Ignition Alternator Kit
STK-177– CDI ignition +12v AC lighting + 12v DC battery charging
Bantam D10, D14, B175

CONTENTS

Stator (BP100)	Rotor (RO100)
Regulator/rectifier RR215	2 Ring Tags M6
HT-CDI +cap	Fitting kit - 3x spacers
Collet	M5 x 12 screws x2
1 Male & 1 Female bullet + cover	

Optional parts

Rotor Puller - FP-100

Rotor Holder - RH-5637

PRODUCT FEATURES

- Replacement for Lucas or Wipac alternator
- Self generating cdi ignition with electronic advance/retard curve
- No battery, contact breaker assembly or distributor required
- Simple timing set-up, the rotor and stator have engraved marks, these are aligned as per the fitting detail.
- Single phase alternator 50w output with combined regulator and regulator/rectifier. This gives a controlled 12v AC output to the lighting circuit to prevent bulb failure + 12v DC output to a battery - if fitted. The battery can be replaced with a capacitor pack if required, this gives greater reliability but has limited energy storage capability.
- Rotor fitted with collet locking system in place of the original key and keyway. This allows correct timing set-up as the keyway is not required. If the crankshaft is rebuilt it is quite common for the keyway to be in the wrong position.

Fitting Instructions

Step 1 Remove LH engine cover, exposing the alternator. Undo the x3 nuts holding the alternator/stator. Retain the nuts.

Step 2 Remove old alternator/stator from the crank cases.

Step 3 Undo the rotor nut, this can be done by holding the rotor with a suitable tool. If an impact wrench is available it is not normally necessary to hold the rotor.

Step 4 Fit new stator in position shown (fig. 2), then fit the 3 spacers supplied onto the studs followed by washer and original nuts. The stator should be located in approximately the middle of the slots. Don't fully tighten yet.

Step 5 Remove the woodruff key from the crankshaft. Locate the taper locking collet on the crankshaft as far as possible and then fit the new rotor. Locate the nut onto the crankshaft but do not fully tighten yet. We recommend you use Loctite on the nut.

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Step 6 **Setting the timing (see fig 3)** - the piston should be set at 16^0 BTDC using a dial gauge or timing disc. With the piston set rotate the stator (without moving the crankshaft) so the 'FA' mark aligns with the pre-set punched mark, in red (not the FA line) on the stator **(see fig 3)** . Tighten the rotor retaining nut to about 40ft/lbs torque. Final adjustment can be made by moving the stator on the slotted holes - tighten the x3 nuts when set.

Step 7 Remove the original HT coils. Locate the HT-CDI coil in a convenient position, note the HT-CDI coil is supplied with an adaptor plate, also the HT-CDI cable can be cut to length as required. Connect blue & black/white cables together to the 1/4" female large terminal and the black cable to the 3/16" female small terminal (see circuit diagram below).

Step 8 The black/white cable from the HT-CDI is for connection to a stop switch - when grounded it will cut the ignition; see circuit diagram.

Step 9 Connect the alternator feed to the combined reg/rectifier as shown below. This will provide regulated 12vAC for the lighting and 12vDC for battery charging if fitted..