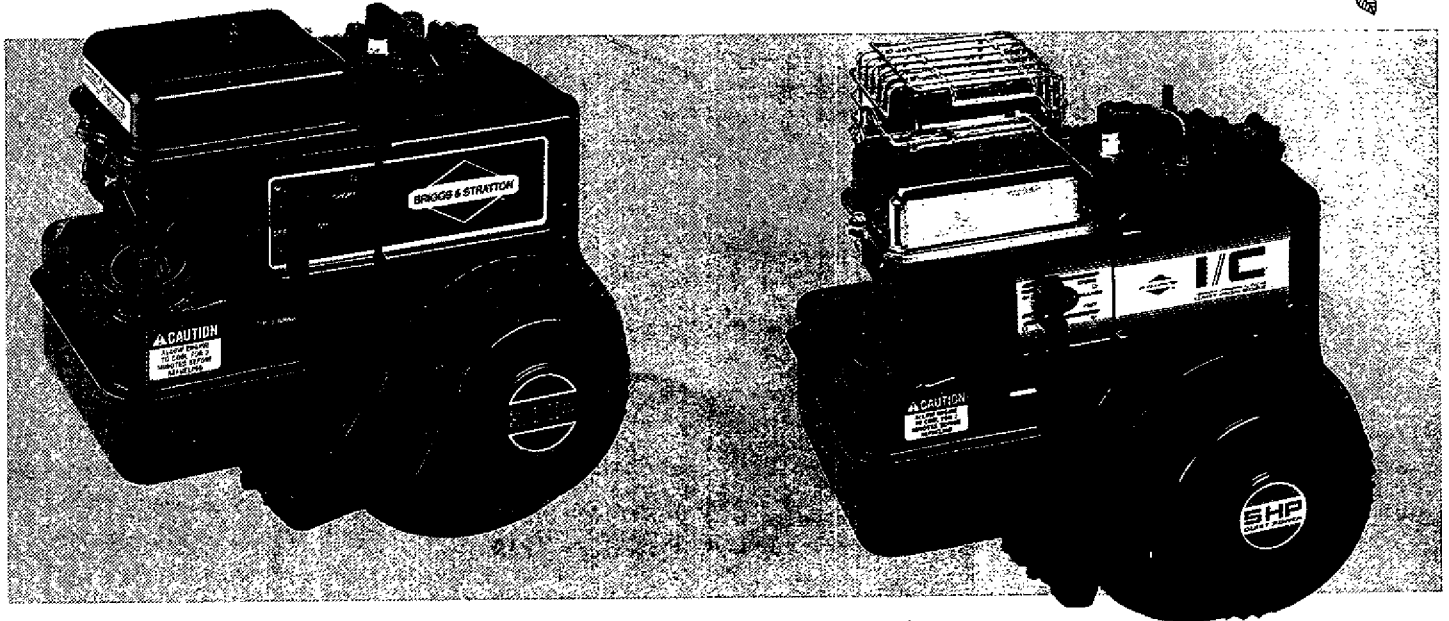




Operating and Maintenance Instructions for Model Series 80200 & 82200 130200 & 132200




Briggs & Stratton Corporation
Milwaukee, Wisconsin 53201

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In the Interest of Safety

 This safety alert symbol indicates that this message involves personal safety. Words danger, warning and caution indicate degree of hazard. Death, personal injury and/or property damage may occur unless instructions are followed carefully.

The Briggs & Stratton engine you bought with your equipment is made of the finest material in a state-of-the-art manufacturing facility. Please understand that Briggs & Stratton sells engines to original equipment manufacturers. It also sells to others in the distribution chain who may sell to the ultimate consumer, an equipment manufacturer, another distributor or a dealer. As a result, Briggs & Stratton does not necessarily know the application on which the engine will be placed. For that reason, you should carefully read and understand the operating instructions of the equipment on which your engine is placed before you operate it.

You should also understand that there are equipment applications for which Briggs & Stratton does not approve the use of its engines. Briggs & Stratton engines are not to be used on vehicles with less than 4 wheels. They include motor bikes, aircraft products and All Terrain Vehicles. Moreover, Briggs & Stratton does not approve of its engines being used in competitive events. **FOR THAT REASON, BRIGGS & STRATTON ENGINES ARE NOT AUTHORIZED FOR ANY OF THESE APPLICATIONS.** Failure to follow this warning could result in death, serious injury (including paralysis) or property damage.



You are not ready to operate this engine if you have not read and understood the following safety items. Read this entire owner's manual and the operating instructions of the equipment this engine powers.



WARNING

DO NOT run engine in an enclosed area. (Exhaust gases contain carbon monoxide, an odorless and deadly poison.)

- DO NOT place hands or feet near moving or rotating parts.
- DO NOT store, spill, or use gasoline near an open flame, nor near an appliance like a stove, furnace, or water heater that uses a pilot light or can create a spark.
- DO NOT refuel indoors or in an unventilated area.
- DO NOT remove fuel tank cap nor fill fuel tank while engine is hot or running. (Allow engine to cool 2 minutes before refueling.)
- DO NOT operate engine if gasoline is spilled or when smell of gasoline is present or other explosive conditions exist. (Move equipment away from spill and avoid any ignition until gasoline has evaporated.)
- DO NOT transport engine with fuel in tank or with fuel shut-off valve open.
- DO NOT choke carburetor to stop engine, especially in an enclosed vehicle. (Whenever possible, gradually reduce engine speed before stopping.)
- DO NOT tamper with governor springs, links or other parts to increase engine speed. (Run engine at speed set for equipment manufacturer.)

- DO NOT check for spark with spark plug removed. (Use an approved tester.)
- DO NOT crank engine with spark plug removed. (If engine is flooded, place throttle in FAST and crank until engine starts.)
- DO NOT strike flywheel with a hammer or hard object as this may cause flywheel to shatter in operation. (Use correct tools to service engine.)
- DO NOT operate engine without a muffler. (Inspect periodically and replace if worn or leaking. If engine is equipped with muffler deflector, inspect periodically and, if necessary, replace with correct deflector.)
- DO NOT operate engine with an accumulation of grass, leaves or other combustible material in muffler area.
- DO NOT use this engine on any forest covered, brush covered, or grass covered unimproved land unless a spark arrester is installed on muffler. Spark arrester must be maintained in effective working order by owner and/or 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.
- DO NOT touch hot muffler, cylinder, or fins which can cause burns.
- DO NOT start engine with air cleaner or air cleaner cover removed (or cover over carburetor air intake, if Sno/Gard engine).



WARNING

✓ PREVENT ACCIDENTAL STARTING by removing spark plug wire when servicing engine or equipment. Disconnect negative

- wire from battery terminal if equipped with electric starting system.
- ✓ KEEP cylinder fins and governor parts free of dirt, grass and other debris which can affect engine speed.
- ✓ PULL starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent hand or arm injury.
- ✓ USE fresh gasoline. Stale fuel can gum carburetor and cause leakage.
- ✓ CHECK fuel lines and fittings frequently for cracks or leaks. Replace if

necessary.

- ✓ Use only Genuine Briggs & Stratton Parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the engine.



WARNING:



The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

International Symbols



Safety Alert



Read Owner's Manual

| ○ On Off



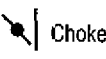
Stop



Fuel Shutoff




Fuel



Choke

Before Starting

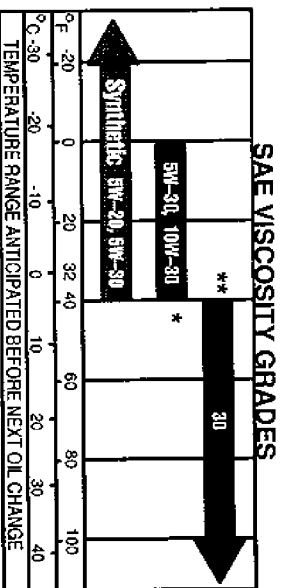
READ THE OPERATING INSTRUCTIONS OF THE EQUIPMENT THIS ENGINE POWERS

 **NOTE:** Engine is shipped WITHOUT oil.

4-CYCLE OIL RECOMMENDATIONS

Change and Add Oil According to Chart below. We recommend the use of a high quality detergent oil classified "For Service SE, SF, SG," such as Briggs & Stratton 30 weight oil, part no. 100005. Detergent oils keep the engine cleaner and retard the formation of gum and varnish deposits. No special additives should be used with recommended oils.

NOTE: DO NOT MIX OIL WITH GASOLINE.



* Air cooled engines run hotter than automotive engines. Use of 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.

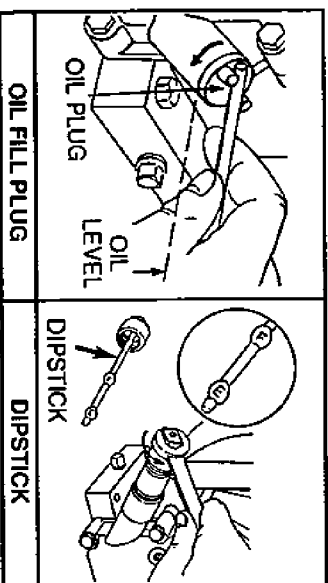
TO FILL CRANKCASE WITH OIL:

Place engine level. Clean area around oil fill. Remove oil fill plug or dipstick. **POUR OIL SLOWLY.** **DO NOT OVER-FILL.** Capacity is approximately 1.25 pints (21 ounces or 0.6 liters). Replace oil fill plug or dipstick.

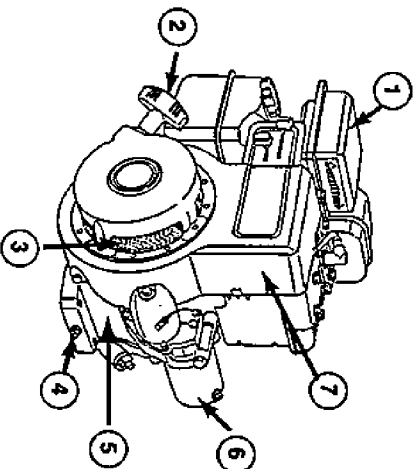
NOTE: If engine is equipped with optional gear reduction, see instructions on page 7 for filling gear reduction with oil.

TO CHECK OIL LEVEL:


Place engine level. If engine has oil fill plug, oil level should be as shown in following figure. If engine has extended oil fill, remove and wipe oil from dipstick with clean cloth. Screw dipstick firmly into place. Remove to check oil level. Dipstick must be firmly assembled into adapter when engine is running.



1. Air Cleaner
2. Rewind Starter
3. Rotating Screen
4. Oil Drain Plug
5. Cylinder
6. 12V Starter Motor (120 Volt Optional)
7. Model, Type and Code Numbers



FUEL RECOMMENDATION

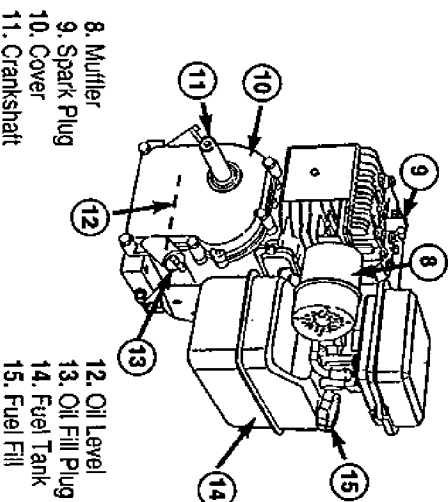
 This engine will operate satisfactorily on any gasoline intended for automotive use. A minimum of 77 octane is recommended. **DO NOT MIX OIL WITH GASOLINE.**

Use clean, fresh, lead-free gasoline. Leaded gasoline may be used if lead-free is not available. Use of lead-free gasoline results in fewer combustion deposits and longer valve life. We recommend the use of Briggs & Stratton Gasoline Additive, part no. 5041. Purchase fuel in quantity that can be used within 30 days. This will assure fuel freshness and volatility tailored to the season.

NOTE: We **DO NOT** recommend the use of gasoline which contains alcohol, such as gasohol. However, if gasoline with alcohol is used, it **MUST NOT** contain more than 10 percent Ethanol and **MUST** be removed from the engine during storage. **DO NOT** use gasoline containing Methanol. See **STORAGE INSTRUCTIONS.**



DO NOT REMOVE foam from fuel tank, if so equipped. **DO NOT FILL** fuel tank to point of overflowing. Allow approximately 1/4 in. (5 mm) of tank space for fuel expansion.



8. Muffler
9. Spark Plug
10. Cover
11. Crankshaft
12. Oil Level
13. Oil Fill Plug
14. Fuel Tank
15. Fuel Fill

Starting

TO START ENGINE:

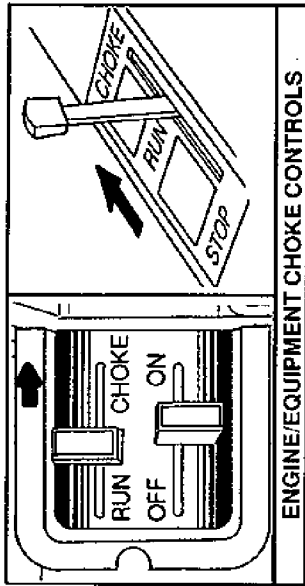


WARNING: ALWAYS KEEP HANDS AND FEET CLEAR OF MOWER BLADE OR OTHER ROTATING MACHINERY.

CHOKE ENGINE:



Move engine or equipment choke control lever to "CHOKE" or "START" position.



ENGINE/EQUIPMENT CHOKE CONTROLS

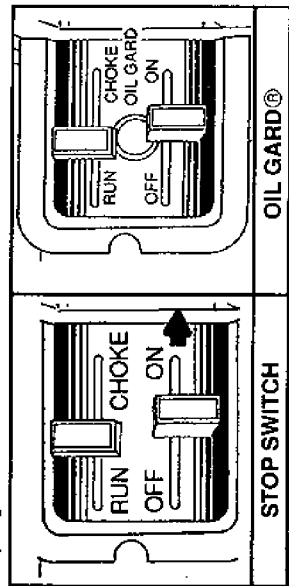
NOTE: Choke should fully close. If it does not, equipment control must be readjusted. See ADJUSTMENT section.

STOP SWITCH

Move stop lever to "ON" position, if so equipped.

OIL GARD® (Optional Accessory)

OIL GARD® light warns of low oil level. If light flickers or remains on and if engine cannot be started or stopped and cannot be restarted, oil must be added. Fill to FULL mark on dipstick or to overflowing at oil fill plug. Do not over-fill.

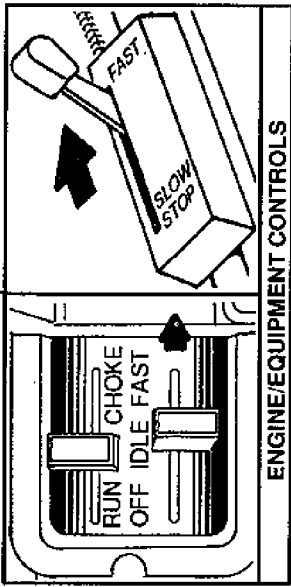


STOP SWITCH

OIL GARD®

SET THROTTLE CONTROL LEVER:

If engine is equipped with manual choke, move engine or equipment throttle control lever to "FAST" position.



ENGINE/EQUIPMENT CONTROLS

REWIND STARTER



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.

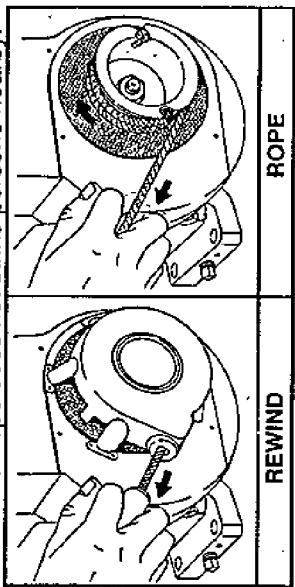
ROPE STARTER



Wind the starter rope around the pulley in direction shown by arrow. Pull the rope with a quick full arm stroke to prevent kickback. Repeat if necessary with choke opened slightly. When engine starts, open choke gradually.



CAUTION: When using rope starter to crank engine, use caution so knotted end of rope does not strike persons nearby.



REWIND

ROPE

ELECTRIC STARTER

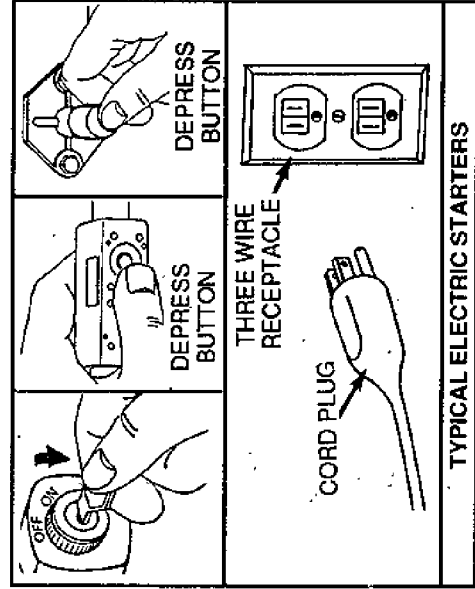
On engines equipped with 12 volt starting systems, turn key to "START" position or press starter button. Short starting cycles provide best starter life. Prolonged cranking (more than 15 seconds) can damage starter motor. Allow starter to cool 2 minutes. When engine starts, gradually open choke.

NOTE: Battery, if so equipped, is supplied by equipment manufacturer and may require charging before use.

On engines equipped with 120 volt starting systems, press "ON" button of conductor cord's integral "ON-OFF" switch. Release as soon as engine starts and gradually open choke.



CAUTION: The 120 volt electric starter is equipped with a three-prong plug for your safety. The longer prong in this plug is connected to the starter motor housing. When the starter motor is plugged into a properly grounded receptacle, it will protect the user from shock should the starter motor insulation fail for any reason. If a longer extension cord is used with this starter, it should also have three-prong and three-hole plugs.



DEPRESS BUTTON

DEPRESS BUTTON

THREE WIRE RECEPTACLE

CORD PLUG

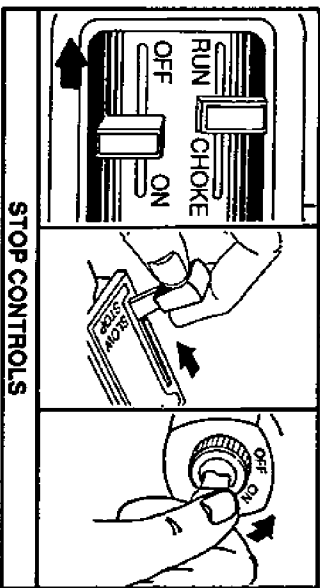
TYPICAL ELECTRIC STARTERS

Stopping

TO STOP ENGINE:



Move engine control to "OFF" position or equipment control to "SLOW" and then "STOP" position. Turn key to "OFF" position, if so equipped. Do not choke carburetor to stop engine. Backfire or engine damage may result if choke is used to stop engine.



Adjustments

ENGINE AND EQUIPMENT CONTROLS

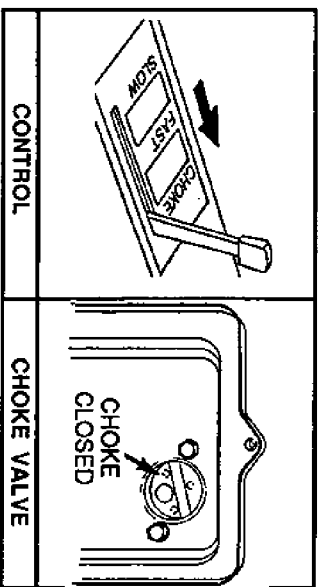
Correct control adjustment is necessary for good engine performance.

NOTE: Manual controls require no adjustment.



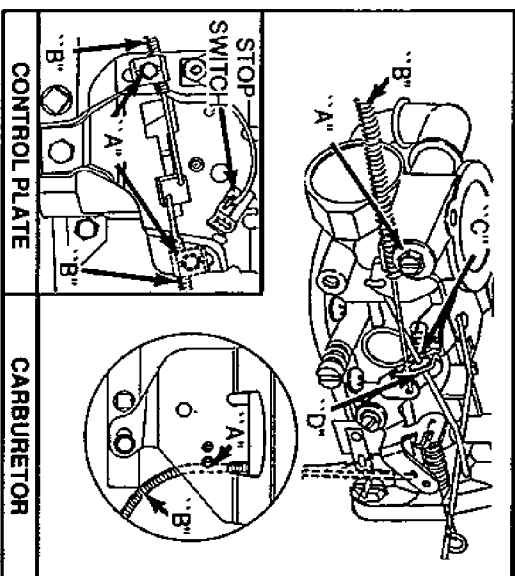
TO CHECK OPERATION OF CHOKE CONTROL:

Remove air cleaner cover and element. With equipment control lever in "CHOKE" position, choke valve should be fully closed as shown. If choke valve does not fully close, follow adjustment instructions below.



TO ADJUST CHOKE CONTROL:

With equipment control lever in "FAST" position, loosen casing clamp screw "A" on carburetor or control plate. Move casing and wire "B" until washer "C" just touches bell crank at "D". Tighten casing clamp screw "A." Bell crank on carburetor or governor control lever on control plate must make good contact with stop switch, if so equipped. Reassemble air cleaner to carburetor.



Adjustments

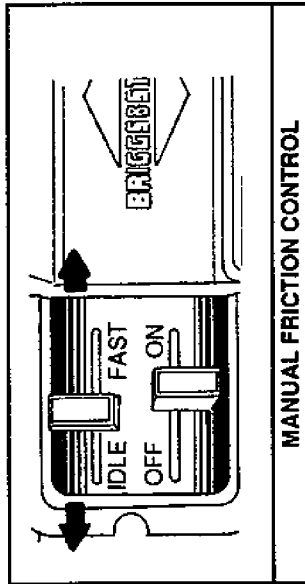
THROTTLE CONTROL:



CAUTION: 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 RPM.

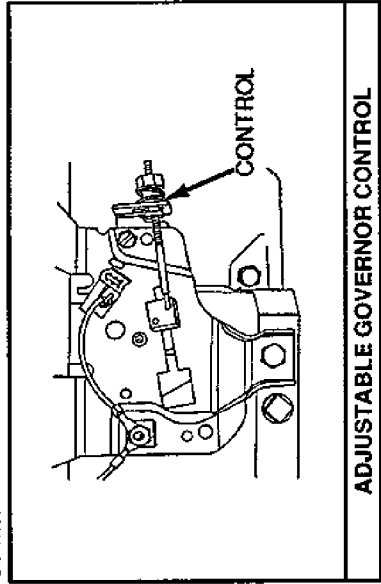
MANUAL FRICTION CONTROL

Move knob as shown to change engine speed.



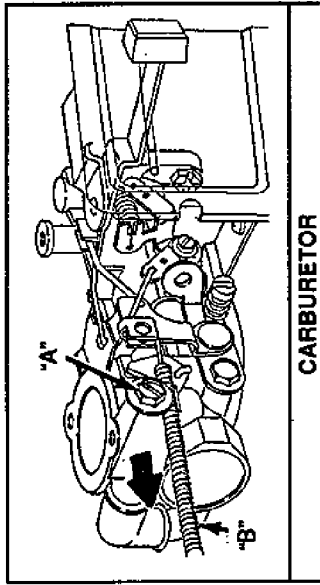
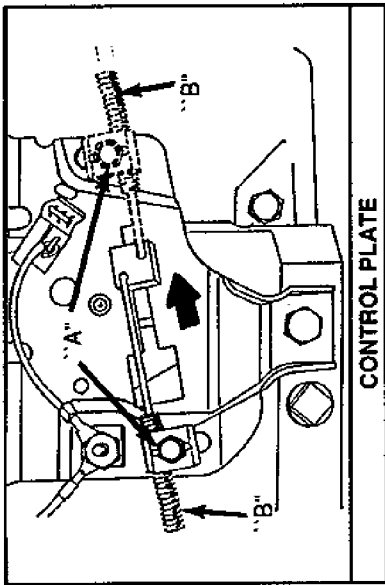
ADJUSTABLE GOVERNOR CONTROL

Governor lever has been set to permit top no-load RPM specified by the equipment manufacturer. If adjustment is required, consult any Briggs & Stratton Authorized Service Center.



REMOTE CONTROL

Remote control casing and wire "B" are attached to engine at carburetor or control plate as shown.



TO ADJUST OPERATION OF REMOTE CONTROL (NOT CHOKE-A-MATIC®):

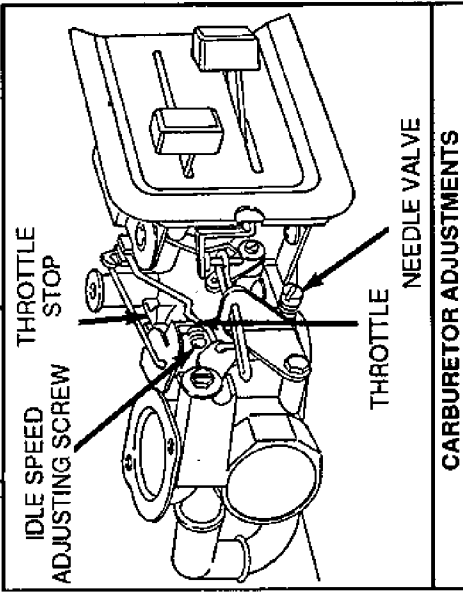
If adjustment is needed, move equipment control lever to "FAST" position. Loosen casing clamp screw "A" and move casing and wire "B" in direction shown to end of travel. Tighten casing clamp screw "A." Move equipment control lever to "STOP" position. Lever on engine must make good contact with stop switch on carburetor or control plate.

CARBURETOR ADJUSTMENTS

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude or load. Air cleaner and air cleaner cover must be assembled to carburetor when running engine. The best carburetor adjustment is obtained with fuel tank approximately 1/2 full.

INITIAL ADJUSTMENT:

Gently turn needle valve clockwise until it just closes. Turning valve in too far may damage it. Next open the needle valve 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:

Place equipment control lever in "SLOW" position. Turn needle valve in until engine slows (clockwise - lean mixture). Then turn it out past smooth operating point until engine runs unevenly (rich mixture). Now turn needle valve to the midpoint between rich and lean so the engine runs smoothly. Next, adjust idle RPM. Rotate throttle counterclockwise and hold against stop while adjusting idle speed adjusting screw to obtain 1750 RPM. Release throttle. Engine should accelerate without hesitation or sputtering. If it does not accelerate smoothly, carburetor should be readjusted, usually to a slightly richer mixture.

Maintenance



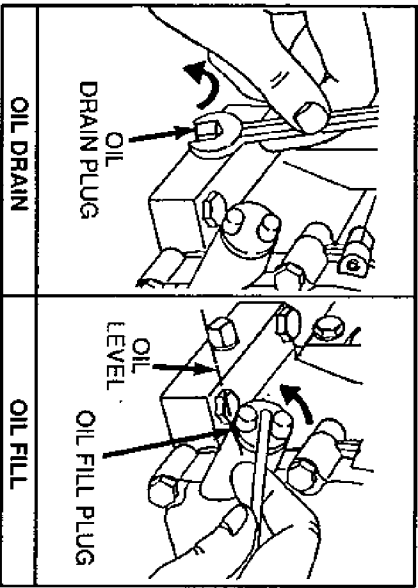
CAUTION: TO PREVENT ACCIDENTAL STARTING when servicing engine or equipment, always remove wire from spark plug and insert in holding tab. Disconnect negative wire from battery terminal, if equipped with 12 volt starting system.



CHECK OIL LEVEL REGULARLY: Check after each 5 hours of operation or daily. **BE SURE OIL LEVEL IS MAINTAINED.**

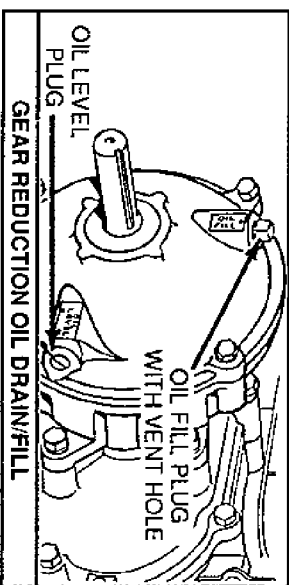
CHANGE OIL AS RECOMMENDED:

Change oil after first 5 hours of operation. Then, under normal operating conditions, change oil after every 50 hours of operation or every season, whichever occurs first. Change oil after 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 oil fill plug or dipstick and refill with new oil of correct grade. Replace oil fill plug or dipstick.



CHANGE OIL (Gear Reduction Option):

Remove oil level plug and oil fill plug. Drain oil after every 100 hours of operation or every season, whichever occurs first. 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 and must be installed on top of gear case cover.



SERVICE AIR CLEANER:

Service pre-cleaner, if so equipped, every 25 hours or every season, whichever occurs first.

Service cartridge every 100 hours or every season, whichever occurs first, if equipped with pre-cleaner. Service cartridge every 25 hours or every season, whichever occurs first, if NOT equipped with pre-cleaner.

NOTE: Service more often under dusty conditions.

1. Loosen screws and remove cover.

To service pre-cleaner:

- a. Carefully remove pre-cleaner and 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.

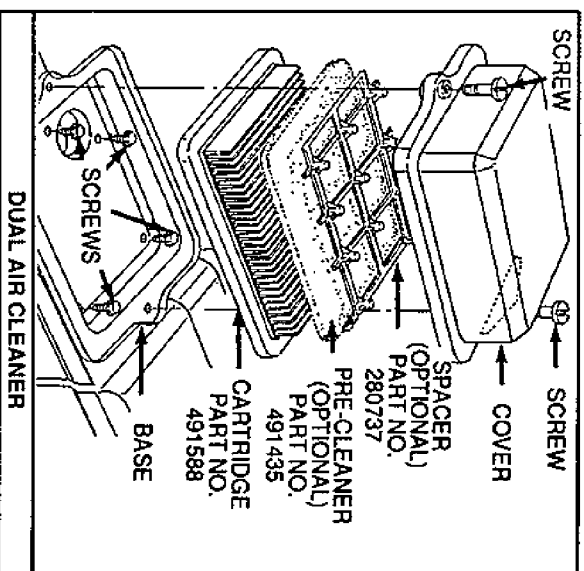
To service cartridge:

- a. Carefully remove cartridge.
- b. Clean by tapping gently on a flat surface.
- c. If very dirty, replace or wash in a non-sudsing detergent and warm water solution. Rinse thoroughly with water flowing from mesh side until water is clear. Allow cartridge to stand and 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 cartridge and pre-cleaner.
3. Reinstall air cleaner cover and tighten screws.



Maintenance

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.



CAUTION: To assure smooth operation, keep rack and pinion controls, governor linkage and springs free of debris.



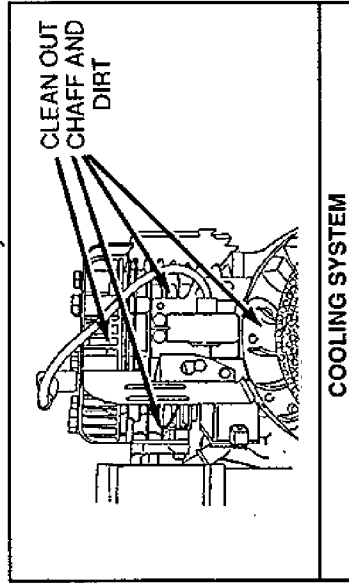
CAUTION: Periodically clean muffler area to remove all grass, dirt and combustible debris.

CLEAN SPARK ARRESTER SCREEN:

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

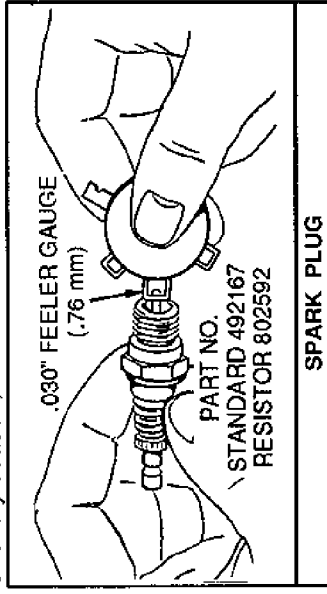
CLEAN COOLING SYSTEM:

Grass, chaff or dirt may clog the rotating screen and the air cooling system, especially after prolonged service cutting dry grasses. After every 100 hours or every season, whichever occurs first, remove the blower housing and clean the area shown to prevent overspeeding, overheating and engine damage. Clean more often if necessary.



REPLACE OR CLEAN SPARK PLUG:

Replace or clean after every 100 hours of operation or every season, 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.

REMOVE COMBUSTION DEPOSITS:

Remove cylinder head every 100-300 hours of operation. Scrape and wire brush the combustion deposits from cylinder, cylinder head, top of piston and around valves. Reassemble gasket and cylinder head. Turn screws down finger tight with three longer screws around exhaust valve, if so equipped. Torque cylinder head screws in a staggered sequence to 140 in.-lbs. (15.8 Nm).

Maintenance Schedule









Follow the hourly or calendar intervals, whichever occur first. More frequent service may be required.

MAINTENANCE OPERATION	Every 5 Hours or Daily	25 Hours or Every Season	50 Hours or Every Season	100 Hours or Every Season	100-300 Hours
Check Oil Level	●				
Change Oil ♦			● Note 1		
Change Oil (Gear Reduction)				●	
Service Pre-Cleaner (Optional accessory)		● Note 2			
Service Air Cleaner Cartridge (if no pre-cleaner)		● Note 2			
Service Air Cleaner Cartridge (if dual element)				● Note 2	
Clean Cooling System				● Note 2	
Inspect Spark Arrestor (Optional Accessory)			●		
Replace or Clean Spark Plug				●	
Clean Combustion Chamber Deposits					●

- ♦ Change oil after first 5 hours, then after every 50 hours or every season.
- Note 1: Change oil every 25 hours when operating under heavy load or in high ambient temperatures.
- 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

-  Read Operator's Manual
-  Warning/Caution
-  Oil
-  Fuel
-  Choke
-  Fast
-  Slow
-  Air Cleaner

General Information

This is a single cylinder, L-head, air-cooled engine. On mobile equipment, the engine will operate satisfactorily at any angle at which operator and equipment can function safely.

MODEL SERIES 80200 and 82200

Bore 2-3/8 in. (60.33 mm)
 Stroke 1-3/4 in. (44.45 mm)
 Displacement 7.75 cu. in. (127.0 cc)
 Torque 4.60 Ft.-Lbs. @ 3100 RPM

MODEL SERIES 130200 and 132200

Bore 2-9/16 in. (65.09 mm)
 Stroke 2-7/16 in. (61.91 mm)
 Displacement 12.57 cu. in. (206.0 cc)
 Torque 7.66 Ft.-Lbs. @ 3000 RPM

NOTE: Engine power will decrease 3-1/2% for each 1,000 feet (305 m) above sea level and 1% for each 10° F (5.6° C) above 60° F (16° C).

TUNE-UP SPECIFICATIONS

<u>DESCRIPTION</u>	<u>B & S PART NO.</u>
Air cleaner cartridge	491588
Air cleaner pre-cleaner, if so equipped	491435
Air cleaner spacer, if so equipped	280737
Standard Spark plug (Champion J19LM)	492167
Resistor Spark plug (Champion RJ19LM)	802592
<u>CLEARANCES</u>	
Spark Plug Gap030 in. (.76 mm)
Intake Valve*005-.007 in. (.13-.18 mm)
Exhaust Valve*009-.011 in. (.23-.28 mm)
* with valve springs installed and piston 1/4 in. (6 mm) past top dead center.	

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.

Note: Walking fingers logo and "Yellow pages" are registered trademarks in various jurisdictions.

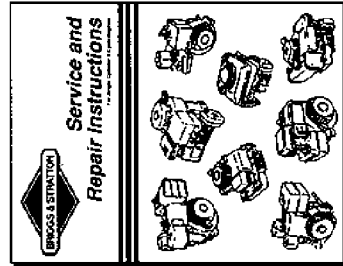


Your nearest Service Center may be located in the "Yellow Pages"™ directory under "Engines, Gasoline," "Gasoline Engines," or similar category. You may also locate the Service Center in your mailing zip code area by telephoning 1-800-233-3723. There are over 30,000 Authorized Service Centers worldwide available to serve you.

Authorized Service Centers carry a stock of Original Briggs & Stratton Service Replacement Parts and are equipped with special service tools. Ask for Original Briggs & Stratton Service Replacement Parts which preserve the original design of your engine. Imitation replacement parts offer potential risks in internal construction as well as fit, finish and warranty back-up. Trained mechanics assure expert repair service on all Briggs & Stratton engines. Major engine repairs require proper tools and a thorough knowledge of internal combustion engine repair procedure.

Briggs & Stratton publishes illustrated shop manuals, parts lists and owner's manuals for every engine it manufactures. To receive a list of available publications, write to Briggs & Stratton Corporation, P. O. Box 1144, Milwaukee, WI 53201, Attention: Service Division.

The shop manual shown here includes "Theories of Operation," common specifications and detailed information covering adjustment, tune-up and repair of Briggs & Stratton L-head, single cylinder, 4 cycle engines and is available from a Briggs & Stratton Authorized Service Center. You can also order directly from the factory at the above address.



Part No. 270962

STORAGE INSTRUCTIONS

Engines to be stored over 30 days need to be protected or drained of fuel to prevent gum from forming in the fuel system or on essential carburetor parts.

1. For engine protection, we recommend the use of Briggs & Stratton Gasoline Additive, Part No. 5041, available from any Briggs & Stratton Authorized Service Center. Mix Additive with fuel in fuel tank or storage container. Run engine for a short time to circulate Additive through carburetor. Engine and fuel can be stored up to 24 months.



CAUTION: If Additive is not used or if engine is operating on gasoline containing alcohol, remove all fuel from tank and run engine until it stops from lack of fuel.

2. While engine is still warm, drain oil from crankcase. Refill with fresh oil.
3. Remove spark plug and pour approximately 1/2 ounce (15 ml) of engine oil into the cylinder. Replace spark plug and crank slowly to distribute oil.
4. Clean dirt and chaff from cylinder, cylinder head fins, blower housing, rotating screen and muffler areas.
5. Store in a clean and dry area.

SERVICE & REPAIR INFORMATION

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

ABOUT YOUR ENGINE WARRANTY: (see back cover for statement of LIMITED WARRANTY)

Briggs & Stratton welcomes warranty repair and apologizes to you for being inconvenienced. Any Authorized Service Dealer may perform warranty repairs. Most warranty repairs are handled routinely, but sometimes requests for warranty service may not be appropriate. For example, warranty would not apply if engine damage occurred because of misuse, lack of routine maintenance, shipping, handling, warehousing or improper installation. Similarly, warranty is void if the serial number of the engine has been removed or the engine has been altered or modified.

If a customer differs with the decision of the Service Dealer, an investigation will be made to determine whether the warranty applies. Ask the Service Dealer to submit all supporting facts to his Distributor or the Factory for review. If the Distributor or the Factory decides that the claim is justified, the customer will be fully reimbursed for those items that are defective. To avoid misunderstanding which might occur between the customer and the Dealer, listed below are some of the causes of engine failure that the warranty does not cover.

IMPROPER MAINTENANCE:

The life of an engine depends upon the conditions under which it operates, and the care it receives. Some applications, such as tillers, 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.

THIS WARRANTY COVERS ENGINE RELATED DEFECTIVE MATERIAL AND/OR WORKMANSHIP ONLY, AND NOT REPLACEMENT OR REFUND OF THE EQUIPMENT TO WHICH THE ENGINE MAY BE MOUNTED. NOR DOES THE WARRANTY EXTEND TO REPAIRS REQUIRED BECAUSE OF:

1. PROBLEMS CAUSED BY PARTS THAT ARE NOT ORIGINAL BRIGGS & STRATTON PARTS.
2. Equipment controls or installations that prevent starting, cause unsatisfactory engine performance, or shorten engine life. (Contact equipment manufacturer.)
3. Leaking carburetors, clogged fuel pipes, sticking valves, or other damage, caused by using contaminated or stale fuel. (Use clean,

fresh, lead-free gasoline and Briggs & Stratton gasoline stabilizer, Part No. 5041.)

4. Parts which are scored or broken because an engine was operated with insufficient or contaminated lubricating oil, or an incorrect grade of lubricating oil (4 cycle engines: check oil level daily or after every 8 hours of operation. Refill when necessary and change at recommended intervals.) (2 cycle engines: use correct mixture of gasoline and BIA/NMMA certified oil.) Read "Owner's Manual."
5. Repair or adjustment of associated parts or assemblies such as clutches, transmissions, remote controls, etc., which are not manufactured by Briggs & Stratton.
6. Damage or wear to parts caused by dirt, which entered the engine because of improper air cleaner maintenance, re-assembly, or use of a nonoriginal air cleaner element or cartridge. (At recommended intervals, clean and re-oil the Oil-Foam® element or the foam pre-cleaner, and replace the cartridge.) Read "Owner's Manual."
7. Parts damaged by overspeeding, or overheating caused by grass, debris, or dirt, which plugs or clogs the cooling fins, or flywheel area, or damage caused by operating the engine in a confined area without sufficient ventilation. (Clean fins on the cylinder, cylinder head and flywheel at recommended intervals.) Read "Owner's Manual."
8. Engine or equipment parts broken by excessive vibration caused by a loose engine mounting, loose cutter blades, unbalanced blades or loose or unbalanced impellers, improper attachment of equipment to engine crankshaft, overspeeding or other abuse in operation.
9. A bent or broken crankshaft, caused by striking a solid object with the cutter blade of a rotary lawn mower, or excessive v-belt tightness.
10. Routine tune-up or adjustment of the engine.
11. Engine or engine component failure, i.e., combustion chamber, valves, valve seats, valve guides, or burned starter motor windings, caused by the use of alternate fuels such as, liquified petroleum, natural gas, altered gasolines, etc.

WARRANTY IS AVAILABLE ONLY THROUGH SERVICE DEALERS WHICH HAVE BEEN AUTHORIZED BY BRIGGS & STRATTON CORPORATION. YOUR NEAREST AUTHORIZED SERVICE DEALER IS LISTED IN THE "YELLOW PAGES" OF YOUR TELEPHONE DIRECTORY UNDER "ENGINES, GASOLINE" OR "GASOLINE ENGINES," "LAWN MOWERS," OR SIMILAR CATEGORY.

Briggs & Stratton Engines Are Made Under One Or More Of The Following Patents:			
5,320,795	5,243,878	5,150,674	5,040,503
5,271,363	5,197,425	5,105,331	5,016,588
5,269,713	5,197,422	5,086,890	4,996,956
5,265,700	5,191,864	5,040,644	4,995,357
Design D-247,177 (Other Patents Pending)			
4,977,879	4,694,792	4,355,253	DES. 309,458
4,971,219	4,520,288	4,270,509	DES. 309,457
4,895,119	4,453,507	4,233,534	DES. 308,872
4,819,593	4,430,984	4,168,288	DES. 308,871

In the USA and Canada, a 24 hour hot line, 1-800-233-3723, has a menu of pre-recorded messages offering you engine maintenance information.

BRIGGS & STRATTON ENGINE OWNER WARRANTY POLICY

effective February 1, 1994
 Replaces all undated Warranties and all Warranties
 dated before February 1, 1994

LIMITED WARRANTY

"Briggs & Stratton Corporation will repair or replace, free of charge, any part, or parts of the engine that are defective in material or workmanship or both. Transportation charges on parts submitted for repair or replacement under this Warranty must be borne by purchaser. This warranty is effective for the time periods and subject to the conditions provided for in this policy. For warranty service contact your nearest Authorized Service Dealer as listed in the 'Yellow Pages' under 'Engines, Gasoline,' 'Lawn Mowers' or similar category. 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, OR 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	WITHIN U.S.A. AND CANADA		OUTSIDE U.S.A. AND CANADA	
	CONSUMER USE*	COMMERCIAL USE*	CONSUMER USE*	COMMERCIAL USE*
All Vanguard™ engines.	2 year - engine / Lifetime** - Magnetron® ignition			
All Diamond Plus, Europa™, Industrial Plus™ and all I/C®.	2 year	1 year	2 year	1 year
Quantum® and Diamond Power.	2 year	90 days	2 year †	90 days
All standard 2 through 18 HP engines installed on lawn mowers, riders, edgers, tillers, and all Sno/Gard engines.	2 year	90 days	1 year	90 days
All other standard 2 through 18 HP engines.	1 year	90 days	1 year	90 days

* For purposes of this warranty policy, "consumer use" means personal residential household use by the original retail consumer. "Commercial use" means 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. **Engines used in competitive racing or on commercial or rental tracks are not warranted.**

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

† One (1) year in Australia and New Zealand.

NO WARRANTY REGISTRATION CARD IS NECESSARY TO OBTAIN WARRANTY ON BRIGGS & STRATTON ENGINES. YOU MUST SAVE THE PURCHASE RECEIPT. A PROOF OF PURCHASE DATE WILL BE REQUIRED TO OBTAIN WARRANTY.