



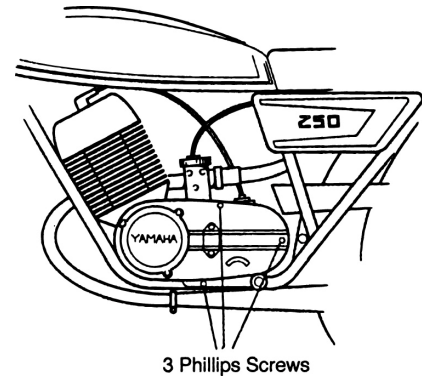
## FITTING INSTRUCTIONS

Thank you for choosing a Newtronic Contactless optical ignition system.

For a speedy and successful installation, it is recommended that you first read all the way through the fitting instructions and familiarise yourself with the parts provided in the kit.

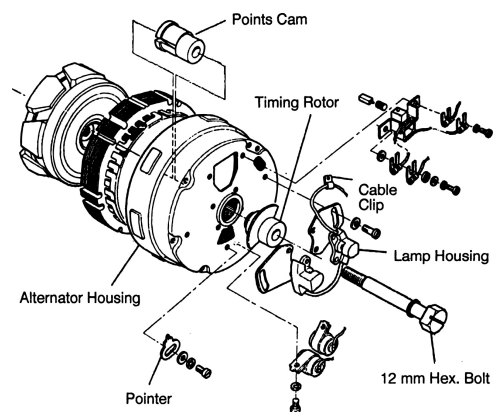
1. Remove the cover over the contact breaker assembly.
2. Remove the gear lever.
3. Undoing the three Phillips screws remove the left hand crankcase cover with the clutch cable attached to the cover. (Fig.1)
4. Slacken the small bolts on the contact breakers securing the condenser and points wires and disconnect the wires. Remove the screws securing the points adjusting plates to the alternator casing and remove the points complete with the adjusting plates. (Fig. 2)
5. Remove centre bolt and spring washer securing the contact breaker cam with a 12mm spanner.
6. It is now necessary to remove the alternator casing to extract the contact breaker cam as it will not pass through the hole in the centre of the casing. This is secured by three Phillips screws and once undone the casing may be removed. Care should be taken in removing this casing as the alternator wires are attached to this. On no account should the nuts next to the three Phillips screws be distributed. The contact breaker cam can now be extracted.
7. Re-fit the alternator casing.
8. Fit the Newtronic timing rotor through the hole in the centre of the alternator casing ensuring that the drive pin engages in the slot in the rotor. Replace the centre bolt and spring washer and tighten.
9. Fit the Newtronic baseplates and lamp assemblies as shown in the diagram using two of the original adjusting plate screws. These should be set for the moment to be in approximately the middle of the slots.
10. Ensure that the link wire between the two Newtronic lamp housings is positioned under the retaining clip and is clear of the timing rotor.
11. Fit the trigger lead securing clip using one of the original adjusting plate screws in the position shown in the diagram. On some models it may be necessary to remove the condensers to fit this clip. It is important to ensure that the screw securing this clip does not foul on the alternator rotor.
12. Thread the trigger lead through the back of the alternator casing using harness grommet. under the carburettors, through the to the R/H side of the bike. It will be necessary to make a small hole in the cable sheathing.
13. Re-fit the engine crankcase cover using the three Phillips screws taking care not to trap any of the wiring and ensuring

**Fig. 1**



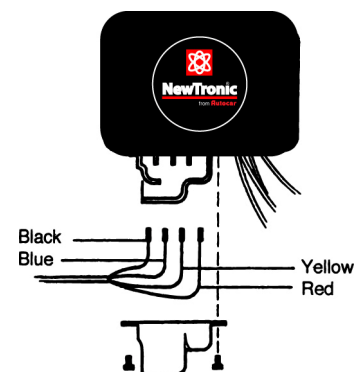
3 Phillips Screws  
LOCATION OF ENGINE CRANKCASE COVER

**Fig. 2**



EXPLODED VIEW OF IGNITION TIMING

**Fig. 3**



SWITCHING UNIT CONNECTIONS

# MOTORCYCLE IGNITION SYSTEM - YAMAHA

Yamaha 250 and 350cc TWINS Models DS7, RD to 1976 (Type 522), RD 350 to 1976 (Type 521)

the clutch cable is correctly fitted. Carefully arrange the original contact breaker wiring down the side of the alternator casing so as to keep it out of the way of the Newtronic assembly.

14. Re-fit the gear lever and check for correct operation of the clutch.
15. Remove the petrol tank and R/H side cover.
16. Connect the trigger lead to the Newtronic switching unit using the moulded plug cover provided and fill the plug with the waterproof sealant also provided. Secure the plug with the two self-tapping screws (Fig. 4).
17. Wipe clean the side of the battery box (Fig. 5) and remove the protective backing from the self adhesive panel on the back of the Newtronic switching unit and affix to the bike.
18. Earth the blue lead from the Newtronic switching unit to the crankcase bolt (Fig. 5).
19. Connect the grey and orange leads to the ignition coils under the petrol tank removing the original points wiring. The brown lead is then connected into the four-way connector next to the coils, retaining all the existing wiring in this connector (Fig. 6).
20. Re-fit the petrol tank and replace the R/H side cover.

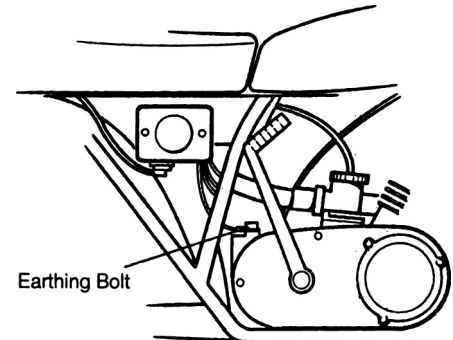
All the necessary components are now fitted and it only remains to set the ignition timing. This should NOT be done in bright sunlight or the timing will be affected. Setting the ignition timing is basically no different to the procedure adopted when using contact breakers, except that a stroboscopic timing light must be used. It should be remembered that the engine fires as the timing rotor leaves the lamp housing. You must ensure that the rotor does not foul the lamp housings.

## SETTING THE TIMING:

1. Connect the stroboscopic timing light to the left hand cylinder and start the engine. Align the timing marks by rotating the left hand baseplate. The timing marks are viewed through a hole cut in the alternator casing.
2. Repeat for the right hand cylinder.
3. Check that all screws are tight and re-fit the cover over the points.

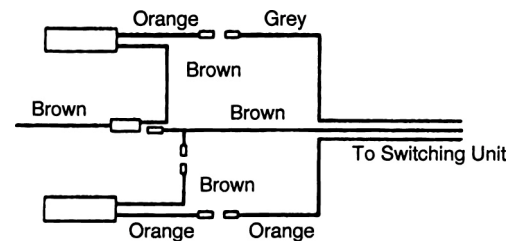
Having installed your Newtronic system following this step by step guide, you should soon be enjoying years of improved starting and performance, fuel saving, and reliable tuning.

Fig. 4



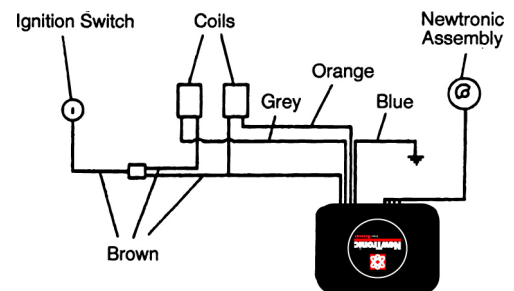
LOCATION OF SWITCHING UNIT  
FIXED TO SIDE OF BATTERY BOX

Fig. 5



WIRING CONNECTIONS UNDER TANK

Fig. 6



SCHEMATIC WIRING DIAGRAM



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