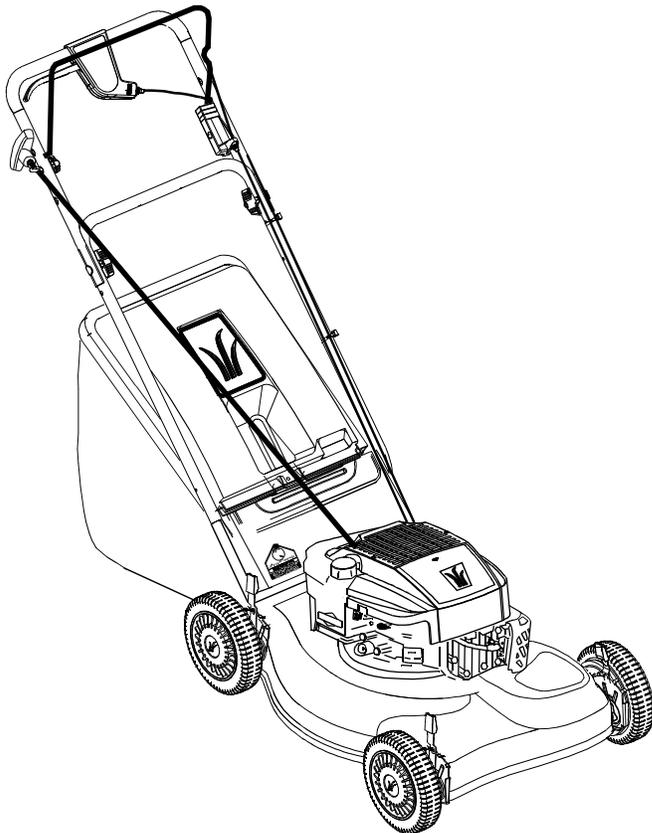




Operator's Manual



Model Series

440 Thru E459

IMPORTANT: Read safety rules and instructions carefully before operating equipment.

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 or contact the service department, P.O. Box 368022 Cleveland, Ohio 44136-9722.

MTD PRODUCTS INC. P.O. BOX 368022 CLEVELAND, OHIO 44136-9722

PRINTED IN U.S.A.

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(3/00)

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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 in the operating position and looking down 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 PRODUCTS INC
CLEVELAND, OHIO 44136

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 .

SECTION 1: IMPORTANT SAFE OPERATION PRACTICES



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 your lawn mower. Failure to comply with these instructions may result in personal injury. When you see this symbol, heed its warning.

WARNING: The Engine Exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

DANGER: Your lawn mower 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 lawn mower is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

GENERAL OPERATION

- Read this operator's manual carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Be completely familiar with the controls and the proper use of this machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
- Your rotary mower is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to perform one job: to mow grass. Do not use it for any other purpose.
- Never allow children under 14 years old to operate a power mower. Children 14 years old and over should only operate mower under close parental supervision. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use your mower.
- 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 to help prevent blade contact or thrown object injury. Although the area of operation should be completely cleared of foreign objects, an object may have been overlooked and could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator or any others allowed in the area.
- Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Shirts and pants that cover the arms and legs and steel-toed shoes are recommended. Do not wear loose fitting clothes or jewelry. They can be caught in moving parts. Never operate a unit in bare feet, sandals, slippery or light weight (e.g. canvas) shoes.
- Always wear safety glasses or safety goggles during operation or while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine in any direction.
- 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 picked up and thrown by the mower in any direction and cause serious personal injury to the operator or any others allowed in the area. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. To help avoid a thrown objects injury, keep children, bystanders and helpers at least 75 feet from the mower while it is in operation.
- Do not put hands or feet near or under rotating parts. Keep clear of discharge opening at all times as the rotating blade can cause injury.
- Many injuries occur as a result of the mower being pulled over the foot during a fall. Do not hang on to the mower if you are falling; release the handle immediately.
- Never pull the mower toward you while you are walking. If you must back the mower away from a wall or obstruction first look down and behind, 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.
- Do not operate the mower while under the influence of alcohol or drugs.
- Do not adjust the throttle control with the engine running.
- Do not engage the self-propelled mechanism on units so equipped while starting engine.

- The blade control handle is a safety device. Never attempt to bypass its operation. Doing so makes the safety device inoperative and may result in personal injury through contact with the rotating blade. The blade control handle must operate easily in both directions and automatically return to the disengaged position when released.
- Never operate the mower in wet grass. Always be sure of your footing. A slip and fall can cause serious personal injury. Keep a firm hold on the handle and walk, never run. If you feel you are losing your footing, **RELEASE THE BLADE CONTROL HANDLE IMMEDIATELY** and the blade will stop rotating within three seconds.
- Mow only in daylight or good artificial light.
- Stop the blade when crossing gravel drives, walks or roads.
- If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Shut the engine off 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 engine is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
- Never operate mower without proper guards, grass catcher, plates or other safety protective devices in place.
- Muffler and engine become hot and can cause a burn. Do not touch.
- Only use accessories approved for this machine by the manufacturer. Read, understand, and follow all instructions provided with the approved accessory.
- If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer for assistance.

SLOPE OPERATION

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 as shown on the slope gauge, do not operate this unit on that area or serious injury could result.

DO:

- Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
 - Watch for holes, ruts, hidden objects, or bumps. Tall grass can hide obstacles.
- 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 control handle immediately and the blade will stop in less than 3 seconds.

DO NOT:

- Do not mow near drop-offs, ditches or embankments. The operator could lose footing or balance.
- Do not mow slopes greater than 15 degrees as shown on the slope gauge.
- Do not mow on wet grass. Reduced footing could cause slipping.

CHILDREN

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. 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 or other objects.
- Never allow children under age 14 to operate the mower. Children 14 years of age and above should read and understand the operation instructions and safety rules in this manual.
- Use extreme care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision of a child or hazard.

SERVICE

- Use extreme care in handling gasoline and other fuels. They are extremely flammable and the vapors are explosive.
- Use only an approved gasoline container.
- Never remove gas cap or add fuel while the engine is running. Allow engine to cool at least two minutes before refueling.
- Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- Never refuel machine indoors because flammable vapors will accumulate in the area.
- Never store the machine or fuel container inside where there is an open flame or spark such as a gas water heater, space heater, or furnace.
- Never run an engine inside a closed area.

- To reduce fire hazard, keep mower free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage. Allow mower to cool at least 5 minutes before storing.
- Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire, and keep the wire away from the spark plug to prevent accidental starting.
- We do not recommend the use of pressure washers or garden hose to clean your unit. They may cause damage to electric components, spindles, pulleys, bearings or the engine. The use of pressure washers will result in shortened life and reduce serviceability.
- Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., bent, cracked or worn). Replace with blade which meets original equipment specifications listed in this manual.
- 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 engine, remove the wire from the spark plug, and thoroughly inspect the mower for any damage. Repair the damage before starting and operating the mower.
- Never attempt to make a wheel or cutting height adjustment while the engine is running.
- Grass catcher components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Do not change the engine governor setting or overspeed the engine. Excessive engine speeds are dangerous.



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.



SECTION 3: UNPACKING

Removing Unit From Carton

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

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

NOTE: Make sure not to crimp the cables while removing the loose parts or the entire unit from the carton.

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

SECTION 4: ASSEMBLING YOUR LAWN MOWER

Tools Required

- Pair of Pliers
- Funnel
- Set of adjustable wrenches

Disconnecting Spark Plug

- Before setting up your lawn mower, disconnect the spark plug wire from the spark plug, and ground it to a bolt, retaining post or V-slot on the engine. See Figure 1.

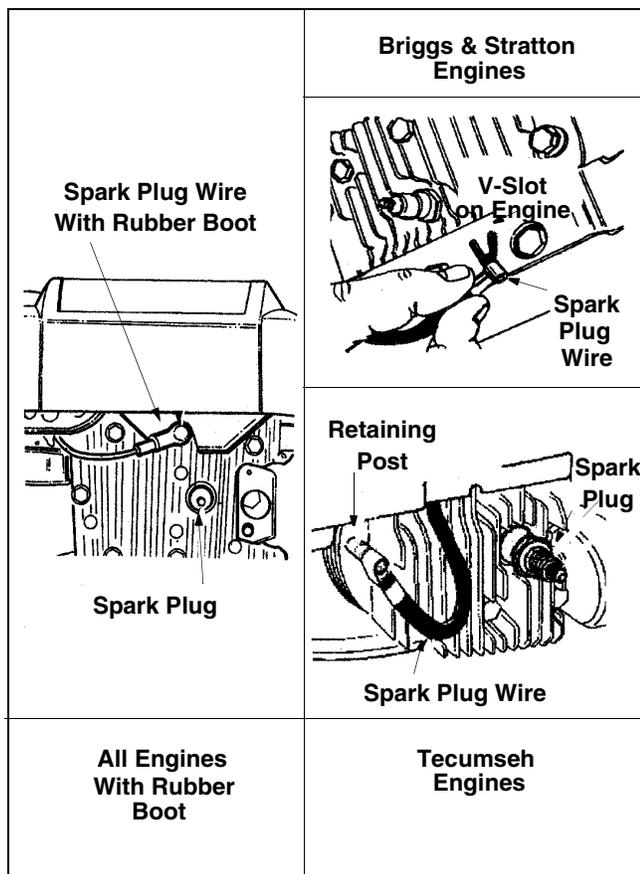


Figure 1

Assembling Handle

- Remove grass bag from the unit and set it out of the way. See Figure 2 (step 1).

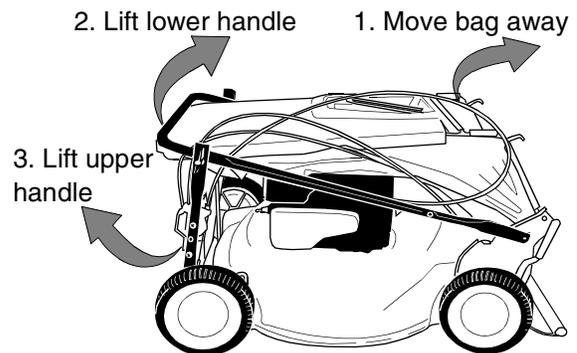


Figure 2

- Raise the lower handle in the direction shown in Figure 2 (step 2) till it snaps into place.
- Raise the upper handle in the direction shown in Figure 2 (step 3). Tighten the wing nuts which are already on the handle. See Figure 5.

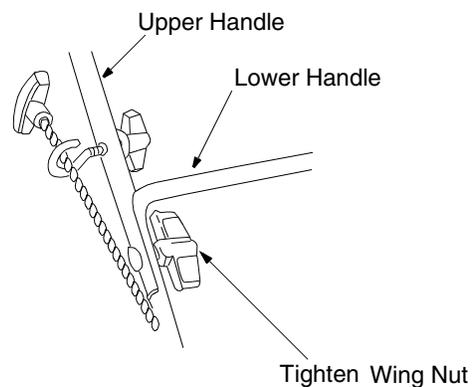


Figure 3

NOTE: Make sure to route the cables outside the lower handle. Also do not crimp the cables while lifting the handle up.

- For shipping purposes, the hairpin clip is placed in the outer hole of the weld pin on the lower handle. Remove the hairpin clip from the outer hole of the weld pin.
- Using a pair of pliers, insert the hairpin clip into the inner hole in the weld pin. Repeat on other side. See Figure 4.

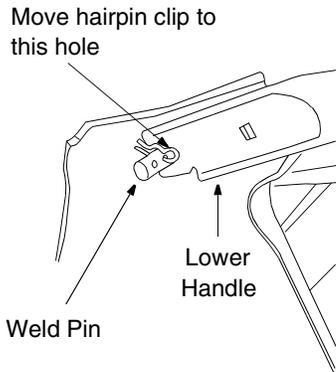


Figure 4

- Insert post of cable ties that are on lower handle into the holes provided on the lower handle. The holes may be on the inside or outside. Pull cable ties tight and cut off the extra. See Figure 5 below.

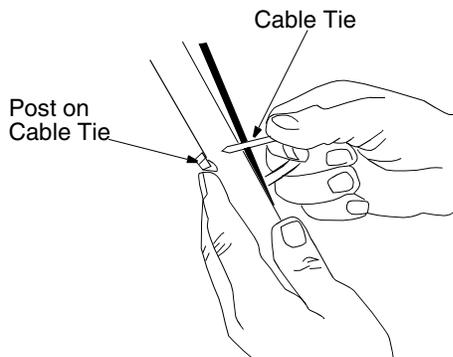


Figure 5

Attaching Starter Rope

The rope guide is already attached to the right side of the upper handle of your mower. See Figure 6.

- With the spark plug wire disconnected and grounded, hold the blade control handle against the upper handle, and pull the starter rope up to the rope guide. See Figure 6.

- Slip the rope through the rope guide as shown below. Tighten the wing nut holding the rope guide to the upper handle.

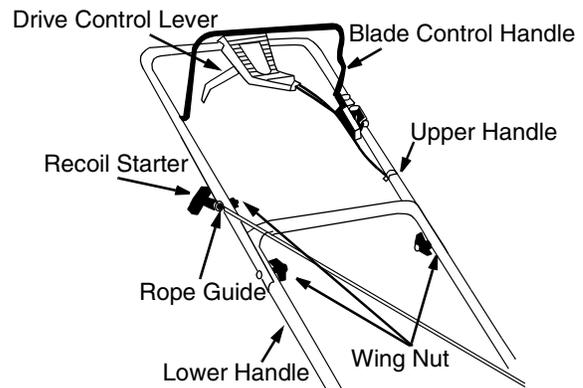


Figure 6

Grass Catcher Assembly

NOTE: Make certain the grass bag is turned right side out before assembling (warning label will be on the outside).

SOFT GRASS BAG

Parts for Soft Grass Bag:

- Front Frame
- Rear Frame
- Bag

Assemble soft grass bag as follows:

- Join the rear frame and front frame assembly as shown in Figure 7A.
- Place bag over frame (black plastic side is the bottom of bag). Slip the openings in the side of the plastic channels on the bag over the hooks on the grass catcher frame.
- Secure bag to frame by working the plastic channels on bag over frame as shown in Figure 7B. All of the plastic channels except the center top of the bag attach from the outside of bag. The center top of the bag attaches from inside the bag.

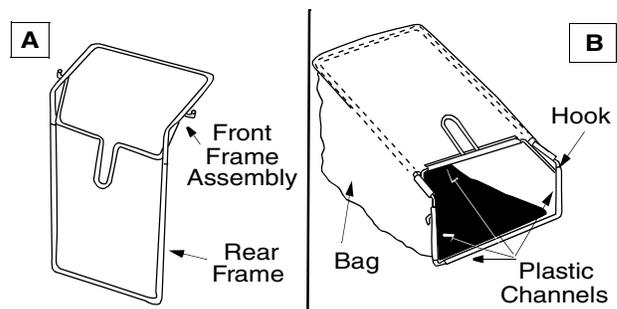


Figure 7

HARDTOP GRASS BAG

Parts for Hardtop Grass Bag:

- Rear Frame (packed inside hardtop cover)
- Front Frame
- Bag
- Hardtop Cover
- Mounting Bracket
- Hex Lock Nut
- Phillips Screw

Assemble hardtop grass bag as follows:

- Insert one end of the rear frame into the slit in the cloth channel on the edge of the grass bag (slits are approximately 6 inches from the end of the bag). See Figure 8A. Feed all the bag material on one side of the frame before working it around frame. Make certain the other end of rear frame comes out the slit in the other side. See Figure 8B.

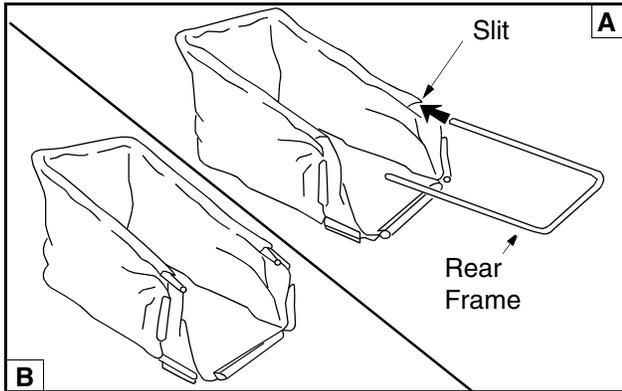


Figure 8

- Slide the ends of the front frame assembly into the ends of the rear frame as shown in Figure 9A. The handle in front frame assembly goes away from the black plastic bottom of the bag. Push the two frames together until the cross piece on the front frame contacts the rear frame.
- Slip the openings in the side of the plastic channel on bag over hooks on the grass catcher frame. See Figure 9B.
- Secure front of bag to front frame by working the five plastic channels on bottom, sides and top of bag over frame.

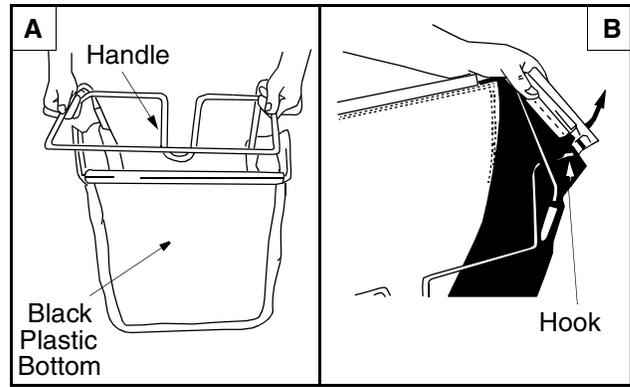


Figure 9

- Hold the bag and frame so the bag hangs from the frame (is not bunched around the frame). Slide the handle on the grass catcher frame down into the slot in the hardtop cover as shown in Figure 10.

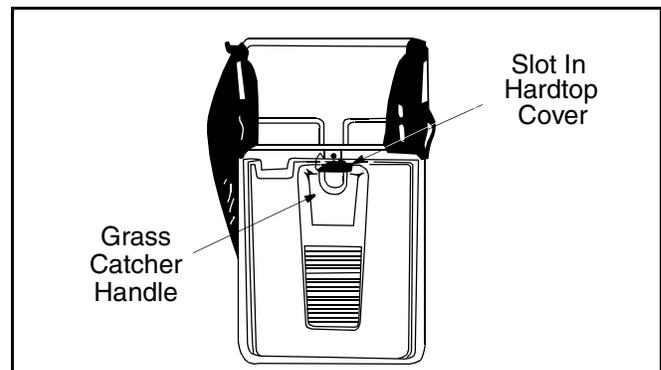


Figure 10

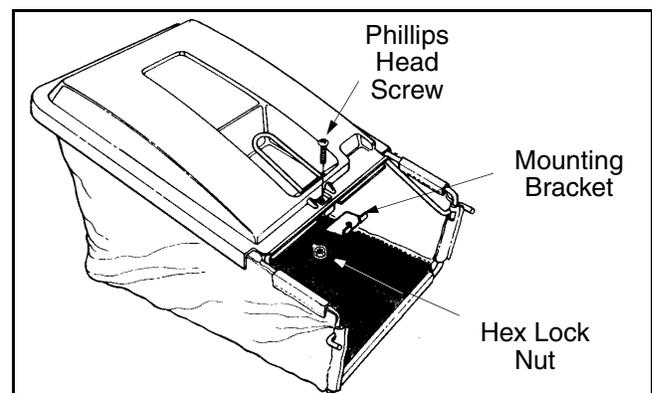


Figure 11

- Press the rear frame into the two tabs at the back of the hardtop cover and the cross bar on the front frame into the channel on the front of the hardtop cover. Some force may be required.
- Place the mounting bracket under the front of the handle, with the tabs on the bracket facing up. Insert phillips head screws down through the hardtop cover and mounting bracket. Secure with hex lock nuts. See Figure 11.

Attaching Grass Catcher

- If your mower is equipped with a mulching plug, and it is in place on the mower, lift the rear discharge door and remove the rear mulching baffle from the mower. See Figure 12.

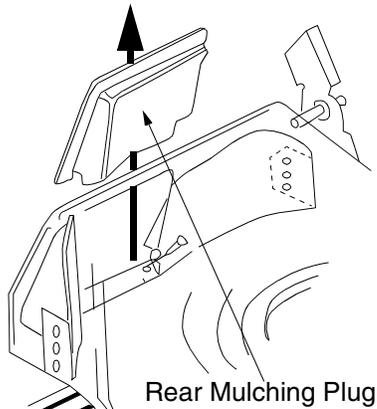


Figure 12

NOTE: Make sure that the cables are routed to the outside of the handle when attaching the grass catcher.

- Lift the rear discharge door.
- Place the hooks of the grass catcher into the slots in the handle bracket assemblies on both sides. See Figure 13. Release the rear discharge door.

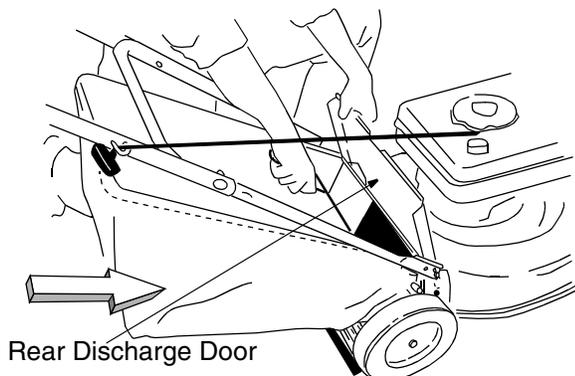


Figure 13

Removing 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.
- Reinstall the plastic rear mulching baffle.
- Release the rear discharge door.



WARNING: Never operate the mower unless the hooks on the grass catcher are seated in the slots on the handle bracket assemblies, and the rear discharge door rests firmly against the top of the grass catcher.

Optional Chute Deflector

If your mower is equipped with the optional chute deflector, assemble as follows:

- Slide the rod into the upper edge of the chute deflector so the tab on the rod is toward the left side of the chute deflector. When assembled correctly, the rod will extend further to the left side than the right side. See Figure 14.
- Slide the push nut onto the right side of the rod to secure.

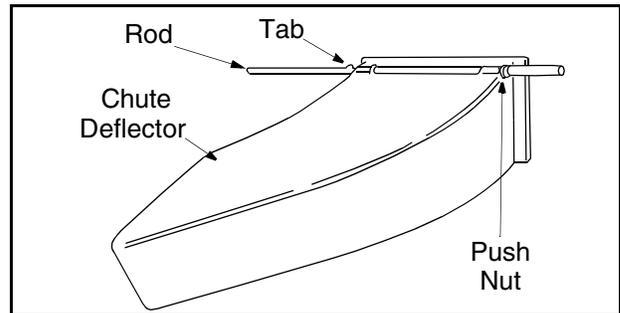


Figure 14

Attaching Chute Deflector

- Lift the rear discharge door on the mower.
- Place the ends of the rod into the slots in the handle bracket assemblies. See Figure 15.
- Release the rear discharge door.

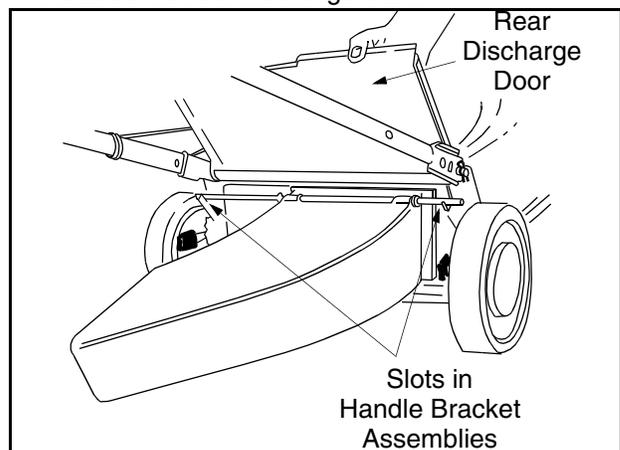


Figure 15

Converting to Mulcher

- Lift the rear discharge door.
- Remove the grassbag or chute deflector.
- Insert the mulch plug. See Figure 12.
- Release the rear discharge door. See Figure 13.

SECTION 5: KNOW YOUR LAWN MOWER

Read this owner's manual and safety rules before operating your lawn mower. Compare the illustrations in Figure 16 with your lawn mower to familiarize yourself with the location of various controls and adjustments.

The operation of any lawn mower can result in foreign objects being thrown into the operator's eyes thus causing severe eye damage. **Always wear safety glasses** while operating the mower, or while performing any adjustments or repairs on it.

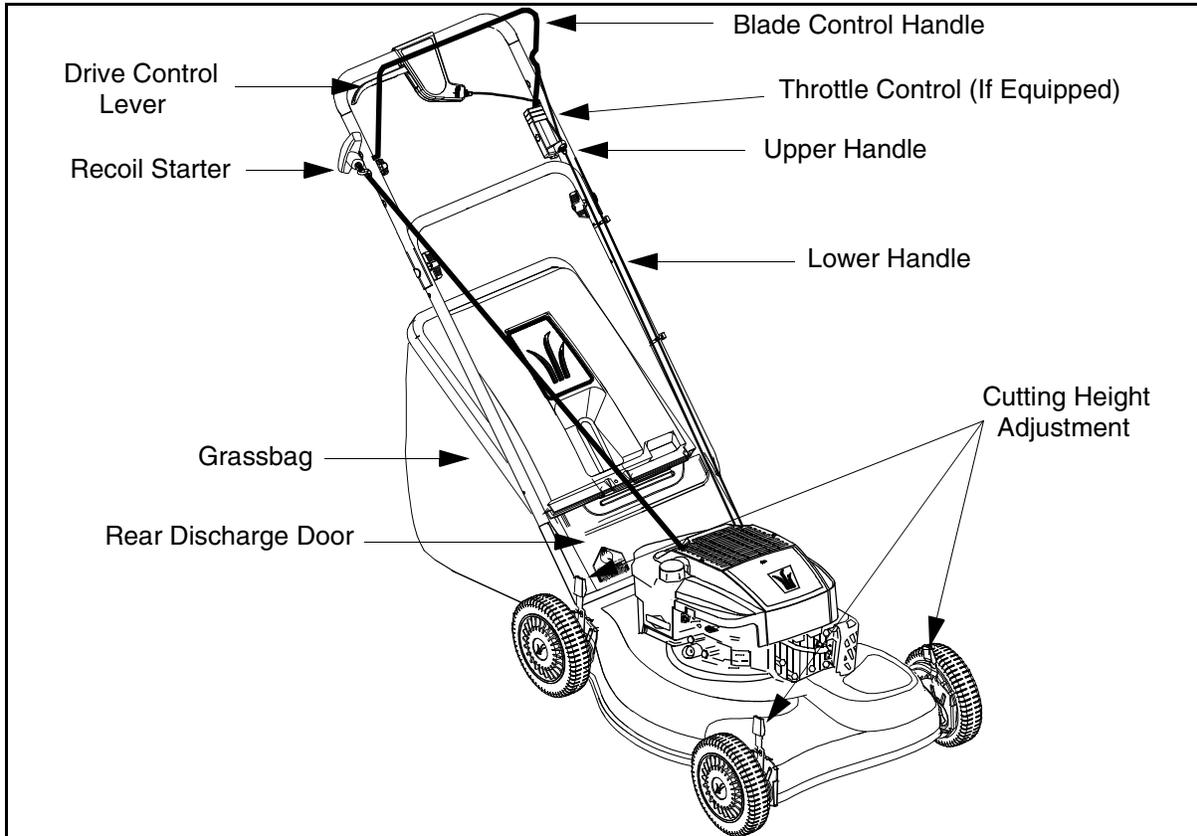


Figure 16

Recoil Starter

The recoil starter is attached to the handle. Stand behind the unit and pull the recoil starter to start the unit.

Primer

The primer is used to pump gas into the carburetor. Use it to assist in starting a cold engine, but do not use it when restarting a warm engine after a short shutdown. Refer to engine manual for location of the primer.

Blade Control Handle

The blade control handle is located on the upper handle of the mower. The blade control handle must be depressed in order to operate the unit. Release the blade control handle to stop the engine and the blade.

Drive Clutch Control

The drive control lever is located on the upper handle and is used to engage the drive. Squeeze the lever against the upper handle to engage the drive; release

the drive control lever to slow down or stop the mower from propelling.

Throttle Controls (If Equipped)

Your unit will be equipped with one of three optional throttle controls. Follow the instructions which pertain to your unit.

- The throttle control is located on the left side of the upper handle. It is used to regulate engine speed.
- The throttle control is located on the engine. It is used to regulate engine speed.
- The engine is equipped with a constant speed throttle which is set at full throttle for maximum engine and cutting performance.

WARNING: The throttle control can not be used to stop the engine. If your throttle control is located on the engine, do not adjust the throttle control with the engine running.

Electric Start Ignition Switch (If Equipped)

If your mower is equipped with an electric starter, the ignition switch is located on the left side of the handle panel. It is used only for the electric starter. See Figure 17.

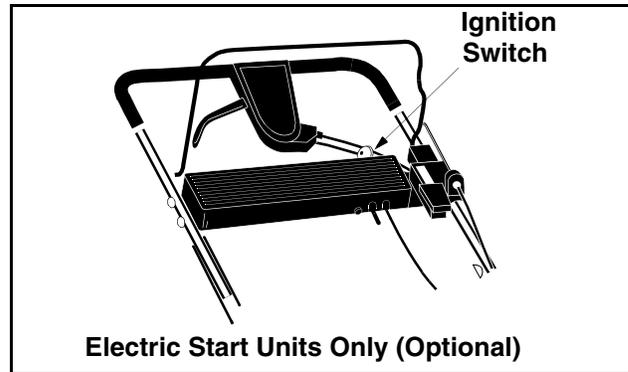


Figure 17

SECTION 6: OPERATING YOUR LAWN MOWER

Gas And Oil Fill-Up



WARNING: Never fill fuel tank indoors, or when engine is running or hot. Do not smoke when filling up the fuel tank.

- Service the engine with gasoline and oil as instructed in the separate engine manual packed with your mower. Read the instructions carefully.

Before Starting Mower

Electric Start Units Only (If Equipped)



WARNING: The battery contains corrosive fluid and toxic material—HANDLE WITH CARE. Keep away from children. Do not puncture, disassemble, mutilate or incinerate the battery. Explosive gases could be vented during charging or discharging. Use in a well ventilated area, away from sources of ignition.

IMPORTANT: Use only the battery charger supplied with this mower.

Charging the Battery:

- Remove the protective cap from the end of the battery pack lead. *Always plug charger lead into battery pack lead first, and then insert battery charger plug into 120 volt standard household outlet.* See Figure 18. Follow this order of action every time you charge the battery.
- Charge battery for 16 hours before initial use. **Do not charge longer than 20 hours.**
- After charging, disconnect battery charger plug from household outlet first, then disconnect charger lead from battery pack lead.

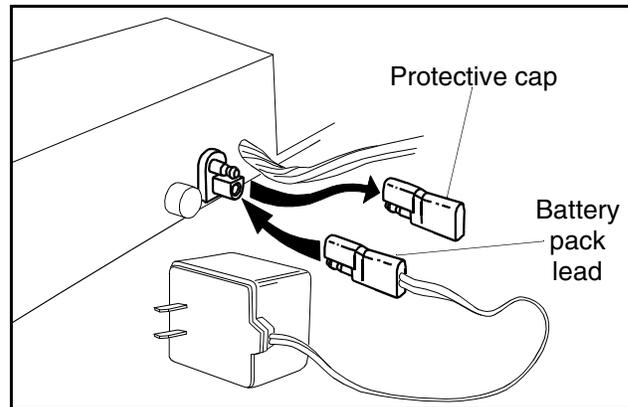


Figure 18



WARNING: Do not remove the battery pack from the handle panel for any reason other than replacement. When replacing the battery pack, refer to the instructions in the Service & Adjustments section.

All Units:

- Attach spark plug wire to spark plug. Make certain the metal cap on the end of the spark plug wire (inside the rubber boot) is fastened securely over the metal tip on the spark plug.
- Check the drive clutch control for proper adjustment. If the mower does not propel itself or the drive wheels hesitate with the drive clutch engaged, perform the drive clutch control adjustment as instructed on page 16 of this manual.

Starting Engine



WARNING: Be sure no one other than the operator is standing near the lawn mower while starting engine or operating mower.

Never run engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas.

Keep hands, feet, hair and loose clothing away from any moving parts on engine and lawn mower.

When starting the unit for the first time, face the mower against a solid object such as a wall, fence, etc. Start the unit and if it shows any signs of motion while the drive clutch control is still disengaged, shut the engine off immediately.

- Make sure that the drive clutch control is adjusted so the drive belt is as loose as possible.
- Move throttle control lever (if equipped) toward the “rabbit” position.
- Push the primer three times. Wait two seconds between each push. In temperatures below 55° F, prime five times. Do not prime to restart a warm engine after a short shutdown.
- Standing behind the mower, depress the blade control handle and hold it against the upper handle.
- **Electric Start:** Turn the ignition key to the right to start the engine. Release the key after the engine starts.
- **Recoil Start:** Grasp starter handle and pull rope out slowly until engine reaches the start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly. Pull rope with a rapid, continuous, full arm stroke. Keeping a firm grip on the starter handle, let the rope rewind slowly.

Stopping Engine

- Release blade control handle to stop the engine and the blade.
- Disconnect spark plug wire and move away from spark plug to prevent accidental starting.

Using Your Lawn Mower

- **Do not** operate the mower without the mulching cover, the grass catcher bag, or the discharge chute properly installed.
- Be sure that the lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine. Such objects could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator and others.
- For best results, *do not cut wet grass* because it tends to stick to the underside of the mower, preventing proper discharge of grass clippings,

poor mulching conditions, and could cause you to slip and fall. New grass, thick grass, or wet grass may require a narrower cut.

- For a *healthy lawn*, always cut off one-third or less of the total length of the grass. Lawn should be trimmed in fall as long as there is growth.
- Always operate your mower with the engine in the full throttle (rabbit) position for the most effective mulching or bagging of the cut grass.



WARNING: If you strike a foreign object, stop the engine. Remove spark plug wire from spark plug, thoroughly inspect the mower for any damage. Repair the damage before restarting and operating the mower. Extensive vibration of the mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

Bagging Grass Clippings

You can use the grass catcher bag to collect clippings while you are operating the mower. Attach the grass catcher following instructions on page 10 of this manual. The grass clippings will automatically collect in the bag as you run the mower. Operate the mower till the grass bag is full. Do NOT allow the bag to overfill with grass clippings.

- Stop the engine completely by releasing the control handle.
- Make sure that the unit has come to a complete stop.
- Lift discharge door and pull grass bag up and away from the mower to dispose of the grass clippings. See Figure 19.

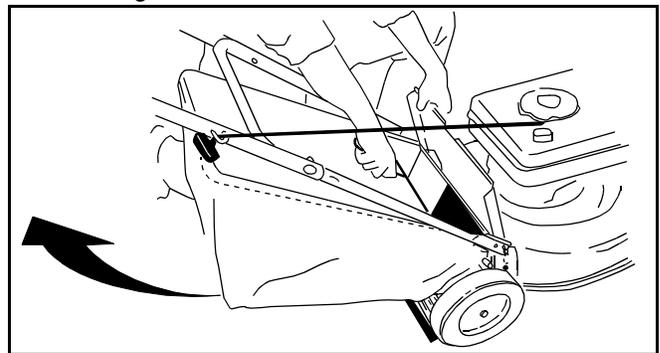


Figure 19

Adjusting Cutting Height

Refer to height adjustments section of this manual on page 17 for instruction on how to adjust the cutting height and the handle height.

- For best results in mowing, keep the cutting height position high until it is determined which height is best for your lawn.

SECTION 7: MAINTAINING YOUR LAWN MOWER



WARNING: Always stop the engine and disconnect the spark plug wire before performing any maintenance work or adjustments on your lawn mower.

Cleaning Mower

The underside of the mower deck should be cleaned after each use to prevent any build-up of grass clippings, leaves, dirt, or other debris. If this debris is allowed to accumulate, it will result in rust and corrosion.

We do not recommend the use of pressure washers or garden hose to clean your unit. They may cause damage to electric components, spindles, pulleys, bearings or the engine. The use of water will result in shortened life and reduce serviceability.

- Disconnect spark plug wire.
- Drain the gasoline from the lawn mower, or place a piece of plastic under the gas cap.
- Tilt the mower so that the side with the air cleaner is facing UP. Hold the mower firmly.
- Scrape and clean the underside of the deck with a suitable tool. Do NOT spray with water.
- Put the mower back on its wheels. If you had put plastic under the gas cap, remove it now.



WARNING: Never tip the mower more than 90 degrees in any direction and do not leave the mower tipped for any length of time. Oil can drain into the upper part of the engine causing a starting problem.

Engine Maintenance

- A list of key maintenance jobs required for good performance by the mower is given below. Follow the accompanying engine manual for detailed list and instructions.
- Change engine oil after the first two operating hours and every 25 operating hours thereafter. Check the oil level before starting the engine every time.
- Service foam filter in the air cleaner every 25 hours of use and replace the paper filter component every 100 hours. You may have to service the air filter more frequently if you are operating the mower under extremely dusty conditions.

- Clean the engine periodically. Remove dirt and debris with a cloth or brush.
- Clean the spark plug and reset the gap to .030" at least once a season or every 50 hours of operation. Spark plug replacement is recommended at the start of each season.

Inspect muffler periodically, and replace if necessary. Damaged mufflers or spark arresters can create a fire hazard. Make sure to avoid muffler and surrounding areas while the mower engine is hot because temperature of these areas of the engine may exceed 150° F.

Lubrication

Wheels

- Lubricate the wheels and bearings, if so equipped, at least once a season with light oil or engine oil. Also, if the wheels are removed for any reason, lubricate the surface of the axle bolt and the inner surface of the wheel with light oil.

Chute Deflector & Rear Discharge Door

- Lubricate the torsion spring and the pivot point on each end of the chute deflector and the rear discharge door using a light oil. This will prevent rusting and ensure that the deflector, which is a safety device, can always work properly.

Engine

- Follow the engine manual instructions and recommended schedule for lubricating engine components.

Transmission

- The transmission is pre-lubricated and sealed at the factory and does not require lubrication on a regular basis as part of maintenance. However, if you disassemble the transmission for any reason, refill with two ounces of Alvania grease (part # 737-0168) as part of reassembly.

Pivot Points

- Lubricate the pivot points on the blade control handle, brake cable and the cutting height adjustment lever at least once a season with light oil. The blade control handle must operate freely in both directions. The cutting height adjustment levers should be able to move easily.

SECTION 8: SERVICE AND MAKING ADJUSTMENTS

Blade Care

Periodically inspect the blade adapter and pulley for cracks, especially if you strike a foreign object. Replace when necessary.



WARNING: When removing the cutting blade for sharpening or replacement, protect hands by using heavy gloves or a thick rag to grasp the cutting blade.

- Disconnect spark plug wire from spark plug.
- Turn mower on its side making sure that the air filter and the carburetor are up.

To Remove Blade

- Remove the bolt and bell washer that hold the blade-pulley assembly to the engine crankshaft. See Figure 20. Remove the assembly from the crankshaft.
- Remove the two bolts and lock nuts from the blade assembly.
- Remove the blade from the blade adapter and pulley.

To Replace Blade:

- Before reinstalling the blade-pulley assembly to the unit, lubricate the engine crankshaft and the inner surface of the blade adapter with light oil or engine oil.
- Also lubricate the bolt holes, bolt and the inner surface of the nuts.
- Install the blade adapter on the pulley with the “star” away from the pulley. See Figure 20.

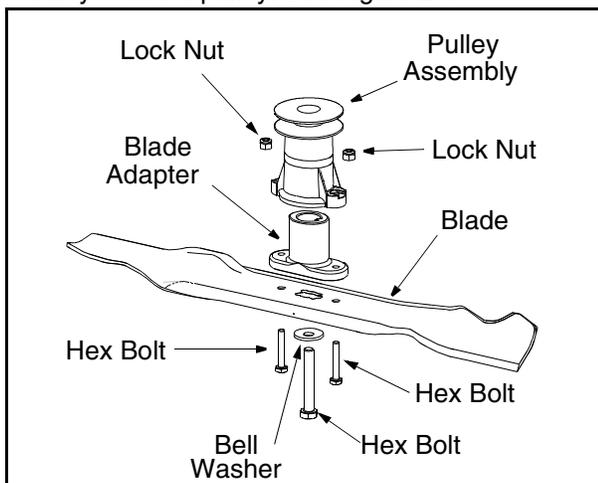


Figure 20

- Place the new blade on the blade adapter with the side marked bottom (has a part number) facing away from the adapter.

- Secure the blade to the assembly with two hex bolts and lock nuts. Tighten the hex bolts to the recommended torque. Refer to ‘Blade Mounting Torque’ section below.
- Install the blade assembly on the engine crankshaft. Secure with the hex bolt and bell washer (cupped side of washer to blade) and tighten to the recommended torque. Refer to ‘Blade Mounting Torque’ section below.

IMPORTANT: The bolt used to secure the blade to the engine is specially heat-treated. **Do not substitute.** To order replacement bolt, refer to the parts list in the back of this manual.



WARNING: To ensure safe operation of your unit, all nuts and bolts must be checked periodically for correct tightness.

To Sharpen Blade:

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen the blade while it is still on the mower.
- Follow the original angle of grind as a guide. Make sure 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, and may causing personal injury. Test the blade by balancing it on a round shaft screwdriver or a blade balancer.
- If the blade is not balanced, remove metal from the heavy side until it balances evenly.

Blade Mounting Torque:

Blade adapter bolts: 120 in.lbs. minimum, 150 in.lbs. maximum.

Center bolt: 450 in.lbs. minimum, 600 in.lbs. maximum.

Battery Pack Replacement

(Electric Start Units Only)

Remove the battery pack from the handle panel for replacement only. Do not separate the batteries for any reason. Dispose of batteries properly.



WARNING: Batteries contain sulfuric acid which may cause burns. Do not short circuit or mutilate batteries in any way. Do not put batteries in fire as these may burst or release toxic materials.

When replacing battery pack in handle panel, battery pack must be positioned with the positive terminal to the right hand side and the negative terminal to the left hand side of panel. Replacing the battery pack incorrectly will cause serious damage. The positive lead on the wire harness has the smaller connector. Connect the positive lead to the positive side of the battery pack, then connect the negative side.

In-line Fuse (Electric Start Only)

The unit is equipped with an in-line fuse. If the unit fails to start, check the fuse inside the battery cover by turning the end of the fuse holder and removing from the battery cover. Replace with standard automotive 7-1/2 amp fuse.

Replacing Drive Belt

- Remove the two shoulder screws from on top of the deck which secure the front drive cover to the mower deck. See Figure 21.
- Remove the front drive cover from the unit by lightly pressing inward on the sides of the front drive cover. This will release the tabs that secure the front drive cover to the height adjuster brackets.
- Remove the idler and hardware from the idler bracket using 7/16" wrench and socket. See Figure 21.
- Remove the belt from the transmission pulley as shown in Figure 21.

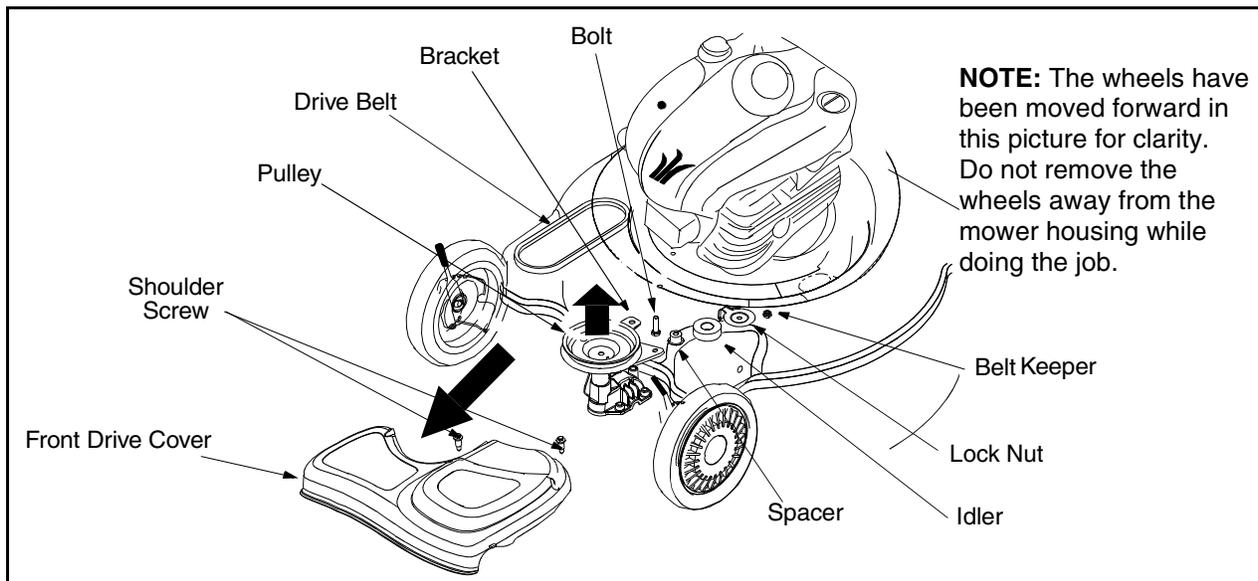


Figure 21

- Lift and stabilize the front of the deck.
- Loosen the center hex bolt and lower the blade and engine pulley until there is adequate clearance to move the belt past the belt keeper.
- Remove the belt from the engine pulley and around the blade. See Figure 22.
- Reassemble in reverse order with new belt (part # 754-0465). **NOTE:** Begin idler reassembly by inserting bolt up through the idler bracket hole. Adjust the drive clutch following the instructions below.

NOTE: Torque center hex bolt to between 450 and 600 in. lbs.

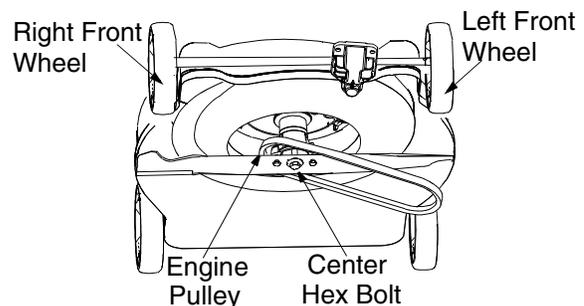


Figure 22

Adjusting Drive Clutch Control

- The drive clutch adjustment wheel is located on the drive control lever housing and is used to tighten or loosen tension on the drive cable. Perform this adjustment if the following exists.

- a. The mower does not propel itself with the drive control lever engaged.
- b. The mower's drive wheels hesitate with the drive control lever engaged.
- To resolve the above problems, rotate the adjustment wheel with your fingers: clockwise to tighten the cable, and counter-clockwise to loosen the cable. See Figure 23 .

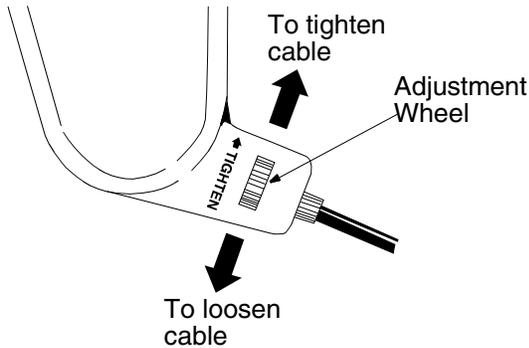


Figure 23

Adjusting Handle Height

Your mower is shipped with the handle in the higher height position. To lower the handle height, proceed as follows.

- Remove the starter rope from the rope guide.
- Remove the upper handle by removing the hand knobs and carriage bolts. Lay the upper handle out of the way, being careful not to bend or kink the cables.
- Remove the hairpin clips from the weld pins on the handle brackets. Refer to Figure 4. Press out on the legs of the lower handle. Remove lower handle from the mower.
- Turn the lower handle around so the notch on the bottom of the lower handle is facing forward as shown in Figure 24. Reassemble, placing the bottom holes in the handle over the weld pins in the handle mounting bracket.

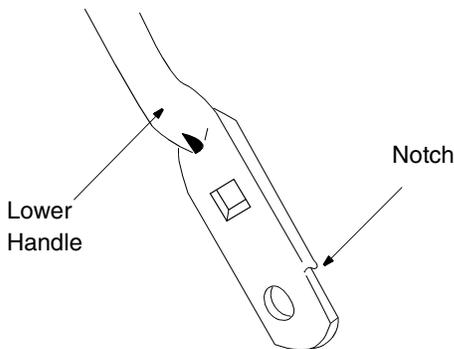


Figure 24

- Reassemble the upper handle to the lower handle.
- Place the hairpin clips in the inner holes of the weld pins and attach the starter rope as instructed in the Assembling Your Lawn Mower section.

Adjusting Cutting Height

IMPORTANT: All wheels must be placed in the same relative position. For rough or uneven lawns, move the height adjustment lever to a higher position. This will help stop scalping of the grass.

An adjusting plate and thumb lever at each wheel position provides cutting height adjustment. Each adjusting plate has nine height positions. Height of cut will be changed when the thumb lever is moved from one hole to another.

- Simply depress the lever towards the wheel and move the lever assembly to desired position. See Figure 25.

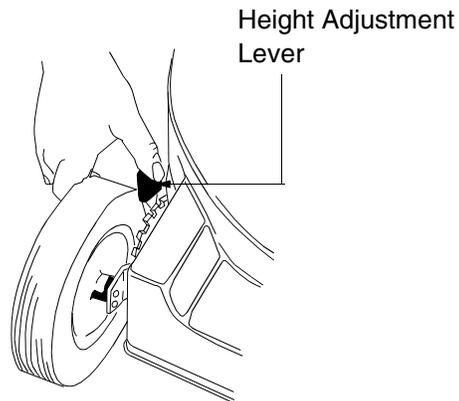


Figure 25

Adjusting Carburetor

NOTE: A dirty air cleaner may cause an engine to run rough too. Make sure that the air cleaner is clean and attached to the carburetor before deciding to adjust the carburetor.

To adjust the carburetor, please follow the recommendations and instructions found in the engine manual.



WARNING: If any adjustments are made to the engine (e.g. carburetor) while the engine is running, keep clear of all moving parts. Be careful of heated surfaces like the muffler.

SECTION 9: OFF-SEASON STORAGE

Prepare your lawn mower for storage at the end of the season or **if the unit will not be used for 30 days** or more. Store the mower in a **clean, dry area**.

Mower

- Clean underside of the mower following instructions in the Maintenance section of this manual.
- We do not recommend the use of pressure washers or garden hose to clean your unit. They may cause damage to electric components, spindles, pulleys, bearings or the engine. The use of water will result in shortened life and reduce serviceability.
- Lubricate the mower as instructed in the Maintenance section of this manual.
- You can fold your mower's handle for convenient storage: Remove the starter rope from the rope guide; loosen the two hand knobs on the sides of the handle, and let the upper handle fold down to the rear. Move the hairpin clips to the outer hole in the weld pins on the handle mounting brackets. Spread the sides of the lower handle, and push it forward and down.
- Inspect and replace/sharpen blade, if required. Refer to the Service & Adjustments section of this manual for blade care instructions.

Engine

- Follow recommendations in the accompanying engine manual for off-season storage of the engine.
- Change oil as necessary as stated in the engine owners manual.
- Clean engine and remove any grass clippings, dirt, and debris from the cooling fins, air intake screen, levers, linkage and the exterior of the engine.

Storage Of The Battery

The battery must be stored with a full charge. A discharged battery will freeze.

IMPORTANT: All batteries discharge during storage. Recharge battery every two months and before returning to service. Refer to charging instructions in OPERATING YOUR LAWN MOWER section on page 12.

Other

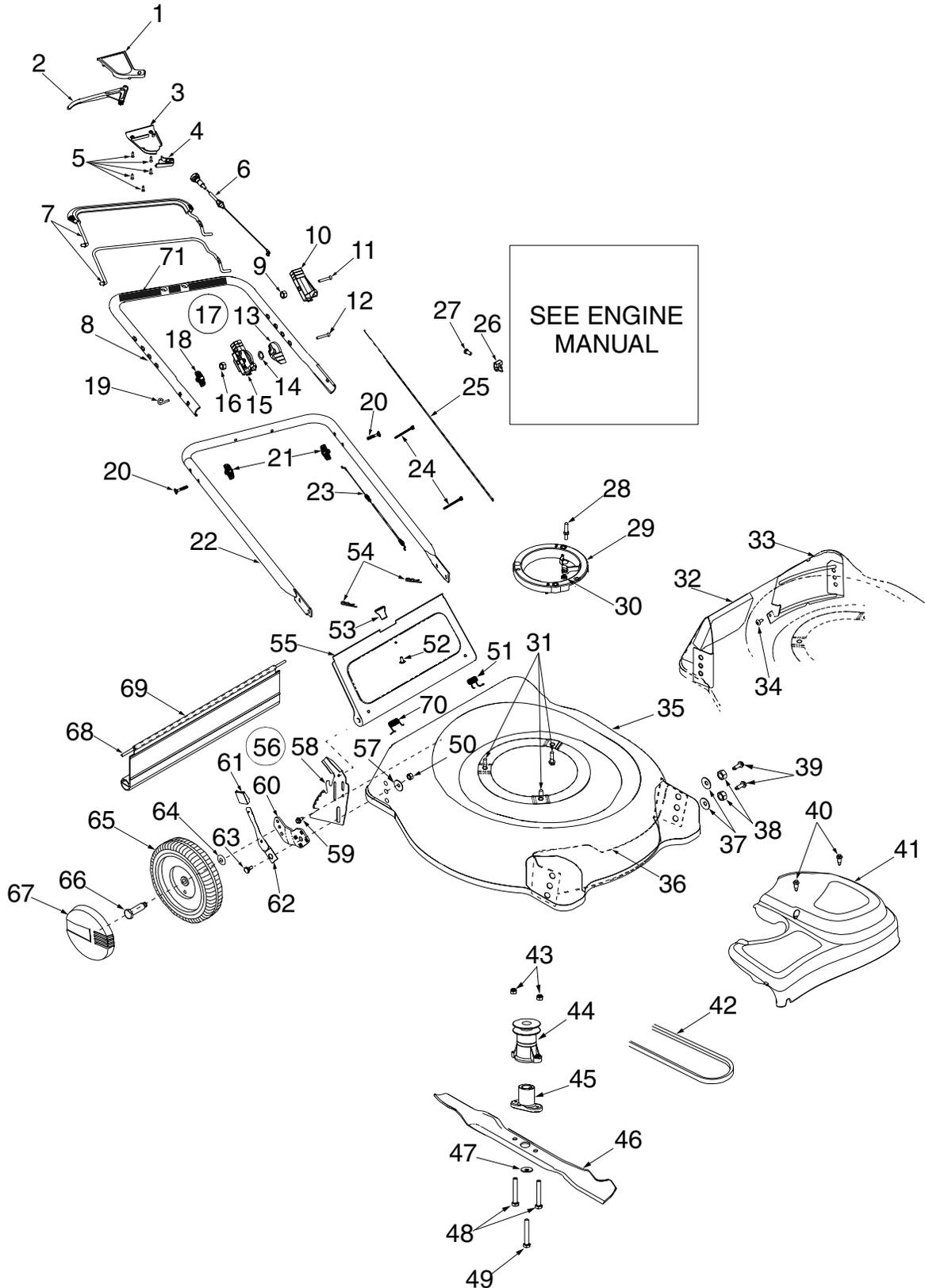
- Do not store gasoline from one season to another. *Gasoline that is older than one month old may significantly contribute to difficulty in starting your engine.*
- Replace your gasoline can if it starts to rust. Rust and/or dirt in the gasoline will cause problems. Store unit in a clean, dry area. Do not store next to corrosive materials, such as fertilizer or rocksalt.

NOTE: *If storing in an unventilated or metal storage shed, be certain to rustproof the equipment by coating with a light oil or silicone.*

SECTION 10: TROUBLE-SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Engine fails to start	<ol style="list-style-type: none"> 1. Blade control handle disengaged 2. Spark plug wire disconnected 3. Throttle control lever not in starting position 4. Fuel tank empty, or stale fuel 5. Blocked fuel line 6. Faulty spark plug 7. Engine flooded 	<ol style="list-style-type: none"> 1. Engage blade control handle 2. Connect wire to spark plug 3. Move throttle lever to correct position 4. Fill up tank with fresh gasoline 5. Clean fuel line 6. Clean, adjust gap, or replace 7. Wait a few minutes and start again.
Engine runs erratic	<ol style="list-style-type: none"> 1. Spark plug wire loose 2. Blocked fuel line or stale fuel 3. Vent in gas cap plugged 4. Water or dirt in fuel system 5. Dirty air cleaner 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Clean fuel line, fill tank with clean, fresh gasoline. 3. Clear vent. 4. Drain fuel tank. Refill with fresh fuel. 5. Clean air cleaner. Refer to engine manual.
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low 2. Air flow restricted 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil. 2. Clean lawn mower engine.
Occasional skip (hesitates) at high speed	<ol style="list-style-type: none"> 1. Spark plug gap too close 	<ol style="list-style-type: none"> 1. Adjust gap to .030 inches.
Idles poorly	<ol style="list-style-type: none"> 1. Spark plug fouled, faulty, or gap too wide 2. Dirty air cleaner 	<ol style="list-style-type: none"> 1. Reset gap to .030 inches or replace spark plug. 2. Clean air cleaner.
Excessive vibration	<ol style="list-style-type: none"> 1. Cutting blade loose or unbalanced 2. Bent cutting blade 3. Bent engine crankshaft 	<ol style="list-style-type: none"> 1. Tighten blade and adapter, balance blade. 2. Replace blade. 3. Contact your nearest service center
Mower will not mulch grass	<ol style="list-style-type: none"> 1. Engine speed too low 2. Wet grass 3. Excessively high grass 4. Dull blade 	<ol style="list-style-type: none"> 1. Move throttle lever to FAST position. 2. Wait until grass is dry to cut. 3. Mow once at a high cutting height, then mow again at desired height. 4. Sharpen or replace blade.
Uneven cut	<ol style="list-style-type: none"> 1. Wheels not in same height position 2. Dull blade 	<ol style="list-style-type: none"> 1. Reposition all wheels at same height. 2. Sharpen or replace blade.

SECTION 11: PARTS LIST FOR MODEL 440 THRU E450 SERIES

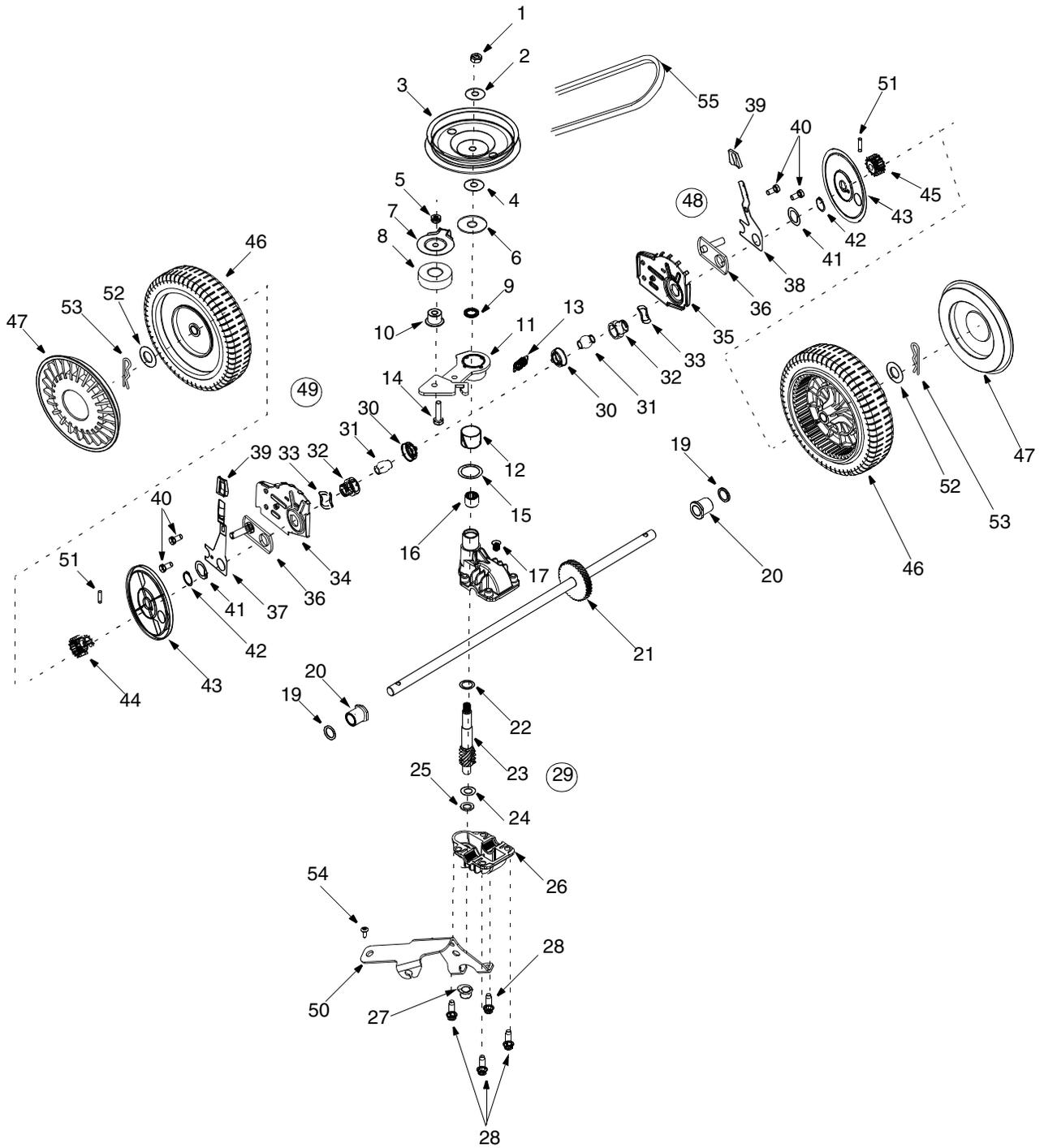


Models 440 Thru E450 Series

Ref. No	Part No.	Description	Ref. No	Part No.	Description
1	731-1057	Upper Drive Cover	37	712-0798	Hex Nut 3/8-16
2	731-0620	Drive Lever	38	736-0331	Bell Washer .39 x 1.13 x .062
3	731-1058	Lower Drive Cover	39	710-0216	Hex Screw 3/8-16 x .75
4	731-1059	Mounting Cap	40	7510042824	Screw #12 x .457
5	710-1667A	Screw #10-12:75	41	731-1936A	Trans Cover - Black
6	746-0960	Drive Cable		731-1937A	Trans Cover - Yellow
7	747-0824	Control Lever	42	754-0465	V-Belt
	647-0004	Deluxe Control Lever	43	712-0324	Hex Lock Nut 1/4-20
8	749-1230	Upper Handle	44	756-1146A	Drive Pulley
9	712-0324	Hex Lock Nut 1/4-20	45	748-0411	Blade Adapter
10	746-0883	Control Hsg.	46	742-0741	21" Mulching Blade w/star
11	710-1270	Scr. Oval C-Sunk 1/4-20 x 1.31		742-0641	21" Standard Blade
12	710-0605	Scr. Oval C-Sunk 1/4-20 x 1.81 †	47	736-0452	Bell Washer .396 I.D. x 1.140 O.D. x
13	746-0876	Throttle Lever †	48	710-0606	Hex Screw 1/4-20 x 1.50
14	736-0501	Curved Washer .663 x .980 x .014 †	49	710-1257	Hex Screw 3/8-24 x 2.50
15	746-0875	Throttle Housing †	50	712-3005	Hex Nut 3/8-16
16	712-0324	Hex Lock Nut 1/4-20 Thd.	51	732-0677	Torsion Spring L.H.
17	811-00185	Throttle Body Comp. †	52	710-0192	Scr. Tr. Mach #10-24 x .380
18	720-0279	Knob	53	720-0275	Knob
19	710-1205	Eye Bolt 1/4-20	54	714-0104	Cotter Pin
20	710-1174	Carriage Bolt 5/16-18 x 2.0	55	782-7000	RD Door
21	720-0314	Knob	56	682-0515	Complete Handle Brkt Ass'y - LH
22	749-0928	Lower Handle		682-0516	Complete Handle Brkt Ass'y - RH
23	746-0843	Throttle Cable: 55" (B&S) †	57	736-0356	Bell Washer .39 ID x 1.38 OD
	746-0847	Throttle Cable: 42" (Tec) †	58	682-0513	Handle Brkt Ass'y - LH
24	726-0240	Tie Cable		682-0514	Handle Brkt Ass'y - RH
25	746-0553	Control Cable 39" (B&S)	59	710-0896	Hex Screw w/wsh. 1/4-14 x .62
	746-0737	Control Cable 51" (Tec)	60	14766	Pivot Bar - LH
26	751B213146	Cable Clamp (B&S) †		14765	Pivot Bar - RH
	7510007775	Cable Clamp (Tec) †	61	720-0190	Knob
27	710-1237	Hex Screw: T: #10-32 (B&S) †	62	732-0417A	Spring Lever
	710-0871	Hex Screw: #10-32 (Tec) †	63	738-0507B	Shldr Screw .500 Dia x .434 Long
28	711-1293	Pin-Belt Keeper	64	736-0105	Bell Washer .380 x .880 x .062
29	631-0075A	Engine Spacer	65	634-0020	Wheel 8 x 1.75 Disk Bar Grey
30	712-0271	Hex Nut 1/4-20 Thread	66	738-0102	Shldr Screw .498 x 1.445
31	710-1008	Tapp Screw w/Hex Lock Wash	67	720-0249	Hubcap: Euro Grey 3 1/2"
32	782-5004	Rear Baffle Right		731-0981A	Hubcap: Radial Spoke Grey 5"
33	782-5003	Rear Baffle Left	68	732-0700	Wire
34	710-1017	Scr. AB: 1/4-14 .625 Trust	69	731-1236	Rear Flap
35	782-0080A	Deck 21" RD	70	732-0678	Torsion Spring R.H.
36	782-5002	Front Baffle	71	720-0294	Foam Grip (2 Req'd)

† If Equipped

Models 440 Thru E450 Series



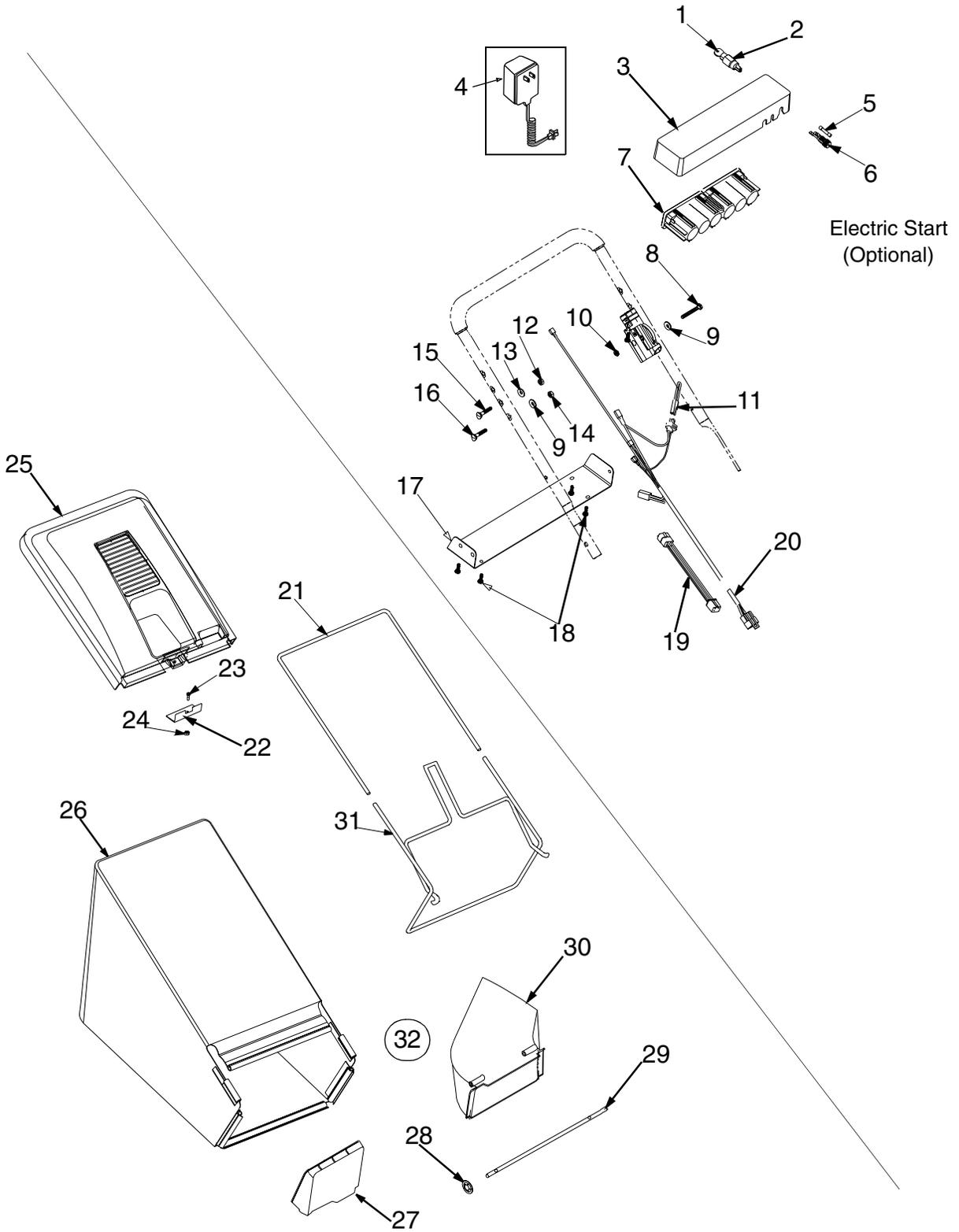
Models 440 Thru E450 Series

Ref. No	Part No.	Description	Ref. No	Part No.	Description
1.	712-3025	Hex Jam Nut 5/16-24	29.	618-0298A	Transmission Assembly (Includes Ref. # 1to Ref. #30)
2.	736-0425	Bell Washer .325 x .930 x .045	30.	732-0708	Bearing Retainer
3.	756-1042	Pulley, 3.82 x .313 x .68	31.	741-0604	Bearing Sleeve .50 I.D.
4.	736-0425	Bell Washer .325 x .930 x .045	32.	748-0355	Bearing Support
5.	712-0896	Lock Nut 1/4-28	33.	736-0447	Wave Washer 1.5 x 1.0 x .029
6.	736-0406	Flat Washer .442 x 1.38 x .060	34.	782-0512B	RH Height Adj. Plate
7.	782-7598	Belt Keeper	35.	782-0511A	LH Height Adj. Plate
8.	741-0124	Ball Bearing	36.	682-0509	Pivot Plate Assembly
9.	721-0457	Oil Seal	37.	732-0706	RH Front Lever
10.	750-1050	Flange Spacer	38.	732-0707	LH Front Lever
11.	682-0028	Idler Bracket Assembly	39.	720-0190	Knob
12.	741-0682A	Bearing Sleeve	40.	710-0216	Hex Cap Screw 3/8-16 x .75
13.	732-0849A	Flat Washer .504 x .700 x .030	41.	736-0474	Washer DD 1.5" O.D.
14.	710-0299	Hex Cap Screw 1/4-28 x 1.00	42.	716-0102	Snap Ring 1.0 dia.
15.	736-0570	Flat Washer .865 x 1.145 x .030	43.	782-7551	Wheel Dust Cap
16.	741-0699	Needle Bearing .438 x .625 x .500	44.	717-1534	Gear 14T RH FWD
17.	721-0325	Plug 1/4 x .437	45.	717-1533	Gear 14T LH FWD
18.	618-0300A	Upper Housing	46.	634-0021A	Wheel, 8x2 x 1.75
19.	721-0329	Oil Seal .500 x .687 x .094	47.	731-0981A	Hubcap: Gray
20.	741-0673	Flange Bearing	48.	682-0512A	RH Height Adj. Complete
21.	611-0105	Output Shaft	49.	682-0511A	LH Height Adj. Complete
22.	736-0520	Flat Washer .504 x .700 x .030	50.	682-0030	Cable Idler Bracket
23.	717-1492	Pinion Shaft 10T	51.	715-0221	Dowel Pin
24.	736-0314	Thrust Washer .375 x .70 x .030	52.	736-3013	Flat Washer 1/2 x 1.00 x .063
25.	736-0569	Thrust Washer .388 x .625 x .062	53.	714-0101	Cotter Pin .08 x 1.42
26.	618-0299A	Lower Housing	54.	738-1002	Screw
27.	741-0672	Flange Bearing .378 x .531 x .370	55.	754-0465	Belt
28.	710-1276	Hex Screw w/Washer 1/4-20 x .750			

IMPORTANT: For a proper working machine, use factory approved parts.

V-Belts are specially designed to engage and disengage safely. A substitute (non OEM) V-Belt can be dangerous by not disengaging completely.

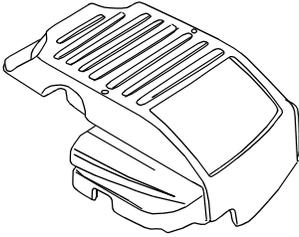
Models 440 Thru E450 Series



Models 440 Thru E450 Series

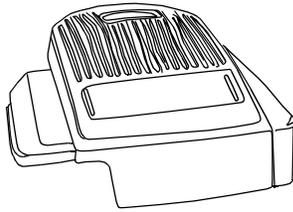
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	725-0201	Ignition Key	19	725-1538	Harness Extension
2	725-0873	Key Switch	20	625-0022	Harness
3	731-0891A	Battery Tray	21	764-0310	Rear Catcher Frame
4	725-0727	Battery Charger	22	782-9011	Mounting Bracket
5	725-0298	Fuse 7.5 Amp	23	710-0286	Hex Screw 1/4 -20 x .5
6	725-1428	Fuse Holder	24	712-0324	Hex Nylon L-Nut 1/4-20
7	725-1276	Battery 12V	25	731-1322A	Hardtop Cover w/o Logo: Econo: Blk.
8	710-0501	Hex Screw:1/4-20:2.0		731-1876	Hardtop Cover w/Logo: Econo: Blk.
9	736-0270	Bell Washer .265 x .75 x .062		764-0433	Grassbag for Hardtop Assy
10	712-0329	Special Hex Nut 5/16-18	26	764-0476A	Grass Bag: Soft Top w/ Logo
11	725-1206	Plug		764-0309	Grass Bag: Econo: Soft Top w/o Logo
12	712-0267	Nut 5/16-18	27	782-5007A	Mulcher Plug
13	736-0242	Bell Wash .340 ID x .872 OD	28	726-0201	Nut: Spd. .3125 ID
14	712-0287	Hex Nut 1/4-20	29	711-0996	Rod
15	710-1250	Carriage Bolt 5/16-18 x 1	30	731-1405	Side Discharge Adapter
16	710-0111	Carriage Screw	31	764-0311	Front Catcher Frame
17	782-9012	Lower Battery Tray	32	190-104-000	Chute Deflector Complete
18	710-0969	Tapp Screw			

SECTION 12: ENGINE SHROUDS



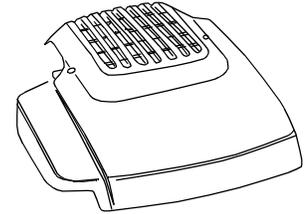
Part No.	Color
751B281439	Dark Red
751B281440	Black
751B281443	Bright Red

Hardware: 710-1256 (Screw)



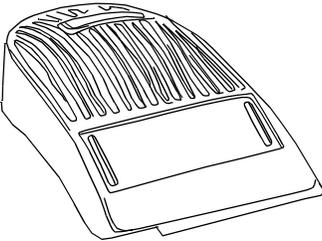
Part No.	Color
731-1395A	Red
731-1396A	Black
731-1397A	Gray

Hardware: 710-1256 (Screw)



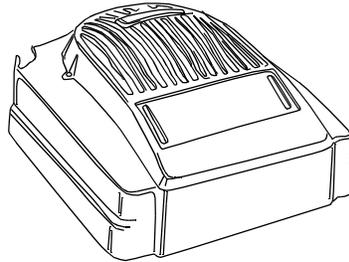
Part No.	Color
731-1402A	Yellow
731-1694	Black
731-1695	Silver
731-1934	Charcoal

Hardware: 710-1256 (Screw)



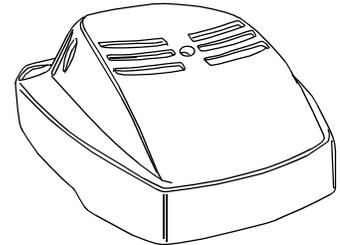
Part No.	Color
731-1585B	Black

Hardware: 710-1274 (Screw)



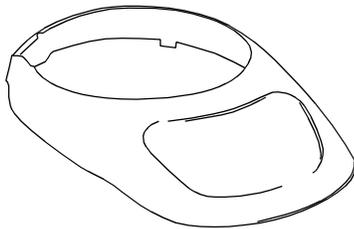
Part No.	Color
731-1586B	Black
731-1612A	Red

Hardware: 7510042823 (Screw)

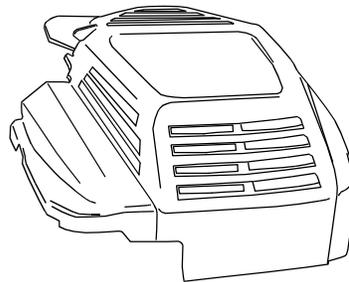


Part No.	Color
7510143208	Black

Hardware: 7510042823 (Screw)

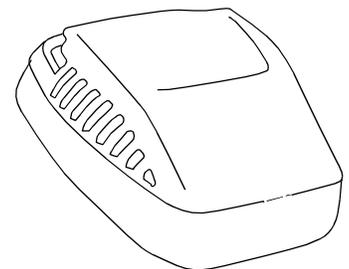


Part No.	Color
7511681311	Black
7511681911	Red
7511682011	Gray



Part No.	Color
751B281451	Gray

Hardware: 710-1256 (Screw)



Part No.	Color
751B281476	Black
751B281777	Yellow

Hardware: 710-1237 (Screw)

MANUFACTURER'S LIMITED WARRANTY FOR:



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

MTD warrants this product against defects in material and workmanship 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 material 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 Products Inc. for use with the product(s) covered by this manual will void your warranty as to any resulting damages.

Normal wear parts or components thereof are subject to separate terms as follows: All normal wear part 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 material or workmanship of OTHER component parts. Normal wear parts and components include, but are not limited to, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, shave plates and tires. Batteries are covered by a 90-day limited replacement warranty.

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, please check for a listing in the Yellow Pages or contact the Customer Service Department of MTD PRODUCTS INC by calling 1-800-800-7310 or writing to P.O. Box 368022, Cleveland, Ohio 44136-9722.

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. Please refer to the applicable manufacturer's warranty on these items.
- b. Log splitter pumps, valves and cylinders have a separate one year warranty.

- c. Routine maintenance items such as lubricants, filters, blade sharpening and tune-ups, or adjustments such as brake adjustments, clutch adjustments or deck adjustments; and normal deterioration of the exterior finish due to use or exposure.

- d. MTD does not extend any warranty for products sold or exported outside of the United States of America, its possessions and territories, except those sold through MTD's authorized channels of export distribution.

No implied warranty, including any implied warranty of merchantability or 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 or guaranty, 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. During the period of the Warranty, the exclusive remedy is repair or replacement of the product as set forth above. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

The provisions as set forth in this Warranty provide the sole and exclusive remedy arising from the sales. MTD shall not be liable for incidental or consequential loss or damages including, without limitation, expenses incurred for substitute or replacement lawn care services, for transportation or for related expenses, or for rental expenses to temporarily replace a warranted product. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation 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 the 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 use or misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser, original lessee or 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.