

Boyer Bransden

GT380 Installation

Start by loosening the points plate removing the nut and washer. Then disconnect the three wires coming to the points and remove the plate with all parts still fitted to the plate. The plate should clear the cam fitted on the central spindle.



Remove all the parts from the points plate, as shown in the adjacent picture. The cam has been withdrawn from the spindle and shown inverted for a later reference point.

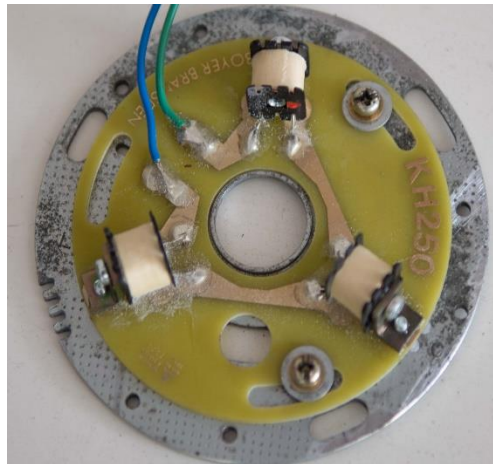
The points backing plate can be copied and a new one made, or reused and modified to mount the new KH250 stator plate. In addition to the backing plate you will also need to retain the rear 3 lobe timing plate along with the original nut and washer fitted

to the mounting shaft.

The 3-lobe timing plate (below left) is retained and used with the new magnetic rotor. Ensure the lug on the timing plate is located in the correct side of the slot in the magnetic rotor. The magnetic rotor has a slot right the way across and can be fitted out of line by 60 degrees. The 3 magnets should align over the 3 lobes of the timing plate, the picture below right shows the correct alignment.



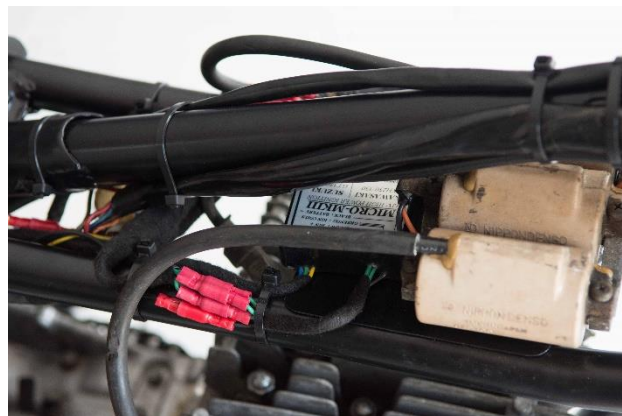
The rear backing plate cannot be used in its original condition and as mentioned it must be modified. There are a series of raised lugs on the plate and these must be removed so that the Boyer pickup plate can be mounted correctly.



The picture top left shows the plate with all the lugs removed using a bench grinder. The pickup plate needs to be mounted on the backing plate so that the viewing hole, round on the pickup and a flattened ellipse on the backing plate (above right).

You will find that the fastening slots do not quite align with the backing plate screw holes. It is easy enough to modify the pickup plate by filing the insulated board to give the necessary notches so that you can use the original tapped holes that attached the old points.

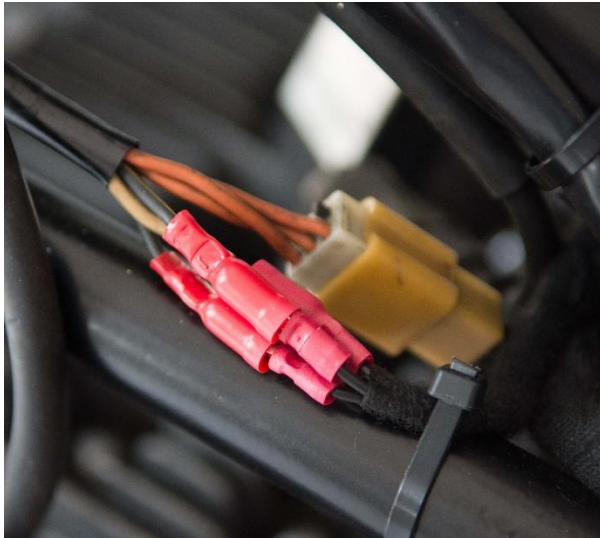
You can achieve a nice neat installation of the electronics adjacent to the HT coils. I chose to make a mounting plate which uses the attachment bolts of the coils to fix the plate in position.



The simple plate shown above left slides under the coils and the mounting bolts pass up through the holes to fix it in position. The picture next to that shows the

plate fixed in position with the Boyer MKIII micro resting on the plate. I fixed the box in its final position using Velcro on the box and the plate.

Wiring the unit in is relatively simple because of the design of the Boyer system with all the spark plugs firing every 120 degrees, so there is no concern with maintaining specific continuities for firing order. The best way to connect from the Mk III to the coils is to make your connections just after the last connector before the HT leads, which is the picture below.



The positive connections from the kill switch which are the three orange wires retain their position in the loom. At the back of that last plug you will cut the three wires, white, black/yellow, and black. Make your bullet connectors ready to receive the three-diode loom. The connections from the Mk III to the diodes are set to be idiot proof with green to green. I chose to run the diodes from the connection shown here directly to the other side of the frame. The picture below shows the diode connections coming out and being connected to the Micro Mk III before it is slid

back into its final installation position.

The power feed to the Micro Mk III yellow wire was taken from just behind the connector shown above taking one of the orange wires and splicing in an additional wire to provide that feed. The black earth cable from the Mk III was extended slightly so that I could take it back to the main battery earth lug to be certain that there was no interruption in the earth point. I chose to use cloth tape to protect all the looming for the new installation rather than leaving the wires open to the environment. This is very inexpensive and with well positioned tie wraps you can affect a clean installation.



The final part of the wiring is the feed from the pickup plate back to the Mark III connections. To



simplify things, I recommend removing one of the three cables originally fitted and I chose to keep the white and the black and yellow. I made a conscious choice not to use the original loom connectors and part of the loom. My connection is made straight from the pickup plate directly to the Mk III with no breaks, purely the bullet connectors. This is to minimise any chance of ignition failures due to connector working loose over time or becoming corroded. If you are working an

old project like this, you will already have found some of the spade connectors within connector blocks corroded so this is just eliminating a potential failure later.

The final assembly of the ignition assembly needs the rear rotor to be fitted first and then the backing plate with the Boyer pick up plate fitted in position so that the sighting hole sits above the timing mark on the casing, around the seven o'clock position. The magnetic rotor then needs to be fitted on the spindle so that it locates with lug of the rear timing rotor so that the magnets line up with the C/L/R markers. At this point the rear rotor and magnetic assembly can turn through 360 degrees.

The final setup for the timing is based on the centre cylinder set at 2.3mm before TDC. Then move the rear rotor and magnet assembly so that it shows the 'C' letter in line with the timing marker seen through the sighting hole. At this point everything can be tightened down on the backing plate and the centre spindle. This should provide static timing and at least the engine should start.

The good thing about using the original backing plate is that it has notches on the outside that can be used to advance or retard the timing using a flat blade screwdriver without loosening the backing plate too much when running the engine with a strobe attached. This allows good friction between the plate and casing so that there is no inadvertent movement of the backing plate as you set the dynamic timing. I understand that the trigger point of the sensor and magnet is a few degrees after the centre point (effectively the back edge of the stator). Therefore, expect to see the timing initially slightly retarded when using the strobe.



Here is the final installation and through the viewing hole at the bottom you can see the timing marker. The bad news is that because of the timing point on the pick up is at the back edge of the pick up stator the timing marker no longer matches up as it would with the points when using a strobe. Even when the timing is set correctly you will only see an edge of the timing rotor. The best way to time the bike now is to use the dimples

you can see on the top of the magnet.

The simple tip to set the timing to 24 degrees before top dead centre is to use a folded square of paper corner to corner two times to give you 22.5 degrees. Use the centre cylinder as your reference and set that to TDC.



The magnet assembly rotates anti-clockwise when running. Take your folded paper and line up with the back edge of the sensor stator (past the centreline of the sensor rotating CCW). Then rotate the magnet so that the dimple shows fully in front of the leading edge of the paper. That full dimple showing will give you about a further degree, so in total close to 24 degrees. When you hold the paper in position with a strobe you can easily see the dimple on the magnet relative to that.

I hope this makes your installation a little easier and from what I can see there is no difference with the GT550.