

**B.S.A.**  
**Motor Cycle**  
**Instruction**  
**Book**

*1936 Models*

1.49 h.p. O.H.V.

2.49 h.p. S.V.

2.49 h.p. O.H.V.

2.49 h.p. O.H.V. Light de Luxe



**RIDERS' INSTRUCTIONS FOR 1936  
B.S.A. MOTOR CYCLES.**

1.49 h.p. O.H.V., 2.49 h.p. S.V.,  
2.49 h.p. O.H.V. and 2.49 h.p. Light de Luxe

**FILLING UP.**

The petrol tank capacity is two gallons.

Fill the oil compartment in the tank, which holds three pints, or on model B18, the tank under the saddle. To obtain the most satisfactory service from your machine it is most essential to use only high-quality lubricants. This point cannot be over-emphasized. **It is most important also that one of the recommended grades of oil is used.** For correct lubrication we strongly recommend the high-quality oils tabulated on page 22. It is not sufficient to specify the grade, the actual brand required should be stated.

The use of an upper-cylinder lubricant is particularly advisable during the first 1,000 miles of a machine's life.

**NOTE.**

A good rider will occasionally go over all the nuts on his Motor Cycle with a spanner, to see that they are kept tight, and will carefully look round his machine to ensure that everything is in order

Check the oil in the gearbox (see page 9) and make certain that all other parts are adequately lubricated (pages 8 and 23).

It is advisable with a new machine to give the engine a small supply of extra oil. This is done by removing the sparking plug, and, after setting the piston at the bottom of its stroke, putting in about two teaspoonsful of oil. **Make certain that the oil control on the right-hand side of the engine is open** (see page 7). After filling the tank for the first time, slacken the oil pipe union on the pump and allow oil to exude before tightening. This should also be done if the oil supply has been allowed to fall very low in the tank.

### CONTROLS.

The carburettor controls are on the right handlebar; on the 2.49 h.p. O.H.V. the throttle control is by twist grip, which opens when turned towards the rider, and the air control is a short lever mounted above the front brake lever. The left twist grip operates the ignition advance, by turning towards the rider; and the clutch and exhaust valve lifter levers are mounted together on the same side. On the 1.49 h.p. and 2.49 h.p. S.V. machines the carburettor levers are mounted together; the longer one operates the throttle and the shorter the air. The ignition control is a lever on the left handlebar. The 1.49 h.p. model is not fitted with an exhaust valve lifter. The rear brake is operated by the right toe pedal. The gate of the hand gear change is marked thus:—"1" for first, or bottom gear; "N" for neutral; "2" for the intermediate second gear; "3" for third or top gear (and "4" for fourth or top gear with the 4-speed gearbox).

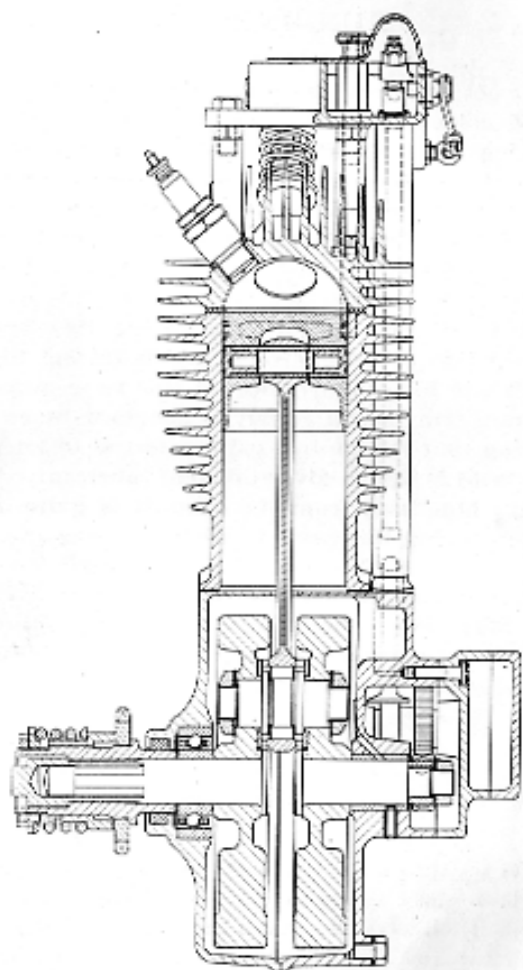
### RUNNING-IN.

Do not overdrive the engine during the first 500-1,000 miles. Careful attention during this period will improve the machine considerably and greatly affect the subsequent performance during the rest of its life. The addition of a little engine oil to the fuel is to be advised if an upper-cylinder lubricant is not used.

It is of the utmost importance that the lubrication of the engine is ample during the "running-in" period. During this time make certain that the oil supply is adequate by ensuring that the control valve referred to later (page 6) is set to give sufficient lubricant. A slight blue haze from the exhaust is quite in order during this period and an oil consumption of about 800-1,000 m.p.g. is reasonable. Later, when the various moving parts have "bedded down" the supply can be reduced to give a much more economical consumption without fear of damage.

### STARTING.

Set the throttle at about one-eighth open and the air lever shut. Move the ignition control to about one-half full advance. Raise the exhaust lifter and push the kickstarter down as smartly as possible with the foot. When the kickstarter is just over half-way down drop the exhaust lifter. Do not kick half-heartedly, or stop before the pedal is quite down, but make full use of the whole movement of the kickstarter.



*Cross-section of the B.S.A. 249 h.p. O.H.V. engine.*

**Fig. 1.**

In very cold weather it may be necessary to flood the carburetter. Do not depress the tickler for too long, as excessive flooding will make starting even more difficult. After depressing the tickler for a few seconds, open the throttle about one-eighth, and then depress the kickstarter till compression is felt. Raise the exhaust lifter, and as explained above depress the kickstarter a little more. Then gently push the pedal down again and the engine will be heard to draw in the rich mixture. If this is done two or three times, and then the starting procedure given above followed, a certain start should be made under the coldest conditions.

### **RIDING.**

To obtain first or bottom gear, raise the clutch lever (on the left handlebar) fully, and push the gear lever in to the forward position. If this is not directly obtainable, do not exert excessive force, but gently press the lever while moving the machine a little backwards and forwards, with the clutch disengaged, of course. Engage the clutch gently, and at the same time gradually open the throttle. The air lever should be kept fully open under normal circumstances, and for starting when hot.

To change gear perfectly it is necessary to accelerate the engine when changing down, and to slow it down when changing up. This is due to the relative speeds of the engine and road wheels in the different gears. Changes can be effected, of course, by de-clutching and putting the lever into the required position. Nevertheless a little time spent in learning the correct method is distinctly advantageous. The throttle is left slightly open while the change is being effected when changing down; this allows the

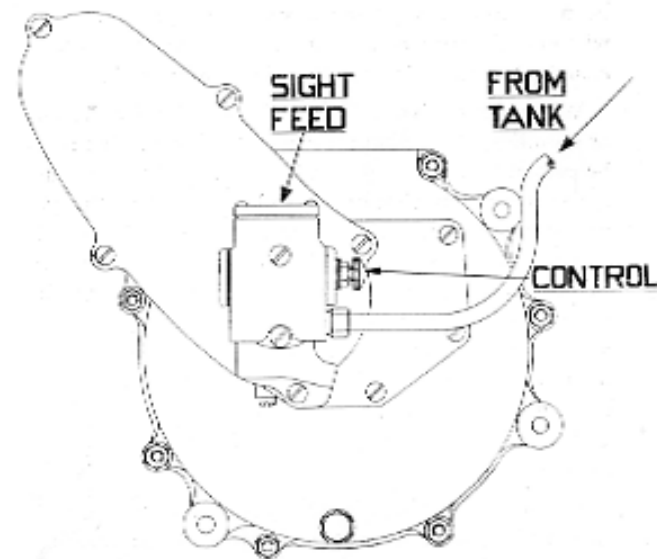
engine to increase its speed when the clutch is raised. When changing up, the throttle is closed during the operation.

Do not use an excessive opening of the throttle when starting, and do not allow the engine to "rev" unduly when stationary. Use the throttle control to govern the speed of the machine. Quite definite deceleration is obtained by merely closing the throttle. To lift the clutch and use the brakes, when sufficient retardation can be obtained with a closed throttle, is wasteful. On very greasy roads, the use of the engine as a brake is to be advocated, particularly in conjunction with a change to a lower gear. **It is never advisable, except in cases of emergency, either to accelerate or brake fiercely; both are signs of an inconsiderate driver, and, when the roads are greasy, both are extremely dangerous.**

**A good driver is the most unobtrusive.**

## LUBRICATION.

**ENGINE.** A simple and efficient lubrication system, with only one external oil pipe, has been adopted for these machines. The oil is drawn from a compartment in the petrol tank, holding three pints, and delivered to the engine by a pump mounted on the timing cover. A sight-feed is incorporated so that the supply of oil can be readily checked. For normal use the quantity should be adjusted to 14-16 drops per minute. Beyond seeing that there is oil in the tank, and taking care to drain the crank-case every 1,000 miles, little attention is required.



*Lubrication System.*

Fig. 2.

After draining, give the cylinder a charge of oil (see page 2) and increase the pump control setting for about 50 miles.

Owing to the varied conditions under which machines may be used, no fixed settings can be given, but the above amounts should be satisfactory under normal circumstances.

These figures are quite arbitrary, and one should judge on the general running as to whether the lubrication is satisfactory. There should be just a puff of bluish smoke from the exhaust when the throttle is opened suddenly after the engine has

been running slowly for a while as for instance, when accelerating after idling behind traffic. Always ensure that there is an adequate supply of oil.

When the engine is "run-in" after the first 1,000 or so miles, the oil supply can be reduced. It must be remembered that general driving methods influence oil consumption considerably, and it is always necessary to give a little increase in the oil control setting when a journey at high speeds is being undertaken. A setting which is perfectly satisfactory for normal touring at moderate speeds and which gives a very economical consumption, will not be suitable for more arduous conditions. It lies, therefore, with the rider, to a large extent, to find the very best setting for his machine, using the foregoing notes as a guide.

Drain the crankcase every 1,000 miles when hot, give the cylinder a charge of oil (page 2), and increase the oil supply for about 50 miles. Do not flush the crankcase with paraffin.

Lubricate O.H.V. rockers with a grease gun and the upper push rod ends with an oil can, every 250 miles.

**CYCLE PARTS.** It is of the utmost importance that the hubs should be greased every 500 miles. Lubricate the steering head every 500 miles, and the brake operation and cams every 1,000 miles.

A few drops of oil should be given to the control levers, exposed cables, brake rod joints and gear change; also lubricate the ball in the clutch operation (*H*, Fig. 5) occasionally. The front forks should be greased every 250 miles.

The front chain is lubricated from the crankcase by a valve on the left side. Oil is fed from this

through a hollow stud into the chaincase, where a trough is provided, to collect the oil.

It is advisable to remove chains periodically and thoroughly lubricate them. Cleanse them in petrol or paraffin, and warm them gently in a mixture of grease and graphite. When cool, wipe off the excess lubricant and replace the chains, but clean the sprockets before doing this.

**GEARBOX.** To fill the gearbox with oil, remove the plug (*J*, Fig. 13) at the rear on the right-hand side.

Inspect the oil level every 500 miles, and after every 2,000 miles, drain and flush the gearbox, and refill. Oils recommended for the gearbox will be found on page 22. The drain plug is marked *K* in Fig. 13. For model B18 (4-speed gearbox) the drain plug is in the bottom.

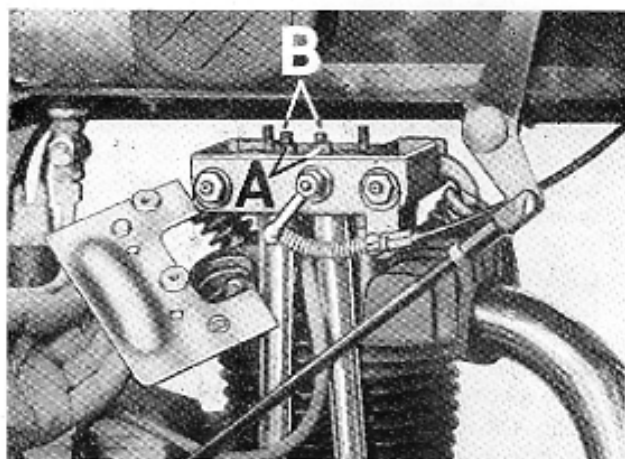
## RUNNING ADJUSTMENTS.

**VALVE CLEARANCES.** Particular attention should be paid to the valve clearances, the correct settings of which are given on pages 15 and 17. Check them every 500 miles.

The best method is to set the piston at the top of the compression stroke. Check this by removing the sparking plug and with a pencil feel the position of the piston while rotating the engine a little in either direction. This can be done when the machine is on the stand, by engaging any gear and turning the back wheel. Note that when the piston is at the top, the valves are not open, and neither one nor the other is opened by a movement backwards or forwards.

On O.H.V. models remove the rocker box cover by removing the knurled nuts. Undo the locking nut *A* (Fig. 3), and turn the square end of the screw





*O.H.V. Tappet Adjustment,*  
Fig. 3.

*B* until the correct clearance is obtained, and check the clearance again. Tighten *A* before replacing the cover.

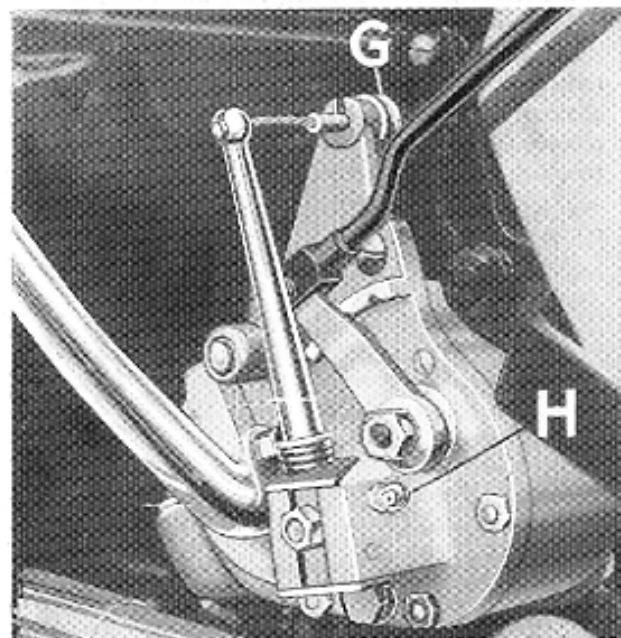
On S.V. models remove the valve cover by taking off the knurled nut which retains it. With a spanner on *A* (Fig. 4), hold the tappet head while turning *B* with another spanner to the left or clockwise. Then turn the tappet stem by means of a spanner on the flats at *C*, obtain the required clearance, and then lock *B* against *A*. Again check the clearance.

**BRAKES.** A wing nut at the rear end of the brake rod effects the rear brake adjustment. The front brake is adjusted by a knurled thumb nut on the cable stop, fitted to the front forks.



*S.V.*  
*Tappet*  
*Adjustment*  
Fig. 4.

**CLUTCH OPERATION.** The clutch operation is adjusted by the thumb nut *G* (Fig. 5). The position shown in the illustration is correct, and there should be a little clearance at *H*. If this is not so, adjust the central screw, having released the locknut, and use *G* as a final adjustment only.



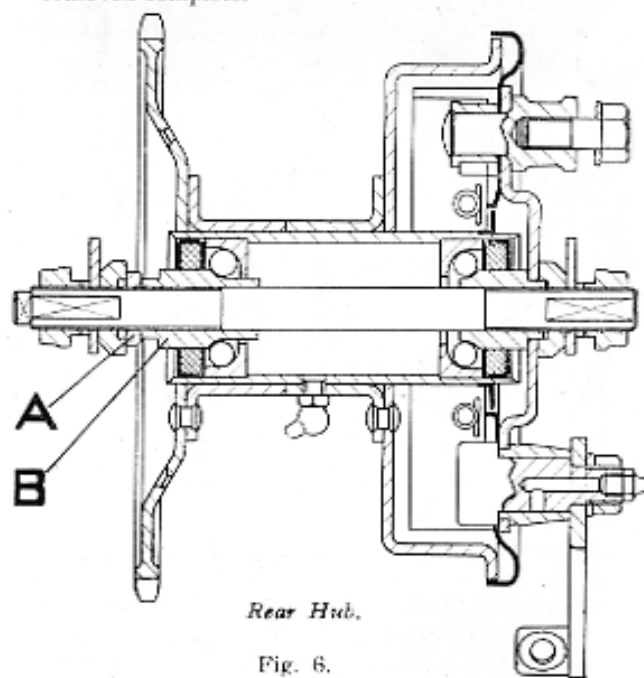
*Clutch Control Adjustment*  
Fig. 5.

**FRONT FORKS.** Keep the link bolts just tight enough to eliminate side play. To adjust, release the locknuts on the left-hand side, screw up the bolts, and retighten the nuts. Do not make the adjustment too close; it is better to release the shock absorber in order to be certain that the other joints

are not binding. The shock absorber should be adjusted to suit road conditions.

To adjust the steering head, loosen the clip nut under the handlebars, and then tighten the top adjusting nut until there is no perceptible shake in the head. This can be checked by placing a box under the engine so that the front wheel is clear of the ground. Tighten the clip nut.

Should it be necessary to remove or replace the fork spring, first place a box under the engine as above. Take off the nut on the top of the spring; remove the link bolts and the links. The spring will then be clear of the frame, and by removing the pin and nut on the bottom fixing, the spring can be removed complete.



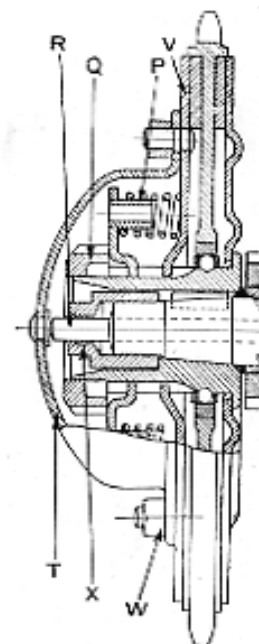
Rear Hub.

Fig. 6.

To remove the scrolls, hold the bolts tightly in a vice, and punch the end of the spring to wind it off. When replacing, the spring can be wound on to the scroll by hand.

**HUBS.** These are fitted with cup and cone type ball bearings and adjustments are made when the wheel is out of the forks. The rear hub is shown in Fig. 6. The locknut *A* must be released, the adjusting sleeve *B* screwed in or out as required, and *A* tightened again. The front hub is constructed similarly.

**It is most important that the wheels should have just perceptible side play at the rim when the adjustment is complete.**



Clutch. Fig. 7.

1.49h. p. and 2.49h. p. S. V. spring.

The tail of rear guard is detachable to give easy removal of the rear wheel, and the removable portion is held by the lower rear stays. Shouldered nuts are used on the studs attached to the mudguard at this point, and it is important to locate these and the two dowels, in the mudguard near the joint correctly.

**CUSH DRIVE (2.49h.p.)**

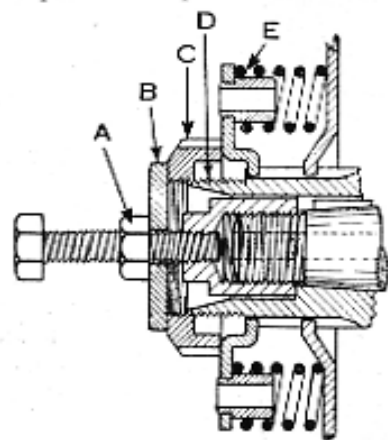
The spring tension can be adjusted by the two ring nuts which hold the spring.



**FRONT CHAIN.** After releasing the gearbox bolt nuts, move the gearbox forward or backward. The gearbox bolts are both below the box on the right-hand side of the box. The chain should have  $\frac{1}{8}$  in. freedom up and down at the centre. Make sure that this is correct for all positions of the sprockets. Also make sure that the nuts are well tightened after completing the adjustment.

**CLUTCH.** The clutch spring tension can be increased by screwing up the nut *Q* (Fig. 7) or *C* (Fig. 8). A special tool is supplied for the clutch to simplify the replacement of the spring. This is shown in operation in Fig. 8. The clutch on model B18 fitted with 4-speed gearbox is operated similarly.

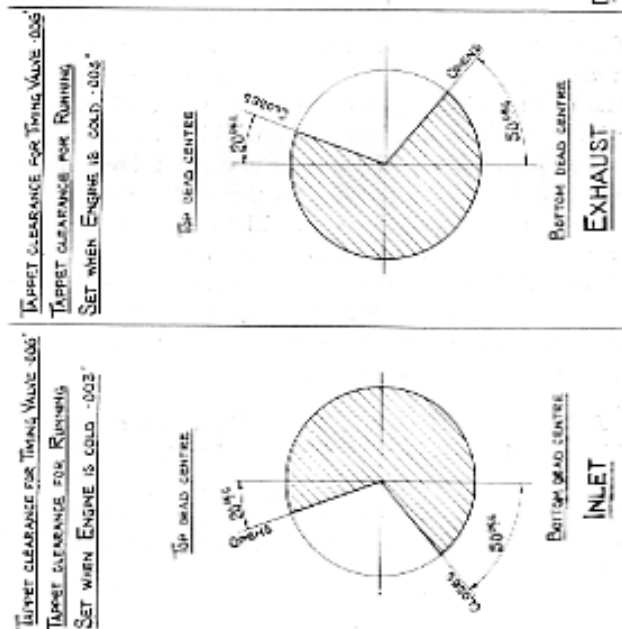
When reassembling the clutch, make certain that the clutch plates are replaced in the correct order.



*Clutch Spring Tool in operation.*  
1.49 h.p. and 2.49 h.p. S.V. Fig. 8.

**REAR CHAIN.** The rear chain adjustment is by means of a cam on the rear spindle.

Release the spindle nuts and turn the spindle on the left-hand side, by means of the small square,



*Value Timing Diagram*  
(1.49 h.p. O.H.V. and 2.49 h.p. O.H.V.)

until the correct tension is obtained. The chain should have  $\frac{1}{8}$  in. freedom at the centre. Make sure that this is correct for all the positions of the sprockets, and that the cams are against the stops. Tighten the left-hand nut first, and then the right-hand nut. See that the wheel is correctly aligned.

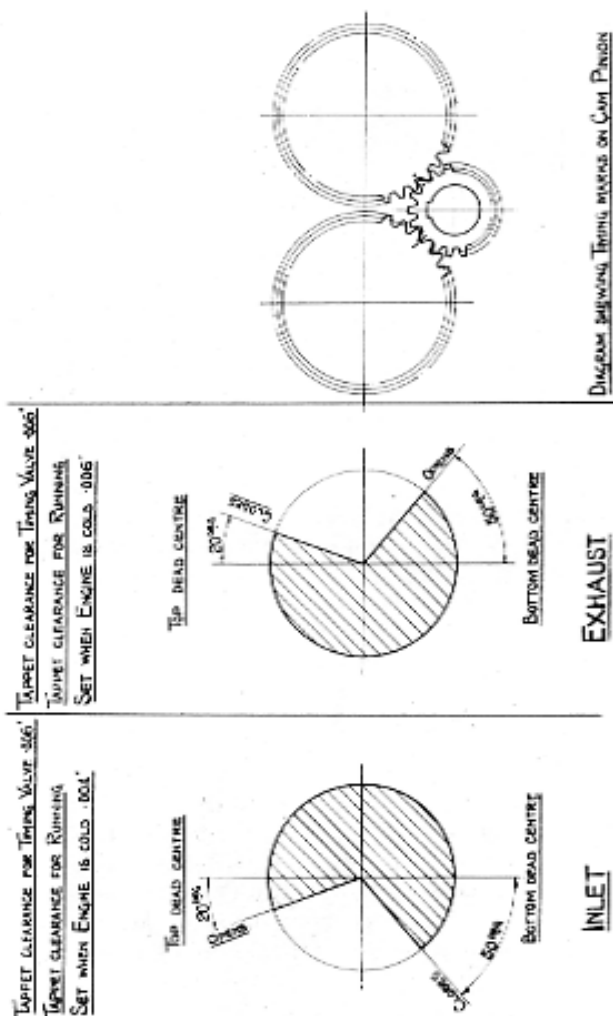
**VALVE TIMING.** The engine shaft pinion and cams are marked to facilitate correct assembly. This is shown on pages 15 and 17.

**IGNITION TIMING.** The magneto sprocket is accessible when the chain cover is removed. Release the magneto sprocket and set the piston at top dead centre on the compression stroke (see page 9). Then rotate the engine backwards, measuring the amount the piston descends from the top position. The correct distances for the different models are  $\frac{1}{8}$  in. on the 1.49 h.p. and 2.49 h.p. O.H.V. and  $\frac{1}{4}$  in. on the other model. Then set the contact breaker points just opening (.002 in. gap), with the control in the fully advanced position. The cam will then be moved as far as possible in an anti-clockwise direction. The fully open gap should, of course, be correct to the gauge. The magneto sprocket should be tightened at this setting, and **check the setting before replacing the plug.**

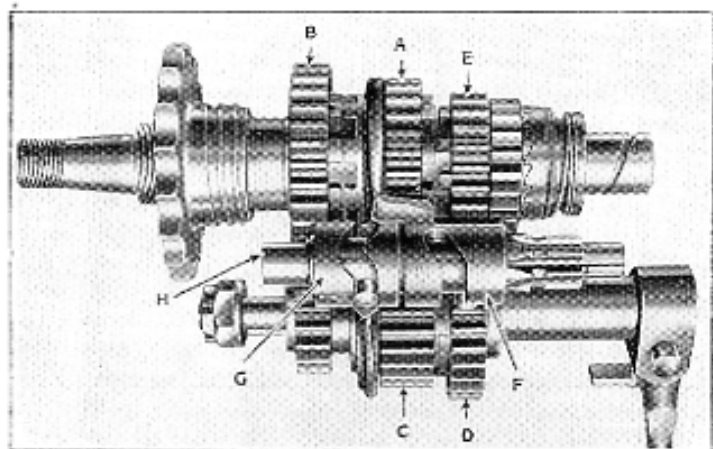
**MAGLITA or MAGDYNO CHAIN.** To adjust this, release the two nuts on the left side of the base plate. Move the unit until the chain tension is correct, and the maximum movement at the centre of the chain is  $\frac{1}{4}$  in. Check that this is so after tightening the nuts, and for all positions of the sprocket.

### GEARBOX.

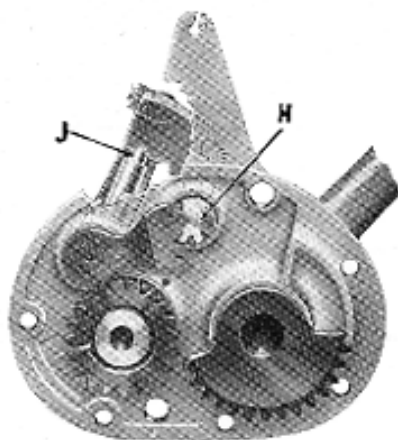
This is of the constant mesh type, and the construction is shown in Figs. 9, 10 and 12. The gear



Valve Timing Diagram (2.49 h.p. S.V.)



*Three-speed Gearbox Internals.*  
Fig. 9.



*Three-speed Gearbox Selector mechanism.*  
Fig. 10.

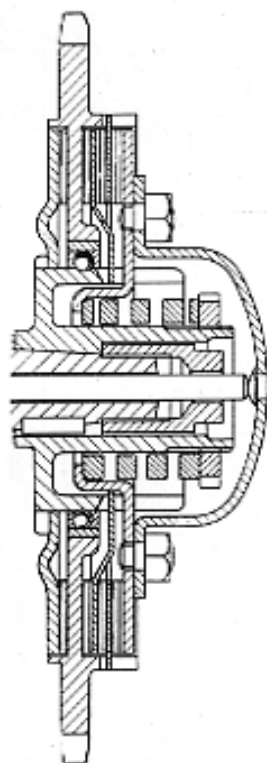
reductions are obtained by transmitting the drive through various trains of gears.

In the 3-speed gearbox top gear is effected by sliding pinion *A* so that the dog teeth on it engage with those on pinion *B*.

Middle gear is obtained by first withdrawing pinion *A* from engagement with pinion *B* and then sliding pinion *C* so that its dog teeth engage with fixed pinion *D*.

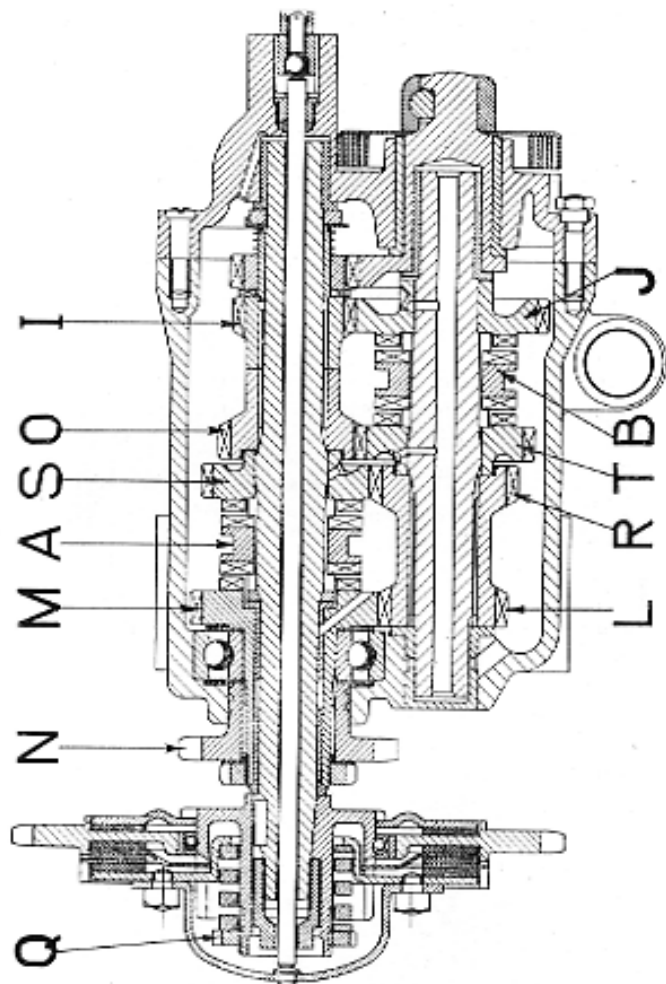
Low gear is obtained by disengaging pinion *C* from pinion *D*, then sliding pinion *A* into engagement with loose pinion *E*.

The necessary axial movement of the gears *A* and *C* on their shafts is obtained by means of the operating forks *F* and *G* respectively, which engage in grooves in the gears. Pegs on the control shaft *H* working in helical cam slots in the forks convert the rotary movement of the outside gear lever (through a quadrant and gear) into the sliding motion of the operating forks.



*Clutch 2.49 h.p. O.H.V.*  
*B28 and B18.*

Fig. 11.



Sectional arrangement Four-speed Gearbox  
Model B18.

Fig. 12.

A spring-controlled plunger *J* on the gear control lever registering in depressions in the control plate gives definite location to the gears.

The kickstarter mechanism is mounted on the layshaft.

#### FOUR-SPEED GEARBOX.

Model B18 2.49 h.p. O.H.V. Light de Luxe.

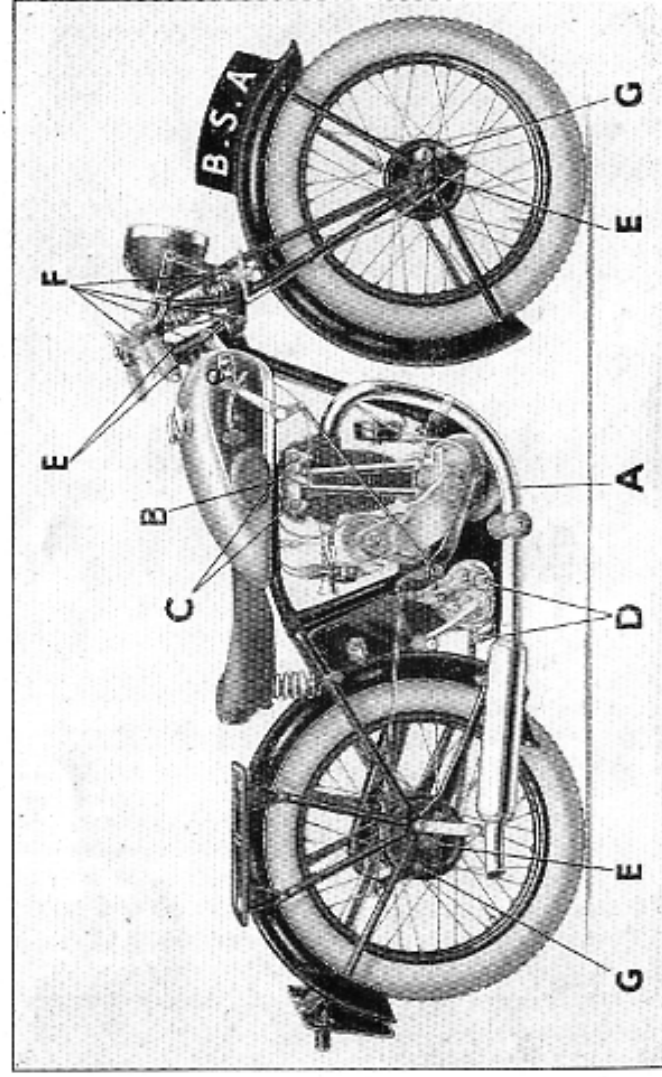
This is of the constant mesh type, and the construction is shown on page 20. The gear reductions are obtained by transmitting the drive through various trains of gears, and selecting these by means of the dogs *A* and *B*, which are coupled to the main and layshafts respectively, by spines on which they can be moved laterally. These dogs are moved by forks, which are actuated by the rotation of the control shaft.

The first gear train is by pinions *I* and *J*, and the constant mesh pinions *L* and *M*, the latter being coupled to the final sprocket *N*. Second gear utilises *O* and *T* and *L* and *M*, and third gear *S* and *R*, *L* and *M*. Top gear is direct by coupling *M* to the mainshaft by the dog *A*.

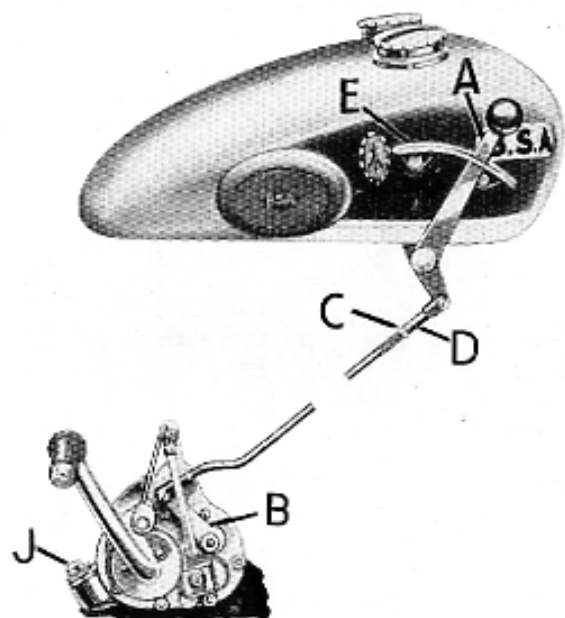
**TO ADJUST GEAR-CHANGE.** If a considerable movement has been made in the position of gearbox it will be necessary to readjust the gear control rod. To effect this the lever *B* (Fig. 13) should be moved towards rear of machine until the spring plunger on the gearbox can be felt to have registered with its recess. The nut *C* should now be slackened from sleeve *D* and the screw connecting *D* to the hand lever removed. Sleeve *D* should now be moved until operating lever *A* is just making contact with the forward end of its quadrant *E*. Then replace the screw and tighten nut *C*. Test adjustment by

## OIL RECOMMENDATIONS.

See Page	COMPONENT	See Fig.	Attention Required	WAKEFIELD	VACUUM	SHELL
6	Engine	A	Top up tank every 250 miles. Drain every 1,000 miles.	Patent Castrol XXL Patent Castrol XL	Mobiloil Clearosol D Mobiloil Clearosol D	Acrosshell Acrosshell
8	O.H.V. push-rod ends	B	A little oil every 250 miles.	AS FOR ENGINE		
8	O.H.V. Rockers	C	Two or three strokes of grease gun every 250 miles.	Castrolase Heavy	Mobilgrease No. 2	Shell Retinax
9	Gearbox	D	Top up every 500 miles Drain and refill every 2,000 miles.	Castrol D	Mobilgrease No. 2	Shell Retinax
				AS FOR ENGINE		
				AS FOR ENGINE		
8	Hubs Steering Head	E	Grease every 500 miles	Castrolase Heavy	Mobilgrease No. 2	Shell Retinax
8	Front Forks	F	Grease every 250 miles	Castrolase Heavy	Mobilgrease No. 2	Shell Retinax
8	Brake Cam Clutch Operation	G D	Grease every 1,000 miles.	Castrolase Heavy	Mobilgrease No. 2	Shell Retinax
8	Control rod joints and exposed cables.		A little oil every 500 miles.	AS FOR ENGINE		



moving lever to middle of neutral position, noting that the spring plunger can be felt engaging when the lever *A* is opposite the respective positions on quadrant.



*Adjustment of Gear-change.*

Fig. 13.

### DECARBONIZING.

It is necessary to decarbonize the engine from time to time. The symptoms which indicate the need for this are a tendency to "pink" and a falling off in performance. Excessive carbon deposit, which may be due to over-oiling, particularly at low speeds or rich mixture, may cause harsh running, difficult starting, and overheating.

**DISMANTLING (S.V. model).** On this model decarbonization and a "top overhaul" is extremely simple. By the removal of the head bolts the head can be taken off, exposing the piston, which should be set at top dead centre, and the valves. The head can easily be cleared of carbon. If the valve seats are suspected these can be remedied, and if care is taken to keep all grinding compound away from the piston, valve guides, and carburetter (which latter should be removed), the cylinder need not be removed from the engine, a procedure necessary only when the rings require renewal.

To take off the cylinder after having detached the carburetter and exhaust pipe remove the four nuts which hold the cylinder to the crankcase. Lift the cylinder up and forwards into the front angle of the frame and then turn the engine forward until the piston comes out of the bottom of the cylinder, steadying the piston as it emerges so that it does not fall over and get damaged when it comes clear of the cylinder. Cover up the piston and the top of the crankcase carefully with a rag to prevent dust and grit falling in. Remove the valves from the cylinder and carefully chip out all carbon from the top of the cylinder and the valve pockets and passages with a long-handled screwdriver. After all the carbon has been removed wipe the cylinder thoroughly with a clean but oily rag, so as to remove all traces of carbon from the walls. Then swill out with paraffin and finally wipe clean.

**O.H.V. models.** With these machines the procedure is as follows:—

Unscrew the petrol pipe at the tank end. Remove the carburetter by releasing the clip fixing and tie this up on the machine out of the way. Detach high tension lead from sparking plug and remove

the latter. Set the exhaust valve open and disconnect the ball at the end of the bowden wire from the lifter lever on the rocker box. Screw out the bowden wire adjuster to remove it from the rocker box.

Remove the rocker box cover and then the four rocker box bolts. Then withdraw the rocker box, push rods, and push rod tubes, towards the right-hand side of the machine, the upper portions first. The four nuts holding the cylinder head can then be undone. Tap the head lightly and draw it off the studs, removing it from the left-hand side of the machine.

By undoing the four holding-down nuts the cylinder may then be detached.

**DECARBONIZING.** Scrape the carbon out of the cylinder head, and remove the valves. A special tool is provided for this purpose. The split collars can be freed when pressure is applied to the valve and spring collar by means of the tool, by a sharp tap with a small hammer. The ports and the portions of the head previously masked by the valves can then be cleaned. Take great care not to damage the valve seats however. The other parts of the head can be cleaned and polished with varying grades of emery cloth.

**GRINDING-IN VALVES.** If either of the valves is slightly pitted on its seat it may be ground in by the following method:

Valve grinding compound (obtainable at any garage or accessory shop) is smeared lightly on the face of the valve, which is then returned to its seating.

By means of a screwdriver in the slot in the head of the valve rotate it backwards and forwards by a turn of the wrist.

Every few strokes the valve should be lifted slightly off its seat and moved to a different position. A light spring under the valve head simplifies this operation, which should be continued until an inspection of the valve face shows a smooth surface all the way round.

If it is badly pitted, however, it should be sent to the B.S.A. works at Small Heath to be refaced. On its return a very slight amount of grinding-in will be sufficient to make a good face. Never attempt to grind in a badly pitted valve, as excessive valve grinding wears away the valve seat in the cylinder and causes the valve to become pocketed, with consequent loss of power. After grinding-in be careful to wipe away all traces of the grinding material both on the valve and in the cylinder head. Before replacing the valves smear their stems with a little oil.

**PISTON AND RINGS.** The gudgeon pin is of the floating type, and by being pushed out of the piston frees the latter from the connecting rod.

Mark the piston on the inside of the skirt to enable it to be re-assembled in the original position. Scrape all carbon off the top of the piston by means of a short screwdriver or old pocket knife. Finish by polishing the top of the piston lightly with fine emery paper.

Now examine the piston rings. If they are bright and quite free in their grooves it is better to leave them alone, as they are brittle and there is a considerable risk of breaking them during removal. If the rings are stuck in their grooves prise them out very carefully and clean them. Scrape any carbon from the grooves and from the inside and edges of the rings and then replace, providing they are otherwise in order.



After several thousand miles have been covered the gap between the ends of the rings should be checked with a ring in cylinder. The ring may be positioned correctly by first inserting the piston and then sliding the ring up to the piston skirt. If the gap exceeds  $25/1,000$ in. a new ring should be fitted with a gap of  $.006$ in. to  $.010$ in. on the 1.49 h.p., and  $.007$ in. to  $.011$ in. on the other models.

Any ring showing brown patches should be replaced by a new one.

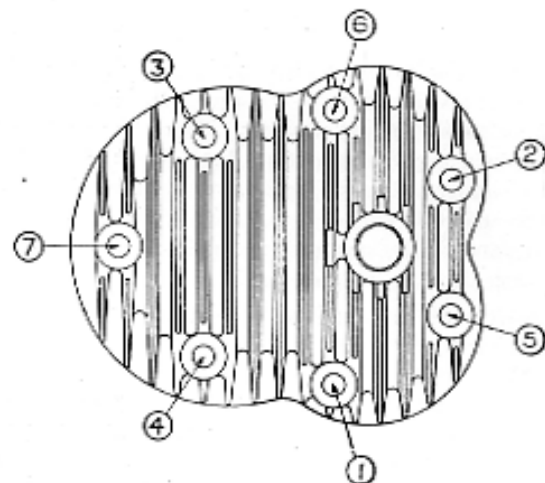
After cleaning the piston make sure that the slots in the piston rings are on the opposite sides of the piston to one another and then smear the sides of the piston generously with engine oil to obviate any risk of damage when first running after assembly.

#### ASSEMBLING AFTER DECARBONIZATION

Before replacing the cylinder pour a small quantity of engine oil into the crankcase and smear the cylinder walls with oil.

Replace the valves and springs with the aid of the special tool, if necessary.

Replace the piston and gudgeon pin on the connecting rod, having previously oiled the various parts, and make sure that the piston is the correct way round. Turn the engine until the crank is slightly past bottom dead centre. The top piston ring should now be compressed by the fingers while the cylinder barrel, held in the front angle of the frame, is slid on to the piston. The lower ring may now be compressed until it enters the barrel, which may then be slid home and bolted to the crankcase by gradually and alternately tightening down the nuts.



2.49 h.p. S.V.

Fig. 14

In the case of detachable heads on the S.V. models the bolts should be tightened down in the proper order as shown on the diagram (Fig. 14).

The head should be tightened evenly on O.H.V. models in a similar manner.

Now, on O.H.V. engines turn the engine until both tappets are down (*i.e.*, piston at top dead centre at end of compression stroke). Replace rocker box and push rods and see that the tops of the vapour tubes spring into their seatings underneath the box.

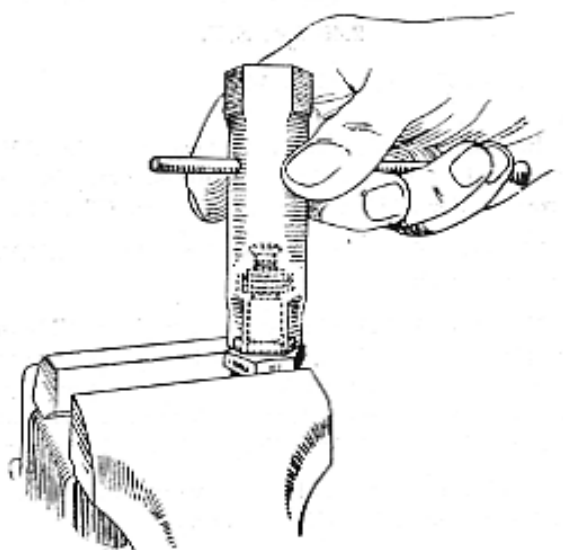
Check the clearances between valves and rockers or tappets and adjust if necessary.

The rocker box or valve cover, exhaust lifter cable, carburetter, sparking plug, and exhaust pipes may now be fitted.

## CLEANING.

The life of a machine is increased, and its appearance and value greatly improved by regular and careful attention to cleaning. Special care should be taken to prevent grit working into the moving parts and causing undue wear and other troubles. Particularly is this the case round the front, rear, and sidecar hubs, carburetter, magneto, valve stems, tappets, brakes, and gearbox.

Never rub dry and caked mud from the frame, mudguards, etc. To do so means that the enamel will be subjected to the abrasive action of the grit and the polish will soon be destroyed. Thoroughly soak the dirt first, then wash it off and wipe the parts dry. If a hose is available this will be found



*Sparking Plug Dismantling.*

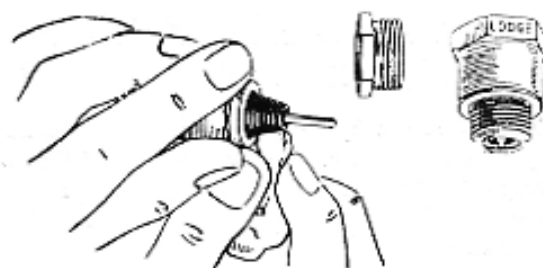
Fig. 15

the most satisfactory way of removing dirt. Direct the stream of water on the portion being cleaned, taking care to avoid playing direct on to the hub bearings, etc. Afterwards brush lightly with a soft brush, finally drying and polishing with a smooth cloth. To remove dirt from the engine soak it well with paraffin, cleanse with a fresh supply, then wipe dry. To remove oil stains from the crankcase use caustic soda solution very sparingly. An occasional coating of a cylinder paint should be given to prevent rusting of the cylinder, or a solution of lampblack in paraffin to which a small quantity of gold-size has been added may be used. This will also be found to assist the radiation of heat.

## SPARKING PLUG.

The sparking plug fitted to your machine has been selected after careful tests and is the best type for your engine. Occasional cleaning is necessary, and we advise the following method:—

Hold the plug in a vice (Fig. 15) and unscrew the gland nut by means of a box-spanner. Wash the surface of the inside insulation clean of soot and



*Sparking Plug Cleaning.*

Fig. 16

carbon by the use of petrol. This surface should only be wiped carefully with a rag, and must not be filed or rubbed with emery or glass-paper (Fig. 16).

Scrape the metal body quite clean of carbon, and if desired wash in paraffin or petrol. Reassemble the plug, using only sufficient force on the gland nut to make the joint gastight. After assembling the spark gap should be adjusted to .018in., or roughly the thickness of an ordinary visiting card. (A gauge may be obtained free of charge on application to the makers of the plugs fitted to our machines—Messrs. Lodge Plugs Ltd., Rugby—enclosing 1½d. to cover postage.)

When the engine is thoroughly "run in" it is unlikely that the plug will require frequent cleaning, unless a "leaded" petrol is being used, in which case it is advisable to dismantle the plug and clean it at least every 1,000 miles. In normal use the spark gaps will get gradually wider, and this throws an unnecessary strain on the magneto. It is therefore advisable occasionally to adjust the spark gaps by bending the earth or side electrodes towards the centre pin.

## GENERAL MAINTENANCE AND RUNNING HINTS.

There are so many factors governing the satisfactory running of an engine that the importance of giving attention to all the following points must be emphasized if the best all-round results are to be obtained.

Poor compression may be due either to the need for valve grinding, tappet adjustment not in accordance with the instructions given earlier in this book, or, in the case of an engine which has covered a

considerable mileage, piston ring wear and consequent leakage. Choking of the exhaust system, due to over-oiling for a long period or other incorrect treatment, may cause overheating and consequent loss of power.

The actual timing of the ignition should be verified and it may be possible in certain cases, dependent upon local conditions (including the type of fuel used), to make an advance on the standard setting (see page 16).

When driving the ignition should invariably be kept advanced as much as is possible under the conditions obtaining. In this connection it must be stressed that a dirty engine—*i.e.*, one that is carbonized up badly by the use of unsuitable fuel (we recommend for normal purposes either a good brand of No. 1 spirit or one of the petrol-benzole or Ethyl mixtures), or sparking plugs out of order—may render it impossible to make full use of the ignition advance.

Under certain conditions the carburetter jet may be reduced by one size, but, generally, this is not desirable, and an endeavour should be made to obtain the required petrol consumption without this alteration by following out the suggestions above and below. The adjustable screw controlling the starting and slow-running setting should be kept out—*i.e.*, unscrewed—as far as may be without prejudicing starting. Although it is claimed that this setting has little effect upon the petrol consumption, this is not necessarily the case under conditions where there may be a fair amount of engine idling or running, say, downhill, against the engine with the throttle closed. The weaker the mixture under these conditions the less will be the waste of petrol.

All joints in the carburation system and the petrol pipe line should be kept tight, and to avoid waste the petrol tap should be turned off whenever the vehicle is left standing for more than a few hours. There may be no definite leak, but the rate of evaporation in the float chamber is, under certain conditions, relatively high, and the amount of petrol wasted in this way over a period may be quite appreciable. Excessive flooding when starting is productive of petrol waste and should be avoided at all times, since it prejudices easy starting and tends to wash away the oil from the cylinder walls of a cold engine.

The air holes in the filler cap of the petrol tank should be cleaned out from time to time. Occasionally these get choked and float chamber starvation at high speeds will result.

Also, the petrol tap in the tank should be removed periodically. The tap screws into a plug, to which is attached a filter; this should be cleaned occasionally when the tank is empty or nearly so, and any collection of dirt or water at the bottom of the tank carefully removed by washing out with petrol. The tap itself should be blown through in both the normal and the reserve position. Occasionally dirt or water may lodge in the body of the tap, causing a restriction in the petrol supply.

What are called "floating" obstructions in the carburetter jet are sometimes difficult to locate, and indicate their presence by causing partial choking at irregular intervals. Any restriction of the petrol supply due to the foregoing can obviously be remedied by cleaning the jet.

### DRIVING.

Violent acceleration, either on the top or lower gears, should be avoided, as should an undue amount of running on the latter.

The petrol consumption on the lower gears is, for obvious reasons, very much heavier than on top gear, and experience with the vehicle will show that it is possible to use top gear to a greater extent by careful spark manipulation than would perhaps be realised during the early period of running.

In connection with the ignition control, it is perhaps advisable again to stress the need for making full use of the advance, apart from increasing the petrol consumption. Driving on retarded or partially retarded ignition will cause engine overheating in addition to giving unsatisfactory running.

### TROUBLE AND HOW TO LOCATE IT.

To meet any emergency likely to arise through trouble on the road it is advisable to carry the following spares: Spare valve, complete with springs, cup, and cotter; sparking plug, spare links and fasteners for chain, chain rivet extractor, and tyre repair outfit, together with the kit of tools supplied with the machine. The points most likely to cause trouble are the petrol supply and the sparking plug.

Should the engine develop misfiring or stop firing altogether first ascertain that there is petrol in the tank and that the petrol tap is turned on to carburetter. Depress the tickler on the float chamber to see that petrol is reaching the jet. If not see whether the petrol pipe is clear, detaching it by unscrewing the union nuts from the petrol tap and underside of the carburetter float chamber. Then examine the jet, which is removed by unscrewing the hexagon-headed nut at the base of the carburetter body. The jet will then be exposed and can readily be screwed out. If the machine still refuses to fire after correcting these faults examine the sparking plug

to see whether the points are fouled with charred oil; if so, clean the plug in accordance with the instructions given on page 32. Having cleaned the plug connect it to high-tension cable, lay plug on top of cylinder, noting that only the metal body of plug makes contact with this. Rotate engine a few times by means of kickstarter. A spark should occur at intervals at the plug points unless the plug is defective. If so fit in a spare plug. Of course if the engine stops and over-oiling is suspected—in this case the exhaust will have previously had a bluish tinge—remove the plug and clean in the first place; then, if engine still refuses to run, examine the other points likely to cause trouble.

It pays to put high-quality  
Spares into a high-quality  
machine.

Insist on genuine  
**B.S.A. Spares.**

**B.S.A. CYCLES LTD., Birmingham, II.**

*Directors:* A. E. BERDMAN, J. W. BRYAN,  
G. D. BURTON, A. H. POLLEN.

*B.S.A. Cycles Limited reserve the right to alter the designs or  
any constructional details of their manufactures at any time  
without giving notice.*

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## PROPRIETARY INSTRUMENTS, FITTINGS, AND ACCESSORIES.

No expense is spared to secure as standard equipment the most suitable and highest quality instruments and accessories. Nevertheless, the Company's guarantee does not cover such parts, and in the event of trouble being experienced the parts in question should be returned to and claims made direct on the actual manufacturers, who will deal with them on the terms of their respective guarantees, as follows:—

### **Tyres:**

Messrs. Dunlop Rubber Co. Ltd., Fort Dunlop,  
Birmingham.

### **Saddles:**

Flexible Saddles Ltd., Greet, Birmingham.  
Messrs. Herbert Terry & Sons Ltd., Redditch.

### **Electrical Equipment and Electric Horns:**

Messrs. Joseph Lucas Ltd., Birmingham.

### **Speedometers and Clocks:**

Messrs. S. Smith & Sons (M.A.) Ltd., Cricklewood,  
London.

### **Carburettors and Twist Grips:**

Messrs. Amalgamated Carburettors Ltd., Perry  
Bar, Birmingham.

### **Grease Guns:**

Messrs. Tecalemit Ltd., Great West Road, Brent-  
ford, Middlesex.

### **SPECIAL NOTE.**

Prompt attention to all claims under guarantee will be ensured if your covering letter gives—

- (1) Make, year, and model of motor cycle.
- (2) Date of purchase and name of Dealer from whom obtained.

## LUCAS SERVICE DEPOTS

In the event of any difficulty with any part of the equipment, no matter how trivial, we shall be only too pleased to give every assistance possible. The best course to adopt is to call at the nearest Lucas Service Depot (the addresses of which are given below), when the equipment can be examined as a whole. The depots are not only at your disposal for repairs, overhauls and adjustments, but to give free advice. If it is necessary, however, to communicate, or when ordering spare parts, always give the type and number of the unit in question, the make, and if possible, the date of the Motor Cycle on which it is fitted.

<b>BELFAST</b> ... ..	3/5, Calvin Street, Mountpottinger
Telephone: Belfast 7917.	Telegrams: "Servdep, Belfast."
<b>BIRMINGHAM</b> ... ..	Great Hampton Street
Telephone: Central 8401 (10 lines).	Telegrams: "Lucas, Birmingham."
<b>BRIGHTON</b> ... ..	Old Shoreham Road, Hove
Telephone: Preston 3001 (4 lines).	Telegrams: "Lucas, Brighton."
<b>BRISTOL</b> ... ..	345, Bath Road
Telephone: Bristol 8400 (4 lines).	Telegrams: "Kingly, Bristol."
<b>CARDIFF</b> ... ..	54a, Penarth Road
Telephone: Cardiff 4693 (4 lines).	Telegrams: "Lucas, Cardiff."
<b>COVENTRY</b> ... ..	Priory Street
Telephone: Coventry 3068 & 3841.	Telegrams: "Lucas, Coventry."
<b>DUBLIN</b> ... ..	Portland Street North, North Circular Road
Telephone: Drumcondra 484 (6 lines).	Telegrams: "Lucas, Dublin."
<b>EDINBURGH</b> ... ..	32, Stevenson Road, Gorgie
Telephone: Edinburgh 82921 (4 lines).	Telegrams: "Lucas, Edinburgh."
<b>GLASGOW</b> ... ..	227/229, St. George's Road
Telephone: Douglas 3975 (5 lines).	Telegrams: "Lucas, Glasgow."
<b>LEEDS</b> ... ..	64, Roseville Road
Telephone: Leeds 2859 (5 lines).	Telegrams: "Lucas, Leeds."
<b>LIVERPOOL</b> ... ..	450/456, Edge Lane
Telephone: Old Swan 1408 (3 lines).	Telegrams: "Lucas, Liverpool."
<b>LONDON</b> ... ..	Dordrecht Road, Acton Vale, W.3
Telephone: Shepherd's Bush 3160 (10 lines).	Grams: "Dynamagra, Act, London."
<b>LONDON</b> ... ..	759, High Road, Leyton, E.10
Telephone: Leytonstone 3361 (3 lines).	Grams: "Lucas, Leyton, E.10."
<b>LONDON</b> ... ..	155, Merton Road, Wandsworth, S.W.18
Telephone: Putney 5131 (6 lines) & 5501.	Telegrams: "Lucas, Wandsworth, London."
<b>MANCHESTER</b> ... ..	Talbot Road, Stretford
Telephone: Longford 1101 (5 lines).	Telegrams: "Lucas, Stretford."
<b>NEWCASTLE-ON-TYNE</b> ... ..	64/66, St. Mary's Place
Telephone: Central 3571 (8 lines).	Telegrams: "Motolite, Newcastle-on-Tyne."

## LIST OF B.S.A. STOCKISTS.

FOR SERVICE APPLY EITHER WHERE THE VEHICLE WAS PURCHASED OR TO THE LOCAL B.S.A. DEALER, OR TO ANY OF THE FOLLOWING B.S.A. MOTOR CYCLE SPARE PARTS STOCKISTS.

Town	Name of Stockist	Address	Telephone No.	Telegraphic Address
Aberdeen	J. Dawson	24-26, Thistle Street	1272	
Aldershot	Phillips Bros.	Birkett Road and Grammore Lane	300	Phillips, Cycles, Aldershot.
Banbury	Trinder Bros.	3, Broad Street	146	Trinder, 146, Banbury.
Bedford	The Imperial Cycle Co.	58, St. Leger	2374	
Belfast	W. J. Chambers	106, Dongsill Pass	2263	Fastnote, Belfast.
Berwick-on-Tweed	Lion Garages Ltd.	Lion Garage	15	
Biggleswade	Bryants	72, Shortmead Street	108	
Birkenhead	H. J. Marston	50, Anzyle Street	2213	Notram, Birkenhead.
Birmingham	County Cycle & Motor Co. Ltd.	391, Broad Street	Midland 2670	Carmoyen, Birmingham.
" (Aston)	Falcon Cycle & Motor Depot (E. Newell)	54, Lovells Road	Northern 505	
" (Edgbaston)	Chas. E. Gomp & Sons Ltd.	15, Upper Hagley Road	Bearwood 1943	
" (Huy Mills)	H. Bird & Sons	1945, Coventry Road	Victoria 651	
" (Rubery)	Owen's Garage	New Road	3	Rubery Owen, Rubery, Birmingham.
" (Small Heath)	Scotts	543, Coventry Road	Victoria 372	
" (Sparkhill)	A. Watkins	550 & 565, Stratford Rd.	Victoria 946	
Blackburn	Shuttleworth & Geldart	St. Peter Street	6678	
Blackpool	J. Hall	143, Church Street	795	
Blandford	Fianders' Garage	White Cliff Mill Street	57	Fianders' Garage Blandford.
Bournemouth	Craze Bros.	Christchurch Road, Bournemouth	Bournemouth 63	
"	S. Priestley	35, Seamount Road	834	Priestley, Bournemouth.
Bradford	C. Sidney Ltd.	Blind Institute Buildings, Upper Piccadilly	3116	
Bridgwater	Anderson & Wall	18, St. Mary Street	116	Service, Bridgwater.
Brighton	Bridgers	20, Gloucester Place	Brighton 5281	
Bristol	S. J. Fair	201, Cheltenham Road	2238	
Bury	Arthur Coyle	33, Walmersley Road	714	
Cambridge	King & Harper	6 and 7, Bridge Street	1600	Motors, Cambridge.
Canterbury	G. R. Barrett & Son	30, St. Peter Street	386	Barrett Motors, Canterbury.
Cardiff	Car Distributors (Cardiff) Ltd.	155, City Road	3422	
Carlisle	W. T. Tiffin	Irishgate Brew	314	Tiffin, Irishgate, Carlisle.
Carmarthen	W. Edwards & Sons	Tawy Garage	82	Edwards' Garage, Carmarthen.

List of B.S.A. Stockists—continued.

Town.	Name of Stockist.	Address.	Telephone No.	Telegraphic Address.
Chapel-en-le-Frith.	Lomas Bros.	Newfield Garage	309	Whisley Bridge 100
Chatham	H. G. Russell	Russells Garage, Medway Street.	3609	Lucas Bros., Chapel-en-le-Frith.
Chelmsford	H. T. Hadler	Now Street	227	Hadler, Chelmsford.
Cheltenham	Leslie Paynter	Both Street	2887	Paynter's Garage, Bath Street, Cheltenham.
Chester	Davies Bros.	34, Bridge Street	510	
Colchester	The Motor Cycle and Light Car Depot.	119, High Street	2632	Medical, Colchester.
Coventry	Coventry Motor Mart Ltd.	London Road	3200	Coventry Motor Mart.
Croydon(West)	Godfreys Ltd.	228/234, London Road	1214	Croydon Cofrabike, London.
Darlington	Duplex Motor & Cycle Co.	8-13, Grange Road	2071	Duplex, Darlington.
Derby	Kay & Scamptson	14, Sadlergate	1131	Kay, Sadlergate, Derby.
Doncaster	W. E. Clark & Co.	27 & 29, Station Road.	176	Cars, Doncaster.
Dorchester	Tilley's	31, South Street	14	Motors, Dorchester.
Dunstable	B. G. England	Half Moon Hill, Watling Street.	207	
Eastbourne	Bradshaw's	10, Terminus Road	1292	
East Grinstead	Fosters (East Grinstead) Ltd.	79, London Road	131	
Edinburgh	Alexander & Co.	113-115, Lathian Road	21176	Motorcycles, Edinburgh.
Evesham	Frank Merial Ltd.	Central Garage, 20, Port Street.	54	
Exeter	Wessex Garage Co.	18-22, Longbrook Street.	2342	Wessex Garage, Exeter.
Frome	P. Difazio	25, Catherine Street	212	Difazio, Frome.
Gateshead	O. Carmichael & Son	81-83, High West Street	15	
Glasgow	Bell Bros.	223, St. George's Road	258	Douglas Motobike, Glasgow.
"	Alexander & Co.	272-274, Great Western Road.	3880	Douglas Alexmoto, Glasgow.
Gloucester	T. E. Harper	1, Worcester Street	1187	
Guildford	E. Pissall	11-12, Woodbridge Road	255	Guildford
Halifax	Halifax Motor Exchange	25, Horton Street	1400	Perfection, Halifax.
Hampton-in-Arden.	J. Parson	Barston	30	Hampton-in-Arden
Harrrogate	H. Acklam	11, Bower Road	5125	
Hawick, N.B.	Milligan & Bell	7, Bridge Street	179	
Haywards H'th	J. W. Dinnage	Sussex Road	294	
Hersford	A. Kear & Co.	52b, Commercial Street.	2239	Kear, Hereford.

List of B.S.A. Stockists—continued.

Town.	Name of Stockist.	Address.	Telephone No.	Telegraphic Address.
Hitchin	J. Chalkley & Sons	Brand Street	44	Chalkley's, Hitchin.
Horsham	Jackson Bros.	London Road	12	
Hove	Bradshaws	6, Western Road	4124	Hove
Huddersfield.	Earnshaws	Manchester Road	1232	
Hull	A. E. Brown	473-48, Witham	4162	Central
Inverness	Alex Munro	14, Baron Taylor's Street	98	Munro, Iron-Imonger, Inverness.
Ipswich	Revetts	Barrack Corner Garage and St. Matthew's St.	2823	Revetts, Motors, Ipswich.
King's Lynn.	J. Cox & Sons	Railway Road	350	Cox, Cycles, Lynn.
Kingston-on-Thames.	H. Taylor & Co.	135/7, London Road	1263/4	Dynametro, Kingston
Launceston	J. Woodridge & Son	Western Road	21	Woodridge, Launceston.
Leeds	J. Armitage & Sons	York Street	23193	
"	Watson, Cairns & Co. Ltd.	Lower Briggate	23379	Watson Cairns, Briggate, Leeds.
Leicester	E. W. Campion & Sons	Welford Place	58054	
Lincoln	West's (Lincoln) Ltd.	115c, High Street	762	West's Garage, Lincoln.
Liverpool	Candle's	41, Byron Street	6160	Bank Seldnuc, Liverpool.
London, S.E.15	Boyer & Bentley	118, Perkhsm Rye	3032	New Cross
"	W.1	Godfrey's Ltd.	366-368, Euston Road.	Museum Cofrabike, London.
"	E.C.2	J. Gress Ltd.	4, Old Jewry, Cheapside	Central Jogrospur, 0166 Phone, London.
"	N.7	J. Gress Ltd.	255-257, Holloway Rd.	Northern 1297
"	S.E.6.	E. Parks & Son	5 and 6, Central Parade, Catford.	Lee Green Mecycparts, Catgreen, London.
"	S.E.18.	Clare & Co. Ltd.	1 and 125, Woolwich High Street.	Woolwich 174
"	W.12.	Turner's Stores	81-83, Goldhawk Road	Shaphard's Bush 2436
"	E.7	Lowett's Ltd.	418, Romford Road, Forest Gate.	Grangewood Levermoto, 1234 London.
"	S.W.11	Owen Bros.	19, Batterssa Rise, Clapham Common.	Battersen 1299
"	(Twickenham)	C.A. Bloy	192, Heath Road	Popesgrove 2103
Lowestoft	Taylor Bros.	75, London Road	510	
Luton	F. H. Moss	Park Street	1792	
Maidstone	Anstey & Son	30-34, Stone Street	432	Anstey 432, Maidstone.



List of B.S.A. Stockists—continued.

Town.	Name of Stockist.	Address.	Telephone No.	Telegraphic Address.
Manchester	W. H. Jones	415, Bury New Road, Higher Broughton.	Hr. B'ton. 2978	
"	Colmore Deput	22, Peter Street	7127	Coldep. Manchester.
"	Tom Davies	229, Deansgate	B'frirs 0536	
"	Stretford Garage	1073, Chester Road, Stretford.	Langford 1998	
Middlesbrough	Pallister, Yare & Cobb, Ltd.	134, Marton Road	2873	Physcok. Middlesbrough.
Nelson	Wilde & Co.	95-97, Manchester Road	524	
Newcastle-on-Tyne	Dene Motor Co.	Haymarket	2336	Central Ened, Newcastle-on-Tyne.
"	Kirsop, Murray & Co. Ltd.	12, Hood Street	1566	
Newmarket	H. W. Kelty & Son	High Street	48	
Newport (Mon.)	V. T. Waite	79, Commercial Street	2716	Warnobike, Newport (Mon.)
Northampton	P. C. Spriss	1, Henry Street	1160	
Norton (Malton, Yorks.)	Bower's Motor Exchange	Church Street	176	Malton Bower, Malton.
Norwich	H. Chapman	42, Duke Street	921	Chapman, Duke Street, Norwich.
Nottingham	E. W. Campion & Sons	Station Street	2961	
Oxford	Laytons of Oxford	New Road	3381	Integrity, Oxford.
Perth	M. Shaw & Sons	22, Mill Street, and 137-143, High Street.	483	Shaw's Garage, Perth.
Peterborough	Barrows Bros.	57, Westgate	154	
Peterhead	J. Campbell & Sons	341-38, St. Peter's Street	172	Campbell, Peterhead.
Plymouth	A. E. Snell (Mrs.)	95/7, Old Town Street	1706	Tyres, Plymouth.
Portsmouth	Sutalls	250-258, Commercial Road	6153	Sutalls, Commercial, Portsmouth.
Preston	Loxham's Garages Ltd.	Charnley Street, Fibergate.	4242	Loxham's, Preston.
Pulborough (Sussex)	Gray & Rowell	Fittlesworth Station, Burygate.	Bury 4 (Sussex) 1143	
Reading	Fortescue Bros. Ltd.	1 and 2, West Street	1143	
Redhill	The Redhill Motor and Cycle Works	50, Brighton Road	527	
Rhyl	Nelson's	39, Queen Street	130	Nelson's Garage, Rhyl.
St. Austell	S. H. Kellway & Sons	South Street Garage	102	
Salisbury	W. Rowland & Sons	86-106, Castle Street	170	Motors, Salisbury.
Sheffield	Walter Wragg	Wellington Street	26098	Wragg, Sheffield 26098.
Sherborne	Sheppard's Garage (Sherborne) Ltd.	Sherborne Garage, South Street.	85	Dyer, Sherborne.
Shetland	Thomson's Motor Garage & Marine Engine Works	Esplanade, Lerwick	85	Thomson's Garage, Lerwick.
Shrewsbury	J. C. Pickering	49, Mardol and Smithfield Road.	2730	

List of B.S.A. Stockists—continued.

Town.	Name of Stockist.	Address.	Telephone No.	Telegraphic Address.
Southampton	B. B. Tebbutt	10, Commercial Road	4863	Tebbut, Southampton 4863.
Southport	H. F. Brockbank	64, King Street	5054	
Southsea	Percy Kilm Ltd.	Elm Grove	4793	Portam'th Percy Kilm, Southsea.
Stockton-on-Tees	S. Jones, Motor Eng.	Bridge Road	66179	
Stoke-on-Trent	J. & N. Bassett	Howard Place, Shelton	2890	Hanley
Stratford-on-Avon	A. Bolland & Co.	Guild Street	14	Bolland, Stratford-on-Avon.
Sunderland	Dunn & Jameson	100-106, Hylton Road	4088	Motors, Sunderland.
Sutton-in-Ashfield	W. Henstock	29-43, Forest Street	90	Henstock, 90, [Sutton-in-Ashfield.
Swadlincote	S. W. Wroughton	High Street Garage	114	Wroughton's Garage, Swadlincote.
Swindon	J. Easter & Sons	8-10, King Street	786	Swindon
Taplow (Bucks.)	H. E. West	Bath Road	270	Burnham West, Taplow.
Taunton	W. P. Edwards	58, East Street	243	Edwards, Motorcycles, Taunton.
Thetford	W. & G. Lambert Ltd.	Cycle & Motor Works	17	Lambert's, Thetford.
Tonbridge	Chas. Bulter & Co.	150, High Street	105	Motorservice, Tonbridge.
Tunbridge Wells	G. E. Tunbridge	2, Vale Road	416	Tunbridge Wells.
Warsop (Notts)	E. Poynton	Central Garage, Market Place	21	
Watford (Herts.)	Lloyd Cooper & Co. Ltd.	61, Queen's Road	2125	
Wednesfield	Wednesfield Motor and Cycle Garage.	Wolverhampton Road	31372	Fallings Park
Wellingborough	H. V. Briggs Ltd.	High Street	163	Briggs Motors, Wellingborough.
Westcliff-on-Sea	J. Costin & Son	257, London Road, Southend.	1095	
Weybridge	W. L. Lewis & Son	51, Church Street	210	
Weymouth	Tilley's	The Esplanade	72	Motors, Weymouth.
Winchester	Winchester Cycle and Motor Co.	Jewry Street	728	
Windsor	S. A. Surplice	37 and 39, Sheep Street	200	
Workington	J. Wilkinson	41, Washington Street	156	Wilkinson's Garage, Workington.
Worthing (West)	F. Wheatland	56, Broadwater Street	1224	Worthing
Yarm-on-Tees	T. B. Dubson & Sons	High Street	118	Eaglecliffe
Yeovil	The Yeovil Motor Mart	Hendford	267	Motor Mart, Y'vil
York	C. S. Russell	32, Lawrence Street	744	Russell, Lawrence Street, York.

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