

# **BOYER BRANSDEN ELECTRONICS LTD**

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## **MICRO-DIGITAL ELECTRONIC IGNITION FOR NORTON COMMANDO / ATLAS.**

### **Comprising:-**

- |   |  |
|---|--|
| a) Transistor box (rectangular red box with wires)                  | d) Plastic straps (1x large 1x small)              |
| b) Stator plate (round printed circuit with two coils and wires)    | e) 1.25" x 0.25" BSF bolt & 1.25" x 0.25" UNF bolt |
| c) Magnetic rotor (round plated steel unit with two magnets fitted) | f) Terminals: 4 male bullets                       |

### **Fitting instructions**

- 1) Remove seat.
- 2) Remove tank, disconnect fuel lines
- 3) Remove contact breaker cover.
- 4) Remove complete contact breaker assembly including the auto-advance unit.  
Disconnect the two wires coloured black-white and black-yellow.
- 5) Set engine at 31 B.T.D.C. on the alternator mark (ensure correct mark is used - there are two marks on the alternator on 1972/3 models, use the mark indicating T.D.C. with the pistons in top position).
- 6) Fit magnetic rotor unit using one of the bolts (supplied), with the magnets in line with the "NORTON" name on the timing case. See Fig.1.
- 7) Fit stator plate (with the connecting wires at the bottom) using the standard studs.
- 8) The magnet on one side of the rotor should now be in the centre of the top timing hole in the stator plate; this should also set it half way along its adjustment slots. If not, move the rotor until this is achieved without turning the engine from 31deg. B.T.D.C. See Fig.2. (THE ATLAS ENGINE HAS THE POINTS HOUSING BEHIND THE CYLINDER HEAD, IT'S SHAFT IS ROTATING IN THE REVERSE DIRECTION.SET TIMING ON THE CLOCKWISE TIMING HOLE.)
- 9) Fit two male bullet connectors (supplied) to the two wires in the timing cover and plug them into the corresponding coloured female connectors on the stator plate wires. These connectors should be wedged in tight against the timing case or strapped to one of the stator coils as they can fracture with vibration. Check the two core cable from timing cover to the front frame tube has a minimum 50mm(2inch) of free play.
- 10) The two wires in the timing cover can be traced up the frame tube to a pair of bullet type connectors. Remove these connectors.
- 11) Remove all the low tension connections from the two ignition coils.
- 12) Remove the white-blue wire from the ballast resistor between the two ignition coils. The colour of this ignition power feed wire may be different on some machines, if so check using a test lamp or meter to find the live wire when the ignition is switched on.
- 13) Remove the red wire from its earthing point on the end of the condenser pack. Reconnect this to the + marked terminal on the left-hand ignition coil.
- 14) Fit the transistor box to the frame tube with the plastic strap (supplied), with the long wires to the right-hand front side and the two short wires to the left. See Fig.3.
- 15) Connect the short black-white and black-yellow wires from the transistor box to the two wires which feed down to the timing cover, using the male bullet connectors (supplied).
- 16) Connect the red wire from the transistor box as follows: first connector to the earth tag on the end of the condenser pack, second connector to the + terminal of the left-hand ignition coil with the red wire already connected to it.
- 17) Connect the - terminal of the left-hand ignition coil to the + of the right-hand coil using the short black connecting wire.
- 18) Connect the black wire from the transistor box to the - terminal of the right-hand ignition coil.
- 19) Connect the white-blue wire (the one removed from the ballast resistor) to the white wire from the transistor box.
- 20) All original wires that have been removed are now not in circuit and can be safely tucked out of the way.
- 21) Check all connections are good and tight, if not remove and tighten with pliers.
- 22) Refit tank, fuel lines and seat.
- 23) Start engine and time with a stroboscope to 31 B.T.D.C.(28 DEG.with standard ignition) with the engine running up to 5000 r.p.m. This is done by moving the ignition stator plate. If the timing is not obtainable before the end of the adjustment, the magnetic rotor will have to be slackened off and moved a small amount until the correct timing can be obtained.
- 24) Refit timing cover. With this system two 12 volt coils can be used as long as they are in good order. The standard 6 volt coils do short out to the metal case, check for damage by the mounting clamps. A single dual output coil can be used as long as its primary resistance is more than 3 ohms. This should be mounted on the frame in a manner that will take the heat from the centre core.  
**WITH THIS SYSTEM SUPPRESSED SPARK PLUG CAPS OF 5000 OHM MUST BE FITTED AS RADIO FREQUENCY ENERGY CAN CORRUPT THE MICROPROCESSOR AND PRODUCE VERY BAD RUNNING.**

PLEASE TURN OVER

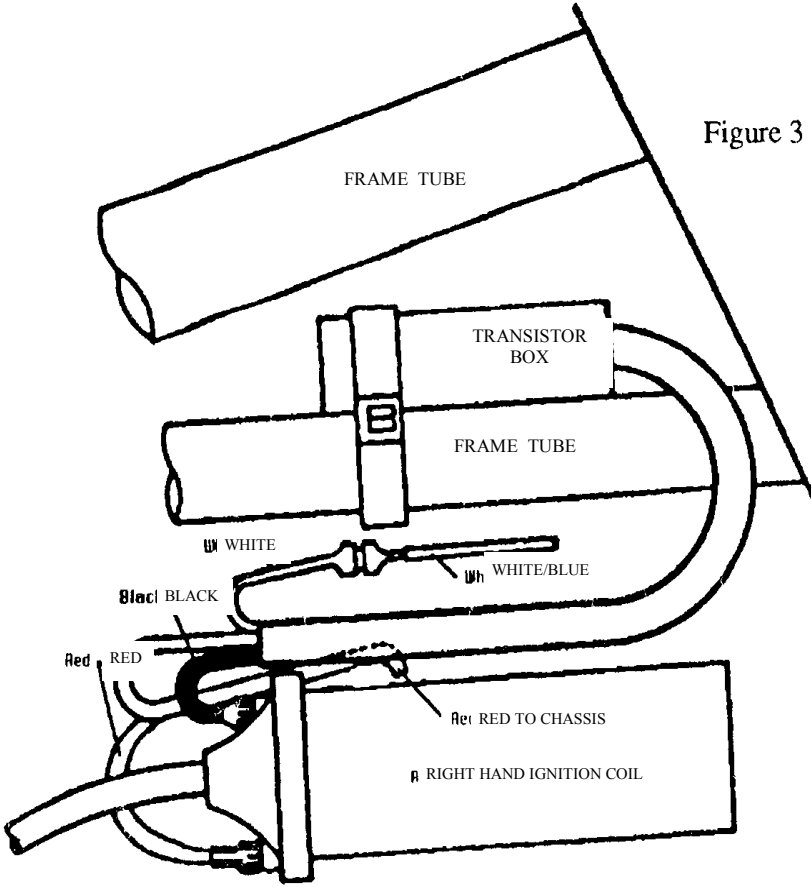


Figure 3

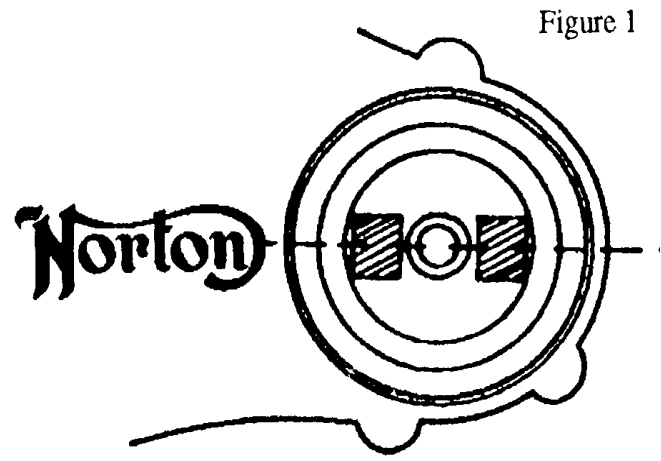


Figure 1

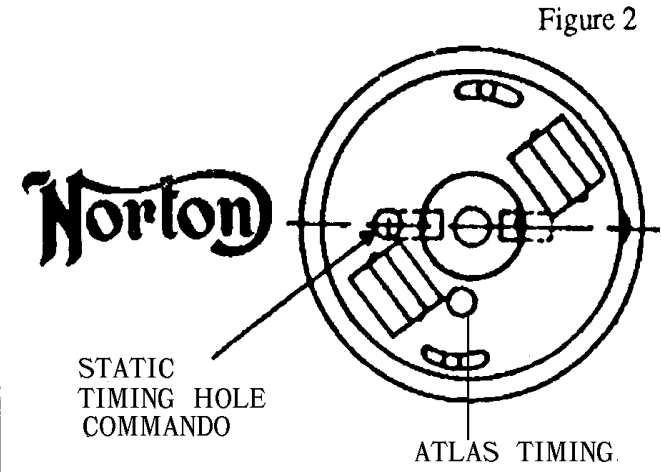
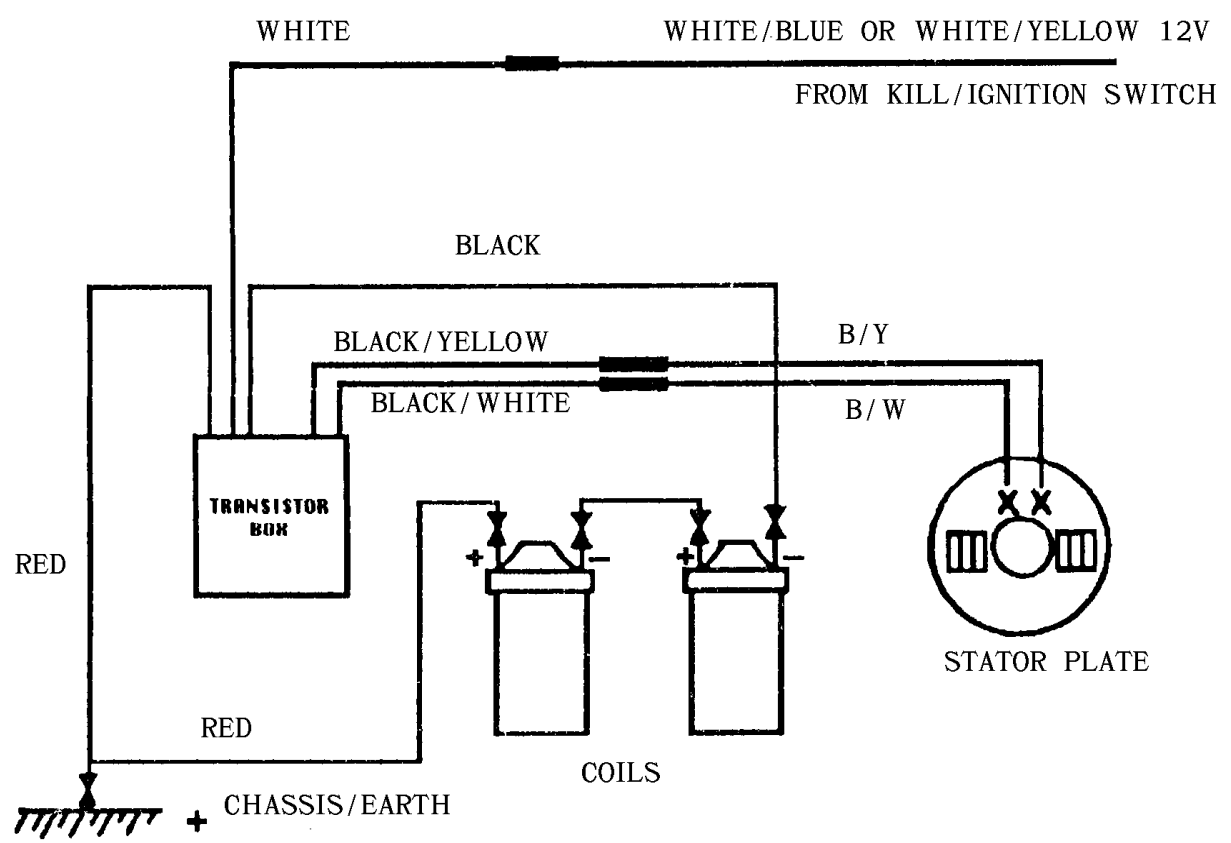


Figure 2



Norton Commando Models --- POSITIVE GROUND