BSA - SECTION A

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D14/4 LUBRICATION A2
REGULAR MAINTENANCE
Regular maintenance is essential if the machine is to have a long and trouble-free life. The following list of items requiring attention will also serve as a guide to the periods of time between servicing. The correct method of performing each operation will be found under the appropriate headings in later chapters.
FIG. A1.
Ref. No. Ref. No.
Weekly Every 2,000 miles (3,200 km.)
7 Oil brake pedal pivot. 2 Change oil in gearbox.
9 Oil exposed cables and control
joints. 6 Grease brake cams.
Every 5,000 miles (8,000 km.)
11 Grease speedometer drive cable.
Every 1,000 miles (1,600 km.) 4 Lubricate contact breaker cam.
2 Check oil level in gearbox.
5 Grease swinging arm pivots (2). Every 10,000 miles (16,000 km.)
3 Grease clutch control. 10 Drain and refill front forks.
8 Oil central stand pivots . Grease wheel bearings.
Grease steering head bearings.

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RECOMMENDED LUBRICANTS
OIL
BRAND

Engine Gearbox
GREASE
POINTS
FRONT
FORKS
Castrol Castrol Two
-Stroke Oil Castrol XXL Castrolease LM Castrolite
Shell 2T Two-
Stroke Oil Shell X100-40 Shell Retinax A Shell X100-20
Esso Esso Two-Stroke
(2T) Motor Oil Esso Extra
Motor Oil 40/50 Esso Multipurpose
Grease H Esso 20W/30
Mobil Mobil-Mix TT Mobiloil A Mobilgrease MP Mobiloil Artic
B.P. Energol Two-
Stroke Oil Energol
S.A.E. 40 Energrease L2 Energol
S.A.E. 20
Regent Motor Oil
2T Havoline
S.A.E. 40 Marfak
Multipurpose 2 Havoline
S.A.E. 20W

All the engine oils listed above are self-mixing and must be used in the proportion of one part oil to twenty-four parts petrol (i.e., 4 per cent mixture).
NOTE:For running-in purposes, a twenty parts, one part oil mix, may be used.
If standard (non-self-mixing) oil is used, this must be S.A.E. 40 grade and the mixture proportion is one part to thirty-two parts petrol (i.e., 3 per cent mixture).
ENGINE LUBRICATION
The lubrication of the engine is provided by the oil mixed with the petrol supply, forming a mixture commonly known as petroil. The correct proportion of oil to petrol is given on this page.
For efficient running of the engine, and adequate lubrication it is essential that the oil be completely mixed with the petrol.
It is preferable to use one of the self-mixing two-stroke oils specified in the list of recommended lubricants or alternatively ready-mixed petroil can be obtained from most filling stations.
Because the engine is dependent solely on the fuel mixture for its lubrication, avoid coasting the machine downhill for long periods with the throttle shut, as the

engine may seize through lack of oil.
The engine mainshaft bearings are lubricated from the chaincase on the drive- side, and from the gearbox on the generator side. Special oil seals prevent this oil entering the crankcase.

GEARBOX LUBRICATION
The gearbox, though built in unit with the engine, is self-contained with regards to lubrication. The oil used for lubricating the gears also serves the primary drive, and the main bearings.

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It is therefore essential that the correct oil level be maintained.
To check the gearbox oil level remove the level screw and filler plug, and pour oil into the filler until it just begins to flow from the level hole. Replace the screw after filling, having first checked the condition of its fibre washer.
FIG. A2.
It is important that S.A.E. 40 grade oil be used, not any of the self-mixing oils recommended for the engine. As the clutch is lubricated from the same supply, special anti-friction additives should not be mixed with the gearbox oil.
Changing the oil in the gearbox is best done after a run, as the oil is warm and therefore more fluid. Take out the filler plug, and unscrew the drain plug underneath the gearbox. Allow all the oil to drain into a suitable receptacle before cleaning the gearbox with flushing oil. Replace the drain plug and refill the gearbox to the correct level as described above. The condition of the drain plug fibre washer is important; over-tightening will damage it.

CONTACT BREAKER
The contact breaker is mounted on the right-hand engine shaft and is housed within the primary cover. It is essential that no engine oil is allowed into the contact breaker housing and to prevent this, an oil seal is fitted behind the contact plate.
Periodical lubrication of the contact breaker cam however, is necessary. Provision is made for this in the form of a grease-soaked wick.
The grease (preferably of the high-melting point

type) should be applied sparingly to the wick every 5,000 miles (8,000 km.). Avoid using the grease excessively, otherwise the contact points may become contaminated, resulting in misfiring and difficult starting.

REAR CHAIN

It is a good practice to periodically remove the rear chain and clean it thoroughly in petrol or paraffin. When dry, gently warm the chain in a mixture of grease and graphite, allow to cool and wipe off any excess grease. Before replacing the chain, clean both the rear wheel and gearbox sprockets. Remember that the chain connecting link must be fitted with the closed end of the spring fastener pointing in the direction of chain travel (i.e., on the lower run of the chain, the closed end should be rearward).
See section H for further information.

STEERING HEAD

The steering head bearings are packed with grease on assembly and should only require repacking at the intervals quoted on page A2. Full details of removing and replacing the steering assembly can be found on pages E8 & E9 in the fork section.
Wipe out all the old grease from the bearing cups and clean the ball bearings by rolling them in a clean rag. After cleaning, carefully examine the bearings, cups and cones for pitting, corrosion or cracks, and renew if necessary.

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The fresh grease will hold the ball bearings in position during re-assembly. Check that the grease is as quoted on page A3.
The correct number of ball bearings for each cup is twenty-four.

FRONT FORK

(D14 Supreme)

The oil contained in the fork legs not only acts as the damping medium but also lubricates the bearing bushes. Because of the former function it is essential that the amount of oil in each leg is exactly the same. The need for renewal of the oil may be indicated by

excessive movement of the forks, but it should only be necessary at the intervals quoted on page A2.
Prise out the cap on top of the fork leg; a small hole is provided in the cap to facilitate this. With the aid of a tubular spanner, unscrew the small nut which is now exposed then remove the large nut which carried the cap. Disconnect the mudguard stay at the lower end of the fork leg and unscrew the drain stud, allowing the oil to drain out into a suitable receptacle. Whilst standing astride the machine, apply the front brake and slowly depress the forks a few times to expel any remaining oil in the system.
Repeat the operation on the other fork leg and replace the drain studs and new fibre washers.
Pour an eighth-pint of an S.A.E. 20 oil into each fork leg and replace the top nuts and caps.

FRONT FORK
(Sports and Bushman)
The procedure for draining and refilling the forks fitted to the D14/4 Sport and Bushman is much the same as above, except that the filler is a single cap nut on the top of the fork leg, and a drain screw is provided at the bottom of the fork leg adjacent to the wheel spindle. The capacity also is different being a third pint (175 c.c.) S.A.E. 40 oil to each leg.

WHEEL BEARINGS
The wheel bearings are packed with grease on assembly and should only require repacking at the intervals given on page A2.
The bearings should first be removed as detailed in pages F3 and F4, after which they must be washed thoroughly in paraffin and, if possible, an air line should be used to blow out any remaining grit or paraffin.
After assembling the first bearing, pack from inside with the correct grade of grease (see page A3). Do not over-pack the bearings, as not only is this wasteful, but there is a risk of grease finding its way on to the brake linings. Avoid handling brake shoes with greasy hands.
FIG. A3.

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FIG. A4.

CONTROL CABLES

Exposed sections of inner control cables should be lubricated weekly with an oilcan. The most satisfactory way of lubricating a cable, however, is to include a flow of oil between the inner cable and the casing by using a simple oil reservoir as shown in Fig. A3, and leaving the cable for several hours.

During their manufacture, the inner cables are greased with a molybdenum-based grease which forms a semi-permanent lubricant and should therefore give long service before needing attention.

SPEEDOMETER CABLE

It is necessary to lubricate the speedometer cable to prevent premature failure of the inner wire, though care must be taken to avoid over-zealous greasing which may result in the lubricant entering the instrument head. To gain access to the inner wire, simply unscrew the cable nut at the speedometer gearbox, when the wire can be withdrawn. The grease should be applied sparingly to the wire but the top 6" (near the instrument head) must not be greased.

REAR SUSPENSION

Each of the two suspension dampers comprise a telescopic damper unit and