



# BTH Components Ltd

*Ignition systems for the 21st century*



## Vincent V-Twin BT-H Magneto 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 recognised Vincent mechanic.

1. Remove your existing ignition system including spark plugs and parts you would normally remove to time your engine. Try your new BT-H magneto in place before proceeding further. Some very early post war twins may need some relieving due to the thickness of the early sand castings. They certainly didn't skimp on materials in this area.

2. These instructions assume that you are using a fixed timing pinion or that you have permanently locked your auto advanced mechanism so that it cannot operate. **Important.** Remove the lower rear magneto fixing stud from the crankcase. This is where the supplied Allen head socket screw has to be fitted.



3. Remove the brass timing hole screw from the BT-H magneto



4. Turn the magneto shaft until the arrow is at the top pointing up towards the timing hole.

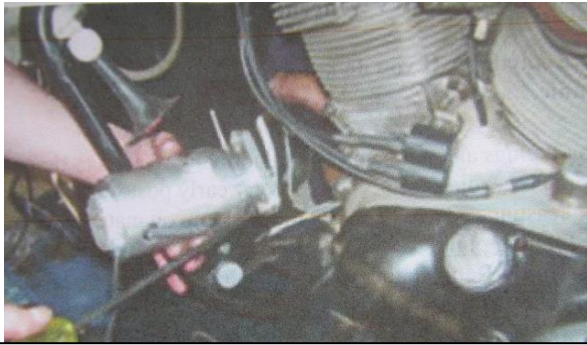
*(Double check this as once the gear and blind fixing nut are fitted in step 9 you will not be able to see the arrow)*



5. Insert the 6mm stainless timing rod into the timing hole. 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.

*(If you have lost your 6mm timing rod do not try to use 1/4" round bar. It is 0.015" too big and will not*

6. Fit the "O" ring into the machined groove in the flange using a little grease to hold it in place.



7. Put the supplied Allen head socket screw into the lower rear magneto fixing hole.

8. Using the supplied ball end Allen key to keep the screw in place, fit the magneto to the back of the timing case. N.B. If you have not removed the timing cover you will not be able to fully tighten the magneto fixing until the timing pinion is secured.



9. Set your engine to required Fully Advanced ignition point before top dead centre on the rear cylinder using your preferred method. (*Degrees, inches or mm.*) (*The electronics automatically retards the ignition for starting.*) (*See note 1 at the bottom of page.*)

10. Replace the timing pinion and torque the nut to 12-15 ft/lb Maximum and **REMOVE THE TIMING ROD.**



11. Fix the coils under the cowl or other suitable position. Connect the wiring.

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

**Wiring.** The blue wire goes to the black spade on the H.T. coil, the brown wire goes to the green spade. The blue wire with a yellow tag goes to the coil with the long (rear cylinder) plug lead. The coil does not need to be earthed. If you do not use this cut out wire make sure that the end is well insulated so that it cannot inadvertently stop the engine.

**Notes:**

1. You may find that with modern fuels your engine may perform better using up to 3 - 4 degrees fewer advance than standard.

12. **N.B.** It is advisable not to run the black cut out wire alongside the H.T. leads as this can sometimes interfere with the performance of the magneto.

13. Check that the connectors to the coils have sufficient clearance when you use the side stands to take out the front wheel.

**See photograph**

14. Set the spark plug gaps to 0.018-0.020" (0.46-0.5mm) and refit.

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

