VesselView 7

90-8M0074777 513

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VesselView 7 Overview

IMPORTANT: VesselView is a multi-function display (MFD) that is compatible with products manufactured by Mercury Marine Outboards, Mercury MerCruiser, and Mercury Diesel. Some of the functions explained in this manual will be disabled depending on the power package it is connected to.

VesselView is a comprehensive boat information center that can display information for up to four gasoline or diesel engines. It continuously monitors and reports basic operating data including detailed information such as seawater temperature and depth, trim status, boat speed and steering angle, and the status of fuel, oil, water, and waste tanks.

VesselView can be fully integrated with a vessel's global positioning system (GPS) or other NMEA-compatible devices to provide up to the minute navigation, speed, and fuel-to-destination information.

VesselView is a display extension for autopilot features and joystick operations. All functionality of these piloting features are controlled through a strict protocol with Mercury Marine's autopilot control area network (CAN) track pad. VesselView will show if the mode is active or in standby; popups will appear as the vessel arrives at a waypoint asking to acknowledge the turn, and display text about how to adjust the engine and drives to achieve maximum efficiency.

VesselView is equipped with a micro SD card port that allows an authorized OEM or dealership to import the personality configuration. It can also be use by the owner to upgrade the operating system. When more than one VesselView is used, either as a triple- or quad-engine application, or a second helm, the same micro SD card can be used to download those configurations.

Front Controls

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- **a -** Touch screen
- **b -** Mark–Menu button
- **c -** Standby–Auto button
- **d -** Exit button
- **e -** Rotary knob (press for enter function)
- **f -** Goto–Pages button
- **g -** In/Out Zoom, man overboard (MOB)
- **h -** Power–Brightens
- **i -** Card reader door

Front Controls Operations

Touch Screen: The screen on VesselView 7 has numerous districts that are touch sensitive and operated with a press, or flick with a vertical or horizontal motion.

Mark–Menu: The Mark–Menu has two functions and is dependent on which screen mode is active. Press the Mark–Menu button while the chart plotter is visible to access waypoints and other functions. Press the button while SmartCraft information is visible to open the scroller bar.

Standby–Auto: Allows the operator to suspend or engage Navico® systems operation.

Exit: Closes a menu and removes the cursor from the screen.

Rotary Knob: Used for maneuvering in menus, zooming in charts and can be pressed to enter a selection.

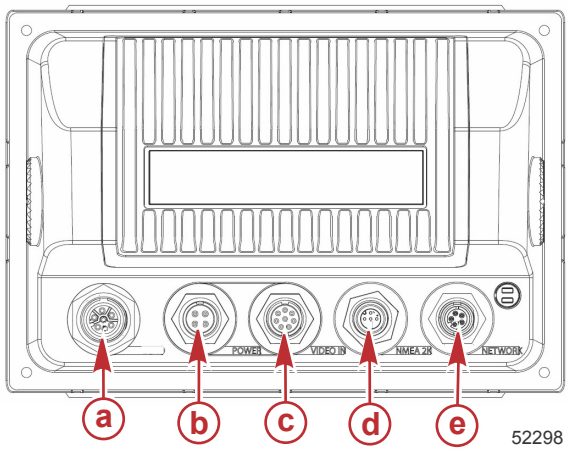
Goto–Pages: A short press displays the home panel pages and can be pressed multiple times to toggle through the home page menus. A long press displays the Goto menu options.

In Out–MOB: Zoom buttons for various NMEA backbone components. Pushing the In and Out buttons at the same time will mark the position of the vessel with a man overboard (MOB) icon.

Power–Standby–Brightness: Press once to access the standby mode or change the backlighting of the unit or go to Night mode.

Card Reader: Allows VesselView software to be upgraded, navigation charts uploaded, and allows waypoints and settings to be saved.

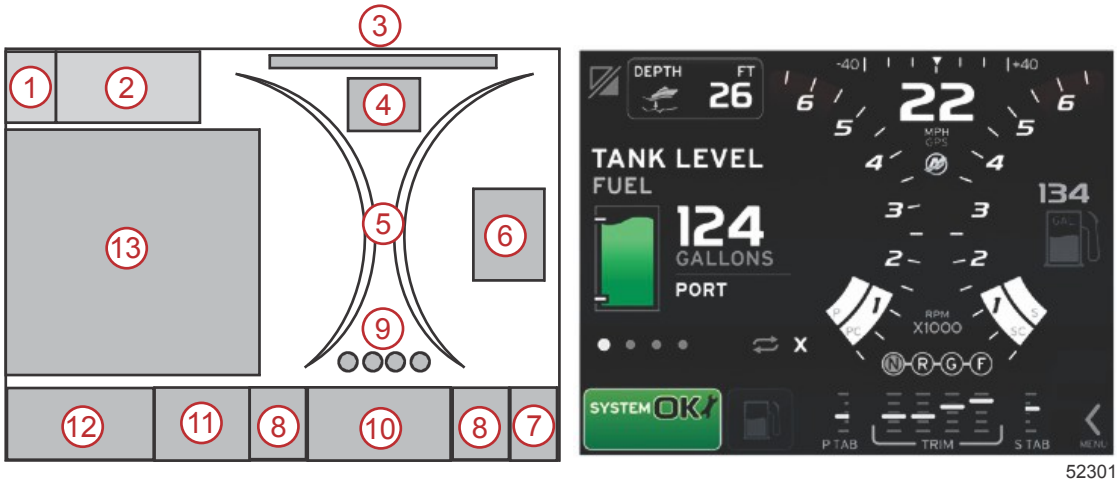
Rear Panel



Item	Function	Description
a	SmartCraft	Connects to the SmartCraft network, links SC 100 gauges
b	Power	Power input and external alarm
c	Video in	Provides two composite video inputs
d	SIMNET/ NMEA 2000	Connects to NMEA 2000 network
e	Network	Ethernet network ports

VesselView 7 Screen Display Locations and Descriptions

VesselView has multiple boxes that display specific engine information and active modes.



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1. Application Swap: Touching this area of the screen will toggle between a Mercury application screen and the last Navico screen.
2. Volts or Depth: This data box is user definable. A list of all available data parameters is available in the **Settings** menu.
   - The data box will only display voltage when a SmartCraft depth transducer is not installed.
   - The data box will display depth if a SmartCraft depth transducer is installed.
3. Steering Angle: If installed, the user can select maximum limits of 45 or 60º, and invert the angle. The steering angle will be available if the installed sensor is connected to the SmartCraft control area network. Steering angle is turned off by default, but can be manually turned on in the **Settings** menu.
4. Speed: Displays the speed of the vessel. If a speed source is not available, the display will show dashes. The display will show the speed value, the speed source (paddle wheel, pitot, or GPS), and the units of measurement (MPH is the default.) A speed value greater than two integers will be shown in smaller fonts.
5. RPM: Displays a moving bar representing the engine RPM. A dual-engine application will show two separate moving bars, a triple-engine application will show three, a quad-engine application will show four.
6. Fuel: This data box displays total fuel.
   - Displays total fuel only. Individual fuel data will be located in the contextual data area under fuel management.
7. Scroller Bar Icon: Touch this area to show the scroller bar. The scroller bar allows the operator to select different Mercury application screens to open in the contextual data area.
8. Tabs: This data box is user definable. A list of all available data parameters is available in the **Settings** menu.
   - If installed, Port tab will be displayed on the left side of the trim data. STBD tab will displayed on the right side of the trim data.
9. Gear Position: DTS products will display all gear positions for each engine. The positions are defined as F = forward, N = neutral, and R = reverse. Non DTS products will show N = neutral and G for in gear.
10. Trim: This data box is user definable. Displays trim for up to four engines. Trim popup is available in the contextual data area. Trim popup can be turned off or on in the **Settings** menu.
11. Contextual Data Area Icon: Displays an icon representing the data currently being displayed in the contextual data area of the screen. It will also display the previously displayed contextual data icon if there is currently no contextual data being displayed. Press the pages button to open the scroller bar. The user can select an icon in the scroller bar and the contextual data will then be displayed.
12. System Tray: Displays the current active mode and warnings.
13. Contextual Data Area: Displays all contextual data, which includes, for example, initial start-up scan progress, good stewardship messages, maintenance schedule, and warnings.

Touch Districts

VesselView 7 incorporates touch-sensitive districts within the screen. This allows the operator to open or interact with specific items by using defined touch gestures on the screen. There are two types of touch gestures: tap/press and flick.

Tap/Press Districts

Tap/press districts are used in both the persistent and contextual data elements. These districts offer maximum usability and enhance screen graphics.

Quad engine example

District	Description
1	Area that toggles the application **IMPORTANT: Other applications associated with VesselView may not be accessible. The vessel must have a specific Navico® device connected to the NMEA 2K backbone to be able to toggle between applications.**
2	Area that displays data box information
3	Area that displays speed information
4	Area that displays fuel information
5	Area that opens and closes the scroller bar
6	Area that displays data box information
7	Area that displays data box information
8	Area that toggles display of active menu
9	Area that displays variable system tray information
10	Area that performs various tasks for contextual data area
11	Area that performs various tasks for contextual data area

Single-engine example

District	Description
1	Area that toggles the application **IMPORTANT: Other applications associated with VesselView may not be accessible. The vessel must have a specific Navico® device connected to the NMEA 2K backbone to be able to toggle between application.**
2	Area that displays data box information
3	Area that displays speed information
4	Area that displays speed information
5	Area that opens and closes the scroller bar
6	Area that displays data box information
7	Area that displays data box information
8	Area that toggles display of active menu
9	Area that displays variable system tray information
10	Area that performs various tasks for contextual data area
11	Area that performs various tasks for contextual data area

Flick Districts

Flick districts are used in the contextual data box area and in the Scroller menu bar selection. There are two types of flick gestures: horizontal and vertical.

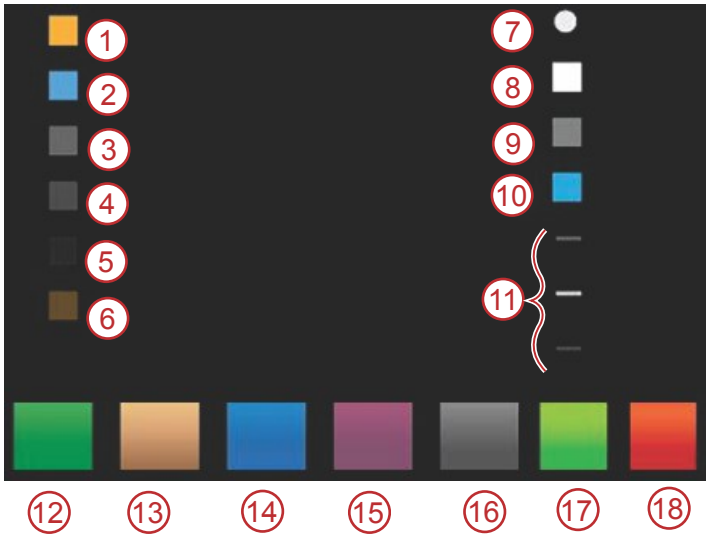
- Horizontal flicks will advance the available pages.
  a. Pages will advance in the direction of the horizontal flick.
  b. When the end of the pages is reached, a horizontal flick to the left will move the page from the last page to the first page.
  c. Auto-cycle and exit cannot be activated or selected when a flick action is performed.
- Vertical flicks allow the operator to deep dive into addition data pertaining to that specific screen.
  a. Flick up will deep dive into additional data.
  b. Flick down will exit and return data to an overview status.
  c. If deep dive data is not available vertical flicks will not be active.
- The scroller bar district utilizes a speed-based flick action to advance the menu selections.
  a. Slow flick = slower advancement.

b. Fast flick = faster advancement.

District	Description
a	Area for contextual data horizontal and vertical transition
b	Area for contextual data horizontal transition

Color Strategy

VesselView uses a color strategy to help quickly identify the various types of fluid that are on the vessel, if the system is operating normally, if attention to specific operating systems is required, if an element is active, or if the element is computer controlled.



1 - Computer-controlled functions or cautions and warnings
2 - Notice
3 - Contextual panel header text (not activated)
4 - Contextual panel sub-header text (not activated)
5 - Autopilot (not activated)
6 - Computer controlled function (not activated)
7 - Navigation footer dot highlighted
8 - Navigation footer element highlighted
9 - Navigation footer element (not activated)
10 - Navigation footer (active)
11 - Tank marker
12 - Fuel
13 - Oil
14 - Water
15 - Waste
16 - Gray water
17 - Good (normal)
18 - Bad (warnings)

Maintenance—VesselView 7

IMPORTANT: It is recommended that the supplied sun cover be installed for protection when the unit is not in service.

Display Cleaning

This product was packaged with a cloth that should be used for cleaning the screen. Salt, when crystalized, can scratch the display coating when using a dry or damp cloth. Ensure the cloth has a sufficient amount of fresh water to dissolve and remove salt deposits. Do not apply aggressive pressure on the screen while cleaning.

When watermarks cannot be removed with the cloth, mix a 50/50 solution of warm water and isopropyl alcohol to clean the screen. Do not use acetone, mineral spirits turpentine-type solvents, or ammonia-based cleaning products. The use of strong solvents or detergents, may damage the anti-glare coating, the plastics, or the rubber keys.

It is recommended the sun cover be installed when the unit is not in use to prevent UV damage to the plastic bezel and rubber keys.

Stuck Keys

Verify that there are no keys stuck in the down position. If a stuck key is found, wiggle the key to free it.

How to Update Your VesselView 7 Software

The following instructions explain how to upgrade the VesselView 7 software. Internet access is required along with a communication port used to transfer the file to a micro SD card.

Obtaining the Latest Software

1. The latest software for the display is available online for general down load at www.mercurymarine.com. To understand what software version is in VesselView, power up VesselView. While the system boots up, the screen will show the software version in the lower right corner.
2. Within the Mercury Marine web site, go to Service and Support, select the VesselView 7 product and click on DOWNLOAD UPGRADE.
3. Depending on your computer's security settings, a security warning may appear. Click Allow to continue.
4. Create a folder on your hard drive and save the file in this folder.
5. If you are asked to SAVE or RUN, select SAVE and save to your hard drive.

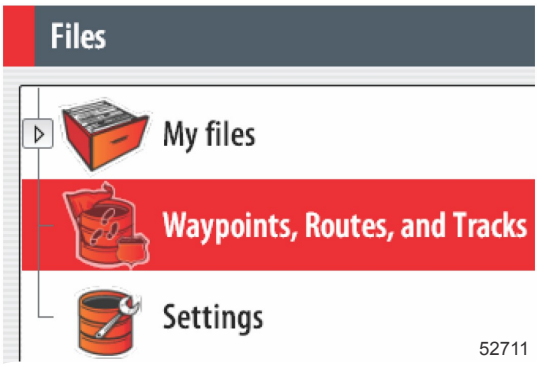
   NOTE: *The file is a compressed zip file typically 70–100 MB in size and can take a long time to download on some Internet connections. For example, estimated download time for dial up 56K modems is 3-4 hrs hours; DSL and some cable Internet is 10-15 minutes, and high-speed cable Internet is 1-2 minutes.*

   IMPORTANT: A zip file is a compressed file format. Your computer may require a free download of Winzip software in order to manipulate zip files. You can find the free WinZip Software from the WinZip Website. http://www.winzip.com/index.htm.
   IMPORTANT: Some browsers may change the file extension. Verify that the file name and extension are not changed. The file name should be for example: VesselView#-y.y.zz.zz-standard-3.upd. The # sign represents the VesselView model (4). The main version number is represented as y.y, and the build number is zz.zz. Do not rename the file or change the extension.
6. After the file is saved to the hard drive, copy the files to a 512 MB or higher capacity blank micro SD card root. The root of the drive is the topmost level, and not placed into a folder.

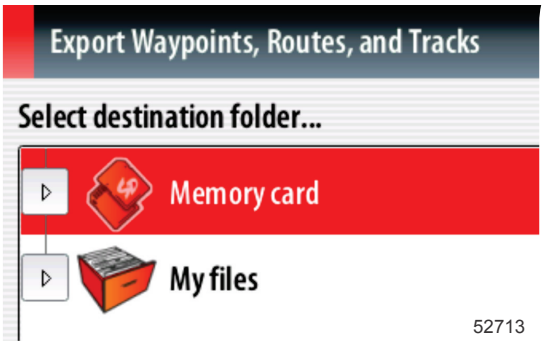
Backup Your Waypoints, Routes and Tracks

Although waypoints, routes and tracks should not be affected, it is recommended that these are backed up before starting the upgrade. The backup process copies all waypoints, routes and tracks to a micro SD card. The card can be the same one that has the upgrade files. Depending on the amount of information you will backup, the card must have the capacity to store it.

1. Turn the ignition key on and verify that the VesselView is on.
2. Insert the micro SD card into the card reader port all the way until it stays in place.
3. Press the PAGES button below the rotary knob.
4. Select Tools; then select Files.
5. Select Waypoints, Routes and Tracks.



6. Select the desired file format and then press Export.
7. Select Memory Card as the destination folder and select OK.



8. Name the backup file using the keypad and then press Enter.

Upgrading Vesselview

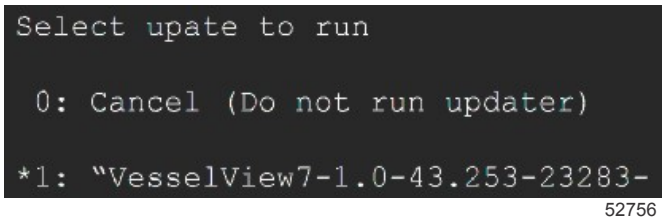
Important considerations before and during the upgrade process:

- Have you backed up your waypoints, routes and tracks?
- Each display must be upgraded individually; there is no automatic network feature to upgrade multiple VesselViews simultaneously.
- Do not turn off the display or disrupt the power during the upgrade process.
- Do not remove the micro SD card during the upgrade process.

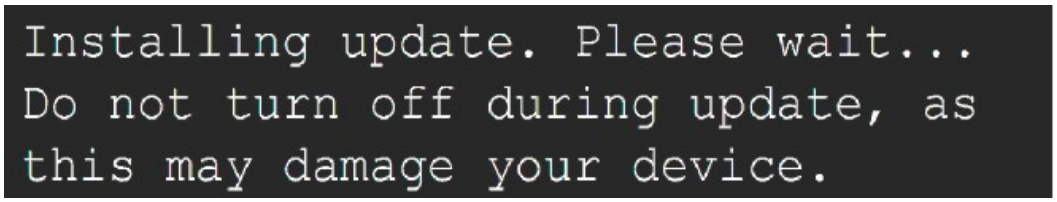
1. Verify that the ignition key is off and that VesselView is not turned on.

   NOTE: *Some installations may have the VesselView powered up with a dedicated circuit, rather than by the ignition key-on circuit.*

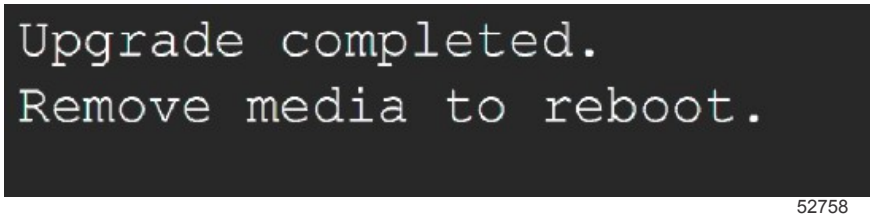
   IMPORTANT: VesselView must be turned off for more than 5 minutes before upgrading the software.
2. Insert the micro SD card into the card reader port all the way until it stays in place.
3. Turn the ignition key on and verify that the VesselView is on.
4. Allow the system to boot up. A screen will prompt you to upgrade or cancel.
5. Use the rotary knob to highlight the upgrade file and press the knob to confirm.



6. Do not turn the ignition key off, turn VesselView off, or remove the micro SD card while the software is uploading. The upgrade process may take several minutes to complete.



7. When the upload is finished, remove the micro SD card and the system will automatically reboot to complete the upload.



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8. Verify that the software version upgraded is the correct version. Use the scroller bar and go to Systems and open About. The current software version is listed.

Section 2 - System Startup

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VesselView 7 Startup Warning Screen

When VesselView 7 is started, a warning screen pops up and advises the operator not to rely on the product as a primary source of navigation and that the user assumes all liability for operation and associated risks.

Initial Startup

VesselView must be programed for the vessel personality. The vessel personality can be created by three different methods: with Mercury Marine G3, a micro SD card the OEM has saved the data to, or through the onboard menu system. The vessel personality may include, but is not limited to: the number of engines, the number of helms, the number and type of tanks, and the type of sensors installed on the vessel.

- If a personality has been loaded with G3 or a micro SD card, and it is a single-display installation, then no setup or installation dialog is required.
- When multiple VesselView displays are installed, these devices will be self-discovered. A popup will appear informing that multiple devices are installed. The station and display number must be selected through on-screen prompts.
- If a personality has never been loaded into the product, then VesselView will use the default setup based on what is discovered by querying the SmartCraft protocol for engine and type of drive. Further customization can be performed with the onboard menu system.

Splash Screen

When the ignition key is turn on, a Mercury startup splash screen will appear. The number of engine hours will be displayed for up to 4 engines. The number of hours is supported up to 9,999 hours. In the lower right corner of the screen is the software version. Power packages with emissions control will show an engine icon in the lower left hand corner of the screen.

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Mercury splash screen

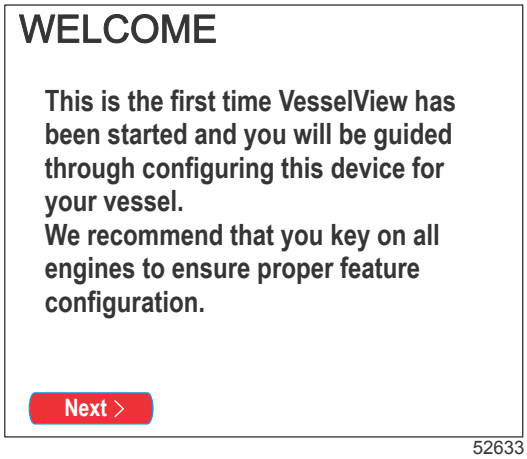
Device Configuration

The VesselView device configuration guides you through the first steps to configure the VesselView. VesselView device configuration begins when the VesselView unit is turned on for the first time or when a factory reset is performed.

These settings and more can be changed at any time in the Settings menu.

1. Turn all engine key switches to the on position and the WELCOME screen will appear.

IMPORTANT: Do not rush VesselView by pressing buttons while the system is booting up to acquire vessel and engine data. When VesselView is initially started or after a factory reset, the system will take a few seconds to complete the boot up process.



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2. Press the rotary knob to continue.

Import Configuration

IMPORTANT: The import configuration option should only be used by an authorized OEM or dealership. It is used to import configuration settings that were saved to a micro SD card. A micro SD card may contain several data files.

1. Insert the card into the card port.
2. Use the rotary knob to highlight the file on the screen and press the knob to start the upload.
   IMPORTANT: Do not remove the card or turn the system off while the import is in process. Damage to the unit may result.
3. Remove the micro SD card after the configuration upload is complete.
4. If there is no configuration file or card in the port, highlight Next and press enter.

NOTE: *If the imported configuration settings are correct for your power package, the setup process is complete.*

Engine Setup

1. Use the rotary knob to highlight Engine Type and press the knob to enter.
2. Select the type of engine and press the knob to accept.

Available Types of Engines		
None	2-Stroke Gas Outboard	4-Stroke Gas Outboard
Gas Sterndrive No Troll	Gas Inboard No Troll	Gas Jet Drive
Gas Sterndrive	Gas Inboard	Gas Verado
Diesel Sterndrive No Troll	Diesel Inboard No Troll	Diesel Inboard

3. Use the rotary knob to turn the malfunction indicator lamp on or off, and select the number of engines.
4. Use the rotary knob to highlight Previous or Next and press the knob to accept.

Display Setup

1. Use the rotary knob to select and change which engine to show on the display.
2. Use the rotary knob to highlight Previous or Next and press the knob to accept.

Unique VesselView ID

The unique VesselView ID differentiates each VesselView unit from all other installed SmartCraft devices. You must assign a unique identifier to each VesselView unit and to designate whether the VesselView is installed at the primary (helm ID 1) or secondary helm.

Use the rotary knob to highlight and accept changes.

IMPORTANT: Do not choose the same unique VesselView ID for multiple VesselView installations.

NOTE: *Select the ID by the position of the installed VesselView (lowest to highest helm is recommended).*

Units of Measurement

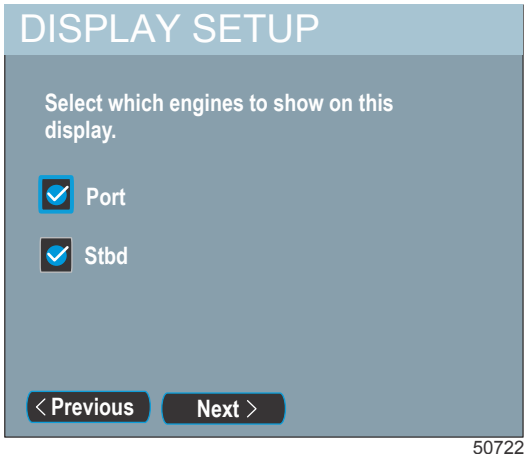
Use the rotary knob to highlight and accept the type of measurement you prefer to use: U.S. Standard or metric.

NOTE: *You can change the unit of measurement on specific sensors. Go to the Settings menu to change the sensor unit of measurement.*

Display Setup

The DISPLAY SETUP screen enables you to choose where the data for each engine is displayed on VesselView. Typically, the engines are displayed left to right, in the same order as their physical locations port to starboard. Some helm configurations may require different display settings. If you choose to display only one engine in a multi-engine application, VesselView displays the collective data such as total fuel flow and range for all engines, but displays engine specific data for only the engine selected for that display.

1. Use the rotary knob to highlight the engine location. Press the knob to turn it off or on. VesselView can display information for up to four engines.



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2. Use the rotary knob to highlight which engine to be displayed. Press the knob to turn it off or on. The following is a description of what may be available, depending on the number of engines:
   - NONE
   - STBD
   - PORT
   - STBDCNTR (triples and quads)
   - PORTCNTR (quads only)
3. Use the rotary knob to highlight Next to continue to DEVICE SETUP.

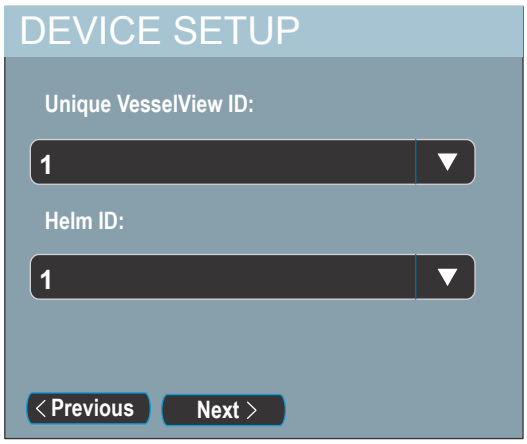
Device Setup

The unique VesselView ID differentiates each VesselView unit from all other installed SmartCraft devices. The DEVICE SETUP screen enables you to assign this unique identifier to each VesselView unit and to designate whether the VesselView is installed at the primary or secondary helm.

IMPORTANT: Do not choose the same unique VesselView ID for multiple VesselView installations.

1. If there is only one VesselView unit installed on the vessel, proceed to step 5: otherwise, press the enter button to access the UNIQUE VESSELVIEW ID option.

NOTE: *Select the ID by the position of the installed VesselView (lowest to highest helm is recommended).*



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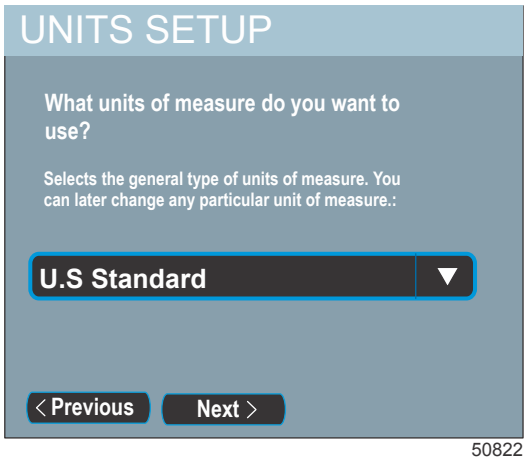
2. Press enter to open the Unique VesselView ID option. Highlight the ID number and press enter. Choose a number that is different from the other numbers assigned to any other VesselView unit installed.
3. Highlight the HELM ID option and press enter.

   NOTE: *Use 1 for a single-helm vessel. If a vessel has multiple VesselView units installed at different helms, the ID number represents the helm location. Lowest to highest helm is recommended.*
4. Highlight the helm ID selection and press enter.
5. Highlight Next and press enter to proceed to UNITS SETUP button.

Units Setup

UNITS SETUP allows you to choose the type of measurement you want to use: U.S. Standard or metric. After this configuration setup is complete, you can change the type of measurement in the Settings menu. Changing the units in the Settings menu will be covered in another section of this manual.

1. Press enter and highlight the desired type of measurement.
2. Press enter to confirm your selection and highlight Next. Press enter.



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3. The screen advises you that the configurations are almost complete and that they can be changed at any time in the Settings menu. Press enter to finish the configuration or go back through the configuration steps.
4. After pressing enter, a Network screen will popup stating the data sources have not been set up and asks if you want to set up the sources. Highlight OK or Cancel option and press enter.
5. Select OK and the screen will pop open and the system will auto select the data. All vessel NMEA 2K and CAN network products must be turned on.
6. A progress bar shows the auto select elapsed time.

Display Screens

Startup

On startup after the splash screen sequence, the main display will load and all data and graphics will be active. Two conditions are available: engines off or engine running. The following chart and information explain the sequence for how the persistent and contextual data areas change.

Engine state	Contextual data area
Engine off, ignition on	Good stewardship message
Engine cranking	System scan in progress, animated propeller is shown
Engine running at idle	Propeller color turns green
Engine running in gear	Level 1 smart contextual data

Engine Off, Ignition On

The Mercury good stewardship message screen is displayed in the contextual data area when the ignition is on and the engines are not running. All functions will be available and there will be no engine data displayed.

- The messages are randomly selected. Examples include: Do you have floatation devices, Mercury reminds you to please boat safely.
    - The good stewardship list items are subject to change depending on engine type or personality configuration.

Engine Running at Idle

When the engine is running, the contextual area of the display will show green propeller when the system scan report is finished.

- The contextual data area of the screen will display an animated propeller and progress bar to indicate a scan is in progress.

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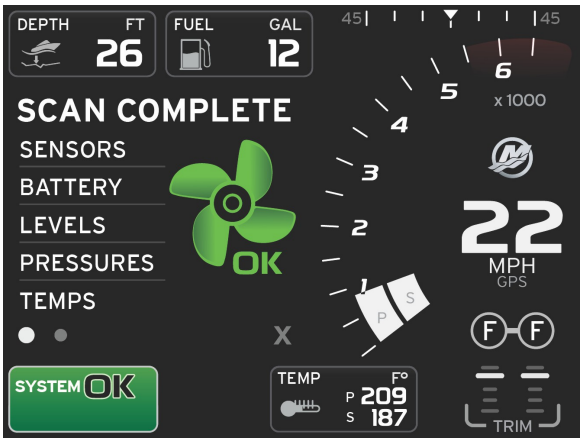
System Scan

a - Animated propeller

b - Progress bar

- If at anytime the engine is shifted into gear, the system scan will stop and the propeller will turn green and Level 1 smart contextual data will appear.

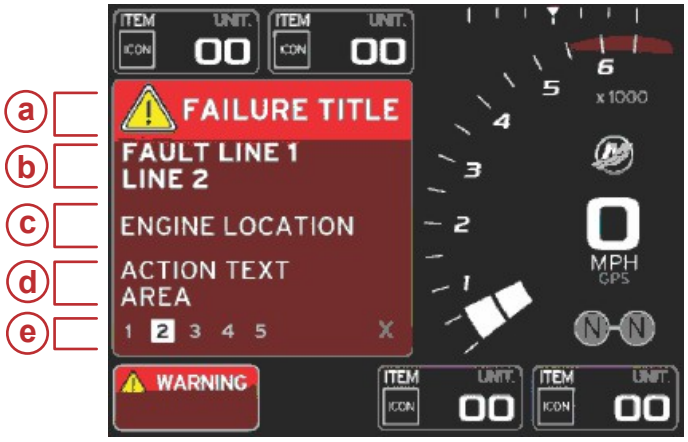
- When the scan is complete, various contextual pop-ups can appear: engine faults, maintenance reminders, communication errors, system OK scan report.



Scan Complete

Engine Fault

If an engine fault is detected during a system scan, the contextual data area will display descriptive text in a bold color fault screen. The color of the fault screen will depend on the type of fault detected. The system tray lower left-hand corner will change according to the fault that is displayed.

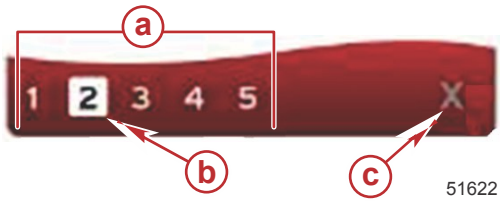


- **a -** Fault icon with fault title
- **b -** Short text or legacy text
- **c -** Engine fault location
- **d -** Action text
- **e -** Number of faults

Fault Navigation

When faults are present, they will be identified with numbers along the bottom of the fault contextual tray.

1. The selection box will default to the first fault and will have a white-filled box with a black number.
2. The selected fault will alternate between the fault number and a positive (+) symbol indicating there is more data to display.



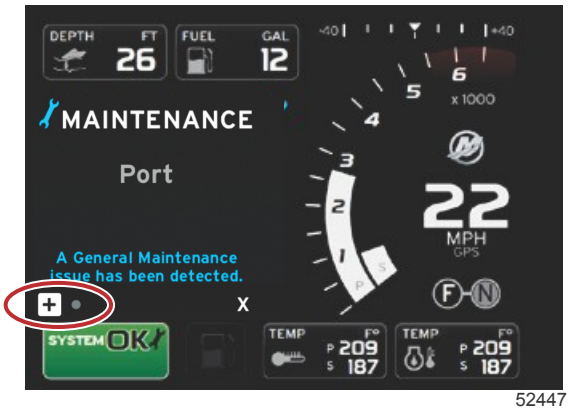
- **a -** Number of faults in tray
- **b -** Selected fault
- **c -** Exit icon for the fault tray

3. When a positive (+) symbol is available, additional data related to that fault can be viewed.
4. When the additional data requires more pages, the fault tray area will show one or more circles. The selected page circle will be white. This area will show the long text description of the fault.
5. To exit the fault tray, use the **X** button.

Engine Scheduled Maintenance

If a maintenance reminder is detected during a system scan, the contextual data area will display descriptive text in a bold color screen. The system tray lower left corner will change according to the fault that is displayed. Use common sense to protect your investment, and check your engine oil on a regular basis, preferably before each use.

1. When the scheduled maintenance time is fully depleted, the contextual data area will display a general maintenance reminder to perform the scheduled maintenance.



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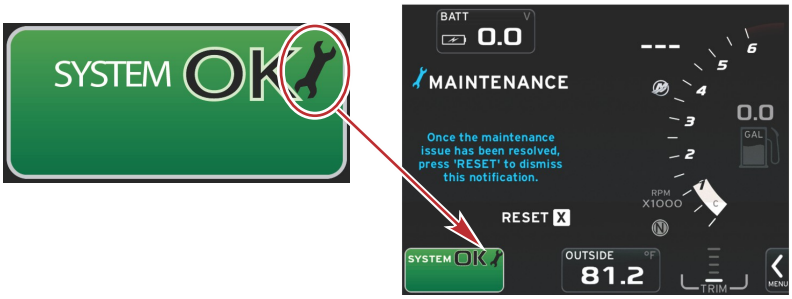
2. Open the + icon to expand the text. You can reset the maintenance to 100% or exit the screen.

   NOTE: *The wrench icon maintenance reminder will be displayed in the system tray until the fault is cleared from the system*



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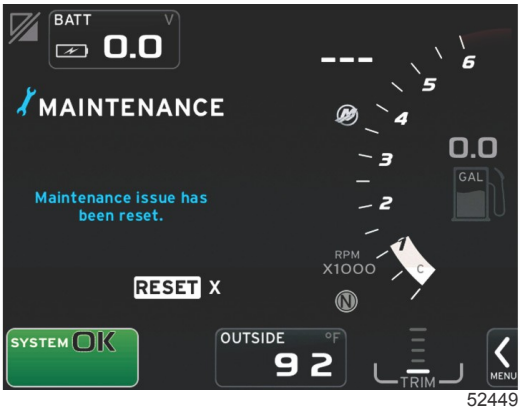
3. After resetting the maintenance reminder, the wrench icon no longer appears in the system tray.



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System Scan - Scan Report

When a system scan is completed and there are no faults, maintenance reminders, or communication errors, the contextual data area will display SCAN COMPLETE with a report and a good-stewardship message. The scan report will be displayed until the engine is put into gear or the X button is pressed.

- The good stewardship messages are randomly selected. Examples include: Do you have floatation devices, Mercury reminds you to please boat safely.

- The good stewardship list items are subject to change depending on engine type or personality configuration.

Scan complete

Good stewardship message

Communication Errors

When a system scan encounters a communication error, the scan will stop and all data fields will be displayed with dashed lines. The system tray will be gray with an X in a red circle and text reading Comm Error.

Communication error

Notes:

Section 3 - Contextual Data

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3

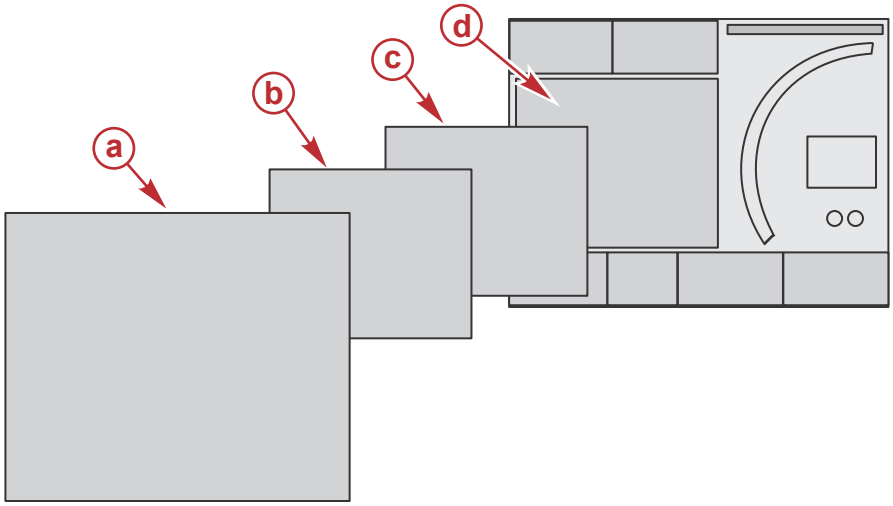
System Tray Functionality

The system tray is used to communicate specific engine information and active modes. It will always be visible on the main screen in the lower left corner of the display, unless a pop-up full screen warning is encountered. The color, icon, and text will change according to the system status, warnings, maintenance indication and active modes. Your vessel personality and the type of power package installation will have a direct affect on which icons will be available in the system tray. Not all of the available icons are listed in the following table.

System Tray Examples	
 51875	Engine icon when ignition is turned on. The icon is only visible if the power package has emissions control.
 52099	Communication error when the ignition is turned on. The power package is not communicating through the control area network.
 52100	Indicates that every component connected to the control area network is within normal operating parameters.
 52101	Warning icon indicates that there is a fault.
 52102	Warning indicating the starboard engine onboard diagnostic has detected a fault. All other engine locations will be similar.
 52104	Autopilot waypoint tracking. The orange color indicates waypoint tracking is active and computer controlled. If autopilot waypoint tracking is in standby mode (not active) the color of the field will be gray. This color scheme change is the same for all autopilot functions.

Navigation of Contextual Data Display

Contextual data includes initial start-up scan progress, good stewardship messages, maintenance schedule, and warnings. Specific contextual data is displayed during predefined level events. Level events can be part of the boot-up progress, changes with the power package, or if any warnings are encountered.



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Contextual Level Event Progress Definition	
a	Level 4 is a full-screen event that occurs when pop-up warnings are encountered.
b	Level 3 is a standard screen size event that occurs when pop-ups for the power package or vessel change. Changes may include, but are not limited to, trim, navigation, ECO, and fuel.
c	Level 2 is a standard screen size event for all of the contextual panels.
d	Level 1 is a standard screen size for all contextual data which will include the start-up system scan.

Scroller Bar Functionality

The scroller bar provides access to icon items not currently displayed in the contextual data area of the screen. The icon item will be hidden until activated and will display the amount of time the user has selected in the **Settings** menu. If there is no activity for more than five seconds, the icon item in the contextual data area will transition off. When active, the contextual data area will be transformed to show icon name and data pertaining to that feature.

Scroller Bar Activation and Navigation

1. Press the scroller bar icon arrow in the bottom right corner of the screen.
2. Use the rotary knob to highlight the icon you would like displayed. A blue box will highlight the scroller bar icon to be selected.

NOTE: *An arrow icon will appear to the left and right of the scroller bar. When only one arrow icon is visible, you must move the direction indicated by the arrow. When both arrows are visible, either direction can be selected.*

a - Selected Icon
b - Scroller bar arrows

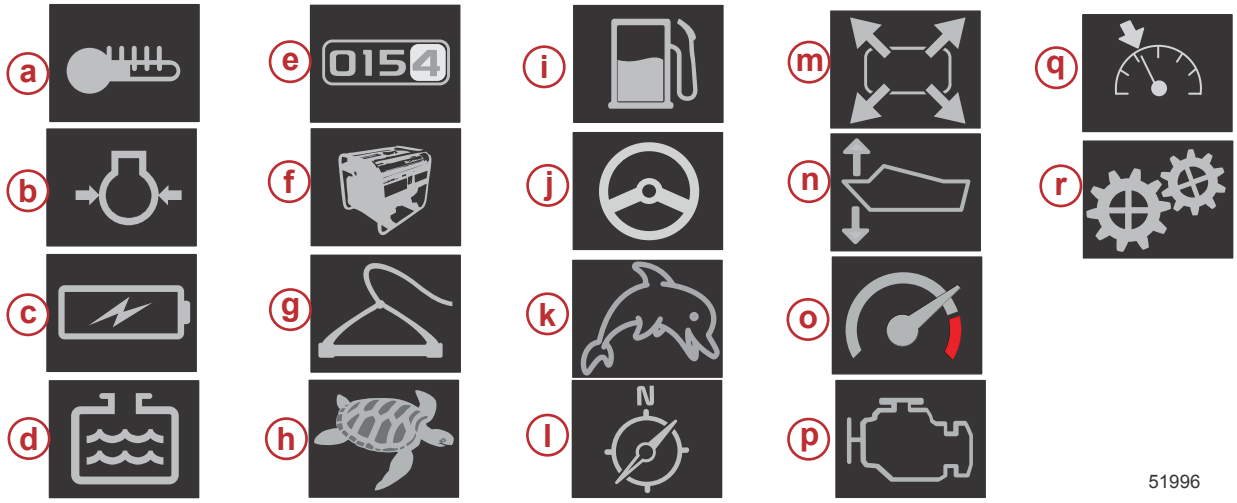
Contextual Data Area

During the scroller bar navigation process, when the icon is highlighted and enter is not pressed, the contextual data area will change to display the icon, the icon name, and a description of what the feature does. The contextual data area will show this information for a short time only.

Final Contextual Data Selection

When the icon has been chosen, press enter. The icon will show next to the system tray and the contextual data area will display the full data pertaining to that selection.

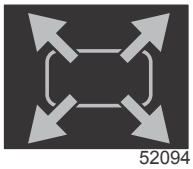
Scroller Bar Icons



Icon	Description
a	Temperature–displays engine and environment temperature values: oil, water, fuel, air (manifold.) Available information is power-package dependent.
b	Pressure–displays engine pressure values: water, oil, fuel, boost. Available information is power-package dependent.
c	Voltage–displays battery values for all engines.
d	Tanks–displays the vessel's onboard tanks data: fuel, water, waste, oil (two-cycle only), capacity.
e	Trip Log–displays recorded trip data: total distance, total time, average speed, average fuel consumption. Trip log recorded data can be erased and set to zero.
f	Generator–displays data the generator can send through a NMEA 2000 or J1939 protocol control area network: current state (run/stop), voltage (AC/DC), hertz, hours, oil pressure, water temperature.
g	Smart Tow–activates Smart Tow profiles for selection. Profiles can be modified.
h	Troll Control–activates low-speed engine control. Can be used to control engine RPM.
I	Fuel Management–displays fuel system statistics: current economy, average economy, volume use per hour, total capacity, fuel used.
j	Autopilot–displays autopilot data
k	Eco–displays information to guide the operator to the best trim position and engine speed to achieve the best fuel economy.
l	Navigation–displays data relating to installed navigation system: compass heading, longitude and latitude, time to waypoint (TTW,) bearing to waypoint (BTW,) distance to waypoint (DTW,) course over ground (COG).
m	Expand–paginates through the selected data screens.
n	Trim and Tabs–displays drive trim position and position of tabs. A sensor must be installed on the tabs for this function to display information.
o	Performance–displays advanced performance data: peak performance (RPM/speed), inches per revolution of the propeller.
p	Engine Data–displays additional engine information: manifold temperature, throttle percent, engine load, manifold boost pressure. Available information is power package dependent.
q	Cruise Control–activates cruise control. Allows the user to control the vessel with the engine RPM or vessel speed. Vessel speed control requires a paddle wheel sensor or GPS.
r	Settings–main location where data can be turned on or off, modify sensor data tolerance ±, select preferred displayed values (metric/English/nautical), reset to factory default. Note—A reset to factory default will erase all customized settings.

Enlarging Persistent Data

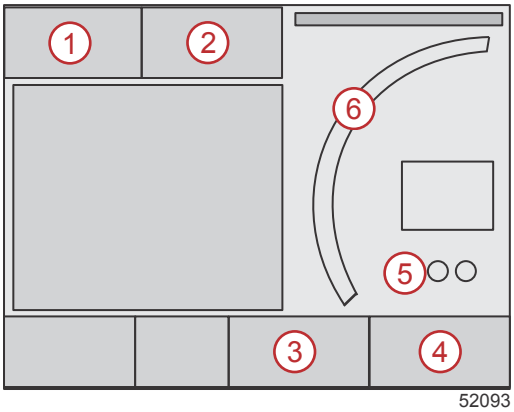
Data boxes can be enlarged by highlighting the expand (X-PAND) icon and pressing the enter button.



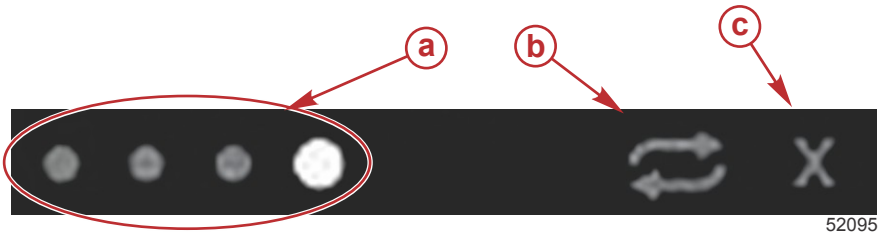
Expand icon

After the icon is activated, the contextual data area will be filled with the enlarged data from the actively displayed data boxes. Up to six data boxes can be enlarged, one at a time, and will paginate in the chronological sequence shown in the following illustration. Data boxes 3 and 4 will only display the optional user-selected data.

NOTE: *The default setting of trim and tabs will not enlarge unless they are activated with external controls. If they are activated, a pop-up process will be utilized. Trim and tabs pop-ups can be turned off in the Settings menu.*



Each data box has its own page indicator in the lower left-hand corner of the contextual data area. Press on the various pages or the auto cycle icon or exit icon. Press enter when the auto cycle or exit icon are highlighted.



a - Page indicators
b - Auto cycle icon
c - Exit icon

Auto Cycle

- When auto cycle is selected but not active, the icon will be displayed on a white field.
- Press the rotary knob to activate the auto cycle. The icon will be displayed on a blue field with white arrows and will remain this color scheme until auto cycle is disabled. The default time for auto cycle is five seconds per page and can be changed in the Settings menu.
- When the auto cycle is active, the arrow icon are not available. Highlight one of the pages and press the rotary knob. Auto cycle remains active but is not visible. To return to the auto cycle, highlight the auto cycle icon and press enter.
- To turn off auto cycle, highlight the X and press enter. The screen will exit the contextual area.

Section 4 - Setup and Calibrations

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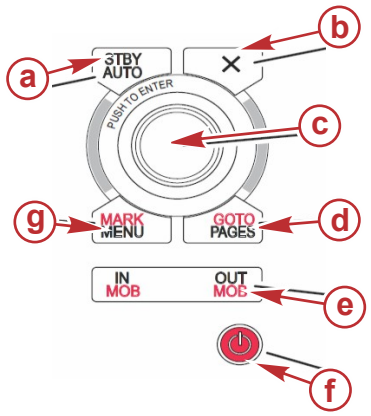
4

Settings Menu Navigation

Navigation to Settings Menu

1. Press the pages button while the SmartCraft screen is visible.



a - Standby–Auto button
b - Exit button
c - Rotary knob (press for enter function)
d - Goto–Pages button
e - In/Out Zoom, man overboard (MOB)
f - Power–Brightens
g - Mark–Menu button

2. Turn the rotary knob so that the last icon is highlighted. The last icon is the Settings menu.
3. Press the rotary knob.

System

The System menu allows you to format the time and date, turn buzzers and horns off or on, change various lighting parameters, import a graphic for a customized splash screen, turn the simulation program on (this is generally used at the dealership level), and identifies the software version.

The greater-than sign (**>**) indicates additional menu choices.

Systems		
Language	Select the desired language	—
Time >	Change time and date format Automatic time update is only available if a GPS is connected.	—
Buzzer >	Key Beeps >	Off, Quiet, Normal, Loud
	Alarm Beeps	On (checkmark), off (no checkmark)
Backlight >	Level >	0–100%
	Night Mode	On (checkmark), off (no checkmark)
	Network Update	On (checkmark), off (no checkmark)
	Local Gain >	0–100%
Image Viewer >	SD Card Selection	—
Simulate	On (checkmark), Off (no checkmark)	—
Restore Defaults	All Settings, Engine Limits, Alarm History	—
About	Display Software Version	—

Preferences

The Preferences menu allows you to:

1. Select which engines are to be displayed, the helm number, and device number
2. Select if the display is visible at the helm
3. Enable an ambient temperature sensor readout
4. Set the auto-cycle interval
5. Turn off or on autopilot or skyhook popup screens
6. Turn data boxes on or off
7. Turn popup warnings on or off

8. Adjust the scroller bar auto-hide delay time and select which scroller bar icons are to be displayed
9. Turn on or off the startup check list
10. Turn on or off the trim tab display
11. Select the type of cruise or SmartTow control.

The greater-than sign (**>**) indicates additional menu choices

Preferences		
Engines >	Turn on (check mark) or off (no checkmark) depending upon which engine is displayed	
Helm Number, Device Number >	Select the helm location of the VesselView (required if there is more than one helm). Select a unique device number (required if more than one VesselView is installed).	
Visible from Helm >	On (checkmark) or off (no checkmark)	
Ambient Temperature Sensor >	On (checkmark) or off (no checkmark)	
Auto-cycle Interval >	1, 5, or 10 seconds	
Pop-ups >	Trim	On (checkmark) or off (no checkmark)
	Trim popup time	Select 2, 5, 10 seconds
Data Boxes >	Choose type of data for data box 1 >	Navigation >, Vessel >, Engine >, Environment >
	Optional data boxes >	None, One, Both
	Choose type of data for data box 2 >	Navigation >, Vessel >, Engine >, Environment >
Scroller Bar >	Auto-hide delay >	Select 5, 10, 15, or 30 seconds
	Item Visibility >	On (checkmark) or off (no checkmark): X-PAND, temperatures, pressure, tanks, voltages, fuel, ECO, cruise, navigation, trip log, SmartTow, troll control, engine, generator, performance, and trim and tabs, autopilot
Startup checklist	On (checkmark) or off (no checkmark)	
Show tabs	On (checkmark) or off (no checkmark)	
Show trim	On (checkmark) or off (no checkmark)	
Show steering	On (checkmark) or off (no checkmark)	
Camera installed	On (checkmark) or off (no checkmark)	

Vessel

Vessel allows the operator to assign the number of engines, the number of fuel tanks and the total fuel capacity. The fuel capacity can also be reset after refueling.

The greater-than sign (**>**) indicates additional menu choices.

Vessel		
Setup >	Vessel Setup >	Number of engines, number of fuel tanks
		Vessel total fuel capacity
Refuel >	Vessel Refuel >	Enter the amount of fuel added and set to full

SmartCraft

The SmartCraft settings menu allows you to:

1. Select the number of engines on the vessel
2. Offset sensor data: depth, sea temperature, speed, steering, trim, tabs

3. Set the tanks' capacity
4. Set various smart contextual limits
5. Turn off or on supported data for each engine
6. Select the number of SmartCraft networks and the network number

The greater-than sign (**>**) indicates additional menu choices.

SmartCraft				
Number of engines >		Select 1–4	—	—
Depth Offset >		Calibration: offset, zero, restore	—	—
Sea Temperature >		Sea temperature source >	None, PCM0, PCM1, PCM2, PCM3, AirMar0, AirMar1, AirMar2, AirMar3	—
		Offset >	Calibration: offset, zero, restore, save	—
Speed >		GPS source >	CAN-P or H	—
		Pitot speed source >	None, PCM0, PCM1, PCM2, PCM3,	—
		Pitot sensor type >	100 or 200 PSI	—
		Pitot multiplier >	Calibration: multiplier and restore, save	—
		Paddle speed source >	None, PCM0, PCM1, PCM2, PCM3	—
		Paddle speed sensor >	Legacy or Airmar	—
		Paddle frequency >	Calibration: multiplier and restore, save	—
Steering >		Steering angle source >	None, PCM0, PCM1, PCM2, PCM3, TVM	—
		Invert steering	Turn on (check mark) to invert steering, or off (no checkmark), which engine to show steering	—
		Offset >	Calibration: offset, zero, restore, save	—
Tanks >	Location: port, port center, starboard center, starboard >	Tank 1 or 2 >	Calibration >	Empty, 1/4, ½, 3/4, full
		Tank usage >	None, fuel, oil, water, waste	—
		Capacity >	0 up to six digits	—

SmartCraft				
Trim >	Location: port, port center, starboard center, starboard >	Has trim	Turn on (check mark) or off (no checkmark)	—
		Calibration >	Set trim in, maximum trim range, full trim out, reset, restore, save	—
Tabs >	Tab source >	None, PCM0, PCM1, PCM2, PCM3, TVM	—	—
	Starboard and port calibration	Number of calibration points (2 or 3),	Set tab down, mid, up range, reset, restore, save	—
Smart contextual >	Enable	Turn on (check mark) or off (no checkmark)	—	—
	Engine running threshold >	Set limit	—	—
	Slow demand threshold >	Set limit 0–99 %	—	—
	Fast demand threshold >	Set limit 0–99 %	—	—
	Lever shift threshold >	Set limit 0–99 %	—	—
	Mode timer threshold >	Set limit 0–10.0 seconds	—	—
	Mode stable threshold >	Set limit 0–10.0 seconds	—	—
	Steady state threshold >	Set RPMs per second	—	—
Limits >	RPM, fuel rate, coolant temp, oil temp, oil pressure, water pressure, battery voltage, intake temp, boost pressure, transmission oil pressure and temperature >	Set the limits: minimum, maximum, warning low, warning high, reset, save for each engine.	—	—
Supported data >	Location: port, port center, starboard center, starboard >	Actual gear, boost pressure, fuel pressure, gear pressure, gear temperature, load percent, manifold temperature, MIL (malfunction indicator lamp), oil pressure, oil temperature, throttle present, water pressure	Turn on (check mark) or off (no checkmark)	—
Advanced >	Number SmartCraft network >	1 or 2 Used with vessels with more than 1 SmartCraft network	—	—
	Network number >	A or B Used to identify the network	—	—

Easy Links

Vessels with SC 100 gauges must have the easy links enabled (check mark) in VesselView for data to be received at the SC 100 gauge.

Easy Link		
Port, Port Center, Starboard Center, Starboard >	Engine and Transmission >	Port or Starboard–On (checkmark), off (no checkmark)
	RPM sync	On (checkmark), off (no checkmark)
	Fuel tank 1	On (checkmark), off (no checkmark)
	Fuel tank 2	On (checkmark), off (no checkmark)
	Oil tank	On (checkmark), off (no checkmark)
	Fresh Water	On (checkmark), off (no checkmark)
	Waste water tank >	Gray tank 1, Black tank 1 On (checkmark), off (no checkmark)

Alarms

Alarms allows you to check the history for any alarm, turn a specific alarm on or off, or show all the alarms.

Alarms >	Alarm History	Shows legacy alarms
	Alarms Settings >	No GPS fix, Shallow water, Deep water, Water temp rate, Anchor, Anchor depth, low boat speed, Speed through water rationality fault, XTE, Waypoint radius, Arrival, True wind shift, True wind high, True wind low, Fuel remaining low, Fuel remaining high, Voltage >, Missing data >, Vessels >, Autopilot >, Engines > ***NOTE:*** *These settings must be enabled to receive alarms.*
	Show all helm alarms	On (checkmark), off (no checkmark)

Units

Units allows you to select the type of measurement for the various SmartCraft network sensors: English, metric, nautical, magnetic or true heading, miles per gallon, liters per kilometer and more.

The greater-than sign (**>**) indicates additional menu choices.

Units >	Distance >	Nautical, kilometer, mile
	Distance small >	Feet, meter, yards
	Speed >	Knots, kilometer per hour, miles per hour
	Winds speed >	Knots, kilometer per hour, miles per hour, meters per second
	Depth >	Meters, feet, fathoms
	Altitude >	Meters, feet
	Heading >	Magnetic, true
	Temperature >	Centigrade, Fahrenheit
	Volume >	Liters, gallons
	Economy >	Distance/volume, volume distance, miles per gallon, gallons per mile, kilometer per liter, liter per kilometer
	Pressure >	Hg, mbar, psi, kPa
	Barometric pressure >	Hg, mbar, kPa

Network

1. Auto Select, Sources and Magnetic Variation:

- Auto Select scans the CAN bus and NMEA backbone for installed data reporting (input and output) components. These items must have power supplied to them for the Auto Select to assimilate the data reporting.
- Sources opens the Data Sources Selection which includes, but is not limited to: GPS, Log/Timer and Environment. Each of these data sources will be global when enabled.
- Magnetic Variation can be manually changed or automatically updated. Manual variation can be changed + or – up to 5 digits, including two decimal points.

2. Device List and Diagnostics:
   - Device List shows all CAN bus and NMEA backbone data reporting components that are recognized. This can be useful for diagnosing CAN and NMEA communication errors.
   - Diagnostics shows data reporting of errors and overruns on the CAN and NMEA communications. This can be useful for skilled technician for diagnosing CAN and NMEA communication errors.
3. Groups:
   - Network Groups are products that use data sources on the N2K network. These products use data sources that all other products on the network use, or could use a data source independently from other units. You can also globally change all displays to a different source from any display.
   - There are ten categories of sources: Compass, Navigation, and Position, are a few of the category group sources. Under each of these categories, a display can be set to receive data from sources as part of the group, or receive the data independently from the group.
4. Damping
   - Damping allows you to choose between a 1- and 9-second delay for updating various sensors connected to the CAN and NMEA backbone.
5. Speed:
   - Speed source lets you select either a strategy or GPS. Strategy is the default selection.
   - Speed through the water (STW) threshold is the transition from one type of speed sensor to another. The most common threshold transition is a paddle wheel to pitot sensor. There is no transition available to GPS.
   - Calibrate paddle speed allows you to fine tune the hertz calibration of the paddle wheel sensor.
6. ECO Mode:
   - Eco Mode allows you to modify the target windows that are within the ECO program.
7. Reverse Fill Calibration:
   - Allows you to quickly update the tank full capacity calibration based on the amount of fuel added.
8. Cruise/SmartTow type:
   - You can manually select either Auto, RPM or speed base for cruise control and SmartTow.

Personality File

The personality menu option should only be used by an authorized OEM or dealership.

Notes:

Section 5 - Screen Navigation

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5

Economy Mode

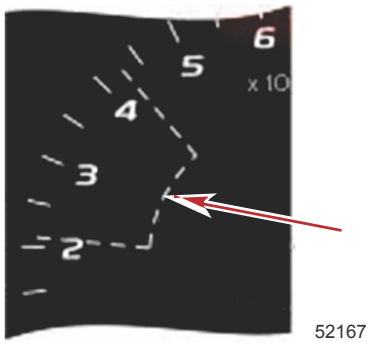
ECO Mode

ECO Mode displays information to guide the operator to set the optimum trim position and engine speed to achieve the best fuel economy. The engine control module (ECM) or propulsion control module (PCM) calculates the best fuel economy based on information from various sensors on the power package and vessel.

1. Push the pages button to open the scroller bar.
2. Use the rotary knob to the find the ECO Mode icon and press enter. The contextual area will display ECO icon element with a short description on how to achieve the best fuel economy.

ECO Minimum and Maximum Values

When ECO Mode is active, the minimum and maximum value target lines will appear in the RPM sweep. These lines display the active optimized range that is to be calculated. The target lines can be adjusted in the Settings menu.



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ECO RPM and Trim Targets

When the RPM values reach the minimum value range, RPM and trim targets will appear. A colored line will span the RPM sweep with colored targets to inform the user where the target values are and will change color when they have achieved optimization.

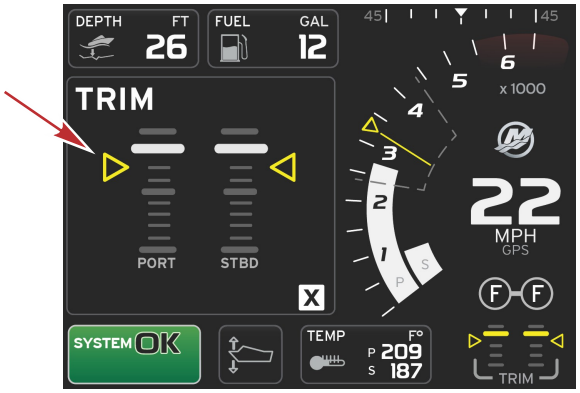
Target Colors

Triangle Color Rules				
State	**Color**	**Fill value**	**Action**	**Image**
Target not achieved	Yellow	Outline	Blinking	 52170
Target achieved	Green	Solid	Continuous	 52171

The following are examples of ECO RPM targets in different states.

Not optimized **Optimized**

The contextual data area will display the trim targets.



When all targets have been achieved, the contextual data area screen will change from instructions to displaying OPTIMIZED with the current fuel economy value.

ECO Navigation

The contextual data area footer will display REFRESH, MINIMIZE, and X.

- Minimize will hide ECO instructions and display ECO MODE in the system tray. Minimize allows the user to display other information in the contextual area.
- Refresh will reset the ECO values and use new parameters for determining the RPM and trim target values.
- X will close ECO Mode program, removing the RPM and trim targets from the persistent data area.

- The active area will have a white border.

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a - Refresh
b - Minimize
c - Exit

ECO Refresh

Refresh allows you to recalculate the current values that ECO uses for the RPM and trim targets.

1. Highlight the refresh feature and press enter.
2. Instructions appear in the contextual data area. Highlight the refresh feature and press enter.

52177

3. When the system has finished calculating new targets, the contextual data area will change to indicate that the values have been refreshed.
4. Highlight the X and press enter to return to the main ECO instruction screen.

52178

5. The ECO contextual data area will show instructions and show new target values on how to achieve optimization for the best economy.

Minimize

Minimize is a feature that allows the user to continue with the ECO features while displaying additional information in the contextual data area.

1. When minimize is selected, the ECO instructions will be removed and then display additional information in the contextual data area. You can also select limited items from the scroller bar.
   - Scroller bar selection is limited to: Expand, Fuel Management, Trip Log, Voltage, Navigation, Pressure, Temperature, Tanks and Generator.

     NOTE: *The items available on the scroller bar are dependent upon information available from the gauge and vessel personality.*
   - Items displayed in the scroller bar that are gray when ECO is active are unavailable and cannot be selected.

2. When minimize is active, the system tray will display ECO.
3. To enlarge ECO Mode, use the touch screen to highlight the ECO icon and press the enter.
4. When ECO achieves optimization, the contextual area text will change to OPTIMIZED.

Changing ECO Targets

The software for ECO monitors the engine sensors and looks for the best fuel economy number while the vessel is in operation. When the software recognizes an improvement in the fuel economy, VesselView records the trim and engine RPM values at that time. This calculation happens whether the ECO screen is visible or not. When the software has recorded the RPM and trim values, it will guide the operator with arrows to that optimum running speed and trim setting. In most applications the ECO screen does not need any calibration, although there are settings to customize the gauge for your boating style. The default settings are within acceptable parameters for most vessel applications. The following are the default settings.

Default ECO Target Settings	
Fuel economy stability	0.7 seconds
RPM stability	0.7 seconds
RPM window minimum	2000 RPM
RPM window maximum	4000 RPM
RPM target proximity	10%
Trim target proximity	3%

IMPORTANT: A manual trim calibration must be performed before the ECO screen can be used if a vessel personality was not uploaded with a micro SD card. Using a default trim calibration will not allow the ECO screen to function properly.

Changing Target Values

1. Open the scroller bar.
2. Use the rotary knob to highlight the last icon, which is Settings, and press the enter button.
3. Go to Network and press enter.
4. Highlight ECO Mode and press enter.
5. Highlight the target value you want to change.
6. Change the target data and press the enter button.
7. Continue this process until the you exit the target.

   NOTE: *The settings menu will close after exiting the target. To change other target values, open the scroller bar. The Settings icon will be highlighted. Follow the same process as previously outlined to change other target values.*

Smart Tow Mode

Smart Tow

Smart Tow is based on the engine RPM unless the vessel has a GPS installed and connected to the control area network. When the vessel contains a GPS, you can select either speed targets or engine RPM targets for Smart Tow control options. You can also create custom launch profiles.

52179

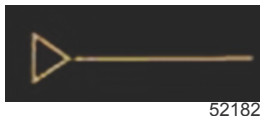
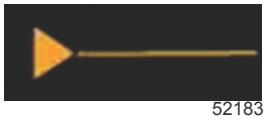
Smart Tow Targets

Smart Tow will modify the persistent data area by incorporating RPM and overshoot indicators within the RPM sweeps. The RPM set point target will be the color orange and the overshoot scale will be the color white.

52180

a - RPM set point target
b - Overshoot scale

The RPM set point target will change from and outline when not active, to a solid when activated.

RPM set point target			
State	**Color**	**File value**	**Image**
Set-up point	Orange	Outline	 52182
Active	Orange	Solid	 52183

When Smart Tow is not active, the RPM sweep display is white. Smart Tow will modify the color of the RPM sweep display to orange when active.

52184

Active RPM sweep display color orange

Smart Tow Overview Panel

Smart Tow will display an overview panel before launching Smart Tow for the first time. This screen will remain visible for a short time. The overview panel provides instructions on how to navigate the Smart Tow screen. You can either hide help, continue, or exit out of the Smart Tow feature from this screen.

- When HIDE HELP is chosen, the help screen will not appear during the next launch cycle and the system will continue to launch the Smart Tow default contextual screen.

- CONTINUE will launch the default Smart Tow contextual screen and keep the Overview page in the launch sequence the next time Smart Tow is launched.

52185

- X will exit the Smart Tow option.

Smart Tow Contextual Data Area

The default Smart Tow contextual screen allows you to select, set, and modify settings in the Smart Tow features. The launch graph dot is animated when Smart Tow is active and performing a launch sequence. The dot will move along the launch path showing what part of the launch sequence the system is performing.

52188

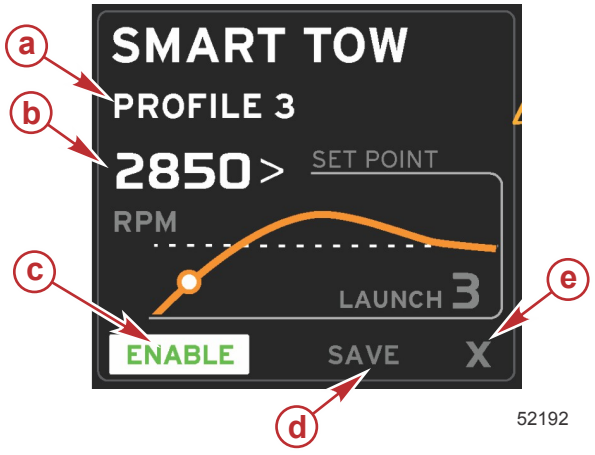
Launch graph animated dot

Navigation

Smart Tow utilizes the contextual data area and the footer section to allow you to adjust the settings. Press or flick to move through the selection box fields. The footer section allows you to enable or disable Smart Tow, save, or exit.

There are five selection fields. Use the rotary knob or flick to scroll through the profile selection, RPM/speed set point, and enable/disable.

- The items located in the footer navigation require the selection to be pressed or press the rotary knob to accepted.



52192

a - Profile selection
b - Set point value
c - Enable
d - Save
e - Exit

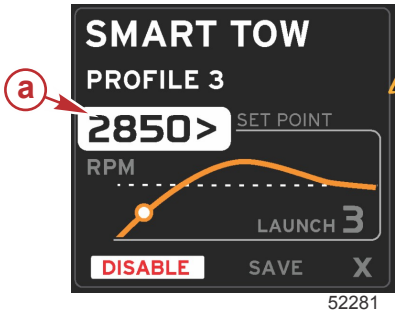
Profile selection allows you to select from the five factory preset profiles and any custom settings you have created. Custom settings can be modified and will default to the last known settings.

52280

Factory preset profiles

The set-point value will allow the operator to adjust the RPM or speed set-point. These will default to 10 mph or 1700 RPM until the operator uses the QUICK SAVE option to override the default values.

- Set-point is the default selection when Smart Tow is active. The operator can adjust the RPM or speed by pressing the contextual data screen area.

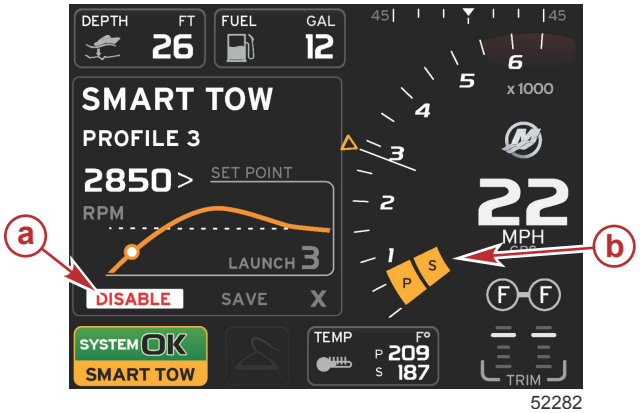


52281

a - Set-point default selection

After making adjustments to the desired settings, press the selection in the footer area of the contextual data area.

- Enable or disable turns the feature on or off. The persistent data RPM sweeps will be displayed as non-active white sweeps. The operator can modify all settings when the system is in the off (disabled) state.
  a. Enabled (on) is green when active
  b. Disabled (off) is red when not active



52282

a - Not active – red
b - Normal RPM sweep displayed when mph mode is selected

- Press SAVE. Save will modify the Smart Tow screen to allow the operator to choose quick save, save as new, or create custom.
- If the operator presses on the X, Smart Tow is disabled and the persistent and contextual area returns to the default screen.

Save

When the operator selects save, the contextual data box will transition to the save options. Quick save is the default selection.

- Press on the selection to confirm.

a - Quick save
b - Save as new
c - Create custom

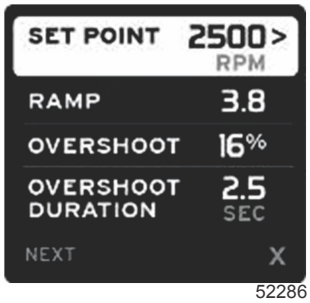
- **QUICK SAVE** will store the existing profile with the new RPM or speed values. Press to save the data and return to the Smart Tow contextual screen.
- **SAVE AS NEW** allows the operator to store the current setting with a custom name. Press to transition to the custom file name. The file name selection is active by default.
  a. Use the screen or rotary knob to change the letters.

  b. Use the rotary knob to highlight save and press the knob to confirm the changes.

  NOTE: *To exit, select X and press the rotary knob. The screen will transition to the main screen without saving the new data.*

Create Custom Launch

Create custom launch allows the operator to create a custom launch profile. The operator can adjust the set-point of the RPM or speed, ramp, overshoot, and overshoot duration. When the operator selects this option, the contextual data area will transition to the custom profile set-up screen.



- Use the rotary knob to move the selection box to the desired fields that require adjustment. Use the onscreen prompt to adjust the value of the selected item.
- After the custom profile is completed, highlight NEXT or X.
  a. Select Next, and the contextual data area will transition to SAVE AS NEW to create a custom name for the new launch profile. Press the rotary knob to accept the selection.
  b. Selecting exit, the custom profile settings will not be saved and the screen will transition to the main Smart Tow screen.

Cruise Control Mode

Cruise Control

The cruise feature allows the operator to select a set-point and adjust the value so the vessel maintains a specific speed or engine RPM.

- Cruise is RPM based, unless the vessel incorporated a Mercury Marine GPS into the control area network.
- If the vessel has a Mercury Marine GPS, the default setting is vessel speed.
- The operator can select either RPM set-points or speed-based set-points. The type of cruise option selection can be changed in the Settings menu.
- Open the scroller bar and highlight the cruise icon. Refer to **Scroller Bar Icons** to identify the cruise icon.

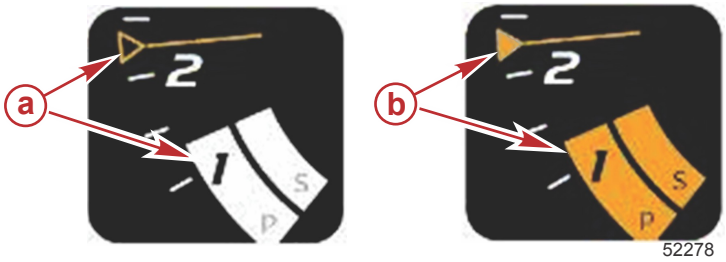
  NOTE: *Cruise Control can be disabled by placing the remote control levers in neutral.*

Cruise Control Contextual Data Area

Persistent Data Change

Cruise will modify the persistent data area of the screen by incorporating an RPM indicator within the RPM sweep, similar to Smart Tow and ECO Mode targets.

- When cruise mode is activated, elements of the persistent data will be modified to communicate:
  - RPM set-point.
  - RPM sweep color will change to orange when active to indicate the engine is computer controlled.

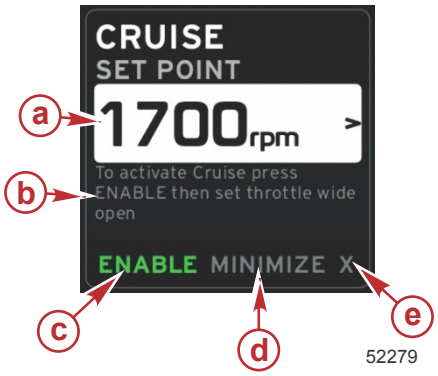


a - Cruise not active
b - Cruise active

Cruise – Contextual Data Area

Cruise will modify the contextual data area of the screen when active.

- Elements within the contextual data area will change to allow the user to set-up:
  a. RPM set-point.
  b. Cruise status enable or disable.



a - Set-point value
b - Instruction
c - Enable
d - Minimize
e - Exit

Cruise Navigation

Cruise mode will have a modified navigation system similar to Smart Tow. The footer section of the contextual panel allows the operator to enable or disable cruise, minimize, or exit the program element. Footer navigation will follow the same basic navigation selection strategy as other features.

1. Use the rotary knob or flick to scroll through the selections in the footer.
2. Press the knob to activate the selection.
   a. Enable or disable turns the element feature on or off.
   b. Minimize will hide cruise data and display CRUISE in the system tray. This allows the operator to display information from other selected icons.

3. The set-point adjustment selection field will be the default location at cruise start-up. After making adjustments to the desired settings, use the rotary knob to move the cursor to the enable/disable selection in the footer area of the contextual data area.
   a. Use the rotary knob to move between the set-point selection and the footer.
   b. When the selection box is outside the footer navigation area (set-point field), the operator only needs to use the rotary knob to make RPM or speed adjustments. There is no need to press the knob to engage the new setting.
4. Minimize is a feature that allows the operator to use the cruise feature while displaying additional data in the contextual data area.
   IMPORTANT: Set-points cannot be adjusted when cruise is minimized.
   a. Scroller bar icon selection is limited. Items that are not accessible will be grayed out when cruise is active.
   b. If autopilot is active, and cruise is minimized, the system tray will display CRUISE in the system tray.
      - Cruise data will be displayed over autopilot settings if the user selects the system tray.
      - If an autopilot popup warning occurs or the operator uses the autopilot CAN track pad, autopilot contextual data will automatically fill the contextual data area. The operator will have to minimize to hide the popup data.
5. After minimize is activated, the system tray will display CRUISE.
6. When exit is selected while displaying cruise element, the cruise feature will be disabled. The cruise icon will be displayed next to the system tray until another icon is selected from the scroller bar.

Troll Control Mode

The troll feature allows the operator to select a set-point and adjust the value so that the vessel maintains a specific speed or engine RPM.

- Troll is RPM based.
- Open the scroller bar and highlight the troll icon. Press the rotary knob to active troll control. Refer to **Scroller Bar Icons** to identify the troll icon.

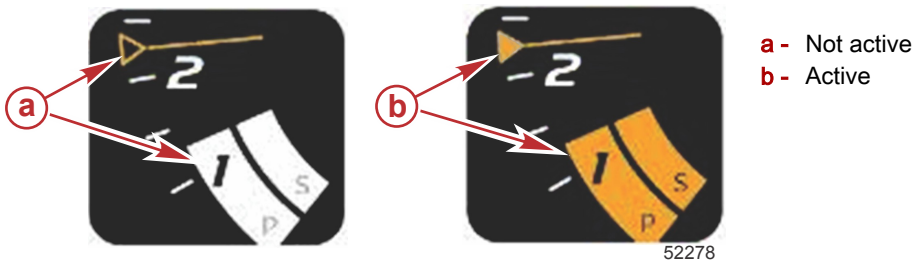
  NOTE: *Troll Control can be disabled by placing the remote control levers in neutral.*

Troll Control Contextual Data Area

Persistent Data Change

Troll will modify the persistent data area of the screen by incorporating a RPM indicator within the RPM sweep, similar to Smart Tow and ECO Mode targets.

- When troll control mode is activated, elements of the persistent data will be modified to communicate:
  - RPM set-point.
  - RPM sweep color will change to orange when active to indicate that the engine is computer controlled.



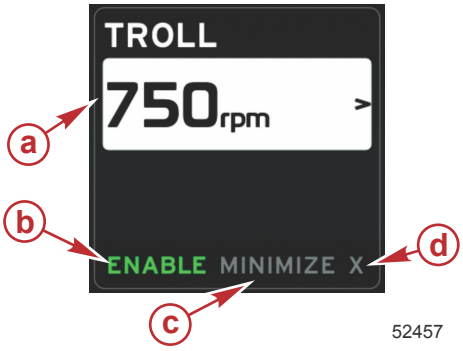
a - Not active
b - Active

Troll – Contextual Data Area

Troll will modify the contextual data area of the screen when active.

- Elements within the contextual data area will change to allow the user to set-up:
  a. RPM set-point.

b. Troll status enabled or disable.



a - Set-point value
b - Enabled or disable
c - Minimize
d - Exit

Troll Navigation

Troll mode will have a modified navigation system similar to Smart Tow. The footer section of the contextual panel allows the operator to enable or disable troll, minimize, or exit the program element. Footer navigation will follow the same basic navigation selection strategy as other features.

1. Press on the selection in the footer.
2. Press the enter button to activate the selection.
   a. Enable or disable the element feature
   b. Minimize will hide troll data and display TROLL in the system tray. This allows the operator to display information from other selected icons.
3. The set-point adjustment selection field will be the default location at troll start-up. After the operator makes adjustments to the desired settings, press on the enable/disable selection in the footer area of the contextual data area.
   a. Use the touch screen to move between the set-point selection and the footer.
   b. When the selection box is outside the footer navigation area (set-point field), the operator only needs to change the RPM or speed numbers. There is no need to press enter to engage the new setting.
4. Minimize is a feature that allows the operator to use the troll feature while displaying additional data in the contextual data area.
   IMPORTANT: Set-points cannot be adjusted when troll is minimized.
   a. Scroller bar icon selection is limited. Items that are not accessible will be grayed out when troll is active.
   b. If autopilot is active, and troll is minimized, the system tray will display TROLL in the system tray.
      - Troll data will be displayed over autopilot settings if the user selects the system Tray
      - If an autopilot popup warning occurs or the operator uses the autopilot CAN track pad, autopilot contextual data will automatically fill the contextual data area. The operator will have to minimize to hide the popup data.
5. After minimize is activated, the system tray will display TROLL.
6. When exit is selected while displaying troll element and the operator presses enter, the troll feature will be disabled. The troll icon will be displayed next to the system tray until another icon is selected from the scroller bar.

Autopilot Screens

Autopilot Screens Overview

VesselView is a display extension for autopilot features and joystick operations. All functionality of these piloting features are controlled through the Mercury Marine autopilot control area network (CAN) pad. VesselView will show if the mode is active or in standby; popups will appear as the vessel arrives at a waypoint asking to acknowledge the turn, and display information on how to adjust the engine and drives to achieve maximum efficiency.

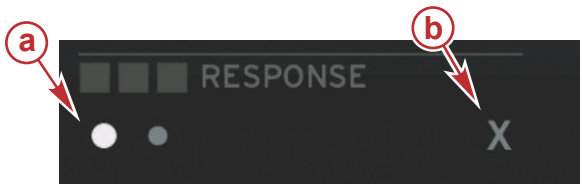
- Pressing any button on the autopilot CAN track pad, will cause VesselView to default to displaying the autopilot screen.
- Autopilot will be actively displayed when this feature is turned on. All modes and functions are controlled with the CAN pad.

Autopilot Screens Navigation

Autopilot screens will have a modified navigation system. Information will be displayed on two pages of contextual data. Page indicators and X will be the only selections available.

- Page 1 will contain base autopilot information.
- Page 2 will contain additional navigation data.

- Use the X to hide autopilot data and display the autopilot mode in the system tray icon. This allows other information to be displayed in the contextual area.



52461

a - Pages
b - Minimizes autopilot data

Minimized Autopilot

When X is selected from the contextual data navigation, autopilot data will be removed. You can select to display limited items from the scroller bar in the contextual data area. The last contextual data will be displayed by default.

- Scroller bar selection limited to: Expand, ECO, Fuel Management, Trip Log, Voltage, Navigation, Pressure, Temperature, Tanks, Cruise, Genset, and Settings.

  NOTE: *Available scroller bar items available are based on the gauge and vessel personality.*
- When ECO is active and autopilot is minimized, the system tray will display AUTO in the system tray icon.
- Items in the scroller bar that cannot be selected will be gray when autopilot is active.
- When an autopilot popup occurs, or a button is pressed on the autopilot CAN pad, autopilot data will automatically fill the contextual data area. You must select X to hide the data.
- The system tray will display what active mode autopilot is in: track, auto, waypoint sequence or standby. Waypoint sequence will be displayed on a field of orange in the system tray; all other modes will be on a field of gray.

Warnings

Popup Warnings

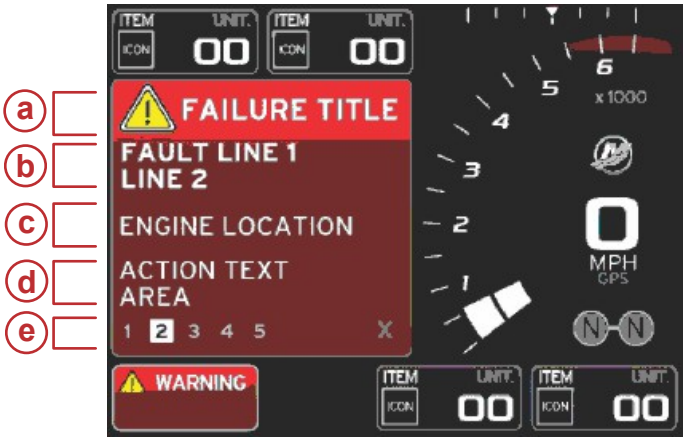
All Mercury warning alarms will be shown regardless of what screen is displayed at the time of the warning. When an alarm warning is activated, the status box will display the warning text and icon. Faults, along with their descriptive short text, long text, and action text, will be displayed full screen.

- When a fault occurs:
  a. The status box will turn red and show the warning text and Icon.

52101

  b. Fuel and depth warning faults will have additional options and will be described in **Fuel Critical Alarm and Depth Alarm**.
  c. A level 3 popup warning (trim, navigation, ECO, fuel) can be turned off or on by the operator in the Settings menu. By default it is turned on. If the popup warning is turned off in the Settings menu, the faults will only show in the system tray.
  d. All Guardian faults (level 4) will always be displayed regardless of what is selected in the Settings menu.
  e. If the fault is related to emissions control, the engine icon will be displayed in the status box.
- When the operator selects a fault in the contextual area:
  a. The fault title with the warning icon will be displayed at the top.
  b. Short text fault description and the fault location (engine) will be displayed below the title.

c. When more than one fault exists, use the rotary knob to navigate to each fault and press the rotary knob to access the fault. Refer to **Engine Fault**.



51619

a - Fault icon with fault title
b - Short text or legacy text
c - Engine fault location
d - Action text
e - Number of faults

Fuel Critical Alarm

The fuel alarm is managed by VesselView, not by the engine ECM/PCM.

- Display notification properties and fuel warning levels can be set in the Settings menu.
- If the operator has fuel selected as a persistent data field in location #2 (refer to **Screen Display Locations and Descriptions**), then the fuel data field will show the warning.
- The warning icon will replace the fuel icon and the data box will change between the black field and a red field.

52275

- If the operator does not have fuel selected as a persistent data field (location #2), but it is active as a warning fault, then the system tray will display a red field and show FUEL .
- The operator can also select the fuel warning as a contextual popup in the Settings menu. Pressing the rotary knob will minimize the contextual panel. The fault will still be displayed in one of two locations, depending on the screen set-up.

Depth Alarm

The depth alarm is managed by VesselView, not by the engine ECM/PCM.

- Display notification properties and depth warning levels can be set in the Settings menu.
- If the operator has depth selected as a persistent data field in location #1 (refer to **Screen Display Locations and Descriptions**), then the depth data field will show the warning.
- The warning icon will replace the depth icon and the data box will change between the black field and a red field.

52276

- If the operator does not have depth selected as a persistent data field (location #1), but it is active as a warning fault, then the system tray will display a red field and show DEPTH .

- The operator can also show the depth warning as a contextual popup in the Settings menu. Pressing the rotary knob will minimize the contextual panel. The fault will still be displayed in one of two locations depending on the screen set-up.

Notes:

Section 6 - Installation

Table of Contents

6

Mounting Guidelines

Mounting Location

The mounting location must be carefully chosen before you drill or cut. VesselView must be mounted so that the operator can use the controls and clearly see the display screen. The display screen has high-contrast and anti-reflective properties that allow viewing in direct sunlight. For best results, mount the display out of direct sunlight and where there is minimal glare from windows or bright objects.

Verify that there are no hidden electrical wires or other parts behind the panel before cutting.

Do not install where it can be used as a handhold, where it might be submerged, or where it will interfere with the operation of the boat.

Ensure that there is sufficient clearance space to connect all relevant cables.

Good ventilation must be considered when identifying a mounting location. Poor ventilation can cause the display to overheat. This product is designed to operate within temperatures of –15 to +55 °C (+5 to 131 °F).

Electromagnetic Interference

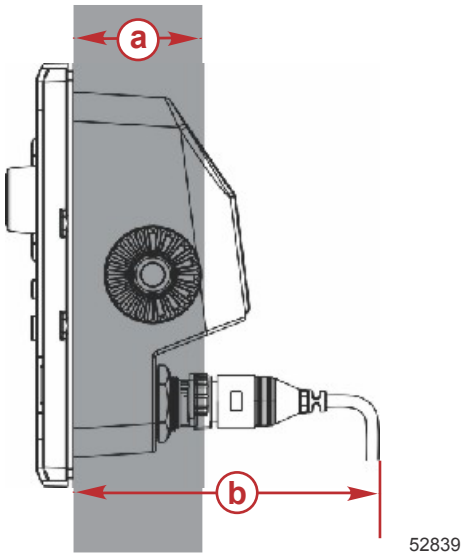
The following are the minimum distances that must be considered when selecting a mounting location. Verify that VesselView is not mounted closer than:

- 1.5 m (5 ft) from a radio or transmitting mast
- 2 m (6.5 ft) from a radar antenna
- 1 m (3 ft) from a compass

Installing VesselView 7

The following installation instructions have been written for the harnesses included with the VesselView. The 90° harness connectors may not allow VesselView to be installed when the dashboard thickness is greater than the dimension listed. Straight connector PN# 8M0075080 should be ordered when the dash board thickness exceeds the maximum allowable thickness.

1. Verify that there is sufficient clearance for the VesselView harness connections.

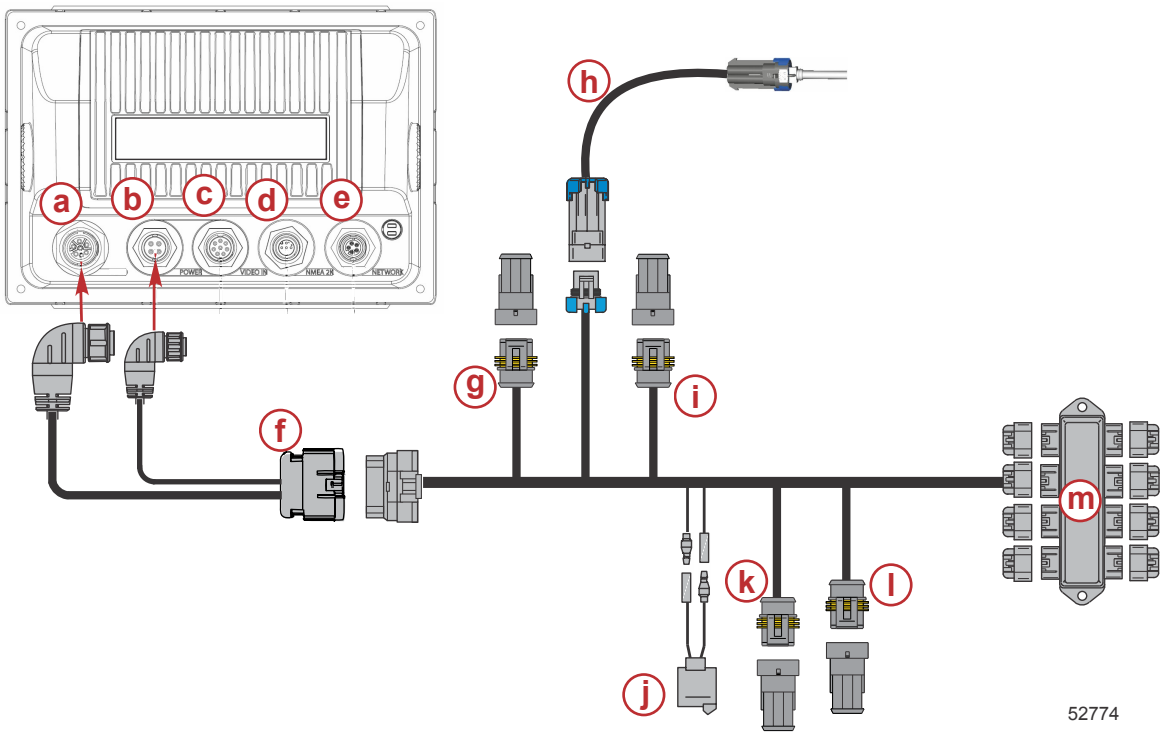


a - Dash board 5.08 cm (2 in.) (reference only)
b - 12.0 cm (4.72 in.)

2. Secure the cut-out template to the mounting surface with adhesive tape.
3. Drill the 4 mounting holes with an appropriate size drill bit.
4. Use a 25.0 mm (0.98 in.) hole saw to remove the four corners of the gray cut-out area.
5. Remove the remaining gray area with a saw or other device.
6. Use a file to remove any sharp edges.
7. Verify that VesselView fits into the opening. Remove material from the opening if there is any interference.
8. Remove the adhesive protection backing from the gasket and install the gasket onto the mounting contact surface of the VesselView.
9. Connect all of the cables to the rear of the unit before inserting into the opening.
10. Secure the unit with the mounting hardware.

11. Install the upper and lower bezel trim.

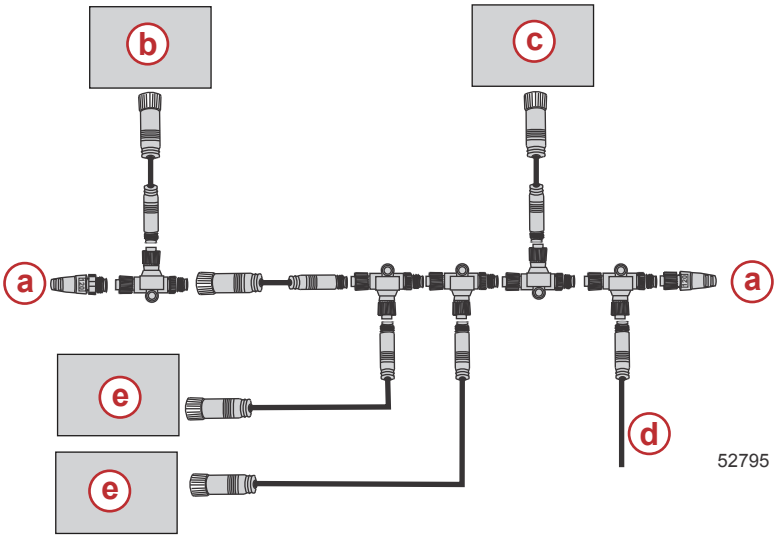
VesselView 7 Wire Harness



a - SmartCraft network connection
b - Power connection
c - Video in
d - SIMNET/ NMEA 2000
e - Ethernet network
f - VesselView 7 adapter harness
g - System Link port
h - Air temperature sensor
i - System Link starboard
j - Horn
k - System Link starboard center
l - System Link port center
m - Junction box

VesselView NMEA 2K Connections

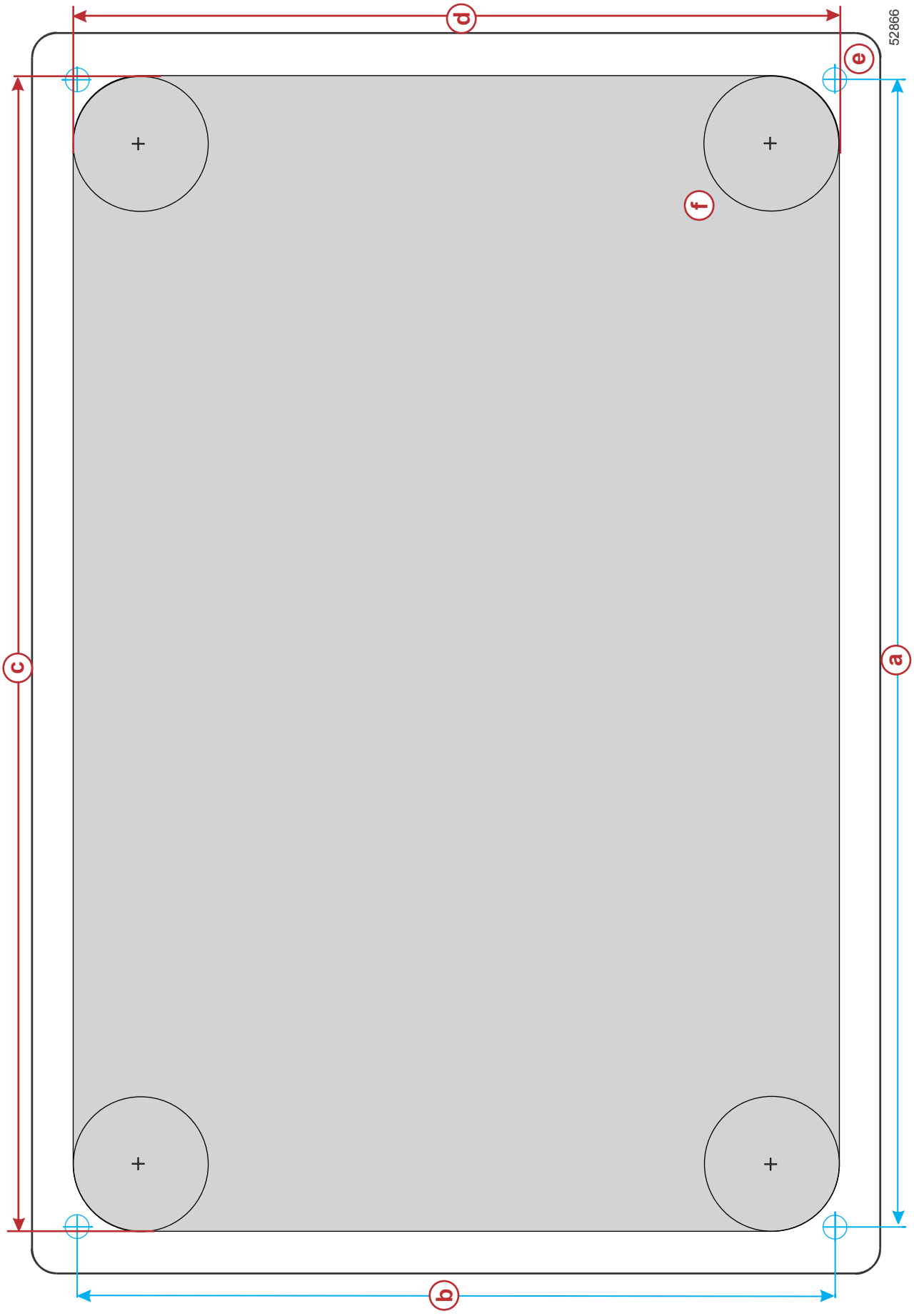
NMEA 2K must be powered separately from the SmartCraft network. The NMEA 2K power supply must be properly fused and have termination resistors at each end of the backbone.



a - 120k ohm termination resistor
b - GPS
c - Chart plotter
d - NMEA 2K fused power source
e - VesselView

VesselView 7 Cut-out Template

IMPORTANT: Due to printing and copying variables, the image size may have changed from the actual size. Check the graphic for accuracy prior to using the template.


d
e
f
c
a
b
52866

a - 212.7 mm (8.37 in.)
b - 140.5 mm (5.53 in.)
c - 214.2 mm (8.43 in.)
d - 142.1 mm (5.59 in.)
e - 4.3 mm (0.17 in.) (4x)
f - 25 mm (0.98 in.)