

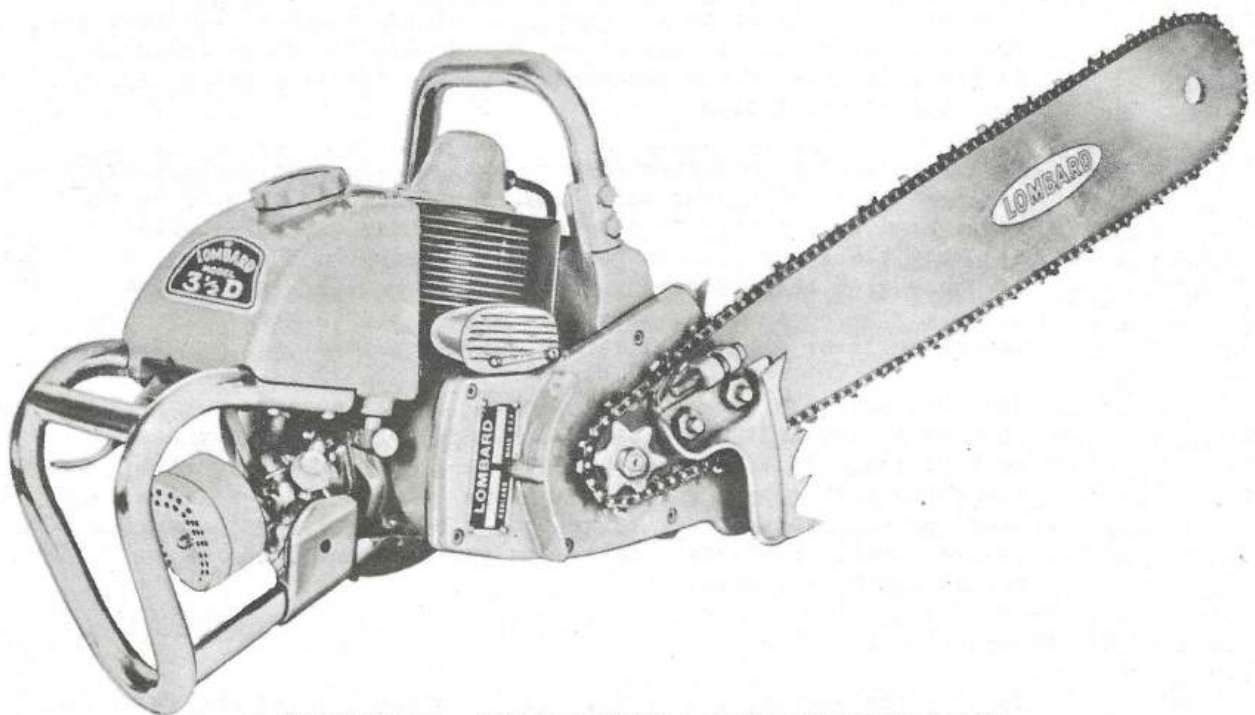
Instruction Manual

No. 301

Lombard
**WOODLOT
WONDER**

MODEL 3½ D POWER CHAIN SAW

**Including Parts List
and
Chain Sharpening Instructions**



LOMBARD GOVERNOR CORPORATION

CHAIN SAW DIVISION

ASHLAND, MASSACHUSETTS

IMPORTANT OPERATING INSTRUCTIONS

AND GENERAL INFORMATION ON

LOMBARD MODEL 3 1/2D WOODLOT WONDER CHAIN SAW

1. ENGINE-STARTING INSTRUCTIONS

NOTE: Special Fuel Mixture for run-in of new engines. Use 3/4 pint SAE 30 motor oil per gallon of gas for first 20 hours of use.

(A) Permanent Fuel

In a clean container thoroughly mix 1/2 pint of No. 30 motor oil with each gallon of gasoline. (Low grade or white gasoline is preferred, but any grade of gasoline will operate satisfactorily.) Fill the tank with this mixture.

(B) Starting Engine

Completely open the shut-off valve, located on the right side of the engine below gas tank. Snap switch to "ON" position.

Move the choke lever to the choke position. Check to see that the carburetor dial is set at No. 7. NOTE: The choke lever is on the left side of the carburetor and the choke position is back toward the filter.

Pull handle of recoil starter straight out, on same angle that it is mounted, with your left hand. Hold the saw by placing the right hand on the rear handle bar, and at the same time hold the throttle lever in open position. In very cold weather, or if the engine has not been run for a long period, two or more pulls may be necessary. After the engine starts gradually move the choke lever back until the engine has warmed up.

When restarting a warm engine, choking is not necessary. Choking a warm engine, or over-choking a cold engine may result in flooding. If this occurs, continue cranking engine, with the choke pushed back until the engine starts. In severe cases of flooding, the shut-off valve should be closed and the engine cranked until it starts. After the engine starts, the valve should again be opened.

(C) Stopping Engine

To stop the engine, shut off ignition switch located on air shroud, left side of engine. Completely close gas shut-off valve.

2. SAW OPERATION

(A) Chain Tension

To get the correct tension of chain, loosen the two nuts on studs so cutter bar can be moved easily. Tighten chain tension screw until chain is reasonably tight. To check for correct tension, the chain on the lower part of the cutter bar should be hanging loose so there is at least 1/8" between the side links and the edge of cutter bar. The chain tension is an important item and should be watched carefully. If chain tension is too tight, chain will not run, or end of bar may become burnt.

(B) Chain Lubrication

The chain is lubricated by automatic oiler which shuts off automatically when the chain is not moving. Therefore, when engine is idling, the chain will not be oiled. Remove the filler cap on the oil reservoir to fill with SAE #30 oil.

It may be necessary in sub-zero weather to mix kerosene with the oil or use a much lighter oil. Kerosene may also be added to cut gummy pitch.

There is a small hole in the sprocket which allows the oil to get on the chain and this should be checked daily to see that it is not plugged with sawdust.

(C) Gear Lubrication

An oil hole cover, on gear case near muffler, has been provided for lubricating gears. Hold the throttle lever down enough so chain is moving very slowly and oil will be distributed on teeth of driven gear inside gear case, (use two or three squirts from an oil can). There is a small hole in the back of the gear case which acts as an overflow if excess oil is used on gears. Leakage through this hole is a normal function and should not cause alarm.

REMEMBER: Oil Daily: using SAE 30 oil.

(D) Positions of Cutting

This model 3 1/2D saw will cut in any position. When starting a cut be sure engine is up to speed before entering chain into wood.

3. ENGINE MAINTENANCE

(A) Spark Plug

The spark plug should be checked periodically. A dirty, oily or carboned plug causes starting trouble and poor operation.

The spark plug should be cleaned, and the points set at .030 inches. If there is any doubt about the condition of the plug, it should be replaced with a Champion No. JT-6-J or equivalent.

(B) Air Filter

This engine is equipped with a dry type tubular filter. It should be cleaned in gasoline twice a week and allowed to drain. The filter should be dry before replacing.

(C) Muffler & Exhaust Ports

The muffler and the exhaust ports should be cleaned every 50 hours. Failure to clean these parts periodically results in loss of power.

To clean the muffler, remove from cylinder and scrape carbon from all cavities and the exhaust outlet space.

To clean the cylinder exhaust ports, remove the spark plug, and turn the starter pulley so that the piston is at the bottom of the stroke, below the exhaust holes. With any blunt instrument scrape the carbon from the three cylinder exhaust holes so that they are completely open and remove the carbon from the surrounding exhaust chamber. Crank the engine several times to blow out the loosened carbon. Replace the spark plug and muffler.

(D) Starter

If the emergency arises where the rewind starter fails, it may be removed from the air shroud to expose a conventional rope pulley starter which can be used until rewind starter is repaired.

To repair starter, remove four screws holding starter to air shroud. Refer to exploded view of starter (Fig. 8) before disassembling. All parts of the drive mechanism may be replaced by removing the retainer ring. Take notice of the way the parts are assembled. They must be reassembled in exactly the same way for the starter to operate.

To replace cord or rewind spring, remove four screws holding mounting flange, flange and cover together. Hold rotor from turning and remove screen, mounting flange and flange. Allow rotor to turn,

about two turns, to relieve preset of rewind spring and remove rotor, being careful to disengage rotor from rewind spring so spring will remain in cover. To replace cord, take out old cord and insert new one by removing cord retainer from cord and tie knot in its place. Make two turns around rotor with cord in a counterclockwise direction when looking at outward end of rotor. Spring may be replaced if needed. Spring must be replaced with care, as it is apt to fly while taking it out or putting it in. Before reassembling, refer to Fig. 8. Also, notes under Fig. 8. Check each part individually with Fig. 8 before assembling. Assemble rotor, being sure to engage rewind spring. Rewind cord on rotor counterclockwise. Make about two turns on rotor counterclockwise to preset spring. Hold in this position and reassemble parts. When starter is assembled and cord is pulled, the sharp edges of the friction shoe plates should protrude and turn counterclockwise. Check this action before reassembling starter to engine.

(E) Carburetor Adjustments

There are two adjustments on the carburetor, the full load adjustment and the idling adjustment. The full load adjustment is the numbered dial located on the right side of the carburetor. The idling adjustment is located on left side of the carburetor. The normal setting of full load adjustment is at No. 7, and the idling adjustment is about 3/4 turn open.

Should it be necessary to check the adjustments, the engine should first be run at full load until it is warmed up. The full load adjustment may then be checked by turning it (clockwise) until motor slows down or coughs and the position noted. The adjustment should then be turned open (counterclockwise) until the engine after speeding up again slows down and runs unevenly; this position should be noted. Correct adjustment will be half way between these two points. At this position, the engine should deliver maximum power.

Make sure that the numbered dial is tight on the carburetor shaft. If it should become loose, remove it from the adjustment shaft. Turn the adjustment shaft in until it seats in the carburetor. Do not turn in too tight as this may damage the seat. Then back out 1/8 turn; place the dial on the needle valve, push all the way in and rotate clockwise until the stop on the back of the dial strikes the side of the dial stop. Tighten set screw.

To check the idling adjustment, the carburetor throttle must be held in the closed position and the idling adjustment screw on the right side of carburetor turned in or out until the engine runs smoothly. If after this adjustment the engine keeps stalling, it can be adjusted with the idling adjusting screw on the throttle shaft.

If carburetor leaks, flush as outlined on next page.

Flush the diaphragm chamber. Tilt saw backward so the drain plug (located on lower left hand side of carburetor below choke lever) is the lowest spot in the diaphragm chamber. Open fuel line valve on tank. Remove the drain plug. Press flushing plunger, thus permitting fuel to flush past the inlet needle through the diaphragm chamber and out the drain hole. This will clean the inlet needle and remove any foreign particles from the chamber.

This step should only take place after all other methods of stopping leak have failed. Loosen screw just above choke lever. This screw must not be taken out, or loosened enough to bring head more than 1/8 inch above casting. With the screw in this position, break the copper washer that is under the head and remove it. Retighten the screw and recheck.

If by chance this screw is loosened too much or taken out, the spring will become dislodged from the nib on the inlet control lever. This nib is visible through the drain plug hole. If the spring cannot be put in proper place on nib through the drain plug hole, then the diaphragm cover on the bottom of the carburetor must be removed to make this spring accessible.

Two-cycle engines when running under light loads may appear to miss. This in no way affects the operation of the engine.

(F) Should Engine Fail to Start

The following material is presented as an aid in the maintenance and repair of the engines. Proper maintenance of an engine will result in hundreds of hours of satisfactory operation.

Check ignition switch on air shroud.

Check for fuel in the gas tank and check to see that shut-off valve is open.

Check magneto. Hold the spark plug wire 3/16" from engine, spark should jump from the terminal to the engine when cranked. If no spark occurs, test the condenser and coil; if faulty, replace.

Check for spark; remove spark plug and with magneto wire attached hold the base of the plug against the engine, crank engine. A spark should jump across the plug points. If it doesn't, clean the plug or replace with a new one.

Check for flooding. Remove spark plug and if plug is wet or if gap is closed by liquid fuel, the plug should be dried, and with main adjustment needle closed, the engine should be cranked un-

til vapor stops coming out of spark plug hole. Re-insert plug and open adjustment dial to No. 7 or 3/4 turn open.

Check for gasket leaks and for leaks around the crankshaft seal.

(G) Should Engine Overheat

Check the flow of air over the cylinder. If restricted by dust or dirt, remove the cylinder shield and clean the cylinder fins, and if necessary, remove the air shroud and clean the flywheel fan and the air intake holes in rewind starter.

Be sure to have correct fuel mixture; 1/2 pt. of No. 30 motor oil to each gallon of gasoline. Use a separate clean container for mixing oil and gasoline.

(H) Should Engine Lack Power

Check carburetor adjustment. See instructions. (Item E in engine maintenance.)

Check magneto timing. Corresponding match marks on the stator plate and crankcase should be lined up. If the timing has been changed, loosen the stator plate lock screw. Move the stator plate to the correct timing position as indicated by the marks and tighten the screw. Proper timing is indicated by the breaker points opening when the piston is 3/16" to 1/4" before the top dead center of the stroke.

Check for carbon. If exhaust ports and muffler are restricted by carbon, scrape clean.

Check compression. Remove spark plug and place compression gauge in cylinder spark plug hole. After cranking the engine several times, the gauge should register 70 lbs. or more. If compression is faulty, replace piston rings.

Check for gasoline and oil ratio in fuel. Be sure engine has 1/2 pint of oil for each gallon of gasoline.

Check cylinder, carburetor, reed plate, and transfer port gaskets for leaks. Also check for leaks around the crankshaft seals.

(I) General Information

Magneto point setting	.020 inch
Spark Plug gap	.030 inch
Fuel Ratio	1/2 pt. No. 30 oil per gal. of gasoline
Recommended engine speed	2700 to 4000 r.p.m.

Clean muffler and exhaust ports every 50 to 75 hours.

Clean air filter twice a week.

If magneto is removed from the engine, be sure to replace cam in original position, with the beveled side out.

When replacing piston, be sure tapered side of baffle is toward muffler side of engine.

4. SAW MAINTENANCE

(A) Chain

One of the most important parts of the saw is the chain. The cutting efficiency of the unit depends on the condition of the chain. Therefore, it should be inspected daily for sharpness and damage. If the chain appears to be dull (noticed by slower cutting) or if it has struck a hard object such as a stone, etc., do not continue to cut. Use a round file with file holder to sharpen this Chipper Chain. A chain cutting wood after becoming dull will damage both chain and cutter bar as it will require forcing the saw. It will also reduce the life of the chain as it necessitates excessive filing of the radius face angles of the cutters.

Use your chain with care and see that it has plenty of lubrication so parts will not wear and keep it sharp at all times.

If a cutter is broken or damaged beyond repair, it may be replaced from the spare parts that are shipped with all new chains. Check to be positive the correct cutter, that is, left or right, is assembled into the chain. When peening rivets, do not strike too hard, or you will bulge large diameter of rivet in center blanks; therefore, binding the chain. Light blows using the ball end of a small hammer is sufficient. Always check chain for flexibility at repaired joint.

(B) Cutter Bar

Many cutter bars are damaged by ill use, that is, lack of proper lubrication on chain and cutter bar, unnecessary forcing of saw when cutting, and twisting of cutter bar in some cuts. Always remember the lack of proper oil will cause excess wear on both chain and cutter bar: therefore, reducing the life of both items.

The top edges of slot of cutter bar, where side links of chain run, should be checked for parallelism periodically. A good method is to place a square on side of cutter bar as shown in Fig. 1.

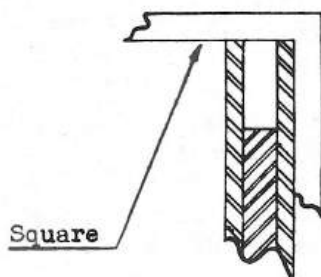


Fig. 1

File or stone edges parallel and remove all burrs. If one edge is lower than the other, the chain will cut crooked, and then the operator will force the saw to try and remedy this situation; therefore, resulting in considerable damage to the cutter bar.

(C) Clutch

This saw is equipped with a special shoe-type, automatic clutch mounted on engine shaft, inside gear housing. It will automatically engage and release according to engine speeds, which are controlled by the throttle lever.

This clutch cannot be adjusted. If chain creeps, then the idling speed of the engine is incorrect. This is remedied by adjusting idle mixture.

When repairing saw, never run engine with clutch assembly on engine shaft unless drum is also assembled in proper position on same shaft. Because of centrifugal force the shoes may fly off and cause injury or damage.

(D) Gear Housing

The gear housing contains the gears and clutch assembly. The only attention it requires is to oil gears daily by 3 or 4 drops of SAE #30 motor oil from an oil can. At the same time, hold throttle lever down a small amount so chain will be traveling very slowly, thus gears will be rotating slowly and get oiled properly.

5. SERVICE AND REPAIR INSTRUCTIONS

(A) Suggested Procedure for Dismantling Saw

Remove Cutter Bar and Chain.

Sprocket - Hold sprocket stationary and remove sprocket nut. Lift sprocket from spline shaft.

Cover - Gear Case: Remove eight screws.

Remove lock nut on engine shaft.

Remove clutch.

Remove clutch key.

Remove special washer.

Remove drum - gear assembly.

Remove bushing and special washer from engine shaft.

Driven gear and transmission shaft assembly are removed as one unit.

Front handle bar, remove four screws.

Gear case, remove three screws.

Fuel line, disconnect and remove.

Remove throttle link between carburetor and arm.

Oil Pump - if necessary to remove oil pump from back of gear case, loosen holder, keeping in mind the threads are left hand.

Remove gas tank and rear handle bar.

(B) Suggested Procedure for Dismantling Engine

Air Filter - remove air filter cover and filter.

Carburetor and Reed Plate - remove two nuts.

Muffler - remove the screws holding muffler to the cylinder.

Rewind Starter - remove four screws holding starter to air shroud.

Air Shroud - remove screws holding the air shroud to the shroud base, and remove wire to stop button.

Flywheel - remove nut from inside starter cup and remove starter cup. Replace nut loosely and give it a sharp rap with a rawhide hammer until flywheel is loosened from taper of crankshaft.

Magneto Stator Plate - loosen the friction screw at the base of the stator plate. Pull the stator plate off by turning back and forth.

Cam and Key - remove by tapping. Note position before removal.

Shroud Base - remove four screws holding the shroud base to the engine.

Cylinder - remove four nuts.

Crank Case - remove six screws holding the crankcase together, then tap the end of the crankshaft gently to separate the case and bearing from shaft, tap the shaft gently.

To replace ball bearing in the case, remove lock ring, washer and seal. Heat the case evenly with a blow torch or over a gas flame until the bearing drops out. At this temperature a new cold bearing can be dropped in. Make sure that the beveled side of the inner race of the bearing is up when it is dropped into the crankcase. Also, be sure when replacing the seal that the lip is toward the center of the engine.

Connecting Rod - to remove the connecting rod from shaft, remove the two screws holding the cap to the rod. When reassembling the rod and cap to the shaft, be sure that the match markers on the rod and cap are on the same side. Be sure that there are 30 rollers in assembly. Be sure that the straight side of the piston baffle is toward the tapered end of shaft.

To remove the rod from the piston pin, remove the lock ring from one side of the piston and slide the piston pin to one side.

It is extremely important that all parts be thoroughly clean, and the moving parts oiled before assembly. A reassembled engine will require a run-in period of about an hour before full power will be developed.

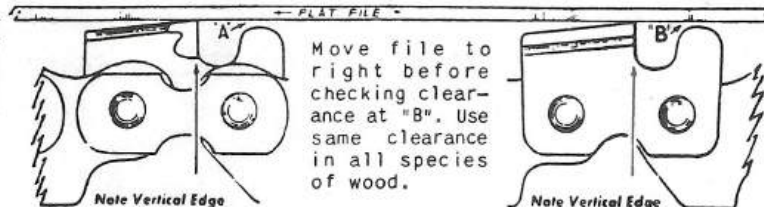
Filing Instructions

FOR #12 CHIPPER CHAIN

"Your file held in one position does the job"

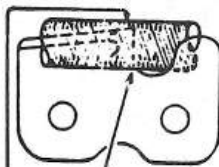
Chain Rider Clearance

To check rider clearance place a flat file on two cutters as illustrated...Use a feeler gauge in space "A".



Depth gauge clearance should be about .030 inch, or as set at factory.

SIDE VIEW

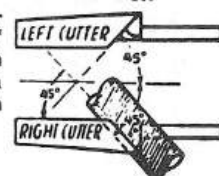


Use only a 3/16 inch round, straight (not rat-tail) file. Draw long, even strokes. Press firmly back and slightly up. Hold one position.

Always keep this edge vertical when viewed from side. Keep 1/5 of file diameter above top plate.

Keep file up. Low filing undercuts side of cutter, causing chain to grab. Never use a flat file to sharpen top plate.

TOP VIEW



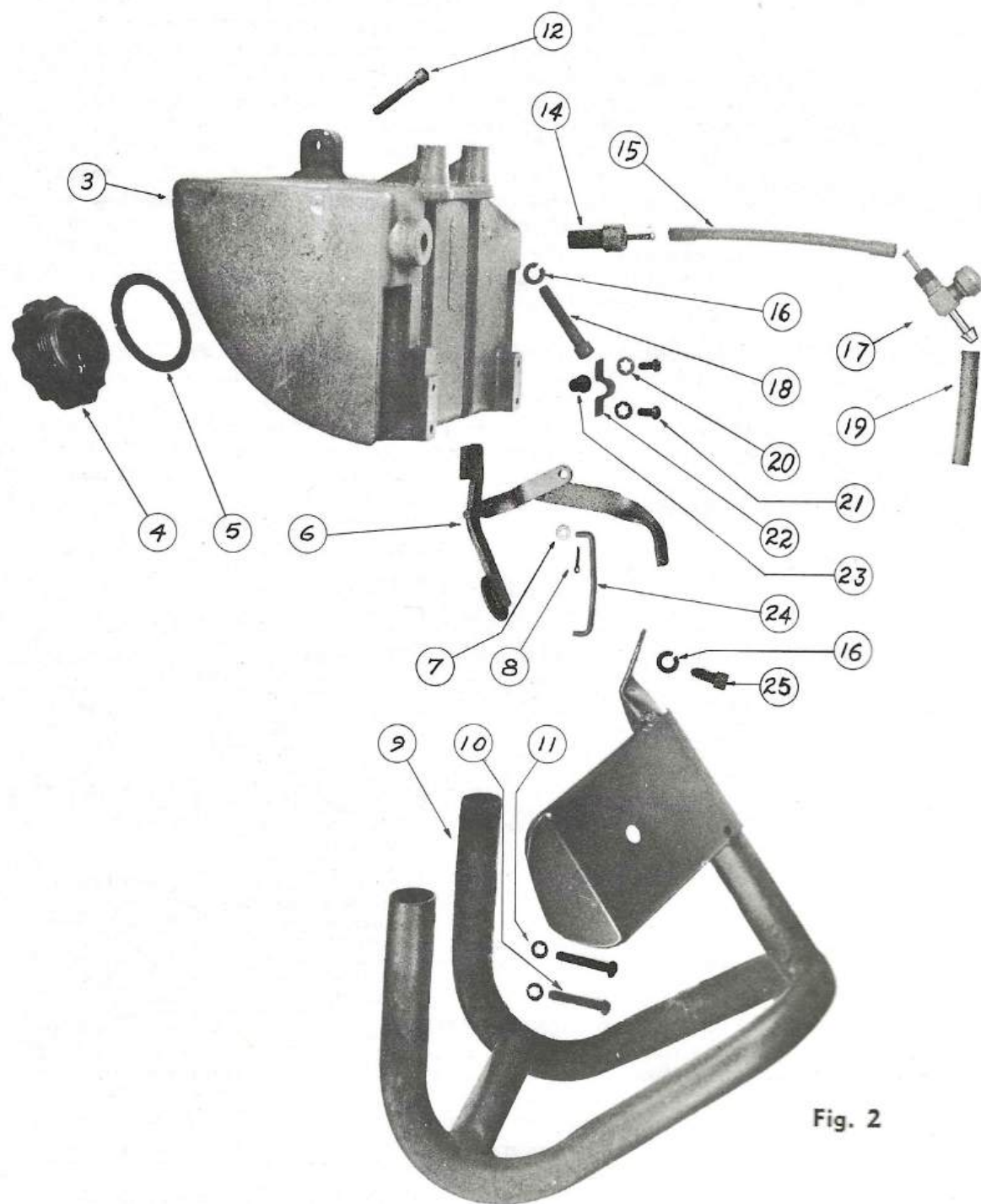
Keep the same 45° angle on both left and right cutters.

END VIEW



LOMBARD MODEL 3½D GAS SAW-PHOTO No. YS-2276

Gas Tank & Rear Handle Bar Assembly



LOMBARD GOVERNOR CORP., ASHLAND, MASS.

PARTS LIST YS-2276

**For Gas Tank and Rear Handlebar Assembly
Woodlot Wonder Model 3½D**

Item No.	Part No.	Part Name	Qty. Per Unit
3	YS-2272-A	Gas Tank	1
4	YS-2269-2	Cap, Gas Tank	1
5	5-53	Gasket, Gas Tank Cap	1
6	YS-2080	Throttle	1
7	PW-107	Washer, Plain	2
8	PM-144	Cotter Pin	2
9	YS-2217	Rear Handlebar	1
10	PS-315	Screw, Round H'd. #10-24 x 1¼ lg.	4
11	PW-210	Lockwasher, Shakeproof #1210-00	5
12	PS-122	Screw, Socket H'd. Cap ¼-20 x 1¼ lg.	1
14	5-42	Strainer & Weight	1
15	5-41	Sleeve — Gas Tank	1
16	PW-216	Split Lockwasher	3
17	YS-2317	Valve, Shut-off	1
18	PS-128	Screw, Socket Hd. ¼-20 x 1 ⅛	2
19	YS-2263	Gas Line	1
20	PW-209	Lockwasher Shakeproof #1208-00	4
21	PS-308	Screw, Rd. H'd. 8-32 x ⅜ lg.	4
22	YS-2017	Clip, throttle	2
23	YS-2014	Bushing, Throttle	2
24	YS-2018	Link, Throttle	1
25	PS-106	Screw, Socket Hd. ¼-20 x ⅝ lg.	1

LOMBARD MODEL 3½ D GAS SAW — PHOTO No. YS-2274 **Gear Case & Front Handle Bar Assembly**

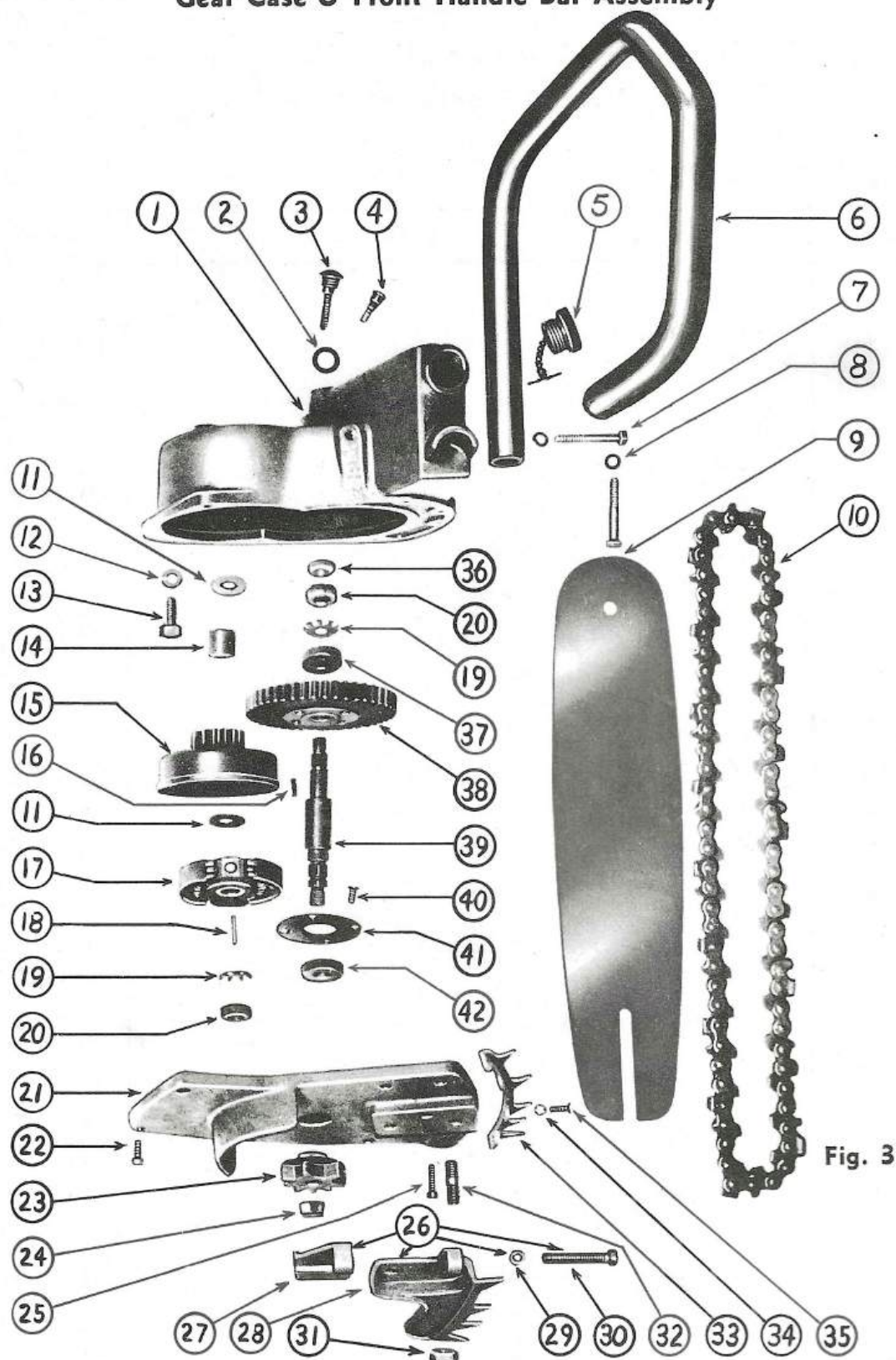


Fig. 3

LOMBARD GOVERNOR CORP., ASHLAND, MASS.

PARTS LIST YS-2274

For Gear Case Assembly

Woodlot Wonder Model 3 1/2 D

Item No.	Part No.	Part Name	Qty. Per Unit
1	YS-2081	Gear Case, with Cover, Screws and Gasket	1
		Consisting of :	Qty.
	YS-2081-1A	Gear Case	1
	YS-2081-1B	Cover	1
	YS-2081-1C	Gasket	1
	PS-701	Screw	6
2	YS-2031	Gasket, Oil Pump Holder	1
3	YS-2201	Oil Pump Assembly	1
4	YS-2035	Cover, Oil Hole	1
5	YS-2330	Cap, Oil Reservoir	1
6	YS-2064	Handlebar (Front)	1
7	PS-405	Screw, Hex H'd. 1/4-20 x 1 1/2 lg.	4
8	PW-204	Lockwasher, 1/4" Standard	4
9		Cutterbar (One of the following)	1
	YS-2072	16" for .050 drive chain (Standard)	
	YS-2363	20" for .050 drive chain (Standard)	
10		Chain (One of the following)	1
	PM-215	16" with .050 drive link 1 1/2" pitch	
	PM-216	20" with .050 drive link 1 1/2" pitch	
11	YS-2032	Washer, Special	2
12	PW-207	Lockwasher, 5/16 (Standard)	3
13	PS-402	Screw, Hex H'd. Cap 5/16-18 x 1 lg.	3
14	PM-137	Bushing	1
15	YS-2056	Gear, Driver	1
16	YS-2025	Key, Driven Gear	1
17	30001	Clutch Assembly, Lombard	1
		Consisting of :	Qty.
	30002	Hub	1
	30003	Weight	1
	30004	Shoe	2
	30005	Link	2
	30006	Guide Pin	1
	30007-23	Spring	2
	RP-094-8	Roll Pin	5
	RP-187-12	Roll Pin	2
18	YS-2071	Key, Clutch	1
19	PM-135	Lockwasher	2
20	PM-134	Locknut	2
21	YS-2062	Cover, Gear Case	1
22	PS-124	Screw, Socket H'd. Cap 10-24 x 1/2 lg.	6
23	YS-2067	1/2" Pitch Sprocket Standard	1
24	PN-308	Locknut	1
25	PS-125	Screw, Socket H'd. Cap 10-24 x 3/4 lg.	2
26	YS-2087	Auxiliary Spike (Chain Tension) Assembly	1
		Consisting of :	Qty.
27	YS-2091	Bracket, Tension	1
28	YS-2068	Auxiliary Spike	1
29	YS-2093	Thrust Collar	1
30	YS-2092	Screw, Tension	1
31	PN-103	Nut, 3/8-16 Standard	2
32	YS-2065	Stud	2
33	YS-2030	Spike Bumper	1
34	PW-210	Lockwasher, Shakeproof #1210-00	4
35	PS-318	Screw, Rd. H'd. 10-24 x 5/8 lg.	4
36	PM-132	Grease Seal	1
37	PB-110	Ball Bearing	1
38	YS-2003	Gear, Driven	1
39	YS-2066	Shaft, Gear Case	1
40	PS-210	Screw, Flathead 8-32 x 1/2 lg.	4
41	YS-2009	Plate, Bearing Cover	1
42	PB-111	Ball Bearing	1

CAUTION: When ordering, include serial number of saw, part number, part name and quantity desired.

ENGINE MODEL AH47 — TYPE 1024 D

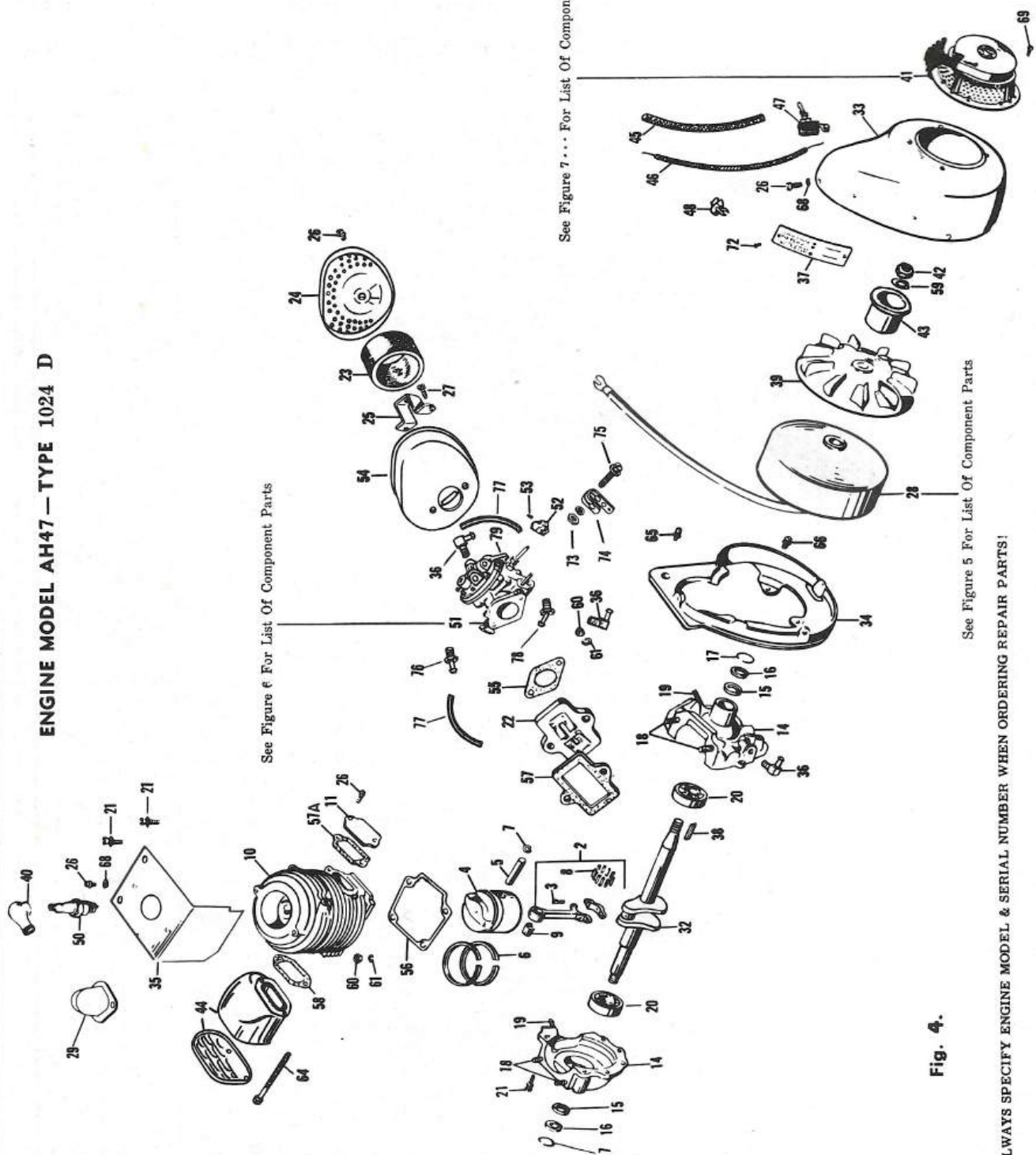


Fig. 4.

ALWAYS SPECIFY ENGINE MODEL & SERIAL NUMBER WHEN ORDERING REPAIR PARTS!

ENGINE MODEL AH47 — TYPE 1024 -D

PARTS LIST

Ref. No.	Part No.	Part Name	Qty.	Ref. No.	Part No.	Part Name	Qty.
2	005-06	Connecting Rod Asbly. Complete	1	42	S-1128	7/16-20 Hex Nut	1
3	1007-02	Connecting Rod Screws	2	43	14 - 3	Rewind Starter Cup	1
4	1015-18	Piston	1	44	YS-2316	Muffler	1
5	1016-04	Piston Pin	1	45	1136	Cut-off Wire Sleeve	1
6	1017-09	Piston Rings	2	46	3066-01	Ignition Cut-off Wire	1
7	1119	Piston Pin Retaining Rings	2	47	3084-02	Stop Switch	1
8	Q4212	Needle Bearings	30	48	49425	Cable Fastener	1
9	B-68	Piston Pin Bearing	1	50	J-T 6-J	Spark Plug	1
10	S-1338	Cylinder	1	51	HP-12 A	Carburetor	1
11	1064-01	Transfer Port Cover	1	52	08612	Carburetor Dial Knob	1
14	020-21	Crankcase Asbly. Complete	1	53	06969	Carburetor Dial Knob Set Screw	1
15	1002	Crankcase Seals	2	54	YS-2218	Air Filter Base	1
16	1003	Crankshaft Seal Retainers	2	—	S-1276	Gasket Set	1
17	1004	Crankshaft Seal Retainer Spring	2	55	1009	Carburetor Gasket	1
18	1022	Cylinder Studs	4	56	1012-04	Cylinder Gasket	1
19	1031	Carburetor Studs	2	57	1027	Reed Plate Gasket	1
20	3203	Ball Bearings	2	57A	1065-02	Transfer Port Cover Gasket	1
21	S-1114	10-24 x 5/8 Fil. Hd. Sems Screw	8	58	3014-02	Cylinder Exhaust Gasket	1
22	S-1439	Reed Plate Asbly.	1	59	S-1206	7/16 Lockwasher	1
23	1029	Air Filter Element	1	60	PN-102	1/4-20 Hex Nuts	6
24	YS-2209	Air Filter Cover	1	61	PW-204	1/4 Lockwashers	6
25	1077	Air Filter Bracket	1	64	YS-2331	1/4-20 x 2 3/4 lg. Special Screw	2
26	S-1115	10-24 x 1/2 Fil. Hd. Sems Screw	9	65	S-1191	1/4 20 x 1/2 lg. Fil. Hd. Sems Screw	4
27	S-1125	8-32 x 1/2 Fil. Hd. Sems Screw	2	66	S-1119	1/4-20 x 5/8 Fil. Hd. Sems Screw	4
28	FW-2385	Magneto - Wico	1	68	PW-108	#10 Flatwashers	6
29	YS-2013	Shield—Spark Plug Protection	1	69	PS-702	10-24 x 1/2 Pan Hd. Sems Screw	4
32	1001-73	Crankshaft	1	72	S-1259	6 x 3/8 Drive Screws	2
33	1018-35	Air Shroud	1	73	PN-108	8-32 Nut	1
34	1019-25	Shroud Base	1	74	3105 02	Throttle Shaft—Clampon Lever	1
35	1023-04	Cylinder Shroud	1	75	3105-03	Screw Fil. Hd. Sems—8-32 x 5/8	1
36	YS-2270	Fuel Line Elbow	1	76	YS-2271	Spc. Straight Fitting	1
37	1057-03	Name Plate	1	77	YS-2262	Pressure Line	2
38	4062	Flywheel Key	1	78	PM-206	45° Elbow	1
39	1063-06	Flywheel Fan	1	79	010436	Stop — Carb. Dial Knob	1
40	227	Spark Plug Cover	1				
41	S-1282-K	Rewind Startér	1				

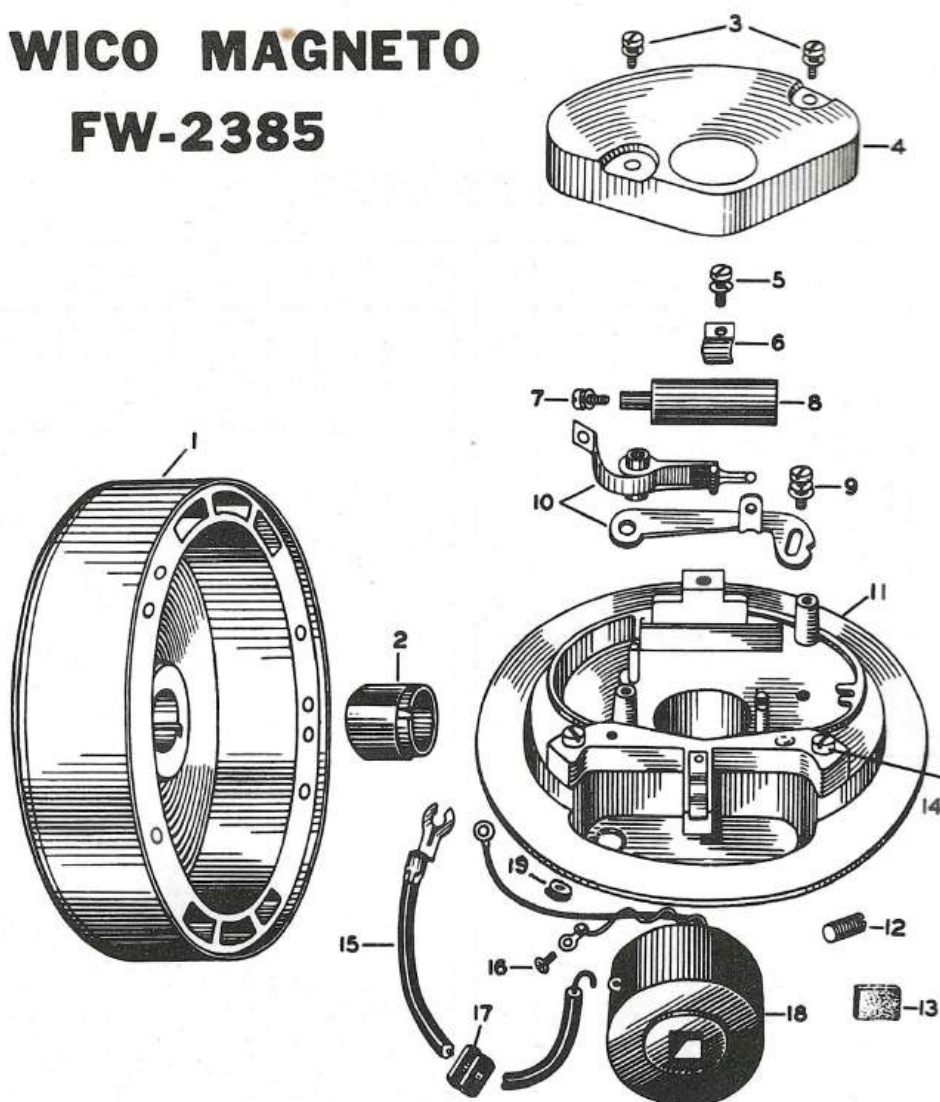
WARNING - Order By Part Number - Do Not Use Illustration Reference Numbers

Ask your Dealer for parts and prices — Parts normally sold only through Dealer.

ALWAYS SPECIFY ENGINE MODEL & SERIAL NUMBER WHEN ORDERING REPAIR PARTS!

WICO MAGNETO

FW-2385



Ref. No.	Part No.	Part Name	Qty. Per Unit	Ref. No.	Part No.	Part Name	Qty. Per Unit
1	Y8873B	Rotor	1	12	X8859	Friction Shoe Group	1
2	8852	Breaker Cam	1	13	6318	Cam Wiper Felt	1
3	5411	Breaker Cover Clamp Screws and Washers	2	14	5428	Core Screw	2
4	8855	Breaker Cover	1	15	X7782	Lead Wire Group	1
5	5411	Condenser Clamp Screw	1	16	8732	Primary Lead Wire Clip Screw	1
6	8854	Condenser Clamp	1	17	5486	Lead Wire Grommet	1
7	5431	Condenser Connection Screw and Washer	1	18	X8877	Coil Group	1
8	X8959	Condenser Group	1		X9470	Stator Plate Unit (Includes Stator Plate, Core, Coil, Condenser, Breaker Mechanism, and Lead Wire Group)	
9	5900	Fixed Contact Clamp Screw and Washer	1	19	6678	Ground Wire Grommet	1
10	X8920	Breaker Contact Set	1				
11	X9471	Stator Plate Repl. Assembly (Includes Stator Plate and Coil Core)	1				

TILLOTSON CARBURETOR MODEL HP 12A

ALWAYS SPECIFY ENGINE MODEL
& SERIAL NUMBER WHEN
ORDERING REPAIR PARTS!

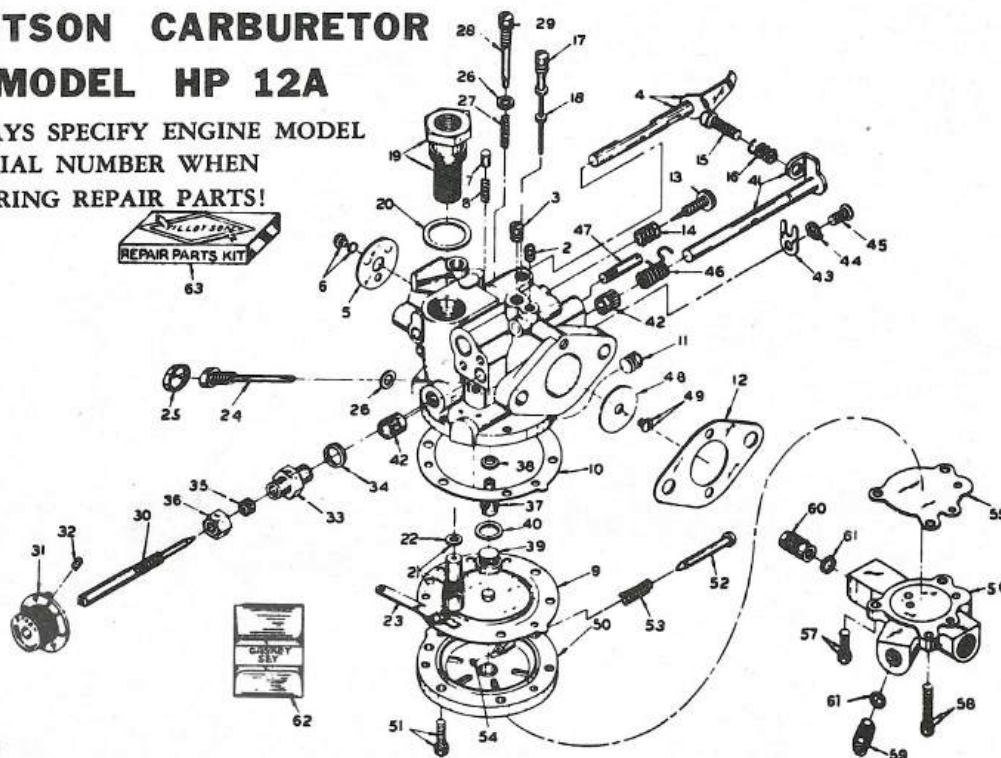


Fig. 6

Ref. No.	Part No.	Part Name	Qty.	Ref. No.	Part No.	Part Name	Qty.
2	02232	Body Channel Plug Screw	1	36	0703	Main Adj. Screw Packing Nut	1
3	02983	Body Channel Plug Screw	1	37	*09883	Main Nozzle	1
4	09876	Choke Shaft & Lever	1	38	06076	Main Nozzle Gasket	1
5	02405	Choke Shutter	1	39	09679	Main Nozzle Channel Plug Sc.	1
6	08942	Choke Shutter Sc. & Lockwasher	1	40	09930	M'n Nozzle Chn'l Plug Sc. G'ket	1
7	05454	Choke Friction Pin	1	41	09878	Throttle Shaft & Stop Lever	1
8	08805	Choke Friction Spring	1	42	09780	Throttle Shaft Bushings	1
9	*09698	Diaphragm	1	43	09678	Throttle Shaft Clip	1
10	09676	Diaphragm Cover Gasket	1	44	0992	Throttle Shaft Clip Lockwasher	1
11	02395	Drain Plug Screw	1	45	01974	Throttle Shaft Clip Screw	1
12	1009	Flange Gasket	1	46	*09602	Throttle Shaft Return Spring	1
13	*09697	Idle Adjustment Screw	1	47	04594	Throttle Stop Pin	1
14	*08793	Idle Adjustment Screw Spring	1	48	08646	Throttle Shutter	1
15	*05095	Idle Adj. Regulating Screw	1	49	08942	Th'tle Shutter Sc. & Lockwasher	1
16	*0788	Idle Speed Reg. Screw Spring	1	50	010179	Diaphragm Cover	1
17	*09761	Idle Tube	1			(Includes Ref. 52, 53, & 54)	
18	07900	Idle Tube Gasket	1	51	09689	Diaphragm Cv'r Sc. & Lckwshr.	1
19	09834	Inlet Connection & Screen	1	52	010095	Flushing Plunger	1
20	09681	Inlet Connection Gasket	1	53	010094	Flushing Plunger Spring	1
21	*010141	Inlet Needle, Seat & Gasket	1	54	010093	Flushing Plunger Ret. Clip	1
22	010165	Inlet Seat Gasket	1	55	*010090	Fuel Pump Diaphragm	1
23	*09708	Inlet Control Lever	1	56	010178	Fuel Pump Body	1
24	*09695	Inlet Cont. Lever Pinion Screw	1	57	09689	Fuel Pump Body Sc. Lckwshr.	1
25	09884	Inlet Cont. Lever Pinion Sc. Cap	1	58	*010098	Fuel Pump Body Sc. & Lckwshr.	1
26	0648	Inlet Cont. Lever Pinion Sc. Gasket	1	59	*010100	Fuel Inlet Check Valve	1
27	*09683	Inlet Tension Spring	1	60	*010097	Fuel Outlet Check Valve	1
28	*010012-S	Inlet Tension Spring Retaining Screw & Washer	1	61	06076	Fuel Inlet & Outlet Check Valve Gasket	1
29	010004	Inlet Ten. Spring Ret. Sc. Washer	1	62	*GS-104	GASKET & PACKING SET	1
30	*09880	Main Adjustment Screw	1	63	RK-153	REPAIR PARTS KIT	1
31	08612	Main Adjustment Screw Knob	1		010180	Fuel Pump Body Assembly	1
32	06969	Main Adj. Sc. Knob Set Screw	1			(Includes Ref. 59, 60, & 61)	
33	0702	Main Adjustment Screw Gland	1		010181-S	Fuel Pump & Diaphragm Cover Assy. (55-61 Inclusive)	1
34	0676	Main Adj. Screw Gland Gasket	1				
35	09112	Main Adj. Screw Packing	1				

* Denotes contents of REPAIR PARTS KIT

STARTER ASSEMBLY No. S-1282 - K

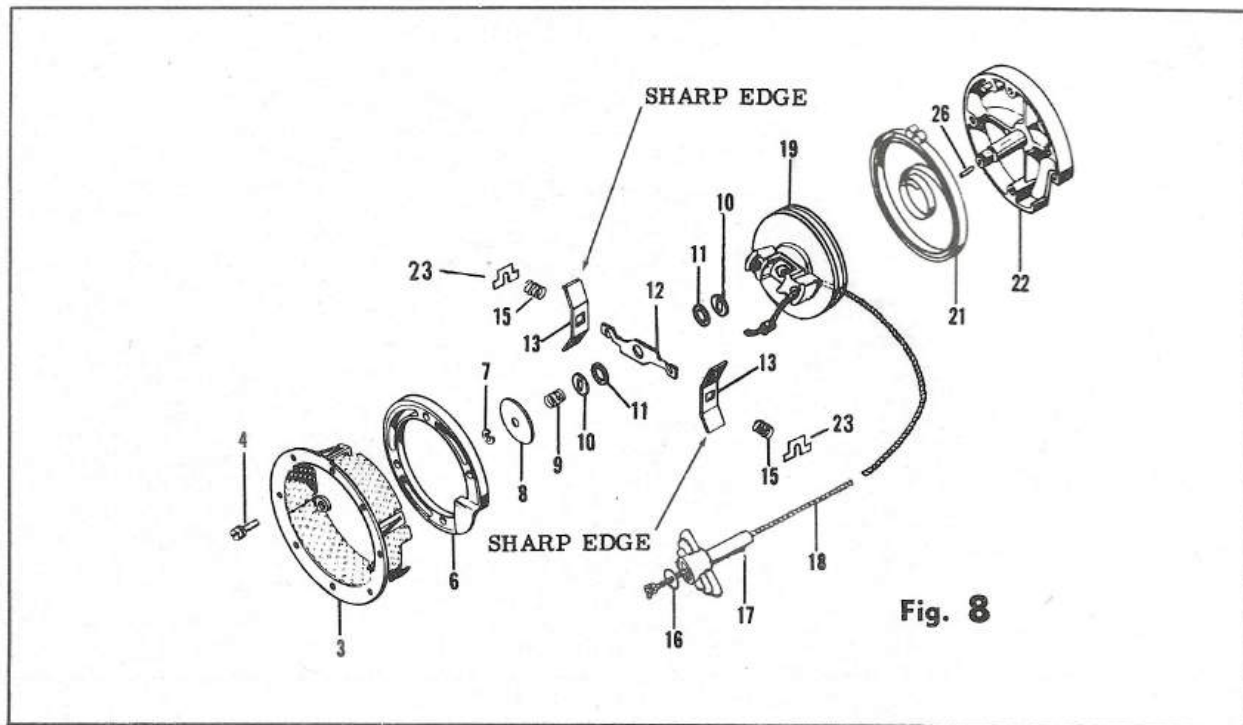


Fig. 8

NOTICE — When reassembling starter unit, the position of sharp edge of item 13 must be as shown on illustration. The position of item 12 must also be as illustrated.

Ref. No.	Part No.	Part Name	No. Req'd.
3	138-5	Flange-Mounting	1
4	23-5	Machine Screw	4
6	38-4	Flange	1
7	29-3	Ring-Retainer	1
8	27-8	Washer-Brake Retainer	1
9	20-3	Spring-Brake	1
10	27-3	Washer-Brake	2
11	27-2	Washer	2
12	16-4	Brake-Lever	1
13	11-71	Plate-Friction Shoe	2
15	20-2	Spring-Friction Shoe	2
16	27-17	Washer-Handle	1
17	44-2	Handle	1
18	140-1	Cord w/Clip	1
19	13-10	Rotor	1
21	20-1	Spring-Rewind	1
22	51-31	Cover	1
23	11-9	Spring Retainer Plate	2
26	25-9	Pin Centering	1