

## **A. ENGINE DOES NOT START**

### *Incorrect wiring*

- a. Check connections to the coils and that the 12V feed from the ignition switch is connected to the coils.
- b. Check that the earth connection is sound.
- c. Check that the wiring to the switching unit is correct, especially in the moulded plug.

### *Engine backfires on cranking*

- a. Timing rotor 180° out.
- b. Check coil connections for correct colour coding.
- c. Check that the condensers have been disconnected.

### *Flat battery*

Charge battery.

### *Lack of fuel*

Check that the fuel tap is on and that there is fuel in the tank.

### *Rotor not covering lamps properly*

Slacken adjusting screws and move plates carrying the lamps inwards.

### *Timing rotor severs lamp lead*

Send assembly back to Newtronic Systems.

### *Faulty system*

Follow assembly check procedure.

## **B. ENGINE STARTS BUT DOES NOT RUN CORRECTLY**

### *Engine does not advance properly*

- a. Auto advance mechanism binding.
- b. Engine timed on T mark instead of F mark.
- c. Auto advance mechanism not engaged properly in end of crankshaft.

### *Engine misfires at low revs*

- a. Loose electrical connections, especially earth.
- b. Rotor not covering lamps.
- c. Incorrect ignition timing.
- d. Faulty ignition system.

### *Engine runs on only half number of cylinders*

- a. Check all electrical connections.
- b. Rotor not covering lamps.
- c. Faulty ignition system.

### *Engine misfires at high revs*

- a. Faulty electrical connections.
- b. Water in HT connection.
- c. Spark plugs breaking down.
- d. Cracked spark plug caps.
- e. Faulty ignition system.

## **C. SYSTEM CHECK PROCEDURE**

### *1. To check the Switching Unit*

Disconnect lamp leads from the switching unit. Remove the HT leads from the plugs, connect to spare spark plugs and place the plugs on top of the engine.

Switch on the ignition and short the red lamp pin to the blue lamp pin repeatedly and sparks should occur at one of the plugs. (Two plugs in the case of a 4 cylinder engine).

Repeat shorting the red lamp pin to the black lamp pin and sparks should occur at the other plug or plugs. Care should be taken NOT TO SHORT THE RED PIN TO EARTH.

If sparks appear at alternative plug (or plugs) when the blue or black pin is repeatedly shorted to the red pin the unit is satisfactory.

### *2. To check the lamp assembly*

To be done after checking the switching unit. Re-connect the lamps with the coil HT leads still connected to the plugs on top of the engine. Move a piece of card or plastic through each lampholder in turn and a spark should be visible at each plug (or plugs) in turn.

If this occurs both the unit and the lamps are satisfactory.

## **D. PROBLEMS IN TIMING ENGINE**

1. A xenon stroboscope is easier to use than a neon one. This has a brilliant white light not an orange-red one.
2. Check for free movement of Auto advance mechanism.
3. For additional accuracy check the position of the manufacturer's timing marks using a dial gauge

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