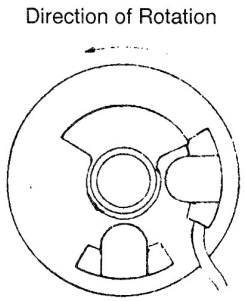
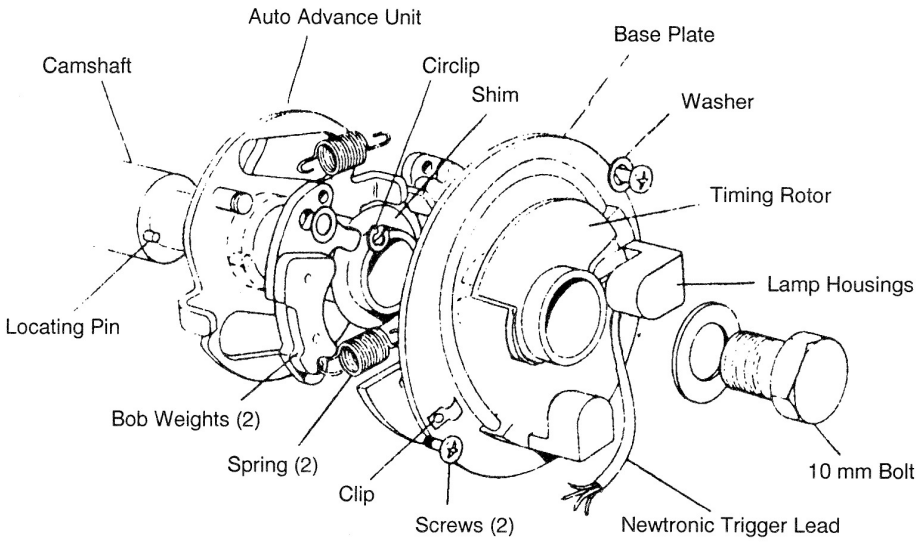
# (YAM4)




EXPLODED VIEW OF IGNITION TIMING ASSEMBLY

# YAMAHA XS 250/400

## Fitting Instructions

1. First read the fitting instructions all the way through and familiarise yourself with the parts provided in the fitting kit with the help of the explanatory diagrams.

2. Disconnect battery earth, remove cover over contact breakers, remove also the casting covering the timing marks.

3. Raise seat and remove petrol tank.

4. Disconnect the points wires from the bullet connecters where they enter the main harness (1 orange, 1 grey). Disconnect also the condensers at the moulded plug terminal.

5. Undo the two screws securing the points baseplate and remove.

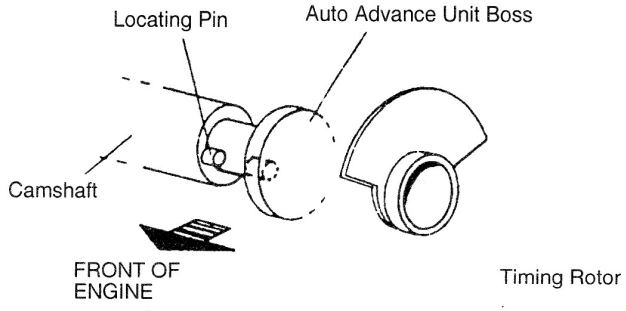
6. Undo the 10 mm bolt securing the auto-advance mechanism and remove. The points cam must also be removed from the auto advance itself, this is simply pulled off.

7. Turn the engine by means of the kick-start (or 17 mm spanner on the end of the crankshaft) until the firing mark of the right hand cylinder (R/F) is aligned with the timing pointer. Ensure also that the auto advance is in the position shown in the diagram.

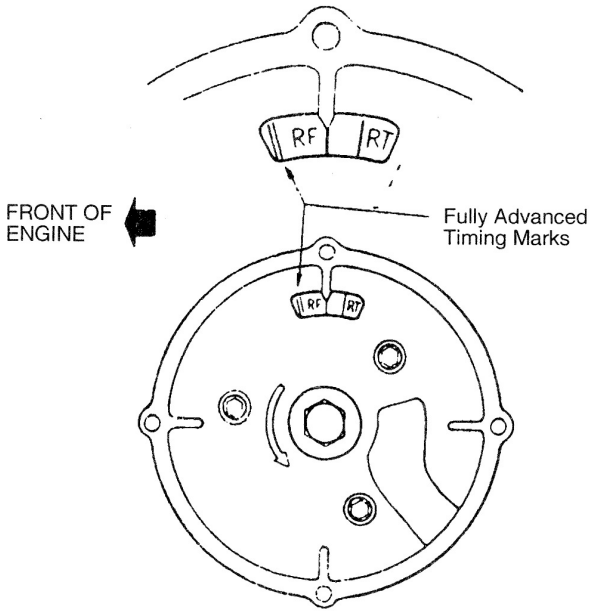
8. The next step involves the assembly of the Newtronic timing rotor to the auto advance mechanism. These instructions must be followed carefully. Hold the auto advance and feed the Newtronic assembly (rotor and baseplate as supplied ) down the shaft of the auto advance mechanism to engage the slots in the lugs of the bob-weights. This must be done in the relationship as shown in the diagram.

9. Fit the assembly back to the bike ensuring the drive for the auto advance is engaged in the camshaft and secure with the 10 mm bolt.

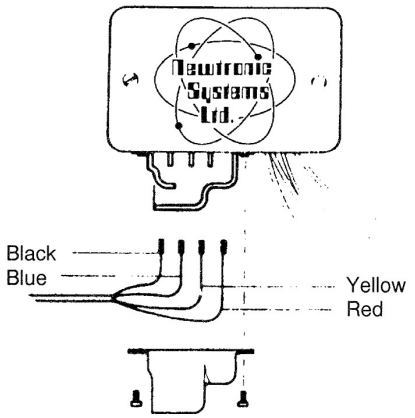
10. Check the engine is still in the R/F timing mark and align the Newtronic baseplate so as to be in the position shown in the diagram. The trailing edge of the rotor should be central in the fixed lamphousing. Temporarily secure with the two Phillips screws and washers fitting the cable clip for the trigger lead under the lower screw.



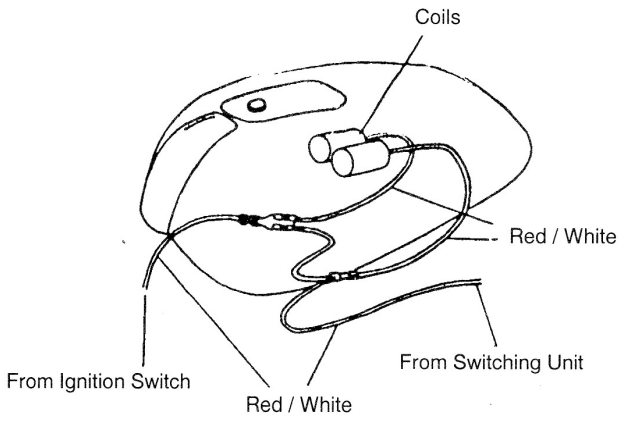

RELATIVE POSITIONS OF ROTOR AND CAMSHAFT ON ASSEMBLY




TIMING MARKS




TRIGGER LEAD CONNECTIONS TO SWITCHING UNIT AND PLUG ASSEMBLY




WIRING CONNECTIONS UNDER TANK

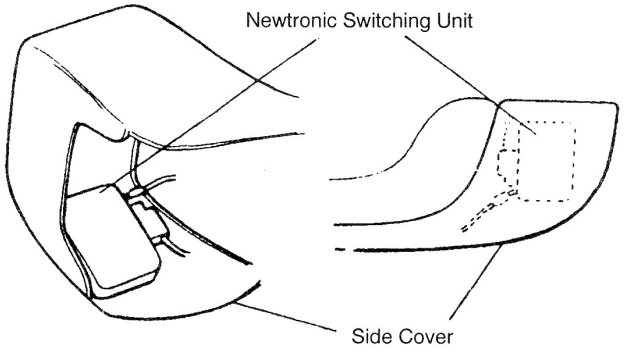
11. Route the Newtronic trigger lead along the top N/S frame rail using the original clips and tie-wrap to appear at the hump in the rear of the seat. Connect the trigger lead to the Newtronic switching unit using the moulded plug cover and fill with the sealant provided. Secure the plug with the two self tapping screws. See diagram.

12. Thread the three wires from the Newtronic unit along the frame top rail to the coils. Connect the grey and orange wires in the bullet connectors from which the original points wires were removed, ensuring correct colour coding grey to grey, orange to orange. Connect the red/white to the coil feed as shown in the diagram. This is the 12 V feed for the Newtronic, do not disconnect the original coil feed.

13. Earth the blue lead to the mudguard mounting bolt, first cleaning off the paint to ensure good electrical contact.

14. Wipe clean the area inside the seat hump, remove the protective backing from the self-adhesive panel on the back of the Newtronic switching unit and fit to the seat in the position shown. Ensure it doesn't foul when the seat is closed.

15. Replace the petrol tank, reconnect battery earth.




NEWTRONIC SWITCHING UNIT LOCATION

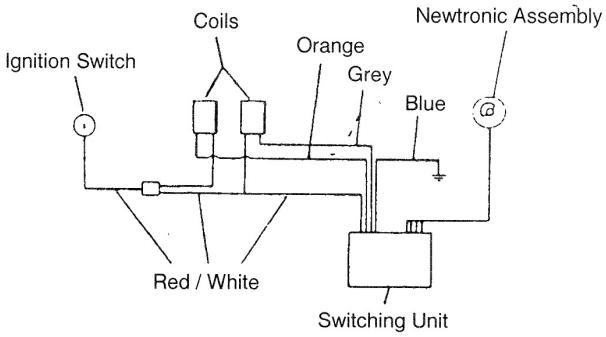
All the necessary components are now fitted and it only remains to set the ignition timing. This should NOT be done in bright sunlight or the timing will be affected. Setting the ignition timing is basically no different to the procedure adopted when using contact breakers, except that a stroboscope 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.

To set the ignition timing proceed as follows:

1. Connect the timing light to the R/H cylinder and start the engine. Align the R/H mark with the pointer by rotating the whole Newtronic baseplate. Also ensure the advance marks are correctly aligned by revving the engine and checking with the stroboscope.

2. Connect the timing light to the L/H cylinder and adjust by moving the small adjustable lamp housing.

3. Check all screws are tight and refit the cover and gasket over the points, and also the cover over the timing marks.




SCHEMATIC WIRING DIAGRAM

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