

Mistral Engineering

63a Turner Road, London, E17 3JG Tel: 01-521 1180

FITTING INSTRUCTIONS FOR BSA TWINS

ISSUE 2 November 1981

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 5/16th 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

Mount the diode pair via centre hole, by bolting in a position which allows the wires to be free and not strained. The aluminium mounting bracket does not have to be earthed or have a heat sink. NO DRILL 1/4" HOLE IN TRIANGULAR PLATE BEHIND OIL FILTER & MOUNT DIODE PAIR UNDERNEATH

N.B. The diode pair looks similar to a replacement rectifier used on some machines, but internally it is entirely different and neither component should be interchanged.

Fit the amplifier brackets on to 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 diode pair 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 screw on the slotted hole in the pick-up. It is necessary to cut off one of the lugs on the case to clear the pick-up. Set the engine on the fully advanced timing marks and turn the backplate to trap the 5 mm. timing spacer as shown.

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

Wiring

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 when 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.

