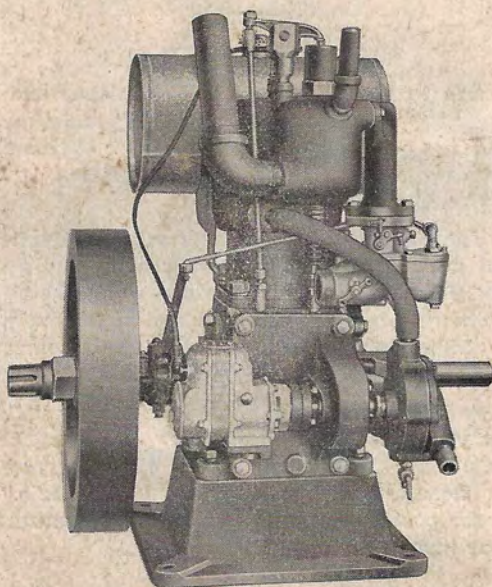


INSTRUCTION BOOK
AND REPAIR LIST

4 to 6 Horse Power
Single Cylinder
Engine



Cushman Motor Works
LINCOLN 1, NEBRASKA

FOREWORD

The Cushman Engine is a truly fine machine, sturdy, powerful, efficient and easy to operate.

It is correct in design, and manufactured from the finest materials, by Master Engine Builders. The length and kind of service depends almost entirely on the operator.

The operator should read and follow these instructions, and thoroughly familiarize himself with the engine, to assure long and uninterrupted service.

REMEMBER

Be sure to **KEEP THIS BOOK**—another one will cost you ten cents. This book is “important” and should be referred to often. When ordering parts, give engine model and serial number, parts number and description, and specify how shipment is to be made.

Merchandise sent to the factory to be duplicated, repaired or exchanged must show your name and address and must be **PREPAID**. **WRITE** the same day the shipment is made. Tell us why it is returned and what you want done with it. There is much delay in giving customers prompt service because they fail to give complete information.

Every C.O.D. shipment, regardless of how little it costs, will cost you at least 30 cents plus postage and the cost of the parts. Save money by sending check, money order or stamps. Repairs are handled on a “cash basis.” Include amount for postage—any difference will be returned to you with your invoice.

INSTRUCTIONS AND OPERATION

BEFORE STARTING

Where this engine is used for stationary work, a permanent foundation of concrete should be used.

The gasoline tank should be at least six inches above the carburetor. Be sure the fuel line has no short bends or kinks. Wash out the gasoline tank and fuel line with gasoline before you fill the tank. Be sure the air hole in the gas tank filler cap is open, and is kept open.

Fill the crank case to the top of the filler hole with SAE 30 weight oil.

Check the gap on the spark plug. It should be .020" to .025", or the **thickness of a worn dime**. If not correctly set, the engine will not start. Watch for cracked porcelain. See that the priming cup is in place and the ignition wire connections are tight. The carburetor was set at the factory, but if you have trouble, check it by screwing the needle valve clear up and then opening approximately $1\frac{1}{4}$ to $1\frac{1}{8}$ turns. Adjust for best results after engine is warmed up and pulling.

TO START ENGINE

Fill up water, gasoline and oil.

Rotate flywheel two or three complete turns with the carburetor choked, by holding your hand over the air intake or closing the butterfly valve in the air intake. Experienced operators use the flywheel itself for cranking.

After a good charge is in the cylinder, give the flywheel a quick turn over compression. In cold weather, or for easier starting, fill the priming cup with gasoline and draw it into the cylinder.

COOLING SYSTEM

The water is circulated by a gear driven centrifugal pump. This assures positive cooling as long as the water level is above the pump. Sometimes the circulation may not start at slow speeds. Speed the engine up for an instant, to start it. To remove the pump runner, take off the pump case cover and unscrew the runner from the shaft. Unscrew to the left.

In cold weather drain the water tank and pump. Turn the engine over several times after it is drained, to get all the water out. Be sure the pump is free before cranking engine, because if froze up, it will break the pump or shaft.

LUBRICATION

This is the most important thing about getting service from your engine.

Keep the oil level up. Check each five hours. Use good oil—SAE 30 grade for general use. Use 20 grade with zero pour test for winter.

Change the oil when it is too thin, or every fifty hours' running. In extra dusty work, change more often. When using kerosene or distillate, change twice as often.

Oil the upper valve stem and rocker arm each five hours.

Oil the fan on radiator cooled engines each five hours.

All parts are oiled from the crank case except the governor, the joints to and about the carburetor, the rocker arm, valve stems, and clutch.

IGNITION TROUBLES

Continual misfiring is often due to a bad spark plug—cracked, defective or dirty. Clean your plug first. Then lay it on the cylinder and test the spark. If the spark is not hot and "fat", check up the magneto. See the magneto instruction book.

CARBURETOR

The air adjustment is automatic. There are two mixture adjustments, one for idling and one for running. The idling adjustment is located just under the mounting flange and the running adjustment under the carburetor. The idling adjustment should be from completely shut to $\frac{3}{4}$ turns open. The correct running adjustment is $1\frac{1}{2}$ to 2 turns open.

AIR CLEANER

Dust and dirt will ruin an engine very quickly. An air filter should be used on all engines that are used in dusty and dirty work. We can furnish these at a small cost. Give us model and serial number of your engine.

THE GOVERNOR

This works direct on the throttle valve and maintains an even speed. Wash the shaft, collar, shoes and pins with gasoline. Keep them clean, and free from dirt. Screwing the adjusting nut down causes the engine to run faster. Screw the nut out to slow the engine down. This can be done while the engine is running. 450 RPM is the slowest speed practical. 1100 RPM is normal and 1300 RPM maximum.

The screw on the throttle lever at the carburetor should be set so the engine will just keep going when the throttle is closed.

If the engine speed is irregular, yet the governor works freely, it indicates a poor fuel supply. Adjust the carburetor needle valve. If this does not correct the trouble, take the top off the carburetor float chamber and see that the fuel flows freely and is at the proper level in the float chamber. The feed line may be plugged.

POUNDING

When an engine pounds, it indicates serious trouble. Stop the engine at once to prevent damage. It may be overheating. Check the water supply and circulation. It can be pre-ignition, from improper spark timing. It is usually loose bearings. Running with loose bearings will "crystalize" connecting rods, bolts, pins, etc., and wreck the engine. Adjust them at once. A loose flywheel will cause a heavy pound. It can usually be located by rocking the wheel. If allowed to remain loose, it will ruin the crankshaft. Keep the flywheel nut tight.

ADJUSTING BEARINGS

A knock when rocking the flywheel back and forth usually indicates loose connecting rod bearings. Take off the gear cover, with pump and magneto. When replacing, be sure the drive gears are correctly meshed. See later paragraph.

The shims between the halves of the bearings are laminated. The thin layers can be separated and peeled off with a sharp knife. Do not remove too much at once. Try the fit often. The connecting rod bolts must be pulled up tight, without making the bearings bind. The bearings must be snug, but not tight. You should be able to move the rods back and forth by hand. Be sure the nuts are locked by the cotter pins, with the ends opened up and bent around both sides of the nuts.

The main bearings are taper rollers. They should need no adjustment until the engine needs reboring. Any end play in the crank shaft should be taken up. This is done by removing one of the thinnest shims under a bearing housing. When properly adjusted, roller bearings are snug and without play, yet have no "drag" at all.

TIMING THE VALVES

Turn the engine until the punch marks on the flywheel face have passed top center two inches, on the exhaust stroke. The exhaust valve should be just closed, and the push rod easily turned with the fingers. If the spring pressure is not relieved at this point, the push rod is too long. Loosen the lock nut and adjust the rod screw down. If the pressure is relieved before this point, adjust the screw up. Be sure the push rod is not long enough to hold the valve open. That will burn out the valve.

The intake valve is adjusted with the screw and lock nut on the outer end of the rocker arm. The intake valve should have .010" and the exhaust .012" clearance when the engine is hot. The intake valve push rod should start to move just as the punch marks indicate a worn cam. If there is much variation, the cam shaft should be replaced with a new one.

TO REMOVE CAM SHAFT

Take off the gear cover. On early engines, remove the pin on the intake cam, and drive the cam to the right. Remove the four screws, which hold the cam gear to the cam shaft web. Turn the flat side of the cam web up. Remove the headless set screw which holds the left hand cam shaft bushing in the housing. Drive the bushing out, and move the cam shaft to the left, away from the gear.

The cam shaft gear is numbered on two teeth. The tooth marked "4" should be meshed into the crank shaft gear so the marked tooth will come in direct line with the row of punch marks on the web of the crank shaft. Put the cam shaft back in place and turn it until the holes in the web correspond with those in the gear. Replace and tighten up the screws. Be sure the marked points on the gear and crank shaft correspond before tightening down the screws. If the gears have been correctly installed, the valves will open as above shown. The screws must be securely riveted, after tightening down. Check the valve timing.

CRANK SHAFT GEAR

If this has to be replaced, completely remove the clutch or pulley, and the bearing housing. It is best to remove the crank shaft entirely. The bearing must be carefully removed from the crank shaft. Use a dull cold chisel, or a punch, and drive off evenly, by light blows, from all sides. The crank shaft gear is a drive fit over a Woodruff key. Be sure the key is fitted properly and in place before driving on a new gear. The key must not fit so tightly that the gear is sprung out of round when it is forced on the shaft. Use a piece of pipe for driving the gear and bearing on the shaft.

In replacing the crank case cover, put the engine on dead center at the top of the compression stroke. Turn the magneto very slowly in the correct direction until the impulse just trips. Replace the cover without moving the gear or magneto in any way. Check this timing by turning the engine very slowly past com-

pression. The impulse must trip with the piston on dead center, at the top of the stroke. Any slight adjustment can be made by loosening the bolts in the magneto drive coupling and turning the magneto very slightly in the proper direction.

COMPRESSION

Poor compression means poor power. Test it by turning the flywheel over to bring the piston up against compression. A properly working engine has good compression. Test for compression leaks first, by pouring a little oil around the spark plug to detect any leak. Second, remove the intake valve rocker arm, unscrew the valve guide, and take out the complete intake valve and cage for examination. This leaves an opening through which the exhaust valve can also be inspected and removed. There is a slot in both valves in which a screw driver can be used for turning the valves back and forth to work out any deposit of carbon. If dirty, the valves should be thoroughly cleaned with gasoline. Examine the valve seats and faces. If not good, grind the valves.

If these things do not correct the compression, it is a leaking piston. Worn piston rings cause loss of power and oil pumping. This will foul the spark plugs and cause the valves to stick. The piston and rings must be removed. This is done by removing the cylinder from the crank case. Worn piston rings should be replaced. A scored or badly worn cylinder should be replaced or rebored and fitted with an oversize piston, rings and pins.

Fit new rings to the cylinder with a "gap" of .004". Clean all the carbon out of the ring grooves and see that the rings fit snug but do not bind.

If the engine has been standing idle for some time, the valves may become stuck to the seat or the stems stuck in the guides. Put some kerosene gasoline or oil on the valve stem, turn with a pair of pliers and snap up and down with a screw driver forced between the valve stem and push rod. Remove the spark plug, pour in a teaspoon of kerosene and turn the engine over several times. Then put in one or two tablespoons of cylinder oil and turn the engine over several times to spread the oil thoroughly over the surface.

To test for a leaky exhaust valve, remove the exhaust pipe, turn the engine over compression, listening for a hissing noise. To test for a leaky intake valve, remove the intake pipe and listen for the noise the same way.

Back fire through the carburetor is caused by too lean a mixture, or a leaky intake valve. This may be a sticking valve, carbon on the valve seat, poor valve seat, or poor gasket. A copper asbestos gasket is placed under the intake valve cage to seal this joint. If this gasket is damaged or misplaced, it will ruin the compression.

GRINDING THE VALVES

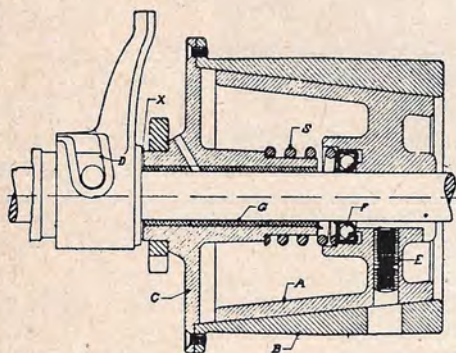
Remove both valves and wash thoroughly with gasoline. Regrind with any good grinding compound. Be sure to thoroughly wash the grinding compound from the valves, seats and cages before replacing.

If the valves have a deep groove in the seat, they will collect carbon, and it will be necessary to grind the valves often to keep them in condition. They should be refaced or replaced with new valves.

THE CLUTCH

The clutch consists of inside cone "A" and outer cone "B". A coil spring

"S" inside of clutch, forces these two cones together, bringing the two surfaces into contact. The clutch lever operating with a cam effect (at point D) against



the clutch lever screw on the engine bearing, forces the outer cone outward and away from contact with the inner cone, thus releasing the clutch. When the clutch is in full contact, the clutch lever is not engaged, and should not touch the clutch at point (X). There should be clearance enough to allow inserting a knife blade. If the lever is not free at this point, the clutch will not hold for its full power. If, on the other hand, the lever has too much clearance, it may not throw the cone completely out of engagement.

The clutch is adjusted by setting it at the proper place on the shaft. The inner cone is held by two set screws reached through the hub, and by a washer and stud at the end of the shaft. The location of the clutch is adjusted by means of this washer and stud.

Do not leave clutch thrown out very long with the engine running. It is primarily a convenience for starting the engine before throwing on full load. Keep the clutch bearing oiled.

BREATHER

There is a breather on the crank case. This is not an oil filter. If oil is blown out through the breather, remove the breather cover, screen and metal baffle, and reseal the leather valve by light blows with a hammer on a wood tool. The leather valve sometimes is held off its seat by particles of carbon from the crank case. These must be removed.

ATTACHMENTS FOR OTHER FUELS

Attachments to operate this engine on natural gas, kerosene, distillate, or tractor fuel, can be had. Kerosene or distillate dilute the crank case oil rapidly. This requires frequent oil changes. It is questionable whether they show any saving as compared to gasoline. Good tractor fuel and natural gas are very economical and entirely satisfactory.

WHEN ENGINE FAILS TO START

See if there is gasoline in the tank, and that it flows into the carburetor freely.

Check the compression. If it is bad, follow the instructions previously given.

Check the ignition by laying the spark plug on the top of the cylinder and turning the engine over. (See instructions under "Ignition Troubles".) A new spark plug costs little and saves money.

Excessive oil pumping or too rich a fuel mixture will foul the spark plug. A plug will sometimes show a spark when tested outside the cylinder and yet fail to fire under compression. This indicates a very dirty plug or a cracked porcelain. If the compression and ignition is good, the trouble is in the fuel supply.

Gasoline should drip from the carburetor when the engine is cranked with the choker on. If it does not do so, the gasoline line is obstructed in some way.

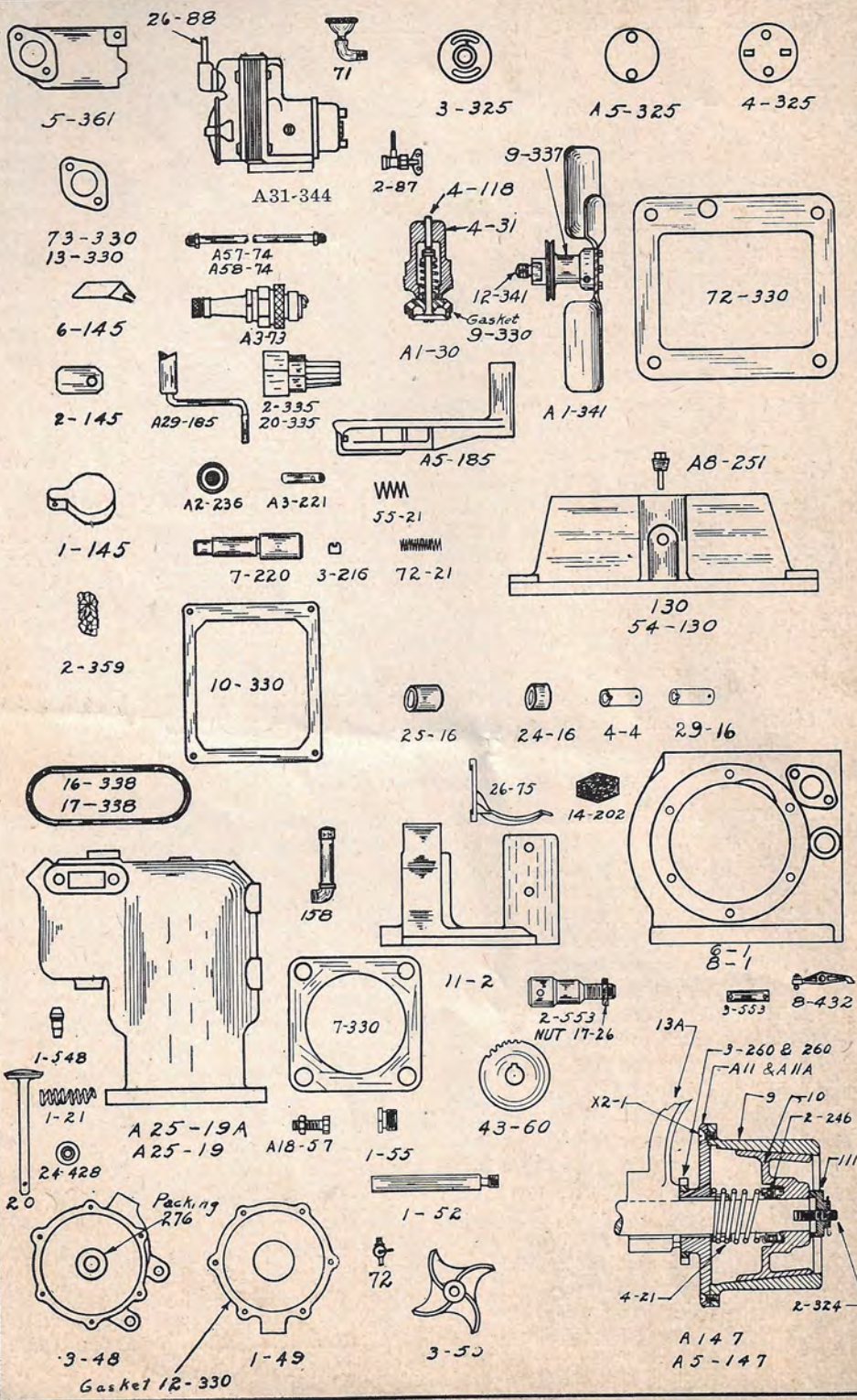
PARTS AND PRICE LIST

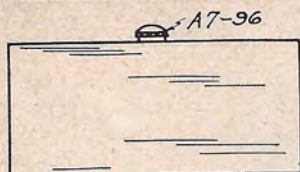
For illustrations, see pages 10 and 11.

Be sure to give engine serial number when ordering parts.

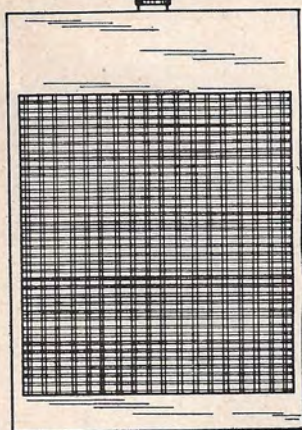
Part No.	DESCRIPTION	No. Used	Price Each
6-1	Crankcase (from engine No. 65031 to No. 65234).....	1	\$14.50
8-1	Crankcase (after engine No. 65235).....	1	14.50
11-2	Crankcase gear cover	1	4.00
A11-2	Gear cover assembly with pump, less magneto and coupling	1	13.00
3A	Side plate, governor side (Model C33).....	1	3.50
14-3	Side plate, clutch side (Model C34).....	1	3.75
15-3	Side plate, governor side (Model C34).....	1	4.00
16-3	Side plate, clutch side (Model C33).....	1	3.25
4R	Main bearing babbitt, clutch side	1	1.50
1-4R	Main bearing babbitt, flywheel side	1	1.50
2-4R	Connecting rod lower bearings	2	1.00
4-4	Camshaft bearing, babbitt	2	1.25
4-5	Crankshaft for Model C33.....	1	12.00
22-5	Crankshaft for Model C34.....	1	15.00
A22-5	Crankshaft with bearing cones and crank gear Model C34)	1	27.50
8B	Crankshaft counterweight	2	.75
9	Clutch pulley 6x4"	1	4.00
9B	Clutch pulley 8x4"	1	8.00
	Special Clutch pulleys on application.		
10	Clutch cone	1	2.00
A11	Clutch cover, 9-tooth sprocket, block chain.....	1	3.25
A11A	Clutch cover, special for 11-tooth sprocket, roller chain	1	3.25
A13A	Clutch shifting lever	1	1.25
A1-15	Connecting rod assembly, with all bearings, bolts and shims	1	7.00
1-15A	Connecting rod with piston pin bushing.....	1	3.75
16	Piston pin bronze bushing	1	.50
24-16	Pump shaft bearing, short	1	.50
25-16	Pump shaft bearing, long	1	.50
27-16	Fan spindle thrust bearing.....	1	.10
29-16	Bronze camshaft bushing, intake cam side.....	1	1.50
31-16	Bronze camshaft bushing, exhaust cam side.....	1	1.50
3-18	Connecting rod shim, plain.....	2	.05
4-18	Connecting rod shim, laminated.....	2	.20
A4-18	Connecting rod shims, per set.....set of 4		.45
A25-19	Cylinder with both valves assembled.....	1	24.00
A25-19R	Cylinder with exhaust valve	1	20.75
	Regrinding cylinder to .015" or .030" oversize.....(net)		4.00
20	Exhaust valve	1	1.00
1-21	Exhaust valve spring	1	.20
4-21	Clutch spring	1	.30

Part No.	DESCRIPTION	No. Used	Price Each
16-21	Starter crank spring	1	.05
55-21	Oil pump strainer spring	1	.10
72-21	Oil pump plunger spring	1	.10
73-21	Governor tension spring	1	.15
74-21	Intake valve spring	1	.20
2-26	Governor tension nut	1	.15
3-26	Intake pipe stud nut	2	.05
27	Flywheel key	1	.10
5-27	Crank gear key	1	.05
13-28	Intake pipe	1	1.50
A1-30	Intake valve, assembled	1	2.50
4-31	Valve plug	1	.85
2-34	Push rod felt cover plate	1	.15
35A	Governor weight	2	.25
A36	Governor collar	1	.75
1-37	Governor shoe	2	.15
4-38	Governor arm	1	.75
6-39	Governor link	1	.25
14-44	Piston only	1	4.00
NOTE: Pistons can be supplied .0025 to .030 over- size, also semi-finished upto .050 oversize, at same price.			
1A14-44	Piston with rings and connecting rod assembly.....	1	13.00
2-45	Piston ring, 4x3/16" compression.....	3	.35
13-45	Piston oil ring, 4x3/16"	1	.40
NOTE: Piston rings can be furnished .0025, .005, .015, .030 oversize at same price.			
46	Wrist pin	1	.75
Can be furnished oversize at same price.			
3-48	Pump case	1	2.50
1-49	Pump case cover	1	.85
3-50	Pump runner—four blades, cast iron.....	1	.65
4-50	Pump runner—flat, steel blade	1	.10
1-52	Pump shaft for 3-50.....	1	.45
4-52	Pump shaft for 4-50.....	1	.45
1-55	Pump stuffing nut	1	.65
56A	Push rod for exhaust valve	1	1.50
5-56	Push rod for intake	1	1.50
A6-57	Connecting rod bolt and nut.....	4	.15
7-57	Governor shoe screw	2	.10
8-57	Governor tension screw	1	.20
9-57	Camshaft gear screw	4	.05
17-57	Wrist pin set screw	1	.10
A18-57	Push rod screw and nut.....	1	.10
A18-58	Camshaft with intake cam (before engine No. 68361)	1	5.00
20-58	Camshaft (after Engine No. 68361).....	1	5.00
60	Camshaft gear	1	2.00
8-60	Crankshaft gear (for Model C33).....	1	2.00
43-60	Pump shaft gear	1	2.00

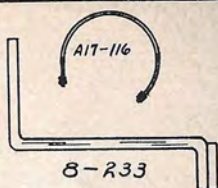




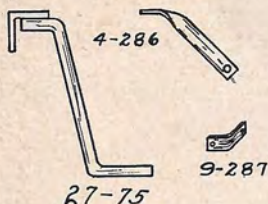
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A25-84



A1-289



A17-116
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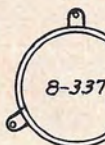
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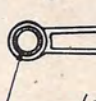
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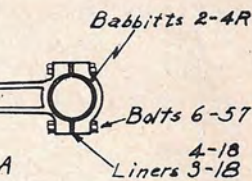
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13-45



8-337



16
1-15A
A1-15



Babbitts 2-4R

Bolts 6-57

4-18

Liners 3-18



17-57



46



1-202



10-541



56A
5-56



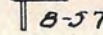
35-A



X11-1



1-37



8-57

A20-58
A18-58



4R



1-4R

A2-118



A2-118



4-5 C33
22-5 C34



8-B



5-27

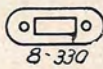


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8-60

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8-330



13-28



14-113

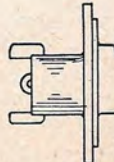
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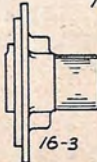
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14-3



3-A



16-3



5-246



4-246



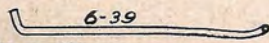
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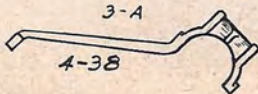
A36



2-26 73-21



6-39



4-38

Part No.	DESCRIPTION	No. Used	Price Each
44-60	Crank gear (for Model C34)	1	2.00
69	Water hose connection	2	.10
71	Priming Cup	1	.50
72	Pump drain cock	1	.25
A3-73	Spark plug, $\frac{7}{8}$ ", C-1	1	.60
A57-74	Gasoline tube with nuts, $\frac{1}{4} \times 13\frac{3}{4}$ "	1	.50
A58-74	Gasoline tube with nuts for unit, $\frac{1}{4} \times 12\frac{3}{4}$ "	1	.60
26-75	Gasoline tank brace for round tank (bolts to cylinder)	1	1.00
27-75	Gasoline tank bracket for unit	1	.50
29-75	Rear gas tank bracket for unit	1	1.50
9-77	Intake valve spring pin	1	.10
A7-84	Gasoline tank—round	1	3.25
A25-84	Gasoline tank for Unit	1	3.75
2-87	Gasoline shut-off cock	1	1.00
26-88	Magneto cable, high tension	1	.75
A9-92	Tillotson Carburetor, Model N7A	1	11.00
A7-96	Gasoline tank cap—threaded type	1	.25
A13-96	Gasoline tank cap—quick turn type	1	.15
102	Water shut-off cock	1	1.00
1-103	Water hose nipple, $\frac{1}{2} \times 1\frac{1}{2}$ "	2	.10
104	Water hose (give length when ordering) $\frac{3}{4}$ " (per ft.		.20
22-104	Water hose (give length when ordering) $\frac{5}{8}$ " per ft.		.20
A105	Water cooler tank only	1	4.50
106	Water cooler cone with shield	1	3.50
A106	Water cooler complete, cone type	1	8.00
111	Clutch washer	1	.10
112	Muffler cap	1	.40
14-113	Flywheel	1	12.00
A17-116	Gasoline tank band and nut	2	.10
A2-118	Intake lifter rod	1	.60
4-118	Intake valve extension on valve	1	.35
5-125	Intake valve	1	.75
126C	Intake valve cage	1	1.50
127	Governor frame	1	1.00
A127	Governor frame assembly	1	1.20
130	Subbase (before Engine No. 65235)	1	10.00
54-130	Subbase (after Engine No. 65235)	1	10.00
139	Water cooler tank bolt	2	.15
1-145	Breather cap	1	.20
2-145	Breather valve leather	1	.20
6-145	Breather baffle	1	.15
A147	Clutch assembly (give type of sprocket wanted)	1	17.50
A2-158	Muffler assembly	1	1.30
1-170	Intake valve washer	1	.10
A5-185	Starter crank—ratchet type used with nut 2-335	1	1.00
A29-185	Starter crank—used with nut 20-335	1	1.00
1-190	Starter crank pawl	1	.10
1-202	Main bearing felt washer	2	.10
4-202	Governor shaft bushing felt	2	.10
14-202	Gasoline tank felt	1	.10

Part No.	DESCRIPTION	No. Used	Price Each
20-202	Push rod gasket	2	.10
3-216	Oil pump valve stop	1	.10
7-220	Oil pump body	1	2.00
A3-221	Oil pump plunger assembly	1	.75
8-233	Radiator fan bracket	1	.75
9-233	Radiator bracket—cast iron	1	1.50
A2-236	Oil pump strainer assembly	1	.30
2-246	Clutch ball bearing	1	1.25
4-246	Main bearing cone with roller.....	2	4.00
5-246	Main bearing cup	2	2.00
A8-251	Oil gauge assembly	1	.25
260	Clutch sprocket—11-tooth for roller chain.....	1	1.75
3-260	Clutch sprocket—9-tooth for block chain.....	1	1.75
276	Pump packing ring	3	.10
4-286	Radiator support brace	1	.20
9-287	Radiator support at top of radiator.....	2	.15
10-287	Radiator support	1	.50
A1-289	Radiator	1	20.00
2-324	Clutch stud	1	.15
3-324	Intake pipe stud, $\frac{3}{8}$ x1 $\frac{1}{2}$ "	2	.15
3-325	Magneto coupling, slotted	1	.70
4-325	Magneto coupling, leather	1	.80
5-325	Magneto coupling plate	1	.60
A5-325	Magneto coupling plate with pins	1	.70
6-325	Magneto coupling pins	2	.25
1-330	Side plate shim—.005" thick	4	.10
7-330	Cylinder to crankcase gasket	1	.10
8-330	Intake pipe to cylinder gasket	1	.10
9-330	Intake valve copper gasket	1	.05
10-330	Gear cover gasket	1	.10
11-330	Side plate shim, .015" thick	2	.15
12-330	Pump case gasket	1	.10
13-330	Carburetor to intake pipe gasket.....	1	.05
72-330	Crankcase to base gasket	1	.25
73-330	Breather gasket	1	.05
2-335	Starting crank nut with spline, used with A5-185 crank	1	.50
20-335	Starting crank nut with pin on flywheel, used with A29-185 crank	1	.60
6-337	Fan hub and pulley for round belt.....	1	3.50
8-337	Fan drive pulley on flywheel, V-belt.....	1	3.00
8-337R	Fan drive pulley on flywheel, round belt.....	1	3.00
9-337	Fan hub and pulley for V-belt.....	1	3.50
A16-338	Fan belt—leather, with coupling for Unit	1	.80
17-338	Fan belt—Gates 2420 V-belt	1	1.60
18-338	Fan belt—Gates 2440 V-belt	1	1.60
A1-341	Fan blade with hub	1	6.00
12-341	Fan spindle	1	3.50
A31-344	Magneto—Wico No. C.....	1	23.00
1-355	Belt pulley, 4x4"	1	2.60

Part No.	DESCRIPTION	No. Used	Price Each
2-355	Belt pulley, 5x4"	1	3.00
3-355	Belt pulley, 6x4"	1	3.40
4-355	Belt pulley, 6x6"	1	4.00
10-355	Belt pulley, 8x4"	1	4.75
11-355	Belt pulley, 7x4"	1	4.00

NOTE: Plain pulleys go on crankshaft, but will not fit on clutch.

2-359	Breather screen	1	.15
5-361	Breather	1	.75
A5-361	Breather assembly	1	1.50
24-428	Exhaust valve spring washer	1	.10
8-432	Rocker arm	1	.50
10-541	Main bearing felt retainer	2	.10
1-548	Exhaust valve guide	1	.65
2-553	Rocker arm post	1	1.50
3-553	Rocker arm pin	1	.50
2-560	Gas tube straight fitting	1	.30
5-562	Gas tube elbow fitting	1	.30

MISCELLANEOUS

X1-3	Magneto mounting screws, $\frac{1}{4} \times \frac{3}{4}$ "	2	.05
X1-14	Carburetor to intake pipe screws, $5/16 \times \frac{3}{4}$ "	2	.05
X1-26	Side plate screws, $\frac{3}{8} \times \frac{3}{4}$ "	14	.05
X1-28	Pump case to gear cover screws, $\frac{3}{8} \times 1$ "	4	.05
X1-33	Breather to crankcase screws, $\frac{3}{8} \times 2\frac{1}{4}$ "	2	.10
X1-43	Gasoline tank bracket screws, $\frac{1}{2} \times 1$ "	2	.10
X1-45	Crankcase to base screws $\frac{1}{2} \times 1\frac{1}{2}$ "	4	.15
X1-53	Cylinder to crankcase screws $\frac{5}{8} \times 1\frac{1}{4}$ "	4	.20
X1-74	Counterweight screws $\frac{3}{8} \times 1\frac{1}{2}$ "	4	.15
X1-93	Push rod felt retainer screw $\frac{1}{4}$ -20x $\frac{3}{8}$ "	1	.03
X1-107	Governor frame screws $\frac{1}{4} \times \frac{5}{8}$ "	2	.05
X1-110	Breather valve cap screw $\frac{1}{4}$ -20x $\frac{5}{8}$ "	1	.05
X2-13	Breather valve screw No. 10-24x $\frac{5}{8}$ " Rd. Hd.	1	.05
X3-4	Pump case cover screws 12-24x $\frac{5}{8}$ "	6	.05
X4-1	$5/16$ "-24 Castellated nuts	4	.05
X4-3	No. 10-24 Hex. nut	1	.03
X4-11	$\frac{3}{8}$ "-24 Hex. nut	1	.03
X4-30	$\frac{5}{8}$ "-18 Hex. jam nut	1	.04
X4-38	$\frac{1}{4}$ "-20 Hex. nut	...	.03
X4-51	$\frac{1}{4}$ "-28 Hex. nut	...	.03
X4-52	No. 8-32 Hex. nut	...	.03
X7-1	$5/16$ " lock washer	...	.02
X7-2	$\frac{5}{8}$ " lock washer	...	.03
X7-6	$\frac{1}{2}$ " lock washer	...	.02
X7-7	$\frac{1}{4}$ " lock washer	...	.02
X7-10	$\frac{3}{8}$ " lock washer	...	.02
X7-15	No. 10 lock washer	...	.02
X8-2	$1/16 \times \frac{5}{8}$ " cotter pin	...	.02
X8-4	$3/32 \times 1$ " cotter pin	...	.02
X8-6	$\frac{1}{8} \times 1$ " cotter pin	...	.05

Part No.	DESCRIPTION	Used No.	Each Price
X8-11	5/32x3/4" cotter pin	---	.02
X8-13	5/32x1 1/2" cotter pin	---	.05
X9-2	1/4"—20x5/16" headless set screw	---	.05
X11-1	Governor weight rivet, 1/4 x 1 1/8"	2	.05
X11-2	Governor arm pin 5/16x3 1/2"	1	.05
X11-5	Starter crank pawl rivet 5/16x1 1/2" flat head	1	.05
X13-4	Street ell 1/2", 45°	1	.15
X13-10	Muffler elbow	1	.75
X13-16	Muffler nipple 1 1/2 x 6"	1	.20
X13-21	1/8" pipe close nipple	1	.10
X13-38	Oil drain plug 1/4"	1	.05
X14-1	Magneto coupling 1/4" steel washer	2	.02
X14-14	No. 10 plain washer	1	.02
X15-8	No. 3 Woodruff key	1	.03
X16-9	Pump gear taper pin No. 3—1 3/4"	1	.05
X17-1	Expansion plug 1 1/8"	2	.05
X19-4	Oil pump ball 7/32"	1	.05

OUR GUARANTEE

We guarantee each new unit to be free from defects in material and workmanship under normal use and service. Our obligation under this guarantee is limited to making good at the factory, any part or parts thereof which shall, within three months after delivery, be returned to us with transportation charges prepaid and which our examination shall disclose to our satisfaction to have been thus defective.

This guarantee shall not apply to any unit which shall have been repaired or altered outside the factory in any way so as to affect its stability or reliability or in which other than our genuine parts have been installed, or which has been subject to misuse, accident, negligence or racing. We make no guarantee in respect to trade accessories or parts not of our manufacture, inasmuch as they are usually guaranteed separately by their respective manufacturers.

THE CUSHMAN MOTOR WORKS
Lincoln Nebraska