ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE COMPANY.

Cables : Twin, Shipley, Yorks.
Codes : Bentley, A.B.C., Private.

Goods to Shipley
L.M.S.

Established 1908.

SCOTT
MOTOR CYCLE
COMPANY,
SHIPLEY,
YORKS.

Telephone : Shipley 337-338.
Telegrams : Twin, Shipley.

Proprietors :
SCOTT MOTORS (SALTAIRE) Ltd.

Contractors to the Admiralty.

Ref. AF/PG.

Mr. B. P. Stevenson,
53. Netherlands Avenue,
Odsal, Bradford.

3rd. August/1949.

Dear Sir,

Further to your visit to our Works, we beg to enclose herewith the only literature we have now remaining for the 300.c.c. Model, and trust you will find this of interest.

Yours faithfully,
Scott Motors (Saltaire) Limited.

Service Department.

Enclosure.

INSTRUCTION. FOR 300 c.c. MACHINE.

THE NEW ENGINE. On taking delivery it is advisable to satisfy oneself that no damage has been done in transit, and that no excess of oil has accumulated in the crankcase well. Any excess should be drained away by removing the oil plug provided for this purpose, before attempting to start. Do not forget to firmly replace this plug, then proceed as follows:-

1. Fill Oil Tank.(Rear Filler-cap, left-hand side).

Use recommended oils of the correct grade only - preferably CASTROL XXL. The following may be used with confidence if the first-mentioned is not obtainable:-

CASTROL "XL" or "C" Motorine "Huile-de-Luxe" (Prices).
Speedwell "Sans Egal" Vacuum "T.T." (Improved).

2. Fill petrol tank.

The petrol tank is in two halves, connected by means of a bridge pipe. When filling up, both front filler caps should be used. For best results, we recommend a mixture of Benzol & Petrol, 50% each. We also recommend that about half-pint of engine oil should be added to each two gallons of petrol during the first 500 miles running.

TO START.

(1). Handlebar controls.

(a) Throttle Lever (right handlebar, long lever) should be set approximately one-eighth open. It opens towards you.

(b) Air Lever (right handlebar, short lever) shut, i.e. away from you.

(c) Ignition Lever (left Handlebar) half-advanced, i.e. half-way towards you. (Retarded when furthest away from you.

(2) GEAR LEVER.
See that the gear-lever is in the "neutral" position, i.e. with the lever in the second position from the front.

(3) Turn On the petrol.
Flood the carburettor by depressing the "tickler" on the float chamber lid.

(4) Standing alongside the machine, lift the half- compression trigger lever (left handlebar) and gently depress the kick-starter pedal with the left foot two or three times; then depress the pedal smartly- but not violently- at the same time dropping the half-compression lever.

AFTER STARTING.

(1) OIL REGULATION .The oil regulation is set on the generous side for running-in when the machine leaves the factory, but to enable this to be checked over, the setting should be as follows:- For running-in period, one drop with every third pulsation. After the running-in period, the pulsations per drop can be increased and the oil consumption lowered accordingly. Blue smoke should be emitted from the Exhaust pipe, which at first will appear excessive, due to the greater supply being given the engine during "running-in".

OIL REGULATION (continued).

With a new engine it is always advisable to be on the generous side with the oil supply for at least the first 500 miles or so. Objections to over-lubrication are four-stroking, (Engine firing every alternative revolution instead of every revolution) and that the Sparking Plug may be oiled up, causing misfiring or Engine stoppage. This however, is not a frequent occurance, and where it does happen, cut down the oil supply a little.

2) GEAR OPERATION.

a) Set throttle so that the engine runs slowly.

b) Disengage clutch fully. This is done by fripping the end lever on the left handlebar.

c) After a momentry pause, move Gear Lever into the low gear notch, that is, the most forward position.

d) Engage clutch gently by releasing handlebar lever, accelerating Engine slightly as it takes up the load.

When approximately 10 m.p.h. has been attained, change into middle gear. This is done by closing the throttle Lever and simultaneously moving the Gear Lever backwards into the middle notch, which is about half the whole of its travel.
The exact position can be fet immediately, but care should be taken not to let it remain accidentally in the neutral position between "low" and "middle". The throttle can then be opened again immediately, the change occupying less than a second.

When 20 m.p.h. is attained, change into high gear by exactly thw same method, moving the gear lever fight back.

To change down from "high" to "middle" or "middle" to "low" is done by first opening the throttle slightly, then disengaging the clutch (but not necessarily fully) simultaneously moving Gear Lever into desired notch. Then smartly release the Lever.

N.B. Do not change down at a higher road speed than can be done confortably in the lower ratio. No attempt should be changed direct from "high" to "low" or vice versa. To put gear into neutral from either low or middle gear, disengage clutch and move lever to neutral notch. To do this from high gear anormal change must first be made into middle gear, pausing momentarily before going through to neutral. The above instructions apply when the machine is in motion.

If the machine is stationary, but the engine running, the clutvh must be kept fully disengaged until the Lever is in neutral notch, when it may of course be released. When the engine is not running, no attempt should be made to force the gear lever. It is advisable to move the machine very slightly back-wards or forwards to obtain easy engagment, or alternatively, to turn the engine slowly over with the Kickstarter until the Lever moves freely into neutral position.

N.B.

On no account must a gear be engaged when the machine is in motion with the engine stopped as could happen if descending a hill in neutral. Under such circumstances the general practise with Gear Boxes should be observed, i.e. the Machibe must be brought to rest first, a d kickstarted, or the gear can be engaged when standing and the engine started with the machine s momentum upon releasing clutch.

TO STOP THE MACHINE. When driving, the actual speed is controlled by the Throttle Lever, all other controls being utalised only to obtain the best running conditions for the particular circumstances. Therefore to slow the machine down, the Throttle should be closed and if this does not pull the machine up quickly enough, the Brakes must then be applied. It is a better practice to apply the Rear Brake before the Front Brake- and unwise to use the front Brake to any great extent, unless the Rear Brake is also being used at the same time.

Before bring the machine to rest, the Gear Lever should be slipped into neutral, although this is not essential if the Machine is already in low gear.

If an immediate re-start is to be made, the Engine need not be stopped, but it should be throttled down, to prevent needless racing.

If a restart is not to be made for some hours, the Engine can be stopped by choking the Carburettor with the palm of the hand placed over the air intake until the Engine stops, then leave the Throttle Lever in the closed position.

Turn off the petrol when standing (and close the throttle fully), particularly if the Machine be left tilted, or flooding of the Crankcase may occur.

LUBRICATION. Engine.

This is by means of a Pilgrim single sight feed Mechanical Oil-Pump, driven off the Magneto Sprocket, and is essentially detachable from the Magneto Platform, after taking away the Oil Pipes. It is important on replacing the Oil Pump. to see that the Pump Drive registers correctly with the driving hole in the Magneto sprocket. From the Pump, oil is led to the Crankcase L.H. Main bearing. The left-hand Crank is drilled, so that at the point of maximum crankcase suction, its oil passages register with the supply from the pump to the Main Bearing, and oil is caused to flow direct to the Roller Bearing big end. Surplus oil is thrown out by centrifugal force, and the Piston & Cylinder lubricated by splash. Provision is also made for ample lubrication of the R.H. Main Bearing.

WARNING. The Pump Driving Worm must never be revolved with either the end plate or end cam removed from the Pump Body. Also the Pump Plunger must never be removed from the Pump Body. unless the Driving Worm and Bush have first been removed. Failure to observe these points will immediately render the Pump Plunger and Driving Worm liable to serious damage. Do not interfere with the position of the Pump bracket in relation the the Magneto Bracket, as this is carefully adjusted at the factory, and never needs attention.

GEARBOX. Use Wakefield's " CASTROLEASE LIGHT" or "SPEEDWELL CRIMSANGERE LIGHT" for lubricating the Gearbox. (These have been specially prepared for this make of box. A quarter of a pound is sufficient for one charge, and half this amount should be used every 1,000 miles. All gears are carefully charged before being sent out, but after the first 500 miles, we advise adding a little more lubricant. Add two tablespoonfuls of Engine Oil to "Crimsangere". A careful observation of these instructions is important, as gear trouble can usually be corrected to under-lubrication, or use of unsuitable lubricants. OVER LUBRICATION CAN DO NO HARM. The joints in the gear changing mechanism should be kept oiled regularly. DO NOT LUBRICATE THE CLUTCH.

CHAINS, FORKS, WHEEL BEARINGS, ETC. Instructions are the same as applying to our other models - see the Book of the Scott", pages 19 & 20. The forks are identical to those now being fitted to Super Squirrels.

MAGNETO TIMING. To set the Magneto timing, proceed as follows:- a) Remove the Sparking Plug. (b)Fully retard the ignition lever. (c) turn the engine by means of the flywheel in its normal direction until the Piston just reaches the top dead centre. This can be felt by inserting through the Plug hole a length of stiff wire, or a pencil. (do not use a solid implement, such as a screw-driver, bor try to feel it with your finger) (d)Slacken off Magneto Sprocket Fixing Nut, and ease the Sprocket off the Taper of the Spindle by levering it gently from behind (with a thin spanner or screw-driver on each side of the spindle) tapping the nut gently at the same time; or, alternatively tap the sprocket from behind. (It is not necessary to remove the Oil Pump) (e) Remove the Contact breaker cover, and turn the Contact Breaker in a forward position until the platinum points are just fully broken. (f) Now tighten up th Sprocket carefully, taking care that the Magneto Spindle dos not rotate while doing so.

ADJUSTMENTS.

CHAINS. (Engine).

These are adjusted by moving the Gearbox backward or forward by means of the Adjusting Bolt provided, after first slackening off the two box Hol ding down nuts under the Gear Platform, and removing the Chain Guard, to enable the correct chain tension to be tested. The correct tension is when there is about ½" up and down moement in the chain in the centre of its run. Whenever the Engine Chain is adjusted the Rear Chain must be adjusted also.

REAR CHAIN.

Screw and adjusters are provided on the Rear Frame Lugs, but before these are used the Spindle Nuts must be slackened. The chains should be adjusted to allow approximately ½" movement at its tightest poi points, while the wheel must be kept in alignment. The surest method of testing alignment is to place a perfectly straight bar against the sides of both wheels, as high as the Mudguard etc. will allow. The wheels are correctly aligned if it is possible to hold the bar in contact with the Wheels at the four points where it crosses the Rims. Alternatively, a piece of string may be streched horizontally and parallel to the machine, measurements to Rims being taken therefrom.
NOTE: Chain adjustment may also necessitate re-adjustment of Rear Brake.

MAGNETO CHAIN.

This is adjusted by slackening off the four large Nuts holding the Magneto Platform, and then lifting the Platform about its rear fixing until correct adjustment is secured. The four Nuts are then securely tightened. Do not alter adjustment of oil pump is relation to Magneto Platform. THIS IS MOST IMPORTANT.

CLUTCH.

The Clutch Withdrawal Lever (on Gearbox) should be examined immediately any signs of clutch slip is suspected, to see that there is definately some idle movement when the clutch is fully enagaged. It may be found necessary to adjust the Cable Stop if it is discovered that the Inner Cable is too tight. Adjustment is also provided for in the Clutch Lever Thrust Screw whuch can be screwed in or out after slackening its lock nut.

Should the Gear Operation Lever on Gearbox be disturbed and not replaced in its correct location, it may, when in high gear position, foul the Clutch Lever and interfere with its operations. In cases where the Clutch Plates have worn, and permanent slip has developed. we would advise removing the endcap and Clutch Adjuster Nut. If any washers are found behind this nut, these should be removed. As an alternative, in obstinate cases, a stronger Clutch Spring may be fitted. This will cause for more exertion to operate Handlebar Lever.

BRAKES.

Adjustment is the same as on the 2-speed Super Squirrel Models - see "The Book of the Scott", page 67.

WHEEL BEARINGS.

The wheel bearings are of the cup and cone type, and great care should be exercised in their adjustment. The follwing procedure should be adopted:- Put the Machine on its stand and test the wheel for side-play by holding the rim in one hand and pulling sideways. If any play exists, slacken the Spindle Bolt Nut, and by means of the cone spanner screw up the adjustable cone until only slight play can be detected, then lock up the spindle and rotate the wheel to see that it revolves quite freely. It may be that sufficient clack has not been left and the wheel is stiff to revolve, in which case, the operation must be repeated, leaving slightly more end play, to allow for thte tightening effect of the Spindle Nut. Should wear take place, adjust the bearing immediately. Do not allow wheel shake to develop.

STEERING HEAD BEARINGS.:

These are of the ball thrust type, to adjust which, it is necessary to first lift the front wheel clear of the ground. The Top Ball Race Lock Nut should then be slackened off, and adjustment by screwing up the R.H. threaded nut. During this process, test the forks for freeness, and do not overtighten. When the correct adjustment is found finally tighten up the Lock Nut.

DECARBONIZING. Normal Attention. With a new engine, decarbonizing is advisable, and usually necessary after the first 500 miles, this being due to the excessive oiling during the running-in period. Subsequently, as the oil supply can be cut down, the period between decarbonizing is considerably lengthened, When an engine is run in and normal oiling adhered to, the Cylinder Head and Pistons need only be cleaned from time to time, say every 1,500 miles. This is a very simple matter, as it is only necessary to take off the Detachable Cylinder Head to clean the Combustion and Piston Heads, whilst the Exhaust Ports can be reached when the Piston is at the bottom of its stroke.

COMPLETE DECARBONIZING. When a complete decarbonizing is to be carried out, the Cylinder must be removed from the Crankcase (see Later) Particular attention should be paid to the cylinder ports, Sparking Plug orifices, and the sides of the piston head deflector; the Piston rings should be removed, and also carbon deposit from the grooves. The insides of the piston heads should also be cleaned, and the opportunity taken of cleaning out the crankcase.

HALF COMPRESSION VALVE.

This can be removed for cleaning (it rarely requires re-grinding) by screwing out the Valve Lock Ring, when the Valve itself can be pulled out.

To take off the Cylinder Head:First take off the Holding Down Stud Nuts, and lightly tap the head free. do not use a screwdriver between the Head and Cylinder, as damage to joint face may occur. When the Head is replaced, tighten each nut equally, and after a preliminary run, to heat up the Head, again tighten thoroughly.

TO TAKE OFF THE CYLINDER. Can be removed from crankcase without taking engine from Frame, as follows:- Take out sparking plug, detach exhaust box, letting it slip down after removing Half Compression Pull-Off Spring. Remove Cylinder Holding down nuts (at each corner of square base of Cylinder. Cylinder casting can now be lifted off Piston, taking care to ease off cylinder with Crankshaft in such a position as to allow Piston & Con Rod to lie in one line.

TO DRAIN CRANKCASE. Remove hexagon headed Drain Plug, found underneath. Sump should contain only a very small quantity of oil, and it should be flushed out with paraffin and allowed to drain off if there is much sediment in it. Upon engine being started, Oil Pump must be opened several turns, and can be reset to normal after a few minutes slow running.

ON REPLACING CYLINDERS. The Piston Rings must be carefully guided into their grooves, to prevent the possibility of over-riding their stop. No extreme force must be used, the cylinder being eased into position.

TO TAKE OFF PISTON. The Gudgeon Pin can be pushed, or lightly tapped out, (together with its aluminium end cap) from the small cap end.

TO REMOVE PISTON RINGS. Piston Rings are easily removed by raising one end over the Piston Stop and moving it round until it mounts over the piston body. On replacing rings, see that they are the right side up, i.e. with the bright side upon the lower face of the groove. USE ONLY SCOT RINGS: USE ONLY SCOT RINGS.

TO REMOVE FLYWHEEL. The flywheel is removed by first taking off the r.h. threaded nut, and then applying one or two sharp blows on the end of the shaft with a hammer, to ease it off its taper. Take care not todamage the thread. When replaving the flywheel the tapered hole in the shaft must be quite free of grease and grit; be sure that the key is correctly fitted and that it does not touch the main bearing bush.

TO REMOVE CONNECTING ROD. After removing the Flywheel, the Crabkcase doores should be removed. This is done by taking off the three Stud Nuts, and easing from the back. Do not insert any sharp instrument between the joint face, as the dace is liable to be damaged, and cause an air leak. The Crankpin Clamping Screw on the L.H. Crank should now be slackened back, after first adjusting its flat Lock Washer, leaving the R.H. Crank free to be withdrawn from the Crankcase and Con-Rod, together with the Crankpin (be careful to collect the 20 Big End Rollers) The Connecting Rod can now be lifted out.

TO REMOVE THE CRANKS. The method of removal for the R.H. Crank has already been stated. The L.H. Crank is withdrawn, after removal of the engine sprocket, the operation being similar to removal of Fly-Wheel, after first taking off the chain Guard, Engine and Magneto Chains.

REBUILDING ENGINE. This is carried out in reverse order to the dismantling; the most important point to watch is that the two halves of the crankshaft are in perfect alignment. After the R.H. Crank, together with crankpin, has been inserted into the L.H. Crank, the door should be replaced (see that no foreign matter adheres to the joint face) and the L.H. Crankpin Screw toghtened up. The crank-shaft should now be revolved, and if perfectly free, the L.H. Crank-pin screw should be locked by means of its lock washer. If tight places are detected when the cranks are revolved, slacken off the crankpin screw, and slightly move the Cranks relative to one another, and try again.

FORKS. These are of the same type used on the Super Squirrels, see page 59 in the Book Of The Scott". Whenever the Guide Bushes are disturbed, or replaced, they must be allowed to align themselves, in their housings, and therefore must noy be clamped up until the Forks are fully assembled.

HINTS AND TIPS. Engine defects. Assuming that both Carburettor and Magneto are functioning correctly, the efficiency of the Engine primarily depends upon the following:-
(a) Good cylinder compression. (b) Good crankcase compression. (c) Correct timing of Magneto. (d)Absence of air leaks. (e) Freeness of bearings and working surfaces, &(f) correct lubrication.

CYLINDER COMPRESSION. can be tested by steady pressure upon the Kickstarter Pedal or by engaging high gear and pulling the back wheel round with the Machine on the stand. It should offer considerable resistance. Compression may not appear good immediately after an engine has been decarbonized, particularly if new Piston rings have been fitted, but this should rapidly become normal after a lit lo use. Defective Cylinder Compression may be due to faulty or broken Piston Rings, shortage of oil, stuck-up half compression valve or leakage from the Sparking Plug.

DEFECTIVE CRANKCASE COMPRESSION. can be tested by removing the Sparking Plug, engaging high gear and turning the Engine sharply by means of the back-wheel. Thereshould be a distinct "pop" at each revolution (suggestive of a cork being withdrawn from a bottle) Weakness of compression can be detected by the nature of this sound. Crankcase leakage may be due to badly fitting crankcase Doors. Faulty Piston Rings or want of oil will also impair crank-case as well as cylinder compression. Any point at which crankcase leakage occurs can ususally be traced by looking for signs of oil leakage.

TESTING FOR AIR LEAKS. The best method is to run the engine slowly, and with a petrol injector spray spirit round all the joints. Any leaks will soon be shown by the sudden variation of E gine Speed.

LOSS OF POWER IMPORTANT. One of the most likely causes of a general loss of power is the partial choking of Silencer or Exhaust Pipe with burnt oil and carbon. They should be dismantled and thoroughly cleaned at regular intervals.

SUDDEN LOSS OF POWER. Assuming that the engine is not running short of oil, loss of power may be due to partial choking of the Carburettor Jets or Petrol Feed Pipe, it usually being accompanied by pronounced "knocking".

PLUG TROUBLE. Sometimes shows itself by puzzling symptons suggestive of other causes, and it is a wise plan to test the engine with a stand by plug of a suitable type before time is wasted by looking for other possible causes.

GENERAL. Go over all nuts occasionally, including those on the Frame members, but never tighten unduly, as Bolts can become considerably weakened by over-stressing the threads.

If troubled with engine vibration, toghten up securely the Engine fixing bolts. If over-heating occurs, it will be most likely be due to the timing being in-sufficiently advanced, or to a chocked Exhaust System.

Drain off old oil at fairly frequent intervals.

Do not carry spare Bolts and Nuts etc. loose in the Tool Box; the threads are likely to damage.

Attend immediately to any rattles from Guards etc. before wear can take place.

Correct fork setting is with bottom of Fork Bell 7/8" from the fork end lug (Scott Forks).

The Engine number is stamped on the Crankcase near the front cylinder Bolt (Flywheel side).

The Frame number is stamped on the L.H. Side of the seat lug.
IN CORRESPONDENCE QUOTE THESE NUMBERS.

For accessories see maker's hand-books.