

# Service Bulletin

#### Bulletin No. 2016-66 OEM No. 2016-66

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## Official Recall Notification U.S. Federal Boat Safety Act

## Mercury Diesel Vessel Sensor Harness Replacement

## **Models Affected**

IMPORTANT: This bulletin affects the following engines that are equipped with Bravo sterndrives and Mercury Digital Throttle and Shift (DTS) only.

Models Covered	Serial Number Or Year
2.0L I4 Tier 2	88206000 and up
2.8L I4 Tier 2	88300000 and up
4.2L I6 Tier 2	88401000 and up
2.0L l4 Tier 3	70002130 and up
3.0L V6 TDI Tier 3	CEZ000000 and up
4.2L V8 TDI Tier 3	CMC000200 and up

Mercury DTS can be positively identified by the type of shift plate that is used to control the drive:



## Scope

Worldwide

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## Situation

An issue has been identified regarding Mercury Diesel sterndrive power packages that are equipped with Digital Throttle and Shift (DTS). A failure of the trim, pitot, steering, or paddle wheel sensor may result in a reduction of sensor voltage and subsequent misinterpretation of the DTS shift actuator's position. This can result in the shift actuator shifting into forward gear during the engine start process, even though the electronic remote control handle is in the neutral position. The drive will remain in forward gear until the failed sensor is disconnected.

A redesigned vessel sensor harness is available to prevent this situation from occurring.

As the engine serial number cannot be used to identify if a Mercury diesel engine is rigged with DTS or mechanical shifting, reimbursement for inspection time is provided to confirm that mechanical shifting is present and the campaign can be closed on that engine serial number.

## **Owner Notification**

A letter will be sent to every registered owner of a potentially affected boat. The letter will advise the owner to take their boat to any Mercury Diesel authorized dealer for inspection or repair. Visit MercNET, contact Mercury Diesel customer service, or your regional service center to determine whether repairs on a certain engine within the affected models have been completed. As a Mercury Diesel dealer, you should also contact known affected customers to make them aware of this recall and to schedule an appointment for the repair. A copy of the customer letter is attached.

## Correction

Identify if the engine is equipped with DTS or mechanical shifting:

- If mechanical shifting is present, take no further action and submit a claim for inspection only.
- If DTS is present, verify that the vessel sensor harness is of the original design.
  - a. If the harness is of the original design, replace the vessel sensor harness with the redesigned harness as outlined in the following steps.
  - b. If the harness present is the redesigned harness, no further action is required.

#### **Vessel Sensor Harness Identification**

Engines	Original Vessel Sensor Harness	Redesigned Vessel Sensor Harness
2.0L, 2.8L, 4.2L 16 Tier 2	61745	<b>b</b> <b>a</b> 61746
	<ul> <li>a - Harness P/N label—8M3000209</li> <li>b - Accessory relay drive connector (not used)</li> </ul>	<ul> <li>a - Harness P/N label—8M2100588</li> <li>b - Accessory relay drive connector removed</li> </ul>
3.0L TDI V6, 4.2L TDI V8	a b c 61747	a 61748
	<ul> <li>a - Harness P/N label—8M2100302</li> <li>b - Seawater flow connector (not used)</li> <li>c - Shift anticipate connector (not used)</li> </ul>	<ul> <li>a - Harness P/N label—8M2100575</li> <li>b - Seawater flow and shift anticipate connectors removed</li> </ul>

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- Locate the vessel interface panel (VIP) on the 2.0L, 2.8L, or 4.2L engines, or the vessel adapter assembly (VAA) on TDI engines. Refer to the pictures following for identification.
- 2. Identify the vessel sensor harness by its connection point at the VIP or VAA.

**NOTE:** Many installations have an extension harness between the VIP or VAA and the vessel sensor harness. The extension harness does not require replacement. Follow the extension harness to locate the actual vessel sensor harness.



#### Mercury Diesel VIP vessel sensor harness connection

- a Vessel sensor harness
- **b** VIP connection location



Mercury Diesel TDI VAA vessel sensor harness connection

- 3. Unplug all auxiliary sensors and devices from the harness. Loosen the Allen retaining screw and unplug the 24-pin connection from the VIP, VAA, or extension harness.
- 4. Connect the new vessel sensor harness 24-pin connector to the VIP, VAA, or existing extension harness. Tighten the Allen retaining screw to secure the connection.
- 5. Reconnect all auxiliary sensors and devices to the new vessel sensor harness, making sure all connectors seat properly.
- 6. Start the engine and verify function of the DTS shift actuator, trim sensor, and any other auxiliary sensors that are connected to the harness.

## Parts Required

DTS Sterndrive Models 2.0L, 2.8L, 4.2L

Qty.	Description	Part Number
1	Vessel sensor harness	8M0118368

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#### DTS Sterndrive Models 3.0L TDI, 4.2L TDI

Qty.	Description	Part Number
1	Vessel sensor harness	8M0118364

NOTE: Multiple engine boats will require one vessel sensor harness per engine.

### Warranty

**United States and Canada:** Mercury Marine will credit the dealer for the part and labor to install. Submit a warranty claim through your normal warranty processing channel, listing:

- Engine serial number
- Warranty flat rate:
  - a. Inspection only (mechanical shifting): SB02
  - b. Inspection and replacement of vessel sensor harness (DTS): SB10
- Labor:
  - a. Inspection only (mechanical shifting): 0.2 hour
  - b. Inspection and replacement of vessel sensor harness (DTS): 1.0 hour
- Part code: 331
- Fail code: 00

If the engine is outside of warranty, please contact Mercury Diesel technical service at (920) 929-5884 for a preauthorization.

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

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#### OFFICIAL NOTIFICATION OF FEDERAL BOAT SAFETY ACT RECALL

Dear Mercury Marine Customer,

Thank you for your patronage. Mercury Marine is dedicated to providing a superior product with outstanding quality and reliability. As part of our commitment to superior customer satisfaction, we have determined that your diesel engine must be inspected.

#### What is the Condition?

We are contacting you because our records indicate that you are the registered owner of a Mercury diesel engine. Mercury diesel engines are sold with either Digital Throttle and Shift (DTS) or mechanical throttle and shift.

- **Mechanical Throttle and Shift**: Engines that are equipped with mechanical throttle and shifting are not affected and no service action is required.
- **Digital Throttle and Shift**: We have identified a potential issue with the vessel sensor harness on engines equipped with DTS. During the engine start process, you may notice the sterndrive shifting into gear even with the remote control lever still in neutral. This issue could lead to a hazardous condition. Do not operate the boat until this situation has been corrected.

#### What Will We at Mercury Do?

We have provided instructions to our authorized dealers on the proper method to inspect and replace the vessel sensor harness if needed. The required service will be performed at NO COST to you.

#### What Should You Do?

Please reference the included inspection document to determine whether your vessel is equipped with Digital Throttle and Shift (DTS) or mechanical throttle and shifting.

If the inspection confirms that your vessel is equipped with mechanical throttle and shifting, no further action is required. However, we would appreciate a phone call to Mercury Marine Customer Assistance at 1-920-929-5040 to inform us for our records.

If you are not comfortable with performing this inspection, or have confirmed that your vessel is equipped with DTS, contact your authorized Mercury dealer to schedule a service appointment. Be sure to mention Mercury Diesel Service Bulletin 2016-66.

Please present this notice to your authorized Mercury dealer at the time of service.

If you have any questions or no longer own this Mercury product, please contact Mercury Marine Customer Assistance, at 1-920-929-5040, between 7:30 AM and 4:30 PM, Central Time.

We have sent this notice in the interest of your continued satisfaction with our product. We sincerely regret any inconvenience this may cause you.

Thank you for boating with Mercury Marine.

Mercury Marine Customer Service

## Inspection

Ensure all key switches are in the off position.

Raise the engine hatch and look for a mechanical shift plate, mounted on the starboard side of the engine or on the boat's transom near the engine.



The mechanical shift plate will have two mechanical cables attached to it.

If this type of shift plate is present, no service activity is required. Please contact Mercury Marine Customer Assistance at 1-920-929-5040 to inform us that your vessel is not affected by this campaign.

If you cannot locate this mechanical shift plate or you do not feel comfortable with this inspection, contact your authorized Mercury Marine dealer to schedule an inspection or service appointment.