

STK-970 Villiers Trials 9E/32A Engine



CONTENTS

Flywheel Outer Ring:

Standard (2.85kg)

or Heavy (3.5kg)

or Extra Heavy (4.5kg)

*weights shown for combined inner & outer flywheels
only 1 will be included in the kit*

Flywheel Inner

Stator

Fitting Kit

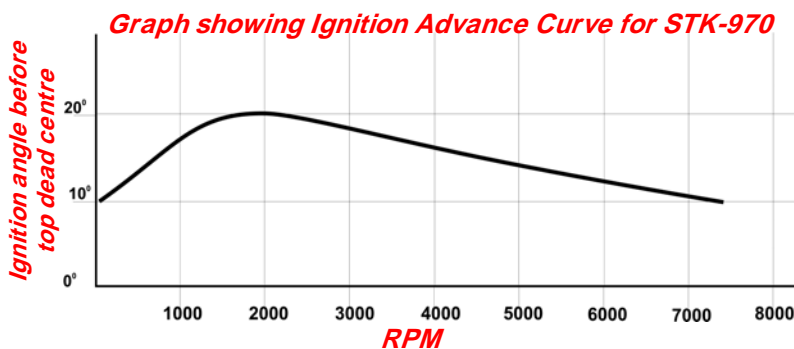
HT-CDI



STK-970 - shown here with 'heavy' (3.5kg) flywheel

PRODUCT FEATURES

- CDI ignition system for strong spark starting at only 150 rpm.
- Automatic variable advance curve specifically for the 2 stroke engine



- Flywheel is a 2 piece solid alloy steel construction + magnet ring with perfect balance 'by design'. It has a self extracting/retaining nut as per the Villiers original. With the outer flywheel removed initial timing set up and adjustment is easily achieved.
- The outer flywheel ring can be changed for a lighter or heavier version depending on rider preference.
- Three versions are available with total weights of 2.85kg, 3.5kg and 4.5kg.
- Note original standard brass flywheel is 2.65kg and 'heavy' original for trials is 3.5kg.
- High quality electroplating and stainless steel fittings are used for maximum corrosion protection.



Fitting Instructions



Step 1

The base plate is retained by tapping the 2 holes indicated, thread size M6 (see fig. 1). These were used for the original stator coils, the hole size should already be correct at about 5.2mm.

Tapped holes

Fig. 1

Step 2 Fit the base plate using the x2 domed head screws (see fig. 2). Note: it is important to use the spring washers provided - **do not fully tighten yet.**

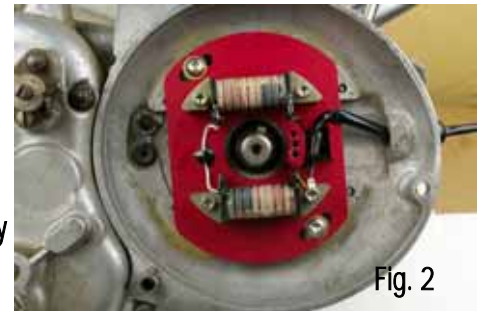


Fig. 2



Fig. 3

Step 3

The cable exit is through the original HT cable hole at the front of the engine (see fig. 3) - use the screw on gland supplied as this will ensure a waterproof seal; tighten the gland when the cable is correctly located.

Step 4 Fit the inner flywheel

Step 5 (See fig. 4) To set the timing, remove the spark plug and with a dial gauge set the piston to 10° before 'TDC' (the original for fixed timing is about 23° BTDC) Then, without moving the flywheel, align the punched mark on the base plate with the 'F' mark line on the flywheel. See fig. 4. The base plate can then be tightened using a 4mm allen key through the holes in the flywheel.



Fig. 4

Timing marks

Step 6 Fit the combined HT-CDI unit, plug in the 2 terminals from the stator, the larger terminal has a black/red lead connected; if this terminal is connected to earth or the engine or chassis, this will cut the ignition so a kill switch can be fitted if required.

Step 7 Replace the plug, fit the HT cap on the lead after cutting to the length required.



Fig. 5

Step 8

(See fig. 5) When fitting the outer flywheel it is recommended that you use Loctite (Threadlock) or similar (**don't use Loctite stud retainer if you wish to remove the screws in the future**) to retain the 6 counter-sunk screws.