

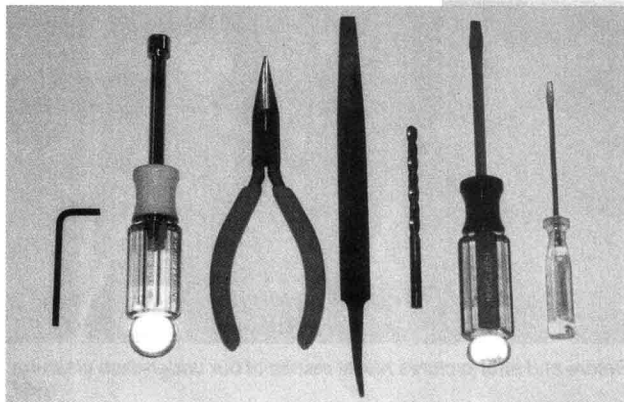
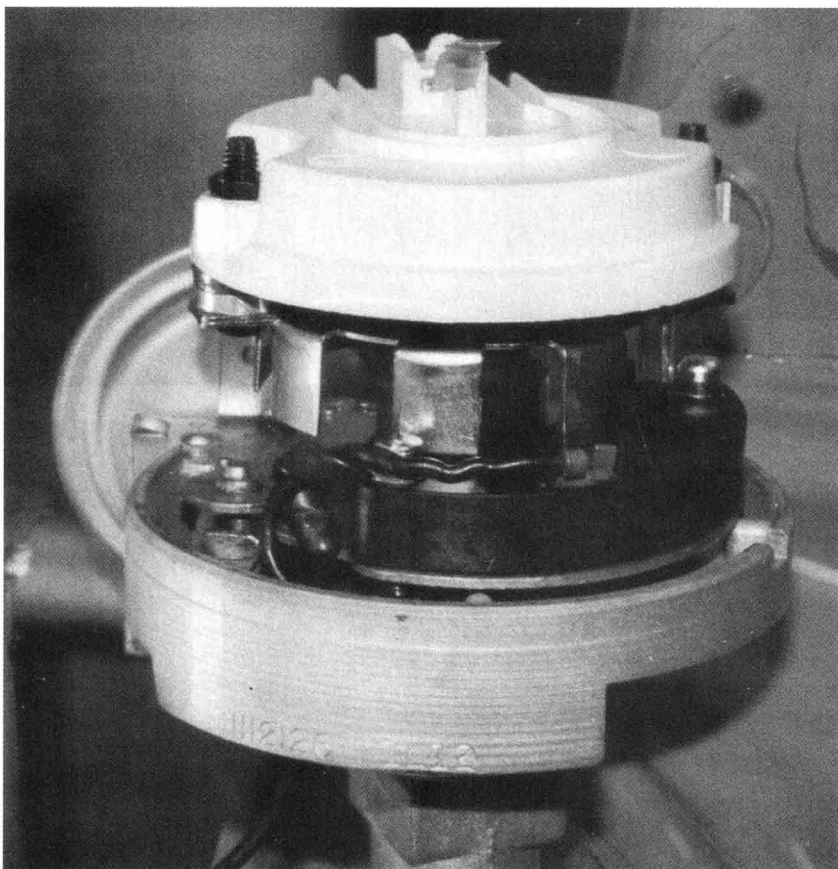
Points Taken

Installing and testing M&H's breakerless electronic ignition conversion kit

text and photos by Dan Jensen

As owners of older musclecars, we are continually bombarded by the attributes of new cars and their technical superiority. Sophisticated electronics control everything except the person behind the wheel. Every so often, however, there are high-tech products that trickle down for use in our older, less complicated cars, making these simpler machines act more dependable, run better and require less maintenance. One such product is M&H's breakerless single-wire, electronic-ignition conversion kit.

The kit (PN 38131) converts '57-'74 General Motors V8 single- and dual-point distributors to a more reliable solid-state electronic ignition. The beauty of this particular conversion kit is that it fits entirely inside the stock distributor cap. While there are other kits available that do the same thing, the M&H setup is unique because it's a one-wire system utilizing the existing distributor wire that runs to the negative side of the coil, thus maintaining the stock appearance of your engine compartment. That is a big

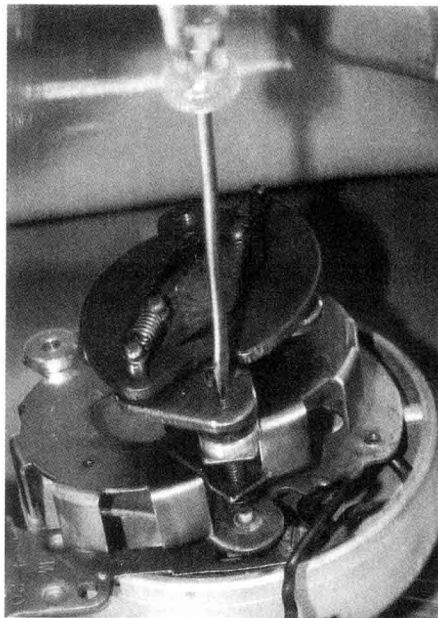


As with any kit, it is important to familiarize yourself with the instructions and parts, as well as the tools required to perform the job. Parts included in the kit are the module, vane section halves, 10-32 small-pattern hex nuts (two), No. 10 split lock washers (two), 10-32x1-inch button head screws (two), 8-32x1/2-inch fillister head screws (two), 6-32x1/2-inch brass binding head screw, 8-32x1/2-inch low profile screw, No. 8 split lock washers (two) and a flexible wire clamp.

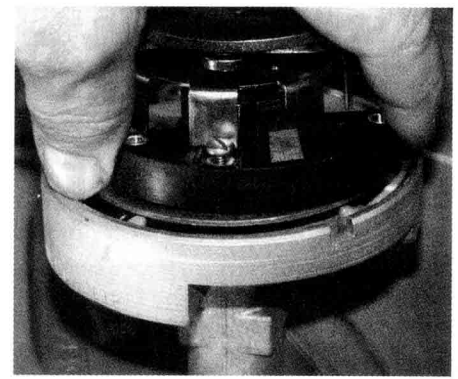
The kit also includes a 1/8-inch hex wrench and a small blade screwdriver. Additional tools you'll need to supply yourself include a 5/16-inch socket (box-end wrench or nut driver will do), needle-nose pliers, flat file, 7/32-inch drill, and a medium-blade screwdriver.



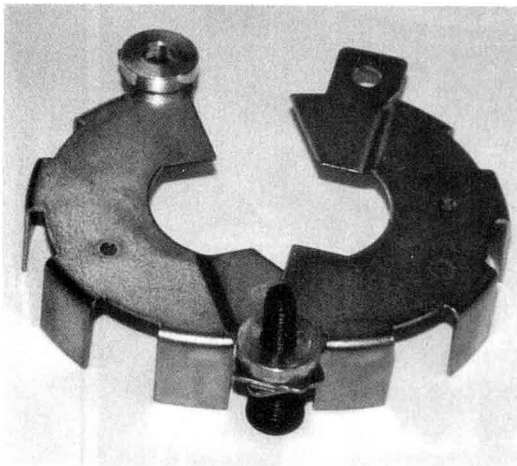
The first step is to remove the distributor cap, rotor, points and condenser. This is an ideal time to inspect the distributor for any problems and get them corrected before installing the kit.



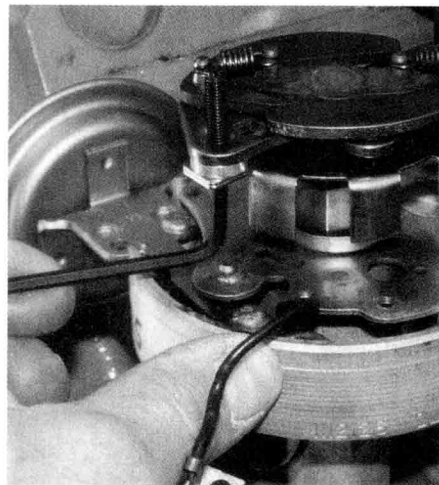
Place the halves around the distributor shaft, threading the screw up through the existing tapped hole for the distributor rotor. You'll need the needle-nose pliers to hold the screw up from the bottom, and then use the small-blade screwdriver (there is a slot cut into the bottoms of these screws) to turn the screw counterclockwise to thread the assembly up snug to the mounting ear. Do not tighten the screw with the screwdriver. Repeat for the other side.



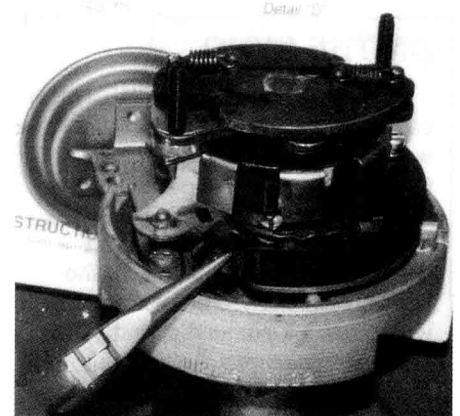
Install the 6-32x1/2-inch brass binding head screw in the module. The existing distributor lead wire fastens to this screw. The lead wire terminal will have to be bent up at a 45 degree angle to prevent interference with the inside of the distributor cap when the vacuum advance moves the point plate. Work the module through the vane openings, and position where the points used to be. There is a locating bump on the distributor's point plate that must be lined up with a corresponding hole in the bottom of the module for proper seating. Turn the distributor shaft a little to ensure the vanes don't strike the module.



Insert one of the 10-32x1-inch button head screws through one side of the vane section halves so that the vanes point down and the screw points up.



Using the supplied 1/8-inch hex wrench, tighten both screws from the bottom side.



Use the two 8-32x1/2-inch fillister head screws and No. 8 split lock washers to fasten the module to the point plate. Install the flexible wire clamp under the screw closest to the entry point of the distributor lead wire. The tab should point outward and be wrapped around the lead wire to keep it away from the vanes. The needle-nose pliers are holding the end of the flexible clamp as it is wrapped around the wire.

plus if you want to retain that 100-percent-correct underhood appearance. We also installed the M&H coil (PN 38236) for a hotter spark.

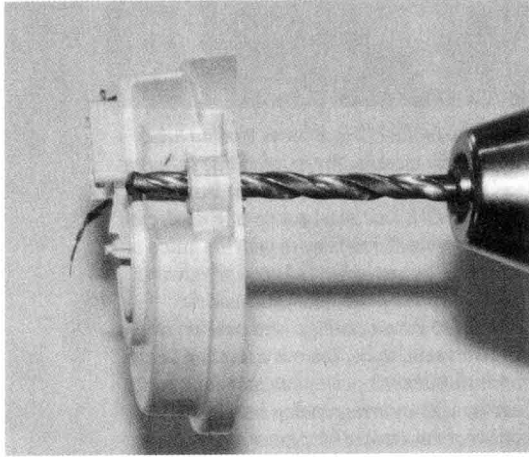
What are the benefits of installing the M&H kit, besides keeping a stock appearance? The most significant is the active dwell control that maintains high-rpm spark energy, yet reduces coil heating at idle. The M&H system has an auto-standby that prevents coil damage and/or dead batteries if the ignition is left on. The magnetic sensor is immune to engine oils, dirt and other contaminants

which can play havoc with optical-type ignitions. It is protected from over-voltage/over-current from high-amp battery chargers. Also, reversed battery connections and/or improper wiring will not hurt the module as with some other brands. Moisture and vibration can't get past this unit's sealed, high-temperature thermoplastic housing. Of course, periodic maintenance of the old points system is eliminated, and M&H stands behind the breakerless kit with a three-year warranty.

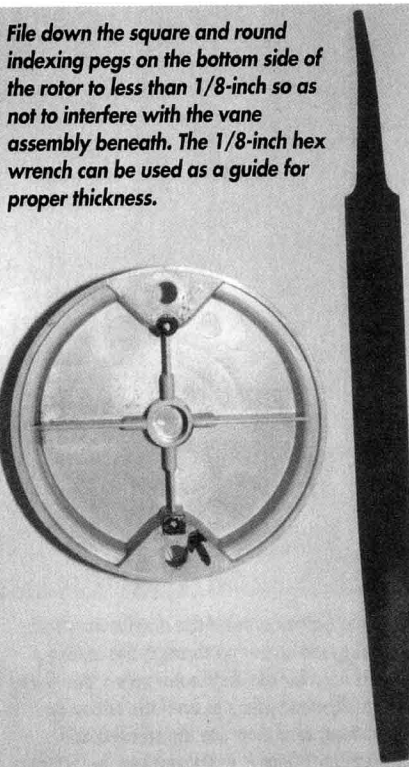
On top of that, and perhaps most

important, the distributor doesn't have to be removed from the engine to perform the conversion. However, considering that the Chevy, Pontiac and Oldsmobile distributors are at the back of the engine, you may want to pull the distributor to save your back. Just remember to mark the location of the distributor body in relation to the engine, and mark the location of the rotor to the distributor body. The instructions with the kit are very clear, with excellent diagrams and helpful tune-up and troubleshooting

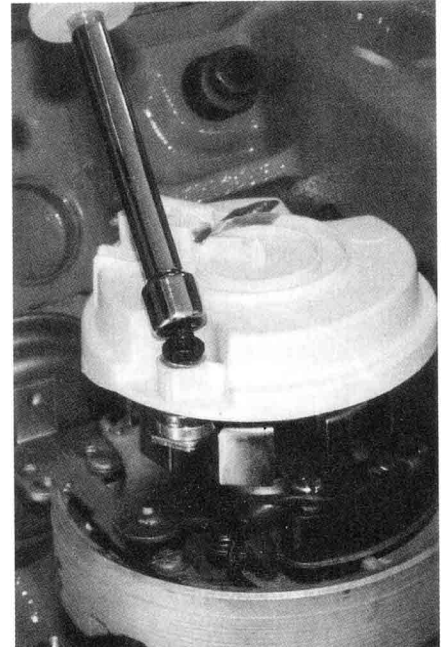
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Enlarge the two mounting holes in the rotor with the 7/32-inch drill bit.



File down the square and round indexing pegs on the bottom side of the rotor to less than 1/8-inch so as not to interfere with the vane assembly beneath. The 1/8-inch hex wrench can be used as a guide for proper thickness.



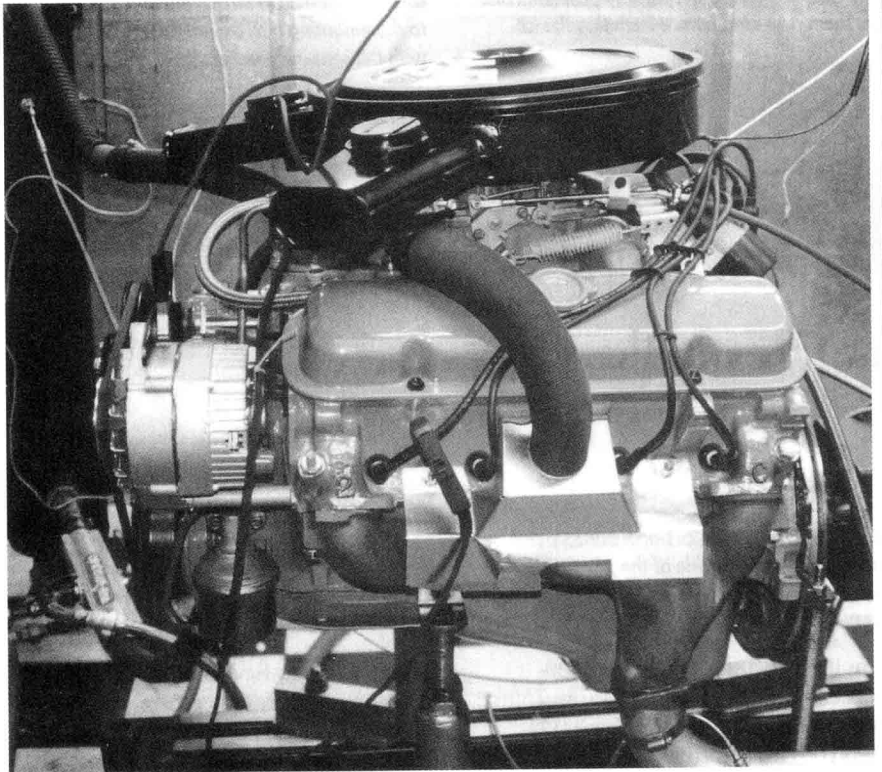
Using the 5/16-inch nut driver, install the rotor with the two 10-32 small-pattern hex nuts and No. 10 split lock washers. The breakerless SE single-wire ignition installation is complete.

ON THE DYNO

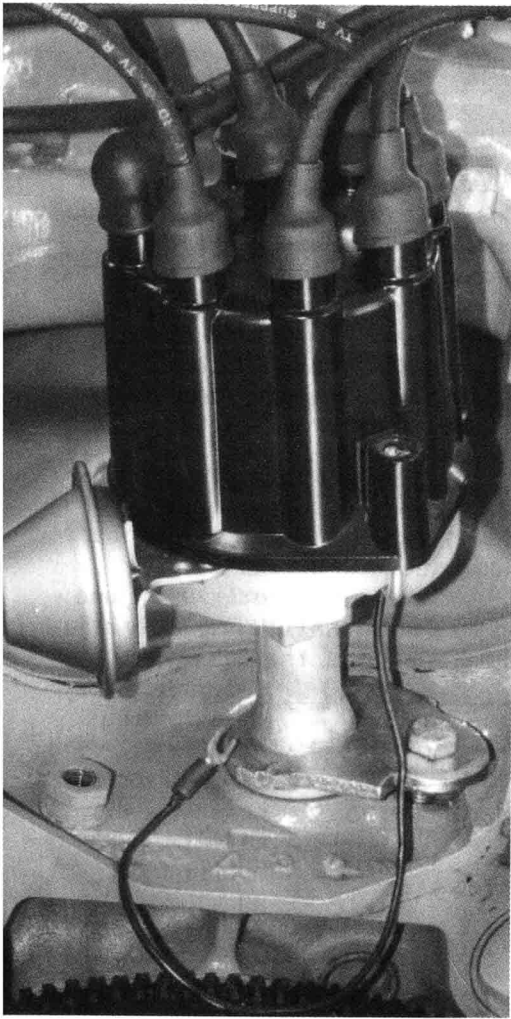
Okay, we know that the M&H kit is easy to install, but how well does it work? We happened to be dyno-testing a stock '71 455 HO at Pierce Race Engines in Lansing, Michigan. We brought the M&H-converted distributor along to put in after the engine's output had been maximized with the stock points distributor. With settings to factory specifications, the engine's baseline horsepower and torque came in at 361 hp at 4600 rpm and 495 lb-ft at 3200 rpm. Both richening and leaning the carburetor hurt the horsepower and torque, so we left the carb stock. However, speeding up the advance curve and setting total mechanical advance to 40 degrees gave us our best results of 366 hp at 4500 rpm, and 500 lb-ft at 3200 rpm.

We quickly switched the stock-points distributor and Delco coil for the M&H distributor and coil. The engine fired right up, and we immediately noticed that the timing light was dead-steady as we set the total timing to 40 degrees. The moment of truth came as John Pierce went to wide-open throttle on his DTS dynamometer. We made three quick pulls. The engine responded with horsepower readings of 367, 366, and 368 hp consecutively, all at 4500 rpm. Torque came in at 499, 500, and 501 lb-ft, all at 3200 rpm.

The M&H conversion found 2 hp and 1 lb-ft of torque over our blueprint points distributor. Our findings



probably would have been greater if the HO's stock distributor hadn't been optimized for the dyno test. The M&H breakerless ignition is not only easy to install, but should also improve reliability, be maintenance-free, and improve performance and fuel efficiency. Now the owners of older GM musclecars can take advantage of 21st century technology while cloaked in a veil of factory-original appearance!



To install the distributor back into the engine, first align the rotor with the mark you made on the distributor body. Then line up the mark on the body to the mark on the engine as you slide the distributor down into its hole. If the distributor fails to seat all the way down, you may have to turn the oil-pump driveshaft a bit. Once in with all the marks lined up, install the distributor clamp and cap. Start the car and set the timing to specs.

suggestions. To simplify the procedure for photography reasons, we performed the conversion on a 455 Pontiac V-8 mounted on an engine stand.

MC

SOURCES

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