User's Guide

***ICON II* 3.5" Gauge**

EVINRUDE® E-TEC®

BRP

Original Instructions

TABLE OF CONTENTS

SAFETY INFORMATION

This user's guide may contain the following safety messages:

⚠ DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury

⚠ CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

NOTICE

Indicates an instruction which, if not followed, could severely damage engine components or other property.

This user's guide contains information to prevent personal injury and damage to equipment. Use this guide in combination with the boat and outboard operator's guides. Always follow safety and operation information.

PRODUCT INFORMATION

The *Icon II 3.5" Color* gauge is designed for use with *Evinrude E-TEC® G2* outboards. The display communicates with the outboard, remote control(s), and other network connected devices, by means of a *NMEA 2000®* compliant network.

The gauge handles standard *NMEA 2000* messages and proprietary messages. The display controls a number of helm functions and options. Some options and/or modes of operation are not possible to access without this display present in the system. Select outboard sensor calibrations and functions are also accessible through the display.

FEATURES
Supports single and twin outboard applications. Twin engine applications require 2 gauges (one for each outboard)
Viewable with polarized sunglasses
Bright illumination - 750 Nit (750 cd/m^2)
Firmware update capability via USB interface
Integrates with *Evinrude ICON II* remote controls and *Evinrude E-TEC G2* outboards
NMEA 2000 network interface
Pre-configured user selectable screens
Descriptive text for fault codes and procedures
Multi-language support

SYSTEM FUNCTIONS

The display provides a number of user selectable modes and configuration menus. Select modes affect unit selection and screen appearance. Other modes interact with and affect remote control and outboard operation and functionality.

This display interacts with system components including one *Evinrude E-TEC G2* outboard, up to two remote controls, and devices on a *NMEA 2000* network.

Display Parameters

The display supports the following data:

Number of engines supported • 2 (one gauge for each engine)	Operating Hours
Engine Instance • 0-1	Low Oil Warning
System Faults	Fuel Economy
Fuel Flow	Mode Selection • Trim Assist • Power Steering Assist
Water Pressure	Winterization
Battery Voltage	Hand/Foot Throttle Command Source
Cooling Water Temperature	Settings • Trim Sender Calibration • Tilt Limit Calibration • Fluid Level Configuration and Calibration
Trim Position	Back Light Control • Display Selected • Remote Control Selected
Oil Level • From outboard mounted oil tank • From vessel mounted oil tank	Audible Alarms
Fluid Levels • Four Inputs • Sourced from remote control inputs or NMEA 2000 devices	Unit Selection • US • Metric • Imperial • Nautical
Speed Over Ground (with use of a GPS antenna/source only)	

INSTALLATION

Verify that each of the following components are in the kits:

Kit With GPS P/N 769968

- Sealing Plug, P/N 514690
- 2-pin connector, P/N 514696
- Single Tee, P/N 764151
- GPS Antenna, P/N 767487
- Wire Harness, P/N 767749
- Gauge Assembly, P/N 5010797
- User's Guide, P/N 362089

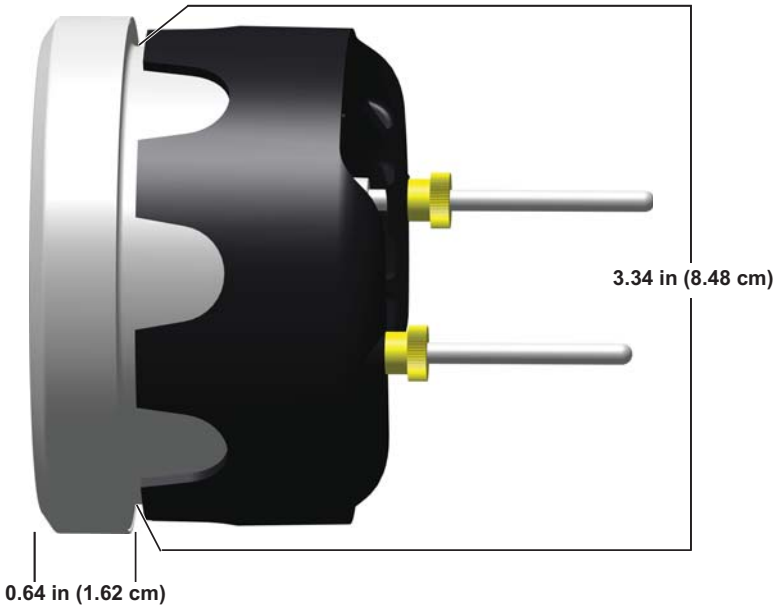
Kit Without GPS P/N 769969

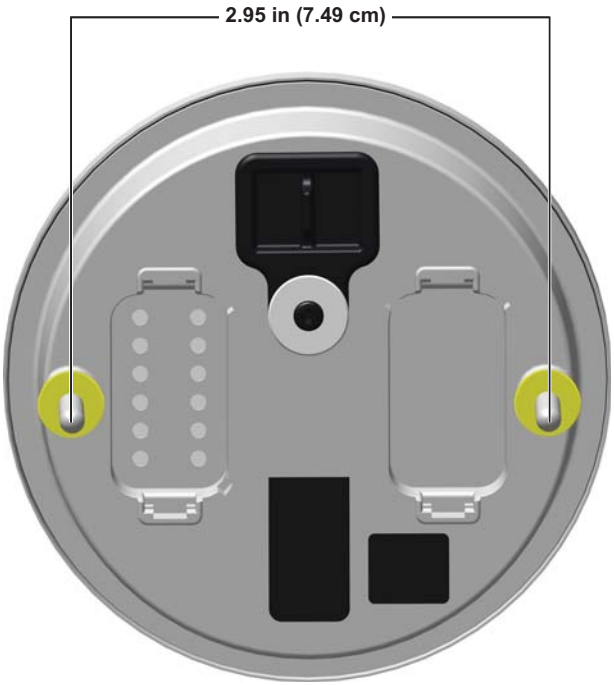
- Sealing Plug, P/N 514690
- 2-pin connector, P/N 514696
- Single Tee, P/N 764151
- Wire Harness, P/N 767749
- Gauge Assembly, P/N 5010797
- User's Guide, P/N 362089

Install the threaded studs into the back of the gauge and tighten.

362089-41

GAUGE DIMENSIONS





362089-43

INSTRUMENT PANEL CLEARANCES

Gauge Spacing (center to center)

- Minimum center distance - 4” (10.16 cm)

Instrument Panel Thickness

- Maximum panel thickness - 1” (2.54 cm)

Drilled Hole Size

IMPORTANT: Check space behind panel for adequate instrument clearance.

- 3 3/8 in. (86 mm)

FASTENING THE GAUGE

Insert instrument into panel hole. Install back clamp. Tighten nuts finger tight.

Electrical Connections

Connect the following:

- 2-pin deutsch connector to the warning horn (optional)
- 2-pin deutsch connector to the accessory power Y-connector
- the public network connector to the public network tee

For gauge connector identification, refer to **CONNECTOR IDENTIFICATION**.

TURNING THE DISPLAY ON

Turn the key switch to the On position or start the outboard to turn the display on.

NOTE: There is no power button on this gauge.

SETTING UP YOUR GAUGE

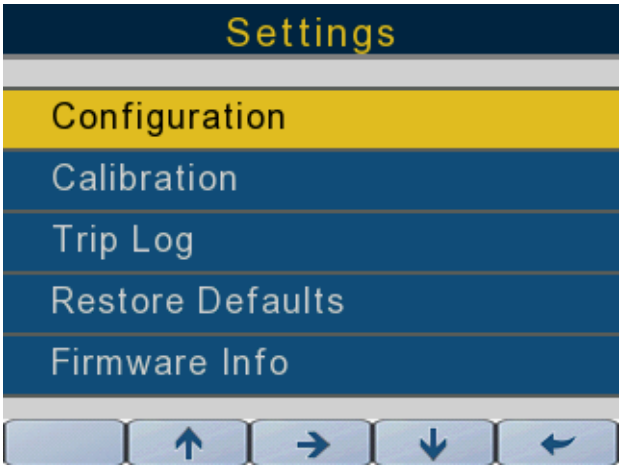
Settings

Press and hold the backlight button (far right) to access the Settings screen.

Use the Settings screen to set Configuration options, Calibration options, reset the trip log, restore the display to factory default settings, and view Firmware Information.

Use the up and down arrows to highlight the desired selection.

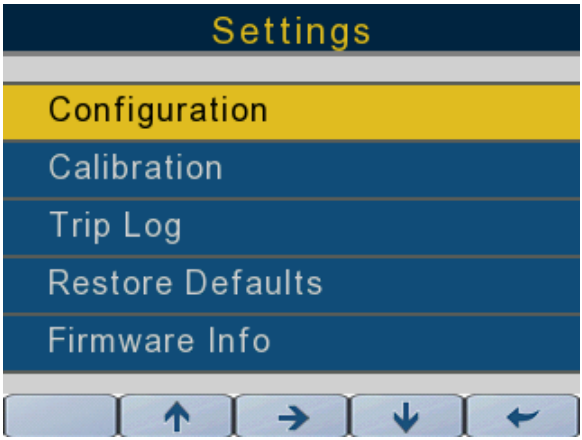
Press the right facing arrow to enter the desired selection screen.



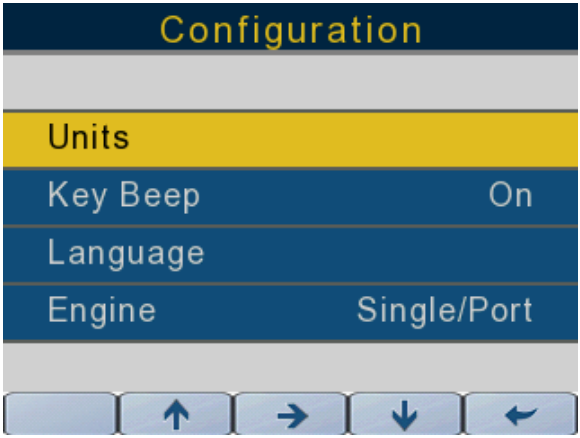
362089-20

Configuration

Use the up and down arrows to highlight the Configuration option from the Settings screen. Press the right facing arrow button to access the Configuration screen. Use the Configuration screen to set Units, Key Beep, Language and Engine.



362089-20



362089-22

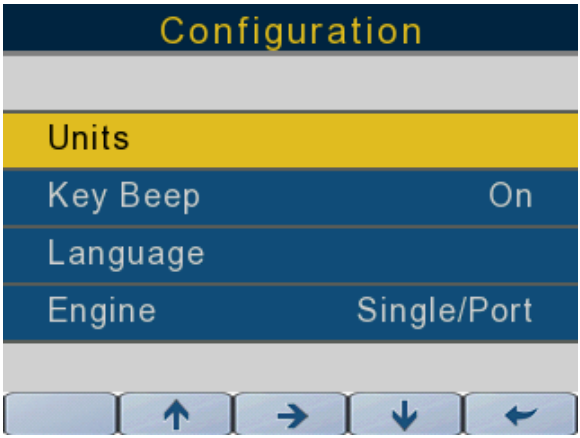
Units

Unit Selection

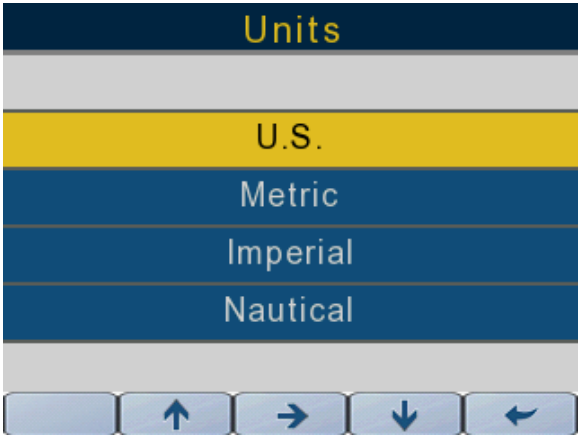
NOTE: If Nautical is selected, certain units of measure will change. Refer to the table below for specifics.

U.S.	Metric	Imperial	Nautical
Degrees Fahrenheit	Degrees Celsius	Degrees Celsius	Specific unit of measure is determined by primary measurement system selection (sub-units)
Gallons per Hour	Liters per hour	Imperial gallons per hour	Specific unit of measure is determined by primary measurement system selection (sub-units)
Miles per Gallon	Liters per 100 Kilometers	Miles per imperial gallon	Nautical miles per specific unit of measure is determined by primary measurement system selection (sub-units)
Miles per Hour	Kilometers per Hour	Miles per hour	Knots
percent	percent	percent	percent
Pounds per Square Inch	kilospascals	Pounds per square inch	Specific unit of measure is determined by primary measurement system selection (sub-units)
Revolutions per Minute	Revolutions per Minute	Revolutions per minute	Revolutions per minute
Volts	Volts	Volts	Volts
Miles	Kilometers	Miles	Nautical miles

Use the up and down arrows to highlight the Units selection in the list. Press the right facing arrow to enter the Units screen. Use the up and down arrows to select units in U.S. (default selection), Metric, or Imperial or Nautical.



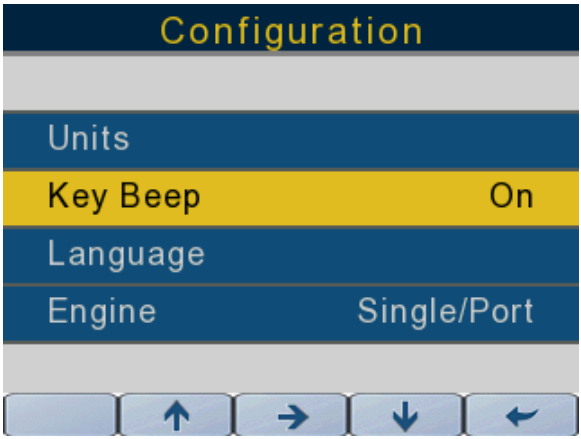
362089-22



362089-39

Key Beep

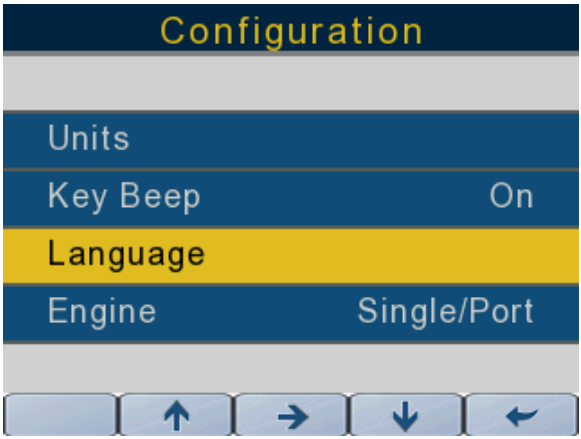
Use the up and down arrows to highlight Key Beep.
Press the right facing arrow button to turn the Key Beep On or Off.



362089-15

Language

Use the up and down arrows to highlight Language.
Press the right facing arrow to access the language screen.



362089-42

Use the up and down arrows to highlight the language selection (English (default), French, Spanish, Italian, or German). Press the right facing arrow to confirm the language selection.

362089-21

Engine

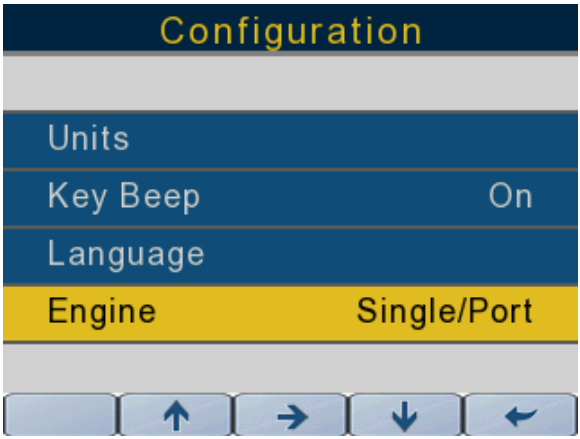
Use the up and down arrows to highlight Engine.

Press the right facing arrow button to change the selections.

For single engine applications, use the Single/Port setting.

For twin engine applications, two gauges are required (one for each engine).

Use the Single/Port setting for the port engine and the Starboard setting for the starboard engine.



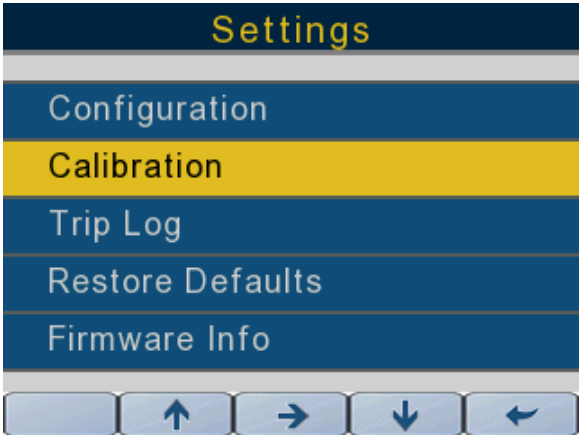
362089-37

Calibration

Press the up and down arrow buttons to highlight Calibration.

Press the right facing arrow button to enter the Calibration screen.

Use the Calibrations screen to set calibration options for Fluid Tanks, Trim and Tilt.



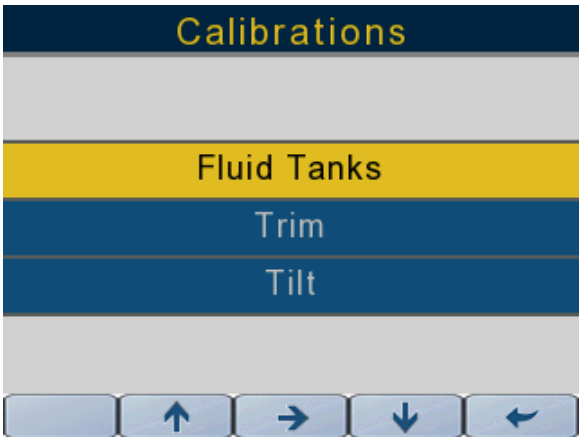
362089-27

Fluid Tanks

Press the up and down arrow buttons to select the Fluid Tanks option.

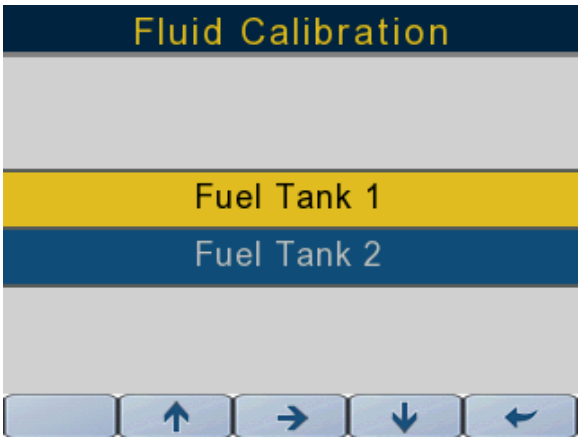
Press the right facing arrow button to set calibration levels (2, 3, or 5 point) and tank volumes.

The fluid tank input source(s) are sourced from the control head (if applicable) or via the NMEA 2000 network.



362089-16

Press the right facing arrow button to access the Fluid Calibration screen for the selected fuel tank.

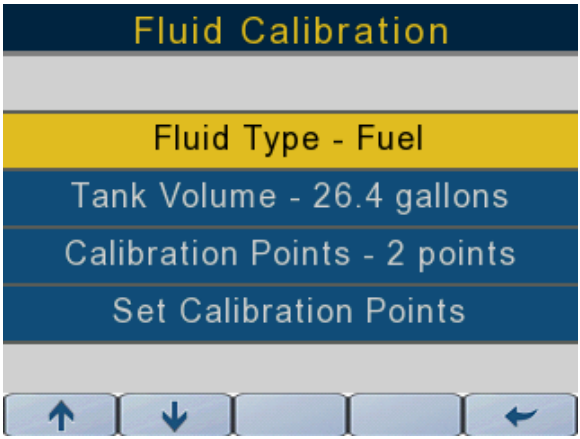


362089-31

Press the up and down arrow buttons to select the following:

Fluid Type

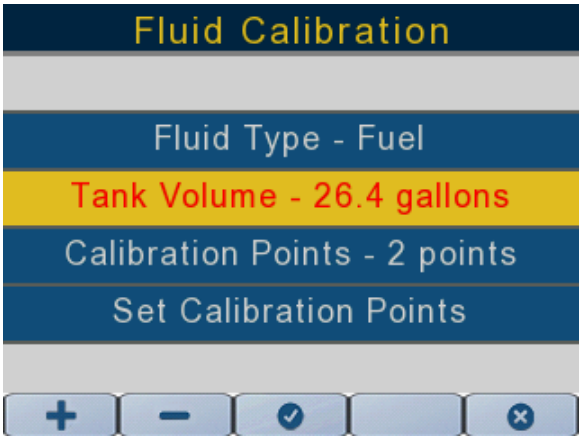
Fluid Type is not configurable.



362089-32

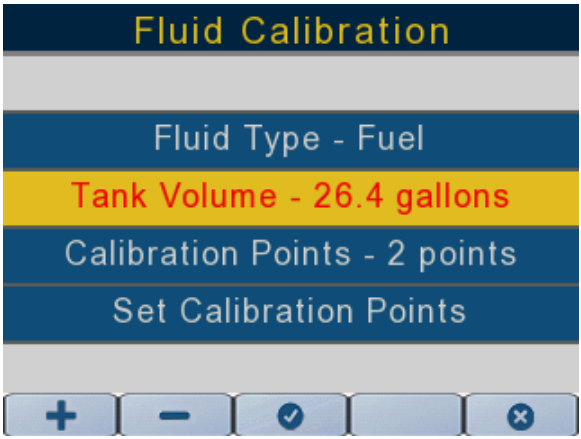
Tank Volume

Press the up and down arrows to highlight Tank Volume.



362089-33

Once tank volume is highlighted, press the right facing arrow.
The text will turn red.

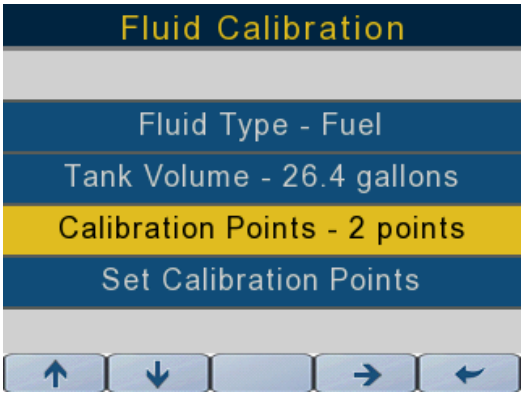


362089-34

Press the up and down arrows to select the appropriate tank volume.
Press the check mark button to confirm the selection.
Press the left facing arrow to return the previous screens.

Calibration Points

Press the up and down arrow buttons to highlight Calibration Points.



362089-35

Once Calibration Points is highlighted, press the right facing arrow button.
Press the + and - buttons to select the appropriate number of calibration points (2, 3 or 5).
Press the left facing arrow to return the previous screens.

Set Calibration Points

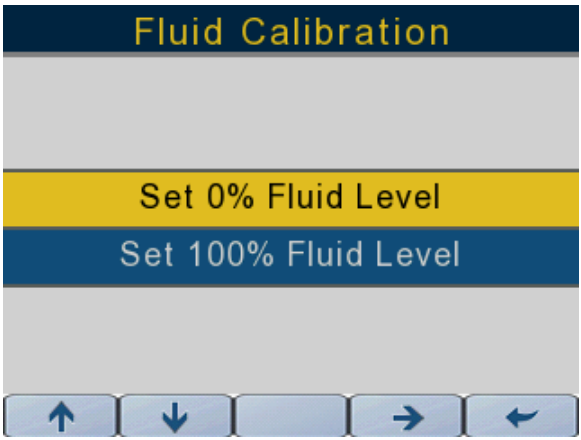
Press the up and down arrow buttons to change the calibration point.

IMPORTANT: Have the float on the tank fluid sending unit at the very bottom of its travel range when setting the fluid level to 0%.

IMPORTANT: Have the float on the tank fluid sending unit at the very top of its travel range when setting the fluid level to 100%.

NOTE: Not all calibration points have to be set at the same time.

Press the right facing arrow button to set the appropriate calibration point.



362089-36

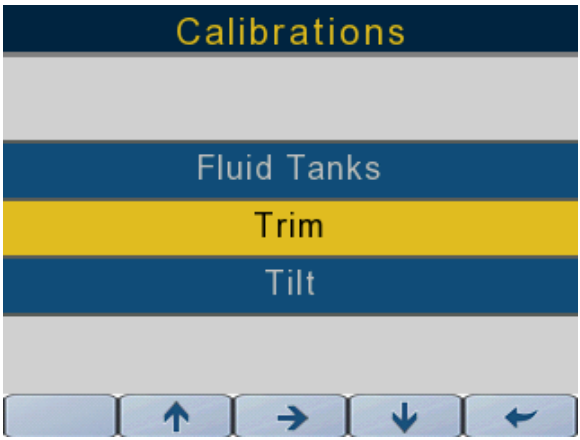
Press the left facing arrow to return the previous screens.

Repeat this procedure for all tanks and all fluid levels to be monitored by this gauge.

Trim

Press the up and down arrow buttons to select the Trim option.

Press the right facing arrow button and follow the on-screen prompts to set the lower and upper trim range limits.



362089-24

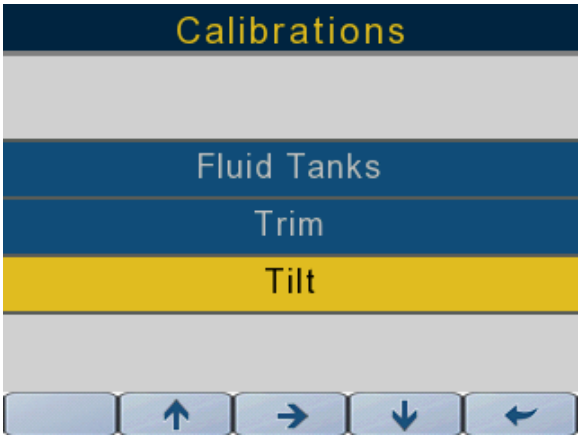
Use the left facing arrow button to return to the previous screen.

Tilt

Press the up and down arrow buttons to select the Trim option.

Press the right facing arrow button to select the Tilt option.

Follow the on-screen prompts to set or clear the maximum tilt range limit.

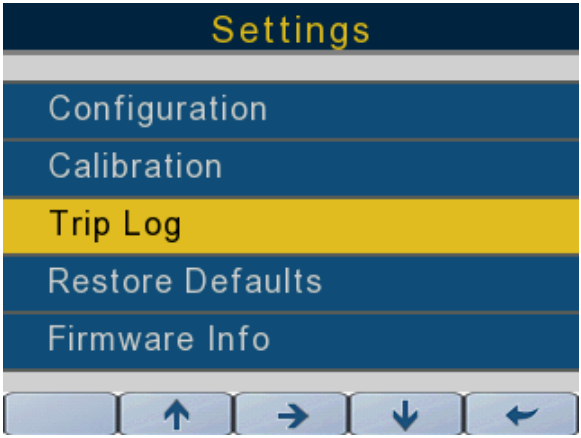


362089-25

Use the left facing arrow button to return to the previous screen.

Trip Log

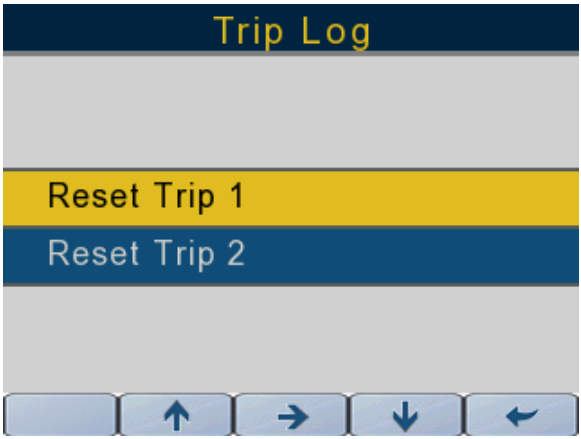
Use the following two screens to reset the trip logs for Trip 1 and Trip 2.
Press the up and down arrow buttons to select Trip Log.
Press the right facing arrow button to access the Trip Log menu.



362089-29

Reset Trip Logs

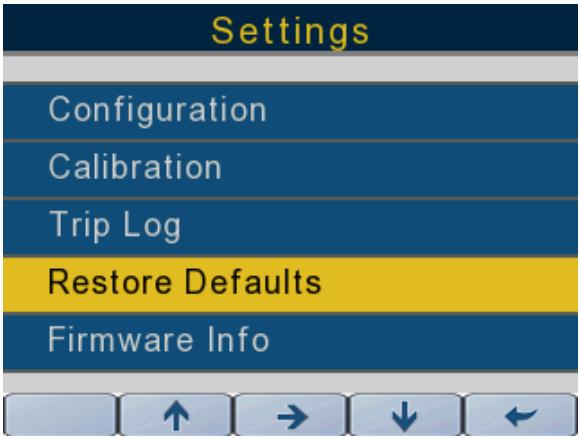
Press the up and down arrow buttons to highlight which trip to reset.
Press the right facing arrow button to reset the trip log.



362089-43

Restore Defaults

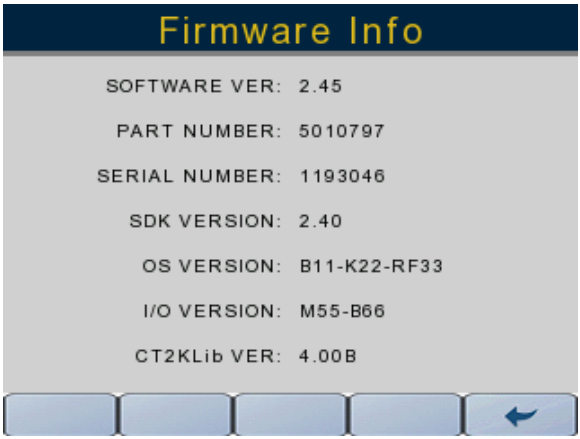
Use the Restore Defaults screen to restore the display to factory default settings.
Press the up and down arrows to select Restore Defaults.
Press the right facing arrow button to access the Restore Defaults menu.



362089-18

Firmware Information

Use this screen to view the current firmware information for the display.



362089-28

MODE SELECTION

Press the Mode Select button to access the Mode Select screen. The following table describes the Mode Select functions:

Function	Settings/Options	Note
Throttle Select	Hand, Foot	The “Foot” option will only appear on the Mode Select screen if a foot throttle is installed in the system
Trim Assist (*i-Trim*)	On, Off	Factory set to Off
Winterization	Initiate	Use for long term storage
Power Steering Assist	Minimum, Medium, Maximum	Factory set to “Minimum” Only available on *Evinrude E-TEC G2* outboards with Dynamic Power Steering (DPS) or iDock models

Throttle Source

The “Hand” throttle selection is shown. Press the right facing arrow button to toggle the selection between “Hand” and “Foot”.

Throttle source is only available on the gauge set to Port/Single

362089-26

Trim Assist

Select the trim assist option. Press the right facing arrow button to toggle the selection between On and Off.

Use the gauge set to Port/Single to set the trim assist for single engine configurations and both port and starboard engines on twin engine applications.

362089-12

Winterization

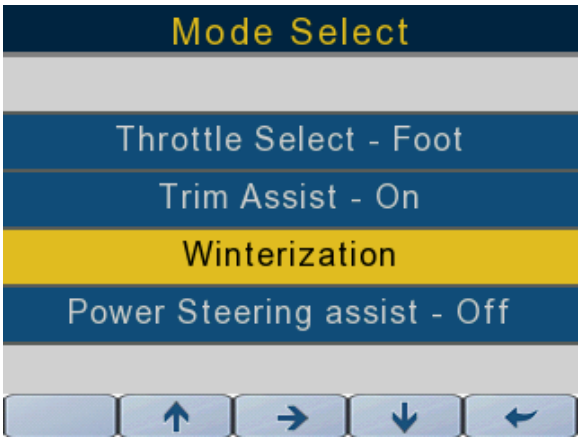
Use the up and down arrow buttons to select the Winterization option.

Press the right facing arrow button to start the winterization process. Follow the on-screen prompts to complete winterizing of the outboard.

Use the gauge set to Port/Single for single engine and twin port engine winterization.

Use the gauge set to Starboard for twin starboard engine winterization.

NOTE: The engine must be running to initialize the winterization process.



362089-13

Power Steering Assist

Use the up and down arrow buttons to select the Power Steering Assist option. Press the right facing arrow button to toggle the selection between Minimum Assist, Medium Assist, and Maximum Assist.

Use the gauge set to Port/Single to set the power steering assist for single engine configurations and both port and starboard engines on twin engine applications.

362089-19

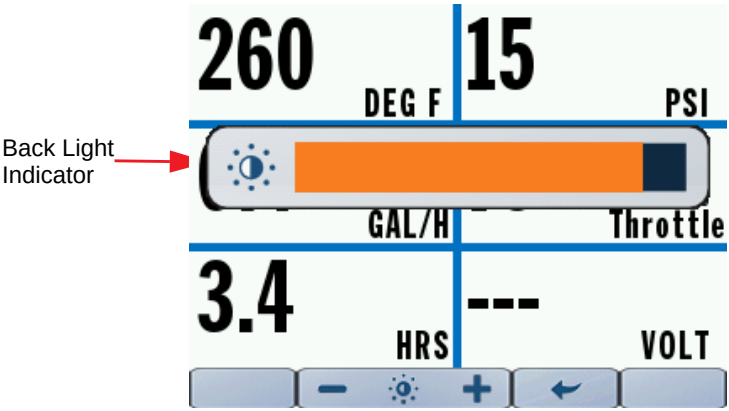
Instrument Selected Backlighting

Backlighting can be adjusted in three different means and is adjustable in 10% increments from 10% to 100%. Back light level remains in memory when the display is shut off.

1) PRESS THE FAR RIGHT BUTTON ON THE GAUGE TO ACCESS THE BACKLIGHT ADJUSTMENT

2) Via the SETUP/BACKLIGHTING MENU ON THE GAUGE

3) VIA AN ICON II PREMIUM CONTROL HEAD (SEE CONTROL HEASD INSTRUCTIONS).



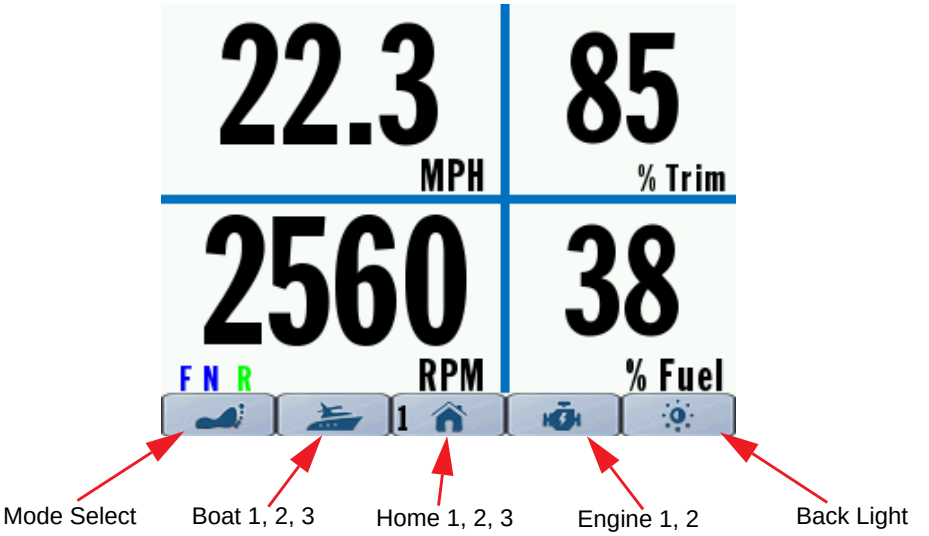
362089-11

USING THE DISPLAY

Press a button once to access its first screen, press the same button again to access its subsequent screens if applicable.

When powered on, the gauge will return to the screen displayed when powered down.

NOTE: The Mode Select button only accesses a single screen.

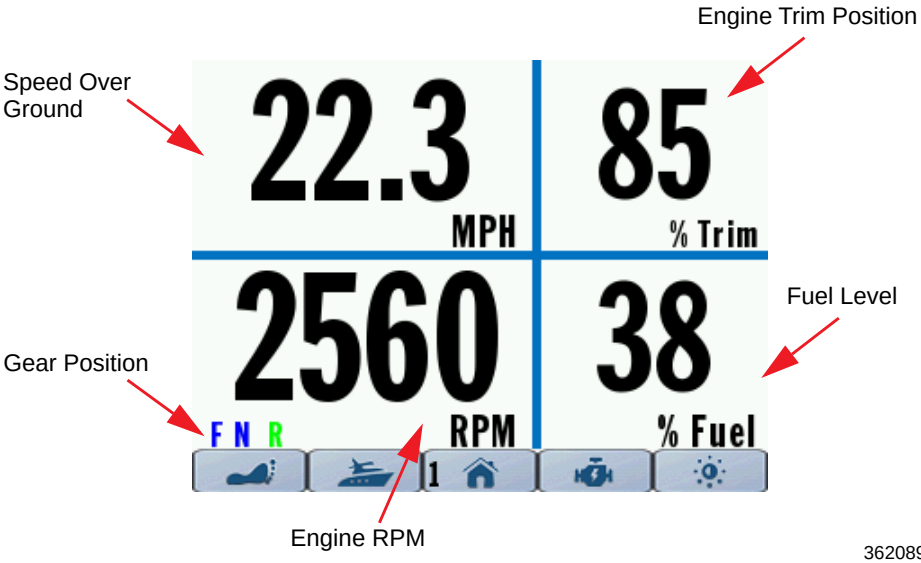


DISPLAY SCREENS

Home 1

Press the Home button once to access the Home 1 screen. The data shown is:

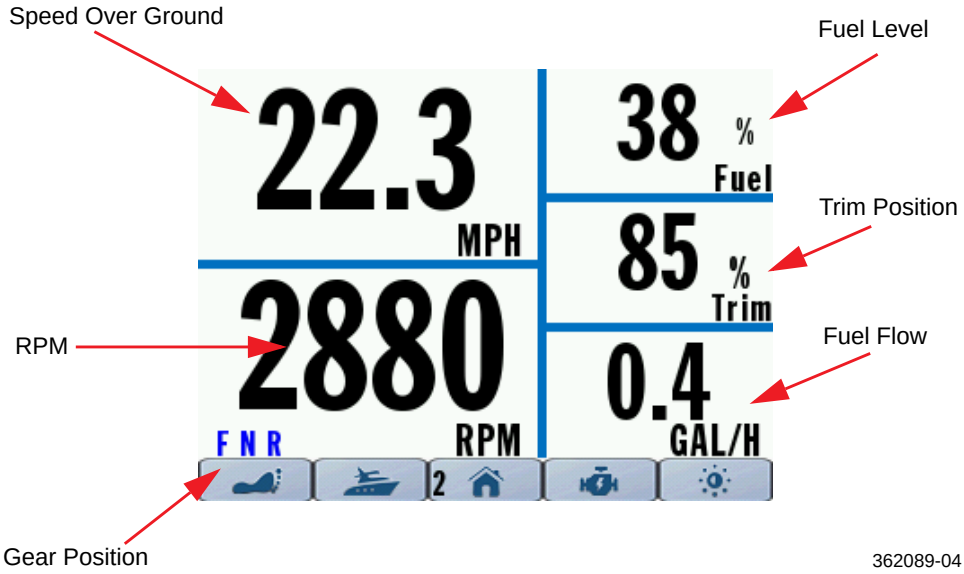
- Speed Over Ground (only available if a GPS device is present)
- Engine RPM
- Gear Position
- Engine Trim Position
- Fuel Level (sum of total fuel sources)



Home 2

Press the Home button a second time to access the Home 2 screen. The data shown is:

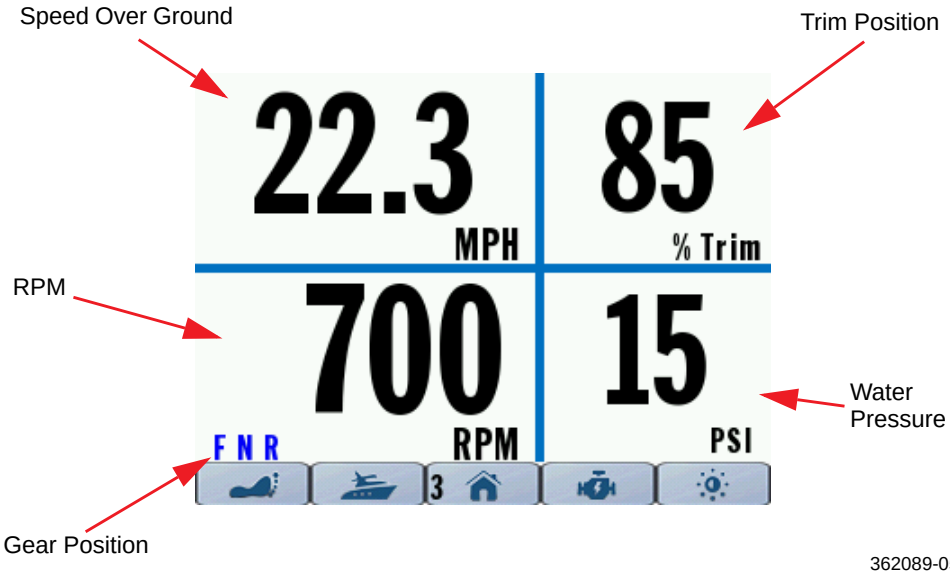
- Speed Over Ground (only available if a GPS device is present)
- Engine RPM
- Gear Position
- Fuel Level (sum of total fuel sources)
- Engine Trim Position
- Fuel Flow



Home 3

Press the Home button a third time to access the Home 3 screen. The data shown is:

- Speed Over Ground (only available if a GPS device is present)
- Engine RPM
- Gear Position
- Engine Trim Position
- Water Pressure or Engine Coolant Temperature



362089-05

Boat 1

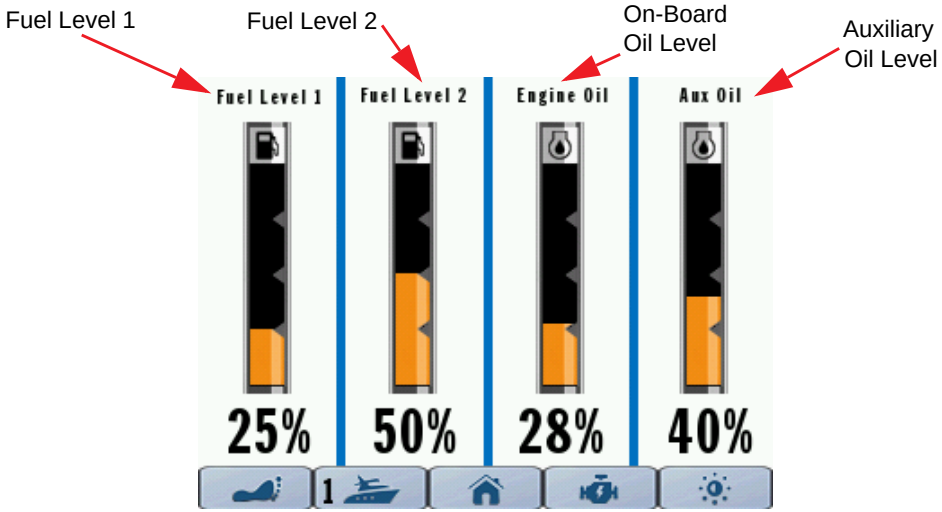
Press the Boat button once to access the Boat 1 screen.

The gauge display will vary according to system configuration. Use the latest version of Evinrude Diagnostic Software to Configure up to four (4) tanks – two fuel tanks, one on-engine oil tank, and one vessel mounted oil tank.

The fluid level shall be displayed as a bar graph with divisions of ¼ tank increments. The bar graph will show 100% when the tank is full and 0% when the tank is empty.

The data shown is:

- Fuel Level - Tank 1 (instance 4)
- Fuel Level - Tank 2 (instance 5)
- Engine Onboard Oil Level (instance 0 or 1 depending on gauge configuration.
- Auxiliary Oil Level (default for instance 6)



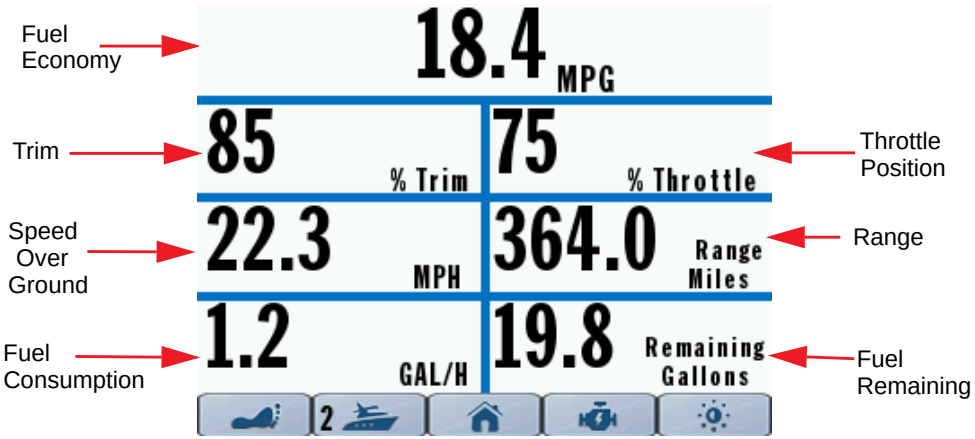
362089-40

Boat 2

Press the Boat button a second time to access the Boat 2 screen. This screen provides operating data for the fuel economy of the vessel.

The data shown is:

- Fuel Economy
- Engine Trim Position
- Speed Over Ground (only available if a GPS device is present)
- Fuel Consumption
- Throttle Position
- Range – uses sum of fuel tank levels and average fuel economy value
- Fuel Remaining – sum of all fuel tanks



362089-07

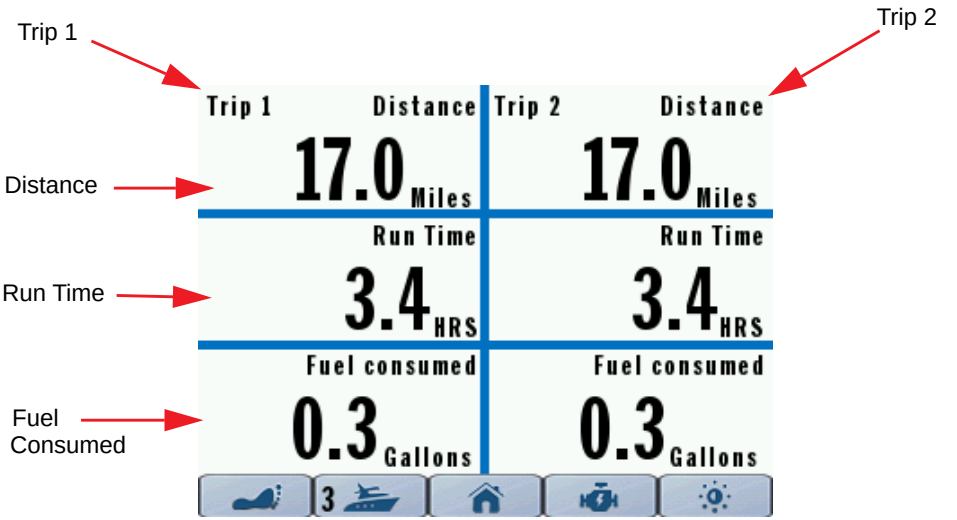
Boat 3

Press the Boat button a third time to access the Boat 3 screen. This screen provides operating data for the two independent trip logs of the vessel.

Trip logs will only be available on the gauge set to Port/Single for single engine configurations as well as twin engine configurations.

The data shown is for Trip 1 and Trip 2 are:

- Distance
- Run Time
- Fuel Consumed (cumulative from all fuel tanks)

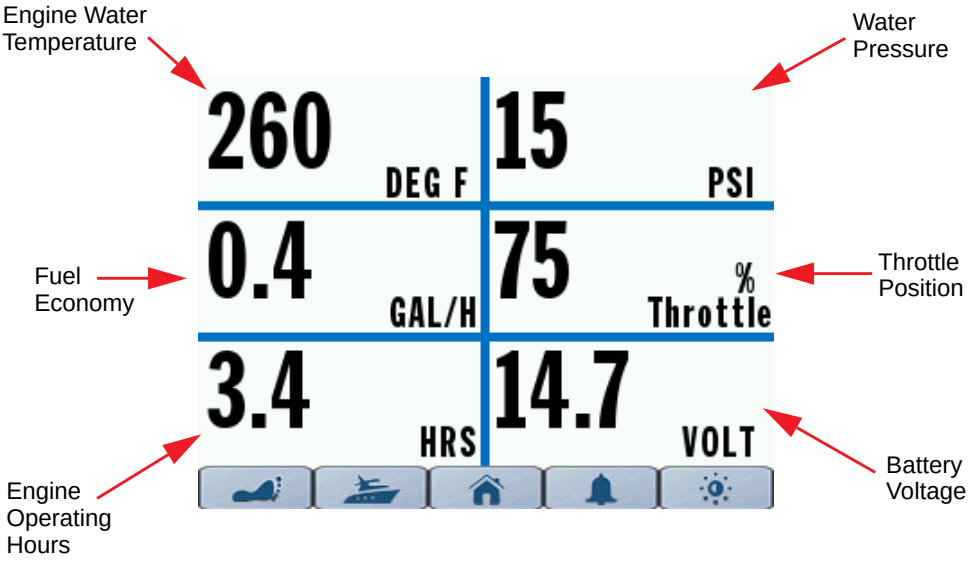


362089-08

Engine 1

Press the Engine button to access the Engine 1 screen. The data shown is:

- Engine Water Temperature
- Fuel Economy
- Engine Operating Hours
- Water Pressure (if available)
- Throttle Position
- Battery Voltage



362089-09

Engine 2

Press the Engine 2 button a second time to access the Engine 2 screen. This screen displays active System Faults.

362089-10

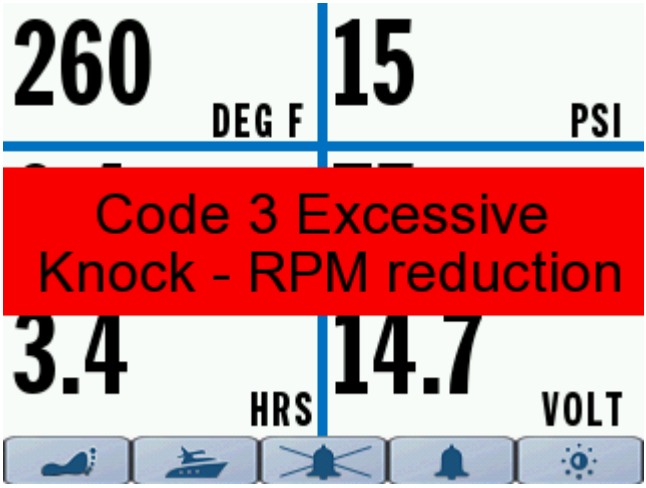
SYSTEM INFORMATION

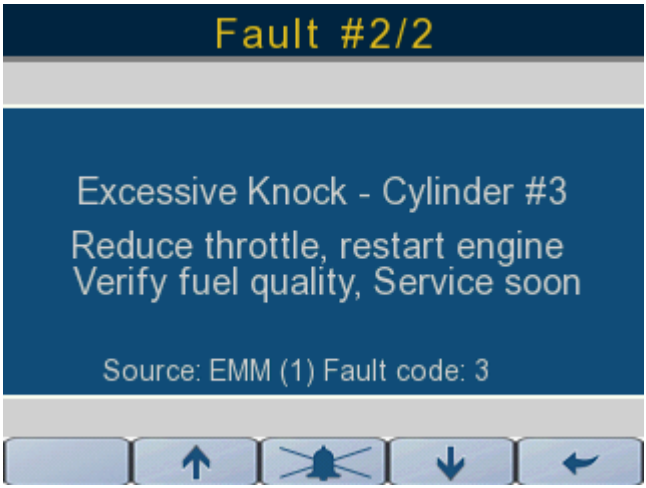
System Faults

When an active or current fault is broadcast onto the *NMEA 2000* network by a control head(s), Mechanical Control Module, engine, Joystick module, Manifold controller and Pressure sensor module, the gauge will do one of the following:

- Display the active fault on the Engine 2 page
- Activate the appropriate Engine Status Indicator (Oil, Temperature, Check engine, Battery)
- Activate a pop up showing the appropriate fault information. The Pop Up color will be orange. In addition, the appropriate Engine Status Indicator will be highlighted.

NOTE: A pop up accompanied with an audible alarm will display the appropriate fault information and the pop up color will be red. In addition, the appropriate Engine Status Indicator will be highlighted.


260
DEG F
15
PSI
Code 3 Excessive Knock - RPM reduction
3.4
HRS
14.7
VOLT


Fault #2/2
Excessive Knock - Cylinder #3
Reduce throttle, restart engine
Verify fuel quality, Service soon
Source: EMM (1) Fault code: 3

A pop-up warning and audible warning, or both, will remain in effect until acknowledged by the operator. If a fault is active, it will be displayed in Active Faults information on the Engine 2 page.

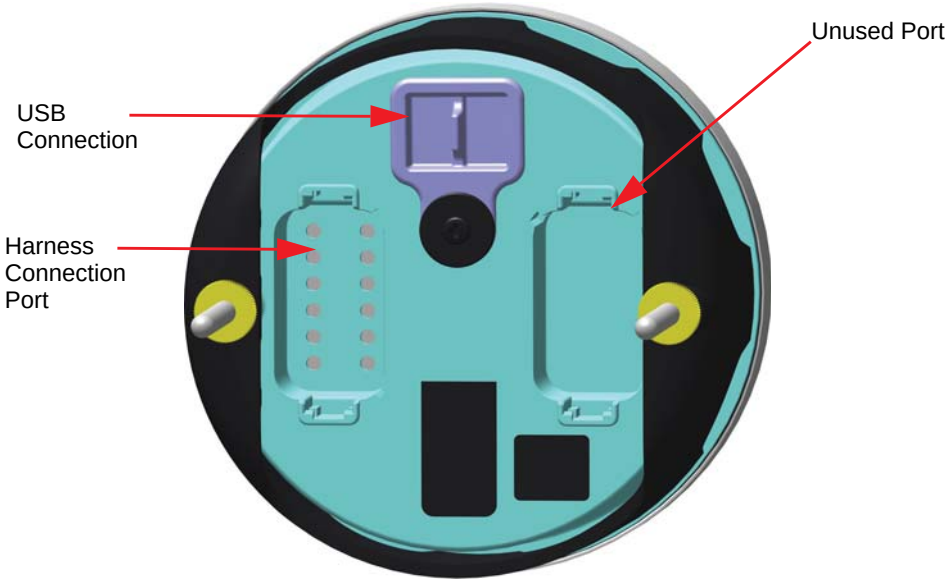
Fault display depends on the instance configuration of the gauge (Port/Single used for single engine configurations and port engines on twin engine configurations. Starboard selection used for starboard engines on twin engine applications).

- EMM fault codes will only be displayed in the Engine 2 page on the gauge whose instance matches the source of the fault code. **For Example:** If the Starboard EMM activates a fault, that fault information can only be found in the Engine 2 page of the gauge that is set to Starboard.
- Control head fault codes will only be displayed in the Engine 2 page on the gauge that is set to Port/Single.
- Mechanical control module faults will only be displayed in the Engine 2 page on the gauge that is set to Port/Single.
- Joystick module faults will only be displayed in the Engine 2 page on the gauge that is set to Port/Single.
- Manifold controller will be displayed in the Engine 2 page on the gauge whose instance matches the source of the fault code. **For Example:** If the Starboard EMM activates a fault, that fault information can only be found in the Engine 2 page of the gauge that is set to Starboard.
- Pressure sensor module faults will only be displayed in the Engine 2 page on the gauge that is set to Port/Single.

CONNECTOR IDENTIFICATION

NOTE: The USB port is used for firmware updates - see your dealer.

Rear View



362089-14

TROUBLESHOOTING

	Problem	Solution
Troubleshooting Tip	*Display does not power On.*	*Charge the network power supply battery to a minimum of 12.5V.* *Disconnect wiring harness from back of gauge, and then securely reconnect it.* *Check for power at pins 1 and 2 of connector*

	Problem	Solution
Trim Position Troubleshooting Tip	*Trim position is not accurate.*	*Verify the trim calibration settings.*

	Problem	Solution
Trim Position Troubleshooting Tip	*Trim position is not accurate.*	*Verify the trim calibration settings.*

	Problem	Solution
Water Pressure Troubleshooting Tip	*Water pressure does not display or is not accurate.*	*Verify the water pressure transducer selection; use Evinrude Diagnostic software (see your dealer).*

	Problem	Solution
Fuel and Oil Level Troubleshooting Tip	*Fuel and oil level does not display or is not accurate.*	*Reset the configuration of the fluid input source.* *Reset the multi-point level calibration for each fluid tank.*

Fuel Economy Troubleshooting Tip	***Problem***	***Solution***
	Fuel economy data does not display or is not accurate	*Verify that GPS speed input data is available.*

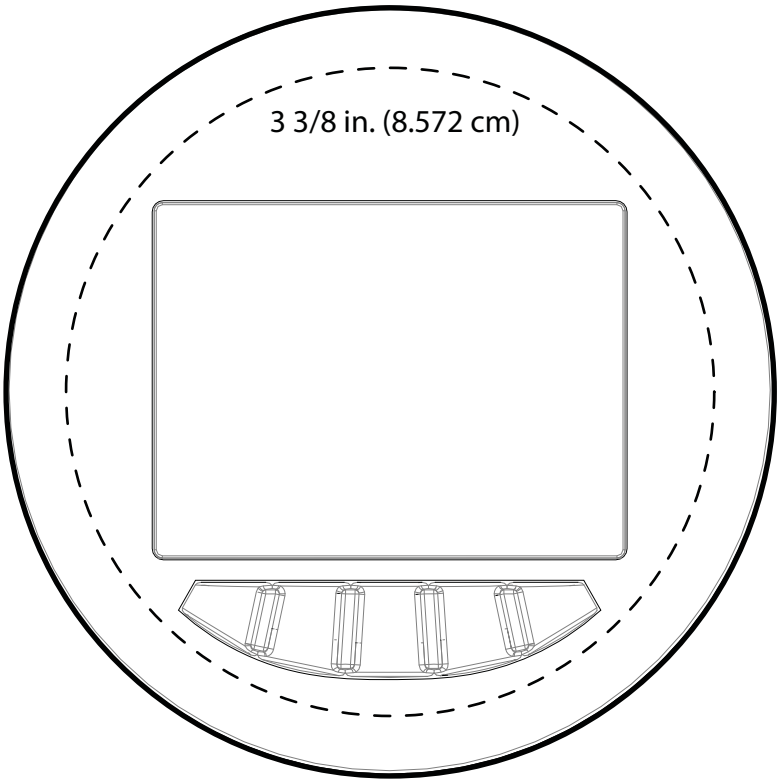
Troubleshooting Tip	***Problem***	***Solution***
	On-board oil level does not display or is not accurate.	*Trim to the full down position before checking oil level.*

MOUNTING TEMPLATE

Use a 3 3/8” hole saw to cut a hole along the dotted line.

Ensure print settings are set to 100%.

Ensure the gauge aligns properly to the template BEFORE cutting.



www.brp.com

SKI-DOO® SEA-DOO® CAN-AM®
LYNX® EVINRUDE® ROTAX®