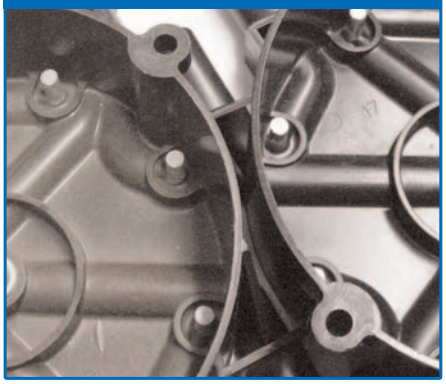
Editor's Notes

From time to time, the four page format of the printed ***Counter Point*** newsletter prevents us from including all of the material we have collected. Out of necessity, some of the material ends up being cut to make everything else fit the available space. Rather than discard this material, we've instituted this new department ("Editor's Notes") with this issue. Editor's Notes will only be available to ***Counter Point*** subscribers who have opted for Internet ***Counter Point*** delivery in Adobe portable document format (PDF).

More On Distributor Components

In this issue's "Fine Tuning," we helped a reader who was having no-start problems on a customer's car. The cause of the problem turned out to be a blocked distributor vent, which was causing an abnormally high level of ozone buildup inside the distributor. We included a photo of the vent, but not the discolored secondary ignition components (cap and rotor) which often result when a distributor vent is clogged.

Clogged distributor vents may cause an abnormal ozone buildup inside the distributor. Discolored components (left) are a possible tip-off to venting problems.



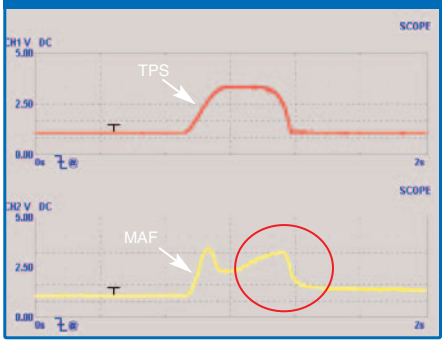
Examine the sample photos on this page. Each includes a good ignition component, next to a used component that has been discolored by high ozone levels inside the distributor. Keep an eye on those distributor vents during ignition maintenance work!

We expect to see some discoloration as secondary ignition components age in service. However, higher than normal discoloration (left) may indicate distributor venting problems.

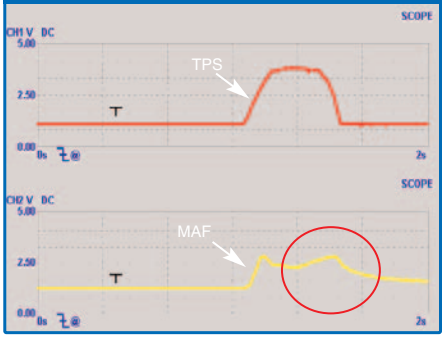
Oscilloscope Testing

Comparing the TPS and MAF oscilloscope traces is a very effective means of determining the health and responsiveness of the MAF.

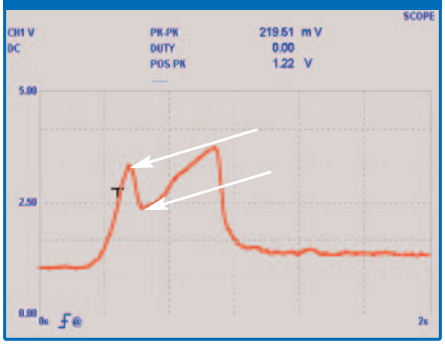
Ford MAF and TPS oscilloscope patterns (both good).



Ford MAF and TPS patterns (bad MAF pattern). Notice how the second wave of voltage has decreased and the drop off voltage back to ground is shallower.



A good Ford MAF pattern. A voltage drop between to the two arrow points is normal.



The wiggle in the MAF signal between the arrow points is normal. The sensor is very sensitive to incoming air. What we're seeing is normal intake air from cylinder efficiency. A good sensor will produce at least 4 volts on a wide open throttle snap. A bad sensor will have high voltage at KOEO and won't reach 4 volts during a snap throttle test. Set your oscilloscope on the 500 ms scale for best viewing. Notice the difference in the KOEO voltage between good and bad — 1.22 V versus 1.59 V at idle.