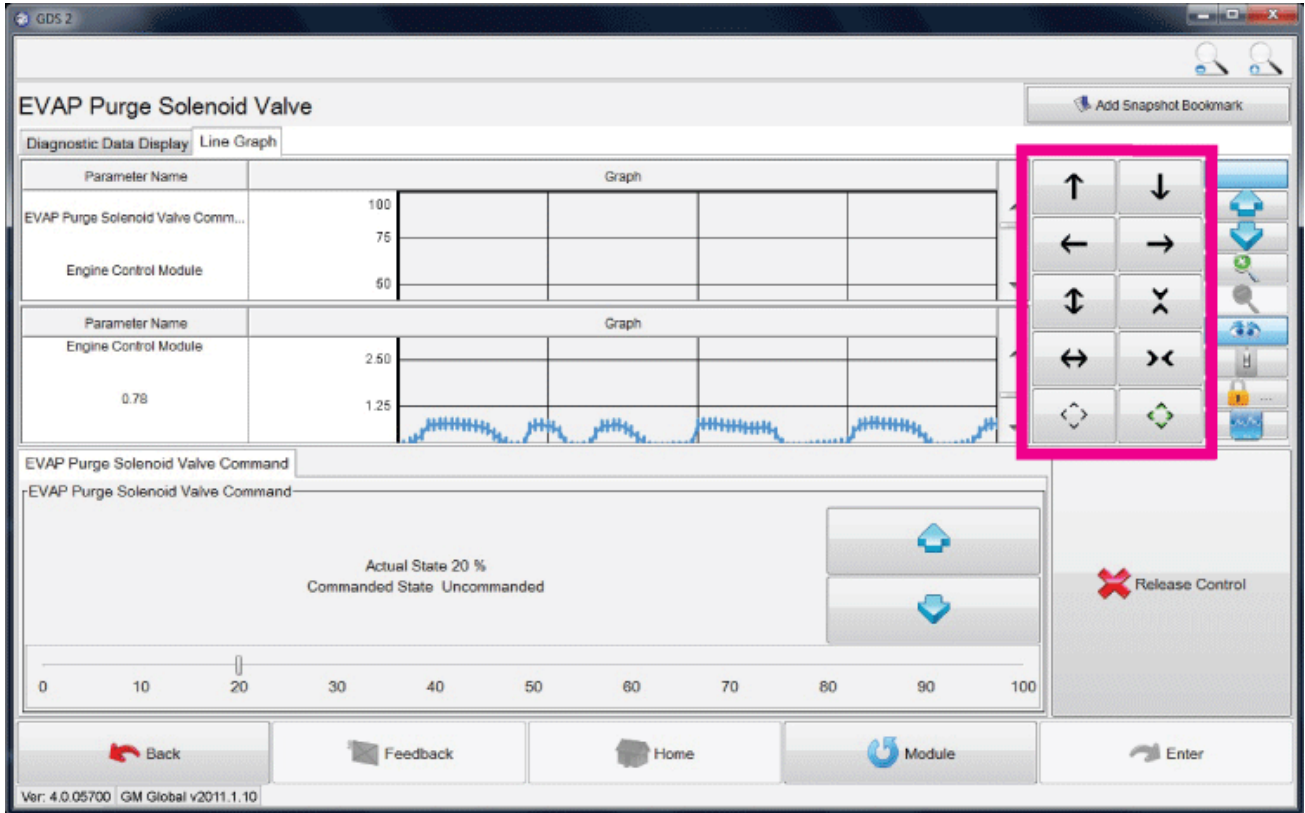
VIII

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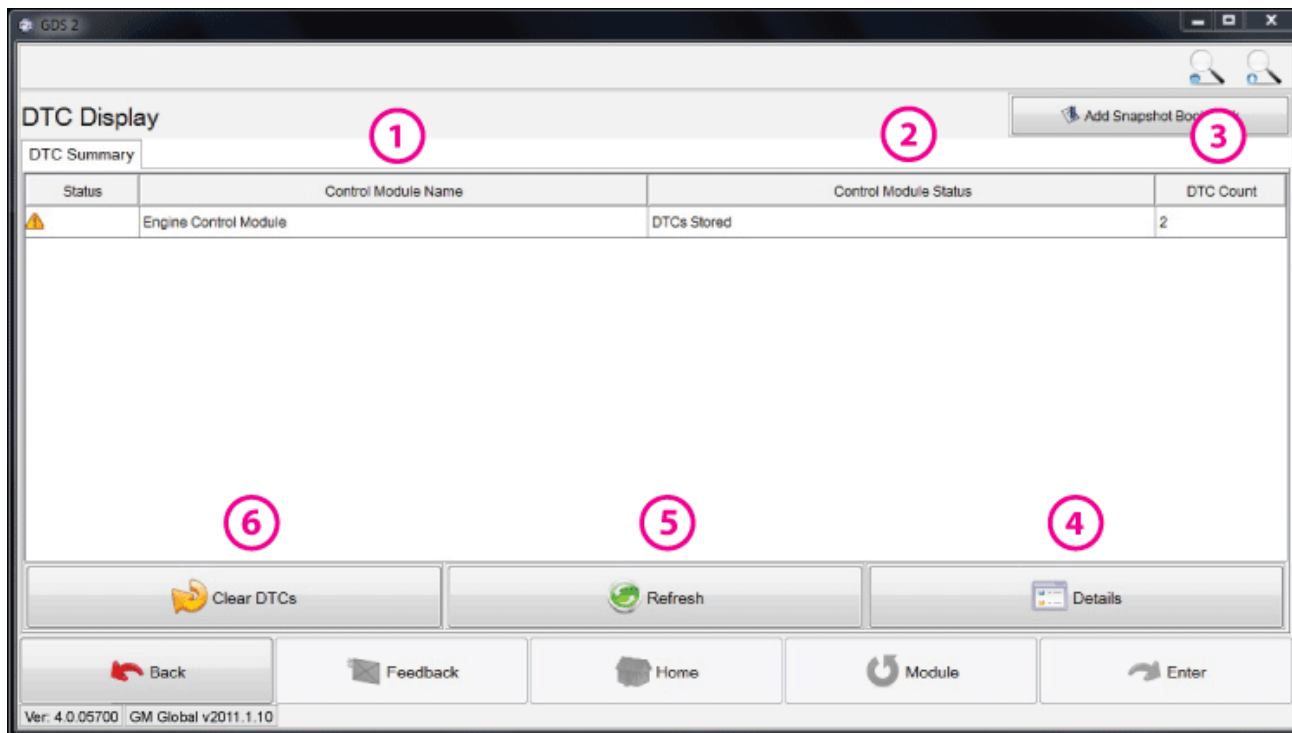
IX

Return to [\[IX\]](#)



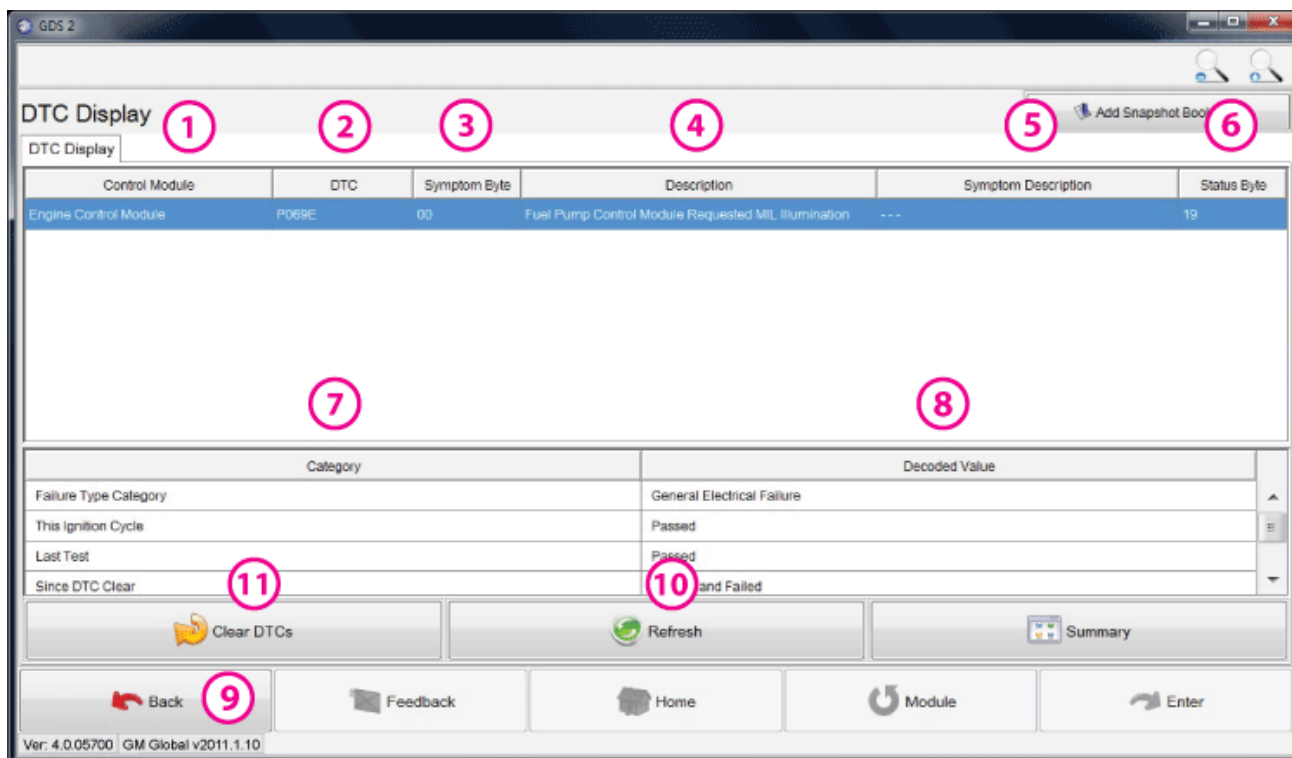
X

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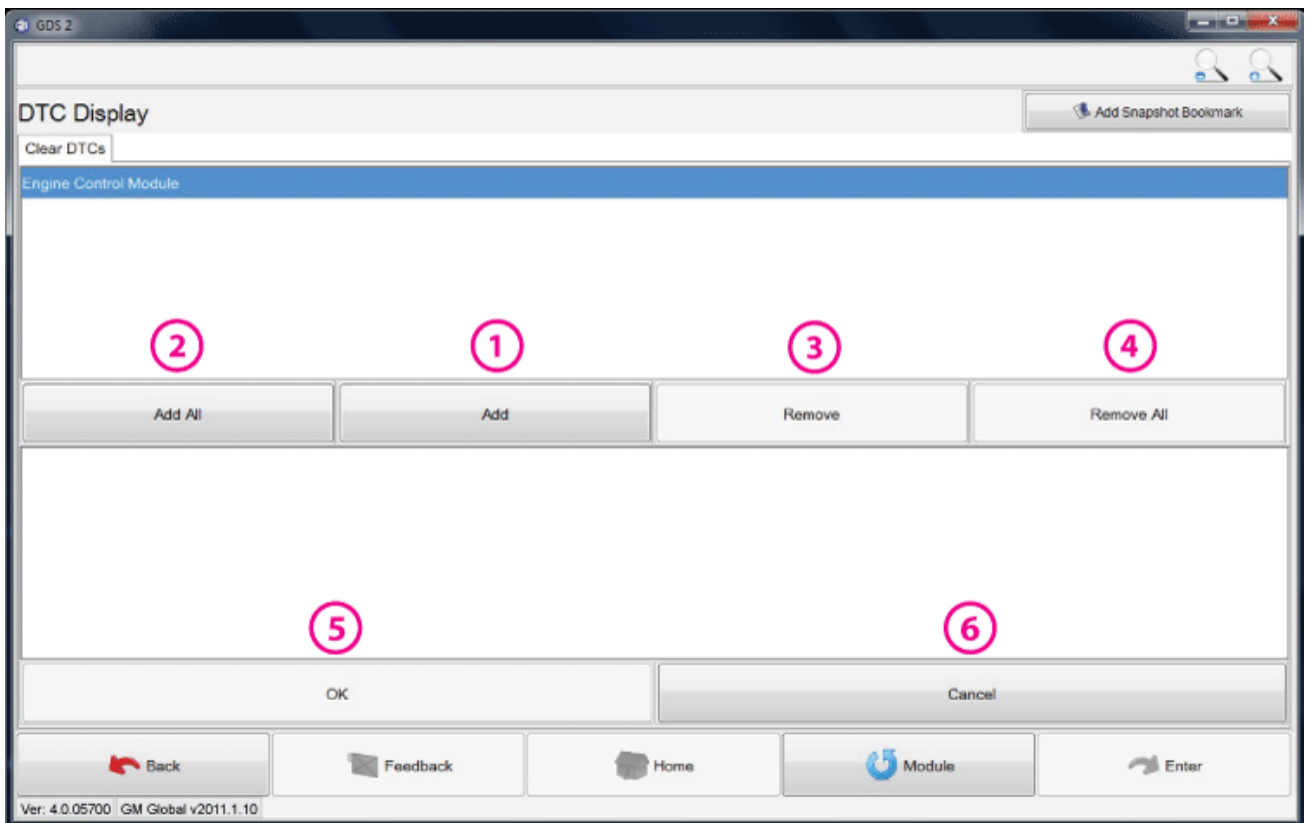
XI

Return to [\[XI\]](#)



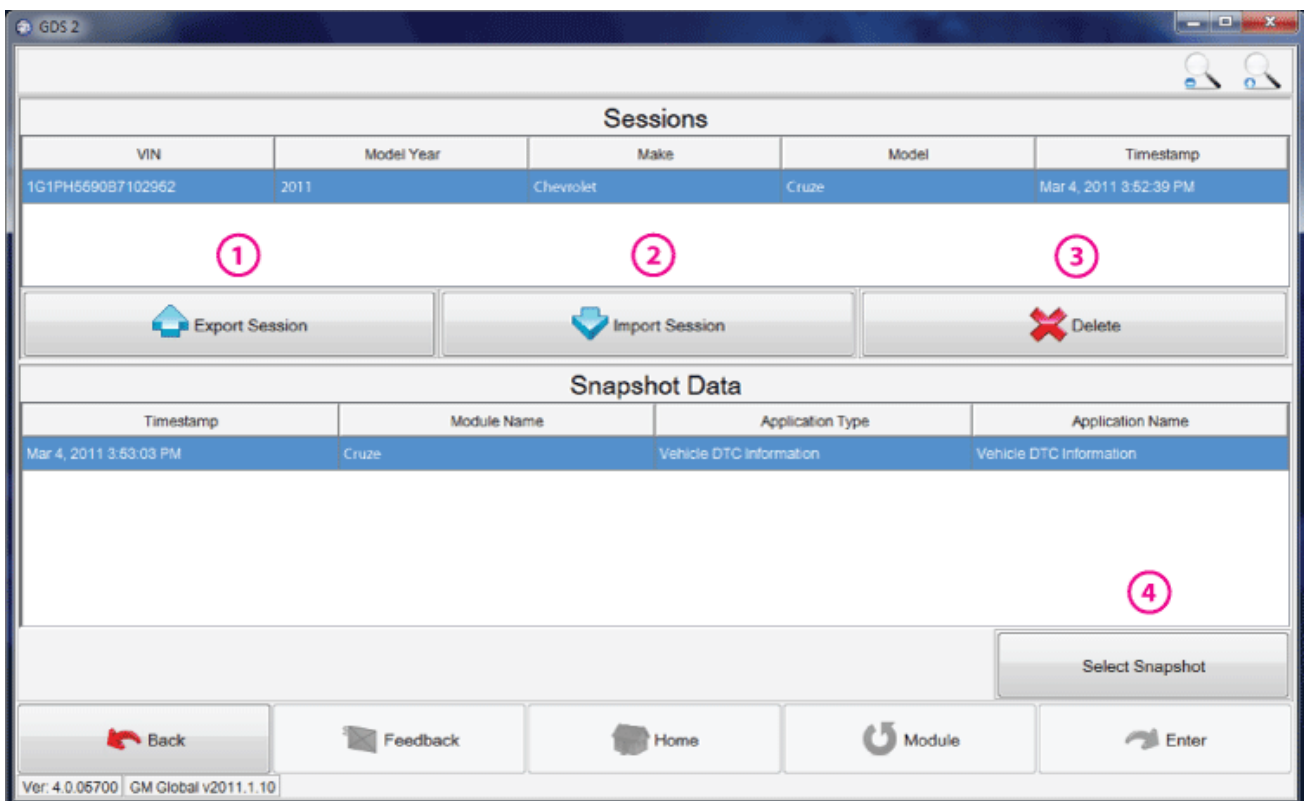
XII

Return to [\[XII\]](#) [\[XII-2\]](#)



XIII

Return to [\[XIII\]](#)



XIV

Return to [\[XIV\]](#)

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