# WARNING: HIGH VOLTAGE!



# DISCONNECT THE POWER SOURCE BEFORE INSTALLING OR SERVICING ANY IGNITION SYSTEMS COMPONENTS.

Failure to follow these instructions and the equipment owners' handbook and shop manual could result in serious personal injury, death and or damage to property. This part is designed to be installed by a mechanic that is familiar with industrial safety standards. <u>High Voltage may be present at the ignition coil</u> <u>primary OR secondary circuit.</u> Do not connect a dwell meter or test light to the coil primary terminals. Do not connect 12 volts to the

coil. Do not use a test light or jumper wire on the ignition box or ignition coil. Serious personal injury, death and or damage to property could result.

## **Description**

The ZK is an electronic igniter that is used to ignite fuel inside the burner of an industrial machine. The ZK Perma-Tune module provides power to an ignition coil which in turns provides power to the electrodes inside the burner. The sparks generated by the electrical power at the electrode ignites fuel that is introduced into the burner. The Perma-Tune ignition system is unique for its ability to maintain a continuous shower of sparks to the burner regardless of high pressures or extreme gas velocities that otherwise would prevent combustion.

### **Applications**

The ZK was used in a wide variety of applications, mostly in mobile oil field equipment such as nitrogen pumpers.



MODEL ZK

<u>8-Violet Wire= Ignition Switch.</u> Eliminate the ballast resistor if so equipped. Power requirements are 5 Amps continuous and 50 Amps surge at 12 Volts. Use 30 Amp fuse protection, use 12 Gauge wire to extend the Violet wire if required.

7-Not Used.

6-Not Used.

5-Not Used.

4-Not Used

<u>3-Brown Wire= Ground to chassis and battery minus.</u> The Perma-Tune Brown Wire, engine and battery minus terminal must be grounded to the vehicle chassis.

NOTE: Missing or defective ground connections may result in burnt breaker points and may damage or reduce the effectiveness of the 911E.

<u>2-Green Wire= Coil Hot signal.</u> This is also an optional tachometer signal for tachometers that are not compatible with the signal from the Yellow or White wire.

WARNING: HIGH VOLTAGE on this wire. Disconnect battery before servicing this connection.

CAUTION: Do not connect a rev limiting tachometer to the green wire or damage to the 911E will result. Do not connect a dwell meter here or damage to the meter may result. Do not connect 12 Volts to the coil. 1-Black Wire= Coil ground.

#### **Description**

#### **NOTES**

Spark plug polarity may be reversed by swapping the green and black wires. Unlike other systems, Perma-Tune ignitions make no humming sounds when turned on . Replace the ignition coil if there is evidence of oil leaking from inside the high voltage tower or at the seal at the top of the coil. To check if your coil has leaked, remove it from the car and shake it. You should hear only a small amount of air splashing inside the coil, if you don't hear any splashing, or if there is a lot of air in the coil, replace it. Any quality ignition coil will work with the Perma-Tune, however some "high performance" coils may cause flash over in the distributor cap. Perma-Tune coil P/N 103 or any 12 Volt coil is recommended. Check spark plug wires, distributor cap and rotor for cracks, corrosion and short circuits. These problems become more evident after the Perma-Tune is installed due to the increased power it produces. Check fuel for water contamination, check fuel pump pressure and carburetor settings. Remove any radio noise suppressers that may be attached to the ignition coil, they are not needed

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## MOUNTING

Bolt the 911EOS to a flat surface so as not to bend the mounting flanges. The flanges can be cut or drilled. Avoid mounting it near the exhaust system. If a flat surface is not available, mount the adapter bracket provided in the desired location and bolt box to the bracket. When mounting the box on a non conductive surface the box need not be grounded.

#### CONNECTIONS

Solder and shrink tube connections are recommended. Crimp connectors of the marine variety are acceptable. Any wires not used must be insulated.

CAUTION: Damage may result to the unit if unused tachometer wires are shorted to ground.