

Tips and tricks of a veteran bilge rat.

I didn't begin life as an opinionated know-it-all marine surveyor. I spent 20+ years working the marine industry repairing and operating boats. That bilge time has taught me a little about everything that is or makes a boat a boat. That experience with a lot of schooling and reading has helped my career to no end. In fact it qualifies my ability to do my job.

Along the way I learned a few tricks, some helpful, some parlor and most apply to mid size boats to yachts with Sterndrive or inboard gas and diesel power. If you are a do-it-yourselfer get a pencil and copy some of this down or email me for a copy.

That mass of wire behind the dash panel on your boat is made up of lots of different color wires. Those colors are duplicated at the engines and elsewhere. When attempting to establish why an instrument or system is not working, simply knowing what color wire does what can prove really helpful. I don't think these colors work on Yamaha outboards but will apply to most everything else.

- 1) **Red-** Main power supply coming from a battery source or main engine harness. Should be dead with battery switch off.
- 2) **Purple-** Main power distribution. At the dash this power starts at the ignition switch and is distributed via the purple wire to everything else. Should be live only with the key ON.
- 3) **Black-** (old) Yellow (new) older boats will have black wires used as ground conductors. Newer craft use the color yellow. ABYC switched to yellow to avoid confusion with 120ACV hot conductors, which are traditionally black and may be found alongside DC conductors in the same panel.
- 4) **Yellow with red stripe-** Starting circuit. This should go from the ignition switch, through the shift handle (in most cases) as a neutral safety and then into the harness to arrive at the starting solenoid. It gets power when you turn the key to "start"
- 5) **Dark Gray-** On the engine and dash it provides RPM signal to the tachometer. In the boat harness and switch panel it's used for navigation lighting.
- 6) **Light blue-** Oil pressure information goes directly from "S" on the gauge to the engine-sending unit.
- 7) **Tan-** Engine water temperature goes directly from the "S" on the gauge to the engine-sending unit.
- 8) **Pink-** Fuel level sending unit goes directly from the "S" on the gauge to the fuel tank sending unit center terminal.
- 9) **Dark brown with white stripe-** Engine alarm circuit. This wire will run in series through the oil and temperature alarm sending switches on the engine and to the buzzer and lamp at the dash. This system works on connecting a ground circuit. The buzzer is powered and the engine units supply ground when a fault occurs.
- 10) **Dark Blue-** Cabin and instrument lights.
- 11) **Brown with yellow stripe or plain yellow on older boats-** Bilge blower power.
- 12) **Orange-** Not used in a long time but still found on some harnesses. Was intended for a full current ammeter.

TILT AND TRIM ALL ENGINES- Green for grass, (down) Blue for sky (up)
More tricks to come next week. Please submit topics for discussion or questions.