

# BRIGGS & STRATTON Engine Model Number: 110412

This information has been extracted out of the Briggs engine operators manual Form No. 274263-10/99. For additional information see the complete Briggs Manual.




## OIL CAPACITY

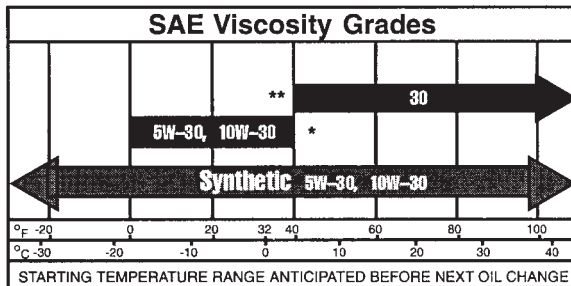
Engine holds approximately 5/8 quart (20 ounces; 0.6 liter).

## TYPE OF OIL TO USE

- Use a high quality detergent oil classified "For Service SF, SG, SH, SJ" or higher, such as Briggs & Stratton 30W, Part Number 100005 (20 oz) or 100028 (48 oz).
- Do not use special additives.
- Choose a viscosity according to the table opposite.



**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.**

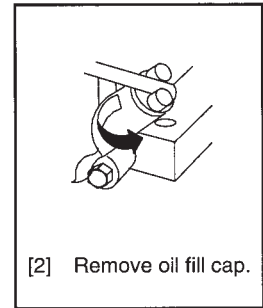
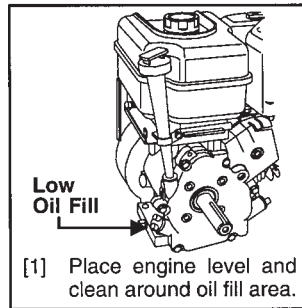


\* **CAUTION:** Air cooled engines run hotter than automotive engines. The use of non-synthetic multi-viscosity oils (5W-30, 10W-30, etc.) in temperatures above 40° F (4° C) will result in higher than normal oil consumption. When using a multi-viscosity oil, check oil level more frequently.

\*\* **CAUTION:** SAE 30 oil, if used below 40° F (4° C), will result in hard starting and possible engine bore damage due to inadequate lubrication.

## CHECKING AND ADDING OIL

- Check oil level *before* starting the engine.
- Check level daily, or after every eight (8) hours.
- Keep oil level at FULL.
- Do not overfill.



**CAUTION: OIL GARD®** (if equipped) is intended to prevent starting an engine that is low on oil. See page 7. Always check oil level before starting engine. Under certain conditions, **OIL GARD®** may not shut down a running engine. Engine damage may occur if oil level is not properly maintained and will void warranty coverage.

If engine is equipped with **OIL GARD®**, and if engine runs low on oil, light on engine warns of low oil level. If light flickers and engine cannot be started, or has stopped and cannot be restarted, add oil. Fill to point of overflowing at oil fill cap or to **FULL** mark on dipstick (if equipped). Do not overfill.



## TYPE OF FUEL TO USE



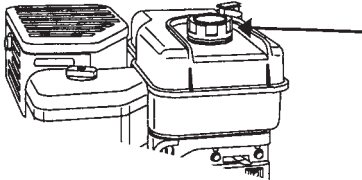
- Use clean, fresh, regular unleaded gasoline with a minimum of 85 octane. Fresh fuel prevents gum from forming in the fuel system or on essential carburetor parts. Purchase fuel in quantity that can be used within 30 days.
- Do not use gasoline which contains Methanol.
- Do not mix oil with gasoline.
- For engine protection use Briggs & Stratton Gasoline Additive available from your Authorized Briggs & Stratton Dealer (P/N 5041 or single use pouch).

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

**CAUTION:** Some fuels, called oxygenated or reformulated gasoline, are gasoline 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.

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## ADDING FUEL

 <b>WARNING</b>  	 <p>[4] Remove cap. Fill tank to approximately 1-1/2 inches below top of neck to allow for fuel expansion. Be careful not to overfill. Briggs &amp; Stratton <b>Smart-fill®</b> fuel can fills to the correct level and automatically shuts off, reducing spills and emissions.</p> <p>[5] Replace cap before starting.</p>
<p>[1] Fill fuel tank outdoors or in well-ventilated area, away from sparks, open flames, pilot lights, heat, and other ignition sources.</p> <p>[2] If fuel spills, wait until it evaporates before starting engine.</p> <p>[3] Turn engine OFF and let engine cool at least 2 minutes before removing gas cap.</p>	



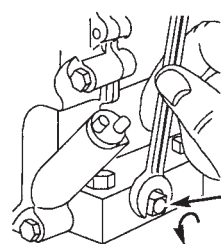
Follow the instructions and schedules indicated below.



Task <small>Perform task at hourly or calendar interval, whichever comes first.</small>	Every 8 Hours of Daily	25 Hours of Every Season	50 Hours of Every Season	100 Hours of Every Season	Yearly
Check Oil Level	✓				
Change Oil			✓*		
Change oil in gear reduction (if equipped)				✓	
Service air cleaner pre-cleaner (if equipped)		✓*			
Service air cleaner cartridge (if not equipped with pre-cleaner)		✓*			
Service air cleaner cartridge (if equipped with pre-cleaner)				✓*	
Inspect spark arrester (if equipped)			✓		
Replace spark plug				✓	
Replace fuel filter (if equipped)				✓	
Clean cooling system				✓*	
Check valve clearance					✓

\* **Change oil after first 5 to 8 hours of use**, then every 50 hours or every season. Change oil every 25 hours when operating the engine under heavy load or in high temperatures.


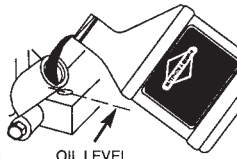
\*\* Clean more often under dusty conditions or when airborne debris is present. Replace air cleaner parts, if very dirty.

## CHANGING OIL

 1/4" HEX	 PIPE	 <p style="text-align: right;">OIL DRAIN PLUG</p>
<b>Typical drain plugs</b>		

 <b>WARNING</b>  	<p>[1] Place engine level.</p> <p>[2] Disconnect spark plug wire and keep it away from spark plug. Disconnect battery (if equipped with electric starter) at negative terminal.</p>
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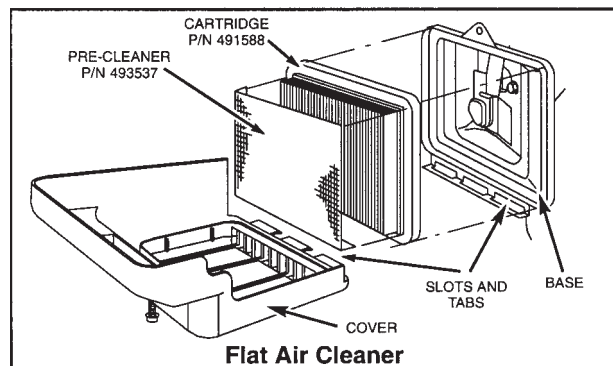
- [3] With engine OFF but still warm remove oil drain plug and drain oil into appropriate receptacle.
- [4] Reinstall drain plug. Remove dipstick (if equipped) or oil fill cap.
- [5] Add new oil, about 5/8 quart (20 ounces: 0.6 liter). Fill to FULL line on dipstick or to point of overflowing at oil fill cap. **Do not overfill.**
- [6] Replace dipstick or oil fill cap.

 <p><b>High Oil Fill</b> (if equipped)</p>	 <p><b>Low Oil Fill</b></p>
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## 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.



### REMOVING and INSTALLING FLAT AIR CLEANER

- [1] Loosen screw, tilt cover down and remove air cleaner.
- [2] Install clean (or new) air cleaner assembly inside cover. If equipped with pre-cleaner, install with arrows up and lip of pre-cleaner at bottom of cartridge pleats.
- [3] Insert cover's tabs into slots in bottom of base.
- [4] Tilt cover up into place and tighten screw.

### REPLACE FUEL FILTER (if equipped)

**WARNING**

- [1] Disconnect spark plug wire and keep away from spark plug.
- [2] Drain fuel tank or close fuel shut-off valve before replacing fuel filter. Otherwise, fuel can leak out, creating a fire/explosion hazard.

## FUEL SYSTEM

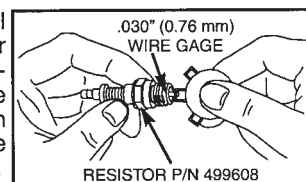
**WARNING**

Replacement parts for fuel system (cap, hoses, tanks, filters, etc.) must be the same as original parts, otherwise fire can occur.

## SPARK PLUG

Use only Briggs & Stratton Spark Tester (part number 19368) to check for spark.

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



## VALVE CLEARANCE

Check valve clearance yearly. (See Tune-up Specifications on page 6.)

## PARTIAL LIST OF GENUINE BRIGGS & STRATTON PARTS

<u>PART</u>	<u>BRIGGS &amp; STRATTON PART NO. (or equivalent)</u>
Flat air cleaner cartridge	491588 (5043)
Flat air cleaner pre-cleaner	493537
Oval air cleaner cartridge	498596
Oval air cleaner pre-cleaner	273356
Oil	100005 or 100028
Fuel filter	499638
Gas additive	5041
Resistor spark plug	499608
Long life platinum spark plug (used on most OHV engines)	5066
Spark plug wrench	89838
Spark tester	19368
Oil pump kit	5056
(uses standard electric drill to remove oil from engine quickly)	