ADVENTIGNITIONS
Anaheim, CA USA

Tempest 4 (T4)
Installation Guide
Kawasaki Sxi / SXR

For use with the following Kawasaki models:
Sxi-750, SXR-800
Kawi-Doo

The T4 SXR Ignition System is a plug and play product. The system is comprised of two parts, the T4 2-cylinder universal ignition module and a T4 to SXR connector adapter. The T4 connector adapter attaches directly to SXR's wiring without need to cut and solder any wires. The same T4 to SXR connector adapter fits all Sxi-750 and SXR-800 models.

The T4 Ignition module can provide other useful functions on this vehicle

- 3 water control channels
- Hole shot (low speed) limiter
- TPS (Throttle Position Sensor), with additional hardware

Contact the sales department at Advent Ignitions for additional information.

First Things First

Disconnect the battery positive cable (red) before proceeding.

Installation Overview

The T4 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 or call Advent for assistance.

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

3. Using 10mm socket, remove bolts from each side of the OEM ignition module. Lift the ignition out then unplug all connectors attached to the ignition. Leave in place the metal shield plate and the two spacers under the plate. Secure the plate and spacers by reinstalling the bolts just removed.

4. **2004 and newer models:** remove the wire harness for the two black connectors previously connected to the OEM ignition. Trace each wire from each black connector back to the in-line connectors and separate each of these connectors. Set the two wire harnesses aside.

Mount the T4 Ignition on shield plate

5. Remove the protective coverings from the two strips of double-face tape on the back of the T4 ignition, position the ignition on the shield plate such that the T4 connector overhangs the edge of the plate and press the ignition in place. This position is required to allow the mating connector latch to be assessable. Be sure of the position before pressing it into place as the tape cannot be removed once in place.

Wiring the T4 Ignition

6a. Attach each wire from the T4 connector the mating connectors with matching colored wire in the electrical box.

6b. **2004 and new models:** There are two Yellow/Red wires, one with a male connector, the other with a female connector. These wires do not connect to the T4, simply plug these mating connectors together.

Attach the White Connector (crank position sensor)

7. 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 T4. For model years 2003 or older the electrical box has a 4-wire connector. Simply install the T4's 2-wire connector over the pins with Blue and Green wires of the 4-wire connector aligned with the same colors on the T4 connector. The T4's 2-wire connector will snap in place and hold properly.

Kawi-Doo Installations

A mating white connector with pigtail wires is provided for connection to the Sea-Doo crank position sensor wires. Follow the connection instructions provided in the Sea-Doo CPS connector package.

Wires not connected

One or more wires in your electrical box may not have matching mating wires on the T4 Ignition. Here is a list of possible unconnected wires;

Color	Connected to	Notes
Black/Red	Air temperature sensor	Not used by T4 Ignition, remove sensor and both wires from boat
Blue	Air temperature sensor	
2004 or newer		
Red/Yellow	Over temperature sensor	Optional use by T4 ignition, remove sensor and both wires if you don't plan
Blue	Over temperature sensor	to use the sensor. The Red/Yellow wire on the T4 will then not be connected
2003 or older		
Red/Yellow	Over temperature sensor	Optional use by T4 ignition, remove sensor and both wires if you don't plan
Black/Yellow	Over temperature sensor	to use the sensor. The Red/Yellow wire on the T4 will then not be connected

Gray control cable

This cable and its water tight strain relief are provided to connect to any external relay circuits and switches. If you don't plan to use water control or a hole shot switch this cable can be curled up inside the electrical box. Refer to the next section for cable installation if required.

The Ignition Installation is Complete

Refer to the next two sections **"Installing Electrical Devices and Switches"** and the separate sheet "**Setting the Switches".**

Last Things Next

1. Reconnect the battery cable removed at the beginning of this installation procedure.
2. Use the Curve Devil® to design your timing curves, rev limiters and other operating parameters of your T4 Ignition.

The T4 installation is now complete!
Continue to next section –
"Installing auxiliary electrical devices and switches"

Installing Auxiliary Electrical Devices and Switches

The Relay control feature of the T4 Ignition provides the user with the ability to control up to 2 auxiliary electrical engine devices. These may include water control, fuel pumps, bilge pumps, power valves (RAVE valves) etc. Each relay control circuit is capable of handling up to 1.0A of current.

First Things First, For Safety…

Disconnect the battery positive cable (red) before proceeding.

Installation Overview

Four wires are provided to connect to various electrically operated relays, values auxiliary fuel pumps, Switches, etc.

Adding Wires to the T4 Connector

If your T4 does not have relay control wires installed in the connector you can order a wire kit that is easily installed.

If your T4 ignition does not have a 15" relay cable attached Figure 1 shows the connector locations for the relay control wires.

1. Remove the light blue water seals from the wire holes indicated in Figure 1.
2. Again referring to Figure 1 insert each wire into its respective hole. Note that the metal connector end will enter the hole in only one orientation. If the metal connector does not insert and click Into place easily, remove it and try another orientation.

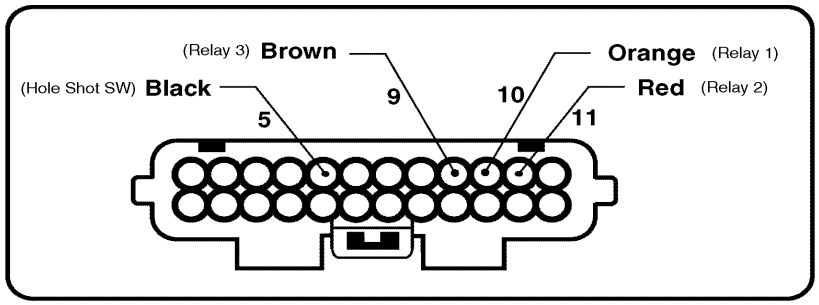

Figure 1

Gray cable for 3 relay outputs & Hole Shot SW

Electrical Devices that Can be Connected to the T4

- Relays used to control high current type electrical devices or motors such as bulge pumps.
- Electrically operated solenoids
- Devices designed to operate up to 21Vdc
- Devices that draw 1.0 amps or less

Electrical Devices that Cannot be Connected to the T4

- Devices such as incandescent lamps over .5 Amp or motors
- Devices that require more than 1.0 amp of current.
- Devices that are designed to operate on voltage less than 12Vdc
- Devices that are designed to operate on AC voltage

If any of these types of devices are connected the T4 has internal safety feature that will turn the device off to protect the T4 ignition module.

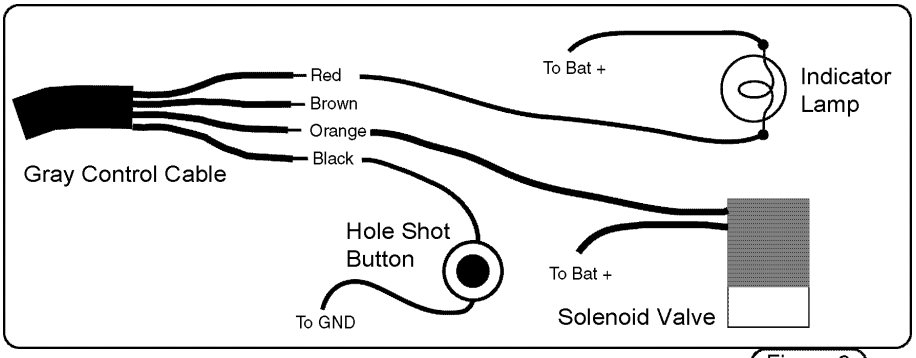

Figure 2

Wiring Devices to the T4 Gray Control Circuit

NOTE: Devices such as relays, solenoids and lamps do not have an electrical polarity. This is to say that it does not matter how their wires are connected to the T4 circuits and power.

1. Figure 2 shows how to hook up electrical control devices and indicator lamps to T4 relay channels 1 and 2.
2. Figure 2 shows connection of a handle bar mounted Hole Shot switch.

Last Things Next

1. Re-attach the battery terminal.
2. Use the Curve Devil to design your Relay control On/Off profiles and other operating parameters of your T4 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 watercraft.

This installation is now complete!

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