

# Morris Magneto M5 Instructions, '70 -'99 Big Twins, types B, C, and D

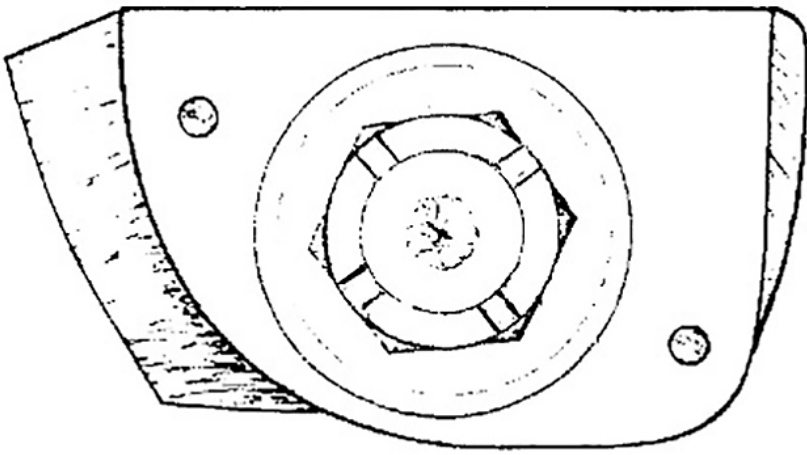


Fig. 1

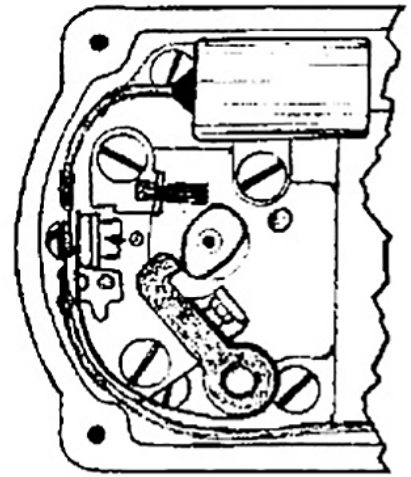


Fig. 2

Your new Morris Magneto kit is a quality precision-built product. Installation should be performed by a qualified mechanic. Loosen or remove pushrods and remove stock gearcase cover. Referring to H-D manual "Engine Specifications" and "Engine Gearcase" sections, check general engine condition, and set cam end play to .001 – .005". Install new gearcase cover. Cover should fit somewhat freely onto pinion shaft and cam. Set your engine on the correct stroke & position for installation, as follows:

motor not completely assembled, use conventional "front valves closed" method;

motor fully assembled, you may find the following method easier:

- a) Remove your **rear** spark plug only.
- b) Kick until you feel **front cylinder** compression; rear piston will be on the way up.
- c) Continue turning the motor until the rear piston gets to the top. At this point, the correct front cylinder advanced timing mark will be just appearing in the back of the hole. Continue until it is centered.

Remove magneto cap (unless it is clear). Set magneto rotor so narrow cam lobe is located counter-clockwise from cam follower as in Picture 2, and breaker points are just opening. This is your correct front cylinder advanced timing position. On the bottom of the magneto, note position of drive lugs in relation to mounting flange. Install the drive gear and pin to the end of cam, meshing the teeth so that either pair of slots on drive is in a similar position, and will engage lugs when installing mag head. Be sure that the pin registers correctly in cam notch.

Temporarily install the magneto to check drive alignment. Your cam gear positioning is correct if the advanced timing position is within the range of the flange adjustment. If not, re-mesh gear using other pair of drive slots. When done, securely bolt gear to end of cam using red locite on threads and mating surface (insure threads are clean and oil-free). Install the gear cover plate and gasket. Install the magneto and gasket, securing with the nuts and heavy washers provided, in the advanced timing position visually as shown and outlined above. Static timing is all that is required. Timing can be dialed in exactly by using Morris Magneto p/n KATT, timing and testing tool. We do not recommend the 'cellophane' method. NOTE: If magneto head was previously installed, you will need to go past your timing mark until magneto clicks, indicating that the impulse spring has been tripped (at approximately 5/16" or 8mm past rear piston TDC, but on front cylinder compression stroke), then back up the motor in high gear and re-locate timing mark. Install cap if off, making sure coil springs line up, and tighten cap screws 1/8 turn past hand-tight. Stud on side of magneto is used to "kill" magneto with a grounding toggle switch or lever (p/n KSL), do not connect to your battery or 12-volt system. NOTE: Impulse mechanism is intended for starting only. Maintain a high enough idle so that it does not engage while running.

**Stuff to know:** This magneto was designed to start with a moderate kick; hard kicks may actually hamper starting. Unit is also fully compatible with electric start. The long-lasting OEM-type points in your magneto have been set at .015, and will require no attention for years. When replacement is necessary, use Morris p/n **P5** and condensor p/n **P6**. Use only original type cap, gasket, points and condenser. Initial spark plug gap, .025". Due to the hot spark, you can expect the gap to burn larger somewhat faster than with a battery ignition. Use of a single-fire module, Morris p/n **MSF**, may help prolong plug life. We recommend Autolite

4275 or 4316 spark plugs for older H-D heads (short reach), or 4265 for long reach, as used on most aftermarket heads, and “76 - up stock H-D heads. Use copper or stainless steel solid core (non-suppression) spark plug wires (Morris p/n **MWS**).

**US Patents 4191157; D375509**