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MiscRes: Magazine Articles

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"Jacobs Ignition Install", A Good to Go Dual Fire System

TECH

TECH & HOW-TO

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JACOBS IGNITION INSTALL

A Good To Go Dual-Fire System

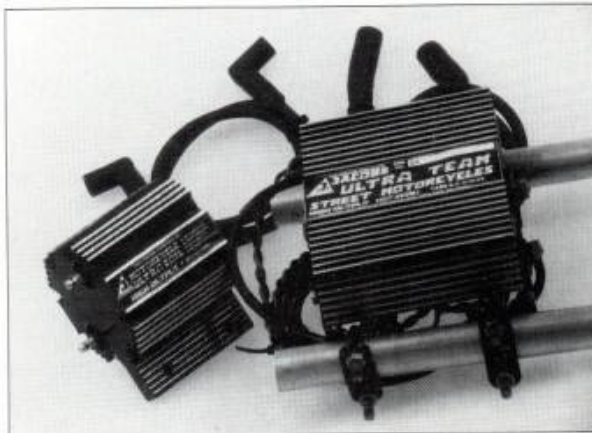
Text and photos by Chris Maida

When it was time to get an ignition for our Evo Cafe Racer Giveaway bike, we decided to go with a dual-fire system we saw back in February at the Cincinnati Trade Show. We were impressed with the Jacobs system and wanted to do an installation with it.

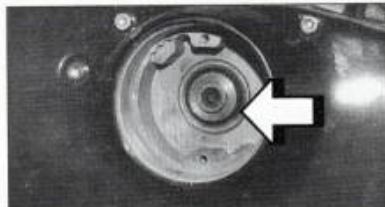
The Jacobs ignition, called the Ultra Street Team For Motorcycles (P/N 372916), is simpler to install than some systems currently on the market. This is because it uses the stock ignition's triggering device. It doesn't matter whether it's a magnetic pickup or mechanical points in the cam cover's ignition cavity. What that means to you is there's no need to mess with the engine's timing. Just install the Jacobs components, increase the gap on your present spark plugs as per the instruction chart (the Jacobs system puts out 990 millijoules of spark energy), and you're good to go.

There are three components to this system. First is an Energy Pak, the "brains" of the system. The Energy Pak contains a microprocessor that controls the spark as per the need of each cylinder. This results in more power and smoother operation regardless of the RPM, altitude, temperature, or spark plug condition. Note: the Energy Pak doesn't alter the engine's timing, it tailors the spark output. The Energy Pak also has a settable rev limiter and diagnostic LED display.

Second is the High Output Street Performance Coil (MUCHOI-89MJ) which automatically intensifies the spark in times of high demand. Note: the Energy Pak and Performance Coil are



The Jacobs Ultra Street Team For Motorcycles includes an Energy Pak which is the "brains" of the system, a High Output Street Performance Coil, and Energy Core spark plug wires.



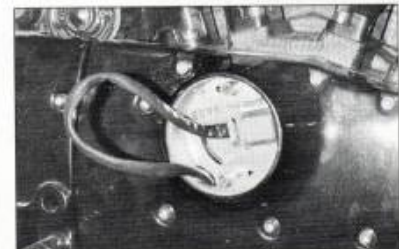
1 Though you don't have to open up this part of your engine with the Jacobs system, we will show you the build from here in case you want to upgrade from mechanical points to a magnetic pickup. Note the notch on the shaft in the center of the ignition cavity.



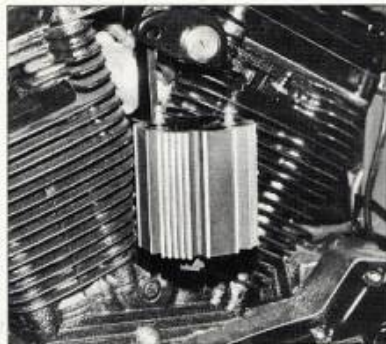
3 Here's the ignition disc where it lives in the ignition cavity. Remember that notch in the shaft? Be sure the raised area on the back of the disc aligns with that notch.



2 The bolt on the left holds in the advance unit and point cam for a mechanical points setup. The bolt on the right is for the ignition disc on an OEM magnetic pickup system.



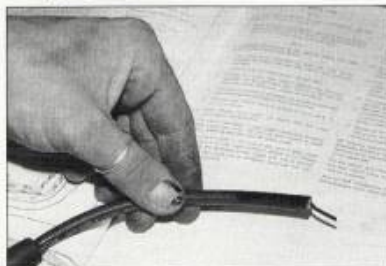
4 With the magnetic pickup and timing plate bolted into place, route the wiring through the timing cover. You can run the wires to the Jacobs coil and Energy Pak later.



5 We mounted the coil between the cylinders on the left side of the bike. Jacobs is redesigning the coil so it can be mounted in the stock location on all Sportster models.



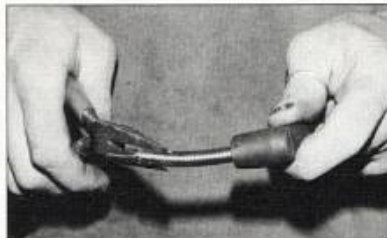
6 With the coil mounted, we can now cut the spark plug wires to fit. When you cut the wire, keep in mind that you will be stripping off some insulation for the new plug boot.



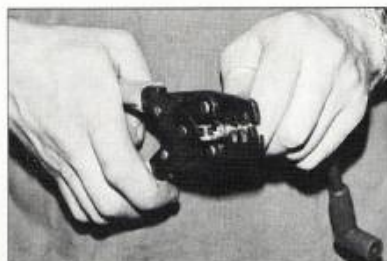
7 Strip the plug wire so about 1/2" or so of the metal core is exposed.

matched to each other. If you use the Performance Coil without the Energy Pak, you'll need to install a ballast resistor in the system. If you use the Energy Pak with another coil, it must be one with less than one ohm primary resistance or it will get fried by the Energy Pak's high power output.

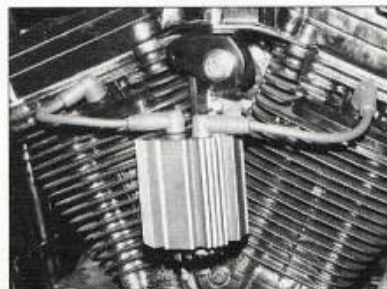
Third is a set of Energy Core spark plug wires. These are high-conductivity true metal core ignition wires that will increase the performance of your engine



8 Insert the wire into the supplied 90 degree spark plug boot. Use a needlenose pliers to grab the end of the wire through the plug side of the boot and pull the wire out of the boot.



9 Using wire crimpers, install the new wire ends supplied with the kit. Don't forget to pull your plugs and regap them according to the chart supplied with the kit.



10 Here's the finished product. You can now hook up the wires from the triggering device as per the instructions.

by delivering the maximum amount of spark to the plugs while not emitting any annoying radio noise. These wires are pure silicone and are 100% waterproof.

Please note that by the time you read this, the Performance Coil and Energy Pak will have been redesigned to be much more compact and easier to install than the components shown here. The Jacobs team has been busy adapting its products to fit the "smaller-is-better" custom market. The Performance Coil will be able to be mounted in the stock location on any XL and the Energy Pak



11 Here's where the Energy Pak would normally be mounted. But seeing we have a large empty area over the rear fender under the cafe body, we mounted it there. After mounting your Energy Pak, run the rest of the wires. Note: by the time you read this, Jacobs will have redesigned the Energy Pak to have a smaller, cylindrical shape.



12 If you didn't disturb the components in your ignition cavity, you're finished with the installation and ready to fire off the bike. If you have altered the timing, check the service manual for your machine. Move the timing plate with a screwdriver to reset the timing.

will be sporting a smaller, cylindrical shape. The suggested retail price for Jacobs' Ultra Street Team For Motorcycles (P/N 372916) is \$479.

Though it's not necessary to mess with the stock ignition triggering device, our installation started with an empty cavity and built it out, in case you're upgrading from mechanical points to the OEM magnetic pickup. Follow along with the photos as we install the system on to our 1986 Evo Cafe Racer. ■

SOURCE

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article submitted by ferretface of the XLFORUM

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