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By Appointment

MOTOR MOWER MANUFACTURERS

ATCO

INSTRUCTION BOOK

FOR

12 inch and 14 inch **MODELS**

READ BEFORE USING & KEEP
HANDY FOR REFERENCE

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THE
ATCO
12-in. and 14-in.
MODELS

**INSTRUCTIONS FOR WORKING
AND MAINTENANCE.**

SIMPLICITY of control and maintenance have been reduced to a fine art, and if it is used and looked after in the manner described here, the Atco will give you yeoman service.

Please keep this "manual" handy. **Read it before you use the machine the first time, and refer to it as occasion demands.** It gives you in concentrated form, the vast store of knowledge which we have accumulated, of how best to mow with the Atco and how to look after it.

Apart from the items mentioned here, the golden rule is "do as little 'fiddling about' with the Atco as possible."

STARTING.

1. **See that the Tank has a supply of Petroil.** Petroil mixture for new machines consists of $\frac{3}{4}$ pint of oil to two gallons of No. 1 Petrol.

WHEN THE ENGINE HAS BEEN RUN FOR FOUR HOURS THE PROPORTION OF OIL TO PETROL MAY BE SLIGHTLY REDUCED.

Warning: Never use unsuitable or inferior oil, and always use a high-grade motor vehicle petrol.

A petrol tin has room in it for the necessary oil, which should be poured in from a measure. The tin should always be thoroughly shaken before use.*

Keep a petrol tin clearly labelled "Atco Motor Mower Petroil" for this purpose.

Among suitable oils are the following :—

PRICE'S MOTORINE " B " DE LUXE, which we ourselves use.

Duckham's Adcol N.P.3 Motor Oil. Triple Shell.

Mobiloil D.

Essolube "40."

2. Turn on petrol tap and thoroughly flood carburetter. At the same time (but only when starting up from cold) close the air strangler or choke.
3. Open throttle lever slightly (about a quarter of its travel).
4. See that clutch is in free position.
5. Holding the handles, engage kick starter gently and, having engaged it, depress sharply, and if necessary repeat until engine fires.
6. Allow the engine to warm up, and then gradually open the air-strangler until it is fully out, i.e., wide open, in which position it should be left for working ; and for starting while the engine remains warm.

You are now on the lawn, with the engine running and ready to mow. The rest is easy. You will quickly find the most effective method of mowing your particular lawn, and the clutch control and the single lever throttle give complete control over the machine.

LUBRICATION.

ENGINE.

Petrol does this entirely automatically provided the proper petrol and oil are mixed in the right proportion and well shaken in the labelled petrol tin before pouring into the tank.

At least twice a season, it is advisable to drain the crankcase by taking out the drain plug, and allowing the petrol to drain off. (Do this off the lawn for preference, because if it falls on the lawn it will temporarily disfigure a small patch).

Then replace the drain plug.

GENERAL.

The following points about mowing will help in making and keeping beautiful turf, and ensuring satisfaction with your machine in the form of low cost and a high standard of work.

1. Occasionally mow in an entirely different direction from your normal way.
2. Avoid making your "end turns" on the same spot. This is easily achieved by varying the depth of the "headland" or cross-strip which you cut at the end of the lawn to give you turning space.
3. Before the first cut of the season the lawn has a thick growth, which often conceals stones, etc., which have been thrown on to it in various ways. A search for these before mowing the first time will eliminate possible damage to the cutters. After the first cut, stones and other hard substances will be easily seen.
4. Although shakeproof washers are fitted wherever nuts are likely to work loose, it is prudent to go over nuts with a spanner before each mowing to see that they are secure. Nuts allowed to work off may fall either direct into the cutters or on to the grass and may get caught by the cutters later. In either event damage, for which the makers cannot assume any liability, is likely.
5. In dry weather set your "cut" a little higher, so as to leave the grass longer, thus enabling it to hold more moisture and provide more protection.

In addition, in very severe drought it is advisable occasionally to mow without the grass box. The grass thus cut and left will hardly be seen, and will form an added protection against the hot sun, and will eventually help the texture of the fibrous topsoil.

You should continue mowing through drought periods. It does no harm and is the only way to prevent the establishment of bents—long, coarse grass seedpods.

Do not attempt to flush the crankcase with paraffin or petrol. This is unnecessary and extremely undesirable.

The Atco-Villiers carburetter, though of extremely simple and efficient design, should not if possible be tampered with. It is designed to render jet stoppage almost impossible. Occasionally, however, it is advisable to undo the union nut at the carburetter end of the petrol pipe, and take out the small gauze filter cap. This can be easily lifted out with a pin or piece of wire, but care should be taken not to damage it. It should then be cleaned and replaced.

SHOULD STARTING DIFFICULTY BE EXPERIENCED IT IS MOST LIKELY DUE TO ONE CAUSE, FOR WHICH THE REMEDY BY THE OPERATOR IS SWIFT AND SURE.

THE ENGINE MAY HAVE BEEN TURNED OVER SEVERAL TIMES WITHOUT STARTING, OR IN SOME OTHER WAY SUCH AS EXCESSIVE FLOODING, PETROIL MAY HAVE ACCUMULATED IN THE CRANKCASE. THIS MAY HAVE "DRENCHED" OR "SOOTED UP" THE SPARKING PLUG OR MADE THE MIXTURE TOO RICH.

IF THIS HAS HAPPENED IT CAN SOMETIMES BE CLEARED BY SETTING THE THROTTLE LEVER ON THE HANDLES WIDE OPEN AND THEN TURNING THE ENGINE OVER SHARPLY SEVERAL TIMES WITH THE STARTER.

IF THIS FAILS APPLY THE FOLLOWING :—

REMEDY.

Drain crankcase by removing the crankcase drain plug and allowing petrol to run out. Also remove sparking plug, and after petrol has drained from crankcase, turn the engine over sharply several times. This will blow out all excess petrol.

Replace crankcase drain plug.

Then thoroughly clean sparking plug, which is a specially selected type most suited to the work of motor mowing, as follows :—

Using two spanners, unscrew the electrode or inner portion from the outer portion taking care not to lose the small washer

which ensures the plug being gas tight when assembled. Clean the electrode thoroughly. Assemble the two portions of the sparking plug firmly, and replace in the cylinder, when the engine should start.

From time to time check that the gap between the plug points over which the spark jumps is .02", which is approximately the thickness of a visiting card.

LUBRICATION OF THE MACHINE (other than engine).

This is so simple that it requires no diagram. The same oil as used to make the petrol mixture, may be used. The only points requiring the regular use of the oil can are the chains, the clutch, the bearings, the kick starter, and the front rollers, as follows :—

1. **ALL CHAINS.** A few drops of oil fortnightly on each chain.
2. **FRONT ROLLER SHAFT.** The front rollers work under adverse conditions. They are close to the ground and revolve at high speed, often in conditions of wet and grit.

It is, therefore, in the user's interest to provide for their working under as favourable conditions as regards lubrication and cleanliness as possible.

To ensure this, they should be dismantled (by undoing the ends nuts, when they will slip out of the slots in their brackets). Take the rollers off, thoroughly clean the bearings inside each roller and the shaft itself. Smear thoroughly with oil and re-assemble, taking care to replace the distance washers between rollers and to smear these washers thoroughly with oil.

This is specially designed to be a quick maintenance operation and should be done regularly.

If the above instructions are regularly carried out, the maximum wear will be obtained and all undesirable noise from the front rollers avoided.

A few drops may with advantage occasionally be put between each roller, but this does not obviate the necessity to clean and lubricate as above; in fact, if the above instructions are regularly and thoroughly carried out, oiling between each roller is unnecessary.

- 3. DRIVING SIDE OF MACHINE.** Remove chain cover. Locate the three oil tubes running to rear roller shaft bearing, clutch shaft bearing, and cutter shaft bearing. A few drops of oil in each of these every fortnight.

A few drops of oil should also be given to each side of intermediate chain wheel, fortnightly.

Replace chain cover.

- 4. OTHER SIDE OF MACHINE.** Locate two oil hole covers and swivel these to one side, exposing oil holes. A few drops of oil in each hole fortnightly.
- 5. THE CLUTCH.** A few drops of oil in the hole drilled in boss of Outer clutch member, weekly. Also a few drops of oil weekly on the clutch operating forks, between the hardened pads of operating forks and the withdrawal collar.
- 6. KICK STARTER.** A few drops of oil monthly in oil hole in centre bush. Also a few drops monthly on each side of the kick starter freewheel.

ADJUSTMENTS.

- 1. CUTTERS. Bottom Blade to Cutting Cylinder.**

NOTE.—IT IS UNNECESSARY AND ALSO UNDESIRABLE TO SLACK OFF THE MAIN NUTS WHICH FORM THE PIVOT OF THE BOTTOM BLADE BEARER.

As wear takes place, the bottom blade has to be brought up to the cutters.

Two arms from the bottom blade bearer terminate in screw adjusting brackets fixed on the inside of each side frame at the back of the grass delivery plate. To bring bottom blade into closer contact with the cutter, which is necessary

as wear takes place, very slightly slacken the two back screws and tighten up two front screws.

This should be done carefully and a little at a time, until each blade of the cutter when revolved by hand just brushes the bottom blade over its whole length.

Do not adjust cutters too hard against the bottom blade, or undue wear will be caused, and remember to tighten, firmly but gently, the adjusting screws against the arms of the bottom blade bearer when adjustment is complete.

2. **FRONT ROLLERS. For Height of Cut.**

Slack off nuts on either side, and bring rollers forward slightly for a shorter cut, backwards slightly for a longer cut. Lock up nuts. Front roller brackets have graduated marks to ensure uniform adjustment either side.

3. **CLUTCH.**

The sole adjustment (whilst very rarely necessary) is very simple to make and is done by adjusting the pivot pin at the lower end of the clutch lever. This is adjusted by means of the two nuts, one on either side of the frame plate to which it is fixed. When in proper adjustment the operating lever should have approximately $\frac{1}{2}$ -in. of free movement in the gate at the top, before the pads are in close contact with the withdrawal collar on the clutch.

4. **CONVEYOR PLATE. For controlling the "throw of grass."**

Undo nuts and adjust delivery plate forward or backward in accordance with the state of the grass, or the wear of the cutting cylinder.

5. **HANDLES.**

The handle grips are readily adjustable to suit the height of the operator. The two nuts of one handle are loosened, and the handle set to the preferred position. Then the same nuts are tightened up. The other handle is then dealt with likewise. By thus attending to each handle in turn there is no chance of the position of the clutch lever gate being altered during this operation.