

BCS

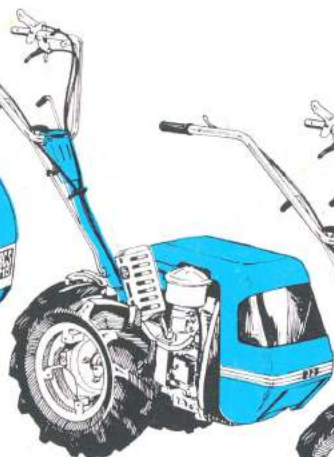
POWER UNITS & Gardening Attachments

SERIES

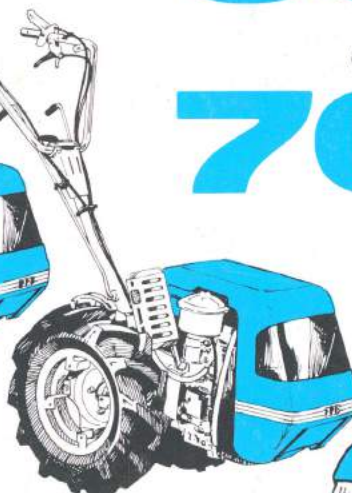
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&
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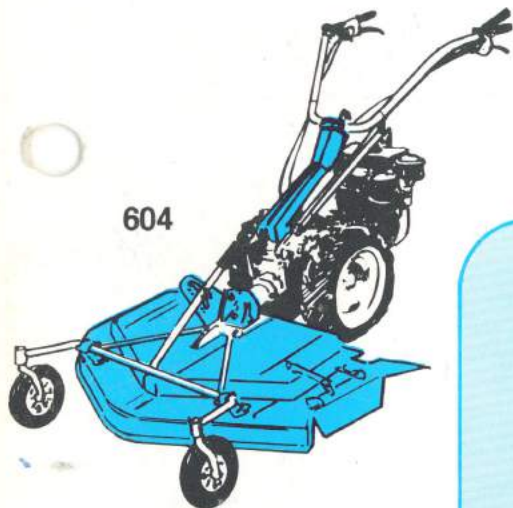
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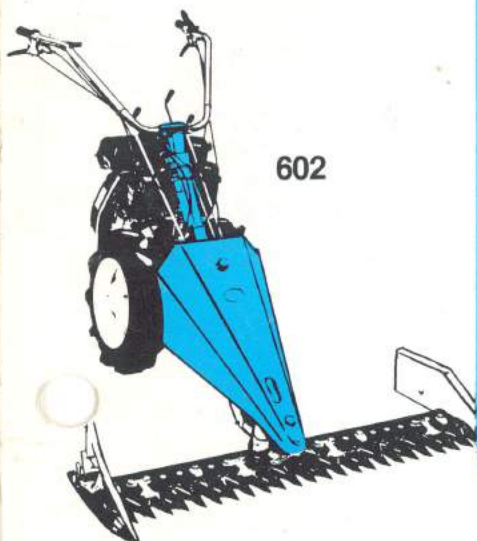
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604



602

OWNERS Use & Care MANUAL



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

Dear Customer;

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

The BCS Limited Warranty for your machine extends for a full three years, during which time all necessary service qualifying under the conditions of warranty will cost you only for the transportation of the machine.

The beauty of the BCS concept is that you need only to add interchangeable attachments to your BCS instead of buying a whole machine for each application. With precision gearing throughout, your BCS machine is built for lasting service, with no troublesome drive belts.

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 local dealer can help you keep your BCS equipment in top shape. In the meantime, be sure to follow the operating and maintenance tips in this owner's manual for satisfied performance of your machine.

BCS Mosa, Inc.



A leading manufacturer of tractors and farm implements for the past 45 years, BCS operates from this 50-acre facility near Milan, Italy.

CONTENTS

Section One

Rules for Safe Operation of Unit and Attachments

Rules for Safe Operation	5
Rear-Tine Tiller Precautions	8
Rotary Mower Precautions	9
Cutter Bar Mower Precautions	10
Snow Thrower Precautions	10
Log Splitter Precautions	11
Shredder/Chipper Precautions	12
Power Sprayer Precautions	13

Section Two

Preparing for Use

Unpacking	14
Assembling the Unit	14
Specifications	17
Features of 700 Series	18
Features of 600 Series	20
Lubrication, Filters and Fuel	21
Starting and Stopping	22
Gear and PTO Engagement—Rear-Mount Mode	25
Conversion of 700 Series for Front Mount	26
Operating Front-Mount Attachments	26
Maintenance Program	27

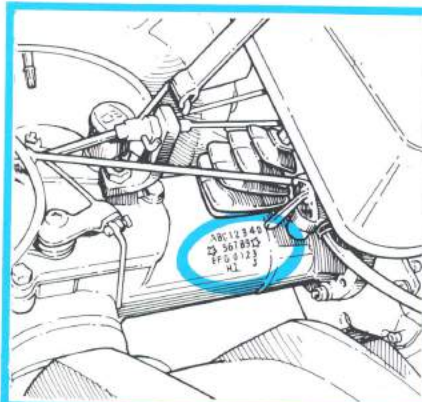
Section Three

Use and Care of Attachments

Lubrication of Attachments	28
Coupling Attachment to PTO	28
Use and Care of Rear-Tine Tiller	29
Use and Care of Rotary Mower	31
Use and Care of Cutter Bar Mowers	34
Use and Care of Snow Thrower	36
Use and Care of Log Splitter	37
Use and Care of Shredder/Chipper	38
Use and Care of Pressure Sprayer	39

WARNING

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

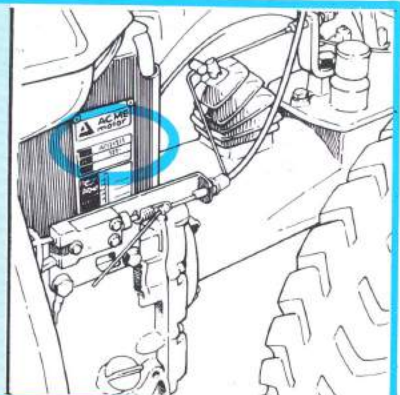


RECORD SERIAL NUMBERS HERE

BCS UNIT ★ _____

ENGINE MODEL _____

ENGINE SERIAL _____





LIMITED WARRANTY

What is Covered?

This warranty covers all defects in materials and workmanship in your BCS machine, including engine, attachments and accessories. This warranty does not cover the battery which is warranted separately.

What is the Period of Coverage?

BCS machines used only for personal, family or household purposes are warranted for a period of three (3) years from the date of purchase. BCS machines used for any other purpose, such as commercial, professional or rental use, are warranted for a period of one (1) year from the date of purchase.

What Will BCS Do?

BCS will, at its option, repair or replace any defective parts of the BCS machine covered by this warranty, or, in appropriate cases, refund the purchase price (less reasonable depreciation) on return of your BCS machine.

How Can You Get Service?

For warranty service, return the defective BCS product together with proof of date of purchase and the serial number of your BCS product to an Authorized BCS Servicing Dealer or BCS Factory Recommended Service Station. Transportation of your BCS product to and from the place where warranty service is performed shall be at your expense and risk. See the Yellow Pages or call (704) 846-1040 for the name and address of a BCS Servicing Dealer or Service Station near you. You may also obtain warranty information by writing:

BCS Mosa Inc.
P.O. Box 1739
Matthews, NC 28105

Other Conditions, Exclusions and Limitations

This warranty is given to the first retail purchaser (other than for purposes of resale) only and is not transferable. This warranty does not cover damage resulting from other than defects in material or workmanship, or damage caused by unreasonable use including the failure to provide reasonable and necessary maintenance as prescribed in your BCS owner's manual.

In addition, this warranty does not cover tune-ups or replacement of non-defective parts that may wear out with reasonable use within the warranty period or which may require replacement in connection with normal maintenance, such as, by way of example, roto tiller tines, lawn mower blades, clutch and control cables.

This warranty is void if the serial number of your BCS machine is removed or defaced or if service for defects covered under this warranty is performed by other than an Authorized BCS Servicing Dealer or BCS Factory Recommended Service Station.

This warranty applies only to BCS machines sold within the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, the Canal Zone, or American Samoa.

This limited warranty is in lieu of all other express warranties. Any implied warranty of fitness for a particular purpose, merchantability or otherwise, applicable to this product, shall be limited in duration to the duration of this limited warranty. BCS shall not be liable for any special, incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty supersedes any other warranty on your BCS machine, including any warranty contained in your owner's manual.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty is given by BCS Mosa Inc., 13601 Providence Road, Matthews, NC 28105. Phone: (704) 846-1040.

SECTION ONE

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 or shredder/grinder 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!



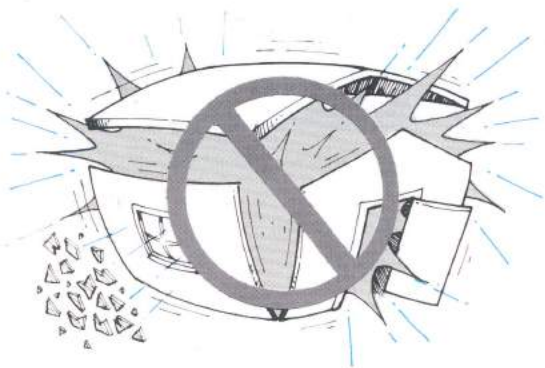
ONLY PROPERLY INSTRUCTED PERSONS
SHOULD USE THIS EQUIPMENT

KEEP CHILDREN AWAY

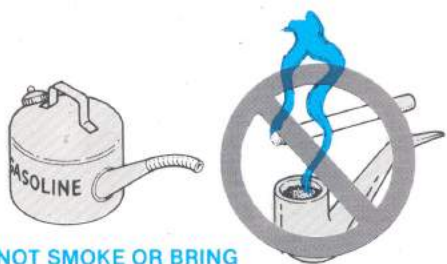


EYE AND HEARING
PROTECTION

STURDY FOOTWEAR



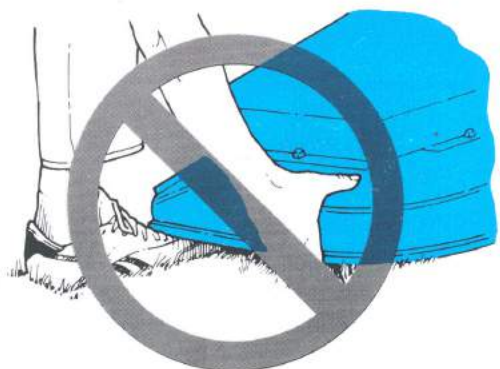
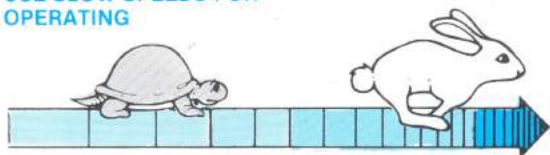
DON'T KEEP FUEL OR FUELED ENGINES WHERE SPARKS COULD CAUSE FIRE OR EXPLOSIONS



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

SEE OPERATING SPEED RECOMMENDATION FOR EACH ATTACHMENT

USE SLOW SPEEDS FOR OPERATING



NEVER PUT HANDS OR FEET UNDER MOWER DECK OR INTO OPENING

Thoroughly inspect the area where you are going to mow grass or throw snow. Remove toys, stones, bones, wires, glass 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 (3m) 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 shredder/grinder attachment unless the engine has been rendered unstartable (by disconnection of spark plug wire). Keep machine clean-out holes closed. Stay out of the discharge stream of a mower, shredder/grinder, snow-thrower 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.

Never ride the tractor or an attachment. Ride only on riding accessories designed for the purpose. Do not take children on a sully 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 sully** 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 on the 700 series of units. 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. [Lockouts not required on model 600 series.]

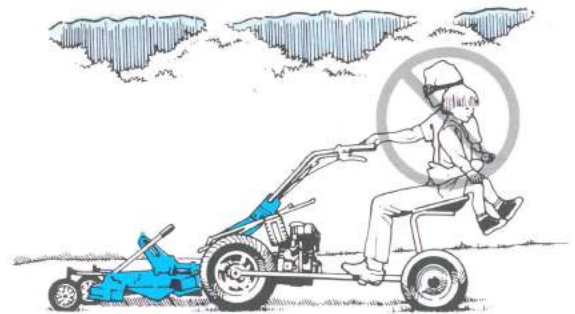
Do not use the highest numbered gear on the gear selector when walking behind the machine. On all units in this manual, the highest gear produces much faster than walking speed, and is only to be used for transport in conjunction with a transport sully.

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, snow-thrower, or shredder/grinder.
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.

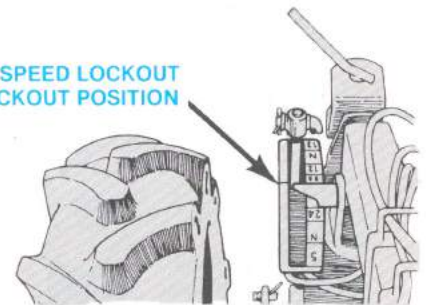
All safety guards, plates, lockouts, deflectors and shields must be in proper position. Do not operate if any safety devices or fastening parts are missing from the unit.

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

HIGH SPEED LOCKOUT IN LOCKOUT POSITION



DO NOT OPERATE IF MACHINE STARTS TO VIBRATE



UNIT SERVICING SHOULD BE DONE BY AUTHORIZED BCS DEALERS

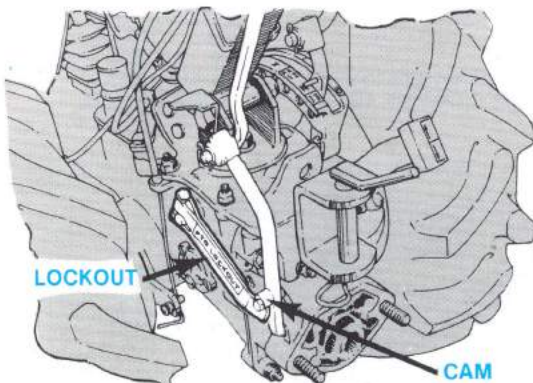
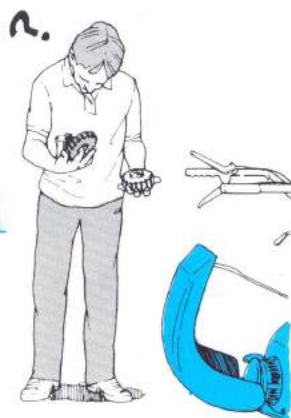


INDOOR OPERATION

BUILD-UP OF FUMES CAN BE VERY DANGEROUS



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



700 SERIES TRACTORS:
REINSTALL PTO LEVER
CAM SCREW TO ACTIVATE
PTO/REVERSE LOCKOUT
BEFORE USING REAR
TINE TILLER

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 23) 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

Before using the rear-tine tiller always check that the **cam screw** is in place on the **PTO lever**. If the **cam screw** was removed (for operation of front-mount attachments) it must be reinstalled before tiller use. Together, the **cam screw** and **PTO/reverse lockout lever** function to prevent tine rotation while the machine is backing up, or backing up when the tiller is operating. (See 700 Series "FEATURES" in Section Two for details.)

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 operations 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.

The highest number gear selection is only for transport of the unit and tiller attachment in conjunction with a **transport sully**. Do not operate the tiller in high gear. Do not use high transport speeds on slippery surfaces. When using a transport sully, look behind and use care when backing.

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.

ROTARY MOWER PRECAUTIONS

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 sully.

The discharge deflector of the 3-blade mower deck can be raised to shorten the deck for storage and clearance purposes. **DO NOT MOW WITH DEFLECTOR RAISED.**

Stay alert for holes, rocks, roots in the terrain and other hidden hazards. Keep away from drop-offs.

When operating from a riding sully, reduce speed and use extreme caution on slopes and in sharp turns to prevent tipping and loss of control. Use wheel extensions for added stability. Be especially cautious when changing direction on slopes.

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.

Mower decks designed for grass bags must either have a grass bag in position, or the discharge opening to the grass bag must be closed.

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

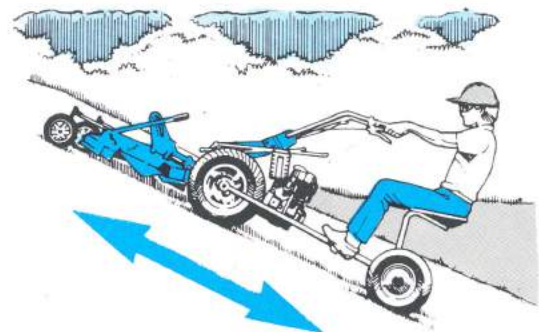
Never put hands in any openings of the mower or grass bag when the engine is running. If necessary to clear out the discharge chute with your hands, always first disconnect the spark plug wire.

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.

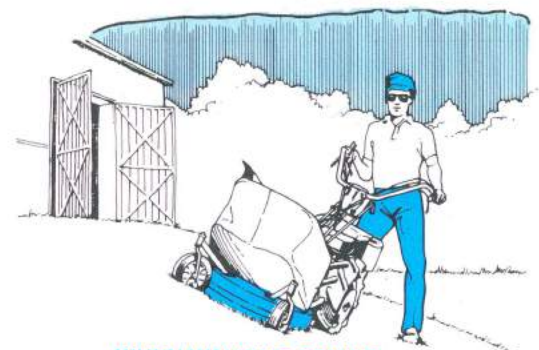
USE ONLY IN CONJUNCTION WITH TRANSPORT SULLY



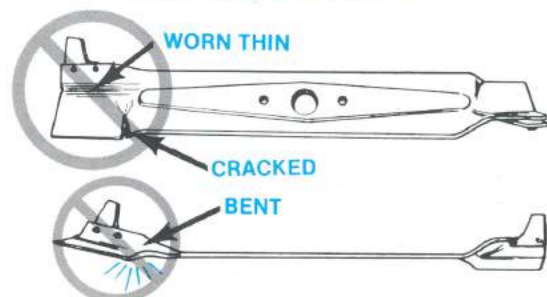
DO NOT MOW WITH GRASS DEFLECTOR RAISED

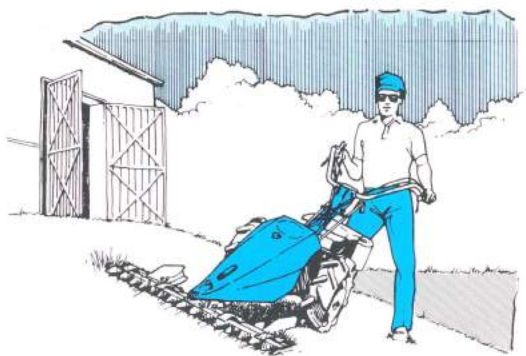


WHEN RIDING, MOW UP AND DOWN SLOPES

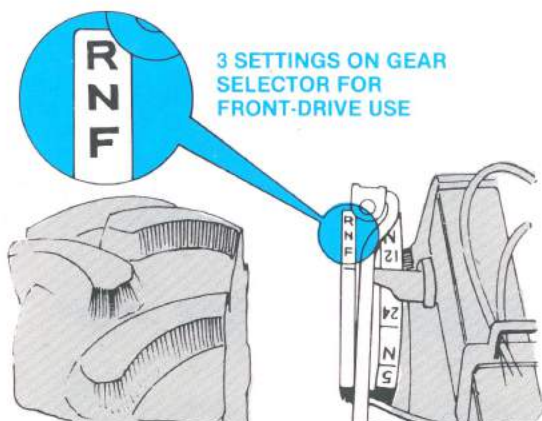


WHEN WALKING BEHIND, MOW ACROSS THE SLOPES

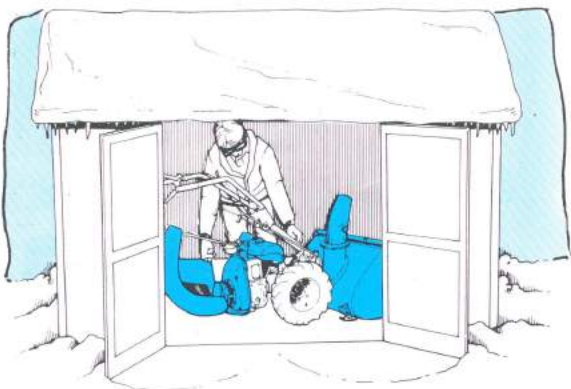




MOW ACROSS THE FACE OF A SLOPE



3 SETTINGS ON GEAR SELECTOR FOR FRONT-DRIVE USE



OPEN DOORS WIDE IF STARTING THE ENGINE INDOORS



CLEAN SNOW THROWER AFTER USE OR THAW IN A WARM PLACE

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. The throttle and gear combinations recommended for cutter bar mowing are given in Section 3, page 34. Do not use transport gear (#3 on model 602; #5 on model 604) for any purpose except transport in conjunction with a transport sulky. Transport speeds may exceed 6 mph on model 602, and 7 mph on model 604. On the units (715, 725, 735 and 745) convertible for front-drive attachments such as the cutter bar mowers, the **high speed lockout** blocks the high forward speed settings on the gear selector, and leaves only three settings—Forward (F), Neutral (N) and Reverse (R)—open for use of front-drive attachments. **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.

Do not overload machine capacity by attempting to clear snow at too fast a pace.

Work at slow tractor speeds only. Never use the high transport speeds on slippery surfaces, and do not attempt to clear steep slopes.

Use only attachments and accessories (wheels and tires, chains, counterweights, etc.) approved by the manufacturer.

LOG SPLITTER PRECAUTIONS

Never allow anyone to operate the log splitter who has not read this owner's manual or been instructed fully in the safe operation of the log splitter.

Do not use the log splitter for any purposes except the splitting of logs.

Put the tractor in the rear-mount mode, with the handlebars positioned over the PTO end. Couple the log splitter directly to the tractor PTO.

During transport, walk to the **left** of the log splitter. So, adjust the handlebar position towards the left side. For operation, the handlebars may be placed in any position that does not interfere with use of the splitter controls.

Set up the splitter on firm, level ground. Chock or block up the tires if necessary to keep the machine from rolling. Level the splitter bed by supporting the tongue on a log or block.

Always wear non-slip boots or heavy shoes, and trim attire with no dangling laces or chains. The operator and all helpers should wear eye protection.

In woods and brush locations, take appropriate fire-fighting equipment with you.

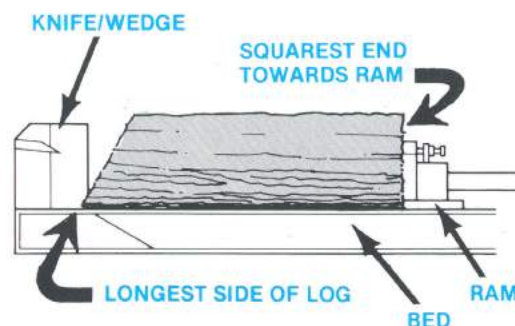
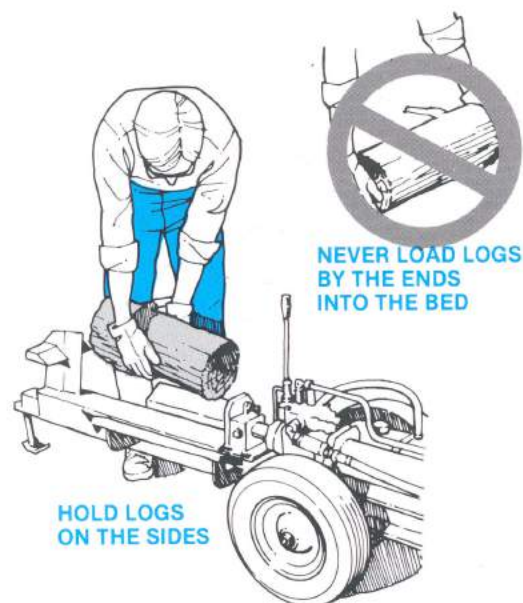
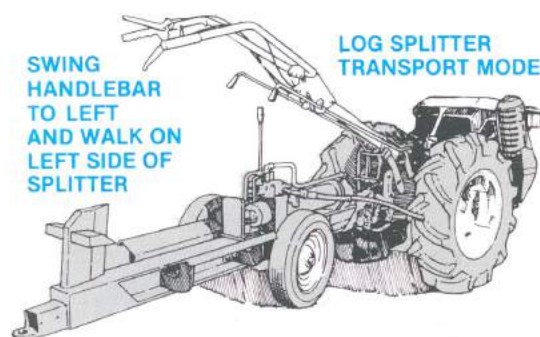
Do not operate unless all safety equipment is in place, and the controls are properly set. Do not use an engine speed of less than $\frac{3}{4}$ throttle.

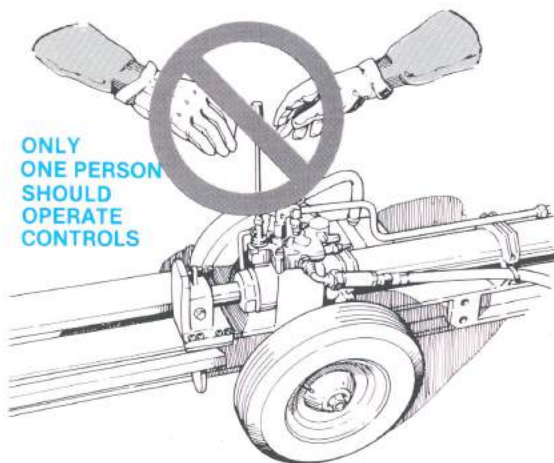
Load only one log at a time onto the log cradle. Never attempt to split more than one log at a time, except when it is necessary to use a second log to complete the separation of the first log.

When loading logs, place hands on the sides of the log, **NOT ON THE ENDS!** Never place the hands or any other part of the body between the log and the splitter ram or wedge.

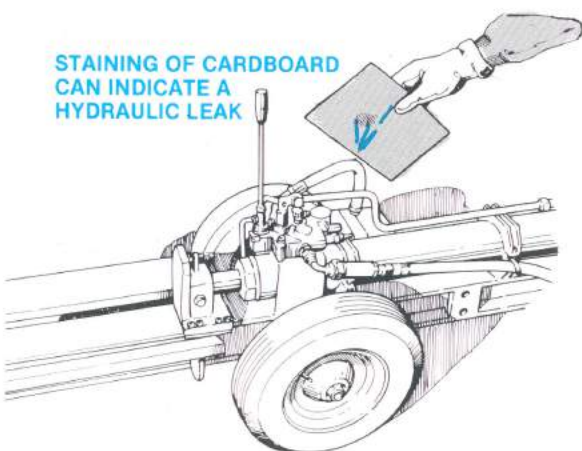
Persons helping with the loading should be taught how to load the logs properly, and the operator must not touch the ram control until the loader's hands are well away from the splitter.

When the log ends are not square, the squarest end should be loaded towards the ram, and the log rotated to put the longest side on the bottom.

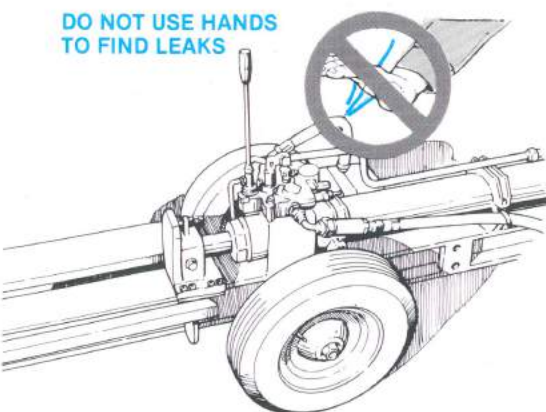




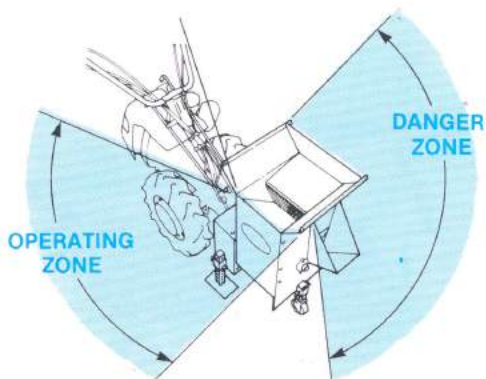
ONLY
ONE PERSON
SHOULD
OPERATE
CONTROLS



STAINING OF CARDBOARD
CAN INDICATE A
HYDRAULIC LEAK



DO NOT USE HANDS
TO FIND LEAKS



SET UP ON UNPAVED LEVEL GROUND

Before leaving the equipment unattended, always disconnect the spark plug wire to prevent unauthorized operation of the machine.

High fluid pressures are developed in log splitters. Hydraulic fluid escaping through a pinhole-size leak can puncture the skin and cause blood poisoning. Therefore, heed the following at all times:

1. Before operation, inspect for frayed, kinked or damaged hoses, fittings and tubing. Do not operate if the splitter does not appear to be in good condition.
2. Do not use the hands and fingers to find leaks in the system. Leaks can be detected by passing wood or cardboard over the suspect area, and looking for discoloration caused by escaping fluid. If injured by escaping hydraulic fluid, see your doctor at once! Serious infection or reaction can develop if proper medical treatment is not administered immediately.
3. Do not adjust the pressure settings of the pump or valve.
4. Stop the engine, disengage the PTO to the log splitter, and disconnect the spark plug wire before changing or adjusting hoses and fittings, or working on other components of the hydraulic system.

SHREDDER/CHIPPER PRECAUTIONS

Read all instructions in this owner's manual, plus the detailed instructions in the manual furnished with your shredder/chipper attachment.

Wear safety eye protection at all times.

Wear trim-fitting clothing articles with no dangling ties, laces, chains, etc. Remove rings, bracelets and wrist watches before operating the shredder/chipper.

Set up the machine only on a level surface.

Do not operate the machine on a gravel or paved surface.

Before starting, make sure the machine is in good operating condition, with no broken or missing parts, and with all screws, nuts, and bolts properly secured.

Before starting, make sure the cutting chamber is empty.

Stay in the operating zone [right side of machine]. Never put your face or body above the hopper when feeding the shredder. Never stand in front of the chipper feed chute or go on the discharge [left] side when the machine is running.

Keeps hands and other parts of your body, and clothing out of the feeding chamber, discharge chute and any area where there are moving parts.

Do not overreach. Keep your balance and footing at all times.

When feeding shreddable material into the shredder, be extremely careful that foreign objects such as metal, rocks, bottles or cans are not included.

Do not allow processed material to build up in the discharge area. This may prevent proper discharge and can result in kickback of material through the feed opening.

Always disengage the PTO before transporting the unit and shredder/grinder attachment. Never leave the machine unattended without putting the controls in neutral and disconnecting the spark plug wire to prevent unauthorized operation.

POWER SPRAYER PRECAUTIONS

Always read and follow the information and instructions for the application of herbicides, fungicides, insecticides and fertilizers obtained from the labels of such products or from the manufacturer. In addition, advice on chemicals approved for use in your area can be obtained from your local county agent. Be sure you know the proper application rate for any chemical you wish to spray.

Inspect the sprayer before each use. The sprayer develops high pressure, so be sure all pressure lines and connections are in good condition.

Choose windless days for the spraying of any chemical considered hazardous. Do not spray where drift could contaminate people, animals or property.

When applying any substance dangerous if breathed in, or absorbed through the skin, wear adequate protection. This should include rubber gloves and boots, goggles, respirator masks, caps, and clothing to cover as much of the body as possible. Cotton articles are suggested for their launderability as well as high absorbency. After the spraying of any hazardous substance, remove clothing articles for laundering, and immediately take a thorough soap-and-water shower before residues have time to enter your body.

Before spraying, always prepare for proper wash-down of equipment.

Never allow passengers to ride the sprayer.

The pressure at the discharge nozzle is as high as 300 psi. The spray can penetrate the skin and cause severe blood poisoning. Do not put hands into the discharge stream. Do not direct spray at people or animals.

Unless the manufacturer of the chemicals claims that certain products can be combined for application, spray only one chemical at a time. Flush the sprayer tank before changing sprays.

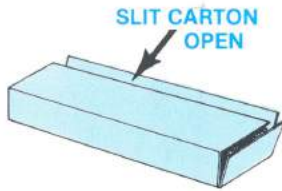
Always hose down the equipment and flush the sprayer tank after each use. Select an area where the run-off will not contaminate ground water. Do not dump into ditches and storm sewers.



SECTION TWO

PREPARING FOR USE

UNPACKING



The machine is too heavy for one or two persons to lift out of the carton. So cut the tape and pull out the staples at the top of the carton. Slit open the carton and lay the sides out flat. Remove the machine, the tools and the parts to be assembled to the tractor. There is a package of spare parts. Do not open this package now, as none of its contents are required for assembly. The fasteners required for assembly have been placed at locations where they are to be used.

602 and 715 A 14" B 17"	604 and 725 A 19" B 24"	735 A 22" B 26"	745 A 26" B 31"
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TIRE VALVES ON THE OUTSIDE

TIRE VALVES ON THE INSIDE

TO CHANGE TIRE VEE DIRECTION

180°

ASSEMBLING THE TRACTOR

1. INSTALL THE WHEELS:

- The recommended mounting is **wide track** for stability, with tire tread **vees** pointing in the direction of forward travel for maximum traction.
- For **wide track** mounting, the tire valves should be on the outside. For a **narrower track**, the valves should be on the inside. You can make a track width change by switching the wheels (models 602 and 715) or by removing four bolts per wheel and switching only the rims and tires (models 604, 725, 735 and 745).

- If the **tread vee** direction is to be changed without changing the track width, turn the tires (or wheels) around 180°, and also change sides when remounting. If you do not switch sides, the track width will change.

700 SERIES TRACTORS: Although these machines are convertible for front-mounted attachments, it is important that the tire vees point in the forward direction of **Rear Tine Tiller** travel, which is from the tiller or power take-off (PTO) end towards the engine end. It is not necessary to remount the wheels for front-mounted attachments.

602 and 604 UNITS: These machines are pushers, not tractors. They push front-mounted attachments ahead of them. On these models, the mounting should be **wide track**, with **tread vees** pointing from the engine end towards the attachment.

2. ADJUST TIRE PRESSURE TO 15 POUNDS.

3. ASSEMBLE STEERING COLUMN TO COLUMN SUPPORT ABOVE THE TRANSMISSION (700 Series only):

- The **high speed lockout** is assembled to the bottom of the steering column with a bolt and nut. Remove these parts.
- The **high speed lockout** must be assembled on to the left side of the steering column when the column is fastened to the column support. This lockout is a vital safety feature. (See Warning.)

WARNING

When the control handle is swung over the engine end, as when using front-mounted attachments, the high speed lockout is in position to block shifting into high forward speed gears which are too fast for use in backing the tractor. When the control handle is swung back over the PTO end for operation of a rear tine tiller, the high forward speed gear is unblocked automatically, but should be used only for transport to and from the work site—**NEVER FOR TILLER OPERATION.**

- Hold the steering column in position on the column support. Slip the lockout onto the bolt and slide the bolt through from the left side of the column. Secure with the nut previously removed. Make sure the nut is tight.

4. ASSEMBLE HANDLEBAR SUPPORT BRACKET, BRAKE LEVERS AND CONTROL ROD SUPPORTS TO MACHINE (ALL MODELS):

- Remove the fasteners and plastic control rod supports from the handlebar support bracket. Position the bracket on the steering column and install the bolts and nuts as follows:

700 SERIES: The regular shape bolt goes in the bottom hole nearest the gearcase. The bolt with two threaded ends goes in the other hole.

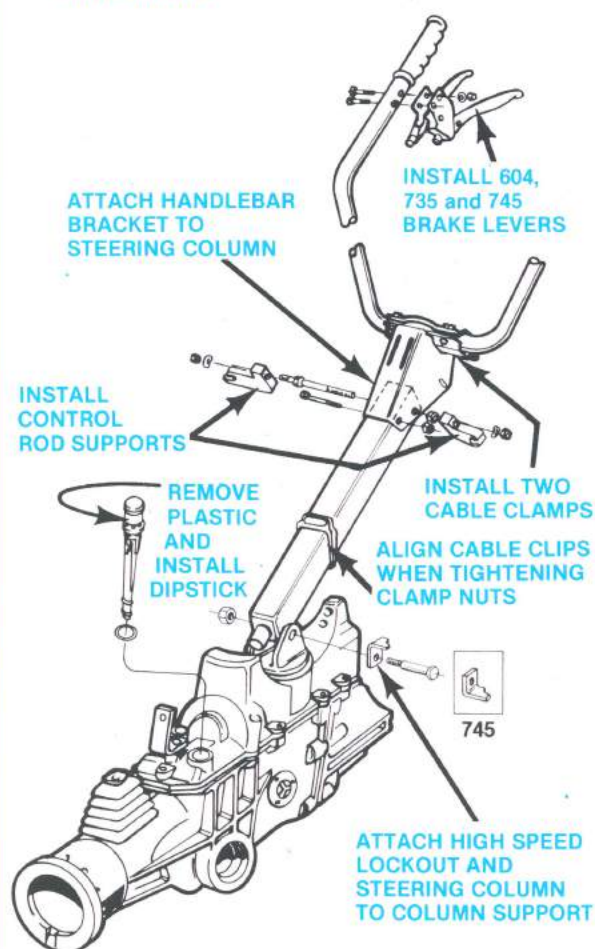
600 SERIES: The regular shape bolt goes in the hole second from bottom, and the bolt with two threaded ends goes in the hole nearest the gearcase.

ALL MODELS: The tapered end of the nuts goes toward the handlebar support bracket. Tighten the nuts securely.

- Using a wave washer and nut on each side, assemble the plastic control rod support brackets to the bolt having the two threaded ends. Do not tighten these nuts until step 5.

700 SERIES ASSEMBLY

UNNECESSARY DETAILS NOT SHOWN



NOTE

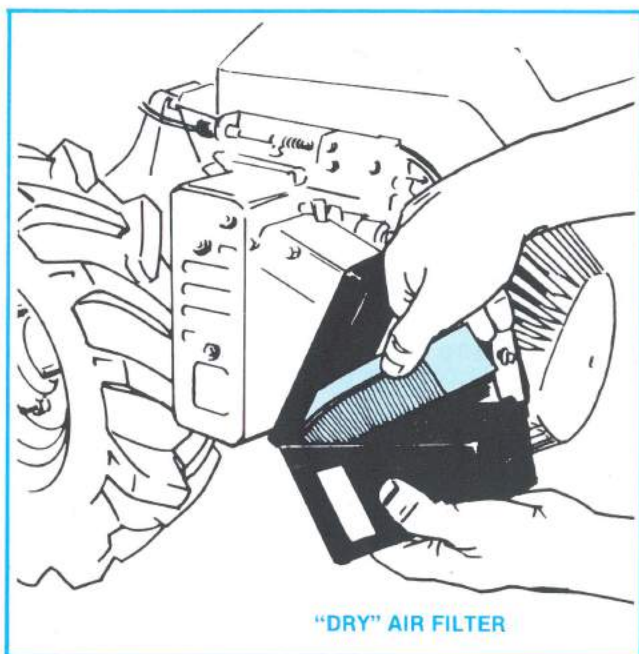
Whereas the position of the lockout flag on the 715 through 735 is UP, it belongs DOWN on model 745.

- 735 and 745 Tractors and Model 604 have left and right wheel brakes controlled by brake levers under the right handlebar grip. Remove the nuts and bolts and use them to assemble the brackets to the handlebar at the grip. During assembly, be sure to pull the ends of the tension springs back into the "spring loaded" position.

NOTE: An optional wheel brake kit is available for installation on Models 602, 715 and 725.

5. SECURE CONTROL RODS AND CABLES:

- Fit the control rods into the plastic control rod support brackets (attached to the handlebar support bracket in step 4). Now tighten the control rod support bracket nuts.
- The handlebar clamp nuts have been left loose, with the two wire cable clips hanging loosely from the bolts. While tightening the clamp nuts, position the clips so they will support the cables. Put the cables in the clips.

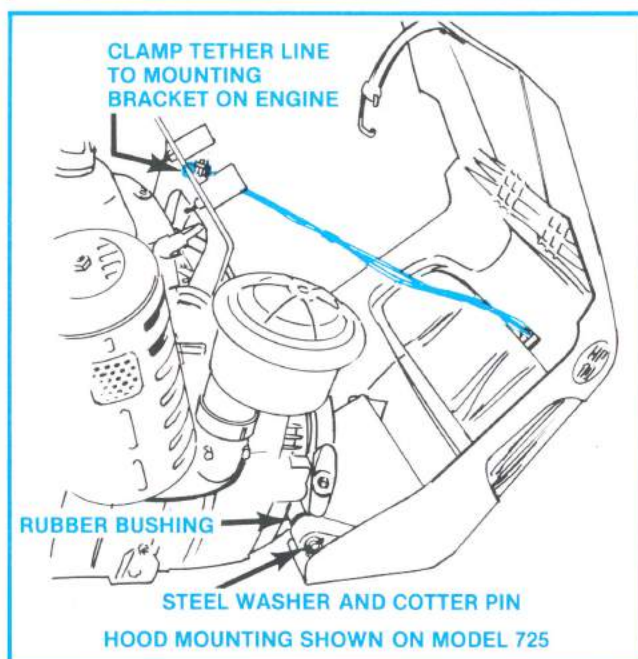
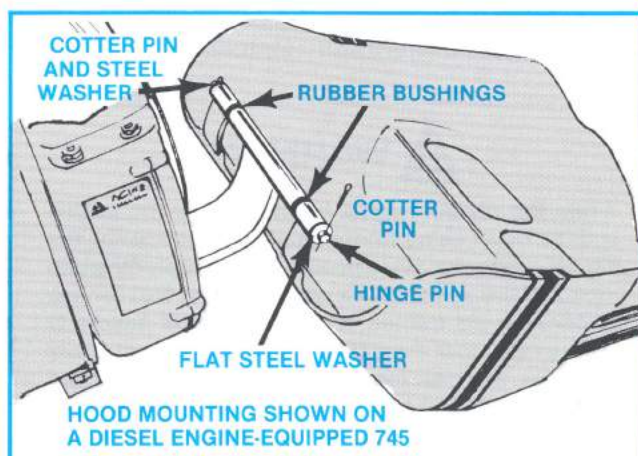
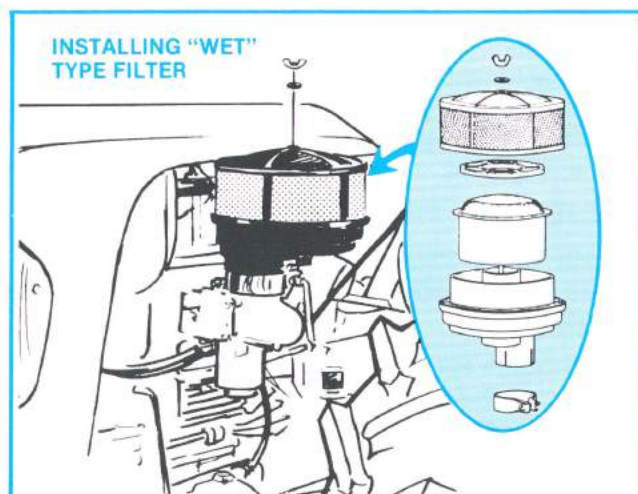


6. ENGINE AND TRANSMISSION:

- For shipping purposes, the transmission (gear-case) filler hole is sealed with a plastic plug. Replace this plug with the dipstick from the owner's packet. It is important to oil the dipstick O-ring with a light engine oil, and also to install the dipstick with its flat side towards the center of the machine.
- Remove and discard the thimble-shaped, clear plastic protective cover from the oil breather tube located to the left of the carburetor.
- The BCS engines for models 602, 604, 715, 725 and 735 have a "dry" cartridge type air filter. No installation or preservice is required. The air cleaner body has a snap-on cover.
- The ACME 16HP gas engine for the model 745 has a "wet" type oil-filled air filter. Follow the illustration to assemble the parts of the filter, including the mesh cartridge, inside the filter bowl. Mount the bowl to the carburetor intake. Using the same seasonal SAE weight of oil the engine is to use, fill the filter cup with oil up to the mark, which is about $\frac{1}{4}$ " above the bottom. Twist the air filter cover back onto the filter cup.

7. HOOD ASSEMBLY (700 SERIES ONLY):

- Two rubber bushings are preinstalled in the engine mounting bracket. Two more bushings are packaged "loose." Install the loose bushings in the hood mounting brackets (see illustration).
- Align the hood and engine brackets and slide the long hinge pin through from one side to the other. Secure with a washer and cotter pin on each end of the hinge pin.
- Using the clamp provided, attach the tether line from the hood to the hood support bracket on the engine.



- Using the metric size wrenches from the tool kit, check the whole machine to be sure all fastening parts are tight. Stow the tools in the tool box located under the hood or between the handlebars.
- With the engine on a level surface, check the oil levels. (See GEARBOX LUBRICATION, page 22).

SPECIFICATIONS

ENGINE AND POWER UNIT

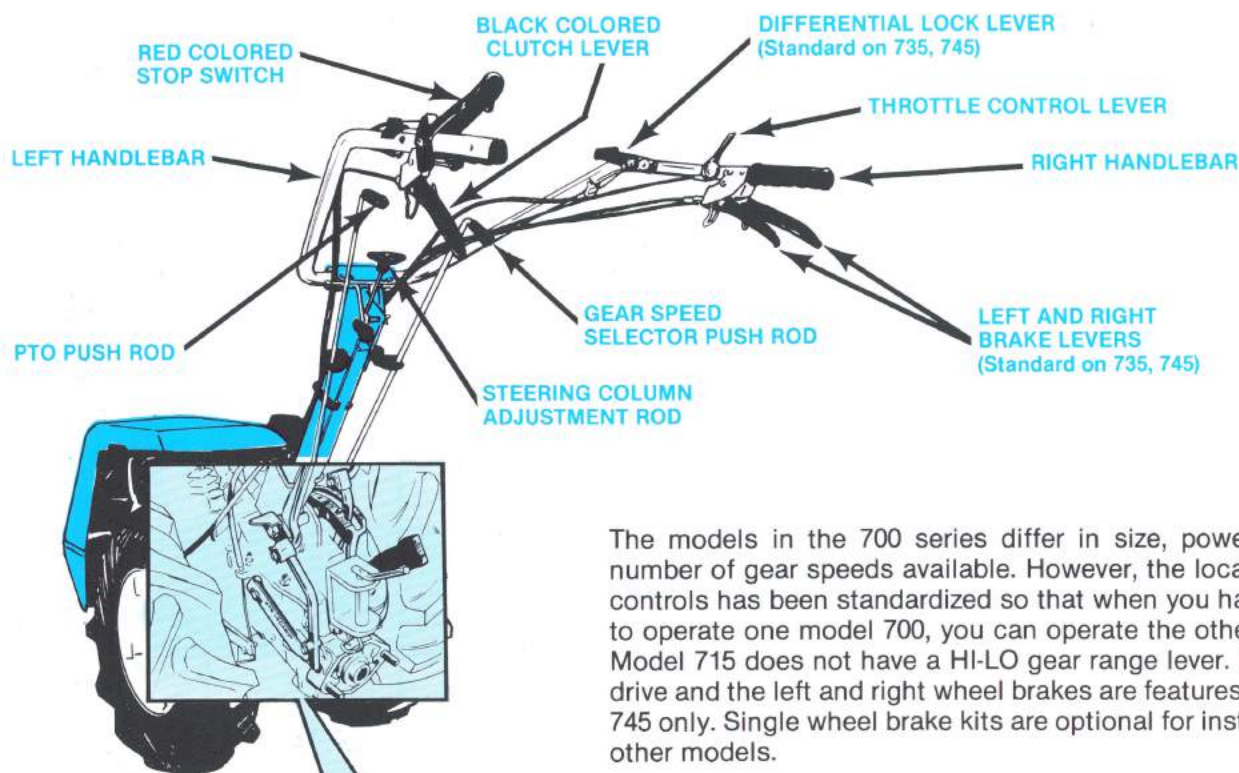
MODEL	602	715	725	735	604	745
Engine						
Gasoline	10hp	6hp or 10 hp	10hp	10hp	10hp	16hp
Diesel	—	—	8hp	10hp	—	14hp
Air Filter	Dry cartridge	Dry cartridge	Dry cartridge or oil bath	Dry cartridge or oil bath Diesel, wet	Dry cartridge or oil bath	Nylon mesh in oil bath
Transmission	Precision steel gears	Precision steel gears	Precision steel gears	Precision steel gears with differential	Precision steel gears with differential	Precision steel gears with differential
Gears						
Forward	3	3	5	5	5	5
Reverse	1	1	2	2	2	2
Speed (mph)						
1st	1.5	0.7	0.6	0.7	0.6	0.5
2nd	2.5	1.7	1.4	1.5	1.3	1.1
3rd	6.2	7.2	1.9	2.1	2.1	1.5
4th	—	—	4.1	4.0	5.2	3.3
5th	—	—	7.5	8.1	7.5	6.3
Reverse (1)	1.9	1.4	0.8	0.9	0.8	0.6
Reverse (2)	—	—	2.4	2.4	3.1	1.8
Power Take-Off						
Type	Independent	Independent	Independent	Independent	Independent	Independent
RPM @3600 engine speed	965	965	965	965	965	825
PTO Coupling	2 studs w/nuts	2 studs w/nuts	2 studs w/nuts	2 studs w/nuts	2 studs/nuts	3 studs w/nuts
Wheels & Tires*						
Size	4.00-8	4.00-8	4.0-10	5.0-10	4.0-10	6.5/80-12
Tread	Tractor	Tractor	Tractor	Tractor	Tractor	Tractor
Track width†	17"	17"	21"	22"	21"	26"
Weight (lbs.)§	137	140	160	188	165	300
Dimensions (in.) ☆						
Height	37	33-42	34-43	28-37	31-48	34-43
Width	21	21	21	27	27	27
Length	40	61	61	70	44	78
Capacities (qts.)						
Fuel Tank	4.25	4.25	4.25	4.25	4.25	4.50
Transmission	1.90	1.90	2.20	2.20	2.20	2.20
Crankcase	0.80	0.80	0.80	0.80	0.80	0.80
Running time @3600rpm	2.5 hrs.	2.5 hrs.	2.5 hrs.	2.5 hrs.	2.5 hrs.	2.5 hrs.

NOTES: * Other combinations available.
† Adjustable with optional accessories.

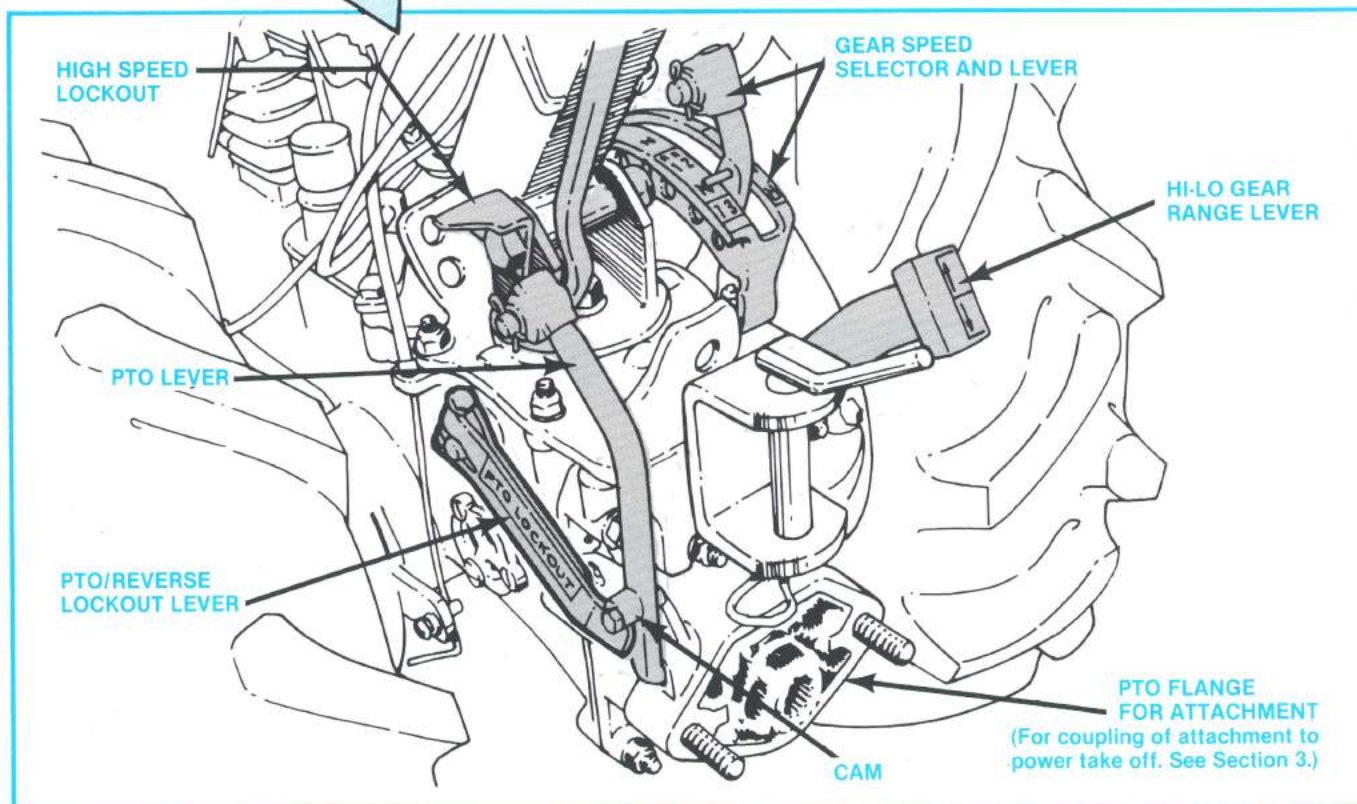
§ Power unit with standard wheels and tires.
☆ Depends on attachment and load.

FEATURES OF 700 SERIES

Set up for Rear-Mount Attachments

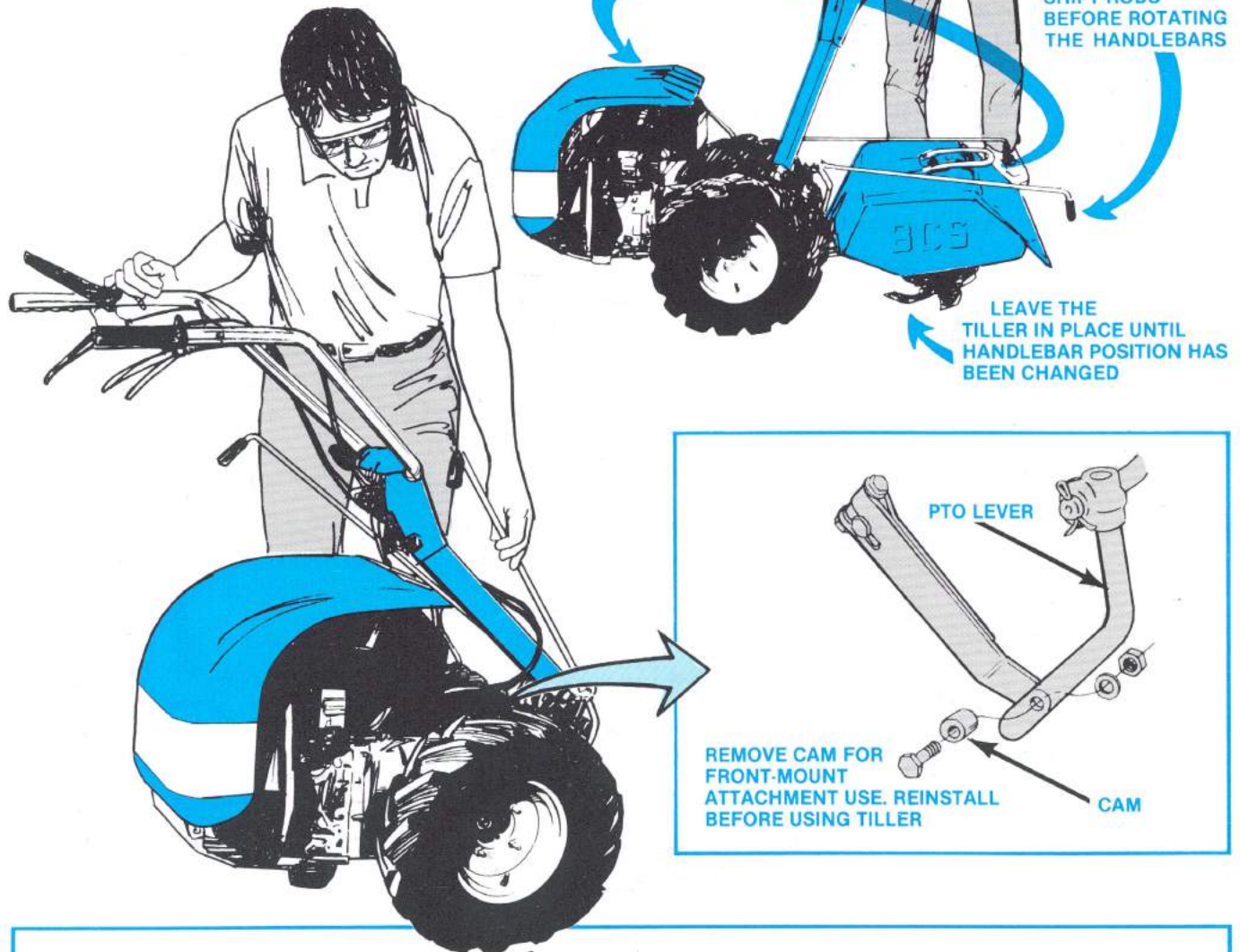


The models in the 700 series differ in size, power, and the number of gear speeds available. However, the location of the controls has been standardized so that when you have learned to operate one model 700, you can operate the others as well. Model 715 does not have a HI-LO gear range lever. Differential drive and the left and right wheel brakes are features of 735 and 745 only. Single wheel brake kits are optional for installation on other models.



700 Series during conversion for front-mount attachments

After positioning the handlebars over the engine, replace the tiller with desired front-mount attachment. Then remove the PTO/REVERSE GEAR LOCKOUT CAM because REVERSE gear is required to advance a unit in the front-mount mode. Low forward gear on the gear selector is used in backing. In the front-mount mode, the HI SPEED LOCKOUT (page 18) is positioned over the gear selector, blocking use of the highest speed.



WARNING

These two highly important safety devices on the tractor must never be rendered incapable of providing the protection for which they were designed:

a) PTO/REVERSE GEAR LOCKOUT—When a tiller or other rear-mount attachment is in operation, the tractor must never be backed up. Accordingly, the lockout prevents simultaneous engagement of PTO and REVERSE gear in the rear-mount mode. For front-mount attachments, such as mowers, it is necessary to engage both the PTO and REVERSE gear at the same time for forward

direction of operation. This is done by removing the PTO/REVERSE GEAR LOCKOUT CAM. CAM MUST BE REINSTALLED before use of a rear-mount attachment.

b) HIGH SPEED LOCKOUT—When the handlebars are positioned over the engine, this lockout is in position to prevent shifting into the highest speed setting on the gear selector. But, when the machine is converted to the rear-mount mode, the highest (forward) gear is unblocked. However, it must be used only for transport and NEVER FOR TILLER OPERATION!

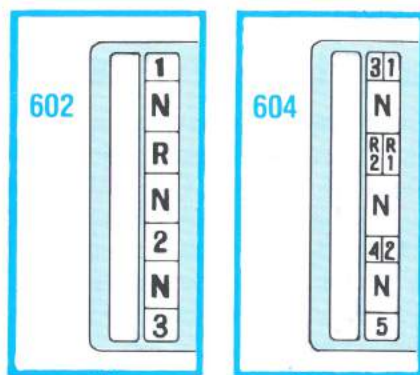
FEATURES OF 600 SERIES

Exclusively for front-mounted attachments, and not convertible for rear-mounted attachments, 600 series units have all positions marked on the gear speed selector available for use.

Model 602 has three gears forward and one reverse position. The model 604 has a differential, 2-wheel brakes, and a HI-LO gear range lever. The combination of gear selection and HI-LO gear range lever setting makes available five speeds forward and two reverse.

The units are designed for stable operation over rugged or steep terrain. Wheel spacers can be added to widen the track for increased stability. Over less rugged terrain, they can be operated from a riding sulky, but only in conjunction with one of the rotary mowers.

The 600 series can be used as walk-behind units for the cutter bar attachments and snow throwers. They can also supply the power for stationary attachments such as the Shredder/Chipper and the Log Splitter.

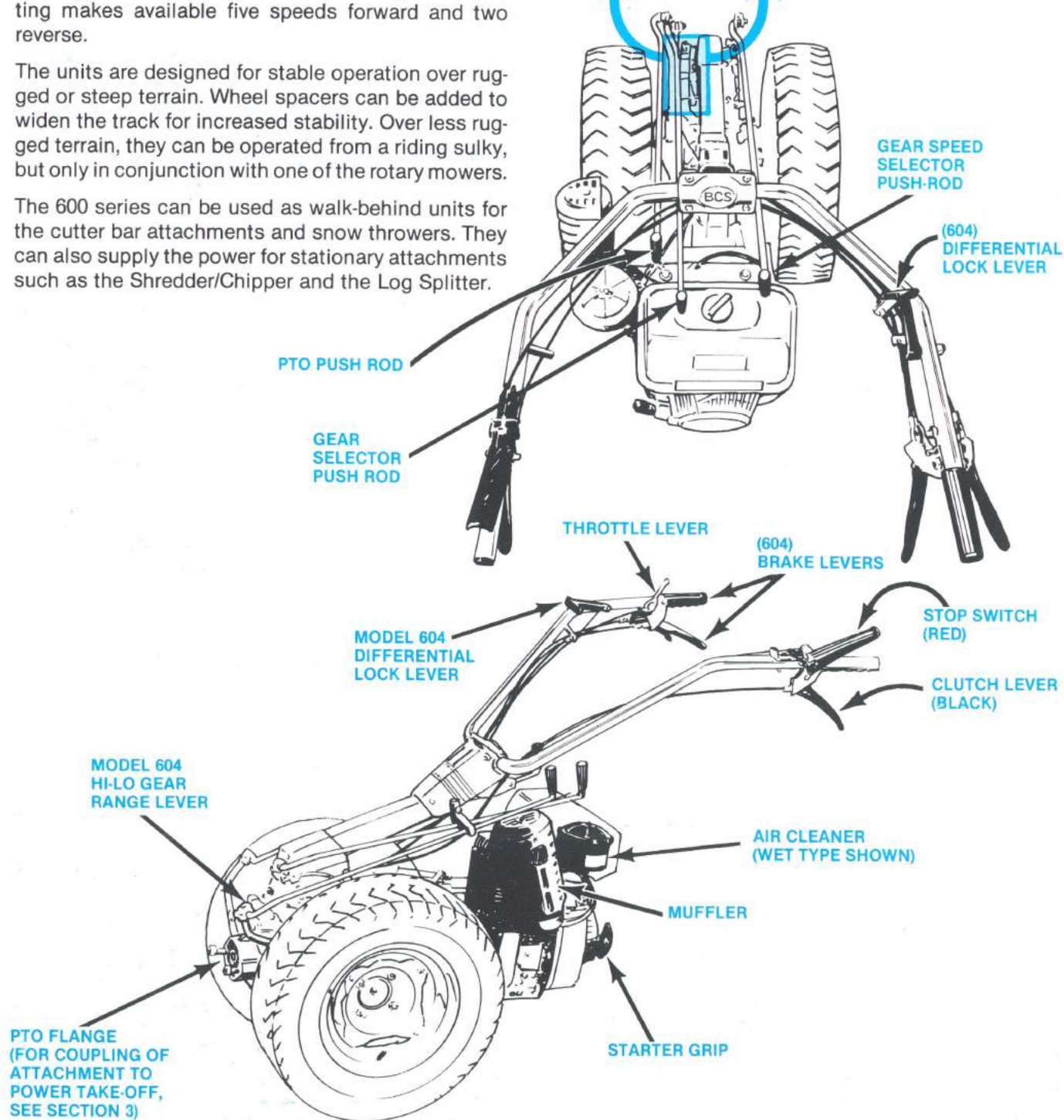


DUAL GEAR POSITIONS:

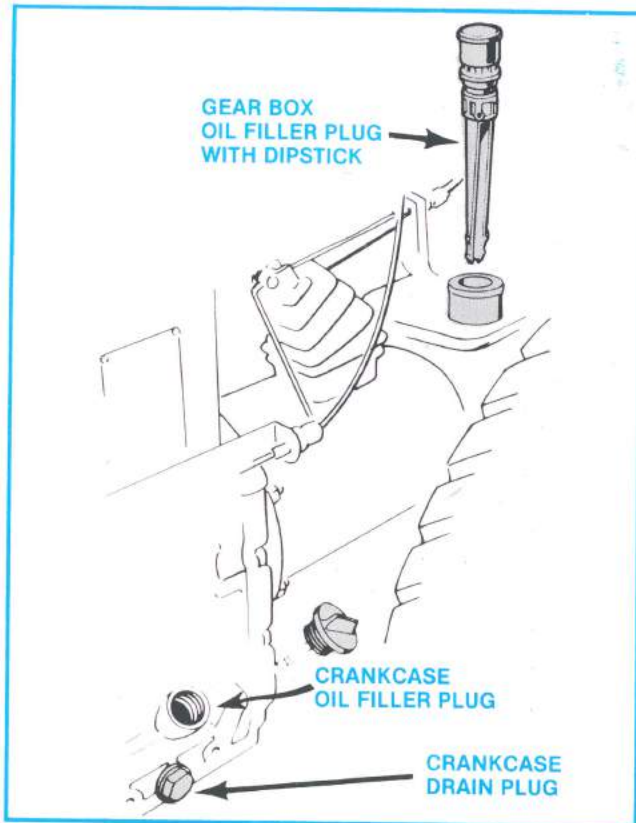
YELLOW (SLOW HI-LO)
1, R1 AND 2

RED (FAST HI-LO)
3, R2 AND 4

HI-LO SETTING
DOES NOT AFFECT
5th GEAR



LUBRICATION, FILTERS AND FUEL



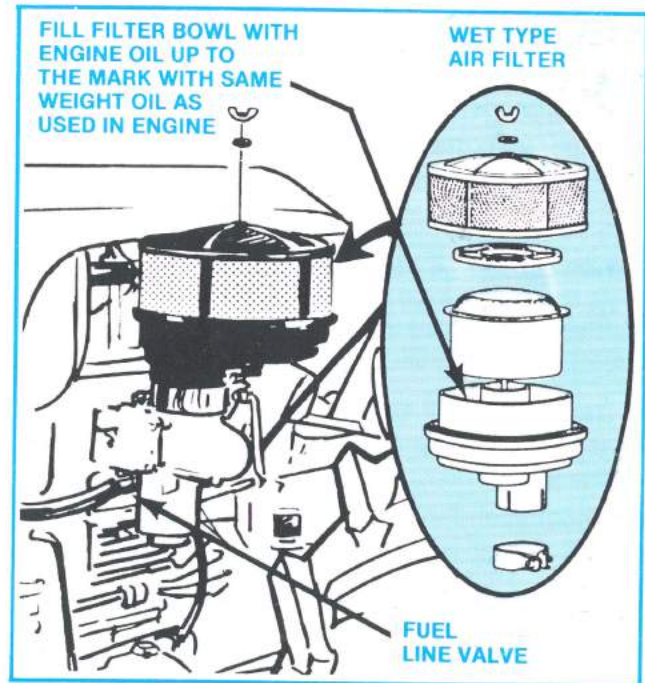
ENGINE CRANKCASE LUBRICATION

1. The engine requires SAE 30 weight oil, or a multi-grade oil such as SAE 10W-40 for summer use. In winter weather use an SAE 20 weight oil. The oil should be a quality 4-cycle automotive type.

NOTE

For ambient temperatures above 86°F (30°C) use SAE 40 or SAE 20W-50 weight oil. Below minus 14°F (10°C) use SAE 5W-30 weight oil. If necessary, warm the engine until it can be cranked successfully.

2. Place the machine on a level surface. Unscrew the crankcase oil filter plug and check the oil level. If the plug has a dipstick, maintain the oil level between the high and low marks. If there is no dipstick and the oil level is more than half an inch (12.7mm) below the top thread of the filler hole, fill to the top. Always check before use and maintain the proper oil level.
3. Change the oil before each season of use, and after every 8 hours of engine operation. Always run the engine to warm the oil before draining the crankcase. The drain plug is located just below the oil filler cap.

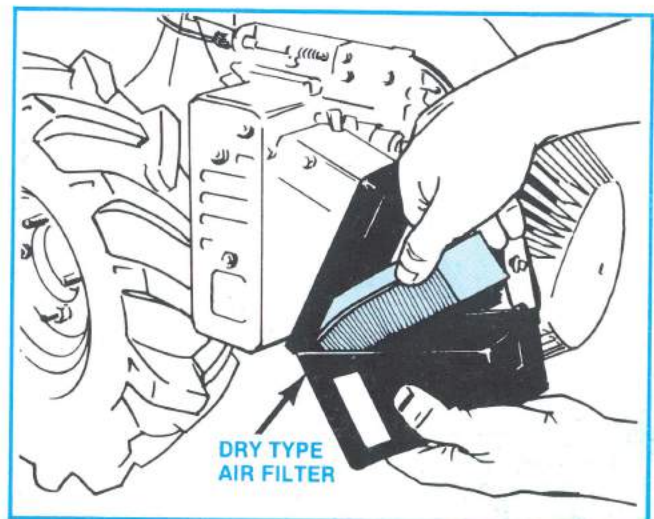


ENGINE AIR FILTER

1. If the engine has a "wet element" type air filter, it is a good idea to drain the filter bowl of oil, then rinse both the bowl and the filter in a cleaning solvent. Let the filter drain and dry completely before installation. After installing the filter, add oil up to the mark about 1/4" from bottom of bowl with the same weight oil used in the engine crankcase. Check the filter frequently and maintain the oil level at the mark.
2. If the engine has a "dry element" air filter, check the condition regularly and frequently. A clogged filter raises engine temperature. It is better to replace a dirty filter than try to clean it.

NOTE

Under extremely dusty conditions, as when tilling dry, dusty ground, check the air cleaner often.



GEARBOX LUBRICATION

The gearbox requires maintenance of the oil level with SAE 90 EP (extreme pressure) gear oil. The gearbox filler cap has a dipstick with marker rings denoting **full** and **low** levels.

NOTE

When checked on a brand new machine, the oil level will be above the full mark on the dipstick. When the oil level drops below the full mark, refill only to the full mark. Do not overfill.

1. Twist and pull up the filler cap to check the dipstick. Do not operate if the oil level is below the low marker.
2. Recommended frequency for checking the gearbox oil level is every 50 hours of engine operation.

GASOLINE ENGINE FUEL

The engine will run on either leaded or unleaded gasoline. Gasoline of 87 to 93 octane is recommended.

1. Remove the fuel cap, fill fuel tank, and re-install the cap securely.



**NO FLAME!
NO SMOKING!**



**NO ELECTRICAL
SPARKS!**



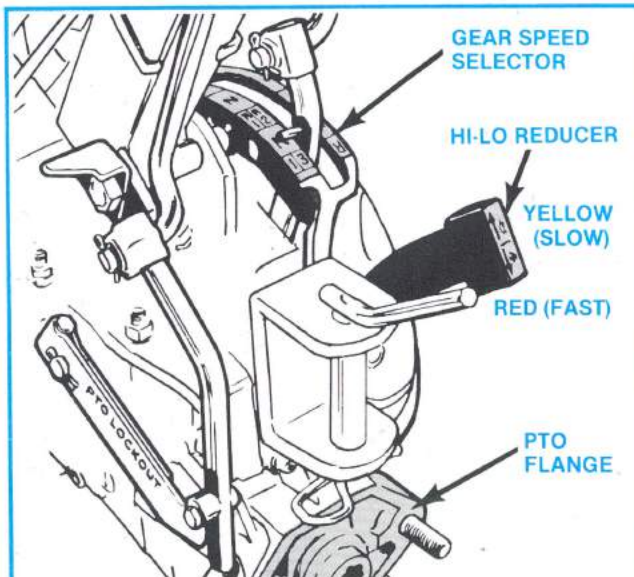
DANGER

Gasoline is explosive! Read page 2 of safety "Rules," before filling the fuel tank and starting the engine. Use approved type, properly labeled fuel containers. Do not smoke or bring fuel near any sparks or open flame. Do all fueling outdoors, never in a garage or shop connected to living quarters. Do not refuel when the engine is running or still hot.

2. Push the tractor at least 10 feet from fueling area and wipe off any spillage before starting the engine.
3. Open the fuel line valve at the tank outlet, so fuel can flow by gravity to the carburetor.

STARTING AND STOPPING

Including Tractor Control and PTO Engagement

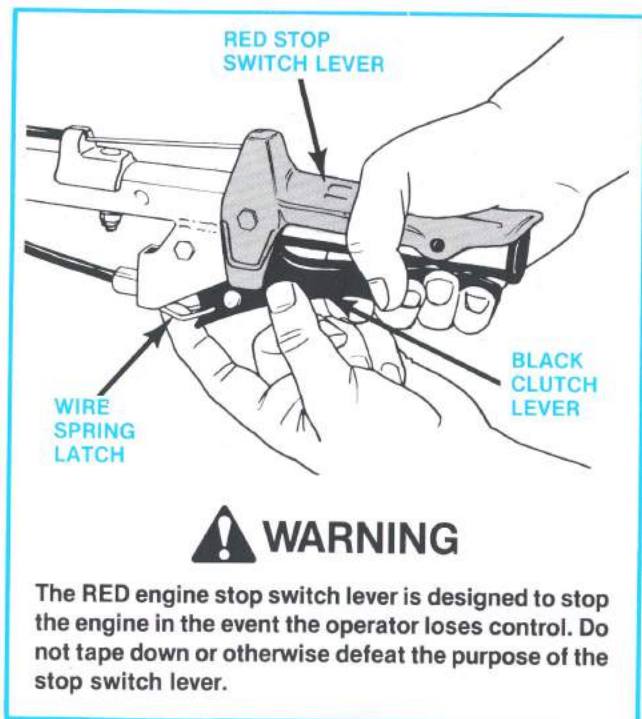


WARNING

Be sure to put the gear selector in NEUTRAL (N) position and disengage the PTO before starting the engine. If started in gear, the tractor will move along. If started with the PTO engaged, a tiller on a hard surface may run away. Inadvertent operation of any attachment can be dangerous.

SETTING CONTROLS FOR COLD STARTING

1. DISENGAGE THE PTO. (Rear-mount attachment mode—pull pack on the PTO push rod; Front-mount attachment mode—push the PTO push rod.)
2. SHIFT INTO NEUTRAL on the Gear Speed Selector. All positions marked "N" on the selector are neutral.
3. OPEN THE THROTTLE. Advance the throttle lever on the right handle to between half and full throttle (Forward) position.
4. OPEN THE FUEL VALVE. Open position is valve handle in line with the fuel line.
5. CLOSE THE CHOKE. Closed position of the choke lever on the carburetor is lateral (upward). Downward is "open choke."
6. SET BOTH CLUTCH AND SWITCH LEVERS FOR ENGINE STARTING. The clutch is the black lever on the left handle. The RED engine stop switch lever on the handle has to be held depressed or it will shut off the engine. For engine starting, depress both controls with one hand, and prop them in this position by setting the wire spring latch. (See illustration).



NOTE

Squeezing the clutch lever dislodges the wire spring latch, permitting the operator to take over control. If the operator lets go of the handle the engine will be switched to a stop.

CRANKING TO START

Set the controls for starting (see page 13) and start the engine.

SPRING START ONLY: Refer to the keyed sequence of drawings.

- [1] Push the button and put the crank handle into the cranking position.
- [2] Put the latch/trip level up into the latched position.
- [3] Load the spring by turning crank handle six times clockwise. Return crank handle to the down position.
- [4] Trip the starter by turning the latch/trip lever downward. Repeat starting procedure if necessary.



RECOIL START ONLY: **Read warning.** Grasp the starter grip with one hand. Place your foot against the side of tire tread to steady the engine. Pull gently until starter engages, then pull rapidly to crank the engine. Open the choke when the engine starts.

! WARNING

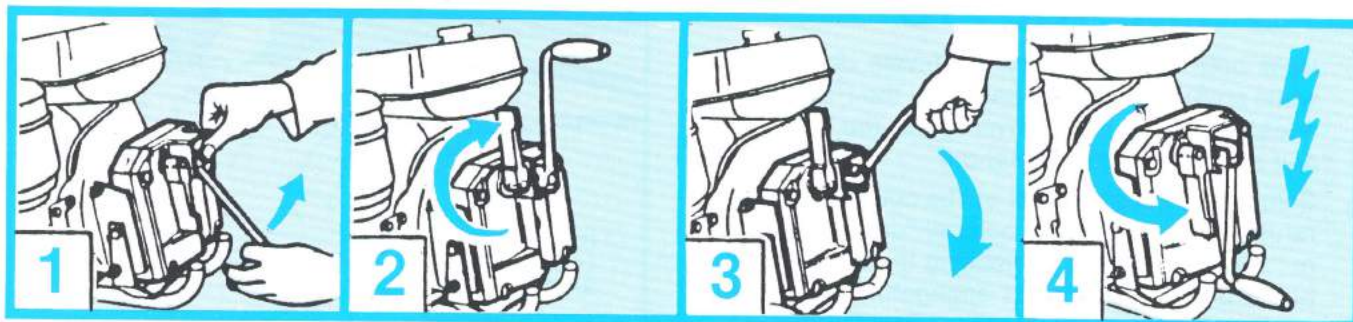
Never wrap the starter rope around your hand or wrist, or use two hands to pull the starter grip. You want the grip to be pulled from your grasp if the engine kicks during cranking.



ELECTRIC START ONLY: Turn ignition key to "START" to crank the engine. Return key to the "RUN" position when the engine starts. Open the choke.

ENGINE WARM UP PERIOD

Let the engine warm up for a few moments without a load [in neutral (N) and PTO disengaged] to give the oil time to reach the parts of the engine requiring lubrication.

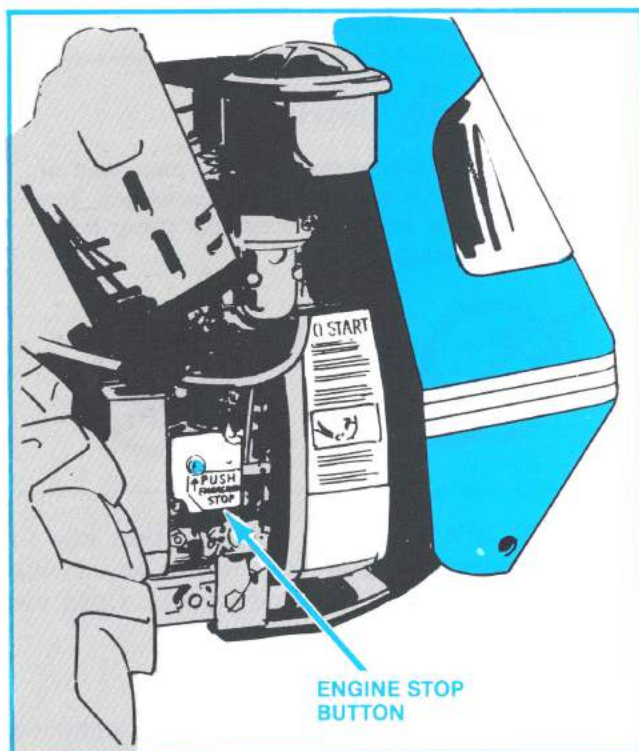


TAKING CONTROL OF THE MACHINE

1. When the engine is running, grasp the handlebar. Hold the switch lever depressed and squeeze the clutch lever to dislodge the wire spring latch. Both clutch and stop switch levers will now be under your control.
2. Do not let up the stop switch lever or it will stop the engine. When ready for action, shift into the desired gear and gently release the clutch lever.

STOPPING

Any time you let go of the left handle, the RED stop lever on top will activate the ignition stop switch to stop the engine. **NOTE:** In the event of mechanical or electrical failure, all engines, except the 6HP, can be stopped by holding depressed the engine stop button located near the carburetor.

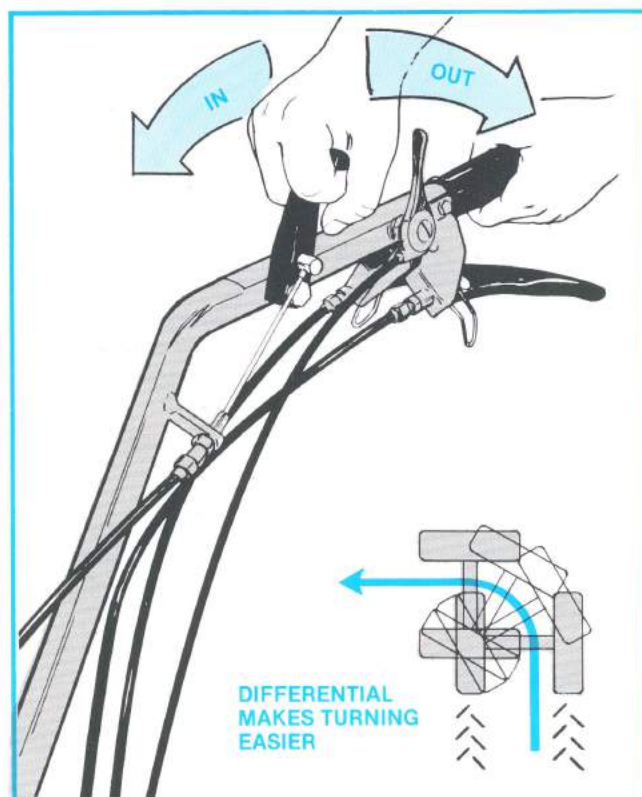


SHIFTING GEARS AND ENGAGING THE PTO

1. Hold both **switch** and **clutch** levers depressed while shifting gears and engaging the PTO. Then release only the clutch lever to put the machine and attachment into operation.
2. Sometimes the gear teeth will be out of mesh and refuse to engage. If this occurs, "double-clutch" or "slip" the clutch by releasing the clutch lever just a bit while trying for engagement with the push rod of the gear selector or PTO lever.

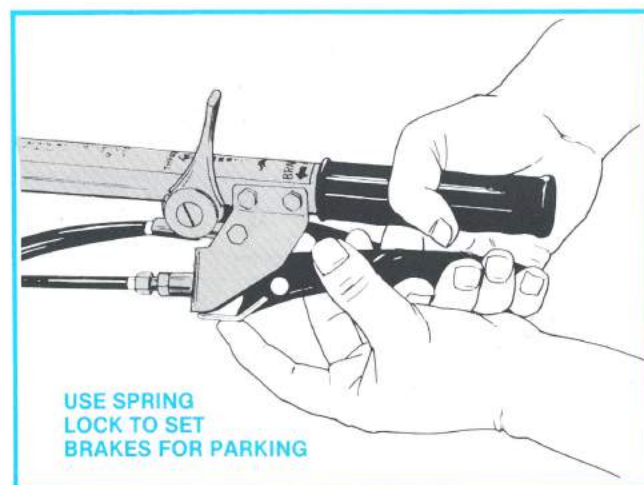
NOTE

Transmission to the axle and wheels is independent of transmission through the power take-off to an attachment. The advantage of this BCS design is that the most efficient operating rpm of the attachment can be selected by throttle setting, and the desired machine movement chosen independently through a combination of throttle setting and gear selection.



DIFFERENTIAL DRIVE

A feature of the models 735, 745 and 604, the differential directs the driving force to one wheel, allowing the other to free-wheel. Differential drive facilitates making tight turns with the tractor. When two-wheel drive is needed for traction, lock in the differential lever on the right handlebar.



WHEEL BRAKES

Models 735, 745 and 604 have two-wheel brakes. The brake levers are on the right handlebar. The same type **spring latch** as the one for the clutch and stop switch is used to latch the brake levers for parking. However, the machine may also be placed in gear to keep it from rolling when the engine is shut off. For the models not equipped with two-wheel brakes, a one-wheel brake kit is available.

NOTE

Directions such as **right** and **left** are always called out from the operator's position with the machine assembled for its main mode of operation. When the handlebars of a convertible model are swung over the engine end for front-mount operation, the right brake lever on the right handlebar to the right will brake the right wheel. But the right wheel will be on the left side.

RESTARTING A WARM ENGINE

While still warm, the engine requires no choking, and may not start if cranked at closed choke.

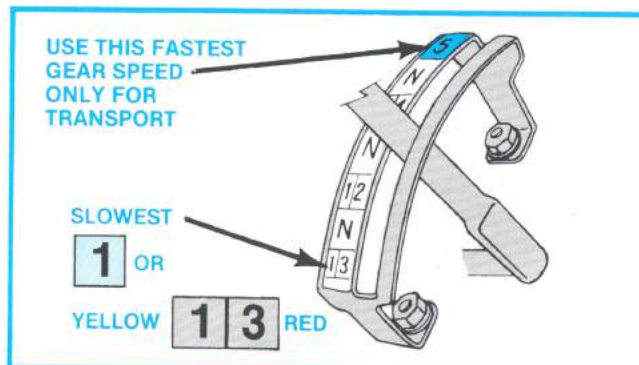
SHUT-DOWN

(See instructions on page 8)

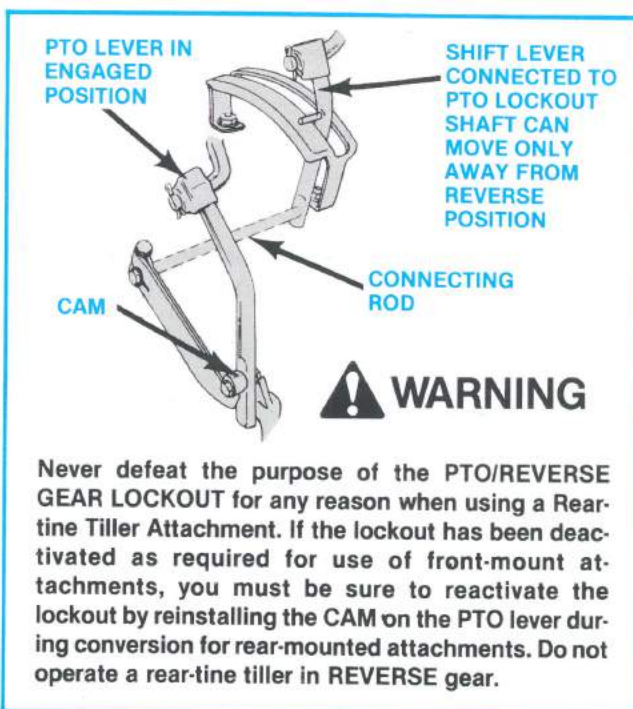
GEAR AND PTO ENGAGEMENT WITH 700 SERIES IN THE REAR-MOUNT MODE

(Not for 600 Series)

1. Start the engine. Keep the throttle at a moderate speed setting. On models 725, 735 and 745, the HI-LO gear range lever should be in the low speed (yellow) range while you are learning to operate the machine.
2. Hold the clutch lever (left handlebar) depressed while shifting, and engaging the PTO lever, and until you are ready to drive.
3. Models 725, 735 and 745 only: In order to change the HI-LO lever position, you must de-clutch, disengage PTO, put gear selector into neutral (N) position, and use your right hand to put the HI-LO lever into the desired range. The color code of the HI-LO lever position and the gear selector position is RED for the faster speeds and YELLOW for the slower speeds.
4. Shift into the lowest forward speed position on the gear speed selector. If the gears will not engage, release (slip) the clutch just a bit until the gears mesh.



5. Smoothly release the clutch lever and the machine will move forward.
6. As long as the PTO is disengaged, you can shift out of low gear into REVERSE (R, R1 or R2) or any higher gear or NEUTRAL (N) slot on the gear selector. When you wish to halt momentarily without shifting into neutral or killing the engine, depress the clutch lever.
7. Before engaging the PTO, be sure machine is in the gear you wish to use. When the PTO is engaged the PTO/REVERSE GEAR LOCKOUT will block you from shifting into REVERSE or going past it to another gear slot.
8. **FUNCTION AND USE OF THE PTO/REVERSE GEAR LOCKOUT**
Backing a Model 700 Tractor while the tiller or other rear-mounted attachment is operating, can be extremely dangerous. For this reason, the model 700 tractors have a PTO/REVERSE GEAR LOCKOUT device. The device prevents shifting into reverse when the PTO is engaged, and engagement of the PTO when the machine is in reverse gear. (See illustration.)

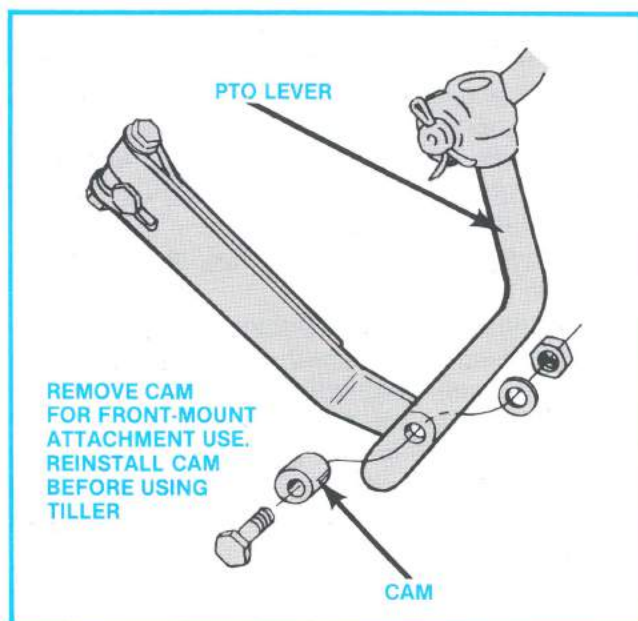


CONVERSION OF 700 SERIES FOR FRONT MOUNT

NOTE

To keep the tractor from rotating during the positioning of the control handles over the engine, leave the attachment coupled to the PTO flange.

1. Remove the reverse lockout CAM, held to the PTO lever by a bolt, wave washer and nut. Put these parts in a safe place, because they must be reinstalled when you change back to the rear-mount attachment mode. Removal of this CAM deactivates the PTO/REVERSE GEAR LOCKOUT permitting use of "R" or "R1/R2" gear selector positions during operation of a front-mount attachment.

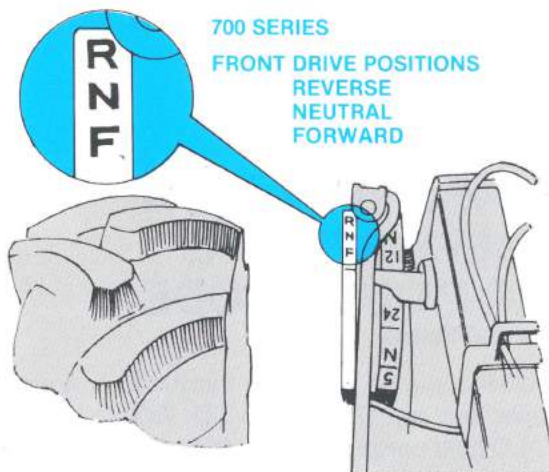


2. Shift into the lowest gear. This is for clearance when moving the handlebar to the engine end.
3. Detach the PTO and gear selector push rods from the supports on the steering column.
4. Pull back the **handlebar adjustment rod** until it is free of the support at the top of the gear box. With slow, careful maneuvering, move the handlebar counterclockwise (to the position over the engine) and reengage the adjustment rod in one of the holes in the support. Do not bend or crimp the cables while rotating the handlebar.
5. Check the position of the cables. There should be no sharp bends in the cables. Put the push rods back into their support brackets, and be sure the handles point downward.
6. In the mode for front-drive, the **high speed lockout** on the steering column blocks shifting into all but three positions on the gear speed selector. A



decals which read correctly from the operator's position (from behind engine) labels them "F" (forward), "N" (neutral) and "R" (reverse). (The decal denoting gear selections for the rear-drive mode appears upside-down).

7. On models 725, 735 and 745, the HI/LO gear range lever may be used to obtain high and low speeds in both the "F" and "R" selections.

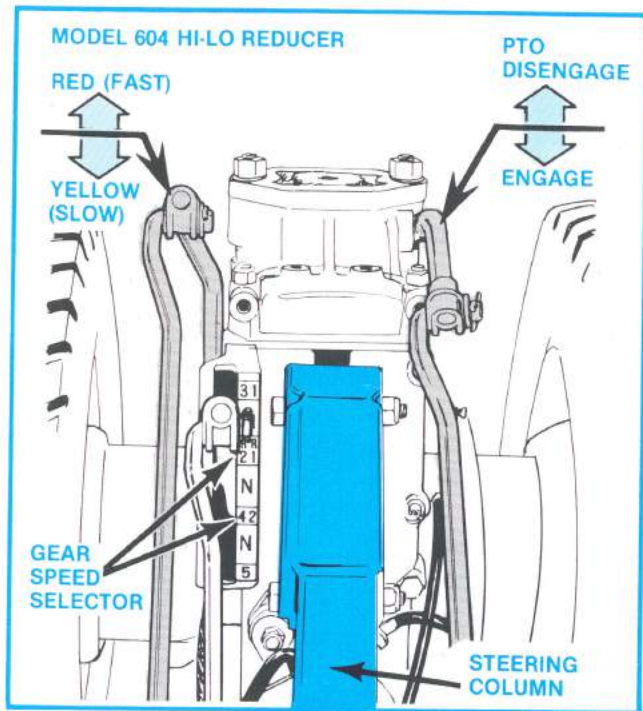


OPERATING FRONT-MOUNTED ATTACHMENTS

! WARNING

FOR MODELS 602 and 604

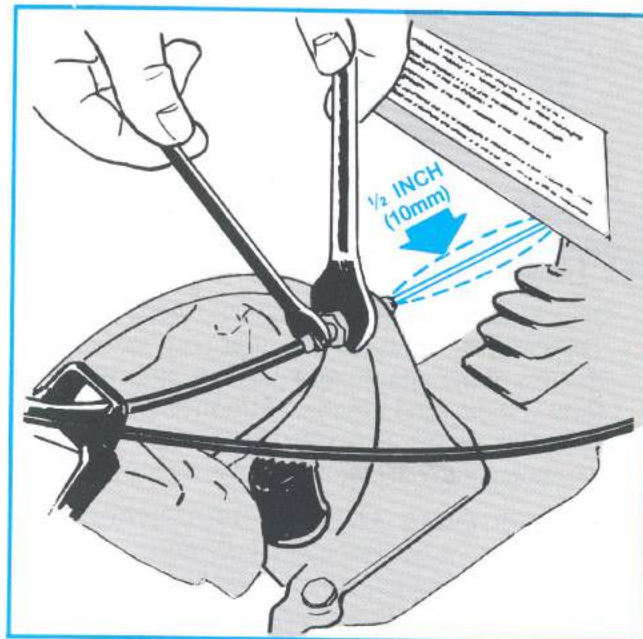
These models do not have a device to prevent operation in the highest gear available on the gear selector. The highest forward speed ("5" on 604, "3" on 602) on the selector must be used only for transport AND NOT DURING ATTACHMENT OPERATION. The speeds (8 mph or higher) obtainable in the highest gear settings are much too fast for both satisfactory performance and safe operation.



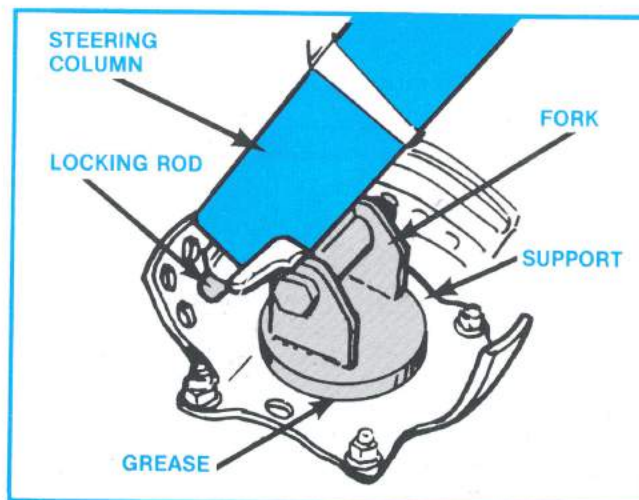
1. Disengage the PTO by pushing the PTO push rod away from you. Shift into neutral. On the 602 and 604 models, use the "N" selection between "R" or "R1/R2" and the lowest forward gear position—"1" or "3/1."
2. Declutch the unit and pull the PTO push rod towards you to engage the PTO. The PTO will transmit power to the attachment when the clutch lever is released. To move forward for operation, declutch the unit while shifting into the gear recommended for the particular attachment.

MAINTENANCE PROGRAM

1. Refer to the maintenance instructions and illustrations in the "Use and Maintenance" manual furnished for your model engine. Change oil, filters, etc., and clean the cylinder fins and crankcase oil breather as instructed in the engine manual.
2. **DAILY CLEAN-UP:** When the machine is very dirty you may hose down everything except the engine immediately after use. But to avoid cracking the engine, you must let it cool before hosing it down. You may, however, idle the engine until it is warm enough to evaporate the wash water from around the spark plug.
3. **AFTER FIRST 10 OPERATING HOURS** (and afterward as recommended):
 - a) Tighten nuts and bolts.
 - b) Check tire pressure.



- c) Check the clutch cable play (now, and every 50 operating hours hereafter). The cable should be neither taut nor too slack. The proper play is 1/2 inch (10mm) of deflection (see illustration). To adjust, hold cable nut from turning, and tighten or loosen the clutch cable adjusting screw as required.
 - d) Check the gear oil level of each attachment. Recheck rotary mowers every 50 hours and the other attachments every 100 hours.
4. **SEASONALLY:**
 - a) Lubricate the control cables with a light oil.
 - b) 700 Series only: The hinge of the hood should be lubricated with a light oil. Do not use mineral oil.
 - c) 700 Series only: After cleaning thoroughly, apply grease between the steering column fork and the steering column support. Then oil the top and bottom of the steering column locking rod.



SECTION THREE

USE AND CARE OF ATTACHMENTS

LUBRICATION OF ATTACHMENTS

ROLLERS, ROTARY MOWERS, AND SNOW-BLOWERS: Remove the pipe plug located on top of the attachment gear housing. If the oil level is more than 2 inches (51mm) below the filler plug, fill to the top with SAE-90 EP (extreme pressure) gear oil. Maintain at the nearly full level.

POWER BARS AND CHIPPER/SHREDDER: These require no gear oil, but do require frequent greasing with a lithium (general purpose) grease pumped through "zerk" fittings on the housing.

For lubrication of other attachments, see the particular attachment.

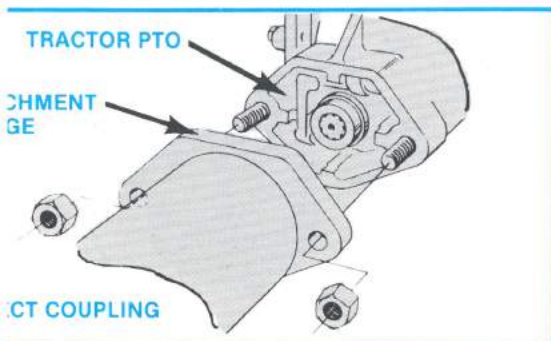
COUPLING ATTACHMENT TO PTO

The externally splined (grooved) end of the gear drive can be seen at center of the attachment's power shaft (PTO) flange. When an attachment is coupled to the PTO flange and the clutch is engaged, the drive shaft slides outward to engage the splined shaft of the attachment. The shafts then rotate as a single unit. They disengage whenever the PTO push rod is pulled to disengage the PTO.

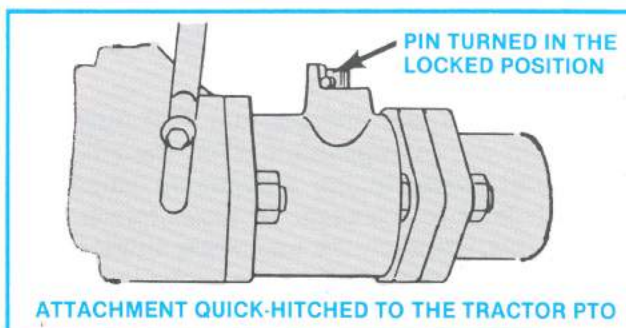
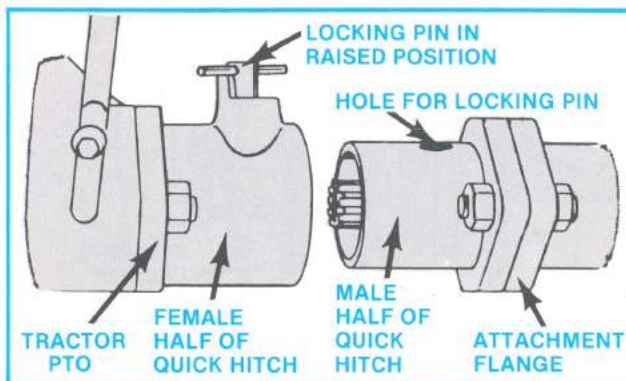
Although the attachment may be coupled directly to the tractor PTO, there is an optional quick hitch that shortens the time for coupling or uncoupling from minutes to a few seconds. There are also PTO extensions in lengths of 3" and 6" which can be added between the PTO and the attachment for better clearance with large, heavy engines.

DIRECT COUPLING:

Remove the lock nuts and washers from the tractor PTO studs.



- Align the tractor PTO with the connecting flange of the attachment. Always bring the tractor to the attachment. If necessary, use props to level the attachment.
- Slide the PTO studs into the attachment flange and secure with the washers and lock nuts.



B. QUICK HITCH:

- The hitch consists of two parts held together by a captive T-handled pin. Pull and turn pin sideways, to separate the parts.
- Remove the two nuts from the tractor PTO studs and the two bolts and nuts from the quick hitch.
- Attach the female part, **pin-side-up**, to the tractor PTO. Attach the male part, **hole-side-up**, to the attachment connecting flange. Install and tighten the four nuts.
- Fit the attachment part into the PTO part. Twist the pin so it drops down into locking position, securing the two parts together.
- To uncouple, pull the pin.

C. FRONT-MOUNT ATTACHMENT CONNECTIONS:

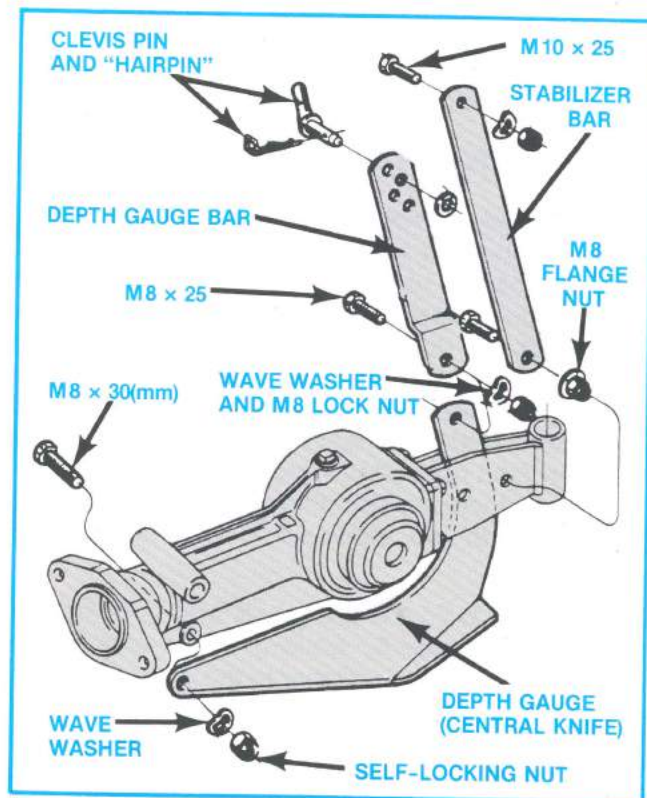
See individual attachments for connections.

NOTE: Attachments flanged for model 745 cannot be coupled to PTOs of other models.

USE AND CARE OF REAR-TINE TILLER ATTACHMENTS

PREPARING NEW TILLER

1. Cut the carton away to remove the tiller. Stand the tiller on end so the underside is accessible for assembly.

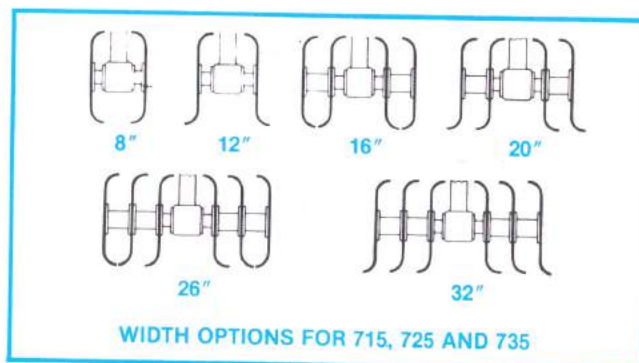


2. Hardware and fasteners are provided for assembly of the depth gauge and stabilizer bar. The bolts in the illustration are labeled by their metric number (M8 or M10) and the length in millimeters. Use the self-locking nut to fasten the depth gauge to the gear housing. Install the flange nut at the stabilizer bar bottom connection.
3. The depth gauge and stabilizer bar protrude through the top of the tiller housing. The bar is bolted to the brackets. The gauge is pinned with the clevis pin and "hairpin." Tighten all nuts.

WIDTH OF TILTH

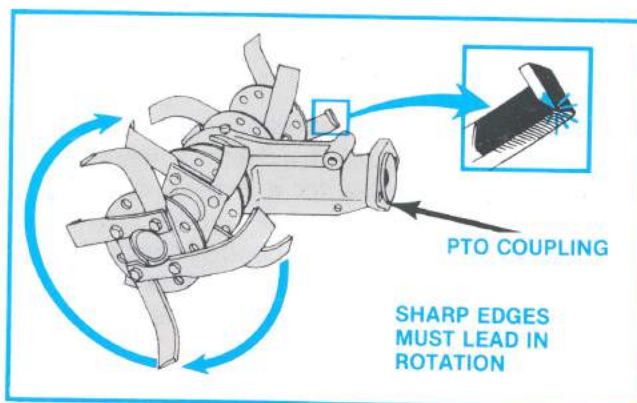
1. **Single Row Attachment For 715, 725 and 735:** The standard tiller is available preassembled in widths of 20", 26" and 30". The track width can be changed from one to another of the above widths as required. Just as the track width of the tractor depends on how the wheels are mounted, the tilling width can be increased or decreased

by adding or removing flanges of tines on each side. The standard protective housing will adjust to a minimum width of 16" (40cm). An optional narrow housing assembly is needed for 12" and 8" track widths.

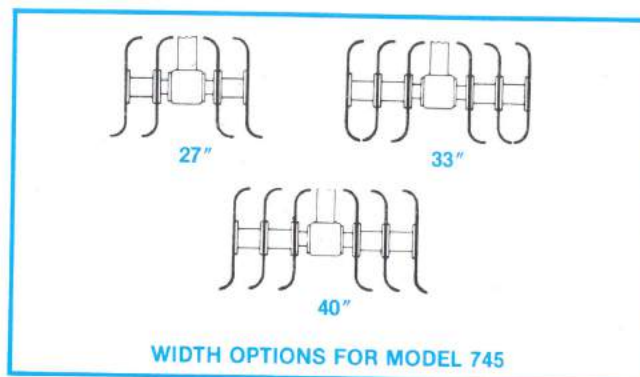


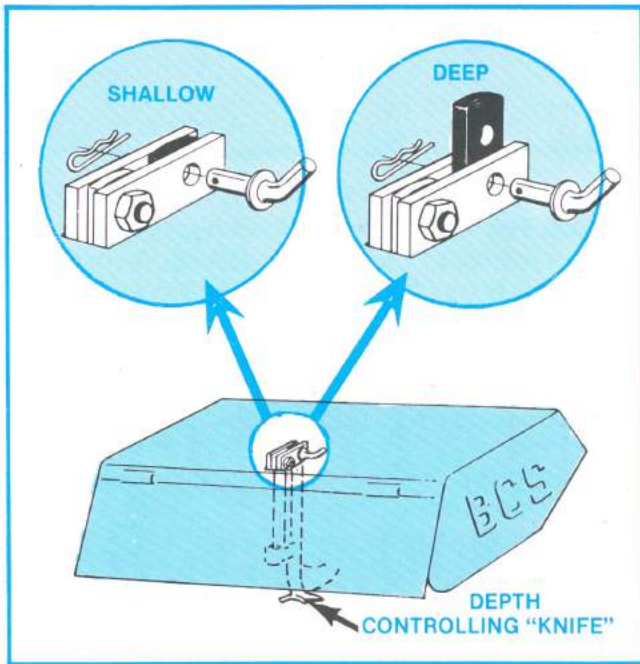
NOTE

When remounting tines on the flanges, it is wise to keep the tines on one side of the attachment in place for use as a model. Do not mount the tines backwards on the flange.



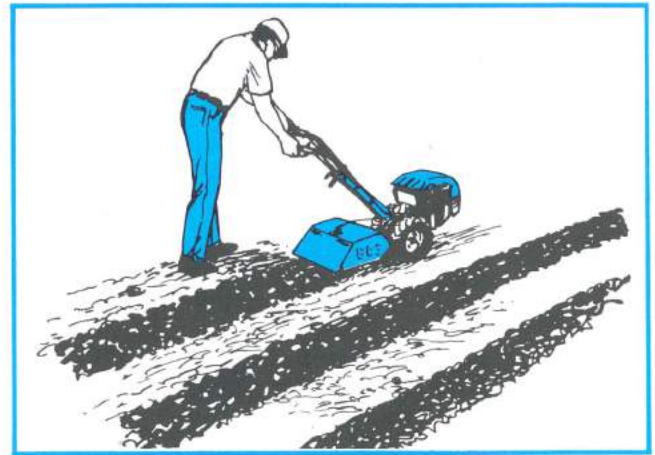
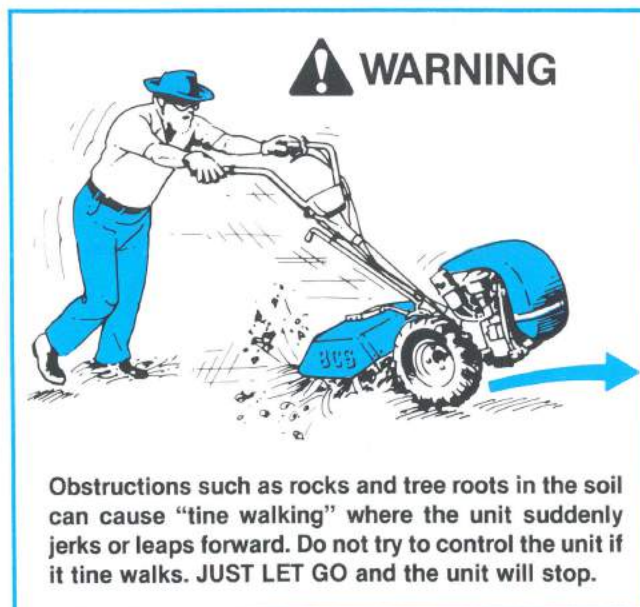
2. **Single Row Attachment For Model 745:** This comes preassembled for a tilling width of 33". The width can be increased to 40" or decreased to 27" by adding or removing flanges of tines on each side, and by changing the tines to Bend inward or outward.





TILLING DEPTH ADJUSTMENT

1. A bar with adjustment holes and a clevis pin and "hairpin" is at the top center of the tiller housing.
2. On any of the above tillers, the greatest tilling depth is obtained with the clevis pin positioned through the bottom hole in the bar.
3. In hard ground, as when tilling a patch of ground for the first time, pin the depth adjustment rod through the top hole for a shallow cut. After a pass or two to break up the hard top crust, stop the engine and pin the depth adjustment bar through the lower position hole. Pinning the bar through the bottom hole raises the depth-gauging "knife" for maximum tilling depth.

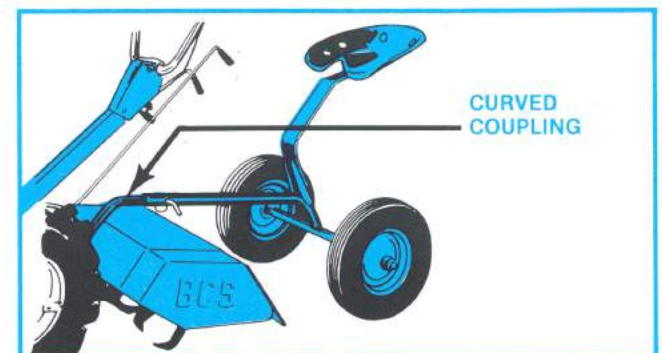


GARDENING SUGGESTIONS

1. The standard width tines are good for all tilling and cultivation work, and the better choice for use in hard or rocky soils. Optional narrow width tines give superior results and a finer texture in soft, grassy or sandy soils. When breaking new ground, or preparing hard, rocky soil, till at a minimum depth, at the lowest gear setting, and at a fast throttle setting. In soft soils, you can probably start right off tilling at maximum depth setting, but you will find that maximum depth and finest tilth are achieved in the lowest gear speeds.
2. You can avoid trampling over and tamping the fresh-tilled rows by walking to one side of the tiller. Swing the handlebar to the side and adjust it to a comfortable height. After a bit of practice with the tiller, you can work out a pattern where your footprints will be erased with each new pass.

TRANSPORT SULKY FOR REAR-TINE TILLER

Exclusively for 700 series tractors, the Transport Sulky is for use in riding the machine to and from the work place. As warned in Section One, you must never operate the tiller from a sulky or wagon of any type. A vee drawbar is required for sulky attachment to model 715, and a curved coupling for the other models.



USE AND CARE OF ROTARY MOWER ATTACHMENT

DANGER

NEVER OPERATE ROTARY MOWER BEHIND TRACTOR



WRONG!



RIGHT!

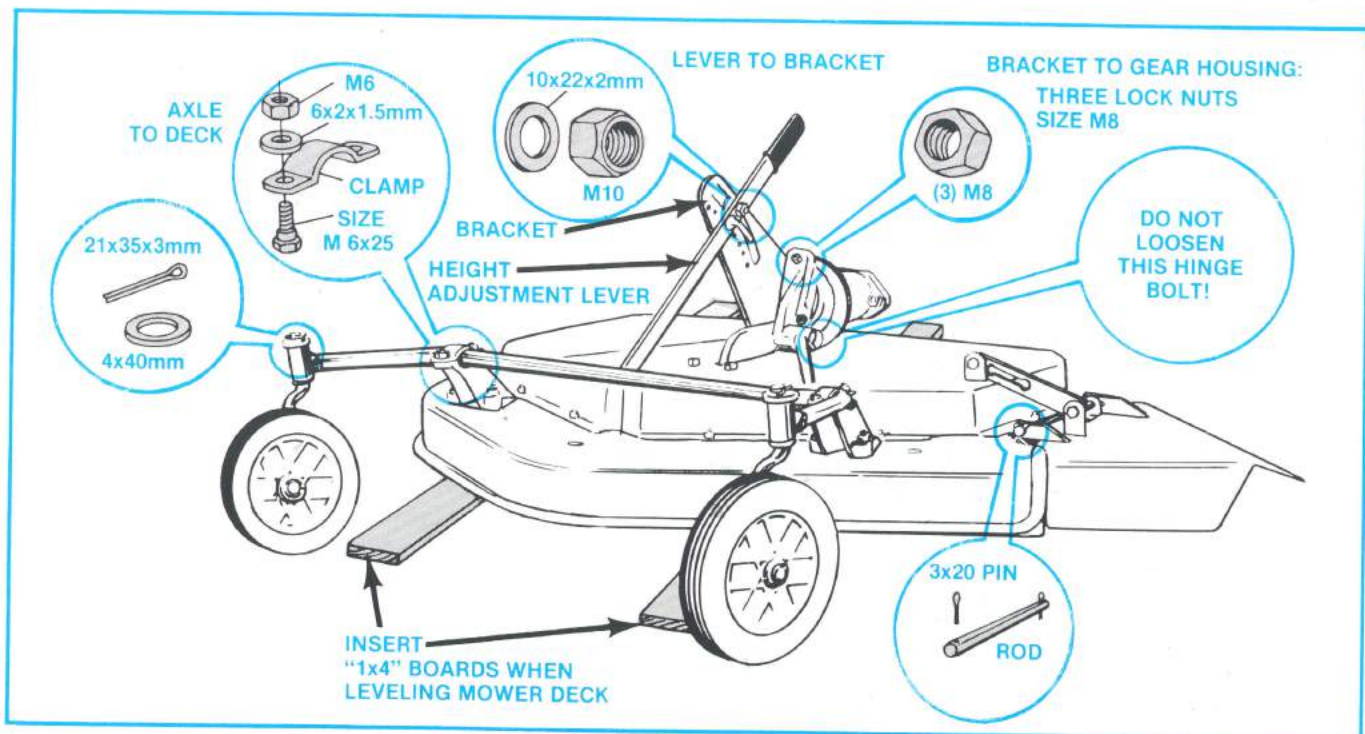
700 SERIES CONVERSION FOR MOWER USE

1. Before removing the rear tine tiller attachment, refer to pages 25 and 26 for detailed conversion instructions. Swing the handlebar over the engine and deactivate the PTO/REVERSE LOCKOUT by removing the CAM. Then remove the attachment.
2. The three positions marked R, N, and F appear right-side-up when viewed from the operator's position. Respectively, **Reverse**, **Neutral**, and **Forward**, these are the only selections which the HIGH SPEED LOCKOUT device leaves available for mower operation.

ASSEMBLY, CONNECTION AND LEVELING OF THE 40-INCH, 3-BLADE MOWER ATTACHMENT

The attachment is packaged "knock-down" and requires the following steps of assembly. The fastening parts are identified by their metric dimensions.

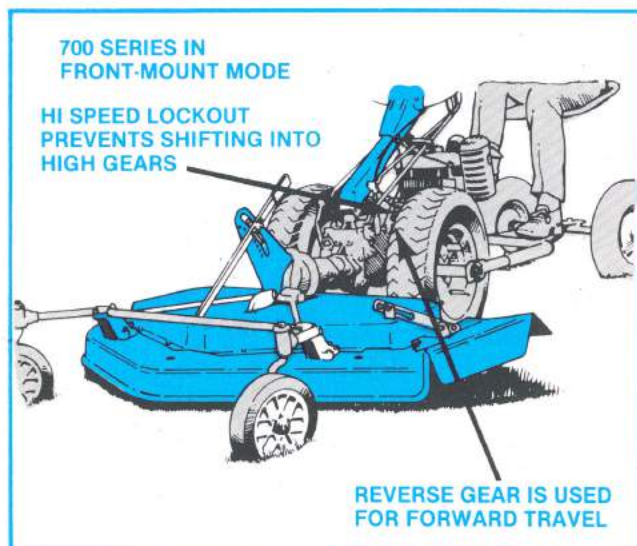
1. Pull the bracket back to the gear housing. It will pull hard, but do not loosen the hinge bolt to make pulling easier. Secure bracket to housing with the three M8 locknuts.
2. Clamp the axle to the deck on both sides.
3. Assemble both wheels to the axle, using the 21x33x3mm washers and the 4x40mm pins.
4. Assemble the height adjustment lever to the bracket, but do not tighten the leveling nut (M10) at this time.
5. Assemble the grass deflector to the deck with the long rod and a 3x20mm pin.
6. Put the machine on a flat, level surface, and mount the attachment to the machine.
7. Using the "1x4" boards as a leveling gauge, slide a board under each side of the deck from front to rear.



8. With the leveling nut loosened (see step 4) let the deck sink down on the "1x4" boards. Now tighten the leveling nut. The deck is now locked in position for a level cut.

LUBRICATION (PRESERVICE)

Before operating, check that the gear oil level of the mower gear housing is within $\frac{1}{2}$ " of the top of the filler hole. The gear oil level should be checked every 50 operating hours.



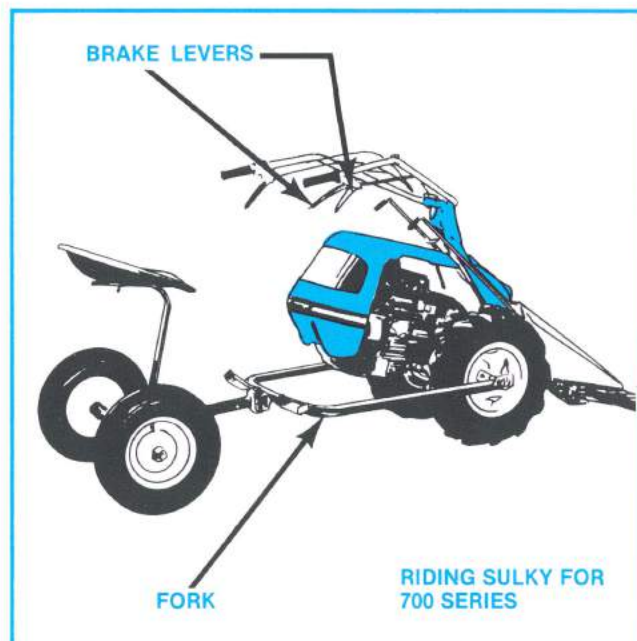
ROTARY MOWER OPERATION

WARNING

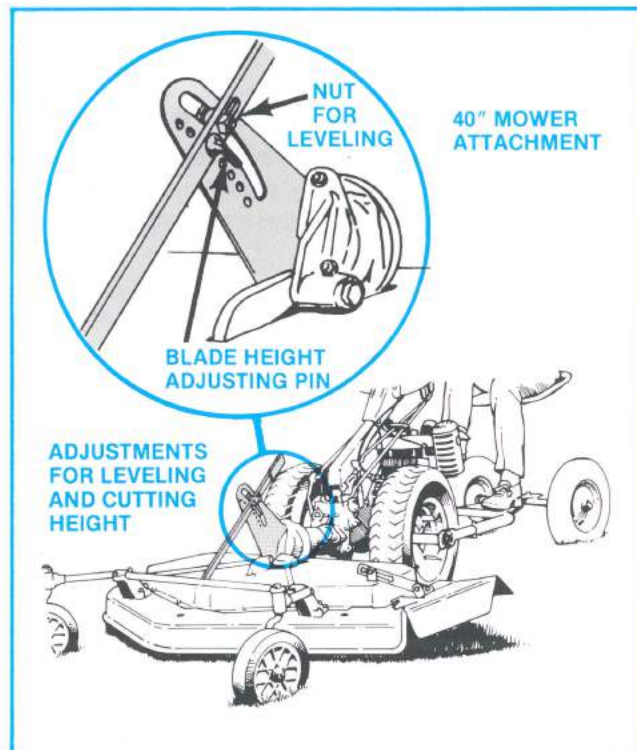
Read and obey all mower safety rules in Section One. Do not leave the starting and operating zone when the engine is running. Keep toes and fingers away from the mower deck. Do not remove or defeat the purpose of the deflector on the grass discharge chute.

When operating from a sulky, always **MOW UP AND DOWN** (never across) a slope, and make wide turns to guard against tipping over. When walking behind the mower, **WALK ACROSS SLOPES** (never up and down).

1. **OPERATING FROM RIDING SULKY:** Only models with wheel brakes should be operated from a riding sulky. An optional single wheel brake kit is available for the other models.
2. **CUTTING HEIGHT SELECTION:** The cantilevered cutting height adjustment mechanism (illustrated) adjusts the cutting height by raising or lowering the front wheels. To change the setting, pull out the pin, move the lever to the desired position on the quadrant, and reinstall the pin.



3. To avoid shock to the grass, it is recommended that only about $\frac{1}{3}$ of the grass blade height, or a maximum of 2 inches, be removed at each cutting. For example, reduce a 6-inch growth to 4-inches on the first mowing. Then reduce the height with a second mowing some time later.



4. Mowing wet lawns is not recommended because of poor results and also because it increases the potential for mildew and other grass diseases.
5. It is a good idea to vary the mowing pattern with each mowing. This will help to eliminate matting, and give a more even overall appearance than when the mowing pattern is unvaried.

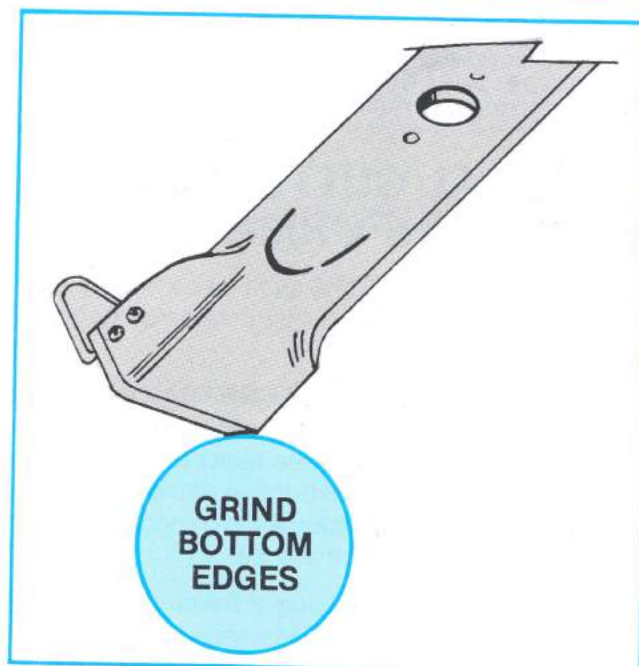
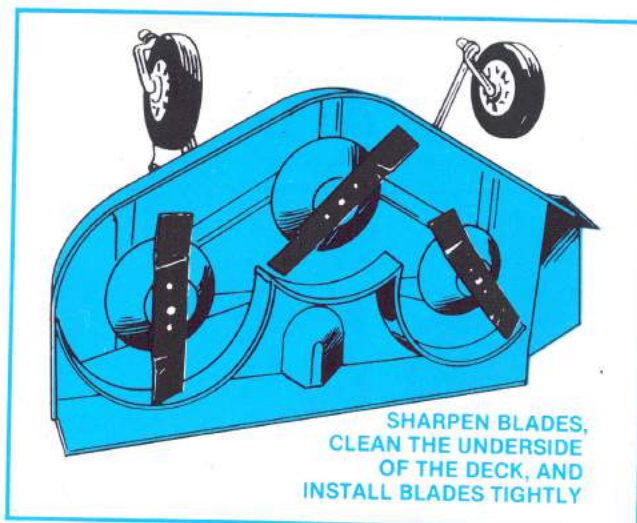
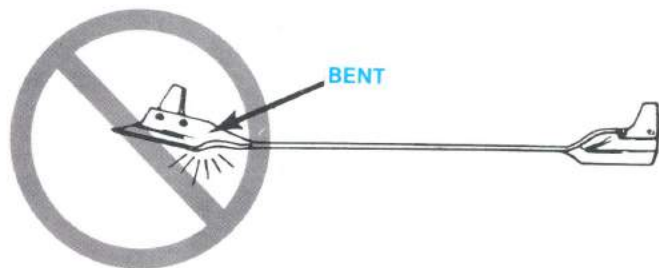
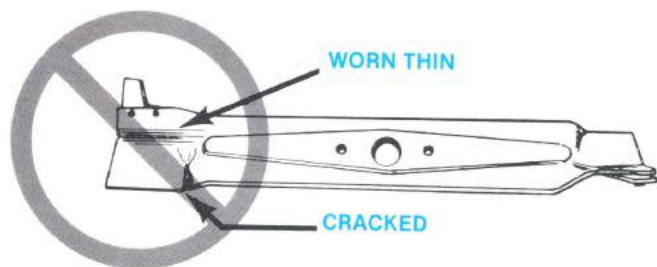
WARNING

IF A HARD OBJECT IS STRUCK: Shut engine down immediately (see page 7) and inspect for a bent blade condition. Do not try to straighten and reuse a bent blade, because any impact severe enough to bend the hardened steel may cause tiny cracks which could later enlarge.

INSPECTION AND MAINTENANCE

Like all cutting tools, the mower must be kept in good condition to perform well.

1. Clean the mower blade housing (underside of the deck) often enough to prevent heavy caking of grass and dirt on the surfaces. Inspect the mower blades for general condition each time.
2. Contact with small particles plus the grass, not only dulls the edges but also wears the blades at other points. Sharpen the blades frequently, and inspect each time for wear and cracks which may occur at illustrated points. Replace cracked or badly worn blades immediately, because cracked pieces could break and be discharged at high velocity from the mower deck.



3. The BCS blades are made of high-grade steel which is too hard for filing. Resharpener the **bottom** edges by grinding. Do not overheat the steel.
4. During sharpening, be sure to balance each mower blade by grinding the heavier end. Out-of-balance blades cause excessive vibration.

USE AND CARE OF CUTTER BAR MOWER ATTACHMENTS



GENERAL CUTTER BAR MOWER INFORMATION

1. 700 SERIES TRACTORS must be converted to the front-mount mode. See instructions on pages 19 and 25.
2. The SICKLE BAR and MULCHER BAR are the two original types of BCS mower bars. The COMBINATION BAR combines features and abilities of both. Although construction of the bars is very similar, there are differences to be encountered in adjustment and maintenance.
3. The plastic blade coupling at the center of the bar is designed to break if an obstruction stops the blade from reciprocating. Accordingly, keeping one or two spare couplings on hand is recommended.

RECOMMENDED OPERATION

WARNING

Never operate the mower bar from a mowing sulky.

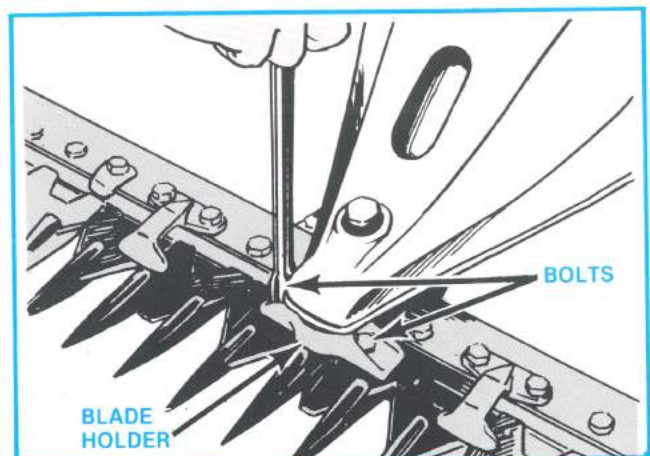
1. It is unnecessary to run the engine at wide open throttle for satisfactory performance. Cutter bar mowers give excellent results when operated at medium throttle settings, and there is less wear and tear on the reciprocating parts. If necessary to increase ground speed, select a higher gear rather than advance the throttle.
2. The short teeth of the Mulching Bar can cut wet grass without clogging. Both the Mulching and

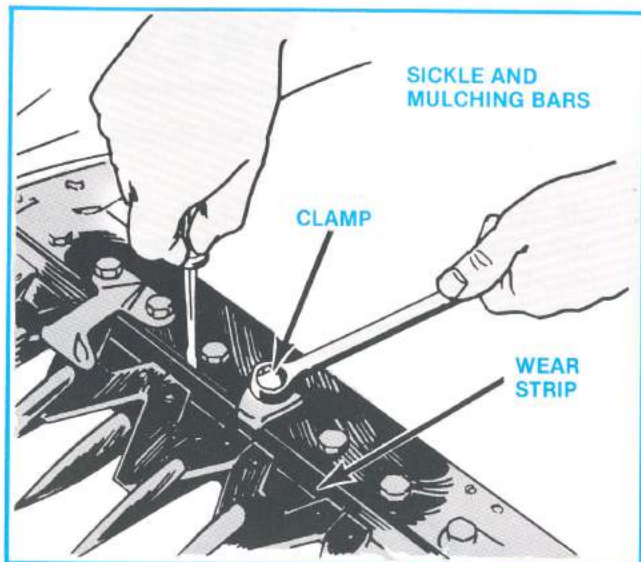
Combination Bars are designed for recutting (mulching) mown grass. For brushcutting, and also when operating in extremely rugged terrain, go slowly and deliberately with either type attachment.

3. The Sickles Bar is designed specifically for cutting grass. It cannot recut mown grass and is not suitable for cutting brush.

MOWER BAR MAINTENANCE

1. Wash down and re-oil the sliding parts after each use.
2. Every four operating hours pump a lithium base grease into the blade control mechanism through the two grease fittings on the central housing. (No gear oil is required for this attachment.)
3. The cutting teeth should be removed and sharpened with a grinder. For blade removal, remove the two bolts and the plastic blade coupling. Then slide out the blade.

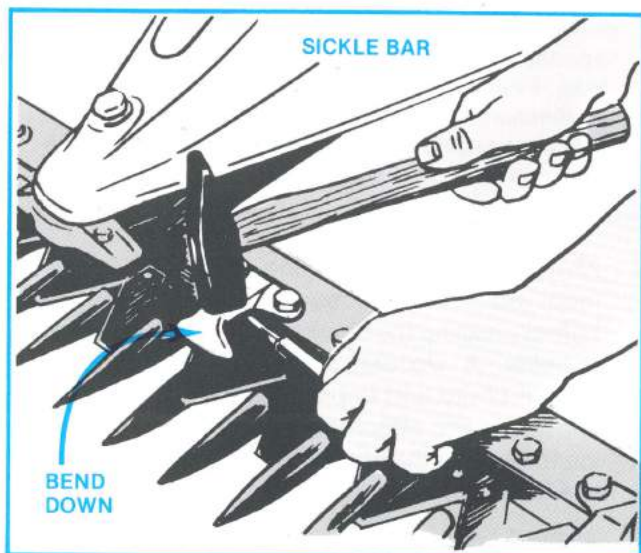




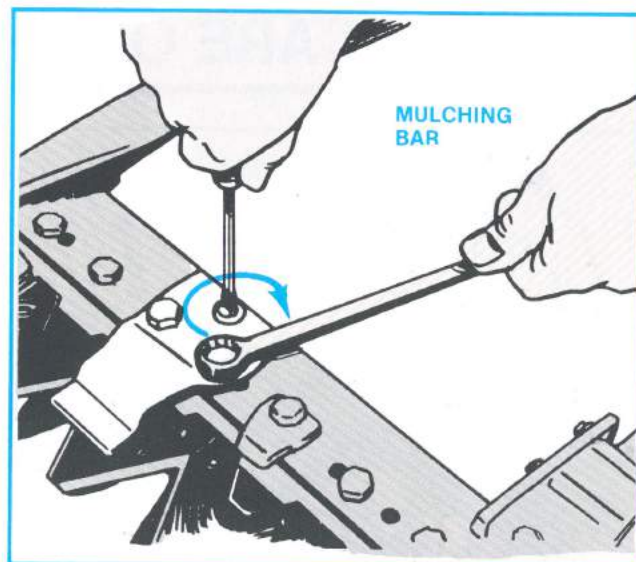
4. This step of adjustment is required only for the Sickle and Mulcher Bars and not for the Combination Bar: When play between the wear strip and blade becomes excessive, loosen the wear strip clamps and push the wear strip closer to the blade with a screwdriver tip. Tighten the clamp bolts securely.
5. The tension between the blade and the tooth comb is set by adjusting the blade holders (described below).

NOTE

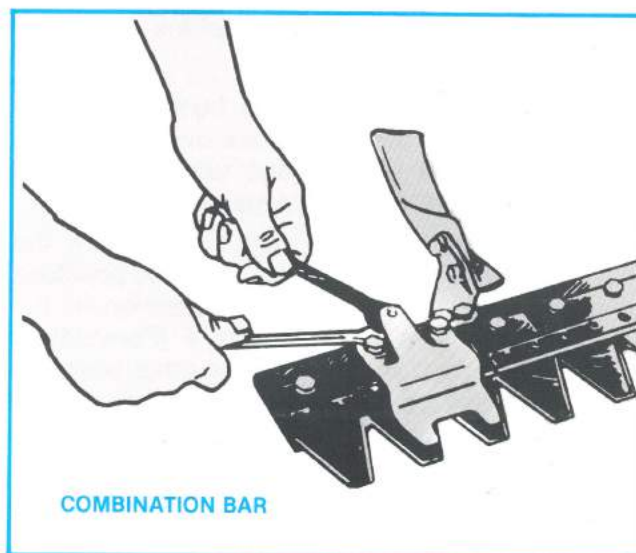
The tension must be snug enough for clean cutting action, but should not freeze or bind the blade against the tooth comb.



- a) **SICKLE BAR** (with no adjusting screw): Loosen the blade holder bolts. Support the assembly on a firm surface. Slide a screwdriver shank under the neck of the blade holder. Bend down the holder with light hammer strokes. Tighten the bolts and check the blade tension.

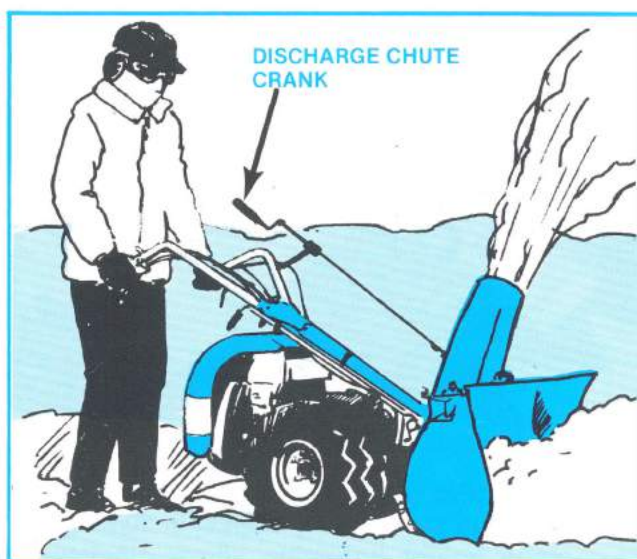


- b) **MULCHING BAR**: Loosen the blade holder bolts and increase the tension by turning the blade holder adjusting screw clockwise. Tighten the bolts before checking the tension. Repeat tensioning process, if required, until tension is correctly "snug."
- c) **COMBINATION BAR**: Loosen the blade holder bolts. Then loosen and hold the lock nut from turning, and use a wrench to turn the jackpost type adjusting screw against the blade holder. Check the tension after tightening the lock nut and the bolts. Repeat tensioning process, if required, until tension is properly snug. Rear play can be eliminated by pulling back the blade holder when tightening the nuts.



6. **REPLACEMENT PARTS**: See your dealer for parts. The mower blades are available as a complete riveted assembly, in strips of three cutters, or singly.

USE AND CARE OF THE SNOW THROWER



GENERAL INFORMATION

The 32" Snow Thrower fits only the model 745. The 28" Snow Thrower fits all other models including the 602 and 604. Both sizes are similar in construction and operation. Optional accessories include snow grips and wheel weights for added traction.

SNOW THROWER OPERATION

1. Read all precautions in Section One pertaining to the safe operation of the machine and snow thrower attachment.
2. 700 SERIES ONLY: This is a front-mounted attachment. Put the handlebars over the engine (see pages 19 and 25) and remove the PTO/REVERSE LOCKOUT CAM (page 26).
 - a) The decal appearing right-side-up from the operator's position marks the three positions available for snow-thrower operation in the front-mount mode. They are F (Forward), N (Neutral) and R (Reverse). The other positions on the selector are blocked for reasons of safety by the HIGH SPEED LOCKOUT (see page 26).
 - b) On models 725, 735 and 745, the HI/LO gear range lever may be used to obtain high and low speeds in both the "F" and "R" gear selections.
3. If necessary to start the engine in a barn or shed, keep the doors wide open.
4. If necessary to back up, be sure of your footing, and be sure the way behind you is unobstructed.

Do not use a high gear or fast throttle setting when backing the machine.

5. ON ALL 600 AND 700 SERIES: Do not use too high a gear or throttle setting. Throttle down and be extra careful on turns and slopes.

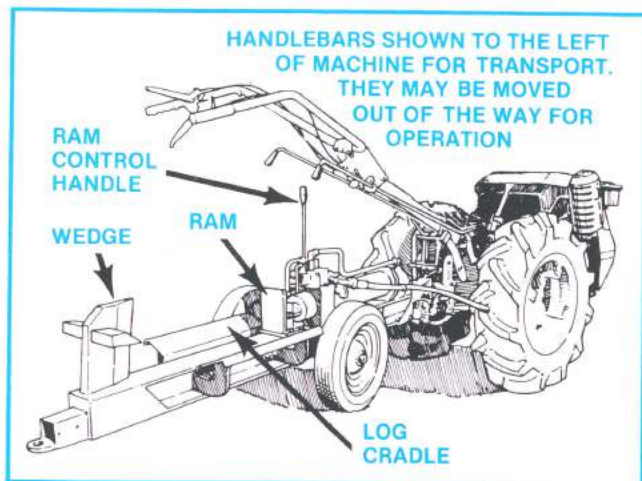


! WARNING

Do not try to clear slopes so steep that you could lose control, or the machine could slide into you or an obstruction.

The snow-thrower has an impeller retard system designed to brake the impeller to a stop within three seconds after PTO disengagement or engine shut-down. Even so, never put hands and fingers inside the discharge chute or the impeller (collector) area unless the engine has been rendered unstartable, as explained in Section One, page 8.

5. Always shut off the engine, wait until all movement stops, and disconnect the spark plug wire before clearing the discharge chute or deicing the impeller. A wooden stick for clearing the discharge chute and impeller is provided with each snow-thrower attachment. You can also let the ice thaw from the snow-thrower if a warm place is available for this purpose.
6. Always be sure to direct the discharge chute away from living quarters, vehicles and people. Work in a pattern which will pile the snow where desired, and which requires the fewest passes with the machine. With the wrong procedure, you could be throwing snow over and over without clearing the area. Don't forget that the wind has an influence on how you should proceed.



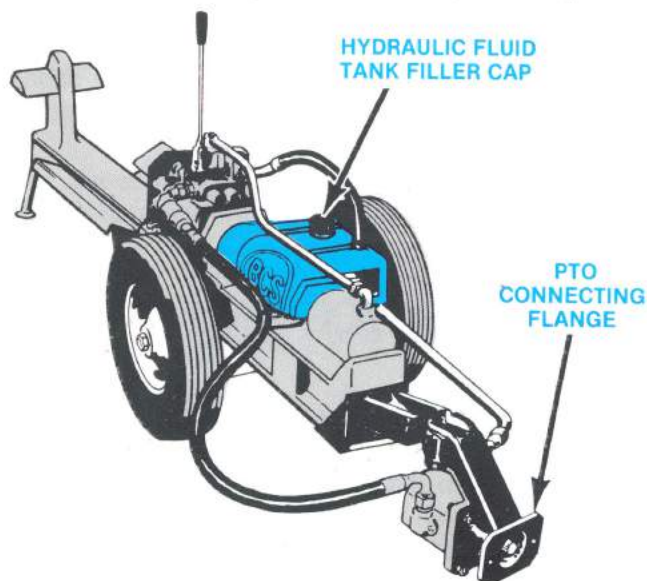
LOG SPLITTER OPERATION

1. The splitter includes a single stage hydraulic pump developing a maximum pressure of 3675 psi, a 2-gallon tank, and a lever-operated hydraulic cylinder. In the cycle time of 17 seconds the splitter develops a maximum splitting force of 10 tons. The log capacity is 26". The splitter has a 9" verticle wedge and a removable 8" horizontal quartering wedge. It has a 4" beam and a 13" log cradle.

NOTICE

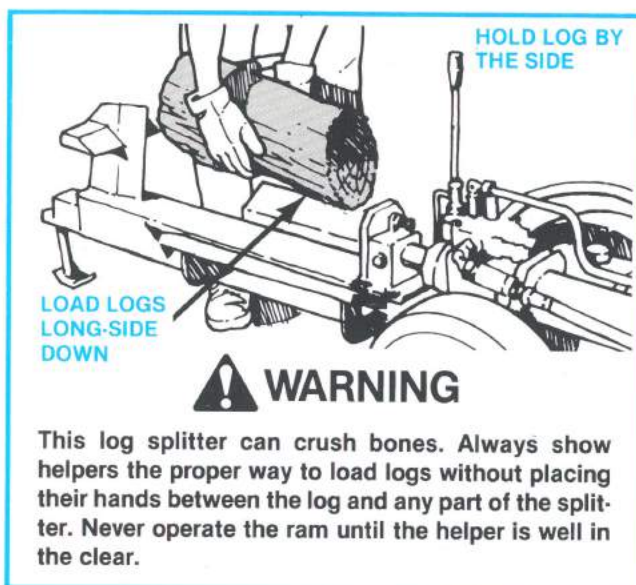
The log splitter is not classified for travel on public highways and must not be trailered behind an automobile or truck.

2. The hydraulic pump of the splitter couples directly to the machine PTO. The 700 series tractors should be converted to the rear-mount mode (see pages 19 and 25). The log splitter should be transported by pulling it behind the machine (see page 12).
3. Set up for work on a cleared, level spot. If



necessary, block up the machine to be sure of its stability during log splitting.

4. Review all precautions pertaining to the operation of the log splitter and machine in Section One.



5. Put the engine in NEUTRAL (N) gear and advance the throttle to medium speed, or faster as required.
6. Logs which are cut at an angle should be cradled long-side-down. Cradle the log into position on the bed and move the ram control lever forward. When the log is split, reverse to recycle before clearing the cradle and loading another log.

INSPECTION AND MAINTENANCE

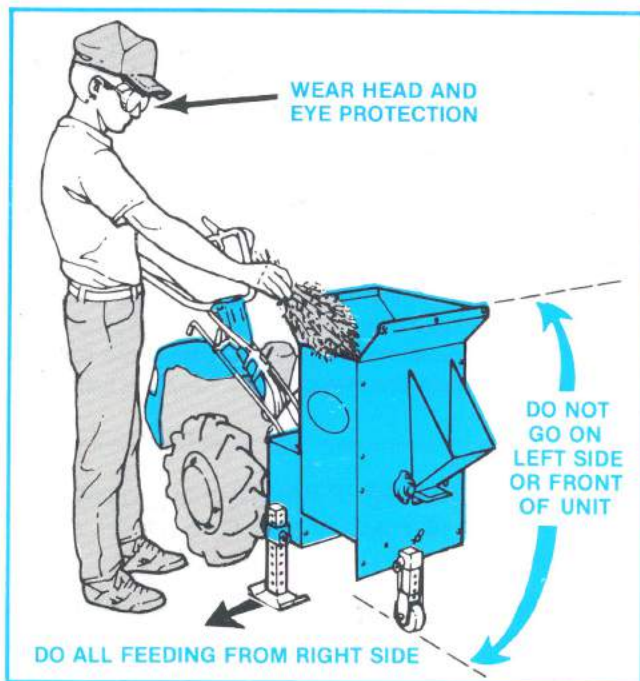
1. Grease the wheel bearings with a lithium base grease, and maintain tire pressure at 15 lbs. (103 kPa.)
2. Sharpen the wedges only if they become dull enough to noticeably affect performance.
3. Add hydraulic fluid as required to maintain a reasonably high level of oil in the tank.
4. Do not use the splitter if any malfunction develops. Have the machine serviced by your BCS dealer.

DANGER

If a leak in the hydraulic system is suspected, do not try to find the leak with your hand. Run the engine and pass a sheet of cardboard near the suspected areas of leakage, as illustrated in Section One.

USE AND CARE OF BCS SHREDDER/CHIPPER ATTACHMENT

These instructions are based on those in the BCS Shredder/Chipper Owner's Manual furnished with your Shredder/Chipper. Always refer to the manual for complete instructions.



ORIENTATION WITH ATTACHMENT COUPLED TO THE PTO

1. The operating zone is on the right side of the unit and attachment. Going on the left side where materials are discharged is dangerous, as is working directly in front of the Chipper feed chute or leaning over the Shredder hopper. It is possible for rejected material or nails embedded in wood to be kicked back out of these openings. Eye protection should be worn.
2. The Chipper device is a knife blade mounted on a rotating disc behind the slot in the feed chute. Material pressed against the feed slot will have pieces sliced off the end. This takes a fair amount of feed pressure. Stay to the right, out of the path of a kickback.
3. The Shredder hammermill mechanism consists of gangs of rotating hammers or flails which beat or grind short, soft materials into small particles.
4. Neither Shredder nor Chipper can handle cloth, plastic, metal, glass, wire, stones, etc.
5. Instructions for height adjustment are given in

the Shredder/Chipper Owner's Manual. Always set up the machine on a soft but firm ground which acts as a shock absorber. Do not operate on gravel or hard surfaces.

SHREDDER OPERATION

1. Materials must be thrown in the top hopper with force enough to penetrate the grinding screen. Be sure you are not wearing articles which could be caught and pulled into the hopper by the material.
2. Do not try to shred long vines or branches.
3. For most materials, the standard $\frac{3}{4}$ inch mesh screen should be left in place. Finer screens are available for processing of materials such as dry leaves.
4. Some moist materials and soils may be processed with the screen removed. If the material is too wet to go through the Shredder, try mixing in drier material such as small wood chips and short twigs to help prevent clogging.

WARNING

Always shut down the machine and wait for all movement to stop before clearing the shredder screen, chipper chute or material discharge area. Never insert tools, such as a hoe handle, into a machine that is running in an attempt to clear it.

CHIPPER OPERATION

1. Direct the end of the branch, stalk or vine against the center of the rotor disc for best action. Do not put very soft or very short pieces into the chute.
2. Do not put hands inside the chute. If a short-chipped piece stays in the chute, push it through with the next branch.
3. As long as the machine is not overloaded, the Shredder and Chipper may be operated at the same time.

MAINTENANCE AND SERVICE

The Shredder/Chipper Owner's Manual contains instructions for greasing the shaft bearings, reversing or changing worn shredder hammers, sharpening the chipper knife, and maintaining proper drive belt tension. An exploded view drawing and parts lists are included.

USE AND CARE OF PRESSURE SPRAYER

GENERAL INFORMATION

The BCS Garden/Orchard Pressure Sprayer is a rear-mount attachment which connects directly to the hitch of model 725 or 735, but requires the V-drawbar for the model 715. The high-pressure pump couples to the PTO of the models 725, 735 and 745.

The polyethylene spray tank holds 25 gallons. The Hypo roller pump has nylon rollers and viton shaft seals—the best for most agricultural spray materials. Maximum pump pressure is 300 psi. At 150 psi it will discharge at 2 gpm, covering a range of 10 to 40 feet.

The standard # 143-AL spray gun, equipped with 25 feet of $\frac{1}{2}$ " diameter EPDM hose, has a twist handle control.

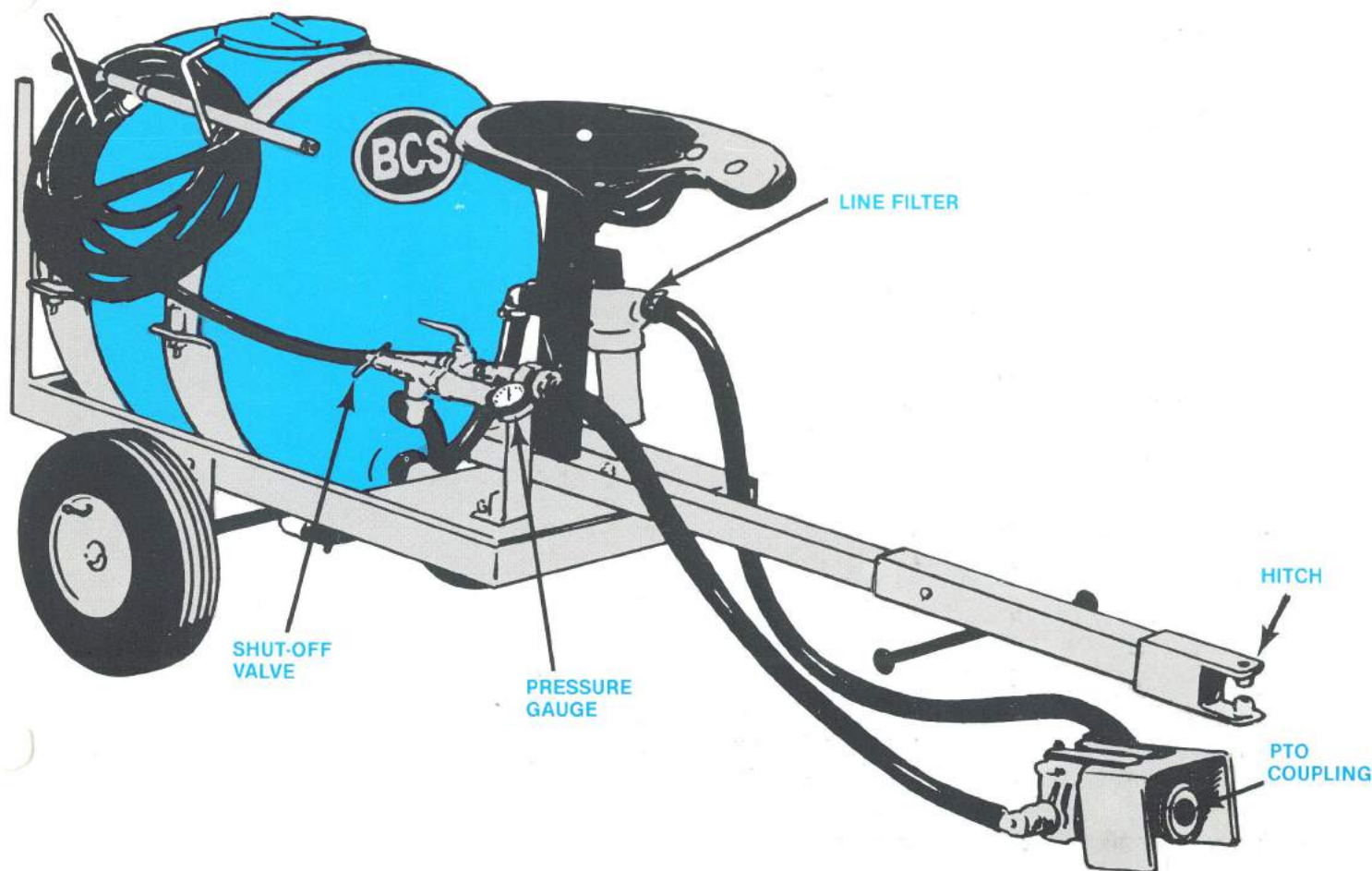


CAUTION

Be sure to read and follow all of the precautions in Section One which pertain to the safe use of tractor and sprayer. Dress in protective clothing, including hats, gloves, and eye protection.

OPERATING AND CLEANING UP

1. The Sprayer has no brakes. Consequently, the tractor must have wheel brakes. If your model does not have brakes, install a brake kit.
2. The tractor should be put into the rear-mount mode and the PTO/REVERSE LOCKOUT CAM reconnected (if previously removed).
3. Hitch the sprayer to the tractor and couple the pump to the PTO.
4. Select the gear and throttle speed combinations which will provide the desired spray coverage.
5. When through spraying, be sure to clean up the equipment, disposing the wash water in a safe area. Take a soap and water shower to prevent absorption of chemicals through the skin. Have clothing laundered.
6. Keep the line filter clean. Unscrew the filter bowl, back-flush the mesh screen filter, and reinstall.
7. Consult the Pressure Pump Instruction Manual supplied with the sprayer for maintenance and repair of the pump. See your authorized BCS dealer for parts and service.



Accessories for **BCS** Power Units & Attachments

UTILITY TRAILER

Use with any 700 series power unit. Attaching bracket is necessary only for model 715. Hauls up to 875 pounds of firewood, trash, shrubs, etc. Has a separate footbrake for operating safety. Not for road use.

Trailer #921-48685-6
Bracket #922-43805-3

TRANSPORT SULKY

For use with any 700 series power unit to transport operator long distances. Not for work applications. Attaching bracket required. Not for road use.

Model 715
Sulky #921-42378-6 Bracket #922-43797-2
Other 700 series models
Sulky #921-48675-3 Bracket #922-43791-3

MOWING SULKY

Converts your walking BCS Rotary Mower Attachment to a riding mower. For either 600 or 700 series power units.

Part #921-48775-5

WHEELS AND TIRES

Many sizes and types are available to suit your needs. Ask your BCS servicing dealer for complete information.

STEEL CAGE WHEELS

For additional traction in loose or wet soils.
17" size-#922-43682-6
19½" size-#922-42474-2

NARROW NURSERY STEEL WHEELS

For cultivating narrow rows, these wheels reduce track width, enabling operator to till 12" or 8" rows.

Part #922-43683-0

V DRAWBAR

Allows operator to attach a transport sulky to a model 715 tractor without removing the Tiller Attachment.

Part #922-43797-2

TILLER TINES

The standard tines supplied with the attachment have been proved over many years to be ideally suited for most soil types. Special tines are also available for special conditions. Ask your servicing dealer for complete information.

TRANSPORT WHEEL

Providing fast, easy maneuvering, this rubber-tired wheel is mounted on 700 series tractors by an easy-to-remove-or-install "presto" pin.

Part #922-42465-0

TILLER HOODS

Available in 8", 12" and 16" fixed widths, and 20" and 26" adjustable widths, all hoods include removable trailing cover. Ask your servicing dealer for additional information.

WHEEL WEIGHTS

Available in various weights for different wheel sizes, weights mount into the wheels for increased traction and/or deeper plowing or tilling.

Part #922-43686-3 for 4.00-8
Part #922-48715-6 for 4.00-10 & 5.00-10
Part #922-48720-4 for 6.00-12

SINGLE BOTTOM PLOW

Will plow a furrow from 6" to 10". Size 6.5/80-12 tires and wheel weights are recommended for plowing.

Part #921-42452-3

SWIVEL PLOW

Reversible plow allows gardener to return down next plow row. 6.5/80-12 tires and wheel weights are recommended.

Part #921-42454-5

ADJUSTABLE RIDGER

Will make furrows 4" to 12" wide and 4" to 8" deep. Ideal for seed planting and forming irrigation ditches.

Part #921-42456-0

PTO EXTENSIONS

Available in 3" and 6" lengths needed for certain applications with a Rotary Mower or Cutter Bar Mower Attachment on diesel engine power units.

Part #922-00010-0 (three inch)
Part #922-00014-4 (six inch)

SNOW GRIPS

They provide additional traction during operation of the Snow-Thrower Attachment. Various sizes are available. See your servicing dealer.

Part #922-48328-4

FRONT WEIGHT

Mounts below the weather hood to add weight and traction to the power unit. 700 series.

Part #922-48719-3

HILLER/FURROWER

Two tools in one, Furrower has removable hiller wings so it can be used separately. Easily attaches to the Tiller hood by a "presto" pin.

Part #121-74630-0

COMBINED RIDGER

Used in combination with Tiller tines, replaces the original tiller hood.

Part #921-43785-6

DOZER/SCRAPER BLADE

Can be pushed or pulled. Easily converts by "presto" pin. Angles are adjustable.

Part #999-99999-5

BUMPERS

Protect engine from walls and fence posts. Bumpers vary in size according to model. See your servicing dealer for information.

CUTTER BAR BLADE GUARD

To be installed on Cutter Bar Mower when not in use. Protects operator. See servicing dealer for part number.

WHEEL SPACERS

Placed on wheel axles, these 2.5" spacers increase track width by 5".

Part #922-43685-2

ADJUSTABLE WHEEL EXTENSIONS

A pair of these will increase the track width by as much as 8 inches.

Part #922-48700-5

LOCK-OUT HUBS

Used to equip model 715 or 725 with free-wheeling feature. Also increases track width.

Part #922-43817-1

BRAKE

Available in kit form for models 602, 715 and 725. Other models have factory-installed brakes.

Part #922-43799-4

PTO ADAPTOR

Converts the standard BCS PTO shaft to the American standard 1-3/8", 6-spline size.

Part #922-48721-5

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