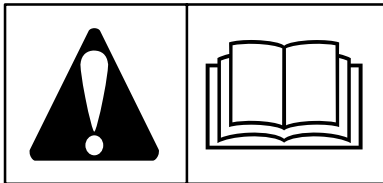
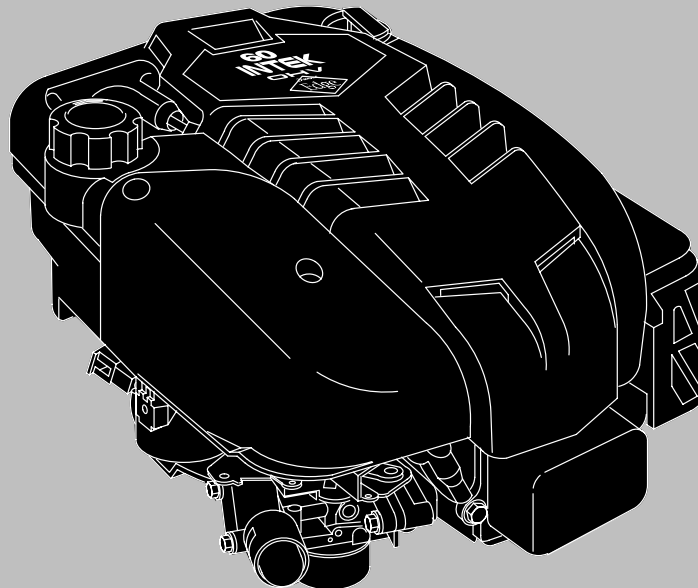




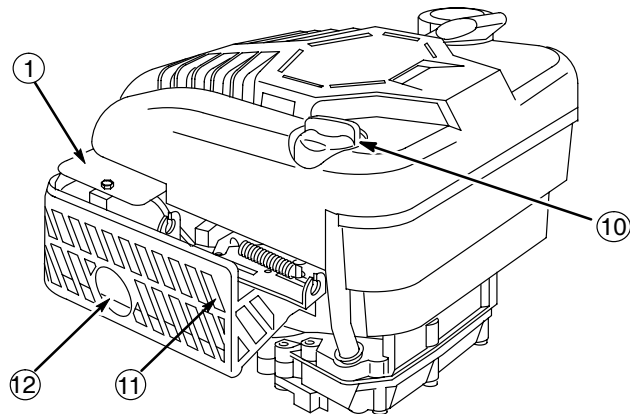
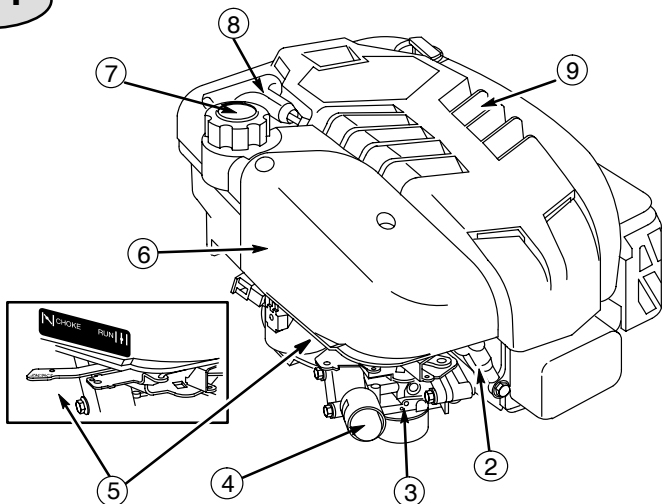
**Intek™**  
**110000, 120000**



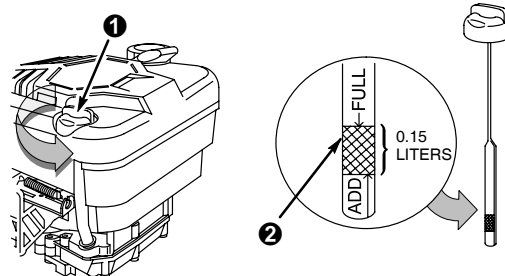
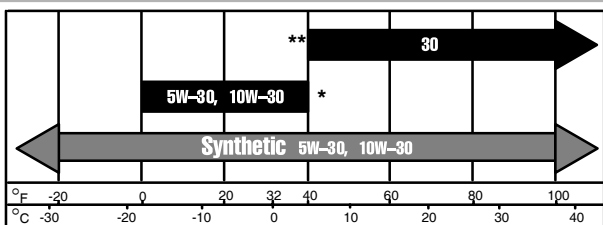
- Ⓜ **Operating & Maintenance Instructions**
- Ⓜ **Betriebsanleitung & Wartungsvorschriften**
- Ⓜ **Drifts- og vedligeholdelsesvejledning**
- Ⓜ **Instrucciones de Mantenimiento & Operación**
- Ⓜ **Instructions d'utilisation et de maintenance**
- Ⓜ **Οδηγίες Λειτουργίας & Συντήρησης**
- Ⓜ **Istruzioni per l'uso e la manutenzione**
- Ⓜ **Anvisninger for bruk og vedlikehold**
- Ⓜ **Gebruiksaanwijzing**
- Ⓜ **Instruções de operação e de manutenção**
- Ⓜ **Instruktionsbok**
- Ⓜ **Käyttö & Huolto-ohjeet**



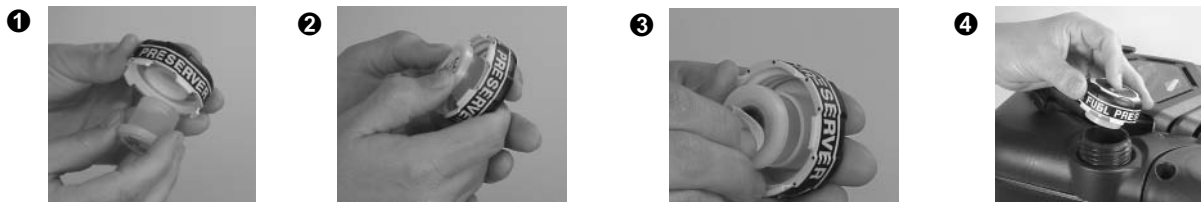
**Fig. 1**



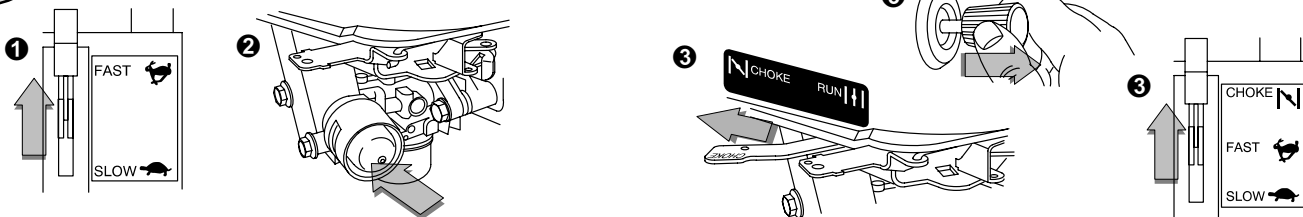
**Fig. 2**



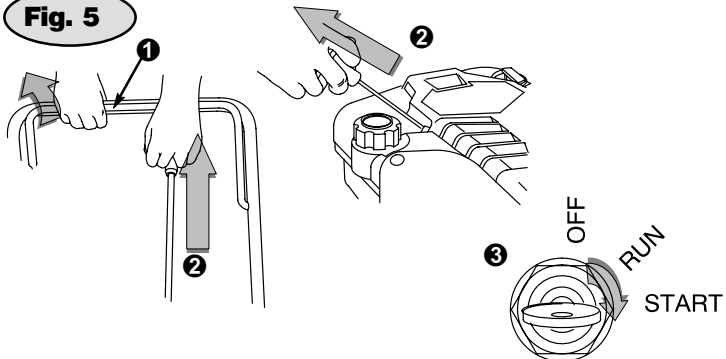
**Fig. 3**



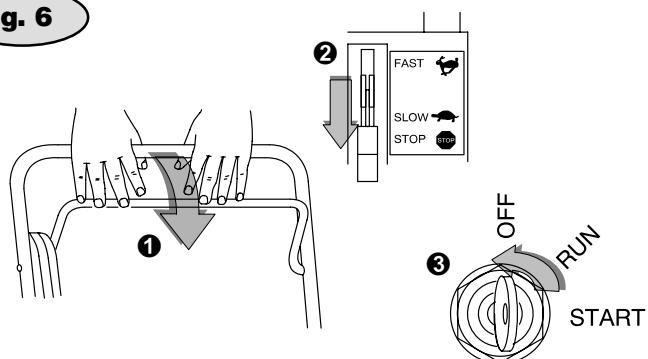
**Fig. 4**



**Fig. 5**



**Fig. 6**



Note: (This note applies only to engines used in the U.S.A.) Maintenance, replacement or repair of the emission control devices and systems may be performed by any nonroad engine repair establishment or individual. However, to obtain no charge repairs under the terms and provisions of the Briggs & Stratton warranty statement, any service or emission control part repair or replacement must be performed by a factory authorized dealer.



## ENGINE COMPONENTS

- Fig. 1** ① Engine Model Type Code  
 XXXXXX XXXX XX XXXXXXXX
- ② Resistor spark plug
  - ③ Carburetor
  - ④ Primer bulb, if equipped
  - ⑤ Choke lever, if equipped
  - ⑥ Air cleaner
  - ⑦ Fuel fill
  - ⑧ Rope handle
  - ⑨ Finger guard
  - ⑩ Oil fill/Dipstick
  - ⑪ Muffler guard
  - ⑫ Muffler/spark arrester, if equipped

Record your engine Model, Type and Code numbers here for future use.

Record your date of purchase here for future use.

## TECHNICAL INFORMATION

### Power Ratings

The power ratings for an individual engine model are initially developed by starting with SAE (Society of Automotive Engineers) code J1940 (Small Engine Power & Torque Rating Procedure) (Revision 2002-05). Given both the wide array of products on which our engines are placed, and the variety of environmental issues applicable to operating the equipment, it may be that the engine you have purchased will not develop the rated horsepower when used in a piece of power equipment (actual "on-site" power). This difference is due to a variety of factors including, but not limited to, the following: differences in altitude, temperature, barometric pressure, humidity, fuel, engine lubrication, maximum governed engine speed, individual engine to engine variability, design of the particular piece of power equipment, the manner in which the engine is operated, engine run-in to reduce friction and clean out of combustion chambers, adjustments to the valves and carburetor, and other factors. The power ratings may also be adjusted based on comparisons to other similar engines utilized in similar applications, and will therefore not necessarily match the values derived using the foregoing codes.

## GENERAL INFORMATION

In the state of California, OHV Model Series 110000 and 120000 engines are certified by the California Air Resources Board to meet emissions standards for 125 hours. Such certification does not grant the purchaser, owner or operator of this engine any additional warranties with respect to the performance or operational life of this engine. This engine is warranted solely according to the product and emissions warranties stated elsewhere in this manual.

### Model Series 110000

Bore ..... 68.26 mm (2.69 in.)  
 Stroke ..... 46.00 mm (1.80 in.)  
 Displacement ..... 167 cc (10.20 cu. in.)

### Model Series 120000

Bore ..... 68.26 mm (2.69 in.)  
 Stroke ..... 52.00 mm (2.05 in.)  
 Displacement ..... 190 cc (11.58 cu. in.)

## TUNE-UP SPECIFICATIONS

- Armature air gap ..... 0.25 - 0.36 mm  
 ..... (0.010 - 0.014 in.)
- Spark plug gap ..... 0.51 mm (0.20 in.)
- Valve clearance with valve springs installed and piston 6 mm past top dead center (check when engine is cold). See Repair Manual P/N 272147.
- Intake valve clearance ..... 0.10 - 0.20 mm  
 ..... (0.004 - 0.008 in.)
- Exhaust valve clearance ..... 0.10 - 0.20 mm  
 ..... (0.004 - 0.008 in.)

Note: Engine power will decrease 3-1/2% for each 1,000 feet (300 meters) above sea level and 1% for each 10° F (5.6° C) above 77° F (25° C).

## SAFETY SPECIFICATIONS

### BEFORE OPERATING ENGINE

- Read entire Operating & Maintenance Instructions AND the instructions for the equipment this engine powers.\*
- Failure to follow instructions could result in serious injury or death.

\* Briggs & Stratton does not necessarily know what equipment this engine will power. For that reason, you should carefully read and understand the operating instructions for the equipment on which your engine is placed.

### THE OPERATING & MAINTENANCE INSTRUCTIONS CONTAIN SAFETY INFORMATION TO:

- Make you aware of hazards associated with engines
- Inform you of the risk of injury associated with those hazards, and
- Tell you how to avoid or reduce the risk of 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.**

**WARNING**

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

## Hazard Symbols and Meanings

Fire

Explosion

Shock

Kickback

Toxic Fumes

Hot Surface

Hazardous Chemical

Moving Parts

## International Symbols and Meanings

Safety Alert

Choke

Read Operator's Manual

Oil

Fuel

Fuel Shutoff

On Off

Stop

**DANGER**

Contents are **HARMFUL OR FATAL IF SWALLOWED**. Avoid contact to eyes, skin, or clothing. Do not take internally. Avoid breathing the mist or vapor. Overexposure to eyes or skin can cause irritation. Keep stabilizer out of the reach of children.

Fuel stabilizer is a hazardous chemical.\*\*

- Fresh Start™ fuel cap is designed to hold a cartridge which contains fuel stabilizer.
- IF SWALLOWED, call physician immediately. Do not induce vomiting. If inhaled, remove to fresh air. In case of eye or skin contact, flush with water for 15 minutes.
- Store unopened cartridges in a cool, dry, well-ventilated area. Keep open cartridge in fuel cap, and fuel cap closed on fuel tank when not in use.

\*\* Fuel stabilizer contains 2,6-di-tert-butylphenol (128-39-2) and aliphatic petroleum distillate (64742-47-8).



### WARNING

Gasoline and its vapors are extremely flammable and explosive.



Fire or explosion can cause severe burns or death.

#### 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.
- Do not overfill fuel tank. Fill tank to approximately 1-1/2 inches below top of neck to allow for fuel expansion.
- Keep gasoline away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.

#### WHEN STARTING ENGINE

- Make sure spark plug, muffler, fuel cap and air cleaner are in place.
- Do not crank engine with spark plug removed.
- If fuel spills, wait until it evaporates before starting engine.
- If engine floods, set choke to OPEN/RUN position, place throttle in FAST and crank until engine starts.

#### WHEN OPERATING EQUIPMENT

- Do not tip engine or equipment at angle which causes gasoline to spill.
- Do not choke carburetor to stop engine.

#### WHEN TRANSPORTING EQUIPMENT

- Transport with fuel tank EMPTY or with fuel shut-off valve OFF.

#### WHEN STORING GASOLINE OR EQUIPMENT WITH FUEL IN TANK

- Store away from furnaces, stoves, water heaters or other appliances that have pilot light or other ignition source because they can ignite gasoline vapors.



### WARNING

Starting engine creates sparking.



Sparking can ignite nearby flammable gases.

Explosion and fire could result.

- If there is natural or LP gas leakage in area, do not start engine.
- Do not use pressurized starting fluids because vapors are flammable.



### WARNING

Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go.

Broken bones, fractures, bruises or sprains could result.

- When starting engine, pull cord slowly until resistance is felt, then pull rapidly.
- Remove all external equipment/engine loads before starting engine.
- Direct coupled equipment components such as, but not limited to, blades, impellers, pulleys, sprockets, etc., must be securely attached.



### WARNING

Engines give off carbon monoxide, an odorless, colorless, poison gas.

Breathing carbon monoxide can cause nausea, fainting or death.

- Start and run engine outdoors.
- Do not start or run engine in enclosed area, even if doors or windows are open.



### WARNING



Running engines produce heat. Engine parts, especially muffler, become extremely hot.

Severe thermal burns can occur on contact.

Combustible debris, such as leaves, grass, brush, etc. can catch fire.

- Allow muffler, engine cylinder and fins to cool before touching.
- Remove accumulated combustibles from muffler area and cylinder area.
- Install and maintain in working order a spark arrester before using equipment on forest-covered, grass-covered, brush-covered unimproved land. The state of California requires this (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.



### WARNING

Rotating parts can contact or entangle hands, feet, hair, clothing, or accessories.

Traumatic amputation or severe laceration can result.

- Operate equipment with guards in place.
- Keep hands and feet away from rotating parts.
- Tie up long hair and remove jewelry.
- Do not wear loose-fitting clothing, dangling drawstrings or items that could become caught.



### WARNING



Unintentional sparking can result in fire or electric shock.

Unintentional start-up can result in entanglement, traumatic amputation, or laceration.

#### BEFORE PERFORMING ADJUSTMENTS OR REPAIRS

- Disconnect spark plug wire and keep it away from spark plug.
- Disconnect battery at negative terminal (only engines with electric start).

#### WHEN TESTING FOR SPARK

- Use approved spark plug tester.
- Do not check for spark with spark plug removed.

## OIL RECOMMENDATIONS

### CAUTION:

Engine shipped from Briggs & Stratton without oil. Before starting engine, fill with oil. Do not over-fill.

Use a high quality detergent oil classified "For Service SF, SG, SH, SJ" or higher such as Briggs & Stratton 30, Part Number 100005. Use no special additives with recommended oils. Do not mix oil with gasoline.

Fig. 2

Choose the SAE viscosity grade of oil from this chart that matches the starting temperature anticipated before the next oil change.

- \* Air cooled engines run hotter than automotive engines. The use of non-synthetic multi-viscosity oils (5W-30, 10W-30, etc.) in temperatures above 40° F (4° C) will result in higher than normal oil consumption. When using a multi-viscosity oil, check oil level more frequently.
- \*\* Use of SAE 30 oil below 40° F (4° C) will result in hard starting and possible engine damage due to inadequate lubrication.



**Note:** Synthetic oil meeting ILSAC GF-2, API certification mark and API service symbol (shown at left) with "SJ/CF ENERGY CONSERVING" or higher, is an acceptable oil at all temperatures.

**Use of synthetic oil does not alter required oil change intervals.**

#### Check oil level.

Oil capacity is about (22 ounces or .65 liter) if engine is not equipped with oil filter. If engine is equipped with oil filter, add 4 more ounces (.1 liter) when changing oil filter.

Place engine level and clean around oil fill ❶.

Remove dipstick, wipe with clean cloth, insert and tighten down again. Remove dipstick and check oil level. Oil should be at FULL mark ❷.

If oil is required, add slowly. Tighten dipstick firmly before starting engine.

## FUEL RECOMMENDATIONS

Use clean, fresh, lead-free, regular gasoline with a minimum of 85 octane. Leaded gasoline may be used if it is commercially available and if unleaded is unavailable. Purchase fuel in quantity that can be used within 30 days. See storage instructions.

In U.S.A. leaded gasoline may not be used. Some fuels, called oxygenated or reformulated gasolines, are gasolines blended with alcohols or ethers. Excessive amounts of these blends can damage the fuel system or cause performance problems. If any undesirable operating symptoms occur, use gasoline with a lower percentage of alcohol or ether.

This engine is certified to operate on gasoline. Exhaust Emission Control System: EM (Engine Modifications).

Do not use gasoline which contains Methanol. Do not mix oil with gasoline.

For engine protection, we recommend using Briggs & Stratton Fuel Stabilizer available from an Authorized Briggs & Stratton Service Dealer.

#### ADDING FUEL

### WARNING





Before refueling, allow engine to cool 2 minutes.

Clean around fuel fill before removing cap to refuel. Remove cap. Fill tank to approximately 1-1/2 inches below top of neck to allow for fuel expansion. Be careful not to overfill.

**Note:** Remove and discard blue plug in fuel fill.

### Fig. 3 FRESH START™ FUEL CAP

Your engine may be equipped with a Fresh Start™ fuel cap.

	 <b>DANGER</b>
	<p>Contents are <b>HARMFUL OR FATAL IF SWALLOWED</b>. Avoid contact to eyes, skin, or clothing. Do not take internally. Avoid breathing the mist or vapor. Overexposure to eyes or skin can cause irritation. Keep stabilizer out of the reach of children.</p> <p>Fuel stabilizer is a hazardous chemical.**</p>

\*\* Fuel stabilizer contains 2,6-di-tert-butylphenol (128-39-2) and aliphatic petroleum distillate (64742-47-8).

1. Place cartridge into fuel cap. ①
2. Push to “snap” cartridge into place. ②
3. Remove the tab to expose membrane ③
4. Reinstall fuel cap on engine fuel tank. ④
5. Periodically check the cartridge ④ to ensure there is still stabilizer liquid inside. If it is empty, remove cartridge and replace.

### STARTING/STOPPING

 <b>WARNING</b>		
		

### Fig. 4 BEFORE STARTING

- Check oil level.
- Add fuel and re-install fuel cap.
- Move throttle control to FAST position. ①
- Push primer bulb 3 times, if equipped. ②
- Move choke lever to close. ③

### Fig. 5 STARTING ENGINE


- Pull back safety brake control handle ① then,
- Pull rope handle ② slowly until resistance is felt. Then pull cord rapidly to overcome compression, prevent kickback and start engine.
- **OR**, Turn key to start. ③

#### CAUTION:

To prolong starter life, use short starting cycles (5 seconds maximum, then wait one minute). Follow equipment manufacturer's recommendations for charging battery.


- Allow engine to warm up.  
**If choke equipped:**  
Slowly adjust toward RUN position. Wait until engine runs smoothly before each choke adjustment.

### Fig. 6 STOPPING

 <b>WARNING</b>	<p>Do not stop engine by moving choke control to <b>CHOKE</b>. Backfire, fire or engine damage could occur.</p>
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- Release safety brake control handle ① **OR** move throttle control to stop ②.
- **OR**, Turn key off and remove. ③

### MAINTENANCE

 <b>WARNING</b>	<p>To prevent accidental starting, remove spark plug wire ① and ground it before servicing.</p>
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We recommend that you see an authorized Briggs & Stratton Dealer for all maintenance and service. Use only Briggs & Stratton parts.

 <b>WARNING</b>	<p>Do not strike the flywheel with hammer or hard object. If done, the flywheel may shatter during operation.</p> <p>Do not tamper with governor spring, links or other parts to increase engine speed.</p>
--	---

#### CAUTION:

If engine must be tipped to transport equipment or to inspect or remove grass, **keep spark plug side of engine up.**

### Fig. 7 CHANGING ENGINE OIL

 <b>WARNING</b>	
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Change oil after first 5 hours of operation. Change oil while engine is warm. Refill with new oil of recommended SAE viscosity grade.

1. Preferably drain oil from top of engine as illustrated. If draining oil from top of engine, keep air cleaner ② side up. Oil can also be drained with spark plug side up.
2. **OR**, Oil can be drained from bottom if necessary. By removing drain plug ③ with a ratchet and square extension ④, oil can be drained from engine bottom.

Follow the hourly or calendar intervals, whichever occur first. More frequent service is required when operating in adverse conditions noted below.

#### First 5 Hours

- Change oil

#### Every 8 hours or daily

- Check oil level
- Clean debris\*\*\*
- Clean around muffler

#### Every 25 hours or every season

- Change oil if operating under heavy load or high ambient temperature
- Service air cleaner \*

#### Every 50 hours or every season

- Change oil
- Inspect spark arrester, if equipped

#### Every 100 hours or every season

- Service air cleaner cartridge, if equipped with pre-cleaner\*
- Clean air cooling system\*
- Change oil filter, if equipped.
- Replace in line fuel filter, if equipped.
- Replace spark plug\*\*

\* Clean more often under dusty conditions, or when airborne debris is present or after prolonged operation cutting tall, dry grass.

\*\* In some areas, local law requires using a resistor spark plug to suppress ignition signals. If this engine was originally equipped with resistor spark plug, use same type of spark plug for replacement.

\*\*\* On string trimmer applications: clean debris at each refueling, sooner if needed;

have qualified technician clean air cooling system every 30 hours, every season, sooner if needed especially in high debris conditions.

### OIL FILTER

Change oil filter ⑤, if equipped

Replace oil filter after every 100 hours of operation.

1. Drain engine oil.
2. Before installing new filter, lightly oil filter gasket with fresh, clean oil.
3. Screw filter on by hand until gasket contacts oil filter adapter. Tighten 1/2 to 3/4 turn more.
4. Refill engine with fresh oil.
5. Start and run engine at idle to check for leaks. Stop engine.
6. Re-check oil level. Add oil if required.

### Fig. 8 AIR CLEANER

All engines have an air cleaner cartridge. The cartridge is either flat or oval (see illustrations). In addition, some engines have a pre-cleaner.

#### CAUTION:

Do not use pressurized air or solvents to clean cartridge. Pressurized air can damage cartridge; solvents will dissolve cartridge.

#### PRE-CLEANER

To clean pre-cleaner (if equipped), separate it from cartridge and wash in liquid detergent and water. Air dry thoroughly. Do not oil pre-cleaner. Re-assemble dry pre-cleaner on clean cartridge.

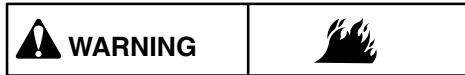
#### OVAL AIR CLEANER

1. Loosen screws ② and lift cover ③.
2. Carefully remove pre-cleaner ④ (if equipped) and cartridge assembly ⑤.
3. After servicing pre-cleaner and cartridge, assemble pre-cleaner on cartridge.
4. Install cartridge/pre-cleaner assembly in base ⑥.
5. Place cover on air cleaner and tighten screws securely to base.

#### SQUARE AIR CLEANER

1. Loosen screw ② and tilt cover ③ down. Carefully remove pre-cleaner ④ (if equipped) and cartridge ⑤ assembly from cover
2. After servicing pre-cleaner and cartridge, place pre-cleaner, if equipped, over cartridge pleats with arrows in direction shown (pre-cleaner lip ⑥ will be at bottom of pleats).
3. Install pre-cleaner and cartridge assembly in cover.
4. Insert tabs on cover into slots ⑦ in bottom of base.
5. Tilt cover up and tighten screw securely to base.

## FUEL SYSTEM

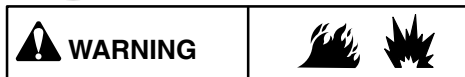


Replacement parts for fuel system (tank, hoses, valves, etc.) must be the same quality as original parts, otherwise fire can occur.

### Replacing Fuel Filter

- Remove the engine cover. Replace fuel filter. Check filter for water or debris. If found, clean fuel system. Reinstall the engine cover.

### Fig. 9 SPARK PLUG



DO NOT check for spark with spark plug removed. Use only Briggs & Stratton Spark Tester ②, to check for spark.

- The electrodes on the spark plug must be clean and sharp to produce the powerful spark required for ignition. If the spark plug is worn or dirty the engine will be hard to start.
- Ensure spark plug gap ③ is 0.51 mm or 0.020 in.

### VALVE CLEARANCE

Under certain running conditions, engines may require periodic valve clearance adjustment. Consult the repair manual, Part No. 275110, or see your Authorized Briggs & Stratton Service Dealer for adjustment procedure.

### Fig. 10 CLEANING DEBRIS

Engine and parts should be kept clean to maintain freedom of movement, and to reduce the risk of overheating from accumulated debris.

To assure smooth operation, keep governor linkage, springs and controls ④ free of debris.

**Note:** On string trimmer applications, clean accumulated debris at each refueling, sooner if needed

Accumulation of debris around muffler ⑤ could cause a fire. Inspect and clean before every use.

If muffler is equipped with spark arrester screen ⑥, remove spark arrester screen for cleaning and inspection. Replace if damaged.

Periodically remove grass and chaff build-up from engine. Clean finger guard ⑦.

**CAUTION:**  
DO NOT use water to clean engine parts. Water could contaminate fuel system. Use a brush or dry cloth.

## ADJUSTMENTS

### Fig. 11

### THROTTLE CONTROL ADJUSTMENT

Loosen casing clamp screw ②. Move governor control lever ③ in direction of arrow as far as possible. Move throttle control to FAST position. Tighten casing clamp screw.

### FIXED ADJUSTABLE CONTROL

This governor control lever ④ was set to the equipment manufacturer's requirements. If adjustment is required, consult an Authorized Briggs & Stratton Service Dealer.

### CHECK STOP SWITCH

Move throttle control to STOP position, if so equipped. Governor control lever ⑤ must make good contact with stop switch ⑥.

Check operation of controls. Readjust if necessary.

### CARBURETOR ADJUSTMENT

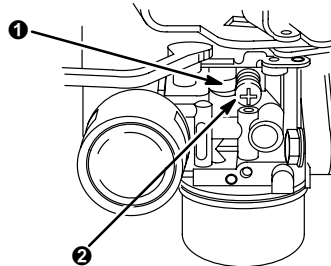


A primer equipped carburetor is not adjustable and the engine will idle down only 600 to 900 rpm, which accounts for the higher than expected idle speed.

If the engine controls are fixed speed, the engine will not idle down at all.

See an Authorized Briggs & Stratton Dealer for carburetor adjustment of a choke equipped engine.

On a choke equipped carburetor air/fuel mixture is not adjustable. Use a tachometer to adjust idle speed. Start engine and warm up about 5 minutes. With engine running, place equipment throttle control in SLOW position. Rotate carburetor throttle lever ① against the idle speed screw and hold while adjusting the idle speed screw ② to obtain 1750 rpm. (Governed idle has been set to 2000 at the factory.)



## STORAGE

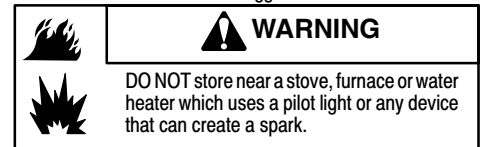
Engines stored over 30 days need special attention. To prevent gum from forming in fuel system or on essential carburetor parts:

a) if fuel tank contains oxygenated or reformulated gasoline (gasoline blended with an alcohol or an ether), run engine until it stops from lack of fuel, or b) if fuel tank contains gasoline, either run engine until it stops from lack of fuel, or add a gasoline stabilizer to the gas in the tank.

**Note:** If stabilizer is used, run the engine for several minutes to circulate the additive through the carburetor. Then engine and fuel can be stored.

- Change oil.
- Remove spark plug and pour about 15 ml (1/2 oz.) of engine oil into cylinder. Replace spark plug and crank slowly to distribute oil.
- Clean engine of debris.
- Store in a clean and dry area.

We recommend use of Briggs & Stratton Fuel Stabilizer available from all Authorized Briggs & Stratton Service Dealer.



## SERVICE

We recommend that you see an authorized Briggs & Stratton Service Dealer for all maintenance and service of the outboard and outboard parts. Use only genuine Briggs & Stratton parts. Each Authorized Briggs & Stratton Service Dealer carries a stock of Genuine Briggs & Stratton Parts and is equipped with special service tools. Trained mechanics assure expert repair service on all Briggs & Stratton engines. Only dealers recognized as "Authorized Briggs & Stratton" meet the higher Briggs & Stratton service standards.

You may locate your nearest Authorized Briggs & Stratton Service Dealer in our dealer locator map on our web site

[www.briggspowerproducts.com](http://www.briggspowerproducts.com) or in the  "Yellow

Pages™" directory under "Lawn Mowers" or "Engines, Gasoline" or "Gasoline Engines," or similar category.

**Note:** Walking fingers logo and "Yellow Pages" are registered trademarks in various jurisdictions.

### Partial List of Genuine Briggs & Stratton Parts

Part	Part No.
Oil (20 oz.)	100005
Oil (48 oz.)	100028
Oil filter	692513
Oil pump kit (uses standard electric drill to remove oil from engine quickly)	5056
Fuel stabilizer (1 oz., 30 ml single use pouch)	5058
Fuel stabilizer (4.2 oz., 125 ml bottle)	5041
Fuel filter	298090 (5018)
Flat air cleaner cartridge	491588 (5043)
Flat air cleaner pre-cleaner	493537
Oval air cleaner cartridge	498596
Oval air cleaner pre-cleaner	273356
Resistor spark plug	499608
Long life platinum spark plug (OHV engines - set gap to .020 in. or .50 mm)	5066
Spark tester	19368
Spark plug wrench	19374

**Briggs & Stratton Corporation (B&S),  
the California Air Resources Board (CARB)  
and the United States  
Environmental Protection Agency (U.S. EPA)  
Emission Control System Warranty Statement  
(Owner's Defect Warranty Rights and Obligations)**

EMISSION CONTROL WARRANTY COVERAGE IS APPLICABLE TO CERTIFIED ENGINES PURCHASED IN CALIFORNIA IN 1995 AND THEREAFTER, WHICH ARE USED IN CALIFORNIA, AND TO CERTIFIED MODEL YEAR 1997 AND LATER ENGINES WHICH ARE PURCHASED AND USED ELSEWHERE IN THE UNITED STATES (AND AFTER JANUARY 1, 2001 IN CANADA).

**California, United States and Canada Emission Control Defects Warranty Statement**

The California Air Resources Board (CARB), U.S. EPA and B&S are pleased to explain the Emission Control System Warranty on your model year 2000 and later small off-road engine (SORE). In California, new small off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. Elsewhere in the United States, new non-road, spark-ignition engines certified for model year 1997 and later, must meet similar standards set forth by the U.S. EPA. B&S must warrant the emission control system on your engine for the periods of time listed below, provided there has been no abuse, neglect or improper maintenance of your small off-road engine.

Your emission control system includes parts such as the carburetor, air cleaner, ignition system, muffler and catalytic converter. Also included may be connectors and other emission related assemblies.

Where a warrantable condition exists, B&S will repair your small off-road engine at no cost to you including diagnosis, parts and labor.

**Briggs & Stratton Emission Control Defects Warranty Coverage**

Small off-road engines are warranted relative to emission control parts defects for a period of two years, subject to provisions set forth below. If any covered part on your engine is defective, the part will be repaired or replaced by B&S.

**Owner's Warranty Responsibilities**

As the small off-road engine owner, you are responsible for the performance of the required maintenance listed in your Operating and Maintenance Instructions. B&S recommends that you retain all your receipts covering maintenance on your small off-road engine, but B&S cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

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

You are responsible for presenting your small off-road engine to an Authorized B&S Service Dealer as soon as a problem exists. The undisputed warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact a B&S Service Representative at 1-414-259-5262.

The emission warranty is a defects warranty. Defects are judged on normal engine performance. The warranty is not related to an in-use emission test.

**Briggs & Stratton Emission Control Defects Warranty Provisions**

The following are specific provisions relative to your Emission Control Defects Warranty Coverage. It is in addition to the B&S engine warranty for non-regulated engines found in the Operating and Maintenance Instructions.

**1. Warranted Parts**

Coverage under this warranty extends only to the parts listed below (the emission control systems parts) to the extent these parts were present on the engine purchased.

- a. Fuel Metering System
  - Cold start enrichment system (soft choke)
  - Carburetor and internal parts
  - Fuel Pump
- b. Air Induction System
  - Air cleaner
  - Intake manifold
- c. Ignition System
  - Spark plug(s)
  - Magneto ignition system
- d. Catalyst System
  - Catalytic converter
  - Exhaust manifold
  - Air injection system or pulse valve
- e. Miscellaneous Items Used in Above Systems
  - Vacuum, temperature, position, time sensitive valves and switches
  - Connectors and assemblies

**2. Length of Coverage**

B&S warrants to the initial owner and each subsequent purchaser that the Warranted Parts shall be free from defects in materials and workmanship which caused the failure of the Warranted Parts for a period of two years from the date the engine is delivered to a retail purchaser.

**3. No Charge**

Repair or replacement of any Warranted Part will be performed at no charge to the owner, including diagnostic labor which leads to the determination that a Warranted Part is defective, if the diagnostic work is performed at an Authorized B&S Service Dealer. For emissions warranty service contact your nearest Authorized B&S Service Dealer as listed in the "Yellow Pages" under "Engines, Gasoline," "Gasoline Engines," "Lawn Mowers," or similar category.

**4. Claims and Coverage Exclusions**

Warranty claims shall be filed in accordance with the provisions of the B&S Engine Warranty Policy. Warranty coverage shall be excluded for failures of Warranted Parts which are not original B&S parts or because of abuse, neglect or improper maintenance as set forth in the B&S Engine Warranty Policy. B&S is not liable to cover failures of Warranted Parts caused by the use of add-on, non-original, or modified parts.

**5. Maintenance**

Any Warranted Part which is not scheduled for replacement as required maintenance or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted as to defects for the warranty period. Any Warranted Part which is scheduled for replacement as required maintenance shall be warranted as to defects only for the period of time up to the first scheduled replacement for that part. Any replacement part that is equivalent in performance and durability may be used in the performance of any maintenance or repairs. The owner is responsible for the performance of all required maintenance, as defined in the B&S Operating and Maintenance Instructions.

**6. Consequential Coverage**

Coverage hereunder shall extend to the failure of any engine components caused by the failure of any Warranted Part still under warranty.

**Look For Relevant Emission Durability Period and Air Index Information On Your Engine Emission Label**

Engines that are certified to meet the California Air Resources Board (CARB) Tier 2 Emission Standards must display information regarding the Emissions Durability Period and the Air Index. Briggs & Stratton makes this information available to the consumer on our emission labels. The engine label will indicate certification information.

The **Emission Durability Period** describes the number of hours of actual running time for which the engine is certified to be emission compliant, assuming proper maintenance in accordance with the Operating & Maintenance Instructions. The following categories are used:

**Moderate:** Engine is certified to be emission compliant for 125 hours of actual engine running time.

**Intermediate:** Engine is certified to be emission compliant for 250 hours of actual engine running time.

**Extended:** Engine is certified to be emission compliant for 500 hours of actual engine running time.

For example, a typical walk-behind lawn mower is used 20 to 25 hours per year. Therefore, the **Emission Durability Period** of an engine with an **intermediate** rating would equate to 10 to 12 years.

The **Air Index** is a calculated number describing the relative level of emission for a specific engine family. The lower the **Air Index**, the cleaner the engine. This information is displayed in graphical form on the emission label.

**After July 1, 2000, Look For Emissions Compliance Period On Engine Emissions Compliance Label**

After July 1, 2000 certain Briggs & Stratton engines will be certified to meet the United States Environmental Protection Agency (USEPA) Phase 2 emission standards. For Phase 2 certified engines, the Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emission requirements. For engines less than 225 cc displacement, Category C = 125 hours, B = 250 hours and A = 500 hours. For engines of 225 cc or more, Category C = 250 hours, B = 500 hours and A = 1000 hours.

The displacement of Model Series 110000 engines is 167cc.

The displacement of Model Series 120000 engines is 190cc.

This is a generic representation of the emission label typically found on a certified engine.



# BRIGGS & STRATTON ENGINE OWNER WARRANTY POLICY

Effective January 1, 2003 replaces all undated Warranties and all Warranties dated before January 1, 2003

## LIMITED WARRANTY

Briggs & Stratton Corporation will repair or replace, free of charge, any part(s) of the engine that is defective in material or workmanship or both. Transportation charges on parts submitted for repair or replacement under this warranty must be borne by purchaser. This warranty is effective for the time periods and subject to the conditions stated below. For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at [www.briggsandstratton.com](http://www.briggsandstratton.com), or by calling 1-800-233-3723, or as listed in the 'Yellow Pages'™.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM PURCHASE, OR TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. Some states or countries do not allow limitations on how long an implied warranty lasts, and some states or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state and country to country.

## OUR PRODUCT

<b>VANGUARD™</b>	<b>ELS™ I/C® Industrial Plus™ Intek™ (Sleeve Bore)</b>	<b>Force™ Intek™ (Kool Bore) Power Built™ OHV QUANTUM® Quattro™ Q45™ Sprint™</b>	<b>Classic™</b>	<b>Etek™</b>
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## WARRANTY PERIOD\*

Consumer Use	2 years	2 years	2 years	1 year	1 year
Commercial Use		1 year	90 days	90 days	

\* Note the following special warranty periods: **2 years** for Classic™ engines in the European Union and Eastern European countries, for all consumer products in the European Union, and for emission control systems on engines certified by EPA and CARB. **5 years** for consumer use, 90 days for commercial use of Touch-N-Mow® starter on Quantum® and Intek™ engines. **Engines used in competitive racing or on commercial or rental tracks are not warrantied.**

The warranty period begins on the date of purchase by the first retail consumer or commercial end user, and continues for the period of time stated in the table above. "Consumer use" means personal residential household use by a retail consumer. "Commercial use" means all other uses, including use for commercial, income producing or rental purposes. Once an engine has experienced commercial use, it shall thereafter be considered as a commercial use engine for purposes of this warranty.

**NO WARRANTY REGISTRATION IS NECESSARY TO OBTAIN WARRANTY ON BRIGGS & STRATTON PRODUCTS. SAVE YOUR PROOF OF PURCHASE RECEIPT. IF YOU DO NOT PROVIDE PROOF OF THE INITIAL PURCHASE DATE AT THE TIME WARRANTY SERVICE IS REQUESTED, THE MANUFACTURING DATE OF THE PRODUCT WILL BE USED TO DETERMINE THE WARRANTY PERIOD.**

## ABOUT YOUR ENGINE WARRANTY

Briggs & Stratton welcomes warranty repair and apologizes to you for being inconvenienced. Any Authorized Service Dealer may perform warranty repairs. Most warranty repairs are handled routinely, but sometimes requests for warranty service may not be appropriate. For example, warranty would not apply if engine damage occurred because of misuse, lack of routine maintenance, shipping, handling, warehousing or improper installation. Similarly, warranty is void if the serial number of the engine has been removed or the engine has been altered or modified.

If a customer differs with the decision of the Service Dealer, an investigation will be made to determine whether the warranty applies. Ask the Service Dealer to submit all supporting facts to his Distributor or the Factory for review. If the Distributor or the Factory decides that the claim is justified, the customer will be fully reimbursed for those items that are defective. To avoid misunderstanding which might occur between the customer and the Dealer, listed below are some of the causes of engine failure that the warranty does not cover.

### Normal wear:

Engines, like all mechanical devices, need periodic parts service and replacement to perform well. Warranty will not cover repair when normal use has exhausted the life of a part or an engine.

### Improper maintenance:

The life of an engine depends upon the conditions under which it operates, and the care it receives. Some applications, such as tillers, pumps and rotary mowers, are very often used in dusty or dirty conditions, which can cause what appears to be premature wear. Such wear, when caused by dirt, dust, spark plug cleaning

grit, or other abrasive material that has entered the engine because of improper maintenance, is not covered by warranty.

**This warranty covers engine related defective material and/or workmanship only, and not replacement or refund of the equipment to which the engine may be mounted. Nor does the warranty extend to repairs required because of:**

1. PROBLEMS CAUSED BY PARTS THAT ARE NOT ORIGINAL BRIGGS & STRATTON PARTS.
2. Equipment controls or installations that prevent starting, cause unsatisfactory engine performance, or shorten engine life. (Contact equipment manufacturer.)
3. Leaking carburetors, clogged fuel pipes, sticking valves, or other damage, caused by using contaminated or stale fuel. (Use clean, fresh, lead-free gasoline and Briggs & Stratton Fuel Stabilizer, Part No. 5041.)
4. Parts which are scored or broken because an engine was operated with insufficient or contaminated lubricating oil, or an incorrect grade of lubricating oil (check oil level daily or after every 8 hours of operation. Refill when necessary and change at recommended intervals.) OIL GARD® may not shut down running engine. Engine damage may occur if oil level is not properly maintained. Read Operating & Maintenance Instructions.
5. Repair or adjustment of associated parts or assemblies such as clutches, transmissions, remote controls, etc., which are not manufactured by Briggs & Stratton.
6. Damage or wear to parts caused by dirt, which entered the engine because of improper air cleaner maintenance, re-assembly, or use of a non-original air cleaner element or cartridge. (At recommended intervals, clean and re-oil

the Oil-Foam® element or the foam pre-cleaner, and replace the cartridge.) Read Operating & Maintenance Instructions.

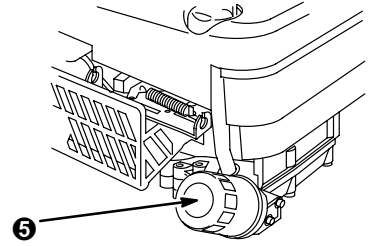
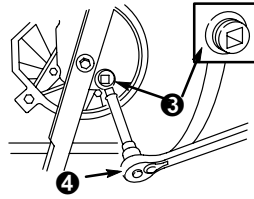
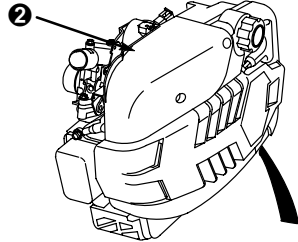
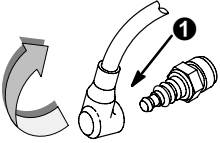
7. Parts damaged by over-speeding, or overheating caused by grass, debris, or dirt, which plugs or clogs the cooling fins, or flywheel area, or damage caused by operating the engine in a confined area without sufficient ventilation. (Clean fins on the cylinder, cylinder head and flywheel at recommended intervals.) Read Operating & Maintenance Instructions.
8. Engine or equipment parts broken by excessive vibration caused by a loose engine mounting, loose cutter blades, unbalanced blades or loose or unbalanced impellers, improper attachment of equipment to engine crankshaft, over-speeding or other abuse in operation.
9. A bent or broken crankshaft, caused by striking a solid object with the cutter blade of a rotary lawn mower, or excessive v-belt tightness.
10. Routine tune-up or adjustment of the engine.
11. Engine or engine component failure, i.e., combustion chamber, valves, valve seats, valve guides, or burned starter motor windings, caused by the use of alternate fuels such as, liquified petroleum, natural gas, altered gasolines, etc.

**Warranty is available only through service dealers which have been authorized by Briggs & Stratton Corporation. your nearest Authorized Service Dealer is listed in the "Yellow Pages"™ of your telephone directory under "Engines, Gasoline" or "Gasoline Engines," "Lawn Mowers," or similar category.**

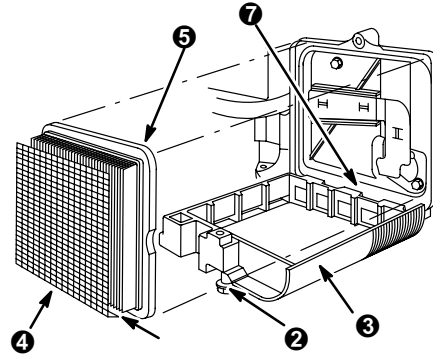
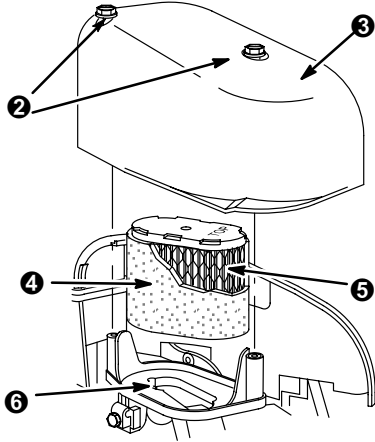
Briggs & Stratton Engines Are Made Under One Or More Of The Following Patents: Design D-247,177 (Other Patents Pending)										
6,325,036	6,077,063	5,819,513	5,606,948	5,497,679	5,235,943	5,138,996	4,996,956	4,633,556	4,430,984	DES. 308,871
6,284,123	6,064,027	5,813,384	5,606,851	5,320,795	5,197,425	5,086,890	4,977,879	4,630,498		DES. 308,872
6,260,529	6,014,808	5,765,713	5,548,955	5,271,363	5,197,422	5,070,829	4,971,219	4,522,080		DES. 309,457
6,230,678	5,894,715	5,645,025	5,546,901	5,269,713	5,191,864	5,058,544	4,895,119	4,520,288		DES. 356,951
6,202,616	5,852,951	5,642,701	5,503,125	5,265,700	5,188,069	5,040,644	4,819,593	4,512,499		DES. 361,771
6,116,212	5,823,153	5,619,845	5,501,203	5,243,878	5,186,142	5,009,208	4,719,682	4,453,507		DES. 375,963



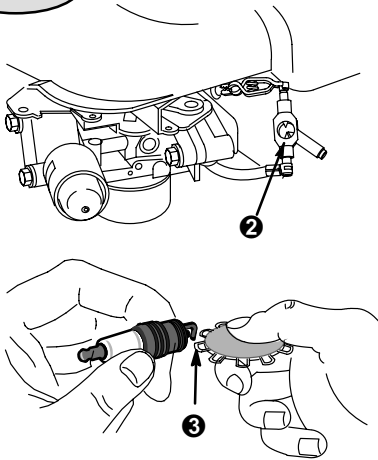
**Fig. 7**



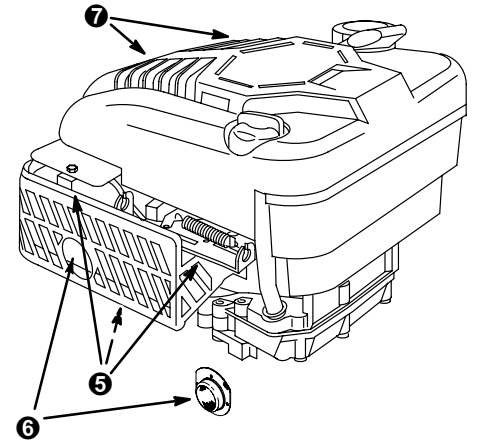
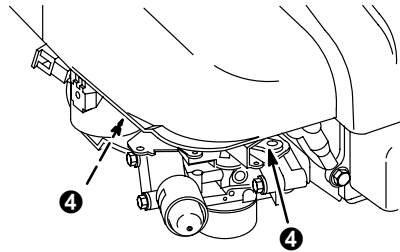
**Fig. 8**



**Fig. 9**



**Fig. 10**



**Fig. 11**

