

DIS6

INSTALLATION MANUAL
DIS6-911
DISTRIBUTORLESS
IGNITION SYSTEM
FOR CARBUERATED PORSCHE 911s

COMPU-TRONIX
PERFORMANCE IGNITION SYSTEMS

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INTRODUCTION

Congratulations! You have just purchased the highest performance ignition system available for a Porsche 911.

READ THESE INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION!

If you are in doubt about any of the procedures, have a qualified automotive technician install the system for you!

Refer to diagram during installation

VERIFY THE CONTENTS OF THE SYSTEM.

It should contain the following:

DIS6-911 Electronic Distributor
Distributor mounting Bracket
Mounting Bracket Spacer (Counter Clockwise Distributors only)
6 Tower Ignition Coil Pack
Coil Pack Mounting Template
Wire Harness
8 mm Spark Plug Wire Set
Hardware Kit

GENERAL COMMENTS

These instruction sheets are precise and accurate. They are designed to take you through the installation, step by step, in a logical sequence. If you follow them, the system will work the first time, every time. If you do not follow them, Cypress Engineering cannot guarantee the results.

Due to the high-energy output of this system, only silicone high voltage leads, such as the ones supplied with the system, can be used.

High quality spark plugs, in new or good condition must be used. Recommended spark plug gap is 0.045”.

Never crank the engine with any high voltage wires disconnected from the Coil Pack terminals or spark plugs. This puts a very high stress on the coil and it is dangerous!

DO NOT try to time this system with a dial back timing light! Each spark plug wire conducts current once per engine revolution instead of once every other revolution as in a conventional system. Use only a standard timing light with a clamp on inductive type pick up.

REMOVE STOCK COMPONENTS

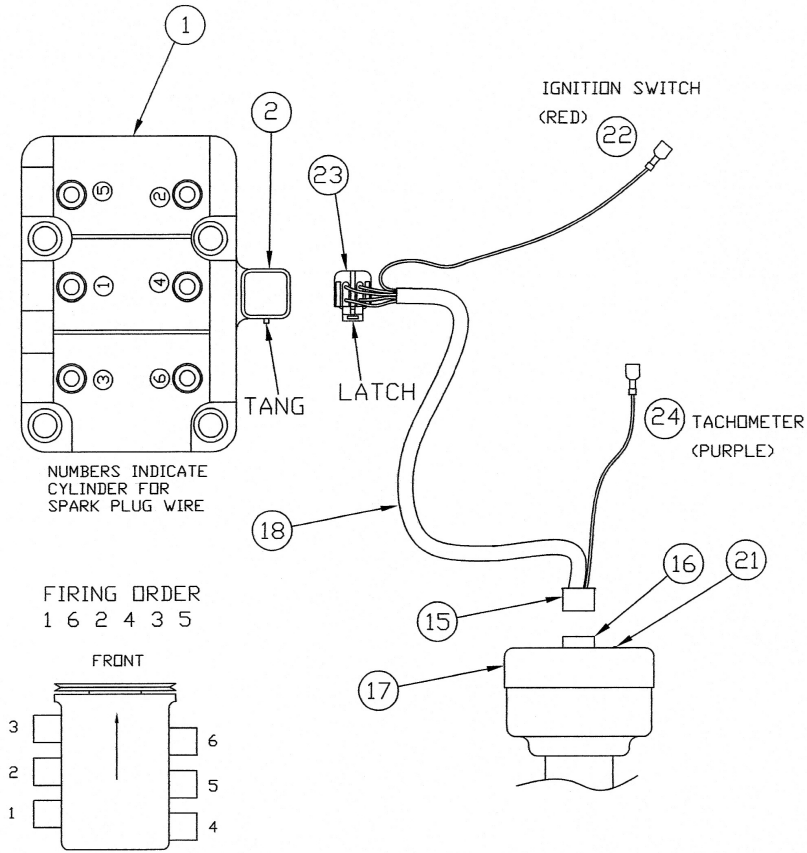
MAKE SURE THE IGNITION SWITCH IS OFF!

1. Remove high voltage wire from ignition coil.
2. Remove all of the high voltage wires from the spark plugs.
3. Remove the distributor cap and set it and the high voltage wires out of the way. .
4. Remove all wires from the ignition coil.

CAUTION: MAKE SURE THE IGNITION SWITCH IS OFF!! The wire from the ignition switch to the ignition coil primary terminal is NOT fused in many applications. If this wire is allowed to touch vehicle or engine ground, with the ignition switch on, it can cause a direct short on the battery possibly causing permanent damage to the vehicle wiring and a fire. Cypress Engineering assumes no liability for damage caused from this occurrence or due to any faults in the existing vehicle wiring.

5. Remove the ignition coil and mounting strap from the fan housing and set them aside.
6. Remove the distributor and set it aside. Save the bolt that secured the distributor to the engine case.
7. Install the Compu-Tronix distributor. Orient the mounting bracket so that the set screw is accessible after installation. **For counter clockwise rotating distributors, there is a spacer ring that mounts above the mounting bracket.** Rotate the mounting bracket so that the mounting bolt is near the center of the slot and tighten it down. Tighten the set screw just enough so that the distributor can still be turned by hand.

FIGURE 1



WIRE HARNESS CONNECTIONS
FIGURE 1

SET INITIAL TIMING

1. **Refer to Figure 1.** Insert the plug (15) on the wire harness (18) into the socket (16) on the top of the Compu-Tronix distributor. The plug will only go into the socket one way. **DO NOT** connect the plug (23) to the coil pack at this time.

With the ignition switch off, the gear shift in neutral and the emergency brake set, rotate the engine until the timing mark is about 10° BTDC. It does not matter whether #1 cylinder or #4 cylinder is on the compression stroke.

Refer to Figure 1.

Connect the red wire (22) to the ignition switch wire. (It is up to the installer to locate the ignition switch wire). If the original system had points, the ignition switch wire was connected to the plus (+) terminal of the ignition coil. If a CD system is installed, the ignition switch wire will have to be located.

Turn the ignition switch on.

2. The LED static timing light (21), in the top of the Compu-Tronix Distributor may be on or off.
3. **For clockwise rotating distributors:** If the LED is off, slowly rotate the distributor counterclockwise until the LED just turns on. This is the point at which #1 cylinder will fire. If the LED is initially on, rotate the distributor clockwise until the LED turns off. The distributor may need to be rotated up to 120° for the LED to turn off. Then slowly rotate the distributor counterclockwise until the LED just turns back on. This is the point at which #1 cylinder will fire. Tighten the set screw. **TURN THE IGNITION SWITCH OFF.** The timing is now set with 10° initial advance
4. **For counter clockwise rotating distributors:** If the LED is off, slowly rotate the distributor clockwise until the LED just turns on. This is the point at which #1 cylinder will fire. If the LED is initially on, rotate the distributor counterclockwise until the LED turns off. The distributor may need to be rotated up to 120° for the LED to turn off. Then slowly rotate the distributor counterclockwise until the LED just turns back on. This is the point at which #1 cylinder will fire. Tighten the set screw. **TURN THE IGNITION SWITCH OFF.** The timing is now set with 10° initial advance

INSTALL THE COIL PACK

Compu-Tronix offers two different coil pack mounting brackets that greatly simplify mounting the coil pack.

If an optional Compu-Tronix coil pack mount has not been purchased, use the included clear plastic mounting template and the mounting hole dimensions shown and mount the coil pack in the coolest location practical in the engine compartment. It may be necessary to fabricate an intermediate mounting plate. Make sure the coil is solidly mounted and free from any excessive vibration. The coil pack should be oriented such that the coil connector is towards the distributor.

If using the optional Compu-Tronix fan shroud coil mount bracket, simply put it in place of the factory coil mount. Orientate the bracket so the longer straight part is vertical and the shorter bend part attaches to the fan shroud. Secure the bracket using the original hardware that held on the factory coil mount.

INSTALL SPARK PLUG WIRES

Refer to Figure 1.

The cylinder designations in the Porsche 911 are as follows:

#1 Driver side rear	#4 Passenger side rear
#2 Driver side middle	#5 Passenger side middle
#3 Driver side front	#6 Passenger side front

The six spark plug wires supplied are of unequal length. Determine which wire will be used for each cylinder before cutting any wires to length to avoid coming up short on any wires. The cylinder designations, for the connection of the spark plug wires to the Coil Pack (1), are shown in Figure 1. The cylinder designations are also molded into the coil pack housing at the base of the respective high voltage tower. Install the spark plug wires to the spark plugs and coil pack. The best procedure is to install one wire completely from the spark plug to the coil pack. Then go onto the next wire. Make sure all wires are fully seated on the spark plugs and coil pack terminals.

FINAL ELECTRICAL CONNECTIONS

MAKE SURE THE IGNITION SWITCH IS OFF!

Refer to Figure 1.

1. Connect the wire harness connector (23) to the Coil Pack Connector (2). **ENSURE THAT THE CONNECTOR (23) IS ORIENTED SUCH THAT THE LATCH ON THE CONNECTOR (23) CLIPS OVER THE TANG ON THE COIL PACK CONNECTOR (2). FAILURE TO PROPERLY ORIENT THESE CONNECTORS WILL DAMAGE THE SYSTEM.** Make sure the connectors are fully mated and that the latch locks in to place over the tang.
2. Connect the ignition switch wire to the red wire (22), in the wire harness (18). Connect the wire from the tachometer (if applicable) to the purple wire (24) coming from connector (15). If you are not using a tachometer, tape off the connector on the purple wire. The ignition switch and tachometer wires should be terminated with fully insulated ¼" female spade connectors.
3. Make sure none of the wiring or connectors are lying against any surface that gets hot enough to cause damage.

SETTING IGNITION TIMING

NOTE: A variable or "dial back" timing light can not be used unless the delay is set to ZERO and it is used as a conventional timing light!

Start the engine. The engine is timed in the conventional manner using a conventional timing light with an inductive pick up clamp. The inductive pick up should be clamped around the #1 spark plug wire. If the timing light is weak, reverse the orientation of the inductive pick up on the spark plug wire. Full advance is reached at 3,200 RPM. Maximum advance should be set to factory specifications for maximum advance at this RPM.

TROUBLESHOOTING

DO NOT ATTEMPT TO SEE IF THE SYSTEM IS FIRING BY DISCONNECTING A SPARK PLUG WIRE AND HOLDING IT NEXT TO GROUND. THE HIGH VOLTAGE CREATED BY THIS PROCEDURE STRESSES THE INSULATION AT THE COIL AND IS VERY DANGEROUS!

Engine cranks but does not start – No spark present

Determine if the red LED light flashes on and off when the engine is cranked. If it does, the ignition switch wire connection is good and the ECM is triggering correctly.

Verify that there is 12 volts present at the ignition switch wire when the ignition switch is turned on.

If the red LED stays off, the ECM is not getting 12 volts from the ignition switch wire.

Verify that the ECM connector is fully inserted and seated into the Coil Pack Connector.

Verify that the ECM is fully seated on the distributor body.

If the red LED light stays on, the system is not triggering correctly.

Make sure there are no noises coming from the ECM/distributor when the shaft is rotating, that would indicate interference between the trigger disk and the ECM.

Engine starts but backfires/misfires

The spark plug wires may be connected incorrectly. Recheck that the spark plug wires are connected as shown in Figure 5.

Make sure all rubber boots on the spark plug wires are fully seated at both the coil pack and spark plug ends.

Advance curve is incorrect

The advance curve is determined by the advance weights in the Bosch distributor. If the advance curve is incorrect, the advance mechanism in the distributor may be faulty OR the Trigger Disk may be dragging against the ECM.

Verify that the trigger disk is not dragging against the ECM by noting that there are no marks on the rotor. Verify the correct height of the trigger disk using the spacer strips. If the Trigger Disk height is within spec, the advance mechanism in the distributor will have to be corrected.

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