

Circulate to: Sales Manager Accounting Service Manager Technician Parts Manager

Zeus Pod TVM Software Change

Models Affected

All Zeus 3000 series pod drives

Scope

Worldwide

Situation

Zeus pods with SmartCraft software version SC 2.2 are no longer available. Beginning in December of 2012, production and service replacement Zeus pod TVM's are programmed with SmartCraft software version SC 2.5. Model identifiers have changed from JH to KH for production, and JP to KP for service. Production pods use H instead of P as the last identifier in the model/part number.

Zeus JH, IH, or HH pods can be replaced with the new KP pods; however, both pods must have the same software level. CDS G3 must be used to reprogram the SC 2.2 pod to software version SC 2.5.

You must also replace the five pressure transducers in the hydraulic steering and trim system, as the new software requires pressure transducers with a higher range scale. Reprogramming a SC2.2 pod to software version SC2.5 without replacing the pressure transducers will cause the hydraulic pressure readings shown in CDS G3 to be inaccurate.

Part Interchangeability

Reference to the following chart for current service replacement KP pods corresponding to the no longer available JP pods:

JP Pod Part Number (NLA)	Current KP Pod Part Number	Pod Model Description
5P4AG94JP	5P4AG94KP	1.34 Port pod QSM with drop box
5P4AY54JP	5P4AY54KP	2.24 Port pod QSB without drop box
5P4AZ54JP	5P4AZ54KP	2.06 Port pod QSB without drop box
5P4CY64JP	5P4CY64KP	2.24 Port pod QSB with drop box
5P4CZ64JP	5P4CZ64KP	2.06 Port pod QSB with drop box
5P4DA74JP	5P4DA74KP	1.95 Port pod QSB with drop box
5P4DB74JP	5P4DB74KP	1.79 Port pod QSC with drop box
5Q4AG94JP	5P4AG94KP	1.34 Starboard pod QSM with drop box
5Q4AY54JP	5Q4AY54KP	2.24 Starboard pod QSB without drop box
5Q4AZ54JP	5Q4AZ54KP	2.06 Starboard pod QSB without drop box
5Q4CY64JP	5Q4CY64KP	2.24 Starboard pod QSB with drop box
5Q4CZ64JP	5Q4CZ64KP	2.06 Starboard pod QSB with drop box
5Q4DA74JP	5Q4DA74KP	1.95 Starboard pod QSC with drop box
5Q4DB74JP	5Q4DB74KP	1.79 Starboard pod QSC with drop box
5P4AL84JP	5P4AL84KP	1.50 Port pod CAT ZF QSC with drop box

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.

JP Pod Part Number (NLA)	Current KP Pod Part Number	Pod Model Description
5Q4AL84JP	5Q4AL84KP	1.50 Starboard pod CAT ZF QSC with drop box

Dealer/Distributor Parts Inventory

There is no action to be taken to upgrade inventory at the distributor or dealer levels. Zeus service replacement pods that contain SC 2.2 software should be used to replace direct individual SC 2.2 pods when needed until inventory is depleted. At that time, SC 2.5 pods may be ordered to directly replace SC 2.2 pods.

Inspection/Test

When a vessel has SC 2.5 software in either the port or starboard pod and SC 2.2 software in the opposite pod, CDS G3 can be connected to that vessel to check compatibility of the TVMs. The module data screen will show the Calibration ID levels. Cal ID's of the TVMs will differ as shown in the following example.



51714

Notice the initial portion of the Cal ID of the STBD TVM is TVM12ZXXXPAAA. The Port is TVM09ZXXXPABA. This indicates that the TVM module on the starboard side contains SC 2.5 software and the port side TVM module contains SC 2.2 software. The SC 2.2 TVM version may vary slightly from this software version.

NOTE: You must have version 1.3.10 CDS G3 or greater to complete the reflash. Previous versions of 1.3 CDS G3 software can be upgraded by connecting your PC to the internet and opening G3. 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.

Software Reflash—Use the check list below to complete the following steps in this order for the reflash to be complete:

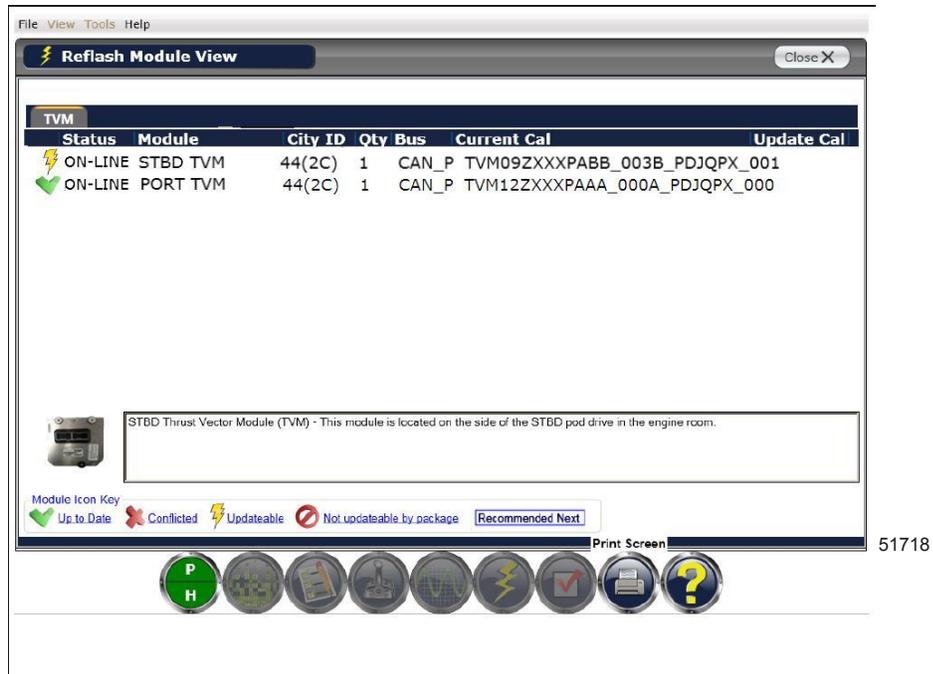
- Ensure that CDS G3 is version 1.3.10 or greater
- Unplug all VesselView displays or other SmartCraft gauges
- Connect CDS G3 and turn all vessel keys on
- Identify and reflash the correct TVM model from SC 2.2 to SC 2.5
- Connect the SmartCraft gauges
- Replace pressure transducers and install decals
- Launch the boat and perform drive initialization
- Perform an on-the-water drive alignment
- Conduct a sea trial and test all premier features

After you have establish the TVM must be reprogrammed to software version SC 2.5, select the reflash package to begin the update as shown in the following example.

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.

At the reflash package browser screen, select the diesel tab to view all diesel reflash packages. Highlight the reflash package labeled "Diesel Zeus - SC 2.2 to SC 2.5 package". Now select next to proceed with the reflash.



After the reflash process is complete, verify that the TVM calibration matches the SC 2.5 module as shown in the screenshot below.



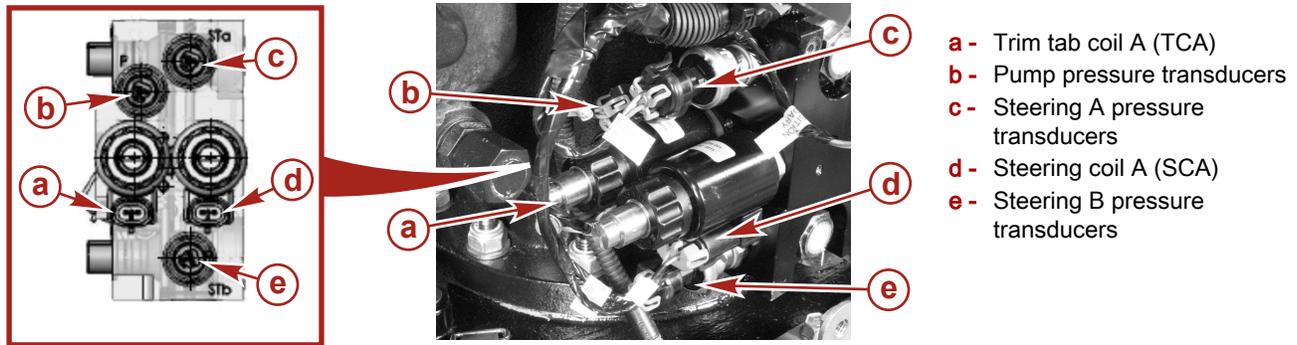
Hydraulic Transducer Replacement

The kit for the transducer replacements includes the five transducers and two labels to apply to the steering and trim manifolds to indicate that the transducers have been replaced with the higher scale transducer.

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.

Each pod's hydraulic steering manifold contains three pressure transducers. These steering pressure transducers are indicated by letters b, c, and e in the following illustration.

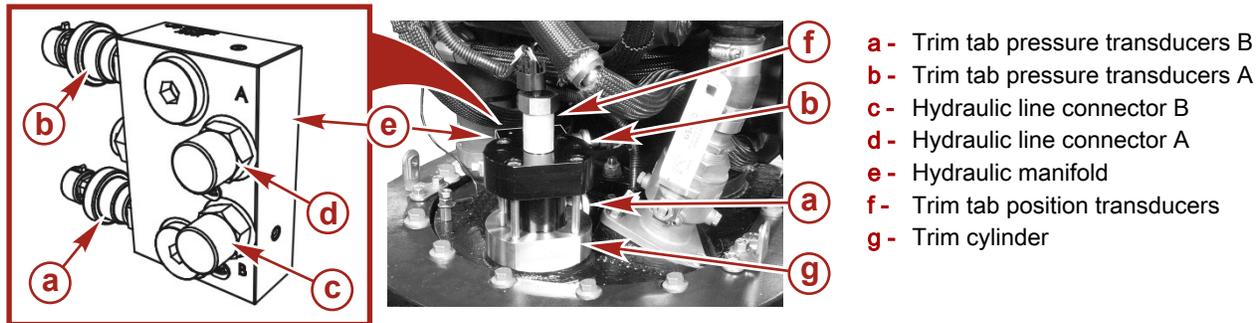


41885

- a - Trim tab coil A (TCA)
- b - Pump pressure transducers
- c - Steering A pressure transducers
- d - Steering coil A (SCA)
- e - Steering B pressure transducers

Each pod's hydraulic trim tab manifold contains two pressure transducers. These trim tab pressure transducers are identified by the letters a and b in the following illustration.

NOTE: The trim circuit is equipped with a check valve to prevent the trim tab from lowering when the hydraulic pump is not operating. When servicing the trim system, the trim tab should be all the way down. If the vessel is out of the water, you will need to supply water to the seawater pickup and operate the engine to lower the trim tab. If the transmission driven hydraulic pump will not operate, refer to Service Manual #52, Section 5D, for instructions on manually lowering the trim tab.



42111

- a - Trim tab pressure transducers B
- b - Trim tab pressure transducers A
- c - Hydraulic line connector B
- d - Hydraulic line connector A
- e - Hydraulic manifold
- f - Trim tab position transducers
- g - Trim cylinder

Refer to the following chart for the part number and torque value of these transducers.

NOTE: Ensure that the sensor fitting and the area around the sensor are clean before removal to avoid contamination. Use only a lint-free cloth to clean the sensor area before removal. The replacement sensor must remain sealed in the shipping container until time of installation.

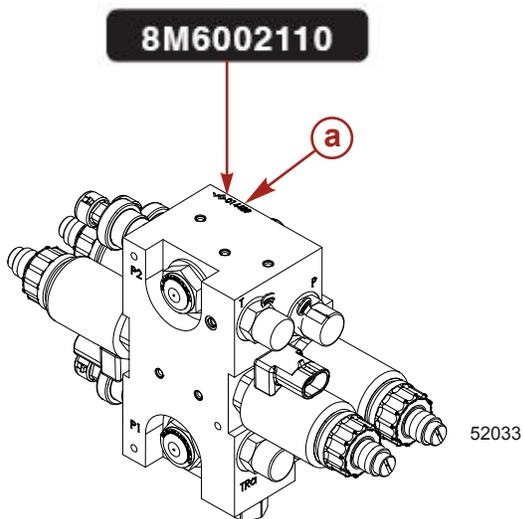
Qty.	Description	Nm	lb-in.	lb-ft	Part Number
1	Hydraulic pressure transducer kit	25	—	18	8M0078384

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.

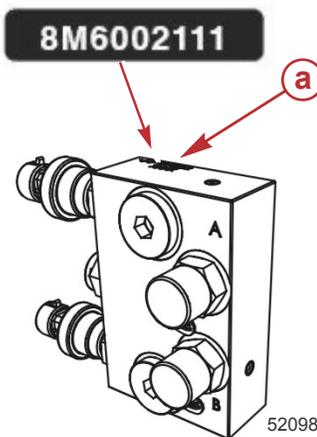
Label Placement

Two decal labels are included in the transducer kit. The labels should be installed on the steering manifold and the trim manifold. Use the following illustrations to determine the placement of each label. These labels indicate that the newer 3500 psi pressure transducers have been installed for future part replacement reference. Ensure that the surface is clean, dry, and free of oil prior to the application of the decal.



Steering manifold

a - Affix the decal here



Trim tab manifold

Perform Drive Initialization

When a TVM is reflashed, the mechanical stop information is lost and must be restored with CDS G3. Go to **Configuration**, select **Drive Configuration**, then select **Drive Initialization**. In the upper right portion of the Drive Initialization screen you must select either the port or starboard pod that was just reflashed. The pod that was not reflashed will not require initialization. Follow the onscreen directions to complete initialization of the reflashed TVM.



50551

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.

Sea Trial

After any software upgrade/reflash to a Zeus vessel, a sea trial should be performed to verify the operation of all features of the vessel.

- During the sea trial, set the drive alignment to ensure that the vessel tracks straight using the **Drive Alignment** procedure in CDS G3. Go to **Configuration**, select **Drive Configuration**, then select **Drive Alignment** and follow the on-screen directions to complete alignment of the drives.
- Test all joystick directions for functionality.
- Test the premier features: Skyhook (if installed), AutoHeading, and Track waypoint functions.



50552

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.