



### Joe Hunt Early Sportster Magneto Instructions

The Hunt magneto designed for the Sportster generates its own voltage to produce a high voltage discharge to the spark plugs. It consists of an induction coil with primary and secondary circuits, a rotating magnet (rotor), condenser, points and breaker cam. A grounding circuit cuts the ignition and stops the engine. The magneto is sturdily constructed for years of use with minimal maintenance.

**INSTALLATION:** Insert the rotor shaft into the gear case. Install magneto onto the adaptor plate and attach with bolts and nuts. On magnetos with manual retard, install the control arm before replacing the tach drive gear at the bottom of the mag with a good all purpose grease before installation. Make sure the tach cable turns freely before going any further. **NOTE:** We do manufacture our magneto to Harley Davidson tach drive specifications. However, because we manufacture one part and Harley Davidson the other, we cannot warranty any parts of the tach drive.

**TIMING:** The ignition is timed in the advanced position to occur when the front cylinder piston is 11/16 inches (or 45 degrees) before top dead center. Timing should be routinely checked once a year or whenever points are replaced. Timing is adjusted by rotating the magneto housing after loosening the mounting bolts. Directions to time the mag properly:

1. Remove spark plugs, remove timing inspection hole plug in the left side of the crankcase. Next, remove the front intake pushrod cover so valve action can be seen. Remove the magneto cap and check the point gap, making sure it is in the area of .012 to .015.
2. Turn engine over in normal operating manner until just after front intake valve closes and the piston is coming up on compression stroke. Turn engine very slowly until the timing mark (170) on flywheel is exactly in the center of the inspection hole.
3. On 1964 and earlier models make sure the timing marks on the magnet base and mounting plate are in alignment.
4. The narrow cam lobe should now be located counter-clockwise from the cam follower on the movable point which should just be opening. If the points are already well open or nowhere close, the mag must be shifted to get correct timing.
5. A static timing light or HUNT timing device can be used to accurately determine when the points open as follows: disconnect coil lead from the breaker point and attach to open coil side of the timing device. Re-attach the other 2 wires to breaker point. Connect the other side of the timing device to the housing. When the points are closed, the light will be on and when the points open the light will go out.
6. If the points cannot be opened by rotating the housing within the limits of the slots or if the housing bumps, the air cleaner, reposition the magneto by unbolting it from the case and lifting it away from the case enough to clear the gears. Adjust the cam position and re-mesh the gears. If point opening still cannot be obtained by rotating the housing lift the magneto and re-mesh the gears until the proper timing point is obtained.