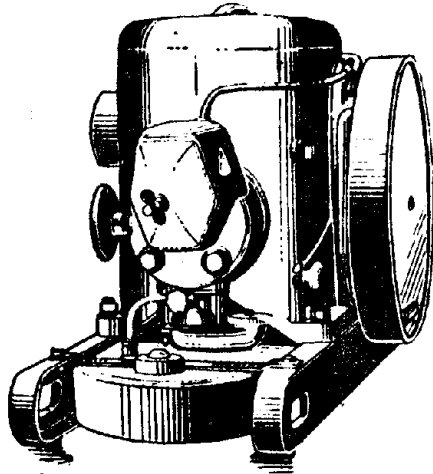


Instructions
for Care and Operation of
McCormick-Deering
1½ to 2½ H.P.
3 to 5 H.P.
Gasoline Engines
(Type "LA")
Equipped with Wico Type "H" Magneto



With List of Repair Parts

Important

TO McCORMICK-DEERING OWNERS—

This pamphlet has been prepared and is furnished for the purpose of giving the user as much information as possible pertaining to the care and operation of this machine. The owner is urged to read and study this instruction pamphlet and if ordinary care is exercised, he will be assured of satisfactory service.

MANUFACTURED BY

INTERNATIONAL HARVESTER COMPANY

(INCORPORATED)

606 SO. MICHIGAN AVE.

CHICAGO, U.S.A.

SPECIFICATIONS

	1 1/2 to 2 1/2 H. P.	3 to 5 H. P.
Horse Power { at engine speed 600 R.P.M.	1 1/2	3
{ at engine speed 1000 R.P.M.	2 1/2	5
Bore	3 1/8"	4"
Stroke	3 1/4"	4 1/8"
Engine speed	600 to 1000 R.P.M.	600 to 1000 R.P.M.
Flywheel size	14" dia., 1 1/8" face	17 1/8" dia., 2 1/8" face
Magneto—high tension, rotary type	Wico Type "H"	Wico Type "H"
Spark plug (optional)	Champion No. 1 or No. 20	Champion No. 1 or No. 20
Pulley (standard) (takes 4" belt)	6" dia., 5" face	8" dia., 5" face
Pulley speed	300 to 500 R.P.M.	300 to 500 R.P.M.
Pulley sizes (furnished special)	3", 4", 5", 7", 8" dia.	3", 4", 5", 6", 7" dia.
Water hopper—capacity	2 1/2 gallons	4 gallons
Fuel tank—capacity	1 1/8 gallons	2 gallons
Lubricating oil—capacity	1 quart	3 pints
Auxiliary water hopper	Special Equipment	Special Equipment
Air cleaner (oil type)	Special Equipment	Special Equipment
Length overall	28"	33 1/2"
Width overall	16 1/8"	19 1/8"
Height overall	18"	20 1/2"

INSTRUCTIONS FOR OPERATING

IMPORTANT!

This engine is equipped with a fuel tank having no gravity openings, and great precaution has been taken to produce one of the safest engines for operation in a building. *A permit should, however, be obtained from the Insurance Authorities when engine is installed in an insured building.*

Air Cleaner Attachment

If the engine is to be operated under very dusty conditions, we recommend the use of our Special (oil type) Air Cleaning Attachment.

Auxiliary Water Hopper Attachment

When the engine is to run a long time, without attention, we recommend the use of our Special Auxiliary Water Hopper which, when filled, will outlast a full tank of fuel, thereby preventing any damage that may be caused from an insufficient amount of water.

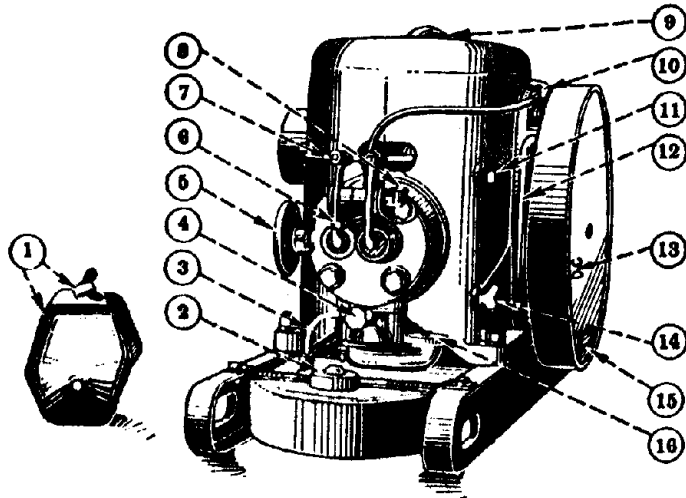


Illustration No. 1

Ref. No.	DESCRIPTION	Ref. No.	DESCRIPTION
1	Cylinder head cover with wing nut.	9	Water hopper cover.
2	Fuel tank filler cap.	10	Timing notch (in side plate).
3	Fuel pipe assembly.	11	Auxiliary water drain plug.
4	Fuel needle valve.	12	Breather pipe.
5	Muffler.	13	Timing (D.C.) mark.
6	Cylinder head cover stud.	14	Water hopper drain plug.
7	Valve rocker adjusting screw nut.	15	Starting crank.
8	Valve rocker shaft oiler.	16	Choke valve.

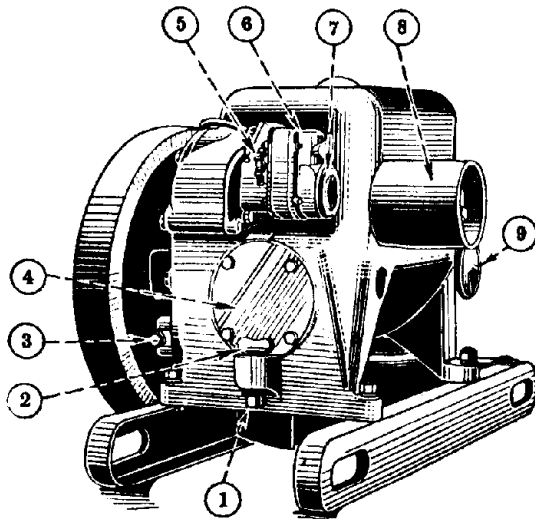


Illustration No. 2

Ref. No.	DESCRIPTION
1	Crankcase oil drain plug.
2	Crankcase oil filler plug.
3	Speed regulating screw.
4	Hand hole cover plate.
5	Engine stop switch.
6	Magneto.
7	Magneto breaker cover.
8	Belt pulley.
9	Muffler.

Preparations for Starting

(See illustration No. 1)

Fuel

Fill the fuel tank with clean gasoline.

Caution: Never fill gasoline tank while engine is running.

Inasmuch as the fuel consumption is very small, a high test gasoline is a good investment in cold weather. Trouble will be avoided if the fuel is kept free from water and dirt. Fuel tank should be removed and cleaned out at least once a year.

Note! See Special Instruction Book when using Kerosene Burning Attachment.

Cooling

Fill hopper with clean water (preferably rain or soft water) to within $\frac{1}{2}$ " of the top and keep it well filled. *Hot water in zero weather will make starting easier.*

Lubrication

(See illustration No. 2)

Fill the crankcase with a good brand of new engine oil, level with the top of the filler boss, and keep it full. The following grades of oil are recommended.

S.A.E. No. 40—Above + 60° F.	|	S.A.E. No. 20—+ 20° F. to 0° F.
S.A.E. No. 30—+ 60° F. to + 20° F.	|	S.A.E. No. 10—0° F. to - 20° F.

Do not allow dirt to drop in the oil opening when filling.

Drain oil after every 100 hours of operation and after every 50 hours when operating under very dusty conditions. Occasionally flush out the crankcase with flushing oil.

When the engine is new and occasionally thereafter, remove the rocker arm cover and oil the rocker arms, adjustment screw cups, end of valve stems, and the starting crank handle pin and see that they move freely and are free from paint and dirt. Do not oil the valve guides.

Note: The rocker arm cover should always be in place when running the engine.

Put two drops of oil on the magneto breaker arm pivot felt ring after every 50 hours of operation, using S.A.E. No. 50 oil, and refill the space back of breaker arm rubbing block after every 400 to 500 hours of operation with standard I.H.C. magneto grease (21372D). (See illustration No. 4.)

To Start Engine

(See illustration No. 1)

Open fuel needle valve approximately $\frac{1}{2}$ to $\frac{3}{4}$ of a turn in summer, approximately 1 to $1\frac{1}{2}$ turns in freezing weather, and two full turns in zero or colder weather.

Crank engine slowly until you feel it on the compression stroke. Press down on choke valve and give the crank a quick upward flip, keeping the hand about one inch away from the flywheel, and pulling away from the flywheel at the same time. Release the choke after engine gets *one charge* and crank the engine, using only a quick upward flip. If engine does not start after a few cranks, repeat the operation. Do not choke the engine too much, otherwise you may flood it and cause hard starting. As soon as engine starts to run, adjust the needle valve.

After engine starts, turn needle valve so mark on head is at the top.

Too much fuel makes the engine run uneven and smoke; lack of fuel causes the engine to run uneven and backfire.

When the engine is to be started hot, do not use the choke but close the needle valve one-fourth of a turn from the regular operating position.

If engine becomes flooded, spark plug should be removed, cleaned and re-installed and the engine cranked, with the fuel completely shut off, until the engine starts to run; then adjust the fuel needle valve to best operating position.

When the engine has been flooded it is a good policy to pour about one tablespoonful of cylinder oil into the cylinder through the spark plug opening before replacing the spark plug.

Magneto

(See instructions on page 9.)

Ignition

Engine is equipped with a Type "H" Wico Rotary type high-tension magneto having an automatic impulse coupling which automatically advances and retards the spark. The engine should be cranked only with half turns and not spun.

The Champion No. 1 spark plug is recommended for standard service and the Champion No. 20 for light service.

Engine Speed Regulation

(See illustration No. 2)


The engine as shipped from the factory is set for $2\frac{1}{2}$ H.P. at 1000 R.P.M. for the $1\frac{1}{2}$ to $2\frac{1}{2}$ H.P. engine, and for 5 H.P. at 1000 R.P.M. for the 3 to 5 H.P. engine. This speed can be decreased by turning the speed regulating screw (in a counter-clockwise direction). Lowering the engine speed decreases the horse power.

To Stop Engine

(See illustration No. 2)

Push in on stop switch on the side of magneto or shut off the fuel.

When engine has been pulling a heavy load, it is sometimes advisable to shut off the fuel rather than use the magneto switch if the engine is to be started again in a short time.

 Always drain water hopper in cold weather.

If the engine is to stand idle for any considerable length of time, a good practice to follow is to set the engine so the intake and exhaust valves are both closed.

 To get satisfactory service, do not overload the engine.

Exhaust Pipe

In case the exhaust is carried to the outside of the building, a drain should always be provided close to the cylinder head and slightly below the exhaust outlet from the head. Use 45 degree bends or long radius elbows to make the turns. The pipe should be increased one size, starting at the cylinder head, and increased one size for every 10 feet of length.

Timing and Adjustments

(See illustration No. 5)

If the engine has to be dismantled for any reason, the following instructions must be followed:

General Reassembling

1. Assemble throttle valve shaft extension with washer, bearing spring and connecting link attached, into the hole under the cylinder bore with the groove in the bearing at the bottom, and press in until the bearing is against the shoulder. Insert the tappets.
2. Assemble crankshaft and camshaft so the marked tooth on pinion meshes between the two marked teeth in the gear, care being taken not to damage the camshaft oil seal.
3. Assemble piston and connecting rod through the head end and fasten to the crankshaft so the sides of rod and cap are even with the two center punched marks on rod and cap on the same side, and the countersunk hole in the small end of the rod on top. If the bearings become badly worn, they should be replaced to insure a quiet running engine. If new main bearings are installed, be sure the oil hole in the bearing is in line with the oil hole in the casting. The connecting rod bearing is split off the center of the rod for aligning purposes and should not be filed. *Under no circumstances file the rod or cap.* If, for any reason, the oil ring has been removed, it must be assembled on the piston with the sharp edges away from the piston head.
4. Assemble the governor in place and be sure the shaft is screwed tightly into the gear. Place governor plunger, spring and collar in the shaft and see that the plunger moves freely endwise.
5. Assemble governor lever unit in place and screw fork in to approximately the same position it was originally.
6. Turn the lever on end of throttle valve shaft extension in a clockwise rotation about three-fourths of a turn or until the lever points down, then slip the free end of connecting link into hole in end of governor lever.
7. Push the throttle shaft connection on end of throttle shaft extension down to the shoulder. Turn throttle valve shaft in cylinder head in a counter-clockwise direction as far as it will go and, without disturbing this setting, mesh the throttle valve shaft into the slip joint, then fasten head tightly in place with cylinder head gasket and valve rockers in place.

General Reassembling—Continued

8. Lift the connecting link out of the end of governor lever and adjust governor lever support fork so end of connecting link will just slip into the governor lever when the governor is pushed in tight against the end of plunger; then tighten the lock nut, making sure the lever bears centrally on end of plunger. Check and see that there is no binding of governor linkage thru the complete swing of throttle valve shaft extension lever. Tapping the inner end of throttle shaft extension will free any endwise binding caused by reassembling cylinder head to engine.

9. Make sure all locks, cotters and nuts are tight, screw out speed adjusting screw in side plate so it is even with inside of boss, fill the pockets above the bearings with oil, and fasten the side plate in place, being careful not to damage the speed change lever or crankshaft oil seal. Crankshaft and camshaft should have about $\frac{1}{4}$ " end play when cover is drawn up tight.

10. Assemble flywheel with felt washer in place and align the D.C. mark on flywheel with the timing notch on side plate when engine is on the compression stroke. The compression stroke may be determined by placing the finger over the spark plug hole and cranking engine in a clockwise direction. When air blows past the finger, the engine is on compression stroke.

11. When the flywheel is to be removed, loosen clamp bolt at hub and tap flywheel as close to hub as possible. *Caution! Never strike flywheel rim to remove flywheel.*

12. Remove the magneto breaker cover and adjust the breaker points so they are .020" open when rubbing block is on high point of cam, *as shown in illustration No. 4*. Replace the cover. The gauge depressed at end of magneto wrench can be used for this adjustment. Align the marked tooth on magneto gear with mark on magneto flange, and, without disturbing this setting, insert magneto into its mounting hole so magneto gear meshes with cam gear. Then tighten the magneto screws *lightly* so magneto can be rocked.

The magneto impulse coupling can be made to trip exactly at the time the D.C. mark on flywheel is in line with timing notch on side plate by tipping the magneto forward or backward. Then *tighten* the magneto screws.

Caution! When checking tripping point of coupling, take a firm hold on flywheel and move slowly so you do not pass the point of actual trip. Never allow magneto impulse coupling to trip before D.C.

13. Screw the speed regulating screw all the way in and then back it out about 2 turns or to the speed at which the engine is to run. Do not turn screw too far in as it will overload the governor and cause undue wear.

14. Assemble push rods in place and adjust valve rockers so that intake clearance is .006" to .008" and exhaust clearance is .008" to .010". Grinding the valves occasionally will improve starting and increase the power.

General Reassembling—Continued

15. Set spark plug gap to .020" or to the thickness of gauge depressed at end of magneto wrench. Assemble spark plug in place and attach cable. Assemble valve rocker and hand hole cover in place. After engine warms up, tighten cylinder head screws.

16. Assemble the fuel tank to engine and skids and attach the fuel line, making sure the screen is clean and the small ball in check valve is free. See that nut on fuel line and the two screws holding the pipe to mixer are started before finally tightening; screw at mixer should be drawn up tight so no air leak can occur.

17. Assemble belt pulley with felt washer in place. 3", 4", 5", 6", 7" and 8" pulleys are provided for the engine, the 6" pulley being standard for the 1½ to 2½ H.P. engine and the 8" pulley for the 3 to 5 H.P. engine; the other sizes can be furnished as ordered. The camshaft is slightly longer than the pulley hub; this makes it possible to key the pulley out to end of camshaft which will allow the belt to run down past the skid runner.

CARE AND SERVICING OF WICO TYPE "H" MAGNETO

The Wico Type "H" flange mounted magneto requires very little care other than an occasional inspection of the breaker points and to maintain a gap of .020" between these points. (See illustration No. 4.)

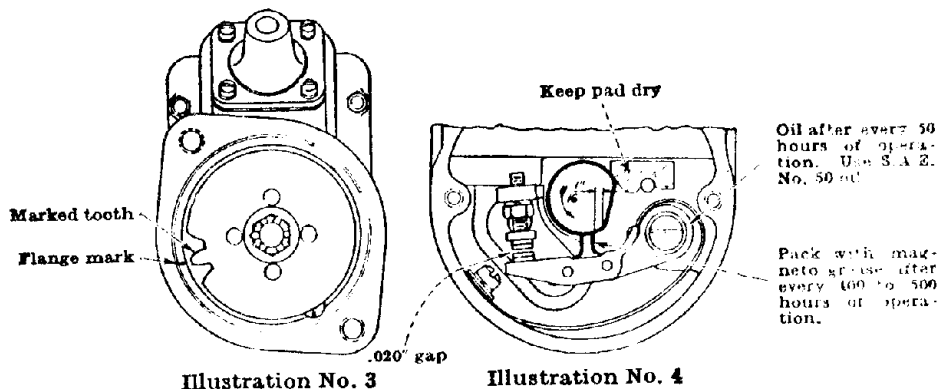


Illustration No. 3

Illustration No. 4

The only lubrication necessary is two drops of SAE 50 oil on the felt ring behind the breaker arm at the pivot; also use standard IHC magneto grease (213721) on the breaker arm back of rubbing block.

Minor Repairs

The following minor repairs can be made by a competent repairman.

Breaker Points

When point renewal is necessary, it is recommended that both fixed and movable points be changed at the same time. Remove the fixed point, then remove the screw that holds the breaker arm on its pivot. Slip the arm far enough off its pivot, so that a small screw driver can be put in back of the arm. The screw holding the breaker spring to the housing can then be removed. Then remove breaker arm and spring. If the breaker arm and spring are to be used again, care should be exercised to see that the breaker arm spring is not distorted.

When replacing the breaker arm, care must be taken to see that the points are in line and that spring is not distorted.

(Continued on page 12)

CARE AND SERVICING OF WICO TYPE "H" MAGNETO—Continued**Condenser Renewal**

The magneto cover, containing the breaker point assembly, is removed by taking off the four nuts and working the cover gently off the studs. The cover should not be removed with force as the high tension coil is connected to it by the primary lead wire and care must be used in order not to break this connection. Remove the nut and lock washer on the outside of the magneto cover which holds one end of the condenser to the cover, then loosen the nut on the other end of the condenser and the condenser and primary lead wire will lift out easily, since the condenser bracket is slotted.

When replacing the condenser, be sure the primary lead wire is in the recess provided for it.

Terminal

In case of damage to the terminal, remove the four screws which hold the terminal in place, taking care not to damage the gasket which seals terminal to magneto cover. Replace with new terminal, making sure that small keyway in terminal is aligned with key in plate. Insert the four screws and tighten securely.

Impulse Coupling

To remove impulse coupling from magneto, remove cotter pin and nut on end of shaft. In order to hold the shaft while the nut is being loosened, insert a screw driver between impulse stop and end of flyweight or driven flange. Do not try to hold the gear.

After nut is removed, the gear and its bushing can be slipped off the shaft, making sure that impulse spring contained in the gear is removed with it. Impulse spring can be removed from gear by inserting a blunt pin through hole in gear that anchors the outer end of spring, forcing the spring out of the hole.

The driven flange is keyed to the drive shaft of magneto and after the gear is removed, flange can be pried off by placing a screw driver behind it on each side. Do not damage the pilot boss that guides the magneto into the engine housing.

Replacement impulse springs are enclosed in a casing to facilitate their installation. To insert a new spring, lay the wound spring, which is in casing, over the recess in the gear, so that outer eye of spring is over the notch in the gear provided for it. Use a piece of brass or hard wood to drive the eye into its notch in the gear and, at the same time, work the rest of the spring into the gear by inserting blunt pin through holes in casing provided for this purpose. The spring will then drop into its recess. At the same time, the casing which holds the wound spring will come off.

To replace gear on magneto, pull inner eye of spring out just enough so that it can be started into notch in driven flange. Turn flange until flyweight engages the impulse stop, then turn the gear clockwise until impulse trip pin in gear passes by the engaging surface on the flange. Then press the gear into place and insert the bushing.

Caution! Never remove the armature when making these repairs, as the magnets will become weak and will not function properly.

The foregoing instructions apply only to **Minor Repairs**. Whenever **Major Repairs**, or repairs not specified above, are necessary, such as replacement of the drive shaft assembly, consisting of drive shaft, breaker point cam and rotating magnets, coil group, ball bearings, flange group, assembly plate group and core group, the magneto should be taken to any authorized "Wico" Service Station or International Harvester Company branch.

LIST OF REPAIR PARTS

Cylinder Head, Valves and Muffler

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1 1/2 to 2 1/2 H. P.	3 to 5 H. P.	
3557DX	.....	Cylinder head assembly.
3557DY	.....	Cylinder head assembly, complete with valves.
3563D	.....	Valve rocker, L. H.
3564D	.....	Valve rocker, R. H.
.....	3868DX	Cylinder head assembly.
.....	3868DY	Cylinder head assembly, complete with valves.
.....	3905D	Valve rocker, L. H.
.....	3906D	Valve rocker, R. H.
11916D	11916D	Cylinder head cover stud wing nut
27934D	27934D	Valve rocker shaft oiler.
27939D	.....	Cylinder head gasket.
27940D	.....	Throttle shaft.
27941D	.....	Throttle valve stop pin.
27942D	27942D	Throttle valve shaft plug.
27943D	.....	Inlet and exhaust valve.
27944D	27944D	Valve spring retainer.
27945D	27945D	Valve lifter.
27946D	.....	Valve push rod.
27949D	27949D	Valve rocker bracket, right.
27950D	.....	Valve rocker shaft assembly.
27951D	27951D	Valve rocker shaft wick.
27952DX	.....	Cylinder head cover, complete.
27953D	27953D	Cylinder head cover plate.
27954D	27954D	Cylinder head cover stud.
27957D	.....	Muffler assembly.
28008D	28008D	Valve spring.
.....	29558D	Throttle valve stop pin.
.....	29584D	Valve rocker shaft assembly.
.....	29589D	Cylinder head gasket.
.....	29596D	Throttle valve.
.....	29600D	Inlet and exhaust valves.
.....	29601D	Valve push rod.
.....	29602D	Throttle shaft.
.....	29609D	Muffler assembly.
.....	29621DX	Cylinder head cover, complete.
30559D	30559D	Speed change screw bushing.
30934D	30934D	Throttle shaft housing breather.
30939DA	30939DA	Throttle shaft oil seal.
31164D	31164D	Throttle shaft housing breather felt.
L 15102	L 15102	Valve spring retainer pin.
L 15136	.....	Throttle valve.
L 15217	L 15217	Valve rocker screw.

Crankcase

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1 1/2 to 2 1/2 H. P.	3 to 5 H. P.	
3556DAX	.....	Side plate assembly.
3559DBX	.....	Crankcase assembly.
3572D	3572D	Oil filler plug.

Crankcase—Continued

(See Illustration No. 3)

I H C Part No.		DESCRIPTION
1½ to 2½ H. P.	3 to 5 H. P.	
3573D	3573D	Splash plate (water hopper cover).
.....	3869DX	Side plate assembly.
.....	3870DBX	Crankcase assembly.
13053D	.....	Expansion plug, 1½" (in crankcase).
13053D	.....	Expansion plug, 1½" (in side plate).
17562D	17562D	Expansion plug, 1" (in side plate).
19857D	.....	Main bearing oil seal.
.....	20108D	Camshaft bearing oil seal.
27843D	27843D	Hopper drain plug.
27999D	.....	Oil seal felt.
28000D	28000D	Hand hole cover.
28001D	28001D	Hand hole cover gasket.
28003D	.....	Side plate gasket.
28004D	.....	Crankcase breather pipe.
28005D	.....	Side plate breather pipe.
28006D	.....	Skid runner, L. H.
28007D	.....	Skid runner, R. H.
28010D	.....	Main bearing (crankshaft and camshaft).
28011D	.....	Main bearing (.005" undersize) (crankshaft and camshaft).
28012D	.....	Main bearing (.020" undersize) (crankshaft and camshaft).
28013D	.....	Main bearing (.025" undersize) (crankshaft and camshaft).
.....	29564D	Expansion plug, 1½" (in side plate).
.....	29565D	Expansion plug, 1½" (in crankcase).
.....	29566D	Crankshaft bearing oil seal.
.....	29574D	Crankshaft bearing.
.....	29575D	Crankshaft bearing (.010" undersize).
.....	29576D	Crankshaft bearing (.020" undersize).
.....	29577D	Crankshaft bearing (.030" undersize).
.....	29578D	Camshaft bearing.
.....	29579D	Camshaft bearing (.010" undersize).
.....	29580D	Camshaft bearing (.020" undersize).
.....	29581D	Camshaft bearing (.030" undersize).
.....	29586D	Crankshaft oil seal felt.
.....	29587D	Camshaft oil seal felt.
.....	29588D	Side plate dowel.
.....	29590D	Side plate gasket.
.....	29591D	Side plate breather pipe.
.....	29592D	Crankcase breather pipe.
.....	29745D	Skid runner, L. H.
.....	29746D	Skid runner, R. H.
G3472	.....	Crankcase dowel.
42844V	42844V	Expansion plug, 2½" (in crankcase).

Connecting Rod and Piston

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1½ to 2½ H. P.	3 to 5 H. P.	
3574DX	Piston, complete with rings.
3575DX	Piston, complete with rings (.005" oversize).
3576DX	Piston, complete with rings (.010" oversize).

Connecting Rod and Piston—Continued

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1½ to 2½ H. P.	3 to 5 H. P.	
3577DX	.....	Piston, complete with rings (.020" oversize).
3578DX	.....	Piston, complete with rings (.030" oversize).
3579D	.....	Compression ring.
3580D	.....	Compression ring (.005" oversize).
3581D	.....	Compression ring (.010" oversize).
3582D	.....	Compression ring (.020" oversize).
3583D	.....	Compression ring (.030" oversize).
3584D	.....	Oil ring.
3585D	.....	Oil ring (.005" oversize).
3586D	.....	Oil ring (.010" oversize).
3587D	.....	Oil ring (.020" oversize).
3588D	.....	Oil ring (.030" oversize).
.....	3861DX	Piston, complete with rings.
.....	3862DX	Piston, complete with rings (.005" oversize).
.....	3863DX	Piston, complete with rings (.010" oversize).
.....	3864DX	Piston, complete with rings (.020" oversize).
.....	3865DX	Piston, complete with rings (.030" oversize).
.....	3907D	Compression ring.
.....	3908D	Compression ring (.005" oversize).
.....	3909D	Compression ring (.010" oversize).
.....	3910D	Compression ring (.020" oversize).
.....	3911D	Compression ring (.030" oversize).
.....	3912D	Oil ring.
.....	3913D	Oil ring (.005" oversize).
.....	3914D	Oil ring (.010" oversize).
.....	3915D	Oil ring (.020" oversize).
.....	3916D	Oil ring (.030" oversize).
3938DX	.....	Piston, complete with rings (8000-ft. altitude—special).
.....	3945DX	Piston, complete with rings (8000-ft. altitude—special).
27916D	.....	Connecting rod and cap.
27916DX	.....	Connecting rod and cap, complete with bearings.
27935D	.....	Connecting rod bushing.
27936D	.....	Connecting rod screw lock.
27937D	.....	Piston pin.
27938D	.....	Piston pin set screw.
28014DX	.....	Connecting rod bearing assembly.
28015DX	.....	Connecting rod bearing (.005" undersize).
28016DX	.....	Connecting rod bearing (.020" undersize).
28017DX	.....	Connecting rod bearing (.025" undersize).
.....	29560D	Connecting rod screw lock.
.....	29561D	Connecting rod bushing.
.....	29562D	Piston pin set screw.
.....	29563D	Piston pin.
.....	29611DX	Connecting rod bearing assembly, complete.
.....	29612DX	Connecting rod bearing assembly (.005" undersize).
.....	29613DX	Connecting rod bearing assembly (.020" undersize).
.....	29614DX	Connecting rod bearing assembly (.025" undersize).
.....	29615D	Connecting rod and cap.
.....	29615DX	Connecting rod and cap, complete with bearings.
31168D	.....	Piston pin (.003" oversize).
31169D	.....	Piston pin (.005" oversize).
31170D	.....	Piston pin (.008" oversize).
.....	31171D	Piston pin (.003" oversize).
.....	31172D	Piston pin (.005" oversize).
.....	31173D	Piston pin (.008" oversize).

Crankshaft, Camshaft, Flywheel and Pulleys

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1½ to 2½ H. P.	3 to 5 H. P.	
3554DAX	.....	Flywheel assembly.
3560DB	.....	Camshaft gear (38 teeth).
3589D	3589D	Pulley, 4" dia., 5" face (special).
3590D	3590D	Pulley, 3" dia., 5" face (special).
3591D	3591D	Pulley, 5" dia., 5" face (special).
3592D	.....	Pulley, 6" dia., 5" face (standard).
.....	3592D	Pulley, 6" dia., 5" face (special).
3593D	3593D	Pulley, 7" dia., 5" face (special).
3594D	.....	Pulley, 8" dia., 5" face (special).
.....	3594D	Pulley, 8" dia., 5" face (standard).
.....	3866DX	Flywheel, complete.
4710D	.....	Camshaft gear key (Woodruff No. 15).
4710D	.....	Crankshaft pinion key (Woodruff No. 15).
4710D	.....	Flywheel key (Woodruff No. 15).
.....	13058D	Flywheel key (Woodruff No. 29).
27915D	.....	Camshaft.
27919D	.....	Crankshaft.
27932D	.....	Crankshaft pinion (19 teeth).
27933D	27933D	Flywheel handle.
27998D	27998D	Flywheel handle pin plug, ¼".
28018D	28018D	Pulley key, ¼" x 2¼".
.....	29585D	Crankshaft pinion (24 teeth).
.....	29616D	Camshaft.
.....	29618D	Crankshaft.
.....	29623DA	Camshaft gear (48 teeth).
.....	29822D	Camshaft gear key (Woodruff No. "E").
.....	29822D	Crankshaft pinion key (Woodruff No. "E").
L 15109	L15109	Flywheel handle pin.
L 15181	L15181	Flywheel handle spring.

Mixer

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1½ to 2½ H. P.	3 to 5 H. P.	
3565D	.....	Mixer body.
3566DX	.....	Air intake assembly.
.....	3860DX	Air intake assembly.
.....	3867D	Mixer body.
27958D	.....	Mixer gasket.
27961D	27961D	Needle valve assembly.
27962D	27962D	Needle valve spring washer.
27963D	27963D	Compensating valve pin.
27964D	.....	Choke valve.
27965D	27965D	Choke valve pin.
27966D	27966D	Choke valve spring.
28023D	28023D	Mixer suction pipe nut.
.....	29559D	Compensating valve.
.....	29595D	Mixer gasket.
.....	29599D	Choke valve.
.....	29662D	Compensating valve spring.
L 15135	.....	Compensating valve.
L 15167	.....	Compensating valve spring.
9977T	9977T	Needle valve stem spring.

Fuel Tank and Connections

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1 1/2 to 2 1/2 H. P.	3 to 5 H. P.	
27556D	27556D	Fuel tank filler cap.
27992D	.....	Fuel tank assembly, complete with cap.
27996D	27996D	Fuel line coupling.
27997D	.....	Fuel line assembly, complete.
.....	29606D	Fuel line assembly.
.....	29620D	Fuel tank assembly, complete.

Governor and Throttle

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1 1/2 to 2 1/2 H. P.	3 to 5 H. P.	
3567D	3567D	Governor gear (26 teeth).
3570DX	3570DX	Governor lever assembly.
4861DX	4861DX	Governor weight assembly.
27967D	27967D	Governor gear shaft.
27968D	27968D	Governor weight pin.
27968D	27968D	Governor lever pin.
27969D	.....	Governor spring.
27972D	27972D	Governor plunger pin assembly.
27973D	27973D	Governor speed change collar.
27974D	27974D	Governor speed change lever.
27978D	27978D	Governor lever support assembly.
27979DX	.....	Throttle shaft extension assembly.
27980D	27980D	Throttle shaft extension washer.
27981D	27981D	Throttle shaft connection.
27982D	27982D	Throttle valve spring.
27983D	.....	Governor throttle connection.
28002D	28002D	Throttle shaft extension bearing.
.....	29593D	Governor spring.
.....	29594D	Governor throttle connection.
.....	29598DX	Throttle shaft extension assembly.
L. 15138	L. 15138	Governor throttle connection washer.

Magneto and Spark Plugs

(See Illustration No. 5)

I H C Part No.		DESCRIPTION
1 1/2 to 2 1/2 H. P.	3 to 5 H. P.	
13117D	13117D	Spark plug (Champion No. 1).
13173D	13173D	Spark plug (Champion No. 20) (for light load).
27984D	.....	Magneto gasket.
27985D	27985D	Spark plug cable support.
28025D	.....	Magneto, complete (Wico Type "H" flange mounting).
28026DX	.....	Magneto gear with pin.
28357DAX	.....	Spark plug cable, complete with insulator.
28364D	28364D	Magneto gear pin.
.....	29567D	Magneto, complete (Wico type "H" flange mounting).
.....	29582D	Magneto gasket.
.....	29610DAX	Spark plug cable, complete with insulator.
.....	29622DX	Magneto gear with pin.
30041D	30041D	Wrench and gauge (breaker points and spark plug).
1924T	1924T	Spark plug cable terminal.
3095V	13095V	Spark plug wrench.

Magneto (Wico Type "H")

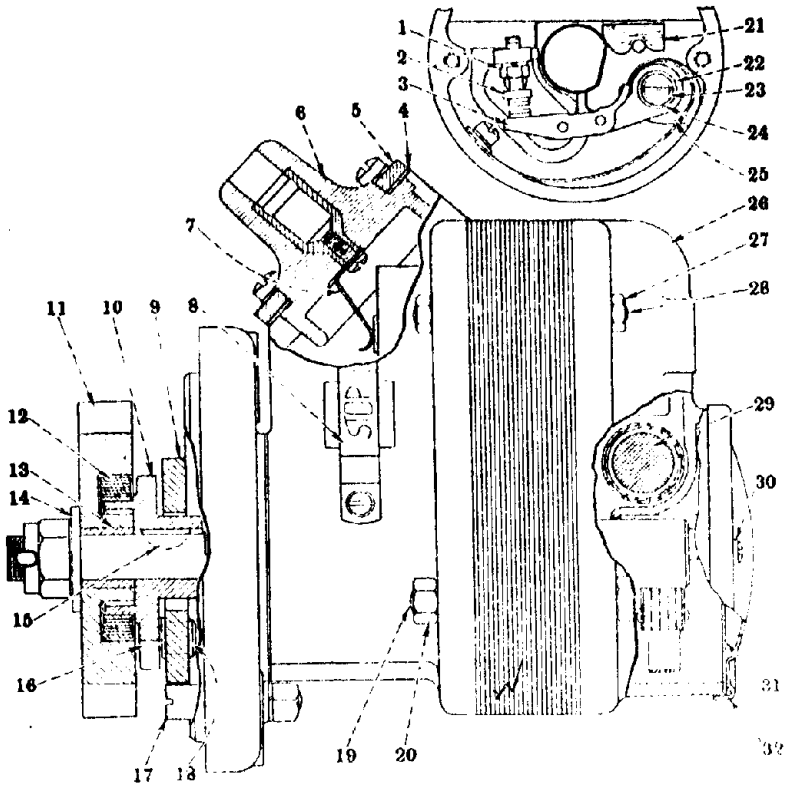


Illustration No. 7

Ref. No.	I.H.C. Part No.	Ref. No.	I.H.C. Part No.	Ref. No.	I.H.C. Part No.
1	30484D	12	30475D	22	30195D
2	30488D	13	30474D	23	30194D
3	30493D	14	30477D	24	30196D
4	30472D	15	30482D	25	30191D
5	30473D	16	30476D	26	30502D
6	30501D	17	30487D	27	30489D
7	30471D	18	30485D	28	30181D
8	30489D	19	30479D	29	30192D
9	30468D	20	30483D	30	30176D
10	30476D	21	30490D	31	30478D
11	{280261D}X			32	30197D
	{296221D}X				

Magneto (Wico Type "H")

(Parts for Minor Repairs)

(See illustration No. 7)

TH C Part No	Mfg's Part No	DESCRIPTION
30468D	A-14X	Impulse pawl.
30469D	A-14XA	Terminal.
30470D	A-24X	Breaker box cover screw.
30471D	A-25X	Terminal connection spring.
30472D	A-26X	Terminal plate gasket.
30473D	A-27X	Terminal plate.
30474D	A-32X	Impulse gear bushing.
30475D	A-33X	Impulse drive spring.
30476D	A-35	Impulse driven flange, complete.
30477D	M-42X	Impulse gear washer.
30478D	A-45X	Breaker cover gasket.
30479D	A-73X	Core stud (lower).
30480D	M-74X	Core stud nut (upper).
30481D	16-82B	Core stud (upper).
30482D	M-94X	Impulse driven flange key.
30483D	M-100X	Core stud nut (lower).
30484D	M-156X	Breaker point nut.
30485D	A-243X	Impulse pawl snap ring.
30486D	A-250XA	Breaker point wrench.
30487D	A-256X	Impulse stop.
30488D	A-259	Fixed contact point, complete.
30489D	A-261XA	Ground switch spring.
30490D	A-263X	Breaker cam lubricating pad.
30491D	16-281	Breaker arm lubricating ring.
30492D	A-301	Condenser, complete.
30493D	A-331	Breaker arm, complete.
30494D	16-791	Breaker arm bushing.
30495D	M-36X	Breaker arm bushing clamping washer.
30496D	15-804	Breaker arm bushing retaining screw.
30497D	X-1027	Breaker cover unit.
30498D	X-1301	Impulse driven flange and pawl, complete.
30501D	X-1307	Terminal (complete).
30502D	X-1308	Main housing (breaker end), complete.