



OEM Diagnostic Gauges



OPERATOR'S MANUAL OEM Diagnostic Gauges

OMDZ109098 ISSUE 05NOV25 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

John Deere Power Systems

Worldwide Edition
PRINTED IN U.S.A.



Introduction

Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages. See www.techpubs.deere.com (Ag&Turf/JDPS), www.johndeeretechno.com (C&F), or your John Deere dealer to order.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (PIN) in the Specification or Machine Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. PIN information is helpful when ordering parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate or statement which you should have received at time of purchase.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

If you are not the original owner of this machine, it is in your interest to contact your local John Deere dealer to inform them of this unit's serial number. This will help John Deere notify you of any issues or product improvements.

DX,IFC1 -19-03APR09-1/1

John Deere Is at Your Service

Customer satisfaction is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts, and service:

- Maintenance and service parts to support your equipment.
- Trained service technicians and the necessary diagnostic and repair tools to service your equipment.
- **John Deere replacement parts, repair services, and information for maintenance or repair are available. For more information, please visit deere.com or deere.ca.**



TS201—UN—15APR13

DX,IFC,JDS -19-30SEP25-1/1

Required Emission-Related Information

Service Provider

A repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall, and all other services paid for by John Deere must be performed at an authorized John Deere service center.

DX,EMISSIONS,REQINFO -19-08DEC23-1/1

Emissions Performance and Tampering

Operation and Maintenance

The engine, including the emissions control system, shall be operated, used, and maintained in accordance with the instructions provided in this manual to maintain the emissions performance of the engine within the requirements applicable to the engine's category/certification.

Tampering

No deliberate tampering with or misuse of the engine emissions control system shall take place; in particular with regard to deactivating or not maintaining an exhaust gas recirculation (EGR) or a DEF dosing system. Tampering with an engine's emissions control system voids the European Union (EU) or other country's applicable type approval, certification, and emissions-related warranties.

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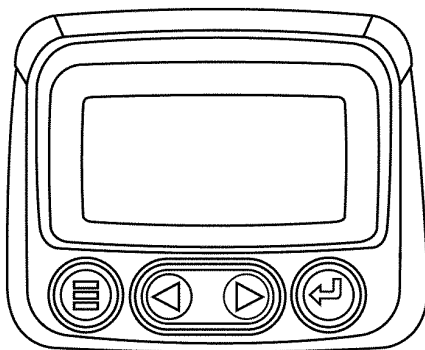
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Identification Views



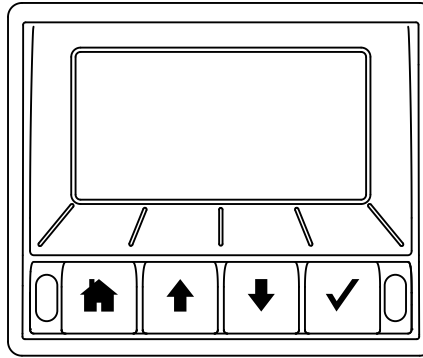
PV101 Diagnostic Gauge

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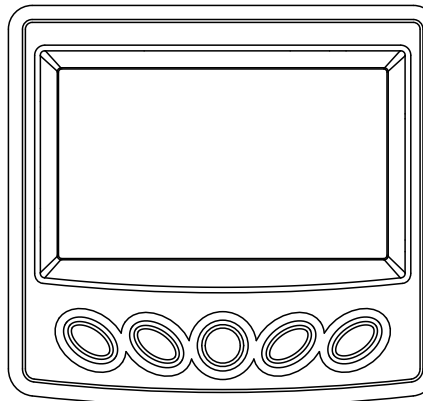
Introduction



DG14 Diagnostic Gauge

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RG28085 —UN—01APR16



PV480 Diagnostic Gauge

KW40574,000003F -19-06APR16-3/3

RG28084 —UN—01APR16

Introduction

THIS MANUAL CONTAINS INFORMATION on OEM Diagnostic Gauges.

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OEM Engine and Drivetrain Warranty Registration

RG37914 —UN—11DEC23



Scan this code to register your OEM engine or drivetrain product online.
You can also visit us directly at [John Deere Warranty Registration](#).

Why registering your OEM engine or drivetrain product is a really smart idea:

- **Get faster service.** Registering your engine or drivetrain product gives us the information we need to meet your service needs promptly and completely.
- **Protect your investment.** You'll be kept up-to-date on engine or drivetrain product updates.
- **Extend your warranty.** You'll be given the option to extend your coverage before your standard warranty term expires.
- **Stay informed.** Be the first to know about new products and money-saving offers from John Deere.

You're Covered

When you buy a John Deere engine or drivetrain product you aren't just buying pistons and crankshafts and gear drives. You're buying the ability to get work done. Without downtime, without worries, and without hassles. And you're buying the assurance that if you do need help, a strong support network will be there — ready to step in.

Confidence. That's what John Deere engines, John Deere drivetrains, and John Deere Warranties are all about.

Long durations. Warranties designed to give you confidence in your engine or drivetrain product.

Worldwide support. Get service when and where you need it. John Deere has 4,000+ service locations worldwide.

Genuine John Deere parts and service. Authorized service outlets will use only new or remanufactured parts or components furnished by John Deere.

Warranty Duration

Equipment operators can't afford downtime or unexpected repairs. That's why we offer comprehensive warranties on our OEM industrial engines, marine engines, and drivetrain products.

- **OEM Engines:** 2-year/2,000-hour warranty, with unlimited hours in the first year.
- **Drivetrain Products:** 12-month/2000-hour warranty. In the absence of a functional hour meter, hours of use will be determined on the basis of 12 hours of use per calendar day.

These warranties take effect the date the engine or drivetrain product is delivered to the first retail purchaser. Be sure to register your engine or drivetrain product and take full advantage of the John Deere service and support network.

In addition, engine extended warranties are available under certain conditions. John Deere offers a variety of purchased warranties to extend the warranty period for your engine. You'll be given the option to extend your coverage before your standard warranty term expires.

Obtaining Warranty Service

Warranty service must be requested through an authorized John Deere service outlet before the expiration of the warranty. Evidence of the engine's or drivetrain product's delivery date to the first retail purchaser must be presented when requesting warranty service. Authorized service outlets include:

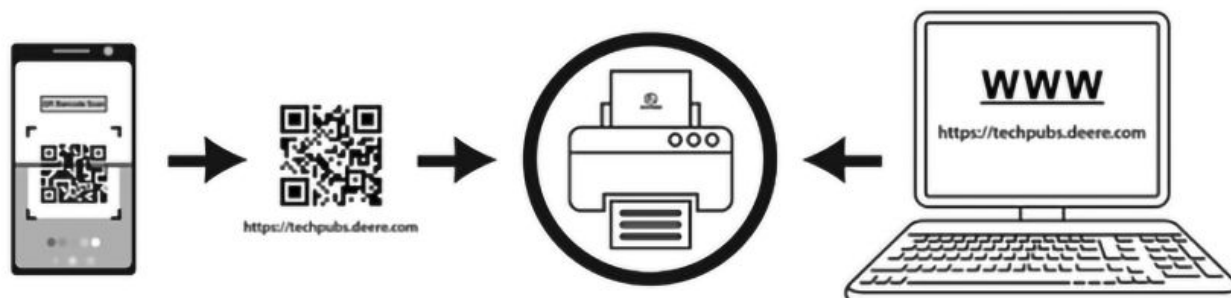
- John Deere distributor
- John Deere OEM service dealer
- John Deere equipment dealer
- John Deere marine dealer

Worldwide Support Network

Visit [Global Dealer Locator](#) to find the authorized engine or drivetrain service location nearest you. For complete warranty details visit <https://www.deere.com/en/parts-and-service/warranty-and-protection-plans/warranties/warranty-statements> or <https://www.deere.ca/en/parts-and-service/warranty-and-protection-plans/warranties/warranty-statements> to view, download, or print the warranty statement for your engine or drivetrain product.

RG,OEMWarranty,EngineOM -19-12MAY25-1/1

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Previous Editions
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Regulatory Information

Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A.

The undersigned hereby declares that:

Machine Type: DG14 Diagnostic Gage

Model(s): 3DYY32C-214

fulfill(s) all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
EMC	2014/30/EC	Self-certified, per Annex II of the directive (Details in Technical Construction File)
RoHS	2011/65/EU	Supplier certified (Details in Technical Construction File)

The product is in conformity with the following standards and/or other normative documents:

EN 13309:2010

Name and address of the person in the European Community authorized to compile the technical construction file:

Brigitte Birk
John Deere GmbH & Co. KG
Mannheim Regional Center
John Deere Strasse 70
D-68163 Mannheim, Germany

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of Declaration: Waterloo, IA, USA

Date of Declaration: 31 August 2017

Manufacturing Unit: Product Engineering Center, Waterloo,
IA, USA

Name: Allison Plunkett

Title: Mgr. App. Design & External App. Engineering

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PV101 Diagnostic Gauge

PV101 Instrument Panels

Interim tier 4 / Stage III B John Deere PowerTech OEM Engines have an electronic control system, which has the following controls and gauges as shown. The following information applies only to those controls and gauges supplied by John Deere. Refer to your engine application manual for specific guidelines if John Deere-sourced controls and instrumentation are not used.

NOTE: This manual only covers operation of engine with a John Deere control system.

Following is a brief description of the available optional electronic controls and gauges found on John Deere provided instrument panels. Refer to manufacturer's literature for information on controls not provided by Deere.

A—Diagnostic Gauge/Hour Meter

The diagnostic gauge (A) displays diagnostic trouble codes (DTCs) as they are accessed. Other information on the engine can be accessed using the touch keys (N, O, and P). The hour meter feature shows the operating hours of the engine and should be used as a guide for scheduling periodic maintenance. If the diagnostic gauge receives a trouble code from an engine control unit, the current display will switch to a warning or shutdown (depending on the severity of the code) screen that will display the trouble code number, the description of the code and the corrective action needed.

B—Tachometer

The tachometer (B) indicates engine speed in hundreds of revolutions per minute (rpm).

C—Voltmeter (Optional)

The voltmeter (C) indicates system battery voltage. The amber "Warning" light (Q) will illuminate when battery voltage is too low for proper operation of the fuel injection system.

D—Audible Alarm (Optional)

The audible alarm (D) will sound whenever low oil pressure, high coolant temperature, or water-in-fuel conditions exist. This includes all signals that light up the amber "WARNING" indicator (intermittent alarm) or the red "STOP ENGINE" indicator (steady alarm).

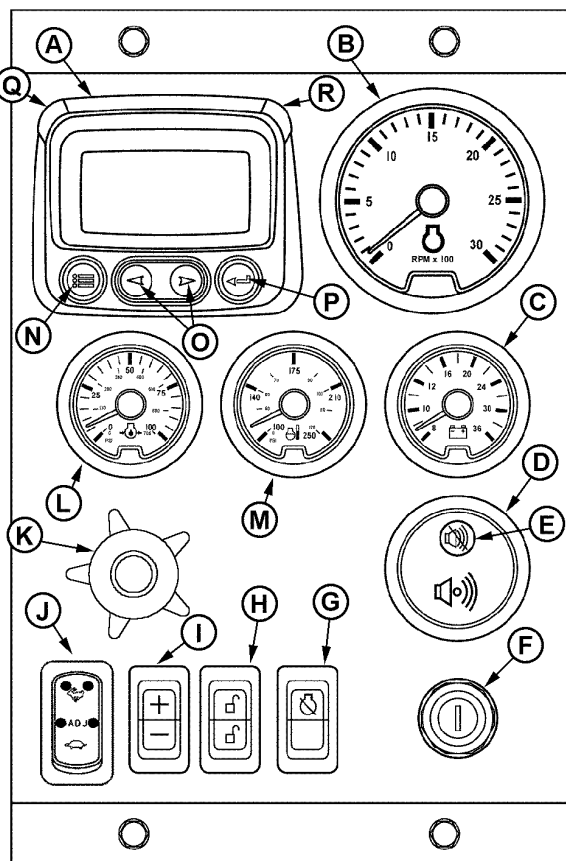
E—Audible Alarm Override Button

The optional audible alarm has an override button (E) that silences the audible alarm for approximately two minutes when pressed.

F—Key Start Switch

The three-position key start switch (F) controls the engine electrical system. From the "OFF" position when the key switch is turned clockwise to "START", the engine will crank. When the engine starts, the key is released and returns to the "ON" (RUN) position.

G—Override Shutdown Rocker Switch



Full-Featured Instrument Panel

- | | |
|-----------------------------------|---------------------------------------|
| A—Diagnostic Gauge/Hour Meter | J—High-Low Speed Select Rocker Switch |
| B—Tachometer | K—Analog Throttle Control (Optional) |
| C—Voltmeter (Optional) | L—Oil Pressure Gauge |
| D—Audible Alarm (Optional) | M—Coolant Temperature Gauge |
| E—Audible Alarm Override Button | N—Menu Key |
| F—Key Switch | O—Arrow Key (2 used) |
| G—Override Shutdown Rocker Switch | P—Enter Key |
| H—Bump Enable Rocker Switch | Q—Amber "WARNING" Indicator Light |
| I—Speed Select Rocker Switch | R—Red "STOP ENGINE" Indicator Light |

Switch will be present, but may not be active, depending on engine control unit (ECU) options originally selected. If switch is active, pressing the upper half of the override shutdown switch (G) will override an engine shutdown signal. The switch must be pressed within 30 seconds to prevent undesired shutdown of engine. Pressing this switch will override the ECU engine shutdown command for 30 seconds at a time to move vehicle to a safe location.

H—Bump Speed Enable Rocker Switch

Continued on next page

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This is a three-position switch (H) with the center position as "OFF" (locked). With this switch in the "OFF" position, the speed select switch (I) is also locked, to prevent accidental changes in operating speed. Pressing upper or lower half of switch (H) will unlock or enable the bump speed switch to take effect using speed select switch (I).

I—Speed Select Rocker Switch

The speed select switch (I) is used to bump engine speed up (+) or down (-) in small increments during operation. This switch must be used with the bump speed enable switch (H) in the unlocked position (top or bottom half of button depressed).

J—High-Low Speed Select Rocker Switch

The high-low speed select switch (J) is used to set the engine operating speeds at slow (turtle) or fast (rabbit). Factory preset idle speeds can also be adjusted using bump speed enable switch (H) with speed select switch (I).

The basic instrument panel will have the high-low speed select switch only. Press and hold up (+) or down (-) to adjust engine speed as desired. The engine speed selected will not be held in the memory. To adjust engine speeds, See Changing Engine Speeds in Section 20.

How To Select Preset Operating Speeds (Bump Speeds)

First select "Turtle" (slow) or "Adj" by pressing speed select switch (J) to "Turtle" (slow) or "Adj"(center). Then you can press either the upper or lower portion of the bump speed enable switch (H) to unlock the setting. The bump speed enable must be held down as the speed select switch (J) is used to change the setting by pressing (+) to increase speed or (-) to decrease speed.

Once the slow idle speed has been set, the bump speed enable **switch must be pressed and released three times within two seconds to commit the new operating speed to memory.** If not done, the engine's new speed will only be effective until the key switch is shut off. Then the speed will revert back to the previous setting.

The fast idle speed is not adjustable. It will always go back to the factory preset fast idle speed.

K—Analog Throttle Control (Optional)

The throttle control (K) is used to control engine speed. This control is available only on engines with analog throttle.

L—Engine Oil Pressure Gauge

The oil pressure gauge (L) indicates engine oil pressure. An audible alarm (D) warns the operator if engine oil pressure falls below a safe operating pressure.

M—Engine Coolant Temperature Gauge

The engine coolant temperature gauge (M) indicates engine coolant temperature. An audible alarm (D) warns the operator if coolant temperature rises above the preset safe operating temperature.

N—Menu Key

The menu key is pressed to either enter or exit the menu screens on the diagnostic gauge (A).

O—Arrow Keys

Use the arrow keys (O) to change the display on the window of the diagnostic gauge (A) and to access engine performance data.

Pressing the left arrow to scroll to the left or upward or the right arrow to scroll to the right or downward. This will allow you to view various engine parameters and any diagnostic trouble codes that occur.

Refer to the following procedure for accessing engine information on the diagnostic gauge using the touch keys.

P—Enter Key

The enter key (P) is pressed to select the parameter that is highlighted on the screen.

Q—Amber "WARNING" Indicator Light

When light is illuminated, an abnormal condition exists. It is not necessary to shut down the engine immediately, but the problem should be corrected as soon as possible.

R—Red "STOP ENGINE" Indicator Light

When light is illuminated, stop engine immediately or as soon as safely possible to prevent engine damage. Correct problem before restarting.

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PV101 Diagnostic Gauge — Using

The diagnostic gauge (A) allows the operator to monitor engine functions, view diagnostic trouble codes (DTCs), and perform preliminary diagnostics. The gauge is linked to the electronic control system and sensors.

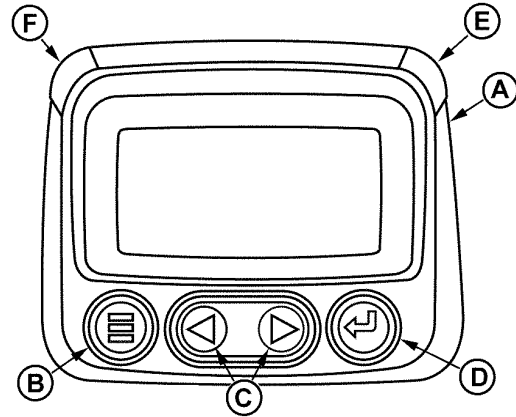
The menu key (B) allows the operator to access the main menu of the diagnostic gauge. For more information see PV101 Diagnostic Gauge — Main Menu in Section 15. This key also allows the operator to cancel an option and go back to the previous menu or home menu.

The arrow keys (C) allows the operator to scroll between menu items. The arrow keys automatically change from up and down, to left and right depending on the menu item to be selected.

The enter key (D) allows the operator to access menu items selected by the arrow keys (C) and confirm changes made by the operator.

The red “STOP ENGINE” indicator light (E) allows the operator to visually see when a condition exists which requires immediate operator action and service.

The amber “WARNING” indicator light (F) allows the operator to visually see when a condition exists which requires operator action.



Diagnostic Gauge

A—Diagnostic Gauge
B—Menu Key
C—Arrow Keys

D—Enter Key
E—Red “STOP ENGINE”
Indicator Light
F—Amber “WARNING”
Indicator Light

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PV101 Diagnostic Gauge — Main Menu

NOTE: The engine does not need to be running to navigate the diagnostic gauge screens.

The main menu is the starting point in accessing engine information and configuring the diagnostic gauge. Press the menu key (B) to access the main menu.

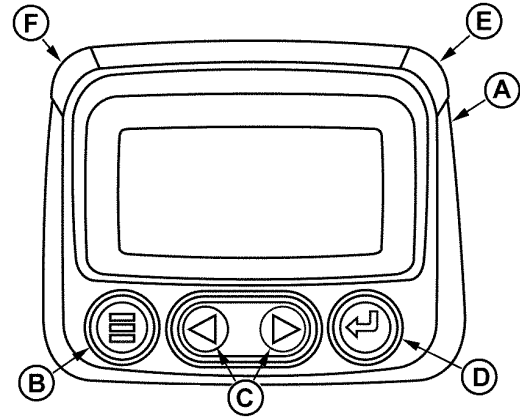
Use the arrow keys (C) and enter key (D) to view menu items displayed:

- Go to 4-up display
- Exhaust filter
- Engine speed control
- Languages
- Stored codes
- Engine configuration
- Setup 1-up display
- Setup 4-up display
- Select units
- Adjust backlight
- Adjust contrast
- Utilities

Listed are examples of features available in main menu items.

In Utilities:

- Gauge data
- Remove all gauges
- Software version
- Modbus setup
- Fault conversion



Diagnostic Gauge

A—Diagnostic Gauge
B—Menu Key
C—Arrow Key (2 used)

D—Enter Key
E—Red “STOP ENGINE”
Indicator Light
F—Amber “WARNING”
Indicator Light

- Select engine ECU
- Clear machine hours
- Performance data
- Interactive tests
- Reset trip
- Set function instance
- ECU software update

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RG13132 —UN—09SEP03

PV101 Diagnostic Gauge — Essential Menus

Automatic Exhaust Filter Cleaning

To enable auto exhaust filter cleaning mode:

1. Press menu key on diagnostic gauge
2. Press arrow keys to scroll up or down to EXHAUST FILTER
3. Press select key
4. Press arrow keys to scroll up or down to AUTO EXH FLT CLEAN
5. Press select key to enable auto exhaust filter cleaning

Manual/Parked Exhaust Filter Cleaning

To request a manual/parked exhaust filter cleaning:

1. Reduce engine speed to slow idle
2. Press menu key
3. Press arrow keys to scroll up or down to EXHAUST FILTER
4. Press select key
5. Press arrow keys to scroll up or down to REQUEST EXH FLT CLEAN
6. Press select key to request a manual/parked exhaust filter cleaning
7. Follow directions on display and ensure all conditions are met
8. Press select key to CONFIRM all conditions are met

Disable Exhaust Filter Cleaning

To disable the auto exhaust filter cleaning mode:

1. Press menu key on diagnostic gauge
2. Press arrow keys to scroll up or down to EXHAUST FILTER
3. Press select key
4. Press arrow keys to scroll up or down to DISABLE EXH FLT CLEAN
5. Press select key to disable exhaust filter cleaning

Fault Codes — Active

To view active fault code information:

1. Press menu key on diagnostic gauge
2. Press arrow keys to scroll up or down to FAULTS
3. Press select key
4. Press arrow keys to scroll up or down to ACTIVE FAULTS
5. Press select key
6. Press arrow keys to scroll through available faults

Fault Codes — Stored

To view stored fault code information:

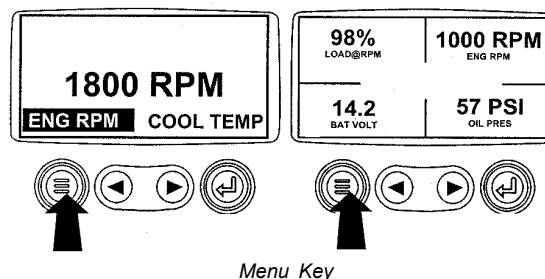
1. Press menu key on diagnostic gauge
2. Press arrow keys to scroll up or down to FAULTS
3. Press select key
4. Press arrow keys to scroll up or down to STORED FAULTS
5. Press select key
6. Press arrow keys to scroll up or down to VIEW
7. Press select key
8. Press arrow keys to scroll through available faults

BL90236,0000025 -19-02JUN16-1/1

Main Menu Navigation

NOTE: The engine does not need to be running to navigate the diagnostic gauge screens. If engine start up is desired, See Starting The Engine. All of the engine values illustrated on the diagnostic gauge indicate the engine is running.

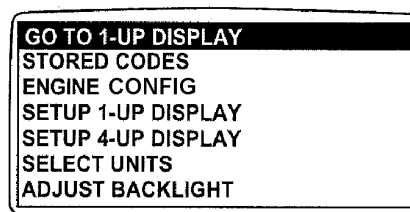
1. Turn the key switch to the ON position. Starting at the single or four engine parameter display, press the "Menu" key.



Menu Key

OURGP11,00000A9 -19-27MAY16-1/5

2. The first seven items of the "Main Menu" will be displayed.

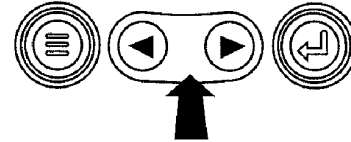
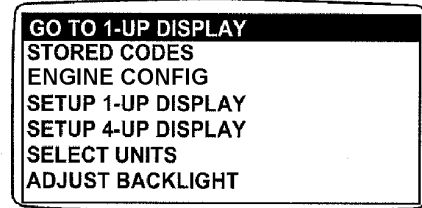


Menu Display

Continued on next page

OURGP11,00000A9 -19-27MAY16-2/5

3. Pressing the "Arrow" keys will scroll through the menu selections.

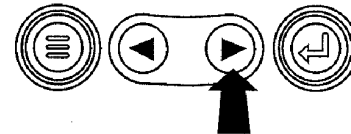
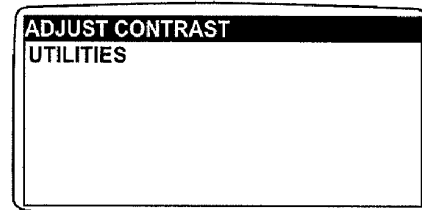


Main Menu Items

RG13161 —UN—02OCT03

OURGP11,00000A9 -19-27MAY16-3/5

4. Pressing the right arrow key will scroll down to reveal the last items of "Main Menu" screen, highlighting the next item down.

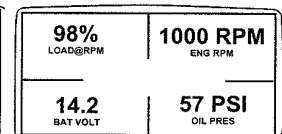
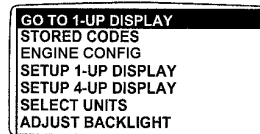


Last Items On Main Menu

RG13162 —UN—26SEP03

OURGP11,00000A9 -19-27MAY16-4/5

5. Use the arrow keys to scroll to the desired menu item or press the "Menu Button" to exit the main menu and return to the engine parameter display.



Use Arrow Buttons To Scroll / Quadrant Display

RG13163 —UN—02OCT03

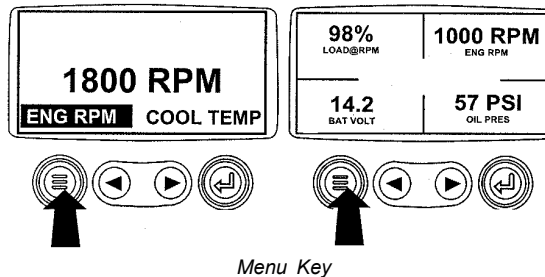
OURGP11,00000A9 -19-27MAY16-5/5

Engine Configuration Data

NOTE: The engine configuration data is a read only function.

NOTE: The engine does not need to be running to navigate the diagnostic gauge screens. If engine start up is desired, See *Starting The Engine*. All of the engine values illustrated on the diagnostic gauge indicate the engine is running.

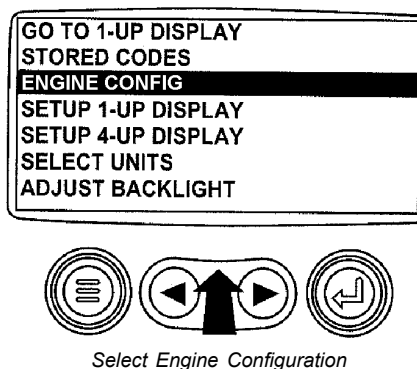
1. Turn the key switch to the ON position. Starting at the single or four engine parameter display, press the "Menu" key.



RG13159 —UN—26SEP03

OURGP11,00000AB -19-27MAY16-1/6

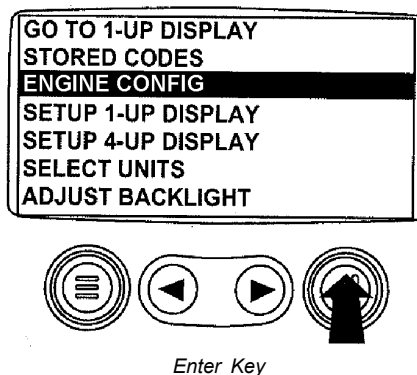
2. The main menu will be displayed. Use the "Arrow" keys to scroll through the menu until "Engine Config" is highlighted.



RG13164 —UN—07OCT03

OURGP11,00000AB -19-27MAY16-2/6

3. Once "Engine Config" menu item has been highlighted, press the "Enter" key to view the engine configuration data.

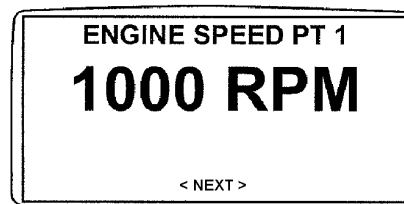


RG13165 —UN—02OCT03

Continued on next page

OURGP11,00000AB -19-27MAY16-3/6

- Use the "Arrow" keys to scroll through the engine configuration data.

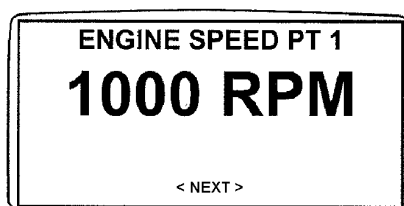


Use Arrow Keys To Scroll

OURGP11,00000AB -19-27MAY16-4/6

RG13166 —UN—28SEP03

- Press the "Menu" key to return to the main menu.

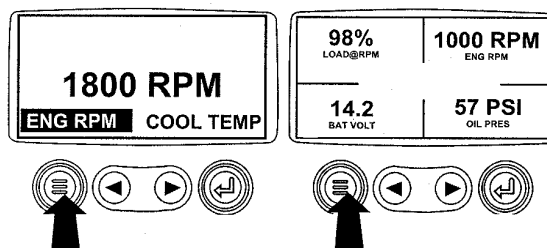


Return To Main Menu

OURGP11,00000AB -19-27MAY16-5/6

RG13167 —UN—28SEP03

- Press the "Menu" key to exit the main menu and return to the engine parameter display.



Exit Main Menu

OURGP11,00000AB -19-27MAY16-6/6

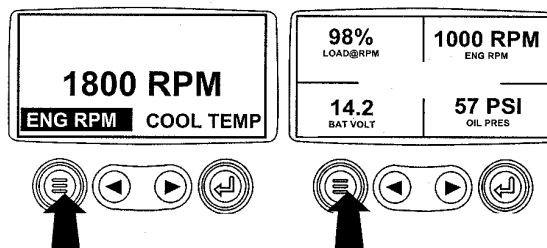
RG13159 —UN—28SEP03

Accessing Stored Trouble Codes

NOTE: The engine does not need to be running to navigate the diagnostic gauge screens. If engine start up is desired, See Starting The Engine. All of the engine values illustrated on the diagnostic gauge indicate the engine is running.

For description of trouble codes, see chart in Troubleshooting Section.

- Turn the key switch to the ON position. Starting at the single or four engine parameter display, press the "Menu" key.



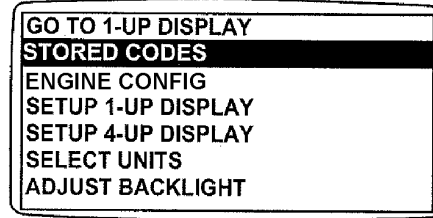
Menu Key

Continued on next page

OURGP11,00000AC -19-27MAY16-1/6

RG13159 —UN—28SEP03

- The main menu will be displayed. Use the "Arrow" keys to scroll through the menu until "Stored Codes" is highlighted.

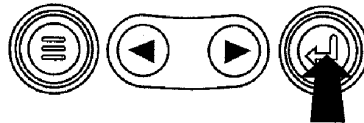
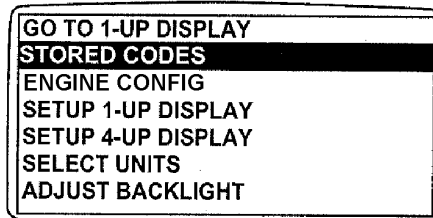


Select Stored Codes

OURGP11,00000AC -19-27MAY16-2/6

RG13168 —UN—02OCT03

- Once the "Stored Codes" menu item has been highlighted press the "Enter" key to view the stored codes.

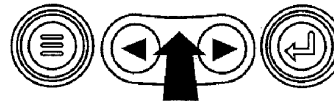
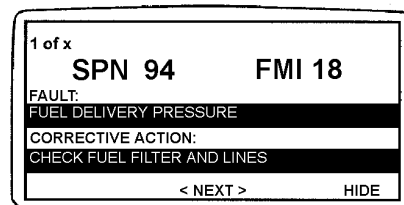


Enter Key

OURGP11,00000AC -19-27MAY16-3/6

RG13169 —UN—02OCT03

- If the word "Next" appears above the "Arrow" keys, there are more stored codes that may be viewed. Use the "Arrow" key to scroll to the next stored code.



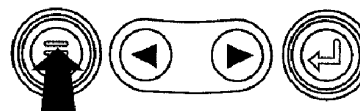
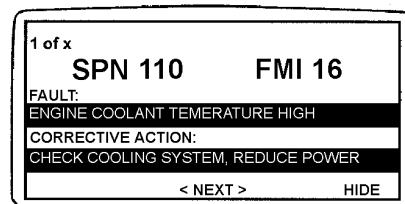
Use Arrow Keys To Scroll

Continued on next page

OURGP11,00000AC -19-27MAY16-4/6

RG13245 —UN—02OCT03

- Press the "Menu" key to return to the main menu.

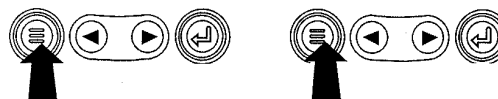
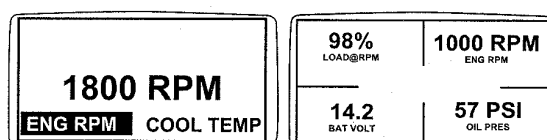


Return To Main Menu

OURGP11,00000AC -19-27MAY16-5/6

RG13246—UN—02OCT03

- Press the "Menu" key to exit the main menu and return to the engine parameter display.



Exit Main Menu

OURGP11,00000AC -19-27MAY16-6/6

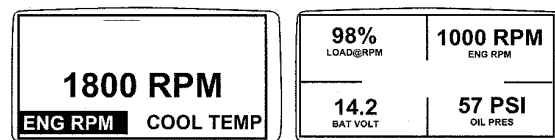
RG13159—UN—26SEP03

Accessing Active Trouble Codes

NOTE: The engine does not need to be running to navigate the diagnostic gauge screens. If engine start up is desired, See *Starting The Engine*. All of the engine values illustrated on the diagnostic gauge indicate the engine is running.

For description of trouble codes, see chart in *Troubleshooting Section*.

- During normal operation the single or four parameter screen will be displayed.



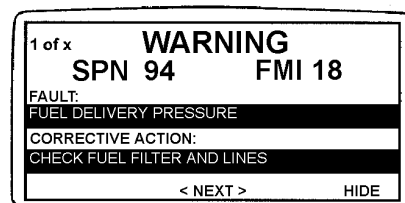
Normal Operation

OURGP11,00000AD -19-27MAY16-1/7

RG13172—UN—26SEP03

- When the diagnostic gauge receives a trouble code from an engine control unit, the single or four parameter screen will be replaced with the "Warning" message. The SPN and FMI number will be displayed along with a description of the problem and the corrective action needed.

IMPORTANT: Ignoring active trouble codes can result in severe engine damage.



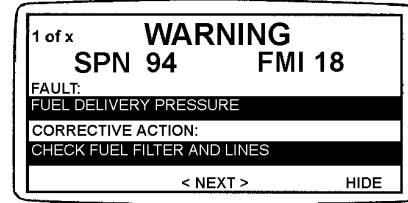
Active Trouble Codes Displayed

Continued on next page

OURGP11,00000AD -19-27MAY16-2/7

RG13240—UN—30SEP03

3. If the word "Next" appears above the arrow keys, there are more trouble codes that can be viewed by using the arrow keys to scroll to the next trouble code.



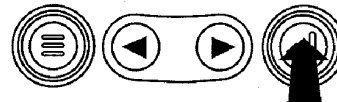
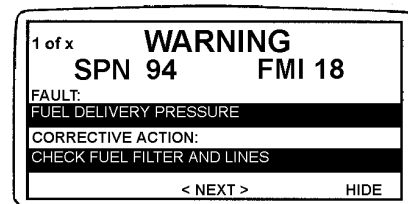
Use Arrow Keys To Scroll

OURGP11,00000AD -19-27MAY16-3/7

RG13241 —UN—30SEP03

IMPORTANT: Ignoring active trouble codes can result in severe engine damage.

4. To acknowledge and hide the code and return to the single or four parameter display, press the "Enter" Key.

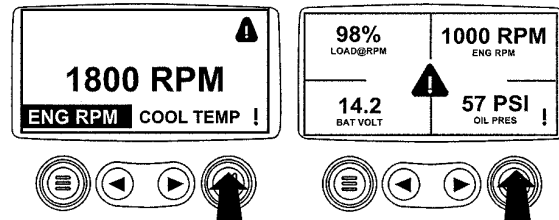


Hide Trouble Codes

OURGP11,00000AD -19-27MAY16-4/7

RG13242 —UN—30SEP03

5. The display will return to the single or four parameter display, but the display will contain the warning icon. Pressing the "Enter" key will redisplay the hidden trouble code.



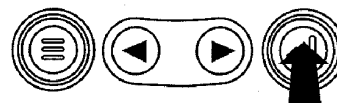
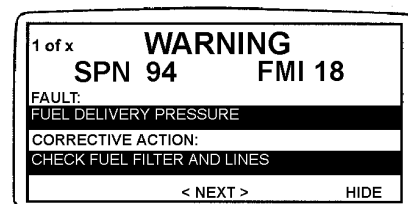
Active Trouble Code Icon

OURGP11,00000AD -19-27MAY16-5/7

RG13176 —UN—26SEP03

IMPORTANT: Ignoring active trouble codes can result in severe engine damage.

6. Pressing the "Enter" key once again will hide the trouble code and return the screen to the single or four parameter display.



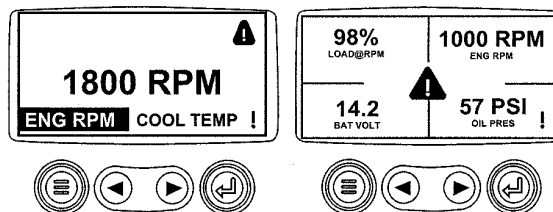
Enter Key

Continued on next page

OURGP11,00000AD -19-27MAY16-6/7

RG13242 —UN—30SEP03

- The single or four parameter screen will display the warning icon until the trouble code condition is corrected.



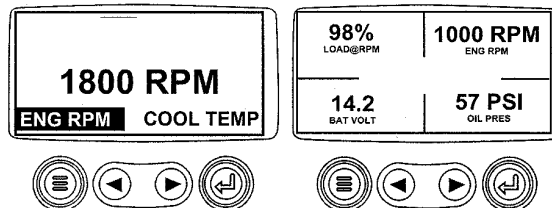
Active Trouble Code Condition

OURGP11,00000AD -19-27MAY16-7/7

RG13243 —UN—01OCT03

Engine Shutdown Codes

- During normal operation the single or four parameter screen will be displayed.



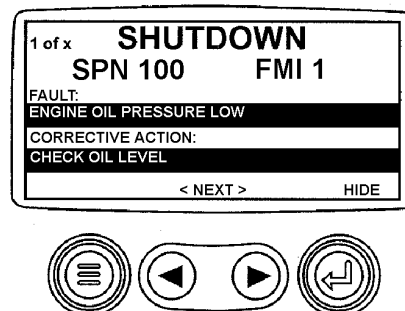
Normal Operation

OURGP11,00000AE -19-27MAY16-1/6

RG13172 —UN—26SEP03

- When the diagnostic gauge receives a severe trouble code from an engine control unit, the single or four parameter screen will be replaced with the "Shutdown" message. The SPN and FMI number will be displayed along with a description of the problem and the corrective action needed.

If the word "Next" appears above the arrow keys, there are more trouble codes that can be viewed by using the arrow keys to scroll to the next trouble code.



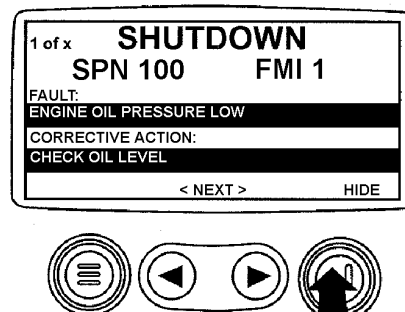
Shutdown Message

OURGP11,00000AE -19-27MAY16-2/6

RG13238 —UN—29SEP03

- To acknowledge and hide the trouble code and return to the single or four parameter display, press the "Enter" key".

IMPORTANT: Ignoring the shutdown message can result in severe engine damage.



Hide Trouble Code

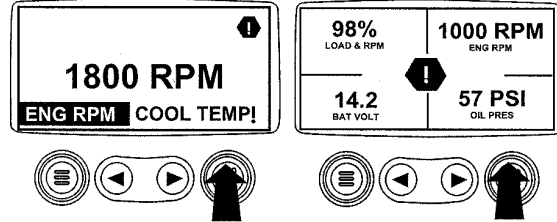
Continued on next page

OURGP11,00000AE -19-27MAY16-3/6

RG13239 —UN—29SEP03

- The display will return to the single or four parameter display, but the display will contain the "Shutdown" icon. Pressing the "Enter" key will redisplay the hidden trouble code.

IMPORTANT: Ignoring the shutdown message can result in severe engine damage.

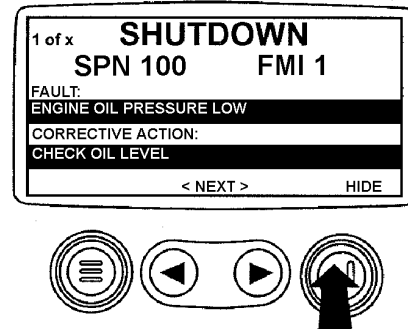


Flashing Shutdown Icon

OURGP11,00000AE -19-27MAY16-4/6

RG13179—UN—26SEP03

- Pressing the "Enter" key once again will hide the trouble code and return the screen to the single or four parameter display.



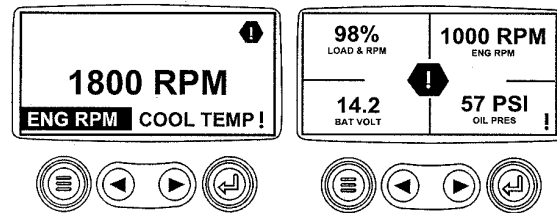
Redisplay Trouble Code

OURGP11,00000AE -19-27MAY16-5/6

RG13239—UN—29SEP03

- The single or four parameter screen will display the shutdown icon until the trouble code condition is corrected.

IMPORTANT: Ignoring the shutdown message can result in severe engine damage.



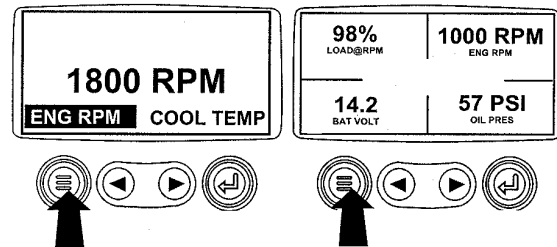
Shutdown Icon

OURGP11,00000AE -19-27MAY16-6/6

RG13180—UN—26SEP03

Adjusting Backlighting

- Turn the key switch to the ON position. Starting at the single or four engine parameter display, press the "Menu" key.



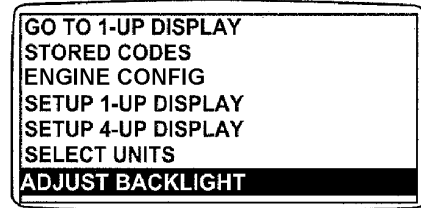
Menu Key

Continued on next page

OURGP11,0000237 -19-23AUG10-1/6

RG13159—UN—26SEP03

- The main menu will be displayed. Use the "Arrow" keys to scroll through the menu until "Adjust Backlight" is highlighted.

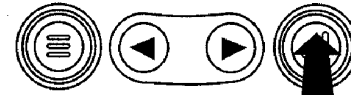
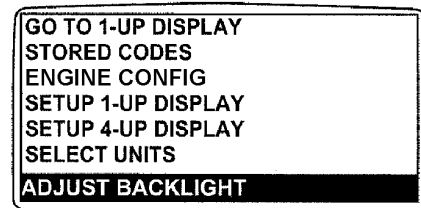


Select Adjust Backlight

OURGP11,0000237 -19-23AUG10-2/6

RG13181 —UN—02OCT03

- Once the "Adjust Backlight" menu item has been highlighted, press the "Enter" key to activate the "Adjust Backlight" function.

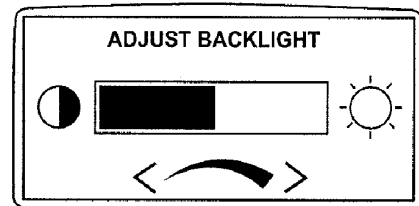


Press Enter Key

OURGP11,0000237 -19-23AUG10-3/6

RG13182 —UN—02OCT03

- Use the "Arrow" keys to select the desired backlight intensity.



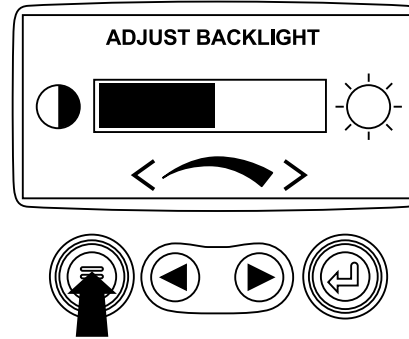
Adjust Backlight Intensity

Continued on next page

OURGP11,0000237 -19-23AUG10-4/6

RG13183 —UN—29SEP03

- Press the "Menu" key to return to the main menu.

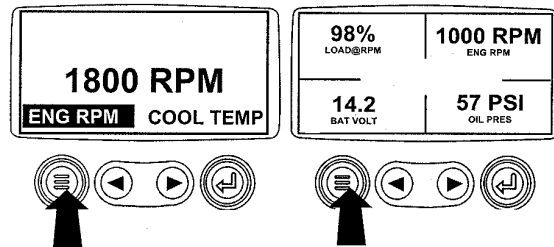


Return to Main Menu

OURGP11,0000237 -19-23AUG10-5/6

RG19048 —UN—23AUG10

- Press the "Menu" key to exit the main menu and return to the engine parameter display.



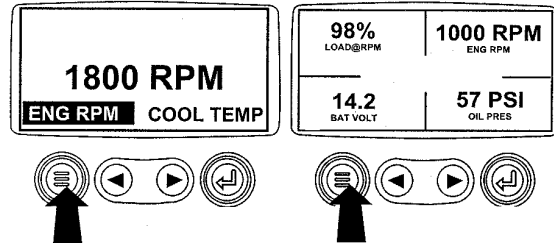
Exit Main Menu

OURGP11,0000237 -19-23AUG10-6/6

RG13159 —UN—26SEP03

Adjusting Contrast

- Turn the key switch to the ON position. Starting at the single or four engine parameter display press the "Menu" key.

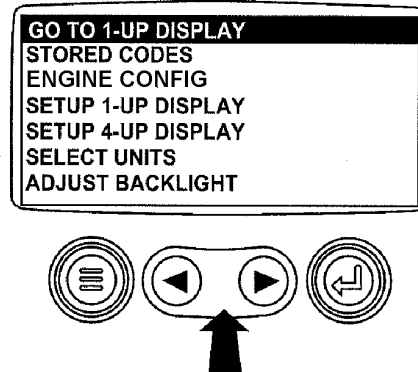


Menu Key

OURGP11,00000AF -19-27MAY16-1/6

RG13159 —UN—26SEP03

- The main menu will be displayed. Use the "Arrow" keys to scroll through the menu until "Adjust Contrast" is highlighted.



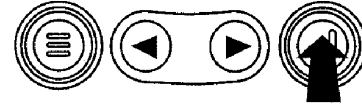
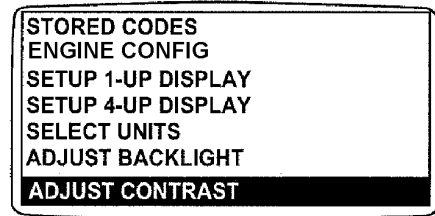
Select Adjust Contrast

Continued on next page

OURGP11,00000AF -19-27MAY16-2/6

RG13161 —UN—02OCT03

- Once the "Adjust Contrast" menu item has been highlighted, press the "Enter" key to activate the "Adjust Contrast" function.

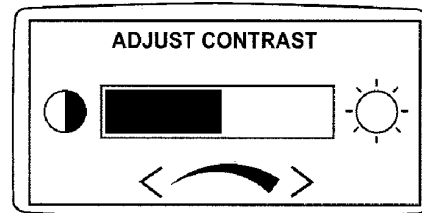


Press Enter Key

OURGP11,00000AF -19-27MAY16-3/6

RG13185 —UN—02OCT03

- Use the "Arrow" keys to select the desired contrast intensity.

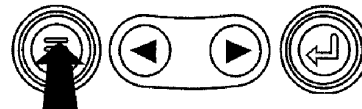
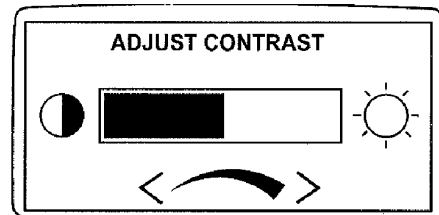


Adjust Contrast Intensity

OURGP11,00000AF -19-27MAY16-4/6

RG13186 —UN—29SEP03

- Press the "Menu" key to return to the main menu.



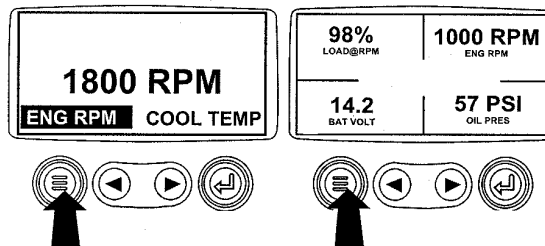
Return To Main Menu

Continued on next page

OURGP11,00000AF -19-27MAY16-5/6

RG13187 —UN—26SEP03

- Press the "Menu" key to exit the main menu and return to the engine parameter display.



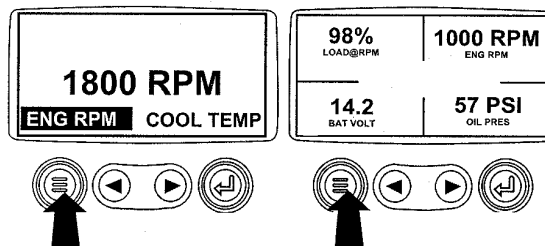
Exit Main Menu

OURGP11,00000AF -19-27MAY16-6/6

RG13159 —UN—26SEP03

Selecting Units Of Measurement

- Turn the key switch to the ON position. Starting at the single or four engine parameter display, press the "Menu" key.

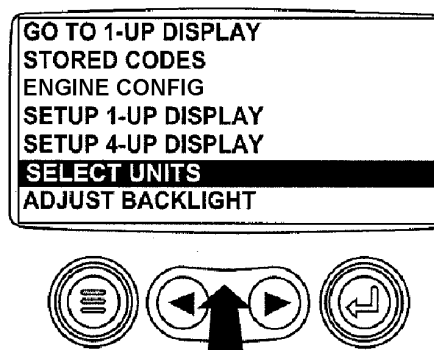


Menu Key

OURGP11,00000B0 -19-27MAY16-1/7

RG13159 —UN—26SEP03

- The main menu will be displayed. Use the "Arrow" keys to scroll through the menu until "Select Units" is highlighted.

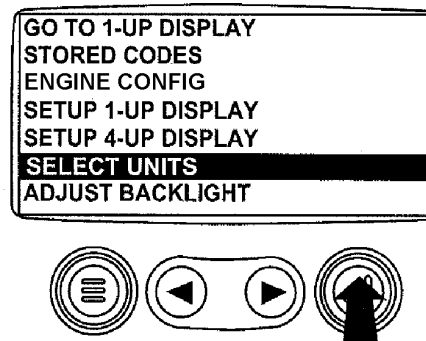


Select Units

OURGP11,00000B0 -19-27MAY16-2/7

RG13188 —UN—02OCT03

- Once the "Select Units" menu item has been highlighted press the "Enter" key to access the "Select Units" function.



Press Enter Key

OURGP11,00000B0 -19-27MAY16-3/7

RG13189 —UN—02OCT03

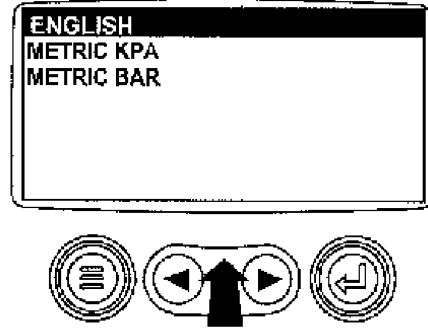
Continued on next page

4. There are three choices for units of measurement, English, Metric kPa or Metric Bar.

English is for Imperial units, with pressures displayed in PSI and temperatures in °F.

Metric kPa and Metric bar are for SI units, with pressures displayed in kPa and bar respectively, and temperatures in °C.

Use the "Arrow" keys to highlight the desired units of measurement.

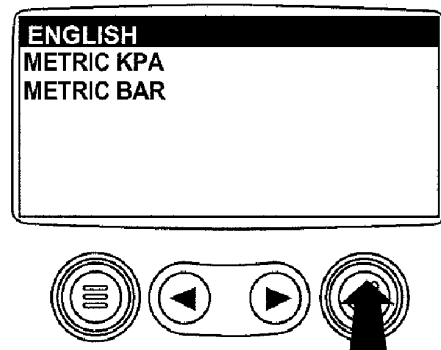


Select Desired Units

OURGP11,00000B0 -19-27MAY16-4/7

RG13190 —UN—26SEP03

5. Press the "Enter" key to select the highlighted units.

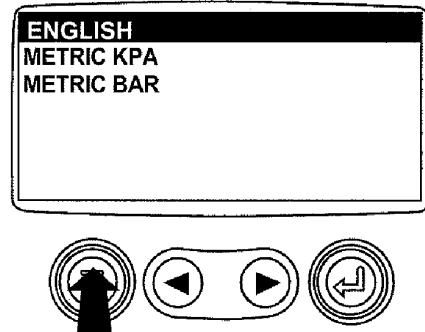


Press Enter Key to Select

OURGP11,00000B0 -19-27MAY16-5/7

RG13191 —UN—30SEP03

6. Press the "Menu" key to return to the main menu.



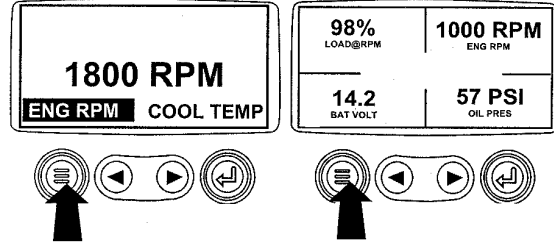
Return To Main Menu

Continued on next page

OURGP11,00000B0 -19-27MAY16-6/7

RG13192 —UN—26SEP03

- Press the "Menu" key to return to the engine parameter display.



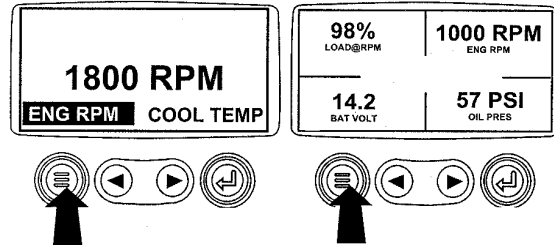
Press Menu Key

OURGP11,00000B0 -19-27MAY16-7/7

RG13159 —UN—26SEP03

Setup 1-Up Display

- Turn the key switch to the ON position. Starting at the single engine parameter display, press the "Menu" key.

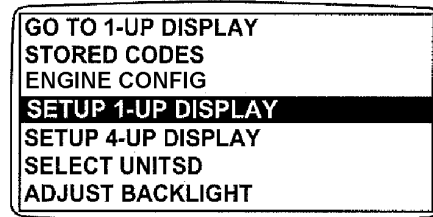


Menu Key

OURGP11,00000B1 -19-27MAY16-1/18

RG13159 —UN—26SEP03

- Use the "Arrow" keys to scroll through the menu until "Setup 1-Up Display" is highlighted.

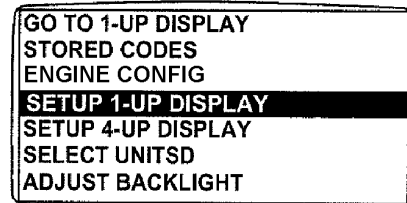


Setup 1-Up Display

OURGP11,00000B1 -19-27MAY16-2/18

RG13193 —UN—02OCT03

- Once "Setup 1-Up Display" menu item has been highlighted press the "Enter" key to access the "Setup 1-Up Display" function.



Press Enter Key

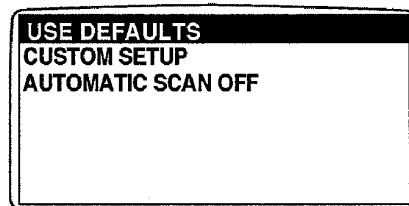
OURGP11,00000B1 -19-27MAY16-3/18

RG13194 —UN—02OCT03

Continued on next page

4. Three options are available for modification of the 1-Up Display.

- a. **Use Defaults** – This option contains the following engine parameters for display: Engine Hours, Engine Speed, Battery Voltage, % Load, Coolant Temperature and Oil Pressure.
- b. **Custom Setup** – This option contains a list of engine parameters. Engine parameters from this list can be selected to replace any or all of the default parameters. This option can be used to add parameters available for scrolling in the 1-Up Display.
- c. **Automatic Scan** – Selecting the scan function will allow the 1-Up Display to scroll through the selected set of parameters one at a time, momentarily pausing at each.

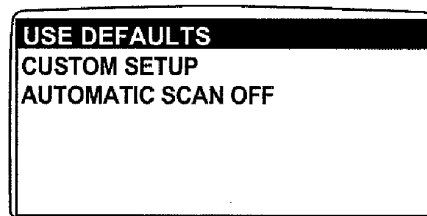


1-Up Display Options

OURGP11,00000B1 -19-27MAY16-4/18

RG13196—UN—26SEP03

5. **Use Defaults** - To select "Use Defaults" use the Arrow keys to scroll to and highlight "Use Defaults" in the menu display.

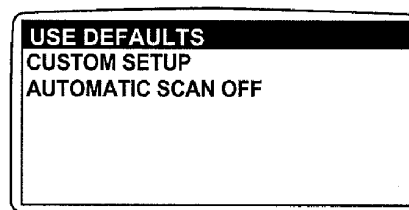


Select Defaults

OURGP11,00000B1 -19-27MAY16-5/18

RG13195—UN—26SEP03

6. Press the "Enter" key to activate the "Use Defaults" function.



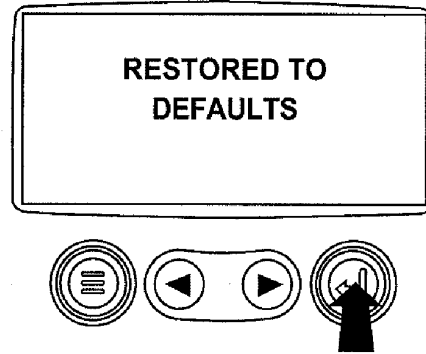
Defaults Selected

Continued on next page

OURGP11,00000B1 -19-27MAY16-6/18

RG13197—UN—29SEP03

7. The display parameters are reset to the factory defaults, then the display will return to the "Setup 1-Up Display" menu.

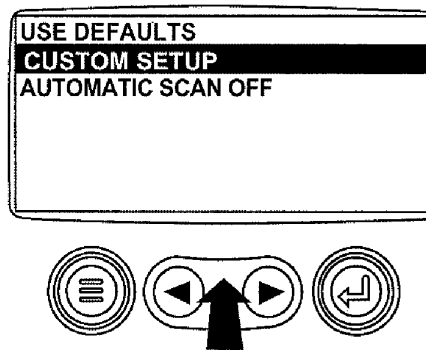


Restored To Defaults

OURGP11,00000B1 -19-27MAY16-7/18

RG13149 —UN—24SEP03

8. **Custom Setup** - To perform a custom setup of the 1-Up Display, use the arrow buttons to scroll to and highlight "Custom Setup" on the display.

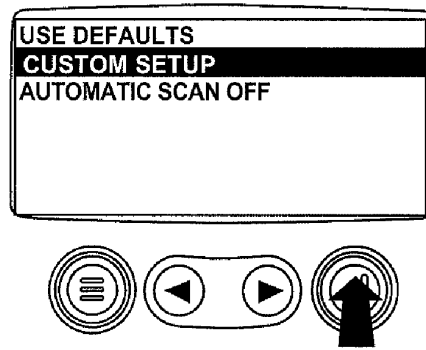


Select Custom Setup

OURGP11,00000B1 -19-27MAY16-8/18

RG13198 —UN—26SEP03

9. Press the "Enter" key to display a list of engine parameters.



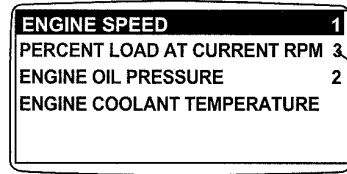
Engine Parameters

Continued on next page

OURGP11,00000B1 -19-27MAY16-9/18

RG13199 —UN—26SEP03

10. Use the "Arrow" keys to scroll to and highlight a selected parameter (parameter with a number to right of it).



This number indicates the order of display for the parameters and that the parameter is selected for display.

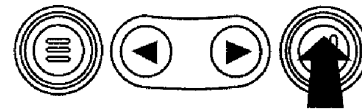
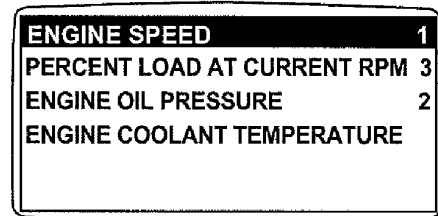


Select Parameters

OURGP11,00000B1 -19-27MAY16-10/18

RG13150 —UN—24SEP03

11. Press the "Enter" key to deselect the selected parameter, removing it from the list of parameters being displayed on the 1-Up Display.

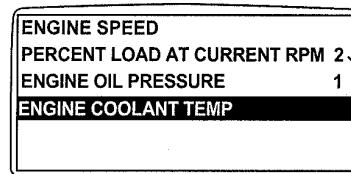


Deselect Parameters

OURGP11,00000B1 -19-27MAY16-11/18

RG13219 —UN—26SEP03

12. Use the "Arrow" keys to scroll and highlight the desired parameter that has not been selected for display (parameter without a number to right of it).



Note that the numbers now indicate the new order of display for the parameters.



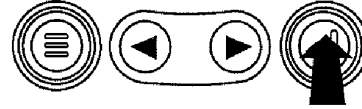
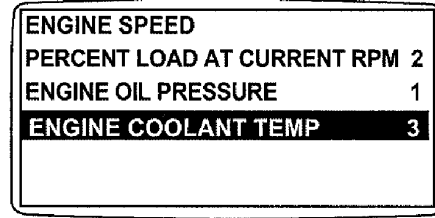
Select Desired Parameters

Continued on next page

OURGP11,00000B1 -19-27MAY16-12/18

RG13151 —UN—24SEP03

13. Press the "Enter" key to select the parameter for inclusion in the Single Engine Parameter Display.
14. Continue to scroll through and select additional parameters for the custom 1-Up Display. Press the "Menu" key at any time to return to the "Custom Setup" menu.

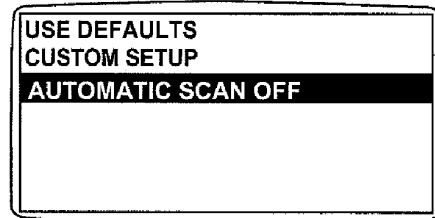


Select Parameters For Display

OURGP11,00000B1 -19-27MAY16-13/18

RG13220 —UN—26SEP03

15. **Automatic Scan** - Selecting the scan function will allow the 1- Up Display to scroll through the selected set of parameters one at a time. Use the "Arrow" keys to scroll to the "Automatic Scan" function.

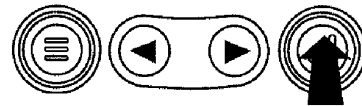
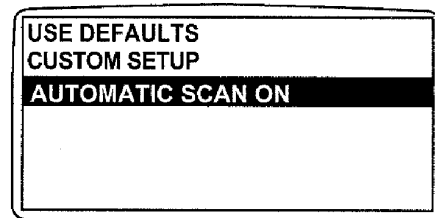


Automatic Scan Off

OURGP11,00000B1 -19-27MAY16-14/18

RG13221 —UN—26SEP03

16. Press the "Enter" key to toggle the "Automatic Scan" function on.



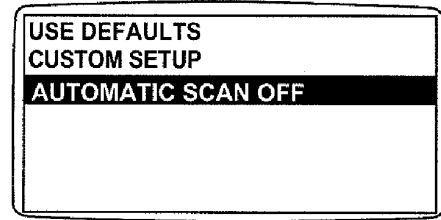
Automatic Scan On

Continued on next page

OURGP11,00000B1 -19-27MAY16-15/18

RG13222 —UN—26SEP03

17. Press the "Enter" key again to toggle the "Automatic Scan" function off.

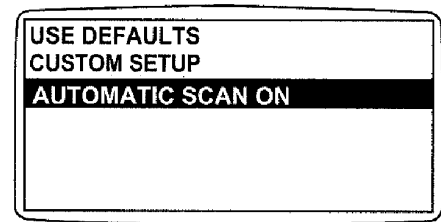


Automatic Scan Off

OURGP11,00000B1 -19-27MAY16-16/18

RG13223 —UN—26SEP03

18. Once the "Use Defaults", "Custom Setup" and "Automatic Scan" functions have been set, press the "Menu" key to return to the main menu.

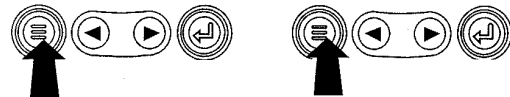
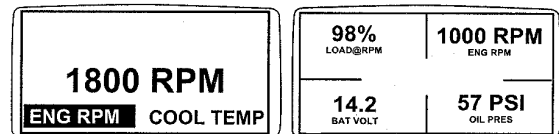


Menu Key

OURGP11,00000B1 -19-27MAY16-17/18

RG13224 —UN—26SEP03

19. Press the "Menu" key to exit the main menu and return to the engine parameter display.



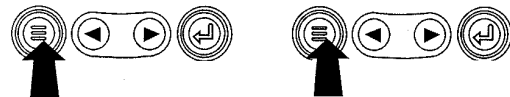
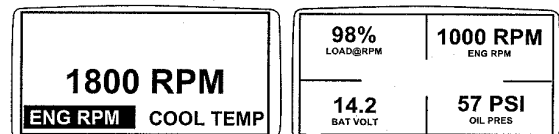
Exit Main Menu

OURGP11,00000B1 -19-27MAY16-18/18

RG13159 —UN—26SEP03

Setup 4-Up Display

1. Turn the key switch to the ON position. From the single or four engine parameter display, press the "Menu" key.



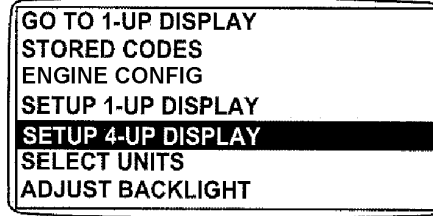
Menu Key

Continued on next page

OURGP11,00000B2 -19-27MAY16-1/14

RG13159 —UN—26SEP03

2. The main menu will be displayed. Use the "Arrow" keys to scroll through the menu until "Setup 4-Up Display" is highlighted.

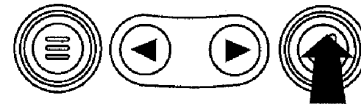
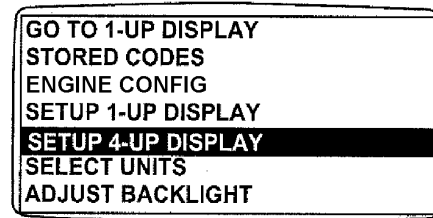


Select Setup 4-Up Display

OURGP11,00000B2 -19-27MAY16-2/14

RG13225 —UN—02OCT03

3. Once the "Setup 4-Up Display" menu item has been highlighted, press the "Enter" key to activate the "Setup 4-Up Display" menu.

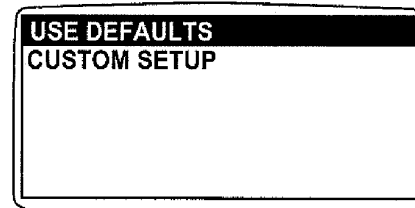


Press Enter Key

OURGP11,00000B2 -19-27MAY16-3/14

RG13226 —UN—02OCT03

4. Two options are available for the 4-Up Display.
 - a. **Use Defaults** – This option contains the following engine parameters for display: Engine Speed, Battery Voltage, Coolant Temperature and Oil Pressure.
 - b. **Custom Setup** – This option contains a list of engine parameters. Engine parameters from this list can be selected to replace any or all of the default parameters.



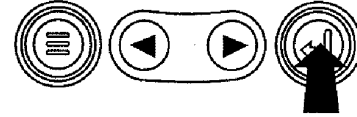
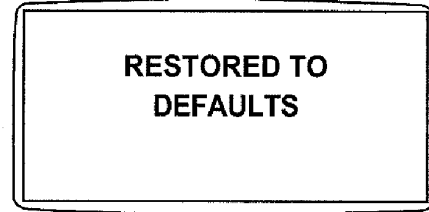
Select Factory Defaults

Continued on next page

OURGP11,00000B2 -19-27MAY16-4/14

RG13244 —UN—02OCT03

5. To reset the display parameters to the factory defaults, scroll to and highlight "Use Defaults". Press the "Enter" key to activate the "Use Defaults" function. A message indicating the display parameters are reset to the factory defaults will be displayed, then the display will return to the "Setup 4-Up Display" menu.

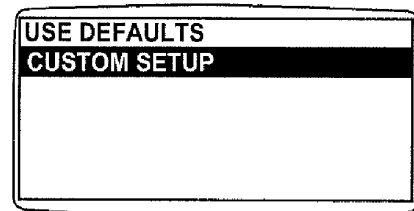


Restored To Defaults

OURGP11,00000B2 -19-27MAY16-5/14

RG13149 —UN—24SEP03

6. **Custom Setup** - To perform a custom setup of the 4-Up Display, use the arrow buttons to scroll to and highlight "Custom Setup" on the display.

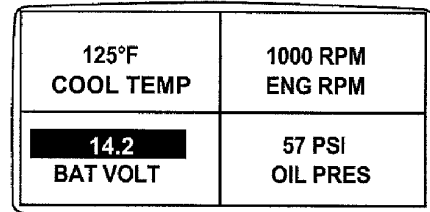


Custom Setup

OURGP11,00000B2 -19-27MAY16-6/14

RG13227 —UN—26SEP03

7. The quadrant with the highlighted parameter value is the current selected parameter. Use the "Arrow" keys to highlight the value in the quadrant you wish to change to a new parameter.



Select Parameters

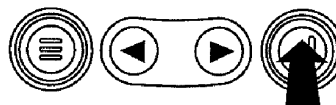
Continued on next page

OURGP11,00000B2 -19-27MAY16-7/14

RG13228 —UN—26SEP03

8. Press the "Enter" key and a list of engine parameters will be displayed.

125°F COOL TEMP	1000 RPM ENG RPM
14.2 BAT VOLT	57 PSI OIL PRES



List Of Engine Parameters

OURGP11,00000B2 -19-27MAY16-8/14

RG13229 —UN—26SEP03

9. The parameter that is highlighted is the selected parameter for the screen. Use the "arrow" keys to highlight the new parameter to be placed in the "4-Up Display".

ENGINE SPEED	3
ENGINE HOURS	
ENGINE COOLANT TEMPERATURE	1
BATTERY POTENTIAL	
ENGINE OIL TEMPERATURE	2
ENGINE OIL PRESSURE	4

The number to the right of the parameter indicates the quadrant in which it is displayed.
1. = Upper Left Quadrant
2. = Lower Left Quadrant
3. = Upper Right Quadrant
4. = Lower Right Quadrant



Select Desired Engine Parameter

OURGP11,00000B2 -19-27MAY16-9/14

RG13230 —UN—26SEP03

10. Press the "Enter" key to change the selected parameter in the quadrant to the new parameter.

ENGINE SPEED	3
ENGINE HOURS	
ENGINE COOLANT TEMPERATURE	1
BATTERY POTENTIAL	
ENGINE OIL TEMPERATURE	2
ENGINE OIL PRESSURE	4



Enter Selected Parameter

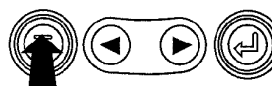
OURGP11,00000B2 -19-27MAY16-10/14

RG13231 —UN—26SEP03

11. Use the "Menu" keys to return to the "4-Up Custom Setup" screen.

ENGINE SPEED	3
ENGINE HOURS	
ENGINE COOLANT TEMPERATURE	1
BATTERY POTENTIAL	
ENGINE OIL TEMPERATURE	2
ENGINE OIL PRESSURE	4

Note the number to the right of the selected parameter indicating that the parameter is now assigned to that display location.



Return To 4-Up Custom Setup

Continued on next page

OURGP11,00000B2 -19-27MAY16-11/14

RG13232 —UN—26SEP03

12. The selected quadrant has now changed to the new selected parameter.

125°F COOL TEMP	1000 RPM ENG RPM
143°F OIL TEMP	57 PSI OIL PRES



4-Up Display

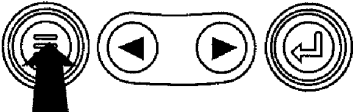
OURGP11,00000B2 -19-27MAY16-12/14

RG13153 —UN—24SEP03

13. Repeat the parameter selection process until all spaces are as desired.

14. Press the "Menu" key to return to the main menu.

125°F COOL TEMP	1000 RPM ENG RPM
143°F OIL TEMP	57 PSI OIL PRES



Return To Main Menu

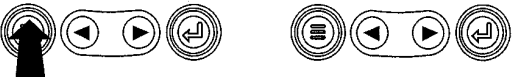
OURGP11,00000B2 -19-27MAY16-13/14

RG13154 —UN—24SEP03

15. Press the "Menu" key to exit the main menu and return to the engine parameter display.

GO TO 1-UP DISPLAY
STORED CODES
ENGINE CONFIG
SETUP 1-UP DISPLAY
SETUP 4-UP DISPLAY
SELECT UNITS
ADJUST BACKLIGHT

125% COOL TEMP	1000 RPM ENG RPM
143°F OIL TEMP	57 PSI OIL PRES



Select Remaining Parameters

OURGP11,00000B2 -19-27MAY16-14/14

RG13155 —UN—07OCT03

DG14 Diagnostic Gauge

DG14 Diagnostic Gauge — Using

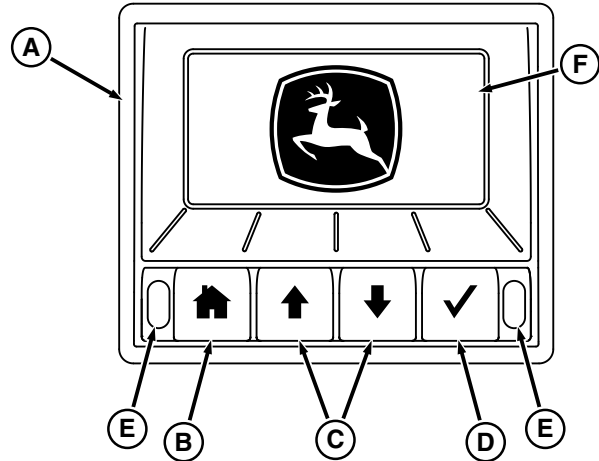
The diagnostic gauge (A) allows the operator to monitor engine functions, view diagnostic trouble codes (DTCs), and perform preliminary diagnostics. The gauge is linked to the electronic control system and sensors.

The home menu key (B) allows the operator to access the main menu of the diagnostic gauge. For more information, see DG14 Diagnostic Gauge — Main Menu in Section 15. This key also allows the operator to cancel an option and go back to the previous menu or home menu.

The arrow keys (C) allows the operator to scroll between menu items. The arrow keys automatically change from up and down, to left and right depending on the menu item to be selected.

The check mark select key (D) allows the operator to access menu items selected by the arrow keys (C) and confirm changes made by the operator.

The indicator lights (E) allows the operator to visually see the presence of an active DTC.



DG14 Diagnostic Gauge

A—Diagnostic Gauge
B—Home Menu Key
C—Arrow Key (2 used)

D—Check Mark Select Key
E—Indicator Light (2 used)
F—Display

BL90236,0000028 -19-19AUG21-1/1

DG14 Diagnostic Gauge — Main Menu

NOTE: The engine does not need to be running to navigate the diagnostic gauge menu screens.

The main menu is the starting point in accessing engine information and configuring the diagnostic gauge. Press the home menu key (B) to access the main menu.

Use the arrow keys (C) and select key (D) to view menu items displayed:

- Function
- Display
- Utility
- Setup

Listed are examples of features available in main menu items.

In Function:

- View DTC
- Reset trip (FT4 Only)
- Exhaust regeneration (IT4 & FT4 Only)
- ECU software updates

In Display:

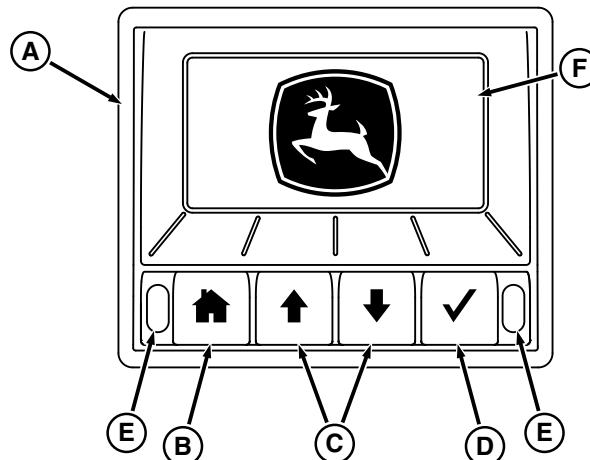
- Adjust backlight
- Adjust indicator brightness
- Display option setup

In Utility:

- Full parameter list
- Software data
- Select units
- Select language

In Setup:

- Select analog input
- Select digital input
- Select digital output



Diagnostic Gauge

A—Diagnostic Gauge
B—Home Menu Key
C—Arrow Key (2 used)

D—Check Mark Select Key
E—Indicator Light (2 used)
F—Display

- Alarm functionality
- Add J1939 gauge
- Set RS485 messaging
- Set engine source address
- Set function instance
- Harness diagnostics
- TSC control (password protected)

Key Code for Password Protected Screens

Numeric values are assigned to keys on diagnostic gauge as identified below:

- 1 — Home Menu Key
- 2 — Up Arrow Key
- 3 — Down Arrow Key
- 4 — Check Mark Select Key

BL90236,0000029 -19-19AUG21-1/1

RG27904—UN—25FEB16

DG14 Diagnostic Gauge — Essential Menus

Automatic Exhaust Filter Cleaning

To enable auto exhaust filter cleaning mode:

1. Press home menu key on diagnostic gauge.
2. Press arrow keys to scroll up or down to FUNCTION.
3. Press check mark select key.
4. Press arrow keys to scroll up or down to EXHAUST REGENERATION.
5. Press check mark select key.
6. Press arrow keys to scroll up or down to AUTOMATIC.
7. Press check mark select key to enable auto exhaust filter cleaning.

Manual/Parked Exhaust Filter Cleaning

To request a manual/parked exhaust filter cleaning:

1. Reduce engine speed to slow idle.
2. Press home menu key on diagnostic gauge.
3. Press arrow keys to scroll up or down to FUNCTION.
4. Press check mark select key.
5. Press arrow keys to scroll up or down to EXHAUST REGENERATION.
6. Press check mark select key.
7. Press arrow keys to scroll up or down to FORCED.
8. Press check mark select key to request a manual/parked exhaust filter cleaning.
9. Follow directions on display and ensure all conditions are met.
10. Press check mark select key to CONFIRM all conditions are met.

Disable Exhaust Filter Cleaning

To disable the auto exhaust filter cleaning mode:

1. Press home menu key on diagnostic gauge.

2. Press arrow keys to scroll up or down to FUNCTION.
3. Press check mark select key.
4. Press arrow keys to scroll up or down to EXHAUST REGENERATION.
5. Press check mark select key.
6. Press arrow keys to scroll up or down to INHIBIT.
7. Press check mark select key to disable exhaust filter cleaning.
8. Press check mark select key to continue after the warning has been acknowledged.

Fault Codes — Active

To view active fault code information:

1. Press home menu key on diagnostic gauge.
2. Press arrow keys to scroll up or down to FUNCTION.
3. Press check mark select key.
4. Press arrow keys to scroll up or down to VIEW FAULT CODES.
5. Press check mark select key.
6. Press arrow keys to scroll up or down to ACTIVATE.
7. Press check mark select key.
8. Press arrow keys to scroll through available faults.

Fault Codes — Stored

To view stored fault code information:

1. Press (home) menu key on diagnostic gauge.
2. Press arrow keys to scroll up or down to FUNCTION.
3. Press (check mark) select key.
4. Press Arrow keys to scroll up or down to VIEW FAULT CODES.
5. Press (check mark) select key.
6. Press arrow keys to scroll up or down to STORED.
7. Press (check mark) select key.
8. Press Arrow keys to scroll through available faults.

BL90236,0000026 -19-19AUG21-1/1

DG14 — Initial Start Up

1. Ignition ON.

NOTE: If no ECU communication is received, display defaults to offline configuration screen.

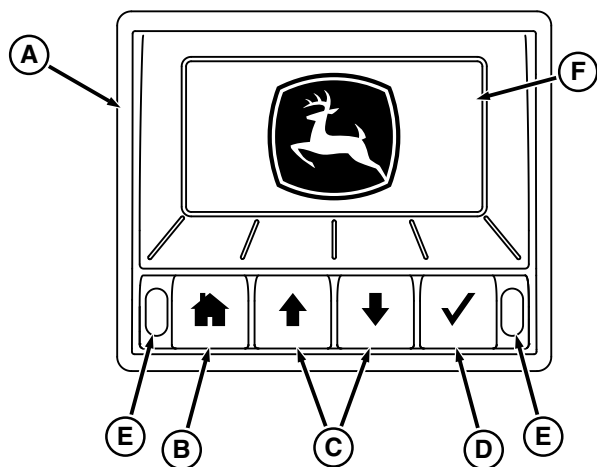
If operating temperature is below -25°C (-13°F), 20 minute warm-up may be required.

If wait to start message displays, it is recommended not to start engine.

2. Ignition ON, Engine ON.

A—Diagnostic Gauge
B—(Home) Menu Key
C—Arrow Keys

D—(Check Mark) Select Key
E—Indicator Light
F—Display Screen



Diagnostic Gauge

RG27904—UN—25FEB16

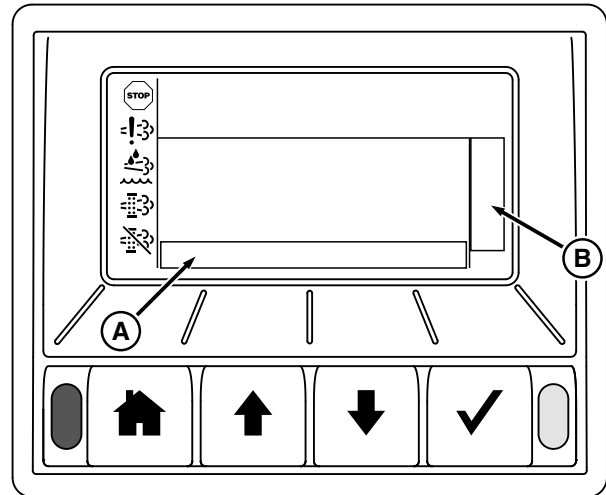
Continued on next page

KW40574,000003E -19-23MAY16-1/4

Configuration screens vary based on emission tier. FT4 display configuration appears as shown. The lower gauge indicates engine speed and the scale adjusts depending on ECU broadcast of low and high idle engine speeds. The vertical gauge on the right-hand side indicates DEF level percentage on a scale of 0-100. The vertical and horizontal gauges are not configurable, however the 1-up and 4-up menus are.

A—Engine Speed

B—DEF Level



FT4 Display

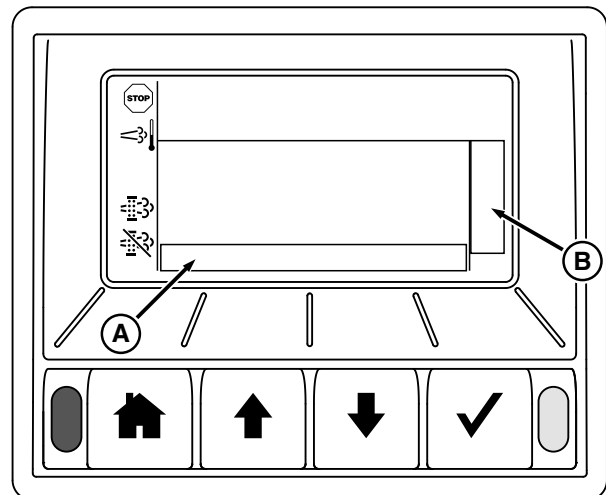
KW40574,000003E -19-23MAY16-2/4

RG28121 —UN—17MAY16

IT4 display configuration appears as shown. The lower gauge indicates engine speed and the scale adjusts depending on ECU broadcast of low and high idle engine speeds. The vertical gauge on the right-hand side indicates soot loading percentage on a scale of 0-100. Vertical and horizontal gauges are not configurable, however the 1-up and 4-up menus are

A—Engine Speed

B—Soot Loading Percentage



IT4 Display

Continued on next page

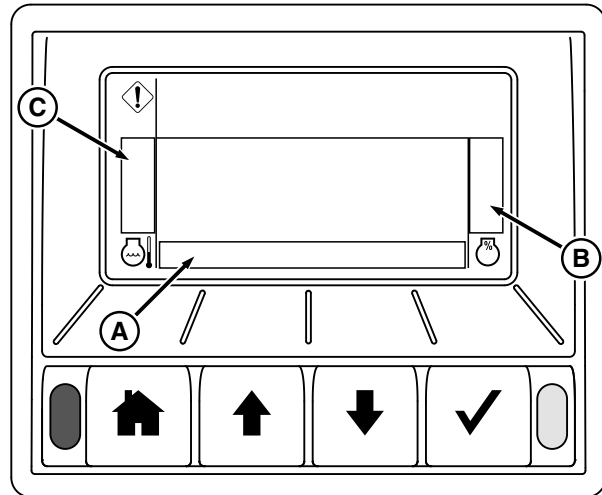
KW40574,000003E -19-23MAY16-3/4

RG28123 —UN—17MAY16

T3 and marine display configuration appears as shown. The lower gauge indicates engine speed and the scale adjusts depending on ECU broadcast of low and high idle engine speeds. The vertical gauge on the right-hand side indicates engine load percentage on a scale of 0-100. The gauge on the left-hand side indicates engine coolant temperatures on a scale of 40°C (104°F) to 112° (234°F). Vertical and horizontal gauges are not configurable, however the 1-up and 4-up menus are.

A—Engine Speed
B—Load Percentage

C—Coolant Temperature



T3 and Marine Display

KW40574,000003E -19-23MAY16-4/4

RG28122—UN—17MAY16

DG14 — View Fault Codes

There are three options for viewing ECU fault codes.

Active:

- Displays all active fault codes (DM1)
- Number of active fault codes are displayed in top right corner
- Press arrow keys to access active fault codes

Stored:

- Displays all stored fault codes (DM2)

- Number of stored fault codes are displayed in top right corner
- Press arrow keys to access stored fault codes

Clear fault codes:

- Clears all stored fault codes (DM2)
- Indicates when all fault codes are clear

NOTE: Marine configuration for clear fault codes is password protected. Password is 1-3-4-2

KW40574,0000040 -19-31MAY16-1/1

DG14 — ECU Software Update

This feature only operates with a John Deere installed JDLink system connected to the machine and allows control of the download process for ECU software.

1. To enable automatic software downloads, press arrow keys to select.

2. Press (check mark) select key to confirm selection.

NOTE: By default, automatic updates are disabled when received from factory.

KW40574,0000041 -19-23MAY16-1/1

DG14 — Exhaust Filter Cleaning

NOTE: Only available for IT4 and FT4 configurations. All other configurations will not incorporate this feature.

There are three selectable options for exhaust filter cleaning.

Automatic

- Factory default
- Sends CAN messages to ECU indicating exhaust filter cleaning can be automatically performed when required

Manual

When automatic filter cleaning is not sufficient, manual filter cleaning may be necessary.

- Select manual on display
- Second and third screens acknowledge impact of selection
- Press (check mark) select key to proceed
- Requirement screen indicates what ECU needs prior to manual cleaning
- Select continue if all requirements are satisfied
- A 30 second request is sent to ECU for exhaust filter cleaning
- Press (home) menu key to cancel and revert to 1-up and 4-up menu screens

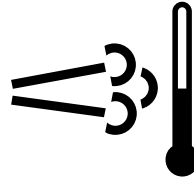
Disable

When restrictions prevent exhaust filter cleaning, select this option to stop all exhaust filter cleaning activity from occurring.

- Select disable on display
- Second screen acknowledges impact of selection
- Press (check mark) select key to proceed
- Press (home) menu key to cancel and revert to 1-up and 4-up menu screens

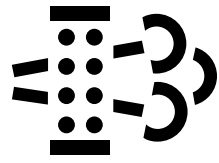
The following indicators display regeneration status when parameter status is broadcast from ECU.

RG22488 —UN—21AUG13



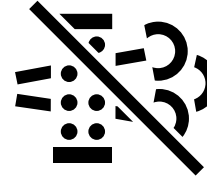
SPN 3697

RG22489 —UN—21AUG13



SPN 3703

RG22490 —UN—21AUG13



SPN 3698

PGN	SPN	Description
64892	3697	Exhaust filter cleaning in process
64892	3703	Exhaust filter cleaning needed
64892	3698	Exhaust filter cleaning disabled

NOTE: All John Deere products are compliant with requirements for U.S. EPA Emission Standard — Final Tier 4 and EU Emissions Standard - Stage IIIB diesel engines.

KW40574.0000001 -19-22SEP16-1/2

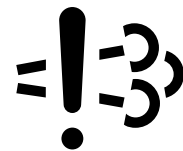
FT4 also supports the following failure indicators.

RG28265 —UN—17MAY16



DEF Level < 10% Remaining

RG28266 —UN—17MAY16



Engine Emissions System Failure or Malfunction (Derate Indication)

KW40574.0000001 -19-22SEP16-2/2

DG14 — Reset Trip

NOTE: Only available for FT4 configurations.

When selected, diagnostic gauge requests current trip hours from ECU and broadcasts the trip information in the following format HRS:MIN.

Press (check mark) select key to reset. After reset, the trip information is displayed as 00:00.

KW40574,0000002 -19-17MAY16-1/1

DG14 — Restored Operation

NOTE: Only available for FT4 configurations and offered for European Union certified countries.

When selected and engine is derated, diagnostic gauge initiates an override of derate for a limited time. This allows operator to come to a safe stopping point or assist with engine troubleshooting.

When accessing restored operation menu, a warning message indicates that the operation is for emergency use only.

1. Press (check mark) select key to continue
2. Using keypad, enter passcode by matching the code
3. Operator is prompted to the number of restored operation attempts available for activation

NOTE: Operator has three attempts to use before no override is available.

4. Press (check mark) select key to activate an attempt before any override functionality becomes available

5. Timer activation only occurs if engine is in active derate. All activate requests are ignored until condition is met
6. Once activated, screen displays total override time remaining in MIN:SEC
7. Press (check mark) select key at any time to continue normal operation

If restored operation feature is activated, an active or expired message displays on screen every minute during operation.

If operator has key cycled the engine, passcode must be reentered. Number of attempts remaining or active screen is displayed.

If total remaining time reaches zero and the final attempt has been activated, a pop-up message displays every minute indicating attempts have expired and needs to be reset by the local John Deere dealer, engine distributor, or other service provider.

KW40574,0000006 -19-29MAY25-1/1

DG14 — Display Options

Individual content can be viewed using arrow keys to scroll up or down and (check mark) select key to confirm and view selection.

Adjust Backlight

Use arrow keys to increase or decrease level of brightness on display and accessory gauges.

Backlight Options

Use arrow keys to change backlight color to either green or red.

Use arrow keys to adjust intensity of backlight color.

NOTE: Intensity adjustment will only modify accessory gauge intensity, not the display backlight. Reference adjust backlight or analog input sections to perform backlight dimming function.

Adjust Indicator Brightness

Individual intensity adjustments to red and/or amber visual fault indicators can be made separately.

1. Press arrow keys to increase or decrease intensity of red (stop) or amber (warning) fault indicators.
2. Confirm changes for indicator.

Display Option Setup

There are three display configurations that can be selected and changed at any time.

1-Up Screen Setup

- Factory Default — configured with engine speed as only parameter displayed
- Custom Setup — 1-up configurations can be made at any time and stays in configuration through power cycles
 - Press arrow keys to select number of 1-up screens (up to 12 screen views) displayed and configure the parameters for each screen
 - Press (check mark) select key to begin parameter selection. Use arrow keys to scroll through list and press (check mark) select key to confirm selection.

Repeat steps to configure the remaining 1-up screens selected

- Press (home) menu key to revert to previous menu

4-Up Screen Setup

- Factory Default — configured with one 4-up menu that includes engine speed, coolant temperature, oil pressure, and battery voltage
- Custom Setup — 4-up configurations can be made at any time and stays in configuration through power cycles
 - Press arrow keys to select the number of 4-up screens (up to three screen views) displayed and configure the parameters for each screen
 - Press (check mark) select key to select quadrant and begin parameter selection. Press arrow keys to scroll through list and press (check mark) select key to confirm. Repeat steps to configure the remaining quadrants
 - If more than one 4-up screens are desired, press (home) menu key to select parameters for remaining screens
 - Press (home) menu key to revert to previous menu

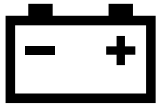
NOTE: Symbols indicate the selectable parameters. Reference the 1-up and 4-up parameter list for supported engine parameters.

Auto Scroll

- By default this functionality is enabled from the factory
- Press arrow keys to disable or enable auto scroll. If enabled, operator can select scroll times (1 to 8 seconds) for 1-up and 4-up menus
- Press (check mark) select key to view specific 1-up or 4-up home screens. Scroll timers will resume after screen is selected

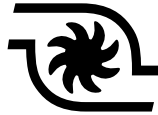
1-Up and 4-Up Parameter Symbols

RG28246 —UN—17MAY16



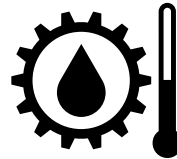
Battery Voltage

RG28254 —UN—17MAY16



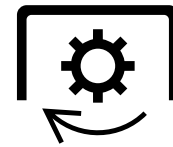
Boost Pressure

RG28267 —UN—17MAY16



Gear Oil Temperature

RG28268 —UN—17MAY16



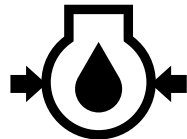
Shaft Speed

RG28245 —UN—17MAY16



Engine Coolant Temperature

RG28255 —UN—17MAY16



Engine Oil Pressure

RG28270 —UN—17MAY16

HP

Gauge 1: Auxiliary or Hydraulic Pressure

RG28271 —UN—17MAY16

HT

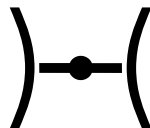
Gauge 2: Auxiliary or Hydraulic Temperature

RG28244 —UN—17MAY16



Engine Speed

RG28256 —UN—17MAY16



Throttle Position

RG28272 —UN—17MAY16

HL

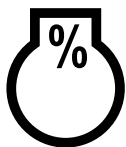
Gauge 3: Hydraulic Level

RG28273 —UN—17MAY16

DP

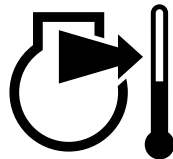
Gauge 4: Transmission Differential Pressure

RG28257 —UN—17MAY16



Engine Percent Load

RG28258 —UN—17MAY16



Exhaust Temperature

RG28274 —UN—17MAY16

PIP

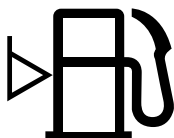
Gauge 5: Pump Inlet Pressure

RG28269 —UN—17MAY16

PDP

Gauge 6: Pump Discharge Pressure

RG28259 —UN—17MAY16



Fuel Level

RG28260 —UN—17MAY16



Fuel Rate

RG28275 —UN—17MAY16

AI1

Analog Input 1 (Pin X)

RG28276 —UN—17MAY16

DI1

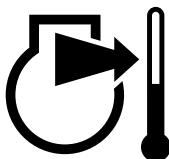
Digital Input 1 (Pin X)

RG28261 —UN—17MAY16



Total Engine Hours

RG28262 —UN—17MAY16



Manifold Air Temperature

RG28277 —UN—17MAY16

DI2

Digital Input 2 (Pin X)

RG28278 —UN—17MAY16

DI3

Digital Input 3 (Pin X)

RG28263 —UN—17MAY16



Gear Oil Pressure

KW40574,0000007 -19-27JUN16-3/2

DG14 — Utility Options

Parameter List

The following parameters are displayed in standard or metric units.

- Engine Speed (rpm)
- Throttle Position (%)
- Engine Percent Load (%)
- Total Engine Hours (Hrs)
- Engine Coolant Temperature
- Engine Oil Pressure
- Battery Voltage (V)
- Manifold Air Temperature
- Air Inlet Temperature
- Boost Pressure
- CAC Outlet Temperature
- Exhaust Temperature
- Fuel Delivery Pressure
- Fuel Temperature
- Fuel Level (%)
- Fuel Rate (L/hr)
- Total Fuel Used (L)
- Gear Oil Pressure
- Gear Oil Temperature
- Shaft Speed (rpm)
- Aux/Hydraulic Pressure
- Aux/Hydraulic Temperature
- Hydraulic Level (%)
- Transmission Differential Pressure
- Pump Inlet Pressure
- Pump Discharge Pressure

- Analog Input 1
- Digital Input 1
- Digital Input 2
- Digital Input 3

ECU and Transmission Parameters

Press arrow keys up or down to scroll through parameter list.

Software Data

Engine Software Information — Sends requests to ECU for engine software ID and factory option ID. Displays both when available.

DG14 Software Information — Displays John Deere software serial number, John Deere software ID, manufacturer bootloader ID, manufacturer application ID, and manufacturer compiled date.

NOTE: John Deere software serial number and software ID information are critical for mandatory and optional software updates.

Select Units

Operator can select desired unit preference in English (psi, °F), Metric kPa (kPa, °C), and Metric Bar (Bar, °C)

Select Language

Operator can select desired language preference. Supported languages are English, Spanish, German, French, and Italian.

KW40574,0000009 -19-31MAY16-1/1

DG14 — Set up Options

Analog Input

Four available settings:

- 500 — 1K Max ohms
- 200 — 500 Max ohms
- Fuel Level — used to support current Murphy fuel senders
- Backlight dimmer

Analog inputs are linearly calibrated using a minimum and maximum position and are viewable in the current field of setup menu.

1. Press (check mark) select key to set the minimum and maximum position settings.
2. To set minimum position, adjust analog device to minimum position and press up arrow key.
3. To set maximum position, adjust analog device to maximum position and press down arrow key.
4. Press (check mark) select key to confirm that selection and current field updates.

NOTE: For minimum setting, calibration for fuel level sender is high resistance (full tank level) and for maximum setting, calibration for fuel level sender is low resistance (empty tank level).

Digital Input

Two pre-configured options available that can be used in combination with TSC (torque speed control).

- Throttle Increase and Decrease Switch — allows operator to configure a two-state bump switch as throttle control instead of using display arrow keys
- Set Low and High Idle Switch — allows operator to configure a three-state position switch to send a CAN command to engine to immediately operate at low or high idle depending on switch position

By default, the diagnostic gauge comes preprogrammed as “other” and allows operator to use digital input for their application needs.

Digital Output

Pre-configured options can be used as a digital output driver.

- Stop Lamp — indicates a stop condition
- Warning Lamp — indicates a warning condition
- Wait to Start Lamp — indicates a wait to start condition
- CAN bus Lost Lamp — indicates loss of CAN bus communication
- DEF Level Horn (available for FT4 configuration only) — external horn or chime indicates that DEF has reached low levels and pulses twice a minute until fault condition is corrected

Alarm Functionality

Activation of alarm functionality activates both PVA and Digital Configured alarms. Silencing functionality is driven by the display and not associated hardware.

Two silencing options are available.

Local Silence — silences alarms on local display. Default configuration set to local silence.

1. Press arrow keys to scroll up or down and configure interval rate between silencing at either two or five minutes.
2. Press (check mark) select key to toggle between two and five minutes selections.
3. Press (home) menu key to save selections and revert to previous menu.

Global Silence — if multiple displays are configured to same engine, this option silences all alarms. Silencing function can be enabled from any display tied to engine.

1. Press arrow keys to scroll up or down to global selection.
2. Press (check mark) select key to enable.

NOTE: The rate of occurrence between silencing is two minutes.

3. Press (home) menu key to save selections and revert to previous menu.

If alarm functionality is enabled and an active fault condition exists, a silence alarm message displays. Press (check mark) select key to silence alarm. By default, alarm functionality is disabled.

If one or more displays are used in same network, global silencing must be enabled on all displays for one display to silence all.

Add J1939 Gauge

Supported J1939 CAN (receive only) gauges:

PGN	SPN	Description
65164	1387	Auxiliary Pressure #1
	1388	Auxiliary Pressure #2
	441	Auxiliary Temperature #1
	442	Auxiliary Temperature #2
65128	1638	Hydraulic Temperature
	2602	Hydraulic Oil Level
61448	1762	Hydraulic Pressure
64741	5536	Hydraulic Oil Temperature
65272	126	Transmission Filter Differential Pressure

Allows operator to view data (receive only) for optional CAN based gauges.

NOTE: When selecting a gauge, only one parameter can be supported within each gauge selection.

1. Press arrow keys to select optional supported gauge.
2. Press (check mark) select key to turn selection on or off.

Continued on next page

KW40574,000000A -19-27JUN16-1/2

Gauge	PGN	SPN	Description
Gauge 1	65164	1387	Auxiliary Pressure #1
		1388	Auxiliary Pressure #2
	61448	1762	Hydraulic Pressure
Gauge 2	65164	441	Auxiliary Temperature #1
		442	Auxiliary Temperature #2
	65128	1638	Hydraulic Temperature
	64741	5536	Hydraulic Oil Temperature
Gauge 3	65128	2602	Hydraulic Oil Level
Gauge 4	65272	126	Transmission Filter Differential Pressure

NOTE: By default, all gauges are turned off until configured.

Set RS485 Messaging

RS485 is enabled by default.

1. Press arrow keys to enable or disable message transmissions for external gauges.
2. Press (check mark) select key to confirm.

The following gauges are supported.

- Tachometer
- Coolant temperature
- Oil pressure
- Volt meter
- % load
- Fuel level

Set Engine Source Address

Configure desired ECU source address on CAN network.

1. Press arrow keys to select the following source addresses: 0, 1, 231, 232, and 233.

NOTE: For Marine configurations select the source addresses: 0, 1, 239, 240, and 241.

2. Press (check mark) select key to confirm.

NOTE: Factory default is ECU source address 0.

Set Function Instance

Allows setting the source claim address on the CAN network.

1. Press arrow keys to configure the address 0-31.
2. Press (check mark) select key to confirm. Diagnostic gauge reboots with updated address claim.

NOTE: Factory default for address claim is 0.

Harness Diagnostics

Press (check mark) select key to initiate harness diagnostic testing. A success or failed message displays.

TSC Control

This option is password protected to limit unauthorized selections or changes. Password required to access menu. Factory default disables function.

Enter Password screen — Enter 1-3-4-2 in numeric spaces provided. Keypad starts 1 (furthest left) to 4 (furthest right) and automatically moves to the next box until all four boxes are populated. In case of failed attempt, diagnostic gauge reverts to menu screen.

NOTE: Password is not changeable.

1. Press arrow keys to enable or disable.

NOTE: Once enabled, minimum and maximum speed limits currently governed by the ECU are displayed and can be used for reference when making configuration changes

2. Press (check mark) select key to view standard configuration settings.
3. Press (check mark) select key to move between adjustable parameters.
 - a. Minimum Speed Limit — selection from 600 rpm up to 1800 rpm Factory defaults are 600 rpm.
 - b. Maximum Speed Limit — selection from 3000 rpm down to 1800 rpm Factory defaults are 3000 rpm.
 - c. Ramp Up Limit — selection from 100 rpm to 1000 rpm Factory defaults are 100 rpm.
 - d. Ramp Down Limit — selection from 100 rpm to 1000 rpm Factory defaults are 100 rpm.
 - e. Bump Up Increment — selection from 1 rpm to 100 rpm Factory defaults are 10 rpm.
 - f. Bump Down Increment — selection from 1 rpm to 100 rpm Factory defaults are 10 rpm.
4. Press arrow keys to change parameter values for each parameter listed.
5. Press (home) menu key to exit menu.

Once changes are set, added value displays above engine speed and indicates requested speed setting.

NOTE: When enabled, TSC stays enabled through power cycles. To turn off functionality, feature must be disabled within the TSC control menu.

NOTE: Set point selection will not override ECU governor selection.

DG14 — Faults and Warnings

Visual Indication

- Amber LED (warning condition) — located in bottom right corner
- Red LED (stop and/or shutdown condition) — located in bottom left corner

RG28243 —UN—17MAY16



Stop and/or Shutdown Fault Condition

RG28264 —UN—17MAY16



Warning Fault Condition

Engine Shutdown Codes

When ECU broadcasts severe fault codes, 1-up and 4-up displays are replaced with shutdown timer message. During this time, no activity can be performed on display until engine shuts down and ECU stops broadcasting message. Following completion of the shutdown timer, check all active fault codes under function menu to troubleshoot.

Fault Codes

When fault codes are received from ECU, 1-up and 4-up displays are replaced with active fault code message.

Press (check mark) select key to acknowledge and hide fault.

NOTE: Display returns to 1-up or 4-up but retains warning, stop icons, and a brief fault description in header until fault is corrected.

Stand Alone Messages (Troubleshooting)

- CAN bus Communication Lost — occurs when valid J1939 CAN messages are not received for 30 seconds
 - Check wiring, CAN bus, termination resistors, and under set-up menu, check ECU address and function instance

NOTE: Functions on diagnostic gauge are limited until the CAN bus and messaging is restored

- No Data — displays in place of parameter value and occurs when data is not received for elected parameter for 5 seconds
- No Stored Faults — request sent to ECU for stored fault code information (DM2) and response is no codes available
- No Active DTC's — displays when no codes available

KW40574,0000017 -19-02JUN16-1/1

DG14 — Service Programming

Viewing Loaded Software

NOTE: If operator is not connected to engine, select offline configuration menu to view.

1. Press (home) menu key.
2. Press arrow keys to select utility.
3. Press (check mark) select key.
4. Press arrow keys to select software data.
5. Press (check mark) select key.
6. Verify John Deere software ID.

Downloading Payload

NOTE: Internet connection is necessary for this portion.

1. Start a new job in Service ADVISOR.
2. Enter model of engine (for example 6090) and click the "search" icon.
3. Type in static serial number **JDPDSPLYDG14** in the PIN/ESN box.
4. Click "Use this Model".
5. Service ADVISOR will display message "Unable to validate PIN 'JDPDSPLYDG14'. Do you wish to use this PIN anyway?"
6. Click "Yes", and then select "Finish"
7. Select "Reprogramming" from Service ADVISOR home page.
8. Select check box next to GRAYHILL-GrayHill Micro Display (GHC).
9. Verify that available software update version is newer than software version loaded on the display.
10. Select "Action" in upper right of Service ADVISOR window.

11. Select "Download Selected Payload(s)" and then click "Go".

12. Confirmation page should display status as "Downloaded" once complete.

NOTE: The default location for the files to be downloaded to is "C:\sds\payloadsn".

13. Select "Back" to return to reprogramming page.

Programming Payload

IMPORTANT: Some applications have more than one display on the same CAN bus. All displays, except one to be programmed, must be disabled by either disconnecting or pulling the fuse.

1. Connect Service ADVISOR to ECU.
2. Turn Key ON (Engine OFF).
3. If not already open, open job that was created when downloading the payload.
4. Select "Reprogramming" from Service ADVISOR home page.
5. Select check box next to GRAYHILL-GrayHill Micro Display (GHC).
6. Verify that available software update version is newer than software version loaded on the display.
7. Select "Action" in upper right of Service ADVISOR window.
8. Select "Start Reprogramming" and then click "Go".
9. Confirm reprogramming has successfully complete message.
10. Turn Key OFF for at least 15 seconds prior to starting again.

KW40574,0000018 -19-07MAR17-1/1

DG14 — Cleaning and Maintenance

Use a soft towel and mild soap or JD cleaner (degreaser). Do not use bleach, toluene, acetone, and trichloroethylene.

For accessory gauges and polycarbonate enclosures, use mild soap with a soft towel. Do not use ammonia-based cleaners.

KW40574,000012A -19-15JUN16-1/1

PV480 Diagnostic Gauge

PV480 Instrument Panel

John Deere PowerTech™ OEM engines have an electronic control system, which has controls and gauges as shown. The following information applies only to those controls and gauges supplied by John Deere. Refer to your engine application manual for specific guidelines if John Deere-sourced controls and instrumentation are not used.

The following is a brief description of the available optional electronic controls and gauges found on John Deere provided instrument panels. Refer to manufacturer's literature for information on controls not provided by John Deere.

Instrument Panel

A — Diagnostic Gauge

The diagnostic gauge (A) allows the operator to view fuel level, DEF level, engine parameters, diagnostic trouble codes (DTCs), and other engine functions. 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.

B — Arrow Keys

The arrow keys (B) allow the operator to select menu items.

C — Menu Key

The menu key (C) allows the operator to access the main menu of the diagnostic gauge.

D — Select Key

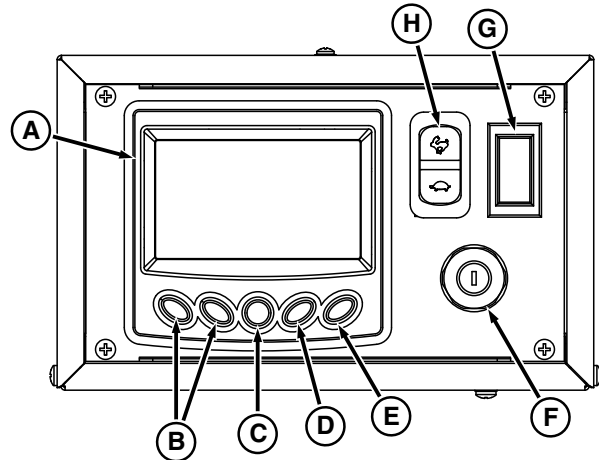
The select key (D) allows the operator to access menu items selected by the arrow keys (B) and confirm changes made by the operator.

E — Exit Key

The exit key (E) allows the operator to cancel an option and to go back to the previous menu.

F — Key Switch

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PV480 Instrument Panel

A—Diagnostic Gauge
B—Arrow Key (2 used)
C—Menu Key
D—Select Key

E—Exit Key
F—Key Switch
G—Cover
H—Speed Select Rocker Switch

The three-position key switch (F) controls the engine electrical system. When the key switch is turned clockwise to "START", the engine cranks. When the engine starts, the key switch is released and returns to the "ON" (RUN) position.

G — Cover

The cover (G) hides an expansion slot for an additional switch.

H — Speed Select Rocker Switch

The speed select rocker switch (H) is used to bump engine speed up (+) or down (-) in small increments during operation.

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PV480 Diagnostic Gauge — Using

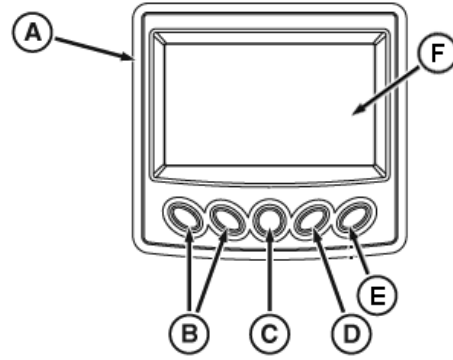
The diagnostic gauge (A) allow the operator to monitor engine functions, view diagnostic trouble codes (DTCs), and perform preliminary diagnostics. The gauge is linked to the electronic control system and sensors.

The arrow keys (B) allows the operator to scroll between menu items. The arrow keys automatically change from up and down, to left and right depending on the menu item to be selected.

The menu key (C) allows the operator to access the main menu of the diagnostic gauge. For more information, see PV480 Diagnostic Gauge — Main Menu in Section 15.

The select key (D) allows the operator to access menu items selected by the arrow keys (B) and confirm changes made by the operator.

The exit key (E) allows the operator to cancel an option and to go back to the previous menu.



PV480 Diagnostic Gauge

A—Diagnostic Gauge
B—Arrow Key (2 used)
C—Menu Key

D—Select Key
E—Exit Key
F—Display

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PV480 Diagnostic Gauge — Main Menu

NOTE: The engine does not need to be running to navigate the diagnostic gauge screens.

The main menu is the starting point in accessing engine information and configuring the diagnostic gauge. Press the menu key (C) to access the main menu.

Use the arrow keys (B) and select key (D) to view menu items displayed:

- User Settings
- Faults
- Exhaust Filter
- Start Options
- Service
- Utilities

Listed are examples of features available in main menu items.

In User Settings:

- Date
- Time
- Language
- Units
- Brightness
- Ambient Light

In Check Faults:

- ActiveDTCs
- Stored DTCs

In Exhaust Filter:

- Status
- Auto exhaust filter clean
- Disable exhaust filter clean
- Request exhaust filter clean

In Start Options:

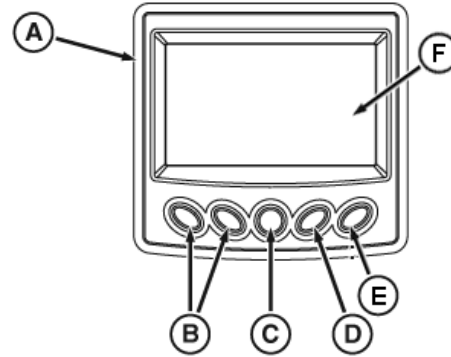
- Auto features
- Manual features
- Clock start
- Temperature start

In Service:

- Data list screens
- Engine hours
- Data logger
- Service reminders
- Harness diagnostics
- Component identification

In Utilities:

- System settings
- Pressure governing
- ECU software update
- Advanced settings (password protected)



PV480 Diagnostic Gauge

A—Diagnostic Gauge
B—Arrow Key (2 used)
C—Menu Key

D—Select Key
E—Exit Key
F—Display

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PV480 Diagnostic Gauge — Essential Menus**Automatic Exhaust Filter Cleaning**

To enable auto exhaust filter cleaning mode:

1. Press Menu key on diagnostic gauge.
2. Press Arrow keys to scroll up or down to EXHAUST FILTER.
3. Press Select key.
4. Press Arrow keys to scroll up or down to AUTO EXH FLT CLEAN.
5. Press Select key to enable auto exhaust filter cleaning.

Manual/Parked Exhaust Filter Cleaning

To request a manual/parked exhaust filter cleaning:

1. Reduce engine speed to slow idle.
2. Press Menu key.
3. Press Arrow keys to scroll up or down to EXHAUST FILTER.
4. Press Select key.
5. Press Arrow keys to scroll up or down to REQUEST EXH FLT CLEAN.
6. Press Select key to request a manual/parked exhaust filter cleaning.
7. Follow directions on display and ensure all conditions are met.
8. Press Select key to CONFIRM all conditions are met.

Disable Exhaust Filter Cleaning

To disable the auto exhaust filter cleaning mode:

1. Press Menu key on diagnostic gauge.
2. Press Arrow keys to scroll up or down to EXHAUST FILTER.
3. Press Select key.
4. Press Arrow keys to scroll up or down to DISABLE EXH FLT CLEAN.
5. Press Select key to disable exhaust filter cleaning.

Fault Codes — Active

To view active fault code information:

1. Press Menu key on diagnostic gauge.
2. Press Arrow keys to scroll up or down to FAULTS.
3. Press Select key.
4. Press Arrow keys to scroll up or down to ACTIVE FAULTS.
5. Press Select key.
6. Press Arrow keys to scroll through available faults.

Fault Codes — Stored

To view stored fault code information:

1. Press Menu key on diagnostic gauge.
2. Press Arrow keys to scroll up or down to FAULTS.
3. Press Select key.
4. Press Arrow keys to scroll up or down to STORED FAULTS.
5. Press Select key.
6. Press Arrow keys to scroll up or down to VIEW.
7. Press Select key.
8. Press Arrow keys to scroll through available faults.

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