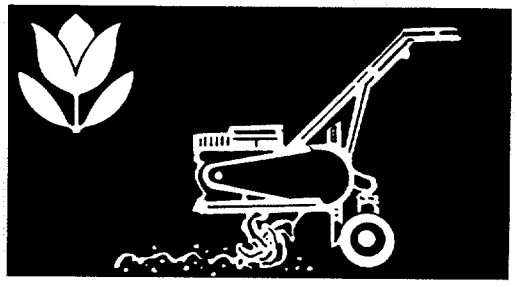
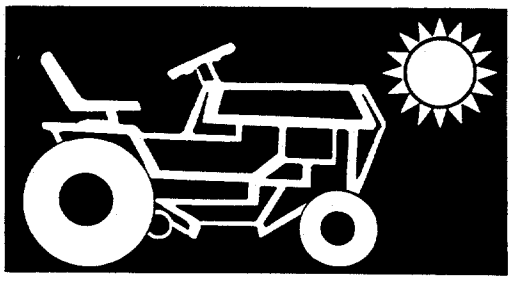
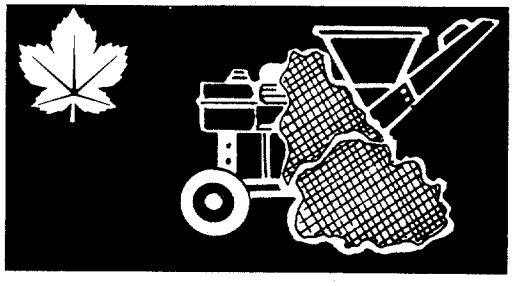
$1.00

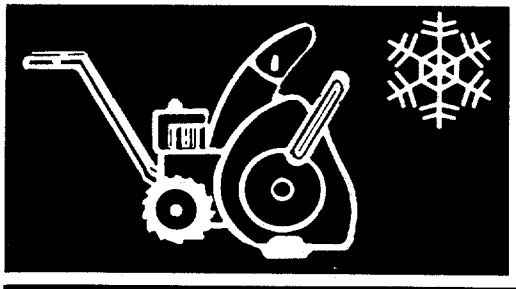
OWNER'S GUIDE

OUTDOOR POWER EQUIPMENT
for all seasons









VARIABLE SPEED REAR ENGINE RIDING MOWERS

OEM 190-073 Bag

Model Numbers

138-501-000
thru
138-508-000
138-511-000
thru
138-514-000

STEERING RATIO 5.6 : 1
TURNING RADIUS 4' INSIDE 8' OUTSIDE

IMPORTANT:

Read Safety Rules and Instructions Carefully

Thank you for purchasing an American-built product.

PRINTED IN U.S.A.

FORM NO. 770-5238C

INDEX

Dear Customer,

So often throughout the year we are all in a rush to meet our daily obligations.

However, we at MTD Products Inc are taking a quick moment out to say. . .

"Thank you for your business."

Sincerely,
MTD PRODUCTS INC

INSTRUCTIONS GIVEN WITH THIS SYMBOL ARE FOR PERSONAL SAFETY. BE SURE TO FOLLOW THEM.

LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

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

WARNING: 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 state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

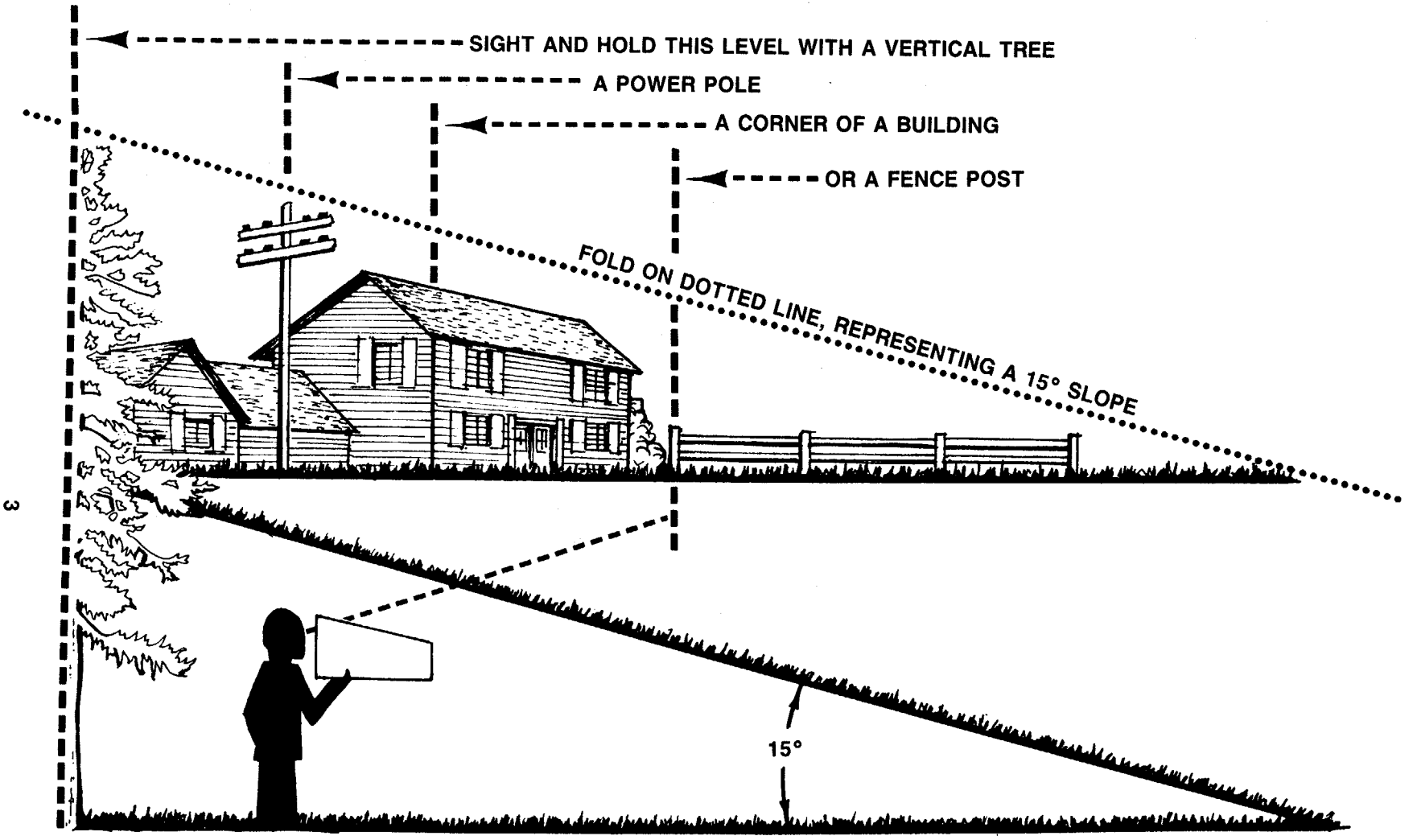
In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service center.

Cut Along This Line

SLOPE GAUGE

(Keep this sheet in a safe place for future reference.)

USE THIS SHEET AS A GUIDE TO DETERMINE SLOPES WHERE YOU MAY NOT OPERATE SAFELY.



WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2½ feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious injury.

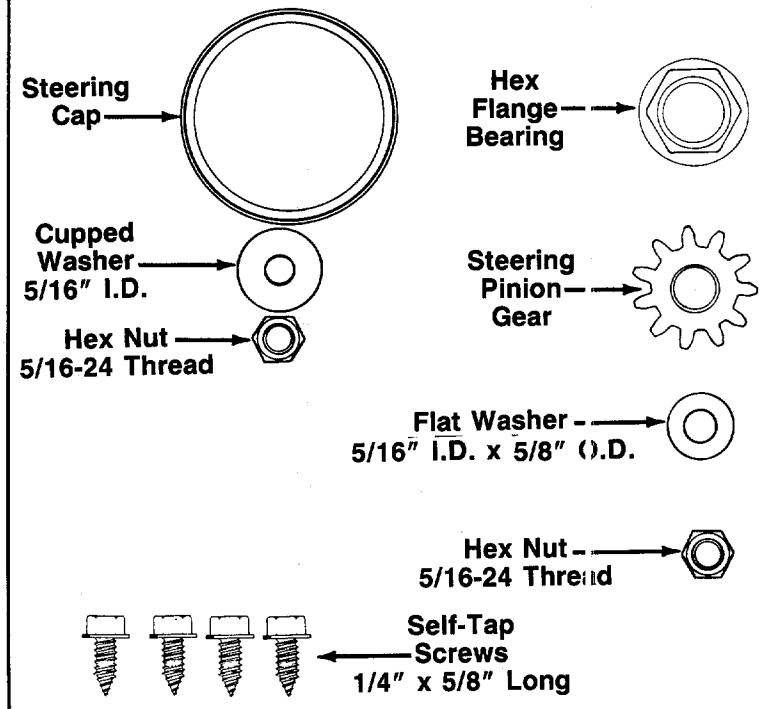
Operate RIDING mowers up and down slopes, never across the face of slopes.
Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

CONTENTS OF HARDWARE PACK

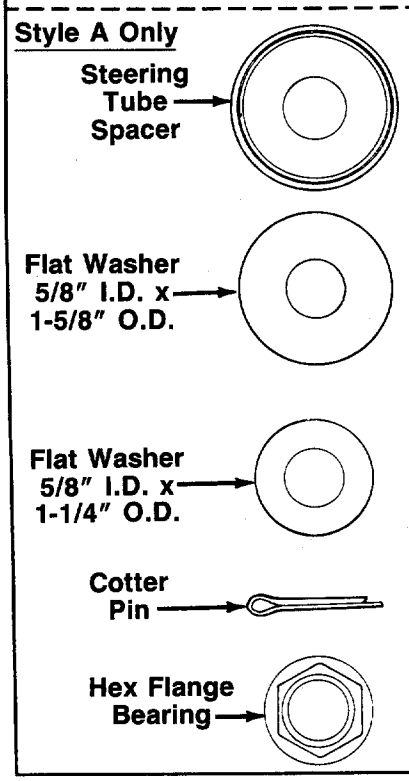
Remove this sheet from your owner's manual and separate the hardware according to the illustration for identification purposes. Parts are illustrated approximately half size. Refer to the separate deck manual for any assembly instructions concerning the deck. After assembly, keep the Slope Gauge which is on the reverse side of this sheet for future use.

(Hardware pack may contain extra items which are not used on your unit.)

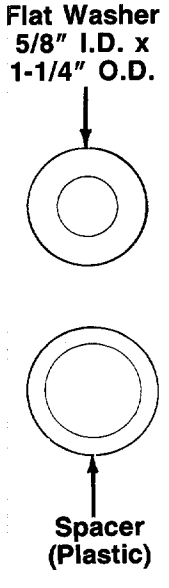
A ATTACHING THE STEERING MECHANISM



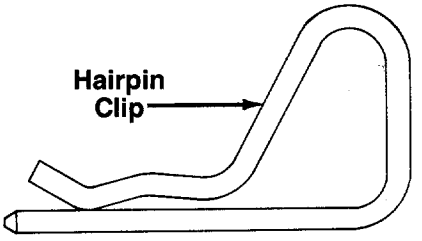
Style A Only



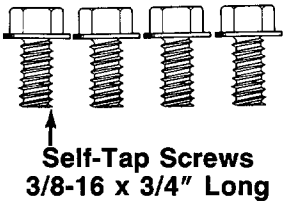
Style B Only



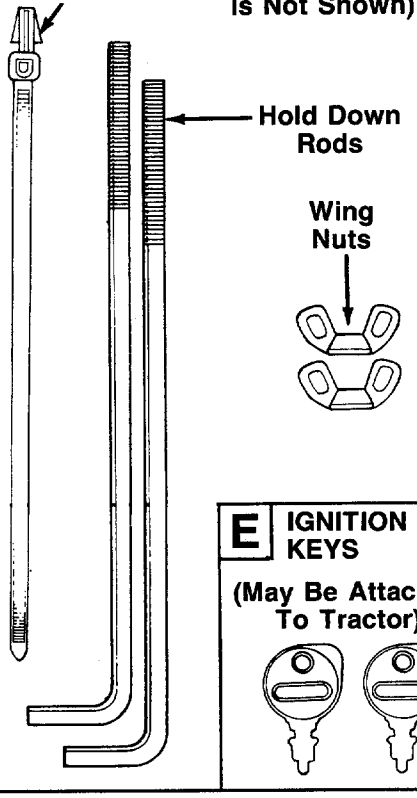
B ATTACHING THE CHUTE DEFLECTOR (30" Side Discharge Deck Only)



C ATTACHING THE SEAT

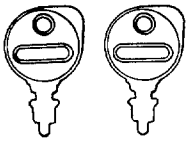


D INSTALLING THE BATTERY



E IGNITION KEYS

(May Be Attached To Tractor)



IMPORTANT

RULES FOR SAFE OPERATION

THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR UNIT. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL— ⚠ **HEED ITS WARNING.**

DANGER

Your unit was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.

1. READ THIS OWNER'S MANUAL carefully in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. This unit is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.
3. Know the controls and how to stop the machine quickly.
4. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
5. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts to avoid entanglement in the moving parts. Never operate a unit in bare feet, sandals, or sneakers.
6. To prevent injury, do not carry passengers or give rides. Keep children, pets and bystanders out of the area while mowing. Only the operator should ride on the unit and only ride in the seat.
7. Check overhead clearance carefully before driving under power lines, guy wires, bridges or low hanging tree branches, before entering or leaving buildings, or in any other situation where the operator may be struck or pulled from the unit, which could result in serious injury.
8. To maintain control of the unit and reduce the possibility of upset or collision, operate the tractor smoothly. Avoid erratic operation and excessive speed.
9. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of foreign objects, a small object may have been overlooked and could be accidently thrown by the mower in any direction and cause injury to you or a bystander.
10. Stop the blade(s) when crossing gravel drives, walks or roads.
11. Disengage all attachment clutches and shift into neutral before attempting to start engine.
12. Disengage power to attachment(s) and stop engine before leaving operating position.
13. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times as the rotating blade(s) can cause injury.
14. Disengage power to attachment(s) and stop engine before making any repairs or adjustments. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
15. Before attempting to unclog the mower or discharge chute, stop the engine. The mower blade(s) may continue to rotate for a few seconds after the engine is shut off. Therefore, be sure the blade(s) have stopped completely. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
16. Disengage power to attachment(s) when transporting or not in use.
17. Take all possible precautions when leaving vehicle unattended such as disengaging power take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
18. For your safety, use the slope gauge included as part of this manual to measure slopes before operating this unit on a sloped or hilly area. If the slope is greater than 15° as shown on the slope gauge, do not operate this unit on that area or serious injury could result.
19. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face. Use extreme caution if it is necessary to drive the tractor up an incline or back the tractor down an incline because the front of the tractor could lift and rapidly flip over backward which could cause serious injury.
20. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Always keep the tractor in gear when going down steep hills to take advantage of engine braking action.
21. Stay alert for holes in terrain and other hidden hazards which may cause the unit to tip over.
22. Use care when pulling loads or using heavy equipment.
    A. Use only approved drawbar hitch points.
    B. Limit loads to those you can safely control.
    C. Do not turn sharply. Use care when backing.
    D. Use counterweight(s) or wheel weights when suggested in owner's manual.
23. Watch out for traffic when crossing or near roadways.
24. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
25. Handle gasoline with care. It is highly flammable.
    A. Use approved gasoline container.
    B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline.
    C. Open doors if engine is run in garage. Exhaust fumes are dangerous. Do not run engine indoors.

Rules for Safe Operation (continued)

26. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in operator's manual.
27. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
28. Never store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water and space heaters, clothes dryers, and the like. Allow the engine to cool before storing in any enclosure.
29. To reduce fire hazard, keep engine free of grass, leaves or excessive grease.
30. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object. The damage should be repaired before restarting and operating the equipment.
31. Do not change the engine governor settings or overspeed the engine.
32. When using the vehicle with mower, proceed as follows:
    (1) Mow only in daylight or in good artificial light.
    (2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
    (3) Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher.
    (4) Check blade mounting bolts for proper tightness at frequent intervals.
33. Check grass catcher bags frequently for wear or deterioration. For safety protection, replace only with new bag meeting original equipment specifications.
34. Look behind to make sure the area is clear before placing the transmission in reverse and continue looking behind while backing up. Disengage blades before shifting into reverse and backing up.
35. This unit should not be driven up a ramp onto a trailer or truck under power, because the unit could tip over, causing serious personal injury. The unit must be pushed manually to load properly.

IMPORTANT: This unit is shipped WITHOUT GASOLINE or OIL; however, a small amount of oil may be present from the factory. Do not overfill. After assembly, service engine with gasoline and oil as instructed in the separate engine manual packed with your unit.

NOTE: Reference to right or left hand side of the unit is observed from the driver's seat, facing forward.

ASSEMBLY

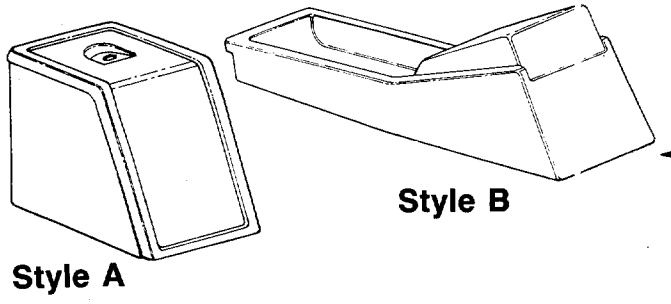


FIGURE 1.

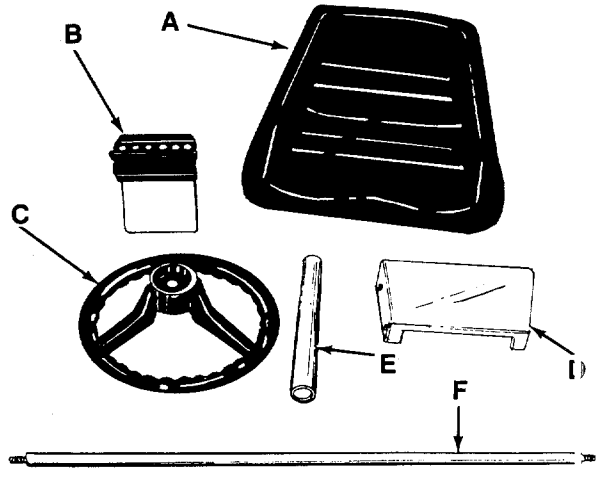


FIGURE 2.

This owner's manual covers various models of lawn tractors. The units illustrated may vary slightly from your unit.

Examine the steering box cover on your unit, and determine if it is Style A or Style B as shown in figure 1. Follow only those instructions which pertain to your style riding mower. Refer to the separate deck manual for all information concerning the deck.

UNPACKING

1. Remove the riding mower from the carton as follows. Open the top flaps. Remove all loose parts and carton inserts. Cut the front corners of the carton. Make certain brake is released, and push the unit out of the carton.
2. Remove page four from this manual and separate the contents of the hardware pack according to the illustration for identification.

Loose Parts in Carton: (See Figure 2)

A (1) Seat
B (1) 12 Volt Battery*
C (1) Steering Wheel
D (1) Steering Gear Cover
E (1) Steering Tube—Chrome (Style A)
F (1) Steering Shaft (Style A)
G (1) Steering Shaft Assembly (Style B)—Not Shown
* Electric start models only.

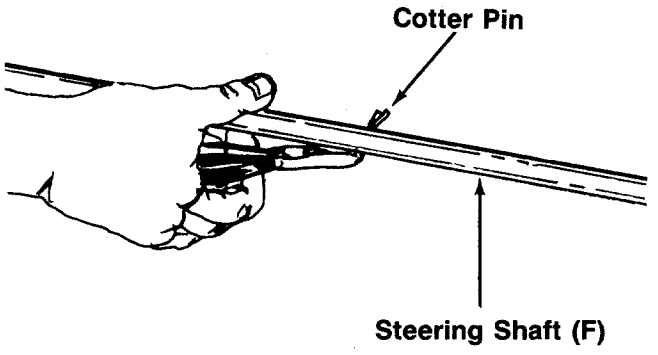


FIGURE 3.—Style A Only

ATTACHING THE STEERING MECHANISM (Hardware A)

NOTE

Steps 1 through 6 are for Style A units only. For Style B units, proceed with step 6.

Style A only:

1. Insert the **cotter pin** into the hole on **steering shaft** (F). Secure in place by bending the ends of the cotter pin in opposite directions. See figure 3.

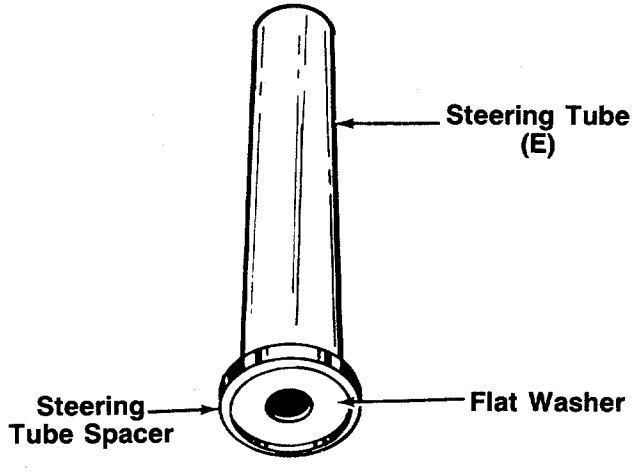


FIGURE 4.—Style A Only

2. Press the large **flat washer** (1-5/8″ diameter) into the open side of the black plastic **steering tube spacer.** See figure 4.
3. Press the **steering tube spacer** into one end of the chrome-plated **steering tube** (E). See figure 4. Make certain spacer is seated securely into tube.

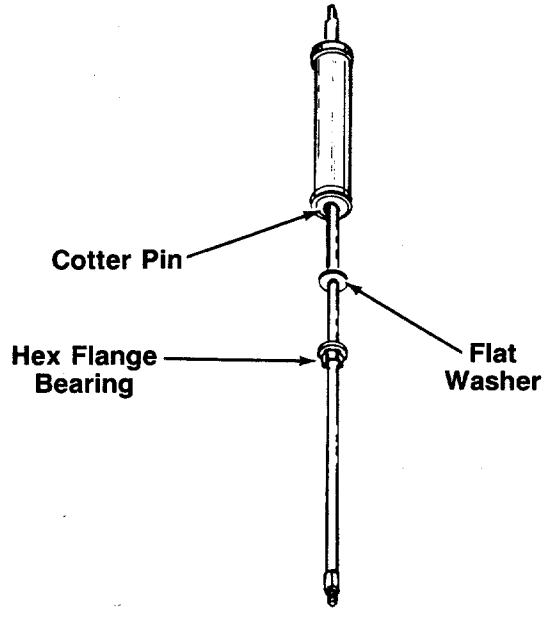


FIGURE 5.—Style A Only

4. Hold the **steering shaft** upright, so that the **cotter pin** is closer to the top of the shaft. Slide the **steering tube spacer** and **steering tube** down over the **shaft** (above the cotter pin). See figure 5.
5. Slip **flat washer** (1¼″ diameter) on the **steering shaft** immediately below the cotter pin. Place one plastic **hex flange bearing** flat side up, below the washer. See figure 5.

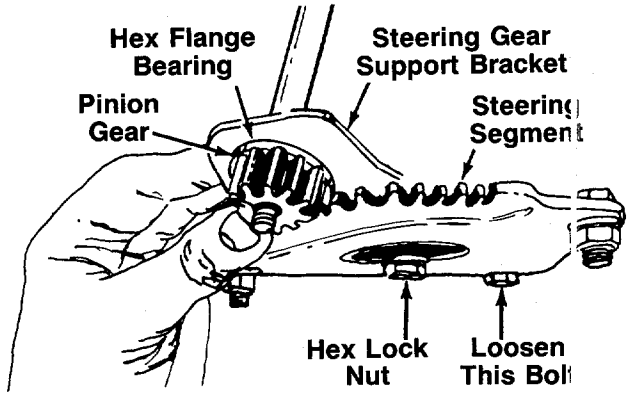


FIGURE 6.

6. **Style A**—Insert the **steering shaft** with assembled parts through the **steering housing cover.** The lower end of the shaft should extend through the hole in the front end of the **steering gear support bracket** (Ref. No. 12 on page 30). See figure 6.
   Style B—Insert the **steering shaft** through the **steering housing cover.** Place **flat washer** and **plastic spacer** over end of **steering shaft** before inserting the shaft through the hole in the front end of the **steering gear support bracket** (Ref. No. 12 on page 30).
7. Loosen the **hex nut** located at the **rear of the steering gear segment** (Ref. No. 27 on page 30) so that the steering gear segment can be pushed about ¼" toward the rear of the rider, to permit easier assembly of the **pinion gear.** Two 9/16" wrenches are required.
8. Place **hex flange bearing,** flat side down, over the end of the **steering shaft,** and seat it into the **steering gear support bracket.** See figure 6.
9. Raise **steering shaft** slightly so **pinion gear** can be placed in position (teeth of gear must mesh with teeth of steering gear segment). Insert steering shaft through pinion gear (splined collar on steering shaft is inside of pinion gear). Then place **flat washer** (5/8" diameter) on shaft and secure with **hex nut** (5/16" I.D.). Do not tighten at this time.
10. Push the **steering gear segment** (loosened in step 7) forward toward its original position, until it **engages solidly into the teeth of the pinion gear.** Retighten the nut at the rear of the steering gear segment. Two 9/16" wrenches are required.

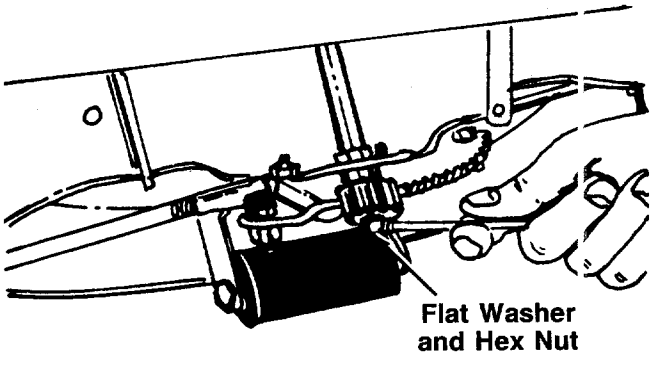


FIGURE 7.

WARNING

Steering gear **must** be adjusted as instructed in step 10, and hex lock nut **must** be adjusted as instructed in step 12. **Improper adjustment will cause excessive wear on the steering gear segment.**

11. Now tighten the hex nut which secures the pinion gear. See figure 7.
12. Make certain the hex lock nut which secures the steering segment to the steering gear support bracket (shown in figure 6) is tightened so there is no play between the two parts. Do not overtighten as the steering segment must be free to turn.
13. Lubricate the teeth of the pinion gear and steering gear segment with an automotive chassis grease.
14. Install the **steering gear cover** (D) as shown in figure 8, to cover the underside of the steering mechanism. Secure with two **self-tapping screws** on each side of the cover. Do not completely tighten any of these screws until all four of them are positioned correctly.

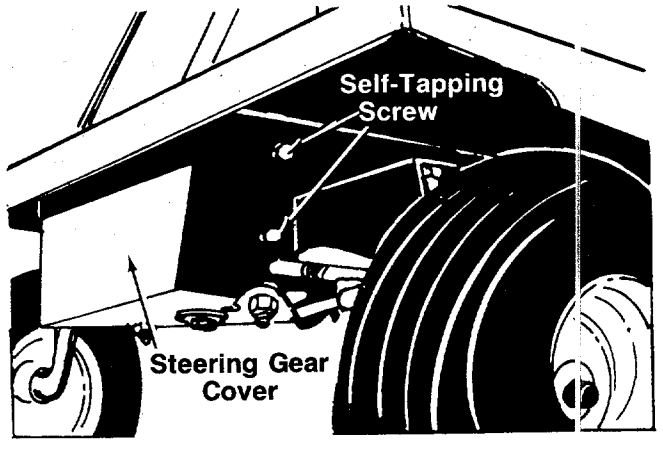


FIGURE 8.

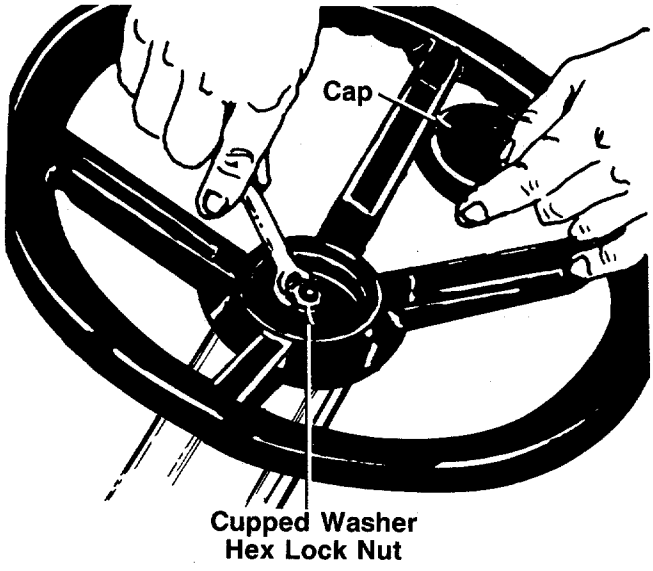


FIGURE 9.

15. Position the front wheels of the riding mower so they are pointing straight forward.
16. Place **steering wheel** (C) in position desired. Make certain the steering wheel is seated over the end of the steering tube.
17. Place the **cupped washer** with the cupped side down over the **steering shaft.** Secure with 5/16" **hex lock nut.** See figure 9.
18. Place the **steering wheel cap** over the center of the **steering wheel** and seat it with your hand.

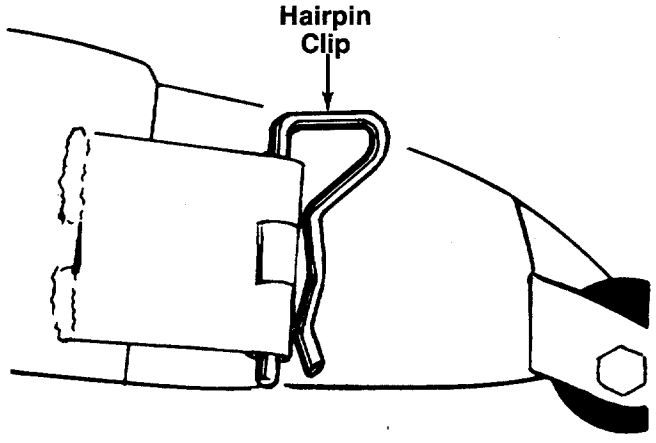


FIGURE 10.—30" Side Discharge Deck

ATTACHING THE CHUTE DEFLECTOR (Hardware B)
30" Side Discharge Deck:

Secure the **chute deflector** to the deck by placing the **large hairpin clip** in the **chute deflector bracket,** located on the front of the deck. See figure 10.

ATTACHING THE SEAT (Hardware C)

1. The slots in the **seat pivot bracket** allow the seat to be adjusted to different positions. Place the **seat** against the seat pivot bracket in the position desired, and secure with four self-tapping screws. See figure 11.
2. Route the **wire lead** which is in the wire harness beneath the seat in **front** of the right hand seat bracket. Plug the lead into the **plug** on the wire lead extending from the right hand side of the seat. See figure 11.

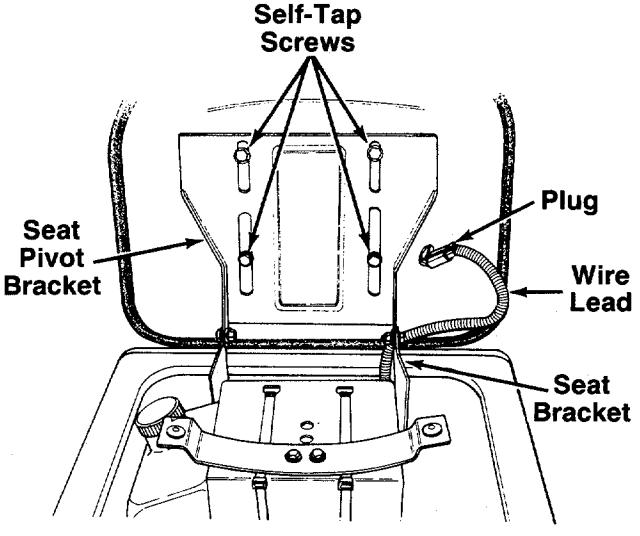


FIGURE 11.

IMPORTANT

When raising or lowering the seat, be careful not to pinch the wire leads.

TIRE PRESSURE

For shipping purposes, the tires on your unit may be over-inflated. Tire pressure should be reduced before unit is put into operation. Recommended operating tire pressure should be 10 p.s.i.

Check sidewall of tire for manufacturer's maximum tire pressure. If this information does not appear on your tire, maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

BATTERY INFORMATION

ELECTRIC START MODELS ONLY

WARNING

A. Battery acid must be handled with great care as contact with it can burn and blister the skin. It is also advisable to wear protective clothing (goggles, rubber gloves and apron) when working with it *

B. Should battery acid accidentally splatter into the eyes or onto the face, rinse the affected area immediately with clean cold water. If there is any further discomfort, seek prompt medical attention.

C. If acid spills on clothing, first dilute it with clean water, then neutralize with a solution of ammonia/water or baking soda/water.

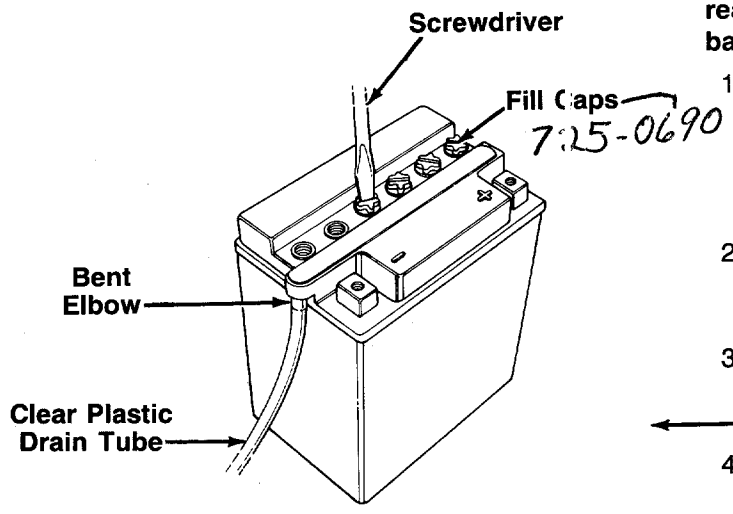


FIGURE 12.

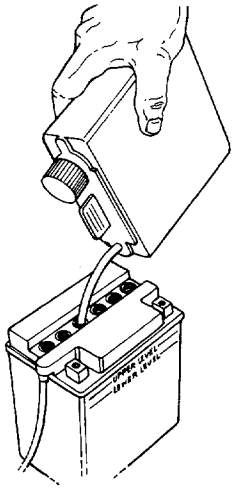


FIGURE 13.

D. Since battery acid is corrosive, do not pour it into any sink or drain. Before discarding empty electrolyte containers, rinse them with a neutralizing solution.

E. NEVER connect or disconnect charger clips to battery while charger is turned on as it can cause sparks.

F. Keep all lighted materials (cigarettes, matches, lighters) away from the battery as the hydrogen gas generated during charging can be combustible.

G. As a further precaution, only charge the battery in a well-ventilated area.

***Always shield eyes, protect skin and clothing when working near batteries.**

ACTIVATING THE BATTERY

Do not activate battery (fill with battery acid) until battery is actually placed in service. Be certain to read previous warnings before activating the battery.

1. Open the battery pack. Be careful not to puncture the box. It contains the battery with a long plastic tube attached, battery fluid (acid) in a plastic container, one short plastic tube and one hardware pack (two hex bolts and nuts).
2. Place the battery on a table or workbench. Make certain the long plastic drain tube is in place on the vent elbow.
3. Remove the six fill caps from the top of the battery with a screwdriver. Be careful not to damage the fill caps. See figure 12.
4. Place the battery fluid container on the table or workbench. Carefully cut off tip of the spout and attach the short plastic tube provided. Do not squeeze the container when cutting tip.
5. Fill each battery cell slowly and carefully to the UPPER LEVEL line marked on battery. See figure 13. Use caution as the acid level will rise rapidly after the bottom of the cell is filled.
6. Allow battery to stand for 30 minutes with the fill caps removed, while the plates absorb acid.
7. If acid level has fallen after the 30 minute standing period, refill each cell with battery acid to the UPPER LEVEL line on battery. Replace the fill caps.
8. Before discarding the empty container, neutralize any residue with baking soda and rinse container with water. Puncture container several times before discarding.
9. Charge the battery after the 30 minute standing period. SLOW CHARGE THE BATTERY (DO NOT FAST CHARGE) at a maximum bench rate of 1.4 amperes until the specific gravity reading is 1.260-1.280. Charge for a minimum of 2 hours and a maximum of 8 hours.

WARNING

Battery contains sulfuric acid. Refer to warning on page 10. Antidote: EXTERNAL—Flush with water. INTERNAL—Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Seek prompt medical attention. EYES: Flush with cool water for at least 15 minutes, then seek immediate medical attention.

Since batteries produce explosive gases, keep all lighted materials (cigarettes, lighters, matches, etc.) away. Be sure to charge battery only in well-ventilated areas. Make certain venting path of battery (drain tube) is always open.

KEEP BATTERIES
OUT OF THE REACH OF CHILDREN!

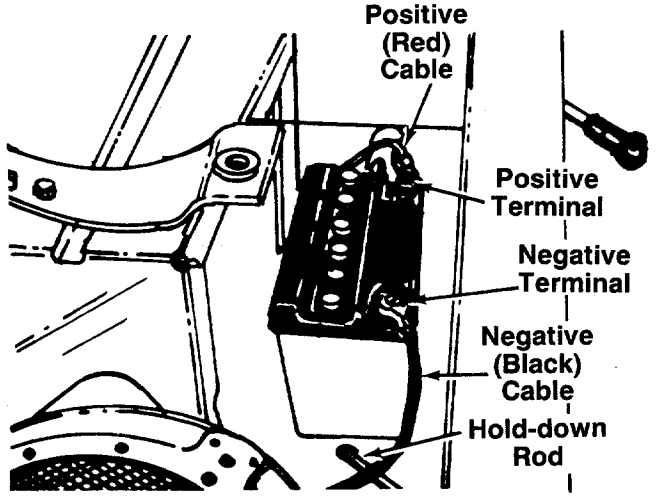


FIGURE 14.

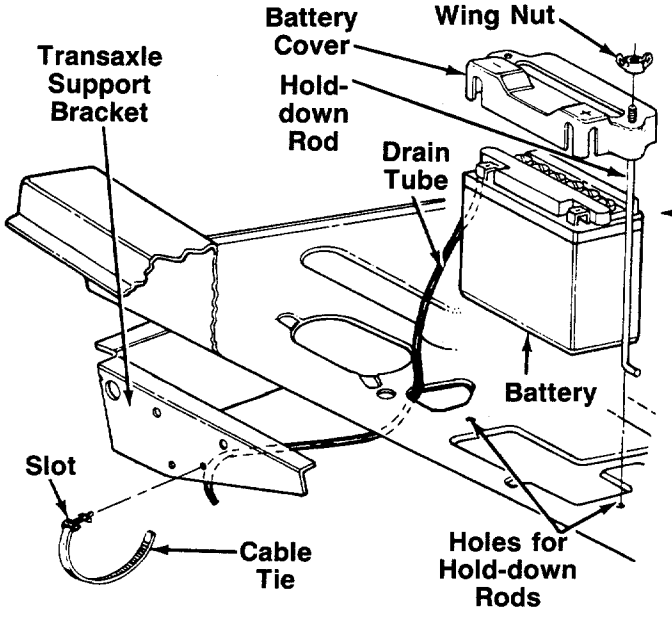


FIGURE 15.

NOTE

Charging rate after battery has been put into operation: The battery is to be charged for a period of 14-16 hours, NO LONGER THAN 30 HOURS.

After battery has been charged, add only distilled water. Do not add acid.

During normal operation, it is only necessary to charge the battery:

1. When it is activated for the first time.
2. Before winter storage.
3. Before using the lawn tractor after winter storage.

INSTALLING THE BATTERY (Hardware D)
(Electric Start Models Only)

1. Hook the battery hold-down rods into the holes in the frame. See figures 14 and 15.
2. Place the battery in the rider with the positive terminal to the front. The negative terminal goes to the rear of the unit. See figure 14.
3. Place the positive (heavy red) cable and small red wire with in-line fuse on the positive terminal. Secure with bolt, nut and lock washer provided with battery.
4. Place the negative (heavy black) cable on the negative terminal. Secure with bolt, nut and lock washer provided with battery. See figure 14.
5. Secure the battery in place with battery cover and hold-down rods. Secure with two wing nuts. See figure 15.
6. Route the clear plastic drain tube down through the hole in the frame, next to the engine drain plug, shown in figure 15.
7. Push the locking end of cable tie through the hole in transaxle support bracket. See figure 15. Place the end of cable tie through the slot so a loop is formed around the drain tube to secure it. Tighten cable tie and cut off excess end.

CONTROLS

This manual should be read in its entirety before operating the riding mower. **Be certain to service the engine with gasoline and oil as instructed in the separate engine manual before starting the engine.** Study the operating instructions and safety precautions thoroughly to insure proper functioning of your mower and to prevent injury to yourself and others. Be sure to save this manual for future reference.

THROTTLE CONTROL

The throttle control is used to regulate the engine speed. On 5 H.P. models, it is also used to choke the engine. The engine should be operated from 3/4 to full throttle when operating the cutting deck. See figure 16.

CHOKE CONTROL (8, 10 and 11 H.P. Models)

The choke control is located on the console and is operated manually. Details for the choke operation are covered in the separate engine manual packed with your unit. See figure 16.

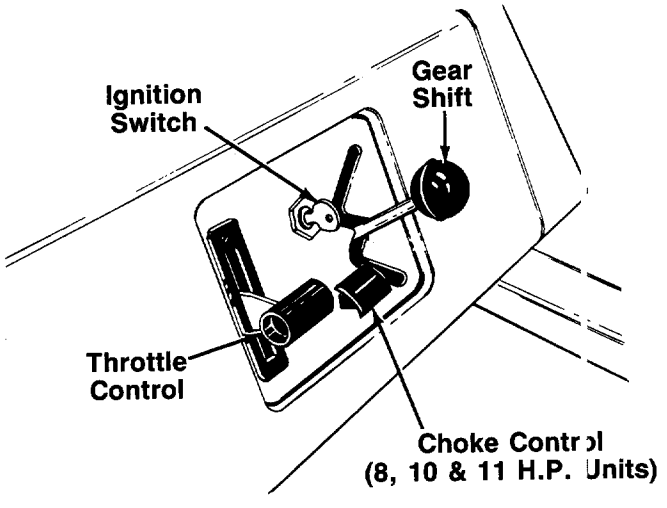


FIGURE 16.

IGNITION KEY

Recoil Model—The key must be turned to the ON position before pulling the recoil handle to start the engine. Turn the key to the left to the OFF position to stop the engine. Remove the key when the unit is not in use.

Electric Start Model—The key must be turned to the START position to start the engine. After the engine is running, let the key return to the ON position. Turn the key to the OFF position to stop the engine. Remove the key when the rider is not in use. See figure 16.

SHIFT LEVER

The shift lever is located on the left hand side of the console and has three positions, FORWARD, NEUTRAL and REVERSE. See figure 16. The clutch-brake pedal must be depressed and the riding mower must not be moving when shifting gears. Do not force the shift lever. Release the clutch-brake pedal slightly to line up the shifting collar in the transmission. Then try to shift gears.

SPEED CONTROL LEVER

The speed control lever allows you to regulate the ground speed of the riding mower to one of six settings. See figure 17. To set, depress clutch pedal. Push speed control lever outward and move backward to slow rider, move forward to increase speed. When desired speed has been obtained, place lever in that position. Whenever clutch is engaged, rider will automatically go to the pre-set speed.

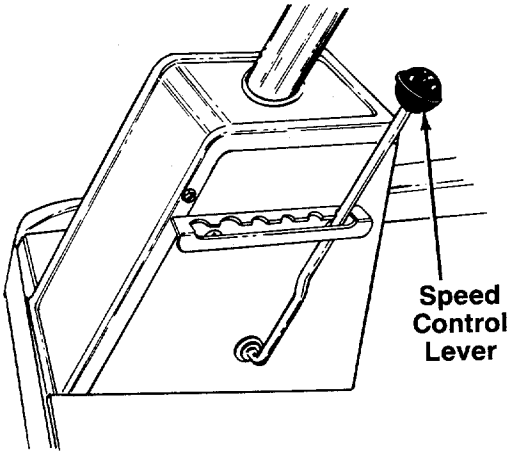


FIGURE 17.—Style A Shown

GASOLINE GAUGE

The gasoline gauge is located in the gasoline fill cap. The gauge indicates the amount of fuel in the tank.

CLUTCH-BRAKE PEDAL

The clutch-brake pedal is located on the right side of the rider. Depressing the clutch-brake pedal part way disengages the clutch. Pressing the pedal all the way down disengages the clutch and engages the disc brake. See figure 18.

NOTE

The clutch-brake pedal must be depressed to start the engine.

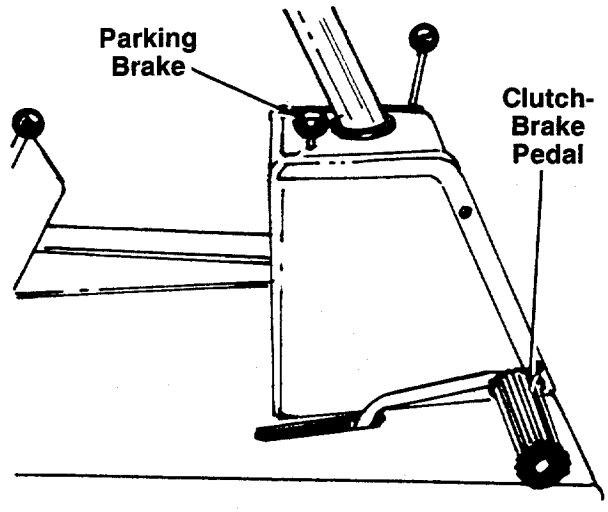


FIGURE 18.—Style A Shown

PARKING BRAKE

To set the parking brake, depress the clutch-brake pedal and press the parking brake knob down. To release the parking brake, depress and release the clutch-brake pedal. See figure 18.

BLADE ENGAGEMENT LEVER

The blade engagement lever is located on the right hand side of the deck. Figure 19 shows the blade engagement lever in the disengaged position.

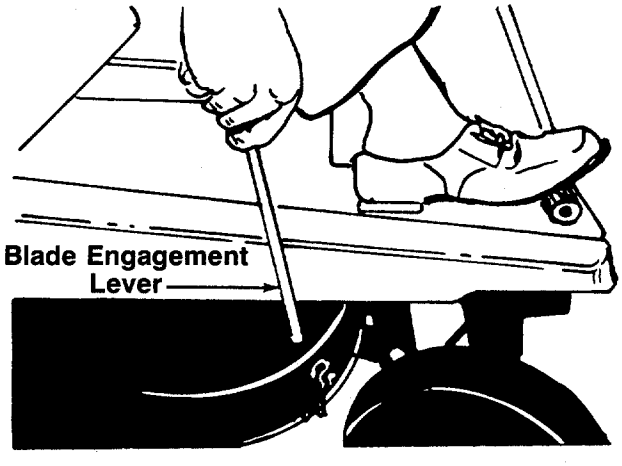


FIGURE 19.

To engage the blade, move the blade engagement lever toward the front of the unit. Move the lever toward the rear to disengage the blade.

DECK CUTTING HEIGHT LEVER

The deck cutting height lever is used to raise and lower the cutting deck, which sets the cutting height.

Move the lever outward, select desired cutting height and release lever. The lever may be set in any one of the six cutting height positions. See figure 20.

CAUTION

The blade does not shut off when the deck is raised. You must place the Blade Engagement Lever in the disengaged (OFF) position.

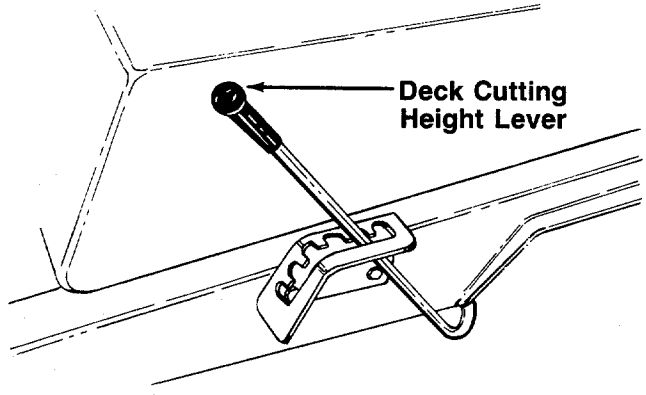


FIGURE 20.

SAFETY INTERLOCK SYSTEM

Interlock safety switches are located on the clutch-brake pedal, the blade engagement lever, shift lever and the seat.

Before the engine will start, the clutch pedal must be depressed all the way and the blade engagement lever must be in the disengaged position.

Before the unit can be shifted into reverse, or if the operator leaves the seat, the blade engagement lever must be in the disengaged position.

RECOIL STARTER HANDLE (Recoils Start Models Only)

The recoil starter handle is located on the left rear side of rider. The recoil starter handle can be pulled while standing by the left rear side of unit. The ignition key must be on before the engine will start. After the engine starts, the recoil starter handle must be returned and locked into the rope handle bracket before the blade or clutch is engaged. The engine will stop if these instructions are not followed. See figures 21 and 22.

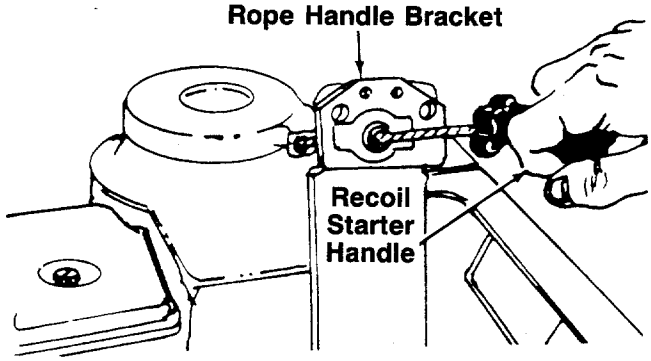


FIGURE 21.—Recoil Start Model

Turn and Lock

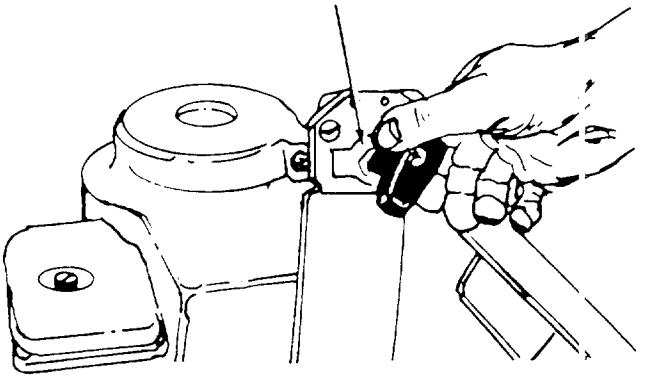


FIGURE 22.—Recoil Start Model

OPERATION

CAUTION

- READ OPERATOR'S MANUAL(S) • NEVER CARRY CHILDREN
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS
- KEEP SAFETY DEVICES (GUARDS. SHIELDS AND SWITCHES) IN PLACE AND WORKING
- REMOVE OBJECTS THAT COULD BE THROWN BY BLADE(S)
- DO NOT OPERATE THE UNIT WHEN CHILDREN AND OTHERS ARE AROUND
- ALWAYS LOOK BEHIND THE UNIT BEFORE BACKING UP
- DO NOT OPERATE THE UNIT WHERE IT COULD SLIP OR TIP
- IF THE UNIT STOPS GOING UPHILL. STOP BLADE(S) AND BACK SLOWLY DOWNHILL
- BE SURE BLADE(S) AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE(S)
- BEFORE LEAVING OPERATOR'S POSITION. SHUT ENGINE OFF AND REMOVE KEY

NOTE

This unit is equipped with a **safety interlock system** for your protection. The purpose of the safety interlock system is to prevent the engine from cranking or starting unless the clutch-brake pedal is depressed and the blade engagement lever is in the disengaged position. In addition, the blade engagement lever must be in the disengaged position when the unit is put into reverse or the engine will shut off. If the operator leaves the seat with the blade engagement lever engaged, the engine will shut off.

WARNING

Do not operate the rider if the interlock system is malfunctioning because it is a safety device, designed for protection.

STARTING THE ENGINE

CAUTION

Get on and off the unit from the left hand side to avoid possible contact with the blade engagement lever (located on the right hand side).

1. Be sure the crankcase is filled with oil as recommended in the engine manual. Fill fuel tank with clean, fresh, lead-free gasoline. Leaded gasoline is an acceptable substitute; however, using lead-free gasoline results in fewer combustion deposits and longer valve life.
2. Attach the wire to the spark plug.
3. Depress the clutch-brake pedal and lock it down.
4. Move the blade engagement lever back to the disengaged position.
5. a. **5 H.P. units only:** Set the throttle control lever in the CHOKE position.
   b. **All other units:** Set throttle control in the FAST position. Pull out the choke control.

NOTE

A warm engine may not require choking.

6. Place the shift lever in the NEUTRAL position.
7. a. **Recoil Start Units:** Turn the ignition key to the ON position. Twist the recoil starter handle until it is free and pull it with a quick steady motion. After the engine starts, return the recoil starter handle and twist it until it locks. See figure 21.
   b. **Electric Start Units:** Turn the ignition key to the START position. As soon as the engine starts, let the key return to the ON position. See figure 16.
8. a. **5 H.P. units:** Slowly return the throttle to the running position as the engine warms up.
   b. **All other units:** Push choke knob in gradually. Move throttle control to desired engine speed.
9. To stop, turn the ignition key to the OFF position. Remove the key when the rider is not in use.

PUTTING THE RIDING MOWER IN MOTION

NOTE

Parking brake **must** be disengaged before unit is put into motion.

1. Advance the throttle control from 3/4 to full throttle to prevent strain on the engine and to operate the cutting blades.

2. Place the shift lever in either the FORWARD or REVERSE position.

CAUTION

Look to the rear before backing up.

3. Slowly release the clutch-brake pedal.
4. To stop, depress the clutch-brake pedal.

NOTE

When operating the unit initially, there will be little difference between the highest two speeds until after the belts have seated themselves into the pulleys during the break-in period.

5. The blades can be engaged either while moving or while standing still. Move the blade engagement lever forward slowly until the blades are turning.

WARNING

When the blades are engaged, keep feet and hands away from the discharge opening, the blades or any part of the deck.

STOPPING

Engine—Turn the ignition key to the left to the OFF position.

Rider—Depress the clutch-brake pedal.

Blades—Pull the blade engagement lever all the way back.

CAUTION

If the unit is not to be used for a long period, place the shift lever in NEUTRAL, stop the engine, set the parking brake and remove the key. DO NOT leave the machine on an incline.

NOTE

A brief break-in period is essential to ensure maximum engine and mower life. The break-in consists of running the engine at half speed for a period of time required to use one tank of gasoline. It is also recommended to change crankcase oil after the first 5 hours of operation.

Be sure that the lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine. For best results and to insure more even grass distribution, do not mow when lawn is excessively wet.

IMPORTANT

If you strike a foreign object, stop the engine. Remove wire from spark plug, thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower.

NOTE

If any problems are encountered, refer to the Trouble Shooting Charts on pages 22 thru 24.

If unit stalls with speed control in high speed, or if unit will not operate with speed control lever in a low speed position, proceed as follows.

1. Place shift lever in Neutral.
2. Restart engine.
3. Place speed control lever in high speed position.
4. Release clutch-brake pedal fully.
5. Depress clutch-brake pedal.
6. Place speed control lever in desired position.
7. Place shift lever in either Forward or Reverse, and follow normal operating procedures.

GRASS CATCHERS are available as optional equipment for the riding mowers shown in this manual.

Model 015 for 26″ Side Discharge Deck
Model 055 for 30″ Side Discharge Deck
Model 038 for 30″ Rear Discharge Deck
Model 058 for 36″ Rear Discharge Deck

WARNING

The mower should not be operated without the entire grass catcher or chute deflector in place.

NOTE

Under normal usage bag material is subject to wear, and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations.

For replacement bags, use only factory authorized replacement bag.

ADJUSTMENTS

WARNING

Do not at any time make any adjustment to riding mower without first stopping engine and disconnecting spark plug wire.

THROTTLE CONTROL

If adjustment is needed, refer to the separate engine manual packed with your unit.

SPEED CONTROL LEVER ADJUSTMENT

NOTE

When operating the unit initially or after replacing the belts, there will be little difference between the highest two speeds until after the belts have gone through a break-in period and have seated themselves into the pulleys.

If the full range of speeds cannot be obtained or your unit, adjust the speed control lever as follows.

1. Start the engine.
2. Place the shift lever in Neutral position.
3. Place the speed control lever in high speed position.
4. Release the clutch-brake pedal completely, then slowly depress the pedal all the way (to park position). Hold the pedal in this position.
5. Turn the engine off.
6. After engine stops completely, release the clutch-brake pedal.
7. Disconnect the speed control rod by removing the hairpin cotter and flat washer. See figure 23.
8. Place the speed control lever in 2nd speed position.
9. Adjust the rod by threading it in or out of the ferrule until it is all the way to the front of the slot as shown in figure 23.
10. Secure the speed control rod using the flat washer and hairpin cotter.

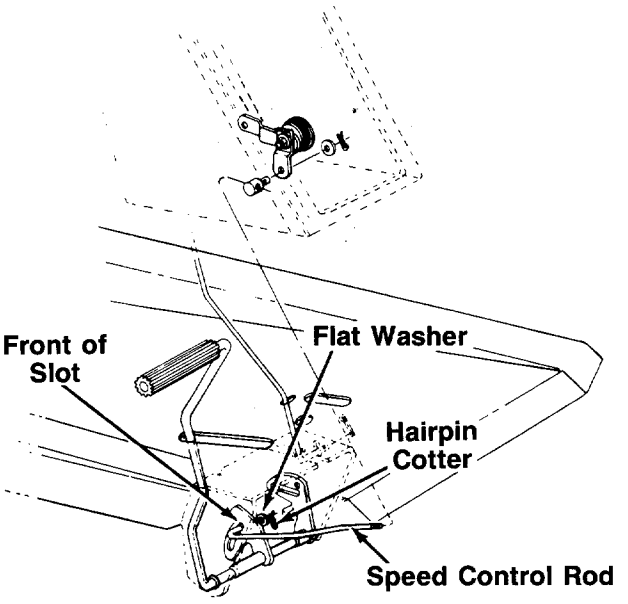


FIGURE 23.

NEUTRAL ADJUSTMENT (See Figure 24)

1. Place the transmission in neutral. (The unit will move freely when pushed forward and backward with the parking brake released).
2. Loosen the bolt which secures the shift lever assembly to the shift lever adjusting link.
3. Place the shift lever in the neutral slot.
4. Tighten the hex bolt to 13 foot pounds.

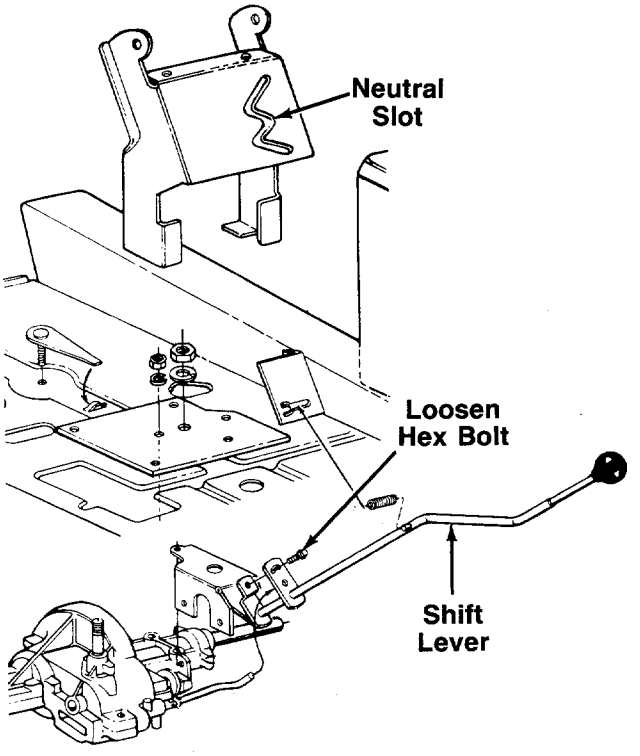


FIGURE 24.

BRAKE ADJUSTMENT (See Figure 25)

The brake is located by the left rear wheel inside the frame. During normal operation of this machine, the brake is subject to wear and will require periodic examination and adjustment.

To adjust the brake, remove the cotter pin. Adjust the castle nut so the brake starts to engage when the brake lever is ¼" to 5/16" away from the axle housing.

NOTE

Figure 25 is shown with the unit tipped up on rear wheels for clarity only.

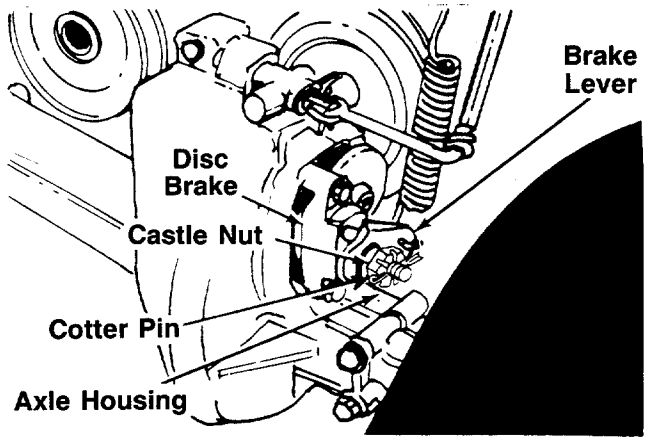


FIGURE 25.

WHEEL ALIGNMENT

The caster (forward slant of the king pin) and the camber (tilt of the wheels out at the top) require no adjustment. Automotive steering principles have been used to determine the caster and camber on the mower. The front wheels should toe-in 1/8 inch. See figure 26. To adjust, follow these steps:

1. Remove the cotter pin and flat washer which hold the tie rod to the axle bracket. See figure 26.
2. Adjust the tie rod in or out until the wheels toe-in approximately 1/8".
3. Replace the tie rod into the wheel bracket, and replace the cotter pin and flat washer.

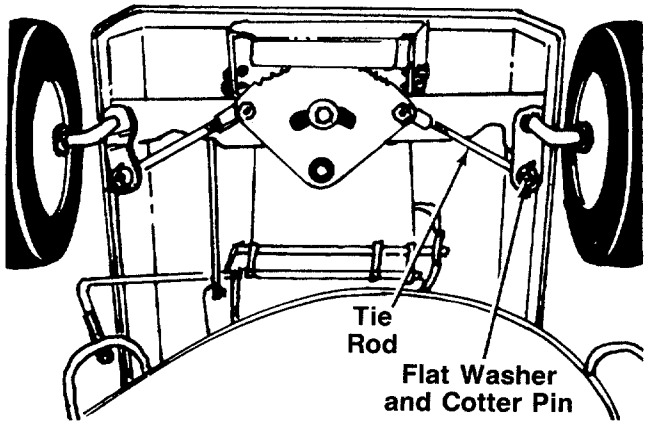


FIGURE 26.

DECK ADJUSTMENT

Side to Side Leveling

NOTE

Check tire pressure in all four tires before leveling the deck. Recommended tire pressure is 10 p.s.i.

If an uneven cut is obtained, the deck may be leveled. A deck adjustment rod is located on the right side of the unit. See figure 27.

To adjust the deck, loosen the two hex nuts at the left rear deck link assembly. Thread the hex nuts up or down the deck adjustment rod as necessary. Retighten the hex nuts.

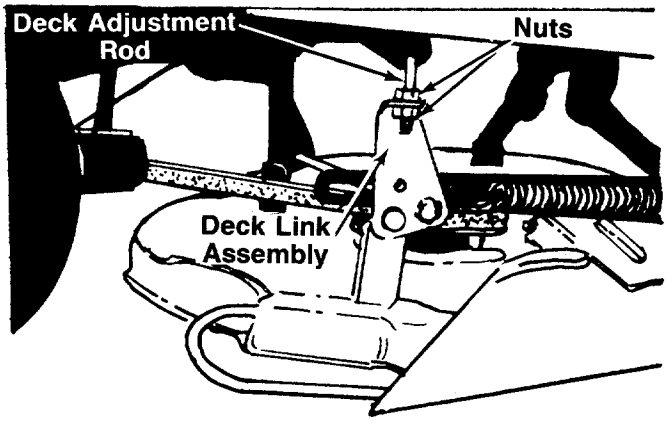


FIGURE 27.

Deck Pitch

The front of the deck should be approximately 1/4" to 3/8" lower than the rear of the deck. Adjust the pitch as follows.

1. Place the deck in the engaged position.
2. Remove the hairpin cotter and flat washer which hold the deck lift connecting rod to the front deck lift assembly. See figure 28.
3. Remove the connecting rod from the deck lift assembly and thread it in or out of the ferrule as necessary. See figure 28. Replace the rod.

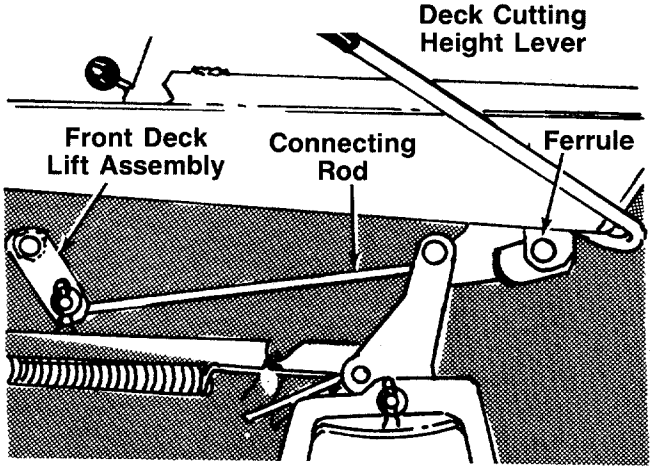


FIGURE 28.

BLADE BRAKE ADJUSTMENT (See figure 29)

WARNING

Make certain spark plug wire is disconnected and grounded against the engine while making this adjustment.

To adjust the blade brake, proceed as follows.

1. Disconnect the brake cable from the lower inside belt guard on the rider by removing the hairpin cotter, flat washer and clevis pin.
2. Lower the deck to its lowest position. Place the blade engagement lever in the **disengaged** position.
3. Pull the brake cable back so there is no slack in the cable. **Do not** put tension on the cable. Select the hole in the lower inside belt guard which aligns with the end of the cable. Move the end of the brake cable **forward** to the next hole in the belt guard (which will give a small amount of slack in the cable), and reassemble.

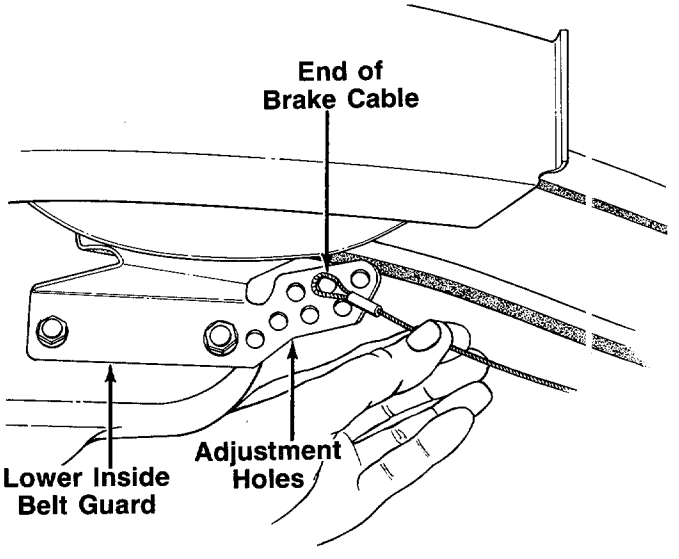


FIGURE 29.

CARBURETOR ADJUSTMENT

WARNING

If any adjustments are made to the engine while the engine is running (e.g. carburetor), disengage all clutches and blades. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load. To adjust the carburetor, refer to the separate engine manual packed with your unit.

NOTE

A dirty air cleaner will cause an engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor.

LUBRICATION

WARNING

Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of work on riding mower.

1. **Engine.** Maintain the engine oil according to the engine manual.
2. **Front Wheels.** The front wheels are provided with grease fittings. Lubricate at least once a season with automotive multi-purpose grease.
3. **Linkage.** Oil all deck linkage and height adjustment linkage.
4. **Transaxle.** It is lubricated at the factory and does not require checking. Lubricate with 10 oz. of grease (Part No. 737-0148) if disassembled.

MAINTENANCE

WARNING

Disconnect spark plug wire and ground it against the engine before performing any repairs or maintenance.

CUTTING BLADE

A. Removal for Sharpening or Replacement

WARNING

Be sure to disconnect and ground the spark plug wire before working on the cutting blade to prevent accidental engine starting. Protect hands by using heavy gloves or a rag to grasp the cutting blade.

1. Remove the large bolt and lock washer which holds the blade and adapter to the blade spindle. See figure 30.
2. Remove the blade and adapter from the spindle.

3. If the blade or blade adapter needs replacing, remove the two small bolts, lock washers and nuts which hold the blade to the adapter. See figure 30.

B. Sharpening

Remove the cutting blade by following the directions of the preceding section.

When sharpening the blade, follow the original angle of grind as a guide. It is **extremely important** that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. An unbalanced blade will cause excessive vibration when rotating at high speeds, may cause damage to the mower and could break, causing personal injury.

The blade can be tested for balance by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly.

NOTE

It is recommended that the blade always be removed from the adapter for the best test of balance.

C. Reassembly

Before reassembling the blade and the blade adapter to the unit, lubricate the spindle and the inner surface of the blade adapter with light oil. Lubricating the bolt holes, bolts and inner surface of the nuts with light oil is also recommended. A 4 oz. plastic bottle of light oil lubricant is available. Order part number 737-0170. Engine oil may also be used.

When replacing the blade, be sure to install the blade with the side of the blade marked "Bottom" (or with part number) facing the ground when the mower is in the operating position.

Blade Mounting Torque

3/8" Dia. Bolt 375 in. lb. min., 450 in. lb. max.
5/16" Dia. Bolt 150 in. lb. min., 250 in. lb. max.

NOTE

To insure safe operation, ALL nuts and bolts must be checked periodically for correct tightness.

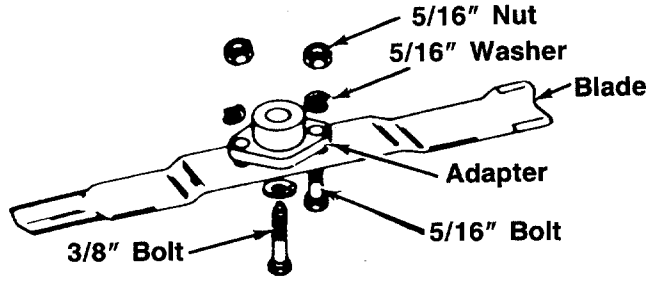


FIGURE 30.

FUEL FILTER

Your unit is equipped with a replaceable in-line fuel filter. Replace filter whenever contamination or discoloration is noticed. Order replacement filter through your engine authorized service dealer.

CLEANING ENGINE AND BLADE HOUSING

Any fuel or oil spilled on the machine should be wiped off promptly. Grass, leaves, and other dirt must not be left to accumulate around the cooling fins of the engine or on any part of the machine.

Clean the underside of the blade housing after each mowing.

BELTS

Check that belts are free of oil or dirt. Wipe the belts periodically with a clean rag.

ENGINE

Refer to separate engine manual for all engine maintenance instructions.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.

Service **air cleaner** every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced.

The **spark plug** should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each mowing season; check engine manual for correct plug type and gap specification.

BATTERY MAINTENANCE

1. Check periodically (every two weeks or before and after charging) to be sure electrolyte level is above the lowest line on battery. Add only distilled water or good quality drinking water. NEVER add additional acid or other chemicals to battery after initial activation.
2. The battery should be checked with a hydrometer after every 25 hours of operation. If the specific gravity is less than 1.225, remove battery and recharge.
3. Coat the terminals and exposed wiring with a thin coat of grease or petroleum jelly for longer service and protection against electrolyte corrosion.
4. The battery should be kept clean. Any deposits of acid should be neutralized with soda and water. Be careful not to get this solution in the cells.

BATTERY STORAGE

1. Charge battery using normal methods. NEVER store discharged battery as it will not recover.
2. When storing battery for extended periods disconnect battery cables. Removing battery from unit is recommended.
3. Store in cold, dry place.
4. Recharge battery whenever the specific gravity is less than 1.225, before returning to service, or every two months, whichever occurs first.

COMMON CAUSES FOR BATTERY FAILURE ARE:

1. Overcharging
2. Undercharging
3. Lack of water
4. Loose hold downs and/or corroded connections
5. Excessive loads
6. Battery electrolyte substitutes
7. Freezing of electrolyte

NOTE

THESE FAILURES DO NOT CONSTITUTE WARRANTY.

INSTALLATION OF TIRE TO RIM

WARNING

The following procedure must be followed when removing or installing a tire to the rim.

1. Be sure rim is clean and rust free.
2. Lubricate both the tire and rim generously.
3. Never inflate to over 30 p.s.i. to seat beads. Excessive inflation pressure when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

DRIVE BELT REMOVAL AND REPLACEMENT

NOTE

It is recommended that the entire instructions on belt removal and replacement be read before changing the belts.

1. Remove the battery from the unit (electric start models only).
2. To prevent gasoline from leaking from the engine, remove the fuel tank cap, place a piece of thin plastic over the neck of the fuel tank and screw on the cap.
3. Disconnect the spark plug wire and ground it against the engine.
4. Remove the deck as described in the separate deck manual.
5. Unhook the idler spring from the rider frame. See figure 31.
6. Remove the hex bolt, nut and lock washer at the torque rod bracket and transaxle. See figure 31.

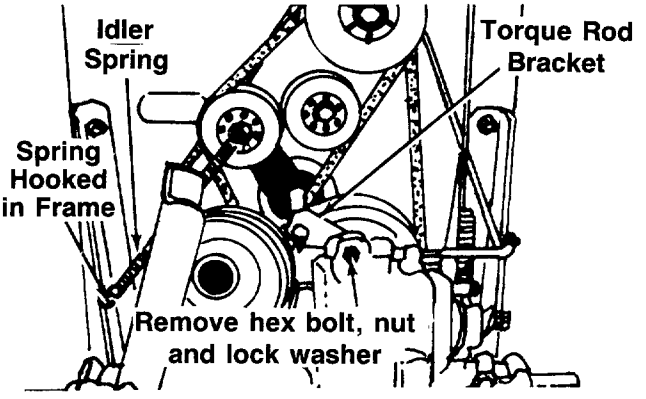


FIGURE 31.

7. Remove the hex bolt which holds the torque rod bracket to the torque rod, and remove bracket. See figure 32.

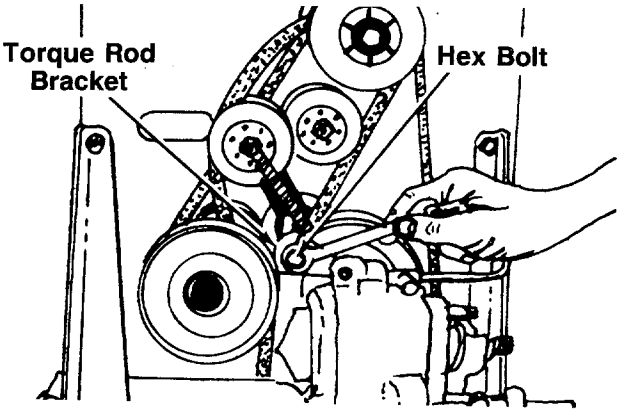


FIGURE 32.

8. Slip the "V"-belt off the variable speed pulley and transaxle pulley. See figure 33.

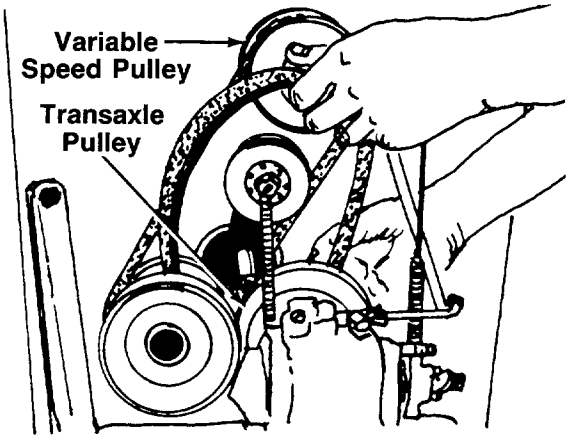


FIGURE 33.

9. Remove two hex bolts, nuts and lock washers from the engine pulley belt guard at rider frame to allow the engine pulley belt guard to drop down out of the way. See figure 34.

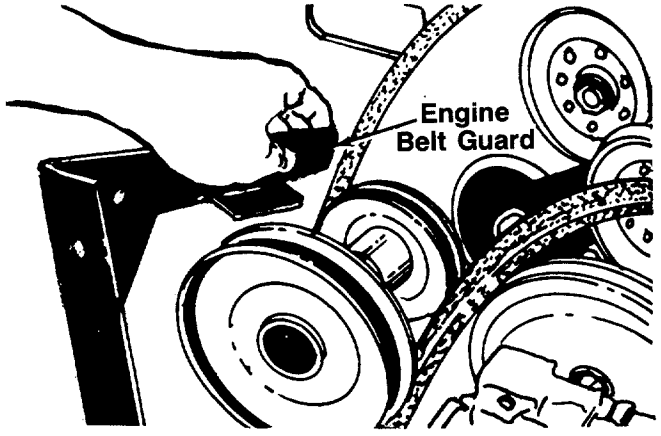


FIGURE 34.

10. Remove the idler pulley by removing the hex lock nut. See figure 35.

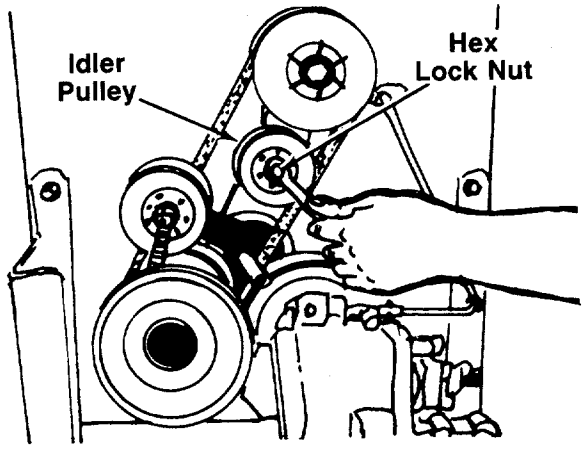


FIGURE 35.

11. Remove and replace the "V"-belt. See figure 36.

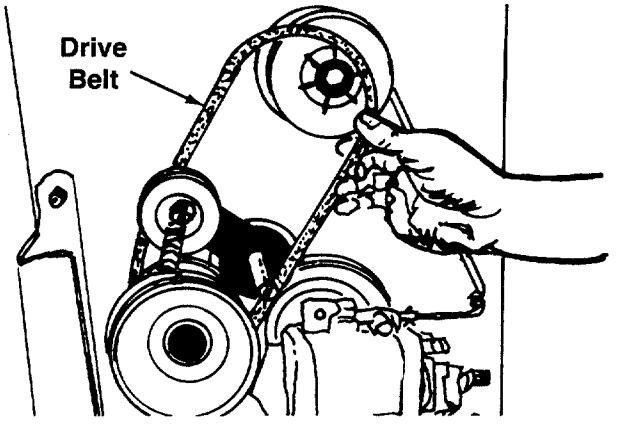


FIGURE 36.

12. Upon reassembly of idler pulley, be certain the hub side of idler goes against the idler bracket. See figure 37.

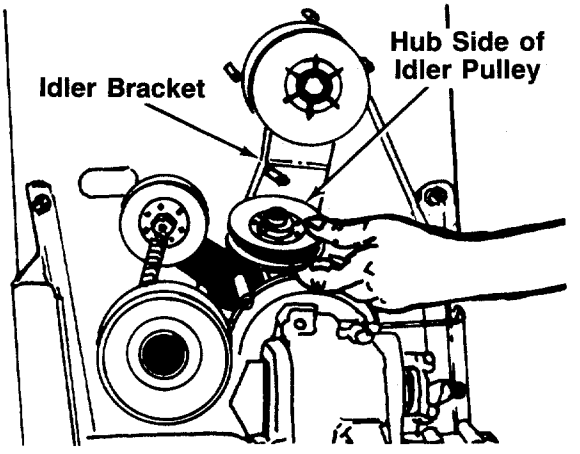


FIGURE 37.

13. When sliding the idler pulley on the idler bracket, be certain the belt is between the pulley and guide pin. See figure 38.

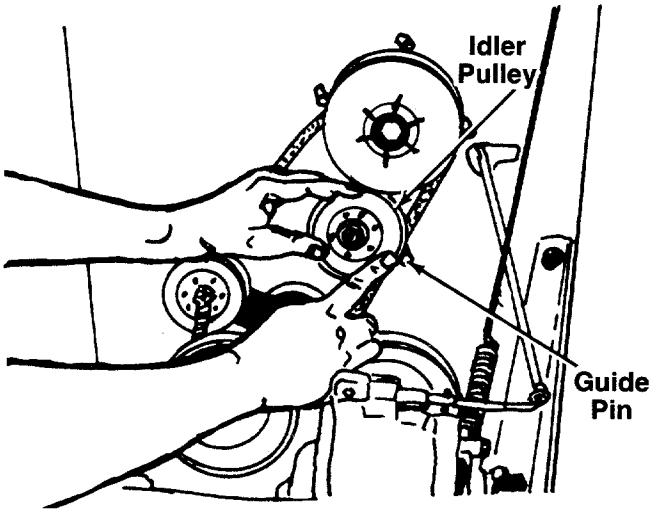


FIGURE 38.

14. Reverse the above steps (paying close attention to steps 12 and 13) when reassembling the new belts.

NOTE

Be certain all belts are inside belt guards and keepers. Also, be sure to reassemble the safety wire (orange) at the deck chute.

OFF-SEASON STORAGE

If the machine is to be inoperative for a period longer than 30 days, prepare for storage as follows

1. Clean the engine and the entire unit thoroughly.
2. Lubricate all lubrication points. Wipe the entire machine with an oiled rag to protect the surfaces.
3. Refer to the engine manual for correct engine storage instructions. The engine must be completely drained of fuel to prevent gum deposits from forming on essential carburetor parts, fuel lines and fuel tanks.
4. Refer to battery storage instructions on page 20.
5. Store unit in a clean, dry area.

NOTE

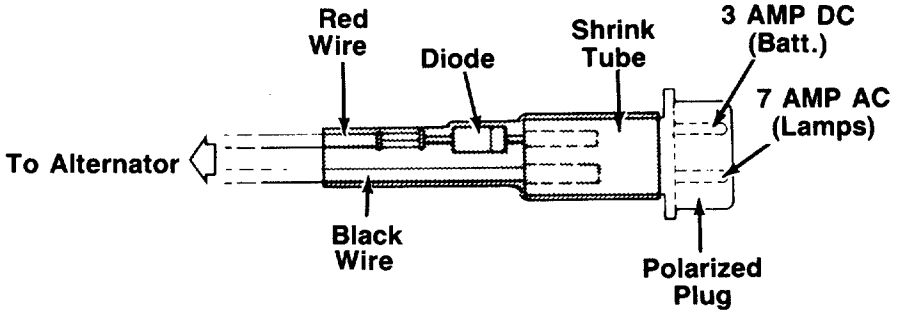
When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.

TROUBLE SHOOTING CHART FOR RECOIL START MODELS

~~CAUTION: ALWAYS DISCONNECT SPARK PLUG BEFORE ATTEMPTING ANY REMEDY.~~

TROUBLE	LOOK FOR	REMEDY
Engine will not start when recoil handle is pulled.	Clutch and blade not disengaged.	Clutch pedal must be depressed and blade must be shut off.
	Ignition key not in the ON position.	Turn on the ignition key.
	Throttle not in the starting position.	Check owner's guide for correct position for throttle control for starting.
	No spark to spark plug.	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have the engine repaired at authorized engine service dealer. Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.
	No fuel to the carburetor.	Gasoline tank empty. Fill. Fuel line or in-line fuel filter is plugged. Remove and clean fuel line. Replace filter if necessary.
	Air filter dirty.	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.
	Mechanical failure (wires or switch).	The interlock system includes two mechanical activated switches which are wired in parallel. If the buttons on both switches are not depressed at least 1/8", the magneto will be grounded and the engine will not start. While testing the interlock system, you will make the mower temporarily unsafe by permitting the engine to be started with the blade and clutch engaged. WARNING: While testing, disengage the clutch, shut off the blade control, set the parking brake and place the gear shift lever in neutral. Disconnect the yellow wire where it attaches to the primary wire from the breaker assembly on the engine. Try to start the engine. If the **engine does not start,** the problem is in the engine (e.g. no fuel or no ignition). If the engine does start, the problem is in the safety system. Check the following: 1. The interlock wire may be grounded by being pinched or rubbing through the insulation. Tape or replace the wire. 2. The bolt on the flat spring behind the recoil starter where the yellow wire attaches must be insulated from the spring. Use a continuity tester. If it is not insulated, remove the bolt and nut, and replace the two fiber washers and reassemble.
Engine stops while engaging blade or releasing clutch.	Recoil handle is not in proper position.	After the engine starts, the recoil starter handle must be pushed into the dashboard and turn a quarter turn either direction to lock it in place.
Engine smokes.	Engine loses crankcase vacuum.	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.
Excessive vibration.	Bent or damaged blade spindle.	**Stop engine immediately.** Check all pulleys, blade spindles, blade adapters, keys and bolts for tightness or damage. Tighten or replace any damaged parts.
	Bent blade.	**Stop engine immediately.** Replace damaged blade. Only use original equipment blades.
Mower will not discharge grass or leaves uncut strips.	Engine speed too low.	Throttle must be set between 3/4 and full throttle.
	Transmission selection.	Use lower transmission gear. The slower your ground speed, the better the quality of cut.
	Blades short or dull.	Sharpen or replace blades (uncut strip problem only).

TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

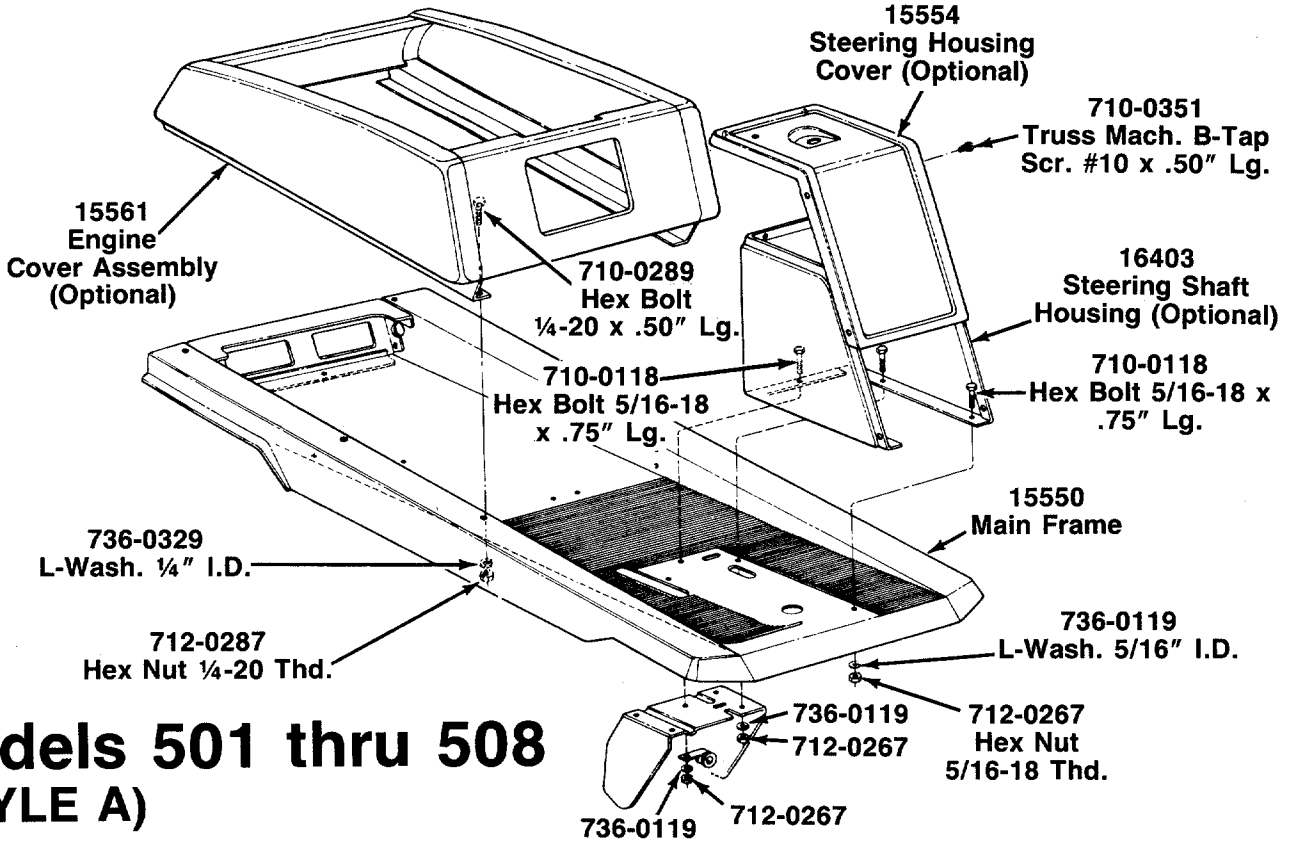
TROUBLE	LOOK FOR	REMEDY
Engine will not crank	Battery installed incorrectly	The battery must be installed with the negative terminal, identified at the terminal post by (Neg, N or −), grounded. The positive terminal (Pos, P or +) attaches to the large cable from the solenoid. The small red wire from the fuse holder or circuit breaker is also attached to the positive terminal.
	Blown fuse or circuit breaker	Replace fuse with 7½ amp. fuse ¼ x 1¼" lg. Circuit breaker will reset itself when it cools off. Fuses or circuit breakers seldom open or fail without a reason. The problem must be corrected. Check for loose connections in the fuse holder. Replace fuse holder if necessary. A dead short may be in the cranking or charging circuit where the insulation may have rubbed through and exposed the bare wire. Replace the wire or repair with electrician's tape if the wire strands have not been damaged. Note: Look for a wire pinched between body panels, burned by the exhaust pipe or muffler or rubbed against a moving part.
	Battery is dead or weak	Use a hydrometer to check the condition of the battery. The Specific Gravity (s.g.) should be 1.265 at 80°F. (1.215 s.g. minimum needed for cranking engine). The reason for the battery failing must be determined. (1) Defective battery. Battery will not accept or hold a full charge. (2) Short circuit. Check for grounded wire. (3) Charging system not working. The charging system is an alternator located under the flywheel. It is unregulated and rated 3 amp. at 3600 r.p.m. A diode (rectifier) is located in the output lead just before the wire harness plug on the engine side.  The diode changes A.C. to D.C. to charge the battery. A bad diode can either fail to charge the battery or discharge the battery if the alternator is shorted as well as the diode. To test: (1) Disconnect charger lead from the battery (small red wire). (2) Connect 12 V small test lamp between the 3 amp. D.C. charge lead and the positive terminal of the battery. (3) With the engine off, the lamp should not light. If it does, the diode and possibly the alternator should be replaced. (4) Start the engine. The lamp should light. If it does not, the alternator (stator) or lead wire is bad and should be replaced.
	Mechanical failure (Wires and switches)	The interlock system includes two mechanical activated switches which are wired in series in the circuit used to energize the starter solenoid. While testing the interlock system, you will make the mower temporarily unsafe by permitting the engine to be started with the blade and clutch engaged. WARNING: While testing, disengage the clutch, shut off the blade control, set the parking brake and place the gear shift lever in neutral. Attach a wire (minimum 18 gauge) to the positive terminal of the battery and touch the other end to the small terminal on the solenoid. **If the engine does not crank:** (1) There is a loose connection or poor ground. (2) The solenoid may be bad. The solenoid can be checked by using a heavy wire (#8 gauge minimum) and jumping between the two large terminals. If the engine cranks, the solenoid is bad. (3) If the engine does not crank when you jump the solenoid, have the starter motor tested by an authorized engine dealer. If the engine does crank, the problem is with one of the safety switches, ignition switch or the wire between the fuse holder (or circuit breaker) and the small terminal on the solenoid. Note: Look for a poor connection at the switches or a defective switch. Replace if necessary.
Engine cranks but will not start	Throttle or choke not in starting position	Check owner's guide for correct position for throttle control and choke for starting.
	No spark to spark plug	Spark plug lead disconnected. Connect lead. Hold spark plug lead away from engine block about 1/8". Crank engine. There should be a spark. If not, have engine repaired at authorized engine service dealer. Faulty spark plug. To test, remove spark plug. Attach spark plug lead to spark plug. Ground the spark plug body against the engine block. Crank the engine. The spark plug should fire at the electrode. Replace if it does not.

TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

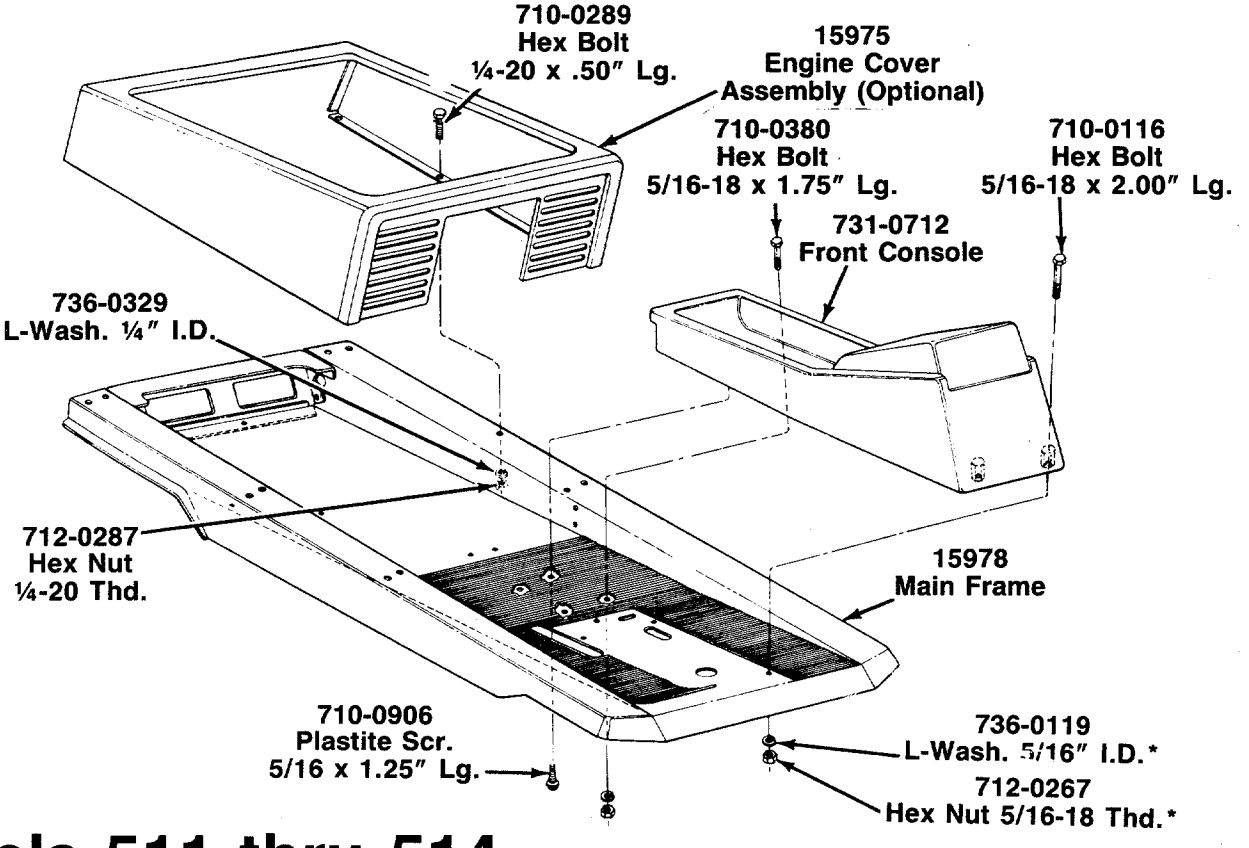
TROUBLE	LOOK FOR	REMEDY
	No fuel to the carburetor	Gasoline tank empty. Fill. Fuel line or in-line fuel filter plugged. Remove and clean fuel line. Replace filter if necessary.
	Air filter dirty	If the air cleaner is dirty, the engine may not start. Clean or replace as recommended by the engine manufacturer.
Engine smokes	Engine loses crankcase vacuum	Dipstick not seated or broken. Replace defective part. Engine breather defective. Replace.
Excessive vibration	Bent or damaged blade spindle	**Stop engine immediately.** Check all pulleys, blade adapters, keys and bolts for tightness and damage. Tighten or replace any damaged parts.
	Bent blade	**Stop engine immediately.** Replace damaged blade. Only use original equipment blades.
Mower will not discharge grass or leaves uncut strips	Engine speed low Transmission selection Blades short or dull	Throttle must be set between 3/4 and full throttle. Use lower transmission speed. The slower your ground speed, the better the quality of cut. Sharpen or replace blades (uncut strip problem only).

BELT TROUBLE SHOOTING CHART

Failure	Probable Cause	Corrective Action
1 Broken Belt	1A Sudden stop or shock load to belt	1A Inspect rider for cause such as foreign objects stuck in between deck and frame or belt path. Remove obstruction and inspect for damage. Replace belt per parts list in this manual.
	1B Incorrect belt used	1B Replace with proper belt only. See parts list in this manual. Roll belt onto pulley. **Do not** use a screwdriver to push or pry belt onto pulley. The sharp bend can damage internal cords.
	1C Abrupt engagement	1C Slower engagement required.
	1D Defective or damaged belt	1D Refer to 1B.
2 Belt Shreds	2A Belt guides or guards incorrectly adjusted	2A Belt guides and guards should be adjusted to approximately 1/16 to 1/8 inch from belt when in the engaged position.
	2B Pulleys not aligned	2B Realign pulleys to be within approximately 1/16 inch of each other. Check with straight edge. Be sure fastening hardware is tight.
	2C Bad pulley—rough, rusty, chipped, bent, frozen bearing, etc.	2C Replace as necessary. Adjust as per 2B.
3 Belt Comes Off	3A Belt stretched	3A Adjust as necessary when applicable. Refer to 1B.
	3B Broken or weak idler spring	3B Replace.

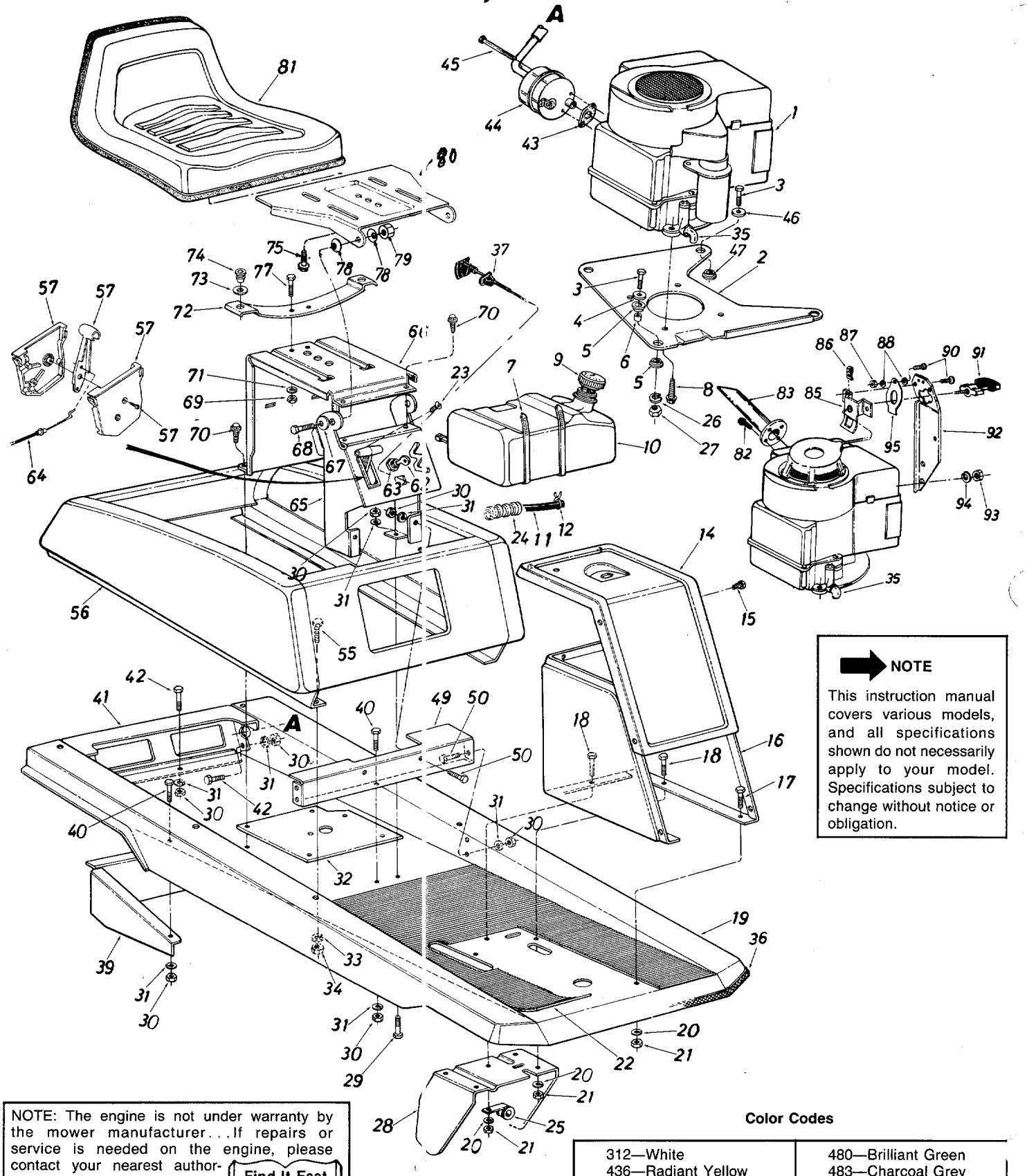


Models 501 thru 508
(STYLE A)



Models 511 thru 514
(STYLE B)

Models 501 thru 508, 511 thru 514



NOTE

This instruction manual covers various models, and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

NOTE: The engine is not under warranty by the mower manufacturer...If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."

Find It Fast In The Yellow Pages

Color Codes

312—White	480—Brilliant Green
436—Radiant Yellow	483—Charcoal Grey
447—Patina Silver	499—Beige
452—Black	629—Silver Flake
456—Radiant Tangerine	630—Blue
460—Green Flake	638—MTD Red

Models 501 thru 508, 511 thru 514

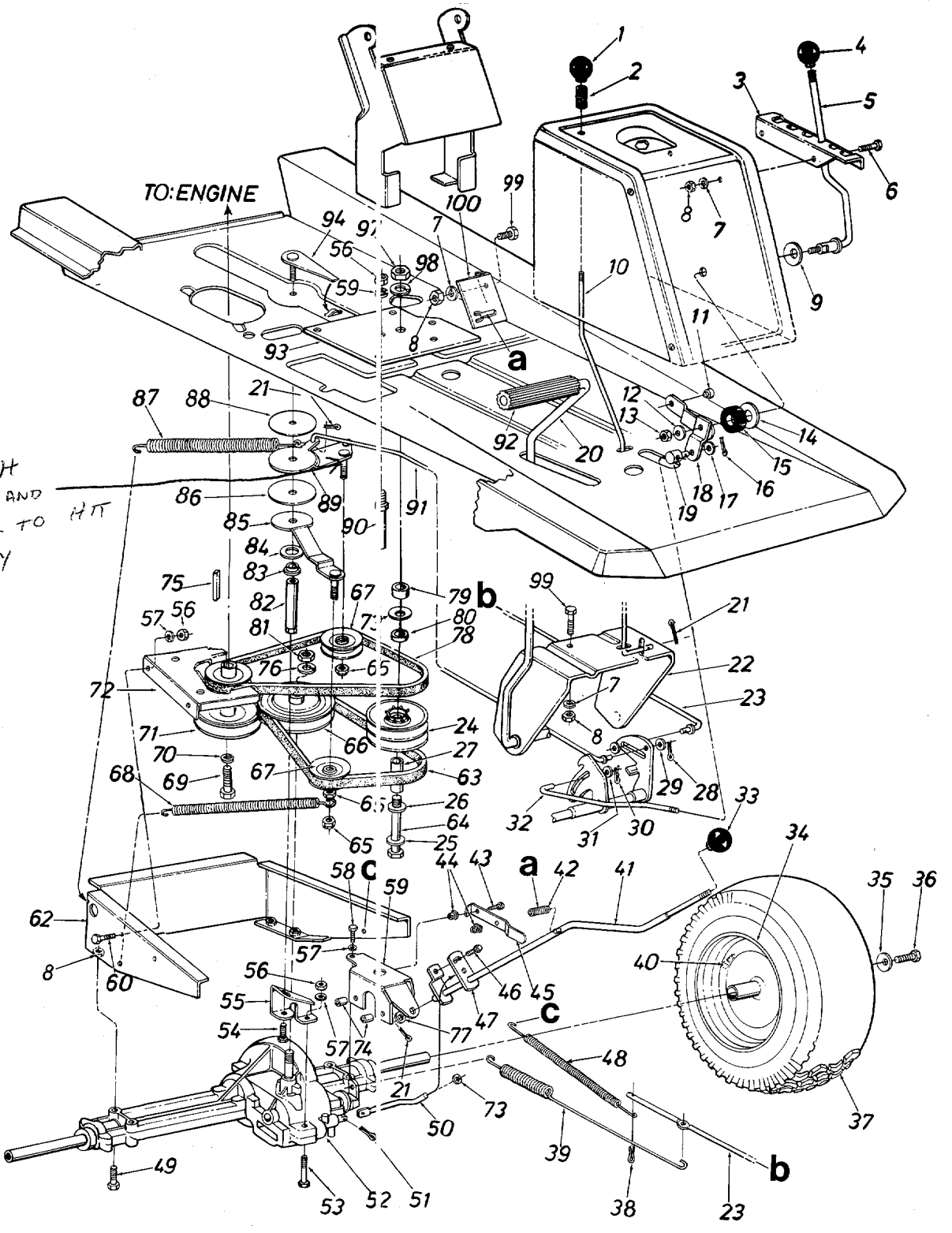
PARTS LIST FOR MODELS 501 THRU 508, 511 THRU 514 RIDING MOWERS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	—		Engine	
2	15572		Engine Mounting Plate	
3	710-0158		Hex Bolt 5/16-24 x 1.25" Lg.*	
4	736-0231		Fl-Wash. .330" I.D. x 1.125" O.D.	
5	722-0153		Engine Mounting Grommet	
6	750-0539		Spacer .315" I.D. x .50" O.D. x .520" Lg.	
7	726-0209		Cable Tie 30.6 Lg.	
8	710-0502		Hex Wash. Hd. Self-Tap Scr. 3/8-16 x 1.25" Lg.	
9	723-0155		Gas Gauge	
10	751-0368		Fuel Tank	
11	751-0173		Gas Line	
12	726-0207		Hose Clamp—.406" Dia.	
14	—		Refer to Page 25	
15	—		Refer to Page 25	
16	—		Refer to Page 25	
17	—		Refer to Page 25	
18	—		Refer to Page 25	
19	—		Refer to Page 25	
20	—		Refer to Page 25	
21	—		Refer to Page 25	
22	735-0220		Floor Mat	
23	710-0779		Truss Mach. AB-Tap Scr. #10 x .50" Lg.	
24	731-0757		Convoluted Conduit	
25	726-0175		Clamp	
26	736-0119		L-Wash. 5/16" I.D.*	
27	712-0123		Hex Nut 5/16-24 Thd.*	
28	15562		Clutch-Brake Pedal Ass'y.	
29	710-0118		Hex Bolt 5/16-18 x .75" Lg*	
30	712-0267		Hex Nut 5/16-18 Thd.*	
31	736-0119		L-Wash. 5/16" I.D.*	
32	~~15588~~ 17100		Mounting Brkt. Variable Speed Pulley	
33	736-0329		L-Wash. ¼" I.D.*	
34	712-0287		Hex Nut ¼-20 Thd.*	
35	737-0125		90° Elbow Male To Female	
36	731-0511		Trim Strip 18" Lg.	
37	746-0614		Choke Control	
39	15553		Transaxle Support Ass'y.	
40	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
41	15571		Rear Frame Panel	
42	710-0621		Hex Bolt 5/16-18 x .50" Lg.*	
43	721-0207		Exhaust Gasket (8 H.P.)	
	721-0208		Exhaust Gasket (10 & 11 H.P.)	
44	751-0412		Muffler Ass'y. (8 H.P.)	
	751-0425		Spark Arrester For 8 H.P. Muffler	
	751-0413		Muffler Ass'y. (10 & 11 H.P.)	
	751-0426		Spark Arrester For 10 & 11 H.P. Muffler	
45	738-0635		Shld. Bolt (8 H.P.)	
	738-0636		Shld. Bolt (10 & 11 H.P.)	
46	736-0343		Fl-Wash. .330" I.D. x 1.25" O.D.	
47	736-0392		Flange Wash. .320" I.D. x .750" O.D.	
49	15604		Seat Support & Frame Brkt.	
50	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
55	710-0289		Hex Bolt ¼-20 x .50" Lg.*	
56	—		Refer to Page 25	
57	831-0796		Throttle Control Box Ass'y. (5 H.P.)	
	831-0823		Throttle Control Box Ass'y. (8, 10 & 11 H.P.)	
62	725-0201		Ignition Key	
63	725-0267		Ignition Switch (Electric Start)	
	725-0464		Ignition Switch†	
64	746-0630		Throttle Control Wire—35" (5 H.P.)	
	746-0503		Throttle Control Wire (8, 10 & 11 H.P.)	
65	16483		Front Seat Bracket	
66	15606		Rear Seat Bracket	
67	736-0242		Bell-Wash. .345" I.D. x .88" O.D.	
68	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	
69	712-0267		Hex Nut 5/16-18 Thd.*	
70	710-0601		Hex Self-Tap Scr. 5/16-18 x .75" Lg.	
71	736-0329		L-Wash. ¼" I.D.*	
72	732-0431		Seat Spring	
73	736-0160		Fl-Wash. .531" I.D. x .930" O.D.	
74	731-0555		Grommet	
75	710-0623		Hex Wash. Hd. Tap Scr. 3/8-16 x 3/4" Lg.	
77	710-0118		Hex Bolt ¼-20 x .75" Lg.*	
78	736-0242		Bell-Wash. .345" I.D. x .88" O.D.	
79	712-0158		Hex Cent. L-Nut 5/16-18 Thd.	
80	15607		Seat Pivot Bracket	
81	757-0343		Seat Ass'y. Comp.	N
82	710-0894		Hex Wash. Hd. TT-Tap Scr. 8-32 x .50" Lg. (5 H.P.)	
83	751-0339		Exhaust Pipe Ass'y. (5 H.P.)	
85	11053		Switch Brkt. Ass'y.†	
86	712-0147		Speed Nut #10-24 U-Type†	
87	712-0121		Hex Nut #10-24 Thd.*†	
88	736-0338		Fiber Washer†	
90	710-0351		Truss Mach. Scr. #10 x .50" Lg.*†	
91	11263		Plastic Handle (Starter Rope)†	
92	15655		Rope Handle Bracket†	
93	712-0267		Hex Nut 5/16-18 Thd.*†	
94	736-0119		L-Wash. 5/16" I.D.*†	
95	732-0257		Switch Spring†	

†Recoil Start Models Only.

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

Models 501 thru 508, 511 thru 514



** REAR WHEEL CHART

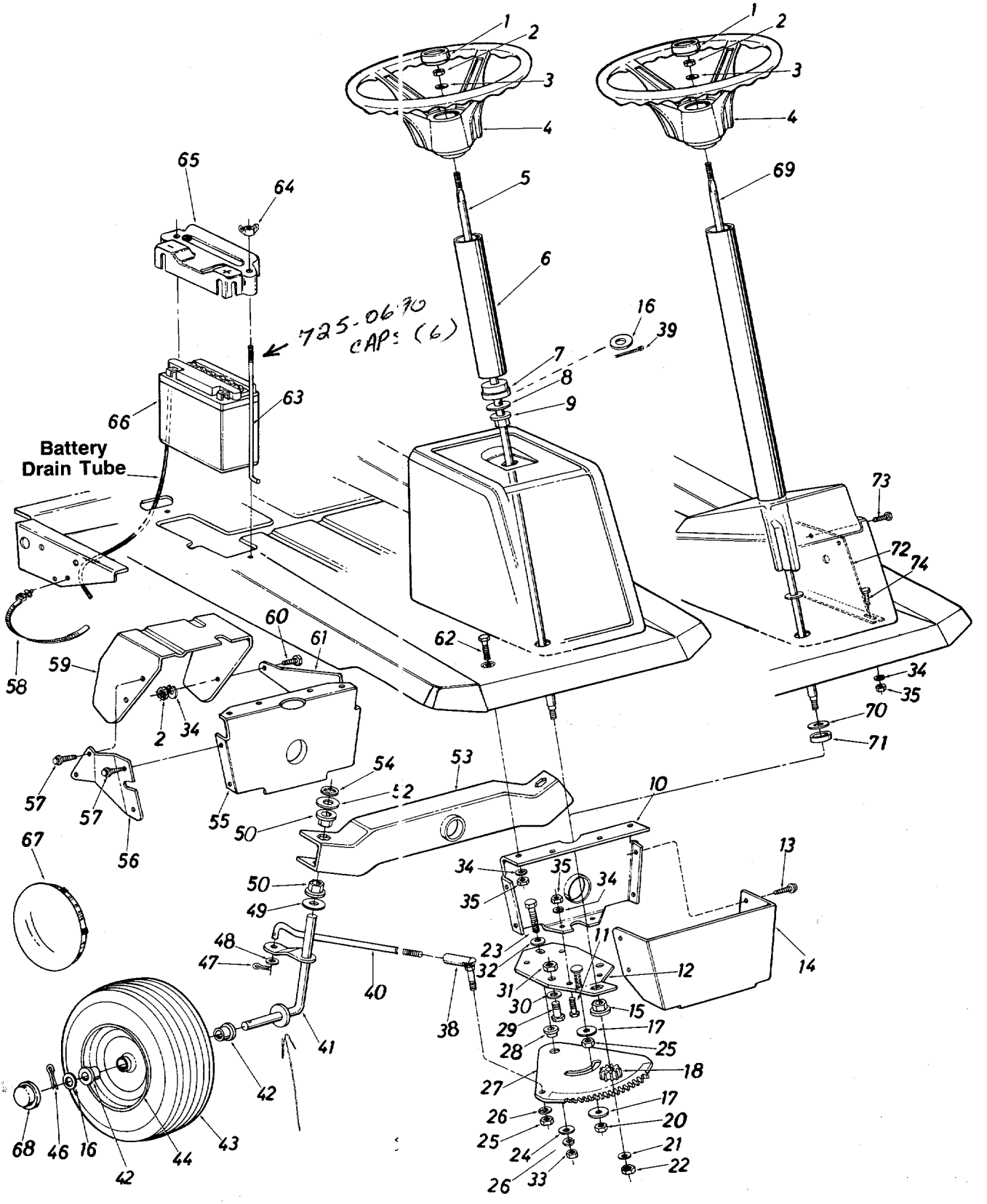
Description	16 x 6.50	15 x 6.0	13 x 5.0
Wheel Assembly Comp.	734-0591	734-0524	734-0523
Tire Only	734-0275	734-0427	734-0298
Rim Only	734-0594	734-0521	734-0517

Models 501 thru 508, 511 thru 514

PARTS LIST FOR MODELS 501 THRU 508, 511 THRU 514 RIDING MOWERS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	720-0187		Ball Knob ¼-20 Thd. 1.25″	
2	732-0437		Compression Spring	
3	16389		Speed Index Bracket	
4	720-0165		Ball Knob	
5	747-0652		Speed Control Lever	
6	710-0323		Truss Mach. Scr. 5/16-18 x .75″ Lg.*	
7	736-0119		L-Wash. 5/16″ I.D.*	
8	712-0267		Hex Nut 5/16-18 Thd.*	
9	736-0253		Bell-Wash. .345″ I.D. x .88″	
10	747-0427		Brake Locking Rod (501 thru 508)	
	747-0450		Brake Locking Rod (511 thru 514)	
11	731-0493		Cap	
12	736-0242		Bell-Wash. .345″ I.D. x .08″	
13	712-0158		Hex Cent. L-Nut 5/16-18 Thd.	
14	736-0100		Fl-Wash. .531″ I.D. x 1.25″ O.D. (501 thru 508)	
	736-0154		Fl-Wash. .50″ I.D. x 1.5″ O.D. (511 thru 514)	
15	735-0129		Rubber Washer	
16	714-0145		Intern. Cotter Pin ½″ Dia.	
17	736-0275		Fl-Wash. .34″ I.D. x .68″ O.D.	
18	16396		Speed Control Lever Brkt. Ass'y.	
19	711-0677		Ferrule—Engagement	
20	15562		Clutch/Brake Pedal Ass'y.	
21	714-0507		Cotter Pin 3/32″ Dia. x .75″*	
22	15562		Clutch/Brake Pedal Ass'y.	
23	747-0431		Brake Rod	
24	717-0884		Variable Speed Pulley Ass'y.	
25	736-0247		Washer .40 I.D. x 1.25 O.D.	
26	741-0405		Thrust Brg. 1.25″ O.D. x .56″ I.D.	
27	750-0705		Spacer Sleeve 2.71″	
28	714-0115		Cotter Pin 1/8″ Dia. x 1.25″*	
29	736-0275		Fl-Wash. .34″ I.D. x .60″ O.D.	
30	714-0104		Intern. Cot-Pin 5/16″ Dia.	
31	736-0275		Fl-Wash. .34″ I.D. x .60″ O.D.	
32	747-0394		Speed Control Rod (501 thru 508)	
	747-0451		Speed Control Rod (511 thru 514)	
33	720-0165		Ball Knob	
34	**		Rear Wheel Rim Only	
35	736-0242		Bell-Wash. .345″ I.D. x .88″	
36	710-0627		Hex L-Bolt 5/16-24 x .75″ Lg.	
37	**		Rear Wheel Ass'y.—Comp.	
38	714-0470		Cotter Pin 1/8″ Dia. x 1.25″*	
39	732-0389		Extension Spring 17.0″ Lg.	
40	734-0255		Air Valve	
41	16475		Shift Lever Ass'y.	
42	732-0499		Compression Spring 1.50″ Lg.	
43	710-0789		C Sink AB S-Tap Scr. #8 x .50″ Lg.	
44	726-0206		Push-in Nut #10	
45	732-0420		Spring Switch	
46	710-0289		Hex Bolt ¼-20 x .50″ Lg.*	
47	16476		Shift Lever Adjusting Link	
48	732-0487		Ext. Spring 8¼″ Lg.	
49	710-0378		3/16-18 x 2.50 Hex Bolt	
50	747-0668		Shift Rod	
51	714-0149		Intern. Cotter Pin	
52	717-0775V		Transaxle (See Breakdown)	
53	710-0136		Hex Bolt ¼-20 x 1.75″ Lg.*	
54	710-0180		Hex Bolt 3/8-24 x .75″ Lg.*	
55	15564		Torque Rod Bracket	
56	712-0287		Hex Nut ¼-20 Thd.*	
57	736-0329		L-Wash. ¼″ I.D.*	
58	710-0965		Self-Tap Mach. Scr. Type "C" ¼-20 x 1.37″ Lg.	
59	16478		Shift Lever Support Brkt.	
60	710-0597		Hex Bolt ¼-20 x 1.00″ Lg.*	
62	15553		Transaxle Support Ass'y.	
63	754-0240		V-Belt	
64	710-0693		Hex Bolt 3/8-16 x 4.5″ Lg.	
65	712-0116		Hex Ins. L-Nut 3/8-24 Thd.	
66	756-0390		5/8 V-Pulley .500″ I.D. x 6″	
67	756-0116		V-Belt Idler .38″ I.D. x 3.06″	
68	732-0308		Ext. Spring .50″ O.D. x 6.37″	
69	710-0314		Hex Bolt 7/16-20 x 1.00″ Lg.	
70	736-0171		L-Wash. 7/16″ I.D.	
71	756-0391		Engine Pulley .500″ O.D. & 3.56″ O.D.	
72	15623		Upper Eng. Belt Guard	
73	736-0219		Bell-Wash. .4″ I.D. x 1.12″ O.D.	
74	750-0686		Spacer .256″ I.D. x .50″ O.D.	
75	714-0114		Sq.-Key ¼″ x 2.00″ Lg.	
76	736-0921		L-Wash. ½″ I.D.*	
77	736-0226		Fl-Wash. .469″ I.D. x .88″ O.D.	
78	754-0241		V-Belt	
79	750-0706		Spacer 1.00″ x .380″ O.D.	
80	736-0405		Washer .56 I.D. x 1.25″ O.D.	
81	712-0922		Hex Nut ½-20 Thd.	
82	711-0676		Torque Rod	
83	748-0294		Flange Bearing .378	
84	736-0187		Fl-Wash. .640″ I.D. x 1.24″	
85	15569		Idler Bracket Ass'y.	
86	736-0283		Thrust Wash. .635″ I.D.	
87	732-0436		Extension Spring 7.58″ Lg.	
88	736-0284		Thrust Wash. .385″ I.D.	
89	15585		Idler Bracket Ass'y. For Clutch	
90	711-0747		Belt Guard Pin ¼″ Dia.	
91	747-0422		Clutch Rod	
92	735-0196		Foot Pad	
93	17100		Mtg. Brkt. Variable Pulley	
94	15642		Weld Bolt Brkt. Ass'y.	
97	712-0798		Hex Nut 3/8-16	
98	736-0217		L-Wash. 3/8 Heavy Duty	
99	710-0118		Hex Bolt 5/16-18 x .75″ Lg.*	
100	16482		Shift Lever Spring Brkt.	

Models 501 thru 508, 511 thru 514



Models 501 thru 508, 511 thru 514

PARTS LIST FOR MODELS 501 THRU 508, 511 THRU 514 RIDING MOWERS

F.).	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	731-0220		Steering Wheel Cap	
2	712-0237		Hex L-Nut 5/16-24 Thd.	
3	736-0242		Bell-Wash. .345″ I.D. x .88″ O.D.	
4	731-0805		Steering Wheel Ass'y.	
5	738-0700		Steering Shaft (501 thru 508)	
6	750-0568		Steering Tube Spacer (Chrome) (501 thru 508)	
7	731-0651		Steering Tube Spacer (501 thru 508)	
8	736-0187		Fl-Wash. .635″ I.D. x 1.24″ O.D. (501 thru 508)	
9	741-0225		Hex Flange Bearing (501 thru 508)	
10	15613		Pivot Bar Bracket	
11	710-0118		Hex Bolt 5/16-18 x .75″ Lg.*	
12	17130		Steering Gear Support Brkt.	
13	710-0776		Hex Wash. Hd. AB-Tap Scr. ¼ x .62″ Lg.	
14	15608		Steering Gear Cover	
15	741-0225		Hex Flange Bearing	
16	736-0285		Fl-Wash. .640″ I.D. x 1.5″ O.D.	
17	736-0320		Fl-Washer 3/8″ I.D. x 1.37″ O.D.	
18	748-0290		Steering Pinion Gear	
19	~~736-0320~~		~~Fl-Wash. .385″ I.D. x 1.38″~~	
20	712-0116		Hex L-Nut 3/8-24	
21	736-0275		Fl-Wash. .34″ I.D. x .68″ O.D.	
22	712-0123		Hex Nut 5/16-24 Thd.*	
23	710-0191		Hex Bolt 3/8-24 x 1.25″ Lg. (Grade 5)	
24	736-0320		Fl-Wash. .385″ I.D. x 1.38″	
25	712-0241		Hex Nut 3/8-24 Thd.*	
26	736-0169		L-Wash. 3/8″ I.D.*	
27	717-0472		Steering Gear Segment	
28	738-0541		Shoulder Spacer .622″ Dia. x .218	
29	710-0689		Hex Bolt (Nylon) ½-13 x .75″	
30	736-0160		Fl-Wash. .530″ I.D. x .930″	
31	712-0206		Hex Nut ½-13 Thd.*	
32	736-0105		Bell-Wash. .385″ I.D. x .88″	
33	712-0241		Hex Nut 3/8-24 Thd.*	
34	736-0119		L-Wash. 5/16″ I.D.*	
35	712-0267		Hex Nut 5/16-18 Thd.*	
38	723-01		Ball Joint Ass'y. 3/8-24 Thd.	
39	714-01		Cotter Pin 1/8″ Dia. x 1.00″ Lg.* (501 thru 508)	
40	747-04		Steering Tie Rod	
41	15616		Front Axle Ass'y.—R.H.	
	15617		Front Axle Ass'y.—L.H. (Not Shown)	
42	741-0		Flange Bearing .632″ I.D.	
43	◄		Front Wheel Ass'y. Comp.	
44	◄		Front Wheel Rim Only	
46	714-0		Cotter Pin 1/8″ Dia. x 1.25″*	
47	714-0		Cotter Pin 1/8″ Dia. x 1.00″*	
48	736-0		Fl-Wash. .385″ I.D. x .87″	
49	736-0		Fl-Wash. .635″ I.D. x 1.24″	
50	741-0		Hex Flange Bearing	
52	736-0		Fl-Wash. .635″ I.D. x 1.12″	
53	1561		Pivot Bar Ass'y.	
54	726-0		Speed Nut 5/8″ I.D.	
55	1561		Pivot Bar Bracket	
56	1569		Bracket Reinforcement—R.H.	
57	710-0		Hex Wash. Hd. AB-Tap Scr. ¼ x .62″ Lg.	
58	726-0		Cable Tie**	
59	1556		Clutch-Brake Pedal Ass'y.	
60	710-0		Hex Bolt 5/16-18 x .75″ Lg.*	
61	1569		Bracket Reinforcement—L.H.	
62	710-0		Hex Bolt 5/16-18 x .75″ Lg.*	
63	711-0		Battery Hold Down Rod**	
64	712-0		Wing Nut Solid ¼-20 Thd.**	
65	731-0		Battery Hold Down Cover**	
66	725-0		12V Battery**	
67	734-		Chrome Hub Cap (Optional)	
68	731-		Plastic Hub Cap (Optional)	
69	1651		Steering Shaft Ass'y. (511 thru 514)	
70	736-	7	Fl-Wash. .635″ I.D. x 1.24″ O.D. (511 thru 514)	
71	750-	2	Spacer (Plastic) (511 thru 514)	
72	160		Reinf. Brkt. Ass'y. (511 thru 514)	
73	710	3	Truss Mach. Scr. 5/16-18 (511 thru 514)	
74	710	6	Hex Bolt 5/16-18 x 2.00″ Lg. (511 thru 514)	

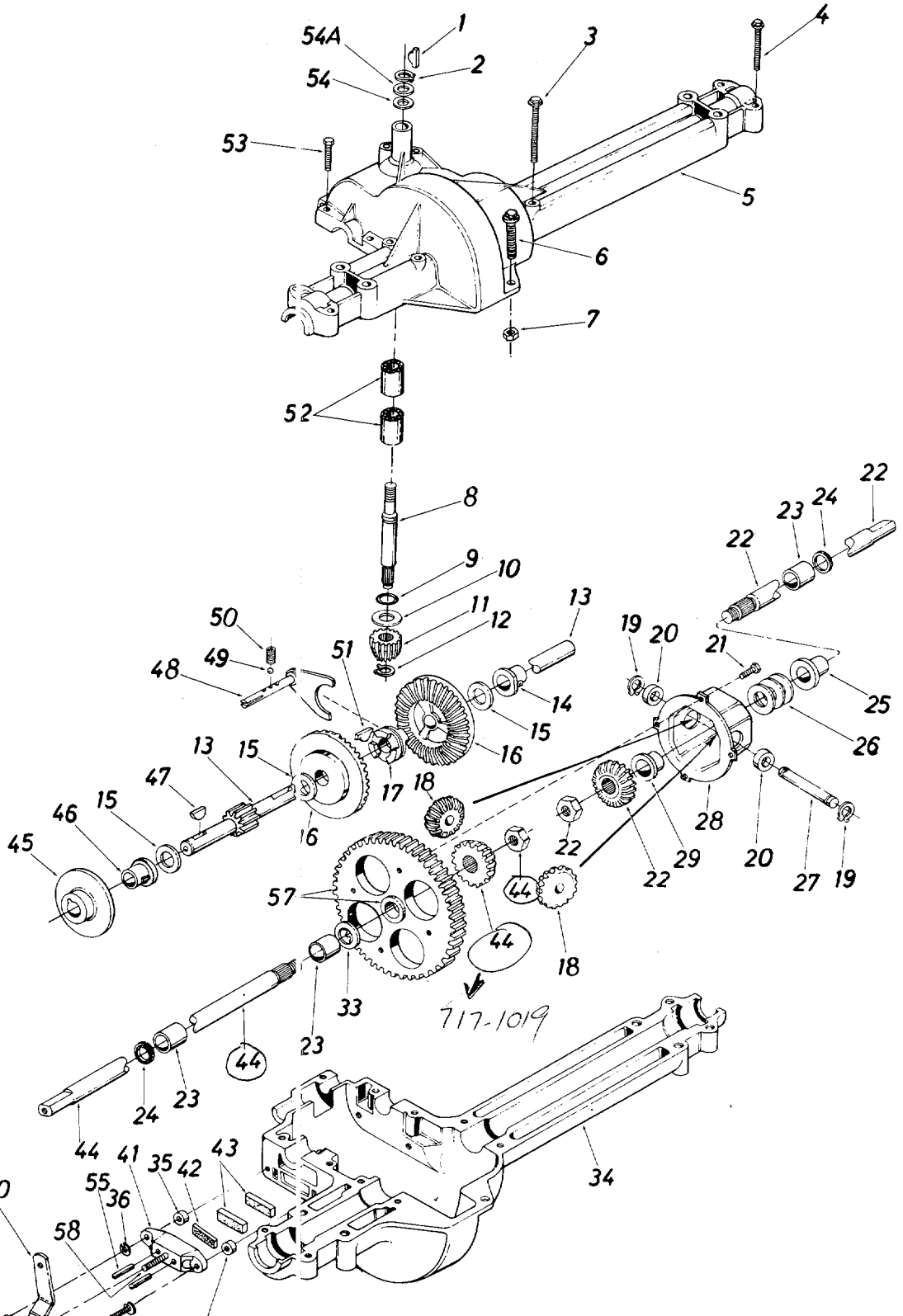
**Electric Start Models only.

◄FRONT WHEEL CH

Description	11 x 4.0	1 x 4.0	10.5 x 3.5
Wheel Assembly Comp.	734-1454	34-1404	734-1000
	734-1382	34-1382	—

NYLATRON PLASTIC

Models 501 thru 508, 511 thru 514



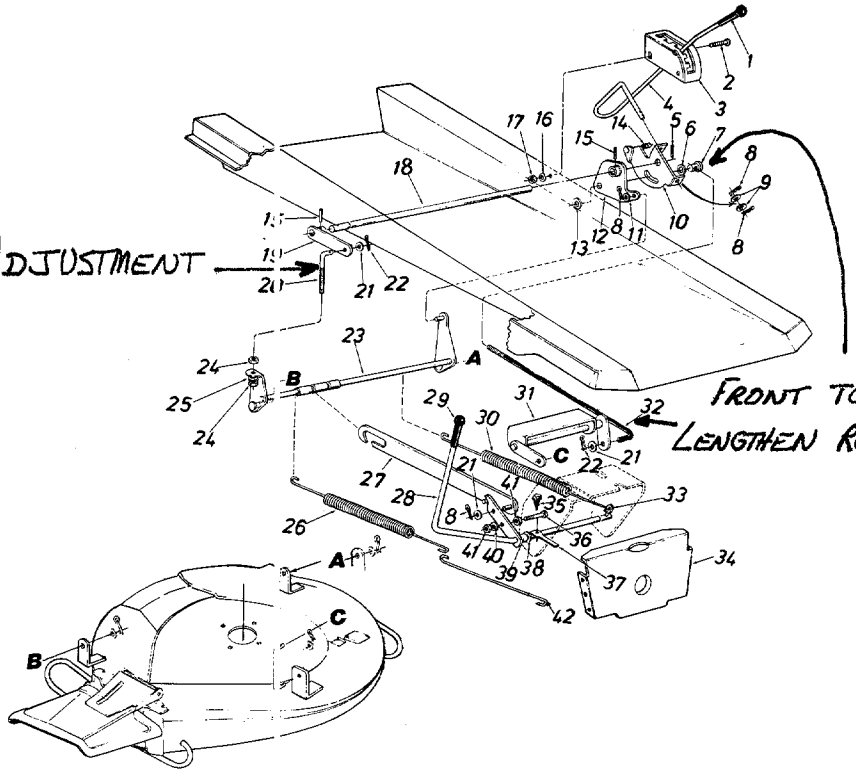
Models 501 thru 508, 511 thru 514

PARTS LIST FOR
SINGLE SPEED TRANSAXLE LEFT HAND 717-0775V

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	714-0129		#4 Hi-Pro Key 3/32 x 5/8" Dia.	
2	716-0115		Snap Ring .625" Shaft	
3	710-0854		Hex Bolt ¼-20 x 1.75" Lg.*	
4	710-0378		Hex Bolt 5/16-18 x 2.5"	
5	717-0764		Upper Housing	
6	710-0889		Hex Fl-Bolt ¼-20 x .88" Lg.*	
7	712-0287		Hex Nut ¼-20 Thd.*	
8	717-0634		Input Shaft	
9	721-0178		Square Seal 5/8" I.D.	
10	736-0335		Thrust Washer 5/8" I.D. x 1.25" O.D.	
11	717-0633		Pinion Input 14T	
12	716-0108		Retaining Ring 7/16" Ext.	
13	717-0768		Drive Shaft	
14	741-0336		Flange Brg. 5/8" I.D. x ¾" Lg.*	
15	**		Fl-Wash. (See Below)	
16	717-0757		Bevel Gear 42T	
17	717-0667		Clutch Collar	
18	717-1020		Miter Gear 15T (H.D.)	
19	716-0142		Snap Ring	
20	717-0690		Thrust Bearing ½" I.D. x 1.0" O.D.	
21	710-0862		Pan Head Scr. ¼-20 x .50" Lg. w/Patch	
22	717-0766		Axle R.H. Ass'y.—Kit	
23	741-0340		Sleeve Bearing ¾" I.D. x 1.0" Lg.	
24	721-0179		Oil Seal ¾" I.D.	
25	741-0339		Flange Bearing ¾" I.D. x 15/16" Lg.	
26	736-0188		Fl-Wash. .760" I.D. x 1.49" O.D.	
27	717-0673		Cross Shaft	
28	717-0777		Differential Housing Ass'y.	
29	—		Part of Ref. 28	
33	736-0188		Fl-Wash. .760" I.D. x 1.49" O.D.	
34	717-0761		Lower Housing	
35	750-0555		Spacer .53" O.D. x 3/8" Lg.	
36	736-0329		L-Wash. ¼" I.D.*	
37	710-0886		Hex Bolt ¼-20 x 1.50" Lg. (Grade 5)	
38	712-0335		Castle Nut 5/16-24 Thd.	
39	736-0159		Fl-Wash. .344" I.D. x .875" O.D.	
40	717-0772		Actuating Arm	
41	717-0679		Brake Yoke	
42	717-0682		Puck Plate	
43	717-0678		Brake Puck	
44	717-0765		Axle L.H. Ass'y.—Kit	
45	717-0677		Brake Disc	
46	741-0337		Flange Bearing 5/8" I.D. x 15/16" Lg.	
47	714-0161		Woodruff Key 3/16 x 5/8 HT	
48	717-0754		Shift Fork Ass'y.	
49	741-0862		Ball Detent .250" Dia.	
50	732-0863		Spring Detent	
51	714-0169		#9 Hi-Pro Key 3/16" x ¾" Dia. HT	
52	741-0335		Needle Brg. 5/8" I.D. x ½" Lg.	
53	710-0855		Hex Bolt ¼-20 x 1.00" Lg.	
54	736-0336		Fl-Wash. 5/8" I.D. x .030	
54A	736-0337		Fl-Wash. 5/8" I.D. x .040	
55	741-0343		Actuating Pin 5/16" Dia.	
56	710-0966		Hex Bolt ¼-20 x 2.50" Lg. (Grade 5)	
57	717-0767		Differential Gear 72T Ass'y. w/Bearing	
58	717-0681		Sq. Hd. Bolt 5/16-24 Thd.	
59	1544-013		Cotter Pin 3/32" Dia. x .50" Lg.	
—	737-0148		Grease—Shell (10 oz.) DARINA	

*Ref. No. 15 736-0349 Fl-Wash. 5/8" I.D. x 1.0" O.D. x .020" Thk.
736-0336 Fl-Wash. 5/8" I.D. x 1.0" O.D. x .030" Thk.
736-0337 Fl-Wash. 5/8" I.D. x 1.0" O.D. x .040" Thk.

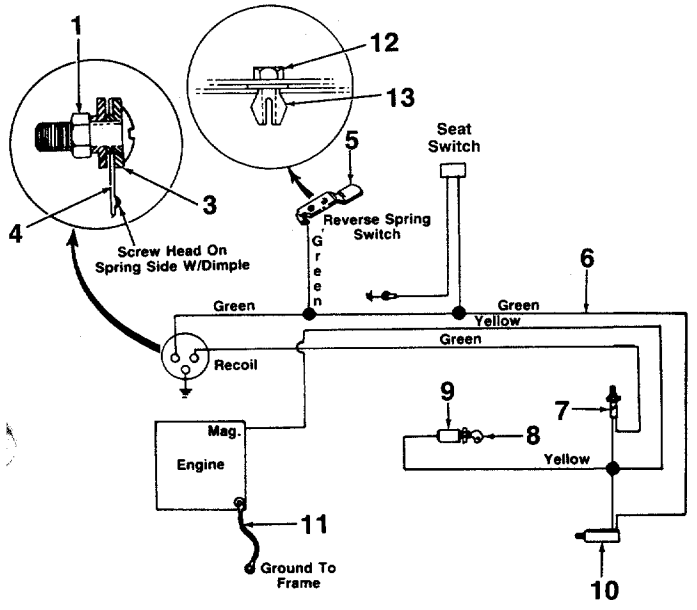
Models 501 thru 508, 511 thru 514



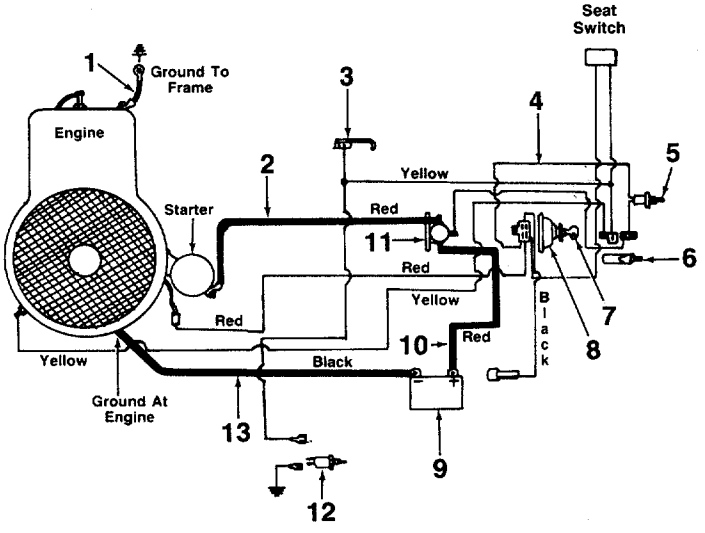
PARTS LIST FOR 501 THRU 508, 511 THRU 514 RIDING MOWERS

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	720-0143		Grip		21	736-0300		Fl-Wash. .385" I.D. x .87" O.D.	
2	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.*		22	714-0145		Intern. Cotter Pin ½" Dia.	
3	16397		Deck Index Bracket		23	15600		Deck Link Ass'y.—Rear	
4	747-0651		Deck Lift Handle		24	712-0798		Hex Nut 3/8-16 Thd.*	
5	715-0134		Spring Pin Spir. 3/16" Dia. x 1.50" Lg.		25	736-0169		L-Wash. 3/8" I.D.*	
6	736-0187		Fl-Wash. .385" I.D. x .87" O.D.		26	732-0540		Extension Spring .73" O.D. x 13.84" Lg.	
7	711-0749		Adj. Ferrule Deck Lift Handle		27	15644		Deck Drive Control Bracket	
8	714-0115		Cotter Pin 1/8" Dia. x 1.00" Lg.*		28	15568		Blade Engagement Lever Ass'y.	
9	736-0160		Fl-Wash. .531" I.D. x .930" O.D.		29	720-0143		Grip	
10	16402		Deck Lift Handle Retainer Ass'y.		30	732-0540		Extension Spring .73" O.D. x 13.89" Lg.	
11	736-0300		Fl-Wash. .385" I.D. x .87" O.D.		31	15573		Deck Lift Ass'y.—Front	
12	15578		Deck Lift Brkt. Ass'y.—L.H.		32	747-0426		Deck Lift Connecting Rod	
13	736-0162		Fl-Wash. .635" I.D. x 1.04" O.D.		33	711-0753		Clevis Pin Special .250" Dia.	
14	732-0430		Compression Spring .50" Dia. x 1.0" Lg.		34	15613		Pivot Bar Bracket	
15	715-0114		Spring Pin Spir. 1/4" Dia. x 1.50" Lg.		35	710-0642		Hex TT-Tap Scr. ¼-20 x .75" Lg.	
16	736-0119		L-Wash. 5/16" I.D.*		36	710-0805		Hex Bolt 5/16-18 x 1.50" Lg. (Grade 5)	
17	712-0267		Hex Nut 5/16-18 Thd.*		37	732-0435		Switch Actuator	
18	738-0550		Rear Hgt. Adj. Shaft		38	736-0160		Fl-Wash. .531" I.D. x .930" O.D.	
19	15609		Deck Lift Brkt. Ass'y.—R.H.		39	750-0515		Spacer .511" I.D. x .70" O.D. x .38" Lg.	
20	710-0866		Deck Adj. Scr. 3/8-16 Thd		40	736-0119		L-Wash. 5/16" I.D.*	
					41	712-0267		Hex Nut 5/16-18 Thd.*	
					42	732-0451		Spring Hook	

Models 501, 502, 511 and 512 (Recoil Start)



Models 504 thru 508 and 514 (Electric Start)



PARTS LIST FOR ELECTRICAL SYSTEM MODELS 501, 502, 511 AND 512 RIDING MOWERS

REF. NO.	PART NO.	DESCRIPTION	NEW PART
1	712-0121	Hex Nut #10-24 Thd.*	
2	710-0425	Truss Mach. Scr. #10-24 x .62" Lg.*	
3	736-0338	Fiber Washer	
4	732-0257	Switch Spring—Recoil	
5	732-0420	Spring Switch—Reverse	
6	725-1182	Wire Harness	
7	725-0269	Safety Switch—Red N.C.—Clutch	
8	725-0201	Ignition Key	
9	725-0464	Ignition Switch	
10	725-0819	Safety Switch—P.T.O.	
11	725-0882	Ground Wire	
12	710-0425	Truss Mach. Scr. #10-24	
13	726-0206	Push-In Nut #10	

PARTS LIST FOR ELECTRICAL SYSTEM MODELS 504 THRU 508 AND 514 RIDING MOWERS

REF. NO.	PART NO.	DESCRIPTION	NEW PART
1	725-0977	Elec. Wire 8 Ga. x 9.0" Lg.	
2	725-0424	Elec. Wire	
3	732-0420	Spring Switch—Reverse	
4	725-1143	Wire Harness	
5	725-0268	Safety Switch—Black N.O. CLUTCH	
6	725-0819	Safety Switch BLADE	
7	725-0201	Ignition Key	
8	725-0267	Ignition Switch	
9	725-0514	Battery 12V	
10	725-0927	Elec. Wire Red w/Boot	
11	725-0771	Solenoid	
12	725-0269	Safety Switch Red N.C.	
	725-1001	Safety Switch Red—(36" Deck)	
13	725-0975	Elec. Wire 8 Ga. x 9.0" Lg.	
14	725-0765	Elec. Wire	
15	725-0977	Elect. Wire 11.5" Lg.	

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quantity of each part required.

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline,** Briggs & Stratton or Tecumseh Lauson.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

ALABAMA	**BIRMINGHAM**	
Auto Electric & Carburetor Co.	2625 4th Ave. S.	35233
ARKANSAS	**NORTH LITTLE ROCK**	
Sutton's Lawn Mower Shop	5301 Roundtop Drive Box 368, Rt. 4	72117
CALIFORNIA	**PORTERVILLE**	
Billious	75 North D Street	93257
COLORADO	**DENVER**	
Spitzer Industrial Products Co.	6601 N. Washington St.	80229
FLORIDA	**JACKSONVILLE**	
Radco Distributors	4909 Victor St. Box 5459	32207
	HIALEAH	
Small Eng. Dist.	7995 W. 26th Court	33016
GEORGIA	**EAST POINT**	
East Point Cycle & Key Inc.	2834 Church St.	30344
ILLINOIS	**LYONS**	
Keen Edge Co.	8615 Ogden Ave.	60534
INDIANA	**ELKHART**	
Parts & Sales Inc.	2101 Industrial Pkwy.	46516
IOWA	**DUBUQUE**	
Power Lawn & Garden Equip.	2551 J.F. Kennedy	52001
LOUISIANA	**NEW ORLEANS**	
Suhren Engine Co.	8330 Earhart Blvd.	70118
MARYLAND	**TAKOMA PARK**	
Center Supply Co.	6867 New Hampshire Ave.	20912
MASSACHUSETTS	**SPRINGFIELD**	
Morton B. Collins Co.	300 Birnie Ave.	01107
MICHIGAN	**MOUNT CLEMENS**	
Power Equipment Dist.	340 Hubbard	48043
MINNESOTA	**PLYMOUTH**	
Hance Distributing Inc.	12795 16th Ave. North	55441
MISSOURI	**EARTH CITY**	
Oscar Wilson Engine & Parts	4159 Shoreline Dr.	63045
	KANSAS CITY	
Automotive Equip. Service	3117 Holmes St.	64109
NEW JERSEY	**ALLOWAY**	
Piersons	Canal St., Box 494	08001
NEW MEXICO	**ALBUQUERQUE**	
Spitzer Eng. & Parts Co.	1023 Third Ave. N.W.	87103
NEW YORK	**CARTHAGE**	
Gamble Dist., Inc.	West End Ave.	13619
NORTH CAROLINA	**GREENSBORO**	
Dixie Sales Company	335 N. Green	27402
OHIO	**CARROLL**	
Stebe's Mid-State Mower Supply	Box 366, 71 High St.	43112
	CLEVELAND	
Bleckrie, Inc.	7900 Lorain Ave.	44102
	WADSWORTH	
National Central	687 Seville Rd.	44281
	YOUNGSTOWN	
Burton Supply Co.	1301 Logan Ave. Box 929	44501
PENNSYLVANIA	**HARRISBURG**	
EECO Inc.	4021 N. 6th St.	17110
	WILLOW GROVE	
Thompson Rubber Co.	850 Davisville Rd.	19090
	PITTSBURGH	
Bluemont Co.	11101 Frankstown Rd.	15235
	PUNXSUTAWNEY	
Frank Roberts & Sons	R.D. 2	15767
	SCRANTON	
Scranton Auto Ignition Co.	1133-35 Wyoming Ave.	18509
TENNESSEE	**KNOXVILLE**	
Ace Distributors	2103 Magnolia	3791[illegible]
	MEMPHIS	
American Sales & Service, Inc.	3035-43 Bellbrook	38116
TEXAS	**DALLAS**	
Marr Brothers, Inc.	423 E. Jefferson	75203
	SAN ANTONIO	
Engine House Inc.	8610 Botts Lane P.O. Box 17867	78217
UTAH	**SALT LAKE CITY**	
Powered Products	1661 N. Beck St.	84116
VIRGINIA	**ASHLAND**	
RBI Corp.	101 Cedar Ridge Dr.	23005
WASHINGTON	**SEATTLE**	
Equip. Northwest	1410 14th Ave.	98122
WISCONSIN	**MILWAUKEE**	
Wisconsin Magneto Inc.	4727 N. Teutonia St.	53209

WARRANTY PARTS AND SERVICE POLICY (0687)

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. **Replacement of Missing Parts** on new equipment.
2. **Replacement of Defective Parts** within the warranty period.
3. **Repair of Defects** within the warranty period.

All claims MUST be substantiated with the following information:

1. **Model Number, Serial Number and/or Data Code** of unit involved.
2. **Date** unit was purchased or first put into service.
3. **Date of Failure.**
4. **Nature of Failure.**

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