Operating Instructions

IMPORTANT
ALWAYS USE
GOOD, CLEAN OIL
S. A. E. No. 20
For Temperatures Below 32° F.
Use S. A. E. No. 10W
ADD OIL FREQUENTLY
CHANGE OIL REGULARLY

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ADD OIL FREQUENTLY
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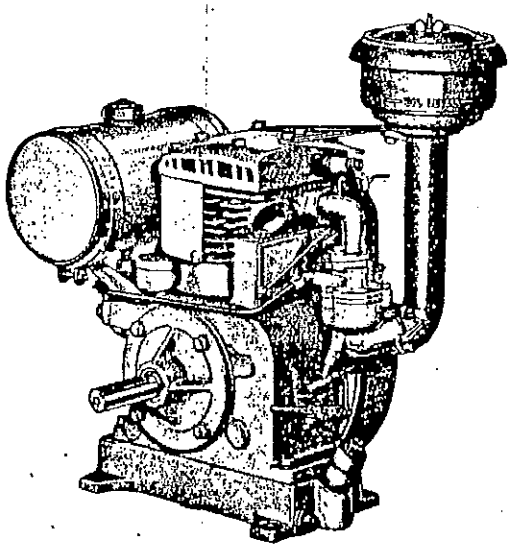
Adjustment and Repair Information • Parts List

MODELS

"B"—"BH"—"BHL"—"BHLP"—"BHP"—"BHR"
"BL"—"BLP"—"BLR"—"BM"—"BMG"—"BP"—"BR"
5 DIGIT TYPE NUMBERS FROM 20,000 TO 95,299 (INCL.)



INDEX

Read these instructions carefully before operating this Motor for the first time.

Guessing how to run it may cause you unnecessary inconvenience, aggravation or failure to receive the fine service that is built into it.

There is a right way to operate this Motor. This book tells you how.

Each Motor is carefully tested and adjusted at the factory before packing for shipment, and if correctly operated will perform beyond your expectations.

DO NOT START THIS MOTOR UNTIL YOU HAVE READ CAREFULLY THE "STARTING AND OPERATING INSTRUCTIONS" ON Page 3

4 CYCLE
BRIGGS & STRATTON
GASOLINE MOTOR

IMPORTANT SAFETY INFORMATION AND INSTRUCTIONS FOR

ENGINE SELECTION
ENGINE INSTALLATION
ENGINE OPERATION

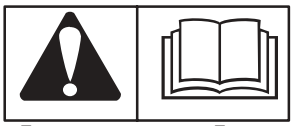
Keep these instructions for future reference.

In the USA and Canada,
our 24 hour hotline is:

18002333723

Briggs & Stratton Corporation
Milwaukee, Wisconsin 53201

www.briggsandstratton.com



Before installing and operating this engine read and observe all warnings, cautions and instructions on both sides of this sheet, on the engine, and in the operating & maintenance instructions.

NOTE: This sheet of instructions and safety information is not meant to cover all possible conditions and situations that may occur. Read entire Operating & Maintenance Instructions for this engine AND the instructions for the equipment this engine powers. Failure to follow instructions and safety information could result in serious injury or death.

The safety alert symbol (⚠) is used to identify safety information about hazards that can result in personal injury.

A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

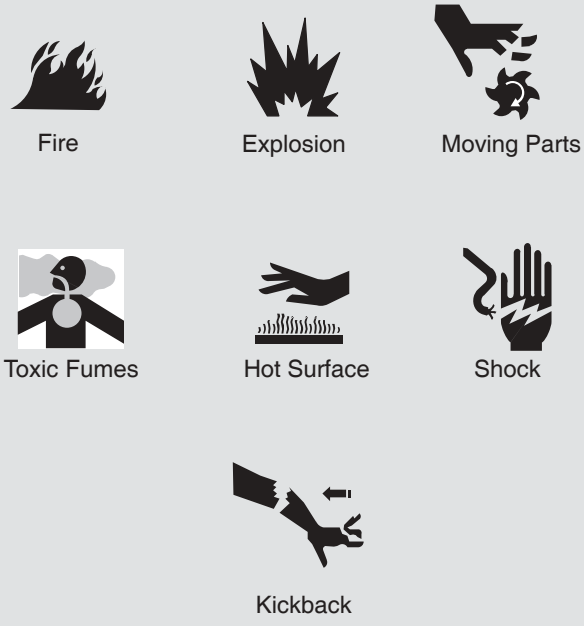
⚠ **DANGER** indicates a hazard which, if not avoided, **will result in death or serious injury.**

⚠ **WARNING** indicates a hazard which, if not avoided, **could result in death or serious injury.**

⚠ **CAUTION** indicates a hazard which, if not avoided, **might result in minor or moderate injury.**

CAUTION, when used **without** the alert symbol, indicates a situation that **could result in damage to the engine.**

HAZARD SYMBOLS AND MEANINGS



(OVER)

FORM MS-6445-01/03

ENGINE SELECTION

WARNING

Failure to select the correct engine could result in fire or explosion.

- Some engines are unique and designed for specific applications or types of equipment. If this engine will be used to build new equipment, contact Briggs & Stratton to ensure that the engine is appropriate for the intended use.

  Note: For all Go-karts use only a model 136200 series engine, which offers improved safety and performance.
- Replacement engines should be the same model as the original engine, or be the Briggs & Stratton designated replacement engine. Refer to the Operation & Maintenance Instructions for engine identification information.

  Note: For all Go-karts use only a model 136200 series engine, which offers improved safety and performance.
- Do not use Briggs & Stratton engines on 3-wheel All-Terrain Vehicles (ATVs), motor bikes, air craft products, or vehicles intended for use in competitive events. Briggs & Stratton does not approve of or authorize such uses.

ENGINE INSTALLATION

[1] Do not attempt to install this engine if you do not have the appropriate tools and knowledge of small engine installation procedures. Use only Briggs & Stratton parts. Contact your Authorized Service Dealer for assistance.

[2] Do not modify the engine in any way without Briggs & Stratton factory approval. Any such modification is at the owner's sole risk.

[3] If the exhaust system on the old engine was supplied by the equipment manufacturer, you must transfer the exhaust system and related components (original muffler and related pipes, brackets, clamps, and shields) to the new engine. All components must be in good condition.

[4] **WARNING**

Install muffler (and muffler deflector if used) so outlet points away from operator, fuel tank, and equipment, and so muffler heat will not damage or deform engine and components.

[5] **WARNING**

Ensure all fuel lines and fittings are properly assembled and do not leak. Replacement parts must be the same model as the original.

[6] **WARNING**

Ensure all wiring, including safety switches and engine shut-off components are completely installed and functioning properly.

[7] Set engine speed to equipment manufacturer's specification. Refer to equipment manufacturer's manual. Do not tamper with governor springs, or other parts that will increase engine speed above specification.

[8] **WARNING**

All engine parts, including fuel cap, spark plug, muffler, air cleaner, and covers and guards for drive components (gears, belts, shafts, couplings, etc.) must be in place before attempting to start engine.

[9] **WARNING**

If engine is installed on walk behind lawn mower, all mower components, including cutting blade, must be correctly installed before attempting to start engine.

[10] **WARNING**

When working on the engine or equipment, remove spark plug wire from spark plug. For electric start, remove negative wire from battery.

[11] **WARNING**

Do not check for spark with spark plug removed. Use Briggs & Stratton spark tester #19368.

ENGINE OPERATION

WARNING

When adding fuel:

Turn engine off and let engine cool at least 2 minutes before removing gas cap.

Fill fuel tank outdoors or in well-ventilated area. Fill tank to about 1 inch below lowest portion of neck to allow for fuel expansion.

Keep gasoline away from sparks, open flames, pilot lights, heat, and other ignition sources.

WARNING

When starting engine:

Remove all external equipment/engine loads.

Wait until spilled fuel is evaporated. Start engine outdoors.

Pull cord slowly until resistance is felt, then pull rapidly.

If engine floods, set choke to OPEN/RUN, place throttle in FAST and crank until engine starts.

WARNING

When operating equipment:

Do not tip engine or equipment at angle which causes gasoline to spill.

Run engine outdoors. Do not run in enclosed area, even if doors or windows are open.

Do not choke carburetor to stop engine.

Starting and Operating Instructions

1. BEFORE STARTING THE MOTOR. Fill the crankcase with Mobiloil "Arctic" or any other high grade oil not heavier than **S. A. E. No. 20** for operating motor in temperatures of 32° F. and above. For temperatures below 32° F. use Mobiloil "Arctic Special" or other high grade oil not heavier than **S. A. E. No. 10 W.**

A HEAVIER OIL MUST NOT BE USED. The oil filler plug is painted blue and is located on top of motor base. With the motor level remove filler plug and pour oil in opening until it rises to the level of the filler plug opening. Crankcase holds 3 pints. Fill air cleaner with oil of the same viscosity as used in the crankcase to the indicated oil level. See paragraph 62. Fill the gas tank with a good grade of fresh, clean gasoline. Tank holds one gallon. Do not mix oil and gasoline. See paragraphs 11 to 19.

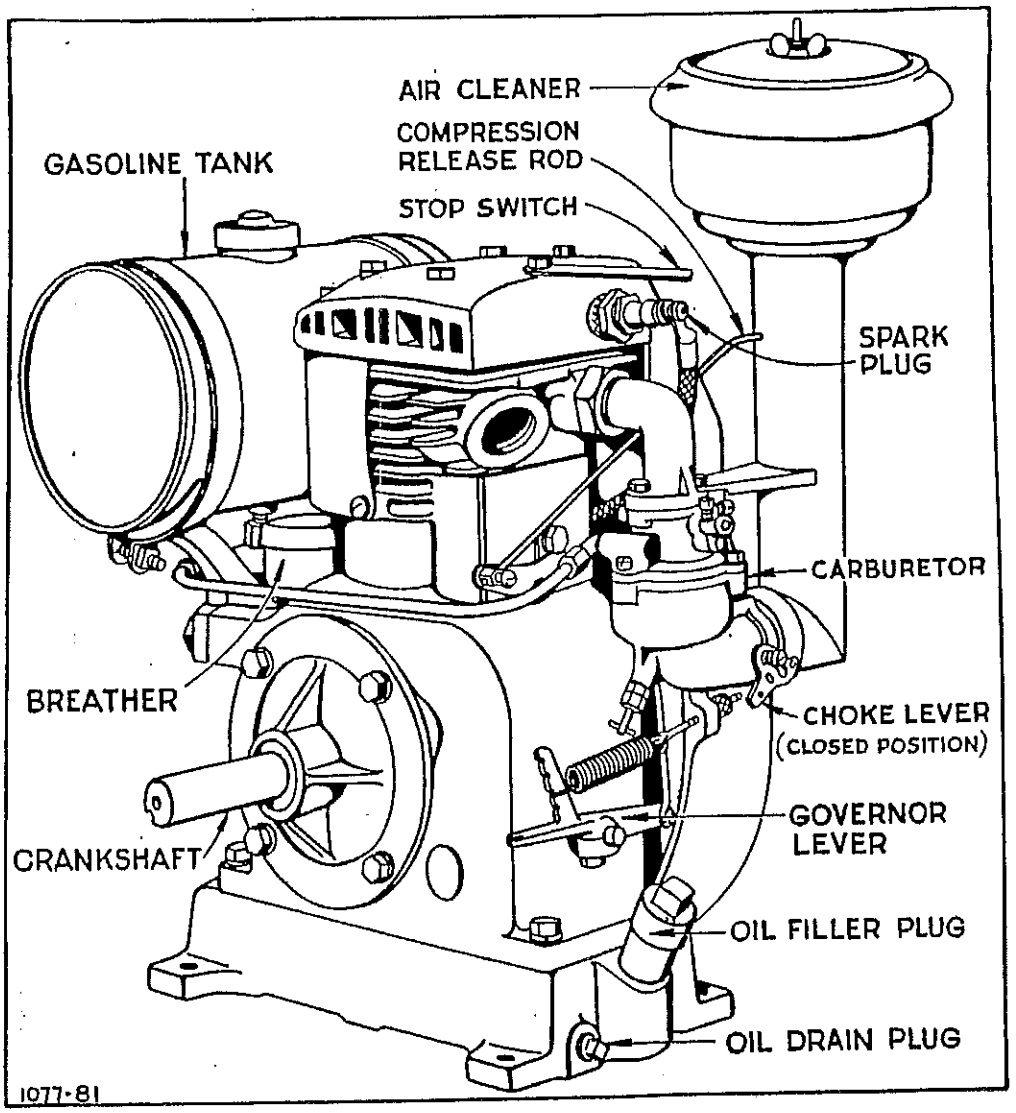
2. HOW TO START. Open gasoline shut-off valve in gas filter. Completely close carburetor choke.

A. HAND CRANK STARTER TYPE. Press the starter shaft in, to mesh gear with pinion on crankshaft. Crank rapidly to prime the motor. After motor has been primed, open choke about half way and, when motor starts, gradually open the choke valve until it runs smoothly with the choke valve wide open. (A warm motor does not require as much choking as a cold motor.)

B. ROPE STARTER TYPE. Slip the knotted end of the starter rope into the notch of the starter pulley and wind the rope around it. Pull the rope with a quick steady pull with choke closed to prime the motor. Operate choke as explained under 2-A.

3. FAILURE OF MOTOR TO START. COLD WEATHER causes the oil in crankcase to become thick and the gasoline less volatile. Should you experience trouble in starting, we suggest that you give your motor a little extra priming. Also be sure that the spark plug points are clean and the gap set at .025". See plate No. 9. If motor fails to start after a reasonable number of trials do not make any adjustments until you have studied the instructions referred to in the **Servicing Reference Chart**, on page 3.

Plate No. 1



Servicing Reference Chart

MOTOR FAILS TO START

	Paragraph
Out of Gasoline	1-16
Out of Oil	1-13-59-60
Dirt or Gum in Fuel System	16 to 19
Incorrect Use of Choke	20
Carburetor Out of Adjustment	22 to 26
Spark Plug Dirty	32-33
Ignition Cable Grounded	34
Magneto	35 to 46
Poor Compression	47 to 56
Air Cleaner Clogged	62

MOTOR STOPS

Out of Gasoline	1-16
Out of Oil	1-13-59-60
Dirt or Gum in Fuel System	16 to 19
Motor Overheated	13-59-60-61-62-64
Air Cleaner Clogged	62
Motor Overloaded	64

MOTOR OVERHEATS

	Paragraph
Out of Oil	1-13-59-60
Oil Needs Changing	14-15
Oil Too Heavy	14-15
Carburetor Out of Adjustment	22 to 26
Poor Spark	31 to 46
Carbon	61
Muffler Clogged	63
Overloaded	64

MOTOR LACKS POWER

Lack of Oil	1-13-59-60
Add or Change Oil	13 to 15
Carburetor Out of Adjustment	22 to 26
Motor Not Up to Speed	25 to 28
Poor Spark	31 to 46
Poor Compression	47 to 56
Carbon	61
Air Cleaner Clogged	62
Muffler Clogged	63
Overloaded	64

Instructions for Adjustment and Repair

4. HOW TO STOP. Press the stop switch mounted on the cylinder head against the end of the spark plug. Hold it until motor stops firing. This will ground the spark. Some models are equipped with spark plug shield. To stop, push red button located on blower case.

5. GENERAL DATA. You will find your motor substantially built. It is made of high grade materials by skilled workmen, in a factory fully equipped with the most modern machinery. Before it was shipped, it received many tests and careful inspections.

6. Your motor will give you better service if you do not tinker with it. This does not mean, however, that it does not require a certain amount of attention. Give it the right kind of fuel, oil and care. Keep it clean both inside and out. You will be well repaid in trouble-free, satisfactory service.

7. If you should experience any difficulty, follow the instructions referred to in the **Servicing Reference Chart above.** If you cannot easily remedy it, consult your dealer or a nearby Briggs & Stratton Central Service Distributor. See page 22.

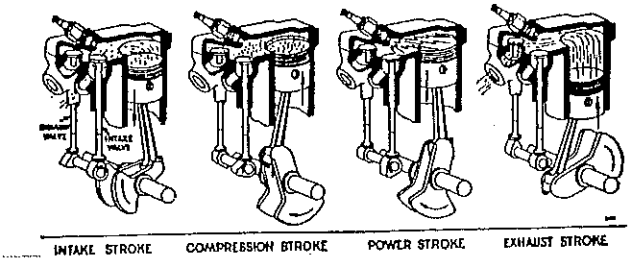
8. OPERATING REQUIREMENTS. A gasoline motor to operate properly must have all parts in correct adjustment to provide good ignition, carburetion, compression and cooling. And of equal importance, the oil and gasoline used must be clean and of recommended grades. The following instructions fully explain the simple

adjustments and offer operating recommendations that will assure you of complete satisfaction. We urge you to carefully observe them.

9. The reliability, economy and ease of starting which characterize this motor are due in part to the fact that it is of the 4-stroke cycle design commonly called "4-cycle," the same design used in all automotive motors. As the name indicates, there are four strokes to one complete power cycle.

10. HOW A 4-CYCLE MOTOR OPERATES. On the **intake stroke** the piston goes down, producing a suction in the cylinder, thereby drawing fuel up through the carburetor so that the space above the piston becomes filled with combustible gas. During this stroke the intake valve is open. Next the piston comes up on the **compression stroke** with both valves closed. At the top of the compression stroke a spark occurs at the spark plug, firing the highly compressed gas. This produces an explosion above the piston which forces it down on the **power stroke.** Both valves are closed. On the next upstroke of the piston, called the **exhaust stroke,** the exhaust valve is open, and the burned gases driven out. See plate No. 2.

The 4-Stroke Cycle
Plate No. 2



11. KEEP THE MOTOR CLEAN. It will pay you to keep your motor clean both inside and outside. See that no dirt or water enters motor when filling with oil or gasoline. As a precautionary measure always wipe off the gasoline cap and oil filler plug, as well as around them before refilling. Dirt in the motor or gasoline tank will cause trouble and even serious damage. Also be sure to remove any dirt or grass that may accumulate in the flywheel housing or between cylinder fins.

12. USE THE RIGHT KIND OF OIL. Correct lubrication is important. We recommend the use of MOBILOIL "ARCTIC" or other high grade oil with similar characteristics having a low carbon residue and a body not heavier than **S. A. E. No. 20** for operating motor in temperatures of 32° F. and above. For temperatures below 32° F. use Mobiloil "Arctic Special" or other high grade oil not heavier than **S. A. E. No. 10W. A heavier oil which might be satisfactory in a tractor or for lubricating farm machinery must NOT be used.** Do not mix oil with gasoline. This 4-cycle motor is provided with an independent efficient lubrication system which forces a stream of oil to all moving parts of the motor. There are no external parts which require separate oiling.

13. ADD OIL REGULARLY. A motor which is run without oil will be ruined within a few minutes. To avoid the possibility of such an occurrence and the resulting expense, always fill the oil reservoir at the blue plug to the top of the filler plug opening after each five hours of motor operation. Capacity of oil reservoir is three pints.

14. CHANGE OIL FREQUENTLY. After every twenty-five hours of motor operation, the oil should be completely drained from the crankcase. Do not remove motor from its mounting base. Remove the yellow oil drain plug, located at either end of motor base, and let the oil flow into a pan or other receptacle you use. We do not recommend flushing out with kerosene. Replace the drain plug, refill with fresh oil and replace the blue filler plug.

15. In the normal running of any motor, small particles of metal from the cylinder walls, pistons and bearings will gradually work into the oil. Dust particles from the air also get into the oil. If the oil is not changed regularly these foreign particles cause increased friction and a grinding action which shortens the life of the motor. Sludge, a gummy mass, forms which clogs up the oil passages. Fresh oil also assists in cooling, for old oil gradually becomes thick and loses its cooling as well as its lubricating qualities.

16. USE CLEAN GASOLINE. A good grade of **fresh clean** gasoline is recommended. Too high test gasoline may form vapor-lock in gas line when motor gets hot. This interrupts the flow of gasoline and causes motor to stop. Be sure that the small vent hole in the gasoline tank cap is not clogged up, for air must enter the tank to allow the gasoline to flow to the carburetor. Test by blowing through top of cap. See paragraph 18.

17. AVOID GUMMY GASOLINE. If you experience trouble with a gummy, sticky substance with a peculiar sharp obnoxious smell, change to another grade of gasoline. This gum comes from the gasoline and clogs carburetor, gas line, gasoline tank, etc.

18. YOU CAN AVOID MOST TROUBLE FROM GUM IF YOU WILL KEEP THE TANK FULL WHEN YOU ARE NOT USING THE MOTOR. If you use it only occasionally, drain tank completely and refill when motor is used again. The reason for this is that evaporation of stale gasoline causes most gum deposits.

19. TO CLEAN THE FUEL LINES. Disconnect the gasoline line at the carburetor and also at the gas filter. Blow through the gas line to clear it. To clean the gas filter, first close the shut-off valve and loosen thumb screw. Remove and clean glass bowl, gasket and screen. Open shut-off valve to see if gasoline flows freely from the tank. IMPORTANT: If you find a gummy varnish-like substance, alcohol or acetone will dissolve it. See paragraphs 17 and 18.

20. CORRECT USE OF THE CHOKE. The correct carburetor setting (see paragraph 23) gives the motor the best mixture to run on when it is hot. For starting, it is necessary to choke the carburetor to get a rich mixture, because cold gasoline does not vaporize readily. A warm or hot motor requires very little choking. Until you become familiar with your motor, however, you may make the mistake of not choking the carburetor enough or you may choke it too much. If motor fails to start after cranking three or four times with the choke closed, try cranking two or three times with the choke part-way down and then all the way down, or open. Use motor choke the same as you use an automobile choke.

21. TO PRIME THE MOTOR. The motor may fail to start for the reason that either the carburetor is incorrectly adjusted or dirty, or the fuel line is dirty or clogged, or you are out of gasoline. To determine the cause, prime the motor by removing the spark plug and pour a half teaspoonful of gasoline into the spark plug opening. Replace the spark plug and crank the motor. If it fires for three or four revolutions and stops, the difficulty is definitely in the fuel system. See paragraphs 19, 22 to 26. If motor will not fire at all, check the ignition system, see paragraphs 31 to 46, also compression, paragraphs 47 to 56.

22. TO ADJUST THE CARBURETOR. The carburetor on this motor is of the gravity type. The gasoline supply is regulated by a needle valve. The throttle is automatically controlled by the governor, see paragraphs 27 to 30.

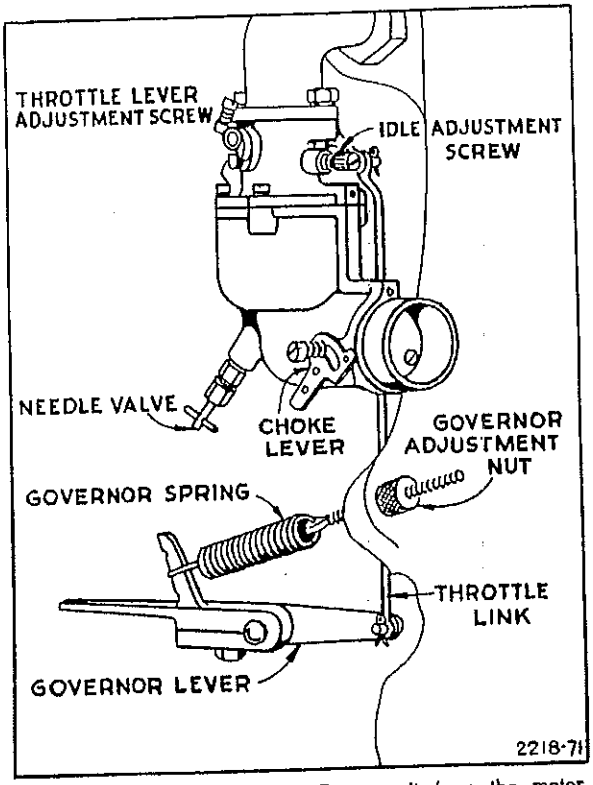
23. To adjust the carburetor, completely close needle valve by turning to right or clockwise as far as possible. Do not screw up

too tight or use force when closing needle valve, or needle valve may be damaged. From closed position, open needle valve one to one and one-quarter turns. After the motor has been started and warmed up make final adjustment with the choke wide open by turning the needle valve to the point at which motor operates most smoothly with full load. This setting will also take care of starting with use of the choke. When starting cold motor, if it is necessary to keep choke partially closed several minutes before motor runs smoothly, carburetor setting is too lean and needle valve should be opened a notch or two — turn to left. For governor adjustments see paragraphs 27 to 30. The idle adjustment screw setting is about a half to three quarters of a turn open. Do not force screw against seat or you will damage both.

24. The throttle lever adjustment screw is set at the factory to permit an idling speed of about 1200 R. P. M. We do not recommend adjusting the throttle to bring the speed lower. If you want to idle the motor at a higher speed than 1200 R. P. M. turn the throttle lever adjusting screw to the right or in a clockwise direction.

25. TO REMOVE AND REPLACE CARBURETOR. Disconnect gasoline line from carburetor and gasoline shut-off valve. Remove two cap screws and lockwashers from the intake elbow. Then remove the cotter pin from the throttle shaft lever and slip the throttle link off. To replace, reverse the operations as performed above. Use a new cotter pin if necessary.

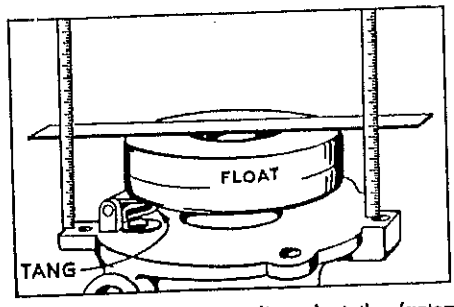
Carburetor and Governor Hook-Up
Plate No. 3



26. TO CLEAN CARBURETOR. Remove it from the motor as explained in the previous paragraph. Remove gas line connector elbow. To disassemble carburetor, FIRST remove needle valve, stuffing box nut, packing nut gland and nozzle. Then remove screws and lockwashers from the upper carburetor body. CAUTION: The upper and lower bodies are interlocked by the nozzle and failure to disassemble in above order will result in damaged parts. To check inlet valve and seat, pull out brass pin holding carburetor float. A worn or dirty inlet valve and seat or incorrect float level will cause carburetor to leak. In reassembling, float should be in a horizontal position when it closes inlet valve and seat. To check float, invert upper carburetor body and place a scale or a flat, straight piece of steel across carburetor float and see that distance from top of float to carburetor body flange is equal at both sides of float. See plate No. 3A. The float hinge tang can be bent to attain proper position of float. If any parts are gummy, clean them in alcohol or acetone. Blow through all passages and openings. Do **not** use wire to clean out small holes. Replace worn or damaged parts.

27. GOVERNOR—CORRECT MOTOR SPEED. The speed of your motor is automatically maintained under varying loads by a centrifugal governor. It is operated from the cam gear.

Carburetor Float Position
Plate No. 3A



28. The governor was carefully adjusted at the factory to maintain normal speed under load. Do not re-adjust unless absolutely necessary. It can be changed by reducing or increasing the tension of the governor spring. Turn governor adjustment nut to the right or clockwise to increase motor speed. To left or counterclockwise to reduce motor speed. Recommended motor speed is 2300 to 2700 R. P. M.

29. RESETTING GOVERNOR LEVER. If the governor lever has been loosened or removed from the governor shaft, it is easily reset. With the carburetor attached to motor and hooked up to governor lever with throttle link, loosen set screw holding governor lever on the shaft. Push the governor lever toward the left as far as it will go. Hold it in this position and turn the governor shaft to the right with pliers until it strikes a stop in the crankcase. Tighten screw that holds governor lever to shaft until the lever is snug. Push governor lever to the right as far as it will go and tighten screw securely.

30. Some motors are equipped with manual or remote carburetor controls as shown in plate Nos. 4, 5, 6, and 7. In plate Nos. 4 and 5 are shown remote idling devices. To idle motors with these

Manual and Remote Carburetor Controls

Plate No. 4

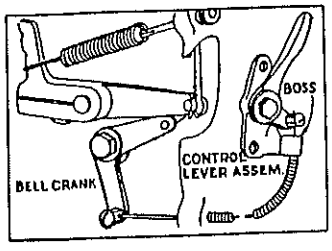


Plate No. 5

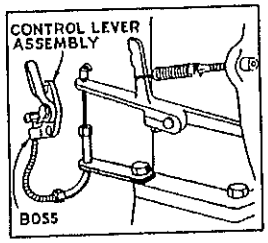


Plate No. 6

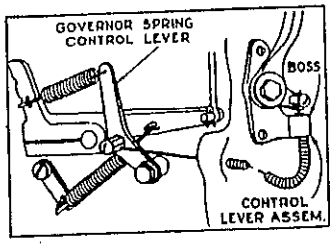
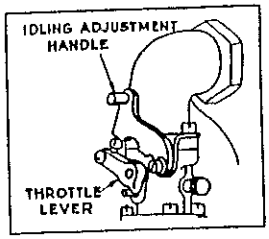


Plate No. 7

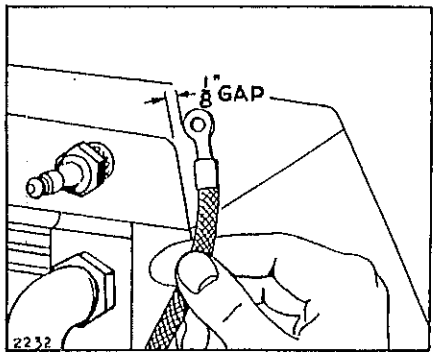


devices, move control lever away from boss on control lever base. To operate motor at governed speed, return lever to boss on the control lever base. Device in plate No. 6 is a remote governor control. To increase motor speed, move control lever away from boss on the control lever base. This adds tension to the throttle spring, allowing carburetor throttle to open wider. To reduce motor speed, return the control lever toward boss on the control lever base. Some models have a hand idling device as shown in plate No. 7. This eliminates changing governor hook-up on motors not equipped with a remote control. To idle motor, lower the idling adjustment lever. Raise the lever to bring motor back to normal running speed.

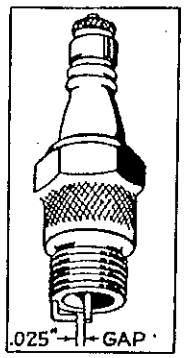
31. THE IGNITION SYSTEM. The spark is produced by a high tension magneto consisting of armature, condenser, contact points and rotating magnets cast in a flywheel. This is a simple self-contained system which is very reliable. It also does away with batteries. The ignition current is sent into the motor cylinder through the ignition cable and spark plug. The magneto itself as well as the cable and spark plug must all be in proper condition and adjustment to insure a good hot spark.

32. TO CHECK FOR SPARK. To prove that a satisfactory spark is being delivered by the magneto, remove the ignition cable from the plug. Hold ignition cable terminal about ⅛" from any metal part of the cylinder head (keep hand on insulated part of the cable to avoid a shock). Turn motor with starter, and if the spark jumps this gap the entire ignition system, with the exception of the spark plug, is O. K. See plate No. 8. (To check spark plug see paragraph 33.) If no spark, check cable, see paragraph 34, and refer to magneto adjustments paragraphs 35 to 46.

Checking Spark
Plate No. 8



Spark Plug
Plate No. 9



33. SPARK PLUG ADJUSTMENT. Spark plugs should be cleaned and points reset to .025" after each 100 hours of operation. See plate No. 9. Points burn away in service. The porcelain is to prevent the spark from jumping anywhere except at the gap, and if cracked or broken it will prevent the plug firing. Water on the outside of the spark plug may permit the high voltage current to leak over the surface of the porcelain. Dirt or carbon on it will do the same thing. The spark plug can be cleaned by washing off the carbon with gasoline or kitchen scouring powder. Points should be scraped or sand-papered. See plate No. 9. Always keep a new plug on hand. Use Champion No. 8 Commercial or exact equivalent. For extra heavy duty, use Champion No. 5 Commercial or its exact equivalent. When inserting plug place a little graphite grease on the threads.

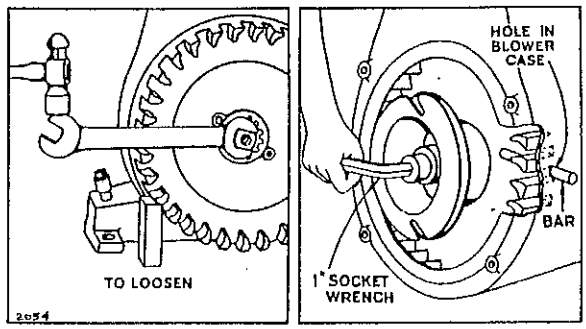
34. IGNITION CABLE. Insulation must not be broken, or soaked with oil or water, or grounded in any way where it touches the motor, or it will interfere with good ignition. Spark plug cable should be fastened to the secondary terminal (small brass plate coming out of the coil). See plate No. 14.

35. TO REMOVE AND REPLACE FLYWHEEL. The flywheel is securely mounted to the crankshaft by means of a taper fit, a soft key, right hand threaded nut, and a nut lock on rope starter motors, or a pinion gear and lock on crank starter motors.

A. ROPE STARTER MOTORS. Place a rod or punch through the ⅜" hole in the blower housing at gas tank side, so that it passes between fins of the flywheel. This will hold the flywheel rigid and prevent its turning as you loosen pulley nut. Use a 1" socket wrench with a "T" or "L" handle. To start nut, tap end of wrench, remove blower housing, loosen flywheel with the flywheel puller No. 29157 furnished with the motor.

B. CRANK STARTER MOTORS. Remove blower housing. Unscrew two cap screws and lockwashers that hold pinion gear lock on flywheel. To loosen pinion, place a wood block under the flywheel fin on left side of flywheel to hold it rigid and prevent turning. Use a ¾" open end wrench on pinion. Tap end of wrench handle lightly with a hammer to the left. Tap carefully or a broken fin may result which will throw the flywheel out of balance. Remove flywheel with flywheel puller No. 29157 provided with motor.

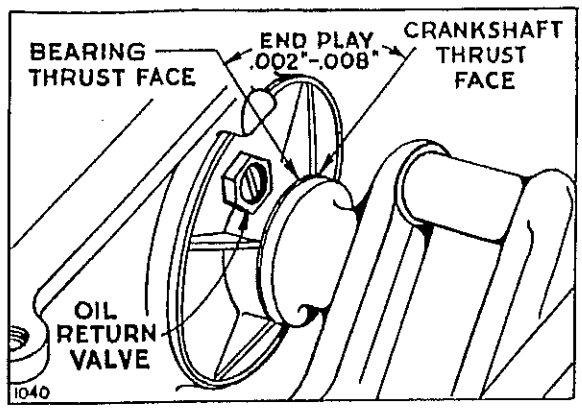
Removing Flywheel
Plate No. 10



36. TO REASSEMBLE THE FLYWHEEL reverse the operations in preceding paragraphs, put a very thin coat of cup grease on the crankshaft taper and see that flywheel key is in place.

37. TO REMOVE AND REPLACE MAGNETO ASSEMBLY. After removing flywheel as explained in paragraph 35, detach the ignition cable from the spark plug and remove the back plate, flywheel key, contact point dust cover and the four magneto mounting screws. Turn the crankshaft so that the contact plunger holds the contact points open and then remove magneto assembly. To replace, reverse the operations and use the old gasket between the plate and crankcase, or, if damaged, a new gasket. See part 66457, 66527, or 66537 for proper thickness to get correct end play of .002" to .008" between magneto bearing and crankshaft thrust faces, as shown in plate No. 11. Use lockwashers under mounting screws.

Correct End Play
Plate No. 11

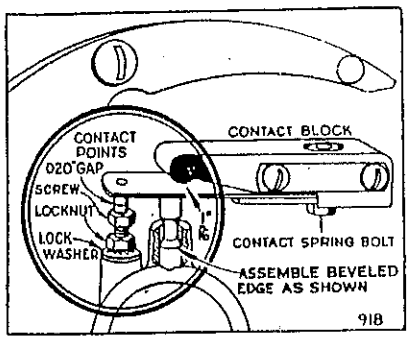


38. MAGNETO TIMING. The magneto assembly is always correctly timed with the motor when the flywheel is assembled to the tapered crankshaft with a key and securely held in place with right hand threaded nut. Do not attempt to change the timing by relocating any parts or filing crankshaft timing flat. Always use soft key part No. 66403. If steel key is used and flywheel becomes loose it will damage the keyway in the crankshaft.

39. TO ADJUST AND CLEAN CONTACT POINTS. While magneto plate is on motor crankcase, turn crankshaft by hand to see if contact points open and close properly. Points must be clean and line up squarely to make good electrical contact. Do not use a steel file on contact points — use a carborundum contact file.

40. To line up contact points loosen contact spring bolt. Move contact spring assembly to line up with contact screw point. Tighten contact spring bolt. To adjust contact spring tension, turn crankshaft until points are in open position, then place $\frac{1}{16}$" gauge between contact spring and round end of contact block, and tighten contact block screws. Turn contact screw to secure .020" gap and tighten locknut against lockwasher. See plate No. 12. If either or both points become badly pitted or burned, replace both points, part Nos. 63238 and 69754.

Magneto Contact Points
Plate No. 12

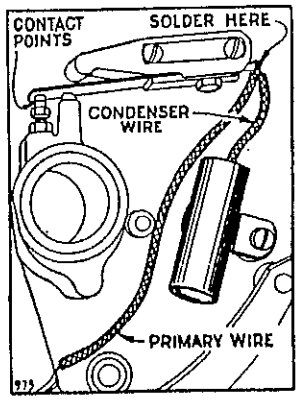


41. TO REPLACE CONDENSER. A leaky or weak condenser may cause the motor to start hard, to sputter, or misfire under load. If motor misfires after checking gasoline line, carburetor, spark plug, cable and contact points, install a new condenser. Slip the short insulator sleeve over the condenser wire. Solder the end of condenser wire and primary wire to contact spring. (See plate No. 13.)

42. If after new condenser has been installed the ignition system still does not deliver a satisfactory spark, we recommend sending the complete magneto unit including the flywheel to the nearest Briggs & Stratton Central Service Distributor listed on page 22 for proper adjustment.

43. TO REPLACE ARMATURE. Remove armature lead wire from contact spring, and high tension ignition cable from secondary terminal loop in the armature. Both wires are soldered. Save as much of the hydrolene as possible so that you can insulate high tension terminal when you assemble new armature. Do not use battery compound or tar as it will melt and run over the entire magneto assembly. Unscrew two armature mounting screws and pry armature loose with screw driver.

Condenser Installation
Plate No. 13

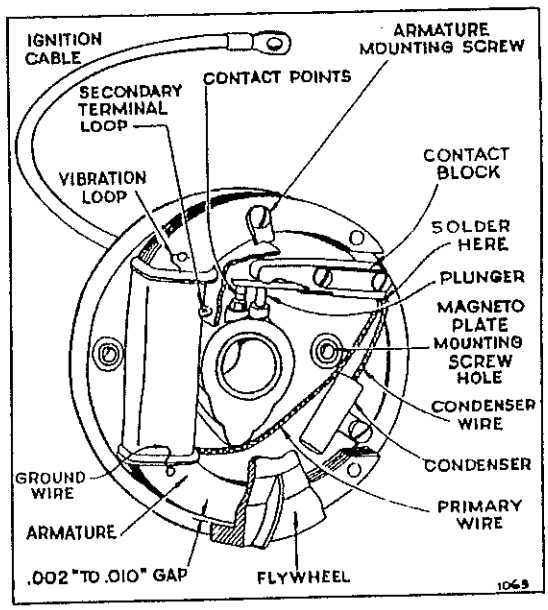


44. To install armature, place dust cover clip under upper mounting screw, tighten lower mounting screw. Then fasten ignition cable to the terminal and fill pocket, formed with flap, with hydrolene. Solder armature lead wire to contact spring. Replace dust cover and the clip holding cover in place, tighten upper armature mounting screw. See plate No. 14.

45. Air gap of .002" to .010" must be maintained between armature shoes and flywheel poles. Gap must only be sufficient to prevent rubbing but not over .010" or poor ignition will result.

46. To check armature shoes for rub, chalk edges and mount flywheel in place. Remove spark plug to release compression. Turn flywheel several revolutions by hand. Remove flywheel and examine edges of armature shoes. High spots will have the chalk rubbed off. File high spots carefully with a fine file until flywheel no longer rubs, but do not remove too much metal.

Complete Magneto Assembly
Plate No. 14

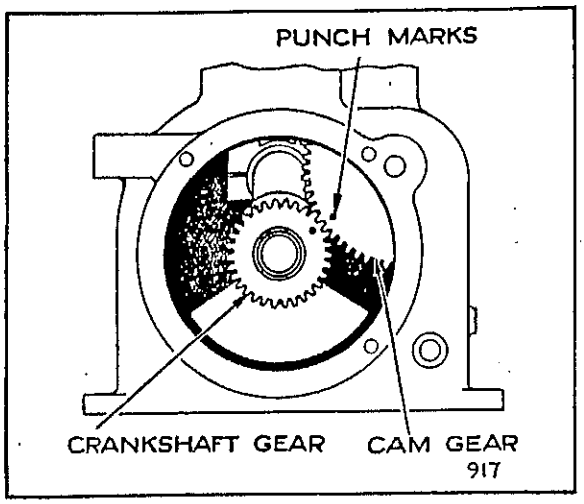


47. CYLINDER HEAD. The cylinder head is held on with six cap screws. When the cylinder head has been removed for the purpose of cleaning carbon or grinding valves, care should be used in replacing it. Use a new gasket if possible. Otherwise, clean the old one and coat both sides with cup grease. We do not recommend the use of shellac on cylinder head gaskets. Tighten each cap screw a little at a time so that the cylinder head is pulled down evenly. Screws need be only moderately tight.

48. COMPRESSION. Proper compression is obtained when valves seat properly, gaskets do not leak, and piston and rings are properly fitted. When tuning up a motor, it is always well to check compression. This is done by turning the motor over quickly by hand. If turned slowly sticky valves may not be detected. If a point of resistance is offered every other revolution, compression should be satisfactory. If motor turns over without compression resistance for a full cycle, it is possible that a worn piston or piston rings, leaky valves or leaky gaskets are present. See that spark plug has a gasket under it and is drawn up tight. Also check cylinder head gasket and tighten cylinder head bolts.

49. VALVE ADJUSTMENT. To check valve clearance remove valve cover plate. The correct clearance on the exhaust valve is .007" to .009". The clearance of the intake valve is .005" to .007". These clearances to be adjusted when motor is cold. Tappet clearance is adjusted by grinding required amount from end of valve stem. End of stem must be square with stem proper.

Valve Timing — Plate No. 15



50. To remove valves, remove cylinder head, and if not dismantled, drain oil from crankcase. Invert cylinder. Compress the spring with valve spring compressor No. 69189-T3, and with the end of a screw driver push out the split collars, and release spring compressor. Tilt cylinder back far enough to allow valve to drop, permitting its stem to clear the spring. Pry spring out with end of screw driver.

51. To replace valves and valve springs, compress spring in valve spring compressor. Turn tool to inverted position with collar retainer washer on top. Drop split collar in place in retainer washer one at a time. When first half of split collar is placed in retainer washer, push it around to the back of valve stem to allow easy placing of second half. Special valve spring compressor tool part No. 69189-T3 is available from the factory.

52. To reseat valves, grind in the same manner as automobile valves. If valves stick they may be coated with gum or carbon. To remove gum use alcohol or acetone. Clean valve stems thoroughly with wire brush or emery cloth. Also scrape all carbon from valve ports.

53. The timing of the valves is taken care of by the meshing of the cam shaft gear with the gear on the crankshaft. These gears are properly meshed when the mark on the cam shaft gear is in line with the mark on the crankshaft collar. See plate No. 15.

54. PISTON. The piston in this motor is made of a special aluminum alloy which is very light in weight. The top and second lands of the piston are smaller than the skirt to allow for greater expansion at the piston head. When piston is removed be sure to thoroughly clean carbon from head of piston and ring grooves. If piston is out of round or scored it should be replaced.

55. Earlier model motors used a piston with a slip fit pin hole marked with an "X" on boss on one side and a press fit on the other. When fitting piston in the motor assemble the side with "X" on boss toward the magneto side. Later model motors use a piston with slip fit piston pin hole on both sides. If an oversize piston is necessary, we recommend that reboring of cylinder be done by an Authorized Central Service Distributor or the factory.

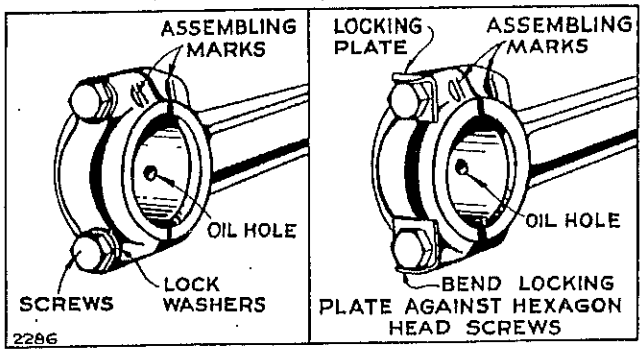
56. PISTON RINGS. The piston rings when fitted in the cylinder should have a gap of .007" to .017". The rings should be fitted in the cylinder below the piston ring travel. Before assembling new rings to piston be sure that piston ring grooves are thoroughly cleaned and rings move in grooves freely.

57. PISTON PIN. On earlier model motors the piston pin is a free fit in one side of the piston and a tight fit in the other. To remove this pin without special equipment, it is advisable to heat the piston in boiling water which causes the aluminum alloy to expand. Cut a wooden pin a little smaller than the size of the piston pin and use this and a hammer to drive the pin out. Drive the pin out through the free fit hole. This hole is toward the magneto side and is indicated with an "X" on the pin hole boss. You should, of course, drive the pin out while the piston is still hot. To easily replace the pin the piston should be heated. In later model motors the piston pin is a slip fit in both holes of the piston. To remove it from piston, remove lock rings and slip pin out of the piston.

58. CONNECTING ROD. The connecting rod is also made of a special aluminum alloy which combines strength with light weight. When assembling connecting rod to crankshaft, the oil hole in the lower bearing must be toward the magneto side. See plate No. 16. The assembly marks on cap and rod must be on the same side. The connecting rod screws of motors before serial No. 31100 are fastened with lockwashers. See plate No. 16, Fig. 1. After serial No. 31100 the screws are fastened with a screw head locking plate. See plate No. 16, Fig. 2. This screw head locking plate must fit against shoulder and be bent up against a flat side of the hexagon head screw as shown.

Connecting Rod — Plate No. 16

Fig. 1 Fig. 2

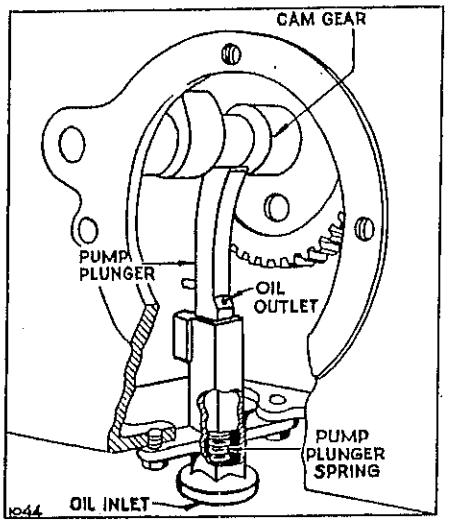


59. OIL PUMP. The oil pump is assembled to the crankcase with two bolts and lockwashers and is operated from an eccentric on the cam gear. An inoperative pump will result in insufficient lubrication which may score cylinder and piston assembly. To check oil pump, remove base and the two bolts that hold pump in place. Place the pump in a pan of oil about ½" deep. Work plunger up and down. A stream of oil will be forced out of the hole in the pump plunger, if the pump is in good operating condition. If clogged, remove plunger and plunger-spring and submerge the parts in gasoline or kerosene for three or four hours to loosen accumulated sludge or gum. If the pump is still inoperative, it should be replaced. In assembling, be sure that spring and plunger are in place as shown in plate No. 17.

60. OIL LEAKS. If oil leaks from either end of crankshaft bearings, remove base from motor. Oil return valves are screwed into crankcase and magneto back plate below main bearings. Remove oil return valve and clean or flush with gasoline and blow out any dirt lodged under the small disc. Replace if necessary. See plate No. 11.

61. CARBON. Excessive carbon is caused by improper grade of oil — too much oil usually the result of piston rings not seating properly or sticking — carburetor set too rich — or long service.

Oil Pump — Plate No. 17



An unusual amount of carbon is noticeable by motor knocking or loss of power. Occasionally remove carbon from valves, valve ports, piston head, piston rings and ring grooves, cylinder head and top of cylinder bore.

62. AIR CLEANER. The air cleaner is to protect the motor from dust and dirt. No motor can stand up under the grinding action that takes place when dust and dirt particles are drawn into the motor through the carburetor. Air Cleaners should be cleaned occasionally as follows:

OIL BATH TYPE: Wash the outside of the filter element with a rag or brush dipped in gasoline or kerosene. **Do not submerge.** Then clean bowl by submerging it in gasoline or kerosene. Fill cleaner with oil of the same viscosity as used in crankcase, up to the level marked on cleaner bowl. See instructions on air cleaner label.

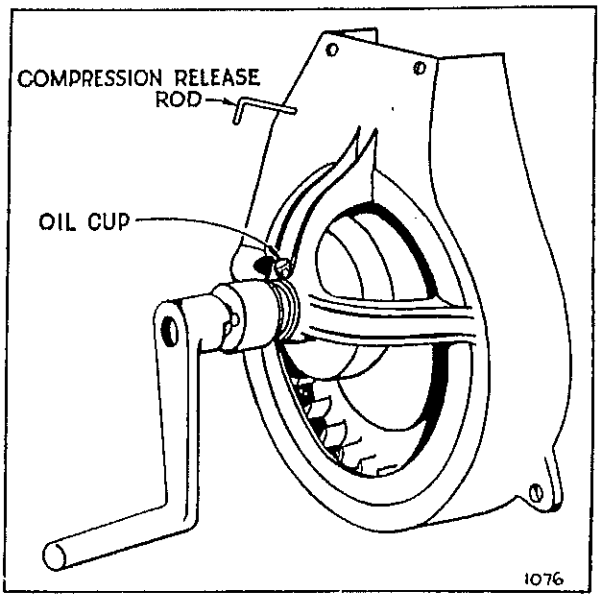
FELT TYPE: Remove the felt regularly and brush out accumulated dust and dirt. Then wash felt thoroughly with gasoline. Make sure felt is dry before replacing.

63. MUFFLER. After long periods of service it is possible that the muffler will become clogged to the point where it will affect the motor's power. To check the muffler unscrew it from the motor and run water into the open end of the muffler. If full streams of water come out of the small holes at the end of the muffler, you will know that it is not clogged up. If the water runs through very slowly, however, the muffler is probably clogged and should be replaced.

64. OVERLOAD. Always be sure that the machine the motor is operating is well lubricated and running freely. If it is not, it may cause the motor to become overloaded resulting in it overheating, losing power, or even stopping entirely.

65. CRANK STARTER ASSEMBLY. Tighten pinion gear on crankshaft securely. Oil crank gear shaft through the oil cup and grease the pinion and crank gear teeth occasionally to reduce wear. See plate No. 18.

Plate No. 18



66. PARTS. All parts should be ordered from your dealer or nearest Briggs & Stratton Service Distributor, listed on page 22.

Repair Parts

67. To assure continued satisfactory performance, do not attempt to use substitute repair parts when overhauling or repairing the Briggs & Stratton Motor. Insist that all repair parts be original Briggs & Stratton parts.

68. ALWAYS GIVE TYPE, MODEL AND SERIAL NUMBERS. Briggs & Stratton motors are identified by a type number, model letter and a serial number. This information is stamped on a metal plate attached to the blower housing.

69. When writing to the factory or to a Central Service Distributor for service information, or when ordering new parts, be sure to specify the type number, the model, and the serial number of the motor to be serviced. This will assure prompt and efficient service without unnecessary correspondence.

70. HOW TO MAKE OUT PARTS ORDERS. Print your name and address plainly and correctly. Do not abbreviate name of town or state. Specify on the order how shipment to you is to be made. This will assist in giving prompt and efficient service.

71. Give part number and name of parts wanted. (Do not use number cast on parts.) You will find the part numbers, names and prices on pages 11-18, and parts illustrations on pages 19-20.

72. After you have made out order, check back to see that you have followed all instructions and have accurately listed what you want.

73. Shipments will be made C. O. D. or send remittance with order to cover parts and add what you think will be sufficient for postage. Send postal or express money order, bank draft or certified check for this amount. Do not send currency in a letter. It is not safe.

THIS BOOK COVERS 5 DIGIT TYPE NUMBERS ONLY — 20,000 TO 95,299 (INCL.)

TO FIND THE CORRECT NUMBER OF THE PART YOU NEED

1. Make a note of your motor TYPE NUMBER (not the Serial Number) that appears on the metal nameplate attached to the motor blower housing.
2. Refer to pages illustrating parts and locate the Master Part Number by comparing your old part with the illustrations. Assemblies include all part numbers bracketed in illustrations. All parts shown in assembly brackets on which part numbers are given can be purchased separately.
3. After the Master Part Number has been identified, refer to the following Parts Lists where these Master Part Numbers are listed in numerical order.

   The Master Part is used on all types of motors except those types listed under "Note."

4. If a "Note" appears below the Master Part Number, this means that this part is made different from the Master Part for certain types and if your type is listed under "Note," order the part referred to.

   If two or more parts are bracketed (⌐——) under "Note," they are used to replace the Master Part on the type numbers shown.

5. If your Motor Type Number does not appear after any part number listed under "Note," order the Master Part Number.
6. When ordering parts — or writing for service information — always specify the MODEL LETTER — TYPE NUMBER — and SERIAL NUMBER of your motor.

Parts List

MODELS "B"—"BH"—"BHL"—"BHLP"—"BHP"—"BHR"—"BL"—"BLP" "BLR"—"BM"—"BMG"—"BP"—"BR"

MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
19001	Nozzle—Carburetor		2
	Note: **No. 19004** Nozzle—Carburetor		2
	Used on type Nos. 20790, 20802, 20828, 20834, 20955, 25256, 25281, 25292, 25378, 95095, 95118, 95120, 95133, 95203, 95285.		
	No. 99206 Nozzle—Carburetor		2
	Used on type Nos. 25567, 60881.		
19002	Valve and Seat—Fuel Inlet		4
	Note: **No. 99207** Valve and Seat—Fuel Inlet		4
	Used on type Nos. 25567, 60881.		
19011	Seal—Oil		4
19013	Cone—Roller Bearing		6
21152	Lever—Throttle		2
21198	Bracket—Fuel Tank—Replaced by No. 290419.		
22064	Guide—Front Air		6
22073	Lock—Connecting Rod Screw		1
	Note: **No. 90366** Lockwasher		1
	Used on engines before Serial No. 31100.		
22076	Fan—Flywheel		8
22085	Shield—Cylinder		6
	Note: **No. 62445** Shield—Cylinder		6
	Used on type No. 60589.		
22246	Shim—Connecting Rod		1
	Note: Used on earlier model engines. Order **No. 22246** shim only if your present rod requires same.		
22368	Washer—Control Lever		1
22372	Clamp—Control Casing		1
	Note: **No. 62786** Clamp—Control Casing		1
	Used on type No. 20469.		
22547	Screen—Fuel Filter—With rectangular hole		1
	Note: For screen with round hole order **No. 62876**		1
	Use **No. 62477** screen on earlier model engines with Tillotson Fuel Filter		1
22715	Shim—.003" thick		1
22716	Shim—.010" thick		1
22725	Washer—Control Lever		1
22731	Link—Throttle		1
	Note: **No. 68626** Link—Throttle		1
	Used on engines with Kingston or Schebler Carburetor.		
22834	Washer—Spacer		1
23050	Sleeve—Bearing		2
23051	Locknut—Bearing Sleeve		2
23108	Bushing—Throttle Shaft		1
23114	Pin—Float Hinge		1

MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
23117	Retainer—Needle Valve		1
23118	Nut—Needle Valve Packing		1
23123	Screw—Choke Lever		1
23125	Pin—Throttle Lever		1
23228	Valve—Carburetor Idle		1
23402	Locknut—Contact Screw		1
23571	Swivel—Control Lever		1
23580	Bushing—Control Lever		1
23597	Plunger—Fuel Pump		1
23638	Valve—Exhaust		6
	Note: {**No. 63735** Valve—Exhaust		6
	{**No. 90847** Nut—Hex.—¼—28		1
	Used on engines before Serial No. 1170.		
23699	Nut—Fuel Shut-off Lever		1
	Used on ⅜" Dia. shut-off lever.		
	Note: **No. 23346** Nut—Fuel Shut-off Lever		1
	Used on $\frac{3}{16}$" Dia. shut-off lever.		
23779	Pin—Throttle Link		1
26068	Spring—Throttle Adjustment		1
	Note: **No. 26105** Spring—Throttle Adjustment		1
	Used on type Nos. 25567, 60881.		
26069	Spring—Idle Valve Adjustment		1
26110	Retainer—Fuel Pump Plunger		1
26155	Spring—Choke Lever		1
26157	Spring—Idle Valve and Throttle Adjustment		1
26413	Spring—Oil Pump		1
27034	Gasket—Carburetor Body		1
27090	Gasket—Spark Plug		1
27145	Packing—Fuel Shut-off Lever		1
	Used with ⅜" Dia. shut-off lever.		
	Note: **No. 27019** Packing—Fuel Shut-off Lever		1
	Used with $\frac{3}{16}$" Dia. shut-off lever.		
29036	Clutch Assembly—Pulley (Plain Bearing)	7	
	Note: **No. 29110** Clutch Assembly—Pulley (Plain Bearing	7	
	Used on type No. 25563.		
29037	Bushing—Crankcase Cover		4
	Includes: **No. 68712** Ring—Oil Retainer.		
	Note: {**No. 29530** Bearing—Ball		10
	{**No. 29531** Seal—Oil		4
	Used on engines with ball bearing crankcase covers.		
29092	Stud—Clutch Spring		1
29109	Shaft and Gear—Starter	3	
	Note: **No. 29195** Shaft and Gear—Starter	3	
	Used on type No. 60681.		

(See Next Page)

MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
	No. 29637 Shaft and Gear—Starter	3	
	Used on type Nos. 20463, 60764.		
	No. 99042 Shaft and Gear—Starter	3	
	Used on type No. 60996.		
	No. 99427 Shaft and Gear—Starter	3	
	Uses: **No. 23156** Coupling—Crank	1	
	Used on type No. 25292.		
29131	Shield—Spark Plug		6
	Note: **No. 99003** Shield—Spark Plug		6
	Used on type No. 60881.		
29154	Pulley with Bushing—Drive Clutch	4	
	Note: **No. 29567** Pulley with Bushing — Drive Clutch	4	
	Used on type No. 25563.		
29157	Puller—Flywheel	1	4
29222	Cup—Oil, Starter Shaft		1
29269	Rod Assembly—Connecting		12
29290	Gasket—Cylinder Head		1
29332	Case Assembly—Gear	6	
	Note: **No. 61585** Case—Gear	6	
	Used on type No. 60963.		
29334	Housing Assembly—Blower	10	
	Note: **No. 29634** Housing Assembly—Blower	10	
	Used on type Nos. 20410, 20463, 25256, 60561, 60563, 60681, 60750, 60764, 60840, 60918, 60996, 60997, 95118.		
	No. 29635 Housing Assembly—Blower	10	
	Used on type Nos. 60556, 60594, 60927.		
	No. 89523 Housing Assembly—Blower	10	
	Used on type No. 20019.		
	For all other types refer to No. 29351.		
29336	Cylinder Assembly	25	
	Note: **No. 29495** Cylinder Assembly	25	
	Used on type Nos. 20463, 60561, 60563, 60614, 60681, 60750, 60764, 60996.		
	No. 29695 Cylinder Assembly	25	
	Used on type Nos. 60540, 60875.		
	No. 29986 Cylinder Assembly	25	
	Used on type No. 60881.		
	Includes: **No. 63879** Bushing—Fuel Pump Plunger		1
	No. 99170 Cylinder Assembly	25	
	Used on type No. 20406.		
	No. 99228 Cylinder Assembly	25	
	Used on type Nos. 95054, 95056.		
29338	Body Assembly—Oil Pump		7
	Note: **No. 29941** Body Assembly—Oil Pump		7
	Used on type No. 60881.		
29339	Plunger—Oil Pump		6
29343	Lever Assembly—Governor		5
	Note: **No. 29424** Lever Assembly—Governor		5
	Used on type Nos. 60556, 60594.		
	Includes **No. 62437** Bracket — Governor Lever		1
	No. 29497 Lever Assembly—Governor		5
	Used on type Nos. 20463, 60561, 60563, 60614, 60681, 60750, 60764, 60996.		
	No. 29989 Lever Assembly—Governor		5
	Used on type Nos. 20406, 60881.		
29346	Cable—Ignition		3
	Note: **No. 29552** Cable—Ignition		3
	Used on type Nos. 20052, 20406, 20424, 60568, 95294.		
	No. 89762 Cable—Ignition		3
	Used on type No. 60881.		
29347	Cover Assembly—Crankcase	4	
	Note: For Double Thrust Ball Bearing Crankcase Cover see **No. 89773.**		
	No. 29419 Cover Assembly—Crankcase	4	
	Used on type Nos. 60556, 60594, 60694.		
	No. 29438 Cover Assembly—Crankcase	4	
	Used on type Nos. 20485, 20753, 20821, 60575, 60714, 60847.		
	No. 29529 Cover Assembly—Crankcase	4	
	Used on type Nos. 20039, 20802, 20828, 20955, 20999, 25289, 25290, 60586, 60606, 60666, 60703, 60742, 95111, 95285, 95294.		
	Includes: **No. 29531** Seal—Oil		
	No. 29857 Cover Assembly—Crankcase	4	
	Used on type No. 60903.		
	Includes: **No. 29531** Seal—Oil		
	No. 29988 Cover Assembly—Crankcase	4	
	Used on type Nos. 20406, 60881.		
	Includes: **No. 29531** Seal—Oil		
29349	Carburetor Assembly (Kingston)		
	Replaced by **No. 89914.**		
	Note: **No. 29487** Used on Rope Starter Engines and Engines Without Starters equipped with Kingston Carburetors.		
	Replaced by **No. 89914.**		
29351	Housing Assembly—Blower	10	
	Note: **No. 29494** Housing Assembly—Blower	10	
	Used on type Nos. 20007, 60540, 60541, 60684, 60809, 60821, 60860.		
	No. 29893 Housing Assembly—Blower	10	
	Used on type No. 60614.		
	No. 61884 Housing—Blower	10	
	Used on type Nos. 20999, 25566, 60590, 60917, 95294.		
	No. 99076 Housing Assembly—Blower	10	
	Used on type No. 20469.		
	No. 99137 Housing Assembly—Blower	10	
	Used on type No. 20406.		
	For all other types refer to Part **No. 29334.**		
29369	Nozzle—Carburetor		1
29370	Body Assembly—Upper Carburetor		10
	Note: **No. 29381** Body Assembly—Upper Carburetor	1	
	With throttle shaft, idle valve, and venturi assembled.		
29380	Shaft Assembly—Throttle		2
29398	Tube—Control Casing		2
	Note: **No. 29404** Tube—Control Casing		2
	Used on type Nos. 60540, 60875.		
	No. 29440 Tube—Control Casing		2
	Used on type Nos. 25281, 60541, 60596, 60821, 60860, 60943, 60944.		
	No. 29492 Tube—Control Casing		2
	Used on type No. 60555.		
	No. 29493 Tube—Control Casing		2
	Used on type Nos. 60561, 60614, 60681, 60750.		
	No. 91648 Screw—Cap, Hex. Hd.—$\frac{5}{16}$—24x½"		1
	No. 90366 Lockwasher—$\frac{5}{16}$x⅛x$\frac{1}{16}$"	1	4
	Used to mount Control Tube to Blower Housing.		
	No. 29689 Tube—Control Casing		2
	Used on type Nos. 20463, 60563, 60764, 60996.		
	No. 91648 Screw—Cap, Hex. Hd.—$\frac{5}{16}$—24x½"		1
	No. 90366 Lockwasher—$\frac{5}{16}$x⅛x$\frac{1}{16}$"	1	4
	Used to mount Control Tube to Blower Housing.		
	No. 63772 Clamp		1
	Used on type No. 60931.		
29403	Plate—Pulley Clutch	3	
29428	Tappet Assembly—Exhaust Valve		4
	Note: **No. 63618** Tappet—Exhaust Valve		4
	Used before Serial No. 1170.		
29447	Cleaner Assembly—Air	3	
29464	Pipe—Fuel—11½" long		4
	For other lengths specify:		
	No. 19016 Pipe—Fuel—13⅛" long		4
	No. 29348 Pipe—Fuel—15¼" long		4
	No. 69969 Pipe—Fuel—24½" long		6
	No. 99396 Pipe—Fuel—13" long		4
	The following fuel pipes and connections used with No. 69963 Tank Assembly—Fuel (Combina-		

(See next page)

Before ordering parts, read instructions top page 11.

MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
	tion) on type Nos. 60598, 60617, 60753, 60772, 60776, 60912, 92588:		
	No. 29201 Pipe—Fuel—17" long		4
	No. 63416 Nut—Check		1
	No. 65604 Plug—Check		1
	No. 69836 Valve—Shut-off		1
	No. 69914 Pipe—Fuel—1⅛" long		4
	No. 69915 Tee		1
	No. 99008 Pipe—Fuel—3⅞" long		4
29530	Bearing—Ball		10
29531	Seal—Oil		4
29570	Pump Assembly—Oil	1	
	Note: **No. 29990** Pump Assembly—Oil. Used on type No. 60881.	1	
29571	Body Assembly—Lower Carburetor	1	8
	Note: **No. 29526** Body Assembly—Lower Carburetor. Used on Rope Starter Engines equipped with Kingston Carburetors.	1	8
29604	Pulley—"V" Belt—3" Dia.	1	
29656	Armature Assembly	3	
29679	Cover—Air Cleaner		8
29680	Filter—Air Cleaner	1	
29681	Bowl—Air Cleaner		8
29881	Condenser		2
29897	Drive Shaft and Gear	3	
29918	Bearing—Ball		4
29928	Carburetor Assembly (Schebler)		
	Note: Replaced by **No. 89914.**		
	No. 29929 Carburetor Assembly Replaced by **No. 89914.** Used on type Nos. 20790, 20802, 20828, 20834, 20955, 25256, 25281, 25292, 25378, 95095, 95118, 95120, 95133, 95203, 95285.		
	No. 99151 Carburetor Assembly. Used on type No. 20406.	3	
	No. 99645 Carburetor Assembly. Used on type Nos. 25567, 60881.	3	
29940	Pump Assembly—Fuel	2	10
	Note: **AC 1523637** See page 18 listing parts on this Fuel Pump.		
29996	Body Assembly—Upper Carburetor Replaced by **No. 89914.**		
	Note: **No. 99188** Body Assembly—Upper Carburetor Replaced by **No. 89914.** Used on type Nos. 20790, 20802, 20828, 20834, 20955, 25256, 25281, 25292, 25378, 95095, 95118, 95120, 95133, 95203, 95285.		
	No. 99204 Body Assembly—Upper Carburetor. Used on type Nos. 25567, 60881.	2	10
29997	Shaft Assembly—Throttle		6
29998	Shaft Assembly—Choke		2
29999	Float—Carburetor		2
46133	Spring—Spark Plug Shield		1
46277	Rivet—Tubular—$\frac{1}{8} \times \frac{5}{16}$"		1
53029	Connector—Fuel Filter		1
61029	Pulley—Drive	3	
	Note: **No. 21167** Pulley—Drive. Used on type No. 20469.	5	
61265	Ring—Pulley Clutch	1	
61331	Elbow—Air Cleaner		8
61361	Lever—Throttle		1
61371	Elbow—Air Cleaner		8
61583	Gear—Cam	3	
61666	Pipe—Air Cleaner	2	
61889	Head—Cylinder	4	
61890	Elbow—Intake	1	
	Note: **No. 61904** Elbow—Intake. Used on type No. 20406.	1	
61906	Ring—Piston, Compression, Top—Standard		1
61907	Ring—Piston, Compression, Center—Standard		1
61908	Ring—Piston, Oil—Standard		1
61917	Ring—Piston, Compression, Top—.010" O.S.		1
61918	Ring—Piston, Compression, Center—.010" O.S.		1
61919	Ring—Piston, Compression, Top—.020" O.S.		1
61920	Ring—Piston, Compression, Center—.020" O.S.		1
61921	Ring—Piston, Compression, Top—.030" O.S.		1
61922	Ring—Piston, Compression, Center—.030" O.S.		1
61923	Ring—Piston, Oil—.010" O.S.		1
61924	Ring—Piston, Oil—.020" O.S.		1
61925	Ring—Piston, Oil—.030" O.S.		1
62041	Shell—Air Cleaner		6
62042	Washer—Air Cleaner		1
62100	Stop—Contact Spring		1
62177	Strap—Blower Housing Mounting		1
62178	Plate—Contact Block		1
62199	Washer—Bell Crank		1
62222	Cup—Valve Spring		1
62235	Ring—Oil Retainer		1
62244	Bowl—Carburetor		6
62246	Valve—Choke		1
62252	Washer—Valve Tappet		1
62254	Cup—Starter Spring		2
62304	Switch—Stop		1
62309	Shim—.003" thick		1
62342	Cover—Pulley Clutch		6
62352	Washer—Starter Pinion		1
	Note: **No. 91521** Washer—Flywheel. Used on engines without starters.		1
62362	Lock—Starter Pinion		2
62408	Plate—Back	1	
	Note: **No. 62734** Plate—Back. Used on type No. 60881 before Serial No. 29955. After Serial No. 29955, use **No. 22065** Plate—Back	1 1	
62427	Valve—Throttle		1
62451	Strap—Air Cleaner Pipe		1
62452	Strap—Air Cleaner Pipe		1
62465	Bowl—Air Cleaner		6
62466	Clamp—Air Cleaner		1
62740	Valve—Throttle		1
	Note: **No. 62743** Valve—Throttle. Used on type Nos. 20790, 20802, 20828, 20834, 20955, 25256, 25281, 25292, 25378, 95095, 95118, 95120, 95133, 95203, 95285.		1
62741	Valve—Choke		1
	Note: **No. 62872** Valve—Choke. Used on type Nos. 25567, 60881.		1
62742	Bowl—Carburetor		4
	Note: **No. 99152** Bowl Assembly—Carburetor. Used on type No. 20406.		4
	No. 99703 Bowl Assembly—Carburetor. Used on type Nos. 25567, 60881.		4
62763	Washer—Choke Lever		1
62818	Support—Engine (Front)	2	8
	Note: **No. 61645** Spacer—Engine Mounting. Used on type No. 60555.	8	8
62819	Support—Engine (Rear)	2	8
62843	Shield—Oil Spray		1
62872	Valve—Choke (Off-Center)		1
	Note: **No. 62932** Valve—Choke (Center)		1
62883	Washer—Bronze Thrust		1
62886	Washer—Ball Bearing Retainer		1
62899	Washer—Choke Lever		1
62928	Valve—Throttle		1
62999	Bracket—Throttle, Control		6
63199	Pin—Starter Shaft		1
63238	Screw—Contact Point		1
63269	Washer—Pulley Clutch		1
63284	Pin—Clutch, Lining		1
63334	Rod—Governor Spring		1
63335	Plunger—Governor		4
63341	Bushing—Governor Crank		1
	Note: **No. 23010** Bushing—Governor Crank. Used on type No. 60881 after Serial No. 16306.		1

Before ordering parts, read instructions top page 11.

MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
63343	Shaft—Governor Gear		1
63355	Bushing—Bell Crank		1
63377	Connector—Fuel Pipe		1
63382	Cup—Roller Bearing		6
63383	Cup—Roller Bearing		6
63403	Valve—Needle		1
63404	Valve—Carburetor Idle		1
63405	Nut—Needle Valve Packing		1
63406	Pin—Throttle Lever		1
63408	Cup—Idle Valve Spring		1
63409	Valve—Fuel Inlet		1
63410	Seat—Fuel Inlet Valve		1
63411	Pin—Float Hinge		1
63426	Locknut—Control Wire Casing		4
63491	Pinion—Crank Starter		1
63520	Nut—Governor, Spring Rod Adjusting		1
63523	Bushing—Pulley Clutch		1
63524	Screw—Clutch Adjusting		1
63585	Flange—Carburetor Nozzle		2
63605	Bushing—Starter Shaft		1
63609	Rod—Compression Release		6
63614	Shaft—Cam		6
63616	Valve—Intake		6
	Note: **No. 63734** Valve—Intake; **No. 90847** Nut—Hex.—¼—28. Used before Serial No. 1170.		1
63639	Venturi—Carburetor		1
63654	Key—Pulley Clutch		1
63657	Collar—Control Wire		1
63659	Tappet—Intake Valve		4
	Note: **No. 63618** Tappet—Intake Valve. Used before Serial No. 1170.		4
63733	Stud—Air Cleaner		2
63864	Spacer—Bearing		1
63865	Pin—Bearing Retainer		1
63868	Screw—Rocker Arm		1
63882	Valve—Carburetor Idle		1
63883	Venturi—Carburetor		1
	Note: **No. 23027** Venturi—Carburetor. Used on type Nos. 20790, 20802, 20828, 20834, 20955, 25256, 25281, 25292, 25378, 95095, 95118, 95120, 95133, 95203, 95285. **No. 23040** Venturi—Carburetor. Used on type Nos. 25567, 60881.		1
63884	Pin—Throttle Lever		1
63885	Nut—Needle Valve Packing		1
63887	Pin—Float Hinge		1
63888	Screw—Plug		1
63889	Screw—Choke Lever		1
63926	Bushing—Gear Case		3
64539	Clamp—Ground		1
65078	Block—Contact Spring		1
65084	Washer—Valve Cover		4
65098	Lining—Pulley Clutch		1
65126	Spring—Throttle		1
65198	Cover—Magneto Point		1
65237	Gasket—Valve Cover		1
65414	Plunger—Magneto Point		1
	Note: **No. 66054** Plunger—Magneto Point. Used on type Nos. 20406, 60881.		1
65434	Gasket—Oil Filler Cap		8
65616	Casing—Control Wire (72" long). For all other types, if longer casing is needed, specify length in inches; if shorter casing is needed, order **No. 65616** and cut to required length.		
65647	Gasket—Carburetor Mounting		1
65725	Insulator—Armature Lead		1
65884	Gasket—Inlet Valve		1
65894	Gasket—Carburetor Bowl		1
65904	Gasket—Needle Valve		1
65906	Spring—Intake and Exhaust Valve		2
65914	Gasket—Carburetor Nozzle		1
65924	Gasket—Carburetor Bowl		1
65932	Plug—Cam Shaft		1
65934	Gasket—Carburetor Bowl		1
65942	Cover—Valve		6
	Note: **No. 62846** Cover—Valve. Used on type Nos. 20406, 60881.		6
66403	Key—Flywheel		1
66457	Gasket—Magneto Plate—.015" thick		2
66527	Gasket—Magneto Plate—.005" thick		2
66537	Gasket—Magneto Plate—.009" thick		2
66637	Gasket—Gear Case Cover		1
66647	Packing—Needle Valve		1
66657	Gasket—Carburetor Bowl		1
66667	Gasket—Carburetor Nozzle		1
66677	Gasket—Carburetor Body		1
66687	Gasket—Inlet Valve Seat		1
67023	Pin—Bushing Retainer		1
67072	Washer—Control Wire Casing		2
67127	Gasket—Engine Base		2
67137	Gasket—Crankcase Cover		1
67197	Gasket—Carburetor Nozzle		1
67216	Spring—Pulley Clutch		1
67247	Gasket—Air Cleaner Mounting		1
67253	Spacer—Cylinder Head		2
67266	Wire—Control (79" long). For all other types, if longer wire is needed, specify length in inches; if shorter wire is needed, order **No. 67266** and cut to required length.		
67316	Spring—Governor		1
	Note: **No. 26086** Spring—Governor. Used on type No. 20469.		1
67546	Spring—Governor Control		1
67616	Spring—Idle Valve		1
67666	Spring—Compression Release		1
67897	Gasket—Air Cleaner Cover		1
67987	Gasket—Fuel Pump Mounting		1
68156	Spring—Crank Starter		1
68182	Clip—Throttle Spring		1
68217	Packing—Needle Valve		1
68237	Gasket—Gear Case Cover		1
68283	Collar—Valve Spring		1
68293	Retainer—Valve Spring Collar		1
68346	Spring—Choke Lever		1
	Note: **No. 22358** Washer; **No. 67626** Spring; **No. 90877** Screw—Mach. Rd. Hd.—8—32x⅝"—Brass. Used on Rope Starter Engines equipped with Kingston Carburetors.		1
68386	Crankshaft	9	
	Note: **No. 26008** Crankshaft. Used on type Nos. 20828, 60703, 60742.	9	
	No. 26013 Crankshaft. Used on type Nos. 20022, 20410, 25256, 25563, 60578, 60736, 95095, 95118.	9	
	No. 26039 Crankshaft. Used on type No. 60899.	9	
	No. 26054 Crankshaft. Used on type No. 60963.	9	
	No. 26077 Crankshaft. Used on type Nos. 20399, 20463, 25286, 25287, 60996, 95114.	9	
	No. 26104 Crankshaft. Used on type No. 20406.	9	
	No. 26130 Crankshaft. Used on type Nos. 20999, 95294.	9	
	No. 26132 Crankshaft. Used on type Nos. 95054, 95056.	9	
	No. 26136 Crankshaft. Used on type No. 95090.	9	
	No. 26153 Crankshaft. Used on type No. 95285.	9	
	No. 68586 Crankshaft. Used on type Nos. 20002, 20032, 20481, 20490, 25285, 25292, 60503, 60539, 60541,	9	

(See next page)

Before ordering parts, read instructions top page 11.

MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
	60546, 60547, 60563, 60590, 60702, 60733, 60764, 60809, 60821, 60860, 60917, 60931, 60943, 60944.		
	No. 68726 Crankshaft..... Used on type No. 60575.	9	
	No. 68796 Crankshaft..... Used on type Nos. 20955, 25289, 25290, 60586, 60666, 60903, 95111.	9	
	No. 68956 Crankshaft..... Used on type Nos. 20039, 20802, 60606.	9	
	No. 99146 Crankshaft..... Used on type No. 60881.	9	
68477	Gasket—Fuel Filter		1
	Note: **No. 67267** Gasket—Fuel Filter..... Used on earlier model engines with Tillotson Fuel Filter.		1
68487	Bowl—Fuel Filter		2
	Note: **No. 67257** Bowl—Fuel Filter..... Used on earlier model engines with Tillotson Fuel Filter.		3
68546	Lock—Piston Pin		1
68652	Wrench—Spark Plug		6
68667	Gasket—Fuel Inlet Seat and Nozzle.....		1
68677	Packing—Needle Valve		1
68712	Ring—Oil Retainer		1
68876	Clip—Magneto Point Cover.....		1
69134	Muffler	3	
69298	Strap—Fuel Tank		6
69446	Stud and Wing Nut.....		1
69447	Filter—Air Cleaner		8
69689	Cap—Oil Filler		4
69691	Clutch Assembly—Pulley (Ball Bearing).....	7	
69696	Pulley with Bearing—Clutch.....	4	
69698	Plate and Ring Assembly—Clutch.....	4	
69739	Bearing—Ball	1	
69754	Point and Spring—Contact.....		1
69780	Block Assembly—Contact		8
69801	Plate—Pulley Clutch	3	
69836	Valve—Fuel Shut-off		1
69839	Gear Assembly—Governor	1	
69851	Cleaner Assembly—Air	2	
69856	Lever—Governor Control		2
69858	Seal—Oil		4
69859	Cover Assembly—Gear Case.....		4
69866	Cone—Roller Bearing		8
69867	Cone—Roller Bearing		8
69905	Screen—Carburetor		1
69906	Float—Carburetor		2
69908	Shaft Assembly—Choke		1
	Note: **No. 29527** Shaft Assembly—Choke..... Used on Rope Starter Engines equipped with Kingston Carburetors.		1
69911	Bushing—Magneto Plate ..... Includes: **No. 62235** Ring—Oil Retainer.		4
69926	Crank—Governor		2
	Note: **No. 99167** Crank—Governor..... Used on type No. 20406, and type No. 60881 after Serial No. 16306.		2
69932	Rope—Starter		6
69947	Cleaner Assembly—Air	2	
69948	Body—Air Cleaner	1	8
69950	Release Assembly—Compression		8
	Note: **No. 29532** Release Assembly—Compression Used on type No. 60614.		8
69951	Cover Assembly—Valve		6
69952	Shaft Assembly—Compression Release.....		1
	Note: **No. 29533** Shaft Assembly — Compression Release ..... Used on type No. 60614.		1
69961	Cap—Fuel Tank		4
89250	Breather Assembly		8
	Note: **No. 89220** Breather Assembly..... Used on type Nos. 60590, 60917.		8
	No. 99168 Breather Assembly..... Used on type No. 60881.		8
89307	Valve—Oil Return		1
89531	Shaft and Lever—Choke (Off-Center Choke).....		1
	Note: **No. 99205** Shaft and Lever—Choke..... Used on type Nos. 25567, 60881.		2
	No. 99347 Shaft and Lever—Choke (Center Choke)		1
89773	Cover Assembly—Crankcase	4	
89914	Carburetor Assembly (Off-Center Choke).....	2	8
89915	Body Assembly — Lower Carburetor (Off-Center Choke)	1	
90010	Screw—Machine, Rd. Hd.—10—32x$\frac{5}{16}$".....		1
90028	Screw—Machine, Rd. Hd.—4—36x$\frac{3}{16}$".....		1
	Note: **No. 90004** Screw—Machine, Rd. Hd. 4—36x¼"		1
	No. 90369 Lockwasher—No. 4x$\frac{3}{4}$x$\frac{3}{32}$"..... Used with Throttle Valve on type Nos. 20790, 20802, 20828, 20834, 20955, 25256, 25281, 25292, 25378, 25567, 60881, 95095, 95118, 95120, 95133, 95203, 95285.		1
	No. 91841 Screw—Machine, Fill. Hd. 6—32x¼"		1
	No. 90362 Lockwasher—No. 6x$\frac{3}{4}$x$\frac{3}{32}$"..... Used with Choke Valve on type Nos. 25567, 60881.		1
90029	Screw—Machine, Rd. Hd.—4—36x¼".....		1
90083	Screw—Machine, Rd. Hd.—10—32x⅝".....		1
90100	Screw—Machine, Rd. Hd.—6—32x$\frac{5}{16}$".....		1
90217	Screw—Machine, Fill. Hd.—10—32x½".....		1
90230	Screw—Machine, Fr. Oval Hd.—4—36x⅜".....		1
	Note: **No. 23041** Screw—Venturi Retainer..... Used on type Nos. 25567, 60881.		1
	No. 91778 Screw—Machine, Fr. Oval Hd. —4—36x$\frac{5}{16}$" ..... Used on type Nos. 20790, 20802, 20828, 20834, 20955, 25256, 25281, 25292, 25378, 95095, 95118, 95120, 95133, 95203, 95285.		1
90355	Nut—Hex.—10—32		1
90366	Lockwasher—$\frac{5}{16}$x⅛x$\frac{1}{16}$"		1
90367	Lockwasher—No. 8x$\frac{3}{4}$x$\frac{3}{32}$"		1
90369	Lockwasher—No. 4x$\frac{3}{4}$x$\frac{3}{32}$"		1
90576	Nut—Hex.—8—32		1
90683	Lockwasher—½x$\frac{1}{2}$x⅛"		1
90689	Screw—Cap, Hex. Hd.—⅜—24x1¾".....		1
90700	Screw—Cap, Hex. Hd.—¼—20x¾".....		1
	Note: **No. 91146** Screw—Cap, Hex. Hd. ¼—20x⅞" ..... Used on type Nos. 60556, 60594, 95054, 95056.		1
90746	Screw—Machine, Fill. Hd.—10—32x⅝".....		1
90832	Lockwasher—¼x$\frac{3}{32}$x$\frac{1}{64}$"		1
90847	Nut—Hex.—¼—28		1
90878	Plug—Pipe—¼"		1
	Note: **No. 91474** Plug—Pipe—¼"..... Used on type No. 25292.		1
	No. 91488 Plug—Pipe—⅛"..... Used on type Nos. 95054, 95056.		1
90887	Screw—Cap, Hex. Hd.—⅜—16x1¼".....		1
	Note: {**No. 23136** Stud..... {**No. 92292** Nut—Hex.—⅜—24..... Used on engines with Aluminum Bases.		1
	No. 91652 Screw—Cap, Flat Hd. ⅜—16x1¼" ..... Used on carburetor side to mount cylinder to base on type Nos. 60540, 60875.		1
90891	Screw—Cap, Hex. Hd.—¼—20x½".....		1
90895	Screw—Cap, Hex. Hd.—⅜—16x1".....		1
90916	Screw—Machine, Rd. Hd.—¼—20x½".....		1
90950	Screw—Cap, Hex. Hd.—$\frac{5}{16}$—24x¾".....		1
90969	Lockwasher—⅝x$\frac{13}{14}$x$\frac{5}{32}$"		1
91028	Screw—Cap, Hex. Hd.—⅜—24x¾".....		1
91122	Lockwasher—Shakeproof No. 1206.....		1
91162	Screw—Connecting Rod		1
91195	Screw—Machine, Rd. Hd.—¼—20x⅜".....		1
91203	Screw—Cylinder Head		1
91208	Nut—Hex.—$\frac{5}{16}$—24		1

Before ordering parts, read instructions top page 11.

THIS BOOK COVERS 5 DIGIT TYPE NUMBERS ONLY — 20,000 TO 95,299 (INCL.)

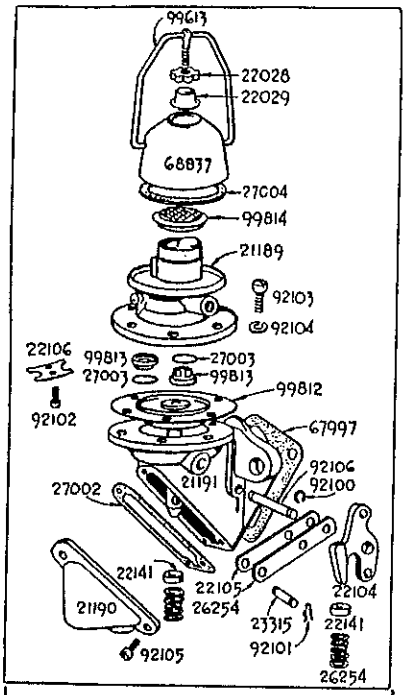
MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
91237	Lockwasher—¼x$\frac{5}{16}$x$\frac{3}{4}$"		1
91247	See No. 91319.		
91255	Screw—Machine, Fill. Hd.—¼—20x½"		1
91256	Screw—Machine, Fill. Hd.—¼—20x1"		1
91310	Locknut—Muffler Elbow		1
91319	Screw—Cap, Hex. Hd.—½—20x1"		1
	Used with Steel Tank Bracket.		
	Note: **No. 91247** Screw—Cap, Hex. Hd.—½—20x2"		1
	Used with Malleable Iron Bracket.		
91324	Washer—¼" Standard		1
91359	Screw—Machine, Fill. Hd.—10—32x¾"		1
91366	Screw—Machine, Rd. Hd.—10—32x⅞"		1
91371	Nipple—Oil Filler		4
	Note: **No. 91780** Nipple—Oil Filler		1
	Used on type No. 60881.		
91379	Screw—Machine, Rd. Hd.—6—32x½"		1
91385	Screw—Magneto Mounting		1
91386	Screw—Valve Cover		1
91387	Screw—Cylinder Head		1
91388	Lockwasher—$\frac{5}{16}$x$\frac{5}{8}$x$\frac{5}{64}$"		1
91398	Screw—Cap, Hex. Hd.—¼—20x½"		1
	Note: **No. 92412** Screw—Cap, Hex. Hd. ¼—20x¾"		1
	Used with cast iron governor lever.		
	No. 91146 Screw—Cap, Hex. Hd. ¼—20x⅞"		1
	Used on cast iron governor lever on type Nos. 60556, 60594, 60927.		
	No. 90528 Screw—Cap, Hex. Hd. ¼—28x¾"		1
	No. 90847 Nut—Hex.—¼—28		1
	Used on stamped steel governor lever on type Nos. 60556, 60594, 60927.		
91415	Elbow—1"—45° Mall. Iron		12
91416	Nipple—Exhaust		2
	Note: **No. 91649** Nipple—Exhaust		2
	Used on type No. 20933.		
91439	Screw—Cap, Hex. Hd.—¼—20x⅜"		1
91442	Screw—Valve Cover		1
91443	Screw—Machine, Rd. Hd.—4—36x¼"		1
91444	Screw—Machine, Oval Hd.—6—32x$\frac{3}{16}$"		1
91456	Screw—Cap, Hex. Hd.—¼—20x1"		1
91458	Screw—Parker Kalon—No. 7x2½"		1
91466	Lockwasher—⅜x$\frac{5}{32}$x$\frac{1}{16}$"		1
91471	Screw—Cap., Hex. Hd.—⅜—24x⅞"		1
	Note: **No. 91028** Screw—Cap, Hex. Hd. ⅜—24x¾"		1
	Used on earlier model engines.		
	No. 90686 Screw—Cap, Hex. Hd.—⅜—24x1"		1
	Used on type No. 60881.		
91478	Key—Pulley Clutch		1
91487	Plug—Pipe—¾" Sq. Hd.		1
	Note: **No. 91750** Plug—Pipe (¾" Countersunk). Used on type Nos. 20463, 60860.		1
91540	Key		1
	Note: **No. 63055** Key		1
	Used on type No. 60772.		
91566	Screw—Machine, Rd. Hd.—$\frac{5}{16}$—18x⅜"		1
	Used on Rope Starter Engines and on Engines Without Starters.		
91575	Screw—Cap, Hex. Hd.—$\frac{5}{16}$—18x¾"		1
91590	Locknut—Intake Elbow		1
91604	Screw—Machine, Rd. Hd.—6—32x⅛"		1
91635	Connector—Fuel Filter		1
91648	Screw—Cap, Hex. Hd.—$\frac{5}{16}$—24x½"		1
91674	Nut—Wing		1
91698	Screw—Machine, Rd. Hd.—¼—20x⅝"		1
91711	Screw—Fuel Pump Mounting		1
91777	Screw—Machine, Fill. Hd.—8—32x¾"		1
	Note: **No. 90072** Screw—Machine, Rd. Hd. 8—32x⅝"		1
	Used on type Nos. 25567, 60881.		
91814	Screw—Cap, Hex. Hd.—⅜—16x2"		1
	Note: **No. 90887** Screw—Cap, Hex. Hd. ⅜—16x1¼"		1
	Used on type No. 60555.		
91865	Lockwasher—$\frac{5}{16}$x$\frac{3}{8}$x$\frac{1}{16}$"		1
91920	Screw—Machine, Fill. Hd.—8—32x⅝"		1
91984	Pin—Cotter—$\frac{1}{16}$x½" long		1
92129	Nut—Hex.—¼—28		1
92141	Screw—Cap, Hex. Hd.—¼—28x½"		1
92179	Screw—Machine, Fill. Hd.—10—32x¼"		1
92182	Screw—Machine, Rd. Hd.—¼—20x1"		1
92236	Screw—Gear Case Cover		1
92260	Screw—Set, Sq. Hd.—$\frac{5}{16}$—18x⅜"		1
	Note: **No. 91363** Screw—Set, Sq. Hd. ⅜—16x⅝"		1
	Used on type Nos. 20469, 60772.		
92268	Lockwasher—⅜x⅛x$\frac{5}{32}$"		1
92272	Screw—Cap, Hex. Hd.—$\frac{5}{16}$—18x¾"		1
92284	Nut—Crankshaft		1
92285	Pin—Cotter—No. 18x¼" long		1
92287	Screw—Machine, Rd. Hd.—10—32x¼"		1
92288	Pin—Cotter—$\frac{1}{16}$x½" long		1
92290	Lockwasher—No. 10x$\frac{1}{16}$x$\frac{3}{64}$"		1
92293	Screw—Machine, Fill. Hd.—10—32x⅜"		1
	Note: **No. 91494** Screw		1
	Used on type No. 20469.		
92305	Washer—Governor Retainer, Control Lever		1
92306	Screw—Cap, Hex. Hd.—¼—28x⅝"		1
	Note: **No. 90802** Screw—Hex. Hd.—¼—20x1½"		1
	No. 92278 Nut—Hex.—¼—20		1
	Used on type Nos. 60540, 60541, 60821, 60875.		
92322	Screw—Set (Pulley Clutch)		1
92413	Pin—Cotter—$\frac{1}{16}$x⅜" long		1
	Note: **No. 91431** Pin—Cotter—¼" long		1
	Used on type Nos. 20463, 60561.		
	No. 92283 Pin—Cotter—$\frac{5}{32}$x⅝" long		1
	Used on type Nos. 20406, 60881.		
92424	Screw—Machine, Fill. Hd.—¼—20x1½"		1
92425	Nut—Sq.—¼—20		1
99027	Crank—Starter	2	
	Note: **No. 29519** Crank—Starter	2	
	Used on type Nos. 60750, 60996.		
	No. 61519 Crank—Starter	2	
	Used on type No. 60681.		
	No. 99024 Crank—Starter	2	
	Used on type No. 20835.		
	No. 99032 Crank—Starter	2	
	Used on type Nos. 20410, 20463, 20802, 20955, 25256, 25290, 60561, 60563, 60575, 60586, 60606, 60666, 60703, 60742, 60764, 60903.		
99031	Idling Device		4
99142	Valve Assembly—Needle		1
99147	Arm—Rocker, Fuel Pump		6
99153	Piston Assembly—Standard		12
99199	Piston Assembly—.010" O.S.		12
99200	Piston Assembly—.020" O.S.		12
99201	Piston Assembly—.030" O.S.		12
99225	Seal—Oil		4
99230	Arrester—Flame	1	
99333	Float—Carburetor		2
99341	Body—Upper Carburetor	1	
99342	Body Assembly—Upper Carburetor	1	
99345	Nozzle—Carburetor		2
99346	Valve—Needle		1
99524	Shaft Assembly—Throttle		1
99592	Valve—Needle		1
99665	Yoke Assembly—Fuel Filter		2
	Note: **No. 89743** Yoke Assembly—Fuel Filter. Used on earlier model engines equipped with Tillotson Fuel Filter.		3
99780	Valve and Seat—Fuel Inlet		1

Before ordering parts, read instructions top page 11.

MASTER PART NUMBER	NAME	SHIPPING WEIGHT Lbs.	Oz.
99909	Cover Assembly—Fuel Filter		2
	Note: **No. 61685** Cover—Fuel Filter		2
	Used on earlier model engines equipped with Tillotson Fuel Filter.		
99910	Filter Assembly—Fuel		10
99921	Tank Assembly—Fuel	3	
	Note: **No. 29575** Tank Assembly—Fuel	4	
	Used on type Nos. 20485, 20753, 20821, 60684, 60693, 60948.		
	No. 29678 Tank Assembly—Fuel	4	
	Used on type Nos. 60809, 60875.		
	No. 29888 Tank Assembly—Fuel	4	
	Used on type No. 60931.		
	No. 69963 Tank Assembly—Fuel (Combination)	4	
	Used on type Nos. 60598, 60617, 60753, 60772.		
290059	Lever—Fuel Shut-off—⅜" Dia. "T" shaped		2
	Note: **No. 23347** Lever—Fuel Shut-off—$\frac{3}{16}$" Dia. "L" shaped		2
	No. 29536 Lever—Fuel Shut-off		4
	Used on earlier model engines equipped with Tillotson Fuel Filter.		
290412	Flywheel Assembly	13	
	Replaces and is interchangeable with No. 61451 Flywheel.		
290419	Bracket—Fuel Tank (Steel)	1	10
	Replaces and is interchangeable with No. 21198 Tank Bracket (Malleable Iron).		
	No. 61380 Bracket—Fuel Tank	2	8
	Used on type Nos. 60540, 60541.		
290553	Drive Shaft and Gear Case Cover Assembly	9	
290563	Case Assembly—Gear	6	10
290564	Cover Assembly—Gear Case	6	
290568	Lever Assembly—Control (Stamped Steel)		4
	Note: **No. 29035** Lever Assembly—Control (Cast Iron)	1	
	Used on type Nos. 60540, 60541, 60821, 60875.		
	No. 89583 Lever Assembly—Control (Cast Iron)	1	
	Used on type No. 60611.		
	Includes: **No. 92282** Screw—Machine, Rd. Hd.—10—24x½"		1
	No. 92289 Screw—Machine, Rd. Hd.—10—24x⅞" (2)		1
	To mount control lever on type No. 60555, use:		
	No. 92290 Lockwasher—No. 10x$\frac{1}{16}$x$\frac{5}{64}$" (2)		1
	No. 67072 Washer (4)		1
	No. 90013 Screw—Machine, Rd. Hd. 10—32x1⅛" (2)		1
	No. 90290 Nut—Hex.—10—32 (2)		1
	To mount control lever on type No. 20469, use:		
	No. 91560 Bolt—Stove, Rd. Hd.—$\frac{3}{16}$x1¾" (with nut) (2)		1
	No. 92290 Lockwasher—No. 10x$\frac{1}{16}$x$\frac{5}{64}$" (2)		1
290584	Base—Control Lever (Stamped Steel)		2
	Note: **No. 21441** Base—Control Lever (Cast Iron)		6
	Used on type No. 60611.		
	No. 65631 Base—Control Lever (Cast Iron)		6
	Used on type Nos. 60540, 60541, 60821, 60875.		
290605	Pulley Assembly—Rope Starter	1	4
290642	Lever—Control (Stamped Steel)		2
290654	Screw and Nut Assembly—Contact Block		1
290748	Magneto Assembly	6	
	Note: **No. 290749** Magneto Assembly (Shielded Ignition Cable)	6	
	Used on type Nos. 20052, 20424, 60568.		
	No. 290750 Magneto Assembly	6	
	Used on type Nos. 20022, 20753, 20811, 20821, 20849, 20999, 25318, 25567, 60536, 60558, 60589, 60617, 60684, 60736, 60787, 60788, 60904, 60912, 60948, 95090, 95283, 95285, 95288.		
	Includes: **No. 66165** Wire—Ground		2
	No. 290752 Magneto Assembly	6	
	(Ground Wire with Terminal, Special Magneto Plate and Plunger, and Shielded Ignition Cable.)		
	Used on type No. 60881, after Serial No. 16306.		
	Includes: **No. 66175** Wire—Ground		1
	No. 65995 Terminal		1
	No. 290852 Magneto Assembly	6	
	(Shielded Ignition Cable)		
	Used on type No. 95294.		
	Includes: **No. 66165** Wire—Ground		2
	No. 290853 Magneto Assembly	6	
	(Special Magneto Plate and Plunger, and Shielded Cable)		
	Used on type No. 20406.		
	No. 290898 Magneto Assembly	6	
	Used on type Nos. 20462, 60899.		
	Includes: **No. 65785** Wire — Ground (Shielded)		2
	No. 290900 Magneto Assembly	6	
	(Shielded Ignition Cable)		
	Used on type No. 60881 before Serial No. 16306.		
	Includes: **No. 66165** Wire—Ground		2
290858	Screen Assembly—Blower Housing		6
	Note: **No. 290860** Screen Assembly — Blower Housing		6
	Used on engines without starter.		
290859	Screen Assembly—Blower Housing		6
	Note: **No. 290860** Screen Assembly — Blower Housing		6
	Used on engines without starter.		
290918	Lever Assembly—Control		4
290984	Plug—Spark (with gasket)		8
	Note: **No. 99496** Plug—Spark (with gasket)		
	Used on type No. 25565.		
290987	Pin Assembly—Piston—Standard		4
290988	Pin Assembly—Piston—.005" O.S.		4
291053	Base Assembly—Engine	10	
	Note: **No. 61655** Base—Engine	10	
	Used on type Nos. 60561, 60681, 60750.		
	No. 61790 Base—Engine	10	
	Used on type No. 60881.		
	No. 291054 Base Assembly—Engine	10	
	Used on type Nos. 95054, 95056.		

Before ordering parts, read instructions top page 11.

FUEL PUMP PARTS



29940 Fuel Pump

B & S NO.	*AC NO.	NAME
21189	1523084	Cover—Top
21190	855228	Cover—Bottom
21191	1523357	Body—Fuel Pump
22028	855763	Nut—Thumb
22029	854005	Seat—Bowl
22104	1521745	Arm—Rocker
22105	855374	Link—Rocker Arm
22106	1521956	Retainer—Valve Cage
22141	1522196	Cap—Spring
23315	855016	Pin—Rocker Arm Link
26254	1522195	Spring—Rocker Arm and Diaphragm
27002	855229	Gasket—Bottom Cover
27003	1521953	Gasket—Valve Cage
27004	1523096	Gasket—Fuel Pump Bowl
29940	1523637	Pump Assembly—Fuel
67997	855580	Gasket—Fuel Pump Mounting
68837	1523094	Bowl—Fuel Pump
92100	848429	Washer—Rocker Arm Pin
92101	855017	Clip—Link Pin
92102	132696	Screw—Valve Cage Retainer
92103	855493	Screw—Top Cover
92104	855064	Lockwasher—Top Cover
92105	132108	Screw—Bottom Cover
92106	1521289	Pin—Rocker Arm
99813	1523231	Screw Assembly—Ball
99812	1522179	Diaphragm Assembly
99813	1523106	Valve and Cage Assembly—Fuel Pump
99814	1523099	Screen Assembly—Fuel Pump

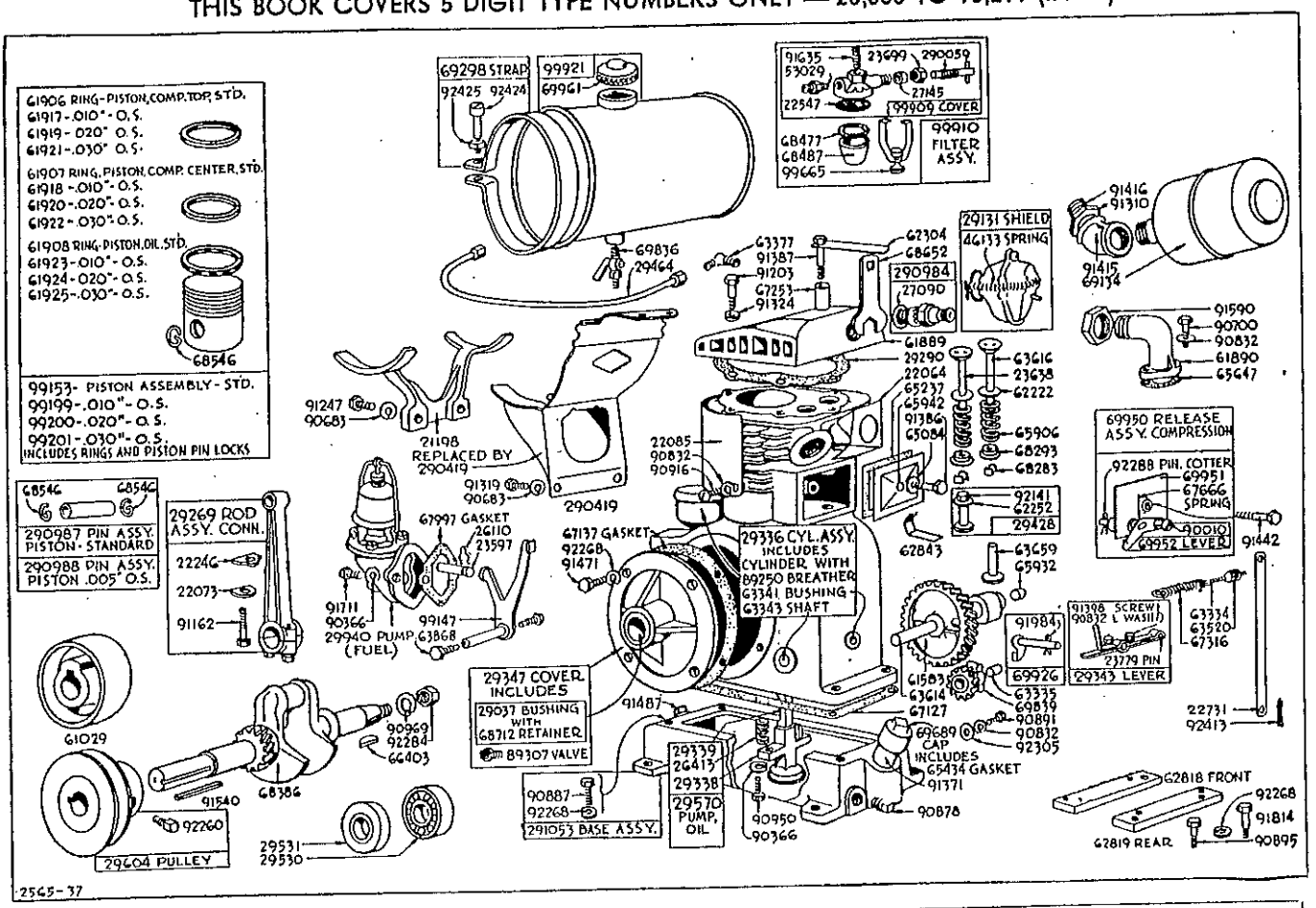
*Manufactured by AC Spark Plug Co., Flint, Mich.

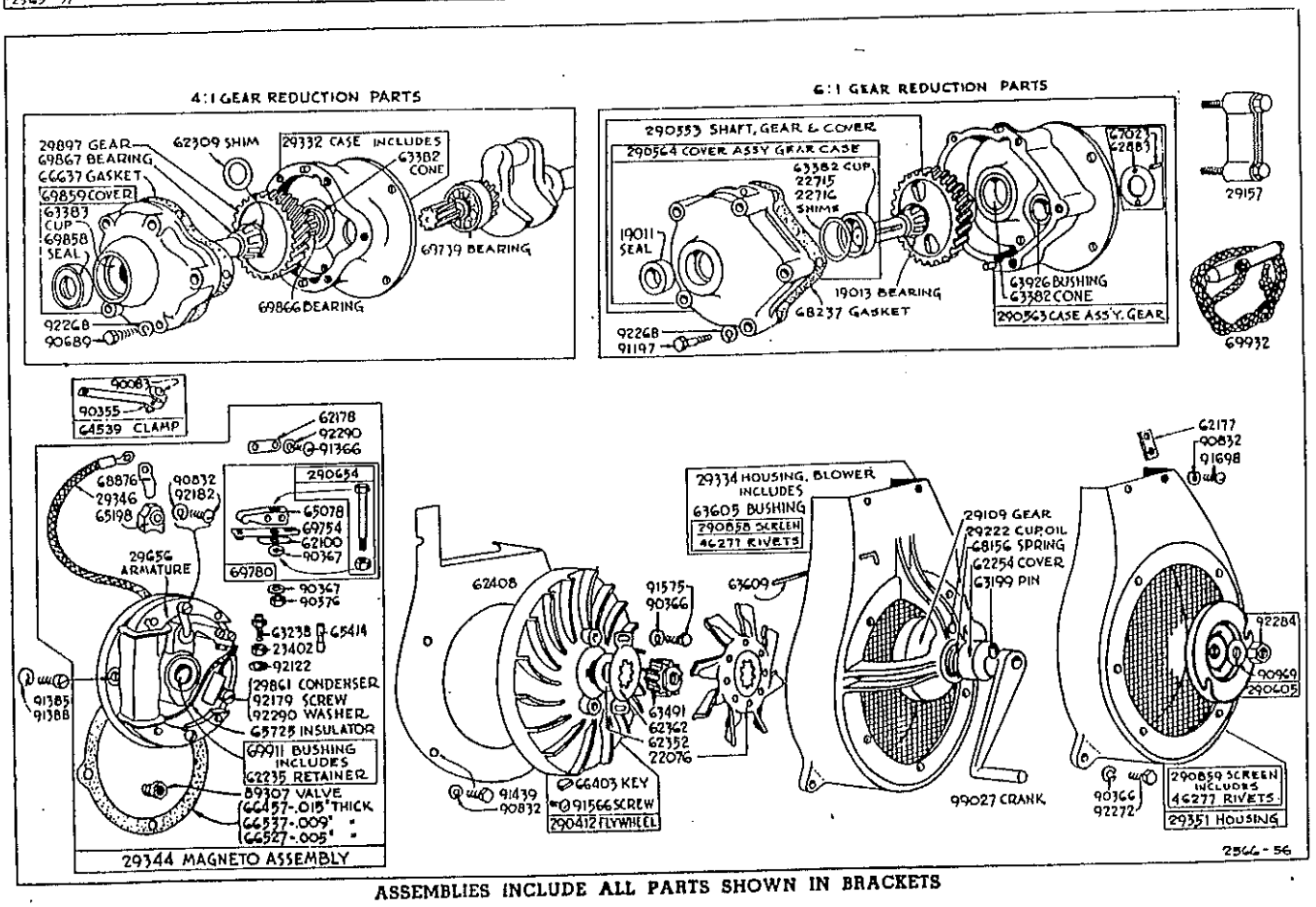
Before ordering parts, read instructions top page 11.

THE GUARANTEE — For Ninety Days from purchase date, Briggs & Stratton Corporation will replace for the original purchaser, FREE OF CHARGE, any part or parts found, upon examination at our factory at Milwaukee, Wisconsin, or at any Authorized Central Service Distributor's place of business, to be defective under normal use and service, on account of defects in material or workmanship.

All transportation charges on part or parts submitted for replacement under the guarantee must be borne by purchaser.

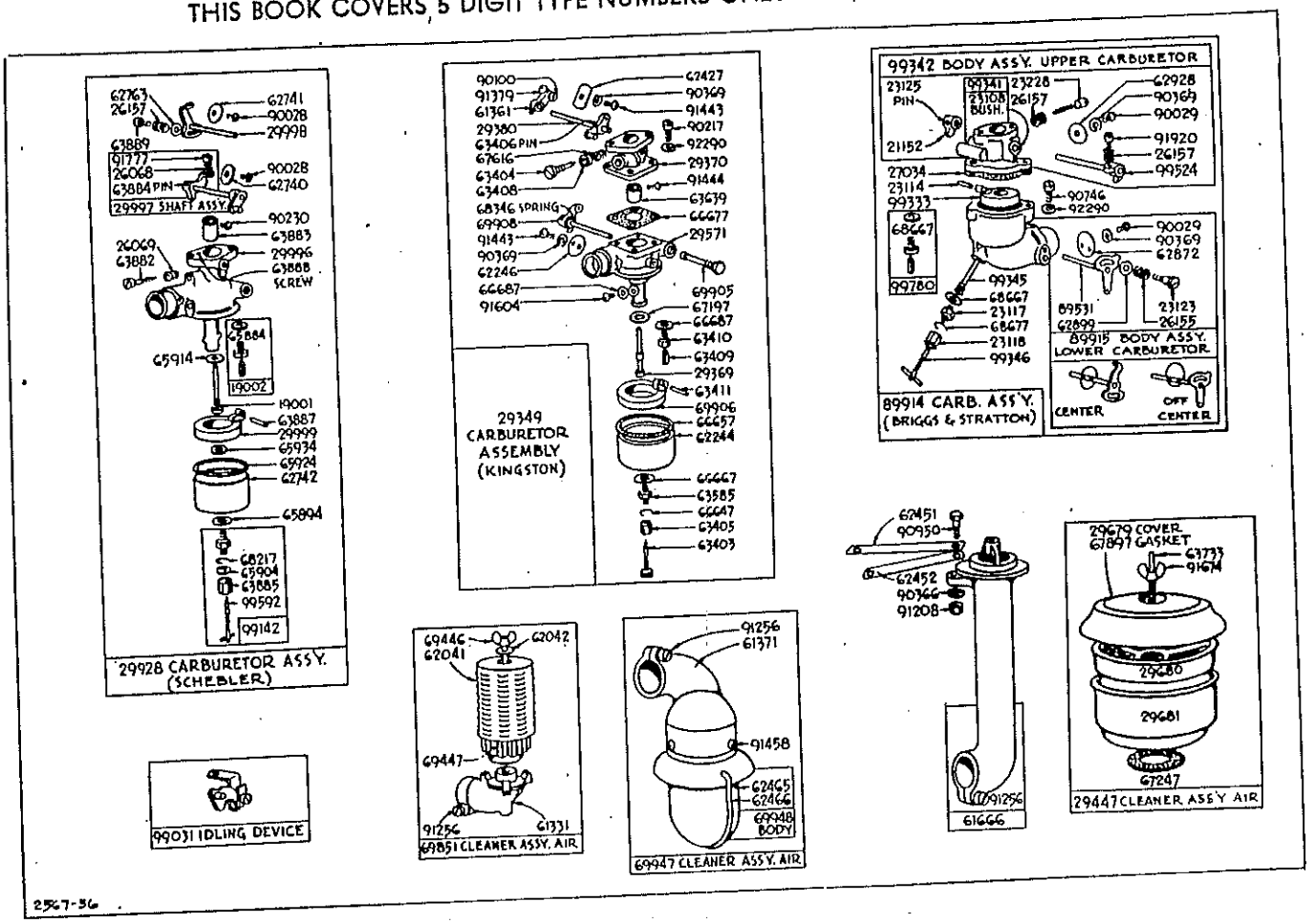
WHAT THIS GUARANTEE DOES NOT INCLUDE — This guarantee does not cover the free replacement of parts inoperative because of wear occasioned by use. It does not cover the labor cost of replacing parts, neither is it effective if the motor has been the subject of misuse, negligence, or accident, nor if it has been repaired or altered outside of our Milwaukee Factory or any Authorized Central Service Distributor in any way which, in our judgment, affects its condition or operation.

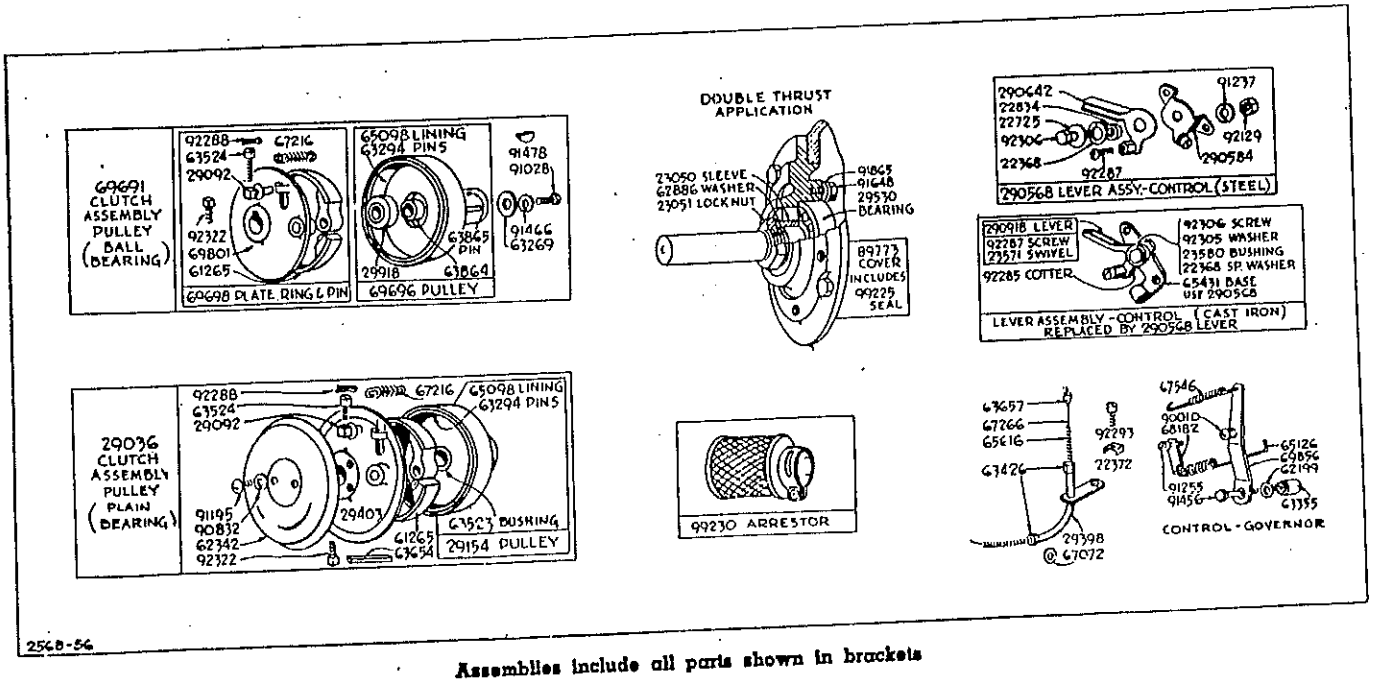




ASSEMBLIES INCLUDE ALL PARTS SHOWN IN BRACKETS

THIS BOOK COVERS 5 DIGIT TYPE NUMBERS ONLY — 20,000 TO 95,299 (INCL.)





Assemblies include all parts shown in brackets