

# INSITE™ 7.6.1 - What's New?

#### **Electronic Service Tools**









# What's New Topics?

- Installation
- Operating Systems Supported
- New Engines Supported
- New Features Supported
- New ECM Diagnostic Test Supported
- What's New Summary
- INSITE™ Overview



# Installation INSITE™ 7.6.1 installation

- INSITE™ 7.6.1 is available for download through the Cummins Inc. Update Manager
- INSITE™ v7.6.0 or INSITE™ v7.6 SP1 must be installed before installing INSITE™ v7.6.1
- Administrative rights are NOT needed to install INSITE™ v7.6.1
- A new password will not be required if an active subscription to INSITE™ exists



# **Operating Systems**

- Supported:
  - Windows® 7, 32-bit and 64-bit
- Not supported:
  - Windows® XP, 32-bit and 64-bit
  - Windows® Vista, 32-bit and 64-bit

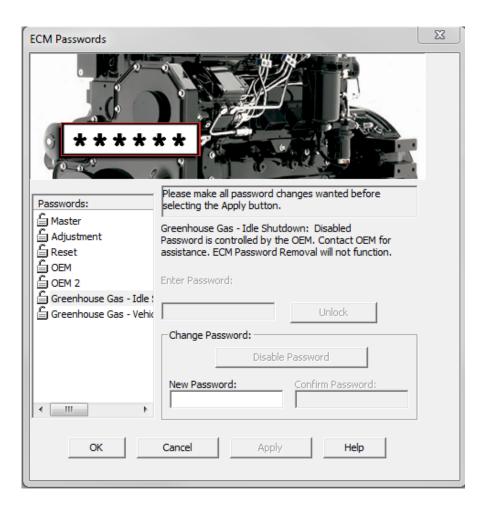


# New/Modified Base Features Supported

- Greenhouse Gas (GHG) ECM Security
- Greenhouse Gas Idle Shutdown and Greenhouse Gas Vehicle Speed Limiter are two new ECM Security settings designed to allow OEMs to configure engine settings to meet the requirements of the GHG Rules which allows the OEM to claim GHG emissions credits. The OEM will program the features and lock the values with an ECM password.
- These programmed parameters can only be changed when the password has been provided by the OEM.
- The Greenhouse Gas ECM passwords are controlled by the OEM and ECM Password Removal will not function on parameters locked with Greenhouse Gas ECM Security.



# Greenhouse Gas (GHG) ECM Security





# Greenhouse Gas (GHG) - New in Features and Parameter

⊒ 🗂 Idle Shutdown	Enable	
Note:	54	F
∼ Nercent Engine Load	20	Percent HH:MM:SS
↑ Time Before Shutdown	00:10:00	
-⊞ 💼 Ambient Temperature Override	Enable	
- □ <b>a</b> Greenhouse Gas Idle Shutdown	Enable	
	46603	mi
💼 Idle Shutdown With Parking Brake Set	Enable	
<mark>≜</mark> In PTO	Enable	
manual Override	Enable	
= Shutdown Accessory Relay	Installed	
⊞ <b>≜</b> Warning Period	Enable	

🛅 Road Speed Governor	Enable	
Maximum Accelerator Vehicle Speed	65	mph
Maximum Vehicle Speed	75	mph
Noad Speed Governor Lower Droop	5	mph
Noad Speed Governor Upper Droop	9	mph
Greenhouse Gas Vehicle Speed Limiter	Enable	
→ No Distance Threshold	62	mi
Maximum Vehicle Speed	75	mph
	1243	mi
Neset Interval	435	mi



# New Features Supported

 Note: New features and monitors will be displayed by INSITE only if they are supported by the calibration.

#### Accelerator Brake Override

 This feature provides the ability to limit the accelerator when both the accelerator and brake pedals are pressed for a period of time.
 This will allow the operator to move the vehicle to a safe position when conditions such as a stuck accelerator pedal or lever occurs.

#### Battery Power Required Lamp

This feature informs the user when it is safe to remove power after key off. This allows all data to be saved to the flash, perform any Key OFF tasks and for the ECM to safely shutdown. Once the lamp goes OFF, it indicates it is safe to remove power.

#### Coolant Level Sensor

 This feature provides the necessary parameters to interface with the Engine Coolant Level Sensor 2.



# **New Features Supported**

### • Electric Fuel Lift Pump

 This feature provides the ability to configure the Electric Fuel Lift Pump.

#### Fuel Level Sensor 2

 This feature provides the capability to enable the Fuel Level Sensor 2.

### Fuel Level Sensor 2 Multiplexing

 This feature provides customers to configure the ECM to accept the Fuel Level Sensor 2 input via the datalink instead of a physical ECM input.



# New Features Supported

#### Greenhouse Gas Idle Shutdown

This feature provides the ability for the OEM's to enable Idle Shutdown as well as
define the distance the vehicle must travel before Idle Shutdown can be modified.
To change these settings, the OEM must be contacted for the Greenhouse Gas Idle Shutdown password.

#### Greenhouse Gas Vehicle Speed Limiter

This feature provides the ability for the OEM's to set the Maximum Vehicle Speed and driver initiated overrides as well as define the distance the vehicle must travel before these settings can be modified. To change these settings, the OEM must be contacted for the Greenhouse Gas - Vehicle Speed Limiter password.

#### Idle Shutdown Warning Period

 This feature will set up the amount of time the warning lamp will blink before the engine is shutdown while idling.

#### Step Size Adjustment

 This feature provides the ability to configure the amount of increase or decrease in step size when adjusting the Power Take Off speed.

# New ECM Diagnostic Test Supported

#### Aftertreatment SCR Performance Test

 The Aftertreatment SCR Performance test can be used to monitor the status of the Aftertreatment SCR Catalyst Outlet NOx Sensor and the Aftertreatment SCR Catalyst. This test also starts the Aftertreatment Diesel Particulate Filter Regeneration.

### **New Monitors Supported**

- Aftertreatment Combined Soot Load Estimate
- Aftertreatment Diesel Exhaust Fluid Dosing State
- Aftertreatment Diesel Exhaust Fluid Line Heater 3 Status
- Aftertreatment Diesel Oxidation Catalyst Intake Temperature
- Aftertreatment Diesel Particulate Filter Intake Temperature
- Aftertreatment Diesel Particulate Filter Outlet Temperature
- Aftertreatment Differential Pressure Soot Load Estimate
- Aftertreatment Model Based Soot Load Estimate
- Air Conditioner Pressure
- Air Conditioner Status
- Air Conditioning Pressure Sensor Voltage
- Alternator Voltage
- Clutch Interlock Park/Neutral Switch
- Dual Valve Fuel Control Mode
- ECM Key Off Time
- EGR Cooler Bypass Valve Position
- EGR Flow Ratio
- EGR Valve Flow
- EGR Valve Position Commanded
- EGR Valve Position Fault
- Engine Operating State
- Engine Torque Mode
- Failed Handshake Count
- Fuel Level Sensor 2
- Fuel Rail Pressure Feedback
- High Speed Governor Breakpoint Speed
- High Temperature Coolant Intake Temperature
- High Temperature Coolant Intake Temperature Sensor Voltage
- Interstage Pressure

- Interstage Pressure Sensor Voltage
- Low Speed Governor Reference Speed
- Mass Air Flow Frequency
- Oil Pressure Switch Status
- Open Modular Diaphragm Valve Engine Run Time
- Pressure Control Valve Current Commanded
- Pressure Control Valve Current Feedback
- Primary Accelerator Pedal or Lever Position
- Secondary Accelerator Pedal or Lever Position
- SKIM Communication Status
- SKIM Handshake Timer
- SKIM Key Received Count
- SKIM Reset Status
- SKIM Status
- Stationary Pumping Mode
- Throttle Differential Pressure
- Throttle Differential Pressure Sensor Signal Voltage
- Total Confirmed Modular Diaphragm Valve Pop-Offs
- Voltage Regulator Driver Duty Cycle
- Voltage Regulator Setpoint
- Volume Control Current Commanded
- Volume Control Current Feedback
- Wastegate/VGT Actuator Position Commanded
- Water In Fuel Error Distance After Error
- Water In Fuel Error Distance During Error
- Water In Fuel Error Distance From Error Set To Error Cleared
- Water In Fuel Error Number of Errors
- Water In Fuel Error Total Distance At Last Error

# What's New Summary

- This has been an overview of INSITE™
- For further training on INSITE, please refer to the INSITE™ Virtual College CD, P/N 4091839
- For Additional information and support:
  - Contact Cummins® local distributor
  - Visit <a href="https://insite.cummins.com/insite/index.html">https://insite.cummins.com/insite/index.html</a>
  - INSITE™ Help Desk 1-800-433-9341
     Option 2 or 812-377-8136 Option 2





# **INSITE**<sup>TM</sup>

INSITE™ functionality Breakdown and Details

### Table of Contents – Part 1

- Audit Trail
- Calibration Selection and Download
- ECM Connections
- Data Monitor Logger and OBD Monitors

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- ECM Diagnostic Tests and Advanced ECM Data
- Fault Information and Fault Information System
- Feature and Parameters
- Inquire Data Extraction



### **Table of Contents – Part 2**

- Installation and Tool / ECM / User Security
- Trip Information
- Work Orders

Cummins Inc. Update Manager





### **INSITE™** Audit Trail

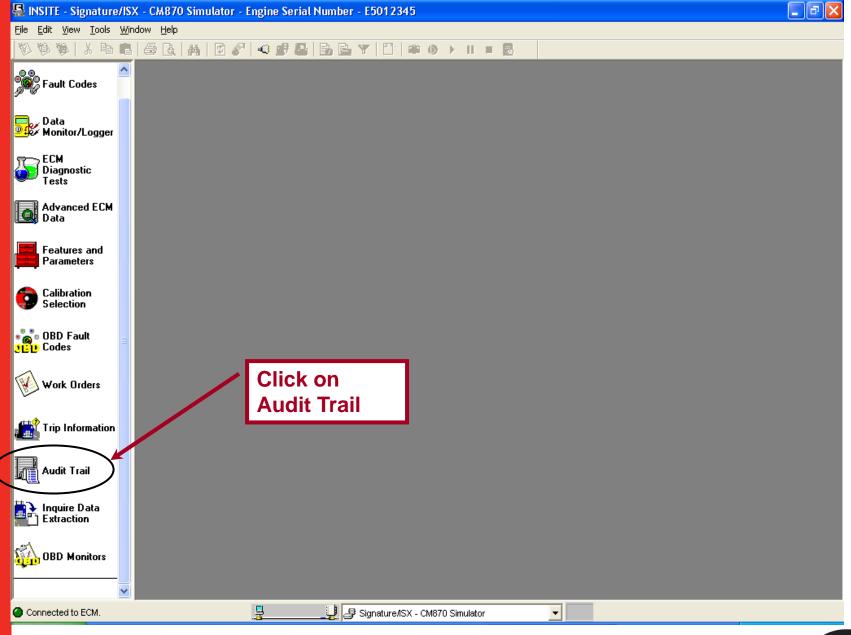
**Electronic Service Tools** 

### **Audit Trail**

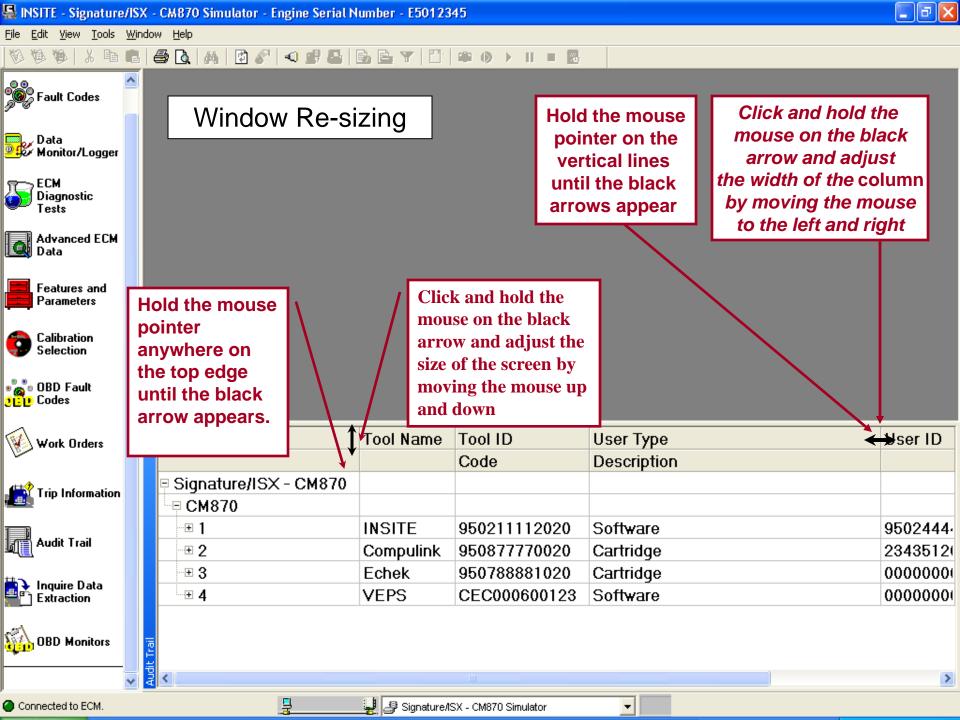
- Tracks changes made to ECM settings
  - INSITE Tool Version
  - User Identification
  - ECM Time
- •Audit Trail displays the last four or eight times, if supported by the calibration, that the ECM was modified
- A single record can contain multiple changes

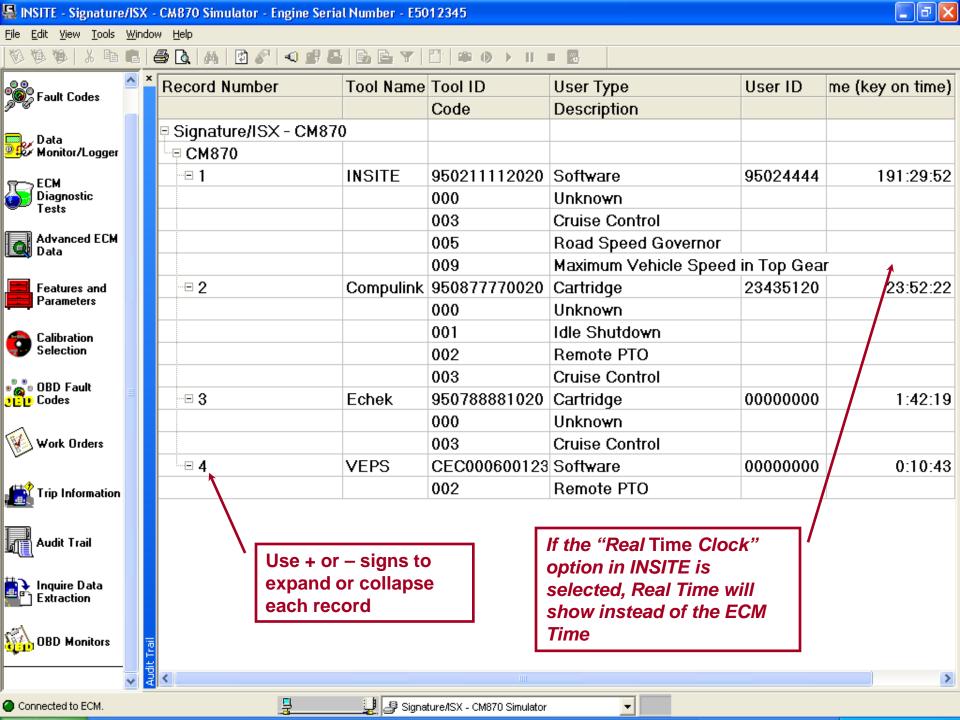
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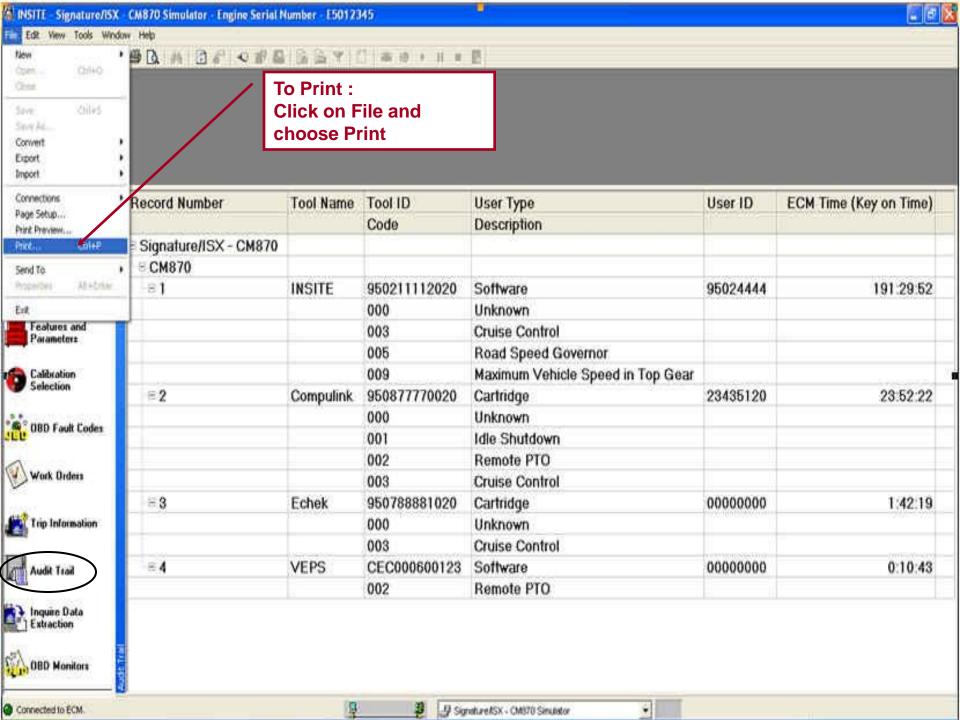
**Software Version of** the application

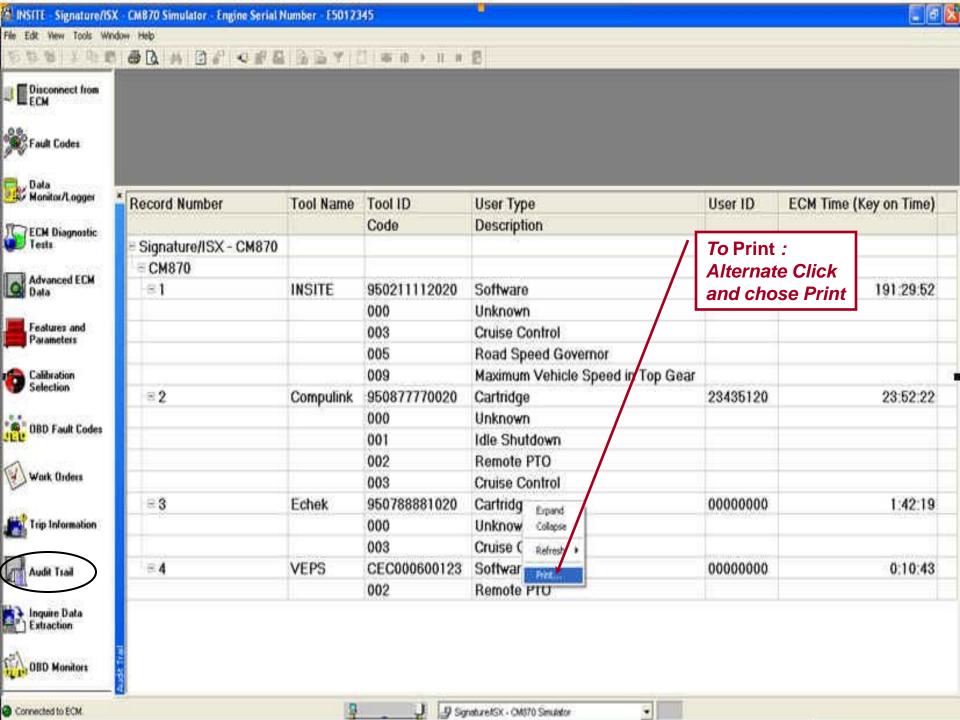
# Audit Trail

×	Record Number	Tool Name	Tool ID	User Type	User ID	ECM Time (key on time)
			Code	Description		
	□ Signature/ISX	- CM870				
	□ CM870					
	□ 1	INSITE	950211112020	Software	95024444	191:29:52
			000	Unknown		
ı			003	Cruise Control		
			005	Road Speed Governor		
			009	Maximum Vehicle Speed in Top Gear		ar
	<b>□ 2</b>	Compulink	950877770020	Cartridge	23435120	23:52:22
			000	Unknown		
			001	Idle Shutdown	\	User ID who made
ı			002	Remote PTO		the change
ı			003	Cruise Control		the change
	- ∃ 3	Echek	950788881020	Cartridge	00000000	1:42:19
			000	Unknown		
			003	Cruise Centrel		
	-	VEPS	CEC000600123	Collinato	Codes that identify the type of ECM changes	
			002	Remote PTO type of E		

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# **Audit Trail Wrap Up**

- The most recent changes will appear under record number 1
- Multiple changes might be listed under each of the 4 or 8 records if supported by the calibration
- Audit Trail will automatically update as changes are made to the ECM
- User can perform refresh within INSITE™ by using the alternate click and choosing Refresh



You have concluded this section of the training.

Please click to the next slide and continue or Click Here to return to the Table of Content.





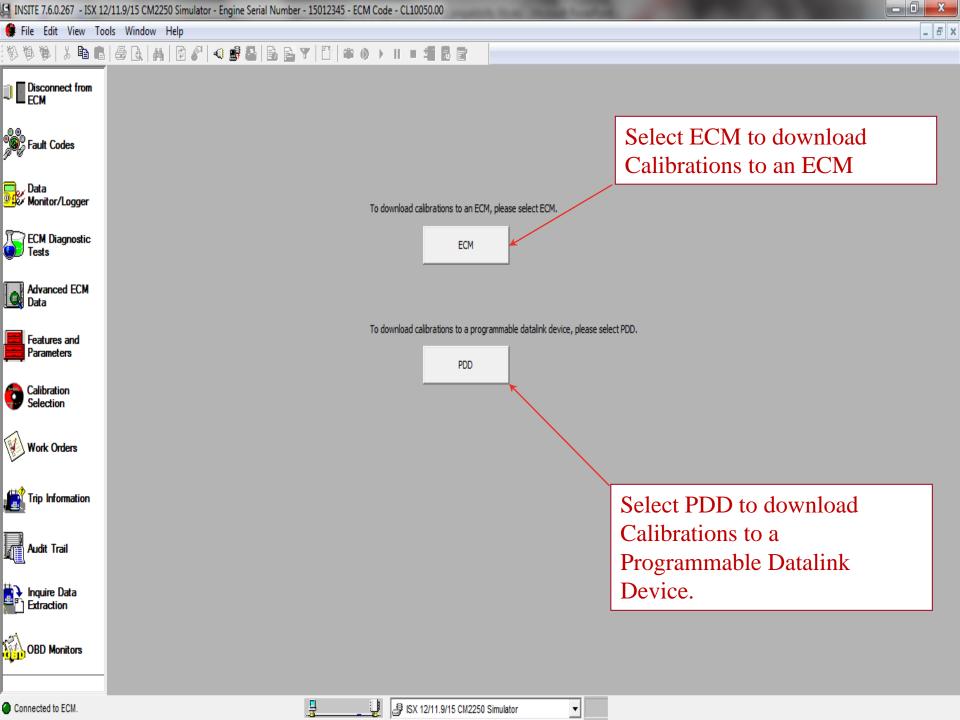
### **INSITE™** Calibration Selection

**Electronic Service Tools** 

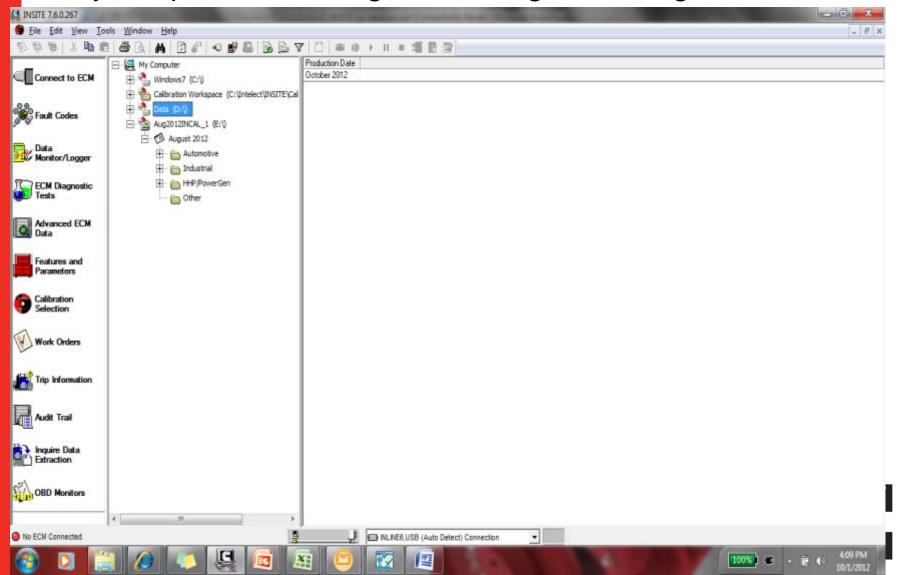
### Programmable Datalink Device

The Calibration Selection has been redesigned to include a separate section for Programmable Datalink Device (PDD) Calibrations such as the Aftertreatment Device or Turbocharger. This will allow users to bypass connecting to the ECM and download directly to a PDD.



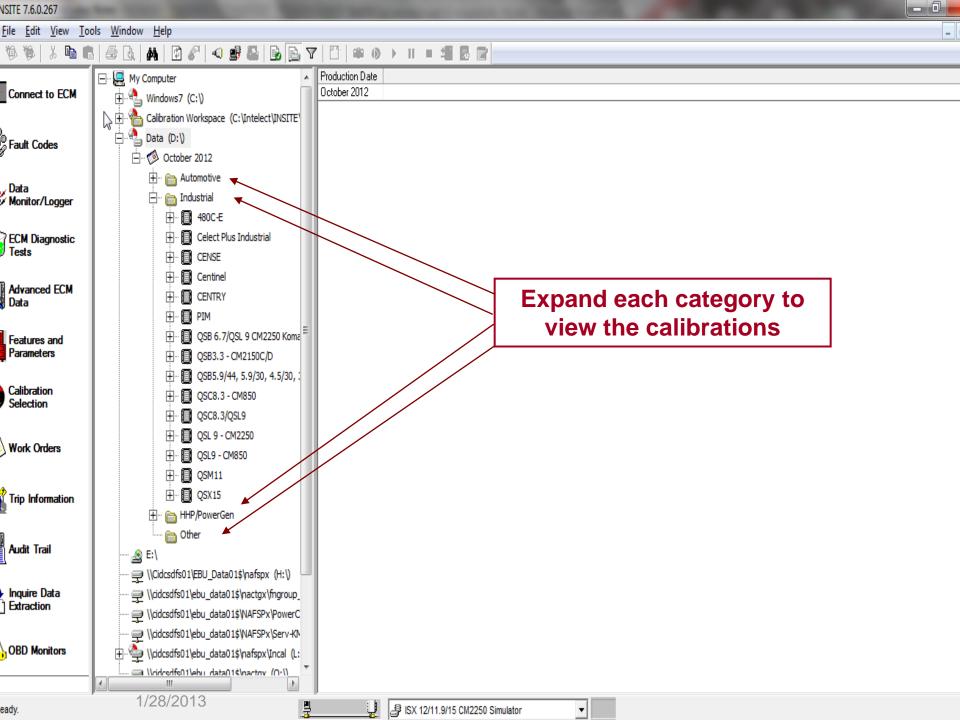


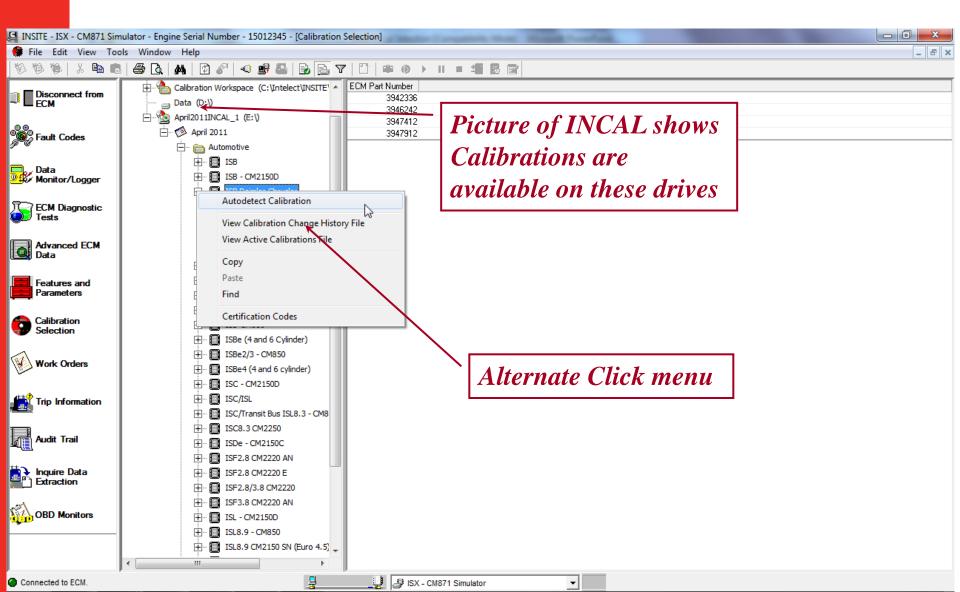
Ability to update or change the rating of an Engine



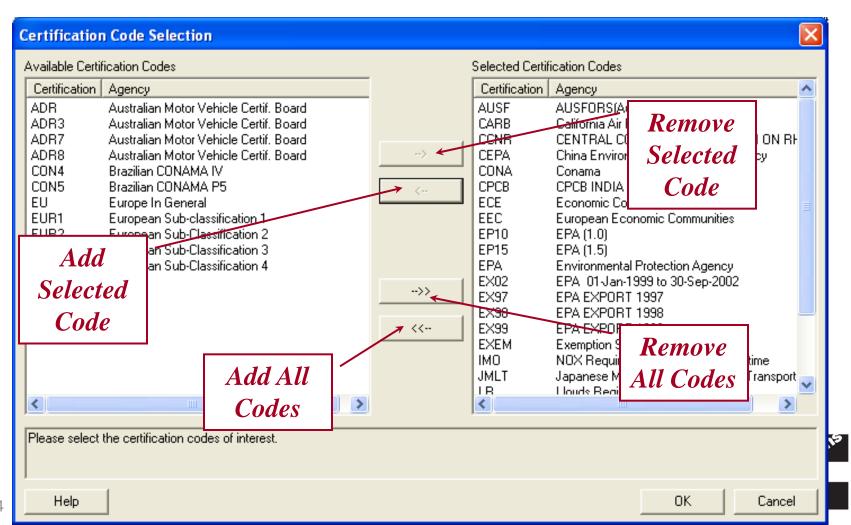
- Calibration Selection has products sorted into groups:
  - Automotive
  - Industrial
  - HHP/PowerGen
  - Other





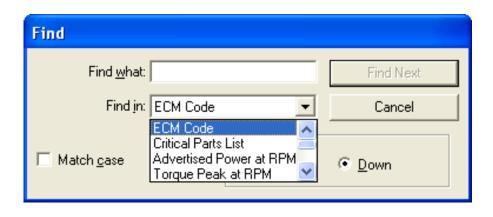


Ability to Select Specific Certification Codes



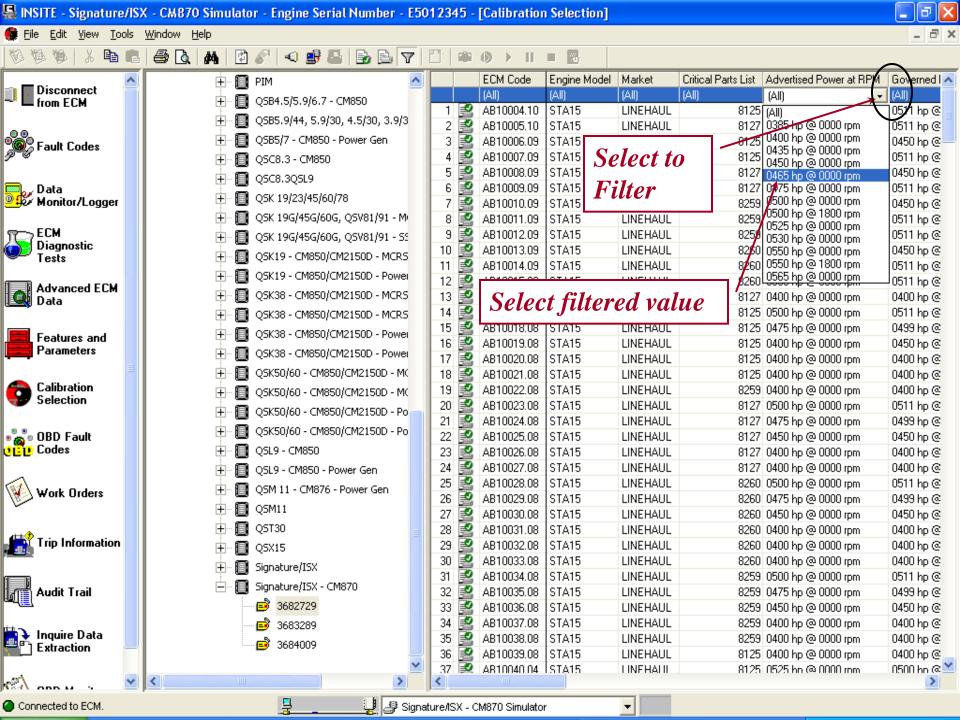
### **Calibration Selection**

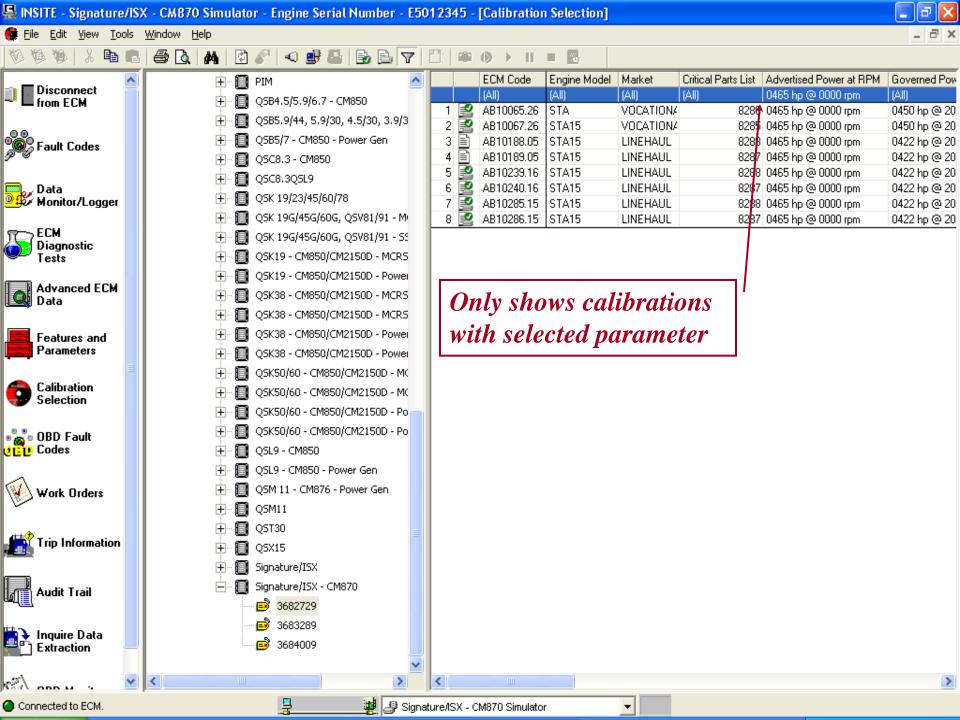
- Search/Find Calibration Note Data
- Sort each Column in Ascending or Descending order
- Filter Calibrations according to HP, Torque, etc.
- Move Columns to better align Notes

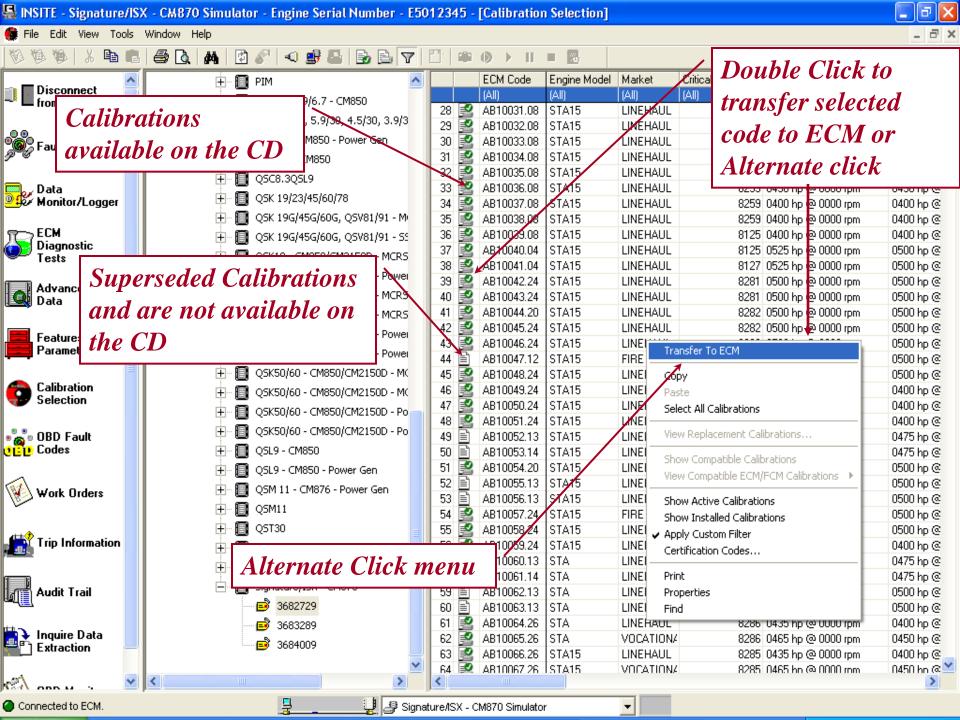


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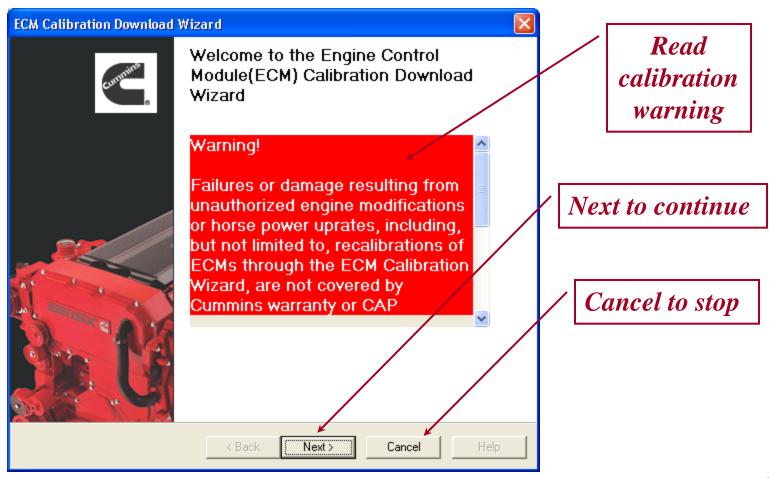








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## Calibration Selection: Authorization Passwords

#### Calibration Authorization Password is <u>not</u> required:

- Calibrating an ECM to a newer or older ECM Code revision
- Superseding ECM Codes
- Calibrating a Foot Printed ECM

#### Calibration Authorization Password is required:

- Calibrating a ROM booted ECM
- Changing to a different ECM Code

#### Authorization can be done by using:

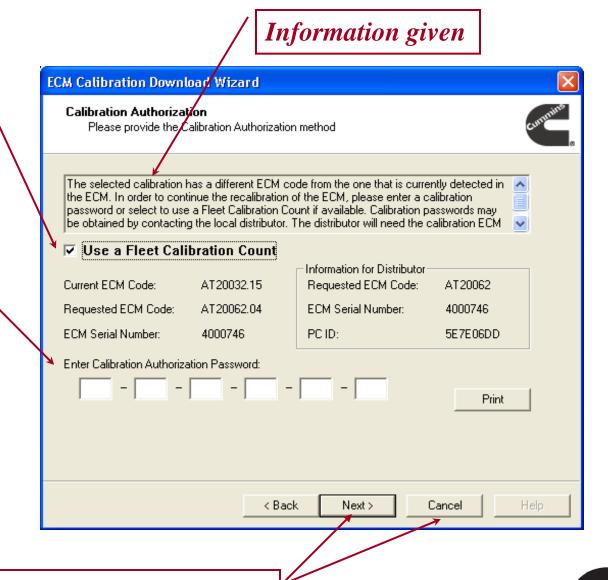
- Fleet Count
- Calibration Authorization Password



If Fleet Count available, Check to use Fleet Count

OR

Use single Calibration Authorization Password

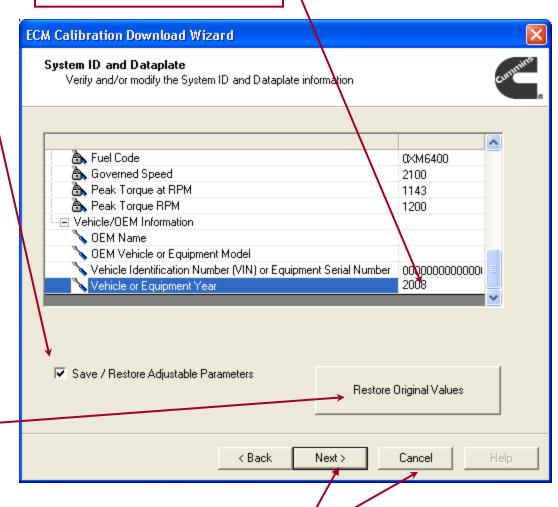


Next to continue or Cancel to stop

#### Can edit Dataplate

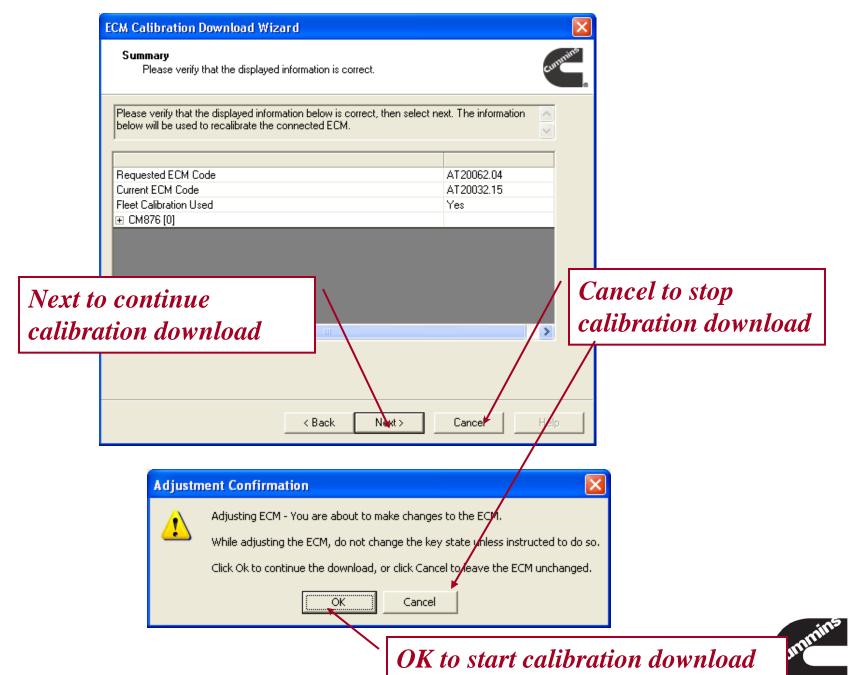
Option to Save and Restore Adjustable parameters.

For Industrial
Applications this
should <u>not</u> be
checked



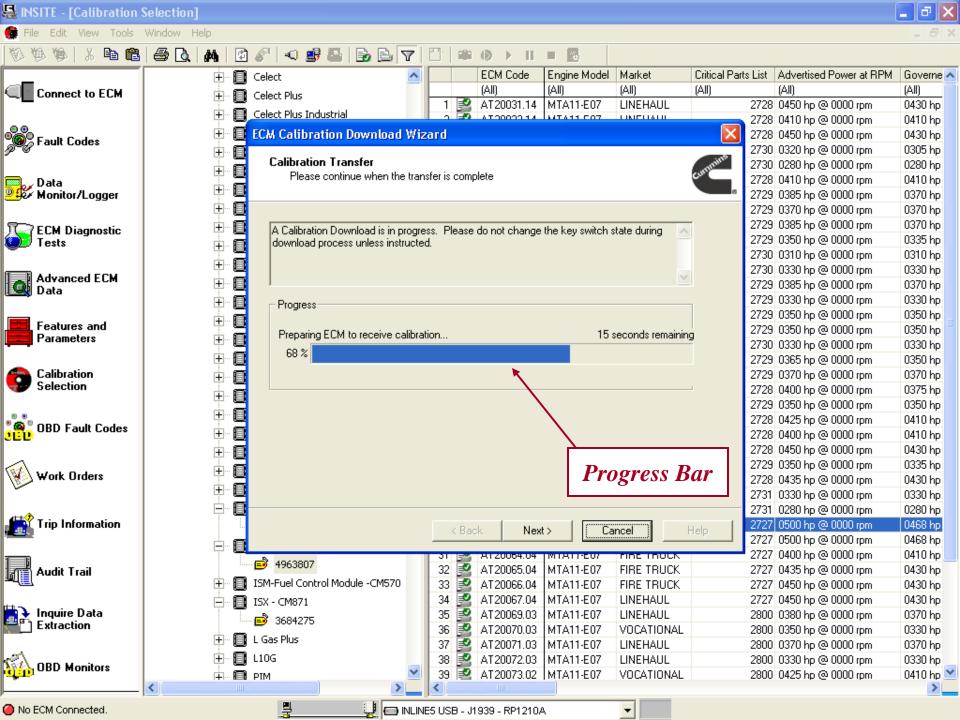
Undo Dataplate edits

Next to continue or Cancel to stop

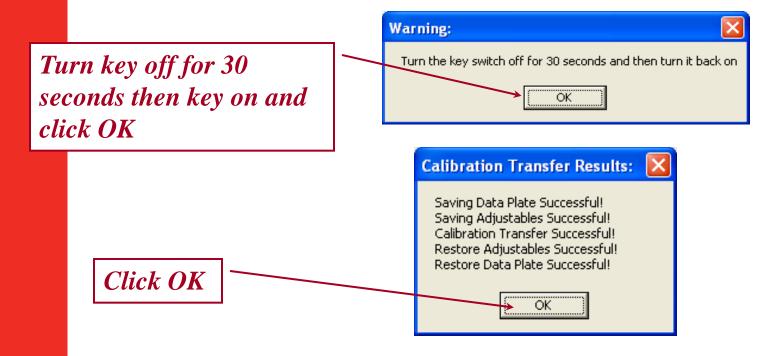


Cummins Confidential Innovation You

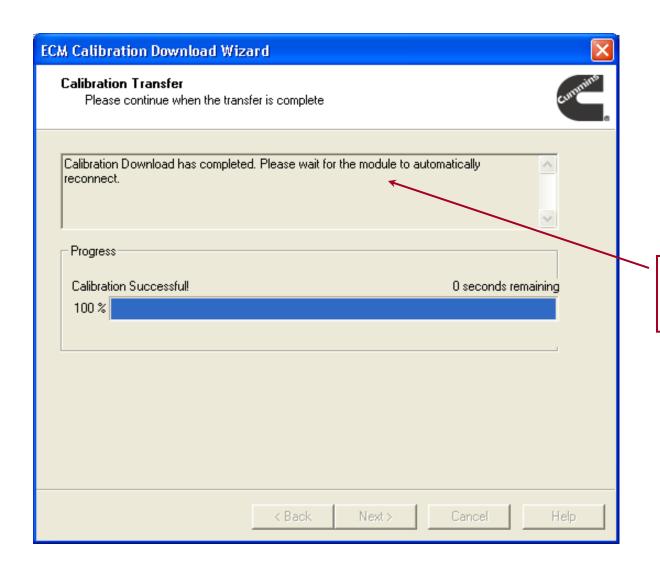
Innovation You Can Depend On



 Follow all prompts through the calibration transfer process until the calibration transfer has been completed.





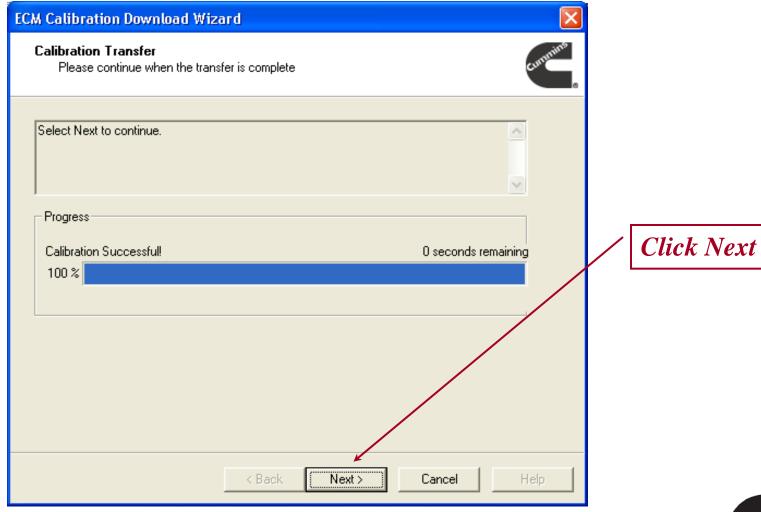


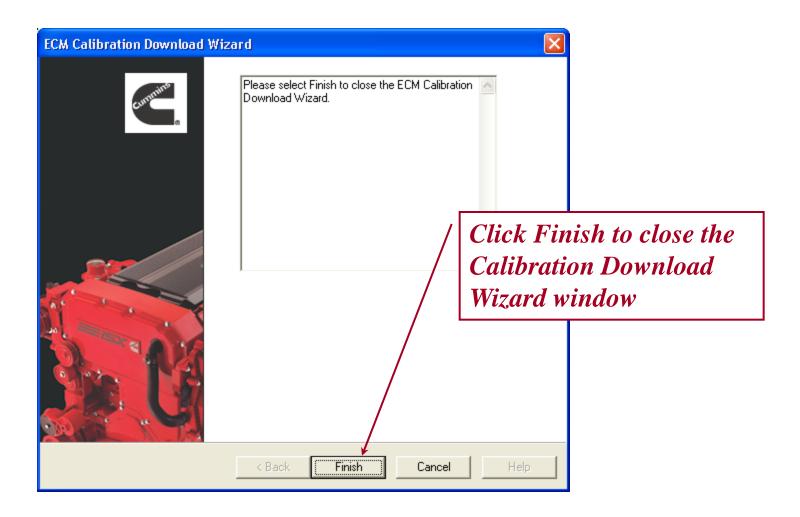
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**Follow** instructions



46







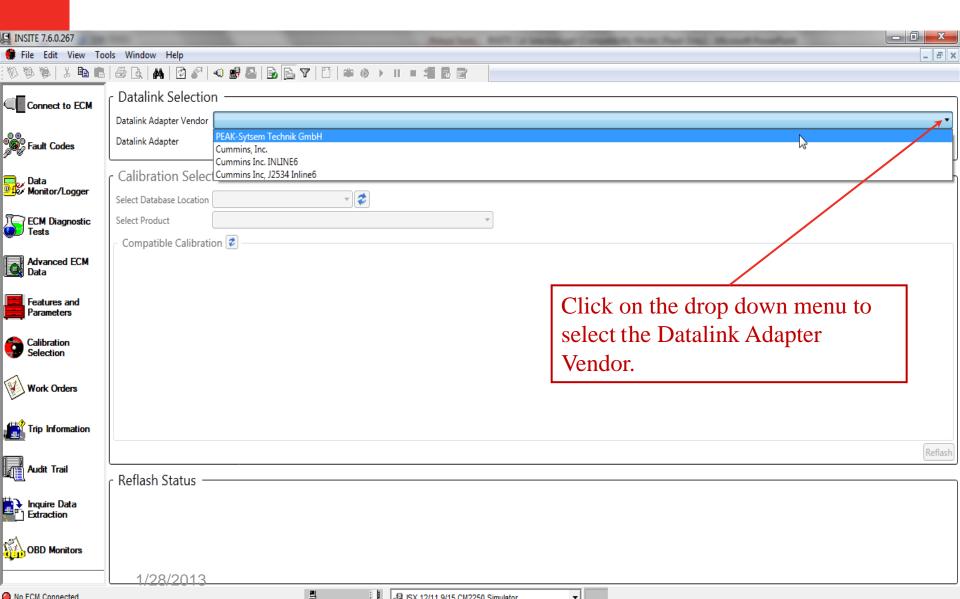
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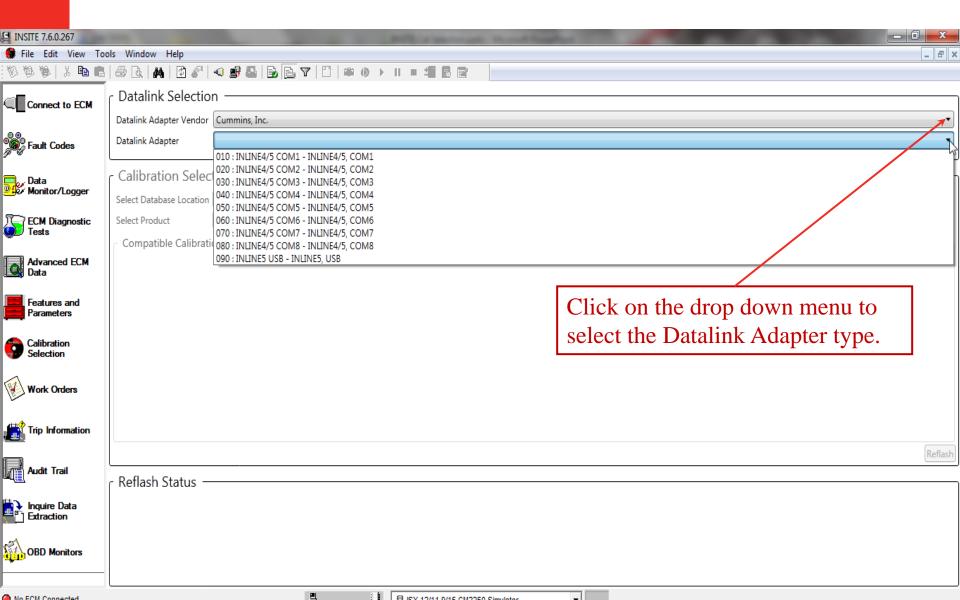
• INSITE provides the capability to download a calibration to a PDD using any RP1210A adapter

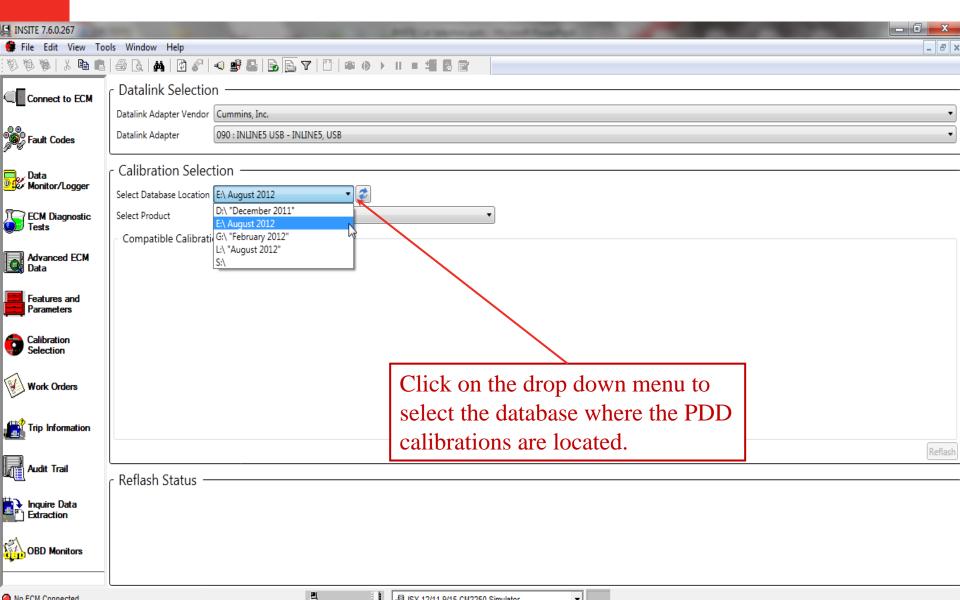
This capability is found in the Calibration Selection

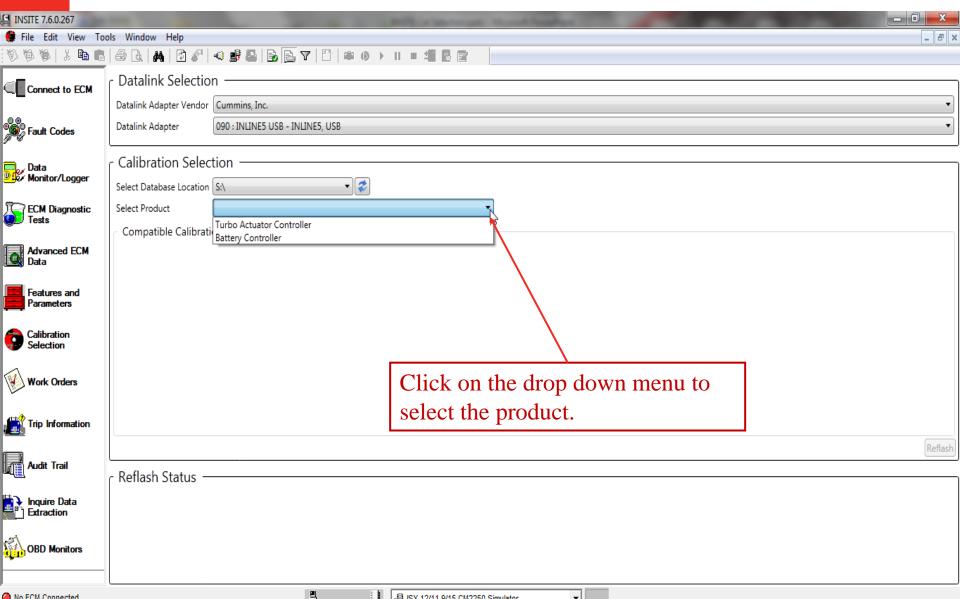
The latest INLINE 4/5 and INLINE 6 Drivers Firmware are needed to support the calibration download

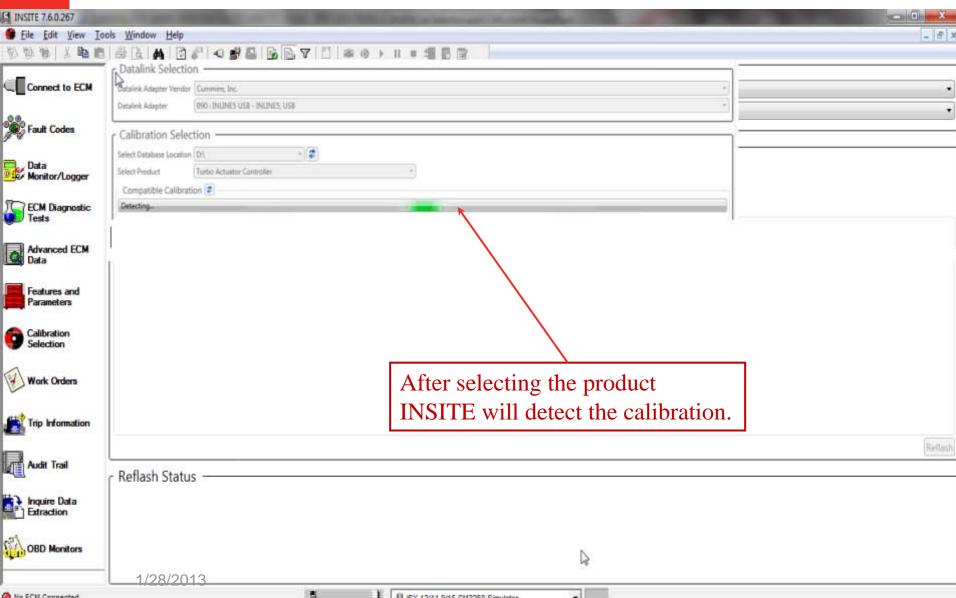


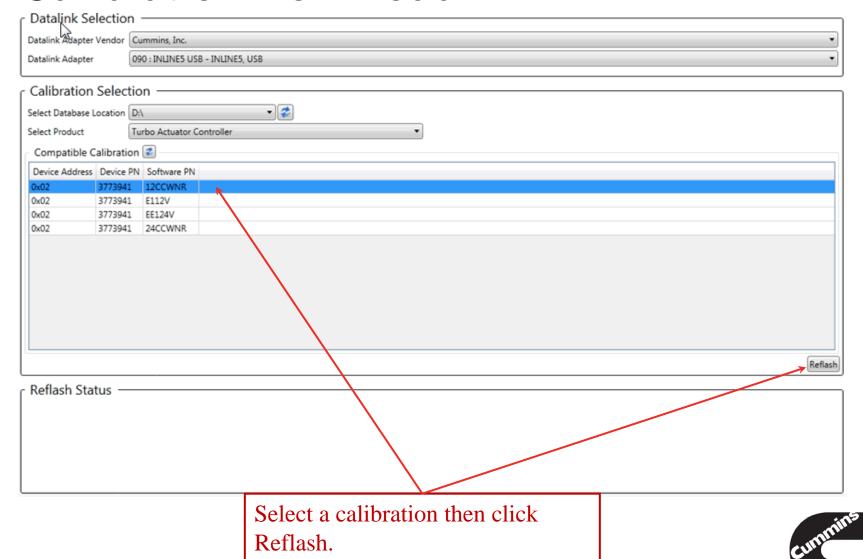




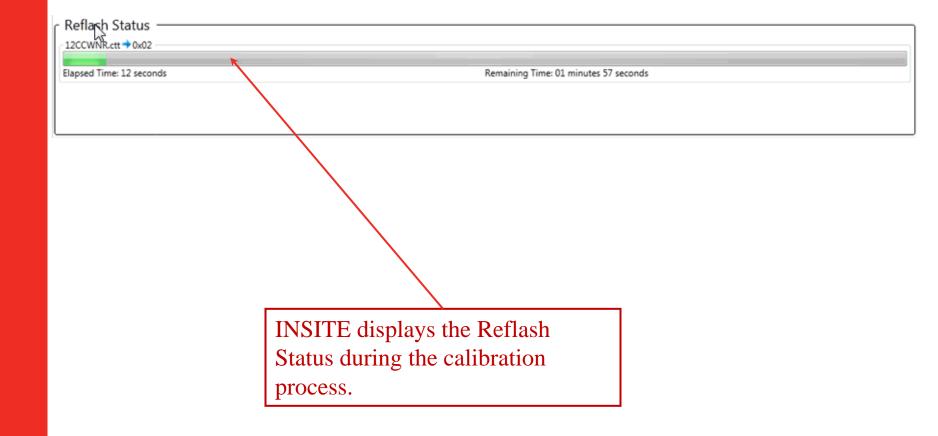




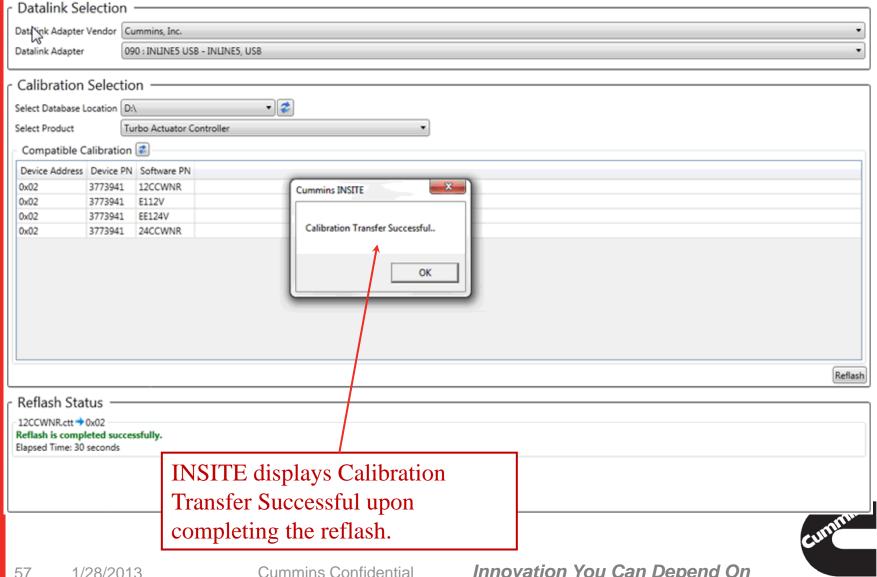




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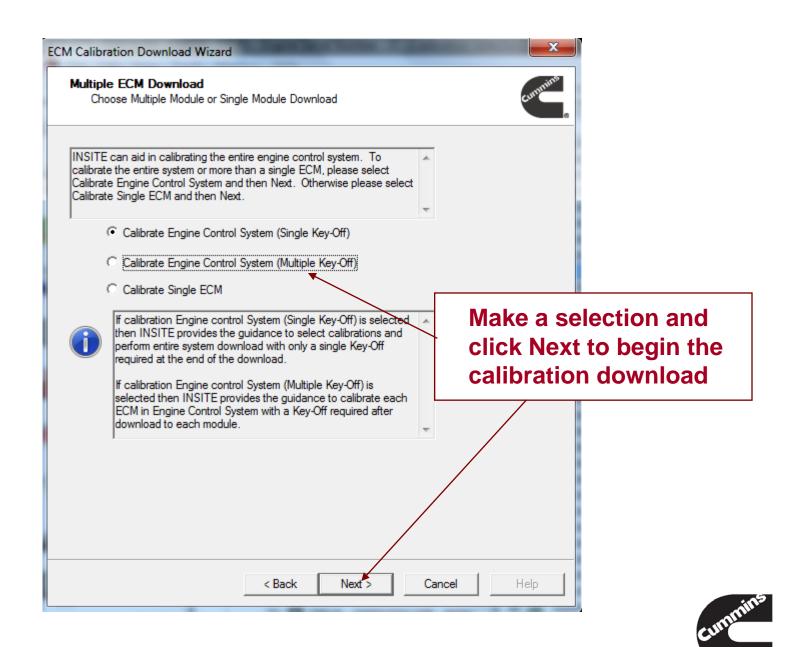


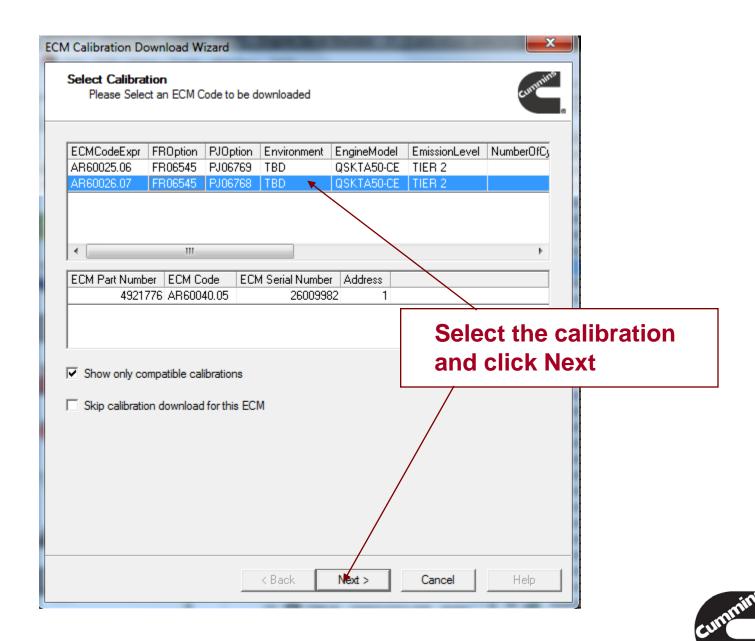


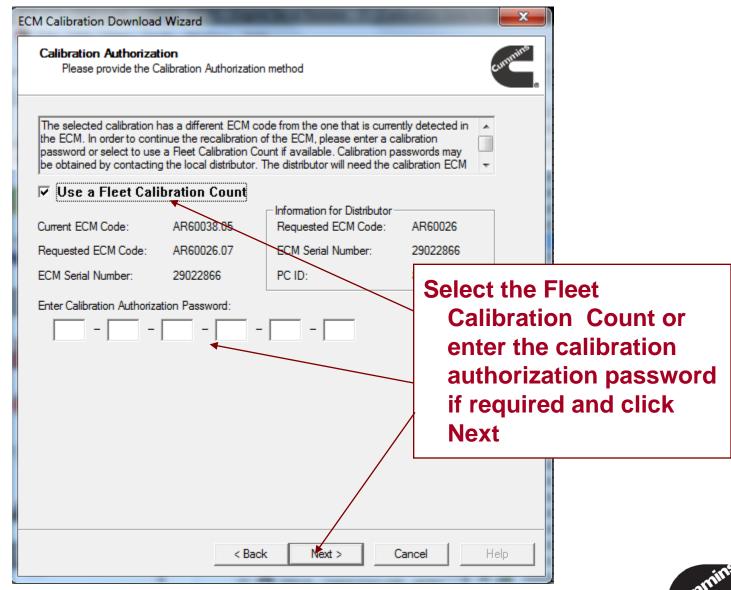
### Single key off for multi-module downloads

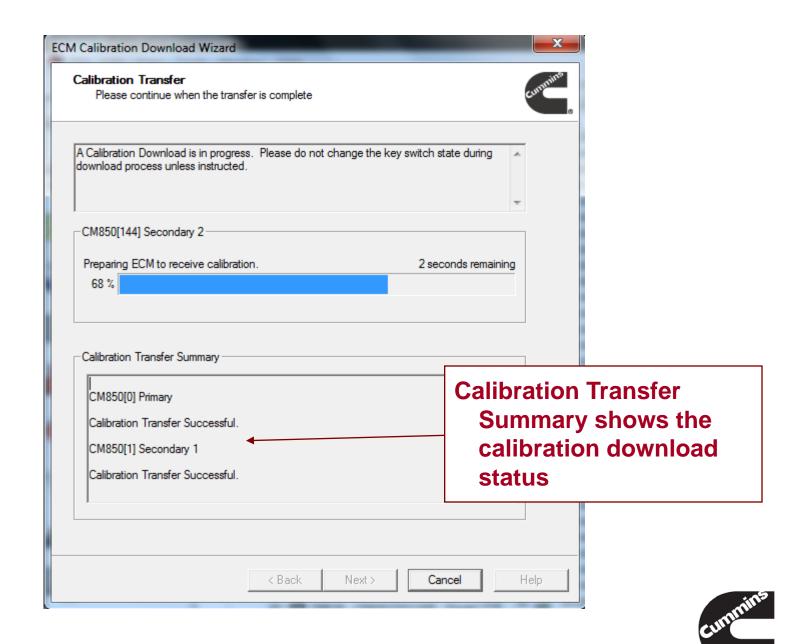
- INSITE™ only requires a single key off at the end of a multi-module calibration download
- All ECM Codes to be downloaded can be selected before the calibration download begins

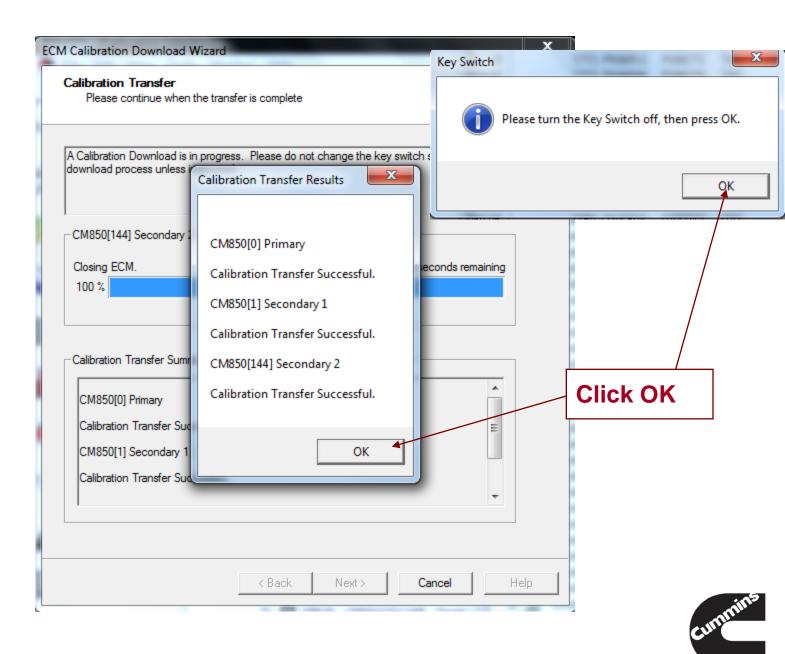












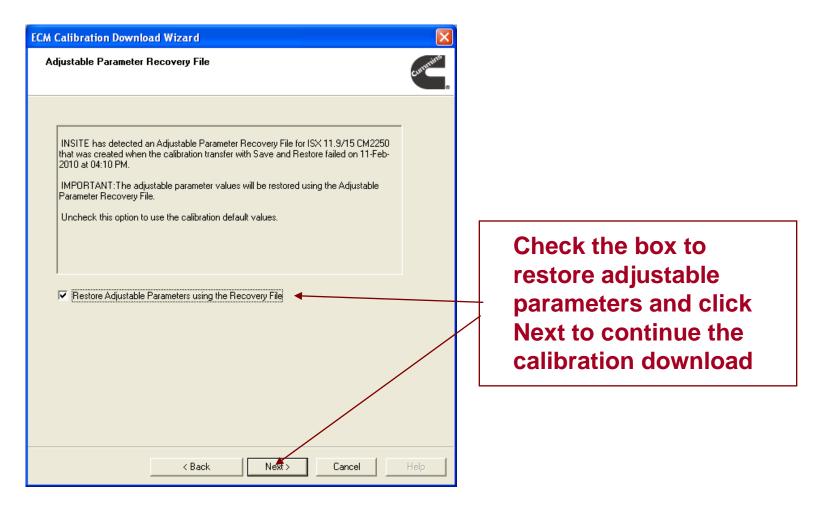
#### Adjustable Parameters Recovery File

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- If a calibration download fails when Save/Restore Adjustable Parameters is selected, INSITE™ will save these parameters to an Adjustable Parameter Recovery File
- The file can be used by INSITE™ to restore the Dataplate and adjustable parameters on this ECM if it is in a ROM Booted or Foot Printed state on the next successful download



#### **Adjustable Parameters Recovery File**





### Calibration Supersession

 Supersession refers to the process of providing replacement calibrations for obsolete calibrations

 Superseded Calibrations are not active and not installed on the INCAL DVD

 Calibration Reduction has generated a large number of Superseded Calibrations

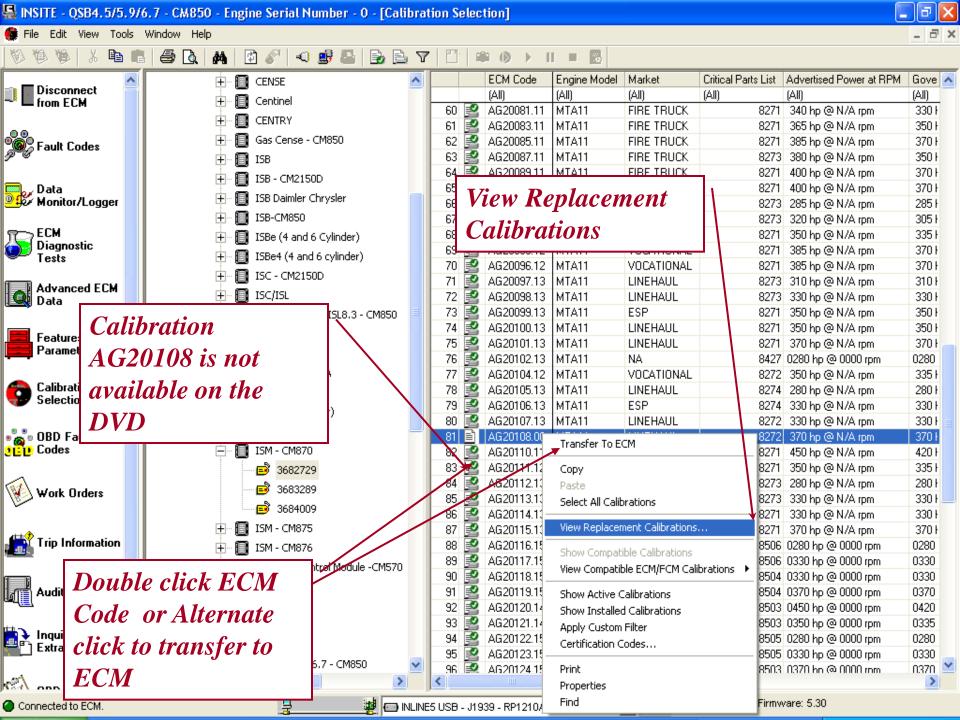


#### **Calibration Supersession**

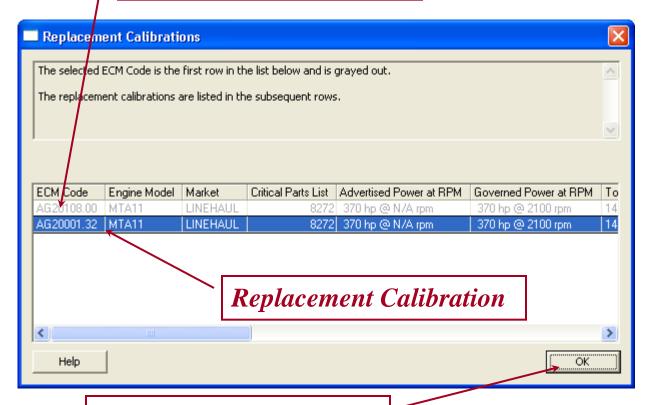
- If INSITE has "Show Installed Calibrations" or "Show Active Calibrations" selected
  - Calibration Selection will not display the Superseded calibration
  - Auto detect will not find the Superseded calibration
- Uncheck "Installed Calibrations" and uncheck "Active Calibrations" on Tools menu
  - Tools > Calibration Selection or Alternate Click
- When downloading the replacement calibration, first select the Superseded calibration. A pop-up window will appear displaying the replacement calibration.
- View Replacement Calibrations







Selected Calibration that was not available



Click OK To ECM to continue calibration transfer with replacement ECM Code



# PowerMatch calibrations are now able to be sent using INSITE

- -The PowerMatch calibration will be based on an ECM Serial number and will only download to the specific ECM for which it was created
- Calibration download attempts to different ECMs will produce a warning message and will end the calibration download process



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## Calibration Selection Wrap Up

- Calibration Download is used to update the ECM
- Calibration Selection
  - Contact local distributor for Calibration and/or Calibration Authorization password
  - To view Superseded Calibrations, uncheck "Installed Calibrations" and uncheck "Active Calibrations"
- Use Calibration filtering to reduce number of Calibrations listed

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 Calibration Authorization Password is required for uprating or ROM Booted ECMs



You have concluded this section of the training.

Please click to the next slide and continue or Click Here to return to the Table of Content.





#### **INSITE™** Connections

**Electronic Service Tools** 

#### **Connections**

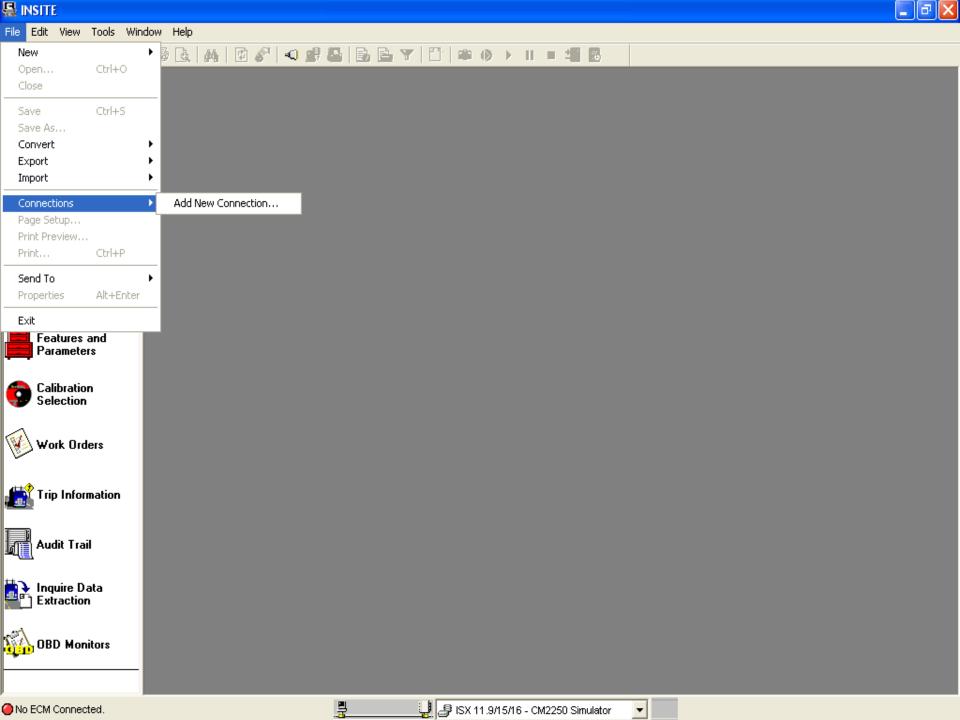
Additional Connections/Simulators can be added.

-Add new...

-Tools → Options → Connections

File → Connections → Add New Connection...



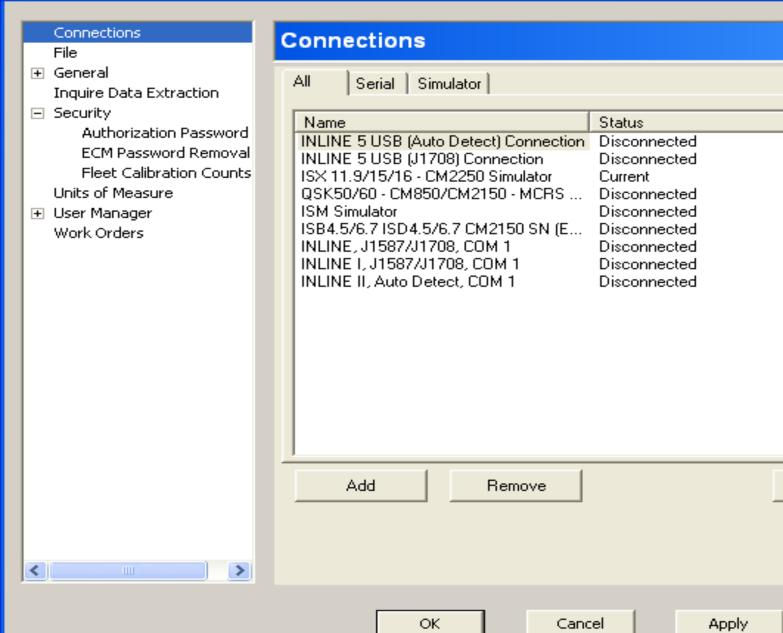






**Properties** 

Help

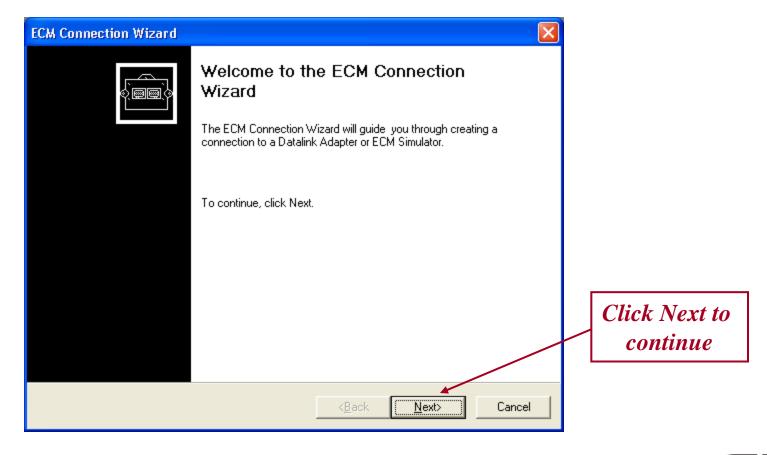


### **Auto Configure**

The Auto Configure feature is updated and improved to identify not only Cummins adapters but also other third party RP1210A compliant datalink adapters



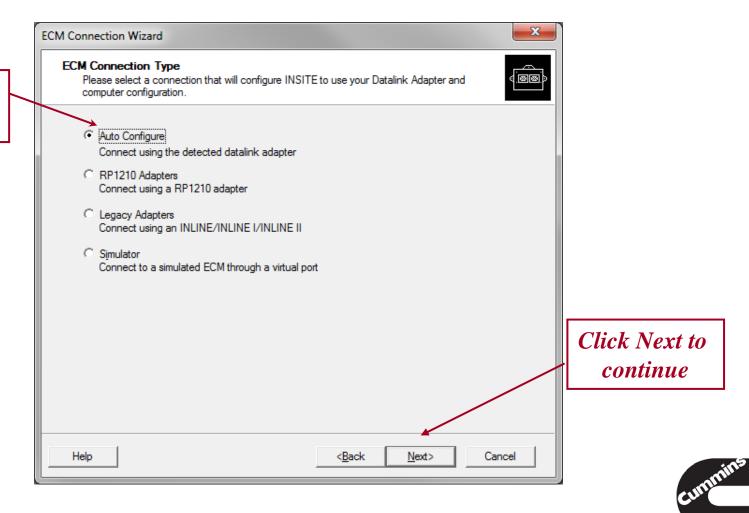
# **ECM Connection Wizard – Auto** Configure



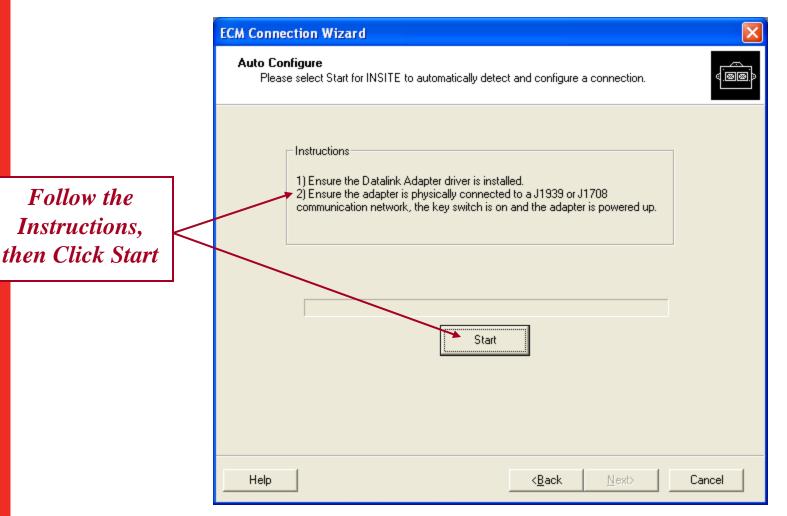


# **ECM Connection Wizard – Auto Configure**

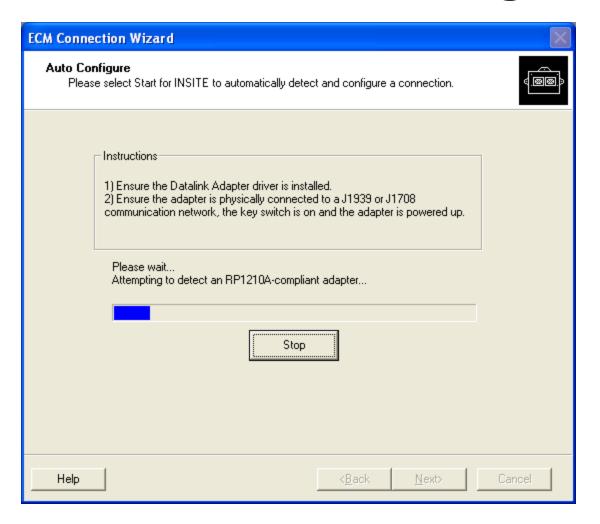
Select Auto Configure



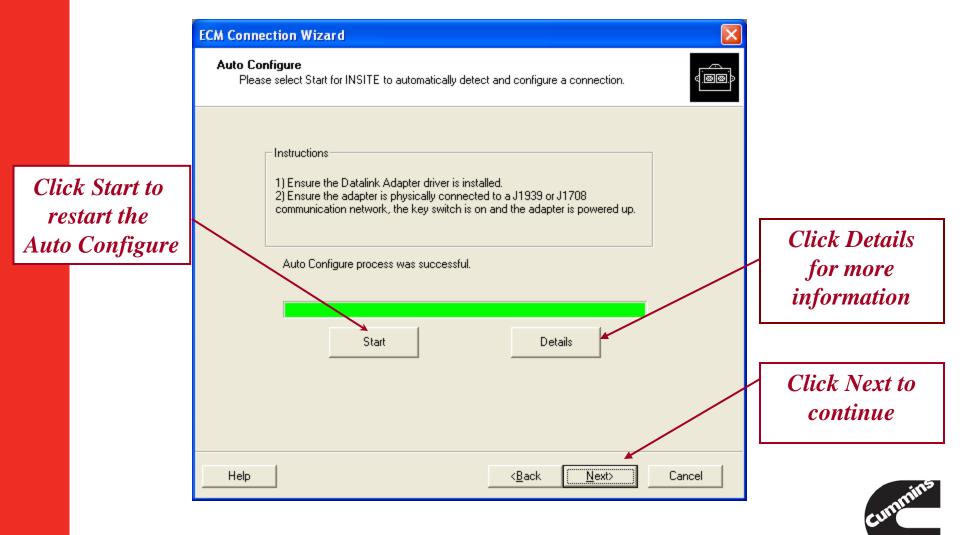
# ECM Connection Wizard – Auto Configure



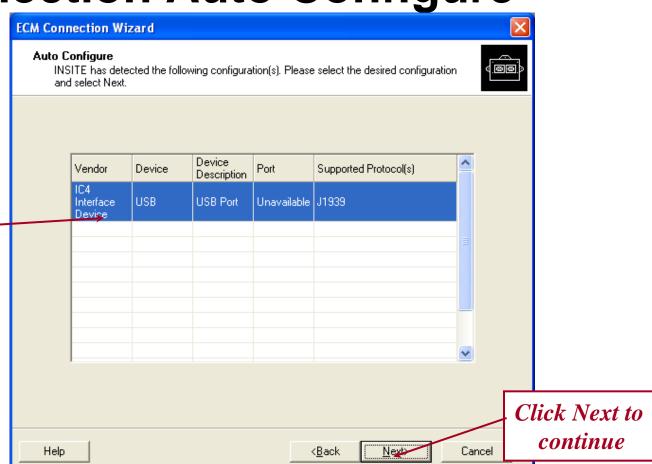






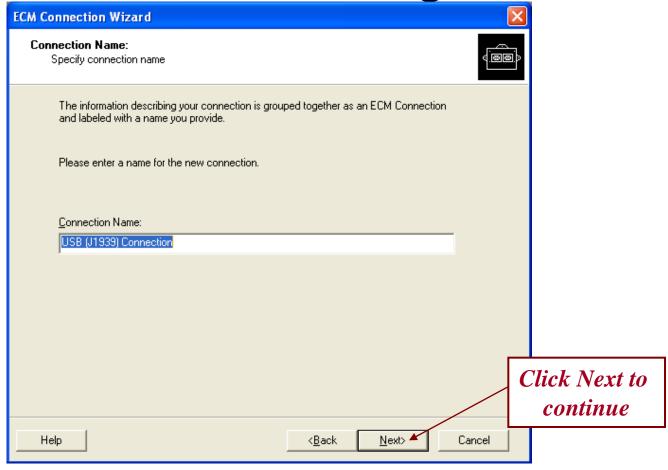


82



Select the connection





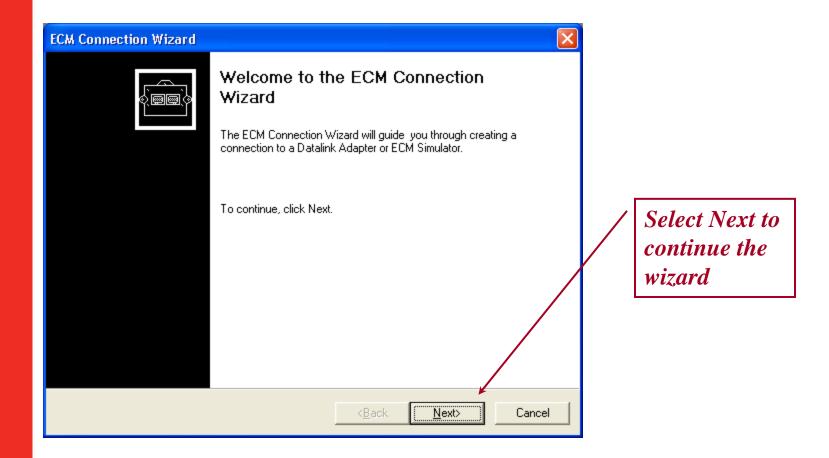


#### **Connection Wizard**

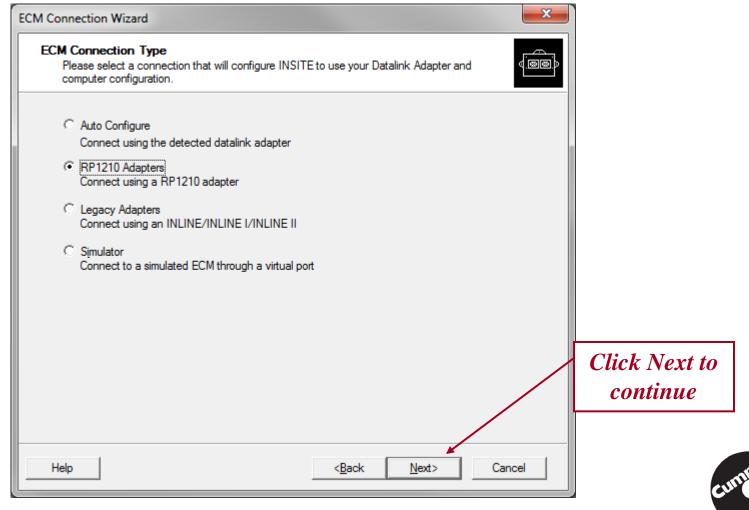
 The connection wizard is updated and simplified for the easy selection of RP1210A compliant datalink adapters and connection tests within the connection wizard



#### **ECM Connection Wizard**

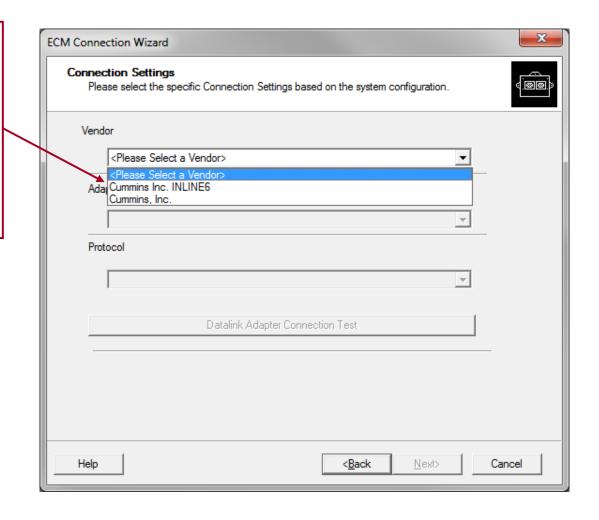






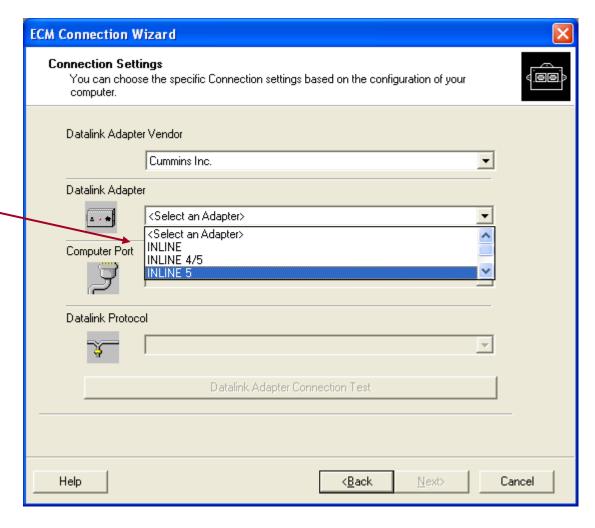
1/28/2013

RP1210A Datalink
Adapter Vendor list
will be displayed if
the corresponding
adapter drivers are
installed. Select the
Datalink Adapter
Vendor

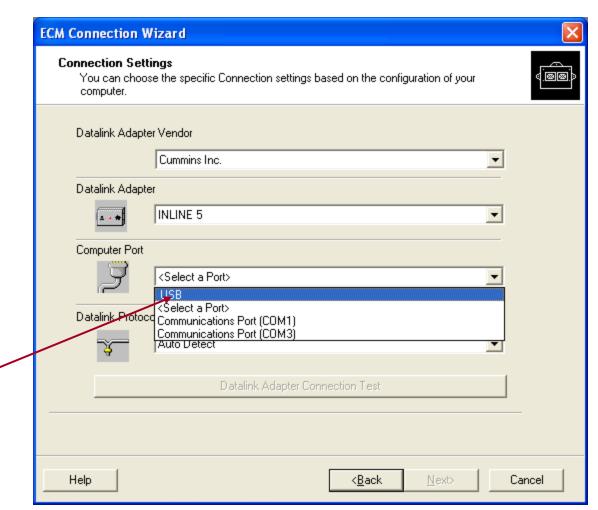




Select the Datalink Adapter



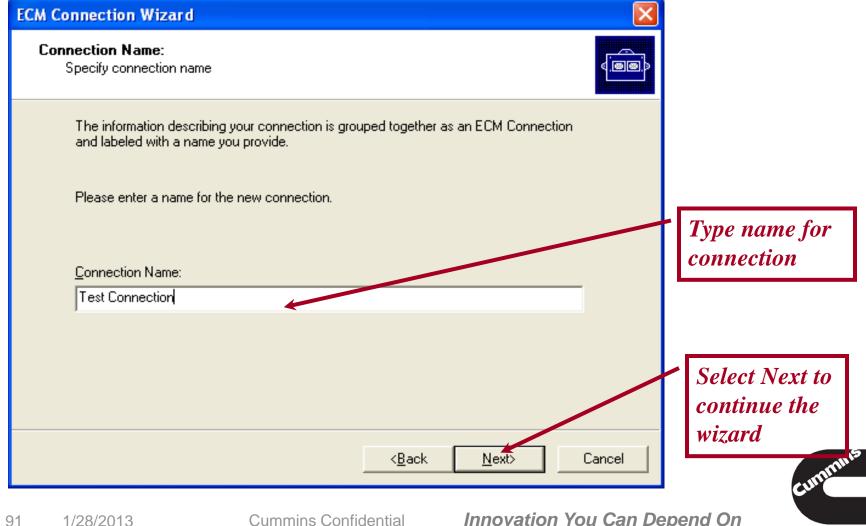




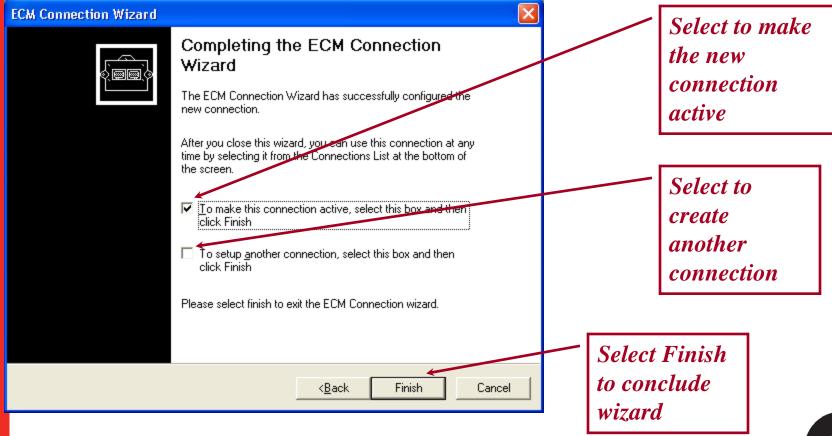
Select the computer port



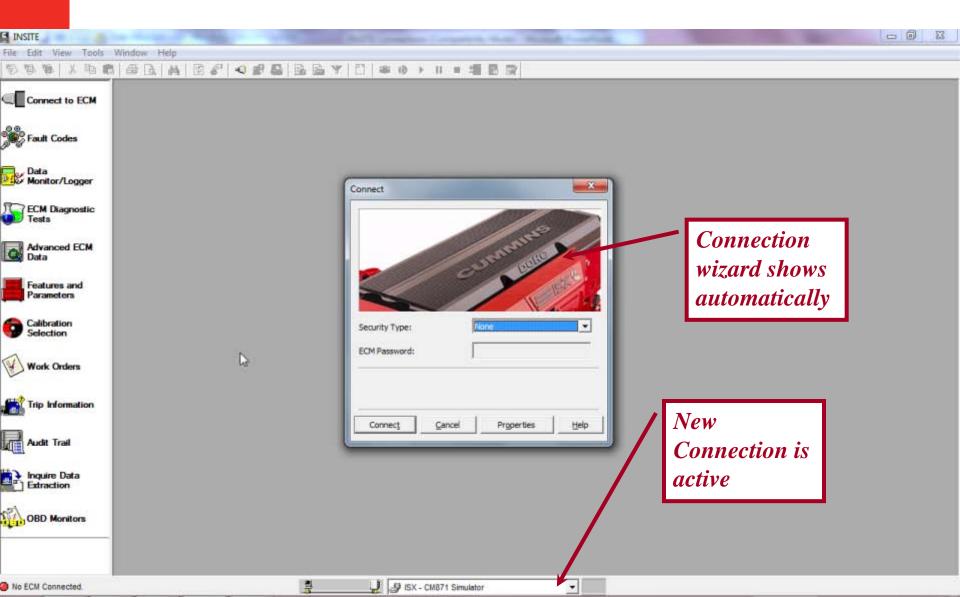
#### **Connection Name**



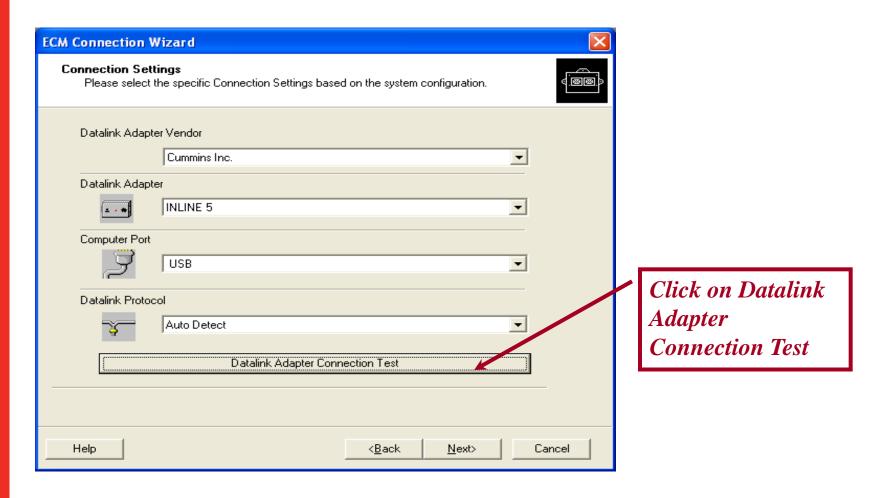
# Completing the ECM Connection Wizard



#### **Connection Wizard**

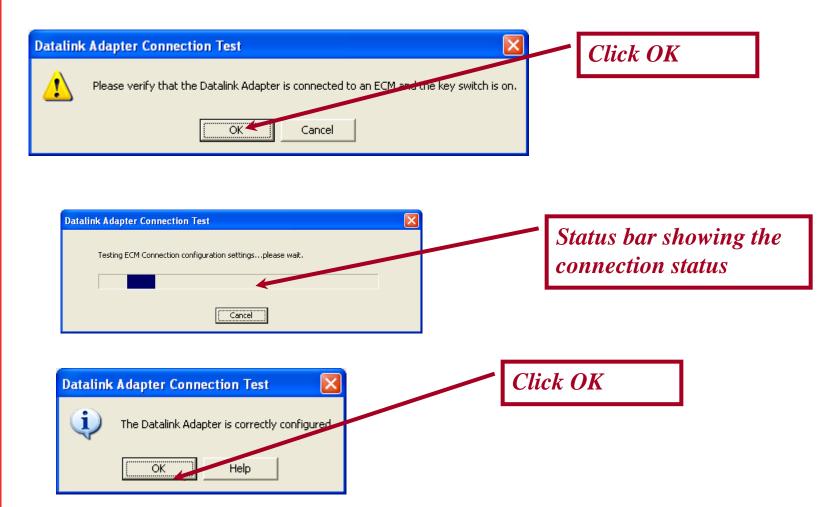


### **Datalink Adapter Connection Test**





### **Datalink Adapter Connection Test**





#### **Connections**

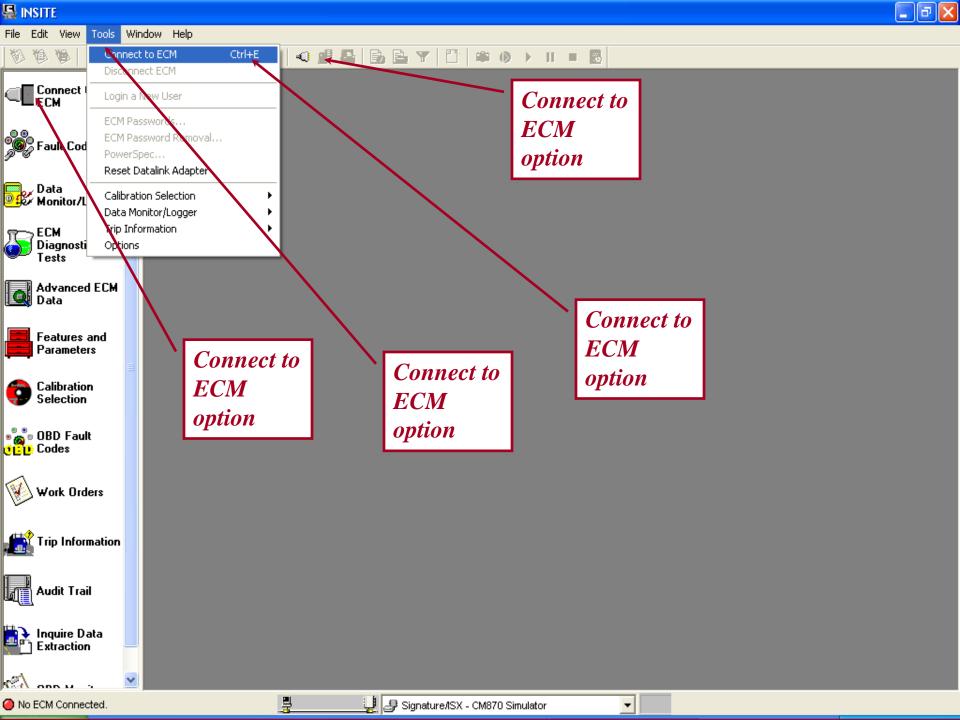
#### Select the desired Connection Type

- -INLINE 5/6, RP1210A or Simulator
- –Will open a Connect Window

#### If previous connection type selected

- -Tools → Connect to ECM
- -Ctrl+E
- -Connect to ECM icon on the View Bar
- -Connect to ECM icon on the Tool Bar





#### Connections





# Ability to add Functionality Password when opening INSITE™ for the first time

- INSITE™ provides the capability to enter both the Basic and Functionality password the first time it is opened
- This applies to a new installation only

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 After entering the Basic password, a window will open asking for the Functionality password to be entered



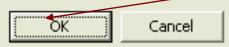
#### Cummins INSITE



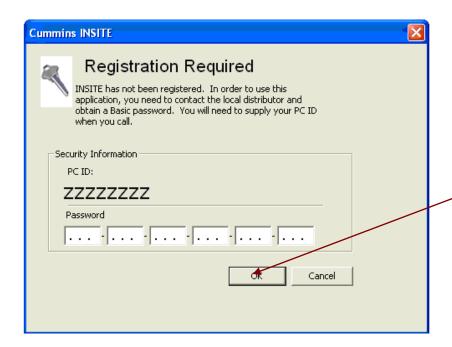


Before registering INSITE, log into the Windows account that will be used to access INSITE. This will help prevent unnecessary PCID transfer in case INSITE generates a different PCID for a different Windows login account.

If this is the Windows account that will be used to access INSITE, select OK to continue with the registration. Otherwise, select Cancel and log into the desired Windows account.



#### Follow the instructions and click OK



**Enter the Basic Password** and click OK



#### **Cummins INSITE**



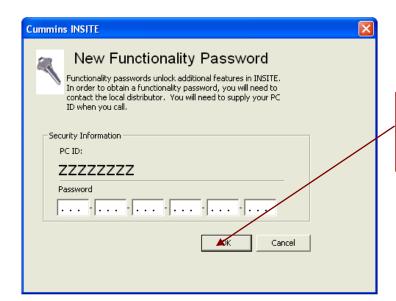
The Basic Password was successfully entered.

Do you want to enter the Functional Password now?

Select Yes to enter the Functional Password. Select No to open INSITE in Read Only Mode.



Follow the instructions to enter the Functionality Password



Enter the Functionality
Password and click OK



## **Engine Simulators**

- INSITE can Simulate connections to all supported engines
  - Celect Plus, ISX, ISB...
  - Almost Full Simulated tool Functionality
  - Can be used for training or exploring Engine Features
  - Data is simulated and may not represent actual engine data
- Simulator can be used to learn INSITE and Engine features without being connected to an Engine



## **Connections Wrap Up**

- Make sure the desired connection is selected
- –To connect to ECM
  - Use Ctrl+E as a shortcut to get connected
  - Use the View Bar icon
  - Tool Bar icon to connect

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Click on Tools → Connect to ECM



You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.

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104



# INSITE™ Data Monitor/Logging and OBD Monitors

**Electronic Service Tools** 

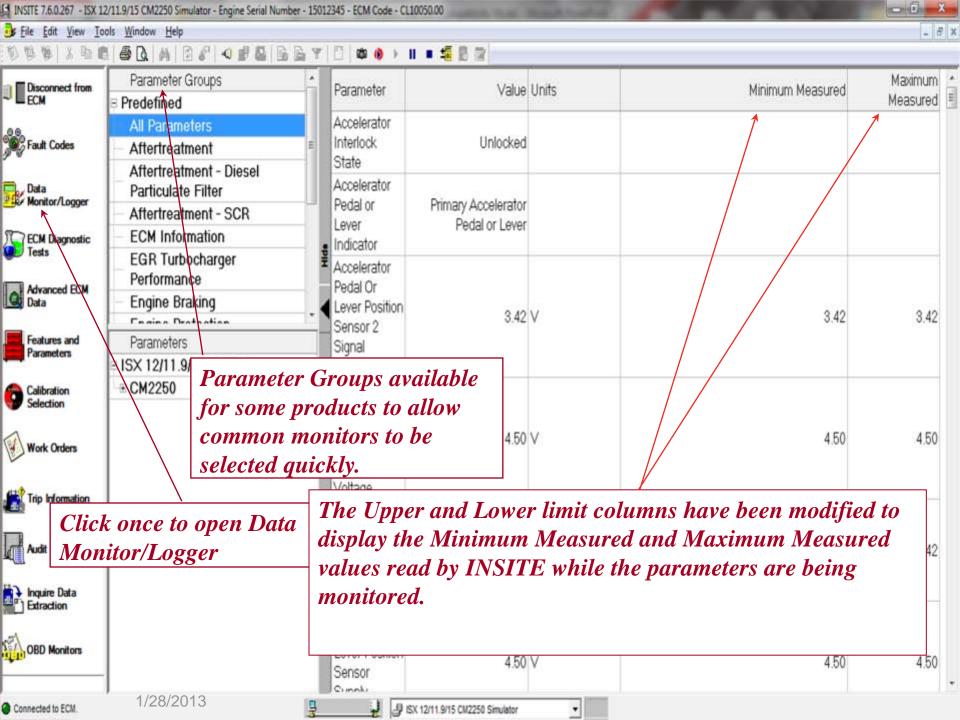
## Data Monitor / Logger

Method to view or log live engine data at a user defined sample rate.

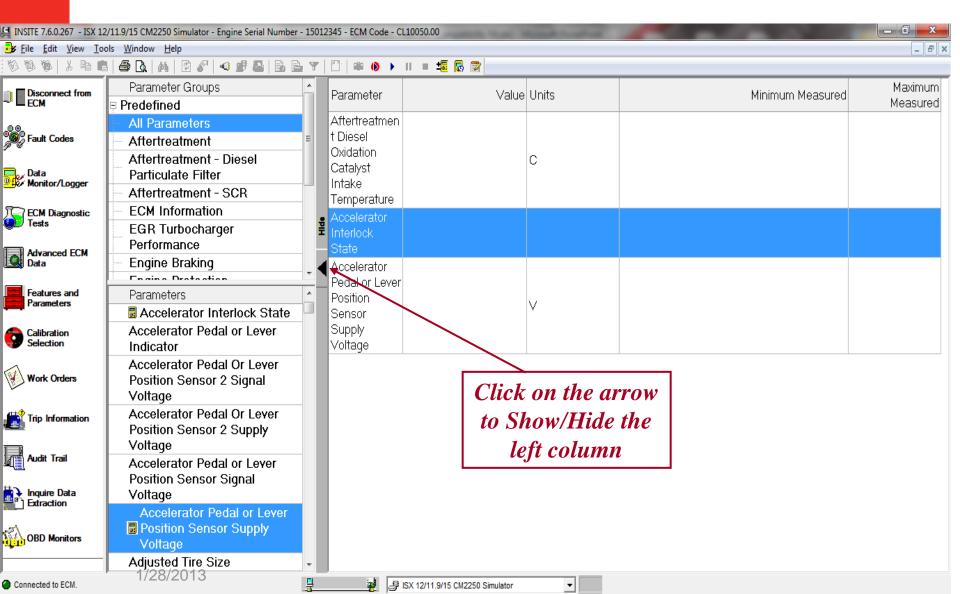
- Monitor data:
  - View selected parameters to display

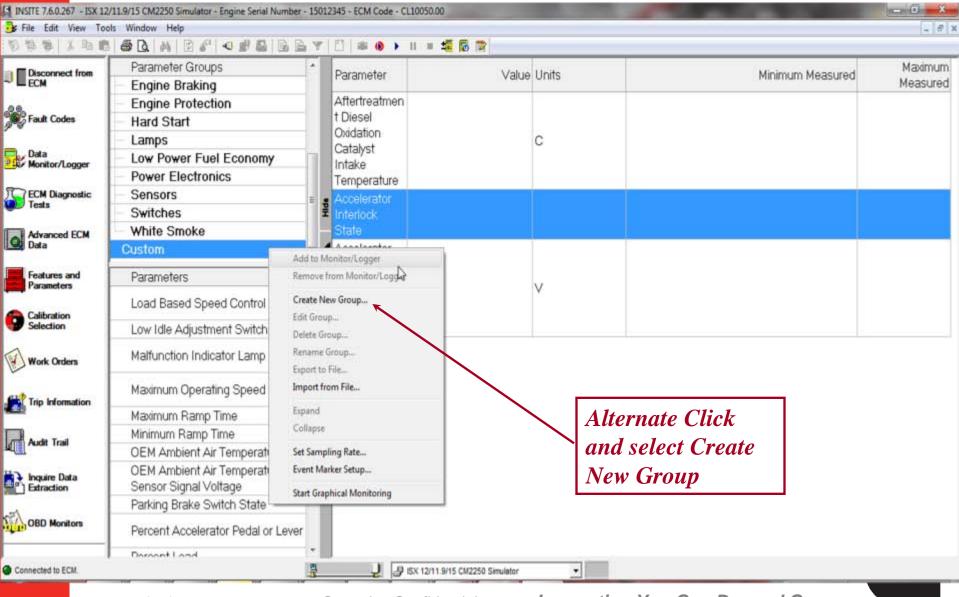
- Log data:
  - Continuous logged data for each parameter selected and saved to a file for analysis
- Snapshot:
  - Single data point logged for each parameter selected and saved to a file for analysis



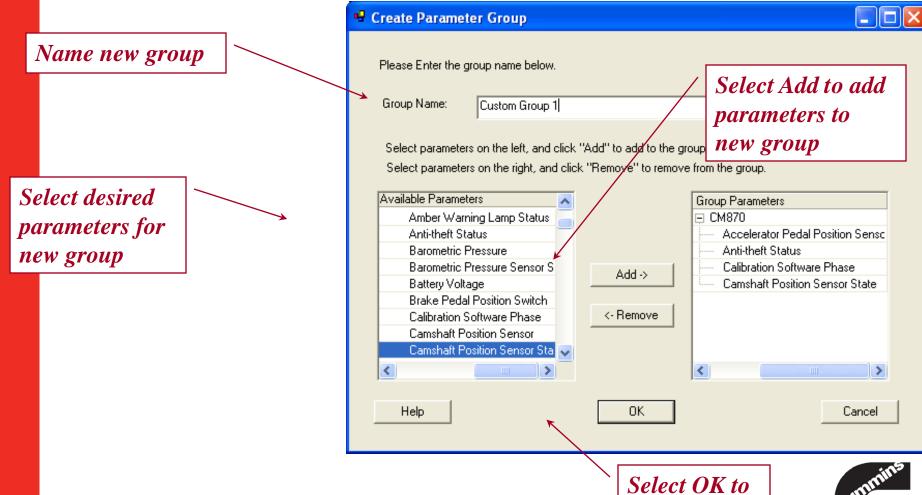


# **Data Monitor / Logger**





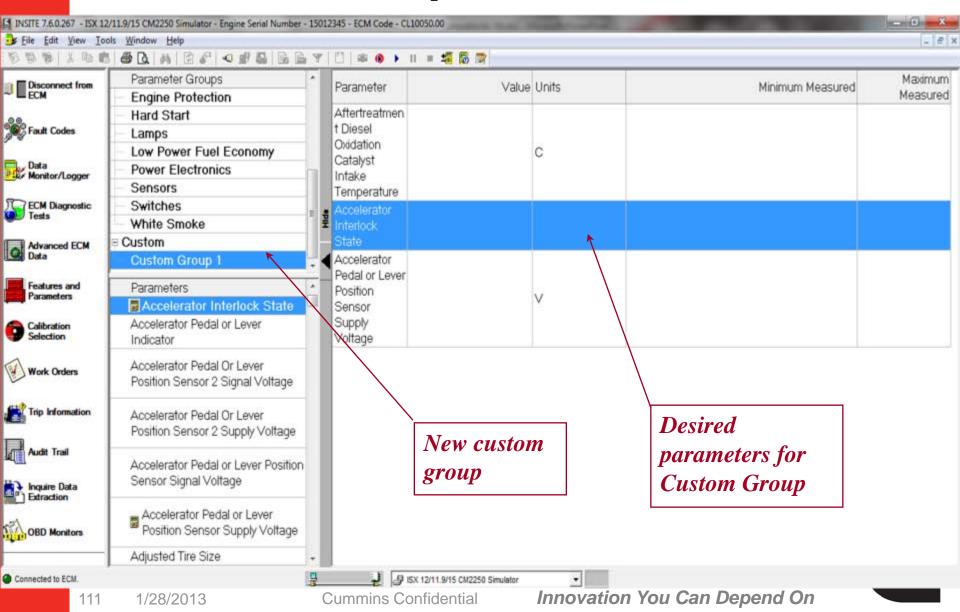
# **Create Custom Group**



continue

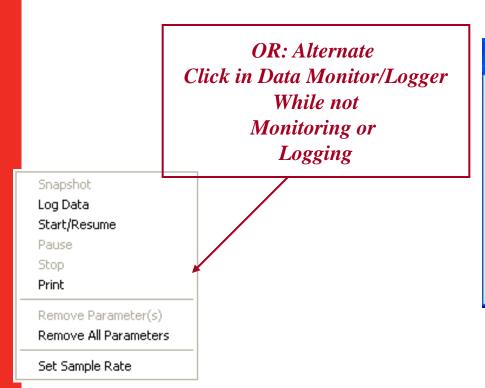
Innovation You Can Depend On

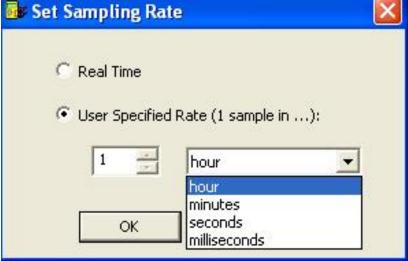
## **Custom Group**



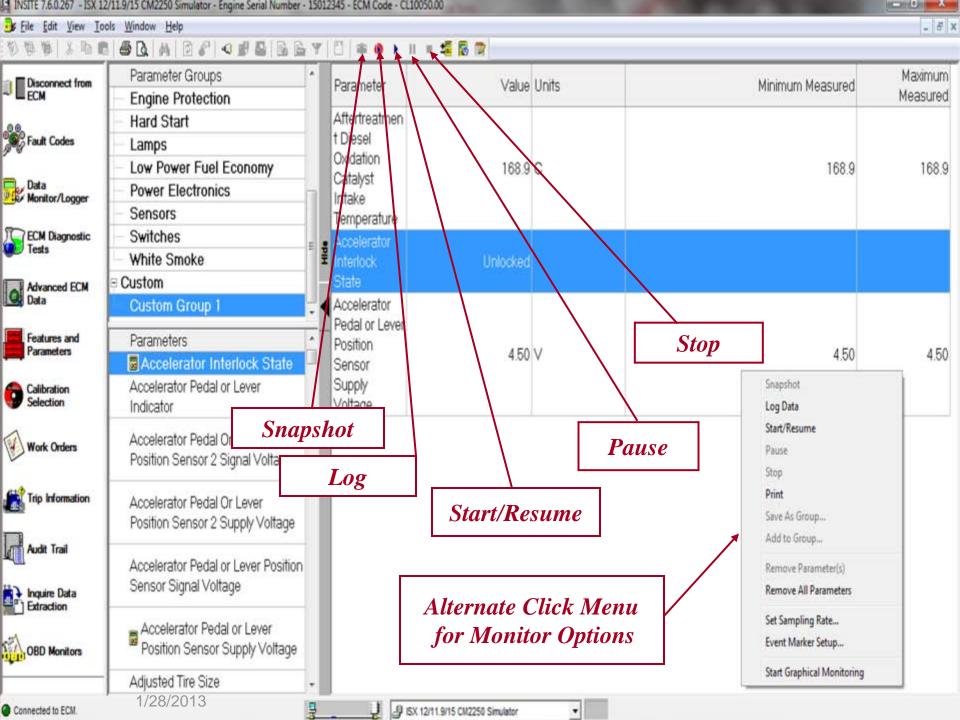
Setting the Data Monitor / Logger sample rate.

 Select Tools → Data → Monitor/Logger → Set Sampling Rate



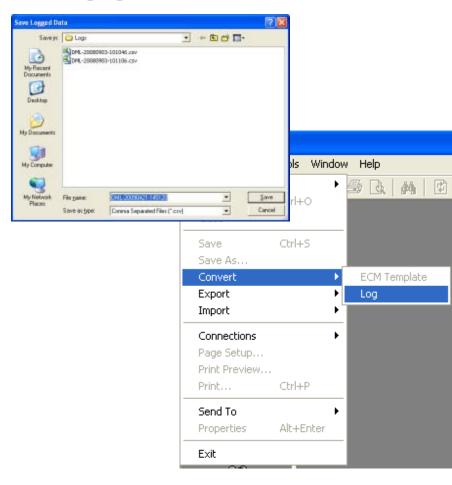






### Converting a Log file for external use:

- Generate a Log File
- Save the Log File
  - INSITE prompts to save once Stop has been selected in Data Monitor/Logger
  - The log files or the snapshot files are saved as Comma Separated Value (CSV) files
  - This file is saved to the hard drive in the C:\Intelect\Insite\Logs Directory or to the drive INSITE is installed
  - User Comments can be added to the Log File





## –Log file contains:

INSITE Pro	essional 7.6.0.267				
Cummins I	nc.				
Data Log In	formation				
	Start Date and Time:	14-Sep-2012,13:56:54.56	i		
	Total Log Time:	00:35.0			
	Source Log Filename:	C:\Users\ke720\AppData\Local\Temp\tmp850B.tmp			
	Destination Path	C:\INTELECT\INSITE\Logs			
	SamplingRate:	1 seconds per sample			
	Comments:				
Customer	and Vehicle Informatio	n			
	Customer Name:	Customer Came**			
	Vehicle Unit Number:	x06BBBBBBB			
Engine Info	ormation				
	Model:				
	Serial Number:	0			
	ECM Part Number:	4943134			
Date	Time	Battery Voltage	Crankcase Pressure	ECM Time(Key On Time)	
9/14/2012	56:54.6	13.9	0	232:47:42	
14-Sep-12	56:55.6	13.9	0	232:47:42	
14-Sep-12	56:56.6	13.9	0	232:47:44	
14-Sep-12	56:57.6	13.9	0	232:47:46	



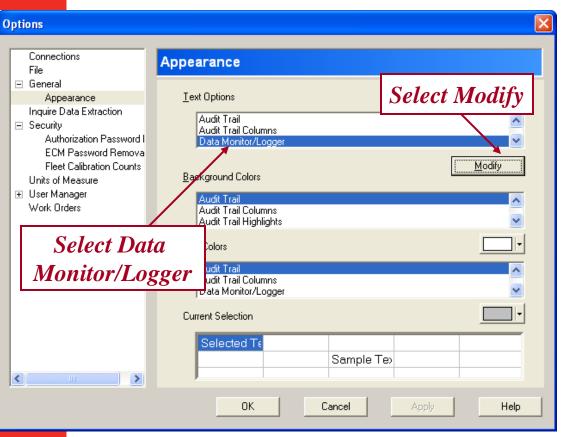
#### **Data Monitor / Logger Limits**

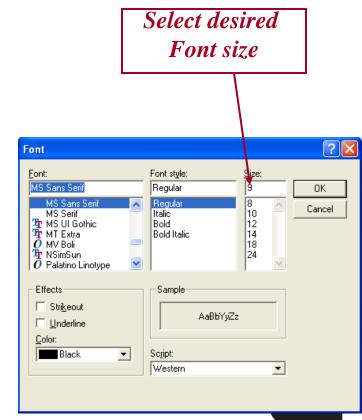
- The Lower Limit and Upper Limit column titles have been replaced with "Min Measured" and "Max Measured"
- The Min Measured column now contains the minimum value observed for each parameter during an open Data Monitor/Logger session.
- The Max Measured column now contains the maximum value observed for each parameter during an open Data Monitor/Logger session.
- The Out of Range Parameter window will no longer be used and has been removed.



Increasing the font size in Data Monitor/Logger:

 Select Tools → Options and select Appearance under the General settings

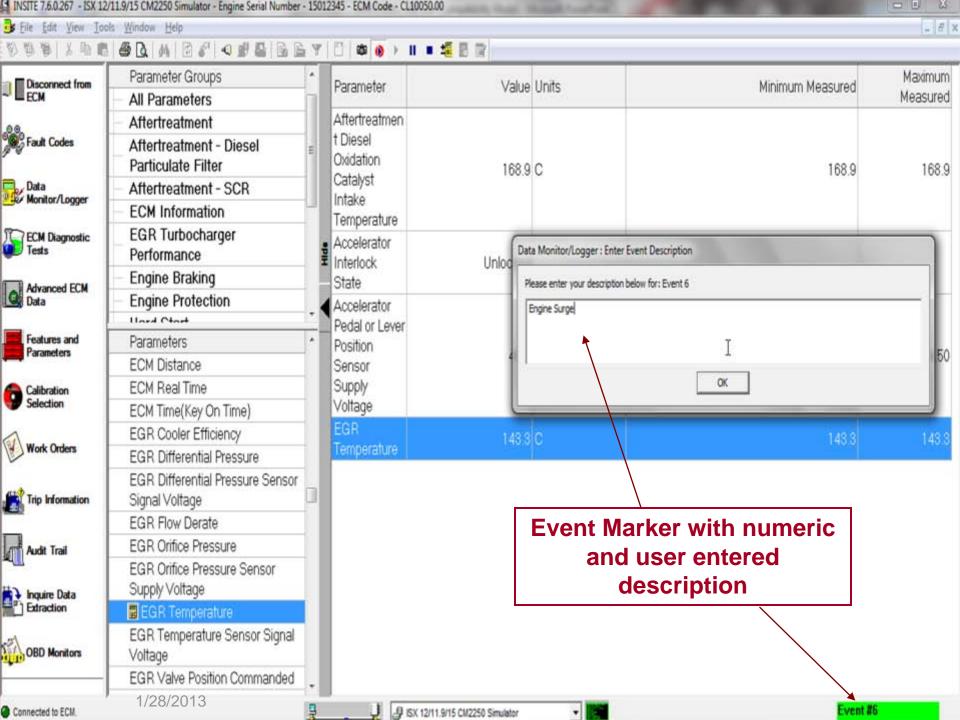




## **Data Monitor/Logging**

- An event can be marked while logging in the main Data Monitor / Logger screen, or when in Graphical Monitoring, by pressing the spacebar
- This provides the option to enable or disable the Event Marker as well as providing the option to create comments for event markers
- The Log file contains the Event Marker Description. For more information on Data Monitor/Logger, refer to Data Monitor logger module on slide 20.

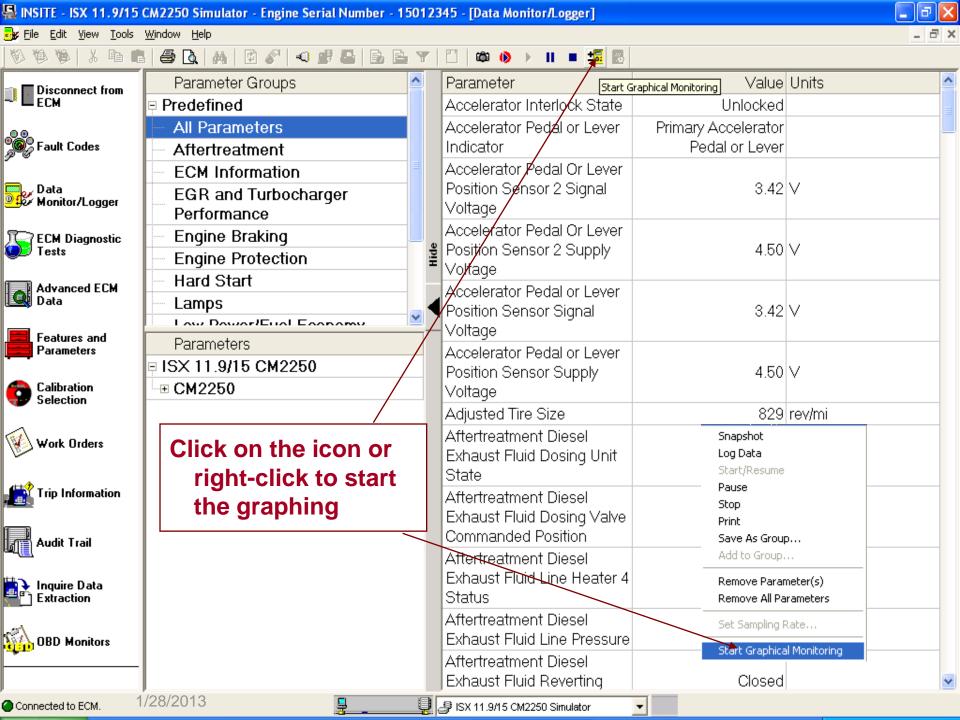


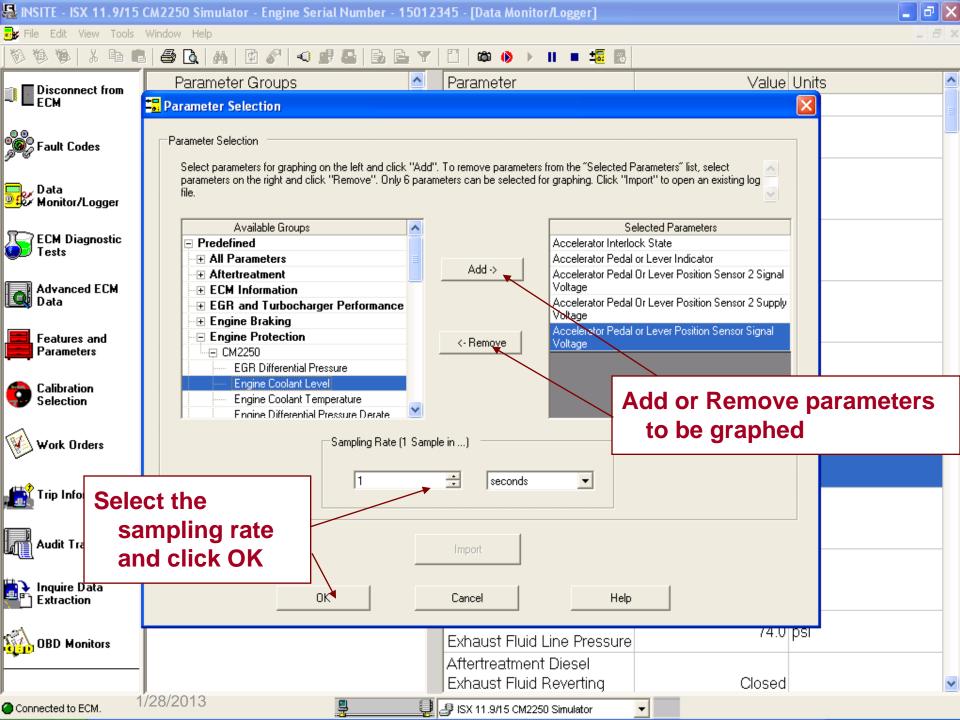


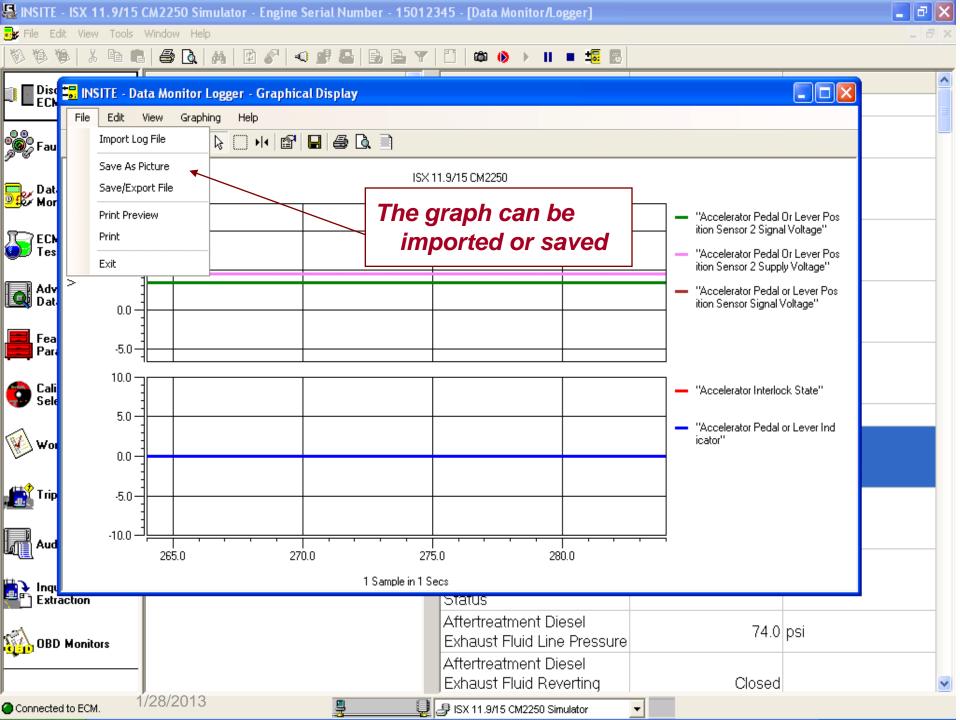
# Data Monitor/Logger Graphical Monitoring

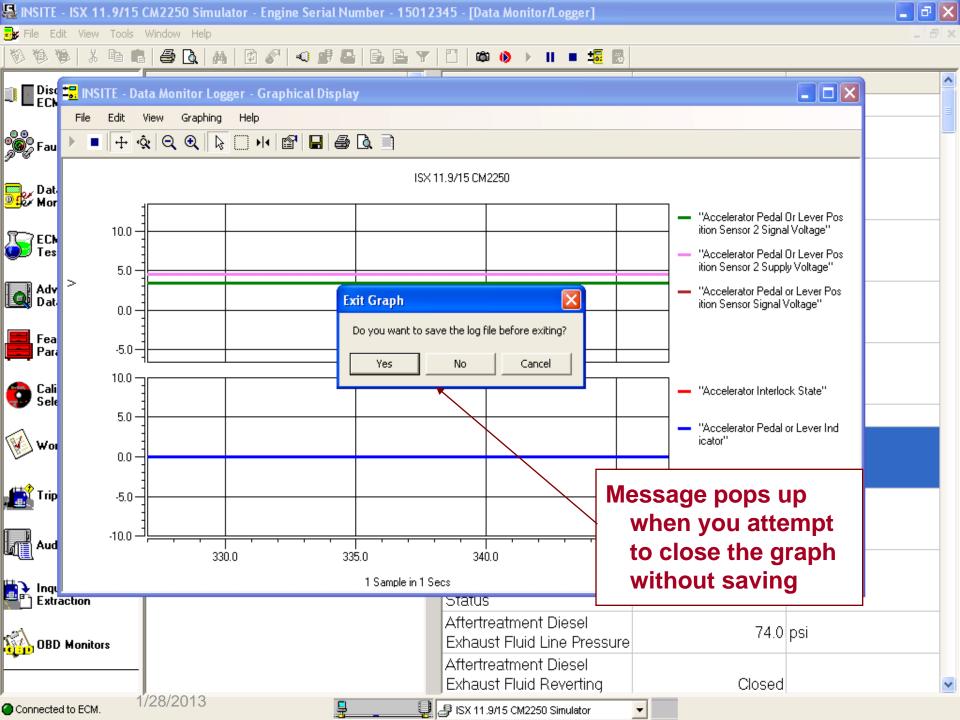
- Graphical Monitoring is a way to display, log, print, and save data for up to six parameters in a graph
- Graphical Monitoring visually monitors and plots multiple parameters into a graphical display

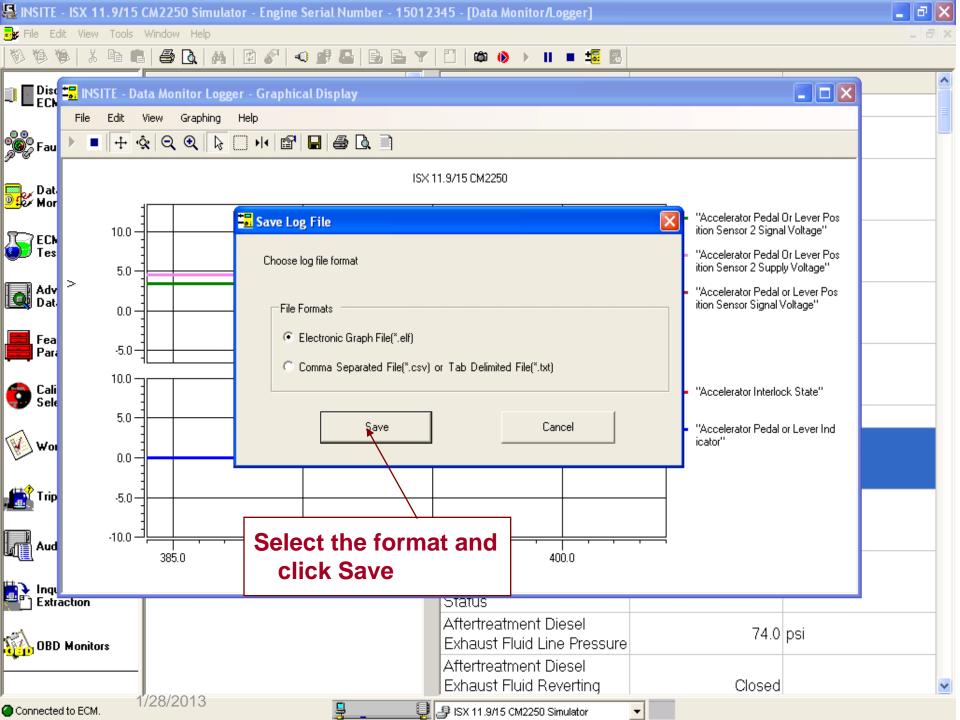


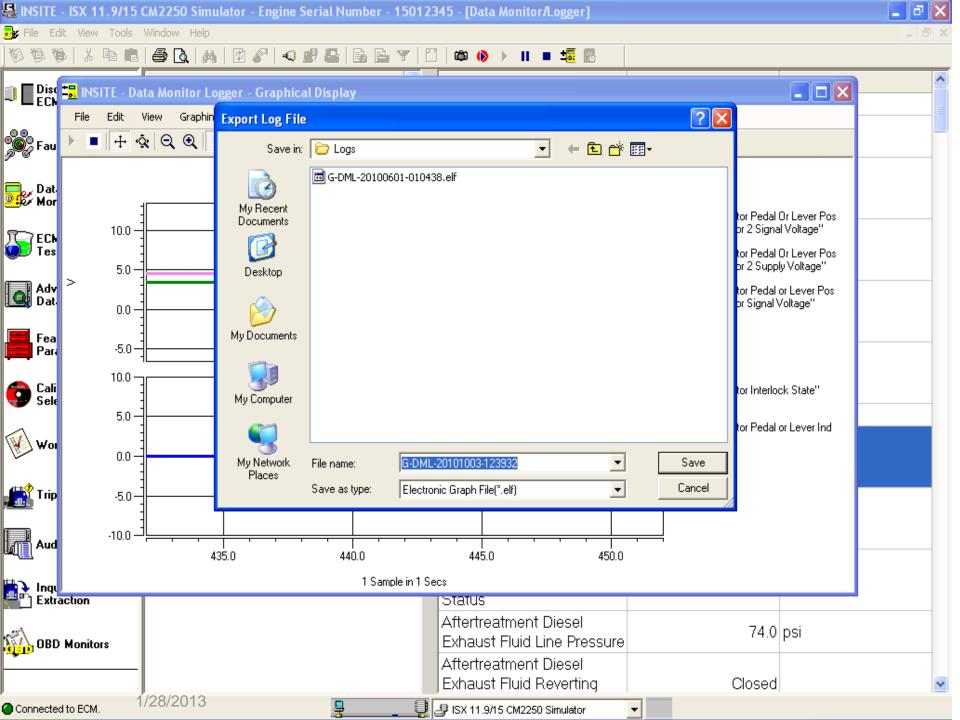












# Data Monitor / Logger Wrap Up

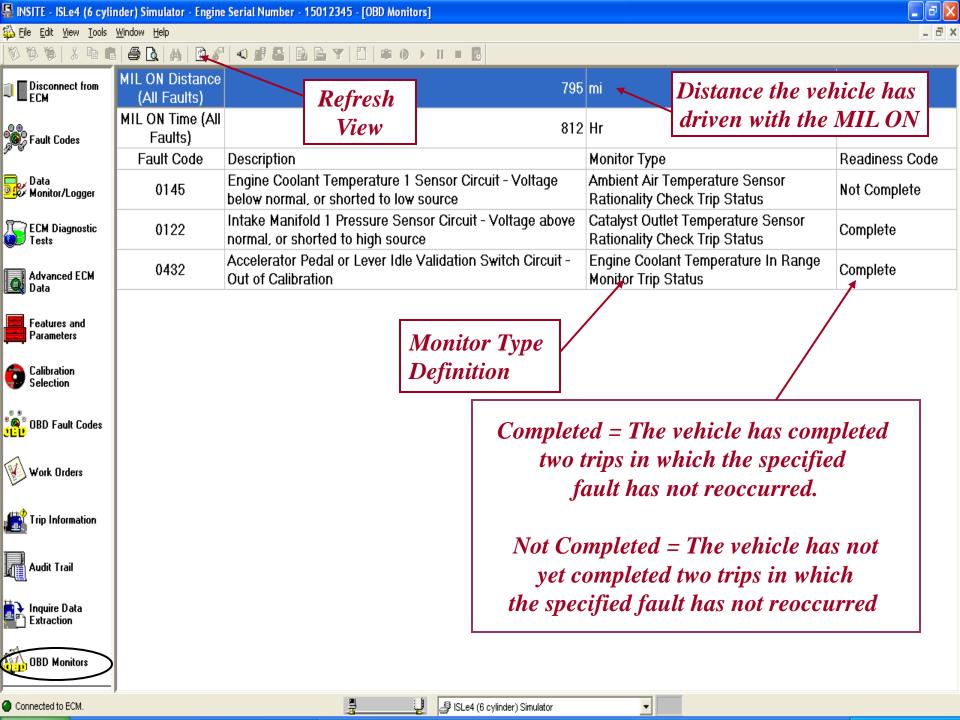
- Data Monitor/Logger provides a means to View, Log or Snapshot live engine data
- Log and Snapshot files can be saved as a CSV or Tab delimited (.txt) files for analysis in Excel
- The Data Monitor/Logger appearance can be modified through Tools → Options to display data in a larger font
- Graphical Monitoring is a way to display, log, print, and save data for up to six parameters in a graph



## **OBD Monitors**

- The OBD system monitors components that can affect the emission performance of the vehicle
- Displays a map of all available fault codes with associated monitor type and its readiness status.
- OBD Monitors are never cleared from this view
- User can refresh the view





You have concluded this section of the training.

Please click to the next slide and continue or Click Here to return to the Table of Content.



130



# INSITE™ ECM Diagnostic Tests and Advanced ECM Data

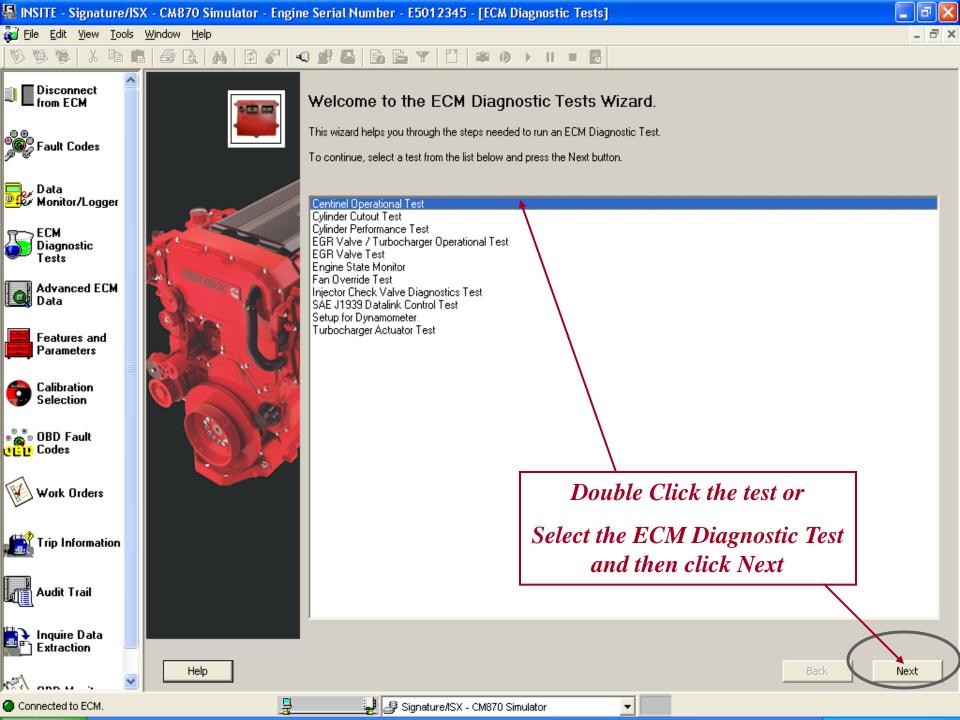
**Electronic Service Tools** 

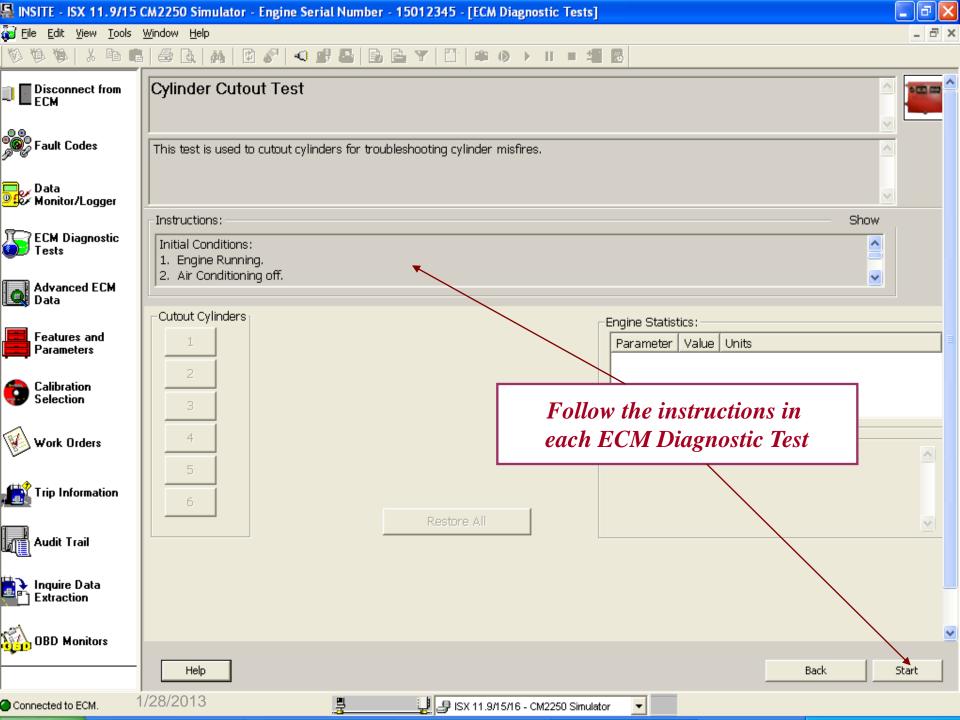
# **ECM Diagnostic Tests**

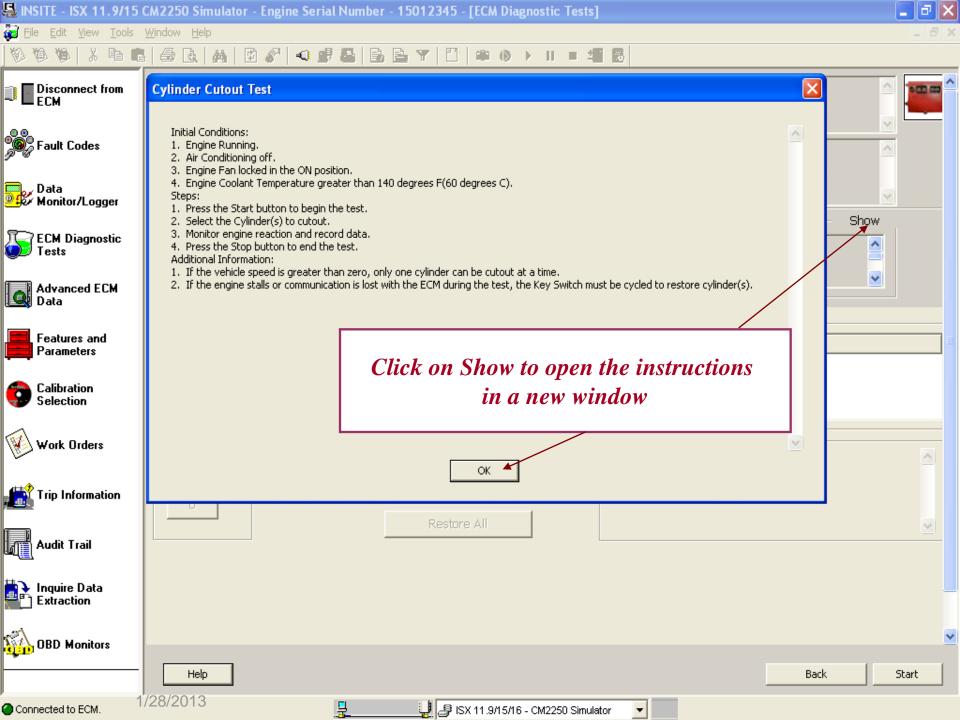
ECM Diagnostic Tests window displays tests available for the connected engine

Each Engine supports different ECM **Diagnostic Tests** 









# **ECM Diagnostic Tests**Wrap Up

- Each Engine supports different ECM Diagnostic Tests
- Follow the directions of each test carefully

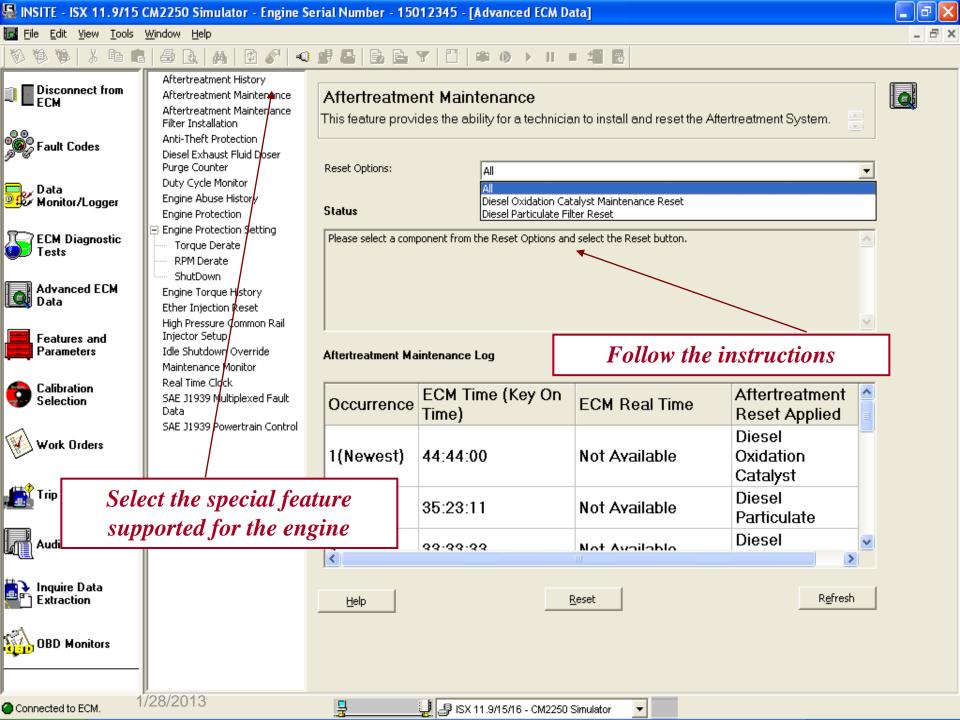


### Advanced ECM Data

Advanced ECM Data window displays the special features available for the connected engine

Each Engine supports different special features





# Advanced ECM Data Wrap Up

- Each Engine supports different special features
- Follow the directions of each feature carefully



You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.





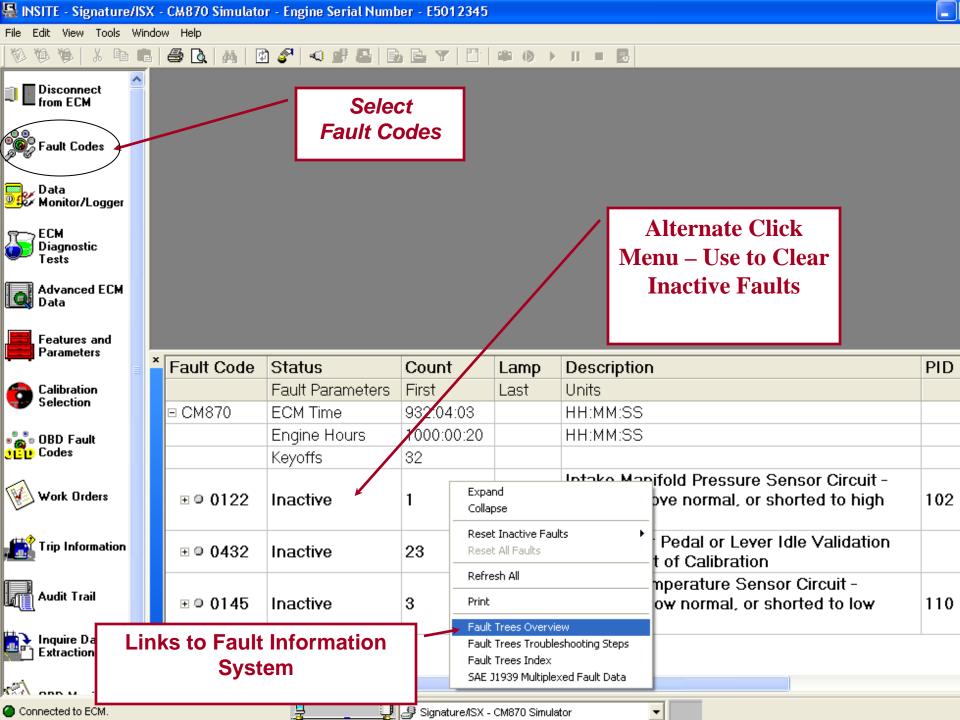
## **INSITE™** Fault Codes

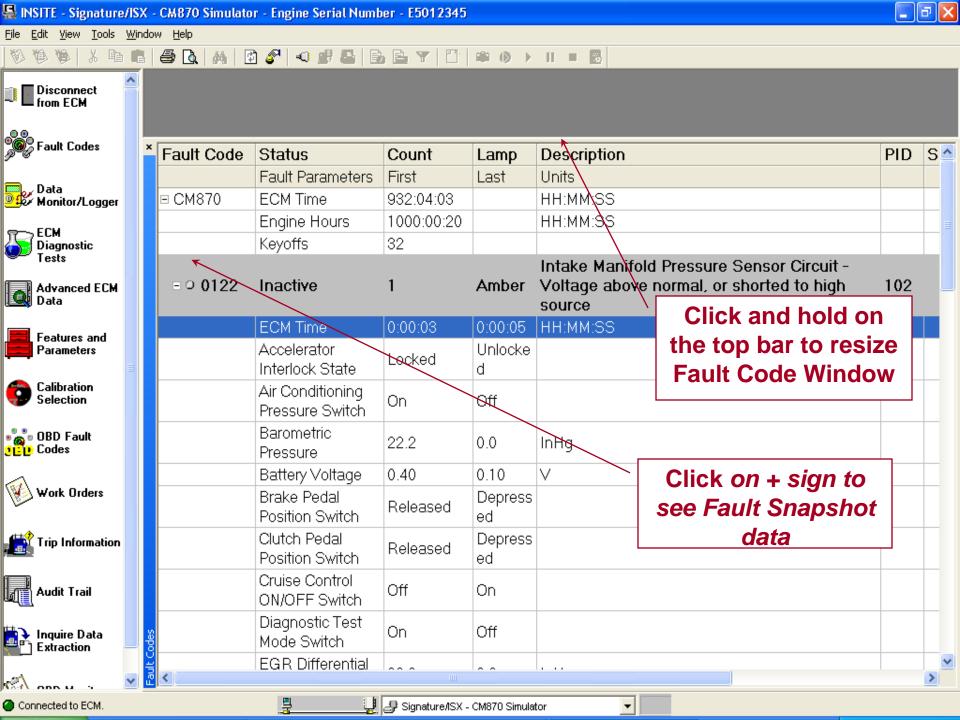
#### **Electronic Service Tools**

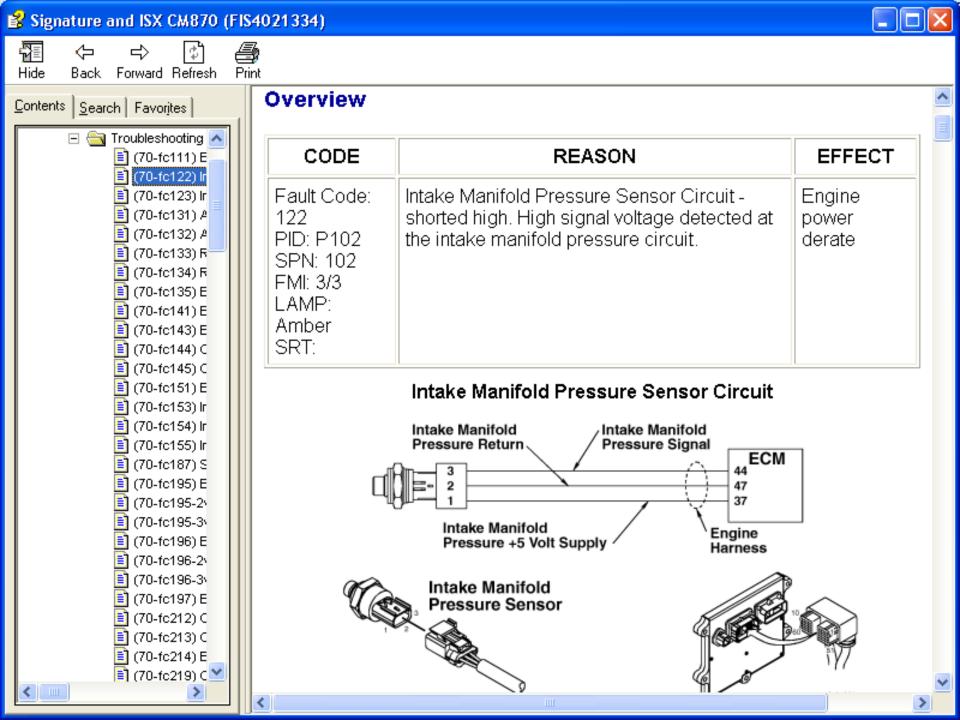
## **Fault Codes**

- Fault Codes window displays an engine's fault data
- Fault Codes include both engine faults and engine protection faults
- Each fault is represented by a Cummins fault code
  - Indicates a specific malfunction or abnormal condition within the controller, subsystem, or engine
- Ability to link to Fault Information System for Troubleshooting Information







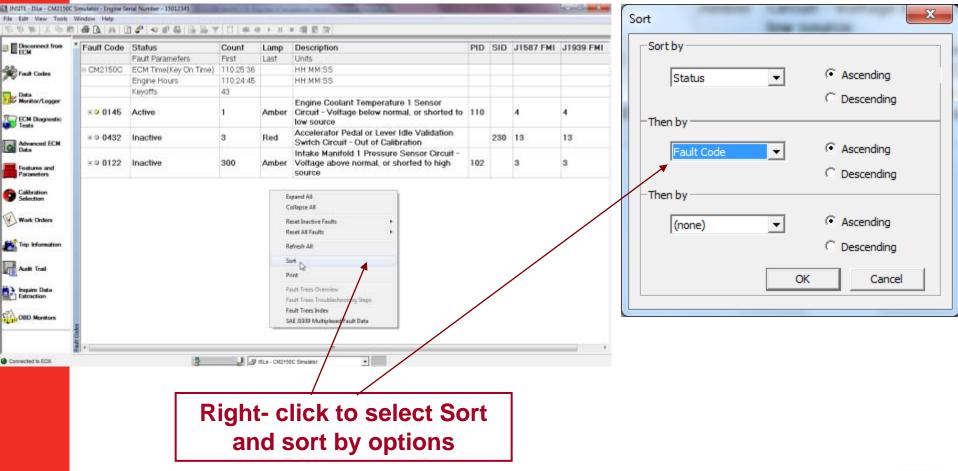


#### **Fault Codes Sorting**

- Fault Codes can be sorted by either the column, or by right click for multiple column sorting
- The Fault Code data can be sorted by clicking on the column header for a single column sort
- The data will be sorted based on the selected column in ascending order. Click on the column header again to resort the data in descending order

**Note:** Sorting can only be used on the Fault Code, Status, Count, or Lamp columns

#### Fault Codes Sorting



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## Fault Codes Wrap Up

- Fault Codes window shows active and inactive Fault Codes
- Alternate click
  - Link to Fault Information System for Troubleshooting information
  - Clear Inactive Faults
- Links to Troubleshooting available in the Fault Information System

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You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.





#### **INSITE™** Features and Parameters

**Electronic Service Tools** 

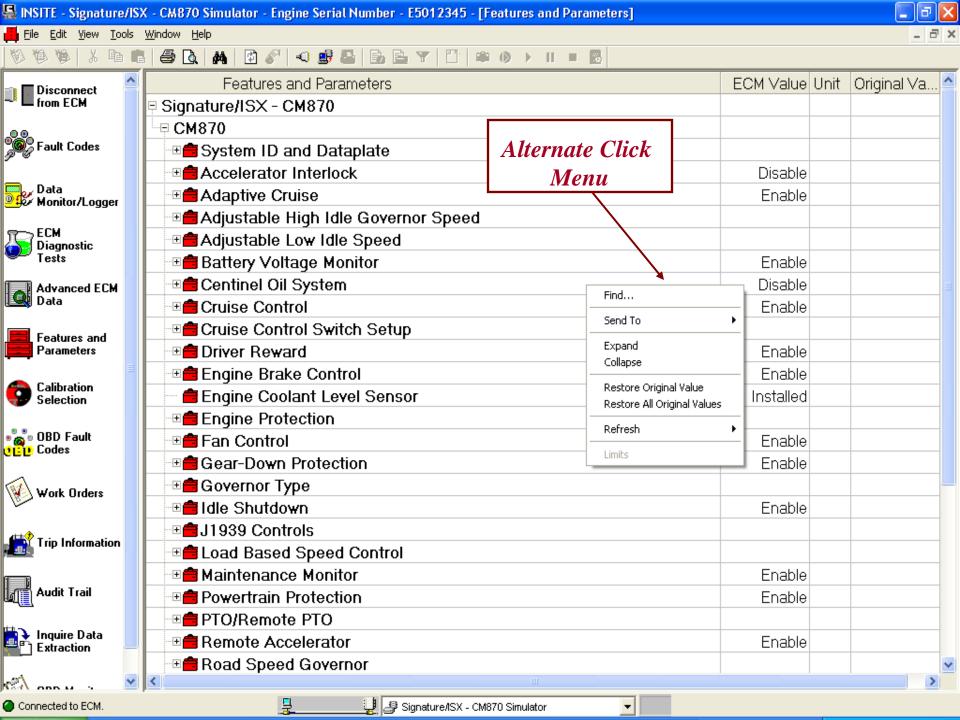
#### **Features and Parameters**

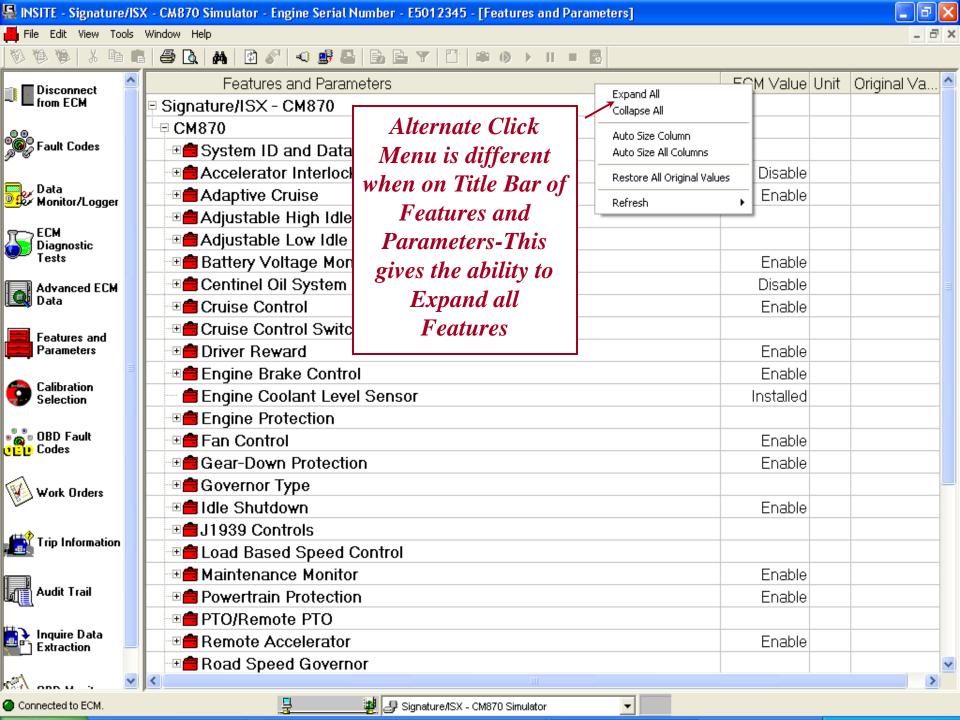
- Allows licensed user to make changes to ECM settings
- Each Engine family may have a unique set of Available Features and Parameters
- Parameters are a subset of Features

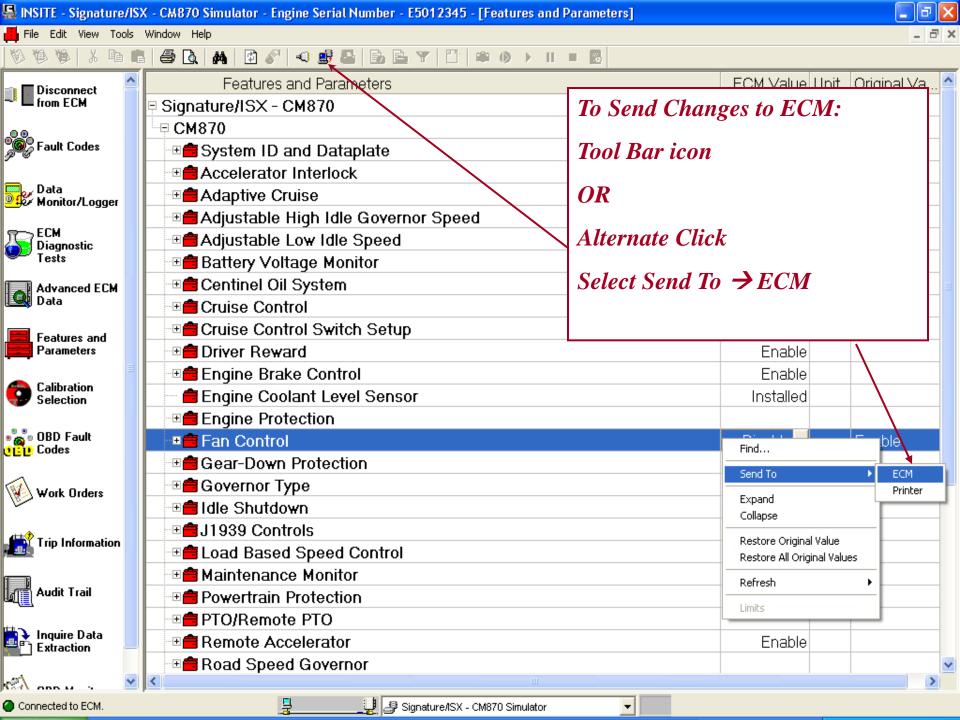
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•INSITE™ lists Features and Parameters in one view - allowing multiple adjustments at once

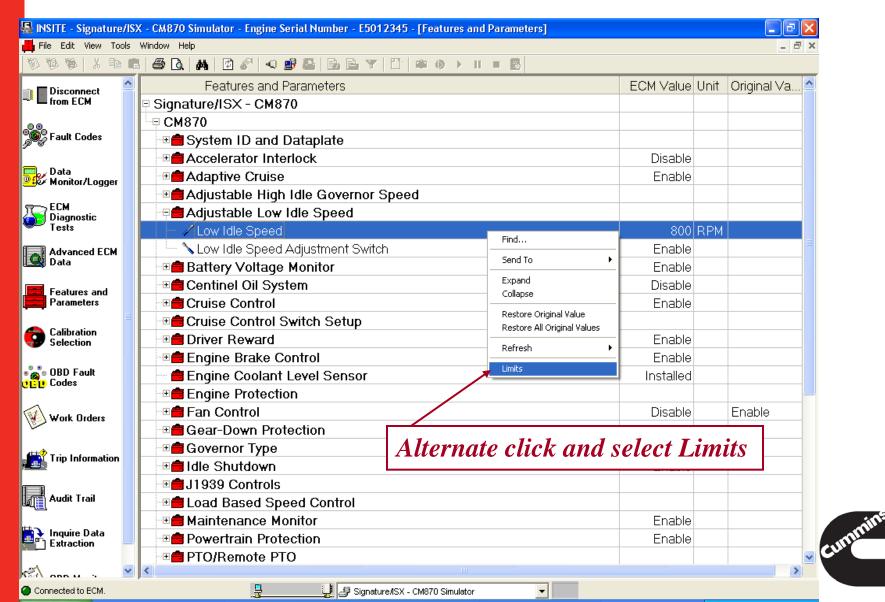




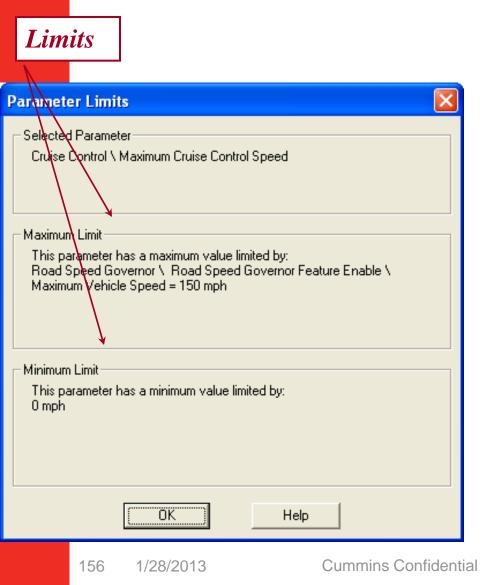


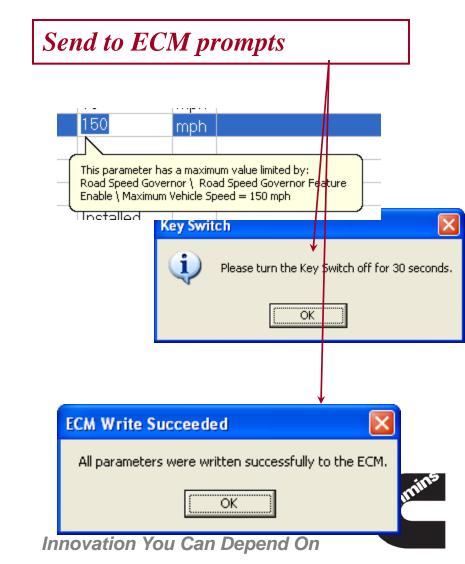


#### **Check Limits**



#### **Features and Parameters**





# Features and Parameters Wrap Up

- •Multiple adjustments can be made at once
- Tool Tips help in adjusting parameters
- Alternate Click
  - Ability to search using Alternate Click Menu
  - Send changes to ECM
  - View Limits of a parameter
  - Expand all parameters when alternate click on title bar of Features and Parameters



You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.

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# **INSITE™** Inquire Data Extraction

**Electronic Service Tools** 

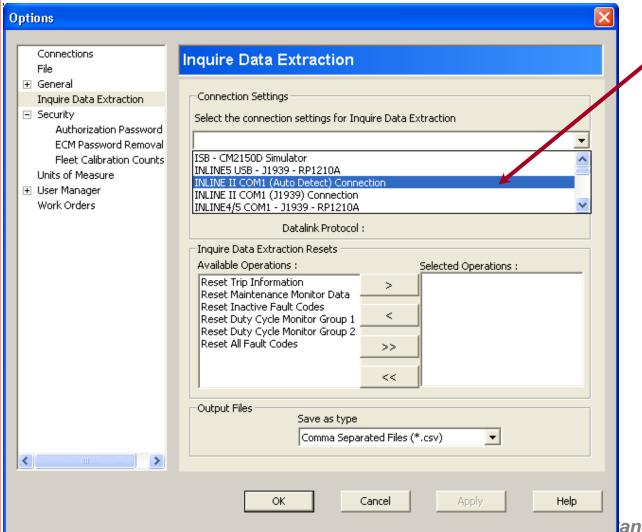
- Used to quickly extract and store ECM data
- Reset selected parameters in a connected engine
  - When no active faults or other issues are present
- Inquire Data Extraction is typically performed while fueling the vehicle

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 Extracted data is saved to a 'CSV' (Comma Separated Value) file for future use

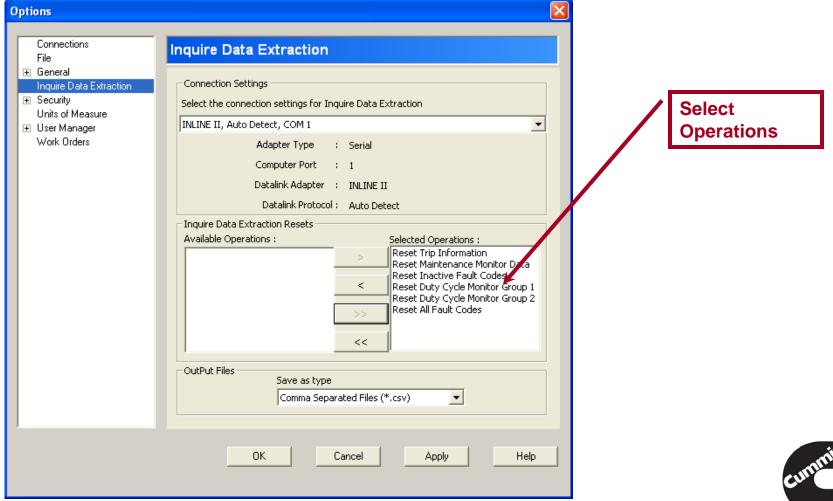


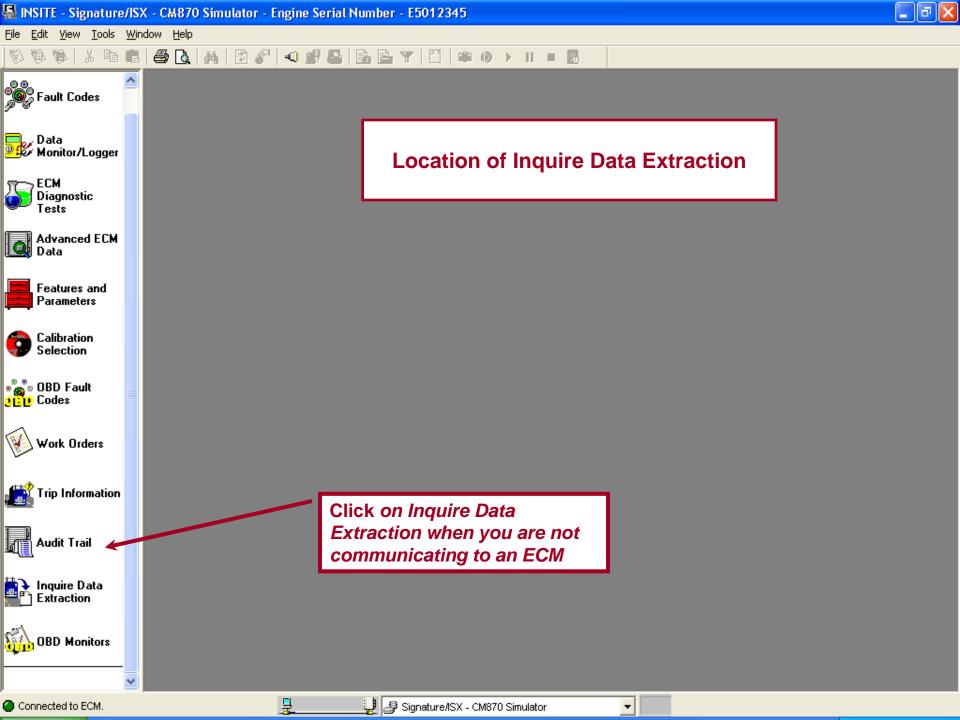
#### Tools → Options



Select the connection



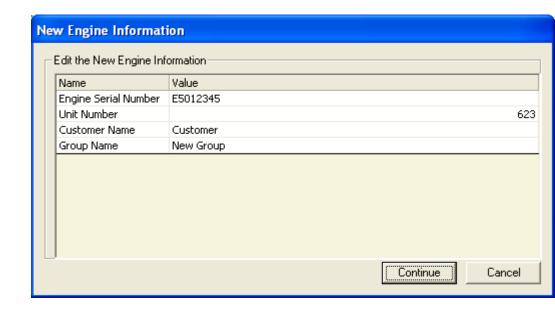




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#### 1<sup>st</sup> Time Engine **Extract**

- Vehicle information Listed
- Can be customized for easier identification









#### -Inquire Data Extraction Status

Current Connection Configuration :

Connection Name : Signature/ISX - CM870 Simulator

Computer Port : 1 Datalink Adapter : N/A Datalink Protocol : N/A

(To change the settings click on 'Options' button)

Please connect to a vehicle

0%

#### -Vehicle Properties :

Group Name	Engine Serial Number	Unit Number	Customer Name
■ New Group			
∀ehicle	E5012345	623	Customer
IE5012345_0_20040720105757.csv			
IE5012345_0_20040720110242.csv			
IE5012345_0_20040720110310.csv			
IE5012345_0_20040720110447.csv			
Vehicle	15012345	UNIT001	Customer
I15012345_0_20040720110415.csv			
I15012345_0_20040720110529.csv			
└──	307662884	QSKG	Customer
1307662884_0_20040720110654.csv			
1307662884_1_20040720110656.csv			
I307662884_2_20040720110659.csv			

# Inquire Data **Extraction**

Connect

Close

Options

Help

# Inquire Data Extraction Wrap Up

- Excellent application for fleets that need to quickly gather vehicle data
- Simple connection to vehicles

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- Provides resets as needed
- Data is automatically formatted for importing to a spread sheet or data base



You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.

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# INSITE™ Installation and Tool – ECM – User Security

**Electronic Service Tools** 

#### Agenda

- -Installation/Auto Run
- -Tool Security
- -Start Up
- -Tools Options
- –ECM Security
- User Manager
- -Roll Back Option



#### **Auto Run Menu**

#### INSITE™ installation DVD uses an Auto Run Menu

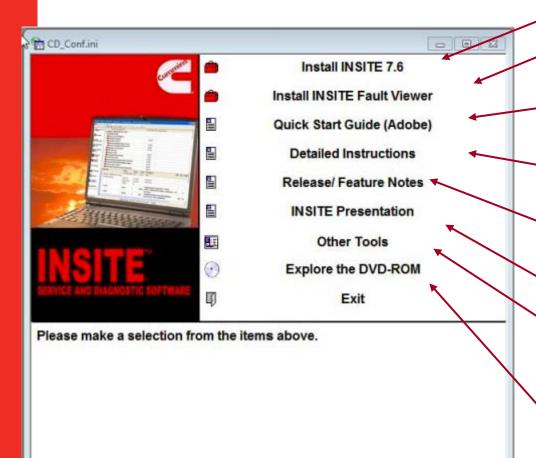
- To Install, Select Install INSITE ™ 7.6.0
- INSITE TM will upgrade from previous versions
- It is not necessary to uninstall previous versions of INSITE before installing the new version



#### **Auto Run Menu**

Install INSITE 7.6.0

Install INSITE Fault Viewer



Quick Start Guide

**Detailed Instructions** 

Release/Feature Notes

**INSITE Presentation** 

Other Tools

Explore the DVD-ROM

http://insite.cummins.com

http://www.cummins.com

Back to Agenda



# **Auto Run Wrap Up**

Refer to either the Quick Start Guide or the Installation Instructions

INSITE™ will upgrade from previous versions

It is not necessary to uninstall previous versions of INSITE ™ before installing the new version.



#### **Upon Initial Startup**

- Registration Password Required
  - Basic Password is needed to access INSITE™ Basic Functionality (Read Only)
  - Additional Functionality can be added
    - Once INSITE™ is opened
    - Tools → Options → Security

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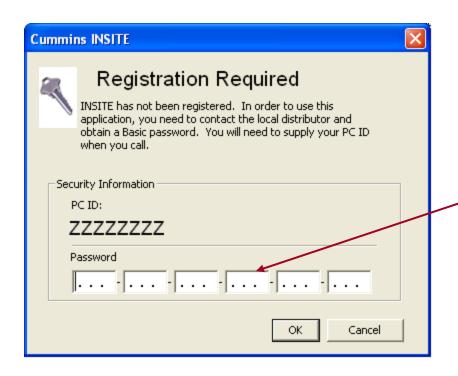
Login to the Windows® account that will be used to access INSITE™



Text	Zero's	O's
Arial	0	Q
Times	0	0
Termina	a1 Ø	0
Ms Serif	0	0

Notice the difference between Zero's and O's





18 Digit Password



# **Tool Security Wrap Up**

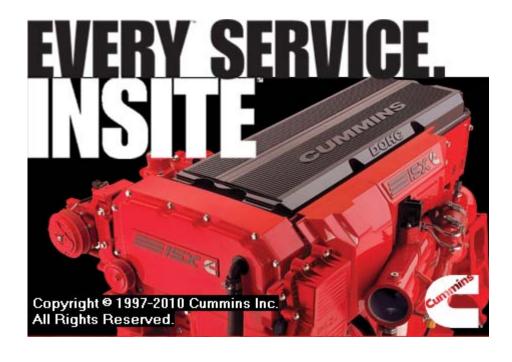
Be careful when entering passwords containing Zero's and/or O's

Tools → Options → Security

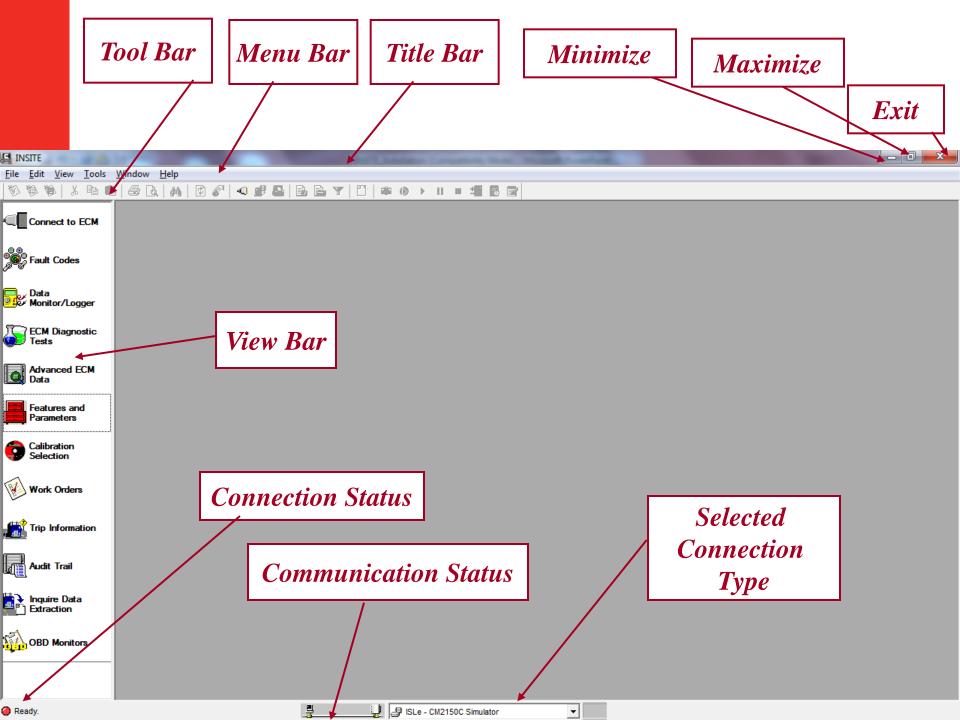
- Enter your Functionality Password
- -Enter Fleet Count Password
- -Enter Zap-It Password

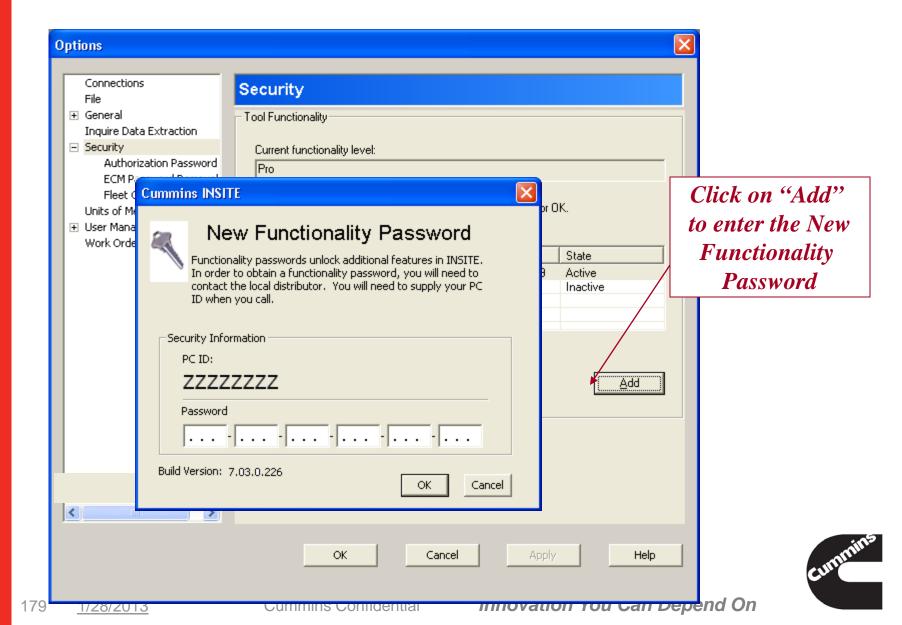


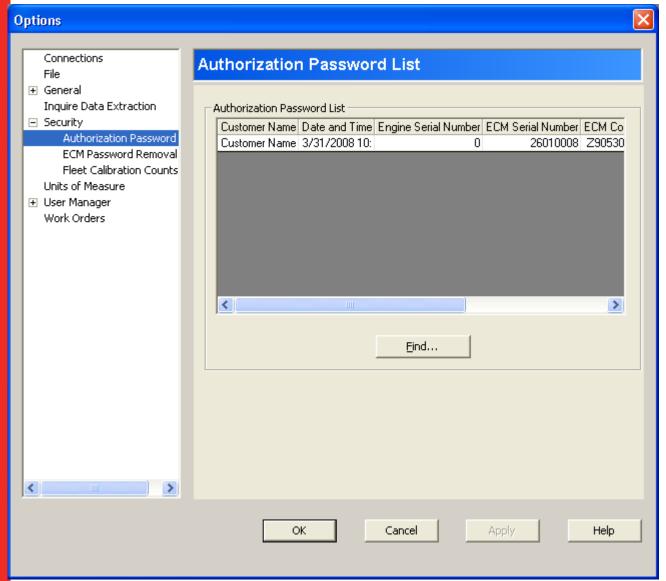
# **INSITE Start Up**







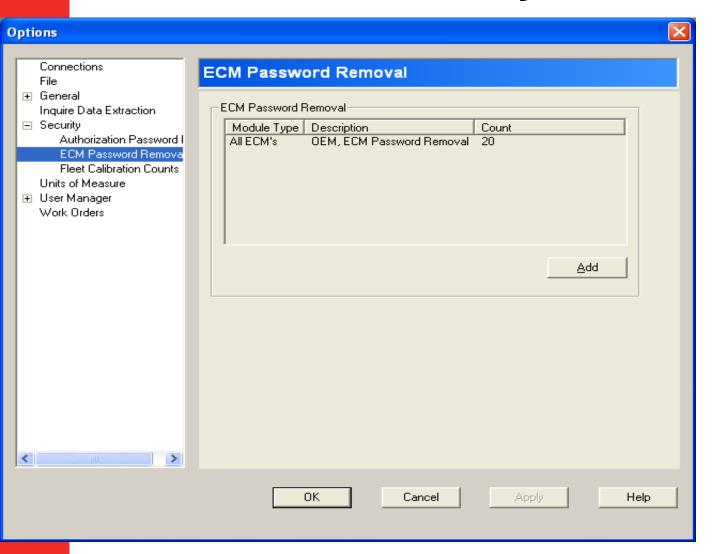




☐ History of calibration download that required a password



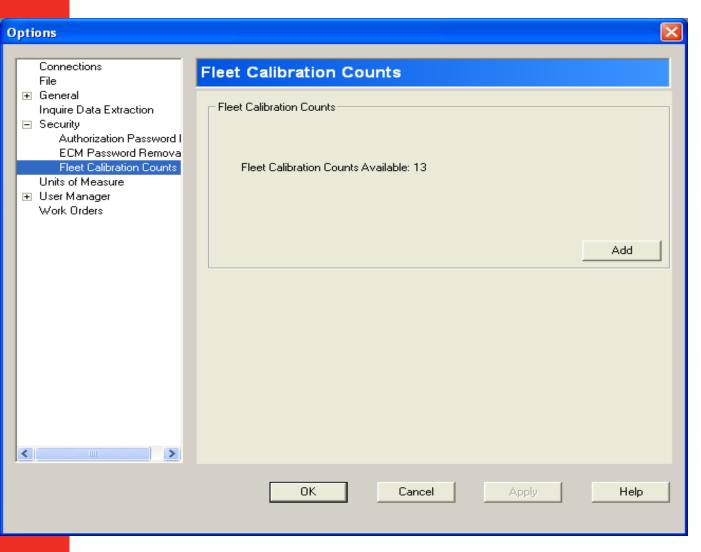
#### **Tool Security**



- ☐ ECM Password Removal (Zap-It)
- ☐ Passwords that allow INSITE to remove ECM Passwords



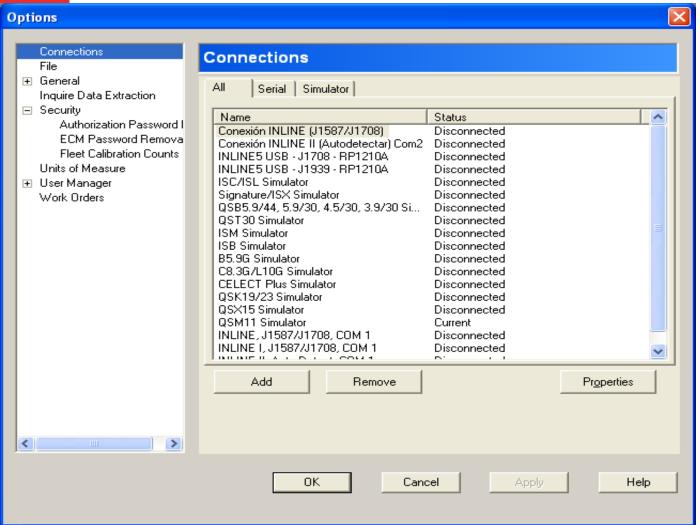
### **Tool Security**



- **☐** Fleet Counts
- ☐ Allows user to store counts to download several Calibrations without using Single Passwords



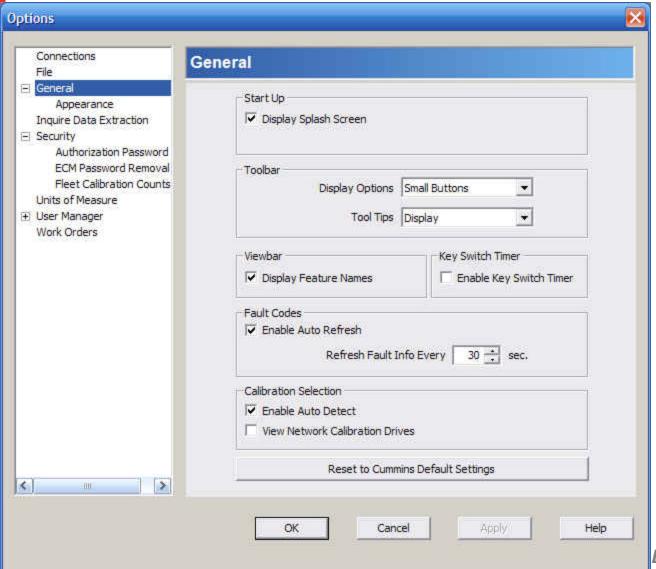
# Tools→ Options→ Connections



□Add and Remove Connections



### Tools→ Options→ General

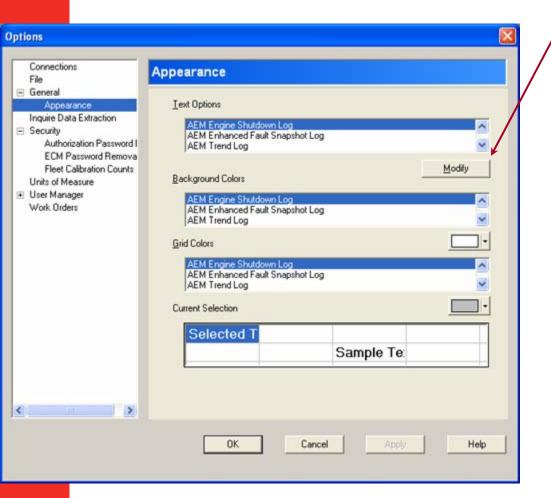


□ Personal Preferences



Tools→ Options→ General→

**Appearance** 

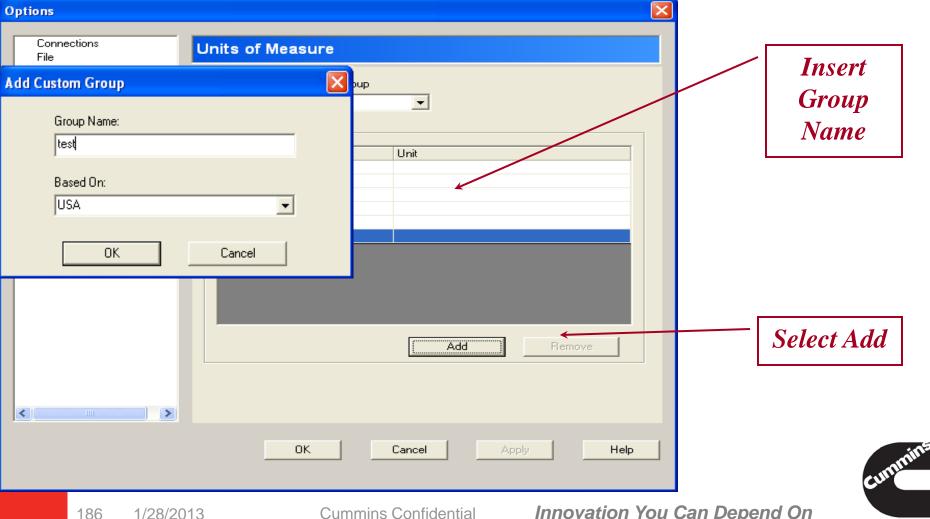


Select Modify

□Font size can be changed for ease of viewing

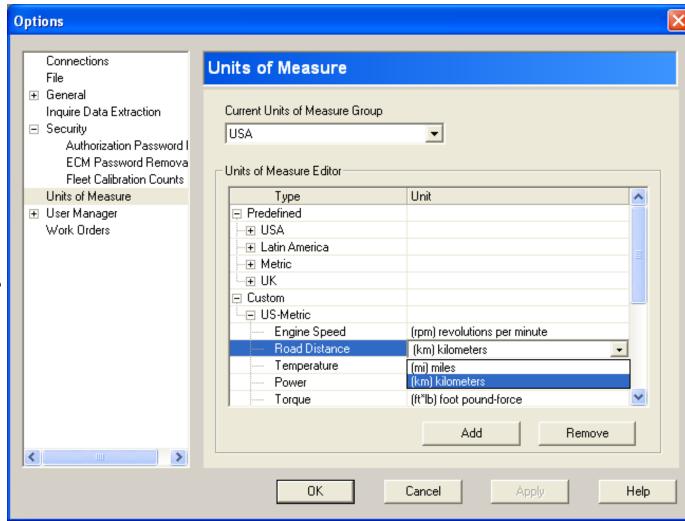


# **Tools**→ **Options**→ **Units of** Measure



# Tools→ Options→ Units of Measure

- □ Predefined Groups
- ☐Custom Groups may be set up
- □ Adjust
  Custom Groups
  to match User
  Preferences



### **Tools** → Options Wrap Up

#### One place to Set up and customize INSITE™ Contains:

- Connections
- File Locations
- General
  - Location to Adjust Font Sizes
- Tool Level Security
  - ECM Password Removal Passwords
  - Fleet Calibration Count Passwords
- Units of Measure
- User Manager
- Work Orders



Most of the Cummins ECMs have five levels of password capabilities:

- Master
- Adjustment
- Reset
- OEM
- OEM 2



#### Master ECM Password

- No Changes to ECM Allowed
- Includes all Writes and Resets

#### Adjustment Password

- Master Password must also be Set
- Only allows changing ECM Adjustments
  - Features and Parameters

#### Reset Password

- Master Password must also be Set
- Only allows ECM Resets
  - Fault Codes, Trip Information

#### OEM/OEM 2 Password

- –Master Password does not need to be set
- Protects OEM Specific Parameters from Adjustment



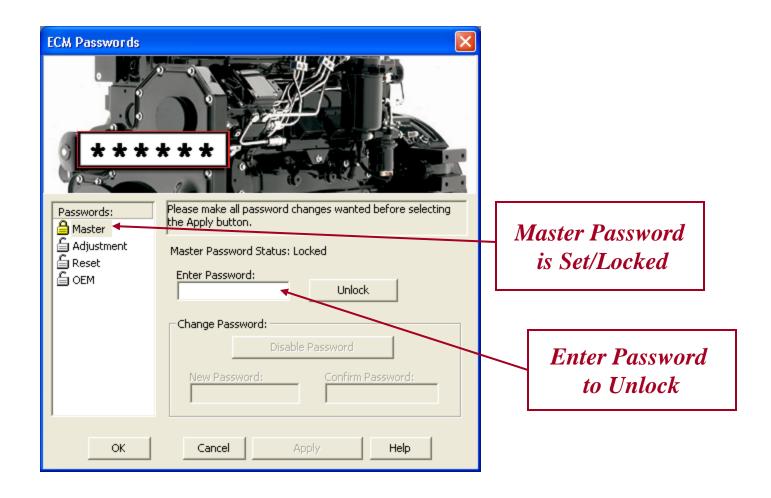


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Tools → ECM Passwords...

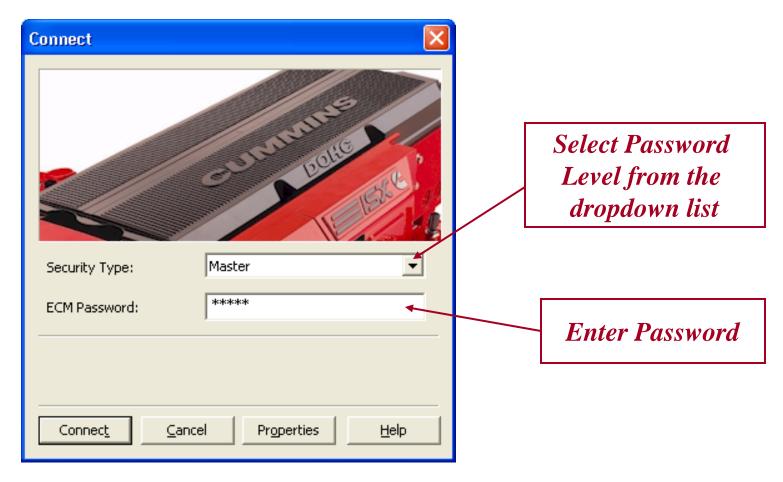


191



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# ECM Security Wrap Up

- Used to protect the ECM from users making unauthorized adjustments
- –Different levels can be set to allow for:
  - Resets only (Reset Password)
  - Feature Adjustments (Adjustment Password)
  - Full functionality (Master Password)
- –Master Password must be Set when using ECM Security

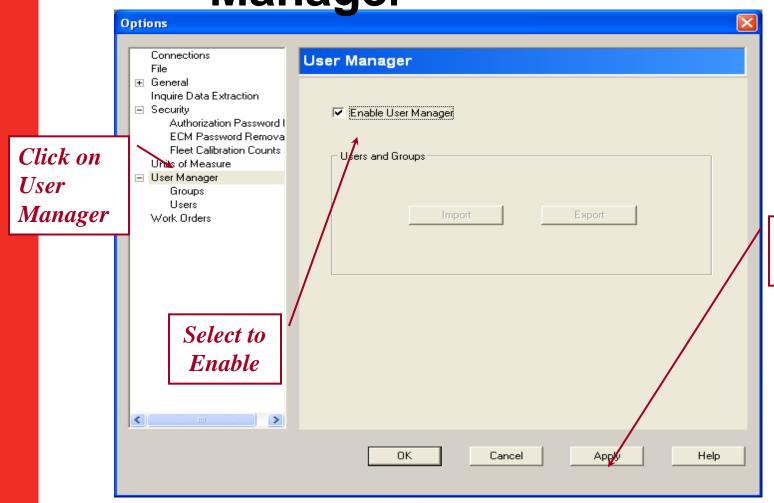


#### **User Manager**

- Enables a system administrator to assign specific access rights to individual users and groups
- When enabled, a login is required to open INSITE ™
- Multiple users and groups can be created



Tools→ Options→ User Manager



Select Apply



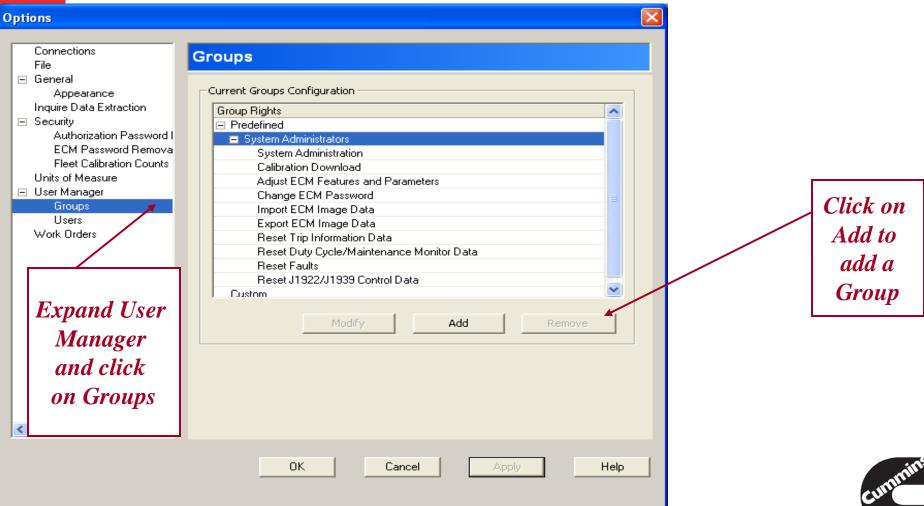
#### System Administrator

Modify User Hiser Name: System Administrator Password: \*\*\*\* Enter the Confirm Password: password for skokokokok the System Administrator Groups: System Administrators <u>O</u>K. Cancel Help

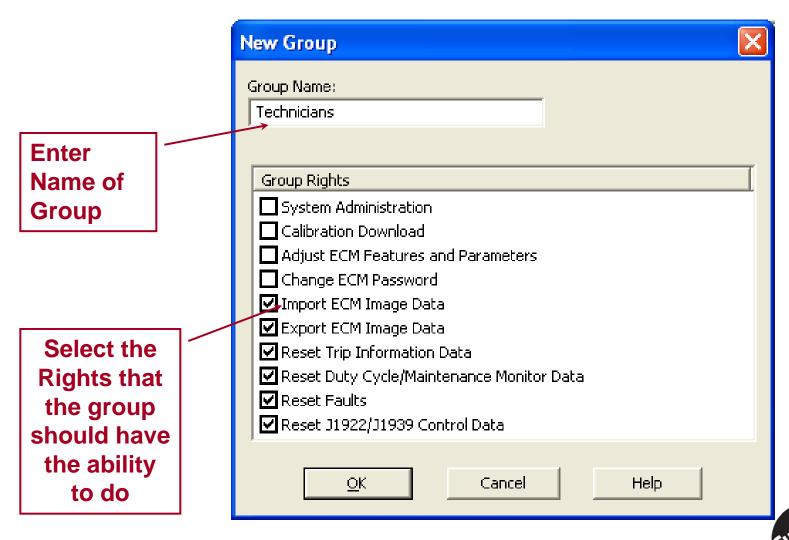


1/28/2013

# **Setting Up Groups**

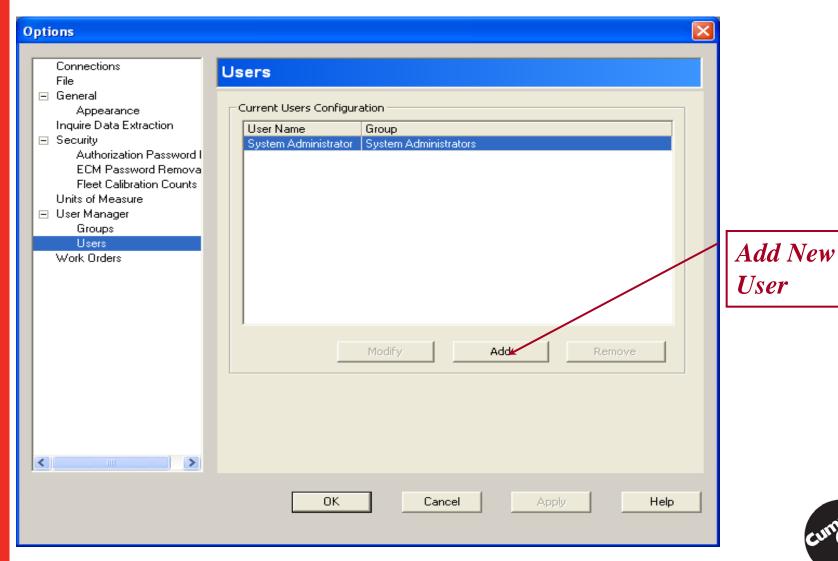


## **Setting Up Groups**



199

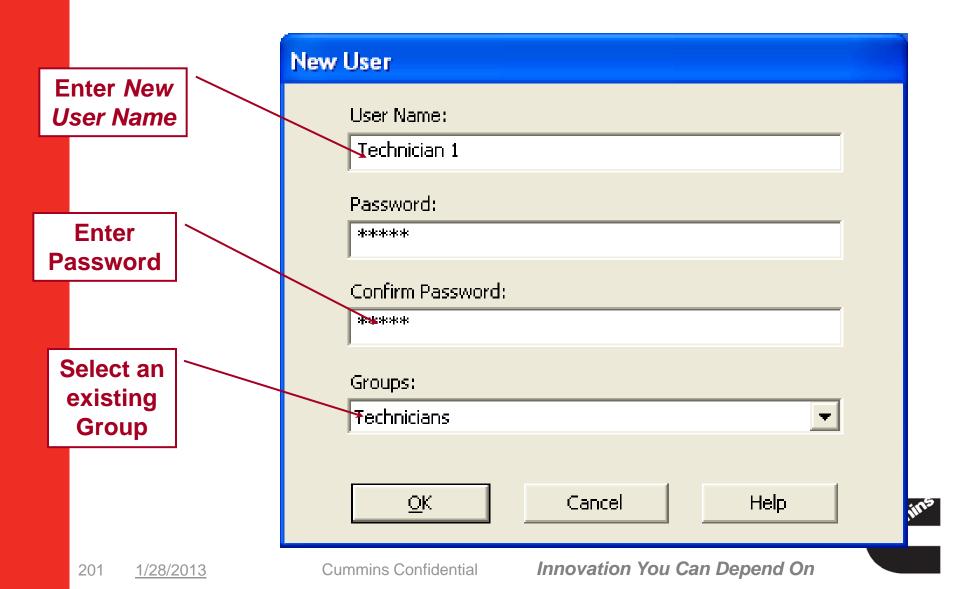
# Setting Up Users



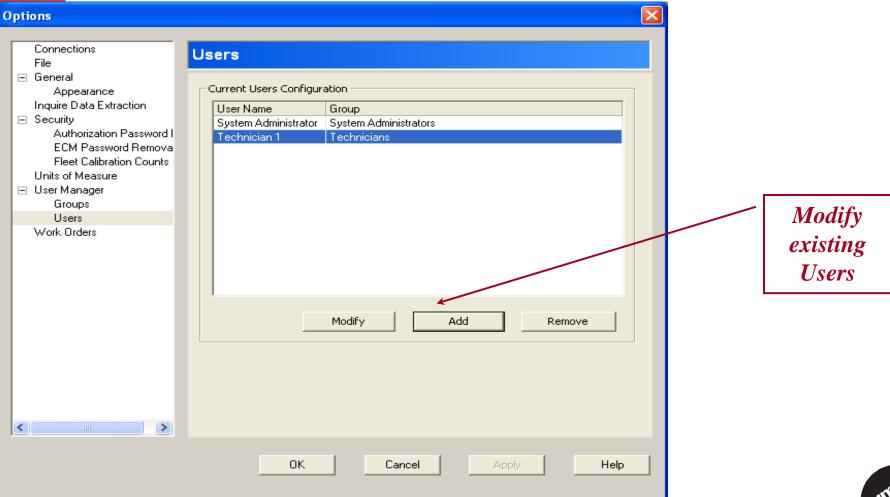


200

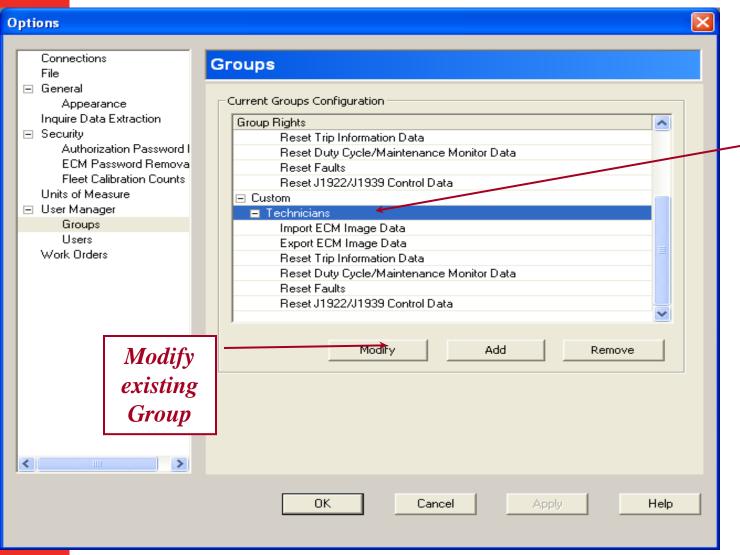
# **Setting Up Users**



## **Modifying Users**



# **Modifying Groups**



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New Group will show under Custom



#### **After Re-starting INSITE**



204

### **User Manager Wrap Up**

 User Manager allows INSITE ™ to be used by multiple users with restricted access to the Tool Functionality



#### **Roll Back Option**

- INSITE™ provides the capability to roll back to the previous base version
- For example, INSITE™ 7.5.1 can be rolled back to INSITE™ 7.5 by using uninstall update in the Control Panel

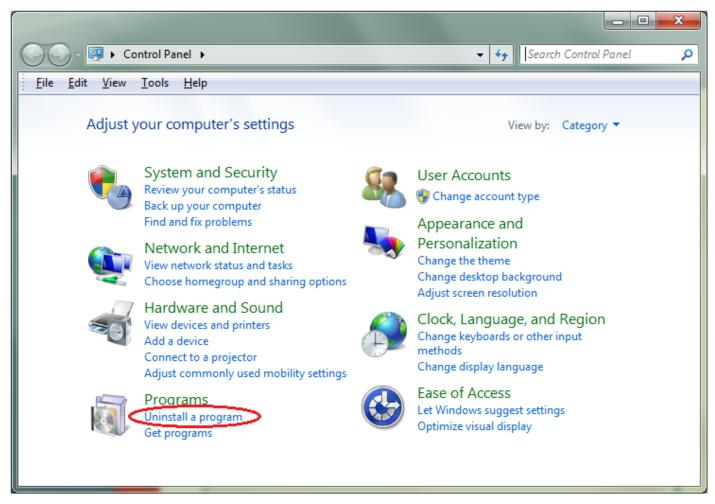


#### **Roll Back Option**

- On a Windows 7 or Windows Vista PC
  - Go to Start > Control Panel > Programs > Uninstall a Program. On the upper left hand side, click on View installed updates. Select INSITE™ 7.5.1 from the list and click Uninstall. Follow the prompts to uninstall INSITE™ 7.5.1
- On a Windows XP PC
  - Go to Start > Control Panel > Add/Remove Programs. On the top, check the box **Show updates**. Select INSITE™ 7.5.1 from the list and click **Uninstall**. Follow the prompts to uninstall INSITE™ 7.5.1
- Note: The PC may need to be restarted after uninstalling INSITE™ 7.5.1



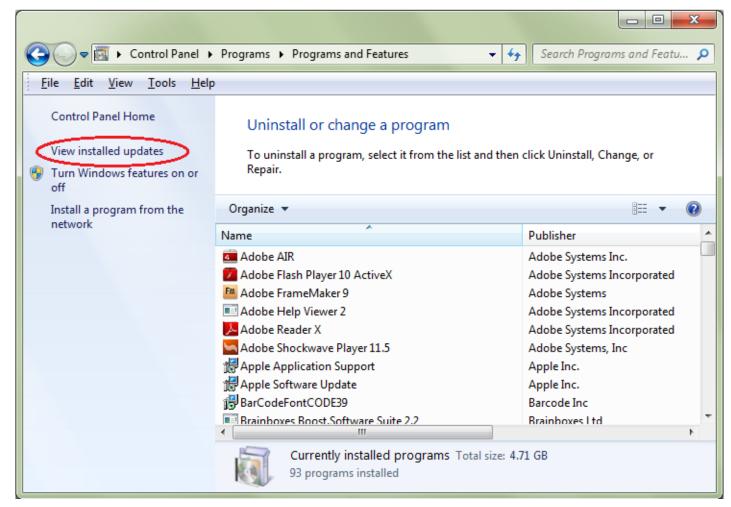
#### **Roll Back Option – Windows 7/Vista**





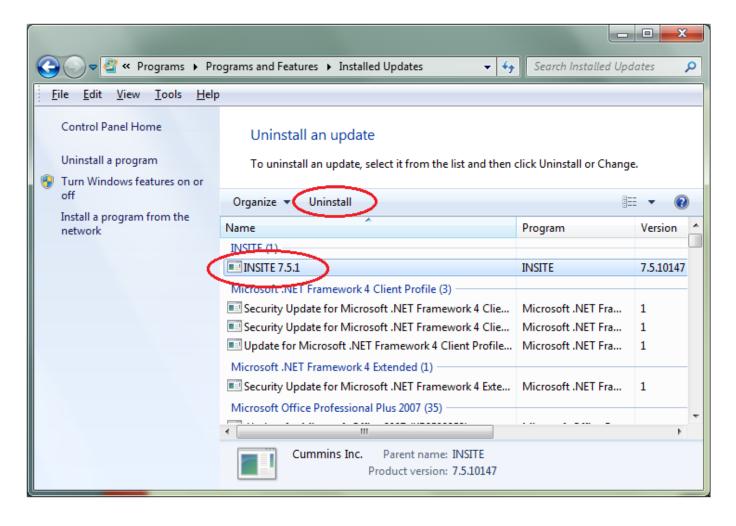
208

#### **Roll Back Option – Windows 7/Vista**



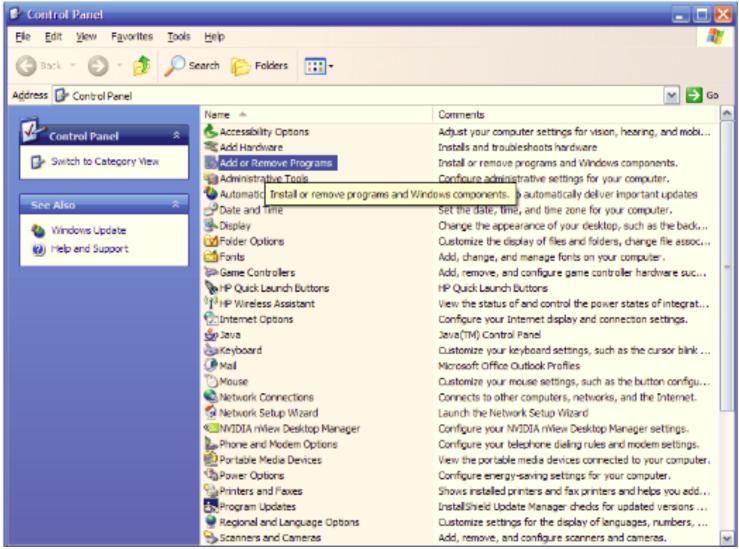


#### **Roll Back Option – Windows 7/Vista**



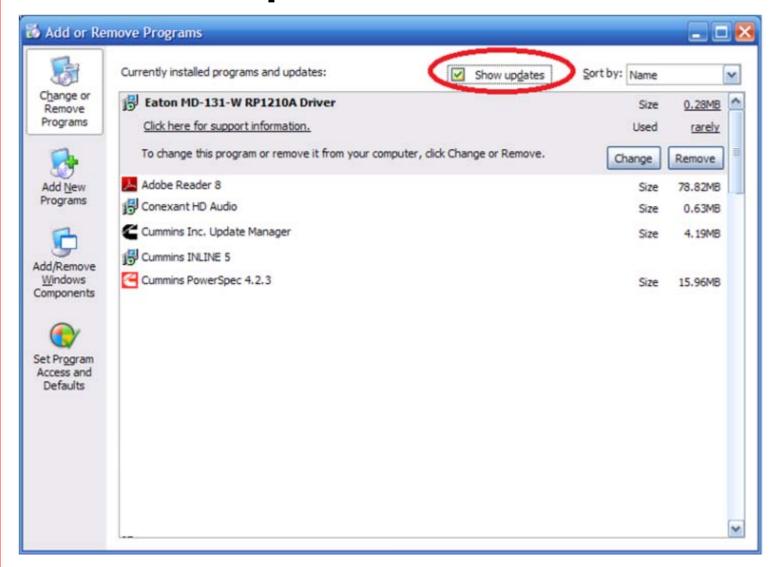


#### **Roll Back Option – Windows XP**





#### **Roll Back Option – Windows XP**

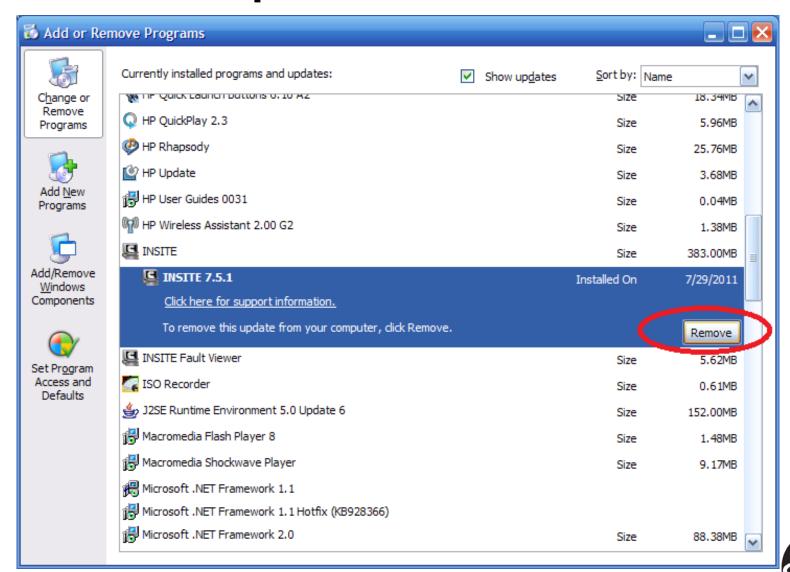




1/28/2013

212

#### **Roll Back Option – Windows XP**



#### **Roll Back Option Wrap Up**

 INSITE™ provides the capability to roll back to the previous version



You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.

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#### **INSITE™** Trip Information

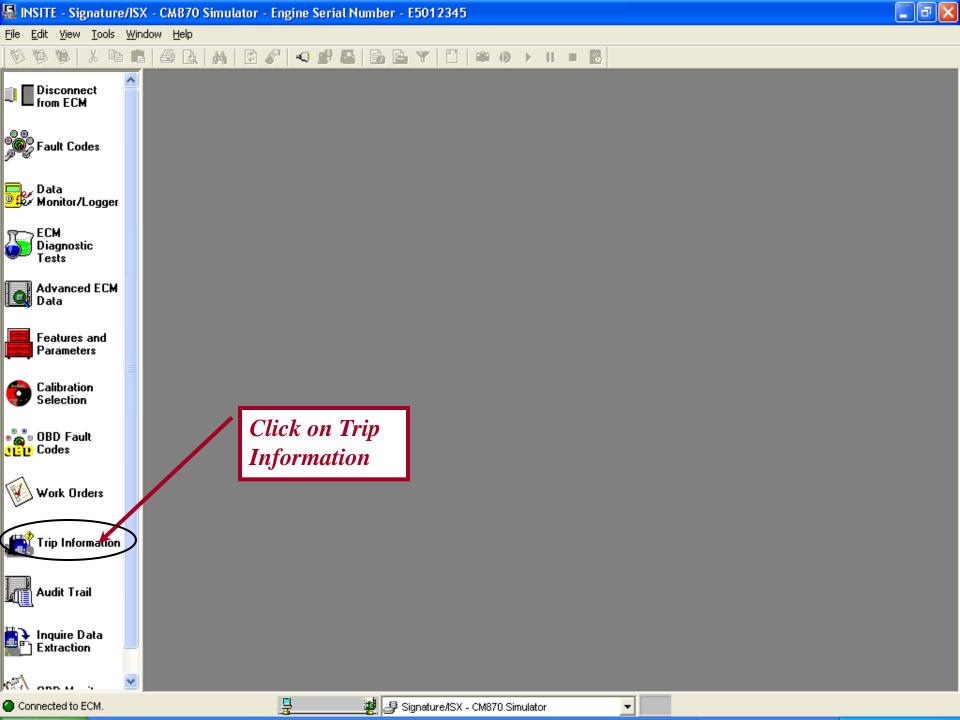
#### **Electronic Service Tools**

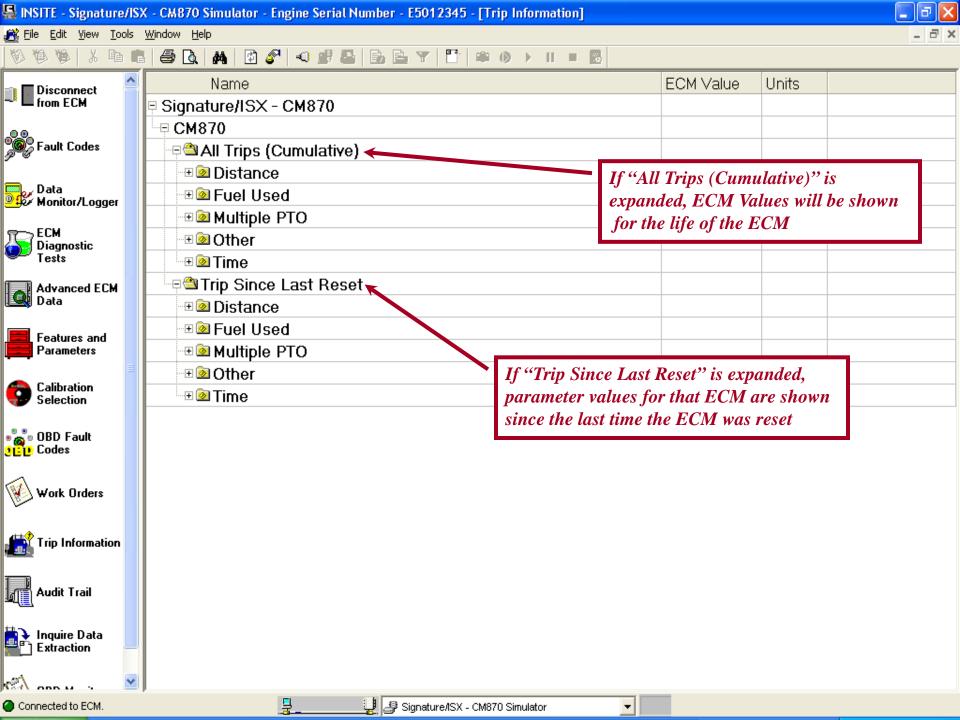
## **Trip Information**

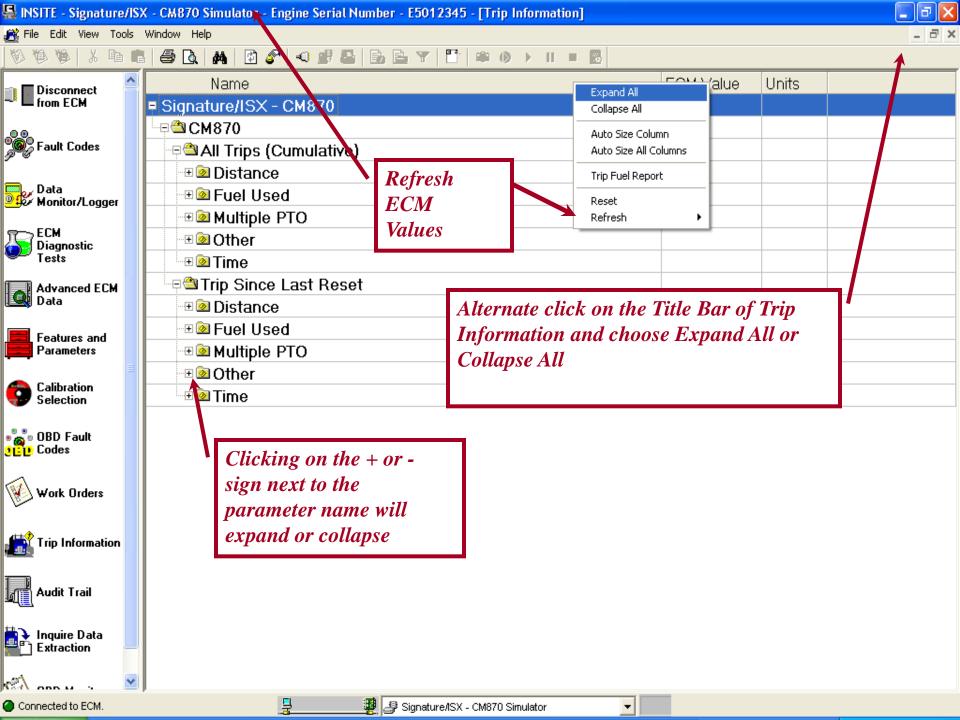
- Trip Information continuously monitors and records engine operating data that tracks engine and driver performance
- Stored data can be viewed using INSITE™
  - Live module
  - Exported ECM Image
- Parameters are grouped differently, according to the ECM
- Not all ECMs list the same parameters



217





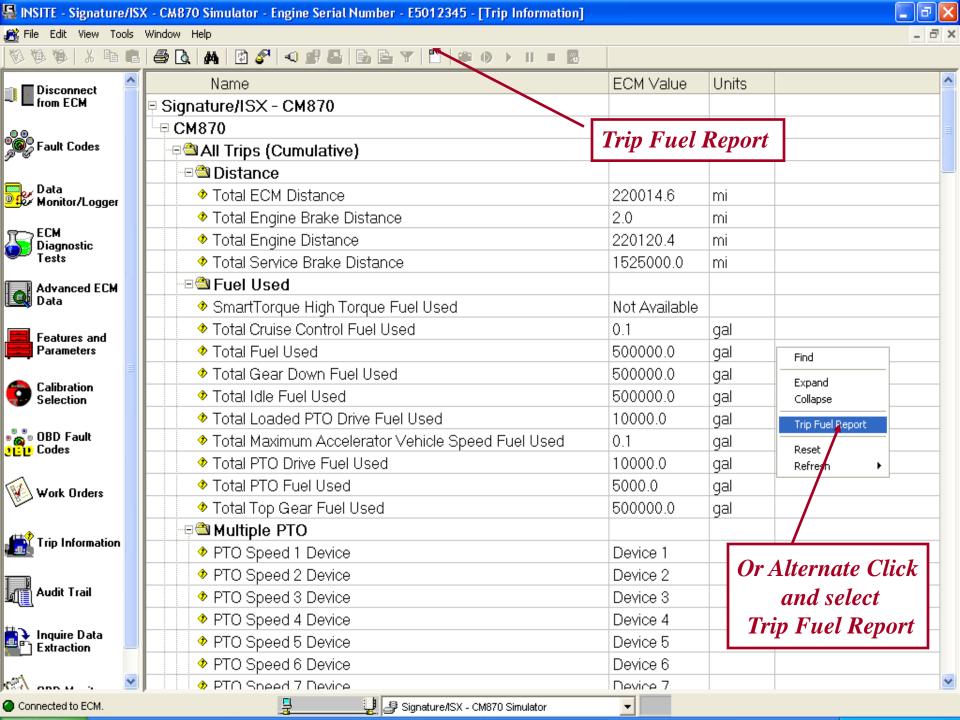


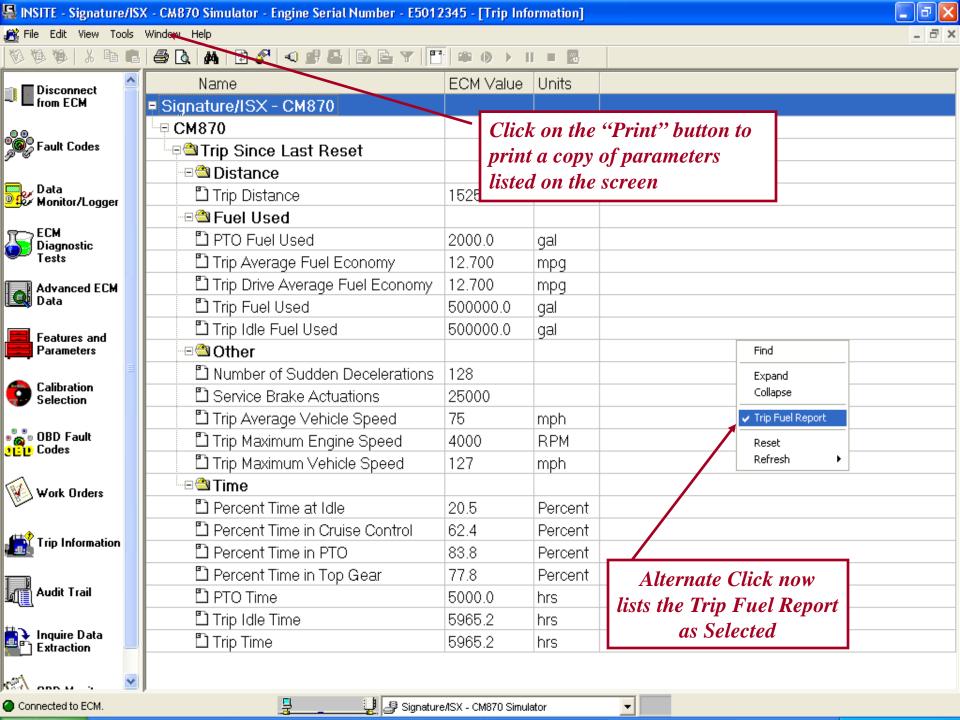
## **Trip Information: Trip Fuel Report**

- A Trip Fuel Report is a condensed list of fueling parameters
- Available on any engine that supports Trip Information
- Can only be Printed from this view

■ Signature/ISX - CM870		
□ 📮 🛳 CM870		
্ৰ All Trips (Cumulative)		
⊕ <b>a</b> Distance		
□ <b>△</b> Fuel Used		
◆ SmartTorque High Torque Fuel Used	Not Available	9
◆ Total Cruise Control Fuel Used	0.1	gal
◆ Total Fuel Used	500000.0	gal
◆ Total Gear Down Fuel Used	500000.0	gal
◆ Total Idle Fuel Used	500000.0	ga
◆ Total Loaded PTO Drive Fuel Used	10000.0	ga
◆ Total Maximum Accelerator Vehicle Speed Fuel Used	0.1	ga
◆ Total PTO Drive Fuel Used	10000.0	ga
◆ Total PTO Fuel Used	5000.0	ga
◆ Total Top Gear Fuel Used	500000.0	ga
<b>■  Multiple PTO</b>		
••• •• Other		
⊞ <b>i</b> Time		







## **Trip Information**

Trip Information may be printed when connected to the ECM or Image

- Tool Bar Printer Icon
- File → Print

Trip Information Customer Name :Customer Work Order Name :NA Company Name : Cummins Customer Unit Number : 623

Engine Serial Number: E5012345 ECM Image Name: NA

Work Order Name :NA			ECM Image Name :NA
Name	ECM Value	Units	
= Signature/ISX - CM870 ···□ CM870			
= = = All Trips (Cumulative)			
⊟  Distance			
◆ Total ECM Distance	220014.6	mi	
Total Engine Brake Distance	2	mi	
◆ Total Engine Distance	220120.4		
Total Service Brake Distance	1525000	mi	
⊟ <b>≝</b> Fuel Used			
Total Cruise Control Fuel Used	0.1	gal	
◆ Total Fuel Used	500000	qal	
Total Gear Down Fuel Used	500000	qal	
♦ Total Idle Fuel Used	500000	qal	
Total Loaded PTO Drive Fuel Used	10000	qal	
Total Maximum Accelerator Vehicle Speed Fuel Used	0.1	qal	
Total PTO Drive Fuel Used	10000	qal	
◆ Total PTO Fuel Used	5000	qal	
Total Top Gear Fuel Used	500000	qal	
Vocational Smart Power High Horsepower Fuel Used	450	qal	
🖃 🖰 🛗 Multiple PT O			
PTO Speed1 Device	Device 1		
◆ PTO Speed 2 Device	Device 2		
PTO Speed 3 Device	Device 3		
◆ PTO Speed 4 Device	Device 4		
PTO Speed 5 Device	Device 5		
◆ PTO Speed 6 Device	Device 6		
PTO Speed 7 Device	Device 7		
♦ PTO Speed 8 Device	Device 8		1

## Trip Information Wrap Up

- –Allows the user to view ECM Values for multiple time periods:
  - Lifetime of the ECM
  - Since the Trip Information was last reset
- -Trip Fuel Report will display all fuel related parameters for the above time periods
- -INSITE™ allows the user to print these screens



You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.





#### **INSITE™ Work Orders**

**Electronic Service Tools** 

- A Work Order is the top level identifier that contains the ECM image(s). Work Orders can be used for tracking vehicle and equipment repair history.
- An Image is a copy of the ECM data
- Work Orders may contain multiple Images
  - By default, an "Initial" image is created when connecting to an ECM with the Work Order Mode enabled
  - By default, a "Final" image is created when disconnecting from an ECM with the Work Order Mode enabled
  - Additional "User" images may be created under each Work Order while connected to the ECM
- Work Orders can be created automatically by INSITE™ or manually by the user

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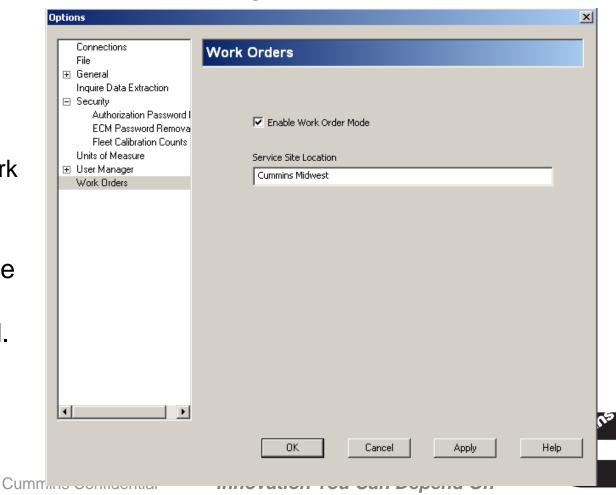
228

To have INSITE™ automatically create Work Orders when connecting and disconnecting:

Select Tools →
Options → Work
Orders

 Select "Enable Work Order Mode"

By default this feature is Enabled when INSITE™ is installed.



- When connected to an ECM, only Work Orders compatible with that ECM serial number will be displayed
- Disconnect from an ECM to view all Work Orders
- Work Order and Image names are defaulted to a Date – Time format (i.e. WO-20041027-145950 = 10/27/2004-2:59:50). These names can be changed at the time of creation or under the Work Order properties to help identify the specific customer, vehicle or equipment

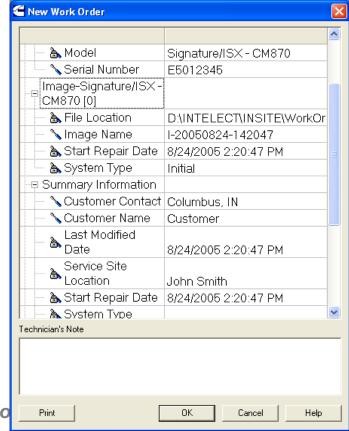


With Work Order Mode enabled and no compatible Work Orders exist, a New Work Order dialog will be displayed after connection to the

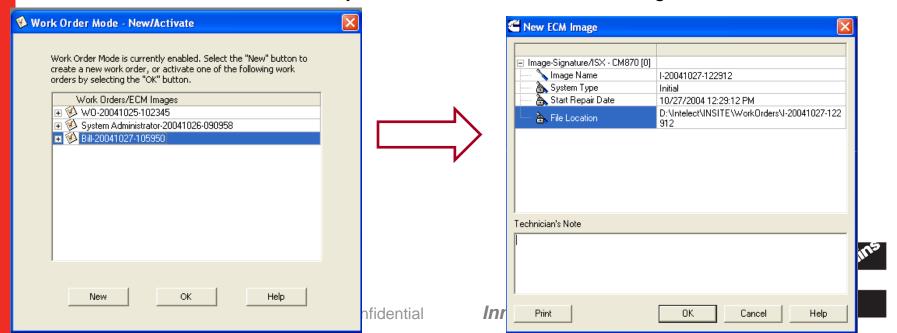
**ECM** 

Enter the Work Order Number, Image Name and Select OK

 If you do not wish to create a new Work Order, select Cancel

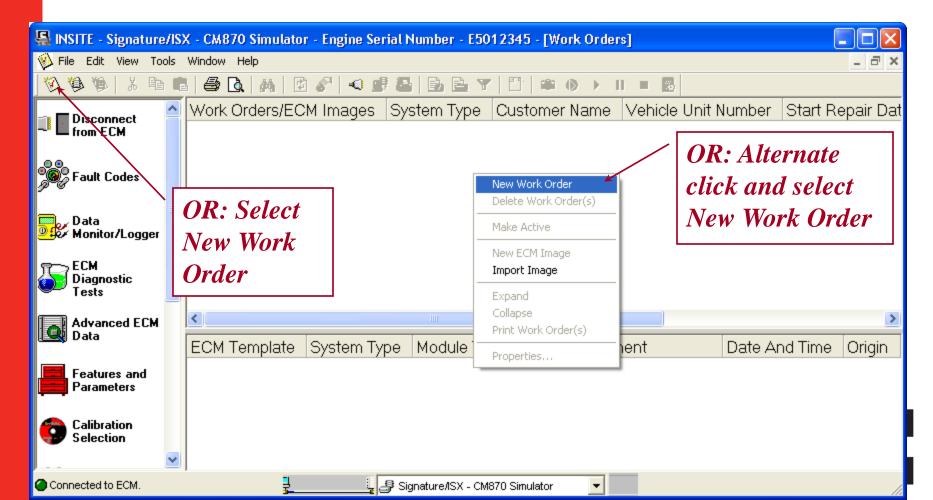


- With Work Order Mode enabled and compatible Work Orders exist, the New/Activate Work Order dialog will be displayed after connection to the ECM
  - Select New to create a new Work Order
  - OR: Select one of the compatible Work Orders in which to create a new Image and select OK
    - Enter the Image Name and confirm the creation by selecting OK
    - OR: Select Cancel if you do not wish to create an Image



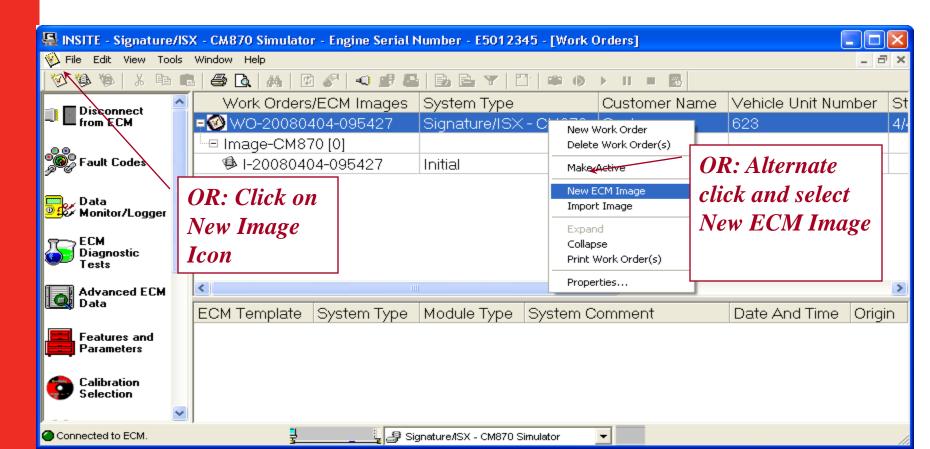
#### Manually creating New Work Orders

Select File → New → Work Order...



#### Manually creating New ECM Image

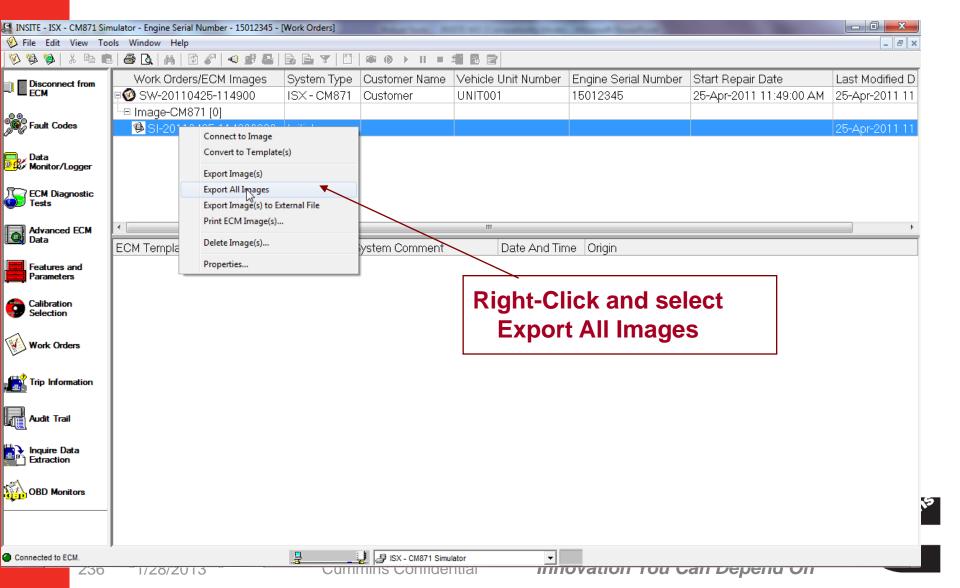
- Select File → New → ECM Image...
- The new Image will be created in the Active Work Order



Each image can be exported for use in two ways:

- Exported as an INSITE compatible file, .eif (exported image file) to be imported by another user with INSITE
- To an external file, "Image Name.csv" (Comma Separated Value)
  - This format can be opened with Excel, Word, Notepad, etc.
- All Work Order images can be exported using the right-click menu and selecting the 'Export All Images' option. Highlight the Work Order image and right-click to export all images





- Importing an Image
  - Alternate Click in the Work Order area and select Import Image
  - Select the Image to be imported
- Opening an Image
  - INSITE's exported ECM images (.eif) can be opened by double clicking .eif file
  - INSITE™ will open, import the image, and automatically connect to it
    - If INSITE™ is already open, the ECM image will be imported but not automatically connected
- Convert to a Template
  - Alternate Click on the Image and select Convert to Template
  - Templates provide a means of configuring multiple ECM's with the same base parameter settings

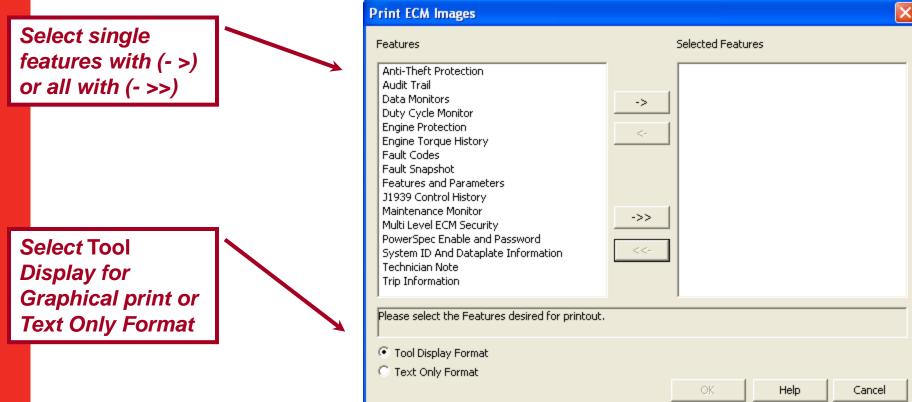
1/28/2013

237

Cummins Connacture

#### Printing ECM Images

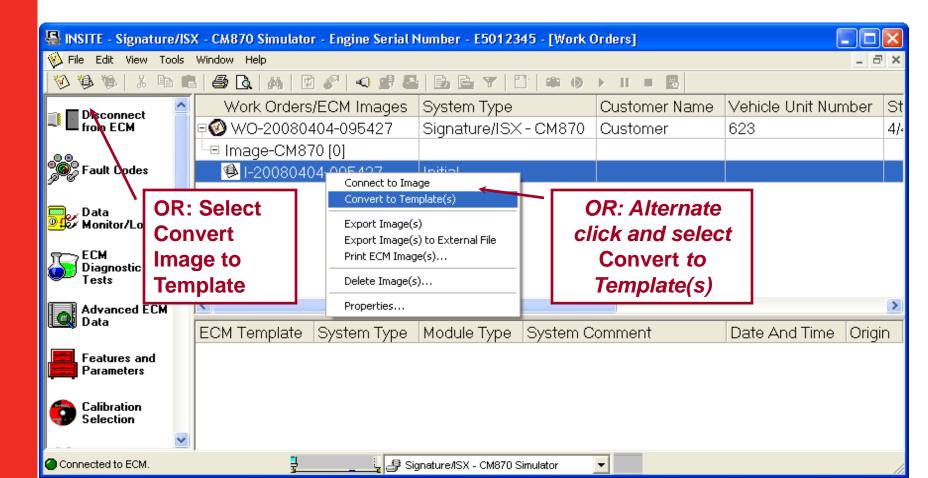
- Select the ECM Image
  - Select File → Print
  - OR: Alternate right click Print ECM Image(s)



## **Templates**

Templates can be created from an ECM Image to allow transferring the same Feature and Parameter setup from that Image to multiple ECMs

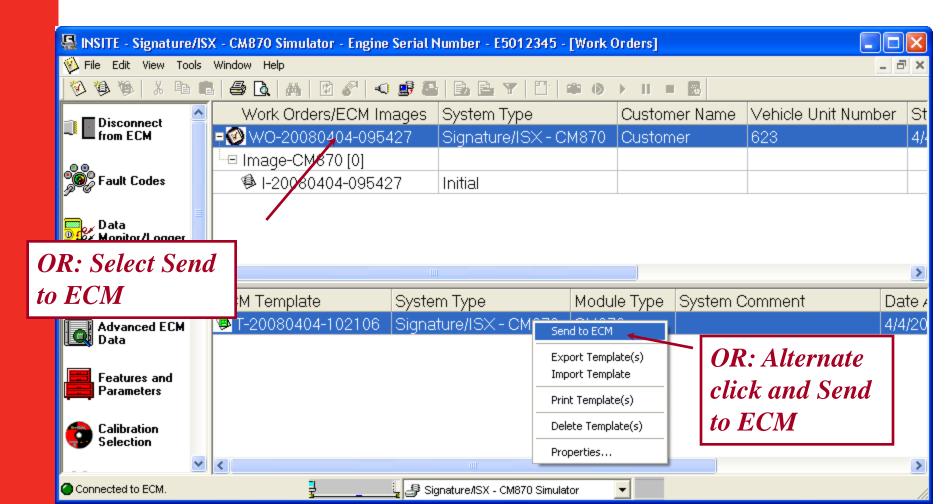
Select Image then select File → Convert → ECM Template



## **Templates**

To send a template to an ECM, select the Template:

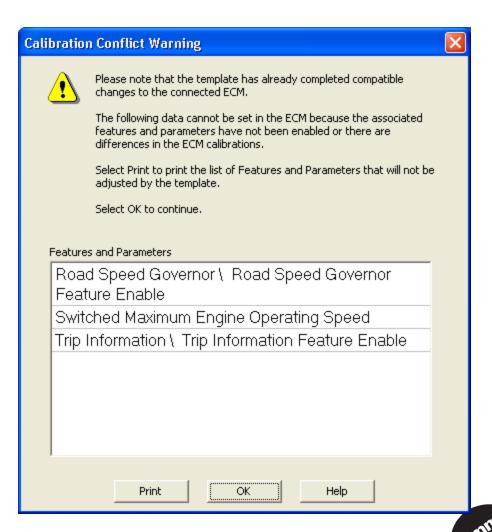
Select File → Send To → ECM...



## **Templates**

#### Template Report

- Ability to report which parameters were not able to be written to **ECM**
- User can use this to setup the vehicle accordingly



## Work Order Wrap Up

- A Work Order is the top level identifier and can contain multiple ECM Images
- Only compatible Work Orders are displayed when connected to an ECM. All Work Orders will display when not connected
- Work Order Mode is defaulted ON and can be used to create Initial and Final Images upon Connect and Disconnect respectively
- Images can be converted to Templates to allow the Features and Parameters from that Image to be transferred to other ECMs

242

You have concluded this section of the training. Please click to the next slide and continue or Click Here to return to the Table of Content.





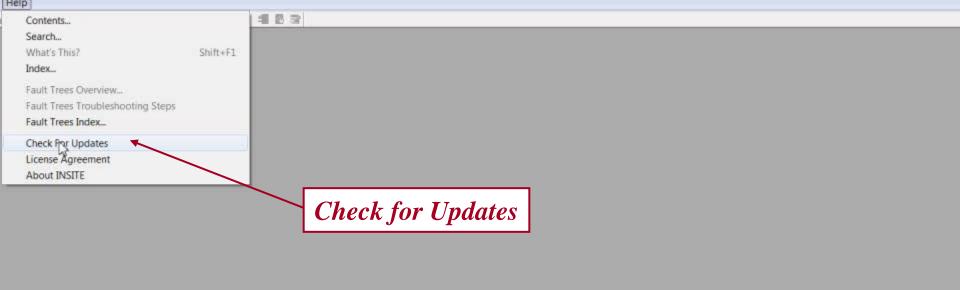
### **Cummins® Inc. Update Manager**

**Electronic Service Tools** 

# Cummins® Inc. Update Manager Overview

- Provides up-to-date information for INSITE™
  - Fault Information System (FIS) files
  - Help and Manual files
  - Feature Packs
  - Service Packs
- Provides an Automatic Update Notification Alert when updates are available through the internet





**Automatic Update Notification** 

**Alert** 

The Automatic Update Notification Alert will display at a specified day and time if updates are available

Choose "Remind Me In" or "Select and Install Updates"





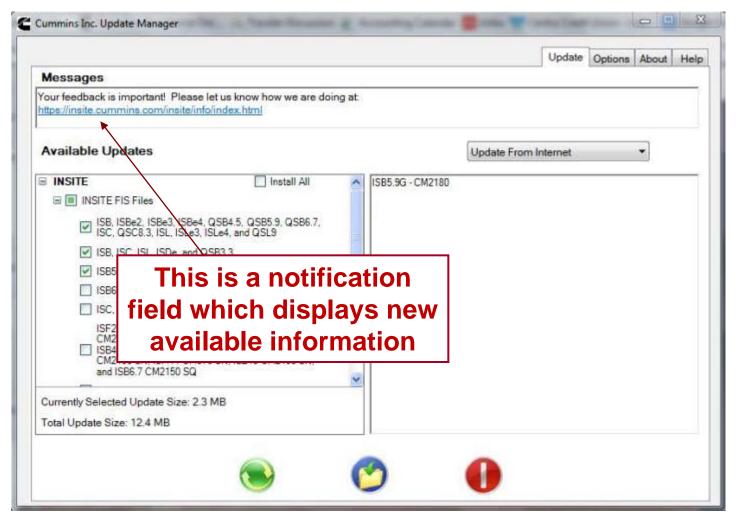


## **Check for Updates Manually**

- Updates can be manually checked through the following:
  - INSITE > Help > Check for Updates
  - Open the Cummins Inc Update Manager and click on "Get Updates" button in the lower left part of the window.



## Message Box





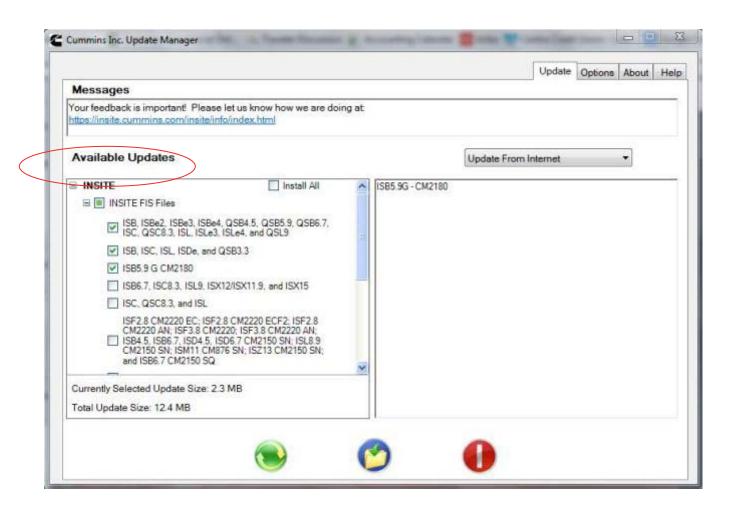
## **Get Updates From Internet/CD**

**Choose Update from** Internet, Update from Other, or CD/DVD option Update Options About Help Messages Your feedback is important! Please let us know how we are doing a https://insite.cummins.com/insite/info/index.html **Available Updates** Update From Internet **■ INSITE** Install All ISB5 9G - CM2180 ■ INSITE FIS Files ISB, ISBe2, ISBe3, ISBe4, QSB4.5, QSB5.9, QSB6.7, ISC, QSC8.3, ISL, ISLe3, ISLe4, and QSL9 ISB. ISC. ISL. ISDe, and QSB3.3 ✓ ISB5.9 G CM2180 **Select Get Updates** ISB6.7, ISC8.3, ISL9, ISX12/ISX11.9, and I ISC. QSC8.3, and ISL. ISF2.8 CM2220 EC; ISF2.8 CM2220 ECF2; ISF2.8 CM2220 AN; ISF3.8 CM2220; ISF3.8 CM2220 AN; ISB4.5, ISB6.7, ISD4.5, ISD6.7 CM2150 SN: ISL8.9 CM2150 SN: ISM11 CM876 SN: ISZ13 CM2150 SN: and ISB6.7 CM2150 SQ Currently Selected Update Size: 2.3 MB Total Update Size: 12.4 MB

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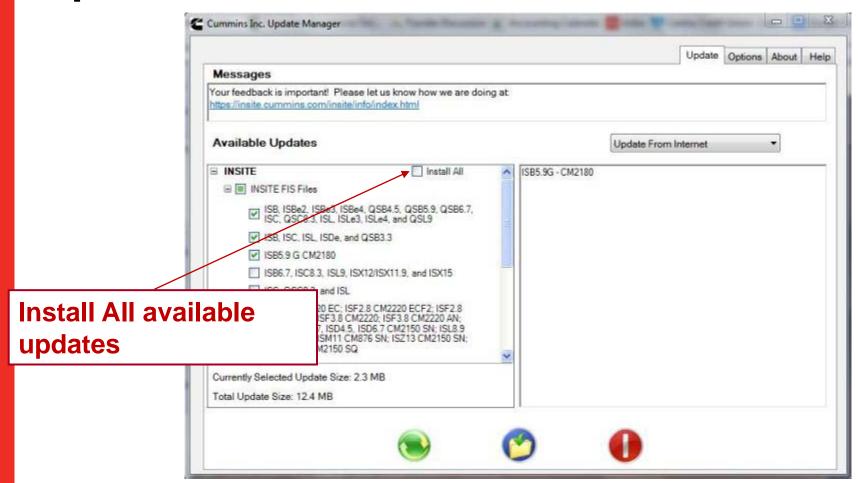
IIIIIOVation You Gair Depend On

## **Checking for Updates - Internet**



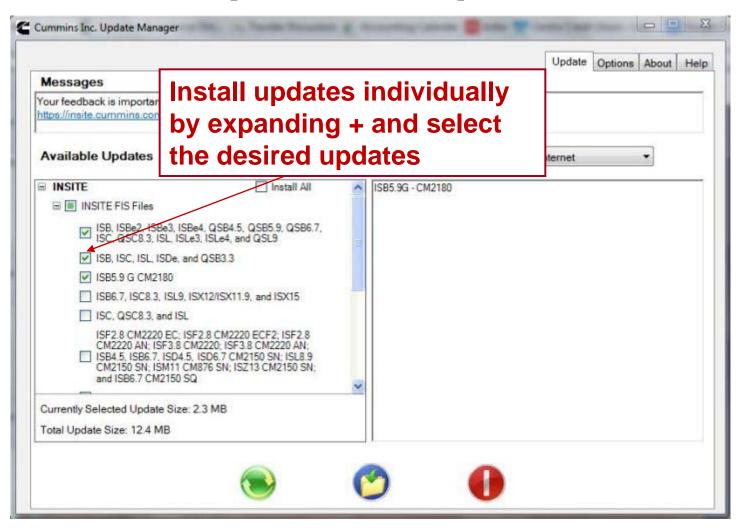


## Available Updates – Install All INSITE Updates



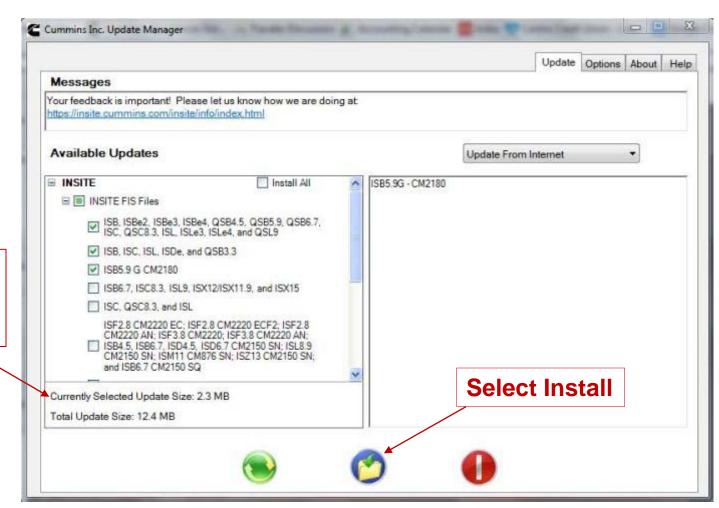


## **Available Updates Expanded**





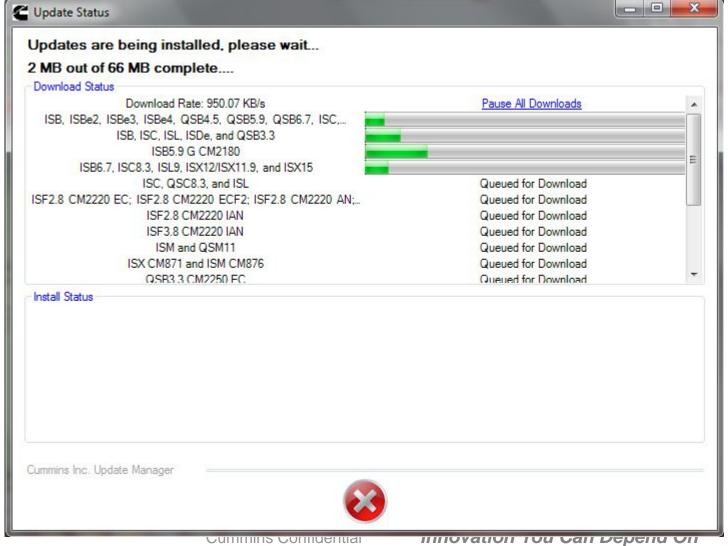
## Select Available Updates



Size of selected updates



#### **Download Status Information**



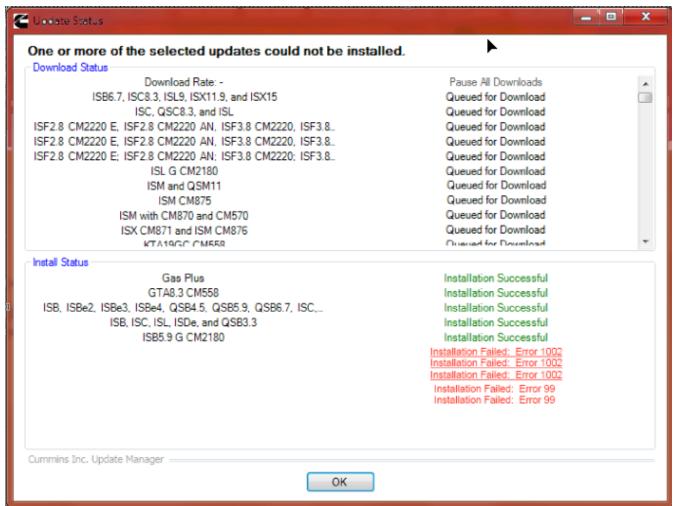


#### **Installation Status Information**

Once the installation is complete, the installation status will be displayed.

If the installation is successful, "Installation Successful" will be displayed.

If the installation is not successful, "Installation Failed: Error XX" will be displayed along with an error code.



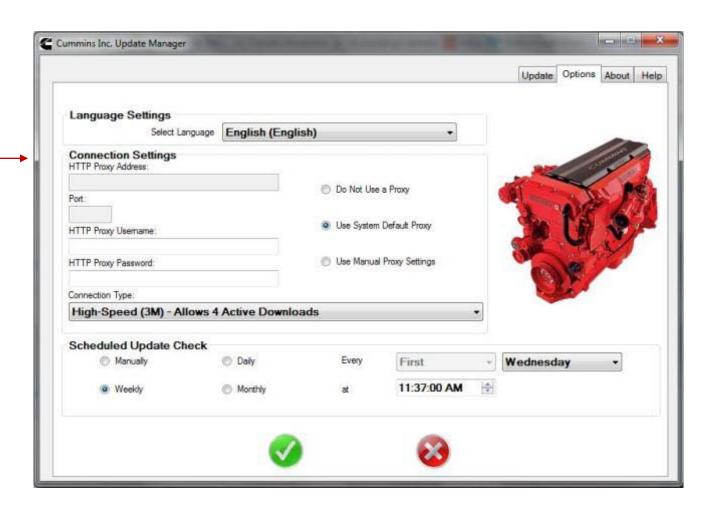


## **Options Tab – Proxy Settings**

Most users will not have to change the proxy settings.

For other users, the Proxy Settings will have to be entered.

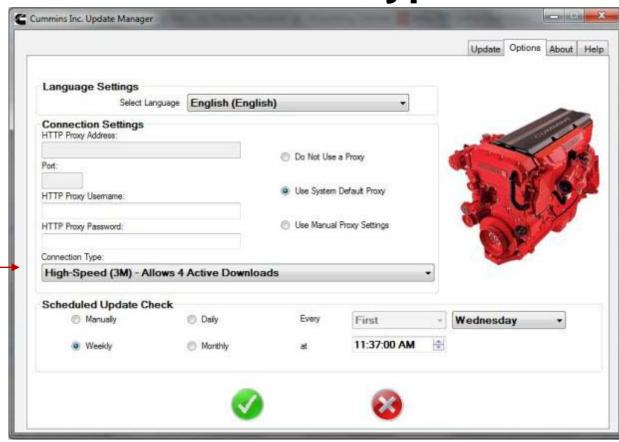
Contact local IT support for help with Proxy settings.





#### **Options Tab – Connection Types**

New to 3.0 - Connection
Type has been added for users who want to vary their connection option.

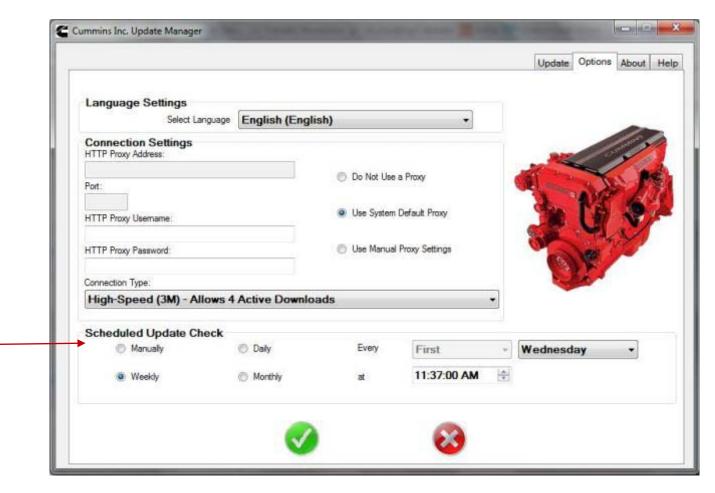




# Options Tab – Scheduled Update Check

The default Scheduled Update Check is once a month.

This can be changed to Daily, Weekly, Monthly or Manually.







Update Option About Help



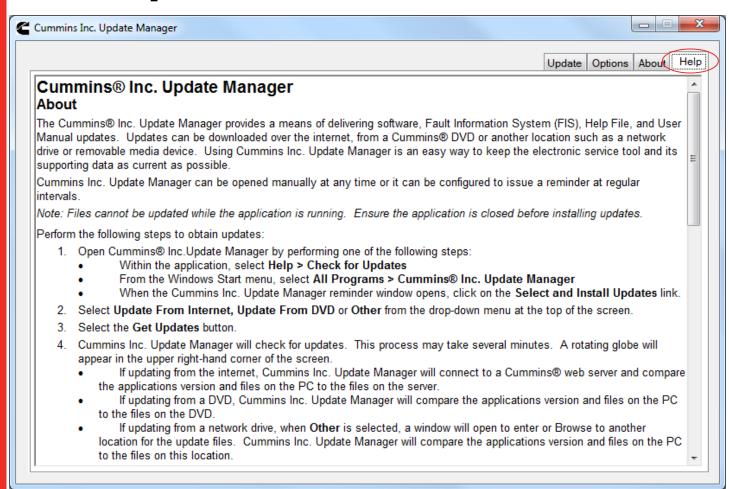
Version:

Copyright 2010, Cummins Inc.

http://www.cummins.com

http://insite.cummins.com

#### Help Tab



The Help Tab provides an overview of the Update Manager





Update Options About Help

The Cummins® INSITE™ Update Manager provides a means of delivering software, Fault Information System (FIS), Help File, and 🤚 User Manual updates. Updates can be downloaded either from a Cummins® CD or over the internet. Using Update Manager is an easy way to keep the INSITE™ electronic service tool and its supporting data as current as possible.

Update Manager can be opened manually at any time or it can be configured to issue a reminder at regular intervals.

Note: Files cannot be updated while INSITE™ is running. Ensure INSITE™ is closed before installing updates.

Perform the following steps to obtain INSITE™ updates:

- Open Cummins® INSITE™ Update Manager by performing one of the following steps:
  - Within INSITE™, select Help > Check for Updates
  - From the Windows Start menu, select All Programs > INTELECT > Cummins® INSITE™ Update Manager
  - When the Update Manager reminder window opens, click on the Select and Install Updates link.
- Select either Update From Internet or Update From CD, from the drop-down menu at the top of the screen.
- Select the Get Updates button.
- Update Manager will check for updates. This process may take several minutes. A rotating globe will appear in the upper. right-hand corner of the screen.
  - If updating from the Internet, Update Manager will connect to a Cummins® web server and compare the INSITE™ version and files on the PC to the files on the web server.
  - If updating from a CD, Update Manager will compare the INSITE™ version and files on the PC to the files on the CD.
- If updates are available, they will be listed in the window pane under Available Updates.
- Select the desired updates by either highlighting the item or clicking on its checkbox. When an item is selected, its description is displayed on the right-hand side of the screen. The size of the currently selected item and the total size of all selected items is displayed below the Available Updates. Click on the item again to deselect it.

Selecting the top level box will also select all updates listed below it. Clicking on the <plus-sign.gif> will expand the listing.



# **Cummins® Inc. Update Manager Wrap Up**

- Provides up-to-date Fault Information System (FIS) files, Help files, Feature Packs and Service Packs
- Automatic Update Notification
- Scheduled update checks



You have concluded this training package.

Click Here to return to the Table of Content.

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