

P7N Switching Unit

Wiring instructions for 12 volt negative earth vehicles

BEFORE STARTING

Read these instructions carefully and make sure you understand them. Check the polarity of your vehicle and that the coil is properly installed and working as detailed below).

Please note that 'Scotchlok' style connectors are not recommended for Newtronic installation.

CHECK VEHICLE POLARITY

Check the negative battery terminal is connected to vehicle earth. If the positive battery terminal is connected to earth **DO NOT ATTEMPT TO FIT THE SWITCHING UNIT**. It will be damaged and will not be replaced under warranty.

CHECK COIL INSTALLATION

Check the voltage supplied to the coil as follows:

Connect a wire from the negative terminal of the coil direct to vehicle earth. Connect the positive lead of a voltmeter to the SW (or "+") coil terminal and the negative lead to vehicle earth. Switch on the ignition (note: do not leave the ignition switched on for more than a few minutes).

- If the voltmeter reads 12V (and at least 9.5v while cranking) the coil is correctly terminated and the positive "SW" or "+" coil terminal should be a suitable connection point for the White wire of the Newtronic switching unit.
- If the voltmeter reads about 6V it is likely that a ballast resistor is fitted. The coil is correctly terminated but the coil positive terminal should not be used as a switching unit connection point.
- If the volt meter reads a negative voltage 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.
- If there is no voltage reading check the vehicle installation and re-test.

If in doubt, **DO NOT** connect the Newtronic switching unit and seek advice before proceeding.

CHECK THE COIL IS WORKING

1. Remove the ignition lead from spark plug. Insert a spare spark plug into the lead and earth the spark plug body.
2. Connect a length of wire to the "CB" (or "-") coil terminal, switch on the ignition and dab the other end of the wire to vehicle earth several times. The plug should spark each time the wire is earthed. If it does not, check and correct the coil installation before proceeding further.

GENERAL NOTES

- No wiring alterations are required to properly installed coils or Tachometers.
- There should be a minimum of 7cm (3") clearance between the

switching unit trigger lead and the coil or ignition leads.

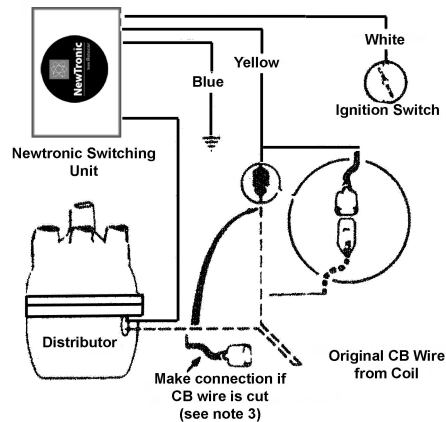
- Suppressed ignition leads are recommended. Suppressed caps or in-line suppressors should be used with copper ignition leads.
- Loose ignition connections or poor earthing can cause radio interference which may be accentuated when a Newtronic system is fitted.

MOUNTING THE SWITCHING UNIT

Secure the switching unit in a suitable position on the vehicle bodywork using the sticky pad provided. Clean the area with a de-greaser or methylated spirit before sticking.

SWITCHING UNIT WIRING

Only when all the preceding tests have been performed satisfactorily should the installation of the switching unit be started. All of the switching unit wires may be shortened or lengthened as required.



White Wire (+12V)

Connect to 12 volt Positive switched source which is :

- 0 Volts when ignition switch is "Off".
- 12 Volts when ignition switch is On.
- 9.5 Volts (or more) when ignition switch is in the "Start" position

A suitable connection may be available from:

- The ignition switch,
- The Fuse box . To avoid a blown fuse cutting the ignition connect to the battery side of the box.
- A Ballast resistor (connect to the +12 V side).
- The +12V SW or "+" ignition coil terminal.

Blue Wire (-12V earth)

Connect the Blue wire to a good vehicle earth on bared metal on the car chassis. (Note that some body panels jointed with mastic do not offer a good earth connection) Also check the battery and engine earth straps are in good condition.

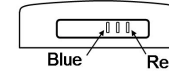
Yellow Wire (CB or negative coil terminal)

WARNING If the yellow wire is wrongly connected to the SW or "+" coil terminal or to any other +12 Volt supply the unit will be damaged and the guarantee invalidated.

Disconnect the contact-breaker (CB) wire from the coil terminal and terminate the Yellow wire in it's place. Remove the other end of the CB wire from the distributor and store. This wire may be reused if the contact breakers need to be re-fitted for any reason.

Check the installation before testing the switching unit.

TESTING THE SWITCHING UNIT



NOTE: the switching unit should not be switched on for more than 15 minutes on a non-running engine or damage will result !

- Set up an earthed spark plug as in part 1) of "Check the coil is working" above.
- Switch on the ignition and with a bent piece of wire short together the switching unit "Blue" and "Red" pins several times (see figure below for location) The spark plug should spark each time.

NOTE: take care the wire does not come into contact with any other pins or vehicle earth.

If the plug does not spark re-check the installation and repeat the test.

TESTING THE IGNITION SYSTEM

- Install the lamp assembly and connect to the switching unit in accordance with the adaptor kit instructions.
- Reconnect the earthed spark plug as detailed in part 1) of "Check the coil is working" above.
- Switch on the ignition.
- Rotate the Newtronic trigger disk through the lamp assembly. If the spark plug fires each time the beam of light is un-obscured, the installation is working.

If the spark plug does not fire check the installation and re-test.

COMPLETING THE INSTALLATION

Time the engine according to the adaptor kit installation instructions

TROUBLE SHOOTING

If a spark can be produced at the plug by moving the installation wires or the lamp assemblies it is possible a poor connection has been made or a wire is broken inside it's sheathing. It will be necessary to locate the problem and rectify it before the vehicle is driven.

If the installation has been thoroughly checked and is still not working the test sequence should have identified if the problem is with the adaptor kit lamp assembly OR the switching unit.

Whichever seems to be at fault should be returned to your supplier for testing.