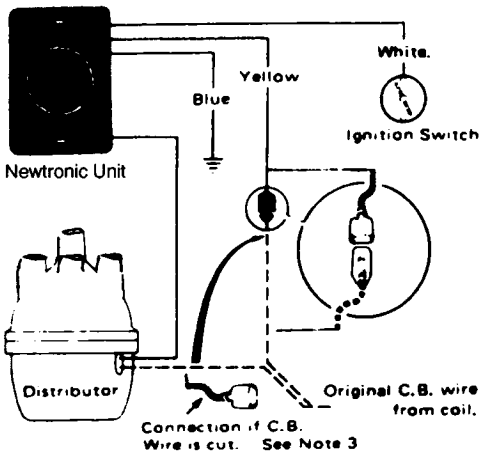
NEWTRONIC SYSTEMS LTD.

WIRING INSTRUCTIONS FOR 12 VOLT NEGATIVE EARTH VEHICLES

Negative earth vehicles. The negative battery terminal will be earthed. Should the positive battery terminal be earthed use a positive earth switching unit.



WHITE SUPPLY WIRE

Connect to 12 volt switched source. See NOTE 1.

BLUE WIRE

Connect to earth. See NOTE 2.

YELLOW WIRE

Connect to original contact-breaker wire. See NOTE 3.

NOTE 1

The purpose of this wire is to supply the Newtronic unit from a 12 volt source with the following requirements:-

a. Off when ignition switch is in "Off" position.
b. 12 volts when ignition switch is in "On" position.
c. 9.5 volts (or more) when ignition switch is in start position.

A suitable source as above can be found at one of the following connections:-

I. IGNITION SWITCH
An all white wire is often suitable.

II. FUSE BOX
Connect to the live side, to avoid ignition cutting out if a fuse blows.

III. LIVE SIDE OF BALLAST RESISTOR
Check that this circuit is live when ignition switch is in "start" position.

IV. LIVE SIDE OF 12 VOLT COIL
Few vehicles are designed to supply 12 volts to the coil, so the coil supply should be checked as in TEST 1.

If in doubt, do not connect the Newtronic supply wire to the coil.

NOTE 2

Ensure that good contact is made with clean bared metal on body or chassis of car.

Check battery and engine earth strap connections are in good condition.

Note that some body panels with mastic sealant in their joints do not provide an adequate earth.

NOTE 3

Leave the original contact-breaker (C.B.) wire connected to the coil. Disconnect the other end of the C.B. wire from the distributors if its terminal will connect directly to the Newtronic yellow wire. If not suitably terminated leave attached to the distributor and cut the C.B. wire at a convenient position. Fit a terminal to the end of the C.B. wire which will mate with the Newtronic yellow wire terminal. The cut end of the discarded wire attached to the distributor should be suitably terminated for restitution if the Newtronic unit is removed.

Do not attempt to short cut the use of terminals by using a 'Scotchlok' connector.

GENERAL NOTES

a. No wiring alterations need be made to the coil or Tachometer.

b. As the cumulative resistance of the resistive spark plugs and suppressed H.T. leads may cause tracking, we recommend providing a total of not more than 15K ohms per plug.

c. The trigger lead from the Newtronic unit to the distributor must be kept away from the coil and H.T. leads. A minimum 3" (three inch) clearance is recommended.

d. The white, yellow or blue wire may be shortened or lengthened as required.

e. Radio interference does not come from the unit itself. Coil and generator suppression should be achieved by the use of .1μf to 1μf capacitors in the normal way. Suppressed leads do not require suppressed caps. With copper leads, suppressed caps or in line suppressors must be sealed to the lead with insulating tape. Loose ignition connections and poor earthing of radio or aerial will cause interference through arcing, possibly accentuated with a Newtronic unit.

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TEST 1, COIL

PURPOSE

To determine what voltage is supplied to the coil terminal (SW or +).

ACTION

Connect a length of wire from the terminal (CB or –) to earth. Switch ignition on.

Connect volt meter to the coil terminal (SW or +) and to earth.

RESULT

If volts reading is 12, and at least 9.5 while cranking, the coil terminal (SW or +) should be a suitable connection point for the Newtronic white supply wire.

If volts reading is less than 12, the coil has a ballasted (low voltage) supply, and is therefore not suitable as a 12 volt connection point for the Newtronic supply wire.

NOTE

Every vehicles coil should be matched to its coil supply, i.e. a 12 volt coil should receive a 12 volt supply, and a ballasted coil a suitable reduced supply.

TEST 2, COIL

PURPOSE

To determine whether the coil is working.

ACTION

Remove H.T. lead from top of coil. Insert a spark plug and earth with a length of wire. Connect one end of a length of wire to coil terminal (CB or –) and dab other end to earth several times.

RESULT

If the plug sparks the coil is working. If not either the coil is dead, or there is no supply to the (SW or +) terminal.

TEST 3, NEWTRONIC UNIT

PURPOSE

To determine whether the unit is working.

ACTION

Leave the earthed spark plug in the coil (as in TEST 2). Remove the lamp wire plug connection box from the side of the unit, exposing the three pins. Switch the ignition on.

With a bent piece of wire short together the exposed (blue) and (red) pins several times, taking care that no part of the wire comes into contact with other metal on the vehicle.

RESULT

If the plug sparks several times, the unit is working. If no spark results, either the unit is dead, or one of its main wires is not connected properly.

NOTE

For test purposes, the Newtronic white supply wire may be connected direct to the battery positive terminal, to ensure that the unit is receiving 12 volts. It must not remain connected to the battery for longer than 15 minutes, unless the engine is running.

For test purposes the Newtronic yellow wire may be connected directly to the coil terminal (C.B. or –), eliminating the possibility of a break in the original contact-breaker (C.B.) wire.

WARNING

If the yellow wire is connected to coil terminal SW or +, or to any other live supply, the unit may be damaged and **the guarantee invalidated.**

TEST 4, NEWTRONIC LAMP

This test can be carried out only if the unit is shown to be working in TEST 3.

PURPOSE

To determine if the lamp if working.

ACTION

Remove the H.T. lead from the coil and insert earthed spark plug (as in TESTS 2 and 3).

Reconnect any terminals previously removed.

Switch ignition on.

Pass the Newtronic scanning disk through the lamp several times, causing the plug to spark.

RESULT

If the plug sparks, the lamp if working.

If not, either the lamp is dead or a lamp terminal is not connected properly.

NOTE

If the lamp is still installed in the distributor during the test, the disc can be passed through the lamp by rotating the engine. If it is not installed the lamp can be held in one hand and the disc passed through it with the other hand.

If a spark is produced at the plug by moving the trigger lead or by applying pressure to the silicon sealing on the lamp, a broken wire is indicated.

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