



Operator's Manual

21" Steel Deck Walk Behind Lawn Mower

Walk Behind Model : SLM-21SBS, LM-21SBS



Warning

Read and Follow all safety rules and instructions in this manual before attempting to operate this machine.

Failure to comply with these instructions may result in personal injury.

Thank you for purchasing a **Saber Edge** Lawn Mower. It was carefully engineered to provide excellent performance when properly operated and maintained. It is designed primarily for cutting grass on well-maintained lawns on residential or commercial properties. It is not designed for cutting brush or for agricultural uses.

Before operating your new **Saber Edge** it is strongly recommended all operators carefully read this manual in its entirety before operating the equipment. This manual explains how to operate and maintain the product properly and safely to avoid injury and property damage.

You may contact **Saber Edge** Corporations directly at www.saberturf.com for product and accessory information, help finding a dealer, or to register your product.

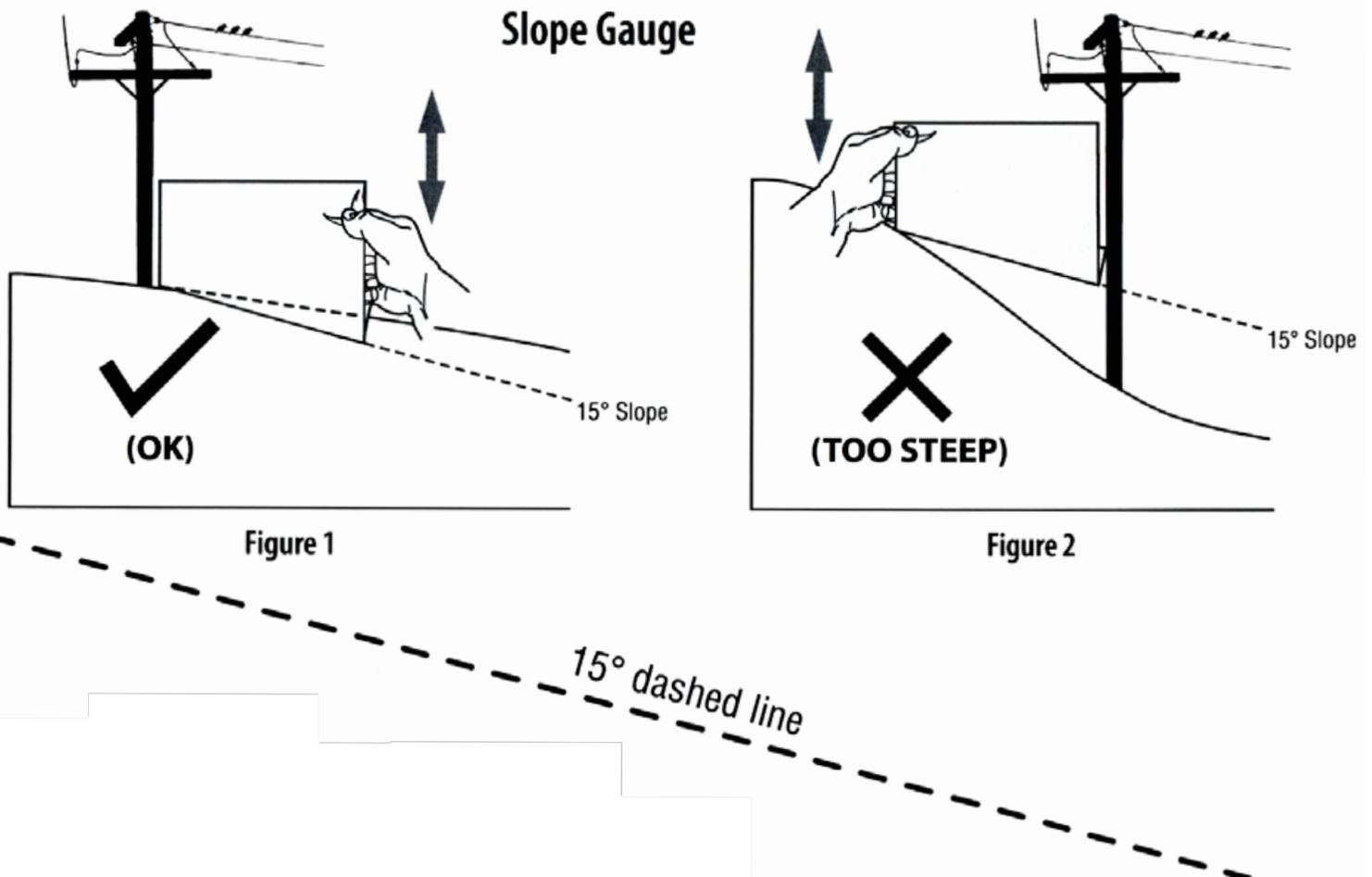
Whenever you need service, genuine **Saber Edge** parts, or additional information, contact an Authorized Service Dealer or Saber Edge's Customer Service and have the model and serial numbers of your product ready.



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Slope Gauge



USE THIS SLOPE GAUGE TO DETERMINE
IF A SLOPE IS TOO STEEP FOR SAFE OPERATION!

To check the slope, proceed as follows:

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

WARNING! Slopes are a major factor related to tip-over and roll-over accidents which can result in severe injury or death.

Do not operate machine on slopes in excess of 15 degrees. All slopes require extra caution. Always mow across the face of slopes, never up and down slopes.

Safety

Read and understand the contents of this manual before you start the engine.

Obey all safety messages that follow this symbol to avoid possible injury or death. Improperly using or maintaining this mower could result in injury or death. To reduce this potential, comply with the following safety instructions.

The following instructions have been adapted from the ANSI/OPEI standard B71.1-2003.

This cutting machine is capable of amputating hands and feet and of throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

General Operation

NOTE: Determine the left and right sides of the machine from the normal operating position

- Read, understand, and follow all instructions on the machine and in the manual(s) before starting. Keep this manual in a safe place for future and regular reference.
- Do not operate machine without the entire grass catcher, proper guards, plates or other safety protective devices securely in place and working.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.
- Do not put hands or feet near or under the machine.
- Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate this machine.
- Never leave a running machine unattended.
- Be sure the area is clear of people and pets before operating. Stop machine if anyone enters the area.
- Clear the area of objects such as rocks, sticks, toys, wire, etc., which could be thrown by the blade. Stay behind the handle when the engine is running.
- Always wear substantial footwear while operating. Never operate the machine barefooted or while wearing sandals or open toes shoes.
- Always wear protective eyewear (safety goggles/safety glasses with side shields) while operating. Do not be worn while operating.
- Do not pull machine backward unless absolutely necessary. Always look down and behind before and while moving backward.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blade when crossing gravel surfaces.
- Operate machine only in daylight or good artificial light.
- Never operate machine while under the influence of alcohol or drugs.
- Never operate mower in wet grass. Always be sure of your footing; always walk while keeping a firm hold on the handle; never run.
- Disengage the drive system, if so equipped, before starting the engine.
- If the machine should start to vibrate abnormally, stop the engine and check for the cause immediately. Vibration is generally a warning of trouble.
- Lightning can cause severe injury or death. If you see lightning or hear thunder in the area, do not operate the machine; seek shelter.
- Stop the engine and wait until the blade comes to a complete stop before cleaning the machine, removing grass catcher, or unclogging the discharge guard.

Slope Operation

Warning: Slopes are a major factor related to slip and fall accidents, which can result in severe injury. Operation on all slopes require extra caution. If you feel uneasy on a slope, do not mow it.

- Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- Do not mow on wet grass or excessively steep slopes. Poor footing could cause a slip and fall accident.
- Watch for holes, ruts, bumps, rocks, exposed roots or other hidden objects. Uneven terrain could cause a slip and fall accident. Tall grass can hide obstacles.
- Do not mow near drop-offs, ditches, or embankments. You could lose your footing or balance.

Children and Pets

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

- Be alert and turn mower off if a child or pet enters the area.
- Keep children and pets out of the mowing area and under the watchful care of a responsible adult other than the operator.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child or pet.
- Be especially watchful of children and pets darting into the area while operating.

Service

Safe Handling of Gasoline

Gasoline is extremely flammable and the vapors are explosive. To avoid personal injury or property damage, use extreme care in handling gasoline.

 **Warning: Exhaust contains carbon monoxide, an odorless, deadly poison that can kill you.**

Do not run the engine indoors or in an enclosed area

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Never store the machine or fuel container where there is an open flame, spark, or pilot light such as on a water heater or on other appliances.
- Do not fuel machine in an enclosed room or near open flames. Assure adequate ventilation. Outdoor refueling is recommended.
- Use only an approved gasoline container.
- Allow engine to cool before refueling.
- Never remove gas cap or add fuel while the engine is running.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing, change clothing immediately.
- Never overfill fuel tank. Replace gas cap and tighten securely.

General Service

- Never operate machine indoors or a closed area. Exhaust contains carbon monoxide, an odorless, deadly poison that can kill you.
- California Proposition 65 Warning. The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.
- Keep all nuts and bolts tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine 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 storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before starting.
- Never make any adjustments or repairs with the engine running. Disconnect the spark-plug wire and ground against engine to prevent unintended starting.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
- Do not change the engine governor setting or overspeed the engine.
- Maintain or replace safety and instruction labels, as necessary.

Safety and Instructional Decals

Important: All damaged or illegible safety and instruction decals should be replaced.

They are located near areas of potential danger:



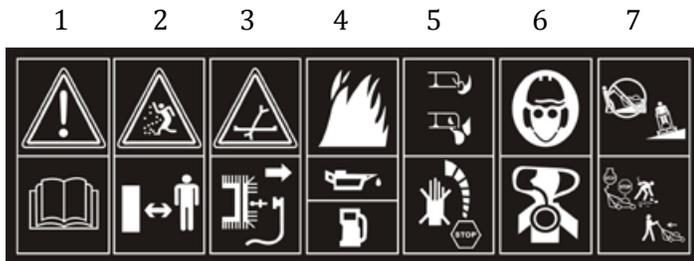
Safety Warning Label



Danger Decal

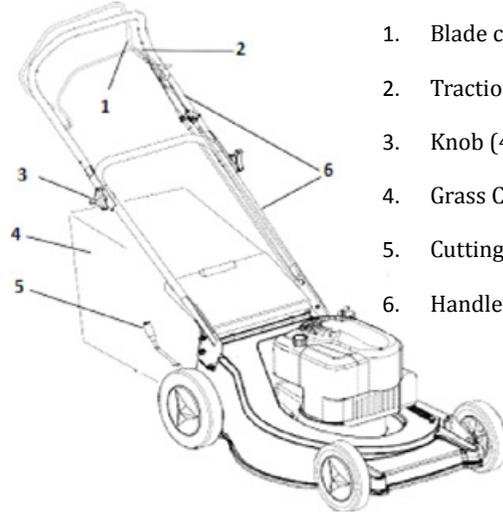
CALIFORNIA SPARK ARRESTER WARNING

Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrester may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.



1. Warning- Read owners manual.
2. Thrown object hazard- keep bystanders a safe distance from the machine.
3. Disconnect the spark-plug wire and read the instructions before servicing or performing maintenance.
4. Gasoline is highly flammable. Fill oil and gasoline with caution outdoors. Never near open flame or sparks.
5. Cutting/dismemberment hazard of hand or foot, from mower blade- stay away from moving parts and keep all guards and shields in place.
6. Wear eye, ear and head protection when operating unit.
7. Cutting/dismemberment hazard of hand or foot, mower blade- do not mow up and down slopes, only mow across; stop the mower and engine, pick up debris before operating; look behind and down when reversing.

Product Overview



1. Blade control bar
2. Traction Clutch Bar
3. Knob (4)
4. Grass Catcher
5. Cutting Height Lever
6. Handle

Setup

Important: Remove and discard the protective plastic sheet that covers the engine.

Installing the Handle

Important: When folding or unfolding handle be careful not to pinch or damage the cables. Damaged cables will create unsafe operating conditions.

If the cable[s] is damaged do not use the machine and contact an Authorized Service Dealer.

- Remove top handle and spin handle around and lay on the ground flat with blade control bar facing upward.
- Rotate lower handle to the operating position. Align the lower handle hole with lower handle bracket and insert two 5/16th x 1 inch carriage bolts on both sides using 5/16th flat washer and nut and tighten.
- Securely tighten all four lower handle bolts.
- Install upper handle to lower handle using 5/16th x 2 inch carriage bolts and handle knobs, making sure cable is on top of the handle.
- Snap on the two cable clamps to the handle one on the top handle and other on lower handle securing the cable to the handle.

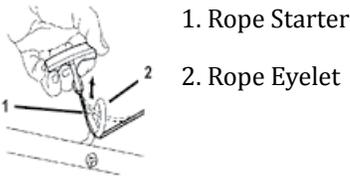


Installing the Recoil-starter

Rope in the Rope Eyelet

Important: To start the engine safely and easily whenever you use the machine, install the recoil-starter rope in the rope guide.

Hold the blade control bar to the upper handle and pull the recoil-starter rope and thread it through the rope eyelet on the handle



Filling the Engine with Oil

Important: Your machine does not come with oil in the engine. Before starting the engine, fill the engine with oil.

1. Move the machine to a level surface.
2. Remove the dipstick.
3. Slowly pour oil into the oil fill tube until the oil level reaches the Full line on the dipstick.
4. Note: Do not overfill. (type: SAE 30W detergent oil with an API service classification of SF, SG, SH, SJ, SL or higher.)
5. Install the dipstick securely.

Warning: If the oil level in the crankcase is too low or too high and you run the engine, you may damage the engine.

Important: Change the engine oil after the first 5 operating hours; change it yearly thereafter.

Refer to changing the engine oil.

Filling the Fuel Tank

Refer to engine manual

Warning/Danger: Gasoline is extremely flammable and explosive. A fire or explosion from gasoline can burn you and others.

- To prevent a static charge from igniting the gasoline, place the container and/or machine directly on the ground before filling not in a vehicle or on an object.

- Fill the tank outdoors when the engine is cold. Wipe up spills.
- Do not handle gasoline when smoking or around an open flame or sparks.
- Store gasoline in an approved fuel container, out of the reach of children.
- For best results use clean, fresh, unleaded gasoline, with a minimum of 87 octane/87 AKI (91RON).
- Gasoline with up to 10% ethanol (gasohol) is acceptable.
- For more information refer to engine manual.

Checking the Engine Oil Level

Always check oil level before starting lawn mower.

1. Move the machine to a level surface.
2. Remove the dipstick, wipe it clean, and fully insert the dipstick.
3. Remove the dipstick and read the oil level. If the oil level is below the full line, slowly pour oil into the oil fill tube until the oil level reaches the Full line on the dipstick.
4. Note: Do not overfill. (type: SAE 30W detergent oil with an API service classification of SF, SG, SH, SJ, SL or higher.)
5. Install the dipstick securely.

Adjusting the Cutting Height

Warning: Adjusting the cutting height may bring you into contact with the moving blade, causing serious injury.

Make sure to stop the engine and wait for all moving parts to stop.

Never place your fingers under the housing when adjusting the cutting height.

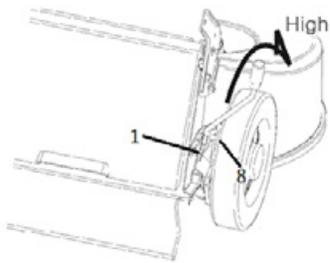
Caution: If the engine has been running, the muffler will be hot and can severely burn you. Keep away from the hot muffler.

This Machine is equipped with 8 different cut setting ranging from 7/8th inch to 3- 3/8th inch located on the rear right side of the machine.

To Change Cutting Height:

First unlock the setting by pulling the lever away from the mower out towards the right.

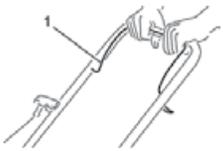
You can now move the lever either towards the front wheel (increasing the height) or back towards the rear bag (decreasing the height).



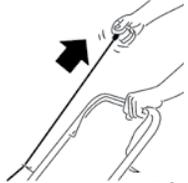
- 1st = 1.125 inch
- 2nd = 1.250 inch
- 3rd = 1.625 inch
- 4th = 1.875 inch
- 5th = 2.250 inch
- 6th = 2.500 inch
- 7th = 2.875 inch
- 8th = 3.250 inch
- 9th = 3.500 inch
- 10th = 3.875 inch

Starting the Engine

1. Hold the Blade- control bar against the handle.



2. Pull the recoil- start handle.



Important: If the machine does not start after multiple attempts contact your Authorized Service Dealer.

Stopping the Engine

To stop the engine, Release the blade control bar and wait for all moving parts to stop before leaving the operating position.



⚠ Important: When releasing the blade control bar both the blade and engine should stop within 3 seconds. If they both do not stop properly discontinue use of the machine and contact an authorized Service

Forward Travel

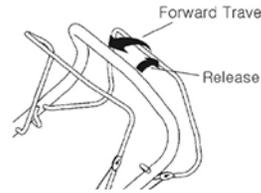
To travel forward

Pull lever to handle and hold

To stop Travel Forward

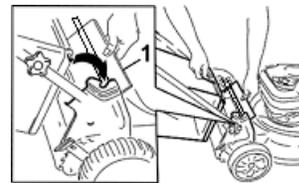
Release Lever

Note: Do not pull mower backwards when you are using the self-propelled travel.



Installing the Grass Bag

1. Shut engine off.
2. Set mulching lever to bag setting.
3. Lift up the rear deflector.
4. Insert the grass catcher onto the handle bracket rod.
5. Lay the deflector plate down onto the bag.



⚠ Stop Engine Before removing or installing discharge chute, grass catcher, or guard in place. Do not mow without discharge chute, grass catcher, or guard in place.

Removing the Grass Bag

1. Lift up the rear deflector.
2. Lift the grass-bag handle out from the bracket rod and remove the bag from the machine.
3. Close the rear deflector.

Mowing

Mowing Tips

- Make sure to clear the area of stones, sticks, branches, wire and other debris that the blade could hit.
- Never deliberately mow over any object. Avoid striking solid objects with the blade.
- If the machine strikes an object or starts to vibrate, immediately stop the engine, disconnect the wire from the spark plug, and examine the machine for damage.
- For best performance, install a new blade before the cutting season begins.
- Replace the blade when necessary with a **Saber Edge** replacement blade.

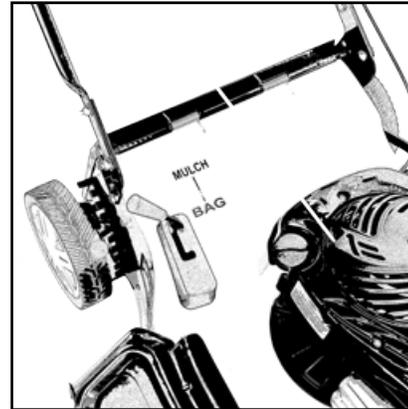
Cutting Grass Tips:

- Cut only about a third of the grass blade at a time. Do not cut below the 4th setting (1- 7/8th inch) unless the grass is sparse or it is late fall when grass growth begins to slow down. Refer to Adjusting the Cutting Height.
- When cutting grass over 6 inches tall, mow at the highest cutting height setting and walk slower; then mow again at a lower setting for the best lawn appearance. If the grass is too long, the machine may plug and cause the engine to stall. Mow only dry grass or leaves. Wet grass and leaves tend to clump on the yard and can cause the machine to plug or the engine to stall. Cut the grass more frequently.
- Overlap cutting swaths instead of cutting a full swath with each pass.
- For extremely heavy cutting, reduce the width of cut by overlapping previously cut path and mow slowly.
- Pores in cloth grass catchers can become filled with dirt and dust with use and catchers will collect less grass. To prevent this, regularly hose catcher off with water and let dry before using.
- Keep top of engine around starter clear and clean of grass clipping and chaff. This will help engine airflow and extend engine life.

Mulching the Clippings

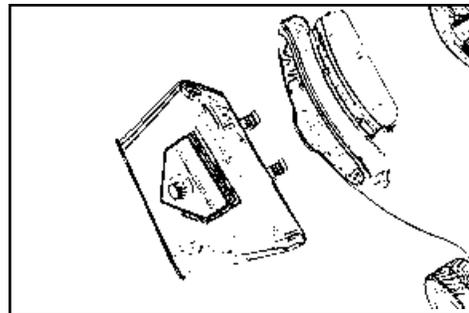
If the grass catcher is on the machine, remove it before mulching the clippings and shift mulching lever to the mulch position.

Engaging Mulching Lever



Move lever to the left and then up.

Using Side Discharge



1. Shift lever to the mulching position
2. Lift the spring loaded side discharge cover located on the side of the mower.
3. Insert side discharge deflector by aligning the 2 protruding ends of the deflector into the 2 notches under the bar and spring that holds the side discharge cover.
4. Once inserted the side discharge cover will secure the discharge deflector in place.

Warning: Make sure side discharge deflector is securely installed. Failure to do so can cause the deflector to fall off and be mangled by the blade producing dangerous debris to be flung causing serious injury to the operator and/or bystanders.

Mulching tips:

Avoid cutting your lawn when it is wet. Wet grass tends to form clumps and interferes with the mulching action. The best time to mow your lawn is the early afternoon. At this time the grass has dried, yet the newly cut area will not be exposed to direct sunlight.

For best results, adjust the lawn mower cutting height so that the lawn mower cuts off only the top one-third of the grass blades. If the lawn is over-grown it will be necessary to raise the height of cut to reduce pushing effort and to keep from overloading the engine and leaving clumps of mulched grass. For extremely heavy mulching, reduce your width of cut by overlapping previously cut path and mow slowly.

Certain types of grass and grass conditions may require that an area be mulched a second time to completely hide the clippings. When doing a second cut, mow across (perpendicular) the first cut path.

Change your cutting pattern from week to week. Mow north to south one week then change to east to west the next week. This creates a criss cross affect helping prevent matting of the lawn.

Bagging the Clippings

Use the grass bag when you want to collect grass and leaf clippings from the lawn. Make sure mulching plug has been removed from the mower deck before installing grass catcher (see installing grass bag).

 **Warning:** A worn grass bag could allow small stones and other similar debris to be thrown in the operator's or bystander's direction and result in serious personal injury or death to the operator or bystanders.

Check the grass bag frequently. If it is damaged, install a new **Saber Edge** replacement bag.

Maintenance

Recommended Maintenance Schedule

Maintenance Service	Maintenance Procedure
After the first 5 hours	<ul style="list-style-type: none"> Change the engine oil.
Before each use or daily	<ul style="list-style-type: none"> Check the engine oil level. Ensure that the engine stops within 3 seconds after releasing the blade control bar. Remove grass clippings and dirt from under the housing
Every 25 hours	<ul style="list-style-type: none"> Check the air cleaner for dirty, loose, or damaged parts, and clean or replace them if necessary.
Every 50 hours	<ul style="list-style-type: none"> Change the engine oil.
Every 100 hours	<ul style="list-style-type: none"> Replace the air-cleaner element (more frequently when operating the machine in dusty or dirty operating conditions). Clean the cooling system (refer to your engine owner's manual). Replace the spark plug.
Before storage	<ul style="list-style-type: none"> Empty the fuel tank before repairs as directed and before annual storage.
Yearly	<ul style="list-style-type: none"> Replace the blade or have it sharpened (more frequently if the edge dulls quickly) by an Authorized Saber Edge Dealer . Refer to your Engine Operator's Manual for any additional yearly maintenance procedures.

Preparing for maintenance

1. Stop the engine and wait for all moving parts to stop.
2. Disconnect the spark-plug wire from the spark plug before performing any maintenance procedure.



3. After performing the maintenance procedure(s), connect the spark-plug wire to the spark plug.

Important: Before tipping the machine to change the oil or replace the blade, allow the fuel tank to run dry through normal usage. If you must tip the machine prior to running out of fuel, use a hand fuel pump to remove the fuel. Always tip the machine onto its side with the dipstick down.

⚠ Warning: Tipping the machine may cause the fuel to leak. Gasoline is flammable, explosive and can cause personal injury.

Servicing the Air Cleaner

Service Interval: Every 25 hours/Yearly (whichever comes first)—Check the air cleaner for dirty, loose, or damaged parts, and clean or replace them if necessary.

Every 100 hours/Yearly (whichever comes first)

1. Perform the pre-maintenance procedures;
2. Snap open the air-cleaner cover.
3. Replace the air-cleaner element.
4. Install the air-cleaner cover.



Changing the Engine Oil

Service Interval: After the first 5 hours

Every 50 hours/Yearly (whichever comes first)

- Refer to engine manual

Run the engine a few minutes before changing the oil to warm it. Warm oil flows better and carries more contaminants.

1. Perform the pre maintenance procedures, refer to preparing for maintenance.
2. Remove the dipstick.
3. Tip the mower onto its side (with the air filter up) to drain the used oil out through the oil fill tube.



4. After drain the used oil, return the machine to the normal operating position.
5. Slowly pour oil into the oil fill tube until the oil level reaches the FULL line on the dipstick. Do not over fill.
6. Wipe off dipstick end with a clean cloth.
7. Insert the dipstick into the oil-fill tube
8. Remove the dipstick and read the oil level on the dipstick. Once it has reached the full line,
9. Install the dipstick securely.
10. Dispose of the used oil properly at a local recycling center.

Note: For best results use clean, fresh, unleaded gasoline, with a minimum of 87 octane/87 AKI (91RON). Gasoline with up to 10% ethanol (gasohol) is acceptable

For more information refer to engine manual.

⚠ Warning: If the oil level in the crank case is too low or too high and you run the engine, you may damage the engine.

Replacing the Blade

Service Interval: Yearly

⚠ Warning: The blade is sharp; contacting the blade can result in serious personal injury. To replace or sharpen the blade it is strongly recommended to have an Authorized Service Dealer perform this task.

Examine the blade whenever you run out of gasoline. If the blade is damaged or cracked, have it replaced immediately by an Authorized Service Dealer. If the blade edge is dull or nicked, have it sharpened or replaced by Authorized Service Dealer.

Preparing the Machine for Storage

⚠ WARNING: Gasoline vapors can explode.

- Do not store gasoline more than 30 days.
- Do not store the machine in an enclosure near an open flame.

Allow the engine to cool before storing it.

1. On the last refueling of the year, add fuel stabilizer to the fuel as directed by the engine manufacturer.
2. Run the machine until the engine stops from running out of fuel.
3. Prime the engine and start it again.
4. Allow the engine to run until it stops. When you can no longer start the engine, it is sufficiently dry.
5. Disconnect the wire from the spark plug.
6. Remove the spark plug, add 1 oz. (30 ml) of oil through the spark plug hole, and pull the starter rope slowly several times to distribute oil throughout the cylinder to prevent cylinder corrosion during the off-season.
7. Install the spark plug and tighten it with a torque wrench to 15 ft-lb (20 N-m).
8. Tighten all nuts, bolts, and screws.

