

# Dual Acting SST System Troubleshooting Guide

## STEP 1

Before proceeding with the tests below, verify that each orange power wire is connected to a live positive power source and that the fuses\* are not blown. Make sure that each black wire has a good connection to ground.\*\* After this is complete, conduct the tests below.

Conduct the following test by directly powering the shorter, unused cable on the EIC Relay Module:

Operation	Reaction
Touch positive to Red and Blue Simultaneously	Port trim tab down
Touch positive to Red and Yellow Simultaneously	Port trim tab up
Touch positive to Green and Blue Simultaneously	Starboard trim tab down
Touch positive to Green and Yellow Simultaneously	Starboard trim tab up
Touch positive to Red, Green and Blue Simultaneously	Both trim tabs down
Touch positive to Red, Green, and Yellow Simultaneously	Both trim tabs up

If both trim tabs operate properly when the above test is conducted, then either the EIC Display or the EIC Wire Harness is at fault. Ensure that both ends of the EIC Wire Harness are seated firmly in the plugs, and that the EIC Display's orange wire has proper voltage.

If the above test is conducted and both trim tabs still do not work, then perform the test below by removing the EIC Dual Pump Cable (Y-Harness) from the EIC Relay Module. Using a hot lead, directly power the end of the Y-Harness just removed from the EIC Relay Module (four wires in the plug) as shown below:

Operation	Reaction
Touch positive to Red and Blue Simultaneously	Port trim tab down
Touch positive to Red and Yellow Simultaneously	Port trim tab up
Touch positive to Green and Blue Simultaneously	Starboard trim tab down
Touch positive to Green and Yellow Simultaneously	Starboard trim tab up
Touch positive to Red, Green and Blue Simultaneously	Both trim tabs down
Touch positive to Red, Green, and Yellow Simultaneously	Both trim tabs up

If both trim tabs operate as they should after conducting the above test, then the EIC Relay Module is faulty. If both trim tabs still do not work, then one of the Dual Acting Relay Modules or DAHPUs is at fault.

### IMPORTANT: FOR BOATS KEPT IN SEAWATER

To provide protection from electrolytic corrosion a zinc anode must be applied to each tab. In the case of tabs installed on the boat as original equipment by the builder, Bennett recommends that a bonding system be utilized for your particular model. The SST system top portion of the actuator and the actuator shaft are electrically isolated from each other. Therefore the trim plane and the upper part of the actuator must be individually protected or integrated into a bonding system.

**Trim tabs and actuators should be painted with anti-fouling paint to prevent fouling by marine growth. Follow paint manufacturer's recommendations for proper priming and painting of stainless steel.**

**NOTE: Do not paint under zincs — this prevents electrical contact with trim tabs.**

## STEP 2A — Troubleshooting for Port Dual Acting Relay Module and Port DAHPU

Before proceeding with the tests below, verify that each orange power wire is connected to a live positive power source, and that the fuses\* are not blown. Make sure that each black wire has a good connection to ground.\*\* After this is complete, conduct the tests below.

Unplug the EIC Dual Pump Cable (Y-Harness) from the Port Dual Acting Relay Module. Take the Port Dual Acting Relay Module and using a hot lead directly power the three-color wire pigtail featuring a red heat shrink collar as shown below:

Operation	Reaction
Touch positive to Red and Blue Simultaneously	Port trim tab down
Touch positive to Red and Yellow Simultaneously	Port trim tab up

If port trim tab still will not move, unplug the port Dual Acting Hydraulic Power Unit (DAHPU). Directly power the DAHPU plug as shown below:

Operation	Reaction
Touch positive to Red and Blue Simultaneously	Port trim tab down
Touch positive to Green and Blue Simultaneously	Port trim tab up

If port trim tab is functional when the DAHPU is powered direct, but not when powered through the Port Dual Acting Relay Module, then the Port Dual Acting Relay Module is faulty. If the trim tab still does not move, then the port DAHPU or port actuators are faulty.

## STEP 2B — Troubleshooting for Starboard Dual Acting Relay Module and Starboard DAHPU

Before proceeding with the tests below, ensure that each orange power wire is connected to a live positive power source, and that the fuses\* are not blown. Make sure that each black wire has a good connection to ground.\*\* After this is complete, conduct the tests below.

Unplug the EIC Dual Pump Cable (Y-Harness) from the Starboard Dual Acting Relay Module. Take the Starboard Dual Acting Relay Module and using a hot lead directly power the three-color wire pigtail featuring a green heat shrink collar as shown below:

Operation	Reaction
Touch positive to Green and Blue Simultaneously	Starboard trim tab down
Touch positive to Green and Yellow Simultaneously	Starboard trim tab up

If starboard trim tab still will not move, unplug the starboard DAHPU. Directly power the DAHPU plug as shown below:

Operation	Reaction
Touch positive to Red and Blue Simultaneously	Starboard trim tab down
Touch positive to Green and Blue Simultaneously	Starboard trim tab up

If starboard trim tab is functional when the DAHPU is powered direct, but not when powered through the Starboard Dual Acting Relay Module, then the Starboard Dual Acting Relay Module is faulty. If the trim tab still does not move, then the starboard DAHPU or starboard actuators are faulty.

\* This system could contain up to five (5) fuses — three (3) 1.5 amp, with two (2) 10 amp or two (2) 20 amp. The boat builder could have replaced these fuses with breakers, or used breakers and inline fuses.

\*\* Five (5) ground (black wires) — two (2) DAHPUs, two (2) Dual Acting Relay Modules and one (1) EIC Relay Module.