

## **MODIFIED TIMING FIXTURE INSTRUCTIONS FOR THE OMC LO-TENSION MAGNETO**

**Purpose:** As one set of magnets in the flywheel pass by the driver coil, a voltage and current is induced which flows from one end of the coil, through one set of points (closed), across the armature plate, and through the other set of points (also closed), and back to the other end of the coil, completing the circuit. At the exact correct time as the magnets pass by the driver coil, one set of points opens. That causes a rapid voltage rise across the primary of the external spark coil, which induces a high voltage in the secondary winding and the resulting high voltage then jumps the spark plug gap. The same thing happens as the other set of magnets pass the driver coil, and the other set of points opens, sending rapid voltage rise across the primary of the other external spark coil to fire the other cylinder. Note that it is the time of the breaker points' opening that is important, not the distance that they open. Setting them to open .020" with a feeler gauge will get them close, but using the timing fixture gets them right on. It also sets them to fire at 180 degrees apart.

After you get used to using the timing fixture, you will find that it is also much easier and quicker than trying to do it with a feeler gauge.

**Test meter or light:** Almost any method of testing continuity will work, from a simple test light to a digital multimeter. **The best way is with an analog multimeter, preferably one capable of reading resistances of less than one ohm, although even the cheapest ones will work well.**

**Set-up:** Remove spark plugs so crankshaft will turn easily. Disconnect the wires from the points. Connect the test leads as shown, being sure to connect the meter lead to the armature plate, not engine ground.

**Adjusting the points:** Make sure the breaker points hold down screw has the thin washer under the head. Then go ahead and assemble the points to the armature plate and tighten the hold-down screw. With the timing fixture pointer between the timing marks on the armature plate, turn the eccentric adjusting screw if necessary to close the points as shown on the meter or light. Then carefully turn it in the direction to open the points. At the instant that they break contact as indicated by the meter or light, stop turning. Note that it is NOT necessary to loosen the hold-down screw to turn the eccentric. Wiggle the timing fixture pointer back and forth and verify that the points are breaking when the pointer is between the two timing marks. Turn the timing pointer and shaft to align the other pointer between the timing marks and repeat by setting the other set of breaker points.

**Note:** When installing new points, aim for setting them to break at the first timing mark. Then when the cam-follower rubbing block wears in a bit, the points will break between the marks.

**Note:** Using a meter capable of reading less than one ohm offers the advantage of checking for any low resistance across the breaker points. It should show infinity when the points are open and zero ohms when they are closed. Not an "about" an ohm or so, but zero ohms. Whatever method is used, if you don't get zero ohms with the points closed, they are dirty or otherwise not making good contact. The majority of magneto problems are caused by dirty points, especially true on the Lo-Tension magneto where *both* sets of points must be making contact for the initial induced current to flow.