

# Operator's Manual



## Electric Lawn Mower 19" Rear Bagger

Model 407

**IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY**



This symbol on the product's nameplate  
means it is listed by  
UNDERWRITERS LABORATORIES INC.

**MTD LLC P.O. BOX 361131 CLEVELAND, OHIO 44136-9722**

FORM NO. 770-8969D  
(9/02)

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## FINDING MODEL NUMBER

This Operator's Manual is an important part of your new Lawn Mower. It will help you assemble, prepare and maintain the unit for best performance. Please read and understand what it says.



**Before you start assembling your new equipment**, please locate the model plate on the equipment and copy the information from it in the space provided below. The information on the model plate is very important if you need help from our Customer Support Department or an authorized dealer.

- You can locate the model number by standing behind the unit and looking at the rear of the deck. A sample model plate is explained below. For future reference, please copy the model number and the serial number of the equipment in the space below.

(Model Number)

(Serial Number)

**MTD LLC**  
**P. O. BOX 361131**  
**CLEVELAND, OH 44136**  
**330-220-4683**  
**800-800-7310**

www.mtdproducts.com

Copy the model number here: \_\_\_\_\_

Copy the serial number here: \_\_\_\_\_

## CALLING CUSTOMER SUPPORT

If you have difficulty assembling this product or have any questions regarding the controls, operation or maintenance of this unit, please call the Customer Support Department.



Call **1- (330) 220-4MTD (4683)** or **1- (800)-800-7310** to reach a Customer Support representative. Please have your unit's model number and serial number ready when you call. See previous section to locate this information. You will be asked to enter the serial number in order to process your call.

For more details about your unit, visit our website at [www.mtdproducts.com](http://www.mtdproducts.com)

# SECTION 1: IMPORTANT SAFE OPERATION PRACTICES

## READ ALL INSTRUCTIONS!



**WARNING:** 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 this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol—**HEED ITS WARNING.**

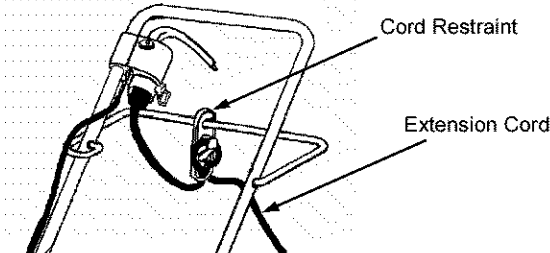


**DANGER:** This machine was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.



When using electric lawnmowers, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury. These basic precautions include the following:

## GENERAL OPERATION

1. Read, understand, and follow all instructions on the machine and in the manual before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 14 years old to operate this machine. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
4. Never allow adults to operate this machine without proper instruction.
5. To help avoid blade contact or a thrown object injury, stay in the operator zone behind the handles and keep children and bystanders at least 75 feet from the machine while it is in operation. Stop motor if anyone enters the area.
6. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects, which could be tripped over or thrown by the blade. Thrown objects can cause serious personal injury.
7. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction, which may cause discharged material to ricochet back toward the operator.
8. Always wear proper eye protection while operating or performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
9. Always use a face or dust mask if operating in a dusty environment.
10. Dress Properly – Do not wear loose clothing or jewelry. They can be caught in moving parts. Use of rubber gloves and footwear is recommended when working outdoors.
11. Ground Fault Circuit Interrupter (GFCI) protection should be provided on the circuit(s) or outlet(s) to be used for the lawn mower. Receptacles are available having built-in GFCI protection and may be used for this measure of safety.
12. To prevent electric shock use only with a UL listed extension cord set suitable for outdoor use, such as Type SW-A, SOW-A, STW-A, STOW-A, SJW-A, SJOW-A, SJTW-A, or SJTOW-A.
13. Extension Cord - Make sure your extension cord set is in good condition, is heavy enough to carry the current your mower will draw, and is polarized (one blade of plug is wider than the other). A 50' length of 12 AWG cord should be used. A longer length or undersized cord will cause a drop in line voltage resulting in a loss of power and overheating.
14. To reduce the likelihood of disconnection of the lawn mower from the extension cord set, be sure to use the cord restraint provided as shown in the illustration below:  

15. To reduce the risk of electric shock, this lawn mower has a polarized plug (one blade is wider than the other) and will require the use of a polarized extension cord. The mower plug will only fit into the polarized extension cord one way. If the plug does not fit fully into the extension cord, reverse the plug. If the plug still does not fit, obtain a correct polarized extension cord. A polarized extension cord will require the use of a polarized wall outlet. This plug will fit into the polarized outlet only one way. If the plug does not fit fully into the wall outlet, reverse the plug. If the plug still does not fit, contact a qualified electrician to install the proper wall outlet. Do not change the equipment plug, extension cord receptacle, or extension cord plug in any way.

16. Home circuit – This mower should be operated on a 15 AMP circuit. If you experience difficulty in starting with a standard 15 AMP fuse or circuit breaker, contact your nearest authorized service facility. Do not use a higher rated fuse or breaker without consulting your power company.
17. Do not abuse the cord by pulling the mower by the cord or yanking it to disconnect it from the receptacle. Keep cord from heat, oil, and sharp edges.
18. Many injuries occur as a result of the mower being pulled over the foot during a fall caused by slipping or tripping. Never operate this machine in bare feet, sandals, slippery or lightweight (e.g. canvas) shoes. Do not hold on to the mower if you are falling; release the handle immediately.
19. Never pull the mower back toward you while you are walking. If you must back the mower away from a wall or obstruction first look down and behind to avoid tripping and then follow these steps:
  - Step back from the mower to fully extend your arms.
  - Be sure you are well balanced with sure footing.
  - Pull the mower back slowly, no more than half way toward you.
  - Repeat these steps as needed.
20. Do not use lawn mower for any job except that for which it is intended. Do not force the lawn mower – Cut grass at a rate, for which the mower is designed, which will not sacrifice the performance or safety of the machine.
21. Do not operate the mower while under the influence of alcohol or drugs.
22. Stay Alert – Do not operate the mower when you are tired. Watch what you are doing. Use common sense.
23. Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade can amputate hands and feet.
24. Never attempt to make a wheel or cutting height adjustment while the motor is running.
25. Avoid dangerous environments – Never operate the mower in the rain or in wet or damp grass.
26. Mow only in daylight or in good artificial light. Walk, never run.
27. Stop the blade when crossing gravel drives, walks or roads.
28. If the equipment should start to vibrate abnormally, stop the motor and check immediately for the cause. Vibration is generally a warning of trouble.
29. Stop the motor and wait until the blade comes to a complete stop before removing the grass catcher or unclogging the chute. The cutting blade continues to rotate for a few seconds after the motor is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
30. Never operate mower without proper trail shield, discharge cover, grass catcher, blade/motor control or other safety protective devices in place and working. Never operate mower with damaged safety devices. Failure to do so can result in personal injury.

31. Only use parts and accessories made for this machine by the manufacturer. Failure to do so can result in personal injury.
32. If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer or telephone 1-800-800-7310 for assistance and the name of your nearest servicing dealer.

## Slope Operation

Slopes are a major factor related to slip and fall accidents which can result in severe injury. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not mow it. 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 degrees, do not mow it.

### Do:

1. Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
2. Watch for holes, ruts, rocks, hidden objects, or bumps which can cause you to slip or trip. Tall grass can hide obstacles. Remove all objects such as rocks, tree limbs, etc., which could be tripped over or thrown by the blade.
3. Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your balance, release the blade/motor control handle immediately, and the blade will stop rotating within 3 seconds.

### Do Not:

1. Do not mow near drop-offs, ditches or embankments, you could lose your footing or balance.
2. Do not mow slopes greater than 15 degrees as shown on the slope gauge.
3. Do not mow on wet grass. Unstable footing could cause slipping.

## Children

1. Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the mower and the mowing activity. They do not understand the dangers. Never assume that children will remain where you last saw them.
  - Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
  - Be alert and turn mower off if a child enters the area.
  - Before and while moving backwards, look behind and down for small children.
  - Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your vision of a child who may run into the mower.
2. Never allow children under 14 years old to operate a power mower. Children 14 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.

## Service

- When servicing use only identical replacement parts listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
- Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the power cord when not in use and to prevent unintended starting.
- Follow instructions for lubricating and changing accessories.
- Inspect lawn mower cord and extension cords periodically and replace immediately, if damaged. Lawn mower cord should be repaired by an authorized service facility only.
- Keep handles dry, clean and free from oil and grease.
- To reduce a fire hazard, keep the motor free of grass, leaves and debris build-up.
- Check the blade and motor mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., bent, cracked, and worn) Replace blade with the original equipment manufacturer's (OEM) blade only, listed in this manual.
- Maintain your mower with care – Keep mower blade sharp and clean for best and safest performance. Mower blades are sharp and can cut, wrap the blade or wear gloves and use extra caution when servicing them.
- Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- After striking a foreign object, stop the motor and disconnect the power cord. Thoroughly inspect the mower for any damage. Repair the damage before operating the mower.
- Grass catcher components, discharge cover, and trail shield are subject to wear and damage which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace immediately with original equipment manufacturer's (OEM) parts only, listed in this manual.
- When not in use, store lawn mower indoors in a dry area, locked-up and/or out of the reach of children.

## Double Insulated Lawn Mower

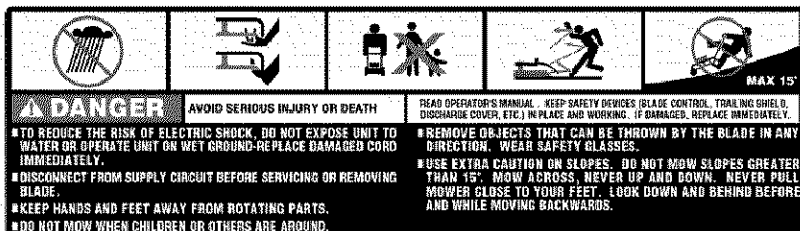
Double insulation is a concept in the safety of electric lawn mowers, which eliminates the need for the usual three-wire grounded power cord and grounded power supply system. Wherever there is electric current in the mower, there are two complete sets of insulation to protect the user. All exposed metal parts are isolated from the internal metal motor components with protecting insulation.

**IMPORTANT:** Servicing of a lawn mower with double insulation requires extreme care and knowledge of the system and should be performed only by a qualified service technician. For repair service we suggest you return the lawn mower to your nearest authorized service dealer. Always use original factory replacement parts when servicing.

## SAVE THESE INSTRUCTIONS!

### WARNING: YOUR RESPONSIBILITY

- Restrict the use of this power machine to persons who read, understand, and follow the warnings and instructions in this manual and on the machine.

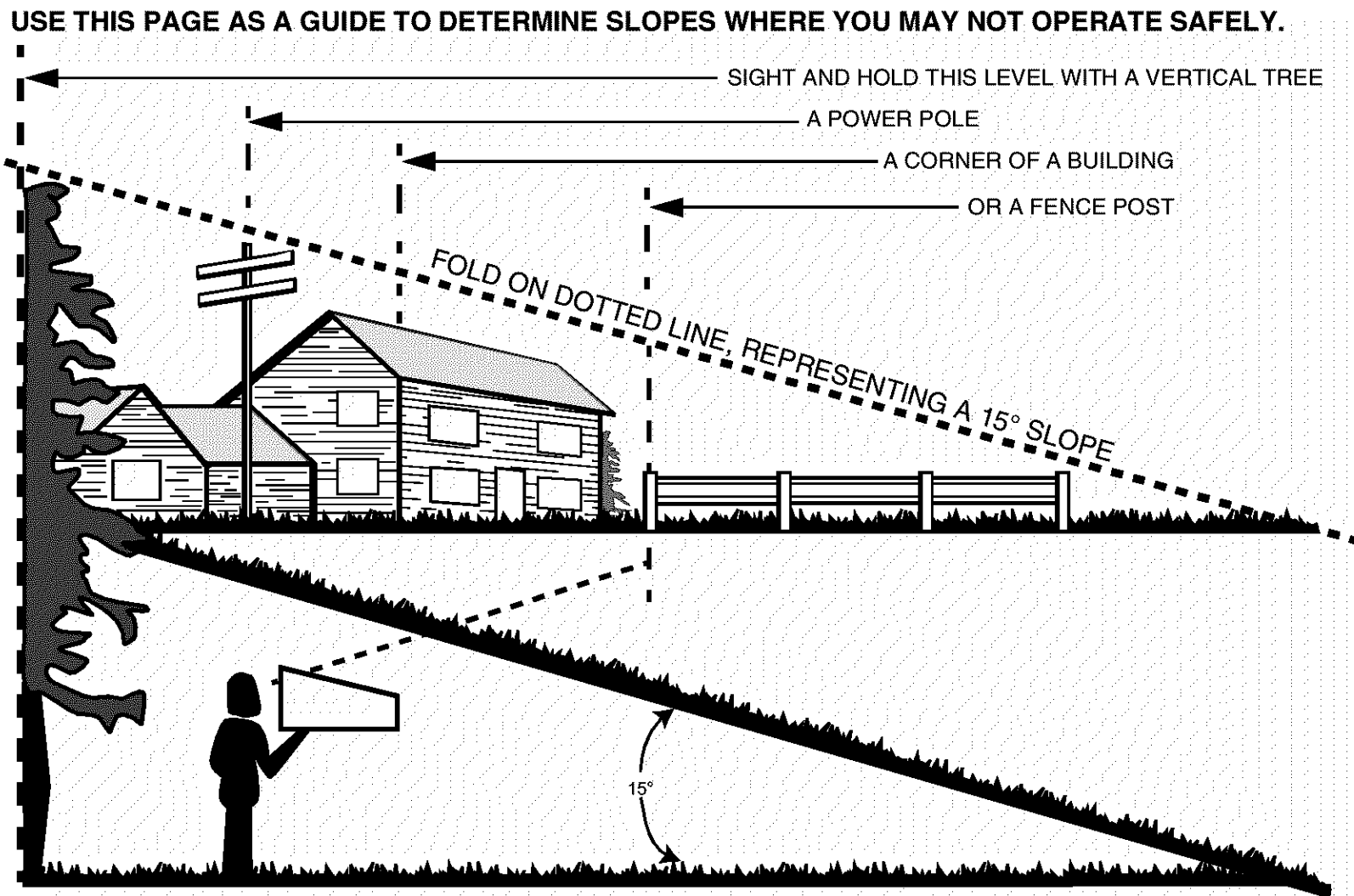


TO REDUCE THE RISK OF INJURY, DO NOT OPERATE UNLESS DISCHARGE COVER OR GRASS CATCHER IS IN ITS PROPER PLACE. IF DAMAGED, REPLACE IMMEDIATELY.



## SECTION 2: SLOPE GAUGE

Use this page as a guide to determine slopes where you may not operate safely. Do not operate your lawn mower on such slopes.



### WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 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.

## SECTION 3: UNPACKING INSTRUCTIONS

### Remove Unit From Carton

**NOTE:** Reference to the right or left hand side of the mower is observed from the operating position.

- Remove staples, break glue on the top flaps, or cut the tape at carton end and peel along top flap to open the carton.
- Remove any loose parts included with the unit (i.e., operator's manual, etc.).
- Cut the corners and lay the carton down flat.
- Remove packing material.

Roll or slide the unit out of carton. Check the carton thoroughly for loose parts.

### REMOVE MANUAL & LOOSE PARTS

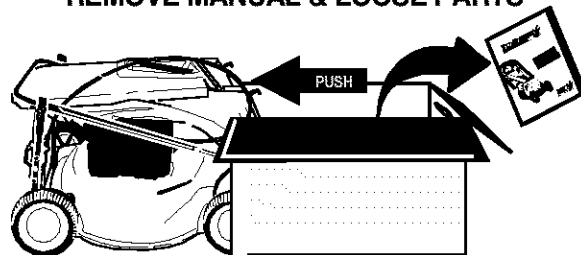


Figure 1

## SECTION 4: ASSEMBLING YOUR LAWN MOWER

### Loose Parts in Carton

- Grass Catcher Assembly. Refer to Figure 2.
- Owner's Manual (not shown).

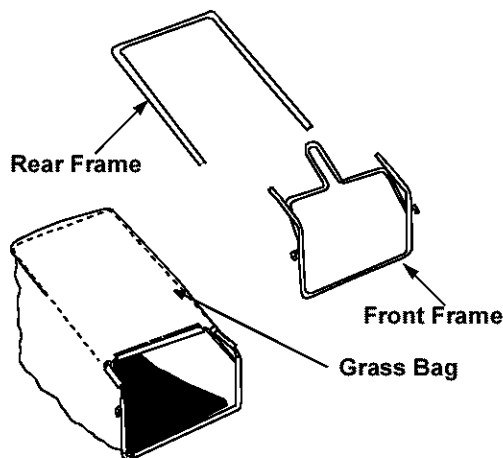


Figure 2

### Tools Required

- A pair of pliers.

### Assembling Handle

- Remove any packing material which may be between the upper and lower handles for shipping purposes.

- Pull up and back on the upper handle to raise the handle into the operating position. Make certain the lower handle is seated securely into the handle mounting brackets. Refer to the steps in Figure 3.

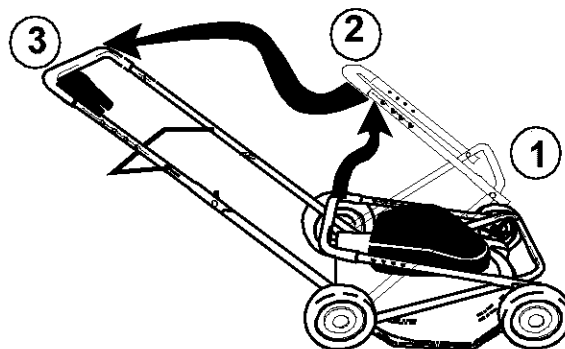


Figure 3



**WARNING:** The handle insulators are not only used to adjust handle height, but are also a safety device and should never be altered in any way. If replacement is necessary, use original equipment parts as shown in the parts list on page 16.

- The upper handle may be adjusted to three different height positions. To adjust the handle at the desired position, align one of the three marks on the top of the lower handle insulators with the mark on the upper handle insulators. See Figure 4.
- Tighten the hand knobs on each side of the handle. Make sure that carriage bolts are seated properly into the handle insulators.

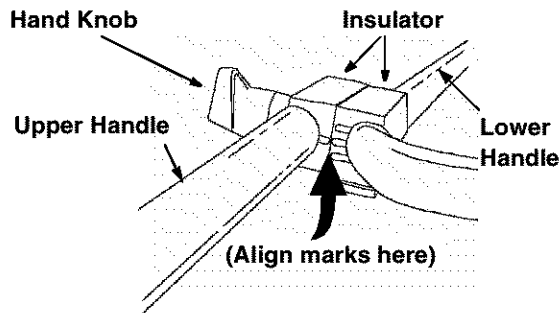


Figure 4

- Remove the hairpin clips from the outer hole in the weld pins on the handle mounting brackets.
- Using a pair of pliers, squeeze one leg of the lower handle against the handle mounting bracket. Insert the hairpin clip into the inner hole on the weld pin. Repeat on the other side. Refer to Figure 5.
- Make certain all nuts and bolts are tightened securely.

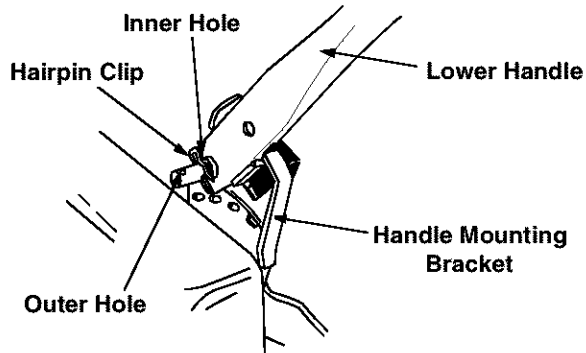


Figure 5

## Assembling the Grass Catcher

**NOTE:** Before assembling, make sure that the grass bag is turned right side out with the warning label on the outside. Also the black plastic side is the bottom of the bag.

- Insert the front frame into the rear frame as far as it will go.
- Place frame assembly inside the bag.
- Slip the plastic channel of the bag over the frame (adjacent to the handle of the grass catcher) as shown in Figure 6. Make sure that the handle of the grass catcher protrudes *out* of the notch in the plastic channel on bag.
- Insert the two hooks on both sides of the frame through the openings on both sides of the bag.

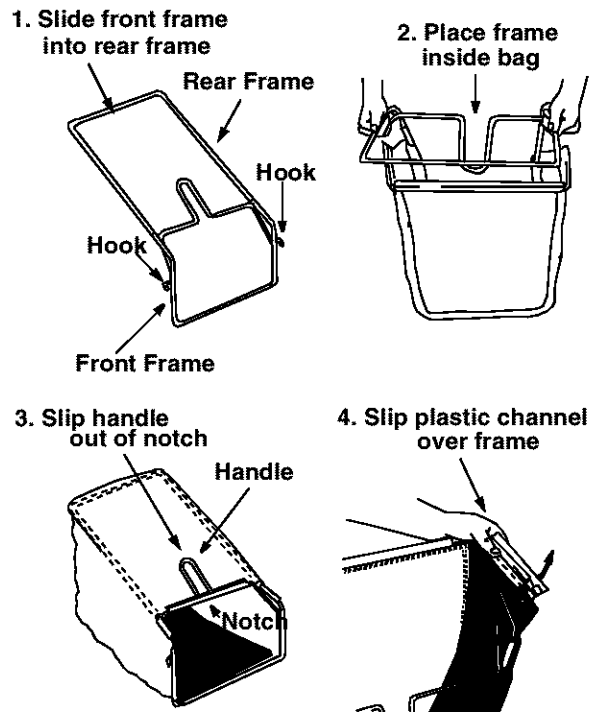


Figure 6

- Secure bag to the frame by working the plastic channels on bag over the frame on the other sides as shown in Figure 6.

**NOTE:** All of the plastic channels except the center top of the bag attach from the outside of the bag. The center top of the bag attaches from the inside of bag.



**WARNING:** Never operate the mower without the proper trail shield, discharge cover, grass catcher, blade/motor control or other safety protective devices in place and working. Never operate the mower with damaged safety devices. Failure to do so can result in personal injury.

## Attaching The Grass Catcher

- Lift the rear discharge door on the mower and remove the mulching baffle. See Figure 7.

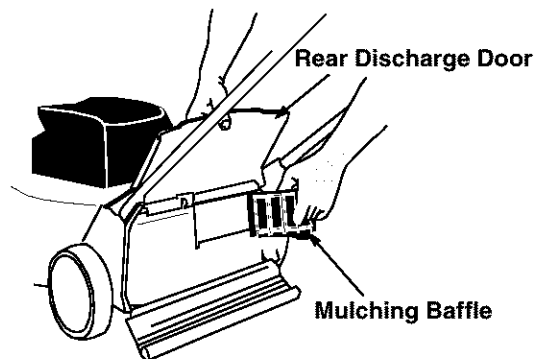


Figure 7



- Place the hooks of the grass catcher into the slots in the handle bracket assembly on each side of the lower handle as shown in Figure 8. Release the rear discharge door.

To remove the grass catcher, lift the rear discharge door on the mower. Lift the grass catcher up, out of the slots in the handle bracket assemblies. Release the rear discharge door.



**WARNING:** Do not operate this mower with the chute door open, unless the complete grass catcher is properly mounted on the mower.

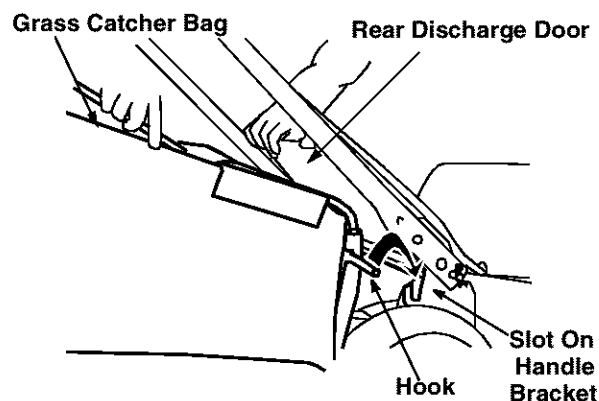


Figure 8

## SECTION 5: KNOW YOUR LAWN MOWER

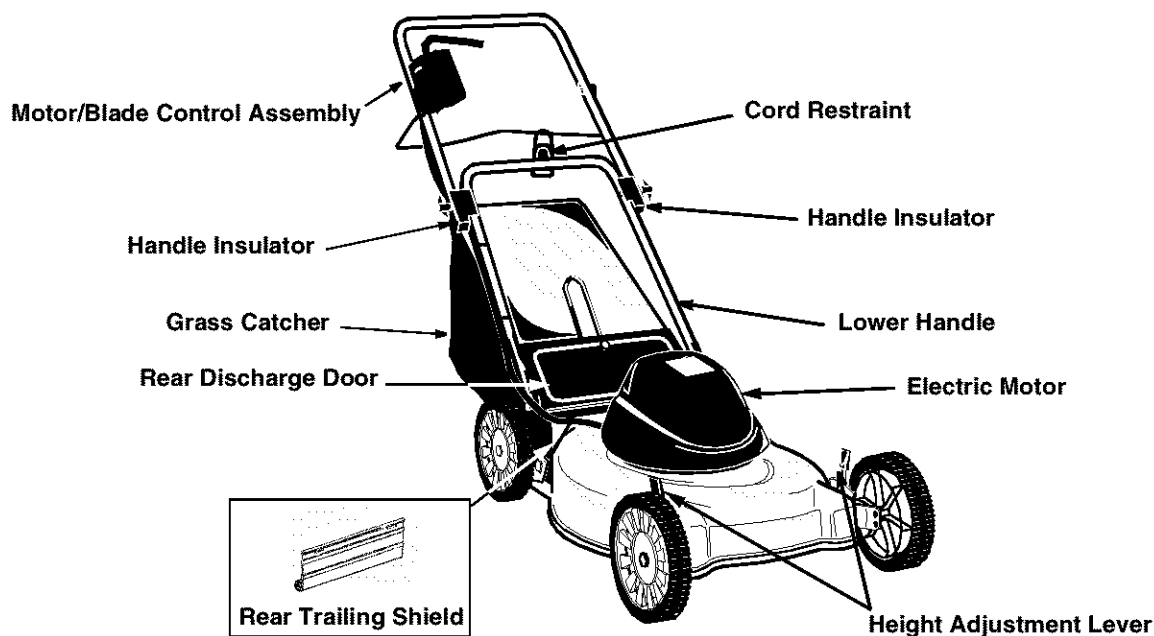


Figure 9

Read this operator's manual and safety rules before operating your lawn mower. Compare the illustration in Figure 9 with your lawn mower to familiarize yourself with the location of various controls and adjustments. Save this manual for future reference.



**WARNING:** The operation of any lawn mower can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear safety glasses while operating the mower, or while performing any adjustments or repairs.

### Motor/Blade Control Assembly

The motor/blade control is located on the upper handle of the mower. See Figure 9. The motor/blade control handle engages and disengages the motor and blade.



**WARNING:** The motor / blade control assembly is a safety device. Never attempt to bypass its operations.

### Rear Trailing Shield

The rear trailing shield, attached between the rear wheels of your mower, is provided to minimize the possibility of objects being thrown at the operator from the rear of the mower. See Figure 9.

### Circuit Breaker

The mower is equipped with a circuit breaker, located on the motor/blade control. Refer to Figure 10. This circuit breaker may trip when too much strain is placed on the mower. See *Making Adjustments Section*.

## Cord Restraint

The cord restraint is located on the back of the upper handle and when used properly, helps to protect the motor/blade control assembly and also the extension cord powering the unit.

## Height Adjustment Lever

A height adjustment lever at each wheel provides cutting height adjustment. Each adjuster has nine height positions. Height of cut will be changed when the lever is moved from one position to another. Simply depress the lever towards wheel and move wheel and lever assembly to desired position. All wheels must be placed in the same relative position.

# SECTION 6: OPERATING YOUR LAWN MOWER

## Cord Connection

### Extension Cord Selection

Shown below is the length of extension cord and its corresponding acceptable cord ratings.

- 50' Cord — use 12 AWG

The extension cord should be a UL listed cord set suitable for outdoor use.

**IMPORTANT:** Using any other length or rating of cord will diminish the performance and possibly the life of the electric motor, and may also cause breakers to trip or fuses to blow in your home's fusebox.

### Cord Restraint

- Attach the extension cord (not provided with unit) to the cord restraint as follows.
- Form a small loop in the extension cord. Allow enough excess cord to make the connection to the motor/blade control (approximately 20 inches).
- Slip the loop through the slot on the bottom of the cord restraint, and up over the tab, to prevent disconnection from the motor/blade control during operation.
- Keep the cord restraint as close to the motor/blade control as possible. See Figure 9.

### Connecting to the Motor/Blade Control Assembly

Connect the plug on the extension cord fully onto the plug on the mower. The mower is equipped with a polarized AC power plug (one blade of the plug is wider than the other), which will fit into the plug on the extension cord only one way. If unable to make a full connection, try reversing the plug on the extension cord. Should the plugs still fail to fit, contact your service dealer for assistance. Do not defeat the safety purpose of the polarized plug.

### Connecting to the Electric Power Source



**WARNING:** This mower should be operated on a 15 AMP circuit. If you experience difficulty in starting with a standard 15 AMP fuse or circuit breaker, contact your nearest authorized service facility. Do not use a higher rated fuse or breaker without consulting your power company.

Plug the extension cord into any convenient 110-120 volt 60 cycle A.C. outlet or receptacle for your source of power. This outlet may be located either out-of-doors or indoors. To avoid blowing fuses, pick an outlet that is not overloaded. Your mower will operate satisfactorily on a circuit that is fused for 15 amperes. Do not use oversize fuses without consulting an electrician. If an inside receptacle is used, the extension cord can be taken out either through the doorway or a window.

## Starting the Motor and Blade

**NOTE:** The wheels on your unit are set in a low cutting height position for shipping purposes. For best results, raise the cutting position until it is determined which height is best for your lawn. See cutting height adjustment in the Making Adjustments section.

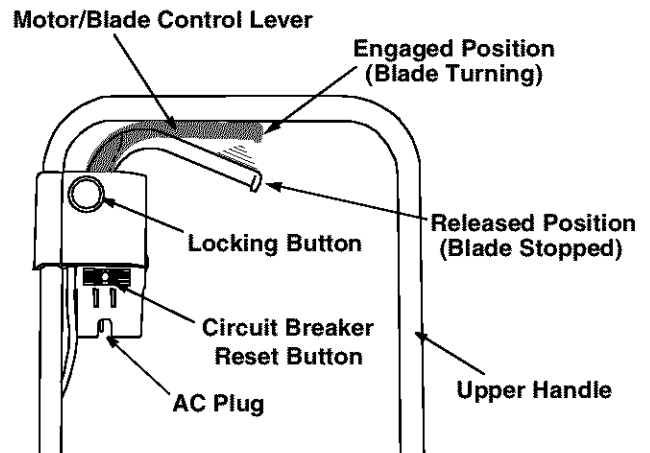


Figure 10

To engage the motor and blade, first be certain to follow the previous steps for connecting a suitable extension cord, then referring to Figure 10:

- Stand behind the unit and depress the locking button.
- While holding the locking button down, pull the blade/motor control lever and hold it against the upper handle.
- Release the locking button.

## Stopping the Motor and Blade



**WARNING:** The blade continues to rotate for a few seconds after the motor is shut off. If motor does not come to a stop when the motor/blade control handle is released, contact an authorized service dealer.

To stop the motor and blade from spinning:

- Release the blade/motor control lever from its position against the upper handle and the blade and motor will quickly come to a stop.

**NOTE:** A high pitched noise may occur as the electric motor decelerates and some sparking may occur also at the same time. This is normal behavior when the motor and blade is disengaged.

## Mowing Your Lawn

**NOTE:** A sharp blade will greatly increase the performance of the lawn mower, especially in conditions of higher grass. Be sure to check the blade and sharpen it at least once a year as outlined in the Maintenance section.

- Be sure that lawn is clear of stones, sticks, wires, or other objects which could damage the lawn mower or motor. Such objects could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator and others.
- To prevent electric shock, do not operate the mower in damp or wet conditions.
- Always start from the **point closest to the power source** where the cord is connected. Never mow around the lawn in circles; travel back and forth across the lawn, starting from the point closest to the outlet and then moving away from the outlet so the cord lies in the cut portion of the lawn, out of the way. See Figure 11.

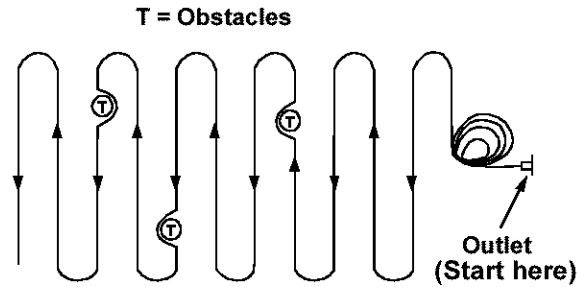


Figure 11

- Do not allow the extension cord to wrap around trees, shrubs or other obstacles. When picking up the extension cord, wind the cord in a series of equal loops on each side of your hand to prevent snarling.
- When cutting heavy grass, reduce walking speed to allow more effective cut and proper discharge of the clippings. For a healthy lawn, always cut off one-third or less of the total length of the grass. The average lawn should be approximately 1-1/2 to 2 inches during the cool season, and over 2 inches during hot months. For a healthier and better looking lawn, cut more often and after moderate growth. The lawn should be cut in the fall as long as there is growth.

### Mulching Tips

- For effective mulching, do not cut wet grass because it tends to stick to the underside of the deck, preventing proper mulching of grass clippings. New or thick grass may require a narrower cut. The ground speed should be adjusted to the condition of the lawn. If mowing has been delayed and the grass has been allowed to grow in excess of 4", mow twice to reduce the grass height to 3-1/4" maximum.



**WARNING:** If you strike a foreign object, stop the motor, and unplug from the power supply circuit. Thoroughly inspect the mower for any damage, and repair the damage before restarting and operating the mower. Excessive vibration of the mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

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## SECTION 7: MAKING ADJUSTMENTS

### Cutting Height Adjustment

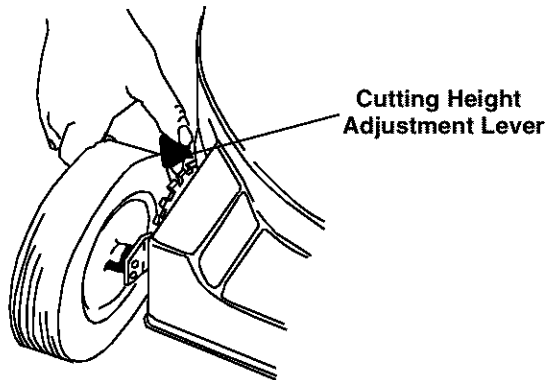


Figure 12

A height adjustment lever at each wheel provides cutting height adjustment. Each adjuster has nine height positions. Height of cut will be changed when the lever is moved from one position to another.

- Depress the lever towards wheel and move wheel and lever assembly to desired position.
- To raise the height, push the lever towards the front of the mower on both front wheels, and push the lever toward the back of the mower on the rear wheels.

Refer to Figure 12. All wheels must be placed in the same relative position. For rough or uneven lawns, move the wheels to a position which will give a higher cutting height.

### Handle Height Adjustment

- The upper handle may be adjusted to three different height positions. To adjust the handle at the desired position, align one of the three marks on the top of the lower handle insulators with the mark on the upper handle insulators. Refer to Figure 4.
- Tighten the hand knobs on each side of the handle. Make sure that carriage bolts are seated properly into the handle insulators.

### Resetting the Circuit Breaker

The mower is equipped with a circuit breaker, located on the motor/blade control assembly as shown in Figure 10. This circuit breaker may trip when too much strain is placed on the mower. The circuit breaker may have been tripped if the mower will not run.

- If this occurs, unplug the mower, wait approximately five minutes, then depress the reset button. Refer to Figure 10.
- Plug the mower back in, restart the mower, but be sure to reduce the strain on the mower (i.e., mow at a higher cutting height, slow down cutting speed, or take a smaller width of cut).
- If the circuit breaker does not reset, or if it trips repeatedly under normal cutting conditions, unplug the mower from the extension cord and unplug the extension cord from the power source. Then check to make certain your cord is the correct length and rating as listed in the *Operating Your Lawn Mower* section. If the cord is correct and is also not damaged, take the machine to an authorized service dealer for repair.

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## SECTION 8: MAINTENANCE



**WARNING:** Always stop the motor and disconnect from the power source before cleaning, lubricating or performing any repairs or maintenance on the lawn mower.

### Cutting Blade Replacement



**WARNING:** Always protect hands by wearing heavy gloves and/or wrapping cutting edges with newspapers or other materials when performing any blade maintenance. Be certain to disconnect the power supply.

### Removing the Blade

- Stop the motor and disconnect the power supply to the mower. Turn the mower on its side.
- Use a block of wood between blade and mower deck to prevent the blade from turning when the bolt is removed.
- Using a 24mm wrench or socket, loosen the blade bolt and remove the blade.

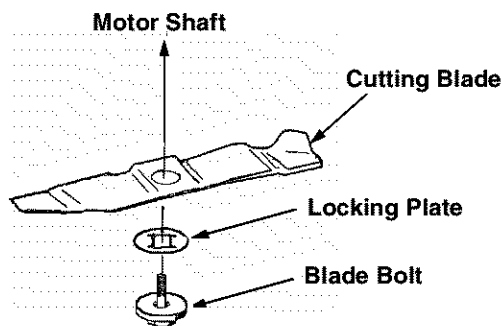


Figure 13

### Installing the Blade



**WARNING:** The blade hardware is not only used to attach the blade assembly, but is also an insulated safety device and should never be altered in any way. If replacement is necessary, use original equipment parts as shown in the parts list on page 16.

- Place the cutting blade, locking plate, and blade bolt on the motor shaft and thread the blade bolt in finger tight. Refer to Figure 13.

**NOTE:** Make certain to replace the parts in the exact order in which they were removed. When installing the cutting blade, be sure it is installed with the curved ends pointing towards the mower deck and not towards the ground.

- Torque the blade bolt down using a torque wrench to assure the bolt is tightened properly. The recommended torque for the blade bolt is 450-600 in. lbs. To insure safe operation of your unit, all nuts and bolts must be checked periodically for correct tightness.

### Sharpening the Blade

To sharpen the blade, first remove the blade as outlined in the previous section. DO NOT attempt to sharpen the blade while it is attached to the mower. The blade can be sharpened with a file or on a grinding wheel.

- 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.
- Test the blade by balancing it on a round shaft screwdriver or a blade balancer as shown in Figure 14.
- If the blade is not balanced, remove metal from the heavy side until it balances evenly.



**WARNING:** An unbalanced blade will cause excessive vibration when rotating at high speeds. It may also cause damage to the mower and could break, causing personal injury.

- Reinstall the blade as described earlier in this section making certain to torque the cutting blade to specifications.

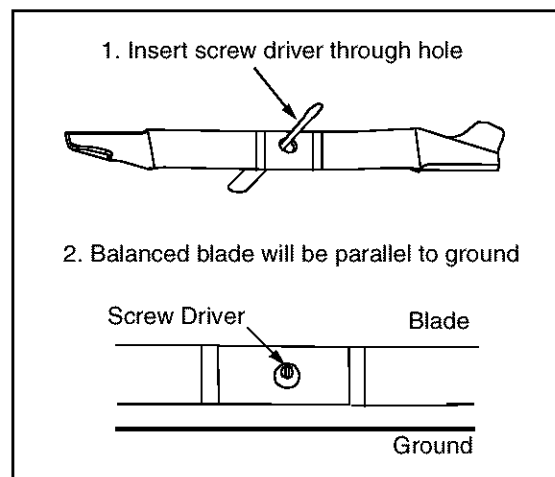


Figure 14

## Mower Deck



**WARNING:** To reduce the risk of electric shock, do not expose the mower to water.

The underside of mower deck should be cleaned after each use as grass clippings, leaves, dirt and other debris will accumulate. This accumulation of grass clippings, etc., is undesirable as it will promote rust and corrosion.

- Remove any buildup of grass and leaves on or around the motor cover (**do not** use water). Wipe the mower clean with a dry cloth occasionally.
- If debris is allowed to build up on the underside of the unit, tilt the mower forward or on its side and scrape it clean with a suitable tool.

## Lubrication

At the beginning and end of each mowing season:

- Lubricate the springs on the rear discharge door with a light oil.
- Lubricate the height adjustment levers and related hardware with light oil.
- Remove the wheels and lubricate the surface of the axle bolt and the inner surface of the wheel with light oil.
- Remove the blade and blade hub assembly and lubricate the motor shaft with light oil or engine oil. Refer to Figure 13.

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## SECTION 9: OFF-SEASON STORAGE

The following steps should be taken to prepare the lawn mower for storage.

- Make certain the power supply is disconnected.
- Clean mower as instructed in previous section.
- Inspect and replace/sharpen blade if required. Refer to Cutting Blade section on page 12.
- Lubricate mower following instructions on page 13.
- Store mower in a dry, clean area. Do not store next to corrosive materials, such as fertilizer and rock salt.
- Wipe extension cord to remove any foreign substance such as oil or stains. Replace extension cord if cut or damaged in any way.
- Wind cord in a series of equal loops on each side of your hand to prevent snarling.
- Store mower indoors, in a cool, dry place, out of reach of children. Do not cover lawn mower with a solid plastic sheet. Any plastic covering traps moisture around the mower which promote rust and corrosion.

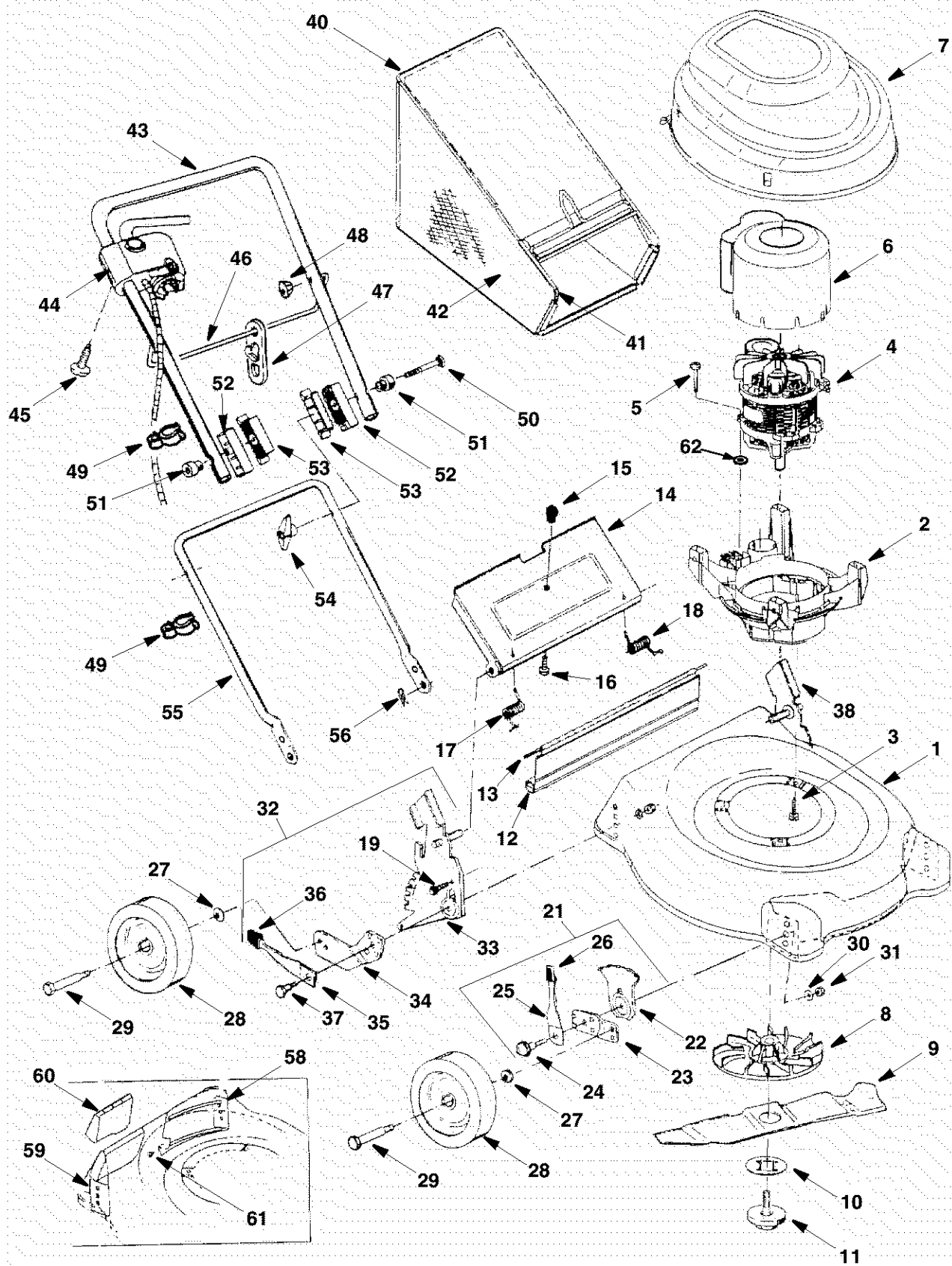
The handle may be folded away completely for storage.

- Remove grass bag.
- Loosen the hand knobs on the sides of the handle, and fold the upper handle down.
- Pull outward on each side of the lower handle, and lift the sides of the lower handle past the edges of the handle mounting brackets. Fold the lower handle forward. Make sure not to bend or kink the power cord.

## SECTION 10: TROUBLE SHOOTING GUIDE

Trouble	Possible Cause(s)	Corrective Action
Handle not in position.	Carriage bolts not seated in the handle insulators.	Adjust the height of the handle and make sure that the carriage bolts are seated properly into the handle insulators. Tighten the hand knobs.
Mower not starting.	Cord disconnected from the motor/blade control.	Reconnect the cord keeping the cord restraint close to the motor/blade control.
	Motor/blade control switch defective.	Replace motor/blade control switch.
	Extension cord not connected to the plug on the mower.	Connect the extension cord to the plug on the mower.
	Extension cord not connected to a source of power.	Connect the extension cord to a 110-120 volt 60 cycle A.C. receptacle.
	Circuit breaker on the mower or in the house receptacle tripped.	Reset the circuit breaker following instructions in the Operating Your Lawn Mower section of this manual.
Circuit breaker on the mower tripping.	Too much workload on the mower.	Raise the cutting height, reset the circuit breaker on the mower, take a smaller width of cut, and walk slowly.
	Fuse blown; outlet overloaded.	Connect to an outlet that is fused for 15 amperes. Reset the circuit breaker and start the mower again.
Mower cutting grass unevenly.	Lawn rough or uneven.	Move the wheels to a higher cutting height position.
	Cutting height not set properly.	All wheels must be placed in the same cutting height for the mower to cut evenly.
Mower not mulching properly.	Wet grass clippings stick to the underside of the deck.	Wait till the grass dries before mowing.
Hard to push.	High grass or cutting height too low.	Raise cutting height.
	Rear of mower housing and blade dragging in heavy grass.	Raise cutting height.
Mower vibrating at higher speed.	Bent motor shaft.	Stop the motor, disconnect the power source and inspect for damage. Repair before restarting. If vibration persists, take it to a service dealer.
	Blade is unbalanced.	Balance the blade by grinding each cutting edge equally.

## SECTION 11: PARTS LIST





REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	782-0054A	Mower Housing, 19"	33	682-0514-0637	Handle Bracket, RH
2	731-2425	Motor Support	34	14765	Pivot Bar, RH
3	710-1756	Screw, M7 x 25		14766	Pivot Bar, LH
4	724-0309	Electric Motor, 115V, 1500W	35	732-0417A	Spring Lever
5	710-1756	Screw, M7 x 25	36	720-0190	Spring Lever Knob
6	731-2400	Air Guide Cover	37	738-0507B	Shoulder Bolt
7	731-2383-0637	Hood	38	682-0513-0637	Handle Bracket, LH
8	631-0132	Blade Hub Assembly	39	682-0515	Handle Holder Assy, LH (Includes #34-38)
9	742-0826	Cutting Blade (Mulch/Bag)			
10	782-7051	Locking Plate	40	764-0325	Rear Catcher Frame
11	624-0075	Screw, Blade	41	764-0326	Front Catcher Frame
12	731-1261	Trailing Shield	42	764-0475A	Grass Bag
13	732-0712	Wire Rod	43	749-1310-0637	Upper Handle
14	782-7025-0637	Rear Discharge Door	44	725-1937	Cord and Switch Assembly
15	720-0275	Knob	45	710-1757	Screw
16	710-0192	Truss Screw, 10-24 x .38"	46	747-1094	Guide Rod
17	732-0678	Door Spring, RH	47	726-0368	Cord Restraint
18	732-0677	Door Spring, LH	48	720-0279	Wing Nut
19	710-0896	Washer Hd Screw, 1/4-14 x .625	49	731-2422	Cable Guide
21	14578	Height Adj. Assy. RH (shown)	50	710-0450	Carriage Bolt
	14579	Height Adj. Assy. LH (not shown) (Both Include Ref #22-26)	51	731-1388	Insulating Washer
22	15261A	Adjusting Plate	52	731-1268	Height Adjuster, Upper Handle
23	15262B	Pivot Bar	53	731-1267	Height Adjuster, Lower Handle
24	738-0507B	Shoulder Bolt	54	720-0241	Handle Knob
25	14832	Lever and Knob Assy. (Incl #26)	55	749-1318-0637	Lower Handle
26	720-0190	Knob, Height Adjustment	56	714-0104	Internal Cotter Pin
27	736-0105	Spring Washer	57	782-5025-0638	Front Baffle
28	734-1987	Wheel	58	782-5026-0638	Rear Baffle
29	738-0102	Axle Bolt	59	782-5004-0638	Rear Mulch Baffle
30	736-0356	Spring Washer	60	731-2386	Rear Mulch Plug
31	712-0798	Nut	61	710-1017	Tap Screw, 1/4-14 x .625"
32	682-0516	Handle Holder Assy, RH (Includes #33-37)	62	736-0695	Washer

## **NOTES**

## **NOTES**

# MANUFACTURER'S LIMITED WARRANTY FOR:



The limited warranty set forth below is given by MTD LLC with respect to new merchandise purchased and used in the United States, its possessions and territories.

MTD LLC warrants this product against defects for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any accessory or attachment not approved by MTD LLC for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear parts or component failures will be covered on the product for a period of 90 days regardless of cause. After 90 days, but within the two year period, normal wear part failures will be covered ONLY IF caused by defects in materials or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to: batteries, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates, auger spiral rubber, and tires.

**HOW TO OBTAIN SERVICE:** Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area, check your Yellow Pages, or contact MTD LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-800-800-7310 or 1-330-220-4683 or log on to our Web site at [www.mtdproducts.com](http://www.mtdproducts.com).

This limited warranty does not provide coverage in the following cases:

- a. The engine or component parts thereof. These items carry a separate manufacturer's warranty. Refer to applicable manufacturer's warranty for terms and conditions.
- b. Log splitter pumps, valves, and cylinders have a separate one year warranty.
- c. Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments, deck adjustments, and normal deterioration of the exterior finish due to use or exposure.

- d. MTD LLC does not extend any warranty for products sold or exported outside of the United States, its possessions and territories, except those sold through MTD LLC's authorized channels of export distribution.
- e. Parts that are not genuine MTD parts are not covered by this warranty.
- f. Service completed by someone other than an authorized service dealer is not covered by this warranty.
- g. Transportation charges and service calls are not covered.

**No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind MTD LLC. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.**

**The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. MTD LLC shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

**HOW STATE LAW RELATES TO THIS WARRANTY:** This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.