

THE FAMOUS
JAMES

**DRIVER'S
HANDBOOK**

125cc TWO-STROKE
MOTOR CYCLE



JAMES MOTOR CYCLES LTD
FORMERLY.

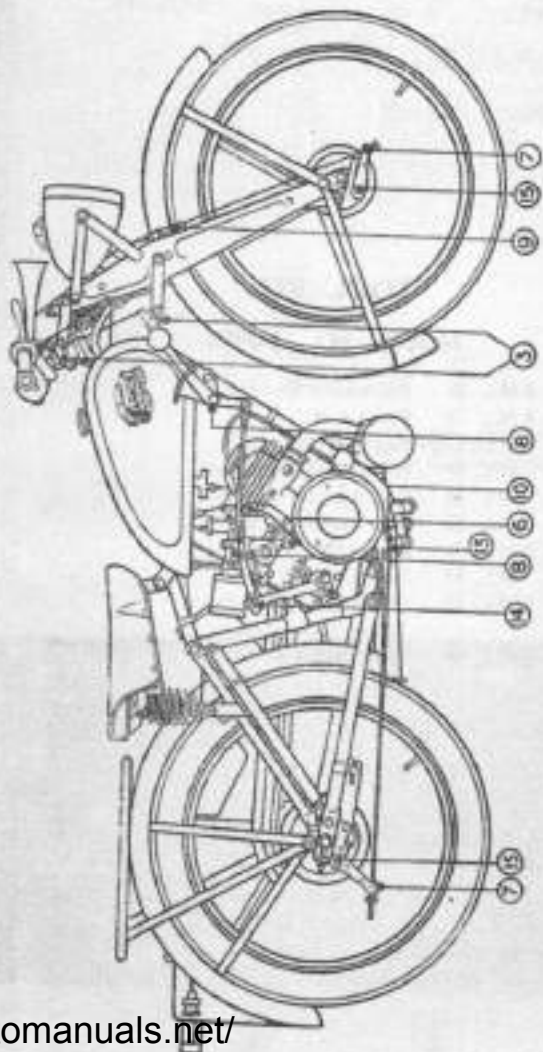
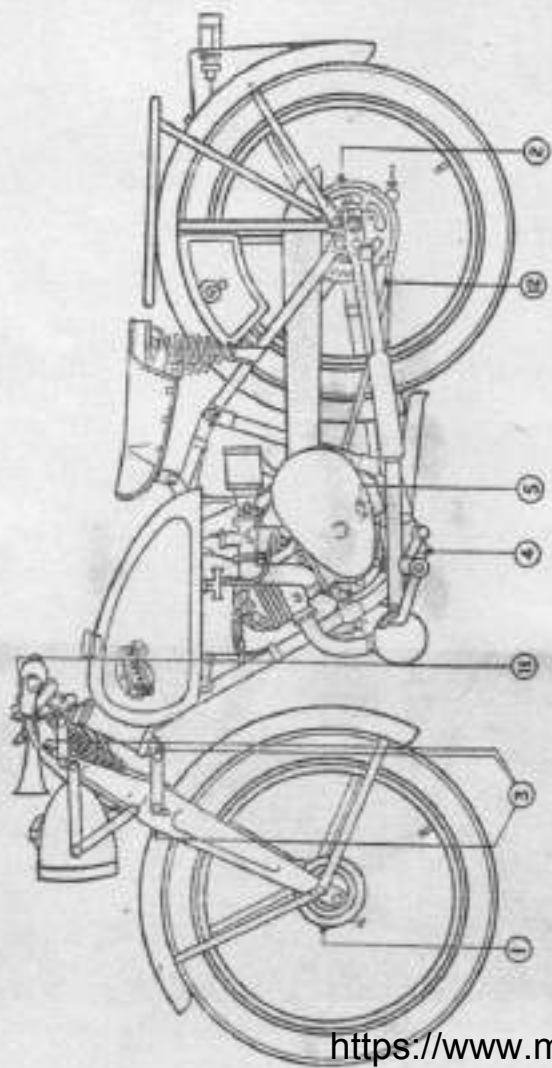
THE JAMES CYCLE CO, Ltd.
GREET • BIRMINGHAM, 11
ENGLAND

3-1 Villiers LIGHTWEIGHT CARBURETTOR.
MARK 9 D ENGINE 125 CC
#3 Jet in Inboard Needle
Full Needle

TOOL KIT.

MODEL M.L. JAMES.

B.M.L. 27	Adjustable Spanner 4 in.
B.M.L. 28	Pliers 6 in.
B.M.L. 27A	Mag. Spanner
M.L. 57	Exhaust Pipe Spanner
M.L. 56	D.E. Spanner 525/601
M.L. 55	D.E. Spanner 330/448
B.M.L. 30A	Screw Driver
M.L. 59	Tyre Levers (3)
B.M.L. 61	Chain Rivet Extractor
	Driver's Handbook
B.M.L. 44	Tool Wallet



Key No.	PART	Lubrication
1	Front Hub	Light Grease
2	Rear Hub	Light Grease
3	Fork Shafts	Engine Oil
4	Brake Pedal Shaft	Engine Oil
5	Front Chaincase	Engine Oil
6	Gear Box	Engine Oil

OIL CAN LUBRICATION.

7	Brake Lever Roller	Engine Oil
8	Gear Control	Engine Oil
9	Front Brake Spring Box	Engine Oil
10	Brake Rod Joint	Engine Oil
11	Handlebar Control	Engine Oil
12	Rear Chain	Engine Oil
13	Prop Stand	Engine Oil
14	Kick Start Pedal	Engine Oil
15	Brake Cams	Engine Oil

ENGINE LUBRICATION BY PETROIL SYSTEM.

- 1 Part Engine Oil* to 16 Parts Petrol, or
- 3 Measures Oil to 1 Gallon of Petrol.

*FOR RECOMMENDED GRADES SEE CHART OVERLEAF.

"JAMES" MODEL M.L. MOTOR CYCLE
125cc. TWO STROKE.

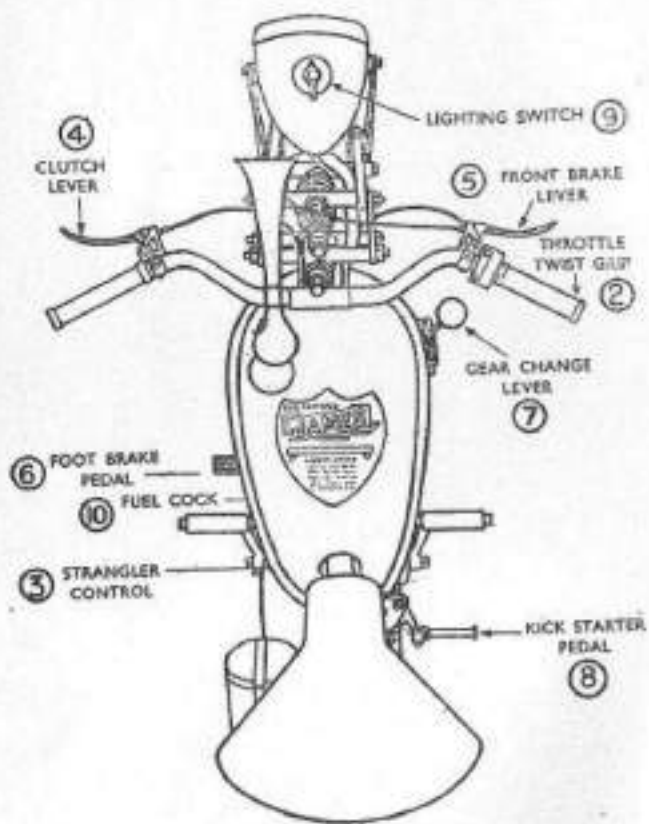
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125cc TWO-STROKE MOTOR CYCLE

CONTROLS (See illustration).

Before using new and strange machines, become familiar with the operation and position of the following controls. Pay particular attention to the gear positions.

2. Throttle Twist Grip.

Twist inwards to open.

3. Strangler Control.

This is operated by lifting the lever on near side of strangler body upwards. When the engine is started, gradually push down the lever to the fully open position. It should only be used when starting from cold.

4. Clutch Lever.

Large lever in front of left hand. This lever should be operated to its full extent when changing gear.

5. Front Brake Lever.

Large lever in front of right hand. Grip to operate front wheel brake.

6. Foot Brake Pedal.

Depress by left foot to operate rear wheel brake.

7. Gear Change Lever.

Controls the use of the three gears, or ratios, between engine and rear wheel revolutions. There is no notch for neutral, but the quadrant is marked with the letter N. Forward for low gear.

8. Kick Starter Pedal.

On the right side of the machine, with a hinged pedal.

9. Lighting Switch.

Controls lighting of lamps by rotating lever on panel at rear of head lamp. Positions are marked on switch body.

10. Fuel Cock.

Has two positions, "Main" and "Reserve." The "Main" supply is controlled by the round end of the cock. To turn "On" pull the round end out; to turn "Off" push in. The "Reserve" supply is controlled by the hexagonal end of the cock. To change over to "Reserve" leave the main supply open, and pull out the hexagonal end of the cock. Always make a practice of turning off the fuel supply before stopping the engine.

DATA FOR DRIVERS.

Petrol Tank Capacity...	...	2½ Gallons.
Petrol and Oil Mixture (Petrol)	...	1 part Engine Oil* to 16 parts Petrol, or 3 measures Oil (measure incorporated in filler cap) to 1 gallon of petrol.
Gear Box Capacity ...	...	Fill to plug level with Gear Oil.*
Chain Case Capacity ...	...	Fill to plug level with Engine Oil.*
Ignition Setting ...	...	5/16in. before T.D.C.
Carburettor Jet Size ...	...	No. 3.
Carburettor Taper Needle ...	...	No. 3.
Carburettor Taper Needle Setting ...	...	2 27/64in. end of needle to bottom of slide.
Air Cleaner ...	...	Dip in Oil (See page 8)
Tyre Size ...	...	2.75 x 17.
Rim ...	...	W.M.O. 19.

*FOR RECOMMENDED GRADES OF OILS
SEE CHART ON INSET.

ENGINE LUBRICATION AND FUEL SUPPLY SYSTEM.

The engine is lubricated by oil carried in with the petrol—the "Petrol" system. The correct fuel mixture is 16 parts petrol to one part oil, i.e. one gallon of petrol to half pint of oil. A measure is incorporated in the Fuel Tank Petrol Cap. When replenishing the tank, three full measures of oil should be added to one gallon of petrol, which should be mixed before putting in the tank.

STARTING THE ENGINE.

- (a) See that there is sufficient fuel in the tank.
- (b) If the machine has been standing for any length of time, shake well to mix the oil with the petrol.
- (c) See that the gear lever is in the neutral position.
- (d) Pull out the round end of the Fuel Cock to turn on the petrol.

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- (e) Close the strangler lever by lifting upwards. This should be performed only when the engine is cold. Always ensure "Strangler Control" is fully open immediately the engine is sufficiently warm to run without it being in use. Normally the strangler can be opened fully after approximately 30 seconds running. Remember that excessive use will cause difficult starting.
- (f) Open the throttle approximately a quarter of the total movement of the twist grip.
- (g) Starting from cold, depress the plunger on top of the carburettor to fill the float chamber; do not keep pressed down or engine will become flooded with fuel. Do not do this when engine is hot.
- (h) Depress the kick-starter pedal once or twice and then give a sharp kick downwards.
- (i) After the engine has been running for a short time, open the strangler control by pressing downwards to full extent.

STOPPING THE ENGINE.

When the machine is to be left standing for any lengthy period, i.e. overnight, or similar periods during the day, it is advisable to turn off the fuel supply and allow the engine to use up the supply of petrol in the carburettor while coming to rest. By this means it avoids the possibility of fuel draining into the engine with subsequent starting difficulties. Under other circumstances to stop the engine close the throttle.

ON THE ROAD.

Having started and warmed up the engine, take the machine off the stand, sit astride it, free the clutch by pulling up the large lever on the left-hand bar, and engage the lowest gear by pushing gear lever to forward position.

Slowly release the clutch lever and the machine will commence to move forward. As it does this the engine speed will tend to drop as it picks up the load, so it will be necessary to slightly increase the throttle opening bit by bit to keep the engine speed rising. As the speed of the machine is increased, and when well under way, disengage the clutch, close the throttle and engage second gear. Release the clutch lever, then open up the throttle to increase the speed of the machine. Repeat these operations in order to engage top gear.

Always endeavour to make the movements on the clutch lever and on the gear operating lever as simultaneous as

possible. A steady pressure of the hand on the gear lever is desirable. Do not race the engine unnecessarily, or let in the clutch suddenly to cause the rear wheel to spin, or cause jerky starting. Take a pride in making a smooth getaway.

When changing up to a higher gear, as the clutch is freed, the throttle should be slightly closed so that the engine speed may be reduced to keep in step with the higher gear ratio, and conversely when changing down to a lower gear the throttle is to be regulated so that the engine speed is increased to keep in step with the lower gear ratio.

Do NOT slip the clutch to control the road speed.

Do not hang on to top gear too long when hill climbing. Full use should be made of the intermediate gears to obtain effortless running and smooth hill climbing.

STOPPING THE MACHINE.

To stop the machine, close the throttle, declutch by lifting the large lever on the left handlebar, and gently apply both brakes, increasing the pressure on them as the speed of the machine decreases. Place gear lever in neutral position and stop the engine.

Before leaving the machine turn off the fuel supply by pushing in the round fuel cock knob.

When using the machine on wet or greasy roads, it is better to apply BOTH brakes together, because sudden or harsh application of either brake only under such conditions may result in a skid.

RUNNING IN.

For at least the first 500 miles care to avoid over-driving must be taken, and under no circumstances must the engine be driven at full throttle during this running-in period. The engine must not be allowed to attain a high rate of revolutions while on the road, or when running idle. The following speeds should not be exceeded in the various gears:— 1st, 8 m.p.h.; 2nd, 15 m.p.h.; top, 25 m.p.h.

After the first 500 miles of running, speed on the various gears may be gradually increased.

CHAIN LUBRICATION.

The primary chain is in an oil bath case, and the chain case should be kept filled to correct level of oil, which is

up to the filler plug. Failure to maintain the correct level of oil will result in rapid chain wear and destruction. The rear chain is not automatically lubricated, and should be removed occasionally for lubrication.

PERIODICAL ATTENTIONS.

PETROL TANK. Check level and fill up if necessary. It is essential to mix thoroughly the oil with the petrol before emptying into the fuel tank. (See Engine Lubrication and Fuel Supply System, page 4).

TYRES. Check pressures and inflate if necessary, the correct pressures being:—Front, 16 lbs. per square inch; Rear, 20 lbs. per square inch.

MONTHLY.

Remove junction pipe at rear of tank, and blow out any dirt or foreign matter.

Clean petrol pipe and carburettor filter.

EVERY 500 MILES.

FRONT CHAIN LUBRICATION. Remove the filler plug from front chain case, and fill up to correct level of oil.

EVERY 750 MILES.

SILENCERS. Remove the front silencer and clean out carbon from the baffle holes and restriction washers in cylinder exhaust pipes. Remove auxiliary silencer and tail pipe, clean baffle holes in tail pipe and restriction washers in the end of the pipe where this enters the silencer. The fish tail end of the tail pipe should also be cleaned.

EVERY 1000 MILES.

BRAKE CAMS. Lubricate with oil can. An excessive quantity of oil should not be used, otherwise this may get through to the brake linings.

FORKS. Check adjustment of fork links and spindles. To adjust the fork shafts, release the nuts at each end, and turn shaft by the square end anti-clockwise to take out play

caused by wear; afterwards tighten locknuts securely. A knurled washer is placed on each fork shaft, and it should just be possible to revolve this when the adjustment is correct.

REAR CHAIN LUBRICATION. The rear chain should be removed for lubrication and treated by soaking in a bath of oil or tallow

AIR CLEANER. The air cleaner which is held on to strangler body by a clip, should be removed approximately every 1000 miles and cleaned by dousing in petrol; when dry, dip in Oil and allow to drain before re-fitting.

Care should be taken when removing the air cleaner not to hold the gauze, as this will press this away from the end cap and prevent it functioning properly.

EVERY 5000 MILES (or more frequently under extremely wet or muddy conditions).

HUBS. The hubs are packed with grease during assembly, to lubricate the bearings and prevent the entry of mud and water. A grease nipple on the hub is provided for the periodical injection of fresh grease. The quantity so injected must not be excessive—one or two shots of the grease gun will be sufficient—or there will be a tendency for the surplus to work out into the brake drum and so cause brake inefficiency.

GENERAL ATTENTION TO MAINTAIN EFFICIENCY.

ENGINE.

INSPECT GAS AND OIL-TIGHT JOINTS AND TIGHTEN IF NECESSARY.

1. Cylinder Head joint.
2. Cylinder Base joint. Examine for oil or gas leakage. There are four nuts to check. If after the nuts have been evenly tightened the joint still leaks, the cylinder base gasket may need renewal.
3. Carburettor Inlet Pipe (2 nuts). Carburettor clip, strangler body clip and air cleaner.
4. Exhaust Pipe and Fittings. Use Spanner No. M.L. 57 for exhaust nuts to cylinder; and Spanner M.L.55 for

nuts securing manifolds to cylinder, and clips for exhaust pipes and tail pipe.

5. Crankcase Joint. Examine for leakage. There are six nuts to be checked

INSPECT ENGINE MOUNTING, AND TIGHTEN IF NECESSARY.

1. Engine Frame Bolts (3).
2. Crank Case Bolts.

START ENGINE.

1. Listen for knocks or rattles.
2. Uneven Firing may be caused by—
 - (a) defective sparking plug.
 - (b) incorrect gap (18 thousandths correct).
 - (c) defective H.T. cable.
 - (d) dirty or incorrectly-adjusted contact breaker points (15 thousandths correct). Use gauge on spanner.
 - (e) obstruction in petrol supply.
 - (f) water or dirt in float chamber.
 - (g) oil content in petrol too great.
 - (h) carburettor flooding.
 - (i) make sure strangler control is fully open.
3. Examine exhaust smoke for correct mixture. With the two-stroke engine using petrol mixture, slight blue exhaust smoke will be seen from the tail pipe.

STOP ENGINE. TEST FOR WEAK COMPRESSION WITH OPEN THROTTLE.

1. Gasket trouble. Probably noticeable by oil leak

ENGINE LUBRICATION AND FUEL SYSTEM.

ENGINE "PETROL" LUBRICATING AND FUEL SYSTEM.

1. Check quantity of fuel in tank. Do not forget that the fuel also serves the purpose of lubricating all internal parts of the engine, and always remember to replenish the fuel tank with the correct mixture of oil and petrol, which should be mixed before putting it into the tank. See page 4.

EXAMINE FUEL SYSTEM.

1. Security of tank fixing bolts (2).
2. Leaks at taps and unions. Do not over-tighten where fibre washers are fitted. Use Adjustable Spanner No. B.M.L.27 to tighten petrol tap. If petrol tap is loose, slacken petrol pipe before tightening. Check banjo

- union at carburettor end of pipe. Check nut on base of float chamber.
3. Carburettor flooding (dirt in float chamber or tickler sticking).
 4. Throttle cable frayed or acute bends in cable run. Alter position of clips if necessary.

START ENGINE.

Set control for slow running. The engine should two-stroke up the whole range of throttle opening. Do not race the engine unnecessarily.

IGNITION SYSTEM, SPARKING PLUG.

MAGNETO. (Incorporated in Flywheel).

1. Remove flywheel plate (3 screws). Inspect contact breaker for correct operation. Inspect operation while slowly turning the engine. Examine for burnt or pitted contact points. Check gap between points when fully open with gauge on spanner. Clearance should be 15 thousandths.
2. Check tightness of flywheel nut (right-hand thread).
3. Inspect insulated wires for—
 - (a) shorts, cracks, frayed or rubbed portions.
 - (b) contact with hot part of engine.

SPARKING PLUG.

1. Remove with Spanner B.M.L.27 and check gap (18 thousandths. When adjusting plug gap set side points, not central electrode.
2. Inspect for cleanliness and cracked insulator.
3. Replace and check for leaks. Tighten gland if necessary.

STEERING, BRAKES, WHEELS AND TYRES.

EXAMINE CONTROLS.

1. Examine handlebar control levers for tightness on handlebar, freedom of operation of clutch, brake, correct friction on twist grip.
2. Put a spot of oil on the end of each control wire and on the pivot pins for clutch, brake and valve lift levers, also on the nipples where these pivot in the levers.
3. See that there is a small amount of slack in the clutch control, when in the off position. Adjust if necessary.
4. Brake pedal adjustment. Brake taken up by screwing knurled nut further on the brake rod.

5. Hand brake lever adjustment. Brake taken up by slackening locknut on cable adjuster on forks, and unscrew cable adjuster. Ensure locknut is fully tightened after adjustment.

SECURITY.

1. Bolts securing chain wheel to rear hub flange. Use Spanners No. M.L.55 and M.L.56.
2. Examine each control cable inner wire for fraying.
3. Examine each control outer cable and see that there are no sharp bends, and cables are not kinked or chafed.
4. Wheel mounting nuts (2 on front axle, 2 on rear axle).

LUBRICATION.

Before applying gun, carefully clean exterior of nipples. Wipe off all excess lubricant when finished.

1. Wheel Hubs (1 nipple on each hub). Periodical attention only. See page 8.
2. Oil fork shafts (6 nipples).
3. Brake pedal. Oil brake pedal cross shaft (2 nipples in frame lug).
4. Moving parts—Oilcan—
 - (a) Brake lever rollers front and rear.
 - (b) Gear control quadrant and ball joints.
 - (c) Front brake spring box.
 - (d) Rear brake rod joint.
 - (e) Prop stand.
 - (f) Kick start pedal ball joint.
 - (g) Brake cams. Periodical attention only. See page 7.

WEAR AND ADJUSTMENT.

1. Test for up and down play in steering head.
 - (a) Place stout box under engine to raise front wheel clear of the ground.
 - (b) Clasp the handlebar head clip lug where it meets the main frame head lug with the fingers of the left hand, and at the same time hold the forward end of the front mudguard with the right hand and lift. Movement of the head clip lug felt with the left hand indicates slackness.
 - (c) Adjust if necessary by releasing head clip nut, and screwing down the large head locknut. Do not use excessive force. Finally tighten head clip pin locknut.
2. Test for rim rock with front wheel clear of the ground (as appendix (a)). No side rock should be felt on the rim.
3. Examine for worn brake linings. Adjustment exhausted on brake rod rear, or cable adjuster front, indicates wear. Stripped threads and brakes binding.

TYRES. How to get the best out of Dunlop Tyres.

Maintain in the tyres the correct inflation pressure.

For 2.75—19 tyres recommendation is :—

FRONT TYRE : 16 lbs. per square inch.

REAR TYRE : 20 lbs. per square inch.

Check the pressure with a gauge at least once a week.

Avoid sudden stops and rapid acceleration — which wear out tyres rapidly by causing wheel slip.

Drive at reasonable speed having regard to the road conditions.

The amount of concussion which the tyres can stand is limited.

Do not allow flints, etc., to remain embedded in the tread.

They will work through, puncturing tube and damaging the casing.

See that wheels are always in alignment.

Keep oil, grease and paraffin away from the tyres and from the spokes. If any finds its way on to the tyres, remove it by using a clean cloth and a very little petrol. Do not use too much petrol which may have a harmful effect on the rubber.

TRANSMISSION.

EXAMINE CONTROLS.

1. See that there is slight slack in clutch cable. Adjust by clutch cable adjuster mounted on rear gear box case. Unscrew and take up slack; screw in to increase slack. Tighten locknut after adjustment.

2. Check that kick start crank returns to upright position.

LUBRICATION—GEAR BOX.

1. Check correct level. Remove oil level plug on side of gear box, and top up at filler plug on top of the box between the cylinder and gear change lever boss. Fill slowly until oil runs from the level plug hole.

2. Clean gear box casing, check gear box cover nuts.

SECURITY, LUBRICATION AND WEAR.

1. Primary chain case, check centre nut and examine for oil leaks.
2. Primary chain lubrication, check oil level; if required fill up to level of oil plug on bottom of chain case.
3. Clutch drag, check that clutch frees when disengaged, and that clutch cable is not frayed at handlebar or gear box end.
4. Check for silent and easy selection of gears.
5. Rear chain guard, check for security.
6. Rear chain not fouling, correct tension (normal 3/8 in. whip at tightest place). Check rear tyre on bottom run, connecting spring clip secure, and open end facing forward when on bottom run of chain, correct lubrication (red deposit at joints indicates dryness).
7. Examine rear chain sprockets for wear (hooked teeth indicates extreme wear).
8. If rear chain is very dirty or dry, remove from machine for cleaning and lubrication. (When replacing chain, observe clip is replaced as paragraph 6 above.) See Periodical Attention, page 8.

CONDITIONS OF SALE AND GUARANTEE

We give the following guarantee with our motor cycles, motor cycle combinations, and sidecars, including all accessories and component parts other than tyres, saddles, chains, and lighting and electrical equipment, and other than accessories and component parts supplied to the order of the Purchaser and differing from those comprised in the standard specifications supplied with our motor cycles, motor cycle combinations and sidecars, but including accessories and parts supplied by way of exchange as hereinafter provided. This guarantee is given in place of any implied conditions or warranties or any liabilities whatsoever statutory or otherwise; no guarantee except that hereinafter mentioned and no conditions or warranty whatsoever statutory or otherwise is given or is to be implied, nor are we to be under any liability whatsoever except under the guarantee hereinafter contained. Any statement, description, condition, or representation contained in any catalogue, advertisement, leaflet or other publication shall not be construed as altering, varying or overriding anything herein contained. In the case of machines (a) which have been used for "hiring out" purposes or (b) any motor cycle and/or sidecar used for any dirt track, tinder track or grass track racing or competitions (or any competition of any kind within an enclosure for which a charge is made for admission to take part in or view the competition) or (c) machines from which the trade mark, name or manufacturing number has been altered or removed or (d) any machines in which parts have been used not supplied by or approved by the motor cycle manufacturer, or (e) any machine from which the silencing system as fitted by the manufacturer has been partially or wholly removed or interfered with, no guarantee, condition or warranty of any kind statutory or otherwise is given or is to be implied nor are we to be under any liability whatsoever in respect of any such machine.

We guarantee, subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, but this guarantee is so extent and be in force for six months only from date of purchase, or date of exchange in case of any accessory or part supplied by way of exchange as hereinafter provided, and damages for which we make ourselves responsible under this guarantee are limited to the free repair or supply of a new part or accessory in exchange for the part of the motor cycle, motor cycle combination or sidecar or accessory which may have proved defective. We undertake, subject to the conditions mentioned below, to make good in manner aforesaid any part or accessory covered by this guarantee which has proved defective within the said period of six months. We do not undertake to replace or refund, or bear the cost of replacing or refunding any such new part or accessory in the motor cycle, motor cycle combination or sidecar. As motor cycles, motor cycle combinations and sidecars are easily liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by wear and tear, misuse or neglect.

The term "misuse" shall include, amongst others, the following acts:—

1. The attaching of a sidecar to a motor cycle in such a manner as to cause damage or calculated to render the latter unsafe when ridden.
2. The use of a motor cycle or of a motor cycle and sidecar combined, when carrying more persons or a greater weight than that for which the machine was designed by the manufacturer.
3. The attaching of a sidecar to a motor cycle by any form of attachment not provided, supplied, or approved by the manufacturer, or to a motor cycle which is not designed for such use.

We do not guarantee tyres, saddles, chains or lighting and electrical equipment or any accessories or component parts supplied to the order of the Purchaser differing from those comprised in the standard specifications supplied with our motor cycles, motor cycle combinations or sidecars. As regards all such tyres, saddles, chains, lighting and electrical equipment, accessories and component parts, no guarantee, condition or warranty of any kind statutory or otherwise is given or is to be implied, and we are to be under no liability whatsoever in respect thereof.

CONDITIONS OF GUARANTEE

If a defective part or accessory should be found in any motor cycle, motor cycle combination or scooter, or in any part or accessory supplied by way of exchange as before provided, it must be sent to us CARRIAGE PAID, and accompanied by an invitation from the owner that he desires to have it repaired or exchanged free of charge under our guarantee and he must also furnish us at the same time with the number of the machine, the date of the purchase or the date when the alleged defective part or accessory was exchanged as the case may be.

Failing compliance with the above, such articles will be here at THE RISK OF THE OWNER, and this guarantee and any implied guarantee, warranty or condition shall not be enforceable.

REPAIRS

Any motor cycle, motor cycle combination or scooter sent to us to be placed, overhauled or repaired will be repaired upon the following conditions, i.e., we guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, such guarantee to extend and be in force for three months only from the date such work shall have been executed, and this guarantee is in fact and in exclusion of all conditions and warranties statutory or otherwise and all liability whatsoever and the damages recoverable are limited to the cost of any further work which may be necessary to correct and make good the work found to be defective.