

Ransomes

This machine is not designed for use in "agriculture" as defined in The Agriculture (Field Machinery) Regulations 1962. If it is adapted for use in "agriculture" as so defined it will become subject to those Regulations, and should accordingly be fitted with a guard which is available from Ransomes.

RANSOMES SIMS & JEFFERIES LTD. . IPSWICH . ENGLAND

"MARQUIS" MOTOR MOWER

18-in. Mark 4

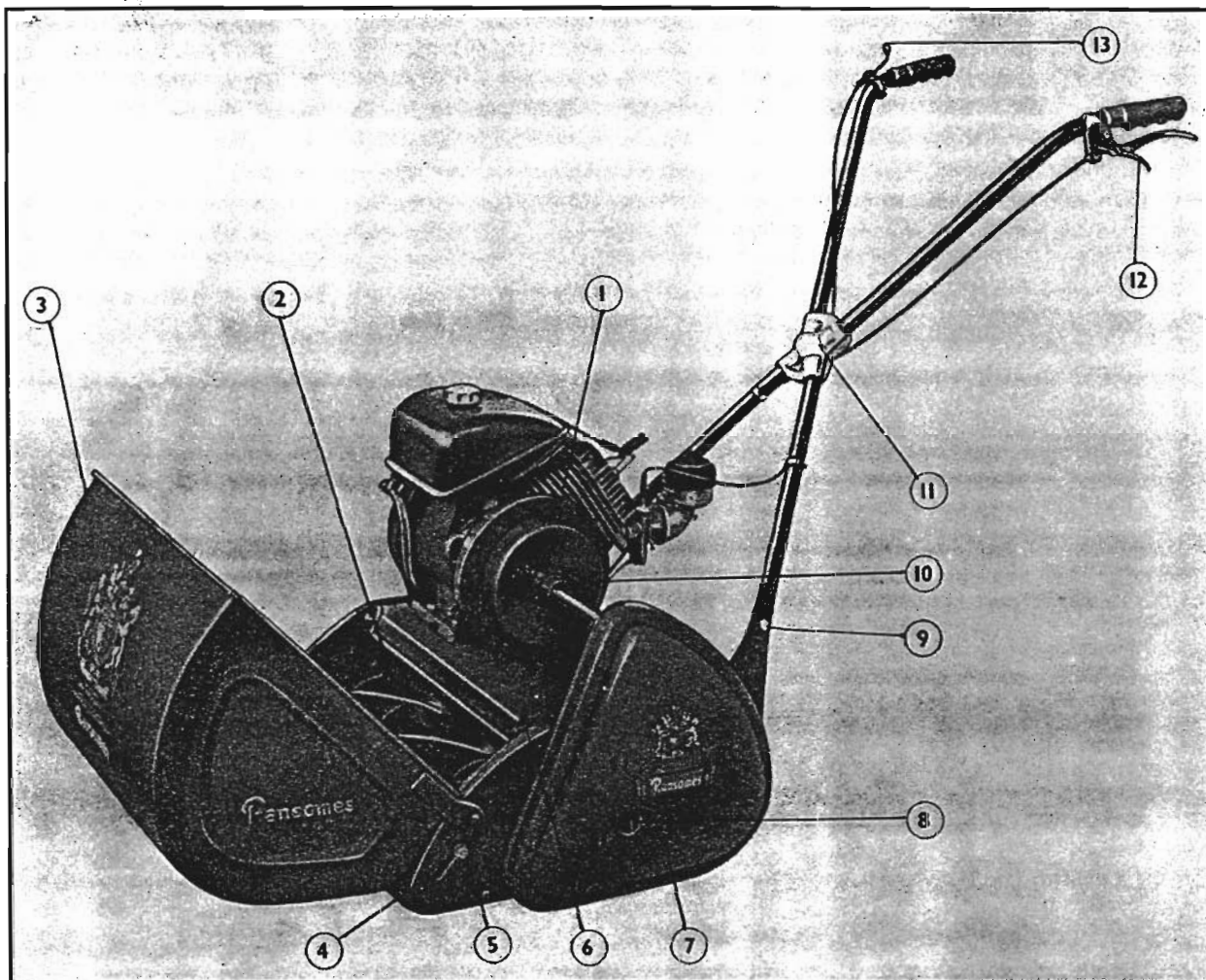
20-in. Mark 4

OPERATOR'S INSTRUCTIONS

You have bought a first class motor mower and the useful life and good service you obtain from your machine depends to a large extent on the way it is maintained and operated.

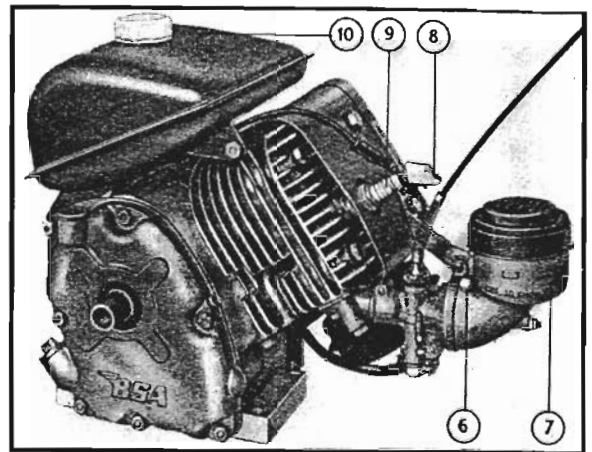
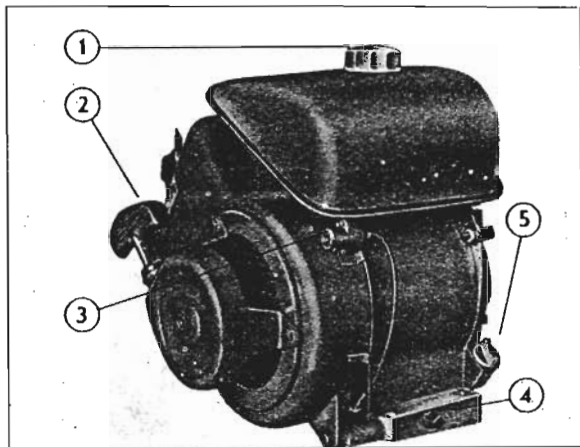
Before attempting to use your mower, please read through this booklet carefully and make yourself thoroughly conversant with the simple controls, lubrication and maintenance.

THIS IS YOUR MARQUIS . . .



- | | |
|--------------------------------|-----------------------------------|
| 1 Engine | 8 Chaincase Cover Retaining Screw |
| 2 Cutting Cylinder | 9 Handle Height Adjustment |
| 3 Grassbox | 10 Centrifugal Clutch |
| 4 Front Rolls | 11 Clamp-Handle Width Adjustment |
| 5 Front Roll Height Adjustment | 12 Landroll Clutch Lever |
| 6 Concave Adjustment | 13 Engine Throttle Lever |
| 7 Chaincase Cover | |

THE ENGINE AND HOW TO OPERATE IT



- | | |
|---------------------------------|--|
| 1. Petrol Tank Filler Cap. | 6. Choke Operating Knob. |
| 2. Recoil Starter Handle. | 7. Oil Bath Air Cleaner. |
| 3. Petrol Tap (Push-Pull Type). | 8. Ignition Earthing Strip. |
| 4. Sump Drain Plug. | 9. Sparking Plug. |
| 5. Sump Filler Cap. | 10. Petrol Tank
(Capacity 4 pints). |

RECOMMENDED ENGINE OILS

Mobiloil B.B.; Shell X100-40; Castrol XXL;
Esso Extra 40/50; B.P. Energol S.A.E. 40.

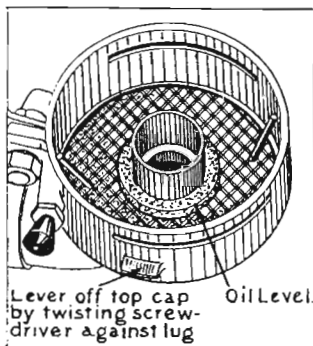


Fig. 1

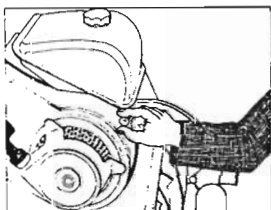


Fig. 2

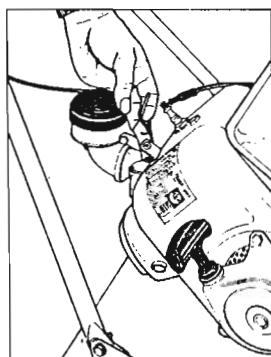


Fig. 3

BEFORE STARTING ENGINE FOR FIRST TIME

Unscrew the filler cap (5) and with the engine level, fill the sump with one of the recommended oils, to the top of the filler hole threads. This will take about 1 pint (0.568 litres).

Unscrew petrol filler cap (1) and fill tank with regular grade petrol (gasoline). Tank capacity 4 pints (2½ litres).

AIR CLEANER (7). Lever off the top cover and remove the felt washer, inner wire gauze and felt pad and soak these parts in engine oil. Replace in the same order as removed and pour in sufficient engine oil to just cover the felt washer (Fig. 1). Replace the top cover.

TO START THE ENGINE

1. Make sure the landroll clutch is disengaged, i.e., the operating lever (item 12 opposite) should be fully compressed and the safety catch locked in the ratchet.
2. Pull petrol tap to ON position (Fig. 2).
3. Make certain the earthing strip (8) is clear of sparking plug (see Fig. 3).
4. Pull out choke control on carburettor (Fig. 4).
5. Open throttle control slightly (Fig. 5).
6. Hold the mower firmly with the left hand, pull starter handle (2) slowly until compression resistance is felt and continue to pull until resistance ceases. Allow cord to recoil and then pull handle smartly when engine will fire (Fig. 6).
7. Allow engine to warm up for a minute or so and then push in choke control knob.

TO STOP ENGINE

Close throttle lever and press earthing strip firmly against the sparking plug.

ROUTINE SERVICING

Drain the engine sump after the first 10 hours running by removing the drain plug (4) with the help of the special spanner included in the tool kit.

Replace drain plug when sump is empty and refill with fresh oil. Thereafter change the oil in the sump every 50 hours of running.

Check the oil level every 8 hours of running and top up if necessary.

Wash out air cleaner top cap felt washer and pad in petrol and replenish with fresh oil at regular intervals.

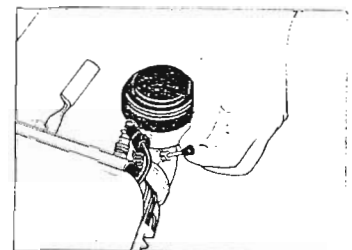


Fig. 4

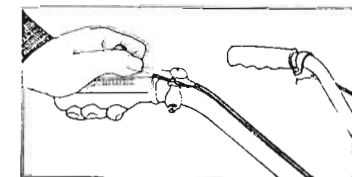


Fig. 5

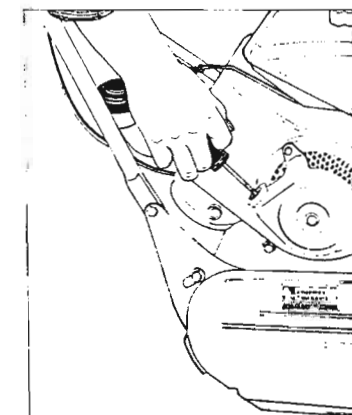


Fig. 6

LUBRICATING THE MACHINE

USING THE OILGUN SUPPLIED IN THE TOOLKIT.

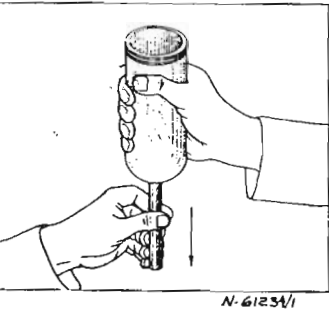


Fig. 7

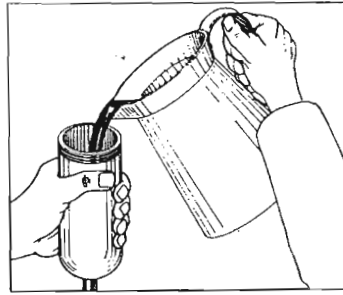


Fig. 8

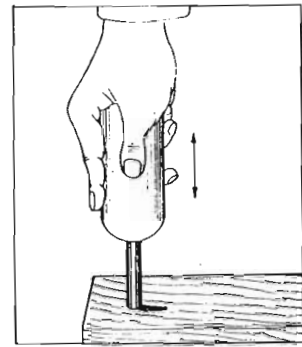


Fig. 9

Unscrew the filler cap and pull nozzle downwards to its fullest extent. (fig. 7).

Fill gun with one of the recommended brands of S.A.E. 40 engine oil. (fig. 8).

Replace filler cap and press nozzle once or twice against a piece of wood to remove air bubbles. (fig. 9).

Apply nozzle to lubrication nipple and make sure it is square with the end of the nipple and press firmly on the body of the gun two or three times.

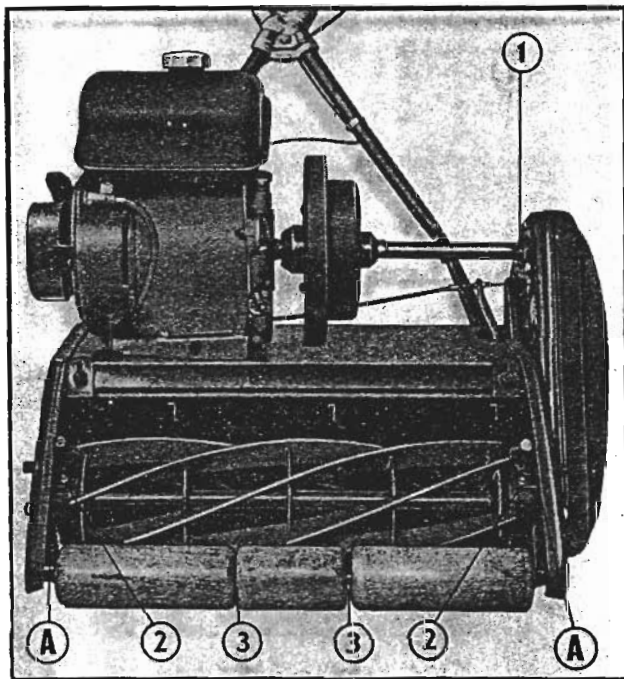


Fig. 10

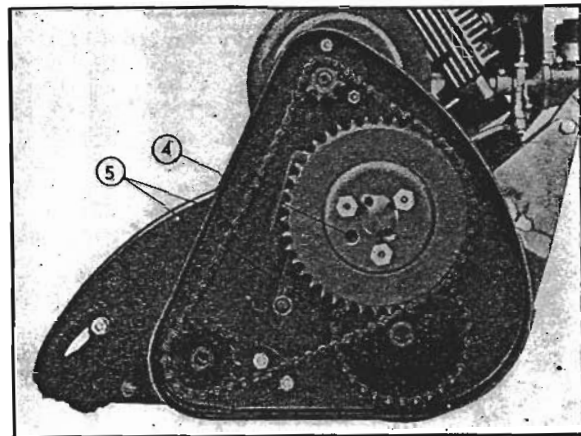


Fig. 11

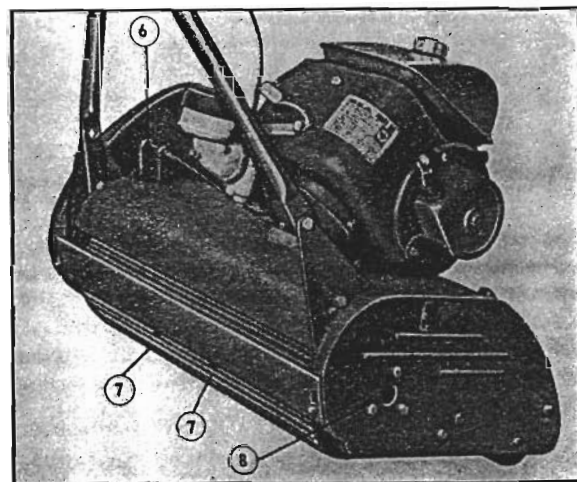


Fig. 12

LUBRICATION POINTS

There are 10 lubrication points on the 18 in. (45 cm) model and 8 on the 20 in. machine (51 cm). Oil gun nipples are provided at all but 2 points. The mower should be oilgun lubricated, using a recommended engine oil, every 8 working hours.

1. Clutch shaft through nipple in shaft. (fig. 10).
2. Cutting cylinder bearings through nipples on either side of machine. (fig. 10).
3. Wood rolls. Oil spindle between rolls. (fig. 10).
4. Landroll Clutch through nipple in outer plate. (fig. 11)
5. Driving Chains. (fig. 11).
6. Landroll Spindle bearing through nipple available through top deck. (fig. 12). 18-INCH MACHINES ONLY.
7. Landrolls through nipples below the surface. (fig. 12).
8. Landroll Spindle bearing through nipple in R.H. end of spindle. (fig. 12). 18-INCH MACHINES ONLY.

INITIAL ADJUSTMENTS TO A NEW MOWER

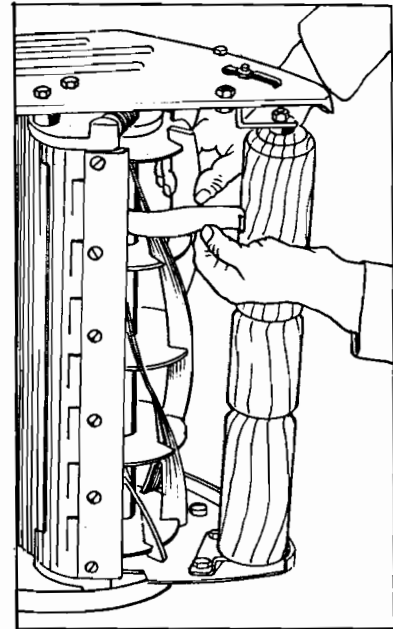
Before attempting to operate a new mower, check the following points and make any adjustments that may be necessary to suit your personal requirements. **NEVER** make any of these adjustments with the engine running.

SETTING THE CUTTING CYLINDER TO BOTTOM BLADE. (See fig. 13).

Tilt the mower gently backwards so that the handles are resting on the ground. To check that the cutting cylinder is set correctly to the bottom blade hold a thin piece of writing paper between the edge of the bottom blade and the spiral cutters and turn the cutting cylinder by hand. The paper should be cut cleanly at any point along the edge of the bottom blade.

If a clean cut is not made some adjustment is necessary.

To do this, turn the adjusting screws marked "A" on illustration on opposite page in a clockwise direction making an eighth of a turn to each screw alternatively. Do not overtighten, the spiral cutters should slide over the bottom blade as easily as the blades of a well-adjusted pair of garden shears come together.



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Fig. 13

HEIGHT OF CUT ADJUSTMENT. (See fig. 14).

Decide upon the height you wish the grass to be left after cutting.

Slacken bolts "B" on either side of the mower and raise or lower the front rolls. (Raising the rollers produces a closer cut). Check with a straight edge placed across the front roll and landroll as shown in fig. 14. The distance "C" between the bottom blade and the straight edge should never be less than $\frac{5}{8}$ of an inch or the mower may well be damaged. Check, with the straight edge, both sides of the machine to ensure that the front roll is square with the bottom blade. Then retighten bolts "B" securely.

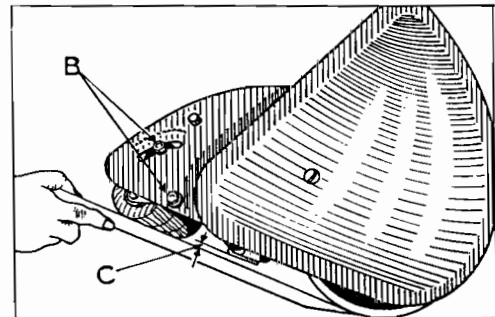


Fig. 14

HANDLE ADJUSTMENT. (See fig. 15).

Raise the handles to bring the mower back to its normal position and push the machine backwards and forwards a few times to decide if the height and width of the handles are to your liking.

To increase or reduce the height, slacken bolts "D" (fig. 15) and raise or lower the handles to suit; then re-tighten the bolts securely.

To increase or reduce the width, slacken bolts "E" in the centre clamp, open or close the top halves of the handle tubes and, again, re-tighten the bolts.

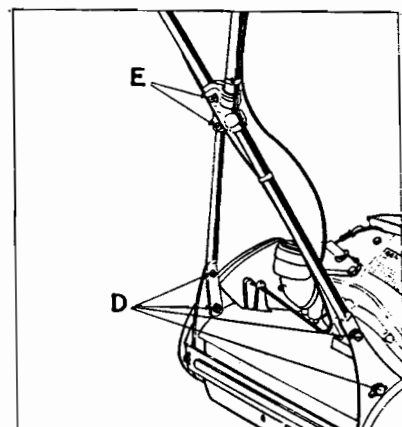


Fig. 15

OPERATING THE MOWER

Start the engine as explained on Page 2 and allow the engine to warm up for a minute or so. Then gradually engage the landroll clutch and at the same time open the throttle. Let the clutch in fully and the mower will move forward. Adjust the throttle so that the mower moves at a comfortable walking speed.

At the end of each cut, disengage the landroll clutch by squeezing the operating lever and press down firmly on the handles so that the mower can be turned on the landroll.

To stop the mower, disengage the landroll clutch and close the throttle. When leaving the machine with the engine running, such as when emptying the grassbox, close the throttle so that the cutting cylinder stops revolving.

MOWER MAINTENANCE

ADJUSTING THE TRANSMISSION CHAINS

Disengage the landroll clutch. Remove the chaincover by unscrewing the retaining screw (item 7, illustration on page 2) by means of a coin or screwdriver. Turn the outer clutch plate "B" fig. 16 until the holes in the circular nut beneath this plate are visible. Insert the special pin spanner supplied in the tool kit and turn anti-clockwise. The complete clutch assembly can now be slid upwards and backwards to tighten the chains. Do not overtighten them. When correctly adjusted, it should be possible to depress the cylinder drive by about $\frac{3}{8}$ of an inch midway between the cylinder pinion and the engine drive sprocket as shown in fig. 16.

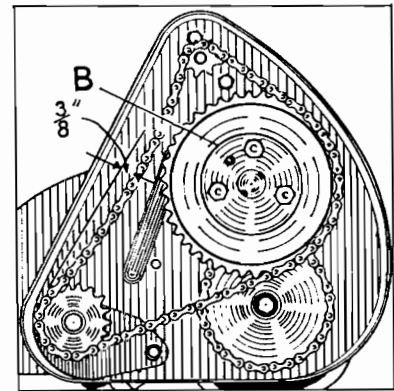


Fig. 16

ADJUSTING THE LANDROLL CLUTCH.

Adjustment is provided at the lower end of the control cable. Slacken the locknut on the adjuster (fig. 17) and unscrew the adjuster in an anti-clockwise direction. Make one or two turns only, then check that there is a gap of approximately $\frac{1}{16}$ of an inch (1.5 mm) between the end of the operating pin and the lever as shown, to ensure that the clutch will drive firmly when engaged. Now squeeze the control lever on the handle and check that the clutch does disengage. If satisfactory, re-tighten the locknuts on the cable adjuster and the adjusting screw. After considerable service, it will be found that no further adjustment can be made due to wear on the clutch linings. A visit to your local Service Centre will then become necessary.

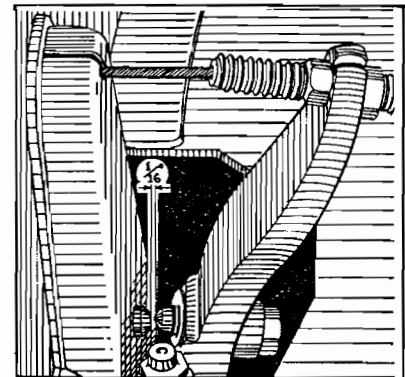


Fig. 17

ADJUSTING THE CONCAVE

Slacken the self locking nuts "C" (fig. 18) holding the brackets on the top deck of the mower and pull the concave forward, at the same time making sure that it is bedded down correctly on the bottom block.

Do not allow the concave to rub against the spiral cutters. There should be a clearance of approximately $\frac{1}{16}$ of an inch (1.5 mm) at the centre line as shown.

Reversal of the hinge brackets "C" will sometimes help in positioning the concave correctly.

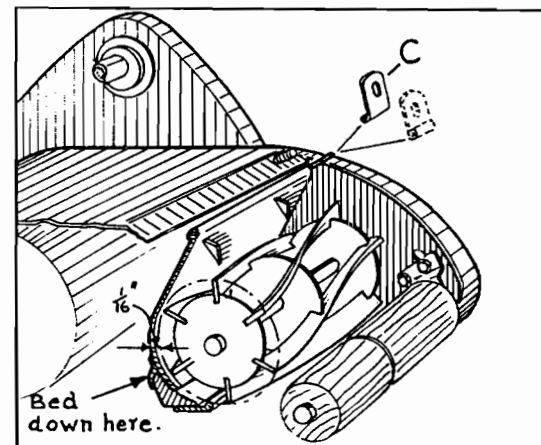


Fig. 18

IF YOUR ENGINE FAILS TO START

CHECK IGNITION SYSTEM

1. Make sure the ignition earthing strip is clear of the sparking plug.
2. Examine the sparking plug. Check the points and if they are fouled and dirty clean them thoroughly or better still take the plug to your nearest garage or service centre and get them to air-blast the plug for you. Check the gap between the points. It should be 0.30" (0.8 mm) or approximately the thickness of a piece of card from a cigarette carton. Adjust the gap by bending the side wire. If the central electrode is considerably eroded, fit a new plug, and do not forget to fit the copper sealing washer.
3. Before replacing the plug, connect it to the ignition cable, and, resting the metal part of the body against the cylinder fins of the engine, pull the recoil starter and note if a spark jumps across the points. If there is no spark try a new plug and test again. If there is still no spark, there is a breakdown in the electrical side of the engine and you should contact your local Service Centre.

CHECK FUEL SYSTEM.

1. Remove the filler cap and check that there is a good supply of petrol (gasoline) in the tank.
2. Slip the end of the fuel pipe off the "push-pull" petrol tap and pull the tap to the on position for a few moments. If no petrol runs through, the filter attached to the tap has become clogged. Empty the petrol tank. Unscrew the petrol tap and wash the filter thoroughly in clean petrol. Do not use a rag to clean it.

If the flow of petrol from the "push-pull" petrol tap is satisfactory, replace the fuel pipe and check that the carburettor float chamber is clean and free from dirt and water. Remove the top cap (fig. 19) to carry out this inspection, and take out the float, being careful not to damage it. Wash the chamber out in petrol.

3. Check that the carburettor jet is not blocked. Remove the cover nut (fig. 19) at the carburettor base and take out the gauze filter. Wash this filter out in clean petrol. The jet can now be removed by unscrewing but do not attempt to clear this with fine wire or a pin. Blow through it to clear any obstruction.
4. Check that the air cleaner is not dirty or choked. Clean and replenish with fresh oil if necessary as explained on Page 3.

If, after carrying out the above checks, the engine will only run roughly or smokes badly, decarbonisation may be necessary, or the trouble may be more serious. In either case it would be best to consult your nearest Service Centre.

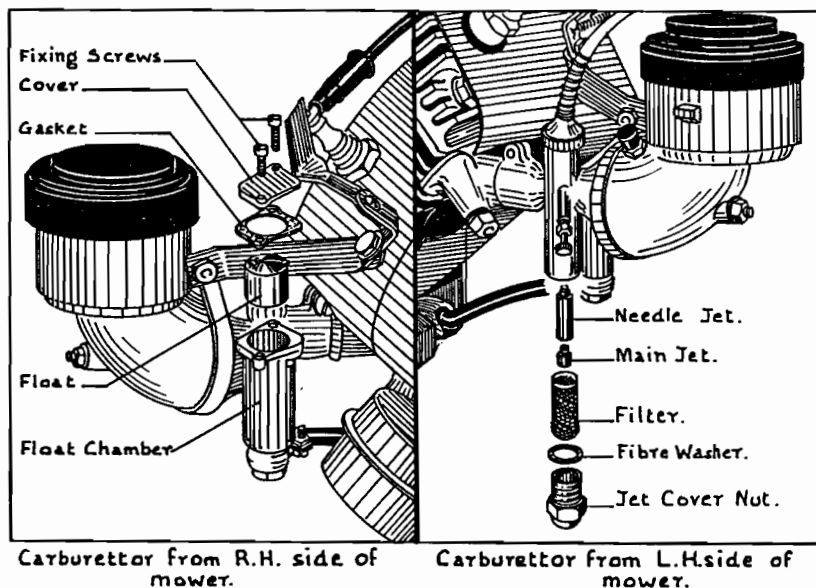


Fig. 19

CORRECTION OF MINOR MOWER FAULTS

FAULT	REMEDY
Grass is cut in uneven strips leaving a "step" between each cut.	Front rolls are not square with bottom blade. Make necessary adjustment as per instructions on Page 5.
Grass is cut unevenly in wavy or hummocky fashion.	Alignment of cutting cylinder has been upset, probably through running into an obstruction. Consult your local Service Centre.
Grass is torn off instead of being cut cleanly.	Adjust cutting cylinder correctly to bottom blade—see Page 5. If grass is still not cut cleanly, the cutter requires sharpening.
Grass is removed entirely and mower labours.	Bottom blade set too low. Check and adjust for correct clearance—see Page 5.
Engine races but mower moves forward sluggishly.	Cylinder may have run into an obstruction. Stop engine and clear. If no obstruction, this may be due to a slipping clutch. Adjust cable (see Page 6) and if fault is not cured, new pads must be fitted to the clutch plates.
Cuttings not entering grassbox properly.	Adjust throw of concave—see Page 6.

GENERAL ADVICE

After the first few hours running, the machine should be checked to see all nuts and bolts are still tight. Every machine leaves our factory in perfect condition. If any damage is apparent when delivery is made, report the details at once to the supplier of the machine.

Do not start the engine in your shed or garage unless the doors are open, as exhaust fumes are dangerous.

Before cutting, see that your lawn is free from stones and other hard objects. These may well damage the cutting cylinder.

Do not refuel while the engine is running, petrol (gasoline) spilt on a hot engine may well cause a fire, and avoid spilling fuel on the lawn as this will destroy the grass.

The mower should not be put away with grass cuttings left in the grassbox.

Always STOP the engine before touching the cutting cylinder or driving chains.

After using the mower, apply a little oil with a brush to all the spiral ~~cutters~~ ^{cutters}. This will prevent them from rusting.

When entering into any correspondence about the machine or when ordering replacement parts, please quote the registered number of the mower which appears on a plate on the right hand side frame.

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