Using Diagnostic Gauge to Access Engine Information

The diagnostic gauge (A) allows the operator to view many readouts of engine functions and diagnostic trouble codes (DTCs). The gauge is linked to the electronic control system and its sensors. This allows the operator to monitor engine functions and to troubleshoot the engine systems when needed.

Press the two touch switches (B) to view the various engine functions in sequence. The displays can be selected as either customary English or metric units.

NOTE: Engine parameters which can be accessed will vary with the engine application.

The following menu of engine parameters can be displayed on the diagnostic gauge window:

- Accelerator pedal position
- Percentage load @ current speed
- Actual engine percent torque
- Engine speed
- Trip distance
- Total vehicle distance
- Engine hours
- Trip fuel
- Total fuel used
- Coolant temperature
- Fuel temperature
- Engine oil temperature
- Engine intercooler temperature
- Fuel delivery pressure
- Engine oil level
- Engine oil pressure
- Coolant pressure
- Coolant level
- Wheel base vehicle speed
- Fuel rate
- Barometric pressure
- Air inlet temperature
- Boost pressure
- Intake manifold temperature
- Air filter differential pressure
- Exhaust gas temperature

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A—Diagnostic Gauge

B—Touch Switches C—Lights

- Electrical potential (voltage)
- Battery potential (voltage), switched
- Transmission oil pressure
- Transmission oil temperature
- Injector metering rail #1 pressure
- Injector metering rail #2 pressure
- Estimated percent fan speed
- Active service (diagnostic) codes
- Stored service (diagnostic) codes

NOTE: Engine parameters which can be accessed will vary with the engine application.

The diagnostic gauge includes a two-line by eight-character backlit Liquid Crystal Display (LCD). The top line displays the data label, i.e. "EngHrs" and the bottom line displays the matching unit information, i.e. "1246 hrs.". The diagnostic gauge uses two touch switches (UP and DOWN) for scrolling through the engine parameter list and viewing the menu list. Two lights (C) (amber and red) are used to signal active trouble messages received by the diagnostic gauge.

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The touch switches on the diagnostic gauge allow quick and easy navigation through the menu to find the information needed.

The diagram on the preceding page is a typical Main Menu of Engine Parameters. The Main Menu has 14 entries; the first 10 are engine data parameters, and the last four are sub-menu entry points.

Accessing the Menus

The following two rules are used for accessing the various items on the menus:

- 1. To scroll through the parameter list, press *either* the UP or DOWN touch switch.
- 2. To select or exit a sub-menu, *simultaneously* press the UP and DOWN switches.

Selecting Engine Data Parameters

To read any of the engine parameters, press either UP or DOWN switch (as shown on diagram) until the top line of the display shows the desired information.

Selecting Sub-Menus

Press either the UP or DOWN switch until the top line of the display shows the label of the desired sub-menu. Then press **BOTH** the UP and DOWN switches at the same time. This action will select the sub-menu and the next screen on the display will list the sub-menu items. This is also the way to access diagnostic trouble codes (DTCs).

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To select the Units Sub-Menu, press the UP or DOWN switch until the top line of the display reads "Units". Then press BOTH the UP and DOWN switches at the same time to select the Units Sub-Menu. The above

diagram shows the steps for selecting the desired units

- 1. Press both the switches to retain the current units designation.
- 2. Press either UP or DOWN switch to toggle the units selection, then press both switches to select the desired unit of measure.

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The diagnostic gauge can display the engine configuration data stored in the engine control unit (ECU). To select the *Engine Configuration Sub-Menu* (see diagram on previous page), press the UP or DOWN switch until the top line of the display reads "E-Config". Then press BOTH the UP and DOWN switches at the same time to select the *Engine Configuration Sub-Menu*. The diagnostic gauge will display the engine configuration data as shown in the diagram.

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Viewing Active Engine Service Codes/Diagnostic Trouble Codes (DTCs)

Viewing Active Service Codes/Diagnostic Trouble Codes (DTCs)

The diagnostic gauge continuously monitors all messages broadcast over the Control Area Network (CAN) and displays all active service codes /diagnostic trouble codes (DTCs) at the time the message is broadcast. The word "SrvcCode" is displayed on the second line. The display will cycle every 5 seconds between the currently displayed parameter and the "SrvcCode" message until the active service code (DTC) clears. To view the active codes, select the *Service Code Sub-Menu* by pressing the UP or DOWN switch until the top line of the display reads "SrvcCode". Then press BOTH the UP and DOWN switches at the same time to select the Service Code (DTC) Sub-Menu. The diagnostic gauge has the ability to display all active service codes (DTCs) received. The diagram above titled *Service Code (DTC) Sub-Menu* shows the process for selecting active service codes (DTCs) and their values.

NOTE: For a list of Service Codes or Diagnostic Trouble Codes (DTCs) and their causes, refer to TROUBLESHOOTING Section 45, later in this manual. An alternate method of accessing trouble codes for engines for engines without the diagnostic gauge is the blink code method. See Section 45.



Viewing Stored Service Codes/Diagnostic Trouble Codes (DTCs)

The diagnostic gauge can request stored service codes (DTCs) from the engine. The stored service codes may be used for diagnostic and service needs. To view the stored service codes, it is necessary to select the *DM2 Codes Sub-Menu* by pressing the UP

or DOWN switch until the top line of the display reads "DM2 Codes". Then press BOTH the UP and DOWN switches at the same time to select the *DM2 Codes Sub-Menu*. The gauge will display the stored service codes according to the menus shown in the diagram.