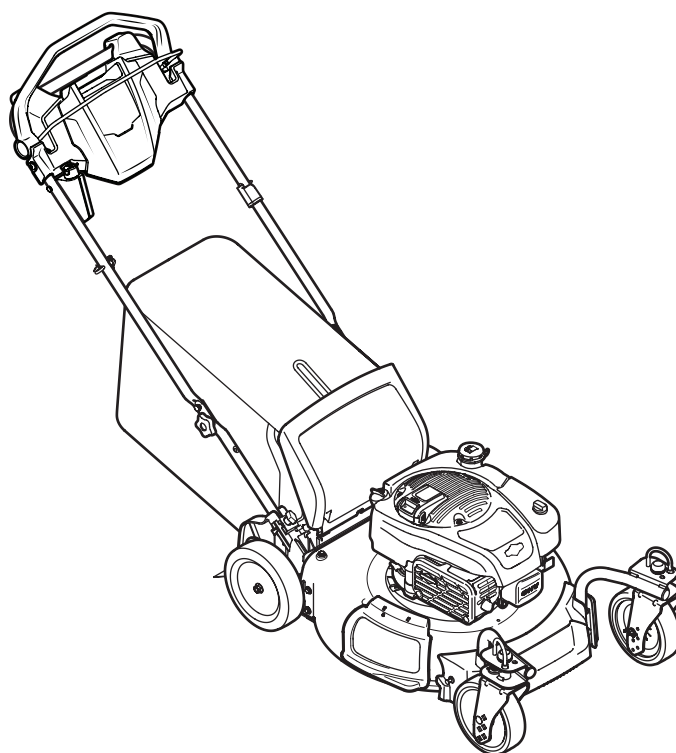


# *Cub Cadet*<sup>®</sup>

## OPERATOR'S MANUAL



### Self Propelled Mower — Models SC 500 ez +

#### **⚠ WARNING**

**READ AND FOLLOW ALL SAFETY RULES AND INSTRUCTIONS IN THIS MANUAL  
BEFORE ATTEMPTING TO OPERATE THIS MACHINE.  
FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.**

---

CUB CADET LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019

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## Thank You

Thank you for purchasing a Lawn Mower manufactured by Cub Cadet. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the equipment. It instructs you how to safely and easily set up, operate and maintain your machine. Please be sure that you, and any other persons who will operate the machine, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarize yourself with the machine, its features and operation. Please be aware that this Operator's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. We reserve the right to change product specifications, designs and equipment without notice and without incurring obligation.

If applicable, the power testing information used to establish the power rating of the engine equipped on this machine can be found at [www.opei.org](http://www.opei.org) or the engine manufacturer's web site.

If you have any problems or questions concerning the machine, phone your local Cub Cadet dealer or contact us directly. Cub Cadet's Customer Support telephone numbers, website address and mailing address can be found on this page. We want to ensure your complete satisfaction at all times.

Throughout this manual, all references to *right* and *left* side of the machine are observed from the operating position

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## Record Product Information

Before setting up and operating your new equipment, please locate the model plate on the equipment and record the information in the provided area to the right. You can locate the model plate by standing at the operator's position and looking down at the rear of the deck. This information will be necessary, should you seek technical support via our web site, Customer Support Department, or with a local authorized service dealer.

### MODEL NUMBER

### SERIAL NUMBER

---

## Customer Support

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this machine, you can seek help from the experts. Choose from the options below:

- ◇ Visit us on the web at [www.cubcadet.com](http://www.cubcadet.com)
- ◇ Call a Customer Support Representative at (800) 965-4CUB
- ◇ Locate your nearest Cub Cadet Dealer at (877) 282-8684
- ◇ Write us at Cub Cadet LLC • P.O. Box 361131 • Cleveland, OH • 44136-0019



**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!**

## CALIFORNIA PROPOSITION 65



**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.



**WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. *Wash hands after handling.*



**DANGER:** This machine was built to be operated according to the safe operation practices 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 fingers, hands, toes and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

## General Operation

1. 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. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be completely familiar with the controls and the proper use of this machine before operating it.
3. This machine is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times. This machine has been designed to perform one job: to mow grass. Do not use it for any other purpose.
4. Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and should be trained and supervised by an adult.
5. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use this machine.
6. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects, which could be tripped over or picked up and thrown by the blade. Thrown objects can cause serious personal injury.
7. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction, which may cause discharged material to ricochet back toward the operator.
8. To help avoid blade contact or a thrown object injury, stay in operator zone behind handles and keep children, bystanders, helpers and pets at least 75 feet from mower while it is in operation. Stop machine if anyone enters area.
9. 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.
10. 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.
11. Do not put hands or feet near rotating parts or under the cutting deck. Contact with blade can amputate fingers, hands, toes and feet.

12. A missing or damaged discharge cover can cause blade contact or thrown object injuries.
13. 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.
14. 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 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.
15. Do not operate the mower while under the influence of alcohol or drugs.
16. Do not engage the self-propelled mechanism on machines so equipped while starting engine.
17. The blade control 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 must operate easily in both directions and automatically return to the disengaged position when released.
18. 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.
19. Mow only in daylight or good artificial light. Walk, never run.
20. Stop the blade when crossing gravel drives, walks or roads.
21. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
22. 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 blade control is released. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
23. Never operate mower without proper trail shield, discharge cover, grass catcher, blade control or other safety protective devices in place and working. Never operate mower with damaged safety devices. Failure to do so can result in personal injury.
24. Muffler and engine become hot and can cause a burn. Do not touch.
25. Never attempt to make a wheel or cutting height adjustment while the engine is running.
26. Only use parts and accessories made for this machine by the manufacturer. Failure to do so can result in personal injury.
27. When starting engine, pull cord slowly until resistance is felt, then pull rapidly. Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go. Broken bones, fractures, bruises or sprains could result.
28. If situations occur which are not covered in this manual, use care and good judgement. Contact Customer Support for assistance or the name of the nearest service 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 machine on a sloped or hilly area. If the slope is greater than 15 degrees, do not mow it.

### Do:

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

### Do Not:

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

## Children

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.

1. Keep children out of the mowing area and under watchful care of a responsible adult other than the operator.
2. Be alert and turn mower off if a child enters the area.
3. Before and while moving backwards, look behind and down for small children.
4. 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.
5. Keep children away from hot or running engines. They can suffer burns from a hot muffler.
6. Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.
7. After stopping engine, remove Electric Start Push Key (if equipped) and keep it in a safe place out of the reach of children.

## Service

### Safe Handling Of Gasoline:

1. 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.
2. Use only an approved gasoline container.
3. 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.
4. 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.
5. 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.
6. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
7. Never fuel machine indoors because flammable vapors will accumulate in the area.
8. Never remove gas cap or add fuel while engine is hot or running. Allow engine to cool at least two minutes before refueling.
9. Never over fill fuel tank. Fill tank to no more than 1 inch below bottom of filler neck to provide for fuel expansion.
10. Replace gasoline cap and tighten securely.
11. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting engine.
12. 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.
13. To reduce fire hazard, keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
14. Allow machine to cool at least 5 minutes before storing.
3. 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!"
4. Mower blades are sharp and can cut. Wrap the blade or wear gloves, and use extra caution when servicing them.
5. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
6. Never tamper with safety devices. Check their proper operation regularly.
7. 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.
8. Never attempt to make a wheel or cutting height adjustment while the engine is running.
9. 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!"
10. Do not change the engine's governor setting or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
11. Check fuel line, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
12. Do not crank engine with spark plug removed.
13. Maintain or replace safety and instruction labels, as necessary.
14. Observe proper disposal laws and regulations. Improper disposal of fluids and materials can harm the environment.
15. According to the Consumer Products Safety Commission (CPSC) and the U.S. Environmental Protection Agency (EPA), this product has an *Average Useful Life* of seven (7) years, or 140 hours of operation. At the end of the *Average Useful Life* have the machine inspected annually by an authorized service dealer to ensure that all mechanical and safety systems are working properly and not worn excessively. Failure to do so can result in accidents, injuries or death.

### General Service:

1. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
2. 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 and remove Electric Start Push Key (if equipped) to prevent unintended starting.

### Do not modify engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

## Notice Regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM), Oxidizing Catalyst (OC), Secondary Air Injection (SAI) and Three Way Catalyst (TWC) if so equipped.

## Spark Arrestor












**WARNING:** This machine 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 arrestor meeting applicable local or state laws (if any).

If a spark arrestor 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 arrestor 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.

## Safety Symbols

This page depicts and describes safety symbols that may appear on this product. Read, understand, and follow all instructions on the machine before attempting to assemble and operate.

Symbol	Description
	<b>READ THE OPERATOR'S MANUAL(S)</b> Read, understand, and follow all instructions in the manual(s) before attempting to assemble and operate.
	<b>DANGER — ROTATING BLADES</b> To reduce the risk of injury, keep hands and feet away. Do not operate unless discharge cover or grass catcher is in its proper place. If damaged, replace immediately.
	<b>DANGER — BYSTANDERS</b> Do not mow when children or others are around.
	<b>DANGER — HAND/ FOOT CUT</b> Keep hands and feet away from rotating parts.
	<b>DANGER — THROWN DEBRIS</b> Remove objects that can be thrown by the blade in any direction. Wear safety glasses.
	<b>DANGER — SLOPES</b> Use extra caution on slopes. Do not mow slopes greater than 15°.
	<b>WARNING—GASOLINE IS FLAMMABLE</b> Allow the engine to cool at least two minutes before refueling.
	<b>WARNING— CARBON MONOXIDE</b> Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
	<b>WARNING— HOT SURFACE</b> Engine parts, especially the muffler, become extremely hot during operation. Allow engine and muffler to cool before touching.



**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.

**SAVE THESE INSTRUCTIONS!**



## Slope Gauge

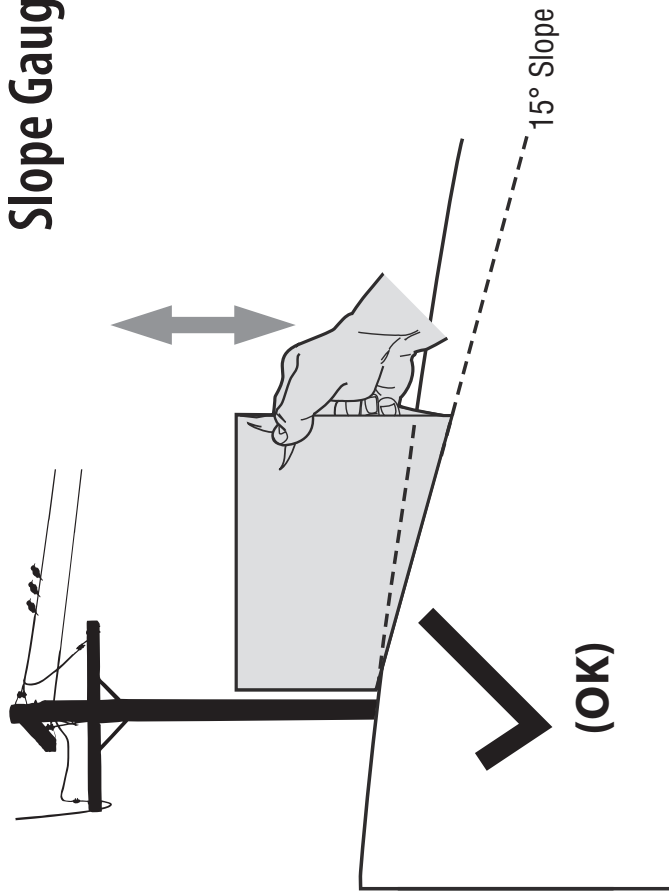


Figure 1

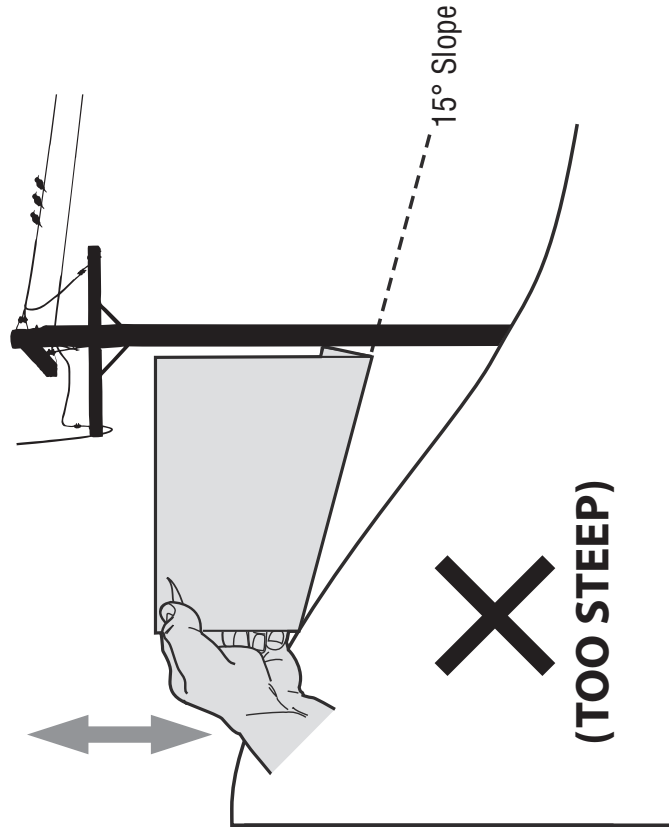


Figure 2

*15° dashed line*

### USE THIS SLOPE GAUGE TO DETERMINE

#### IF A SLOPE IS TOO STEEP FOR SAFE OPERATION!

To check the slope, proceed as follows:

1. Remove this page and fold along the dashed line.
2. Locate a vertical object on or behind the slope (e.g. a pole, building, fence, tree, etc.)
3. Align either side of the slope gauge with the object (See Figure 1 and Figure 2).
4. Adjust gauge up or down until the left corner touches the slope (See Figure 1 and Figure 2).
5. If there is a gap below the gauge, the slope is too steep for safe operation (See Figure 2 above).



**WARNING!** Slopes are a major factor related to tip-over and roll-over accidents which can result in severe injury or death. Do not operate machine on slopes in excess of 15 degrees. All slopes require extra caution.

Always mow across the face of slopes, never up and down slopes.



## Contents of Carton

- One Lawn Mower
- One Lawn Mower Operator's Manual
- Battery Charger
- One Grass Catcher
- One Engine Operator's Manual
- Electric Start Push Key
- One Bottle of Oil
- One Side Discharge Chute
- Battery Pack

## Assembly

**NOTE:** This unit is shipped without gasoline or oil in the engine. Fill up with gasoline and oil as instructed in the accompanying engine manual BEFORE operating your mower.

### Handle

1. Remove any packing material which may be between upper and lower handles.
  - a. Remove star knobs and carriage bolts from handle as shown in Figure 3-1. Do not loosen or remove adjacent hex head screws.

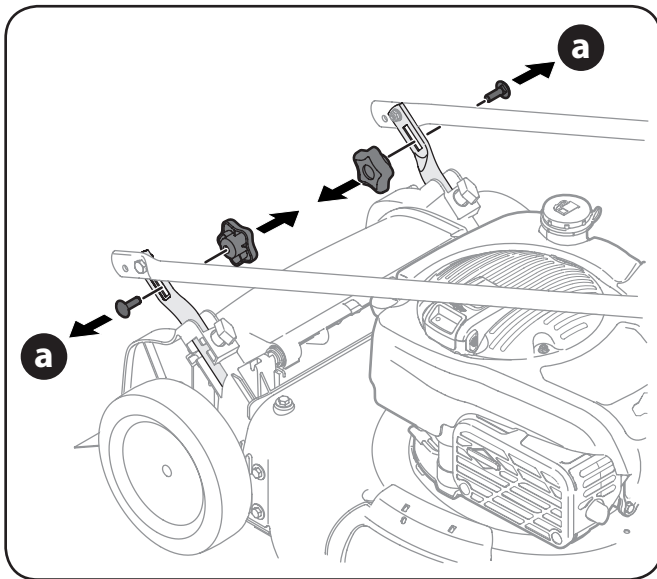


Figure 3-1

- b. While stabilizing mower so it doesn't move, pivot upper handle up as shown in Figure 3-2. Do not crimp cables while lifting the handle up and make sure they go on the outside of the handle.

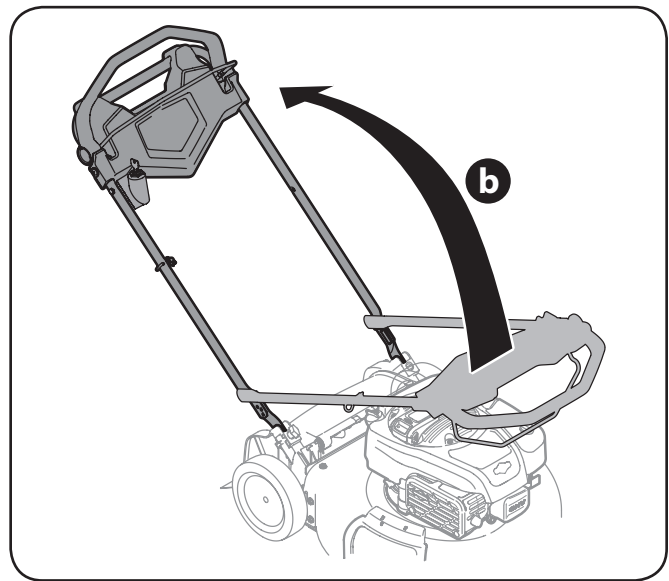
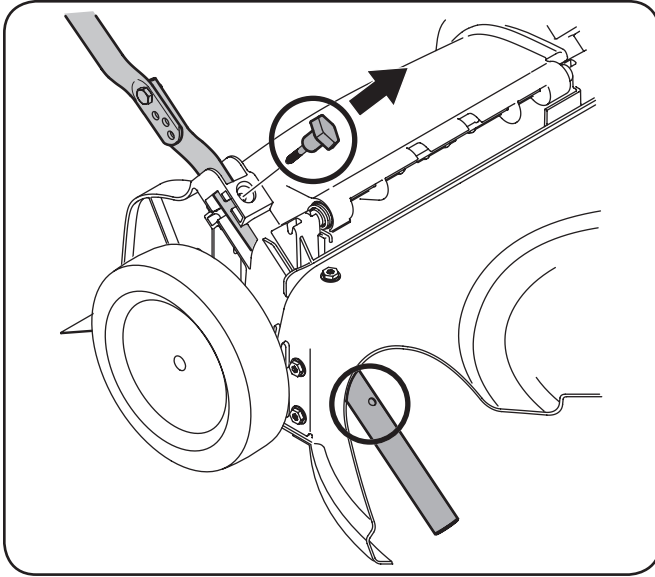


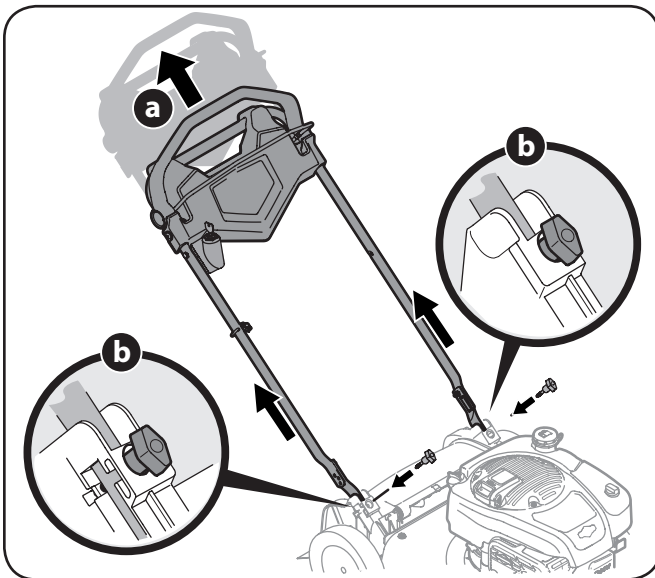
Figure 3-2

2. Remove the T-bolts from the handle brackets as shown in Figure 3-3.



**Figure 3-3**

3. Follow the steps below to complete handle assembly:
  - a. Pull upward on the handle approximately 8 inches until holes in lower handle (shown in Figure 3-3 deck cutaway) line up with holes in handle bracket. See Figure 3-4.

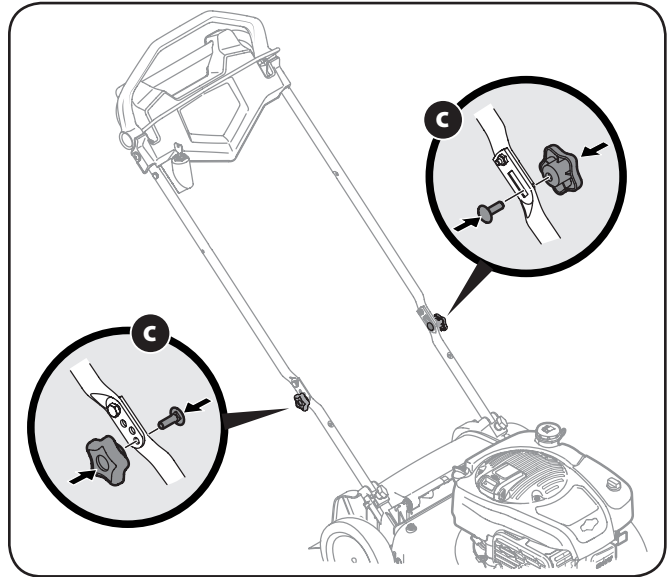


**Figure 3-4**

**NOTE:** When pulling upward on handle, make sure to not pull handle all the way out.

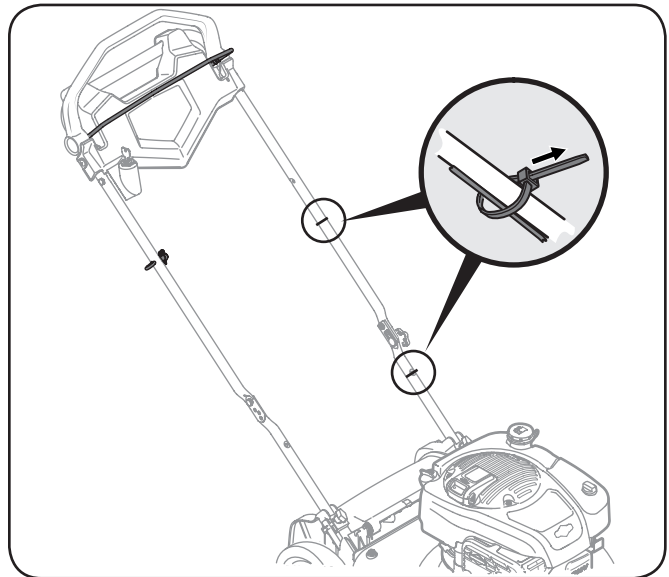
- b. Insert the T-bolts removed earlier through the handle brackets and lower handle and tighten securely to secure the handle in place. See Figure 3-4.

- c. Reattach star knobs and carriage bolts removed earlier into lower holes of handle as shown in Figure 3-5.



**Figure 3-5**

4. Use cable ties provided to secure blade control and drive cables to lower handle as shown in Figure 3-6.



**Figure 3-6**

**IMPORTANT:** To reduce wear and allow for proper operation, make sure to leave some slack in the upper portion of the cable(s).

## Grass Catcher

1. Follow steps below to assemble the grass catcher (if needed). Make certain bag is turned right side out before assembling (warning label will be on the outside).
  - a. Place bag over frame so that its black plastic side is at the bottom.
  - b. Slip plastic channel of grass bag over hooks on the frame. See Figure 3-7.

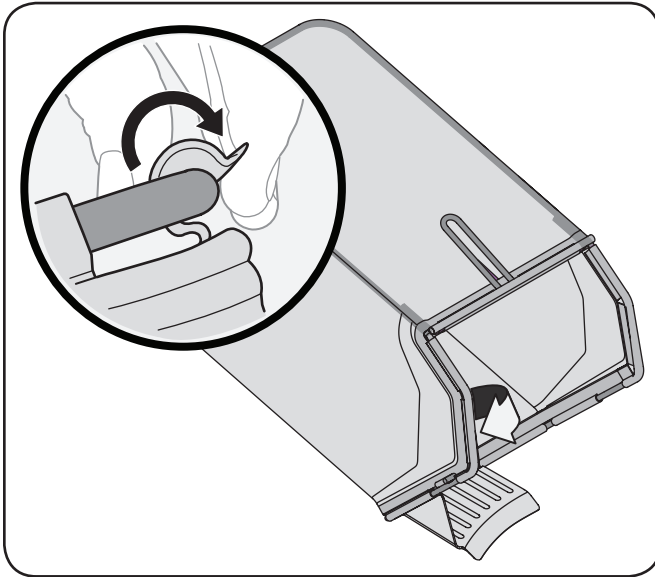


Figure 3-7

2. Follow steps below to attach grass catcher:
  - a. Lift rear discharge door.
  - b. Place grass catcher into the slots in the handle brackets as shown in Figure 3-8. Let go of discharge door so that it rests on the grass catcher.

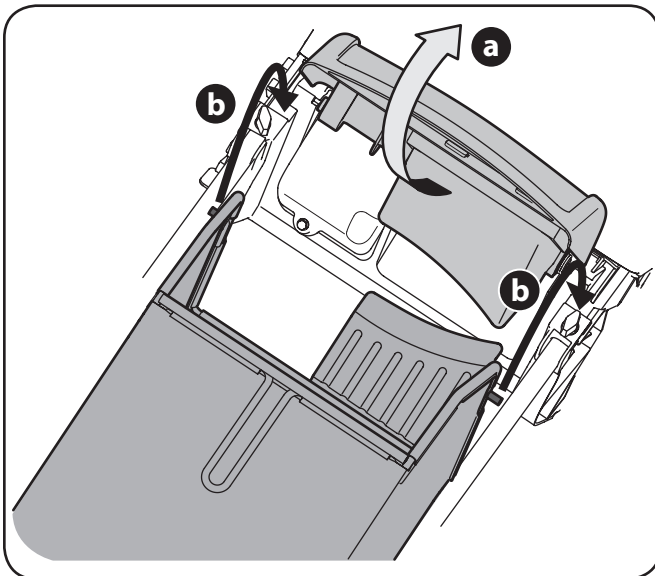


Figure 3-8

To remove grass catcher, lift rear discharge door on the mower. Lift grass catcher up and off of the slots in the handle brackets. Release rear discharge door to allow it to close rear opening of mower.

## Side Discharge Chute

Your mower is shipped as a mulcher. To convert to side discharge, make sure grass catcher is off of the unit and rear discharge door is closed.

1. On the side of the mower, lift the side mulching plug. See Figure 3-9.

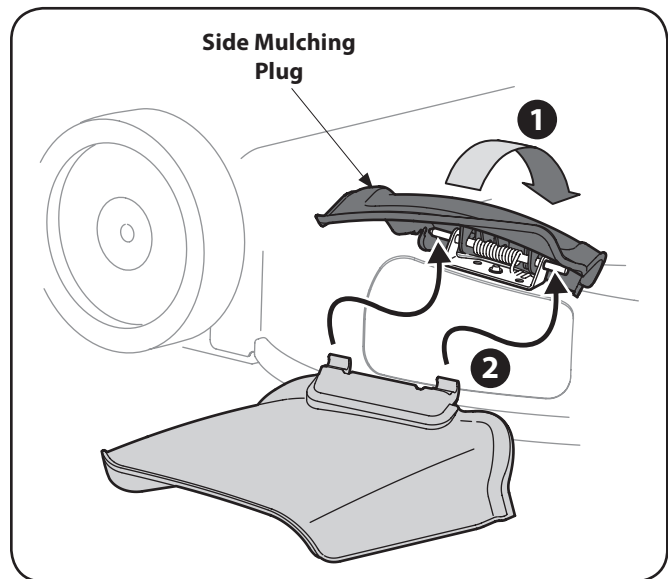


Figure 3-9

2. Slide two hooks of side discharge chute under hinge pin on mulching plug assembly. Lower the mulching plug. Do not remove side mulching plug at any time, even when you are not mulching.

## Adjustments

### Cutting Height

The rear wheel cutting height adjustment lever is located above the rear left wheel. See Figure 3-10A insert.

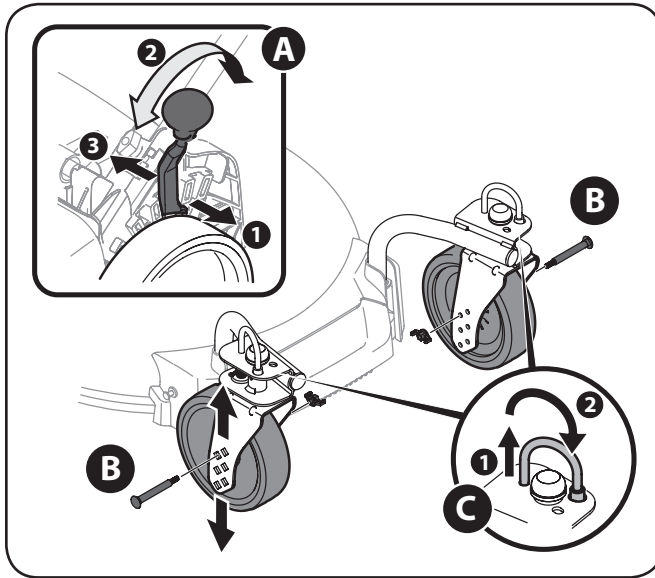


Figure 3-10

1. Pull lever out and away from mower.
2. Move lever forward or back for desired cutting height.
3. Release lever towards mower deck.

The front wheel cutting height is determined by selecting one of six positions on each caster assembly. To adjust front cutting height, refer to Figure 3-10B and proceed as follows:

1. Remove wing nut from axle bolt. Slide axle bolt and wave washer from the assembly and select a cutting height.
2. With wave washer on axle bolt, reinsert hardware in the square hole desired through wheel assembly and secure with wing nut previously removed.

**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 stop scalping of grass.

The casters can be locked in a straight ahead position or positioned to swivel freely. See Figure 3-10C insert.

1. Lift lock pins.
2. Place in larger holes to lock wheels. Place pins in smaller holes to allow casters to rotate freely for turning.

### Handle Pitch

For convenience of operation, you may adjust the pitch of the handle as follows:

1. Remove star knobs and carriage bolts from handle. See Figure 3-11.

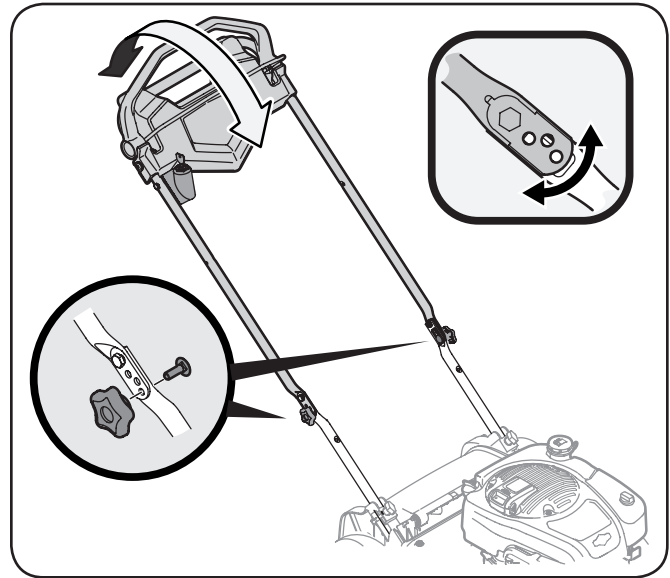


Figure 3-11

2. Position the handle in one of the three positions that is most comfortable. See Figure 3-11 inset.
3. Secure into position with star knobs and carriage bolts removed earlier.

## Set-Up

### Gas and Oil Fill-Up

Refer to the separate engine owner's manual for additional engine information.

1. Add oil provided before starting unit for the first time out of the box.
2. Service the engine with gasoline as instructed in the separate engine owner's manual.



**WARNING:** Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel the machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes and other sources of ignition.

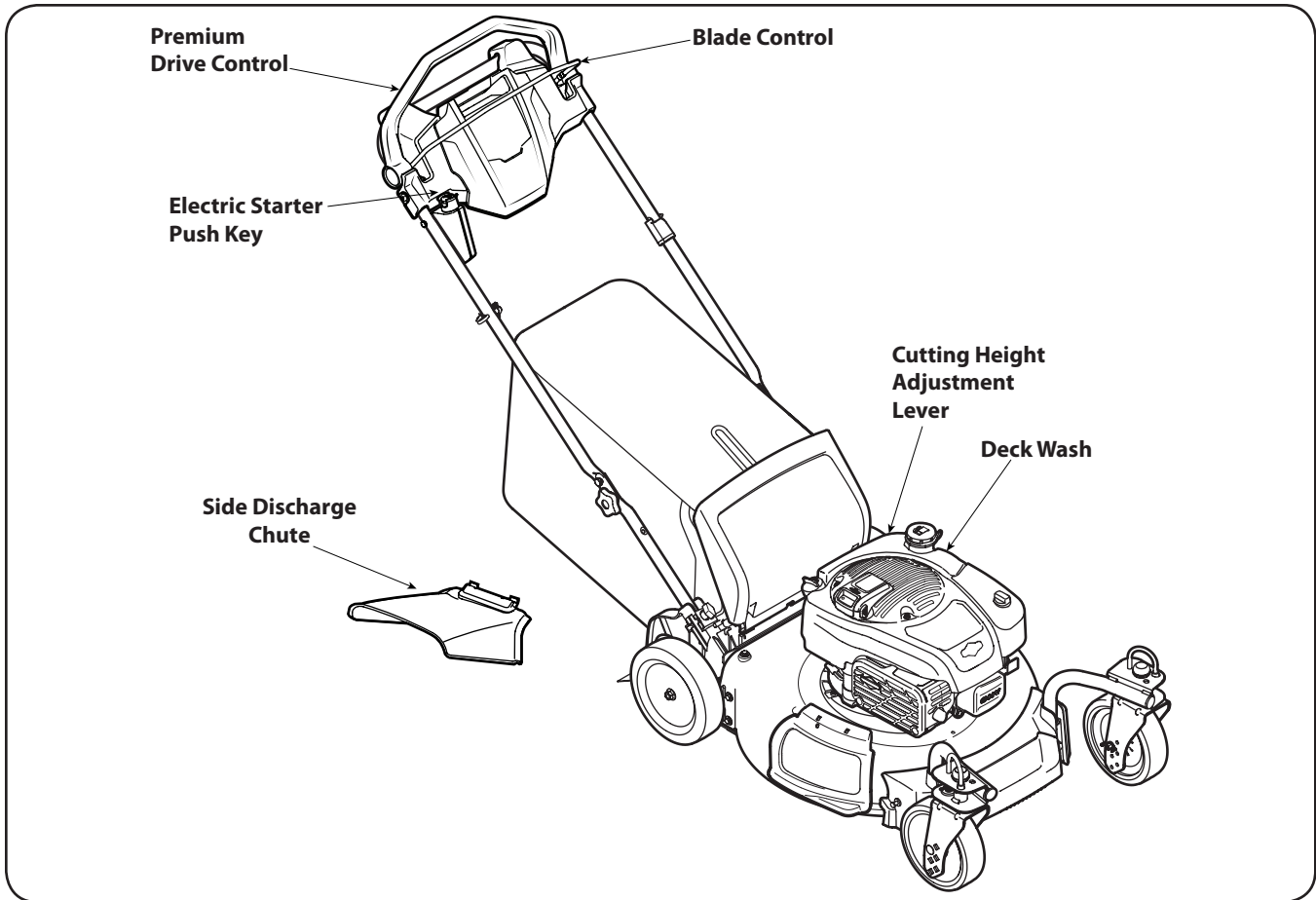


Figure 4-1

## Blade Control

The blade control is attached to the upper handle of the mower. Depress and squeeze it against the drive control to operate the unit. Release it to stop engine and blade.



**WARNING:** This blade control is a safety device. Never attempt to bypass its operations.

## Premium Drive Control

The premium drive control is located on the upper handle and is used to engage the drive. Pushing the control forward will engage the drive. The farther the control is pushed forward, the faster the mower will propel. Once pressure is released from the control it will return to the neutral position and the drive will be disengaged.

## Cutting Height Adjustment Lever

The cutting height adjustment lever is located above the left rear wheel. To adjust the cutting height, refer to the "Assembly & Set-Up" Section.

## Deck Wash

Your mower's deck is equipped with a water port on its surface as part of its deck wash system. Use the deck wash to rinse grass clippings from the deck's underside.

## Side Discharge Chute

Your mower is shipped as a mulcher. To discharge the grass clippings to the side instead, follow the instructions in the "Assembly & Set-Up" section to attach the side discharge chute.



**WARNING:** Keep hands and feet away from the chute area on cutting deck. Refer to warning label on the unit.

## Electric Starter Push Key

The electric starter push key is located on the right side of the upper handle. It is both a removable key and push button and is only provided on electric start models.

## 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.

Refer to engine manual for more detailed information pertaining to the starting of the engine.

1. Check the battery tray on top of the engine for debris and if dirty clean with a brush or cloth. Push the battery pack into the battery tray until it clicks on top of engine. See Figure 5-1.

**Note:** To wake up a new battery, a First Time quick charge of approximately ten (10) seconds is required. See the **When To Charge Battery Pack** section.

2. Insert plastic Electric Start Push Key into starter housing located on the right side of upper handle until it snaps in place.
3. Standing behind the mower, pull the blade control back against the drive control. See Figure 5-2.
4. Push the electric starter push key to start the engine. See Figure 5-2.

**NOTE:** To extend the life of the starter, use short starting cycles (five seconds maximum). Wait one minute between starting cycles.

**IMPORTANT:** If the engine will not crank and the battery pack display lights are flashing, then the battery pack temperature is too hot or current draw is too high. All four battery display lights will flash a warning for 10 seconds. The battery pack does not have a fuse, but will automatically reset after 10 seconds. If battery pack temperature is too hot, remove the battery and allow it to cool. To avoid excess current draw on lawnmower, keep the mower housing clean of grass build-up and debris.

## Stopping Engine

1. Release blade control to stop the engine and blade.
2. Remove Electric Start Push Key if mower is to be left unattended, stored, or serviced. To remove key, grasp the key's top push button and pull it straight up and out. Keep key in a safe place out of the reach of children.
3. Remove the battery pack.



**WARNING:** Wait for the blade to stop completely before performing any work on the mower or to remove the grass catcher.

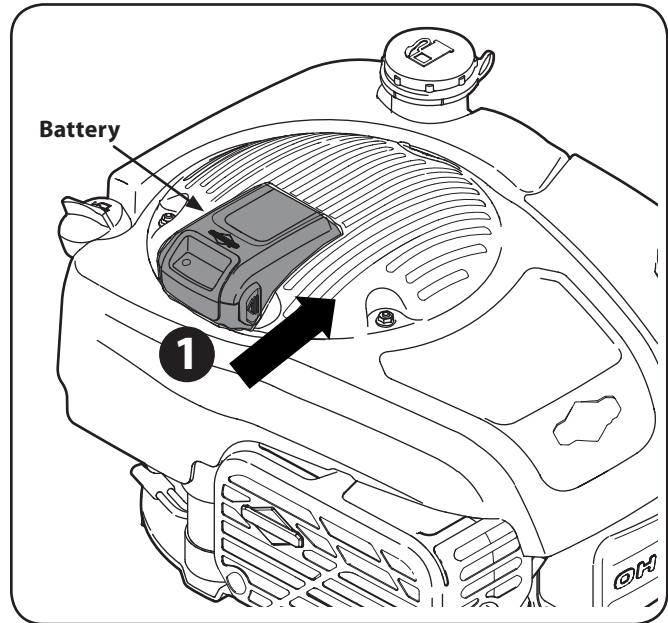


Figure 5-1

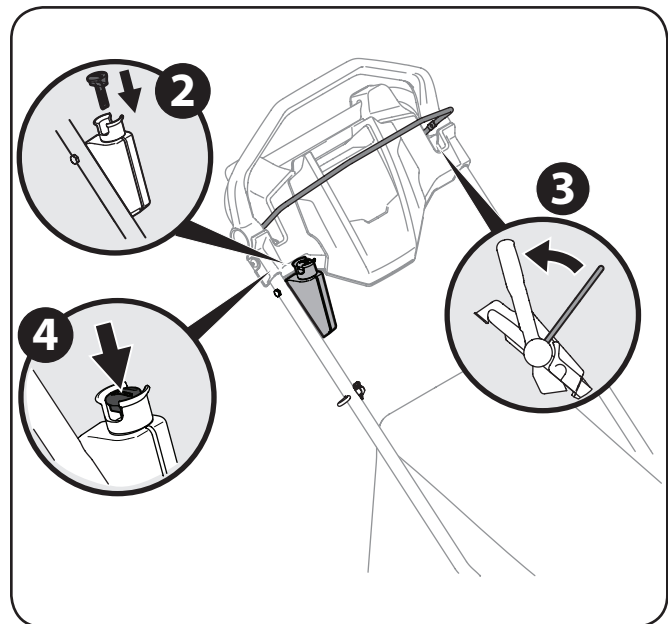


Figure 5-2



## Using Your Lawn Mower

Be sure 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.

1. Once the engine is running and while continuing to hold the blade and drive controls together, push the drive control forward to propel mower. The farther the control is pushed forward, the faster the mower will propel. Once pressure is released from the control it will return to the neutral position and the drive will be disengaged.

**NOTE:** For ease of use, while gripping the controls, simply lock your wrist and elbows and walk - the unit will automatically adjust to your speed.



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

## Using as Mulcher

For mulching grass, remove the grass catcher and allow the rear discharge door to close the rear opening of mower. For effective mulching, do not cut wet grass. If the grass has been allowed to grow in excess of four inches, mulching is not recommended. Use the grass catcher to bag clippings instead.

## Using Grass Catcher

You can use the grass catcher to collect clippings while you are operating the mower.

1. Attach grass catcher following instructions in the "Assembly & Set-Up" section. Grass clippings will automatically collect in bag as you run mower. Operate mower till grass bag is full.
2. Stop engine completely by releasing the blade control. Make sure that the unit has come to a complete stop.
3. Lift discharge door and pull grass bag up and away from the mower to remove the bag. Dispose of the grass clippings and reinstall the bag when complete.

**NOTE:** Make sure to clean any excess grass from around the rear opening of the mower, especially between the transmission cover and sidewall on the left hand side and along the bottom, to ensure tight fit of bag onto mower.



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



## Maintenance

### General Recommendations

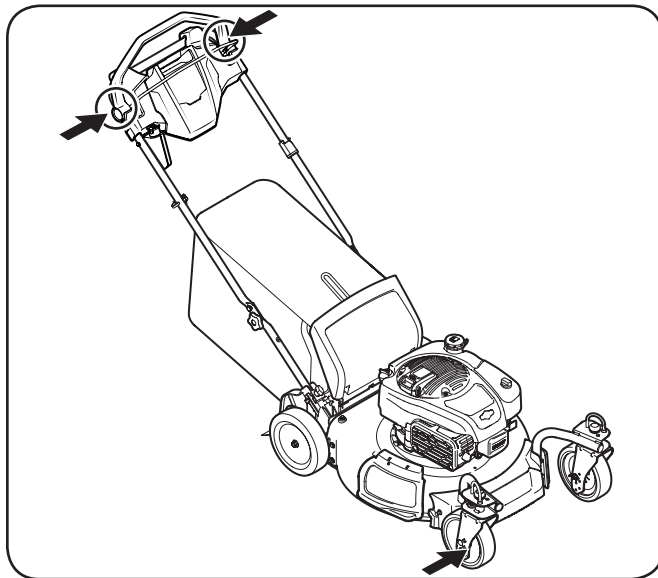
- Always observe safety rules when performing any maintenance.
- The warranty on this lawn mower does not cover items that have been subjected to operator abuse or negligence. To receive full value from warranty, operator must maintain the lawn mower as instructed here.
- Changing of engine-governed speed will void engine warranty.
- All adjustments should be checked at least once each season.
- Periodically check all fasteners and make sure these are tight.



**WARNING:** Always stop engine, remove Electric Start Push Key (if equipped), allow engine to cool, disconnect spark plug and ground against engine before performing any type of maintenance on your machine.

### Lubrication

1. Lubricate pivot points on the blade and drive controls at least once a season with light oil. These controls must operate freely in both directions. See Figure 6-1.



**Figure 6-1**

2. Lubricate the front wheels and casters at least once a season with light oil (or motor oil). If wheels are removed for any reason, lubricate the axle bolt and inner surface of the wheel with light oil.
3. The transmission is pre-lubricated and sealed at the factory and does not require lubrication.

4. Follow the accompanying engine manual for lubrication schedule and instruction for engine lubrication.

### Deck Wash

Your mower's deck is equipped with a water port on its surface as part of its deck wash system.

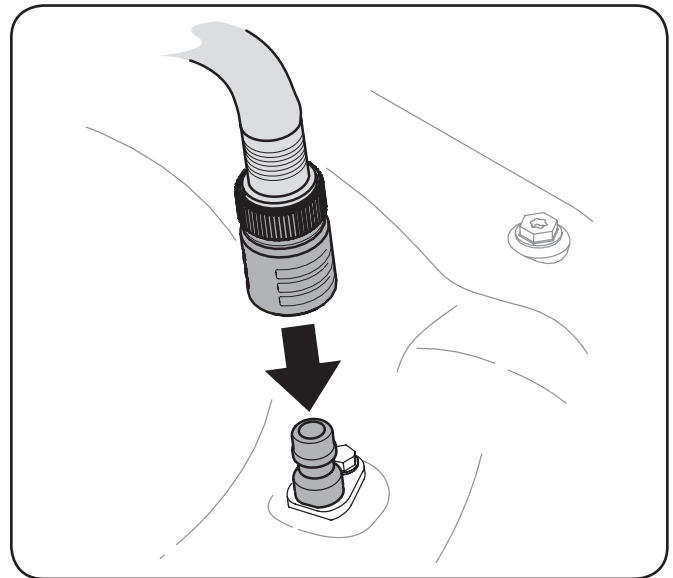
Use the deck wash to rinse grass clippings from the deck's underside and prevent the buildup of corrosive chemicals. Complete the following steps **AFTER EACH MOWING**:

1. Push the mower to a level, clear spot on your lawn, near enough for your garden hose to reach.



**CAUTION:** Make certain the mower's discharge chute is directed **AWAY** from your house, garage, parked cars, etc.

2. Thread the hose coupler (packaged with your mower's Operator's Manual) onto the end of your garden hose.
3. Attach the hose coupler to the water port on your deck's surface. See Figure 6-2.



**Figure 6-2**

4. Turn the water on.
5. Start the engine as described in the Operation section.
6. Run the engine for a minimum of two minutes, allowing the underside of the cutting deck to thoroughly rinse.
7. Release blade control to stop the engine and blade.
8. Turn the water off and detach the hose coupler from the water port on your deck's surface.

After cleaning your deck, restart the mower. Keep the engine and blade running for a minimum of two minutes, allowing the underside of the cutting deck to thoroughly dry.

## Engine Care

A list of key engine maintenance jobs required for good performance by the mower is given below. Follow the accompanying engine manual for a detailed list and instructions.

- Maintain oil level as instructed in engine manual.
- Service air filter every 50 hours or annually under normal conditions. Clean more often under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner filter, refer to the engine manual.
- Clean spark plug and reset the gap 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.
- Clean engine regularly with a cloth or brush. Keep the top of the engine clean to permit proper air circulation. Remove all grass, dirt, and combustible debris from muffler area.
- Engines stored between 30 and 90 days need to be treated with a gasoline stabilizer such as **STA-BIL**® to prevent deterioration and gum from forming in fuel system or on essential carburetor parts.

## Adjustments

### Drive Adjustment

The drive system consists of pulleys, a belt, and a cable linking the transmission to the drive handle. As these components wear adjustment may be needed. To adjust the drive linkage perform the following:

1. Rotate the drive cable fitting located on the left upper handle upward. See Figure 6-3.

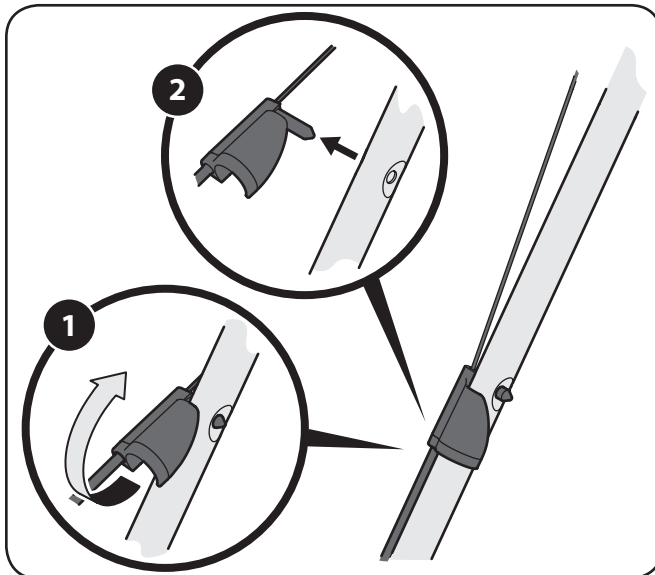


Figure 6-3

2. Pull the fitting away from the handle.

3. Unhook the cable and remove the metal bushing from the plastic drive handle. See Figure 6-4.

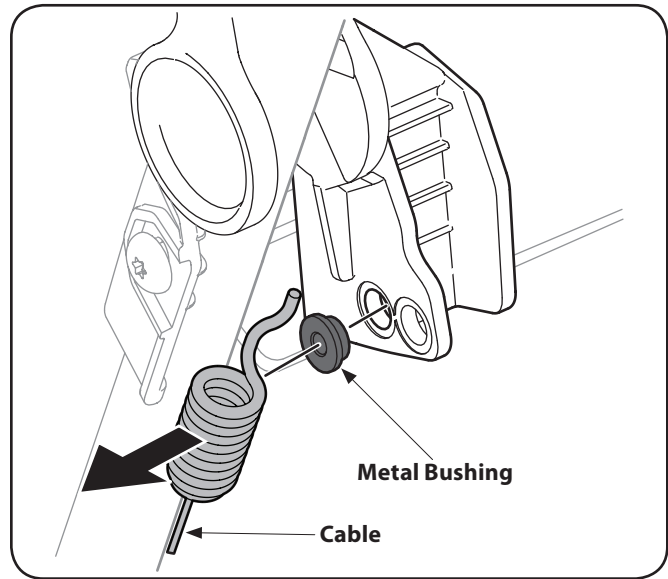


Figure 6-4

4. Replace bushing in the lower hole and reattach the cable through the bushing and lower hole in the handle. See Figure 6-5.

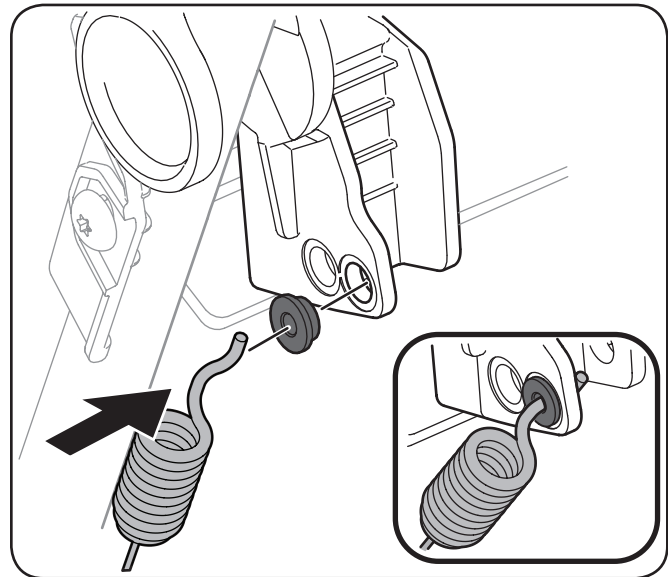


Figure 6-5

5. Reinsert the drive cable fitting into the upper handle and rotate it downward.
6. Start the mower and check the function of the drive handle.



**CAUTION:** If the drive is engaged without pushing on the handle after this adjustment is made return the cable to its original position on the plastic drive handle.

## Blade Care



**WARNING:** When removing the cutting blade for sharpening or replacement, protect your hands with a pair of heavy gloves or use a heavy rag to hold the blade.

Periodically inspect the blade adapter for cracks, especially if you strike a foreign object. Replace when necessary. Follow the steps below for blade service.

1. Disconnect spark plug boot from spark plug and remove Electric Start Push Key (if equipped). Turn mower on its side making sure that the air filter and the carburetor are facing up.
2. Remove the bolt and the blade bell support which hold the blade and the blade adapter to the engine crankshaft. See Figure 7-1.

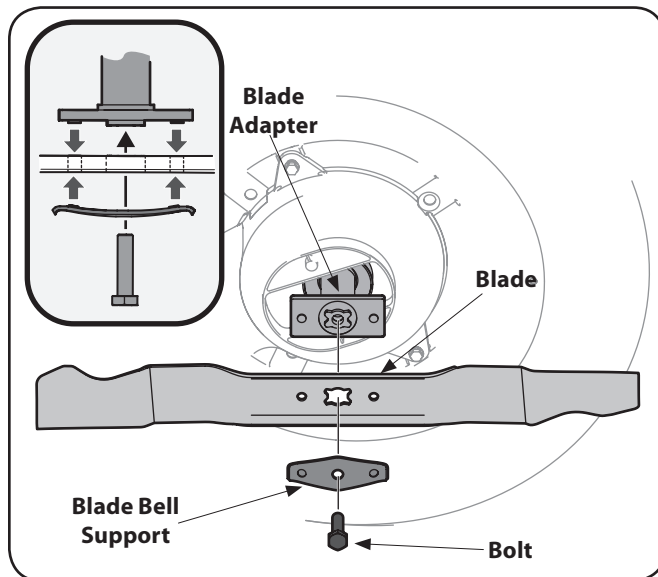


Figure 7-1

3. Remove blade from the adapter for testing balance.
4. Balance the blade on a round shaft screwdriver to check. Remove metal from the heavy side until it balances evenly. When sharpening the blade, follow the original angle of grind. Grind each cutting edge equally to keep the blade balanced.



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

5. Place the blade on the adapter such that the side of the blade marked "Bottom" (or with part number) faces the ground when the mower is in the operating position. Make sure that the blade is aligned and seated on the blade adapter flanges. See Figure 7-1 inset.
6. Place blade bell support on the blade. Align notches on the blade bell support with small holes in blade.
7. Replace hex bolt and tighten hex bolt to torque: 450 in. lbs. min., 600 in. lbs. max.

To ensure safe operation of your mower, periodically check the blade bolt for correct torque.

## Belt Care

**NOTE:** Several components must be removed in order to change the mower's belt. See an authorized Service Dealer to have your belt replaced.

## When To Charge Battery Pack

Refer to engine manual for more detailed information regarding the battery pack and charger.

**First Time** - The Lithium-Ion battery pack was partially charged before shipment. To maintain charge and to prevent damage while in storage, the battery pack is programmed to enter a "sleep mode". A quick charge of approximately ten (10) seconds is required to wake up the battery. Leave battery pack in charger until fully charged. To charge the battery pack, see the **How To Charge Battery Pack** section.

**As Required** - To check available charge, press the Battery Fuel Gauge button and charge if required. See Figure 7-2. Refer to the **Battery Fuel Gauge** section below.

## How To Charge Battery Pack

1. Connect battery charger to electrical outlet.



**WARNING:** Keep battery pack and battery charger dry. Do not expose battery pack or charger to rain or wet conditions.

2. Slide the battery pack firmly into the battery charging bay. See Figure 7-3. If the red charging light does not come on, remove the battery pack and reinstall. Make sure the battery pack is firmly seated in the battery charging bay.
  - Red light (A, Figure 7-2) indicates battery pack is charging normally.
  - Green light (B) indicates battery pack is fully charged.
  - FLASHING red light (C) indicates the battery pack is either too hot or too cold and will not accept a charge. Leave the battery pack connected and when normal operating temperature is reached it will automatically start charging.
  - FLASHING red/green lights (D) indicate that battery pack will not charge and must be replaced. See **Lithium Ion Battery Pack Disposal** at the end of this section.
3. From "sleep mode", the battery will wake up in approximately ten (10) seconds.
4. A completely discharged battery pack will fully charge in approximately one (1) hour. The battery pack will stay fully charged if left on the charger.
5. When the green light indicates that the battery pack is fully charged, it can be removed from the charger.
6. To check available charge, press the Battery Fuel Gauge button.
7. When not in use, disconnect battery charger from electrical outlet.



Figure 7-2

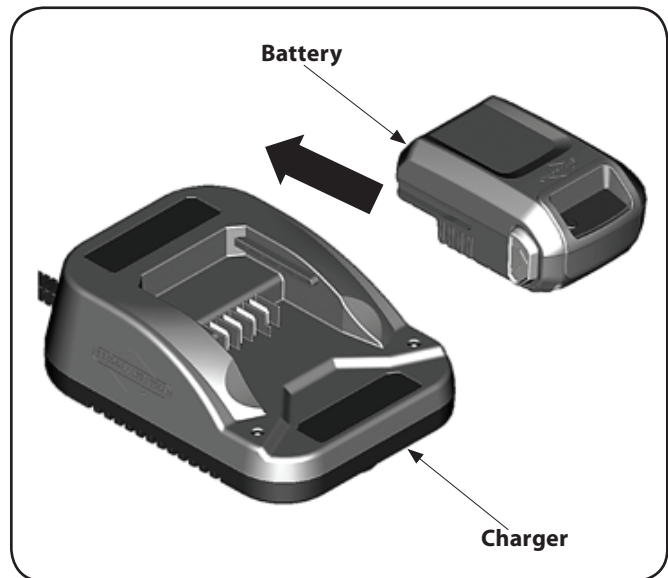


Figure 7-3

## Battery Fuel Gauge

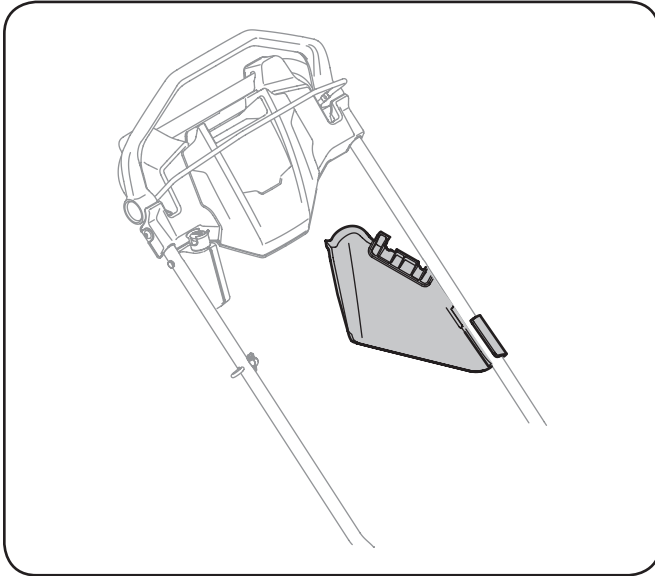
To check available charge, press the Battery Fuel Gauge button. The display lights (E, Figure 7-2) will indicate the approximate amount of charge remaining in the battery pack.

- **Four lights** - 78% to 100%
- **Three lights** - 55% to 77%
- **Two lights** - 33% to 54%
- **One light** - 10% to 32%
- **Flashing light** - less than 10%

## Off-Season Storage

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

- Clean and lubricate mower thoroughly as described in the lubrication instructions.
- Coat mower's cutting blade with chassis grease to prevent rusting.
- Refer to engine manual for correct engine storage instructions.
- Secure side discharge chute to handle as shown in Figure 7-4.



**Figure 7-4**

- Store mower in a dry, clean area. Do not store next to corrosive materials, such as fertilizer.

When storing any type of power equipment in a poorly ventilated 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 of your lawn mower before storage.

## Battery Pack and Charger

- When not in use, disconnect charger and store in a cool, dry area. Wet, damp areas can cause corrosion of terminals and electrical contacts. If stored for long periods in high temperatures (120 degrees F), permanent damage to the battery pack can result. Check electrical terminals and contacts on battery packs and charger. Wipe with clean cloth or blow clean with compressed air.
- After storage, a normal charge may be required. To check available charge, press the Battery Fuel Gauge button and charge if required. See the Battery Fuel Gauge section.

## Lithium Ion Battery Pack Disposal



**WARNING:** Battery chemicals are toxic and corrosive. Fire or explosion can cause severe burns or death.



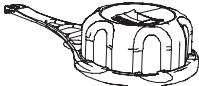

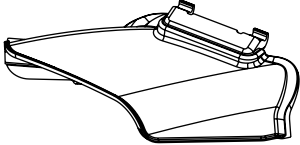
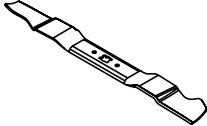
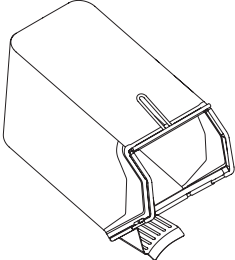
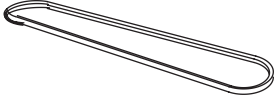

- Never burn or incinerate discarded or used battery packs as they may explode. Toxic fumes and materials are created when battery packs are burned.
- Do not use a battery that has been crushed, dropped, or damaged.

Used and discarded battery packs will likely still carry a small electrical charge and should be handled with care. Always dispose of discarded or used battery packs according to federal, state and local regulations.

Problem	Cause	Remedy
Engine Fails to start	<ol style="list-style-type: none"> <li>1. Blade control disengaged.</li> <li>2. Spark plug boot disconnected.</li> <li>3. Fuel tank empty or stale fuel.</li> <li>4. Faulty spark plug.</li> <li>5. Blocked fuel line.</li> <li>6. Engine flooded.</li> <li>7. Battery not charged.</li> <li>8. Battery pack temperature too hot or current draw too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Engage blade control.</li> <li>2. Connect wire to spark boot.</li> <li>3. Fill tank with clean, fresh gasoline.</li> <li>4. Clean, adjust gap, or replace.</li> <li>5. Clean fuel line.</li> <li>6. Wait a few minutes to restart, but do not prime.</li> <li>7. Charge battery. See Service section.</li> <li>8. Allow battery to cool. Battery does not have a fuse but will automatically reset after 10 seconds.</li> </ol>
Engine runs erratic	<ol style="list-style-type: none"> <li>1. Spark plug boot loose.</li> <li>2. Blocked fuel line or stale fuel.</li> <li>3. Vent in gas cap plugged.</li> <li>4. Water or dirt in fuel system.</li> <li>5. Dirty air cleaner.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect and tighten spark plug boot.</li> <li>2. Clean fuel line; fill tank with clean, fresh gasoline.</li> <li>3. Clear vent.</li> <li>4. Drain fuel tank. Refill with fresh fuel.</li> <li>5. Refer to engine manual.</li> </ol>
Engine overheats	<ol style="list-style-type: none"> <li>1. Engine oil level low.</li> <li>2. Air flow restricted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill crankcase with proper oil.</li> <li>2. Clean area around and on top of engine.</li> </ol>
Occasional skips (hesitates) at high speed	<ol style="list-style-type: none"> <li>1. Spark plug gap too close.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust spark plug gap. Refer to engine manual.</li> </ol>
Idles poorly	<ol style="list-style-type: none"> <li>1. Spark plug fouled, faulty, or gap too wide.</li> <li>2. Dirty air cleaner.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset gap or replace spark plug. Refer to engine manual.</li> <li>2. Refer to engine manual.</li> </ol>
Excessive Vibration	<ol style="list-style-type: none"> <li>1. Cutting blade loose or unbalanced.</li> <li>2. Bent cutting blade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten blade and adapter. Balance blade.</li> <li>2. See an authorized service dealer.</li> </ol>
Mower will not mulch grass	<ol style="list-style-type: none"> <li>1. Wet grass.</li> <li>2. Excessively high grass.</li> <li>3. Dull blade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not mow when grass is wet; wait until later to cut.</li> <li>2. Mow once at a high cutting height, then mow again at desired height or make a narrower cutting path.</li> <li>3. Sharpen or replace blade.</li> </ol>
Uneven cut	<ol style="list-style-type: none"> <li>1. Wheels not positioned correctly.</li> <li>2. Dull blade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place front and rear wheels in same height position. (Dual Height Adjusters)</li> <li>2. Sharpen or replace blade.</li> </ol>

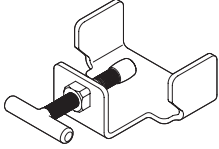
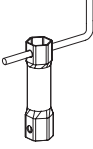
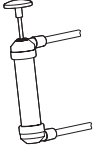
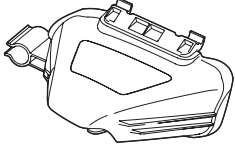
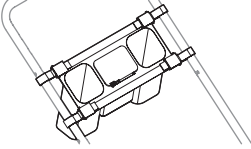
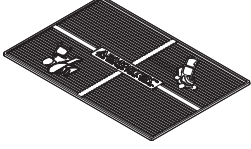
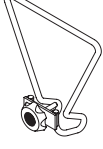
Problem	Cause	Remedy
Mower will not self propel	<ol style="list-style-type: none"> <li>1. Belt not installed properly.</li> <li>2. Debris clogging drive operation.</li> <li>3. Damaged or worn belt.</li> <li>4. Drive control out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check belt for proper pulley installation and movement.</li> <li>2. Stop engine, disconnect spark plug boot, and clean out debris.</li> <li>3. Inspect and replace belt.</li> <li>4. Adjust drive control. (See Maintenance &amp; Adjustments section)</li> </ol>
High pullback effort	<ol style="list-style-type: none"> <li>1. Pulling mower backwards before transmission disengages.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow the unit to roll forward slightly without the drive lever(s) engaged before pulling backwards.</li> </ol>



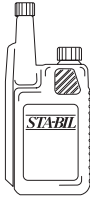

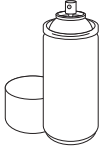
Component	Part Number and Description
	759-3336 Spark Plug
	BS-795066 Air Filter Element BS-796254† Pre-Cleaner
	BS-799585 Fuel Tank Cap
	634-04733 Wheel (Front) 934-04714 Wheel (Rear)
	731-07131 Discharge Chute
	942-0741A Mulching Blade 942-0741-X Xtreme Mulching Blade
	964-05005 Grass Bag
	954-04282 Belt
	731-09728 Push Key

† If Equipped

Phone 877-282-8684 for your nearest Cub Cadet Dealer to order replacement parts or a complete Parts Manual (have your full model number and serial number ready). Parts Manual downloads are also available free of charge at [www.cubcadet.com](http://www.cubcadet.com).

Component	Model Number and Description
	490-850-0005 Blade Removal Tool — Holds blade in place for faster, safer removal.
	SPW-134 Spark Plug Wrench — Duel ended wrench to serve multiple uses. Fits 3/4" or 13/16" hex plug.
	490-850-0008 Oil Siphon — Makes it easy to transfer gas, oil and liquids from tank to container.
	490-850-0016 Side Discharge Blower — Blows leaves, grass clippings and debris. Eliminates need for separate blower. Easy installation with no tools.
	490-850-0015 Cargo Carrier — Conveniently holds drinks, tools and more. Simple installation. Attaches in less than two minutes with no tools.
	490-241-0034 Garage Floor Mat — Anti-skid mat, measures 24" x 36". Projects garage floor from stains.
	490-850-0012 Mower Kick Stand — Keeps mower stable for changing/ sharpening blade and cleaning underside of deck.

Phone (800) 800-7310 or (330) 220-4683 to order attachments and accessories. Have your mower's full model number and serial number ready to assure compatibility. Items can also be purchased online at [www.cubcadet.com](http://www.cubcadet.com).

Component	Model Number and Description	
	22216	STA-BIL® fuel Stabilizer, 32 oz — Treats 80 gallons of fuel. Keeps stored fuel fresh for quick, easy starts. Prevents corrosion from moisture and ethanol-induced attraction. Prevents gum and varnish.
	490-290-0012	Mower Cover — Protects your mower against sun, rain and dust damage. Coated for maximum water resistance and repellency. U.V. and mildew resistant
	490-900-0062	Non-Stick Mower Deck Spray — Long-Lasting anti-stick graphite spray. Prevents grass clippings buildup in mowing deck.

Phone (800) 800-7310 or (330) 220-4683 to order attachments and accessories. Have your mower's full model number and serial number ready to assure compatibility. Items can also be purchased online at [www.cubcadet.com](http://www.cubcadet.com).





# CUB CADET LLC

## MANUFACTURER'S LIMITED WARRANTY FOR

### WALK-BEHIND MOWERS

**IMPORTANT:** To obtain warranty coverage owner must present an original proof of purchase and applicable maintenance records to the servicing dealer. Please see the operator's manual for information on required maintenance and service intervals.

The limited warranty set forth below is given by Cub Cadet LLC with respect to new merchandise purchased or leased and used in the United States and/or its territories and possessions, and by MTD Products Limited with respect to new merchandise purchased or leased and used in Canada and/or its territories and possessions (either entity respectively, "Cub Cadet").

This warranty is in addition to any applicable emissions warranty provided with your product.

Cub Cadet warrants this product (excluding its *Normal Wear Parts* and *Batteries*, as described below) against defects in material and workmanship for a period of three (3) years, commencing on the date of original retail purchase or lease and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship.

*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 original purchase or lease. Normal wear parts include, but are not limited to items such as: belts, blades, blade adapters, grass bags and wheels.

*Batteries* have a one-year prorated limited warranty against defects in material and workmanship, with 100% replacement during the first three months. After three months, the battery replacement credit is based on the months remaining in the twelve (12) month period dating back to the original date of original sale or lease. Any replacement battery will be warranted only for the remainder of the original warranty period.

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 Cub Cadet for use with the product(s) covered by this manual will void your warranty as to any resulting damage. In addition, Cub Cadet may deny warranty coverage if the hour meter, or any part thereof, is altered, modified, disconnected or otherwise tampered with.

**HOW TO OBTAIN SERVICE:** Warranty service is available, WITH PROOF OF PURCHASE AND APPLICABLE MAINTENANCE RECORDS, through your local authorized service dealer. To locate the dealer in your area:

#### **In the U.S.A.**

Check your Yellow Pages, or contact Cub Cadet LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, call 1-877-282- 8684 or log on to our website at [www.cubcadet.com](http://www.cubcadet.com).

#### **In Canada**

Contact MTD Products Limited, Kitchener, ON N2G 4J1, call 1-800-668-1238 or log on to our website at [www.mtdcanada.com](http://www.mtdcanada.com).

Without limiting the foregoing, 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. 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.
- c. Service completed by someone other than an authorized service dealer.
- d. Cub Cadet 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 Cub Cadet's authorized channels of export distribution.
- e. Replacement parts and/or accessories that are not genuine Cub Cadet parts.
- f. Transportation charges and service calls.
- g. Cub Cadet does not warrant this product for commercial use.

**There are no implied warranties, including without limitation any implied warranty of merchantability or fitness for a particular purpose. No warranties shall apply after the applicable period of express written warranty above. No other express warranties beyond those mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind Cub Cadet. The exclusive remedy is repair or replacement of the product as set forth above.**

**The terms of this warranty provide the sole and exclusive remedy arising from the sale and/or lease of the products covered hereby. Cub Cadet shall not be liable for any 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.

**Cub Cadet LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019, Phone: 1-877-282-8684**  
**MTD Products Limited, Kitchener, ON N2G 4J1, Phone: 1-800-668-1238**