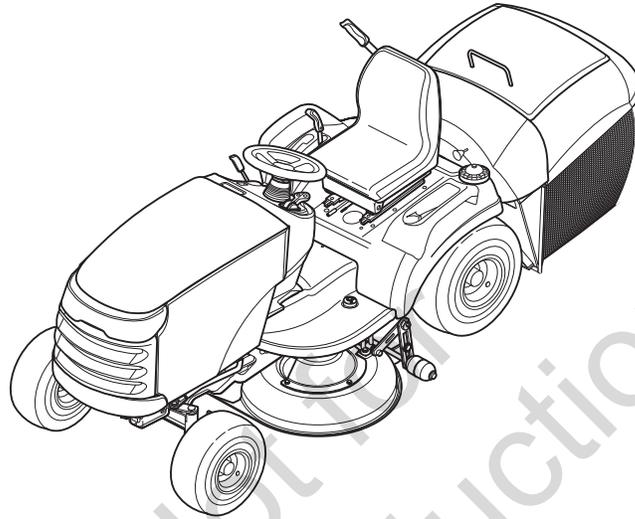




# OPERATOR'S MANUAL



## Baron XL / 2400 XL / RD Series

### 21HP Hydro Tractors

Mfg. No.	Description
2690762	Simplicity Baron XL, 21HP w/ 40" Mower (CE)
2690763	Snapper RD21V40, 21HP w/ 40" Mower (CE)
2690772	Massey Ferguson 2421 XL, 20HP w/ 40" Mower (CE)
2690773	Simplicity Baron XL, 21HP 4WD w/40" Mower (CE)
2690774	Snapper RD21V40, 21HP 4WD w/40" Mower (CE)

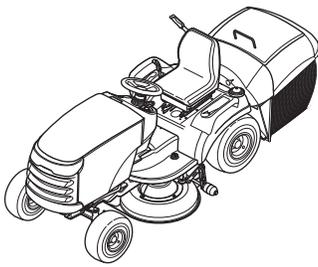


1735268

Revision G

Original Instructions

Not for  
Reproduction



# Table of Contents

---

<b>Safety Rules &amp; Information.....</b>	<b>4</b>	<b>Regular Maintenance .....</b>	<b>20</b>
Identification Numbers .....	9	Maintenance Schedule.....	20
Safety Decals .....	10	Check Tire Pressures .....	20
Safety Icons.....	11	Safety Interlock System Check.....	21
<b>Features &amp; Controls .....</b>	<b>12</b>	Blade Brake Check.....	21
<b>Operating the Tractor .....</b>	<b>14</b>	Battery Maintenance .....	21
Safety Interlock System Tests .....	15	Engine Maintenance.....	21
General Operating Safety .....	15	<b>Troubleshooting &amp; Adjustments .....</b>	<b>22</b>
Adding Fuel .....	15	Troubleshooting the Tractor .....	22
Starting the Engine .....	15	Troubleshooting the Mower.....	23
Stopping the Tractor & Engine.....	15	Seat Adjustment .....	24
Driving the Tractor .....	16	Hopper Latch Adjustment.....	24
Mowing.....	16	Catcher-Full Alarm Adjustment.....	24
Mowing in Reverse.....	16	Mower Lift Adjustment.....	25
Operating an Attachment in Reverse.....	16	Cutting Height Adjustment.....	25
Pushing the Tractor by Hand .....	16	Leveling the Mower .....	25
Parking Brake Function .....	17	Battery Charging .....	25
Emptying the Catcher .....	17	<b>Warranty .....</b>	<b>26</b>
Attaching a Trailer .....	18	<b>Specifications .....</b>	<b>27</b>
Catcher Installation & Removal .....	18	<b>Parts &amp; Accessories.....</b>	<b>28</b>
12 Volt Power Outlet (Some Models) .....	19		
Storage.....	19		

*NOTE: In this manual, “left” and “right” are referred to as seen from the operating position.*

# Safety Rules & Information



## Operating Safety

Congratulations on purchasing a superior-quality piece of lawn and garden equipment. Our products are designed and manufactured to meet or exceed all industry standards for safety.

Power equipment is only as safe as the operator. If it is misused, or not properly maintained, it can be dangerous! Remember, you are responsible for your safety and that of those around you.

Use common sense, and think through what you are doing. If you are not sure that the task you are about to perform can be safely done with the equipment you have chosen, ask a professional: contact your local authorized dealer.

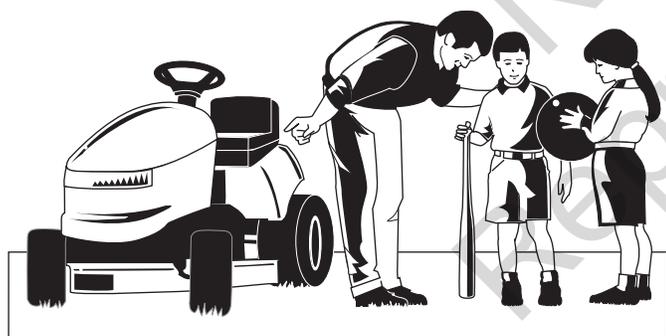


## Read the Manual

The operator's manual contains important safety information you need to be aware of **BEFORE** you operate your unit as well as **DURING** operation.

Safe operating techniques, an explanation of the product's features and controls, and maintenance information is included to help you get the most out of your equipment investment.

Be sure to completely read the Safety Rules and Information found on the following pages. Also completely read the Operation section.



## Children

Tragic accidents can occur with children. Do not allow them anywhere near the area of operation. Children are often attracted to the unit and mowing activity. Never assume that children will remain where you last saw them. If there is a risk that children may enter the area where you are mowing, have another responsible adult watch them.

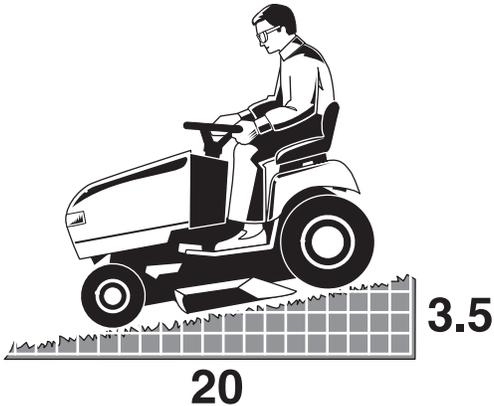
**DO NOT GIVE CHILDREN RIDES ON THIS UNIT!** This encourages them to come near the unit in the future while it is running, and they could be seriously hurt. They may then approach the unit for a ride when you are not expecting it, and you may run over them.

## Reverse

Do not mow in reverse unless absolutely necessary. Always look down and behind before and while traveling in reverse even with the mower blades disengaged.



## Slope Operation



You could be seriously injured or even killed if you use this unit on too steep an incline. Using the unit on a slope that is too steep or where you don't have adequate traction can cause you to lose control or roll over.

A good rule of thumb is to not operate on any slope you cannot back up (in 2-wheel drive mode). You should not operate on inclines with a slope greater than a 3.5 foot rise over a 20 foot length. Always drive up and down slopes: never cross the face.

Also note that the surface you are driving on can greatly impact stability and control. Wet grass or icy pavement can seriously affect your ability to control the unit.

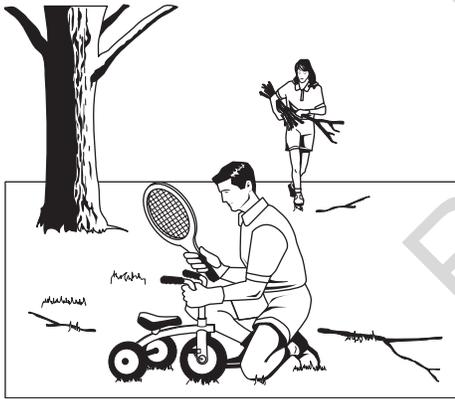
If you feel unsure about operating the unit on an incline, don't do it. It's not worth the risk.

## Moving Parts

This equipment has many moving parts that can injure you or someone else. However, if you are seated in the seat properly, and follow all the rules in this book, the unit is safe to operate.

The mower deck has spinning mower blades that can amputate hands and feet. Do not allow anyone near the equipment while it is running!

To help you, the operator, use this equipment safely, it is equipped with an operator-present safety system. Do NOT attempt to alter or bypass the system. See your dealer immediately if the system does not pass all the safety interlock system tests found in this manual.



## Thrown Objects

This unit has spinning mower blades. These blades can pick up and throw debris that could seriously injure a bystander. Be sure to clean up the area to be mowed BEFORE you start mowing.

Do not operate this unit without the entire grass catcher or discharge guard (deflector) in place.

Also, do not allow anyone in the area while the unit is running! If someone does enter the area, shut the unit off immediately until they leave.

## Fuel and Maintenance

Gasoline is extremely flammable. Its vapors are also extremely flammable and can travel to distant ignition sources. Gasoline must only be used as a fuel, not as a solvent or cleaner. It should never be stored any place where its vapors can build up or travel to an ignition source like a pilot light. Fuel belongs in an approved, plastic, sealed gas can, or in the tractor fuel tank with the cap securely closed. Spilled fuel needs to be cleaned up immediately.

Proper maintenance is critical to the safety and performance of your unit. Be sure to perform the maintenance procedures listed in this manual, especially periodically testing the safety system.



# Safety Rules and Information

---



Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of unit, severe personal injury or death to you, or bystanders, or damage to property or equipment **This mowing deck is capable of amputating hands and feet and throwing objects.** The triangle  in text signifies important cautions or warnings which must be followed.

## GENERAL OPERATION

1. Read, understand, and follow all instructions in the manual and on the unit before starting.
2. Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
3. Only allow responsible adults, who are familiar with the instructions, to operate the unit (local regulations can restrict operator age).
4. Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade(s).
5. Be sure the area is clear of other people before mowing. Stop the unit if anyone enters the area.
6. Never carry passengers.
7. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while travelling in reverse.
8. Never direct discharge material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blade(s) when crossing gravel surfaces.
9. Do not operate the machine without the entire grass catcher, discharge guard (deflector), or other safety devices in place.
10. Slow down before turning.
11. Never leave a running unit unattended. Always disengage the PTO, set parking brake, stop engine, and remove keys before dismounting.
12. Disengage blades (PTO) when not mowing. Shut off engine and wait for all parts to come to a complete stop before cleaning the machine, removing the grass catcher, or unclogging the discharge guard.
13. Operate the machine only in daylight or good artificial light.
14. Do not operate the unit while under the influence of alcohol or drugs.
15. Watch for traffic when operating near or crossing roadways.
16. Use extra care when loading or unloading the unit into a trailer or truck.
17. Always wear eye protection when operating this unit.
18. Data indicates that operators, age 60 years and above, are involved in a large percentage of power equipment-related injuries. These operators should evaluate their ability to operate the equipment safely enough to protect themselves and others from injury.
19. Follow the manufacturer's recommendations for wheel weights or counterweights.
20. Keep in mind the operator is responsible for accidents occurring to other people or property.
21. All drivers should seek and obtain professional and practical instruction.
22. Always wear substantial footwear and trousers. Never operate when barefoot or wearing sandals.
23. Before using, always visually check that the blades and blade hardware are present, intact, and secure. Replace worn or damaged parts.
24. Disengage attachments before: refueling, removing an attachment, making adjustments (unless the adjustment can be made from the operator's position).
25. When the machine is parked, stored, or left unattended, lower the cutting means unless a positive mechanical lock is used.
26. Before leaving the operator's position for any reason, engage the parking brake (if equipped), disengage the PTO, stop the engine, and remove the key.
27. To reduce fire hazard, keep the unit free of grass, leaves, & excess oil. Do not stop or park over dry leaves, grass, or combustible materials.

---

## TRANSPORTING AND STORAGE

1. When transporting the unit on an open trailer, make sure it is facing forward, in the direction of travel. If the unit is facing backwards, wind lift could damage the unit.
2. Always observe safe refueling and fuel handling practices when refueling the unit after transportation or storage.
3. Never store the unit (with fuel) in an enclosed poorly ventilated structure. Fuel vapors can travel to an ignition source (such as a furnace, water heater, etc.) and cause an explosion. Fuel vapor is also toxic to humans and animals.
4. Always follow the engine manual instructions for storage preparations before storing the unit for both short and long term periods.
5. Always follow the engine manual instructions for proper start-up procedures when returning the unit to service.
6. Never store the unit or fuel container inside where there is an open flame or pilot light, such as in a water heater. Allow unit to cool before storing.

## SLOPE OPERATION

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution. If you cannot back up the slope or if you feel uneasy on it, do not operate on it.

Control of a walk-behind or ride-on machine sliding on a slope will not be regained by the application of the brake. The main reasons for loss of control are: insufficient tire grip on the ground, speed too fast, inadequate braking, the type of machine is unsuitable for its task, lack of awareness of the ground conditions, incorrect hitching and load distribution.

1. Mow up and down slopes, not across.
2. Watch for holes, ruts, or bumps. Uneven terrain could overturn the unit. Tall grass can hide obstacles.
3. Choose a slow speed so that you will not have to stop or change speeds while on the slope.
4. Do not mow on wet grass. Tires may lose traction.
5. Always keep unit in gear especially when traveling down slopes. Do not shift to neutral and coast downhill.
6. Avoid starting, stopping, or turning on a slope. If tires lose traction, disengage the blade(s) and proceed slowly straight down the slope.
7. Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to rollover.
8. Use extra care while operating machines with grass catchers or other attachments; they can affect the stability of the unit. Do not use on steep slopes.
9. Do not try to stabilize the machine by putting your foot on the ground (ride-on units).
10. Do not mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
11. Do not use grass catchers on steep slopes.
12. Do not mow slopes you cannot back up them.
13. See your authorized dealer/retailer for recommendations of wheel weights or counterweights to improve stability.
14. Remove obstacles such as rocks, tree limbs, etc.
15. Use slow speed. Tires may lose traction on slopes even through the brakes are functioning properly.
16. Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
17. Four Wheel Drive Models: Four Wheel Drive improves access to dangerously sloped terrain, increasing the possibility of rollover. If the machine stops while going uphill, stop the blades and back down slowly. Avoid sudden turns.

## TOWED EQUIPMENT (RIDE-ON UNITS)

1. Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the hitch point.
2. Follow the manufacturer's recommendations for weight limit for towed equipment and towing on slopes.
3. Never allow children or others in or on towed equipment.
4. On slopes, the weight of the towed equipment may cause loss of traction and loss of control.
5. Travel slowly and allow extra distance to stop.
6. Do not shift to neutral and coast down hill.

## ⚠ WARNING

**Never operate on slopes greater than 17.6 percent (10°) which is a rise of 3-1/2 feet (106 cm) vertically in 20 feet (607 cm) horizontally.**

**When operating on slopes use additional wheel weights or counterweights. See your dealer/retailer to determine which weights are available and appropriate for your unit.**

**Select slow ground speed before driving onto slope. In addition to front weights, use extra caution when operating on slopes with rear-mounted grass catchers. Mow UP and DOWN the slope, never across the face, use caution when changing directions and DO NOT START OR STOP ON SLOPE.**

## CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the unit and the mowing activity. Never assume that children will remain where you last saw them.

1. Keep children out of the mowing area and under the watchful care of another responsible adult.
2. Be alert and turn unit off if children enter the area.
3. Before and during reverse operation, look behind and down for small children.
4. Never carry children, even with the blade(s) off. They may fall off and be seriously injured or interfere with safe unit operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
5. Never allow children to operate the unit.
6. Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

## EMISSIONS

1. Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or other reproductive harm.
2. Look for the relevant Emissions Durability Period and Air Index information on the engine emissions label.

## IGNITION SYSTEM

1. This spark ignition system complies with Canadian ICES-002.

# Safety Rules & Information

---

## SERVICE AND MAINTENANCE

### Safe Handling of Gasoline

1. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
2. Use only approved gasoline containers.
3. Never remove the gas cap or add fuel with the engine running. Allow the engine to cool before refueling.
4. Never fuel the machine indoors.
5. Never store the machine or fuel container where there is an open flame, spark, or pilot light such as near a water heater or other appliance.
6. Never fill containers inside a vehicle or on a truck bed with a plastic bed liner. Always place containers on the ground away from your vehicle before filling.
7. 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.
8. Keep 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.
9. If fuel is spilled on clothing, change clothing immediately.
10. Never over-fill the fuel tank. Replace gas cap and tighten securely.
11. Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
12. If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapors have dissipated.
13. Replace all fuel tank caps and fuel container caps securely.

### Service & Maintenance

1. Never run the unit in an enclosed area where carbon monoxide fumes may collect.
2. Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
3. Never tamper with safety devices. Check their proper operation regularly and make necessary repairs if they are not functioning properly.
4. Keep unit free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage, and remove any fuel-soaked debris. Allow machine to cool before storage.
5. If you strike an object, stop and inspect the machine. Repair, if necessary, before restarting.
6. Never make adjustments or repairs with the engine running.
7. Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
8. Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
9. Check brake operation frequently. Adjust and service as required.
10. Maintain or replace safety and instructions labels, as necessary.

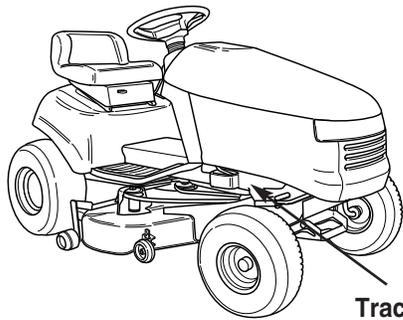
11. Do not remove the fuel filter when the engine is hot as spilled gasoline may ignite. Do not spread fuel line clamps further than necessary. Ensure clamps grip hoses firmly over the filter after installation.
12. Do not use gasoline containing METHANOL, gasohol containing more than 10% ETHANOL, gasoline additives, or white gas because engine/fuel system damage could result.
13. If the fuel tank must be drained, it should be drained outdoors.
14. Replace faulty silencers/mufflers.
15. Use only factory authorized replacement parts when making repairs.
16. Always comply with factory specifications on all settings and adjustments.
17. Only authorized service locations should be utilized for major service and repair requirements.
18. Never attempt to make major repairs on this unit unless you have been properly trained. Improper service procedures can result in hazardous operation, equipment damage and voiding of manufacturer's warranty.
19. On multiple blade mowers, take care as rotating one blade can cause other blades to rotate.
20. Do not change engine governor settings or over-speed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.
21. Disengage drive attachments, stop the engine, remove the key, and disconnect the spark plug wire(s) before: clearing attachment blockages and chutes, performing service work, striking an object, or if the unit vibrates abnormally. After striking an object, inspect the machine for damage and make repairs before restarting and operating the equipment.
22. Never place hands near the moving parts, such as a hydro pump cooling fan, when the tractor is running. (Hydro pump cooling fans are typically located on top of the transaxle).
23. Units with hydraulic pumps, hoses, or motors: **WARNING:** Hydraulic fluid escaping under pressure may have sufficient force to penetrate skin and cause serious injury. If foreign fluid is injected into the skin it must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result. Keep body and hands away from pin holes or nozzles that eject hydraulic fluid under high pressure. Use paper or cardboard, and not hands, to search for leaks. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system. If leaks occur, have the unit serviced immediately by your authorized dealer.
24. **WARNING:** Stored energy device. Improper release of springs can result in serious personal injury. Springs should be removed by an authorized technician.
25. Models equipped with an engine radiator: **WARNING:** Stored energy device. To prevent serious bodily injury from hot coolant or steam blow-out, never attempt to remove the radiator cap while the engine is running. Stop the engine and wait until it is cool. Even then, use extreme care when removing the cap.

## Identification Numbers

When contacting your authorized dealer for replacement parts, service, or information you **MUST** have these numbers.

Record your model name/number, manufacturer's identification numbers, and engine serial numbers in the space provided for easy access. These numbers can be found in the locations shown.

*NOTE: For location of engine identification numbers, refer to the engine owner's manual.*

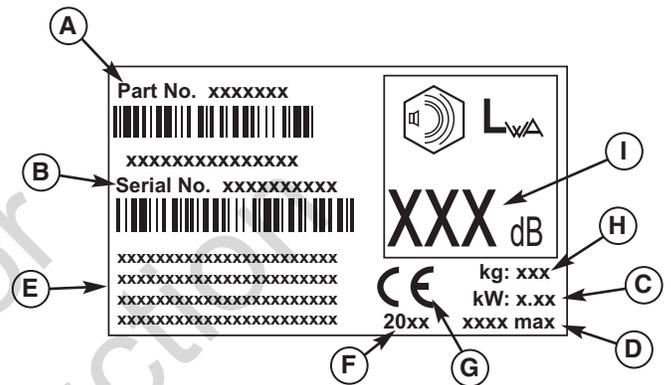


Tractor ID Tag

PRODUCT REFERENCE DATA	
Model Description Name/Number	
Unit MFG Number	Unit SERIAL Number
Mower Deck MFG Number	Mower Deck SERIAL Number
Dealer Name	Date Purchased
ENGINE REFERENCE DATA	
Engine Make	Engine Model
Engine Type/Spec	Engine Code/Serial Number

## CE Identification Tag Markings

- A. Manufacturer's Identification Number
- B. Manufacturer's Serial Number
- C. Power Rating in Kilowatts
- D. Maximum Engine Speed in Rotations per Minute
- E. Manufacturer's Name and Address
- F. Year of Manufacture
- G. CE Compliance Logo
- H. Mass of Unit in Kilograms
- I. Guaranteed Sound Power in Decibels



# Safety Decals

## Safety Decals

This unit has been designed and manufactured to provide you with the safety and reliability you would expect from an industry leader in outdoor power equipment manufacturing.

Although reading this manual and the safety instructions it contains will provide you with the necessary basic knowledge to operate this equipment safely and effectively, we have placed several safety labels on the unit to remind you of this important information while you are operating your unit.

All DANGER, WARNING, CAUTION and instructional messages on your rider and mower should be carefully read

and obeyed. Personal bodily injury can result when these instructions are not followed. The information is for your safety and it is important! The safety decals below are on your rider and mower.

If any of these decals are lost or damaged, replace them at once. See your local dealer for replacements.

These labels are easily applied and will act as a constant visual reminder to you, and others who may use the equipment, to follow the safety instructions necessary for safe, effective operation.



**Decal - Operating Instructions, CE Models, Part No. 1734027**



**Decal - Danger, Thrown Objects Part No. 1721107**



**Decal - Danger, Thrown Objects Part No. 1720390**



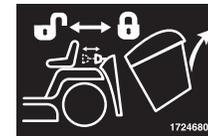
**Decal - Danger, Thrown Objects Part No. 1720391**



**Decal - Danger, Rotating Blades Part No. 1720389**



**Decal - Hopper Pedal Part No. 1723317**



**Decal - Hopper Release Part No. 1724680**



**Decal - Hopper Control Part No. 1723310**



**Decal - Drawbar Limits Part No. 1721141**



**Decal - Cutting Height Part No. 1723470**



**Decal - Transmission Release Part No. 1723425**



**Decal - Ignition Positions Part No. 1722806**

## Safety Icons

### Warning: Read Operator's Manual.

Read and understand the Operator's Manual before using this machine.



### Danger: Fire Hazard.

Do not add fuel while engine is hot or running. Stop engine and allow to cool for 3 minutes prior to adding fuel.



### Danger: Dismemberment.

This machine can amputate limbs. Keep bystanders and children away when engine is running.



### Danger: Hot Surface.

Allow machine to cool before touching this area.



### Danger: Dismemberment.

This mower deck can amputate limbs. Keep hands and feet away from blades.



### Danger: Carbon Monoxide Poisoning.

Do not operate the engine in an unventilated area.



### Warning: Remove Key Before Servicing.

Remove the key and consult technical literature before performing repairs or maintenance.



### Danger: Thrown Objects.

Do not operate without first connecting the discharge tube.



### Danger: Machine Rollover.

Do not use this machine on slopes greater than 10°.



### Danger: Thrown Objects.

Do not operate with hopper open.



### Danger: Thrown Objects.

This machine is capable of throwing objects and debris. Keep bystanders away.



### Danger: Thrown Objects.

Do not operate the with the hopper removed, or without the deflector.







## Headlights

The light switch turns the tractor headlights on and off.



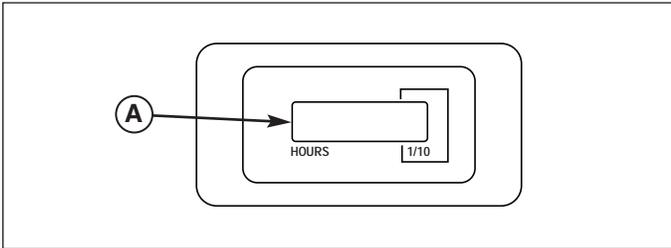
## Brake Pedal

Depressing the brake pedal applies the tractor brake.



## Hour Meter (Optional)

The hour meter measures the number of hours the key has been in the RUN position (A).



The hour meter will flash an initial oil change indicator at 5 hours, and a lubrication reminder every 50 hours. These reminders display for approximately two hours and will automatically reset themselves.

*NOTE: The hour meter will register the passage of time when the key is in the RUN position, even if the engine is not running. The hour meter has a self contained power source so the total hours are always visible.*



## PTO Switch

The PTO (Power Take-Off) switch engages and disengages attachments that use the PTO. To engage the PTO, pull UP on the switch. Push DOWN to disengage. *Note that the operator must be seated firmly in the tractor seat for the PTO to function.*



## Ignition Switch

The ignition switch starts and stops the engine, it has three positions:



**OFF** Stops the engine and shuts off the electrical system.



**RUN** Allows the engine to run and powers the electrical system.



**START** Cranks the engine for starting.

*NOTE: Never leave the ignition switch in the RUN position with the engine stopped—this drains the battery.*



## Ground Speed Pedals

The tractor's forward ground speed is controlled by the forward ground speed control pedal. The tractor's reverse ground speed is controlled by the reverse ground speed control pedal.

Depressing either pedal will increase ground speed. Note that the further down the pedal is depressed, the faster the tractor will travel.



## Mower Height of Cut Adjustment

The cutting height adjustment knob controls the mower cutting height. The cutting height is infinitely adjustable between 1" and 3-3/4" (2.5 cm - 9.5 cm).



## Cutting Height Fine Tuning Adjustment

The cutting height fine tuning adjustment is used to set the mower cutting height between two of the preset cutting positions.



## Attachment Lift Control Lever

When using the mower deck, lift the deck off the ground while transporting to and from the job site. **DO NOT** cut with the mower in the raised, transport position.

The attachment lift control lever raises and lowers attachments that utilize the tractor's manual lift linkage. Pushing the lever forward lowers the attachment while pulling the lever back raises the attachment. You must pull back slightly on the lever and depress the release button to change lift positions. Be sure the lever is fully forward when mowing.



## Catcher Removal Lock

After depressing the catcher dump lock pedal, pull this knob forward to release the catcher for removal.



## Cruise Control (Optional)

The cruise control is used to lock the ground speed control in forward. Move the lever forward until the desired ground speed is reached. To disengage the cruise control move the lever back. In the event you need to stop quickly, depressing the brake pedal will also return the cruise control to neutral.

# Features & Controls

---



## Seat Adjustment Lever

The seat can be adjusted forward and back. Move the lever, position the seat as desired, and release the lever to lock the seat into position.



## Transmission Release Valve Lever

The transmission release valve lever deactivates the transmission so that the tractor can be pushed by hand. See **PUSHING THE TRACTOR BY HAND** for operational information.



## Catcher Full Alarm

The “catcher full” alarm sounds when the grass catcher has been filled with cut grass. When the alarm sounds, disengage the PTO, travel to the area in which you desire to dump the grass, then empty the catcher. *Note: When using the unit for leaf collection, the alarm may not be activated by dry leaves.*



## Fuel Tank / Fuel Gauge

The fuel gage indicates the amount of fuel in the fuel tank. To add fuel, remove the filler cap. Be sure to leave room for heat expansion.



## Parking Brake

The parking brake knob is used to lock the parking brake when the tractor is stopped. Fully depressing the brake pedal and pulling up on the knob engages the parking brake.



## Catcher Dump Lock Pedal

The catcher dump lock pedal unlocks the catcher so that it can be opened to dump out collected grass.



## Catcher Open/Close Lever

The catcher open/close lever opens the catcher so that it may be emptied and closes it for mowing. To empty the catcher, depress the catcher dump lock pedal and pull forward on the handle. To close, push the lever backward until the catcher closes and locks.



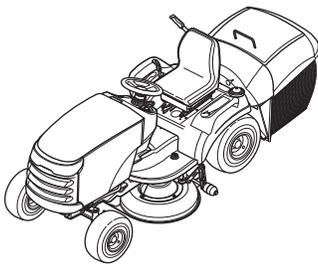
## 12V Power Outlet

The power outlet is 12V-DC. Accessory must be rated at 14 amps or less.



## Reverse Mowing Option (RMO)

The Reverse Mowing Option allows for mowing (or use of other PTO driven attachments) while traveling in reverse. If you choose to mow or operate another attachment in reverse, turn the RMO key after the PTO is engaged. The L.E.D. light will illuminate, and the operator can then mow in reverse. Each time the PTO is disengaged the RMO needs to be reactivated if desired.



# Operating the Tractor

## Safety Interlock System Tests

### **⚠ WARNING**

This unit is equipped with safety interlock switches and other safety devices. These safety systems are present for your safety. Do not attempt to bypass safety switches, and never tamper with safety devices.

#### TEST 1 — ENGINE SHOULD NOT START IF:

- Blade rotation control is in the ENGAGE position, OR
- Brake pedal is NOT fully depressed (parking brake OFF).

#### TEST 2 — ENGINE SHOULD START IF:

- Operator is sitting in seat, AND
- Blade rotation control is in the DISENGAGE position, AND
- Brake pedal is fully depressed (parking brake ON).

#### TEST 3 — ENGINE SHOULD SHUT OFF IF:

- Operator rises off seat.

#### TEST 4 — BLADE BRAKE CHECK

Mower blades and mower drive belt should come to a complete stop within five seconds after blade rotation control is moved to DISENGAGE position. If the mower drive belt does not stop within five seconds, see your dealer.

### **⚠ WARNING**

If the unit does not pass a safety test, do not operate it. See your authorized dealer.

## General Operating Safety

Be sure to read all information in the Safety and Operation sections before attempting to operate this unit. Become familiar with all of the controls and how to stop the unit.

### Adding Fuel

To add fuel:

1. Remove the fuel cap (A, Figure 2.1).
2. Fill the tank. Do not overfill. Leave room in the tank for fuel expansion. Refer to your engine manual for specific fuel recommendations.
3. Install and hand tighten the fuel cap.

### **⚠ WARNING**

Gasoline is highly flammable and must be handled with care. Never fill the tank when the engine is still hot from recent operation. Do not allow open flame, smoking or matches in the area. Avoid over-filling and wipe up any spills.



Do not use gasoline containing METHANOL, gasohol containing more than 10% ETHANOL, gasoline additives, or white gas because engine/fuel system damage could result.

## Starting The Engine

1. While sitting in the operator's seat, fully depress the brake pedal or set the parking brake.
  2. Make sure that your feet are not depressing the ground speed control pedals and that the cruise control lever is in neutral.
  3. Disengage the PTO clutch.
  4. Close the choke.
- NOTE: A warm engine may not require choking.*
5. Insert the ignition key and turn it to START.
  6. After the engine starts, move the engine throttle control to SLOW. Warm up the engine by running it for at least a minute.
  7. Set throttle to FULL.

*NOTE: In the event of an emergency the engine can be stopped by simply turning the ignition switch to STOP. Use this method only in emergency situations. For normal engine shut down follow the procedure given in STOPPING THE TRACTOR.*

## Stopping The Tractor & Engine

1. Return the ground speed control(s) to neutral.
2. Disengage the PTO and wait for all moving parts to stop.
3. Place the throttle control in the position specified in the engine owner's manual provided in the operator's packet shipped with your tractor. Follow any recommended stopping procedures.
4. Turn the ignition switch to OFF. Remove the key.

# Operating the Tractor

## Driving The Tractor

1. Sit in the seat and adjust the seat so that you can comfortably reach all the controls and see the dashboard display.
2. Engage the parking brake.
3. Make sure the PTO switch is disengaged.
4. Start the engine (see STARTING THE ENGINE).
5. Disengage the parking brake and release the brake pedal.
6. Depress the forward ground speed control pedal to travel forward. Release the pedal to stop. Note that the further down the pedal is depressed the faster the tractor will travel.
7. Stop the tractor by releasing the ground speed control pedals, setting the parking brake, and stopping the engine (see STOPPING THE TRACTOR AND ENGINE).

## Mowing

1. Set the mower cutting height to the desired level and set the gauge wheels to the appropriate position (if equipped).
2. Engage the parking brake. Make sure the PTO switch is disengaged.
3. Start the engine (see STARTING THE ENGINE).
4. Fully lower the mower using the attachment lift lever.
5. Set the throttle to FULL.
6. Engage the PTO (Mower Deck).
7. Begin mowing. When the “catcher full” alarm sounds, turn off the PTO immediately to prevent discharge tube plugging. Travel to the desired location and empty the catcher.
8. When finished, shut off the PTO and raise the mower using the attachment lift control lever.
9. Stop the engine (see STOPPING THE TRACTOR AND ENGINE).

## Mowing in Reverse

### ⚠ WARNING

The engine will shut off if the reverse ground speed pedal is depressed while the PTO is on and the RMO has not been activated. The operator should always turn the PTO off prior to driving across on roads, paths or any area that maybe used by other vehicles. Sudden loss of drive could create a hazard.

### ⚠ WARNING

Mowing in reverse can be hazardous to bystanders. Tragic accidents can occur if the operator is not alert to the presence of children. Never activate RMO if children are present. Children are often attracted to the unit and the mowing activity.

If an operator chooses to mow in reverse, the RMO system can be used. To use the Reverse Mowing Option (RMO) turn the RMO key after the PTO is engaged. The L.E.D. light will illuminate, and the operator can then mow in reverse. Each time the PTO is disengaged the RMO needs to be reactivated if desired. The key should be removed to restrict access to the RMO feature.

## Attachment Operation in Reverse

If an operator chooses to operate a PTO driven attachment in reverse, the RMO system can be used. To use the Reverse Mowing Option (RMO) turn the RMO key after the PTO is engaged. The L.E.D. light will illuminate, and the operator can then operate the attachment in reverse. Each time the PTO is disengaged the RMO needs to be reactivated if desired. The key should be removed to restrict access to the RMO feature.

## Pushing The Tractor By Hand



### DO NOT TOW TRACTOR

- Towing the unit will cause transmission damage.
- Do not use another vehicle to push or pull this unit.
- Do not actuate the transmission release valve lever while the engine is running.

## Two Wheel Drive Models (2WD)

1. Disengage the PTO and turn the engine off.
2. Pull the transmission release back approximately 2-1/2” (6 cm) to lock into released position (Figure 2.1).
3. The tractor can now be pushed by hand.

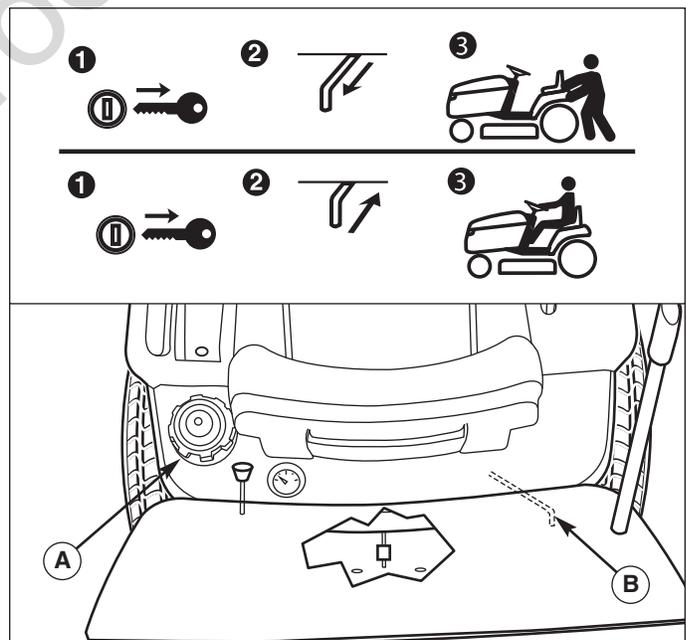
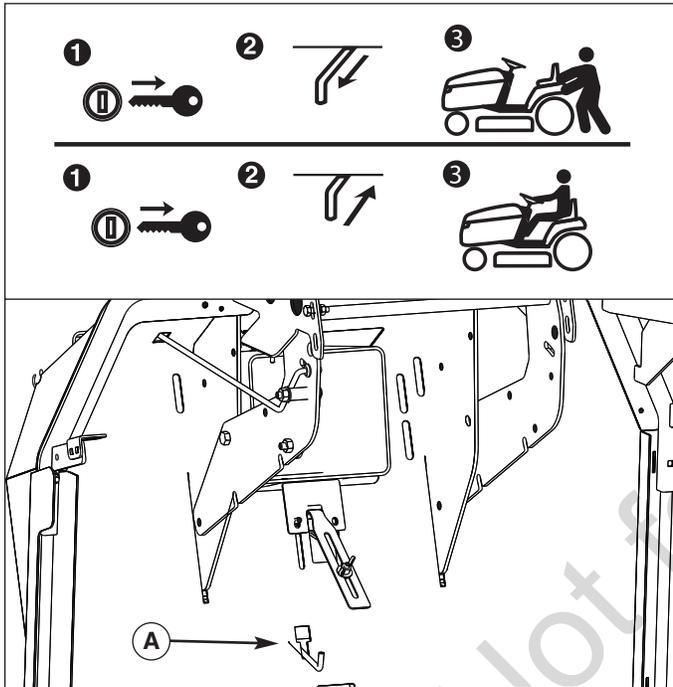


Figure 2.1. Transmission Release Lever (2WD)

- A. Fuel Tank Cap
- B. Transmission Release Lever

## Four Wheel Drive Models (4WD)

1. Disengage the PTO and turn the engine off.
2. Push the transmission release in approximately 2-1/2" (6.4 cm) to lock into released position (Figure 2.2).
3. The tractor can now be pushed by hand.

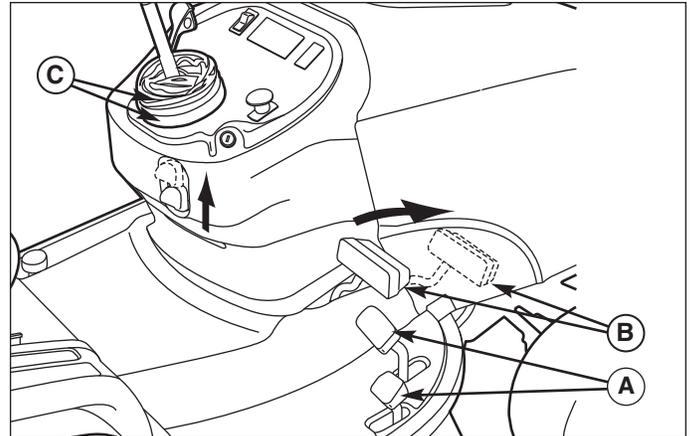


**Figure 2.2. Transmission Release Lever (4WD)**  
A. Transmission Release Lever

## Parking Brake Function

**Applying the Parking Brake** - See Figure 3. To lock the parking brake, release the ground speed pedals (A), fully depress the brake pedal (B), pull UP on the parking brake knob (C), and then release brake pedal.

**Releasing the Parking Brake** - See Figure 3. To release the parking brake, fully depress the brake pedal (B) and push the parking brake knob (C) DOWN.

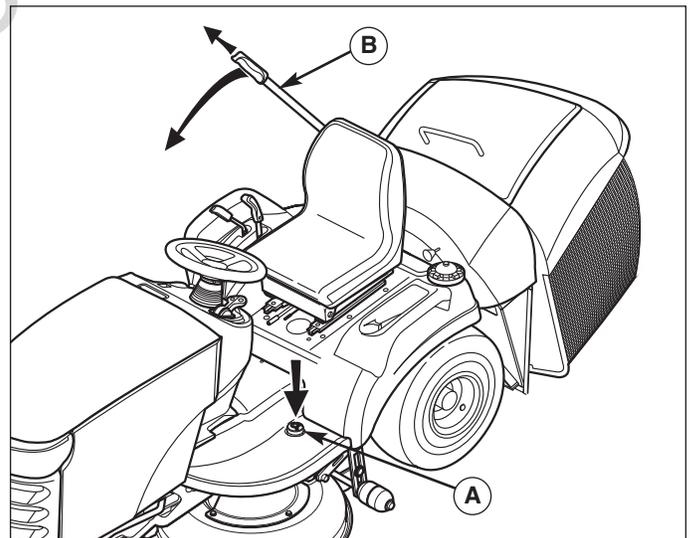


**Figure 3. Engaging the Parking Brake**  
A. Ground Speed Pedals  
B. Brake Pedal  
C. Parking Brake Knob

## Emptying the Catcher

To empty the catcher:

1. Depress the catcher dump pedal (A, Figure 4).
2. Extend the catcher lever (B) and use it to empty the catcher.
3. Use the lever (B) to close the catcher, and slide it back into the catcher.



**Figure 4. Emptying the Hopper**  
A. Catcher Dump Pedal  
B. Catcher Lever

# Operating the Tractor

## Attaching a Trailer

*NOTE: Remove the hopper to attach a trailer.*

The maximum horizontal drawbar force allowed is 444 Newton. The maximum vertical drawbar force is 222 Newton. This equates to a 396 lbs (180 kg) trailer on a 10 degree hill. Secure the trailer with an appropriately sized clevis pin (A, Figure 5) and clip (B).

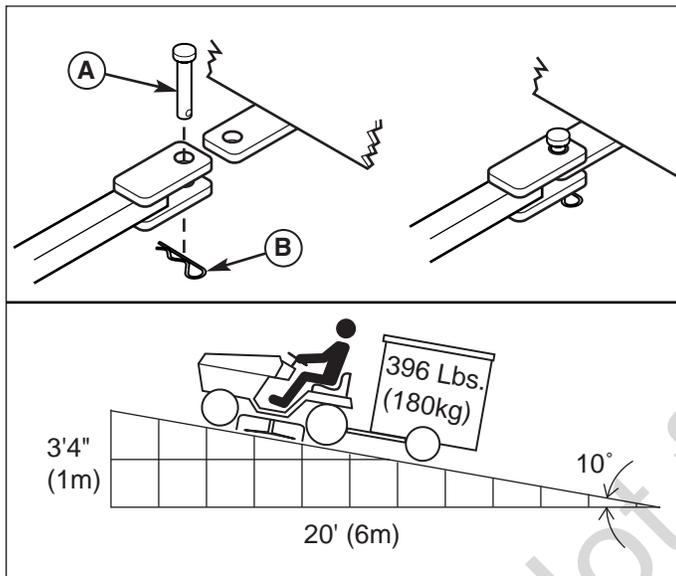


Figure 5. Trailer Weight Recommendations

- A. Clevis Pin
- B. Clip

## Catcher Removal AND Installation

### ⚠ WARNING

**Do not operate the unit without the hopper or deflector in place.**

1. Move the catcher removal knob (C, Figure 6) forward to unlock the catcher from the rear support arms.
2. Depress the catcher dump lock pedal (A).
3. Use the catcher lever (B) to open the catcher slightly.
4. Lift the catcher off the rear support arms.
5. Install in reverse order of removal. To assist installing the catcher, be sure to line up the alignment marks on the catcher and rear of the tractor.

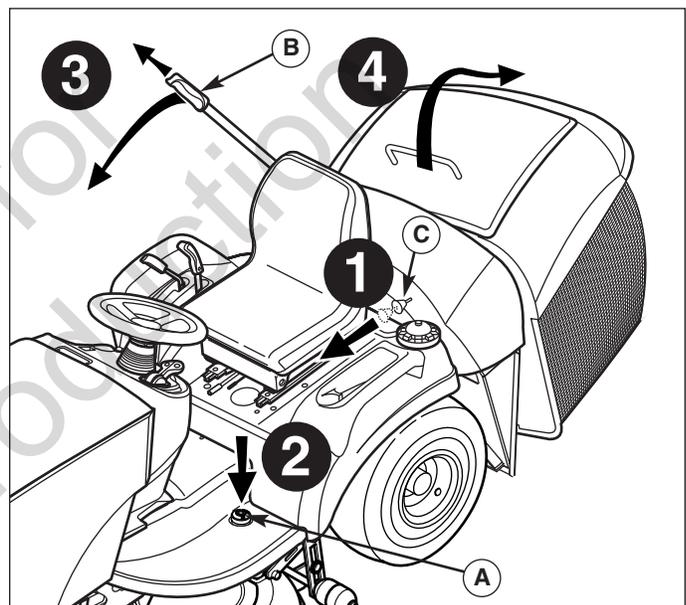


Figure 6. Emptying the Hopper

- A. Catcher Dump Pedal
- B. Catcher Lever
- C. Catcher Lock Knob

## 12 Volt Power Outlet (certain models)

### ⚠ CAUTION

Avoid Injury. Safe operation requires your full attention. Do not wear radio or music headphones while operating machine.

The 12-volt accessory plug is located in the left side pod (Figure 1). It can be used to power small electronic devices. The accessory must be rated at 14 amps or less.

*NOTE: Operating a 12-volt accessory, especially with the engine at idle, may cause battery discharge. When not using the accessory plug it must be covered with the rubber plug to prevent moisture from causing a short circuit. Entrance of water into plug can cause a short circuit.*

## Storage

### ⚠ WARNING

Never store the unit (with fuel) in an enclosed, poorly ventilated structure. Fuel vapors can travel to an ignition source (such as a furnace, water heater, etc.) and cause an explosion.  
Fuel vapor is also toxic to humans and animals.

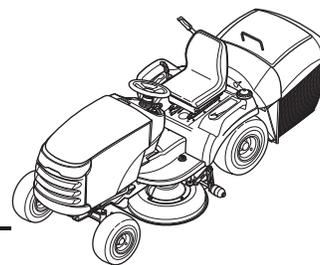
Before you store your unit for the off-season, read the Maintenance and Storage instructions in the Safety Rules section, then perform the following steps:

- Disengage the PTO, set the parking brake, & remove the key.
- Perform engine maintenance and storage measures listed in the engine owner's manual. This includes draining the fuel system, or adding stabilizer to the fuel (do not store a fueled unit in an enclosed structure - see above).
- Battery life will be increased if it is removed, put in a cool, dry place and fully charged about once a month. If the battery is left in the unit, disconnect the negative cable.

Before starting the unit after it has been stored:

- Check all fluid levels. Check all maintenance items.
- Perform all recommended check and procedures found in the engine owner's manual.
- Allow the engine to warm up for several minutes before use.

# Regular Maintenance



## Maintenance Schedule

The following schedule should be followed for normal care of your tractor and mower.

TRACTOR AND MOWER
<b>Every 8 Hours or Daily</b>
Check safety interlock system
Clean debris off tractor and mower deck
Clean debris from engine compartment
<b>Every 25 Hours or Annually *</b>
Check mower blade stopping time
Check tractor and mower for loose hardware
Check tire pressure
<b>Every 50 Hours or Annually *</b>
Check tractor brakes
Clean battery and cables
<b>See Dealer Annually to</b>
Lubricate tractor and mower
Check mower blades **

\* Whichever comes first

\*\* Check blades more often in regions with sandy soils or high dust conditions.

ENGINE
<b>First 5 Hours</b>
Change engine oil - see engine manual
<b>Every 8 Hours or Daily</b>
Check engine oil level - see engine manual
<b>Every 25 Hours or Annually *</b>
Clean engine air filter and pre-cleaner **
<b>Every 50 Hours or Annually *</b>
Change engine oil
Replace oil filter
<b>Annually</b>
Replace air filter
Replace pre-cleaner
<b>See Dealer Annually to</b>
Inspect muffler and spark arrester
Replace spark plug
Replace fuel filter
Clean engine air cooling system

\* Whichever comes first

\*\* Clean more often in dusty conditions or when airborne debris is present.

## Check Tire Pressures

Tire Pressure should be checked periodically, and maintained at the levels shown in the chart (Figure 7). Note that these pressures may differ slightly from the "Max Inflation" stamped on the side-wall of the tires. The pressures shown provide proper traction, improve cut quality, and extend tire life.

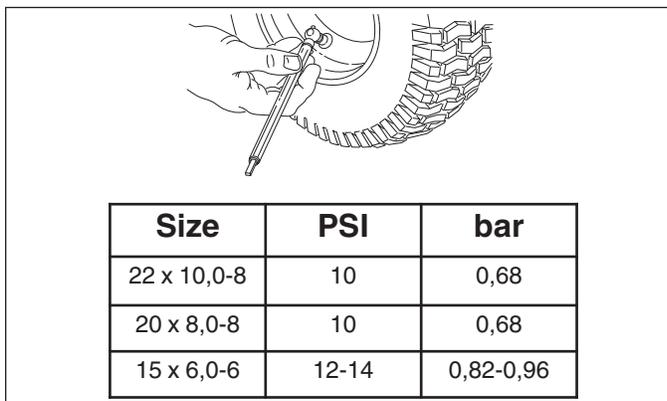


Figure 7. Tire Pressure

## Safety Interlock System Check

Check the function of the safety interlock system using the test procedure. If the tractor fails any of the tests, see your dealer.

## Blade Brake Check

Mower blades and mower drive belt should come to a complete stop within five seconds after the electric PTO switch is turned off.

1. With tractor in neutral, PTO disengaged and operator in seat, start the engine.
2. Look over the left-hand footrest at the mower drive belt. Engage the PTO and wait several seconds. Disengage the PTO and check the amount of time it takes for the mower drive belt to stop.
3. If mower drive belt does not stop within five seconds, see your dealer.

## Engine Maintenance

Refer to the engine owner's manual for all engine maintenance procedures and recommendations.

## Battery Maintenance

### ⚠ WARNING

When removing or installing battery cables, disconnect the negative cable **FIRST** and reconnect it **LAST**. If not done in this order, the positive terminal can be shorted to the frame by a tool.

## Cleaning the Battery and Cables

1. Disconnect the cables from the battery, negative cable first (A, Figure 8).
2. Remove the battery hold-down (C) and battery.
3. Clean the battery compartment with a solution of baking soda and water.
4. Clean the battery terminals and cable ends with a wire brush and battery terminal cleaner until shiny.
5. Reinstall the battery in the battery compartment, and secure with the battery hold-down (C).
6. Reattach the battery cables, positive cable first (B).
7. Coat the cable ends and battery terminals with petroleum jelly or non-conducting grease.

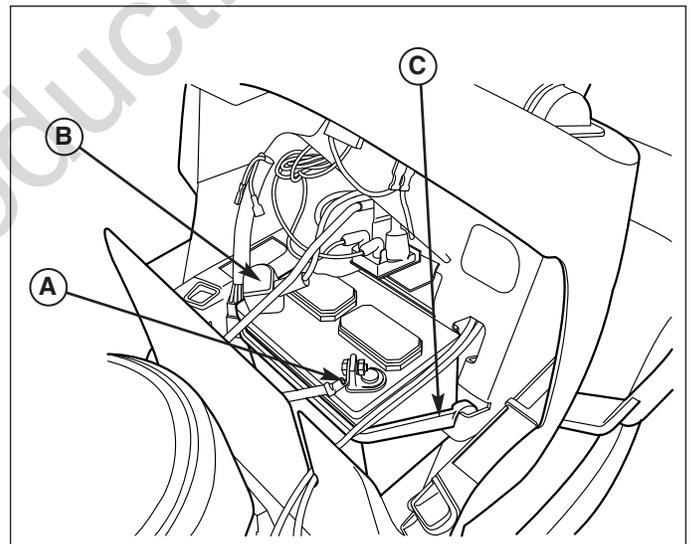
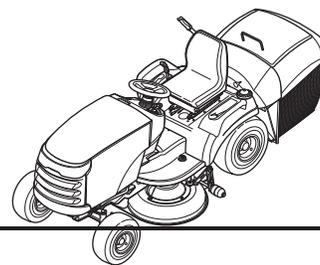


Figure 8. Battery

- A. Negative Cable
- B. Positive Cable & Cover
- C. Rubber Hold-Down Strap

# Troubleshooting & Adjustments



## Troubleshooting

While normal care and regular maintenance will extend the life of your equipment, prolonged or constant use may eventually require that service be performed to allow it to continue operating properly.

The troubleshooting guide below lists the most common problems, their causes, and remedies.

See the information on the following pages for instructions on how to perform most of these minor adjustments and service repairs yourself. If you prefer, all of these procedures can be performed for you by your local authorized dealer.

## **⚠ WARNING**

**To avoid serious injury, perform maintenance on the tractor or mower only when the engine is stopped and the parking brake engaged.**

**Always remove the ignition key, disconnect the spark plug wire and fasten it away from the plug before beginning the maintenance, to prevent accidental starting of the engine.**

## Troubleshooting the Tractor

PROBLEM	LOOK FOR	REMEDY
<b>Engine will not turnover or start.</b>	Brake pedal not depressed.	Fully depress brake pedal.
	PTO (electric clutch) switch is in ON position.	Place in OFF position.
	Cruise control engaged.	Move knob to NEUTRAL/OFF position.
	Out of fuel.	If engine is hot, allow it to cool, then refill the fuel tank.
	Engine flooded.	Disengage the choke.
	Fuse is blown.	See authorized dealer.
	Battery terminals require cleaning.	See Cleaning the Battery and Cables.
	Battery discharged or dead.	Recharge or replace battery.
	Wiring loose or broken.	Visually check wiring. If wires are frayed or broken, see authorized dealer.
	Solenoid or starter motor faulty.	See authorized dealer.
	Safety interlock switch faulty.	See authorized dealer.
	Water in fuel.	See authorized dealer.
	Gas is old or stale.	See authorized dealer.
<b>Engine starts hard or runs poorly.</b>	Fuel mixture too rich.	Clean air filter.
	Engine has other problem.	See authorized dealer.
<b>Engine knocks.</b>	Low oil level.	See engine manual.
	Using wrong grade oil.	See engine manual.
<b>Excessive oil consumption.</b>	Engine running too hot.	See authorized dealer.
	Using wrong grade oil.	See engine manual.
	Too much oil in crankcase.	Drain excess oil.

# Troubleshooting & Adjustments

## Troubleshooting the Tractor (Continued)

PROBLEM	LOOK FOR	REMEDY
<b>Brake will not hold.</b>	Internal brake worn.	See authorized dealer.
<b>Tractor steers hard or handles poorly.</b>	Steering linkage is loose.	See authorized dealer.
	Improper tire inflation.	See Check Tire Pressure section.
	Front wheel spindle bearings dry.	See authorized dealer.
<b>Engine exhaust is black.</b>	Dirty air filter.	See engine manual.
	Choke closed.	Open choke.
<b>Engine runs, but tractor will not drive.</b>	Ground speed control pedals not depressed.	Depress pedals.
	Transmission release lever in PUSH position.	Move into DRIVE position.
	Mower drive belt is broken.	See authorized dealer.
	Parking brake is engaged.	Disengage parking brake.
	Traction drive belt is broken or slipping.	See authorized dealer.

## Troubleshooting the Mower

PROBLEM	LOOK FOR	REMEDY
<b>Mower will not raise.</b>	Lift linkage not properly attached or damaged.	See authorized dealer.
<b>Mower cut is uneven.</b>	Mower not leveled properly.	See authorized dealer.
	Tractor tires not properly inflated.	See Check Tire Pressure.
<b>Mower cut is rough looking.</b>	Engine speed too slow.	Set to full throttle.
	Ground speed too fast.	Slow down.
	Mower has other problem.	See authorized dealer.
<b>Engine stalls easily with mower engaged.</b>	Engine speed too slow.	Set to full throttle.
	Ground speed too fast.	Slow down.
	Dirty or clogged air filter.	See engine manual.
	Cutting height set too low.	Cut tall grass at maximum cutting height during first pass.
	Discharge chute jamming.	Cut grass with discharge pointing toward previously cut area.
	Engine not up to operating temperature.	Run engine for several minutes to warm up.
<b>Excessive mower vibration.</b>	Starting mower in tall grass.	Start the mower in a cleared area.
	Mower has other problem.	See authorized dealer.
<b>Engine runs and tractor drives, but mower will not drive.</b>	PTO not engaged.	Engage the PTO.
	Mower has other problem.	See authorized dealer.

# Troubleshooting & Adjustments

## Seat Adjustment

### Pitch Adjustment

The pitch of the seat can be adjusted to one of three positions. See your dealer for assistance.

### Seat Slide Adjustment

The seat can also be adjusted forward and back. Move the lever (A, Figure 9), position the seat as desired, and release the lever to lock the seat into position.

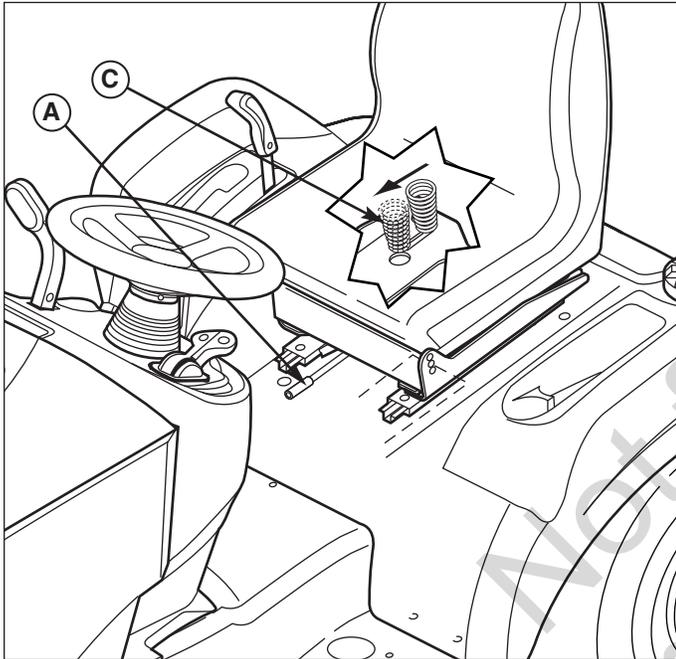


Figure 9. Seat Adjustment

- A. Seat Adjustment Lever
- C. Seat Spring

### Seat Spring Adjustment

The seat springs (C, Figure 9) can be adjusted to provide a softer or firmer ride. Tilt the seat forward and slide the spring assembly (C) forward for a softer ride, and back for a firmer ride.

### Hopper Latch Adjustment

If the hopper will not latch when the lever is quickly closed, the latch clearance may need to be adjusted. See your dealer for assistance.

## Catcher-full Alarm Adjustment

There are two ways to adjust the “catcher full” alarm one for grass volume and one for sensitivity.

### Grass Volume Adjustment

Sliding the paddle bracket (C, Figure 10) up increases the volume of grass in the collector before the alarm goes off. Sliding the paddle bracket (C) down decreases the volume of grass in the collector before the alarm goes off.

1. Loosen bracket hardware (B).
2. Slide paddle bracket (C) up or down.
3. Tighten bracket hardware (B).

### Sensitivity Adjustment

Sliding the carriage bolt, washer and nut (D, Figure 10) up decreases the sensitivity in the collector before the alarm goes off. Sliding the carriage bolt, washer and nut (D) down increases the sensitivity in the collector before the alarm goes off.

1. Loosen carriage bolt, washer and nut (D).
2. Slide carriage bolt, washer and nut (D) up or down the alarm paddle (A).
3. Tighten carriage bolt, washer and nut (D).

*NOTE: It may be necessary to change the catcher-full alarm as turf conditions change. See your dealer for assistance.*

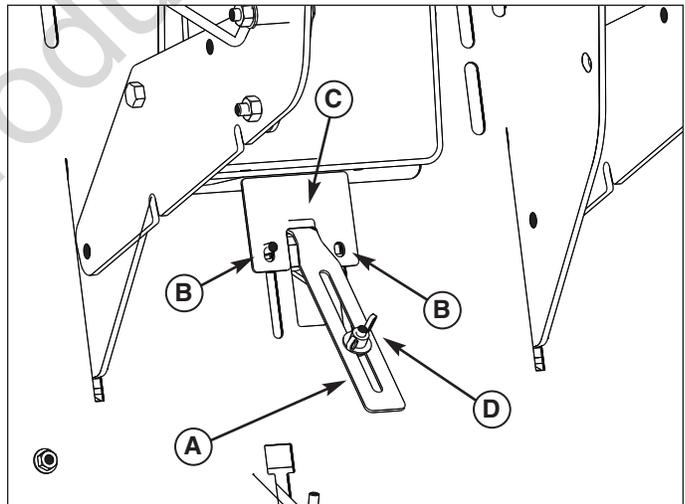


Figure 10. Catcher Alarm Adjustment

- A. Alarm Paddle
- B. Bracket Hardware
- C. Paddle Bracket
- D. Carriage Bolt, Washer, and Nut

## Mower Lift Adjustment

### ⚠ WARNING

Before checking mower, shut off PTO and engine, remove the key, and allow all moving parts to stop.

Mower lift height can be adjusted using the mower lift chains. For increased mower lift, use the third chain link (as shown in Figure 11). For more below-ground travel, use the fourth link.

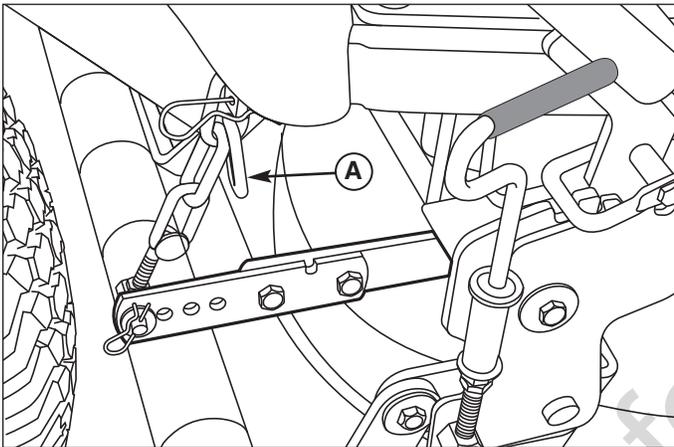


Figure 11. Mower Lift Adjust  
(viewed from underneath right side of tractor)

A. Mower Lift Chain

## Cutting Height Adjustment

The cutting height adjustment lever (A, Figure 12) controls the mower cutting height. Push the button to release the lever. Move the lever back to raise the deck and forward to lower it.

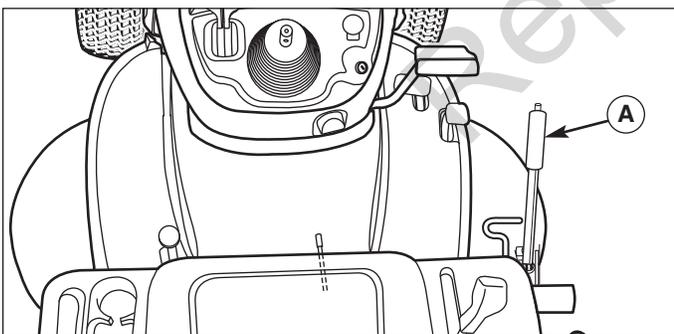


Figure 12. Mower Cutting Height Adjustment

A. Adjustment Lever

## Leveling The Mower

If the cut is uneven, the mower may need leveling. Unequal or improper tire pressure may also cause an uneven cut. Make sure tire pressure is correct as specified in Checking Tire Pressure. See your dealer for assistance.

## Battery Charging

### ⚠ WARNING

Keep open flames and sparks away from the battery; the gasses coming from it are highly explosive. Ventilate the battery well during charging.

A dead battery or one too weak to start the engine may be the result of a defect in the charging system or other electrical component. If there is any doubt about the cause of the problem, see your dealer. If you need to replace the battery, follow the steps under Cleaning the Battery & Cables in the Regular Maintenance Section.

To charge the battery, follow the instructions provided by the battery charger manufacturer as well as all warnings included in the safety rules sections of this book. Charge the battery until fully charged (until the specific gravity of the electrolyte is 1.250 or higher and the electrolyte temperature is at least 60° F). Do not charge at a rate higher than 10 amps.

**LIMITED WARRANTY**

Briggs & Stratton Power Products Group, LLC will repair and/or replace, free of charge, any part(s) of the equipment that is defective in material or workmanship or both. Briggs & Stratton Corporation will repair and/or replace, free of charge, any part(s) of the Briggs and Stratton engine\* (if equipped) that is defective in material or workmanship or both. Transportation charges on product submitted for repair or replacement under this warranty must be borne by purchaser. This warranty is effective for the time periods and subject to the conditions stated below. For warranty service, find the nearest Authorized Service Dealer using our dealer locator at [www.murray.com](http://www.murray.com).

There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from purchase or to the extent permitted by law. Liability for incidental or consequential damages are excluded to the extent exclusion is permitted by law.

Some states or countries do not allow limitations on how long an implied warranty lasts, and some states or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state or country to country.

**WARRANTY PERIOD**

<u>Item</u>	<u>Consumer Use</u>	<u>Commercial Use:</u>
Equipment	2 Years	90 Days
Engine*	2 Years	90 Days
Battery	1 Year	1 Year

The warranty period begins on the date of purchase by the first retail consumer or commercial end user, and continues for the period of time stated above. "Consumer use" means personal residential household use by a retail consumer. "Commercial use" means all other uses, including use for commercial, income producing or rental purposes. Once product has experienced commercial use, it shall thereafter be considered as commercial use for purposes of this warranty.

No warranty registration is necessary to obtain warranty on Briggs & Stratton products. Save your proof of purchase receipt. If you do not provide proof of the initial purchase date at the time warranty service is requested, the manufacturing date of the product will be used to determine warranty eligibility.

**ABOUT YOUR WARRANTY**

We welcome warranty repair and apologize to you for being inconvenienced. Warranty service is available only through servicing dealers authorized by Briggs & Stratton or BSPPG, LLC.

Most warranty repairs are handled routinely, but sometimes requests for warranty service may not be appropriate. This warranty only covers defects in materials or workmanship. It does not cover damage caused by improper use or abuse, improper maintenance or repair, normal wear and tear, or stale or unapproved fuel.

**Improper Use and Abuse** - The proper, intended use of this product is described in the Operator's Manual. Using the product in a way not described in the Operator's Manual or using the product after it has been damaged will void your warranty. Warranty is not allowed if the serial number on the product has been removed or the product has been altered or modified in any way, or if the product has evidence of abuse such as impact damage, or water/chemical corrosion damage.

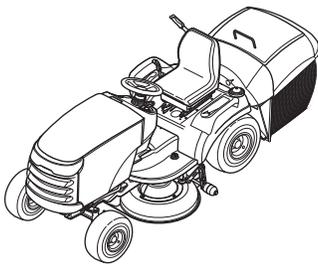
**Improper Maintenance or Repair** - This product must be maintained according to the procedures and schedules provided in the Operator's Manual, and serviced or repaired using genuine Briggs & Stratton parts. Damage caused by lack of maintenance or use of non-original parts is not covered by warranty.

**Normal Wear** - Like all mechanical devices, your unit is subject to wear even when properly maintained. This warranty does not cover repairs when normal use has exhausted the life of a part or the equipment. Maintenance and wear items such as filters, belts, cutting blades, and brake pads (engine brake pads are covered) are not covered by warranty due to wear characteristics alone, unless the cause is due to defects in material or workmanship.

**Stale Fuel** - In order to function correctly, this product requires fresh fuel that conforms to the criteria specified in the Operator's Manual. Damage caused by stale fuel (carburetor leaks, clogged fuel tubes, sticking valves, etc) is not covered by warranty.

\* Applies to Briggs and Stratton engines only. Warranty coverage of non-Briggs and Stratton engines is provided by the engine manufacturer.





# Specifications

*NOTE: Specifications are correct at time of printing and are subject to change without notice.*

## ENGINE

### 21 HP\* Briggs & Stratton

<b>Make</b>	Briggs & Stratton
<b>Model</b>	Twin Vanguard (385777)
<b>Horsepower</b>	21
<b>Displacement</b>	38.2 cu in. (627 cc)
<b>Electrical System</b>	Alternator: 12 volt, 16 amp Battery: 230 CCA
<b>Oil Capacity</b>	48 oz (1,4 L)

## CHASSIS

<b>Fuel Tank Cap</b>	Capacity: 2.5 Gallons (9.5 L)
<b>Rear Wheels</b>	Tire Size: 20 x 10.00-8 (2WD) Tire Size: 22 x 10.00-10 (4WD) Inflation Pressure: 6-8 psi (.41-.55 bar)
<b>Front Wheels</b>	Tire Size: 15 x 6.00-6 (2WD) Tire Size: 16 x 6.50-8 (4WD) Inflation Pressure: 15 psi (.8-1,0 bar)

## TRANSMISSION

### K46

<b>Type</b>	Hydrostatic Tuff Torq K46
<b>Hydraulic Fluid</b>	10w 30 Premium Engine Oil
<b>Capacity</b>	2.6 qt (2,5 L)
<b>Speeds</b>	Forward: 0-5.5 mph (0-8,8 km/h)
<b>@ 3400 rpm</b>	Reverse: 0-3.5 mph (0-5,6 km/h)
<b>Continuous Torque Output</b>	215 ft-lbs (291 Nm)
<b>Drawbar Rating</b>	440 lbs (200 kg)
<b>Maximum Weight on Axle</b>	584 lbs (265 kg)

### K464

<b>Type</b>	Hydrostatic Tuff Torq K464
<b>Hydraulic Fluid</b>	10w 50 Synthetic Engine Oil
<b>Capacity</b>	5.4 qt (5,1 L)
<b>Speeds</b>	Forward: 0-5.5 mph (0-8,8 km/h)
<b>@ 3400 rpm</b>	Reverse: 0-3.5 mph (0-5,6 km/h)
<b>Continuous Torque Output</b>	215 ft-lbs (291 Nm)
<b>Drawbar Rating</b>	440 lbs (200 kg)
<b>Maximum Weight on Axle</b>	584 lbs (265 kg)

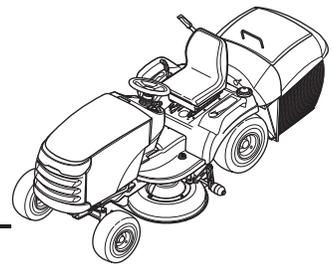
## DIMENSIONS

<b>Overall Length</b>	109 in. (277 cm)
<b>Length (Tractor Only)</b>	76 in. (193 cm)
<b>Overall Width</b>	37 in. (94 cm)
<b>Height</b>	At Top of Seat: 44 in. (112 cm)
<b>Weight (approx.)</b>	
<b>21HP Tractor</b>	707.7 lbs (321 kg)

*The gross power rating for individual gas engine models is labeled in accordance with SAE (Society of Automotive Engineers) code J1940 (Small Engine Power & Torque Rating Procedure), and rating performance has been obtained and corrected in accordance with SAE J1995 (Revision 2002-05). Torque values are derived at 3060 RPM; horsepower values are derived at 3600 RPM. Actual gross engine power will be lower and is affected by, among other things, ambient operating conditions and engine-to-engine variability. Given both the wide array of products on which engines are placed and the variety of environmental issues applicable to operating the equipment, the gas engine will not develop the rated gross power when used in a given piece of power equipment (actual "on-site" or net horsepower). This difference is due to a variety of factors including, but not limited to, accessories (air cleaner, exhaust, charging, cooling, carburetor, fuel pump, etc.), application limitations, ambient operating conditions (temperature, humidity, altitude), and engine-to-engine variability. Due to manufacturing and capacity limitations, Briggs & Stratton may substitute an engine of higher rated power for this Series engine.*

# Parts & Accessories

---



## Replacement Parts

Replacement parts are available from your authorized dealer. Always use genuine Simplicity Service Parts.

## Maintenance Items

Many convenient and helpful service and maintenance items are available from your authorized dealer. Some of these items include:

- |                   |                     |
|-------------------|---------------------|
| Engine Oil        | Tire Sealant        |
| Touch-Up Paint    | Degreaser/Degreaser |
| Grease Gun Kit    | Gas Stabilizer      |
| 8 oz. Grease Tube |                     |

Not for  
Reproduction



[www.SimplicityMfg.com](http://www.SimplicityMfg.com)



[www.snapper.com](http://www.snapper.com)



[www.MasseyLawn.com](http://www.MasseyLawn.com)

Briggs & Stratton Power Products Group, L.L.C.  
Copyright © 2010 Briggs & Stratton Corporation  
Milwaukee, WI USA. All Rights Reserved  
[www.BRIGGSandSTRATTON.com](http://www.BRIGGSandSTRATTON.com)

