

Tempest 3 (T3)

Installation Instructions

Kawasaki Sxi/SXR Ignition

All model years

This document describes the installation of the Kawasaki Sxi and SXR twin cylinder Jet Ski ignitions.

Tools Required

- 10mm Socket
- 12mm Socket

First Things First, for Safety... Very Important!

 **Disconnect the battery positive cable (red) before proceeding.**

Installation Overview

The T3 Ignition is designed to give you trouble-free service if installed according to these instructions. Read the entire instruction procedure before beginning the installation. If you do not understand any portion of these instructions, refer installation to a qualified technician.

Installation

Remove electronics enclosure from its Mounting Location

1. Using a 10mm socket remove the mounting bolts on each side of the electronics enclosure.
2. Remove the enclosure cover and set aside the screws, 2 mounting flanges, 'O' ring, and enclosure top.

Unplug and Remove the OEM Ignition

1. Using 10mm socket, remove bolts from each side of the OEM ignition. Lift out the ignition and unplug all connectors attached to the OEM ignition. Now remove the protective metal plate that was under the ignition and two 3/16" thick washers under that plate.
2. **2004 and newer models:** Remove the wire harness for the two black connectors previously unplugged from the OEM ignition. Trace each wire from each black connector back to in-line connectors and separate each of these connectors. Set the two wire harnesses aside.

Install the T3 Ignition

1. Install the T3 ignition into the mounting bracket supplied with your T3. Slide the end of the ignition that is opposite the wires under the lip at the rear of the bracket and press the wire end of the ignition firmly into the bracket. Attach the keeper plate using two 5mm bolts supplied. Place the ignition/bracket in the location where the OEM ignition was removed. Secure the ignition in place with the supplied bolts.
2. Attach each wire from the T3 ignition to the same colored wire in the electrical box.
3. **2004 and new models:** There are two Yellow/Red wires, one with a male connector, the other with a female connector. Plug these mating connectors together.

Attach the White Connector

For model years 2004 or newer the electrical box has a 2-wire connector and it mates directly with the 2-wire connector on the T3. For model years 2003 or older the electrical box has a 4-wire connector. Simply install the T3's 2-wire connector over the pins with Blue and Green wires of the 4-wire connector aligned with the same colors on the T3 connector. The T3's 2-wire connector will snap in place and hold properly.

Wires not connected

One or more wires in your boat may not have mating wires on the T3 Ignition. Here is a list of possible unconnected wires;

Color	Connected to	Notes
Black/Red Blue	Air temperature sensor Air temperature sensor	Not used by T3 Ignition, you may remove sensor and both wires,
2004 or newer		
Red/Yellow Blue	Over temperature sensor Over temperature sensor	Optional use by T3 ignition, remove sensor and both wires if you don't plan to use this sensor. The Red/Yellow wire on the T3 will not be connected
2003 or older		
Red/Yellow Black/Yellow	Over temperature sensor Over temperature sensor	Optional use by T3 ignition, remove sensor and both wires if you don't plan to use the sensor. The Red/Yellow wire on the T3 will not be connected

Set the Programming Switches to Your Settings

Before proceeding with the physical installation of the T3 Ignition, set the programming switches to match the specific engine hardware configuration of your boat. Refer to the Sxi/SXr User Guide supplied with your ignition.

Testing your Advent Ignition

You will now do a simple start and idle test to confirm that the T3 Ignition is properly installed.

1. Connect the red battery wire.
2. Set the electronics enclosure in a stable position on or near the engine.
3. Depress the START button and the engine should start normally. Depress the STOP button and the engine should stop normally.
4. Start the engine once more and pull the TETHER. The engine should stop normally.

If the engine does not stop, apply the choke stop stop it. Check and confirm that each wire from the ignition are properly and firmly attached .

If problems persist, please call Advent Ignitions for technical assistance.

Installing the Water Control System

If you are installing water control, then proceed to the next section. Otherwise, continue to the end of this section.

Attach the electronics enclosure cover plate and mount the enclosure in the PWC

1. Replace the large O-ring in its track and place the enclosure cover in position.
2. Install the 10mm hex head bolts with the two mounting flanges and secure the enclosure cover ensuring that the enclosure is once again watertight.
3. Position the electronics enclosure at its original mounting location. Install the mounting hex head bolts to secure the enclosure in place.

Last Things Last

Restart the engine then press the stop switch to ensure that everything works properly.

Attention! Severe engine damage may occur.

Do not attempt to operate the boat under any loads if you have not properly set all the programming switches on the T3 Ignition.

Installing Water Control System

- **Connecting water control solenoids to ignition module**
- **Setting head pipe water ON / OFF RPM**
- **Setting stinger pipe water ON RPM**

Water Control Function Overview - The Tempest 3 Super Jet, SXi 750 and SX-R 800 Ignitions have two independent water control channels built in. This eliminates the need for separate controllers and the extra cost and complexity of installation. The T3 water controller also provides a wider range of control than any other product.

Wiring Overview

The user is responsible for the connections between the T3 Ignition and the water control solenoids. Advent does not provide the wire or the solenoids. However, we do provide the mating connectors to connect wires to the ignition.

Tools Required

- 18 or 20-gauge stranded wire (lamp cord wire may be used)
- Soldering iron
- Resin core solder
- Electrical tape or 3/16" diameter shrink tubing

Wiring Ignition Water Cable to Solenoid

1. On solenoid wires, strip the insulation so ¼" of wire is exposed. Tin each wire.
2. On water control cable from Ignition, remove 1.5" of outer covering. Strip ¼" of insulation from ends of wires you intend to use (See Figure 1). If the stinger wire pair is not being used, tape each wire end and pull wires back along cable and tape in place for possible future use.
3. The wire lengths of the cable from the Ignition and solenoid must be extended to allow for installation. Lamp zip cord is a suitable wire to use for this purpose. Cut lamp cord to proper length and strip the wires on each end ¼". Tin each wire. Slide a 1" long piece of shrink tubing over each wire on one end. Keep the shrink tubing away from any heat generated during soldering.
4. Solder the lamp cord wires to the Red and Black wires from the ignition cable. Slide the shrink tubing over the splice and apply heat to shrink in place.
5. Solder the lamp cord wires to the black wires of the solenoid (Note: solenoid wires do not have polarity). Slide the shrink tubing over the splice and apply heat to shrink in place.

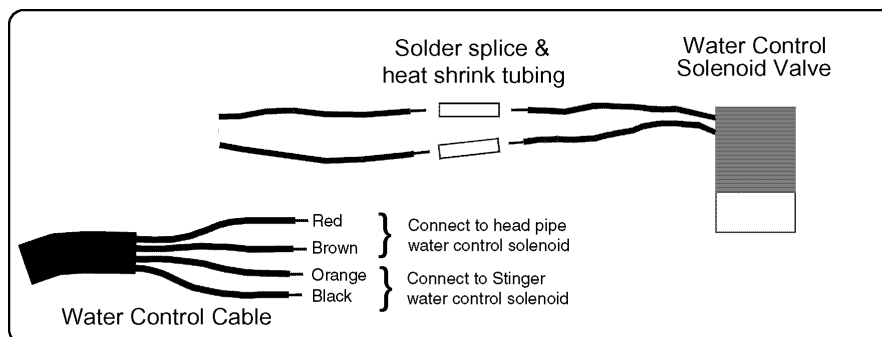


Figure 1

Attach the electronics enclosure cover plate and mount the enclosure in the PWC

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2. Install the 10mm hex head bolts with the two mounting flanges and secure the enclosure cover ensuring that the enclosure is once again watertight.
3. Position the electronics enclosure at its original mounting location. Install the mounting hex head bolts to secure the enclosure in place.

Last Things Last

Restart the boat and repeat the test procedure above to ensure that everything works properly.

Attention! Severe engine damage may occur.

Do not attempt to operate the boat under any loads if you have not properly set all the programming switches on the T3 Ignition.

**If you have any questions or comments, please contact us by phone, FAX, or e-mail.
Be sure to reference the year and model of your boat.**

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