


Maintenance

Regular maintenance will improve the performance and extend the life of the engine. See any Authorized Briggs & Stratton Dealer for service. **Use only genuine Briggs & Stratton parts. Other parts may not perform as well, may damage the engine, and may result in injury.** In addition, use of other parts may void your warranty.

Emission Control

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.




WARNING

Wear eye protection when doing repair work.

Frostbite can result from skin/eye contact with leaking LP liquid.

- Installation, adjustment and repair work should be done by a qualified technician.
- Flexible supply lines should be checked regularly to make sure they are in good condition. Replace damaged or leaking components.



WARNING

Unintentional sparking can result in fire or electric shock.

Fire or explosion can cause severe burns or death.

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




Before performing maintenance or repairs:

- Disconnect spark plug wire and keep it away from spark plug.
- Disconnect battery at negative terminal (only engines with electric start).
- Use only correct tools.
- Do not strike the flywheel with a hammer or hard object because the flywheel may later shatter during operation.
- Do not tamper with governor spring, links or other parts to increase engine speed.

When testing for spark:

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

Follow the instructions and schedules indicated below.

Task	Every 8 Hours or Daily	25 Hours	50 Hours	100 Hours	100-400 Hours
Check Oil Level 					
Service Air Cleaner Pre-cleaner*					
Inspect Spark Arrester (if equipped)					
Change Oil ** 					
Change Oil Filter (if equipped)					
Service Air Cleaner Cartridge*					
Clean Oil Cooler (if equipped)*					
Clean Cooling System*					
Check Valve Clearance on LPG/NG Engines					
Clean/Replace Spark Plugs 					
Clean/Replace In-line Fuel Filter (if equipped)					
Check Valve Clearance					

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

** **Change oil after first 5 to 8 hours of use**, then every 100 hours. Change oil every 50 hours when operating the engine under heavy load or in high temperatures.

Air Cleaner

All engines have a round air cleaner cartridge. 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.

WARNING

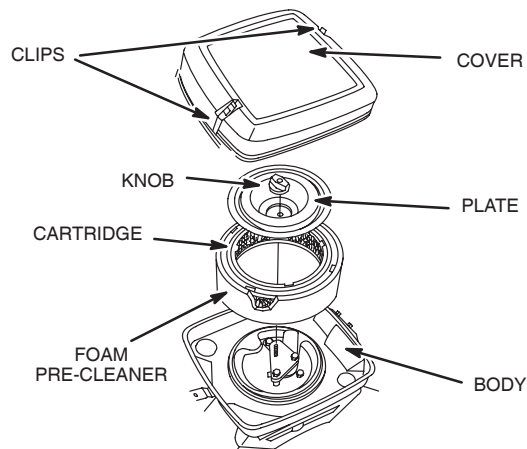
Ensure air cleaner, retainer, and cover are properly installed before starting engine.

Pre-cleaner

To clean pre-cleaner (if equipped), separate it from cartridge and wash in liquid detergent and water. Squeeze dry in a clean cloth.

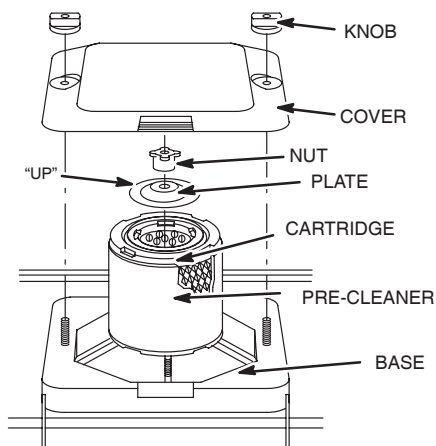
Removing and Installing Air Cleaner without Fuel Tank

1. Unhook clips on both sides of cover and remove cover.
2. Remove knob and plate. Carefully remove air cleaner assembly to prevent debris from entering carburetor.
3. Reassemble clean (or new) pre-cleaner on clean (or new) cartridge.
4. Reinstall air cleaner assembly, plate and knob in body.
5. Replace cover and reattach clips to body.



Removing and Installing Air Cleaner with Fuel Tank

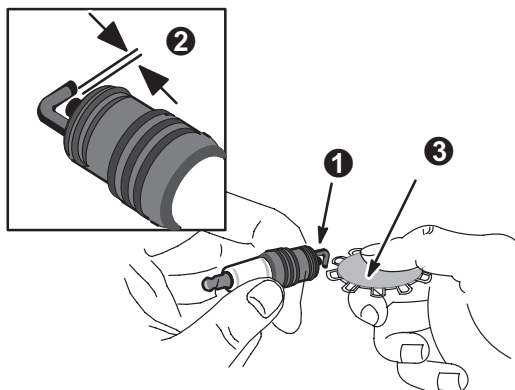
1. Remove knobs and cover.
2. Remove nut, plate and carefully lift air cleaner assembly (pre-cleaner and cartridge) off stud.
3. Reinstall clean (or new) air cleaner assembly firmly in base. Reinstall plate (top side marked "UP") and nut.
4. Reinstall cover. Tighten knobs securely.



Spark Plug

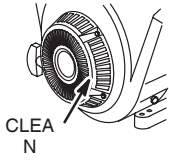
Check the spark plug every 100 hours. Replace the spark plug if upon inspection the electrode ① is burned or worn. Ensure the spark plug is clean. Check the gap ② with a wire gauge ③ and reset to .76 mm or 0.030 in. if necessary.

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.



Cleaning Debris

Daily or before every use, clean accumulated debris from engine. Keep linkage, springs and controls clean. Keep area behind and around muffler free of any combustible debris.



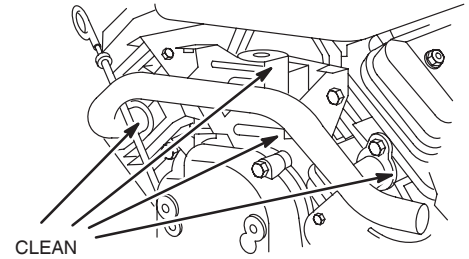
Finger Guard



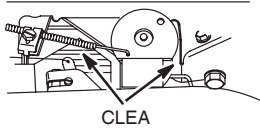
Rotating Screen



Spark Arrester



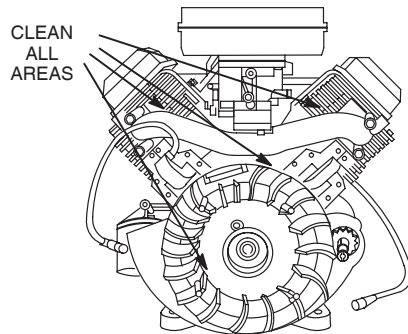
Muffler Area



Linkage, Springs and Controls

Air Cooling System

Debris may clog the engine's air cooling system. Remove blower housing and clean area shown to prevent overheating and engine damage.



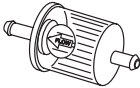
Muffler

If muffler is equipped with spark arrester screen, remove screen for inspection. Replace screen if damaged or plugged.

Fuel System

Replacing Fuel Filter (if equipped)

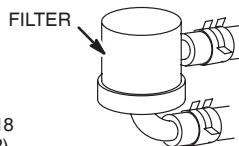
Drain Fuel tank or close fuel shut-off valve before replacing fuel filter. Otherwise, fuel can leak out creating a fire/explosion hazard.



PART NO. 493629
(WITH FUEL PUMP)



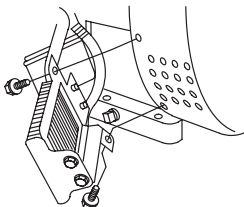
PART NO. 298090 or 5018
(WITHOUT FUEL PUMP)





PART NO. 808116 (WITH
FUEL TANK, IF EQUIPPED)

Oil Cooler (if equipped)



Clean oil cooler of all debris and chaff.



	 WARNING
<ul style="list-style-type: none"> Engine parts should be kept clean to reduce the risk of overheating and ignition of accumulated debris. 	

CAUTION
<p>Do not use water to clean engine parts. Water could contaminate fuel system. Use a brush or dry cloth.</p>

CAUTION
<p>All the components used to build this engine must remain in place for the proper operation of this engine.</p>

	 WARNING
<ul style="list-style-type: none"> Replacement parts for fuel system (cap, hoses, tanks, filters, etc.) and exhaust system (mufflers, arresters, etc.) must be the original parts, otherwise fire can occur. 	

Valve Clearance

Gasoline Engines: Check valve clearance yearly.

LPG/NG Engines: Valve clearance must be checked after every 100 hours of operation. Adjust if necessary.