



Installation and Troubleshooting Guide

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CDI P/N: 511-9776

Remote DVA Test Harness

This harness is designed for testing the switch box, stator and trigger outputs during running conditions. It may be used to check DVA voltages up through wide open throttle ranges.

Johnson/Evinrude 2 Cylinder with ADI Ignition

1. Connect the Orange jumper wires to the Green wires according to the numbers on the wires.
2. Connect the Orange jumper wires to the ignition coils according to the color code of the wires and cylinder numbers (NOTE: Remember the top cylinder is #1 and uses a Orange/Blue wire).
3. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
4. Start the engine.
5. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
6. Rotate the switch to the remaining cylinder and record the reading.
7. If you have a low reading on both cylinders, check the stator output.

Johnson/Evinrude 3 Cylinder with ADI Ignition

1. Connect the Orange jumper wires to the Green wires according to the numbers on the wires.
2. Connect the Orange jumper wires to the ignition coils according to the color code of the wires and cylinder numbers (NOTE: Remember the top cylinder is #1 and uses a Orange/Blue wire while the bottom cylinder uses a Orange/Green wire).
3. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
4. Start the engine.
5. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
6. Rotate the switch to the remaining cylinders and record the readings.
7. If you have a low reading on all cylinders, check the stator output.
8. If you have a low reading on one cylinder, check the power pack output using a 511-9775 Pack Load Resistor.

Johnson/Evinrude 4 Cylinder with ADI Ignition

Connect the Orange jumper wires to the Green wires according to the numbers on the wires.

1. Connect the Orange jumper wires to the ignition coils according to the color code of the wires and cylinder numbers (NOTE: Remember the top cylinder uses a Orange/Blue wire while the bottom cylinder uses a Orange/Green wire).
2. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
3. Start the engine.
4. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
5. Rotate the switch to the remaining cylinders and record the readings.
6. If you have a low reading on cylinders 1 and 3 or 2 and 4, check the stator output. If the stator checks OK, the power pack is likely bad.

Johnson/Evinrude 6 Cylinder with ADI Ignition

1. Connect the Orange jumper wires to the Green wires according to the numbers on the wires.
2. Connect the Orange jumper wires to the ignition coils according to the color code of the wires and cylinder numbers (NOTE: Remember the top cylinder uses a Orange/Blue wire while the bottom cylinder uses a Orange/Green wire).
3. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
4. Start the engine.
5. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
6. Rotate the switch to the remaining cylinders and record the readings.

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7. If you have a low reading on cylinders 1, 3 and 5 or 2, 4 and 6, check the stator output or swap the power packs from one bank to the other bank and retest. If the low readings follow one of the power packs, the power pack is likely bad.

Mercury 2 Cylinder with ADI Ignition

1. Connect the green wires to the ignition coils according to the color code of the wires and sleeving.
2. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
3. Start the engine.
4. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
5. Rotate the switch to the remaining cylinders and record the readings.
6. If you have a low reading on both cylinders, check the stator output.

Mercury 3 Cylinder with ADI Ignition

1. Connect the green wires to the ignition coils according to the color code of the wires and sleeving.
2. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
3. Start the engine.
4. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
5. Rotate the switch to the remaining cylinders and record the readings.
6. If you have a low reading on all cylinders, check the stator output.

Mercury 4 Cylinder with ADI Ignition

1. Connect the green wires to the ignition coils according to the color code of the wires and sleeving.
2. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
3. Start the engine.
4. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
5. Rotate the switch to the remaining cylinders and record the readings.
6. If you have a low reading on cylinders 1 and 2 or 3 and 4, check the stator output. If the stator checks OK, the switch box is likely bad.
7. Disconnect the tester green wires.

Mercury 6 Cylinder with Twin Switch Boxes

1. Connect the green wires to the ignition coils according to the color code of the wires and sleeving.
2. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
3. Start the engine.
4. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading to that ignition coil. Record the reading.
5. Rotate the switch to the remaining cylinders and record the readings.
6. If you have a low reading on cylinders 1, 3 and 5 or 2, 4 and 6, check the stator output or swap the stator leads from one switch box to the other switch box and retest. If the low readings follow one set of stator leads, the stator is likely bad.
7. Disconnect the tester green wires.

Testing Stator Output

Mercury 3 Cylinder with ADI Ignition

1. With the stator wires are connected to the switch box, connect the green wire marked #1 with the blue stator wire and the green wire marked #2 with the red stator wire.
2. Plug the probes from the DVA adapter/DVA meter into the pin jacks in the box.
3. Start the engine.

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4. Turn the first switch to the #1 cylinder position. This will give you the DVA output reading for the low speed winding. The reading should increase with rpm and stabilize. If the voltage rises and then falls back quickly, the stator is likely bad.
5. Rotate the switch to the #2 position. This DVA output reading for the high speed winding should show a smooth climb in voltage to wide open throttle. If the DVA reading drops back, the problem could be the stator, switch box or rectifier.
6. Disconnect the rectifier and retest, if the problem clears up-replace the rectifier.

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