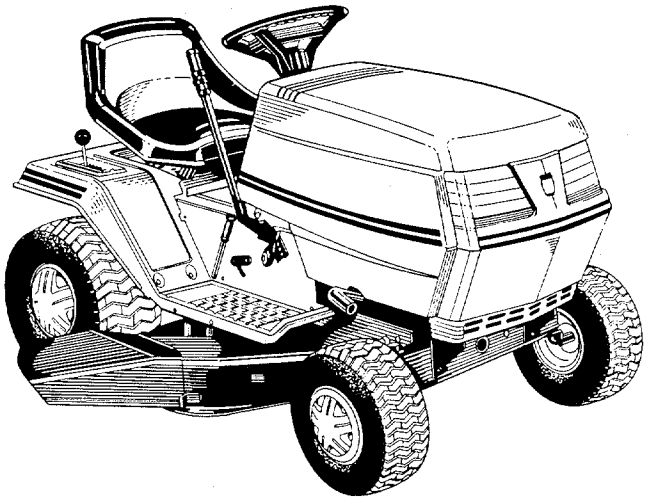
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OWNER'S GUIDE

Thank you for purchasing an American-built product.

12.5 H.P.
LAWN TRACTOR



Model Number
139-684-401

IMPORTANT:
Read Safety Rules and Instructions Carefully

PRINTED IN U.S.A.

FORM NO. 770-6361D

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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, Peerless components, motor, battery (except as noted below) or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

A battery which proves defective within ninety (90) days will be replaced without charge. After 90 days but within one year from the date of purchase, MTD will replace the defective battery for a charge of 1/12 of the current retail price of the battery for each full 30 day period between the date of purchase and the date of return.

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.

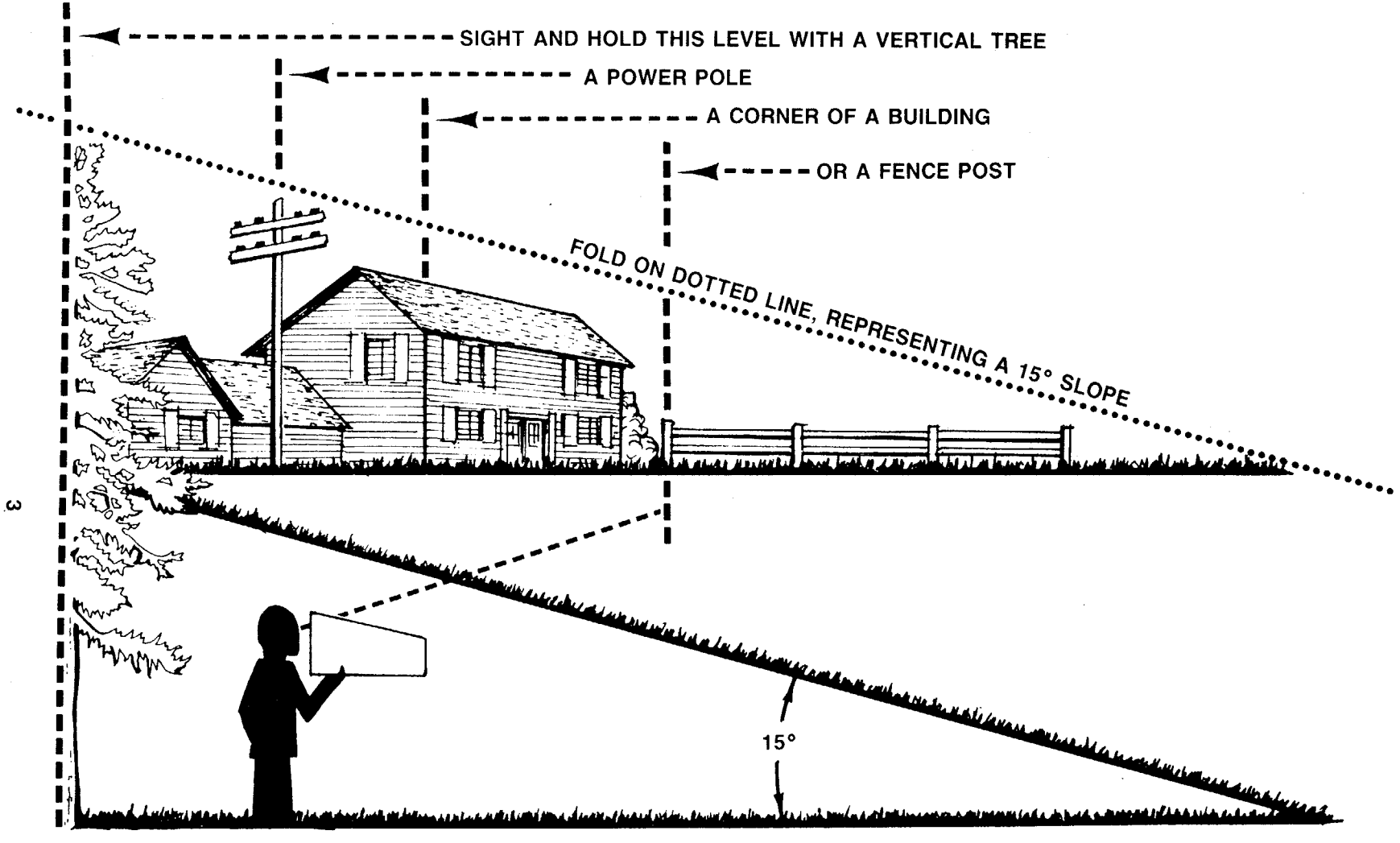
In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer.

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

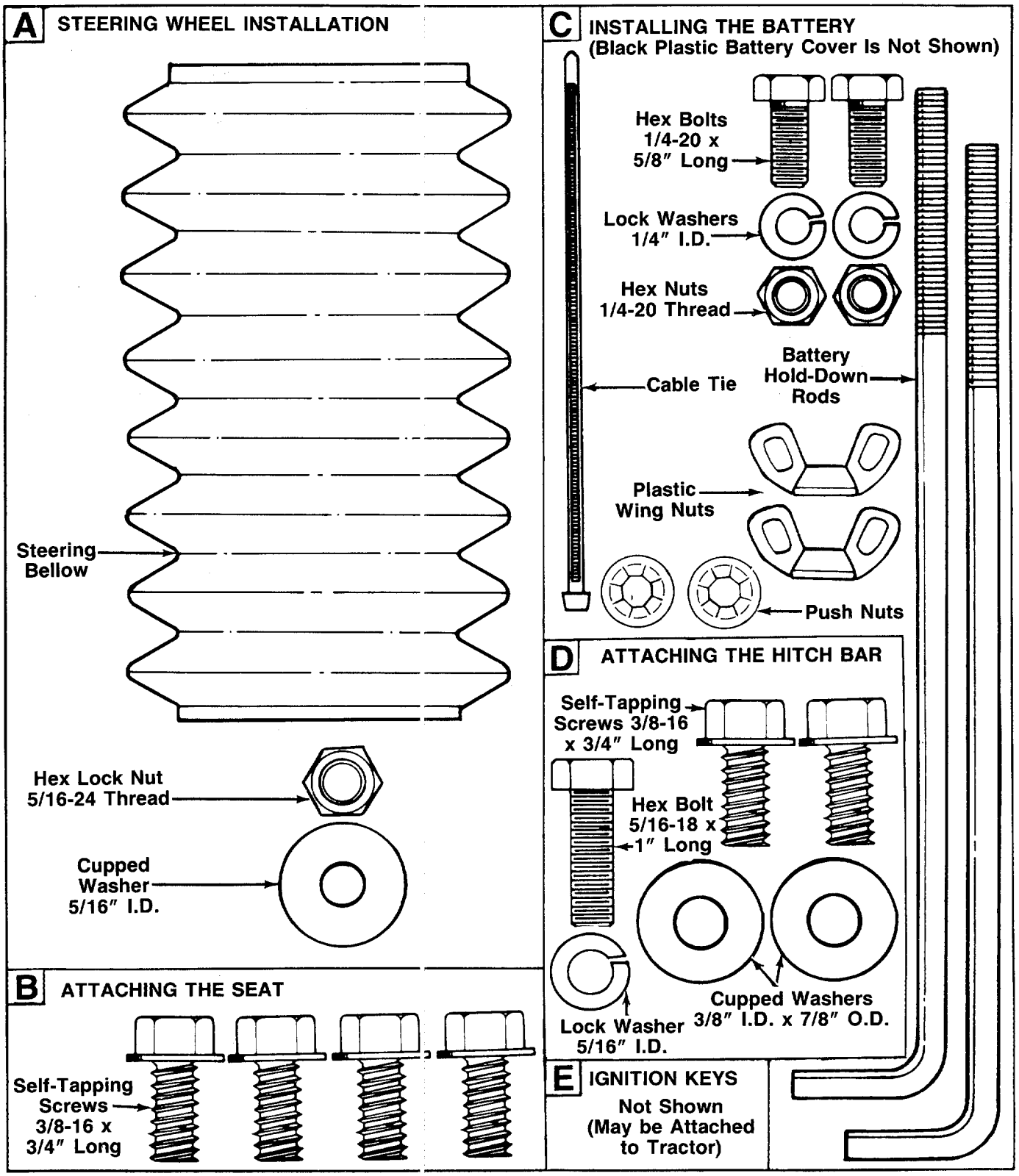
Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2½ feet every 10 feet). A riding mower could overturn and cause serious injury. If operating a walk-behind mower on such a slope, it is extremely difficult to maintain your footing and you could slip, resulting in serious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





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

UNPACKING

1. Remove the lawn tractor 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 lay the contents of the hardware pack on the illustration for identification.

NOTE

Two mounting brackets and hardware are included in a separate bag for use with the optional grass collector, model 190-064. Keep these parts in a safe place for future use.

Important: If you purchase the optional grass collector (190-064), it may be equipped with a front counterweight, which will not fit your unit. You must order a set of wheel weights, part number 753-0476, to use instead of the front counterweight.

BATTERY INFORMATION

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.

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.**

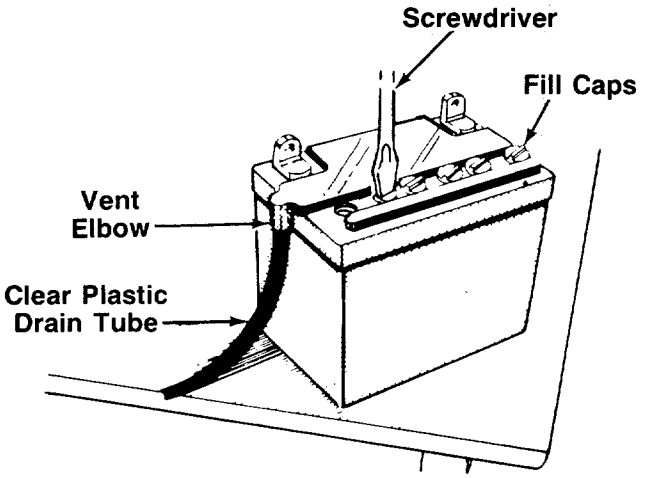


FIGURE 1.

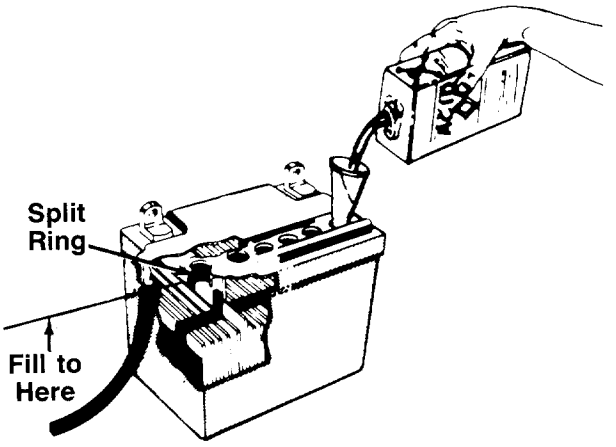


FIGURE 2.

DANGER

Battery contains sulfuric acid. Refer to warning on page 6. 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.

KEEP BATTERIES
OUT OF THE REACH OF CHILDREN!

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 cardboard container and one cone.
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 1.
4. Cut off the tip of the cone for use as a funnel.
5. Place the battery fluid container upright on the table or workbench. Carefully remove the flap on the box, and pull out the plastic tube. Cut off the tip of the plastic tube. Do not squeeze the container when cutting the tip.
6. Fill each battery cell slowly and carefully to the split ring at the bottom of the well. See figure 2. Use caution as the acid level will rise rapidly after the bottom of the cell is filled. DO NOT OVERFILL.
7. Allow battery to stand for 30 minutes with the fill caps removed, while the plates absorb acid.
8. If acid level has fallen after the 30 minute standing period, refill each cell with battery acid to the split ring. Replace the fill caps.
9. Before discarding the empty container, neutralize any residue with baking soda and rinse container with water. Puncture container several times before discarding.
10. Charge the battery after the 30 minute standing period. SLOW CHARGE THE BATTERY (DO NOT FAST CHARGE) at a maximum bench rate of 5 amperes until the specific gravity reading is 1.265 (Approximately 30 minutes).

NOTE

After battery has been in service, add only distilled water to replace normal loss. Do not add acid.

NOTE

This engine is equipped with regulated alternator. 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.

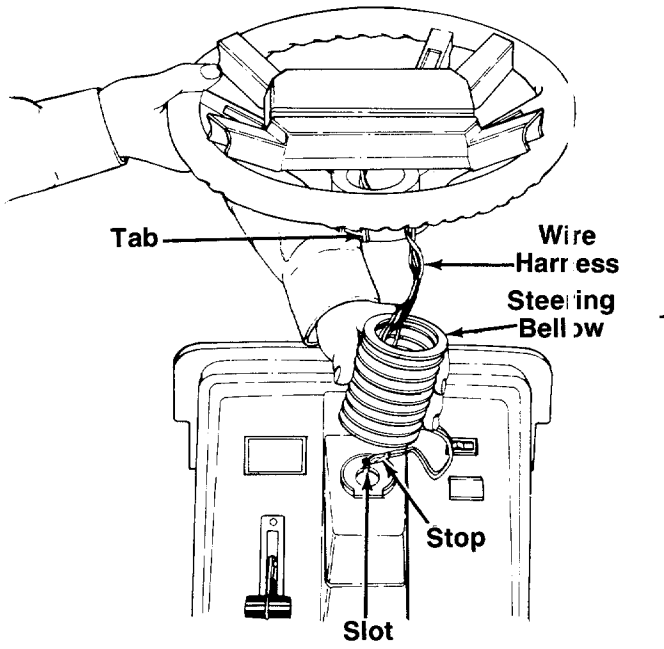


FIGURE 3.

STEERING WHEEL INSTALLATION (Hardware A)

Your unit is equipped with indicator lights, located in the steering wheel. The steering wheel **must** be assembled as follows for proper operation of the indicator lights.

1. Open the hood of the tractor.
2. Place the larger end of the steering bellow over the wire harness extending through the steering wheel (bellow must fit over the four tabs on the steering wheel). See figure 3.
3. Insert the ends of the wire harness down through the hole in the dash. Then slide the wires through the slot into the smaller hole in the dash to the stop (tape) on the harness as shown in figure 3. Only about 6″ of wire will extend beneath the dash.
4. Plug the three connectors on the wire harness into the corresponding connectors on the tractor.
5. Slide the upper steering column through the hole in the dash, over the lower steering column. Insert hex bolt through upper and lower column to secure temporarily in either of the two bottom hole locations.
6. Position the front wheels of the tractor so they are pointing straight forward.
7. Slide the steering bellow over the steering column. Hold the wires out of the way as shown. See figure 4.
8. Place the steering wheel over the steering column, positioning steering wheel as shown (slot for the wires is toward the front of the tractor).
9. Place the washer with the cupped side down over the steering column. Secure with 5/16″ hex lock nut.
10. Attach the steering wheel insert to the steering wheel as follows.
    a. Position the steering wheel insert so the lights are toward the bottom.
    b. Place the two prongs on one side of the insert over two of the spokes on the steering wheel. Press into place.
    c. Take the slack out of the wires by pulling through the steering wheel.
    d. Press the prongs on the other side of the insert over the other two spokes on the steering wheel.
11. Remove the hex bolt which is holding the upper and lower steering columns. Turn steering wheel three full revolutions clockwise.
12. The holes in the upper steering column provide height positions for the steering wheel. Use one of the bottom two holes only. See figure 4, inset. Select desired position, and secure with hex bolt and hex lock nut. Tighten securely.

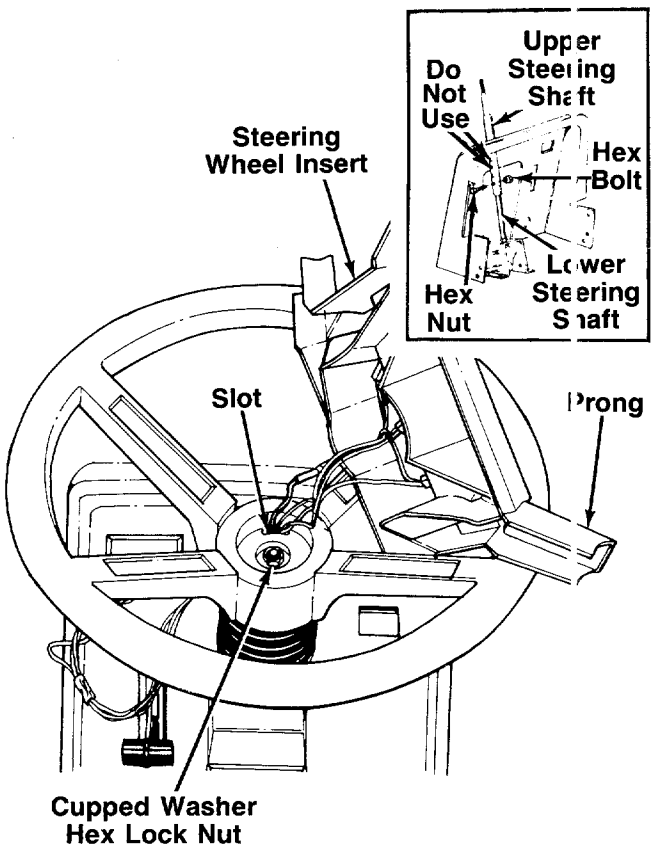


FIGURE 4.

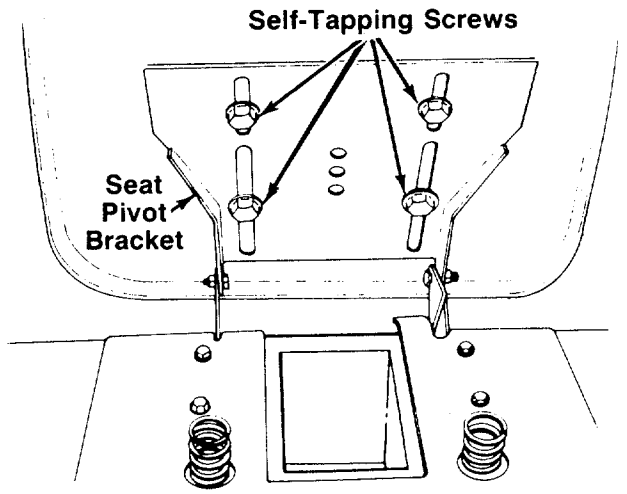


FIGURE 5.

13. If any excess wire is beneath the steering wheel, insert it inside the steering bellow. Pull bellow up against the bottom of the steering wheel.

ATTACHING THE SEAT (Hardware B)

Place the seat in position against the seat pivot bracket, lining up the slotted holes in the pivot bracket with the holes in the seat. Select desired position for the seat, and secure with self-tapping screws. See figure 5.

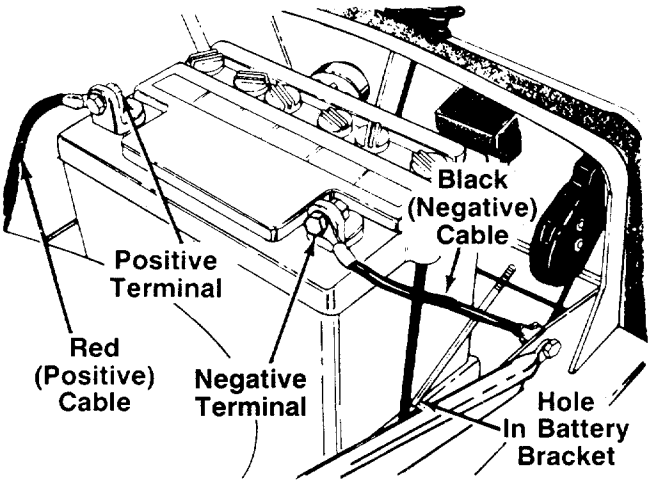


FIGURE 6.

INSTALLING THE BATTERY (Hardware C)

1. Open the hood of the lawn tractor by lifting up on both sides of the hood.
2. Place the battery in the lawn tractor so that the positive terminal is facing the right side of the unit. See figure 6.

NOTE

Right and left hand sides of the unit are determined from the operating position, facing forward.

3. Attach the positive cable (heavy red wire) to the positive battery terminal (+) with hex bolt 5/8" long, 1/4" lock washer and hex nut. See figure 6.
4. Attach the negative cable (heavy black wire) to the negative battery terminal (–) with the other hex bolt 5/8" long, 1/4" lock washer and hex nut.

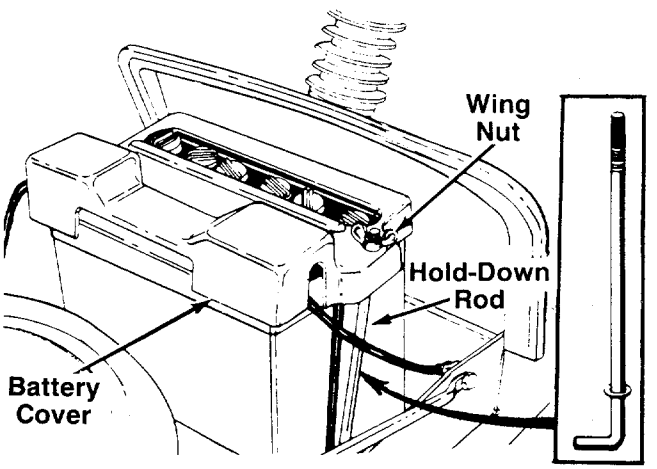


FIGURE 7.

5. Attach one push nut to each of the battery hold-down rods as shown in figure 7, inset.
6. Hook one hold-down rod into the hole in battery bracket. See figure 6. Slide the push nut to the bottom of the hold-down rod. Place the black plastic battery cover in position over the hold-down rod. Secure with wing nut. See figure 7. Attach other hold-down rod to the other side of battery cover in the same manner.

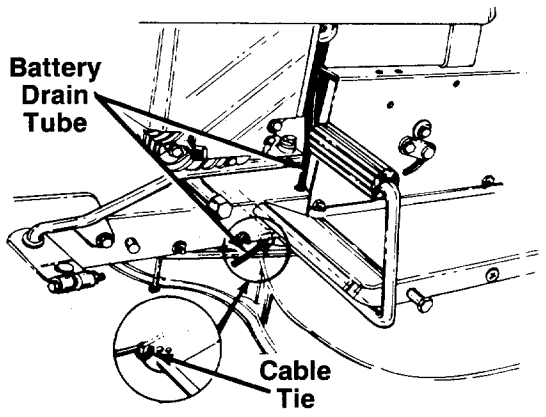


FIGURE 8.

7. Route the battery drain tube down through the hole in the frame, then forward to the bracket on clutch-brake pedal shaft. See figure 8.
8. Secure drain tube to bracket on clutch-brake pedal shaft, using the cable tie. Trim excess end of cable tie.

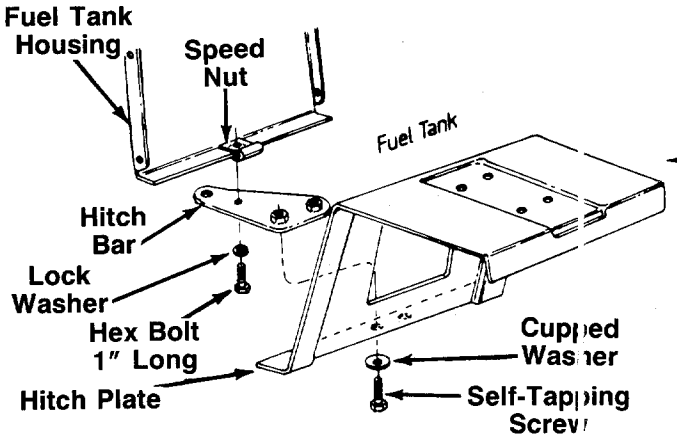


FIGURE 9.

ATTACHING THE HITCH BAR (Hardware D)

1. Place the hitch bar (weld nuts up) above the edge of the hitch plate on the tractor. See figure 9. Secure with two 3/4" long self-tapping screws and cupped washers (cupped side of washers go against the hitch plate).
2. Attach the hitch bar to the speed nut on the edge of the fuel tank housing using hex bolt 1" long and lock washer.

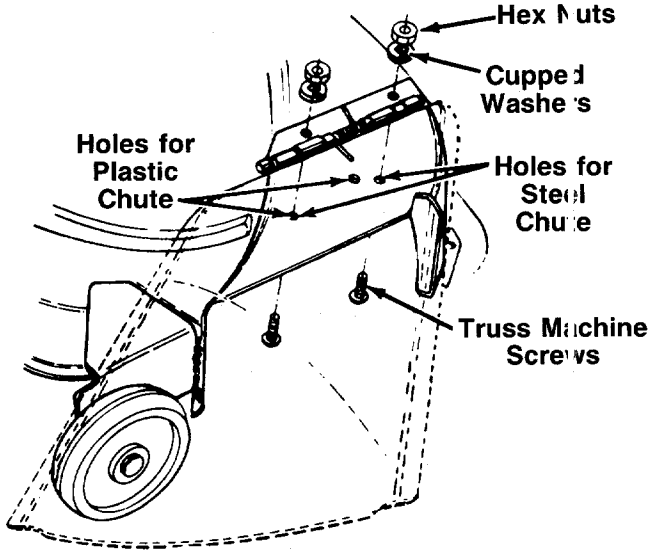


FIGURE 10.

ATTACHING THE CHUTE DEFLECTOR

The chute deflector on your unit may be either plastic or steel. Assemble the chute, using the holes shown in figure 10.

WARNING

Do not operate your unit unless the chute deflector has been properly installed.

1. Remove the truss machine screws, cupped washers and hex jam nuts which are attached to the deck next to the chute opening.
2. Place the chute deflector in position as shown in figure 10. Secure with hardware just removed.

CONTROLS

THROTTLE CONTROL

The throttle control is used to regulate the engine speed. To get maximum efficiency from cutting, the throttle should be in the FAST position when operating the mower. See figure 11.

CHOKE CONTROL

The choke control is located on the dashboard and is operated manually. Details for the choke operation are covered in the separate engine manual packed with your unit. See figure 11.

SHIFT LEVER

The shift lever is located in the center of the console and has three positions, FORWARD, NEUTRAL and REVERSE. See figure 11. The clutch-brake pedal must be depressed and the lawn tractor 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.

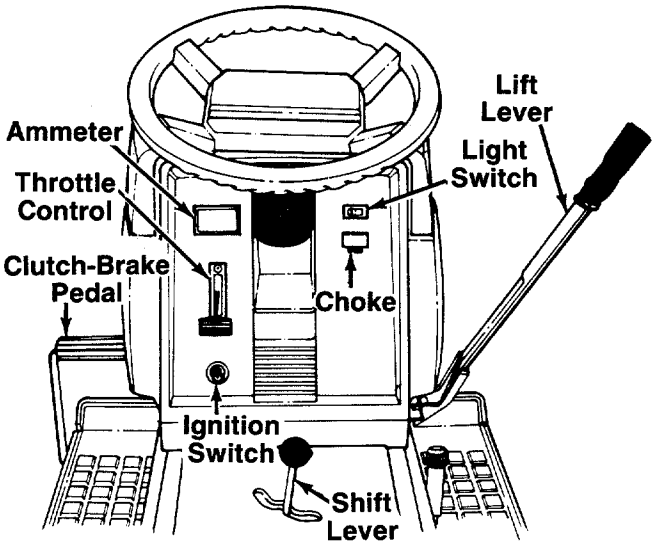


FIGURE 11.

SPEED CONTROL LEVER

The speed control lever is located on the right fender. It allows you to regulate the ground speed of the lawn tractor. See figure 12. To select the ground speed, depress clutch pedal. Push speed control lever outward and move backward to slow lawn tractor, move forward to increase speed. When desired speed has been obtained, release lever in that position. Whenever clutch is engaged, unit will automatically go to the pre-set speed.

IGNITION SWITCH

Turn the key to the START position to start the engine. When the engine is running, let the key return to the ON position. To stop the engine, turn the key to the left to the OFF position and remove it to prevent accidental starting. See figure 11.

LIGHT SWITCH

Push the light switch to turn on the lights. Ignition key must be in the ON position. See figure 11.

AMMETER

The ammeter registers the rate of battery charge or discharge. The ammeter will register on the discharging side when starting the engine. It should register on the opposite side (charging) when the engine is running in the fast position until the battery is completely charged. With a fully charged battery or with the engine idling, the ammeter will not show a charge. See figure 11.

CLUTCH-BRAKE PEDAL

The clutch-brake pedal is located on the left side of the lawn tractor. 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 11.

NOTE

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

PARKING BRAKE

The speed control lever is used to set the parking brake. To set the parking brake, depress the clutch-brake pedal. Press the speed control lever outward and all the way to the rear of the unit. Release the speed control lever and the clutch-brake pedal.

To release the parking brake, depress the clutch-brake pedal, press the speed control lever outward and move to desired position. Release the speed control lever and the clutch-brake pedal.

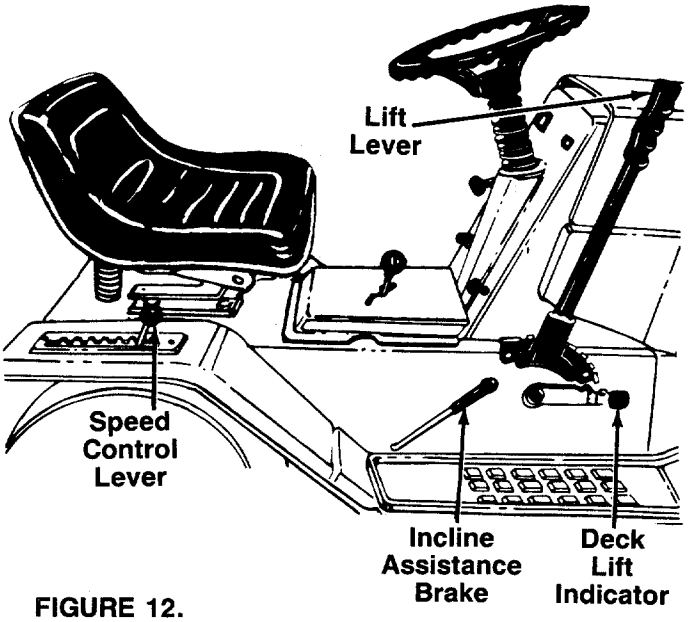


FIGURE 12.

INCLINE ASSISTANCE BRAKE

When stopping on a hill, hold the incline assistance brake lever back while you release the clutch-brake pedal until the lawn tractor begins to move, then release the lever. This lever permits smoother starts and clutch engagement by holding the tractor during the brake release/clutch engagement operation. See figure 12.

INTERLOCKS (Not Shown)

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

Before the engine will start, the clutch-brake peda must be depressed all the way and the lift lever must be in the disengaged position.

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

LIFT LEVER

The lift lever is used to raise and lower the cutting deck and to engage and disengage the cutting blades Pulling it all the way back and locking it disengages the blades. The lift lever must be in the disengaged position when starting the engine, when shifting into reverse or if the operator leaves the seat.

DECK LIFT INDICATOR

The deck lift indicator marks the position being used for the lift lever. Select the lift lever position desired, press the indicator lever outward, move it to the position immediately below the lift lever and release the indicator lever. See figure 12.

DECK WHEEL HEIGHT ADJUSTMENT

Move the deck wheel to the desired hole location in the deck.

SETTING THE CUTTING HEIGHT

1. Select the position for the lift lever which gives the desired cutting height. Move the deck lift indicator so that the lift lever can be returned to the same position after it is raised.
2. Set the deck wheels so that the wheels are ¼ to ½ inch above the ground.

INDICATOR LIGHTS

The unit is equipped with three indicator lights, located in the steering wheel. An illuminated light when starting the engine signifies the following.

CLUTCH—Depress the clutch-brake pedal.
PTO—Disengage the lift lever.

OIL—Will illuminate when starting the engine. **If it illuminates at any other time, oil pressure is low. Immediately stop the engine, check oil level and fill if necessary.**

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

TIRE PRESSURE

The tires on your unit may be over-inflated for shipping purposes. Reduce the tire pressure before operating the unit. Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure).

WARNING

Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

STARTING THE ENGINE

NOTE

To open the hood, simply lift up on both sides of the hood.

1. Service the engine with oil and gasoline as described in the engine manual.
2. Depress the clutch-brake pedal and set the parking brake.
3. Place the lift and disengagement lever in the DISENGAGED position. See figure 12.

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 lift and disengagement lever is in the disengaged position. In addition, the lift and disengagement 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 lift and disengagement lever engaged, the engine will shut off.

WARNING

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

4. Set the throttle control in the FAST position. See figure 11.
5. Pull out choke knob to choke engine. A warm engine may not require choking.
6. Turn the ignition key to the START position. When the engine is running, let the key return to the ON position. See figure 11.
7. Push choke knob in gradually. Move the throttle control to desired engine speed.

STOPPING THE ENGINE

Turn the ignition key to the left to the OFF position. Remove the key to prevent accidental starting.

IMPORTANT

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

NOTE

If any problems are encountered, refer to the Trouble Shooting Chart on page 22.

OPERATING THE LAWN TRACTOR

1. Set the desired cutting height.
2. Start the engine as instructed previously.
3. Move throttle control to ¾ or full throttle to prevent strain on the engine and to operate the cutting blades.
4. Place the shift lever in either the FORWARD or REVERSE position.

CAUTION

Look to the rear before backing up.

5. Release the parking brake by depressing the clutch-brake pedal, pressing outward on the speed control lever and moving to desired position. Use first speed position when operating the lawn tractor for the first time.
6. Release clutch-brake pedal slowly to put unit into motion.
7. The lawn tractor is brought to a stop by depressing 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. Be certain to change oil in the crankcase 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 tractor or engine. For best results and to insure more even grass distribution, do not mow when lawn is excessively wet.

When stopping the unit to empty a grass bag, etc., move the throttle to idle position to avoid "browning" the grass (caused by air from the engine hitting the same spot for a period of time). This "browning" is a temporary condition, which may not appear for 1 to 2 days after mowing.

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.

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.

OPERATING THE CUTTING BLADES

The cutting blades may be engaged while the lawn tractor is moving or standing still. DO NOT engage the cutting blades abruptly as the sudden belt tension on the pulley may cause the engine to stall.

WARNING

When the blade drive is engaged, keep feet and hands away from the discharge opening, the blades or any part of the deck. When the unit is used for other than mowing operations, the blade drive should be disengaged.

Move the lift and disengagement lever into the DISENGAGED position to raise the deck and disengage the blades.

GRASS COLLECTOR Model 190-064 is available as optional equipment for the lawn tractor shown in this manual.

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

SEAT ADJUSTMENT

The seat may be adjusted to different positions. Refer to "Attaching the Seat" section of Assembly Instructions.

STEERING WHEEL ADJUSTMENT

There are two height positions for the steering wheel. To adjust the height of the steering wheel, remove the hex bolt and hex lock nut on the steering shaft. Place the steering wheel in the position desired and secure with hex bolt and hex lock nut. Refer to figure 4.

NOTE

When raising the height of the steering wheel, stretch the steering bellow to cover the steering shaft.

DECK LEVELING ADJUSTMENT

If an uneven cut is obtained, the deck may be leveled as follows.

1. Remove the transmission cover:
   a. Place the gear shift lever in the neutral position. Unscrew the gear shift knob.
   b. Remove the two truss head screws which secure the transmission cover.
   c. Lift the transmission cover. Unplug the safety wire from beneath the transmission cover, and remove cover.
2. Using a 1/2" wrench, loosen the jam nut. See figure 13.
3. With the unit on a hard, level surface, measure the distance from the bottom edge of the center of the left side of deck to the ground. Measure the same distance on the center of the right side of the deck (just behind the chute area on side discharge units). Or, place the blades in a straight line, and measure the distance from the outside edge of the blade tips to the ground.
4. Adjust the deck as follows: To lower the left side of the deck, tighten the adjusting screw. To raise the left side of the deck, back the adjusting screw off several turns. Remeasure the deck as described in step 3, and readjust if necessary. Tighten the jam nut to secure the adjusting screw when the deck is level.
5. Replace the transmission cover, following the instructions in step 1 in reverse order. Be certain to reconnect the safety wire.

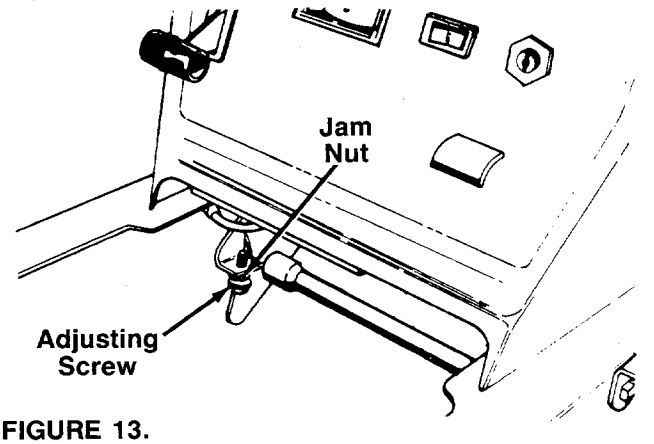


FIGURE 13.

SPEED CONTROL ADJUSTMENT (See figure 14)

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.

First, adjust the speed control lever by pushing the clutch-brake pedal forward until the stop on the speed control rod is against the running board rod. See figure 14. Have another person hold the pedal in this position as you make the following adjustment. Place the speed control lever in parking brake position. Remove the hairpin cotter and flat washer, and adjust the ferrule on the rod so it is against the back end of the slot. See figure 14. Replace the flat washer and hairpin cotter.

Next, adjust the speed control link as follows to obtain the correct neutral adjustment.

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. Place speed control lever in second position.
8. Remove the cotter pin and flat washer which secures the speed control link to the variable speed torque bracket assembly.
9. Push the clutch-brake pedal backward by hand as far as it will go using light pressure. Hold it in this position as you thread the speed control link in or out of the ferrule until it lines up with the pin on the variable speed torque bracket assembly.
10. Secure speed control link to variable speed torque bracket assembly with flat washer and cotter pin.

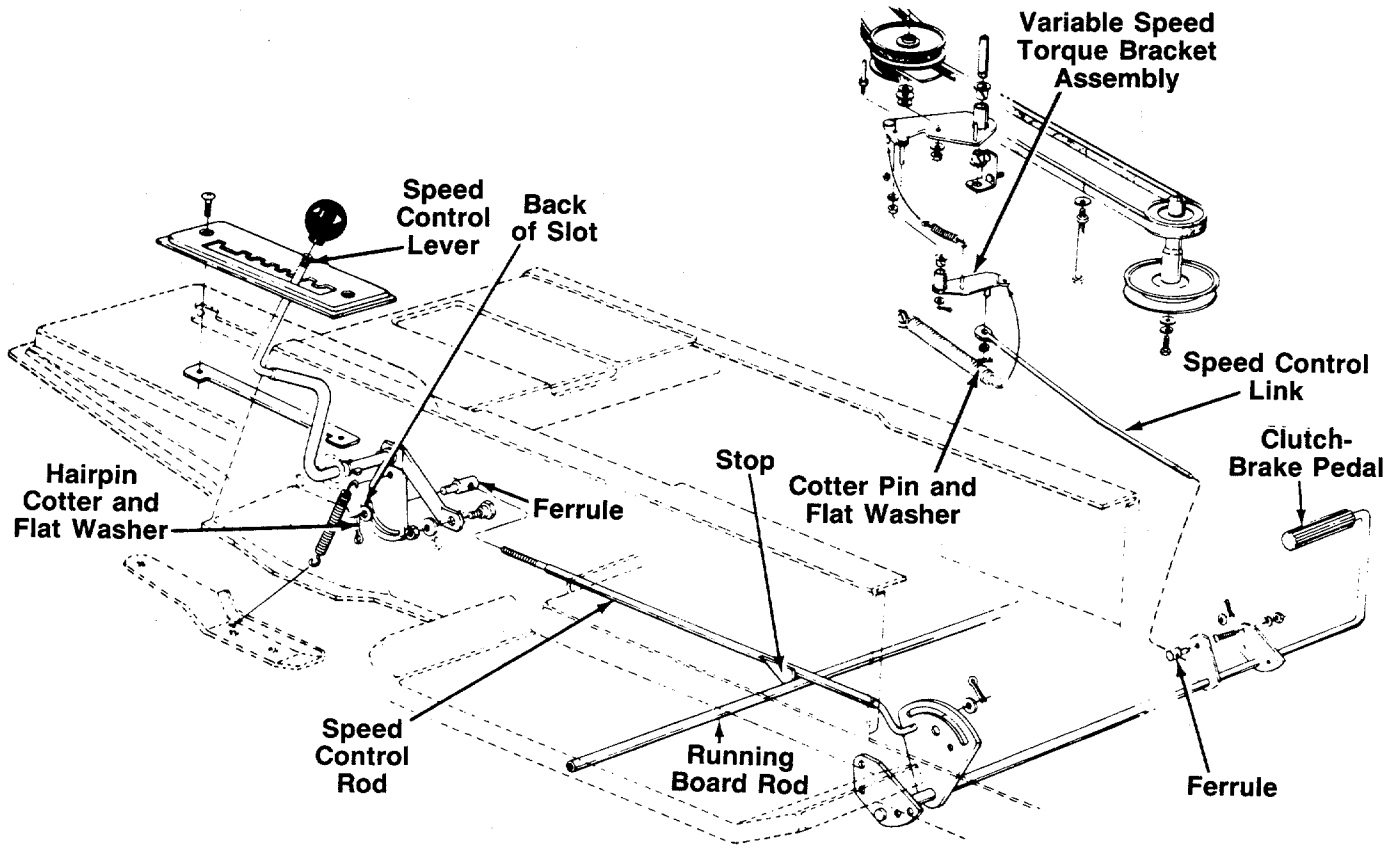


FIGURE 14.

NEUTRAL ADJUSTMENT

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 link. See figure 15.
3. Place the shift lever in the neutral slot. See figure 15.
4. Tighten the bolt to 13 foot pounds.

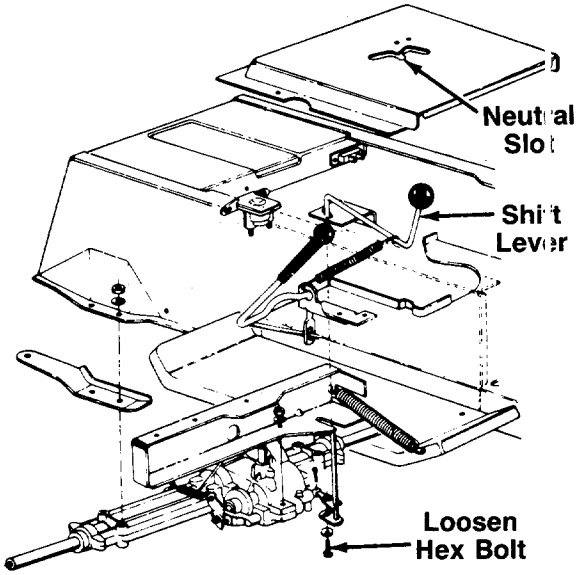


FIGURE 15.

WHEEL ADJUSTMENT

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 tractor. The front wheels should toe-in 1/8 inch.

To adjust the toe-in, follow these steps.

1. Remove the hex nut and lock washer, and drop the tie rod end from the wheel bracket. See figure 16.
2. Loosen the hex jam nut on tie rod.
3. Adjust the tie rod assembly for correct toe-in.

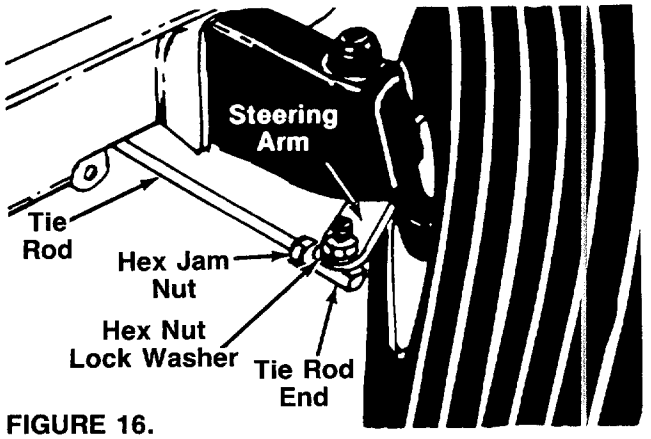


FIGURE 16.

Dimension "B" should be approximately 1/8" less than Dimension "A." See figure 17.

A.) To increase Dimension "B," screw tie rod into tie rod end.

B.) To decrease Dimension "B," unscrew tie rod from tie rod end.

C.) Reassemble tie rod. Check dimensions. Readjust if necessary.

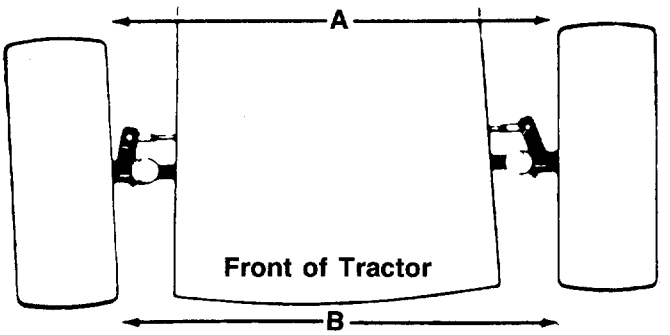


FIGURE 17. TOE-IN DIAGRAM

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. Refer to the separate engine manual.

BRAKE ADJUSTMENT (See figure 18)

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

CAUTION

Do not have the engine running when you adjust the brake.

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

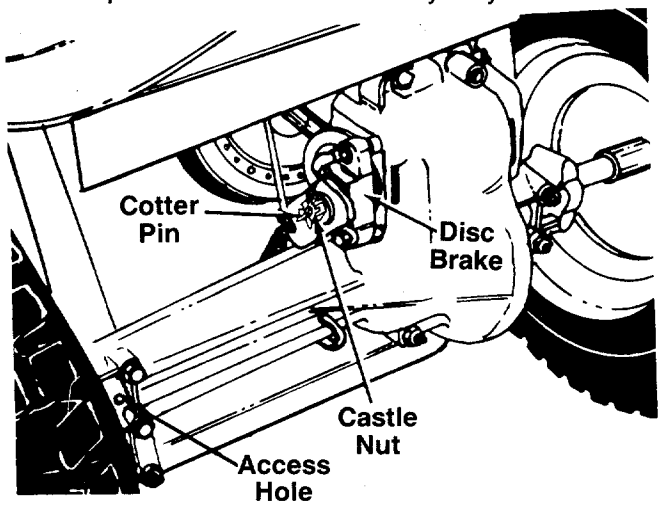


FIGURE 18.

LUBRICATION

WARNING

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

STEERING GEARS

Lubricate teeth of steering gears with automotive multi-purpose grease after every 25 hours of operation or once a season. See figure 19.

STEERING SHAFT

Lubricate steering shaft at least once a season with light oil.

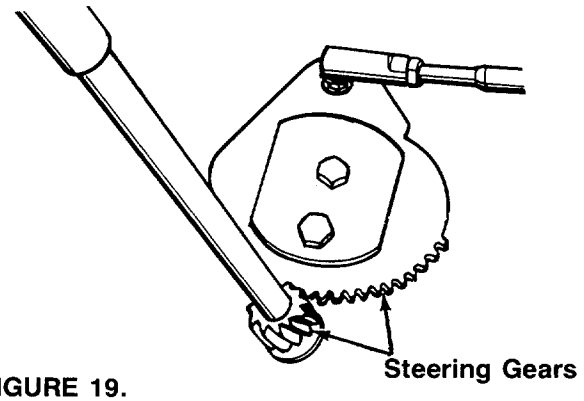


FIGURE 19.

TRANSAXLE

The transaxle is lubricated and sealed at the factory and does not require checking. If disassembled for any reason, lubricate with 10 oz. of grease, part number 737-0148.

The rear axles may be lubricated once a season, using the access hole on each side of the transaxle housing. See figure 16. A push-type hand grease gun, equipped with a special flush coupler is required. Use Shell grease, part number 737-0148.

WHEELS

The front wheels are provided with grease fittings. The rear wheels must be removed from the axle for lubrication. Lubricate at least once a season with automotive multi-purpose grease.

PIVOT POINTS

Lubricate all pivot points with light oil at least once a season.

MAINTENANCE

WARNING

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

TROUBLE SHOOTING

Refer to page 22 of this manual for trouble shooting information.

CRANKCASE OIL

Check the oil level in the crankcase before each use of the machine and after every five hours of operation. Oil level should be maintained as instructed in the separate engine manual.

After the first five hours of operating a new engine, drain the oil from the crankcase while engine is still hot and refill crankcase with new oil; thereafter change the oil every 25 hours of operation. Refer to the engine manual.

AIR CLEANER

Under normal operating conditions, the air cleaner, located on top of the carburetor, must be serviced after every ten hours of use. Under extremely dusty operating conditions, the air cleaner must be serviced after every hour of operation. To service the air cleaner, refer to the separate engine manual packed with your unit.

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.

SPARK PLUGS

The spark plugs should be cleaned and the gaps 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.

CUTTING BLADES

A. Removal for Sharpening or Replacement

WARNING

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

Remove the large bolt and lock washer which holds the blade and adapter to the blade spindle. Remove the blade and adapter from the spindle.

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

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.

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

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.

BELT REMOVAL AND REPLACEMENT

WARNING

Disconnect the spark plug wire and ground it against the engine. Block the wheels of the unit.

NOTE

Figures 20 and 23 through 25 are shown with the unit tipped up for clarity. It is not necessary to tip the unit to remove the belts.

However, if tipping the unit is desired, remove the battery from the unit. To prevent gasoline leakage, drain the gasoline, or remove the fuel tank cap, place a thin piece of plastic over the neck of the fuel tank and screw on the cap. Be certain to remove the plastic when finished changing the belts. Block unit securely.

Removing the Deck Belt

1. Place the lift lever in the disengaged position.
2. Remove the three hex bolts (belt keepers) from the engine pulley belt guard. See figure 20.

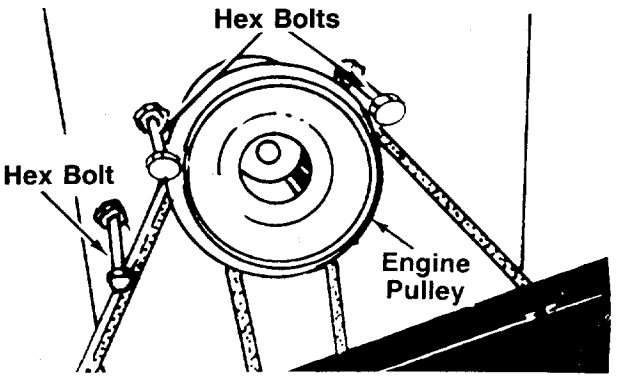


FIGURE 20.

NOTE

Make certain hex bolts are reassembled as shown in figure 20.

3. Unhook the deck belt from the engine pulley.
4. Place the lift lever in the engaged (all the way forward) position.
5. Disconnect the six deck links by removing the hairpin cotters and flat washers.
6. Place the lift lever in the disengaged position.
7. Slide the deck from beneath the lawn tractor.
8. Remove the belt guards at each deck pulley by removing the hex bolts, lock washers and hex nuts. See figure 21.
9. Remove and replace the belt, following the instructions in reverse order.

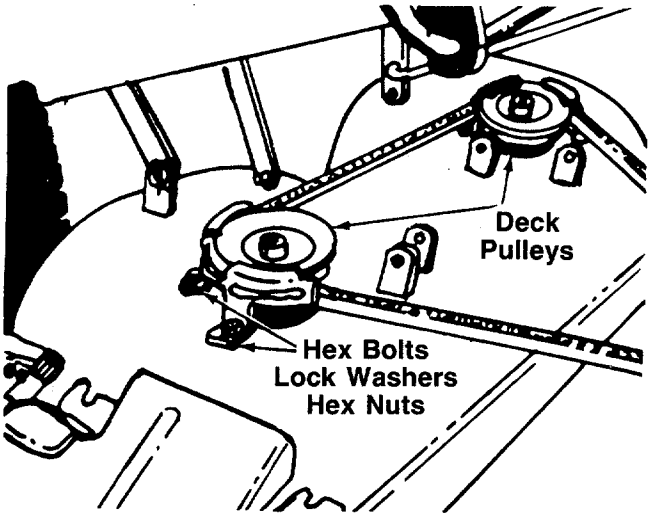


FIGURE 21.

Rear Drive Belt

1. Remove the two truss head screws which secure the transmission cover.
2. Lift the transmission cover. Unplug the safety wire from beneath the transmission cover. Remove transmission cover.
3. Push the idler pulley toward the right side of the unit. Lift the belt over the idler pulley. See figure 22.
4. Remove the belt from the variable speed pulley.
5. Remove the two bolts which hold the shift lever bracket to the frame on the left side of the unit. Swing the bracket toward the right so the belt can be removed from the transmission pulley. See figure 22.
6. Replace belt, and reassemble in reverse order.

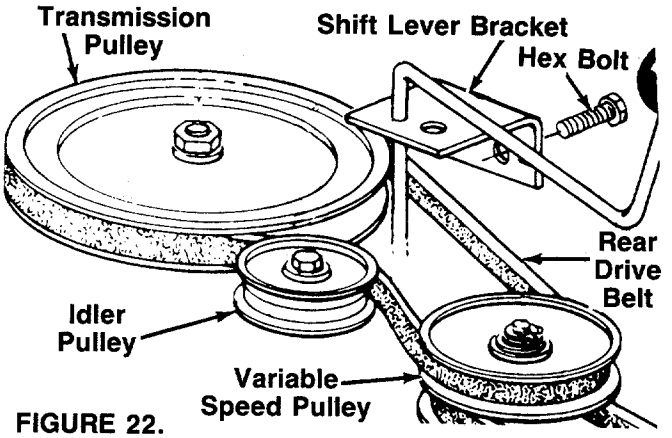


FIGURE 22.

Front Drive Belt

1. To remove the front drive belt, first remove the rear drive belt from the idler pulley and variable speed pulley.
2. Place the lift lever in the disengaged position.
3. Remove the hex bolts (belt keepers) from the engine pulley belt guard. Refer to figure 20.
4. Unhook the deck belt from the engine pulley.
5. Remove the two bolts, lock washers and nuts on each side of the frame which hold the engine pulley belt guard to the frame. See figure 23.

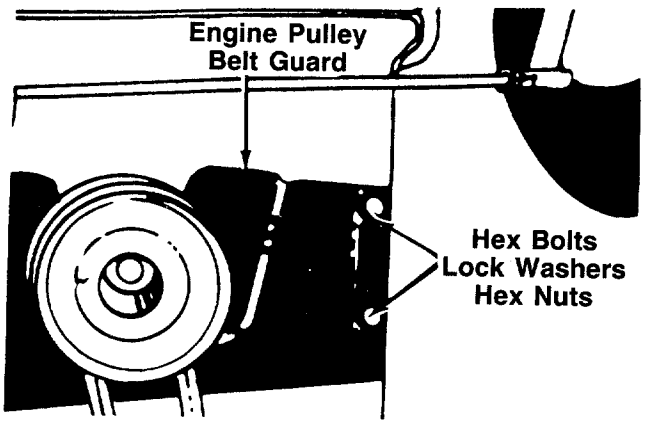


FIGURE 23.

6. Remove the engine pulley belt guard by slipping it back and to the right. See figure 24.

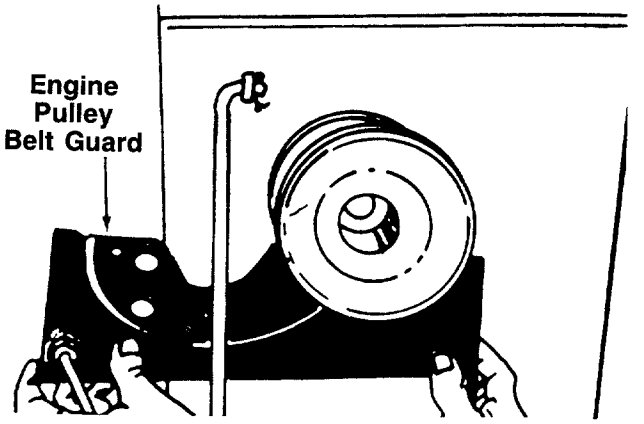


FIGURE 24.

7. Place the clutch-brake pedal in park position.
8. Push forward on the variable speed pulley, and lift the belt off the engine and remove the belt from the engine pulley.
9. Release the clutch-brake pedal. Using the pedal to move the variable speed pulley as necessary, lift the belt up and off the variable speed pulley.

NOTE

When reassembling, make certain belt is inside the pins. See figure 25.

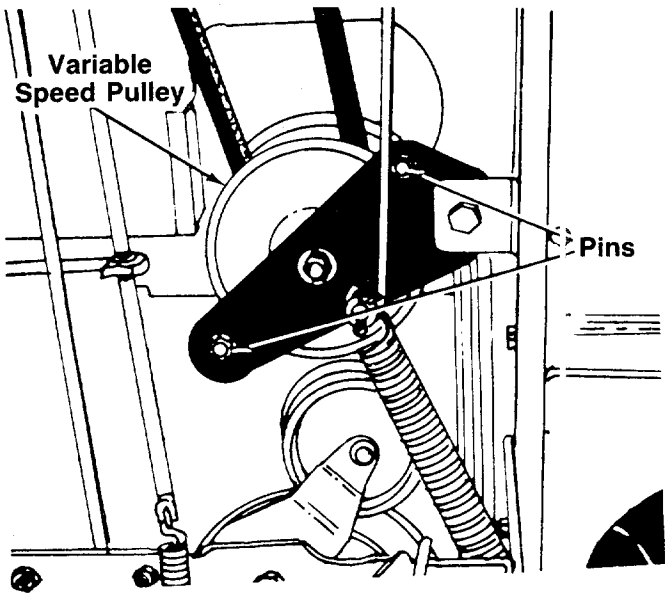


FIGURE 25.

10. Reassemble with a new belt, following instructions in reverse order.

BATTERY REMOVAL OR INSTALLATION

WARNING

When removing the battery, follow this order of disassembly to prevent the screwdriver from shorting against the frame.

1. Remove the Negative cable.
2. Remove the Positive cable.

To install a battery:

1. Attach the Positive cable.
2. Attach the Negative cable.

JUMP STARTING

1. Attach the first jumper cable from the Positive terminal of the good battery to the Positive terminal of the dead battery.
2. Attach the second jumper cable from the Negative terminal of the good battery to the FRAME OF THE UNIT WITH THE DEAD BATTERY.

WARNING

Failure to use this starting procedure could cause sparking, and the gas in either battery could explode.

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 a 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.

TIRES

Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure). Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on all tires.

When installing a tire to the rim, be certain rim is clean and free of rust. Lubricate both the tire and rim generously. Never inflate to over 30 p.s.i. to seat beads.



Excessive pressure (over 30 p.s.i.) when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

OFF-SEASON STORAGE

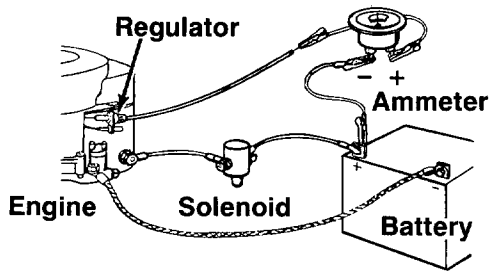
If the machine is to be inoperative for a period longer than 30 days, prepare for storage as follows.

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 previous page.
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.

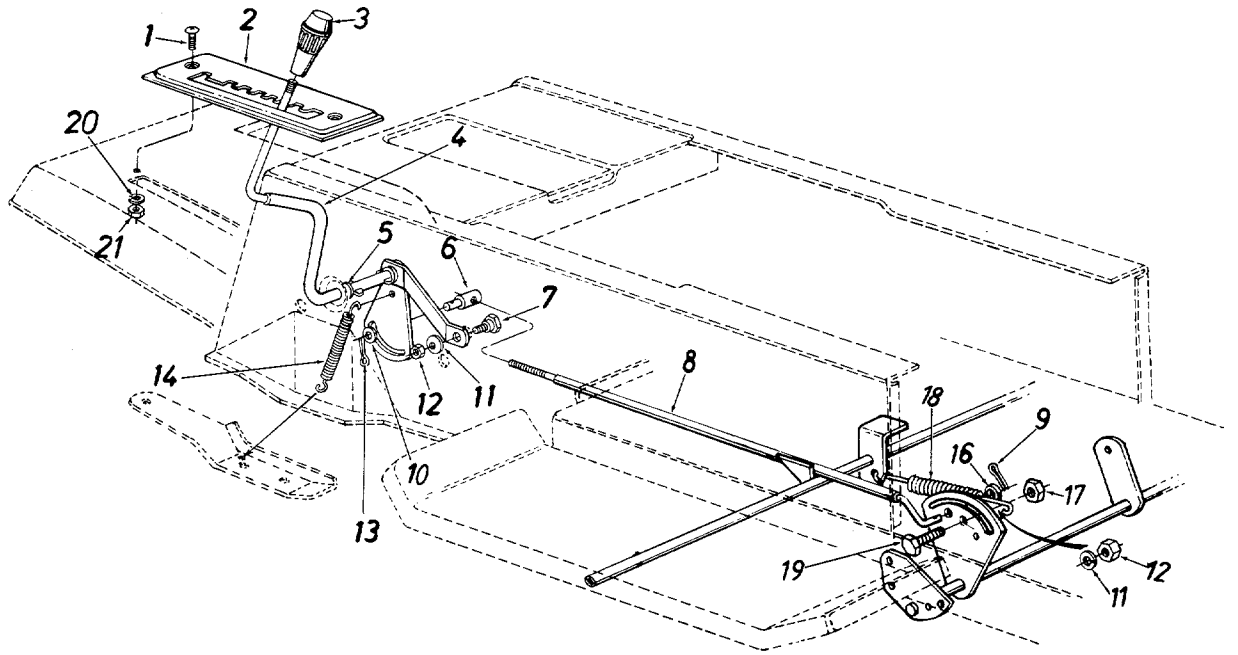
TROUBLE SHOOTING CHART FOR ELECTRIC START MODELS

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 regulated and rated 16 amp. at 3600 r.p.m. A regulator is located on the right hand side of the engine. The two mounting bolts act as a guard.  The regulator changes A.C. to D.C. to charge the battery. A bad regulator can either fail to charge the battery or discharge the battery if the alternator is shorted as well as the regulator. To test: (1) Disconnect charger lead from the battery (small red wire). (2) Connect 12 V small test lamp between the 16 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 regulator and possibly the alternator may have failed. (4) Start the engine. The lamp should light. If it does not, the alternator (starter) or lead wire could be bad.
	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).

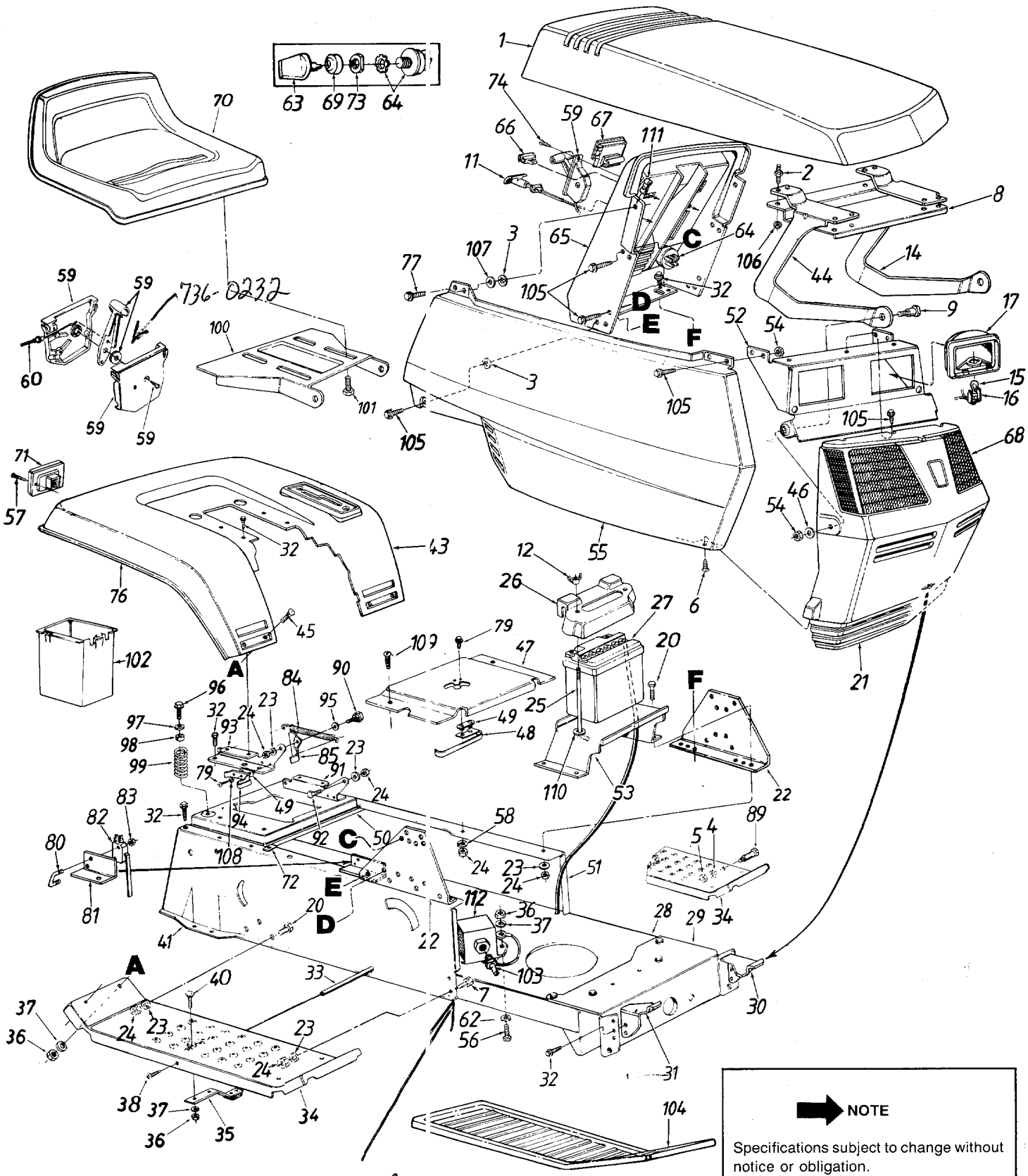
Model 684



PARTS LIST FOR MODEL 684 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	710-0924		Truss Mach. Scr. ¼-20 x .75" Lg.	11	736-0119		L-Wash. 5/16" I.D.*
				12	712-0267		Hex Nut 5/16-18 Thd.*
2	17469	N	Speed Selector Plate 7-Speed	13	714-0507		Cotter Pin 3/32 Dia. x .75"*
3	720-0218		Shift Knob	14	732-0303		Spring
4	16192		Speed Selector Cam Ass'y.	16	736-0226		Fl-Wash. .47" I.D. x .88" O.D.
5	736-0192		Flat Washer .53" I.D. x .93"	17	712-0158		Hex L-Nut 5/16-18 Thd.
6	711-0198		Ferrule 3/8-24 x .37" Dia.	18	732-0470A	N	Ext. Spring 4.75" Lg.
7	738-0155		Shoulder Bolt	19	710-0376		Hex Cap Bolt 5/16-18 x 1" Lg. (Grade 5)
8	16355A	N	Speed Control Rod Ass'y.				
9	714-0507		Cotter Pin 3/32" Dia. x .75"*	20	736-0329		L-Wash. ¼" I.D.*
10	736-0140		Fl-Wash. .385" I.D. x .62"	21	712-0287		Hex Nut ¼-20 Thd.

Model 684


736-0232
WRONG ART FOR FUEL PUMP (ON ENGINE) NOT AS SHOWN
NOTE
Specifications subject to change without notice or obligation.

Model 684

PARTS LIST FOR MODEL 684 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION
1	731-0932A	638	Hood
2	710-1034	N	Double Ended Stud ¼-20 Thd.
3	726-0233		Pushnut Fastener
4	736-0169		L-Wash. 3/8″ I.D.*
5	712-0798		Hex Nut 3/8-16 Thd.*
6	710-0351		Truss Mach. B-Tap Scr. #10 x .5″ Lg.
7	710-0971		Truss Hd. Scr. 5/16-18 x 1.0″ Lg.
8	16808		Hood Reinforcement
9	738-0141		Shld. Bolt .437″ Dia.
11	746-3022B	N	Choke Control 48″ Lg.
12	712-0113		Wing Nut ¼-20 Thd.—Plastic
14	17271		Hood Hinge—L.H.
15	725-0963		Lamp
16	725-1058		Twist Lock—Lamp Socket
17	731-0705		Headlight Housing
20	710-0118		Hex Bolt 5/16-18 x .75″ Lg.*
21	731-0935	638	Grille
22	17300		Dash Support Bracket
23	736-0119		L-Wash. 5/16″ I.D.*
24	712-0267		Hex Nut 5/16-18 Thd.*
25	711-0222		Battery Hold Down Rod
26	731-0707		Battery Cover
27	725-0453A	N	12 Volt Battery
28	15930B	N	Lower Frame
29	14619A	N	Front Pivot Brk't.
30	16713		Grille Mount Brk't.—L.H.
31	16712		Grille Mount Brk't.—R.H.
32	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16 x .75″ Lg.
33	738-0526		Running Board Rod
34	14604E	N	Running Board (R.H. & L.H.)
35	761-0168		Blade Brake Ass'y.
36	712-0287		Hex Nut ¼-20 Thd.*
37	736-0329		L-Wash. ¼″ I.D.*
38	710-0323		Truss Mach. Scr. 5/16-18 x .75″ Lg.*
40	710-0134		Carr. Bolt ¼-20 x .62″
41	14602G	N	R.H. Side Frame
43	17325	N/638	Rear Fender
44	17270		Hood Hinge—R.H.
45	710-0167		Carriage Bolt ¼-20 x .50″ Lg.*
46	736-0278		Fl-Wash. .328″ I.D. x .68″ O.D.
47	17286		Transmission Panel
48	725-0759		Reverse Safety Switch
49	726-0222		Insulator Nut Plate
50	17226		Hitch Plate
51	14603G	N	L.H. Side Frame
52	17223		Light Bracket
53	12747A	N	Battery Bracket
54	712-0158		Hex Cent. L-Nut 5/16-18 Thd.
55	731-0938		Side Cover—R.H.
	731-0943		Side Cover—L.H. (Not Shown)
56	710-0751		Hex Bolt ¼-20 x 5/8″ Lg. (Gr. 5)†
57	710-0936		Truss Hd. AB-Tap Scr. #6 x .62″ Lg.
58	736-0607		Ext. L-Wash. 5/16″ I.D.
59	831-0823A	N	Throttle Control Box Ass'y.
60	746-0634A	N	Throttle Control Wire 35″
62	736-0498		Internal Lock Washer†
63	725-1341		Ignition Key
64	725-1396		Ignition Switch
65	731-0956		Dash Panel
66	725-0634		Light Switch
67	725-0925		Ammeter
68	731-0949		Lens—L.H.
	731-0948		Lens—R.H.
69	725-1347		Ignition Switch Cap
70	757-0350	N	Seat Ass'y.
71	725-3018	N	Taillight
72	726-0139		Speed Nut #10Z
73	725-1346		Ignition Switch Nut
74	710-0779A	N	Truss Mach. AB-Tap Scr. #10 x .5″ Lg.
76	731-0511		Trim Strip—81″
77	710-0642		Hex Wash. Hd. Tap Scr. ¼ x .75″ Lg.
79	710-0227		Hex Wash. Hd. AB-Tap Scr. #8 x .50″ Lg.
80	711-3259		Switch Screw
81	16799		Switch Bracket
82	725-3066		Switch
83	712-3052		Hex L-Nut #4-40 Thd.
84	732-0581		Ext. Spring 5.31″ Lg.
85	17239A	N	Seat Lift Brkt.
89	738-0145		Shoulder Bolt
90	738-0296		Shld. Bolt .437″ Dia. x .268″
91	17243		Seat Pivot Brkt. Support—L.H.
92	738-0155		Shld. Bolt .437″ Dia. x .162″
93	17244		Seat Pivot Brkt. Support—R.H.
94	725-1303		Spring Switch
95	736-0141		Spr.-Wash. .445″ I.D.
96	710-0602		Hex Wash. Hd. Tap Scr. 5/16-18 x 1″ Lg.
97	736-0159		Fl-Wash. .344″ I.D.
98	722-0160		Bushing
99	732-0588		Compression Spring
100	15607D	N	Seat Pivot Bracket
101	710-0623		Hex Tap Scr. 3/8-16 x .75″
102	731-0873A	N	Utility Box
103	737-0270		Barb Fitting†
104	731-0911		Foot Pad—L.H.
	731-0912		Foot Pad—R.H.
105	710-0599		Hex Tap Scr. ¼-20 x .5″ Lg.
106	712-0107		Hex Lock Nut ¼-20 Thd.
107	736-0176		Fl-Wash. .27″ I.D. x .948″ O.D.
108	736-0426		Fiber Washer
109	710-0351		Truss Mach. Tap Scr. #10 x .5″ Lg.
110	726-0271		Pushnut Fastener
111	712-0185		Speed Nut ¼-20 Thd.
112	751-0473	N	Fuel Pump†

†Optional Parts

*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.

(629—Silver Flake)
(638—Red)

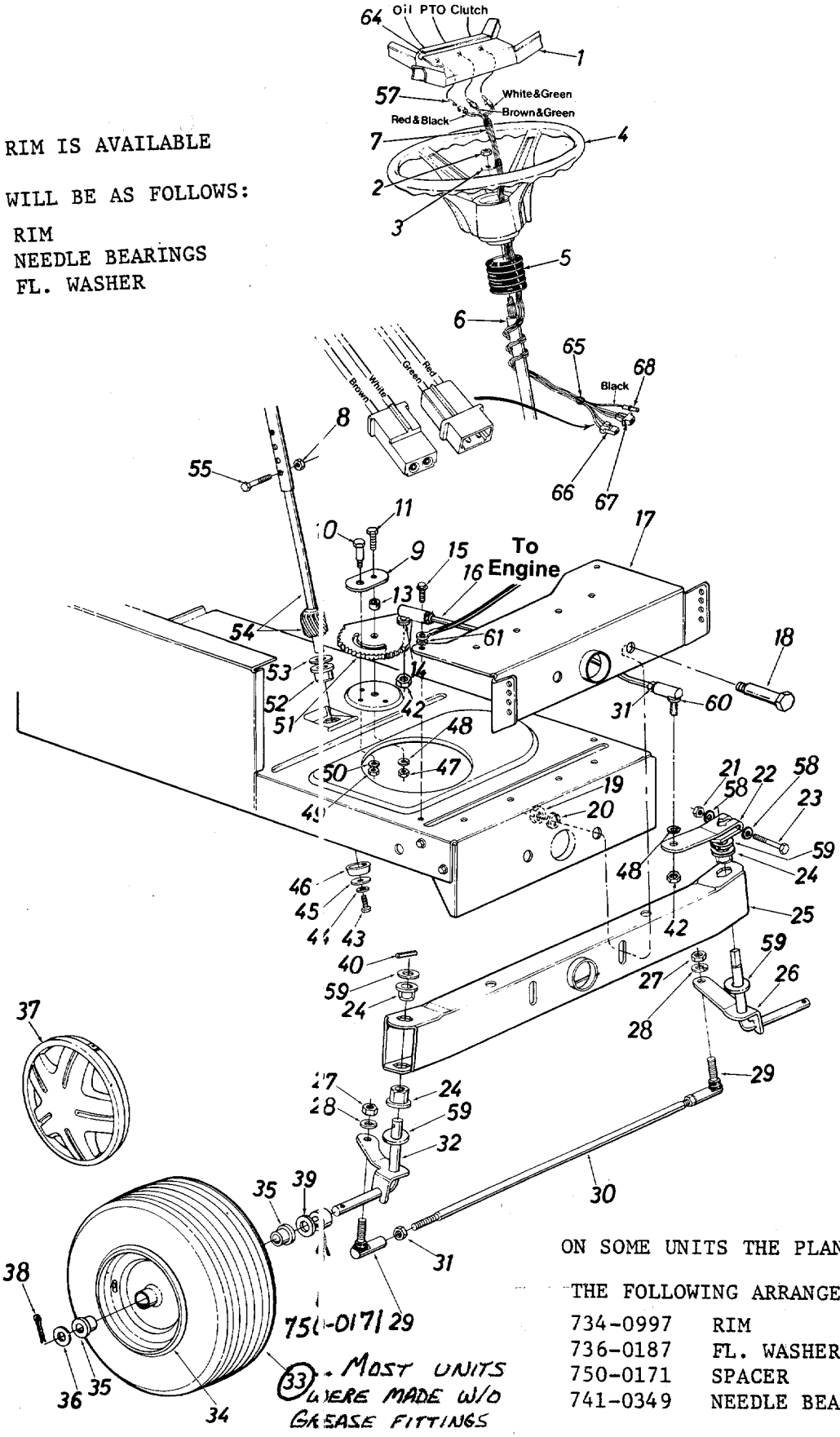
If color or finish is important when ordering parts, use the appropriate color code shown above [i.e. (part no.)-638 for Red Finish].

Model 684

WHEN NEW RIM IS AVAILABLE

WHEEL ASSY. WILL BE AS FOLLOWS:

734-1571	RIM
741-0349	NEEDLE BEARINGS
736-0187	FL. WASHER



ON SOME UNITS THE PLANT USED THE FOLLOWING ARRANGEMENT:

734-0997	RIM
736-0187	FL. WASHER
750-0171	SPACER
741-0349	NEEDLE BEARINGS

Model 684

PARTS LIST FOR MODEL 684 LAWN TRACTOR

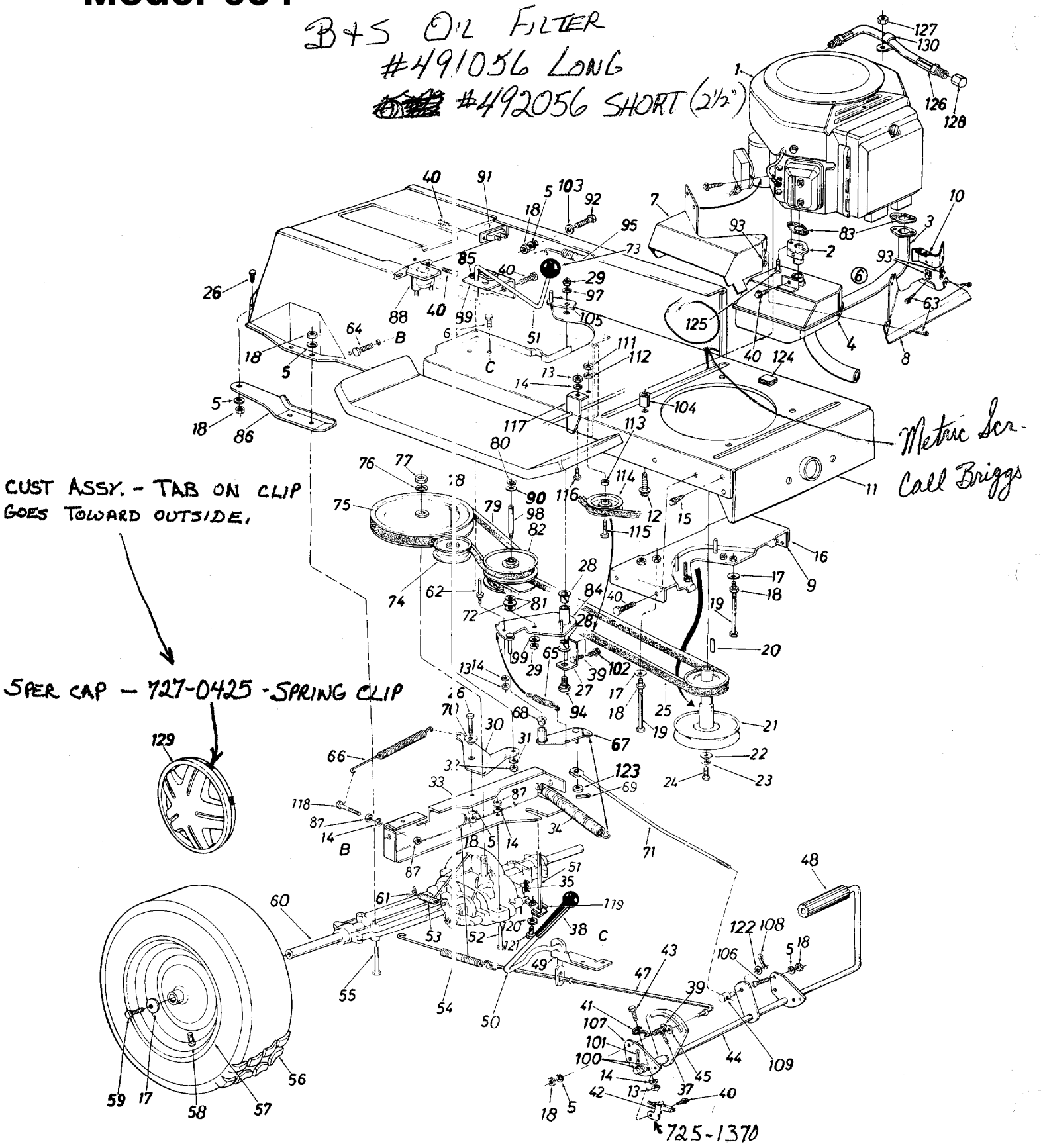
REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	731-0955		Steering Wheel Insert	34	734-1571	N	Front Wheel Rim Only
2	712-0237		Hex L-Nut 5/16-24 Thd.		734-0255		Air Valve
3	736-0242		Belleville Wash. .345" I.D.		737-0146		Grease Fitting
4	731-0806A	N	Steering Wheel	35	741-0349		Needle Bearing
5	731-0954		Steering Bellow	36	736-0285		Fl-Wash. .635" I.D. x 1.59" O.D.
6	16512		Steering Column Ass'y.				
7	725-1364		Harness Indicator Lights	37	734-1503		Hub Cap
8	712-0324		Hex L-Nut ¼-20 Thd.	38	714-0470		Cotter Pin 1/8" Dia. x 1.25" Lg.*
9	17198		Retainer Plate				
10	738-0141		Shoulder Bolt .437" Dia. x .35" Lg. 5/16-18 Thd.	39	736-0187		Fl-Wash. .640" I.D. x .24" O.D.
11	710-0152		Hex Bolt 3/8-24 x 1.0" Lg. (Grade 5)	40	715-0150		Spring Roll Pin
				42	712-0711		Hex Jam Nut 3/8-24 Thd.*
13	750-0535		Spacer .380" I.D. x .625" O.D. x .227"	43	710-0538		Hex L-Bolt 5/16-18 x .62"*
				44	736-0119		L-Wash. 5/16" I.D.*
14	736-0169		L-Wash. 3/8" I.D.*	45	736-0343		Fl-Wash. .33" I.D. x 1.25" O.D.
15	710-0726		Hex Wash. Hd. Self-Tap Scr.				
16	711-0788		Steering Drag Link	46	750-0532		Spacer (Plastic)
17	14619A	N	Front Pivot Brkt.	47	712-0241		Hex Nut 3/8-24 Thd.*
18	738-0527		Shoulder Bolt .498" Dia. x 2.04" Lg. 3/8-16 Thd.	48	736-0169		L-Wash. 3/8" I.D.*
				49	712-0267		Hex Nut 5/16-18 Thd.*
19	712-0798		Hex Nut 3/8-16 Thd.*	50	736-0119		L-Wash. 5/16" I.D.*
20	736-0169		L-Wash. 3/8" I.D.*	51	717-0622		Steering Gear Segment
21	712-0237		Hex Cent. L-Nut 5/16-24 Thd.	52	741-0225		Hex Flg. Brg. .634 I.D.
22	16481		Steering Arm Front Axle	53	736-0187		Fl-Wash. (Hardened)
23	710-0772		Hex Bolt 5/16-24 x 2.00" Lg. (Grade 5)	54	738-0522A	N	Steering Shaft Lower
				55	710-0958		Hex Bolt ¼-20 x 1.31" Lg.
24	741-0225		Hex Flg. Brg. .634" I.D.	57	725-1365		Bulb
25	14608		Pivot Bar Ass'y.	58	736-0271		Wave Wash. .32" I.D. x .62"
26	17167		Front Axle Ass'y.—L.H.	59	736-0187		Fl-Wash. (Hardened)
27	712-0241		Hex Nut 3/8-24 Thd.*	60	723-3018		Drag Link Ball Joint 3/8-24 Thd.
28	736-0169		L-Wash. 3/8" I.D.*				
29	723-3018		Ball Joint 3/8-24 Thd.	61	736-0607		Ext. L-Wash. 5/16" I.D.
30	711-0613		Tie Rod	64	777-8122		Steering Wheel Insert Label
31	712-0711		Hex Jam Nut 3/8-24 Thd.*	65	729-0204		Clamp
32	17168B	N	Front Axle Ass'y.—R.H.	66	729-0132		Connector
33	734-1572	N	Wheel Ass'y. Comp.	67	729-0166		Connector
	734-0864		Tire Only	68	729-0139		Connector

*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.

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."



Model 684


B+S Oil Filter
#491056 Long
#492056 Short (2½")
Metric Ser-
Call Briggs
CUST ASSY. - TAB ON CLIP
GOES TOWARD OUTSIDE.
SPER CAP — 727-0425 - SPRING CLIP
725-1370

Model 684

PARTS LIST FOR MODEL 684 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION
1	—		Engine
2	751-0470	MUST BUY AS A COMP MUFFLER ASSY	Inlet Tube Ass'y.
3	751-0471		Formed Tube Ass'y.
4	751-0472		Exhaust Muffler Sub Ass'y.
5	736-0119		L-Wash. 5/16" I.D.*
6	751-0469		Muffler Ass'y. Comp.
7	16875		Muffler Heat Shield
8	16876A		Front Heat Shield
9	16371		Brake Cable Brk't.
10	16877		Front Heat Shield Ext.
11	15930B	N	Lower Frame Ass'y.
12	710-1035		Hex Wash. Hd. TT-Tap Scr. 3/8-16 Thd.
13	712-0287		Hex Nut ¼-20 Thd.*
14	736-0329		L-Wash. ¼" I.D.*
15	710-0726		Hex Wash. Hd. AB-Tap Scr. 5/16" x .75" Lg.
16	16219A		Belt Guard Brkt. Ass'y.
17	736-0242		Bell-Wash. .345" I.D. x .88"
18	712-0267		Hex Nut 5/16-18 Thd.*
19	710-0190		Hex Bolt 5/16-18 x 4.00"*
20	714-0114		Sq. Key ¼" x ¼" x 2.00"
21	756-0530		Engine Pulley
22	736-0322		Fl-Wash. 7/16" I.D. x 1.25"
23	736-0171		L-Wash. 7/16" I.D.*
24	710-0757		Hex Bolt 7/16-20 x 1.50" Lg.
25	754-0280		Variable-Speed Belt
26	710-0118		Hex Bolt 5/16-18 x .75" Lg.*
27	16553		Bearing Shaft Bracket Ass'y.
28	741-0295		Flanged Nyliner Brg. 5/8" I.D. x .88" Lg.
29	712-0241		Hex Nut 3/8-24 Thd.*
30	15891B	N	Idler Bracket
31	736-0169		L-Wash. 3/8" I.D.*
32	712-0241		Hex Nut 3/8-24 Thd.*
33	15945E	N	Transaxle Support Brkt.
34	732-0459		Ext. Spring .94" O.D. x 6.7"
35	714-0149B	N	Inter. Cotter Pin
36	736-0204		Fl-Wash. .34" I.D. x .62" O.D. x .033"
37	714-0507		Cotter Pin 3/32" Dia. x .75"*
38	720-0223	N	Grip—Black
39	710-0323		Truss Mach. Scr. 5/16-18 x .75" Lg.
40	710-0599		Hex Wash. Hd. Self-Tap Scr. ¼-20 x .50" Lg.
41	732-0582		Switch Actuator
42	725-~~0677~~ / 370		Safety Switch
43	710-0597		Hex Bolt ¼-20 x 1.0" Lg.*
44	16235A	N	Clutch & Brake Pedal Ass'y.
45	736-0117		Fl-Wash.
47	747-0519		Brake Rod 20.9" Lg.
48	735-0196		Foot Pad
49	15889B	N	Brake Lever Bracket
50	15888		Hill Holder Brake Handle
51	16430		Shift Lever Ass'y.
52	710-0559		Hex Bolt ¼-28 x 1.75" Lg.*
53	732-0264		Ext. Spring x 2.5" Lg.
54	732-0413		Ext. Spring x 7.08" Lg.
55	710-0176		Hex Bolt 5/16-18 x 2.75"*
56	734-0817		Wheel Ass'y. Comp.
	734-0448		Tire Only
57	734-0603A	N	Wheel Rim Only
58	734-0255		Air Valve (Service Only)
59	710-0627		Hex Bolt 5/16-24 x .75" Lg.*
60	717-1050		Transaxle Complete—R.H.
61	732-0454		Brake Return Spring Anchor
62	711-0768		Belt Guard Pin ¼-20 Thd.
63	710-0224		Hex AB-Tap Scr. #10 x .5" Lg.
64	710-0604		Hex Wash. TT-Tap Scr. 5/16 x .62" Lg.
65	732-0568		Ext. Spring
66	732-0384		Ext. Spring .62" O.D. x 6.12"
67	16554A	N	Variable Speed Torque Brkt. Ass'y.
68	741-0419		Flanged Bearing
69	714-0507		Cotter Pin 3/32" Dia.*
70	748-0234		Shoulder Spacer .500" Dia. x .27" Lg.
71	747-0530		Speed Control Link
72	741-0405		Truss Bearing .56" Dia. x 1.25"
73	720-0165		Ball Knob
74	756-0437		Fl-Idler Pulley 3.25" x .75"
75	756-0374		½" "V"-Pulley 8.0" O.D. x .501" I.D.
76	736-0921		L-Wash. ½" I.D.*
77	712-0922		Hex Jam Nut ½-20 Thd.*
78	710-0539		Hex Bolt 3/8-24 x .75" Lg.*
79	754-0281		Variable-Speed Belt
80	716-0114		Snap Ring .56" Dia.
81	736-0355		Fl-Wash.
82	717-0800		Variable Speed Pulley Ass'y. 5" O.D.
83	721-0218		Gasket
84	16354B	N	Variable Speed Brkt. Ass'y.
85	732-0525		Comp. Spring Clip
86	14770		Axle Support Brkt.—R.H.
	14769A	N	Axle Support Brkt.—L.H. (Not Shown)
87	712-0138		Hex Nut ¼-28 Thd.
88	725-0771		Solenoid
89	16429A	N	Shift Lever Bracket
90	736-0414		Teflon Washer
91	725-1382		Circuit Breaker
92	710-0959		Hex Bolt 5/16-18 x 1.50" Lg.
93	712-0147		Speed Nut #10-24 Thd.
94	738-0755		Shld. Bolt 3/8-24 x 3.12" Lg.
95	732-0307		Ext. Spring .99" O.D. x 11.0"
96	710-0180		Hex Bolt 3/8-24 x .75" Lg.*
97	736-0105		Bell-Wash. .38" I.D. x .88"
98	738-0569		Shaft .56" Dia. x 3.875" Lg.
99	736-0331		Bell-Wash. .39" I.D. x 1.12"
100	736-0256		Fl-Wash.
101	714-0507		Cotter Pin 3/32" Dia. x .75"*
102	710-0604		Hex Wash. Hd. Scr. 5/16-18 x .62" Lg.
103	736-0231		Fl-Wash. .34" I.D. x 1.12"
104	750-0748		Spacer 5/16" I.D.
105	16067		Belt Guard
106	710-0118		Hex Bolt 5/16-18 x .75" Lg.*
107	15835A	N	Pedal Bracket
108	714-0507		Cotter Pin 3/32 x .75"*

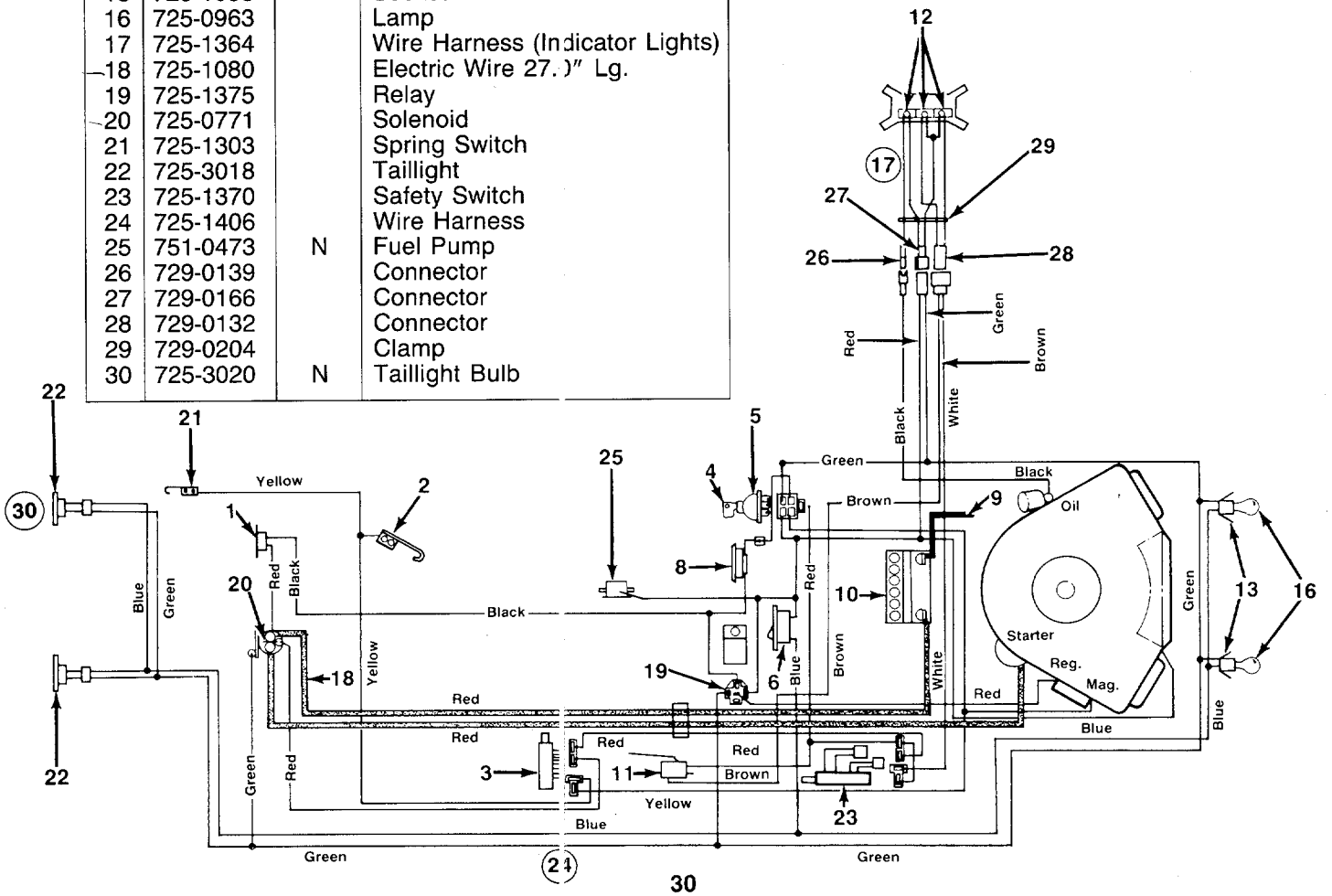
Model 684

PARTS LIST FOR MODEL 684 LAWN TRACTOR (CONTINUED)

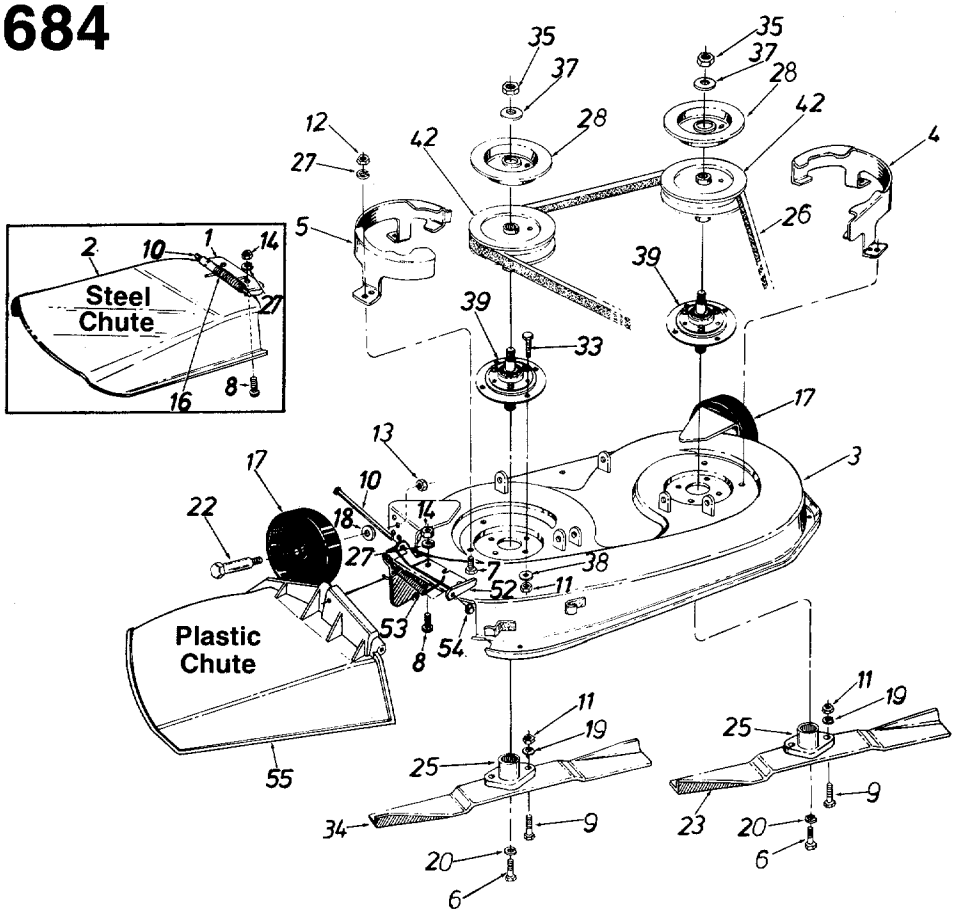
REF. NO.	PART NO.	CODE	DESCRIPTION
109	711-0198		Ferrule
111	712-0798		Hex Nut 3/8-16 Thd.*
112	736-0169		L-Wash. 3/8" I.D.*
113	736-0280		Fl-Wash. .390" I.D. x 1 12"
114	756-0217		Fl-Idler w/Flanges 2.750
115	710-0427		Hex Bolt 3/8-16 x 2.00" Lg.*
116	710-0258		Hex Bolt ¼-20 x .62" Lg.*
117	16181		Spring Hanger Bracket
118	710-0428		Hex Bolt ¼-28 x 1.25" Lg.*
119	16437A	N	Shift Lever Link Ass'y.
120	736-0270		Bell-Wash. .265" I.D. x .75"
121	710-0195		Hex Bolt ¼-28 x .62" Lg.
122	736-0140		Fl-Wash. .385" I.D. x .62"
123	736-0275		Fl-Wash. .34" I.D. x .68" O.D.
124	722-0155		Foam Strip
125	710-1037		Hex Bolt w/Washer
126	727-0434	N	Oil Drain HIGH PRESSURE HYDRO HOSE
127	712-0342		Hex Jam Nut 3/8-16 Thd.
128	737-0143	N	Cap Oil Drain
129	734-1504		Hub Cap
130	726-3009	N	Clamp

PARTS LIST FOR ELECTRICAL SYSTEM

REF. NO.	PART NO.	CODE	DESCRIPTION
1	725-1382		Circuit Breaker
2	725-0759		Spring Switch
3	725-0803B	N	Safety Switch Dpst.
4	725-1340B	N	Ignition Key
5	725-1396		Ignition Switch
6	725-0634		Headlight Switch
8	725-0925		Ammeter
9	725-0994		Ground Wire 14.0" Lg.
10	725-0453A	N	12 Volt Battery
11	725-3066		Safety Switch
12	725-1365		Bulb
13	725-1058		Socket
16	725-0963		Lamp
17	725-1364		Wire Harness (Indicator Lights)
18	725-1080		Electric Wire 27.0" Lg.
19	725-1375		Relay
20	725-0771		Solenoid
21	725-1303		Spring Switch
22	725-3018		Taillight
23	725-1370		Safety Switch
24	725-1406		Wire Harness
25	751-0473	N	Fuel Pump
26	729-0139		Connector
27	729-0166		Connector
28	729-0132		Connector
29	729-0204		Clamp
30	725-3020	N	Taillight Bulb



Model 684



PARTS LIST FOR MODEL 684 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	16521		Chute Bracket (Steel)††	20	736-0217		L-Wash. 3/8″ I.D.—H.D.
2	16566		Chute Deflector (Steel)††	21	736-0329		L-Wash. 1/4″ I.D.*
3	16575A	N	38″ Deep Deck Ass'y.	22	738-0373		Shld. Bolt .498″ Dia. x 1.53″
	801-6576		38″ Deep Deck Ass'y. Comp. (For Service Only)	23	742-0473A		High-Lift Blade
				25	748-0300		Blade Adapter
4	16607		Belt Guard Deck—L.H.	26	754-0329		5L V-Belt
5	16608A	N	Belt Guard Deck—R.H.	27	736-0270		Bell-Wash. ¼″ I.D.
6	710-0152		Hex Bolt 3/8-24 x 1.00″	28	09322		Brake Disc
7	710-0195		Hex Bolt 1/4-28 x .62″	33	710-1013		Rib Neck Bolt 5/16-24 x 1.05″ Lg.
8	710-0255		Truss Mach. Scr. 1/4-20 x .75″	34	742-0473A		High-Lift Blade
9	710-0888		Hex Bolt Special 5/16-24 x 1.0″	35	712-0318		Hex Jam Nut 5/8-18 Thd.
10	711-0792		Hinge Pin	37	736-0158		L-Wash. 5/8″ I.D.*
11	712-0123		Hex Nut 5/16-24 Thd.*	38	736-0119		L-Wash. 5/16″ I.D.*
12	712-0138		Hex Nut ¼-28 Thd.	39	717-0906		Blade Spindle Ass'y. Comp. (Incl. Ref. 33)
13	712-0181		Hex Top L-Nut 3/8-16 Thd.				
14	712-0298		Hex Jam Nut ¼-20 Thd.	42	756-0486		5″ Dia. Pulley
16	732-0542		Torsion Spring††	52	703-1693	N	Hinge Mtg. Brkt.
17	734-0973		Deck Wheel—5″	53	732-0602	N	Torsion Spring
18	736-0105		Bell-Wash. .40″ I.D. x .88″ O.D.	54	726-0106		Push Nut
19	736-0119		L-Wash. 5/16″ I.D.*	55	731-1032	N	Chute Ass'y. Comp. (Plastic)

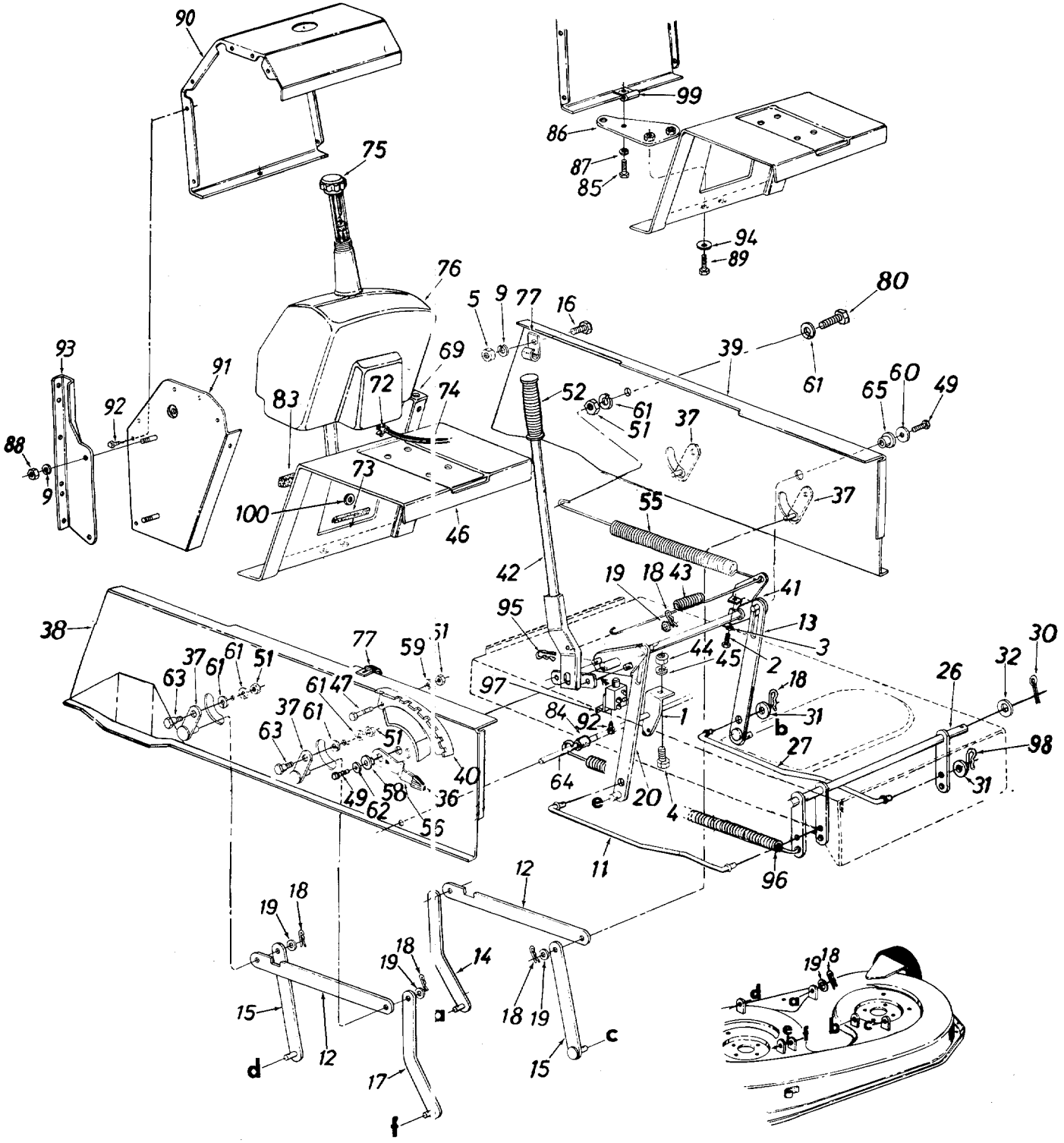
†Not part of deck assembly complete.
††Optional Parts

*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.

NOTE

Specifications subject to change without notice or obligation.

Model 684


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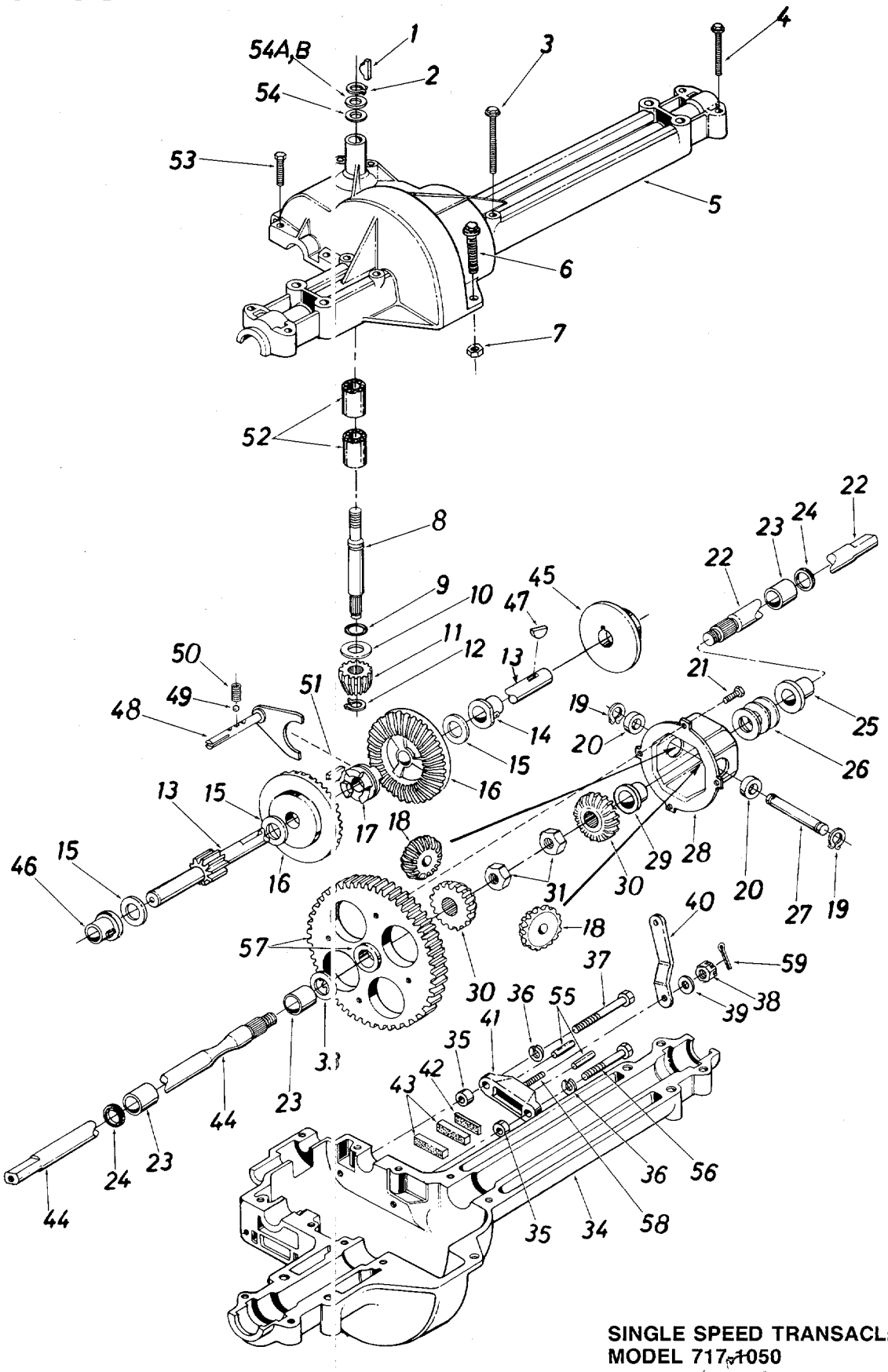
Model 684

PARTS LIST FOR MODEL 684 LAWN TRACTOR

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	16181		Spring Hanger Bracket	56	732-0412A	N	Deck Lift—Down Stop
2	710-0602		Hex Tap. Scr. 5/16-18 x 1"	58	748-0176		Flange Brg. .630" I.D.
3	712-3007		Hex Jam Nut 5/16-18 Thd.	60	736-0231		Fl-Wash. .344" I.D.
4	710-0258		Hex Bolt ¼-20 x .62" Lg.*	61	736-0425		Bell-Wash. .325" I.D. x .930" x .045"
5	712-0267		Hex Nut 5/16-18 Thd.*				
8	732-0410		Ext. Spring 13.25" Lg.	62	736-0231		Fl-Wash. .344" I.D. x 1.125" O.D.
9	736-0119		L-Wash. 5/16" I.D.*				
11	711-0790A	N	Stabilizer Rod	63	738-0140		Shld. Bolt .437" Dia. x .180"
12	09735A	N	Connecting Rod	64	738-0526		Running Board Rod
13	14802A	N	Deck Lift Link Ass'y.	65	741-0313		Flange Brg. .632" I.D.
14	15925		Deck Hanger Link Ass'y.—Rear L.H.	69	17083		Side Panel—L.H.
				72	726-0205		Hose Clamp—.406" Dia.
15	14804		Deck Hanger Link Ass'y.	73	731-0511		Trim Strip—5" Lg.
16	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	74	751-0535		Gas Line—68" Lg.
17	14800		Deck Hanger Link Ass'y.—(Dog Leg)	75	751-0226		Gas Tank Cap
				76	751-0530		Gas Tank
18	714-0101		Inter. Cotter Pin ½" Dia.	77	726-0175		Hose Clamp
19	736-0160		Fl-Wash. .531" I.D. x .93" O.D.	80	710-0959		Hex Bolt 5/16-18 x 1.50" Lg.*
20	14802		Deck Lift Link Ass'y.	83	722-0157		Foam Strip 3/8" x 1-1/8" x 1½" Lg. (2 Req'd.)
26	16234		Stabilizer Shaft Ass'y.				
27	711-0790A		Stabilizer Rod	84	711-0425		Spacer .523" I.D. x .640" O.D. x 1.95" Lg.
30	714-0470		Cotter Pin 1/8" Dia. x 1.25"*				
31	736-0117		Fl-Wash. .385" I.D. x .620" O.D.	85	710-0376		Hex Bolt 5/16-18 x 1" Lg. Gr. 5
32	736-0156		Fl-Wash. .635" I.D. x 1.12" O.D.	86	17166		Hitch Bar
36	08540		Knob—Height Adj.	87	736-0119		L-Wash. 5/16" I.D.*
37	09721		Pivot Link Ass'y.	88	712-0267		Hex Nut 5/16-18 Thd.*
38	14602		Side Panel Upper Frame—R.H.	89	710-0623		Self-Tap Scr. ¾" Lg.
39	14603		Side Panel Upper Frame—L.H.	90	16238		Gas Tank Housing
40	16462		Index Brkt. (Deck Lift)	91	17082		Side Panel—R.H.
41	17154A	N	Lift Shaft Ass'y. (Incl. Ref. 2 & 3)	92	710-0351		Truss Mach. B-Tap Scr. #10 x .50" Lg.
42	17194		Lift Handle Brkt. Ass'y.	93	17078 A		Mounting Bracket—R.H.
43	732-0573		Ext. Spring		17077 A		Mounting Bracket—L.H. (Not Shown) (Use With Optional Grass Catcher)
44	712-0287		Hex Nut ¼-20 Thd.*				
45	736-0329		L-Wash. ¼" I.D.*				
46	17226		Hitch Plate	94	736-0105		Bell-Wash. 3/8" I.D.
47	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	95	714-0145		Internal Cotter Pin 3/8" Dia.
49	710-0604		Hex Wash. TT-Tap Scr. 5/16-18 x .62" Lg.	96	732-0530		Ext. Spring 13.25" Lg.
				97	725-0803B	N	Safety Switch
51	712-0267		Hex Nut 5/16-18 Thd.*	98	714-0111		Cotter Pin 3/32" Dia.
52	720-0233		Grip	99	726-0211		Speed Nut
55	732-0307A	N	Ext. Spring 11" Lg.	100	735-0112		Grommet

*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.

Model 684



SINGLE SPEED TRANSACLE—R.H.
MODEL 717~~1~~050

Model 684

PARTS LIST FOR
SINGLE SPEED TRANSAXLE RIGHT HAND 717-1050

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	714-0129		#4 Hi-Pro Key 3/32 x 5/8" Dia.	33	736-0351		Fl-Wash. .75" I.D. x 1.5" O.D.
				34	717-0761		Lower Housing
2	716-0115		Snap Ring .625" Shaft	35	750-0555		Spacer .53" O.D. x 3/8" Lg.
3	710-0854		Hex Bolt ¼-20 x 1.75" Lg.*	36	736-0329		L-Wash. ¼" I.D.*
4	710-0809		Hex Bolt ¼-20 x 1.25" Lg.*	37	710-0886		Hex Bolt ¼-20 x 1.50" Lg. (Grade 5)
5	717-0764		Upper Housing				
6	710-0642		Hex Fl-Bolt ¼-20 x .75" Lg.	38	712-0335		Castle Nut 5/16-24 Thd.*
7	712-0287		Hex Nut ¼-20 Thd.*	39	736-0371		Fl-Wash. .34" I.D. x .875" O.D.
8	717-0634		Input Shaft				
9	721-0178		Square Seal 5/8" I.D.	40	717-0700		Actuating Arm—R.H.
10	736-0335		Thrust Washer 5/8" I.D. x 1.25" O.D.	41	717-0679		Brake Yoke
				42	717-0682		Puck Plate
11	717-0633		Pinion Input 14T	43	717-0678		Brake Puck
12	716-0108		Retaining Ring 7/16" Ext.	44	717-1011		Axle L.H.
13	717-0758		Drive Shaft—R.H.	45	717-0677		Brake Disc
14	741-0336		Flange Brg. 5/8" I.D. x ¾" Lg.*	46	741-0337		Flange Bearing 5/8" I.D. x 15/16" Lg.
15	**		Fl-Wash. (See Below)				
16	717-0757		Bevel Gear 42T	47	714-0161		Woodruff Key 3/16 x 5/8 HT
17	717-0667		Clutch Collar	48	717-0754		Shift Fork Ass'y.
18	717-1020		Miter Gear 15T—H.D.	49	741-0862		Ball Detent .250" Dia.
19	716-0142		Snap Ring	50	732-0863		Spring Detent
20	717-0690		Thrust Bearing ½" I.D. x 1.0" O.D.	51	714-0169		#9 Hi-Pro Key 3/16" x ¾" Dia. HT
21	710-0862		Pan Head Scr. ¼-20 x .50" Lg. w/Patch	52	741-0335		Needle Brg. 5/8" I.D. x ½" Lg.
22	717-1012		Axle R.H.	53	710-0855		Hex Bolt ¼-20 x 1.00" Lg.
23	741-0340		Sleeve Bearing ¾" I.D. x 1.0" Lg.	54	736-0336		Fl-Wash. 5/8" I.D. x .030
				54A	736-0337		Fl-Wash. 5/8" I.D. x .040
24	721-0179		Oil Seal ¾" I.D.	54B	736-0349		Fl-Wash. 5/8" I.D. x .020
25	741-0339		Flange Bearing ¾" I.D. x 15/16" Lg.	55	741-0343		Actuating Pin 5/16" Dia.
				56	710-0886		Hex Bolt ¼-20 x 1.50" Lg. (Grade 5)
26	736-0188		Fl-Wash. .760" I.D. x 1.49" O.D.	57	717-1059		Differential Gear 72T Ass'y. w/Bearing
27	717-0673		Cross Shaft				
28	717-0777		Differential Housing Ass'y.	58	717-0796		Sq. Hd. Bolt 5/16-24 Thd.
29	—		Comes with Ref. 28	59	1544-013		Cotter Pin 3/32" Dia. x .50" Lg.
30	717-1019		Miter Gear—H.D.				
31	712-0200A	N	Hex Ins. L-Nut ½-20 Thd.	—	737-0148		Grease—Shell (10 oz.)

**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.

At the time of manufacture of lawn tractor, the optional accessories listed below are available.

Description	Model No.	Description	Model No.
36" Single Stage Snow Thrower	190-491-000	Gang Reel (Set of three)	42-0193*
42" Dozer Blade	190-485-000	38" Lawn Sweeper	42-0173*
Tire Chains—18 x 9.5	190-657-000	Heavy Duty Lawn Roller	31-0179*
31 Lb. Wheel Weights	290-215-000	Heavy Duty Dump Cart	41-0171*
Grass Collector	190-064-000	Tine De-Thatcher	41-0166*

*Available through your local dealer or from Agri-Fab Inc., 303 W. Raymond Street, Sullivan, Illinois 61951 (217) 728-4334.

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. Box 2466	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. Box 277	46516
IOWA	**DUBUQUE**	
Power Lawn & Garden Equip.	2551 J.F. Kennedy	52001
LOUISIANA	**LAFAYETTE**	
Jourdan Engine Co.	214 W. Vermillion St. Box 3503	70501
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 YORK	**CARTHAGE**	
Gamble Dist., Inc.	West End Ave. Box 389	13619
NORTH CAROLINA	**GREENSBORO**	
Dixie Sales Company	335 N. Green Box 1408	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.	1850
TENNESSEE	**KNOXVILLE**	
Ace Distributors	2103 Magnolia	37917
	MEMPHIS	
American Sales & Service, Inc.	3035-43 Bellbrook	38116
TEXAS	**DALLAS**	
Marr Brothers, Inc.	423 E. Jefferson	75203
	SAN ANTONIO	
Engine House Inc.	4918 Golden Quail	78249
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
PUERTO RICO	**AGUADILLA**	
CIE & Associates, Inc.	Box 427 Ramey Station	00604

WARRANTY PARTS AND SERVICE POLICY (0588)

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.**