OPERATOR'S MANUAL

SELF PROPELLED WALK BEHIND LAWN MOWER

36" REAR DISCHARGE HYDRO MIDSIZE

933303
16HP KAW ES EU

36" SIDE DISCHARGE HYDRO MIDSIZE

933304
16HP KAW ES EU

SCHILLER GROUNDS CARE

MAN 4165174
Rev.A 03-2010
ORIGINAL LANGUAGE INSTRUCTIONS

Parts Manual 4165173

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

⚠ WARNING

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

Californie Proposition 65 Avertissement

Les échappements des moteurs diesel et certains de leurs composés sont reconnus par l'Etat de Californie pour être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

⚠ AVERTISSEMENT

L'émission du moteur de ce matériel contient des produits chimiques que l'Etat de Californie considère être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

California Advertencia de la Proposicion 65

El estado de California hace saber que los gases de escape de los motores diesel y algunos de sus componentes producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

⚠ ADVERTENCIA

El estado de California hace saber que los gases de escape de este producto contienen productos quÍmicos que producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

CALIFORNIA

Proposition 65 Warning

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **WASH HANDS AFTER HANDLING.**

IMPORTANT MESSAGE

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

This machine comes with an Operation and Safety Manual and a separate Setup, Parts and Maintenance Manual. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand these manuals. 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 manuals 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 Schiller Grounds Care, Inc. 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 Schiller Grounds Care, Inc. 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 manuals, 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 an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

⚠WARNING

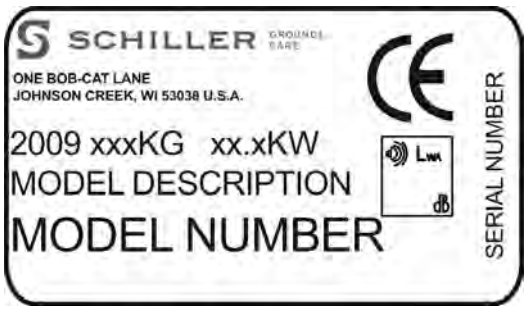
WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

⚠CAUTION

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

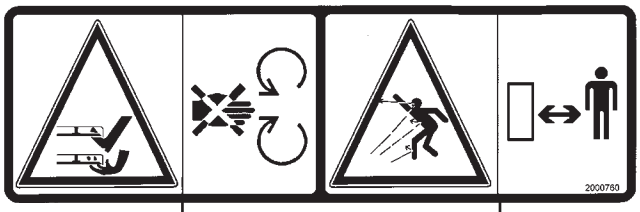
CAUTION

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 mower. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

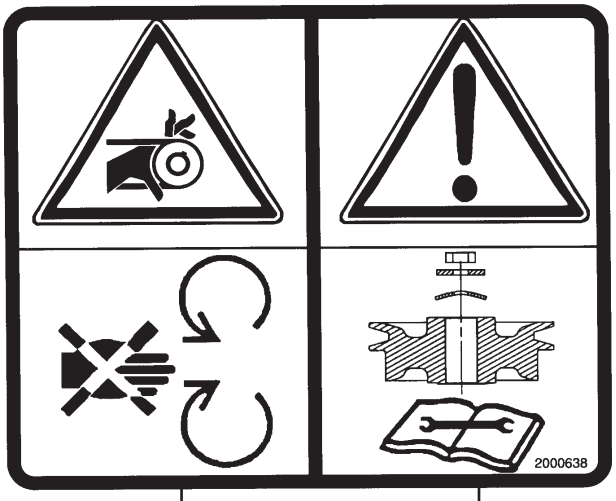


Rotating Blades
- Stay clear of blades when engine is running.
- Stop engine and let blades stop before removing grass collector or unclogging.

Blades Cut
- Amputation Hazard
- Keep hands and feet clear.
- Keep hands away from moving parts

Thrown Objects Hazard
- Keep area clear of people and pets.
- Remove objects blade may strike and throw.
- Stop blades to cross gravel ares.
- Do not operate without chute, mulcher or entire grass collector in place.

Operation & Safety Manual
- Read and understand Operation & Safety Manual.
- Replace if lost or damaged.

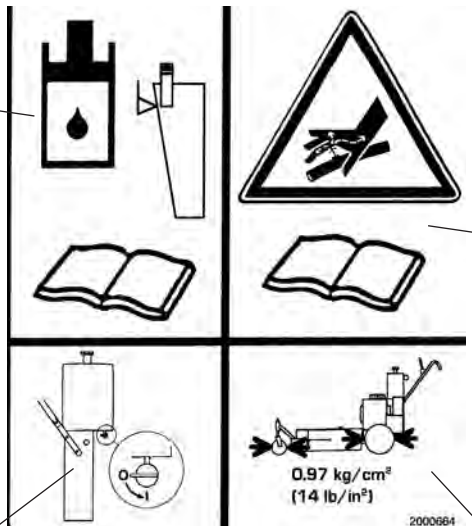


Rotating Parts

- Cut/Crush /Entanglement hazard.
- Keep hands away from moving parts.
- Stop engine before servicing.
- Do not operate with cover removed.

Blade Bolt Installation
- Conical washer must be positioned as shown.
- See Operation & Safety manual for blade changing instructions.

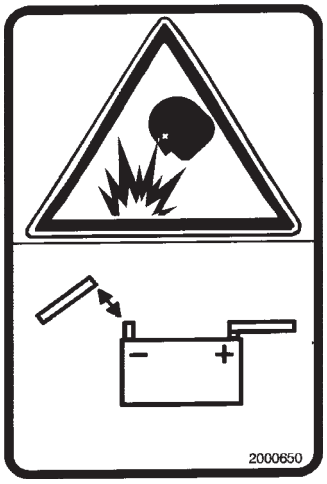
Hydraulic Fluid
- Fill to bottom of filler neck.
- See Operation & Safety manual for fluid specificiations.

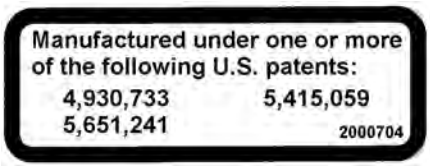


High Pressure Fluid
- Leaks can penetrate skin.
- Seek immediate attention for oil penetration injury.
- See Operation & Safety manual for procedures to find leaks and to service hydraulic system.

Fuel Valve
- Turn clockwise to close (0).
- Turn counterclockwise to open (I).
- Close before transporting to prevent flooding.

Tire Inflation
- Inflate tires to 0.97 kg/cm^2 [14lb/in^2]



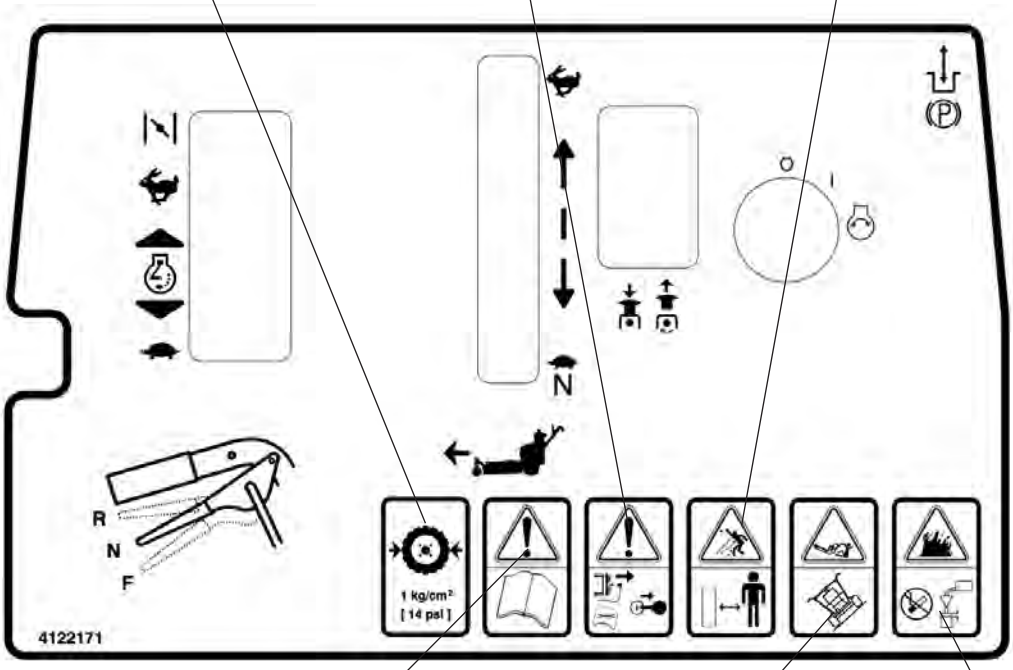


2000650
Batteries Produce Explosive Gases
- Keep sparks and flame away.
- Disconnect negative terminal first.
- Reconnect negative terminal last.

Tire Inflation
- Inflate tires to 1 kg/cm^2 [14psi]

Service / Maintenance
- Stop engine.
- Remove key and disconnect spark plug wire.
- Consult Operation & Safety manual for procedures.

Thrown Objects
- Keep bystanders a safe distance away.
- Remove objuects on ground blade may strike
- Stop blades before crossing gravel.



Operation & Safety Manual
- Read and understand Operation & Safety Manual.
- Replace if lost or damaged.

Slope Hazard
- Do not use on wet or slippery slopes.
- Mow across slopes.

Refueling (Flammable Liquids)
- Do not smoke.
- Stop engine.
- Do not spill fuel.
- Do not overfill. (Allow 25mm for fuel expansion)

Before using machine for the first time, check engine and hydraulic fluid levels and lubricate all points.

TRAINING

a) Read the operator's manual carefully. All rotary grass cutters are potentially dangerous. No person should operate the machine unless they are familiar with the controls and the proper use of the machine.

b) Never allow children or people unfamiliar with these instructions to use the mower. Local regulations may restrict the age of the operator.

c) Keep the area of operation clear of all persons, particularly small children, and pets.

d) Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

PREPARATION

a) Do not operate the equipment when barefoot or wearing open sandals. Always wear substantial footwear and long trousers.

b) Wear hearing appropriate protection.

c) Thoroughly inspect the area where the equipment is to be used and remove all rocks, toys, wire or other debris which may be picked up or thrown by the machine.

d) Petrol (gasoline) is highly flammable.

- Store petrol (gasoline) only in a container specifically designed for gasoline storage in a cool, dry place away from sparks and open flame.
- When refueling or checking fuel level:
  - Stop engine. Allow to cool.
  - Refuel outdoors only.
  - Do not smoke.
  - Use a funnel. Do not overfill. Clean up spills and move machine away from spills before starting.
  - Replace caps tightly on fuel containers & tanks securely.

e) Replace faulty mufflers.

f) Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts.

g) On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.

h) Disengage the self-propelled mechanism or drive clutch on units so equipped before starting the engine (motor).

i) Never attempt to make adjustments while the engine (motor) is running.

j) Never operate the equipment in wet grass. Always be sure of your footing. Keep a firm hold on the handle and walk, never run.

OPERATION

a) Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.

b) Mow only in daylight or in good artificial light.

c) Always be sure of your footing on slopes.

d) Walk, never run.

e) With walk behind machines, mow across the slopes, not up and down.

f) Exercise extreme caution when changing direction on slopes.

g) Do not mow excessively steep slopes.

h) Use extreme caution when reversing or pulling the mower towards you. Be sure the area behind is clear.

i) Stop the blades if the mower has to be tilted for transportation, when crossing surfaces other than grass and when transporting the mower to and from the area to be mowed.

j) Never operate the mower without proper guards, plates, grass catcher or other safety protective devices in place.

k) Do not change the engine governor settings or overspeed the engine.

l) Disengage all blades and drive clutches before starting the engine.

m) Start the engine or switch on the motor carefully according to instructions and with feet well away from the blades.

n) Do not start the engine when standing in front of the discharge chute.

o) Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.

p) Never pick up or carry a mower while the engine is running.

q) Stop the engine, wait for the blades to come to a complete stop, and disconnect the spark plug wire:
- before clearing blockages or unclogging chute.
- before checking, cleaning or working on the mower.
- after striking a foreign object. Inspect the mower for damage and have repairs made before restarting and operating the mower.
- if mower starts to vibrate abnormally, shut off machine immeadiately. Vibration is generally a warning of trouble. Inspect the mower for damage and have repairs made as needed before restarting.

r) Stop the engine (motor):
- whenever you leave the mower.
- before refuelling.

s) Shut the engine (motor) off and wait until the blades come to a complete stop before removing the grass catcher or unclogging chute.

t) Reduce the throttle setting during engine (motor) shut down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of mowing.

u) Go slow when using a trailing seat.

v) Keep washout ports and other mower-housing service openings closed when mowing.

x) Do not engage PTO at full throttle. Throttle midway between idle and highest possible engine speed.

y) Do not start the cutting blades until you are ready to start mowing.

z) Do not carry passengers.

aa) Do not operate where flying debris may injure people or damage property. Keep people and pets at a safe distance.

ab) Do not use if there are any doubts about safety.

ac) Keep labels, guards and shields in place. Replace operators manual if lost or damaged.

ad) Obey safety instructions. Failure to do so may cause injury to yourself or others.

ae) Do not defeat interlocks. Check operation daily.

af) Do not allow children, unskilled or untrained persons to operate machine.

ag) Do not operate machine while under the influence of drugs, alcohol, and any other condition of impairment.

ah) Check blade clutch operation. Adjust or have any problems repaired.

OPERATING ON SLOPES

USE EXTRA CARE WHEN WORKING ON SLOPES.

BEFORE OPERATING ON SLOPES, EVALUATE THE RISKS INVOLVED.

- With walk behind machines, mow across slopes, **not** up and down. With ride-on machines, mow up and down slopes, **not** across, except for zero turn machines. Zero turn machines should mow across slopes.
- Be alert to dips and rises which change the general slope. Watch for holes, rocks and roots in the terrain and other hidden hazards. Keep away from drop offs. Avoid ground conditions which will cause the machine to slide.
- If the operator is uncomfortable or unsure of the machines stability, operation on these slopes should cease immediately.
- The ultimate responsibility for safe operation on slopes, rests with the operator.
- Use lower speeds and exercise extreme caution on slopes and especially in sharp turns to prevent tipping and loss of control. Use extra caution when changing direction on slopes.

LEAVING THE DRIVING POSITION

Park the machine on level ground. Before leaving the driving position, stop the engine, make sure all moving parts are stationary and that the traction control levers are in the neutral position. Apply parking brake.

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 PTO.
- 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.
- Check the grass catcher frequently for wear and deterioration.
- Replace parts if worn, damaged, or faulty. For best results, always replace with parts recommended by the manufacturer.
- Guards should only be removed by a qualified technician for maintenance or service. Replace guards when work is complete.

STORAGE

- Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the engine, muffler, battery compartment and gasoline storage area free of grass, leaves or excessive grease.
- If the fuel tank has to be drained, this should be done outdoors.
- Use only replacement parts supplied by the original manufacturer.

FUEL

WARNING

– Petrol (gasoline) and diesel fuels are flammable; gasoline 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 couse explosions. Flowing fuel can generate static electricity. To prevent static electricity sparks:

– 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 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 cans and tanks securely.

WARNING

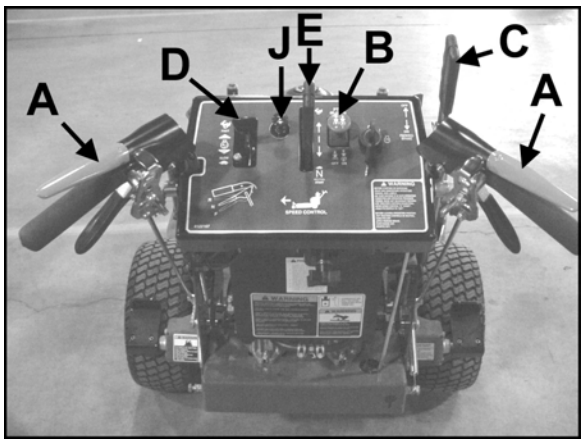
BLADES

– Mower blades are sharp and can cut. Use extra caution when handling. Remove obstructions with care. Wrap the blade(s) or wear gloves.

– Be aware that rotating one blade on multiblade mowers can cause other blades to rotate.

– Only replace blades. Never straighten or weld them.

– Keep other persons away from blades.



OPERATOR PRESENT CONTROLS (A)
The control levers must be held down for PTO operation and to shift the speed control out of neutral. If the PTO switch is on or speed control is shifted from neutral and the control levers are released, the engine will kill. On electric start models the control levers must be released, the blades must be off and the speed control must be in neutral for the engine to start.

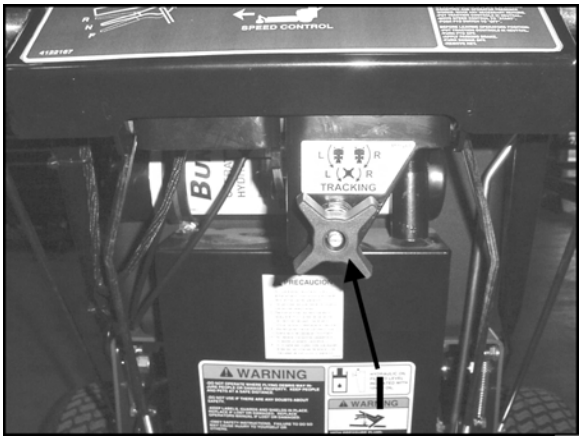
PTO SWITCH (B)
- DO NOT START CUTTING BLADES UNTIL READY TO START MOWING.
- **DO NOT ENGAGE PTO AT FULL THROTTLE. SET ENGINE SPEED MIDWAY BETWEEN HIGH IDLE AND LOW IDLE FOR ENGAGEMENT.**
- Disengage drive to cutting blades whenever you stop or leave the operators position.
- Shut off engine and remove spark plug wire before making adjustments or unplugging mower.
- The drive to the cutters is engaged when the PTO switch is pulled up toward the operator **(ON)** and disengaged by pushing the PTO switch back down **(OFF)**.

PARKING BRAKE (C)
Pull lever back to engage parking brake. Push lever forward to disengage parking brake.

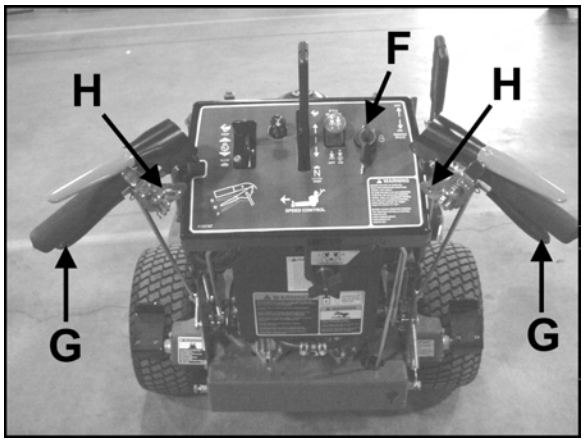
THROTTLE CONTROL (D)
By moving the throttle lever forward towards the engine, the engine speed is increased until the maximum governed rpm is obtained. By moving the throttle lever fully back, the engine will Idle down. On engines with an integrated choke, Moving the throttle lever forward to the detent gives maximum governed rpm. Moving it past the detent, chokes the engine.

SPEED SELECTOR (E)
The speed selector levers in the center of the control panel set the maximum forward and reverse speeds. The further the levers are moved forward, the faster the maximum preset speed. The levers must be moved forward for both forward and reverse speeds. Speed changes can be done on the go. The operator present levers must be held down or the engine will kill when the speed control levers are moved out of the neutral position.

TRACKING ADJUSTMENT KNOB (I)
The tracking adjustment knob provides on-the-go tracking control to correct for any hydraulic circuit or linkage differences from one side to the other.
To correct tracking:
1. Rotate the tracking adjustment knob to the right to make the machine track to the right.
2. Rotate the tracking adjustment knob to the left to make the machine track to the left.



CHOKE (J)
Provided with engines that do not have the integrated choke/throttle **D**. Pull up on choke control to engage choke when starting the engine. Push down on choke control to remove choke after engine starts.



KEYSWITCH (F)
Recoil models: Turn to right to allow engine to be started. Turn key to left to stop engine.

Electric start models: Turn key to right and hold until machine starts. When machine starts, let go of key and it will return to run position. Turn key to left to stop engine.

TRACTION CONTROL LEVERS (G)
TRACTION LOCKS (H)
The traction locks provide a neutral position when pulled back and locked with traction control levers.
To release: pull the traction control levers up enough to push forward on the locks.

NOTE:
- Squeezing the traction levers past the neutral position will cause the machine to back up)
- Both traction control levers must be released at the same time in order to go straight ahead. Using one traction control lever will cause the machine to turn to one side.
- When using the locks to provide a neutral position be sure the traction control rods are fully seated in the rear notch of the traction locks. Failure to do this may result in serious injury.

The traction control levers have **five** functions:

1. To provide a neutral position to stop the machine or to start the engine. Squeeze the levers enough to engage the traction lever locks by moving the tops of the locks towards the handgrip, then release the levers.
2. To engage the drive to wheels: gradually release the traction control levers to the speed set by the speed control and throttle.
3. To stop: pull the levers up to neutral.
4. To steer the unit: pulling up on the R.H. lever will initiate a R.H. turn and pulling up on the L.H. lever will initiate a L.H. turn.
5. To back up: squeeze the levers equally past neutral. This may be done any time the engine is running and the speed selector is not set in neutral, allowing instant forward/reverse operation and zero turning with one wheel driving forward and one wheel driving backward. Releasing the traction lever from reverse automatically returns the machine to neutral or the preset forward speed, depending on where the traction locks are set.

NOTE: There is a noticeable difference in the force required at the traction levers in the transition from neutral to reverse.

BEFORE STARTING THE ENGINE:

- Disengage cutterdeck drive.
- Traction levers are positively locked in neutral.
- Parking brake is on and speed selector is in neutral.

1. Check the engine oil level and add if necessary. Open the fuel valve under the fuel tank. Set the traction levers in the neutral position and the PTO Switch to the off position. Shift the speed selector to neutral.

2. For cold starts, set the throttle lever to the half open position and apply the choke.

   NOTE: For engines with combination choke/throttle controls, move throttle lever all the way forward to choke position.

3. Turn the key to operate electric starter to start the engine.

4. As soon as the engine starts, gradually back the choke off from the choke position until the engine will run with no choke at all.

OPERATING THE MACHINE

- Practice at slow engine and speed selector speeds with the blade control disengaged until completely familiar with the controls.
- For normal cutting the throttle should be set at the full open position. By using the speed control lever to speed up or slow down the machine during use, maximum control and cutting efficiency can be maintained.
- Using the machine at less than full throttle in heavy conditions will cause the engine to labor and result in excessive wear.
- For maneuvering where the speed control lever does not give the required speed, partial throttle may be used.
- Steering is controlled by the operation of the traction control levers. To steer the machine to the left, reduce the drive to the L.H. wheel by pulling up the L.H. traction control lever. To steer to the right, reduce the drive to the R.H. wheel by pulling up the R.H. traction control lever. Pulling a traction control lever up past neutral will cause that wheel to back up.
- To change speeds, depress the operator present controls then move speed control levers to desired speed.

FUEL TANK

⚠WARNING PETROL G(ASOLINE) IS HIGHLY FLAMMABLE!

- Fill fuel tank with good quality, clean, regular unleaded petrol (gasoline).
- Do not use hi-test fuel.
- Do not smoke.
- Do not spill fuel.
- Fill outdoors.
- Do not overfill. Fill to 25 mm below bottom of filler neck to allow room for expansion.
- USE A FUNNEL TO FILL FUEL TANK TO AVOID SPILLING.

DRIVING THE MACHINE IN TRANSPORT

1. With the PTO switch disengaged, and the operator present controls depressed, move the speed selector lever to give the required forward speed.
2. Release the traction lever locks and gradually engage both traction control levers together.

NOTE: Engaging only one traction lever will cause the machine to turn to one side. Squeezing one traction lever past neutral will cause the machine to back up to one side.

CUTTING WITH THE MACHINE

1. Make sure the discharge chute is in position or a grass collector is correctly fitted before starting to cut.
2. Depress the operator present controls.
3. Turn blades on with the PTO switch.
4. Do not start blades at full throttle. Use engine speed midway between high idle and low idle.
5. Move the speed selector lever to give the required cutting speed. Release the traction locks and gradually engage both traction control levers together.
6. Operate so that clippings are discharged onto the area that has been cut. This will result in a more even distribution of clippings and more uniform cutting.

- When mowing large areas, start by turning to the right so that clippings will be discharged away from shrubs, fences, driveways, etc. After two or three rounds, mow in the opposite direction, left hand turns, until finished.
- If grass is extremely tall, it should be mowed twice, the first cut relatively high, the second cut to the desired height.
- Use the left side of the mower for trimming on side discharge decks.

TO STOP THE MACHINE

1. Pull traction levers up to neutral.
2. Engage the traction lever locks in neutral position.
3. Disengage the cutterdeck with PTO switch.
4. Move speed control to neutral.
5. Close the throttle to slow the engine, turn engine off with the keyswitch.

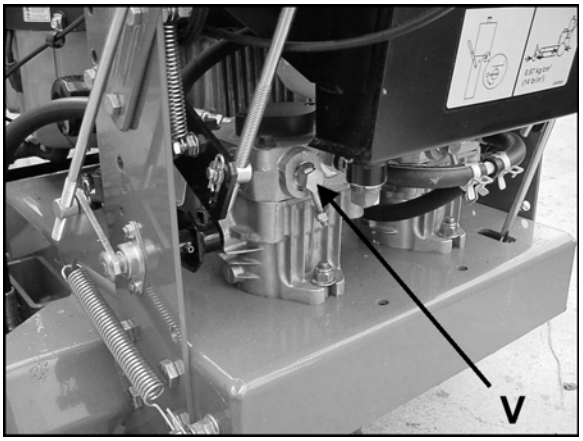
NOTE: When the machine is transported by truck or trailer or left to stand unused, the fuel valve (under the fuel tank) should be turned off. This avoids the possibility of flooding should any dirt get under the carburetor float needle. Leaving the fuel valve open can allow severe flooding which may ruin the engine by diluting the oil.

⚠WARNING **PREVENT INJURY OR PROPERTY DAMAGE FROM THROWN OBJECTS OR FROM CONTACT WITH THE BLADE**

- Keep body parts away from blades.
- Stop engine and let blades stop before removing grass collector or unclogging.
- Keep area clear of people and pets.
- Remove objects blade may strike and throw.
- Stop blades to cross gravel areas.
- Do not operate without chute, mulcher or entire grass collector in place.

PUSHING THE MACHINE WITH THE ENGINE STOPPED:

Open dump valve **V** on each pump by turning counter clockwise two revolutions. Move the machine and close dump valve **V** by turning clockwise until valve is firmly seated.



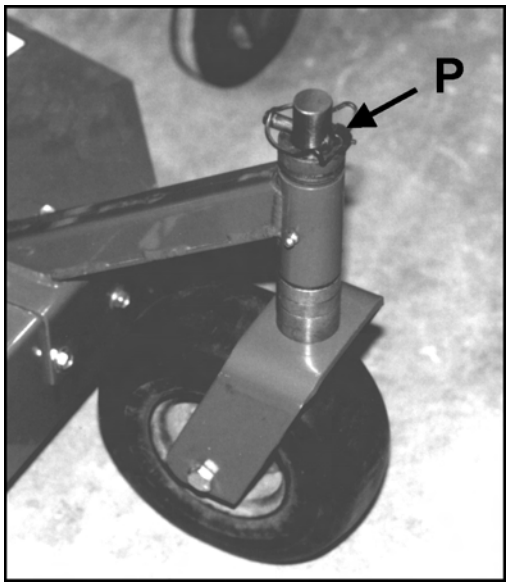
Make all adjustments with the engine shut off, spark plug wire disconnected and mower drive disengaged.

FIXED CUTTERDECK HEIGHT OF CUT

The cutting height is determined by the position of the blades in relation to the wheels. Variation to this height may be made at THREE points. (See Height of Cut Chart on Page 13 or Height of Cut decal located under belt cover to set desired cutting height.)

1. THE CASTER WHEELS

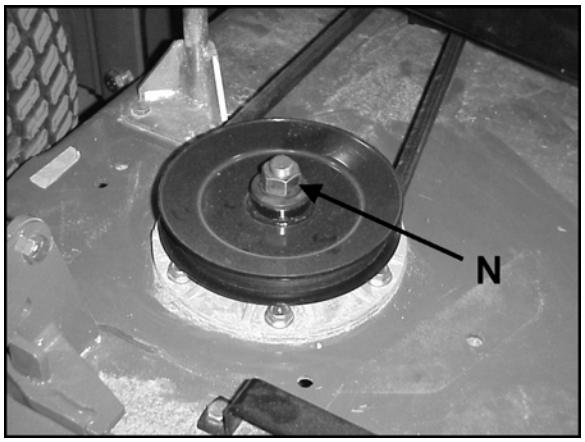
1. Remove the quick pin **P** from the top of the caster wheel pivot spindle.
2. Place required spacers above or below wheel support bracket and replace the quick pin **P**.

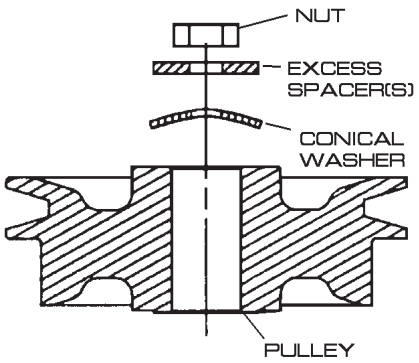


2. CUTTERDECK BLADE SPINDLES

NOTE: See MAINTENANCE section of the Setup, Parts & Maintenance manual for blade removal and replacement procedures.

1. Remove belt cover.
2. Remove nut **N** from the top of the cutter spindle bolt.
3. Withdraw the cutterdeck spindle bolt (from bottom) complete with washer, blade and spacers
4. Place the required number of spacers (no more than 2) on the cutterdeck spindle bolt below the cutterdeck, between blade and spindle shaft.
5. Fit any excess spacers on the cutterdeck spindle bolt above the deck, between the conical washer and the nut. Replace nut and tighten to 95 Nm.

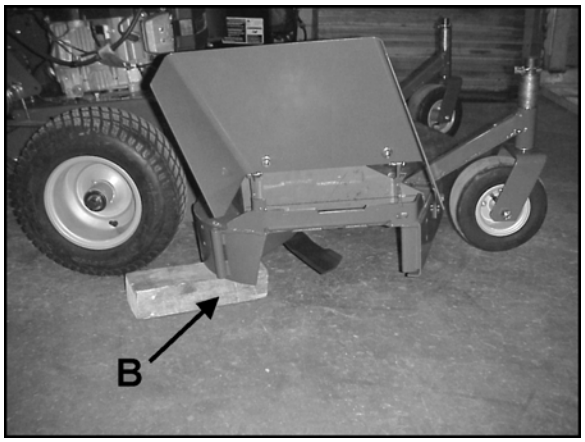


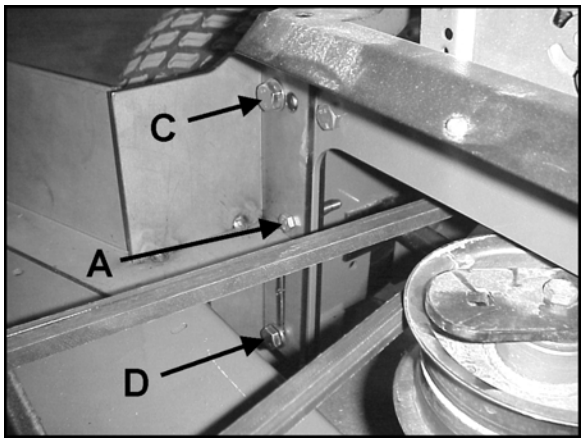


3. CUTTERDECK POSITION

The cutterdeck has FIVE positions relative to the engine deck. To change height of cut start on one side of cutterdeck.

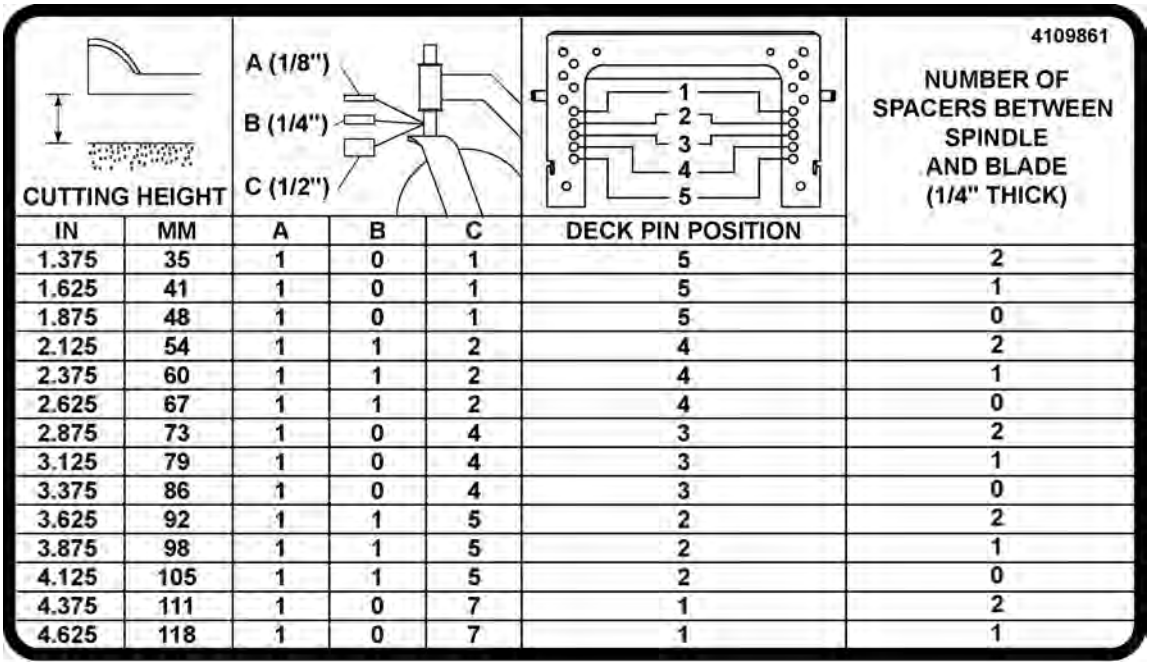
1. Place support blocks of the appropriate thickness under both rear outside edges of the cutterdeck at **B**. See Support Block Chart below.
2. Remove guide pin **A** if installed.
3. Remove the top (2) M12-1.75 bolts.
4. Loosen the lower (2) M12-1.75 bolts **D** enough to allow the deck to lower onto the support blocks, or if the deck is being raised, allow the front of the deck to lower onto the caster wheels.
5. Reinstall top (2) M12-1.75 bolts and tighten all (4) bolts **C** and **D**.
6. Reinstall belt cover.





CUTTING HEIGHT	HOLE POSITION ON ENGINE DECK*	BLOCK HEIGHT AT REAR OF DECK (B)
1.375" - 1.625" (34.9mm-41.3mm)	5	1.25" (31.7mm)
1.875"-2.375" (47.6mm-60.3mm)	4	2.00" (50.8mm)
2.625"-3.125" (66.7mm-79.4mm)	3	2.75" (69.8mm)
3.375"-3.875" (85.7mm-98.4mm)	2	3.50" (88.9mm)
4.125"-4.625" (104.8mm-117.5mm)	1	4.25" (107.9mm)
*Position 1 is the highest hole on the engine deck.		

FIXED CUTTERDECK HEIGHT OF CUT



CUTTING HEIGHT					DECK PIN POSITION	NUMBER OF SPACERS BETWEEN SPINDLE AND BLADE (1/4" THICK)
IN	MM	A	B	C		
1.375	35	1	0	1	5	2
1.625	41	1	0	1	5	1
1.875	48	1	0	1	5	0
2.125	54	1	1	2	4	2
2.375	60	1	1	2	4	1
2.625	67	1	1	2	4	0
2.875	73	1	0	4	3	2
3.125	79	1	0	4	3	1
3.375	86	1	0	4	3	0
3.625	92	1	1	5	2	2
3.875	98	1	1	5	2	1
4.125	105	1	1	5	2	0
4.375	111	1	0	7	1	2
4.625	118	1	0	7	1	1

NOTE: Use only these combinations of settings. If any other setting is used, quality of cut will suffer because of wrong blade angle. These height of cut charts were developed in a controlled workshop environment. Slight variations can occur in the field, depending on tire pressures, etc. Make sure front of blade is lower than back of blade to prevent double cutting. Adjustment is provided by removing 1/8" washer beneath caster support.

PTO BELT

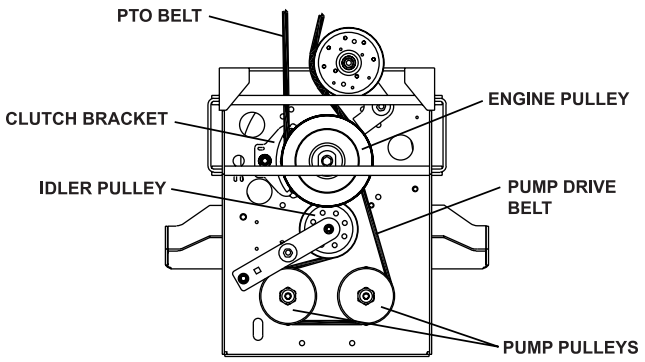
1. Rotate idler arm using a 3/8" (9mm) ratchet or breaker bar and remove belt.

CUTTERDECK BELT

1. Remove PTO belt.
2. Rotate idler arm using a 3/8" (9mm) ratchet or breaker bar and remove belt.
3. Replace in the reverse order.

PUMP-DRIVE BELT

1. Remove PTO belt from the engine clutch.
2. Disconnect the clutch wire harness.
3. Unbolt clutch bracket from clutch and rotate the clutch to allow enough clearance to remove the clutch bracket.
4. Rotate idler arm using a 3/8" (9mm) ratchet or breaker bar inserted into the square hole in the idler arm.
5. Remove pump drive belt.
6. Replace by following steps in reverse order.



View under engine deck

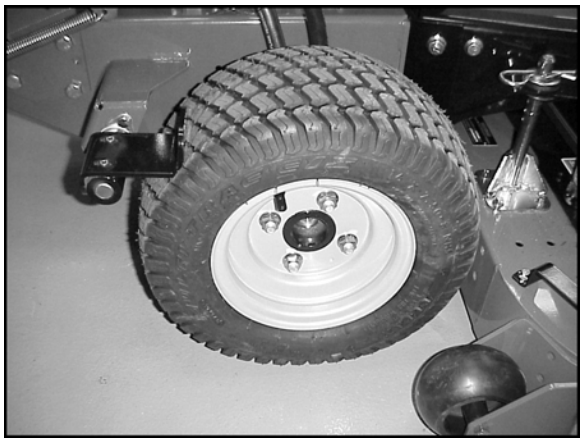
TRACKING WIDTH ADJUSTMENT

The tracking width originally set from the factory can be increased an additional 83 mm overall by performing the following steps.

1. Loosen wheel lug nuts on both drive tires.
2. Raise rear of unit so that drive tires are off the ground. Support the unit with jack stands.
3. Remove wheel lug nuts and wheels. Reattach wheels with the tires rotated so the wheel offset is the opposite of when they were previously installed.
4. Lower machine off of the jack stands and torque wheel lug nuts to 115 Nm.

TIRE PRESSURE ADJUSTMENT

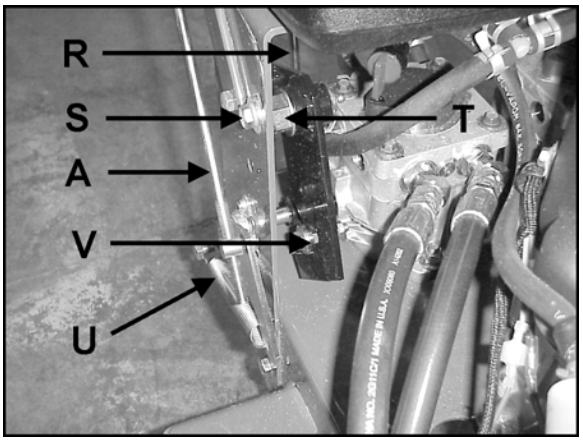
Tire pressures should be maintained at 1.0 kg/cm^2.



TRACTION DRIVE HYDROSTAT ADJUSTMENTS: The following adjustments must be done in order.

STEP 1 - Set Neutral

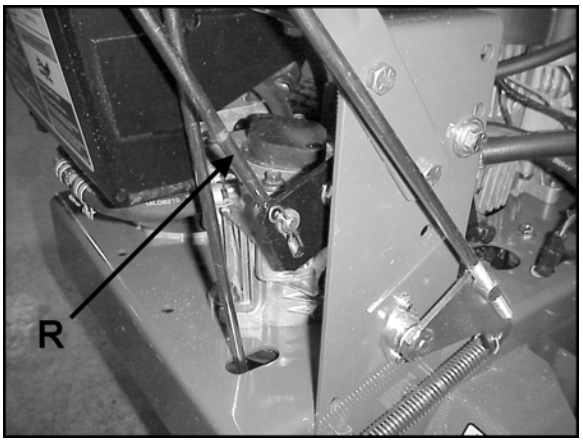
Neutral is set at the factory. If it should require adjustment, raise the wheels off the ground by setting the machine on jackstands or blocks. Disconnect the traction control rod **A** and speed control rod **R** at each pump end. Disconnect pump arm spring **U** from bolt on engine deck. Loosen bolt **S** securing the neutral plate eccentric shaft just enough to turn the shaft. Start the engine and run at low speed. Turn eccentric shaft **T** to raise or lower the point at which the follower bearing is held in the center of the "**V**" until the wheels stop turning. Tighten the eccentric shaft bolt. Increase the throttle setting and check the adjustment. Readjust if necessary. Shut the engine off before proceeding to steps 2 and 3.



STEP 2 - Adjust Speed Control Rods

First adjust neutral, as outlined in Step 1. Set speed control levers to neutral. Adjust swivels on lower ends of speed control rods **R** so they just go into the slots on the neutral plates.

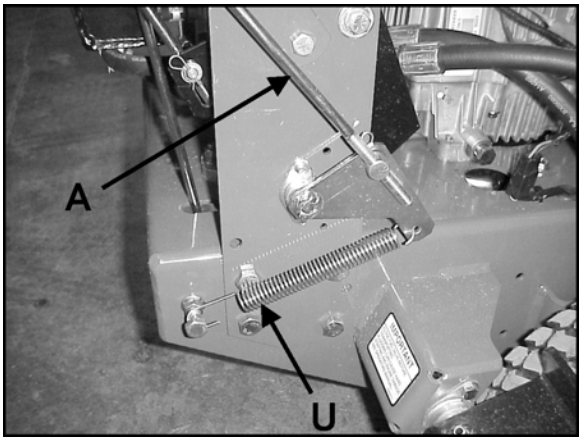
NOTE: If the speed control levers do not have adequate tracking adjustment, the swivel on one of the rods needs to be turned 1 turn.



STEP 3 - Adjust Traction Levers

Set neutral and adjust speed control rods as outlined in Steps 1 and 2. Set traction locks in the neutral position. Grasp traction rod **A** and pull down on it to take out any slack. The pump control arm has some back and forth play. Adjust the swivel to the center of the control arm play. Connect the swivel to the control arm. Reattach pump arm spring **U** to bolt on engine deck.

NOTE: More reverse speed may be gained by adjusting the swivel to the rear of the control arm play. A minimum of 1.6 mm play is required so the traction controls can be put in neutral without the machine backing up.



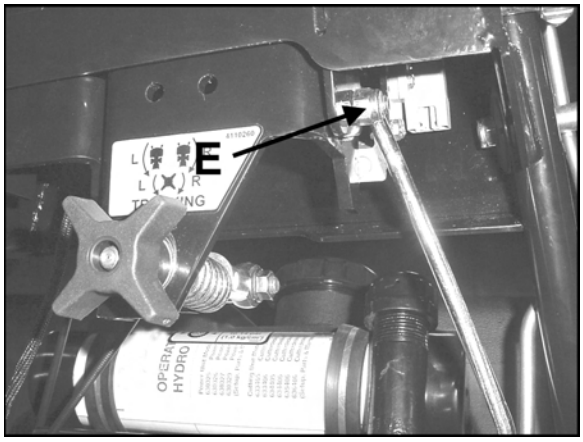
Speed Control Lever Friction

The speed control levers are held where set by friction pads. If the setting will not hold, tighten nut **E** to increase friction on speed control levers.

Center nut tightens tracking movement between individual levers.

End nut tightens movement of both levers for speed.

Both speed control levers should move together when one lever is moved. If not, increase friction. Do not overtighten–this will make tracking adjustment difficult.



PARKING BRAKE - Apply parking brakes and open the bypass valves on the hydraulic pumps. Try to push the machine forward. If wheels rotate, adjust brakes as follows.

TO ADJUST:

1. Remove the hairpin cotter **A** from the brake rod at the brake lever as shown.

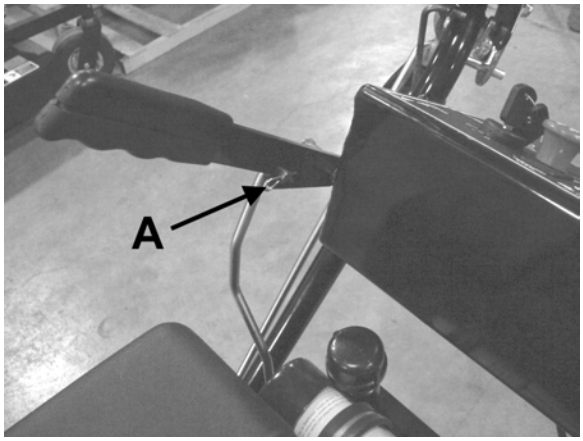
2. Slide the brake rod out of the brake lever and turn the rod in or out of the brake swivel **B** as needed.

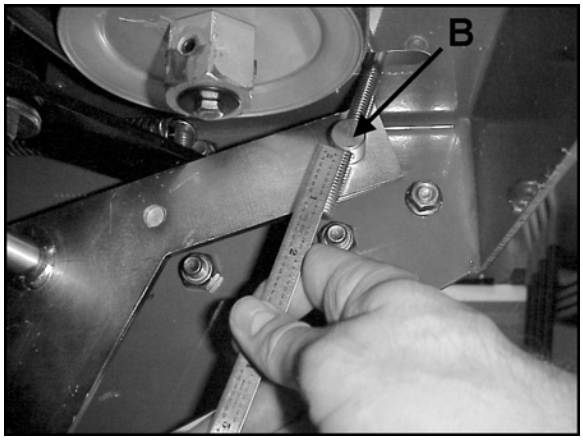
   NOTE: The brake should initially be adjusted so that the brake rod extends through swivel **B** 32 mm as shown. If more brake pressure is required adjust as necessary.

3. Reassemble brake rod to the brake lever using hairpin **A**.

4. Apply parking brakes and try to push the machine forward. If wheels rotate, readjust brakes.

5. Close bypass valves on the hydraulic pumps.

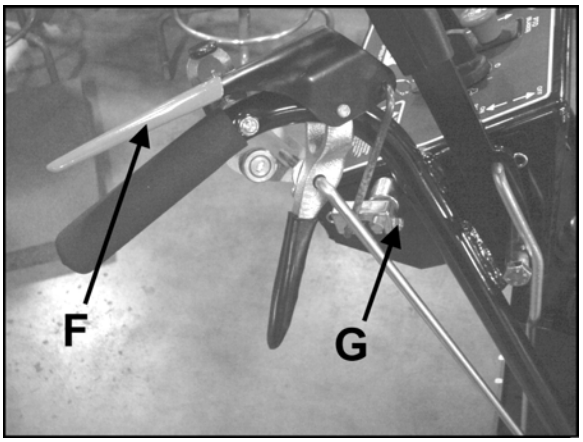




Make all adjustments with the engine shut off, spark plug wire disconnected and mower drive disengaged.

OPERATOR PRESENT CONTROLS

The operator present (OP) controls should be adjusted to control the operation of the plunger of the operator present switch (located under the right side of the control panel). Depressing OP levers **F** should depress the plunger; releasing the levers should extend it.



TO ADJUST:

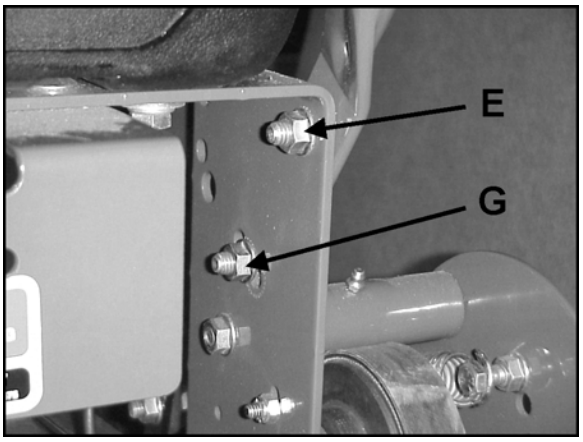
1. Loosen clamp bolts **G** on both ends, so clamps can rotate on shaft.

2. Rotate actuator lever to depress switch plunger. Keep OP levers against handles and tighten bolts **G**.

3. When released, the OP levers should rise and the actuator lever should rotate away from the switch, allowing the switch plunger to extend completely.

HANDLE BAR HEIGHT ADJUSTMENT

To adjust handle bar height: Remove bolts **G** and loosen bolts **E** on each side of handlebars. Raise or lower as required. Reposition upper handle and reinsert bolts **G** into appropriate hole in lower handle and tighten. Readjust traction control rods, brakes and parking brakes.



POWER UNITS

CONTROLS:
Throttle, choke, PTO switch, speed selector lever, key switch, operator present, traction levers (1 per wheel), parking brake.

GROUND SPEED:
0-5.2 mph Forward
0-1.7 mph Reverse

DRIVE TIRES:
16 x 7.50 Turf Saver

BRAKES:
Hydrostat provides dynamic braking
Parking brake: Mechanical on tire surface

TRANSMISSION DRIVE SYSTEM:
Belt from engine to hydrostat input shafts, hydrostatic drive to wheels.

TURNING RADIUS:
0"

HYDRAULIC RESERVOIR CAPACITY:
1.2 Gallons (4.5ℓ)

POWER STEERING:
Independently controlled drive wheels.

WEIGHT:
930325 340lbs (154.2kg)

ENGINE:
Kawasaki FH480V V-Twin

STARTER:
On/Off Switch

GOVERNOR:
2850 RPM, No Load

CUTTERDECKS

CONSTRUCTION:
7 gauge steel deck welded single unit, baffled for high velocity air flow, large discharge opening with chute guard deflector.

SPINDLES:
1" spindle shaft on maintenance free sealed ball bearings in precision machined housing.

CASTERS:
9 x 3.50-4 solid foam.

HEIGHT OF CUT:
adjustable from 1-3/8" to 4-5/8" (3.5-11.7 cm)

BLADE DRIVE:
industrial B section heavy duty v-belt drive (not twisted) from crankshaft to cutterdeck with 5" steel idlers on sealed ball bearings. pto switch on control panel controls engagement of blades..

BLADE MATERIAL:
1566 alloy steel, austempered and heat treated.

CUTTING WIDTH:
36" (91.4cm)

ACCESSORIES AVAILABLE

METAL EASY DUMP GRASSCATCHER
ECO-PLATE

EC Hydro Midsize

4165175 REV A

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

Chuck Clark
Director of Operations
Date: April 1, 2010

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

Jim White
Managing Director
Date: April 1, 2010

Notified Body:
AV Technology Ltd
AVTECH House, Arkle Avenue
Stanley Green Trading Estate
Handforth, Cheshire, SK9 3RW UK

Declare that the machine described below:

Make & Type:	**BobCat, Hydro Midsize**
Category:	**Lawnmower, Walkbehind, Rear Discharge**
Series:	**933303**
Engine:	Kawasaki, **FH480V-AS00**
Speed:	**2850 R.P.M**
Net Installed Power	**11.9 KW (16HP)**
Operation Width:	**914mm (36")**

Declare that the machine described below:

Make & Type:	**BobCat, Hydro Midsize**
Category:	**Lawnmower, Walkbehind, Side Discharge**
Series:	**933304**
Engine:	Kawasaki, **FH480V-AS00**
Speed:	**2850 R.P.M**
Net Installed Power	**11.9 KW (16HP)**
Operation Width:	**914mm (36")**

Complies with the provisions of the following European Directives and Amendments and the Regulations transposing it into national law:

Machinery Directive	**2006/42/EC**
EMC Directive	**2004/108/EC**
Noise in the Environment Directive	**2000/14/EC - Annex VI Procedure 2**
Vibration Directive	**2002/44EC**
Non Road Emissions	**2002/88/EC**
Pedestrian Controlled lawnmowers	**EN836**

Sound: Sound levels were determined in accordance with Directive 2000/14/EC and standards EN13684 and ISO 11094.

Measured Sound power level:	Model 933303 & 933304……	**100 dB**
Guaranteed Sound power level:	Model 933303 & 933304……..	**100 dB**
Operator Ear:	Model 933303 & 933304……..	**85 dB**

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 ……3.77 m/s2

Intended Use and Limits:

This machine is for use cutting grass on normally maintained grass covered areas as a walk-behind lawnmower. Loss of control may result on steep slopes. Before operating on a slope, evaluate the risks involved.

ENGINES	
MODEL NUMBER	**933303 / 933304**
MANUFACTURER	**KAWASAKI**
MODEL	FH480V
CYLINDERS	2
COOLING	Air
FUEL	Gasoline (petrol)
BORE/STROKE	2.68" X 2.56" (68 X 65mm)
DISPLACEMENT	28.8 ci (472 cc)
COMPRESSION	9.0:1
OUTPUT POWER	16 hp (11.94 kw) @ 3600 rpm
OUTPUT TORQUE	24.2 ft-lb (32.8 N•m) @2400 rpm
OIL CAPACITY	1.9 qt (1.8l)
LUBRICATION	Full Pressure
MAIN BEARINGS (MAGNETO/PTO)	2 Plain
CYLINDER BLOCK	Aluminum with cast iron sleeve
CYLINDER HEAD	Aluminum
GOVERNOR	Mechanical
AIR CLEANER	Kai Design Dual Element
IGNITION SYSTEM	Electronic
CHARGING SYSTEM	12V-15 Amp
BATTERY	None
FUEL CAPACITY	4.2 gal (16.2 l)
FUEL TANK	Polyethylene
FUEL CONSUMPTION @ MAX LOAD/SPEED	1.3 gal/hr (5.2 l/hr)

EC CUTTERDECKS		
MODEL NUMBER	SIDE DISCHARGE	REAR DISCHARGE
WIDTH (CHUTE DOWN)	47" (1194 mm)	N/A
WIDTH (CHUTE UP)	36.5" (927 mm)	36.4" (925 mm)
WIDTH OF CUT	35.25" (895 mm)	35.25" (895 mm)
NUMBER OF BLADES	2	2
BLADE LENGTH	18" (457 mm)	18" (457 mm)
BLADE TYPE	Low Lift	Low Lift
BLADE THICKNESS	0.204" (5.2 mm)	0.204" (5.2 mm)
TIP SPEED	12973 ft/min (3954 m/min)	12973 ft/min (3954 m/min)
DAILY PRODUCTION @ 5 mph (8 km/hr)	14.2 acres/8hrs (5.74 ha/8hrs)	14.2 acres/8hrs (5.74 ha/8hrs)
SHIPPING WEIGHT	236 lbs (107 kg)	N/A

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

BOB-CAT BUNTON RYAN STEINER