

# BRIGGS & STRATTON Engine Model Numbers: 192412, 196432, 196437, 197412, 250412, 250417, 256427.

This information has been extracted out of the Briggs & Stratton engine operators manual Form No. MS3928-7/98. For additional information see the complete Briggs & Stratton Manual.

## Oil Recommendations (see fig. 2)

**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 SE, SF, SG," such as Briggs & Stratton "warranty certified" SAE 30 oil (see fig. A). Use no special additives with recommended oils. Do not mix oil with gasoline.

\* Air cooled engines run hotter than automotive engines. Using multi-viscosity oils (10W-30, etc.) above 40° F (4° C) will result in high oil consumption and possible engine damage. Check oil level more frequently if using these types of oils.

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

**Check oil level.** Model Series oil capacity is about:  
1.3 ltr. or 44 oz. for Models 170000, 190000 and 220000.  
1.4 ltr or 48 oz. for Model 250000.

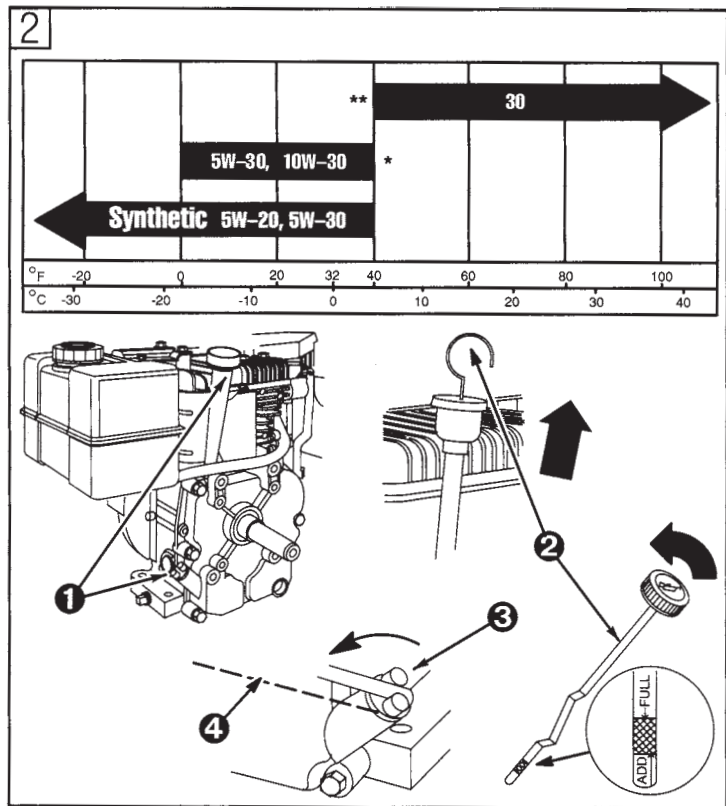
Place engine level and clean around oil fill ①.

Remove dipstick ②, wipe with clean cloth, insert and tighten down again. Remove dipstick and check oil level. Oil should be at FULL mark. If oil is required, add slowly. Do not over-fill.

OR

Remove oil filler plug ③. Oil should be full to overflowing ④.

Tighten dipstick or oil filler plug firmly before starting engine.



## Fuel Recommendations

Use clean, fresh, lead-free gasoline with a minimum of 77 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**.

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.

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

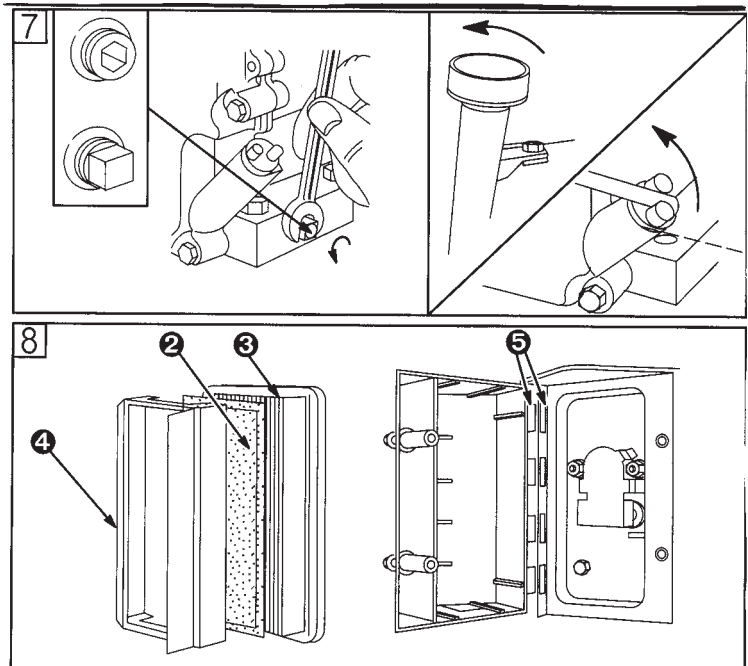
For engine protection, we recommend using Briggs & Stratton Gasoline Additive (see fig. B) available from an Authorized Briggs & Stratton Service Dealer.

### Check fuel level.

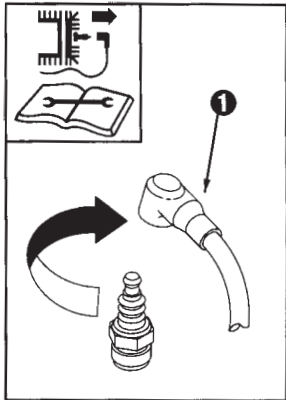
Clean around fuel fill before removing cap to refuel. Allow space in the fuel tank for fuel expansion.



Allow engine to cool 2 minutes before refueling.



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## Maintenance (see figs. 7 8)

See **Maintenance Schedule**. Follow the hourly or calendar intervals, whichever occur first. More frequent service is required when operating in adverse conditions.

To prevent accidental starting, remove spark plug wire ① and ground it and disconnect battery at negative terminal, if engine has electric starting system, before servicing.

### Oil service (see fig. 7)

Check oil level regularly.

Be sure correct oil level is maintained. Check every 5 hours or daily, before starting engine. See oil filling procedure under **Oil Recommendations**.

### Change oil.

Change oil after first 5 hours of operation. Change oil while engine is warm. Refill with new oil of recommended SAE viscosity grade. (see fig. 2)

### Gear reduction, if equipped

Remove oil fill plug ② and oil level plug ③. Drain oil every 100 hours of operation or every season. To refill, pour SAE 30 oil into oil fill hole until it runs out level check hole. Replace both plugs. Oil fill plug has a vent hole ④ and must be installed on top of gear case cover.

### Air cleaner service (see fig. 8)

Replace pre-cleaner ② and/or cartridge ③ if very dirty or damaged. (see fig. C)

1. Loosen screws. Then remove cover and air cleaner assembly from base.
2. Remove air cleaner assembly from inside of cover and disassemble.

To service pre-cleaner, wash in liquid detergent and water. Squeeze dry in a clean cloth. Saturate in engine oil. Squeeze in clean, absorbent cloth to remove ALL EXCESS oil.

To service cartridge, clean by tapping gently on a flat surface. Do not use petroleum solvents, e.g., kerosene, which will cause cartridge to deteriorate. Do not use pressurized air, which can damage cartridge. Do not oil cartridge.

3. Install retainer ④, pre-cleaner (screen side of pre-cleaner toward cartridge pleats) and cartridge in cover.
4. Insert tabs ⑤ on cover into slots ⑥ in base. Tighten cover screws securely.

### Spark plug service

Clean/replace spark plug every 100 hours or every season, whichever occurs first. Use only Briggs & Stratton Spark Tester to check for spark. Spark tester and spark plug wrench are available from any Authorized Briggs & Stratton Service Dealer.

Note: On Model Series 19A400, 19B400, 19C400, 19E400, 19F400, 19G400 engines use only spark plug, Part No. 496018. On Model Series 192400, 196400, 197400, 226400, 250400, 256400, 257400 engines use standard spark plug, Part No. 492167 or resistor spark plug, Part No. 802592, as required.

## Maintenance Cont'd

### Spark plug service cont'd

Note: 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.

Spark plug gap should be 0,76 mm or 0,030 in.

### Keep engine clean

Periodically remove chaff and debris build-up from engine. Do not spray engine with water to clean because water could contaminate fuel. Clean with a brush or compressed air.



Accumulation of debris around muffler could cause a fire. Daily or more often, before running engine, clean around muffler to remove all combustible debris.

If muffler is equipped with spark arrester remove spark arrester screen for cleaning and inspection every 50 hours or every season. Replace if damaged.

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



Replace in-line fuel filter Drain fuel tank or close fuel shut-off valve before replacing fuel filter.

Clean cooling system. Chaff or debris may clog engine's air cooling system, especially after prolonged operation. Internal cooling fins and surfaces may require cleaning to prevent overheating and engine damage. Remove blower housing and clean as shown

## Maintenance Schedule

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 5 hours or daily

- Check oil level
- Clean around muffler, springs and linkage

### Every 25 hours or every season

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

### Every 50 hours or every season

- Change oil
- Clean and inspect spark arrester, if equipped.

### Every 100 hours or every season

- Service air cleaner cartridge\*
- Replace in-line fuel filter, if equipped.
- Replace/clean spark plug
- Change gear reduction oil, if equipped
- Clean cooling system\*

\* Clean more often under dusty conditions, or when airborne debris or chaff is present.