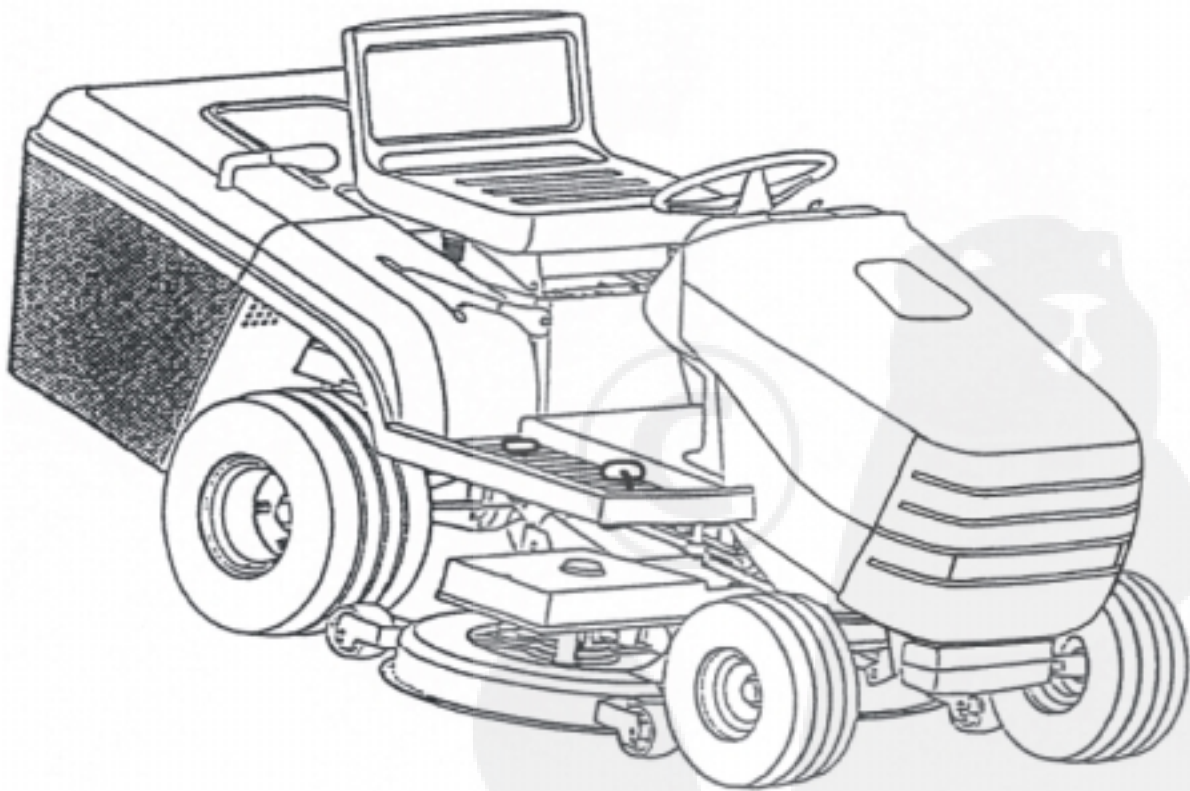


OPERATORS MANUAL

GREEN STAR 15,5 H



2003

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Read this manual carefully so that you will know how to assemble, use and maintain this unit. Fill in and mail the registration card provided with the unit. For service other than described in this manual, contact an authorized service dealer. He will provide you with parts and service.

NOTE: This lawn tractor is equipped with a combustion engine, which should not be used near any land covered with grass or brush, unless the engine's exhaust system is equipped with a spark arrester meeting local laws. The operator should maintain the spark arrester in effective working order.

INTERNATIONAL SYMBOLS

These symbols appear on your unit and in the supplied documentation.
You should learn and understand their meaning.

								
Reverse	Neutral	Transport position	Forward	Fast	Slow	Do not smoke	Engine Off	Choke
								
Engine start	Brake to STOP	Brake release	Mower Height	Reverse	Forward			
								
Check engine	Engine run	Keep hands out	Clutch engage	Clutch Disengage	Parking brake			
								
Top position	Warning	Never leave tractor when running	Noise level	Rotating Blades	European machinery directive for safety			
								
Never drive across a slope	Never use the cutter if there are people, especially children, or pets, in the vicinity	Never carry passengers	Do not raise up	Before adjustment read owner's manual				

SAFETY RULES

THESE INSTRUCTIONS ARE FOR YOUR PROTECTION. YOU SHOULD READ THEM CAREFULLY

WARNING: THIS LAWN TRACTOR IS ABLE TO CUT HANDS, FEET AND THROW OBJECTS. IF YOU DO NOT FOLLOW THE SAFETY INSTRUCTIONS, YOU COULD EXPERIENCE SERIOUS INJURIES.

1. GENERAL OPERATION:

- * KNOW CONTROLS AND HOW TO STOP QUICKLY.
 - * READ, UNDERSTAND AND FOLLOW ALL INSTRUCTIONS IN THE AND ON THE MACHINE BEFORE STARTING.
 - * ONLY ALLOW RESPONSIBLE ADULTS, WHO ARE FAMILIAR WITH INSTRUCTIONS TO OPERATE THE MACHINE.
 - * WEAR SAFETY GLASSES OR EYE SHIELDS WHEN ASSEMBLING OR OPERATING THE MACHINE
 - * DO NOT OPERATE MACHINE WHEN BAREFOOT. ALWAYS WEAR SUBSTANTIAL FOOTWEAR, PREFERABLY STEEL TOED SHOES.
 - * DO NOT WEAR LOOSE FITTING CLOTHING THAT COULD GET CAUGHT IN MOVING PARTS.
 - * CLEAR THE AREA SUCH AS ROCKS, TOYS, WIRES, ETC., WHICH COULD BE PICKED UP AND THROWN BY BLADES.
 - * BE SURE THE AREA IS CLEAR OF PEOPLE WHEN MOWING.
 - * STOP MACHINE IF ANYONE ENTERS THE AREA.
 - * NEVER CARRY PASSENGERS.
 - * DO NOT MOW IN REVERSE UNLESS NECESSARY.
 - * ALWAYS LOOK DOWN AND BEHIND BEFORE AND DURING BACKING UP.
 - * BE AWARE OF MOWER DISCHARGE AND DO NOT POINT IT AT ANYONE.
 - * DO NOT OPERATE MOWER WITHOUT THE ENTIRE GRASS COLLECTOR.
 - * SLOW DOWN BEFORE TURNING.
 - * NEVER LEAVE A RUNNING MACHINE UNATTENDED ALWAYS TURN OFF BLADES, SET PARKING, STOP ENGINE AND REMOVE KEYS BEFORE DISMOUNTING.
 - * TURN OFF BLADES WHEN NOT MOWING.
 - * STOP ENGINE BEFORE REMOVING GRASS COLLECTOR.
 - * MOW ONLY IN DAYLIGHT OR GOOD ARTIFICIAL LIGHT.
 - * DO NOT OPERATE THE MACHINE WHILE UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.
 - * WATCH FOR TRAFFIC WHEN OPERATING NEAR OR WHILE CROSSING ROADWAYS.
 - * USE CARE WHEN MOVING AROUND A FIXED OBJECT TO PREVENT THE BLADES FROM STRIKING IT. NEVER DELIBERATELY RUN OVER ANY FOREIGN OBJECT.
 - * USE EXTRA CARE WHEN LOADING OR UNLOADING THE MACHINE INTO A TRAILER OR TRUCK.
 - * USE CARE WHEN PULLING LOADS OR USING HEAVY EQUIPMENT.
- a USE ONLY APPROVED DRAWBAR HITCH POINTS.
b LIMIT LOADS TO THOSE THAT YOU CAN SAFELY CONTROL
c DO NOT RUN SHARPLY. USE CARE WHEN BACKING.
d USE COUNTERWEIGHTS, WHEEL WIEIGHT WHEN SUGGESTED IN ATTACHMNETS INSTRUCTIONS.

2. SLOPE OPERATION:

SLOPES ARE A MAJOR FACTOR RELATED TO LOSS OF CONTROL AND TIP OVER ACCIDENTS, WHICH CAN RESULT IN SEVERE INJURY OR DEATH. ALL SLOPES REQUIRE EXTRA CAUTION. IF YOU CAN NOT BACK UP THE SLOPE OR IF YOU FEEL UNEASY ON IT, DO NOT MOW IT.

DO !

- * MOW UP AND DOWN, NOT ACROSS
- * REMOVE OBSTACLES SUCH AS ROCKS, TREE LIMBS, ETC.
- * WATCH FOR HOLES, RUTS OR BUMPS. UNEVEN TERRIAN COULD OVERTURN THE MACHINE. TALL GRASS CAN HIDE OBSTACLES.
- * USE SLOW SPEED. CHOOSE A LOW GEAR SO THAT YOU WILL NOT HAVE TO STOP OR SHIFT WHILE ON SLOPE.
- * FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR WHEEL WEIGHTS OR COUNTERWEIGHTS TO IMPROVE STABILITY.
- * USE EXTRA CARE WITH GRASS COLLECTOR OR OTHER ATTACHMENTS. THIS CAN CHANGE THE STABILITY OF THE MACHINE.
- * KEEP ALL MOVEMENTS ON THE SLOPE SLOW AND GRADUAL.
- * DO NOT MAKE SUDDEN CHANGES IN DIRECTION OR SPEED.
- * AVOIC STARTING OR STOPPING ON A SLOPE. IF TIRES LOSE TRACTION TURN OFF THE BLADES AND PROCEED SLOWLY DOWN THE SLOPE.

DO NOT !

- * DO NOT TURN ON SLOPES UNLESS NECESSARY, AND THEN SLOWLY AND GRADUALLY DOWNHILL, IF POSSIBLE.
- * DO NOT MOW NEAR DROP-OFF DITCHES OR EMBANKMENTS THE MOWER COULD SUDDENLY TURN OVER IF A WHEEL IS OVER THE EDGE OF A CLIFF OR DITCH, OR IF AN EDGE CAVES IN.
- * DO NOT MOW ON WET GRASS. REDUCED TRACTION COULD CAUSE SLIDING.
- * DO NOT TRY TO STABILIZE THE MACHINE BY PUTTING YOUR FOOT ON THE GROUND.

THIS SYMBOL MEANS THAT IMPORTANT SAFETY PRECAUTIONS HAVE TO BE POINTED OUT. YOUR SAFETY IS INVOLVED.

SAFETY RULES

3. CHILDREN:

TRAGIC ACCIDENTS CAN OCCUR IF THE OPERATOR IS NOT ALERT TO THE PRESENCE OF CHILDREN. CHILDREN ARE OFTEN ATTRACTED TO THE MACHINE AND THE MOWING ACTIVITY. NEVER ASSUME THAT CHILDREN WILL REMAIN WHERE YOU LAST SAW THEM.

- * KEEP CHILDREN OUT OF THE MOWING AREA AND UNDER WATCHFUL CARE OF ANOTHER RESPONSIBLE ADULT.
- * BE ALERT AND TURN MACHINE OFF IF CHILDREN ENTER AREA.
- * BEFORE AND WHEN BACKING, LOOK DOWN AND BEHIND FOR CHILDREN.
- * NEVER CARRY CHILDREN. THEY MAY FALL OFF AND BE SERIOUSLY INJURED OR INTERFERE WITH SAFE MACHINE OPERATION.
- * NEVER ALLOW CHILDREN TO OPERATE THE MACHINE.
- * USE EXTRA CARE WHEN APPROACHING BLIND CORNERS, SHRUBS, TREES OR OTHER OBJECTS THAT MAY OBSCURE VISION.

4. SERVICE:

- * USE EXTRA CARE IN HANDLING GASOLINE AND OTHER FUELS.
- a USE ONLY AN APPROVED CONTAINER.
- b NEVER REMOVE GAS CAP OR ADD FUEL WITH THE ENGINE RUNNING.
- c NEVER REFUEL THE MACHINE INDOORS.
- d NEVER STORE THE MACHINE OR FUEL CONTAINER INSIDE WHERE THERE IS OPEN FLAME, SUCH AS IN A WATER HEATER.
- * CHECK FUEL SUPPLY BEFORE EACH USE ALLOWING SPACE FOR EXPANSION AS THE HEAT OF THE ENGINE AND SUN CAN CAUSE GASOLINE TO EXPAND AND OVERFLOW THE TANK.
- * USE EXTRA CARE WHEN HANDLING BATTERY ACID. ACID CONTACT WITH SKIN MAY CAUSE SEVERE BURNS. EYE CONTACT MAY CAUSE BLINDNESS.
- * USE EXTRA CARE WHEN SERVICING THE BATTERY. EXPLOSIVE GAS IS PRODUCED IN THE BATTERY. DO NOT SERVICE THE BATTERY WHILE SMOKING OR NEAR AN OPEN FLAME. THIS MAY CAUSE THE BATTERY TO EXPLODE CAUSING SERIOUS INJURY.
- * NEVER RUN A MACHINE INSIDE A CLOSED AREA. EXHAUST FUMES CONTAIN CARBON MONOXIDE, AND ODOURLESS AND DEADLY GAS.
- * KEEP NUTS AND BOLTS, ESPECIALLY BLADE ATTACHMENT BOLTS, TIGHT AND KEEP EQUIPMENT IN GOOD CONDITION.
- * NEVER TAMPER WITH SAFETY DEVICES. CHECK OPERATION REGULARLY.
- * DO NOT CHANGE THE ENGINE GOVERNOR SETTINGS OR OVERSPREAD ENGINE.
- * REDUCE FIRE HAZARDS. KEEP MACHINE FREE OF GRASS, LEAVES OR OTHER DEBRIS BUILD-UP. CLEAN UP OIL OR FUEL SPILLAGE. ALLOW MACHINE TO COOL BEFORE STORING.
- * STOP AND INSPECT THE EQUIPMENT IF YOU STRIKE AN OBJECT. REPAIR IT, IF NECESSARY, BEFORE RESTARTING.
- * NEVER MAKE ADJUSTMENTS OR REPAIRS WITH THE ENGINE RUNNING.
- * GRASS COLLECTOR COMPONENTS ARE SUBJECTS TO WEAR, DAMAGE AND DETERIORATION, WHICH COULD EXPOSE MOVING PARTS OR ALLOW OBJECTS TO BE THROWN. FREQUENTLY CHECK COMPONENTS AND REPLACE WITH MANUFACTURER'S RECOMMENDED SPARE PARTS. WHEN NECESSARY.
- * MOWER BLADES ARE SHARP AND CAN CUT. WRAP THE BLADES OR WEAR GLOVES, AND USE EXTRA CAUTION WHEN SERVICING THEM.
- * CHECK BRAKE OPERATING FREQUENTLY. ADJUST AND SERVICE AS NEEDED.

ASSEMBLY

UNPACKING

The tractor is not completely assembled at the factory, for transportation reasons. After removing the packaging, check the machine for any damage during the shipment, locate the hardware bag and loose parts. Take care while removing the machine from the pallet, to avoid any damage on the mower deck.

STANDARD PACKING

- * tractor
- * steering wheel
- * seat with fasteners
- * battery
- * grass catcher
- * trailer hitch - *optional*
- * bag with owner's manual, engine manual, 2 keys for ignition, 1 decal with an arrow.
- * hardware bag for grass catcher

IDENTIFICATION

The tractor identification plate is located under the driver's seat and behind the battery. Make a note of the serial number on this page. This serial number will have to be quoted when contacting your distributor for service and ordering spare parts for the tractor. See Fig. 1.

Serial No

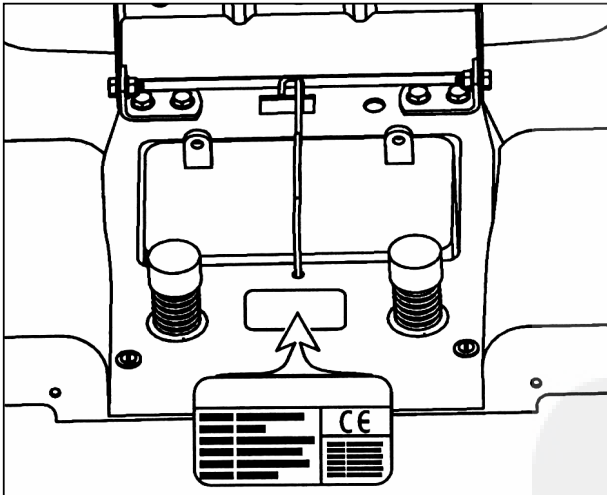


Fig. 1: Identification plate

STEERING WHEEL (Fig. 2)

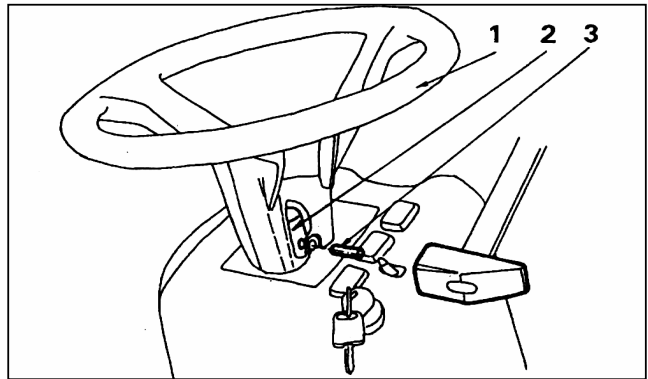


Fig. 2

Proceed to the following steps:

1. Straighten the front wheels.
2. Align the holes of the steering wheel (pos. 1) with the hole in the steering shaft (pos. 2). The steering wheel bar closest to the operator's seat has to be aligned with the lengthwise axis of the tractor. This orientation of the steering wheel makes all the control elements located on the dash panel easily visible.
3. Insert the lock pin (pos. 3) through the holes, and drive it through the holes with a hammer.

SEAT (Fig. 3)

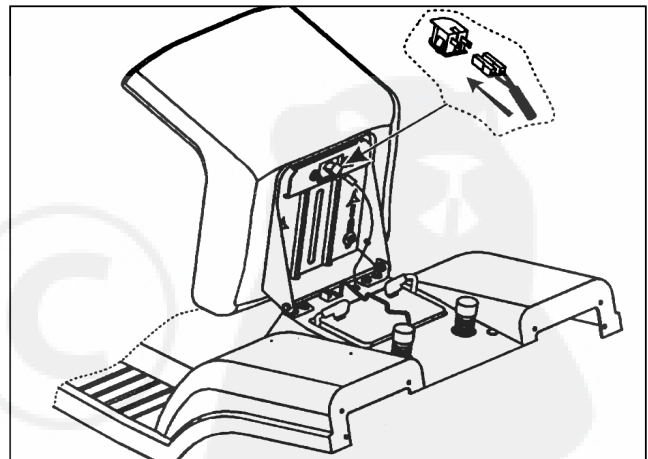


Fig. 3

Proceed to the following steps:

1. Discard the plastic cover from the seat
2. Take off both the adjustment knobs and both hex flange bolts.
3. Place the seat and tighten securely with two bolts, flat and spring washers.
4. Connect the safety switch (Fig. 3).

ASSEMBLY

TRAILER HITCH (Fig. 4)

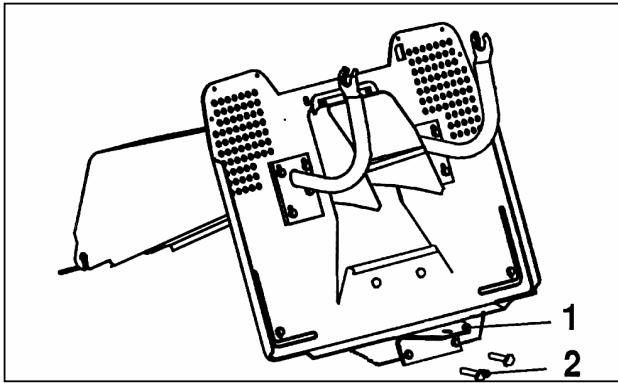


Fig. 4

Note: If your tractor is equipped with the optional trailer hitch then proceed to the following steps:

1. Place trailer hitch in place.
2. Install supplied bolts, washers and nuts. Tighten securely.

GRASS COLLECTOR BAG (Fig. 5)

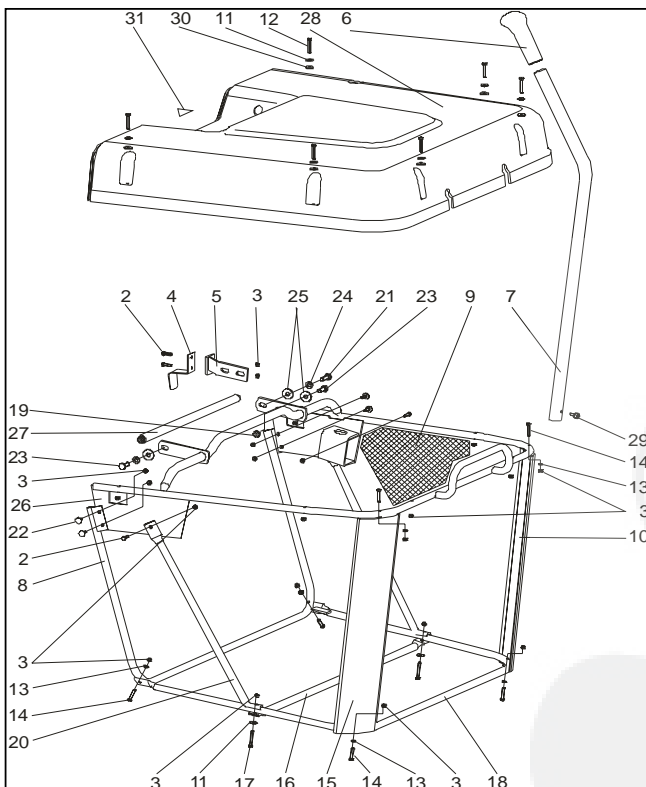


Fig. 5

The grass collector has been partially assembled. To final assemble it correctly (to fit the collector cover with tractor fenders), it is recommended to follow the instructions below:

1. Take all parts of grass collector out from paper box including the partially assembled collector.
2. Lay the assembly down on level surface facing down the plastic collector cover (pos. 28). Make sure not scratching plastic collector cover from outside.
3. Open the front frame assembly (pos. 8) to align holes on the top frame assembly (pos. 26). Insert bolts (pos. 22) and tight the nuts (pos. 3).
4. Using bolt (pos. 14) and nut (pos. 3) tighten the front frame assembly on the bottom frame assembly.
5. Insert corner support (pos. 10) and (pos. 15) between top frame assembly (pos. 18) to fit on outside part of tubes. Tighten them by bolts (pos. 14) and nuts (pos. 3). Be careful about the right placement of corner supports.
6. Tilt down the braces (pos. 20).
7. Place the connecting brace (pos. 16) on the outside of the bag (pos. 9) and tighten it together with braces (pos. 20) using bolts (pos. 17) and nuts (pos. 3).
8. Insert the dumping lever (pos. 7) through the hole of the collector cover (pos. 28) and secure it with the screw (pos. 29). Recommendation: to make the assembling easier you can make the thread into the dumping lever by using the screw (pos. 29) before inserting dumping lever (pos.7) through collector cover (pos. 28).
9. Check out the tightness of grass collector bag (pos. 9) and placing of washer (pos. 11) and (pos. 13) on right places and tighten well nuts (pos. 3).
10. Use the plastic extrusions of collector bag (pos. 9) on the side and bottom part of front frame assembly (pos. 8).

ASSEMBLY

PLACING THE GRASS COLLECTOR ON THE TRACTOR (Fig. 6).

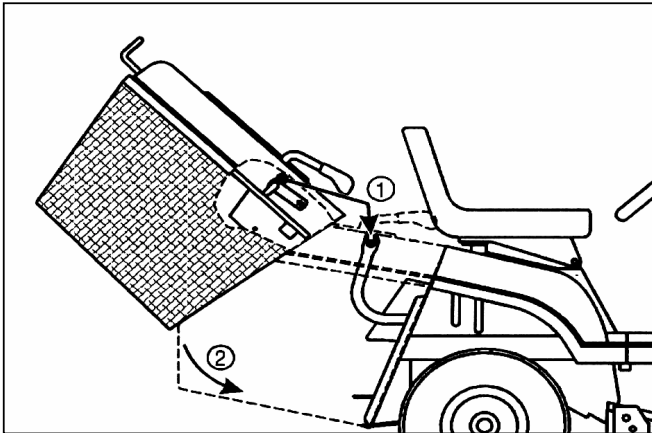


Fig. 6

Proceed to the following steps:

1. Lift the grass collector assembly with both hands. Slant it to an angle of approximately 40 degrees (Fig. 6).
2. Slide the grass catcher on the two support brackets located on the rear collector plate of the tractor. Check out the alignment of grass collector cover to the fender. In case it is not fitting precisely adjust the position of grass collector using the movement of the braces on the slots or by light bending of the braces.
3. When the grass catcher is properly positioned, place the decal with the triangle symbol directly opposite to the symbol on the rear of the tractor. This will assist alignment in the future (Fig. 7).

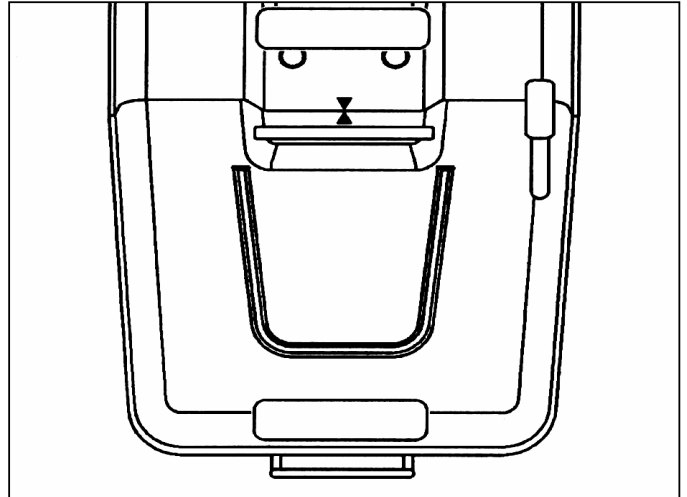


Fig. 7

WARNING

This tractor is equipped with a safety micro-switch and the cutting system will not function when the grass collector assembly is not in place. Do not tamper with this microswitch.

PREPARATION BEFORE THE FIRST OPERATION

The tractor is shipped without gas for safety reasons. Check oil level. Fill fuel tank with recommended gas.

DANGER

Lead acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from batteries. Always wear eye protection when around batteries.

ASSEMBLY

BATTERY PREPARATION

The battery is placed under the seat and can be accessed by tilting the seat in the upright position.

Battery must be fully charged prior to START-UP.

CHARGE BATTERY

Note: The battery supplied is a dry battery.
- it is necessary to proceed to the following steps

1. Remove the battery from the tractor.
2. Fill battery with acid. Factory supplied.
The acid should be 10 mm above the battery plates. Slowly fill with battery acid but do not overfill. The acid level may sink after refill. Wait 20 minutes and fill with more battery acid in order to receive the correct acid level in all cells.
3. Charge the battery at a rate of 6 amps for 1 hour. Use a 12-volt battery charger. Observe all precautions required for battery charging. Complete the assembly of your unit while waiting for the battery to charge. Check the acid level again. If it has sunk below the correct level add distilled water to the correct level.
4. Check battery case for leakage to make sure that no damage has occurred while handling. Clean any acid spillage on the battery or tractor.
Note! Only use distilled water in the battery, when refilling.
5. Re-install the battery and secure it with the spring lever (See Fig. 8).

! Warning !

Avoid tilting the battery. If Battery fluid is spilled, flush the area with water.

The battery emits explosive gas. Sparks, flames and cigarettes must not be within the vicinity of the battery.

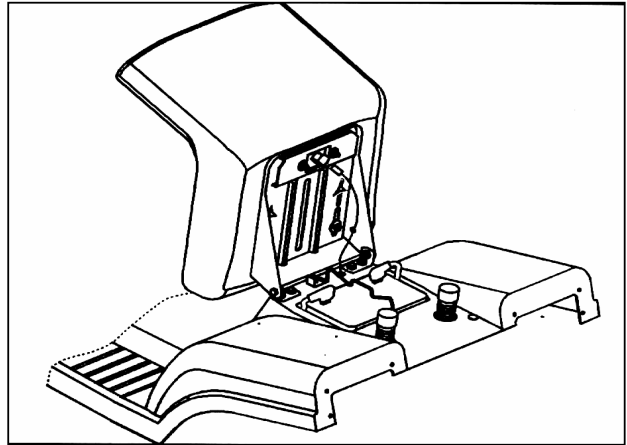


Fig. 8

DANGER

Electrolyte is a dangerous acid and poisonous. Always wear eye protection
Protect your skin when handling acid or battery

POISON/DANGER-CAUSES SEVERE BURNS

Contains sulfuric acid.
Avoid contact with skin, eyes or clothing
To prevent accidents, neutralize excess acid with baking soda and rinse empty container with water

ANTIDOTE

EXTERNAL: Flush with water
INTERNAL: drink large quantities of water or milk.
Follow with milk of magnesia, beaten eggs or vegetable oil.
CALL A PHYSICIAN IMMEDIATELY
EYES: Flush with water for 15 minutes and get prompt medical attention.

KEEP OUT OF THE REACH OF CHILDREN

TO SERVICE THE ENGINE

NOTE: **The engine is shipped with oil!**
If oil needs to be added or changed then fill crankcase with SAE 10w-30 oil. (See engine Operation Manual).
Do not overfill or it will cause serious damage to the engine.

Before starting the engine, read carefully the engine manual.

ASSEMBLY

GAS FILLING

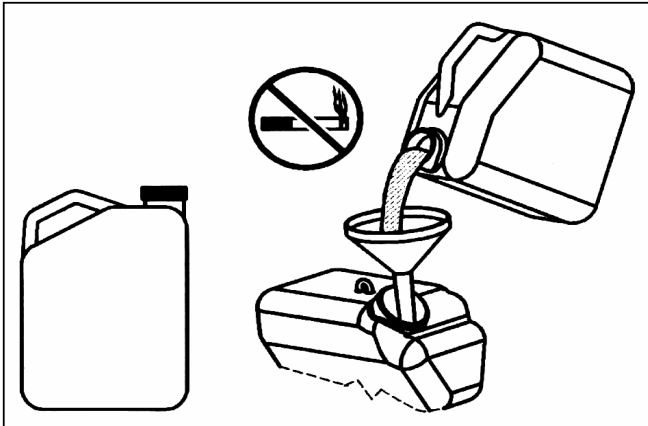


Fig. 9

Use only regular unleaded gasoline. The recommended lowest octane level is 95. If the engine runs on gasoline with a lower octane level than 95, an effect known as knocking can arise. This engine temperature occurs when reached operating level and can cause engine failure.

REFUELLING

WARNING

Make sure there is good air ventilation when refuelling.

1. Stop the engine and let it cool down.
2. Open the gasoline cap slowly in order to release any possible high pressure.
3. Tighten the gasoline cap carefully after refuelling.
4. Dry fuel tank around the area of the gasoline cap. Clean the tank regularly. Impurities in the tank can cause operating problems.

For refuelling, use an approved container with funnel. Do not overfill the tank, which contains approximately 8 litres.

DANGER

Use extra care in handling fuels. They are flammable, vapors are explosive. Allow the engine to cool down before refuelling. Do not smoke. Use safety approved container only to store your gasoline!

In the engine owner's manual, you will find fuel and oil recommendations.

TYRES

Proceed to the following steps:

1. Check the tyre pressure :
(1.0 BAR) for the front wheels: 100 kPa
(0.8 BAR) for the rear wheels. 80 kPa
2. Adjust pressure up or down if necessary (Fig.10).

NOTE: The tyre pressure is important for an even cut.

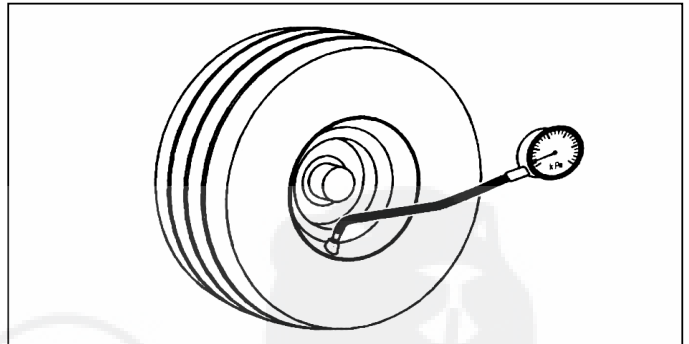


Fig. 10

OPERATION

CONTROLS (Fig. 11)

1. Dash panel
 - a) Throttle control lever
 - b) Ignition switch
 - c) ON/OFF switch cutting system
2. Steering wheel
3. Transmission disengagement lever
4. Cutting height adjustment lever
5. Forward speed pedal
6. Reverse speed pedal
7. Brake pedal
8. Parking brake lever

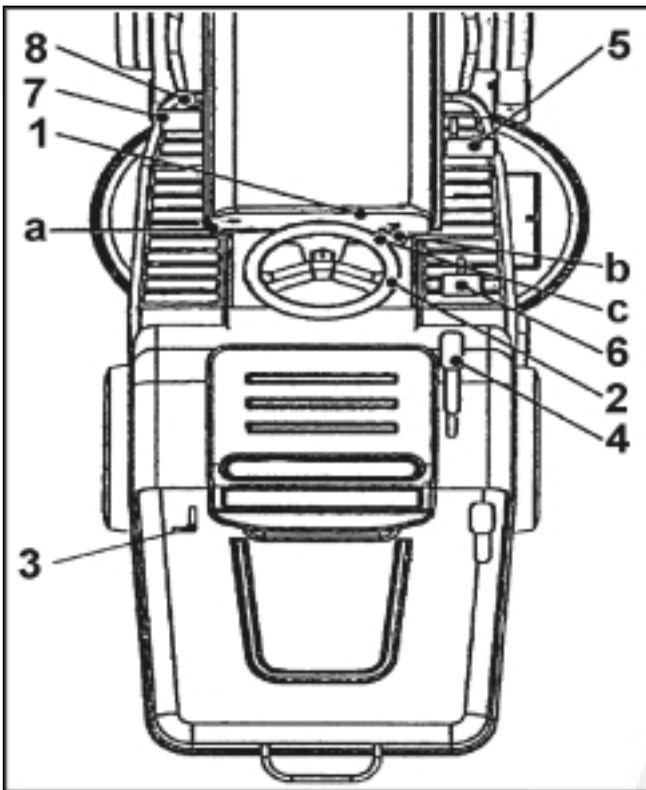


Fig. 11

OPERATION AND DESCRIPTION

Toggle switch cutting system (Fig.12).

To engage, push the mower system down on the rocker switch and place it in the ON position: this actuates the cutting system clutch which drives the blades.

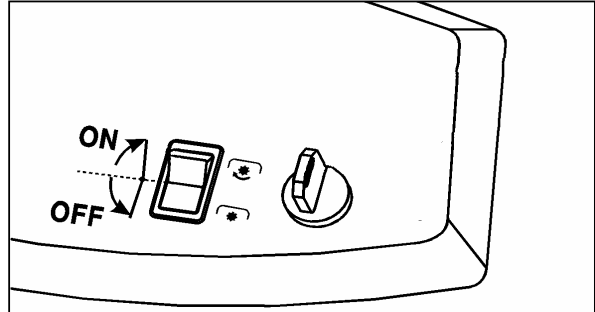


Fig. 12

When the collector is full with grass the overload protection switch located inside the grass collector will be mechanically activated and the warning buzzer will come on. The buzzer is located in the center of the dash panel.

Note:

It is highly recommended that when the warning buzzer is activated to disengage the mower system to prevent the tunnel from being severely clogged.

OPERATION

SEAT ADJUSTMENT (Fig. 13)

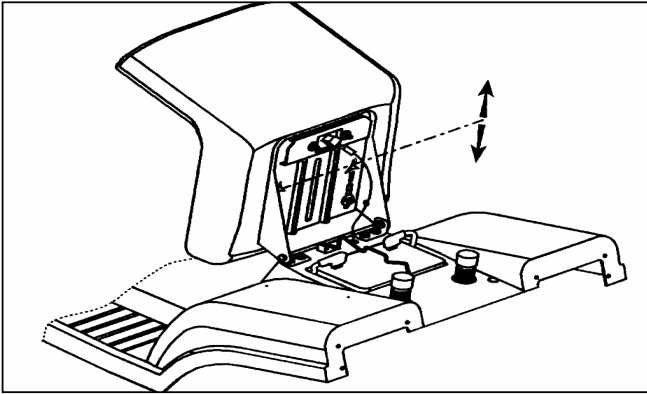


Fig. 13

In order to adjust the seat, proceed to the following steps:

1. Loosen the thumb screws.
2. Move the seat forward or backward to the desired position.
3. Tighten the thumb screws securely.

DANGER

Never run the engine indoors, or in enclosed or poorly ventilated areas. Engine exhaust contains carbon monoxide.

Keep feet, hands and clothes away from the engine.

The temperature of the muffler may exceed 80 degrees C.

TO START THE ENGINE

To start the engine, proceed as follows:

1. Your tractor is equipped with a fuel valve. To open it the handle should point down as shown in Fig.14.

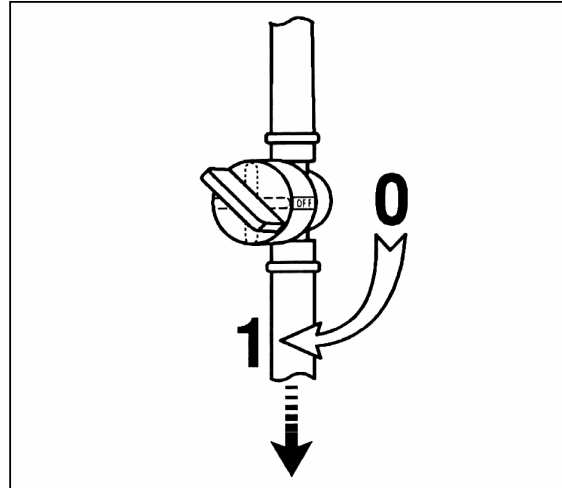


Fig. 14

2. Take a comfortable riding position on the seat. The safety switch is now connected.
3. Depress fully and hold the brake pedal (Fig. 15, pos. 1).

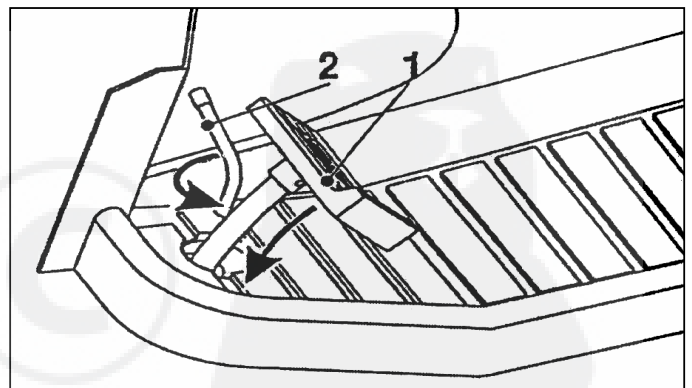


Fig. 15

OPERATION

- Place the throttle control lever in the "choke position" (Fig. 16).

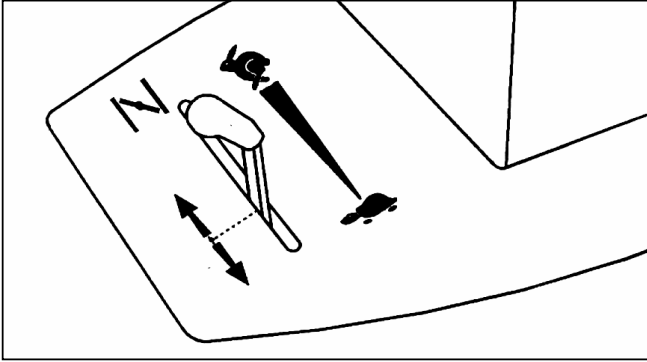


Fig. 16

- Check that the "cutting system" is in the OFF position (Fig. 12).
- Turn the ignition key to START position (Fig.17) release it immediately when the engine has started. Continuous cranking of more that 15 seconds per minute can cause the starter to overheat. Allow the starter to cool down for two minutes after cranking of more than 15 seconds.

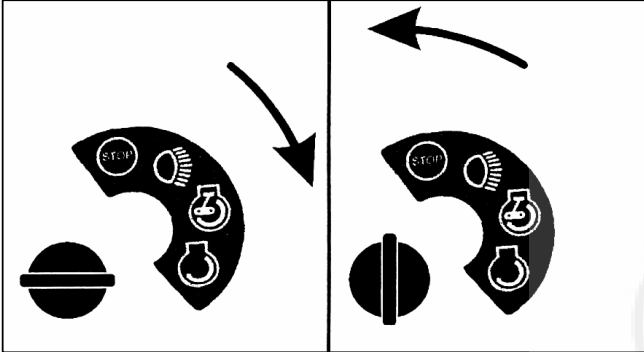


Fig. 17

- After starting the engine set the engine speed by the throttle control lever (Fig. 16).

DANGER

When you want to start the engine, be sure that:

- * the brake-pedal is depressed
- * the mower clutch lever or toggle switch is in the disengaged position
- * the grass collector is properly in place

IMPORTANT

Move the throttle to slow position before turning off the ignition, in order to reduce muffler pop. Failure to do so will result in engine and exhaust damage.

OPERATION

WARNING

The mower deck must be in the highest position, when you drive the tractor in transport mode off the lawn. If not, damage will be caused to the cutting system

RIDING THE TRACTOR

The tractor is equipped with a hydrostatic transmission. It means that the forward and reverse speed can be achieved with the use of the pedals (Fig. 18).

The more depressed the pedals are the faster the tractor moves. The tractor moves faster in forward and slower in reverse.

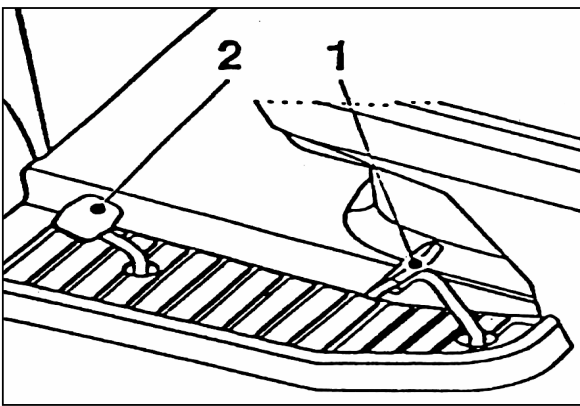


Fig. 18

- 1 - forward pedal
- 2 - reverse pedal

BRAKE (Fig. 15)

When the pedal is fully depressed, the brake is applied. Then, place the throttle lever at the "turtle" position (Fig. 16).

The parking brake lever is used to lock the brake pedal in brake position (Fig. 15, pos. 2).

REVERSE GEAR

CAUTION

Come to a full stop before changing the direction of motion.

Depress slowly the reverse motion pedal (Fig. 18, pos. 2).

WARNING

While riding backwards, watch out behind.
Do not have your mower engaged!

LAWN CUTTING

IMPORTANT

- * Clear the area of any objects such as toys, wires, branches, etc.
- * Do not wear loose clothes which could be caught in moving parts.
- * Always wear substantial footwear.
- * **Keep children and animals out of the area while riding the mower.**
- * Keep hands and feet away from the mower deck.
- * Never carry passengers.

WARNING

In case the tractor must be pushed, the transmission disengagement by-pass lever must be pulled out (Fig.11, pos. 3).

Be sure the cutting system is disengaged and is in the OFF position before starting the engine. (Fig. 19).

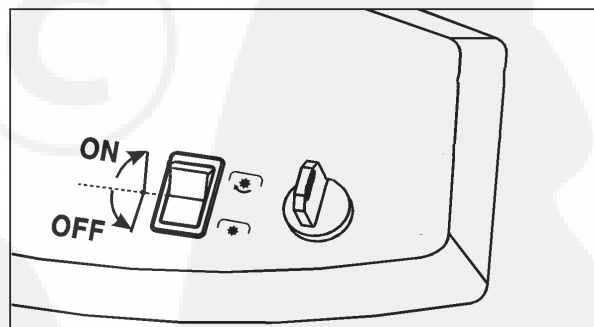


Fig. 19

OPERATION

BLADE CHECK

Check the cutting blades periodically.
If dull, you will not get a nice even cut.
You must replace or sharpen the blades.
After sharpening, you must balance the blades before re-installation.

CUTTING HEIGHT ADJUSTMENT (Fig. 20)

The cutting height adjustment lever is located on the right side fender.
The bottom position of the lever is the lowest cutting height and vice versa.

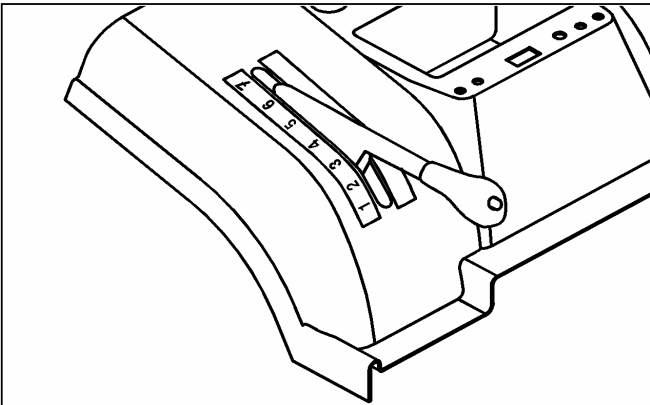


Fig. 20

MOWER DECK GAUGE WHEELS (Fig. 21)

The mower unit might be equipped with four or two front optional support wheels. The support wheels are designed for protecting the mower unit if the ground is uneven.

The mower deck gauge wheels must always be in the lower position. Refer to Fig. 21.

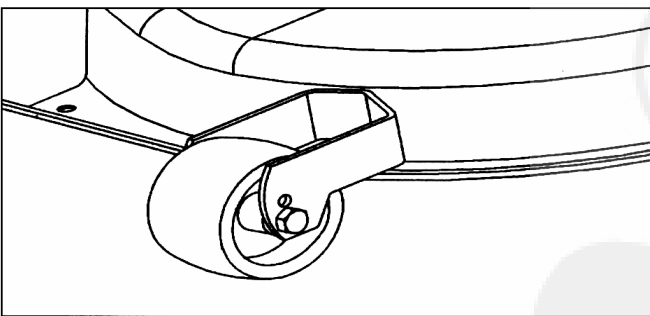


Fig. 21

IMPORTANT

Before you start mowing, make sure the grass collector is installed correctly and is in the closed position.

RIDING AND MOWING

Proceed with the following steps:

1. Start engine and drive tractor to the lawn.
2. Mower height adjustment in highest position (Fig. 20).
3. When on the lawn, engage mower clutch with toggle switch (Fig. 19).
4. Depress slowly the forward motion pedal to reach the desired speed.

IMPORTANT

While starting the blades, keep the throttle in the middle position, to save the belt and clutch from premature wear and possible damage.

SPEED RANGES

The slowest speed is used for mowing on slopes or mowing high wet grass.
The lower the grass is, the higher the speed can be.
When tractor is used for transport (not cutting), depress the forward motion pedal for maximum speed (Fig.18, pos.1).

OPERATION

ALWAYS: In case of any obstacles, immediately disengage the blades and lift the mower deck to the highest level.

IMPORTANT

As soon as the blades strike any solid object, the shear pins will break. Immediately stop the engine! Replace the broken shear pins only with factory original pins. Check to make sure that all blade mounting bolts are tightened.

MOWING HINTS

1. We advise mowing the lawn in a longitudinal and cross direction, overlapping previous cut, which allows the lifting action of the blades into the cutting path.
2. Forward speed of the lawn tractor must be controlled in accordance with the type and height of grass being mowed.

IMPORTANT

The taller the grass that must be cut, the slower the forward speed should be.

SLOPE OPERATION

- * All slopes need extra caution.
- * Do not cut grass when slope is more than 10 degrees (17%).
- * Mow slopes riding up and down, never across.
- * Avoid sudden changes in direction.
- * Remove obstacles such as rocks, tree limbs, ruts, etc.

WARNING

While travelling downhill - never coast!
When parking, depress the brake pedal and lock it (Fig. 15, pos. 1 and 2).

CATCHER DISCHARGING (Fig. 22)

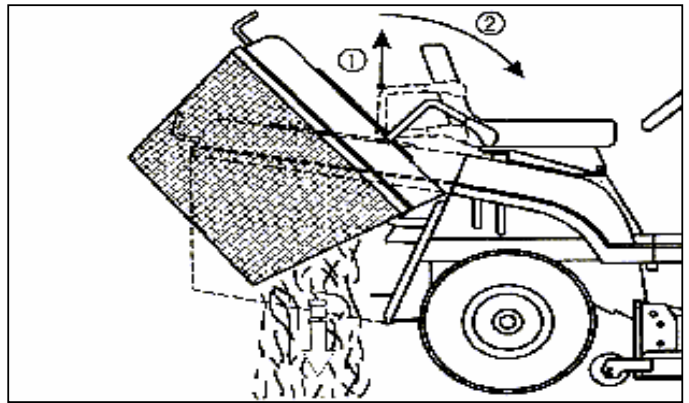


Fig. 22

FUNCTION

WARNING BUZZER WHEN COLLECTOR IS FULL

A micro switch located in the collection system controls this process and, when the grass collector is full, the micro switch is mechanically activated and the collector warning buzzer comes on. In order to avoid clogging the grass collector disengage the cutting system from ON to OFF position and the collector warning buzzer will go off. Then reduce the engine to idle, pull out the telescopic dumping lever all the way and push it down to empty the grass collector, then slowly pull the lever upwards to allow the grass collector to close (grass collector is empty).

NOTE:

- A. If the holes on the grass collector bag are full of grass and are plugged, you must clean the collector bag by using high pressure water then leave to dry.
- B. From time to time, clean the area of the cover of the grass collector switch, mainly the bottom section.

OPERATION

TUNNEL CLEANING

1. Remove the grass collector assy from the back part of the tractor.
2. Clean the inside of the tunnel all the way to the cutting pan from the grass. Use a special scraper.
3. Put the grass collector in place again.

HEADLIGHT

Lights are an integral function of the ignition switch (Fig.17)

SAFETY CONDITIONS

The engine cannot start when:

- a. the seat is not weighted with a driver
- b. the break pedal is not fully depressed (Fig. 15)
- c. the cutting switch is in ON position (Fig. 19)

STORAGE

After mowing is finished, lift the mower deck to the highest position and stop the cutting system drive.

Turn off the ignition switch, depress the brake pedal and lock it with the parking brake. Close the fuel valve.

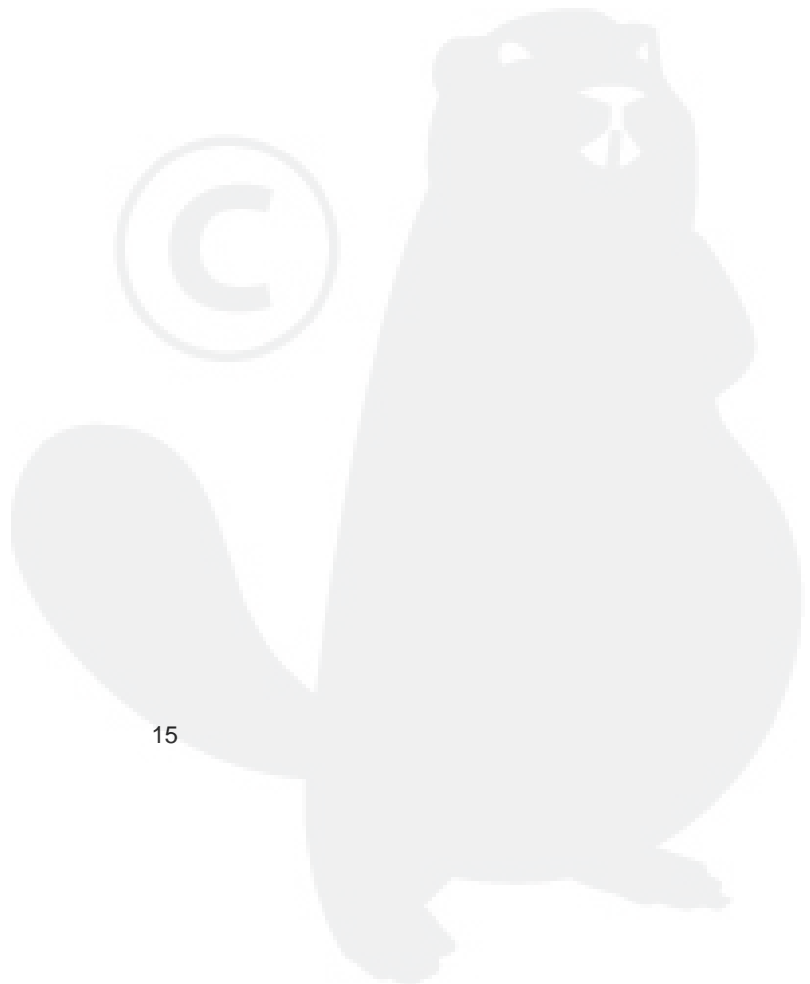
IMPORTANT

Always remove the ignition key before storing. When storing the tractor for longer periods of time, disconnect the battery.

TOWING

The tractor is equipped for towing attachments in the lower rear part of the tractor.

The maximum weight for the attachment is 150 Kg.



MAINTENANCE

CLEANING

WARNING

Before cleaning, washing, servicing or repairing, remove the ignition key!
Always wear substantial "steel toe" footwear, gloves and work clothes.
Be aware of any spilled fuel, oil or other contaminating substances.

After each cut, remove dirt and debris from the machine surface, the discharge tunnel and the grass collector.

WASHING (Fig. 23)

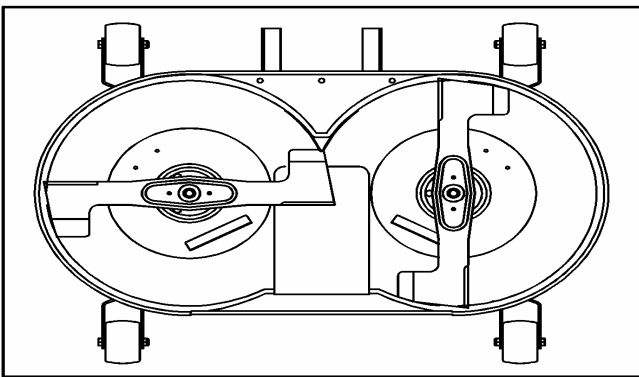


Fig. 23

Proceed with the following:

1. Wash the tractor on a level surface, with the grass collector mounted on.

NOTE: Use the optional mower deck mounted wash-out port if you have this feature.

2. Wash the inside of the mower deck and the discharge tunnel .
3. Dismount the grass collector, wash it and leave it "off " the tractor to dry.
4. Clean the plastic parts of the tractor with a sponge and soapy water.

IMPORTANT

Avoid water directly near the switches, dash or any electrical part.

BE CAREFUL

To clean the tractor, never use high pressure washing machines or aggressive detergents.

ENGINE OPERATION

Follow the instructions described in the engine owner's manual for operation and service (air filter, fuel filter, oil change, spark plugs, etc).

CRANKCASE OIL CHANGE

Crankcase oil should be changed after the first 5 hours of operation.

IMPORTANT

See engine operating and maintenance manual for proper procedures.

If your tractor is equipped with an optional oil drain plug then proceed with the following:

1. Place a flat bottom 2 litre container beneath the oil drain valve (Fig.24).
NOTE: It may be necessary to raise the left side of the tractor (with blocks under left wheels) to get proper drainage.
2. Turn the oil drain valve counterclock-wise and pull to drain oil.
NOTE: The oil fill cap should be loosened to serve as an air vent.
3. To close oil drain valve, push and turn clockwise.
4. Fill with grade SAE 30 or SAE 10W-30 oil. Oil capacity is about 1.4 litres. (See engine instruction manual)
5. Re-install the oil fill cap.
6. Check that the crankcase oil is at the correct level on the oil dip stick.

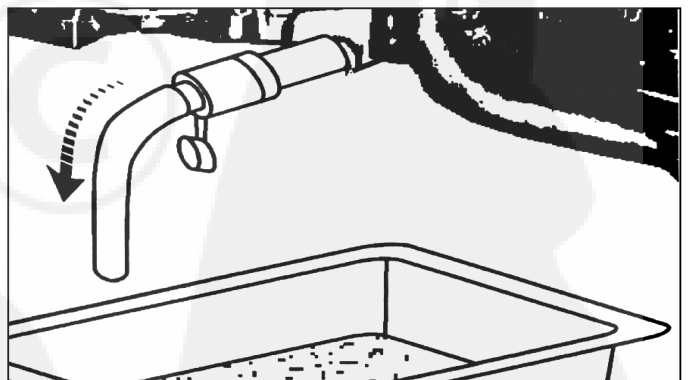


Fig.24

MAINTENANCE

TO BLOCK UP THE TRACTOR

When the tractor is to be blocked up, use a jack to lift it onto support stands. Block up the tractor as follows:

1. Place a jack under the rear axle transmission and lift the rear end of the tractor.
2. Place two stands under the rear axle, one stand at the inner side of each rear wheel.
3. Lift the front end and place two stands under the front axle beam, one stand at the inner side of each wheel spindle.

CAUTION

At no time during maintenance or adjustments, can the tractor be lifted more than 50 cm from level position without taking the following precautions:

1. Remove fuel from the tank and run the engine until the carburetor is dry.
2. Remove battery (See Battery removal paragraph in the Maintenance section).
3. Remove oil from crankcase.

ENGINE MAINTENANCE

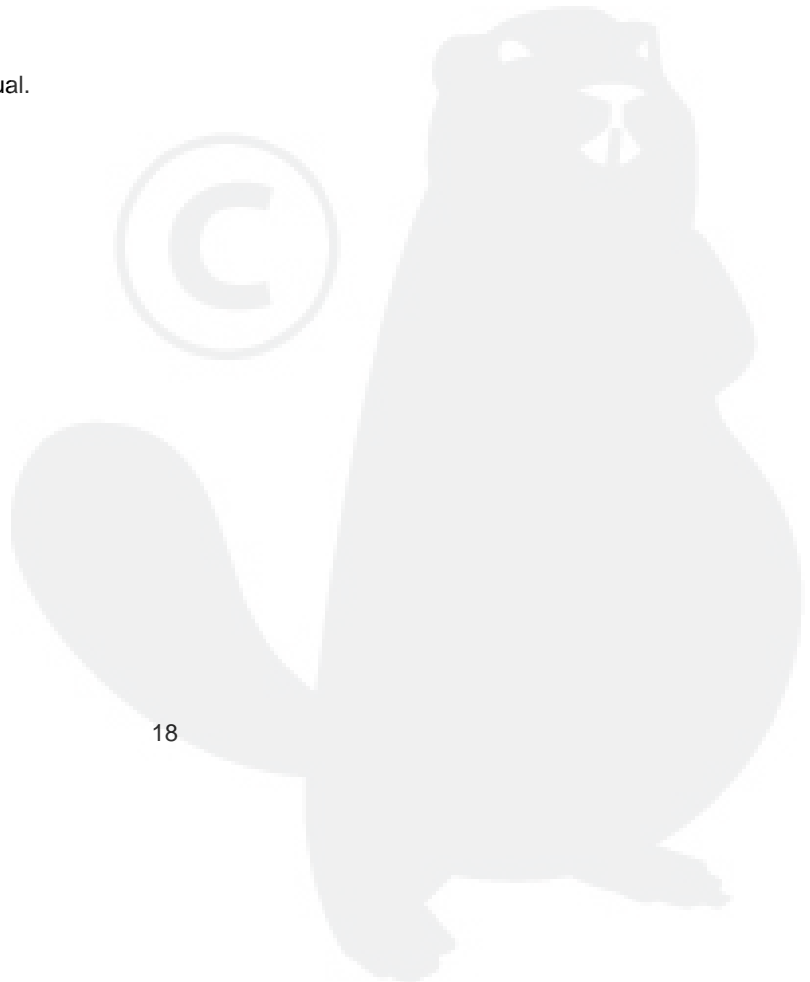
For information on engine lubrication see the engine operating maintenance instructions manual.

LUBRICATION SCHEDULE

Information on how frequently lubrication should be carried out, lubrication points and the type of lubricant are tabulated in the lubrication schedule below. The transmission is lifetime lubricated.

HOURLY METER

Note: Your tractor might be equipped with an optional hour meter. The hour meter will assist you tabulating a maintenance check list.



MAINTENANCE

LUBRICATION SCHEDULE

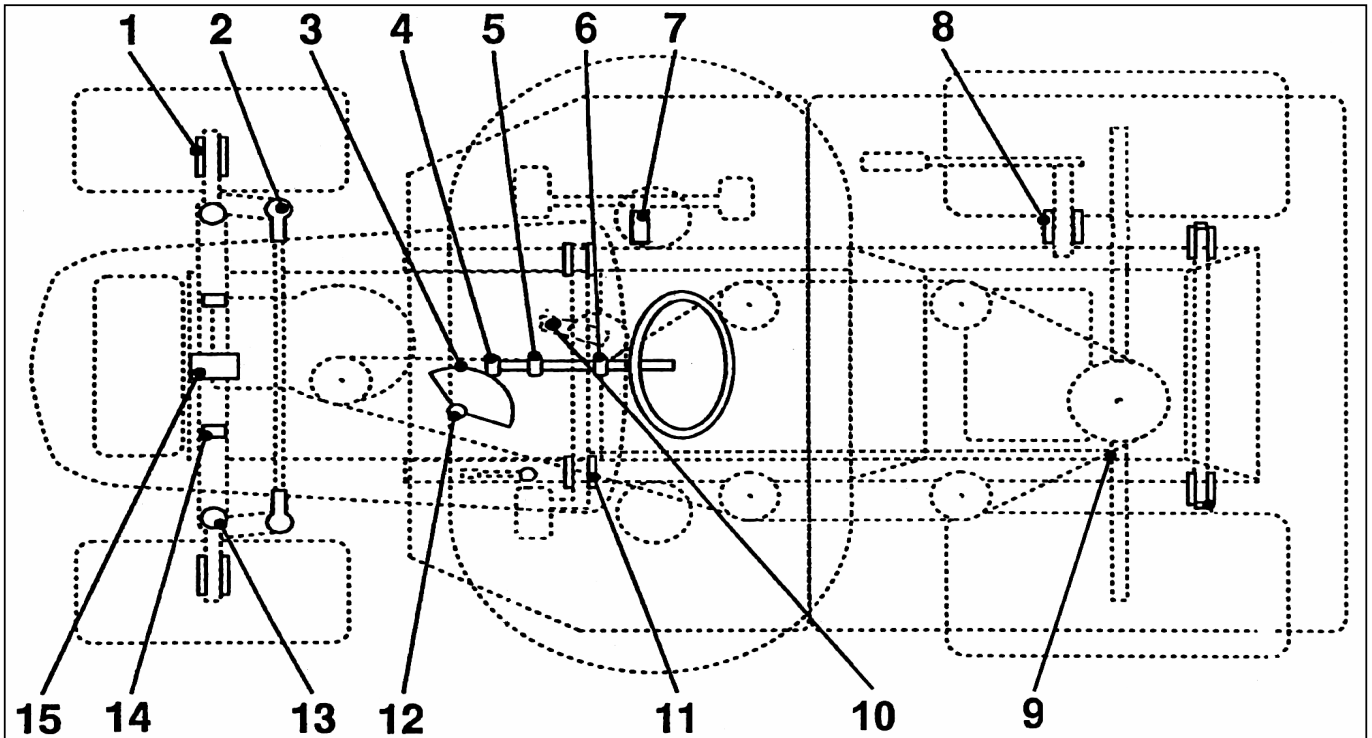


Fig 25

LUBRICATION LIST (Fig. 25)

Item	Name	Number	Term -hours	Lubricant
1	Front wheel - grease fitting	2	25	Grease
2	Steering ball-joints	4	50	Oil
3	Steering sector gear	1	50	Grease
4	Steering pinion gear	1	25	Grease
5	Steering shaft bearing	1	50	Oil
6	Steering shaft bearing	1	50	Oil
7	Motion lever - grease fitting	1	50	Grease
8	Shaft hub for lifting the mower deck	1	50	Oil
9	Motion link ball-joints - <i>optional</i>	4	50	Oil
10	Brake pedal hub	2	50	Oil
11	Parking brake ring	1	50	Oil
12	Steering bearing	1	25	Grease
13	Left & Right spindle - grease fitting	2	25	Grease
14	Mower deck hinged pin	6	When dismantled	Grease
15	Front axle pivot pin	2	When dismantled	Grease

MAINTENANCE

The bearings in the idler pulley and retainer pulleys are life time lubricated. Gear box is filled with oil.

BATTERY MAINTENANCE (Fig. 26)

DANGER

Lead acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from battery. Always wear eye protection when around batteries.

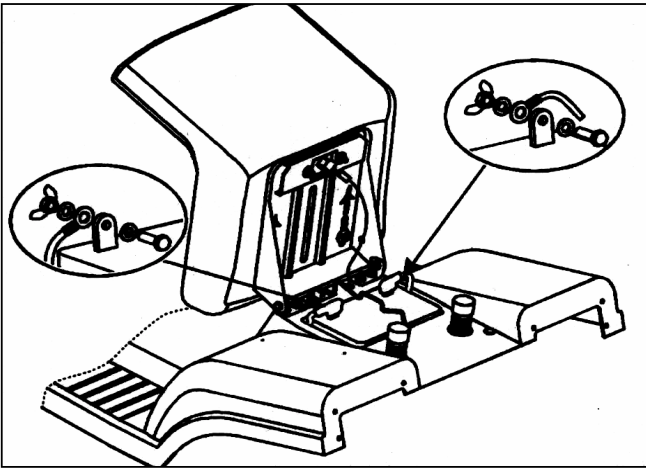


Fig. 26

When starter operates properly and battery connections are clean and tight, but, cranking difficulty is experienced, battery may not be charged. Battery should be taken to a qualified service station and tested or charge the battery with a battery charger (See page 7).

If engine will not start right away under normal cranking speed, continued cranking will run down the battery and may cause damage to the starter. Check the ignition and fuel systems and correct any faults.

The battery should always be kept clean. If the top has an accumulation of dirt or grease, remove the battery from lawn tractor for cleaning. The battery should be cleaned with a mild solution of baking soda and water.

Allow the solution to work for a few minutes, then rinse with clean water and wipe battery dry.

If battery terminals are corroded, clean with a wire brush and coat terminals with petroleum jelly.

DANGER

Be sure to re-install battery in the same position and properly reconnect battery cables (red to positive - black to negative).

Proper care will lengthen battery life. When replacement becomes necessary, use battery of same size and type for continued trouble free service (See Repair parts manual).

DANGER

Always disconnect negative (black) cable first. Removing positive cable first can result in sparks if the wrench touches any metal surface. Be sure battery hold-down bracket does not touch battery terminals and cause a spark.

DANGER

Always connect positive (red) cable first. Connecting negative cable first can result in sparks if the wrench touches any metal surface. Be sure battery hold-down bracket does not touch battery terminals and cause a spark.

ADJUSTMENTS

SPARK PLUG MAINTENANCE

Spark plug should be checked periodically for excessive carbon and gap. Use a wire feeler gauge to check spark plug gap and set 0,7 mm (See Engine operating and maintenance manual).

AIR FILTER MAINTENANCE

Air filter should be cleaned and/or replaced every 25 hours of operation under normal conditions; more often under dusty conditions. To clean air filter see Engine operating and maintenance manual.

HEADLIGHT BULB REPLACEMENT (Fig. 27 & 28)

Lift the hood up. The headlight bulbs are secured in the sleeve with bayonet sockets.

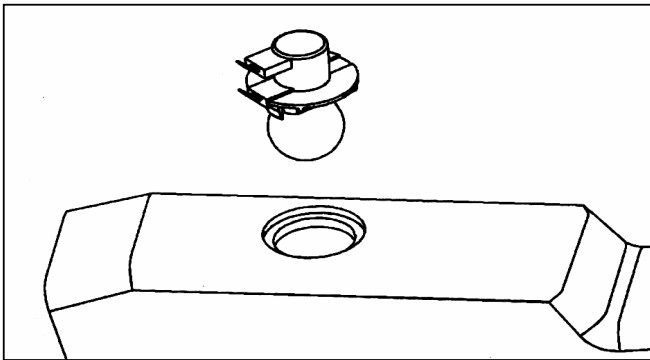


Fig. 27

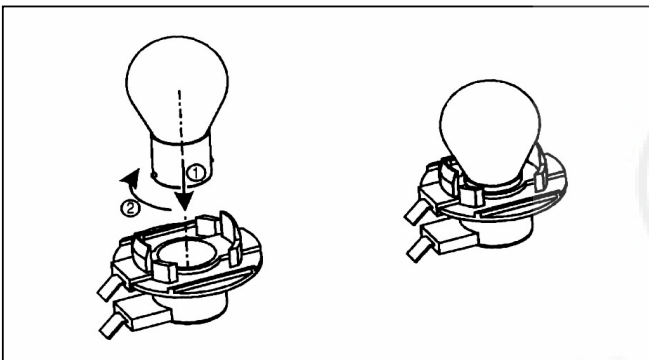


Fig. 28

FUSE EXCHANGE

The fuse box is placed under the dash. To change the fuses, proceed as follows:

1. Lift the hood up.
2. Remove the fuse and replace it by another one of the same value (15A or 5A).

If it is still impossible to start the engine, call your service dealer.

WHEEL EXCHANGE (Fig. 29).

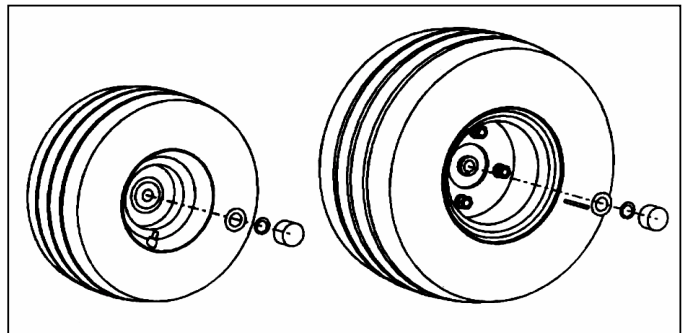


Fig. 29

Proceed as follows:

1. Switch off ignition.
2. Lift up the tractor and place it on stands.
3. Remove plastic cover.
4. Dismount the retaining ring (the flat washer) and remove the wheel.

NOTE:

For the rear wheel, make sure to take key out.

ADJUSTMENTS

TRACTOR BRAKE ADJUSTMENT (Fig. 30)

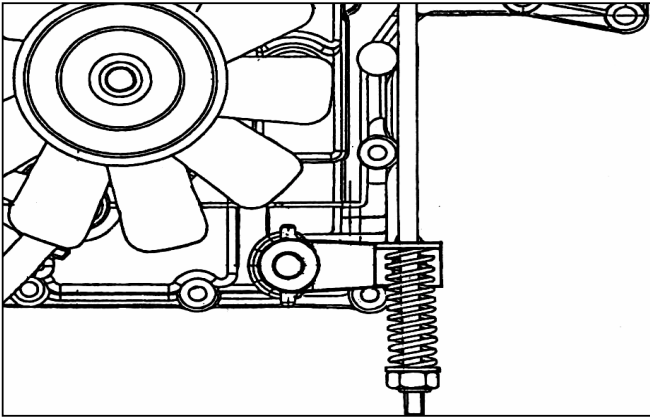


Fig. 30

To check the brake operation:

1. Place the tractor on a flat surface and stop the engine.
2. Pull the transmission disengagement by-pass lever out.
3. Depress the brake pedal enough to latch the parking brake lever in the engaged position (refer to Fig. 15).
4. If you cannot push the tractor, the brake is adjusted correctly and is functioning. If you can push the tractor, the brake is too loose and should be adjusted.

To adjust loose brake:

1. Pull the transmission disengagement by-pass lever out and depress the brake pedal to latch the parking brake lever in the engaged position.
2. Turn the brake rod adjusting nut clockwise until you can not push the tractor.
3. Check again the tractor brake adjustment as described above.

To adjust tight brake:

1. Pull the transmission disengagement by-pass lever out.
2. Turn the brake rod adjusting nut counter-clockwise until you can push the tractor.
3. Check again the tractor brake adjustment.

While operating the tractor, check the stopping distance. If the tractor requires more than 1 meter to stop at high speed in the highest gear then the brake must be adjusted.

ADJUSTMENTS

BLADE REPLACEMENT (Fig.31)

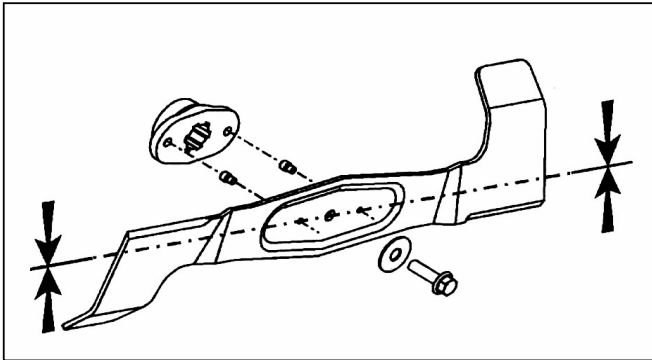


Fig. 31

The cutting blades should be sharp and balanced to run smoothly. Blades should have correct amount of lift for proper cutting and discharge of clippings. The lift is created by the upturned bent tip edges of the blade ends. As the cutting edges of the blades wear, the bent tip edges also wear decreasing the blade lift. Decreased cutting and collecting ability results.

IMPORTANT

It is recommended blades be replaced when the upturned ends show signs of wear.

IMPORTANT

As soon as the blades strike any solid object the shear pins will break. Immediately stop the engine! Check the blades! Replace the broken shear pins only with factory originals. For installation refer to Fig. 32. Check to make sure that all blade mounting bolts are tightened.

To remove blades:

1. Remove the mower deck.
2. When replacing the blades, be sure all parts are reassembled in proper order and securely tightened, or severe vibrations will occur (See Fig. 32). Bent tip edges of blades must be toward top of the mower deck, or blades will not cut.
3. Re-install the mower deck.

IMPORTANT

The right blade has a left hand thread bolt.

DANGER

The cutting blades are sharp
Do not handle the blades with bare hands.
Wear gloves or wrap the blades with newspaper or other material while removing or installing the blades.

SHEAR PINS (Fig. 32)

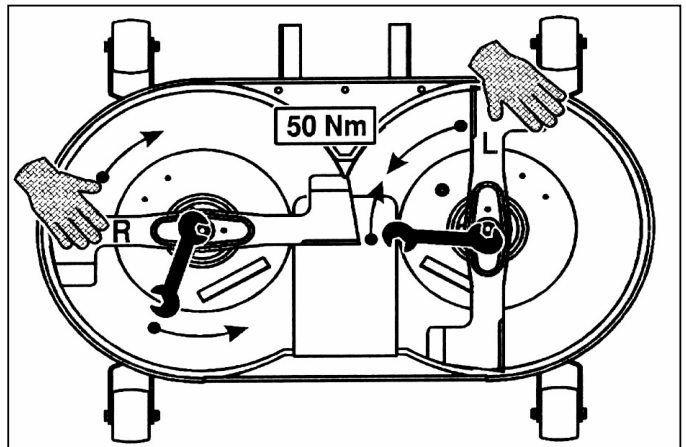


Fig. 32

ADJUSTMENTS

BLADE SHARPENING

IMPORTANT

Great care should be taken to keep the blades balanced. An unbalanced blade will cause excessive vibrations and eventual damage to the engine.

1. The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen while on the mower.
2. Place the center hole of the blade over the end of a screwdriver, place horizontally. If the blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.

WARNING

The cutting blades are sharp. Wear gloves whenever handling the cutting blades.

DRIVE BELTS ADJUSTMENT (Fig. 33 & 34)

IMPORTANT

The life time of the belts and their proper operation depends on their right adjustment. After a few hours of operation, they must be inspected and may need adjustment.

The three belts are located beneath the main frame. One belt drives the transaxle. The other one transmits the power from the clutch to the mower deck. The third one drives and synchronizes the two blades together.

TRANSMISSION DRIVE BELT (Fig. 33)

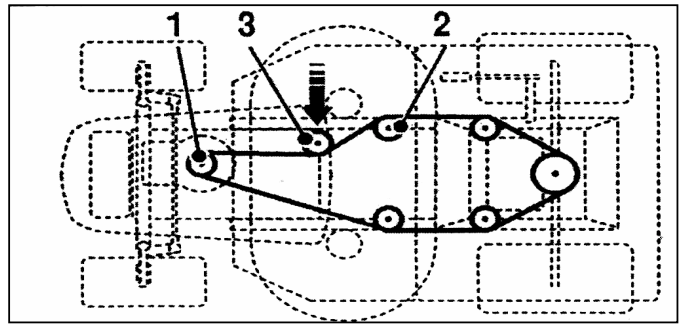


Fig. 33

1. Engine pulley
2. Adjustable idler pulley
3. Idler pulley

Adjust the tension of the belt with the pulley # 3.

MOWER CLUTCH BELT (Fig. 34)

The tension of the belt is automatically adjusted with the spring loaded idler pulley.

NOTE: Longer end of hook-spring must be connected to the tractor chassis. Short end of hook-spring must be connected to mower deck.

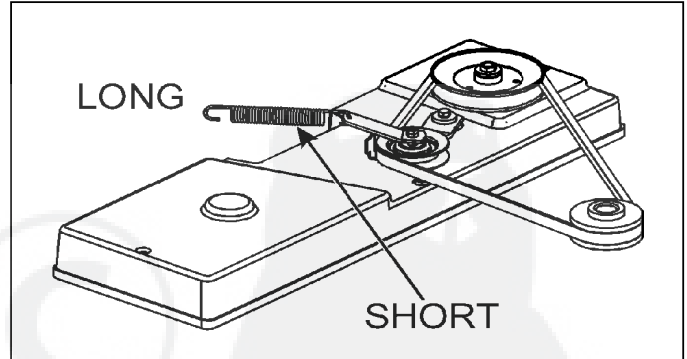


Fig. 34

MOWER DECK BELT (Fig. 36)

ADJUST THE MOWER COG BELT

NOTE: It is recommended that the mower cog belt be adjusted after 20 hours of operation as the new belts will stretch slightly during the initial break in period.

ADJUSTMENTS

A. CUTTING PAN REMOVAL (Fig.35)

1. Lower the cutting pan to the lowest position.
2. Pull idler arm assembly in and remove V-belt from pulley.
3. Disconnect the spring from the engagement lever.

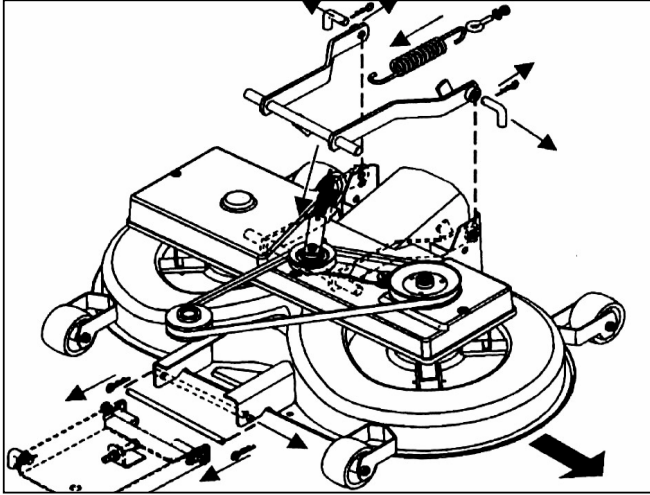


Fig. 35

4. Lift tunnel to release the lower part from the two welded pins that connect it to the mower deck assembly.
5. Pull out tunnel rearwards approximately 10cm. Secure the tunnel to prevent it from falling back down.
6. Remove the hair pin clips from front pin and from the two rear pins.
NOTE: It is recommended to loosen the large spring for safety and to facilitate re-installation of cutting pan. To do so you must remove tunnel.
7. Pull out rear pin from one side and then use a pair of pliers to pull second rear pin from other side.
8. Pull out front pin.
9. Remove V-belt from electro magnetic clutch.
10. Slide cutting pan out from side of tractor.

CAUTION

If the large spring has not been loosened, the pivot arm assembly will spring up with force. Do not place hands or fingers above the pivot arm assembly and use pliers when pulling out second rear pin.

B. ADJUSTMENT PROCEDURES FOR COG BELT TENSION

1. Remove cutting pan from tractor, follow procedure described in A.
2. Remove V-belt pulley and idler arm assy.
3. Remove plastic belt cover.
4. Loosen the two hex nuts on the cog idler pulley on tension bracket idler.
5. Adjust nut M10 until the specified tension from center of cog belt from pulley A to pulley B is reached (See Fig. 36).
6. Re-tighten the two hex nuts on the cog idler pulley and the belt is now adjusted correctly.
7. To re-install the cutting pan - reverse the procedure.

NOTE: It is not possible to adjust the cog belt tension correctly without removing the cutting pan assembly from the tractor.

DANGER

This cog belt must be properly time adjusted. If not, the blades can contact and the belt will be destroyed and the cutting system will be damaged.

DANGER

On impact with any hard objects, the blade shear pins will break and the cog belt could be damaged !

THE COG BELT MUST BE INSPECTED

ADJUSTMENTS

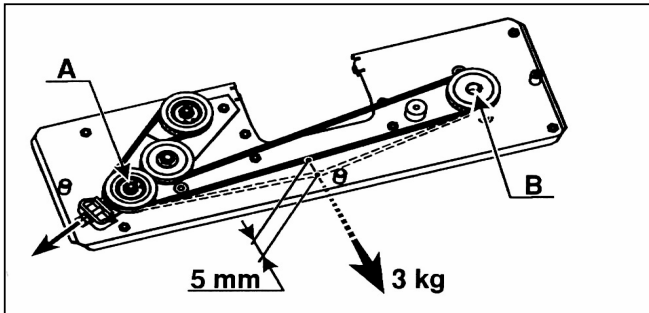


Fig. 36

Be careful!

The two blades must be positioned 90 degrees to each other (Fig. 37).

Replacement:

Use always genuine parts

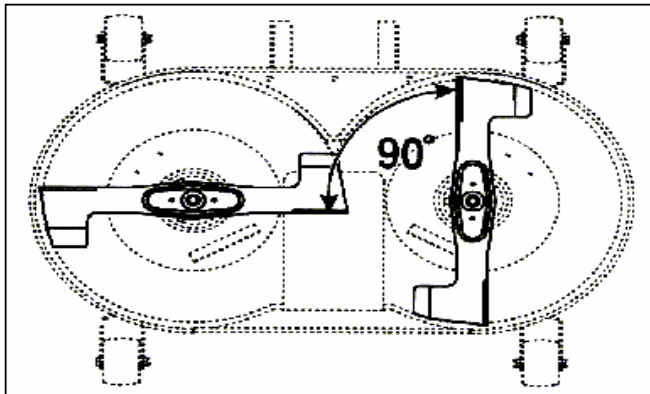


Fig. 37

**ADJUSTMENT PROCEDURES FOR THE HEIGHT
ADJUSTMENT CABLE ROD ASSY.**

Proceed with the following steps:

1. Place the tractor on a flat surface, concrete, if possible.
2. Move the lower pin of the front adjustment suspension into the bottom position of the slotted holes by adjusting the two nuts M12 on the front suspension.
3. Position the height adjustment lever to position 1. The front gauge wheels of the cutting pan are to rest on the ground.
4. Keep adjusting self-locking nut M8 at the end of the height-adjustment rod assy until the rod is slightly tight.

TORQUE SPECIFICATIONS

Cutting system:

Mower cog belt	See Fig. 36
Blade bolt LH	50Nm
Blade bolt RH	50Nm
Housing bolts M8x30	32Nm
Self locking nut M12 (Pulley)	65Nm
Hexagon socket screw M8x25 (Idler arm)	25Nm

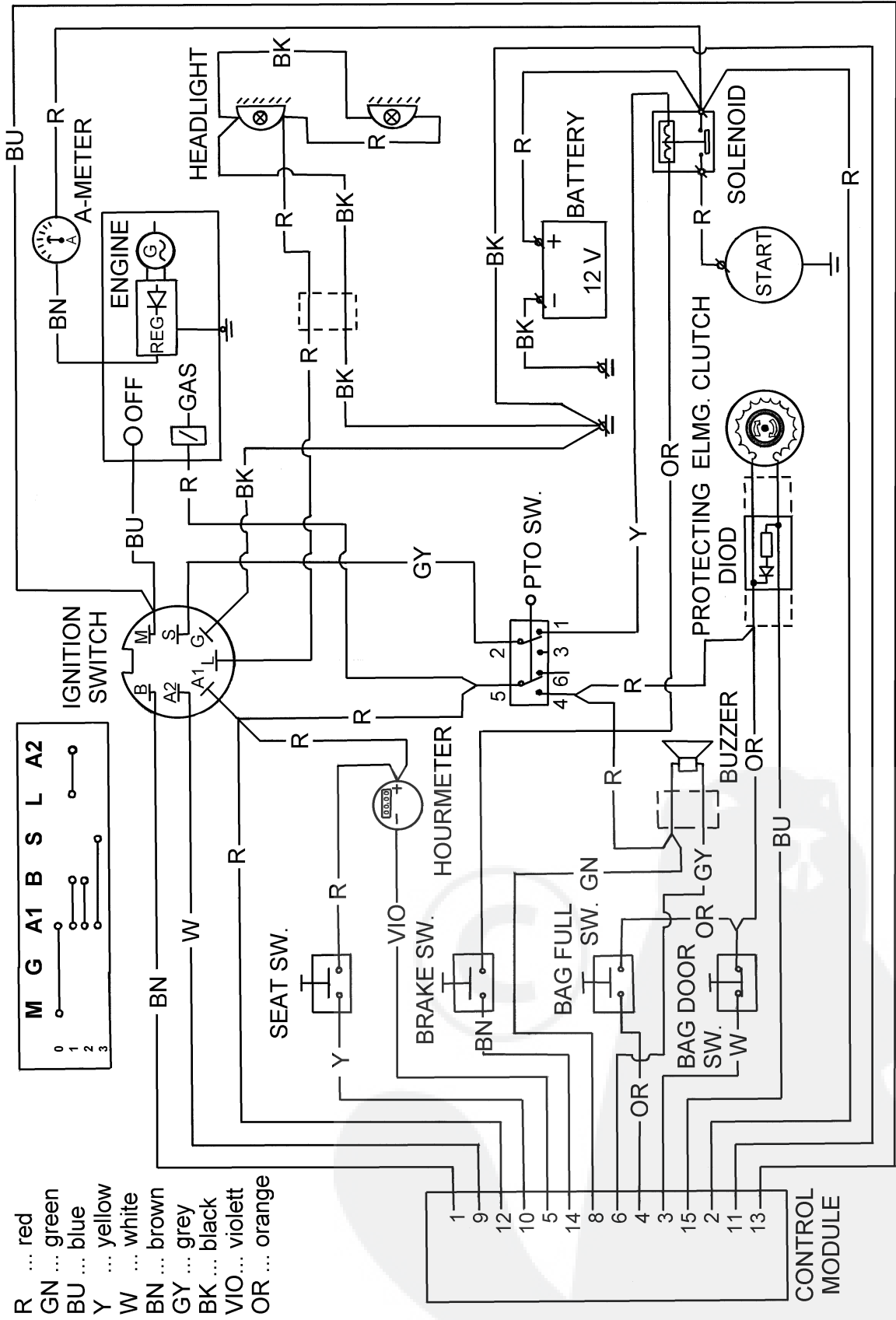
Steering tooth gear fasteners:

Screw M8x20	25Nm
Lock nut M12	80Nm

Engine-transmission drive:

Exhaust screws	16Nm
Crank shaft bolt	108 Nm
Screw M10x40 (Idler pulleys)	40Nm
Self-locking nut M8 (idler arm)	15-20Nm

WIRING



TROUBLESHOOTING GUIDE

PROBLEM	CORRECTION
Mower cuts ragged or uneven	<ol style="list-style-type: none"> 1. Remove any accumulation of grass clippings from underside of mower deck housing. 2. Make sure blades are sharp and in good condition (not bent or incorrectly mounted). 3. Check blade mounting screws. Blade screws must be tight. 4. Check mower deck leveling adjustment per manual. Adjust if necessary. 5. Check blade belt tension per manual. Adjust if necessary. 6. Check quill assemblies for damage or wear. Replace if necessary. 7. Check for possible damage to mower deck housing. Repair if necessary.
Mower leaves unmowed strip between blades	<ol style="list-style-type: none"> 1. Mowing a heavy grass or grass with excessive surface moisture could allow mower to leave an unmowed strip. 2. Forward speed should be adjusted to mowing conditions by gear selection. Engine should be run at full throttle. 3. Make sure blades are sharp and in good condition. Replace if necessary 4. Check blade belt tension. Adjust if necessary. 5. Check quill assemblies for damage or wear. Replace if necessary 6. Check for damage to mower deck housing. Repair if necessary.
Mower scalps lawn	<ol style="list-style-type: none"> 1. Check mower height adjustment setting and readjust if needed. Scalping is more likely on rough or uneven lawns. 2. Check for damage to mower deck housing. Repair if necessary. 3. Check for bent blades or quills assemblies. Replace if necessary. 4. Check mower deck leveling adjustment and adjust if necessary.
Mower will not discharge clippings	<ol style="list-style-type: none"> 1. Remove any accumulation of grass clippings from underside of mower deck housing. 2. Wet conditions can cause the discharge tunnel and underside of mower deck to become plugged with clippings. Do not mow wet grass! 3. Forward speed should be adjusted to mowing conditions by gear selection. Engine should be run at full throttle. 4. When mowing long grass make first cutting in high position, then recut at normal cutting height. 5. Check drive belt tension per manual. Adjust if necessary. 6. If blades have been replaced, make sure they have been properly mounted.
Blade drive belt comes off during use	<ol style="list-style-type: none"> 1. Blade drive belt may suffer internal damage to cords if it comes off during use. If belt comes off after checking all steps below, replace with a new original equipment belt. 2. Check belt tension per manual. Adjust if necessary. 3. Check belt guide. Correct clearance is 1.5mm from belt when blade engage lever is engaged. 4. Check mower deck leveling adjustment per manual. Adjust if necessary. 5. Check for and remove any foreign objects interfering with belt travel. 6. Check all pulleys on mower deck. A bent or split pulley could cause problems. Replace if necessary. 7. Check engine drive pulley inner surface. If inner surface is rough or split, pulley should be replaced. 8. Check blade engagement idler assembly for wear. Replace necessary parts.
Blade drive belt slips	<ol style="list-style-type: none"> 1. If grass is too high or wet, belt slippage may occur. 2. Check belt for wear or damage. Replace if necessary. 3. Check blade belt tension per manual. Adjust if necessary. 4. Check blade drive belt tension spring. If spring is stretched or damaged, replace spring.
Blade drive belt wears excessively	<ol style="list-style-type: none"> 1. Check all belt guides. Correct clearance is 1.5 mm from belt when blade engage level is engaged. 2. Check for and remove any foreign objects interfering with belt travel. 3. Check pulleys for damage. Replace if necessary. 4. Make sure blade brake is clearing belt when mower clutch lever is engaged. Adjust or replace if necessary. 5. Make sure mower deck leveling adjustment is correct. Adjust when necessary. 6. Check blade tension per manual. Adjust if necessary.
Blades will not engage	<ol style="list-style-type: none"> 1. Check belt . If worn or broken, replace. If belt is too loose, make belt adjustment. 2. Check engagement spring on deck engagement idler. If broken or damaged, replace. 3. Check for and remove any foreign objects interfering with engagement idler travel.

TROUBLESHOOTING GUIDE

PROBLEM	CORRECTION
Extreme vibration occurs when blade is engaged	<ol style="list-style-type: none"> 1. Check blades and make sure they are not bent, out of balance or loose. Replace if necessary. 2. Check belt for burn spots or irregularities that might cause vibrations. Replace if necessary. 3. Check quill assemblies for damage or wear. Replace if necessary. 4. Check for worn or damaged blade engagement parts. Repair or replace if necessary. 5. Check engine drive pulley inner surface. If inner surface is rough or split, pulley should be replaced. 6. Check under side of mower deck housing for accumulation of clippings. Remove accumulated clippings. 7. Check for loose or damaged engine mounts. Tighten or replace as necessary. 8. Check blade belt tension per manual. Adjust if necessary.
Unit drive belt slips	<ol style="list-style-type: none"> 1. Check unit drive belt adjustment. Adjust if necessary. 2. Check for damaged or broken clutching idler spring. Replace if necessary. 3. Check belt for wear or damage. Replace if necessary. 4. Check for and remove any foreign objects obstructing clutching idler mechanism. 5. Check for split engine or transmission pulley. Replace if necessary.
Unit drive belt squeals when brake is applied	<ol style="list-style-type: none"> 1. Check lawn tractor drive belt adjustment and lawn tractor brake adjustment per manual. Adjust if necessary. 2. Check for and remove any foreign objects obstructing clutching idler mechanism.
Unit drive belt comes off during use	<ol style="list-style-type: none"> 1. Check belt tension. Adjust if necessary. 2. Check belt guides. Adjust if necessary. 3. Check for split or damaged pulleys. Replace if necessary. 4. Check clutching idler pulley alignment. If out of alignment, idler bracket may be bent. Replace if necessary.
Unit will not propel itself when clutch is engaged	<ol style="list-style-type: none"> 1. See steps 1 through 5 in Unit drive belt slips section of this chart. 2. Check engine, transmission or transaxle pulley for sheared or missing key. Replace if necessary. 3. Check transaxle to make sure it is operable.
Extreme vibration occurs when clutch is engaged	<ol style="list-style-type: none"> 1. Check for split or damaged pulley. Replace if necessary. 2. Check belt for irregularities or burned spots. Replace if necessary. 3. Make sure belt tension is correct. Adjust if necessary. 4. Check clutching idler assembly for wear or damage. Replace parts if necessary.
Unit will not shift or shifts hard	<ol style="list-style-type: none"> 1. Check shifting procedure. 2. Check lawn tractor drive belt adjustment and lawn tractor brake adjustment per manual. Adjust if necessary. 3. Have transaxle checked by an authorized dealer.
Steering slips or is loose	<ol style="list-style-type: none"> 1. Check for steering sector gear and pinion looseness. If gears are loose, make sector gear adjustment. 2. Check ball joints for wear. Replace if necessary.
Engine will not turn over Engine turns over but will not start	<ol style="list-style-type: none"> 1. Check starting procedure. Make sure starting instructions are followed. 2. Check fuse. 3. Check battery for charge. Make sure battery has been activated and charged. 4. On new units, remove spark plug and check cylinder for accumulation of oil due to improper handling. 5. Make visual check of electrical system to make sure all connections and lockout switches are secure. 6. Check engine according to engine manufacturer's instructions. 7. Have electrical system checked out by an authorized dealer. <ol style="list-style-type: none"> 1. Check starting procedure. Make sure starting instructions are followed. 2. Make sure fuel tank is filled with clean, fresh fuel. 3. Make sure fuel shut-off is open. 4. Make sure that throttle is in start or fast position and choke. 5. Check engine according to engine manufacturer's instruction. 6. Have wiring and lockout switches checked by an authorized service dealer. 7. Check fuel filter for obstructions. 8. Check for choke usage.
Blocked discharged tunnel	<ol style="list-style-type: none"> 1. Remove the grass collector and clean the discharge tunnel.

STORAGE

The tractor should be immediately prepared for storage at the end of the season, or if the unit is to be unused for 30 days or more. Fuel, if permitted to stand unused for extended periods (30 days or more) may develop gummy deposits which can adversely affect the engine carburetor and can cause engine malfunction.

DANGER

Never store engine with fuel in tank indoors or poorly ventilated enclosures, where fuel fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer, etc...

Handle fuel carefully. It is highly flammable and careless use could result in serious fire damage to your person and property.

Drain fuel into an approved container outdoors away from open flame.

To prepare the tractor for storage, proceed as follows:

1. Clean the tractor thoroughly.
2. Inspect the tractor for worn or damaged parts and tighten all loose bolts and nuts.
3. Prepare engine for storage (See the engine operating and maintenance manual).
4. Lubricate all points shown in the Lubrication Chart (page 19).
5. Remove the battery (See Battery removal paragraph, in Assembly section of this manual).
6. Clean the battery as described in the Battery maintenance paragraph on the Maintenance section of this manual. Battery is maintenance free and must be fully charged. A discharged battery will freeze and may burst. If possible, place the battery in a cool, dry area. Charge the battery overnight every 30 days.
7. Store the tractor in a clean, dry area and cover it for additional protection. A yearly check-up or a tune-up by an authorized service dealer is a good way of insuring that your tractor will provide maximum performance for next season.

NOTE:

alternative in minimizing the formation of gum depos Fuel stabilizer is an acceptable stabilizer to the fuel in the fuel tank or storage container. Always follow the mix ratio given by the stabilizer manufacturer. Run the engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor. Do not drain the gas tank and carburetor if using stabilizer.

TECHNICAL SPECIFICATIONS

<u>ENGINE:</u>	15,5 HP Diamond plus I/C Briggs & Stratton
<u>BATTERY:</u>	12 Volts/22Ah
<u>FRONT TYRES:</u>	16 x 6.50 - 8 100 KPa (1.0 BAR)
<u>REAR TYRES:</u>	20 x 10.00 - 8 80 KPa (0.8 BAR)
<u>TRANSAXLE:</u>	Tuff Torque Model K-46 Forward speed: 0 - 9.6 km/h to 10.0 km/h Reverse speed: 0 - 4.5 km/h to 5.0 km/h
<u>TURNING RADIUS:</u>	74 cm
<u>CUTTING HEIGHTS:</u>	7 heights: from 25 to 95 mm
<u>MOWING SIZE:</u>	Twin-blade: 102 cm
<u>MOWER DECK:</u>	Suspended
<u>BLADE CLUTCH:</u>	Warner Electro-magnetic clutch
<u>WEIGHT:</u>	Gross : 262 Kg Net : 247 Kg
<u>TRACTOR DIMENSIONS (L x W x H):</u>	240 x 106 x 110 cm

For improvement purposes, specifications and design are subject to change, without notice. Please be advised that no legal claims, of whatsoever they might be, can be used upon the information contained in this manual.

When performing repairs, make sure that only genuine parts are used. Use of non-original parts will void the warranty.

MAINTENANCE

The warranty on this lawn tractor does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain lawn tractor as instructed in this manual. The following maintenance check list is supplied to assist operator to properly maintain the lawn tractor. This is a check list only. Adjustments referred to will be found in the adjustment section of this manual.

MAINTENANCE CHECK LIST

SERVICE RECORD

FILL IN DATES AS YOU COMPLETE REGULAR SERVICE

BEFORE STORAGE																					
BEGINNING EACH SEASON																					
EVERY 100 HOURS																					
EVERY 50 HOURS																					
EVERY 25 HOURS																					
MONTHLY																					
FREQUENTLY																					
AFTER FIRST 20 HOURS																					
AFTER FIRST 5 HOURS																					
AFTER FIRST 2 HOURS																					
BEFORE EACH USE																					
CHECK ENGINE OIL LEVEL	*	*																			
CHANGE ENGINE OIL			*						1	2											*
CHANGE SPARK PLUG												*		*							
REPLACE AIR FILTER PAPER CARTRIDGE											1	2									
CLEAN AIR SCREEN									2												
INSPECT MUFFLER/SPARK ARRESTER										*											
REPLACE FUEL FILTER																				*	
CLEAN BATTERY AND TERMINALS									*												
CHECK BRAKE OPERATION	*					*															
CHECK TRANSMISSION									*												
CHECK TYRE PRESSURE (Fr: 1.0 bar, Rr: 0.8 bar)	*					*														*	
SHARPEN OR REPLACE MOWER BLADES									3												
CHECK FOR LOOSE FASTENERS	*																				*
CLEAN LAWN TRACTOR						*															*
DISCONNECT BATTERY CABLES																					*
SEE LUBRICATION CHART						*			*												*
ADJUST MOWER COG BELT						*				*											*

NOTES: 1. Change more often when operating under heavy load or in high temperatures (35 degrees and above). 2. Service more often when operating in dirty or dusty conditions. 3. Replace more often when mowing in sandy soil.