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

Briggs & Stratton Corporation
Milwaukee, Wisconsin 53201

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PRINTED IN U.S.A.
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 motorbikes, 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.

**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.)

**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.
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.

SET THROTTLE CONTROL LEVER:

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

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.

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 threecord plugs.
To Adjust Choke Control:

Remove all cleaner cover and elements with equipment.

Choke Control:

To Check Operation of Engine and Equipment Controls:

Move equipment control to "OFF" position or 

To Stop Engine:

Engine may result if choke is used to stop en-
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.

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

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 damaged 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.

CONTROL PLATE

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.

IDLE SPEED ADJUSTING SCREW
THROTTLE STOP

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

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).
**Symptoms**

**International Schedule**

**Maintenance**

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**Ready To Serve You And Are Committed To Quality Service.**

*Note 1:* Change oil after every 6 hours. Then, every 50 hours or every season.

*Note 2:* Change after every 25 hours during seasons of high ambient temperatures.

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<table>
<thead>
<tr>
<th>Component</th>
<th>0 Hours</th>
<th>100 Hours or every season</th>
<th>25 Hours or every 25 hours</th>
<th>Every 5 hours or every season</th>
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<td>Choke</td>
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<td>Spark Plug</td>
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Follow the highest calendar intervals, whichever occur first.
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. (65.08 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**

**DESCRIPTION**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>B &amp; S PART NO.</th>
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<tbody>
<tr>
<td>Air cleaner cartridge</td>
<td>491588</td>
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<tr>
<td>Air cleaner pre-cleaner, if so equipped</td>
<td>491435</td>
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<tr>
<td>Air cleaner spacer, if so equipped</td>
<td>280737</td>
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<tr>
<td>Standard Spark plug (Champion J19LM)</td>
<td>492167</td>
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<tr>
<td>Resistor Spark plug (Champion RJ19LM)</td>
<td>802592</td>
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**CLEARANCES**

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<th>DIMENSION</th>
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<tr>
<td>Spark Plug Gap ............ .030 in. (.76 mm)</td>
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<tr>
<td>Intake Valve* ........... .005-.007 in. (.13-.18 mm)</td>
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<tr>
<td>Exhaust Valve* ........ .009-.011 in. (.23-.28 mm)</td>
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</tbody>
</table>

* 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.

**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.

**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.

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 chalk from cylinder, cylinder head fins, blower housing, rotating screen and muffler areas.

5. Store in a clean and dry area.

**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.

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**

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*Note: Walking fingers logo and "Yellow pages" are registered trademarks in various jurisdictions.*
ABOUT YOUR ENGINE WARRANTY: (see back cover for Statement of Limited Warranty)

1. PROBLEMS CAUSED BY PARTS THAT ARE NOT ORIGINAL.

2. Equipment condition or modifications that prevent starting. Cause of equipment malfunction and/or engine performance, or station engine life. (contact Briggs & Stratton Parts Department)

3. Leaking carburetors, clogged fuel pipes, sticking valves, or other service related defects. Cause of equipment malfunction and/or engine performance, or station engine life. (contact Briggs & Stratton Parts Department)

4. Problems caused by Improper maintenance, is not covered by warranty because of improper maintenance, is not caused by dirt, dust, water, freezing, fuel, or other substance that are excessive, or by factory approved fuels other than gasoline. (See Operator's Manual)

5. Improper Maintenance:

   - Failure that warranty does not cover.

   - Customer and dealer agree that some of the causes of the engine may be the result of improper maintenance, and/or operation. Moreover, the engine may be affected by factors such as age, weather, and use. Therefore, it may be necessary to adjust the engine's performance to ensure maximum efficiency and durability. To avoid malfunctioning, it is necessary to ensure that the engine is properly maintained. Therefore, it is recommended to consult the Operator's Manual for more information on how to properly maintain the engine.

   - The engine's performance may be affected by factors such as age, weather, and use. Therefore, it may be necessary to adjust the engine's performance to ensure maximum efficiency and durability. To avoid malfunctioning, it is necessary to ensure that the engine is properly maintained. Therefore, it is recommended to consult the Operator's Manual for more information on how to properly maintain the engine.

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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(TM)' under 'Engines, Gasoline,' 'Gasoline Engines,' '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

<table>
<thead>
<tr>
<th>ENGINES</th>
<th>WITHIN U.S.A. AND CANADA</th>
<th>OUTSIDE U.S.A. AND CANADA</th>
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<tbody>
<tr>
<td></td>
<td>CONSUMER USE*</td>
<td>COMMERCIAL USE*</td>
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<tr>
<td>All Vanguard™ engines.</td>
<td>2 year - engine / Lifetime** - Magnetron® ignition</td>
<td>1 year</td>
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<tr>
<td>All Diamond Plus, Europa™, Industrial Plus™ and all I/C®.</td>
<td>2 year</td>
<td>90 days</td>
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<tr>
<td>Quantum® and Diamond Power.</td>
<td>2 year</td>
<td>90 days</td>
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<tr>
<td>All standard 2 through 18 HP engines installed on lawn mowers, riders, edgers, tillers, and all Sno/Gard engines.</td>
<td>2 year</td>
<td>90 days</td>
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<tr>
<td>All other standard 2 through 18 HP engines.</td>
<td>1 year</td>
<td>90 days</td>
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* 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.