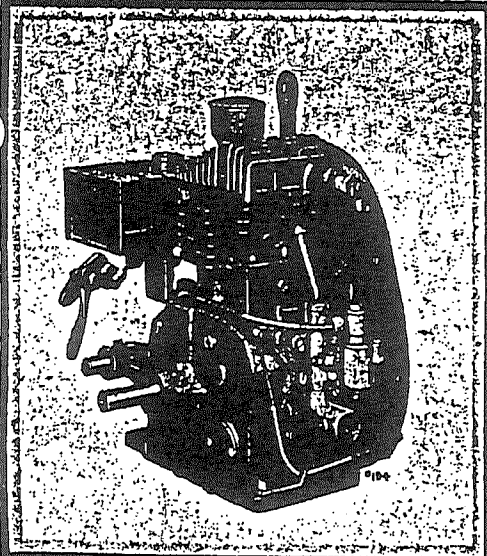


# COURTESY OF BRIGGS & STRATTON

66167



## OPERATING MANUAL *and* PARTS LIST *for* BRIGGS & STRATTON GASOLINE MOTOR

MODEL T

### INDEX

	Paragraph Number	Page Number	Illustration Page Number
Air Cleaner	14	4	
Carbon	58, 62	21, 22	
Carburetor	23, 24, 51 to 55	7, 8, 18, 19, 20	7, 19
Adjusting	54	19	19
Choke	20, 23, 24	7, 8	15, 7, 19
Hook-up	53	19	18
Cleaning	55	20	7, 19
Cooling	39	14, 15	
Compression	31, 57 to 59	10, 21	
Connecting Rod	63	22	22
Cranking	20 to 23	7	5
Cylinder Head	62	22	
Cylinder	64, 65	22, 23	
Gasoline Line (Cleaning)	29	10	5
Gasoline Tank	18	6	5
Guarantee	5 to 14	2, 3, 4	2
Governor	49, 50	18	18
Hand Throttle Control	56	20	20
Ignition	19, 22, 23, 25, 26, 27, 40 to 48	6, 8, 9, 15 to 18	8, 9, 15, 17
Contact Points	45	16, 17	17
Fly Wheel	40, 42	15, 16	15
Fly Wheel Key	40, 42	15, 16	15
Spark Plug Cable	47	17	
Spark	25	8	8
Spark Plug	26, 27, 43	8, 9, 16	15, 8, 9
Lubrication	11, 12, 13, 15 to 17, 37, 38	4, 6, 14	
Fill Oil Reservoir	12, 13, 17	4, 6	5
Oil to use	11, 15	4, 6	
When to add and change oil	12, 13, 17	4, 6	5
Parts			
How to order		24, 25	
Illustrations		26 to 29	26 to 29
Price List		30 to 36	
Piston	59, 60, 64	21, 22	
Priming Motor	28	9	
Speed Adjustment	49	18	
Starter	67	23	5
Starting Motor	20, 21, 22	7	
Stopping Motor	19, 44	6, 16	5
Timing	61	22	22
Trouble Chart		11, 12	
Valves	58	21	

# IMPORTANT SAFETY INFORMATION AND INSTRUCTIONS FOR ENGINE SELECTION ENGINE INSTALLATION ENGINE OPERATION

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

18002333723

Briggs & Stratton Corporation  
Milwaukee, Wisconsin 53201

[www.briggsandstratton.com](http://www.briggsandstratton.com)

Keep these instructions for future reference.





**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



Fire



Explosion



Moving Parts



Toxic Fumes



Hot Surface



Shock



Kickback

(OVER)

FORM MS-6445-01/03

# ENGINE SELECTION



 <b>WARNING</b>



<b>Failure to select the correct engine could result in fire or explosion.</b>



- 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] 



 <b>WARNING</b>	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] 



 <b>WARNING</b>	Ensure all fuel lines and fittings are properly assembled and do not leak. Replacement parts must be the same model as the original.
	
- [6] 



 <b>WARNING</b>	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] 







 <b>WARNING</b>	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] 

 <b>WARNING</b>	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] 

 <b>WARNING</b>	When working on the engine or equipment, remove spark plug wire from spark plug. For electric start, remove negative wire from battery.
	
- [11] 

 <b>WARNING</b>	Do not check for spark with spark plug removed. Use Briggs & Stratton spark tester #19368.
	

# ENGINE OPERATION

	 <b>WARNING</b>
<b>When adding fuel:</b>	
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.	
	 <b>WARNING</b>
<b>When starting engine:</b>	
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.	
	 <b>WARNING</b>
<b>When operating equipment:</b>	
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.	

## This Gasoline Motor Is Your Faithful Friend

### Treat it as a Friend

1. This Briggs & Stratton Gasoline Motor embodies the most modern principles of gasoline motor construction. It is made of high-grade materials and is built by skilled craftsmen. Before it left the Briggs & Stratton factory it was put through many rigid tests, was carefully inspected and found to be in first class condition to give satisfactory service.

2. The less you tinker with the Briggs & Stratton Gasoline Motor the better service it will give you. This does not mean, however, that your motor does not require a certain amount of attention, for it is only a machine. It cannot tell you its wants but depends on you to give it the right kind of fuel, oil and care.

3. This operating manual gives you the following information:

	Pages
About the Guarantee.....	2 to 4
Starting the motor for the first time.....	6, 7
What to do when the motor will not start.....	7 to 10
Trouble Remedy Chart.....	11, 12
How your motor works.....	13, 14
Its construction and maintenance.....	15 to 23
How to order parts.....	24, 25
Parts illustrations .....	26 to 29
Parts and price lists.....	30 to 36
Index.....	Inside Front Cover
Motor specifications.....	Inside Back Cover

4. If this instruction book does not help you locate some specific trouble in your motor, then something too serious for you to correct has occurred. This means that it will be best to leave the motor alone and let an expert do the work. Consult your dealer first. He will help you, or will refer you to a nearby service station or advise you to return the motor to the factory.

## Have You Sent in the Registration Card Which Brings Your Guarantee Certificate?

5. You are entitled to a 90 day guarantee on your Model "T" Motor, so be sure that you get the Guarantee Certificate. It will only be sent to you after the Registration Card has been filled out

**REGISTRATION CARD**  
To Receive your MOTOR GUARANTEE CERTIFICATE

Model No. \_\_\_\_\_ T. No. \_\_\_\_\_ A. No. \_\_\_\_\_  
 Date \_\_\_\_\_  
 Your Name \_\_\_\_\_  
 Mail Address \_\_\_\_\_ State \_\_\_\_\_  
 Town \_\_\_\_\_  
 Dealer Purchased From \_\_\_\_\_ State \_\_\_\_\_  
 Machine No. \_\_\_\_\_  
 Briggs & Stratton Corp., Milwaukee, Wis.

**GUARANTEE CERTIFICATE**

THE ORIGINAL OWNER of this Briggs & Stratton Motor  
 Model \_\_\_\_\_ T. No. \_\_\_\_\_ A. No. \_\_\_\_\_  
 following guarantee:  
 Briggs & Stratton Corporation will replace for the original  
 found, upon examination at our factory at  
 normal use and service, on account of defects  
 charges on part or parts submitted for re-  
 purchaser  
 been the subject of misuse, negligence or  
 side of our Milwaukee factory, or author-  
 ent, affects its condition or operation.  
 \_\_\_\_\_  
 BRIGGS & STRATTON CORPORATION  
*Briggs* President  
 #153

Registration Card and  
Guarantee Certificate

and mailed in to the factory. The dealer from whom you bought your motor should do this for you, but if he did not do so, you should fill out the card and mail it at once.

6. By mailing in this card you not only make sure of getting your Guarantee Certificate but you also have your name and motor registered at the Briggs & Stratton factory and with the author-

ized central service station in your territory so that, should you write regarding service or parts, your requirements will be taken care of promptly. If you did not get a Registration Card, ask your dealer for one or write to the Briggs & Stratton Factory.

#### *What the Guarantee Includes*

7. For 90 days from the date of purchase the 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 authorized Briggs & Stratton service station to be defective under normal use and service, on account of defect in material or workmanship. All transportation charges on parts submitted for replacement under this guarantee must be paid by purchaser.

#### *What the Guarantee DOES NOT Include*

8. This guarantee does not cover the free replacement of parts, 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 accidents, nor if the motor has been repaired or altered outside of our Milwaukee factory or authorized service stations in any way which, in our judgment, affects its condition or operation.

#### *Keep Your Motor Clean*

9. It is important to keep your motor clean both inside and outside. This extra care will repay you many times in better service.

10. 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.

## Failure to Follow these Instructions Voids Your Guarantee

#### *Use the Right Kind of Oil*

11. We recommend the use of GARGOYLE MOBILOIL "ARTIC" or other high grade oil of similar characteristics having low carbon residue and a body not heavier than S. A. E. No. 20. A kind of heavy oil which might be satisfactory in a tractor or for lubricating farm machinery must NOT be used.

#### *Put Oil in Every Day*

12. 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 this would cause, always fill the oil reservoir to the level of the filler plug opening every day the motor is used.

#### *Change Oil At Least Once for Each Fifty Hours' Motor Runs*

13. After each fifty hours of operation, the old oil must be completely drained from crankcase by removing oil drain plug located in center of plate under motor. (See figure 1 on page 5). Drain out the oil when the motor is hot, because hot oil drains out quickly and thoroughly. Then replace the drain plug and refill with fresh oil. We do not recommend flushing out with kerosene. 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. Sludge forms a gummy mass which clogs up the oil passages. If oil is not changed regularly, these foreign particles cause increased friction and a grinding action which shortens the life of the motor.

#### *Air Cleaner*

14. Operating this motor without using an air cleaner voids your guarantee because 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. The filter should be tapped occasionally with a wooden stick to shake off excess dust, or to clean it more thoroughly, the dust may be brushed off with a whiskbroom. Should the felt become greasy or oily, it may be washed in high test gasoline and then it should be dried thoroughly before replacing.

4

*Model and motor number must be given when writing or ordering parts*

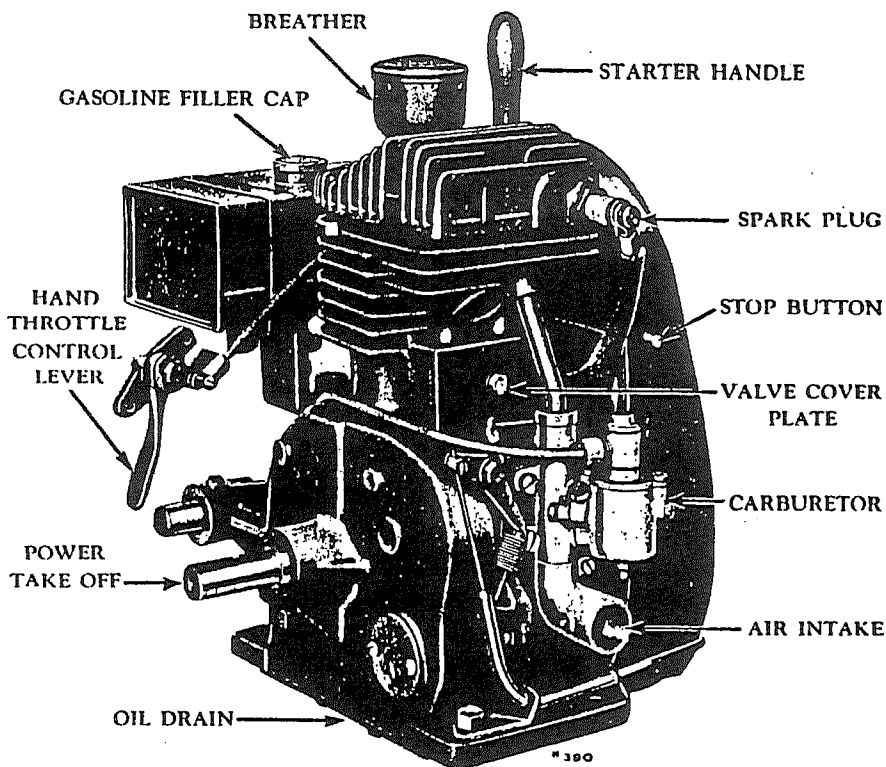


Fig. 1.  
Model "T" Motor

## Starting the Motor for the First Time

### *Use the Right Kind of Oil*

15. Be sure there is oil in the motor before you attempt to start it, and make sure that you use the right kind of oil. A comparatively light oil must be used. WE RECOMMEND GARGOYLE MOBIL OIL "ARCTIC" FOR YEAR AROUND USE.

### *Do Not Mix Oil with the Gasoline*

16. Do not mix oil with the gasoline. It is not necessary in this 4-cycle motor for it is provided with a complete lubrication system which includes an oil pump and an oil trough into which the connecting rod dips. This system provides adequate lubrication for all parts of the motor. The oil is also effective in cooling the motor by carrying heat away from the piston and cylinder walls.

### *Fill the Oil Reservoir*

17. The oil filler plug is located in the rear of the motor, directly under the starter shaft, (Figure 1 on page 5). With motor level remove filler plug and pour in oil until it rises to the level of the filler plug opening. The capacity of the oil reservoir is about 1 pint.

### *Fill the Gasoline Tank*

18. The gasoline tank is filled by removing the large gasoline tank cap. The capacity is 2½ pints. High test gasoline is recommended and insures easy starting, particularly in cold weather. 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.

### *Spark*

19. A spark will be supplied to the spark plug as soon as you crank the motor, the source of ignition being a magneto built into the flywheel. When starting motor it is not necessary to turn on any switch in order to turn on the ignition. To stop motor, however, press on the red stop button until the motor stops turning.



### *Cranking*

20. Choke carburetor by turning choke lever in horizontal position. (See Figures 1 and 2). Closing the choke shutter chokes off air going to the carburetor the same as the choke on your automobile.

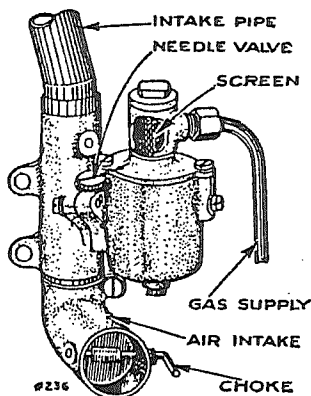


Fig. 2.  
Carburetor

21. Push down on starter handle quickly and repeat before motor stops turning, pumping quickly until the motor fires. Immediately after motor starts, gradually open choke shutter by slowly turning down the choke lever until motor runs smoothly with choke wide open. If motor is cold, it may slow down or sputter. In this case close choke again for a few seconds. If the motor stops, you have probably choked it too much or not enough. You will

soon learn to judge the correct operation of the choke lever so that the motor can be quickly started and kept running without difficulty.

22. You should also remember that very slow cranking may not start the motor because of the fact that the spark is produced by the magneto which requires a certain amount of speed before it produces a spark at the plug.

## What To Do When Motor Will Not Start

### *The Correct Use of the Choke*

23. With gasoline vapor in the motor, this vapor compressed and a spark at the spark plug, there is not much question about starting the motor. Of course it sometimes happens that the gasoline mixture is not right and will not fire properly. This is perhaps the most common cause of failure to start, particularly in a new motor with which you are not thoroughly familiar.

24. The correct carburetor setting is one which gives a good operating mixture when the motor is hot. Because gasoline does not vaporize so well when cold, it is necessary to choke the carburetor in order to cut down the amount of air and give a mixture which is approximately correct for starting. Until you become familiar with your motor, however, you may make the mistake of not choking the motor enough or you may choke it too much and get a lot of raw gasoline in the motor. If you have operated the choke lever while cranking the motor three or four times, try cranking two or three times with the choke lever down. Then, if the trouble was due to choking too much you will find that the motor will start as the excess gasoline is driven out through the exhaust pipe.

### *Checking the Spark*

25. To be sure that you have a spark at the spark plug, you can remove the wire from the plug and hold it within  $\frac{1}{8}$ " of any metal part of the motor (See Fig. 3). Keep the hand back on the insulated part of the wire so that you will not get a shock. Then crank the motor and see if a spark will jump this  $\frac{1}{8}$ " gap. If it does, you will know that the spark is amply strong to jump the small gap at the spark plug when in the motor under compression. This test is

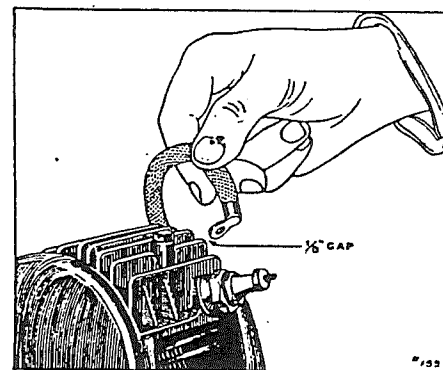


Fig. 3.  
Checking Spark

evidence that your entire ignition system is working satisfactorily. If there is no spark, check the various items on the Trouble Remedy Chart, pages 11 and 12, or see your local dealer or nearest Briggs & Stratton service station.

### *Checking Spark Plug*

26. It sometimes happens that a spark plug porcelain is

cracked or broken so that the spark jumps from the center electrode through to the shell of the spark plug and does not jump at the gap inside of the cylinder (see Fig. 4). This, of course prevents the motor from firing. The simplest way to check a spark plug is to try a new one and you will find it advisable to have a spare spark plug on hand for testing. If the motor starts with the new plug, then you know that the old one is at fault and should be discarded. The gap at the spark plug should be somewhat less than  $1/32''$  (.020" to be exact).

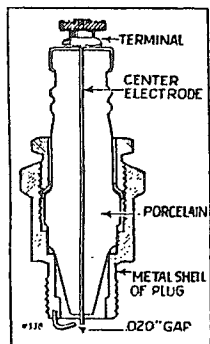


Fig. 4.  
Spark Plug

27. Replacement plug must have same characteristics as No. 7 Champion 18 M. M. Thread,  $1\frac{1}{2}$  M. M. Pitch.

#### *Priming the Motor*

28. On the suction stroke, the motor draws gasoline up through the carburetor, mixes it with air, and feeds a combustible mixture to the cylinder. However, if the magneto produces a good spark and a good spark plug (set with a gap of .020") is in the cylinder and still you cannot start the motor, it is advisable to remove the spark plug and pour in about a half teaspoonful of gasoline. This should run the motor three or four revolutions to show you that it is in operating condition, even if there is no gasoline in the tank and the carburetor is not functioning. Difficulty in the carburetor, however, is extremely unlikely, for the new motor you have was thoroughly tested under its own power and was operating perfectly before it was shipped from the factory.

#### *Cleaning the Gasoline Line*

29. If the motor will run after the cylinder has been primed with gasoline but will not run otherwise, it is possible that the gas line

to the carburetor or the gas shut off valve is stopped up. Disconnect the gasoline pipe at the carburetor (See figure 1) and also at the gas tank. Blow through the gas line to see if it is clear. If no obstruction at this point, remove the gas shut off valve which is screwed in to the gas tank proper. In this valve you will find a screen which may be clogged.

#### *Adjusting Carburetor*

30. The carburetor is properly adjusted at the factory but if you think the adjustment has been tampered with you can adjust it over again in accordance with the instructions given on page 18.

#### *Testing Compression*

31. The motor to run properly must have good compression. You can test this by turning the motor over by hand to make sure there is one point in its rotation where it turns harder than it does at other points. This is due to the upward motion of the piston compressing the fuel mixture. If the flywheel is released, it should rock back and should do this two or three times before the compression all leaks away. If there is no compression, read paragraphs 57 to 59 and 64.

#### *Starter*

32. To crank the motor successfully, it is necessary that after depressing the starter handle, it should come up quickly with your hand, so that the motor can be spun or pumped. Should starter handle stay down or come up slowly, put a little kerosene on the large return lever spring to loosen it.



## Trouble Remedy Chart

### Motor Will Not Start

#### A--Fuel

	See Paragraph Number
1. Gasoline tank supply.....	18
2. Improper use of chock.....	23-24
3. Gasoline does not reach carburetor.....	28-29
4. Improper carburetor adjustment.....	53-54
5. Carburetor Hook-up .....	53
6. Water in the gasoline.....	10
7. Water frozen in carburetor or gasoline pipe..... (Extremely cold weather only)	10-29

#### B--Spark

1. Plug not functioning properly.....	25-26-43
2. Ignition cable grounded, oil soaked or wet.....	47
3. Magneto not delivering proper spark.....	25-35-40 to 48
a. Contact points are not properly adjusted.....	45
b. Contact points oily or dirty.....	45
c. Magneto plate and coil soaked with water or oil.....	45
d. Stop button bent, stuck, wet or dirty.....	44
e. Safety Woodruff key sheared off.....	35-40-42

#### C--Lack of Power

1. Poor compression .....	31-57 to 59-64
2. Poor spark .....	25-35-40 to 48
3. Improper carburetor adjustment .....	53-54
4. Exhaust pipe or muffler clogged.....	66
5. Improper valve clearance .....	58
6. Machine being operated is overloaded.....	68
7. Machine being operated needs oiling .....	68
8. Overheated, (See "Overheats" Page 12.)	

## Trouble Remedy Chart

#### D--Overheats

	See Paragraph Number
1. Oil supply low .....	11 to 17
2. Oil needs changing—is too thick to cool engine properly .....	12-13-39
3. Carbon in cylinder head .....	62
4. Poor spark .....	25-35-40 to 48
5. Machine being driven is overloaded.....	68
6. Machine being driven needs oiling .....	68

#### E--Stops

1. Gas supply shut off .....	18-29
2. Intermittent spark failure .....	25-35-40 to 48
3. Overheated	
4. Flywheel key sheared—loose flywheel.....	35-40-42

#### F--Knocks

1. Carbon in cylinder head.....	62
2. Loose connecting rod .....	63
3. Worn main bearings .....	4-37
4. Loose flywheel .....	35-40-42
5. Lack of oil .....	11-17
6. Defect in connection with machine being driven .....	68

#### G--Starter

1. Starter handle sticks .....	32
2. Starter handle slips on shaft .....	67

## How Your Model "T" Motor Works

### *The 4-Cycle Principle*

33. The reliability, economy and ease of starting which characterize your Briggs & Stratton motor are due in part to the fact that it is designed on the 4-cycle principle which is the basis of the design

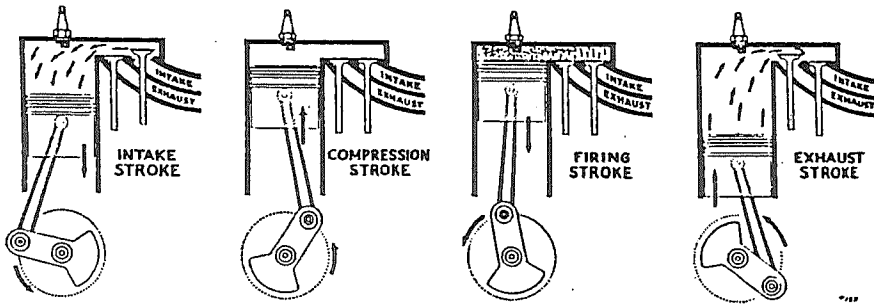


Fig. 5.  
4-Cycle Principle

of all automobile motors. In the common term "4-Cycle Motor" we leave out the word "Stroke" for this description as applied to a motor really means that there are four strokes to one cycle, a cycle being a series or round of events.

34. In our 4-cycle motor the events are indicated in Fig. 5. On the intake stroke (illustration at the left), we have the piston going down, producing a vacuum 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. In the next illustration we find the piston coming 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 gas. This produces an explosion above the piston which forces it down on the firing stroke. Both valves are closed on the firing stroke. On the next upstroke of the piston, the exhaust stroke, with the exhaust valve open, the burned gas is driven out.

### *The Ignition*

35. The spark which fires the gas in your motor is produced by a magneto built in the flywheel. This is a simple self contained system which is very reliable. It also does away with batteries and wiring with the exception of the high tension wire to the spark plug and the single wire which comes out to the red stop button. The magneto contains a coil, a condenser, a pair of contact points and a rotating magnet cast into the flywheel. This rotating magnet is properly timed with relation to the magneto by keying the flywheel to the crankshaft.

### *The Carburetor*

36. The carburetor is a device for properly mixing gasoline vapor with air and feeding it in correct amounts to the motor.

### *The Lubrication*

37. The lubrication of your Model "T" Motor is taken care of by a pump which is operated from an eccentric on the camshaft. This pump keeps a trough, into which the connecting rod dips, constantly full of oil. The dipping of the connecting rod then throws oil to all moving parts of the motor. Oil, which is splashed to the main bearings, is in no danger of leaking out of the motor. Return ducts are provided in which check valves are used. The suction in the crankcase draws oil back into the oil reservoir but pressure in the crankcase cannot reverse the action and force oil out again. Consequently, the motor stays clean and the oil supply is efficiently used.

38. Note that in the design of your Model "T" Motor there are no external parts which require separate oiling.

### *The Cooling*

39. The cylinder is cooled by air as are the cylinders of modern airplane motors. The rotation of the flywheel blows air all around the cylinder which is covered with thin metal fins to help carry heat away from the cylinder walls. As previously mentioned, the oil also assists in cooling. In cooling the motor, the lighter portions

of oil are gradually driven off and unless frequently changed, the oil which remains becomes too heavy to lubricate or cool the motor effectively. See Paragraphs No. 11 to 17, Pages 4 and 6.

## CONSTRUCTION AND MAINTENANCE

### Ignition System

40. Removing the Flywheel and Magneto. To inspect the mag-

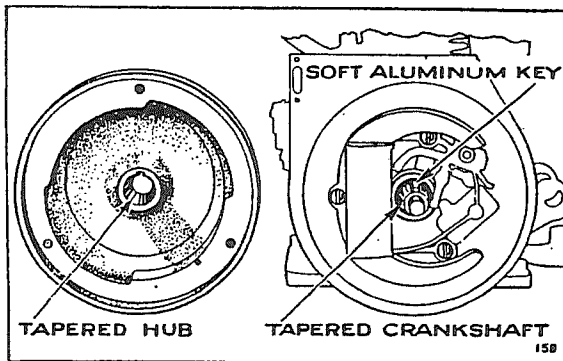


Fig. 5.

### Magneto Flywheel and Crankshaft Taper

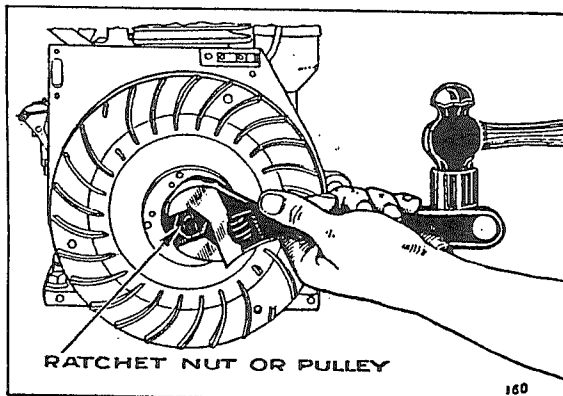


Fig. 6.  
Tightening Flywheel

neto or check up on the contact point setting, it is necessary to remove the flywheel. This is done by unscrewing the nut which holds it in place. A right-hand thread is used, so the nut should be turned to the left. It can be started by tapping the wrench handle with a hammer. Then place a block of wood against the end of the crankshaft and strike it to loosen the flywheel. The magneto is removed by taking out three screws.

41. Replacing Magneto. Magneto should be assembled to cylinder with proper gaskets so that end play of crankshaft is not less than .002" or more than .008".

42. Replacing the flywheel. When completing any necessary work, replace the flywheel, being sure to use the soft Woodruff key supplied. The key is only for the purpose of locating the flywheel on the crankshaft in the correct position so that the magneto will be correctly timed. The flywheel is driven, however, by being a tight taper fit on the taper of the crankshaft. This taper is shown in Fig. 6.) In case the flywheel should come loose, the soft Woodruff key is designed to shear off so that no damage will be done. Therefore, A STEEL KEY SHOULD NEVER BE USED. After the flywheel is in place, has been located with the key and nut or pulley has been screwed up, this nut or pulley should be made VERY TIGHT. This can be done as shown in Fig. 7 by striking the wrench handle or bar with a hammer.

43. Spark Plug. A sectional view of the spark plug is shown in Fig. 4. on page 9. The purpose of the porcelain is to prevent the spark from jumping anywhere except at the gap in the cylinder. If the porcelain is cracked or broken, however, the spark may jump through to the shell of the spark plug. This will prevent the motor firing. Water on the outside of the spark plug may permit the high voltage spark current to leak over the surface of the porcelain. Carbon deposits on the porcelain inside of the cylinder will do the same thing. The spark plug should, therefore, be removed to see that the porcelain is not heavily coated with carbon. It can be cleaned by taking the plug apart and washing off the carbon with gasoline or cleaning with some kitchen scouring powder. When the plug has been put together again, the gap should be set at .020".

44. Stop Button. See that the stop button is not bent or held down by the blower case so that it makes contact continuously. To check this it may be necessary to remove the blower case. See that the button is not shorted with dirt, water or oil. Also check the small wire which runs down to the magneto to see that it is not grounded.

45. Contact Points. While the magneto plate is still on the motor, you can turn the crankshaft by hand and see if the contact points

open and close properly. They should have a gap of .020". Adjust-

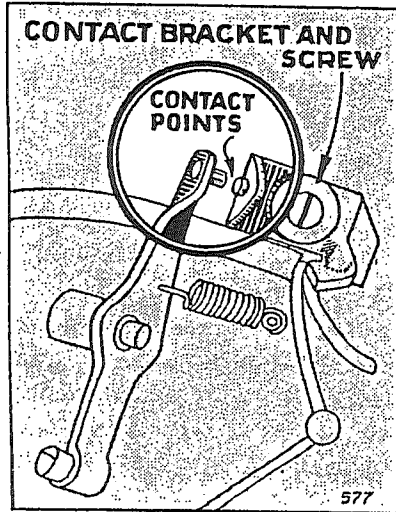


Fig. 8.  
Magneto Parts

ment is made by loosening the contact bracket screw and moving the bracket to its desired position. The contact points surface should be clean and the faces of the points square so that when they come together they make good electrical contact. If points become badly burned or pitted it may be necessary to replace them with new ones. When checking up the contact points be sure that all parts of the magneto are clean and free from grease, water and dirt. Small metal particles, in particular, will cause trouble and prevent

the magneto from firing. The various parts can be washed off with gasoline on a clean rag. Avoid getting gasoline on the coil. Dry off the magneto with another clean rag before putting it in service again.

46. Inspect the soldered terminal on the condenser and the contact bracket.

47. Spark Plug Cable. Check the spark plug cable to see that the insulation is not broken, soaked with oil or water, grounding it, especially at some point where it touches the motor or is very near to the motor. It may be necessary to remove the flywheel and magneto in order to check this cable all the way to the magneto coil. Under no circumstances should the cable be soldered to the coil as heat damages the coil insulation. A twisted connection is sufficient as the cable is held securely by a clip. When checking the cable, also check the ground wire which goes up to the red stop button to see that the insulation is not broken so that the wire rubs on some metal part of the motor.

48. Condenser, Coil and Magnet. If you have not located the trouble up to this point, it is probably in the condenser, the coil or the magnet. Under these circumstances, you should see your dealer or send in the complete magneto with flywheel to the Briggs & Stratton factory, or to the nearest Briggs & Stratton service station.

#### Governor

49. Speed Adjustment. Normal motor speed 1800 R. P. M. To change motor speed, move throttle control lever. More tension on throttle spring increases speed, less tension reduces speed. (See figure 9 and 11).

50. Resetting Governor Lever. If governor lever has been loosened on its' shaft it is reset as follows; (See Fig. 9).

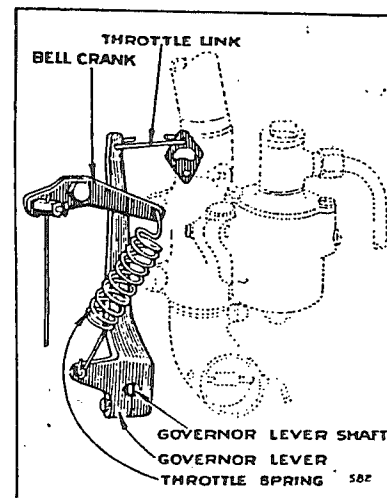


Fig. 9.  
Carburetor and  
Governor Hookup

attached to motor and hooked up to governor lever with throttle link, loosen clamp screw which holds governor lever on its shaft. Hold upper end of governor lever firmly to the right with throttle plate against its stop in carburetor barrel. Holding governor lever in this position, turn governor shaft hard to right or clockwise, with pliers, until you feel it strike a stop inside of crankcase. Tighten clamp screw firmly, being sure that neither the governor shaft or governor lever moves while doing so.

#### Carburetor

51. The carburetor used on your Model "T" Motor is shown in Fig. 9 and Fig. 10. As received from the factory it is properly adjusted. However if it has been tampered with, it can be adjusted over again as described on next page.

52. **Removing and Replacing Carburetor.** Unhook throttle spring from throttle spring clip. Disconnect gasoline line which runs from carburetor to gasoline tank. Remove two small screws and lock-washers which hold carburetor to crankcase. Loosen carburetor from intake pipe working from side to side. With carburetor in right hand, hold governor lever with left hand, bring carburetor towards governor lever and turn carburetor to the right, permitting open end of throttle link to slip out of hole in throttle plate on carburetor barrel. To replace, reverse the operation as performed above. It is important that the open ends of throttle link be toward the crankcase.

53. **Hook-up Throttle link** with open ends towards the crankcase, (See Fig. 9.) must have one end hooked into hole in upper end of governor lever and the other end hooked into the hole of throttle plate on carburetor barrel. The throttle link with coiled end hooked into the end of bell crank and the other end hooked into the eye of the cotter pin in the bottom of governor lever. See paragraph No. 56 for Hand throttle control hook-up.

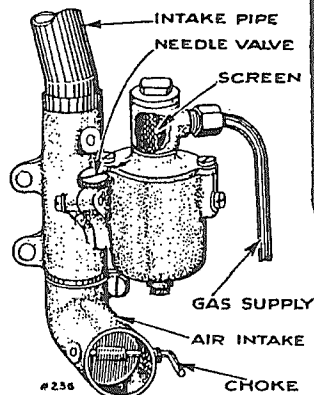


Fig. 10.  
Carburetor

FOR  
**TILLOTSON**  
**CARBURETOR**  
**INSTRUCTIONS**  
**AND PARTS**  
**SEE PAGE**  
**19A-23A**

54. **To Adjust Carburetor.** Completely close needle valve by turning to right or clockwise with screw driver as far as possible. From closed position open needle valve by turning to left or counterclockwise about one to one and a half turns, lining up setting mark notched in the face of

needle valve wheel with pointed adjustment indicator on carburetor bowl cover. (See illustration No. 10) After the motor has been started, warmed up and running with the choke wide open, turn

52. **Removing and Replacing Carburetor.** Unhook throttle spring from throttle spring clip. Disconnect gasoline line which runs from carburetor to gasoline tank. Remove screws which hold carburetor to crankcase. Loosen carburetor from intake pipe by working from side to side. With carburetor in right hand, hold

governor lever with left hand, bring carburetor towards governor lever and turn carburetor to the right, permitting throttle link to slip out of hole in throttle lever. To replace, reverse the operation as performed above. It is important that the open ends of throttle link be toward the crankcase.

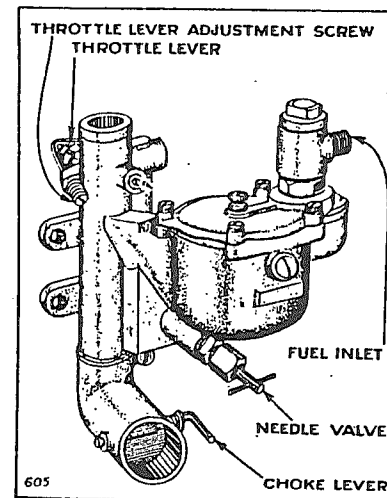


Fig. 10  
Carburetor

53. **Hook-up.** Throttle link with open ends towards the crankcase, (See Fig. 9.) must have one end hooked into the hole of throttle plate in carburetor barrel. The throttle spring must have coiled end hooked into the end of bell crank and the other end hooked into the eye of the cotter pin in the bottom of governor lever. See paragraph No. 56 for Hand throttle control hook-up.

54. **Fuel Feed Adjustment.** The carburetor is provided with one adjustment, the needle valve see Fig. 10, which controls the volume of fuel delivered thru the main nozzle. To close needle valve turn to the right, or clockwise, (never force the needle valve against its seat). Turning needle valve to the left or counterclockwise, opens it.

54A. **Final Adjustment.** The carburetor on the Model "T" Motor is adjusted at the factory at three-fourths of one turn open. To find the point at which the motor delivers maximum power, start the motor and run until thoroughly warm. With the motor thoroughly warmed, turn the needle valve to the right gradually until the motor sputters or the speed begins to drop. Then turn needle valve gradually to the left until the motor operates smoothly under full load. When the final carburetor setting has been determined, do not change it again. This final setting will take care of starting and running although during particularly cold weather you may have to choke the carburetor a little more than usual while the motor is warming up.

55. **Cleaning the Carburetor.** The carburetor will seldom require cleaning although it sometimes happens that a speck of dust or lint will get into one of the small openings and affect the carburetor's operation. Removing the fuel inlet from the carburetor permits removing the cylindrical screen which can be taken off and washed in gasoline. If the carburetor continually floods or leaks, it is probable that there is dirt in the inlet valve. To check this, it is best to have the carburetor off. You can then turn the carburetor upside down and loosen the inlet valve seat. Inverting the carburetor while taking out the seat is advisable so that the inlet valve itself will not fall into the float chamber. The valve and seat should then be carefully washed in gasoline and replaced.

55A. **Cleaning the Nozzles.** The needle valve seat may be removed by unscrewing the needle valve stuffing box nut and gland. The by-pass nozzle may be reached by taking out the hexagon plug screw. By removing the seat and nozzle they may be washed in gasoline and cleaned out by blowing through the small openings.

needle valve a notch at a time in either direction, to find final needle valve setting point at which motor operates most smoothly. This final setting point should be with the needle valve turned to the right, or lean, as far as possible, but so motor will still run smoothly with full load. When this final needle valve setting has been determined, do not change it again. This setting will take care of future starting and running.

55. **Cleaning the Carburetor.** The carburetor will seldom require cleaning although it sometimes happens that a speck of dust or lint will get into one of the small openings and affect the carburetor operation. Disconnecting the gasoline line and the inlet connection from the carburetor permits the removal of the screen as shown in figure 10. This screen should be washed in clear gasoline. The inlet seat at the bottom of the stem on the lower and the upper part of the float stem should be kept clean from any dirt. By removing the needle valve from its seat the small holes in the bowl and barrel can be blown open. When the cover is replaced on the bowl, care should be taken not to damage the inlet valve and seat.

#### *Hand Throttle Control Hookup*

56. The hand throttle control equipment for regulating the motor speed is hooked up as shown in Figure 11. The control lever assembly may be conveniently fastened with two screws to the machine which the motor operates so as to provide ease of control of the motor by the operator. Pulling on the control wire speeds up the motor. The control casing tube assembly is held down with one of the crankcase mounting screws directly on the left side of the carburetor. The bell crank is fastened with the bushing, washer and cap screw to the boss on the crankcase, as shown in Figure 11. The control casing with wire inside is inserted into the tube assembly with the wire coming thru the upper end of tube,

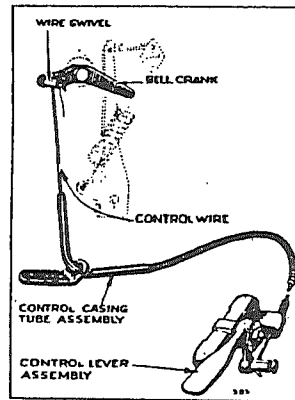


Fig. 11.  
Hand Throttle  
Control Hook-up



and this end of wire is held to the bell crank by the swivel and screw. The other end of wire is fastened to the swivel on the control lever. The coiled end of the throttle spring is hooked to one end of the bell crank and the other end of the spring is hooked thru the cotter in the governor lever. See Figure 9.

#### Compression

57. Compression in the motor is obtained by having valves which seat properly, gaskets which are tight, a spark plug which does not leak, and piston and piston rings which are properly fitted.

58. Valves. Valves are properly fitted when the motor comes from the factory. Valve tappet clearances should be measured with motor cold. Clearance on exhaust valve .020 of an inch, on intake valve .010 of an inch. Adjustment of valves is made by grinding the ends of valve stems. When grinding, care must be taken to keep end of valve stem square to valve stem proper. It should seldom be necessary to remove carbon and grind in valves if correct oil and fuel are used.

59. Piston. The piston in the Model "T" Motor is made of a special aluminum alloy which is very light in weight. (This material permits your motor to develop maximum power at high speed, with minimum vibration.) The standard clearance between the piston and cylinder wall is .0055" to .007". The piston rings, when fitted into the cylinder, should have from .007" to .012" gap.

60. Piston Pin. 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. 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. You should of course drive the pin out while the piston is still hot. The piston should also be heated up in order to enable you to easily replace the pin. The heating facilitates the work because of the rapid expansion of aluminum when heated. This also accounts for the clearance of .0055" to .007" which is used in fitting the piston to the cylinder.

#### Timing

61. The timing of the valves is taken care of by the meshing of the cam shaft gear with the one on the crankshaft. These gears are properly meshed when the punch mark on the cam shaft gear is in line with the chisel mark on the crankshaft. (See Figure 12.)

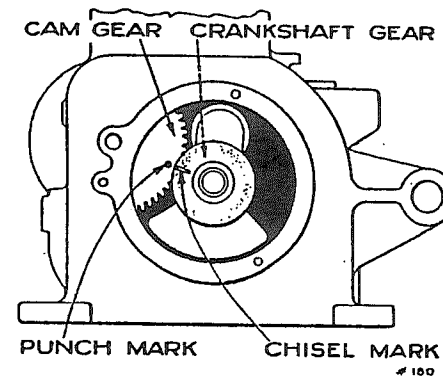


Fig. 12.  
Timing

#### Cylinder Head

62. 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 gasket. In tightening the six cap screws, tighten them a little at a time so that the cylinder head is pulled down evenly rather than all on one side first.

#### Connecting Rod

63. The connecting rod is also made of special aluminum alloy which combines strength with light weight. The lower bearing is of conventional type used with splash lubrication, and should it become loose, can be refitted. When assembling connecting rod to crankshaft, the oil hole as shown in Figure 13 must be toward the magneto. When replacing the cap the assembling marks must be on the same side as shown in figure 13.

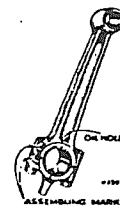


Fig. 13.  
Connecting Rod

#### Worn or Scored Piston, Rings or Cylinder

64. This will only occur after long use of the motor, unless it was

run without oil, oil not the quality and grade recommended, oil not changed regularly, or run with continuous overload.

65. When diameter of cylinder at center is .005" or more, larger than diameter of cylinder at the ends (top and bottom), cylinders should be reground to necessary standard oversize, which is .010", .020", or .030" as required and fitted with the corresponding standard oversize piston and rings. An authorized Briggs & Stratton Service Station should make the repairs.

#### *Exhaust Pipe and Muffler*

66. 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 you can 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 with a new one.

#### *Starter*

67. When replacing starter lever assembly, put tension on the lever return spring and push lever in far enough to line the chain up with the ratchet, and then tighten the set collar in its proper place. To replace handle, determine its desired angular position first, and then push handle on end of shaft and tighten the cap screw securely with a heavy wrench. The fine grooves on the end of the shaft and inside the hole in the handle, permit the handle to be set at any desired angle and also prevent it from slipping on the shaft.

#### *Effect of Load on Motor Operation*

68. We have covered practically every condition that could possibly affect the operation of your Model "T" Motor. Of necessity, however, we have not been able to touch on conditions in the machine which the motor is driving. It is just as important to check up on

the machine as it is to take care of the motor. The machine should not be overloaded, should be lubricated regularly and should be inspected to see that the belt or chain drive is in good condition.

### **Important**

*Follow these instructions when ordering parts or when writing for Information.*

#### **A. Before ordering parts**

Check up with your dealer if it is possible to do so, in regard to parts you believe are needed. He will assist you on any service that is necessary and will help you select the correct parts for your motor.

#### **B. Give model letters and number of motor**

This information is most important as we make many gasoline motors in various types and sizes. You will find the model letters and motor number on the brass plate at the side of the motor.

#### **C. Give name and catalog number of parts wanted**

You will find part numbers and description in section following parts illustrations. (Do not use numbers cast on parts.)

#### **D. Send remittance with order to cover parts plus postage.**

Prices of parts are given in the pages which follow. Add what you think will be sufficient for postage and send postal or express money order for this amount. Do not send currency in a letter. It is not safe. By following these suggestions carefully you will avoid delay and added expense usually connected with C. O. D. shipments.

#### **E. Be sure your name and address are given plainly and correctly**

Print name and address. Do not abbreviate name of town or state.

#### **F. Always specify on the order how shipment to you is to be made.**

#### **G. Address your order or letter to Briggs & Stratton Corporation, Milwaukee, Wisconsin or Authorized Service Station, attention of Service Department.**

H. After you have made out order, check back to see that you have followed these instructions accurately.

This will save time and money for you and assist in giving prompt and efficient service.

I. When returning Motor or Parts to factory or Service Station.

If your motor or parts are returned for any reason, be sure your name and address are on both the inside and outside of the package.

*Model and motor number must always be given from which parts were taken, to insure prompt and accurate service.*

You should also write, explaining fully the reason for the return and exactly what is to be done with it.

*All return shipments must be prepaid, or they will not be accepted.*

### PRICES

NOTE—All prices in this book are subject to change without notice. In case of change in price, orders will be filled at current prices. All prices shown are F. O. B. our factory in Milwaukee, Wis. Prices higher in Canada.

### PLATE NO. 580—PARTS OF CRANKCASE

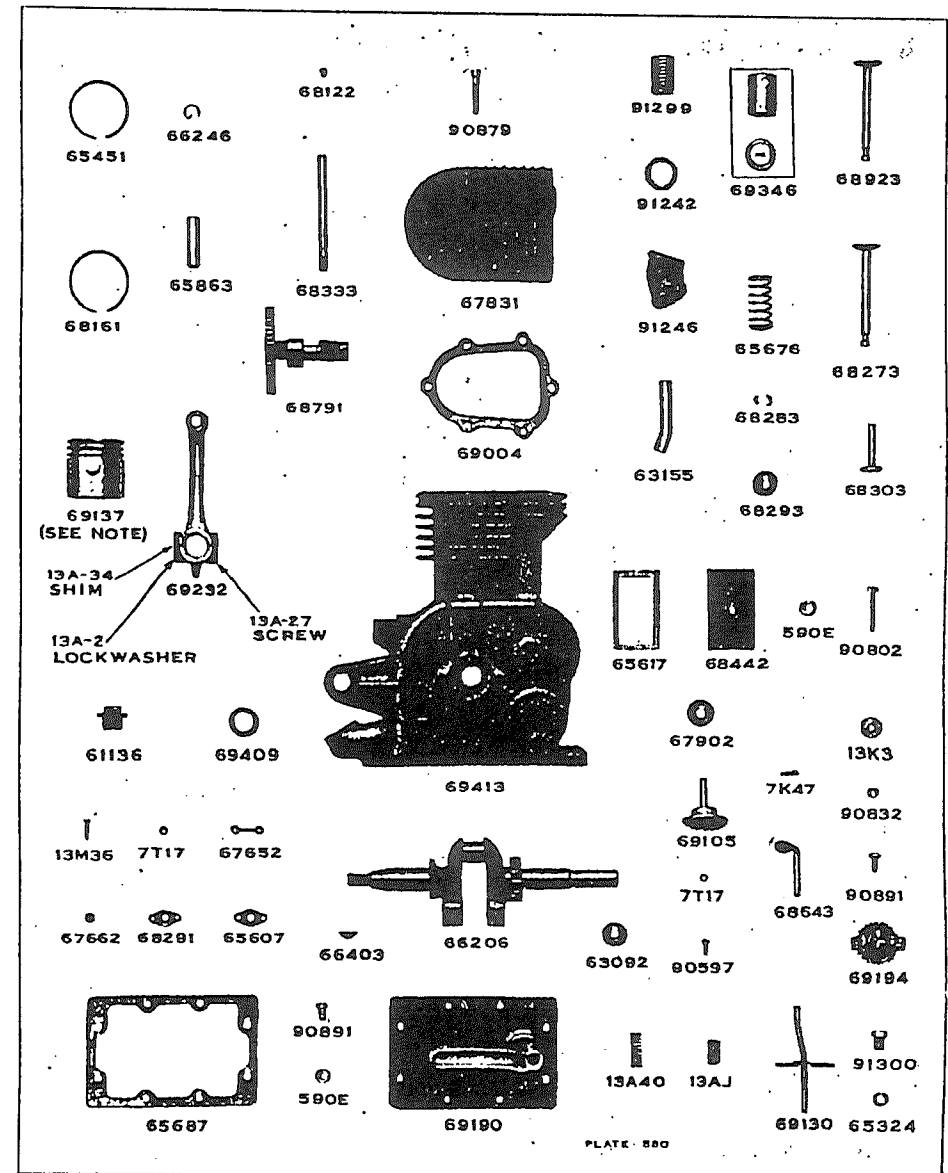


PLATE NO. 255—PARTS OF MAGNETO

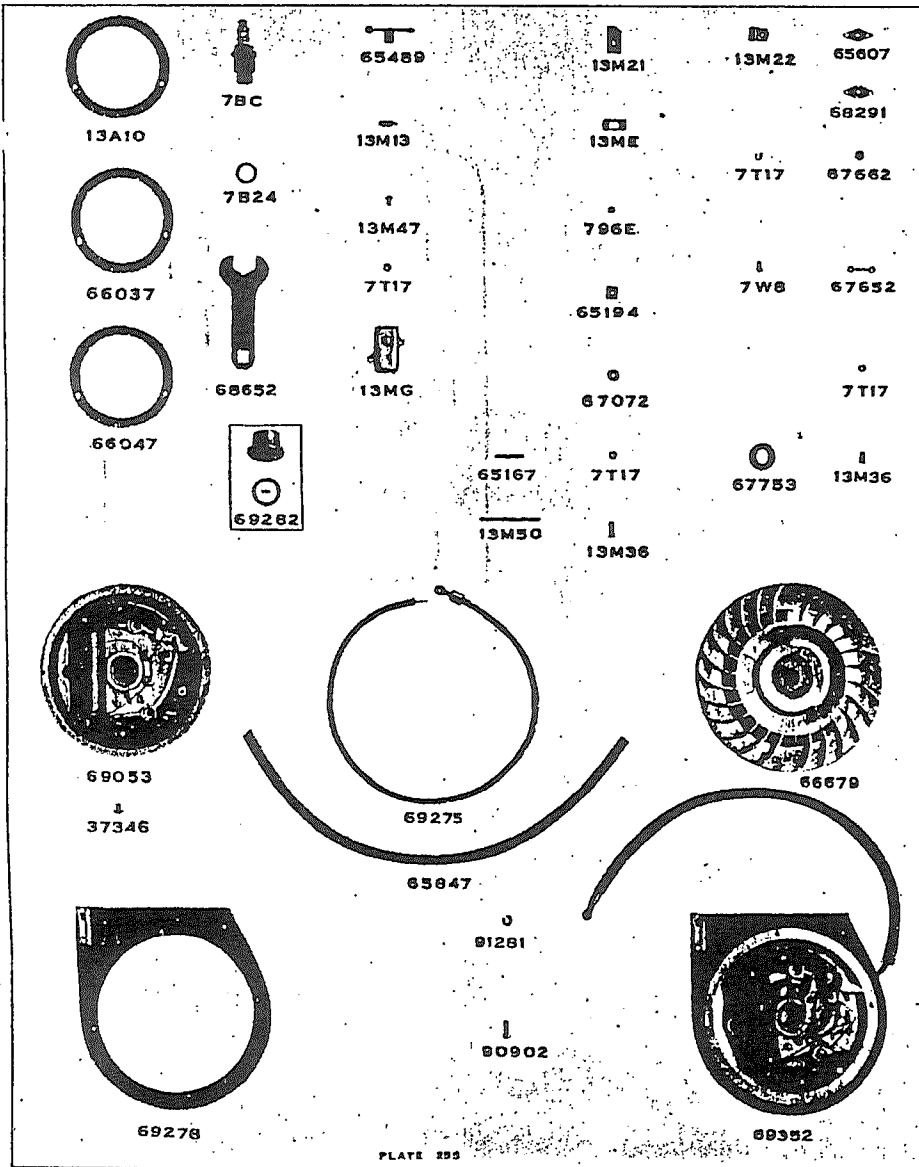


PLATE 255

PLATE NO. 586—PARTS OF CARBURETOR AND STARTER

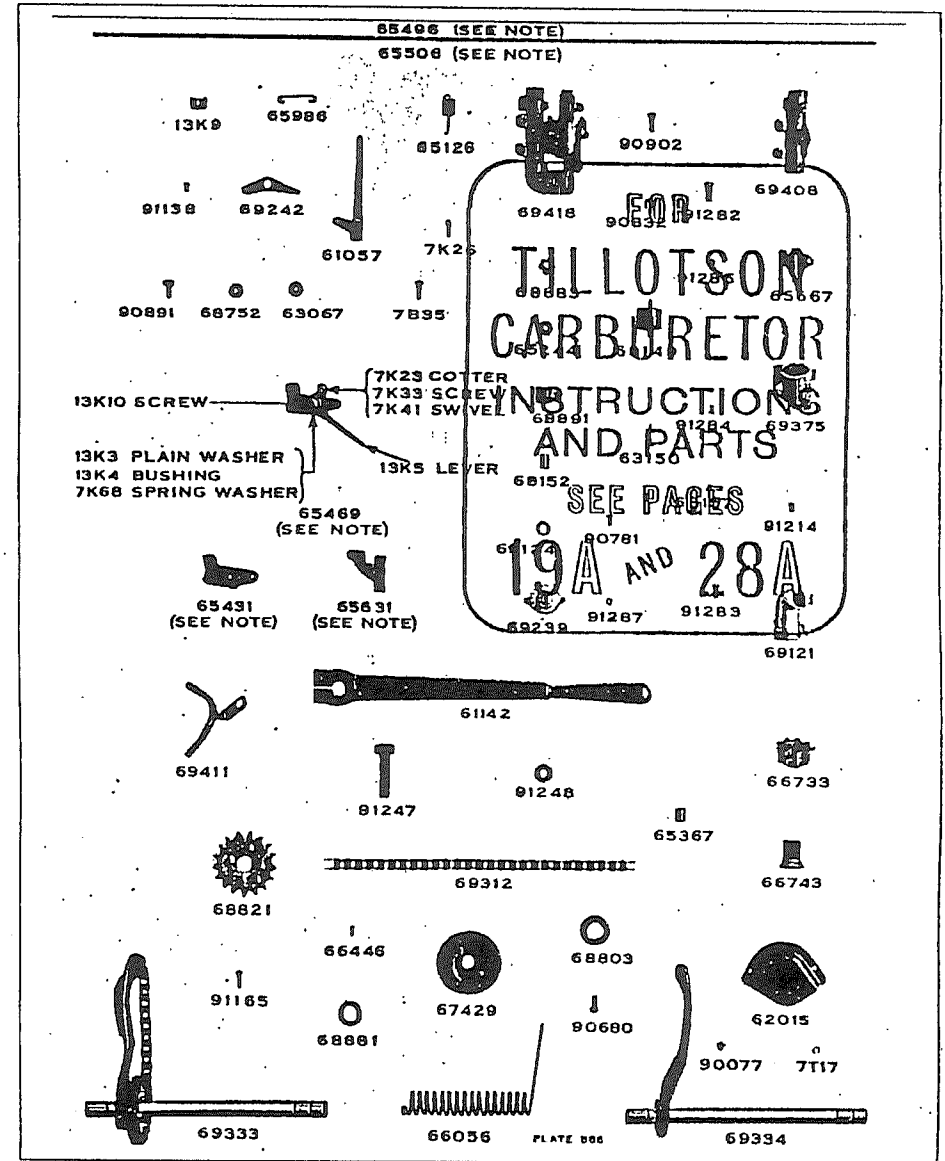
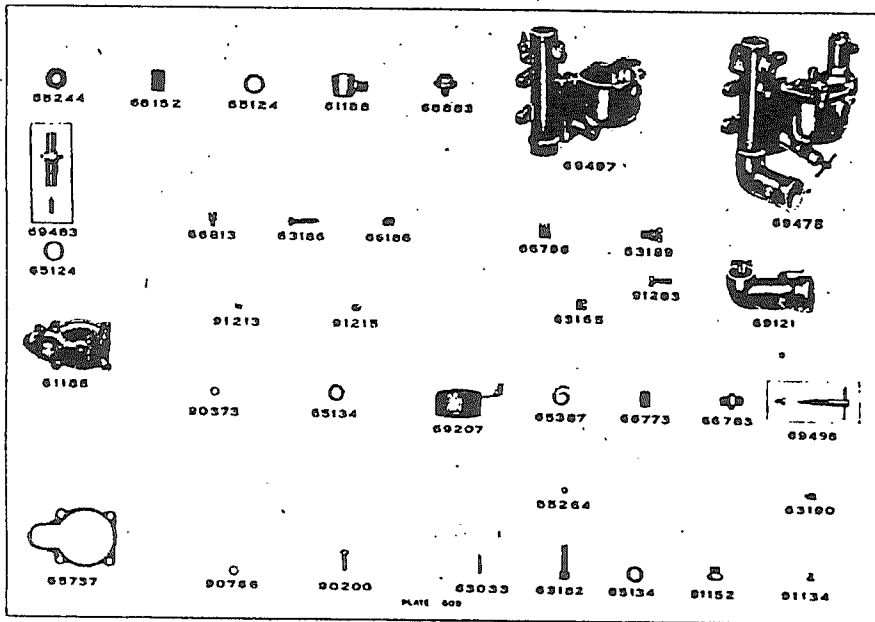


PLATE 586

PLATE NO. 606—MODEL "T" MOTOR CARBURETOR PARTS



PARTS AND PRICE LIST

69478 CARBURETOR ASSEMBLY COMPLETE WITH AIR HORN.....\$9.50

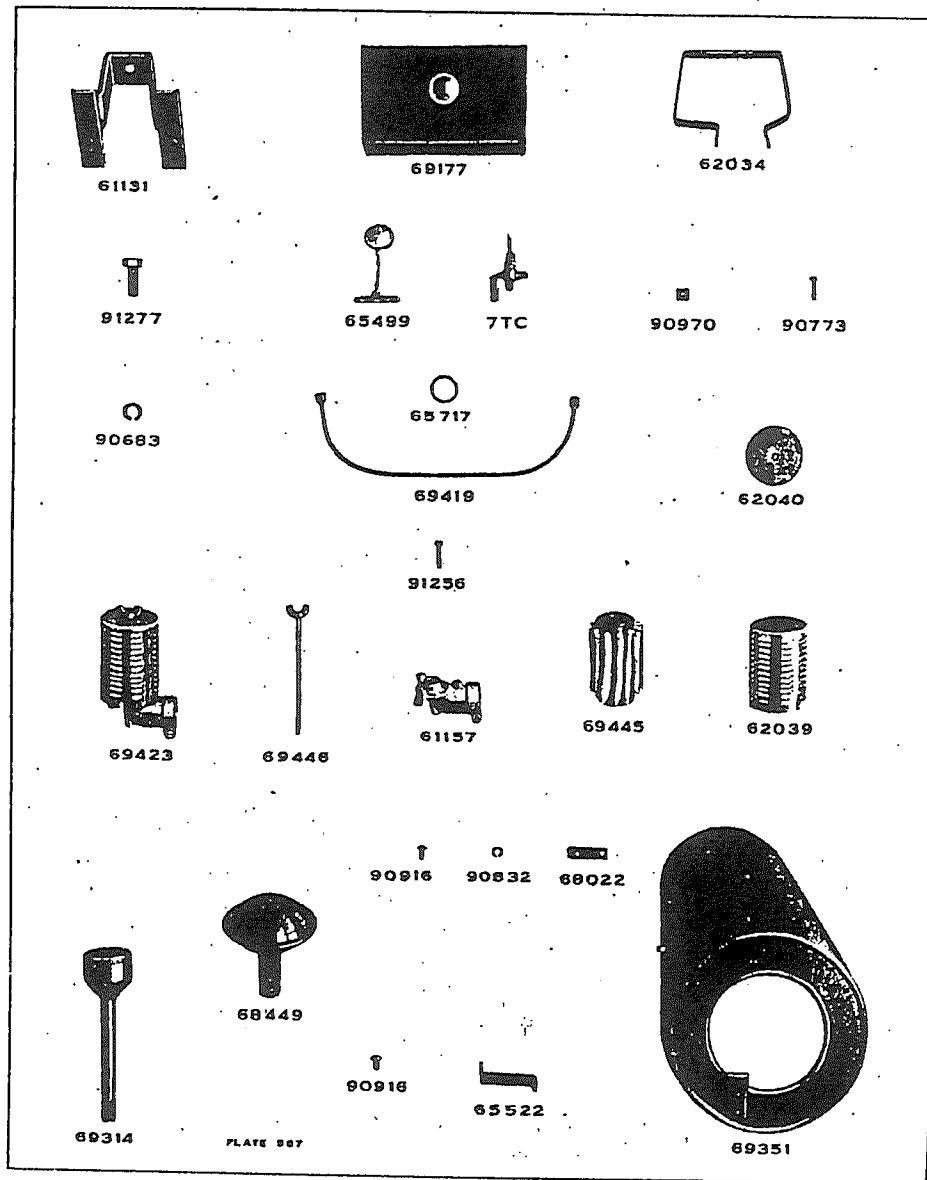
THIS ASSEMBLY IS CONSISTED OF THE FOLLOWING PARTS:

Part No.	Name	Price Each	Part No.	Name	Price Each
61186	Float Bowl Cover .....	.25	68152	Fuel Inlet Screen .....	.10
61188	Inlet Connection .....	.25	68883	Inlet Conn. Screw .....	.10
63033	Float Lever Pin .....	.05	69121	Air Horn Assembly .....	.30
63165	1/8" Headless pipe plug..	.05	69207	Float .....	1.00
63182	By-Pass Nozzle .....	.25	69483	Inlet valve and seat .....	1.00
63186	Throttle Adj. Screw .....	.10	69497	Body with throttle .....	3.50
65124	Inlet Conn. Gasket .....	.05	69498	Needle valve with seat....	.50
65134	Plug Screw gasket .....	.05	90200	Bowl Cover screw .....	.05
65244	Inlet Conn. screw gasket	.05	90373	Lockwasher for vent	
65264	By-Pass nozzle gasket....	.05	screw .....	.05	
65387	Stuffing Box Packing .....	.05	90766	Lockwasher for cover	
65737	Cover gasket .....	.10	screw .....	.05	
66186	Throttle Adj. Scr. Spring	.10	91134	Air Bleed screw .....	.10
66773	Stuffing Box Nut .....	.15	91152	Plug Screw .....	.20
66783	Stuffing Box Gland .....	.25	91283	Air Horn Clamp Screw..	.01
66813	Cover, vent screw .....	.20			

28A

Model and motor number must be given when writing or ordering parts

PLATE NO. 587—PARTS OF GAS TANK AND AIR CLEANER



29

Model and motor number must be given when writing or ordering parts

## PARTS AND PRICE LIST

Part No.	Name	Where Used	Price Each
7BC	Spark Plug with 7B24 Gasket.....		\$.75
7B24	Gasket .....	Spark Plug .....	.05
7B35	Screw .....	1—Governor Lever .....	.01
7K23	Cotter Pin .....	Carburetor Control Assembly .....	.01
7K26	Cotter Pin .....	Governor Lever .....	.01
7K33	Screw .....	Carburetor Control Assembly .....	.05
7K41	Swivel Pin .....	Carburetor Control Assembly .....	.20
7K47	Cotter Pin .....	Governor Crank .....	.01
7K68	Spring Washer .....	Carburetor Control Assembly.....	.10
7TC	Shut off valve .....	Gas tank .....	.95
7T17	Lock Washer .....	2—Crankcase oil sucker .....	.01
		2—Magnet crankcase cover oil sucker	
		1—Cable clamp—Magneto	
		1—Contact bracket—Magneto	
		2—Condenser	
		2—Ratchet guard	
		2—Governor flange	
7W8	Screw .....	Cable clamp—Magneto .....	.05
13AJ	Oil pump plunger .....	Oil pump .....	.20
13A2	Lockwasher .....	Connecting rod .....	.01
13A10	Gasket .....	Magneto plate .....	.05
13A27	Screw .....	Connecting rod .....	.05
13A34	Shim .....	Connecting rod .....	.05
13A40	Spring .....	Oil pump plunger .....	.10
13K3	Plain Washer .....	1—Retain governor gear .....	.05
		1—Carburetor Control assembly	
13K4	Bushing .....	Carburetor control assembly .....	.10
13K5	Lever .....	Carburetor control assembly .....	.50
13K9	Casing clamp .....	Control casing .....	.05
13K10	Screw .....	Carburetor Control Assembly .....	.05
13ME	Contact bracket .....	Magneto .....	.50
13MG	Condenser .....	Magneto .....	1.50
13M13	Breaker arm spring .....	Magneto .....	.05
13M21	Bracket Shim (Bakelite) .....	Magneto .....	.05
13M22	Ignition cable clamp .....	Magneto .....	.05
13M36	Screw .....	2—Mag. crankcase cover oil sucker	.05
		1—Contact bracket—Magneto	
		2—Crankcase oil sucker	
		2—Condenser—Magneto	
13M47	Screw .....	2—Condenser—Magneto .....	.05
13M50	Armature lead insulator .....	Magneto .....	.05
590-E	Washer .....	8—Oil pan to crankcase .....	.05
		1—Valve cover plate	
796-E	Contact bracket washer (fibre).....	Magneto .....	.05
37346	Rivet .....	Air guide to magneto plate.....	.05 Doz.
61057	Governor lever .....		.50
61131	Bracket .....	Gas tank .....	1.00
61136	Oil filler cap .....	Crankcase .....	.25
*61142	Hand crank lever.....		1.50
		Note—For straight foot pedal 13¼" long, order No. 61137.....	1.50

\*Before ordering read the NOTE immediately below this part number.

## PARTS AND PRICE LIST

Part No.	Name	Where Used	Price Each
61157	Elbow .....	Air cleaner .....	1.15
62015	Sprocket guard .....	Starter unit .....	.25
62034	Strap .....	Gas tank .....	.35
62039	Shell .....	Air cleaner .....	.50
62040	Cover .....	Air cleaner .....	.20
63067	Bushing .....	Bell crank .....	.05
63092	Spacer .....	Mounting .....	.05
63150	Needle valve .....	Carburetor .....	.30
63155	Intake pipe .....		.45
63157	Air Bleed Screw .....	Carburetor .....	.10
65124	Gasket .....	Inlet connection—Carburetor .....	.05
65126	Throttle spring .....	Governor lever .....	.15
65167	Armature lead insulator .....	Magneto .....	.05
65194	Contact bracket washer (Bakelite)—Magneto .....		.05
65244	Gasket .....	Inlet connection screw—Carb.....	.05
65314	Insulator (not illustrated) .....	Contact bracket—Magneto .....	.05
65324	Gasket .....	Oil drain plug .....	.05
65367	Felt washer .....	Ratchet nut .....	.01
*65431	Base .....	Carburetor control assembly .....	.45
		Note—Used on standard lever assembly No. 65469.	
*65451	Compression ring .....	Piston .....	.35
		Note—See No. 69137 for oversize rings.	
*65469	Carburetor control assembly—Standard—with base No. 65431.....		1.50
		Note—For control lever assembly with base No. 65631 Order No. 65589.	
65489	Breaker arm .....	Magneto .....	.75
*65496	Control wire, 41½" long.....		.30
		Note—For other lengths specify required length in inches.	
65499	Gas tank cap .....	Gas tank .....	.60
*65506	Control casing, 35¼" long.....		.35
		Note—For other lengths specify required length in inches.	
65522	Side bracket .....	Blower case .....	.10
65607	Oil valve housing gasket .....	1—Mag. crankcase cover oil sucker	.05
		1—Crankcase oil sucker	
65617	Gasket .....	Valve cover plate .....	.10
*65631	Base .....		.45
		Note—Used on No. 65589. (See No. 65469)	
65667	Gasket .....	Carburetor bowl to barrel.....	.05
65676	Valve spring .....	Intake and exhaust valves.....	.15
65687	Gasket .....	Base plate to cylinder .....	.20
65717	Gasket .....	Gas tank cap .....	.05
65847	Ignition cable sleeve .....		.10
65863	Piston pin .....	Piston .....	.30
65986	Throttle link .....	Governor lever .....	.10
66037	Gasket .005" .....	Magneto crankcase cover .....	.05
66047	Gasket .009" .....	Magneto crankcase cover .....	.05
66056	Starter return spring .....	Starter unit .....	.50

\*Before ordering read the NOTE immediately below this part number.

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## PARTS AND PRICE LIST

Part No.	Name	Where Used	Price Each
66206	Crankshaft		7.00
66246	Piston pin lock	Piston	.05
66403	Woodruff Key No. 9.	Crankshaft	.05
66446	Rivet	Starter chain	.01
66679	Flywheel	Magneto	9.20
66733	Ratchet	Starter Unit	.60
66743	Ratchet nut	Starter unit	.30
67072	Contact bracket washer	Magneto	.05
67429	Pawl	Starter unit	.70
67652	Oil valve guide	1—Mag. crankcase cover oil sucker	.05
		1—Crankcase oil sucker	
67662	Oil valve	1—Mag. crankcase cover oil sucker	.05
		1—Crankcase oil sucker	
67753	Washer	Magneto flywheel	.05
67831	Cylinder head		5.50
67902	Thrust washer	Governor gear to flange	.10
68022	Upper bracket	Blower case	.10
68122	Cam shaft plug	Crankcase	.01
68152	Inlet screen	Carburetor	.10
*68161	Oil ring	Piston	.50
	Note—For oversize rings see No. 69137.		
*68231	Piston (not illustrated)		3.50
	Note—For oversize pistons see No. 69137.		
68273	Exhaust valve	Cylinder	2.00
68283	Valve spring retainer collar (2 halves)	Valves	.10
68291	Oil valve housing	1—Mag. crankcase cover oil sucker	.10
		1—Crankcase oil sucker	
68293	Spring retainer	Valves	.10
68303	Cam Follower	Cylinder	1.00
68333	Cam shaft	Cylinder	.40
68442	Valve cover plate	Cylinder	.25
68449	Muffler		1.25
68643	Governor crank		.80
68652	Spark plug wrench		.20
68752	Washer	Bell crank	.05
68791	Cam Gear	Cylinder	6.00
68803	Set collar	Starter unit	.30
68821	Sproket	Starter Unit	.25
68881	Return Spring Bushing	Starter Unit	.05
68883	Inlet Connection Screw	Carburetor	.10
68891	Inlet Connection	Carburetor	.25
68923	Intake valve	Cylinder	.75
69004	Gasket	Cylinder head	.25
69053	Magneto plate & armature includes—		8.25
	4 No. 37346 Rivets		
	1 No. 66037, No. 66047 & No. 13A10 Gaskets.		

\*Before ordering read the NOTE immediately below this part number.

## PARTS AND PRICE LIST

Part No.	Name	Where Used	Price Each
69105	Governor shaft & flange assembly		.40
69121	Air horn assembly	Carburetor	.80
69130	Oil pump rod	Crankcase	.30
*69137	Piston assembly—standard—including—		4.75
	1 No. 68231 Piston	2 No. 65451 Compression rings	
	1 No. 68161 Oil ring	2 No. 66246 Pin lock rings	
	Note—No. 69347 piston assembly .010" oversize includes.....		
	1 No. 61108 piston .010" oversize		6.00
	1 No. 61009 oil ring .010" oversize		4.00
	2 No. 61010 Compression rings .010" oversize		1.00
	2 No. 66246 Piston pin lock rings		.50
	Note—No. 69348 piston assembly .020" oversize includes.....		
	1 No. 61109 piston .020" oversize		6.00
	1 No. 61016 oil ring .020" oversize		4.00
	2 No. 61012 Compression rings .020" oversize		1.00
	2 No. 66246 Piston pin lock rings		.50
	Note—No. 69349 piston assembly .030" oversize includes.....		
	1 No. 61110 piston .030" oversize		6.00
	1 No. 61017 oil ring .030" oversize		4.00
	2 No. 61013 Compression rings .030" oversize		1.00
	2 No. 66246 Piston pin lock rings		.50
69149	Float	Carburetor	.65
69177	Gas tank with cap No. 65499		4.00
69190	Oil trough & base plate assembly		2.00
69194	Governor gear assembly		1.50
69232	Connecting rod assembly—including		4.50
	2 13A2 Lockwashers		
	2 13A27 Cap screws		
	2 13A34 Shims		
69239	Carburetor cover assembly	Carburetor	1.00
69242	Bell crank with wire swivel		.20
*69275	Ignition cable takes sleeve No. 65847		.50
	Note—For Ignition cable with sleeve braided on order No. 69382		
69278	Air guide with switch	Magneto side	.60
69282	Bearing—including—	Magneto	1.25
	1 No. 63094 Bearing		
	1 No. 68692 Oil retainer ring		
	1 No. 67023 Retainer pin		
69312	Starter chain	Starter unit	1.25
69314	Breather		.80
*69333	Starter unit complete includes:		3.50
	1 No. 62015 Ratchet guard	1 No. 69334 Starter lever & Shaft	
	1 No. 69312 Chain	2 No. 7T17 Lockwashers	
	1 No. 68821 Sprocket	2 No. 90077 Screws	
	1 No. 91165 Rivet	1 No. 66446 Rivet	
69334	Starter lever & shaft		2.00

\*Before ordering read the NOTE immediately below this part number.

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## PARTS AND PRICE LIST

Part No.	Name	Where Used	Price Each
69346	Bearing—includes— No. 63126 Bearing No. 68543 Retainer pin No. 68702 Oil retainer	Crankcase	1.25
69351	Blower case		1.35
69352	Magneto & air guide assembly		12.00
69375	Carburetor bowl		2.70
69408	Carburetor barrel assembly		2.45
69409	Gasket	Oil filler cap	.05
69411	Control casing tube assembly		.55
69412	Cylinder with bearings—See No. 69413		18.50
69413	Cylinder assembly includes:		29.00
	1 No. 69412 Cylinder with bearings and valve seat		
	1 No. 68273 Exhaust valve		
	2 No. 65676 Valve springs		
	2 No. 68293 Spring retainer		
	2 No. 68283 Valve spring retainer collar		
	1 No. 68923 Intake valve		
	2 No. 68303 Cam followers		
	1 No. 68791 Cam gear		
	1 No. 68333 Cam shaft		
	1 No. 68122 Cam shaft plug		
	1 No. 65607 Valve housing gasket		
	1 No. 68291 Valve housing		
	1 No. 67652 Valve guide		
	1 No. 67662 Valve		
	2 No. 7T17 Lockwasher		
	2 No. 13M36 Screw		
69418	Carburetor assembly complete		9.00
69419	Gas pipe assembly		.55
69423	Air cleaner assembly—Complete—Carburetor		3.50
69445	Air filter assembly	Air cleaner	1.50
69446	Wing nut & Stud assembly	Air cleaner	.35
90077	Screw	Ratchet guard	.05
90597	Screw	Governor flange	.01
90680	Set screw	Set collar—Starter unit	.05
90683	Lockwasher	Gas tank bracket	.01
90773	Screw	Gas tank mounting strap	.05
90781	Screw	Carburetor cover	.05
90802	Screw	Valve cover plate	.05
90832	Lockwasher	1—Upper blower bracket 2—Carburetor mounting 1—Governor gear retainer	.01
90879	Screw	Cylinder head	.10
90891	Screw	1—Governor gear retainer 8—Oil pan 1—Bell crank	.05

\*Before ordering read the NOTE immediately below this part number.

## PARTS AND PRICE LIST

Part No.	Name	Where Used	Price Each
90902	Screw	3—Magneto plate to crankcase 2—Carburetor mounting	.05
90916	Screw	1—Upper blower bracket 2—Side blower bracket	.05
90970	Nut	Gas tank mounting strap	.05
91138	Screw	Swivel on bell crank	.05
91165	Rivet	Starter unit	.01
*91214	Headless plug	Carburetor bowl drain	.05
	Note—Replaced by No. 63165		
91242	Lock nut	Exhaust Elbow	.05
91246	Elbow	Exhaust	.40
91247	Screw	Hand crank lever	.15
91248	Nut	Hand crank lever	.05
91256	Machine screw	Air cleaner	.05
91277	Screw	Gas tank bracket to crankcase	.10
91281	Lockwasher	Magneto cover plate to crankcase	.01
91282	Screw	Carburetor bowl to barrel	.05
91284	Screw	Carburetor	.05
91285	Lockwasher	Carburetor	.01
91287	Lockwasher	Carburetor cover to bowl	.01
*91299	Nipple, 2½" long	Exhaust	.15
	Note—For 1¾" long nipple order No. 91245.		
91300	Screw	Oil drain	.05

\*Before ordering read the NOTE immediately below this part number.

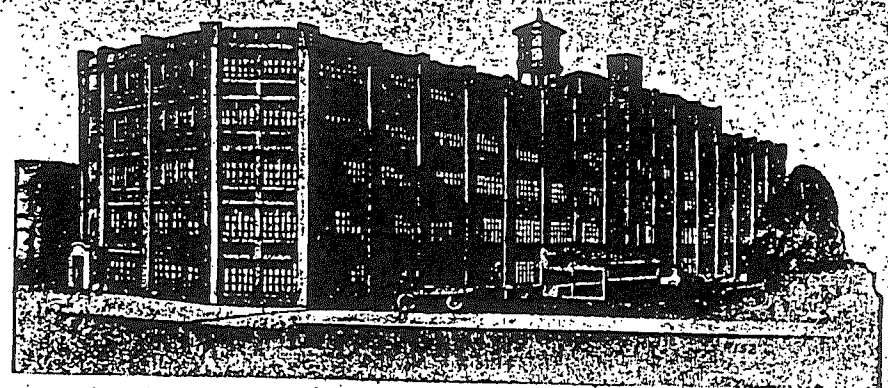
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## ◆ SPECIFICATIONS ◆

### Model "T" Motor

- BEARING**—Bronze backed, babbitt lined.
- BORE**— $2\frac{1}{4}$ "
- CAMS and GEARS**—One piece construction. Cams accurately ground to operate quietly.
- CARBURETOR**—New float feed, adjustable, insuring quick starting and uniform running.
- COOLING**—By strong air current from specially designed flywheel operating in blower case, with extra large cooling fins on cylinder and cylinder head, insuring cool motor at all times.
- CONNECTING ROD**—Aluminum alloy. Large split bearing on crankshaft.
- CRANKSHAFT**—Drop forged 1045 S. A. E. material, counterbalanced to reduce vibration.
- CYLINDER HEAD**—L head removable. Equipped with large fins for efficient cooling.
- GASOLINE CAPACITY**— $2\frac{1}{2}$  Pints.
- GOVERNOR**—Mechanical type—hold speed automatically.
- IGNITION**—High tension magneto built in flywheel. Moisture and dust-proof. Standard 18 M. M. Metric spark plug.
- LUBRICATION**—Splash type. All parts positively oiled by oil pump driven from cam shaft which maintains constant oil level in splash trough, insuring positive lubrication as long as motor has oil. No outside parts to lubricate.
- OIL CAPACITY**—1 Pint.
- PISTON**—Light weight aluminum alloy with two compression rings and one oil ring.
- POWER**— $\frac{1}{2}$  H. P. at normal speed.
- SPEED**—1800 R. P. M.
- STARTING**—Hand lever starter equipped with positive chain and sprocket drive.
- STROKE**— $2\frac{1}{4}$ "
- VALVES**—Stems enclosed and lubricated by oil spray from crankcase.

Briggs & Stratton Corporation  
Milwaukee, Wis., U.S. A.



### WHERE BRIGGS & STRATTON MOTORS ARE MADE

**Y**OUR Model "T" Gasoline Motor is one of the many thousands which are manufactured annually in this modern Briggs & Stratton factory at Milwaukee, Wisconsin. More small gasoline motors are produced here than in any other single plant in the world. The building is complete with all modern facilities for precision construction, economical production, rigid inspection and thorough testing. Briggs & Stratton gasoline motors, made here, are shipped to all parts of the world because of their established reputation for reliable service under widely varying conditions.