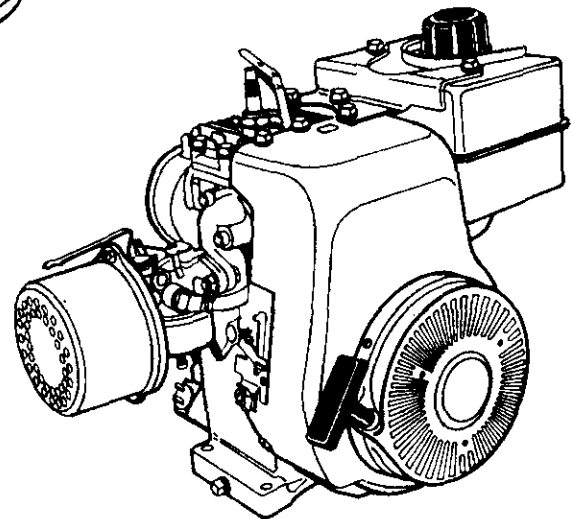
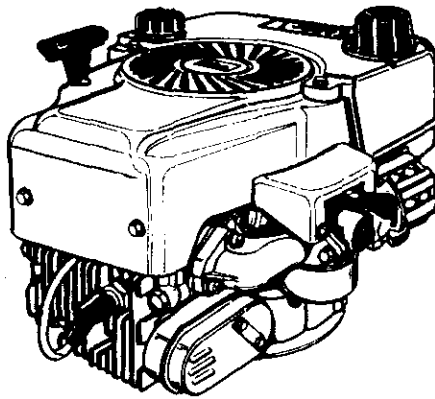


SEARS

operator's manual

MODEL NO. 143.013501

SOLID STATE IGNITION



ENGINE

CAUTION:
Read RULES for
Safe OPERATION
and INSTRUCTIONS
Carefully

- Operating
- Maintenance
- Repair Parts



California Proposition 65 **WARNING:** The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Sold by SEARS, ROEBUCK AND CO., CHICAGO, IL 60684 U.S.A.
and SEARS CANADA, INC., TORONTO, ONTARIO, CANADA

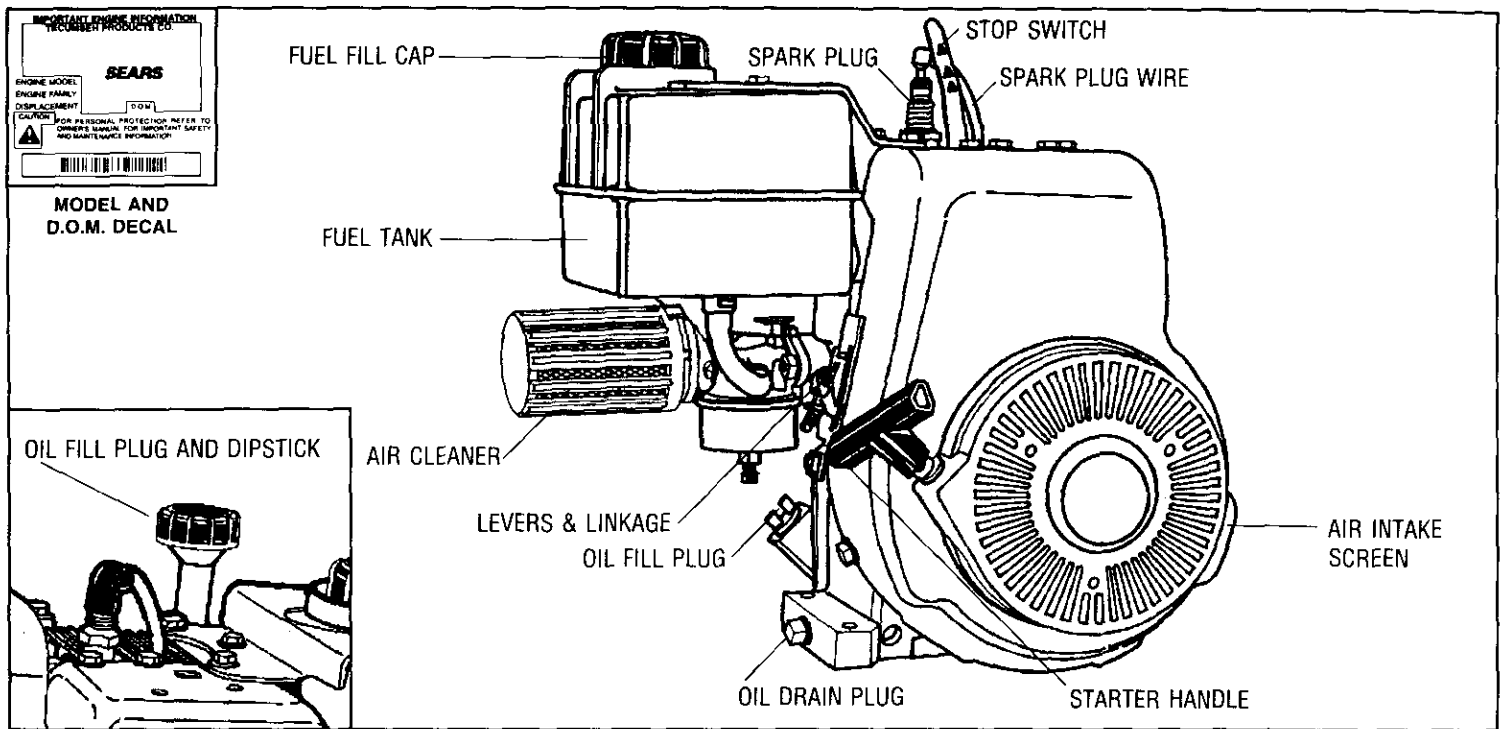


Figure 1



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL AND ANY PROVIDED WITH THE EQUIPMENT ON WHICH THIS ENGINE IS USED BEFORE ATTEMPTING TO OPERATING.



THESE SYMBOLS MAY APPEAR ON THE ENGINE:



FAST



SLOW



STOP



CHOKE



PRIMER

NOTE: Engines which are certified to comply with California and U.S. EPA emission regulations for SORE (Small Off Road Equipment), are certified to operate on regular unleaded gasoline, and include the following emission control systems: Engine Modification (EM), and Three-way Catalyst (TWC) (if so equipped).

OIL & FUEL RECOMMENDATIONS

TO OPERATE ENGINE, YOU WILL NEED THE FOLLOWING:

- ① **A CLEAN, HIGH QUALITY, DETERGENT OIL.**
Be sure original container is marked:
A.P.I. service "SF"- "SJ".
FOR SUMMER (ABOVE 32°F; 0°C) USE SAE 30 OIL.
Using multigrade oil will increase oil consumption.
FOR WINTER (BELOW 32°F; 0°C) USE SAE 5W30 OIL.
(SAE 10W is an acceptable substitute.)
OIL SUMP CAPACITY: 21 ounces (1-1/4 pints)
.56 liter
- ② **A FRESH, CLEAN, UNLEADED REGULAR, UNLEADED PREMIUM, OR REFORMULATED AUTOMOTIVE GASOLINE ONLY. DO NOT USE LEADED GASOLINE.**
NOTE: DO NOT USE GASOLINE CONTAINING METHANOL (WOOD ALCOHOL). Gasoline containing up to 10% ethanol or grain alcohol ("Gasohol"), or up to 15% MTBE (Methyl Tertiary Butyl Ether), may be used but requires special care when engine is unused for extended periods. See "STORAGE" instructions on Page 4.
NOTE: Use clean oil and fuel and store in approved, clean covered containers. Use clean fill funnels.
Never use "stale" gasoline left over from last season or stored for long periods.

IMPORTANT

KEEP THIS MANUAL HANDY AT ALL TIMES FOR FUTURE REFERENCE. READ IT CAREFULLY AND FAMILIARIZE YOURSELF WITH THE OPERATING, MAINTENANCE AND SAFETY INSTRUCTIONS. THIS MANUAL ALSO CONTAINS A COMPLETE PARTS LISTING.

BEFORE STARTING

- ① READ ALL INSTRUCTIONS PROVIDED WITH THE EQUIPMENT ON WHICH THIS ENGINE IS USED.
- ② **TO FILL OIL SUMP OR CHECK OIL LEVEL:**
IMPORTANT: To avoid engine damage never run engine unless:
- Oil level is between "FULL" and "ADD" marks on dipstick.
- Oil fill plug is tightened securely into oil fill tube or hole.
CHECK OIL LEVEL OFTEN DURING ENGINE BREAK-IN.
A. POSITION EQUIPMENT SO ENGINE IS LEVEL.
B. Clean area around oil fill plug (see Figure 1).
C. Remove oil fill plug and dipstick.
D. Wipe dipstick clean, insert it into oil fill hole and tighten securely. Remove dipstick. If oil is not up to "FULL" mark on dipstick, add recommended oil. **POUR SLOWLY.** Wipe dipstick clean each time oil level is checked.
IMPORTANT: DO NOT FILL ABOVE "FULL" MARK ON DIPSTICK.
E. Install oil fill plug and dipstick, tighten securely.

See "MAINTENANCE" section for any future oil level and oil change instructions (see Page 3).

BEFORE STARTING (Continued)

⚠ THE ALUMINUM COMPONENTS OF YOUR NEW ENGINE HAVE BEEN TREATED WITH A PRESERVATIVE INTENDED TO MAINTAIN THE APPEARANCE OF THE ENGINE. THE PRESERVATIVE WILL CURE DURING THE INITIAL USE OF THE ENGINE. A SMALL AMOUNT OF SMOKE MAY BE PRESENT DURING THE INITIAL USE OF THE PRODUCT AND SHOULD BE CONSIDERED NORMAL.

- ③ FILL FUEL TANK** with gasoline as specified in the preceding "OIL & FUEL RECOMMENDATIONS," item 2.

NEVER MIX OIL WITH GASOLINE

Never use "stale" gasoline left over from last season or stored for long periods.

⚠ NEVER FILL FUEL TANK INDOORS. NEVER FILL FUEL TANK WHEN ENGINE IS RUNNING OR HOT. DO NOT SMOKE WHEN FILLING FUEL TANK.

⚠ NEVER FILL FUEL TANK COMPLETELY. FILL TANK TO 1/2" BELOW BOTTOM OF FILLER NECK TO PROVIDE SPACE FOR FUEL EXPANSION. WIPE ANY FUEL SPILLAGE FROM ENGINE AND EQUIPMENT BEFORE STARTING ENGINE.

⚠ ANY LIQUEFIED PETROLEUM (LPG) OR NATURAL GAS FUEL SYSTEM MUST BE LEAKPROOF AND MEET ALL APPLICABLE CODES AND REGULATIONS.

- ④ CHECK THE FOLLOWING:**

⚠ A. BE SURE EQUIPMENT IS IN NEUTRAL GEAR WITH CLUTCHES, BELTS, CHAINS AND SAFETY SWITCHES DISENGAGED. (FOLLOW EQUIPMENT MANUFACTURER'S INSTRUCTIONS). THIS SHOULD PLACE ANY SAFETY SWITCHES IN SAFE STARTING POSITION.

- B. Be sure spark plug wire is attached to spark plug (see Figure 1).
- C. Be sure stop switch next to spark plug is not contacting spark plug (see Figure 1).
- D. Be sure any ignition switch on engine or equipment is in ON, RUN or START position.

STARTING

⚠ NEVER RUN ENGINE INDOORS OR IN ENCLOSED, POORLY VENTILATED AREAS. ENGINE EXHAUST CONTAINS CARBON MONOXIDE, AN ODORLESS AND DEADLY GAS (CARBON MONOXIDE IS ALSO PRESENT IN ENGINE EXHAUST FROM LIQUID PETROLEUM (LPG) AND NATURAL GAS FUEL SYSTEMS).

⚠ KEEP HANDS, FEET, HAIR AND LOOSE CLOTHING AWAY FROM ANY MOVING PARTS ON ENGINE AND EQUIPMENT.

⚠ WARNING: TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150°F (65°C). AVOID THESE AREAS.

- ① ENGINE WITH PRIMER**

- 1) Move control lever to "FAST" or "START" (see equipment manufacturer's instructions).
- 2) The carburetor on your engine has been completely adjusted at the factory. When starting a cold engine, push red primer bulb **firmly with your thumb 5 times**, allowing primer bulb to return completely to original position between pushes. Repeat the above for each starter operation as necessary. **NOTE: DO NOT USE PRIMER TO RESTART A WARM ENGINE AFTER A SHORT SHUTDOWN.**
- 3) a) **RECOIL STARTERS:** Grasp starter handle (figure 1) and pull rope out slowly until you feel drag. Let rope rewind slowly. Pull rope with rapid, full arm stroke. Return rope slowly to original position. **NOTE: If engine fails to start after three pulls, repeat step 2 above.**

STOPPING

- ①** Move equipment control or any ignition stop switch on engine to STOP or OFF (see equipment manufacturer's instructions).
- ②** Push stop switch (if so equipped see Figure 1) located next to spark plug on engine against spark plug and hold it in this position until engine is completely stopped.

- ③ AFTER ENGINE IS STOPPED:**

⚠ A. DISCONNECT SPARK PLUG WIRE FROM SPARK PLUG AND KEEP IT AWAY FROM SPARK PLUG.

⚠ B. TURN IGNITION SWITCH KEY (IF SO EQUIPPED) TO "OFF" POSITION AND REMOVE KEY FROM SWITCH. THIS WILL REDUCE THE POSSIBILITY OF UNAUTHORIZED STARTING OF ENGINE WHILE EQUIPMENT IS NOT IN USE.

⚠ NEVER STORE ENGINE WITH FUEL IN TANK INDOORS OR IN ENCLOSED, POORLY VENTILATED AREAS, WHERE FUEL FUMES MAY REACH AN OPEN FLAME, SPARK OR PILOT LIGHT AS ON A FURNACE, WATER HEATER, CLOTHES DRYER OR OTHER GAS APPLIANCE.

MAINTENANCE

⚠ WARNING: TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150°F (65°C). AVOID THESE AREAS.

- ① CHECK OIL LEVEL:**

Check oil level every five (5) operating hours or each time engine is used. See "② CHECK OIL LEVEL" in "BEFORE STARTING" on Page 1.

- ② CHANGE OIL:**

Change oil after first two (2) operating hours and every 25 operating hours thereafter, more often if operated in extremely dusty or dirty conditions. Change oil while engine is still warm from recent running.

⚠ A. DISCONNECT SPARK PLUG WIRE FROM SPARK PLUG AND KEEP IT AWAY FROM SPARK PLUG.

- B. Position equipment so engine oil drain plug is lowest point on engine.
- C. Remove oil drain plug and oil fill plug to drain oil.
- D. Replace oil drain plug and tighten securely.
- E. Fill oil sump with recommended oil. See "OIL & FUEL RECOMMENDATIONS" and "CHECK OIL LEVEL" on Page 1.
- F. Replace oil fill plug and tighten securely.
- G. Connect spark plug wire to spark plug.

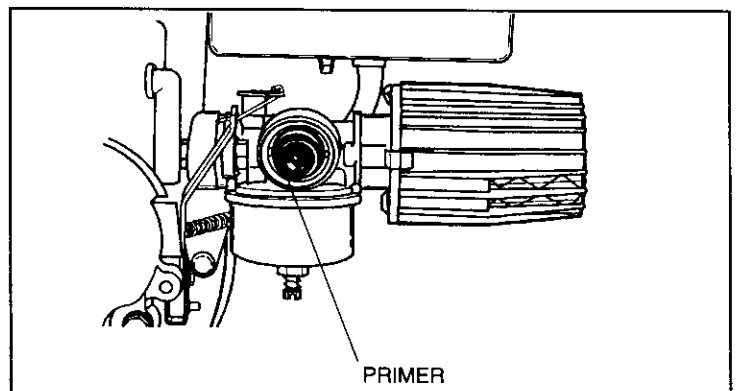


Figure 2

MAINTENANCE (Continued)

③ AIR CLEANER:

IMPORTANT: NEVER RUN ENGINE WITHOUT COMPLETE AIR CLEANER INSTALLED ON ENGINE.

A. TO SERVICE PAPER FILTER (see Figure 3):

DO NOT ATTEMPT TO CLEAN OR OIL FILTER.

Replace once a year or every 100 operating hours, more often if used in extremely dusty conditions.

Replacement filters are available at any nearby Sears Roebuck and Co. (or Sears Canada, Inc.) Service Center.

B. TO REMOVE AND INSTALL FILTER:

1. Loosen two (2) cover screws (these need not be removed completely).
2. Turn cover counterclockwise and remove it and paper filter from base. Discard paper filter.
3. Clean inside of base and cover thoroughly.
4. Insert new paper filter into cover and reassemble cover to base as it was before removal. Tighten cover screws securely.

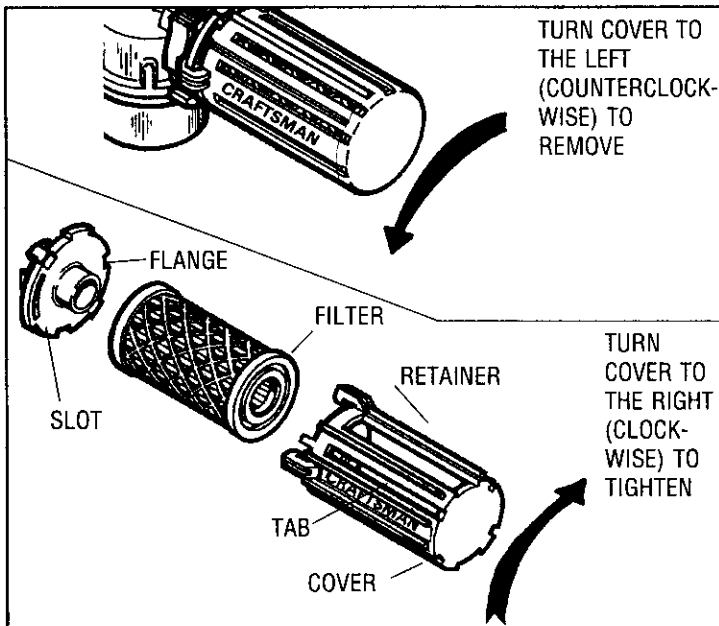


Figure 3

MAINTENANCE (Continued)

④ SPARK PLUG (see Figure 4):

This spark ignition system meets all requirements of the Canadian Interference-Causing Equipment Regulations. This engine complies with all current Australian and New Zealand limitations regarding electromagnetic interference.

Check spark plug yearly or every 100 operating hours.

- A. Clean area around spark plug.
- B. Remove and inspect spark plug.
- C. Replace spark plug if electrodes are pitted, burned or porcelain is cracked. For replacement use Champion RCJ-8.

NOTE: A resistor spark plug must be used for replacement.

- D. Check electrode gap with wire feeler gauge and set gap at .030 if necessary.
- E. Install spark plug, tighten securely.

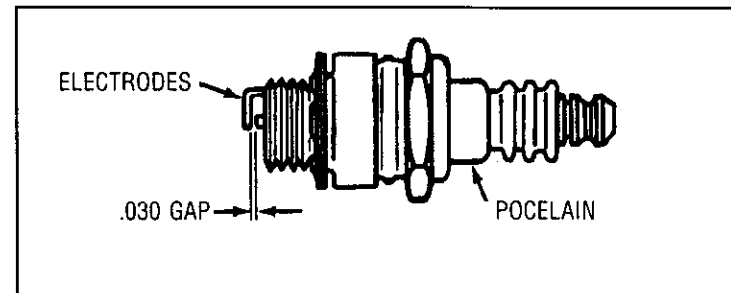


Figure 4

⑤ COOLING SYSTEM:

IMPORTANT: Frequently remove any grass clippings, dirt and debris from cooling fins, air intake screen and levers and linkage (see Figure 1). This will help ensure adequate cooling and correct engine speed.

⑥ CHECK ENGINE AND EQUIPMENT OFTEN FOR LOOSE NUTS, BOLTS AND ATTACHMENTS AND KEEP THESE ITEMS TIGHTENED.

ADJUSTMENTS


DO NOT MAKE UNNECESSARY ADJUSTMENTS. FACTORY SETTINGS ARE SATISFACTORY FOR MOST APPLICATIONS AND CONDITIONS. IF ADJUSTMENTS ARE NEEDED, PROCEED AS FOLLOWS:

① ENGINE SPEED:

NEVER TAMPER WITH ENGINE GOVERNOR WHICH IS FACTORY SET FOR PROPER ENGINE SPEED. OVERSPEEDING ENGINE ABOVE FACTORY HIGH SPEED SETTING CAN BE DANGEROUS.

FOR ANY MAJOR ADJUSTMENTS OR REPAIRS, CONTACT YOUR NEARBY SEARS ROEBUCK AND CO. (OR SEARS CANADA, INC.) SERVICE CENTER.

STORAGE

 **NEVER STORE ENGINE WITH FUEL IN TANK INDOORS OR IN ENCLOSED, POORLY VENTILATED AREAS, WHERE FUEL FUMES MAY REACH AN OPEN FLAME, SPARK OR PILOT LIGHT AS ON A FURNACE, WATER HEATER, CLOTHES DRYER OR OTHER GAS APPLIANCE.**

IF ENGINE IS TO BE UNUSED FOR 30 DAYS OR MORE, PREPARE AS FOLLOWS:

① DRAIN FUEL SYSTEM:

Remove all gasoline from carburetor and fuel tank to prevent gum deposits from forming on these parts and causing possible malfunction of engine.

 **DRAIN FUEL INTO APPROVED CONTAINER OUTDOORS, AWAY FROM OPEN FLAME. BE SURE ENGINE IS COOL. DO NOT SMOKE.**

Run engine until fuel tank is empty and engine stops due to lack of fuel.

NOTE: Fuel stabilizer (such as ULTRA-FRESH™) is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow it to reach carburetor.

② CHANGE OIL:

Change oil if it has not been changed in the last three (3) months. See "CHANGE OIL" instructions in "MAINTENANCE" section.

③ OIL CYLINDER BORE:

- A. Remove spark plug. Squirt one (1) oz. (30 ml) of clean engine oil into spark plug hole.
- B. Cover spark plug hole with a rag.
- C. Crank engine over, slowly, several times.

 **AVOID SPRAY FROM SPARK PLUG HOLE WHEN CRANKING ENGINE OVER SLOWLY.**

- D. Install spark plug. Do not connect spark plug wire.

④ CLEAN ENGINE:

Remove any clippings, dirt, or chaff from exterior of engine.

GENERAL

Just as your automobile needs professional mechanical maintenance from time to time, so does your Craftsman engine. Replacement of the spark plug and air cleaner is made necessary by NORMAL use. Professional Air-Cooled Engine Service is as close as your nearest Sears Roebuck and Co. (or Sears Canada, Inc.) Service Center.

A yearly check-up or tune-up by Sears is a good idea to avoid breakdowns or delay . . . do it at the end of the season, then you're ready for the next. We even prepare it for storage for you.

TROUBLESHOOTING

**THE FOLLOWING MAY HELP AVOID A DELAY IN YOUR WORK OR
SAVE THE EXPENSE OF A SERVICE CALL.**

ENGINE FAILS TO START OR STARTS WITH DIFFICULTY	
CAUSE	REMEDY
Controls not in start position.	Move ENGINE CONTROL or equipment control to "HI" or START position. See "STARTING" instructions in this manual.
Spark plug wire disconnected from spark plug.	Connect SPARK PLUG WIRE to SPARK PLUG.
Spark plug fouled.	Remove SPARK PLUG and clean it. See "SPARK PLUG" instructions in "MAINTENANCE" section in this manual.
Spark plug porcelain cracked.	Install new spark plug.
Insufficient fuel.	Fill FUEL TANK per "BEFORE STARTING" instructions.
Water or dirt in fuel.	Drain FUEL TANK and re-fill with clean, fresh gasoline. See "BEFORE STARTING" instructions in this manual.
Improper carburetor adjustment	Adjust carburetor (if applicable). See "ADJUSTMENTS" section in this manual.
ENGINE LACKS POWER	
CAUSE	REMEDY
Dirty air cleaner.	Replace or clean air cleaner per "AIR CLEANER" instructions in "MAINTENANCE" section in this manual.
Improper carburetor adjustment.	Adjust carburetor (if applicable). See "ADJUSTMENTS" section in this manual.
Lack of lubricaiton.	Fill oil sump to proper level. See "BEFORE STARTING" instructions section in this manual.
ENGINE MISSES UNDER LOAD	
CAUSE	REMEDY
Spark plug fouled.	Remove SPARK PLUG and clean it. See "SPARK PLUG" instructions in "MAINTENANCE" section in this manual.
Spark plug porcelain cracked.	Install new SPARK PLUG.
Improper spark plug gap.	Regap SPARK PLUG electrodes. See "SPARK PLUG" instructions in "MAINTENANCE" section in this manual.
Improper carburetor adjustment	Adjust carburetor (if applicable). See "ADJUSTMENTS" section in this manual.

SEARS, ROEBUCK AND CO.

Federal and California Emission Control Systems Limited Warranty Small Off-Road Engines

CALIFORNIA & US EPA EMISSION CONTROL WARRANTY STATEMENT

The U. S. Environmental Protection Agency ("EPA"), the California Air Resources Board ("CARB") and Sears, Roebuck and Co. are pleased to explain the Federal and California Emission Control Systems Warranty on your new small off-road engine. In California, new 1995 and later small off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. In other states, new 1997 and later model year engines must be designed, built and equipped, at the time of sale, to meet the U.S. EPA regulations for small non-road engines. Sears, Roebuck and Co. will warrant the emission control system on your small off-road engine for the periods of time listed below, provided there has been no abuse, neglect, unapproved modification, or improper maintenance of your small off-road engine.

Your emission control system may include parts such as the carburetor, ignition system and exhaust system. Also included may be the compression release system and other emission-related assemblies.

Where a warrantable condition exists, Sears, Roebuck and Co. will repair your small off-road engine at no cost to you for diagnosis, parts and labor.

MANUFACTURER'S EMISSION CONTROL SYSTEM WARRANTY COVERAGE

Emission control systems on 1995 and later model year California small off-road engines are warranted for two years as hereinafter noted. In other states, 1997 and later model year engines are also warranted for two years. If, during such warranty period, any emission-related part on your engine is defective in materials or workmanship, the part will be repaired or replaced by Sears, Roebuck and Co.

OWNER'S WARRANTY RESPONSIBILITIES

As the small off-road engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual, but Sears, Roebuck and Co. will not deny warranty solely due to the lack of receipts or for your failure to provide written evidence of the performance of all scheduled maintenance.

As the small off-road engine owner, you should, however, be aware that Sears, Roebuck and Co. may deny you warranty coverage if your small off-road engine or a part thereof has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your small off-road engine to a Sears, Roebuck and Co. Authorized Service Outlet as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

Warranty service can be arranged by contacting either a Sears, Roebuck and Co. Authorized Service Outlet, or by contacting Sears, Roebuck and Co. at 1-800-473-7247.

IMPORTANT NOTE

This warranty statement explains your rights and obligations under the Emission Control System Warranty ("ECS Warranty") which is provided to you by Sears, Roebuck and Co. pursuant to California law. See also the Sears, Roebuck and Co. Limited Warranties for Sears, Roebuck and Co. which is enclosed therewith on a separate sheet and also is provided to you by Sears, Roebuck and Co. The ECS Warranty applies only to the emission control system of your new engine. To the extent that there is any conflict in terms between the ECS Warranty and the Sears, Roebuck and Co. Warranty, the ECS Warranty shall apply except in any circumstances in which the Sears, Roebuck and Co. Warranty may provide a longer warranty period. Both the ECS Warranty and the Sears, Roebuck and Co. Warranty describe important rights and obligations with respect to your new engine.

Warranty service can only be performed by a Sears, Roebuck and Co. Authorized Service Outlet. At the time of requesting warranty service, evidence must be presented of the date of sale to the original purchaser. The purchaser shall pay any charges for making service calls and/or for transporting the products to and from the place where the inspection and/or warranty work is performed. The purchaser shall be responsible for any damage or loss incurred in connection with the transportation of any engine or any part(s) thereof submitted for inspection and/or warranty work.

If you have any questions regarding your warranty rights and responsibilities, you should contact Sears, Roebuck and Co. at 1-800-473-7247.

EMISSION CONTROL SYSTEM WARRANTY

Emission Control System Warranty ("ECS Warranty") for 1995 and later model year California small off-road engines (for other states, 1997 and later model year engines):

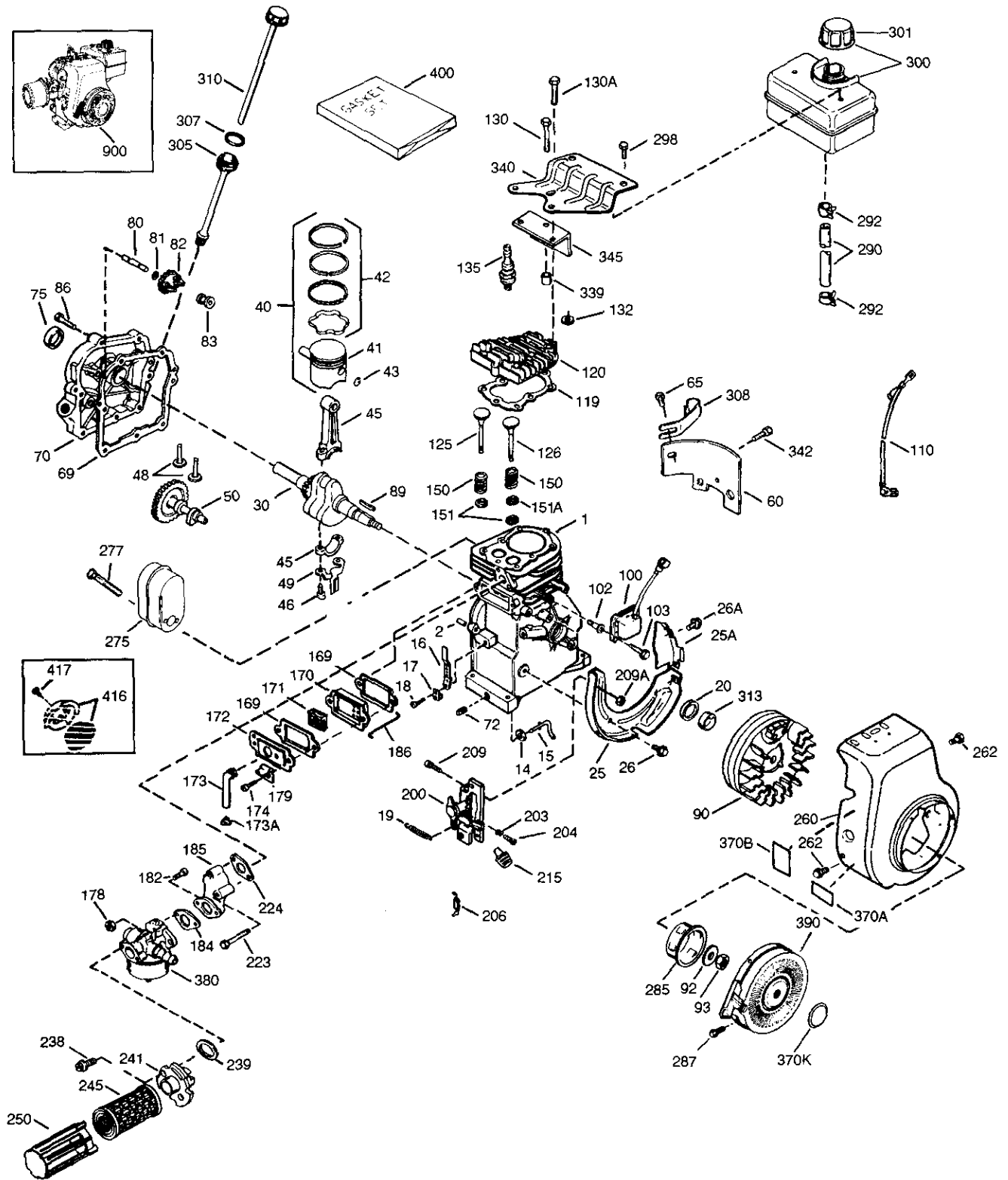
A. APPLICABILITY: This warranty shall apply to 1995 and later model year California small off-road engines (for other states, 1997 and later model year engines). The ECS Warranty Period shall begin on the date the new engine or equipment is delivered to its original, end-use purchaser, and shall continue for 24 consecutive months thereafter.

B. GENERAL EMISSIONS WARRANTY COVERAGE: Sears, Roebuck and Co. warrants to the original, end-use purchaser of the new engine or equipment and to each subsequent purchaser that each of its small off-road engines is:

1. Designed, built and equipped so as to conform with all applicable regulations adopted by the Air Resources Board pursuant to its authority in Chapters 1 and 2, Part 5, Division 26 of the Health and Safety Code, and
 2. Free from defects in materials and workmanship which, at any time during the ECS Warranty Period, will cause a warranted emissions-related part to fail to be identical in all material respects to the part as described in the engine manufacturer's application for certification.
- C. The ECS Warranty only pertains to emissions-related parts on your engine, as follows:
1. Any warranted, emissions-related parts which are not scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the ECS Warranty Period. If any such part fails during the ECS Warranty Period, it shall be repaired or replaced by Sears, Roebuck and Co. according to Subsection 4 below. Any such part repaired or replaced under the ECS Warranty shall be warranted for any remainder of the ECS Warranty Period.
 2. Any warranted, emissions-related part which is scheduled only for regular inspection as specified in the Owner's Manual shall be warranted for the ECS Warranty Period. A statement in such written instructions to the effect of "repair or replace as necessary", shall not reduce the ECS Warranty Period. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
 3. Any warranted, emissions-related part which is scheduled for replacement as required maintenance in the Owner's Manual, shall be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by Sears, Roebuck and Co. according to Subsection 4 below. Any such emissions-related part repaired or replaced under the ECS Warranty, shall be warranted for the remainder of the ECS Warranty Period prior to the first scheduled replacement point for such emissions-related part.
 4. Repair or replacement of any warranted, emissions-related part under this ECS Warranty shall be performed at no charge to the owner at a Sears, Roebuck and Co. Authorized Service Outlet.
 5. The owner shall not be charged for diagnostic labor which leads to the determination that a part covered by the ECS Warranty is in fact defective, provided that such diagnostic work is performed at a Sears, Roebuck and Co. Authorized Service Outlet.
 6. Sears, Roebuck and Co. shall be liable for damages to other original engine components or approved modifications proximately caused by a failure under warranty of an emission-related part covered by the ECS Warranty.
 7. Throughout the ECS Warranty Period, Sears, Roebuck and Co. shall maintain a supply of warranted emission-related parts sufficient to meet the expected demand for such emission-related parts.
 8. Any Sears, Roebuck and Co. authorized and approved emission-related replacement part may be used in the performance of any ECS Warranty maintenance or repair and will be provided without charge to the owner. Such use shall not reduce Sears, Roebuck and Co. ECS Warranty obligations.
 9. Unapproved add-on or modified parts may not be used to modify or repair a Sears, Roebuck and Co. engine. Such use voids this ECS Warranty and shall be sufficient grounds for disallowing an ECS Warranty claim. Sears, Roebuck and Co. shall not be liable hereunder for failures of any warranted parts of a Sears, Roebuck and Co. engine caused by the use of such an unapproved add-on or modified part.

EMISSION-RELATED PARTS INCLUDE THE FOLLOWING:

1. Carburetor Assembly and its Internal Components
 - a) Fuel filter
 - b) Carburetor gaskets
 - c) Intake pipe
2. Air Cleaner Assembly
 - a) Air filter element
3. Ignition System, including:
 - a) Spark plug
 - b) Ignition module
 - c) Flywheel assembly
4. Catalytic Muffler (if so equipped)
 - a) Muffler gasket (if so equipped)
 - b) Exhaust manifold (if so equipped)
5. Crankcase Breather Assembly and its Components
 - a) Breather connection tube



CRAFTSMAN 4-CYCLE ENGINE

MODEL: 143.013501

Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
1	36591	Cylinder (Incl. 2,20,72 & 125)	170	27666	Breather Body
2	26727	Dowel Pin	171	31410	Breather Element
14	28277	Washer	172	34146	Valve Cover
15	31334	Governor Rod	173	32447	Breather Tube
16	31336	Governor Lever	173A	32446	Breather Tube Grommet
17	31335	Governor Lever Clamp	174	650783	Screw, 10-24 x 3/4"
18	651018	Screw, Torx T-15, 8-32 x 19/64"	178	29752	Nut & Lock Washer, 1/4-28
19	34593	Extension Spring	179	30593	Retainer Clip
20	32600	Oil Seal	182	6201	Screw, 1/4-28 x 7/8"
25	36552	Blower Housing Baffle (Incl. 262)	184	*26756	Carburetor To Intake Pipe Gasket
25A	35883	Baffle Extension	185	36703	Intake Pipe (Incl. 182,184, 224)
26	650802	Screw, 1/4-20 x 5/8"	186	31341	Governor Link
26A	650926	Screw, 8-32 x 21/64"	200	36677	Control Bracket (Incl. 203 thru 209A)
30	37336	Crankshaft			
40	40020	Piston, Pin & Ring Set (Std.)	203	31342	Compression Spring
40	40021	Piston, Pin & Ring Set (.010" OS)	204	651029	Screw, Torx T-10, 5-40 x 7/16"
41	40018	Piston & Pin Ass'y. (Std.) (Incl. 43)	206	610973	Terminal
41	40019	Piston & Pin Ass'y. (.010" OS) (Incl. 43)	209	650139	Screw, 8-32 x 1/2"
42	40022	Ring Set (Std.)	209A	30322	Lock Nut 8-32
42	40023	Ring Set (.010" OS)	215	32410	Control Knob
43	20381	Piston Pin Retaining Ring	223	650451	Screw, 1/4-20 x 1"
45	30963B	Connecting Rod Ass'y. (Incl. 46 & 49)	224	*26754A	Intake Pipe Gasket
46	32610A	Connecting Rod Bolt	238	650932	Screw, 10-32 x 49/64"
48	27241	Valve Lifter	239	*34338	Air Cleaner Gasket
49	28594	Oil Dipper	241	35797	Air Cleaner Collar
50	32197A	Camshaft (MCR)	245	35066	Air Cleaner Filter
60	29745	Blower Housing Extension	250	35065	Air Cleaner Cover
65	650128	Screw, 10-24 x 1/2"	260	35585	Blower Housing
69	*27677A	Cylinder Cover Gasket	262	650737	Screw, 1/4-20 x 1/2"
70	34683B	Cylinder Cover (Incl. 75 thru 83)	275	40000A	Muffler (W/Catalyst)
72	27642	Oil Drain Plug	277	650988	Screw, 1/4-20 x 1-3/4"
75	26208	Oil Seal	285	36467A	Starter Cup
80	30574A	Governor Shaft	287	650926	Screw, 8-32 x 21/64"
81	30590A	Washer	290	29774	Fuel Line
82	30591	Governor Gear Ass'y. (Incl. 81)	292	26460	Fuel Line Clamp
83	30588A	Governor Spool	298	650665	Screw, 1/4-15 x 7/8"
86	650488	Screw, 1/4-20 x 1-1/4"	300	35591	Fuel Tank (Incl. 292 & 301)
89	610961	Flywheel Key	301	35355	Fuel Cap
90	611195	Flywheel	305	35554	Oil Fill Tube
92	650815	Belleville Washer	307	35499	"O"-Ring
93	650816	Flywheel Nut	308	35539	Fill Tube Clip
100	34443B	Solid State Ignition	310	35556	Dipstick
102	651024	Solid State Mounting Stud	313	34080	Spacer
103	651007	Screw, Torx T-15, 10-24 x 15/16"	339	28212	Spacer
110	35182	Ground Wire	340	35926	Fuel Tank Bracket
119	*36437	Cylinder Head Gasket	342	650751	Screw, 1/4-20 x 7/16"
120	36438	Cylinder Head (Incl. 119 & 130)	345	32664	Heat Baffle
125	36471	Exhaust Valve (Std.) (Incl. 151)			
125	36472	Exhaust Valve (1/32" OS) (Incl. 151)			
126	29314C	Intake Valve (Std.) (Incl. 151)			
130	650694A	Screw, 5/16-18 x 2"			
130A	6021A	Screw, 5/16-18 x 1-1/2"			
132	650708	Washer			
135	33636	Spark Plug (RJ17LM)			
150	31672	Valve Spring			
151	31673	Valve Spring Cap			
151A	40016A	Intake Valve Seal			
169	*27234A	Valve Cover Gasket			

*Indicates Parts Included in Gasket Set, Ref. No. 400.

CRAFTSMAN 4-CYCLE ENGINE

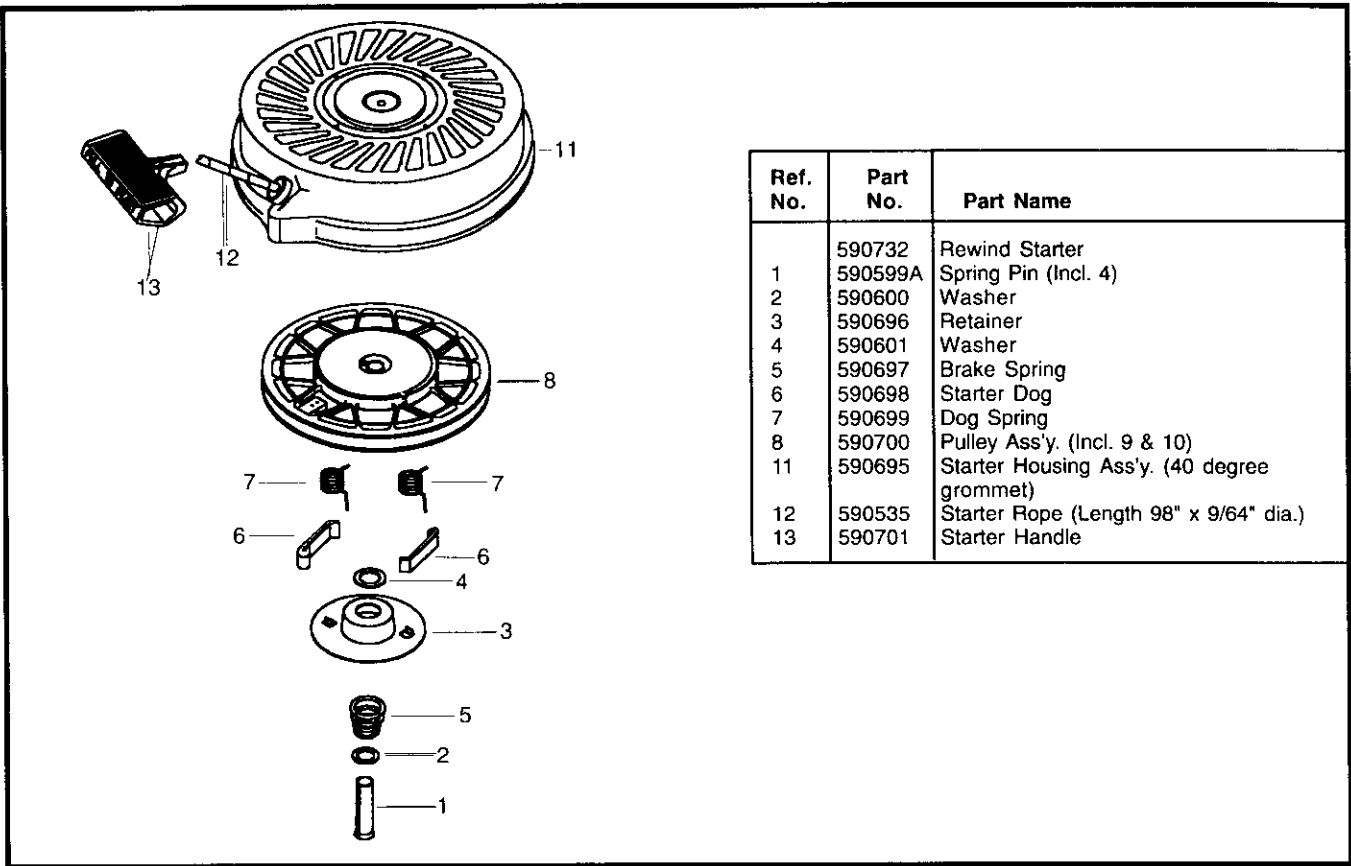
MODEL: 143.013501

Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
370A	36261	Lubrication Decal	900	754291	Replacement Short Block, order from 71-999
370B	35703	Control Decal			
370K	36695	Starter Decal	900	754294B	Replacement Engine, order from 71-999
380	640172	Carburetor (Incl. 184)			
390	590732	Rewind Starter (NOTE: This engine could have been built with 590738 starter).			*Indicates Parts Included in Gasket Set, Ref. No. 400.
400	36439	Gasket Set (Incl. Items Marked *)			
416	36085	Spark Arrestor Kit (Incl. 417) (Optional)			RPM High 3300 to 3600 RPM Low 1700 to 2000
417	650821	Screw, 10-32 x 1/2" (Optional)			

CARBURETOR NO. 640172

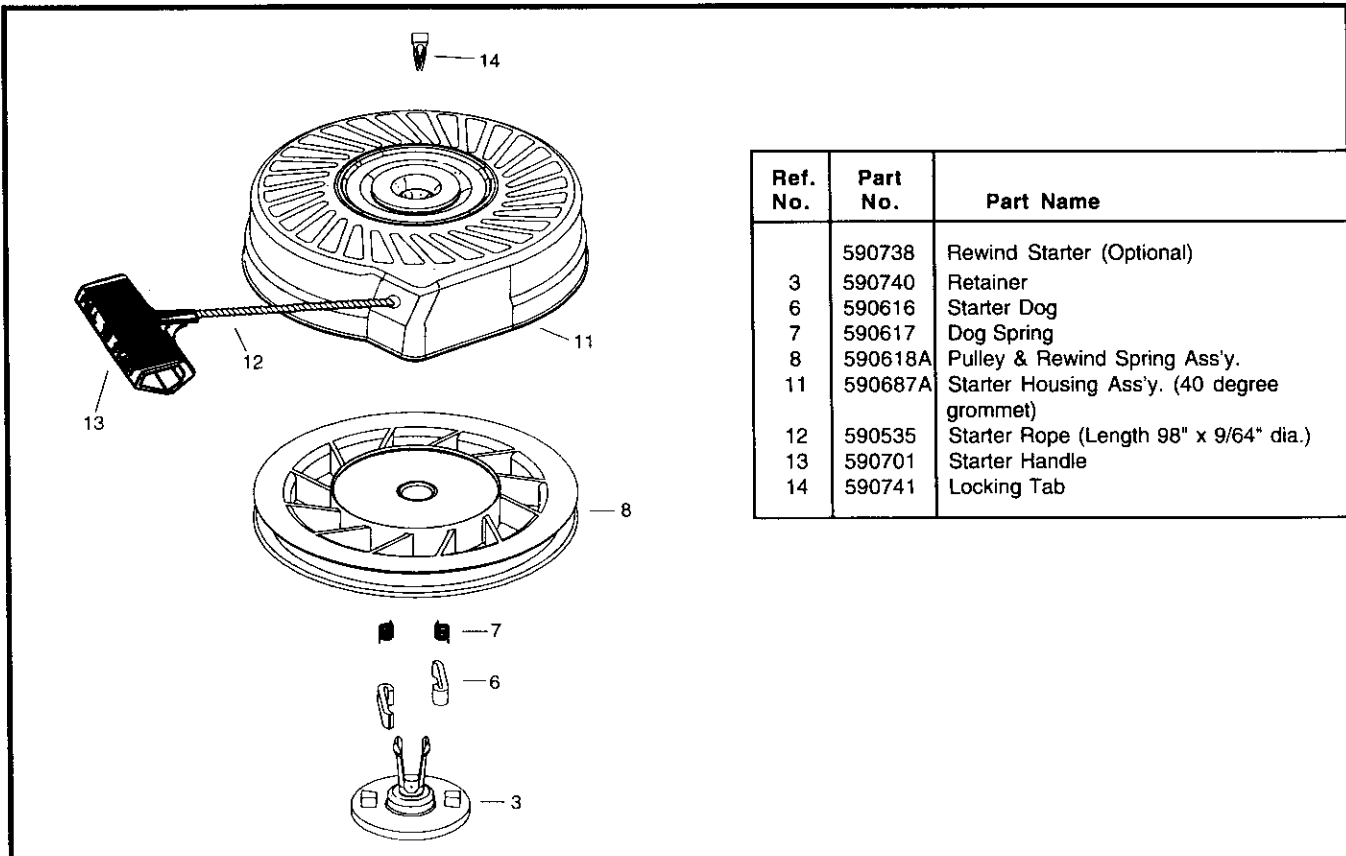
Ref. No.	Part No.	Part Name
	640172	Carburetor (Incl. 184 of Engine Parts List)
1	631615	Throttle Shaft & Lever Assembly
2	631767	Throttle Return Spring
4	*631184	Dust Seal Washer
5	*631183	Dust Seal (Throttle)
6	631036	Throttle Shutter
7	*650506	Shutter Screw
16	632164	Fuel Fitting
17	651025	Throttle Crack Screw/Idle Speed Screw
18	630766	Tension Spring
20	640018	Idle Restrictor Screw
20A	640053	Idle Restrictor Screw Cap
25	631867	Float Bowl
27	*631024	Float Shaft
28	632019	Float
29	*631028	Float Bowl "O" Ring
30	*631021	Inlet Needle, Seat, & Clip (Incl. 31)
31	631022	Spring Clip
35	36045A	Primer Bulb/Retainer Ring
36	640019	Main Nozzle Tube
37	*632547	"O" Ring, Main Nozzle Tube
40	640074	High Speed Bowl Nut
44	*27110A	Bowl Nut Washer
47	*630748	Welch Plug, Idle Mixture Well
48	*631027	Welch Plug, Atmospheric Vent
60	632760	Repair kit (Incl. Items Marked *)

REWIND STARTER NO. 590732



Ref. No.	Part No.	Part Name
1	590732	Rewind Starter
2	590599A	Spring Pin (Incl. 4)
3	590600	Washer
4	590696	Retainer
5	590601	Washer
6	590697	Brake Spring
7	590698	Starter Dog
8	590699	Dog Spring
9	590700	Pulley Ass'y. (Incl. 9 & 10)
10	590695	Starter Housing Ass'y. (40 degree grommet)
11	590535	Starter Rope (Length 98" x 9/64" dia.)
12	590701	Starter Handle

STARTER NO. 590738



Ref. No.	Part No.	Part Name
	590738	Rewind Starter (Optional)
3	590740	Retainer
6	590616	Starter Dog
7	590617	Dog Spring
8	590618A	Pulley & Rewind Spring Ass'y.
11	590687A	Starter Housing Ass'y. (40 degree grommet)
12	590535	Starter Rope (Length 98" x 9/64" dia.)
13	590701	Starter Handle
14	590741	Locking Tab

SEARS

**operator's
manual**

MODEL NO. 143.013501

SOLID STATE IGNITION

CAUTION:

Read **RULES** for
Safe **OPERATION**
and **INSTRUCTIONS**
Carefully

How to ORDER Repair Parts

The Model Number will be found on a decal on the blower housing (See Figure 1). Always mention the Model Number when requesting service or repair parts for your Craftsman Engine.

All parts listed herein may be ordered from any SEARS, ROEBUCK AND CO. or SEARS CANADA, INC. retail or catalog store. If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for expedited handling.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST.

1. The PART NUMBER
2. The PART DESCRIPTION
3. The MODEL NUMBER
4. The NAME OF ITEM - ENGINE

"Your Sears merchandise has added value when you consider that Sears has service units nationwide staffed with Sears trained technicians... professional technicians specifically trained on Sears products, having the parts, tools and equipment to insure that we meet our pledge to you ... we service what we sell."

**Sold by SEARS, ROEBUCK AND CO., CHICAGO, IL 60684 U.S.A.
and SEARS CANADA, INC., TORONTO, ONTARIO, CANADA**