



JACOBS "i.C.E. PAK"

(import Car Energy PAK)

ULTRA TEAM

INSTALLATION INSTRUCTIONS

LEGAL FOR INSTALLATION IN ALL 50 STATES PER CARB EO #D-19-32

NOTE TO INSTALLER: Before starting installation, read this entire book. You will achieve better results in less time!

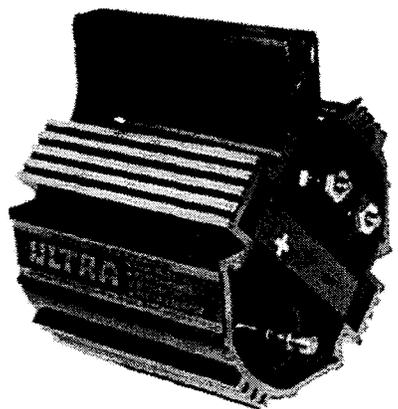
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I. INTRODUCTION

Your Jacobs Electronics ICE PAK's unique styling was designed to provide several easy mounting options. Determine the best mounting location for your vehicle, then select the most appropriate option from the following diagrams.

When choosing a mounting location for electronic items, always attempt to locate them in the coolest spot where there will be air blowing over the item. Avoid sources of extreme heat such as next to exhaust manifolds. Make sure the mounting location is close enough to the battery that the heavy red and black wires will reach.



JACOBS
TORQUER COIL



JACOBS
ICE PAK

This mounting option requires a 6" x 4 3/4" x 2 1/2" and 4 1/2" x 3 1/2" x 3 1/2" mounting surface.

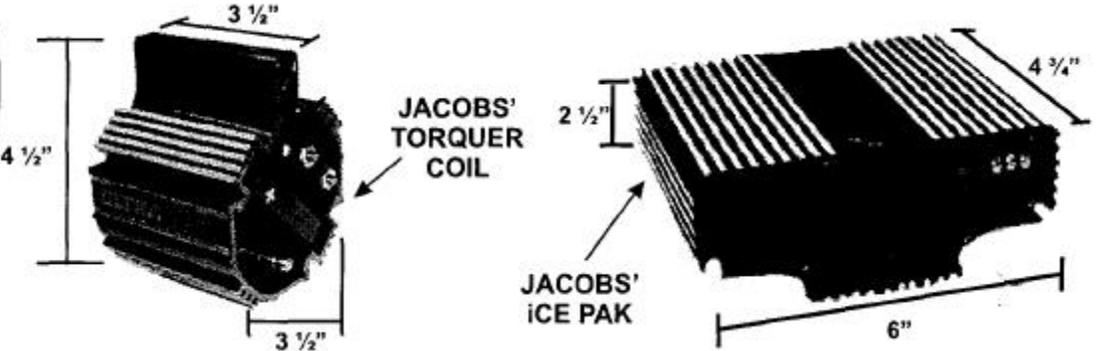


FIGURE 1: iCE PAK AND TORQUER COIL

II BASIC MOUNTING INSTRUCTIONS FOR THE iCE PAK AND TORQUER COIL

NOTE: IT IS ADVISABLE TO MOUNT THE iCE PAK IN SUCH A WAY THAT THE DIAGNOSTIC LEDs WILL BE VISIBLE WHEN THE ENGINE IS RUNNING.

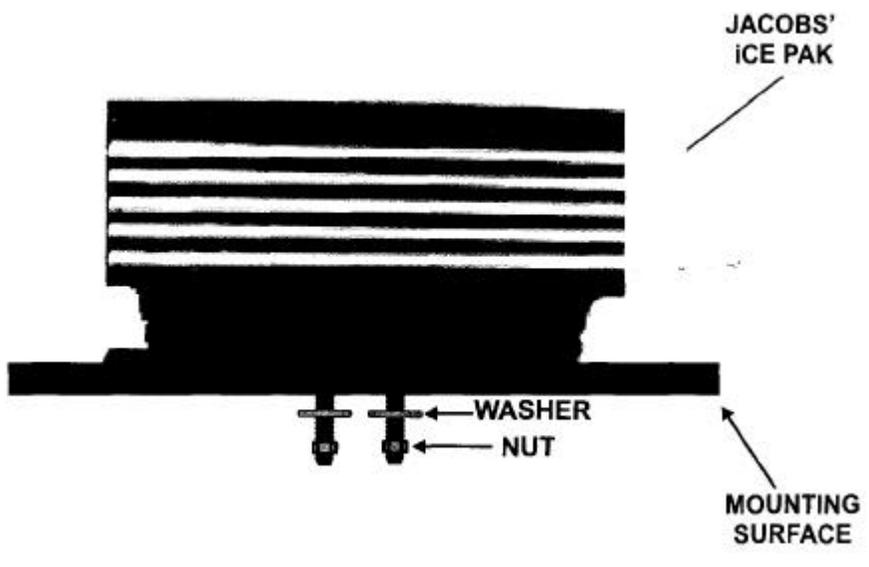


FIGURE 2: FLUSH MOUNTING iCE PAK

OPTION 1: FLUSH MOUNTING iCE PAK, REFER TO FIGURE 2, ABOVE

The iCE PAK can be "flush mounted" using the studs attached to the bottom of the iCE PAK. The MODIFIED L-BRACKET will not be used in this mounting configuration.

Find a flat surface such as the firewall, inner fenderwell, etc. that you can also access from the opposite side and drill two holes slightly larger than the studs. Make sure that there are no components on either side of the mounting surface that could be damaged during drilling. Secure the iCE PAK with lock nuts and flat washers on the opposite side of the mounting surface.

The iCE PAK can be mounted this way to the OEM air filter box. However, if you choose to mount it to any intake components, Jacobs Electronics strongly recommends safety wiring the nuts to prevent them from loosening and possibly being ingested by the engine!

Caution: Be certain there is nothing behind the MOUNTING SURFACE that will be damaged by drilling.

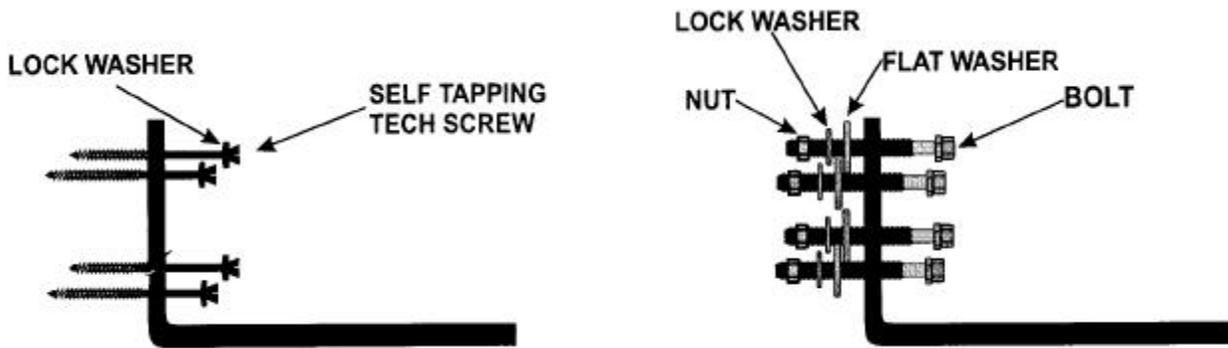


FIGURE 3: MOUNTING THE INCLUDED L-BRACKET

OPTION 2: MOUNTING WHERE AREA IS LIMITED WITH L-BRACKET, SELF-TAPPING TECH SCREWS, OR BOLTS (INCLUDED) REFER TO FIGURE 3, ABOVE

Find a flat, sturdy location, such as the fenderwell. Mount the MODIFIED L-BRACKET with the tech screws and lock washers, or if needed, bolts, nuts, flat and lock washers. Use no less than 2 screws or bolts to secure MODIFIED LBRACKET. Use 1/4" holes when using the bolts.

Caution: Be certain there is nothing behind the mounting surface that will be damaged by the tech screws or bolts.

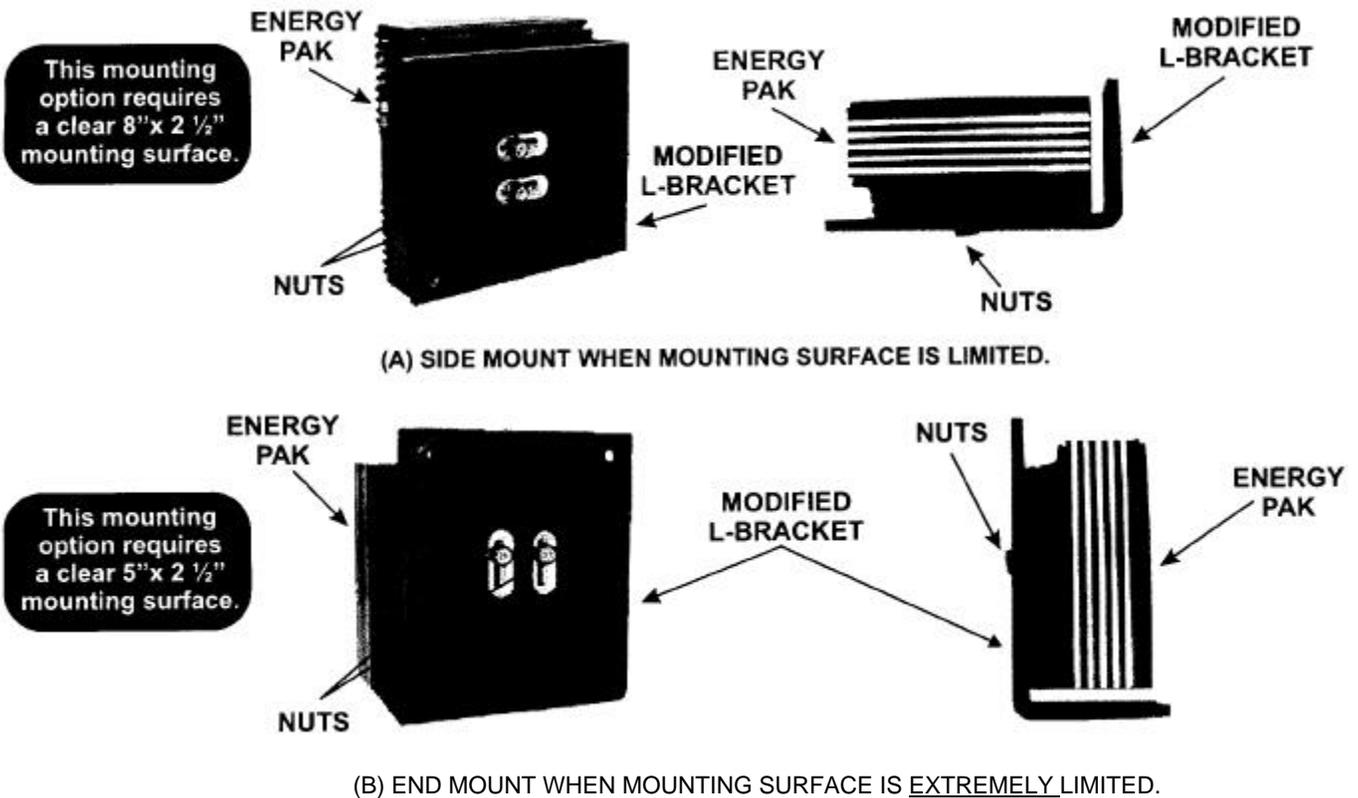
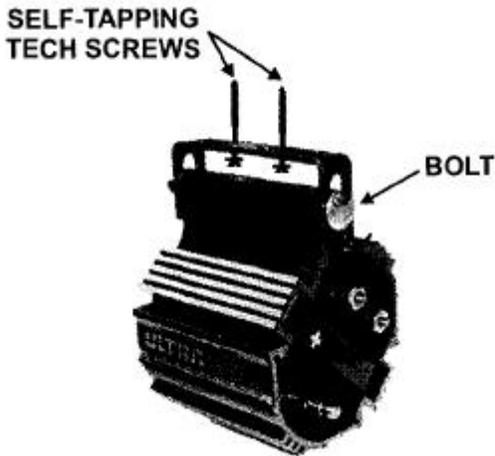


FIGURE 4: MOUNTING OPTIONS USING THE L-BRACKET

OPTION 3: MOUNTING ICE PAK TO THE L-BRACKET (REFER TO FIG. 4, ABOVE)

MODIFIED L-Bracket must already be mounted. Bolt the ICE PAK to the L-Bracket using the bolts and lock washers in your kit. The shape of the bolt hole in the ICE PAK eliminates the need for a backup wrench. For the best installation, push the bolts on the ICE PAK through the MODIFIED L-BRACKET. Next insert the nut onto the bolt from the bottom of the MODIFIED L-BRACKET. Tighten the bolt snugly. Mount ICE PAK with the MODIFIED L-BRACKET either horizontally or vertically as shown above.

REMOTE MOUNTING THE TORQUER COIL



OPTION 1: USING TECH SCREWS, LOCK WASHERS BOLTS, FLAT WASHERS AND LOCK WASHERS (REFER TO FIG. 5, LEFT)

Find a flat sturdy location, such as the fenderwell near enough to the iCE PAK that the plug will reach. Mount the TORQUER COIL using tech screws. Use no less than 2 tech screws to secure the TORQUER COIL.

Caution: Be sure there is nothing behind the mounting surface that will be damaged by the tech screws. Be sure to connect the black ground wire to a good chassis or engine ground.

FIGURE 5: MOUNTING USING INCLUDED HARDWARE

IV BASIC ELECTRICAL CONNECTIONS INSTALLATION

This section will take you step by step through the electrical connection of your iCE PAK and Torque., Coil. It is divided into two parts. The first part is common to ALL iCE PAKs and involves battery and coil connections. The second part is specific to each application type. ONLY ONE of the connections shown in **FIGURES 7 through 9** will apply to your vehicle.

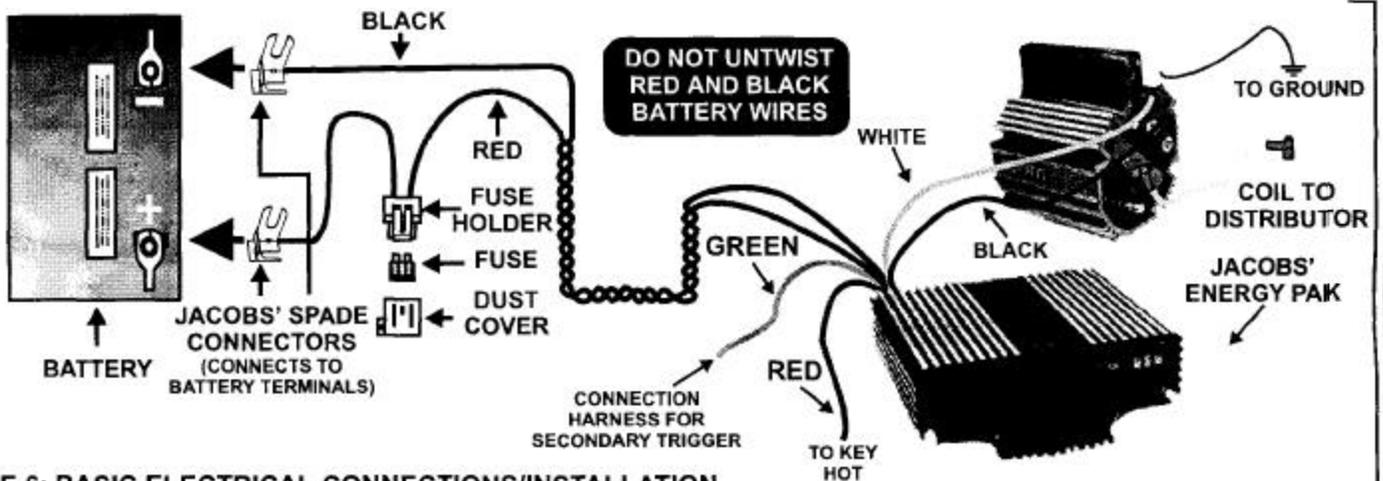


FIGURE 6: BASIC ELECTRICAL CONNECTIONS/INSTALLATION

A. CONNECTIONS OF THE ICE PAWS POWER, GROUND, AND COIL WIRES (REFER TO FIG. 6, ABOVE)

NOTE: DO NOT UNTWIST THE HEAVY BLACK AND RED (FUDED) BATTERY CONNECTION WIRES EXCEPT JUST ENOUGH TO CONNECT TO THE BATTERY THE MORE THESE WIRES STAY TOGETHER, THE BETTER THE SYSTEM RUNS.

1. The HEAVY RED wire connects to the positive (+) side of the vehicle's Battery and the HEAVY BLACK wire connects to the negative (-) side of the vehicle's Battery. The BATTERY does not need to be disconnected.
2. Maintain contact between the battery terminal and the battery cable, maintain tension on the bolt as you loosen your battery terminal as you press the JACOBS SPADE CONNECTORS onto the battery terminals between the terminal and battery post. As soon as JACOBS SPADE CONNECTORS slide onto the terminal, re-tighten the connection.

NOTE: WHEN CONNECTING JACOBS SPADE CONNECTORS AVOID RESETTING CLOCK, ONBOARD COMPUTER, AND RADIO PRESET STATIONS BY NOT LOSING CONTACT BETWEEN BATTERY TERMINALS AND VEHICLE. THIS CAN BE ACCOMPLISHED BY KEEPING TENSION ON THE TERMINAL AS THE JACOBS SPADE CONNECTOR IS INSERTED UNDER THE BATTERY TERMINAL BOLT.

3. Connect the smaller BLACK wire with a ring terminal to the Negative (-) side of the coil. Connect the smaller RED wire with the ring terminal to the Positive (+) side of the coil.
4. When these connections are complete, slowly install the FUSE into the FUSE HOLDER located on the RED wire. Slide the DUST COVER over the FUSE, and mount it to a solid surface using the molded-on mounting tab and included hardware.

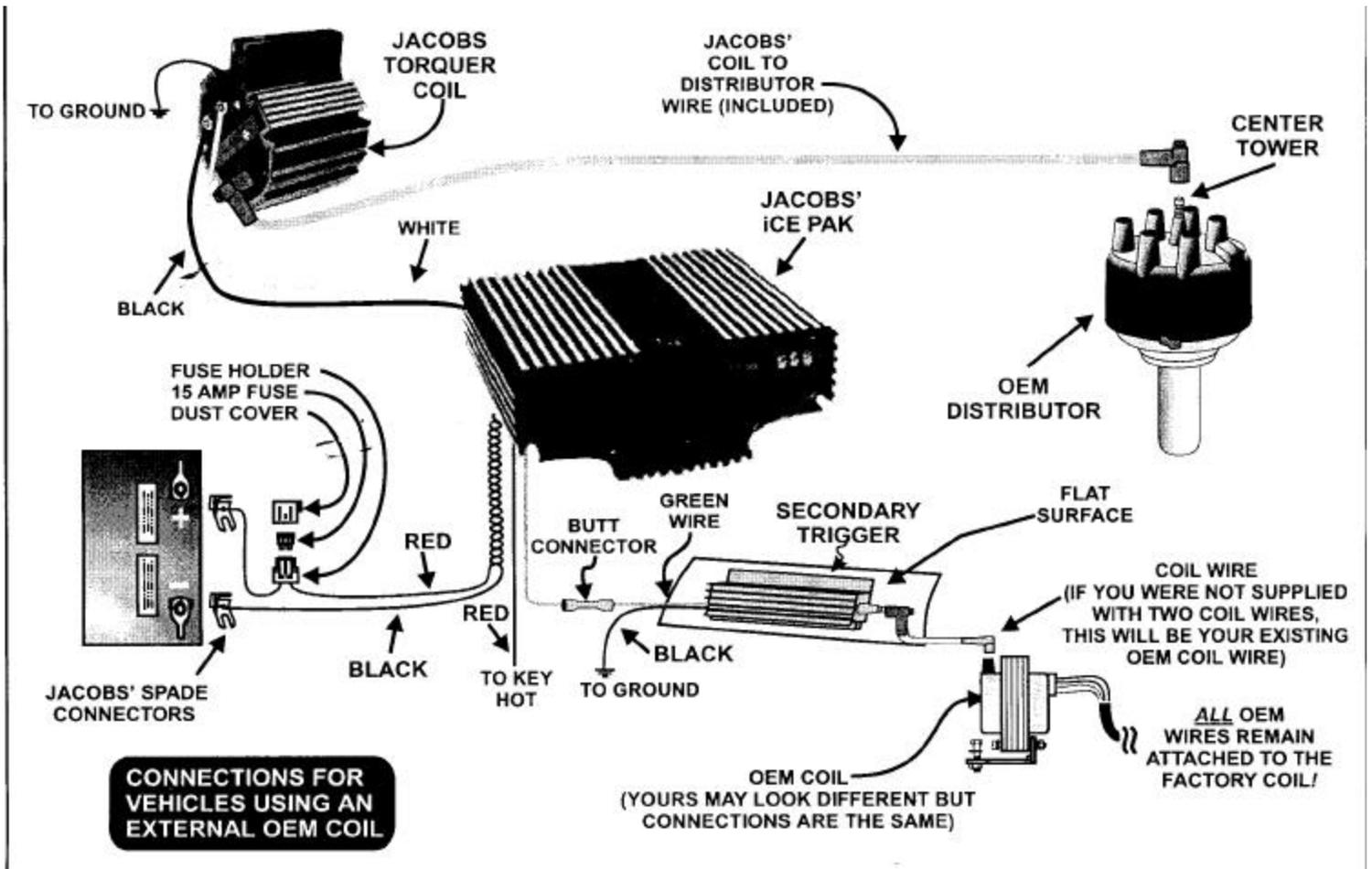


FIGURE 7: CONNECTIONS FOR SECONDARY TRIGGER SINGLE WIRE "EZ" APPLICATIONS

B. CONNECTIONS FOR SECONDARY TRIGGER, "EZ" APPLICATIONS (REFER TO FIG. 7, ABOVE)

This installation uses the patented SECONDARY TRIGGER. Not only does this greatly simplify the installation process, but also allows our unit to work off your existing OEM COIL by using it as a signaling device. This also allows for easy conversion back to stock system.

1. Install the new coil wire supplied as part of your kit between the SECONDARY TRIGGER and the OEM COIL (save your original coil wire in case you wish to convert back to a stock system) as shown in FIGURE 7, above.
2. Install the other new coil wire supplied as part of your kit from the JACOBS TORQUER COIL to CENTER TOWER of the OEM DISTRIBUTOR.
3. Connect the smaller RED wire from the iCE PAK to a "key hot" source (an electrical source that has 12 volts when the vehicle is cranking and running and is OFF when the ignition is turned OFF). This can often be found at the vehicles fuse box suing a volt meter or test light. Do NOT connect the small red wire to the positive (+) side of the OEM coil. Doing so will cause the check engine light to illuminate.
4. Make sure that the BLACK ground wires from the Secondary Trigger and the Ultra Torquer Coil is attached to a good vehicle ground.

MOUNTING SECONDARY TRIGGER

Try to mount SECONDARY TRIGGER in the coolest, driest spot where it will get maximum air flow, away from heat sources. Make sure the cable will reach from mounting location to the OEM COIL and the GREEN wire will reach to the iCE PAK. For mounting the SECONDARY TRIGGER use the supplied Tech screws or tie wraps.

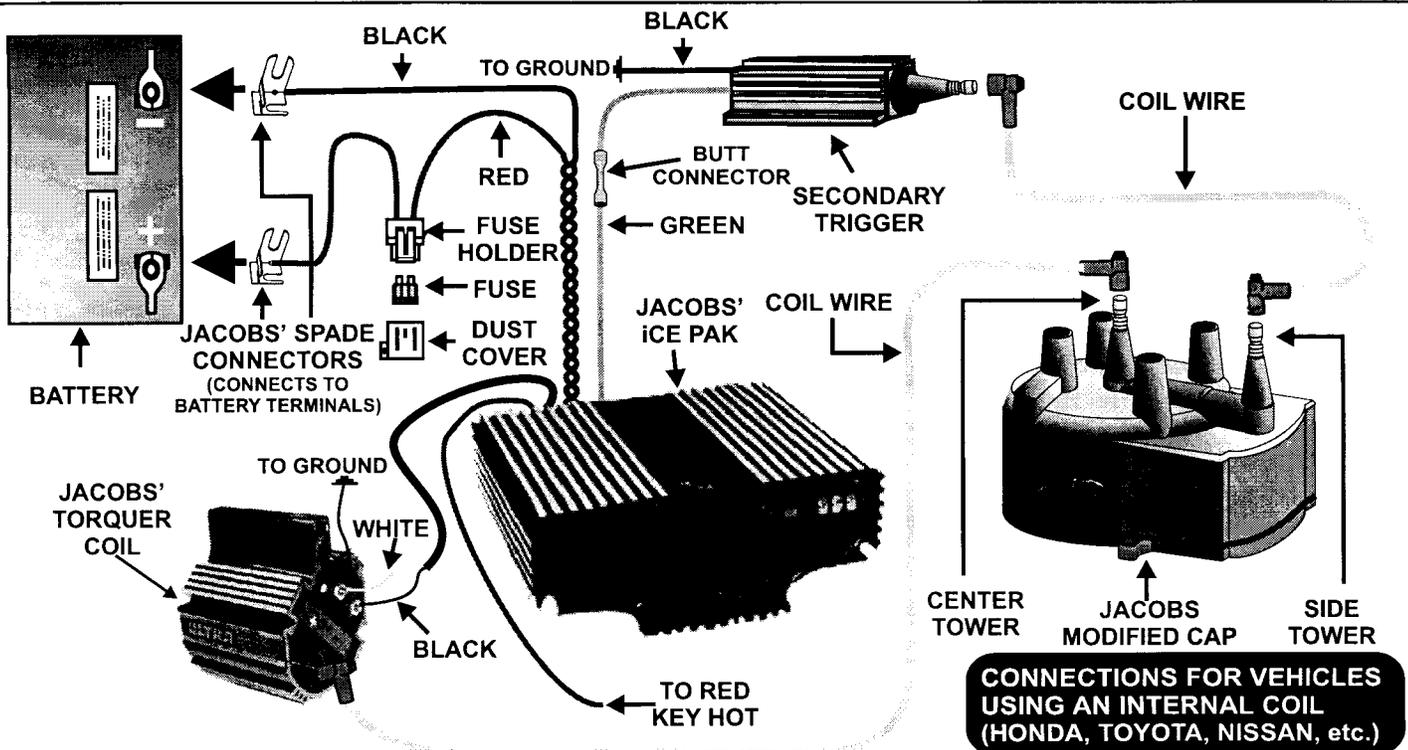


FIGURE 8: CONNECTIONS USING A SECONDARY TRIGGER AND MODIFIED CAP
C. CONNECTIONS USING A SECONDARY TRIGGER AND MODIFIED CAP

This version of the ICE PAK is designed for use on import vehicles originally equipped with an internal coil type distributor. On these vehicles you normally cannot get to the OEM COIL primary terminals (+ and -).

The manufacturer usually places the coil inside the distributor cap in such a way that makes it extremely difficult to install a Jacobs' Ignition product by conventional methods. Also, retaining the OEM COIL is generally required by the vehicles onboard computer for correct operation.

The addition of an aftermarket ignition system would cause performance and/or driveability problems. These situations are corrected by using a SECONDARY TRIGGER and JACOBS MODIFIED CAP. The OEM COIL and wiring are left intact and used to trigger the ICE PAK. This tricks the OEM system into operating properly while the ICE PAK and new JACOBS' TORQUER COIL are actually driving the sparkplugs with an improved spark.

Refer to FIGURE 8, above for connection procedure for vehicle using a JACOBS' MODIFIED CAP and SECONDARY TRIGGER.

NOTE: YOU WERE EITHER SUPPLIED WITH THE JACOBS MODIFIED CAP AS PART OF YOUR KIT, OR YOU MUST SEND A CAP INTO JACOBS ELECTRONICS FOR MODIFICATION.

1. Install the new coil wire supplied as part of your kit between the SECONDARY TRIGGER and the SIDE TOWER of your modified cap (save your original coil wire in case you wish to convert back to a stock system) as shown in FIGURE 8, above.
2. Install the other new coil wire supplied as part of your kit from the JACOBS TORQUER COIL to CENTER TOWER of the modified cap.
3. Connect the smaller RED wire from the ICE PAK to a "key hot" source (an electrical source that has 12 volts when the vehicle is cranking and running and is OFF when the ignition is turned OFF). This can often be found at the vehicles fuse box using a volt meter or test light. Do NOT connect the small red wire to the positive (+) side of the OEM coil. Doing so will cause the check engine light to illuminate.
4. Make sure that the BLACK ground wires from the Secondary Trigger and the Ultra Torquer Coil is attached to a good vehicle ground.

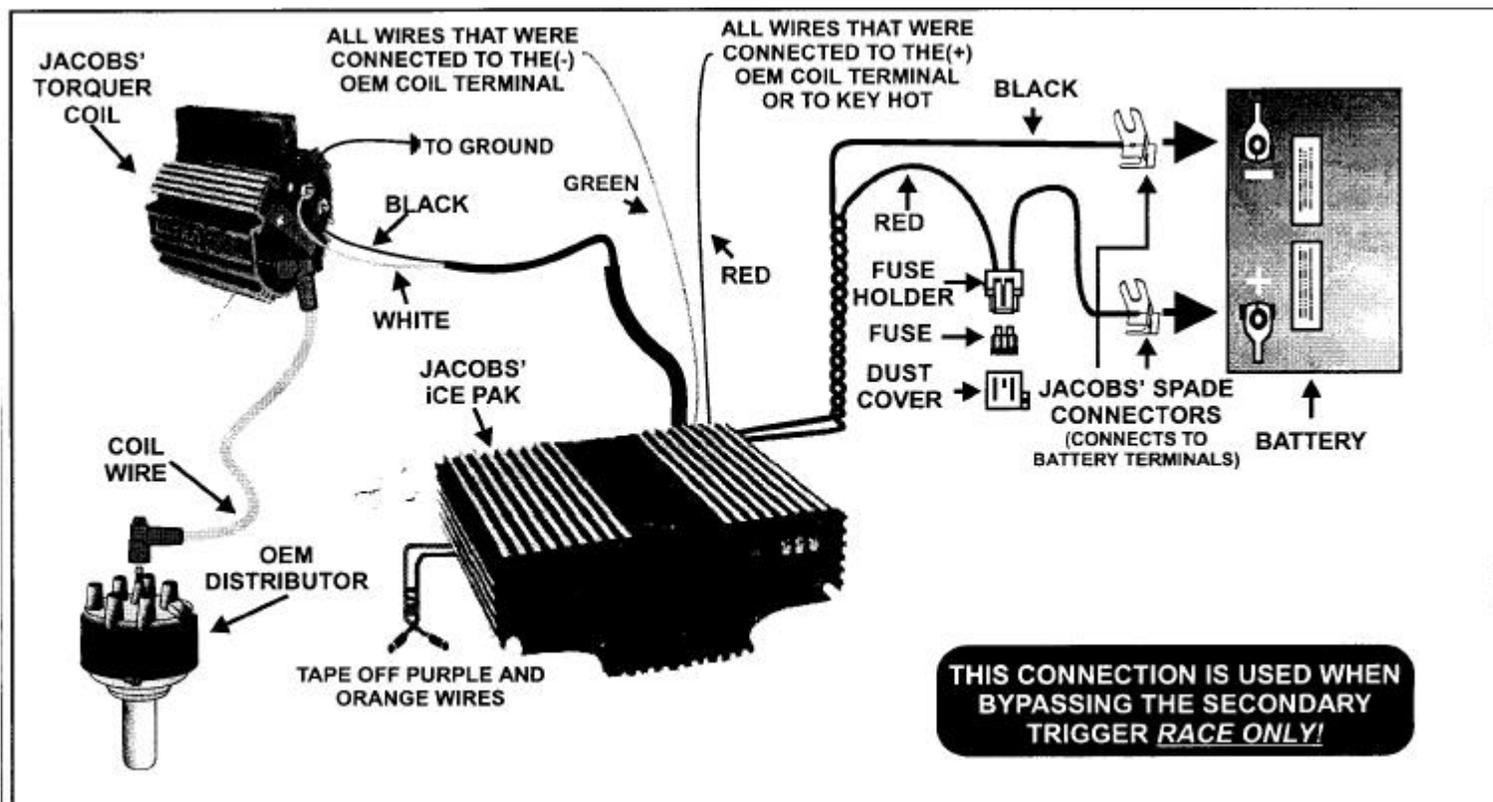


FIGURE 9: CONNECTIONS BYPASSING THE SECONDARY TRIGGER - RACE ONLY!

D. CONNECTIONS BYPASSING THE SECONDARY TRIGGER - RACE ONLY! (REFER TO FIG. 9, ABOVE)

This option is intended for race applications only, when the vehicle's OEM coil has been totally removed.

NOTE: THIS CONFIGURATION IS NOT LEGAL FOR HIGHWAY USE AND MAY CAUSE THE CHECK ENGINE LIGHT TO ILLUMINATE IN STOCK VEHICLES! A RACE VEHICLE IS ASSUMED TO HAVE A CUSTOM FABRICATED WIRING HARNESS AND/OR SPECIALLY REPROGRAMMED ENGINE MANAGEMENT COMPUTERS THAT DO NOT REQUIRE THE OEM COIL TO REMAIN CONNECTED AS PART OF THE EMISSIONS CONTROL SYSTEM.

For race-only applications, the Secondary Trigger can be eliminated as shown in **FIGURE 9**, above.

1. The GREEN wire formerly connected to the SECONDARY TRIGGER is cut and connected directly to the wiring harness that would have connected to the NEGATIVE (-) side of the OEM coil.
2. Connect the smaller RED wire from the iCE PAK to a "key hot" source (an electrical source that has 12 volts when the vehicle is cranking and running and is OFF when the ignition or external kill switch is turned OFF), or to the connections that were formerly attached to the (+) positive side of the OEM coil.

V DIAGNOSTIC LEDs

There are two LEDs located on top of the ENERGY PAK. The YELLOW LED, labeled "INPUT," lights up only if all inputs are connected and functioning properly. The GREEN LED, labeled "OUTPUT," only lights if ENERGY PAK is properly processing data, the ignition coil is working, and all coil connections are correct. When the unit is operating normally, both input and output LEDs will be continuously lit while the engine is running.

VI PRECAUTIONS & TROUBLESHOOTING

- A. ENERGY PAK is capable of producing significantly higher voltage than stock ignitions. Be extremely careful while the ignition switch is on not to come in contact with any primary coil wires, especially with the high voltage coil output. VIOLENT SHOCK WILL OCCUR!
- B. INSTALL FUSE LAST only after all connections are made, and you are ready to start the engine.

CHECKING YOUR INSTALLATION

INITIAL TEST DRIVE:

Once the engine is running and both LEDs remain on, take the vehicle for a test drive. It should run obviously smoother and stronger than before your ENERGY PAK installation. However, because ENERGY PAK also cleans the combustion chamber as you drive, you may continue to realize steadily increasing benefits over the next 1,500 miles of driving.

TROUBLESHOOTING

- A. If engine won't start and LEDs don't blink when cranking, FUSE may have blown or been improperly installed. To remedy, install a known good FUSE of the same rating originally supplied.
- B. If the RED and BLACK wires are reversed at the BATTERY terminals, it may have blown the FUSE. To remedy, connect the RED wire to the positive (+) BATTERY terminal and the BLACK wire to the negative (-) BATTERY terminal. With key "OFF", slowly install a known good FUSE.
- C. Recheck all connections, including the BATTERY terminals, and where the negative (-) battery cable connects to the engine block. Be certain all connections are correct and clean.

IF YOU NEED HELP
WITH WARRANTY INFORMATION, TECHNICAL INFORMATION OR INSTALLATION ASSISTANCE;

CALL TOLL FREE 1-800-825-33#5
M->F 9:00 AM - 6:00 PM CST

LIMITED WARRANTY

JACOBS ELECTRONICS, INC. warrants this product to be free from defects in materials and workmanship under normal use and if properly installed for a period of 120 days from the date of purchase. This warranty is given only to the original retail purchaser of this product. The obligation of JACOBS under this warranty is limited to repairing or replacing, at its option any of its products proven to be defective as mentioned above and returned to JACOBS, postage prepaid, within the warranty period. You must obtain a valid return authorization number from JACOBS before returning any merchandise. JACOBS is not authorized to accept returns without a valid authorization number **CLEARLY PRINTED ON THE OUTSIDE** of the package. All parts returned under this warranty become the property of JACOBS. This shall constitute the sole remedy of a purchaser under this warranty and the sole liability of JACOBS.

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JACOBS ELECTRONICS, INC. disclaims any responsibility for loss of time or use of the product or the vehicle in which it is installed, installation costs, transportation, bodily injury, dismemberment, death or any other incidental or consequential damage, including theft of the vehicle, and makes this limited warranty in lieu of any other warranties or representations, expressed or implied, including any implied warranty of merchantability or fitness of purpose. Some states do not allow limitation or exclusion of implied warranties or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.