

WARRANTY INFORMATION SERVICE INFORMATION

## System Monitor Gauge/ECM Calibration On Multi-Engine Boats

### Models

All 2002 Model Year Mercury Racing Optimax 200 XS, Pro Max 300X and 225X engines when used in a multi-engine application.

### Situation

All engines and system monitors shipped from the factory are configured as a starboard outside engine. Multiple engine installations using a single SmartCraft data cable will need to have the engine ECM and system monitor reprogrammed to match the engine location on the boat. Doing this ensures that the correct ECM data will be transmitted to the corresponding system monitor.

### Correction

Using the Digital Diagnostic Terminal Technician Reference Manual 90-881204-2 or newer for SmartCraft Systems, program the engine ECM for correct engine location. Using the SmartCraft Operation Manual (90-10229021 or newer) and/or the installation manual included with the engine, set the correct engine location of the System Monitor.

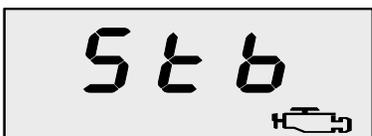
For your convenience, the procedures for setting the System Monitor and the ECM for engine location are enclosed.

**PROCEDURE FOR SETTING ENGINE LOCATION OF SYSTEM MONITOR:**

1. Turn ignition key to the on position.
2. Press and hold **MODE** and  for 3 seconds to bring up the *CAL 1* calibration screen. Continue holding **MODE** and  for 3 more seconds to bring up the *CAL 2* calibration screen.

**Cal 2 Start Screen**

Press the **MODE** button to move to the next calibration screen. 

**Single or Multi-Engine Setting**

This screen lets you select the engine position that the Monitor is connected to. The default setting is Starboard which is displayed on the screen as **Stb**.

1. Press the  button to select desired engine location.
2. Change monitor to read correct engine location.  
There are 4 engine locations available:
 

|                    |                       |
|--------------------|-----------------------|
| 1-Starboard        | Stb (factory default) |
| 2-Port             | Prt                   |
| 3-Starboard inside | Stb2                  |
| 4-Port inside      | Prt2                  |

Press the **MODE** button to save settings and move to the next function which is **Station 1**. 

3. Press and hold **MODE** and  to get out of the CAL 2 calibration screen.

**NOTE:** After calibrating System Monitor, use the DDT to change the ECM to match system monitor settings.

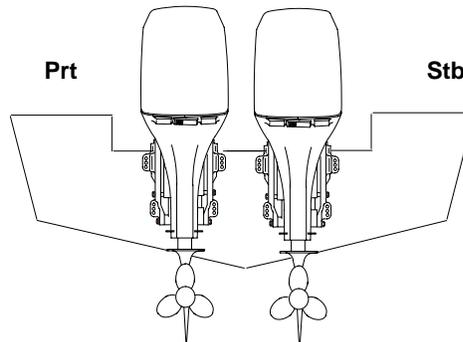
## REPROGRAMMING ENGINE ECM WITH DDT TO MATCH ENGINE LOCATION

**NOTE:** DDT SmartCraft Systems software version 1.0 or higher is required for this procedure.

There are 4 location configurations available:

|                    |                       |
|--------------------|-----------------------|
| 1-Starboard        | Stb (factory default) |
| 2-Port             | Prt                   |
| 3-Starboard inside | Stb2                  |
| 4-Port inside      | Prt2                  |

Figure below shows how to change the port engine from the starboard default setting on a dual engine installation.



1. Turn ignition key to the on position.
2. On the DDT:
  - Press 1 for “Mercury”
  - Press 1 to “Confirm Engine ID”
  - Press 2 for “Manual Test”
  - Press 5 for the “Special Functions” menu
3. To change engine location, select choice 6-ENGINE LOCATION.

Select Function:  
 4-RESET BREAK-IN ↑  
 5-CHANGE FUEL OFFSET  
 6-ENGINE LOCATION

4. The screen will appear asking you to select the number of engines installed on the boat. Press the 2 key for a twin installation.

PLEASE SELECT THE  
 NUMBER OF ENGINES  
 INSTALLED ON THE BOAT  
 1 2 3 4

5. Press the 1 key.

THIS IS CURRENTLY A  
STARBOARD OUTSIDE  
ENGINE  
PRESS 1 TO CONTINUE

6. Use the ← or → key to move the cursor to the Port location if not already selected. Then press the ENTER key.

DUAL ENGINE  
>PRT STB  
SELECT NEW LOCATION  
AND PRESS ENTER

7. The screen message will then ask you to confirm your selection. Press the 1 key to confirm your choice.

YOU HAVE SELECTED A  
PORT OUTSIDE  
ENGINE  
1=YES 2=NO



THIS LOCATION IS NOW  
A PORT OUTSIDE  
ENGINE ↓

8. Turning the key to off, then back to run, will force the ECM to update the current engine location.

TURN KEY OFF THEN  
BACK TO RUN FOR ECM  
TO ACCEPT LOCATION ↑  
PRESS MODE TO EXIT

9. Press Mode Button to exit.