

RANSOMES

FOURTEEN & SIXTEEN

(35 cm & 40 cm)

FOUR-STROKE
MOTOR MOWERS

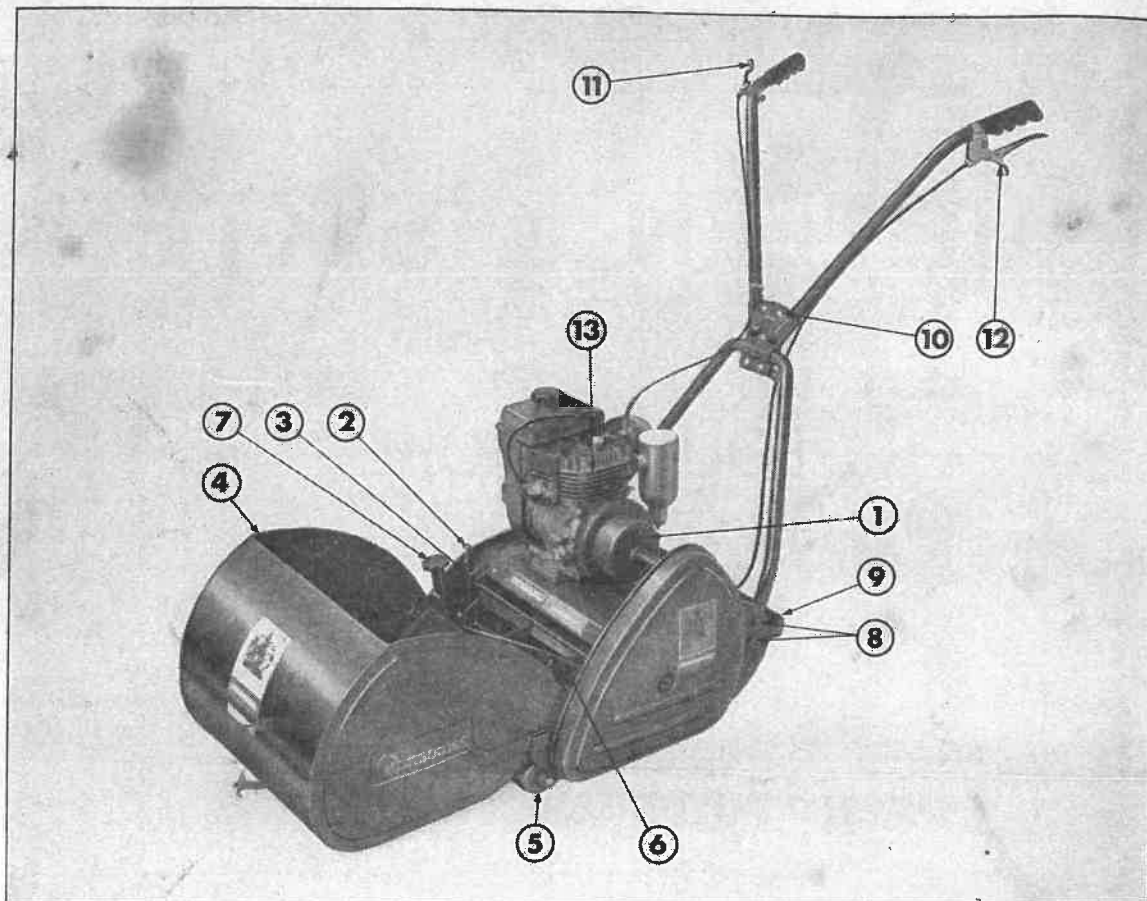
Mark 2

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.

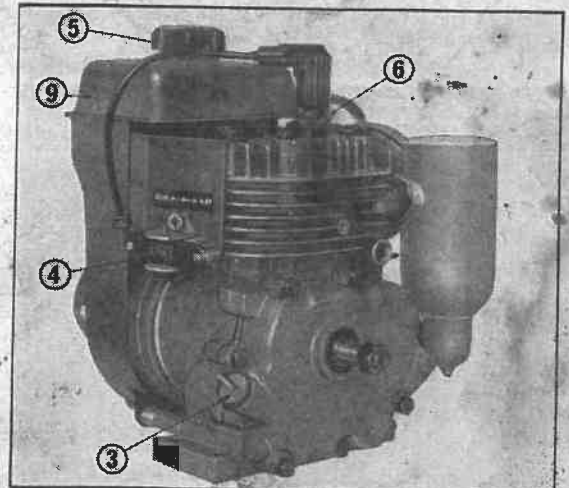
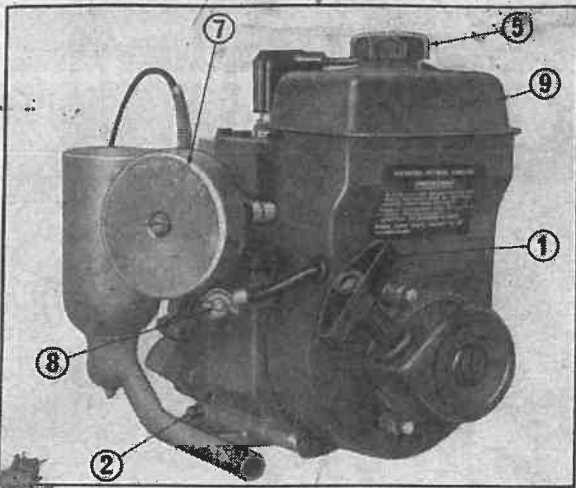
THIS IS YOUR MOWER . . .



- | | |
|-------------------------------|--------------------------------------|
| 1 Centrifugal Clutch | 7 Height of Cut Adjustment |
| 2 Cutting Cylinder Adjustment | 8 Handle Height Adjustment |
| 3 Concave | 9 Handle Rest |
| 4 Grassbox | 10 Handle Width Adjustment |
| 5 Front Rolls | 11 Throttle Control Lever |
| 6 Cutting Cylinder | 12 Control Lever for Landroll Clutch |
| 13 Engine | |

A Tool Kit comprising a Tool Bag, Oil Gun, Spanner (.44/.50 A/F), an Aerosol of Oil, and a Combination Engine Spanner is supplied with each machine. Make sure this is included when you take delivery of your mower.

THE ENGINE AND HOW TO OPERATE IT



- | | |
|--------------------------|---------------------------------|
| 1 Recoil Starter Handle | 6 Sparking Plug |
| 2 Sump Drain Plug | 7 Air Cleaner and Choke |
| 3 Sump Filler Cap | 8 Petrol Tap |
| 4 Ignition On/Off Switch | 9 Petrol Tank (Capacity 1 pint) |
| 5 Petrol Tank Filler Cap | |

RECOMMENDED ENGINE OILS

Mobiloil A; Shell X100-30; Castrol XL;
Esso Extra 10W/30; B.P. Energol S.A.E. 30

BEFORE STARTING A NEW ENGINE

Unscrew the filler cap (3) and with the engine level, fill the sump with one of the recommended oils, to the bottom of the filler hole threads. This will take about $\frac{1}{2}$ pint (.28 litres) of oil. Unscrew petrol filler cap (5) and fill tank with regular grade petrol (gasoline). Tank capacity 1 pint (.56 litre).

TO START THE ENGINE

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.

- 1 Turn petrol tap to ON position (Fig. 1).
- 2 Ignition Switch (4) to ON position.
- 3 Turn air cleaner cover clockwise to close choke (Fig. 2)
- 4 Open throttle control slightly (Fig. 3).
- 5 Hold the mower firmly with the left hand, pull starter handle (1) 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. 4).
- 6 Allow engine to warm up for a minute or so and then turn air cleaner cover anti-clockwise to open choke.

TO STOP ENGINE

Close throttle lever and switch Ignition to STOP position.

ROUTINE SERVICING

Check the oil level in the sump each time the mower is used. After the first 10 hours running, and thereafter every 50 working hours, remove drain plug (2) and empty sump. Refill with fresh oil. Carry out this operation when the engine is hot.

AIR CLEANER. Check air cleaner filter at each oil change. Remove central screw and lockwasher. Withdraw the cover and air choke disc and remove filter. If filter is dirty tap lightly to shake off loose dust. Replace the element each season.

When replacing the air cleaner cover make sure that the tag on the air choke disc engages in the cut-out on the cover (Fig. 5).

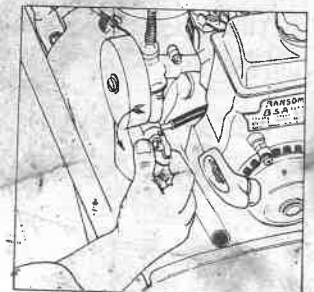


Fig. 1

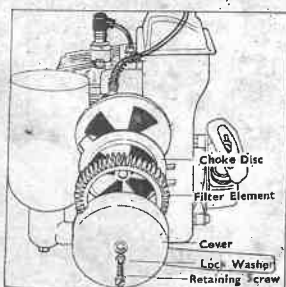


Fig. 5

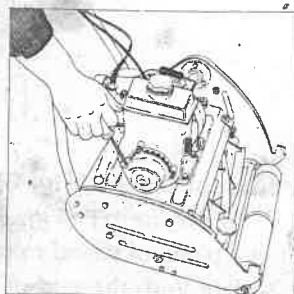


Fig. 4

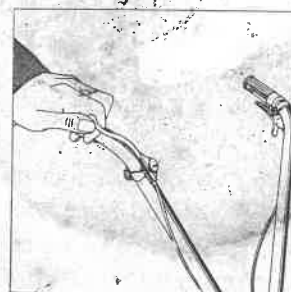


Fig. 3

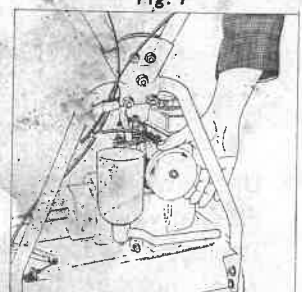
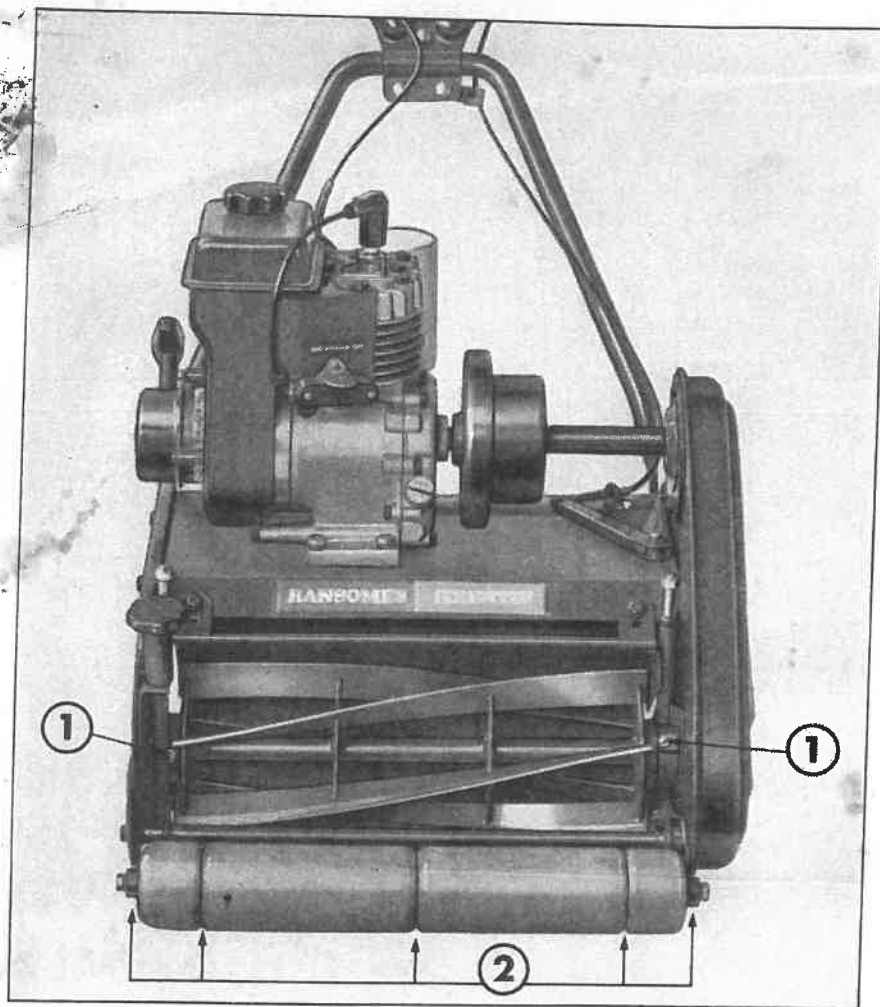


Fig. 2

LUBRICATING THE MOWER



On the "Fourteen" and "Sixteen" Mowers there are only two points which need attention:

- 1 Cutting cylinder bearings through nipples provided on either side of the machine.
- 2 Front rolls. A little oil should be given to the spindle between the rolls. Wipe off any surplus oil that may get on to the wood rolls.

These points should be lubricated with the oil-gun supplied, using S.A.E. 30 oil as recommended for the engine, every eight working hours. Clean around the oiling points before applying the oil gun.

USING THE OILGUN SUPPLIED IN THE TOOLKIT

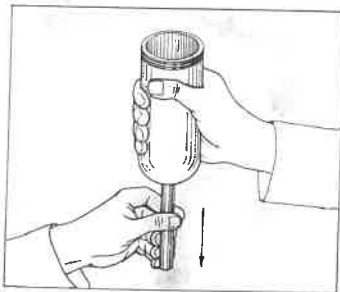


Fig. 6

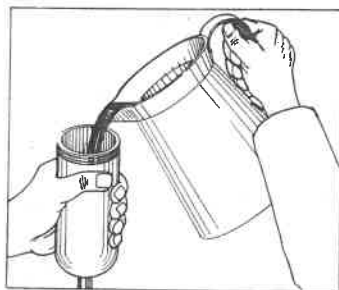


Fig. 7

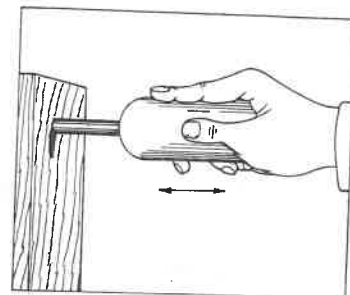


Fig. 8

Unscrew the filler cap and pull nozzle downwards to its fullest extent (Fig. 6).

Fill gun with one of the recommended brands of S.A.E. 30 engine oil (Fig. 7).

Replace filler cap and press nozzle once or twice against a piece of wood to remove air bubbles (Fig. 8).

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.

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. 9)

Tilt the mower gently backwards on to the handle rest ('F' Fig. 11). 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 make an adjustment, slacken the locknuts "A" (Fig. 10) and insert a screwdriver into the slot of the adjusting screws "B". To bring the cutting cylinder closer to the bottom blade turn the screws clockwise. Make an eighth of a turn to each screw alternatively. Do not over-tighten, the blades should only make a light, sliding contact with the bottom blade. Re-tighten the lock-nuts after adjustment

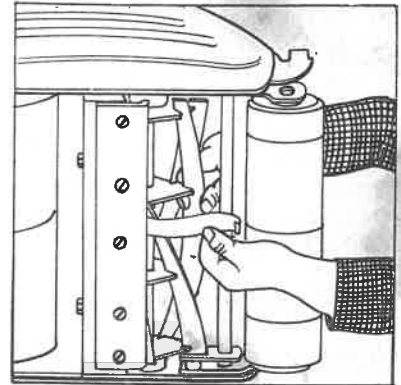


Fig. 9

IMPORTANT—See "Mower Maintenance" on next page

HEIGHT OF CUT ADJUSTMENT (See Fig. 10)

Decide upon the height you wish the grass to be left after cutting. To increase the height turn handwheel "C" (Fig. 10) clockwise or to cut closer turn it anti-clockwise.

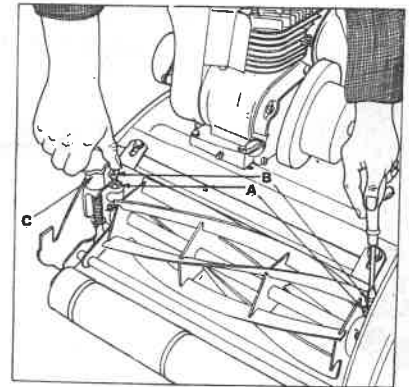


Fig. 10

HANDLE ADJUSTMENT (See Fig. 13)

To increase or reduce the height, slacken bolts "D" (Fig. 11) and raise or lower the handles to suit.

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 (see Fig. 12).

BACK REST AND SCRAPER BAR

Check that the back rest "F" (fig. 11) is set correctly at $3\frac{3}{4}$ from ground level (see fig. 11).

The scraper bar "G", attached to the back rest should be set with the edge just clear of the surface of the landroll.

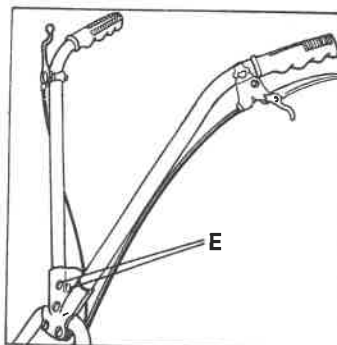


Fig 12

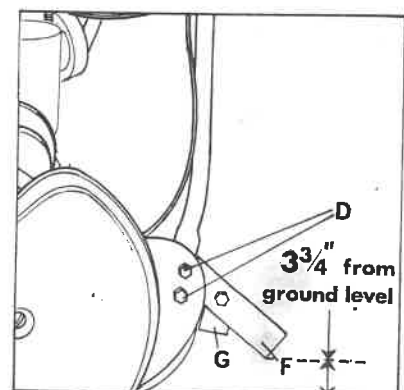


Fig. 11

OPERATING THE MOWER

Start the engine as explained on Page 3 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.

CUTTING LONGER LAWN GRASS

If the grass has been allowed to grow more than two inches, the two centre portions of the front roll should be removed to allow the blades of grass to be presented to the cutters without being bent down. Remove screws "A" (Fig. 13) and the front rolls complete with spindle can be withdrawn. Slide off the centre rolls and fasten the side rolls in position by means of the washers and split pins supplied in the tool kit.

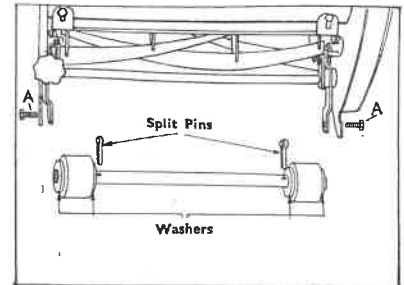


Fig. 13

MOWER MAINTENANCE

SETTING THE CUTTING CYLINDER TO BOTTOM BLADE

The setting of the cutting cylinder to the bottom blade should be checked before the machine is used, or, if the period of use is prolonged, make a check every two working hours. If necessary re-set as shown under "Initial Adjustments," page 5.

THIS CHECK IS ESSENTIAL TO OBTAIN GOOD CUTTING RESULTS AND TO PREVENT OVERLOADING THE TRANSMISSION.

ADJUSTING THE LANDROLL CLUTCH

Adjustment is provided at the lower end of the control cable. Slacken the locknuts "C" (See Fig. 14) and move adjuster "D" outwards; then retighten locknuts. When correctly adjusted, the control lever on the handles should just free the clutch when squeezed and locked in position by the safety catch.

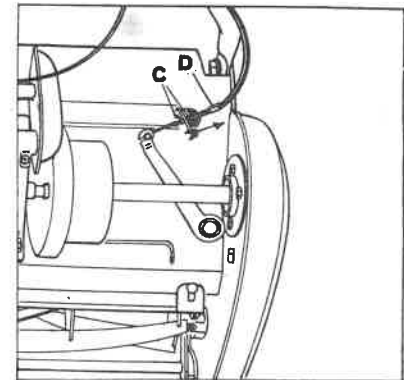


Fig. 14

ADJUSTING THE CONCAVE

Slacken the bolts "E" (Fig. 15) holding the brackets "F" on the top deck of the mower and pull the concave forward. Do not allow the concave to rub against the spiral cutters. There should be a clearance of approximately $\frac{1}{16}$ " at the centre line as shown.

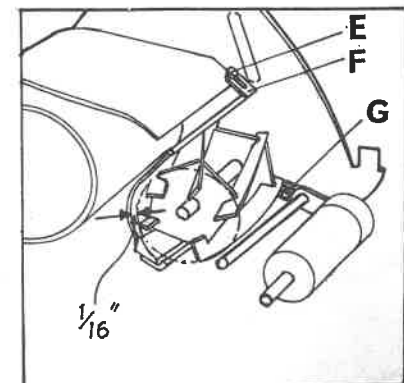


Fig. 15

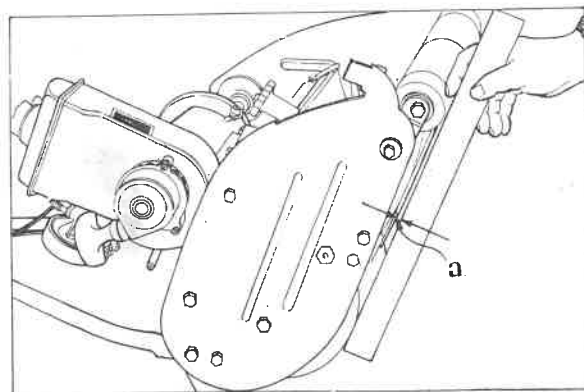


Fig. 16

ALIGNING THE FRONT ROLLS

Should the front rolls get out of square with the bottom blade, tilt the mower gently backwards on to the handle rest as shown in Fig. 16. Slacken bolt "G" (Fig. 18) and move the left hand end of the rolls up or down as required. Check with a straight edge the distance "A" (Fig. 16) from the bottom blade, making this check at either end of landroll and front roll. When both these distances are identical the front rolls will be square with the bottom blade. Re-tighten bolt "G" securely.

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 .030" (0.8mm.) 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 Remove the retaining screw holding the tap to the base of the float chamber and then remove the tap and turn to the ON position for a few moments. If no petrol runs through the pipe or the tap it has become clogged. It is then necessary to clean thoroughly both the petrol tank, pipe and tap.
- 3 Check that the carburettor jet is not blocked. Remove the cover nut (Fig. 17) 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 by tapping lightly on filter element or replace 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.

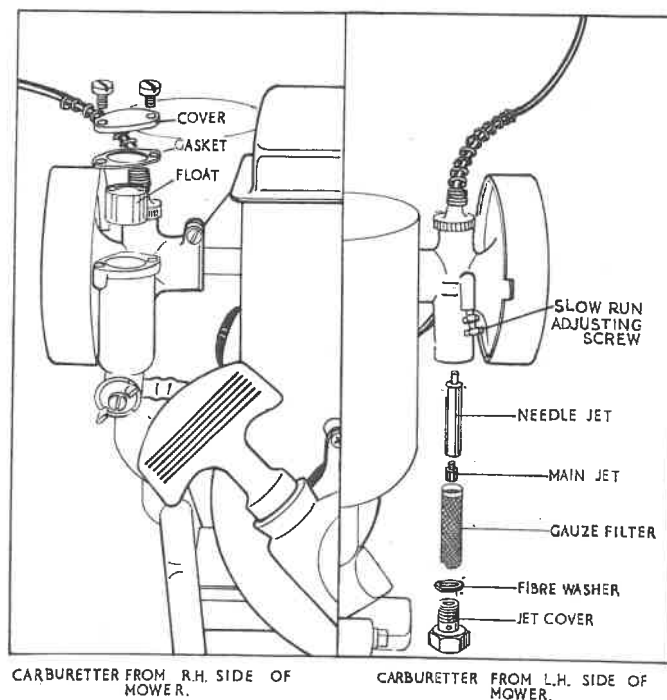


Fig. 17

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 instruction 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 cutters require sharpening.
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 belt or clutch. Adjust as necessary—see Page 6.
Cuttings not entering grassbox properly.	Adjust throw of concave—see Page 6.

WINTER STORAGE

At the end of the season clean the machine thoroughly of all grass clippings and dirt. Using the aerosol of oil supplied in the tool kit, spray the edges of the spiral cutters and bottom blade to prevent rust forming and dulling their keenness.

Use the mower until the fuel tank is empty, then remove the sparking plug and pour in approximately one tablespoon of engine oil. Pull the starting handle a few times to spread the oil over the cylinder wall and then replace the sparking plug. Now pull the handle once more until compression is felt and allow the cord to re-coil. This will ensure that the valves are closed to prevent the ingress of moisture. Store the mower in a dry place.

Drain the oil from the crankcase and refill with fresh oil as detailed on page 3—"Routine Servicing."

GENERAL ADVICE

After the first few hours running, the machine should be checked to see all nuts and bolts are still tight.

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 belts.

After using the mower, clean and apply a little oil to all the spiral 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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