

STAND ON AERATOR MODELS:

PRO Stand-Aer®

SA-30A

(S/N 0300 and higher)

PRO Stand-Aer®

SA-30ACA

(S/N 0100 and higher)





MAN 4174369 Rev. A 09-2016 S MANUA S

CALIFORNIA PROPOSITION 65

A

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

A

ADVERTENCIA: Cáncer y Dãno Reproductivo - www.65Warnings.ca.gov.

WARNING

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

A ADVERTENCIA

El estado de California hace saber que los gases de escape de este producto contienen productos quí mi-cos que producen cá ncer, defectos de nacimiento y otros dañ os en el proceso de reproducció n humana.

IMPORTANT!

It is a violation of California Public Resource Code Section 4442 or 4443 to use or operate the engine on any forest-covered, brush-covered or grass-covered land unless the engine is equipped with a spark arrestor, as defined in Section 4442, maintained in effective working order or the engine is constructed, equipped, and maintained for the prevention of fire.

To acquire a spark arrestor for your unit, see your Engine Service Dealer.

Please refer to the engine manufacturer's information included with the machine.

Labeled power ratings are supplied by the engine manufacturer in accordance with SAE testing and gross/net power rating standards (J1940, J1995, J1349).

SA-30

IMPORTANT MESSAGE

Thank by u for purb ais ng this Clas en product. You have purb as da world bas product, one of the best designed and built anywhere.

This product o mes with Parts and Operator's Manuals The use ful life and good so rive you ree ise from this product depends to a large extent on how well you read and understand this manual. Treat this product properly and adjust it as into ructed, and it will give you many years of reliable so rive.

See a Clas n dealer for any s rive or parts needed. Clas n s rive ens res that y u o ntinue to ree in the bes res Its pois ble from Clas n products. You a n trus Clas n replace ment parts bea use they are manufact ured with the s me high precision and quality as the original parts.

Clase n designs and builds its equipment to e re many y ars in a a fe and product in manner. For longest life, use this product only as direct ed in the manual, be ep it in good repair and follow a fety warnings and into ructions. You'll always be glad you did.

CLASSEN®
SCHILLER GROUNDS CARE, INC.
1028 STREET ROAD, P.O. BOX 38
SOUTHAMPTON, PA 18966
PHONE 877-596-6337 • FAX 215-357-8045

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01-2017

NOTICE !!!

Unauthorized modifications may present **extreme** a fety haz rds to operators and by anders and o uld als res It in produc damage.

Sb iller Grounds Care, Inc & rongly warns agains, 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 Sb iller 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" are so ries or so mponent parts not specifically approved by Schiller Grounds Care, Inc—will resolution to did iller Grounds Care, Inc—will resolution did iller Grounds Care, Inc—will resolution did iller Grounds Care, Inc—will resolution did iller Grounds Care, Inc Warranty being did iller Grounds Care, Inc Warranty being did iller Grounds Care, Inc Warranty being did iller Grounds Care, Inc.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on ae so ries or products not approved by Schiller Grounds Care, Inc. will be considered the responsibility of the individual(s) or o mpany designing and/or making so both banges. Should indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or ae so ries so ould personal injury and/or property damage resolt.



This Operator's Manual should be regarded as part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.



ILEA EL INSTRUCTIVO!

Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.



This yn bol means ATTENTION! BECOME ALERT!

Your a fety and the a fety of others is involved.

Signal word definitions:

The is gnal words below are used to identify levels of hazerds riouses. These words appear in this manual and on the affety labels attabled to Schiller Grounds Care, Incimablines. For your affety and the affety of others read and follow the information given with these is gnal words and/or the yembol bown above.

ADANGER

DANGER indicates an imminently hazardous is tuation whib, if not a wided, **WILL** result in death or so rious injury.

AWARNING

WARNING indicates a potentially hazardous is tuation whib, if not a ided, COULD resilt in death or e rious injury.

ACAUTION

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 unate practice is or property damage.

CAUTION

CAUTION used without the a fety alert sp bol india tes a potentially haze rdous is tuation white, if not a wided, **MAY** result in property damage

S SCHILL

SCHILLER GROUNDS CARE

Model XXXXXXX Serial Number

Schiller Grounds Care, Inc. One Bob Cat Lane Johnson Creek, WI 53038 **MODEL NUMBER:** This number appears on a les literature, teb nia I manuals and prie lits s

SERIAL NUMBER: This number appears only on y ur unit. It o ntains the model number followed one a tive ly by the e rial number. Use this number when ordering parts or e ek ng warranty information. Loa ted behind rider pad on frame of unit.

PREPARING FOR SAFE OPERATION

Operator preparation and training

Read the Operation & Safety Manual

If an operator or meb anic a nnot read English, it is the owner's rep one bility to ex lain this material to them. If any portion of this material is unb ear, o ntab your dealer representative for clarification.



- Beo me familiar with the a fe operation of the equipment, operator o ntrols and a fety is gns Be prepared to \$ op the engine and attab ments quils y in an emergent. Do not operate or allow another pero n to operate this mab ine if there are any quet ions about a fety.
- All operators and meb anis b ould be trained. The owner is rep one ble for training the ue rs
- Wear appropriate b othing, inb uding long trouse rs and a fety goggles or a fety glas s with is de b ields when operating the mab ine. Do not operate barefoot or wearing open a ndals Long hair, looe bothing or jewelry may get tangled in moi ng parts
- Wear hearing protet ion.
- New rallow underage b ildren, unks lled or improperly trained people to operate this equipment. Loa I regulations a n res rit the age of the operator.
- Data india tes that thos operators age 60 % ars and above are involved in a large pere ntage of riding power related injuries Thoe operators b ould exa luate their ability to operate the riding mab ine a fely enough to protet theme le s and others from injury.
- Do not a rry pas ngers es ec ally so all b ildren. They may fall off and be e rious y injured.
- Keep warning labels and this operator's manual legible and intat. Replae ment labels and manuals are an ilable from the fat ory.
- Do not operate mab ine while under the influence of drugs, alcohol, or any other condition of impairment.
- The owner/ue ran pree nt and is rep on ble for aic dents or injuries on rring to theme le s other people or property.

Site preparation and circumstances

- Ea luate the terrain to determine what ae s ries and attab ments are needed to properly and a fely perform the job. Only us ae s ries and attab ments approx d by the manufat urer.
- Clear the area to be aerated of object s s b tos wire or other debris that may be pile d up or thrown by the mab ine.
- Be s re the area is bear of pets and people, ep ecally p ung b ildren. New ras me they will remain where \boldsymbol{v} u lat \boldsymbol{a} w them. Stop the mab ine if any enter the area.
- Operate only in daylight or in good artificial light.
- Do not operate on wet gras as tires may loe trat ion.

MACHINE PREPARATION

- Chek operator pres nt interlok s em and brak operation. Adjuts or repair any problems before us ng.
- Do not tamper with or defeat a fety deive s
 Keep guards, b ields and interlok a fety deive s
 in plae and in proper work ng o ndition. They
 are for p ur protection.
- Keep all fat eners a b as nuts bolts and pins well a g red.
- Vis ally inp et tines tine bolts and the aerating as mbly for wear or damage. Replae worn or damaged tines and bolts
- Verify that mab ine and attab ments if any, are in good operating o ndition.
- Do not lower tines until ready to aerate.

OPERATING SAFELY

IN GENERAL

- Us et ra a re when loading or unloading the mab ine onto a trailer or trute. Do not us p lit ramps. Us full width ramps to load or unload unit.
- Watch out for traffic when near or crossing roadway
- Do not run the engine in an enbose d area where dangerous a rbon monok de fumes a no lleb.
- Do not plae y ur foot on the ground while operating the mab ine with the platform down.
- Do not pull any loads or equipment.
- New r leaw a mab ine unattended. Always e t park ng brake, to op engine and remove ke sy before dismounting.

STARTING

- Start only ao rding to int rut ions in this manual or on the mab ine.
- Before attempting to s art the engine, make s re:
 - the park ng brake is on;
 - the trat ion drive is in NEUTRAL.
- When s arting the engine, make so re hands and feet are bear of the times
- Do not b ange engine governor settings or overse eed the engine. Operating the engine at everse set set set set set of personal injury.

MANEUVERING SAFELY IN GENERAL

- Slow down before turning.
- Do not aerate in reverse unless absolutely neessary. Always look behind and down for small bildren and pets before and during baksing.
- Be aware when approab ing blind o rners
 b rubs trees tall gras or other objects that may observison.

WALK-BEHIND USE

The aerator may be operated as a walk behind unit by raising the footplate and lath ing it in the sowed position. Walk behind mode is useful when terrain or croms and smale operation as a ride-on uno mfortable or est n dangerous. For est mple operation near a bank abose a drop-off or retaining wall would be places where walk behind modes ould be used. When operating as a walk behind, operate acos sopes not up and down.

INTERRUPTING OPERATION

- Before leav ng the operator's pos tion:
 - Park on leve I ground;
 - Set the park ng brake;
 - Shut off the engine and remove the ke y.
- Stop the engine:
 - before refueling;
 - before making adjut ment unles the adjut ment a in be made from the operator's position.
- Stop the engine and dis nnet the s ark plug wire(s or remove the s y
 - before bearing bloke ges
 - before b ek ng, b eaning or work ng on the mab ine;
 - after s rik ng a foreign objet. Inp et the mab ine for damage and make repairs before res arting.
 - if the mab ine begins to v brate abnormally lnp et and make repairs as needed before ret arting;
 - es pt for repairs or adjus ments as specifically noted, such as for carburetor adjus ment, where the engine mus be running. Keep hands and feet bear of moving parts in thes bird ms ane s
- Redue the throttle e tting during engine b utdown and, if the engine is provided with a b utoff a le , turn the fuel off at the o nclus on of aeration.

AERATING SLOPES

WARNING

Slopes are a major factor in lossof-control and tip over accidents that sometimes lead to severe injury or death. All slopes require extra caution.

- Before operating on slopes evaluate the risks involved.
- Do not operate on slopes if uneasy or uncertain.
 Ultimate responsibility for safe operation on slopes rests with the operator.

- Do not aerate steep slopes:
 - Slope is too steep if:
 - the mab ine mus be c abbed (turned partially is deway uphill) to drive ac os the sope.
 - The mab ine turns downhill going ac os the b ope.
 - -You are uneas about being on the bop.
- With ride-on machines, including articulated steering machines, operate up and down slopes, not across, except for zero turn machines. Zero turn machines should operate across slopes.
- With walk-behind machines, always operate across slopes, not up and down.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the tines and proceed slowly straight down the slope.
- With a zero turn machine, if tires lose traction going down a slope, steering control may be regained by speeding up.
- Zero turn machines have much greater traction pointed up slope than down slope. Be aware that traction may be lost going down a slope. Do not operate a zero turn machine on slopes it cannot back up.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.
- Do not turn on slopes unless necessary, and then turn slowly and downhill when possible.
- Stay away from slopes if the ground is loose or if caught in the rain during aeration.
- Use lower speeds on a slope to avoid stopping or shifting.
- Use extra care with attachments. These can change the stability of the machine.
- Avoid driving over ruts, holes, rocks and roots whenever possible. Be alert to dips and rises.
 Uneven terrain can overturn a machine or cause it to slide.
- Do not aerate dropoffs, ditches or embankments.
 The machine could suddenly turn over if a wheel runs over the edge or an edge caves in.
- Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.

MAINTENANCE SAFETY IN GENERAL

- Maintain mab ine ao rding to manufat urer's
 b edule and int rut ions for mak mum a fety
 and bet rea Its
- Park mab ine on lee I ground.
- Nee r allow untrained pers nnel to s rive mab ine.
- Adjus or repair only after the engine has been s opped and the tines have s opped rotating.
- Guards should only be removed by a qualified teb nic an for maintenane or s riv e. Replae when work is o mplete.
- Replae parts if worn, damaged or faulty.
 For bes res Its alway replae with parts reo mmended by the manufat urer.
- Die nnet battery or remove p ark plug wire(s) before making any repairs. Die nnet the negative terminal first and the positive last. Reconnect positive first and negative last.
- Do not dim antle the mab ine without releasing or rest raining fore s whib may a use parts to move stidently.
- Prov de adequate si pport for lifted mab ine or parts if work ng beneath.
- Do not put hands or feet near or under rotating parts
- Clean up oil or fuel p illage thoroughly.
- Replace faulty mufflers.
- To reduce fire hazards, keep the engine, muffler, battery o mpartment and fuel s orage area free of gras leaves debris buildup or greaves.

Tines

A WARNING

Tines are b arp and a n
 t. Ue ex ra a ution when handling. Wear appropriate pers nal protect is equipment.



FUEL

 Gas line and dies I fuels are flammable; gasoline vapors are ep los s. Us ex ra a re when handling.



MARNING

- Store only in o ntainers p ecifically designed for fuel.
- When refueling or b ek ng fuel leve 1:
 - Stop the engine and allow to o ol;
 - Do not an oke;
 - Refuel outdoors only
 - Ue a funnel;
 - Do not overfill;
 - If fuel is p illed, do not attempt to s art the engine until the p ill is beaned up and a pors have beared.

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

- Keep fuel o ntainers elet ria lly grounded.
- Do not fill containers in a vehicle or on a truck or trailer bed with a plat ic liner. Fill o ntainers on the ground away from the p hib e.
- When pratial, remove gas powered equipment from the truk or trailer and refuel it on the ground. If equipment mus be refueled on the truk or trailer, refuel from a portable on tainer rather than a diplens rook e.
- Keep the dip ene r noż e in o ntat with the rim of the fuel tank or o ntainer opening until fueling is o mplete. Do not ue a noż e loż open deive
- Replae a ps on fuel a ns and tank e a rely.

BATTERY

Battery acd is a us ic and fumes are explose and a naus e rious injury or death.

To redue the rik of pero nal injury when work ng near a battery

- Ue protect is equipment
 s b as but not limited to,
 goggles fae b ield, rubber
 glose s and apron when work ng
 with battery ac d.
- Av id leaning over a battery.
- Do not expose a battery to open flames or
 p ark
- Be sure batteries with filler caps are properly filled with fluid.
- Do not allow battery ac d to o ntate eg s or land.
 Flub any o ntate ed area with water immediately and get media. I help.
- Charge batteries in an open, well entitled area, away from sparks and flames. Unplug charger before onnet ing or diennet ing from battery.
- Your unit is fat ory equipped with an AGM tp e battery. An AGM tp e battery b arger b ould be used on these when b arging.

STORAGE SAFETY

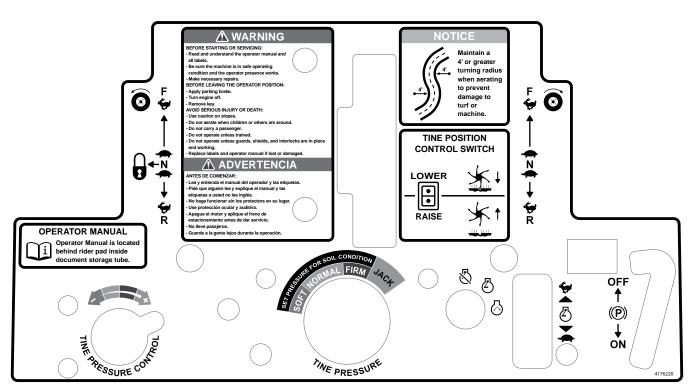
- Stop the engine and allow to o ol before to oring.
- Drain the fuel tank outdoors only.
- Store fuel in an approve do ntainer in a o ol, dry plae.
- Keep the mab ine and fuel o ntainers in a loke d to orage place to prevent tampering and to keep b ildren from playing with them.
- Do not s ore the mab ine or fuel o ntainer near heating appliances with an open flame such as a water heater or an appliane with a pilot light.
- Keep gas line s orage area free of gras leaves and excessive grease to reduce fire hazard.
- Clean gras and debris from aerating units drives, mufflers and engine to help prevent fires.

A WARNING

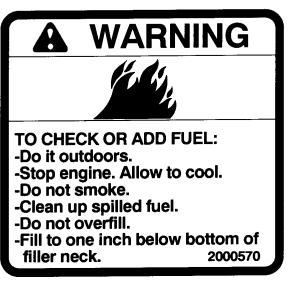


JUMP STARTING

- Be s re the jumper a bles are in good o ndition.
 Turn off the ignition and all elet ria I ace s ries on both mab ines
- 2. Pos tion the mab ine with a good (b arged) battery next to but not toub ing the mab ine with the dead battery so jumper a bles will reab.
- 3. When mak ng a ble o nnet ions
 - make so re the bamps do not tout anywhere exe pt to intended metal parts
 - New ronnet a positive ("+" or red) terminal to a negative ("-" or blake terminal.
 - Make s re the a bles won't get a ught in any parts after the engines are s arted.
- Connect one end of the first jumper cable to the positive terminal on one battery. Connect the other end to the positive terminal on the other battery.
- Connet one end of the other a ble to the negative terminal of the mab ine with a good (charged) battery. Make the final connection on the engine of the mab ine to be a arted, away from the battery.
- 6. Start the **v** hib e with the good battery, then the mab ine with the dib arged battery.
- 7. Remove the a bles in the exa t reverse order of ints allation. When removing eab tamp, take a re it does not toub any other metal parts while the other end remains attabled.







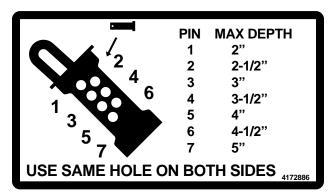


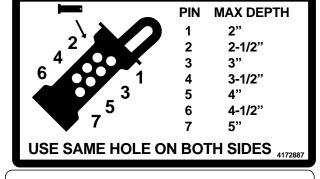
DANGER

ROTATING TINES CAN CUT AND CRUSH TO AVOID SERIOUS INJURY OR DEATH:

- -Keep hands and feet out of tine area.
- -Keep covers in place.
- -Stop engine before accessing tines.

4172914





Service Guide

Read and understand the Operator Manual before servicing.

Every 50 hours or weekly

Yearly

- Check hydraulic level

Grease: Caster pivots

- Check tire pressure - 15 psi rear

Transaxle pivot

- 25 psi front Check chain tension

- Lubricate chain

Hydraulic cylinder pivot

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HYDRAULIC OIL

Fill with 20w50 motor

oil to level indicated

FULL COLD



WARNING

STORED ENERGY

- TINES MAY DROP SUDDENLY.
- SUPPORT LOWER TINES BEFORE SERVICING HYDRAULIC SYSTEM.
- SEE OPERATOR MANUAL FOR SERVICE PROCEDURE.

A WARNING



HIGH PRESSURE FLUID Leaks can penetrate skin.

- Seek immediate medical attention for oil penetration injury.
- See Operator Manual for proper methods to service hydraulic system and locate leaks. 4172910

JACK STANDS

TO RAISE MACHINE:

With engine running

- Pull depth stop pins.
- Lower tines.
- Increase tine pressure to raise machine.
- Pin jack stands in raised position.
- Raise tines to set machine on stands.

TO LOWER MACHINE:

With engine running

- Lower tines.
- Increase tine pressure to raise machine.
- Pin jack stands in operating position.
- Raise tines to set machine on wheels.
- Reinstall depth stop pins.
- When jack stand has been positioned, run or stop engine as appropriate for the work being performed.
- Do not work under machine with engine running.
- Tine may drop suddenly.

4172915

TEXT "SA30A" FOR AN OPERATIONS VIDEO OR **TEXT "SA30AM" FOR A MAINTENANCE VIDEO TO 77453 IN THE US (76000 IN CANADA)**

4176457

BELT ROUTINGS ENGINE PULLEY 4172916

WARNING

- -Wet grass or steep slopes can cause sliding and loss of control.
- -Wheels dropping over edges can cause rollovers.
- -Going up or backing down steep slopes or ramps can result in backward rollovers.

To reduce potential for possible loss of control and rollover resulting in serious injury or death:

- -Stay off slopes machine cannot back up with tines raised.
- -Do not operate near drop offs or water.
- -Do not operate without tires on ground.
- -Do not use split ramps; use full width ramps to load unit.
- -Reduce speed and use extreme caution on slopes and ramps.
- -Avoid sudden turns and rapid speed changes.

CALIFORNIA SPARK ARRESTOR WARNING

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

SET-UP INSTRUCTIONS / CONTROLS

SA-30

ASSEMBLY / SET UP INSTRUCTIONS

- 1. READ THE OPERATOR'S MANUAL BEFORE ASSEMBLY.
- 2. Remove the brake ts e a ring the mab ine to the pallet. Rein's all and tighten a s er ak e nut.
- 3. Lower the operator platform.
- 4. Open the rear panel and o nnet the ground wire to the battery.
- 5. Cheks the oil leve I in both the engine and the hyd raulic tank top off if necesa ry. Us 10w30 oil for the engine.
 - Ue 15w50 or 20w50 motor oil for the hyd raulic tank
- 6. Fill the fuel tank with fres bean regular grade gas line. Open the fuel a le.
- 7. Start the mab ine and drive it off the pallet.

KEYSWITCH (A) - The ke sw itb has three positions OFF, RUN, and START. Ine rt the ke y and turn it boke is to move the sw itb from OFF to RUN. Turn it further to START and hold to engage the starter. Release the ke y and the sw itb will return to RUN from START. Turn the ke y o unterboke is to OFF to stop the engine.

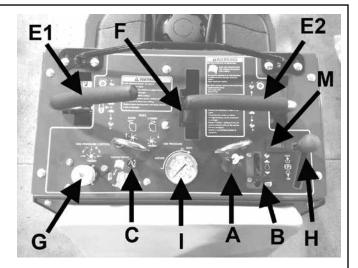
THROTTLE (B) - Move the throttle lever forward to include engine peed until the makemum governed engine RPM is reabled. Move the lever rearward to declease engine peed until the engine reables its idle peed.

CHOKE (C) - Pull the b ok o ntrol out to s t the b ok ON. Puls it in to s t the b ok OFF.

PARKING BRAKE (H) - More the parking brake lever reformed to lath it in the OFF position. More it is deways and to the rear to engage the parking brake. The parking brake must be engaged to start the mab ine.

CONTROL LEVERS (E1 & E2) - Eab of the two o ntrol leve rs o ntrols the drive wheel load ted on its is de. They o ntrol the forward and rever resmove ment of the mab line, provide to earling and also provide dry amic braking.

The operator pres ne mus be released when the park ng brake is engaged. The operator pres ne mus be released to sart the engine.



RAISE-LOWER SWITCH (F) - The raise -lower way it bound operates the high raulise to raise and lower the tinese Roke the sw it be forward to lower the tinese roke it rearward to raise the tinese

PRESSURE CONTROL AND GAUGE (G &

I) - The press re o ntrol adjuts the down fore on the tines Turning the kn ob (G) boke is inceases the down press re, o unterboke is deceases it. The down press re may be read on the Press re Gauge (I). Down press re be ould be adjuted to the lowest tining which keeps the tines at the depth set without ease is set bounding.

HOUR METER (M) - Reo rds a mulated time the engine is running.

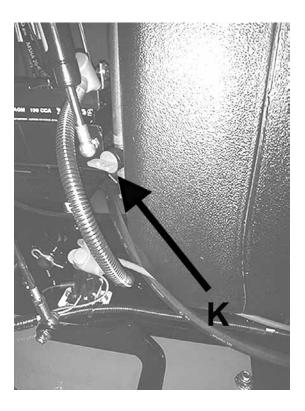
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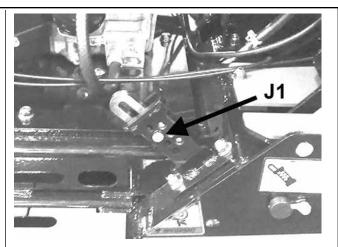
DEPTH SET (J1 & J2) - The depth e tting is loa ted below and to the rear of the engine on eab is de. Plae the pin in the hole on eab is de for the depth by u with to aerate. NOTE: At ual depth may ary depending on e il o nditions tire presare and tine wear.

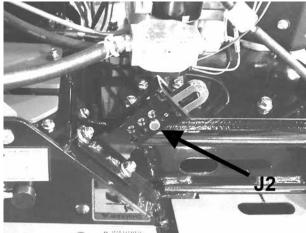
FUEL VALVE (K) - The fuel a læ is loa ted behind the fuel tank on the right is de of the mab ine. the fuel a læ is open when the k ob is in-line with the fuel line hos. Clos the a læ by turning the k ob a quarter turn to be perpendia lar to the fuel line hos.

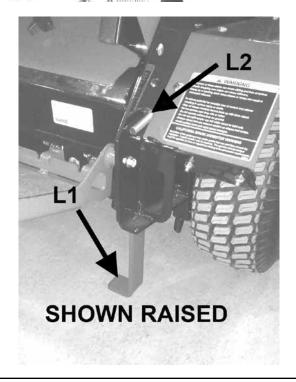
JACK STANDS (L1 & L2) - Built-in jak & ands allow & riv c ng the b ains and the tine as embly without moiv ng the mab ine. To put the mab ine "UP" on the jak lower the tines on a hard & rfae to raise the mab ine. Pull the pin (L2) on eab jak (L1) and drop it. Put the pin bak in the upper hole of the jak to & a re it. Raise the tines to & t the mab ine on the jak

To lower UNIT, lower tines pull pin from upper hole, rais up jak and re-ins rt pin to s a re jak Rais tines to plae unit on ground.









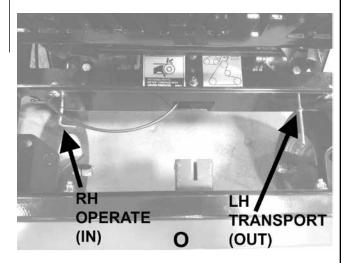
SA-30

PAD (M) - The pad (M) may be removed for ae s to the inis de of the ointrol tower and to ae s the doa ment tube (N) ointaining the operator's manual. It may be un-bipped and used as a kill eeling pad. To remove, lift up and pull out at the bottom of the pad.

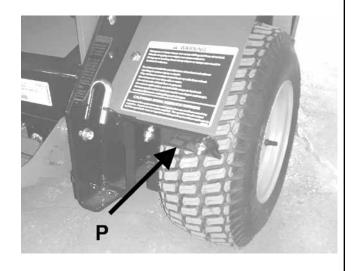
BYPASS VALVES (O) - Bp as a le s allow the mab ine to be pulsed or towed with the engine off and the parking brake die ngaged.

A bp as a le for eab trana ke is loa ted under the weights at the front of the mab ine. With the mab ine off and the park ng brake die ngaged, pull the enlarged area of eab a le rod through the guide hole in the frame and lath it to open the bp as a le. Mose the rod so the enlarged portion pops bake through the frame hole to bose the a lee for operation.

Front cover and weights removed for clarity. LH valve is shown open in "tow" position. RH is shown closed in operating position. (FRONT VIEW EXAMPLE)



MUD SCRAPERS(P) - Mud s apers for the drive wheels are provided. In ideal aeration o nditions, so it is ould be moits but not so wet that it is its to the tires



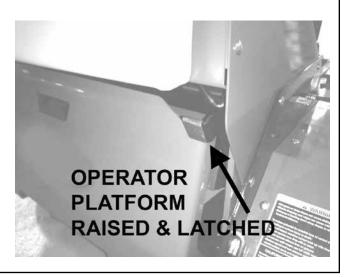
OPERATOR PLATFORM

The operator platform may be raise d to b orten the mab ine for trans ort or to allow us as a walk behind unit. Flip the operator platform up and e a re with the latb . Operate the mab ine normally. To lower the operator platform, lift the latb, and lower the operator platform to the riding pos tion.

WALK-BEHIND USE

The aerator may be operated as a walk behind unit by raising the footplate and lath ing it in the sowed pos tion. Walk behind mode is useful when terrain or circumstances make operation as a ride-on uncomfortable or even dangerous. For example operation near a bank, above a drop-off or retaining wall would be places where walk-behind mode should be used. When operating as a walkbehind, operate across slopes, not up and down.









A DANGER

ROTATING TINES CAN CUT AND CRUSH TO AVOID SERIOUS INJURY OR DEATH:

- -Keep hands and feet out of tine area.
- -Keep covers in place.
- -Stop engine before accessing tines.

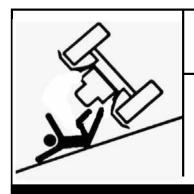
4172914

PRE-OPERATION CHECK LIST (OWNER'S RESPONSIBILITY)	
Reiv ew and follow all a fety rules and a fety dea I into rut ions Chet that all a fety dea Is are into alled and in good on dition. Replae if damaged. Chet to mate a re all to ields and guards are properly into alled and in good on dition. Chet that all hardware is properly into alled. and a red. Chet that equipment is properly and a rely attable do power unit. Chet to be a reengine is free of dirt and debris. Pay particular attention to the oling fins, governor parts and muffler. Clean air intate a ry.	 New r allow riders Inp et area and remove to ones branto es or other hard objet s that might affet aeration, a use injury or damage. Clean area around oil fill dipstick. Remove dipts it and to set to be so re oil is in operating range (between mark on dipts it. Add oil if nee so ry but Do Not Overfill. Into all dipts it assembly firmly until cap bottoms out on tube. Dipts it as mbly mut always be so red into fill tube when engine is running. Chek all lubriation points and grease as into rut ed in manual. Check hydrostatic fluid level. Check to be sure cooling fins on hydrostat are clean. Perform a funt ional to set of the so fety interlots to mean and time to u operate the unit.

▲ CAUTION

Us a ution when making turns. Slow down before making is arp turns to help maintain o introl and to preve int torn turf from is dding or p inning tires. To help preve int turf damage, is ep both drive tires moving wheneve is a turn is made.

TIP: The best way to make a strangler are row turn is to or me to a strong, get the mab ine moiving in reverse with both drive wheels and then powering the mab ine around with the outside wheel. This teb nique keeps the drive tires turning and reverse turning and re



▲ WARNING

SERIOUS INJURY OR DEATH MAY RESULT FROM MACHINE ROLLOVER

- DO NOT OPERATE MACHINE ON STEEP SLOPES OR NEAR DROPOFFS
- AVOID SHARP AND/OR QUICK TURNS

▲ WARNING

ROLLOVER MAY CAUSE PERMANENT INJURY OR DEATH.

- SUDDEN STARTS OR TURNS ON RAMPS OR SLOPES CAN CAUSE OVERTURN.
- USE GREATER CARE ON RAMPS AND AS THE SLOPE INCREASES.

SA-30

FUELING

- Fill fuel tank \$ with good quality, bean, unleaded gas line. Do not us hi-tes fuel. Do not us fuel with more than 10% ethanol (E10).
- Ue a funnel to av id p illage.



TO CHECK OR ADD FUEL:

- Do it outdoors
- Do not an oka
- Stop engine; allow to o ol
- Fill to one inb below bottom of filler neck
- Do not overfill
- Clean up p illed fuel

BEFORE STARTING THE ENGINE

- Be familiar with all o ntrols how eab functions and what eab operates
- Chek the engine oil level and add if nee a ry.
 Turn fuel value to ON.
- Choke: For o ld s arts s t the throttle less r to the half-open position and pull the b ok out to the ON position. For warm s arts s t the throttle to the half-open position and the b ok to the OFF position.

OPERATOR PRESENCE INTERLOCK SYSTEM

To s art the engine:

- The left hand operator pres ne o ntrol les r mus be in the neutral position.
- The park ng brake muts be ON.

To operate the mab ine:

 The operator must release the parking brake before holding the operator preside on not less r down or the engine will k II.

STARTING THE ENGINE

- 1. Lower the operator platform and \$ and on it.
- 2. Turn the ke y to operate the electric starter to start the engine. Release the ke y when the engine starts
- 3. If the engine does not \$ art immediately, do not c ank for more than 10 \$ o nds at a time. Allow 60 \$ o nds for the \$ arter motor to o ol down between \$ arting attempts to prevent the \$ arter motor from burning out.
- 4. If the b oke is ON when the engine to arts gradually bake it off until the engine runs with no boke at all.

DRIVING

- 1. More the parking brake to OFF position.
- 2. Mor traction o ntrol ler rout of neutral.
- 3. Puls both traction levers forward evernly to drive forward in a straight line. Pull both traction levers bake evernly to drive bake ard in a straight line.

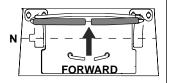
OPERATING NOTES

- Practile at blow engine and trate I pleeds with the tines up until fully familiar with the ointrols
- For normal aeration, the throttle b ould be t at the full open postion. By using the traction levers to speed up or slow down the machine during use, maximum control and aeration efficiency can be maintained.
- Using the mab ine at les than full throttle in heav o nditions will a use the engine and hyd rots at to labor and residt in ease is se wear to the engine and hyd raulic specified.
- The aerator may be operated as a walk behind unit by raising the footplate and lath ing it in the slowed position. Walk behind mode is useful when terrain or circumstances make operation as a ride-on uncomfortable or even dangerous. For example operation near a bank, above a drop-off or retaining wall would be places where walk-behind mode should be used. When operating as a walk-behind, operate across slopes, not up and down.

SA-30

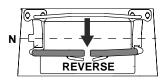
STEERING

Forward movement - To move the mab ine to raight ahead, puls both o ntrol leve rs forward equally from their neutral pois -



tion. Increase speed: as the lew rs are mow d farther forward from the neutral position. Decrease speed: when traw ling forward, pulling the trat ion lew rs rearward bows the mab ine. Stopping: The mab ine will bow when the lew rs reab the neutral position.

Reverse movement - To move the mab ine to raight bake pull both tration levers bake equally from their neutral position. Re-



vere peed inceases as the levers are moved bake farther. Maix mum revere peed is reabled when the levers to op. When moving in revere, puts ing the levers forward to ows the material, and the material pois tion is reabled.

NOTE: The o ntrol levers are pring loaded to return to neutral in both forward and reverse. This pring rest and may be felt when moving the traction levers. When o ntrol levers are released, pring tension will quike y return them to the neutral position.

To turn, move one lever forward and one bake.

Turns during forward movement:

- Forward Right turn
 - more the right traction lever back toward N-neutral to be own the right drive wheel.



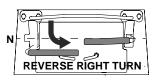
Forward Left turn

- move the left tration lever bake toward neutral to sow the left drive wheel.

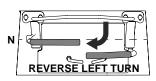


Turns during reverse movement:

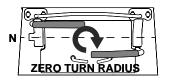
Reverse right turn more the right trac ion
ler r forward toward
neutral to b ow the right
driv wheel.



Reverse left turn move the left traction
 lever forward toward
 neutral to b ow the left
 drive wheel.



Slow, so eeping turns are made with both traction levers on the a me is de of neutral and be ightly apart. True is ro radius turns about the enter of the mab ine are made by haiving one lever in reverse while the other is in forward. By so riying the relative poistions of the two levers, the rate of turn is so ried to so it the is tuation.





Slow down before making a arp turns. The mab ine is a pable of turning a ry rapidly when the lear rs are move d further apart from eab other. Los of o ntrol and/or turf damage may resilt.

STOPPING

- 1. Raie tines
- 2. Release o ntrol trat ion less rs or most to neutral.
- 3. Engage the park ng brake.
- 4. Turn ke y to OFF (o unterbokev is).

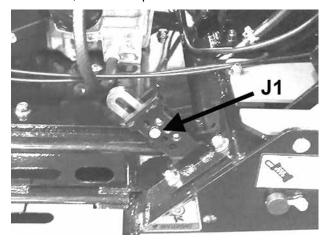
AERATING

NOTE: For bet performane, the lawn to be aerated be ould be thoroughly watered the day before.

- 1. Drive mab ine to the is te to be aerated.
- 2. Set the tine depth \$ ops to the des red aeration depth.
- Lower the tines by roke ng the raise -lower sw ith forward.
- 4. Drie the mab ine forward to aerate. When aerating, drie with the front tire nex to the line of o res from the previous pas to avoid overlap and get even aeration.
- Raise the tines when c ois ng hard si rfae s si b as drise was or is dewalk or going ose r things like p rink er heads
- 6. To obtain maximum benefit, a second pass may be made at right hand angles to the first or by lapping by 1/2.

Aerating TIPS

- Tp ia I aeration o re depth is 2 1/2" to 3" (60-75mm). This gets below the surfae o mpat ion and is easily performed. The mab ine is a pable of going deeper in the right on illow notions but notice ably more power is required. This includes swear and tear on the entire drivent train with minimal additional benefit from the increased depth.
- The mab ine may be turned with the tines in the ground within limits Too tight a turn will lead to the tines tearing turf. A good rule of thumb is to limit turns to about a 4' (1.2m) inis de radius
- When aerating a lawn, operate ac os the lawn.
 Raise the tines at the end of the pas turn around, then lower the tines to o ntinue on the nex pas
 To finish, aerate the perimeter.

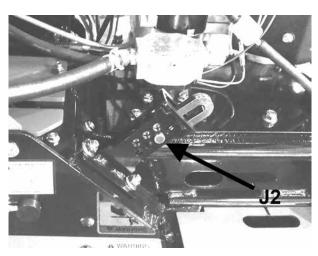


Use of the Depth Stops (J1 & J2)

- The depth s ops enable o nis s ent o re depth in a riy ng s il o nditions by s tting the maix mum o re depth. A o nis s ent o re depth is eps the mab ine from bogging down when going from harder to s fter s il for more o nis s ent operation and better performane.
- Both depth s ops need to be set to the a me depth to avoid twis ing the aeration frame. The depth s ops set the maximum depth the tines penetrate to. At ual depth may vary due to soil on ditions tires tire prevare and tine on dition and wear.
- To get a o nis sent o re depth, wath the depth sops and depth arms. The depth arms is ould say tight agains the depth sops pins when the tines are in the ground. On is onal more ment up is an element protect the tine are millioned in the ground. On the solution of the tine are millioned in the ground. On the tine are millioned in the ground on the solution of the solution of the solution. Act under the pressure of the depth arms tight agains this pins in normal operation. Act under the solution of the solution.

Ese s presi re:

- Was es fuel. Pres re is generated by the hyd raulic lift pump. More pres re takes more power
- Creates es s heat. More pres re generates more heat which mus be remove diva the oil o oler and ree ro ir.
- Creates greater loads on the o mponents in the lift
 m.



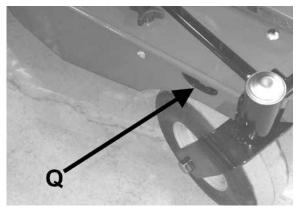
TRANSPORTATION OPERATOR PLATFORM

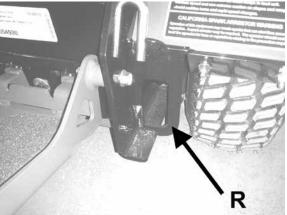
To redue the p ae required, the operator platform may be folded up. A lath is provided to hold it in the "UP" position. the lath automatia lly engages when the platform is raised. to lower the operator platform, raise the lath to disingage it and lower the platform. See Controls Set ion Pg. 13

LOADING THE MACHINE

DO NOT us p lit ramps when loading or unloading the mab ine on a truk or trailer. Us full width ramps rated for at leas the mab ine weight (Approximately 1200 lbs (545 bg)) plus operator weight. Full width ramps redue the pos bility of falling off the ramp. Redue engine p eed and drive b owly when loading or unloading the mab ine.

Sea re the mab ine before trans orting. Front **Q** and rear **R** tie down loa tions are provided to sea re the mab ine.





STORAGE

WARNING

To prevent pois ble explois on or ignition of a porized fuel, do not sore equipment with fuel in tank or carburetor in an enclosure with an open flame (for example, a furnae or water heater pilot light).

Before the equipment is put into storage for any period exceeding 30 days, the following steps should be taken.

- 1. Drain all fuel from the fuel tank and fuel lines
- Start the engine and run until all the fuel is used from the carburetor float bowl.
- 3. While the engine is s ill warm, drain the crankcase oil and refill with the proper weight oil o rrep onding to the s as n the equipment will net be us d.
- 4. Remove the p ark plug and q uirt a sn all amount of engine oil into the trainder. Turn the engine over a few times to distribute the oil.
- 5. Lubria te the b ains

To put the equipment into service after an extended period of storage:

- 1. Chek for loos parts and tighten if nee a ry.
- 2. Chekt for c ake d or broken tines and replae as nee a ry.
- 3. Fill the fuel tank with bean, freb fuel.
- 4. Cheke the engine and gear reduction a so oil less is with the engine in a less I position.
- 5. Start the engine.
- 6. Chek for fuel leak
- 7. Chek operator pree nt operation.

JACK STANDS

Your mab ine is equipped with built in jak ands
The jak to ands are use ful to raise the drive wheels
off the ground for maintenane and b anging b ains
and belts

- When jak s ands have been positioned, run or s op engine as appropriate for the work being performed.
- Do not work under mab ine with engine running.
- Tines may drop s ddenly. Support tines if y u will be work ng under them.

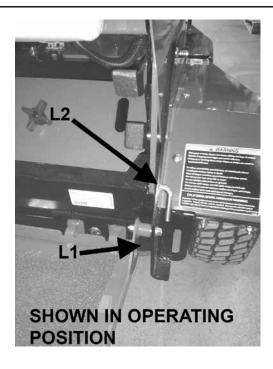
Raise machine:

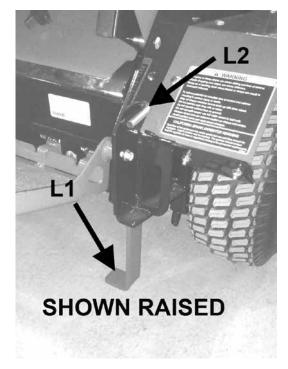
- 1. Start the engine.
- 2. Pull depth \$ op pins
- 3. Lower the tines on a hard s rfae
- 4. Inc eas tine pres re to rais the mab ine.
- 5. Pull jak t and pins and pin in raise d position.
- 6. Raise tines to se t mab ine on se ands

NOTE: Mab ine may be dropped gently onto the jak s ands by reducing the tine down fore until the mab ine lowers. Then raise tines to the transp ort position.

Lower machine:

- 1. Start the engine.
- 2. Inc eae tine pres re to rais the mab ine.
- 3. Pin jak s ands in operating postion.
- 4. Rais tines to lower mab ine onto wheels
- 5. Raise the tines to the trans ort position.
- 6. Stop the engine.
- 7. Reint all depth pins





CHECK DAILY

Operator Presence Interlock System - Start Operation

For the engine to cank the park ng brake must be ON, and the operator present on trol lever must be released in the neutral position. Stand on the operator platform and be explained by one, if the engine will crank with the park ng brake OFF or the operator on trol lever held down.

Operator Presence Interlock System - Run Operation

In order for the engine to run, the operator must either be standing on the platform, or walk ng behind the unit with the platform up, the park ng brake in the OFF position and the LH on trol handle held down out of the neutral position.

The engine may als run if the park ng brake is in the ON pois tion, the LH on trol handle is rotated up into the NEUTRAL pois tion.

To b ek

- 1. Start the engine and run at 1/2 throttle.
- 2. With the LH o ntrol handle in the NEUTRAL pois tion rotated up, more the parking brake lever to ON more the LH o introl lever down. The engine is ould kill.

Repair mab ine before us ng if the Operator Pres ne Interlok Sty em does not operate o rret ly in to art or run. Contat by ur authorize d dealer.

Hardware

Tighten any nuts and bolts found looe. Replae any broken or mis ng hardware. Repair any other problems before operating.

Tire pressure

Rear Tires should be kept inflated at 15 p.s.i (1.05kg/cm²). Improper tire inflation can cause rapid tire wear and poor traction. Uneven inflation can cause uneven aerating. Front tires should be 25 p.s.i.(1.75 kg/cm²).

Engine Maintenance

- -Air Filter: Maintain the air filter according to the manufacturer's engine owners manual.
- -Engine Oil: Cheke engine oil lee I daily. Top off if nee a ry. See engine owners manual.

BATTERY-AGM TYPE BATTERY SUPPLIED

Battery acd is a us ic and fumes are explose and a nause rious injury or death. Use insolated tools wear protective glases or goggles and protective to othing when working with batteries Read and obey the battery manufacturer's instructions

Be e rtain the ignition so it is OFF and the te y has been remove d before e rivicing the battery.

- Verify battery polarity before onnet ing or disonnet ing the battery a bles
- 2. When into alling the battery, always as mble the RED, positive (+) cable first, and the ground, BLACK, negative (-) a ble late.

- 3. When removing the battery, always remove the ground, BLACK, negative (-) cable first and the RED, positive (+) a ble lats.
- 4. AGM tp e battery. Us AGM b arger when charging. P/N 4171973
- 5. Clean the a ble ends and battery pot s with the ell wool. Us a solution of baking so da and water to be ean the battery. Do not allow the solution to enter into the battery ells
- 6. Tighten a bles e a rely to battery terminals and apply a light o at of is lione dieletric great to the terminals and a ble ends to pretent orroson. Keep terminal o to resin plate.

LUBRICATION

PIVOTS

Every 500 hours or yearly (whichever comes first):
Cats er piø ts (2 per)
Trana k e idler piø ts (1 per)
Høl raulic transer inder piø ts (1 per)



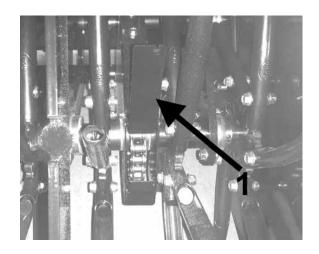
CHAINS-LUBRICATION AND TENSION

Check chain tension after the first
4 hours of operation as detailed
below. See adjus ment s t ion for
any adjus ments that are needed.Lubria te b ains week y or ex ry 50 hours
whichever comes first. A dry type chain lube such as
DuPont Chain Sax r is reo mmended. The ada ntage of a dry lube is that it won't pik up dirt thus
prolonging b ain life. A p ray a n with a s raw mak s
applia tion eas er.

Tine Chains

Tines a n be a arp. Wear glows when work ng around tines

- 1. Start the engine and raise the mab ine onto the jak to and See jak and set ion pg. 19
- 2. Remove the rear over.
- 3. Flip up the b ain o ver door 1 on one of the tine b ains
- 4. Slowly run the orresponding drive and apply lubriant to eab is de of the bain until the entire bain is lubriated. Take a renot to get a ught in tines
- 5. Repeat for the other tine b ain.
- Chek tens on for adjut ment. Some b ak is normal. See adjut ment e t ion if adjut ment is needed.
- 7. Flip the chain o ver doors down. Reints all the rear o ver.
- Lower the mab ine. Stop the engine and pin the jak s ands in the operating position.



Main and Wheel Chains

- 1. Start the engine and raise the mab ine onto the jak to and the sands set ion pg. 19.
- 2. Remove the is de b ain o vers (2 pieces eab is de).
- 3. Slowly run the drive for one is de. Apply lubria nt to eab is de of both b ains until both are o mpletely lubria ted.
- 4. Reints all the is de b ain o e rs
- 5. Chek tens on for adjut ment. Some bak is normal in wheel b ain. The main b ain only requires adjut ment if the automatic tens oner is out of more ment to the rear. See adjut ment be to ion if adjut ment is needed.
- 6. Lower the mab ine. Stop the engine and pin the jak s ands in the operating position.

TRANSAXLE & HYDRAULIC OIL

Do not perform engine maintenane without the engine off and **p** ark plug wires di**s** nnet ed.

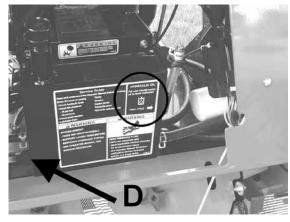
CAUTION

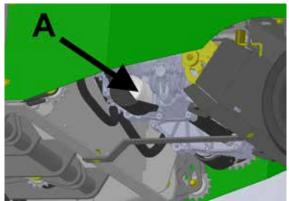
- Chek o ld.
- Add 20w50 oil if nee a ry to the india ted lee I.
- Do not overfill. When the oil warms up it expands. If overfilled cold, the oil may overflow at operating temperature.

Change the transaxle / hydraulic lift circuit oil after the first 75-100 hours, then every 200 hours or yearly.

It is es ntial that the ex erior of the trans k e be free of debris, prior to fluid maintenance.

- 1. Raise the mab ine on the built in jake is ands Remove the protective filter cover over the hydraulic oil filter on each transaxle. Put an oil drain pan under the transaxle hydraulic oil filters. Remove the filters A. This will drain the oil from the transakes With another drain pan, drain the oil from the reseroir through the drain D on the lower left is de if the reseroir. Remove the lift circuit filter. Dispose of the used oil and filters properly.
- 2. Apply pipe o mpound to the ree ro ir drain plug and reints all in the ree ro ir. Oil the gate ts of the new transaxle hydraulic oil filters and install on the trana k es Tighten 3/4 to 1 turn pate the point where the gate to ntate the mounting surface. Reinstall the filter covers. Oil the gasket on ta new lift circuit filter and install on the filter head. Tighten 3/4 to 1 turn past the point where the gasket contacts the filter head. NOTE: The transaxle filters are smaller then the lift circuit filter.
- 3. Fill the res row ir with 20w50 (15w50 is ae ptable) motor oil to the top. (Approx mately 4 qts).
- 4. Have more oil ready. Open the trana kebp as a less Keep the mab ine trana ke on ntrols in neutral. Crack the lift pump outlet fitting, start the machine. Place some rags under the fitting. When oil appears, tighten the fitting. The lift circuit pump will fill the transaxles. Add oil as the leve I drops below the "FULL COLD" mark Run the mab ine and be ep adding oil until the oil leve I sabilizes If the ontrols were not moved out of neutral, purging sould not be required. Drive the mab ine and be ek oiil leve I. Top off as never a ry.







 If the trana k es are nois or jerk, purge the trana k es following the purging proe dures See Purging Transaxles Page 24.

ENGINE OIL

Do not perform engine maintenane without the engine off and spark plug wires die nnet ed.

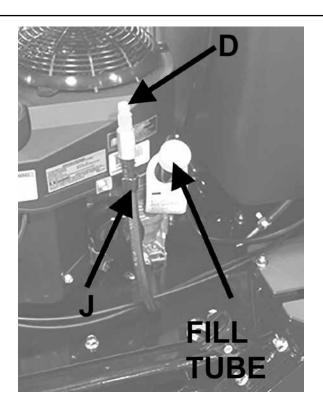
AFTER FIRST FIVE (5) HOURS

While the engine is warm:

- 1. Releas the oil drain hos as mbly from the engine b ip **J**. Lay hos as mbly ow r the frame edge.
- 2. Remove the rubber a p **D** from the tip of the hose as mbly and turn the drain a live to allow oil to drain from the engine. Dip os of us doil in ao rdane with loa I requirements.
- 3. Clean drain a le and tighten the plastic portion of the drain a le bak into the metal portion of the a le. Replae rubber a poer r the tip of the a le. Replae hos as mbly bak into engine bip.
- 4. Change oil filter.
- 5. Fill the c ank e with fres oil to the full mark Do not overfill. See engine manual for oil specifications.



- 1. Cheks oil leve I with the dipts iks
- If oil is needed, add freb oil of proper
 iv o is ty and grade. See engine manual for oil specifications. Do not overfill.
- 3. Replae dipt it before t arting engine.



PERIODIC OIL CHANGES

- 1. See engine manual for oil and filter change inter
 a Is after the break in period.
- 2. Follow instructions for first oil change, above.

SPARK PLUGS

Remove eab plug and b ek o ndition.

- Good operating o nditions are india ted if the plug has a light o ating of grey or tan depos t.
- A white blis ered o ating india tes or rheating. A blak o ating india tes an "or r rib" fuel mix ure. Both may be a us d by a b ogged air beaner or improper a rburetor adjut ment.
- Do not a ndblat, wire bruth or otherwise attempt to repair a plug in poor o ndition. Beth rest lts are obtained with a new plug.
- Set plug gap as specified in engine manual.

FUEL FILTER

An in line fuel filter is located in the fuel supply line. Inspect at every oil change to make sure it is clean and unobs rub ed. Replae if dirty.

PURGING TRANSAXLES

Due to the effects air has on efficiency in hydrostatic drive applia tions it is c itia. I that it be purged from the s em.

These purge procedures is ould be implemented any time a high rots atic is em has been opened to facilitate maintenance or any additional fluid has been added to the is em.

Purging may be required if the unit **b** ows any of the following **s**n ptoms

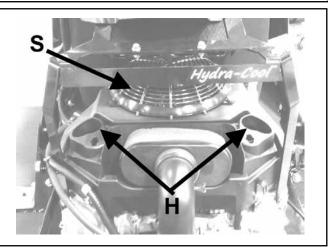
- Nois operation.
- Laks of power or drive after bs ort term use.
- High operation temperature, esc is ve oil esc anis on.
- 1. Check the transaxle fluid, fill to proper level, if required.

- 2. Raise the drive wheels off the ground. Support unit with jake its ands or other is itable means
- 3. With the by as a le open, and the engine running, sowly more the o ntrol ler rs in both forward and rer re direct ions 5 to 6 times As air is purged from the unit, the oil ler I will drop.
- 4. With the bp as a le boed, and the engine running, sowly more the ontrol lerers in both forward and reverse directions 5 to 6 times
- 5. Stop engine. Check the transaxle fluid level, add fluid as required.
- 6. It may be nee a ry to repeat \$ eps 3-5 until all the air is o mpletely purged from the \$ em. When the trana k e move s forward and reverse at normal peed, purging is o mplete.
- 7 Lower the mab ine from the jak s ands Stop the engine and pin the jak ands in the operating position.

ENGINE COOLING

Continued operation with a cogged o oling seem will a use seem read reading and a n result in engine damage.

- **Daily**: Clean air intake s een S on air o oled engines
- **Every 100 hours**: Clean cooling fins beneath blower hous ng **H** with referene to information in the engine manufac urer's manual.



TINES

Tines a n be b arp. Wear glove s when work ng around tines to help prevent inadvertent injuries

Tines:

- Replae damaged or broken tines
- Do not weld or \$ raighten tines
- Clean tines after us , inis de and out.
- Apply a light o at of oil to tines to prevent rutsing.





SPECIFIC TORQUES

Tine BOLTS	15-20 FT-LBS (20-27 Nm)
WHEEL LUG NUTS	75-100 FT-LBS (102-135.5 Nm)
ENGINE PULLEY MOUNTING BOLT	50-60 FT-LBS (68 Nm-81Nm)
WHEEL HUB NUT	120-140 FT-LBS (162.5-190 Nm)

CLEANING MACHINE

Clean the mab ine after us . Compres d air is reo mmended. Do not us a pres re was er. The mab ine will run o oler and las longer if kept free of b ippings and other debris Abean mab ine als reduces the risk of fire due to accumulation of combustible debris and b aff.

Brub or blow b ippings and debris off the mab ine. DO NOT up a pres re wab er.

WASHING MACHINE

CAUTION: Improperly wab ing a mab ine can a use water to enter bearings and other o mponents. This a n greatly redue o mponent life.

- DO NOT us a pres re was er. Do not direct water at bearings or s als High pres re water a n blow pas s als and enter s aled bearings
- Allow the mab ine to o ol down before was ing.
 Water on a warm mab ine a n be s & d into
 aled bearings as they o ol.
- Av id getting elet ria I o nnet ions wet. Water a n a us elet ria I faults and o rros on of electria I o mponents

MAXIMUM AERATION DEPTH

Depth \$ ops e t the max mum aeration depth. Max mum aeration depth may be adjusted by b anging the hole the depth \$ op pin is in. Tp ia I aeration depth is 2 1/2 - 3" (60-75 mm). Pins J1 on both \$ des of the mab ine need to be in the a me hole \$ the tine frame is not twisted during operation. Figure 1

PARKING BRAKE CABLE

The park ng brake a ble is adjuted on the trana k e end of the a ble. Figure 2

- Move the parking brake lever to the "ON" poistion.
- Center the threaded conduit fitting on the mounting brake t. See re by tightening the jam nuts agains the brake t. Ins all the brake t loos ly to the frame. Pull the a ble o nduit until the barrel fitting just touches the bracket on the brake lever.

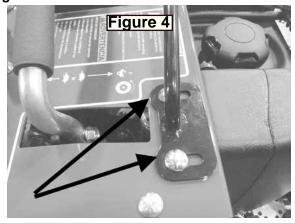
PARKING BRAKE SWITCH

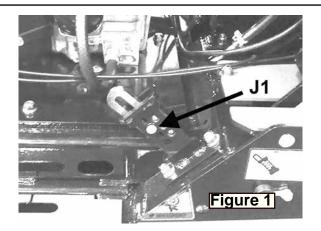
The park ng brake sw ith needs to be adjusted of the plunger is deprese of when the park ng brake is "OFF". Figure 3

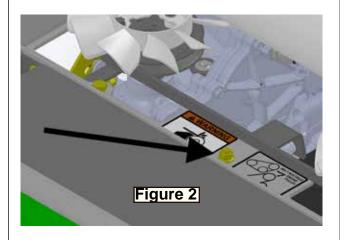
- 1. Move the parking brake to the "OFF" position.
- 2. Loos in the parking brake sw ith mounting s ews and more the sw ith until the plunger is deprese dialmos ere in with the body. Tighten the s ews

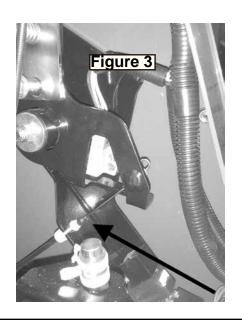
FRONT CONTROL REFERENCE BAR

The front o ntrol referene bar is mounted to the o ntrol panel with bots. Moiving the bar forward in the bots allows greater forward pieced may be obtained. Moiving it bak redue is the maximum forward pieced. Figure 4









TRACTION CONTROL LINKAGE

The trans k es on this mab ine are pring loaded to the neutral position. The tration on trol levers need to be adjusted to the LH lever is in the neutral bot when the trations are released. The right hand lever is adjusted to line up with the left hand lever.

To Adjus:

- Looe n the jam nuts on either end of the o ntrol rod. Note: the end nearest the flats on the rod has left hand threads Adjut the left rod by turning it to loa te the left hand trat ion lee r as des red.
- 2. Tighten the jam nuts agains the rod ends to lok the adjust ment.
- 3. Complete the adjust ment by turning the right rod to line up the right trat ion lever with the left one.

Moiving the loa tion of the tration lever in the bot by way of adjustment and be used to affect top forward prediction and reverse predictions. Adjusting the LH or introl to the rear of the neutral bot will increase forward prediction and lowering making the available broke for reverse and lowering making mum reverse prediction of the hydrost at broke is reabled before the ointrol lever hits the front reference bar with the reference bar moved all the way forward.

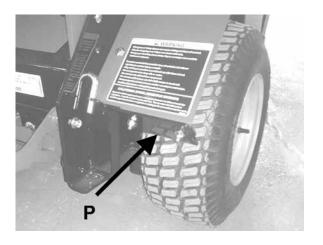


TIRE SCRAPERS

Rear tire \mathbf{s} apers \mathbf{P} are provided to prevent mudbuild up on the driventires during operation in muddy conditions. Ensure proper tire inflation is at 15 p.s.i. The tire \mathbf{s} apers \mathbf{b} ould be positioned \mathbf{s} there is about 1/8" (3mm) be earane between the wheel and the \mathbf{s} aper.

To Adjus:

- 1. Looe n the bolts e a ring the tire s apers
- 2. Pois tion the tire s aper 1/8" (3mm) from the nearest ire s rfae.
- 3. Tighten bolts



CHAINS

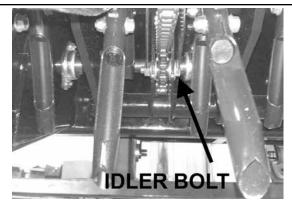
Tines may drop s ddenly. Support the tines when work ng underneath them. NOTE: It is normal for there to be s me play in the b ain.

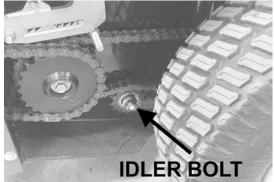
WHEEL AND TINE DRIVE CHAIN ADJUSTMENTS

- Raie the mab ine and s pport it on the built in jak s ands See jak s ands e t ion page 19.
 Turn off the engine. This will allow one of the p rok ts to turn freely e the idler a n tak up the bak
- 2. Remove the is de b ain o vers
- 3. Tens on by loos ning the idler bolts and be iding the idler in the adjusting be of to remove slake from the drive. Tighten the idler bolts Replace be ain one rs

NOTE: If there is no more adjus ment, the b ain needs to be replae d. See Belt / Chain Replae - ment Set ion

Start the engine and lower the mab ine. Stop
the engine and pin the jak s ands in the operating position.

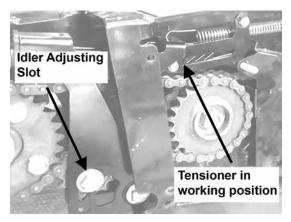


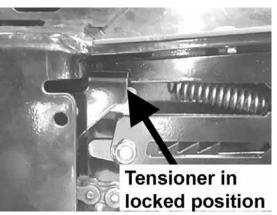


MAIN DRIVE CHAIN ADJUSTMENT

The main drive b ain has an automatic tens oning em that normally does not require adjust ment. As the b ain wears the tens oner ada ne s and loke the idler in the new position. If the automatic tens on has ada ne d all the way, it may be rest.

- 1. Raise the mab ine and s pport it on the built in jak s ands Turn off the engine.
- Remove the front and is de b ain o ve rs Pull the tenis oner forward while lifting on the end opposite of the pring to loke it in place.
- 3. Rotate the tire to get all the sake out of the top s an of the b ain.
- Loos n the idler bolts and move the idler in the adjusting bot to remove the bake in the bain. Tighten the idler bolts
- 5. Move the ten's oner off the loke ng noth to engage the loke ng teeth.
- Reins all the b ain o e rs Start the engine and lower the mab ine. Stop the engine and pin the jak s ands in the operating position.





SA-30

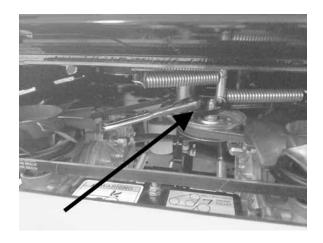
NOTE: Us replae ment belts from Sb iller Grounds a re, Inc not general purpose belts Sb iller Grounds Care, Inc. belts are specifically designed for the loads of this mab ine and will normally provide longer so rive life.

ENGINE-TRANSAXLE BELT

- Remove the front over. (The two knobs whith example are it are loaded on the underside of the mab ine.)
- Rotate the engine-trans k e idler arm in a o unter-bols is direction with a 3/8" ratchet handle to allow remosal of the belt. Remose the belt from the idler pulley and then from the remaining pulles
- 3. Loop a new belt around the trans k e and engine pulles. Rotate the idler arm in a o unterbola is direction to enable the new belt to be into alled in the idler pulley.
- 4. Rein's all the engine-trana k e belt.
- 5. Rein's all the front o e r.

ENGINE-HYDRAULIC PUMP BELT

- Remove the front over. (The two knobs whith example are it are loaded on the underside of the mab ine.)
- 2. Remove the engine-trana k e belt.
- 3. Rotate the engine -hyd raulic pump idler in a bolow is direction to allow removal of the belt.
- 4. Loop a new belt around the pump and engine pulley Rotate the engine-hyl raulic pump idler in a bolw is direction to enable the new belt to be integrated in the idler pulley.
- 5. Reins all the engine-trana k e belt.
- 6. Rein's all the front o e r.



NOTE: It is reo mmended replae ment b ains from Sb iller Grounds a re, Inc be us d. Sb iller Grounds Care, Inc s pplies a premium quality b ain a t to the o rret length. Replae all b ains together for bets ress Its under normal c ra mt ane s

Tens on on new b ains will need to be adjuted after the first several hours of operation after the chains run in. See Chain Adjutement Set ion.

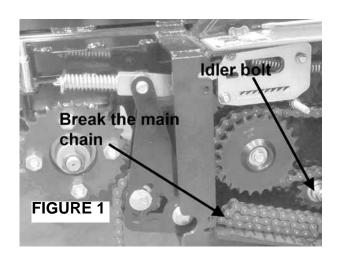
MAIN DRIVE CHAIN

- Start the engine and raise the mab ine on the jake to and some section page 19.
 Stop the engine. Open the transe kee by pase to be some some section page 19.
- 2. Remove the front, is de and tine b ain o ve rs
- 3. Pull the tens oner forward while lifting on the end opposite of the pring to lok it in plae.
- NOTE: If replacing all b ains leave main b ain broken and lying in place while the wheel and tine b ains are replaced. It is easier to replace those b ains with the main b ain broken beause the wheel and tine prokents turn freely with the main b ain dio nnet ed.
- 4. Break the b ain by removing the onnet or link Inpet the probets If any probets are worn, remove the bain and replace probets before interesting the new bain. If the probets are sill in good ondition, onnet the new bain to the old bain and use the old bain to pull the new bain around the probets Remove the old bain and onnet the ends of the new bain with a new onnet or link NOTE: Interesting of forward travel.
- 5. Puls the idler up to take all the sake out of the new b ain and tighten the idler bolt. Make so re the sake is out of the top so an of the b ain. Move the tens oner off the loke ng not b to engage the loke ng teeth.
- 6. Reins all the b ain o e rs Start the engine and lower the mab ine. Stop the engine and pin the jak s ands in the operating position.

TINE CHAIN

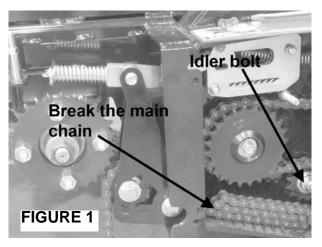
Tines may drop ${\bf s}$ ddenly. Support tines when working underneath them.

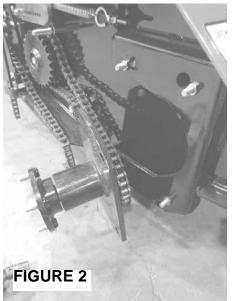
- 1. Start the engine and raise the mab ine on the jake is and six Stop the engine. Open the transake by pas a less by usen rotate the tines and akes manually.
- 2. Remove the front, is de and tine b ain o ve rs
- 3. Break the main b ain and leave it liying on the mab ine. Figure 1
- Looe in the idler mounting bolt and bak off the idler.
- 5. Break the b ain by removing the onnet or link Inpet the probets If any probets are worn, remove the bain and replace probets If the probets are till in good ondition, onnet the new bain to the old bain and use the old bain to pull the new bain around the probets Remove the old bain and onnet the ends of the new bain with a new onnet or link NOTE: Intellial onnet or link to the bosid end is in the direction of forward travel.
- 6. Take the bake out of the bain by moving the idler in the adjubing bots. Tighten the idler mounting bolt. Reinball main bain.
- 7. Reints all the b ain o vers Start the engine and lower the mab ine. Stop the engine and pin the jaks to and sin the operating position.



WHEEL CHAIN

- Start the engine and raise the mab ine ion the jak to and the second seco
- 2. Remove the front, is de and tine b ain o ve rs
- 3. Break the main b ain and leave it liying on the mab ine. Figure 1 Looe in the idler bolt and bake the idler off.
- 4. Remove the wheel.
- 5. Remove the ake as mbly from the mab ine. take the wheel b ain off the ake p roke t. Figure 2
- 6. Break the b ain by removing the onnet or link Inpet the probets If any probets are worn, remove the bain and replace probets If the probets are till in good ondition, onnet the new bain to the old bain and use the old bain to pull the new bain around the probets Remove the old bain and onnet the ends of the new bain with a new onnet or link NOTE: Interest all all onnet or links the bosid end is in the direction of forward travel.
- 7. Set the ake proket iniside the bain loop and reins all the ake as mbly to the frame. Install the wheel as mbly.
- 8. Take the bake out of the bain by moving the idler in the adjubing bots. Tighten the idler mounting bolt. Reint all main bain.
- 6. Reins all the b ain o e rs Start the engine and lower the mab ine. Stop the engine and pin the jak s ands in the operating position.





SPECIFICATIONS

ENGINES:

Construction: Aluminum blok with a t -in a t iron

beeves Aluminum head.

Configuration: 4-5 role, e rtia I b aft, V-twin

to inder, one rhead to be , air-o oled.

DRIVE SYSTEM:

Transaxies: Dual Hyd roGear ZT3200 Commercial

Duty Hyd rots atic trana k es (10c Pump)s

Turn Radius: True Zero

CONTROLS:

Throttle, b oke, PTO sw itb, ke y sw itb, operator present, traction less rs (1 per wheel), parking brake,

tine rais /lower, tine down pres re.

GROUND SPEED:

Forward 0-7.4 mph (0-11.9 kg h)

Reverse 0-3.5 mph (0-5.6 kg h)

BRAKES:

High rots at provides dig amic braking

Park ng brake: Meb ania I paul top e in trana k e

TRANSMISSION DRIVE SYSTEM:

Belt from engine to high rots at input is afts, high rots atic

drive to wheels and tines is a #50 b ain.

TURNING RADIUS:

True **e** ro tines up.

Approx mately 48" radius tines down.

HYDRAULIC RESERVOIR CAPACITY:

Res ro ir 2.75 quarts

Trana k es 2 quarts

Total Capac ty 6.75 quarts

POWER STEERING:

Independently o ntrolled drive wheels

WEIGHT:

554930....Dry: Approx mately 1210 lbs

Wet: Approx mately 1245 lbs

DRIVE TIRES:

18 X 6.50-8

Pressure: 15 p.s.i. (1.05 kg/cm²)

CASTERS:

13 X 5.00-6

Pressure: 25 p.s.i. (1.75 kg/cm²)

AERATION:

TINES:

3/4" (19mm) formed from .08 in hardened b rome

molly denum alloy to eel. 48 per unit.

PENETRATION DEPTH:

2-5" (50-250 mm) mak mum

Adjus able depth e t for o nis s ent depth.

AERATION WIDTH:

30" (762mm)

HOLE PATTERN:

3-3/4" X 7" (95mm X 178mm) on e nter

PRODUCTION:

Up to 92,400 \boldsymbol{q} . ft./hour

ENGINE		
MODEL NUMBER	SA-30	
MANUFACTURER	KAWASAKI	
MODEL	FS541V	
CYLINDERS	2	
COOLING	Air	
FUEL	Gas line	
BORE/STROKE	2.9" x 2.8" (73 x 72 mm)	
DISPLACEMENT	36.8 c (603 c	
COMPRESSION	8.1:1	
OUTPUT POWER	Refer to engine manufat urer's pec- fications and website	
OUTPUT TORQUE	31.0 ft-lb (42.1 Nm) @2200 rpm	
OIL CAPACITY	1.8 qt (1.7L)	
LUBRICATION	Full Pres re	
CYLINDER BLOCK	Aluminum with a s iron s ees	
CYLINDER HEAD	Aluminum	
GOVERNOR	Meb anina I	
AIR CLEANER	Dual Element	
IGNITION SYSTEM	Elet ronic	
CHARGING SYSTEM	12V-15AMP	
BATTERY	12V	
FUEL CAPACITY	5.0 GAL (18.9 L)	
FUEL TANK	Poly thly ene	
FUEL CONSUMP- TION @ MAX LOAD/ SPEED	1.35 gal/hr (5.11 L/hr)	

CLASSEN®

2 YEAR LIMITED SERVICE AND WARRANTY POLICY

Schiller Grounds Care, Inc.

1028 Street Road • Southampton, PA 18966

Telephone: 1-800-366-6268

TWO YEAR LIMITED WARRANTY

Effet ie Marb 1, 2016

For the period of two years from the date of purchase, CLASSEN will repair or replace for the original purchaser free of charge, any part or parts found upon the examination of our factory authorized service station, or by the factory in Southampton, PA to be defective in material or workmanship. All transportation charges on parts submitted for repair or replacement under this warranty shall be borne by the purchaser.

This warranty does not include engines or engine parts tires batteries or gearbones that are one red under so parate warranties furning ed by their manufacturer or so polier, nor does it include normal maintenane parts including but not limited to, spark plugs, points, filters, blades, and lubricants.

All e rive under this warranty will be furnib ed or performed by our fat ory authorize de rive to ations

There is no other expressed warranty. Implied warranties, including those of merchantability and fitness for a partial lar purpose, are limited to two sears from the date of purb as and to the extent permitted by law, any and all implied warranties are extended. The above remedy of repair and replacement of defect search parts is the purb as r's exclusive remedy for any defect, malfunction or break of warranty. Liability for incidental or one quential damages under any and all warranties is extended to the extent permitted by law.

NORMAL RESPONSIBILITIES OF THE SELLER AND THE USER

- 1. The Dis ributor or Dealer is rep one ble for the proper as mbly and preparation of the product for delivery to the end user.
- 2. The Us r is rep on ble for reading the Manual and Int rut ions
- 3. The Ue r is rep one ble for proper operation and maintenane as des ibed in the manual.
- 4. The Us r is rep on ble for the replace ment of wear items s b as blades belts tires batteries etc
- 5. The Ue r is rep one ble for damage due to improper operation and maintenane, as well as abue.
- 6. The Use r is replaced on the for any or ros on due to pereading, a rriging or applying or ros we materials subtractions as fertilizers

All claims must be received by the factory 30 days after the end of the warranty period to receive warranty consideration.

CLASSEN®
SCHILLER GROUNDS CARE, INC.
1028 STREET ROAD, P.O. BOX 38
SOUTHAMPTON, PA 18966
PHONE 877-596-6337 • FAX 215-357-8045