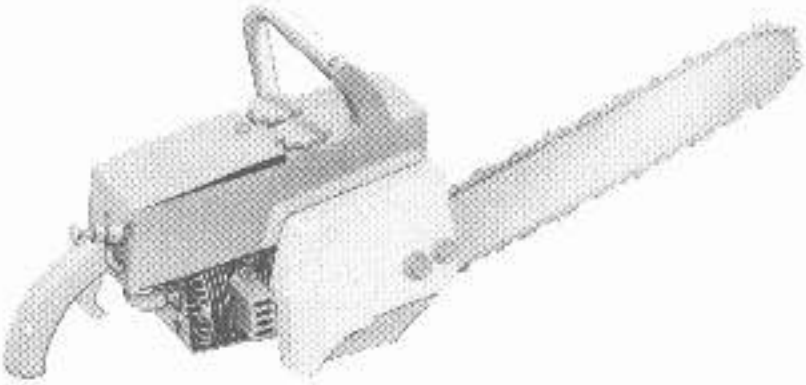
MODELS
44 AND 49
OWNERS MANUAL

YOUR
CHAIN SAW



TOPS IN PERFORMANCE

"Tops in performance" — that's what you will get from your new Chain Saw if the instructions herein written are followed very carefully. Read the chain saw manual and the engine manual completely before attempting to assemble the saw. Your chain saw is a precision engineered instrument designed as ruggedly as a fine instrument can be designed and built. Normal care, use and maintenance should give you a dependable and rugged "friend" for many years.

Unpacking Your Chain Saw

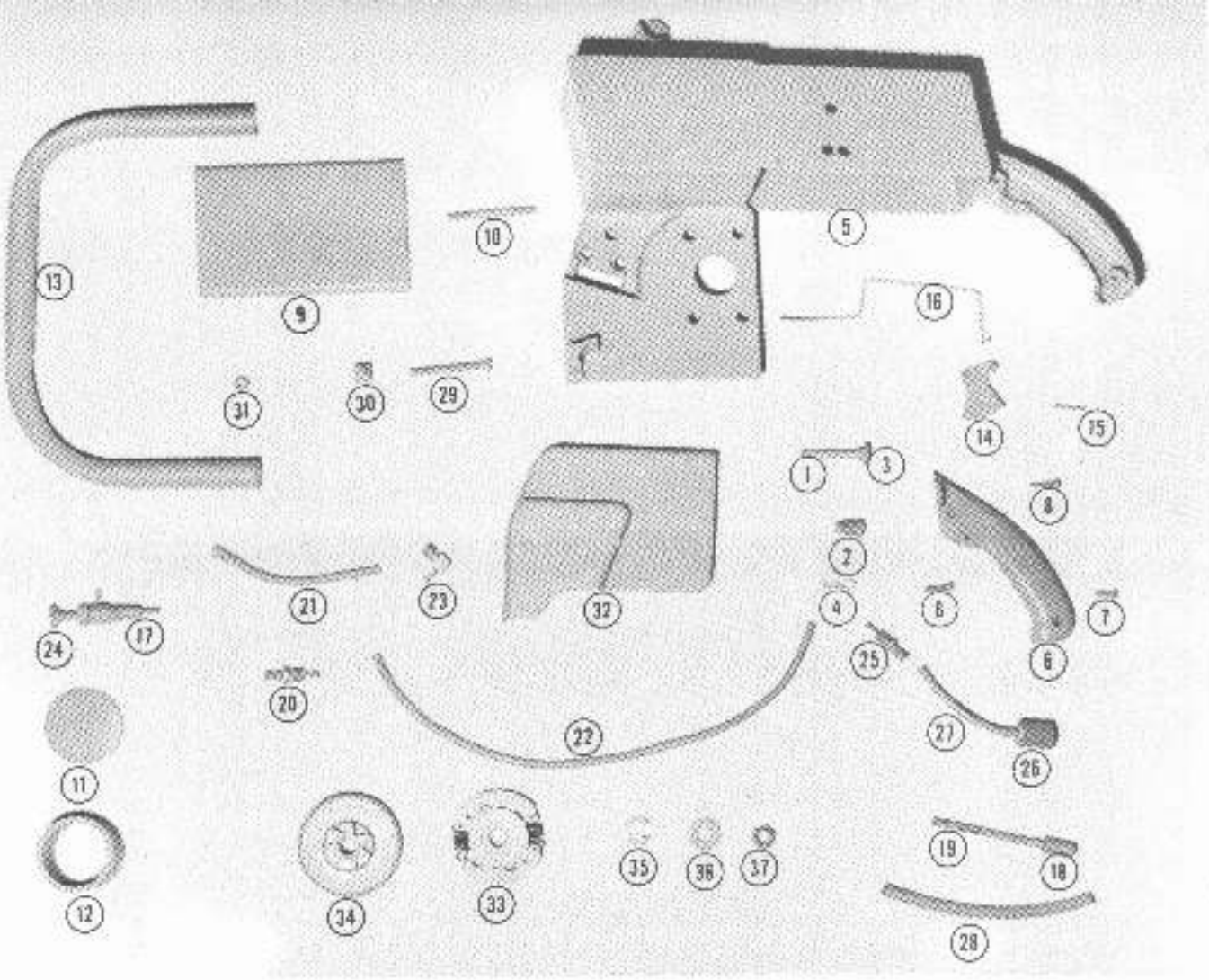
Your Chain Saw is shipped in one package. This package contains the power head and the chain and guide bar. It should be opened immediately and the contents carefully examined for possible damage. If any damage is noted, notify the carrier immediately, since they are liable for all concealed damage. To assemble saw, follow the instructions found in this manual under the heading "To Prepare Saw for Use."

In order that you may be protected under the terms of our warranty, be sure that you fill in and return to us the enclosed warranty card which is the record of your purchase.

To Prepare Saw For Use

1. Remove sprocket guard from power head.
2. Place chain guide bar over the two bolts in power head.
3. Assemble the chain to sprocket and chain guide bar. The cutting teeth on top of guide bar must face away from the power head.
4. Engage chain adjustment pin to hole in guide bar and clamp in place with sprocket guard, but do not completely tighten nuts on the bolts.
5. Tighten chain to proper tension with tension screw in front, at the same time holding up on end of bar to insure proper seating of chain.
6. Clamp chain guide and sprocket guard firmly in place by tightening nuts on two bolts.
7. Chain Oil — Use a good grade of SAE 20 or 30 Motor Oil. The oil may be diluted with kerosene, especially in extreme cold weather or certain types of wood which cause a deposit to build up on chain.
   Refer to starting instructions in engine manual.
8. Fuel Mixture—Thoroughly mix 1 pint of SAE 30 non-detergent oil with two (2) gallons of regular gasoline in a clean container. Do not attempt to mix oil and gasoline in saw fuel tank. Mix 1½ pints oil to 2 gallons gasoline for first 5 hours as a break-in period.
   When pouring fuel mixture into chain saw tank, always use a funnel having a fine screen to strain the fuel.

The Root Manufacturing Company, Inc.
127 EAST ELEVENTH STREET - BAXTER SPRINGS, KANSAS 66713

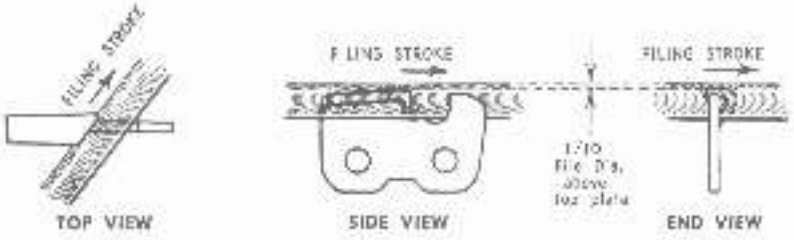


Models 44 and 49 Owners Manual

Part No.	Ill. No.	Description	No. Req.	Price
11070	7	Choke Control Rod	1	.60
11071		Choke Control Wire	1	.25
11072	2	Choke Control Guide Nut	1	.35
11206	3	Choke Control Rod Knob	1	.15
11213	4	Choke Control Rod Detent Clip	1	.15
11854	1	Main Frame	1	37.50
11858	8	Handle Half	1	3.85
11210	7	Handle Half Machine Screw 3/16 x 1 5/8	1	.10
385	9	Handle Half Machine Screw 3/16 x 3/4	8	.10
2935		Handle Half Lockwasher 3/16 SP	2	.10
11876	9	Carburetor Cover Plate	1	1.50
11877	10	Cover Plate Stud Bolt	1	.50
384		Cover Plate Nut 1/4-28 Lock	1	.10
5213		Engine to Frame Cap Screw 5/16-18 x 3/4	1	.10
5421		Engine to Frame Lockwasher 5/16SP	4	.10
11201		Muffler	1	.75
387		Muffler Bolt 5/4 x 3/4 Rd. Hd	8	.10
389		Muffler Washer 1/4 SP	8	.10
11223	11	Air Filter Lever	1	.75
11221	12	Air Filter Element	1	1.10
11222		Air Filter Bracket	1	.85
11223		Air Filter Base	1	.25
395		Air Filter Cover Screw 8-18 x 1-1/4	1	.10
2948		Air Filter Cover Lockwasher 8-18 SP	2	.10
11109		Base to Carburetor Mach. Screw 5/16 x 1 5/8	2	.10
2946		Base to Carburetor Lockwasher 5/16 SP	2	.10
11.076	12	Wrap Around Handle	1	8.00
11052		Handle to Frame Cap Screw (Upper) 1/4-28 x 1 1/2	1	.15
522		Handle to Frame Cap Screw (Lower) 5/16-24 x 1-1/2	1	.15
861		Handle to Frame Nut (Lower) 5/16-24 Lock	1	.10
5.6		Handle to Frame Washer (Upper) 1/4 SP	1	.10
11886	14	Throttle Control Trigger	1	.45
11115	15	Throttle Control Pin	1	.15
1105	16	Throttle Control Wire	1	.80
11113A		Throttle Lock Assembly	1	1.45
11116		Throttle Lock Pin	1	.80
11874		Throttle Lock Pin Nut	1	.20

Part No.	Ill. No.	Description	No. Req.	Price
11113		Throttle Lock Pin	1	.20
11112		Throttle Lock Pin Nut	1	.20
11878		Throttle Lock Pin Spring	1	.20
11879		Throttle Lock Pin Knob	1	.35
11110R		Gas Tank Cap	1	.45
11110B		Oil Tank Cap	1	.45
11111		Cap Gasket ("O" Ring)	2	.25
11109		Cap Check Valves	2	.25
11115	17	Oil Pump	1	4.00
11118	18	Oil Pickup Weight	1	1.50
11119	19	Oil Pickup Weight Tube	1	.25
11192	20	Oil Tank to Pump Wye	1	1.10
11880	21	Oil Line to Pump Tube	1	.25
11846	22	Oil Pump to Guide Bar Tube	1	.50
11121	23	Guide Bar Oil Filter	1	.85
11216	24	Oil Pump Knob	1	.15
11128	25	Gas Tank to Hose Fitting	1	1.15
11126	26	Gas Tank Pickup Weight	1	1.85
11124	27	Gas Tank Pickup Weight Tube	1	.25
11125	28	Gas Tank Fig. to Carburetor Tube	1	.35
11836	29	Chain Tension Adjusting Bolt 1/4 x 2 1/4	1	.15
11901	30	Chain Tension Adjusting Lug	1	.30
390	31	Chain Tension Adjusting Nut 1/4-20 Lock	1	.10
11.847	32	Guide Bar Clamp Plate Model 44 Saw	1	8.75
11849	Not Ill.			
		Guide Bar Clamp Plate Model 49 Saw	1	8.75
2947		Guide Bar Clamp Bolt 1/4-28 x 1 3/4	2	.15
11127		Guide Bar Clamp Nut	2	.10
3964		Guide Bar Clamp Washer	2	.05
11214	33	Clutch - 3" Threaded Bore	1	4.50
11821	34	Lever & Sprocket Assembly - 3/8 Pitch	1	4.85
11852		Needle Bearing - B98	1	1.10
11851	36	Clutch Spacer	1	.50
968	37	Sprocket Washer	1	.10
5682	37	Lock Nut	1	.10
11836		15 1/2" Roller Nose Bar .325	1	16.55
11868		15 1/2" Welded Nose Bar .458	1	16.55
11867		61 - 8" Chain - 3/8 Pitch .050	1	15.00

How To File Chipper Chain



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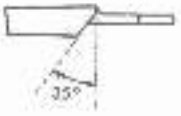

35° TOP PLATE FILING ANGLE

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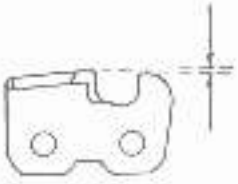

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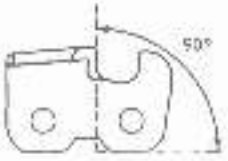

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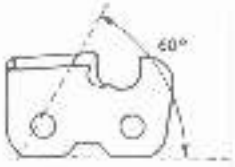

60° TOP PLATE CUTTING ANGLE

This angle must be 60°. It is formed by the position in which you hold the file and it determines whether the cutter is dull, sharp or has a feather edge. If you hold file low, you get a feather edge. Hold it too high, you get a blunt edge. Hold file well up against top plate so about 1/16 of file diameter is above top plate.

Operation

Your Chain Saw is a direct drive type and because of its high speed cutting action, no pressure is needed to cut through the wood.

If pressure becomes necessary to make it cut, the chain should be sharpened.

When starting to cut, don't jam the saw into the wood.

Place the spike bumper against the timber, bring the engine to full throttle and ease the saw into its cut. Don't forget to oil the chain as you are cutting.

Pump the oiler often while cutting and continue to do so — for the life of the chain will be considerably lengthened by this practice. To depend on a few pumps of oil between cuts for lubrication is poor practice.

The clutch is fully automatic and will engage at a specific speed. Do not abuse it by overloading and release the throttle immediately if the chain becomes pinched.

Stopping

Always stop saw between cutting operations or when moving from one position to another. This eliminates the danger of injury to operator or helper and reduces fuel consumption and wear on the engine.

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Bar and Chain Maintenance

1. KEEP CHAIN SHARP — Your saw will not only cut easier and faster, but a properly sharpened chain will reduce wear on your bar, chain and sprocket.
2. When in use — Always maintain sufficient oil flow to chain and bar. Pump the oiler with each cut while your saw is actually sawing wood. Check oil passages to be sure they are free of sawdust and dirt — make certain plenty of oil is pumped to the bar and chain.
3. Turn bar frequently and at regular intervals when cleaning your saw.
4. Maintain sufficient bar groove depth so that guide links do not ride on bottom of groove. A shallow bar groove prevents links from riding properly on rails. This makes the chain run unevenly and can cause excessive chain wear.
5. Keep groove clean — This prolongs the chain life as well as the bar life.
6. Attach bar correctly. Maintain a close relationship between bar and sprocket. The closer the end of the bar is to the sprocket, the smoother the chain will run.
7. When installing new chain — check and smooth bar very carefully. If sprocket appears grooved — install new sprocket.

Safety Precautions

1. Always let a hot saw cool before filling with gasoline.
2. If gasoline is spilled on saw while refueling, wipe off or let dry before starting.
3. Move saw several feet away from fueling spot before starting.
4. Clear underbrush, low limbs and bystanders away before felling a tree.
5. Always have secure footing and a safe exit path picked out before felling a tree.
6. Before starting a saw engine walk around the tree to examine its lean and watch for loose and intertwined limbs or vines which may affect the direction the tree will fall.
7. If possible, always have spike bumper against tree or log before starting cut.
8. Never attempt to sharpen or adjust chain while engine is running.
9. Be firmly in control of saw at all times, and do not straddle saw when making a cut.
10. Relax throttle before removing saw from cut.
11. Never walk backward with a running saw.
12. Don't saw with a dull chain or saw that needs repair.
13. Never carry a saw through a dense, brushy area with engine running.
14. Do not operate a saw unless both gasoline and oil filler caps are in place.
15. Keep the saw clean.
16. Do not start the saw engine in a closed room because the exhaust fumes are deadly.

Warranty and Agreement

The Root Manufacturing Co., Inc., (Manufacturer), warrants each new Chain Saw of their manufacture against defects in material and workmanship, under normal use and service, for a period of three months from date of original purchase except for products used in commercial rental or industrial operations which are not warranted in any respect, to the extent that we will furnish new parts without charge, to replace any parts, which, within said period of time, our investigation shows were defective when shipped, provided written notice has been given us immediately upon the discovery of such defect; and we reserve the right of requiring the return of the defective parts (transportation and insurance prepaid) before any claim is recognized.

Goods, or parts thereof, not manufactured by us are guaranteed only in accordance with the manufacturer's guarantee, and then only to the extent that we are able to enforce the manufacturer's guarantee. No claims for labor, transportation, special, incidental, indirect or consequential damages will be allowed. We reserve the right to incorporate design changes at any time, and to effect price changes without previous notice.

The above warranty is in lieu of all other warranties, statutory or otherwise, expressed or implied, all other representations to Purchaser, and all other obligations or liabilities with respect to such machines. No warranty or representation whatsoever has been made by the manufacturer and relied on by Purchaser, and Seller has no authority to make any such warranty or representation on behalf of such manufacturer.

To insure warranty service, fill in, sign and return warranty cards.

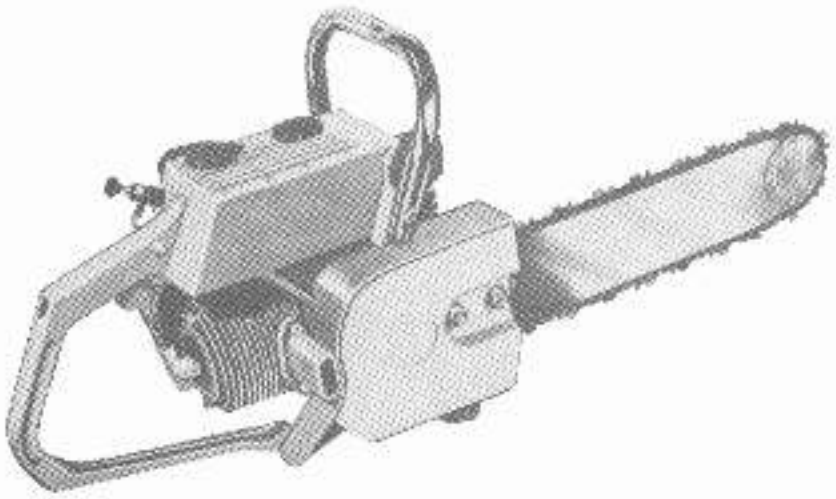
HOW TO ORDER PARTS—When ordering parts, always furnish the model number and serial number of the Chain Saw, the part number and description of the parts. If the dealer where you purchased the Chain Saw cannot furnish the parts, you may order direct from Root Manufacturing Company, Inc., P. O. Box 191, Baxter Springs, Kansas, Zip Code 66713. If the model number, serial number and part number is not available, you may send the old part for duplication. All engine parts are carried by your local engine dealer who is listed under gasoline engines in the yellow pages of your telephone directory.

The Root Manufacturing Company, Inc.

127 EAST ELEVENTH STREET :: BAXTER SPRINGS, KANSAS 66713

MODEL
47 HR
OWNERS MANUAL

YOUR
CHAIN SAW



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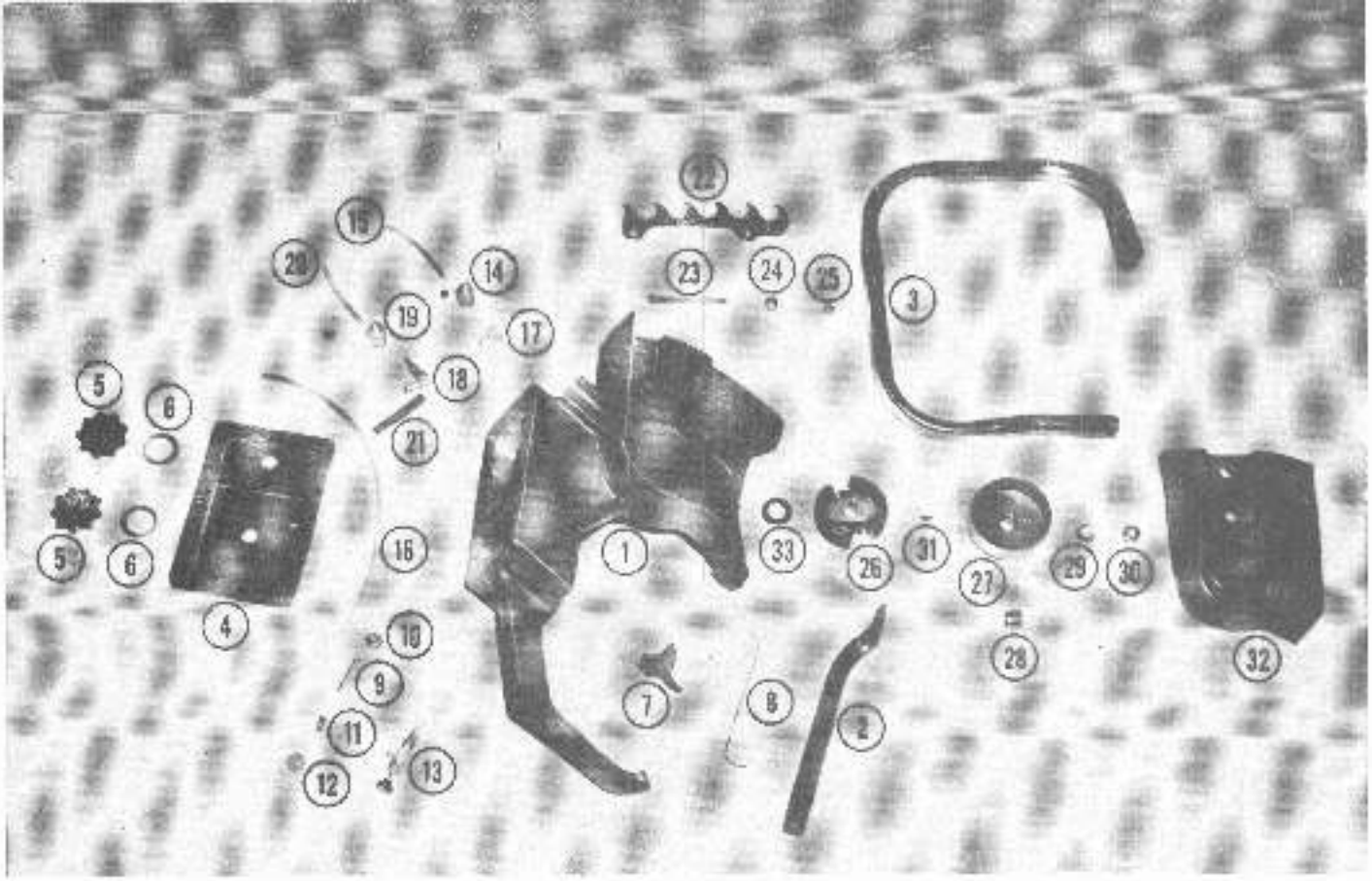
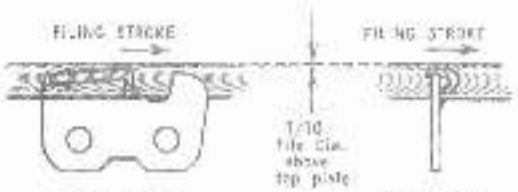


Parts List For Chain Saw

Part No.	Ill. No.	Description	No. Req.	List Each
AH47		Power Products Engine	1	57.95
11100P	(1)	Main Frame	1	27.50
11104		Engine to Frame Bolts	3	.10
11105		Engine to Frame Washers	3	.10
11102	(2)	Frame Base Foot Rest	1	1.50
705		Frame Base Cap Screw	1	.10
520		Frame Base Nut	1	.10
11106		Frame Base Socket Cap Screw	1	.10
11107	(3)	Wrap Around Handle	1	3.00
709		Handle to Frame Bolts	2	.10
520		Handle to Frame Nuts	2	.10
11101	(4)	Gas & Oil Tank Cover	1	5.25
11108		Gas & Oil Tank Cover Gasket	1	.40
11109		Gas & Oil Tank Cover Screws	16	.10
11110	(5)	Gas & Oil Tank Caps	2	.45
11160		Gas & Oil Cap Check Valves	2	.25
11111	(6)	Gas & Oil Cap Gaskets	2	.25
11112	(7)	Throttle Trigger	1	.35
11113		Throttle Trigger Pin	1	.15
11114	(8)	Throttle Trigger Wire	1	.10
11115A		Throttle Lock Assembly	1	1.45
11116	(9)	Lock Pin	1	.60
11072	(10)	Lock Pin Nut	1	.10
11073	(11)	Lock Pin Spring	1	.20
11074	(12)	Lock Pin Button	1	.25
11117	(13)	Oil Pump	1	4.00
11118	(14)	Oil Pickup Wt.	1	1.98
11119	(15)	Oil Pickup Tube	1	.25
11120	(16)	Oil Pump Tube	1	.85
11121	(17)	Chain Oil Elbow	1	.85
11122	(18)	Gasoline Elbow	1	1.10
11123	(19)	Gasoline Pickup Wt.	1	1.98
11124	(20)	Gasoline Pickup Tube	1	.25
11125	(21)	Gasoline Hose	1	.15
11126	(22)	Spike Bumper	1	1.45
1710		Spike Bumper Bolts	2	.10
524		Spike Bumper Lockwashers	2	.10
11044	(23)	Tension Adj. Bolt	1	.10
11032	(24)	Tension Adjust. Lug	1	.60
12009	(25)	Tension Adjust. Nut	1	.10
2917		Guide Bar Clamp Bolts	2	.15
11127		Guide Bar Clamp Nuts	2	.10
3604		Guide Bar Clamp Washers	2	.10
11103	(32)	Guide Bar Clamp	1	3.75
11129	(26)	Clutch (3")	1	4.95
11132	(27)	Drum & Sprocket Assy. (3") 7/16" Pitch	1	4.95
11133		Drum & Sprocket Assy. (3") .404 Pitch	1	4.95
11039	(28)	Needle Bearing	1	1.10
S604	(29)	Washer ⅜ Flat	1	.10
11040	(30)	Nut 7/16 Lock	1	.15
11041	(31)	Woodruff Key	1	.15
11137		16" Welded Nose Bar		15.95
11138		20" Welded Nose Bar		16.95
11139		24" Welded Nose Bar		17.95
11143		16" Roller Bar		15.95
11144		20" Roller Bar		16.95
11145		24" Roller Bar		17.95
11146		16" Chain 7/16" Pitch 52 Drive Links		16.45
11147		20" Chain 7/16" Pitch 61 Drive Links		18.95
11148		24" Chain 7/16" Pitch 70 Drive Links		22.17
11153		16" Chain .404 Pitch 56 Drive Links		16.45
11155		20" Chain .404 Pitch 66 Drive Links		18.95
11156		24" Chain .404 Pitch 76 Drive Links		22.17

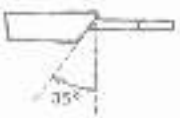
How To File Chipper Chain

TOP VIEW



SIDE VIEW END VIEW

Maintain These Filing Angles



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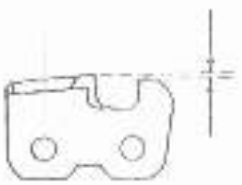

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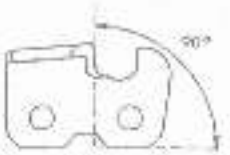

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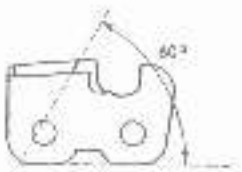

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3. Turn bar frequently and at regular intervals when cleaning your saw.
4. Maintain sufficient bar groove depth so that guide links do not ride on bottom of groove. A shallow bar groove prevents links from riding properly on rails. This makes the chain run unevenly and can cause excessive chain wear.
5. Keep groove clean — This prolongs the chain life as well as the bar life.
6. Attach bar correctly. Maintain a close relationship between bar and sprocket. The closer the end of the bar is to the sprocket, the smoother the chain will run.
7. When installing new chain — check and smooth bar very carefully. If sprocket appears grooved — install new sprocket.

Safety Precautions

1. Always let a hot saw cool before filling with gasoline.
2. If gasoline is spilled on saw while refueling, wipe off or let dry before starting.
3. Move saw several feet away from fueling spot before starting.
4. Clear underbrush, low limbs and bystanders away before felling a tree.
5. Always have secure footing and a safe exit path picked out before felling a tree.
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7. If possible, always have spike bumper against tree or log before starting cut.
8. Never attempt to sharpen or adjust chain while engine is running.
9. Be firmly in control of saw at all times, and do not straddle saw when making a cut.
10. Relax throttle before removing saw from cut.
11. Never walk backward with a running saw.
12. Don't saw with a dull chain or saw that needs repair.
13. Never carry a saw through a dense, brushy area with engine running.
14. Do not operate a saw unless both gasoline and oil filler caps are in place.
15. Keep the saw clean.
16. Do not start the saw engine in a closed room because the exhaust fumes are deadly.

Warranty and Agreement

The Root Manufacturing Co., Inc., (Manufacturer), warrants each new Chain Saw of their manufacture against defects in material and workmanship, under normal use and service, for a period of three months from date of original purchase except for products used in commercial rental or industrial operations which are not warranted in any respect, to the extent that we will furnish new parts without charge, to replace any parts, which, within said period of time, our investigation shows were defective when shipped, provided written notice has been given us immediately upon the discovery of such defect; and we reserve the right of requiring the return of the defective parts (transportation and insurance prepaid) before any claim is recognized.

Goods, or parts thereof, not manufactured by us are guaranteed only in accordance with the manufacturer's guarantee, and then only to the extent that we are able to enforce the manufacturer's guarantee. No claims for labor, transportation, special, incidental, indirect or consequential damages will be allowed. We reserve the right to incorporate design changes at any time, and to effect price changes without previous notice.

The above warranty is in lieu of all other warranties, statutory or otherwise, expressed or implied, all other representations to Purchaser, and all other obligations or liabilities with respect to such machines. No warranty or representation whatsoever has been made by the manufacturer and relied on by Purchaser, and Seller has no authority to make any such warranty or representation on behalf of such manufacturer.

To insure warranty service, fill in, sign and return warranty cards.

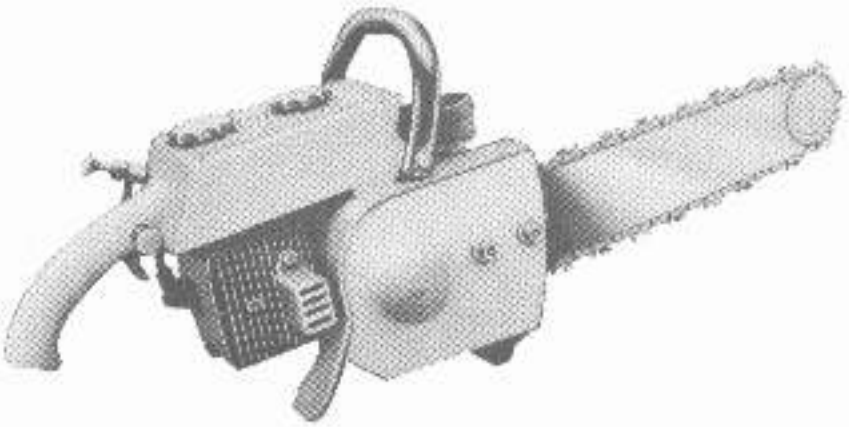
HOW TO ORDER PARTS—When ordering parts, always furnish the model number and serial number of the Chain Saw, the part number and description of the parts. If the dealer where you purchased the Chain Saw cannot furnish the parts, you may order direct from Root Manufacturing Company, Inc., P. O. Box 191, Baxter Springs, Kansas, Zip Code 66713. If the model number, serial number and part number is not available, you may send the old part for duplication. All engine parts are carried by your local engine dealer who is listed under gasoline engines in the yellow pages of your telephone directory.

The Root Manufacturing Company, Inc.

127 EAST ELEVENTH STREET :: BAXTER SPRINGS, KANSAS 66713

MODEL
50
OWNERS MANUAL

YOUR
CHAIN SAW



TOPS IN PERFORMANCE

"Tops in performance" — that's what you will get from your new Chain Saw if the instructions herein written are followed very carefully. Read the chain saw manual and the engine manual completely before attempting to assemble the saw. Your chain saw is a precision engineered instrument designed as ruggedly as a fine instrument can be designed and built. Normal care, use and maintenance should give you a dependable and rugged "friend" for many years.

Unpacking Your Chain Saw

Your Chain Saw is shipped in one package. This package contains the power head and the chain and guide bar. It should be opened immediately and the contents carefully examined for possible damage. If any damage is noted, notify the carrier immediately, since they are liable for all concealed damage. To assemble saw, follow the instructions found in this manual under the heading "To Prepare Saw for Use."

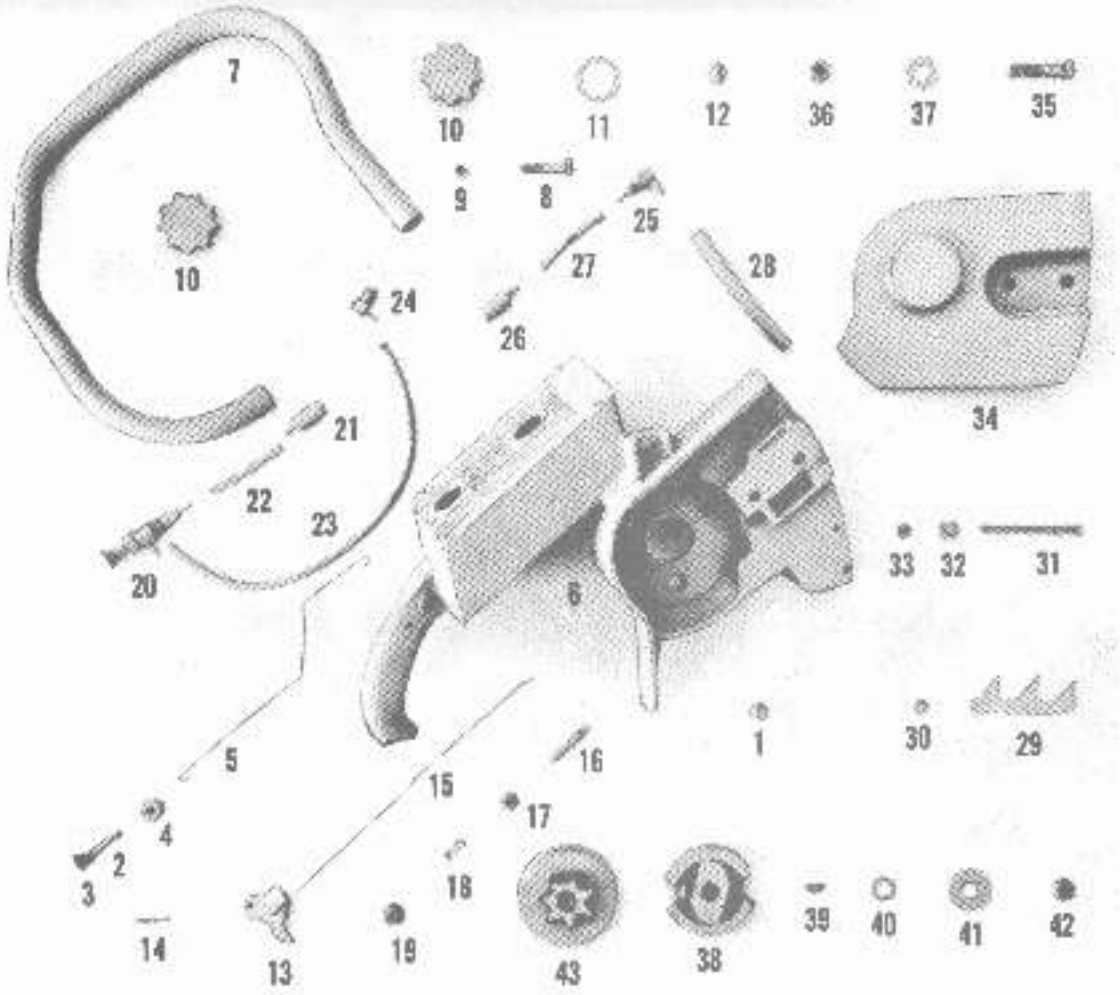
In order that you may be protected under the terms of our warranty, be sure that you fill in and return to us the enclosed warranty card which is the record of your purchase.

To Prepare Saw For Use

1. Remove sprocket guard from power head.
2. Place chain guide bar over the two bolts in power head.
3. Assemble the chain to sprocket and chain guide bar. The cutting teeth on top of guide bar must face away from the power head.
4. Engage chain adjustment pin to hole in guide bar and clamp in place with sprocket guard, but do not completely tighten nuts on the bolts.
5. Tighten chain to proper tension with tension screw in front, at the same time holding up on end of bar to insure proper seating of chain.
6. Clamp chain guide and sprocket guard firmly in place by tightening nuts on two bolts.
7. Chain Oil — Use a good grade of SAE 20 or 30 Motor Oil. The oil may be diluted with kerosene, especially in extreme cold weather or certain types of wood which cause a deposit to build up on chain.

Refer to starting instructions in engine manual.

ROOT MANUFACTURING CO., INC.
127 EAST ELEVENTH ST.
BAXTER SPRINGS, KANSAS

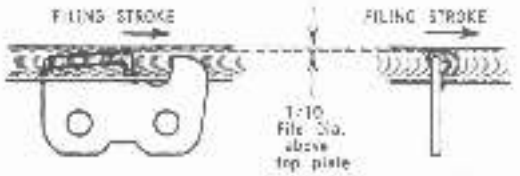


Parts List For Chain Saw

Part No.	Ill. No.	Description	No. Req.	List Each	Part No.	Ill. No.	Description	No. Req.	List Each
11081	(1)	Engine to Frame Bolts	3	.10	11216		Oil Pump Knob	1	.10
11204	(2)	Choke Control Rod	1	.40	11214	(29)	Spike Bumper	1	1.45
11205	(3)	Choke Control Rod Knob	1	.15	1710	(30)	Spike Bumper Cap Screw	2	.10
11206	(4)	Choke Control Rod Grommet	1	.10	395		Spike Bumper Lockwasher	2	.05
11207	(5)	Choke Control Wire	1	.25	11044	(31)	Bar Tension Adj. Bolt	1	.15
11208	(6)	Main Frame	1	27.50	11032	(32)	Bar Tension Adj. Lug	1	.60
11201		Muffler	1	.25	363	(33)	Bar Tension Adj. Nut	1	.10
387		Muffler Bolts	2	.10	11215	(34)	Guide Bar Clamp Plate	1	3.75
395		Muffler Washer	2	.05	2917	(35)	Guide Bar Clamp Cap Screw	2	.10
11200		Carburetor Elbow	1	1.50	11127	(36)	Guide Bar Clamp Nuts	2	.10
11209	(7)	Wrap Around Handle	1	3.00	3604	(37)	Guide Bar Clamp Washers	2	.05
507	(8)	Handle To Frame Cap Screw	2	.10	11129	(38)	Clutch 3" 9/16 Bore	1	5.60
364	(9)	Handle to Frame Nuts	2	.10	11041	(39)	Clutch Woodruff Key No. 5	1	.10
11110R	(10)	Gas Tank Cap	1	.45	11035	(40)	Clutch Spacer	1	.33
11110B	(10)	Oil Tank Cap	1	.45	11132	(43)	Drum & Sprocket Assy. (3") 7/16" Pitch	1	5.00
11111	(11)	Cap Gaskets	2	.10	11133	(43)	Drum & Sprocket Assy. (3") .404 Pitch	1	5.00
11360	(12)	Cap Check Valve	2	.15	11039		Drum Needle Bearing	1	1.10
11211	(13)	Throttle Trigger	1	.35	3604	(41)	Flat Washer 3/8	1	.05
11113	(14)	Throttle Trigger Pin (1/8 Spring)	1	.15	11040	(42)	Lock Nut 7/16" RH	1	.10
11212	(15)	Throttle Wire	1	.10	11137		16" Welded Nose Bar		15.95
11115A		Throttle Lock Assembly	1	1.45	11138		20" Welded Nose Bar		16.95
11116	(16)	Throttle Lock Pin	1	.80	11139		24" Welded Nose Bar		17.95
11072	(17)	Throttle Lock Nut	1	.30	11140		16" Standard Bar		9.95
11073	(18)	Throttle Lock Spring	1	.20	11141		20" Standard Bar		10.95
11074	(19)	Throttle Lock Knob	1	.15	11142		24" Standard Bar		11.95
11117	(20)	Oil Pump	1	4.00	11143		16" Roller Bar		15.95
11118	(21)	Oil Pickup Wt.	1	1.98	11144		20" Roller Bar		16.95
11119	(22)	Oil Pickup Tube	1	.25	11145		24" Roller Bar		17.95
11120	(23)	Oil Pump Tube	1	.65	11146		16" Chain 7/16" Pitch 52 Drive Links		14.68
11121	(24)	Chain Oil Elbow	1	.65	11147		20" Chain 7/16" Pitch 61 Drive Links		17.25
11122	(25)	Gasoline Elbow	1	1.10	11148		24" Chain 7/16 Pitch 70 Drive Links		20.14
11123	(26)	Gasoline Pickup Wt.	1	1.98	11153		16" Chain 404 Pitch 56 Drive Links		14.68
11124	(27)	Gasoline Pickup Tube	1	.25	11155		20" Chain 404 Pitch 66 Drive Links		17.25
11125	(28)	Gasoline Hose	1	.15	11156		24" Chain 404 Pitch 76 Drive Links		20.14

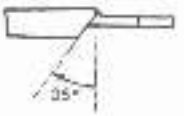
How To File Chipper Chain

TOP VIEW



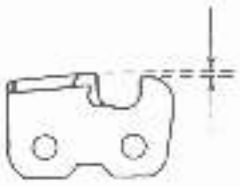
SIDE VIEW END VIEW

Maintain These Filing Angles



35° TOP PLATE FILING ANGLE

Hold the file in one position perpendicular to the side of the cutter and at 35° angle to the length of the chain. If this angle is less than 35°, the cutter is blunt and cutting is slow. If greater than 35°, the cutter is feathered and will dull fast.

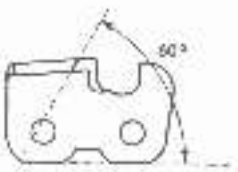


DEPTH GAUGE SETTING

Correct depth gauge settings are as important as cutter filing for efficient cutting and long chain life. If depth gauges are too low, chain will grab, jerk, hang up and overload motor. If they are too high, cutters will not be able to bite into wood, and cutting is slow. Every time you file cutters, check depth gauges and file them if needed.

90° SIDE PLATE ANGLE

The side plate must be 90° to the bottom of the cutter. Use firm, long, even strokes, applying pressure on forward stroke away from you. If this angle is negative (back-slope) cutting will be slow as cutters try to rise out of cut, requiring more pressure to operate saw. Positive angle (hook) feathers top plate which dulls fast and causes chain to grab, hang up.



60° TOP PLATE CUTTING ANGLE

This angle must be 60°. It is formed by the position in which you hold the file and it determines whether the cutter is dull, sharp or has a feather edge. If you hold file low, you get a feather edge. Hold it too high, you get a blunt edge. Hold file well up against top plate so about 1/10 of file diameter is above top plate.

Operation

Your Chain Saw is a direct drive type and because of its high speed cutting action, no pressure is needed to cut through the wood.

If pressure becomes necessary to make it cut, the chain should be sharpened.

When starting to cut, don't jam the saw into the wood.

Place the spike bumper against the timber, bring the engine to full throttle and ease the saw into its cut. Don't forget to oil the chain as you are cutting.

Pump the oiler often while cutting and continue to do so — for the life of the chain will be considerably lengthened by this practice. To depend on a few pumps of oil between cuts for lubrication is poor practice.

The clutch is fully automatic and will engage at a specific speed. Do not abuse it by overloading and release the throttle immediately if the chain becomes pinched.

Stopping

Always stop saw between cutting operations or when moving from one position to another. This eliminates the danger of injury to operator or helper and reduces fuel consumption and wear on the engine.

To stop between cutting operations merely turn the ignition switch to "off" position.

Bar and Chain Maintenance

1. KEEP CHAIN SHARP — Your saw will not only cut easier and faster, but a properly sharpened chain will reduce wear on your bar, chain and sprocket.
2. When in use — Always maintain sufficient oil flow to chain and bar. Pump the oiler with each cut while your saw is actually sawing wood. Check all passages to be sure they are free of sawdust and dirt — make certain plenty of oil is pumped to the bar and chain.
3. Turn bar frequently and at regular intervals when cleaning your saw.
4. Maintain sufficient bar groove depth so that guide links do not ride on bottom of groove. A shallow bar groove prevents links from riding properly on rails. This makes the chain run unevenly and can cause excessive chain wear.
5. Keep groove clean — This prolongs the chain life as well as the bar life.
6. Attach bar correctly. Maintain a close relationship between bar and sprocket. The closer the end of the bar is to the sprocket, the smoother the chain will run.
7. When installing new chain — check and smooth bar very carefully. If sprocket appears grooved — install new sprocket.

Safety Precautions

1. Always let a hot saw cool before filling with gasoline.
2. If gasoline is spilled on saw while refueling, wipe off or let dry before starting.
3. Move saw several feet away from fueling spot before starting.
4. Clear underbrush, low limbs and bystanders away before felling a tree.
5. Always have secure footing and a safe exit path picked out before felling a tree.
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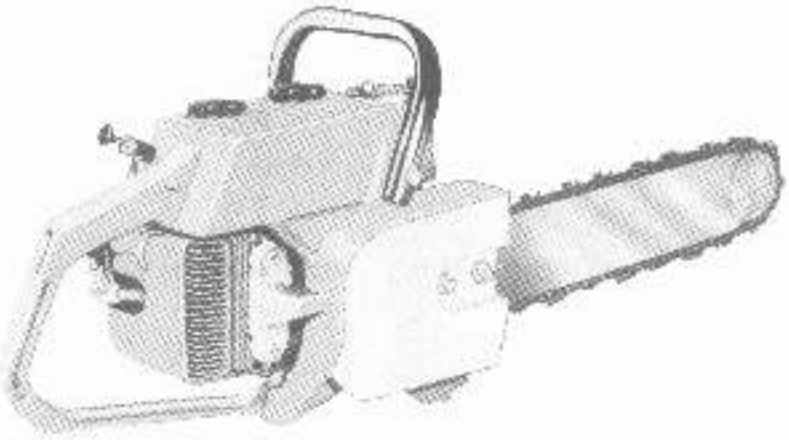
The Root Manufacturing Company, Inc.

127 EAST ELEVENTH STREET :: BAXTER SPRINGS, KANSAS 66713

MODEL
58
OWNERS MANUAL

YOUR
CHAIN SAW



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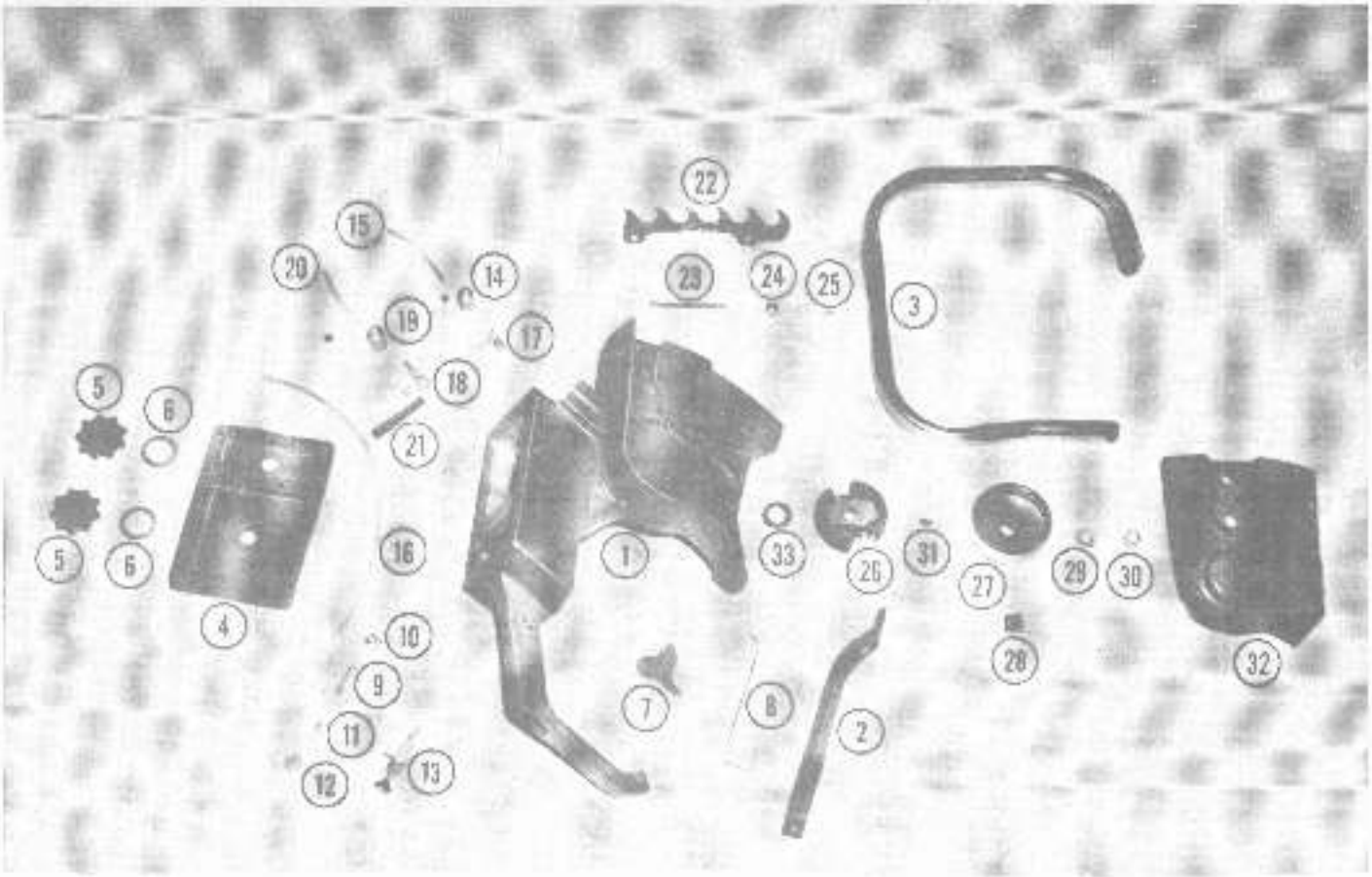
To Prepare Saw For Use

1. Remove sprocket guard from power head.
2. Place chain guide bar over the two bolts in power head.
3. Assemble the chain to sprocket and chain guide bar. The cutting teeth on top of guide bar must face away from the power head.
4. Engage chain adjustment pin to hole in guide bar and clamp in place with sprocket guard, but do not completely tighten nuts on the bolts.
5. Tighten chain to proper tension with tension screw in front, at the same time holding up on end of bar to insure proper seating of chain.
6. Clamp chain guide and sprocket guard firmly in place by tightening nuts on two bolts.
7. Chain Oil — Use a good grade of SAE 20 or 30 Motor Oil. The oil may be diluted with kerosene especially in extreme cold weather or certain types of wood which cause a deposit to build up on chain.
   Refer to starting instructions in engine manual.
8. Fuel Mixture—Thoroughly mix 1 pint of SAE 30 non-detergent oil with two (2) gallons of regular gasoline in a clean container. Do not attempt to mix oil and gasoline in saw fuel tank. Mix 1⅓ pints oil to 2 gallons gasoline for first 5 hours as a break-in period.
   When pouring fuel mixture into chain saw tank, always use a funnel having a fine screen to strain the fuel.

The Root Manufacturing Company, Inc.
127 EAST ELEVENTH STREET :: BAXTER SPRINGS, KANSAS 66713



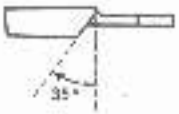
MODEL 58 OWNERS MANUAL

Parts List for Model 58 Chain Saw

Part No.	Ill. No.	Description	No. Req.	Price Each
AH58		Power Products Engine	1	82.57
11100P	(1)	Main Frame	1	27.50
9716		Engine to Frame Bolts 5/16"-18x3/4"	3	.10
8521		Engine to Frame Washers 5/16 SP	3	.10
11102	(2)	Frame Base (Foot Rest)	1	1.59
705		Frame Base Cap Screw	1	.10
367		Frame Base Nut	1	.10
11106		Frame Base Screw	1	.10
11107	(3)	Wrap Around Handle	1	3.00
709		Handle to Frame Bolts	2	.10
364		Handle to Frame Nuts	2	.10
11101	(4)	Gas & Oil Tank Cover	1	5.25
11108		Gas & Oil Tank Cover Gasket	1	.40
11109		Gas & Oil Tank Cover Screws	16	.10
11110	(5)	Gas & Oil Tank Caps	2	.45
11111	(6)	Gas & Oil Cap Gaskets	2	.25
11112	(7)	Throttle Trigger	1	.35
11113		Throttle Trigger Pin	1	.15
11114	(8)	Throttle Trigger Wire	1	.10
11115A		Throttle Lock Assembly	1	1.45
11116	(9)	Lock Pin	1	.80
11072	(10)	Lock Pin Nut	1	.10
11073	(11)	Lock Pin Spring	1	.20
11074	(12)	Lock Pin Button	1	.25
11117	(13)	Oil Pump	1	4.00
11118	(14)	Oil Pickup Weight	1	1.98
11119	(15)	Oil Pickup Tube	1	.25
11120	(16)	Oil Pump Tube	1	.85
11121	(17)	Chain Oil Elbow	1	.85
11122	(18)	Gasoline Elbow	1	1.10
11123	(19)	Gasoline Pickup Weight	1	1.98
11124	(20)	Gasoline Pickup Tube	1	.25
11125	(21)	Gasoline Hose	1	.15
11126	(22)	Spike Bumper	1	1.45
1710		Spike Bumper Bolts	2	.10
321		Spike Bumper Lockwasher	2	.10
11044	(23)	Tension Adjust. Bolt	1	.10
11032	(24)	Tension Adjust. Lug	1	.60
12008	(25)	Tension Adjust. Nut	1	.10
2917		Guide Bar Clamp Bolts	2	.15
11127		Guide Bar Clamp Nuts	2	.10
3004		Guide Bar Clamp Washers	2	.10
11103	(32)	Guide Bar Clamp Plate	1	3.75
11129	(26)	Clutch (3")	1	4.95
11133	(27)	Drum & Sprocket Assy. (3") .404	1	4.95
11039	(29)	Needle Bearing	1	1.10
3004	(28)	Washer 3/8 Flat	1	.10
11040	(30)	Nut 7/16 Lock	1	.15
11041	(31)	Woodruff Key	1	.15
11035	(33)	Clutch Spacer	1	.33
11137		16" Welded Bar		15.95
11138		20" Welded Bar		16.95
11139		24" Welded Bar		17.96
11143		16" Roller Bar		15.95
11144		20" Roller Bar		16.95
11145		24" Roller Bar		17.95
11153		16" Chain .404 P (56E)		16.45
11155		20" Chain .404 P (66E)		18.95
11156		24" Chain .404 P (76E)		22.17

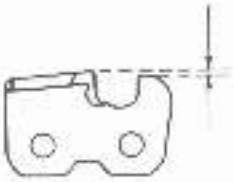
How To File Chipper Chain

Maintain These Filing Angles



35° TOP PLATE FILING ANGLE

Hold the file in one position perpendicular to the side of the cutter and at 35° angle to the length of the chain. If this angle is less than 35°, the cutter is blunt and cutting is slow. If greater than 35°, the cutter is feathered and will dull fast.

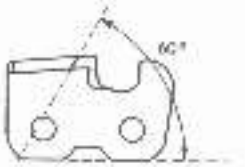


DEPTH GAUGE SETTING

Correct depth gauge settings are as important as cutter filing for efficient cutting and long chain life. If depth gauges are too low, chain will grab, jerk, hang up and overload motor. If they are too high, cutters will not be able to bite into wood, and cutting is slow. Every time you file cutters, check depth gauges and file them if needed.

90° SIDE PLATE ANGLE

The side plate must be 90° to the bottom of the cutter. Use firm, long, even strokes, applying pressure on forward stroke away from you. If this angle is negative (back-slope) cutting will be slow as cutters try to rise out of cut, requiring more pressure to operate saw. Positive angle (hook) feathers top plate which dulls fast and causes chain to grab, hang up.



60° TOP PLATE CUTTING ANGLE

This angle must be 60°. It is formed by the position in which you hold the file and it determines whether the cutter is dull, sharp or has a feather edge. If you hold file low, you get a feather edge. Hold it too high, you get a blunt edge. Hold file well up against top plate so about 1/10 of file diameter is above top plate.

Operation

Your Chain Saw is a direct drive type and because of its high speed cutting action, no pressure is needed to cut through the wood.

If pressure becomes necessary to make it cut, the chain should be sharpened.

When starting to cut, don't jam the saw into the wood.

Place the spike bumper against the timber, bring the engine to full throttle and ease the saw into its cut. Don't forget to oil the chain as you are cutting.

Pump the oiler often while cutting and continue to do so — for the life of the chain will be considerably lengthened by this practice. To depend on a few pumps of oil between cuts for lubrication is poor practice.

The clutch is fully automatic and will engage at a specific speed. Do not abuse it by overloading and release the throttle immediately if the chain becomes pinched.

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Always stop saw between cutting operations or when moving from one position to another. This eliminates the danger of injury to operator or helper and reduces fuel consumption and wear on the engine.

To stop between cutting operations merely turn the ignition switch to "off" position.

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3. Turn bar frequently and at regular intervals when cleaning your saw.
4. Maintain sufficient bar groove depth so that guide links do not ride on bottom of groove. A shallow bar groove prevents links from riding properly on rails. This makes the chain run unevenly and can cause excessive chain wear.
5. Keep groove clean. — This prolongs the chain life as well as the bar life.
6. Attach bar correctly. Maintain a close relationship between bar and sprocket. The closer the end of the bar is to the sprocket, the smoother the chain will run.
7. When installing new chain — check and smooth bar very carefully. If sprocket appears grooved — install new sprocket.

Safety Precautions

1. Always let a hot saw cool before filling with gasoline.
2. If gasoline is spilled on saw while refueling, wipe off or let dry before starting.
3. Move saw several feet away from fueling spot before starting.
4. Clear undergrowth, low limbs and bystanders away before felling a tree.
5. Always have secure footing and a safe exit path picked out before felling a tree.
6. Before starting a saw engine walk around the tree to examine its lean and watch for loose and intertwined limbs or vines which may affect the direction the tree will fall.
7. If possible, always have spike bumper against tree or log before starting cut.
8. Never attempt to sharpen or adjust chain while engine is running.
9. Be firmly in control of saw at all times, and do not straddle saw when making a cut.
10. Relax throttle before removing saw from cut.
11. Never walk backward with a running saw.
12. Don't saw with a dull chain or saw that needs repair.
13. Never carry a saw through a dense, brushy area with engine running.
14. Do not operate a saw unless both gasoline and oil filler caps are in place.
15. Keep the saw clean.
16. Do not start the saw engine in a closed room because the exhaust fumes are deadly.

Warranty and Agreement

The Root Manufacturing Co., Inc., (Manufacturer), warrants each new Chain Saw of their manufacture against defects in material and workmanship, under normal use and service, for a period of three months from date of original purchase except for products used in commercial rental or industrial operations which are not warranted in any respect, to the extent that we will furnish new parts without charge, to replace any parts, which, within said period of time, our investigation shows were defective when shipped, provided written notice has been given us immediately upon the discovery of such defect; and we reserve the right of requiring the return of the defective parts (transportation and insurance prepaid) before any claim is recognized.

Goods, or parts thereof, not manufactured by us are guaranteed only in accordance with the manufacturer's guarantee, and then only to the extent that we are able to enforce the manufacturer's guarantee. No claims for labor, transportation, special, incidental, indirect or consequential damages will be allowed. We reserve the right to incorporate design changes at any time, and to effect price changes without previous notice.

The above warranty is in lieu of all other warranties, statutory or otherwise, expressed or implied, all other representations to Purchaser, and all other obligations or liabilities with respect to such machines. No warranty or representation whatsoever has been made by the manufacturer and relied on by Purchaser, and Seller has no authority to make any such warranty or representation on behalf of such manufacturer.

To insure warranty service, fill in, sign and return warranty cards.

HOW TO ORDER PARTS—When ordering parts, always furnish the model number and serial number of the Chain Saw, the part number and description of the parts. If the dealer where you purchased the Chain Saw cannot furnish the parts, you may order direct from Root Manufacturing Company, Inc., P. O. Box 191, Baxter Springs, Kansas, Zip Code 66713. If the model number, serial number and part number is not available, you may send the old part for duplication. All engine parts are carried by your local engine dealer who is listed under gasoline engines in the yellow pages of your telephone directory.

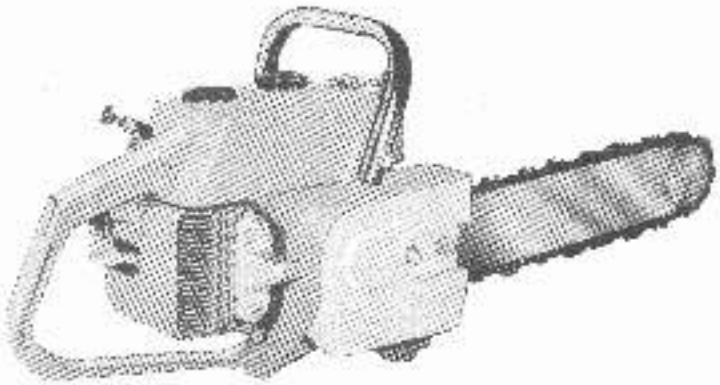
The Root Manufacturing Company, Inc.

127 EAST ELEVENTH STREET :: BAXTER SPRINGS, KANSAS 66713

MODEL
61 HR
OWNERS MANUAL

YOUR
CHAIN SAW

MODEL
82 HR
OWNERS MANUAL



TOPS IN PERFORMANCE

"Tops in performance" — that's what you will get from your new Chain Saw if the instructions herein written are followed very carefully. Read the chain saw manual and the engine manual completely before attempting to assemble the saw. Your chain saw is a precision engineered instrument designed as ruggedly as a fine instrument can be designed and built. Normal care, gas and maintenance should give you a dependable and rugged "friend" for many years.

Unpacking Your Chain Saw

Your Chain Saw is shipped in one package. This package contains the power head and the chain and guide bar. It should be opened immediately and the contents carefully examined for possible damage. If any damage is noted, notify the carrier immediately, since they are liable for all concealed damage. To assemble saw, follow the instructions found in this manual under the heading "To Prepare Saw for Use."

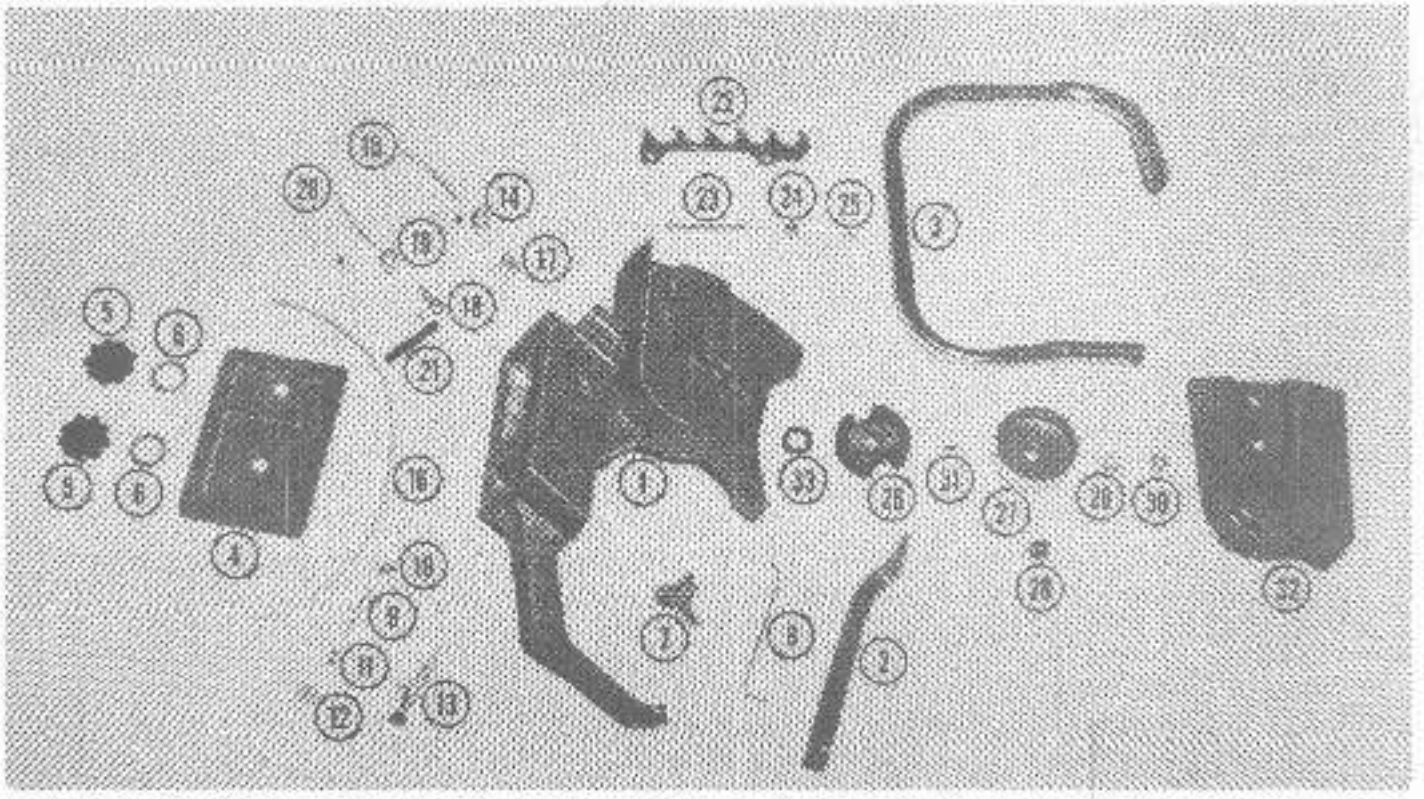
In order that you may be protected under the terms of our warranty, be sure that you fill in and return to us the enclosed warranty card which is the record of your purchase.

To Prepare Saw For Use

1. Remove sprocket guard from power head.
2. Place chain guide bar over the two bolts in power head.
3. Assemble the chain to sprocket and chain guide bar. The cutting teeth on top of guide bar must face away from the power head.
4. Engage chain adjustment pin to hole in guide bar and clamp in place with sprocket guard, but do not completely tighten nuts on the bolts.
5. Tighten chain to proper tension with tension screw in front, at the same time holding up on end of bar to insure proper seating of chain.
6. Clamp chain guide and sprocket guard firmly in place by tightening nuts on two bolts.
7. Chain Oil — Use a good grade of SAE 20 or 30 Motor Oil. The oil may be diluted with kerosene, especially in extreme cold weather or certain types of wood which cause a deposit to build up on chain.

Refer to starting instructions in engine manual.

ROOT MANUFACTURING CO., INC. 127 EAST ELEVENTH ST. BAXTER SPRINGS, KANSAS



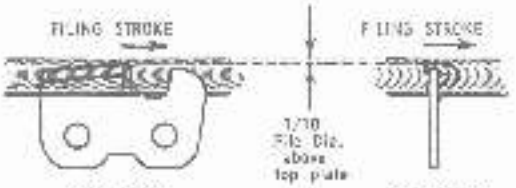
Parts List For Chain Saw

Part No.	Ill. No.	Description	No. Req.	List (Each)
[illegible]		Chrysler Engine — 62	1	$86.40
61896		Chrysler Engine — 61	1	83.70
[illegible]W	(1)	Main Frame	1	27.90
11184		Engine To Frame Bolts	4	.30
11185		Engine To Frame Washers	4	.05
11182	(2)	Frame Boom (Front Post)	1	1.50
785		Frame Base Cap Screw	1	.10
520		Frame Boom Nut	1	.10
11186		Frame Base Socket Cap Screw	1	.20
11187	(3)	Wrap Around Handle	1	3.80
709		Handle To Frame Bolts	2	.10
520		Handle To Frame Nuts	2	.10
11181	(4)	Gas & Oil Tank Cover	1	5.20
11188		Gas & Oil Tank Cover Gasket	1	.10
11189		Gas & Oil Tank Cover Screws	10	.09
11110	(5)	Gas & Oil Tank Cap	2	.25
11111	(6)	Gas & Oil Cap Gaskets	2	.10
11112	(7)	Throttle Trigger	1	.35
1710		Spike Bumper Bolts	2	.10
934		Spike Bumper Lockwasher	2	.05
11044	(23)	Tension Adjust. Bolt	1	.15
11052	(24)	Tension Adjust. Lug	1	.08
10008	(25)	Tension Adjust. Nut	1	.10
3017		Guide Bar Clamp Bolts	2	.10
11127		Guide Bar Clamp Nuts	2	.10
3680		Guide Bar Clamp Washers	2	.05
11003	(32)	Guide Bar Clamp	1	3.75
11130	(28)	Chain 3"	1	6.00
11132	(27)	Drum & Sprocket Assy. 7/16 P	1	7.80
11133		Drum & Sprocket Assy. .404 P		
11039	(29)	Needle Bearing	1	1.10
2004	(26)	Washer 5/8 Flat	1	.05
11040L	(30)	Nut 7/16 Lock L. H.	1	.10
11051	(31)	Woodruff Key	1	.10
11113		Throttle Trigger Pin	1	.15
1111-W	(8)	Throttle Wire	1	.10

Part No.	Ill. No.	Description	No. Req.	List (Each)
11115A		Throttle Lock Assembly	1	1.45
11116	(9)	Lock Pin	1	.00
11078	(30)	Lock Pin Nut	1	.30
11077	(11)	Lock Pin Spring	1	.20
11076	(12)	Lock Pin Button	1	.15
11117	(13)	Oil Pump	1	1.40
11118	(14)	Oil Pickup Wire	1	1.90
11119	(15)	Oil Pickup Tube	1	.25
11120	(16)	Oil Pump Tube	1	.05
11121	(17)	Chain Oil Elbow	1	.65
11122	(18)	Gasoline Elbow	1	1.10
11123	(19)	Gasoline Pickup Wire	1	1.90
11124	(20)	Gasoline Pickup Tube	1	.25
11125	(21)	Gasoline Hose	1	.15
11126	(22)	Spike Bumper	1	1.45
11035	(33)	Chain Sprocket	1	.30
11137		16" Welded Nose Bar		15.95
11138		20" Welded Nose Bar		16.50
11139		24" Welded Nose Bar		17.55
11140		16" Standard Bar		9.95
11141		20" Standard Bar		10.50
11142		24" Standard Bar		11.55
11143		16" Roller Bar		15.95
11144		20" Roller Bar		16.50
11145		24" Roller Bar		17.05
11146		16" Chain 7/16" Pitch	52 Drive Links	14.60
11147		20" Chain 7/16" Pitch	61 Drive Links	17.35
11148		24" Chain 7/16 Pitch	70 Drive Links	20.14
11153		16" Chain 404 Pitch	56 Drive Links	14.60
11155		20" Chain 404 Pitch	66 Drive Links	17.35
11158		24" Chain 404 Pitch	78 Drive Links	20.14
11150		Muffler	1	3.50
11151		Muffler Gasket — Chrysler	1	.25
11052		Bolt 5/16" x 1"	2	.10
706		LW 5/16"	2	.05

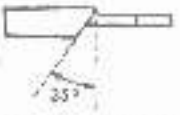
How To File Chipper Chain

TOP VIEW



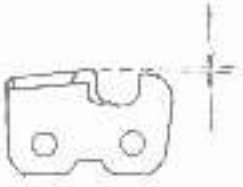
SIDE VIEW END VIEW

Maintain These Filing Angles



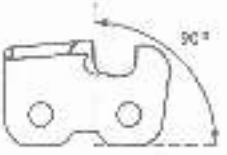
35° TOP PLATE FILING ANGLE

Hold the file in one position perpendicular to the side of the cutter and at 35° angle to the length of the chain. If this angle is less than 35°, the cutter is blunt and cutting is slow. If greater than 35°, the cutter is feathered and will dull fast.



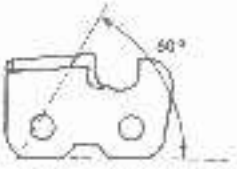
DEPTH GAUGE SETTING

Correct depth gauge settings are as important as cutter filing for efficient cutting and long chain life. If depth gauges are too low, chain will grab, jerk, hang up and overload motor. If they are too high, cutters will not be able to bite into wood, and cutting is slow. Every time you file cutters, check depth gauges and file them if needed.



90° SIDE PLATE ANGLE

The side plate must be 90° to the bottom of the cutter. Use firm, long, even strokes, applying pressure on forward stroke away from you. If this angle is negative (back-slope) cutting will be slow as cutters try to rise out of cut, requiring more pressure to operate saw. Positive angle (hook) feathers top plate which dulls fast and causes chain to grab, hang up.



60° TOP PLATE CUTTING ANGLE

This angle must be 60°. It is formed by the position in which you hold the file and it determines whether the cutter is dull, sharp or has a feather edge. If you hold file low, you get a feather edge. Hold it too high, you get a blunt edge. Hold file well up against top plate so about 1/10 of file diameter is above top plate.

Operation

Your Chain Saw is a direct drive type and because of its high speed cutting action, no pressure is needed to cut through the wood.

If pressure becomes necessary to make it cut, the chain should be sharpened.

When starting to cut, don't jam the saw into the wood.

Place the spike bumper against the timber, bring the engine to full throttle and ease the saw into its cut. Don't forget to oil the chain as you are cutting.

Pump the oiler often while cutting and continue to do so — for the life of the chain will be considerably lengthened by this practice. To depend on a few pumps of oil between cuts for lubrication is poor practice.

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OUR WARRANTY PROTECTS YOU

WARRANTY

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HOW TO ORDER PARTS—First, go to the dealer from which you purchased the saw. If he does not have the required parts, he will order from the nearest Root branch office. Give your model number and parts number to insure receiving correct parts. **MINIMUM PARTS ORDER**—One dollar.

THE ROOT MANUFACTURING COMPANY, INC.

Baxter Springs, Kansas

Printed in U. S. A.