

FITTING INSTRUCTIONS FOR BSA TWINS

NOTE

Before commencing the RITA installation it is worth considering the fact that the timing cover has to have one threaded lug removed to allow the Pickup Plate to fit.

For those with access to some simple engineering tools the cover fixing can be altered as follows:

1. Drill and countersink two more holes in the cover. OR obtain an alternator inspection cover that has four holes in it.
2. Fit the cover with the existing screw(s) and spot through the other two holes with a close fitting drill. Drill through with the tapping size drill and tap new threads.
3. Araldite the spare screw into the hole in the cover and leave to set. Refit the cover with three screws.

Dismantling (Oil in Frame Model)

Remove the seat, air filter covers and elements and the battery. Remove the panels to the rear of the air filter by taking out the $\frac{1}{4}$ " bolts inside the filter casting. Then remove the 2 x 5/16" bolts holding the casting to the frame and replace them with the longer ones supplied. Take off all the wiring connectors from the coils and condensers. Remove the contact breaker plate assembly and the advance/retard unit.

Assembly Fit the amplifier brackets onto the extension of the longer bolts through the air filter. Ensure that there is 4 mm. minimum clearance from the frame, mudguard and chainguard to the amplifier. Pass the amplifier harness to the ignition coils avoiding sharp edges and rubbing points. The battery can now be replaced, but do not connect up until the wiring is completed. Ensure that the aluminium amplifier case is earthed. The air filters can now be re-assembled. Note that on models with a plastic extension tube fitted to the elements, this must be removed. Bend back the metal retaining lug and push the plastic extension out of the filter. Screw the pick-up backplate on to the engine in the middle of its adjustment slots, in the position shown on the diagram. Fit the reluctor into the camshaft taper and set the 0.2-0.3 mm. air gap. Note that it is unnecessary to slacken the pivot screw to adjust the air gap; only slacken the clamp on the slotted hole in the pick-up. Set the engine on the fully advanced timing marks and turn the backplate to trap the 5mm. timing spacer as shown.

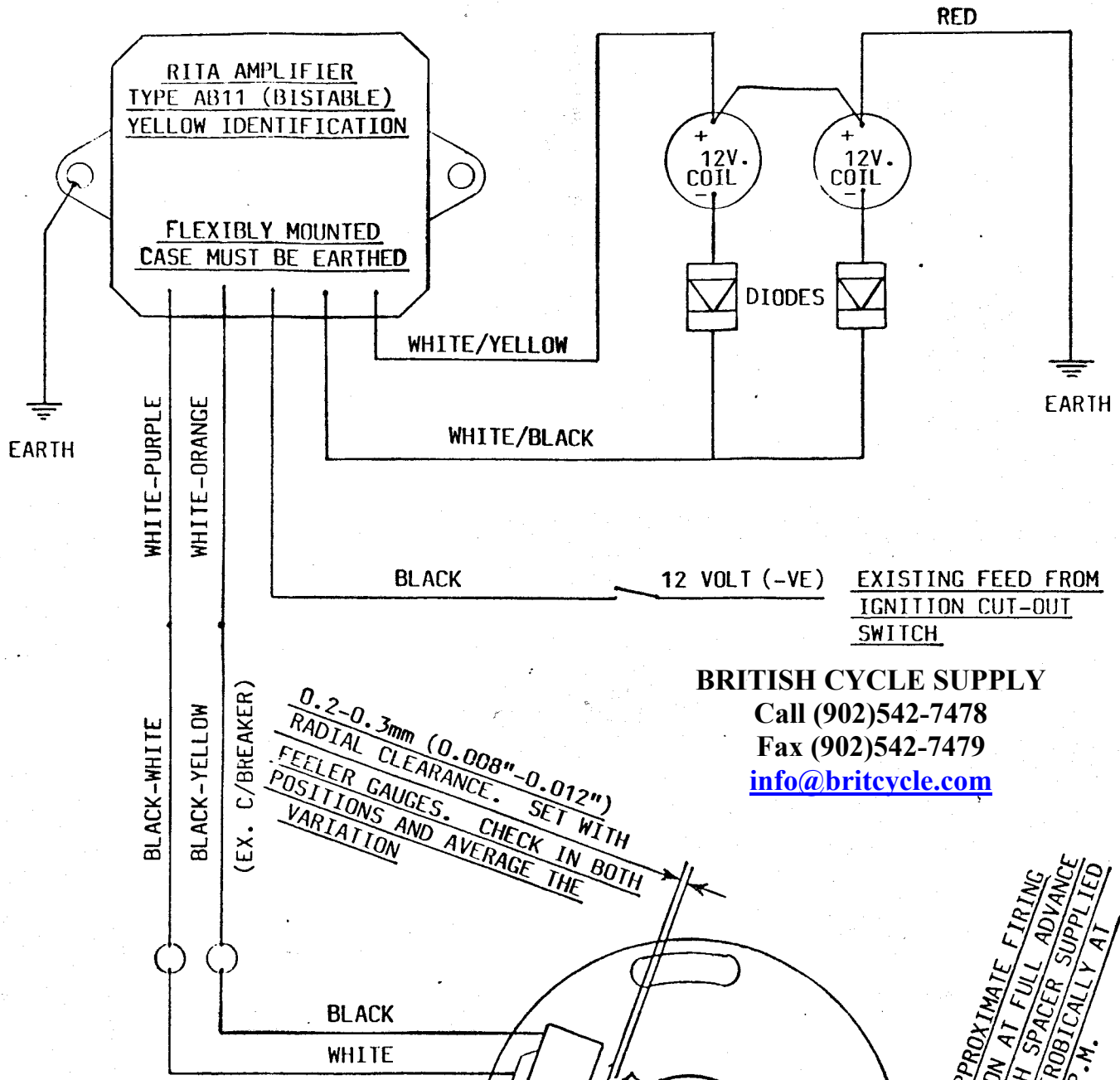
Note For earlier BSA Twins in the non-oil carrying frame, it is will be necessary to find an alternative mounting position for the amplifier.

Wiring Connect the diodes to the white-black wire from the amplifier and fit the link wires from the diodes to the coil negative terminals.

The pick-up wires from the RITA amplifier are prepared to connect with the bullet connectors, on the old contact breaker wires and should be wired as shown in the diagram. Note the arrangement of metal and fibre washers before removing them to fit contact breaker wire eyelets. This is to ensure both pairs of eyelets are isolated from each other and the plate.

The remainder of the wiring is connected as shown in the diagram. Tape or clip wires to frame members where possible.

Run the engine and adjust the fully advanced timing position using a stroboscope. A flash reading at 6,500 RPM is necessary as there is a slight increase in advance all the way up the range of RPM. The engine can be run-in as set statically. Strobe timing can be done later if it is felt necessary.



0.2-0.3mm (0.008"-0.012")
 RADIAL CLEARANCE. SET WITH
 FEELER GAUGES. CHECK IN BOTH
 POSITIONS AND AVERAGE THE
 VARIATION

5mm APPROXIMATE FIRING
 POSITION AT FULL ADVANCE
 SET WITH SPACER SUPPLIED
 CHECK STROBICALLY AT
 6,500 R.P.M.

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NOTE THE AMPLIFIER CAN BE DAMAGED IF THE H.T. VOLTAGE DOES NOT GO TO EARTH. THEREFORE DO NOT EXCEED A 5mm AIR GAP IF TESTING COIL OUTPUT.

