



**75-70006A**

**430 MAX 25HP KUBOTA GAS**

**75-70008A**

**430 MAX 21HP KUBOTA DIESEL**

**75-70010A**

**430 MAX 33HP GENERAC GAS**

**75-70011A**

**430 MAX 30HP KOHLER GAS**

**MAN4163328**  
Rev. A 2-2008

PARTS MANUAL 4163331



**SCHILLER**

GROUNDS  
CARE

# OPERATOR'S MANUAL

**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 cancérogènes, 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 cancérogènes, 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 product, one of the best designed and built anywhere.

This machine comes with an Owner / Operator's Manual and a separate Illustrated Parts Manual. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand 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**

<b>TABLE OF CONTENTS</b>	<b>PAGE</b>
SAFETY.....	2-7
LABELS.....	8
ASSEMBLY / SPECIFICATIONS.....	9
CONTROLS.....	10-12
OPERATION.....	13-16
SERVICE CHARTS .....	17, 18
MAINTENANCE .....	19-23
ADJUSTMENTS.....	24, 25
TROUBLESHOOTING .....	26

## 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 “aftermarket” 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

*Schiller Grounds Care, Inc.*

One Bobcat Lane  
Johnson Creek, WI 53038 U.S.A.  
Phone: 920-699-2000  
Fax: 920-699-3683

SERIAL NUMBER

MODEL NUMBER

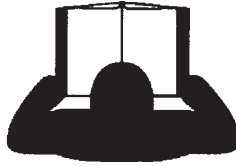
**MODEL NUMBER:** This number appears on sales literature, technical manuals and price lists.

**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.

## Operator preparation and training


### Read the Operation & Safety Manual

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

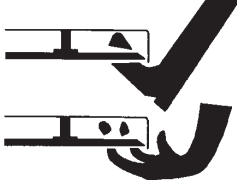



## Site preparation and circumstances

- Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by the manufacturer.
- Clear the area where the equipment is to be used of objects such as rocks, toys, wire or other debris that may be picked up or thrown by the machine.
- Be sure the area is clear of pets and people, especially young children. Never assume they will remain where you last saw them. Stop the machine if any enter the area.
- Operate only in daylight or in good artificial light.
- Turf conditions can affect the stability of the machine.



## WARNING

**All rotary mowers are potentially dangerous. They can amputate hands and feet and throw objects. Failure to follow these safety and operating instructions could result in serious injury or death.**

## Machine preparation

- Check operator present interlock system and brake operation. Adjust or repair any problems before using.
- Do not tamper with or defeat safety devices. Keep guards, shields and interlock safety devices in place and in proper working condition. They are for your protection.
- Keep all fasteners such as nuts, bolts and pins well secured.
- Verify that machine and attachments, if any, are in good operating condition.

## OPERATING SAFELY

### In general

- Use extra care when loading or unloading the machine into a trailer or truck.
- Close fuel valve before transporting.
- Operate all controls from the operator's seat.
- Watch out for traffic when near or crossing roadways.
- Do not run the engine in an enclosed area where dangerous carbon monoxide fumes can collect.
- Do not place your foot on the ground while operating the machine.
- Before mowing, lower the discharge chute, install the mulcher .
- Keep clear of the discharge opening at all times. Never direct the discharge toward a bystander. Stop operation if someone approaches.
- Use care when pulling loads or using heavy equipment.
  - Use only approved drawbar hitch points.
  - Limit loads to those you can safely control.
  - Do not turn sharply. Use care when reversing.
  - Use counterweight(s) or wheel weights when suggested in the operator's manual.
- Never leave a machine unattended. Always turn off the PTO, set parking brake, stop engine and remove keys before dismounting.

### Starting

- Start only according to instructions in this manual or on the machine.
- Before attempting to start the engine, make sure:
  - the parking brake is on;
  - the PTO is disengaged;
  - the F-R lever is in NEUTRAL.
- When starting the engine, make sure hands and feet are clear of attachments.
- Do not start the machine while standing in front of the discharge chute or with the chute directed at someone.
- Do not engage PTO at full throttle. Throttle to idle or lowest possible engine speed.
- Do not change engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.

### Interrupting operation

- Before leaving the operator's position:
  - Park on level ground.
  - Lower attachments.
  - Disengage the PTO.
  - Set the parking brake.
  - Shut off the engine and remove the key.
- Disengage the PTO and wait until the mower blades quit rotating or the attachment stops:
  - before raising cutterdeck;
  - when not mowing;
  - for transport;
  - when crossing surfaces other than grass.
- Stop the engine, disengage the PTO and wait until the blades quit rotating:
  - before refueling;
  - before making height adjustment unless the adjustment can be made from the operator's position.
- Stop the engine, disengage the PTO and disconnect the spark plug wire(s) or remove the key:
  - before clearing blockages or unclogging chute;
  - before checking, cleaning or working on the machine;
  - after striking a foreign object. Inspect the machine for damage and make repairs before restarting.
  - if the machine begins to vibrate abnormally: Inspect and make repairs as needed before restarting;
  - except for repairs or adjustments as specifically noted, such as for carburetor adjustment, where the engine must be running. Keep hands and feet clear of moving parts in these circumstances.
- Allow the blades to come to a complete stop when stopping operation to clear blockages, unclog, inspect the machine, do maintenance or repair.
- Follow the procedure for engine shutdown and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of operation.

## MANEUVERING SAFELY

### In general

- Slow down before turning.
- Always look behind and down for a clear path before and during backing.
- Be aware when approaching blind corners, shrubs, trees, tall grass or other objects that may obscure vision.
- If tires lose traction, disengage the PTO. If on a slope, head down.

### Operating on slopes

- Slopes are a major factor in loss-of-control and tipover accidents that sometimes lead to severe injury or death.
- All slopes require extra caution.
- The operator must be experienced with the Schiller Grounds Care, Inc. tractor and its unique operational responses.
- If the operator is uncomfortable or unsure of the machine's stability, he should cease operation on the slope immediately.
- Ultimate responsibility for safe operation on slopes rests with the operator.
- With ride-on machines, mow up and down slopes, not across.
- With walk-behind machines, mow across slopes, not up and down.
- On uneven, loose or wet ground, the angles should be reduced. Only smooth maneuvers (not erratic) should be made to help maintain stability.
- Machine stability is affected by articulation. When turning the effective width of an articulated machine narrows. Avoid uphill turns.
- Maintain engine RPM and control ground speed with the Forward - Reverse control lever.
- Do not operate on excessively steep slopes.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the PTO and proceed slowly straight down the slope.
- 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 operation.

- 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.
- Use caution when operating near 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.

## Rollover Protection Structure (ROPS)

### **WARNING**

- A Rollover Protection Structure (ROPS) for this tractor is available as an optional accessory. Seat belts must be worn whenever a ROPS is installed on the tractor. Always keep seat belt snugly adjusted. **DO NOT** use seat belts on a tractor without a ROPS.
- If a ROPS is installed and the tractor is overturning, hold onto the steering wheel. Do not attempt to jump out or leave the seat.



## MAINTENANCE SAFETY

### In general

- Maintain machine according to manufacturer's schedule and instructions for maximum safety and best mowing results.
- Park machine on level ground.
- Never allow untrained personnel to service machine.
- Adjust or repair only after the engine has been stopped and the blades have quit rotating.
- Replace parts if worn, damaged or faulty. For best results, always replace with parts recommended by the manufacturer.
- Disconnect battery or remove spark plug wire(s) before making any repairs. Disconnect the negative terminal first and the positive last. Reconnect positive first and negative last.
- Do not dismantle the machine without releasing or restraining forces which may cause parts to move suddenly.
- Provide adequate support for lifted machine or parts if working beneath.
- Do not put hands or feet near or under rotating parts.
- Clean up oil or fuel spillage thoroughly.
- Replace faulty mufflers.
- To reduce fire hazards, keep the engine, muffler, battery compartment and fuel storage area free of grass, leaves, debris buildup or grease.

### Fuel

- 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.



- 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.

### Hydraulic system



### WARNING

The machine's hydraulic system operates under high pressure.



- When checking for leaks, do not use your hands to attempt to find a leak. Instead, use cardboard or paper.
- Escaping hydraulic fluid can be under sufficient pressure to penetrate skin and cause serious injury.
- If hydraulic fluid is injected into the skin, it must be promptly removed by a doctor familiar with this form of injury or gangrene may result.
- Check that all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.



## Battery

Battery acid is caustic and fumes are explosive and can cause serious injury or death.

To reduce the risk of personal injury when working near a battery:

- When working with battery acid, use protective equipment such as, but not limited to, goggles, face shield, rubber gloves and apron.
- Avoid leaning over a battery.
- Do not expose a battery to open flames or sparks.
- Be sure batteries with filler caps are properly filled with fluid.
- Do not allow battery acid to contact eyes or skin. Flush any contacted area with water immediately and get medical help.
- Charge batteries in an open, well ventilated area, away from sparks and flames. Unplug charger before connecting or disconnecting from battery.



## STORAGE SAFETY

- Stop the engine and allow to cool before storing.
- Drain the fuel tank outdoors only.
- Store fuel in an approved container in a cool, dry place.
- Keep the machine and fuel containers in a locked storage place to prevent tampering and to keep children from playing with them.
- When the machine is to be parked, stored or left unattended, close the fuel valve.
- Do not store the machine or fuel container near heating appliances with an open flame such as a water heater or an appliance with a pilot light.
- Keep gasoline storage area free of grass, leaves and excessive grease to reduce fire hazard.

1. Be sure the jumper cables are in good condition. Turn off the ignition and all electrical accessories on both machines.
2. Position the machine with a good (charged) battery next to but not touching the machine with the dead battery so jumper cables will reach.
3. When making cable connections:
  - make sure the clamps do not touch anywhere except to intended metal parts,
  - Never connect a positive ("+" or red) terminal to a negative ("-" or black) terminal.
  - Make sure the cables won't get caught in any parts after the engines are started.
4. 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.
5. Connect one end of the other cable to the **negative** terminal of the machine with a good (charged) battery. Make the final connection on the engine of the machine to be started, away from the battery.
6. Start the vehicle with the good battery, then the machine with the discharged battery.
7. Remove the cables in the exact reverse order of installation. When removing each clamp, take care it does not touch any other metal parts while the other end remains attached.



**00-093**

Location:

Top of rear hydraulic motor shield.



**00-220**

Location:

Right side of frame and front right side of fuel tank.



**00-200**

Location:

Steering column.



**00-025**

Location:

Front grille.

The Schiller Grounds Care, Inc. 430 MAX is designed for the commercial user or homeowner. From the rugged industrial frame to the operator controls...the tractor is ready for demanding turf and grounds care assignments.

Power steering and articulated frame, combined with a low center of gravity and high flotation tires, provide exceptional maneuverability. Fully hydrostatic, infinitely variable, single lever control lets you choose travel speeds to match the task. No clutching, jerking or braking, just smooth power flow to the 4 full time drive wheels for added traction in tough areas.

Front mounted attachments offer a wide range of working tools. All of them attach to the "Quick Hitch" that is a Schiller Grounds Care, Inc. exclusive. The front hitch is standardized for all models of Schiller Grounds Care, Inc. power units so your present attachments are not obsolete.

You can do many tasks with this one tractor, compared to higher priced single purpose machines, by simply changing attachments in less than 2 minutes. Operator safety and comfort, power, performance and dependability will provide years of enjoyment with your Schiller Grounds Care, Inc. tractor.

## ASSEMBLY INSTRUCTIONS

1. Remove unit and all parts from crate.
2. Install the wheels with valve stems facing outward and traction bar tread facing in the proper direction. There are two right wheels and two left wheels. Tighten wheel nuts to 85 ft. lbs. Adjust tire pressures. Refer to Service Schedule on page 17.
3. Install the seat (if removed) and connect the wiring for the seat switch.
4. Install the steering wheel (if removed) and torque the nut to 40 ft. lbs. Snap the center cover in place.
5. Check all fluid levels. Refer to Service Schedule on page 17.
6. Visually inspect for loose bolts or fittings.
7. Start the unit and test drive to check all functions.
8. Before driving the machine without attachment, remove counterweight.

## SPECIFICATIONS

Specifications are subject to change without notice.

### Engine:

75-70006B .....	Kubota WG752-E Gas
	25 HP liquid-cooled
75-70008B .....	Kubota D722-E Diesel
	21 HP liquid-cooled
75-70010B.....	Generac GTH 990
	33 HP air-cooled
75-70011B.....	Kohler CH750 Gas
	30HP air-cooled

### Drive Train:

Transmission.....	Sundstrand Hydrostatic
	Series 15 Pump
	and 2 motors
Transaxles.....	Peerless 2500 Series
	2-speed
Steering.....	Hydraulic power steering
Parking Brake .....	Disc type

### Fuel System:

Tank capacity .....	6 Gallons
Fuel Pump.....	Diaphragm(Generac &
	Kohler)
	Electric (Kubota)

### Electrical:

Starting.....	12 volt, Key switch
Battery.....	12 volt, Group 26

### Tires:

Traction Type .....	21 x 11.00-8, Rawhide
Turf Type, optional .....	20 x 10.00-8, Turfmate

### Dimensions:

Overall Width .....	44"
Overall Length.....	64"
Overall Height .....	49"
Wheelbase .....	38"
Inside Turning Radius .....	46"
Weight (Kohler & Generac).....	1000 lbs.
Weight (Kubota) .....	1100 lbs.

### Speeds:

Forward:	
(Traction Type Tires) .....	0-8.5 MPH (high range)
	0-4.4 MPH (low range)
Reverse	
(Traction Type Tires) .....	0-5.3 MPH (high range)
	0-2.8 MPH (low range)

## 1. PTO LEVER

The PTO lever controls the front drive belt (Power Take Off or PTO) that supplies power to attachments. Rotate the lever upward to engage the PTO and start an attachment. Rotate the lever downward to disengage the PTO and stop the attachment.

- Disengage the PTO whenever you stop or leave the operator's position.
- Shut of the engine with the key before making adjustments or unplugging a clogged attachment.
- Do no engage the PTO until you are ready to start operating the attachment.

## 2. KEYSWITCH

**Gasoline engines:** The key switch has three positions OFF, RUN, and START. Insert the key and turn it clockwise to move the switch from OFF to RUN. Turn it further to START and hold to engage the starter. Release the key and the switch will return to RUN from START. Turn the key counterclockwise to OFF to stop the engine.

**Diesel Engines:** The key switch has four positions PREHEAT, OFF, RUN, and START. Insert the key and turn it counterclockwise to move the switch from OFF to PREHEAT until the glow plug indicator lights. Release the key and the switch will return to OFF. Turn the key clockwise to move the switch from OFF to RUN. Turn it further to START and hold to engage the starter. Release the key and the switch will return to RUN from START. Turn the key counterclockwise to OFF to stop the engine.

## 3. THROTTLE LEVER

Move the throttle lever forward to increase engine speed until the maximum governed engine rpm is reached. Move the lever rearward to decrease engine speed until the engine reaches its idle speed.

## 4. LIGHT SWITCH

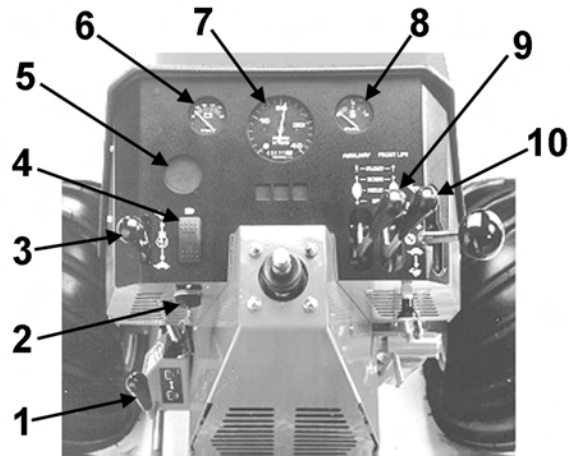
Rock the switch forward to turn the lights on. Rock it rearward to turn the lights off.

## 5. WATER TEMPERATURE GAUGE

Water cooled engines only. Displays engine coolant temperature.

## 6. VOLTMETER

Displays electrical system voltage.



## 7. TACHOMETER AND HOUR METER

Displays engine rpm and accumulated engine operating hours.

## 8. FUEL GAUGE

Displays fuel level in fuel tank.

## 9. AUXILIARY HYDRAULIC LEVER

Controls flow of hydraulic oil to hydraulic device connected to auxiliary hydraulic couplers. This allows extension or retraction of a hydraulic cylinder, or rotation of a hydraulic motor. There are four positions; HOLD, RAISE, LOWER, and FLOAT. Moving the lever forward from the hold positions lowers the attachment, moving it farther forward locks the lever into the detented FLOAT position that allows a cylinder to float or follow terrain. To raise an attachment move the lever to the rear to the RAISE position. If a function performs the opposite direction of what is intended, reverse the hoses connected to the auxiliary ports.

## 10. HYDRAULIC FRONT LIFT LEVER

Controls the vertical position of the front attachment hitch. There are four lever positions; HOLD, LOWER, FLOAT, and RAISE. Moving the lever forward from the hold positions lowers the attachment, moving it farther forward locks the lever into the detented FLOAT position. Mower decks should be run in this position as it allows the deck to follow terrain. For attachments where down pressure is desired, do not move the lever into the FLOAT position. To raise an attachment move the lever to the rear to the RAISE position.

### 11. FORWARD-REVERSE LEVER

Controls infinitely variable forward and reverse speeds.

- To move forward, move the control lever sideways out of the neutral slot and forward. The farther the lever is moved forward, the faster the machine will travel up to its maximum speed.
- To move in reverse, move the control lever sideways out of the neutral slot and rearward. The farther the lever is moved to the rear, the faster the machine will travel in reverse up to its maximum travel speed.
- To slow the machine from either direction, move the control lever toward the neutral position.
- To stop the machine, move the control lever to the neutral position.

### 12. CHOKE

Gasoline engines only. Pull the choke control out to set the choke "ON". Push it in to set the choke "OFF".

### 13. STEERING WHEEL

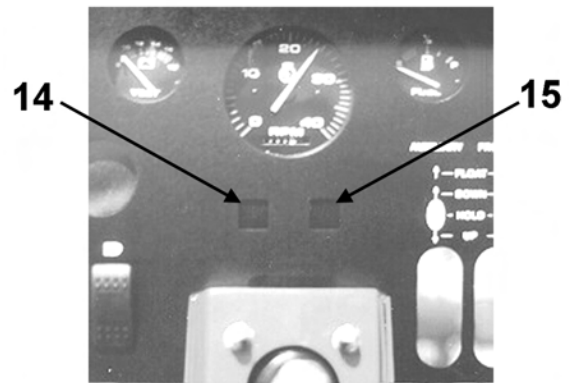
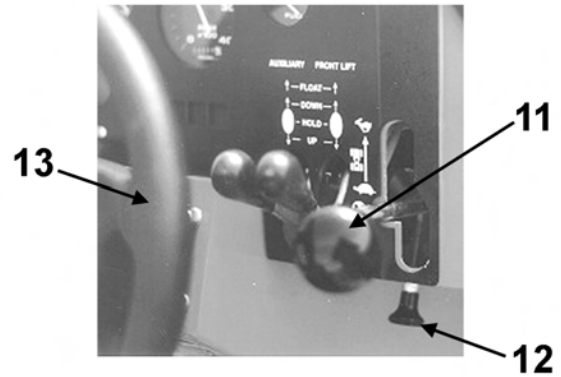
Steers the machine. Turning the steering wheel causes the frame to bend in the middle to turn the machine. Turning the wheel clockwise effects a right hand turn, counterclockwise a left hand turn.

### 14. OIL LIGHT

Indicates low engine oil pressure.

### 15. GLOW PLUG INDICATOR

Diesel engine only. Indicates glow plugs have heated enough for a cold engine to start. Restarting a warm engine does not require glow plug activation.





### 16. REAR TRANSAXLE RANGE SELECTOR LEVER

Selects rear transaxle speed range. Both transaxles must be in the same range. See page 15 for HI-LO Range selection information.

### 17. FRONT TRANSAXLE RANGE SELECTOR LEVER

Selects front transaxle speed range. Both transaxles must be in the same range. See page 15 for HI-LO Range selection information.

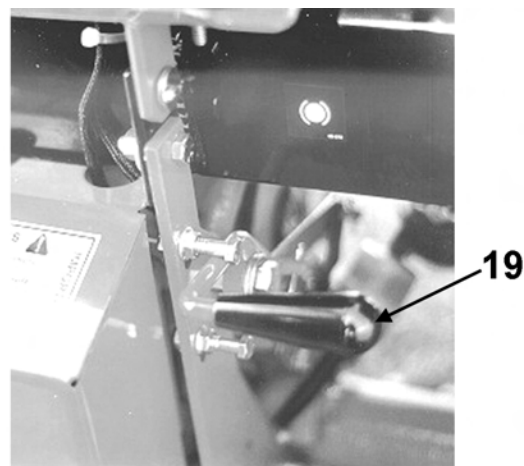
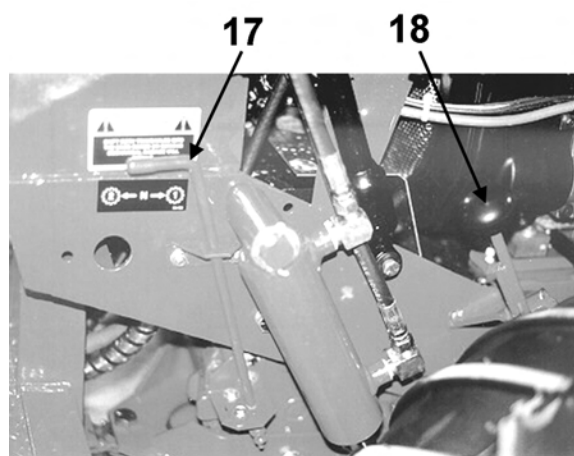
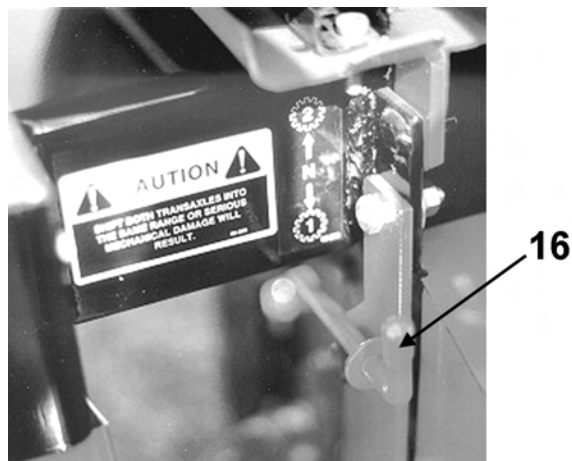
### 18. FRONT HITCH RELEASE LEVER

Raise to unlatch quick hitch to allow disconnecting attachment from tractor.

### 19. PARKING BRAKE LEVER

(On left side)

Raise lever to engage parking brake. Lower lever to disengage parking brake.



## FUELING

- GASOLINE: Fill tank with clean, fresh, regular or unleaded fuel.
- DIESEL: Fill tank with clean, fresh No. #2 diesel fuel. In extreme cold temperatures No. #1 diesel fuel may be used. ***Do not use kerosene or damage to engine may result.*** Refer to engine manual for fuel bleeding instructions.
- Use a funnel to avoid spillage.

## ENGINE OIL

Refer to the engine manual for oil specifications.

## TRANSAXLE HYDRAULIC OIL

Fill transaxle to the safe range with approved hydraulic oil. Use only Schiller Grounds Care, Inc. Trans-Hydraulic Oil or Texas Refinery Corp. 6440 Universal Torque Fluid. ***Do not use automatic transmission fluid, motor oil, or any other type of hydraulic oil.***

### NOTE:

**THE USE OF ANY OIL OTHER THAN Schiller Grounds Care, Inc. TRANS-HYDRAULIC OIL OR TRC 6440 UNIVERSAL TORQUE FLUID IS NOT RECOMMENDED. IF A SUBSTITUTE OIL CAUSES OR SUBSTANTIALLY CONTRIBUTES TO A FAILURE, THAT FAILURE MAY NOT BE COVERED BY WARRANTY.**

### CAUTION

**BE ALERT! STOP RUNNING THE UNIT AT THE FIRST SIGN OF ANY ABNORMAL HYDRAULIC FUNCTION. SERIOUS DAMAGE TO THE HYDRAULIC SYSTEM CAN RESULT!**

## COOLANT

Use only commercial grade antifreeze (for cast iron liquid cooled engines) and deionized water in a 50/50 mix. Mix outside of engine. Don't mix Propylene Glycol and Ethylene Glycol.

## BEFORE STARTING THE ENGINE

- **READ SAFETY DECALS.**
- Be familiar with all controls, how each functions and what each operates.
- Check engine and transaxle oil levels and add if necessary.
- Visually check tires.
- Visually check for loose or missing parts or bolts.
- Check coolant level. (Kubota)

## STARTING THE ENGINE

1. To start the engine: Forward - Reverse lever must be in NEUTRAL, the PTO must be OFF.
2. Open throttle approximately one-fourth of its travel.
3. GASOLINE ENGINES: Pull choke.  
DIESEL ENGINE: Turn key counterclockwise to "preheat" until indicator light goes off. No "preheat" is required when the engine is warm.
4. Turn the key to operate the electric starter to start the engine. Release the key when the engine starts.
5. If the engine does not start immediately, do not crank for more than 10 seconds at a time. Allow 60 seconds for the starter motor to cool down between starting attempts to prevent the starter motor from burning out.
6. Warm up engine at medium speed.
7. If the choke is "ON" when the engine starts, gradually back it off until the engine runs with no choke at all.
8. In cold weather, allow the hydraulic oil to warm up a few minutes at medium engine speed before using tractor.

### CAUTION

**NEVER USE ETHER AS A STARTING AID, SEVERE ENGINE DAMAGE MAY OCCUR.**

### DANGER

**NEVER FILL FUEL TANK WITH THE ENGINE RUNNING.**



## OPERATING NOTES

- **OBSERVE SAFETY DECALS.**
- Practice at slow engine and travel speeds with the PTO off until fully familiar with the controls.
- Do not operate mower with other persons in the area. Irregularities in ground surface can permit foreign material to be propelled from beneath deck to cause serious injury or death.
- Before leaving operator's seat, disengage PTO, set PARKING BRAKE and STOP ENGINE.
- Remove key from ignition if maintenance procedures are to be performed or tractor is to be left unattended.
- Tire pressures are very important! Check tire pressures according to Service Chart on page 17.

### **CAUTION**

Slow down on rough, uneven or steep terrain and for operation of power driven mounted attachments.

### **CAUTION**

Stop running the unit at the first sign of any abnormal hydraulic function. Serious damage to the hydraulic system can result.

### **CAUTION**

Rear weights must be used with attachments over 120 pounds for stability. See attachment operator's manual for weight requirements.

Always remove all rear weights when front mounted attachments are removed, or when using attachments less than 120 pounds, to reduce the possibility of unit tipping over backward while climbing steep slopes or loading ramps.

## TIRE BALLAST

Liquid, foam, rubber or powder ballast in tires causes excess loads on the drive train. **Failures caused by excess loading may not be covered by warranty.**

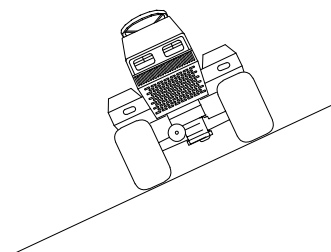
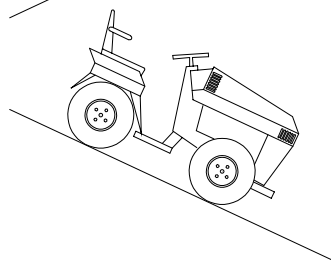
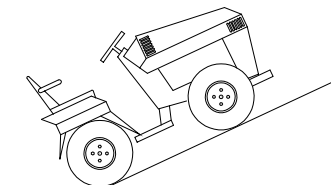
Modified or makeshift weights are not acceptable.

## MAXIMUM ENGINE INCLINATION RECOMMENDATIONS

**When using an engine in an inclined position continuously, the following points must be remembered:**

- The effective volume of the fuel tank becomes less, so air suction must be prevented.
- The effective volume of the engine oil sump is reduced, increasing the possibility of improper engine lubrication.

POSITION	LESS THAN 10 MINUTES CONTINUOUS OPERATION	CONTINUOUS OPERATION
FRONT UP	30°	25°
FRONT DOWN	30°	25°
LEFT OR RIGHT SIDE DOWN	30°	25°



## DRIVING

1. Select desired engine speed with the throttle. For power driven attachments, the engine is normally run at maximum RPM.
2. Vary vehicle speed with the Forward - Reverse control lever. If the attachment or a steep slope causes excessive drop in engine RPM; reduce ground speed. **Do not lug the engine at reduced RPM.**
3. Operate mower and other similar front mounted attachments with front lift lever in "FLOAT" position.
3. Safety seat switch requires operator to be seated when PTO is "ON" or engine will stop. Disengage PTO before attempting to start engine.
4. The hydrostatic transmission provides a braking action when the Forward - Reverse control lever is returned to neutral.
5. Set parking brake and stop engine before dismounting.
6. **DO NOT TOW!** Serious damage to hydraulic system will result. See below for emergency moving instructions.

## EMERGENCY TOWING INSTRUCTIONS FOR A STALLED UNIT

1. Both transaxles must be in neutral before moving a stalled unit. Neutral position is between HIGH (2) and LOW (1) range position.
2. Release the locking straps **B** on both transaxles to shift into "Neutral".

**Failure to shift transaxles into "Neutral" will cause serious damage to the hydrostatic system.**

3. Remember to lock the lever lock strap after towing.

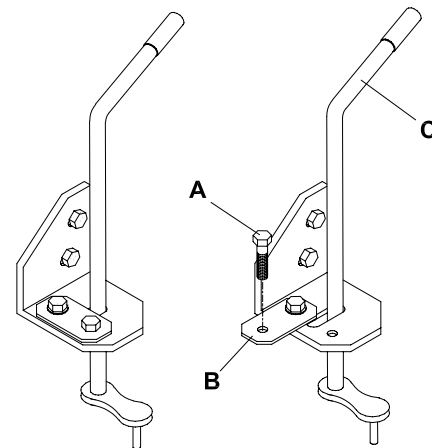
## HIGH-LOW RANGE SELECTION

A locking device has been installed on the gear range selector levers. The units are shipped with the transaxle gear range selector in HIGH (2) range. This range selection is recommended for most of the operating tasks. If slower speeds and more responsive F-R control is needed, use LOW (1) range selection.

## INSTRUCTIONS FOR TRANSAXLE RANGE SELECTION

**Do not attempt to select ranges on slopes or when the unit is traveling. Select ranges only on level surfaces.**

1. Stop the unit on a level surface and set PARKING BRAKE.
2. Stop the engine and dismount.
3. Remove the 1/4 x 3/4 flange bolt **A** from the lever lock strap **B** and swing it away from the lever, revealing a slot. (see diagram below)
4. Shift the range selector lever **C**, observing the 2 - N - 1 decal for range selection. A slight rocking motion of the unit may be needed to fully engage the selector.
5. With the selection completed, replace the lock strap **B** and tighten the 1/4 x 3/4 flange bolt **A** to 12 - 15 ft. lbs. torque. (See Locked Position drawing.)
6. Repeat step 3, 4, and 5 for the other transaxle.



LOCKED POSITION

SHIFT POSITION

## CAUTION

**Be sure to shift both transaxles into the same range or serious mechanical damage will result!**

**DO NOT OPERATE UNIT WITHOUT THE LEVER LOCK STRAPS IN THE LOCKED POSITION!**

## FRONT LIFT

The front lift control valve is equipped with a detent float position. Always use "FLOAT" position when mowing, sweeping, etc.

The QUICK HITCH allows fast interchange of attachments. Push down on hitch control handle to open latches. Install the attachment. Pull up control handle to close and lock latches. See PTO BELT DRIVE for power driven attachments and drive belt installation.

## PTO BELT DRIVE

A belt drive is provided for power transfer to attachments. The PTO drive is designed so that the harder the attachment pulls the tighter the belt gets and wraps more on the pulley.

When PTO is engaged the idler arm is on the slack side which causes the belt to wrap more around the pulleys.

With the PTO engaged, as the front lift moves up and down, the attachment pulley (moving with the front lift) pulls on the double idler and keeps a constant tension on both drive belts.

The attachment drive belt is installed around the left hitch arm before the attachment is connected to the front lift Quick Hitch.

To install the drive belt:

1. Turn the engine off and remove the key.

### **WARNING**

**DO NOT ATTEMPT TO INSTALL BELTS OR MAKE BELT ADJUSTMENTS WITH THE ENGINE RUNNING.**

2. Lift up on the belt release catch located on the right front frame and push toward the center of the tractor.
3. Install the implement drive belt on the pulleys and pull the roll pin T-handle to reengage the release catch.

Each time a PTO belt driven attachment is installed, it is necessary to check the drive belt tension. See ADJUSTMENTS for adjustment instructions.

## AUXILIARY HYDRAULICS

The auxiliary valve and quick couplers are standard equipment. Keep dust covers in place when couplers are not in use. Float position is provided for those attachments which require float.

## STOPPING THE ENGINE...COOL DOWN PROCEDURE

### Kohler & Generac

- Run at full throttle - No load for three to four minutes, then move to half throttle for two minutes and shut down.

### Kubota

- Run at half throttle - No load for two to three minutes, then idle for one to two minutes and shut down.

SERVICE CHART	DAILY	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 250 HOURS
Read safety decals.	X				
Check fuel level.	X				
Check engine oil level.	X				
Check coolant level. (Liquid cooled engines only)	X				
<b>Visual inspection of:</b>					
Bolts and fittings for signs of loosening.	X				
Accumulation of dirt or foreign matter around engine, restricting engine cooling.	X				
Oil leaks or hydraulic hoses, belts, electrical wiring, showing signs of wear.	X				
Tires for low pressure or signs of abnormal wear.	X				
<b>Change engine oil and filter:</b>					
Kohler engine: Initial change at 5 hours Genreac engine: Initial change at 8 hours Kubota engine: Initial change at 35hours	Refer to the engine manufacturer's manual for oil and filter change intervals after initial change.				
<b>Check air cleaner:</b>					
Clean or replace.			X		
<b>Check battery water level:</b>					
If battery is serviceable, fill to cover the plates 1/4".				X	
<b>Transaxles:</b>					
Check transaxle oil level.	X		X		
<i>Use only Steiner Trans-Hydraulic oil or Texas Refinery Corp. 6440 Universal Torque Fluid. Do not use automatic transmission fluid or motor oil.</i>					
Initial hydraulic oil and filter change at 25 hours.					
Change hydraulic oil and filter every 250 hours, or annually (whichever occurs first).					X
Replace hydraulic oil and filter every 250 hours, or at the first sign of abnormal hydraulic function.					X
<b>Fuel system:</b>					
Check or replace filter.				X	
<b>Lubrication:</b>					
Grease PTO slider bracket pivot, saddle, and rod.		X			
Use chain lube, WD-40 or light motor oil on all pivot points, hood hinges, tie rod ends, center link, etc.		X			
Grease drive shaft U-joints, centerpivot and PTO idler arm			X		
<b>Check tire pressure:</b>					
Air Pressure- 5 to 8 lbs. (Duals 3 to 4 lbs.) Outside Duals should have nomore than 50% of the inner tire pressure			X		
<b>Storage:</b>					
Drain fuel tank.					
Maintain proper tire pressure.					
Remove battery and maintain charge.					
Grease exposed cylinder shafts.					

CAPACITIES CHART	
CAPACITY OF:	QUANTITY
Engine Oil (Generac)	2.5 U.S. Quarts (2.4 liters)
Engine Oil (Kubota Gas)	3 U.S. Quarts (2.9 liters)
Engine Oil (Kubota Diesel)	3 U.S. Quarts (2.9 liters)
Engine Oil (Kohler)	1.9 U.S. Quarts (1.8 liters)
Engine Coolant (Kubota Gas)	3 U.S. Quarts (2.9 liters)
Engine Coolant (Kubota Diesel)	3 U.S. Quarts (2.9 liters)
Hydraulic Oil (Rear Axle)	(Approx.) 6 U.S. Quarts (5.7 liters)
Hydraulic Oil (Front Axle)	(Approx.) 7 U.S. Quarts (6.6 liters)
Fuel Tank	6 U.S. Gallons (22.7 liters)

430 BELT CHART		
MODEL	DESCRIPTION	BELT NUMBER
430	Engine drive pulleyto double idler	81-B039
ATTACHMENT DRIVE BELTS		
ALL	Rotary Mowers	81-A040
73-70880	Boom Mower, BM425	81-A040
73-70900	Chipper Shredder, CS312	81-B041
73-70605	Loader, LD300	81-A026
73-70805	Tree Farmer Mower, MC444	81-A040
73-70642	Power Blower, PB100	81-A040
73-70885 73-70886	Reel Mower, 6 Blade, RM674 Reel Mower, 9 Blade, RM684	81-A043
73-70684	Power Box rake, PR348	81-A043
73-70644	Power Turbine Blower, PB200	81-A040
75-70665	Snowblower, SB348 (1001-1713) (1714- )	81-A053 81-A051
73-70585R	Rotary Sweeper, RS350	81-A040
75-70895	Stump Cutter, SC101	81-A043
73-70920	Trencher, TH300	81-B051
73-70890	Tiller, TL348	81-A040
73-70930	Vertical Auger, VA242	81-A027

## CHECK DAILY

### Operator Presence Interlock System - Start Operation

For the engine to crank, the Forward-Reverse lever must be in neutral and the PTO off. Sit in the seat and check, if the engine will crank with the Forward-Reverse lever out of neutral, or the PTO on.

### Operator Presence Interlock System - Run Operation

The operator must be in the seat for the engine to run with the PTO on.

To check:

1. Start the engine and run at 1/2 throttle with the operator on the machine but raised off the seat.
2. Turn the PTO on. This check should kill the engine after 1/2 second.

Repair machine before using if the Operator Presence Interlock System does not operate correctly in start or run. Contact your authorized Schiller Grounds Care, Inc. dealer.

### Hardware

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

### Hydraulic System

Check fluid level at transaxle dipstick, when fluid is cold. Check for leaks and repair before operating.

### Tire pressure

Tire pressures are important! Check tire pressures according to the Service Chart on page 17.

## Battery

### WARNING

Battery acid is caustic and fumes are explosive and can cause serious injury or death.

Use insulated tools, wear protective glasses or goggles and protective clothing when working with batteries. Read and obey the battery manufacturer's instructions.

Be certain the ignition switch is "OFF" and the key has been removed before servicing the battery.

1. Verify battery polarity before connecting or disconnecting the battery cables.
2. When installing the battery, always assemble the RED, positive ( + ) battery cable first and the ground, BLACK, negative ( - ) cable last.
3. When removing the battery, always remove the ground, negative ( - ) cable first and the red, positive ( + ) cable last.
4. Check the electrolyte level every 100 hours of operation.
5. Clean the cable ends and battery posts with steel wool. Use a solution of baking soda and water to clean the battery. Do not allow the solution to enter into the battery cells.
6. Tighten cables securely to battery terminals and apply a light coat of silicone dielectric grease to terminals and cable ends to prevent corrosion. Keep terminal covers in place.

## ENGINE

Do not perform engine maintenance without the engine off, spark plug wires (gasoline engines) disconnected and PTO disengaged.

### ENGINE OIL AND FILTER CHANGE PROCEDURE

1. Run engine until engine is warm for complete draining.
  2. Remove oil drain plug (Kohler & Generac).  
Open draincock (Kubota).
  3. Remove oil filter and wipe filter base clean.
- NOTE:**
- Use only O.E.M. brand filters. Some aftermarket filters are not constructed the same.
4. Lube filter gasket with oil and install new filter. Tighten 1/2 turn after seal contacts base. Do not overtighten.
  5. Reinstall drain plug (Kohler & Generac).  
Close drain cock (Kubota)
  6. Fill with engine oil. Refer to engine manual for oil specifications. See Capacity Chart on page 18.
  7. Run engine and check filter and drain plug or cock for leaks.
  8. Stop engine and refill to proper oil level.

### DAILY

1. Check oil level with the dipstick.
2. If oil is needed, add fresh oil of proper viscosity and grade. Refer to engine manual for oil specifications. Do not overfill.
3. Replace dipstick before starting engine.

### PERIODIC OIL CHANGES

1. Refer to the engine manual for oil and filter change intervals.

### FUEL FILTERS

- Use only O.E.M. brand filters.
- Buy your fuel from a reputable supplier. Recommended gasoline is 87 octane. Recommended diesel fuel is No. 2. Store your fuel properly - keep moisture out.
- Shelf life of fuel is about 3 months - gasoline and diesel.
- Store fuel in proper, clean containers.

## AIR FILTERS

- Install filters properly, do not over tighten and deform element.

### Kohler & Generac

- Keep an extra foam wrap oiled and ready - Can keep the extra foam wrap in tool box.

### Kubota

- Don't over service, remove end cap only to clean out dust. Don't tap dirt out.
- Don't blow out with compressed air. Don't change filter until the engine starts to smoke.
- Check intake hoses and fittings for damage or leaking.

## COOLING

- Keep chaff screen clean. - Air cooled and liquid cooled.
- Keep engine block clean. Grass, dirt, misc. debris will act as an insulator.
- Do not pressure wash a hot or running engine.
- Keep radiators clean. - Do not use high pressure air or washers to clean. Use only low air or water pressure. Blow directly through fins and not on an angle so as not to damage or close fins.
- Use only commercial grade antifreeze (for cast iron liquid cooled engines) and deionized water in a 50/50 mix. Mix outside of engine. Don't mix Propylene Glycol and Ethylene Glycol.
- Do not remove thermostat.

### NOTE:

**THE USE OF ANY AIR FILTER, HYDRAULIC OIL FILTER OR ENGINE OIL FILTER OTHER THAN THOSE SPECIFIED BY THE ENGINE MANUFACTURER IS NOT RECOMMENDED. IF A NON-GENUINE PART CAUSES OR SUBSTANTIALLY CONTRIBUTES TO A FAILURE, THAT FAILURE MAY NOT BE COVERED BY WARRANTY.**



## HYDRAULIC SYSTEM

### NOTE:

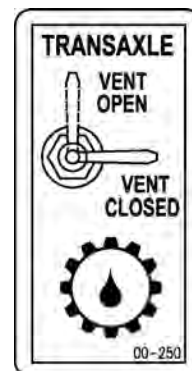
**THE USE OF ANY OIL OTHER THAN Schiller Grounds Care, Inc. TRANS-HYDRAULIC OIL OR TRC 6440 UNIVERSAL TORQUE FLUID IS NOT RECOMMENDED. IF A SUBSTITUTE OIL CAUSES OR SUBSTANTIALLY CONTRIBUTES TO A FAILURE, THAT FAILURE MAY NOT BE COVERED BY WARRANTY.**

1. Keep system filled with proper fluid.
  - Check daily at both transaxle dipsticks.
  - Check when oil is cold.
  - Use only clean containers. Keep it clean!
2. Keep oil and filter changed.
  - Initial filter change 25 hours, then oil and filter change at 50 hours.
  - Change oil and filter every 250 hours thereafter or annually. (whichever occurs first)
  - Change oil when warm (not hot).
  - Make sure filter is primed.
  - Use only O.E.M. filter and Schiller Grounds Care, Inc. fluid or TRC 6440.
  - Check oil level after 30 minutes of operation.
  - Do not over tighten drain plug.
  - Make sure filter is tight.
  - Change hydraulic oil and filter at the first sign of abnormal hydraulic functions.
3. Check for leaks daily (Never operate a unit if a leak is detected).
  - Inspect hoses for leaks or chafing.
  - Inspect fittings and hose ends for seepage.
4. Keep tractor/unit clean.
  - Keep auxiliary hoses and couplers clean and plugged.
  - Grass and debris will hold in heat.
  - A clean unit is easier to work on and safer to operate. And it is easier to do regular checks.
  - See your dealer for a high pressure filter of the entire system if drive system has been opened (such as hoses removed, pump or motors removed).

## TRANSAXLE OIL CHANGE PROCEDURE

Change oil and filter at any time contamination is suspected. Approximately 3 gallons of approved hydraulic oil are needed to change oil.

1. It is best to drain transaxles after the tractor has been thoroughly warm to assure maximum drain.
2. Remove fill neck cap from rear transaxle.
3. Remove drain plug from rear transaxle.
4. Open the front transaxle vent.
5. Remove drain plug from front transaxle. After approximately 1 quart of hydraulic oil has been drained from the front transaxle, remove the fill tube cap.
6. Remove hydraulic oil filter and wipe filter base clean.
7. Fill the new O.E.M. hydraulic filter with hydraulic oil and lube the filter gasket.
8. Install the new hydraulic oil filter. Tighten 3/4 to 1 turn after gasket makes contact with the filter base. Do not overtighten.
9. Install drain plugs in both transaxles.
10. Fill front transaxle to the top of the fill tube, approximately 6 quarts.
11. Close the front transaxle vent.
12. Fill the rear transaxle to the top of the fill neck.
13. Run engine, and turn steering wheel extreme right to extreme left several times to purge all air from the circuit.
14. Drive the unit back and forth about 50 feet to purge air from the drive circuit.
15. Repeat step 12 as needed.



## HYDROSTATIC TRANSMISSION

### ⚠ CAUTION

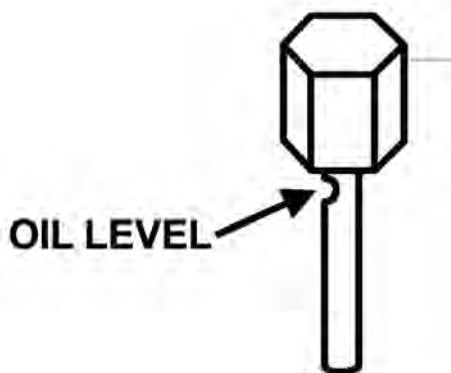
When servicing any part of the hydrostatic system, observe clean shop practices. A small amount of contamination in the high pressure circuit will cause damage to the system. Improper hoses can cause injury. See your Schiller Grounds Care, Inc. dealer for quality service parts and service of the high pressure hydrostatic system.

## TRANSAXLE OIL LEVELS

After a period of time the level on the rear transaxle may be low even though there are no apparent oil leaks. This condition could be caused by a transfer of oil from the rear transaxle to the front transaxle.

**Add oil only to the rear transaxle to bring it up to the top of the filler neck.**

It is normal for the front transaxle to appear over full if the filler cap is removed.



## PTO AND BELTS

### ⚠ WARNING

**STOP ENGINE! DO NOT ATTEMPT TO INSTALL BELTS OR MAKE BELT ADJUSTMENTS WITH THE ENGINE RUNNING.**

### BELT DRIVE

- Schiller Grounds Care, Inc. belts are recommended. (See Belt Chart on page 18 for sizes). Schiller Grounds Care, Inc. specification belts are Aramid fiber reinforced to take back bend and retain a consistent length to keep belt to pulley geometry consistent.

### ENGAGING/DISENGAGING

- Never engage at full RPM always reduce engine RPM before engaging PTO.

### KEEP ALL MOVING PARTS LUBRICATED

- Slider bracket arm. Grease every 25 hours. It must swing freely. Spray lubricant on adjustment threads every 25 hours.

### ALIGNMENT

- Make sure slider bracket arm isn't bent.
- Engine pulley to double idler - Lay straight edge on engine pulley, should line up with the center ridge of double idler pulley.

**Generac & Kohler**.....Move engine pulley to adjust.

**Kubota**.....Space double idler to adjust.

- Double idler to mower deck pulley - With tractor & mower on a flat surface with front lift in float, tops of pulleys should be in line.

## FRAME

1. Check for loose or missing fasteners after first 10 hours. - Every 100 hours thereafter.
  - Torque transaxle mount bolts 60 - 65 ft. lbs. Torque wheel hub bushing bolts to 192 in lbs. Torque in three increments until specified torque is reached.
  - Torque all standard hardware bolts to standard grade 5 spec.
  - Steering cylinder mount bolts, front... torque to 105 ft. lbs., rear... torque to 230 ft. lbs.
  - Center link bolts, torque to 230 ft. lbs. Tighten 1" center bolt to 560 ft. lbs. max.
  - If ROPS equipped, torque bolts to 80 ft. lbs. Do not cut, weld, drill or modify roll bar in any way. Replace if roll bar becomes bent or damaged.
2. Do not remove guards, shields or lock straps.
  - Repair or replace any broken parts.
  - Keep frame parts clean, it makes it easier to find loose or broken parts.
  - Wash after each use around fertilizer, manure, etc., to prevent corrosion.
3. Keep parking brake adjusted properly.
  - Ensure that brake holds unit from creeping. See parking brake adjustment section.

## LUBRICATION

- Grease all fittings as recommended on Service Chart on page 17.
- Lubricate all points after washing.

## WHEELS AND TIRES

- Use only factory recommended wheels and tires.
- Never use different sizes in any combination.
- Maintain proper air pressure.
- Do not load tires with ballast or use wheel weights.
- Tire sealer may be used.
- Be sure dual wheels are installed correctly and the tire pressures are correct.
- Duals must be checked for tightness every day until they are seated in. Torque center bolt to 80 ft. lbs.
- Avoid close operating conditions with duals installed.
- Check lug nuts for torque.... 85 ft lbs.
- Seal beads with Permatex Liquid Sealer.

## ELECTRICAL SYSTEM

- Do not bypass or eliminate safety devices.
- Keep all electrical connections clean and dry.
- Do not add extra electrical equipment.
- If wire replacement is necessary, replace with the same gauge and color code.
- Make certain there is a ground strap between engine and frame.
- Follow recommended jump starting procedures.
- Use only factory recommended size batteries.
- Make a periodic visual inspection of all wiring to ensure it is not damaged.
- Maintain battery by keeping terminals and top of battery clean.

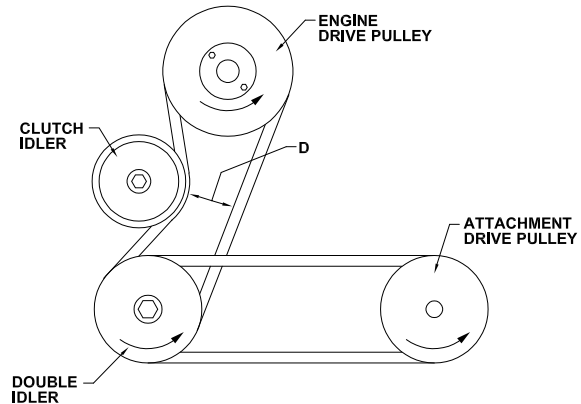
## PTO BELT ADJUSTMENT

### **CAUTION**

**STOP ENGINE! DO NOT ATTEMPT TO INSTALL BELTS OR MAKE BELT ADJUSTMENTS WITH THE ENGINE RUNNING.**

**It is necessary to check the PTO belt adjustment**

- Every time attachments are changed.
  - If the PTO drive belt slips or does not release properly.
1. Attach the new implement using the correct attachment drive belt. See the Attachment Operator's Manual for the correct belt or the belt chart on page 18 in this manual.
  2. Stop the engine, engage the PTO lever and check the distance **D** as shown in the drawing. The correct distance between the PTO drive belt is 2-1/4" to 2-1/2" (1-1/2" to 1-3/4" for Kubota) with attachment belt installed and PTO engaged. If the distance is less than 2-1/4" (1-1/2" Kubota) the drive belt may slip. If the distance is greater than 2-1/2" (1-3/4" Kubota) the drive belt may not release properly when the attachment is raised to the highest position.



**PTO BELT ADJUSTMENT**

3. Disengage the PTO and adjust the idler slide assembly by turning the belt release catch handle clockwise to tighten belt and counter clockwise to loosen belt. Adjust to obtain the correct measurement as stated in step 2.

**NOTE:** If correct measurement is not possible, check for an improper size drive belt.

4. Start the unit and raise the attachment to full height. The attachment should not run with PTO disengaged. If it does, the drive belt adjustment is too tight. Repeat Steps 1 through 4.

## NEUTRAL LINKAGE ADJUSTMENT

Absolute neutral is when the tractor will not creep with the engine running and the Forward - Reverse lever in neutral. If the unit creeps it is necessary to adjust the control linkage. Adjust the linkage by removing the bolt **E** at one end of the connecting link and rotate the rod end **F** one-half turn at a time until the desired setting is reached. Shorten the rod if the unit creeps forward or lengthen the rod if the unit creeps backward. Tighten jam nuts **G** when neutral setting is correct.



### FORWARD-REVERSE LEVER TENSION ADJUSTMENT

Tension is adjusted by tightening the spring-loaded friction washers on the Forward - Reverse lever. Tighten the friction washers to hold the lever in the desired position under normal loads. When the hydrostatic system is subjected to heavy loads, the Forward-Reverse lever has a tendency to return to the neutral position. Additional holding pressure from your hand may be needed to keep the lever in the desired position.

### PARKING BRAKE ADJUSTMENT

The parking brake is a dry disc type located on the rear transaxle. As the friction pads wear it may be necessary to adjust the brake.

#### NOTE:

**Check brake disc periodically to ensure it will float on the brake shaft. Remove and coat with never-seize annually.**

#### TO ADJUST THE PARKING BRAKE:

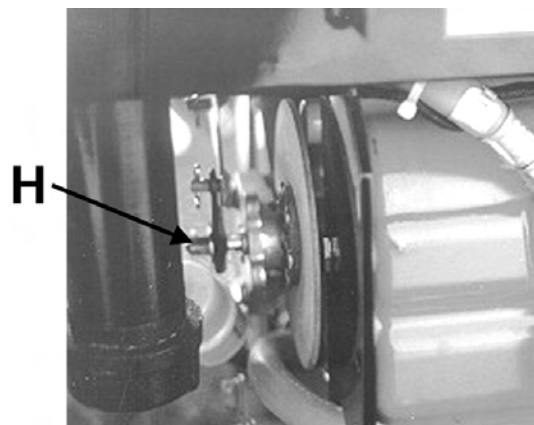
1. Release the brake and remove the cotter pin from the adjusting nut.
2. Tighten the adjusting nut **H** carefully until the disc cannot be moved freely by trying to rotate the disk by hand, then back off just far enough to allow the disk to move freely.
3. Align nut and reinstall cotter pin.

#### TO REPLACE THE BRAKE PADS:

1. Remove the two bolts which fasten the brake assembly to the transaxle.

**NOTE:** There are two loose pins and a backing plate which may fall out upon disassembly. Be sure these are in place before assembling the brake.

2. Slide the disk off the brake shaft.



**NOTE:** A woodruff key in the shaft must stay in place.

3. Replace inner pad and install disk on the brake shaft. It must slide freely on the shaft.
4. Back off brake adjustment nut, replace outer pad in housing and reinstall the assembly to the transaxle.
5. Adjust brake.

### THROTTLE ADJUSTMENT

Tension adjustment is made by simply tightening the spring loaded friction washers on the throttle lever. High and low idle speeds are obtained by adjusting the linkage at the engine.

ENGINE	LOW IDLE	HIGH IDLE
GENERAC	1600 RPM	3700 RPM
KUBOTA GAS	1400 RPM	3600 RPM
KUBOTA DIESEL	1600 RPM	3600 RPM
KOHLER	1800 RPM	3600 RPM

SYMPTOM	POSSIBLE CAUSE	REMEDY
<b>Engine will not turn over.</b>	Forward-Reverse control lever not in neutral.	Adjust neutral linkage (See page 24).
	PTO engaged.	Disengage PTO.
	Battery dead.	Check battery, charge or replace.
	Defective wiring, broken or loose connections.	Visually check, or check with test light for continuity on the circuits.
	Defective starter or starter solenoid.	Check by using a jumper from the battery terminal to the solenoid terminal.
	Safety switches out of adjustment.	Adjust switches so they are fully depressed.
<b>Engine difficult to start, or runs poorly.</b>	Fuel valve partly closed or plugged.	Open fuel valve all the way or remove and clean.
	Fuel filter dirty.	Replace fuel filter.
	Air cleaner dirty.	Replace air cleaner element.
	Water or dirt in fuel.	Drain and refill with fresh, clean fuel.
	Engine running too hot.	Clean engine screen and fins.
	Air in fuel system.	Bleed air out of fuel system.
	Defective fuel pump.	Check fuel pump.
<b>Power steering slow and/or front lift will not lift.</b>	Oil level to low in transaxle	Check transaxle oil level and refill to proper oil level.
	Hydraulic oil filter dirty or plugged	Replace with O.E.M. filter.
	Low charge pump pressure.	See Steiner dealer for pump service.
<b>Implement drive belt slips.</b>	Drive belt tension need adjusting.	Adjust PTO drive belt tension (see page 24).
	Wrong size drive belt.	Use correct belt size.
	Excessive load on attachment drive system.	Check implement attachment for worn or damaged drive parts, blades, bearings, or excessive foreign material buildup.
<b>Tractor will not move with engine running and Forward-Reverse control lever in forward or reverse position.</b>	Parking brake set.	Release parking brake.
	Oil level to low in transaxle	Check transaxle oil level and refill to proper oil level.
	Hydraulic oil filter dirty or plugged.	Replace hydraulic oil filter with O.E.M. filter.
	Air leak in suction line.	Check for loose fittings or damaged suction line.
	Drive coupling failure.	Check drive coupling to determine if pump input shaft is turning.
	Pump control linkage failure.	Check pump control linkage and repair.
	Transaxle shift lever(s) in neutral.	Check transaxle shift lever(s). Be sure shift lever(s) is completely engaged.
	Low charge pump pressure or faulty hydrostatic system.	See Steiner dealer for pump service.
<b>PTO will not run.</b>	Operator not seated.	With Operator seated, restart PTO.
	Electrical problem.	See Steiner dealer for electrical service.
	Belt slipping.	Check for broken or wrong size engine drive belt.





**SCHILLER GROUNDS CARE, INC.**  
**ONE BOB-CAT LANE**  
**P.O. BOX 469**  
**JOHNSON CREEK, WI 53038**  
**920-699-2000**  
**[www.schillergc.com](http://www.schillergc.com)**

