

MICRO-POWER IGNITION SYSTEM FOR HONDA TWIN CB/CL 250-350 MOTORCYCLES**Comprising:-**

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| a) Transistor Box BOX00213 (Blue Micro Power ignition box with wires) | e) 1M Copper-cored h.t. wire. |
| b) Stator Plate STA00293 (round printed circuit board with two coils) | f) 2 x LB05F Spark Plug Caps. |
| c) Magnetic Rotor ROT00293 (round plated steel unit with four magnets) | g) 1 Large, 6 Small plastic straps. |
| d) Dual output digital coil, 4mm h.t. coil terminals, rubber boots. | |

General fitting instructions

You will require the standard bikes toolkit plus a fuel can and syphon pipe, 10mm socket spanner and strobe timing lamp. An impact screwdriver would be useful if the screws are very tight.

- 1) Open seat and remove tools, disconnect battery Negative connections and isolate.
- 2) Turn off petrol, drain fuel, remove petrol tap pipes and one end of tank balance pipe. Unhook rear petrol tank mountings. lift and slide back, removing tank.
- 3) Remove LHS camshaft points cover screws and remove cover.
- 4) Remove the two crosshead screws and washers holding the points plate assembly, retain the screws and washers. Remove the plate, disconnect its Blue and yellow wires from the ignition coils.
- 5) Remove the 10mm centre bolt and washers holding the points cam and mechanical advancer unit, pull and slide these off, retain the bolt with its washers.
- 6) Fit the supplied 4 magnet rotor, rotate until the pin on the camshaft drive plate locates in the rotor hole, replace the 10mm bolt and washers and retighten (fig.1.)
- 7) From the original points plate wires, remove the D shaped rubber grommet using side cutters on its rounded side. Re-use the grommet on the sleeved wires near the edge of the new stator plate.
- 8) Position the Stator Plate into the points housing with the wires exiting the plate at 4 O/Clock, the round steel pins pointing towards the magnets of the installed rotor.
The stator plate has two perimeter cut-outs at 10 o/Clock and 2 O/Clock to clear the two securing nuts and washers of the engine rocker pins.
Refit the points plate screws and washers and loosely tighten with the plate cut-outs centred and fit the grommet to protect the sleeved stator wires as they exit the alternator housing. The cover will be refitted after the timing has been set up.
The Blue and yellow stator wires should be routed back over to the engine and run forwards with the bikes throttle cables to where the ignition box will be fitted to the RHS of the ignition coil bracket.
- 9) Remove LHS alternator cover, (place oil tray beneath to catch any oil residing in generator housing)
- 10) Using carburettor cleaner, thoroughly clean the alternator rotor full advance timing marks, and the static reference mark on the stator.
Correcting fluid or white paint can be used to highlight the marks for strobe timing later. (See fig.3)
- 11) Unplug the spark plug caps, remove two long 6mm bolts that secure the aluminium coil mounting bracket/condensers, ignition switch and Horn to the frame.
- 12) The original Honda condenser pack and ignition coils are not required, remove these and unplug their Black/White, blue and yellow wires.
- 13) The new Micro Power coil can be screwed to the steel loop above the aluminium ignition coil bracket where the condenser pack was attached. As the condenser pack holes have a slightly tighter pitch, one of the aluminium sleeves in the micro power coils mounting holes will need to be pushed out. Use the original Condenser screws to fit the coil to the bracket, position with the HT output shrouds pointing rearwards. (See Fig.2)
- 14) Refit the aluminium ignition coil bracket to the frame together with the ignition switch/horn mounting plate, re-using the long 6mm bolts.
- 15) Prepare two new HT leads. Cut the L/H Lead to 440mm and a R/H lead to 500mm. Fit the 4mm brass crimp terminals to one end of each HT wire by crimping or soldering, lubricate and slide on a waterproof rubber boot over each of the ends.
Plug the longer (R/H) wire to the upper ignition coil terminal, push the rubber boot over coil shroud and fit two small zip ties to secure. Repeat using the shorter (L/H) wire on the lower coil terminal.
- 16) Run the wires to their appropriate cylinders and trim excess if necessary. Screw on the spark plug caps and fit to the spark plugs.
- 17) Fit the Micro Power ignition box into the right hand side of the ignition coil bracket with the label out and the wires exiting forwards. Secure using a large zip tie around the ignition coil bracket (See fig 2).
- 18) From the ignition box, route the long Black wire (earth Neg -) with the 6mm eyelet rearwards along the frame to the battery's NEG (-) terminal, leave unconnected for now.
- 19) Route the sleeved pair of Green and BLK/WH wires through the frame to the ignition coil terminals, connect the BLK/WH to the coil '+' and the Green to coil '-'
- 20) Plug the single BLK/WH wire with the male connector to the black/white wire dual connector on the bikes loom that connected to the original ignition coil.
- 21) Connect the Blue and Yellow wires to the corresponding wires coming across from the stator plate.
- 22) Check all the connectors are tight, and secure loose wiring using zip ties to allow the tank to be refitted without pulling any of the connectors apart.
- 23) Refit the petrol tank and reconnect the two fuel tap pipes and the tank balance pipe, add petrol and check for leaks.
- 24) Reconnect the battery's negative terminal (—) connections, adding the new Black wire from the Micro Power unit.

Setting the timing

- 25) With the bike on its centre stand in second gear, nudge the back wheel until the fully advance timing marks on the generator rotor (two marks close together at 36 degrees and 40 degrees BTDC) straddle the static reference mark on the generator stator. (See fig.3)
The engine is now positioned mechanically to set the static timing. Adjust the ignition stator plate's angular position until one of the four magnets on the new camshaft ignition rotor, lines up centrally behind the timing hole on the stator plate then lightly tighten the plates securing screws. (See fig.4)
- 26) Start the engine to allow the oil and the ignition box to warm up for a few minutes. Connect a strobe timing light to a separate slave 12 volt battery, clip the trigger lead to the nearest plug lead to strobe the timing.
When strobed, the full advance timing marks on the generator rotor should be seen to straddle the static reference mark on the generator stator at 4000 rpm, Adjust the stator plate if necessary, then fully tighten the stator plate securing screws. The ignition timing is now set and requires no maintenance.
- 27) Refit the generator cover/gasket and the contact breaker cam cover, note: a small area in the lower camshaft cover gasket will require trimming with scissors to clear the lower pick up coil on the newly fitted stator plate.

General Data

With this system both spark plugs spark at the same time, but only the cylinder under compression will fire.

5000 ohm suppressed type Plug caps must be fitted and all High Tension connections secure.

The working voltage of the ignition is 10 to 16 volts. The Honda rectifier and voltage regulator should be in good order. These parts can be replaced with the B.B. Power Box Single Phase alternator regulator if necessary.

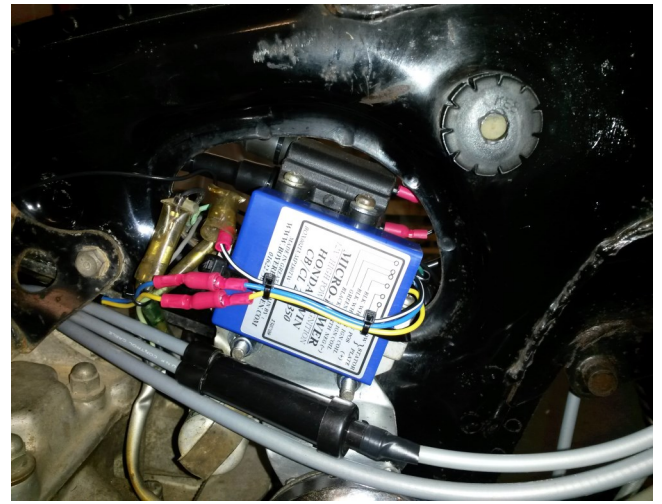
When static the ignition drain current is approximately 50mA. When running consumption is 1.0 Amp , a 6 Amp pulse may occur at switch on.

If testing, the resistance of the stator plate at its wires should be approximately 130 Ohms .

Warning : Protracted attempts at starting or long periods of idling should be avoided, these can cause excessive heating of the ignition components.



(fig.1.) Magnetic rotor fitted to camshaft



(fig.2.) Installation of ignition unit and ignition coil.



(fig. 3.) Engine set to 38 DBTDC (full advance) to set static timing.
(Also use this position for strobe timing at 4000 rpm)



(fig.4.) Set stator position—magnet centrally behind timing hole

