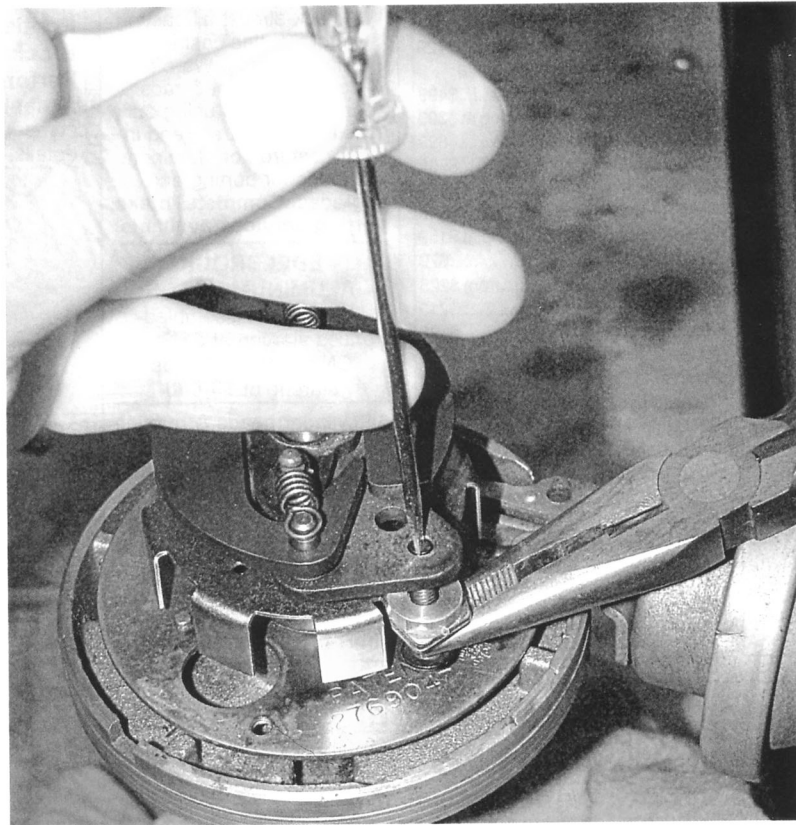


TECH | Shocking Results



Installing M&H Electric's Breakerless SE Ignition for clean, reliable power

Text and photography by Matt Hardesty

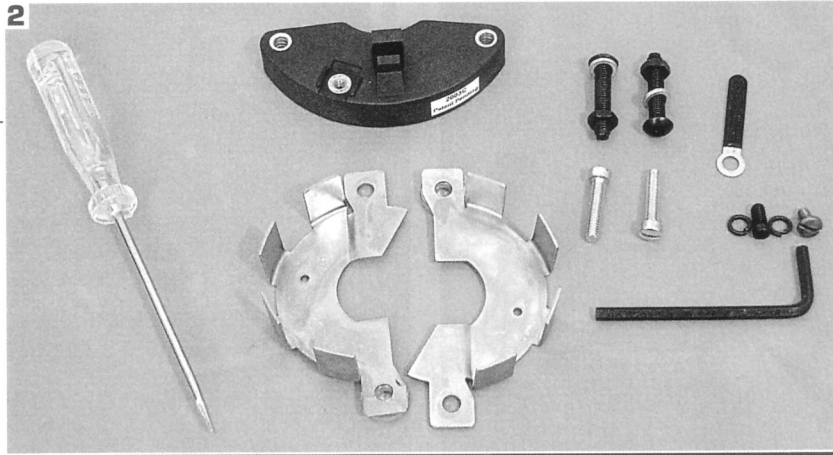
IF YOU'RE STILL RUNNING BREAKER POINTS IN YOUR PONTIAC'S STOCK DISTRIBUTOR, YOU NEED TO ASK YOURSELF ONE QUESTION: WHY? IF THE FACTORY DUMPED POINT-TYPE IGNITIONS IN 1975, WHY WOULD YOU STILL BE USING THEM? REGAPPING THEM? REPLACING THEM? EVEN IF YOU'RE A PURIST OR A RESTORATION MAVEN THERE'S NO GOOD REASON TO RUN POINTS THESE DAYS.



1 The M&H Electric Breakerless SE ignition is an easy-to-install replacement for breaker point systems on 1974-and-earlier Pontiac V-8s. M&H also offers a matching coil that offers improved performance over stock while retaining a factory finish.

With the advent of point-replacement ignitions over the years, the technology has improved albeit without much fanfare. And while the selection of high-performance ignition boxes has steadily increased, many enthusiasts, particularly those wishing to keep an original underhood appearance, prefer the look of a stock ignition system.

However, most under-the-cap replacement ignition systems required two wires to power the unit compared to the one-wire found on a point-type ignition. The two-wire give-away might lose you some points in a



2 The Breakerless SE comes in a kit form with all the necessary hardware and a small screwdriver to easily complete the installation in less than an hour.

guts-and-glory restoration match, so one wire is the way to go.

M&H Electric Fabricators, in Santa Fe Springs, California, struggled with this problem for years: How to build a replacement ignition for points with only one wire. The result of years of research was their new Breakerless SE Single Wire Ignition. It offers a unique combination of features, such as active dwell control that maintains high-rpm spark energy without coil heating at idle; an auto-standby mode that prevents coil damage or drained battery if the key is inadvertently left on; a magnetic sensor unaffected by oil, dirt or contaminants; and an over-voltage protection from high-amp battery chargers, reversed battery cables or just plain bad wiring.

The Breakerless SE uses a Hall Effect rotary vane magnetic sensor that fits perfectly where the stock points mount. The rotary vane itself mounts to the underside of the stock distributor rotor and the original point wire is retained to power the unit (provided it's still in good, usable condition). The installation does not require distributor removal but we think it's a good idea to yank it especially if you haven't had it out in a while (or ever). It'll give you a chance to inspect for wear and tear, while ensuring the vacuum advance is still operational.

The Breakerless SE comes in kit

form with all of the necessary hardware, a small screwdriver, detailed instructions and very helpful diagrams. With the points and condenser removed, the magnetic sensor installs easily. Attaching the rotary vane to the rotor mount on the distributor takes more time since it's a tight space and you'll have to clean out the screw holes on the rotor that normally attach it to the rotor mounting. The sensor itself is a tight fit and you'll have to be sure the power wire tab is angled upward to prevent it contacting the distributor cap when the vacuum advance is moving the plate on which the sensor is mounted.

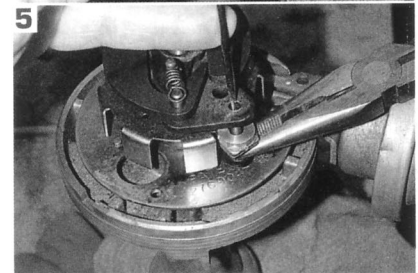
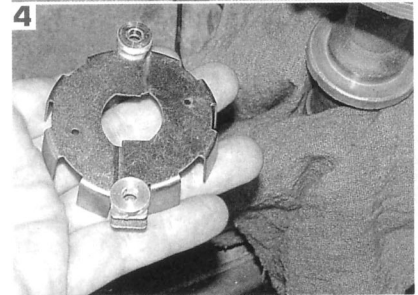
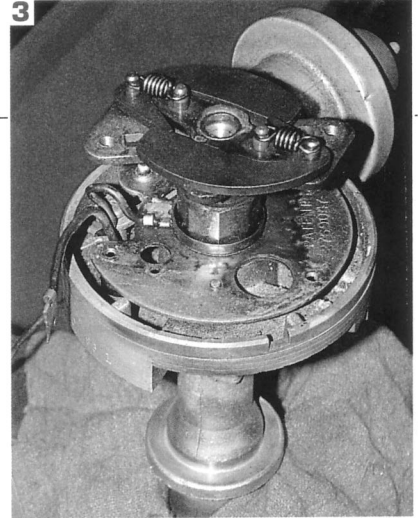
Installed, the Breakerless SE provides a reliable ignition system that's virtually maintenance free, allows quicker starts and improves performance throughout all rpms. You can match the Breakerless SE with M&H's black-painted high-performance coil for a stock look.

Yes, we were impressed with the ignition system's performance. In fact, you could say we were shocked.

SOURCE

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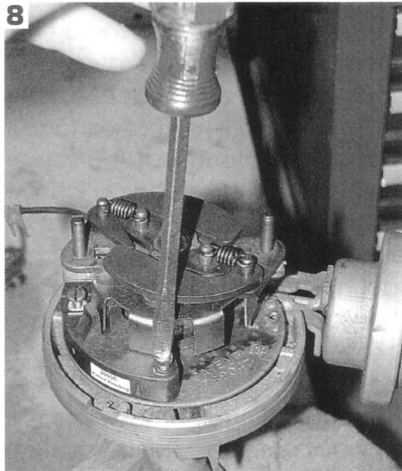
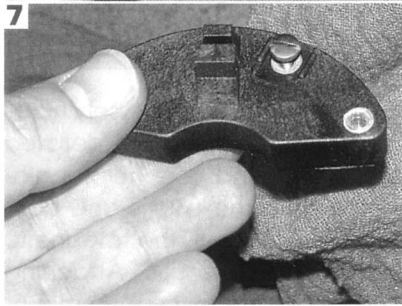
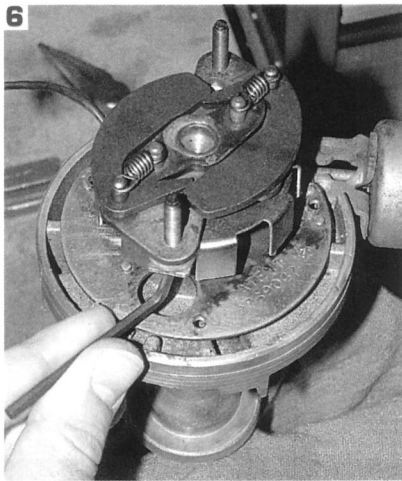
13537 Alondra Blvd.
Santa Fe Springs, CA 90670
(562) 926-9562
www.breakerless.com
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3 Here's our factory distributor from a '68 GTO 350hp 400. We removed the stock points and condenser then checked the point wire for wear and tear. Since the distributor was removed from the engine, we checked shaft play and vacuum advance operation. A good cleaning was in order, followed by a good coat of cast aluminum spray paint when we were finished.

4 This is the rotary vane that comes with the kit. It will pass through the magnetic sensor creating a Hall Effect trigger for the ignition. The rotary vane comes in two pieces and will assemble together like this on the distributor's rotor mount.

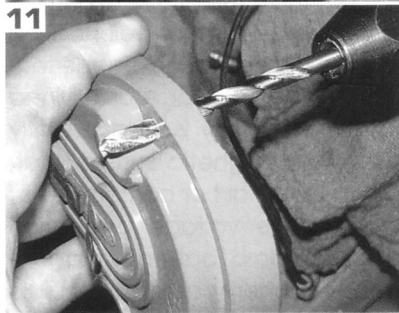
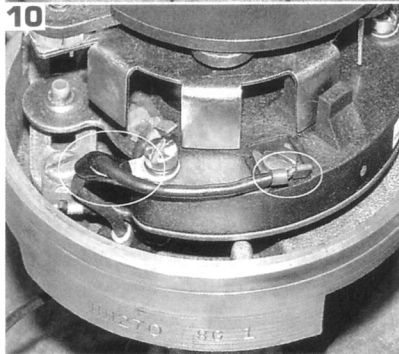
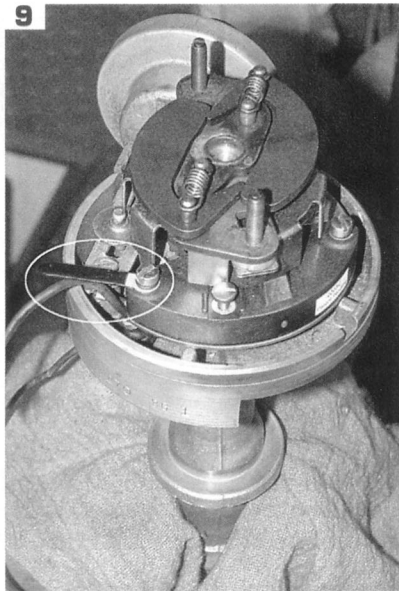
5 The button-head Allen screw is held in place with a pair of needle-nose pliers to get it threaded into the rotor mounting on the distributor shaft. The end of the Allen screw is slotted to make it easier to get it threaded through the mount. M&H supplies the small screwdriver, which fits through the hole to make the job easier.



6 The supplied Allen wrench is then used to tighten the rotary vane to the rotor mount (the supplied screwdriver is *not* used, as its blade might break under heavy tightening pressure).

7 This is the Breakerless SE unit where all the magic happens. There's a lot of precision electronics and research packed into this high-temp thermoplastic housing. The included brass screw for the power wire attachment is shown installed here.

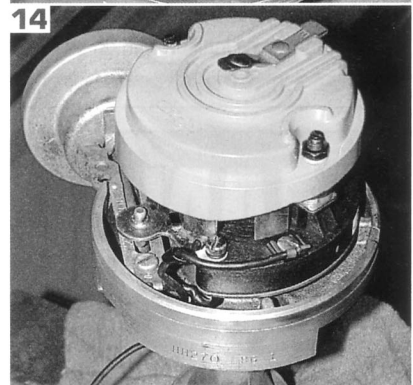
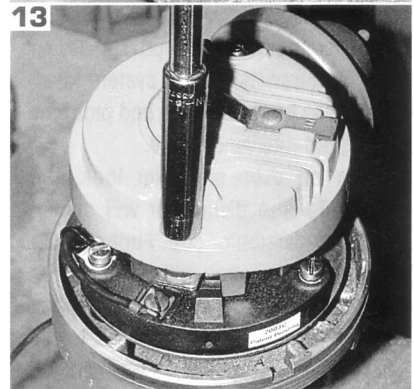
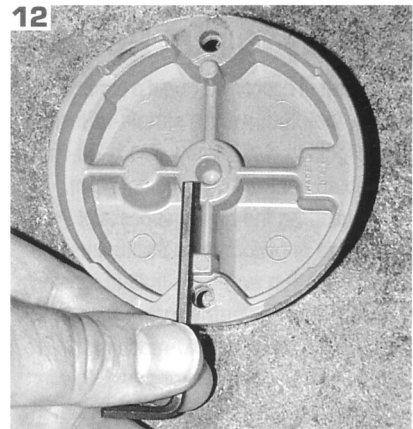
8 The unit installs exactly where the factory points were and fits over the pin in the point's plate for precise placement. However, when tightening, there's no need for high torque. Simply flatten the lock washers snug to prevent damage to the unit's plastic body.



9 An included tab will route the power wire away from moving parts and to the brass screw on the unit. Be sure to follow the diagram exactly to get it mounted properly, as seen here.

10 The power wire tab and connections are seen here encircled. The connector on the unit will need to be angled upward and inward to prevent contact with the distributor cap when the vacuum advance is moving the point plate.

11 Before attaching the factory rotor to the mounting with the new rotary vane screws protruding, you'll probably need to ream out the factory screw holes on the rotor. We used a 7/32-inch drill and a tap holder to clean the Bakelite material out of the hole.



12 To seat the rotor properly, the mounting ears on the bottom of the rotor must not be more than 1/8-inch deep. This is the square and the circle protruding from the bottom of the rotor. You can use the supplied Allen wrench (1/8-inch) to determine if they are too long, as rotors will vary from manufacturer to manufacturer. If you need to remove some material, bust out your trusty Dremel or a file.

13 The supplied nuts and lock washers are then used to attach the rotor to the mounting shaft and the rotary vane. Again, over-tightening only invites cracking and damage, so just flatten out the washer for a snug fit.

14 The finished product is neat, clean, simple, as well as more powerful and reliable than the old points we replaced. The job took less than an hour and no special tools were needed. ■