BRITISH INSTALL GUIDE

Instruction manual with visual guide for

Triumph/BSA/Norton/Royal Enfield

POSITIVE OR NEGATIVE GROUND SYSTEMS

Your kit includes:

(1) Ignition Coil and spark plug lead (long wire will be cut into two short wires).

(2) Ignition module.

(3) Encoder wheel with aluminum standoff, brass collar, and washer.

You will need a wire crimper and basic tools to install ignition kit.

We recommend using shrink tubing or our flexible wire covering to protect the sensitive wires from damage.

We also recommend using a depth gauge or dial caliper to verify TDC if you don't have the factory tool.

A test light is also recommended to find switched power from the cycle.

Coil styles are updated as technology allows. Photos in this manual are for illustration purposes and may not match your kit.

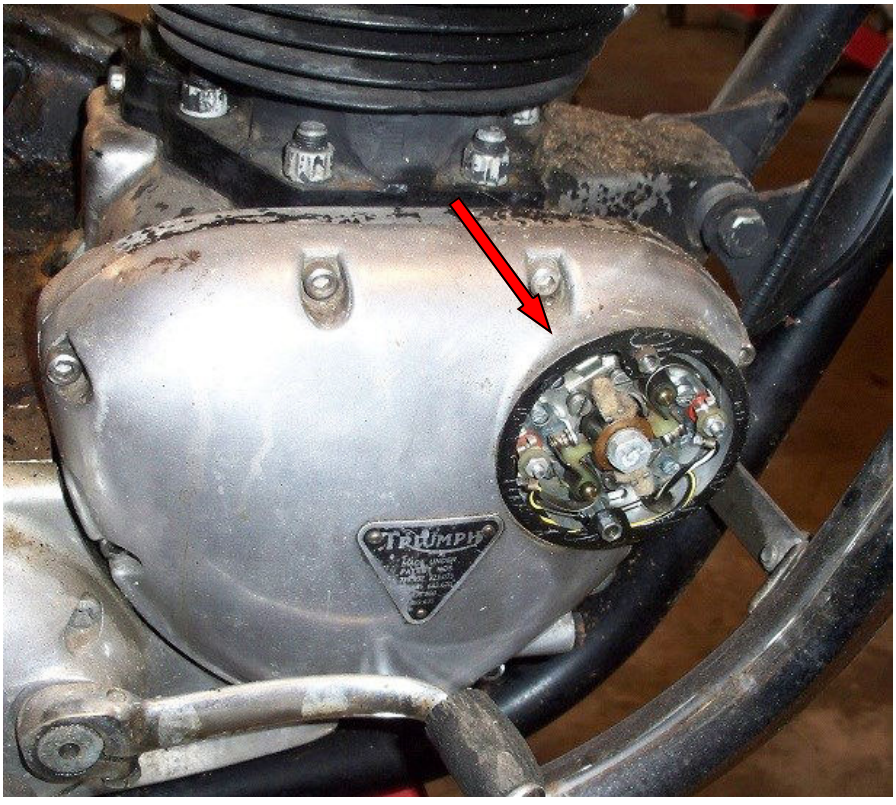
Basic installation involves:

- Replace the standard ignition with the new ignition.
- Install new coil in a sturdy location so it will not contact the fuel tank.
- Connect the ignition wiring (do not connect the coil power until timing is set)
- Set #1 cylinder to TDC and calibrate timing using the encoder wheel.
- Connect coil power lead.

Step 1.

Disconnect your battery.

Locate the points housing at the right side of your engine and remove the cover. Carefully remove the points plate, unplug the wires, and feed them back through the housing. There may be a grommet in the wiring hole. Carefully remove it first to make feeding the wires easier. Two small hex head bolts hold the points plate on and one larger center bolt holds the lobe in place. Remove all three bolts to remove the stock parts.



Step 2

Preparation and installation of new ignition. On Triumphs, It is recommended to chamfer the factory hole where the wiring exits the points area. Use a small file or die grinder to carefully round the hole. This will make it much easier to pull the new wires without damaging them. A pinched wire can cause ignition failure or even a fire.

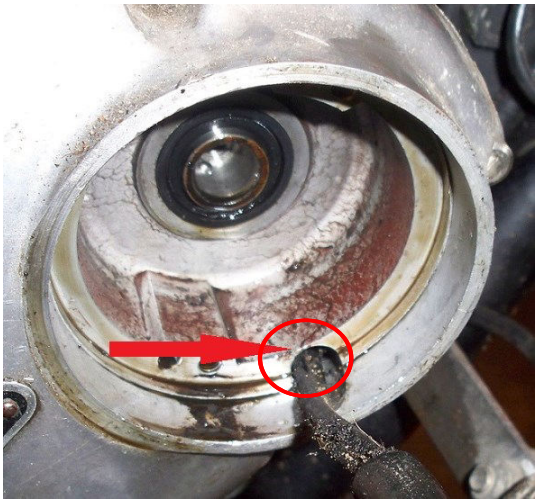
Snipping the corner of the circuit board can also make it easier to route the wiring. Be careful not to trim more than is needed to feed the wires.

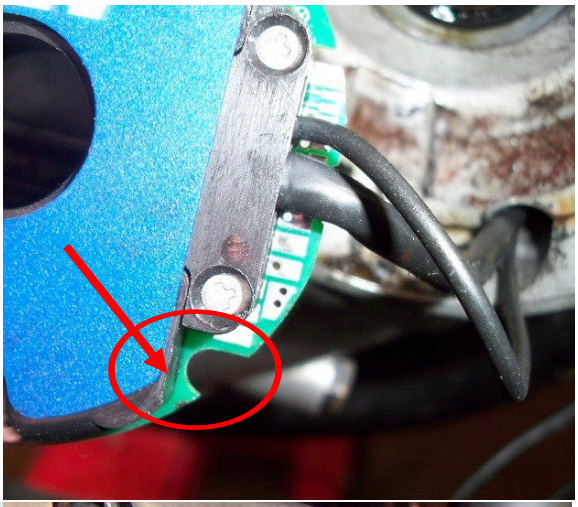
Bolt the ignition into place using the two stock bolts, then slide the aluminum stand off into the center.

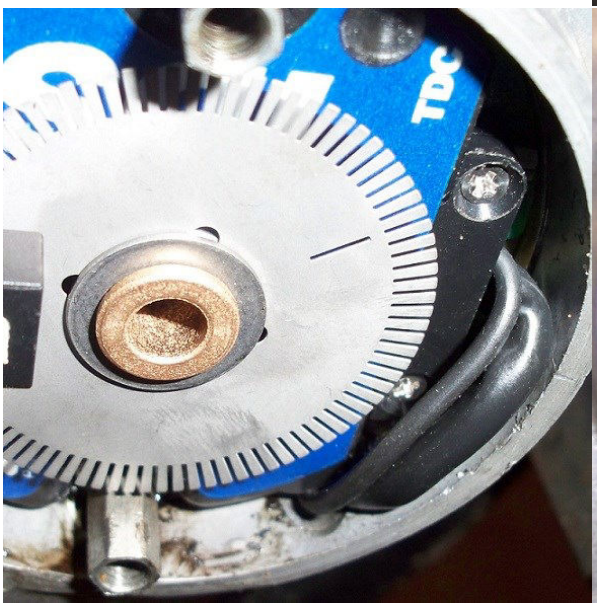
Carefully positioning the encoder disc under the optical reader, insert your STOCK bolt using the washer and brass colored bushing. Make sure encoder is not rubbing on the ignition or optical reader.

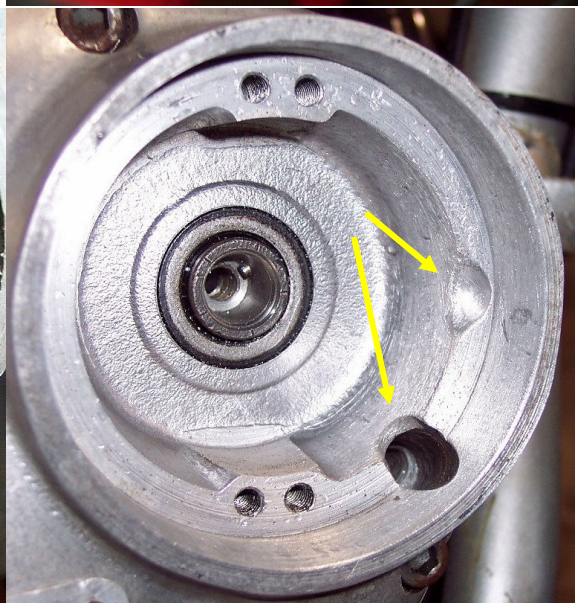
DO NOT TIGHTEN ENCODER YET.

We have found that leaving a 4-5” loop of the new wiring on top of the ignition during installation works well. Once the new ignition is bolted in place, carefully feed the wires through.









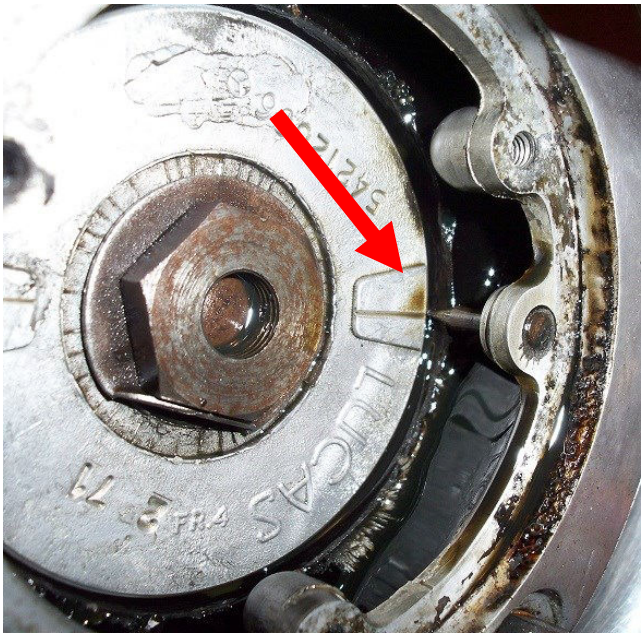
One BSA engines the wiring exits the rear right side cover.

When possible we recommend using factory wire holders and add shrink tubing or flexible wire protectors in areas where the wires may rub.

Step 3

Before setting the timing and tightening the encoder, you must first set the engine at Top Dead Center (TDC) or the ignition will not fire at the correct time.

If you don't have a factory timing tool, it would be advisable to purchase or make a dial caliper tool for finding the exact position.



Caution!

The photo above shows a timing mark and the factory pointer.

This is NOT a mark for TDC. Do not trust timing marks unless you were the one who made them.

We always recommend checking piston height and punching your own TDC mark for future tuning.

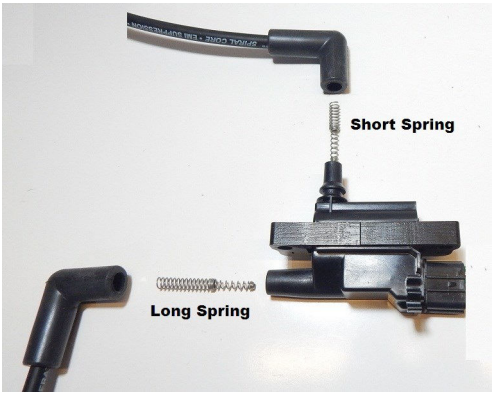
The photo below shows how far the timing mark was from true TDC (we stamped in the dots).

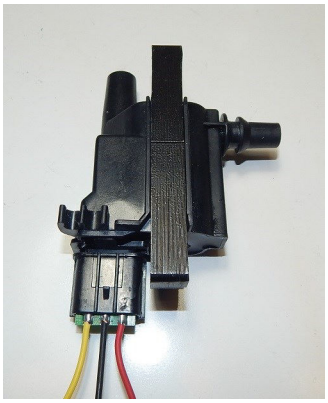
Step 4

Remove your stock coil and install the new multi fire coil. On British twin cylinder bikes you will have a Dual Fire coil with two outputs.

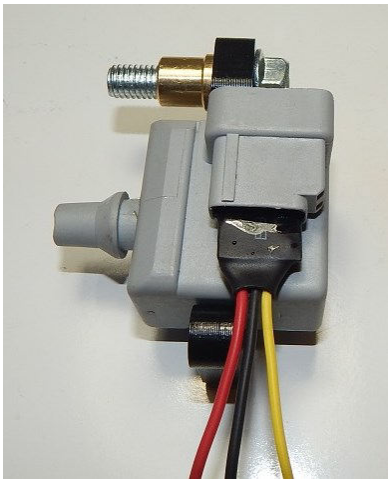
On **Enfields** you will have a single output coil that has a mount built onto it already.

NOTE: Our sparkplug leads are designed to be 20 inches (51cm) long. If you will need them to be longer please contact us. We have 40 inch (102 cm) long versions available.





Dual Tower coils are designed to fire two cylinders at once. This is called “wasted spark” because it fires each cylinder regardless of which stroke it is on. We use a pair of these on dual plug cylinder heads.



Single Tower coils are designed for Enfield or similar single cylinder engines. High compression race applications can use two of these for twin cylinder engines.

Step 5

These directions are specifically for a NEGATIVE GROUND bike. If you are unsure...observe which battery terminal attaches to the frame. If your (+) positive battery terminal is attached to the frame your vehicle is a positive ground system. If the (-) negative battery terminal goes to frame it is a negative ground system.

Installing electrical components with a solid connection is critical. If you do not have the correct crimper we suggest you purchase one. Your ignition will not function with poor connections.

Connect the ignition module and set the timing **BEFORE** connecting power to the ignition coil.

Colors are for the following:

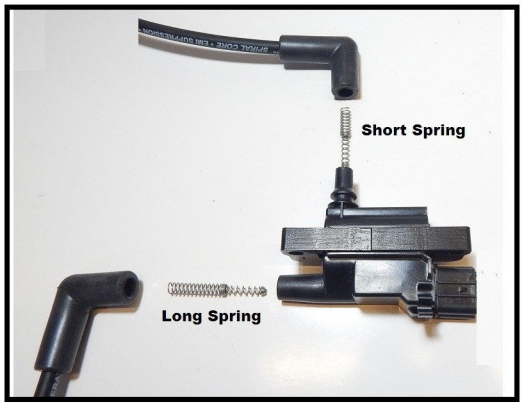
Red wire = Switched power (+) lead for the ignition module.

Black wires= The <u>larger</u> diameter black wire that exits the module individually is the ground lead and must connect to battery negative (or return to regulator negative on battery-less systems).

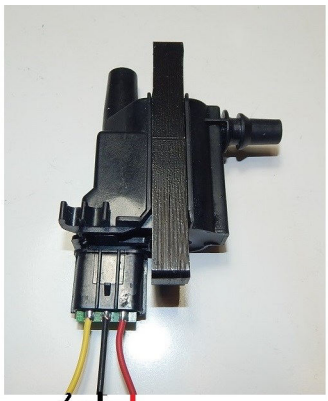
The <u>small</u> black wire is the coil trigger (on MC-1 or MC-2 micro coils this connects to coil yellow).

Green wire= Electric Tach (if you add one). If not used, tape it up so it cant touch any other wires.

White wire=This determines which timing map is used. Connect to battery ground unless you want a milder timing curve. Light load = ground the wire. Heavy load = disconnect it.



Assemble springs as shown



Directly to 12V (+) Power Supply

To ground (frame on negative earth)
To ground (battery (-) on positive earth)

Black trigger
Controls coil and should only be connected to the yellow lead on this coil. DO NOT connect to earth!

These leads are enclosed in a common wrapped housing

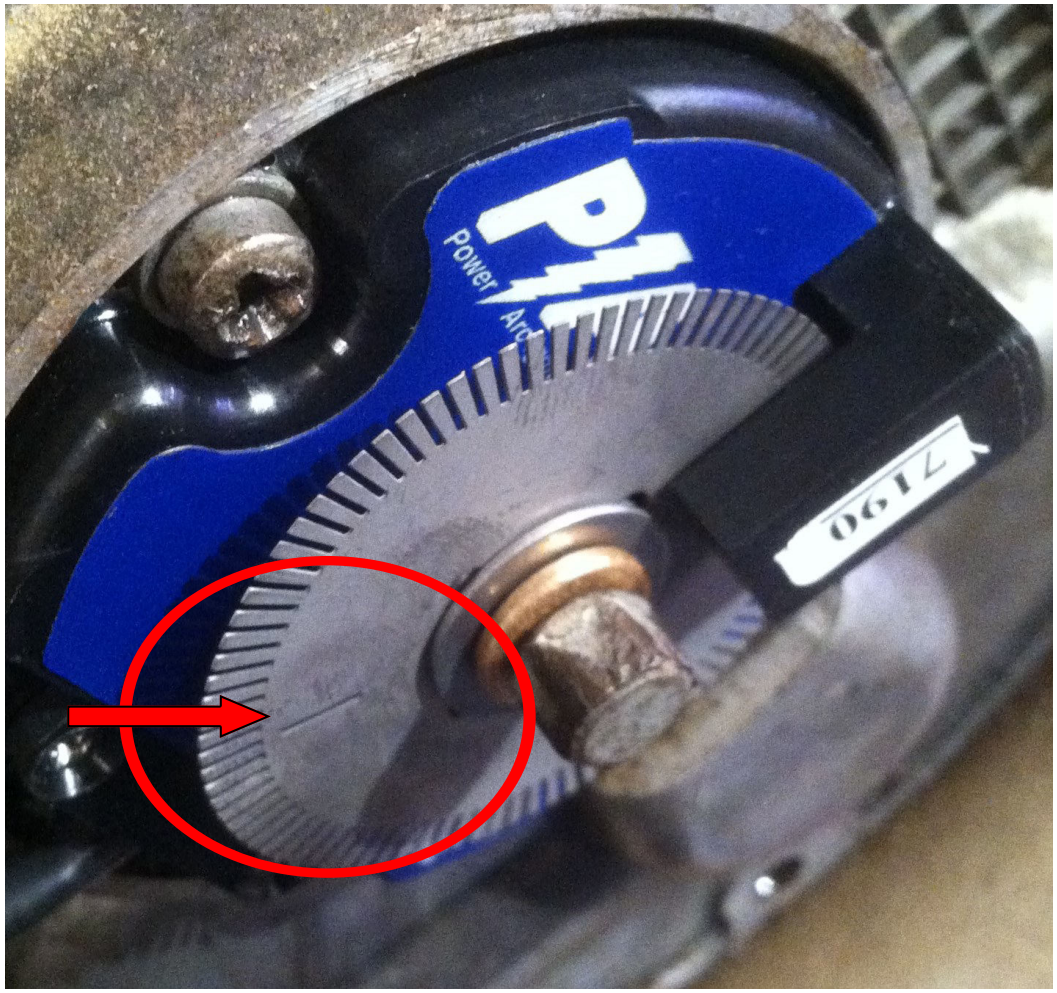
Timing Map sensor lead
Used to control which map is used

Grounding lead to earth will use map with most timing advance
Ungrounding will use map with least timing advance

To ground (frame on negative earth)
To ground (battery (-) on positive earth)

To switched power supply

Tachometer Pulse



Step 6

You can clearly see the small slot in the encoder wheel. When this slot passes under the reader, the LED light will come on and your timing will be set.

Before you set the encoder verify your engine is still at TDC (top dead center) or check the timing mark you created in step #2. This is a wasted spark ignition so it doesn't matter which cylinder you used to find TDC.

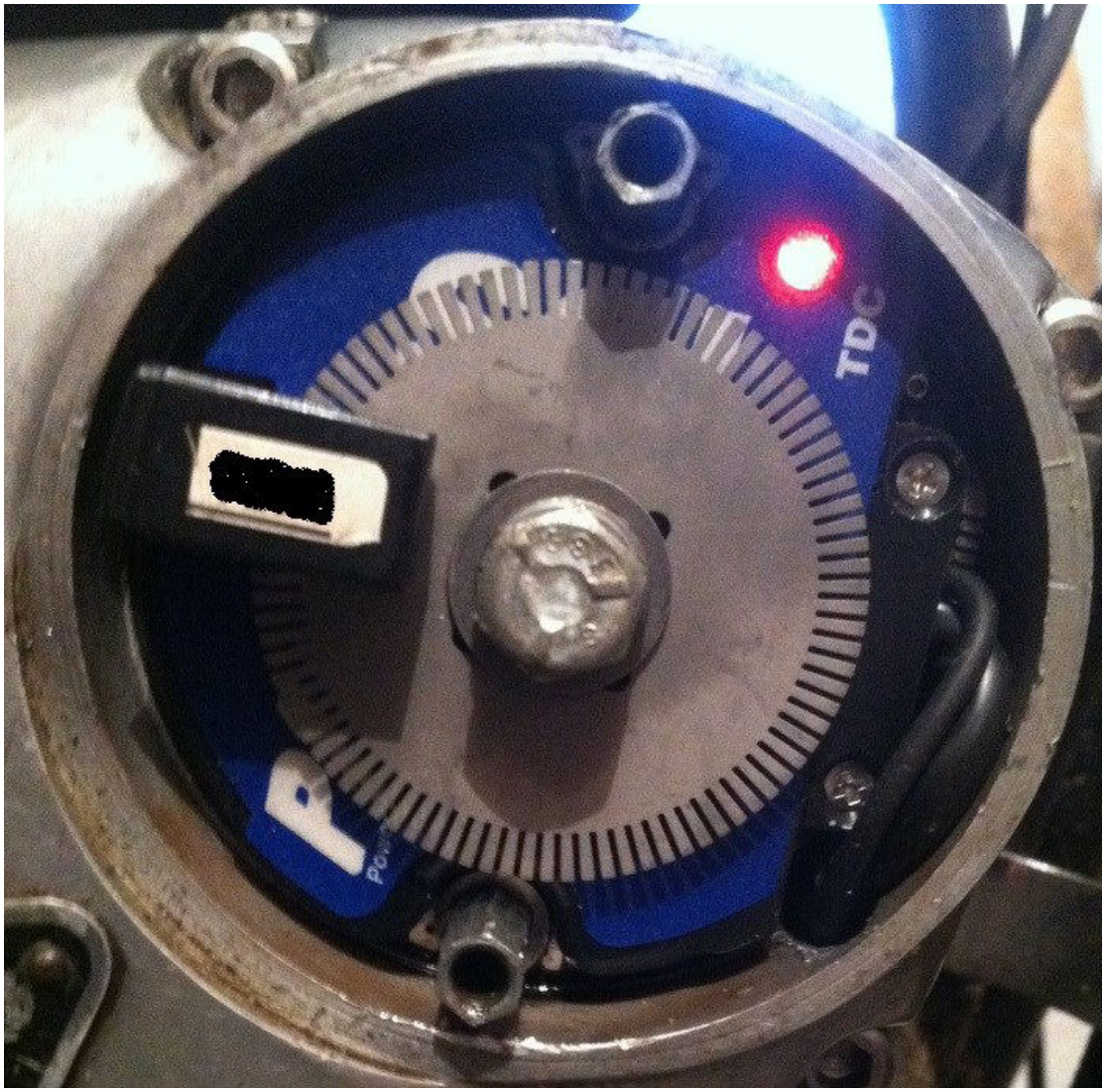
Reconnect your battery.

Carefully rotate the encoder counterclockwise until the **static timing light comes on**. This will happen when the single encoder slot passes under the optic reader.

See photos below. When the light comes on, tighten the bolt using pink 222MS locking agent. Do not over tighten or you may strip the threads.

Here is a picture of the ignition with the LED light on. Now connect power to the red lead of your coil and verify your spark plugs are installed.

Start your engine and go have fun!



We notice improved starting effort and often no longer need to “feed it throttle” when starting. Customers typically notice faster warm ups due to the multi-spark function of the ignition coil. If you regularly ride in wet weather apply a small amount of silicone where the wires exit the points area. The encoder is stainless steel and shouldn’t corrode under normal riding conditions.

We have put forth great effort to design and build a quality product. We encourage suggestions or improvements to the kit and/or instructions.

Happy & Safe Riding.

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