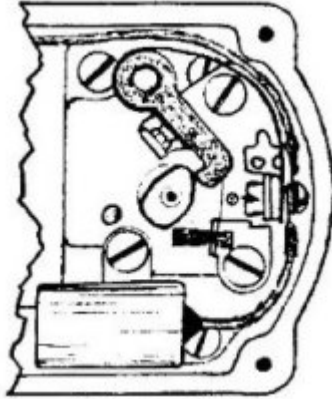


Morris Magneto X5 Instructions, Sportsters and Flatheads with 18 tooth pinion gear



Remove or loosen pushrods. Remove gearcase cover and intermediate gear. Insert new cluster gear, small side in. Gearcase cavity rib must be cut or relieved for gear clearance. Chipping by a sharp wood chisel works well.

Remove magneto cap (if black). Rotate magneto until the small cam is located CCW of the cam follower, and is beginning to break the points, as pictured. This is correct front cylinder advanced timing. Turn your engine until the rear piston is at TDC; the mark which appears in the timing inspection hole is the proper front cylinder advanced timing position. If both front tappets are not down on the heel of the cam, you are on the wrong stroke, and will need to rotate the engine another 360 °. Note: if you have an idler pin, not bushings, contact us.

Install cluster gear so that engine position and magneto position are synchronized (temporarily install generator bolts by hand). If a stock red washer fits with end-play, use on outboard side of cluster gear. Support magneto, take bolts back out. Re-assemble gearcase cover and pushrods. Re-install generator bolts. Bolts must not bottom out in holes. Secure the nuts and washers holding the magneto flange, in the advanced timing position as shown.

Although 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 engine has been turned after magneto has been installed, to check your timing 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 so gasket does not compress more than 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 12-volt system!

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**. Gap accurately. 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 (short reach), or 4265 for if you have aftermarket heads that use long reach plugs. Use copper or stainless steel solid core (non-suppression) spark plug wires (Morris p/n **MWS**). US Patents 4191157, D375509, applicable pat's pend.

series 2

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Note: case must be checked for clearance (see picture). Your engine cases start out as a sand casting, and when cutting the generator mount face, there are two factors: how the casting was held in position; how broad an area was machined. No two were the same.

