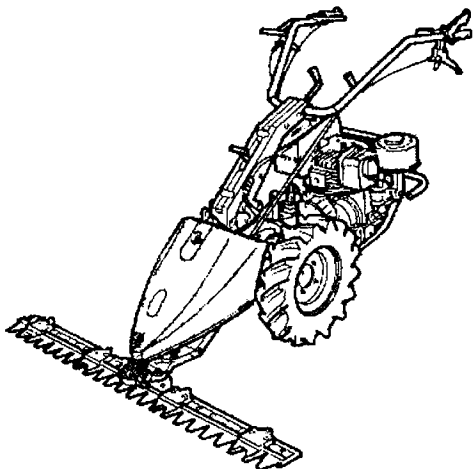
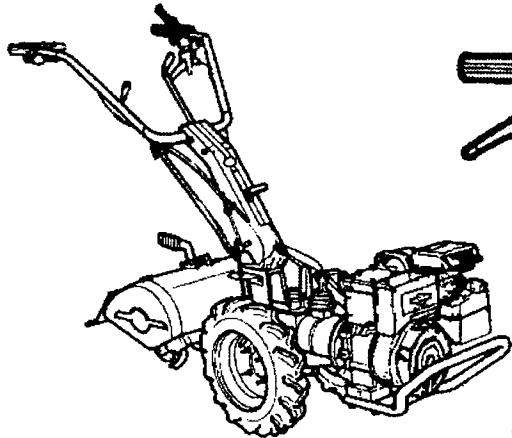
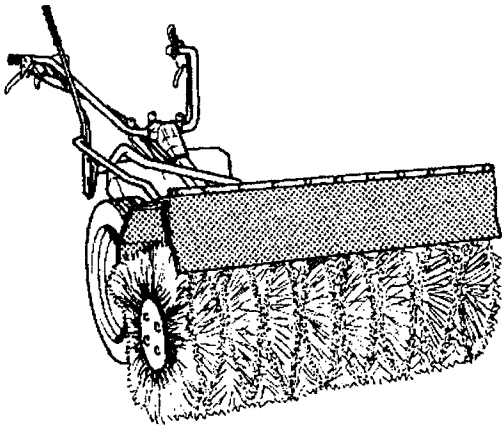
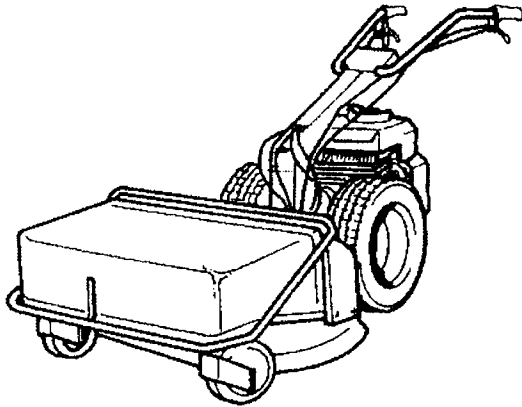


POWER UNITS & Gardening Attachments



SERIES

OWNERS USE & CARE MANUAL



! READ THIS OWNER'S
MANUAL BEFORE
ATTEMPTING TO
OPERATE ANY OF THE
POWER UNITS OR
ATTACHMENTS

MODELS

710 GARDENER

716 GARDENER PLUS

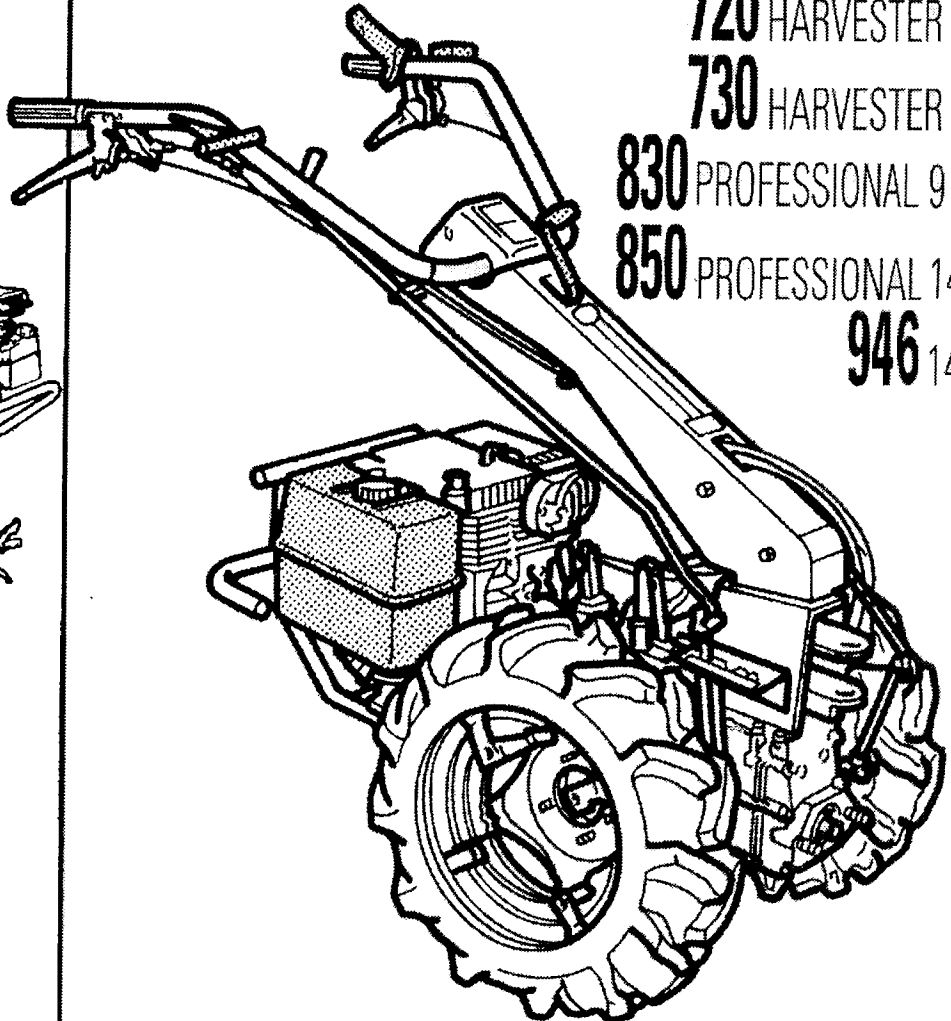
720 HARVESTER

730 HARVESTER PLUS

830 PROFESSIONAL 9 HP

850 PROFESSIONAL 14 HP

946 14 HP



Dear Customer:

Thank you for your purchase. Get set to enjoy the benefits your wise selection of a BCS unit has earned for you. We believe that no other make machine that can handle so many lawn and garden tasks with such fine results - and with so little effort on your part.

Your BCS unit has precision gearing for lasting, trouble-free service. There are no drive belts to stretch and break.

Our network of BCS distributors and servicing dealers stands ready to supply your needs for attachments, accessories, parts and service. With a yearly check-up, your dealer can help you keep your BCS equipment in top shape. Meanwhile, be sure to follow the operating and maintenance tips in this owner's manual for satisfied performance of your machine.

BCS America

MODELS IN THIS EDITION

BCS America maintains a dynamic updating policy. It notifies the field of the serial number of the first unit off the line after a change. This edition covers the models and model options listed in the specifications on page 16.

Accordingly, be sure to record the BCS unit serial number printed between two stars on the transmission, and the engine model and serial numbers from the engine name plate.

GRAPHIC SYMBOLS



THIS SYMBOL IS LIKE A FLAG. IT FLAGS YOUR ATTENTION TO DANGER WARNINGS IN THE MANUAL.



WHEN PLACED OVER A PICTURE OR AN ITEM IN THE PICTURE, THIS SYMBOL SAYS "NO!" DO NOT DO, OR USE OR PERMIT WHATEVER IS SHOWN.



WARNING

READ ALL SAFETY RULES AND OPERATING AND MAINTENANCE INSTRUCTIONS IN THIS MANUAL BEFORE USING ANY POWER UNIT, ATTACHMENT, OR ACCESSORY.

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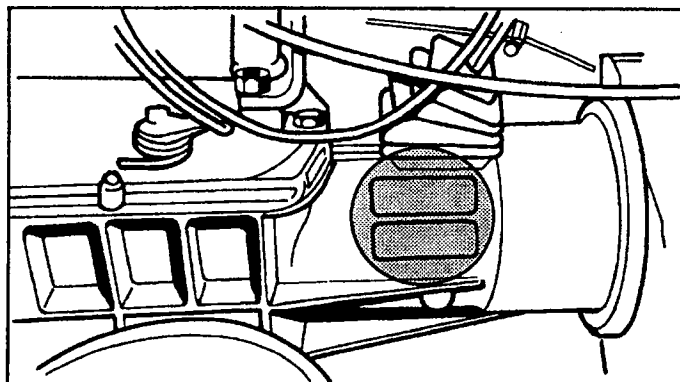
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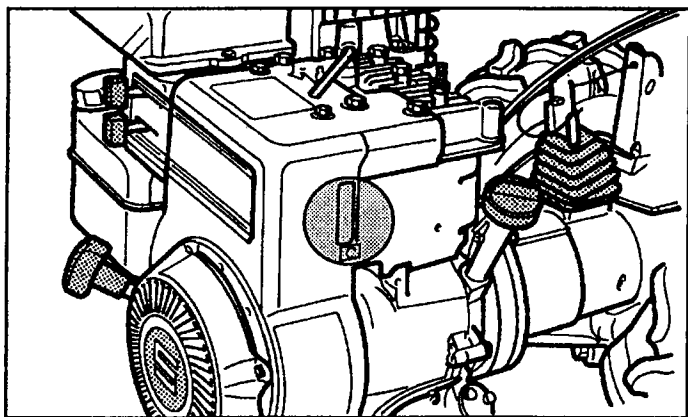
RECORD OF SERIAL NUMBERS



BCS UNIT SERIAL NUMBER * _____ *
(Located between stars on transmission)

**BRIGGS & STRATTON
ENGINE SERIAL NUMBER** _____

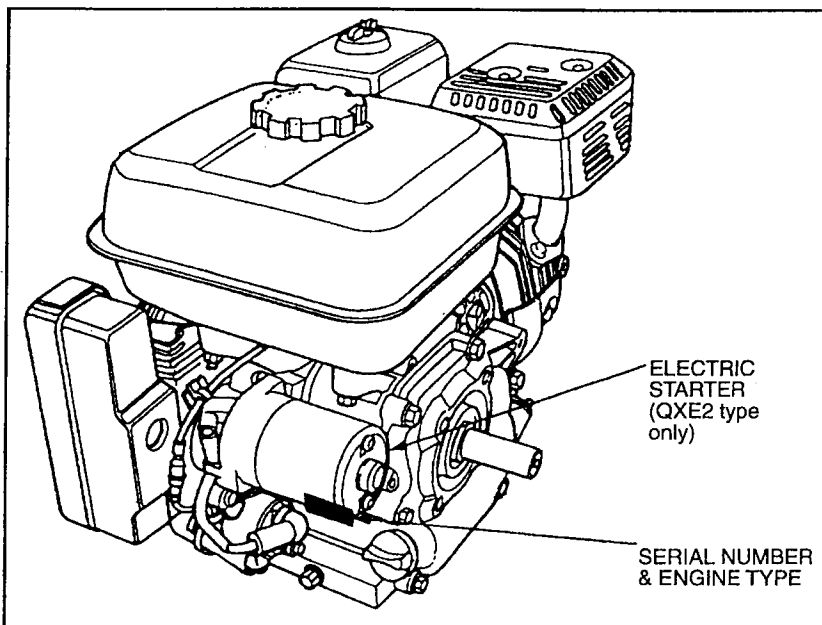
(Stamped on crankcase about two inches from
name plate on side of engine)



HONDA ENGINE SERIAL NUMBER:

TYPE _____

SERIAL NO. _____



LOMBARDINI ENGINE SERIAL NUMBER _____ (Located on engine name plate)

WARNING

**READ ALL SAFETY RULES AND OPERATING AND MAINTENANCE
INSTRUCTIONS IN THIS MANUAL BEFORE USING ANY POWER UNIT,
ATTACHMENT, AND/OR ACCESSORY.**

SECTION ONE

1

INSTRUCTIONS FOR SAFE OPERATION OF BCS POWER UNITS AND ATTACHMENTS

General precautions and instructions are followed by specific precautions for each combination of attachment and power unit in the owner's manual.

GENERAL PRECAUTIONS AND INSTRUCTIONS

TRAINING

READ THIS OWNER'S MANUAL PRIOR TO OPERATING THE POWER UNITS AND ATTACHMENTS. BCS power units and attachments are designed for operation by properly instructed adults only. Make certain that any person operating this equipment has read this manual.

DO NOT LET CHILDREN OPERATE THE POWER UNIT.

KEEP THE OPERATING AREA CLEAR OF PEOPLE AND ANIMALS. BE CAREFUL THAT CHILDREN DO NOT COME NEAR.

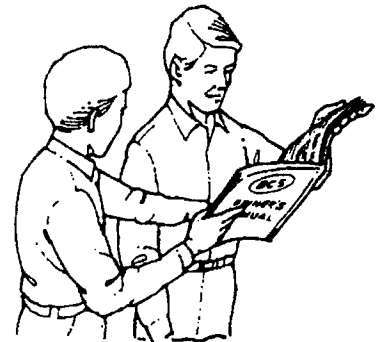
During storage, and whenever the power unit is unattended, disengage the PTO (power take-off) and render the engine unstartable by disconnecting the spark plug wire from the spark plug.

PREPARATION

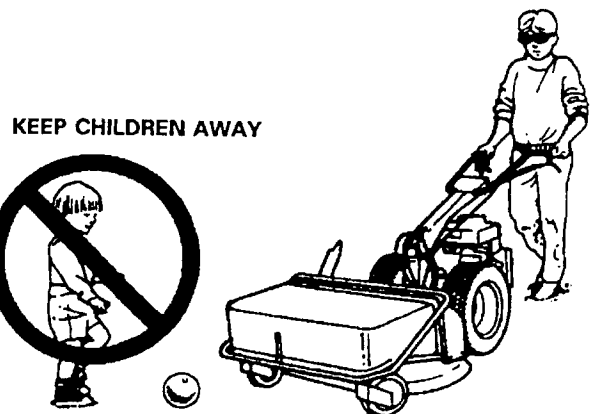
Wear appropriately protective clothing and safety protection articles for the climate and type of attachment you are to operate.

1. For all walk-behind applications, wear sturdy non-slip boots or safety toe shoes. See recommendations listed for use of a particular attachment. Do not wear open-toed sandals or go barefoot when operating these machines.
2. Wear snug-fitting protective clothing which allows freedom of movement without being loose-fitting. Ties, scarfs and jewelry which could be caught in the machinery should not be worn.
3. Wear hearing protection.
4. Wear eye protection when operating a snow-thrower, power sprayer, chipper/shredder or mower attachment.
5. Overexposure to sunlight can be damaging to your eyes and skin. When working in strong sunlight, protect your eyes with sun glasses, and either keep your body covered or apply a sun screen lotion.

Do not operate on terrain where you cannot maintain good footing, or where the machine could overturn or slide into you. When walking behind the unit, walk slowly, DO NOT RUN!



ONLY PROPERLY INSTRUCTED PERSONS SHOULD USE THIS EQUIPMENT



KEEP CHILDREN AWAY



EYE AND HEARING PROTECTION

STURDY FOOTWEAR



Thoroughly inspect the area where you are going to mow or thatch the lawn, sweep walks or drives, or throw snow. Remove toys, stones, bones, wires, glass, newspapers and other objects which could be caught up and thrown by the machine.

Take the following precautions for the safe handling and storage of fuel:

1. Keep fuel supplies in approved type, properly labeled fuel containers.
2. Do not store fuels or fueled units in closed (unventilated) areas, or in garages or shops connected to human living quarters. Do not store units or fuel where there are flames or sources of sparks such as electrical appliances and switches.
3. Obey all local regulations for the storage and handling of fuel.
4. Do not smoke when fueling, or fuel where the fumes could be ignited by fire or sparks.
5. Do all fueling outdoors over non-flammable surfaces. If fuel is spilled on the unit, wipe the unit dry and properly dispose of the wiping rag. **ALWAYS MOVE THE UNIT AT LEAST 10 FEET (3 m) AWAY from the fueling spot and fuel supplies before starting the engine.**
6. Always remove the engine fuel cap very slowly to equalize tank pressure and avoid spurting of fuel. Keep your face and eyes away from the tank while loosening the fuel cap.
7. Do not fuel a running or hot engine. Do not loosen the fuel cap until the engine has stopped.

Then wait several minutes for the engine to cool before pouring fuel.

Before starting the engine, put all control levers in neutral (N) position. All "N" positions on the gear selector are neutral. Also be sure to disengage the PTO (power take-off) to the attachment.

Never make blade height or any other adjustment to the power unit or any attachment while the engine is running.

OPERATION

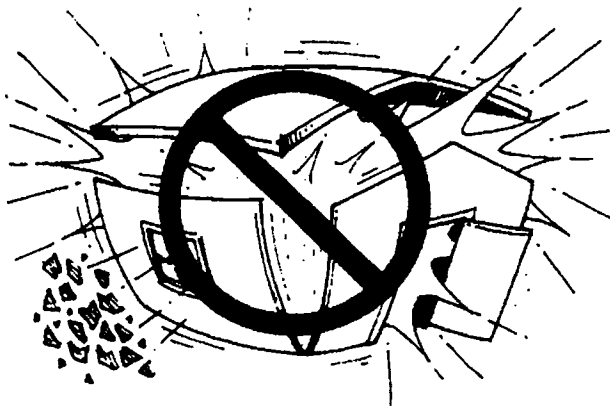
Operate only when there is good visibility. Do not operate at dusk or at night. Do not operate when it is foggy or hazy.

Never change the engine governor setting or overspeed the engine. Use the throttle and gear settings recommended for particular attachments and applications in this owner's manual.

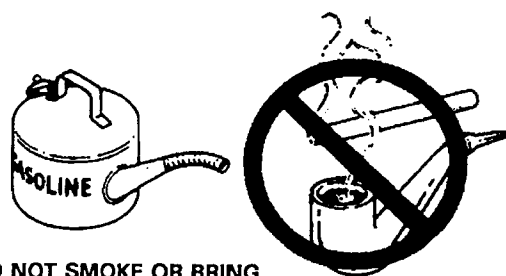
Do not put hands and feet under the mower deck or into the discharge openings of a rotary mower.

Do not put fingers or any other part of the body into the intake or discharge openings of any mower, snow-thrower, or chipper/shredder unless you have disconnected the spark plug wire so the engine cannot be started accidentally. Keep the machine clean-out holes closed. Stay out of the discharge stream of a mower, chipper/shredder, power sweeper or power sprayer.

Always stop operation of a rotary mower, a cutter bar mower, snow thrower, or a tiller before crossing paved or gravel roadways.



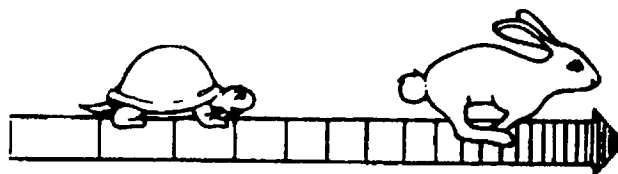
DON'T KEEP FUEL OR FUELED ENGINES WHERE SPARKS COULD CAUSE FIRE OR EXPLOSIONS



DO NOT SMOKE OR BRING ANY FLAME OR SPARKS NEAR FUEL !

USE SLOW SPEEDS FOR OPERATING

SEE OPERATING SPEED RECOMMENDATION FOR EACH ATTACHMENT



NEVER PUT HANDS OR FEET UNDER MOWER DECK OR INTO OPENING

Never ride the tractor or an attachment. Ride only on riding accessories designed for the purpose. Do not take children on a sulky with you.

1. Use **transport sulkies** only for transport to and from the operating area, and never for operation.
2. Use **utility wagons** only for hauling, and limit the payload to the rated capacity of the wagon.
3. A **mowing sulky** is exclusively for operation of a rotary mower and must not be used with any other attachment.
4. Never use ride-on attachments on the highway or any city street.

Do not disconnect or otherwise defeat the purpose of the lockout devices

The high-speed lockout prevents using too fast a gear for backing up a front-mounted attachment.

The PTO/REVERSE lockout permits backing up a rear-mounted attachment only when the PTO is disengaged. Read Section Two for explanation of the lockout devices.

Do not use the highest numbered gear on the gear selector when walking behind the machine.

On all units in this manual, the highest gear produces much faster than walking speed, and is only to be used for transport in conjunction with a transport sulky.

Do not make adjustments or repairs to the machine when the engine is running.

Put all controls in neutral, wait until reciprocating or rotating parts of the attachment have stopped, and disconnect the spark plug wire:

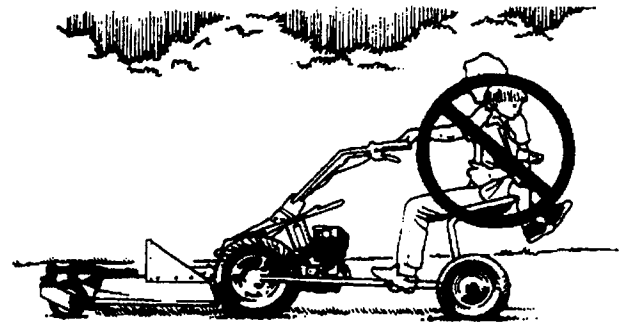
1. Before leaving the unit where unauthorized persons may start it accidentally.
2. When a foreign object has been struck or taken into the attachment.
Proper operation should be restored before further use.
3. Before cleaning out a clogged attachment such as a rotary mower, cutter bar mower, snow-thrower, chipper/shredder or power sweeper.
4. If the machine suddenly starts to vibrate or run erratically.
The entire machine should be inspected by an authorized BCS servicing dealer before further use.

All safety guards, plates, lockouts, deflectors and shields must be in proper position.

Do not operate if any safety devices or fastening parts are missing from the unit.

Do not run the engine indoors where deadly poisonous carbon monoxide fumes can collect.

If the engine is to be started inside a garage or barn, open the doors and windows wide so the fumes can escape.



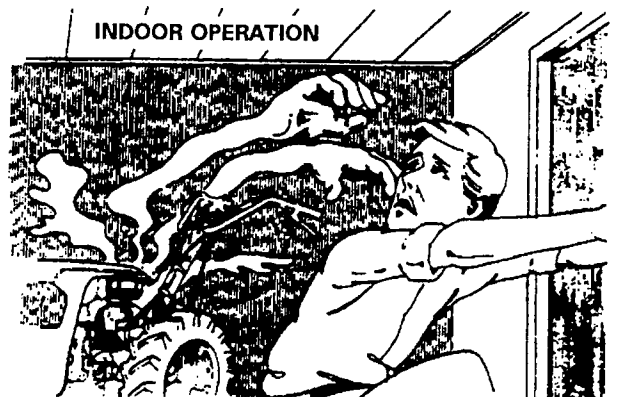
DO NOT LET CHILDREN RIDE WITH YOU ON A SULKY



DO NOT OPERATE IF MACHINE STARTS TO VIBRATE



UNIT SERVICING SHOULD BE DONE BY AUTHORIZED BCS DEALERS



BUILD-UP OF FUMES CAN BE VERY DANGEROUS



MAINTENANCE AND STORAGE

Keep engine, tractor and all attachments in safe working condition.

Clean the unit and accessories at regular intervals, also check for damaged or missing parts. Check the tightness of all fasteners. Perform the items of maintenance recommended in this owner's manual. Do not attempt any disassembly and repairs for which instructions have not been furnished. Certain engine adjustments, and internal servicing of the engine, tractor, clutch and transmission, and gearboxes of attachments should be done only by a BCS-trained serviceman at an authorized BCS servicing dealer or distributor.

Do not store the machine with fuel in the system. Disconnect the fuel line at the carburetor inlet, and drain the fuel into a fuel container. Then reconnect the fuel line. Start and run the engine until it stops from lack of fuel.

When storing the machine, use the spring latch (illustrated on page 30) to latch the clutch lever in the depressed (disengaged) position. This prevents the clutch cone from sticking to the lining during storage.

Store the machine in a well-ventilated place, protected from dampness and the weather.

REAR-TINE TILLER PRECAUTIONS

All the models have **PTO/reverse lockout** devices to prevent tine rotation while the Tiller is being backed up. These devices are shown and their operation described on page 28. Before operating the Tiller, always check that the lockout device is properly assembled on the machine. **Do not remove the high speed lockout or render it inoperable.**

Do not put hands or feet near or under the tiller housing. Keep away from the rotating tines. The tines of the BCS tiller rotate at high speeds independent of the tractor gear speed settings.

Inspect the area to be tilled. Pick up rocks and other objects of a size which may jam or otherwise interfere with tiller operation.

Till only when there is good light.

Use caution to avoid slipping and falling. Wear footwear which will improve footing on slippery surfaces.

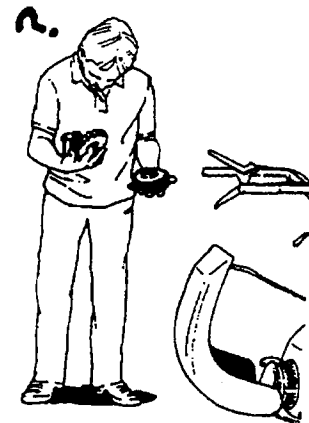
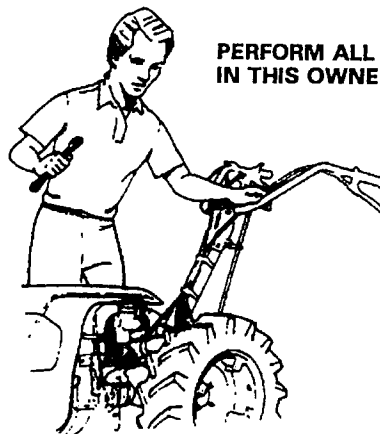
Do not overload the machine by attempting to till too deeply or in fast forward. See tiller operation instructions in Section 3.

On new (previously untilled) or hard, rocky ground, use lowest gear and throttle settings, and set the tiller tines for minimum soil penetration. Be alert for the possibility the machine may leap forward if the tines contact an underground obstruction. If this occurs, let go of the tiller handles to stop the engine.

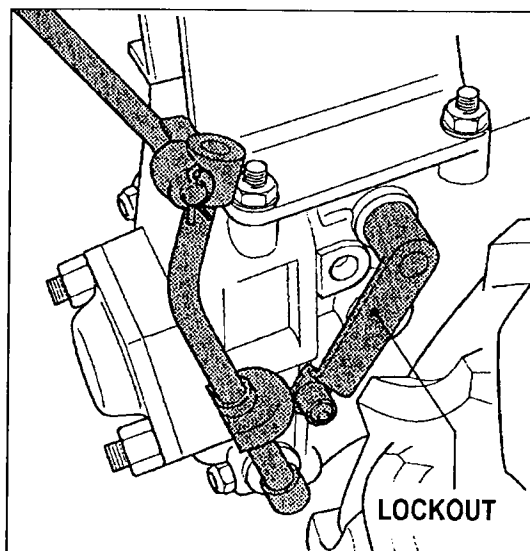
Do not use makeshift accessories in conjunction with the tractor and tiller. Use only wheels, counterweights, shaft extensions, connectors, and tine combinations recommended for each tractor and tiller attachment by BCS.

The highest number gear selection is only for transport of the unit and tiller attachment in conjunction with a transport sulky.

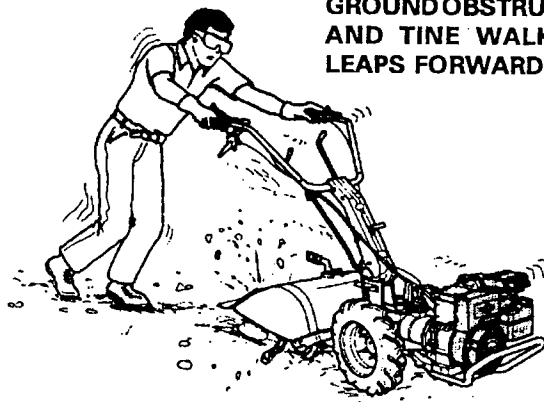
PERFORM ALL MAINTENANCE IN THIS OWNER'S MANUAL



DON'T ATTEMPT REPAIRS NOT COVERED IN THIS OWNER'S MANUAL



TILLER HITS HARD GROUND OBSTRUCTION AND TINE WALKS OR LEAPS FORWARD





Do not operate the tiller in high gear. Do not use high transport speeds on slippery surfaces. When using a transport sulky, look behind and use care when backing.

ROTARY MOWER PRECAUTIONS

IMPORTANT NOTICE

Do not deactivate the PTO Reverse Lockout on any of the convertible models. The new design lockouts on these models automatically disengage during a conversion for front-mount attachments.

Clear the area to be mowed of all objects (wires, rocks, toys, etc.) which might be picked up and thrown by the mower.

Disengage the PTO and put the transmission into neutral (gear selector position "N") before cranking to start the engine, and also whenever leaving the operator zone behind the handlebar or dismounting from a sulky. Stay alert for holes, rocks, roots in the terrain and other hidden hazards. Keep away from drop-offs. Use wheel extensions for added stability of a walk-behind mower. When walking behind, be especially cautious when changing direction on slopes.

When operating from a riding sulky, reduce speed and use extreme caution on slopes and in sharp turns to prevent tipping and loss of control.

MOW SLOPES AS FOLLOWS:

1. When riding, mow up and down, never across the slope.
2. When walking behind, mow across the slope, never up and down.
3. Do not mow excessively steep slopes.

Be careful not to discharge grass in direction of roadways, houses, vehicles and people.

Inspect grass bags frequently for wear and deterioration. Replace grass bags which are not in good condition.

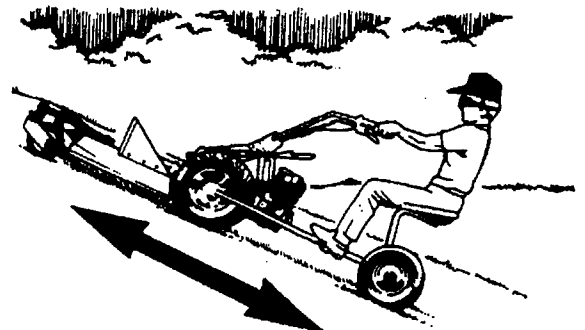
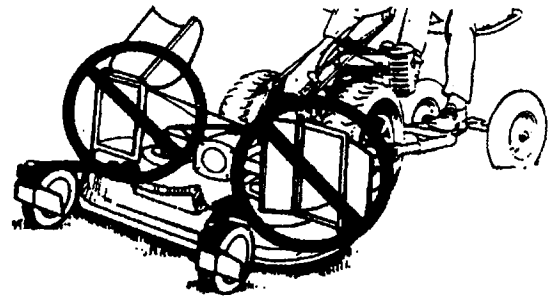
When the 2-blade mower is used without the grass bag, the grass deflector **must** be in the down position covering one discharge chute, and the door on the other chute **must** be closed, to prevent open discharge from the chutes. When mounting the grass bag on the deck to collect the cuttings, open the door and raise the deflector for discharge from the volutes into the bag.

Before removing the grass bag for emptying, disengage the PTO, shut off the engine and wait until the mower blades have stopped.

Never put hands in any openings of the mower or grass bag when the engine is running. If necessary to clear out the discharge chute with your hands, always first disconnect the spark plug wire.

Keep the mower blades in good condition. Inspect, sharpen and maintain blades as recommended for mower attachments in Section 3. Replace bent, badly worn blades, because pieces breaking off can become projectiles. After sharpening, blades should be balanced.

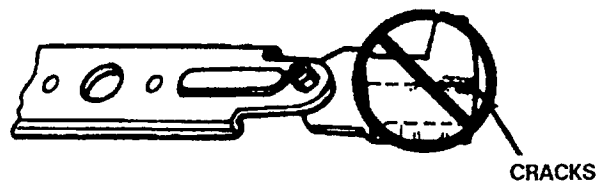
DO NOT MOW WITH
GRASS DEFLECTORS
OPEN



WHEN RIDING, MOW UP AND DOWN SLOPES



WHEN WALKING BEHIND,
MOW ACROSS THE SLOPES



IMPORTANT NOTICE

Do not deactivate the **PTO Reverse Lockout** on any of the convertible models. The new design lockouts on these models automatically disengage during a conversion for front-mount attachments.

CUTTER BAR MOWER PRECAUTIONS

Cutter Bar Mower attachments are intended for walk-behind operation only. Do not use a riding sulky.

Mow only at a slow rate of speed. See page 39 for recommended throttle and gear combinations for cutter bar mowing. Do not use (transport) gear # 4 on 830/850 for any purpose other than using a transport sulky for transport. Transport speed of these models far exceeds the walking speed of an operator.

The models 716, 720, 730 and 946 converted for cutter bar operation have high gear position blocked by a high speed lockout.

Do not remove or otherwise defeat the purpose of the high speed lockout device.

Disengage the PTO when backing the machine.

Cutter bar mowers are designed for mowing over terrain which is too rugged or steep for use of rotary mowers. Use care when mowing hilly terrain. Always mow across the face of a slope, never up and down. Use wheel extenders for added stability. Do not mow excessively steep slopes. Go slowly and carefully on all turns.

SNOW THROWER PRECAUTIONS

Wear protective, trim fitting winter clothing with no scarfs or draw strings which could be caught in the machinery. Wear boots or shoes designed to improve your footing on slippery surfaces. Wear proper eye protection.

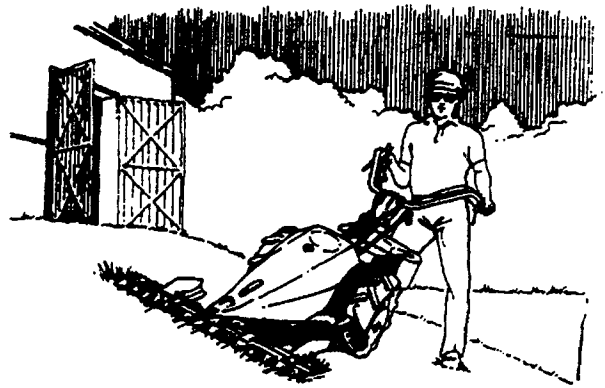
When necessary to start the engine indoors and drive the machine out of the building, keep the doors and windows wide open. Exhaust fumes can be dangerous.

Never put your hands into the discharge opening or impeller/collector when the engine is running. Always disengage the PTO, shut off the engine, and wait until all moving parts have stopped before doing the following:

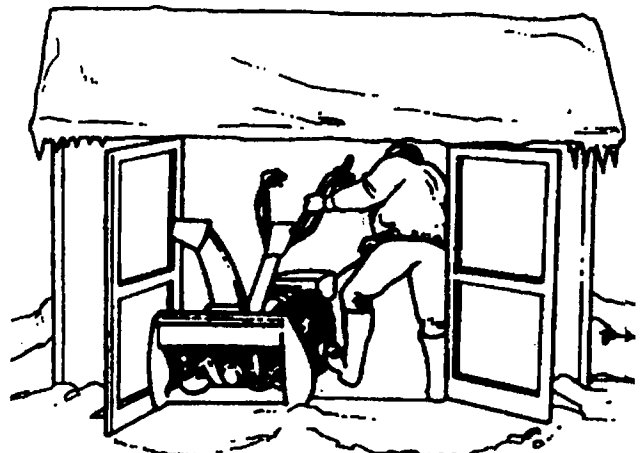
1. Cleaning or deicing the impeller/collector and discharge chute. (If possible, detach snow-thrower and thaw in a warm, dry place.)
2. After striking a foreign object, thoroughly inspect for damage. Make repairs before further operation.

Never use the snow thrower near glass enclosures, automobiles, window wells, drop-offs, etc., without adjusting the discharge angle away from them.

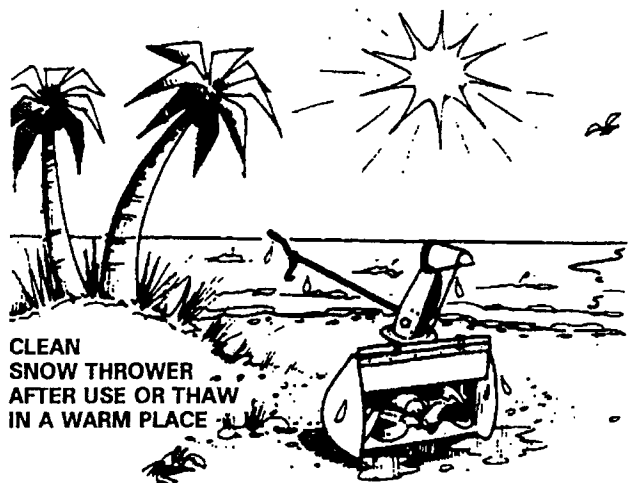
Keep children, pets and observers away.



MOW ACROSS THE FACE OF A SLOPE



OPEN DOORS WIDE IF STARTING THE ENGINE INDOORS



CLEAN SNOW THROWER AFTER USE OR THAW IN A WARM PLACE