![Mercury Diesel logo] # Service Bulletin

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Design 2 Joystick Inspection and Software Reflash for Mercury Sterndrive Diesel

Models Affected

Models Covered	Serial Number
All Design 2 Joystick Piloting for Sterndrive Diesel	All

62532

Design 2 joystick

NOTE: *This bulletin only applies to vessels that are equipped with design 2 joysticks.*

Scope

Worldwide

NOTICE
The service technician performing the procedures described in the bulletin must read and understand the entire service bulletin before attempting a reflash procedure. Failure to follow all service bulletin instructions and the instruction shown in CDS G3 during the reflash process may lead to a reflash failure, resulting in an inoperable or disabled vessel.

Situation

Joystick Inspection

This joystick inspection should be performed at the next customer service interval.

If the joystick is equipped with the external noise suppressor, replace the joystick/noise suppressor assembly. The following two images show the differences between the two designs.

IMPORTANT: Do not remove the external noise suppressor assembly from the joystick. If additional length is needed to accommodate the shorter lead on the replacement joystick, order extension harness 879171T01.

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Joystick with external noise suppressor

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Joystick with internal noise suppressor

In addition, a software update is available for Mercury MerCruiser vessels that provides general Skyhook improvements, as well as enables the capability for advanced Skyhook features.

NOTE: The advanced Skyhook features will not be enabled following this reflash. This update only provides the capability of unlocking these features with an additional charge.

⚠ CAUTION
If the boat has Mercury Theft Deterrent System (TDS) installed, then both key fobs need to be present to pair with the TDS module after reflash. Failure to have both fobs will result in the TDS system becoming activated and the boat will be limited to Guardian forced idle.

Owner Notification

Vessels that contain CCM 16 software packages and design 2 joysticks should be reflashed to the latest version of software using version 1.7.11 CDS G3 or above during the next service interval.

Obtain Vessel Personality

A vessel personality must be installed upon completion of the software reflash.
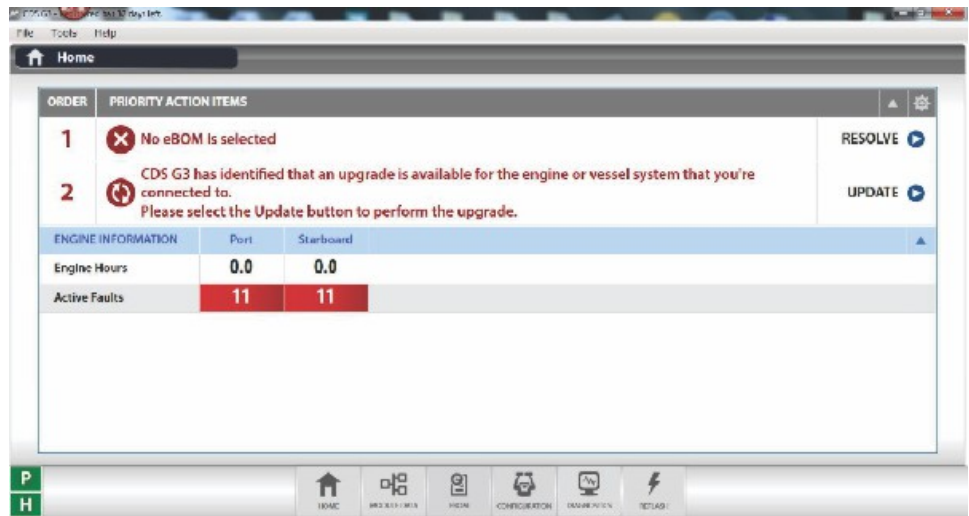
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Checklist

Use the following checklist to guide you through the process.

☐ Hull ID number _____

☐ Engine serial numbers:

   ☐ Starboard _____

   ☐ Port _____

☐ Current personality name:_____

☐ Requested and received new vessel personality file from Mercury Technical Service

☐ Unplug VesselView Link and SmartCraft gauges from the J-boxes

☐ Reflash:

   ☐ Helm 1 starboard CCM

   ☐ Helm 1 port CCM

   ☐ Helm 2 starboard CCM

   ☐ Helm 2 port CCM

   ☐ Configure helm (City ID and lever adapt)

☐ Import new personality

☐ Reconnect VesselView Link and SmartCraft gauges to the J-boxes

☐ Configure auxiliary joystick (if equipped)

☐ Set the running drive alignment

Connect to CDS G3

IMPORTANT: Version 1.7.11 CDS G3 or above must be used to complete the reflash. To verify your current version of CDS G3, click on the word Help at the top of the G3 screen and select About. The current version will be displayed.

Connect the CDS G3 to the vessel, and turn the keys on. The **Home** screen, which is the first screen shown when CDS G3 launches, will list any priority action items that must be addressed, including software updates. One of these items may be **CDS G3 has identified that an upgrade is available for the engine or vessel system that you're connected to. Please select the Update button to perform the upgrade**, as shown in the following screenshot.
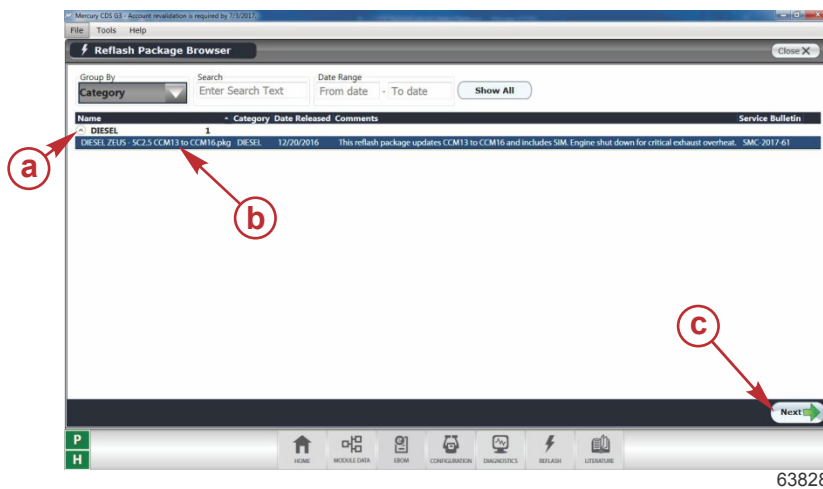

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On the **Home** screen, select the **Update** button to the right of the priority action item that indicates there are available upgrades. Clicking on this will call up the **Reflash Package Browser** from which you can select the reflash packages that are available for your vessel.

IMPORTANT: Disconnecting SmartCraft gauges or VesselView Link is required before reflashing. If the SmartCraft Gauges or VesselView Link is not disconnected from the junction box connection point, the reflash may not complete properly. If this occurs, a module may appear to have failed. It will disappear from the CDS G3 module data screen and will not reappear even with a key cycle. If this occurs, the keys must be turned off, throttle/shift levers placed in reverse wide-open throttle, and the clean power supply (4-pin connector) to the VAA disconnected. Wait about 10 seconds before reconnecting the clean power supply to the VAA, then turn the keys back on with the levers in neutral, and check for the module to show up in the CDS G3 module data screen. Finally, attempt the reflash again by either going to the home screen or to the reflash screen.

Module Reflash

IMPORTANT: Any power interruption or voltage spike occurring during the reflash process can erase the module and cause the vessel to be nonoperational. Disable the vessel battery charger and all automatic power switching devices. Contact Mercury Marine Technical Service if you have a module that which has been erased.

1. Connect the laptop PC to an AC power source to ensure that the power is not interrupted during the reflash procedure.
2. From the **Reflash Package Browser** screen, then select the appropriate package for your application; then select the drop-down arrow.
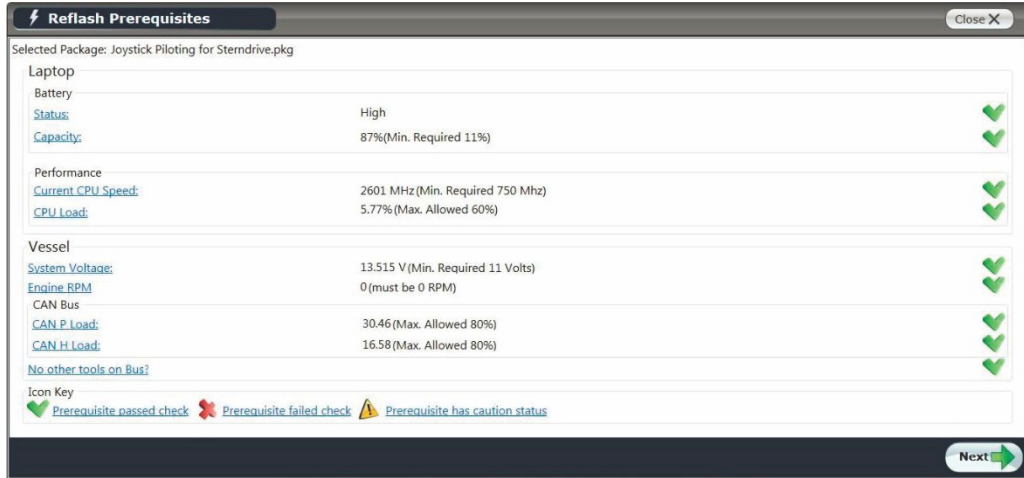

a - Drop-down arrow
b - Reflash package
c - **Next** button

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3. Press **Next** to continue.
4. A **Reflash Prerequisites** screen will show if all prerequisites have been met. Ensure that your system meets the prerequisites. Address any errors that appear.
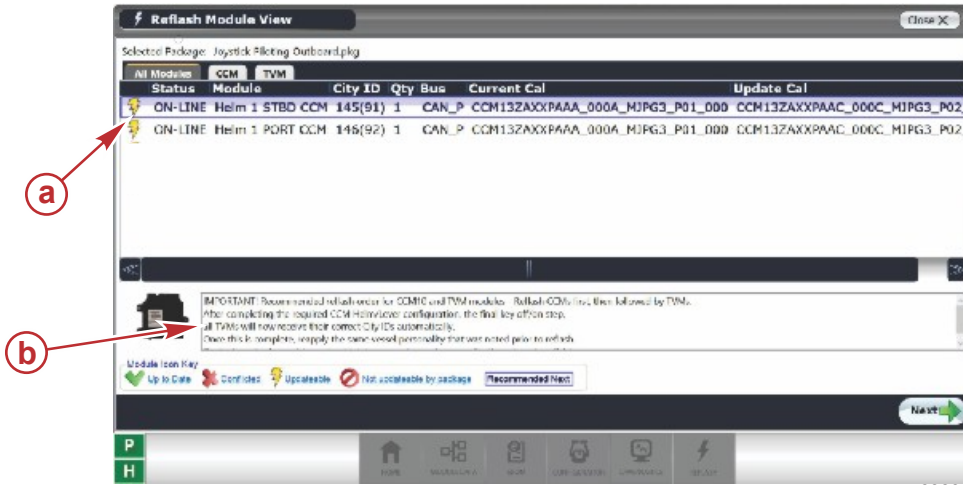
NOTE: *During module reflash, the system may launch the Reflash Prerequisite screen again prior to letting you proceed with a particular module to ensure that all items are still showing passed checks.*

Reflash Prerequisites screen

5. Select **Next** to begin the reflash process. You will be required to enter the hull I.D. and engine serial numbers before proceeding.

6. The **Reflash Module View** screen will list the modules to be reflashed. The on-screen instructions will list the correct order to reflash the modules. Reflash the command control modules (CCMs).

   • Reflash the starboard CCM before the other CCMs. After reflashing, each CCM is assigned a Helm 1 STBD city ID 145.

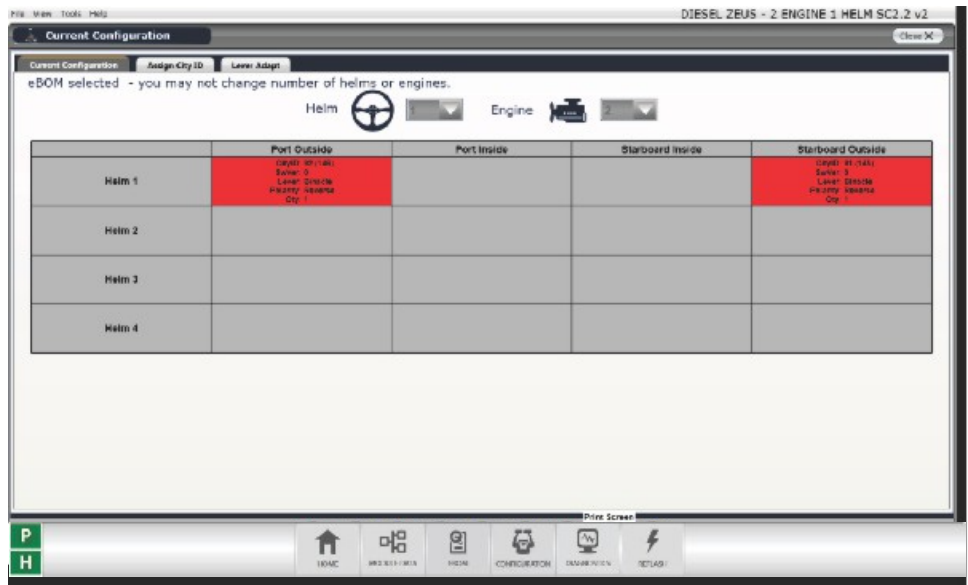**a -** Modules to be reflashed
b - On-screen instructions

Perform City ID Assignment

1. Go to Configuration, select **Helm Configuration**, then select **Helm Device Setup**, then **Helm Setup**.

2. Manually enter the number of helms and the number of engines.

3. Assign City IDs using the tab marked **Assign City ID**.

4. Follow the on-screen instructions to complete the City ID assignment.

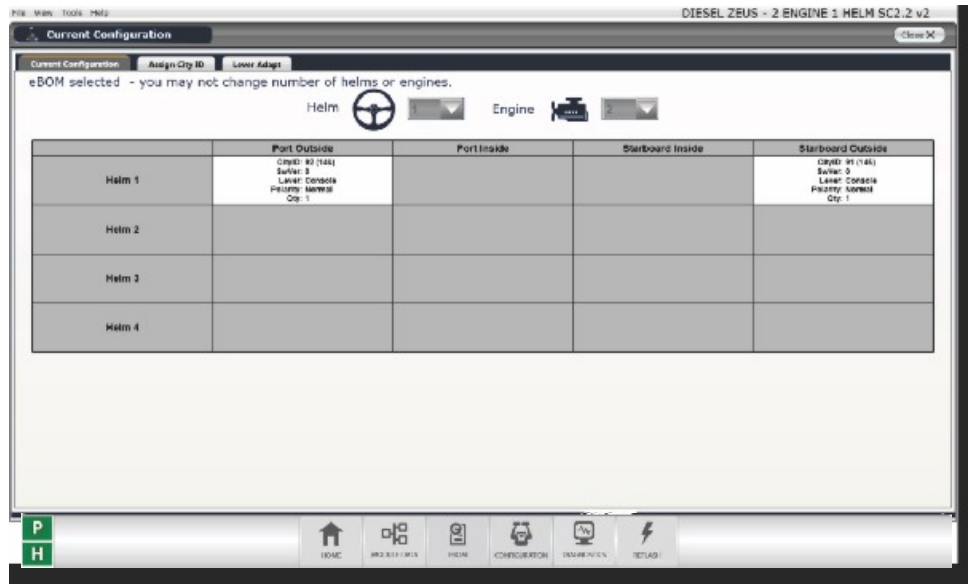5. Upon completion, each CCM is assigned a unique City ID.

6. Each module City ID corresponds to its helm and engine.

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Perform Lever Adapt

- Select the **Lever Adapt** tab. Select the correct remote control type, and follow the on-screen instructions to complete the process.

  IMPORTANT: On triple-engine applications, ensure that the checkbox for shadow-mode is selected.

- Perform the lever adapt process for each helm separately.

- Upon completion, go back to the **Current Configuration** tab and ensure that all CCMs report their location correctly and show white status instead of red.

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Select an eBOM

1. After the lever adapt procedure is complete, you will need to select the correct eBOM to proceed.
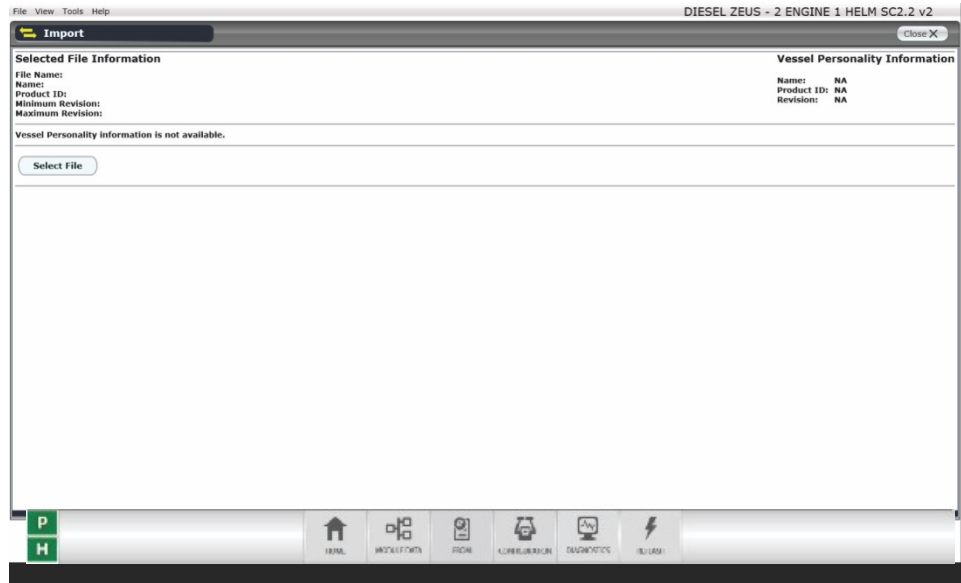2. Select the eBOM that matches your vessel's configuration.

3. Ensure that the Select indication changes to Deselect after it is clicked.

Import Vessel Personality

- After a CCM is reflashed, all vessel personality information for that application is lost.
- The personality information must be restored using the Import function in CDS G3. Go to Configuration, and then select **Personality**, then select **Vessel Personality**.
- Vessel personality files are sent via e-mail from MerCruiser Product Support or the OEM. The personality can be stored on a memory stick, or a folder can be created on the computer desktop.
- Use **Select File** to query the memory stick or file folder that contains the vessel personality.
- Double click the personality. Then select **Begin Import** to complete the vessel personality import process.
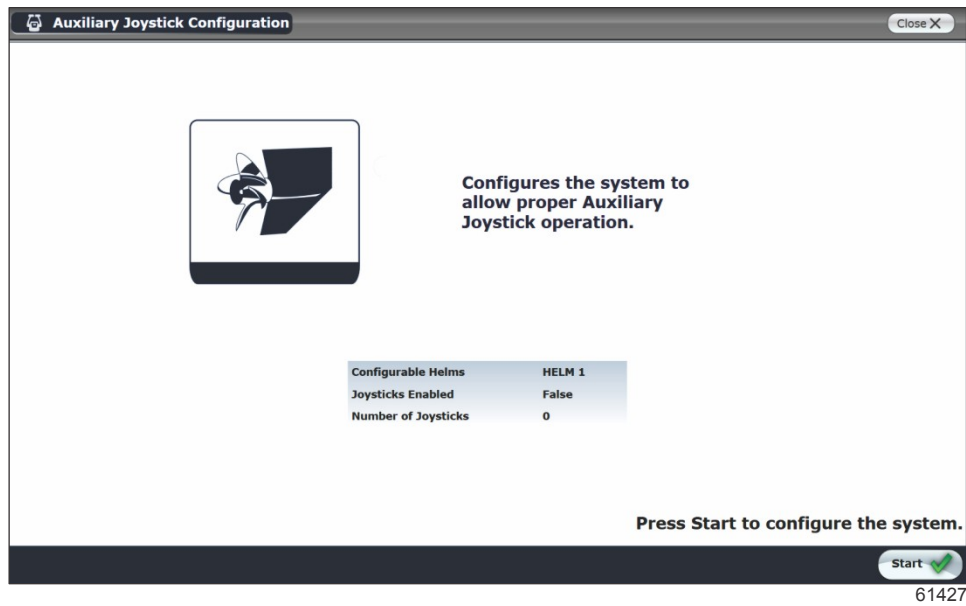

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Auxiliary Joystick Configuration

IMPORTANT: If the vessel is equipped with auxiliary joysticks, they must be reconfigured following a reflash of the CCMs.

1. Go to Configuration, select **Helm Configuration**, then select **Auxiliary Joystick Configuration**.
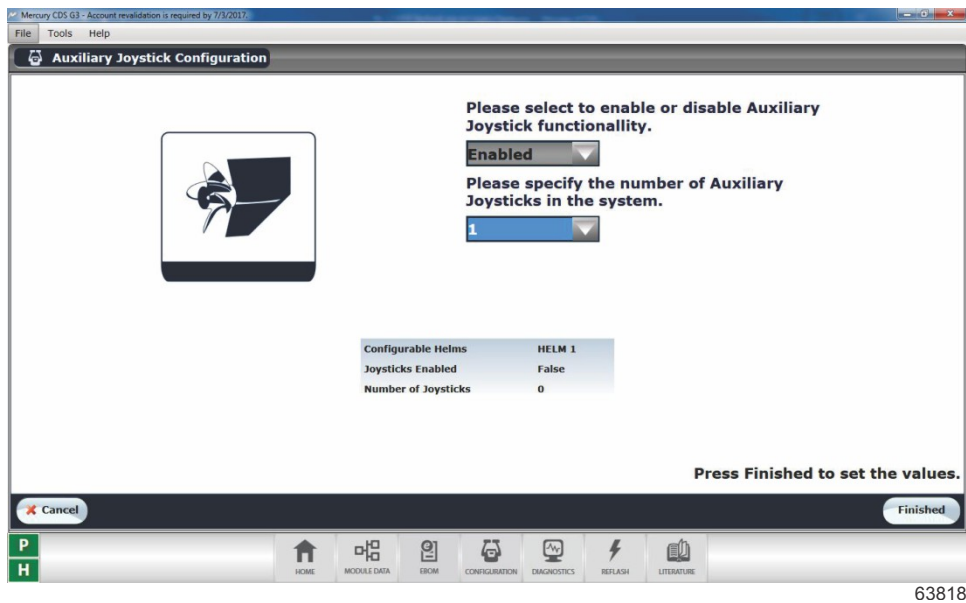
2. Click on **Start** to configure the system.

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3. Select **Enabled** from the drop-down menu. Select the number of auxiliary joysticks that the vessel is equipped with. (Do not count the joysticks at the main control stations.)
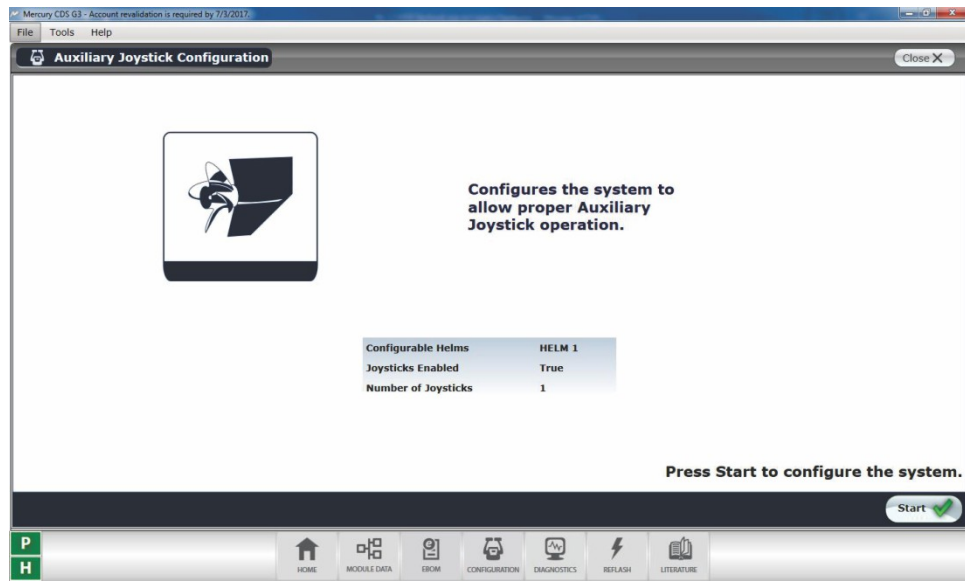

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4. Select **Finished**.

5. Verify that the Joysticks Enabled field states **True** and the number of joysticks is correct.

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6. Exit the auxiliary joystick configuration by clicking **Module Data**.

Sea Trial

After a software upgrade to a vessel, a sea trial must be performed to verify the operation of all features of the vessel. During the sea trial, if necessary, set the drive alignment using the Drive Alignment procedure in CDS G3 to ensure the vessel tracks straight.

1. Connect SmartCraft gauges and VesselView displays.
2. Test all joystick directions for functionality.
3. Test Skyhook, Auto Heading, and Track Waypoint functions.
4. If any features are not functioning correctly, perform the **Import Vessel Personality** procedure again and retest.

Warranty

United States and Canada: Mercury Marine will credit the dealer for the cost of parts and labor. Submit a warranty claim through your normal warranty-processing channel, listing:

1. The drive serial number
2. The labor for reflashing the software:
   • Labor: 1 hour per drive for a total of 2 hours
   • Flat rate code: SB10
   • Part code: 731
   • Failure code: 83
3. For joystick inspection-replacement, claim under starboard drive:
   • Joystick assembly
   • Labor: 0.5 hour per joystick (If vessel is equipped with dual stations)
   • Flat rate code: SB05

Outside the United States and Canada: Follow instructions issued by your local office or by your distributor.