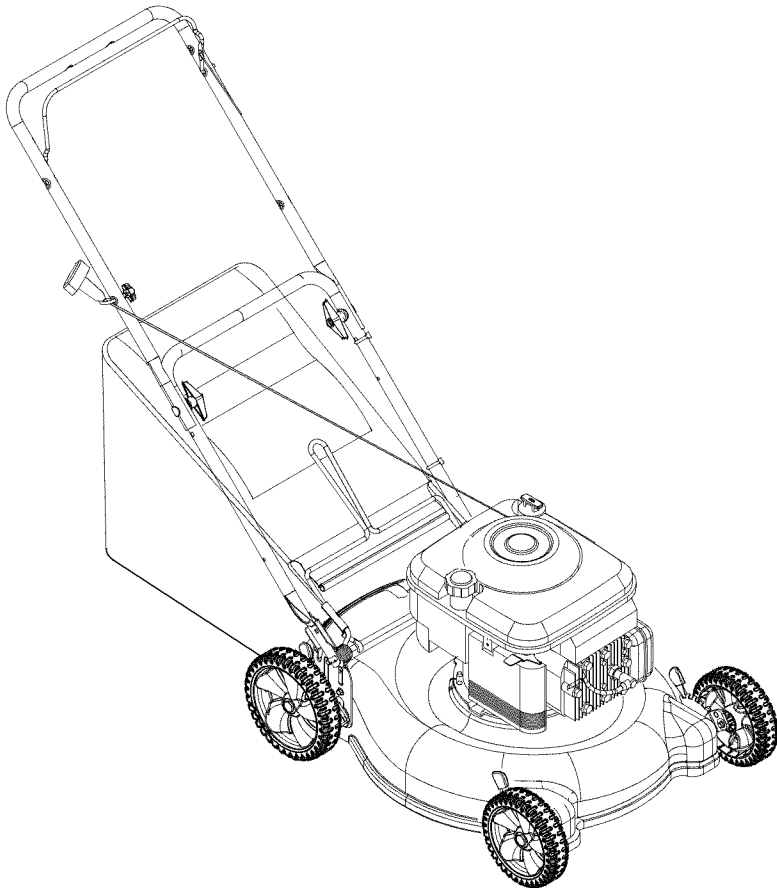


Operator's Manual



21" Rear Discharge Push Mower

400 Series

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 361131 Cleveland, Ohio 44136-0019.

For US Customers: MTD LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019

For Canadian Customers: MTD Products Limited, Kitchener, ON N2G 4J1


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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. A sample model plate is also given below. You can locate the model plate by standing at the operating position and looking down at the rear of the deck. This information will be necessary to use the manufacturer's web site and/or help from the Customer Support Department or an authorized service dealer.

Model Number Numéro de modèle	Serial Number Numéro de série
XXXXXXXXXX	XXXXXXXXXX
	MTD LLC CLEVELAND, OH 44136 MTD PRODUCTS LIMITED KITCHENER, ON N2G 4J1
USA-www.mtdproducts.com CAN-www.mtdcanada.com	1-800-800-7310 1-800-668-1238

Copy the model number here: _____

Copy the serial number here: _____

ENGINE INFORMATION

The engine manufacturer is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual packed separately with your unit for more information.

CALLING CUSTOMER SUPPORT

Please do NOT return the unit to the retailer from which it was purchased, without first contacting Customer Support.

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

For US Customers: 1- (330) 220-4MTD (4683) or 1- (800)-800-7310

For Canadian Customers: 1-800-668-1238

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.


HOW TO OBTAIN SERVICE


Service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area;


In the U.S.A.: 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.

In Canada: Contact MTD Products Limited, Kitchener, ON N2G 4J1, or call 1-800-668-1238 or log on to our Web site at www.mtdcanada.com.

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 this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol—heed its warning.

 **WARNING:** Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

 **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.

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.
- This machine 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 this machine. Children 14 years old and over should read and understand the instructions in this manual and should be trained and supervised by a parent. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use this machine.
- 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 picked up and thrown by the blade. Thrown objects can cause serious personal injury. 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.
- To help avoid blade contact or a thrown object injury, stay in the operator zone behind the handles and keep children, bystanders, helpers and pets at least 75 feet from the mower while it is in operation. Stop machine if anyone enters the area.
- Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
- 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. Never operate this machine in bare feet, sandals, slippery or light weight (e.g. canvas) shoes.
- Do not put hands or feet near rotating parts or under the cutting deck. Contact with the blade can amputate hands and feet.
- A missing or damaged discharge cover can cause blade contact or thrown object injuries.
- Many injuries occur as a result of the mower being pulled over the foot during a fall caused by slipping or tripping. Do not hold on to the mower if you are falling; release the handle immediately.
- 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:
 - a. Step back from the mower to fully extend your arms.
 - b. Be sure you are well balanced with sure footing.
 - c. Pull the mower back slowly, no more than half way toward you.
 - d. Repeat these steps as needed.
- Do not operate the mower while under the influence of alcohol or drugs.
- 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. 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 in good artificial light. Walk, never run.
- 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 trail shield, discharge cover, grass catcher, blade control handle 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.
- Muffler and engine become hot and can cause a burn. Do not touch.
- Only use parts and accessories made for this machine by the manufacturer. Failure to do so can result in personal injury.
- If situations occur which are not covered in this manual, use care and good judgment. Call customer assistance for 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:

- Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, rocks, hidden objects, or bumps which can cause you to slip or trip. 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 rotating within 3 seconds.

Do Not:

- Do not mow near drop-offs, ditches or embankments, you could lose your footing or balance.
- Do not mow slopes greater than 15 degrees as shown on the slope gauge.
- Do not mow on wet grass. Unstable 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. 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.
- Keep children away from hot or running engines. They can suffer burns from a hot muffler.
- 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

Safe Handling Of Gasoline:

- To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite.
- Wash your skin and change clothes immediately.
- Use only an approved gasoline container.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.

- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- Never fuel machine indoors because flammable vapors will accumulate in the area.
- Never remove gas cap or add fuel while the engine is hot or running. Allow engine to cool at least two minutes before refueling.
- Never over fill fuel tank. Fill tank to no more than 1/2 inch below bottom of filler neck to provide for fuel expansion.
- Replace gasoline cap and tighten securely.
- If gasoline is spilled, wipe it off the engine and equipment. Move unit to another area. Wait 5 minutes before starting the engine.
- Never store the machine or fuel container near an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.
- To reduce fire hazard, keep mower free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
- Allow a mower to cool at least 5 minutes before storing.

General Service:

- Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
- Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
- Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., bent, cracked, worn) Replace blade with the original equipment manufacturer's (O.E.M.) blade only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
- 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 engine, disconnect the spark plug wire and ground against the engine. 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, 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 (O.E.M.) parts only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
- Do not change the engine governor setting or overspeed the engine. The governor controls the maximum safe operating speed of the engine.
- Maintain or replace safety labels, as necessary.
- Observe proper disposal laws and regulations. Improper disposal of fluids and materials can harm the environment.

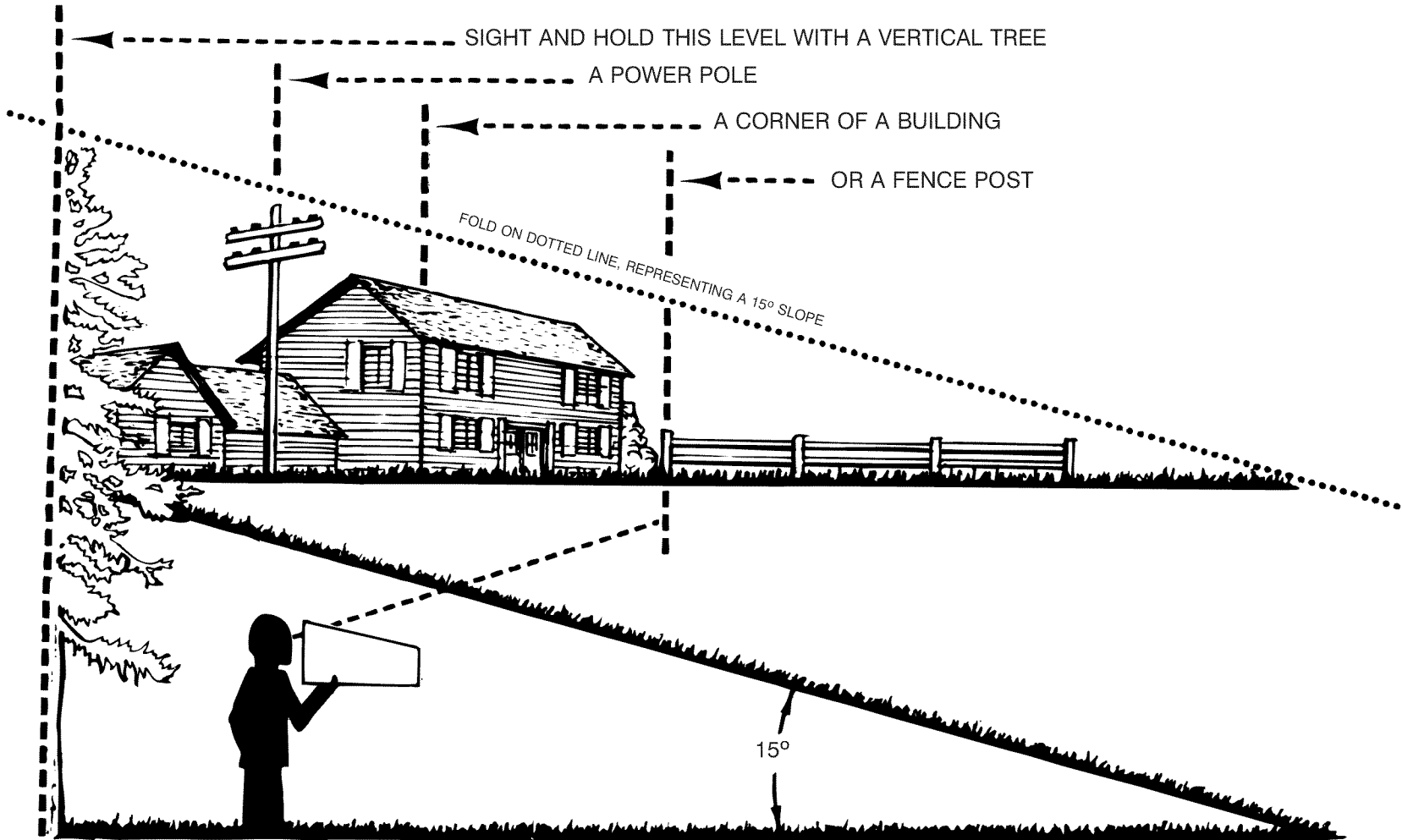
Your Responsibility

- 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.

SLOPE GAUGE

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

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



DANGER

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

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

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

SET-UP

This unit is shipped **WITHOUT GASOLINE or OIL**. After assembly, service engine with gasoline and oil as instructed in the separate engine manual packed with your unit.

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

This owner's manual covers various models of lawnmowers. The units illustrated may vary slightly from your unit. Follow only those instructions which pertain to your model lawnmower.

- Disconnect the spark plug wire and ground it as instructed in the separate engine manual packed with your unit.
- Remove the carton inserts (if any). Remove the loose parts which are in the carton, lift the mower from the carton, or cut the corners of the carton and roll the mower out.

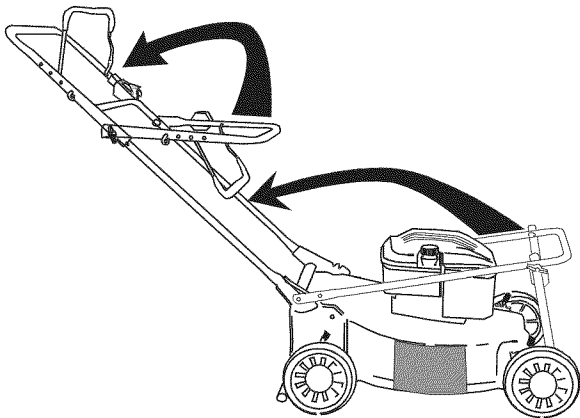


Figure 1

- 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. Tighten the large wing nuts on each side of the handle. See Figure 1.
- Remove the hairpin clips from the outer hole in the weld pins on the handle mounting brackets. Place the hairpin clips in the inner hole. See Figures 2 and 3.
- Place one carriage bolt (found in the hardware pack included with your unit) in the upper hole of the right handle mounting bracket from the inside outward. See Figures 2 and 3. Secure with one wing nut. Repeat process on the left side.
- Remove the small wing nut and the rope guide from the starter rope. See Figure 4.
- With the spark plug wire disconnected and grounded, hold the blade control handle against the upper handle, and pull the starter rope out of the engine. Hold the rope guide as shown so the opening in the rope guide is toward the front of mower. Slip the rope guide around the starter rope and into the

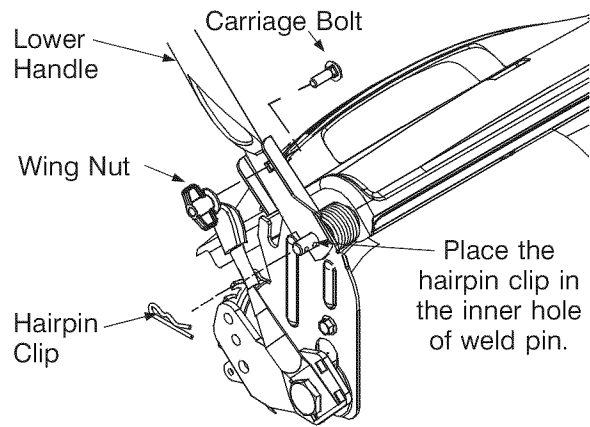


Figure 2- For models with 8" rear wheels.

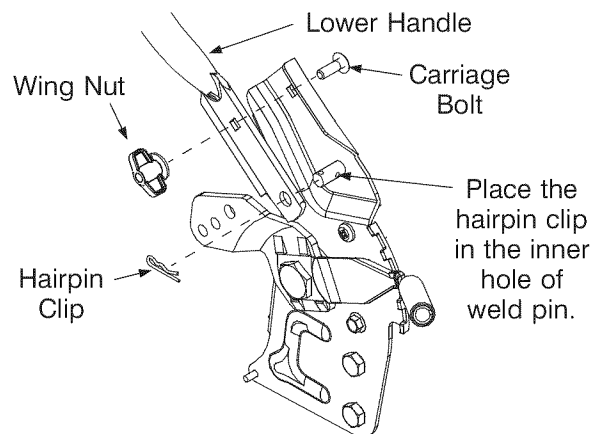


Figure 3 - For models with 12" rear wheels.

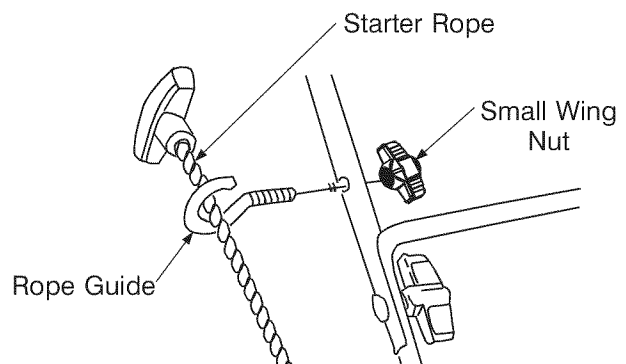


Figure 4

right side of upper handle using the hole shown. Secure using the small wing nut.

- Fasten the cable to the lower handle with the cable ties found on the lower handle. Pull the cable ties tight and trim off the excess. See Figure 5.
- Make certain all nuts and bolts are tightened securely.

NOTE: If the starter rope becomes disconnected from rope guide on handle, disconnect and ground the spark plug wire. Depress the blade control handle and pull the starter rope out from engine slowly. Slip the starter rope into the rope guide on handle.

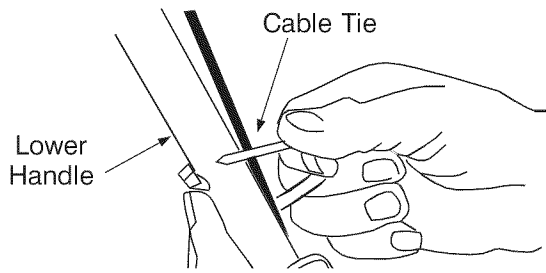


Figure 5

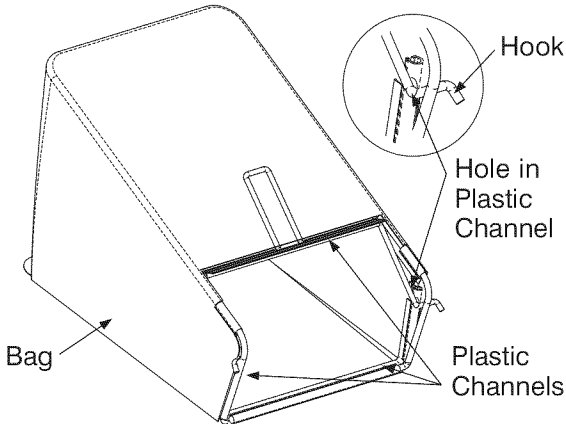


Figure 6

Assembly of Grass Catcher

NOTE: If your mower's grass catcher is assembled, proceed to the next section. If not, follow these steps.

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

- Place bag over frame (black plastic side is the bottom of bag.) Insert the hooks on the frame through the holes in the side plastic channels of the bag. See Figure 6.
- Secure bag to frame by working the plastic channels on bag over frame as shown in Figure 6. All of the plastic channels except center top of bag attach from the outside of bag. Center top of bag attaches from the inside of bag.

Attaching Grass Catcher to Mower

- Lift the rear discharge door on the mower, and place the grass catcher on the pivot rod. Let go of discharge door so that it rests on the grass catcher. See Figure 7.

NOTE: Make certain cables are routed to the outside of the handle so they are not in the way when attaching the grass catcher.

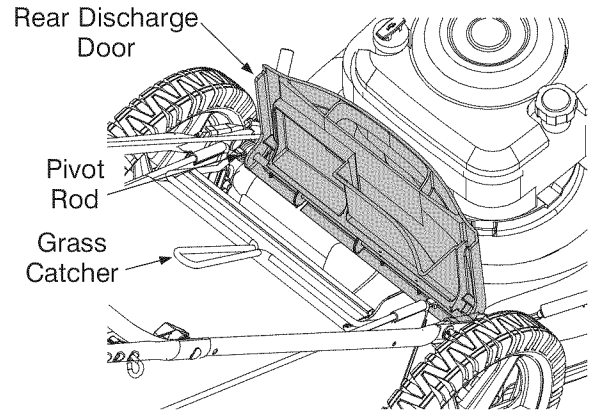


Figure 7

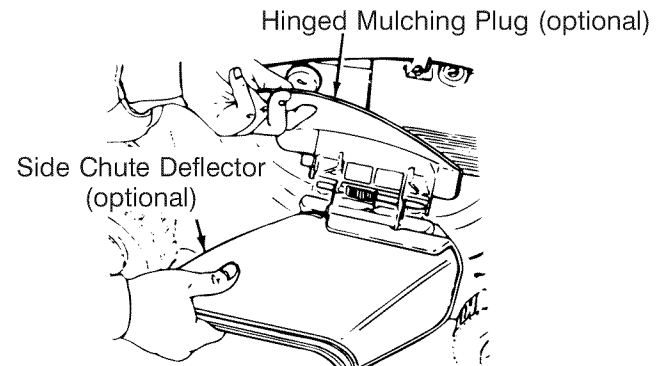


Figure 8

WARNING: Never operate the mower unless the hooks on the grass catcher are seated on the pivot rod, and the rear discharge door rests firmly against the top of the grass catcher.

To Remove the Grass Catcher

- Lift the rear discharge door on the mower as shown in Figure 7. Lift the grass catcher up and off the pivot rod. Release the rear discharge door.

Converting to Side Discharge

If your unit is equipped with a side discharge deflector, you can convert to a side discharge mower as follows:

- Remove the grass catcher as previously described.
- On the side of the mower deck, lift the hinged mulching plug. See Figure 8.
- Slide the two hooks on the side discharge deflector under the hinge pin on the hinged mulching plug assembly.
- Lower the hinged mulching plug.

NOTE: Do not remove the hinged mulching plug at any time, even when you are not mulching.

WARNING: All mowers are equipped with a rear protective guard. The guard helps eliminate projectiles thrown by the blade from injuring the operator. **DO NOT REMOVE THIS GUARD.**

OPERATION

Before Starting

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

! WARNING: Never fill fuel tank indoors, with engine running or until the engine has been allowed to cool for at least two minutes after running.

To Start Engine

- Attach spark plug wire to spark plug. If unit is equipped with a rubber boot over the end of the spark plug wire, make certain the metal loop on the end of the spark plug wire (inside the rubber boot) is fastened securely over the metal tip on the spark plug. See Figure 10.
- If your unit is equipped with a primer, prime engine as instructed in the separate engine manual packed with your unit.
- Standing behind the unit, depress the blade control handle and hold it against the upper handle as shown in Figure 11.
- Grasp the starter handle as shown and pull slowly until resistance is felt, then pull rapidly to start engine and avoid kickback. Return it slowly to the rope guide. See Figure 11.

The blade control handle must be depressed in order to operate the unit. Release the blade control handle to stop the engine and blade.

! WARNING: THIS CONTROL MECHANISM IS A SAFETY DEVICE. NEVER ATTEMPT TO BY-PASS ITS OPERATIONS.

To Stop Engine :

- Release the blade control handle to stop the engine and blade.
- ! WARNING: The blade continues to rotate for a few seconds after the engine is shut off.**
- Disconnect and ground the spark plug wire as instructed in the separate engine manual to prevent accidental starting while equipment is unattended.

Using Your Mulcher (Optional)

Mulching mowers use a specially designed blade to chop the grass clippings extra fine and then blow them back down into the lawn. The small clippings decompose quickly becoming a natural fertilizer that returns much of the needed nutrients to the soil. Continuous mulching means continuous free natural fertilization, no messy clippings to worry about ever again and the end result for you is a much greener healthier lawn.

! WARNING: Your mower is designed to cut normal residential grass of a height no more than 10". Do not attempt to mow through unusually tall, dry grass (e.g., pasture) or piles of dry

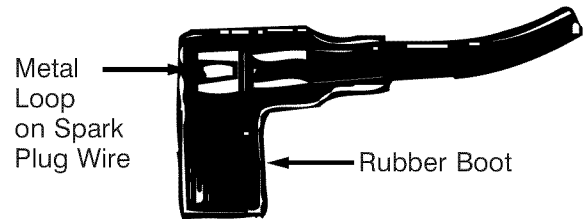


Figure 10

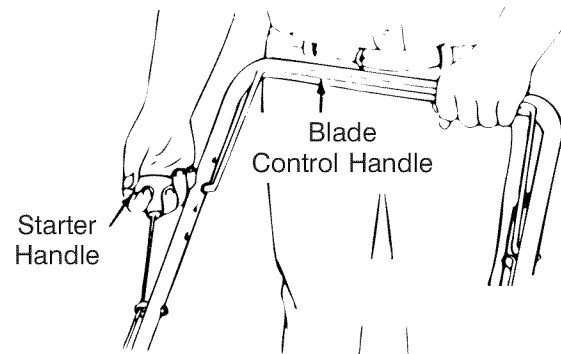


Figure 11

leaves. Debris may build up on the mower deck or contact the engine exhaust presenting a potential fire hazard.

For The Best Results When Mulching:

- **Clear lawn of debris.** Be sure that the lawn is clear of stones, sticks, wire or other foreign objects which could damage the lawnmower. Such objects could be accidentally thrown out by the mower in any direction and cause serious personal injury to the operator and others as well as damage to property and surrounding objects.
- **Do not cut wet grass.** For effective mulching do not cut wet grass because it tends to stick to the underside of the deck preventing proper mulching of the grass clippings.
- **Cut no more than 1/3 the length of the grass.** The recommended cut for mulching is 1/3 the length of the grass. Ground speed will need to be adjusted so the clippings can be dispersed evenly into the lawn. For especially heavy cutting in thick grass it may be necessary to use one of the slowest speeds in order to get a clean well mulched cut. When mulching long grass you may have to cut the lawn in two passes, lowering the blade another 1/3 of the length for the second cut and perhaps cutting in a different pattern than was used the first time. Overlapping the cut a little on each pass will also help to clean up any stray clippings left on the lawn. The mower should always be operated at full throttle to get the best cut and allow it to do the most effective job of mulching.
- **Clean underside of deck.** Be certain to clean the underside of the cutting deck after each use to avoid a build-up of grass, which would prevent proper mulching.
- **Mulching Leaves.** The mulching of leaves can also be beneficial to your lawn. When mulching leaves make sure they are dry and are not laying too thick on the lawn. Do not wait for all the leaves to be off the trees before you mulch.

- It is recommended keeping driveways and sidewalks on the operators right while moving. Continue mowing using this pattern, having the left side of your lawnmower next to the uncut grass. Mulching with the cutting area of the mower on the lawn avoids grass clippings in undesirable areas.

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

ADJUSTMENTS

CAUTION: DO NOT AT ANY TIME MAKE ANY ADJUSTMENT TO LAWNMOWER WITHOUT FIRST STOPPING THE ENGINE AND DISCONNECTING THE SPARK PLUG WIRE .

Height Adjusters:
(See Figure 12).

- Stop mower and disconnect spark plug cable before changing mower cutting height.
 - The wheel adjusters give you nine (9) different cutting positions. Medium is the best for most mowers.
 - To change the height of cut, squeeze adjuster lever toward the wheel, moving up or down to selected height.
- NOTE:** All wheels must be in the same height of cut.
- When cutting in heavy or moist grass, the rear of lawnmower may be raised higher to allow better discharge of the grass.



Figure 12

Carburetor Adjustment

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load. Refer to the separate engine manual packed with your mower for carburetor adjustment information.

LUBRICATION

CAUTION: DISCONNECT SPARK PLUG WIRE BEFORE SERVICING.

WHEELS - If your mower is equipped with ball bearing wheels, lubricate at least once a season with a light oil, all other types require no lubrication. However, if the wheels are removed for any reason, lubricate the surface of the axle bolt and the inner surface of the wheel with light automotive oil.

ENGINE - Follow engine manual for lubrication instructions.

BLADE CONTROL - Lubricate the pivot points on the blade control handle and the brake cable at least once a season with light oil. The blade control must operate freely in both directions.

MAINTENANCE

Cutting Blade

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

- Tip mower as specified in separate engine manual. If it is not specified tip with carburetor up.
- Remove the bolt and blade support which holds the blade and adapter to the engine crankshaft. Remove the blade and adapter from the crankshaft. See Figure 13.

⚠ WARNING: Periodically inspect the blade adapter for cracks, especially if you strike a foreign object. Replace when necessary.

For best results your blade should be sharp. The blade may be resharpened by removing it and either grinding or filing the cutting edge keeping as close to the original bevel as possible. **It is extremely important that each cutting edge receives an equal amount of grinding** to prevent an unbalanced blade. Improper blade balance will result in excessive vibration causing eventual damage to the engine and mower. Be sure to carefully balance blade after sharpening. The blade can be tested for balance by balancing it on a round shaft screwdriver. Remove metal from the heavy side until it balances evenly.

Before reassembling the blade and the blade adapter to the unit, lubricate the engine crankshaft and the inner surface of the blade adapter with light oil. Install the blade adapter on the crankshaft with the "star" away from the engine. Refer to Figure 13. Place the blade with the side marked bottom (or with part number) facing away from the adapter. Align the blade bell support over the blade with the tabs in the holes of the blade and insert the hex bolt. Tighten the hex bolt to the torque listed below:

Blade Mounting Torque

Center Bolt 450 in. lb. min., 600 in.lb. max.

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

CAUTION: Cutting grass in sandy soil condition causes abrasive wear to the blade.

After prolonged use, especially in sandy soil conditions, the blade will become worn and lose some of the original shape. Cutting efficiently will be reduced and the blade should be replaced. Replace with an

approved factory replacement blade only. Possible damage resulting from blade unbalance condition is not the responsibility of the manufacturer.

Deck

The underside of the mower deck should be cleaned after each use to prevent a buildup of grass clippings, leaves, dirt or other matter. If this debris is allowed to accumulate, it will invite rust and corrosion, and may prevent proper mulching.

The deck may be cleaned by tilting the mower and scraping clean with a suitable tool (make certain the spark plug wire is disconnected).

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

Engine

Refer to the separate engine manual for engine maintenance instructions.

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

Under normal conditions service **air cleaner** as instructed in the separate engine manual packed with your unit. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced.

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

NOTE: *This spark ignition system meets all requirements of the Canadian Interference-Causing Equipment Regulations.*

Clean the engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation which is essential to engine performance and life. Be certain to remove all grass, dirt and combustible debris from muffler area.

Rear Flap Replacement

The rear flap is attached to the back of the mower deck, and is designed to minimize the possibility that objects will be thrown from the rear of the mower toward the operator. If the rear flap becomes damaged, replace as follows.

To remove the old rear flap, cut off the flat end of the wire rod which secures it to the deck using a pair of side-cutters. Attach the new rear flap using the new rod provided with the rear flap, bending the ends of the rod over to secure.

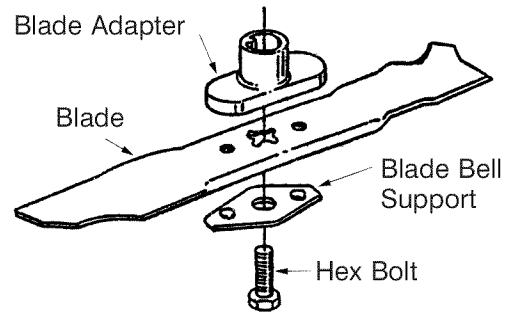


Figure 13

OFF SEASON STORAGE INSTRUCTIONS

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

- Clean and lubricate mower thoroughly as described in the lubrication instructions.
- Refer to engine manual for correct engine storage instructions.
- Coat mower's cutting blade with chassis grease to prevent rusting.
- Store mower in a dry, clean area.

NOTE: *When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rust-proof the equipment. Using a light oil or silicone, coat the equipment, especially cables and all moving parts.*

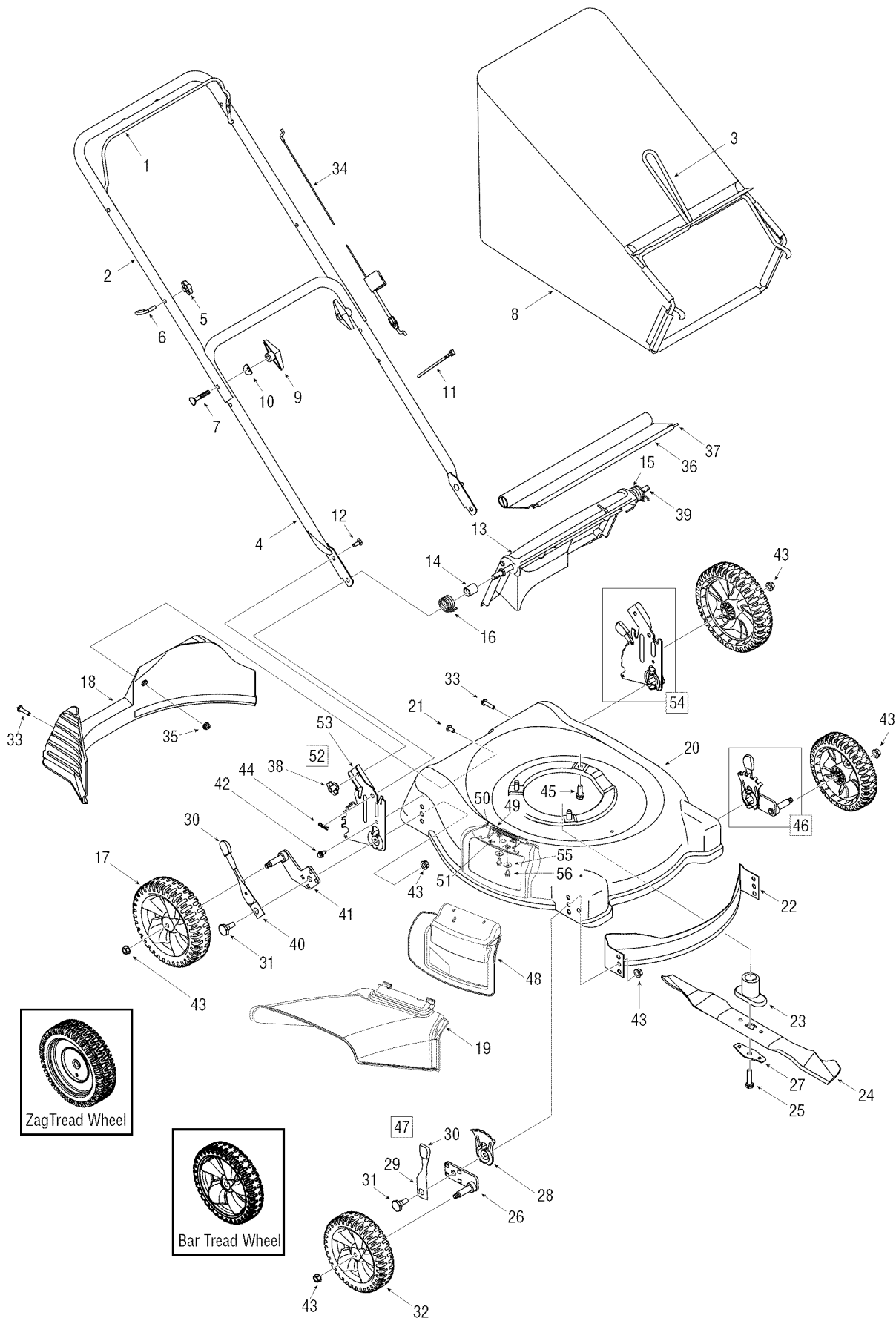
CAUTION: **Never fold or unfold handle without disconnecting spark plug.**

NOTE: *Be careful not to bend or kink cables.*

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Engine fails to start	<ol style="list-style-type: none"> 1. Blade control handle disengaged. 2. Spark plug wire disconnected. 3. Fuel tank empty, or stale fuel. 4. Blocked fuel line. 5. Faulty spark plug. 6. Engine flooded. 	<ol style="list-style-type: none"> 1. Engage blade control handle. 2. Connect spark plug wire. 3. Fill tank with clean, fresh gasoline. 4. Clean the fuel line. 5. Clean, adjust gap or replace. 6. Wait a few minutes to restart, but do not prime.
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 plugged. 4. Water or dirt in fuel system. 5. Dirty air cleaner. 6. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Clean the fuel line; fill the tank with clean, fresh gasoline. 3. Clear vent. 4. Drain the fuel tank and carburetor. Refill with fresh fuel. 5. Clean air cleaner. 6. Adjust carburetor.
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low. 2. Air flow restricted. 3. Carburetor not adjusted properly. 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil. 2. Remove blower housing and clean. 3. Adjust carburetor.
Idles poorly	<ol style="list-style-type: none"> 1. Spark plug fouled, faulty or gap too wide. 2. Carburetor improperly adjusted. 3. Dirty air cleaner. 	<ol style="list-style-type: none"> 1. Reset gap to .030" or replace spark plug. 2. Adjust carburetor. 3. Clean air cleaner.
Excessive vibration	<ol style="list-style-type: none"> 1. Cutting blade loose or unbalanced. 2. Bent cutting blade. 	<ol style="list-style-type: none"> 1. Tighten blade and adapter. Balance blade. 2. Replace blade.
Mower will not mulch grass	<ol style="list-style-type: none"> 1. Wet grass. 2. Excessively high grass. 3. Dull blade. 	<ol style="list-style-type: none"> 1. Do not mow when grass is wet; wait until later to cut. 2. Mow once at a high cutting height, then mow again at desired height or make a narrower cutting path. 3. Sharpen or replace blade.
Uneven cut	<ol style="list-style-type: none"> 1. Wheels not positioned correctly. 2. Dull blade. 	<ol style="list-style-type: none"> 1. Place all four wheels in same height position. 2. Sharpen or replace blade.
Wheels will not propel	<ol style="list-style-type: none"> 1. Belt not installed properly. 2. Debris clogging drive operation. 	<ol style="list-style-type: none"> 1. Check belt for proper pulley installation and movement. 2. Clean out debris.

NOTE: For repairs beyond the minor adjustments listed above, contract your nearest authorized service dealer.



REF NO. N° DE RÉF	PART NO. N° DE PIÈCE	DESCRIPTION	DESCRIPTION
1	747-1161A	Blade Control Handle - Black	Poignée de commande de la lame-noir
2	749-1092A	Upper Handle -Black	Guidon supérieur-noir
3	747-04080	Catcher Lower Frame	Sac à herbe - bâti inférieur
4	749-0928A	Lower Handle	Guidon inférieur
5	720-0279	Knob 1/4-20	Bouton 1/4-20
6	710-1205	Rope Guide Bolt	Boulon de guidage de cordon
7	710-1174	Curved Carriage Bolt 5/16-18 x 2.00	Boulon ordinaire courbé 5/16-18 x 2,00
8	664-04007	Generic Grasscatcher Bag	Sac à herbe
	664-04027	Grasscatcher Bag YM	Sac à herbe YM
9	720-0284	Knob 5/16-18	Bouton 5/16-18
10	736-0451	Saddle Washer	Rondelle selle
11	726-0240	Cable Tie	Attache câble
12	710-0703	Carriage Bolt 1/4-20 x .75 Gr. 1	Boulon ordinaire 1/4-20 x 0,75 Qual. 1
13	731-04134A	RB Chute Door	Porte de goulotte
14	750-04162	Spacer .390 x .810 x .950	Entretoise 0,390 x 0,810 x 0,950
15	732-04089A	LH Torsion Spring	Ressort de torsion CG
16	732-04090A	RH Torsion Spring	Ressort de torsion CD
17	734-1987	Wheel Ass'y 8 x 1.8 Spoke Bar Grey	Ensemble de roue 8 x 1,8 Gris
18	734-04150	RR Baffle	Défecteur de déchiquetage arrière droit
19	731-04177	Side Chute Deflector	Défecteur d'éjection latéral
20	787-01231	21" Deck Ass'y (Models with side discharge only)	Corps 21 po (modèles avec éjection latérale seulement)
	787-01208	21" Deck Ass'y (Models without side discharge only)	Corps 21 po (modèles sans éjection latérale seulement)
21	710-0286	Mach. Scr. Pan Phil. 1/4-20 x .50	Vis de renforcement à usinée 1/4-20 x 0,50
22	782-5002B	Front Baffle 21"	Côté de la goulotte arrière
23	748-0377C	Blade Adapter	Adaptateur de la lame
24	742-0641	21" Blade (w/star)	Lame 21 po (avec étoile)
	742-0741	21" Mulching Blade (w/star)	Lame de déchiquetage 21 po (avec étoile)
25	710-1257	Hex Bolt 3/8-24 x 2.5" Lg. Gr. 8	Vis à tête hexagonale 3/8-24 x 2,5 po de lg Qual. 8
26	687-02077	Pivot Bar RH	Barre de pivot CD
	687-02078	Pivot Bar LH	Barre de pivot CG
27	736-0524B	Blade Bell Support	Support de la lame
28	15261C	Height Adjuster Plate	Plaque de réglage de roue
29	732-0404	Spring Lever Ass'y (w/knob)	Levier de ressort (avec bouton)
30	720-0426	Knob	Bouton
31	738-0507B	Shoulder Screw .50 Dia.	Vis à épaulement 0,50 Dia.
32	734-1988	Wheel Ass'y 7 x 1.8 Spoke Bar Grey	Ensemble de roue 7 x 1,8 Gris
33	710-04371	Hex. L-Scr. 1/4-15 x 1.5	Vis hex. 1/4-15 x 1,50
34	746-1137	Control Cable 53.0" Lg. Snap-on	Câble de la commande 53,0 po de lg.
35	712-04064	Flanged Lock Nut 1/4-20 Gr. F Nylon	Écrou de blocage 1/4-20 Qual. F nylon
36	731-04998	Rear Flap	Abattant de protection arrière
37	732-0700	Wire	Fil
38	712-0397	Wingnut 1/4-20	Écrou à oreilles
39	747-04035	Pivot Rod	Tige de pivotement
40	687-02078	Spring Lever SP (w/knob)	Ressort de levier (avec bouton)
	720-0426	Knob	Bouton
41	687-02071	Pivot Bar RH SP	Barre de pivot - Droit
	687-02070	Pivot Bar LH SP (not shown)	Barre de pivot - Gauche (non illustrée)
42	710-1652	Hex HD. TT Tap Scr. 1/4-20 x 5/8	Vis TT à rondelle-frein hex. 1/4 x 5/8
43	712-0431	Flange Locknut 3/8-16	Écrou de blocage 3/8-16
44	714-0104	Int. Cotter Pin 5/16 DIA	Goupille fendue 5/16 DIA.
45	710-0654A	Hex Wash HD Tap Scr 3/8-16 x .88	Vis autotaraudée 3/8-16 x 0,88
46	687-02099	Height Adj. Ass'y LH (w/knob) (not shown)	Ensemble de réglage de roue CG (avec bouton) (non illustrée)
47	687-02100	Height Adj. Ass'y RH (w/knob)	Ensemble de réglage de roue CD (avec bouton)
48	687-02055	Mulching Plug Ass'y (Incl. items marked *)	Plaque de déchiquetage (Comprends les *)
*	731-04161	Mulching Plug	Plaque de déchiquetage
*49	732-1014	Torsion Spring	Ressort de torsion
*50	747-0710	Hinge Pin	Axe fixe
*51	17032A	Plug Adapter	Adaptateur
52	687-02068	RH Rear Height Adj. Ass'y Complete	Ensemble de réglage de roue CD (complet)
53	787-01144A	RH Height Adj. Brkt.	Ensemble de réglage de roue - CD
54	687-02069	LH Rear Height Adj. Ass'y Complete	Ensemble de réglage de roue CG (complet)
	787-01143A	LH Height Adj. Brkt.	Ensemble de réglage de roue CG
55	736-0270	Cupp. Wash. .265 ID x .75 OD x .062	Rondelle creuse 0,265 DI x 0,75 DE x 0,062
56	710-0599	Hex Wash SF Tapp Scr 1/4-20 x .50	Vis taraudée 1/4-20 x 0,50

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 and/or its territories and possessions, and by MTD Products Limited with respect to new merchandise purchased and used in Canada and/or its territories and possessions (either entity respectively, "MTD").

MTD warrants this product (excluding its normal wear parts as described below) 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 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 part, accessory or attachment not approved by MTD for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal wear parts are warranted to be free from defects in material and workmanship for a period of thirty (30) days from the date of purchase. Normal wear parts include, but are not limited to items such as: batteries, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, friction wheels, 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;

In the U.S.A.:

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.

In Canada:

Contact MTD Products Limited, Kitchener, ON N2G 4J1, or call 1-800-668-1238 or log on to our Web site at www.mtdcanada.com.

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

- a. The engine or component parts thereof. These items may 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. Service completed by someone other than an authorized service dealer.
- e. MTD does not extend any warranty for products sold or exported outside of the United States and/or Canada, and their respective possessions and territories, except those sold through MTD's authorized channels of export distribution.
- f. Replacement parts that are not genuine MTD parts.
- g. Transportation charges and service calls.
- h. If Products are used commercially. (MTD may separately offer Limited Commercial Warranties on certain select products. Ask your dealer or retailer for details or contact MTD Service for more information.)

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. 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 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 jurisdictions 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 LOCAL LAWS RELATE TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights that vary in different jurisdictions.

IMPORTANT: Owner must present Original Proof of Purchase to obtain warranty coverage.

MTD LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019; Phone: 1-800-800-7310, 1-330-220-4683
MTD Products Ltd., P. O. BOX 1386, KITCHENER, ON N2G 4J1; Phone: 1-800-668-1238