RYAN®

SELF PROPELLED WALK BEHIND SODCUTTERS

744853G
16" HEAVY DUTY SODCUTTER HONDA GX390

744854G
18" HEAVY DUTY SODCUTTER HONDA GX390

OPERATOR'S MANUAL

MAN 4167008
Rev. A 08-2011
Original Language Instructions

SCHILLER GROUNDS CARE

HEAVY DUTY SOD CUTTER

IMPORTANT MESSAGE

Thank you for purchasing this Schiller Grounds Care, Inc. product. You have purchased a world class product, one of the best designed and built anywhere.

This machine comes with an Operation /Safety/ Parts Manual. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand this manual. Treat your machine properly, lubricate and adjust it as instructed, and it will give you many years of reliable service.

Your safe use of this Schiller Grounds Care, Inc. product is one of our prime design objectives. Many safety features are built in, but we also rely on your good sense and care to achieve accident-free operation. For best protection, study the manual thoroughly. Learn the proper operation of all controls. Observe all safety precautions. Follow all instructions and warnings completely. Do not remove or defeat any safety features. Make sure those who operate this machine are as well informed and careful in its use as you are.

See a RYAN dealer for any service or parts needed. Schiller Grounds Care, Inc. service ensures that you continue to receive the best results possible from Schiller Grounds Care, Inc. products. You can trust RYAN replacement parts because they are manufactured with the same high precision and quality as the original parts.

Schiller Grounds Care, Inc. designs and builds its equipment to serve many years in a safe and productive manner. For longest life, use this machine only as directed in the manual, keep it in good repair and follow safety warnings and instructions. You'll always be glad you did.

Schiller Grounds Care, Inc.
One Bob Cat Lane
Johnson Creek, WI 53038-0469

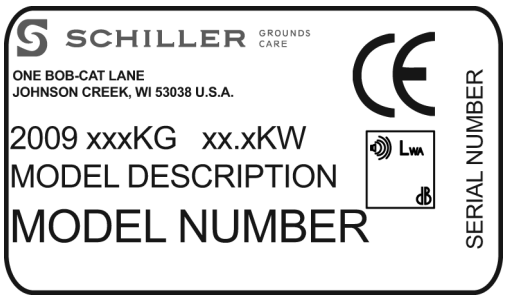
TABLE OF CONTENTS ..... PAGE

NOTICE !!!

Unauthorized modifications may present **extreme** safety hazards to operators and bystanders and could also result in product damage.

Schiller Grounds Care, Inc. strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by Schiller Grounds Care, Inc. Engineering Department. Any Schiller Grounds Care, Inc. product that is altered, modified or changed in any manner not specifically authorized after original manufacture–including the addition of "after-market" accessories or component parts not specifically approved by Schiller Grounds Care, Inc. will result in the Schiller Grounds Care, Inc. Warranty being voided.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by Schiller Grounds Care, Inc. will be considered the responsibility of the individual(s) or company designing and/or making such changes. Schiller Grounds Care, Inc. will vigorously pursue full indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.



This symbol means:
ATTENTION!
BECOME ALERT!

Your safety and the safety of others is involved.

Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to Schiller Grounds Care, Inc. machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

⚠DANGER

DANGER indicates a hazardous situation which, if not avoided, **WILL** result in death or serious injury.

⚠WARNING

WARNING indicates a hazardous situation which, if not avoided, **COULD** result in death or serious injury.

⚠CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **COULD** result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage.

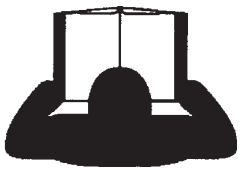
MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

SERIAL NUMBER: This number appears only on your unit. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

PREPARING FOR SAFE OPERATION

Operator preparation and training

Read the Operation & Safety Manual



- If an operator or mechanic cannot read English, it is the owner's responsibility to explain this material to them. If any portion of this material is unclear, contact your factory representative for clarification.
- Become familiar with the safe operation of the equipment, operator controls and safety signs. Be prepared to stop the engine quickly in an emergency. Do not operate or allow another person to operate this machine if there are any questions about safety.
- All operators and mechanics should be trained. The owner is responsible for training the users.
- Wear appropriate clothing, including safety goggles or safety glasses with side shields when operating. Do not operate barefoot or wearing open sandals. Long hair, loose clothing or jewelry may get tangled in moving parts.
- Wear hearing protection.
- Wear safety glasses.
- Never allow underage children, unskilled or improperly trained people to operate this equipment. Local regulations can restrict the age of the operator.
- Keep warning labels and this operator's manual legible and intact. Replacement labels and manuals are available from the factory.
- Do not operate machine while under the influence of drugs or alcohol.
- The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

SITE PREPARATION AND CIRCUMSTANCES

- Evaluate the terrain to determine how to safely perform the job. Use only accessories and attachments approved by the manufacturer.
- Clear the area to be cut of objects such as rocks, toys, wire or other debris that may be thrown or get tangled in the sod cutter.
- Be sure the area is clear of pets and people, especially young children. Never assume they will remain where you last saw them. Stop the machine if any enter the area.
- Cut sod only in daylight or in good artificial light.

MACHINE PREPARATION

- Check operator presence interlock system and brake operation. Adjust or repair any problems before using the machine.
- Do not tamper with or defeat safety devices. Keep guards, shields and interlock safety devices in place and in proper working condition. They are there for your protection.
- Keep all fasteners such as nuts, bolts and pins well secured.
- Visually inspect the blade and blade bolts for wear or damage. Replace worn or damaged blades and bolts.
- Verify that the machine and attachments, if any, are in good operating condition.
- Do not engage the blade until you are ready to cut sod.

OPERATING SAFELY

IN GENERAL

– Use extra care when loading or unloading the machine into a trailer or truck.

– Use caution when making turns and crossing roads and sidewalks. Stop the blade when not cutting sod.

– Do not run the engine in an enclosed area where dangerous carbon monoxide fumes can collect.

– Never leave a machine unattended. Always turn off blade and stop engine when leaving the operator position. When leaving the machine be sure the wheel drive clutch is engaged.

– Use extreme caution when reversing or pulling machine towards you.

STARTING

– Start unit according to instructions in this manual or on the machine.

– Before attempting to start the engine, make sure the master clutch is disengaged.

– When starting the engine, make sure hands and feet are clear of the blade.

– Do not change engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.

OPERATING ON SLOPES

USE EXTRA CARE WHEN WORKING ON SLOPES

BE SURE TO EVALUATE THE RISKS INVOLVED BEFORE OPERATING ON A SLOPE.

- Do not operate on slopes if uneasy or uncertain. Ultimate responsibility for safe operation on slopes rests with the operator.
- Do not operate on steep slopes.
- Keep all movement on slopes slow and gradual.
- Do not cut sod near drop-offs, ditches or embankments. The machine could suddenly turn over if a wheel runs over the edge or an edge caves in.
- Do not turn on slopes unless necessary, and then turn slowly and downhill when possible.
- Be sure of your footing on slopes.

INTERRUPTING OPERATION

- Before leaving the operator's position:
  - Park on level ground.
  - Disengage the master clutch.
  - Shut off the engine.
- Disengage the master clutch and wait until the blade stops moving then disengage the blade clutch:
  - when not cutting sod;
  - for transport;
  - when crossing surfaces other than grass.
- Stop the engine, disengage the master clutch and wait until the blade stops moving:
  - before refueling;
  - before making blade adjustment .
- Stop the engine, disengage the master clutch, and disconnect the spark plug wire(s):
  - before clearing blockages;
  - before checking, cleaning or working on the machine;
  - after striking a foreign object. Inspect the machine for damage and make repairs before restarting;
  - if the machine begins to vibrate abnormally shut off machine immediately. Inspect and make repairs as needed before restarting;
  - except for repairs or adjustments as specifically noted, such as for carburetor adjustment, where the engine must be running. Keep hands and feet clear of moving parts in these circumstances.
- Allow the blade to come to a complete stop when stopping operation to clear blockages, unclog, inspect the machine, do maintenance or repair.
- Reduce the throttle setting during engine shut-down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of operation.

HEAVY DUTY SOD CUTTER

MAINTENANCE SAFETY

In general

- Maintain machine according to manufacturer's schedule and instructions for maximum safety and best results.
- Park machine on level ground.
- Never allow untrained personnel to service machine.
- Adjust or repair only after the engine has been stopped and the blade has stopped moving.
- Replace parts if worn, damaged or faulty. For best results, always replace with parts recommended by the manufacturer.
- Do not dismantle the machine without releasing or restraining forces which may cause parts to move suddenly.
- Provide adequate support, e.g. jack stands for lifted machine or parts if working beneath it.
- Do not put hands or feet near or under rotating parts.
- Clean up spilled oil or fuel thoroughly.
- Replace faulty mufflers.
- To reduce fire hazards, keep the engine, muffler, and fuel storage area free of grass, leaves, debris buildup or grease.

MAINTENANCE AND ADJUSTMENTS

- Disconnect spark plug wire(s) before doing any maintenance.
- Particular care must be taken when adjusting the carburetor while the engine is running. Keep hands and feet clear. Shut off blades.
- When working underneath lifted parts or machines, make sure adequate support is provided.
- Do not dismantle the machine without releasing or restraining forces which can cause parts to move suddenly.
- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Replace worn or damaged parts for safety.

Blades

WARNING

The sod cutter blade is sharp and can cut. Use extra caution when handling. Remove obstructions with care. Wrap the blade or wear gloves.

- Only replace blade. Never straighten or weld.
- Keep other persons away from blades.

WARNING

Fuel

- Gasoline (Petrol) and diesel fuels are flammable; gasoline (petrol) vapors are explosive. Use extra care when handling.
- Store only in containers specifically designed for fuel.
- When refueling or checking fuel level:
  - Stop the engine and allow to cool;
  - Do not smoke;
  - Refuel outdoors only;
  - Use a funnel;
  - Do not overfill;
  - If fuel is spilled, do not attempt to start the engine until the spill is cleaned up and vapors have cleared.

Sparks from static electricity can start fires or cause explosions. Flowing fuel can generate static electricity. To prevent static electricity sparks:

- Keep containers electrically grounded. Do not fill containers in a vehicle or on a truck or trailer bed with a plastic liner. Fill containers on the ground away from the vehicle.
- When practical, remove gas (petrol) powered equipment from the truck or trailer and refuel it on the ground. If equipment must be refueled on the truck or trailer, refuel from a portable container rather than a dispenser nozzle.
- Keep the dispenser nozzle in contact with the rim of the fuel tank or container opening until fueling is complete. Do not use a nozzle lock-open device.
- Replace caps on fuel containers and tanks securely.

STORAGE SAFETY

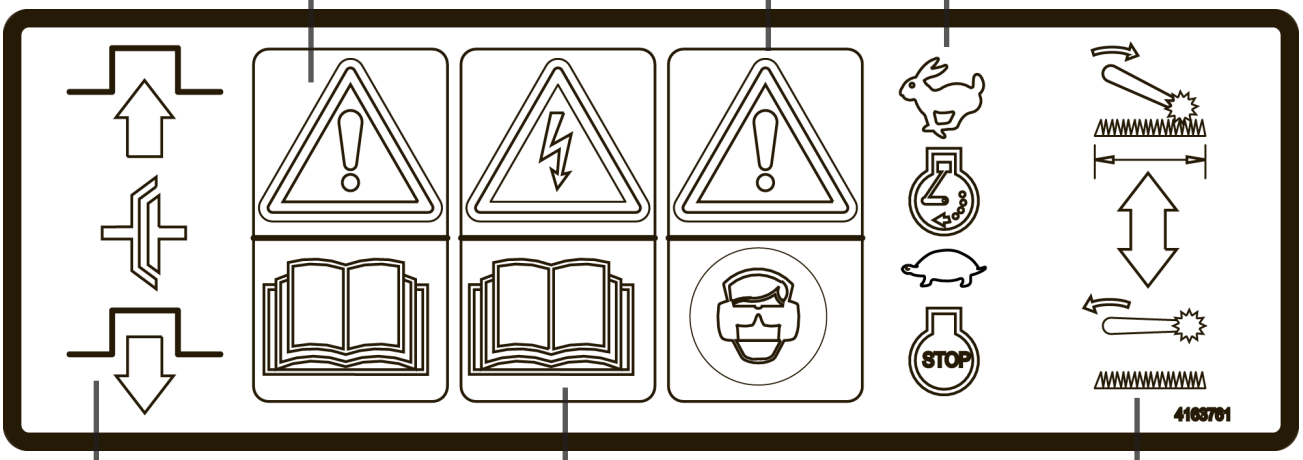
- Stop the engine and allow to cool before storing.
- Drain the fuel tank outdoors only.
- Store fuel in an approved container in a cool, dry place.
- Keep the machine and fuel containers in a locked storage place to prevent tampering and to keep children from playing with them.
- Do not store the machine or fuel container near heating appliances with an open flame, such as a water heater, or an appliance with a pilot light.
- Keep gasoline (petrol) storage area free of grass, leaves and excessive grease to reduce fire hazard.
- Clean grass and debris from cutting units, drives, mufflers and engine to help prevent fires.

HEAVY DUTY SOD CUTTER

ATTENTION:
Read and understand Operator Manual.
Replace manual if lost or damaged.

ENGINE THROTTLE CONTROL:
Move forward to increase engine speed.
Move rearward to decrease engine speed.

ATTENTION:
Wear hearing protection and safety glasses.



MASTER CLUTCH:
Move lever forward to engage.
Move lever rearward to disengage.

UNDERGROUND UTILITY HAZARD:
Contacting underground utilities may cause leaks, explosions or electrocutions.
-Check operation area for underground utilities suck as electrical, gas, and water lines.
-Do not operate where underground utilities are present.

SOD CUT OFF:
Move lever forward to lower metering wheel.
Move lever rearward to raise metering wheel.

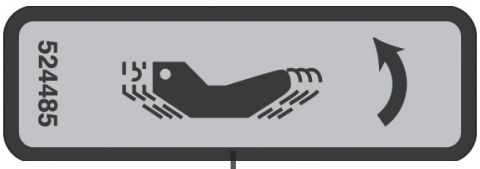
MOVING BLADES/BLADE ARMS CUT/CRUSH HAZARD
Stay clear of blade/blade arms while operating.
Stop engine before servicing or adjusting.

CRUSH HAZARD
Cut-off may operate unexpectedly.
Keep hands a safe distance away.
Do not operate unless cover is installed.
Do not service unless engine is stopped.

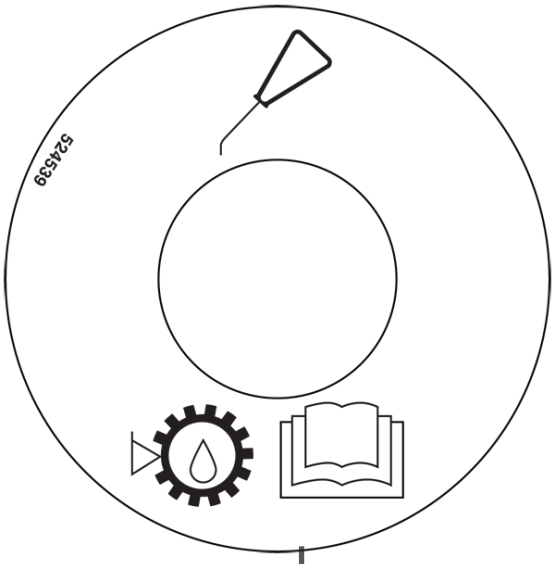
HEAVY DUTY SOD CUTTER

ROTATING PARTS:
Entanglement / Amputation Hazard
Do not operate with cover removed.
Stop engine before servicing.

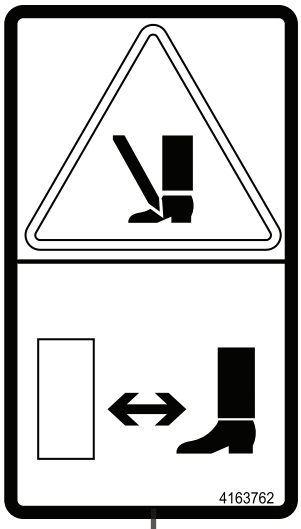
ATTENTION:
-Read Operator Manual before servicing or repairing.
-Remove spark plug wire before servicing or repairing.



Rotate lever counter clockwise to engage sodcutter blade drive.
Rotate lever clockwise to disengage sodcutter blade drive.



GEAR CASE LUBRICATION:
See Operator Manual for proper fluid, checking, and filling procedures.



CUT HAZARD
Cut-off may operate unexpectedly.
Keep feet out of cut-off area.
Do not service unless engine is stopped.

HEAVY DUTY SOD CUTTER

MASTER CLUTCH CONTROL LEVER (A)
Engages / disengages drive belt. Applies brake to drive belt when pulled FIRMLY to rear.

THROTTLE CONTROL (B)
Controls engine speed. Moving it forward increases engine speed. Moving the control all the ay rearward stops the engine.

OPERATOR PRESENCE CONTROL (C)
With master clutch control engaged, engine will stop if operator presence lever is not depressed.

METERING WHEEL CONTROL LEVER (D)
Raises /lowers metering wheel to engage/ disengage cut-off mechanism.

BLADE DEPTH CONTROL LEVER (E)
Raises or lowers cutting blade.

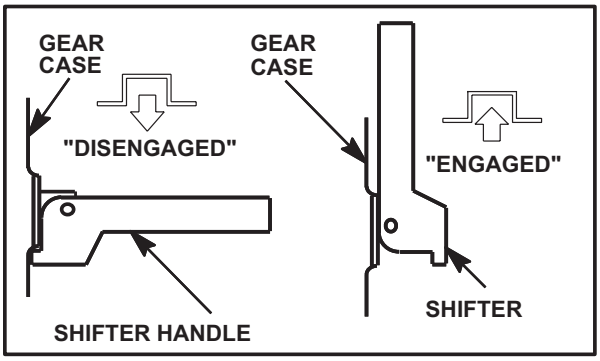
BLADE DEPTH CONTROL LOCKING LEVER (F)
Locking lever holds blade depth control in desired position.

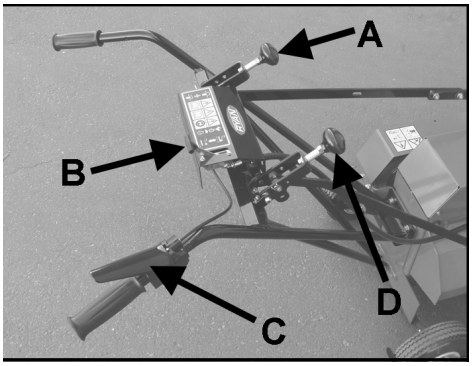
BLADE ANGLE LOCKING LEVER (G)
Locks blades.

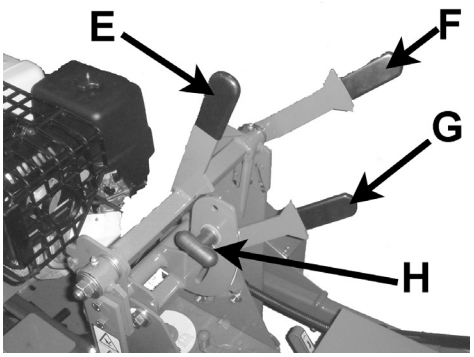
DEPTH STOP (H)
Allows resetting of blade depth to the previous cutting height.

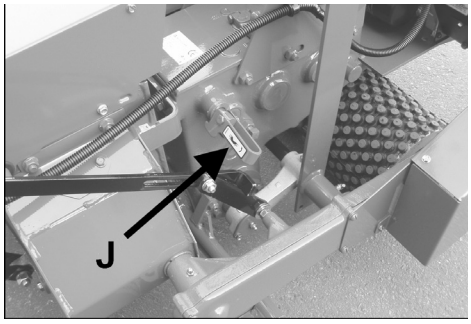
BLADE SHIFTER HANDLES (J)
Engage and disengage blade for cutting and gears for driving Sodcutter.

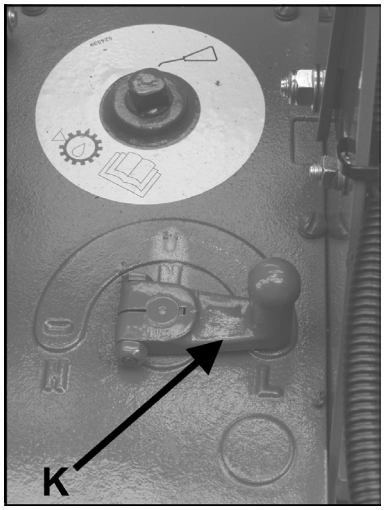
WHEEL SHIFTER LEVER (K)
Allows selecting High, Low or Neutral for the wheel drive.











PRE-OPERATION CHECK LIST
(OPERATOR'S RESPONSIBILITY)

- Review and follow all safety rules and safety decal instructions.
- Check that all safety decals are installed and in good condition. Replace them if damaged.
- Check to make sure all shields and guards are properly installed and in good condition.
- Check that all hardware is properly installed and secured.
- Check to be sure engine is free of dirt and debris. Pay particular attention to the cooling fins, governor parts and muffler. Clean air intake screen. Check air cleaner;the air cleaner needs to be serviced regularly..
- Inspect the work area. Remove stones or other hard objects that might cause damage.
- Check that there are no underground utilities in the work area.
- Check all lubrication points and grease as instructed in manual.
- Perform a functional check of the safety interlock system each time you operate the unit. If it doesn't work, repair it before using the machine.

⚠WARNING

Gasoline (Petrol) is extremely flammable and highly explosive under certain conditions. BE SURE to install fuel cap after refueling.

Fill fuel tank with good quality, clean, unleaded regular gasoline (petrol) to the level recommended by the engine manufacturer.

TO CHECK OR ADD FUEL:

- Use a funnel to avoid spilling.
- Do it outdoors.
- Do not smoke.
- Stop the engine and allow to cool.
- Do not overfill.
- Clean up spilled fuel.

BEFORE STARTING THE ENGINE

1. Be familiar with the controls, how each functions, and what each operates.
2.. Check engine oil level. Add oil if necessary, following the engine manufacturer's recommendations. Refer to engine manual included with literature packet.
3. Open the fuel valve under the fuel tank.
4. Fill the fuel tank with the amount and type of fuel recommended by the engine manufacturer.
5. **CHOKE**: For cold starts, set the throttle lever to the half-open position and move the choke to the ON position. For warm starts set the throttle to the half-open position and the choke to the OFF position.

OPERATOR PRESENCE INTERLOCK SYSTEM

To start the engine:
- The master clutch must be disengaged.

To operate the machine:
- The operator must hold down the operator presence lever or engaging the master clutch will kill the engine.

STARTING THE ENGINE

1. Pull the recoil starter to start the engine.
2. If the choke is ON when the engine starts, gradually back it off until the engine runs with no choke at all.

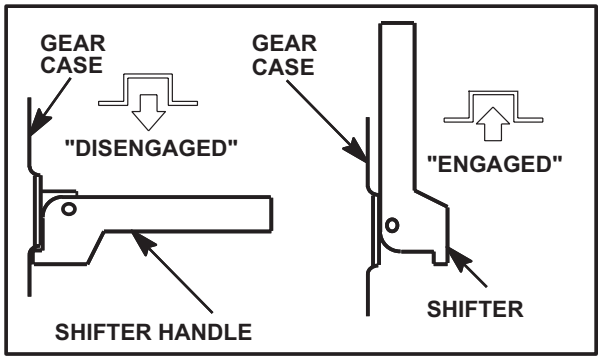
MOVING OF UNIT

To move unit without running blade:

1. Place blade shifter handle in "disengaged" position (handle will point straight out from unit) and raise the metering wheel. See **Figure 1**.
2. Set engine speed to slow.
3. Select High or Low speed with the shifter handle. (The machine may need to be rolled back and forth for the gears to line up to make the shift)
4. Depress operator presence control lever.
5. Engage master clutch control lever.
6. Adjust throttle to desired walking speed.

To move unit **without running the engine**, move drive shifter to neutral and master clutch control lever to the "disengaged" position. Push unit to move it.

FIGURE 1



WHEEL DRIVE SHIFTER HANDLE

CUTTING SOD

WARNING: Beware of underground utilities. Possible electrocution, explosion, service disruption risk could be present.

Before beginning any work, check with the local authorities for underground utility location and depth. Do not operate where there is any risk of contacting underground utilities. Contacting buried utilities could result in a service outage. Contacting buried electrical wires could result in electrocution. Contacting a buried gas line could result in an explosion.

1. Move machine to the area where sod is to be cut. Unlock the rear wheels by turning lock counter-clockwise. With the engine off and the master clutch disengaged, stand on the right side of the machine. Loosen the Blade Depth Control Locking Lever with your right hand, then use the handle bar to tip the machine forward and hold it with your left hand. Lower the Blade Depth Control Lever with your right hand until it hits the preset Depth Stop. Tighten the Locking Lever.

2. Start the engine, then select the wheel drive speed with drive shifter handle and engage the blade drive with the Blade Drive Shifter Lever.

3. Adjust the throttle to full speed. With the machine tipped forward, engage the Master Clutch. The machine will start moving forward and the blade drive will operate. Lower the machine into the sod and cut for a short distance.

4. Disengage the master clutch to stop the machine. Check the sod thickness. Adjust the Depth Stop and blade if necessary. See Adjustment section.

5. Engage the master clutch to continue cutting. At the end of each pass lift up on the handle to raise the blade out of the sod and turn around for the next pass.

SOD CUT-OFF AND METERING WHEEL OPERATION.

The Ryan Heavy Duty Sodcutter has a cut to length feature. The factory cut-off length setting is approximately 6feet (1.83M). See Adjustment Section to set cut-off length and depth.

⚠WARNING

The sod cut-off blade can cut or crush.

- Keep hands and feet out from beneath the machine.
- Stop the engine before performing servicing or making any adjustments.
- Raise the metering wheel before turning. The cut-off continues to operate as long as the metering wheel is on the ground.

NOTES:
- Operate at full engine speed to set cut-off length and depth. At slower speeds the cut-off may not work correctly.
- Cut-off length may vary for a setting depending on sod conditions.

To cut sod to the preset length:

- Lower the metering wheel at the start of the cut.

- As the machine moves forward the metering wheel rolls along the sod and trips the cut-off mechanism when it has traveled past the preset distance.

- When the cut-off mechanism is tripped, the cut-off blade comes down and cuts the sod strip. It is normal for the handle to jump slightly when the cut-off blade cycles.

- Raise the metering wheel before turning the sod cutter.

NOTE: If the handle jumps excessively when the cut-off blade cycles, depth may need to be adjusted. See Adjustment Section.

WALKING RAM AUTO CUT-OFF OR ROLLING RAM CUT-OFF AND SULKY ROLLER

If the Sulky Roller Accessory (P/N 545505) is to be used, the sodcutter must be converted from the auto walking ram cut-off. Use Rolling Ram Accessory(P/N 545395) for this conversion. Refer to the Accessories page.

SULKY ROLLER OPERATION

- Position the machine at the start of the cut.

- Connect the sulky with its hitch pin.

- Lower the blade to start cut.

- At the end of the pass, disengage the master clutch and disconnect the sulky roller.

- Re-engage the master clutch to run the machine as it is raised out of the cut and turn around.

- Position the unit in the ground for the next cut.

- Disengage the master clutch again before reconnecting the sulky for the next pass.

ADJUSTING SOD DEPTH OF CUT

3/4" (20mm) is a good general starting depth of cut. Depth of cut can be varied from there depending on conditions and what you are trying to accomplish.

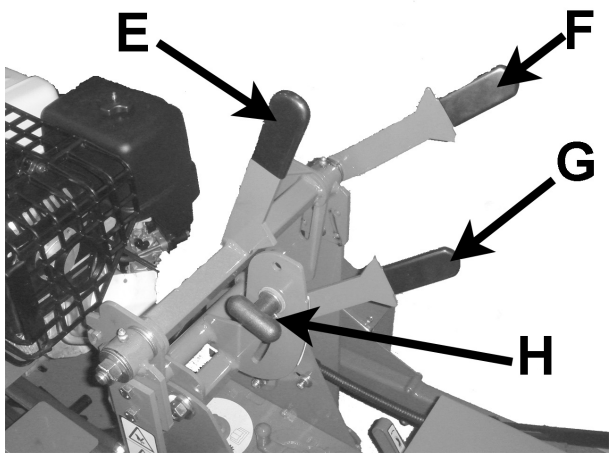
1. Make an initial depth setting. Park the machine on a hard surface. Loosen depth control locking lever **E** and lower the depth control lever **D** until the blade rests on the surface.

2. Loosen the depth gauge lock **F** and set top of depth gauge **G** 3/4" (20mm) below the top of the depth crossbar. Tighten the depth gauge lock to secure the depth gauge setting.

3. Use your left hand to tip the machine forward while lowering the depth control lever **D** until the depth control crossbar hit the Depth Stop **G**. Tighten the locking lever **E** to lock in the depth setting, make a trial run in turf. Check the depth of cut.

4. Re-adjust the depth gauge **G** and depth control lever **D** if necessary.

NOTE: Numbers on depth gauge do not necessarily represent thickness of sod being cut. The numbers are useful as a reference for making changes.



CUT-OFF BLADE DEPTH ADJUSTMENT

Set sod depth of cut before adjusting cut-off depth. To adjust cut-off depth:

1. Loosen rear wheels so they can be moved up and down.

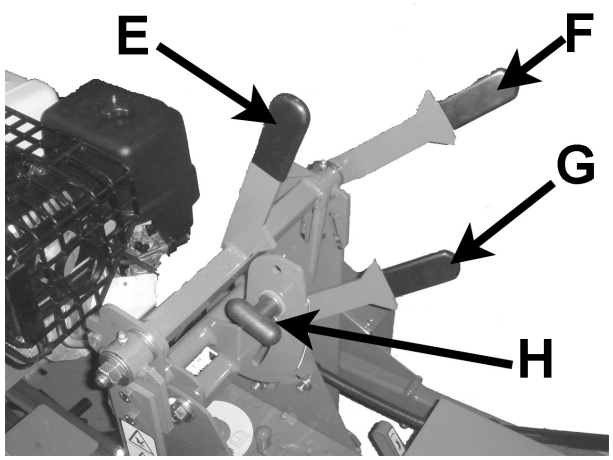
2. Adjust wheels so the cut-off blade will completely separate the sod without taking more of a cutting stroke than needed.

3. Make a test run to check both thickness and cut-off operation. Re-adjust if necessary.

NOTE: The handle will jump slightly at each cut. Excessive jumping means the cut-off blade is coming down to far. Correct excessive jumping by lowering rear wheels.

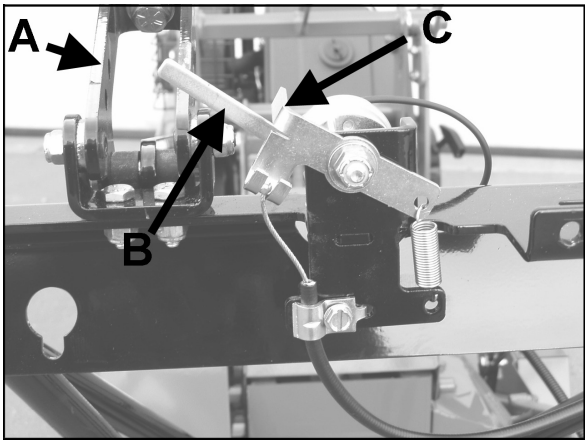
If sod is not cut completely, raise the rear wheels slightly to lower cut-off blade.

When cut-off blade is correctly adjusted, the sod will roll up slightly at each cutting stroke and there will be a slight penetration into the soil below the sod without excessive jumping of the handle.



ADJUSTING OPERATOR PRESENCE CONTROL

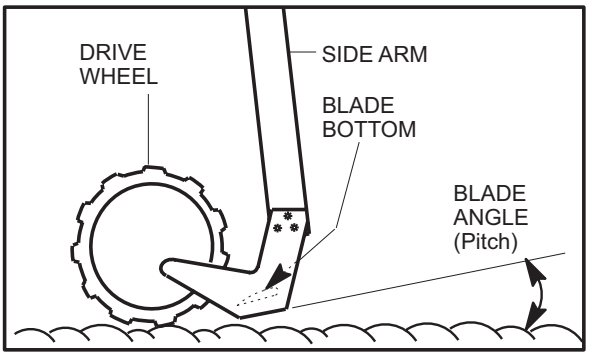
1. To adjust operator presence cable, pull clutch control handle **A** rearward as far as possible.
2. Press operator presence handle (right handlebar) down as far as possible.
3. Adjust cable until the pivot arm **C** contacts the arm extending from the operator presence switch **B**.
4. Tighten cable clamp to secure cable. Check for proper operation.



BLADE ANGLE (PITCH)

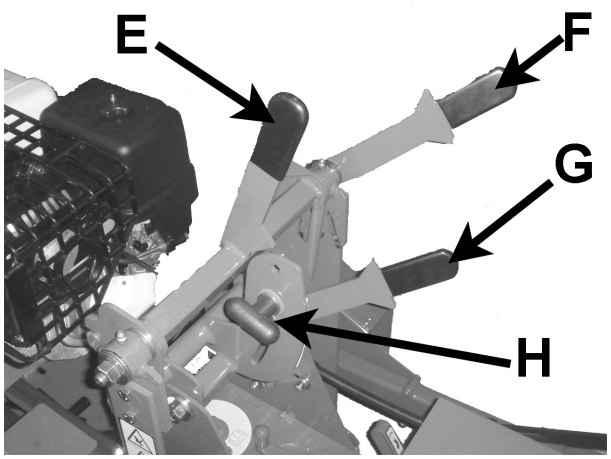
Under normal operating conditions, blade angle is minimal (blade bottom is flat). In extremely hard soil or when cutting with a dull blade, the blade may want to ride out of the ground. It may then help to adjust blade angle forward (see Adjusting Blade Angle below). A short trial run will indicate what the best blade angle is.

NOTE: Extreme blade angles put extra stress on the side arms. To reduce stress on the machine, operate with the flattest blade angle that gives satisfactory results.



ADJUSTING BLADE ANGLE (PITCH)

1. Loosen blade angle control locking lever **F** and move H-frame forward or backward until blade is at desired angle of pitch.
2. Tighten blade angle control locking lever **F**.



LENGTH OF CUT (METERING WHEEL)

The length of cut is determined by how far the metering wheel rolls before it turns the dog wheel to the point where a dog trips the cut-off mechanism. The length is adjusted by the number of dogs and the diameter of the metering wheel.

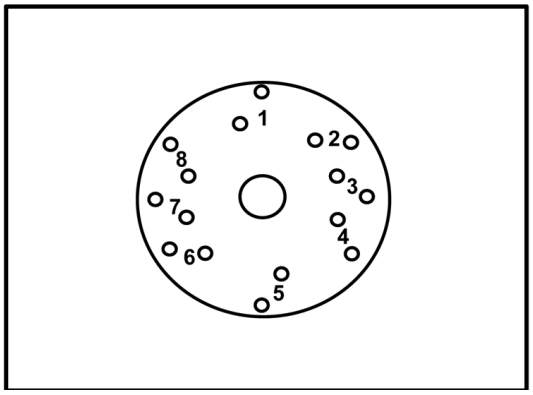
1. Select desired length of cut from the Length of Cut Chart. (See below)

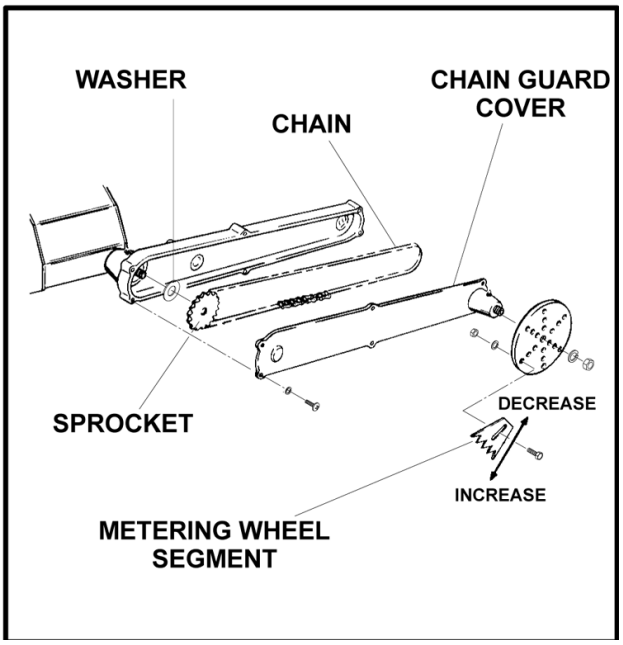
2. Use the chart to determine the number of dogs and dog positions. Set up the unit with the metering wheel segment slot centered on the mounting bolts.
3. Install the correct number of dogs at the positions indicated by the Dog Position Figure

4. Make several cuts.

5. Check the cuts for correct sod lengths. If fine adjustments need to be made, adjust the segments (P/N 515534) on the metering wheel. Segments can be moved out to increase cut length, or moved in to decrease cut length. Be sure all segments are adjusted uniformly.
3. Make a test run to check both thickness and cut-off operation. Re-adjust if necessary.

NOTE: The slot in the metering wheel segments allows adjustment of up to ±1" per foot (80mm per meter) from the nominal setting.





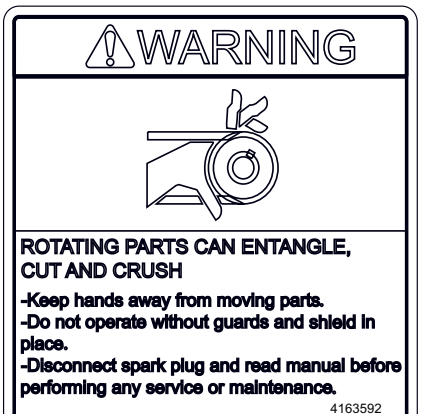
Number and Position of dogs on Dog Wheel	PN 515534		Roll Area	
	Inches	Meters	Square Feet	Square Meters
1	72	1.8	8.0	0.7
1-5	36	0.9	4.0	0.4
1-4-6	24	0.6	2.7	0.2
1-3-5-7	18	0.5	2.0	0.2
1-2-4-5-6-8	12	0.3	1.3	0.1

⚠WARNING

When replacement parts are required, use genuine **Schiller Grounds Care, Inc.** parts or parts with equivalent characteristics, including type, strength and material. Failure to do so may result in product malfunction and possible injury to the operator and/or bystanders.

Carbon monoxide present in the exhaust is an odorless and deadly gas. Never start or run the engine inside where exhaust fumes can collect. Provide enough fresh air to keep fumes from getting too strong.

Replace any warning decal that becomes illegible immediately.



ROTATING PARTS:
Entanglement / Amputation Hazard
Do not operate with cover removed.
Stop engine before servicing.

ATTENTION:
-Read Operator Manual before servicing or repairing.
-Remove spark plug wire before servicing or repairing.

Use adequate lifting device (i.e., hoist, fork lift, etc.) to raise unit.

Use adequate supports when unit is raised for servicing.

Wear protective eye equipment when using hammers, chisels and punches.

DAILY MAINTENANCE

Operator Presence System

For the engine to run, the Operator Presence Lever must be held when the Master Clutch Control is engaged.

To Check:

1. Start the engine and run at 1/2 throttle with the master clutch disengaged.

2. Engage the master clutch holding the Operator Presence Lever. Release the operator presence lever and the engine should stop.

   Repair the machine before using if the Operator Presence System does not kill the engine.

Blades:

Check for damage. Replace any broken, cracked or otherwise damaged blades. Do not weld or straighten blades. Replace or sharpen dull blades. See Sharpening Instructions.

Hardware:

Tighten any nuts and bolts that are found loose. Replace any broken or missing cotter pins. Repair any other problems before operating.

Engine:

See engine manual for change intervals and oil specifications. See engine manual for air cleaner service intervals and service procedure.

HEAVY DUTY SOD CUTTER

Lubrication:

Grease Fittings:
The Heavy Duty Sodcutter has 17 grease fittings. Use a good grade of Lithium Based grease.

GREASE AS INDICATED BELOW:

Pitman arms (1 each side)	1	EVERY 4 HOURS OF USE	(Figure 1)
Side arms (2 each side)	2	EVERY 4 HOURS OF USE	(Figure 1)
Side arm pivots (1 each side-top of unit)	3	EVERY 8 HOURS OF USE	(Figure 2)
Metering wheel shafts (2 points)	4	DAILY	(Figure 3)
Rear axle pivot (1 point)	5	DAILY	(Figure 1)
Rear wheel pivots (1 each side)	6	DAILY	(Figure 4)
Belt idler pivot (1 point)	7	DAILY	(Figure 5)
Cut off mechanism(8 points)	A-H	DAILY	(Figure 6)

NOTE: When lubricating the cut off mechanism, trip the cut-off by hand (turn the metering wheel by hand until the cut-off trips) and then turn the cut-off clutch drive by hand to rotate first the cam grease fitting **E**, and then the rear trunnion roller grease fitting **G** to where they can be accessed.

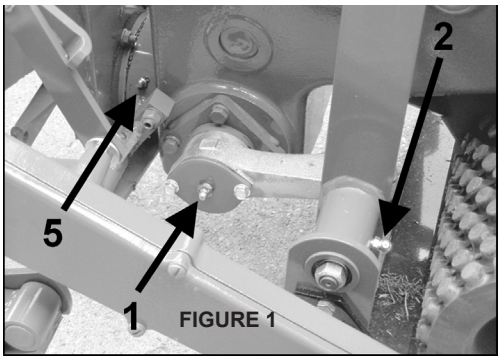


FIGURE 1

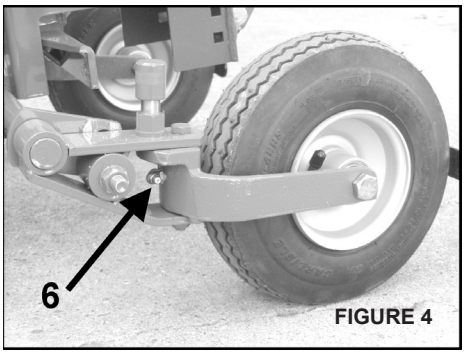


FIGURE 4

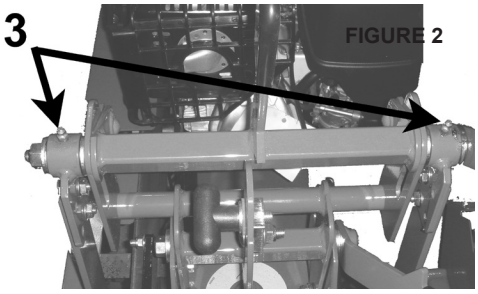


FIGURE 2

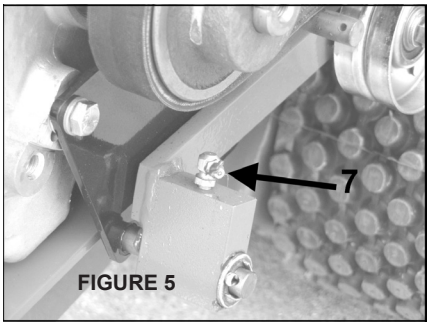


FIGURE 5

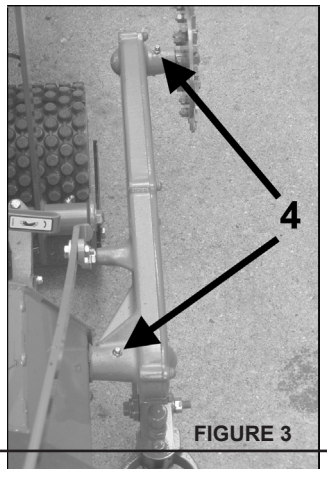


FIGURE 3

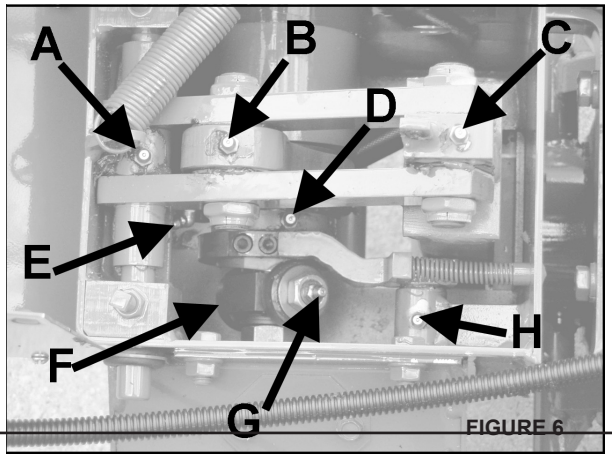


FIGURE 6

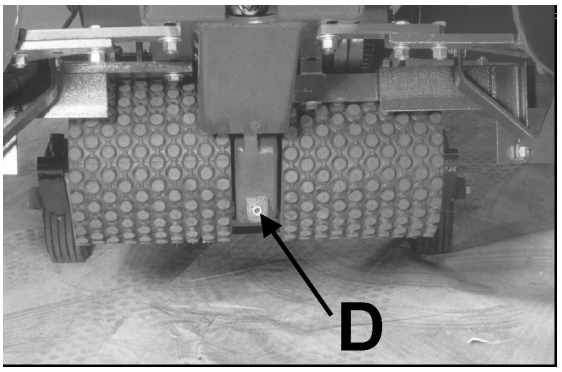
LUBRICATION CON'TD:

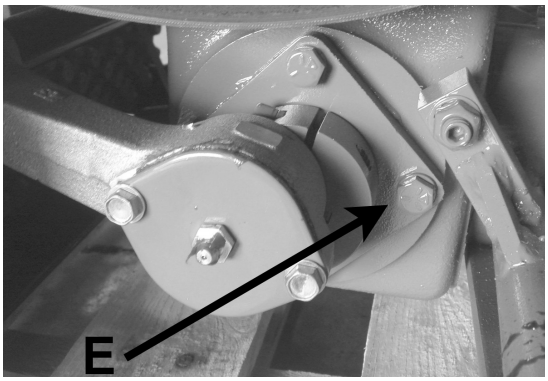
Gear Case:

The gear case is initially filled with 3 1/2 pints (1.7L) of EP 140 Gear Lube. Do not add to this amount unless the oil is changed or lost through leakage. Gear case drain plug **D**.

Check gear case lubricant level by removing one of the rear pitman bearing cap screws **E**. Add EP 140 gear lube through the pipe plug opening in the gear case cover until oil comes out of the pitman cap screw hole.

Drive Chain:
Oil every 25 hours.

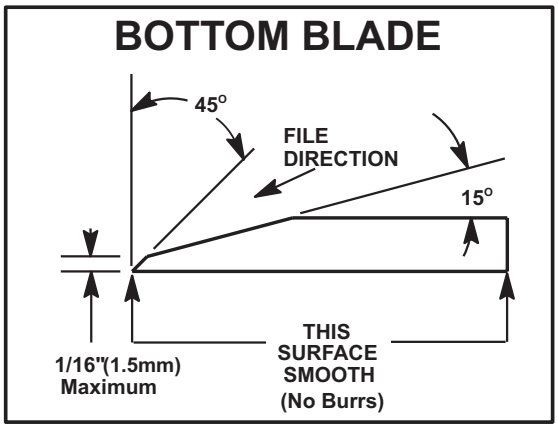


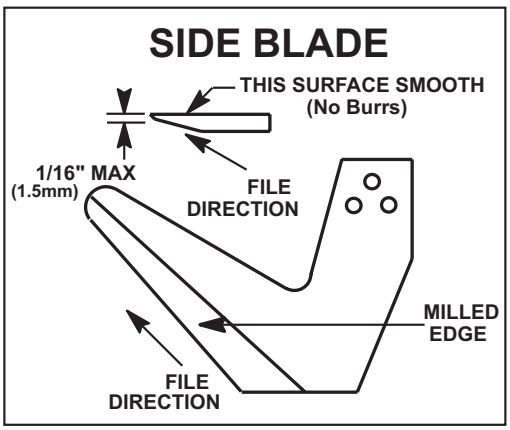


BLADE SHARPENING

WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT WHEN SHARPENING BLADES

1. Hand file bottom blade at 45^{O} angle until no flat remains.
2. To keep cutting edge less than 1/16" (1.5mm) on 45^{O} angle, grind milled surface back at 15^{O} to less than 1/16"(1.5mm).
3. Hand file side blades at 45^{O} until no flat remains.
4. To keep cutting edge less than 1/16"(1.5mm) on 45^{O} angle, grind milled surface back at 15^{O} to less than 1/16"(1.5mm).





STORAGE INSTRUCTIONS

⚠ WARNING

To prevent possible explosion or ignition of vaporized fuel, do not store equipment with fuel in tank or carburetor in enclosure with open flame (for example, a furnace or water heater pilot light).

Daily Storage

1. Check engine oil level and air filter element daily.
2. Check oil level in gear case.
3. Close fuel valve at bottom of fuel tank.
4. Clean cutting blade (grass, dirt, etc.).

EXTENDED STORAGE

Before the equipment is put into storage for any period exceeding 30 days:

1. Drain all fuel from fuel tank and lines (use a hose or fuel line, routed from fuel tank shut-off to proper container).
2. Start engine and run until all fuel is used from the carburetor float bowl.
3. While engine is warm, drain the crankcase oil and refill with the proper weight of oil corresponding to the season when the equipment will next be used.
4. Remove the spark plug and squirt a small quantity of engine oil into the cylinder. Turn the engine over a few times to distribute the oil.
5. Lubricate all lubrication fittings.
6. Clean and oil cutting blade to prevent rust.

To put equipment into operation after an extended storage:

1. Fill fuel tank with clean fresh fuel.
2. Check crankcase oil level, and start engine.
3. Check fuel system for fuel leaks.

TROUBLE SHOOTING SOD CUTTER		
PROBLEM	CAUSE	SOLUTION
Blade will not stay in ground.	a. Bottom of blade is probably rounded off. b. Blade angle is not properly set.	a. Sharpen or replace blade. b. In hard ground, the angle of cut should be slightly downward (pivot “A” frame forward).
Roots clogging blade on side or bottom.	Some types of turf and soil make this a problem.	Keep the blade extra sharp, and ground back at a low angle.
Belts jump off	a. Wrong type of belts. b. Too much slack when belt tightener is disengaged.	a. Use *only* the special banded factory belt. b. Slide engine forward and readjust control rod.
Locking levers not tight when pulled to limit of travel.	Thread wear on locking nut.	Tighten locking nut on opposite end of tie rod.
Belts grab in pulleys and unit creeps when clutch is NOT engaged.	a. Belts are old and frayed, or are not the type sent out with unit. b. Rust or paint in pulley grooves. c. Engine set too far forward.	a. These belts should be replaced with factory stock, anti-friction belts, designed for belt tightener clutches. b. Clean and polish pulleys. c. Move engine back.

Refer to instructions for set-up, operation and service to properly install or correct any problems stated in the above chart.

TROUBLE SHOOTING AUTOMATIC CUT-OFF		
PROBLEM	CAUSE	SOLUTION
No cutting	a. Shaft nut on cam end is too tight. b. Foreign material between rollers and cam surface. c. Metering wheel slipping or not turning.	a. Adjust shaft nut. b. Clean rollers and cam. c. Check bearing for free rotation, or broken chain.
Continuous cutting or double tripping.	a. Shaft nut on cam end too loose. b. Trigger out of adjustment, loose or broken. c. Broken or badly worn rollers or bearings. d. Weak trigger spring. e. Worn trigger end or cam stop. f. Trigger binding in housing. g. Trigger and cam stop not in line.	a. Adjust shaft nut. b. Adjust, tighten, or replace the trigger. c. Repair or replace as necessary. d. Stretch or replace spring. e. Grind square in emergency, replace as soon as possible. f. Remove and repair. g. Shim trigger for correct alignment.
Incomplete cut-off.	a. Dull blade. b. Improperly sharpened blade. c. Shaft nut improperly adjusted. d. Weak pressure on plate spring. e. Unit setting too high. f. Clutch overheating. g. Loose belts.	a. Sharpen blade. b. Resharpen blade. c. Adjust shaft nut. d. Replace spring. e. Adjust dual wheel height. f. Adjust pressure plate clearance. g. Secure with proper tension.
Clutch slips and/or overheats	a. Shaft not properly adjusted. b. Weak spring or improper shimming. c. Improper pressure plate clearance. d. Clutch linings glazed.	a. Adjust shaft nut. b. Replace spring or re-shim. c. Adjust pressure plate clearance. d. Roughen surface or replace.
Length of cut varies.	Trigger friction too great.	Lubricate end of trigger and shaft.

Refer to instructions for set-up, operation and service to properly install or correct any problems stated in the above chart.

HEAVY DUTY SOD CUTTER

Models: 744853G.....HD Sodcutter - 16 in.
744854G.....HD Sodcutter - 18 in.

Engine:
Model.....Model GX390UT2, 11.7 HP Honda
Starter..... Recoil
Governor..... 3200 RPM ± 150 RPM, no load
Engine displacement: 23.7 cu. in. (389cc) and develops 18.5 ft.-lbs. (25.1 N·m) of torque at 2500r.p.m.
Clutch..... spring loaded belt tightener type

Reduction
Engine to blade..... 2.50:1
Engine to drive wheels..... High 29.1:1
Low 36.2:1
Engine to Auto Cut-off..... 4.82:1

Wheels:
Drive..... 8" (203 mm) Dia. w/knobby tread vulcanized to hub
Rear..... 2 x 2.80-4 pneumatic tires with pre-packed ball bearings

Drive:
Engine to gear case.....Two banded A-section belts from engine to gear case. Ten-pitch gears and #50 roller chain running in oil, in gear case to drive wheels.

Gear case:
Lubrication..... EP140 Gear lube
Capacity..... 3 1/2 Pints (1.7L)

Axles...... Drive Wheel; splined 1 3/4" (44.5 mm) diameter mounted in ball bearings.
Rear; center pivot rocking

Chasis..... One-piece cast iron gear case

Blades..... High Carbon Steel Hardened and Sharpened

Blade pitch:
Hand lever adjustment..... variable 0^{O} to 9^{O}

Blade speed: .....
1280 oscillations/min @ 3200 engine RPM

Cutting width:
744853G..... 16"" (30.5 cm)
744854G..... 18" (45.7cmm)

Cutting Thickness..... Precisely adjustable to 2 1/2" (63.5)
Cutting Speed @ 3200 RPM....Low Gear: 145 ft/min (56.3M/min)
High Gear: 231 ft/min (70.5M/min)
Cut-Off drive..... Adjustable: 1 ft. to 9 ft. (305mm to 2.7M)

Rolling Racks.. Adjustable to various sod lengths 6 ft.(1,829mm) to 9 ft.(2,743mm)

Dimensions:
Width..... 31" (787 mm)
Length..... 74" (1880 mm)
Height..... 42" (1067 mm)
Wheelbase..... 24" (610 mm)
Wheelbase with Sulky..... 60 3/4" (1238 mm)

Weight:
744853G..... 534 lbs. (242 Kg)
744854G..... 563 lbs. (588 Kg)

TOUCH -UP PAINT:
16OZ. (0.5L) Spray can, order P/N 65334

EC Declaration of Conformity

The Undersigned Manufacturer:

Schiller Grounds Care, Inc.
One Bob-Cat Lane
Johnson Creek, WI 53038
Date:

Chuck Clark
Director of Operations
Date: October 13, 2011

EU Authorized Representative
Authorized to compile Technical File:

Earlsmere Limited
Unit 18 Valley Road
Station Road Industrial Estate
Wombwell, Barnsley, South Yorkshire, S73 OBS UK

Jim White
Managing Director
Date: October 13, 2011

Declare that the machine described below:

Make & Type: ..... **Ryan, Heavy Duty Sodcutter**
Category:..... **Sodcutter**
Series: **744853G, 744854G**
Engine: ..... **Honda**
Type:..... **GX390**
Speed:..... **3200 R.P.M**
Net Installed Power: ..... **8.9 KW (11hp)**
Cutting Width:..... **40.6cm (16") 744853G & 45.7cm (18") 744854G**

Complies with the provisions of the following European Directives, Amendments, harmonized standards and the regulations transposing it into national law.

Directives/Harmonized Standards

Machinery Directive..... .....**2006/42/EC**
ISO 12100: 2010 (Supersedes ISO 12100-1-2003+A1:2009)
EMC Directive: **2004/108/EC**
Noise in the Environment Directive **2000/14/EC**
Vibration Directive **2002/44/EC**
Non Road Emissions Directive..... .....**2002/88/EC**

Sound: Sound levels were determined in accordance with Directives 2000/14/EC (Annex V), 2006/42/EC and ISO 11094 and standard ISO 3744: 2009.

Guaranteed Sound Power Level **108dB**
Operator Ear..... **92dB**

Vibration:

Hand/arm vibration was measured at the right and left operator handles per ISO 5349-1-2001 and ISO 5349-2-2001. Vibration is given as the vector sum of acceleration in the x, y and z axes. Only the highest of the left and right readings is given.

Guaranteed Vibration Level..... **15.4m/s² Model 744853G**
..... **18.1m/s² Model 744854G**

Intended Use:

This machine is for cutting sod in grass areas grown for the purpose of harvesting the sod. It is intended for use on areas ranging from flat to a 5° degree slope. Loss of control may result on steeper slopes. It is not intended for use in rocky areas.

SCHILLER GROUNDS CARE, INC.
ONE BOB-CAT LANE
P.O. BOX 469
JOHNSON CREEK, WI 53038
920-699-2000
www.schillergc.com

SCHILLER GROUNDS CARE