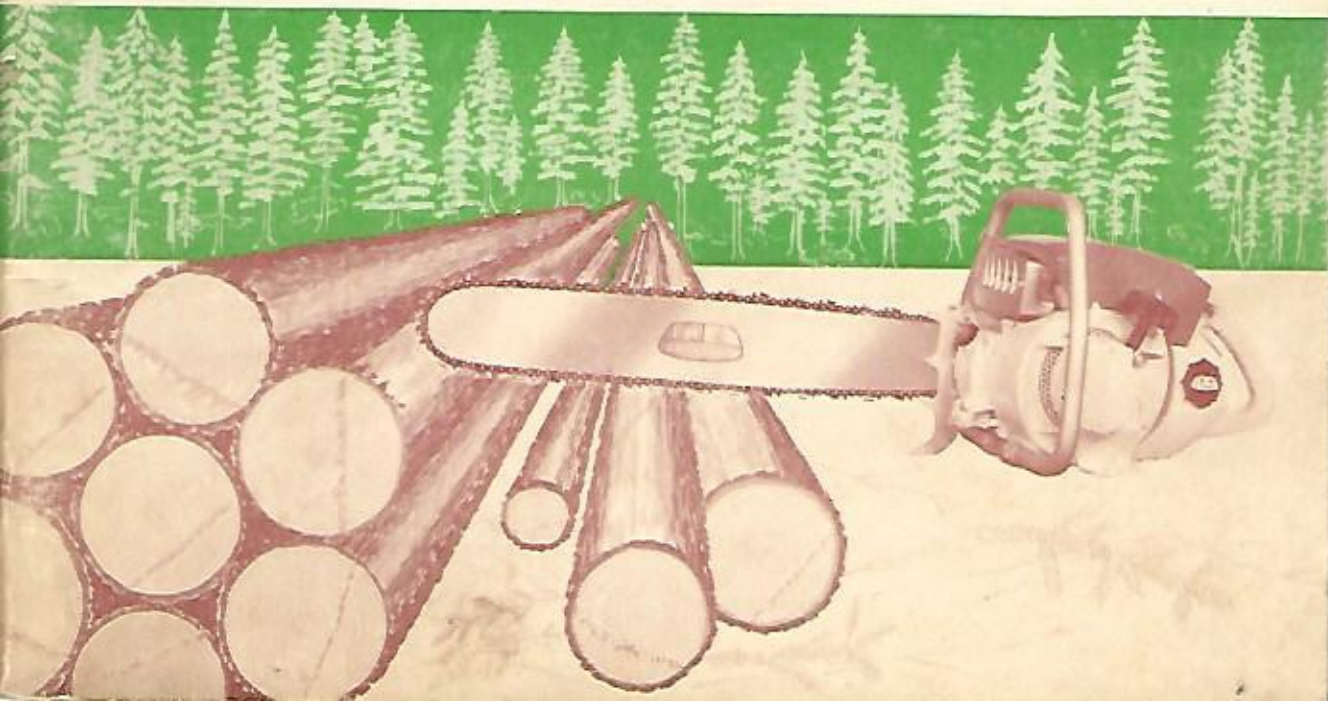


CANADIAN

MODEL 270 - '65 SERIES MANUAL





OPENING MESSAGE

P.M.—Canadien chain saws are designed specifically for production usage, where both high performance and dependability are equal requisites. Your new saw has an unlimited service potential provided it is given normal care and receives the proper maintenance.

This manual is intended as a guide to correct operator maintenance and should be looked over carefully before the saw is put to any extensive use. Anything not explicitly covered herein should be considered specialized service work, best handled by an experienced chain saw mechanic or authorized P.M.—Canadien Dealer.

WARNING

The internal moving parts of the 2-cycle motor are lubricated solely by the oil which is added to the gasoline. The proportion of oil to gasoline as set forth under **STARTING INSTRUCTIONS** must be maintained.

IMPORTANT

When ordering parts, state the **PART NUMBER** and also the **NAME OF THE PART**. Give the **MODEL** and the **SERIAL NUMBER** with each parts order. Register your serial number in the space provided below:

MODEL 270
 SERIAL NUMBER

For **WARRANTY**—see inside back cover.

SAW COMES COMPLETE WITH:

Cutter bar—of required length
 Chipper chain—of corresponding length
 Chain parts
 Chain manual
 Bucking spike—Eastern or Western
 2240 Bar wrench
 2239 Spark plug wrench
 Operator's manual

NOTE TO NEW OWNERS

If you are new to chain saws some of the terms used in this manual may appear technical, and somewhat confusing. Over-printed on the illustrations you will find these same terms with arrows pointing to the place or part referred to in the text. Familiarizing yourself with these terms and with the important contents of this manual will do much towards quickly making you an efficient chain saw operator.



FIGURE 1.

Contents of Box

THINGS TO REMEMBER

Keep machine clean.

Be sure fuel is **THOROUGHLY MIXED** and in the **PROPER PROPORTIONS**.

Keep chain sharp—properly filed and properly tensioned.

Keep chain well oiled.

Keep cylinder block and head fins clear of debris.

Keep air filter clean—wash in fuel mix shake dry before replacing.

Check muffler and exhaust ports periodically, for carbon build-up.

Inspect regularly for loose parts.

STARTING INSTRUCTIONS

Check machine to be sure all components are in working order.

Install bar and chain as follows:

Remove bar nuts and washers—remove chain cover.

Remove outer chain guide plate.

Install bar—fit chain on over bar and sprocket — pull bar forward taking up chain slack — be sure cutting teeth on top of bar face forward.

Replace outer chain guide plate.

Replace chain cover—make sure tensioner pin is located in bar slot.

Replace bar nuts and washers—tension properly — see CHAIN TENSION (p.11) — tighten nuts — check tension again.

Fill fuel tank with thoroughly mixed fuel in the proportions: 1 part S.A.E. 30 or 40 motor oil to 16 parts of regular gasoline.

Fill chain oil tank with clean light S.A.E. 10 or 20 motor oil. See COLD WEATHER (p.38).

To start — flick ignition switch 'ON' — open choke lever — pull motor over.

NOTE: In starting motor always pull cord slowly until slack is taken up (and the starter pawls have engaged smoothly with the starter cup) — then give a short, fast pull.

Pulling fast through the slack allowance, thus engaging the mechanism too forcibly, will soon result in a breakdown of the rewind assembly.

BREAK-IN PROCEDURE

Your new saw has already been through a complete factory run-in, fitted with bar and chain and operation-tested by a factory mechanic.

Although your saw requires no concentrated break-in period, and is ready on delivery for production cutting, the following recommendations should be observed:

Before starting motor, pull chain over bar while freely pumping on the chain oil. The chain should be thoroughly saturated with oil before its initial run, and should be kept overly well oiled for the first hour of operation.

Check repeatedly, and take up tension as required by natural stretching of new chain.

NOTE—Always keep the chain well oiled and properly tensioned.

Warm machine up (at idling speed) for about 2 minutes everytime motor starts from cold.

Never race motor at high RPM's while not engaged in cutting.

OPERATOR PREVENTIVE MAINTENANCE

A system of regular inspections and tune-ups should be adopted by the operator. Continued neglect eventually will mean wasted time and money through major failures and unnecessary repairs. The operator who wishes to avoid later difficulties, will practise preventive maintenance from the start.

CYLINDER AND HEAD FINS

Give cylinder and head fins a regular inspection and cleaning. Check the blower screen (on the starter side) also.

SPARK PLUG

Check regularly for carbon, fouling and cracks. Keep clean and adjust gap to .025". Use only Champion J-6-J or equivalent.

IGNITION

Check high tension lead for loose connections and points of worn insulation. Test ignition switch as described on (p. 35) of the TROUBLE SHOOTING section. Test magneto as described on (p. 36) of the TROUBLE SHOOTING section. Breaker points should be clean and unpitted with gap set at .020". It is recommended that extensive magneto service work be taken to your dealer.

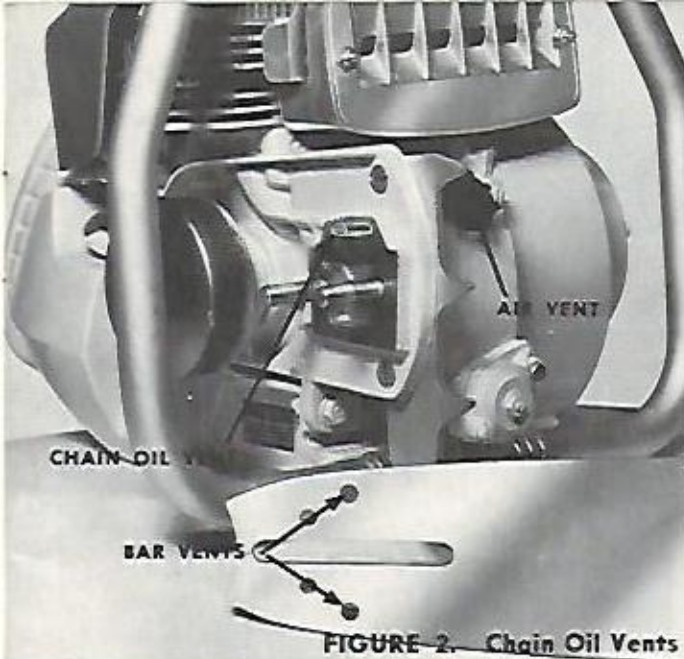


FIGURE 2. Chain Oil Vents

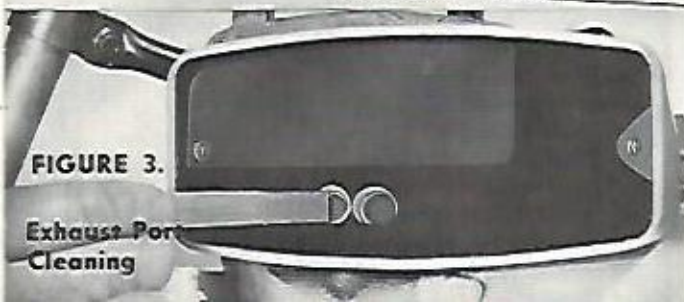


FIGURE 3.

Exhaust Port
Cleaning

CLUTCH

The clutch is designed to engage at a relatively high motor speed. Idling speed should be set safely below that at which clutch engages. Continual overloading of the chain in cutting with the resulting slippage of clutch will rapidly wear out the linings.

CHAIN OIL VENTS

The chain oil vents must be kept clear at all times. The oil tank air vent in the chain oil cap must also be kept clear.

EXHAUST PORTS

Check periodically for carbon build-up. Remove spark plug and locate piston at its lowest point. Remove excess carbon with a blunt edged tool, taking care not to damage port area. Turn machine on end so carbon particles fall out and not back into the cylinder.

AIR FILTER

The machine comes equipped with an all-purpose flock-screen type air filter, safely and easily cleaned in gas solvents.

LUBE-ASSIST

Your Lube-Assist is factory set for average operating conditions. Adjust for local circumstances as follows:

1. Loosen locknut on adjusting screw
2. Back screw off for more oil
3. Turn screw in for less oil

Adjust by turning the screw $\frac{1}{8}$ turn at a time until the oil tank and fuel tank empty themselves at about the same time. If insufficient oil is delivered with screw backed off 3 turns, check for dirt or damage. To obtain basic setting, screw adjusting screw all the way in GENTLY, back off $2\frac{1}{2}$ turns, then adjust as above.

NOTE: The Lube-Assist supplies enough oil for average cutting. Use your manual oiler regularly in all tougher conditions.



FIGURE 4. Cleaning Flock Screen Filter

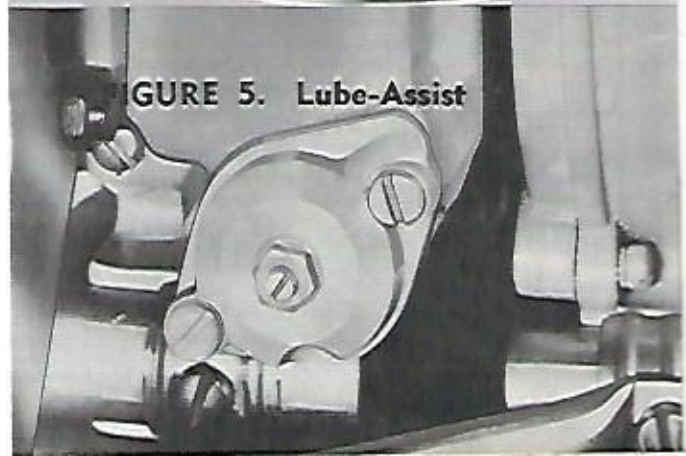


FIGURE 5. Lube-Assist

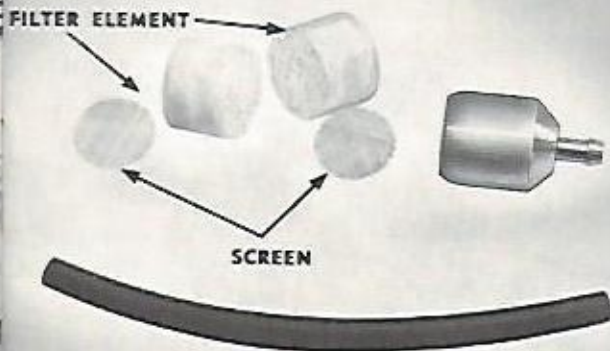


FIGURE 6. Fuel Pick-up Head Assembly

FUEL PICK-UP HEAD

The filter element contained in this pick-up head is the essential checkpoint of the entire fuel system. **NOTE** — The filter screen in the base of the carburetor is secondary and will only require servicing if the pickup head has been neglected for some time. The felt, filter element is inexpensive and should be replaced periodically if major difficulties are to be avoided.



FIGURE 7. Oil Pick-up Head Assembly

OIL PICK-UP HEAD

The components of the oil pick-up head are assembled and sealed — available for replacement only as a completed unit. Replacement of this assembly will not be often required, provided clean, light oils are used without exception. Old 'crankcase' oil will clog the filter element very quickly. The oil tank cover must be removed in order to examine or replace this unit.

CARBURETOR

Periodic adjustments, as outlined below and occasional inspection of the filter in the base of the carburetor should be made by the operator.

CARBURETOR SETTINGS

Always adjust High speed (Main) jet before setting Low speed (Idle) jet.

HIGH SPEED (Main Jet)—To adjust—shut off gently—open $\frac{3}{4}$ to 1 full turn.

LOW SPEED (Idle Jet)—To adjust—after high speed is set—shut off gently—open $\frac{3}{4}$ to 1 turn.

IDLE SPEED—Controls idling speed only—turn clockwise to open—set idle speed screw 1 to $1\frac{1}{2}$ turns open.

NOTE: The engine cannot idle correctly if the idle speed screw is more than $1\frac{1}{2}$ turns open from point of contact with throttle shaft.

Further FINE adjustments to High and Low speed jets may be required for optimum performance.



FIGURE 8. Carburetor Adjustments



FIGURE 9. Carburetor Filter

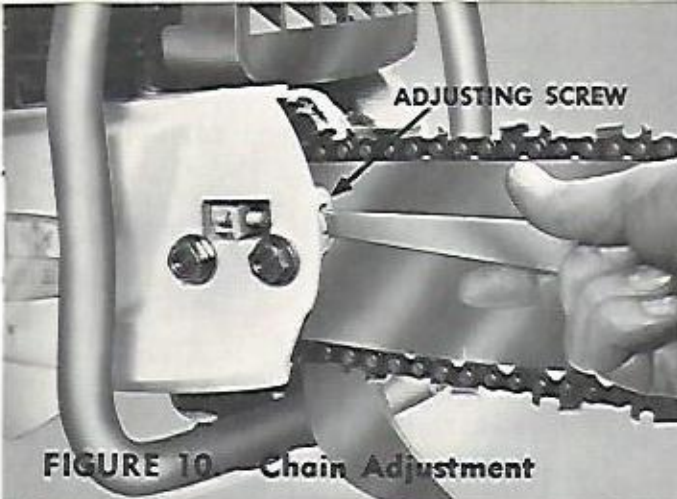


FIGURE 10. Chain Adjustment

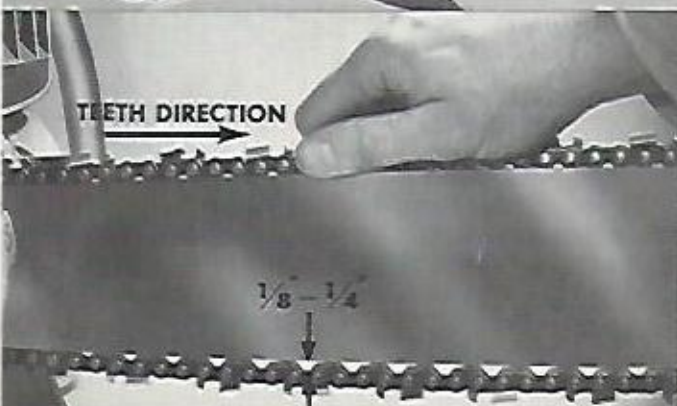


FIGURE 11. Chain Tension

CHAIN TENSION

To adjust chain tension, loosen off the two bar nuts and make necessary adjustment via the ADJUSTING SCREW (fig. 10). The combination wrench and screwdriver, included with the saw, is designed specifically for this purpose. Re-tighten bar nuts when correct tension is achieved.

The chain should 'hang' from the bar so that the widest space between the tie strap or cutter bottoms and the lower edge of the bar is no more than $\frac{1}{4}$ " or no less than $\frac{1}{8}$ " (fig. 11).

A properly adjusted chain should be tensioned to where it can be just pulled around the bar easily by hand after bar and chain have been oiled.

NOTE—Correct tension is essential to long bar, chain and sprocket life. Make a practice of checking tension every time motor is shut off.

BAR, CHAIN AND SPROCKET MAINTENANCE

Most bar chain and sprocket difficulties can be attributed directly to the operator. Neglect of what is required invariably leads to trouble. The following three mistakes are most often made:

1. Insufficient lubrication.
2. Incorrect tension.
3. Incorrect filing and jointing.

SPROCKET

Observing the maintenance recommendations on bar and chain is sufficient to maintain the sprocket. Examine the sprocket periodically, and especially when installing a new chain—never use a new chain with a worn sprocket and vice versa. Under normal conditions the sprocket bearings require a minimum of lubrication. If the bearings should become stiff or noisy, however, pull the clutch and sprocket, clean the bearings and shaft thoroughly, and repack with a good grade of waterproof grease.

Replace the bearings if any damage is apparent.

Do not overlubricate the bearings, as the grease might get on the clutch facings, thus spoiling the clutch action.

BAR MAINTENANCE

Rotate bar regularly to ensure even wear. Keep groove clear of sawdust—avoid damaging, rail-spreading build-up.

Keep bar well lubricated — (as a part of chain lubrication).

For repair of:

BAR GROOVE

To close spread rails—place a groove gauge (a piece of steel about 6" long and approx. .004" thicker than the drive links) in the groove and lay the bar on an anvil with the thinner of the two rails up. Hammer the thin rail snugly down on the groove gauge. Repeat this along the bar except around the bar end. (fig. 13).



FIGURE 12. Clearing Bar Groove

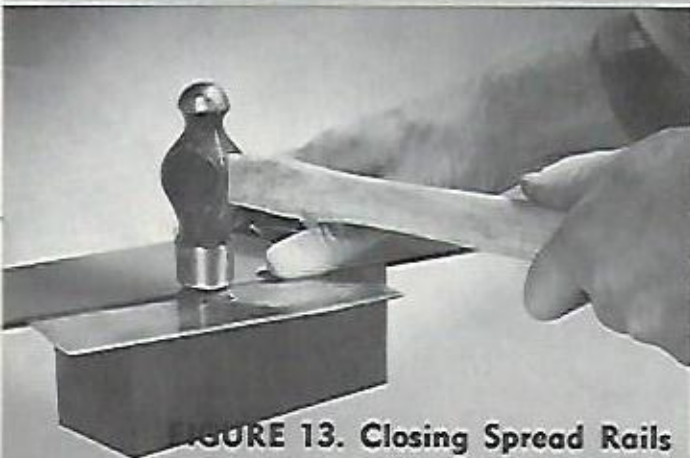


FIGURE 13. Closing Spread Rails

BAR RAILS

To remove burr — When wear leaves a sharp or wire edge on the outer sides of the guide rails, remove it with a flat file.

To joint 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)—make temporary repair using a flat file—see your Dealer for more exacting, permanent repair.

BAR END

Bar ends are inlayed with hard alloy stellite. Do not attempt to open or close grooves of the hardened end. If the inlay becomes chipped, have it repaired by a dealer equipped for this service.

FILING

Peak efficiency from your saw is impossible unless the chain is always kept in top condition. A dull or improperly filed chain will mean extra load on the motor and excess wear on bar, chain and sprocket. The operator who tries to 'force the cut' will only strain himself while actually cutting less wood.

PROCEDURE

Use a sharp $7/32''$ (on $.404''$ pitch chain) full round file—NOT a rat tail file.

Use firm, long, even strokes, applying pressure on the forward stroke away from you.

Always hold file in one position—parallel with the top and at 35° to the right angle.

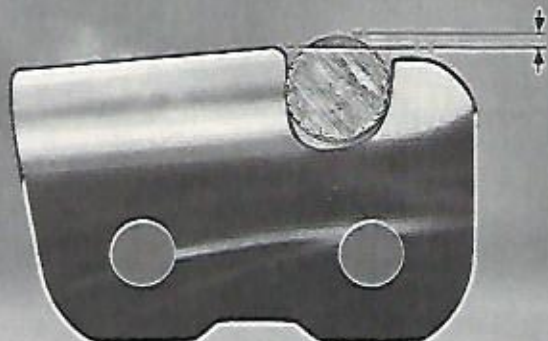


FIGURE 14. Correct Undercut

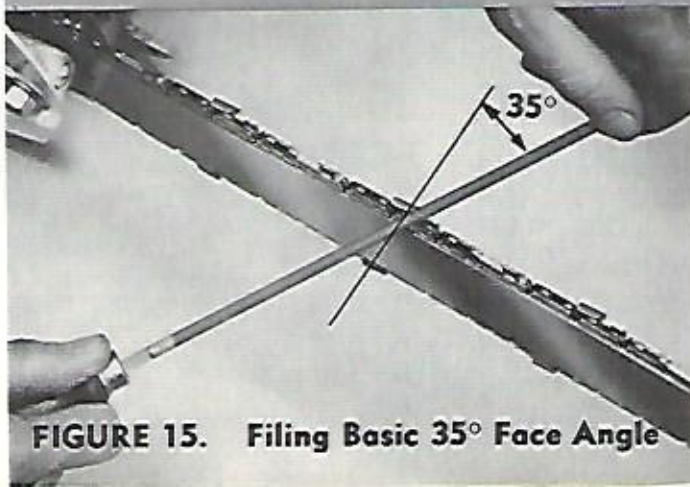


FIGURE 15. Filing Basic 35° Face Angle

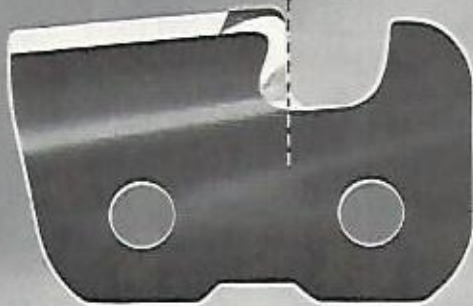


FIGURE 16. Correct Slope

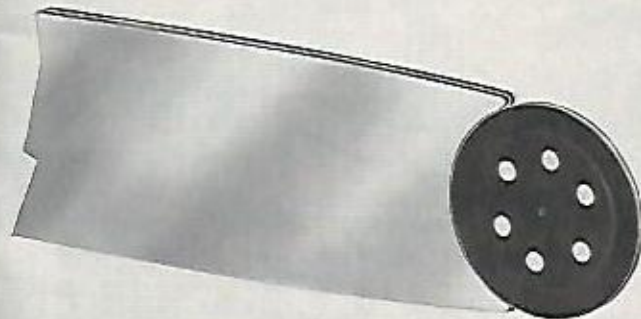


FIGURE 17. Roller Nose Bar

Always keep side of cutting edge **VERTICAL** by keeping about 1/10 of file diameter above top edge of cutter.

NOTE—For further information on chain filing refer to the **FILING and MAINTENANCE INSTRUCTIONS**, included with the saw and with every new chain.

INSTALLING AND FILING NEW CUTTERS

When a new cutter is installed in a chain it should be filed back to correspond with the top plates of the other cutters. The depth gauge must also be set to match the others.

ROLLER NOSE BAR

Grease roller nose regularly through central lubricating hole. Keep the chain tight enough to eliminate all slack, but loose enough to be pulled around easily by hand.

JOINTING

Proper jointing is essential. Make a practice of jointing your chain after every second filing. Excessive joint will cause cutters to bite too deeply; grab, and result in a damaging overload on all attachments. Insufficient joint prevents cutters from taking enough of a bite and means inefficiency.

Joint as follows:

Use a sharp flat file.

Use a proper depth gauge (fig. 19).

File near centre of bar—move chain along, not depth gauge.

Maintain basic joint of .035" (on .404" pitch chain) unless familiar with requirements of varying conditions.

Keep front of depth gauges rounded.

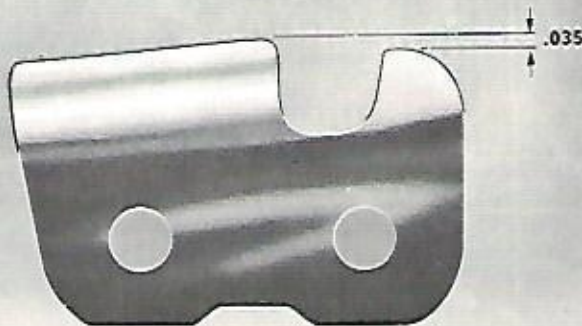


FIGURE 18. Depth Gauge Setting



FIGURE 19. Jointing

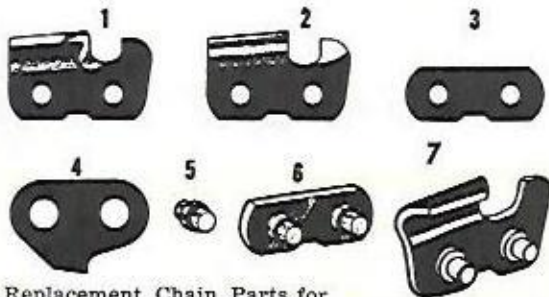
BAR AND CHAIN

Your Model 270 saw comes equipped with a .404 Pitch—.058 Gauge chain. It is an all-purpose chain, proven effective under a wide variation of climatic conditions and in all types of wood. It is the recommended replacement chain.

When ordering replacement bars and chains refer to the following part numbers:

Length	Bar Part No.	Chain Part No.
15"	270415	611052
18"	270418	611060
20"	270420	611064
24"	270424	611076
30"	270430	611092
32"	270432	611100
36"	270436	611104

When ordering individual replacement chain parts refer to the following table:



Replacement Chain Parts for

Ref. No.	Part No.	Part Name
1	691150	L.H. Cutter
2	691151	R.H. Cutter
3	691153	Tie Strap
4	691152	Drive Link
5	691157	Rivet
6	691154	Preset Tie Strap
7	691155	Preset L.H. Cutter

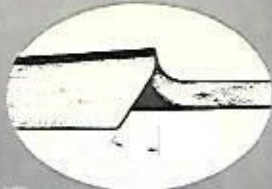
Chain Repair Kit Part No. 611000 containing

Quantity	Part No.	Part Name
1	691150	L.H. Cutter
1	691152	Drive Link
2	691157	Rivet
1	691153	Tie Strap
2	691154	Preset Tie Strap
1	691155	Preset Cutter

VERTICAL



35° - 40°



HOOK



FEATHER EDGE



FIGURE 20.

RIGHT

WRONG

CHAIN TROUBLES

Trouble	Causes	Remedy
Chain cuts to one side	Cutter angles not the same on both sides	See FILING and JOINTING (p.14-16)
	Cutter teeth not the same length on both sides	
	Uneven joint	
	Uneven bar rails	Repair or replace bar—see your Dealer
Chain cuts roughly and/or digs in	Cutter angles incorrectly filed	See FILING and JOINTING (p.14-16)
	Too much or uneven joint	
Chain stiff—hard to tension	Insufficient lubrication	Use chain oil freely
	Poor maintenance—pitch or rust bound	Add kerosene to oil in pitchy wood. When using saw only intermitently, store chain in oil bath
	Damaged drive links—excessively peened	Repair or replace as required



FIGURE 21.

Trouble	Causes	Remedy
Chain breaks	Dull cutters—excessive pressure by operator	Repair—file properly, NEVER force a dull chain—it won't cut faster. STOP and file properly
	Excessive joint	See FILING and JOINTING (p.14-16)
	Insufficient lubrication	Use chain oil freely
	Loose bar	Repair—keep bar stud nuts tight
Badly worn drive links and/or tie straps	Excessive tension	See CHAIN TENSION
	Insufficient lubrication	Use chain oil freely
	Dull or improperly filed chain	See FILING and JOINTING (p.14-16)
	Worn sprocket	Check and replace as required
Chain jumps bar	Incorrect chain tension	See CHAIN TENSION
	Loose bar	Replace chain—re-tension—keep bar nuts tight
	Damaged drive links	Replace damaged links or entire chain as required
Worn drive sprocket	Incorrect chain tension	See CHAIN TENSION
	Dull or improperly filed chain	See FILING and JOINTING (p.14-16)
	Insufficient lubrication	Use chain oil freely

SPECIFICATIONS

BASIC CONSTRUCTION: High strength, low weight, weldable sand cast magnesium

ENGINE: 2-cycle, air cooled

BORE: 2 5/16"

STROKE: 1 3/8"

CAPACITY: 5.8 cu. in.

COMPRESSION RATIO: 10.1

FUEL CAPACITY: 2 1/2 pints

OIL CAPACITY: 1/2 pint

FUEL MIXTURE: 16-1

MAGNETO: Wico

CARBURETOR: Tillotson-diaphragm

STARTER REWIND: Fairbanks-Morse

CONTROLS: Finger tip grouped

WEIGHT: 20 lbs. dry—powerhead

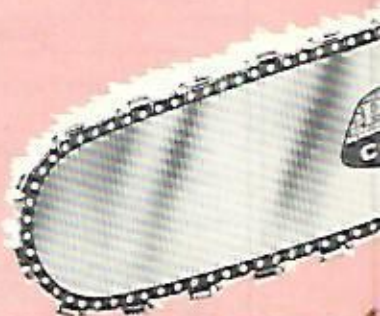
BARS: Solid alloy steel, heat treated, Stellite tipped 15, 18, 24, 30, 36" lengths

CHAIN: .404 pitch — .058 gauge

SPROCKETS: 7 tooth or 8 tooth

EXHAUST Cool, large expansion chamber — low velocity exit, baffled spark arrestor

CYLINDER SLEEVE Hard alloy 'Ni-resist' iron.ported.



ENGINE BALANCE Exposed crankshaft counterbalancing, eliminating vibrations

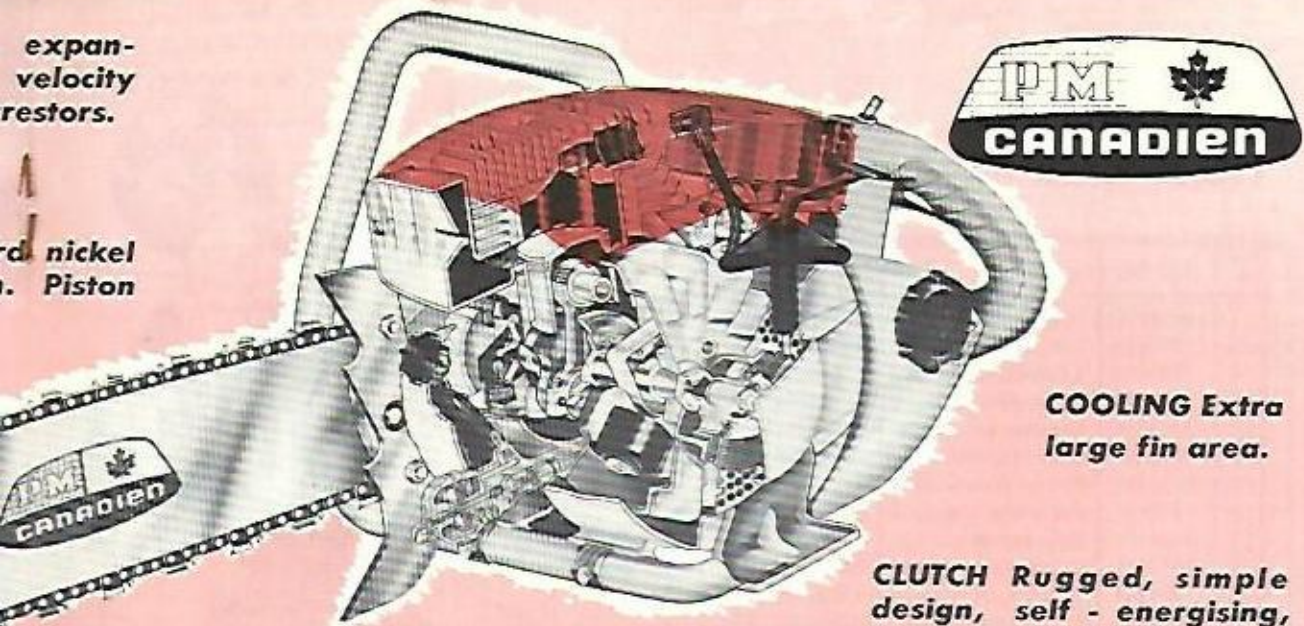
AIR FILTER Pleated ring screen, strong and was over 20 sq. in. surface area

expansion-velocity restors.

rd nickel
Piston

extra
lanc-
tion.

ing, flocc
ashable,
area.



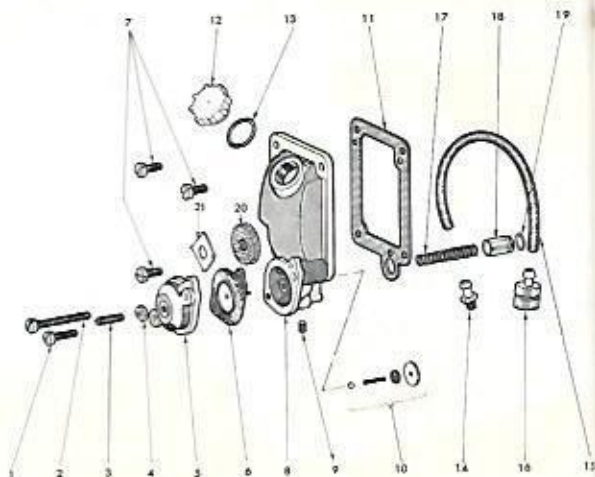
COOLING Extra large fin area.

CLUTCH Rugged, simple design, self-energising,

The Lube-Assist provides a continuous flow of oil to the bar and chain to supplement the amount you normally apply by hand oiling. The manual oiler **MUST** be used at all times to supply lubrication for the various demands of your special cutting technique and various other factors like hard or frozen wood, difficult or binding cuts, extreme hot or cold weather, worn chain or bar, etc.

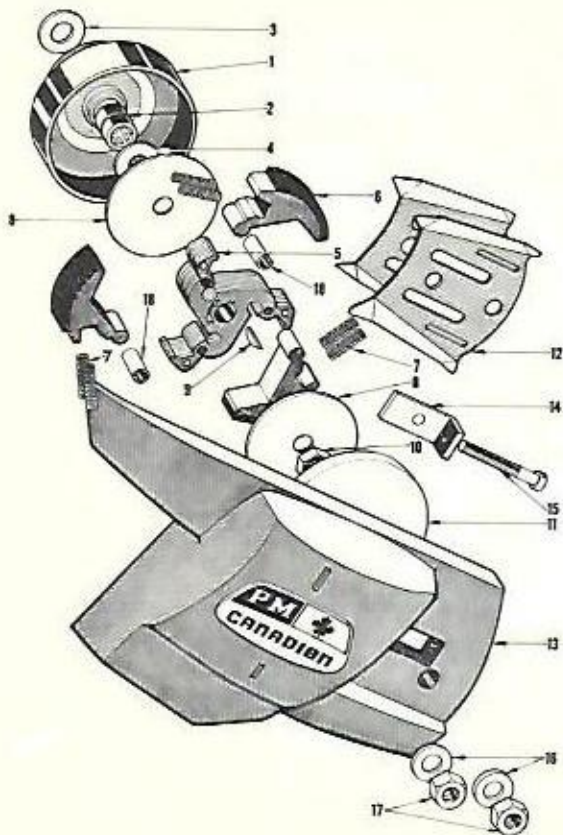
CHAIN OILER

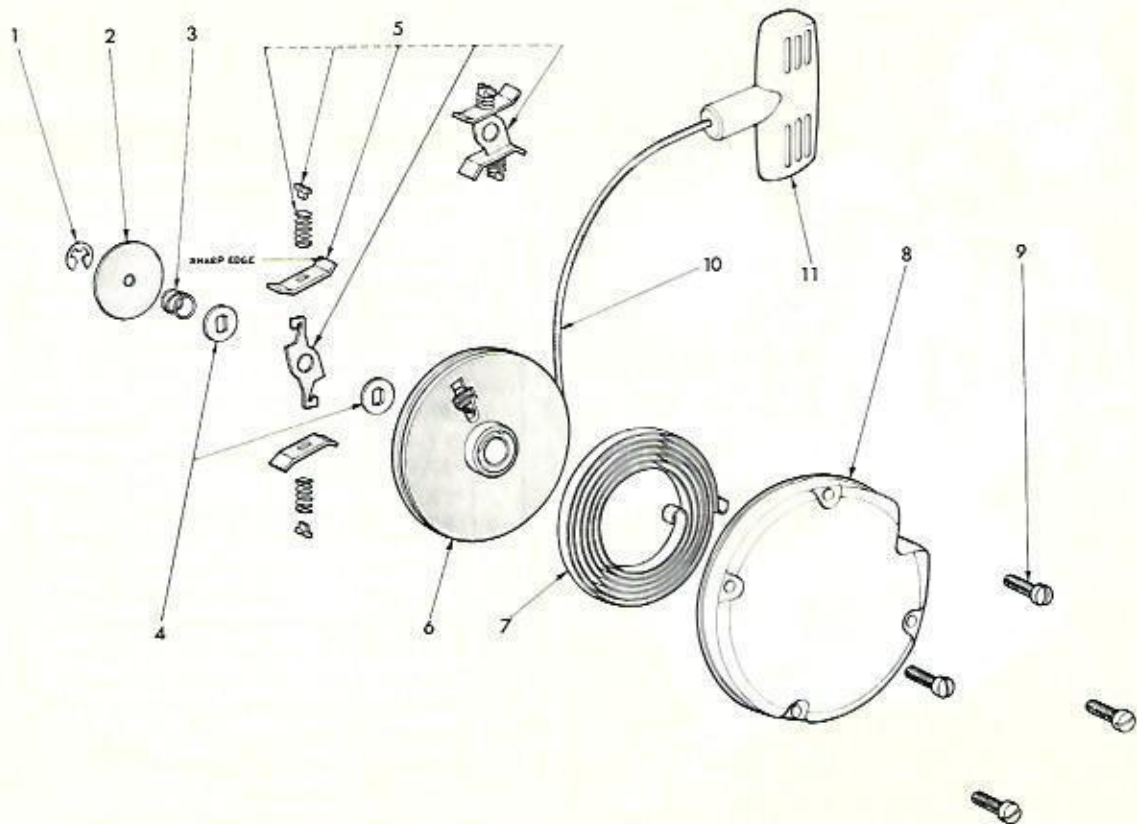
Ref. No.	Part No.	Description
1	**725810	Diaphragm Cover Screw (short)
2	**727810	Diaphragm Cover screw (long)
3	*781260	Adjusting Screw
4	*850260	Lock Nut
5	**275611	Diaphragm Cover Assy. (includes *)
6	**275613	Oiler Piston and Diaphragm Assy.
7	725810	Cover Screw (3 used)
8	270622	Oil Tank Cover Assy. (includes **)
9	**780410	Set Screw
10	**275718	Oiler Valve Repair Kit
11	270246	Gasket
12	270638	Oiler Filler Cap Assembly
13	270258	Oiler Filler Cap Gasket
14	271627	Oil Pick-up Connector
15	270270	Oil Pick-up Hose
16	271629	Oil Pick-up Head Assembly
17	16513	Oiler Spring
18	270260	Oiler Piston
19	16061	'O' Ring
20	270286	Filter
21	270287	Retainer



CLUTCH

REF. NO.	PART NO.	DESCRIPTION
1	270645	7 Tooth Sprocket (drum & bearing)
	270653	8 Tooth Sprocket (drum & bearing)
2	270348	Sprocket Bearing (2 used)
3	19029	Thrust Washer
4	19035	Thrust Washer
	270647	Clutch Driver Assy. (includes *)
5	*270643	Clutch Driver (includes 3-270369)
6	*270646	Clutch Shoe Assembly (3 used)
7	*270363	Spring (6 used)
8	*270364	Side Plate (2 used)
9	856405	Clutch Key
10	850467LC	Crankshaft Nut
11	21121	Clutch Cover
12	21123	Guide Plate (2 used)
13	270648	Chain Cover Assy. (includes **)
14	**270649	Chain Tensioner Assembly
15	**737814S	Chain Tensioner Screw
16	855916C	Bar Washer (2 used)
17	850066C	Bar Nut (2 used)
18	270369	Clutch Sleeve (3 used)

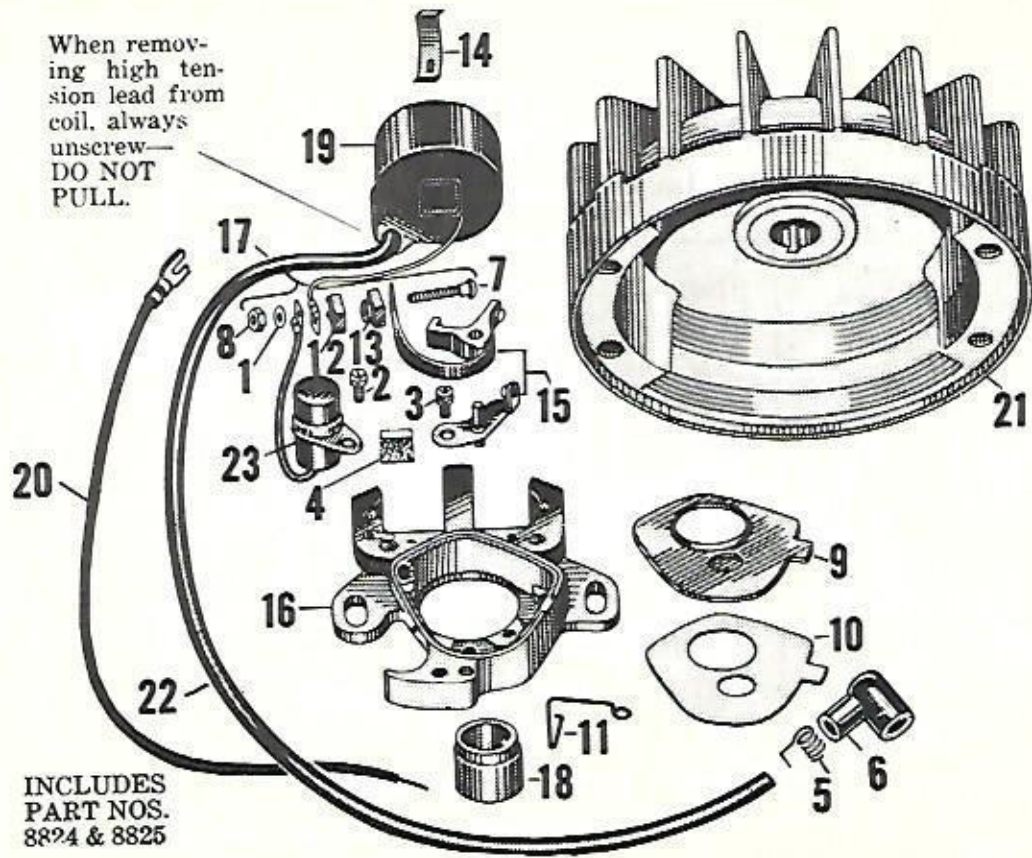




STARTER

Ref. No.	Part No.	Description
	21082	Starter Complete
1	29-3	Retainer Ring
2	27-8	Brake Retainer Washer
3	20-3	Brake Spring
4	27-80	Brake Washer (2 used)
5	111-17	Replacement Pawl Assembly
6	13-10	Rotor
7	20-1	Rewind Spring
8	151-310	Cover
9	726810	Cover Screw (4 used)
10	40-2	Starter Cord
11	144-20	"T" Handle Assembly

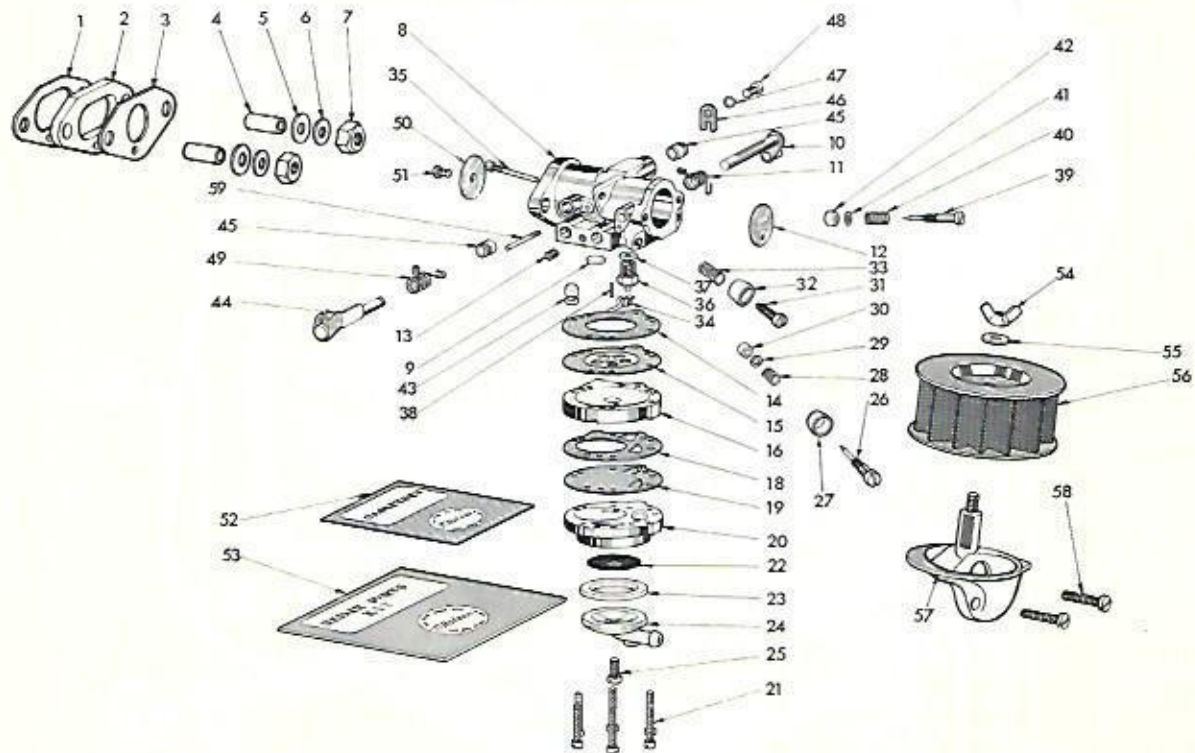
When removing
high tension
lead from
coil, always
unscrew—
DO NOT
PULL.



INCLUDES
PART NOS.
8824 & 8825

MAGNETO

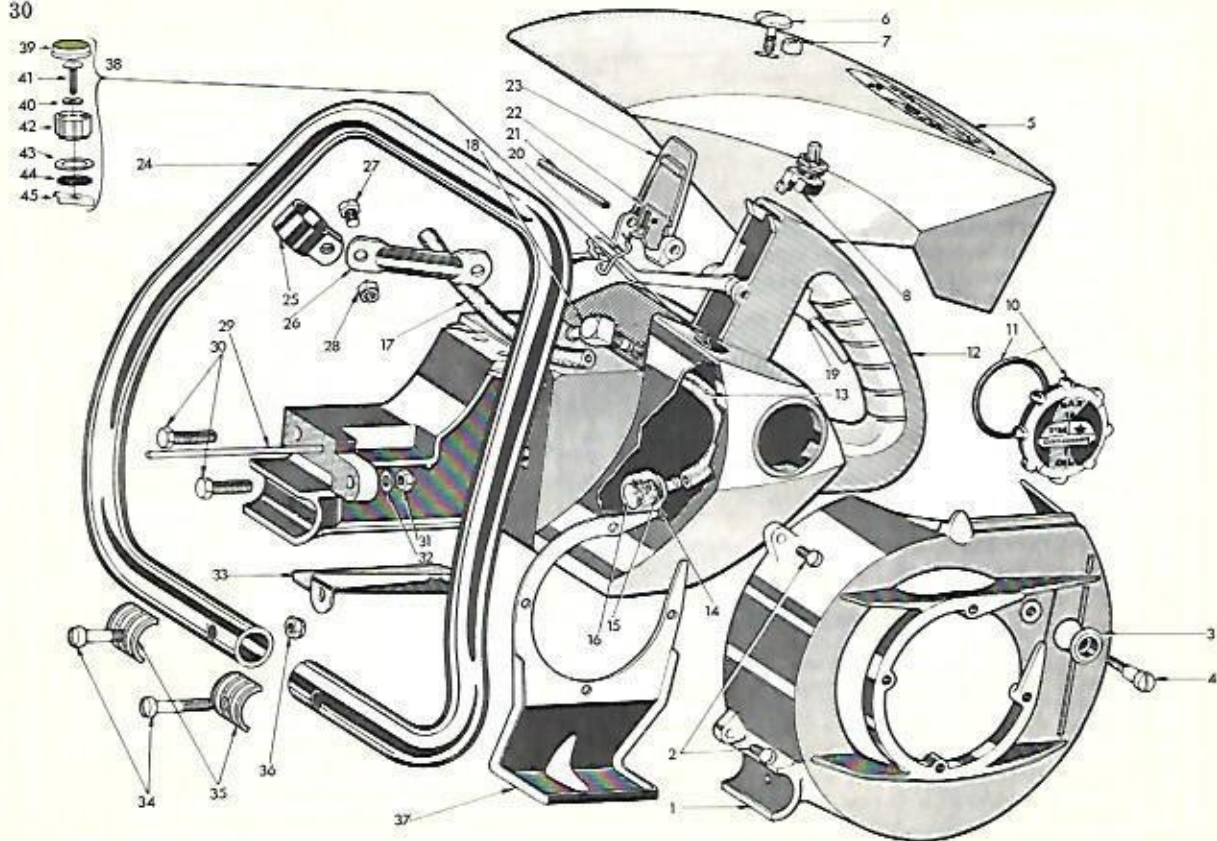
Ref. No.	Part No.	Description
	270601	Magneto assembly complete
	X11189	Stator assembly complete (includes *)
1	* M-90X	Ground lead clamp nut lockwasher
2	* 5431	Condenser clamp screw assembly
3	* 5900	Fixed contact clamp screw assembly
4	* 6318	Cam wiper felt
5	* 8824	Terminal spring
6	* 8825	Terminal spring cover
7	* 9996	Connection stud
8	* 11015	Ground lead clamp nut
9	* 11018	Cover
10	* 11019	Gasket
11	* 11024	Breaker box cover spring
12	* 11025	Connection stud insulator (outside)
13	* 11027	Connection stud insulator (inside)
14	* 11028	Coil wedge spring
15	* X11030	Breaker point set
16	* X11060	Stator plate group (plate & coil core only)
17	X11061	Terminal connection unit
18	11084	Breaker cam
19	* X12920	Coil group
20	X12988	Switch wire (includes grommet and
21	Y11282B	Rotor terminals)
22	* X12004	High tension lead group
23	* X12508	Condenser group
24	270081	Grommet



CARBURETOR

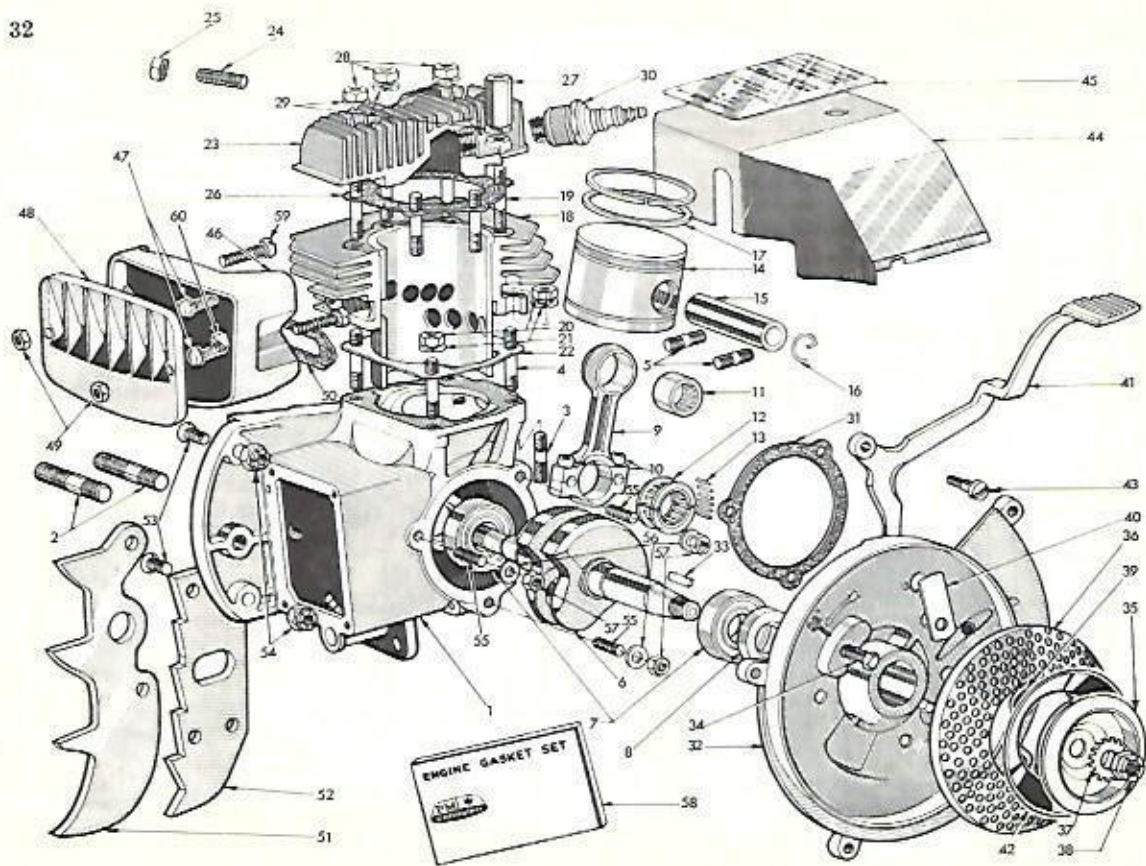
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
	270095	Carburetor Complete	30	011401	Idle Adj. Screw Packing
1	270097	Carburetor Heat Damper Gasket	31	05095	*Idle Speed Regulating Screw
2	270096	Carburetor Heat Damper	32	270099	Idle Speed Regulating Screw Cup
3	270098	Carburetor Gasket	33	0788	*Idle Speed Regulating Screw Spring
4	270028	Insulating Sleeve (2 used)	34	010513	*Inlet Control Lever
5	270026	Fibre Washer (2 used)	35	010581	*Inlet Control Lever Pinion Screw
6	270027	Spacer Washer (2 used)	36	010580	*Inlet Needle, Seat & Gasket
7	850164	Jam Nut (2 used)	37	010165	Inlet Seat Gasket
8	012382	Body (Service)	38	011503	*Inlet Tension Spring
9	02531	*Body Channel Welch Plug	39	011494	*Main Adjustment Screw
10	012381	Choke Shaft & Lever	40	08793	*Main Adj. Screw Spring
11	012383	Choke Shaft Return Spring	41	011428	Main Adj. Screw Washer
12	011883	Choke Shutter	42	011401	Main Adj. Screw Packing
13	02232	Diaphragm Chamber Drain Screw	43	012084	Nozzle Check Valve
14	012473	Diaphragm Gasket	44	012378	Throttle Shaft & Lever
15	012475	*Diaphragm	45	09780	Throttle Shaft Bushing (2 used)
16	010526	Diaphragm Cover	46	09678	Throttle Shaft Clip
17	270098	Carburetor Gasket	47	0992	Throttle Shaft Clip Lockwasher
18	010880	Fuel Pump Gasket	48	01974	Throttle Shaft Clip Ret. Screw
19	012698	*Fuel Pump Diaphragm	49	012244	*Throttle Shaft Return Spring
20	010525	Fuel Pump Body	50	011226	Throttle Shutter
21	010098	Fuel Pump Body Screw & Lockwasher (6 used)	51	012296	*Throttle Shutter Screw
22	010530	*Fuel Strainer Screen	52	GS-155	*Gasket & Packing Set
23	010529	Fuel Strainer Cover Gasket	53	RK-473	Repair Parts Kit
24	010527	Fuel Strainer Cover	54	853910	Cover Nut
25	010571	*Fuel Strainer Cover Ret. Screw	55	271214	Air Filter Washer
26	011716	*Idle Adj. Screw	56	270624	Air Filter Element (Standard)
27	270099	Idle Adj. Screw Cup	57	275623	Air Filter Adapter (c/w Stud)
28	08793	*Idle Adj. Screw Spring	58	716460	Adapter Screw (2 used)
29	011428	Idle Adj. Screw Washer	59	010776	Spring Anchor Pin
			(*)	Indicates contents of Repair Parts Kit	

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GAS TANK

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	270077	Blower Housing	24	270325	Front Handle
2	786010	Blower Housing Screw (4 used)	25	270328	Clamp
3	270084	E Z Pull Roller	26	270329	Brace
4	270085	Roller Screw	27	700814	Screw
5	270640	Outer Shroud Assembly (includes *)	28	850414	Nut
6	*270301	Screw	29	270295	Oiler Pushrod
7	*270302	Screw Retainer	30	701664	Tank Screw (2 used)
8	270238	Switch	31	850364	Tank Nut (4 used)
9	270082	No longer used	32	855914	Tank Washer (4 used)
10	270202	Fuel Cap	33	270220	Snow Guard
11	19137	Fuel Cap Gasket	34	732414	Screw (2 used)
12	270632	Fuel Tank Assembly	35	21094	No-Squash Washer (2 used)
13	270206	Fuel Pickup Hose	36	850414	Nut
14	270633	Fuel Pickup Assembly (includes **)	37	270390	Step Plate
15	**270208	Fuel Pickup Screen (2 used)	38	271715	Tank Vent Kit (includes †)
16	**19159	Felt (2 used)	39	†270216	Cover
17	270210	Fuel Line	40	†271214	Washer
18	270209	Fuel Pickup Connector	41	†771810	Screw
19	270230	Throttle Trigger	42	†271634	Body Assembly
20	270232	Throttle Link	43	†271219	Gasket
21	270231	Hinge Pin	44	†271218	Filter
22	270235	Choke Spring	45	†271213	Clamp
23	270234	Choke Lever			
			For Saws with	Flush Cut Handle (not shown)	
				270016	Flush Cut Handle
				270006	Bracket



ENGINE

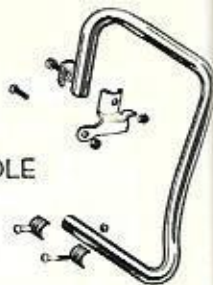
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	270602	Crankcase Assembly (includes*)	31	270074	Stator Backing Plate Gasket
2	*270013	Bar Stud (2 used)	32	270075	Stator Backing Plate
3	*270010	Tank Stud (2 used)	33	21088	Rotor Key
4	*270023	Cylinder Block Stud (4 used)	34	706214	Stator Screws (2 used)
5	*270012	Carburetor Stud (2 used)	35	270126	Starter Cup
6	270025	Crankshaft	36	270127	Starter Screen
7	270030	Main Bearing (2 used)	37	854117	Starter Cup Washer
8	270033	Crankshaft Seal (2 used)	38	850467	Crankshaft Nut
9	270606	Con Rod Assembly (includes **)	39	270081	Switch Wire Grommet
10	**761060-S	Con Rod Cap Screw (2 used)	40	270076	Retainer
11	**270041	Con Rod Small End Bearing	41	270290	Oiler Lever
12	21605	Con Rod Big End Brg. (c/w needles)	42	270128	Starter Cup Shield
13	21026	Con Rod Big End Needle (2 used)	43	270291	Pivot Screw
14	270045	Piston	44	270619	Inner Shroud
15	21017	Wrist Pin	45	270307	Instruction Decal
16	270047	Wrist Pin Retainer Clip (2 used)	46	270617	Exhaust Manifold Body
17	270050	Piston Ring (2 used)	47	736214	Exhaust Body Screws (3 used)
18	270612	Cylinder Block Assy. (c/w studs)	48	270136	Exhaust Manifold Cover
19	270009	Cylinder Head Stud (6 used)	49	850310	Flexloc Nut (2 used)
20	270059	Cylinder Base Nut (4 used)	50	270137	Exhaust Manifold Gasket
21	854114	Cylinder Base Washer (4 used)	51	270340	Bucking Spike (Western)
22	270058	Cylinder Base Gasket	52	270345	Bucking Spike (Eastern)
23	270070	Cylinder Head	53	741464	Bucking Spike Screws (2 used)
24	270038	Brace Stud	54	850364	Bucking Spike Nuts (2 used)
25	850264	Brace Nut 1/4-28 Keps	55	270024	Crankcase Studs (3 used)
26	270071	Head Gasket	56	854214	Washers (3 used)
27	270073	Cylinder Head Nut (Special, 2 used)	57	850164	Nuts (3 used)
28	850064	Cylinder Head Nut (4 used)	58	270710	Engine Gasket Set
29	275069	Cylinder Head Washer (6 used)	59	726610	Exhaust Cover Screws
30	10252	Spark Plug	60	850110	Exhaust Nuts (2 used)

34 **OPTIONAL**
EXTRA
EQUIPMENT



FLUSH CUT
FRONT HANDLE

270712

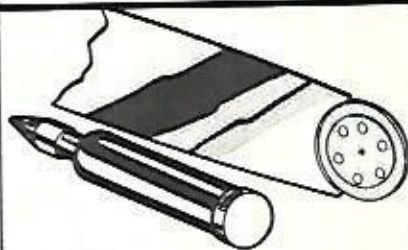


SNOW SHIELD 270221

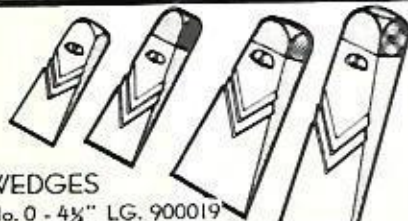
For use only at
temperatures
less than 15
degrees below
zero.



POCKET
CHAIN BREAKER 900009

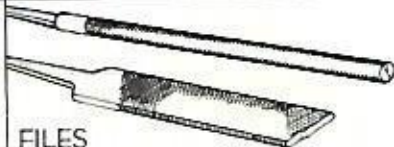


Roller nose grease gun 900023
ROLLER NOSE BARS



WEDGES

- No. 0 - 4 1/2" LG. 900019
No. 1 - Combination 7 1/2" LG. 900020
No. 2 - Bucking Wedge 8" LG. 900021
No. 3 - Felling Wedge 9 1/2" LG. 900022



FILES

- 3/16" round x 8" 900004
7/32" round x 8" (For .404 chain) 900005
1/4" round x 8" (For 1 2" chain) 900006
6" Flat - Round Edge
8" Flat - Round Edge 900008

CANADIEN



SAFE "T" CHAIN

TROUBLE SHOOTING

Trouble	Causes	Remedy
Engine fails to start	FUEL	
	Fuel tank empty	Fill with correct mixture
	Engine flooded	Release choke—hold throttle open—pull starter over several times
	Hot motor—flooded—spark plug wet with gas	Remove plug—blow dry—pull starter over several times with plug out
	Contamination in fuel system	Drain fuel tank — check pickup head element—check fuel line—check screen in base of carburetor
	Cold motor—not sufficiently choked	Hold choke open, pull till motor first responds—release choke—motor should start on next pull or two
	Incorrect carburetor settings	See CARBURETOR SETTINGS (p.10)
	SPARK	
	Ignition switch 'OFF'	Flick 'ON'
	Ignition switch shorting	Check for short by removing wire at base of switch and holding it free—pull motor over
	Fouled or defective spark	Clean or replace as required. Champion J-6-J or equivalent. Adjust gap to .025"
	Ignition switch wire and/or high tension lead loose or shorting	Check for loose connections and points of worn insulation
	Magneto	Disconnect high tension lead from plug—hold lead end ¼" from a clean metal surface—pull starter. If no STRONG spark occurs across this gap, trouble is in the breaker points, coil and/or condenser—see your Dealer

Trouble	Causes	Remedy
	COLD WEATHER—ICE often separates from fuels at freezing temperatures	Simplest solution — to avoid any disassembly, remove machine to warm room. NOTE: Use de-icing additive or methyl hydrate in fuel for cold weather operation
Motor cuts out, leans out, or misfires	FUEL	
	Fuel tank empty	Fill with correct mixture
	Contamination in fuel system	Drain fuel tank — check pickup head element—check fuel line—check screen in base of carburetor
	Air leaks in the fuel system	Check lines and joints for cracks and poor fits
	Incorrect carburetor settings	See CARBURETOR SETTINGS (p.10)
	Carburetor loose	Replace carburetor gaskets—tighten
	SPARK	
	Fouled, wet or defective spark plug	Clean, dry or replace as required
Motor lacks power	Ignition switch wire and/or high tension lead loose or shorting	Check for loose connections and points of worn insulation
	Breaker points dirty, burned or improperly set	Clean, replace or set (gap .020") as required
	Faulty magneto components	See your Dealer
	Incorrect fuel mixture	Replace with correct mixture
	Incorrect carburetor settings	See CARBURETOR SETTINGS (p.10)
	Clogged air filter	Clean—see AIR FILTER (p.8))
	Carbon build-up in exhaust ports and/or muffler	Clean—use a wooden scraper—NOT metal
	Poor compression—worn engine	See your Dealer

Trouble	Causes	Remedy
Motor overheats	Dirty cylinder block and head fins	Clean
	Incorrect carburetor settings	See CARBURETOR SETTINGS (p.10)
	Incorrect fuel mixture	Replace with correct mixture
	Plugged blower screen (starter side of motor)	Clean
	Wrong spark plug	Use Champion J-6-J or equivalent
	Loose cylinder head and/or cylinder block nuts	Tighten
	Loose cylinder head and/or base gaskets	Check and replace as required
Engine starves on acceleration or idles too fast	Incorrect carburetor settings (idle setting too lean)	See CARBURETOR SETTINGS (p.10)
	Air leak in engine	Check conditions of all gaskets and seals—see your Dealer
	Loose muffler	Inspect for damaged exhaust manifold gasket—tighten
Chain oiler not working	Oil pump empty	Fill with light, clean S.A.E. 10 or 20 motor oil
	Oil outlet plugged	Clean
	Cold oil—(cold motor—low temperature operations)	Use a lighter oil or, in extreme cold,, thin 50% with kerosene
	Dirt in pump assembly	Remove tank cover—clean tank with gasoline—replace pick-up head
	Pump pressure down→poor compression	See your Dealer

COLD WEATHER OPERATION

Extreme cold weather presents certain problems. A heated machine will melt snow which can later freeze and bind various moving parts in ice. Controls will freeze. Gasoline can have water in it which separates as ice particles to clog the fuel filters and carburetor passages. Chain oil can become so heavy it will not pass through the pump. The following recommendations will help overcome these problems:

Add a de-icing agent or methyl hydrate to the fuel mixture.

Dilute chain oil up to 50% with diesel oil or kerosene.

CAUTION—Do not dilute chain oil beyond 50% otherwise the lubricating qualities will be destroyed.

TO ASSIST STARTING

Screw high speed needle gently on to its seat and open $1\frac{1}{2}$ to 2 turns or more and choke excessively.

Run motor slowly until it is warmed up then reset the high speed adjustment.

REVIVING A STORED MOTOR

Remove any old fuel and replace with new mixture.

Close both carburetor jets—then reset.

Prime through air intake with a small amount of fuel mixture.

Holding throttle wide open—do not choke—start motor.

Repeat preceding step as required to get machine running properly on its own fuel supply.

Manufacturer's Warranty

We warrant each new P.M. —Canadien engine to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good any part or parts thereof which shall, within 90 days from delivery to the original purchaser prove to have been thus defective.

The bar and chain are warranted separately for a period of 60 days against defects in material and workmanship under the same conditions specified above.

This warranty being expressly in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on

our part, and we neither assume, nor authorize any person to assume for us, any other liability in connection with the sale of our chain saws.

This warranty shall not apply to any chain saw which shall have been repaired or altered by any unauthorized person in any way, so as in our judgment to affect its stability and reliability, nor to any saw which has been subject to misuse, negligence or accident.

To make a claim under this warranty, contact the dealer from whom the saw was purchased, or the nearest authorized P.M. —Canadien Dealer. All claims must be accompanied with the model and serial number of the saw.



POWER MACHINERY

A DIVISION OF BRISTOL AERO - INDUSTRIES LIMITED

FACTORY AND SALES OFFICE: VANCOUVER AIRPORT, VANCOUVER, CANADA

EASTERN SALES OFFICE:
255 BLVD. DES CAPUCINS
QUEBEC 3, P. QUEBEC

U. S. SALES OFFICE:
923 WESTLAKE AVE., N.
SEATTLE, WASH., U.S.A.

940003

