BSA SERVICE SHEET No. 502

Revised March, 1965.

MODELS Dl, D3, D5 AND D7,

THE PETROIL LUBRICATION SYSTEM

The correct lubrication of the two-stroke engine fitted to these models depends upon a certain quantity of oil being mixed with the petrol. It is preferable for this to be done before the fuel is poured into the tank, and a number of filling stations now supply 'petroil' mixture ready for use. Failing this, the oil and petrol should be thoroughly mixed in a separate container. If this is not possible, the petrol should be put into the tank first and the oil added, after which the machine should be rocked to and fro.

The petrol tap must be turned off when the machine is parked. Failure to do this may result in the carburettor float chamber becoming filled with oil if allowed to stand for a long period.

While the engine is running, oil is induced into the crankcase through the carburettor in the form of oil mist mixed with the fuel supply. As the piston descends, compressing the charge in the crankcase, most of the oil mist separates out and is deposited in the crankcase as liquid oil which lubricates the big-end and main bearings. The petrol and air mixture passes up through the transfer ports into the combustion chamber.

Surplus oil is carried by the action of the fuel transfer to the combustion chamber, where it serves as an upper cylinder lubricant, and is eventually burned by the heat of combustion.

There is no point in increasing the proportion of oil to petrol above that recommended since any excess of oil is merely transferred to the combustion chamber where it is burnt. A higher proportion of oil in the charge means a lower proportion of petrol and therefore a less suitable combustible mixture.

A measure for oil is incorporated in the filler cap, that on earlier models being approximately 5 in. long while the later type is approximately 6 in. long. Two and a half of the former, or two of the latter measures must be used with each gallon of petrol. Both these quantities correspond to 1 part of oil to 20 parts of petrol and this will provide adequate lubrication throughout the life of the engine.

If the special two-stroke self-mixing oils are used, the proportion should be increased to 1 to 16, which equals half a pint to one gallon of petrol.

RECOMMENDED ENGINE OILS

CASTROL XXL	or	TWO-STROKE SELF-MIX OIL
MOBILOIL BB	or	MOBILMIX TT
SHELL X100-40	or	PETROILER MIX No. 2T
B.P. ENERGOL 40	or	ENERGOL TWO-STROKE OIL
ESSO EXTRA 40/50	or	ESSO TWO-STROKE MOTOR OIL

Models D5 and D7

On models D5 and D7 the main engine bearings are lubricated by oil transfer from the gearbox. It is therefore essential that the following undiluted oils be used in the gearbox.

RECOMMENDED GEARBOX OILS

CASTROL XXL
SHELL X100-40
ESSO EXTRA 40/50
MOBILOIL BB
ENERGOL 40

B.S.A. MOTOR CYCLES LTD., Service Department, Armoury Road, Birmingham 11
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