

# TECH TIPS

By Tim Chaput and Scott

## McGilvray Spark (Vacuum) Advance

Ok then, let's go out to the garage, raise the hood on the Thunderbird and remove the air cleaner.

We want to check the Spark Advance (SA) to be sure it is working and if not then replace this part. The SA is located attached to the distributor, on the drivers' side and looks like a flying saucer with a small diameter steel tube attached. If you own a '56 T-Bird then you are looking at two flying saucers in some strange mating ritual. My car is a '57 so it is the single flying saucer. (See Photo #1). Follow the small diameter steel tube from the SA to the carburetor. If you have not



**Photo 1.**

DISTRIBUTOR

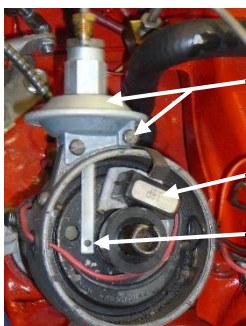
SPARK ADVANCE

VACUUM LINE

removed the air cleaner you must do this in order to have enough room for the next step. Following the steel tube (vacuum line) from the SA the other end enters the carb on the passenger side, in front of the choke adjustment

which is a round black or brown plastic looking object. I only identify this choke but in fact the choke will not be adjusted under this Tech Tip. Now loosen the brass fitting on the carb where the vacuum line terminates. A couple of three turns will allow this vacuum line to be en the pulled out of the fitting. Now bend the vacuum line so you can wrap your lips on this line and suck. If there is vacuum the diaphragm in the SA is good and the SA does not need to be replaced. If there is no vacuum then the diaphragm is bad, shot, has a crack or hole in it. In any case it is not working and needs to be replaced. A replacement SA is available from T-Bird parts suppliers. Sometimes a rebuilt unit is available at less cost.

My SA needed to be replaced. Remove the distributor cap but leave the wires attached, and remove the vacuum line from the SA. Next remove the two screws on the outside of the distributor which hold the SA to the distributor. Save these screws. From the inside of the SA a metal arm extends into the distributor. There is a stud which is attached to the plate of the distributor. This arm is attached to the stud with a "C" or "E" clip. Remove the clip and save. (See Photo #2).



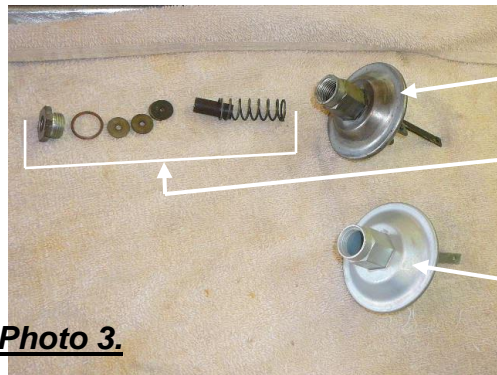
SPARK ADVANCE and TWO ATTACHING SCREWS

PERTRONIX vs Points and Condenser

METAL ARM FROM SPARK ADVANCE and STUD

**Photo 2.**

Now lift the metal arm over the stud and pull the SA away from the distributor. Take the SA to the workbench and unscrew the steel fitting which the brass vacuum line fitting was screwed into. There is a spring and a few small parts behind the fitting which you will need later. (See Photo #3).



OLD SPARK ADVANCE

(from right to left) SPRING, SPRING INSERT, SPACERS or WASHERS, GASKET and STEEL FITTING

NEW SPARK ADVANCE

**Photo 3.**

You may not have this many small spacers (washers) but this is what came out of mine and will need to go into the new SA in the correct order as shown in Photo #3.

Now reassemble the SA and insert into the distributor. The extension on the SA which is screwed to the outside of the distributor has a top and bottom. The bottom has the two threaded holes to receive the mounting screws, which you removed earlier. With the SA orientated correctly, slide the metal arm into the distributor, raise the arm and slide the small hole over the stud. Insert the two mounting screws to the outside of the distributor and install the "C" or "E" clip inside the distributor, on top of the arm and stud. Replace the distributor cap. Replace the vacuum line at both ends, the SA and carb. Install the air cleaner, close the hood and you are ready for a test drive. The new SA will operate at higher speeds when the secondary throttles open, not at slower speeds.