



By Appointment
Motor Mower Manufacturers

ATCO INSTRUCTION BOOK

FOR
1211 MODEL
1946

READ BEFORE USING & KEEP
HANDY FOR REFERENCE

CHARLES H. PUGH LIMITED
WHITWORTH WORKS, BIRMINGHAM, 9
Phone : VICTORIA 2524 (4 lines).
Telegrams : "Accuracy," Bham.

PRICE - 12

TO THE USER.

In your own interest please read this book carefully before using your new Atco.

TOOL KIT.

The Tools supplied with this machine consist of:

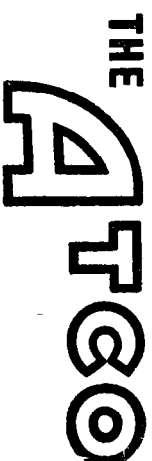
Double Ended Spanner	$\frac{1}{2}$ " x $\frac{1}{8}$ "
"	$\frac{1}{4}$ " x $\frac{1}{16}$ "
"	$\frac{3}{8}$ " x $\frac{1}{16}$ "
Plug Spanner.	
Magneto Spanner.	
Oil Can.	

GUARANTEE.

Please **sign** and **mail** the attached tear-off Guarantee Register P.C. In return we will send the guarantee covering your machine.

Note.—The machine is not covered by our guarantee until registration.

CHARLES H. PUGH, LIMITED,
WHITWORTH WORKS,
BIRMINGHAM, 9.



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 Petrol.** Petrol 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 Petrol", **for this purpose.**

Among suitable oils are the following:—
PRICES 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 slightly 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 you complete control over the machine.
- The following points about mowing will help in making and keeping beautiful turf and ensure 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 "head-land" 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 got 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 periodically 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.

6. Do not rush the mowing—the best results will be obtained at a comfortable walking pace.

7. To the beginner, we would say "don't fight or wrestle with the machine." It is designed for you to guide only, and if you start with that principle in mind, you will have confidence in this docile labour-saver from the moment you find yourself at the handles.

8. When you have finished mowing, clean machine with a clean rag, and wipe blades and bright parts with an oily rag.

9. JUST BEFORE YOU FINISH AND BEFORE THE ENGINE IS STOPPED, TURN OFF THE PETROL TAP AND RUN TILL THE ENGINE STOPS. THEN WHEN YOU START UP NEXT TIME, YOU WILL INTRODUCE A FRESH EASY-STARTING MIXTURE, SIMPLY BY TURNING ON THE PETROL TAP AND SLIGHTLY FLOODING.

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.

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 carb. end of the petrol pipe and take out the small gauze filter cup. 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, PETROL 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:—

Place it in the HEXAGONAL HOLE PIERCED IN THE SIDE PLATE OF THE FRAME.

Then, with the loose spanner provided, unscrew the electrode, or inner portion, from the outer portion, taking care not to lose the small copper washer which ensures the plug being gas tight when assembled. Clean the electrode thoroughly. Assemble the two portions of the sparking plug firmly, taking care that the joint washer is in position, and replace in the cylinder, when the engine should start.

GENERAL MAINTENANCE.

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 be the chains, the clutch, ball bearings and front rollers as follows:—

	Where.	How often.	How much.
1. All chains.	On each chain.	Fortnightly.	A few drops.
2. Ball Bearings.			
Ends of Roller Shaft ...	In oil cups.	Fortnightly.	A few drops in each.
Ends of Cutter Shaft ...	"	"	"
Ends of Clutch Shaft ...	"	"	"
3. Clutch.			
(a) In hole drilled in boss of outer member.		Weekly.	"
(b) Clutch operating forks between hardened pads of operating forks and withdrawal collar ...	"	"	"
4. 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 end nuts, when they will slip out of the slots in their brackets). Take the rollers off, thoroughly clean the bearing 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.

6

ADJUSTMENTS.

1. Cutters.

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 be occasionally 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.

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.

For height of cut.

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

2. Front Rollers.

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.

7

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.

GENERAL.

The flywheel magneto cover is detachable for inspection, or to clean or adjust the magneto points.

While it is rarely necessary to adjust, we give the following timing and points gap data.

The timing is correct when the points break 5/32in. before the piston is at the top of its stroke.

The points should be open to the maximum extent of .015in., which can be judged by the feeler attached to the magneto spanner.

CONCLUSION.

A minimum of service will be required with your Atco. In the unlikely event of difficulties arising which are not capable of simple remedy by referring to this manual, get in touch with your dealer, or, in case of difficulty, with the Atco Service Depot, of which addresses are given opposite.

By following this course, you will find prompt, courteous and efficient service available always at reasonable charges.

Finally, we wish to assure you that your satisfaction with your Atco is our permanent interest, forming part, as it does, of a world-wide Atco goodwill.

IMPORTANT.

TO THE OWNER.

It should be particularly noted that items such as the cleaning of sparking plugs and jets, the adjusting of chains, cutters, etc., do not come under guarantee. While the services of our representatives are available for the carrying out of minor adjustments, a charge would require to be made to defray time and journey expenses.

Full particulars of all such adjustments and the necessary information in regard to plug cleaning, etc., are clearly set out in the Instruction Book, and are capable of being attended to from the information given without special mechanical knowledge.

CHARLES H. PUGH, LIMITED
Sole Manufacturers
Whitworth Works, Birmingham, 9,
England.

Phone: Victoria 2524.

Telegrams: "Accuracy," B'ham.

SALES-SERVICE AREA DEPOTS.

LONDON ... "Atco" Depot, Progress Way, Croydon.
Tel.: Croydon 34771.

CAMBRIDGE ... "Atco" Depot, Hills Road, Cambridge.
Tel.: Cambridge 87462.

BIRMINGHAM ... "Atco" Depot, 1210, Stratford Road, Hall Green.
Tel.: Springfield 2132.

NEWPORT ... "Atco" Depot, 410, Chepstow Road, Newport, Mon.
Tel.: Newport 71417.

ORMSKIRK ... "Atco" Depot, County Road, Ormskirk, Lancs.
Tel.: Ormskirk 239.

ECKINGTON ... "Atco" Depot, Rotherham Road, Eckington, Sheffield.
Tel.: Eckington 73.

DARLINGTON ... "Atco" Depot, 396, North Road, Darlington.
Tel.: Darlington 2671.

EXETER ... "Atco" Depot, Alphington, Exeter.
Tel.: Exeter 3882.

READING ... "Atco" Depot, 106, Bath Road, Calcot, Reading.
Tel.: Reading 3443.

GLASGOW ... "Atco" Depot, Kilmarnock Road, Newton Mearns, by
Glasgow.
Tel.: Newton Mearns 2502.

Also at BELFAST AND DUBLIN