

Circulate to: Sales Manager Accounting Service Manager Technician Parts Manager

Axius Gen 1 White Glove Program

NOTICE

Revised November 2015. This bulletin supersedes the previous bulletin number 2011-02R2 issued January 2012.

Models Affected

All gasoline Axius Gen 1 Vessels

Scope

Worldwide

Situation

This bulletin supersedes 2011-02, 2011-02R1, 2011-02R2.

The following changes were made to this service bulletin revision:

- Removed maintenance checks
- Added reflash instructions
- Revised labor rates for reimbursement

This bulletin provides dealers with detailed instructions and inspection forms to update the software of boats with Axius Gen 1:

- Software identification with potential upgrade (Axius Gen 1 3.5 8M0054192)

NOTE: *There has not been an update to the existing reflash for Axius Gen 1 products.*

Correction

When the vessel arrives at the dealership for service, complete the worksheet provided with this bulletin, and then call your Mercury MerCruiser Technical Service Center to receive the vessel personality.

For complete instructions for reflash, order instruction sheet set part number 8M0056799.

Reflash Axius Generation 1

Hull ID and engine serial numbers will be required later for updating software. Record these numbers before reflashing begins.

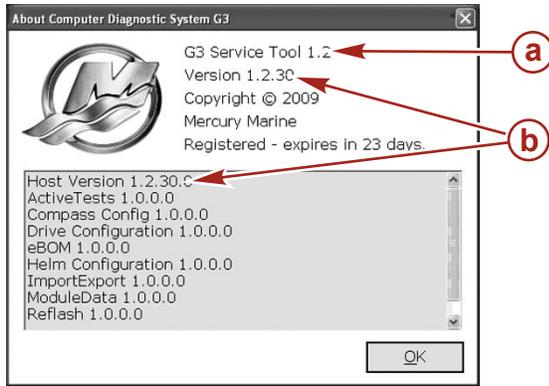
Connecting CDS G3

1. Disconnect VesselView from both the Smart J-box's starboard SmartCraft display 10-pin connection and the Smart J-box multiignition 8-pin connection before starting reflash.
2. Connect CDS G3 to the standard J-box at the helm, or to the yellow diagnostic cable at the helm, if equipped. Do not connect to the engine 10-pin diagnostic port, as CAN H is not in the engine harness and will not allow viewing of the GPS and IMU data.

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3. Turn CDS G3 on and verify that the software for CDS G3 is at level V1.6.4 or newer.



Properties box
a - Revision number
b - Version number

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IMPORTANT: Fill out the worksheet in this bulletin with the following information before contacting Mercury MerCruiser support.

- Boat HIN
- Engine serial numbers
- Vessel personality
- Make, model, and year of boat
- Current software, use eBOM to determine (1.9, 2.2, 3.0, 3.1, 3.3, 3.4)
- PCM calibration numbers—port and starboard
- Features installed and working on the boat, such as Skyhook, Auto Heading, and Track Waypoint
- GPS calibration identification/IMU calibration identification
- Serial numbers (YE0004JK, for example) of both the port and starboard TVMs. While viewing the live data of port and starboard TVM. Record the specific values of the following items: **CurrentTableShift**, **HysteresisOffset**, and **ZeroCrossSuccess**.

IMPORTANT: If the items marked by the red arrows have 0.00 for values, the update of software cannot be completed with the current module on the TVM cylinder. CurrentTableShift and HysteresisOffset values will vary from what is shown, but ZeroCrossSuccess should always read 1.

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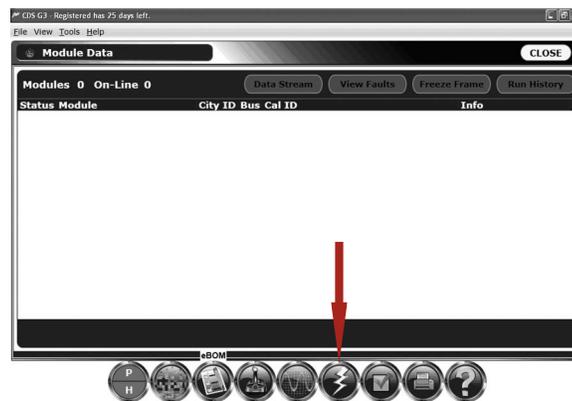
NOTE: Select an eBOM to view data stream information.

Name	Value	Units	Description
Steer_A_Press_ADC	104	ADC	Steering Sink Valve Pressure Sensor ADC Counts
Steer_B_Press	40.44	kPa	Steering Source Valve Pressure
Steer_B_Press_ADC	104	ADC	Steering Source Valve Pressure Sensor ADC Counts
Tank_Press	0.00	kPa	Hydraulic Tank Pressure
Tank_Press_ADC	0	ADC	Hydraulic Tank Pressure Sensor ADC Counts
Steer_Oil_Temp	24.89	C	Steering Oil Temperature
Steer_Oil_Temp_AD C	928	ADC	Steering Oil Temperature Sensor ADC Counts
CurrentTableShift	49.78	mA	Numbers required for the calibration equation
HysteresisOffset	15.34	mA	Numbers required for the calibration equation
Actual_NegCoil_Zer o_Current	725.66	mA	Numbers required for the calibration equation
NegCoil_Hysteresis	15.34	mA	Numbers required for the calibration equation
InitState	0		Initialization State while going through initialization
Initialization_State	0		0 = requires initialization 1 = initialization completed
Initialization_Status	Initialization Needed		
ZeroCrossSuccess	1		Calibration Value
MechanicalDriveOffs et	0.00	deg	Mechanical Drive offset established on Drive Alignment out of Water

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Reflash Modules

1. Select the lightning bolt **Reflash** icon on CDS G3.



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Reflash icon

2. Select **Module Reflash**.
3. Select **Axis Gen 1 Package 3.5 8M0054192**.
4. Select **Next**.

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NOTE: TVM modules will not require updating if software version is 3.3 or newer. They will appear with green check marks on the **Reflash** screen.

5. The **Prerequisites** screen will appear. Before continuing:
 - a. Verify all items have green checks.
 - b. If all items are green, select **Next**.
 - c. If not, verify computer settings, batteries, etc., until all the items are green on the **Prerequisite** screen.
6. Modules needing updating should appear on the screen with a lightning bolt icon beside them. Update the modules in the order in which they appear.

NOTE: Starboard CCM should always be flashed first when flashing command modules.

 - a. Highlight the starboard CCM module and select **Next**.
 - b. Repeat until complete.
7. Enter the hull identification number (HIN) and engine serial numbers that were recorded earlier.
8. Select **Next**.
9. A **Warning** screen will pop up. Carefully follow the warnings and cautions while reflashing modules to avoid potential issues.
10. Select **Begin Reflash**. Reflash will begin on the starboard command module. A progress bar will track progress until the module is completed.
11. After completion of the reflash, the computer will return to **Current Configuration**.
12. Click **Close** and return to the **Reflash** screen.
13. You will now have a green check next to starboard CCM, indicating that it is updated.
14. Select the next module in line at the top, which will be the port CCM with a lightning bolt icon to the left.
15. Highlight and select **NEXT**.
16. The **Warning** screen will appear again.
17. Select **Begin Reflash**.
18. Reflash will begin on the port command module.
19. The progress bar shows when the module is updated.
20. After completion of the reflash, the computer will return to **Current Configuration**.
21. Select **Close** and return to the **Reflash** screen.
22. The **Reflash** screen will now show red Xs beside the CCMs; the port and starboard CCMs will have the same file (city ID). Complete handle adaptation to assign the correct—port or starboard, city ID.

TVM Reflash (if necessary)

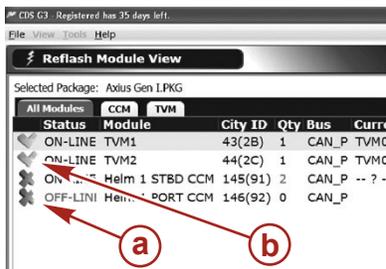
1. Continue the reflash, if necessary, for TVM's by following the next steps. If the software is current, return to **Throttle Configuration**.
2. Select **Starboard TVM City ID 43** and select **NEXT**.
 - a. When the **Warning** screen appears, select **Begin Reflash**. The **Reflash** screen will appear with a progress bar.
 - b. When the module is updated, select **NEXT**. This will take you back to the **Reflash** screen.
 - c. There should be red Xs beside the CCMs and two modules at location 91.
 - d. There should be one TVM with a green check, which is **Starboard TVM City ID 43**.
3. Select **Port TVM City ID 44** and select **NEXT**.
 - a. When the **Warning** screen appears, select **Begin Reflash**. The **Reflash** screen will appear with a progress bar.
 - b. When the module is completed, select **NEXT**. This will take you back to the **Reflash** screen.
 - c. You should now have two TVMs—port and starboard, with green checks.
 - d. Both CCMs will have red Xs, and the location of both will be 91.

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Throttle Configuration

1. Select the **Throttle** icon for configuration.
2. Select the **Helm Configuration** tab.
3. Select **Helm Set Up**.
4. Select the **Assign City ID** tab at top of the screen.
5. Select the proper helm numbers and engine numbers.
6. Read the instructions, select **NEXT** when ready to continue.
7. Follow the prompts to set City IDs.
NOTE: Always turn the key switch OFF when prompted to insure proper set up.
8. When **Assign City ID** is complete, you will be returned to **Current Configuration**.
9. You should now have modules under **Port Outside (146-92)** and **Starboard Outside (145-91)** appear in red, indicating that **Lever Config** is required.



- a - Red X
b - Green check

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Lever Adapt

1. Select **Lever Adapt** at the top right of page.
2. Select **Lever Type**.
3. Select **Adapt All**. Both port and starboard should be NORMAL for polarity.
4. Select **Start**.
5. Follow prompts and instructions for key cycles when **Lever Adapt** is complete.

Steering Wheel Configuration

1. After lever adaptation is completed, select **Steering Wheel Config**.
2. Center the steering wheel and select **Adapt**.
3. Turn the key switch OFF. Follow the prompts.
4. Verify that the engine calibration updates were completed.
5. If the ECM is PCM09, select **Engine Cal** in the **Help** menu on CDS G3 to find the latest calibration for your engine.
6. If an update is available, update the engine calibrations on both engines.
7. The port PCM will require being set back to a port location after flashing. Follow the prompts.

Vessel Personality

With City IDs set on starboard and port CCMs, the **Vessel Personality** can now be loaded.

1. Select the **Throttle** icon.
2. Select **Import**.
3. Install the memory stick provided with the kit into the CDS G3 laptop.
4. Choose E or F drive on the computer when browsing to find the personality.
5. Select file to upload.
6. Select **Start Import**.
7. The personality will load in both starboard and port computer command modules.
8. Follow the prompts on CDS G3 to save the new settings. Follow prompts and instructions for key switch cycles.

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Drive Configuration

The next steps are only required if TVMs—port and starboard, were reflashed. The boat must be in the water, with the engines running, in neutral at a minimum of 800 RPM, and drives straight back for the next steps:

1. Select **Drive Configuration** on the **Configuration** screen.
2. Select **Drive Initialization**.
3. Follow the prompts to complete.

On-the-Water Configuration and Tests

IMPORTANT: The VesselView harness 10-pin and 8-pin connectors must be connected to the Smart J-box.

1. Connect VesselView to the Smart J-box on the 10-pin starboard SmartCraft display, and the 8-pin to multiwake on the Smart J-box.
2. With CDS G3 still connected, prepare to launch the boat for compass configuration if not completed before with G3. Once the boat is in open water to maneuver, select **Configuration** screen on CDS G3.
IMPORTANT: Boat must be in calm water conditions to complete compass calibration.
3. If CDS G3 was turned off, you will need to verify that the proper eBOM is installed before continuing. The eBOM will be Axius 3.5. An engine match on the eBOM is not important to complete the next steps.
4. From the **Configuration** screen, select **Compass Configuration**.
5. Select **Compass Wizard**.
6. The compass wizard will advance through the remaining steps for proper linearization and offset to validate the compass calibration.
7. If the boat is equipped with Axius Premier, validate that all enabled Axius Premier features work. Specific instructions can be found in the appropriate Operation, Maintenance, and Warranty manual:
 - a. With both engines running in neutral, activate SkyHook. A single beep should be heard when SkyHook is engaged.
 - b. With the boat on plane, engage Auto Heading. A single beep should be heard when Auto Heading is engaged. The boat should maintain course.
 - c. If the boat is equipped with a chartplotter, verify that Track Waypoint works. The boat should head toward a selected point.
 - d. If the boat is equipped with a chartplotter, verify that Waypoint Sequencing works. The boat should follow a path with more than one waypoint.
8. Correct any problems found during testing.

Warranty

United States and Canada: Mercury Marine will credit the dealer for the cost of labor and fluids listed. Contact Mercury MerCruiser product support to request preauthorizations to be created under each engine serial number.

In the United States and Canada:

- MerCruiser engine serial number
- Labor: 1.0 hour for each engine, total of 2 hours
- Flat rate code: SB10
- Part code: 731
- Fail code : 00

Outside the United States and Canada: Follow instructions issued by the Marine Power International office or by an authorized Marine Power Distributor.

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Axis White Glove Worksheet

Vessel Information			
Hull ID number:			
Boat make and model:			
Port engine serial number:		Starboard engine serial number:	
Features Currently Installed on Boat			
Skyhook - Y/N	Auto Heading - Y/N	Track Waypoint - Y/N	
Information found in eBOM screen of G3			
Current eBOM that matches boat modules:			
Information found in Module Data screen of G3			
Port engine calibration:		Starboard engine calibration:	
GPS software identification:	IMU Software information:		
Information found in TVM Data Stream screen of G3—Live Data			
Port TVM serial number:		Starboard TVM serial number:	
Port TVM current table shift:		Starboard TVM current table shift:	
Port TVM HysteresisOffset:		Starboard TVM HysteresisOffset:	
Port TVM ZeroCrossSuccess:		Starboard TVM ZeroCrossSuccess:	
Information found in Engine Data Stream screen of G3—Live Data			
Port engine hours:		Starboard engine hours:	
Dealer Contact Information			
Dealer number:			
Phone number:			
Contact name:			

NOTE: The above information must be completed before calling the Mercury MerCruiser Technical Service Center for support. Fax to 1-800-842-4550.

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