

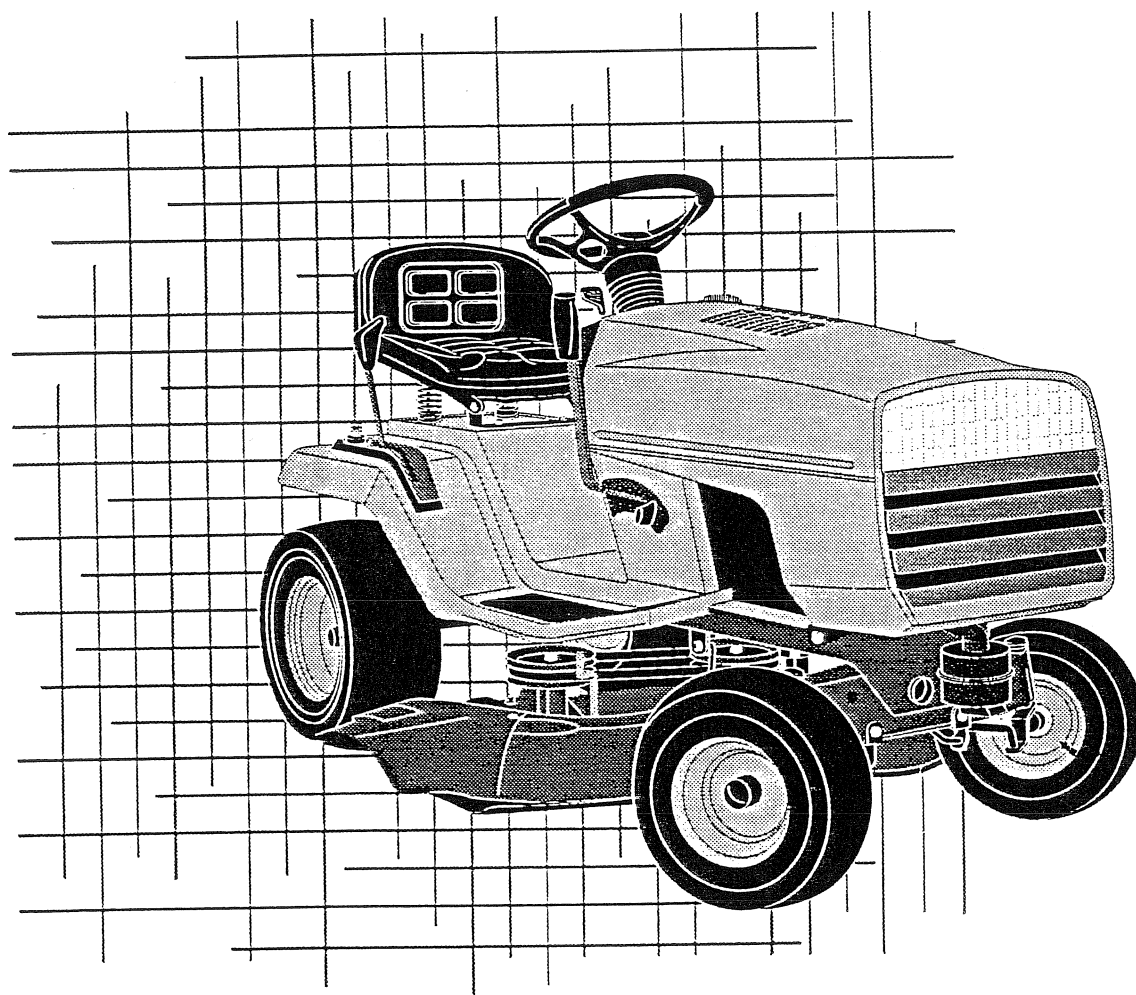
OPERATOR'S MANUAL

IMPORTANT INFORMATION

DO NOT THROW AWAY

LAWN RIDER

MODEL NUMBER - HA1036A (954 00 09 81)
LT112 (954 00 01 91)



RULES FOR SAFE OPERATION



CAUTION: ALWAYS DISCONNECT SPARK PLUG WIRE AND PLACE WIRE WHERE IT CANNOT CONTACT SPARK PLUG TO PREVENT ACCIDENTAL STARTING WHEN SETTING-UP, TRANSPORTING, ADJUSTING OR MAKING REPAIRS.



IMPORTANT

SAFETY STANDARDS REQUIRE OPERATOR PRESENCE CONTROLS TO MINIMIZE THE RISK OF INJURY. YOUR UNIT IS EQUIPPED WITH SUCH CONTROLS. DO NOT ATTEMPT TO DEFEAT THE FUNCTION OF THE OPERATOR PRESENCE CONTROLS UNDER ANY CIRCUMSTANCES.

TRAINING:

- Know the controls and how to stop quickly. Read this Owner's Manual and instructions furnished with attachments.
- Do not allow children to operate the machine. Do not allow adults to operate it without proper instruction.
- Do not carry passengers. Do not mow when children and others are around.
- Do not attempt to operate your vehicle or mower when not in the driver's seat.
- Always get on or off your vehicle from the operator's left hand side.
- The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.

PREPARATION:

- Always wear substantial footwear. Do not wear loose fitting clothing that could get caught in moving parts.
- Clear the work area of objects (wire, rocks, etc.) which might be picked up and thrown.
- Disengage all attachment clutches before attempting to start the engine.
- Handle gasoline with care - it is highly flammable.
 - Use approved gasoline containers.
 - Never remove the fuel cap of the fuel tank or add gasoline to a running or hot engine or an engine that has not been allowed to cool for several minutes after running. Never fill tank indoors. Always clean up spilled gasoline.
 - Open doors if the engine is run in the garage - exhaust fumes are dangerous. Do not run the engine indoors.
- Do not operate the mower without the entire grass catcher, on mowers so equipped, or the deflector shield in place.

OPERATION:

- Keep your eyes and mind on your vehicle, mower, and the area being cut. Do not let other interests distract you.
- Disengage power to attachments and stop the engine before leaving the operator's position.
- Disengage power to mower, stop the engine, and disconnect spark plug wire(s) from spark plug(s) before cleaning, making an adjustment, or repair. Be careful to avoid touching hot muffler or engine components.
- Disengage power to attachments when transporting or not in use.
- Take all possible precautions when leaving the vehicle unattended. Disengage the power take-off, lower the attachments, shift into neutral, set the parking brake, stop the engine, and remove the key.
- Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of slopes (not greater than 15°), never across the face.
- Reduce speed on slopes and make turns gradually to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
- While going up or down slopes, place gearshift control lever in 1st gear position to negotiate the slope without stopping.

- Never mow in wet or slippery grass, when traction is unsure, or at a speed which could cause a skid.
- Stay alert for holes in the terrain and other hidden hazards. Keep away from drop-offs.
- Do not drive too close to creeks, ditches, and public highways.
- Exercise special care when mowing around fixed objects in order to prevent the blades from striking them. Never deliberately run vehicle or mower into or over any foreign objects.
- Never shift gears until vehicle comes to a stop.
- Never place hands or feet under the mower, in discharge chute, or near any moving parts while vehicle or mower is running. Always keep clear of discharge chute.
- Use care when pulling loads or using heavy equipment.
 - Use only approved drawbar hitch points.
 - Limit loads to those you can safely control.
 - Do not turn sharply. Use care when backing.
 - Use counterweight or wheel weights when suggested in owner's manual.
- Watch out for traffic when crossing or near roadways.
- When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the vehicle while in operation.
- Except for adjustments, do not operate engine if air cleaner or cover directly over carburetor air intake is removed. Removal of such part could create a fire hazard.
- Do not change the engine governor settings or overspeed the engine; severe damage or injury may result.
- When using the vehicle with mower, proceed as follows:
 - Mow only in daylight or in good artificial light.
 - Shut the engine off when unclogging chute.
 - Check the blade mounting bolts for proper tightness at frequent intervals.
- Disengage power to mower before backing up. Do not mow in reverse unless absolutely necessary and then only after

MAINTENANCE AND STORAGE:

- Keep the vehicle and attachments in good operating condition, and keep safety devices in place and working.
- Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
- To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease. Do not clean product while engine is running.
- Do not operate without a muffler, or tamper with exhaust system. Damaged mufflers or spark arresters could create a fire hazard. Inspect periodically and replace if necessary.
- Under normal usage the grass catcher bag material is subject to deterioration and wear. It should be checked frequently for bag replacement. Replacement bags should be checked to ensure compliance with the original manufacturer's recommendations or specifications.

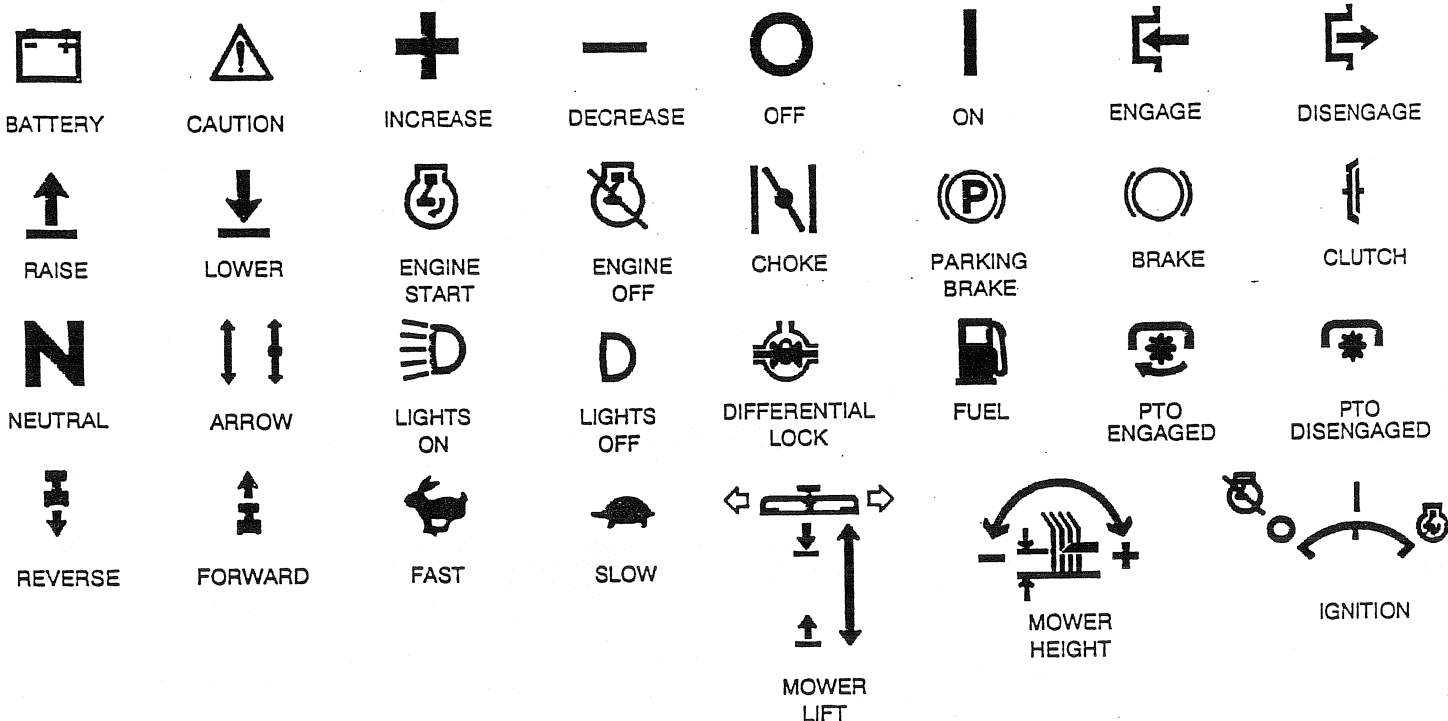


LOOK FOR THIS SYMBOL TO POINT OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS - ATTENTION!!! BECOME ALERT!!! YOUR SAFETY IS INVOLVED.

SYMBOLS

INTERNATIONAL SYMBOLS

These symbols may appear on your unit or in literature supplied with the product. Learn and understand their meaning.



CONGRATULATIONS - and thank you for your purchase.

READ THIS MANUAL - to learn to operate and service your tractor. Incorrect operation or service may cause personal injury or damage to your equipment. Consider this manual a tool that should be used as a reference to insure years of safe, trouble-free operation.

- **BE SURE**- you understand and follow all instructions.
- **RIGHT AND LEFT SIDES** - of tractor are determined by sitting in the driver's seat facing forward.
- **PARTS AND SERVICE** - are available at your authorized service dealer.

NOTE: The illustrations shown in this manual are to aid in the assembly and operation of your tractor. They may or may not show the actual model you have purchased.

CAUTION: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or area laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator. (See **REPAIR PARTS MANUAL** for part number identification).

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other States may have similar laws. Federal laws apply on federal lands.

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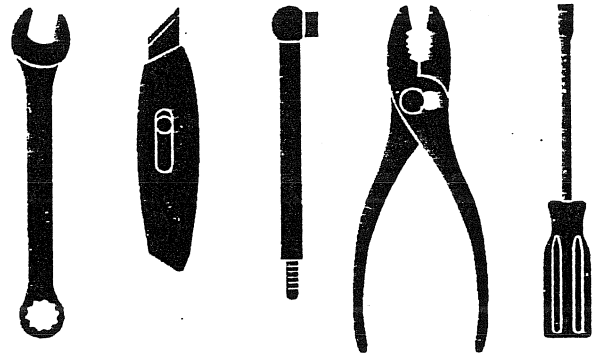
TROUBLE SHOOTING 29

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ASSEMBLY

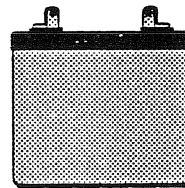
TOOLS YOU WILL NEED

- (1) 9/16" wrench
- (2) 7/16" wrenches
- (1) 1/2" wrench
- (1) Utility knife
- (1) Tire gauge
- (1) Pliers
- (1) Screwdriver

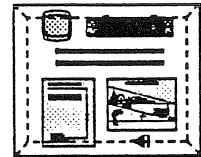


OPEN CARTON

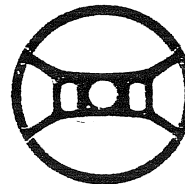
- Remove box of parts
- (1) Battery
- (1) Steering Wheel
- (1) Bag of Parts
- (1) Seat



BATTERY



BAG OF PARTS



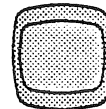
STEERING WHEEL



SEAT

BAG OF PARTS (contents not shown full size).

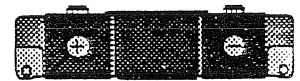
- (1) Steering Wheel Insert
- (2) Keys
- (1) Terminal Guard
- (2) Battery Carriage Bolts
- (1) Steering Clip
- (1) Steering Sleeve
- (1) Operator's Manual
- (1) Slope Instruction
- (1) Battery Caps and Instructions
- (1) Steering Wheel Adapter



STEERING WHEEL INSERT



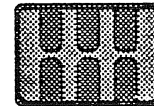
(2) KEYS



TERMINAL GUARD



STEERING CLIP



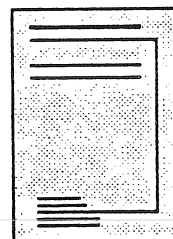
BATTERY TRAY



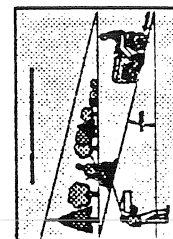
(2) BATTERY CARRIAGE BOLT
1/4-20 X 7-1/2



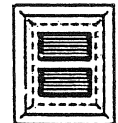
STEERING SLEEVE



OPERATOR'S MANUAL



15° SLOPE INSTRUCTION

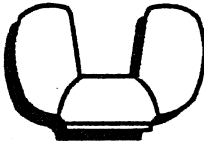
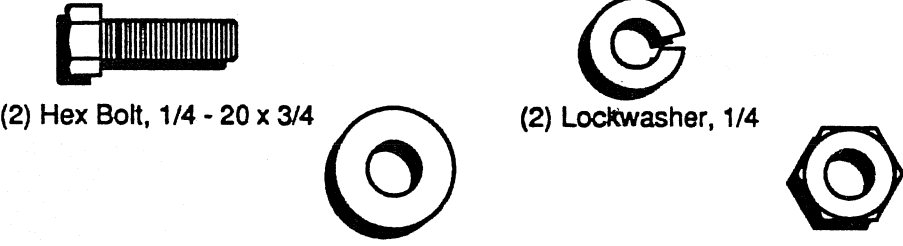
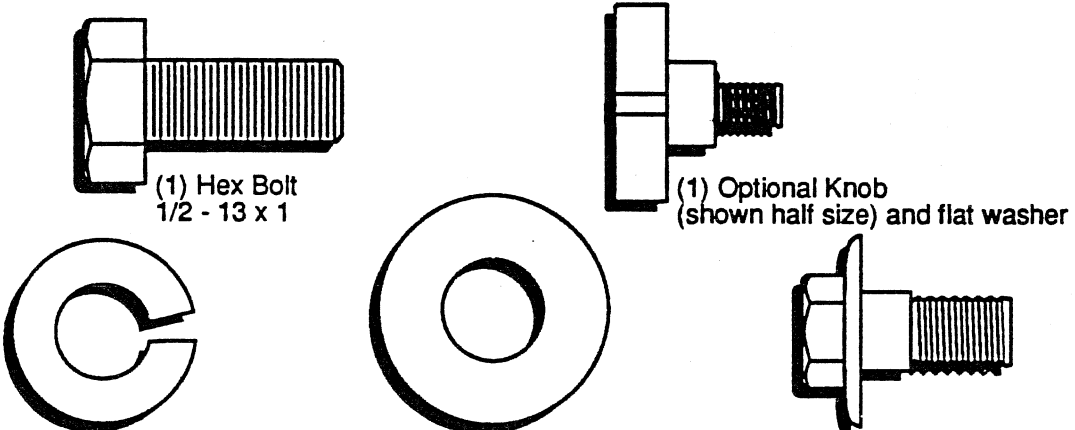
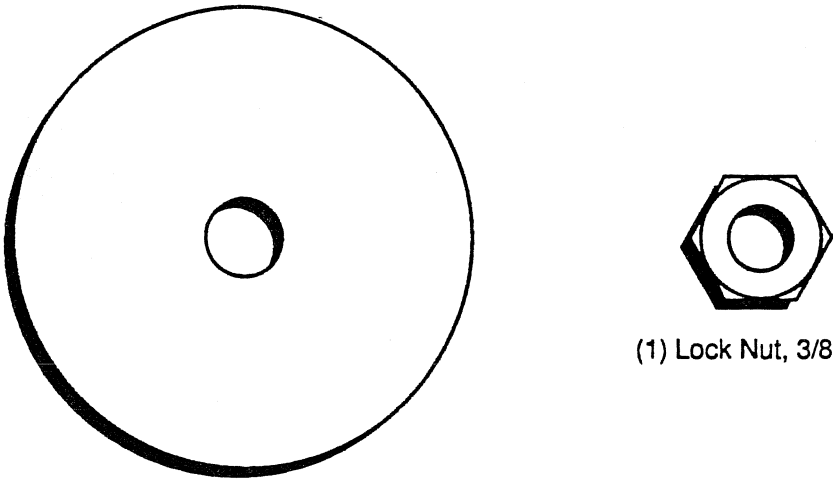


BATTERY CAPS AND INSTRUCTIONS



STEERING WHEEL ADAPTER

ASSEMBLY

ASSEMBLY LOCATION	BAG OF PARTS (CONTENTS SHOWN FULL SIZE)
BATTERY	 <p>(2) Wing Nut, 1/4 - 20</p>
BATTERY TERMINALS	 <p>(2) Hex Bolt, 1/4 - 20 x 3/4</p> <p>(2) Lockwasher, 1/4</p> <p>(2) Washer, 9/32 x 5/8 x 16 Ga.</p> <p>(2) Hex Nut, 1/4 - 20</p>
SEAT	 <p>(1) Hex Bolt 1/2 - 13 x 1</p> <p>(1) Optional Knob (shown half size) and flat washer</p> <p>(1) Lockwasher, 1/2</p> <p>(1) Flat Washer 17/32 x 1 3/16 x 12 Ga.</p> <p>(1) Shoulder Bolt 5/16 - 18</p>
STEERING WHEEL	 <p>(1) 2 3/8" Dia. Washer</p> <p>(1) Lock Nut, 3/8 - 24</p>

ASSEMBLY

FILL AND CHARGE BATTERY

NOTE: SEE INSTRUCTIONS PACKED WITH VENT CAPS IN BAG OF PARTS



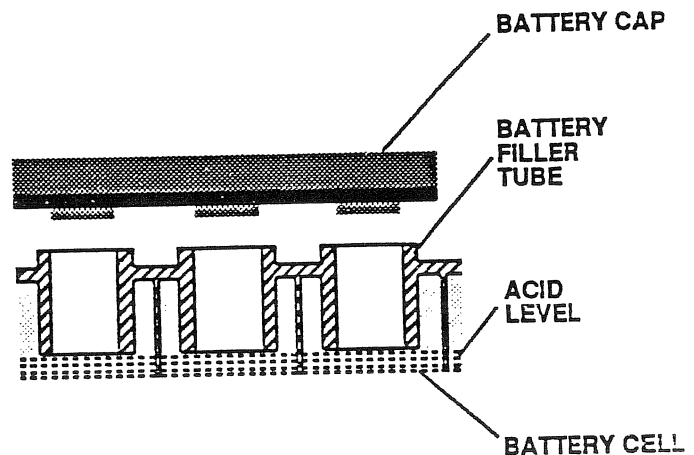
WARNING: READ THE INSTRUCTIONS INCLUDED WITH THE BATTERY ACID CONTAINER. ALWAYS WEAR GLOVES, CLOTHING, AND GOGGLES TO PROTECT YOUR HANDS, SKIN, AND EYES.

WASH HANDS OR CLOTHING IMMEDIATELY IF IN CONTACT WITH BATTERY ACID.

DO NOT SMOKE. FUMES FROM CHARGED BATTERY ACID ARE EXPLOSIVE.

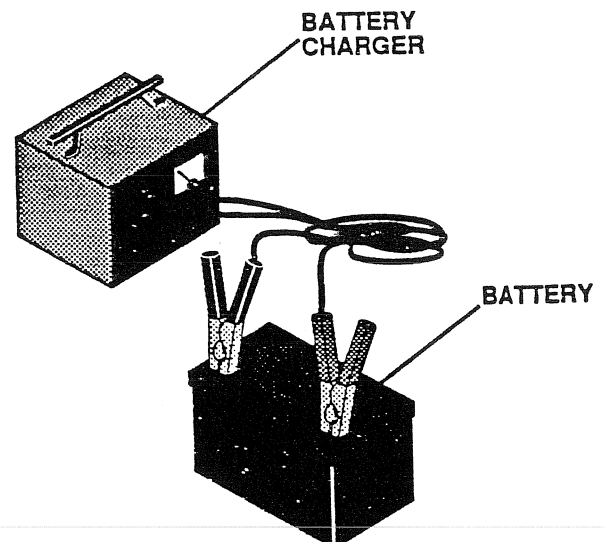
- Fill battery with Battery Acid.
- Fill to bottom of Battery Filler Tube (do not over fill).
- Check Battery Acid level after thirty minutes.
- Add acid if needed.
- Dispose of excess battery acid.

NOTE: NEUTRALIZE ACID BY ADDING TWO GALLONS (7.5 LITERS) OF WATER IN FIVE GALLON (19 LITERS) PLASTIC CONTAINER. STIR WITH WOODEN OR PLASTIC PADDLE WHILE ADDING BAKING SODA. ADD BAKING SODA UNTIL FOAMING STOPS.



(cont.)

- Charge Battery (use a 12 volt Battery Charger and charge at a rate of 6 amps per hour).
- Connect positive (+) charger cable to positive (+) Battery Terminal.
- Connect negative (-) charger cable to negative (-) Battery Terminal.
- Check acid level after Battery is charged.
- Add **water** if needed.



ASSEMBLY

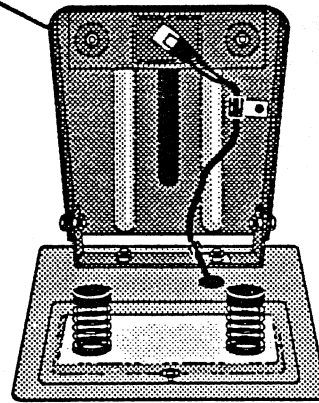
INSTALL BATTERY



WARNING: BEFORE INSTALLING BATTERY REMOVE METAL BRACELETS, WRISTWATCH BANDS, RINGS, ETC. FROM YOUR PERSON. TOUCHING THESE ITEMS TO BATTERY COULD RESULT IN BURNS.

- Lift Seat Pan.

SEAT
PAN



(cont.)

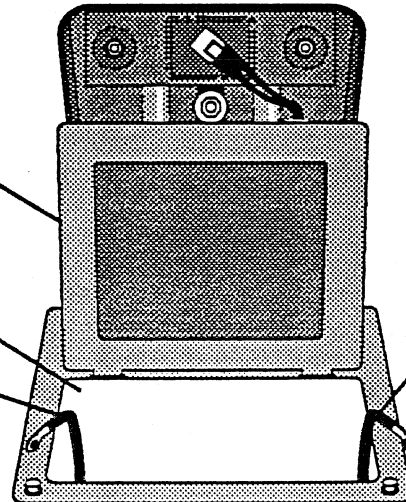
- Lift Fender Door.
- Before placing Battery in Fender Well, move Cables out of the way.

FENDER
DOOR

FENDER
WELL

CABLE

CABLE



(cont.)

- Lower Battery into Fender Well with Battery Terminals toward front of tractor.
- Make sure Battery rests in Battery tray.

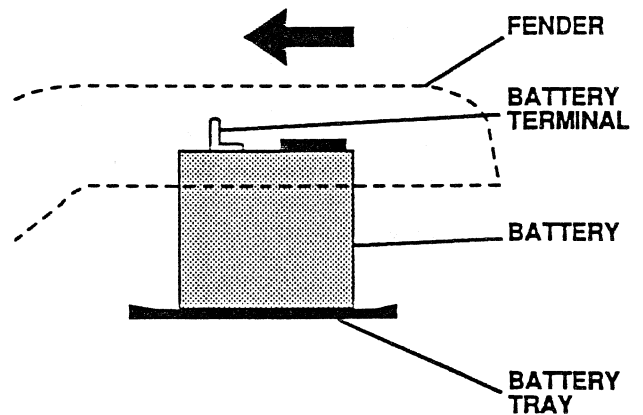
FRONT OF TRACTOR

FENDER

BATTERY
TERMINAL

BATTERY

BATTERY
TRAY

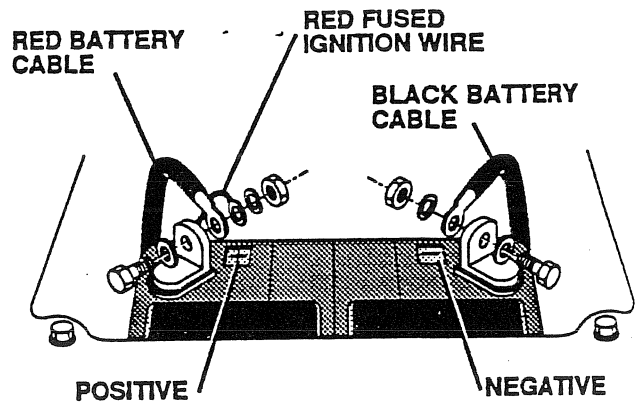


ASSEMBLY



WARNING: POSITIVE TERMINAL MUST BE CONNECTED FIRST TO PREVENT SPARKS FROM ACCIDENTAL GROUNDING.

- Connect **RED** Battery Cable and **RED** Fused Ignition Wire to Positive (+) Terminal of battery.
- Attach with Hex Bolt, Flat Washer, Lock-Washer, and Hex Nut.
- Tighten with two 7/16" wrenches.
- Connect **BLACK** Ground Cable to Negative (-) Terminal of battery.
- Attach with Hex Bolt, Flat Washer, Lock-Washer, and Hex Nut.
- Tighten securely.



(cont.)

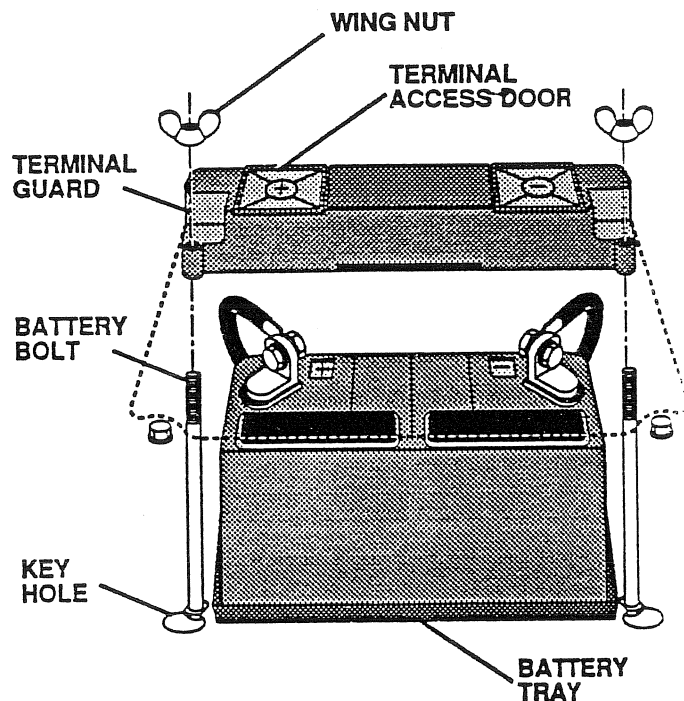
- Place Battery Bolt in Key Hole on frame (head of bolt down).
- Fasten the Battery Bolt to the Terminal Guard with Wing Nut.
- Both sides fasten the same way.
- Replace Fender Door and secure with 1/4 turn of fasteners.



WARNING: KEEP TERMINAL ACCESS DOORS CLOSED WHEN NOT USED TO INSPECT TERMINALS.

NOTE: USE TERMINAL ACCESS DOORS FOR:

- Inspection of ground connections (tighten hardware).
- Inspection of corrosion.
- Testing Battery.
- Jumping (if required).
- Charging (if required).



ASSEMBLY

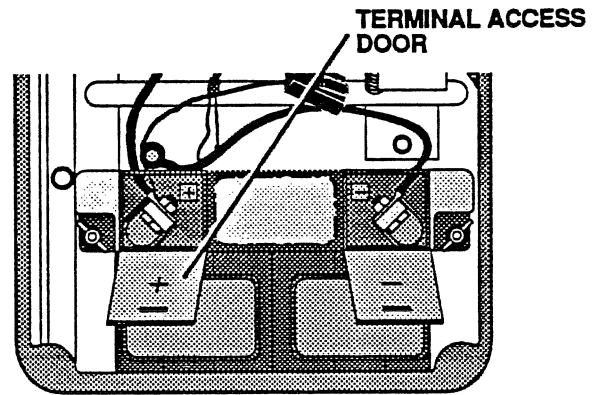
STARTING TRACTOR WITH A LOW BATTERY

NOTE: YOUR TRACTOR IS EQUIPPED WITH A 12 VOLT NEGATIVE GROUNDING SYSTEM. THE OTHER VEHICLE MUST ALSO BE A 12 VOLT NEGATIVE GROUNDING SYSTEM.



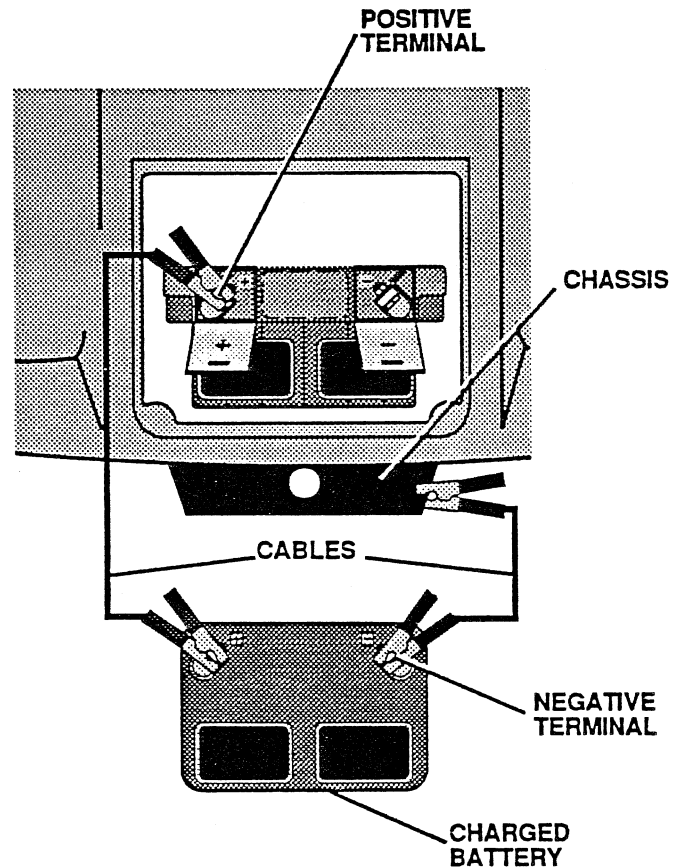
LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES. KEEP SPARKS, FLAME, AND SMOKING MATERIALS AWAY FROM BATTERIES. ALWAYS WEAR EYE PROTECTION AROUND BATTERIES.

- Open Terminal Access Doors to expose terminal connections.



(cont.)

- Connect each end of the **RED** cable to the Positive (+) terminals of each Battery (taking care not to short against chassis).
- Connect one end of the **BLACK** cable to the Negative (-) terminal of fully charged Battery,
- Connect the other end of the cable to good **CHASSIS GROUND** on tractor (away from gas tank or battery).
- Disconnect cables in reverse order:
 - a. Chassis of tractor.
 - b. Negative terminal of fully Charged Battery.
 - c. Positive terminals.
- Close Terminal Access Doors.



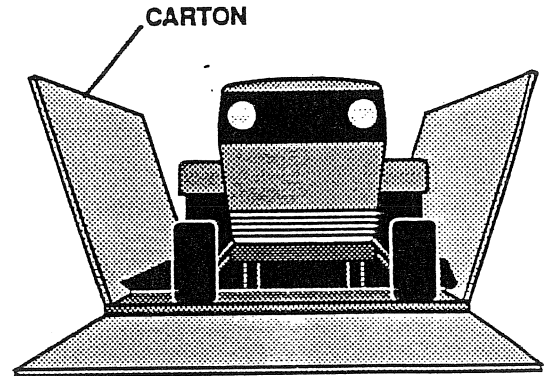
DO NOT USE YOUR TRACTOR BATTERY TO START OTHER VEHICLES.

ASSEMBLY

NOTE: THE ILLUSTRATIONS SHOWN IN THIS MANUAL ARE TO AID IN THE ASSEMBLY AND OPERATION OF YOUR TRACTOR. THEY MAY OR MAY NOT SHOW THE ACTUAL MODEL YOU HAVE PURCHASED.

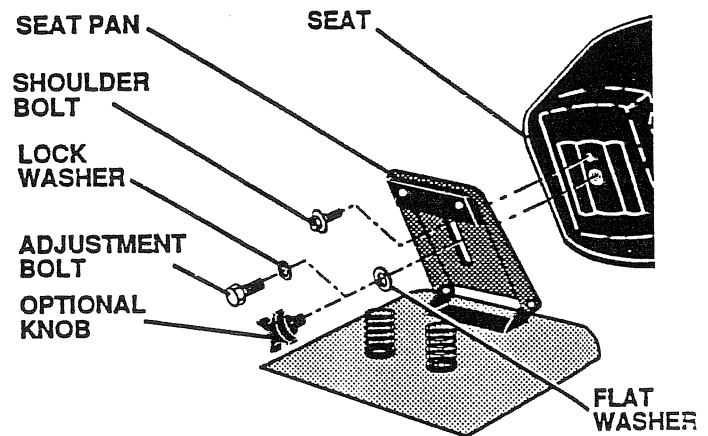
PREPARING THE TRACTOR

- Cut down four corners of Carton
- Fold down sides.



INSTALL SEAT

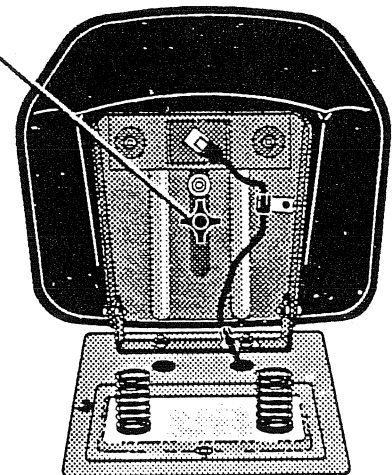
- Place Seat on Pan.
- Screw Shoulder bolt into Seat finger tight.
- Screw Adjustment Bolt, Lock Washer, and Flat Washer or Optional Knob and Flat Washer into Seat. Do not tighten.
- Tighten Shoulder Bolt securely.



ADJUST SEAT

- Place Seat in operating position.
- Sit on Seat.
- Press Clutch and Brake Pedal all the way down.
- Slide Seat until a comfortable position is reached.
- Get off Seat.
- Raise Seat.
- Tighten Adjustment Bolt or Optional Knob securely.

OPTIONAL
KNOB
SHOWN

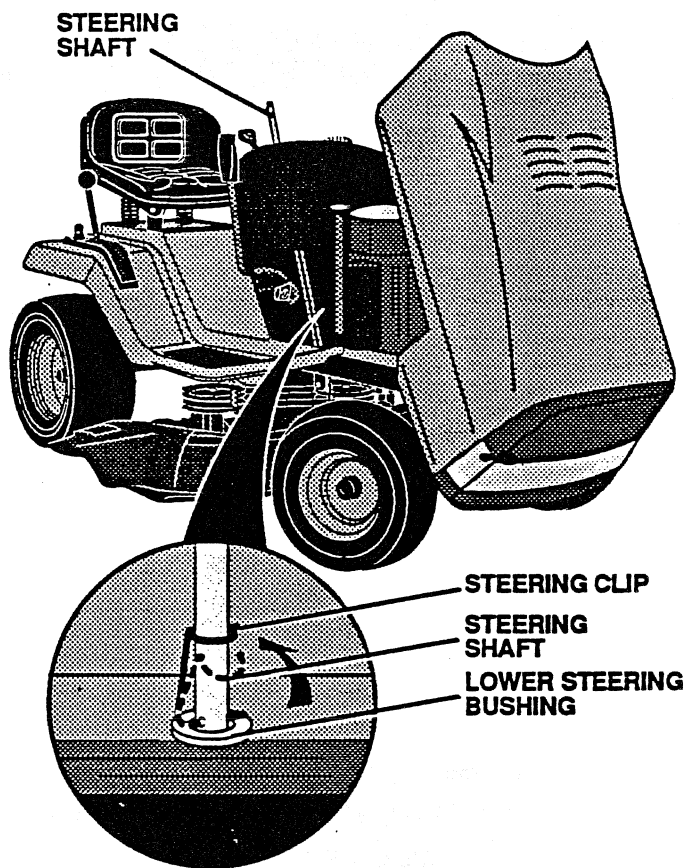


WARNING: KNOB MUST BE TIGHTENED SECURELY TO PREVENT MOVEMENT OF SEAT.

ASSEMBLY

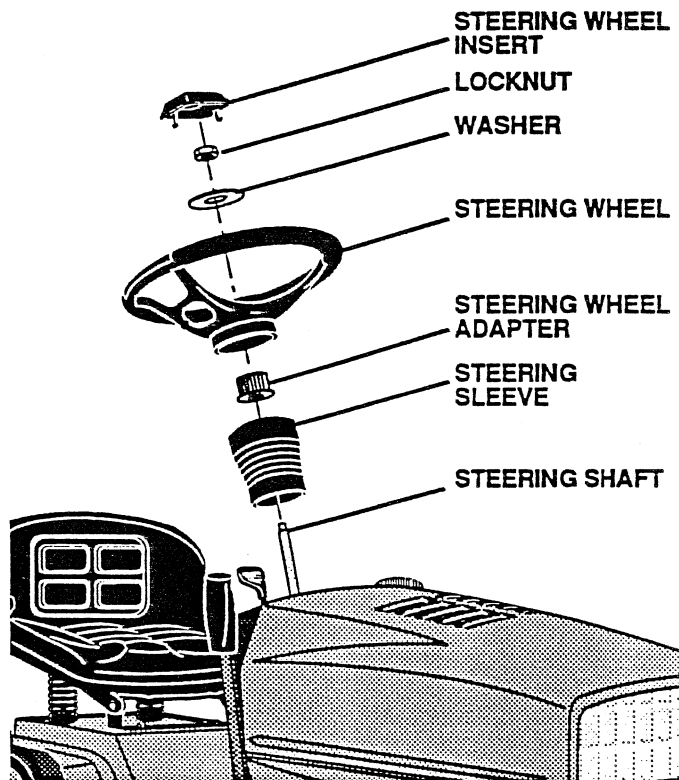
POSITION STEERING SHAFT

- Lift Hood.
- Pull Steering Shaft up to engage gears.
- Put Steering Clip through hole on Steering Shaft (hole is located under dash and above lower Steering Bushing).
- Push Steering Clip onto Steering Shaft until Steering Clip snaps into place.



INSTALL STEERING WHEEL

- Place Steering Sleeve over Shaft (bottom of Sleeve goes over ring on dash).
- Place Steering Wheel Adapter on Steering Shaft.
- Be sure front wheels are pointed straight ahead.
- Put Steering Wheel on Steering Wheel Adapter (bars of Steering Wheel should point straight across tractor).
- Place 2-3/8" dia. Washer on Upper Steering Shaft and install a 3/8" Locknut.
- Tighten the Locknut.
- Snap Steering Wheel Insert onto Steering Wheel.



ASSEMBLY

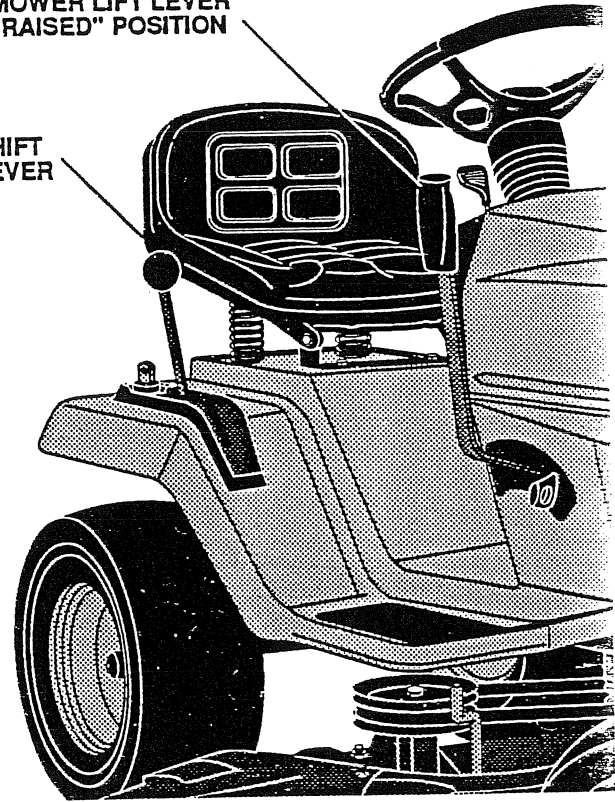
REMOVE TRACTOR FROM SKID

IMPORTANT: CHECK FOR AND REMOVE ANY STAPLES IN SKID THAT MAY PUNCTURE TIRES WHERE UNIT IS TO ROLL OFF SKID.

- Raise Mower Lift Lever.
- Place Shift Lever in neutral (see instructions page 16).
- Release Parking Brake (see instructions page 16).
- Remove plastic on tractor hood.
- Push tractor off skid.

MOWER LIFT LEVER
"RAISED" POSITION

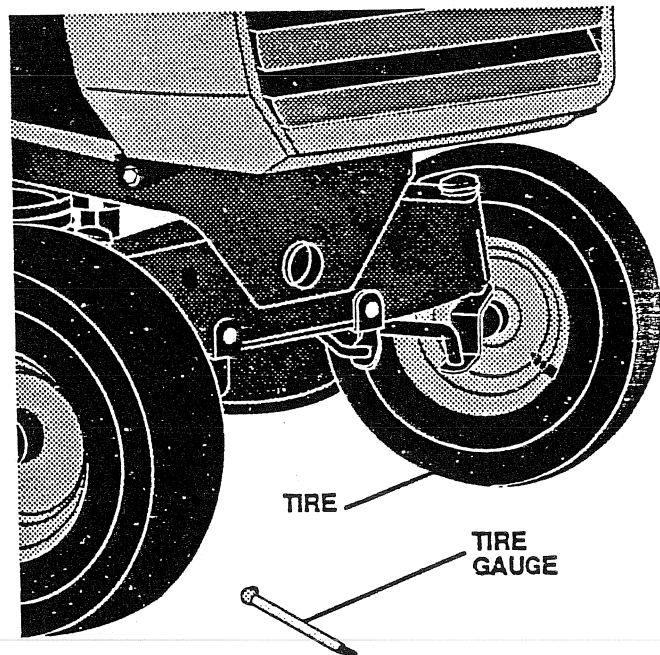
SHIFT
LEVER



CHECK TIRES

- Use Tire Gauge to check pressure.
- Remove tire pressure to PSI shown on side wall of tires.

NOTE: TIRES WERE OVERINFLATED FOR SHIPPING PURPOSES. WRONG AIR PRESSURE WILL KEEP MOWER FROM CUTTING LEVEL.

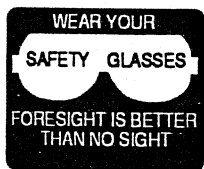


OPERATION



WARNING: READ THE 'RULES FOR SAFE OPERATION' BEFORE OPERATING YOUR MOWER.

ALWAYS WEAR SUBSTANTIAL FOOTWEAR AND AVOID LOOSE FITTING CLOTHING THAT COULD GET CAUGHT IN MOVING PARTS.



The operation of any tractor can result in foreign objects thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before starting your tractor and while moving. We recommend wide vision safety mask for over the spectacles or standard safety glasses.

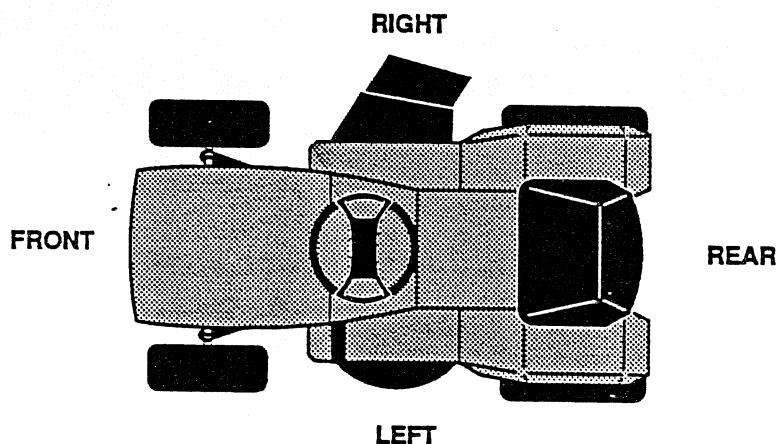


Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against loud noises.

READ THE FOLLOWING:

- Read this manual.
- Know the location and function of all controls.
- Keep guards, safety shield and switches in place and working.
- Remove any objects from your lawn that can be thrown by blades.
- Do not mow when children or pets are in the work area.
- Never carry children or passengers.
- Always look behind before backing.
- Do not mow where tractor can tip or slip.
- If tractor stops going uphill, stop blades and back slowly down.
- Be sure blades and engine have stopped before placing hands or feet near the blades.
- Remove key when leaving machine.

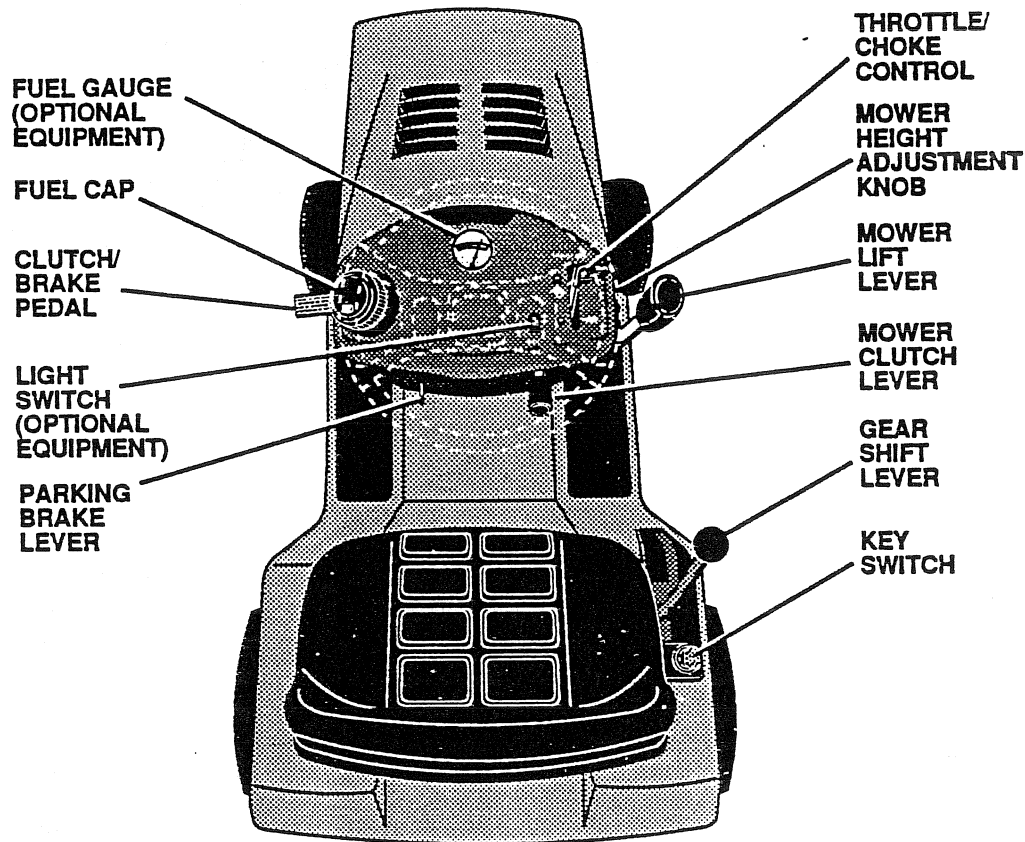
OPERATOR'S POSITION



OPERATION



WARNING: USE THIS DIAGRAM TO LOCATE ALL CONTROLS. DO NOT ATTEMPT TO START TRACTOR AT THIS TIME.



CONTROLS

- **KEY SWITCH:** Is used to start engine.
- **THROTTLE/CHOKE CONTROL:** Push lever to the right and forward to choke engine. This control will increase or decrease the speed of the engine.
- **FUEL GAUGE:** (optional) Indicates how much fuel is in fuel tank.
- **CLUTCH/BRAKE PEDAL:** Used to disengage drive and to stop tractor.
- **GEARSHIFT LEVER:** Press clutch/brake pedal; select the desired speed; move gearshift lever.
- **PARKING BRAKE LEVER:** Set parking brake lever when leaving tractor by pushing clutch/brake pedal completely down. Hold

parking brake lever in engage position and release pressure. The pedal will remain in brake position.

- **LIGHT SWITCH:** (For optional headlights) Turns headlights on or off.
- **MOWER CLUTCH LEVER:** Push lever up to engage mower.

NOTE: THERE WILL BE AN ENGINE HESITATION WHEN THE CLUTCH ENGAGES.

- **MOWER LIFT LEVER:** use to raise or lower mower deck.
- **MOWER HEIGHT ADJUSTMENT KNOB:** Is used to set mower deck height for mowing.



WARNING: BE SURE YOU UNDERSTAND ALL THE CONTROLS BEFORE GOING ANY FURTHER.

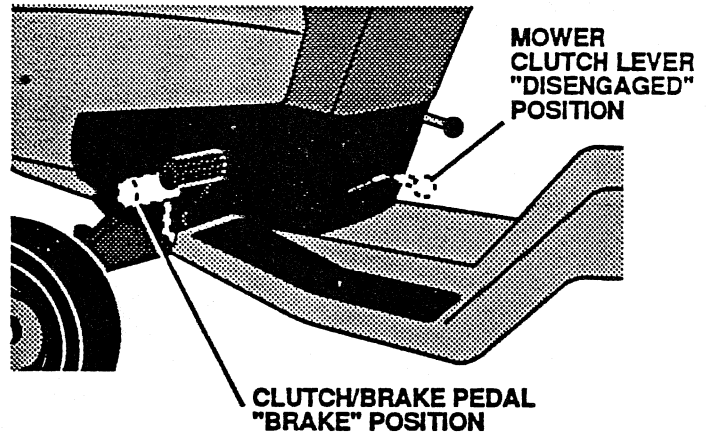
OPERATION



WARNING: KNOW HOW TO STOP YOUR TRACTOR BEFORE ATTEMPTING TO OPERATE IT.

STOPPING

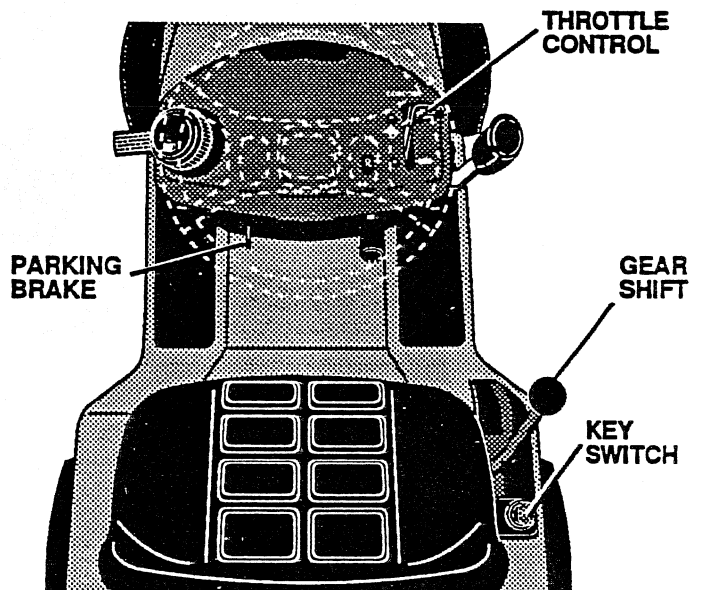
- Push Clutch/Brake Pedal all the way down to "BRAKE" position.
- Place Mower Clutch lever in "DISENGAGE" position.



(cont.)

- While still pushing down the Clutch/Brake Pedal, move Gear Shift Lever to "NEUTRAL" position.
- Place Parking Brake in the "BRAKE" position and remove foot from Clutch/Brake Pedal. Pedal should remain in the "BRAKE" position.
- Move Throttle Control to "S" (slow) position.
- Turn Key Switch to "OFF" position.

NOTE: NEVER USE CHOKE TO STOP ENGINE.

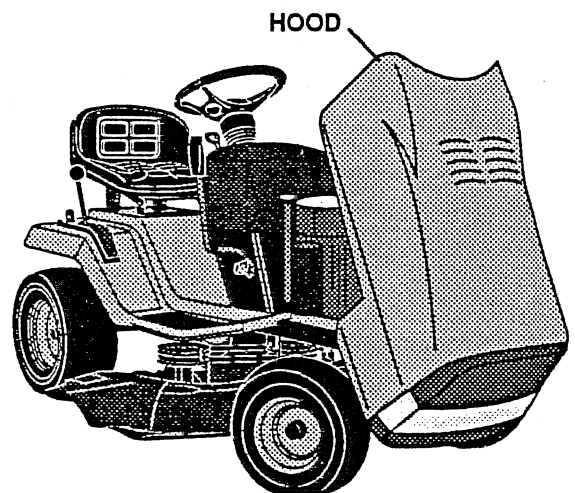


PREPARING THE ENGINE

CAUTION: BE CAREFUL NOT TO ALLOW DIRT TO ENTER THE ENGINE WHEN CHECKING OR ADDING OIL OR FUEL.

NOTE: THIS ENGINE HAS BEEN SHIPPED FILLED WITH SUMMER WEIGHT OIL.

- Park tractor on level ground.
- Raise Hood.

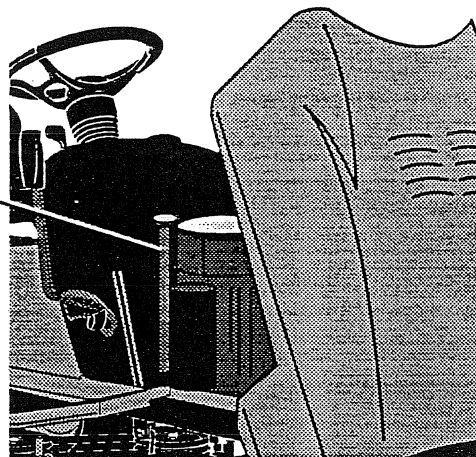


OPERATION

CHECK ENGINE OIL LEVEL

- Remove and wipe Dipstick clean.
- Replace Dipstick for few seconds.
- Remove and read oil level.
- Add oil if necessary. Capacity-3 pt (1.4 L).
- Replace Dipstick and tighten securely.

DIPSTICK

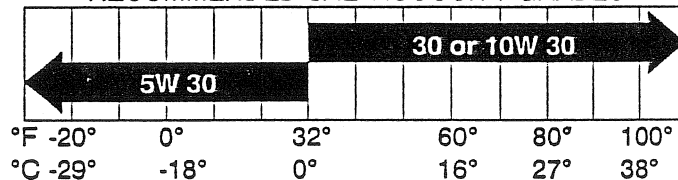


Temperature range expected before next oil change. All oils must meet A.P.I. service classification SD, SC, SE, or SF.



WARNING: TO AVOID DAMAGE TO THE STARTING SYSTEM, USE SAE 5W-30 OIL WHEN THE TEMPERATURE FALLS BELOW 32° F (0°C).

RECOMMENDED SAE VISCOSITY GRADES

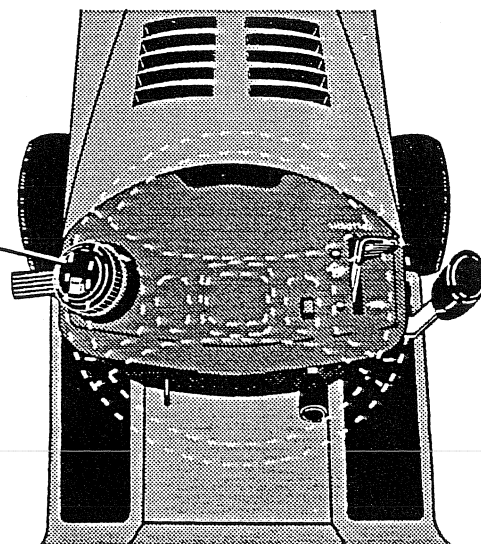


WARNING: FILL TO BOTTOM OF GAS TANK FILLER NECK. DO NOT OVERFILL. WIPE OFF ANY SPILLED OIL OR FUEL. DO NOT STORE, SPILL OR USE GASOLINE NEAR AN OPEN FLAME.

- Fill fuel tank - Capacity 1.4 gals (5.3 L).

CAUTION: USE ONLY CLEAN REGULAR UNLEADED GASOLINE. DO NOT USE GASOHOL, METHANOL, OR PREMIUM UNLEADED. THESE FUELS CAN CAUSE INTERNAL DAMAGE TO YOUR TRACTOR.

FUEL CAP



OPERATION

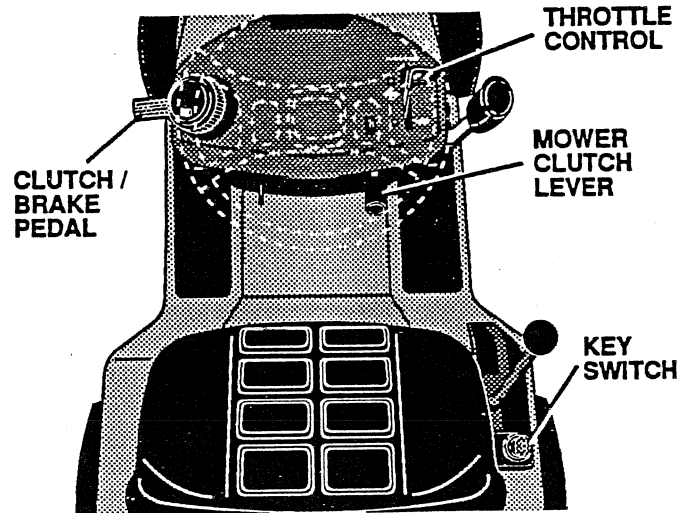


THIS TRACTOR IS EQUIPPED WITH INTERLOCK SWITCHES TO PREVENT STARTING OF THE TRACTOR ENGINE WHILE THE MOWER CLUTCH LEVER IS IN THE "ENGAGED" POSITION AND/OR THE CLUTCH/BRAKE PEDAL IS IN THE "CLUTCH" POSITION. IMMEDIATELY REPLACE SWITCHES THAT ARE NOT IN PROPER WORKING ORDER. DO NOT ATTEMPT TO DEFEAT THE PURPOSE OF THESE SWITCHES.

STARTING THE ENGINE

- Press Clutch/Brake Pedal fully with left foot.
- Disengage Mower and place tractor in neutral.
- Move Throttle Control Lever to "CHOKE" position.
- Turn Ignition Key to "START".
- Release Key as soon as engine starts.

CAUTION: DO NOT RUN STARTER CONTINUOUSLY FOR MORE THAN FIFTEEN SECONDS PER MINUTE.



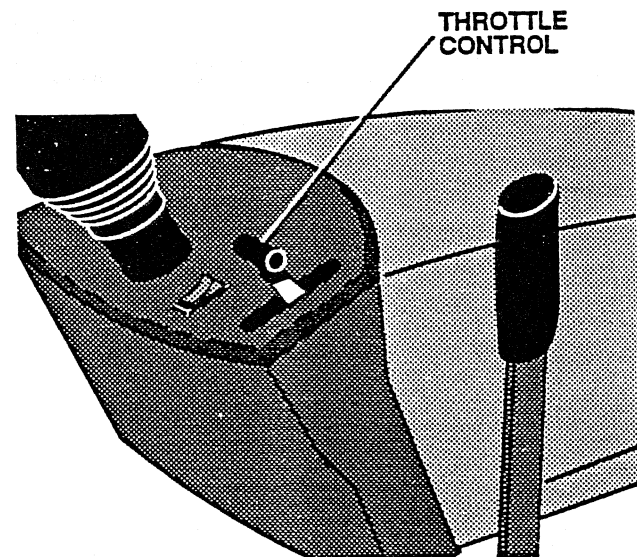
CUTTING YOUR GRASS

WARNING: MAKE SURE PARKING BRAKE WILL HOLD TRACTOR SECURE.



NEVER PLACE YOUR HANDS OR FEET IN OR UNDER ANY POWERED ATTACHMENT OR NEAR ANY MOVING PART WHILE TRACTOR OR ANY POWERED ATTACHMENT IS RUNNING.

DO NOT OPERATE THE MOWER WITHOUT EITHER THE ENTIRE GRASSCATCHER, ON MOWERS SO EQUIPPED, OR DEFLECTOR SHIELD IN PLACE.



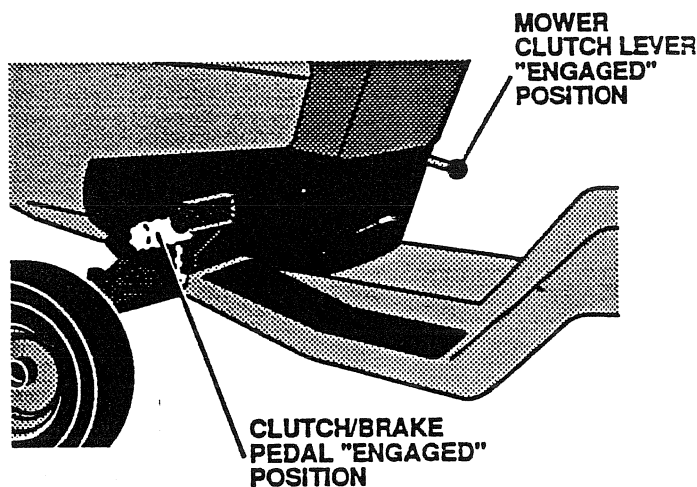
- Start engine.
- Move the Throttle Control half way between *START* and *FAST*.

OPERATION

(cont.)

- Select a low gear (first or second) until you become more familiar with the operation of this unit.
- Slowly release Clutch/Brake Pedal and proceed to the mowing area.
- Stop the unit.
- Slowly move the mower Clutch Lever to the "Engaged" Position.
- Slowly release Clutch/Brake Pedal.

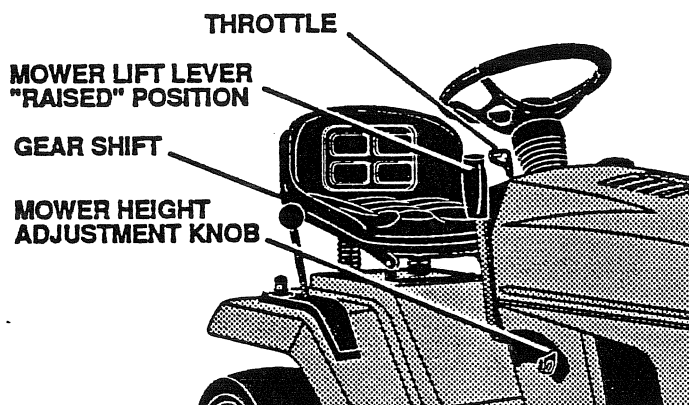
NOTE: ALWAYS OPERATE ENGINE AT FULL ENGINE RPM WHEN CUTTING GRASS TO ASSURE BETTER PERFORMANCE AND DISCHARGE OF MATERIAL.



(cont.)

- Move throttle to the fast position.
- Observe height of cut and readjust as needed, with Mower Height Adjustment Knob.

CAUTION: BEFORE YOU MOVE THE GEAR SHIFT LEVER, COME TO A COMPLETE STOP. FAILURE TO DO SO CAN RESULT IN GEAR BOX DAMAGE.

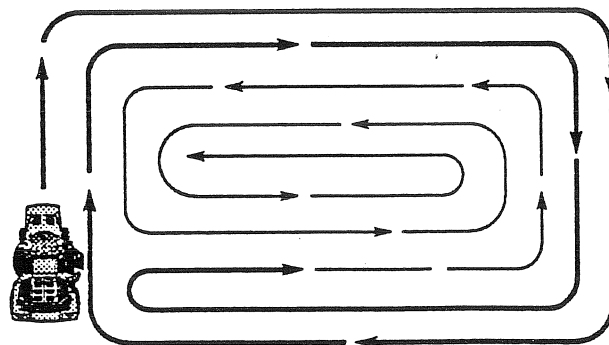


MOWING TIPS

- Be sure your mower is adjusted properly (front-to-rear and side-to-side; see adjustment section).
- Use runner on right side as a guide, blade cuts one inch outside the runner.
- Drive tractor so that the grass is discharged onto side that has already been cut.
- Only cut grass that is dry.

NOTE: WET GRASS MAY PLUG MOWER AND LEAVE A TRAIL OF GRASS CLUMPS.

- Mow grass often. Short grass clippings will decay fast.
- Keep blades sharp. Sharp blades will cut better.
- Slow down when making turns. Quick tight turns will scalp the grass.
- Cutting tall grass may require several passes.



MOWING PATTERN

OPERATION

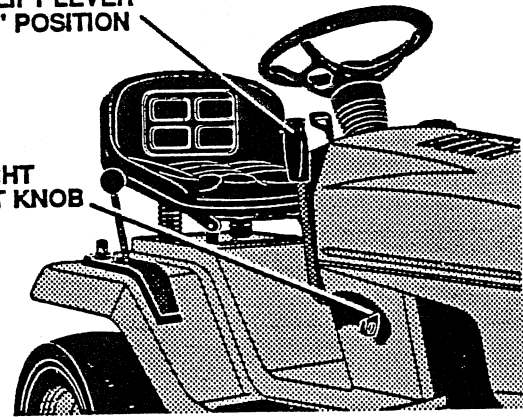
(cont.)

- Adjust MowerLift Lever to the "Raised" Position.
- Make first pass over tall grass.
- Lower Mower Deck to desired height.
- Make final pass in opposite direction.
- Change mowing patterns often.

CAUTION: DO NOT MOW TALL DRY (BROWN) GRASS. THIS COULD PRESENT A FIRE HAZARD.

MOWER LIFT LEVER
"RAISED" POSITION

MOWER HEIGHT
ADJUSTMENT KNOB



OPERATING YOUR TRACTOR ON A HILL

- Move Gear Shift Lever to "1st" before starting up or down hill.

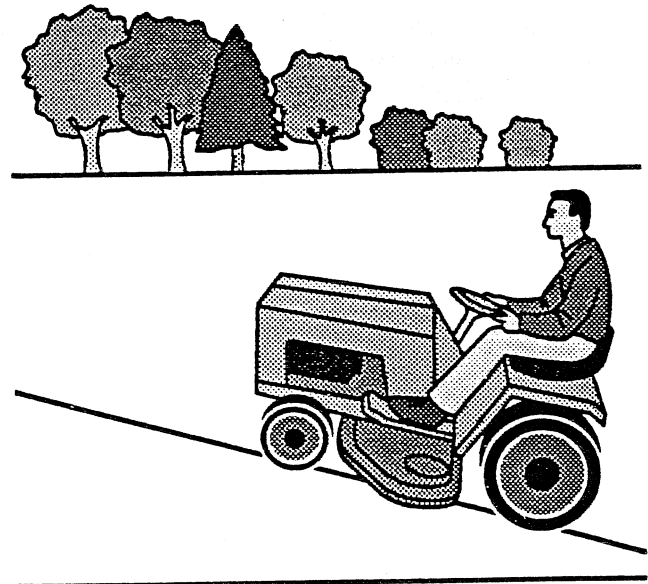


WARNING: NEVER DRIVE UP OR DOWN HILLS WITH SLOPES GREATER THAN 15 DEGREES AND DO NOT DRIVE ACROSS ANY SLOPE. SEE SLOPE SHEET.

- Avoid stopping or shifting on hills.
- If slowing is necessary, move throttle control lever to slower position.
- If stopping is absolutely necessary, push Clutch/Brake Pedal quickly to brake position.

To restart tractor movement.

- Place Gear Shift in first gear.
- Slowly release Clutch/Brake Pedal.
- Make all turns gradually.

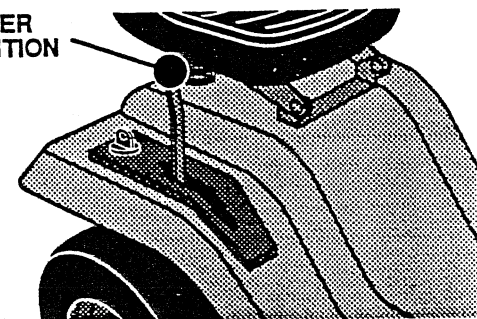


TRANSPORTING YOUR TRACTOR

When pushing your tractor:

- Place Gear Shift Lever in "N" Neutral Position.
- Never push faster than 6mph (9.6 kms/hr.).
- Towing is **not** recommended.

GEAR SHIFT LEVER
"NEUTRAL" POSITION



ADJUSTMENT

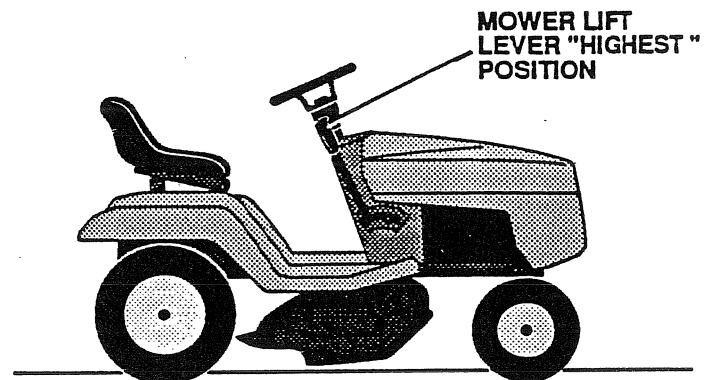


WARNING: BEFORE ATTEMPTING ANY REPAIR, INSPECTION, OR MAINTENANCE OF THE MOWER OR BLADES: PLACE TRANSMISSION IN NEUTRAL. SET PARKING BRAKE. REMOVE IGNITION KEY. DISCONNECT SPARK PLUG WIRE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY OR DEATH.

MOWER ADJUSTMENT

NOTE: BEFORE ADJUSTING MOWER, TIRES MUST BE PROPERLY INFLATED.

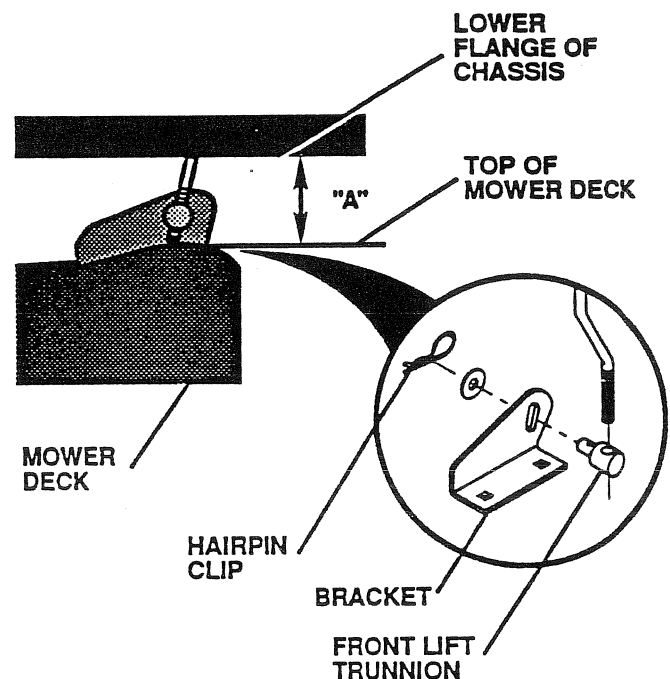
- Inflate tires to PSI shown on side walls of tires.
- Park tractor on a smooth, level surface.
- Raise Mower Lift Lever into highest (transport) position.



(cont.)

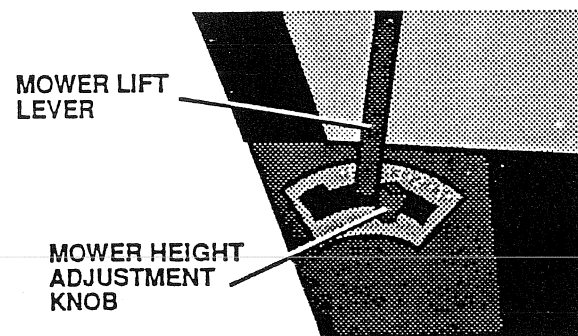
- Measure distance from top of Mower Deck to Lower Flange of Chassis (dim. "A").
- Dim. "A" should be 3-5/8 to 3-7/8 inch (92 to 98 mm).
- To adjust dim. "A", if required, lower mower to lowest position. Remove Hairpin Clip in Trunnion and withdraw Trunnion Pin from bracket. Rotate Trunnion clockwise (↻) on lift link to decrease dim. "A" or counter-clockwise (↻) on Lift Link to increase dim. "A".

NOTE: EACH FULL TURN OF TRUNNION WILL CHANGE DIM. "A" BY 1/16 INCH (1.57MM). RE-INSERT TRUNNION INTO BRACKET WITH PIN POINTING TO L.H. SIDE OF TRACTOR. RE-INSTALL HAIRPIN CLIP.



(cont.)

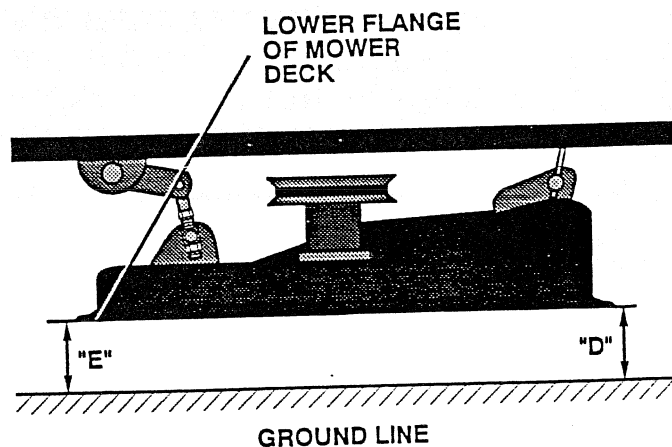
- Place Mower Height Adjustment Knob in position "3".
- Lower Mower Lift Lever to Height Adjustment Knob.



ADJUSTMENT

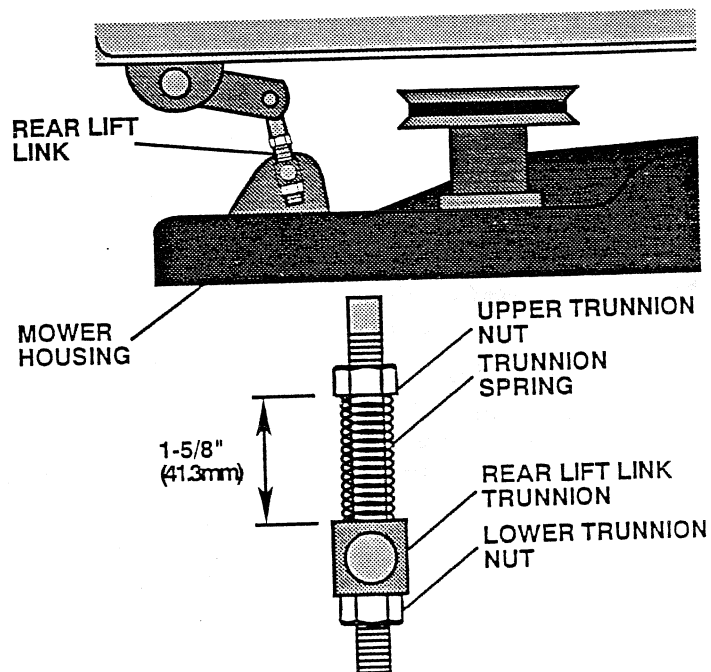
LEVEL MOWER FRONT TO REAR

- For best cutting results, the rear of the Mower should be 1/4 to 3/8 inch (6.3 to 9.5 mm) higher than the front of the Mower.
- Measure distance from ground line to Lower Flange of Deck at right front and right rear (dim. "D" & "E") in line with Front and Rear Lift Links.



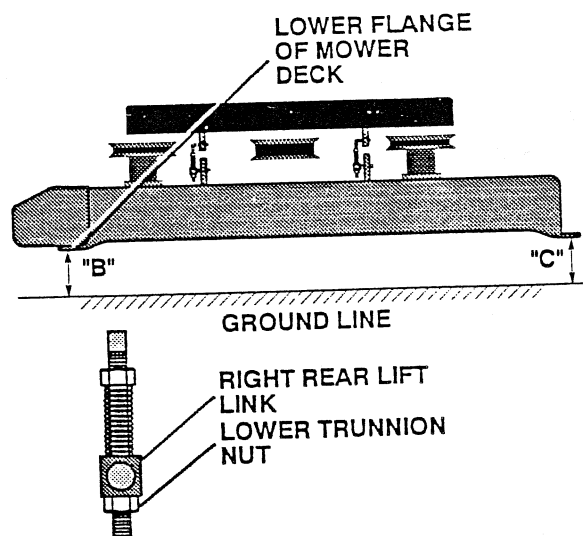
(cont.)

- Raise or lower rear of Mower Housing by adjusting the right Rear Lift Link.
- To raise rear of Mower Housing, tighten Lower Trunnion Nut.
- To lower rear of Mower Housing, loosen the Lower Trunnion Nut.
- When Mower is adjusted, turn Upper Rear Trunnion Nut to compress Trunnion Spring to a height of 1-5/8 inches (41.3mm).



LEVEL MOWER SIDE TO SIDE

- Measure distance from ground to Lower Flange of Mower Deck on both sides of Mower (dim. "B" & dim. "C"). Dim. "B" & "C" should be the same.
- Level the Mower side-to-side by adjusting the Left Rear Lift Link. To raise left side of Mower, tighten the Lower Trunnion Nut.
- When Mower is adjusted, turn Upper Rear Trunnion Nut to compress Trunnion Spring to a height of 1-5/8 (41.3mm) inches.



NOTE: ONE ROTATION OF LOWER TRUNNION NUT IS EQUIVALENT TO APPROXIMATELY 1/8 INCH (3.17MM) OF HEIGHT CHANGE.

MAINTENANCE

NOTE: PERIODIC MAINTENANCE SHOULD BE PERFORMED ON A REGULAR BASIS IN ORDER TO KEEP YOUR TRACTOR IN GOOD RUNNING CONDITION.

 **WARNING: DISCONNECT SPARK PLUG WIRE TO PREVENT ACCIDENTAL STARTING BEFORE ATTEMPTING ANY REPAIR, INSPECTION, OR MAINTENANCE.**

BEFORE EACH USE:

- Check oil.
- Check to see all bolts, nuts, and cotter pins are in place and secure.
- Keep tractor well lubricated.
- Check battery.
- Acid level should be even with bottom of tubes in each cell.
- Keep battery terminals clean.
- Keep battery bolts tight.
- Keep vent caps tight and small holes in vent caps open.
- Recharge slowly at 6 amperes if needed.
- Clean air screen.
- Keep tractor free of dirt and chaff to prevent engine damage or overheating.
- Check brake operation.

MAINTENANCE SCHEDULE

FILL IN DATES
AS YOU COMPLETE
REGULAR SERVICE

BEFORE EACH USE
FIRST 2 HOURS
EVERY 8 HOURS
EVERY 25 HOURS
EVERY 50 HOURS
EVERY 100 HOURS
EVERY SEASON
BEFORE STORAGE

SERVICE DATES

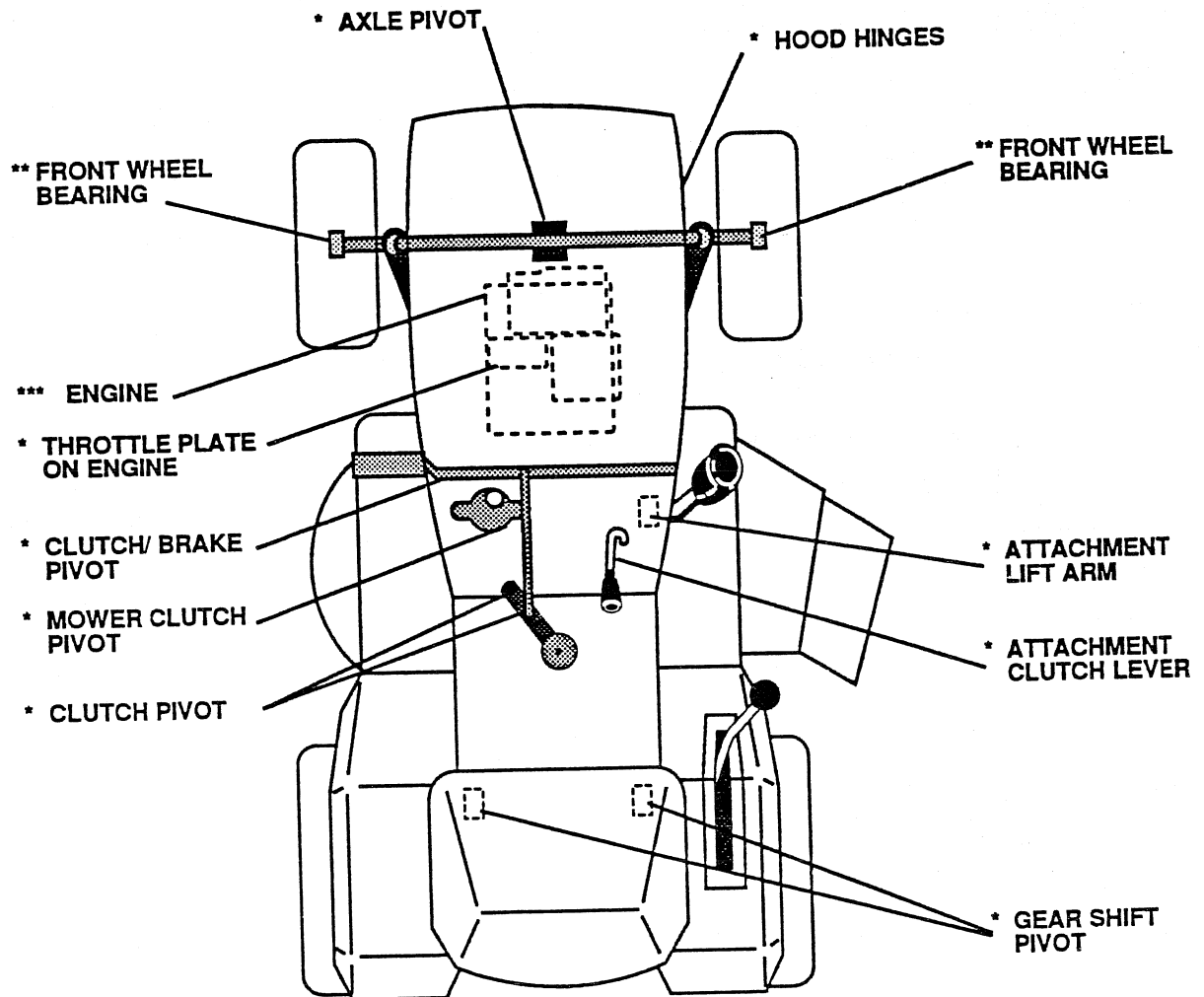
	BEFORE EACH USE	FIRST 2 HOURS	EVERY 8 HOURS	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY SEASON	BEFORE STORAGE	SERVICE DATES							
TRACTOR	Check Brake Operation	✓	✓													
	Check Tire Pressure	✓	✓													
	Check for Loose Fasteners	✓						✓								
	Sharpen/Replace Mower Blades					✓ ³										
	Lubricate Pivot Points					✓										
	Check Battery Level/Recharge					✓		✓								
	Clean Battery and Terminals					✓		✓								
ENGINE	Check Engine Oil Level	✓														
	Change Engine Oil		✓			✓ ^{1,2}										
	Clean Air Filter/Foam Pre-cleaner					✓ ²										
	Clean Air Screen					✓ ²										
	Inspect Muffler/Spark Arrester							✓								
	Clean Engine Cooling Fins									✓ ²						
	Replace Spark Plug									✓						
	Replace Air Filter Paper Cartridge									✓ ²						
Replace Fuel Filter										✓						

1 - Change more often when operating under a heavy load or in high ambient temperatures.
 2 - Service more often when operating in dirty or dusty conditions.
 3 - Replace blades more often when mowing in sandy soil.

We reserve the right to make any changes in design or improvements without imposing any obligation to install the same upon its items heretofore manufactured.

MAINTENANCE

LUBRICATION CHART



- * SAE 30 MOTOR OIL
- ** GENERAL PURPOSE GREASE
- *** REFER TO ENGINE MANUAL FOR ENGINE OIL SPECIFICATIONS

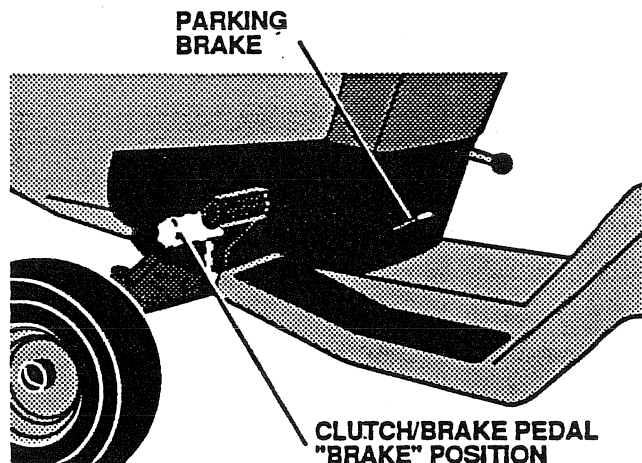
MAINTENANCE

 **WARNING: IF TRACTOR TAKES MORE THAN SIX FEET STOPPING DISTANCE IN HIGHEST GEAR, THEN BRAKE MUST BE ADJUSTED.**

ADJUST BRAKE

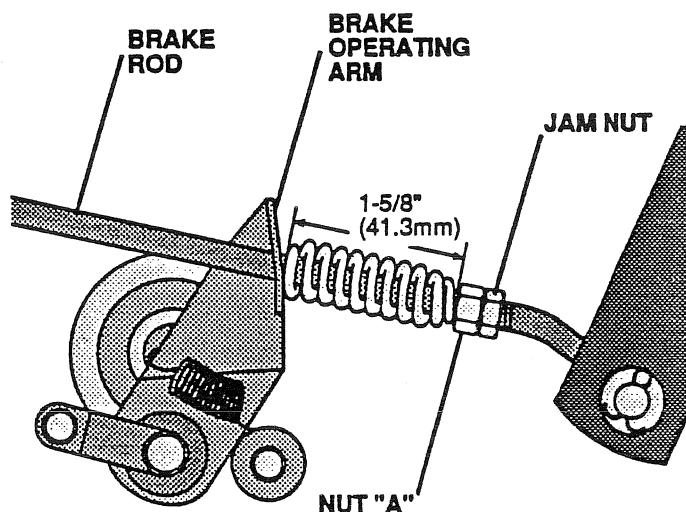
NOTE: PARKING BRAKE MUST BE DISENGAGED AND GEAR SHIFT LEVER IN NEUTRAL WHILE MAKING ADJUSTMENTS.

- Depress Clutch/Brake Pedal and engage Parking Brake.



(cont.)

- Measure distance between Brake Operating Arm and Nut "A" on Brake Rod.
- If distance is other than 1-5/8" (41.3mm), disengage Parking Brake and loosen Jam Nut and turn Nut "A" in direction to attain 1-5/8" (41.3mm) when parking brake is set. Retighten Jam Nut against Nut "A".
- Engage Parking Brake and recheck distance.
- Road test tractor to check if proper stopping distance was achieved.



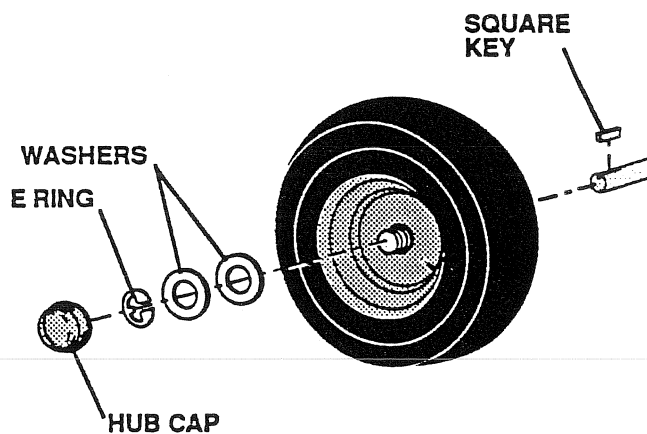
EVERY 25 HOURS

TIRE CARE

- Maintain tire pressure at PSI shown on side walls of tires.

If necessary to remove wheels:

- Block up axle securely.
- Remove Hub Cap, E Ring, and Washers (front tire).
- Remove Hub Cap, E Ring, Washers, and Square Key (rear tire).



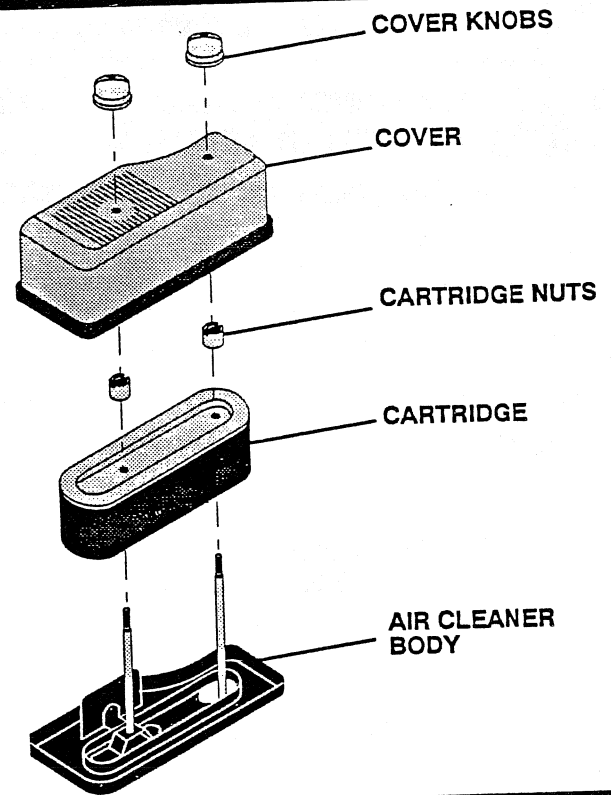
MAINTENANCE

CLEAN AIR CLEANER CARTRIDGE

- Remove Cover Knobs and Cover.
- Remove Cartridge Nuts from top of Cartridge.
- Remove Cartridge and clean Air Cleaner body carefully to prevent dirt from entering carburetor.
- Clean Cartridge by tapping on a flat surface.
- Reassemble Air Cleaner.

CAUTION: NEVER RUN ENGINE WITH AIR CLEANER REMOVED.

NOTE: AIR CLEANER MAY BE DIFFERENT FROM MODEL TO MODEL. SEE ENGINE MANUAL.



EVERY 50 HOURS

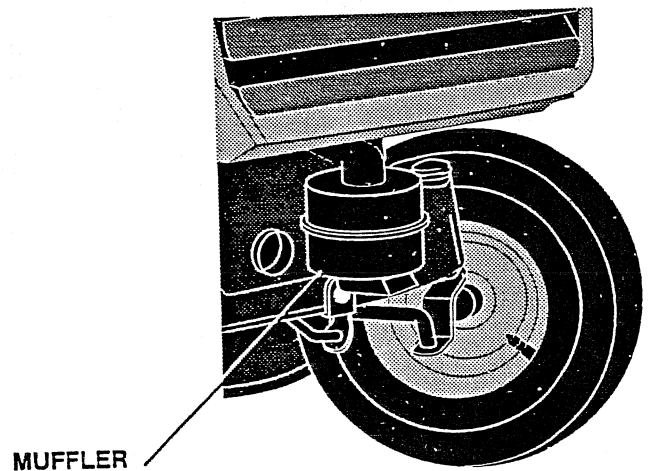
MUFFLER

- Inspect periodically and replace if necessary.
- If your tractor is equipped with a spark arrester screen assembly, remove for cleaning and inspection. Replace if necessary.

NOTE: A SPARK ARRESTER KIT IS AVAILABLE AS AN ACCESSORY PART FOR YOUR TRACTOR. CHECK LEGAL REQUIREMENTS IN YOUR AREA.

CHANGE ENGINE OIL.

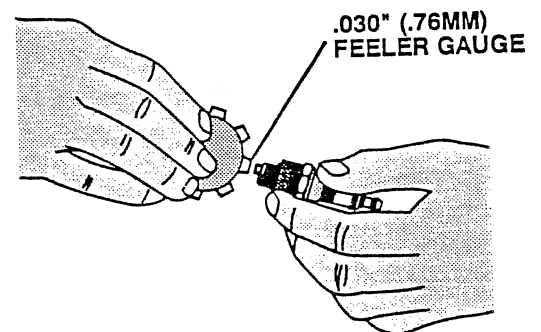
- Refer to engine manual.



EVERY 100 HOURS

SPARK PLUG

- Replace spark plug .
- Gap should be set at .030 inch (.76mm).



MAINTENANCE

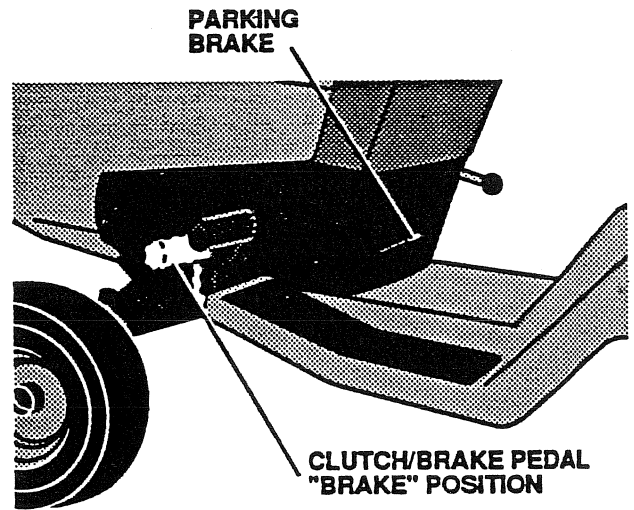
AS NEEDED

CARBURETOR ADJUSTMENT

NOTE: CONSULT ENGINE MANUAL FOR CARBURETOR ADJUSTMENT.

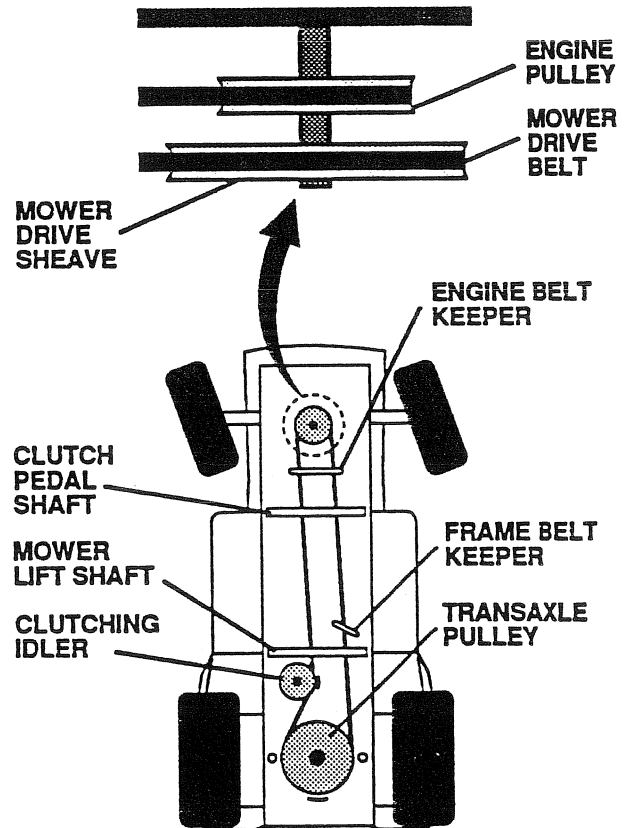
REPLACE TRACTOR MOTION DRIVE BELT

- Engage Parking Brake.
- Turn Front Wheels fully to left or right.

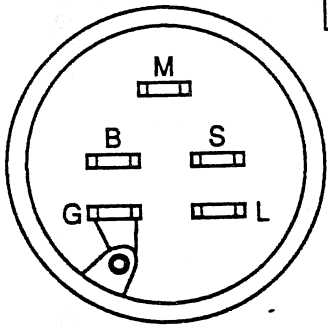
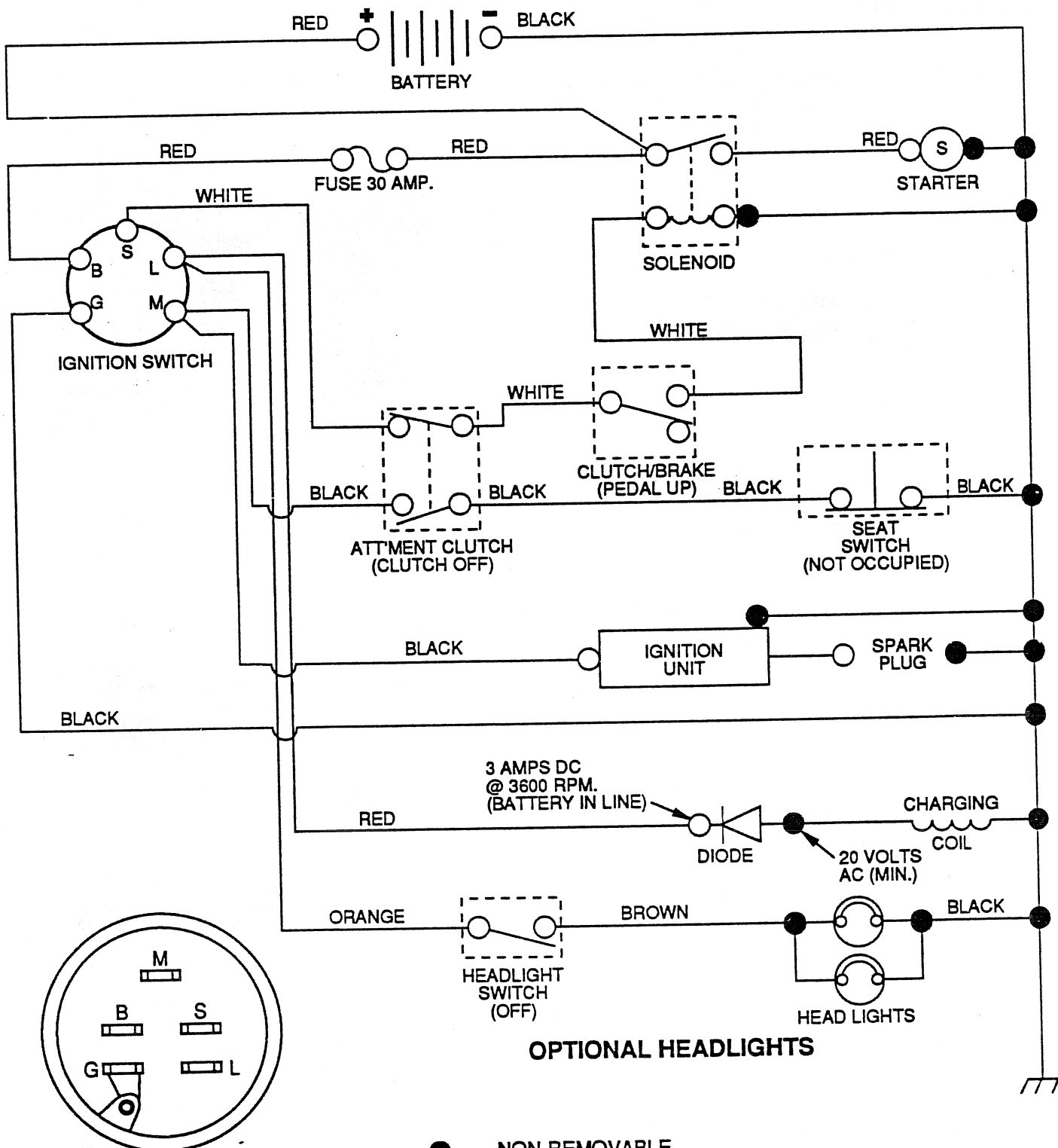


(cont.)

- Disconnect Mower Drive Belt at Engine Pulley.
- Disconnect Motion Drive Belt at Clutching Idler.
- Disconnect Motion Drive Belt at Transaxle. Push above Transaxle Pulley.
- Disconnect Motion Drive Belt at Frame Belt Keeper.
- Disconnect Motion Drive Belt at Engine Pulley. Thread belt below Mower Drive Sheave and through Engine Belt Keeper and Engine Pulley.
- Remove belt.
- Install new belt by reversing above procedure.
- Reconnect Motion Drive Belt at Engine Pulley.
- Make sure that belt is inside all Belt Keepers.



SCHEMATIC



IGNITION SWITCH

POSITION	CIRCUIT
OFF	M + G
ON	B + L
START	B + S

- NON-REMOVABLE CONNECTIONS
- REMOVABLE CONNECTIONS

WIRING INSULATED CLIPS
 NOTE: IF WIRING INSULATED CLIPS WERE REMOVED FOR SERVICING OF UNIT, THEY SHOULD BE REPLACED TO PROPERLY SECURE YOUR WIRING

TROUBLE SHOOTING

PROBLEM ➤ Cause/Remedy

- | | |
|--------------------------------------|--|
| WILL NOT START | ➤ Fill Tank with Fuel . Check Fuel Line and Carburetor (clean if necessary). Replace Fuel Filter. Use Fresh Fuel |
| | ➤ Recharge or replace Battery |
| | ➤ Check Wiring |
| | ➤ Replace Spark Plug(s) and adjust gap |
| WILL NOT TURN OVER | ➤ Push Clutch/Brake Pedal into brake position |
| | ➤ Charge or replace Battery |
| | ➤ Recharge or replace Battery |
| | ➤ Move Mower Clutch Lever to "DISENGAGED" position |
| | ➤ Replace Ignition Switch |
| | ➤ Replace Interlock Switch(es) |
| | ➤ Replace Solenoid or Starter |
| | ➤ Check for fault and replace Fuse |
| | ➤ Check all Wire Connections and "Ground" Points |
| ENGINE CLICKS BUT WON'T START | ➤ Clean Battery Terminals |
| | ➤ Replace Starter or Solenoid |
| | ➤ Charge or Replace Battery |
| | ➤ Check Wire Connections and "Ground" Points |
| HARD TO START | ➤ Place Throttle Control in "FAST" position and run starter several times to clear out gas |
| | ➤ Remove Air Filter and clean |
| | ➤ Replace Spark Plug(s) and adjust gap |
| | ➤ Recharge or replace Battery |
| | ➤ Check the Wiring |
| | ➤ Drain Fuel Tank and Carburetor. Use Fresh Fuel. Replace Fuel Filter |
| | ➤ Make necessary adjustments to Carburetor |
| | ➤ Major Engine Overhaul |
| ENGINE MISSES OR LACKS POWER | ➤ Shift to a lower gear or reduce load |
| | ➤ Drain Fuel Tank and Carburetor. Use Fresh Fuel |
| | ➤ Remove and clean Air Cleaner |
| | ➤ Make necessary Carburetor adjustments |
| | ➤ Clean Air Screen |
| | ➤ Add or change oil |
| | ➤ Replace Spark Plug(s) and adjust gap |
| | ➤ Replace Fuel Filter |
| | ➤ Major Engine Overhaul |
| ENGINE OVERHEATS | ➤ Shift to lower gear or reduce load |
| | ➤ Clean Air Screen |
| | ➤ Add or change oil |
| | ➤ Clean Engine Cooling Fins |
| | ➤ Remove and clean Muffler or replace |
| | ➤ Remove and clean Air Filter |
| | ➤ Use fresh fuel and adjust Carburetor |
| | ➤ Drain and replace oil for proper temperature |
| NO LIGHTS | ➤ Check Fuse, Switch and Wire Connections. Replace Headlight Bulbs |

TROUBLE SHOOTING

WON'T CHARGE

- ☛ Replace Switch
- ☛ Check Fuse for fault and replace
- ☛ Replace Battery
- ☛ Replace Diode Assembly
- ☛ Replace Alternator

ENGINE WILL NOT SHUT DOWN WHEN OPERATOR LEAVES SEAT

- ☛ NOTE: This tractor is equipped with an operator presence sensing system. Any attempt by the operator to leave the seat with the engine running and the mower clutch engaged will shut down the engine.
- ☛ Engage mower Clutch
- ☛ Check all Wire connections
- ☛ Check Seat Switch

UNSATISFACTORY MOWER PERFORMANCE UNEVEN DISTRIBUTION OF CLIPPINGS

- ☛ Place Throttle Control in "FAST" position
- ☛ Check air pressure in Tires
- ☛ Check front-to-rear and side-to-side Mower adjustment
- ☛ Use a slower ground speed
- ☛ Replace Mower Blades
- ☛ Reinstall Mower Blades with top of Blade up
- ☛ Clean underside of Mower Deck

MOWER BLADES WILL NOT ROTATE

- ☛ Correct Clutch mechanism interference
- ☛ Install new Mower Drive Belt
- ☛ Replace frozen Mandrel
- ☛ Replace frozen Idler Pulley
- ☛ Replace bent or unbalanced Blades
- ☛ Replace Mandrel. Replace Deck

EXCESSIVE MOWER VIBRATION

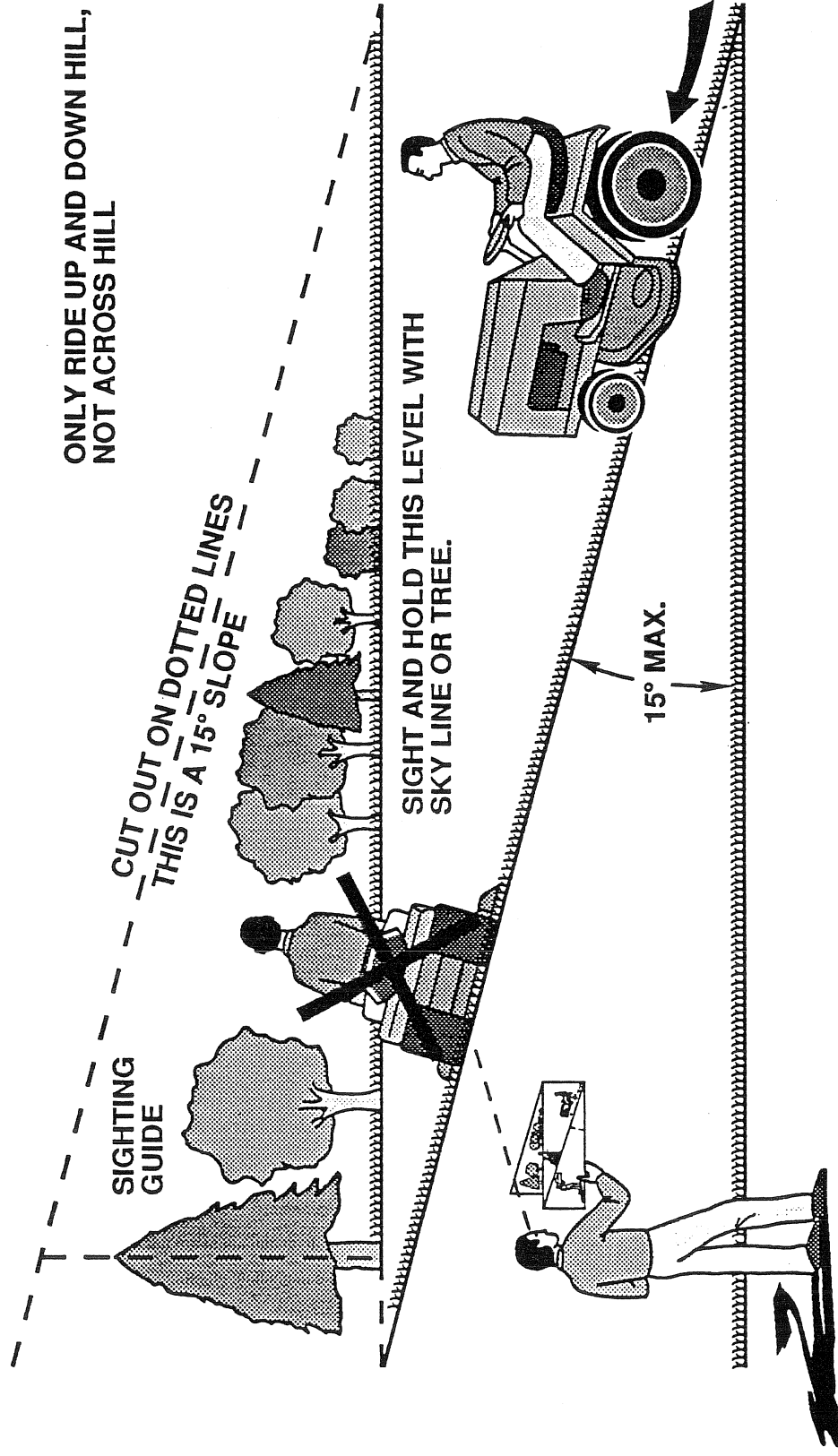
WIND ROWING STRIPPING OR DROPPING OF GRASS CLIPPINGS

- ☛ Set Throttle for maximum engine speed
- ☛ Let grass dry out
- ☛ Clean underside of Mower Deck
- ☛ Readjust Mower front-to-rear and side-to-side
- ☛ Replace Blades

UNEVEN CUT OR SCALPING

- ☛ Readjust Mower front-to-rear and side-to-side
- ☛ Replace Blades
- ☛ Replace bent Mandrel(s)

SUGGESTED GUIDE FOR SIGHTING SLOPES FOR SAFE OPERATION



 Operate your Tractor up and down the face of slopes (not greater than 15°) never across the face. Make turns gradually to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.

