

# Cambridge Lambretta Workshops

## 12 VOLT ELECTRONIC SYSTEM

Please note we no longer supply the Indian made SIL kits, but we have left the instructions here for your reference. It seems far too many suppliers neglect to give you basic fitting instructions, let alone back up and advice when selling such kits.

These systems will fit all Lambretta Li/TV/SX/GP models. Machines using a GP type crankshaft have their own kits, please be sure of what type of crankshaft you have fitted to your machine to ensure correct kit is supplied. We prefer to use original type wiring diagrams. Most electronic looms are nothing more than a standard loom, with one wire taken out, and a new terminal fitted to the green. Using this type of loom does mean that you have to alter wiring in your headset. If you follow our instructions here, you can change all wiring without the need to swap wires in your headset, as all changes are made to your existing wiring loom, and at the junction box end.

### Types of electronic kits offered

#### Kit consists of:

Flywheel, stator, regulator (battery or non battery), C.D.I. unit.

#### Fitting the stator:

- 1) Remove the original flywheel and stator, remove diode + battery (if fitted) and H.T. coil. Refer to the Lambretta manual if necessary for this procedure.
- 2) Secure stator into mag flange as normal, making sure that the studs that secure the mag flange to the engine, the bolts that secure the stator to the mag flange and the clip that secures the stator wires do not sit too proud. Otherwise they will catch on the back of the flywheel. When fitting the stator also make sure that you do not trap the stator wires, crushing them against the mag flange and possibly causing a short circuit. Fit the stator so that the securing 10mm bolts are in the centre of its respective slots.
- 3) Presuming that your crankshaft taper is in good condition, fit a new woodruff key, and then slot the flywheel on. At this stage do not tighten.

## To set ignition timing:

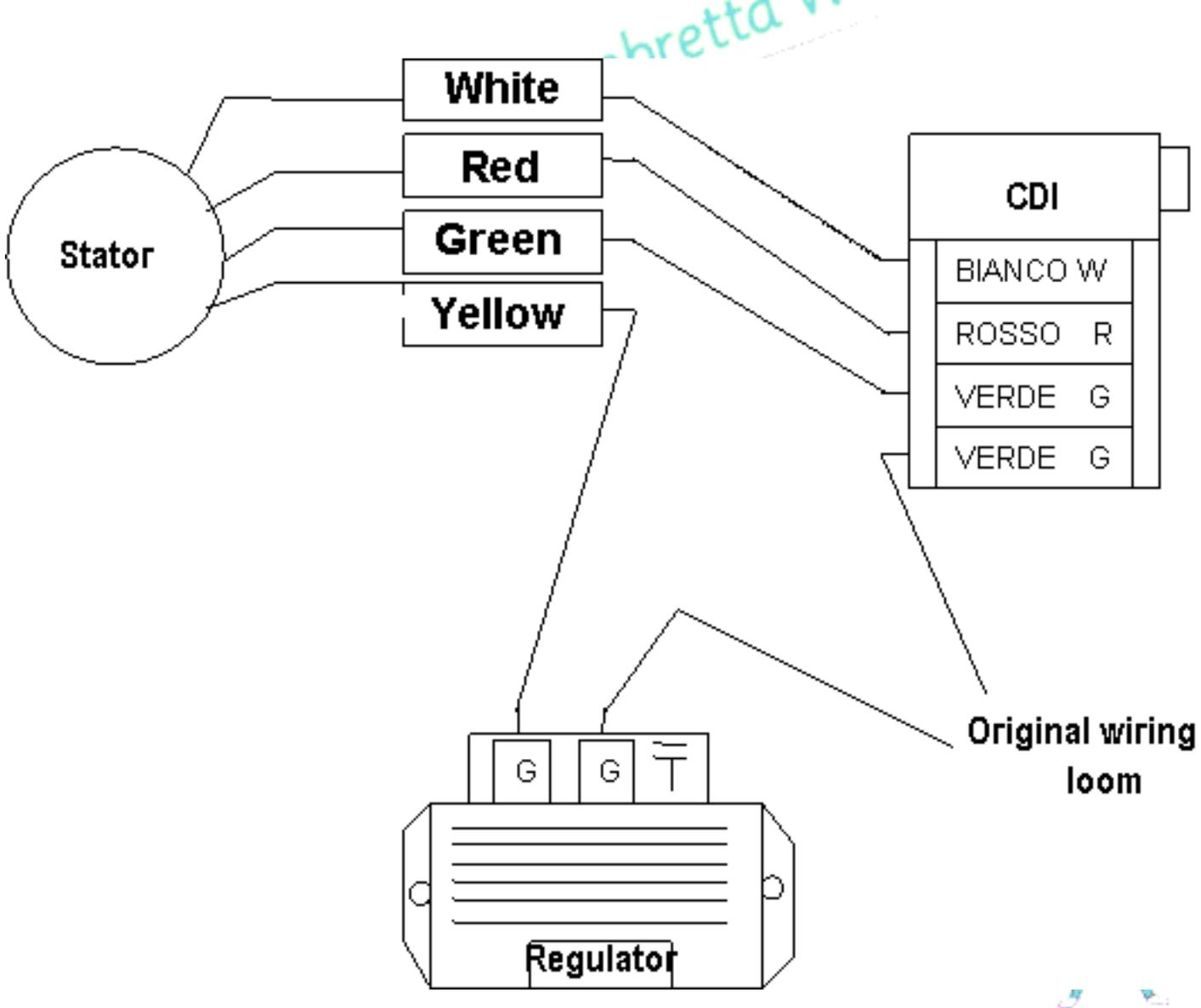
- 1) You must turn the engine over by rotating the flywheel clockwise and find T.D.C.
- 2) On the outer edge of the flywheel at approximately two o'clock, you will find an arrow. Tap a notch using a small chisel or any other suitable sharp implement on the edge of the mag flange, right opposite the arrow when the engine is at T.D.C.
- 3) Now, if you have a timing disc secure it to the flywheel and 21 degrees for GP, 23 degrees all others \*\*, anti-clockwise, and again make a notch in the mag flange right opposite the arrow. If you do not have a timing disc and take a rule and measure 1 1/8 GP, 1 1/4 all others, inches anti-clockwise from the T.D.C. notch and mark the mag flange, again on the outer lip.  
**\*\* Please note due to differing kits, fuel types and other such variants, we would suggest you contact your cylinder kit supplier for details of what they recommend. For standard machines, most suppliers have found 21 degrees for Li, SX, TV type machines, and 19 for GP. Most performance kits suggest from 16 to 19 degrees, these figures are for your guidance only.**
- 4) Now, if you look at the window on the flywheel (at five o'clock), you will see two small lines inscribed. These two lines have to match up exactly with the line on the black pick up box on the stator, when the arrow on the flywheel is pointing at the 21' or 23 degrees depending on your machine. If the two lines on the flywheel are further round (clockwise) then slacken the 10mm stator bolts and turn the stator clockwise until the timing is correct. Secure stator bolts. If the two lines on the flywheel are in front of the pick up box, mark and then slacken the three 10mm stator bolts and turn stator anti-clockwise until timing is correct. Secure stator bolts. The timing is now set, and will never alter.
- 5) Secure flywheel to 50n lbs. If the flywheel does not turn freely then check for cause, (stator bolts, damaged mag flange, twisted crankshaft).
- 6) Fit flywheel dust cover and circlip. Secure flywheel cowling.

## Wiring instructions

You will need an electric drill and 10mm mounting bolts, or if you have purchased one of our electronic mounting brackets no drilling is required.

- 1) Fit junction box to the nearside footboard frame leg. Fit H.T. lead to C. D.I. unit, or the LH side of the regulator.
- 2) Secure the regulator C.D.I, unit somewhere close to the junction box, or on the RH side of the bracket. Make sure that the regulator is well earthed and solidly mounted. It must not be near any heat source. Take the earth wire for the C.D.I. unit and secure under one of its mounting bolts or another suitable earth position.
- 3) Wire up regulator and C.D.I. with the four wires from the stator unit as per the diagrams, depending on which kit you have purchased.
- 4) Take the two green wires (joined) from your main wiring loom, these need to be fitted with a lucar terminal and then plugged into the remaining green on the CDI. Make sure the green that was on your old coil is taped up and not earthed in any way, this wire is no longer used.
- 5) The three remaining wires in your scooters main loom now need to be joined together. These in turn should be connected to the other terminal on the regulator.
- 6) Fit the another wire as an earth wire for the regulator.
- 7) If using a non battery 12V ignition kit and the scooter is fitted with a battery then tape up the battery feed wires, If your machine was previously fitted with 6 volt bulbs then replace with 12 volt ones. If your machine was previously D.C. (with battery) you will also need to change the horn to an A.C. type.
- 7a) If you have a battery electronic kit, please refer to the appropriate wiring for further instructions.
- 8) Check for spark, start engine and check lights.

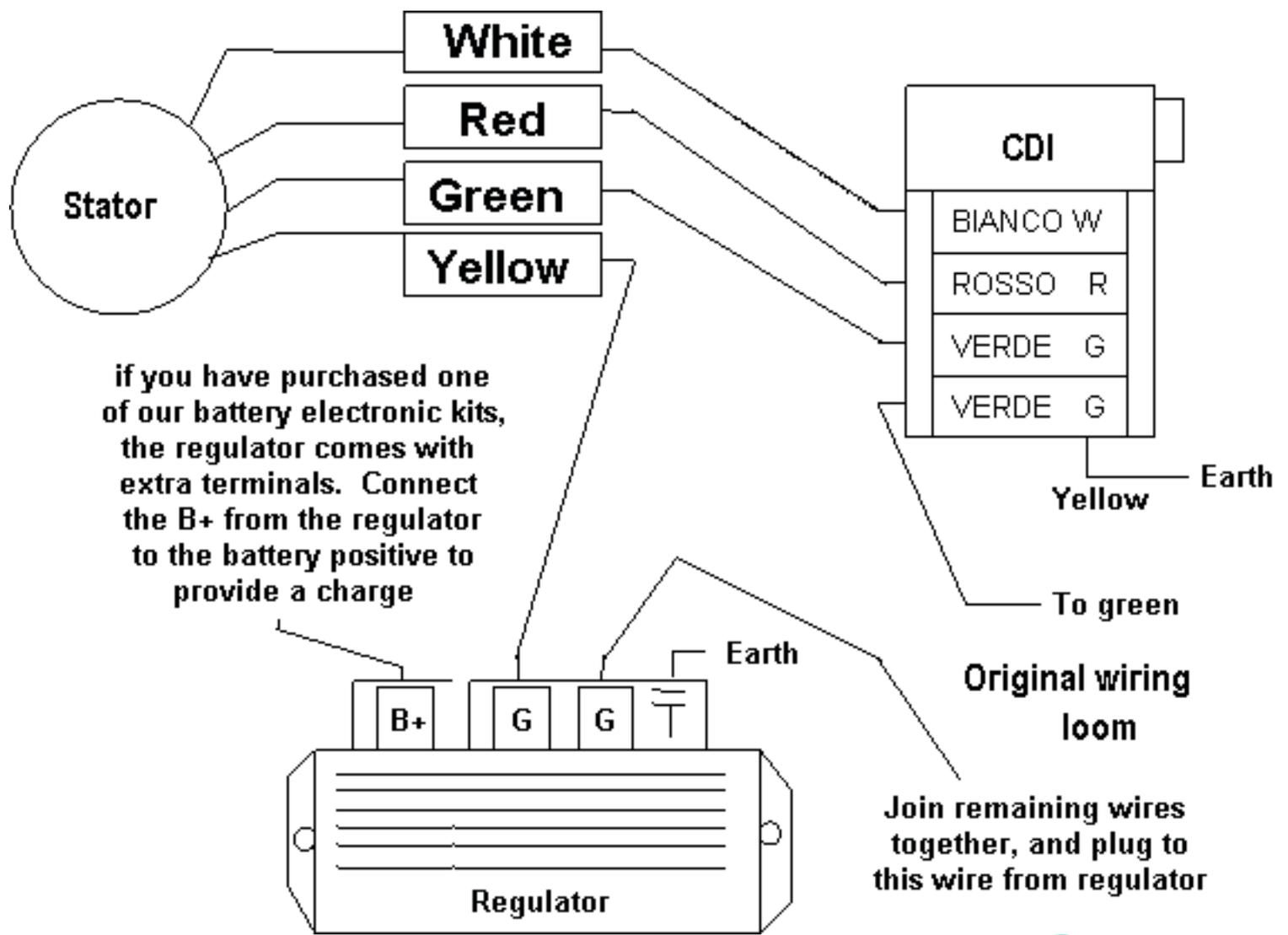
**Wiring Diagram for standard non battery electronic**



Wiring Diagram for standard auxiliary battery electronic

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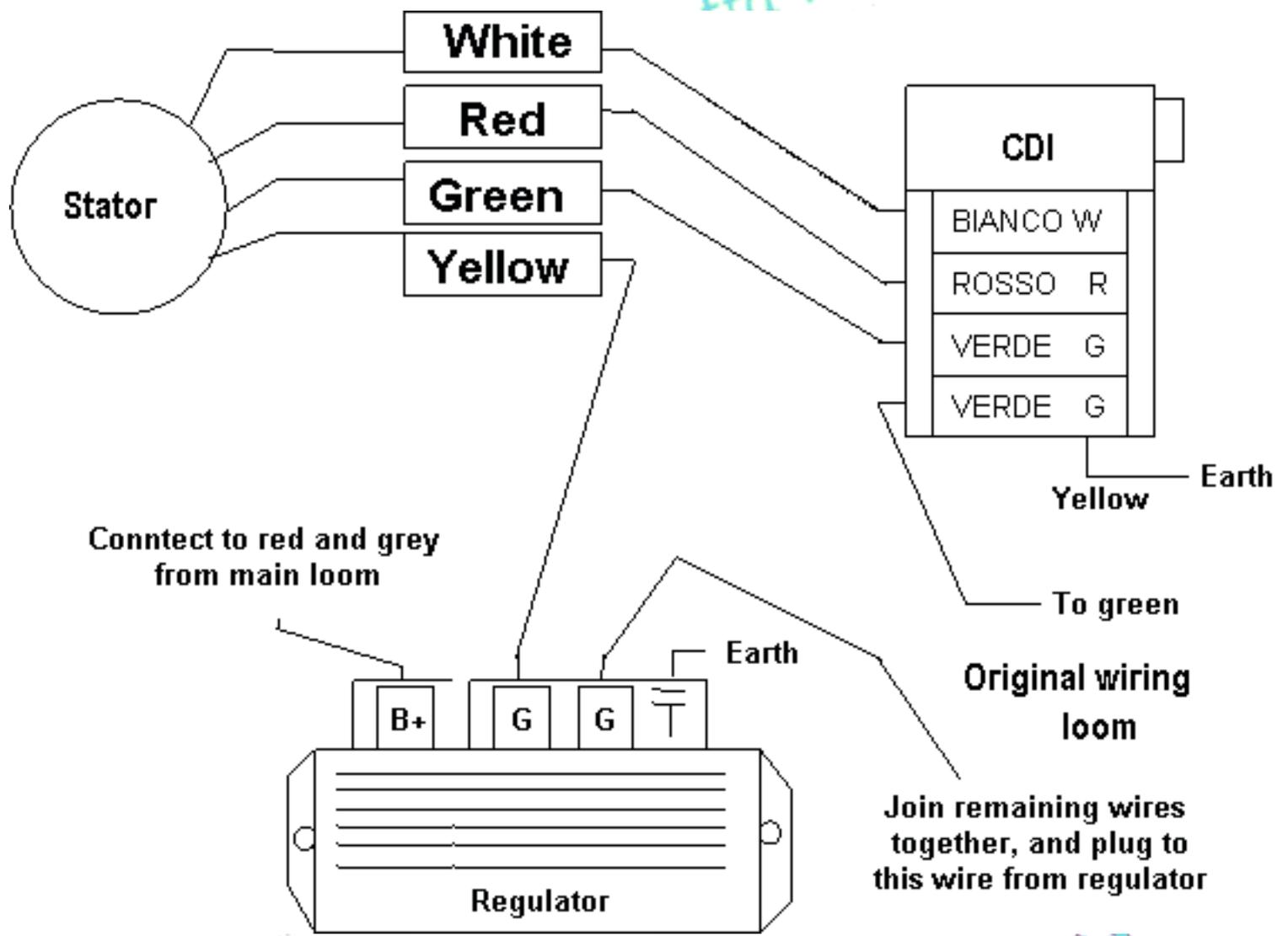


Wiring Diagram for standard standard battery electronic

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