

# BRIGGS & STRATTON Engine Model Number: 303447

This information has been extracted out of the Briggs & Stratton engine operators manual Form No. MS4147-7-98. 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.

Choose the SAE viscosity grade of oil from this chart that matches the starting temperature anticipated before the next oil change. (see fig. [2])

- \* 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 (see fig. [2])

**Oil capacity:** approximately 1-1/2 quarts (48 ounces or 1.6 liters) when changing oil and filter. (Oil capacity will be greater if engine is equipped with remote oil filter.)

**Oil checking procedure:** before starting engine, 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 ③. If oil is required, add slowly. Tighten dipstick firmly before starting engine.

**Oil filling procedure:** first add 1 quart (32 ounces or 1 liter). Start and run engine at idle for 30 seconds. Shut engine off and wait 30 seconds. Then add more oil slowly to bring level to Full mark on dipstick. Check for oil leaks. Tighten dipstick firmly before starting engine.

## Fuel Recommendations

Use clean, fresh, **lead-free** 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**.

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.

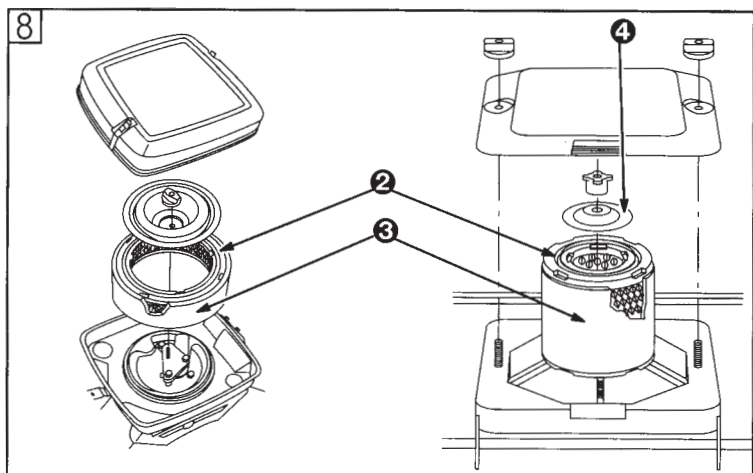
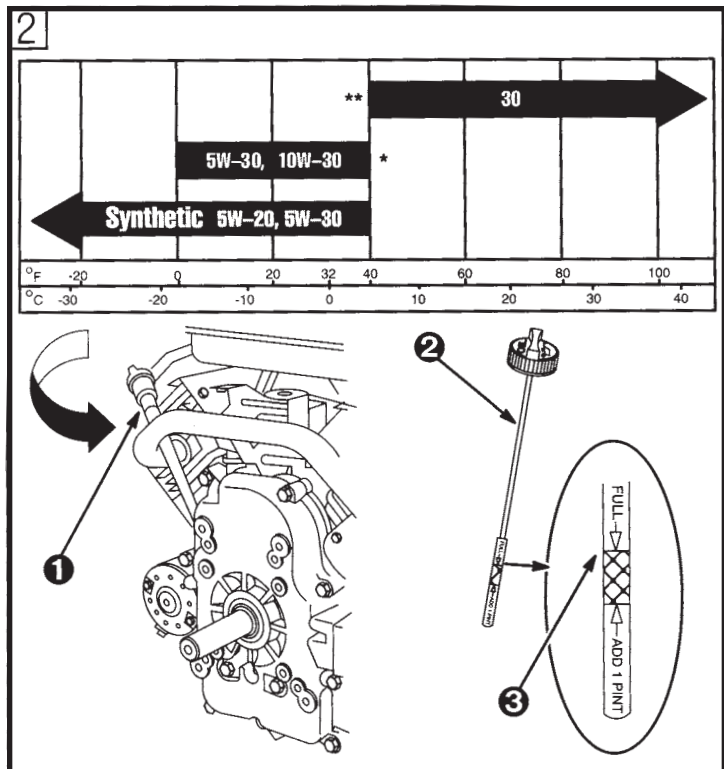
For engine protection, we recommend using Briggs & Stratton Gasoline Additive (see fig. [B]) available from an Authorized Briggs & Stratton Service Dealer.

### Check fuel level.

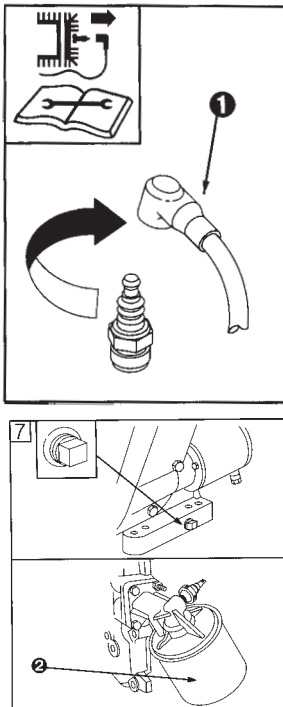
Clean around fuel fill before removing cap to refuel. Allow space in the fuel tank for fuel expansion.



Before refueling, allow engine to cool 2 minutes.



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## Maintenance (see figs. 7 8 9)

Also, see **Maintenance Schedule**. Follow the hourly or calendar intervals, whichever occur first. More frequent service is required when operating in adverse conditions. See any Authorized Briggs & Stratton Dealer for correct replacement parts (see figs. C D)

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

## Oil service (see fig. 7)

Check oil level regularly.

Be sure correct oil level is maintained. Check every 8 hours or daily, before starting engine. See oil filling procedure, **Oil Recommendations**.

## Change oil.

Change oil after first 8 hours of operation. Change oil while engine is warm. Refill with new oil of recommended SAE viscosity grade. (see fig. 2)

## Change oil filter 2, if equipped.

Replace oil filter after every 100 hours of operation or every season, whichever occurs first. Before installing new filter, lightly oil filter gasket with fresh, clean engine oil. Screw filter on by hand until gasket contacts oil filter adapter. Tighten 1/2 to 3/4 turn more. Start and run engine at IDLE to check for oil leaks. Stop engine. Recheck oil level and add oil if required.

## Oil pressure

If oil pressure drops below 1-4 psi (.1-.2 kg/cm<sup>2</sup>), an oil pressure switch (if engine is equipped) will either activate a warning device or stop the engine. Check oil level with dipstick. If oil level is between **ADD** and **FULL** mark on dipstick, do not try to restart engine. Contact an Authorized Briggs & Stratton Service Dealer. Do not operate engine until oil pressure is corrected.

If oil level is below **ADD** mark on dipstick, add oil to bring level to **FULL** mark. Restart engine and check oil pressure. If pressure is normal, continue to operate engine.

Note: Oil pressure gauge, if engine is equipped, is supplied by manufacturer of equipment.

## Air cleaner, dual element (see fig. 8)

1. Remove cover.
2. Carefully slide pre-cleaner 2 off cartridge 3.
3. Remove knob and plate. Carefully remove cartridge to prevent debris from entering carburetor.

Replace pre-cleaner, if equipped, or cartridge if very dirty or damaged.

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 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.

4. Reinstall cartridge, plate and knob.

Note: Top side of air cleaner plate 4 is marked "UP" (only on engines equipped with integral fuel tank).

5. Install pre-cleaner on cartridge and replace cover.

## Maintenance Cont'd

### Spark plug service

Use only Briggs & Stratton Spark Tester to check for spark. Spark plug gap should be .76 mm or 0.030 in. Replace spark plugs every season. Spark plug wrench is available from any Authorized Briggs & Stratton Service Dealer.

### Keep engine clean

Periodically remove chaff/debris buildup from engine. Do not spray engine with water because water could contaminate fuel. Use a brush or compressed air.



Chaff/debris around exhaust manifold/muffler could cause a fire. Inspect and clean around muffler before every use. Keep linkage, springs and controls free of debris.

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



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

Clean oil cooler every 100 hours or every season, if equipped.

Chaff or debris may clog engine's air cooling system, especially after prolonged service. Every 100 hours or every season, clean internal cooling fins and surfaces to prevent overheating and engine damage. Remove blower housing to clean areas shown. Check valve clearance (intake and exhaust .10-.15mm)

## Maintenance Schedule

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

### First 8 Hours

- Change oil

### Every 8 hours or daily

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

### 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 oil filter, if equipped
- Clean oil cooler, if equipped\*
- Clean cooling system\*

### Every season

- Replace spark plugs
- Replace in-line fuel filter
- Check valve clearance

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