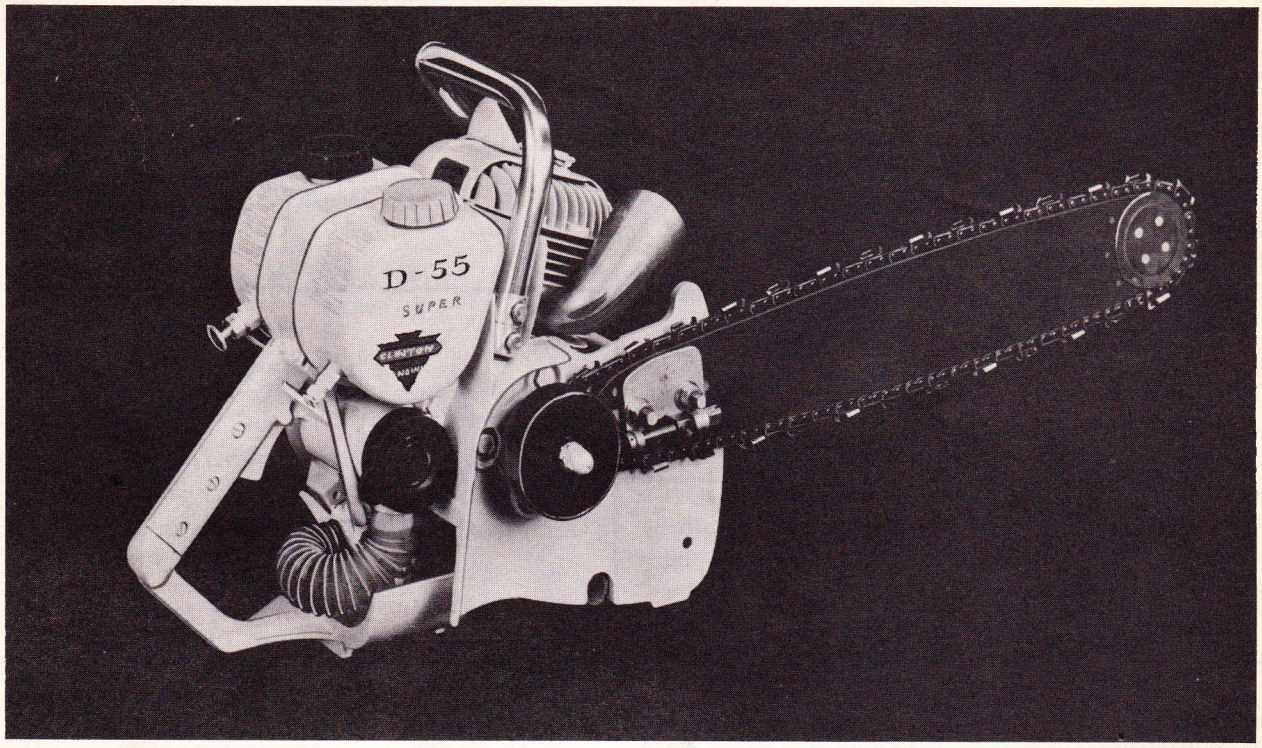
OWNER'S GUIDE

D55-1000
SUPER CHAINSAW



SPECIFICATIONS

TYPE:	Clinton one cylinder, two-cycle, air-cooled.
BORE & STROKE:	1⅞" Dia. x 1⅜" Stroke.
DISPLACEMENT:	4.48 Cubic Inch.
HORSEPOWER:	4 HP (Industry Rated).
ENGINE WEIGHT:	22¼ lbs.
FUEL:	Oil and gasoline mix — ¾ pint to one gallon for first 5 hours — ½ pint per gallon thereafter.
FUEL TANK:	One quart capacity.
CARBURETOR:	Diaphragm with built-in fuel pump for all position cutting.
POWERHEAD ASSEMBLY:	Consists of high quality precision die-cast aluminum cylinder block with integral cast-iron liner plus sectional die-cast magnesium strut and handles for low cost replacement if damaged.

BEARINGS:	3 Needle Bearings — 1 Ball Bearing.
CHAIN OILING:	Push-Button type for operator control to suit various cutting conditions.
MUFFLER:	Industry approved stainless steel spark arrester. Exhaust gases and heat are directed away from operator.
HANDLES:	Tubular chrome plated steel. Hand-sized for easy grip — permits flush cutting.
ROLLER TIP GUIDE BARS:	Patented — cuts as much as 20% faster...reduces chain to guide bar friction...extends life of guide bar, chain and sprocket.
GUIDE BAR LENGTHS:	14", 16", and 20" STELLITE-TIPPED induction hardened guide bars and 16" and 20" ball bearing ROLLER TIP guide bars.
CHAIN:	.404" pitch — .058 gauge standard equipment.

CLINTON ENGINES CORPORATION

CHAINSAW-OUTBOARD DIVISION

CLINTON, MICHIGAN

MANUAL No. 403949

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OPERATION OF THE TWO CYCLE ENGINE

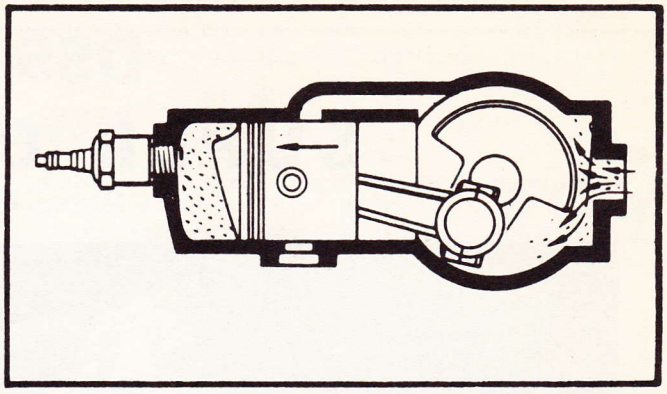
In a two cycle engine, intake, compression, power and exhaust are completed in two strokes of the piston. A power stroke results with every revolution of the crankshaft. On the upward stroke of the piston, a partial vacuum is created in the crankcase. (See Figure No. 1)

First, the vacuum and outside air pressure cause the reed valve between the crankcase and the carburetor to open. The air-fuel mixture from the carburetor flows in to the engine crankcase. Then, the downward movement of the piston causes the reed valve to close while continued downward movement of the piston compresses the fuel charge in the crankcase. Near the bottom of its stroke the piston uncovers the intake by-pass port, which connects the combustion chamber and the crankcase.

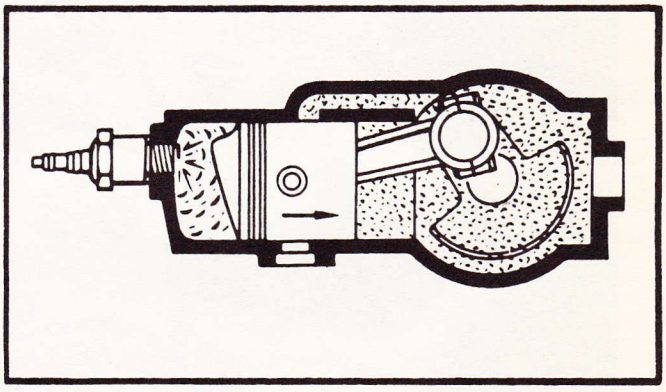
As the piston moves upward on its stroke, it passes the intake port, closing the port opening. Its continued upward movement causes the fuel mixture in the cylinder to be compressed. At the same time a new fuel charge is drawn into the crankcase. As the piston nears the top of the compression stroke, the fuel mixture in the combustion chamber is ignited by the spark. The explosion and expansion of gases forces the piston down on its power stroke. Power is not delivered for the full length of the stroke. Some time is required to rid the cylinder of burned gases, so that it may receive a fresh fuel charge from the crankcase.

As the piston nears the bottom of its stroke, it uncovers the exhaust port opening slightly ahead of the intake port. This permits taking advantage of the pressure of the exhaust gases in the cylinder, which are still comparatively high, and allows them to start escaping. Further downward travel of the piston uncovers the intake by-pass port. The incoming charge assists in forcing the exhaust gases out of the cylinder, to complete the cycle.

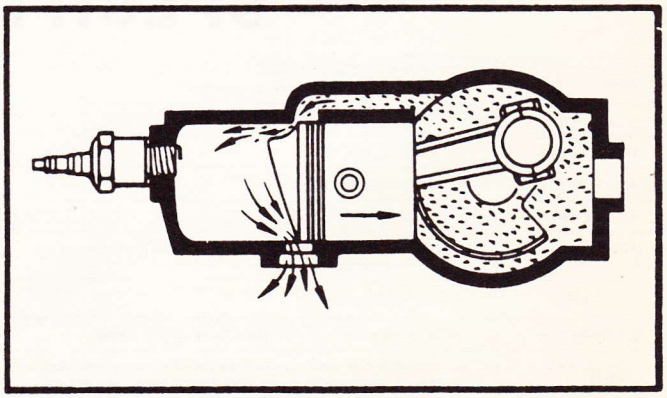
The chief attributes of the two cycle engine are its lightweight, low cost and powerful but simple operation. With only three basic moving parts (crankshaft, piston and rod), maintenance costs are at a minimum while efficiency is at a maximum.



COMPRESSION



POWER



EXHAUST

Figure No. 1

ASSEMBLY OF GUIDE BAR AND CHAIN

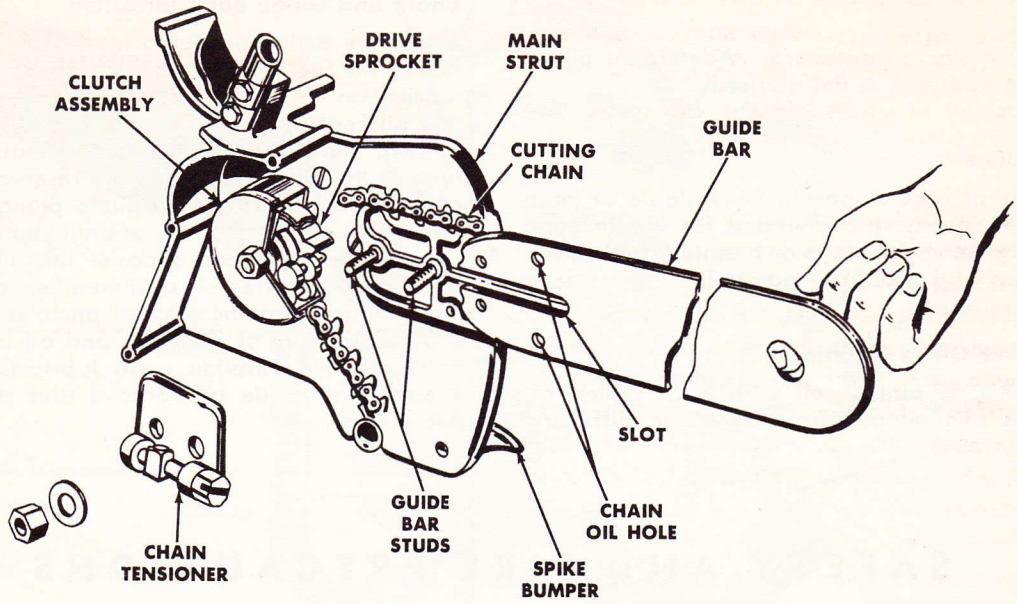


Figure No. 2

1 Slide the guide bar over the mounting studs to the full length of the guide bar slot. (See Figure No. 2)

2. Place the chain around the guide bar so that cutting edges of teeth on top of the guide bar point away from the engine unit.

3. Place the Chain over clutch drum onto the drive sprocket, then place drive links into bar groove.

4. Pull the guide bar out from the engine unit until the chain slack is taken up. Make sure that the chain drive links at the bottom of the bar are properly seated in the bar groove.

5. Place the tension plate on mounting studs with the flat pad against the guide bar

6. Make sure that the chain tension lug, located in the chain tension plate, fits into the slotted holes.

7. Put washers and nuts on the guide bar mounting studs to make them snug, but not tight, against the guide bar mounting plate.

8. While holding with upward pressure at end of guide bar, turn tension adjusting screw clockwise until the chain has a free sag of ⅛ inch from the bottom of the guide bar on stellite tip bars. On roller nose bars the chain should be snug. If the blade is not in the up position as high as it will go against the guide bar studs, it will cause excessive wear on the top of the guide bar closest to the sprocket.

9. Securely tighten the mounting stud nuts and then re-check for proper chain tension. If the tension has changed, then loosen the mounting stud nuts and repeat the procedure outlined in step 8.

10. Be sure the chain is properly tensioned at all times. Check it often. A chain that is too tight will interfere with proper cutting and will cause serious damage to the guide bar and the engine. CAUTION: Check and maintain chain tension for long life and best operation. Use extra care with a new chain until the stretch, which is most noticeable in the first hour of cutting, is eliminated.

CAUTION — Never Adjust Chain Tension While Engine Is Running.

FUEL PREPARATION AND LUBRICATION

Correct fuel mixture is one of the most important points in operating your engine. Follow these instructions carefully, and DO NOT POUR UNMIXED GASOLINE OR OIL INTO THE FUEL TANK.

Type of Oil

Use SAE #30 motor oil outboard. A detergent oil or oil containing additives is not advised.

Type of Gasoline

A good grade of regular gasoline, available at your local filling station, is recommended for use in your chain saw engine. High octane or premium fuels offer no advantages and ARE NOT advised.

Mixing Raito of Oil to Gasoline

Thoroughly mix ¾ pint of oil with each gallon of gasoline. This rich oil mixture may cause difficulty with idling, but it is necessary to properly wear in the various parts of the engine. After 5 hours break-in ratio may be changed to not less than ½ pint to 1 gallon of regular gasoline.

Chain and Guide Bar Lubrication

A positive action oil pump located in the lower portion of the fuel tank (See Figure No. 3) provides ample lubrication to the cutting chain and guide bar. Fill this oil reservoir with new SAE #30 oil, being sure to keep the oil level in the reservoir above the intake tube of the oil pump. When the reservoir is filled and cap replaced, push the oil pump plunger a couple of times until pressure is felt, or until you see oil appearing on the guide bar opposite the oil fitting in the main strut. In extremely cold weather, or when cutting wood which contains a lot of pitch, sap or resin, use a 50-50 mixture of kerosene and oil in the oil reservoir. This will provide good lubrication as well as keeping the guide bar groove and chain comparatively clean.

SAFETY AND FIRE PRECAUTIONS

Your Chainsaw is well-built for maximum safety and efficiency, but carelessness in operation can cause accidents. Read the following suggestions carefully, and remember them as you work with your saw.

1. Do not start the engine in a closed room. Have ample ventilation at all times.
2. Do not touch the chain when the engine is running even at a slow speed.
3. Keep engine adjusted to an idle speed which stops the chain completely.
4. Do not move the chain from one location to another without first stopping the engine.
5. Be sure that the spike bumper (abutment strut) is flush against the sawing log to keep the engine unit from being pulled against the log.
6. Do not operate your chain saw when it needs repair.
7. Do not allow the saw to run while on a cement floor.
8. Do not run saw when it is dull or improperly filed.
9. After refueling, move the engine a few feet away from the fueling site.
10. Keep chain saw clean of dust and inflammables, and check to see that spark plug and electrical connections are tight.

Note! Never Carry the Chain Saw from Place to Place with the Engine Running.

BREAK-IN PERIOD

In order to obtain maximum efficiency and service from your chain saw, it is necessary that the engine be operated during a break-in period of approximately five (5) hours. Never operate the engine without load or allow it to become overheated. Proper breaking in of key parts will have much to do with the life of your engine. Be sure to check often for loose nuts and screws and make all necessary adjustments. Periodic inspection and service by your authorized Clinton Service Dealer will result in long life and good performance of your Chainsaw.

CHAIN SAW CONTROLS

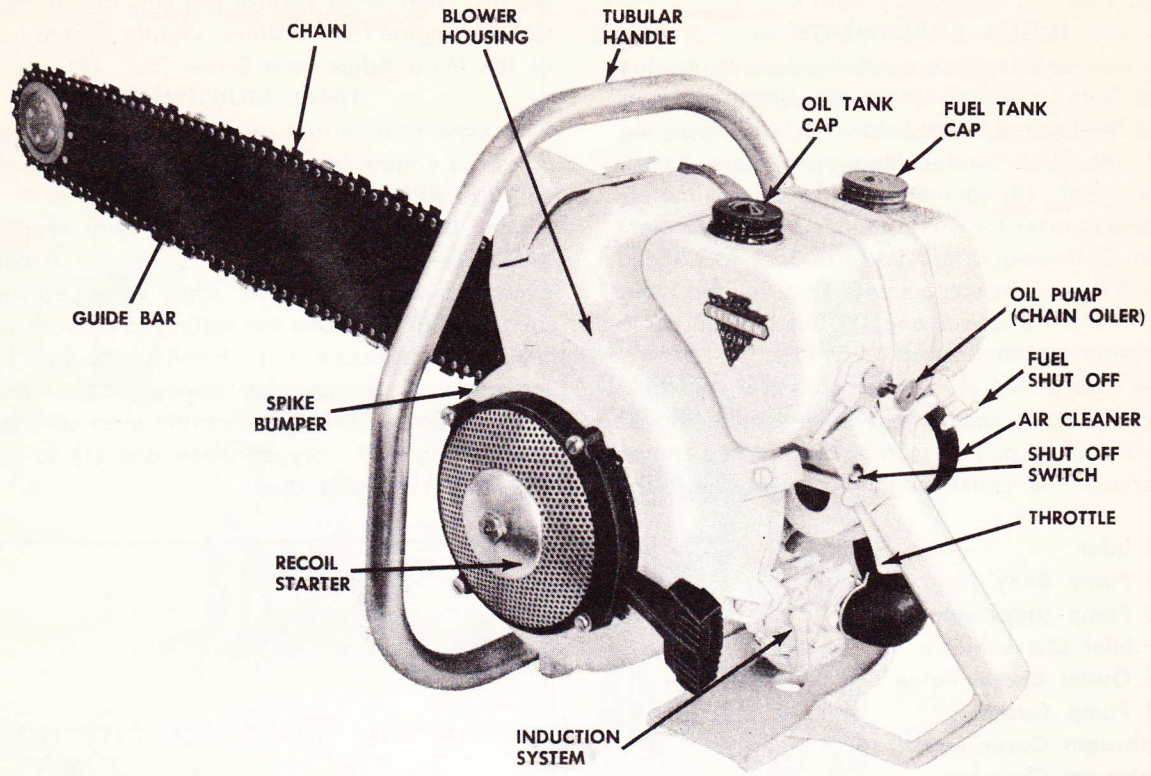


FIG. 3

Major controls on your chain saw are conveniently grouped around the hand grip assembly for finger tip action. You will find your saw easy to manage once you associate the following controls with their locations on the saw. (See Figure 3.)

THE RECOIL STARTER—Located on the left side of the unit. A slight pull will engage the starter with the engine and a spring disengages it when the tension is relieved. CAUTION: The starter cable when pulled out, should not be released abruptly and allowed to snap back into its socket. Release slowly to permit complete re-winding.

THE CHAIN OILER—Manually operated, plunger type oil pump, located in the lower portion of the fuel tank just above the hand grip. This system forces oil to the guide bar and chain for positive lubrication.

FUEL SHUT-OFF VALVE—On the bottom of the fuel tank at the lower right. To open, turn counter-clockwise until a slight tension is noticed.

THE THROTTLE CONTROL — Trigger-type, located on the handle grip. The engine speed, or throttle opening, is increased by squeezing the trigger upward into the handle.

THE HIGH SPEED MIXTURE ADJUSTMENT SCREW—Located on the left side of the carburetor. The adjustment is used to obtain proper fuel and air mixture, make the engine run smoothly and achieve maximum power.

THE IDLE FUEL MIXTURE ADJUSTMENT SCREW — This device is found on the left side of carburetor. It is used to obtain smooth and proper idling speed.

THE CHOKE LEVER — Located on the left side of the carburetor just above the adjustment screws.

THE FUEL PUMP — Located in lower section of carburetor maintains proper fuel supply to the carburetor.

THE IGNITION SWITCH — Toggle-type, located directly under fuel tank.

STARTING PROCEDURE

ADJUSTMENT INSTRUCTIONS

To properly adjust carburetor for best performance the engine must be thoroughly warm.

INITIAL ADJUSTMENTS

To start a new engine: First, carefully close by turning clockwise, both Idle and Main Adjustment Screws (Ref. 7 & 19)—located either below air intake opening or at left side of carburetor. Now open Main Adjustment Screw (Ref. 19) counterclockwise approximately one and one-quarter turns (1¼). Open Idle Adjustment Screw (Ref. 7) three-quarters (¾) turn. Back Idle Speed Regulator Screw off its contact with Throttle Stop Lever then turn it inward about one (1) full turn so as to slightly open Throttle Shutter (Ref. 11).

Open fuel shut off valve, choke carburetor, put ignition switch to "ON" position, squeeze throttle trigger and give firm quick pull on starting cord. When engine fires, decrease the choke slightly and ease off the throttle trigger. Do not race engine, gradually decrease the choke to full open position as engine warms. Then make several test cuts and if necessary, to keep engine from stalling, slightly increase opening of the Main Adjustment Screw (Ref. 19).

FINAL ADJUSTMENTS

Now close throttle and readjust Idle Speed Regulating Screw so engine idle speed is at approximately 1800 to 2200 RPM and without chain turning or throttle trigger being depressed. Then, slowly readjust Idle Adjustment Screw (Ref. 7) to obtain smooth and even engine performance, after which enrichen the mixture slightly above this setting to provide sufficient fuel for quick acceleration. Finally, with saw functioning under a cutting load, slowly readjust Main Adjustment Screw (Ref. 19) to obtain even cutting speed. This setting will vary between one (1) to one and one-half (1½) turns open.

1. **Fuel Inlet**
2. **Fuel Pump Body**
3. **Fuel Pump Diaphragm**

3A Fuel Inlet Check Valve

3B Fuel Outlet Check Valve

4. **Fuel Pump Gasket**
5. **Diaphragm Cover Gasket**
6. **Diaphragm Chamber**
7. **Idle Adjustment Screw**
8. **Impulse Channel**
9. **Idle Fuel Adjustment Orifice**

10A Primary Idle Discharge Port

10B Secondary Idle Discharge Port

11. **Throttle Shutter**
12. **Main Fuel Adjustment Orifice**
13. **Body**
14. **Venturi**
15. **Main Fuel Discharge Port**
16. **Choke Shutter**
17. **Fuel Inlet Supply Channel**
18. **Inlet Needle & Seat**
19. **Main Adjustment Screw**
20. **Inlet Tension Spring**
21. **Inlet Control Lever**
22. **Fulcrum Pin**
23. **Atmospheric Vent Hole**
24. **Diaphragm Cover**
25. **Diaphragm**
26. **Strainer Gasket**
27. **Fuel Inlet Screen**
28. **Strainer Cover Retaining Screw**
29. **Strainer Cover**

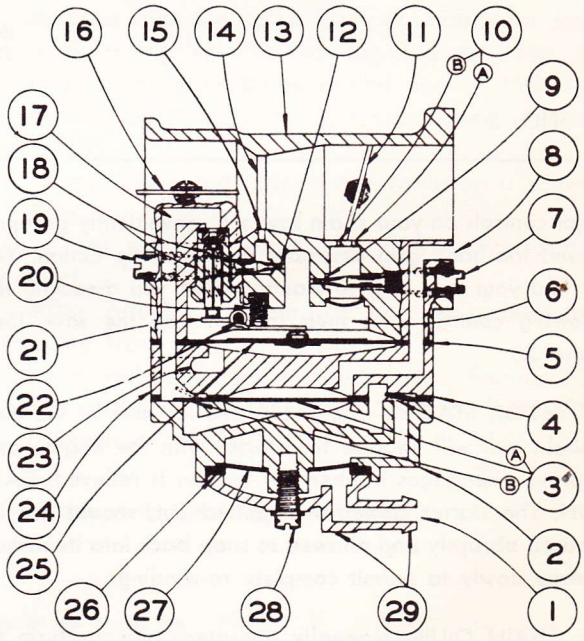


FIG. 4

THE CUTTING OF SMALL LIMBS IS CALLED *PRUNING*.

Pruning Before Felling: Cut from bottom of limb—larger limbs should be undercut, with the final cut made from the top several inches farther out from the trunk.

Pruning After Felling: Always keep the saw blade moving away from the operator.

PRUNING

BUCKING

BUCKING CUT — Small Logs

Try bucking a few stove wood lengths, just to get the feel of your saw.

1. Select a suitable log approximately 12 to 18 inches in diameter.
2. Start your saw according to instructions.
3. Place one hand on the handle grip for complete control of the engine. Use the other hand on the tubular handle to support the unit.
4. Chain should be allowed to feed itself with a minimum amount of pressure on the unit by the operator to achieve best cutting results.
5. As the cut is completed, release the throttle which disengages the clutch.
6. Continue this bucking practice until you are well acquainted with the saw.

BUCKING CUT — Large Logs

To cut a log up to the capacity of the guide bar, start at the top of the log.

1. Raise the power unit and lower the cutting mechanism to begin your cut on the side of the log that faces away from you.
2. Notice that sawing action holds the saw against the log. (See Figure No. 5).
3. After tilting the unit to the maximum angle (about 35°) for the initial cut, pull the chain saw toward you.
4. Repeat this rocking motion until the cut is completed.
5. CAUTION: As the cut nears completion you must be careful to keep the sawing unit from entering the ground. It is sometime possible to roll the log forward and complete the cut from the opposite side, but often this cannot be done, and extreme care is necessary.
6. Release the throttle as you complete the cut, and this action disengages the clutch.

OPERATOR MAKING FINAL CUT (FELLING) PREPARATORY TO FELLING THE TREE.

NOTCHING AND FELLING

For this type of operation rotate the guide bar in a horizontal position against the tree. DO NOT allow spectators within six feet of the chain when it is running.

1. Remember that the undercut notch guides the fall of the tree and should be made with care. By holding your saw at the desired angle any type of notch can be made, but plan carefully. (See Figure No. 6).
2. As you start your felling cut remember to LEAVE HOLDING WOOD (See Figure No. 6) or the tree might spin out of control.
3. Think before you cut!

CHAIN MAINTENANCE AND FILING INSTRUCTIONS

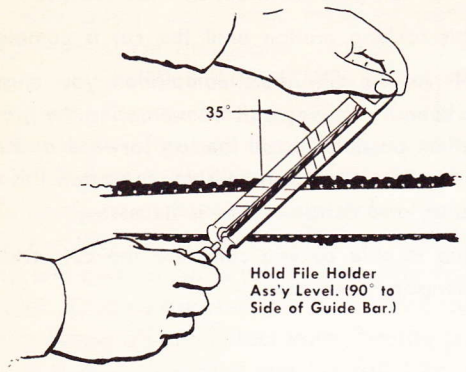


FIG. 9

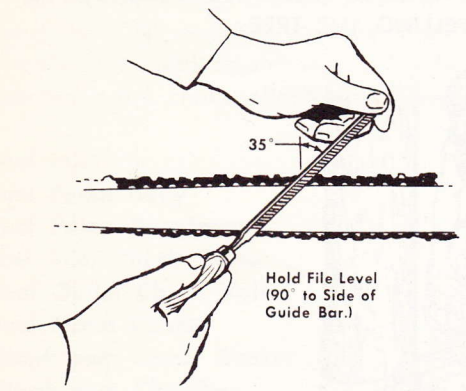


FIG. 10

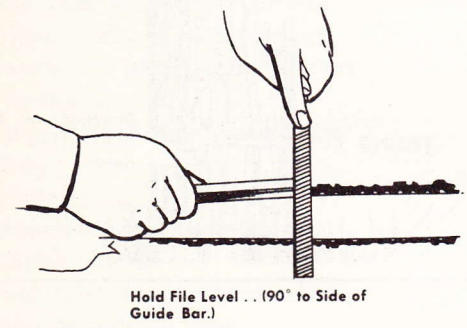


FIG. 11

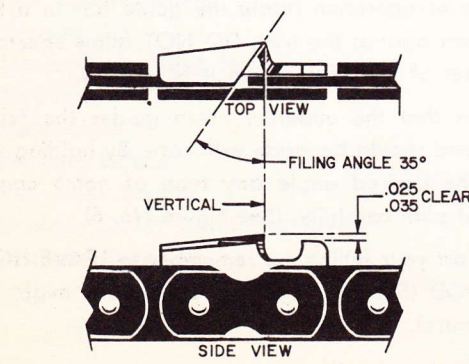


FIG. 12

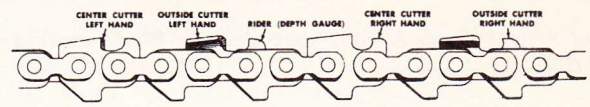


FIG. 7

1. Place chain in chain filing vise or straight edge vise if possible.
2. Place file holder assembly over rounded cutting tooth. (See Fig. 9) The left hand cutting tooth should be sharpened from the right side and the right hand tooth from the left hand side. Line up filing angle marks on holder with guide bar. Hold file level or 90° to the guide bar.
3. Two or three firm strokes (with pressure applied on the forward stroke) should give a keen edge to the tooth.
4. All teeth must have the same filing angles, the same length, and riders the same height.
5. The center cutters, located between the curved cutting teeth, should be filed with a flat file (See Fig. 10) after all the curved cutting teeth have been filed.
6. Using a flat file the center cutters should be filed on leading edge at 35° angle or at the same angle as cutting teeth. Hold file 90° to the guide bar. Take care that the top of the center cutters are even with the top of curved cutting teeth or .005 below curved cutting teeth. Make sure that they are never above the curved cutting teeth. When finished the center cutters should all be the same length and height.
7. The final step is to file the riders down. This is done with the use of a depth gauge (See Fig. 11). Care should be taken that all riders have the same height and that the leading edge is rounded off after filing. Set riders on direct drive chain saws at .025. Set riders on reduction drive models at .035. See picture.

NOTE: In soft wood, the saw chain depth riders on direct drive may be set at .035 on reduction drive at .045 for faster cutting.

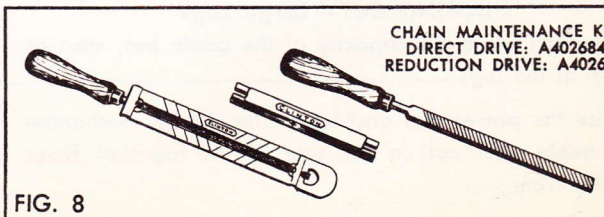
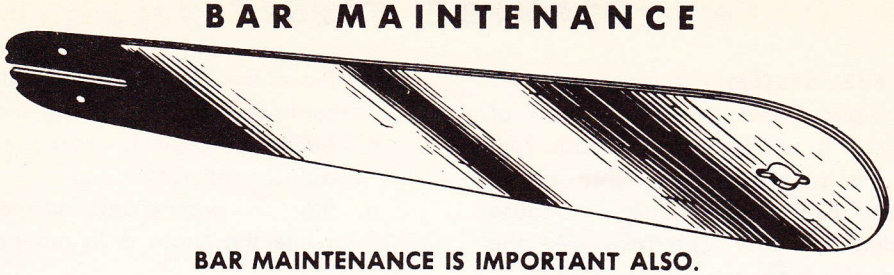


FIG. 8

BAR MAINTENANCE



BAR MAINTENANCE IS IMPORTANT ALSO.

THREE MAJOR FORMS OF BAR WEAR

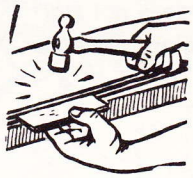
1	2	3
UNEVEN RAIL WEAR	**UNEVEN INSIDE GROOVE WEAR**	**WORN RAILS**
		
Causes cut to bend or "run" . . . chain to bind in cut.	Causes friction and heat binding and general inefficiency.	Shallow groove allows drive links to ride on bottom causing chatter.

JOINTING BAR RAILS

Jointing is the process of making the two rails level and square with each other so as to provide proper bearing surfaces for the bottoms of the tie straps and cutters.

Jointing should be done by your dealer whose shop is equipped to render this service. You can make temporary repair by using the flat file A401906 to even the rails.

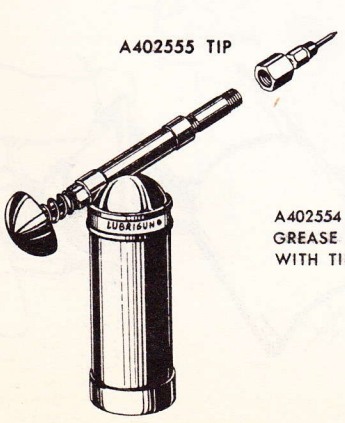
CLOSING BAR GROOVES



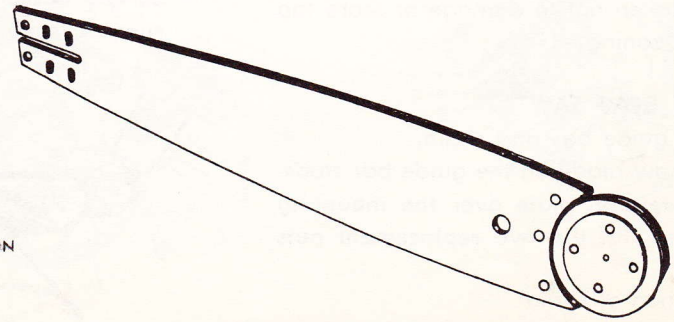
1. Place a piece of steel (about 6" long and approximately .004" thicker than the drive links) in the groove and lay bar on an anvil with the thin rail up.
2. Use a 3 lb. hammer and close thin rail snuggly down on the piece of steel.
3. After each section is closed, drive "piece of steel" forward its entire length and repeat the operation until the entire bar is completed.

BAR MAINTENANCE DUTIES DESCRIBED ABOVE ARE WITHIN THE REACH OF EVERY OWNER. ADDITIONAL DUTIES SHOULD BE HANDLED BY A CLINTON AUTHORIZED SERVICE MAN.

A402555 TIP



A402554
GREASE GUN
WITH TIP



TIP ASSEMBLY
ONLY

A401976

Lubricate Roller Tip frequently. A good grade of lightweight grease is recommended.

SERVICE TIPS

FUEL SYSTEM

The fuel system in your Chainsaw is composed of fuel lines and orifices. It utilizes an automatic fuel pump which puts the proper mixture into action throughout the system. Fuel system defects can cause serious trouble throughout your Chainsaw. At the first sign of trouble of this kind, consult your dealer.

OIL PUMP OPERATION

Since proper lubrication of chain and guide bar is so important, be sure to notice any failure in this system. If oil fails to flow to the guide bar and chain when the oil pump plunger is pushed, or if there is no pressure on the plunger, the pump is not functioning. See your authorized Clinton Service Station Dealer.

GAS CAP AND GASKET

The plastic filler cap like most gas caps has an air-hole in it. This is because the fuel tank must take in air when a vacuum exists in the tank.

MAGNETO ASSEMBLY AND IGNITION SYSTEM
(Flywheel Type)

Remember the magneto should be inspected after every 100 hours of operation. If the engine refuses to start or is hard to start, check the gas supply, carburetion system and spark plug. (If the latter is badly burnt, replace.) If the engine still does not start see your authorized Clinton Service Dealer for magneto inspection and repair.

CLEANING VALVE PORTS
Exhaust

The only servicing required for the valve ports is an occasional cleaning to remove carbon deposits.

1. Remove muffler assembly from Chainsaw engine which will expose the exhaust valve ports.
2. Clean with suitable instrument capable of scraping and removing carbon deposits within these ports.
3. The engine should be turned over by hand until the piston moves below the port openings, which will allow greater access for the cleaning of these ports.
4. Care should be taken not to damage or score top of piston when cleaning.

BOW SAW

1. Remove straight guide bar and chain.
2. Mount the Bow Saw blade on the guide bar studs.
3. Place the chain tension plate over the mounting studs and secure with the two replacement nuts in the Parts Bag.
4. For easy installation of chain
   a. Loosen the tension adjustment.
   b. Place the chain over the drive sprocket and continue to seat it along the blade groove.
   c. Adjust the chain to proper tension by using the adjustment nut.
   d. Start the engine and use the chain oiler freely while the chain is in motion.

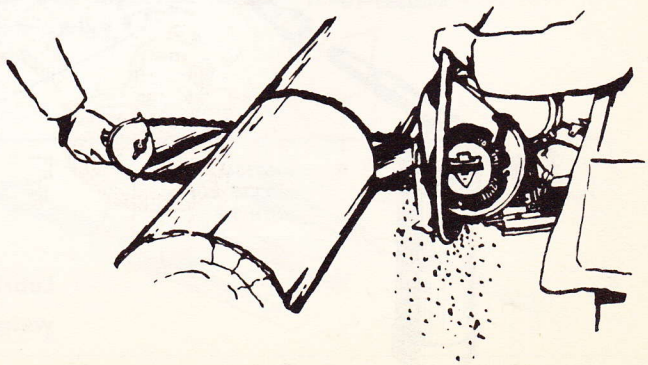
HELPERS HANDLE

For specialized sawing operations which require the use of the long guide bar, the Clinton Chainsaw can be fitted with a Helpers Handle for two-man use.
This assembly is in two parts. A mounting stud on the handle-and-guard half slips through the slotted hole in the rounded end of the guide bar. Note that the lugs on either side of the mounting stud engage the slot to position the handle securely. The cover half is then placed over the stud and secured with a washer and wing nut. **Note:** You may have to knock out a tapered plug in the guide bar to install the helpers handle.

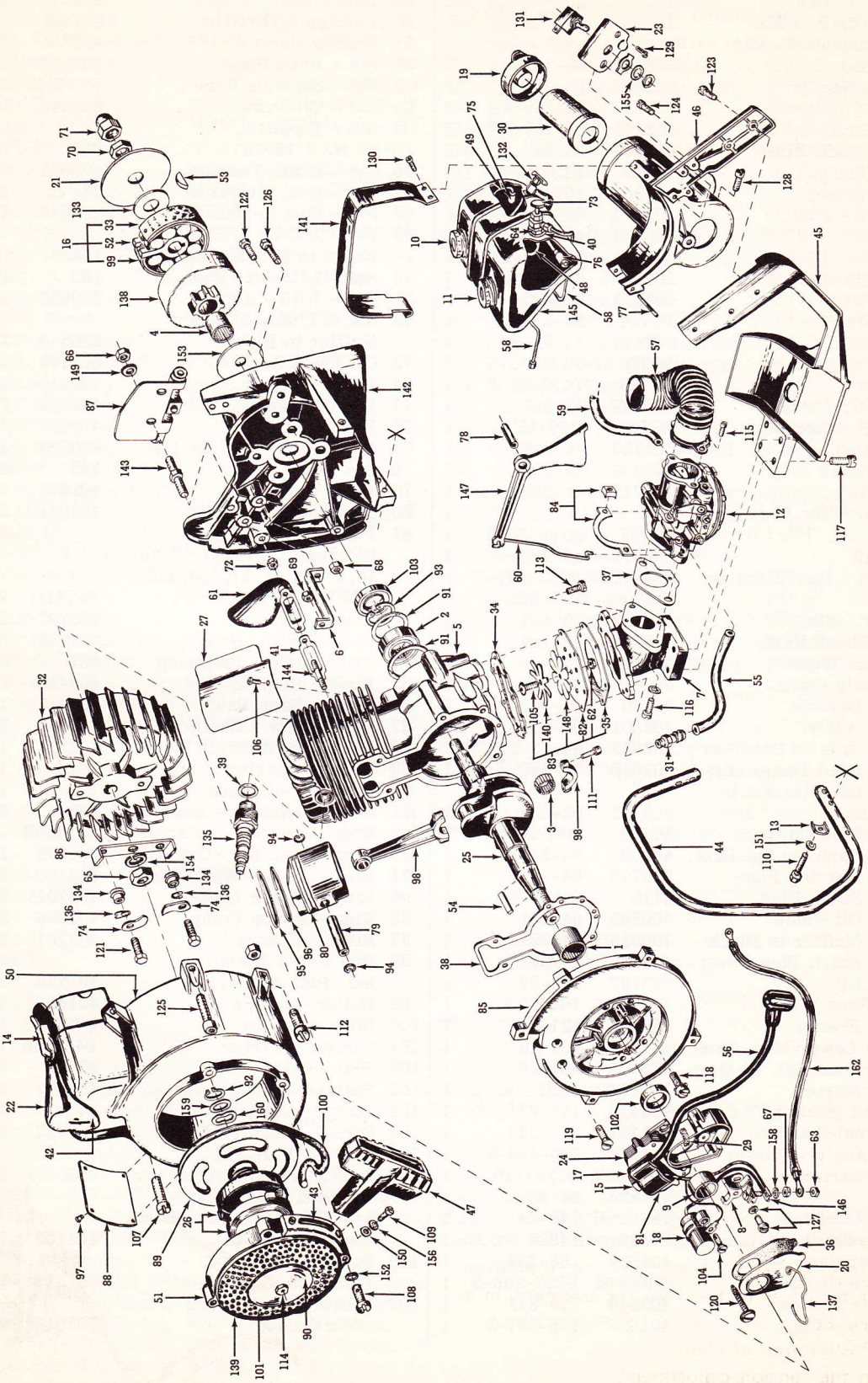
MAINTENANCE

By making the following practices a habit you can help keep your saw in good running order and avoid repairs that neglect might make necessary.

1. Remove sawdust and dirt daily so that a thorough inspection can be made.
2. Tighten any loose nuts or screws.
3. Check fuel and oil lines for leaks, especially at connection points.
4. Check air filter and brush off dirt.
5. Do not use compressed air to remove dust or dirt from the OUTSIDE of the carburetor, since particles may be blown into the mechanism if you do.
6. Check muffler and exhaust ports periodicaelly, when the loss of power is apparent. If ports are dirty, clean them.
7. As often as necessary remove the cutting chain from the guide bar and allow it to soak overnight in a pan of kerosene to remove the sap and resin deposits and to provide lubrication for all parts of the chain.
8. If you notice symptoms of trouble but cannot find the cause, check with your authorized Clinton Service Dealer, and be sure your saw is in good running order.



BASIC PARTS BREAKDOWN



Ref. No.	Description	Current No.	IBM No.	Qty.
1	Bearing - Roller	403854	20-198-99	1
2	Bearing - Ball, Main	233	20-109	2
3	Bearing Ass'y - Needle Wax Bonded	403550	20-197-5	1
4	Bearing - Needle	403957	20-202	1
5	Block - Cylinder	402699	22-639-5	1
6	Brace - Strut	402424	26-459	1
7	Bracket - Induction	403849	26-545	1
8	Breaker Ass'y	P5735	P135-6-5	1
9	Cam - Magneto	402967	157-31	1
10	Cap Ass'y - Fuel	403685	45-197-5	1
11	Cap - Oil	400569	45-93-5	1
12	Carburetor	403893	39-730-99	1
13	Clamp - Handle	201	81-87	5
14	Clamp - Wire	402530	263-274	1
15	Clip - Core	P5734	81-2	1
16	Clutch Ass'y	402645	44-71-5	1
17	Coil Ass'y	P5770	P135-13-5	1
18	Condenser	P5736	P135-31-5	1
19	Cover - Air Cleaner	401699	45-257	1
20	Cover - Breaker Box	P5743	P45-15	1
21	Cover - Dirt	402389	45-297	1
22	Cover - Spark Plug	401679	45-256	1
23	Cover - Switch	401714	45-259	1
24	Core & Breaker Box Ass'y Inc. Ref. No. 17	P5732	P135-37-5	1
25	Crankshaft	403272	46-767	1
26	Cup Ass'y - Recoil Spring	P401835	P263-251-5	1
	Decal Kit	403799	149-372	
27	Deflector - Air	402727	59-499	1
28	Elbow - Check Valve	401405	69-189	1
29	Felt - Cam Wiper	P5742	P94-189	1
30	Filter Ass'y - Air	403934	22-128-5	1
31	Fitting - Bayonet	91170	69-123	1
32	Flywheel Ass'y	402801	83-62-5	1
33	Friction & Steel Band Ass'y	402639	44-73-5	1
34	Gasket - Reed Plate to Block	401629	94-360	1
35	Gasket - Ind. Bracket to Reed Plate	403792	94-438	1
36	Gasket - Dust Cover	P5744	P94-241	1
37	Gasket - Carb. to Ind. Brkt.	401092	94-242	1
38	Gasket - Bearing Plate	700743	94-421	1
39	Gasket - Spark Plug	3115	94-92-99	1
40	Gasket - Oil Pump	400860	94-281	1
41	Gasket - Muffler to Block	700038	94-394	1
42	Gasket - Spark Plug Cover	401987	94-362	1
	Gasket - Kit	403797	149-37	1
43	Guide - Rope	P401834	P111-13	1
44	Handle - Frame	402537	121-141	1
45	Handle & Lower Mtg. Cast	401687	905-15	1
46	Handle & Tank Sdl. Casting	403076	905-26	1
47	Handle - Starter	P700949	P121-182-5	1
48	Hose - Oil (Snake)	402419	158-274	1
49	Hose - Fuel (Snake)	401497	158-243	1
50	Housing Ass'y - Blower	401677	259-488-5	1
51	Housing Starter	P402459	P124-119	1
52	Hub	401830	44-48	1
53	Key - Woodruff	184	148-24	1
54	Key - Flywheel	10339	148-4	1
55	Line - Impulse	401528	158-249	1
56	Lead Wire Group	P402965	P307-206-5	1
57	Line - Air Cleaner	403546	158-313	1
58	Line Ass'y - Oil	401695	158-257-5	1
59	Line - Fuel	401544	158-252	1
60	Linkage - Throttle	401692	159-112	1
61	Muffler Ass'y	403885	170-126-5	1
62	Nut - Reed Plate	403536	183-141	1
63	Nut - Shorting Wire	P5740	P183-21	1
64	Nut - Oil Pump	400544	183-12	1
65	Nut - Flywheel, H. H. 7/16-20	838	183-158	1
66	Nut - Chain Tension	403624	183-195	2
67	Nut - Hex. Terminal	P5740	P183-21	1
68	Nut - Stud to Main Cast	402550	183-190	1
69	Nut - 1/2-20 Brace to Bearing Plate	132	183-33	1
70	Nut - 7/16-20 - Jam	185	183-131	1
71	Nut - 7/16 - Acorn	400937	183-175	1
72	Nut & L'washer Ass'y Muffler to Block	3255-A	183-29-5	2
73	Oil Pump Ass'y	401792	220-28-5	1
74	Pawl - Starter	700915	157-239	2
75	Pickup - Fuel	401765	25-26	1
76	Pickup - Oil	402121	25-28	1
77	Pin - Roll, 1/8" x 1 1/2"	400863	203-137	1
78	Pin - Roll	162	203-107	1
79	Pin - Wrist	402673	203-157	1
80	Piston	402671	204-64	1
81	Plate - Ass'y Stator Ref. Nos. 8, 15, 17, 18, 20, 24, 29, 36, 67, 81, 104, 120, 127, 137, 146, 158.	P5731D	P268-6-5	
82	Plate - Reed	403791	215-444	1
83	Plate Ass'y - Reed	403793	215-444-5	1
84	Plate Ass'y - Retaining	681	215-332-5	1
85	Plate - Bearing	403426	215-417	1
86	Plate - Base Pawl	700913	215-437	1
87	Plate Ass'y - Chain Ten.	400986	215-368-5	1
88	Plate Identification (Screen)	402222	137-387	1
89	Pulley - Starter	P401869	P219-131-5	1
90	Retainer - Screen	P402457	P232-113	1
91	Ring - Retainer - Bearing	195	232-93	2
92	Ring - Retainer - Starter	P401947	P232-109	1
93	Ring - Retainer - Crank.	700893	232-73	1
94	Ring - Lock - Wrist Pin	663	232-119	2
95	Ring - Piston Lock	402701	232-18	3
96	Ring - Piston Comp.	402698	233-44	3
97	Rivet - Cherry	402204	244-75	4
98	Rod & Cap Ass'y Inc. Ref. No. 111	401770	245-69-5	1
99	Roller - Clutch	401803	44-46	8
100	Rope - Starter	P700943	P246-6	1
101	Screen - Starter	P402458	P257-81	1
102	Seal - Oil	257-1	94-257	1
103	Seal - Oil	402407	94-301-99	1
104	Screw - Condenser	P5741	P258-299	1
105	Screw - Reed Plate	403537	258-516	1
106	Screw - R.H.S.T. 8-32 x 3/8 (Deflector)	698	258-550	2
107	Screw & Nylock Ass'y 1/4-20 x 1 1/2 Blower Housing to Strut	401103	258-643	1
108	Screw - 12-24 x 1 Pan Head (Starter)	701013	258-843	4
109	Screw - 10-24 x 1/2 (Pole Guide)	701016	258-845	2

Ref. No.	Description	Current No.	IBM No.	Qty.
110	Screw - H.H. - 1/4-20 x 1 1/2 (Handle)	850	258-569	5
111	Screw - Cap to Rod	400585	258-615	2
112	Screw & Nylock Ass'y Blower Hsg. to Brg. Plate	401708	258-678-5	3
113	Screw & Nylock Ass'y - Induction Brkt	400177	258-586-5	6
114	Screw & Oil Cup Ass'y	P402493	P258-723-5	1
115	Screw - Clamp to Carb.	402126	258-710	2
116	Screw - 1/4-20 x 7/8 Carb. to Ind. Brkt.	365	258-520	2
117	Screw - Handle to Ind. Brkt.	401708	258-678-5	4
118	Screw & Nylock Ass'y Brg. Plate to Block	400179	258-588-5	4
119	Screw - Brg. Plate to Block	401947	258-692-5	2
120	Screw - Mag. to Brg. Plate	5682-A	258-108-5	2
121	Screw & Nylock Ass'y Pawl Plate to Flywheel	701028	258-851-5	2
122	Screw - Main Casting to Block - H.H. 5/16-18 x 7/8	403478	258-750	4
123	Screw & Nylock Ass'y Tank Sdl. to L. Handle	401704	258-677-5	2
124	Screw & Nylock Ass'y Tank Sdl. to L. Handle	401733	258-681-5	1
125	Screw - Blower Hsg. to Brg. Plate to Saddle S.H.C. 1/4-20 x 1 1/2	403071	258-737	1
126	Screw - Main Cast. to Sdl. H.H. 5/16-18 x 1 1/4	403479	258-751	2
127	Screw & L'washer Ass'y Breaker	P5737	P258-297	1
128	Screw & Nylock Ass'y Tank Sdl. to Main Casting	671	258-549-5	1
129	Screw - Switch Cover to Saddle Casting	401732	258-680	2
130	Screw & L'washer Ass'y Tank Straps	400189	258-592	2
131	Shorting Ass'y - Ignition	403638	266-41-5	1
132	Shutoff Valve	401878	293-122	1
133	Spacer - Clutch Cover	400540	304-37	1
134	Spacer - Starter	700914	304-524	2
135	Spark Plug	K403823	K267-66-5	1
136	Spring - Starter Pawl	401865	263-171	2
137	Spring - Breaker Box Cvr.	P5745	P263-10	1
138	Sprocket Ass'y	403911	106-255-5	1
139	Starter Ass'y Recoil	402454	265-160-5	1
140	Stop Reed	403544	293-97	1
141	Strap - Tank Retainer	401700	26-446	1
142	Strut - Main	403206	26-477	1
143	Stud - Guide Bar	403189	24-70	2
144	Stud - Muffler to Block	5659	24-11	2
145	Tank Ass'y - Fuel	401923	277-285-5	1
146	Terminal - Jamtite	P5738	P307-230	1
147	Trigger - Throttle	401691	157-296	1
148	Valve - Reed	403543	293-96	1
149	Washer - Plate Chain Ten.	507	304-337	3
150	Washer - #10 Lock (Str.)	P192	P304-318	2
151	Washer - Lock - Handle	403150	304-451	5
152	Washer - Lock - Starter	701012	304-532	4
153	Washer - Chain Guide	402388	304-430	1
154	Washer - Lock (Flywheel)	400874	304-375	1
155	Washer - Lock Special Shorting Switch	400323	304-368	1
156	Washer - Lock - Internal Lock - 1/4	114	304-3	2
157	Washer - Bearing Plate to Block - 1/2 Flat Not Illust.	657	304-351	4
158	Washer - Terminal	P5739	304-290	1
159	Washer - Retaining (Str.)	P401946	P304-412	1
160	Washer - Wave (Starter)	P401945	P304-411	1
161	Washer - Lead (Str. Rope)	P700964	P304-525	1
162	Wire - Shorting	403396	307-265-5	1

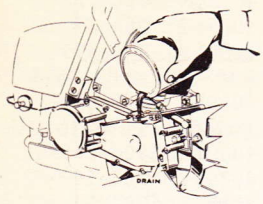
D-55-1000 MODEL VARIATIONS

Below is the list of Model Variations on the D-55-1000 Chainsaw as the number appears on the name plate. The parts listed are in addition or in place of their respective parts. Refer to the basic parts list for parts not listed on this page.

D-55-1000: No variation. Use basic parts list.
D-55-1100: Note 1, 2, 3.
D-55-1101: Note 4, 5.
D-55-1102: Note 1, 2, 5, 6.
D-55-1103: Note 7.
D-55-1104: Note 1, 2, 8.
D-55-1105: Note 9.
D-55-1106: Note 1, 2, 10.
D-55-1107: Note 11.

Note 1: Refer to Transmission Parts Breakdown on 2.05:1 ratio transmission.
Note 2: Use 403699 (121-156-5) Handle Assembly, 403415 (81-138) Clamp Joint, 850 (258-569) Screws (2), 657 (304-351) Washer (2), 400584 (183-167) Nut (3).
Note 3: Use 403800 Decal Kit.
Note 4: Use 403803 Decal Kit.
Note 5: Use 402878 (277-302-5) Tank, 401361 (45-249) Cap Assembly - Oil, 401365 (94-249) Gasket (2), 402001 (45-270) Cap Assembly - Fuel, 401425 (258-665) Screw (2), 401367 (41-126) Retaining Chain Assembly (2), 401366 (94-292) Gasket (2), 401684 (26-445) Strap Tank, 402882 (69-224) Fitting - Oil Pump Valve, 402885 (158-290-5) Oil Line Assembly.
Note 6: Use 402945 (58-244) Decal, 403700 (58-277) Decal.
Note 7: Use 640 (58-167) Decal, 402973 (58-251) Decal.
Note 8: Use 640 (58-167) Decal, 403460 (58-271) Decal.
Note 9: Use 700 (58-170) Decal, 402974 (58-252) Decal.
Note 10: Use 700 (58-170) Decal, 403461 (58-272) Decal.
Note 11: Use 401638 (58-210) Decal, 402935 (58-241) Decal.

TRANSMISSION



LUBRICATION INSTRUCTIONS:

1. Remove Drain Plug (Front of Cover).
2. Remove Filler Plug (Top of Cover). — Use #90 Oil —
3. Fill Transmission to Oil Level — Oil Level has been reached when oil spills from Drain Plug.
4. Replace Drain and Filler Plug. — Check Oil Level frequently —

Ref. No.	Description	Part No.	Qty.
1	Band Ass'y - Clutch	402639	1
2	Bearing - Ball	196	1
3	Bearing - Needle - Reduction	402343	1
4	Bearing - Needle Red. Hsg. Cover	403433	2
5	Bearing - Needle - Drive Gear Front and Rear	402332	2
6	Clutch Assembly	403435	1
7	Connector - Oil Line	402688	1
8	Countershaft Ass'y - Color: Yellow	403429	1
9	Countershaft	403326	1
10	Cover - Clutch	402338	1
11	Cover - Dirt	403391	1
12	Cover & Housing Ass'y	403689	1
13	Cup Ass'y - Clutch	402335	1
14	Crankshaft	403339	1
15	Gasket - Cover to Reduction Hsg.	402345	1
16	Gasket - Housing to Block	403689	1
17	Gear Ass'y - Drive - Color: Yellow	402696	1
18	Gear - Idler - Color: Yellow	403325	1
19	Gear - Low-Speed - Color: Yellow	402691	1
20	Hub Ass'y	403182	1
21	Key - Woodruff	184	2
22	Key - 5/32 Sp.	403390	1
23	Line Ass'y - Oil, Used on G5-1000	403436	1
	Line Ass'y - Oil, Used on 55-1000	403043	1
24	Nut - Grip, 3/8"-24	402550	2
25	Nut - Hex., 7/16"-20 x 3/8"	400642	1
26	Nut - Std. 3/8"-24, Guide Bar End of Studs	402521	2
27	Plate Ass'y - Chain Tension	402324	1
28	Plug Ass'y - Filler	402346	1
29	Plug - Drain	402351	1

Ref. No.	Description	Part No.	Qty.
30	Ring - Retaining, Ball Bearing	195	2
31	Rollers - Clutch (Set of 8)	401803	1
32	Screw - Fil. Hd., 1/4"-20 x 3/4" (Cover to Hsg.)	402691	11
33	Screw - S.H.F.H., 5/16"-18-3A x 7/8" (Housing to Block - 4; Housing to Handle - 2)	403478	6
34	Screw - R.H.S.T., #8-32 x 3/8" Dust Shield	698	1
35	Screw - F.H., #8-32 x 5/8" Clutch Cover	400798	4
36	Screw - Soc. Hd. 1/4-20 x 3/4	403393	1
37	Screw Blower Hsg. to Brg. Plate	401708	1
38	Screw & Nylock - H.H., 3/8"- 24 x 3/4" Spike Bumper to Strut	401403	1
39	Seal - Oil, Reduction Housing	402341	1
40	Seal - Oil, Drive Gear	402333	1
41	Shield - Dust	402339	1
42	Spacer - Sprocket	403338	1
43	Spike Bumper	402742	1
44	Sprocket - (7-tooth)	400221	1
45	Studs - Guide Bar	402535	2
46	Washer - Flat, 12/32" x 13/32" x 1/16	507	5
47	Washer - Chain Guide	402817	2
48	Washer - Thrust, Drive Gear	402334	1
49	Washer - Thrust, Idler Gear	402328	2
50	Washer - #8, Clutch Cover	110	4
51	Washer - Flat	402	1
52	Washer - Slinger	402323	1
53	Washer - Lock	403392	1
54	Washer - Thrust	402899	1

CHAIN AND GUIDE BAR USAGE CHART

Sprocket Number	D55 Super 403407—.404" 7 tooth		D65 Super 403405—½" 7 tooth		R55 Super 400221—½" 7 Tooth		R65 Super 400221—½" 7 Tooth	
	Chain—.058 .404" Pitch	Guide Bar	Chain—.058 ½" Pitch	Guide Bar	Chain—.058 ½" Pitch	Guide Bar	Chain—.058 ½" Pitch	Guide Bar
14" Stellite	H403977	A401231	H403563	A401231	H403563	A401231	H403563	A401231
16" Stellite	H403235	A400855	H403560	A400855	H403560	A400855	H403560	A400855
20" Stellite	H403237	A400854	H403561	A400854	H402187	A400854	H402187	A400854
26" Stellite	XXXXX	XXXXX	H403562	A400870	H402188	A400870	H402188	A400870
30" Stellite	XXXXX	XXXXX	H402189	A401217	XXXXX	XXXXX	H402189	A401217
36" Stellite	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	H402190	A401218
42" Stellite	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	H402191	A401230
16" Roller	H403236	A402221	H403557	A402221	H403557	A402221	H403557	A402221
20" Roller	H403238	A401990	H403558	A401990	H403569	A401990	H403569	A401990
26" Roller	XXXXX	XXXXX	H403559	A401991	H403573	A401991	H403573	A401991
30" Roller	XXXXX	XXXXX	H403611	A402551	XXXXX	XXXXX	H403611	A402551
36" Roller	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	H403612	A402552
			Chain .063 ½" Pitch	Bow Blade	Chain .063 ½" Pitch	Bow Blade	Chain .063 ½" Pitch	Bow Blade
16" Bow Direct Drive	XXXXX	XXXXX	H403973	A403896	XXXXX	XXXXX	XXXXX	XXXXX
18" Bow Gear Drive	XXXXX	XXXXX	XXXXX	XXXXX	H403972	A403897	H403972	A403897

CLINTON CHAINSAW WARRANTY REGISTRATION

CLINTON ENGINES CORPORATION

Maquoketa, Iowa Clinton, Michigan

You have purchased a Clinton-built Chainsaw, world famous for quality and performance. This Chainsaw is manufactured by Clinton Engines Corporation, builder of the most complete line of Air-Cooled Engines in the world. The Clinton Engines Corporation "Arrowhead" trademark is your guarantee of top performance and long service life. This Chainsaw carries the following warranty.

WARRANTY

This Chainsaw Unit is warranted for 45 days from the date of purchase. The Clinton Engines Corporation will replace at no charge to the original purchaser (end user), any part or parts found to be defective in material and/or workmanship when inspected by an Authorized Clinton Service Outlet or Clinton Engines Corporation. (Normal maintenance on the cutting chain, guide bar, sprocket, and clutch is the responsibility of the owner and/or user. These parts are warranted for defective parts and/or workmanship for a period of 45 days from date of purchase. No part replacement labor allowance.)

All transportation charges on warranty material submitted for replacement is to be paid by the purchaser.

Warranty repairs are to be made by an Authorized Clinton Service Outlet only. There is no other warranty expressed or implied. Clinton Engines Corporation shall in no event be liable for consequential damages.

Clinton Engines Corporation appreciates any opportunity to be of service to you.

HOW TO SECURE SERVICE

Mr. Salesman or Mr. Dealer: Please fill out this warranty form to insure that your customer will receive warranty service if needed.

Mr. Customer: Please retain this warranty form along with your Chainsaw Operation and Maintenance Manual. If warranty service is required, present this completed warranty form to your Authorized Clinton Service Center along with the Chainsaw.

CAUTION: Please read the Operation and Maintenance instructions prior to starting the Chainsaw.

_____ _____

Owner's Name City State

_____ _____

Street Address or R. F. D. No. County

_____ _____

Chainsaw Model No. (Copy numbers from name plate) Chainsaw Serial No.

_____ _____

Date Purchased Purchased From

_____ _____ _____

City County State

WARRANTY PROCEDURE

If warranty is required:

1. Do not attempt to disassemble or repair Chainsaw or have repairs made other than by an Authorized Clinton Servicing Account.
2. Show the Authorized Clinton Service Account this warranty registration form.
3. Fill out warranty claim completely with Service Account and sign.
4. If a Clinton Service Account is in doubt whether the repairs necessary are warranty, he is within his rights to charge for the repair and fill out a warranty claim for refund which is submitted to his source of supply and is then subject to the source of supply or factory inspection, review, and decision.