

VANGUARD OHV



Model Series 290400, 303400

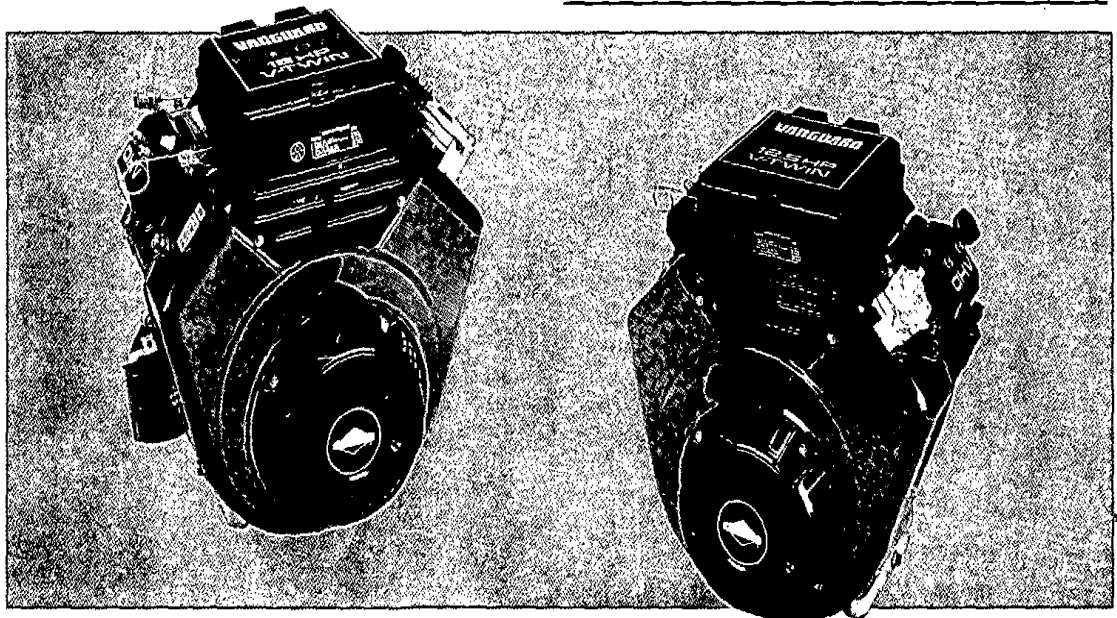
OPERATING AND MAINTENANCE INSTRUCTIONS

BETRIEBS- UND WARTUNGSHINWEISE

ISTRUZIONI PER L'USO E LA MANUTENZIONE

INSTRUCTIONS POUR L'UTILISATION ET L'ENTRETIEN


DRIFT OCH UNDERHALL



Briggs & Stratton Corporation
Milwaukee, Wisconsin 53201

MS-5356-7/89
ENGLISH, GERMAN, ITALIAN, FRENCH, SWEDISH
PRINTED IN U.S.A.

In The Interest Of Safety

 THIS SYMBOL MEANS **WARNING** or **CAUTION**. PERSONAL INJURY AND/OR PROPERTY DAMAGE MAY OCCUR UNLESS INSTRUCTIONS ARE FOLLOWED CAREFULLY.

WARNING

1. DO NOT run engine in an enclosed area. Exhaust gases contain carbon monoxide, an odorless and deadly poison.
2. DO NOT check for spark with spark plug or spark plug wire removed. Use an approved tester.
3. DO NOT crank engine with spark plug removed. If engine is flooded, place throttle in "FAST" position and crank until engine starts.
4. DO NOT smoke when filling fuel tank.
5. DO NOT fill fuel tank while engine is running. Allow engine to cool for two minutes before refueling.
6. DO NOT operate engine when an odor of gasoline is present or other explosive conditions exist.
7. DO NOT operate engine if gasoline is spilled. Move machine away from the spill and avoid creating any ignition until the gasoline has evaporated.
8. DO NOT STORE, SPILL, OR USE GASOLINE NEAR AN OPEN FLAME, or devices such as a stove, furnace, or water heater which utilize a pilot light or devices which can create a spark.
9. DO NOT refuel indoors where area is not well ventilated. Outdoor refueling is preferred.
10. DO NOT OPERATE ENGINE WITHOUT A MUFFLER. Inspect periodically and replace if necessary.
11. DO NOT operate engine with an accumulation of grass, leaves, dirt or other combustible material in the muffler area.
12. DO NOT use this engine on any forest covered, brush covered, or grass covered unimproved land unless a spark arrester is installed on the muffler.
13. DO NOT run engine with air cleaner or air cleaner cover removed.

CAUTION

1. DO NOT RUN ENGINE AT EXCESSIVE SPEEDS, AS THIS MAY RESULT IN INJURY.
2. DO NOT tamper with governor springs, governor links or other parts which may increase the governed engine speed.
3. DO NOT tamper with the engine speed selected by the original equipment manufacturer.
4. DO NOT touch hot mufflers, cylinders, or fins as contact may cause burns.
5. DO NOT place hands or feet near moving or rotating parts.
6. DO keep cylinder fins and governor parts free of grass and other debris as this can affect engine speed.
7. DO pull starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent hand or arm injury.
8. TO PREVENT ACCIDENTAL STARTING when servicing the engine or equipment, always remove the spark plug or wire from the spark plug. Disconnect negative wire from battery terminal if equipped with a 12 volt starting system.
9. DO use fresh gasoline. Stale fuel can cause leakage.

WHEN WORKING ON EQUIPMENT

DO NOT STRIKE FLYWHEEL with a hard object or metal tool as this may cause flywheel to shatter in operation, causing personal injury or property damage. To remove flywheel, use Briggs & Stratton approved tools only.

The use of genuine Briggs & Stratton parts preserves the original design of your engine. Imitation replacement parts offer potential risk including the risk of personal injury.

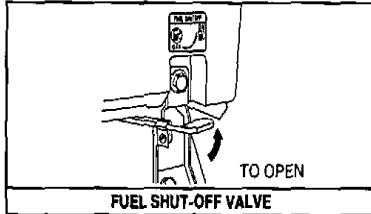
IN THE INTEREST OF ENVIRONMENT

A muffler which leaks because of rust or damage can permit an increased exhaust noise level. Therefore, examine the muffler periodically to be sure it is functioning effectively. To purchase a new muffler, contact any Briggs & Stratton Authorized Service Center for correct replacement.

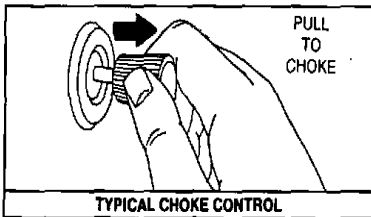
CAUTION: A SPARK ARRESTER MUST BE ADDED to the muffler of this engine if it is to be used on any forest covered, brush covered, or grass covered unimproved land. The arrester must be maintained in effective working order by the operator. In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. See your Briggs & Stratton Authorized Service Center or equipment dealer for spark arrester muffler options.

Starting

OPEN FUEL VALVE: Turn counterclockwise 1/4 turn, on engines so equipped.



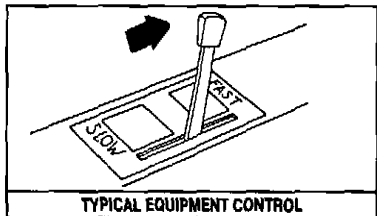
CHOKE ENGINE: Move choke control to "CHOKE" position.



NOTE: This should fully close choke on carburetor. If it does not, remote control must be re-adjusted. See ADJUSTMENT section.

NOTE: A warm engine requires less choking than a cold engine.

SET CONTROL LEVER: Move equipment control lever to "RUN," "FAST" or "START" position.

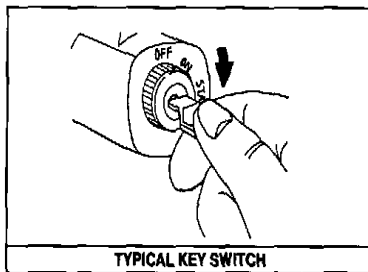


TO START ENGINE:

WARNING: ALWAYS KEEP HANDS AND FEET CLEAR OF MOWER BLADE OR OTHER ROTATING MACHINERY.

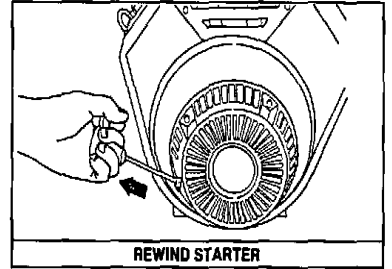
ELECTRIC STARTER

Turn key to "ON" or "START" position and/or press starter button on powered equipment. The best starter life is provided by using short starting cycles of several seconds. Prolonged cranking (more than 15 seconds per minute) can damage the starter motor. Allow starter to cool two minutes. When engine starts, open choke gradually.



REWIND STARTER

WARNING: Grasp starter grip as illustrated and pull slowly until resistance is felt. Then pull cord rapidly to overcome compression, prevent kickback and start engine. Repeat if necessary with choke opened slightly. When engine starts, open choke gradually.



COLD WEATHER STARTING HINTS

1. Be sure to use the proper oil for the temperature expected.
2. Declutch all possible external loads.
3. Set speed control at part-throttle position.
4. A warm battery has much more starting capacity than a cold battery.
5. Use fresh winter grade fuel.

NOTE: Winter grade gasoline has higher volatility to improve starting. Do not use gasoline left over from summer.

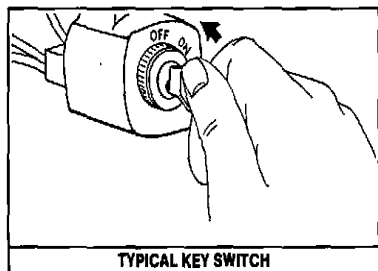
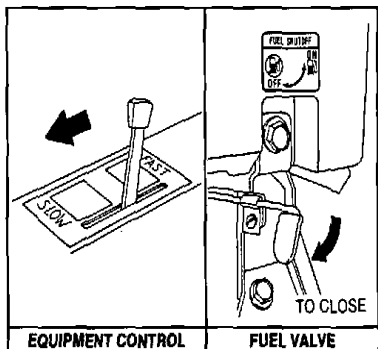
OIL PRESSURE SWITCH (Optional)

If this engine is equipped with oil pressure switch, switch will activate warning device and/or stop engine if pressure drops to 0.2 -0.4 kg/cm² (4 - 6 psi).

Stopping

TO STOP ENGINE:

⚠ Move equipment control lever to "SLOW" position. Turn key to "OFF" position. DO NOT CHOKE carburetor to stop the engine. Fire may result if choke is used to stop engine. Turn fuel valve to "OFF" position.



⚠ CAUTION: Always remove key from switch when leaving equipment unattended or when equipment is not in use.

NOTE: Close fuel valve when equipment is transported to prevent fuel leakage from the carburetor.

Adjustments

CARBURETOR ADJUSTMENTS

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude or load.

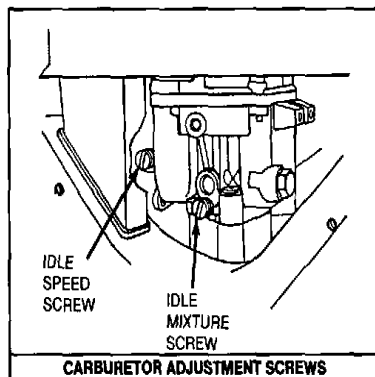
NOTE: The air cleaner and air cleaner cover must be assembled to carburetor when running engine.

THE TWIN CYLINDER ENGINE CARBURETOR FUEL MIXTURE ADJUSTMENT PROCEDURE IS UNIQUE. ADJUST CARBURETOR FUEL MIXTURE IN THE ORDER STATED AS FOLLOWS:

INITIAL ADJUSTMENT:

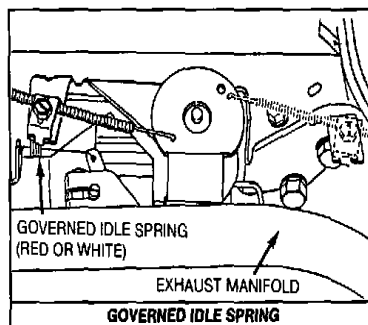
Gently turn the idle mixture screw clockwise until it just closes. Screw may be damaged by turning it in too far. Then turn idle mixture screw 1-1/2 turns counterclockwise.

This initial adjustment will permit the engine to be started and warmed up (approximately 5 minutes) prior to final adjustment.



FINAL ADJUSTMENT:

Start engine and place equipment speed control lever in idle position. Hold carburetor throttle lever against idle stop and adjust idle speed screw to obtain 1300 to 1500 RPM. Turn idle mixture screw slowly clockwise (lean mixture) until speed just starts to slow. Then turn idle mixture screw slowly counterclockwise (rich mixture) until speed just starts to slow. Turn screw to midpoint between rich and lean. Now adjust idle speed screw to obtain 1200 RPM, if governed idle spring is red, or 900 RPM, if governed idle spring is white. Release throttle lever.



If the engine does not accelerate properly, readjust idle mixture screw approximately 1/8 turn counterclockwise (rich).

NOTE: Engines operated at altitudes of approximately 900 to 1500 meters (3000 to 5000 feet) or higher may require the installation of a high altitude carburetor main jet to achieve best engine performance. If erratic performance is observed, contact a Briggs & Stratton Authorized Service Center for part number of high altitude jet.

Adjustments

CONTROL ADJUSTMENTS

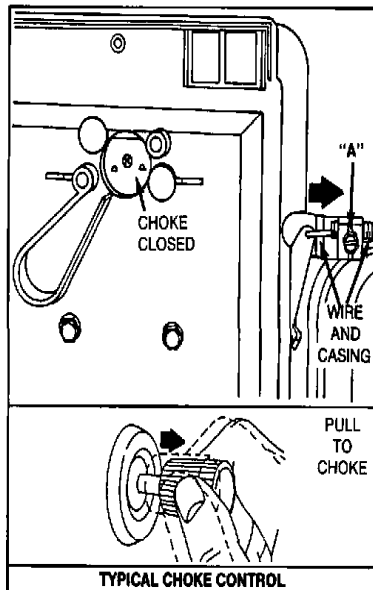
Proper choke and speed control operation is dependent upon proper adjustment of equipment controls.

TO CHECK OPERATION OF CHOKE CONTROL:

Move choke control to "CHOKE" position. The carburetor choke should be closed.

TO ADJUST CHOKE CONTROL:

Loosen casing clamp screw "A." Move choke control to "CHOKE" position. Move casing and wire in direction of arrow until choke is completely closed. Retighten casing clamp screw "A."



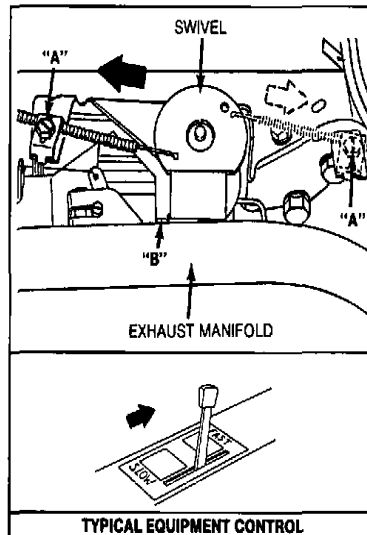
TO CHECK EQUIPMENT CONTROL:



Move control lever on equipment to fastest speed position. Swivel on control bracket should be against stop, "B."

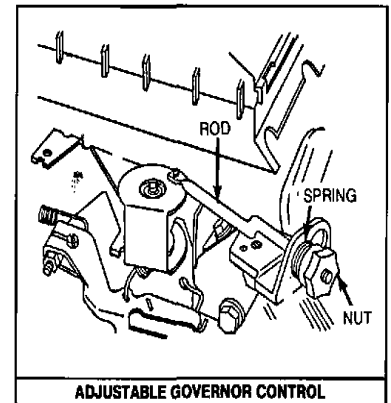
TO ADJUST EQUIPMENT CONTROL:

Loosen casing clamp screw "A." Move casing and wire in direction shown by arrow until swivel contacts stop "B." Retighten casing clamp screw "A."



ADJUSTABLE GOVERNOR CONTROL:

The manufacturer of the equipment on which this engine is installed set the speed at which it operates. If adjustment is required, consult any Briggs & Stratton Authorized Service Center.



NOTE: The acceptable operating speed range is 1800 to 3600 RPM for governed idle speed, see FINAL ADJUSTMENT, page 5. The manufacturer of the equipment on which the engine is installed specifies the Top No Load RPM at which the engine will be operated. DO NOT EXCEED this speed.

Maintenance

CAUTION: TO PREVENT ACCIDENTAL STARTING when servicing the engine or equipment, always remove wires from spark plugs and ground them. Disconnect negative wire from battery negative terminal.

BLUE SYMBOLS ON ENGINE MEAN CUSTOMER MAINTENANCE REQUIRED

CHECK OIL LEVEL REGULARLY:

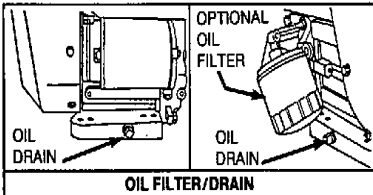
Check after each 8 hours of operation. BE SURE OIL LEVEL IS MAINTAINED.

CHANGE OIL AS RECOMMENDED (PG. 3):

Change oil after first 8 hours of operation. Then, under normal operating conditions, change oil every 50 hours of operation or monthly, whichever occurs first. Change oil every 25 hours of operation if the engine is operated under heavy load, or in high ambient temperatures. Remove oil drain plug and drain oil while engine is warm. Replace drain plug. Remove dipstick and refill with new oil of proper grade. Replace dipstick.

CHANGE OIL FILTER:

Replace oil filter every 100 hours or yearly. Before installing new filter, lightly oil filter gasket with fresh clean engine oil. Screw filter on by hand until gasket contacts filter adapter. Tighten 1/2 to 3/4 turn farther. Start and run engine. Check for oil leaks. Stop engine, recheck oil level and refill if required.



SERVICE DUAL ELEMENT AIR CLEANER:

Remove and service foam pre-cleaner every 25 hours or weekly, whichever occurs first.

Service paper cartridge every 100 hours or yearly, whichever occurs first.

NOTE: Service air cleaner more often under dusty conditions.

SQUARE DUAL ELEMENT:

1. Loosen knob and remove cover assembly.
2. Remove cartridge and pre-cleaner from cover.

To service pre-cleaner:

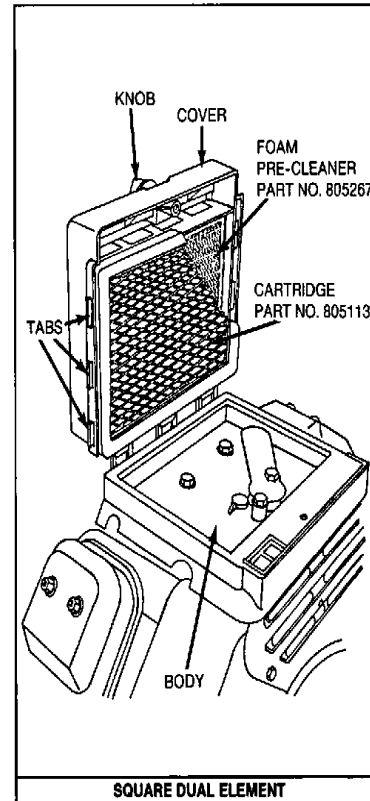
- a. Wash in liquid detergent and water.
- b. Squeeze dry in a clean cloth.
- c. Saturate in engine oil. Squeeze in clean, absorbent cloth to remove all excess oil.

To service cartridge:

- a. Clean by tapping gently on flat surface.
- b. If very dirty, replace, or wash in a low or non-sudsing detergent and warm water solution. Rinse thoroughly with flowing water from mesh side until water runs clear. Let cartridge air dry thoroughly before using.

CAUTION: Petroleum solvents, such as kerosene, are not to be used to clean cartridge. They may cause deterioration of the cartridge. **DO NOT OIL CARTRIDGE. DO NOT USE PRESSURIZED AIR TO CLEAN OR DRY CARTRIDGE.**

3. Reinstall pre-cleaner in cover with foam toward cover.
4. Reinstall cartridge in cover with tabs on cartridge in slots of cover.
5. Reinstall cover assembly on air cleaner body.



Maintenance

ROUND DUAL ELEMENT (USED WITH OPTIONAL FUEL TANK):

1. Remove knob and cover.

To service pre-cleaner:

- Remove pre-cleaner from cartridge.
- 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.

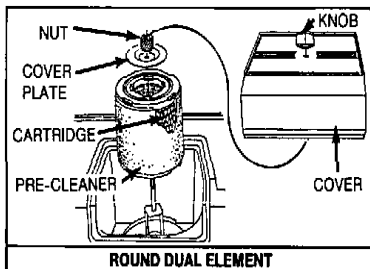
To service cartridge:

- Remove nut and cover plate.
- Carefully remove cartridge and clean by tapping gently on flat surface.

If very dirty, replace, or wash in a low or non-sudsing detergent and warm water solution. Rinse thoroughly with flowing water from mesh side until water runs clear. Let cartridge air dry thoroughly before using.

CAUTION: Petroleum solvents, such as kerosene, are not to be used to clean cartridge. They may cause deterioration of the cartridge. **DO NOT OIL CARTRIDGE. DO NOT USE PRESSURIZED AIR TO CLEAN OR DRY CARTRIDGE.**

2. Reinstall air cleaner assembly.



CLEAN ENGINE:

Remove dirt and debris with a cloth or brush. Cleaning with a forceful spray of water is not recommended as water could contaminate the fuel system.

CLEAN DEBRIS GARD:

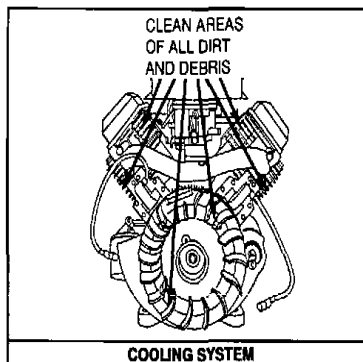
If engine is equipped with Debris Gard, brush grass, chaff and dirt from gard daily (more often if needed) to prevent engine damage caused by overheating and/or overspeeding.

CAUTION: For proper engine operation, keep governor controls and linkage clean and free of debris.

CAUTION: Periodically clean muffler area to remove all grass, dirt and combustible debris.

CLEAN COOLING SYSTEM:

Grass, chaff or dirt may clog the rotating screen and the air cooling system, especially after prolonged service in cutting tall dry grasses. Every 100 hours or yearly, whichever occurs first, remove the blower housing and clean the areas shown to prevent engine damage caused by overheating and/or overspeeding. Clean more often if necessary.

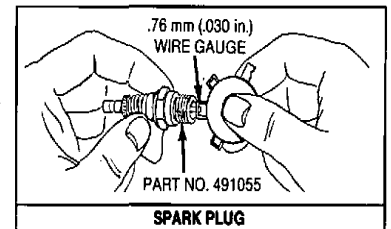


CLEAN SPARK ARRESTER SCREEN:

If engine muffler is equipped with spark arrester screen assembly, remove every 50 hours or monthly for cleaning and inspection. Replace if damaged. Contact any Briggs & Stratton Authorized Service Center.

REPLACE SPARK PLUG:

Replace every 100 hours of operation or yearly, whichever occurs first.

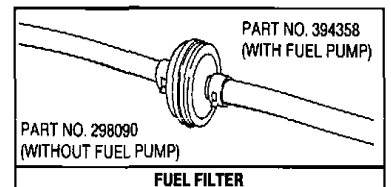


NOTE: Do not blast clean spark plug. Spark plug should be cleaned by scraping or wire brushing and washing with a commercial solvent.

CAUTION: Sparking can occur if wire terminal does not fit firmly on spark plug. Reform terminal if necessary.

REPLACE FUEL FILTER:

Replace IN-LINE filter every season or more often if required. Contact any Briggs & Stratton Authorized Service Center for correct replacement.



Maintenance Intervals

Follow the recommended maintenance schedule and make in-between checks. This will help you obtain maximum engine life.

MAINTENANCE OPERATION	Every 8 Hours or Daily	25 Hours or Weekly	50 Hours or Monthly	100 Hours or Yearly	Yearly
Check Oil Level	●				
Change Oil †			● Note 1		
Change Oil Filter				●	
Clean Foam Air Cleaner Pre-Cleaner		● Note 2			
Service Air Cleaner Cartridge				● Note 2	
Clean Cooling System				● Note 2	
Clean Debris Gard (Optional Accessory)	● Note 2				
Inspect Spark Arrester (Optional Accessory)			●		
Replace In-Line Fuel Filter					●
Replace Spark Plug				●	
Check Valve Clearance					●








† Change oil after first 8 hours.

Note 1: Change oil every 25 hours when operating under heavy load or in high ambient temperature.

Note 2: Clean more often under dusty conditions or when airborne debris is present.

BRIGGS & STRATTON AUTHORIZED SERVICE CENTERS ARE READY TO SERVE YOU AND ARE COMMITTED TO QUALITY SERVICE.

International Symbols

-  Air Cleaner
-  Caution
-  Choke
-  Fast
-  Fuel
-  Oil
-  Slow

ABOUT THE WARRANTY ON YOUR ENGINE

NOTE: See Back Cover for Statement of Limited Warranty.

If warranty service is needed, contact your nearest Authorized Briggs & Stratton Service Center. For prompt attention, your Center will need to know the engine model, type and code numbers, the trouble experienced and the total number of hours the engine was run.

BRIGGS & STRATTON WARRANTY covers only **DEFECTIVE MATERIAL** and/or **WORKMANSHIP**.

Briggs & Stratton Corporation welcomes the opportunity to make justified warranty repairs by any of its Authorized Service Centers. In most instances, the requests for warranty repair are handled in a quick and routine manner. However, some requests for warranty are received which appear not justified. In these cases, though engine owners may not be aware of it, the premature failure of their engine was caused by abuse or neglect, or the equipment on which it was mounted, rather than the engine.

If you differ with the decision of your Service Center, investigation will be made to determine the applicability of warranty. Ask the Service Center to submit all supporting facts to the Factory for review. If the Factory decides that your claim is justified, you will be fully reimbursed for those items accepted as defective. To avoid misunderstanding which might occur between engine owners and Authorized Briggs & Stratton Service Centers, we list below some of the causes of engine failure that Briggs & Stratton warranty does not cover for repair or replacement.

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: Remember that the service life of an engine depends upon the conditions under which it operates and the care it receives. Some applications, such as tillers, trash 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.

WARRANTY DOES NOT APPLY FOR SOME ADJUSTMENTS OR IF ABUSE OR NEGLIGENCE CAUSES ENGINE DAMAGE: SUCH AS

1. Bent or broken crankshafts that could be caused by striking a solid object with the cutter blade of a rotary lawn mower;
2. Sticking valves or clogged carburetors, fuel pipes or other damage caused by using contaminated or stale fuel (Use clean, fresh, lead-free gasoline.);

10 ENGLISH

3. Parts which are scored or broken because an engine was operated with insufficient lubricating oil, improper grade of lubricating oil, or contaminated lubricating oil in the case of a 4 cycle engine, or operated with incorrect BIA/NMMA certified oil/gas mixture in the case of a 2 cycle engine. (For a 4 cycle engine, check the oil level daily or after 8 hours and refill when necessary. Change oil at recommended intervals. For a 2 cycle engine, use the correct oil/gas mixture.);
4. Parts damaged by overspeeding or overheating caused by dirt, grass or debris plugging the cooling fins and clogging the flywheel area, or caused by operating the engine in a confined area without sufficient ventilation (Clean fins on the cylinder, cylinder head and flywheel at recommended intervals.);
5. Damage or wear to parts caused by dirt which entered the engine because of improper air cleaner maintenance or re-assembly (Clean and re-oil the foam pre-cleaner and clean or replace the paper cartridge at recommended intervals.);
6. Damage or wear to parts caused by grit which entered the engine from spark plugs cleaned on an abrasive blast cleaning machine;
7. Tune-up or adjustment needed by an engine but not caused by defective material nor workmanship (Follow the "Operating and Maintenance Instructions" when making any minor adjustments.);
8. Parts broken by excessive vibration caused by loose engine mounting, loose cutter blades, unbalanced blades or impellers, improperly attaching equipment to engine crankshaft, overspeeding or abuse in operation;
9. Repair or adjustment of associated parts or assemblies such as clutches, transmissions, remote controls, etc., which are not of Briggs & Stratton manufacture;
10. PARTS THAT ARE NOT ORIGINAL BRIGGS & STRATTON PARTS OR PARTS THAT ARE NOT APPROVED BY BRIGGS & STRATTON.

Warranty is available only through service centers which have been authorized by the Briggs & Stratton Corporation. Your nearest service center is listed in the Yellow Pages of your Telephone Directory, under "Engines, Gasoline" or "Gasoline Engines."

General Information

This is a twin cylinder, overhead valve, air cooled engine. All drilled/tapped holes and fasteners on this engine are ISO metric. However, where equipment attaches to engine, SAE standards apply.

On mobile equipment, the engine will operate satisfactorily at any angle at which operator and equipment can function safely.

MODEL SERIES 290400, 294400 & 303400

Bore	68 mm (2.68 in.)
Stroke	66 mm (2.60 in.)
Displacement	480 cc (29.3 cu. in.)
Horsepower (290400)	12.5 HP @ 3600 RPM
Horsepower (294400)	14 HP @ 3600 RPM
Horsepower (303400)	16 HP @ 3600 RPM

The horsepower ratings listed are established in accordance with the Society of Automotive Engineers Test Code J-1349. For practical operation, the horsepower loading should not exceed 85% of this rating. Engine power will decrease 3-1/2% for each 305 m (1,000 feet) above sea level and 1% for each 5.5°C (10° F) above 25°C (77° F).

TUNE-UP SPECIFICATIONS

Spark Plug Type	Champion	Autolite
Resistor	RC12YC	3924
Spark Plug Gap	.76 mm (.030 in.)	
Intake Valve		
Clearance*	.10 - .15 mm (.004 - .006 in.)	
Exhaust Valve		
Clearance*	.10 - .15 mm (.004 - .006 in.)	

* Check when engine is cold.

In some areas, local law requires the use of a resistor spark plug to suppress ignition signals. If an engine was originally equipped with a resistor spark plug, be sure to use the same type of spark plug for replacement.

STORAGE INSTRUCTIONS

Engines to be stored over 30 days should be completely drained of fuel to prevent gum deposits forming on essential carburetor parts, fuel filter and tank.

NOTE: We recommend the use of Briggs & Stratton Gasoline Additive, part no. 5041, or an equivalent, which will minimize the formation of fuel gum deposits during storage. Such an additive may be added to the gasoline in the fuel tank of the engine, or to the gasoline in a storage container.

- All fuel should be removed from the tank. Run the engine until it stops from lack of fuel.
- While engine is still warm, drain oil from crankcase. Refill with fresh oil.
- Remove spark plugs and pour approximately 30 ml (one ounce) of engine oil into each cylinder. Replace spark plugs and crank slowly to distribute oil.
- Clean dirt and chaff from cylinders, cylinder head fins, blower housing, rotating screen and muffler areas.
- Store in a clean and dry area.
- Charge battery and store as recommended by the manufacturer.

SERVICE & REPAIR INFORMATION

If service or repair is needed, contact a Briggs & Stratton Authorized Service Center. To serve you promptly and efficiently, the Service Center will need the model, type and code numbers on your engine.

Each Authorized Service Center carries a stock of Original Briggs & Stratton Service Replacement Parts and is equipped with special service tools. Ask for Original Briggs & Stratton Service Replacement Parts. The use of Genuine Parts preserves the original design of your Briggs & Stratton engine. Imitation replacement parts offer potential risks, not just obvious differences such as, fit, finish, and warranty back-up, but hidden differences in internal construction as well. Trained mechanics assure expert repair service on all Briggs & Stratton engines.

Major engine repairs should not be attempted unless you have the proper tools and a thorough knowledge of internal combustion engine repair procedure.



Your nearest service center is listed in the "Yellow Pages" under "Engines, Gasoline" or "Gasoline Engines". He is one of over 25,000 authorized dealers available to serve you.

This illustrated book includes common specifications and detailed information covering adjustment, tune-up and repair procedures for Twin Cylinder OHV Vanguard 4 cycle models. It is available from any Authorized Briggs & Stratton Service Center. Order as Part Number 272144.



**Superseding Warranty
BRIGGS & STRATTON ENGINE WARRANTY POLICY
effective July 1, 1988**

**— Replaces all undated previous Warranties and all Warranties
dated before July 1, 1988**

When warranty repair is justified, Briggs & Stratton Corporation welcomes such repair by any of its Authorized Service Centers.

In most instances, the requests for warranty brought to the attention of our Service Accounts are handled in a prompt routine manner with no question regarding their validity. However, some requests for warranty are received which appear not justified. In these cases, engine owners may not be aware that the premature failure of their engine was the result of abuse or neglect, or that the difficulty which they experience is caused by the equipment rather than the engine.

BRIGGS & STRATTON WARRANTY covers only DEFECTIVE MATERIAL and/or WORKMANSHIP.

LIMITED WARRANTY

"For time period shown below from date of purchase, Briggs & Stratton Corporation will replace for the original purchasers, free of charge, any part, or parts of the engine, found upon examination by any Factory Authorized Service Center, or by the Factory at Milwaukee, Wisconsin, to be defective in material or workmanship or both; this is the exclusive remedy. All transportation charges on parts submitted for replacement under this Warranty must be borne by purchaser. For warranty service contact your nearest Authorized Service Center as listed in the 'Yellow Pages' under 'Engines, Gasoline' or 'Gasoline Engines.' 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 AND TO THE EXTENT PERMITTED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. Some states do not allow limitations on how long an implied warranty lasts, and some states 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."

Briggs & Stratton Corporation
F. P. Stratton, Jr.
Chairman and Chief Executive Officer

WARRANTY PERIOD

ENGINES	CONSUMER USE*	COMMERCIAL USE*
All 2 thru 18 hp engines on non-lawn mowing equipment.	1 year-engine	1 year-engine
All 2 thru 18 hp engines on lawn mowing equipment and all Sno Gard engines	2 year-engine*** 5 year-Magnetron® ignition***	1 year-engine
All Vanguard and I/C® engines	2 year-engine Lifetime**-Magnetron® ignition	2 year-engine Lifetime**-Magnetron® ignition

* For purposes of this warranty policy, "consumer use" shall mean personal residential household use by the original retail consumer. "Commercial use" shall mean 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 policy.

** Lifetime limited warranty of the Magnetron® ignition shall cover parts and labor for the first five (5) years from the date of purchase; thereafter only parts. "Lifetime" shall mean lifetime of the engine in the hands of the original purchaser.

*** Applies to equipment retailed in the U.S.A. and Canada. In all other countries, the warranty for CONSUMER USE is the same as COMMERCIAL USE.

NO REGISTRATION (WARRANTY) CARD IS NECESSARY TO OBTAIN WARRANTY ON BRIGGS & STRATTON ENGINES. SAVE YOUR PURCHASE RECEIPT. PROOF OF PURCHASE DATE WILL BE REQUIRED TO OBTAIN WARRANTY.