

INSTRUCTIONS FOR 250 c.c. O.H.V.

Royal Enfield

MODEL S.51 MOTOR CYCLE

SUPPLEMENTARY TO INSTRUCTION BOOK FOR O.H.V. MODELS G, J, AND J2, ISSUED JUNE, 1951.

Paragraph numbers in brackets refer to Instruction Book for Models G, J, and J2.

1. (1) **Foreword:** The Model S.51 has been introduced to meet the demand in certain countries for a machine of smaller capacity than the Model G. The engine has a capacity of 248 c.c. with a bore and stroke of 64 x 77 m.m. Two types of ignition system are available, i.e., Coil and Magdyno. The coil ignition system provides particularly easy starting at a low cost, but the current available for lighting is not so great as with the Magdyno system. The two ignition systems require certain differences in the machining of the crankcase and the cylinder head so that it is not feasible to convert from one system to the other.
2. (2) **Controls:** No exhaust lifter is fitted to the 250 c.c. engine, which can easily be kicked over compression. To stop the engine, switch off in the case of a machine fitted with coil ignition, or fully retard the ignition and open the throttle quickly in the case of a machine fitted with a Magdyno.
Neutral Finder: Not fitted to this model.
Lighting Switch: On machines fitted with coil ignition a special type of combined lighting and ignition switch is fitted providing five positions, as follow:—
P —Parking lights, i.e., pilot light, tail light and speedometer light. Ignition switched "off."
Off —All lights and ignition "off."
Ig. & Ch.—All lights "off," ignition "on."
H —Head light main bulb, speedometer light, tail light and ignition "on."
L —Head light pilot bulb, speedometer light, tail light and ignition "on."
The switch can be operated only when the central key is in position. This key can be removed only when the switch is in the "P" and "off" positions.

Ammeter: This is not fitted on machines with coil ignition which have instead a red warning light in

the top of the headlamp. This lights when the ignition is switched on and the engine is not running.

3. (16) **Trouble on Road—Ignition:** In the case of a machine fitted with the coil ignition system in which ignition trouble is suspected, before carrying out the tests outlined in paragraph 16 (page 13) of the Instruction Book make sure that the battery is charged and properly connected. Ability to light the pilot light and warning light may be taken as proof of this. Make sure also that the leads from the battery, switch, ignition coil and dynamo are in good order as an open circuit or a short on any of these could be the cause of trouble. Make sure also that the ignition is switched on and that the switch is contacting properly. The lighting of the warning lamp may be taken as proof that the ignition switch is operating correctly.
4. (31) **Ignition Timing:** The ignition timing depends on whether the engine is fitted with coil or Magdyno ignition. This is on account of the different shape of the inlet port used to allow the induction pipe to clear the Magdyno.
The correct timings are:—
Engines with Coil Ignition — $\frac{3}{8}$ in. before T.D.C.
Engines with Magdyno Ignition $\frac{1}{8}$ in. before T.D.C.
NOTE: Engines fitted with coil ignition can be timed without removing the timing cover. The contact breaker can be turned on its shaft after removing the centre screw and extracting the cam by screwing into it a bolt with a $\frac{7}{8}$ in. B.S.F. thread.
5. (33) **Lighting Set—Bulbs:** The correct bulbs for use in the headlamp are:—
Magdyno sets - - - 6 volt—30 and 30 watt.
Coil sets - - - 6 volt—18 and 18 watt.
6. (35) **Carburettor Setting:** The correct carburettor setting is:—
Main Jet 75.
Throttle Valve 4/4.
Needle Clip in No. 2 groove.
7. (36) **Air Cleaner:** This is not fitted to Model S.51.
8. (46) **Tyre Pressures:** The recommended pressures for solo use are:—
Front - - - 18lb. per sq. in.
Rear - - - 26lb. per sq. in.

DON'TS FOR DRIVERS (page 35). The caution against driving on the exhaust lifter does not apply. With coil ignition DON'T forget to switch off when the machine is standing.

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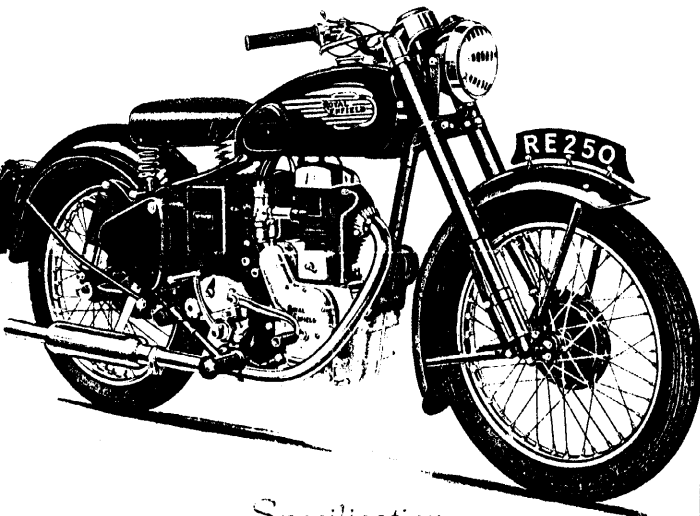
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SPRING FRAME

250c.c. O.H.V. Model S.F.



Specification

248 c.c. o.h.v. single cylinder. Bore 64 mm.; stroke 77 mm. All moving parts totally enclosed and positively lubricated which utilises large capacity oscillating plunger-type feed and return pumps and incorporates a highly efficient felt oil filter with oil-wetted air filter. **GEAR BOX:** Four speed foot-operated gearbox. Multi-plate clutch. Ratios, 6:2:1:1. **TRANSMISSION:** Primary drive by $\frac{1}{2}$ pitch chain totally enclosed and running in aluminium oilbath chaincase. Fitted with deep section rear chainguard. **FRAME:** Constructed of chrome molybdenum tubing incorporating the scientific principle of rear wheel suspension. Hydraulically damped and automatically lubricated. Easy-lift centre stand. **WHEELS:** Duralumin spoked forks. Hydraulically damped and automatically lubricated. Polished aluminium fascia panel. **WHEELS:** Duralumin and ribbed front tyres. Heavy gauge spokes. Powerful 6" brakes. Rear hub incorporates exclusive rubber-vented disc brakes which reduce transmission strain and prolongs the life of tyres, chains and bearings. **ELECTRICAL EQUIPMENT:** 45-watt generator with automatic voltage control and coil ignition. Electric horn. Lucas magdyno optional at extra cost. **INSTRUMENTS:** Smith's 80 m.p.h. illuminated chronometric speedometer. Two spacious toolboxes. Full tool kit. Inflator. **FINISH:** Finished in best quality black stove enamel. Bright parts heavily chromium plated. Attractive metal tank and gold.

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