

INTERNATIONAL®
INSTRUMENT PANEL CLUSTER
Software

User's Manual

International Truck and Engine Corporation®

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I. INTRODUCTION

1. SOFTWARE OVERVIEW

The International electronic instrument panel clusters consists of four basic types: Pre-1997 medium-duty, Post-1997 medium-duty, Pre-1994 heavy-duty, and Post-1994 heavy-duty. To properly diagnosis and program these clusters please follow the instructions outlined in this and other International manuals. The International Panel Cluster software provides the capabilities to

- 1) Attempt to automatically distinguish the type of instrument panel cluster.
- 2) Program specific truck application settings.
- 3) Exercise data link driven gauges.

2. SYSTEM REQUIREMENTS

The International Instrument Panel Cluster diagnostic software is designed and developed to provide diagnosis to the International Instrument Panel Cluster for both Heavy-duty truck and Medium duty truck.

System requirements are as follow:

- 1) PC with Pentium® or Pentium® equivalent or replacement CPU.
32MB of system RAM.
10MB of free system HD.
CD-ROM drive and/or 3½" Floppy drive.
- 2) Microsoft Windows® Operating System. Depends on the version of the International Instrument Panel Cluster software.
- 3) International Instrument Panel Cluster diagnostic software (on CD or 3½" Floppies)
- 4) International approved EZ-Tech Interface cable.

3. NOMENCLATURE

The following are the nomenclatures used within this manual. Please read this section carefully and understand the meaning of the actions required.

| | |
|------------------------------------|--|
| Click or Clicking | For EZ-Tech users this indicates tapping on the lower left-hand area of the touch pad once. For PC users this indicates tapping on the left mouse button. |
| Double click or Double clicking | For EZ-Tech users this indicates tapping on the lower left-hand area of the touch pad twice in succession. For PC users this indicates tapping on the left mouse button twice in succession. |
| Right Click | For EZ-Tech users this indicates tapping on the upper left-hand area of the touch pad once. For PC users this indicates tapping on the right mouse button. |

| | |
|----------------|---|
| Click and drag | For EZ-Tech users this indicates tapping on the lower left-hand area of the touch pad marked by a lock symbol and then using the main area of the touch pad to move the mouse pointer. |
| Hit | Indicates depressing and then releasing a key on the keyboard. |
| ALT | Indicates the action whereby the “Alt” key on the keyboard is depressed while another key on the keyboard is hit. |
| Scroll bar | <p>The <u>horizontal scroll bar</u>  is normally at the bottom of the window. Click on the left arrow button to scroll left. Click on the right arrow button to scroll right. Click on the area to the left of the slider to page left. Click on the area to the right of the slider to page right. Or simply use the slider by clicking and dragging.</p> <p>The vertical scroll bar is normally at the right of the window. Click on the up arrow button to scroll up. Click on the down arrow button to scroll down. Click on the area to the top of the slider to page up. Click on the area to the bottom of the slider to page down. Or simply use the slider by clicking and dragging.</p>  |

II. INSTALLATION

1. SYSTEM SETUP AND SOFTWARE INSTALLATION

It is easy to set up International Instrument Panel Cluster (IPC) diagnostic software. Simply follow the steps on your PC screen.

Following are some of the frequent asked questions during the software installation.

- 1) **Using CD.** Insert CD into CD-ROM drive. If Windows® does not automatically start to setup the software, then refer to Section III-4 System and Software Trouble Shooting.

Using 3 ½” floppy. Insert Setup Disk#1 into floppy drive and type in “A:\Setup.exe”.



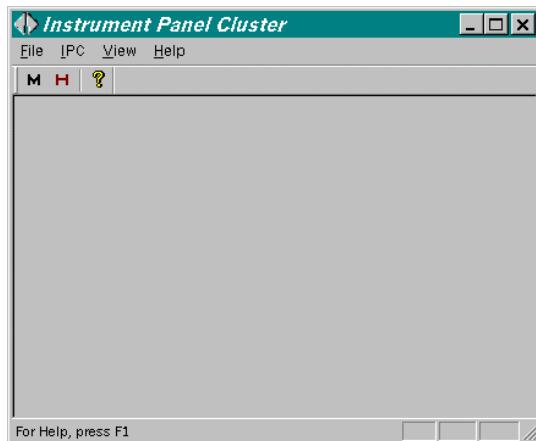
- 2) Always follow the setup instruction on the screen. If you are unsure of the proper responses to any questions during the install process, please select the default values assigned by the install process.
- 3) When the setup installation has been successfully installed, the Instrument Panel Cluster diagnostics icon should be embedded in the **VEHICLE DIAGNOSTIC** folder. Double click on the **VEHICLE DIAGNOSTIC** Folder to bring up the Instrument Panel Cluster diagnostics software shortcut icon.

III. HOW TO USE THE IPC DIAGNOSTIC SOFTWARE

1. BASICS

To begin using this tool, please spend a few minutes reading through this section to gain the basics behind the tool.

After launching the International Instrument Panel Cluster diagnostic software, your computer should display the following main window.



The software provides a menu bar that is right below the window's title bar. All available features of the software can be accessed via the menu bar. The primary interface for the use of the software is based on the type of instrument panel cluster.



For the frequently used actions, a toolbar is provided. The toolbar is a quick and easy way to select the type of instrument panel cluster. Each toolbar button will be described briefly below.



IPC → Medium Duty Opens Instrument Panel Cluster dialog box for International medium duty trucks.



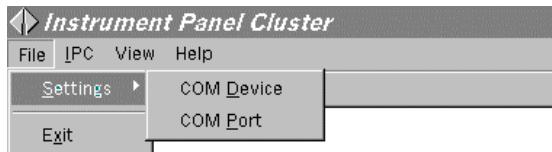
IPC → Heavy Duty Opens Instrument Panel Cluster dialog box for International Heavy Duty trucks.



Help → About Opens the software help about message box.



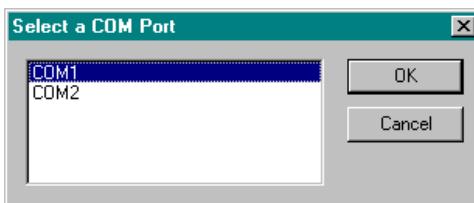
Prior to starting the configuration, the software must be set properly. Click on **File** in the menu bar and then **Settings**. There are two settings available: **COM Device**, and **COM Port**.



The **COM Device** selection configures which interface cable is connected to the communication port.



The **COM Port** selection configures which communication port the interface cable is connected to. This is determined by looking at the back of the computer.



2. IPC FOR MEDIUM DUTY TRUCKS

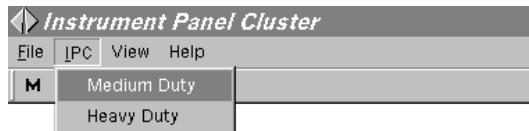
All electronic instrument panel clusters built for Medium Duty trucks can be categorized into two types: pre-1997 and post-1997. Series 1000, 2000, 3000, 4000, and 8000 trucks built since March 1, 1992, have been installed with Medium Duty instrument panel clusters.

The pre-1997 types may require electronic programming for proper calibration. The gauges that may require programming are tachometer and speedometer. If these gauges are programmed to use the data link, then they may be exercised with this tool.

The post-1997 types have data link driven gauges. There is no programming required for proper calibration. The gauges that are data link driven are speedometer, tachometer, coolant temperature gauge, oil pressure gauge, and voltmeter. These gauges may be exercised with this tool.

The exact type of instrument panel cluster must be determined before the tool will allow the correct access and usage. The tool will first attempt to determine the type of instrument panel cluster. If the type cannot be determined automatically then it is left to the user to select the correct type.

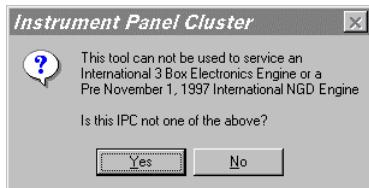
Selecting **IPC** and then **Medium Duty** prompts the tool to initiate the automatic query to determine the type of Medium Duty instrument panel cluster.



HINT: Toolbar shortcut is by clicking on



The following message box is displayed requesting to verify that the truck under service can be accessed using this tool.

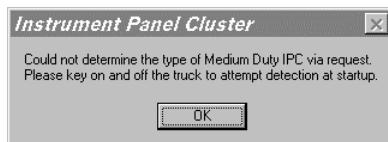


This tool cannot be used to service trucks with International 3 Box electronic engines or NGD engines built prior to November 1, 1997. Please refer to the service manuals on instruction as to how to properly service these instrument panel clusters. If you are servicing one of these trucks **No** please click on the button.

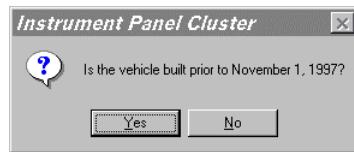
However, if the truck that you **Yes** are servicing is not one of these, then this tool may be used and you should click on the button.

At this time the tool will automatically request for information from the instrument panel cluster. If the tool is able to determine the type of instrument panel cluster then the appropriate message box is displayed indicating the type of instrument panel cluster that is under service.

The following message box is displayed if the service tool cannot determine the type of instrument panel cluster via the automatic request. Please turn the ignition key on and off and back on. This causes the instrument panel cluster to broadcast its own identity information.



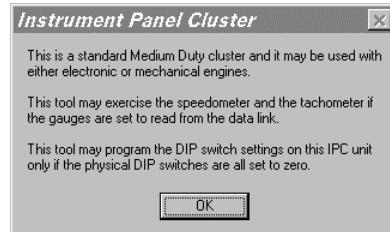
The following message box is displayed if the identity information of the electronic instrument panel cluster cannot be received.



If the vehicle was built prior to November 1, 1997, please click on the **Yes** button. This will cause the pre-1997 Medium Duty instrument panel cluster interface to become available.

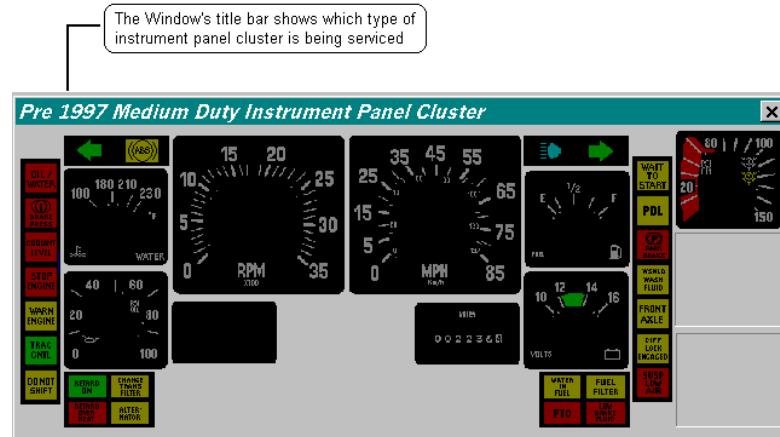
If the vehicle was built on or after November 1, 1997, please click on the **No** button. This will cause the post-1997 Medium Duty instrument panel cluster to become available.

A general message indicating the type instrument panel cluster is displayed prior to displaying the graphical user interface. Please confirm that the physical DIP switches are all set to the zero position. This tool is unable to electronically program the instrument panel cluster if any of the DIP switches is not set at the zero position. Also, this tool may not be able to exercise the gauge depending on which of the DIP switches are not set to the zero position.



Acknowledging the above message box by clicking on the **OK** button.

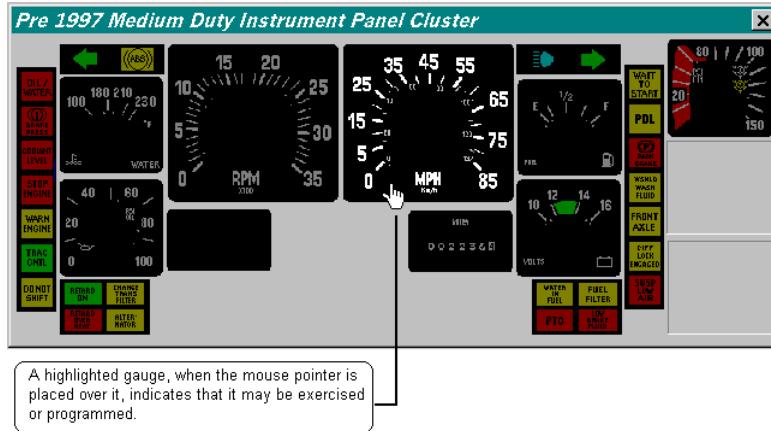
The appropriate graphical interface is displayed. The type of instrument panel cluster is indicated in the window's title bar.



When a gauge may be exercised or programmed, the mouse pointer will change its form from an arrow to a hand with index finger extended.



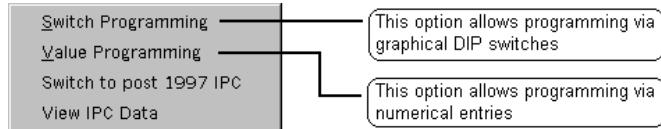
The gauge that may be accessed using this tool is also highlighted when the mouse pointer is placed over it.



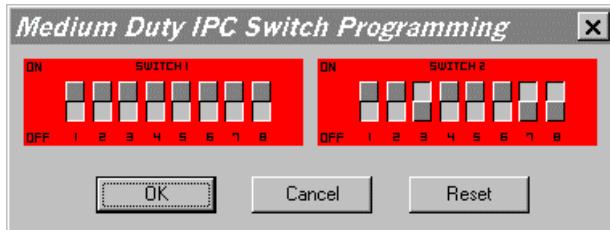
A. PROGRAMMING GAUGE

This section is applicable only to the pre-1997 Medium Duty instrument panel clusters.

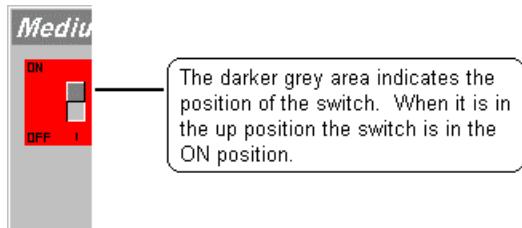
Clicking the right mouse button anywhere on the instrument panel cluster will cause a pop up menu to appear.



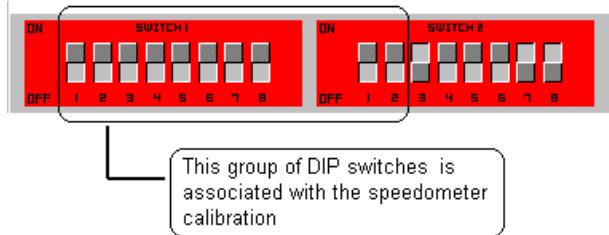
There are two methods of electronic programming: Switch Programming and Value Programming. If the instrument panel cluster under service is driven via the data link then please confirm by clicking on the Switch Programming option.



The Switch Programming graphical interface shows how the instrument panel cluster is programmed.

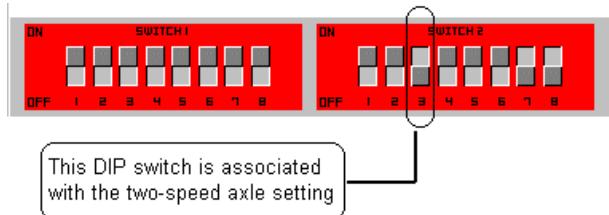


The DIP switches labeled 1 through 8 under the “SWITCH1” bank and 1 and 2 under the “SWITCH2” bank are associated with the speedometer calibration. If all ten DIP switches are in the ON (1) position then the speedometer is driven via the data link and no calibration is necessary.

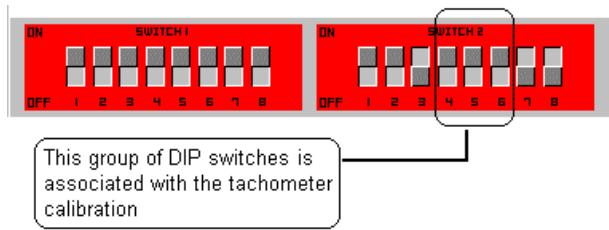


The DIP switch labeled 3 under the “SWITCH2” bank indicates the Two-Speed axle selection.

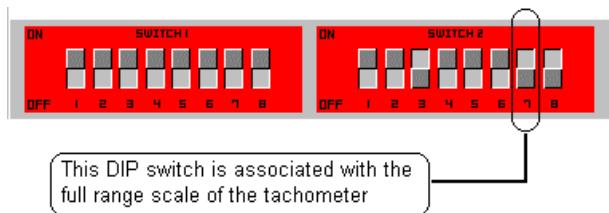
The DIP switches labeled 4 through 6 under the “SWITCH2” bank are associated with the



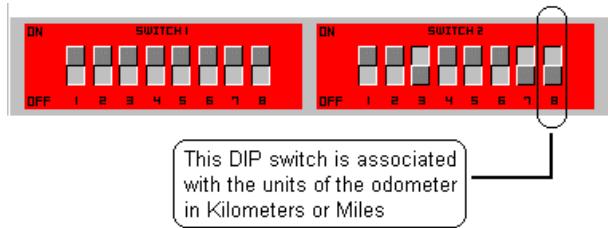
tachometer calibration. If all three DIP switches are in the ON (1) position then the tachometer is driven from the data link and no calibration is necessary.



The DIP switch labeled 7 under the “SWITCH2” bank indicates the tachometer full range scale.



The DIP switch labeled 8 under the “SWITCH2” bank indicates the selection of the odometer unit either Kilometer or Miles.



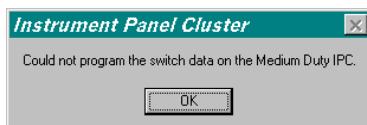
Please refer to the instrument panel cluster service manual for the proper DIP switch settings. Clicking on the DIP switch itself will cause the switch to toggle from the OFF (0) position to the ON (1) position or vice versa.

Clicking on the **OK** button when all the DIP switch settings are set to their proper position will cause the tool to electronically program the instrument panel cluster.

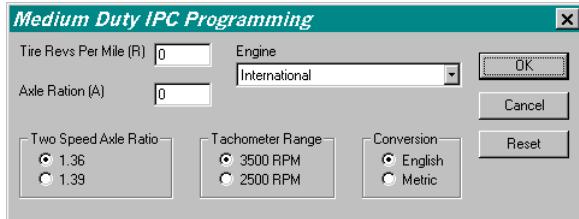
Clicking on the **Reset** button will cause the tool to display how the instrument panel cluster is programmed prior to making any changes.

Clicking on the **Cancel** button will cause the tool to not electronically program the instrument panel cluster.

Please refer to the Trouble Shooting section if the following message box is displayed:

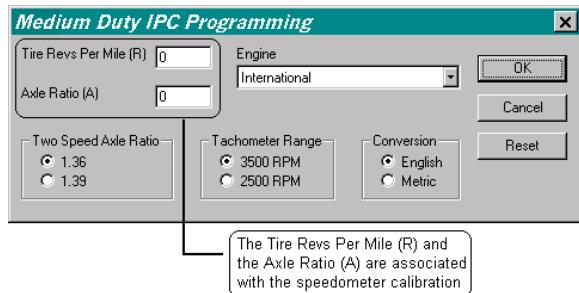


If the instrument panel is to be programmed because of re-calibration then please click on the Value Programming option.



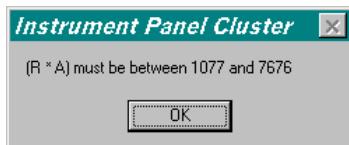
The tool converts the values entered in the value programming dialog box into specific DIP switch settings and then programs the instrument panel cluster.

The calibration required for the speedometer is comprised of Tire Revs Per Mile (R) and the Axle Ratio (A). Type in the appropriate numbers in the edit boxes. These numbers will always



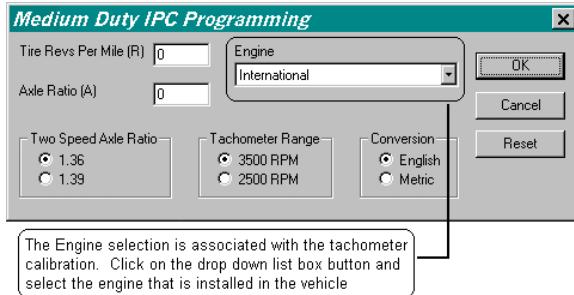
indicate zero (0) until a number is entered.

The result of multiplying Tire Revs Per Mile and the Axle Ratio must be between 1077 and 7676. If the result is outside of this range then a warning message box is displayed.

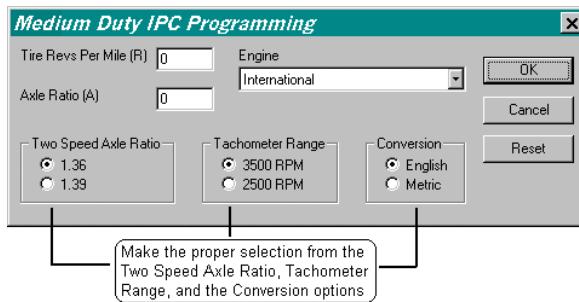


Upon clicking the button the Value Programming dialog box is brought back displaying the Tire Revs Per Mile and the Axle Ratio entered. Please enter the correct values at this time.

The calibration required for the tachometer is labeled Engine. Please select the appropriate engine from the drop down list.



Make the other selections as appropriate by clicking the proper selections for Two-Speed Axle Ratio, Tachometer Range, and Conversion.

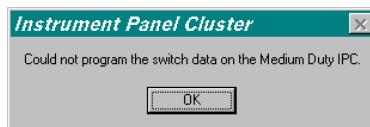


Clicking on the **OK** button will cause the tool to electronically program the instrument panel cluster.

Clicking on the **Reset** button will cause the tool to display how the instrument panel cluster is programmed prior to you making any changes.

Clicking on the **Cancel** button will cause the tool to not electronically program the instrument panel cluster.

Please refer to the Trouble Shooting section if this message box is displayed:



B. EXERCISE GAUGE

CAUTION

Before exercising the gauges with the IPC software the engine controller will need to be disabled so it doesn't send conflicting information on the data link.

Listed below are the fuses to be removed before exercising gauges with the IPC software.

| Fuse Number | Circuit | Model |
|-----------------------------------|---------|--|
| F-5 | | 2000, 4000, 8000 models with the International® Diamond Logic™ Engine Control Module (ECM). |
| F-17 | | 2000, 4000, 8000 models with the Detroit and Cummins electronic engines. |
| F-11 | | 2000, 4000, 8000 models with the Caterpillar electronic engines. |
| C1 | | 3600, 3800 and 4000FBC models with the International® Diamond Logic Engine Control Module (ECM). |
| F6-D | | Conventional Heavy Duty (not cab over) with Caterpillar, Cummins and Detroit engines. |
| F10-C | | Conventional Heavy duty with the International® Diamond Logic™ Engine Control Module (ECM). |
| F2-C (Fuse for ignition relay) | | Conventional Heavy Duty cab over models with electronic engines. |

Be sure to verify this is the correct fuse by checking the label on the fuse panel cover.

If the gauges operate erratically, there is a good chance the engine controller is communicating on the data link.

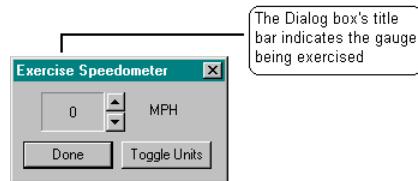
After exercising the gauges with the IPC software, please reinstall the fuses.

Clicking the left mouse button while over a highlighted gauge will place the tool in the exercise gauge mode. The following dialog box becomes available:

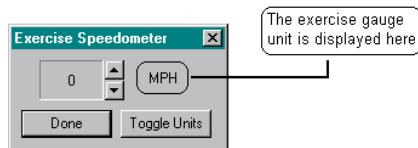


While the tool is in the exercise gauge mode, it will continuously broadcast ATA data link messages to simulate an engine or a vehicle operating condition. However, this mode is only useful if the instrument panel cluster that is under service has been programmed to operate from the ATA data link. No other tool feature is made available until the exercise gauge mode is complete by clicking on the button.

The exercise gauge dialog box's title bar indicates the gauge being exercised. Select the correct exercise unit first prior to exercising the gauge. The button changes the unit from English to metric or from metric to English.



Verify the appropriate unit by looking at the unit being displayed.



There are several ways to exercise the gauge:

- 1) Type in the desired numerical value using the keyboard, or
- 2) Use the up and down arrow keys on the keyboard, or
- 3) Use the up and down buttons in the exercise gauge dialog box.

The longer the up and down arrow keys or the up and down buttons are held the faster the change will occur. The value will freeze when the maximum or minimum range for the gauge is reached. The minimum or the maximum value will be displayed if a value outside of the proper range is entered via the keyboard.

3. IPC FOR HEAVY DUTY TRUCKS

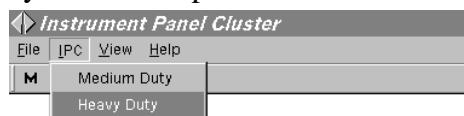
All electronic instrument panel clusters built for heavy-duty trucks can be categorized into two types: pre-1994 and post-1994. Series 5000, 9200, 9300, 9400, 9600, 9700, and 9800 trucks built since January 1, 1994, have been installed with the heavy-duty instrument panel cluster, also known as the command center.

The pre-1994 types may require electronic programming for proper calibration. The gauges that may require programming are tachometer and speedometer. If these gauges are programmed to use the data link, then they may be exercised with this tool.

The post-1994 types may require electronic programming for proper calibration. The gauges that may require programming are tachometer, speedometer, coolant temperature gauge, oil pressure gauge, voltmeter, fuel gauge, and odometer. The gauges that may be exercised by this tool are speedometer, tachometer, coolant temperature gauge, oil pressure gauge, and voltmeter. This tool will only exercise the gauges that are programmed to use the data link.

The exact type of instrument panel cluster must be determined before the tool will allow the correct access and usage. The tool will first attempt to determine the type of instrument panel cluster. If the type can not be determined automatically, then it is left to the user to select the correct type.

Selecting **IPC** and then **Heavy Duty** prompts the tool to initiate the automatic query to determine the type of heavy-duty instrument panel cluster.

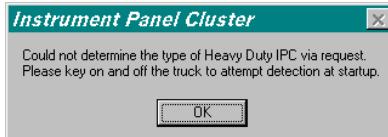


HINT: Toolbar shortcut is by clicking on

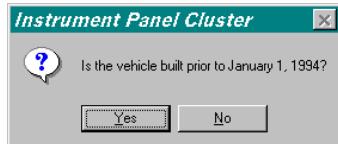


At this time, the tool will automatically request for information from the instrument panel cluster. If the tool is able to determine the type of instrument panel cluster, then the appropriate message box is displayed indicating the type of instrument panel cluster that is under service.

The following message box is displayed if the service tool cannot determine the type of instrument panel cluster via the automatic request. Please turn the ignition key on and off and back on. This causes the instrument panel cluster to broadcast its own identity information.



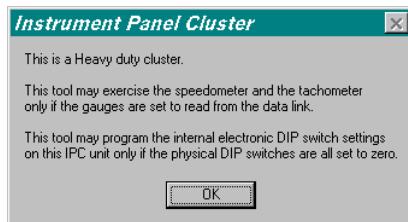
The following message box is displayed if the identity information of the electronic instrument panel cluster cannot be received.



If the vehicle was built prior to January 1, 1994, please click on the button. This will cause the pre-1994 Heavy Duty instrument panel cluster interface to become available.

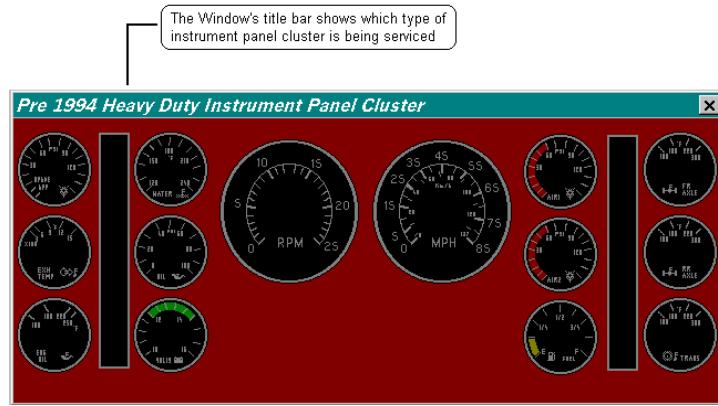
If the vehicle was built on or after January 1, 1994, please click on the button. This will cause the post-1994 Heavy Duty instrument panel cluster to become available.

A general message indicating the type instrument panel cluster is displayed prior to displaying the graphical user interface. Please confirm that the physical DIP switches are all set to the zero position. This tool is unable to electronically program the instrument panel cluster if any of the DIP switches is not set at the zero position. Also this tool may not be able to exercise the gauge depending on which of the DIP switches is not set to the zero position.



Acknowledging the above message box by clicking the button.

The appropriate graphical interface is displayed. The type of instrument panel cluster is indicated in the window's title bar.



When a gauge may be exercised, the mouse pointer will change its form from an arrow to a hand with index finger extended.



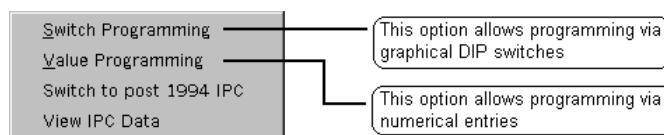
The gauge that may be accessed using this tool is also highlighted when the mouse pointer is placed over it.

A. PROGRAMMING GAUGE

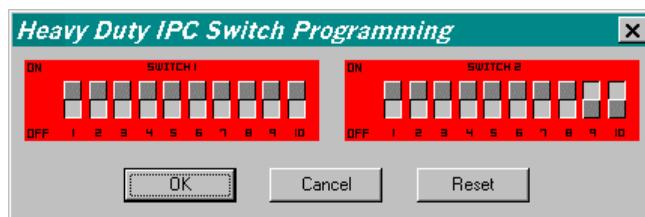
The programming for the pre-1994 and post-1994 instrument panel clusters for heavy-duty trucks are very different. The pre-1994 instrument panel clusters are programmed via a similar methodology as the DIP switches. The post-1994 instrument panel clusters are programmed via actual values only.

PRE-1994 INSTRUMENT PANEL CLUSTERS

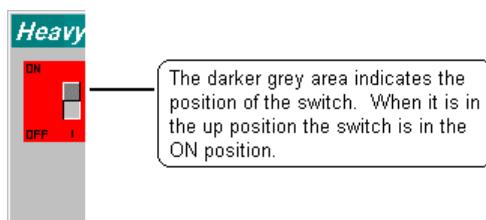
Clicking the right mouse button anywhere besides a highlighted gauge on the instrument panel cluster will cause a pop up menu to appear.



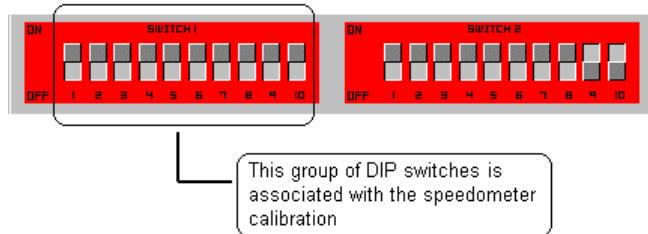
There are two methods of electronic programming: Switch Programming and Value Programming. If the instrument panel cluster under service is driven via the data link then please confirm by clicking on the Switch Programming option.



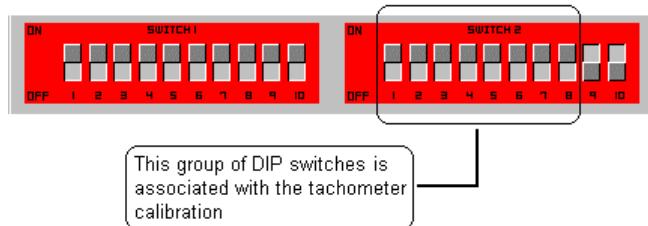
The Switch Programming graphical interface shows how the instrument panel cluster is programmed.



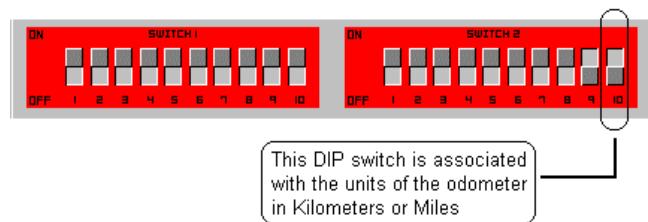
The DIP switches labeled 1 through 10 under the “SWITCH1” bank are associated with the speedometer calibration. If all ten DIP switches are in the ON (1) position, then the speedometer is driven via the data link and no calibration is necessary.



The DIP switches labeled 1 though 8 under the “SWITCH2” bank are associated with the tachometer calibration. If all eight DIP switches are in the ON (1) position, then the tachometer is driven via the data link and no calibration is necessary.



The DIP switch labeled 10 under the “SWITCH2” bank indicates the selection of the odometer



unit either Kilometer or Miles.

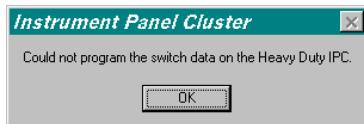
Please refer to the instrument panel cluster service manual for the proper DIP switch settings. Clicking on the DIP switch itself will cause the switch to toggle from the OFF (0) position to the ON (1) position or vice versa.

Clicking on  the button when all the DIP switch settings are set to their proper position will cause the tool to electronically program the instrument panel cluster.

Clicking on  the button will cause the tool to display how the instrument panel cluster is programmed prior to making any changes.

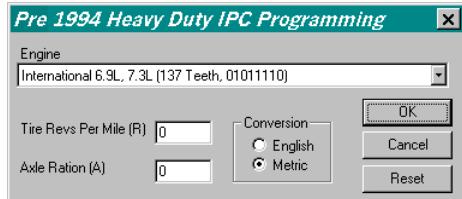
Clicking on  the button will cause the tool to not electronically program the instrument panel cluster.

Please refer to the Trouble Shooting section if the following message box is displayed.

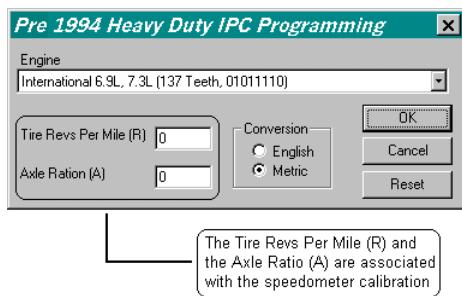


If the instrument panel is to be programmed because of re-calibration, then please click on the Value Programming option.

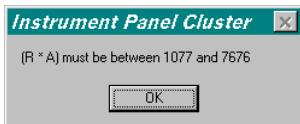
The tool converts the values entered in the value programming dialog box into specific DIP switch settings and then programs the instrument panel cluster.



The calibration required for the speedometer is comprised of Tire Revs Per Mile (R) and the Axle Ratio (A). Type in the appropriate numbers in the edit boxes. These numbers will always indicate zero (0) until a number is entered.



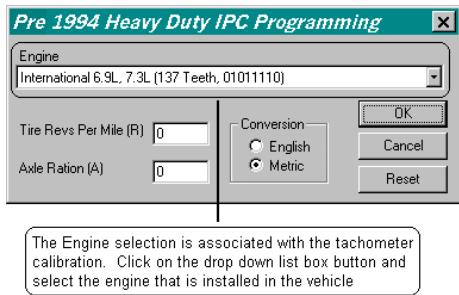
The result of multiplying Tire Revs Per Mile and the Axle Ratio must be between 1077 and 7676. If the result is outside of this range, then a warning message box is displayed.



Upon clicking the **OK** button the Value Programming dialog box is brought back displaying the Tire Revs Per Mile and the Axle Ratio entered.

Please enter the correct values at this time.

The calibration required for the tachometer is labeled Engine. Please select the appropriate engine from the drop down list.

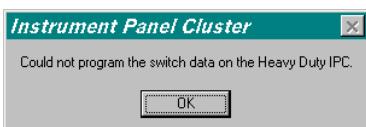


Clicking on the **OK** button will cause the tool to electronically program the instrument panel cluster.

Clicking on the **Reset** button will cause the tool to display how the instrument panel cluster is programmed prior to you making any changes.

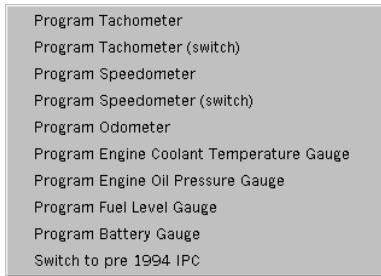
Clicking on the **Cancel** button will cause the tool to not electronically program the instrument panel cluster.

Please refer to the Trouble Shooting section if the following message box is displayed.



POST-1994 INSTRUMENT PANEL CLUSTERS

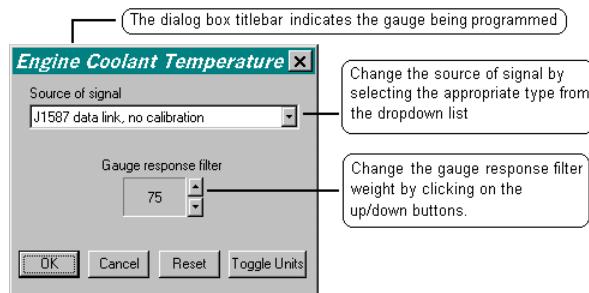
Clicking the right mouse button anywhere besides a highlighted gauge on the instrument panel cluster will cause a pop up menu to appear.



Select the appropriate gauge to program by clicking on the option.

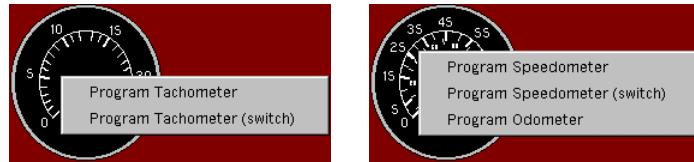
Clicking the right mouse button over a highlighted gauge will either cause an intermediate pop up menu to appear or the desired programming dialog box.

The highlighted gauges that will bring up the programming dialog box are coolant temperature gauge, oil pressure gauge, voltmeter, and fuel meter.

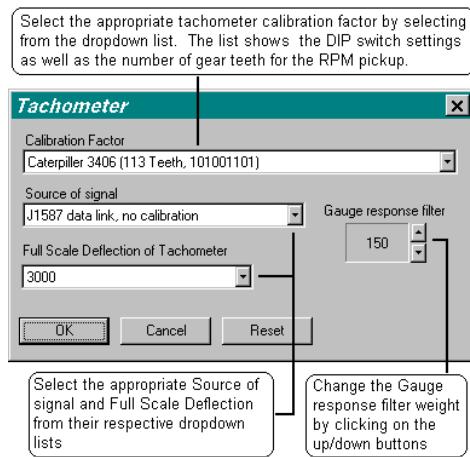


The buttons at the bottom of the dialog box functions the same as described in the pre-1994 instrument cluster programming section.

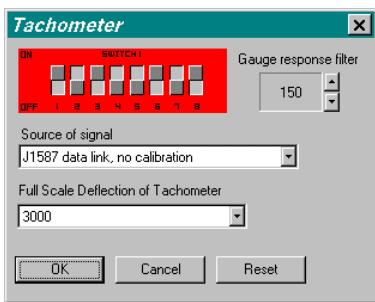
The highlighted gauges that will pop up an intermediate menu are tachometer and speedometer.



The Tachometer may be programmed using two different methods: dropdown list selection or DIP switch settings. The recommended method is by dropdown list selections. To program via this method select “Program Tachometer” from the pop up menu.

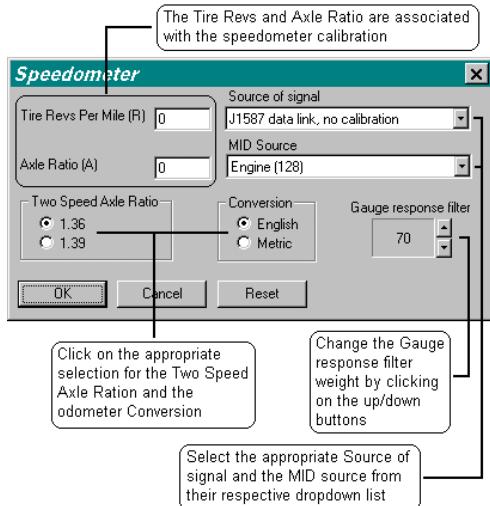


Select “Program Tachometer (switch)” to program via DIP switches. Please see service publications regarding the appropriate DIP switch settings.

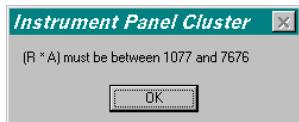


The Speedometer may be programmed using two different methods: values or DIP switch settings. The recommended method is by values. To program via this method select “Program Speedometer” from the pop up menu.

The calibration required for the speedometer is comprised of Tire Revs Per Mile (R) and the Axle Ratio (A). Type in the appropriate numbers in the edit boxes. These numbers will always indicate zero (0) until a number is entered.

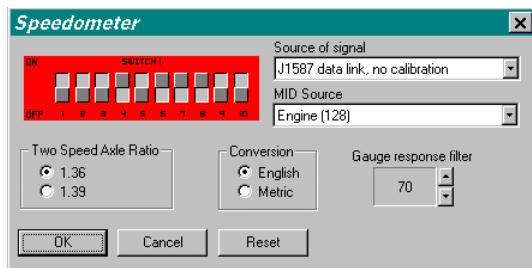


The result of multiplying Tire Revs Per Mile and the Axle Ratio must be between 1077 and 7676. If the result is outside of this range then a warning message box is displayed.

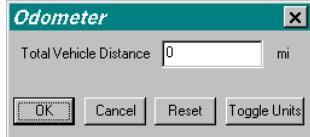


Upon clicking the **OK** button the Value Programming dialog box is brought back displaying the Tire Revs Per Mile and the Axle Ratio entered. Please enter the correct values at this time.

Select “Program Tachometer (switch)” to program via DIP switches. Please see service publications regarding the appropriate DIP switch settings.



Select “Program Odometer” to program the odometer. The Odometer dialog box will appear allowing the odometer to be changed. The value displayed will always indicate zero (0) until a value is entered.



B. EXERCISE GAUGE

CAUTION

Before exercising the gauges with the IPC software the engine controller will need to be disabled so it doesn't send conflicting information on the data link.

Fuses to remove before exercising gauges with the IPC software.

| Fuse Number | Circuit | Model |
|-----------------------------------|---------|---|
| F-5 | | 2000, 4000, 8000 models with the International® Diamond Logic™ Engine Control Module (ECM). |
| F-17 | | 2000, 4000, 8000 models with the Detroit and Cummins electronic engines. |
| F-11 | | 2000, 4000, 8000 models with the Caterpillar electronic engines. |
| C1 | | 3600, 3800 and 4000FBC models with the International® Diamond Logic™ Engine Control Module (ECM). |
| F6-D | | Conventional Heavy Duty (not cab over) with Caterpillar, Cummins and Detroit engines. |
| F10-C | | Conventional Heavy duty with the International® Diamond Logic™ Engine Control Module (ECM). |
| F2-C (Fuse for ignition relay) | | Conventional Heavy Duty cab over models with electronic engines. |

Be sure to verify this is the correct fuse by checking the label on the fuse panel cover.

If the gauges operate erratically, there is a good chance the engine controller is communicating on the data link.

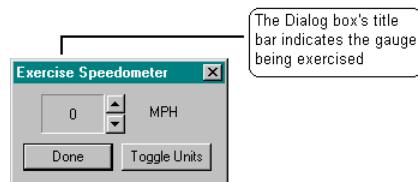
After exercising the gauges with the IPC software, please reinstall the fuses.

Clicking the left mouse button while over a highlighted gauge will place the tool in the exercise gauge mode. The following dialog box becomes available.

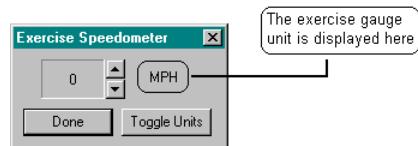


While the tool is in the exercise gauge mode, it will continuously broadcast ATA data link messages to simulate an engine or a vehicle operating condition. However this mode is only useful if the instrument panel cluster that is under service has been programmed to operate from the ATA data link. No other tool feature is made available until the exercise gauge mode is complete by clicking on the **Done** button.

The exercise gauge dialog box's title bar indicates the gauge being exercised.



Select the correct exercise unit first prior to exercising the gauge. The **Toggle Units** button changes the unit from English to metric or from metric to English. Verify the appropriate unit by looking at the unit being displayed.



There are several ways to exercise the gauge:

- 4) Type in the desired numerical value using the keyboard, or
- 5) Use the up and down arrow keys on the keyboard, or
- 6) Use the up and down buttons in the exercise gauge dialog box.

The longer the up and down arrow keys or the up and down buttons are held the faster the change will occur. The value will freeze when the maximum or minimum range for the gauge is reached. The minimum or the maximum value will be displayed if a value outside of the proper range is entered via the keyboard.

4. SYSTEM AND SOFTWARE TROUBLE SHOOTING

1. If you have lost the sessions that were provided by the install disks and you do not have the install disks any more, please use Windows copy function to retrieve the lost file. The back up copy of the session files is located in the **Factory** folder.

2. If the communication link has failed, please follow the steps outlined below.

Note: The following steps are recommended only for PC to Navistar Truck Interface cable, Navistar EZ-Tech Interface cable, or International EZ-Tech Interface cable.

- 1) The interface cable must be connected prior to executing the Instrument Panel Cluster software. Exit the software, connect the cable, run the software again. Make certain that the correct communication port is selected in the software please go to step 2 if still unable to communicate on the ATA data link.

- 2) Disconnect and reconnect the interface cable from the truck's diagnostic connector (Deutsch connector). Make sure the interface cable is secure on both the truck's diagnostic connector and the PC communication (COM) port. Attempt to run the software again. Please go to step 3 if still unable to communicate on the ATA data link.

- 3) If the "Power ON/OFF" indicator is not lit, the truck battery may be low or the truck wiring harness may be faulty. For 6 pin Deutsch connector, check voltage between pin C (VBAT) and pin E (GND) on the truck's diagnostic connector. For 9-pin Deutsch connector, check voltage between pin B (VBAT) and pin A (GND) on the truck's diagnostic connector. If the voltage is 9V DC or greater, please replace the interface cable.

If the "Power ON/OFF" indicator is lit, then go to step 4 if "ATA" (for Navistar EZ-Tech Interface cable or International EZ-Tech cable) or "RXD" (for PC to Navistar Truck Interface cable) indicator is flashing red; if neither indicators on the interface cable are flashing, then go to step 5.

- 4) Try connecting to another PC communication port and/or use another serial cable. Change the settings in the software to open the new selected communication port. Replace the interface cable if still unable to communicate on the ATA data link.

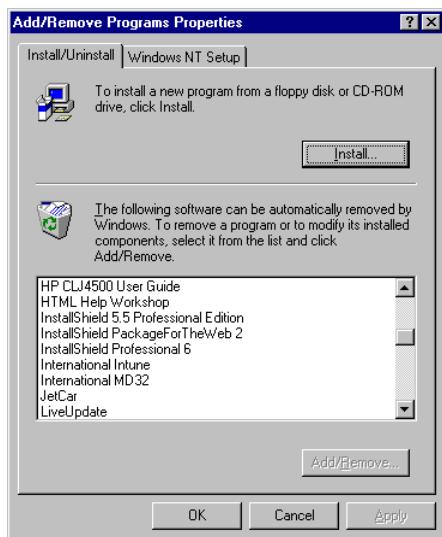
- 5) Check if the key switch is turned on. Replace the interface cable if key switch was turned on.

3. Software installation problem using CD-ROM

Use the Windows control panel to install the software. Click on the Start button in the lower left-hand corner of the screen. Click on the option labeled Settings. Click on the Control Panel folder. Locate and double click on the icon



Click on the button to have Windows automatically locate the CD-ROM to initiate the install process.



4. To Un-Install the software

Use the Windows control panel to un-install the software. Click on the Start button in the lower left-hand corner of the screen. Click on the option labeled Settings. Click on the Control Panel folder. Locate and double click on the icon



Click on the application to be removed in the list and click on the **Add/Remove...** button to have Windows remove the software.

