



# Operator's Manual



## Broadmoor Series

| Mfg. No.   | Description                         |
|------------|-------------------------------------|
| 2691175-00 | Lawn Tractor and Mower Deck 44-Inch |
| 2691176-00 | Lawn Tractor and Mower Deck 50-Inch |
| 2691177-00 | Lawn Tractor and Mower Deck 50-Inch |



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## General Information

**Thank you** for purchasing this quality-built SIMPLICITY riding mower. We're pleased that you've placed your confidence in the SIMPLICITY brand. When operated and maintained according to the instructions in this manual, your SIMPLICITY product will provide many years of dependable service.

**This manual contains** safety information to make you aware of the hazards and risks associated with mowers and how to avoid them. Because Briggs & Stratton Power Products Group, LLC does not necessarily know all the applications this mower could be used for, it is important that you read and understand these instructions. **Save these original instructions for future reference.**

This product requires final assembly before use. Refer to the setup guide for instructions on final assembly procedures. Follow the instructions completely. If you need assistance with assembly, operation, or maintenance of the unit, please contact your local Authorized Simplicity Dealer or visit **SimplicityMfg.com** or call us at **1-800-837-6836**.

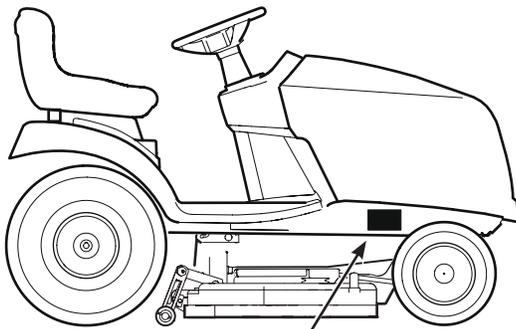
## Product Identification Tag



## Product Reference Data

**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.



**Product 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 |

The Illustrated Parts List for this machine can be downloaded from **SimplicityMfg.com**. Please provide model and serial number when ordering replacement parts.

# Operator Safety

## Important Safety Instructions

**SAVE THESE INSTRUCTIONS** - This manual contains important instructions that should be followed during the initial set-up, the operation, and the maintenance of the equipment. **Save these original instructions for future reference.**

## Safety Symbols and Meanings



 The safety alert symbol is used to identify safety information about hazards that can result in personal injury. A signal word (**DANGER**, **WARNING**, or **CAUTION**) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

 **DANGER** indicates a hazard which, if not avoided, will result in death or serious injury.

 **WARNING** indicates a hazard which, if not avoided, could result in death or serious injury.

 **CAUTION** indicates a hazard which, if not avoided, could result in minor or moderate injury.

**NOTICE** indicates a situation that **could result in damage to the product.**

 **WARNING**  
The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

 **WARNING**  
Certain components in this product and its related accessories contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling.

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

 **WARNING**  
 Running engine gives off carbon monoxide, an odorless, colorless, poison gas. Breathing carbon monoxide can cause headache, fatigue, dizziness, vomiting, confusion, seizures, nausea, fainting or death.

- Operate equipment **ONLY** outdoors.
- Keep exhaust gas from entering a confined area through windows, doors, ventilation intakes, or other openings.

## 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.

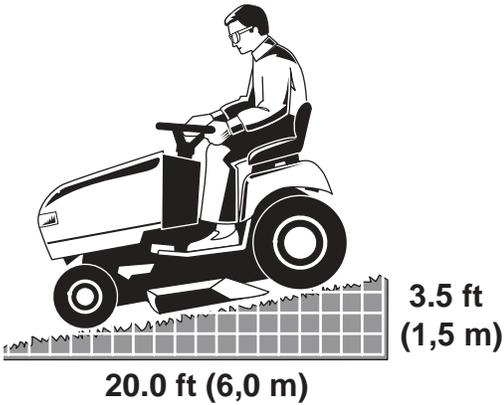
**DO NOT GIVE CHILDREN RIDES ON THIS UNIT!** This encourages them to come near the unit in the future while it is running, and they could be seriously hurt. They may then approach the unit for a ride when you are not expecting it, and you may run over them.

## 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.

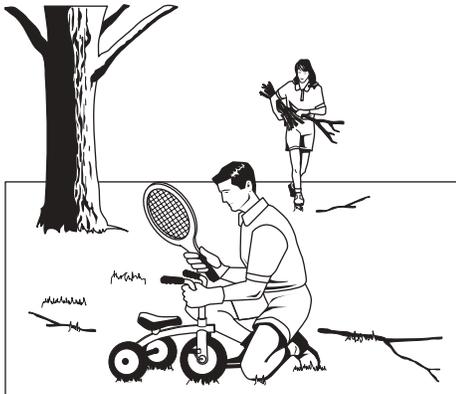
If you feel unsure about operating the unit on an incline, don't do it. It's not worth the risk.

## 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.

Do not allow anyone in the mowing 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. Fuel 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 and be sure to periodically test the safety system.





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 starter insert 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, disengage the PTO, stop the engine, and remove the starter insert.
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 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 if 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.

## 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.

## SERVICE AND MAINTENANCE

### Safe Handling of Gasoline

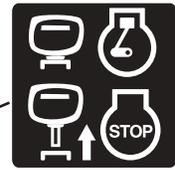
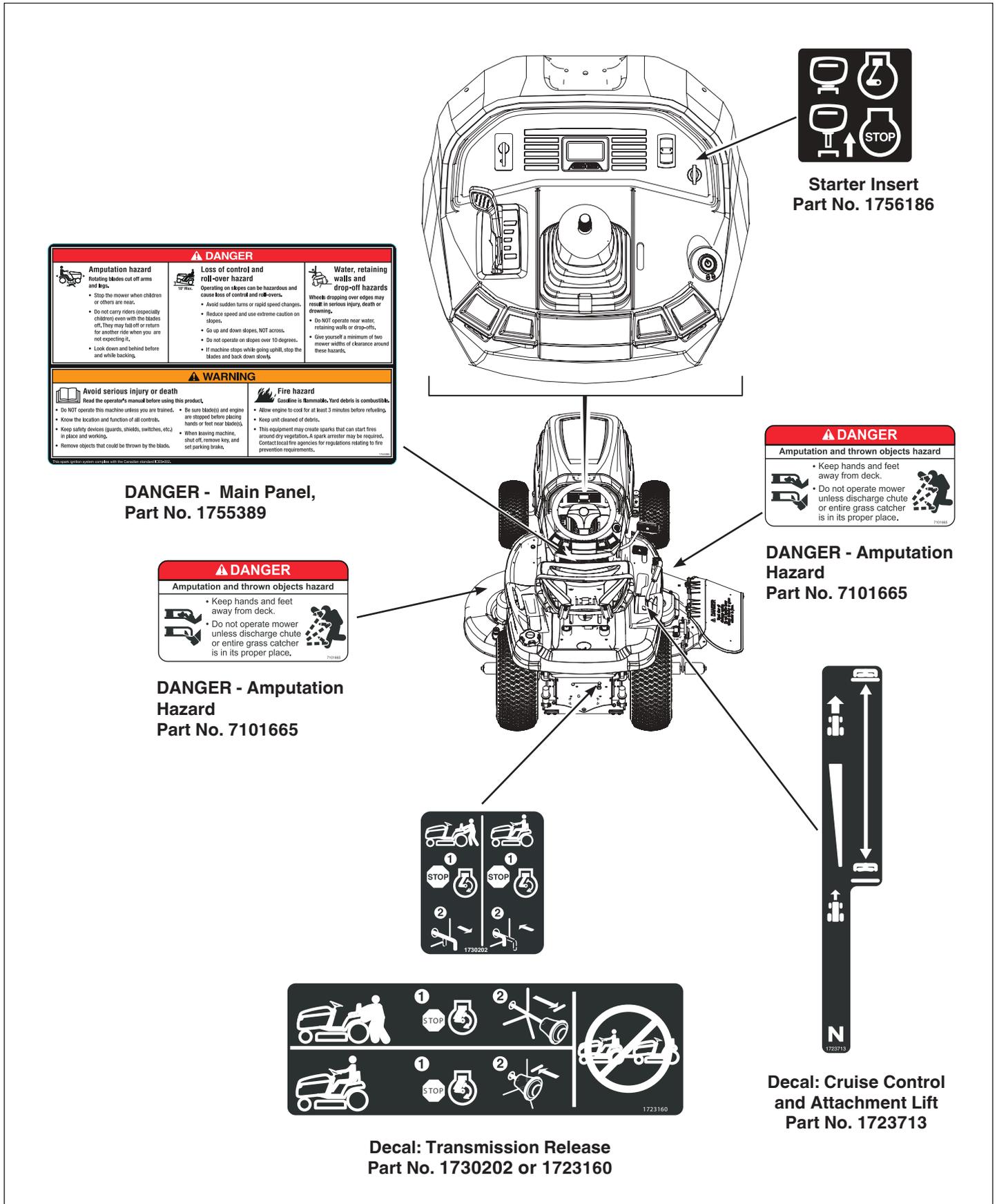
1. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
2. Use only approved gasoline containers.
3. Never remove the gas cap or add fuel with the engine running. Allow the engine to cool before refueling.
4. Never fuel the machine indoors.
5. Never store the machine or fuel container 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 starter insert, 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:** 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:** 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.

# Decal Locations (Safety and Operation)



**Starter Insert**  
Part No. 1756186

|  |   |   |
|--|---|---|
| <b>⚠ DANGER</b>  |   |   |
| <p><b>Amputation hazard</b><br/>Rotating blades cut off arms and legs.</p> <ul style="list-style-type: none"> <li>Stop the mower when children or others are near.</li> <li>Do not carry riders (especially children) even with the blades off. They may fall off or return for another ride when you are not expecting it.</li> <li>Look down and behind before and while backing.</li> </ul>                       | <p><b>Loss of control and roll-over hazard</b></p> <p>Operating on slopes can be hazardous and cause loss of control and roll-overs.</p> <ul style="list-style-type: none"> <li>Avoid sudden turns or rapid speed changes.</li> <li>Reduce speed and use extreme caution on slopes.</li> <li>Go up and down slopes, NOT across.</li> <li>Do not operate on slopes over 10 degrees.</li> <li>If machine stops while going uphill, stop the blades and back down slowly.</li> </ul> | <p><b>Water, retaining walls and drop-off hazards</b></p> <p>Wheels dropping over edges may result in serious injury, death or drowning.</p> <ul style="list-style-type: none"> <li>Do NOT operate near water, retaining walls or drop-offs.</li> <li>Give yourself a minimum of two mower widths of clearance around these hazards.</li> </ul> |
| <b>⚠ WARNING</b>   |   |   |
| <p><b>Avoid serious injury or death</b><br/>Read the operator's manual before using this product.</p> <ul style="list-style-type: none"> <li>Do NOT operate this machine unless you are trained.</li> <li>Know the location and function of all controls.</li> <li>Keep safety devices (guards, shields, switches, etc.) in place and working.</li> <li>Remove objects that could be thrown by the blade.</li> </ul> | <p><b>Fire hazard</b><br/>Gasoline is flammable. Yard debris is combustible.</p> <ul style="list-style-type: none"> <li>Allow engine to cool for at least 3 minutes before refueling.</li> <li>Keep unit cleaned of debris.</li> <li>This equipment may create sparks that can start fires around dry vegetation. A spark arrester may be required. Contact local fire agencies for regulations relating to fire prevention requirements.</li> </ul>                              |   |

**DANGER - Main Panel,**  
Part No. 1755389

**⚠ DANGER**

**Amputation and thrown objects hazard**

- Keep hands and feet away from deck.
- Do not operate mower unless discharge chute or entire grass catcher is in its proper place.

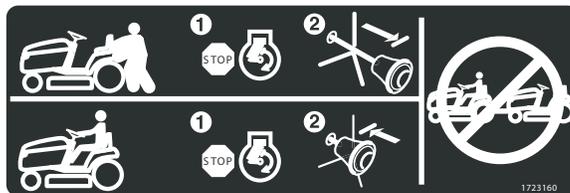
**DANGER - Amputation Hazard**  
Part No. 7101665

**⚠ DANGER**

**Amputation and thrown objects hazard**

- Keep hands and feet away from deck.
- Do not operate mower unless discharge chute or entire grass catcher is in its proper place.

**DANGER - Amputation Hazard**  
Part No. 7101665



**Decal: Transmission Release**  
Part No. 1730202 or 1723160



**Decal: Cruise Control and Attachment Lift**  
Part No. 1723713

Figure 1

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# Features and Controls

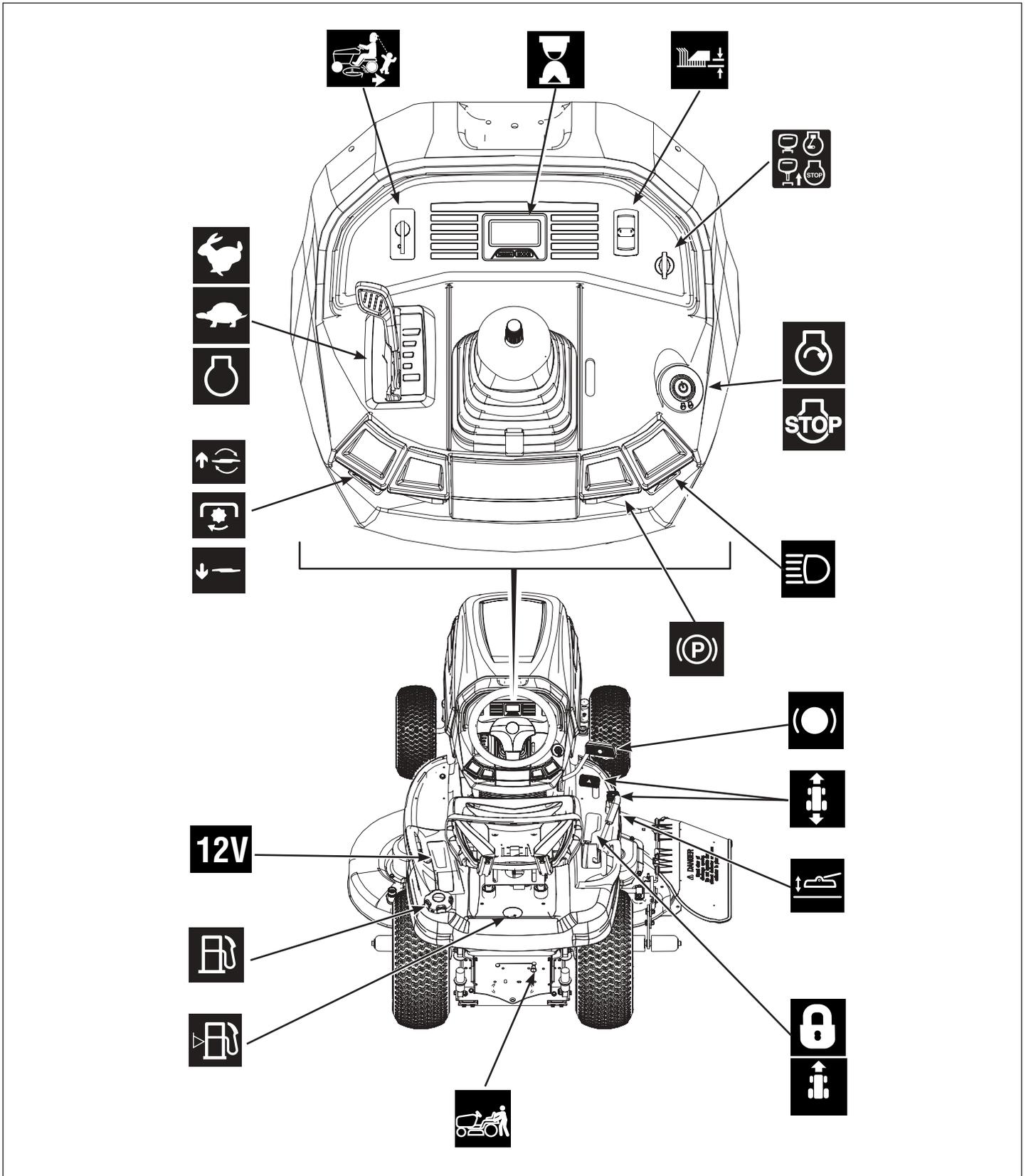


Figure 2



### Headlight Switch

This turns the tractor headlights on and off.



### Throttle Control

This controls the engine speed. Move the throttle control to the FAST position to increase engine speed and SLOW position to decrease engine speed. Always operate at full throttle.



### Height-of-Cut Switch

This adjusts the mower cutting height. Press the switch UP to raise the mowing cutting height and DOWN to lower the mower cutting height.



### Hourmeter

The hourmeter measures the number of hours the key has been in the RUN position. See **Hourmeter** section.



### Reverse Mowing Option (RMO)

This allows the operator to mow (or use other PTO driven attachments) while traveling in reverse. To activate, 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 engaged, the RMO needs to be reactivated if desired.



### Starter Insert

When not in use, remove starter insert and store out of the reach of children. Remove the starter insert to shutdown the engine.



### Start/Stop Push Button

- Press and hold the push button to start the engine.
- Press the push button when the engine is running to shut down the engine.



### Parking Brake

This locks the parking brake when the tractor is stopped. See **Parking Brake** section.



### Power Take-Off (PTO) Switch

The PTO (Power Take-Off ) switch engages and disengages the mower blade clutch. To engage the PTO, pull UP on the switch. Push DOWN to disengage.



**NOTE:** The operator must be seated firmly in the tractor seat for the PTO to function.



### Brake Pedal

Depressing the brake pedal applies the tractor brake.



### Ground Speed Pedals

The forward ground speed pedal controls the tractor's forward ground speed. The reverse ground speed pedal controls the tractor's reverse ground speed.



### Attachment Lift Control Lever

The mower deck lift lever raises and lowers the mower deck and has two positions: Transport and free-float. Set the lever to free-float for mowing. Set the lever to transport when using the tractor for non-mowing applications or when transporting the tractor. **DO NOT** engage the PTO with the mower in the raised transport position or you may damage the belt.



### Cruise Control

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.



### Transmission Release Lever

This releases the transmission so that the tractor can be pushed by hand.



### Fuel Tank

To remove the cap, turn counterclockwise.



### Fuel Level Gauge

Displays the fuel level in the tank.



### 12-Volt Power Outlet

The power outlet is 12V-DC. Accessory must be rated at 9 amps or less.

## Hourmeter

The hourmeter displays the total hours, trip hours, and digital clock (see Figure 3).

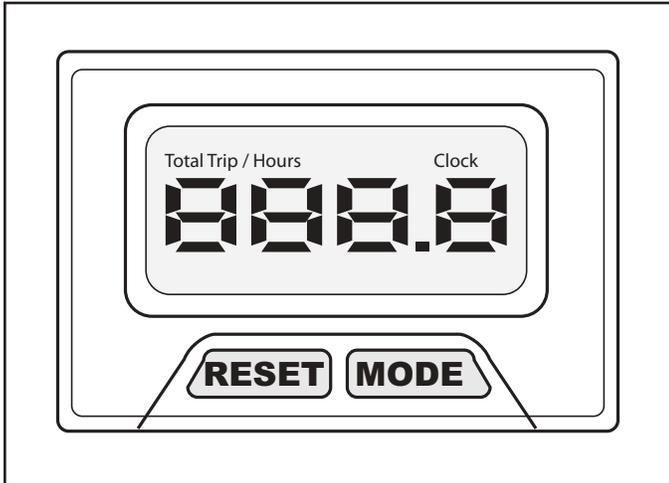


Figure 3

### Display Total Hours, Trip Hours, and Clock

**NOTE:** Whenever you start up the unit, the Total Hours are displayed. The Total Hours will automatically reset to 0 after 999.9.

1. Press MODE for less than 1 second to display the Trip Hours.
2. Press RESET for greater than 3 seconds to reset the Trip Hours to 0.
3. Press MODE for less than 1 second to display the Clock (see **Set the Clock** section).
4. Press MODE for less than 1 second to return to Total Hours.

### Set the Clock

1. Press MODE for greater than 3 seconds. The hours will flash on the display.
2. Press RESET to adjust the hours.
3. Press MODE for less than 1 second to save the setting. The minutes will flash on the display.
4. Press RESET to adjust the minutes.
5. Press MODE for less than 1 second to save the setting.

## 12-Volt Power Outlet

The 12-volt accessory plug is located in the left side pod. It can be used to power small electronic devices. The accessory must be rated at 9 amps or less.

**NOTICE:** 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.

## Parking Brake

Use the parking brake control to engage or disengage the parking brake when the tractor is stopped (**Features and Controls**).

**Engage the Parking Brake** - To engage the parking brake, fully depress the brake pedal, pull UP on the parking brake control, and release the brake pedal.

**Disengage the Parking Brake** - To disengage the parking brake, fully depress the brake pedal, press DOWN on the parking brake control, and release the brake pedal.

## Automatic Controlled Traction

### What is Automatic Controlled Traction?

Automatic Controlled Traction (ACT) is an exclusive feature of our transmissions that provides improved traction. ACT applies a preset amount of torque to both rear wheels even if one starts slipping (a transmission without ACT will lose traction completely if one rear wheel starts slipping). This preset torque is just enough to provide additional traction, and still allow the wheels to turn at different speeds in a tight turn without damaging the lawn.

### What to Expect from Your ACT Tractor

For the most part, while using your tractor you will not notice ACT working, and you will simply become accustomed to increased traction an ACT transmission provides.

Under certain circumstances the ACT system limit can be exceeded, and one of the rear wheels may slip (for instance if trying to turn up a hill while accelerating). This is normal. If you start to lose traction, do not speed up. Instead, slow to a stop, straighten the steering wheel, and slowly accelerate. Stopping the tractor allows the transmission to regain more traction.

## General Operating Safety

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



### WARNING

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

## Safety Interlock System Tests

This unit is equipped with a Safety Interlock System. Do not attempt to bypass or tamper with the switches/devices.

### Test 1 — Engine should NOT crank if:

- PTO switch is ON, OR
- Brake pedal is NOT fully depressed (parking brake OFF), OR
- Operator is NOT in seat.

### Test 2 — Engine SHOULD crank and start if:

- PTO switch is OFF, AND
- Operator is sitting in seat, AND
- Brake pedal is fully depressed (parking brake ON).

### Test 3 — Engine should SHUT OFF if:

- Operator rises off seat with PTO engaged, OR
- Operator rises off seat with brake pedal NOT fully depressed (parking brake OFF).

### Test 4 — Check Mower Blade Stopping Time

Mower blades and mower drive belt should come to a complete stop within five seconds after electric PTO switch is turned OFF. If mower drive belt does not stop within five seconds, see an authorized dealer.

### Test 5 — Reverse Mow Option (RMO) Check

- Engine should shut off if reverse travel is attempted if the PTO has been switched on and RMO has not been activated.
- RMO light should illuminate when RMO has been activated.



### 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 the RMO if children are present. Children are often attracted to the unit and the mowing activity.

## Check Tire Pressure

Tires should be checked periodically to provide the optimum traction and to guarantee the best cut (see Figure 4).

**NOTE:** These pressures may differ slightly from the “Maximum Inflation” stamped on the side walls of the tires.

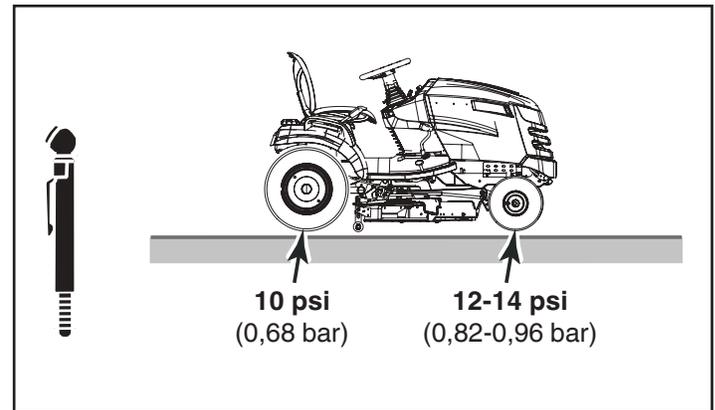
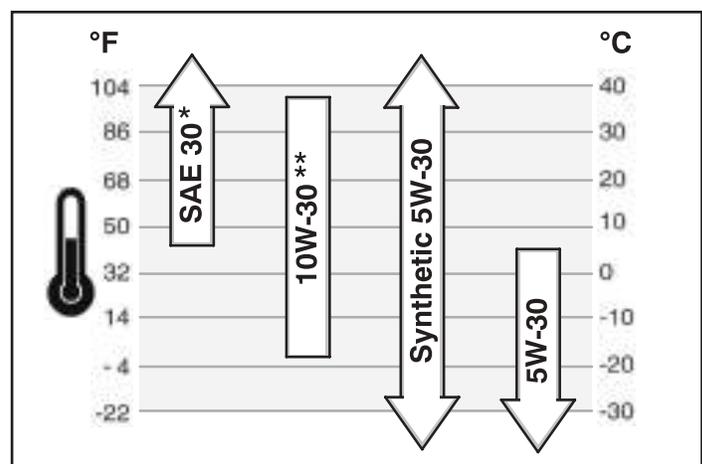


Figure 4

## Oil Recommendations

We recommend the use of Briggs & Stratton Warranty Certified oils for best performance. Other high-quality detergent oils are acceptable if classified for service SF, SG, SH, SJ or higher. Do not use special additives.

Outdoor temperatures determine the proper oil viscosity for the engine. Use the chart to select the best viscosity for the outdoor temperature range expected.



\* Below 40°F (4°C) the use of SAE 30 will result in hard starting.

\*\* Above 80°F (27°C) the use of 10W-30 may cause increased oil consumption. Check oil level more frequently.

## Check and Add Engine Oil

1. Place the tractor on a level surface (see Figure 5).

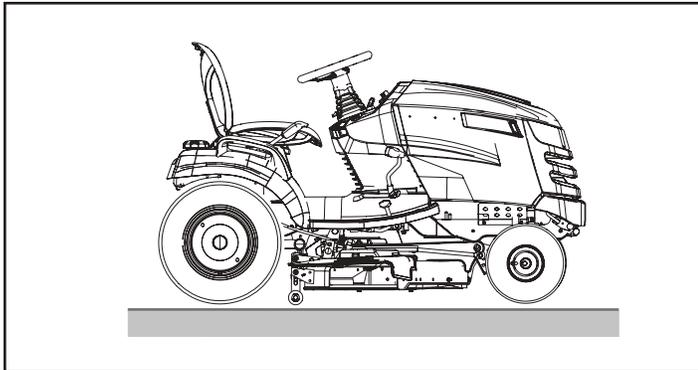


Figure 5

2. Stop the engine and remove starter insert.
3. Clean the oil fill area of any debris and remove.
4. Remove the dipstick and wipe with a clean cloth (see Figure 6).
5. Fully insert the dipstick.
6. Remove the dipstick and check the oil level. It should be at the FULL mark on the dipstick.
7. If FULL, insert the dipstick and tighten securely. If LOW, add oil slowly into the engine oil fill tube (see **Oil Recommendations**). **Do not overfill.** After adding oil, wait one minute, then check the oil level.

### Oil Pressure

If the oil level is below the ADD mark, add oil until it reaches the FULL mark. Start the engine and check for proper pressure before continuing to operate.

If the oil level is between the ADD and FULL marks, **do not start** the engine. Contact an authorized dealer to have the oil pressure problem corrected.

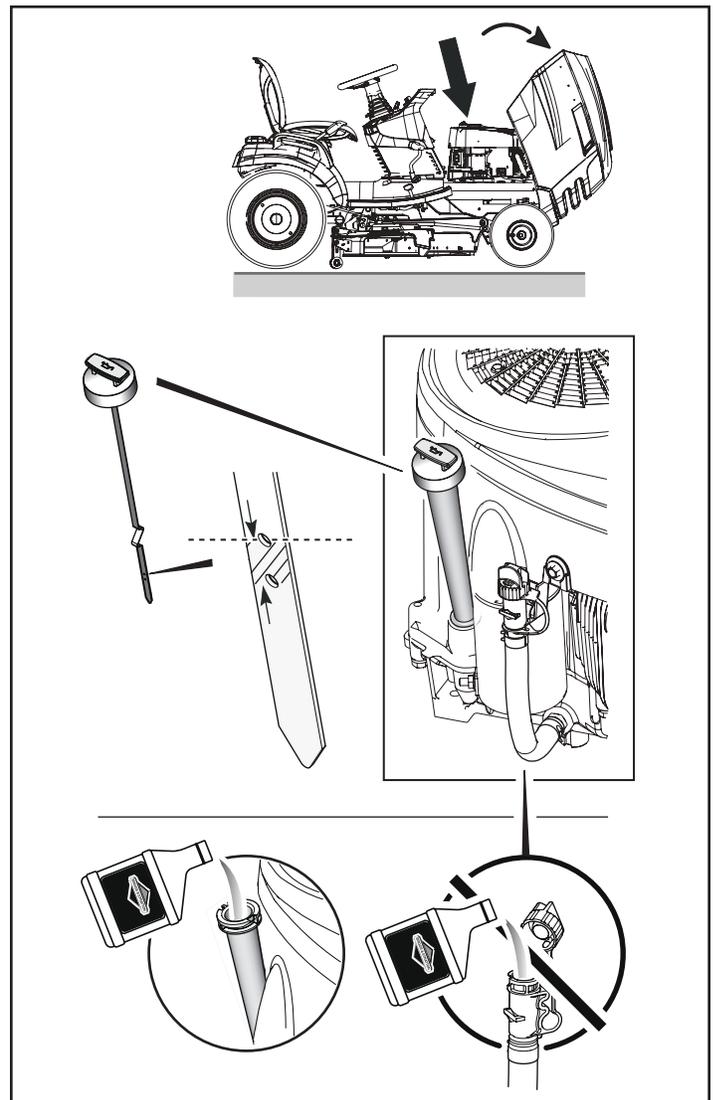


Figure 6

### Fuel Recommendations

**Fuel must meet these requirements:**

- Clean, fresh, unleaded gasoline.
- A minimum of 87 octane / 87 AKI (91 RON). For high altitude use, see below.
- Gasoline with up to 10% ethanol (gasohol) is acceptable.

**NOTICE:** Do not use unapproved gasolines, such as E15 and E85. Do not mix oil in gasoline or modify the engine to run on alternate fuels. Use of unapproved fuels will cause damage to engine components, which will not be covered under warranty.

To protect the fuel system from gum formation, mix a fuel stabilizer into the fuel. See **Storage**. All fuel is not the same. If starting or performance problems occur, change fuel providers or change brands. This engine is certified to operate on gasoline. The emissions control system for this engine is EM (Engine Modifications).

## High Altitude

At altitudes over 5,000 feet (1524 meters), a minimum 85 octane / 85 AKI (89 RON) gasoline is acceptable. For carbureted engines, high altitude adjustment is required to remain emissions compliant. Operation without this adjustment will cause decreased performance, increased fuel consumption, and increased emissions. Contact a Briggs & Stratton Authorized Service Dealer for high altitude adjustment information.

Operation of the engine at altitudes below 2,500 feet (762 meters) with the high altitude adjustment is not recommended. For Electronic Fuel Injection (EFI) engines, no high altitude adjustment is necessary.

## Adding Fuel



### WARNING

Fuel and its vapors are extremely flammable and explosive.  
Fire or explosion can cause severe burns or death.

### When Adding Fuel

- Turn engine off and let engine cool at least 3 minutes before removing the fuel cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
- If fuel spills, wait until it evaporates before starting engine.

1. Clean the fuel cap area of dirt and debris. Remove the fuel cap (**A**, Figure 7). Also see **Features and Controls** section.
2. Fill the fuel tank (**B**) with fuel. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck (**C**).
3. Reinstall the fuel cap.

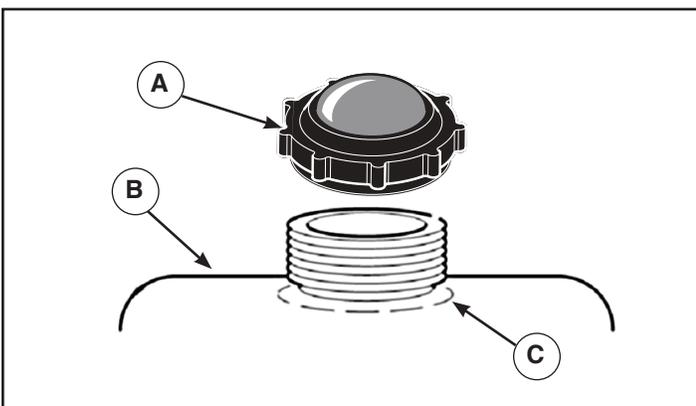


Figure 7

## Starting the Engine



### WARNING

Fuel and its vapors are extremely flammable and explosive.  
Fire or explosion can cause severe burns or death.

### When Starting Engine

- Ensure that spark plug, muffler, fuel cap, and air cleaner (if equipped) are in place and secured.
- Do not crank engine with spark plug removed.
- If engine floods, set choke (if equipped) to OPEN/RUN position, move throttle (if equipped) to FAST position and crank until engine starts.



### WARNING

Engines give off carbon monoxide, an odorless, colorless, poisonous gas.  
Breathing carbon monoxide can cause nausea, fainting, or death.  
Fire or explosion can cause severe burns or death.

- Start and run engine outdoors.
- Do not start or run engine in enclosed area, even if doors or windows are open.

1. Check the oil level (see **Check and Add Engine Oil**).
2. Make sure the starter insert is in place before starting engine.
3. Engage the parking brake. Fully depress the brake pedal, pull UP on the parking brake control, and release the brake pedal.
4. Disengage PTO switch by pushing DOWN.
5. Set the throttle control to the FAST position.
6. Press the start/stop push button and release as soon as the engine starts.

**NOTE:** If the engine does not start after repeated attempts, go to **BRIGGSandSTRATTON.COM** or call 1-800-233-3723 (in USA).

7. After the engine starts, move the throttle control to half speed. Warm up the engine by running it for at least 30 seconds.
8. Set throttle control to the FAST position.

**NOTE:** In the event of an emergency, the tractor/engine can be immediately stopped by pressing the start/stop push button or pulling out the starter insert. For normal shut down, see **Stopping the Tractor and Engine** section.

## 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 (see **Features and Controls**).
2. Engage the parking brake. Fully depress the brake pedal, pull UP on the parking brake control, and release the brake pedal.
3. Make sure the PTO switch is disengaged.
4. Start the engine (see **Starting the Engine**).
5. Disengage the parking brake. Fully depress the brake pedal, press DOWN on the parking brake control, 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 cutting height to the desired level using the mower cutting height lever (see **Features and Controls**).
2. Engage the parking brake. Make sure the PTO switch is disengaged.
3. Start the engine (see **Starting the Engine**).
4. Set the throttle control to the FAST position.
5. Engage the PTO to activate the mower blades.
6. Disengage the parking brake then begin mowing.
7. When finished mowing, shut off the PTO.
8. Press the start/stop push button to STOP the engine (see **Stopping the Tractor and Engine**).



### 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 may be used by other vehicles. Sudden loss of drive could create a hazard.

## Reverse Mowing Option (RMO™)



### 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 the RMO if children are present. Children are often attracted to the unit and the mowing activity.

The Reverse Mowing Option (RMO) allows the operator to mow in reverse (see **Features and Controls**). To activate, 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 engaged the RMO needs to be reactivated if desired. The key should be removed to restrict access to the RMO.

## Pushing the Tractor by Hand

1. Disengage the PTO and turn the engine off.
2. Pull the transmission release (**B**, Figure 8 or 9) back approximately 2-3/8" (6 cm) to lock into released position.
3. The tractor can now be pushed by hand.



### WARNING

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

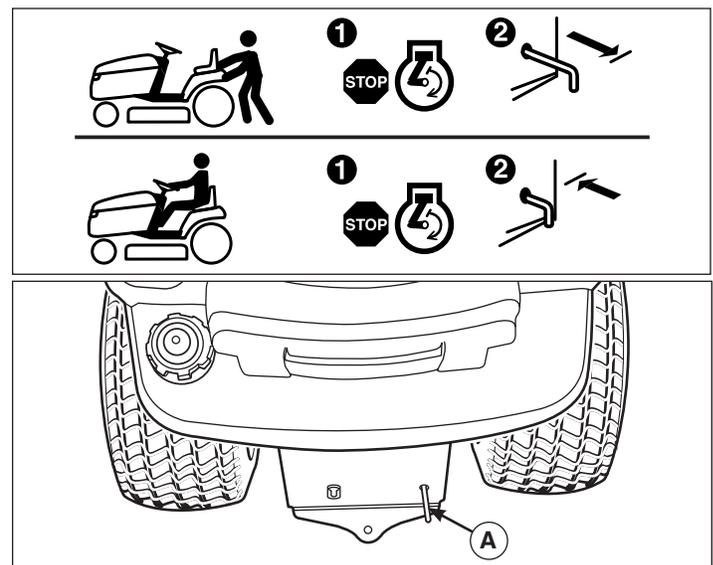


Figure 8

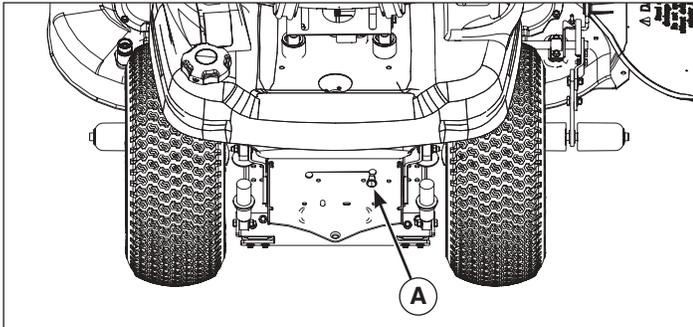
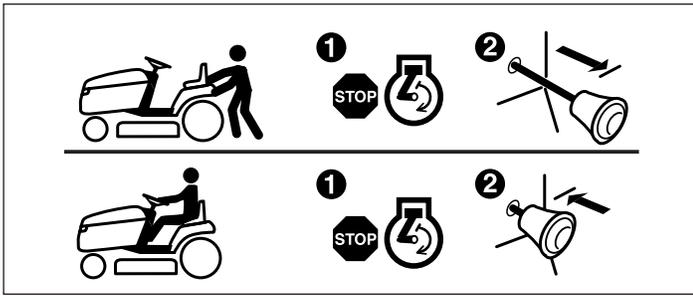


Figure 9

## Stopping the Tractor and Engine



### WARNING



Fuel and its vapors are extremely flammable and explosive.



Fire or explosion can cause severe burns or death.

- Do not choke the carburetor to stop the engine.

1. Release the ground speed pedals to return to the **NEUTRAL** position (see **Features and Controls**).
2. While still on the lawn, disengage the PTO switch, then wait for all moving parts to stop.
3. Move the throttle control to the **SLOW** position.
4. Press the start/stop push button to **STOP** the engine.
5. Remove the starter insert and keep out of the reach of children.
6. Engage the parking brake. Fully depress the brake pedal, pull **UP** on the parking brake control, and release the brake pedal.

**NOTE:** In the event of an emergency, the tractor/engine will stop immediately by pressing the on/off push button or pulling out the starter insert.

# Maintenance

## Maintenance Chart

| 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 tire pressure                        |
| Check mower blade stopping time            |
| Check tractor and mower for loose hardware |
| <b>Every 50 Hours or Annually *</b>        |
| Clean battery and cables                   |
| Check tractor brakes                       |
| <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                          |
| <b>Every 8 Hours or Daily</b>              |
| Check engine oil level                     |
| <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.

## Emissions Control

Maintenance, replacement, or repair of the emissions control devices and systems may be performed by any non-road engine repair establishment or individual. However, to obtain "no charge" emissions control service, the work must be performed by a factory authorized dealer. See the ***Emissions Warranty***.

## Check Tire Pressure

Tires should be checked periodically to provide the optimum traction and to guarantee the best cut (see Figure 4).

**NOTE:** These pressures may differ slightly from the "Maximum Inflation" stamped on the side walls of the tires.



### WARNING

Unintentional sparking can result in fire or electric shock.

Unintentional start-up can result in entanglement, traumatic amputation, or laceration.

### Before performing adjustments or repairs:

- Disconnect the spark plug wire and keep it away from the spark plug.
- Disconnect battery at negative terminal (only engines with electric start).
- Use only correct tools.
- Do not tamper with governor spring, links, or other parts to increase engine speed.
- Replacement parts must be of the same design and installed in the same position as the original parts. Other parts may not perform as well, may damage the unit, and may result in injury.
- Do not strike the flywheel with a hammer or hard object because the flywheel may shatter during operation.

## Cleaning the Battery and Cables

### 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.

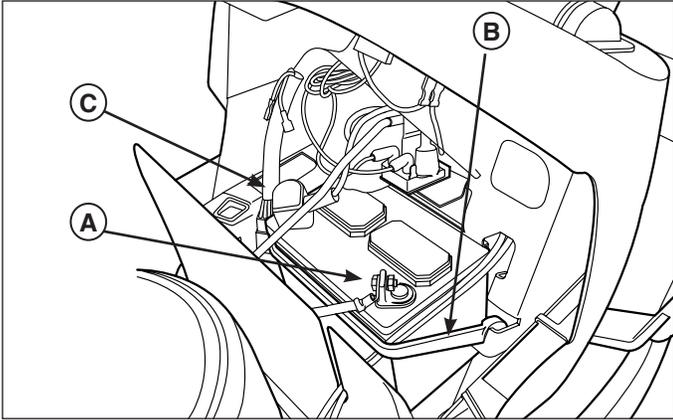


Figure 10

1. Disconnect the cables from the battery, negative cable first (**A**, Figure 10).
2. Remove the battery hold-down strap (**B**) 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 strap.
6. Reattach the battery cables, positive cable first (**C**).
7. Coat the cable ends and battery terminals with petroleum jelly or non-conducting grease.

## Charging the Battery

### 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 and Cables**.

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. Do not charge at a rate higher than 10 amps.

## Check Mower Blade Stopping Time

### WARNING

If the mower blade does not come to a complete stop within 5 seconds, the clutch must be adjusted. Do not operate the machine until the proper adjustment has been performed by an authorized dealer.

Check the mower blade for proper function (see **Safety Interlock System Tests**). The blade should stop rotating in 5 seconds or less after moving the blade control to the OFF position.

## Changing the Engine Oil



### WARNING

Fuel and its vapors are extremely flammable and explosive.  
Fire or explosion can cause severe burns or death.

1. Run engine until warm.
2. Place the tractor on a level surface (see Figure 5).
3. Stop the engine and remove starter insert.
4. Clean oil fill and filter areas of any debris. Remove dipstick and lay on clean cloth (see Figure 6).
5. Disconnect the oil drain hose (see Figure 11). Carefully remove cap and lower hose into an approved container. After the oil has drained, install cap tightly, then attach the hose to the side of the engine.
6. Remove the oil filter and dispose of properly.

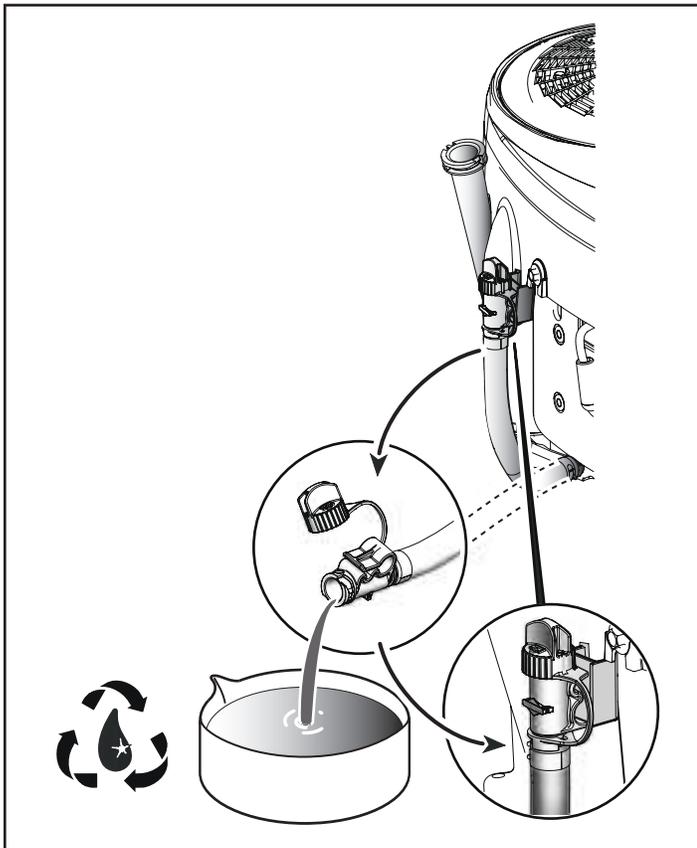


Figure 11

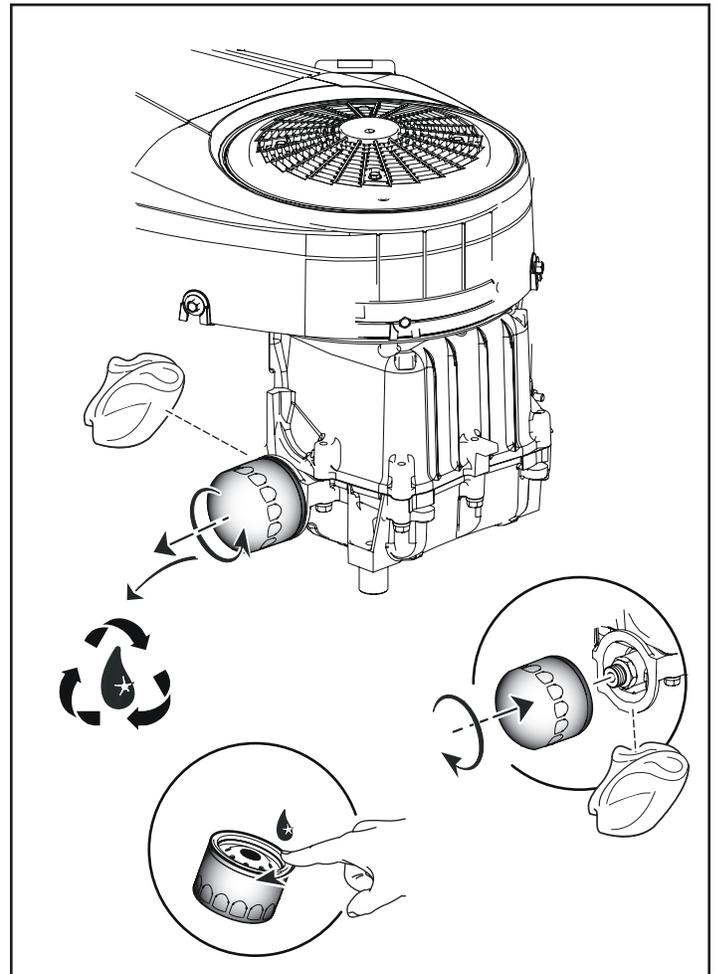


Figure 12

7. Lightly lubricate the oil filter gasket with fresh, clean oil (see Figure 12).
8. Install the oil filter by hand until the gasket contacts the oil filter adapter, then tighten the oil filter 1/2 to 3/4 turns.
9. Add oil (see **Check and Add Engine Oil**).

## Servicing the Air Filter Assembly



### WARNING

Fuel and its vapors are extremely flammable and explosive.  
Fire or explosion can cause severe burns or death.

- Never start or run the engine with the air cleaner assembly or air filter removed..

**NOTICE:** Do not use pressurized air or solvents to clean the filter. Pressurized air can damage the filter and solvents will dissolve the filter.

1. Unscrew and remove cover (A, Figure 13).
2. Remove air cleaner assembly (B) and disassemble.
3. Clean up any possible debris that might get into the carburetor throat (C).

**NOTE:** Replace pre-cleaner/cartridge when dirty or damaged.

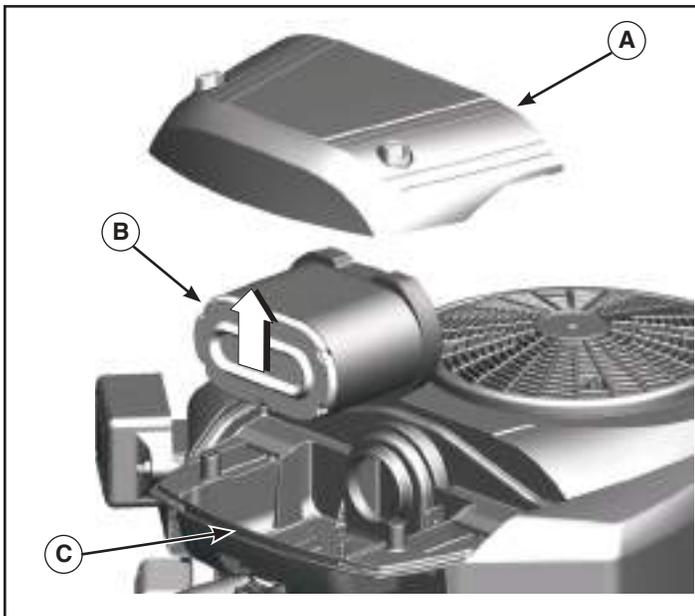


Figure 13

### Pre-Cleaner Cleaning

1. Wash in soapy water with liquid detergent.
2. Squeeze dry in clean cloth.

### Cartridge Cleaning

Tap gently on flat surface to remove light debris. Do not attempt to clean cartridge.

## Servicing the Spark Plugs



### WARNING

Unintentional sparking can result in fire or electric shock.  
Unintentional start-up can result in entanglement, traumatic amputation, or laceration.

### When testing for spark:

- Use approved spark plug tester.
- Do not check for spark with spark plug removed.

**CAUTION:** Spark plugs have different heat ranges. It is important that the correct spark plug is used, otherwise, engine damage can occur.

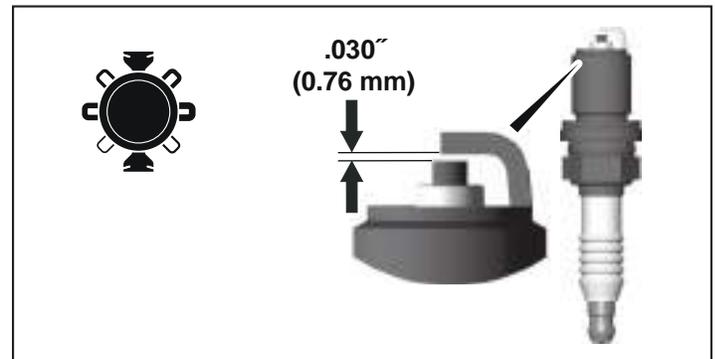
### Clean Spark Plug

Clean with wire brush and sturdy knife. Do NOT use abrasives.

### Check Spark Plug Gap

Use a spark plug feeler gauge to check the gap between the two electrodes. When the gap is correct, the gauge will drag slightly as you pull it through the gap.

If necessary, use the spark plug gauge to adjust the gap by gently bending the curved electrode without touching the center electrode or the porcelain.



### Install Spark Plug

Finger tighten, then tighten with wrench.

- 180 in-lbs (20 Nm), OR
- 1/2 turn when reinstalling the original spark plug.  
1/4 turn when installing a new spark plug.



## Washing the Mower Deck

**NOTE:** The washout port allows you to connect a typical garden hose to the left-hand side of the mower deck to remove grass and debris from the underside.

### **WARNING**

Before running the mower, make sure the hose is properly connected and does not come into contact with the blades. When the mower is running and the blades are engaged, the person cleaning the mower deck must be in the operator position, and there are no bystanders. Failure to follow these precautions may result in serious injury or death.

1. Place the lawn tractor on a smooth level surface.
2. Attach the quick disconnect (**A**, Figure 14) to garden hose (**B**) and connect to washout port (**C**) on mower deck.
3. Turn the mower on and place in the highest cutting position.
4. Run water to remove grass and debris from underside of mower deck.
5. Turn the mower off.
6. Remove the garden hose and quick disconnect from the washout port when completed.

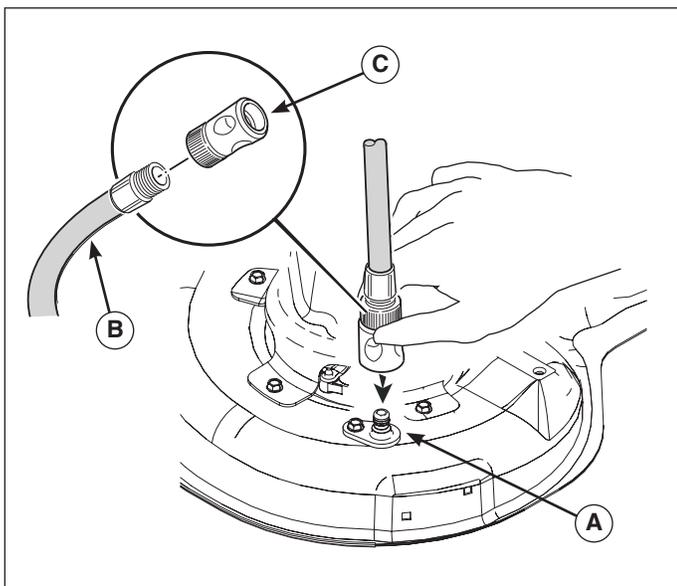


Figure 14

## Removing the Mower Deck

### **WARNING**

Engage parking brake, disengage PTO, stop engine and remove key before attempting to install or remove the mower.

1. Park tractor on a hard, level surface such as a concrete floor.
2. Turn off PTO.
3. Place mower in the lowest cutting position.
4. Turn off engine and remove the key.
5. Apply the parking brake.
6. Disconnect the cutting height mower wire harness plug.
7. Place the attachment lift in the down position.
8. Disconnect lift chain (**A**, Figure 15) from lift hook (**B**) on tractor. Repeat on other side.

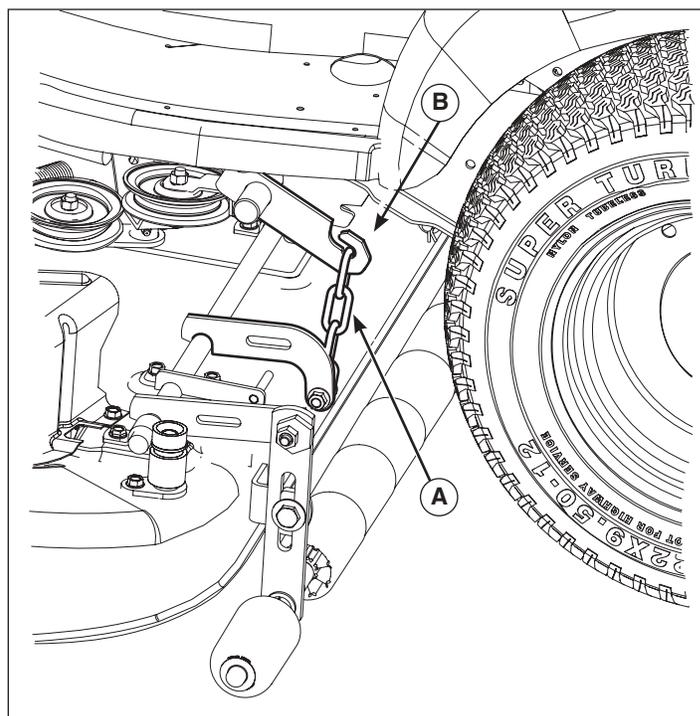


Figure 15

9. Move idler arm (**A**, Figure 16) to remove belt tension. Remove belt (**B**) from the PTO pulley.

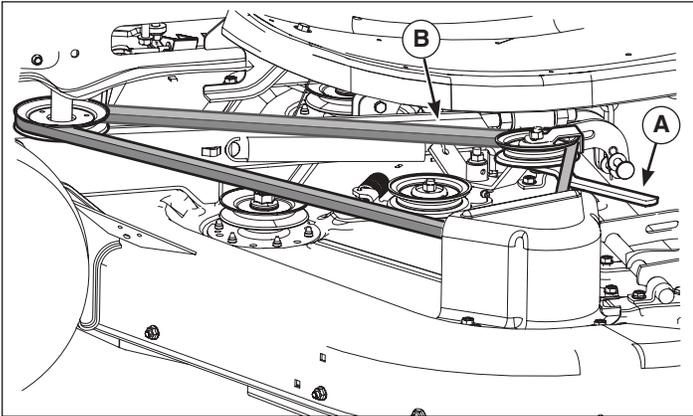


Figure 16

10. Turn the wheels straight.
11. Pull back on spring-loaded lever (**A**, Figure 17) and lift mower hitch off of the tractor hitch brackets.
12. Turn wheels fully left, and slide mower deck out from under the right side of the tractor.

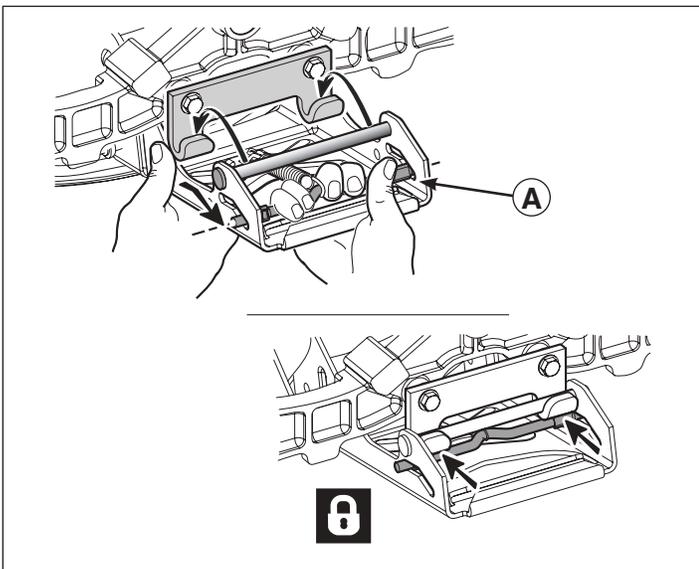


Figure 17

## Installing the Mower Deck

1. Park tractor on a hard, level surface such as a concrete floor.
2. Turn off PTO.
3. Turn off engine and remove key.
4. Apply parking brake. Turn wheels fully to the left.
5. Place the mower lift lever in the down position. Slide mower deck under right side of tractor so that mower hitch is aligned with the front tractor hitch.
6. Turn wheels straight.
7. Pull back on the spring-loaded lever (**A**, Figure 17) while lifting up on the mower hitch. Install mower hitch onto tractor hitch brackets.

**NOTE:** When properly installed, the spring-loaded lever should seat fully underneath the brackets.

8. Connect lift chain (**A**, Figure 15) onto lift hook (**B**) on tractor. Repeat on other side.
9. Move idler arm (**A**, Figure 16) to remove belt tension. Install belt (**B**) onto the PTO pulley.
10. Reconnect the cutting height motor wire harness to the tractor harness.

## PTO Belt Replacement

**NOTICE:** To avoid damaging belts, do not pry belts over pulleys.

1. Park the tractor on a smooth, level surface such as a concrete driveway. Disengage the PTO, turn off the engine, and lock the parking brake. Remove the key.
2. Remove mower deck (see **Removing the Mower Deck**).
3. Remove screws and cover for left blade spindle.
4. Move idler arm (**A**, Figure 16) to remove belt tension. Remove belt from the PTO pulley (**B**).
5. Remove the old belt and replace with a new one. Pull the idler pulley lever to install the belt on the idler pulley. Make sure the V-side of the belt runs in the pulley grooves.
6. Reinstall screws and cover for left blade spindle.
7. Install mower deck (see **Installing the Mower Deck**).

## Leveling the Mower

### WARNING

For your personal safety, do not handle the sharp mower blades with bare hands. Careless or improper handling of blades may result in serious injury.

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 **Check Tire Pressure** section.

### Side-To-Side Leveling

1. With the mower installed, place the tractor on a smooth, level surface such as a concrete floor. Turn the front wheels straight forward.
2. Check for bent blades and replace if necessary.
3. Place the mower in mid-cut position. Arrange the outside mower blades so that they are pointing from side-to-side.
4. Measure the distance between the outside tips of each blade and the ground. If there is more than 1/8" (3 mm) difference between the measurements on each side, proceed to Step 5. If the difference is 1/8" (3 mm) or less, proceed to **Front-To-Back Leveling**.
5. Loosen the outside nut (**A**, Figure 18). Turn the eccentric nut (**B**) to raise or lower left-hand side of mower. When mower is level, hold the eccentric nut while tightening the outside nut.

**NOTE:** When using a turbo collection system, raise the discharge side of the mower approximately 1/4" (6 mm) to compensate for turbo assembly weight. Check the level of the cut grass and adjust the 1/4" (6 mm) measurement as necessary for a smooth, even cut.

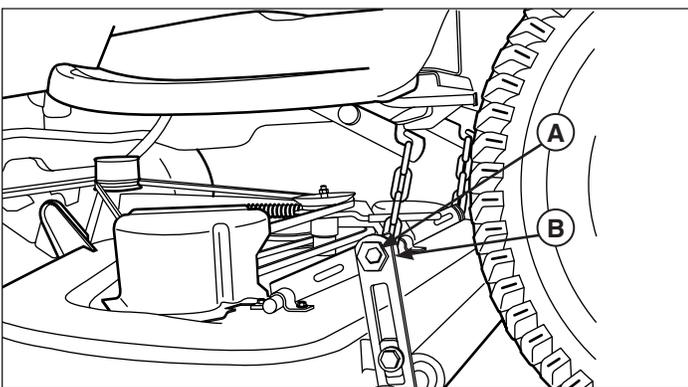


Figure 18

### Front-To-Back Leveling

1. Arrange the blades so they face front-to-back.
2. Measure the distance from the ground to the front tip of the center blade, and from the ground to rear tips of left-hand and right-hand blades.

Front tip of the center blade should be 1/4" (6 mm) higher than rear tips of left-hand and right-hand blades. If not, proceed with Steps 3 and 4.

3. To raise front of mower deck, loosen front nut (**A**, Figure 19) and turn rear nut (**B**) against bracket. To lower front of mower deck, loosen rear nut and the bracket will move backwards to lengthen rod.
4. Re-check the blade measurement then tighten the front nut against the bracket to secure.

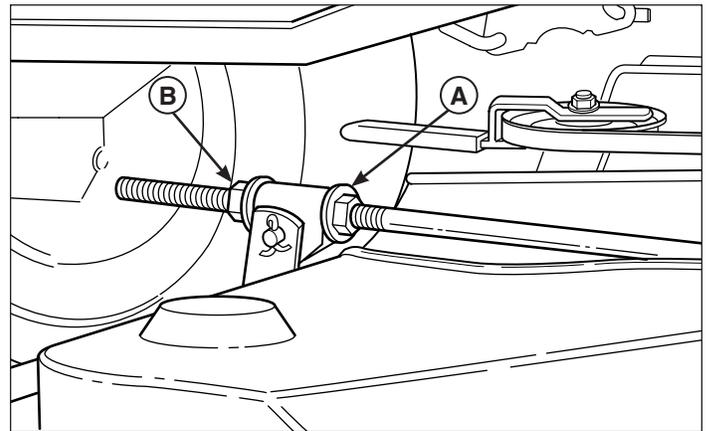


Figure 19

## Servicing the Mower Blades

### **WARNING**

For your personal safety, do not handle the sharp mower blades with bare hands. Careless or improper handling of blades may result in serious injury.

### **WARNING**

For your personal safety, blade mounting capscrews must each be installed with a spring washer, then securely tightened. Torque blade mounting capscrew to 50-60 ft-lbs (68-81 Nm).

**NOTE:** Mower blades must be aligned perpendicular to each other.

1. Remove mower deck (see **Removing the Mower Deck**).
2. To remove blade, use a block of wood to prevent blade rotation while loosening the capscrew (see Figure 20).
3. Remove capscrew (**A**, Figure 21), spring washer (**B**) and blade.
4. Use a file to sharpen blade to a fine edge. If blade is damaged, it must be replaced.
5. Balance the blade as shown in Figure 22. Place the center hole of the blade on a nail lubricated with a drop of oil. A balanced blade will remain level.
6. Reinstall the blade (Figure 21) with the airlifts pointing up toward the mower deck as shown.
7. Reinstall the spring washer (**B**) and capscrew (**A**). Use a wooden block (**C**) to prevent blade rotation while tightening the capscrew (**A**) to 50-60 ft-lbs (68-81 Nm).
8. Install mower deck (see **Installing the Mower Deck**).

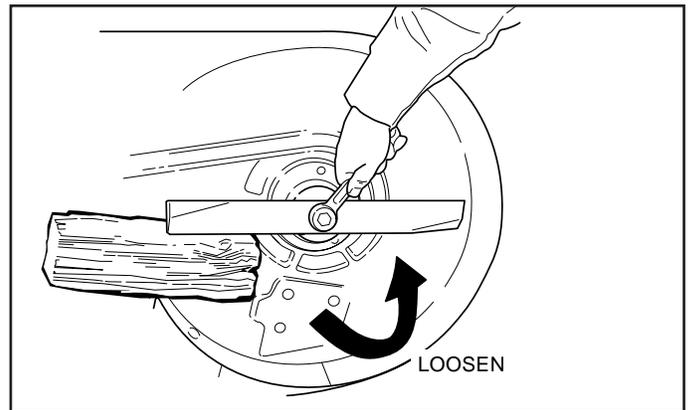


Figure 20

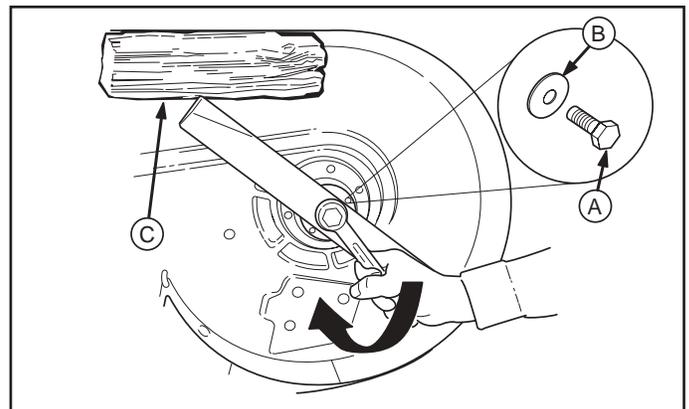


Figure 21

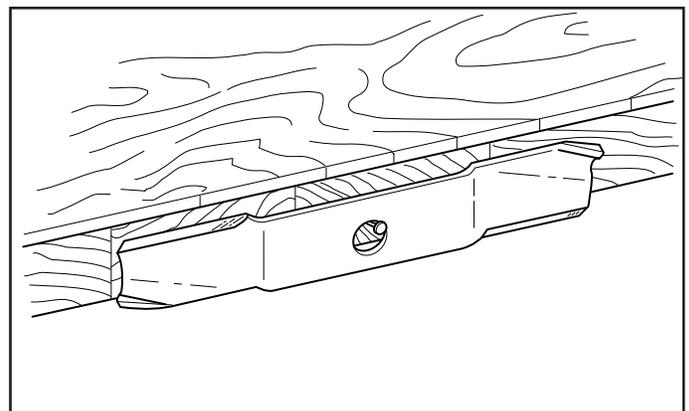


Figure 22

## Storage



### WARNING

Never store the unit (with fuel) in an enclosed, unventilated 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.

#### When Storing Fuel Or Equipment With Fuel in Tank

- Store away from furnaces, stoves, water heaters, or other appliances that have pilot lights or other ignition sources because they can ignite fuel vapors.

## Equipment

Disengage the PTO, set the parking brake, and remove the key.

Battery life will be increased if it is removed. Put in a cool, dry place and keep fully charged during storage. If the battery is left in the unit, disconnect the negative cable.

## Fuel System

Fuel can become stale when stored over 30 days. Stale fuel causes acid and gum deposits to form in the fuel system or on essential carburetor parts. To keep fuel fresh, use **Briggs & Stratton® Advanced Formula Fuel Treatment & Stabilizer**, available wherever Briggs & Stratton genuine service parts are sold.

There is no need to drain gasoline from the engine if a fuel stabilizer is added according to instructions. Run the engine for 2 minutes to circulate the stabilizer throughout the fuel system before storage. If gasoline in the engine has not been treated with a fuel stabilizer, it must be drained into an approved container. Run the engine until it stops from lack of fuel. The use of a fuel stabilizer in the storage container is recommended to maintain freshness.

## Engine Oil

While the engine is still warm, change the engine oil.

### Before starting the unit after it has been stored:

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

## Troubleshooting the Tractor

| PROBLEM   | LOOK FOR                                     | REMEDY   |
|---|--|--|
| <b>Engine will not turnover or start.</b>       | Brake pedal not depressed.                   | Fully depress brake pedal.   |
|   | Out of fuel.                                 | If engine is hot, allow it to cool, then refill the fuel tank.               |
|   | Fuse is blown.                               | See authorized dealer.   |
|   | Battery terminals require cleaning.          | See <b><i>Cleaning the Battery and Cables</i></b> section.                   |
|   | 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.                               | Check/add oil as required.   |
|   | Using wrong grade oil.                       | See <b><i>Oil Recommendations Chart</i></b> .                                |
| <b>Excessive oil consumption.</b>               | Engine running too hot.                      | See authorized dealer.   |
|   | Using wrong grade oil.                       | See <b><i>Oil Recommendations Chart</i></b> .                                |
|   | Too much oil in crankcase.                   | Drain excess oil.  |
| <b>Engine exhaust is black.</b>                 | Dirty air filter.                            | See <b><i>Servicing the Air Filter</i></b> section.                          |
| <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.  |
|   | Parking brake is engaged.                    | Disengage parking brake.   |
|   | Traction drive belt is broken or slipping.   | See authorized dealer.   |
| <b>Brake will not hold.</b>                     | Internal brake worn.                         | See authorized dealer.   |

## Troubleshooting the Tractor (Continued)

| PROBLEM                                | LOOK FOR                          | REMEDY                                  |
|--|-----------------------------------|---|
| Tractor steers hard or handles poorly. | Steering linkage is loose.        | See authorized dealer.                  |
|  | Improper tire inflation.          | See <b>Check Tire Pressure</b> section. |
|  | Front wheel spindle bearings dry. | See authorized dealer.                  |

## Troubleshooting the Mower

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

## ENGINE

### Briggs & Stratton

**Model** Professional Series™ w/EFM  
**Displacement** 40.03 cu in. (656 cc)

**Model** Professional Series™ w/EFM  
**Displacement** 44.18 cu in. (724 cc)

#### All Engines

**Electrical System** Alternator: 16A Reg.  
Battery: 12 Volt, 230 CCA

**Oil Capacity** 64 oz (1,9 L)  
**Engine Oil** Synthetic 5W30  
**Spark Plug Torque** 180 in-lbs (20 Nm)

## CHASSIS

**Fuel Tank Capacity** 3.6 gal (13,6 L)  
**Front Wheels** Tire Size: 15 x 6,0-6  
Inflation Pressure: 12-14 psi (0,82-0,96 bar)  
**Rear Wheels** Tire Size: 22 x 9,5-12  
Inflation Pressure: 10 psi (0,68 bar)  
**Suspension** Suspension Comfort System™ (if equipped)

## TRANSMISSION K57AF

**Type** Hydrostatic Tuff Torq  
**Hydraulic Fluid** 10w30 Synthetic  
**Continuous Torque Output** 216 ft-lbs (292,8 Nm)

## TRANSMISSION K62AC

**Type** Hydrostatic Tuff Torq  
**Hydraulic Fluid** 10w30 Standard  
**Continuous Torque Output** 216 ft-lbs (292,8 Nm)

## MOWER

**Width of Cut** 44" (112 cm)  
50" (127 cm)  
**Number of Blades** 3  
**Base Deck Platform** Side Discharge  
**Cutting Height** 1.0 and 4.0 in. (2,5 and 10,2 cm)  
**Cutting Positions** Infinite/Electronic

## Power Ratings

The gross power rating for individual gasoline engine models is labeled in accordance with SAE (Society of Automotive Engineers) code J1940 Small Engine Power & Torque Rating Procedure, and is rated in accordance with SAE J1995. Torque values are derived at 2600 RPM for those engines with "rpm" called out on the label and 3060 RPM for all others; horsepower values are derived at 3600 RPM. The gross power curves can be viewed at [www.BRIGGSandSTRATTON.COM](http://www.BRIGGSandSTRATTON.COM). Net power values are taken with exhaust and air cleaner installed whereas gross power values are collected without these attachments. Actual gross engine power will be higher than net engine power and is affected by, among other things, ambient operating conditions and engine-to-engine variability. Given the wide array of products on which engines are placed, the gasoline engine may not develop the rated gross power when used in a given piece of power equipment. This difference is due to a variety of factors including, but not limited to, the variety of engine components (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 engine.

## Parts and Accessories

Contact an authorized dealer.

# Warranty

## BRIGGS & STRATTON PRODUCTS WARRANTY POLICY

January 2014

### LIMITED WARRANTY

Briggs & Stratton warrants that, during the warranty period specified below, it will repair or replace, free of charge, any part 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 and is subject to the time periods and conditions stated below. For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at [simplicitymfg.com](http://simplicitymfg.com). The purchaser must contact the Authorized Service Dealer, and then make the product available to the Authorized Service Dealer for inspection and testing.

**There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to the warranty period listed below, 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

| Item                  | Consumer Use | Commercial Use |
|-----------------------|--------------|----------------|
| Equipment             | 36 months    | 3 months       |
| Engine*               | 36 months    | 12 months      |
| Battery (if equipped) | 12 months    | 12 months      |

\* Applies to Briggs & Stratton engines only. Warranty coverage of non-Briggs & Stratton engines is provided by that engine manufacturer. Emissions-related components are covered by the Emissions Warranty Statement.

\*\* In Australia - Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. For warranty service, find the nearest Authorized Service Dealer in our dealer locator map at [BRIGGSandSTRATTON.COM](http://BRIGGSandSTRATTON.COM), or by calling 1300 274 447, or by emailing or writing to [salesenquires@briggsandstratton.com.au](mailto:salesenquires@briggsandstratton.com.au), Briggs & Stratton Australia Pty Ltd, 1 Moorebank Avenue, NSW, Australia, 2170.

The warranty period begins on the date of purchase by the first retail or commercial consumer. "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 a product has experienced commercial use, it shall thereafter be considered as a commercial use product for purposes of this warranty.

To ensure prompt and complete warranty coverage, register your product at the website shown above or at [www.onlineproductregistration.com](http://www.onlineproductregistration.com), or mail the completed registration card (if provided), or call 1-800-743-4115 (in USA).

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 the warranty period. Product registration is not required to obtain warranty service on Briggs & Stratton products.

### ABOUT YOUR WARRANTY

Warranty service is available only through Simplicity Authorized Service Dealers. This warranty covers only 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 not be covered under this warranty. Warranty coverage will also not be provided 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 or equivalent. Damage caused by lack of maintenance or use of non-original parts is not covered by warranty.

**Normal Wear and Tear** - Like most 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 (except engine brake pads) are not covered by warranty due to wear characteristics alone, unless the cause is due to defects in material or workmanship.

**Stale or Unapproved Fuel** - In order to function correctly, this product requires fresh fuel that conforms to the criteria specified in the Operator's Manual. Engine or equipment damage caused by stale fuel or the use of unapproved fuels (such as E15 or E85 ethanol blends) is not covered by warranty.

**Other Exclusions** - This warranty excludes damage due to accident, abuse, modifications, alterations, improper servicing, freezing or chemical deterioration. Attachments or accessories that were not originally packaged with the product are also excluded. There is no warranty coverage on equipment used for primary power in place of utility power or on equipment used in life support applications. This warranty does not include used, reconditioned, second-hand, or demonstration equipment or engines. This warranty also excludes failures due to acts of God and other force majeure events beyond the manufacturer's control.

California, U.S. EPA, and Briggs & Stratton Corporation Emissions Control Warranty Statement  
Your Warranty Rights And Obligations  
For Briggs & Stratton Engine Models with "B" or "G" Trim Designation  
(Model-Type-Trim Representation xxxxxx xxxx Bx or xxxxxx xxxx Gx)

January 2014

The California Air Resources Board, U.S. EPA, and Briggs & Stratton (B&S) are pleased to explain the emissions control system warranty on your Model Year 2014-2015 engine. In California, new small off-road engines and large spark ignited engines less than or equal to 1.0 liter must be designed, built, and equipped to meet the State's stringent anti-smog standards. B&S must warrant the emissions control system on your engine for the periods of time listed below provided there has been no abuse, neglect, or improper maintenance of your engine.

Your exhaust emissions control system may include parts such as the carburetor or fuel injection system, ignition system, and catalytic converter. Also included may be hoses, belts, connectors, sensors, and other emissions-related assemblies.

Where a warrantable condition exists, B&S will repair your engine at no cost to you including diagnosis, parts, and labor.

**Manufacturer's Warranty Coverage:**

Small off-road engines and large spark ignited engines less than or equal to 1.0 liter, are warranted for two years\*. If any emissions-related part on your B&S engine is defective, the part will be repaired or replaced by B&S.

\* Two years or for the time period listed in the respective engine or product warranty statement, whichever is greater.

**Owner's Warranty Responsibilities:**

- As the engine owner, you are responsible for the performance of the required maintenance listed in your Operator's Manual. B&S recommends that you retain all receipts covering maintenance on your engine, but B&S cannot deny warranty solely for the lack of receipts or your failure to ensure the performance of all scheduled maintenance.
- As the engine owner, you should however be aware that B&S may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.
- You are responsible for presenting your engine to a B&S distribution center, servicing dealer, or other equivalent entity, as applicable, as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact B&S at 1-800-444-7774 (in USA) or BRIGGSandSTRATTON.com.

**Briggs & Stratton Emissions Control Warranty Provisions**

The following are specific provisions relative to your Emissions Control Warranty Coverage. It is in addition to the B&S engine warranty for non-regulated engines found in the Operator's Manual.

**1. Warranted Emissions Parts**

Coverage under this warranty extends only to the parts listed below (the emissions control systems parts) to the extent these parts were present on the B&S engine.

**a. Fuel Metering System**

- Cold start enrichment system (soft choke)
- Carburetor and internal parts
- Fuel pump

**b. Air Induction System**

- Air cleaner
- Intake manifold

**c. Ignition System**

- Spark plug(s)
- Magneto ignition system

**d. Catalyst System**

- Catalytic converter
- Exhaust manifold
- Air injection system or pulse valve

**e. Miscellaneous Items Used in Above Systems**

- Vacuum, temperature, position, time sensitive valves and switches
- Connectors and assemblies

**2. Length of Coverage**

For a period of two years from date of original purchase\*, B&S warrants to the original purchaser and each subsequent purchaser that the engine is designed, built, and equipped so as to conform with all applicable regulations adopted by the Air Resources Board; that it is free from defects in material and workmanship that could cause the failure of a warranted part; and that it is identical in all material respects to the engine described in the manufacturer's application for certification. The warranty period begins on the date the engine is originally purchased.

\* Two years or for the time period listed in the respective engine or product warranty statement, whichever is greater.

The warranty on emissions-related parts is as follows:

- Any warranted part that is not scheduled for replacement as required maintenance in the Operator's Manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, the part will be repaired or replaced by B&S at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled only for regular inspection in the Operator's Manual supplied, is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled for replacement as required maintenance in the Operator's Manual supplied, is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced by B&S at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the owner will be grounds for disallowing a warranty claim. The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

**3. Consequential Coverage**

Coverage shall extend to the failure of any engine components caused by the failure of any warranted emissions parts.

**4. Claims and Coverage Exclusions**

Warranty claims shall be filed according to the provisions of the B&S engine warranty policy. Warranty coverage does not apply to failures of emissions parts that are not original equipment B&S parts or to parts that fail due to abuse, neglect, or improper maintenance as set forth in the B&S engine warranty policy. B&S is not liable for warranty coverage of failures of emissions parts caused by the use of add-on or modified parts.

**Look For Relevant Emissions Durability Period and Air Index Information  
On Your Small Off-Road Engine Emissions Label**

Engines that are certified to meet the California Air Resources Board (CARB) small off-road Emissions Standard must display information regarding the Emissions Durability Period and the Air Index. Briggs & Stratton makes this information available to the consumer on our emissions labels. The engine emissions label will indicate certification information.

The **Emissions Durability Period** describes the number of hours of actual running time for which the engine is certified to be emissions compliant, assuming proper maintenance in accordance with the Operator's Manual. The following categories are used:

**Moderate:**

Engines at or less than 80 cc displacement are certified to be emissions compliant for 50 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 125 hours of actual engine running time.

**Intermediate:**

Engines at or less than 80 cc displacement are certified to be emissions compliant for 125 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 250 hours of actual engine running time.

**Extended:**

Engines at or less than 80 cc displacement are certified to be emissions compliant for 300 hours of actual engine running time. Engines greater than 80 cc displacement are certified to be emissions compliant for 500 hours of actual engine running time.

Briggs & Stratton engines are certified to meet the United States Environmental Protection Agency (USEPA) Phase 2 or Phase 3 emissions standards. The Emissions Compliance Period referred to on the Emissions Compliance label indicates the number of operating hours for which the engine has been shown to meet Federal emissions requirements.

For engines at or less than 80 cc displacement:

Category C = 50 hours, Category B = 125 hours, Category A = 300 hours

For engines greater than 80 cc displacement and less than 225 cc displacement:

Category C = 125 hours, Category B = 250 hours, Category A = 500 hours

For engines of 225 cc or more displacement:

Category C = 250 hours, Category B = 500 hours, Category A = 1000 hours

For example, a typical walk-behind lawn mower is used 20 to 25 hours per year. Therefore, the **Emissions Durability Period** of an engine with an **intermediate** rating would equate to 10 to 12 years.







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