

## USING THE TIMING FIXTURE TOOL

**Purpose:** As the magnets in the flywheel pass the first and center legs of the coils' laminated core, a voltage and current is generated in the primary winding of the coil. As the magnets proceed on to pass the center and third legs of the core, the voltage reverses in polarity. At the correct time of that reversal, the breaker points must open. That reversal is what causes a high voltage to be induced in the secondary winding of the coil. 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. **I strongly suggest a low cost analog multimeter available at Home Depot, Lowes, Wal Mart, or others (about \$12). Very simple and easy to use. A pair of jumper wires with alligator clips to connect the test leads help also.**

**Set-up:** Remove spark plugs so crankshaft will turn easily. If using a meter capable of reading resistances of less than one ohm, do not disconnect the wires from the points. Otherwise disconnect the wires. 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 and leaving the wires connected offers the advantage of checking for shorts or opens in the primary circuit. It should show a resistance of around an ohm when the points are open and zero ohms when the points are closed. 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. Stop and fix it.

Due to the slow response of a digital meter, work slower when adjusting the points with one of those to give it time to respond.