



Introduction

The information contained in this Troubleshooting Guide has been compiled from various sources within the marine industry. Any reference to a specific product or brand is not intended for commercial purposes. References to test equipment and products are based upon the information available to the staff of CDI Electronics. **This information is designed for use as a reference guide by a professional marine technician.** CDI Electronics cannot be held liable for the misuse or abuse of the information contained herein. The staff tries to make the information as accurate as possible. However, CDI Electronics cannot assume responsibility for either the data accuracy or the consequences of the data's application.

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Safety Issues

Always remember to treat the outboard engine with respect. The engine uses high voltage for ignition and contains several moving components. Always be aware of moving mechanical parts, the surrounding area, and the position of your hands and body near the engine.

- **Never touch electrical components with wet hands.**
- **Whenever the power source is not needed, disconnect the cable from the negative terminal.**
- **Never reverse the battery leads when you connect the battery or disconnect the terminals while the engine is running as severe damage to the electrical system can result.**
- **Never touch high-tension leads (spark plug leads) with any ungrounded tools while the engine is running.**
- **Never install equipment with requirements exceeding the generating power of the engine. Reference the service manual for values.**
- **Attempt to protect the electronic components from water.**
- **Insure fuel lines, harnesses, and oil lines are properly routed. Failure to follow this rule could result in a fire hazard.**
- **Make sure all ground leads are clean and tight.**

NOTICE: The DVA readings in this book were compiled using the CDI DVA Adapter (511-9773 or 511-9773NL) with a shielded Digital Multimeter. A Digital multimeter with peak voltage scale cannot be used without the DVA as the meter is expecting a 60 hertz signal where the outboard can have an equivalent frequency of over 1000 hertz.

(NOTE) The resistance readings are given for a room temperature of 68°F. Higher temperatures will cause a slightly higher resistance reading.

Normally, DVA readings should always be taken with everything hooked up with the exception of the stop circuit.

The CDI DVA adapter is specifically designed to work with shielded Digital Multimeters. This adapter will simplify the testing of electronic ignition systems, stators, sensors and charging systems. The DVA readings will be approximately the same as any other DVA meter and the specifications listed in the service manuals can be followed without problems (Hopefully a little easier to you).