Morris Magneto MM74L - 74LDMD Instructions, 70 & Later Big Twins

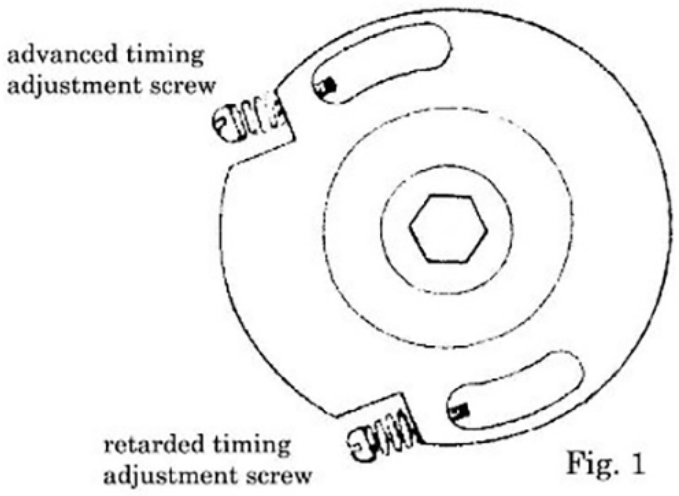


Fig. 1

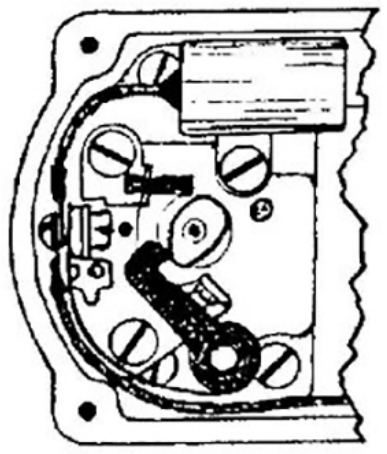


Fig. 2

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. Remove cover plug and install drive gear to end of cam, using red loctite on screw and mounting surfaces. Be sure that the pin registers in cam slot. Temporarily install drive unit into cover, being careful not to pinch the O-ring. Set your engine on the correct stroke & position for installation, as follows:

a) Remove your **rear** spark plug only.

b) Kick until you feel compression (that will be your front cylinder); 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 inspection hole. Continue until it is centered.

Remove magneto cap. 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 hex socket in relation to mounting studs. Hex on drive unit will need to line up to engage with the socket (may vary from picture). If hex position on drive is not similar to socket, position can be changed 12° by removing drive, turning hex one flat+, and reinstalling (2 teeth on the gear). Repeat if necessary. Position is correct when magneto has enough movement in slots to set advanced and retard timings. Securely fasten drive unit to cover.

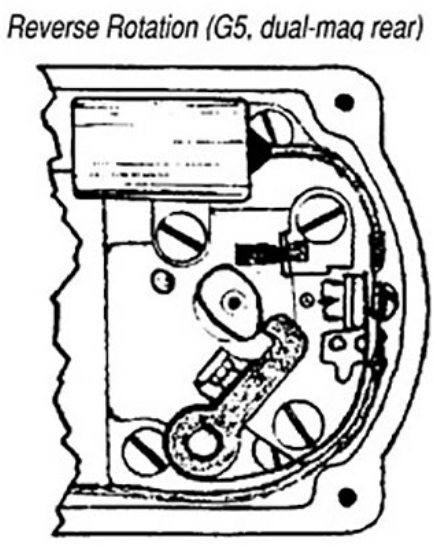
Apply grease to hex drive and magneto base plate. Install magneto with washers, lockwashers, and stopnuts. Tighten nuts until lockwashers begin to compress. Install timing adjustment screws and pieces of the small spring (cut as required), using blue loctite. Attach the large spring between front (retarded) adjusting screw and rear magneto mount stud. Set advanced timing (rear adjusting screw) visually as outlined and shown 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. Re-install cap (make sure coil springs line up), and tighten so gasket does not compress more than 25%. Retard timing adjusting screw should be set so that end of magneto moves approximately 3/4″ from advanced timing position. Retard timing is used for starting and can also be used for idling. When riding, magneto must be advanced, or you could overheat engine.

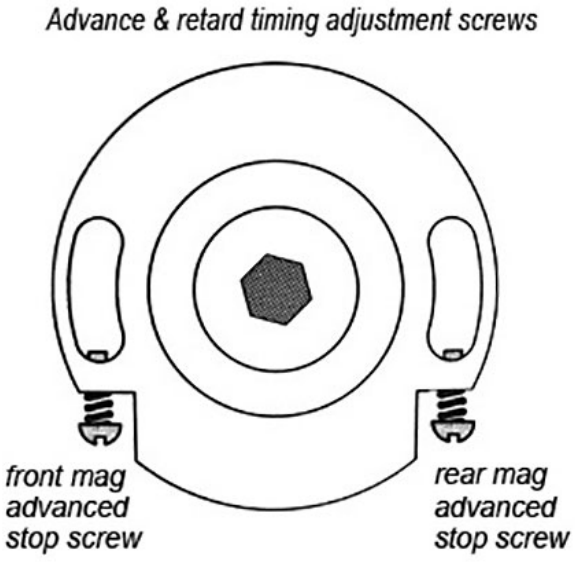
With the proper mounting nuts tension, magneto will stay retarded for starting and idling. As the throttle is opened, vibration from the engine permits the spring to pull the magneto advanced automatically. For racing applications, we recomend a stronger advanced spring and/or greater hold-down nuts tension. 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 12-volt system!

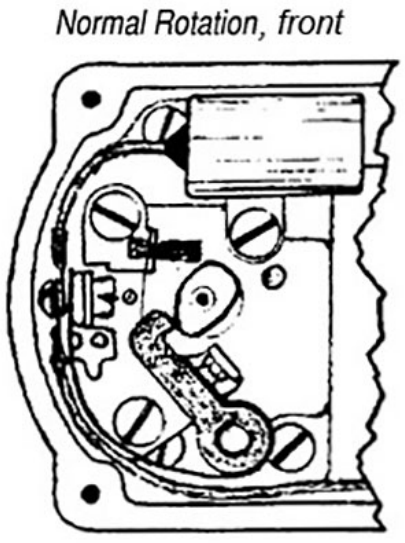
Stuff to know: The long-lasting OEM-type points in your magneto have been set at .015, and will require no attention for years. When replacement is necessary, use Morris p/n **P5** and condensor p/n **P6**. Use only original type cap, gasket, points and condenser. Initial spark plug gap, .020 -.025″. 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 spark plugs for older H-D heads (short reach), or 4265 for long reach, as used on most aftermarket heads, and ’76 -up stock shovels. Use copper or stainless steel solid core (non-suppression) spark plug wires (Morris p/n **MWS**).

US Patents 4191157; D375509

Supplementary Instructions – 74LDMD Magneto







Rear magneto and drive assembling is the same as the front with the following changes:

Rear drive and magneto are both marked with an “R” at the parting seam. Since rear drive shaft thrust is downward, keep top drive shaft thrust bushing oiled. Rear magneto rotates in the opposite direction of the front magneto. When installing rear magneto, narrow cam lobe should be located clockwise from cam follower. Also, spring and screws on rear magneto base are “mirror-image” of front magneto’s.

If motorcycle has a single spark plug head, one of the spark plug wires from each magneto must be grounded. If you are using dual plug heads, magnetos can be run separately (both wires to one head) or combined (wires from each mag to front and rear, recommended).