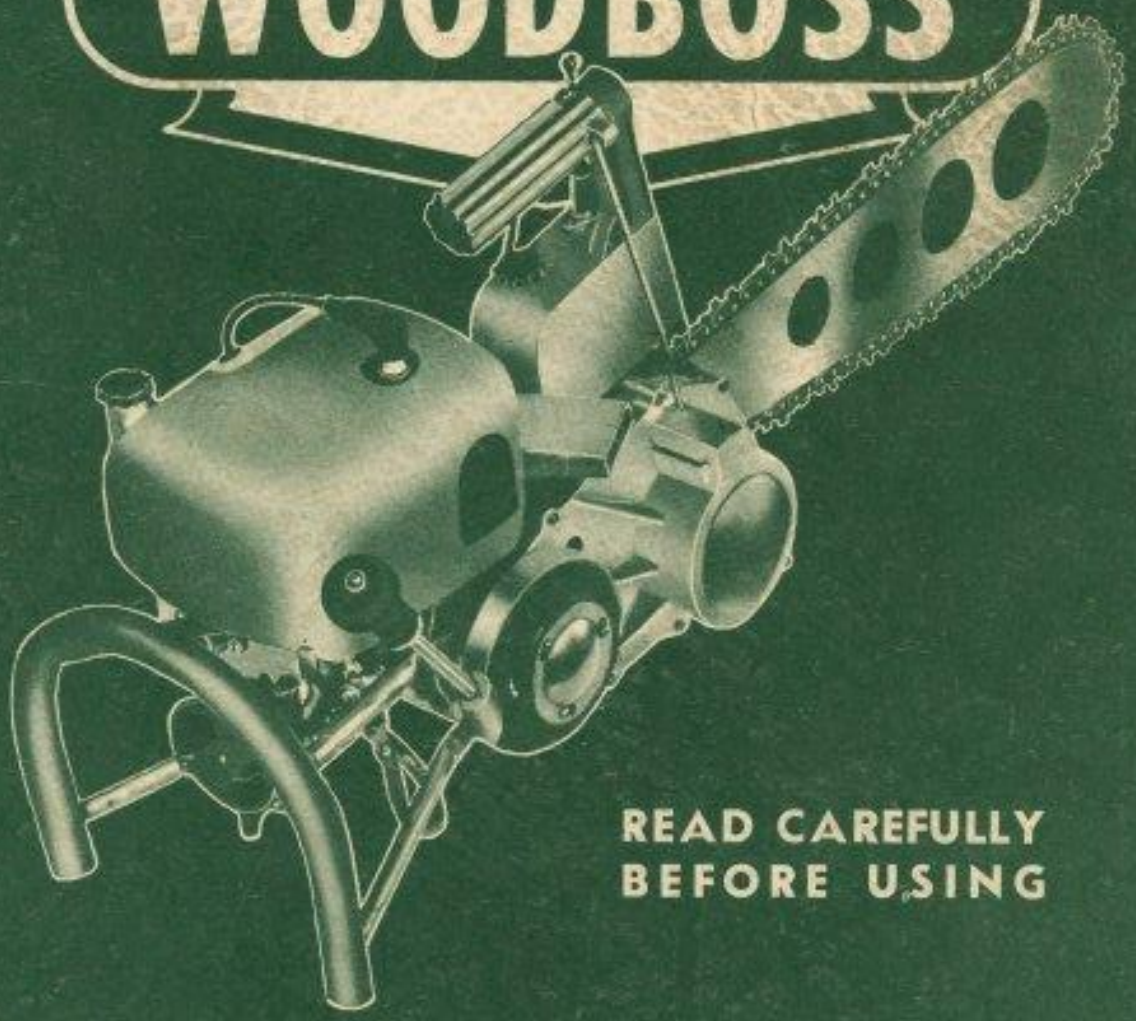
OPERATING INSTRUCTIONS AND PARTS LIST

PM WOODBOSS



READ CAREFULLY BEFORE USING

POWER MACHINERY LIMITED

PM WOODBOSS

148 East Third Avenue - Vancouver 10, Canada

Warranty

This is to Certify:

1. That the component parts of all P. M. Power Chain Saws are manufactured from the highest quality of materials obtainable.
2. That all parts have been carefully inspected before assembly.
3. That machines are assembled and checked by thoroughly experienced mechanics.
4. That each machine is run in on the testing bench for three (3) hours before shipment.
5. That each bar and chain is run in and inspected, and each motor dynamometer-tested for power.

We, Power Machinery Limited, manufacturers of P. M. Power Chain-Saws, warrant that all saws manufactured by us are free from defective parts, and we undertake to replace any parts which are defective, provided such defective parts are surrendered to us or to our agents within one month from the date of delivery of the power saw to the consuming purchaser.

POWER MACHINERY LIMITED,

T. Thackray

Managing Director

PRINTED IN CANADA

OPENING MESSAGE

The P.M. Woodboss is designed to give the owner lengthy, dependable service. However, machinery of any kind, regardless of how good it may be, must be looked after. Moving parts must be kept lubricated, lost or loose screws, nuts and bolts must be replaced or tightened. The machine must be kept clean.

This operating manual is supplied to give the owner information that will aid in keeping the Woodboss in productive operation at all times.

Read it carefully; study the illustrations and diagrams. Any points that arise and are not covered in the manual will be cheerfully answered by your dealer or by the factory.

SPECIFICATIONS

Motor—Single cylinder—2 cycle—air cooled.

Power—4 H.P. at 3800 R.P.M. (Normal Cutting Speed) (B.B.H.P. 2.5).

Cylinder—Cast nickel grey iron.

Crankshaft—Forged and heat-treated. Alloy steel. Precision machined and ground.

Connecting Rod—Forged alloy steel—heat-treated. Bronze bearings.

Piston—2" Bore; 1¾" Stroke; Aluminum Alloy. Heat-treated.

Ignition—Flywheel type, high tension magneto with built-in blower. Well known standard make.

Carburetor—Float type—Standard make.

Lubrication—Mixed with gasoline.

Cylinder Head—Aluminum Alloy. Finned for extra cooling.

Main Bearings—Ball Bearing—Standard precision made.

Gasoline Tank—Cast Magnesium—1 quart capacity.

Net Weight—14 inch—35 lbs.; 20 inch—36 lbs.; 26 inch—37 lbs.

Guide Bar—Alloy Steel—Heat-treated.

Cutting Chain—Alloy Steel—Heat-treated.

General Construction—Cast magnesium used for all castings except cylinder block and those few pieces where hard-wearing bearing surfaces are required.

Starting Pulley—Automatic Recoil.

WARNING

This 2-cycle engine depends for its lubrication upon oil thoroughly mixed with the gasoline in proper proportion and free from water. For filling of tank, a chamois or funnel with fine screen should be used. Never under any condition put gasoline in tank without first mixing it with oil. Make certain it is well mixed and in the proper quantity. One pint of S.A.E. 40 or 50 oil to each gallon of gas. This is the only way of lubricating piston, rings, cylinder walls, connecting rod and bearings.

See that your reserve supply of fuel is mixed in advance.

Starting a New Machine:

The machine, when it leaves our factory, is properly adjusted for steady running: it is possible, however, that rough handling in transit may result in mal-adjustment. In starting a new machine, therefore:

1. Check the machine over thoroughly, making sure nothing has been broken or damaged in transit.
2. Check cutting chain to make sure it is neither too loose nor too tight. It should be slightly slack to prevent burning the rounded part of the guide bar and to reduce friction. It should be possible to lift chain ½ inch above centre of cutting bar with the fingers.
3. Fill the chain oiler in forward handle with light CLEAN lubricating oil and put some oil on the chain and in groove of the bar. When pitch is encountered, mix diesel or coal oil with the regular oil in chain oiler.
4. Adjust high speed jet (which is fitted with T handle) of carburetor until it is about one full turn open. Idling jet (which is knurled and slotted) seldom needs adjusting. It should be about ½ turn open. Proper adjustment can be made only when motor is warm and when it is working.
5. Check clutch to make sure it is NOT engaged.
6. Make sure gasoline shut-off cock is in open position.
7. Open throttle by moving lever backward toward handle and give a quick pull on the starting handle.
8. Should the motor not start after two or three pulls it may be necessary to choke the carburetor. One or two pulls should be all that is necessary with the choke closed. As soon as motor fires, open the choke slightly, increasing the opening as the motor becomes warm.

Once started, DO NOT RACE THE MOTOR: it is never advisable to run a new machine a top speed until it is well broken in. About four hours under working conditions will be enough for this. The carburetor can best be adjusted when the machine is actually cutting and under load. Once the carburetor jets are adjusted it will not be necessary to make further changes, but always use the choke when starting a cold motor.

General Information

In case of hard starting, it may be corrected by the following:

A.—Check spark plug—gap should be about .025. Make sure points are clean.

B.—Check spark from magneto and, if necessary, clean points.

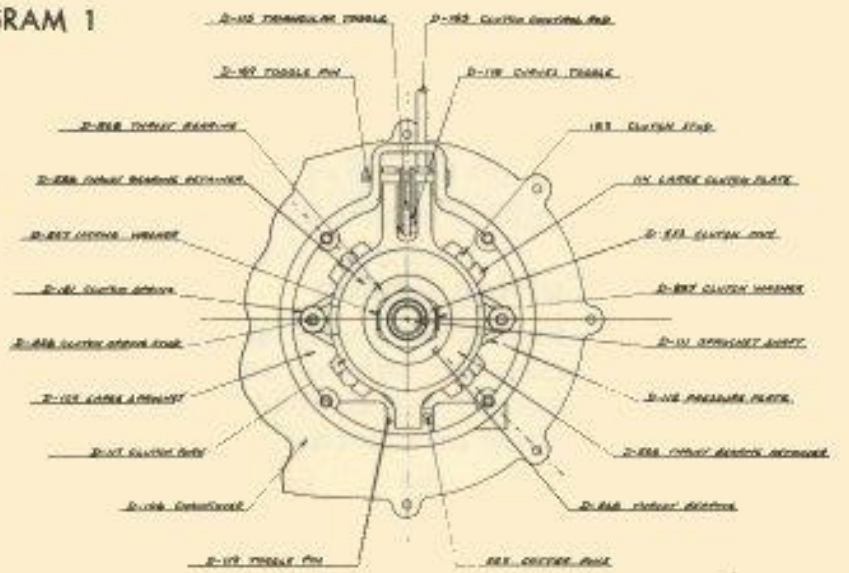
C.—Check for flooding—it may be necessary to remove plug from bottom of crankcase and drain out accumulation of gas and oil. Do this by pulling starting handle two or three times with plug removed. Be sure carburetor bowl is filling with gas and is not stuck.

Be sure when putting a chain on the machine that the points of sprocket locate **between** connecting links and side cutters of chain.

Clutch Adjustment:

Should it be necessary at any time to make adjustments to the clutch, it can be done by removing the clutch housing cover. (Remove the four screws and pry off gently so as not to damage the locating surfaces.) Release clutch locking washer (D-227) by flattening locking lugs with a screw driver and adjust clutch adjustment nut (D-553) until clutch fork (D-117) is barely in contact with inside face of thrust bearing retainer (D-226) when clutch is in the released position. After this is done reset carefully locking lugs on the locking washer to prevent nut from turning. Before replacing cover check for lubrication and add grease if required. A medium weight long-fibre grease is recommended. Check often (once a week) for grease.

DIAGRAM 1



Magneto Adjustment:

To **remove flywheel** from crankshaft unscrew right hand nut part way and tap nut with hammer to jar flywheel loose. Use piece of brass or hardwood to protect nut and shaft end.

Set points at .018" to .020" gap.

To retard spark, loosen screws holding backplate assembly, turn magneto slightly in counter-clockwise rotation. **To advance** move in opposite direction.

KEEP THE MACHINE CLEAN: You will then be able to inspect parts more readily and detect looseness or breakage.

Crankshaft Assembly:

Should it be necessary at any time to remove the connecting-rod from the crankshaft, be careful when replacing it that the cap is put back in its proper position; identification marks are on th econnecting-rod and cap for this purpose. Screws must be made as tight as possible. Be sure that lockwashers are securely locked.

Piston rings should have about .013" clearance between ends when fitted to cylinder-block.

Instructions for Felling:

To use the machine for felling, adjust the carburetor swivel collar (No. 129) so that the carburetor will swivel without having to loosen the collar or tighten it each time. At the same time it should be sufficiently tight so that it won't turn of its own accord. The pin screwed into the outside diameter of the collar is merely to facilitate turning it and is NOT a set screw.

Start motor in upright position, grip left hand on choke body of carburetor in preparation to turning it, place right hand on felling handle. With the left wrist stiff, and a good grip on the choke body, tilt the motor with right hand, allowing the grip to slip in the hand. The weight of the motor as it turns will actually swivel it on the carburetor with the result that it is in a felling position. Engage clutch and speed up motor as the chain starts to cut. When the bar is partly buried in cut, shift the right hand from the felling handle to the bucking handle so that more pressure can be put on the bar. Keep bar level to prevent a curved cut, resulting in the chain binding. The most simple way to gain practice in felling is to cut a few rings off the top of a stump. Practice getting the carburetor in the felling position when the motor is not running.

Maintenance of Cutting Chain:

The chain-saw does considerably more work than the hand-saw for the same period of time, and should be filed or ground at more frequent intervals. Whenever it is necessary to exert unusual pressure on the chain to make it cut it is

time the chain should be sharpened. A dull chain will wear more quickly and will require more time to sharpen, it will also, through the necessary pressure exerted to make it cut, cause excess wear on the edges of the guide bar and on the motor.

Filing Instructions:

Never, at any time (unless to correct serious damage to a portion or all of a chain), file a chain from the top, but **always** from the front of the tooth. Filing from the front extends the life of the chain and maintains adequate space between the teeth to hold sawdust while the chain is in the cut, actually the space increases as the chain is filed back. Should the teeth be filed from the top the space is decreased and the chain life shortened. **This is very important.**

Assembly of Connecting Rod and Piston

(See Diagram 8, Page 21)

Never hammer a wrist-pin into place while the piston is cold as there is too much danger of the piston being deformed. This also applies to dis-assembling.

If the piston is heated in boiling oil, preferably heavy oil, the wrist-pin bore will expand sufficiently so that the pin will drop in, or with very little tapping go into place.

Be sure lock rings for wrist-pin are firmly in place.

Should the piston be out of round after assembly it can be tapped into shape with a leather or plastic hammer, but care must be taken not to damage the ring grooves.

Be very sure when assembling the rod and piston that the oil hole in the cap of the rod is on the **opposite** side to the exhaust side of the piston. This will make the oil hole face the intake hole in the crankcase and insure lubrication.

Check connecting rod and piston for alignment and straighten rod if necessary.

Connecting rod bearings are replaceable. Be sure of proper location for crank-pin bearing. Lubrication holes in bearing and con rod cap must line up.

Connecting Rod

(Illustration Page 21)

When assembling connecting rod on the crankshaft, be sure marked ends of the cap and rod go together. Be certain screws are perfectly tight, and lockwashers are securely locked. Connecting rod bearing on crankshaft should have clearance of .0015. Too tight or too loose will cause serious trouble. The lubricating hole in bottom of con rod cap should face the fuel intake in crankcase.

Cylinder Head

Be sure when placing cylinder head on cylinder block that flow of air from flywheel fan will pass **between** cooling fins on cylinder head, not across fins. Retighten cylinder head nuts when motor has run ½ hour after installing a new gasket.

Pitchy Wood

If cutting in "pitchy" wood, add some kerosene or diesel oil to the oil in chain lubricator.

CAUTION

Do not race your motor at high speed when not actually cutting. Warming it up slowly adds to the life and usefulness of your machine.

How to File and Joint Your Saw For Different Kinds of Woods

It can be understood why a chain saw filed and jointed for softwoods would not give best results in cutting frozen woods or hardwoods, and vice-versa. Consequently it can be understood why all saws leaving the factory must be filed and jointed to one particular standard. All saws leaving the factory are filed and jointed for softwood **unless ordered otherwise.**

This standard is called "No. 3 Chain" and is sharpened and jointed as follows:

	Cutters	Off-set Rakers	Straight Center Rakers
Top Bevel	35°	20°	None
Front Bevel	5°	20°	None
Hook	5° negative	20° positive	20° positive
Jointing (Clearance between point of cutter and raker)	all same height	.020 lower than cutter	.020 lower than cutter

If you intend to use your saw to cut frozen wood or hardwood it will be necessary for you to re-file and re-joint it, or order special chains.

If you want a chain for frozen woods order **Chain No. 3 for frozen wood** (No. 3-F.W.).

If you want a chain for hardwood such as oak, hickory, etc., order **Chain No. 3 for hardwood** (No. 3-H.W.).

If you wish to re-file or rejoint your own saw or have it done by a professional saw filer in your district, the following instructions should be carefully followed:

General Instructions

1. Careful filing will give a fast cutting chain.
2. The height of the teeth should be uniform.
3. Angles of teeth and clearance between points of the side cutters and rakers should be as given in specifications.
4. Keep your saw sharp. A dull saw is inefficient and it increases the wear on the cutter bar and motor.
5. Study diagram. Make sure you understand it. Note the bevel indicated by heavy black line is on the side of the cutter facing you. The bevel indicated by the dotted line is on the side of the cutter away from you.

How to Sharpen and Joint Your Saw For Hardwood and Frozen Wood

1. Make certain that all the center and offset raker teeth are uniform in height. (See "Instructions for use of Filing Vise" in Instruction Book.)
2. The front bevel of the offset rakers should be changed from 20° bevel (see standard specifications) to 10° bevel and the hook on all rakers from 20° positive to 10° positive. Front bevel on sidecutters from 5° to 0° (straight).

Filing Angles and Clearances for Hardwood and Frozen Wood

	Cutters	Off-Set Rakers	Center Rakers
Top Bevel	35°	20°	None
Front Bevel	0°	10°	None
Hook	5° neg. (or less)	10°	10°
Jointing (clearance)		.020" lower than cutter	.020" lower than cutter

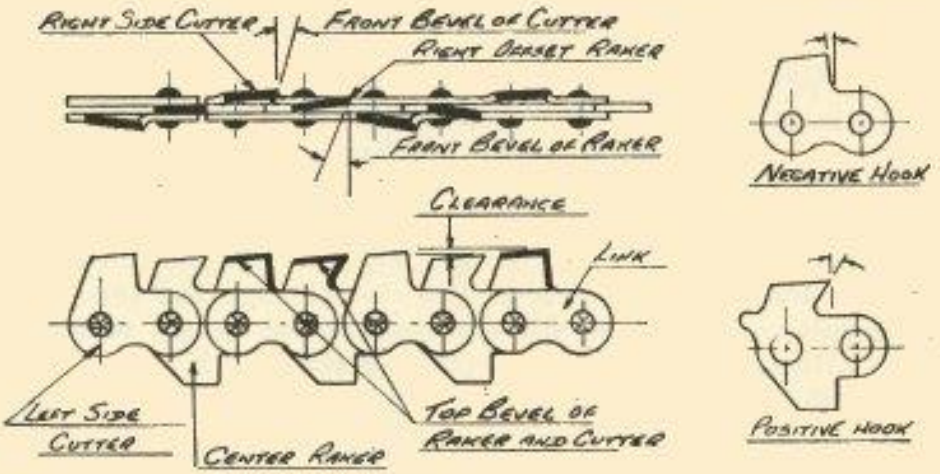


DIAGRAM 2

The instructions given for filing and jointing are our Standard specifications. You may find it necessary to vary these specifications slightly in order to get best results in your particular operation. Sawing conditions vary with type of wood, sap content, temperatures and localities.

This diagram will give an idea of the angles at which to file to obtain 10, 15 and 20 degree bevels.

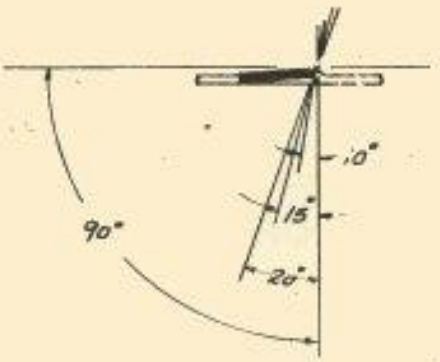


DIAGRAM 3

Instructions for Use of Filing Vise, Setting Block, Cutter Gauge and Raker Gauge with Feeler

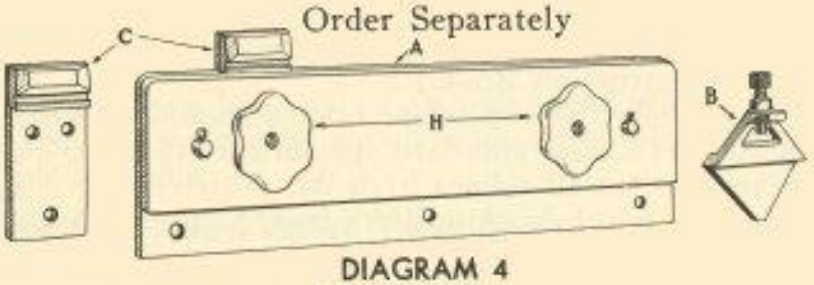


DIAGRAM 4

A—Filing Vise

B—Jointing Gauges—Raker and cutter

C—Setting Block

The Vise is made to firmly clamp a chain by the lugs at tightening of the handles "H". Three holes at the bottom of the vise can be used for fastening it to a bench or stand.

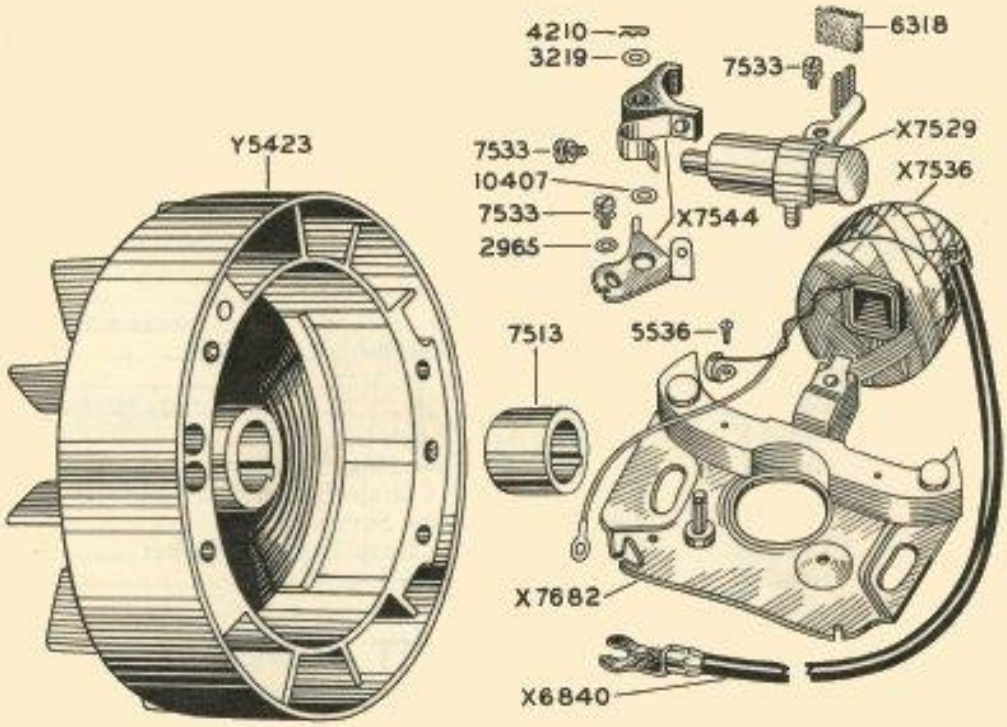
There are two jointing gauges and a .015" feeler required for the vise, one gauge stamped "C" is for use on the side-cutters, the other stamped "R" is for use on the rakers. Both slide along the back and top of the vise to gauge the heights of the teeth.

To joint a chain (the process of filing the cutters to equal heights and the rakers to equal heights, but .015" lower than the cutters), set the cutter gauge by adjusting the screw to the lowest side-cutter point, and file all other cutters on the tops until the points are of equal heights, then set the raker gauge so that the set-screw is .015" lower than the set-screw of the side-cutter gauge, file the tops of the rakers to correspond with the original angles making them .015" lower than the side-cutters.

The setting-block attachment is quite often not necessary for chain maintenance, but for some types of timber additional set may be required. When this is done it is necessary to set only the point of the side-cutters. This is accomplished by adjusting the chain in the vise so that the point of the tooth overlaps the beveled edge of the hardened portion of the setting block and striking the point of the tooth firmly with a small hammer. The point of the tooth will then be set out farther than the rest of the tooth. With practice, one strike of the hammer will be sufficient to set the tooth over. Care must be taken not to break the point of the tooth.

How to Order

The above 4 parts are priced separately. When ordering please state clearly whether you want the VISE ONLY or the COMPLETE SET of Vise with Gauges and Setting Block.



COMPLETE SERVICE PARTS LIST

WICO MAGNETO SPECIFICATION FW-2146

Starting at Serial No. D15000

Part No.	No. per Unit	Part Name
2965	1	Fixed contact clamp screw washer
3219	1	Breaker arm pivot washer
4210	1	Breaker arm lock
Y5423	1	Rotor
5536	1	Primary lead wire clip screw
6318	1	Cam wiper felt
X6840	1	Lead wire group
7513	1	Breaker cam
X7529	1	Condenser group
7533	1	Condenser clamp screw (Sems)
7533	1	Fixed contact clamp screw (Sems)
7533	1	Condenser connection screw (Sems)
X7536	1	Coil group
X7544	1	Breaker contact set
X7643	1	Stator plate unit (Includes stator plate, core, coil, condenser, lead wire and breaker mechanism and Magneto Backplate)
X7682	1	Stator plate repl. assy (Includes stator plate and coil core and Magneto Backplate)
10407	as req.	Breaker point spacing washer
250	as req.	Complete Magneto

Model FWS 18 WICO MAGNETO

On Models Prior to Ser. No. 15000

Part No.	PART NAME
Y 5423 F	Rotor
5429 F	Cam
X 5342 F	Condenser
X 5345 F	Coil
X 5473 F	Stator Plate Assembly
X 5474 F	Fixed Contact
X 5474 F	Breaker Arm
4210 F	Breaker Arm Lock
3219 F	Breaker Arm Spacing Washer
5411 F	Fixed Contact Clamp Screw
5411 F	Condenser Clamp Screw
IXA-256	Fixed Contact Clamp Screw Washer
10407 F	Breaker Arm Spacing Washer
5146 F	Cam Wiper Felt
5077 F	Cam Wiper Felt
10383 F	Coil Wedge
5431 F	Breaker Spring Clamp Screw

MD-44A CARBURETOR ASSEMBLY PARTS

(Using Tillotson MD-44A Model)

REPLACING MODEL AJ-13B

Part No.	Description
230	Breather Body
231	Carb. Toggle Adapt.
232	Throttle Rod
233	MD-44A Carburetor (c/w Pts. Nos. 231 and 234)
234	Toggle Rivet
10235	⅛ I.P.S.x90° Street Elbow
236	Breather Screen (small)
513(2)	8/32x½ R.H.M.S.
525(2)	No. 8 Shakeproof Washer
129	Swivel Collar
185	Swivel Collar Stud
135	Breather Screen (C/case Sc.)
158	Breather Clip Ring (Crankcase Clip Ring)
128	Carburetor Adapter
146	Carburetor Gasket
10193(2)	Carburetor Studs
132	Intake Valve
133	Intake Valve Spring
150(3)	Intake Valve Pins
197	Spring Retainer Bar
157	Throttle Lever
196	Throttle Lever Washer
179	Throttle Tension Spring
260	Copper Mesh
504	12/24x⅜ R.H.M.S.
503	12/24x½ R.H.M.S.
537	6/32x½ R.H.M.S.—Reed Valve
237	Intake Pin Retainer
236	Breather Screen (Breather Body)

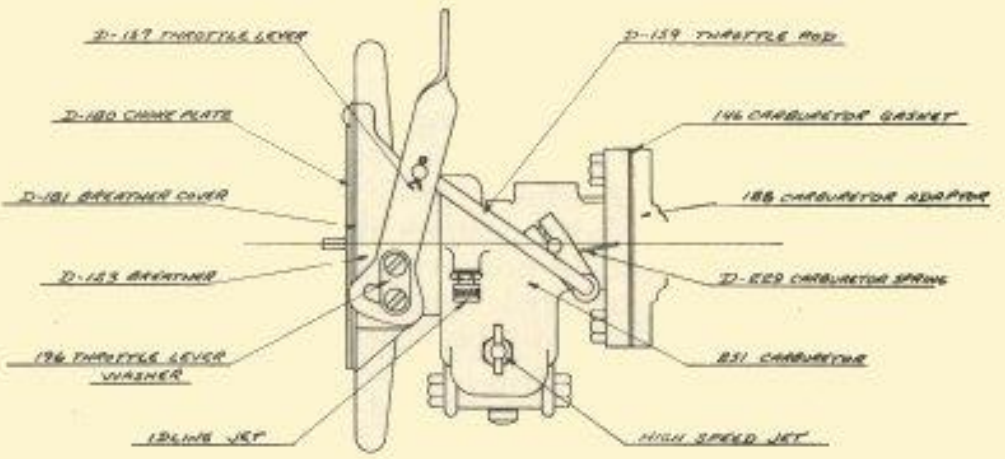


DIAGRAM 6

Model AJ-13B TILLOTSON CARBURETOR

Part No.	Part Name
07353	Body
02531	Body Welsh Plug
05591	Flange Gasket
04636	Float
05425	Float Retaining Cotter Pin
0164	Float Bowl Drain Plug
0648	Float Bowl Drain Plug Gasket
07216	Float Bowl Cover
07198	Float Bowl Cover Gasket
054	Float Bowl Cover Screw
0992	Float Bowl Cover Screw Lockwasher
06910	Idle Adjustment Screw
06243	Idle Adjustment Screw Locknut
0759	Idle Adjustment Screw Lockwasher
06905	Idle Tube
06569	Idle Tube Gasket
06941	Inlet Valve and Seat
0212	Inlet Valve Seat Gasket
02395	Inlet Valve Channel Plug Screw
04152	Main Adjustment Screw
0702	Main Adjustment Screw Gland
0676	Main Adjustment Screw Gland Gasket
0705	Main Adjustment Screw Packing
0703	Main Adjustment Screw Packing Nut
07385	Throttle Shaft and Lever (Assembled)
07369	Throttle Shutter
01462	Throttle Shutter Screw
01675	Throttle Shutter Screw Lockwasher
07231	Gasket and Packing Set

CARBURETOR INSTRUCTIONS

FLOAT SETTING

To check correctly separate Fuel Bowl Assembly from Upper Body Assembly and Gasket. (See Disassembly Instructions Nos. 1 and 2 below). Now with Fuel Bowl Assembly held in upside down position the then lowest point of float, at free end, should project 1/64" below rim of fuel bowl. If resetting is required remove Float (Disassembly Instruction No. 3) and slightly bend vertical float lever only to obtain proper measurement. When inspection indicates Fuel Lever continues to rise beyond float setting point, remove Inlet Needle and Seat. Clean their seating surfaces with a soft cloth. Place Inlet Needle in its seat and tap very lightly while turning Inlet Needle with thumb and forefinger several times to reseat. Re-install, then if proper fuel level is not maintained, install new Inlet Needle and Seat Assembly. **Do not change Float Setting from manufacturing specifications.**

ADJUSTMENT INSTRUCTIONS

Before starting engine check for proper fuel supply in tank. Open Fuel Line Shut Off Valve.

Separate manual carburetor adjustments are provided. Main Adjustment Screw (27) controlling power range mixture and Idle Adjustment Screw (19) governing idle mixture at closed throttle and Idle Speed Regulating Screw (21) controlling required idling speed.

INITIAL ADJUSTMENT

Completely close Idle Adjustment Screw (19) by turning in (clockwise) until seated (without forcing) then turn back in opposite direction about one and one-half (1½) turns. Proceed in like manner with Main Adjustment Screw (27) except open about one full turn after being first closed. Now choke and start engine in usual manner and run until thoroughly warm.

POWER RANGE ADJUSTMENT

With engine running at a constant speed of approximately ½ open throttle position, slowly turn Main Adjustment Screw (27) inward (clockwise) until motor begins to lose speed, then slowly turn back in opposite direction (usually ⅛ to ¼ of a turn) until maximum speed and power is obtained. This will be correct adjustment setting.

IDLE MIXTURE ADJUSTMENT

This adjustment should only be made **after** the above mentioned power range adjustment has been completed. Close throttle and allow engine to idle at slightly faster than normal idling speed requirements by turning Idle Speed Regulating

Screw (21) and located on throttle level, inward. Next, slowly turn Idle Adjustment Screw (19) inward (clockwise) until motor begins to lose speed and miss or flutter, then turn back in opposite direction (usually about ⅛ of a turn) until engine functions smoothly and steadily. Now slowly back out Idle Speed Regulating Screw (21) until desired idling speed is obtained. This will be correct idle adjustment setting.

FINAL ADJUSTMENT

Alternately open and close throttle a few times for adjustment test. If acceleration hesitancy or stalling at idle speed occurs, entire adjustment procedure, outlined above, should be repeated. Preceding instructions cover cold motor start only.

Warm motor only requires opening of throttle and one or two vigorous pulls on starter rope without further carburetor adjustment. Regardless of altitude or climatic conditions a proper carburetor adjustment can be made by following the above rules — which eliminates jet changes.

CARBURETOR PARTS LIST

Ref. No.	Part No.		PART NAME
	Parts illustrated with reference numbers for identification only. Please specify correct part number and name		
1	09093	1	Body upper half
2	*22531	1	Body Channel Welch Ring
3	07903	1	Body Gasket
4	06062	4	Body Retaining Screw and Lockwasher
5	*22534	1	Choke Friction Pin
6	*03860	1	Choke Friction Pin Spring
7	*07912	1	Choke Friction Pin Screw
8	05566	1	Choke Lever
9	03208	1	Choke Lever Retaining Pin
10	07906	1	Choke Shaft
11	03739	1	Choke Shutter
12	05430	1	Choke Shutter Screw
13	05591	1	Flange Gasket
14	07804	1	Float
15	*07901	1	Float Lever Pinion Screw
16	08332	1	Fuel Bowl
17	*03311	1	Fuel Bowl Drain Screw (small)
18	07896	1	Fuel Bowl Plug Screw (large)
19	06910	1	Idle Adjustment Screw
20	05725	1	Idle Adjustment Screw Spring
21	05095	1	Idle Speed Regulating Screw
22	0788-A	1	Idle Speed Regulating Screw Spring
23	08515	1	Idle Tube

Ref. No.	Part No.		PART NAME
24	07900	1	Idle Tube Gasket
25	*07895	1	Inlet Needle, Seat and Gasket
26	02510	1	Inlet Seat Gasket
27	*08160	1	Main Adjustment Screw
28	0702	1	Main Adjustment Screw Gland
29	0676	1	Main Adjustment Screw Gland Gasket
30	0705	1	Main Adjustment Screw Packing
31	0703	1	Main Adjustment Screw Packing Nut
32	*08179	1	Main Nozzle
33	02395	1	Main Nozzle Channel Plug Screw
34	09092	1	Throttle Shaft and Lever
35	*08647	1	Throttle Shaft Return Spring
36	08646	1	Throttle Shutter
37	*05204	1	Throttle Shutter Screw
38	*08598	1	Throttle Stop Lever
39	04594	1	Throttle Stop Lever Pin
40	*06393	1	Throttle Stop Lever Screw
41	*06396	1	Throttle Stop Lever Screw Lockwasher
42	*08025		Gasket and Packing Set
43	08750		Repair Parts Kit
			PARTIAL ASSEMBLY
	09091		Choke Shaft and Lever

* Indicates Contents of Repair Parts Kit.

HOW TO DISASSEMBLE FOR CLEANING OR REPAIR

To correctly disassemble, the following parts must be removed separately and in order indicated:

(1) Complete Main Adjustment Screw (27) and Gland Assembly from Bowl;

(2) Body retaining screws ad lockwashers, to separate Upper Body and Fuel Bowl assemblies;

(3) Float Lever Pinion Pin and Float (14) from Fuel Bowl;

(4) Large Plug Screw (18), the Inlet Needle (25) and Gasket Assembly from Fuel Bowl;

(5) Idle Adjustment Screw (19) Spring. Idle Tube (23) and Gasket, also Main Nozzle Channel Plug Screw (33) from Upper Body;

(6) Throttle Shutter (36) Shaft and Lever Assembly.

To reassemble, reverse the above instructions when installing parts indicated.

DISMANTLING

There are various procedures to follow to simplify dismantling. We suggest that the following procedure, if followed, will prove to be the most satisfactory.

1. **Strut and Oiler**
   Remove the strut and felling handle, guide bar and chain. This is done simply by unscrewing the three nuts (No. 511) and pulling off the assembly. This will eliminate considerable weight and simplify handling of the remaining unit.
2. **Gas Tank**
   There are six (6) screws (No. 503) securing the gas tank (No. 126) to the ventilator housing (No. 125) which must be taken out before removing the tank. To prevent the loss of any gas which might remain in the tank, turn off shut-off cock (No. 266) and uncouple fuel line (No. 258).
3. **Carburetor Assembly**
   Unscrew the swivel collar stud (No. 185) and uncouple swivel collar (No. 129), noting the gasket (No. 151) between crankcase (No. D-105) and carburetor adaptaor (No. 128), which must be replaced at re-assembly.
4. **Flywheel and Magneto**
   Remove blower housing cover (No. 168). Occasionally it is necessary to jar the magneto flywheel free from the crankshaft. This is done by backing off the flywheel nut (R.H. No. 515) one thread beyond the end of the shaft, so that the sharp blow from a soft hammer (brass hammer) required to free the flywheel will in no way damage the crankshaft end.

   The key (No. 535) holding the cam and flywheel to the shaft must be taken out before removing the magneto backplate. It is **important** to note position of spring washer (No. 187) between flywheel and cam. Removal of magneto backplate is done by disconnecting the wire (No. 275) from the shorting button (No. 273) and unscrewing and removing the two screws holding the backplate to the crankcase. Pull the high tension wire from the spark plug through the hole in the blower housing (No. 125) after removing clip, and slip unit over end of crankshaft, taking extreme care not to damage the fibre rubbing block. After ventilator housing has been removed, pry cam free with two screw drivers.
5. **Ventilator Housing and Handle Bars**
   Unscrew remaining three nuts from studs on inside of blower housing. Remove blower housing. From the starting pulley side, pull completely free the two bolts (No. 175) and remove handlebars (No. 156).

6. **Cylinder Block and Piston and Connecting Rod Assembly**
To remove cylinder block (No. A-102), simply unscrew the four (¼-28) nuts holding it to the crankcase and lift over piston. Remove exhaust stack (No. D-124) and **clean out all carbon** before re-assembly.

To remove connecting rod, unscrew the two screws holding the connecting rod cap in place on the crankshaft. After removal, re-assemble parts to prevent losing. Refer to connecting rod replacement instructions for re-assembly with crankshaft.

7. **Clutch Cover and Clutch Fork**

Remove clutch cover (D-118) by prying off with two screw drivers. Release locking washer (D-227) and unscrew clutch nut (D-553). Pull off thrust bearing retainer (D-226). Remove (D-119) and (D-169) toggle pins. The fork (D--17) is now free and can be removed by drawing the clutch control rod down through the opening in the upper part of the clutch housing.

8. **Chain Cover**

Remove starting pulley assembly (A-322) (follow starting pulley instructions). Next remove the nine No. 8-32 screws (No. 501) which hold the crankcase cover (D-107) and chain cover (D-106) together. It will be noted from diagram No. 2 all that remains now to free chain cover is the bearing fit on the crankshaft. It is necessary to put screw drivers between crankcase cover and chain cover and pry them apart, at the same time removing the bearing from the shaft.

9. **Clutch Assembly, Roller Chain and Small Sprocket**
To dismantle roller chain, locate connecting link and remove. Re-assemble parts after removal to prevent loss. Some roller chains will have no connecting link, in which case a link can be found that has been riveted at assembly. File away flared portion of rivet heads and pry apart. Care must be taken not to file away too much of the rivet head so that it cannot be re-riveted.

Before removing sprocket shaft and clutch assembly from crankcase cover (D-107) detach the cutting chain sprocket (No. 153) from sprocket shaft. This screws on the shaft and has a right hand thread, so that removal will often require a sharp blow on the ends of the teeth with a soft hammer to jar it loose.

Once the sprocket is removed push the whole assembly free by tapping on the sprocket end of the shaft with a soft hammer. Be sure not to damage the threads of the sprocket shaft.

Use a puller to remove sprocket (A-108), taking care not to lose woodruff driving key (No. 528) that locates it on the shaft.

10. Crankcase

Holding crankcase in the left hand and using a soft hammer, tap crankshaft on magneto end to free bearing and shaft from crankcase. Do not hit the crankshaft too hard, otherwise the shaft may be forced out of line, or the threads may be damaged. If the assembly is an extremely tight fit it may be necessary to heat the crankcase in order to dismantle these parts. A blow-torch may be used for this purpose, but it will **not** be necessary to apply a great amount of heat.

11. Crankshaft

Use a soft hammer to drive crankshaft (A-101) free from crankcase cover (D-107).

12. Grease Seals

When removing grease seals (No. 253) from crankcase (D-105) and crankcase cover (D-107) use a sleeve or piece of metal close to the outside diameter of the seal to drive them from the castings. Be sure not to damage the fabric of the seal when removing. **Should seals be at all damaged they must be replaced.**

13. Grease Seal Bushings

Grease seal bushings can be removed from the crankshaft by prying them loose with a screw driver after removing woodruff key. Bearings can also be removed in this manner, but care must be taken not to damage the shielded portion when doing this.

14. Dismantling Carburetor Assembly

It should be necessary to dismantle carburetor (No. 251) only for cleansing purposes, and then only to remove the air filter screens and packing. Clean thoroughly in gasoline. The rest of the unit can be cleansed thoroughly in gasoline without any further dismantling.

15. Dismantling Clutch Assembly

Clean thoroughly in gasoline before preparing to dismantle, then inspect thoroughly, checking freedom of bearings, etc. Should everything appear in order no further dismantling should be undertaken.

Should there be any apparent wear making dismantling necessary simply remove cotter pins from the four nuts compressing the clutch springs and take off nuts. When removing the clutch plates, note their order of assembly so that they can be replaced the same way.

RE-ASSEMBLY

In general, the procedure to follow in re-assembling is the reverse of the steps taken in dismantling. While doing this, there are certain points to BEAR IN MIND which are described below.

1. In pressing bearings (No. 255) on crankshaft (A-101) be sure that the shaft is not forced out of alignment.
2. Always use "Permatex" or any other gasket compound on the gasket face of the crankcase when assembling to crankcase cover. If possible, heat crankcase for ease in fitting the crankshaft bearing.
3. Note the position of the grease seals (No. 253) when pressing into the crankcase and cover. The fabric of the seal **must** be turned in to hold crankcase compression. The grease seal bushings are inserted **after** the seals so as not to damage the sealing fabric.
4. After assembling the drive (the small sprocket, the clutch and roller chain) and packing it with grease, put on the chain cover assembly, making sure that "Permatex" is applied to the gasket face in order to retain grease in the housing. At this time check all the toggles and pins for any sign of wear, and if so replace worn parts immediately.
5. On adjusting the clutch fork for correct clutch setting, apply grease to the clutch fork wearing surface so that wear on the bearing retainer is kept at a minimum. **Refer to instructions on clutch adjustment.**
6. When replacing starting pulley assembly tighten the left hand nut on crankshaft as much as possible. Doing this centralizes the crankshaft correctly in relation to the crankcase walls.
7. When re-assembling the connecting rod to the crankpin there are 3 points to note:
   (a) The large flared part of the piston dome MUST face the front of the machine (exhaust side).
   (b) Identification marks on rod and cap must be together for correct alignment. Place large bearing in correct position.
   (c) Be sure that the connecting rod screws are tight and the connecting rod washers are securely clamped around the screws. **Use a heavy screw driver for tightening screws.**
8. When fitting cylinder block, make sure that the piston rings are located correctly by the rings in the groover, and that both block and piston are lubricated for ease in fitting. Fit piston rings to block, leaving .010" gap. Prior

to assembly check block to see if free from carbon deposits, and also **install** a new gasket between crankcase and cylinder block.

9. When assembling carburetor assembly check the reed valve spring to see that there is tension on the reed valve. This is necessary for maximum performance of the motor. Spring, when in position on spigot of retaining bridge (No. 197) should be 1/16" to 3/32" above the level of the two flat portions of the bridge.
10. When mounting magneto backplate to the crankcase, the approximately correct setting places the backplate in a vertical position. If the motor is sluggish and will not pick up speed, advance the spark by rotating the backplate in a clockwise direction. If the motor lacks power at low speeds, retard the spark by rotating in a counter-clockwise direction. When pressing the cam in place, note that the arrow on the cam is on the outside, and that it points in the direction of rotation of crankshaft (counter-clockwise). Check to see that the points are set at .020 gap.
11. Be sure the spring washer (No. 187) is in place (between cam and flywheel) before securing flywheel in place.
12. Prior to fitting the strut and oil tank, make sure that the cutting chain is correctly located on the cutting chain sprocket. The points of the sprocket MUST fit between the links of the chain. Be sure chain tightener is correctly located on sawdust raker.
13. **After motor has been re-assembled and properly run-in, remove gas tank and tighten cylinder head screws and cylinder block nuts.**

HARDWARE
for WOODBOSS Power Chain Saw

Part No.	Qty.	Description	Position
500	1	12/24 x 5/8 R.H.M.S.	Exhaust
501	9	8/32 x 1¼ R.H.M.S.	Chain Case
503	10	12/24 x ½ R.H.M.S.	Gas Tank and Throttle
504	2	12/24 x ⅞ R.H.M.S.	Gas Tank and Throttle
505	2	8/32 x 5/8 R.H.M.S.	Carburetor
506	1	1/4-20 x 5/8 F.H.M.S.	Combination Nut
507	1	5/16-18 x 1¾ Fillister H.M.S.	Chain Tightener
508	2	Special Conrod Screw	
509	4	1/4-20 x ¾ H.H.C.S.	Clutch Housing Cover
511	3	5/16-18 Special Nuts	Cutter Bar Stud
513	4	8/32 x ½ R.H.M.S.	Carburetor Strut
514	1	7/16-20 Left Hand Nut	Manual Pulley
515	1	7/16-20 Nut	Crankshaft
516	18	1/4-28 Hex. Steel Nuts	Cyl. Head, Cyl. Block, etc.
517	9	8/32 Hex. Steel Nuts	Chain Case
518	2	12/24 x 1 R.H.M.S.	Magneto
519	1	5/16 SAE Lock Washer	Chain Tightener

ALL PRICES F.O.B. VANCOUVER, B.C.

Part No.	Qty.	Description	Position
520	3	5/16 SAE Plain Washer	Felling Handle
521	8	1/4 SAE Plain Washer	Cyl. Block, Cyl. Head, etc.
522	1	7/16 SAE Plain Washer	Crankshaft
524	25	1/4 Shakeproof Washer	Gas Tank, Crankcase, etc.
525	13	No. 8 Shakeproof Washer	Chain Case
528	3	No. 304 Woodruff Key	Spline and 15T Sprocket
529	11	3/32 x ½ Cotter Pin	
532	4	5/16-24 S.F. Jam Nut	Clutch Stud
535	1	Special Magneto Key	
537	2	6/32 x ½ R.H.M.S.	Reed Valve
538	1	1/4-20 x ⅜ H.H.C.S.	Drain Plug
539	1	1/4 Fibre Washer	Drain Plug
540	2	1/4-20 x ½ R.H.M.S.	Control Handle
541	1	12/24 Hex. Nut	Exhaust
542	2	1/4-20 x ½ F.H.M.S.	Filing Vise
543	3	5/16-18 x ⅞ F.H.M.S.	Filing Vise
544	2	1/4-20 x 1 Allen Head C.S.	Gauges
545	2	1/4-20 Hex. Nut	
546	2	5/16-18 x 1 H.H.C.S.	Outer End Handle
547	2	5/16-18 Hex. Nuts	Outer End Handle
D-548	3	8/32 x ⅜ R.H.M.S.	Breather
D-549	5	1/4 SAE Plain Washer	Cyl. Head, Clutch Rod
D-550	1	3/16 Cup Washers	Choke Plate
D-551	1	3/16 x ¼ R.H. Rivet	Choke Plate
D-552	4	1/16 x ⅝ Cotter Pin	Clutch
D-553	1	3/4-16 NF Jam Nut	Clutch
D-554	4	1/4-28 Castellated Nuts	Clutch
D-555	2	3/32 x ¾ Cotter Pin	Filing Vise
D-556	2	6/32 x ⅝ R.H.M.S.	Retainer Bar

PARTS LIST
For P.M. WOODBOSS Power Chain Saw
Manufactured by Power Machinery Limited

Part No.	Qty.	Description
A-101	1	Crankshaft
A-102	1	Cylinder Block
A-103	1	Piston
104	1	Connecting Rod
D-105	1	Crankcase
D-106	1	Chain Cover
D-107	1	Crankcase Cover
A-108	1	Small Sprocket, 15T
D-109	1	Large Sprocket, 45T
D-110	1	Clutch Spline
D-111	1	Sprocket Shaft
D-112	1	Pressure Plate
113	7	Small Clutch Plate
114	8	Large Clutch Plate
D-115	2	Triangular Toggle
D-116	2	Curved Toggle
D-117	1	Clutch Fork
D-118	1	Clutch Housing Cover
D-119	1	Clutch Toggle Pin
No. 120	1	Oil Pump Spring
D-121	4	Clutch Spring

Part No.	Qty.	Description
A-122	1	Cylinder Head
D-123	1	Breather and Choke Body
D-124	1	Exhaust
D-125	1	Blower Housing
D-126	1	Gasoline Tank
127/14"		Guide Bar
127/20"		Guide Bar
127/26"		Guide Bar
127/32"		Guide Bar
128	1	Carburetor Adaptor
129	1	Swivel Collar
131	2	Short Crankcase Stud
132	1	Intake Valve
133	1	Intake Valve Spring
D-134	1	Breather Screen
135	2	Breather and Crankcase Screen
136		Connecting Link
137		Right Cutter
138		Left Cutter
139		Check Valve
140		Rakers—Left Raker, Right Raker, Centre
141	1	Pump Plungers
142	1	Plunger Rod
A-143	1	Cylinder Block Gasket
144	1	Small Conrod Bushing
145	1	Large Conrod Bushing
146	1	Carburetor Gasket
147	1	Combination Nut
148	1	Starting Pulley (Manual)
150	3	Intake Valve Pins
151	1	Intake Valve Gaskets
152	1	Oil Pump Cylinder
153	1	Cutting Chain Sprocket
155	1	Chain Tightener
D-156	1	Handle Bars
D-157	1	Throttle Lever
158	2	Crankcase Clip Ring
D-159	1	Throttle Rod
160	1	Strut and Oil Tank Sub-assembly
D-161	1	Upper Control Grip
162	1	Felling Handle
D-163	1	Clutch Control Rod
A-164	1	Short Grease Seal Bushing
165	1	Wrist Pin
166	2	Gas and Oil Tank Cap
167		Chain Rivets (Per Dozen)
168	1	Fan Cover
D-169	1	Clutch Toggle Pin
A-170	1	Long Grease Seal Bushing
171	3	Guide Bar Studs
D-172	1	Clutch Fork Rivet
D-173	1	Clutch Toggle Rivet
174	4	Cylinder Block Studs
175	2	Long Crankcase Bolt
D-177	1	Oil Pump Cap
178	2	Wrist Pin Clip Rings
179	1	Throttle Spring
D-180	1	Choke Plate

Part No.	Qty.	Description
D-181	1	Breather Cover
183	4	Clutch Stud
184	1	Oil Pump Knob
185	1	Swivel Collar Stud
186/14"		Cutting Chain
186/20"		Cutting Chain
186/26"		Cutting Chain
186/32"		Cutting Chain
187	1	Spring Washer for Cam
188	1	Sawdust Raker
D-190	1	Lower Control Grip
191	1	Clutch Connecting Rod
192	2	Oil Tank Plug
193	2	Carburetor Stud
196	1	Throttle Lever Washer
197	1	Spring Retainer Bar
A-198	1	Cylinder Head Gasket
199	1	Crankcase Gasket
D-213	1	Snowshoe
218	1	Oil Tank Spring
219	2	Connecting Rod Washers
224	1	Exhaust Stud
A-225	4	Cylinder Head Studs
D-226	1	Thrust Bearing Retainer
D-227	1	Locking Washer for Clutch Nut
D-228	4	Clutch Spring Stud
D-229	1	Carburetor Spring
250	1	Magneto Complete
251	1	Carburetor
252	1	Spark Plug
253	2	Oil and Compression Seal
254	1	201 KDD Bearings (Sprocket Shaft)
255	5	203 KDD Bearings
A-256	3	Piston Rings
A-257	1	Roller Chain
258	1	Fuel Line
259	1	High Tension Wire and Terminal
260	1	Copper Mesh
261	1	Starting Rope and Handle
263	1	Spark Plug Nipple
266	1	Shut-off Cock
D-268	1	Thrust Bearing (ATB 2610)
270	1	Rubber Grommet
271	1	Roller Chain Connecting Link
272	1	Clip for High Tension Wire
273	1	Shorting Button
274/5	1	Shorting Wire and Terminal
508	2	Connecting Rod Screw
511	3	Cutter Bar Nuts

Accessories

200		Filing Vise
203	2	Tightening Stud
205	1	Raker Gauge
206	1	Cutter Gauge
207	2	Filing Vise Handles
209	1	015 Feeler Gauge
222	1	Setting Block Assembly
211	1	Outer End Handle (Accessory)
		Magneto Timer

WOODBOSS MODEL "D" STARTER

Part No.	Description
10380	Starter Complete
10381	Starter Back Plate
10382	Starter Centre Piece
10383	Starter Cover
10384	Drive Plate Assembly
10384A	Drive Plate
10384B	Drive Plate Spacer
10385	Drive Sleeve
10386	Drive Spring
10387	Drive Spring Ratchet
10388	Pulley Complete
10389	Pulley
10390	Pulley Hub
10392	Starter Shaft
10397	Return Spring
10398	Locking Nut
12354	Drive Plate Pins
12355	Drive Plate Spring
12356	Drive Plate Pawls
12357	Pawl Stop Pins
12359	Drive Sleeve Bushing
12365	Pulley Hub Pawl Spring
12367	Pawl Support Ring
12369	Thrust Washer
13370	Starting Cable Tube
13371	Handle Stop
10310	Starting Cable
10311	Handle
10318	Cable Terminal
10303	Pulley Hub Pawls
10307	Pawl Pins
	HARDWARE
13352	#6 SAE Flat Washer
10394	1/8x3/8 FH Rivets
10395	12-24x2" RHMS
10515	1/8-20 Nut
10522	1/8 SAE Flat Washer
10528	#304 Woodruff Key
10314	12-24x1/2 FHMS
10312	1/8x3/8 RH Rivet
10326	1/2 Countersunk Shakeproof Washer
13117	#12 Lock Washer

MOUNTING INSTRUCTIONS

Make Reference to Diagram

1. Remove existing starter.
2. This Starter is now completely assembled and must be partly dismantled before it can be mounted on the motor. Remove the Starter Backplate (No. 10381) by taking out the three Starter Body screws (No. 10395). Be careful to

keep the Centre Piece (No. 10382) and Starter Cover (No. 10383) from separating. If the Backplate is tight, gently tap it until it becomes free.

3. Fasten Starter Backplate (No. 10381) to the Crankcase Cover with the 4 mounting screws and washers (No. 10314 and No. 10326). Thoroughly tighten. Be sure the Woodruff Key is properly in place. Place the Drive Plate (10384) with a Spacer in front and back on the Crankshaft with the Pawls facing out. The Chamfer on the outer Spacer must face the Drive Plate. Lock securely with the Locking Nut, No. 10398, (Left Hand). Be careful not to break the flywheel fins when locking the Crankshaft.

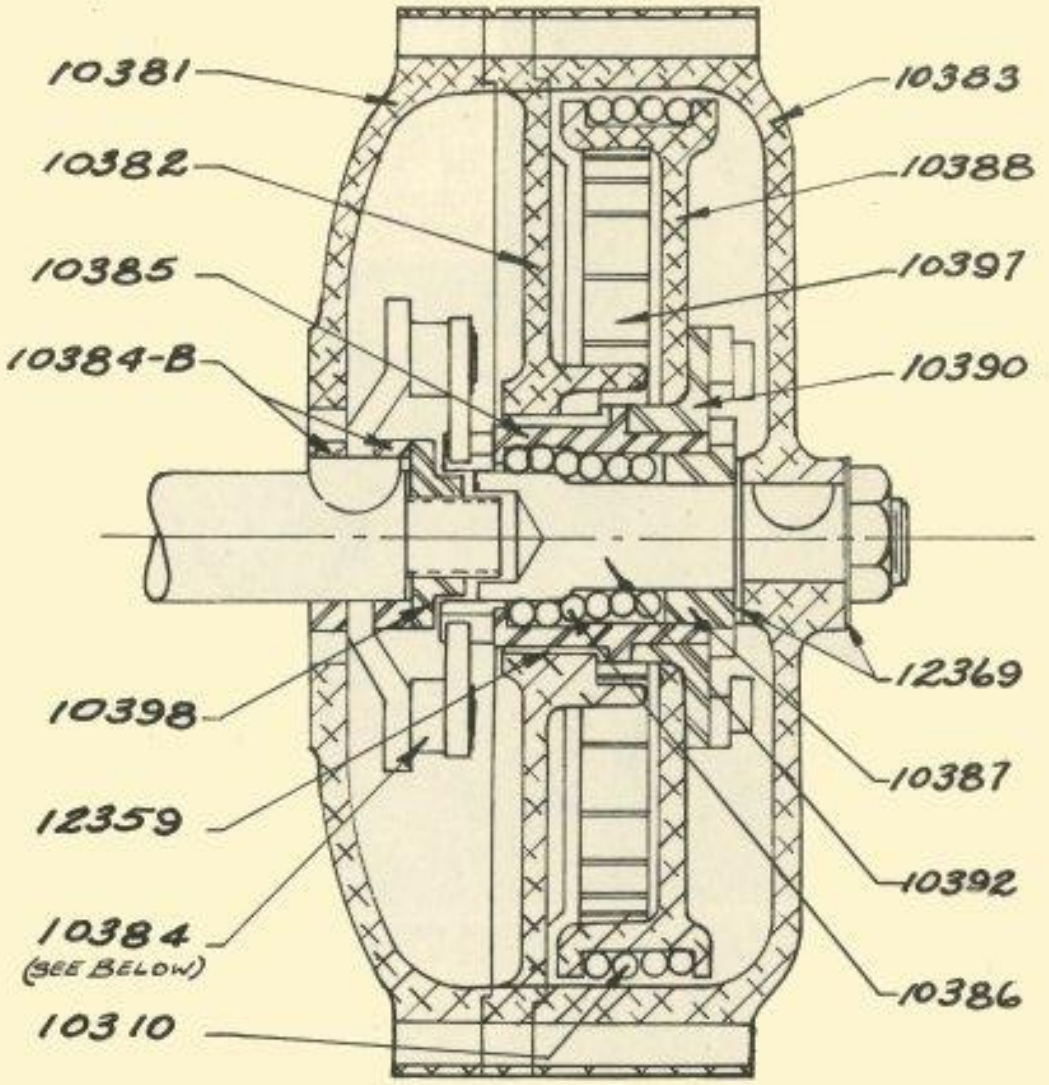
4. Replace outer assembly on Backplate by locating it on the spigot. Do not force it into place, but pull on the Starter Cable until the Drive Sleeve Ratchet (No. 10385) engages with the Driveplate Pawls, then push into place. Secure with screws.

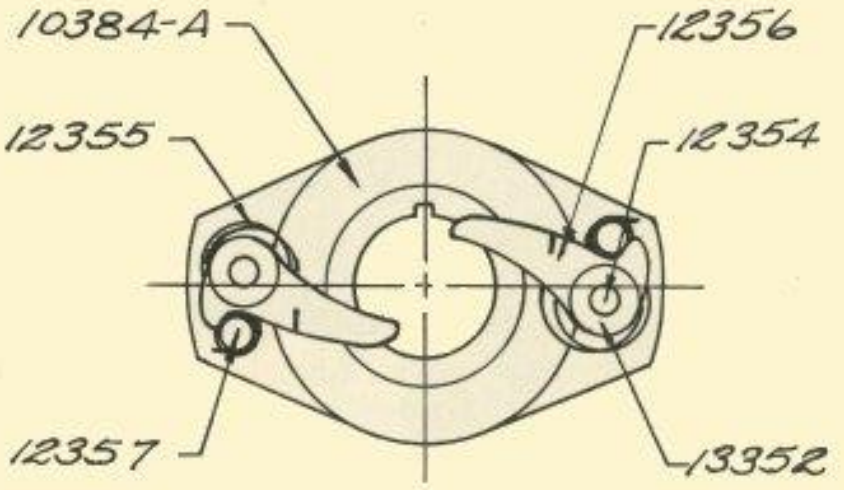
5. For Dismantling, reverse the foregoing procedure.

6. To Replace Starting Cable (No. 10310).
Remove the outer unit from the Starter Backplate—see paragraph (2). Rotate Centre Piece (No. 10382) and Starter Cover (No. 10381) to relieve Return Spring tension on Starter Cable. If cable has broken, rotating is not necessary. Separate the outer unit by holding the outer rim of the Centre Piece and tapping the Drive Sleeve Ratchet with a soft hammer or equivalent. Do not damage bushing. Slip Centre Piece off Spring. Remove old cable and replace with new one. Do not tie the handle in place before threading cable through stem of outer cover. Be sure Cable Ferrule is pushed through cutout in pulley so it will not interfere with spring action. Rewind Return Spring, if it is out of place, slip end of spring into slot in Centre Piece, revolve Centre Piece and Cover until there is tension on the Cable and remount on Backplate.

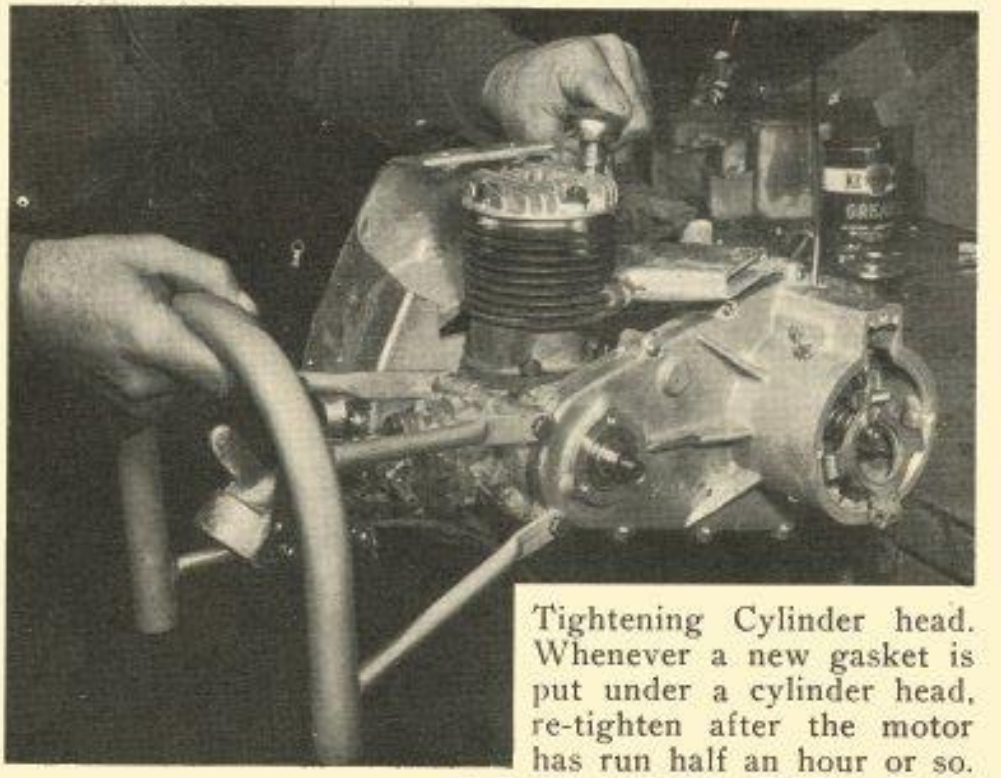
7. To dismantle, remove the three fastening screws from Starter Cover and the nut (No. 10515) and washer (No. 10522) from the end of starter shaft (No. 10392). Tap apart with a soft hammer or equivalent.

8. To assemble outer unit, place Drive Spring Ratchet (No. 10387) in position on pulley. Put the Starter Shaft and Drive Sleeve (No. 10385) assemble (Drive Sleeve, Drive Spring, and Starter Shaft) through from the other end make sure the Woodruff Key is in place and put on Washer (No. 12369). Hold this assembly by Drive Sleeve Ratchet end and fit cover onto shaft, rotating the cover until Woodruff Key locates. When located, push shaft into position, and replace nuts and washer.


10381
10382
10385
10384-B
10398
12359
10384
(SEE BELOW)
10310
10383
10388
10397
10390
12369
10387
10392
10386


10384-A
12355
12357
12356
12354
13352

Assembly of Connecting-rod with crankshaft. Notice the position of the small slope of Piston dome is **opposite** the exhaust side of the machine. Rings are put in place later. Be careful not to bend the connecting-rod. (See Connecting-rod instructions.)



Tightening Cylinder head. Whenever a new gasket is put under a cylinder head, re-tighten after the motor has run half an hour or so.

This illustration shows the undercut being made. Notice the operator has made the top cut first. His grip has been transferred from the felling handle to the bucking handle after the cut has been well started.

Chipping out the undercut. Notice the shape of the axe. The back cut in which the saw now rests has been started before chipping out the under-cut. The saw is in "ready" position to complete felling the tree.

This illustration shows how to hold the machine to have it in the felling position when it is picked up. See "Felling Instruction."

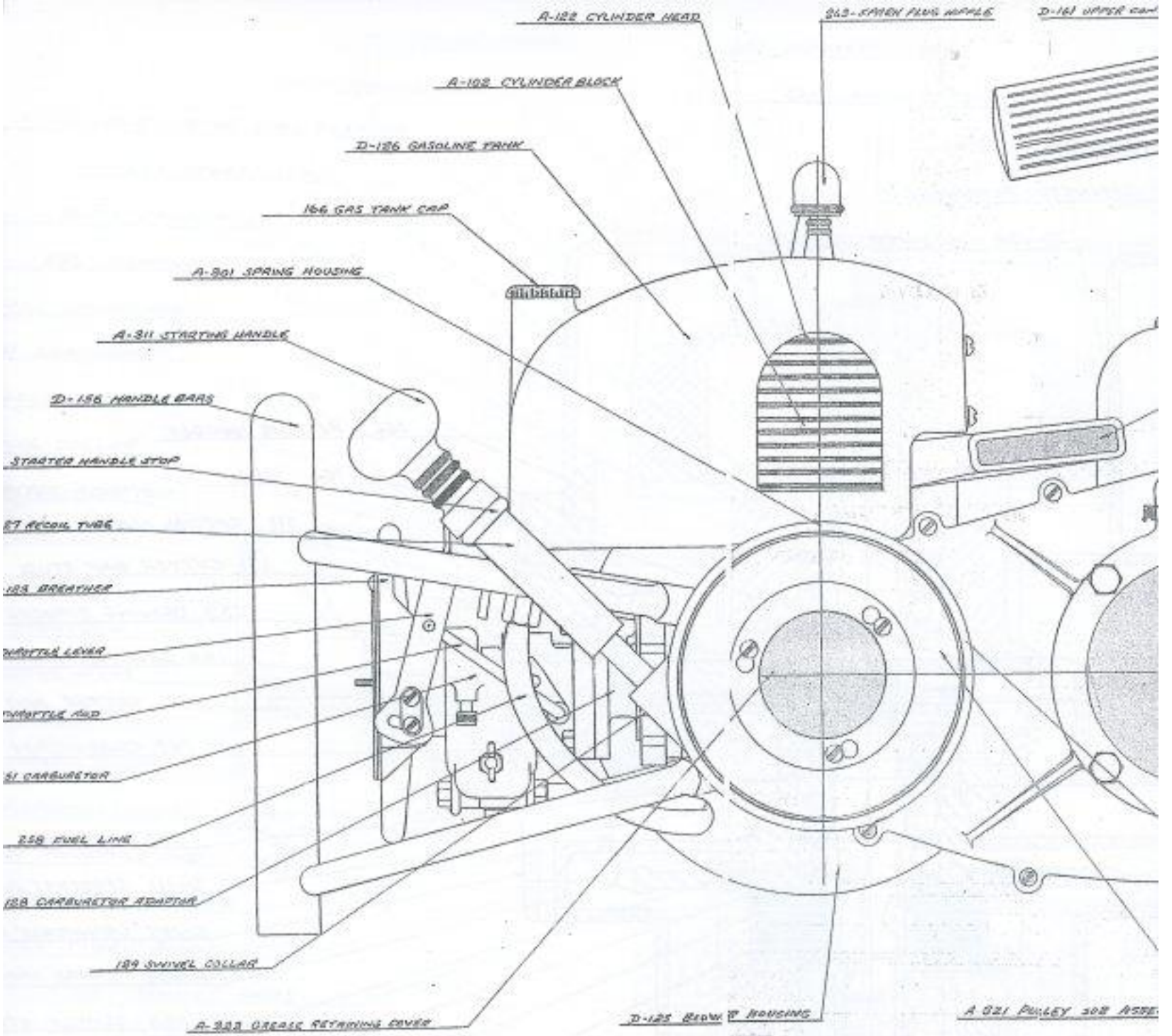
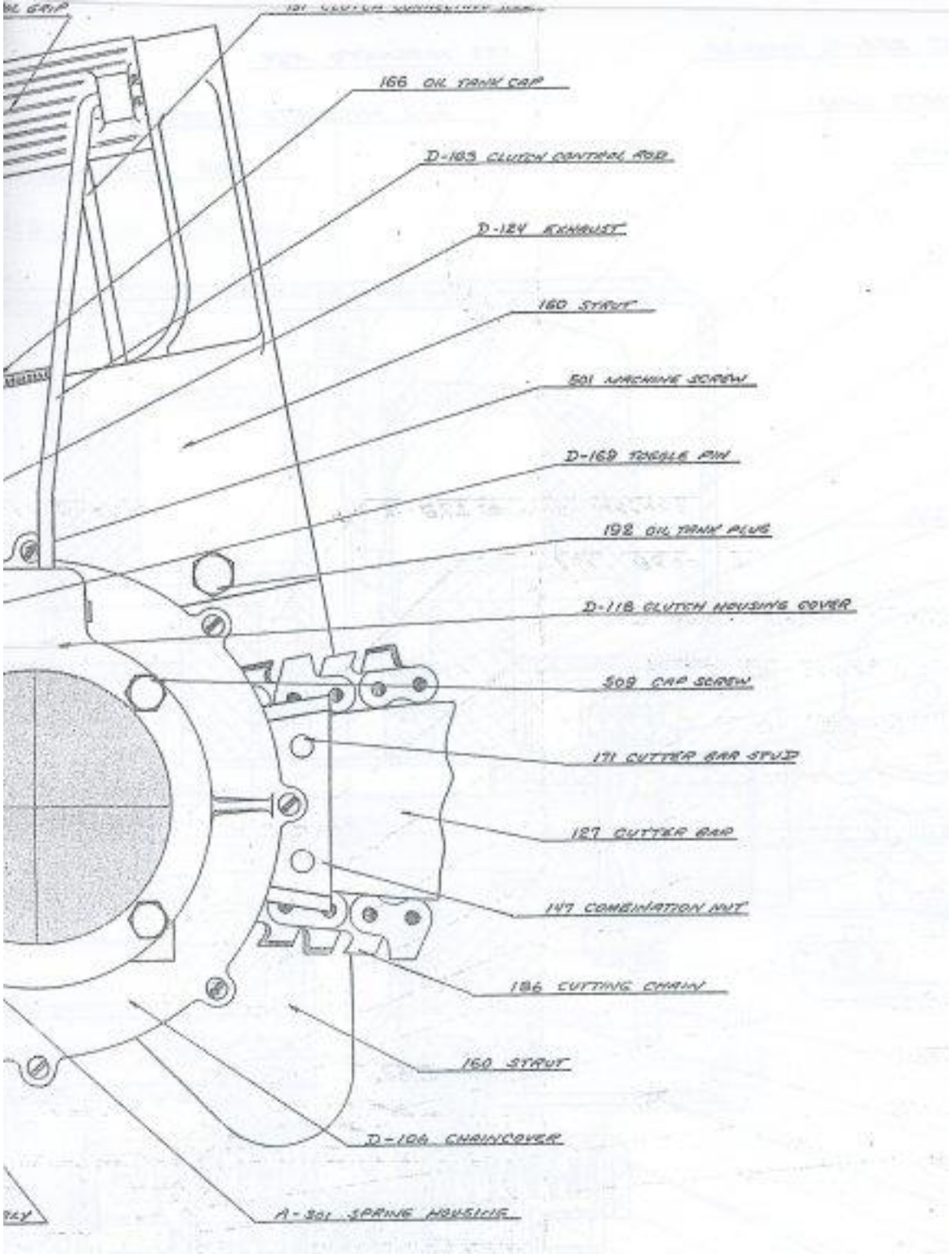
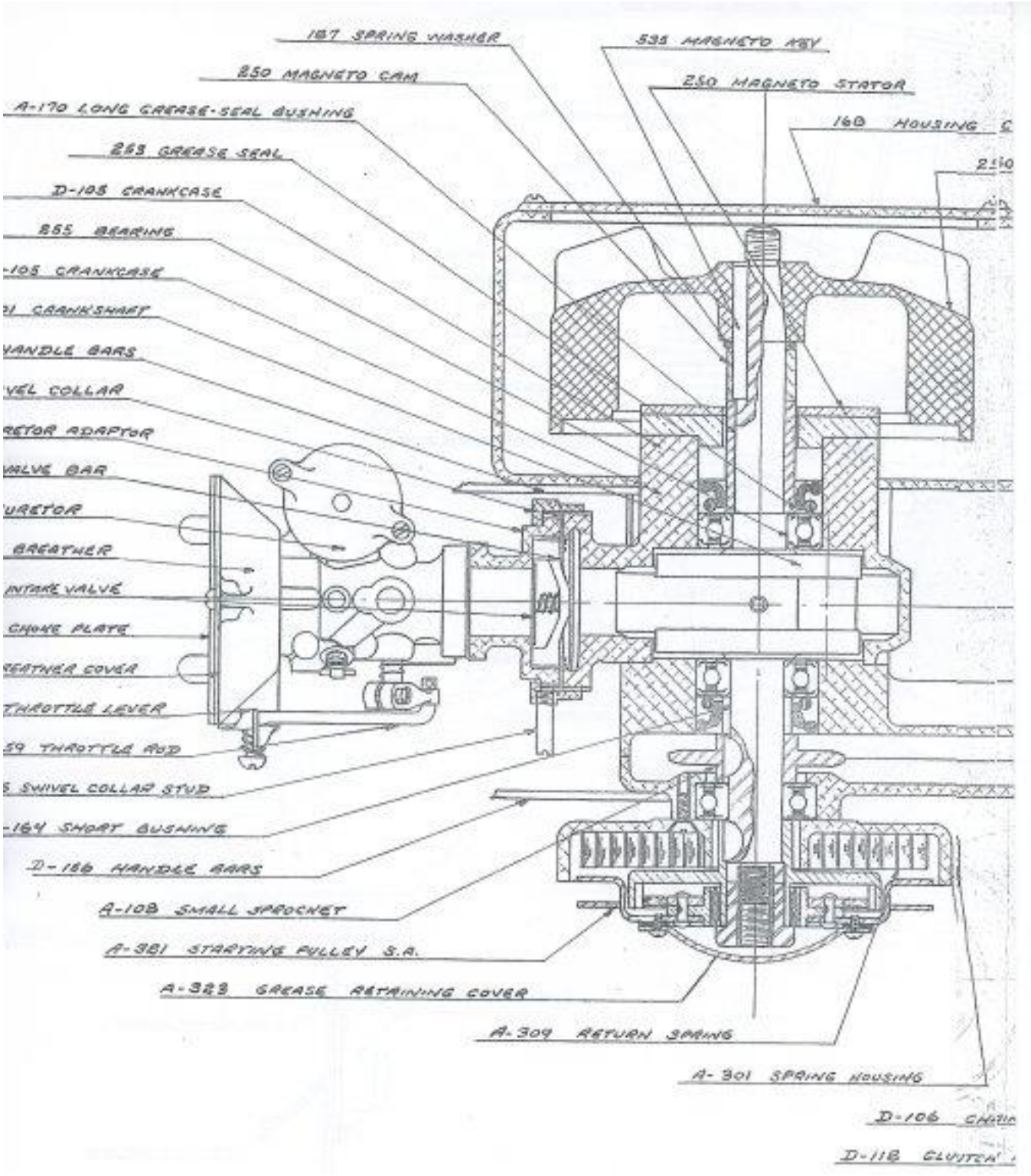
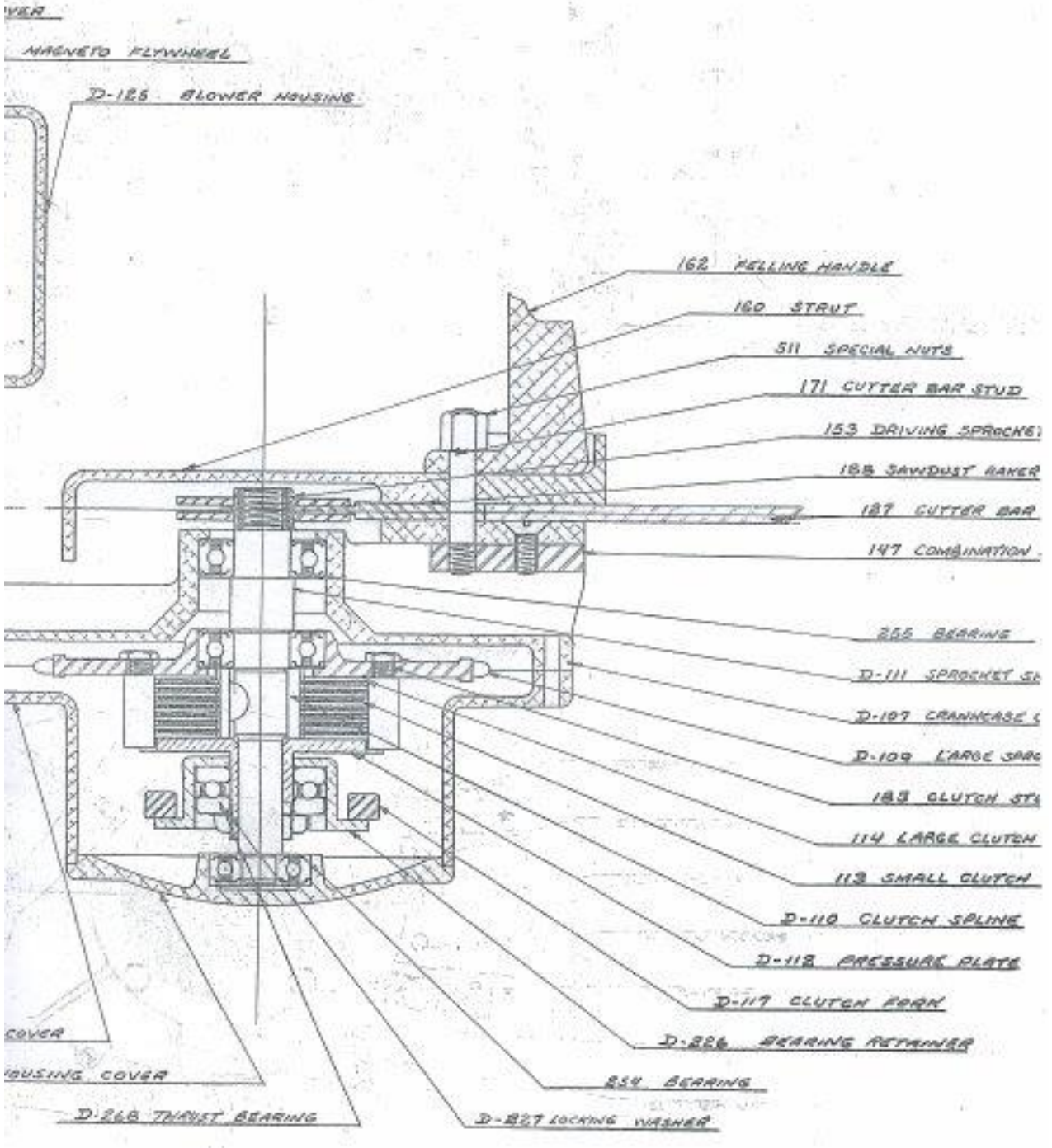
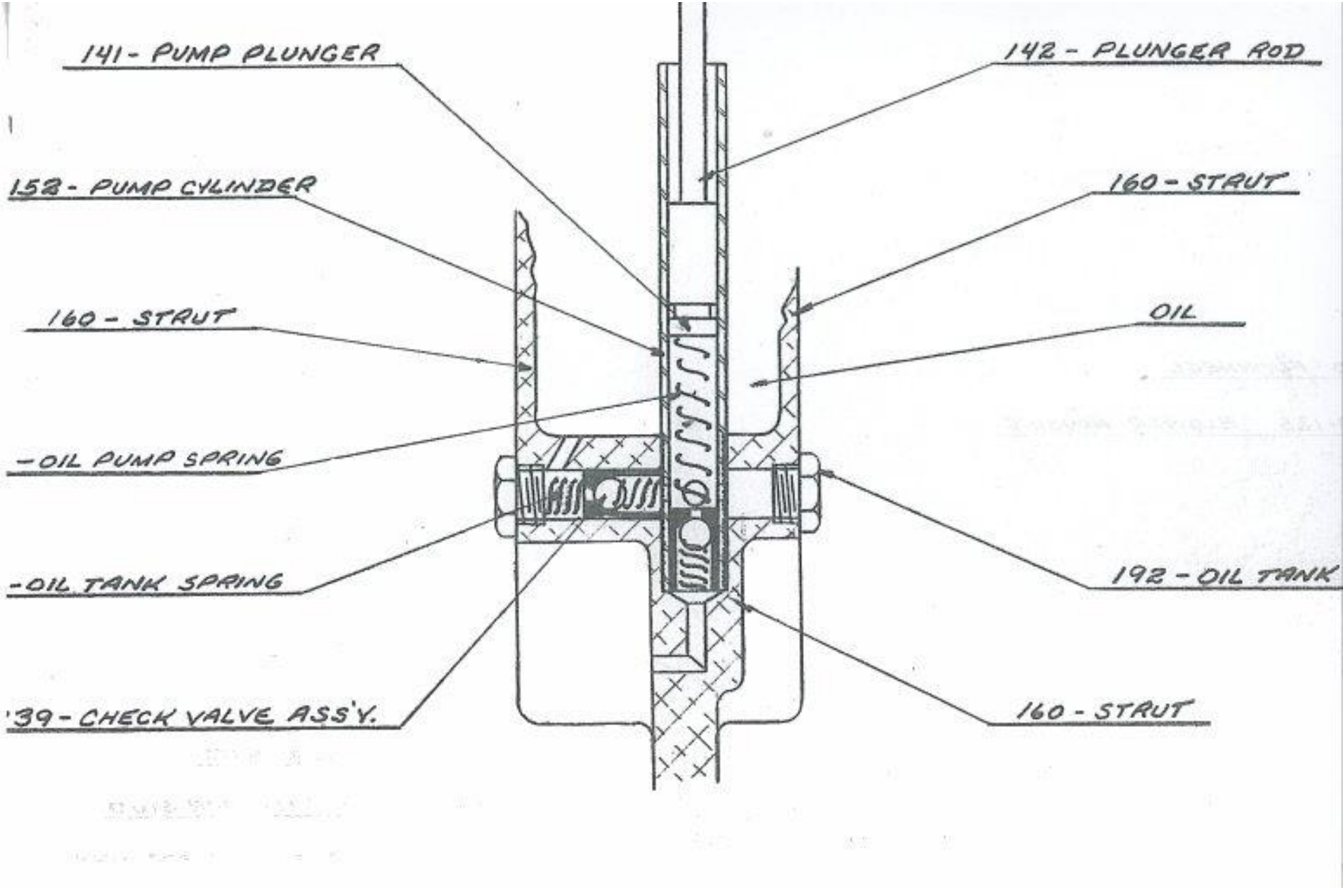

A-122 CYLINDER HEAD
343-SAMEN PLUG MAPLE
A-102 CYLINDER BLOCK
D-126 GASOLINE TANK
166 GAS TANK CAP
A-901 SPRING HOUSING
A-311 STARTING HANDLE
D-156 HANDLE BARS
STARTER HANDLE STOP
87 RECOIL TUBE
188 BREATHER
THROTTLE LEVER
THROTTLE ROD
51 CARBURETOR
258 FUEL LINE
188 CARBURETOR ADAPTOR
189 SWIVEL COLLAR
A-333 CABLE RETAINING COVER
D-125 BLOWER HOUSING
A 821 PULLEY 308 ASSE

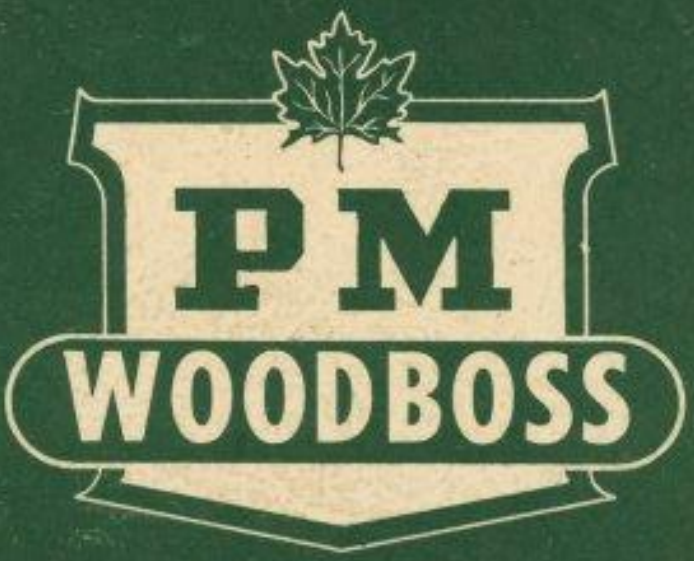
DIAGRAM 11


166 OIL TANK CAP
D-183 CLUTCH CONTROL ROD
D-124 EXHAUST
160 STRUT
501 MACHINE SCREW
D-169 TOGGLE PIN
192 OIL TANK PLUG
D-118 CLUTCH HOUSING COVER
502 CAP SCREW
171 CUTTER BAR STUD
127 CUTTER BAR
147 COMBINATION NUT
186 CUTTING CHAIN
160 STRUT
D-106 CHAINCOVER
A-301 SPRING HOUSING


187 SPRING WASHER
535 MAGNETO ASY
850 MAGNETO CAM
250 MAGNETO STATOR
A-170 LONG GREASE-SEAL BUSHING
160 HOUSING
253 GREASE SEAL
D-105 CRANKCASE
855 BEARING
-105 CRANKCASE
CRANKSHAFT
HANDLE BARS
VEL COLLAR
RETOR ADAPTOR
VALVE BAR
URETOR
BREATHER
INTAKE VALVE
CHOKE PLATE
EATHER COVER
THROTTLE LEVER
59 THROTTLE ROD
S SWIVEL COLLAR STUD
-164 SHORT BUSHING
D-186 HANDLE BARS
A-108 SMALL SPROCKET
A-381 STARTING PULLEY S.A.
A-323 GREASE RETAINING COVER
A-309 RETURN SPRING
A-301 SPRING HOUSING
D-106
D-118


MAGNETO FLYWHEEL
D-125 BLOWER HOUSING
162 FELLING HANDLE
160 STRUT
511 SPECIAL NUTS
171 CUTTER BAR STUD
153 DRIVING SPROCKET
185 SAWDUST RAKER
187 CUTTER BAR
147 COMBINATION
255 BEARING
D-111 SPROCKET
D-107 CRANKCASE
D-109 LARGE SPR
183 CLUTCH ST
114 LARGE CLUTCH
113 SMALL CLUTCH
D-110 CLUTCH SPLINE
D-118 PRESSURE PLATE
D-117 CLUTCH FORK
D-226 BEARING RETAINER
259 BEARING
D-227 LOCKING WASHER
D-268 THRUST BEARING
COVER
HOUSING COVER


141 - PUMP PLUNGER
142 - PLUNGER ROD
152 - PUMP CYLINDER
160 - STRUT
160 - STRUT
OIL
- OIL PUMP SPRING
- OIL TANK SPRING
192 - OIL TANK
'39 - CHECK VALVE ASS'Y.
160 - STRUT



MANUFACTURED BY

Power Machinery Limited

VANCOUVER, CANADA

•

SOLD AND DISTRIBUTED BY

(Canada)

P.M. PRODUCTS (1947) LTD.

895 EAST HASTINGS ST.
VANCOUVER 4, B. C.

(United States)

WOODBOSS INC.

1800 S. E. UNION
PORTLAND 14, ORE.