

**If system beeps to indicate it is taking control, but the boat speed exceeds the target and never comes back and takes control, then a Servo Motor Test & Linkage Test should be performed.**

## **SERVO-MOTOR TEST** (Auto-Tighten Test)

*Each time PerfectPass is powered, the position of servo is checked by an “auto tighten” rotation.*

With key **OFF**, you should be able to easily turn the black knob on servomotor shaft. (If you can not turn the knob then the servomotor is seized)

To check servomotor, turn knob in clockwise direction until snug, then turn it back counterclockwise one full turn.

Now turn key ON which will power PerfectPass. When you hear the beep from the PerfectPass Display the servo will perform its “auto tighten” function and wind in the servo in a clockwise direction by  $\frac{3}{4}$  of a turn. (Ideally, gently hold the knob during this rotation test to add a little resistance)

If the servo winds in the cable smoothly, then this would generally confirm the wiring to servomotor is good.

If the motor does not wind in the cable or it just vibrates, then an electrical connection or crimp is bad. Unplug the two white connectors at servomotor and inspect the wires going into the connectors. Gently pull on each wire to see if one is loose or not securely in crimp. Also, check the wires at plug in the gray servo power cable where it exits the Master Module.

If the problem can not be located, you can perform a “Phase Test”. Call us for details.

**New Installation:** If the system was just installed and the servo will not perform the “auto tighten”, check to make sure the gray servo cable is not plugged into Master Module upside down. Tips on connector should be facing up towards label on module.

**VOLTAGE CHECKS -**

With Control ON you should measure 5 volts on all wires except GREEN which shows near 0, and RED which should measure 12V.

With Control OFF you should measure 12 volts on all wires.