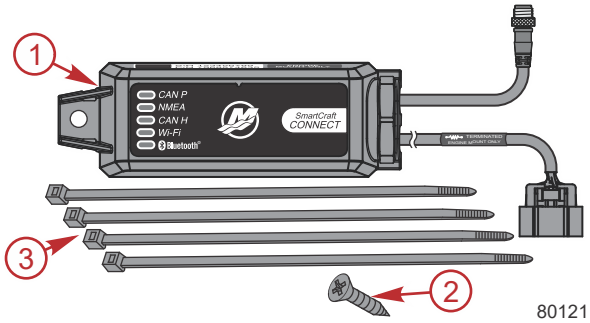
SCC-1 SMARTCRAFT CONNECT GATEWAY INSTALLATION INSTRUCTIONS

IMPORTANT: This document guides our dealers, boatbuilders, and company service personnel in the proper installation or service of our products. If you have not been trained in the recommended servicing or installation procedures for these or similar Mercury Marine products, have the work performed by an authorized Mercury Marine dealer technician. Improper installation or servicing of the Mercury product could result in damage to the product or personal injury to those installing or operating the product. Always refer to the appropriate Mercury Marine service manual for component removal and installation instructions.

NOTE: After completing installation, place these instructions with the product for the owner's future use.

Components Contained in Kit



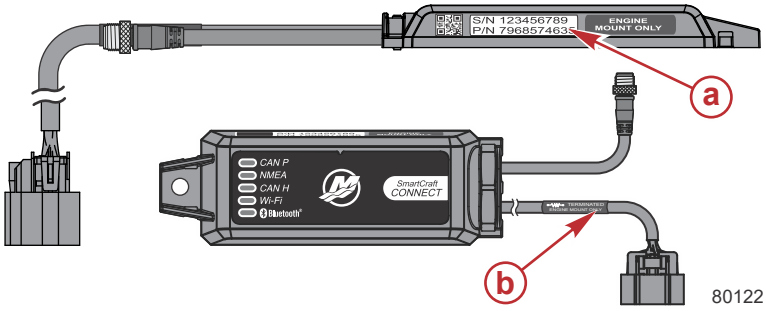
Ref.	Qty.	Description
1	1	SmartCraft Connect module
2	1	#10 x .88 in. stainless steel wood screw
3	4	Cable ties

Information

This manual covers the installation of CAN P only - engine-mounted module (single). The helm-mounted module will default out of the box with CAN P and CAN H. CAN H is applicable to dual, triple, and quad DTS engine applications. CAN H must be turned off if issues with the analog tachometers are encountered on mechanical/non-DTS products.

The termination band on the 10-pin connector cable only applies to engine-mounted modules.

The serial number and part number are located on the side of the module.

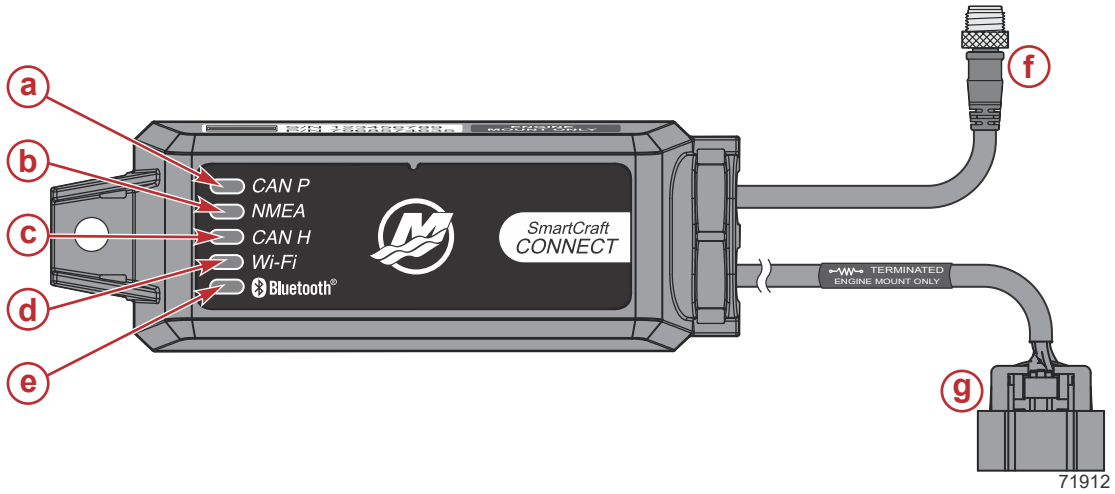


a - Serial/part number location
b - Termination band

SmartCraft Connect Module—Single through Quad-Engine

NOTE: *The SmartCraft Connect module does not provide power for any device on the NMEA 2000 network. The NMEA 2000 network will require its own power source. The NMEA 2000 network power input must have appropriate circuit protection for the devices on the NMEA 2000 network.*

NOTE: *The termination band on the 10-pin connector cable only applies to engine-mounted modules.*



a - CAN P connection light
b - NMEA connection light
c - CAN H connection light
d - Wi-Fi connection light
e - Bluetooth® connection light
f - NMEA 2000® connector
g - 10-pin connector

Compatibility

Boats Equipped with VesselView Link or VesselView 403

SmartCraft Connect and VesselView Link can be used together on the same boat as long as SmartCraft Connect is updated to software version 12.0.5 or newer.

Engines

SmartCraft Connect is compatible with the following engines:

Engines	Model Year	Horsepower (hp)
Mercury outboards and MerCruiser	2004 and newer	40hp and above
Mercury outboards	2022 and newer	25 and 30hp
Mercury Avator electric outboards	All	
Most Mercury diesel engines	Contact Mercury Marine customer service for specific diesel application information.	

Level 1 – SmartCraft Connect Mobile

Partner MFDs must use the latest software provided by the manufacturer.

This level only works with the Mercury Marine app via Bluetooth to show engine data and faults. The NMEA 2000 connector is on the device but is disabled.

Part Number	Description	Number Of Engines Supported	Mounting Location	Built In CAN Bus Termination Resistors	Additional Features For MFD Display Via NMEA 2000
8M0173128	SmartCraft Connect - Mobile	1	On engine	Yes	No
8M0173129	SmartCraft Connect Mobile - multi-engine	1-4	Helm	No	No

SmartCraft Connect Mobile

- Helm and engine-mounted versions are available.

- The NMEA 2000 connector is on the module. The connector does not communicate with MFD displays. The connector will receive depth data from NMEA 2000 for use with Avator outboard displays.
- The primary interface to view data is the Mercury Marine app on a mobile device.

- Some applications will require the use of the SmartCraft Manager app to configure the module. Examples include:
  - Using the app to view fuel level for a fuel level sensor connected to the engine.
  - To use custom trim calibrations.
  - To enable data from optional engine sensors like digital trim or water pressure.

Level 2 – SmartCraft Connect with SIMRAD and VesselView 704 Integration

Partner MFDs must use the latest software provided by the manufacturer.

Decal on the side of a Level 2 SmartCraft Connect module

This SmartCraft Connect version needs either certain SIMRAD MFDs or a VesselView 704 on the NMEA 2000 network to function properly. Without a compatible display, the Level 2 module will not send any data over NMEA 2000. Level 2 modules also include all the mobile features that Level 1 devices have.

Part Number	Description	Number Of Engines Supported	Mounting Location	Built In CAN Bus Termination Resistors	Additional Features For MFD Display Via NMEA 2000
8M0235016	SmartCraft Connect – Engine-mounted	1	On engine	Yes	Yes
8M0235017	SmartCraft Connect – Single-engine	1	Helm	No	Yes
8M0235018	SmartCraft Connect – Multi-engine	1-4	Helm	No	Yes

Compatible MFDs to unlock NMEA 2000 engine data and Mercury Integration:

- SIMRAD NSX®
- SIMRAD NSX® ULTRAWIDE
- SIMRAD NSS® 4
- Mercury Marine VesselView 704

With one of the above displays connected to the NMEA 2000 network, SmartCraft Connect will unlock and begin transmitting engine data to the network.

Once unlocked, other brands of displays can communicate freely with SmartCraft Connect.

If the display is a compatible Garmin® or Raymarine® display, the integrated Mercury features will be available.

The SIMRAD® or VesselView 704 must remain on the network to keep SmartCraft Connect unlocked.

Any device from the Level 2 compatibility list can be combined with a device from the Level 3 compatibility list.

Following are some examples of MFD combinations that will keep a Level 2 SmartCraft Connect unlocked.

- Mercury VesselView 704 + Garmin GPSMAP series
- SIMRAD NSX + Raymarine Axiom series
- SIMRAD NSS4 + other NMEA 2000 compatible display

Level 3 – SmartCraft Connect With Garmin, Raymarine, and Other MFDs

Partner MFDs must use the latest software provided by the manufacturer.

Decal on the side of a Level 3 SmartCraft Connect module

This is the completely unlocked version of SmartCraft Connect.

They are compatible with any display listed in Level 2 as well as certain displays from Garmin and Raymarine.

Level 3 is also the choice for MFDs that do not have Mercury integrated functionality.

Level 3 modules have all of the mobile device functionality found in Level 1 devices.

Part Number	Description	Number Of Engines Supported	Mounting Location	Built In CAN Bus Termination Resistors	Additional Features For MFD Display Via NMEA 2000
8M0173704	SmartCraft Connect – Engine-mounted	1	On engine	Yes	Yes
8M0173694	SmartCraft Connect – Single-engine	1	Helm	No	Yes
8M0173703*	SmartCraft Connect – Multi-engine	1-4	Helm	No	Yes
*8M0173703 supersedes 8M0173696 (NLA).					

List of compatible displays with Mercury integration:

- All displays listed in Level 2
- Garmin-GPSMAP series running v40.03 or newer
- Garmin-echoMAP UHD2 running v40.03 or newer
- Garmin-echoMAP Ultra2 running v40.03 or newer
- Garmin-GPSMAP 8400/8600/9000/9200 series, 7x3/9x3/12x3/16x3 series
- Raymarine Axiom series running Lighthouse 4.1 or newer

Other MFDs and devices not listed will have access to NMEA 2000 engine data and will not have integrated Mercury features similar to the Mercury CAN P gateway.

MFDs

IMPORTANT: Partner MFDs must use the latest software provided by the manufacturer.

Older Garmin and Raymarine devices may offer limited Mercury features.

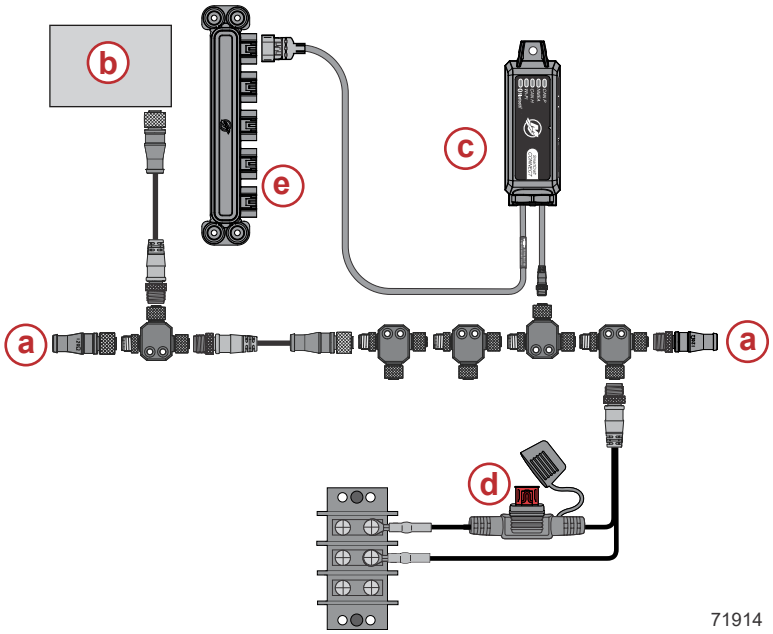
Module Harness Connections

1. Connect a helm-mounted SmartCraft Connect module in one of the two following ways:
   a. Connect the CAN 10-pin harness connector to the SmartCraft junction box. Refer to the following diagram.
   b. Connect the CAN 10-pin harness connector to the helm harness SmartCraft 10-pin connection using a male-male adapter harness.
2. Connect an engine-mounted SmartCraft Connect module by removing the 10-pin resistor cap on the engine harness and connecting the SmartCraft Connect 10-pin connector.
3. Connect the module NMEA 2000 harness connector to the NMEA 2000 network.

NOTE: *A NMEA 2000 extension may be required to reach the NMEA 2000 backbone.*

SmartCraft Connect Mobile does not transmit NMEA 2000 data. There have been situations where the SCC mobile can listen on NMEA 2000 for a depth signal that can be displayed on other Mercury gauges.

The NMEA 2000 LED will not illuminate on SCC Mobile modules.



a - 120-ohm termination resistor
b - Chartplotter
c - SmartCraft Connect module
d - NMEA 2000 fused power source
e - SmartCraft junction box

On-Engine Mounting Guidelines

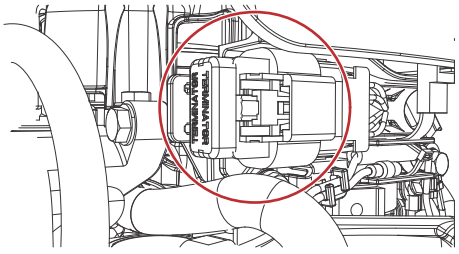
Mounting Requirements

NOTE: *The 10-pin on-engine terminator must be removed from the engine harness before installation of the module.*

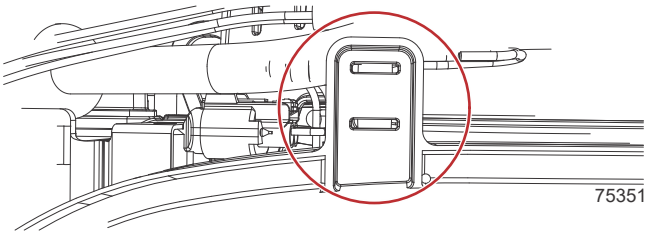
- The SmartCraft Connect module must be mounted in a location that allows for connection to the 10-pin connector on the engine harness. No additional 10-pin harnessing may be used in the installation of this product.
- All routing must adhere to harness installation bend parameter specifications. The minimum bend radius of any portion of the harness must be no less than 13 mm (0.5 in.).
- Two cable ties to secure the SmartCraft Connect module must be used to prevent unwanted movement during normal operation of the propulsion package.
- The following locations must be avoided when installing the SmartCraft Connect module.
  - Any location that can be exposed to water
  - Any location that is subject to high heat during operation of the power package
  - Near ignition coils
  - Near spark plug wires
  - Near shift/throttle cables
  - Where harnessing could contact belts
  - Secured to fuel lines

25/30 FourStroke EFI On-Engine Mounting

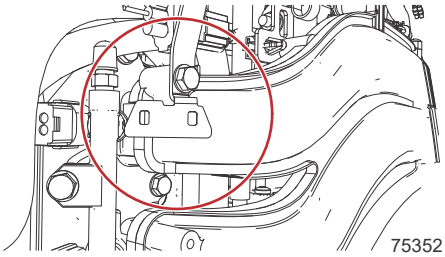
1. Locate the SmartCraft 10-pin connector and remove the CAN termination resistor. Connect the 10-pin connector on the SmartCraft Connect harness. On-engine modules are internally terminated, so the termination resistor is no longer needed.



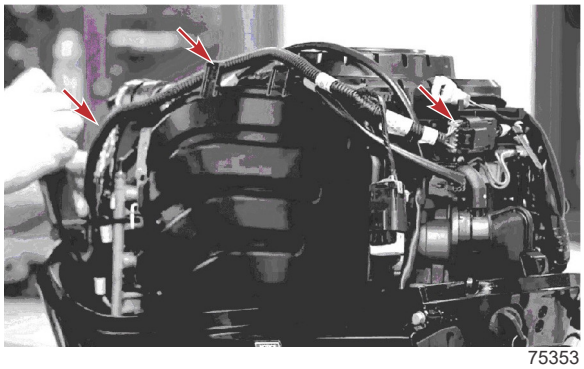
2. Route the harness behind the intake runner mounting tab and secure it with a cable tie.



3. Locate the module mounting bracket on the engine and secure the module with two cable ties.



4. This routing will keep the harness away from moving engine components.



Typical SmartCraft harness routing path

5. The NMEA 2000 connector can remain capped, if it is not intended to be used.

Mercury Avator™ 7.5e Electric On-Outboard Mounting

IMPORTANT: Mercury Marine strongly recommends that a trained and certified technician perform servicing tasks that require removing cowling, including installing the SmartCraft Connect.

NOTE: *Cowl removal and installation instructions can be referenced in the Mercury Avator 7.5e Operation and Installation Manual.*

NOTE: *The following instructions are for installing the SmartCraft Connect on tiller models. The SmartCraft Connect must be mounted under the helm on remote control models.*

1. Record the serial number from the body of the SmartCraft Connect in the **SN:** space in the **SmartCraft Connect Serial Number** table.

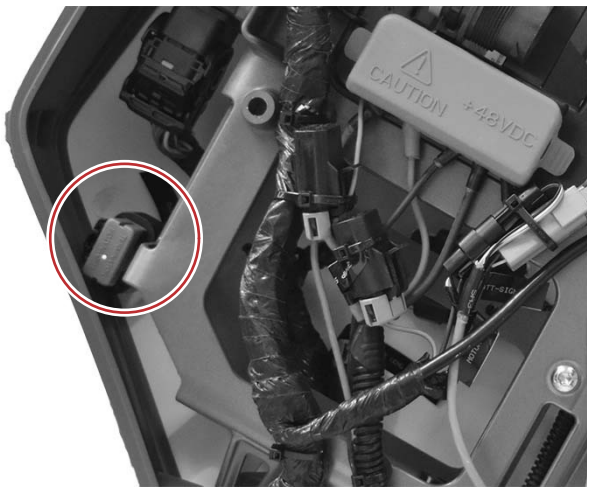
SmartCraft Connect Serial Number
SN:

2. Remove the battery from the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Battery Removal**.

IMPORTANT: Remove the Mercury Avator battery from the outboard motor before performing inspections, assembly, maintenance, and repair activities.

- **Only use the provided handles to carry the Mercury Avator battery.**
- **Keep the Mercury Avator battery away from children.**
- **Keep the Mercury Avator battery away from objects that may cause short circuits, like tools, screws, nails, watches, bracelets, necklaces, keys, or other metal objects.**
- **Handle the Mercury Avator battery with care. Do not crush the Mercury Avator battery or subject it to mechanical shock.**
- **Keep the Mercury Avator battery away from sources of heat and fire.**
- **Do not place the Mercury Avator battery in the presence of flammable vapors or in flammable dust environments.**

3. Remove the front cowl upper panel from the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Front Cowl Upper Panel Removal**.
4. Remove the front cowl lower panel from the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Front Cowl Lower Panel Removal**.
5. Remove the starboard cowl panel from the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Starboard Cowl Panel Removal**.
6. Remove and discard the weatherproof connector cover from the 10-pin data harness connection.



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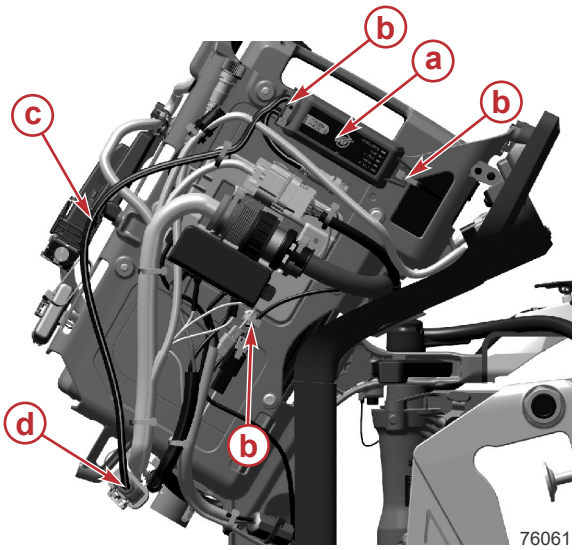
7. Connect the 10-pin connector on the SmartCraft Connect to the outboard wiring harness connector.
8. Verify the connectors are connected by pulling on the connections.

   NOTE: *The connectors should be aligned and seated flush for a proper connection.*

   IMPORTANT: Do not secure the SmartCraft Connect to the main battery bracket assembly. The cable ties will interfere with the battery.

9. Install the SmartCraft Connect on the outboard and secure the SmartCraft Connect harness to the outboard with the cable ties.



a - SmartCraft Connect
b - Cable tie
c - SmartCraft Connect harness
d - 10-pin connector

10. Install the starboard cowl panel on the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Starboard Cowl Panel Installation**.
11. Install the front lower cowl panel on the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Front Lower Cowl Panel Installation**.
12. Install the front upper cowl panel on the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Front Upper Cowl Panel Installation**.
13. Install the battery in the outboard. Refer to the Mercury Avator 7.5e Operation and Installation Manual **Battery Installation**.

Software Requirements

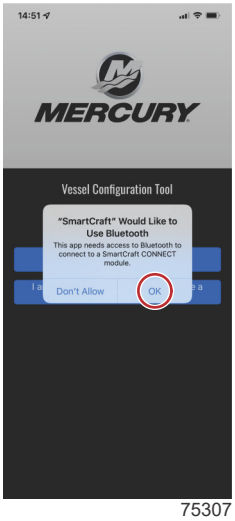
- A mobile device and a Wi-Fi connection with access to the internet.
- SIMRAD® with NSX™ software, Garmin®, or a Raymarine® display users must visit their websites to make sure the display is running the latest software available.

Consumer Login

1. Download the **SmartCraft Manager** app from the iOS App Store or Google Play Store.

2. After the app has been downloaded to the device, open the app to begin the configuration process.

3. Allow for Bluetooth® connectivity to use the configuration app.



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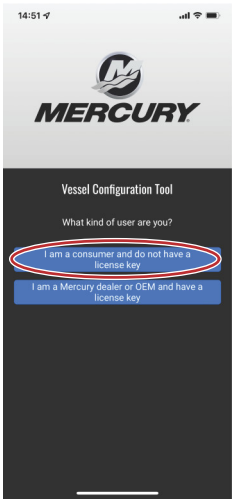
4. Select the **consumer user** option.



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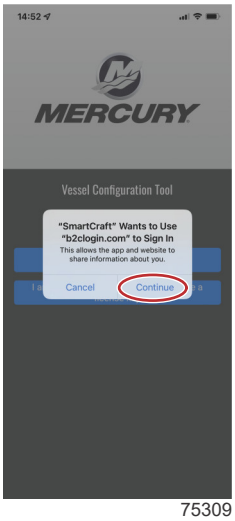
5. Select **Continue** to begin data sharing.



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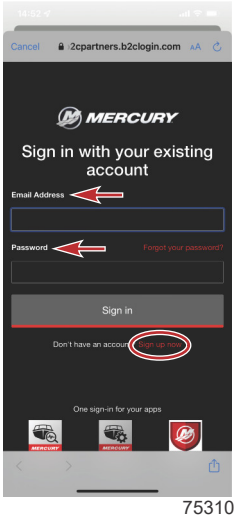
6. Enter the email address and password. As a first time user, select the **Sign up now** option.



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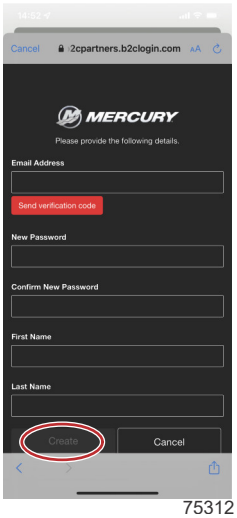
7. Complete all of the required data fields. When finished, select the **Create** button.



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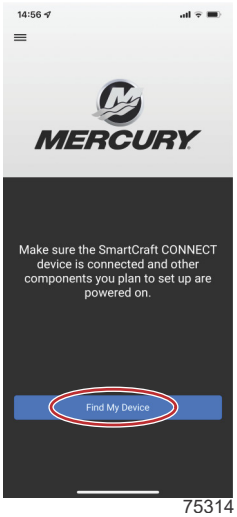
8. Power up the SmartCraft Connect and all other vessel components, select **Find My Device**. Select the SmartCraft Connect device.



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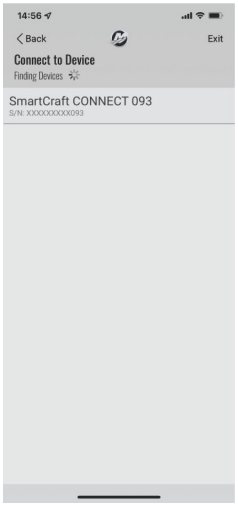

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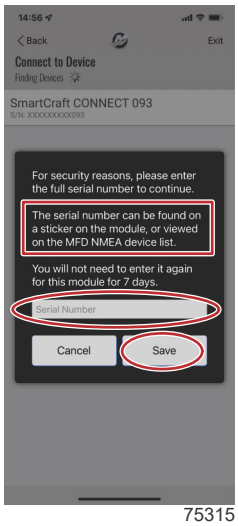
9. Enter the SmartCraft Connect serial number. This can be found on the side of the module, or by querying the list of the NMEA devices on the vessel network, using an MFD display. After entering the serial number, select **Save**.



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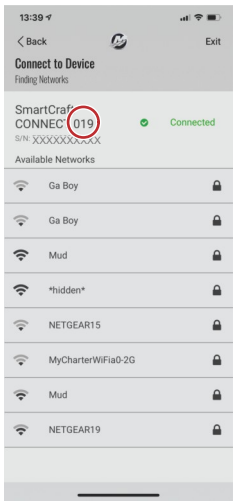
10. Select the Wi-Fi network that will be used for communication connection.

NOTE: *Networks that do not require a password are acceptable to use. Captive portal Wi-Fi networks, which require a user to interact with a web page, cannot be used to configure this module.*

NOTE: *The device name uses the last 3 digits of the module serial number for identification.*

NOTE: *Wi-Fi signal strength needs to be two bars to function properly.*



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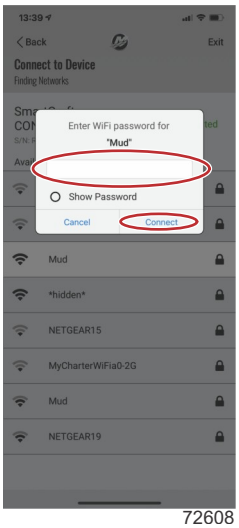
11. Enter the password needed for establishing a connection to a Wi-Fi network. Select **Connect**.



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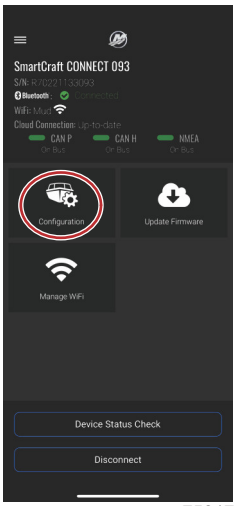
12. After this data is entered, go to the **Mercury Dealer or OEM Configuration Process: Step 11**, to continue the configuration process instructions.
13. The SmartCraft Connect module can now be customized for vessel and engine data. The user input data will be stored on the NMEA network. Changes can be made at any time to the vessel and engine configuration.



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Mercury Dealer or OEM Login

1. Download the **SmartCraft Manager** app from the iOS App Store or Google Play Store.

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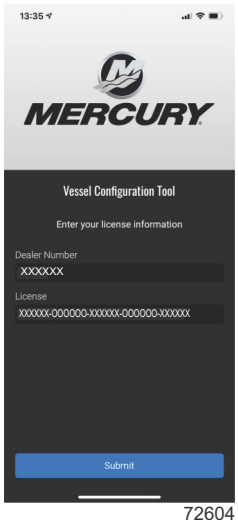
2. Open the app to begin the configuration process.

3. Enter the dealer number and license number.



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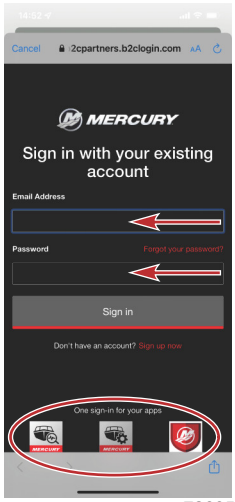
4. Sign in to the appropriate existing account with the email and password credentials. If this is the first time setting up a SmartCraft Connect, an account must be created. Save the new account credentials for future use.

   NOTE: *Brunswick Corporation is moving all accounts to a single login. If you already have an account for 1st Mate, Mercury University, MDA, Harris® boats, Boston Whaler®, Sea Ray®, etc., your username and password will work here.*

   IMPORTANT: Android™ users need to grant the app permission to use location services when requested. This is a requirement to allow a full Bluetooth® connection to the module.



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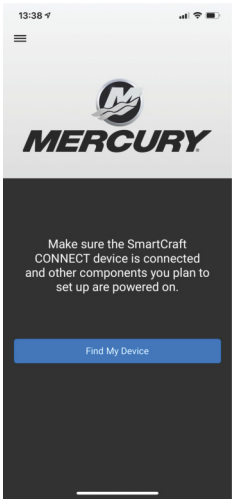
5. Continue entering additional data on the next screen.
6. Power up the system with the key in the **ON** position.

7. Check that the SmartCraft Connect module and all other items on the boat are powered up. When these conditions are met, select **Find My Device**.



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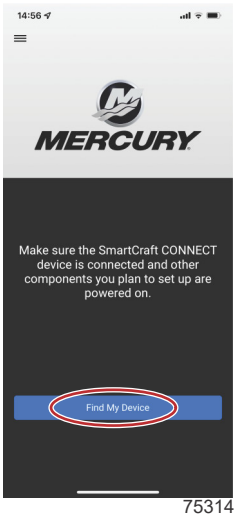
8. The SmartCraft Connect module will appear on-screen along with a list of available Wi-Fi networks. Select a trusted network and connect. Power up the SmartCraft Connect and all other vessel components, select **Find My Device**. Select the SmartCraft Connect device, and select the Wi-Fi network to connect to.



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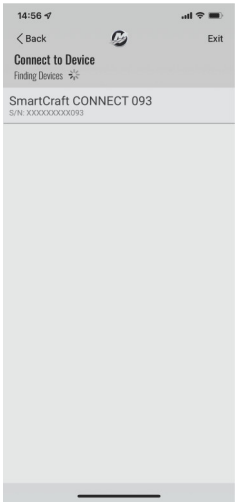

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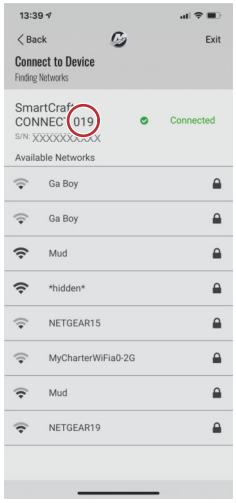
9. ***NOTE:*** *Networks that do not require a password are acceptable to use. Captive portal Wi-Fi networks, which require a user to interact with a web page, cannot be used to configure this module.*

   NOTE: *The device name uses the last 3 digits of the module serial number for identification.*

NOTE: *Wi-Fi signal strength needs to be two bars to function properly.*



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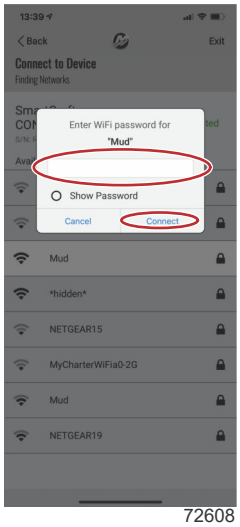
10. Enter the network password and select **Connect**.



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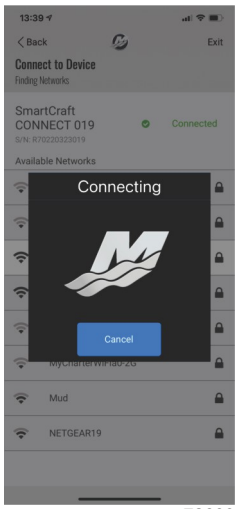
11. The SmartCraft Connect device will connect. Depending on the network strength, this may take a minute.



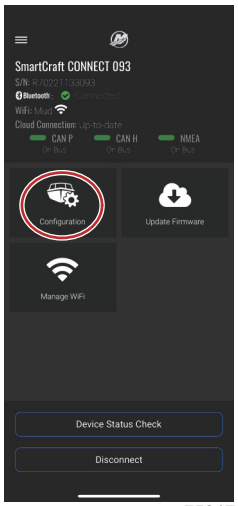
72609

12. The menu screen will appear. The module will automatically query the Mercury site for any updates to the firmware. If any updates are needed, there will be an exclamation point in the upper right corner of the **Update Firmware** tile. In this event, click on that tile and any updates will begin.

NOTE: *The app will say update complete when the module reflash is downloaded to the module. It will then restart, and may take a few minutes to perform the update. Do not remove battery power during this time.*

NOTE: *Complete any firmware updates before beginning the configuration process.*

NOTE: *Wait until the Wi-Fi LED on the device is solid, or a No Updates - '"Device is not ready to receive a firmware update". message will appear.*



75317

74110

Firmware Update

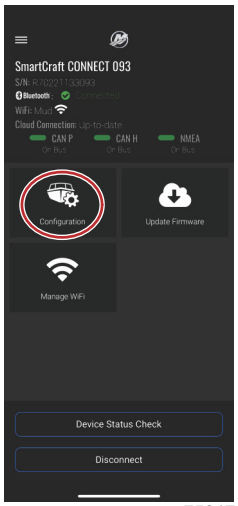
All modules/versions will be required to complete a firmware update before configuration. The SC Manager app will not allow configuration unless the firmware is up to date.

1. The menu screen will appear. The module will automatically query the Mercury site for any updates to the firmware. If any updates are needed, there will be an exclamation point in the upper right corner of the **Update Firmware** tile. In this event, click on that tile and any updates will begin.

   NOTE: *The app will say update complete when the module reflash is downloaded to the module. It will then restart, and may take a few minutes to perform the update. Do not remove battery power during this time.*

   NOTE: *Complete any firmware updates before beginning the configuration process.*

   NOTE: *Wait until the Wi-Fi LED on the device is solid, or a No Updates - '"Device is not ready to receive a firmware update". message will appear.*

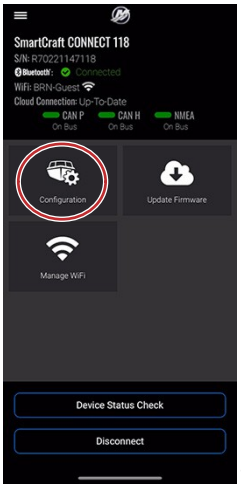


75317

74110

Module Configuration

1. Select **Configuration**.

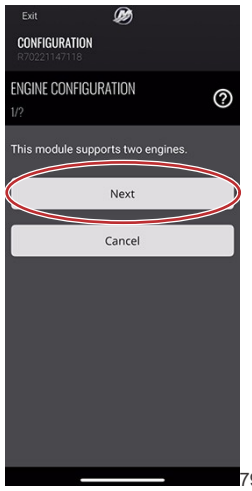


79844

2. Select **Configure Engines**.

79845

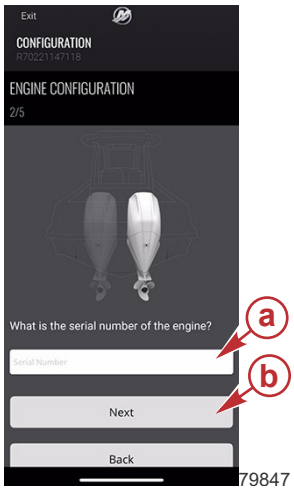
3. Select **Next**.



79846

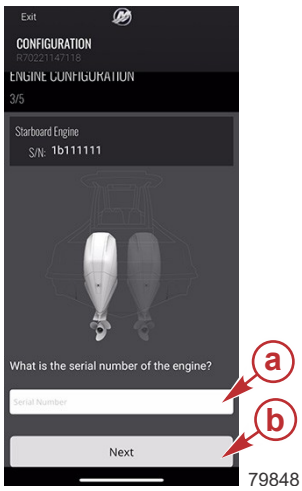
4. Enter the engine serial number.

5. Select **Next**.



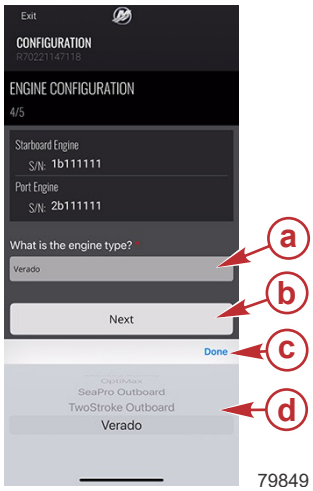
a - Engine serial number
b - Next

6. If applicable, enter the second engine serial number.
7. Select **Next**.



a - Second engine serial number
b - Next

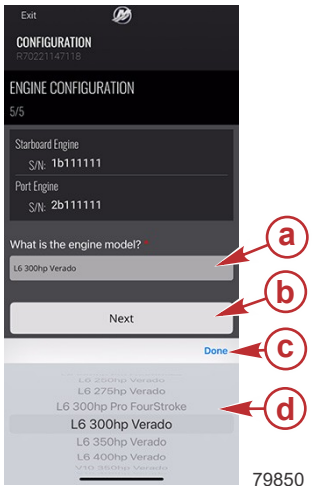
8. Place cursor in the "What is the engine type?" window.
9. Choose the engine from the engine list.
10. Select **Done**.
11. Select **Next**.



a - "What is the engine type?" window
b - Next
c - Done
d - Engine list

12. Place cursor in the "What is the engine model?" window.
13. Choose the engine from the engine list.
14. Select **Done**.

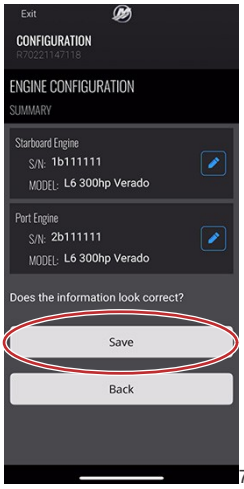
15. Select **Next**.



79850

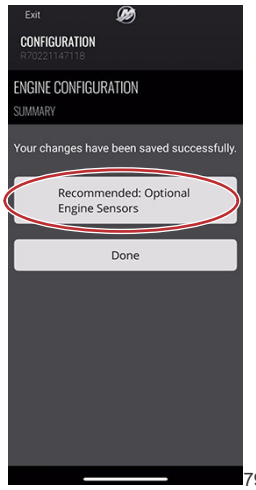
a - "What is the engine model?" window
b - Next
c - Done
d - Engine list

16. Ensure that the information is correct.
17. Select **Save**.



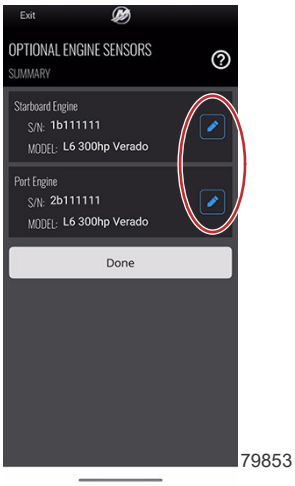
79851

18. Configure the optional items.
19. Select **Recommended: Optional Engine Sensors**.



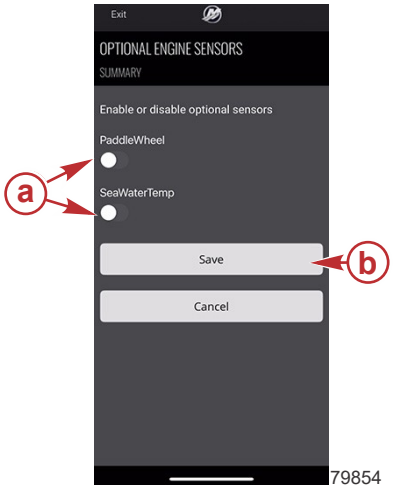
79852

20. Select the pencil icon to configure an engine sensor.



79853

21. Enable or disable the optional sensors.
22. Select **Save**.



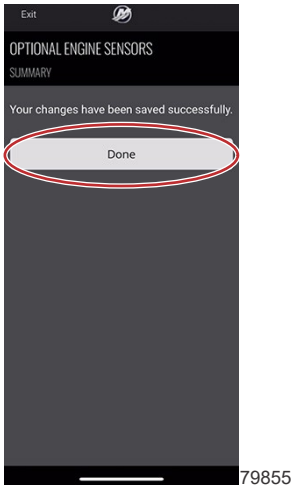
79854

Example, options vary based on engine model

a - Optional sensors

b - Save

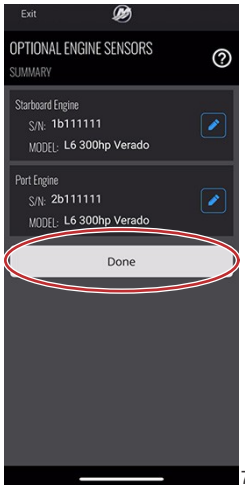
23. Observe the changes saved screen.
24. Select **Done**.



79855

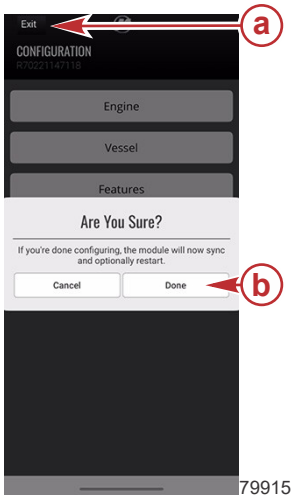
25. If applicable, select the pencil icon for the second engine.
26. Enable or disable the optional sensors.
27. Select **Save**.
28. Observe the changes saved screen.
29. Select **Done**.

30. Observe the engine list screen.
31. Select **Done**.



79856

32. Configure optional custom engine trim calibrations. Refer to **Calibrate Engine Trim**.
33. Configure the fuel tanks. Refer to **Configure Tanks**.
34. Configure the helms. Refer to **Configure Helms**.
35. Configure the steering angle. Refer to **Steering Angle**.
36. Configure the tab source. Refer to **Tab Source**.
37. Calibrate the tanks. Refer to **Calibrate Tanks**.
38. Choose the features. Refer to **Features**.
39. Configure optional advanced settings. Refer To **Advanced**.
40. Select **Exit**.
41. Select **Done**.

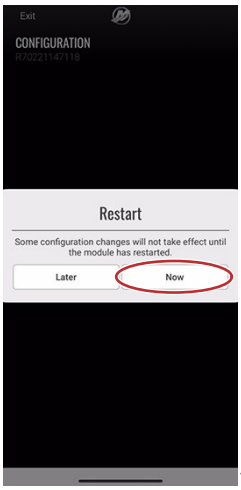


79915

a - Exit
b - Done

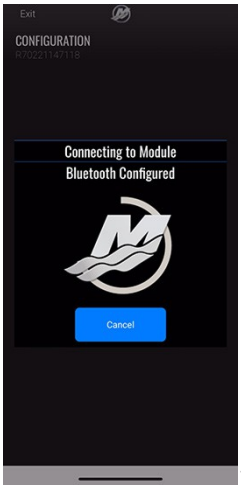
42. Observe that some changes may not take effect until the module has restarted.

43. Select **Now**.



79916

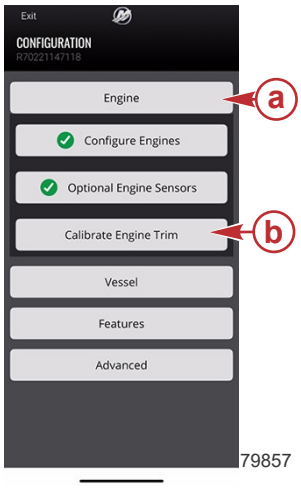
44. Observe the notification of items that have been configured.



79917

Calibrate Engine Trim

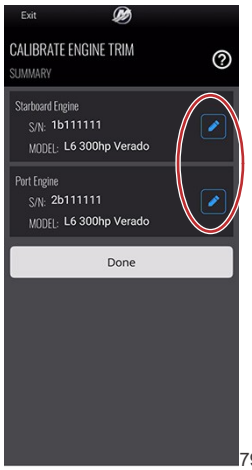
1. Select **Engine**.
2. Select **Calibrate Engine Trim**.



79857

a - Engine
b - Calibrate Engine Trim

3. Select the pencil icon to calibrate the engine trim.

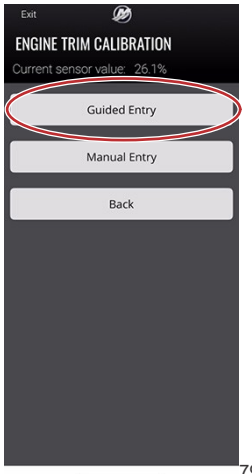


79858

4. Select **Guided Entry** or **Manual Entry**. Refer to **Guided Entry** or **Manual Entry**.

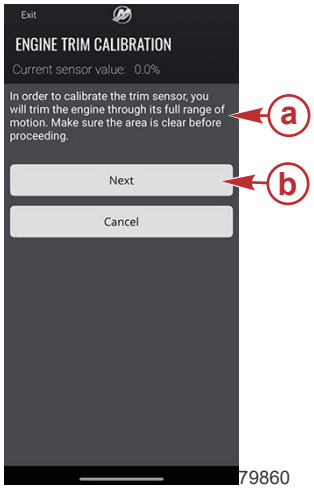
Guided Entry

1. Select **Guided Entry**.



79859

2. Read and perform the instructions on the screen.
3. Select **Next**.

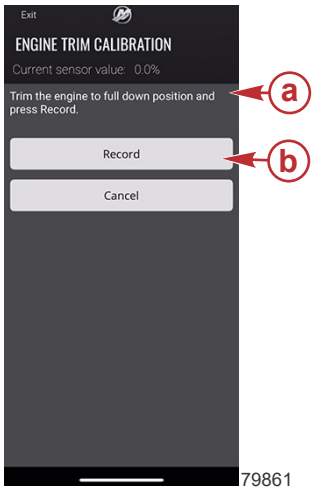


79860

a - Instructions
b - Next

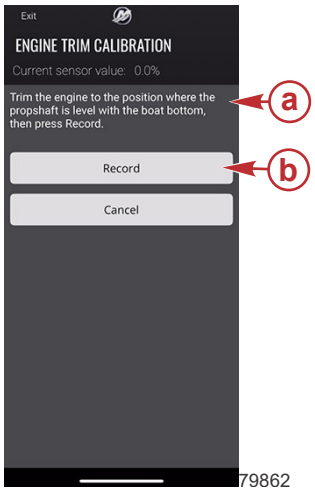
4. Read and perform the instructions on the screen.

5. Select **Record**.



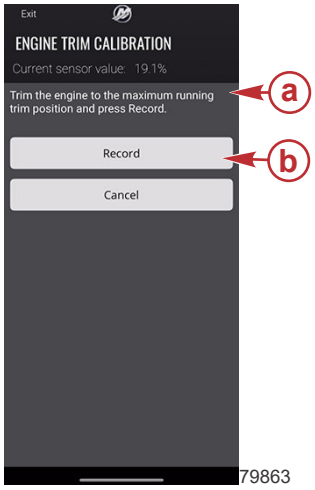
a - Instructions
b - Record

6. Read and perform the instructions on the screen.
7. Select **Record**.



a - Instructions
b - Record

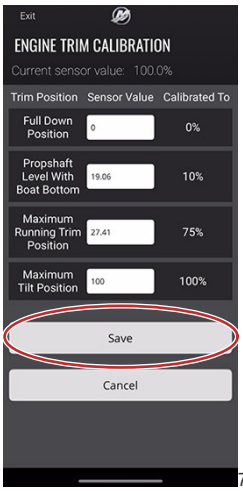
8. Read and perform the instructions on the screen.
9. Select **Record**.



a - Instructions
b - Record

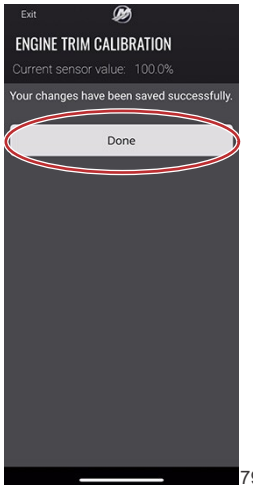
10. Observe the engine trim calibration positions.

11. Select **Save**.



79864

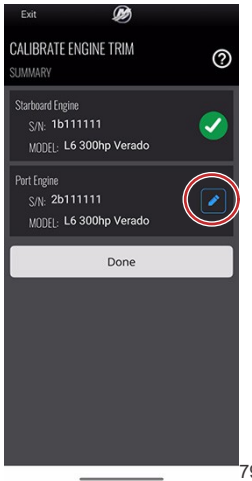
12. Observe that the changes have been made successfully.
13. Select **Done**.



79865

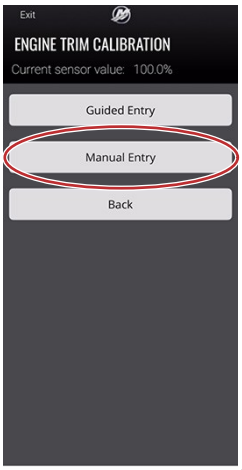
Manual Entry

1. If applicable, select an unchecked engine pencil icon.



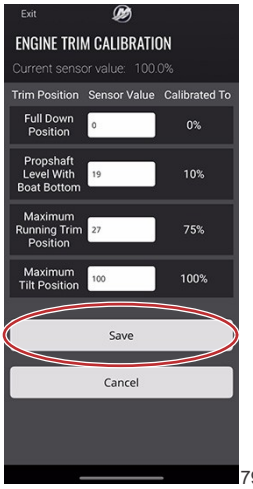
79866

2. Select **Manual Entry**.



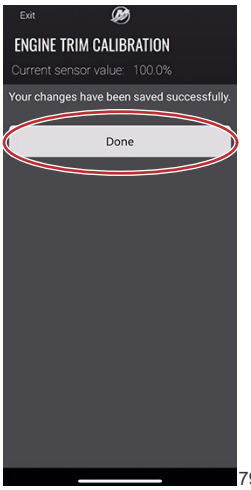
80052

3. Observe the engine trim calibration positions.
4. Select **Save**.



79868

5. Observe that the changes have been made successfully.
6. Select **Done**.



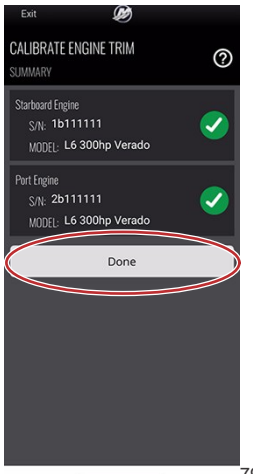
79865

7. Review the calibrate engine trim summary. Refer to **Summary**.

Summary

1. Observe the summary of the calibrate engine trim.

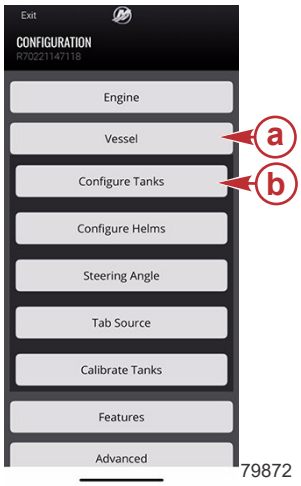
2. Select **Done**.



79870

Configure Tanks

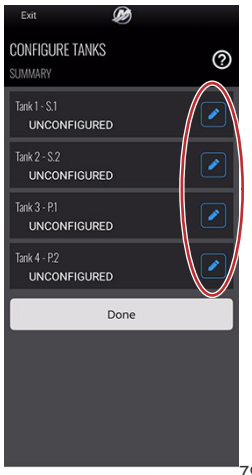
1. Select **Vessel**.
2. Select **Configure Tanks**.



79872

a - Vessel
b - Configure Tanks

3. Select the pencil icon to configure a tank.

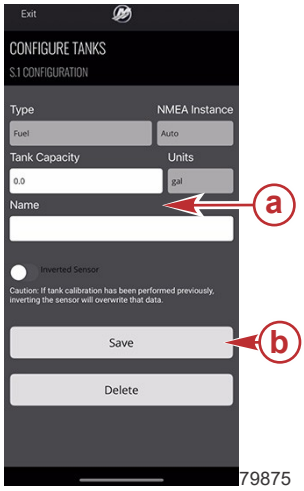


79874

4. Type in tank capacity.
5. If applicable, type in a tank name.
   - The Mercury screen on the MFD will only display type "Fuel" as propulsion fuel. Gas and diesel are considered generator fuel and will not display.

- Tank size must be greater than zero or it will not display.
- Leave NMEA 2000 instance set to Auto unless configuring an advanced tank setup with a combination of NMEA and SmartCraft tank senders.

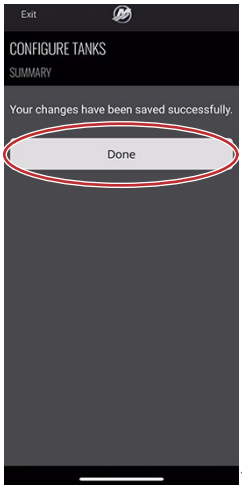
6. Select **Save**.



79875

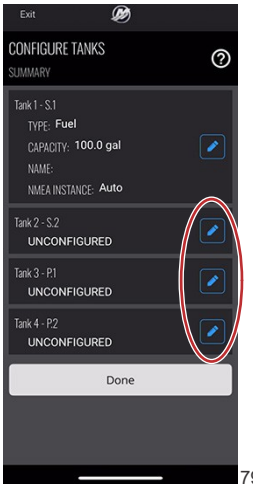
a - Tank capacity and tank name
b - Save

7. Observe that the changes have been made successfully.
8. Select **Done**.



79876

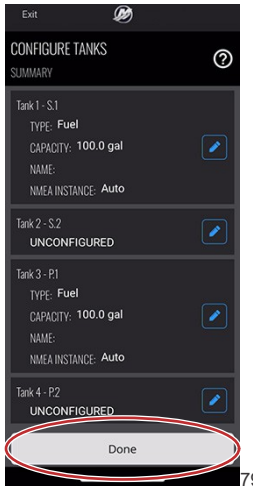
9. If applicable, select the pencil icon to configure another tank.



79877

10. Type in tank capacity.
11. If applicable, type in a tank name.
12. Select **Save**.

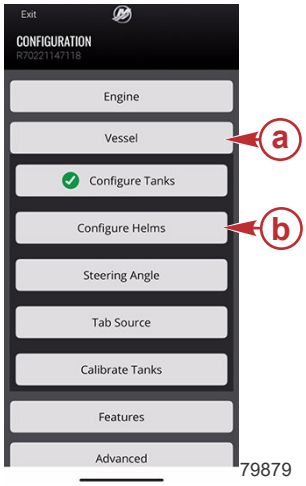
13. Observe that the changes have been made successfully.
14. Select **Done**.
15. If applicable, repeat the previous six steps until the appropriate tanks have been configured.
16. Select **Done**.



79878

Configure Helms

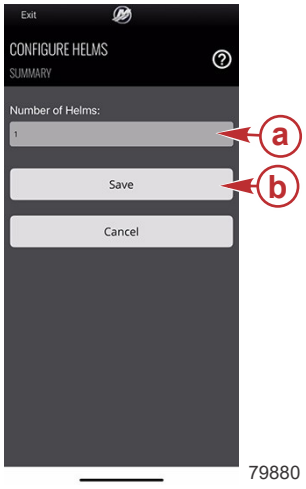
1. Select **Vessel**.
2. Select **Configure Helms**.



79879

a - Vessel
b - Configure Helms

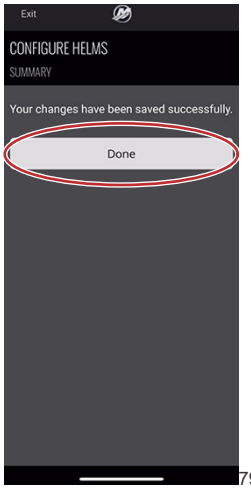
3. Type in the number of helms.
4. Select **Save**.



79880

a - Number of helms
b - Save

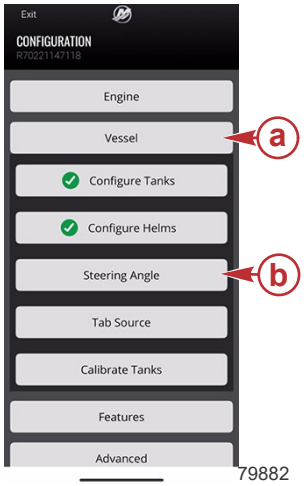
5. Observe that the changes have been made successfully.
6. Select **Done**.



79881

Steering Angle

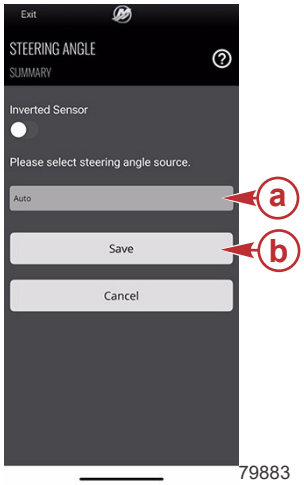
1. Select **Vessel**.
2. Select **Steering Angle**.



79882

a - Vessel
b - Steering Angle

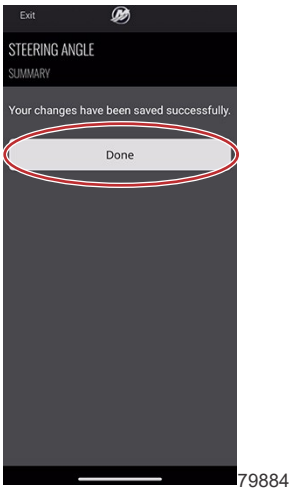
3. Select the steering angle source.
4. Select **Save**.



79883

a - Steering angle source
b - Save

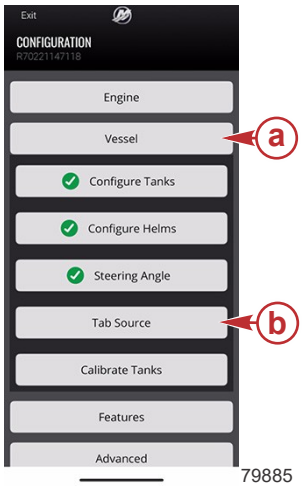
5. Select **Done**.



79884

Tab Source

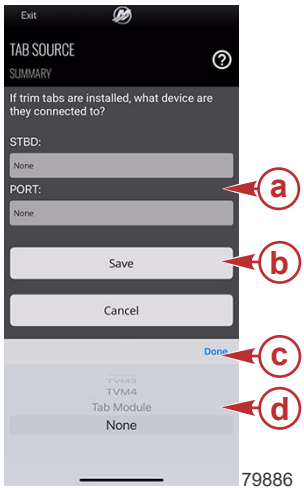
1. Select **Vessel**.
2. Select **Tab Source**.



79885

a - Vessel
b - Tab Source

3. If applicable, select the device that the trim tabs are connected to.
4. Select **Done**.
5. Select **Save**.

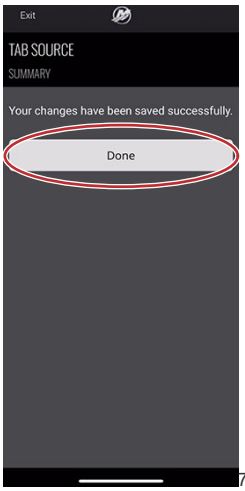


79886

a - Trim tabs
b - Save
c - Done
d - Select

6. Observe that the changes have been made successfully.

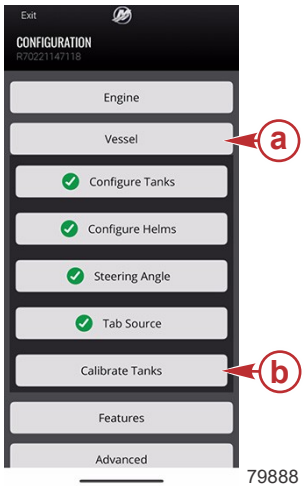
7. Select **Done**.



79887

Calibrate Tanks

1. Select **Vessel**.
2. Select **Calibrate Tanks**.



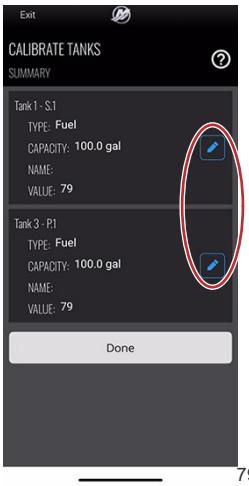
79888

a - Vessel
b - Calibrate Tanks

3. Select unguided or guided entry. Refer to **Unguided Entry** or **Guided Entry**.

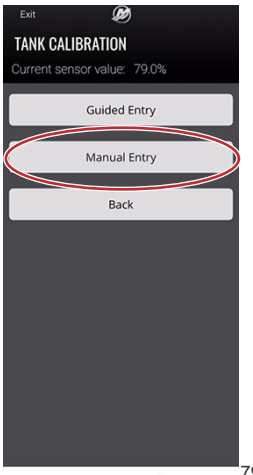
Unguided Entry

1. Select the pencil icon to calibrate a tank.



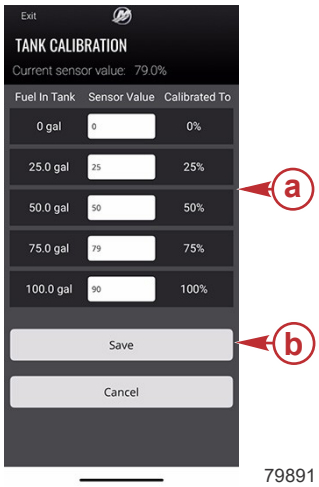
79889

2. Select **Unguided Entry**.



79890

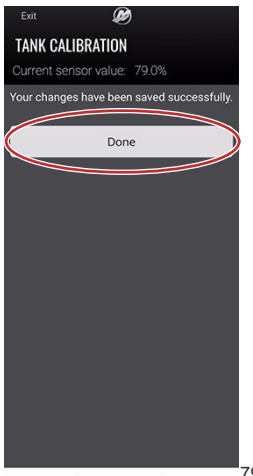
3. Type in appropriate sensor values that correspond to the desired tank percentage indications.
4. Select **Save**.



79891

a - Sensor values
b - Save

5. Select **Done**.

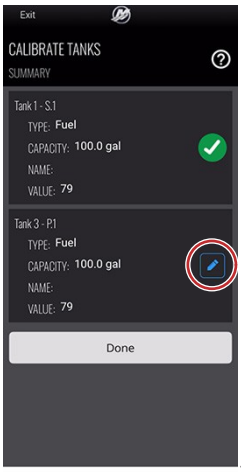


79892

6. Select **Done**. Refer to **Done**.

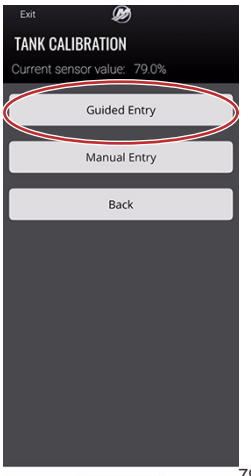
Guided Entry

1. Select the pencil icon to calibrate a tank.



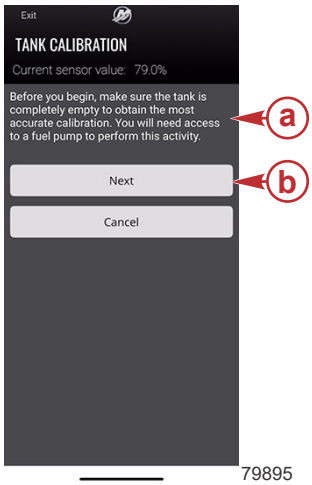
79893

2. Select **Guided Entry**.



79894

3. Read and perform the instructions on the screen.
4. Select **Next**.

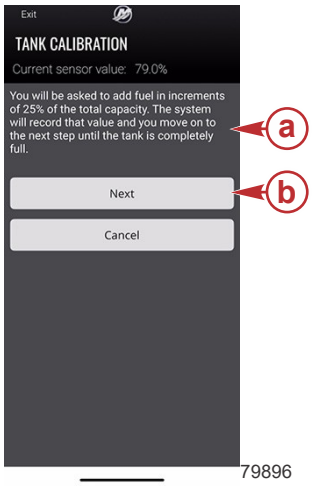


79895

a - Instructions
b - Next

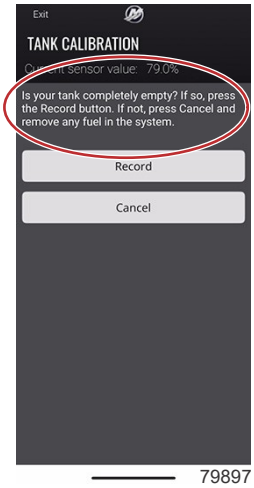
5. Read and perform the instructions on the screen.

6. Select **Next**.

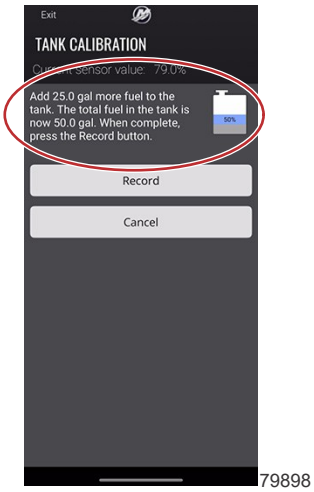


a - Instructions
b - Next

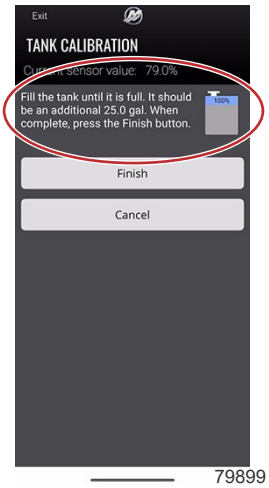
7. Read and perform the instructions on the screen.



8. Read and perform the instructions on the screen.

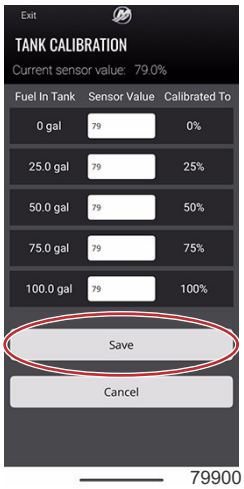


9. Read and perform the instructions on the screen.



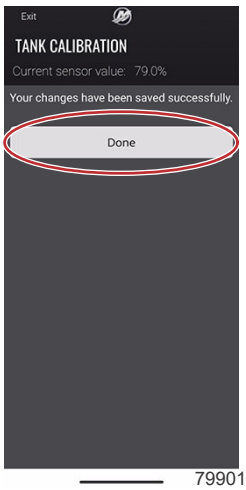
79899

10. Observe that the changes have been made successfully.
11. Select **Save**.



79900

12. Select **Done**.

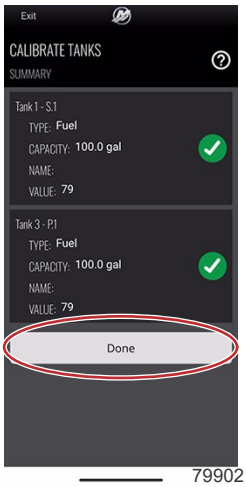


79901

13. Select **Done**. Refer to **Done**.

Done

1. Select **Done**.

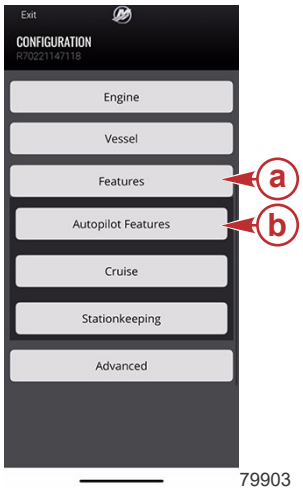


79902

Features

Autopilot Features

1. Select **Features**.
2. Select **Autopilot Features**.



79903

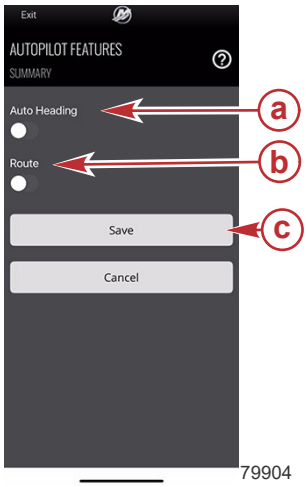
a - Features
b - Autopilot Features

3. Toggle the **Auto heading** and **Route** on or off.

NOTE: *Autopilot features – If the vessel is equipped with this feature, select* ***Autopilot Features*** *to enable the boat feature control via the MFD.*

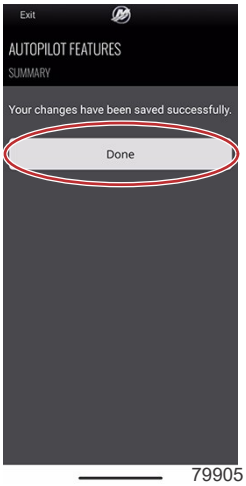
This is only to enable feature control via the MFD. This will not enable the feature on a boat not equipped with it.

4. Select **Save**.



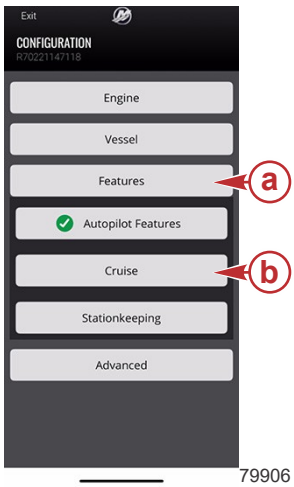
a - Auto heading
b - Route
c - Save

5. Select **Done**.



Cruise

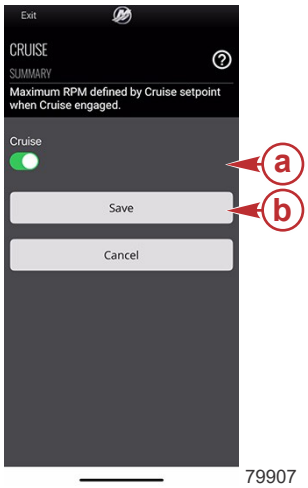
1. Select **Features**.
2. Select **Cruise**.



a - Features
b - Cruise

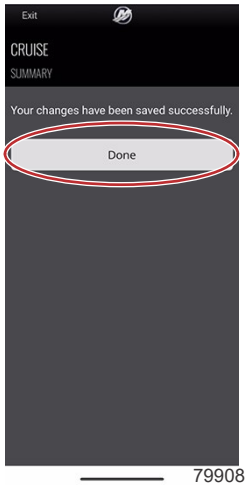
3. Toggle **Cruise** on or off.
NOTE: *This is RPM based cruise control for applicable DTS engines. This setting is to enable the feature on a MFD screen.*

4. Select **Save**.



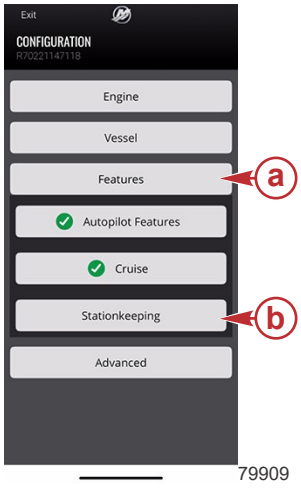
a - Cruise
b - Save

5. Select **Done**.



Stationkeeping

1. Select **Features**.
2. Select **Stationkeeping**.



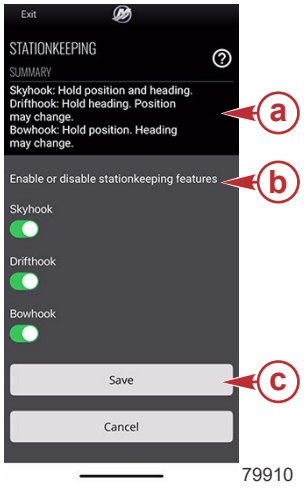
a - Features
b - Stationkeeping

3. Toggle the stationkeeping features on or off.

NOTE: *Stationkeeping features – If the vessel is equipped with this feature, select stationkeeping to enable the boat feature control via the MFD.*

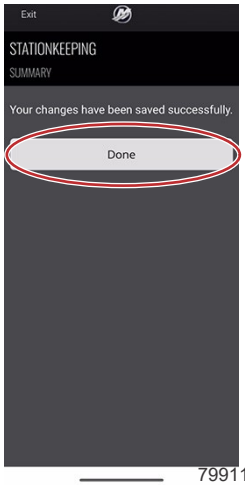
This is only to enable feature control via the MFD. This will not enable the feature on a boat not equipped with it.

4. Observe the instructions on the screen.
5. Select **Save**.



a - Instructions
b - Stationkeeping features
c - Save

6. Observe that the changes have been made successfully.
7. Select **Done**.



Advanced

The default settings are appropriate for almost all boats.

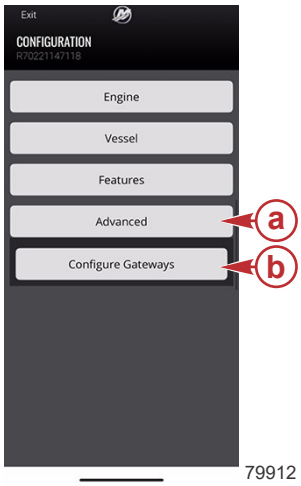
Configure Gateways – If equipped with autopilot:

1. Select Receive NMEA chartplotter data on SmartCraft for autopilot features.
2. To transmit the SmartCraft GPS data for use on NMEA 2000, select CAN P or CAN H depending on which Mercury GPS is installed.

NMEA 2000 GPS speed will not transfer back to CAN P or CAN H to control ActiveTrim or Smart Tow. A Mercury GPS must be used with these features.

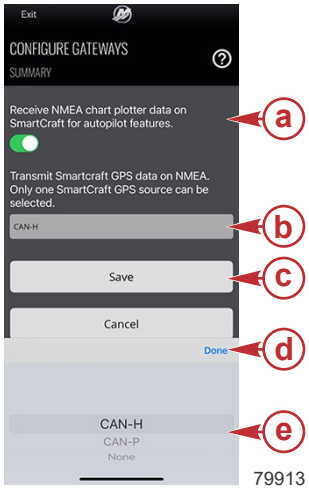
1. Select **Advanced**.

2. Select **Configure Gateways**.



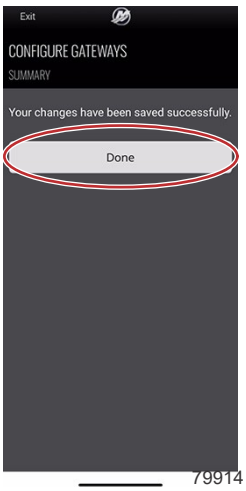
a - Advanced
b - Configure Gateways

3. Toggle the "NMEA chart plotter data on Smartcraft for autopilot features." on.
4. Place cursor in GPS source window.
5. Select a GPS source.
6. Select **Done**.
7. Select **Save**.



a - Toggle
b - GPS source window
c - Save
d - Done
e - Select

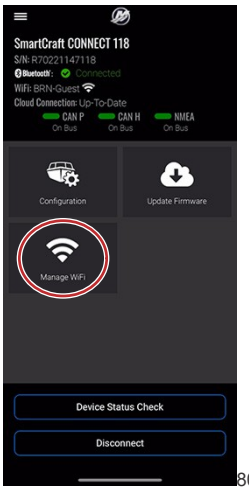
8. Observe that the changes have been made successfully.
9. Select **Done**.



Changing or Deleting the WiFi Network

SmartCraft Connect only stores one WiFi network in the module.

1. Select **Manage Wifi**.

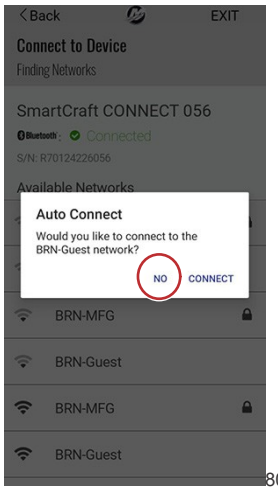


80054

2. Select **Edit**.

80056

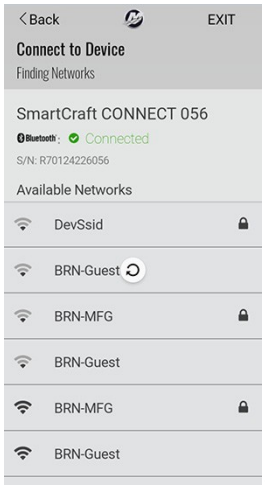
3. Select **NO**.



80057

4. Observe the available networks.
5. Swipe down on the screen to refresh the available networks if the desired network is not available.

6. Select the desired network.



80058

Troubleshooting

Mobile Functionality

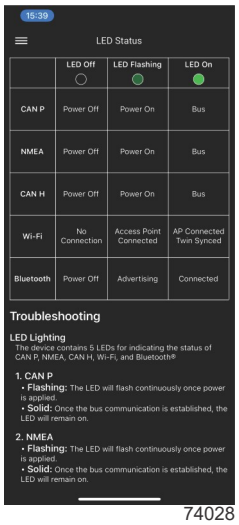
When using the app on Android devices, fine location detail must be shared with the app for proper function.

The Mercury Marine app must be used to view live engine data on a mobile device.

80059

LED Lighting

The Wi-Fi LED status troubleshooting chart is also available in the app.



74028

The device contains five LEDs for indicating the status of CAN P, NMEA, CAN H, Wi-Fi, and Bluetooth®.

1. **CAN P**
   - **Off:** The module is not connected to the CAN bus or the module does not see valid traffic on the CAN bus.
   - **Solid:** Once the bus communication is established, the LED will remain on.
2. **NMEA**
   - **Off:** The LED will be off until connected to a NMEA 2000 network with power and at least one other device. The LED will always be off for mobile versions of SmartCraft Connect.
   - **Solid:** Once the bus communication is established, the LED will remain on.
3. **CAN H**

- **Off:** SmartCraft Connect engine-mounted modules have CAN H and the LED disabled.
- **Solid:** Once the bus communication is established, the LED will remain on.

4. **Wi-Fi**
   - **Off:** No connection.
   - **Flashing:** Connected to a Wi-Fi access point. Attempting to sync with the Mercury cloud server.
   - **On:** Connected to a Wi-Fi access point and synced with the Mercury cloud server.
5. **Bluetooth**
   - **Flashing:** The Bluetooth LED will flash while in pairing mode, indicating it is not currently connected.
   - **Solid:** The Bluetooth LED will remain on continuously while connected.

Firewall Information

The following web domains and ports need to be open to the SmartCraft Connect app and module for proper operation.

Web Domains:

- azurewebsites.net
- azure-devices-provisioning.net

Port Numbers:

Protocol	Port
MQTT	8883
MQTT over WebSockets	443
AMQP	5671
AMQP over WebSockets	443
HTTPS	443

Licensing Errors

- **LicensesExceeded:** You have exceeded the number of licenses issued to your dealer.
- **InactiveDealer:** This account number is no longer active with Mercury Marine.
- **InvalidDealer:** The account number entered was not found in Mercury Marine's records.
- **InvalidLicenseKey:** The license key that was entered is not a valid key—typed it in wrong.
- **LicenseKeyToAccountInvalid:** Either the account number or the license key does not match the purchase records.
- **MachineBlackListed:** Your device was black listed by Mercury Marine.
- **LicenseKeyBlackListed:** Your license key was black listed by Mercury Marine.
- **SubscriptionExpired:** The subscription for this license key has expired.
- **InactiveSubscription:** The subscription for this license key has been canceled by the subscriber.
- **VersionMismatch:** License key is not compatible with this version of software. Example, you tried to use a CDS G3 license key for SC Manager.
- **LicenseRegistrationFailed:** Contact Mercury Service.

SmartCraft Connect Module NMEA 2000 Information

The software is capable of transmitting (**TX**) information to, and receiving (**RX**) information from various parameter group number (PGN) products.

NMEA 2000 Network Power Information	Value
NMEA 2000 Load Equivalency Number (LEN)	1

SmartCraft Connect Module Modes	
Transmit (TX)	**Receive (RX)**
Transmits Mercury data to NMEA 2000 display devices.	Receives data from NMEA 2000 to display on Mercury devices.

Transmitted NMEA 2000 PGNs			
NMEA 2000 PGN	**Special Information**	**Signal**	**Mode**
59392/0xE800	–	ISO Acknowledgment	TX
59904/0xEA00	–	ISO Request	TX
60160/0xEB00	–	ISO Transport Protocol, Data Transfer	TX

Transmitted NMEA 2000 PGNs			
60416/0xEC00	–	ISO Transport Protocol, Connection Manager	TX
60928/0xEE00	–	ISO Address Claim	TX
65280/0xFF00	–	Mercury Marine Proprietary	TX
65310/0xFF1E	–	Mercury Marine Proprietary	TX
126208/0xED00	–	NMEA Group Function	TX
126464/0xEE00	–	PGN List	TX
126720/0x1EF00	–	Mercury Marine Proprietary	TX
126992/0xF010	–	System Time	TX
126993/0x1F011	–	Heartbeat	TX
126996/0x1F014	–	Product Information	TX
126998/0x1F016	–	Configuration Information	TX
127245/0x1F10D	–	Rudder	TX
127250/0x1F112	–	Vessel Heading	TX
127251/0x1F113	–	Rate of Turn	TX
127257/0x1F119	–	Attitude	TX
127258/0x1F11A	–	Magnetic Variation	TX
127488/0x1F200	–	Engine Parameters, Rapid Update	TX
127489/0x1F201	–	Engine Parameters, Dynamic	TX
127493/0x1F205	–	Transmission Parameters, Dynamic	TX
127496/0x1F208	–	Trip Fuel Consumption, Vessel	TX
127498/0x1F20A	–	Engine Parameters, Static	TX
127505/0x1F211	–	Fluid Level	TX
127506/0x1F212	–	DC Detailed Status	TX
128259/0x1F503	–	Speed, Water Reference	TX
128267/0x1F50B	–	Water Depth	TX
129025/0x1F801	–	Position, Rapid Update	TX
129026/0x1F802	–	COG & SOG, Rapid Update	TX
129029/0x1F805	–	GNSS Control Status	TX
129538/0x1FA02	–	GNSS Control Status	TX
129540/0x1FA04	–	GNSS Sats in View	TX
130060/0x1FC06	–	Label	TX
130310/0x1FD06	–	Environmental Parameters	TX
130311/0x1FD07	–	Environmental Parameters	TX
130312/0x1FD08	–	Temperature	TX
130316/0x1FD0C	–	Temperature, Extended Range	TX
130576/0x1FE10	–	Trim Tab Status	TX
130816/0x1FF00	–	Mercury Marine Proprietary	TX
130817/0x1FF01	–	Mercury Marine Proprietary	TX
130821/0x1FF05	–	Mercury Marine Proprietary	TX
130822/0x1FF06	–	Mercury Marine Proprietary	TX
130830/0x1FF0E	–	Vessel Parameters, Low Speed Proprietary	TX
130831/0x1FF0F	–	Mercury Marine Proprietary	TX

Received NMEA 2000 PGNs			
NMEA 2000 PGN	**Special Information**	**Signal**	**Mode**
59392/0xE800	–	ISO Acknowledgment	RX
59904/0xEA00	–	ISO Request	RX
60160/0xEB00	–	ISO Transport Protocol, Data Transfer	RX

Received NMEA 2000 PGNs			
60416/0xEC00	–	ISO Transport Protocol, Connection Manager	RX
60928/0xEE00	–	ISO Address Claim	RX
65240/0xFED8	–	ISO Commanded Address	RX
65311/0xFF1F	–	SeaStar, (Mercury Marine Proprietary)	RX
126208/0x1ED00	–	NMEA Group Function	RX
126720/0x1EF00	–	MFD Capabilities, (Mercury Marine Proprietary)	RX
126992/0x1F010	–	System Time	RX
126996/0x1F014	–	Product Information	RX
126998/0x1F016	–	Configuration Information	RX
127250/0x1F112	–	Vessel Heading	RX
127251/0x1F113	–	Rate of Turn	RX
127257/0x1F119	–	Attitude	RX
127258/0x1F11A	–	Magnetic Variation	RX
128259/0x1F503	–	Speed, Water Reference	RX
128267/0x1F50B	–	Water Depth	RX
129025/0x1F801	–	Position, Rapid Update	RX
129026/0x1F802	–	COG & SOG, Rapid Update	RX
129029/0x1F805	–	GNSS Control Status	RX
129283/0x1F903	–	Cross Track Error	RX
129284/0x1F904	–	Navigational Data	RX
129538/0x1FA02	–	GNSS Control Status	RX
1295390x1FA03	–	GNSS Dilution of Position (DOP)	RX
129540/0x1FA04	–	GNSS Sats in View	RX
130316/0x1FD0C	–	Temperature, Extended Range	RX
130820/0x1FF04	–	Pop-up Button Command, (Mercury Marine Proprietary)	RX
130831/0x1FF0F	–	Mercury Marine Proprietary	RX

Mercury Engine Data to NMEA 2000 Capable Products			
Signal	**Special Information**	**NMEA 2000 PGN**	**Mode**
Rated RPM	–	127498/0x1F20A	TX
Coolant pressure	–	127489/0x1F201	TX
Speed over water (paddle and pitot)	–	128259/0x1F503	TX
RPM (rapid update)	–	127488/0x1F200	TX
Voltage	–	127489/0x1F201	TX
Coolant temperature	–	127489/0x1F201	TX
Fuel pressure	–	127489/0x1F201	TX
Fuel level (percent, type)	–	127505/0x1F211	TX
Fuel flow	–	127489/0x1F201	TX
Oil pressure	–	127489/0x1F201	TX
Oil temperature	–	127489/0x1F201	TX
Gear temp	–	127493/0x1F205	TX
Gear pressure	–	127493/0x1F205	TX
Boost pressure	–	127488/0x1F200	TX
Trim position	–	127488/0x1F200	TX
Rudder angle	–	127245/0x1F10D	TX
Depth	–	128267/0x1F50B	TX
Depth offset	–	128267/0x1F50B	TX

Mercury Engine Data to NMEA 2000 Capable Products			
Signal	**Special Information**	**NMEA 2000 PGN**	**Mode**
Seawater temp	–	130310/0x1FD06	TX
Engine hours	–	127489/0x1F201	TX
Alarm data	NMEA 2000 alarm data is limited and will only display "Check Engine" when an alarm is activated. Refer to the Mercury SmartCraft Gauges for descriptive fault text.	127489/0x1F201	TX
Tabs	–	130576/0x1FE10	TX
Course over ground	–	129026/0x9F802	RX/TX
Speed over ground	–	129026/0x9F802	RX/TX
GPS position	–	129025/0x1F801	RX
Gear position	–	127493/0x1F205	TX
Engine load (diesel)	–	127489/0x1F201	TX

SmartCraft Connect Module to NMEA 2000 Capable Products			
Signal	**Special Information**	**NMEA 2000 PGN**	**Mode**
Heading	–	127250/0x1F112	RX/TX
Waypoint ID	–	129284/0x1F904	RX
Waypoint position (latitude/longitude)	–	129284/0x1F904	RX
Cross track error	–	129283/0x1F903	RX
Manufacturer ID	Address claim (0 x 90 = Mercury)	060928/0xEE00	TX
Product info	–	126996/0x1F014	TX

FCC and ISED Regulatory Information

This device complies with Part 15 of the FCC Rules and Innovation, Science and Economic Development Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme aux normes RSS exemptes de licence d'Innovation, Science et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes: 1) cet appareil ne doit pas provoquer d'interférences, et 2) cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Considerations

To comply with FCC and Innovation, Science and Economic Development Canada RF exposure limits for general population / uncontrolled exposure, the antenna must be installed to provide a separation distance of at least 20cm from all persons and operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

Pour se conformer aux limites d'exposition aux RF de la FCC et d'Industrie Canada pour la population générale / exposition non contrôlée, l'antenne(s) utilisée pour ce transmetteur doit être installé pour fournir une distance de séparation d'au moins 20cm de toutes les personnes et fonctionnant conjointement avec une autre antenne ou émetteur, sauf en conformité avec les procédures de produits multi- émetteur FCC.

Products of Mercury Marine
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