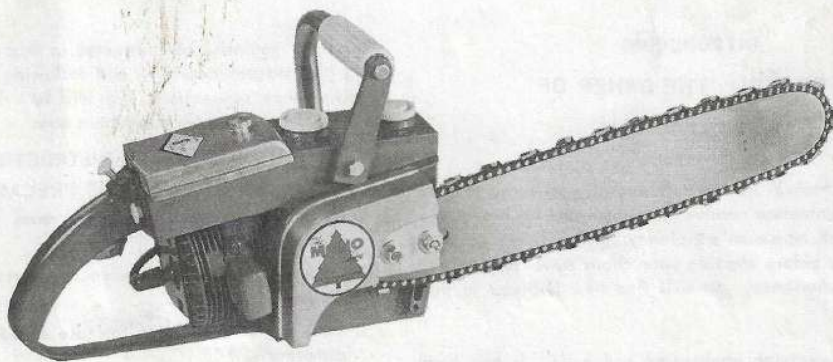


MONO

CHAIN SAWS

Owner's Guide and Parts List



MODEL SL - 246
ENGINE TYPE 1503D MODEL AH - 480

1219-CS-69L

MONO MANUFACTURING CO.

P. O. Box 2787 Coml. St. Sta. Phone UN 2-9324 Springfield, Missouri

MANUFACTURER'S CHAINSAW WARRANTY

For thirty days from purchase date, The Manufacturer will replace for the original purchaser, Free-of-Charge, any part or parts found upon examination at any factory authorized Service Dealer, to be defective under normal use and service, due to defects in material or workmanship.

All transportation charges on part or parts submitted for replacement under this warranty, must be paid for by the purchaser.

No service charges, labor or other expenses will be allowed by the factory. This warranty shall not apply to any part or parts which have been subjected to misuse, accident or negligence; or if it has been altered or repaired outside our factory or authorized service dealer.

The manufacturer reserves the right to make changes in design and changes or improvements upon its product without imposing any obligation upon itself to install the same upon its product there-to-fore manufactured.

The manufacturer reserves the right to inspect and make final decision on any warranty that may be in question.

WARRANTY INSTRUCTIONS

PARTS COVERED UNDER THIS WARRANTY SHALL BE RETURNED PREPAID TO THE MANUFACTURER FOR INSPECTION ALONG WITH WARRANTY CLAIM REPORT PROPERLY FILLED OUT AND SIGNED BY SAW OWNER AND SERVICE DEALER WITHIN 30 DAYS AFTER WARRANTY REPAIRS.

INTRODUCING TO YOU THE OWNER OF A NEW CHAIN SAW

This Owner's Manual has been especially prepared to give you all the information needed to operate and maintain your chain saw with maximum efficiency. Read these instructions carefully before starting your chain saw. Regardless of previous experience, you will find new features in this chain saw.

Your saw is precision engineered and built. It has been carefully inspected throughout all phases of its production and assembled by men who are well trained in production of fine power saw equipment.

Before delivery to you, the chain saw engine has been carefully tested and inspected to assure you of the high degree of performance and satisfaction built into it. However, in order to maintain its standard of performance, this equipment requires a small but IMPORTANT amount of attention on your part.

Always observe good operating procedures, make regular inspections, and perform lubrication and other maintenance

services regularly, as instructed in this manual. By studying the manual carefully and following our operation and maintenance suggestions, you will be rewarded by long and efficient service from your chain saw.

IMPORTANT INSTRUCTIONS SAFETY AND FIRE PRECAUTIONS

1. Do not start engine in a closed room. Make sure there is ample ventilation.
2. Do not touch chain when engine is running, even at idle speed.
3. Keep engine adjusted to an idle speed which stops chain completely.
4. Always stop engine when moving from one location to another.
5. Never run engine at top throttle unless under a load.
6. A dull or improperly filed chain will cause the saw to buck and jump.
7. Do not allow the saw to run while it is resting on a concrete floor.
8. After refueling, move the saw a few feet to another location before starting engine again (fire precaution).
9. Keep saw clean of sawdust and inflammable materials.
10. Keep spark plug and wire connections tight.

PREVENTIVE MAINTENANCE

1. Remove sawdust and dirt daily so that a thorough inspection of the saw can be made.
2. Tighten loose nuts and screws.
3. Make sure the screen under the starter cover is clean.
4. Check fuel and oil line connections for leaks.
5. Check air filter. Clean or replace as specified under air filter instructions.
6. Check chain for proper tension and wear. See chain and bar manual.
7. Check bar for wear and damage. See chain and bar manual.

NOTES:

1. Do not use compressed air to remove sawdust from the outside of the carburetor, unless you cover the carburetor opening first.
2. Be sure that cutting chain and guide bar are receiving sufficient lubrication. Check cutting chain for worn or loose rivets.
3. The chain, as shipped from the factory, is precision-sharpened and ready for general purpose cutting. When you sharpen the chain follow the instructions listed in the chain and bar manual. To obtain the greatest efficiency from the chain you must:
 1. Keep the same cutting angle on all the teeth.
 2. Use the right size file.
 3. Keep the side cutting edge vertical.
 4. Shape in the top cutting edge correctly.
 5. Keep all depth gauge clearances the same.

REGISTER YOUR TYPE AND MODEL NO.

Register your type and Model No. in the space provided below and always refer to them when writing for information or ordering parts.

Type No.

Model No.

Date Purchased

This information is found on plate on side of engine by starter rope.

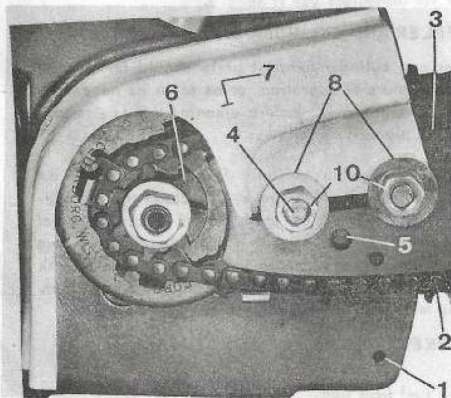


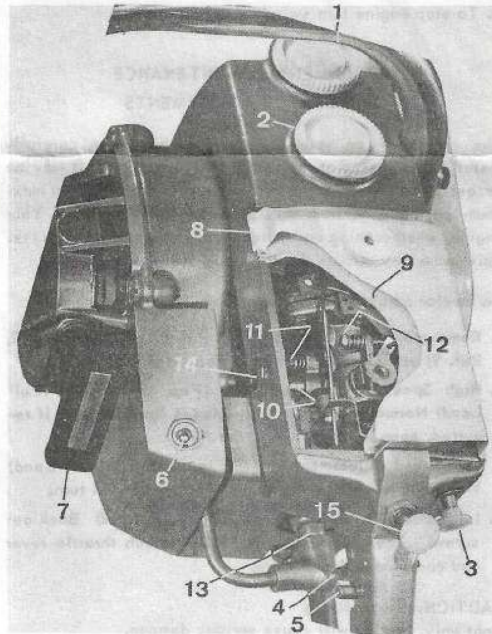
Fig. 1

GENERAL INSTRUCTIONS

The unit is shipped in one carton. The saw is assembled except for the bar, chain, and log hook. Remove the contents from the carton and parts sack and assemble in accordance with the following step by step instructions. Remove the clamp

plate (Fig. 1, Ref. 7) from saw. Place the log hook (not illustrated in parts sack) into position so bottom hole is to hole in main frame (Fig. 1, Ref. 1) and secure by using one each of cap screw and lockwasher (not illustrated in parts sack) in each hole of log hook. **NOTE:** Points of log hook must be in front of saw and points up. Place the chain (Fig. 1, Ref. 2) around guide bar (Fig. 1, Ref. 3). **NOTE:** Be sure the chain is installed with cutters facing forward on the top side of guide bar and also that the chain is seated in the guide bar groove at all points. Place the slot of the guide bar over bar mounting studs (Fig. 1, Ref. 4) so that bar adjustment lobe (Fig. 1, Ref. 5) is in hole as illustrated, which is below the stud slot. Place chain over sprocket (Fig. 1, Ref. 6). Place the clamp plate (Fig. 1, Ref. 7) on bar mounting studs and secure by using two flat washers (Fig. 1, Ref. 8), and nuts (Fig. 1, Ref. 10). The chain tension adjustment is made by use of the chain tightener assembly screw which is located in the front of the main frame by the bar. Tighten the chain with a screwdriver as is outlined in the chain and guide bar manual. After the chain has been tightened, tighten the mounting nuts on bar studs. Chain tension is very important and should be watched carefully. Never tighten chain so tight that it can not be pulled freely around guide bar with your hand. The cutting efficiency of your chain saw depends on proper filing of the chain.

Fig. 2



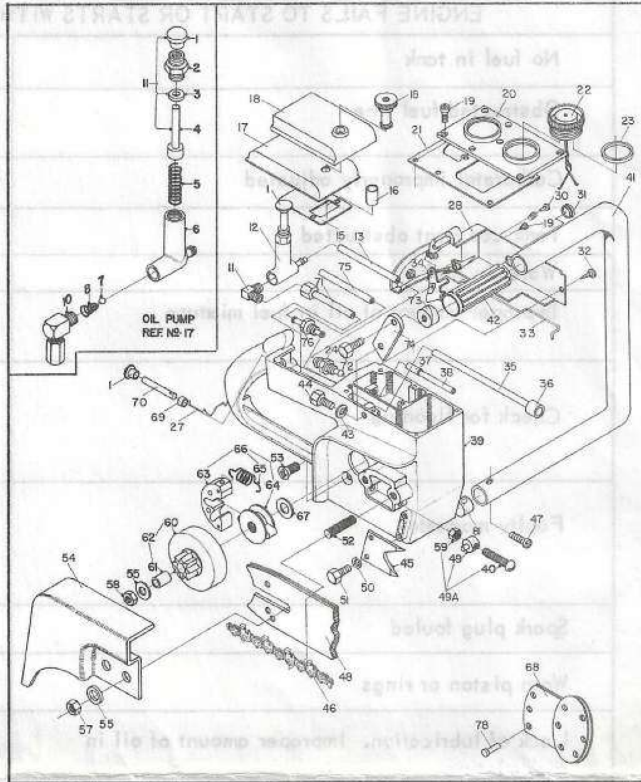
FUEL AND LUBRICATION

IMPORTANT: Units are shipped with engines completely dry so follow the instructions carefully before starting engine. Lubrication of the two cycle engine depends entirely on the oil mixed with the gasoline. The proper mixture is 1/2 pint of SAE 30 wt. oil to one gallon of fresh regular gasoline. For the first few hours of operation it is recommended that a mixture of 3/4 pint of oil per gallon of gasoline be used. Be sure to mix gasoline and oil thoroughly in a separate clean container. Do not pour unmixed gasoline and oil into engine fuel tank. **NOTE:** Two cycle 30 grade oil may be used instead of SAE 30, also, when the weather is warm, (above 40°) outdoor oil may be used in the fuel mixture.

285-2 TROUBLESHOOTING CHART

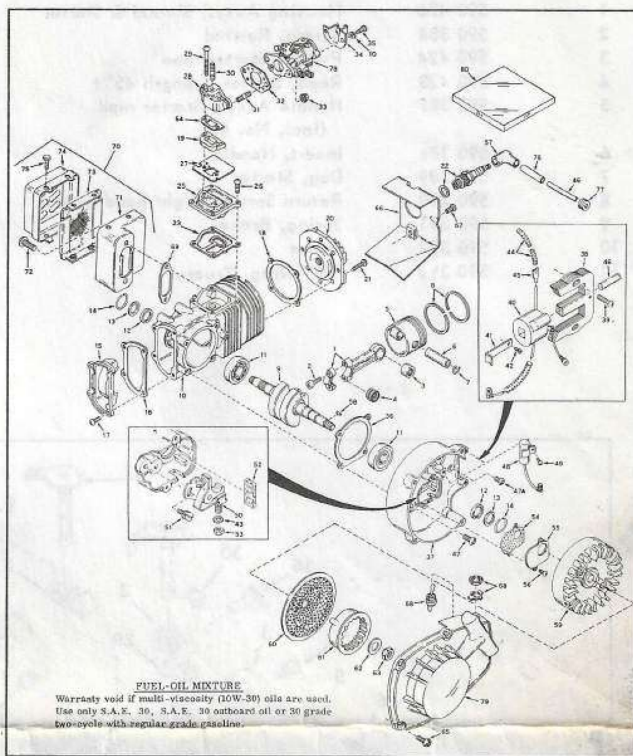
Cause	Remedy
ENGINE FAILS TO START OR STARTS WITH DIFFICULTY OR ENGINE LACKS POWER	
No fuel in tank	Fill tank with clean, fresh fuel.
Obstructed fuel line	Clean fuel screen and line. If necessary, remove and clean carburetor.
Carburetor improperly adjusted	Adjust carburetor.
Tank cap vent obstructed	Open vent in fuel tank cap.
Water in fuel	Drain tank. Clean carburetor and fuel lines.
Improper amount of oil in fuel mixture	Dry spark plug points. Fill tank with clean, fresh fuel of correct mixture.
Check for flooding	Remove spark plug and if wet, plug should be dried. With high speed adjustment screw closed, engine should be cranked until vapor stops coming out of spark plug hole. Insert plug and set high speed adjustment screw as instructed.
Faulty magneto	Check magneto wiring for shorts or grounds; repair if necessary. Check timing, point gap. Clean breaker points. Replace badly pitted breaker points. Check condenser, replace if defective
Spark plug fouled	Clean and regap spark plug or replace spark plug.
Worn piston or rings	Replace piston or rings
Lack of lubrication. Improper amount of oil in fuel mixture	Drain tank; fill with correct mixture
Air cleaner fouled	Clean air cleaner.
Check for spark	Remove spark plug and with magneto wire attached, hold the base of the plug against the engine and crank. A spark should jump across the plug gap. If it doesn't, clean the plug or replace.
Crankcase seals leaking (two cycle)	Replace worn crankcase seals.
Check muffler and exhaust ports periodically when the loss of power is apparent. If ports are dirty, clean them.	
ENGINE OVERHEATS OR ENGINE KNOCKS	
Engine improperly timed	Time engine
Carburetor improperly adjusted	Adjust carburetor
Air flow obstructed	Remove any obstructions from air passages in shrouds.
Cooling fins clogged	Check the flow of air over cylinder. If restricted by grass or dirt, remove foreign material.
Carbon in combustion chamber	Remove cylinder head or cylinder and clean carbon from head and piston.
Lack of lubrication. Improper amount of oil in fuel mixture	Drain tank; fill with correct mixture.
Loose or worn connecting rod	Replace connecting rod
Loose flywheel	Check flywheel key and keyway; replace parts if necessary. Tighten flywheel nut.
<p>If you notice symptoms of trouble but cannot find the cause, check with your Authorized Service Dealer, and be sure your saw is in good running order. For proper chain and bar maintenance and trouble free cutting follow instructions in special chain booklet packed with your saw.</p>	

Ref. No.	Part No.	Description
1	C-796	Choke & Oil Button
2	C-785	Oil Pump Piston
3	C-174	Oil Pump "O" Ring
4	C-154	Oil Pump Assembly (Incls. 1, 2 & 3)
5	C-155	Oil Pump Piston Lock Nut
6	C-156	Oil Pump Piston Nut
7	C-176	Oil Pump Piston Spring
8	C-172	Oil Pump Body
9	C-175	Oil Pump Lower Spring
10	C-187	Oil Pump Ball
11	C-1032	Oil Pump Elbow Assembly
12	C-1020	Oil Pump Assembly
13	C-943	Oil Line Flex w/spring
14	C-183	Oil Line Spring
15	C-1028	Carburetor Gasket
16	C-1030	Spacer, Rubber
17	C-393	Carburetor Air Filter
18	C-1084	Carburetor Cover w/knurled nut
19	911-806	No. 8-32 x 1/2 Ph. O/H Screw, Self Tapping
20	C-1043	Oil & Fuel Tank Cover
21	C-1017	Gasket, Fuel & Oil Tank
22	C-831	Caps, Plastic, Fuel & Oil Tank
23	C-839	Gaskets, Tank Cap
24	C-1063	Oil Line Fitting
27	C-1045	Choke Wire
28	C-1042	Handle Cover
29	911-807	No. 8-32 x 5/8 Ph. O/H Screw, Self Tapping
30	C-439	Throttle Spring & Lock Pin Assy.
31	C-405	Side Button
32	911-804	No. 8-32 x 3/8 Ph. O/H Screw Self Tapping
33	C-1027	Throttle Wire
34	C-1026	Throttle Lever (Trigger)
35	C-1035	Fuel Line Pick-up
36	C-1036	Fuel Tank Pick-up
37	C-1024	Oil Line Flex Rubber
38	C-1023	Copper Spout, flex. Oil Line
39	C-1062	Main Frame
40	920-058	1/4 x 20 x 2 Stove Bolt w/nut
41	C-1051	Front Handle
42	C-1057	Handle Grip, Rubber
43	945-320	5/16 Lockwasher
44	900-412	5/16 x 18 x 1 H.H.C.S.
45	C-382	Log Hook
46	C-647-16	16" Chain
	C-647-20	20" Chain
	C-747-18	Chain (Roller Nose)
	C-747-21	Chain (Roller Nose)
47	913-929	1/4-20 x 1 Ph. F.H. Sems Screw
48	C-649-16	16" Bar
	C-649-20	20" Bar
	C-749-18	18" Roller Nose Bar
	C-749-21	21" Roller Nose Bar
49	C-392	Chain Tightener Lobe
49 A	C-1104	Chain Tightener Lobe Assembly
50	945-318	1/4 Lockwasher
51	900-104	1/4 x 20 x 1/2 H.H.C.S.
52	922-020	3/8-24 x 5/8 T 3/8-16 x 5/8 N Stud
53	909-525	5/16-18 x 3/4 Ph. Flat Hd. Mach. Screw
54	C-1085	Side Cover Plate
55	945-122	3/8 Flatwasher



Ref. No.	Part No.	Description
56	945-114	No. 10 Flatwasher
57	940-206	3/8-24 Hex Nut
58	940-566	7/16-20 Hex Jam Nut
59	940-402	1/4-20 Hex C/L Nut
60	C-390	Drum & Sprocket
61	C-407	Drum Needle Bearing
62	C-403	Clutch Drum & Sprocket Assembly (Incls. No. 60 & 61)
63	C-387	Clutch Shoe
64	C-386	Clutch Center Drive Plate
65	C-388	Clutch Spring
66	C-389	Clutch Assembly (Incls. No. 63, 64 & 65)
67	C-136	Clutch Spacer
68	C-1102	Roller Nose w/rievet
69	C-406	Choke Pin Guide, Nylon
70	C-217	Choke Pin
71	C-1065	Oil Line Copper w/fittings
72	900-418	5/16-18 x 1 3/4 H.H.C.S.
73	940-102	5/16-18 Hex Keps Nut
74	C-1052	Support Bracket, Handle
75	C-1064	Flex fuel line
76	C-1060	Fitting, Fuel
78	C-1103	Rivet
80	C-1061	Wedge, Handle
81	C-271	Handle Plug, Lower

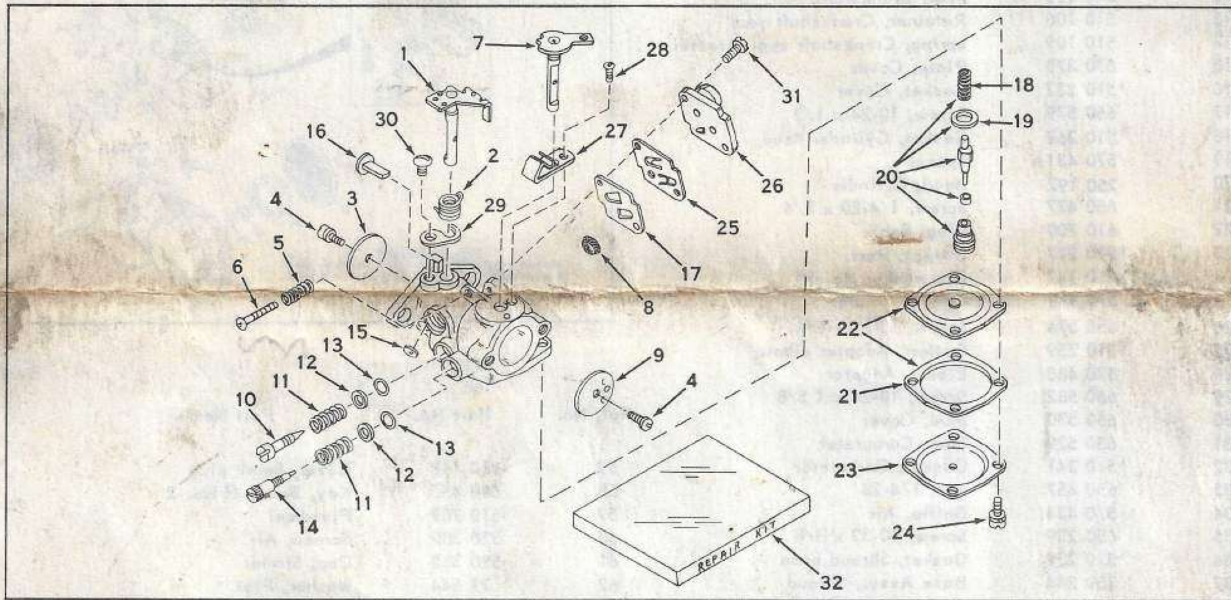
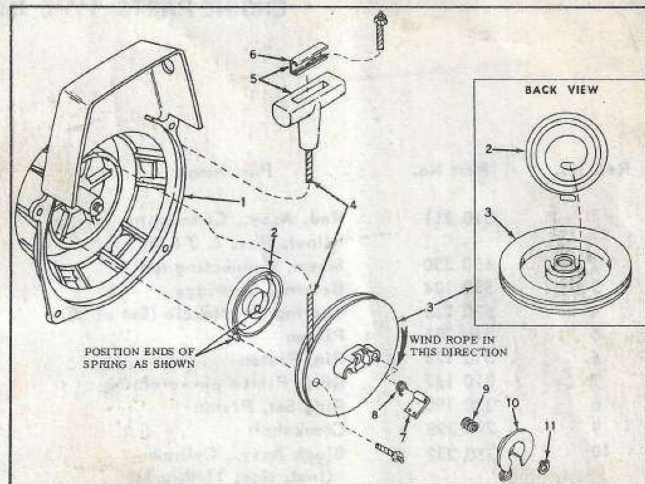
Ref. No.	Part No.	Part Name
1	310 211	Rod, Assy., Connecting (Incl. Nos. 2, 3 & 4)
2	650 350	Screw, Connecting rod
3	530 104	Bearing, Cartridge
4	530 136	Bearing Set, Needle (Set of 30)
5	310 205	Piston
6	310 178	Pin, Piston
7	310 167	Ring, Piston pin retaining
8	310 190	Ring Set, Piston
9	290 398	Crankshaft
10	250 232	Block Assy., Cylinder (Incl. Nos. 11 thru 14)
11	530 110	Bearing, Ball
12	*510 105	Seal, Crankshaft
13	510 106	Retainer, Crankshaft seal
14	510 109	Spring, Crankshaft seal retainer
15	570 370	Plate, Cover
16	*510 232	Gasket, Cover
17	650 579	Screw, 10-24 x 1/2
18	*510 262	Gasket, Cylinder head
19	570 431A	Spacer
20	250 192	Head, Cylinder
21	650 477	Screw, 1/4-20 x 3/4
22	610 703	Plug, Spark
23	*510 277	Gasket, Port
24	650 147	Flatwasher No. 10
25	570 482	Cover, Adapter
26	650 576	Screw, 10-24 x 5/8
27	*510 259	Gasket, Adapter elbow
28	570 488	Elbow, Adapter
29	650 582	Screw, 10-24 x 1 5/8
30	650 530	Stud, Cover
31	650 529	Stud, Carburetor
32	*510 241	Gasket, Carburetor
33	650 457	Nut, 1/4-28
34	570 434	Baffle, Air
35	650 229	Screw, 10-32 x 3/8
36	*510 239	Gasket, Shroud base
37	350 344	Base Assy., Shroud (Incl. Nos. 11 thru 14)
38	610 705	Core, Coil
39	650 544	Screw, 10-24 x 7/8
40	610 706	Coil Assy.
41	32 019	Tab, Coil locking
42	610 288	Screw
43	610 385	Washer, Flat
44	610 670	Sleeve (.208 I. D.)
45	610 713	Terminal
46	610 704	Wire, Lead
47	650 497	Screw, 1/4-20 x 5/8
47A	650 618	Screw, 10-24 x 3/8
48	610 707	Condenser
49	650 611	Screw, 8-32 x 1/4
50	610 708	Point Assy., Breaker
51	29 626	Screw, Breaker point
52	610 592	Felt, Cam
53	650 146	Nut, 8-32
54	610 710	Gasket, Cover
55	610 711	Cover, Breaker box
56	650 621	Screw, No. 7 x 3/8



Ref. No.	Part No.	Part Name
57	610 118	Cover, Spark plug
58	650 455	Key, Woodruff No. 2
59	610 709	Flywheel
60	570 389	Screen, Air
61	590 382	Cup, Starter
62	29 544	Washer, Flat
63	650 577	Nut, Flywheel
64	*510 240 A	Gasket, Adapter elbow
65	650 497	Screw, 1/4-20 x 5/8
66	350 345	Shroud, Cylinder
67	650 623	Screw, 1/4-20 x 5/16
68	610 715	Switch, Toggle
69	*510 230	Gasket, Exhaust
70	390 288	Muffler Assy. (Incl. Nos. 71 thru 75)
71	390 289	Base, Muffler
72	650 497	Screw, 1/4-20 x 5/8
73	390 281	Baffle & Screen Assy., Muffler
74	390 290	Cover, Muffler
75	650 650	Screw, 10 x 3/8
76	570 391	Tubing
77	610 714	Grommet, Lead wire
78	631 566	Carburetor
79	590 425	Rewind Starter & Shroud Assy.
80	510 235 C	Gasket Set (Incl. items marked *)

SHROUD & REWIND STARTER NO. 590 425

Ref. No.	Part No.	Part Name
1	590 426	Housing Assy., Shroud & Starter
2	590 384	Spring, Rewind
3	590 424	Pulley, Starter rope
4	590 423	Rope, Starter (Length 45")
5	590 387	Handle Assy., Starter rope (Incl. No. 6)
6	590 388	Insert, Handle
7	590 389	Dog, Starter
8	590 419	Return Spring, Right hand wound
9	590 391	Spring, Brake
10	590 392	Brake
11	590 393	"E" Ring, Truarc



CARBURETOR No. 631-566

Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
1	631 482	Shaft & Lever Assy., Throttle	18	631 049	Spring, Valve
2	631 045	Spring, Throttle return	19	630 742	Gasket, Valve seat
3	631 367	Shutter, Throttle	20	*631 472	Inlet Needle, Seat, Spring & Gasket Assy. (Incl. Nos. 18 & 19)
4	650 506	Screw, Throttle & Choke Shutter	21	630 750	Gasket, Diaphragm
5	630 766	Spring, Idle speed	22	*630 978	Diaphragm Assy. (Incl. No. 21)
6	650 656	Screw, Idle regulating	23	630 751	Cover Diaphragm
7	631 160	Shaft & Lever Assy., Choke	24	650 545	Screw, Diaphragm cover
8	631 553	Screen, Filter	25	631 555	Valve, Flap
9	631 140	Shutter, Choke	26	631 568	Cover Assy., Valve
10	631 562	Screw, Idle adjustment	27	631 048	Spring, Detent
11	630 738	Spring, Adjustment screw	28	650 569	Screw, Detent spring
12	630 739	Washer, Adjustment screw	29	630 955	Retainer, Throttle shaft
13	*630 740	"O" Ring, Adjustment screw	30	650 545	Screw, Throttle shaft retainer
14	630 737	Screw, Main adjustment	31	650 699	Screw, 4-40 x 3/8 pan flex hd.
15	*630 746	Plug, Welch	32	631 473	Repair Kit (Incl. items marked *)
16	*630 953	Element, Pump			
17	631 554	Gasket			