



BTH Components Ltd

Ignition systems for the 21st



MD1R & MD2R Fitting Instructions

Please read these instructions all the way through before starting. If you do not have sufficient skills or the correct tools have the unit fitted by a recognized mechanic.

NOTE: All covers are sealed and the screws secured with loctite. **DO NOT REMOVE**



1. Turn the magneto shaft until the engraved arrow on the end of the shaft is pointing down towards the base (figure 1.)
2. Insert the 6mm stainless timing rod into the timing hole under where the dynamo will sit. Turn the shaft a little either way to ensure the rod enters fully through the shaft and into the magneto body on the other side (figure 2.)



3. Set your engine to required **Fully Advanced** ignition point before top dead centre either measuring through the plug hole as shown or preferably with a degree disk. (figure 3.) *(The electronics automatically retard the ignitions for starting.)*

4. Fit magneto and replace the timing pinion and torque the nut to 12-15 ft/lb Maximum and **REMOVE THE TIMING ROD** from the magneto. (figure 4.)



6. Fix the HT coils in a suitable position and connect up the wiring. Note: Blue wire to black spade on HT coil. Set the plug gaps to .020".

The HT Coils must have a 1/4 inch air gap & do not strap the HT cables together.

7. Refit any covers etc and check all fasteners and wiring for security.

8. Grease the dynamo gear and fibre gear through the dynamo hole. **This is important.** (figure 5.)

9. The brass screw can be removed to fit your original adv/retard cable for a more original look. (figure 6.)

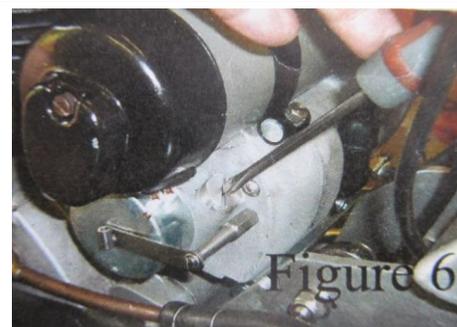


10. The black wire cuts the magneto when earthed. Connect this wire to a switch or kill button for stopping the engine.

11. Start your engine.

NOTES:

1. You may find that with modern fuels your engine may perform better using up to 3-4 degrees fewer advanced than standard.
2. If you do not use a kill switch ensure that the black wire end is well insulated so that cannot be accidentally earthed.



BTH Components Ltd
MD1R extra fitting instruction

The fitting of this unit is similar to the fitting of our PM platform magneto but the following should be noted and checked relating to the fitting of your instructions.

1. Firstly, test fit the magneto drive gear onto the shaft as some old gears can be worn and this could affect performance.
2. Before fitting, push the dynamo onto the top of the magneto and engage the gears. Tighten the strap supplied and make sure there is a little clearance/backlash between the gears by rocking the shaft back and forth. Check all the way round. The gear is new on the unit and will bed in after a few miles, however a tight gear will put pressure on the gears and bearings.
3. There are two types of fittings for the unit. One is by strap as on the Royal Enfields, BSA singles etc. The magneto will have 4 x 5/16' stainless pegs in the base to locate in the engine platform.

The other is bolted from the base by 4x3/8 BSW holes as on Ariel singles, Nortons etc.

4. The strap type can put pressure on the dynamo when the engine strap is tightened and make the gears tight causing them to whine. If this happened you may need to insert shim under the dynamo to create a little backlash in the gears.
5. Make sure the fibre gear and steel gear are well greased. There is access through the dynamo hole. The front case of the magneto is sealed and the screws have nut lock Loctite on them when the unit is assembled.
6. You can run a rev counter off the pinion nut as the original if the bike was fitted with one.
7. The unit will also run a second spark plug if the bike has a twin plug head. Please contact us as this can be retro fitted at a small cost.