PowerSpec User Guide

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Customer Instructions

PowerSpec Overview:

Cummins PowerSpec is a free downloadable PC application designed to allow customers the ability to tailor the operation of their Cummins engine for their specific needs. The following features highlight the capability of PowerSpec:

Gearing Your Vehicles - provides recommendations and a calculator to help optimize vehicle gearing for a specified application and load.

Reading Engine Data - reads engine feature settings, trip information, and fault codes from a Cummins engine (requires INLINE adapter).

Configuring Electronic Features - provides recommended electronic engine feature settings based upon vehicle application and business profile, and allows customers to change these settings on a Cummins engine to meet their specific needs (requires INLINE adapter).

All of these benefits except the last one will be available to all users immediately upon installation of PowerSpec. The ability to spec electronic engine feature settings requires help from an authorized Cummins distributor or dealer, and can be enabled in one of the following ways:

- Obtain a PowerSpec license from your local Cummins Distributor
- Use a "HotSpec" (created by licensed PowerSpec user)

This manual will focus on how to accomplish these options.

Website Address: www.powerspec.cummins.com

PowerSpec System Requirements:

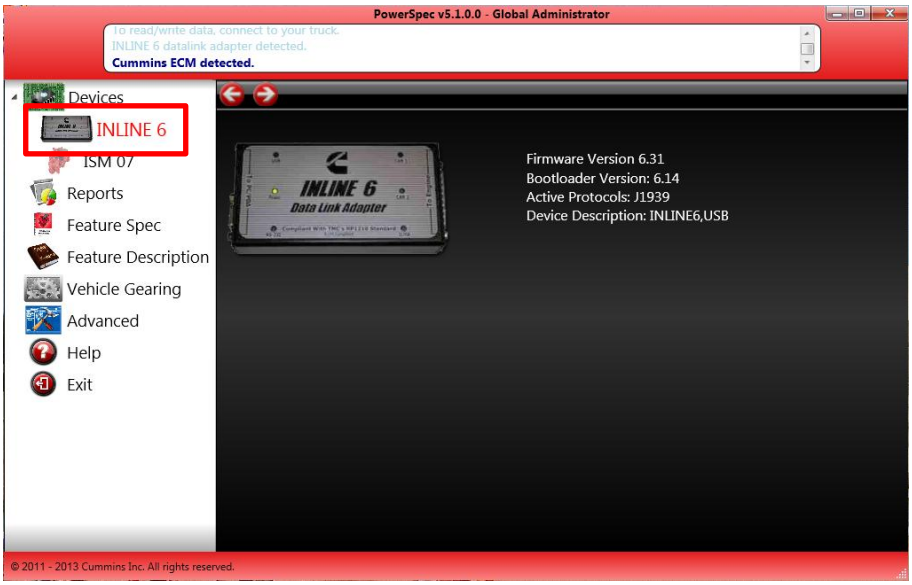
Your system configuration must meet or exceed the following minimum standards in order to run the PowerSpec application:

Computer

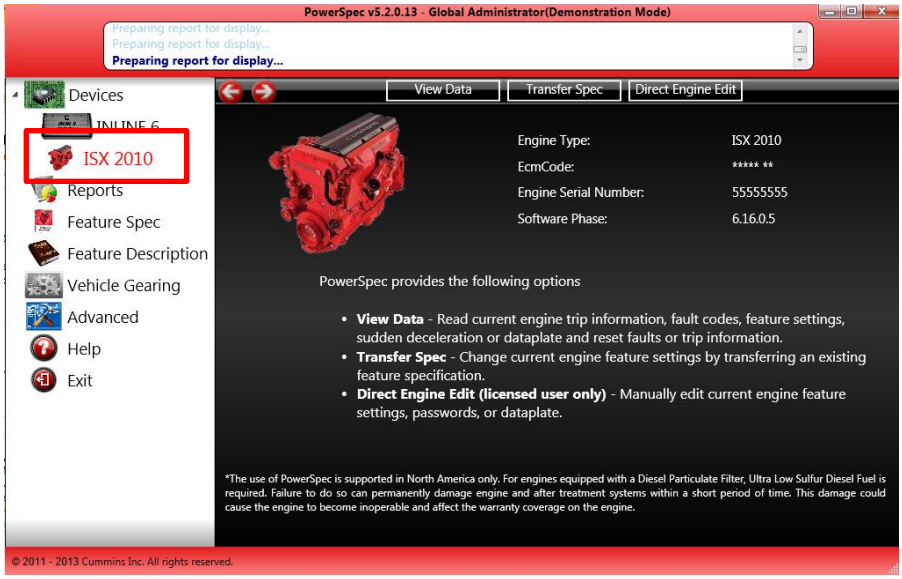
- Operating System: Windows XP, Vista (32 & 64 bit), and Windows 7 (32 & 64 bit)
- RAM: 500 MB of RAM space
- Hard Drive: 480 MB of free hard-disk space
- Port: COM port or USB port
- Browser: Internet Explorer 8 above

Devices

- When connected with the INLINE 6 adapter cable, the INLINE 6 name and icon should appear in the left menu, under ‘Devices’. The engine image and name should also show up when a successful connection is made.

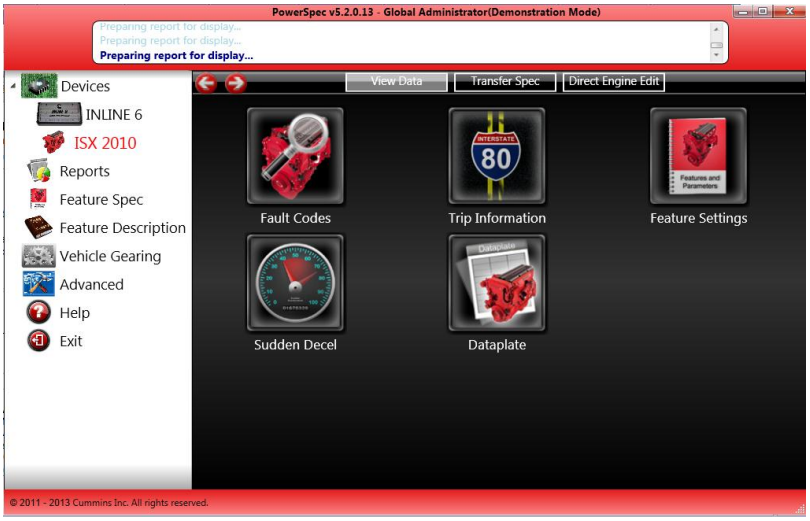


- Clicking on the engine icon the menu will display information including the engine type, ECM code, serial number and software phase. Action items will also be visible above the engine.



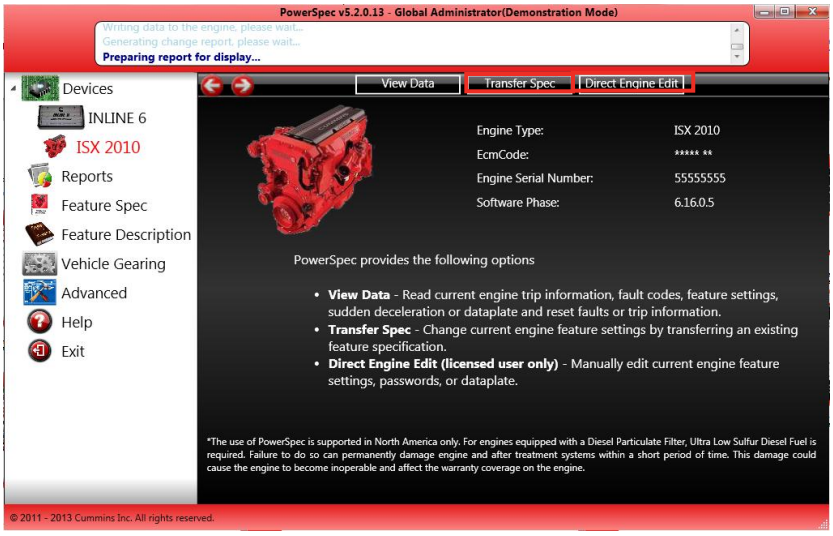
View Data

- By clicking the “View Data” link, you can access fault codes, trip information, feature settings, sudden deceleration data and dataplate reports. For more information, see “View Data”, pg. 19.



Transfer Spec

- You can change current engine feature settings by transferring an existing feature specification. For more information, see “Transferring a Spec”, pg. 17.



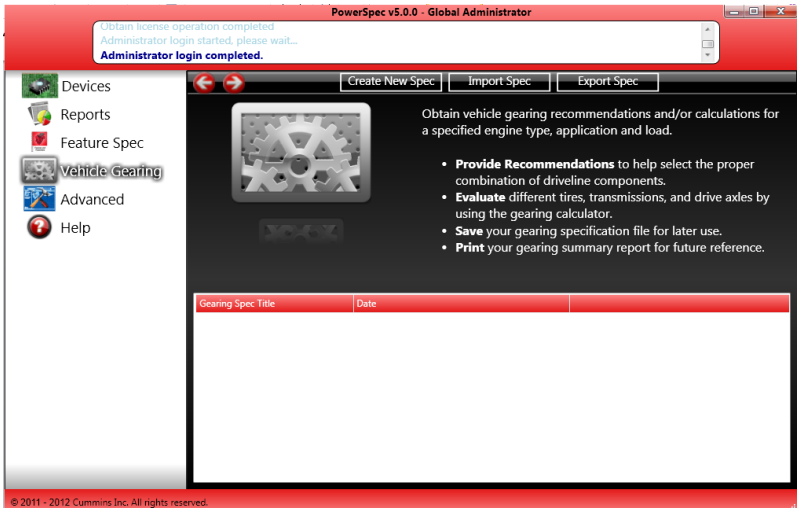
Direct Engine Edit

- Licensed users can manually edit the feature settings, passwords and data plates of the current engine connected.

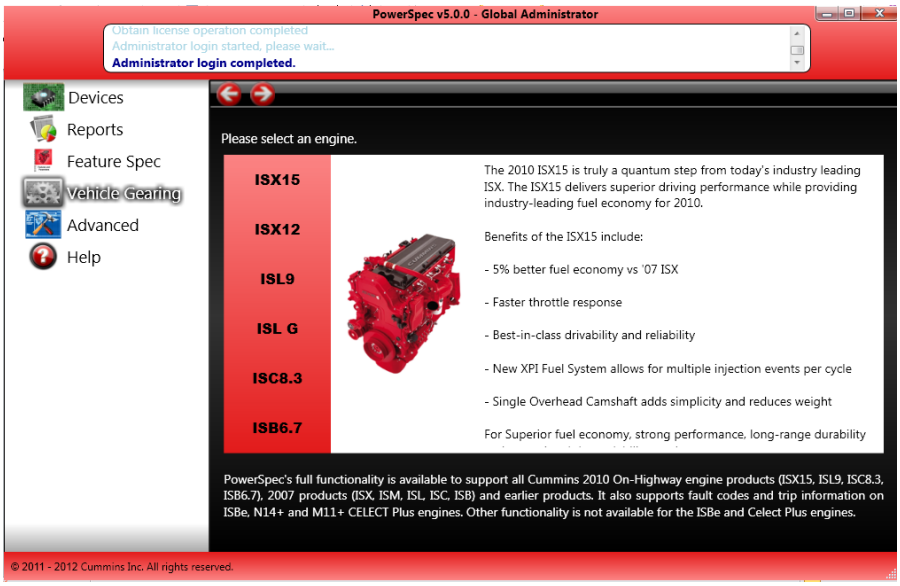
Vehicle Gearing

Getting Gearing Recommendations

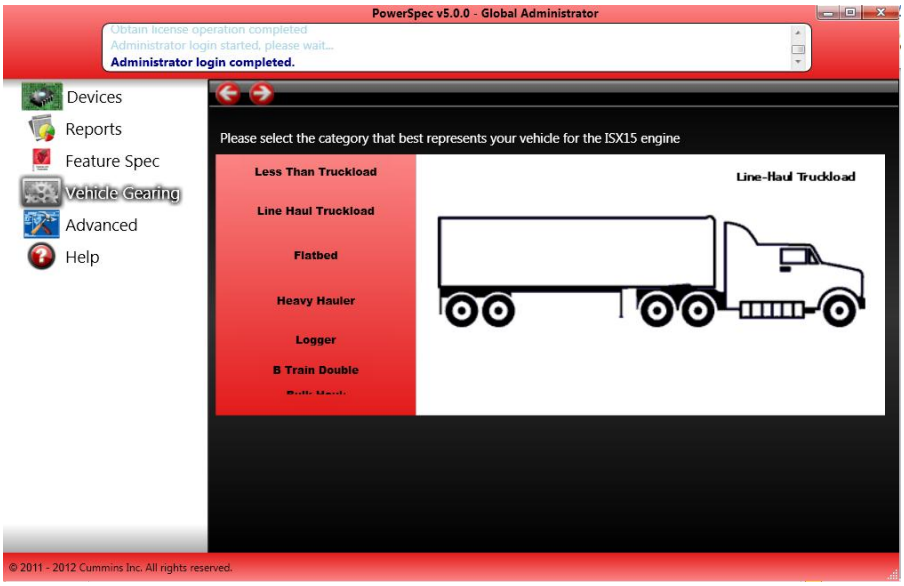
- PowerSpec offers you the ability to create gearing profiles and save them for use/editing at a later date. To create a new spec, select “Vehicle Gearing” from the left menu then “Create New Spec” on the top of the page.



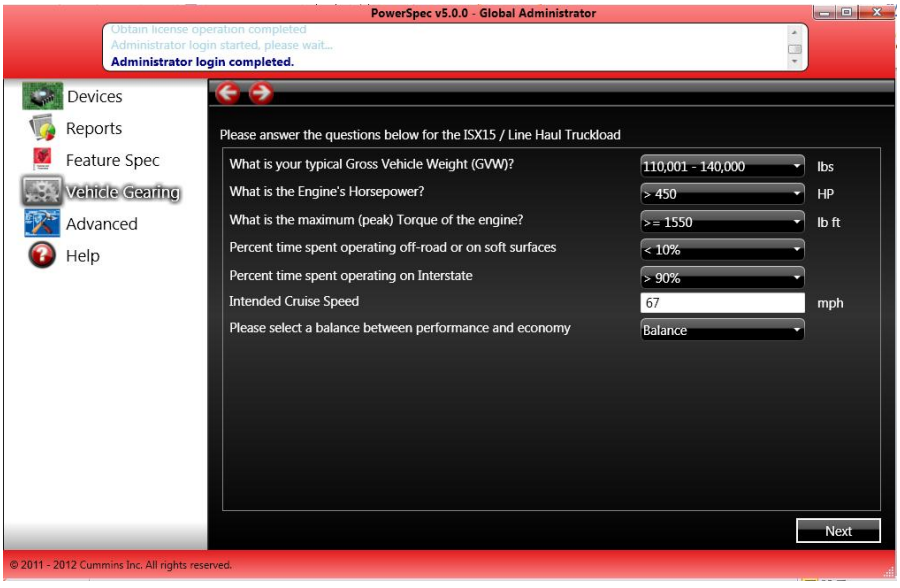
- Select the engine you would like to gear from the list. As you scroll over the different models, a picture of the engine along with a brief description will appear.



- On the next screen, select the truck category that best represents the vehicle you would like to gear. Use the images that appear alongside each selection to help if you are unsure.

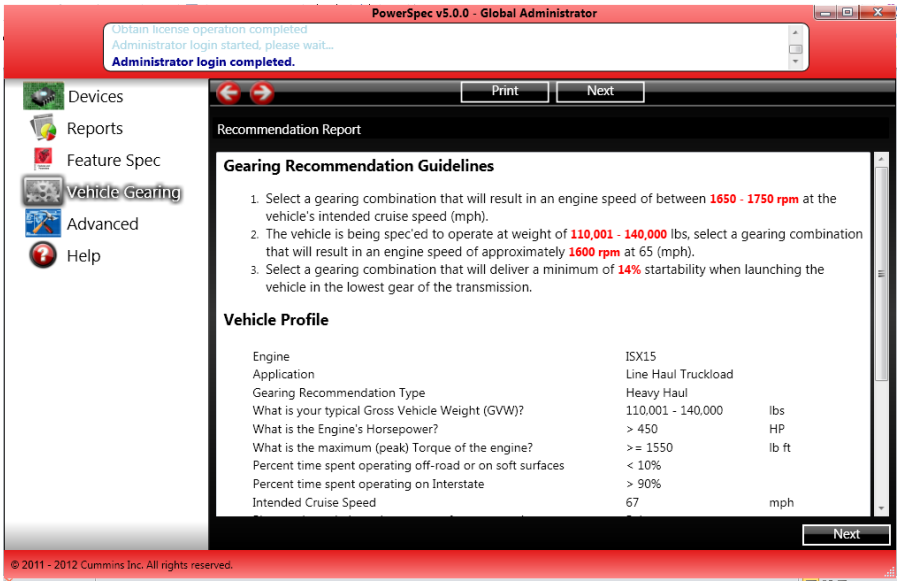


- Answer the application questions on the following screen. These will allow PowerSpec to offer you gearing recommendations specific to your needs. Once you are finished, click “Next.”



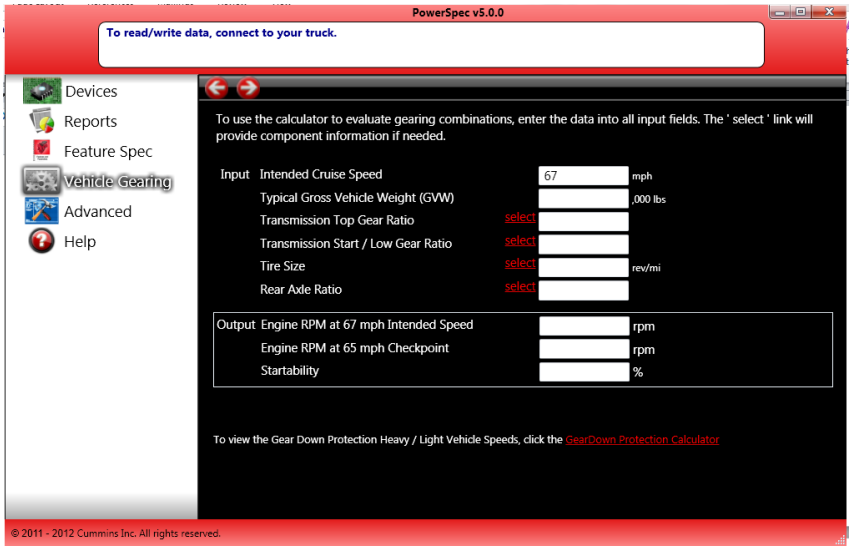
- Using the information you provided, PowerSpec will generate a brief overview report with Cummins’ gearing recommendations guidelines. Review the data on the screen and click “Next” when you are ready to move to the Gearing Calculator. (The “Print” button allows you to get a printout of your results if desired).

If for any reason you need to change an input, click the “back” arrow until you return to the page you need. Follow the previous directions once you make your change.

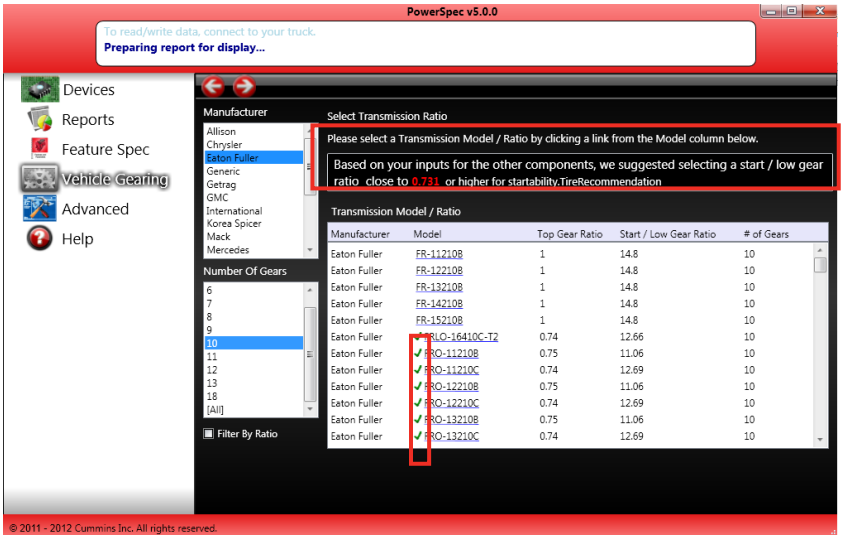


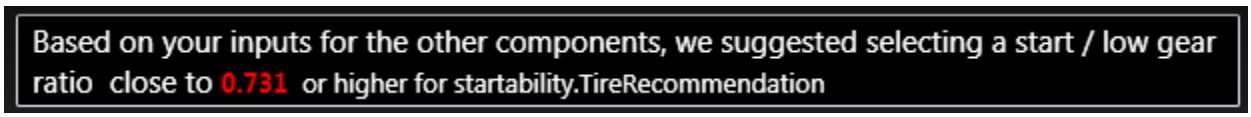
Gearing Calculator

- After reviewing Cummins’ vehicle gearing recommendation guidelines and clicking “Next”, you will begin the **Gearing Calculator**. The calculator will provide final detailed gearing specifications based on the selected driveline components.



- Fill in the requested information. If you do not know specific values for each entry, click the "select" link located left of the respective entry. Choose a manufacturer from the list and indicate number of gears for Transmission, size for Tires, or ratings for Rear Axle Ratio. Now select your model and the values will be updated in the gearing calculator.

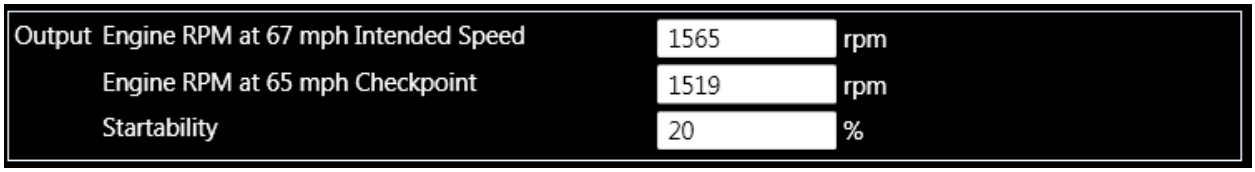




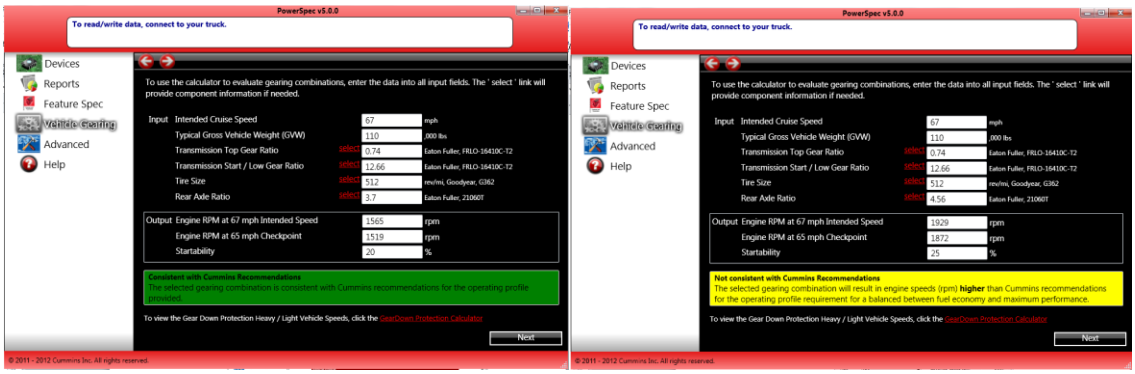
- Based on all other inputs, the gearing calculator displays a recommendation at the top of the "select" page, guiding your choice of models. A green check will appear next to the models that fit the guidelines and an asterisk will appear next to the suggested axle ratio in the drop down box.

- *Note: For "Transmission Top Gear Ratio" and "Transmission Start/Low Gear Ratio" (for certain applications), choosing an item from the selection list will generate values for both boxes.*

- Once the customer has selected the appropriate transmission ratio, tire size, and rear axle ratio, the gearing calculator will provide the following Cummins Gearing Outputs at the bottom:
    1. The Engine RPM at Intended Cruise Speed
    2. The Engine RPM at 65mph Checkpoint
    3. The Startability percentage (provided for appropriate applications)

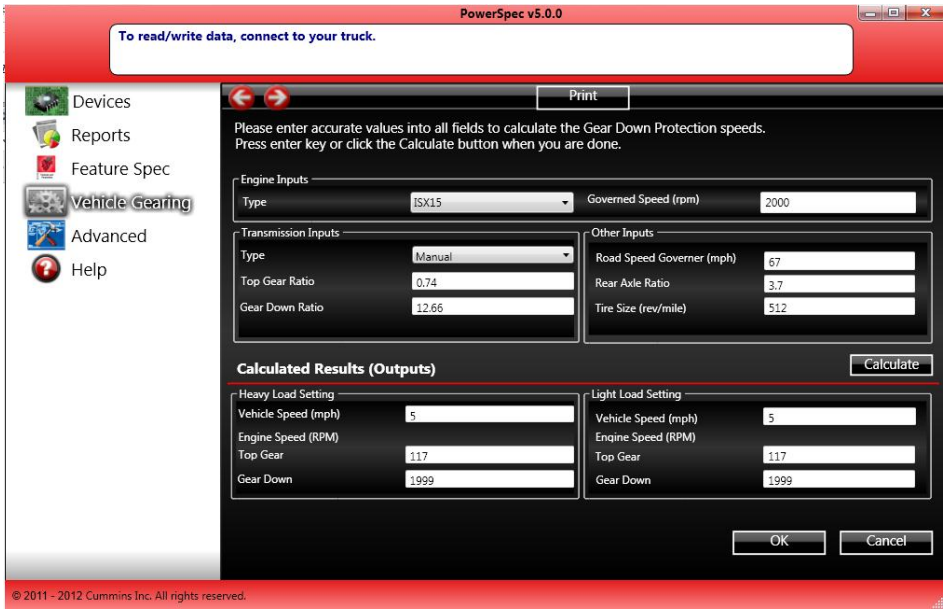


- Once you have finished submitting your data, PowerSpec will calculate whether or not it is consistent with Cummins recommendations. A green box will appear under the output information if the gearing combination is consistent with Cummins gearing recommendations. A yellow box will appear if it is not consistent. If you are receiving this yellow error box, double check to make sure you have entered the correct values in your input fields. This may also mean that you need to select new values to best fit Cummins' gearing recommendations or consult with your local Cummins distributor.

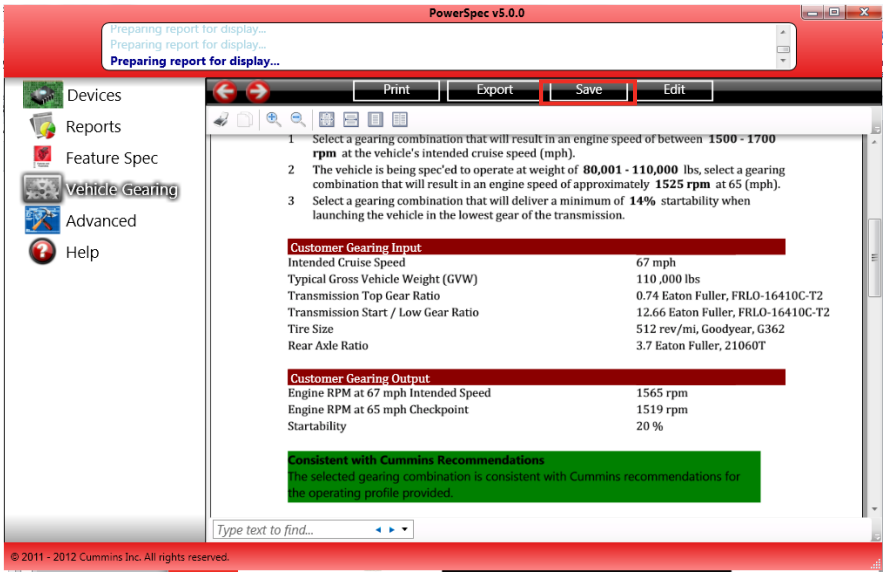


Consistent **Not Consistent**

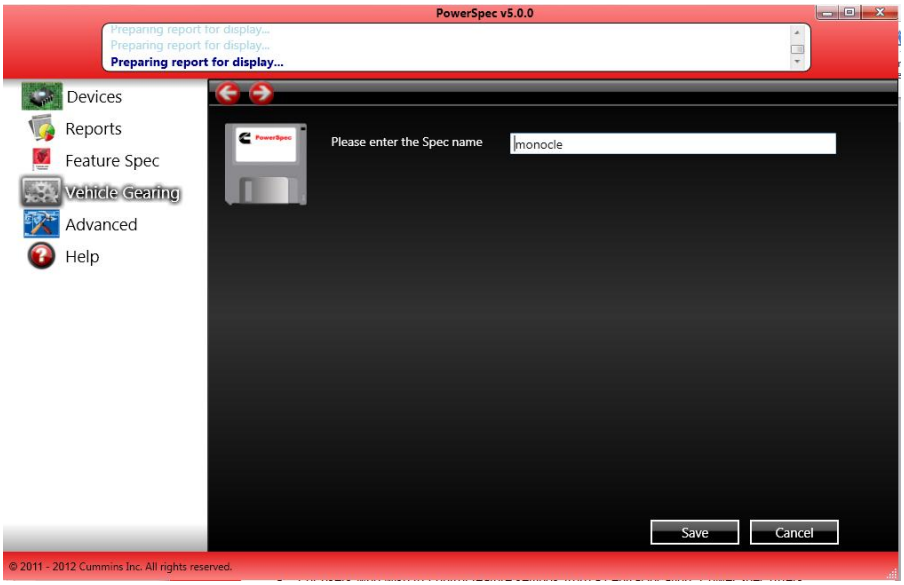
- The GearDown Protection calculator can also be found on this page. To access it, follow the link found at the bottom of the page. The calculator will be launched in a separate window. Provide information for any of the fields that haven't been populated by previous entries (typically just "Transmission Type"). Click "calculate" to get the results. Click print if you would like a hardcopy for your records. Click "OK" to return to the gearing calculator page.



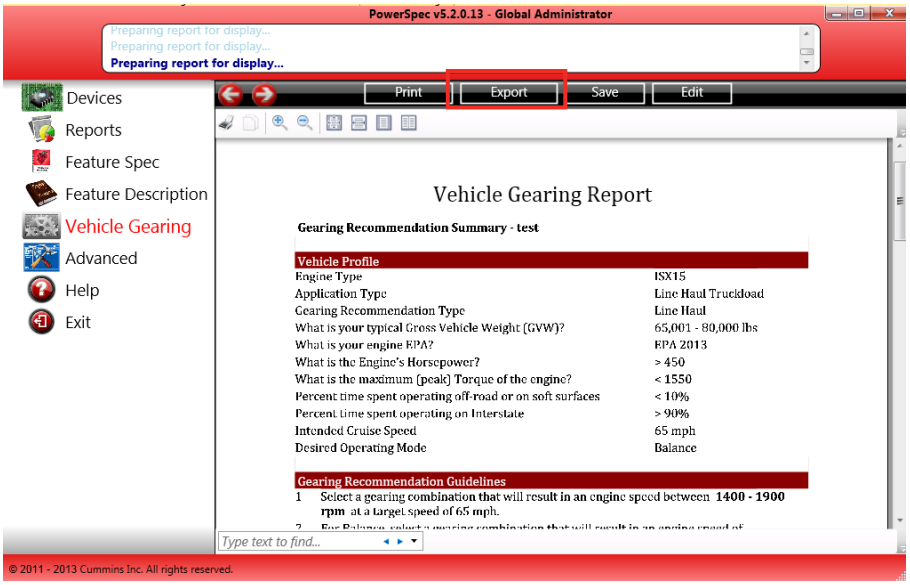
- After returning to the gearing calculator page, click “next.” The following screen will be the Vehicle Gearing Report.



- To save the gearing spec you have just created, click “Save” then name the spec and click “OK”.



- After saving the spec, you can now reference the full report by clicking the name on the vehicle gearing main page. Here you can also export and save the spec to a selected folder on your computer.



Feature Spec Settings

- PowerSpec enables users to tailor programmable engine features to their specific needs.

- For users who wish to control feature settings from a central location, PowerSpec offers the ability to create a HotSpec that runs only on the target PC(s). HotSpecs can only be created from licensed PowerSpec PCs, and cannot be edited by recipients unless they have been granted access to edit them.

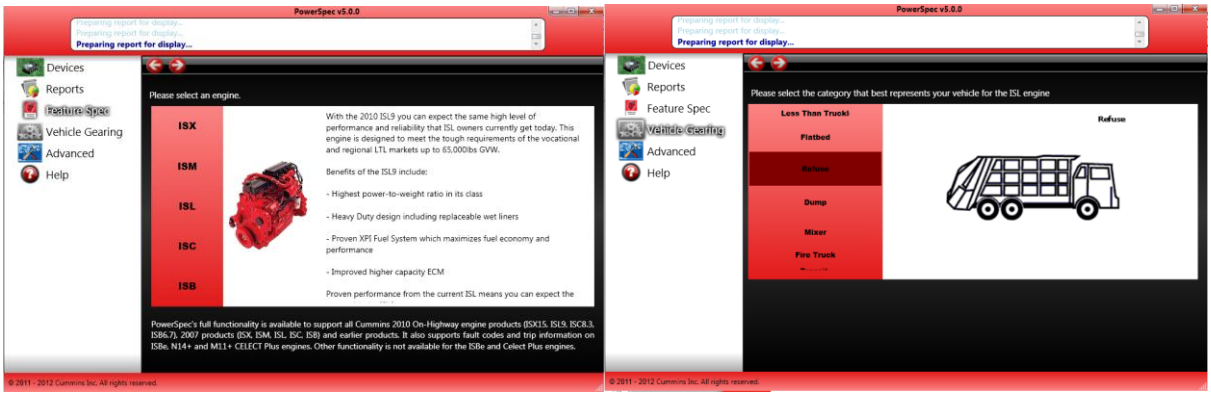
- When used on a specified target PC, the HotSpec will transfer to a Cummins engine with the same authority as the licensed PC that created it. This is the preferred method for many large fleets that only wish to license the fleet manager's PC and keep the shop PCs unlicensed.

Creating a new Spec

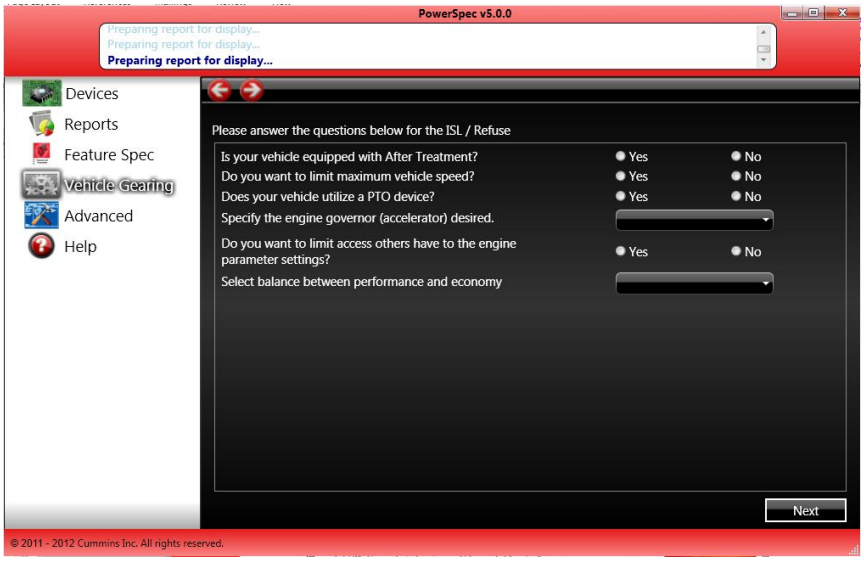
- Select "Feature Spec" from the Main Menu

- On the next page, you have option of selecting an existing spec from the list, creating a new one, or opening one from a file that was given to you by someone else. To create a new Spec, select "Create New" from the menu.

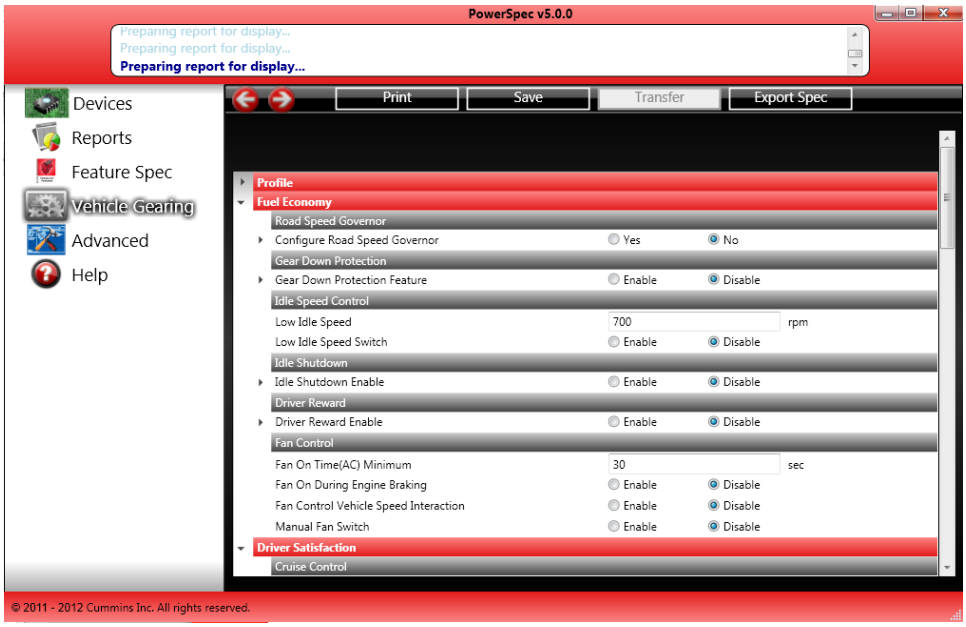
- Similar to the Gearing Calculator, select your engine from the list. On the next page, select your truck model.



- Answer the application questions on the following screen. The number of questions may change according to the information you choose. Once you are finished, click “Next.”



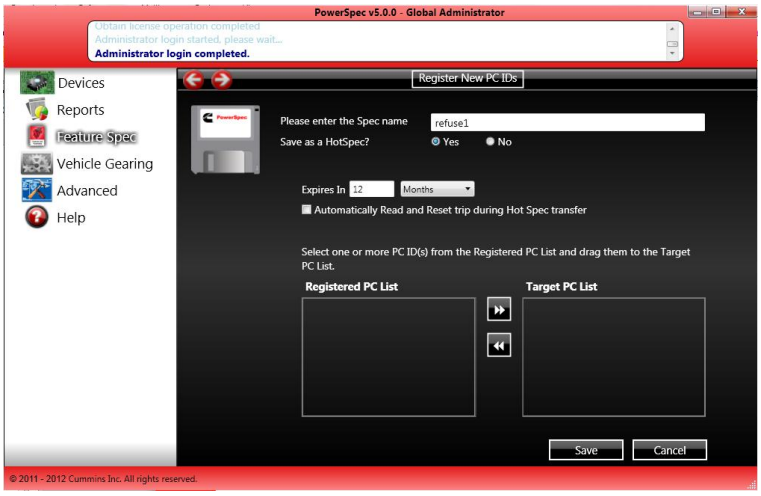
- On the follwing page, PowerSpec will use the application information previously supplied in addition to your selection below to recommend a feature and parameter set. Click “next” once you’ve made your selection.



- The engine feature setting page will list your vehicle profile along with feature and parameter setting for your review. Review the page to confirm that the settings fall in line with your desired Spec. You can make changes to the information by clicking in the appropriate boxes. If you have questions or need further explanation on certain features and parameters, click the "help" link from the left menu bar. *Note – the input will not save automatically.

Saving a HotSpec

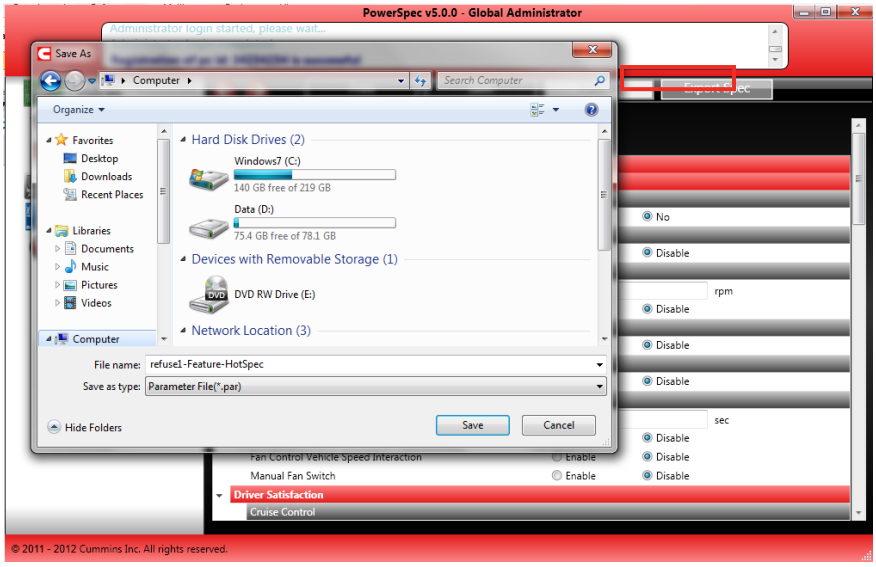
- To save a HotSpec to your PC, simply name the spec and expiration date, indicate the target PCIDs and click "Save".



Notes: *Only the creator of a HotSpec can modify it. HotSpecs can only be viewed by the recipient. Use HotSpecs when you desire to endow the target PC with transfer authorization.*

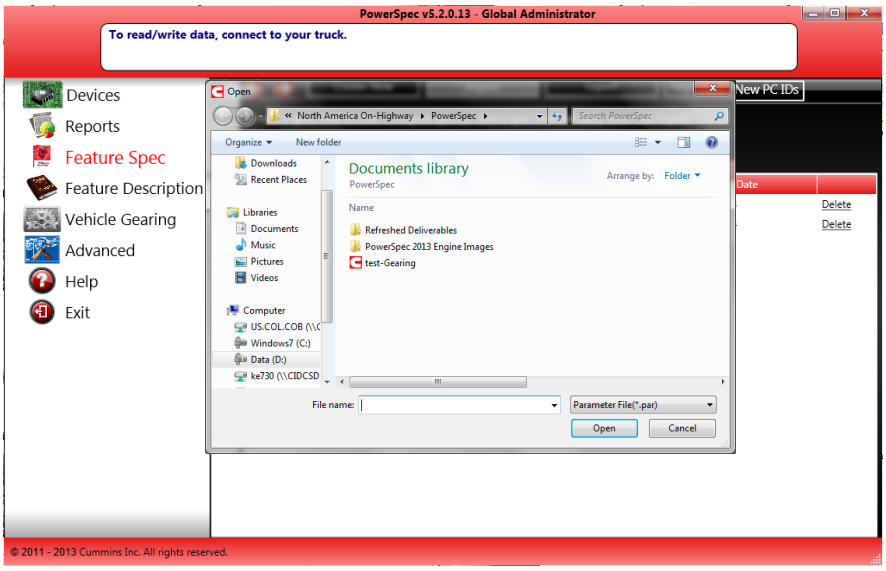
Exporting a Spec

- If you need to save a spec in a format other than a PowerSpec file, click “Export Spec.” PowerSpec gives you three options for saving including a .csv option for use in Microsoft Office Applications. Select your option, click “OK” then “Save.” Your file can now be opened in your respective format.



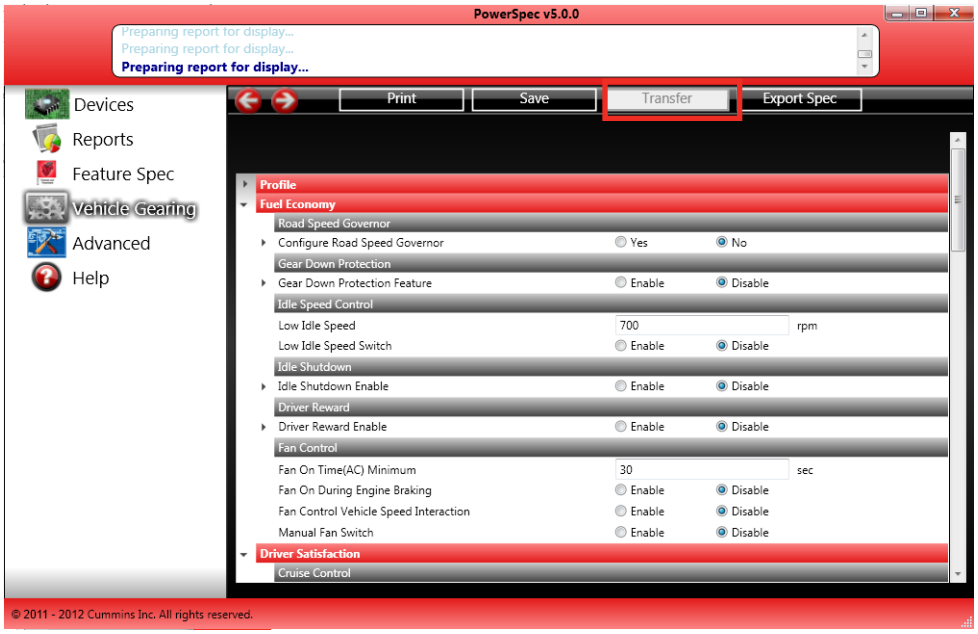
Importing a Spec

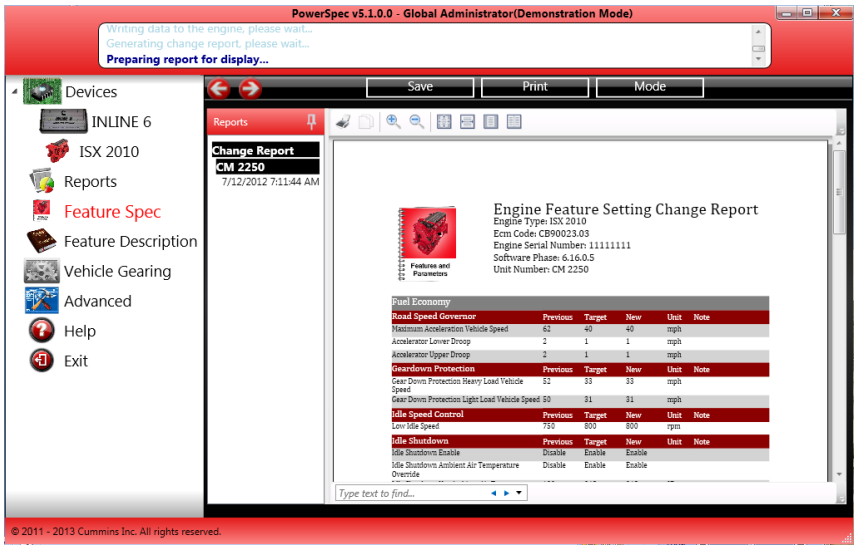
- To import a spec, click “Import” at the top of the Feature Spec page. You will be prompted by a system window. Choose the desired spec and click “open”. You can also import a spec by opening the same file from the Windows folder, without opening PowerSpec first.



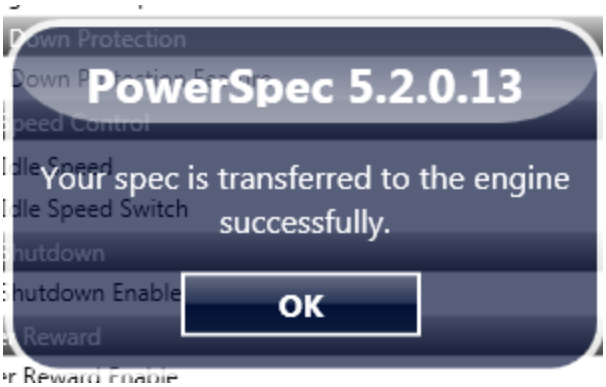
Transferring a Spec

- To transfer an existing Spec to an engine, select “Transfer” at the top of the Feature Spec parameters page.





- To transfer a Spec make sure INLINE™ adapter and cable is connected to your engine. Select a spec from the list and the transfer process should begin. (Note: the “Transfer” button is disabled if you are not connected to a vehicle.)



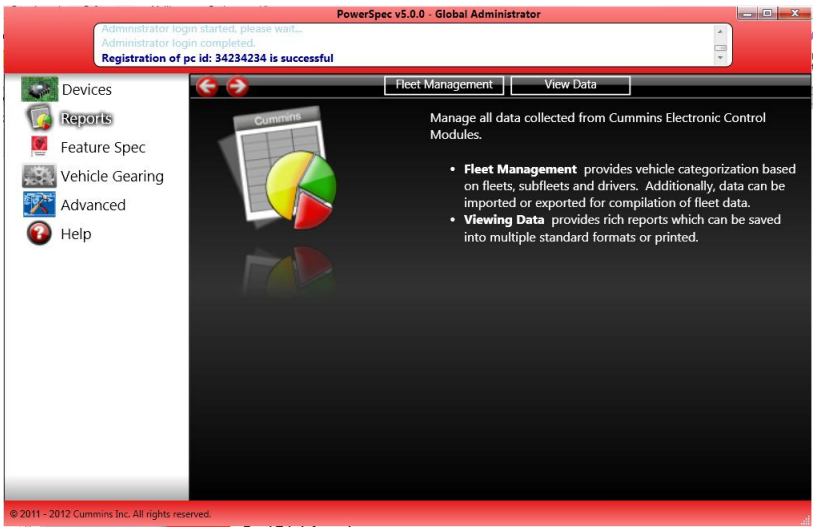
- Once the transfer is finished, PowerSpec will bring up a change report. If you receive an error message, the transfer has failed.

- Once the transfer process is finished, PowerSpec will generate a report for your records. By clicking “Mode,” you can transition between a full report and a shortened one. By clicking “Print Report,” you can print a hard copy of the transfer report for your records. Click “Save As” to save the report for your records. Once you are finished, simply click “Done” to return to the Transfer Feature Spec main page.

- You may also transfer a Spec once you have finished creating/editing it. Simply click “Transfer” on the Spec’s feature settings page and follow the same process as above.

Reports

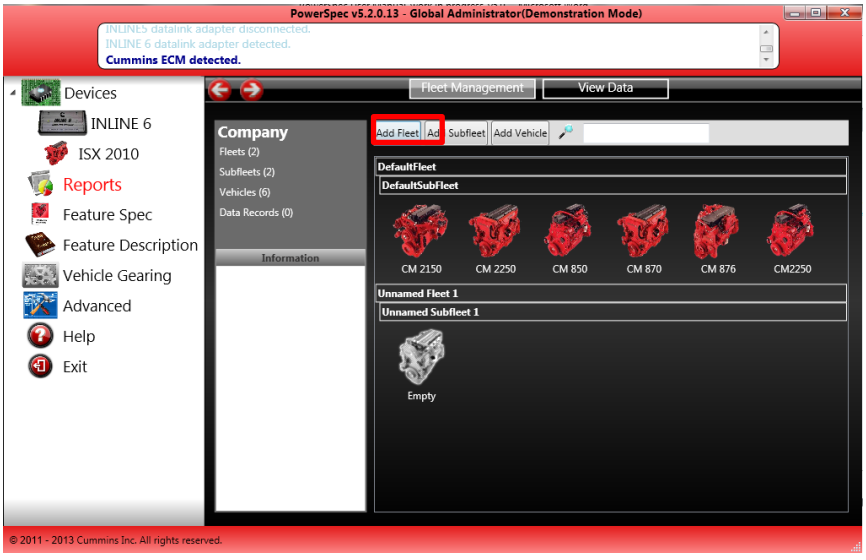
- PowerSpec also allows you the ability to read different types of engine data from trip information to fault codes (including the capability to reset inactive fault codes).



- You can add fleets, sub-fleets or add a vehicle. When you read data from a truck, the trip information is stored under the default fleet/ sub-fleet, automatically. Any truck can be added to a fleet you created by simply dragging and dropping.

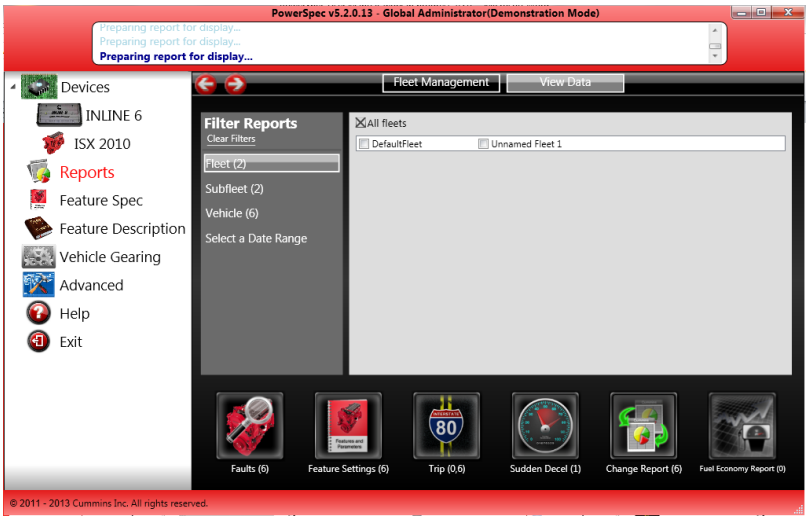
Fleet Management

- The grey window on the left will list your company name and count of fleets, sub-fleets, vehicles, and data records.



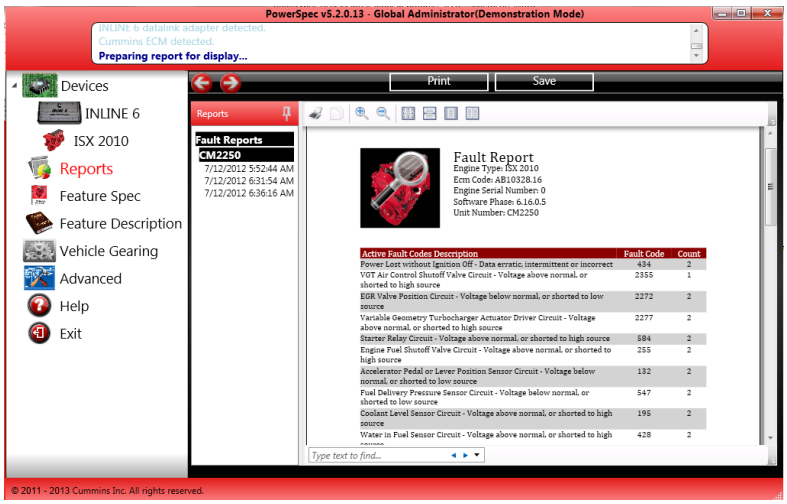
View Data

- If nothing is selected, the bottom icons show all reports stored in the database. As you pick a vehicle or vehicles, fleet or sub-fleet and a start/end date, it will show the number of reports for those selections.



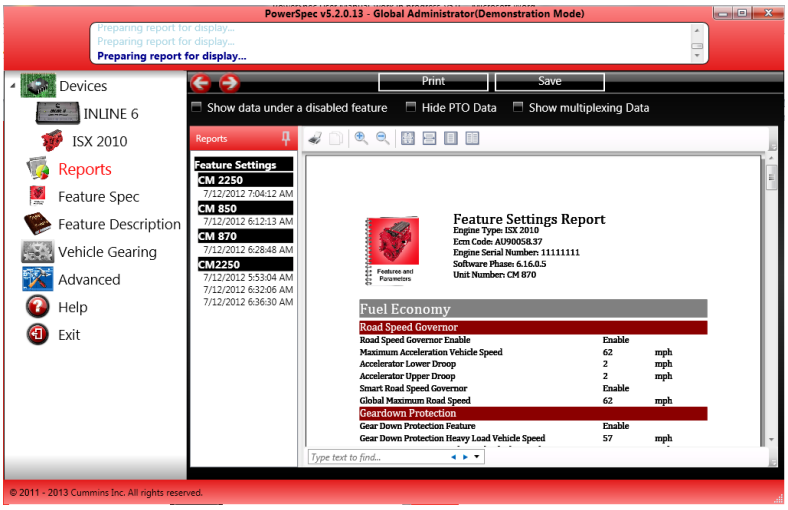
Fault Codes

- By clicking ‘Faults’, you can view a populated list of the fault codes the engine has experienced within the date range selected. The list also includes a description of each.



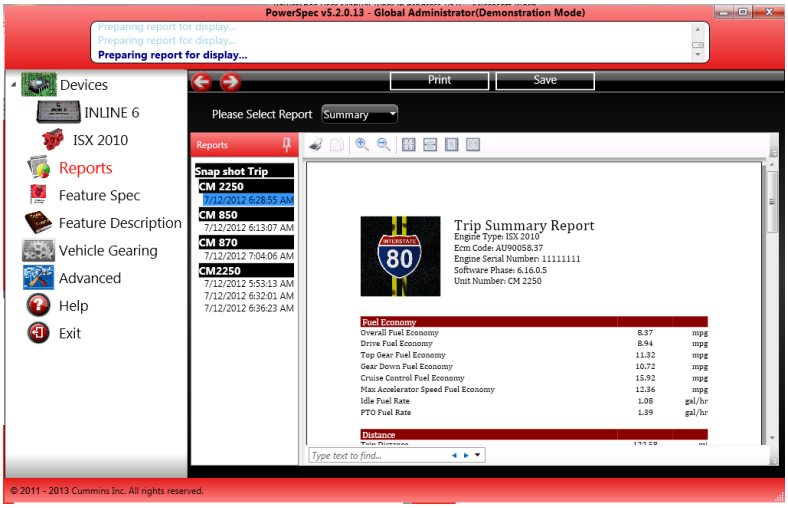
Feature Settings

- You can easily check a list of the feature settings of each engine selected in the ‘View Data’ page. This includes data on disabled features and multiplexing data, if selected at the top of the report.



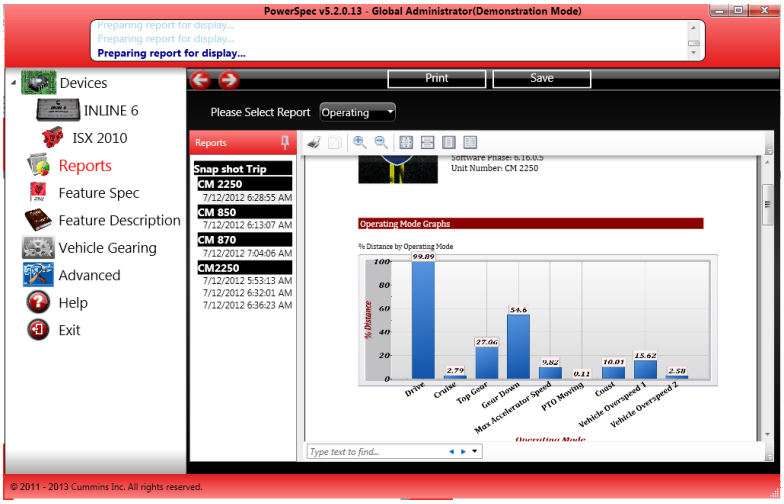
Trip Information

- Trip information can be viewed in summary, detail, or operating reports. Summary will give a high level overview of fuel economy, distance traveled, time travelled and other averages.



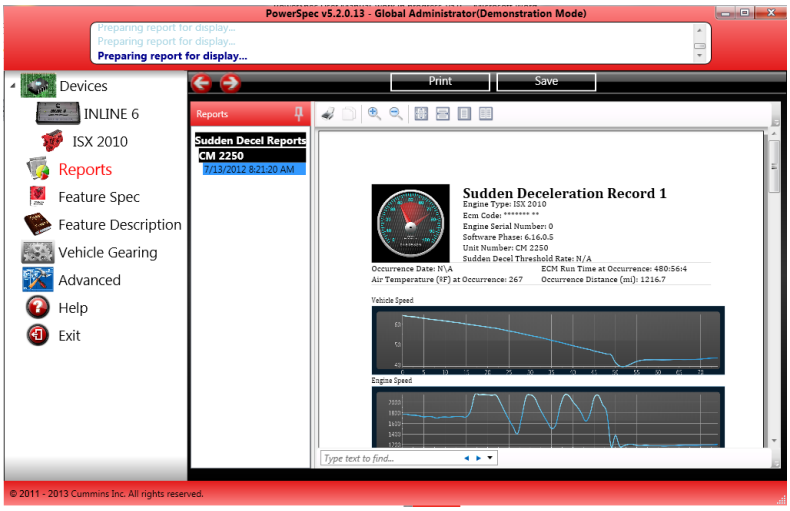
Summary Report

- Viewed in operating report, trip information is displayed in graph format to show a visualization of certain characteristics of the engine during a given trip based on the engine's operating modes.



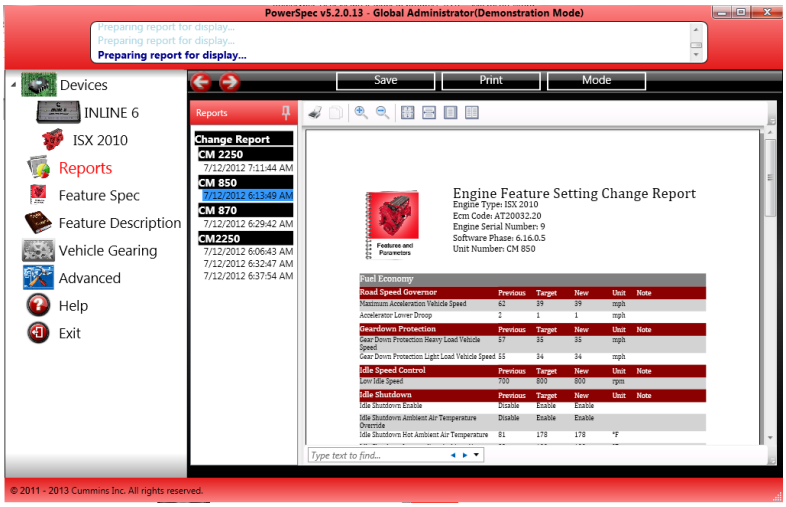
Sudden Deceleration

- PowerSpec also displays, graphically, sudden decal events. The report includes the time, vehicle speed, engine speed, engine load, and throttle during an event.



Change Report

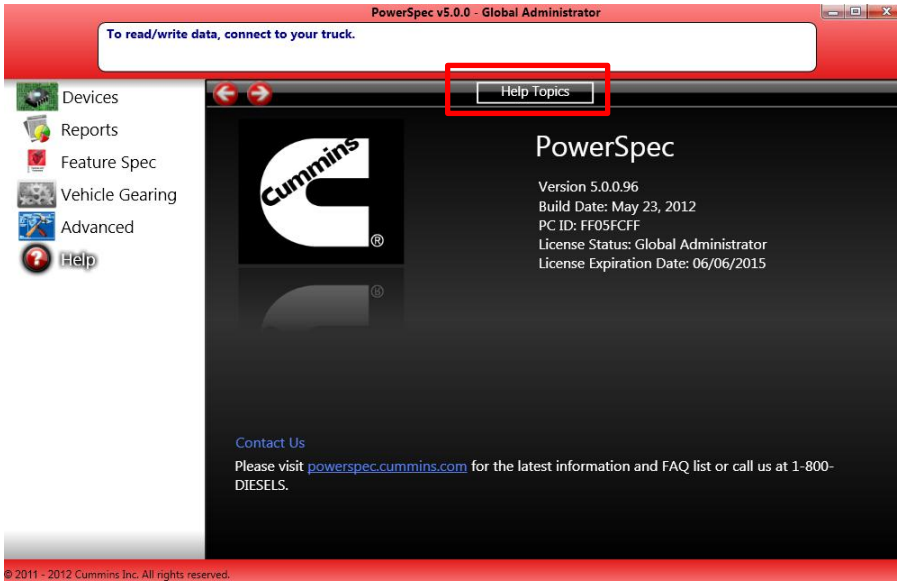
- To view the history of changes made to an engine's feature settings, click 'Change Report'. Here you can compare the new and old feature settings in table format.



Licensing: Customer Instructions

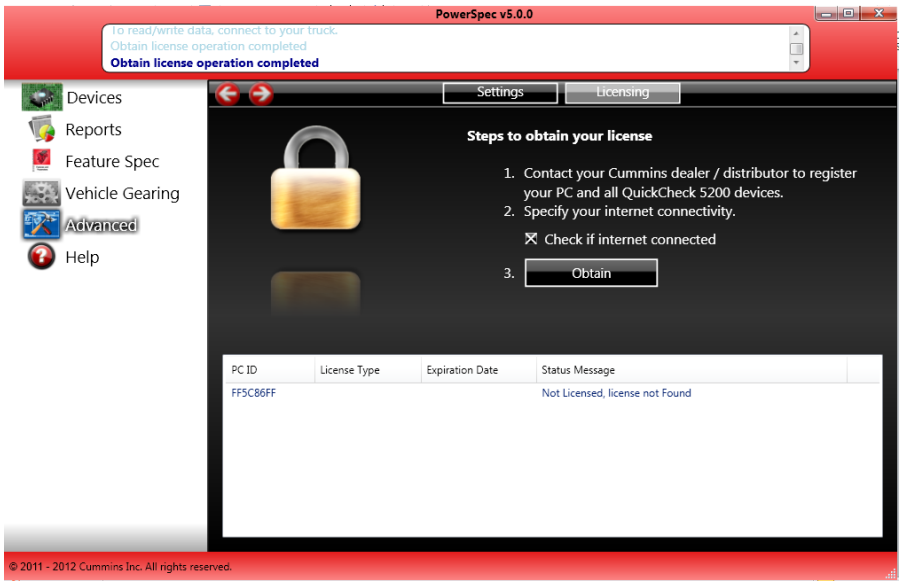
Licensing a PC for PowerSpec Feature Settings

- To start the process, install PowerSpec on the target PC and obtain the PC ID from the PowerSpec Main Menu (next to copyright).



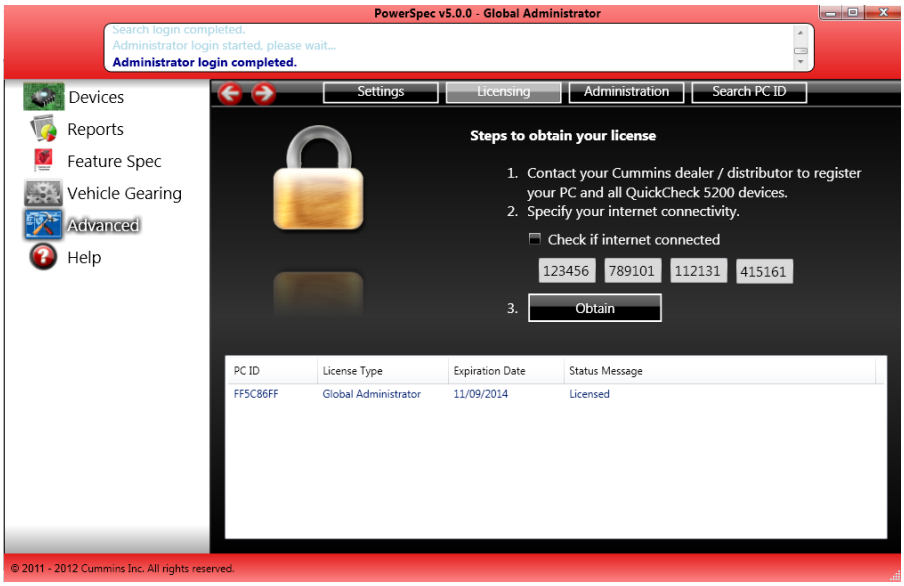
- Next provide the Cummins Distributor with the PC ID and the following personal information:
    - First/Last Name
    - Email Address
    - Company Name
    - Zip Code
    - Phone Number
    - PCID - (Located on PowerSpec “Help” page)
        - Format: 8 characters long – alphanumeric: A-F, 0-9

- After your Cummins Distributor has created the PowerSpec license, there are two methods for installing the license on the target PC:
    - For computers connected to the internet:
        - First , select “Advanced” in the left pane and “Licensing” from the top of the page.



- On the licensing page, select “Internet Connected,” then click “Obtain.” The license will install automatically in a few seconds.

- For computers not connected to the internet:
  - De-select “Internet connected, enter the license key.”
  - Type the 24 digit numeric license key provided by the distributor, then click “Obtain” to install the license. *Note: Each license key only works on the targeted PC.*



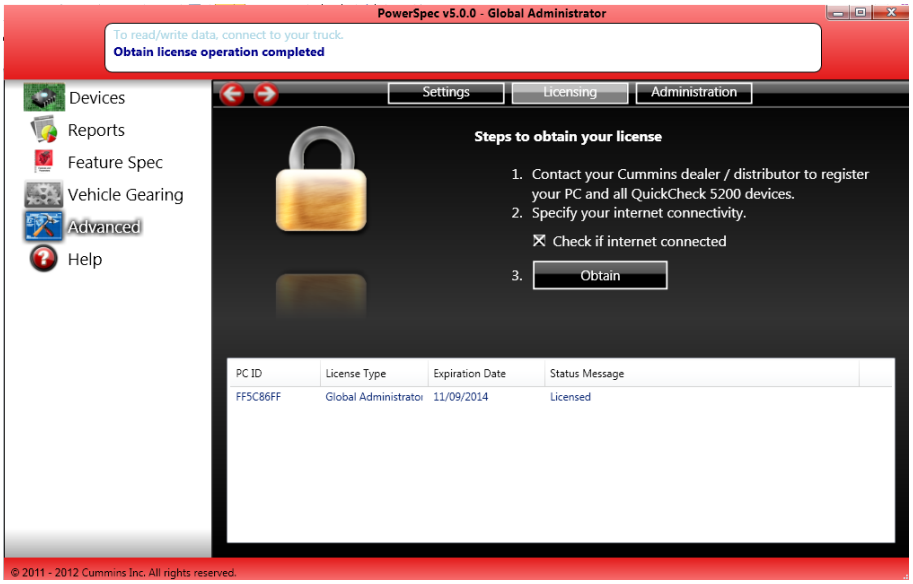
You have now successfully obtained a PowerSpec license!

Licensing: Distributor/ PowerSpec Administrator Instructions

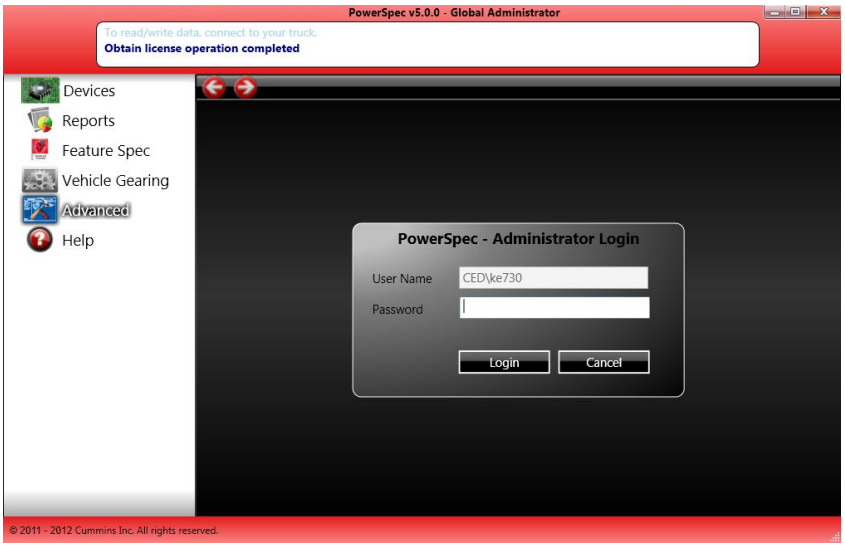
How to License a customer PC

As a PowerSpec administrator you have the ability to license customers PC's allowing them the ability to spec feature and parameter setting and transfer those 'HotSpecs' to their engine.

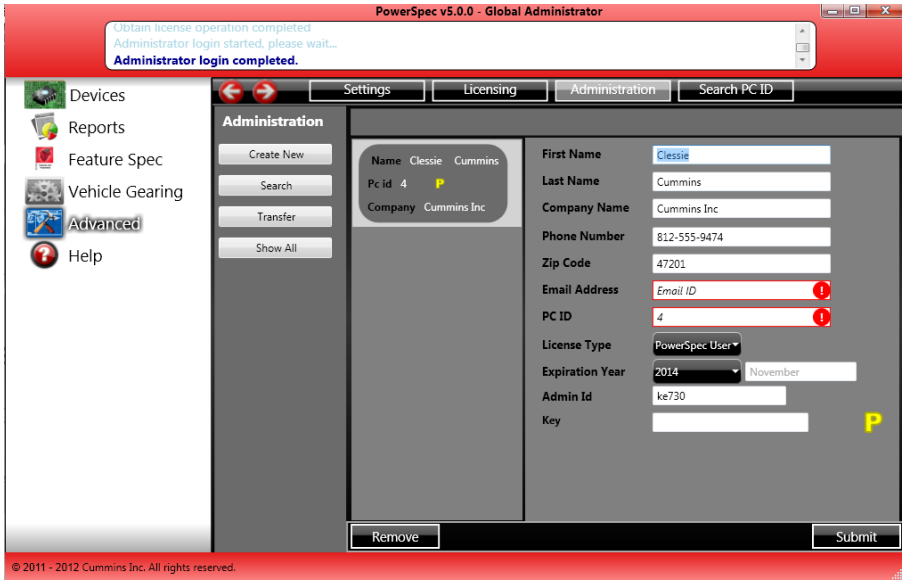
- First, open the PowerSpec license database by clicking 'Advanced' from the menu bar located at the left of your PowerSpec screen. Select 'Administration'.



- You will be asked for your username and password. Please input your WWID and PC password to obtain access to the database.



- From this screen in the database menu you are able to create a new license by clicking the ‘Create New’ button on the left side of the screen or you can update an existing license (i.e. extend the expiration date or change contact info)



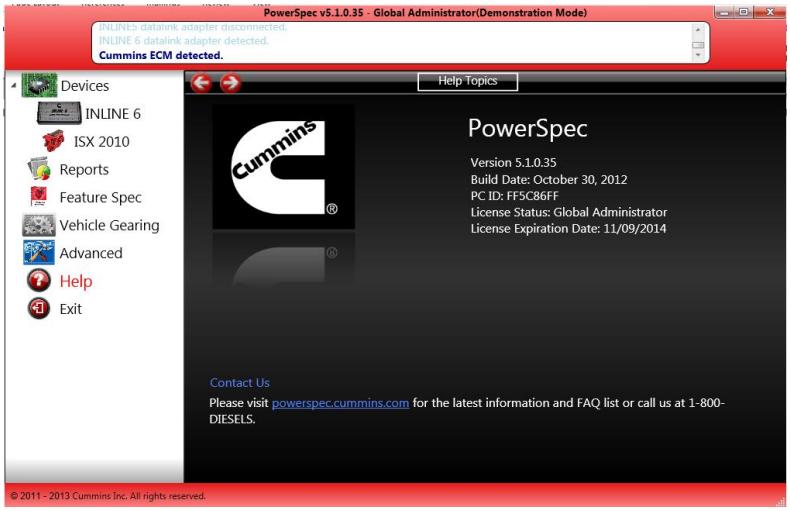
- Once you have either created a new license or updated a current license you must click the ‘Submit’ button which will register the information within the database.

Note: Always remember to inform your customer that they will need to ‘obtain’ their license in order to activate the information. This holds true even if you are just making a change to a license. For steps on having a customer obtain a license refer to page 24 and 25 of this guide.

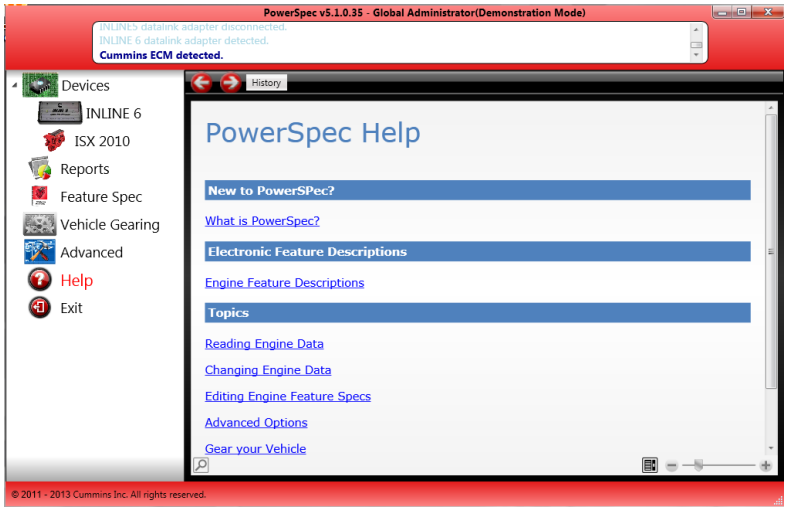
PowerSpec Help

PowerSpec overview, engine feature descriptions and definitions

- PowerSpec contains a library of information including: a program overview, engine feature descriptions, and more in-depth descriptions of how to use the program. These topics are located under the ‘Help’ menu. Click ‘Help’ in the left menu and the ‘Help Topics’ at the top of the page.



- PowerSpec Help contains a comprehensive overview of all the information you need to complete any task.



- Each engine page in PowerSpec Help includes:
  - Overview
  - Features and Parameters Setup
  - Theory of Operation
  - Driver Technique

- PowerSpec 5.2 also contains a direct link to the engine feature descriptions within the navigation bar on the left.