BAD BOY TRACTORS

MODEL
1025H



PLEASE REFER TO THIS MANUAL BEFORE YOU USE THE PRODUCT. ALWAYS PLACE THIS MANUAL NEAR THE PRODUCT AND NOTE THAT THIS MANUAL SHOULD BE TRANSFFERED TO OTHERS IF YOU TRANSFER THE PRODUCT TO THEM.

OPERATOR'S MANUAL

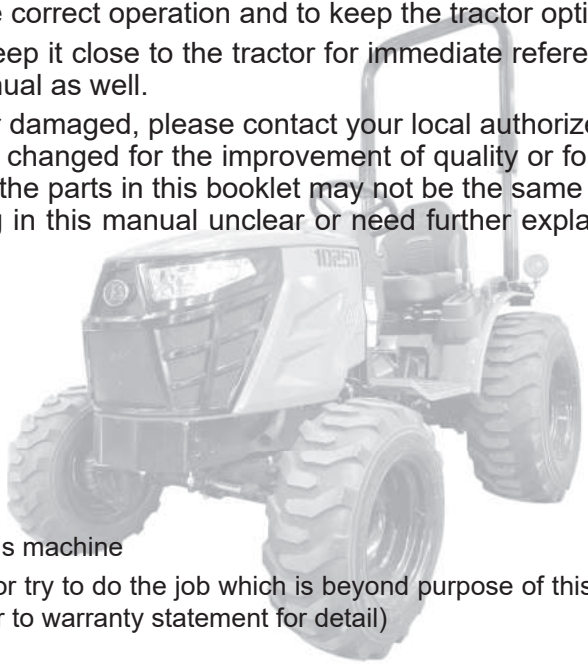
OPERATOR'S MANUAL
MODEL 1025H

PREFACE

This operator's manual contains handling tips and precautions for safe operation of your **BAD BOY 1025H** tractor. Read it carefully before you operate your tractor and make sure that you have a full understanding of this manual. This will ensure correct operation and to keep the tractor optimum condition.

After reading the manual, keep it close to the tractor for immediate reference. When you loan your tractor to someone else, loan the manual as well.

In case the manual is lost or damaged, please contact your local authorized dealer for a copy. Some parts of this product may have been changed for the improvement of quality or for safety reasons, in which case the photographs or drawings of the parts in this booklet may not be the same as the actual parts installed on this product. If you find anything in this manual unclear or need further explanation, please contact your authorized dealer.

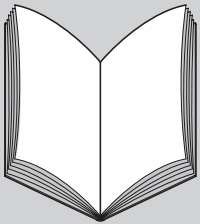


※ Regarding the purpose of this machine

Do not modify the machine or try to do the job which is beyond purpose of this machine. Otherwise it may cause the warranty cancellation. (Refer to warranty statement for detail)

TABLE OF CONTENTS

SECTION



- FOR SAFE OPERATION 1
- REGARDING WARRANTY SUPPORT 2
- SPECIFICATION 3
- DESCRIPTION OF OPERATING SYSTEM 4
- CONTROLS AND COMPONENTS 5
- PERIODIC CHECKS AND MAINTENANCE 6
- DIAGNOSIS AND TROUBLE SHOOTINGS 7
- STORAGE AND DISPOSAL 8

SAFETY AND VEHICLE DAMAGE WARNING

The instructions given with the following marks are very important for your safety.

DANGER	**Failure to observe the instruction given with this mark may result in death or injury.**
WARNING	**Failure to observe the instruction given with this mark may expose you to the risk of death or injury.**
CAUTION	**Failure to observe the instruction given with this mark may expose you to injury.** **• The section, " To Ensure Safe Operation," on the following pages details safety points to be observed to ensure safe operation of your tractor.** **• Please make sure you read it carefully before operating the tractor.**
NOTE	**This instruction is to give an additional description to operator so that he/she can operate the machine more effectively.**
IMPORTANT	**Read this Manual for correct and safe use of the product. Failure to use the product properly may result in an accident. Keep this Manual close to the tractor after you have read it.**

SYMBOL MARKS OF CONTROLLER

This manual includes symbol marks of the controller to simplify operations for maneuverability and maintenance. These meanings are as below, so carefully read it for a proper function.

	Left side indicator		High Beam		Preheat
	Right side indicator		Battery		Engine oil pressure

"USE AND DISPOSAL" POLICY CONCERNED WITH ENVIRONMENT PRESERVATION

We try our best to preserve the environment and are always concerned about our environmental impact at each step of planning, development, production, distribution, use and disposal of products, and for our overall operations through an “environmentally friendly” management system. We comply with international environmental regulations, environmental regulations designated by country and local authorities and other requirements with which we are in agreement, and we work towards the prevention of environmental pollution and the conservation of resources. We provide environmental education and have an awareness campaign to raise environmental awareness among all our employees and members of the supporting companies.

We introduce the “Use and Disposal” policy concerned with environment preservation as follows.

1. Please read the operator’s manual thoroughly for global environment protection. Overload on the machine shortens the product life and increases the harmful exhaust gas, which causes air pollution due to the incomplete combustion.
2. When replacing various fluids (for engine, transmission, hydraulics, etc.) by yourself, don’t dispose the used oil to anywhere not recommended. It can pollute the ground and water. Please contact your local dealer to dispose it legally.
3. Observe the operator’s manual and store or dispose the waste product properly. Rust, oil, etc. leaked from waste product improperly stored can pollute the ground and water. Accordingly for a waste product disposal, contact the necessarily “approved waste collection and recycling facility” to discard the used materials legally.

1. FOR SAFE OPERATION

SAFETY PRECAUTIONS 1-2

BEFORE USING THE MACHINE 1-2
BEFORE WORKING 1-11
WHILE WORKING 1-16
AFTER USING THE MACHINE 1-17
PRECAUTION FOR PROLONGED STORAGE 1-21
OTHER 1-23

DECAL MOUNTING LOCATION 1-31

CAUTIONS FOR DECAL MAINTENANCE 1-35

SAFETY PRECAUTIONS

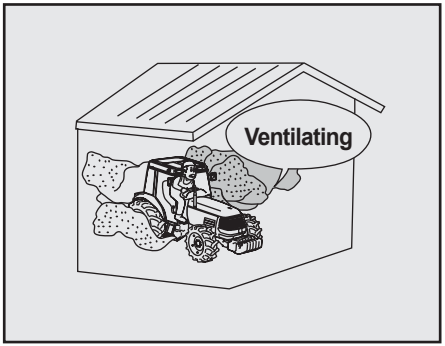
If the instructions in this chapter are ignored, it may cause a machine failure, a fatal accident with injury or death.

For further detailed information, refer to each chapter.

NOTE

- **Please understand that some of the figures or contents in this manual may not match with your own machine due to the product variation.**
- **This tractor is not designed for road driving. Please use a truck to move this machine on the public roads.**

BEFORE USING THE MACHINE

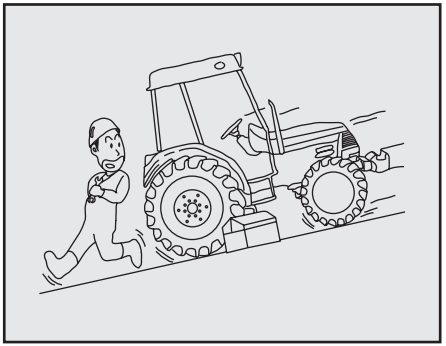


⚠ WARNING

Beware of exhaust gas;

- **Running the engine, repairing (tightening) any painted part or grinding any painted area should be performed only in a well-ventilated area.**

If this instruction is ignored, the exhaust gas or dust can cause intoxication and lead to fatal consequences.



⚠ WARNING

Wide and flat enough area;

- **Inspect or repair the tractor on a wide and flat area.**

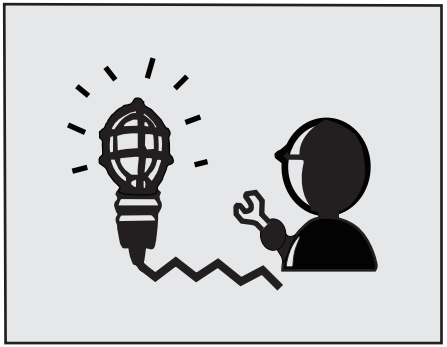
If this instruction is ignored, an unexpected accident may occur, such as overturning of the tractor.

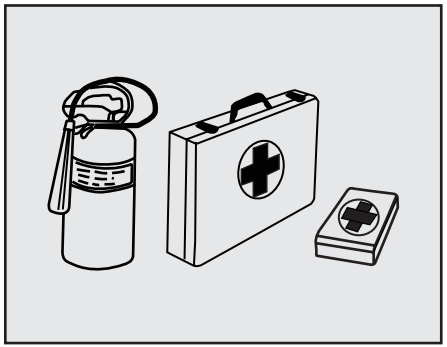
⚠ WARNING

Clean and arranged place;

- **Do not mess the place by dust, mud, oil, or parts**

If this instruction is ignored, an unexpected accident may occur.





⚠ WARNING

Carry out maintenance in a well-lit place;

- **Make sure work area is properly lighted.**

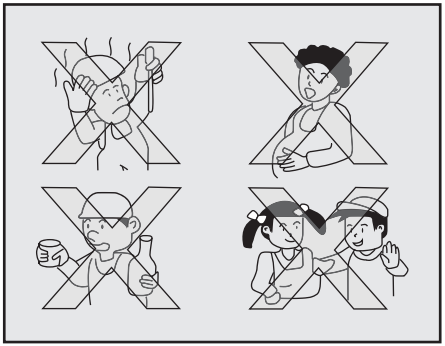
  Use safety work lights with protective covering when working inside or under the machine.

If this instruction is ignored, an unexpected accident may occur, possibly fire or explosion.

⚠ WARNING

Prepare for emergencies;

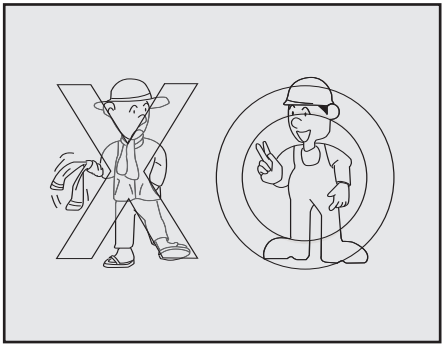
- **Keep a first aid kit and fire extinguisher handy at all times while operating machine.**



⚠ WARNING

Do not drive if you are;

- **Unable to concentrate because of fatigue, under treatment of medicine.**
- **Under the influence of alcohol**
- **Pregnant**
- **Under the age of 18**

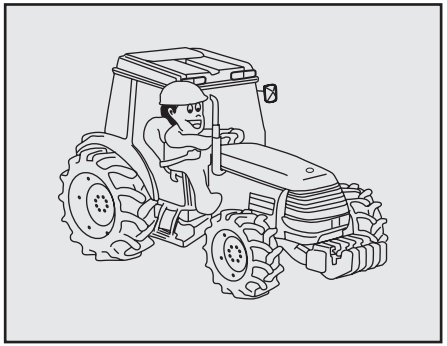


⚠ WARNING

Wear properly for the job;

- **Hair band, loose clothing is not allowed. Wear tight clothes, work hat, and work shoes which have rough bottoms against slippery surface.**

If this instruction is ignored, you will be exposed to a risk of being entangled, slipping, or falling.

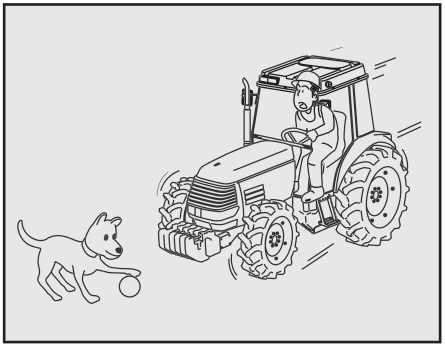


⚠ WARNING

Use only recommended implements;

- **Be sure to use only implements which are recommended by manufacturer.**

If this instruction is ignored, an unexpected accident may occur or tractor may not perform properly.

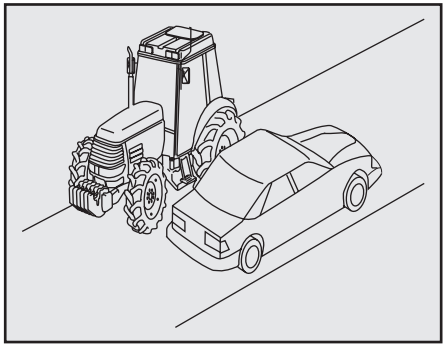


⚠ WARNING

Start the machine slowly after reminding bystander;

- **Start the engine after reminding bystanders of your intension. Do not start the machine abruptly.**

If this instruction is ignored, unexpected accident or injury can happen.

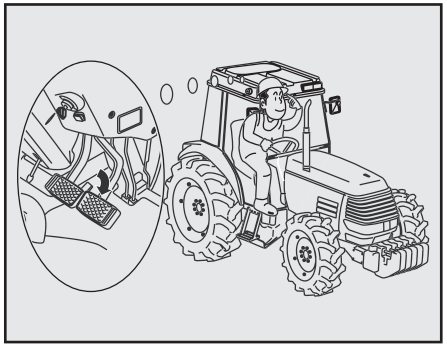


⚠ WARNING

Pay attention to the shoulder of the road;

- **When moving along the unpaved road with ditches or slanted sides, pay attention to the shoulders.**

If this instruction is ignored, there is a risk of falling over.

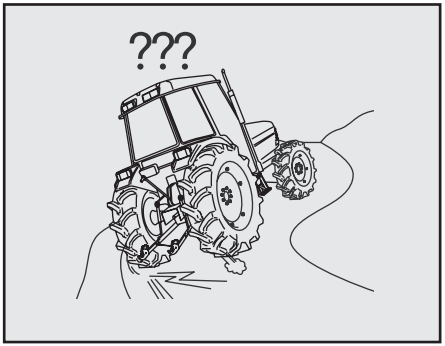


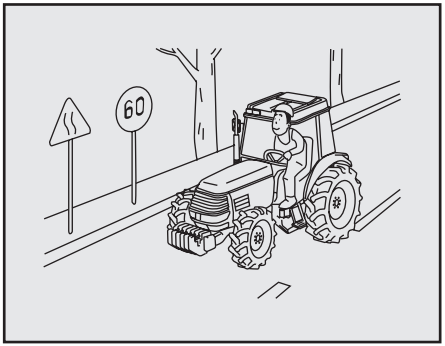
⚠ WARNING

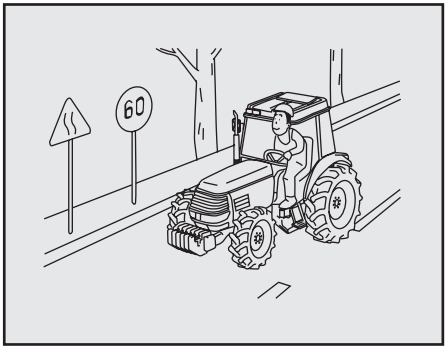
Interlock the brake pedals (left and right) when driving on a road;

- **Make sure to interlock the brake pedals (left and right) when driving on a road**

If this instruction is ignored, there is a risk of abrupt turning or overturning due to one-sided braking.







⚠ WARNING

Avoid rapid starting, braking, turning, and excessive speed;

- **Start and stop the tractor slowly. Reduce engine speed when making a turn and driving on hilly or curved roads.**

If this instruction is ignored, there is a risk of overturning or damage to the machine.

⚠ WARNING

Observe traffic regulations and drive safely;

- **When driving on the road, observe the traffic regulations and wear a hard hat and seat belt.**

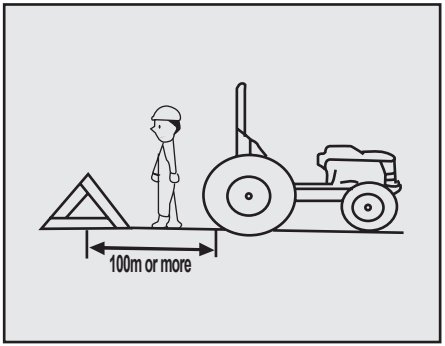
If this instruction is ignored, there is a risk of accident or injury.

⚠ WARNING

Observe traffic regulations when driving on a road safely;

- **If the machine is broke down and stopped on the road, move the machine to a safe place out of the road.**

If this instruction is ignored, there is a risk of accident or injury.

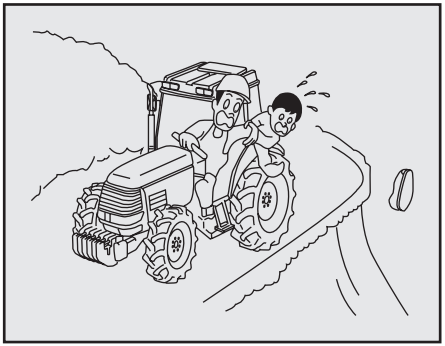


⚠ WARNING

Put machine shut down sign if the machine is stopped on the road;

- **If the tractor is stopped on the road due to the machine failure, put the machine shut down sign (Emergency triangle reflex reflector) at least 100~200 yards before failed machine in accordance with local traffic laws.**

If this instruction is ignored, the machine can be hit by a car and cause a traffic accident with injury or death.

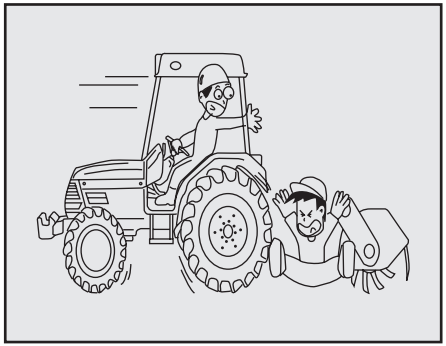


⚠ WARNING

Only driver should be aboard the tractor while in operation;

- **This tractor is designed to allow only one operator. The driver must not allow anyone else to get on the tractor.**
- **Especially never allow children on the machine while in use.**

If this instruction is ignored, an unexpected accident may occur.

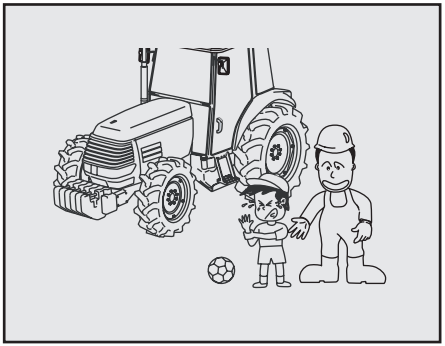


⚠ WARNING

Do not allow anyone near while operating the tractor or implement;

- **When engaging or disengaging the implement by moving the tractor, make sure that no one is around the tractor or between the implement and the tractor.**

[If this instruction is ignored, there is a risk of accident or injury.

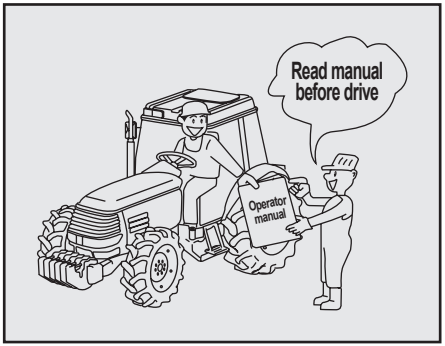


⚠ WARNING

Precautions for children;

- **Fully warn the children and keep them away from the tractor at all times.**

If this instruction is ignored, unexpected accident of injury can happen.

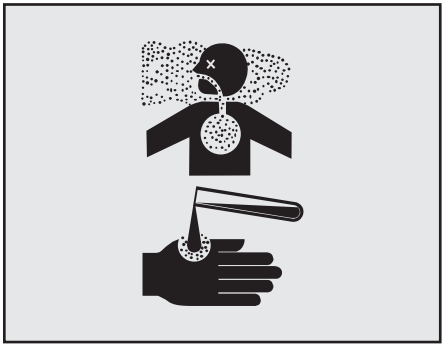


⚠ WARNING

Properly train anyone operating;

- **Explain the handling tips in detail and make sure the driver reads the Manual before driving.**

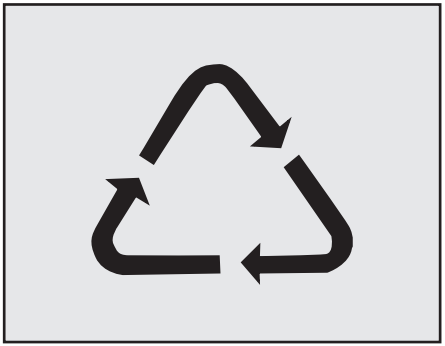
If this instruction is ignored, there is a risk of death, serious injury, or damage to tractor.



⚠ WARNING

Use Pesticides safely;

- **Careless use of agricultural chemicals such as disinfectants, herbicide, pesticides, rat poison, and fertilizer can be harmful to environment and human body. Be sure to observe all relevant regulation and instructions to use the agricultural chemicals efficiently and safely. Then it may prevent injury or accident.**



⚠ WARNING

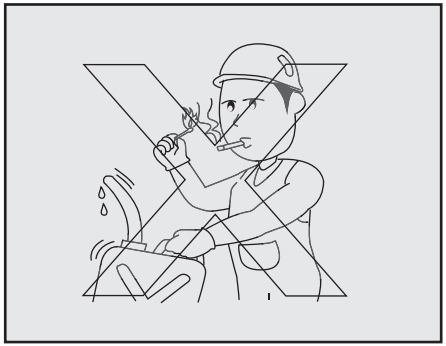
Observe all relevant regulations for disposal;

- **Careless disposal of waste product can be harmful to environment and ecosystem.**
- **When draining the fuel and oil, use a proper container that is not leaking, not food or beverage containers to prevent from drinking. Do not bury the waste product in the ground or dispose to drainage.**

⚠ WARNING

Observe all relevant regulations for disposal;

- **Be sure to observe all relevant regulations when you dispose of the engine oil, transmission oil, fuel, coolant, filters and battery.**
- **Never dispose the used oil directly to the river or drainage, follow legal procedures.**

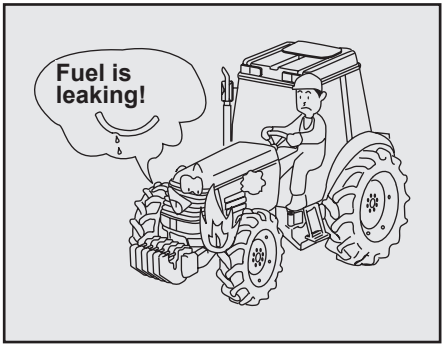


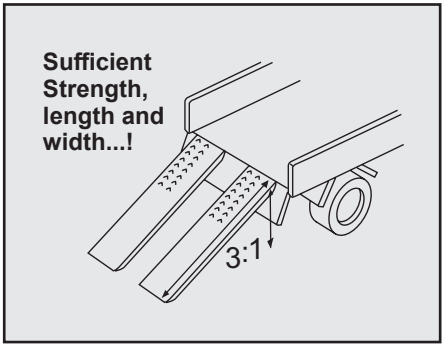
⚠ WARNING

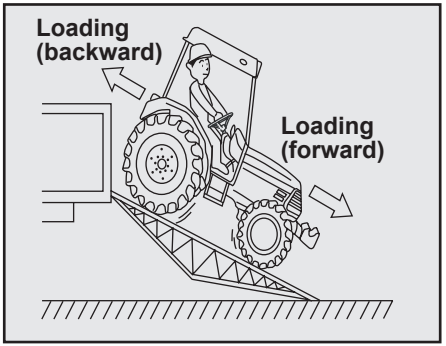
No smoking or open flame when fueling;

- **Do not smoke or use match or lighter while refueling.**

If this instruction is ignored, fuel can catch fire and lead to explosion or fatal injury with burn.







⚠ WARNING

Inspect for fuel leaking;

- **Check the fuel lines and hoses for damage or leakage**

If this instruction is ignored, there is a risk of fire.

⚠ WARNING

Consider the strength, length and width of loading ramps before using;

- **Loading or unloading must be done on a flat and safe place, the tractor engine switched off, and the parking brake engaged. The loading ramps must be non-slip and have sufficient strength, length, and width for the tractor.**

If this instruction is ignored, the tractor may roll backwards or fall off causing accident or injury.

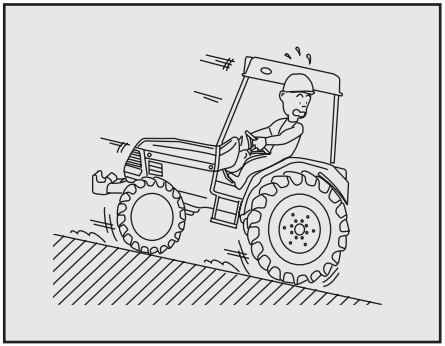
⚠ WARNING

Move the tractor backward when loading, and forward when unloading;

- **Move the tractor backward when loading it on the truck, and forward when unloading from the truck.**

If this instruction is ignored, the tractor may roll or fall off causing accident or Injury.

BEFORE WORKING

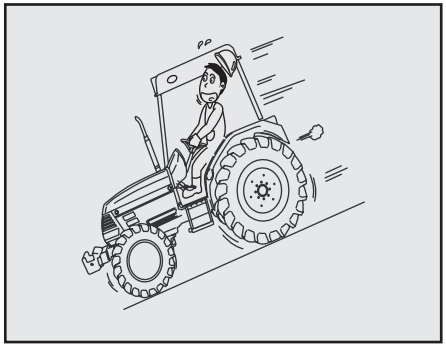


⚠ WARNING

Be careful when driving on the loading ramps;

- **Be careful when driving on the loading ramps. Do not disengage the clutch, shift the main shift, range shift, or forward/ reverse lever.**

If this instruction is ignored, the tractor may roll backwards or fall causing accident or injury.

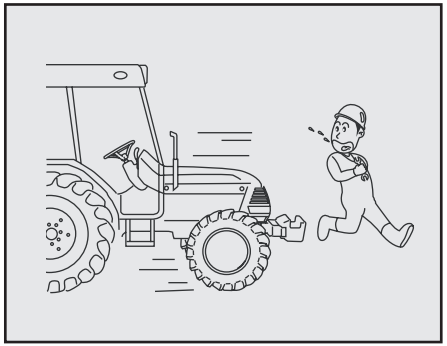


⚠ WARNING

Do not shift gears on slopes or on the loading ramps;

- **When driving on slopes or on loading ramps, select the proper shift gear before approaching the loading ramps and then do not shift the gear on the loading ramps.**

If this instruction is ignored, there is a risk of slipping, rolling, or overturning.

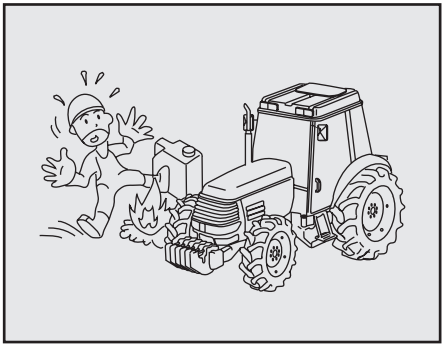


⚠ CAUTION

Stop the engine before maintenance;

- **Stop the engine before maintenance when checking, repairing or cleaning the machine.**

If this instruction is ignored, there is a risk of injury.



⚠ DANGER

Stop and cool down the engine before fueling or lubricating;

- **Do not fill the fuel while the engine is running or machine is hot.**

If this instruction is ignored, fuel can catch fire or lead to fatal injury with burn.

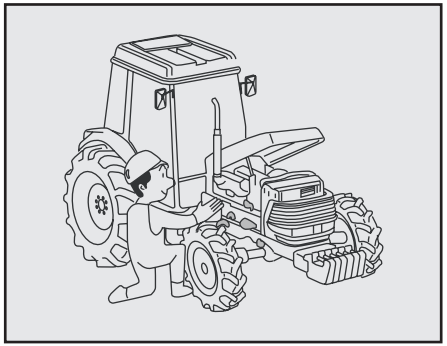


⚠ DANGER

No fire or spark near to the battery;

- **No fire or spark near to the battery while checking and charging the battery.**

If this instruction is ignored, the battery can cause a blaze or explosion and lead to a fatal injury or death.

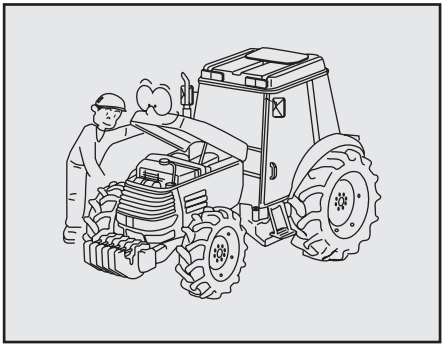


⚠ DANGER

Remove dirt and debris from muffler and engine before operating;

- **Clean if there is dust, debris or fuel on the engine or muffler before operating the machine every day.**

If this instruction is ignored, there is a risk of fire.

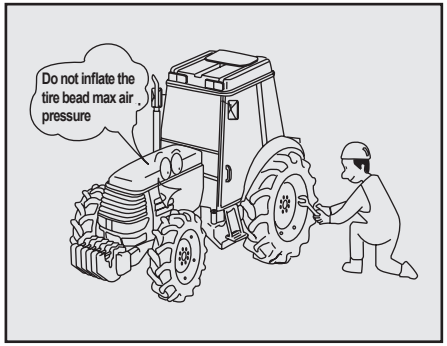


⚠ WARNING

Check electrical component and wire harness;

- **Check before work if the wire harnesses are burned or stuck on any other component, if the cord cover is peeled off or if the wire connectors are loose.**

If this instruction is ignored, the electrical short can cause fire and injury.

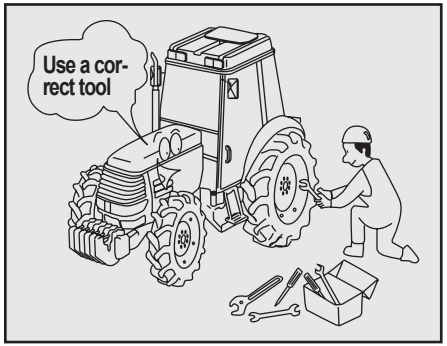


⚠ CAUTION

Do not over inflate tires;

- **When filling tires with air, do not inflate it beyond the maximum pressure stated in this manual. (Refer to P5-22 of Proper inflation pressure)**

If this instruction is ignored, the tire may blow out, causing an injury.

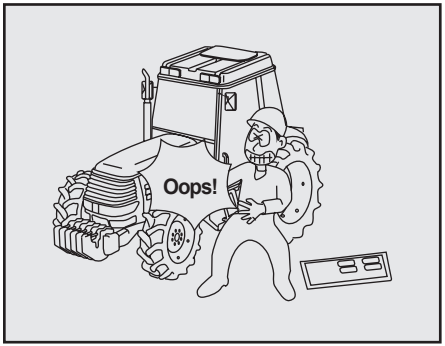


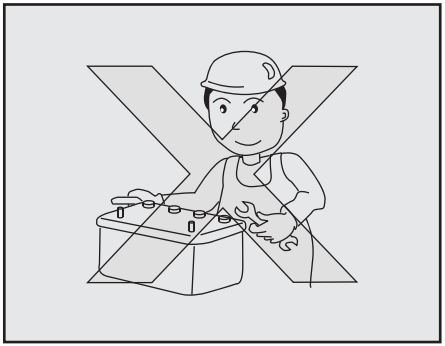
⚠ CAUTION

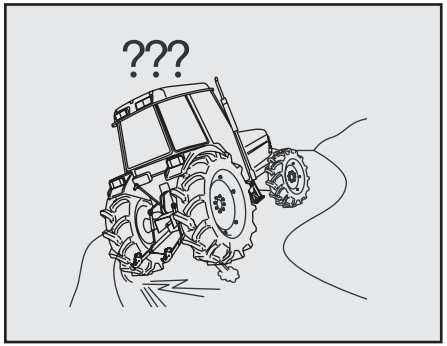
Use correct tools;

- **Use proper tools to carry out all maintenance procedure. Also have available the required tools in the tractor at all times.**

If this instruction is ignored, there is a risk of accident due to poor maintenance.







⚠ CAUTION

Secure hood and side covers before operating tractor;

- **After detaching the covers for checking or maintenance, make sure to put them back in their place.**

If this instruction is ignored, there is a risk that you may get entangled in the tractor or get injured.

⚠ CAUTION

Observe correct procedures when installing or removing the battery;

- **Connect the (+) terminal first when installing the battery, and disconnect the (-) terminal first when removing it.**

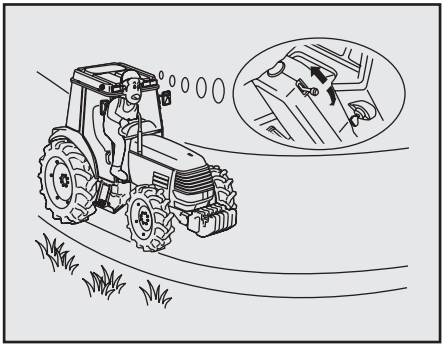
If this instruction is ignored, there is a risk of burn or fire due to short circuit.

⚠ WARNING

It is necessary to inspect the brake and steering wheel;

- **Check if the brakes work properly and evenly on both sides or if the steering wheel is loose.**

If this instruction is ignored, there is a risk of accident.

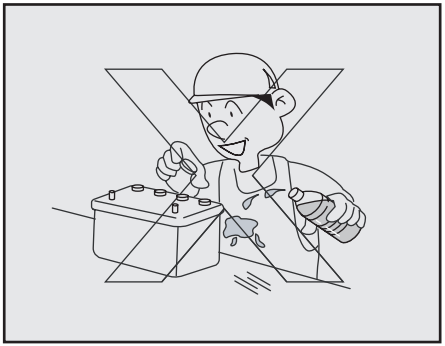


⚠ WARNING

Lock tilt lever and telescopic knob when adjusting steering wheel;

- **Except when you adjust the steering wheel, make sure that the tilt lever and telescopic knob are secured in the "No" and "Lock" positions.**

If this instruction is ignored, the tractor may not turn properly, causing an accident.

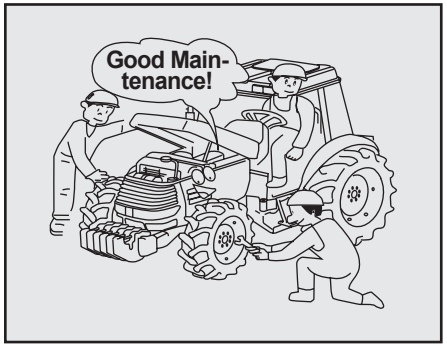


⚠ DANGER

Avoid contact with the battery solution;

- **Be careful that your body or your clothes do not come in contact with the battery solution. If it contacts your skin, wash immediately with water.**

If this instruction is ignored, it can burn your skin or clothes.



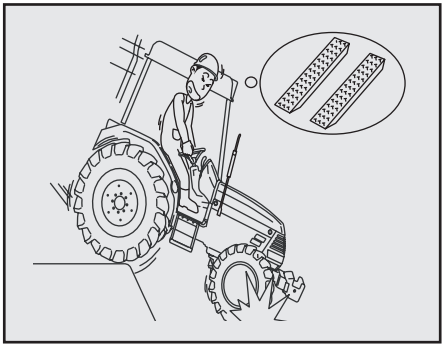
⚠ WARNING

Be sure to check before and after using machine;

- **Be sure to check the machine before and after using. Especially inspect and repair controls such as clutch, brake, lever, etc.**

If this instruction is ignored, the machine can be broken or lead to an accident or injury.

WHILE WORKING

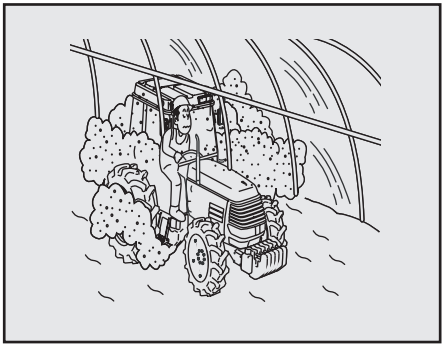


⚠ WARNING

Use the loading ramps when crossing a ditch or a dike;

- **Be sure to use the loading ramps when crossing a ditch or dike, or when passing through soft land. The loading ramps must be suitable for the tractor in width, length and strength.**

If this instruction is ignored, there is a risk of accident that the tractor may slip or turn over.

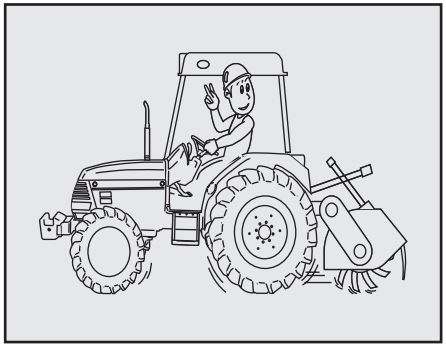


⚠ WARNING

Properly ventilate when working in a green house;

- **Ventilate the green house to let out the exhaust gas.**

If this instruction is ignored, the exhaust gas can cause intoxication and lead to fatal consequences.

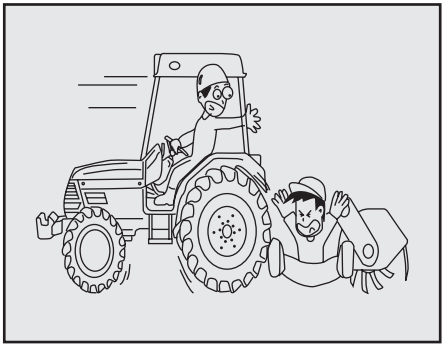


⚠ WARNING

Pay attention and keep hands on the steering wheel while driving;

If this instruction is ignored, there is a risk of accident or injury.

AFTER USING THE MACHINE

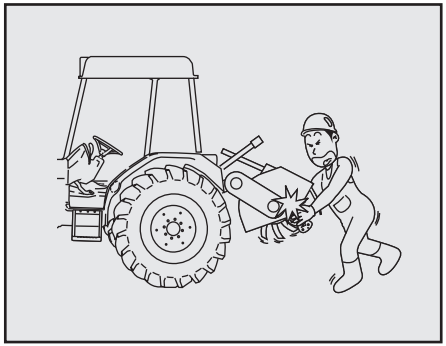


⚠ WARNING

Do not allow anyone near while operating the tractor or implement;

- **When engaging or disengaging the implement by moving the tractor, make sure that no one is around the tractor or between the implement and the tractor.**

If this instruction is ignored, there is a risk of accident or injury.

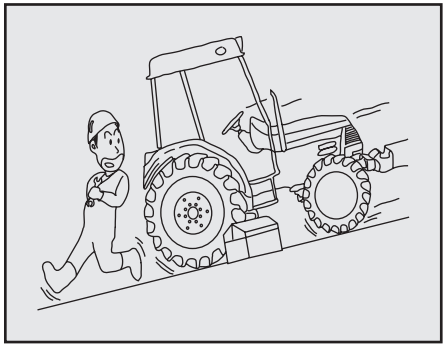


⚠ WARNING

Stop the engine when removing grass, etc. from blades of the cultivator;

- **Stop the engine when removing grass, etc. from blades of the cultivator and lock the flow control valve not to lower the implement.**

If this instruction is ignored, there is a risk that you will get entangled in the cultivator or sustain a serious injury due to lowering the implement.

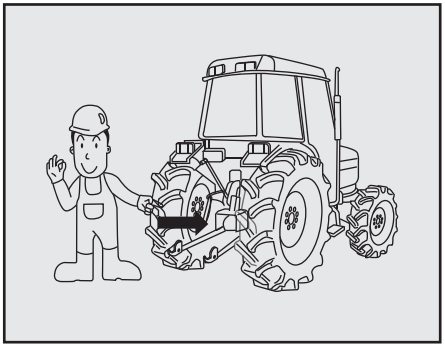


⚠ WARNING

Perform the maintenance on a level and safe location;

- **Perform the maintenance on a level and safe location that will keep the tractor in place and will not cause a risk to people passing by. Before carrying out the maintenance, place blocks at the front and rear tires to prevent movement.**

If this instruction is ignored, an unexpected accident may occur, such as overturning of the tractor.

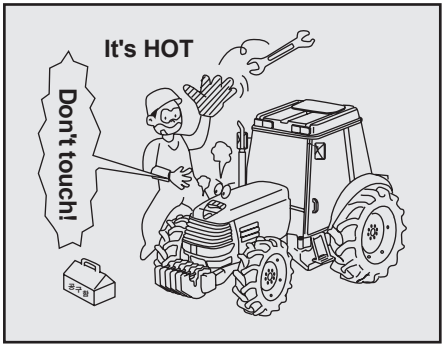


⚠ CAUTION

Cover the PTO shaft when not in use;

- **When the PTO shaft is not in use, apply grease and keep it covered.**

If this instruction is ignored, there is a risk that you may get entangled or get injured. Implement shaft installation on the PTO shaft will not be easy due to the rust on it.

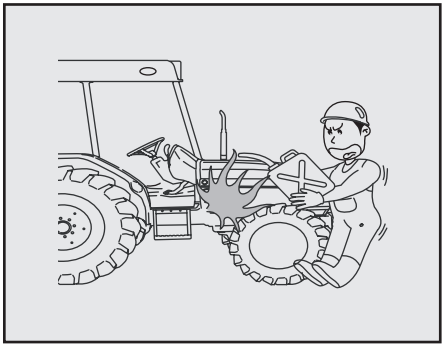


⚠ CAUTION

Carry out maintenance after the parts have cooled down;

- **Carry out the maintenance work after the heated area such as the muffler or the engine is fully cooled down.**

If this instruction is ignored, there is a risk of getting burnt.



⚠ CAUTION

Stop and cool down the engine before fueling or lubricating;

- **Do not fill the fuel while the engine is running or machine is hot.**

If this instruction is ignored, fuel can catch fire or lead to fatal injury with severe burns.

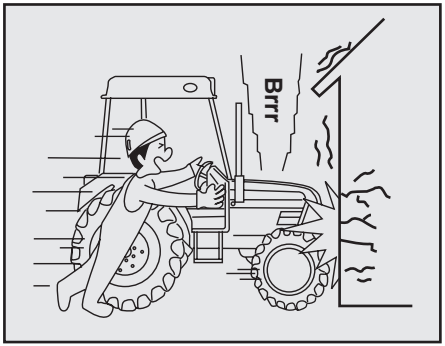


⚠ CAUTION

Be careful of high oil pressure;

- **Make sure that the hydraulic coupling or the hose is not loose or damaged. Before separating the hydraulic coupling or the hose, eliminate the high pressure inside the hydraulic system by moving the control lever while engine is stopped.**

If this instruction is ignored, the oil under high pressure may cause skin injury.

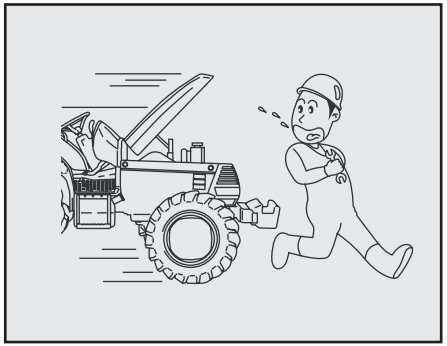


⚠ WARNING

Make sure that you are seated in the driver's seat with your seat belt fastened before starting engine;

- **When starting the engine, make sure that you are seated in the driver's seat with your seat belt fastened and check the seat position and the safety of the tractor.**

If this instruction is ignored, an unexpected accident may occur.

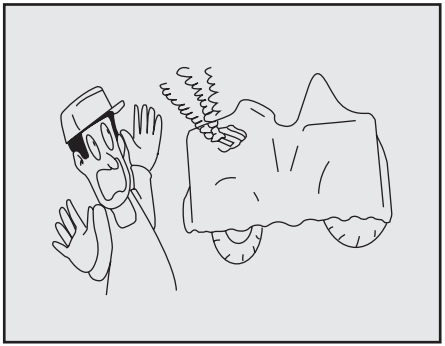


⚠ CAUTION

Stop the engine before maintenance;

- **Stop the engine before maintenance such as checking, repairing or cleaning the machine.**

If this instruction is ignored, there is a risk of injury.

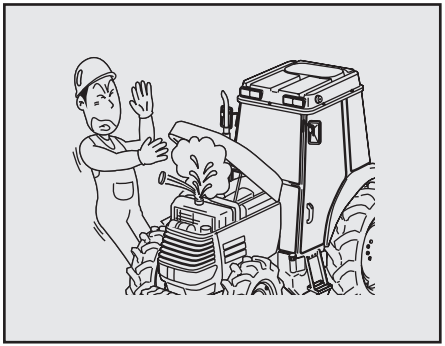


⚠ WARNING

Put tractor rain cover on only after tractor has cooled down;

- **Put tractor rain cover on only after parts such as the engine and muffler have cooled down.**

If this instruction is ignored, there is a risk of fire.

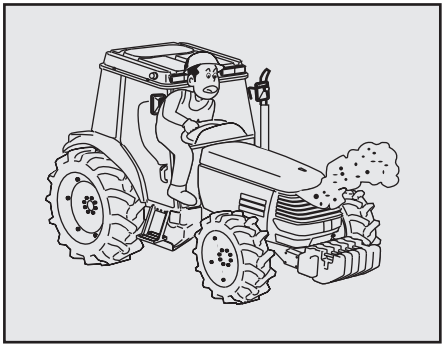


⚠ WARNING

Do not open the radiator cap when the radiator is hot;

- **Never open the radiator cap when the radiator is heated.**

If this instruction is ignored, hot water may spurt, causing burns or damage.



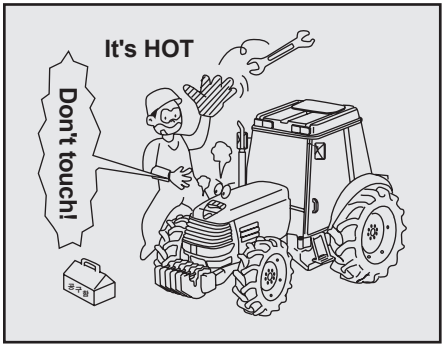
⚠ WARNING

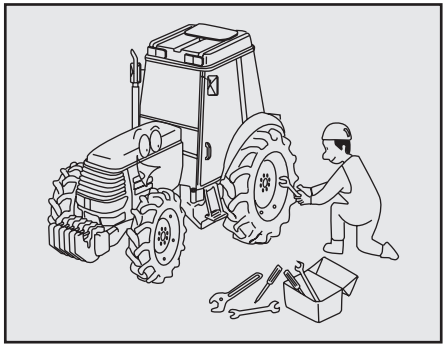
Remove dirt and debris from muffler and engine before operating;

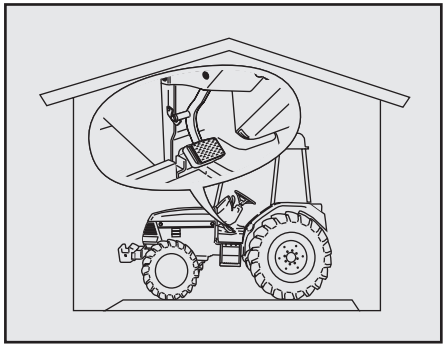
- **Clean if there is dust, debris or fuel on the engine or muffler before operating the machine every day.**

If this instruction is ignored, there is a risk of fire.

PRECAUTION FOR PROLONGED STORAGE







⚠ CAUTION

Be careful of hot muffler;

- During operation and right after the engine is turned off, the muffler is very hot. Avoid touching it.

If this instruction is ignored, you may get burnt.

⚠ CAUTION

After working, immediately repair if necessary;

- Immediately repair or replace the faulty parts.
  - Tighten the loose bolt and nut right away.

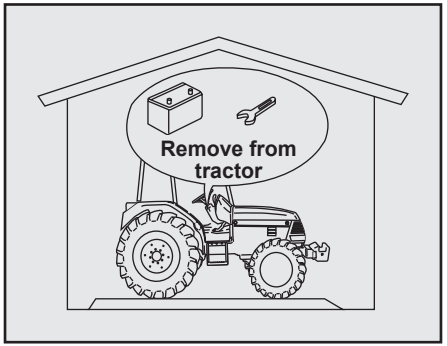
If this instruction is ignored, an unexpected accident may occur due to poor maintenance.

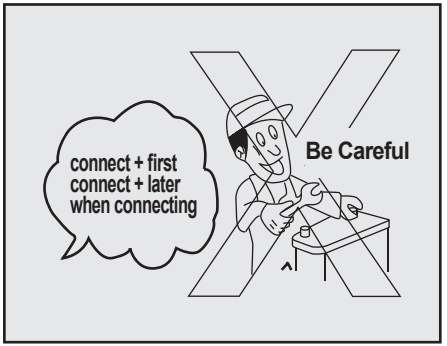
⚠ CAUTION

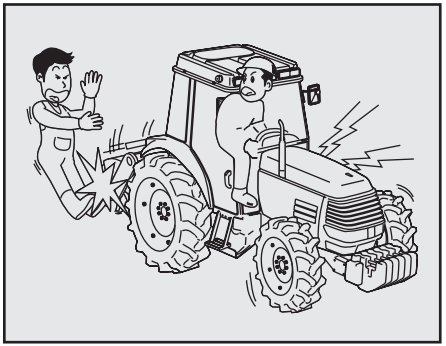
Disengage the clutch when storing the tractor for a long time;

- When storing the tractor for a long period of time, make sure to put the clutch pedal in the disengaging position.

If this instruction is ignored, the clutch disc can be stuck to the fly wheel after long period time.







⚠ WARNING

Disconnect the Battery and the key when storing the tractor for a long period of time;

- **When storing the tractor without use for a long period of time, park the machine on the leveled ground and clean each component, remove the battery and keep the key in a safe place.**

If this instruction is ignored, battery power may be weakened and starting will be failed.

⚠ CAUTION

Observe correct procedures when installing or removing the battery;

- **Connect the (+) terminal first when installing the battery, and disconnect the (-) terminal first when removing it.**

If this instruction is ignored, there is a risk of burn or fire due to short circuit.

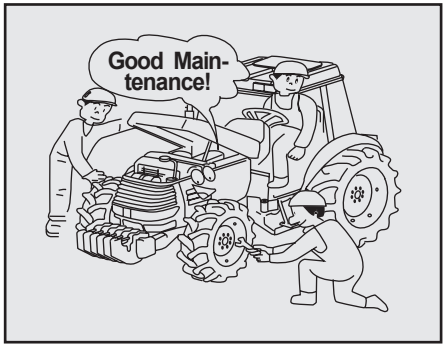
⚠ WARNING

Confirm that the implement is down on the ground when starting the engine;

- **When starting the engine, confirm that the control lever is on "Lowest" position.**

If this instruction is ignored, implement may come down suddenly and cause an injury.

OTHER



⚠ WARNING

Maintenance periodically;

- After using tractor, visit your local dealer for maintenance, such as oil change and filters.
  - Contact the local dealer to discard the parts (battery, etc.) or waste materials.

If this instruction is ignored, there is a risk of accident due to poor maintenance.

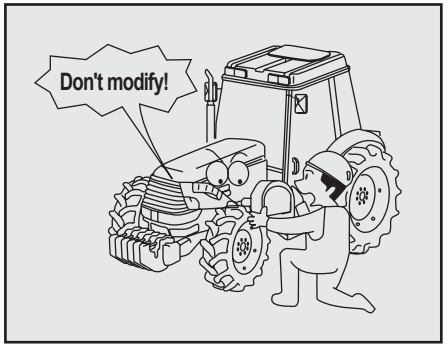
⚠ WARNING

Do not adjust or repair following components. Consult your local BRANSON dealer for these repair;

- Injection capacity and timing of the engine fuel injection pump.
- Correction and repair of hydraulic system (safety valve, hydraulic pump, brake valve, PST cylinder, SCV valve).

There is a risk of accident or injury or machinery breakdown. Remember it may cause the warranty cancellation.

If this instruction is ignored, consult your local BRANSON dealer for those repair and adjustment.

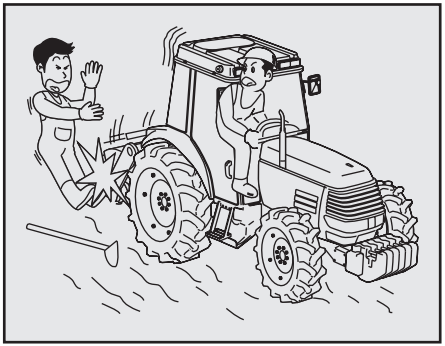


⚠ CAUTION

Do not modify the tractor;

- Use only the genuine parts or other approved parts. Do not modify the tractor.

If this instruction is ignored, there is a risk of accident or injury or machinery breakdown. Remember it may cause the warranty cancellation.

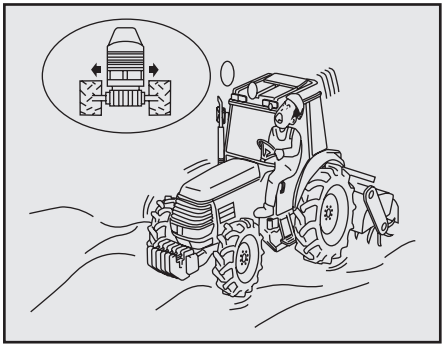


⚠ WARNING

Pay attention when turning with implement;

- **Depending on implements, the overall length may become very long. Pay particular attention to people or objects nearby when making a turn.**

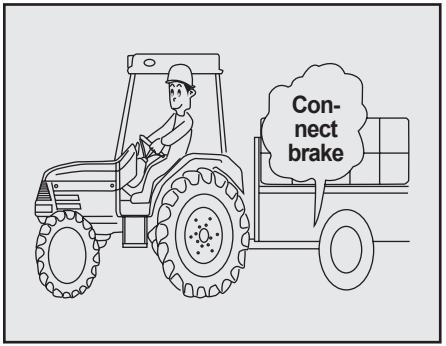
If this instruction is ignored, there is a risk of person injury or a collision of the implement.



⚠ WARNING

Move wheels to widest setting (width between left and right tires) when working slope or when towing;

If this instruction is ignored, there is a risk of turning over.

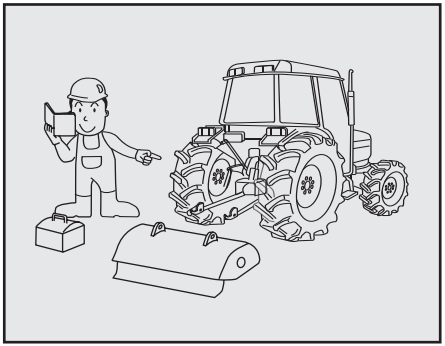


⚠ WARNING

Use caution sign when towing a trailer;

- **Link the brake of the trailer with the brake of the tractor. Do not shift gears when driving on a hill.**

If this instruction is ignored, there is a risk of accident or injury.

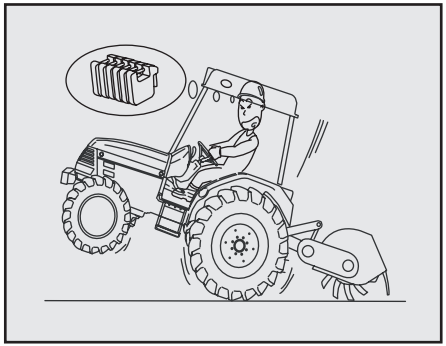


⚠ WARNING

Follow the instruction manual when engaging an implement;

- **When engaging an implement to the tractor, follow the instruction manual for the implement.**

If this instruction is ignored, there is a risk of personal injury or damage to the tractor.

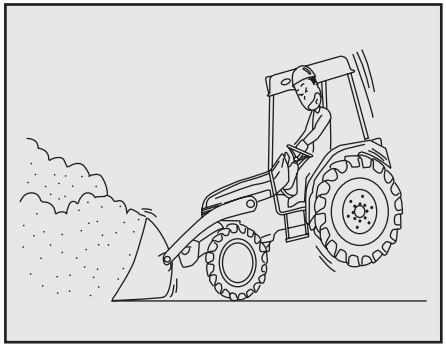


⚠ WARNING

Balance a heavy implement with weights;

- **When engaging a heavy implement, load the weights on the front of tractor to keep the balance of the tractor.**

If this instruction is ignored, there is a risk of accident or injury due to loss of balance.

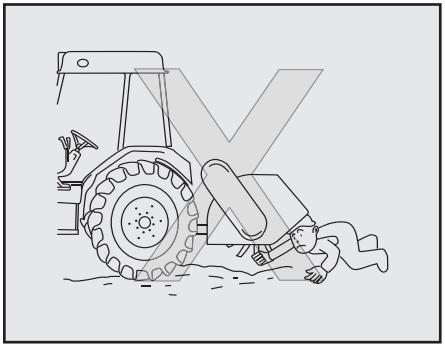


⚠ WARNING

Pay attention to the balance between the front and rear side during the front-end-loader operation;

- **During the front-end-loader operation, apply weights or implement to avoid loosing balance between the front and the rear side of tractor.**

If this instruction is ignored, there is a risk of overturning accident due to loss of balance.

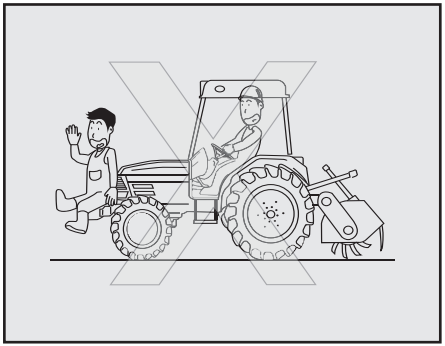


⚠ WARNING

Do not get under or put your feet under the implement;

- **Do not get under or put your feet under the implement.**

If this instruction is ignored, the implement unit may fall down and there is a risk of injury.

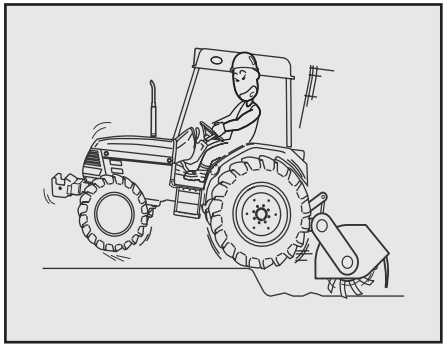


⚠ WARNING

Do not substitute balance weights with a person or anything else;

- **Do not use a person or anything else in place of the balance weight. Use only genuine balance weight.**

If this instruction is ignored, there is a risk of accident or injury.

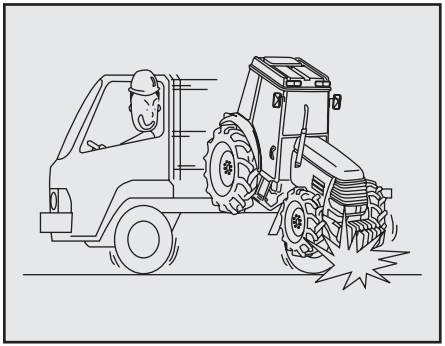


⚠ WARNING

Be careful of unexpected movement when using the rotary tiller;

- **When working with the rotary tiller, put the tiller slowly on soft or rocky ground. The tractor may be pushed in an unexpected direction by the rotating force of the tiller.**

If this instruction is ignored, there is a risk of accident or injury.

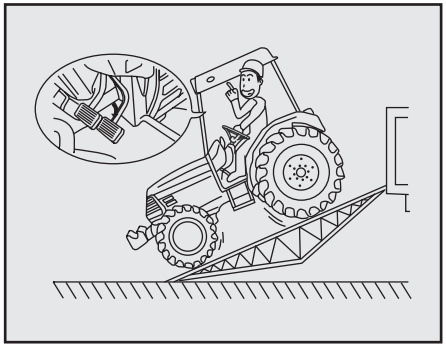


⚠ WARNING

Properly secure tractor during transport;

- **When transporting the tractor, apply the parking brake with gear engaged and fasten the tractor to the truck securely using ropes or belts with sufficient strength.**

If this instruction is ignored, There is a risk of accident that the tractor may fall off the truck.

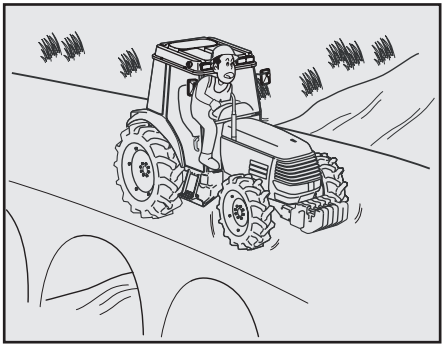


⚠ DANGER

Interlock the brake pedals for both sides when loading or unloading the tractor;

- **It is necessary to interlock the brake pedals for both sides when loading or unloading the tractor.**

If this instruction is ignored, the tractor may overturn due to one-sided braking when the brake pedal is depressed in an emergency.

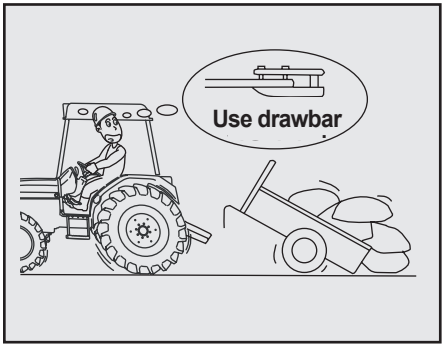


⚠ WARNING

Release the differential gear lock when making a turn;

- **Make sure to release the differential gear lock when making a turn.**

If this instruction is ignored, the tractor may not turn to the intended direction and cause an accident.

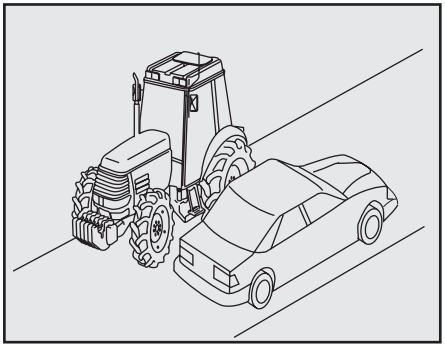


⚠ WARNING

Use the drawbar when towing;

- **Make sure to use the drawbar when towing. Never tow anything with the top link or the lower links.**

If this instruction is ignored, the tractor may turn over.

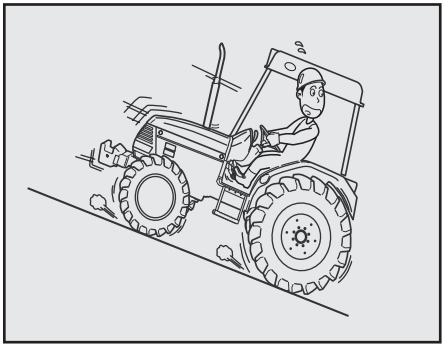


⚠ WARNING

Pay attention to the shoulder of the road;

- **When moving along the unpaved road with ditches or slanted sides, pay attention to the road shoulder.**

If this instruction is ignored, there is a risk of falling over.

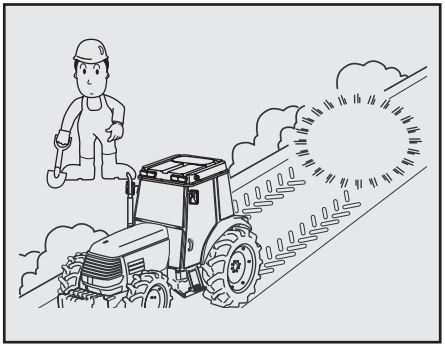


⚠ WARNING

Be careful when driving on a hill;

- **Be careful when driving on a hill. Do not disengage the clutch on the hill. Do not shift the main shift lever, range shift lever, or shuttle lever in [neutral] on the hill.**

If this instruction is ignored, the tractor may roll backwards or fall causing accident or injury.

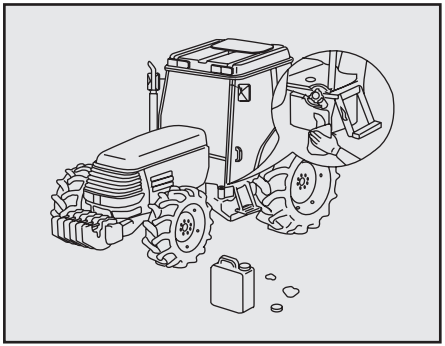


⚠ WARNING

Turn off engine in a level area when leaving the tractor;

- **When leaving the tractor, park the tractor on a level and safe area, turn off the engine, and apply the parking brake. Also, lower the implement on the ground.**

If this instruction is ignored, the tractor may move and cause an accident.

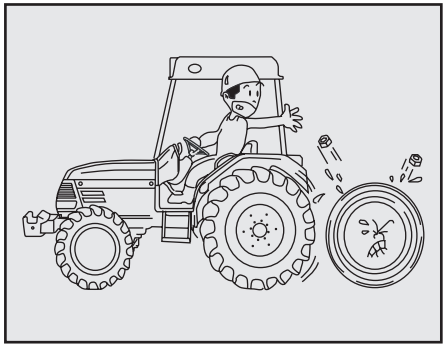


⚠ WARNING

Remove spilled excess fuel after closing the fuel cap;

- **After filling the fuel tank, close the fuel filler cap completely and wipe off the excess fuel thoroughly.**

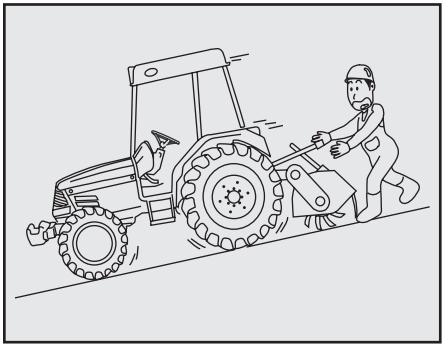
If this instruction is ignored, there is a risk of fire.

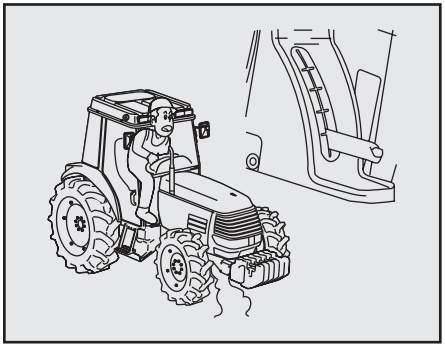


⚠ WARNING

Be aware of the PTO RPM requirements for the implements;

If this instruction is ignored, there is a risk of accident or injury.





⚠ WARNING

Only engage or disengage implements on flat, level area:

- **Engage or disengage the implement on a flat and safe place. Supply proper lighting at all times and especially night.**

[Otherwise]

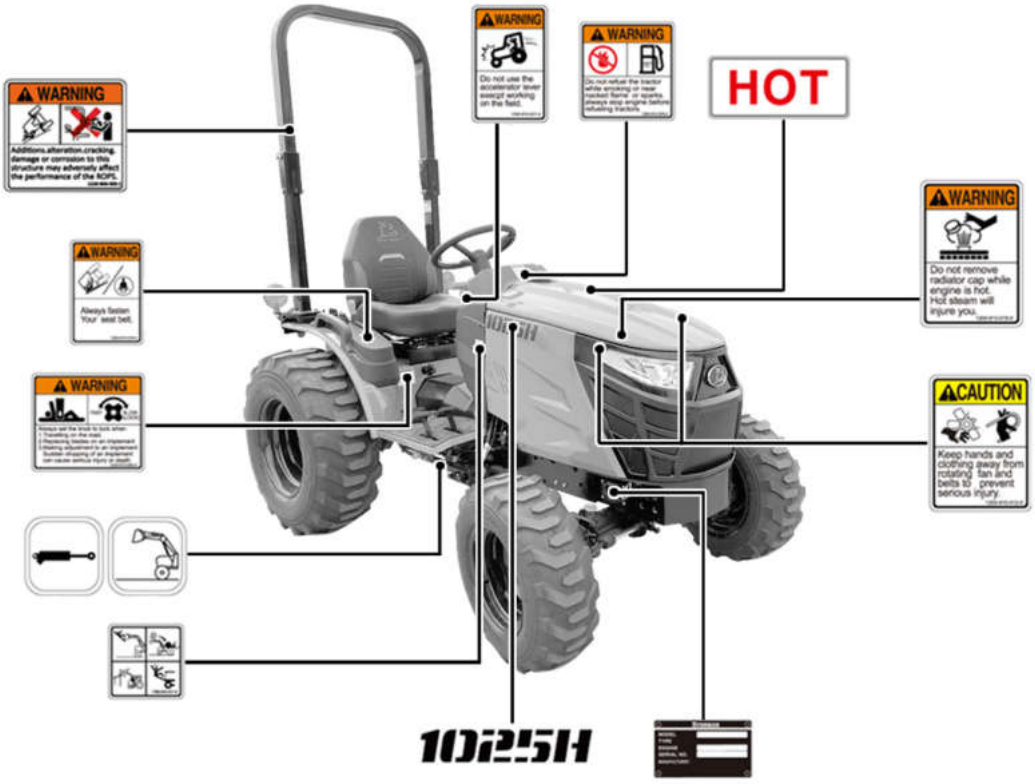
There is a danger of accident.

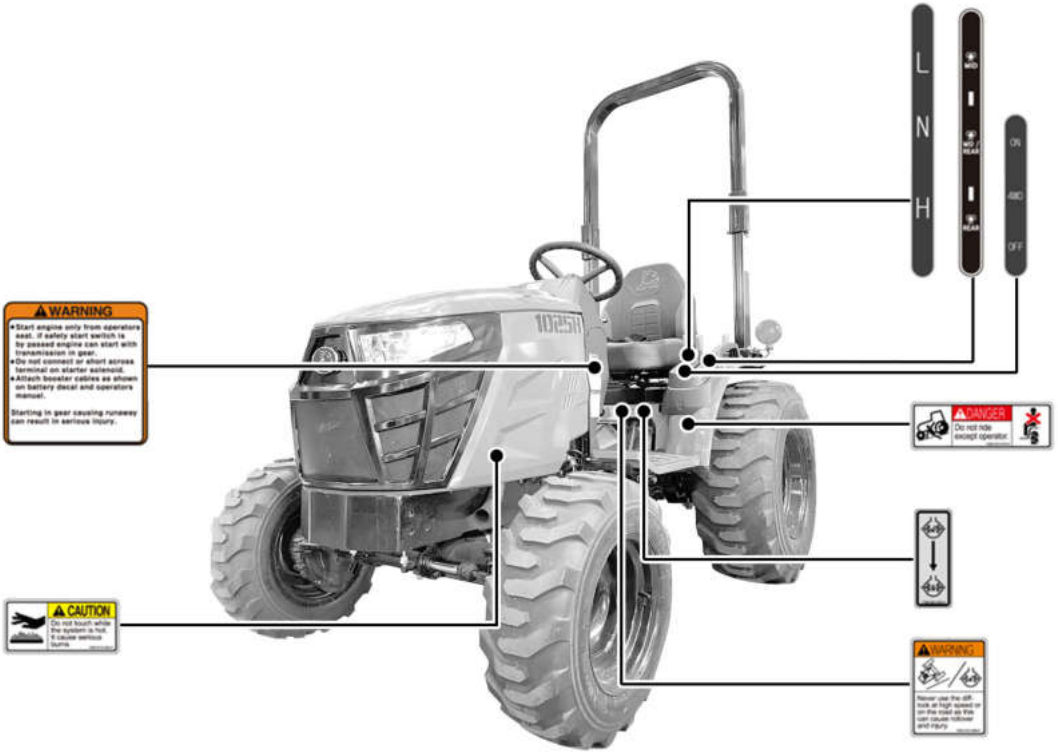
⚠ CAUTION

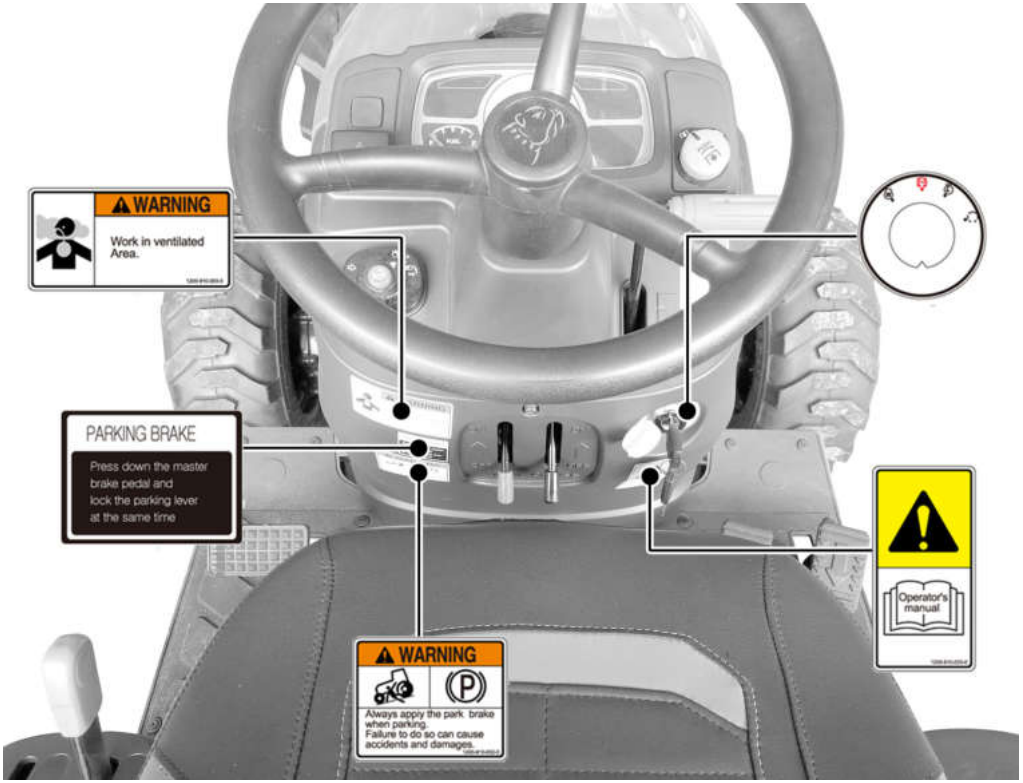
Engage the parking brake during warming up the engine;

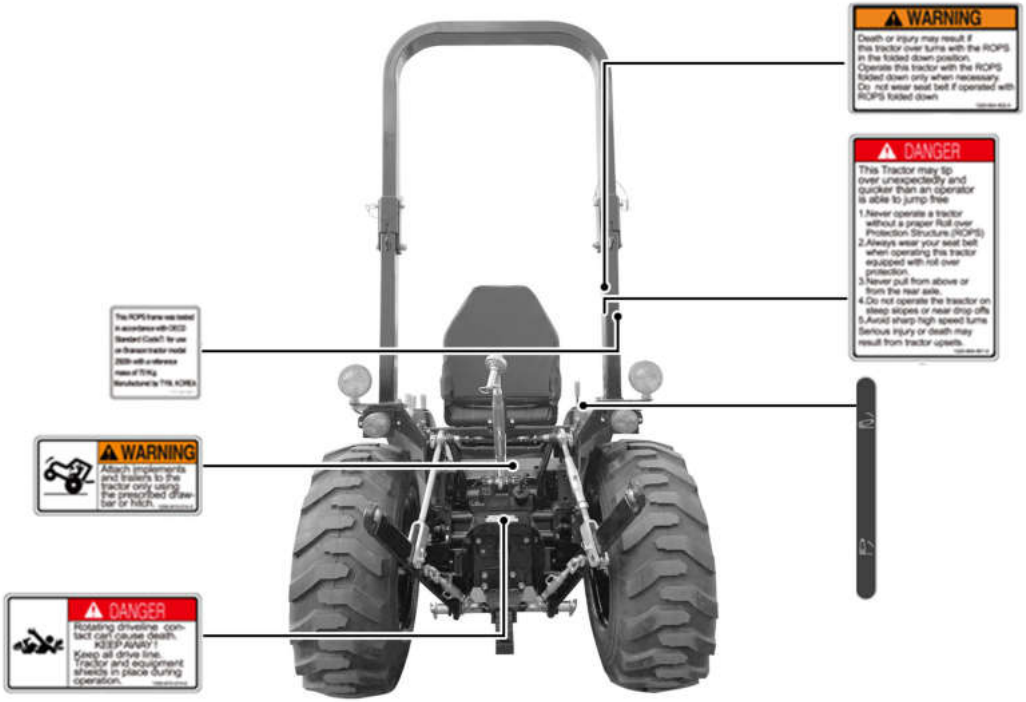
If this instruction is ignored, the tractor may move and cause an accident or injury.

DECAL MOUNTING LOCATION




L
N
H
ON
4WD
OFF
WARNING
Start engine only from operators seat. If safety start switch is by passed engine can start with transmission in gear.
Do not connect or short across terminal on starter solenoid.
Attach booster cables as shown on battery decal and operators manual.
Starting in gear causing runaway can result in serious injury.
DANGER
Do not ride except operator.
CAUTION
Do not touch while the system is hot. It cause serious burns.
WARNING


WARNING
Work in ventilated Area.
PARKING BRAKE
Press down the master brake pedal and lock the parking lever at the same time
WARNING
Always appy the park brake when parking.
Failure to do so can cause accidents and damages.
Operator's manual


WARNING
Death or injury may result if this tractor over turns with the ROPS in the folded down position.
Operate this tractor with the ROPS folded down only when necessary.
Do not wear seat belt if operated with ROPS folded down.
DANGER
This Tractor may tip over unexpectedly and quicker than an operator is able to jump free
1.Never operate a tractor without a proper Roll over Protection Structure.(ROPS)
2.Always wear your seat belt when operating this tractor equipped with roll over protection.
3.Never pull from above or from the rear axle.
4.Do not operate the tractor on steep slopes or near drop offs
5.Avoid sharp high speed turns
Serious injury or death may result from tractor upsets.
WARNING
Attach implements and trailers to the tractor only using the prescribed draw-bar or hitch.
DANGER
Rotating driveline contact can cause death.
KEEP AWAY !
Keep all drive line, Tractor and equipment shields in place during operation.

CAUTIONS FOR DECAL MAINTENANCE

Safety decals are attached to the tractor for safe operation. Make sure to follow the instruction on the decals as well as the following instruction:

⚠ CAUTION

- **Keep the decals clean and intact. If any decal is dirty, wash it with soap and dry with a soft cloth.**
- **Never use a solvent such a thinner or acetone, since it can ruin the decals.**
- **Do not spray high-pressure water directly onto the decal. The decal may fall off the tractor.**

IMPORTANT

- **If a decal is damaged or lost, contact your local BAD BOY dealer immediately to install a new decal.**
- **Make sure to attach the decal in the correct position cleanly without bubbles after cleaning its mounting surface.**
- **If a decal is attached to a component to be replaced, replace the decal as well.**

MEMO

2. REGARDING WARRANTY SUPPORT

REGARDING WARRANTY CERTIFICATE 2-2

REGARDING AFTER-SALES SERVICE 2-2

VEHICLE IDENTIFICATION NUMBER (VIN) 2-2

REGARDING SUPPLYING SERVICE PARTS 2-3

REGARDING GENUINE PARTS AND FLUID 2-3

REGARDING WARRANTY CERTIFICATE

⚠ WARNING

- **Do not modify the machine. If it is damaged by unapproved modification and misuse against description of manual, it will not be covered under warranty.**

REGARDING AFTER-SALES SERVICE

VEHICLE IDENTIFICATION NUMBER (VIN)

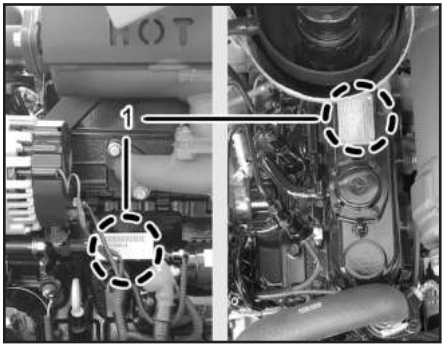
PRODUCTION SERIAL NUMBER



(1) Model And Production Serial Number

The manufacturer's serial number is marked on the serial number decal which is attached to the front right side of the front axle bracket.

ENGINE SERIAL NUMBER



(1) Engine Serial Number

The engine number is stamped on the cylinder block and is specified on the decal which is attached to the cylinder block on the left side of the engine. Also, the decal indicating the engine model and standards is attached on the top of the engine cylinder head cover.

▶REGARDING AFTER-SALES SERVICE

If you have a problem on your machine, refer to "Troubleshooting" of chapter 7 to check by yourself. Or contact immediately to authorized **BAD BOY** dealer nearby.

▶BE PREPARE FOR THE FOLLOWING QUESTION BEFORE CALLING

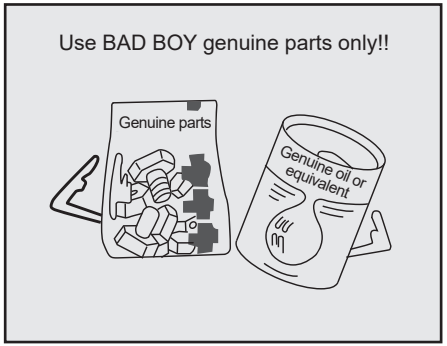
- Model and product serial number
- In case of engine failure, engine serial number
- Working conditions (What kind of job and how fast)
- Run hour of machine
- Describe the problem in detail as possible

REGARDING SUPPLYING SERVICE PARTS

We supply the service parts in accordance with the separated quality assurance regulation.

Consult your local dealer for availability and pricing.

REGARDING GENUINE PARTS AND FLUID



The **BAD BOY** genuine parts and fluid are passed severe durability and performance test. Please use **BAD BOY** genuine parts for your safety.

MEMO

3. SPECIFICATION

MAJOR SPECIFICATIONS 3-2

MAJOR SPECIFICATIONS

ITEMS		1025H
1. Engine	Maker	Yanmar
	Model	3TNV80F
	Type	Water cooled, 4-cycle Diesel
	Rated Output	18.4 kW(25.0 PS) / 3,000 rpm
	Number of Cylinder	3
	Displacement (cc)	1,267 cc
	Bore and Stroke	80mm x 84mm (3.15 in. x 3.31 in.)
	Rated Speed (rpm)	3000
	High idle (rpm)	3,235 ±50
	Low idle (rpm)	1,350 ±50
	Accelerator	Hand Accelerator
	Compression ratio	23.1 : 1
	Firing order	1-3-2-1
	Injection pump	Indirect

ITEMS		1025H
	Lubrication type	Forced feed
	Cooling system	Water cooled, Forced circulation
	Coolant capacity	3.6 ℓ (0.95 US gal)
	Air cleaner	Single element
	Muffler	Horizontal
	Fuel	Diesel fuel (Use ultra low)
	Fuel Tank capacity	22 ℓ (5.8 US gal)
2. Electrical	Battery	12V 50AH
	Starting system	Starter motor with pre-heater
	Starter Capacity	1.2 kW
	Alternator	12V 40A
3. Drive Train	Transmission	Hydraulic + Mechanical, H/L with constant-mesh
	MFWD (4WD)	Standard
	Differential lock	Bevel gears with diff-Lock

ITEMS			1025H
4. Brake	Wet Disc, Foot operated, independent with provision of inter lock for simultaneous operation.		
	Inner dia.		3.03 in. (77 mm)
	Outer dia.		4.90in (124.5mm)
	Number of lining		2 each side
	brake thickness		0.27mm(0.13 in.)
5. PTO	Type		Independent PTO)
	Rear	Shaft	6 Splines, 35 mm(1⅜ in.)
		Speed	540 rpm @ 2,893 rpm
	Mid	Shaft	15 Splines , 25.4 mm(1 in.)
		Speed	2,000 rpm @ 2,875 rpm
6. Hydraulic	Steering		Hydrostatic
	Pump capacity		26.3 lpm (6.95 US gpm)
	Main Relief pressure		15.2 Mpa (2205 psi)
	Steering Relief Pressure		10.8 Mpa (1566 psi)

ITEMS		1025H
7. Hitch	3point linkage Category	Cat. 1(N)
	Lift capacity	600 kg (1323 lb) @ hitch
8. Dimensions (Turf Tire)	Overall length	104in. (2633 mm)
	Overall width	45.8 in. (1164 mm)
	Overall Height	91.3 in.(2320 mm)
	Wheel base	57.5 in. (1460 mm)
	Min. Ground Clearance	9.4 in. (240 mm)
	Weight	730 kg (1610 lb)

MEMO

4. OPERATION DESCRIPTION

EXTERIOR VIEW 4-3

SWITCHES AND LEVERS 4-5

MAIN SWITCH 4-6
HAZARD SWITCH 4-6
COMBINATION SWITCH 4-7
CRUISE CONTROL LEVER..... 4-8
PTO ON/OFF SWITCH..... 4-8

INSTRUMENT CLUSTER.....4-10

HOUR METER 4-11
FUEL GAUGE..... 4-11
COOLANT TEMPERATURE WARNING LAMP... 4-11
PTO INDICATOR 4-12
TURN SIGNAL INDICATOR..... 4-12
LOW BEAM INDICATOR..... 4-12
PARKING INDICATOR 4-13
ENGINE OIL PRESSURE WARNING LAMP..... 4-13
BATTERY CHARGE WARNING LAMP 4-13
GLOW INDICATOR..... 4-14
COOLANT TEMPERATURE WARNING LAMP... 4-14
ENGINE WARNING LAMP..... 4-14

OPERATION THE CONTROLS 4-15

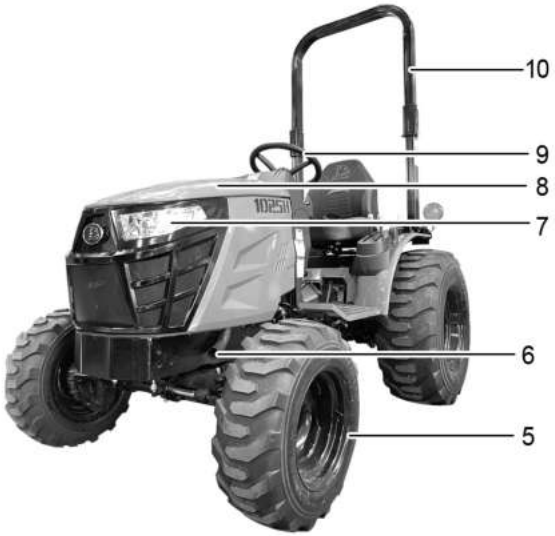
HAND THROTTLE LEVER..... 4-16
BRAKE PEDEL..... 4-16
PARKING BRAKE LEVER..... 4-17
DRIVING SPEED CONTROL PEDAL 4-17
SUB GEAR LEVER(RANGE SHIFT LEVER)..... 4-18
DIFFERENTIAL LOCK PEDAL 4-18
FRONT WHEEL DRIVE LEVER (4WD)..... 4-19
SEAT 4-20
SEAT BELT 4-20
PTO 4-21
POSITION CONTROL LEVER..... 4-23
LOWERING SPEED CONTROL KNOB 4-24

OPERATING THE 3 POINT LINKAGE (TPL) ...4-25

CHECK CHAIN..... 4-26
LIFT ROD..... 4-26
LOWER LINK 4-26
MOUNTING IMPLEMENT 4-27
SAFETY FRAME ROPS 4-28

EXTERIOR VIEW



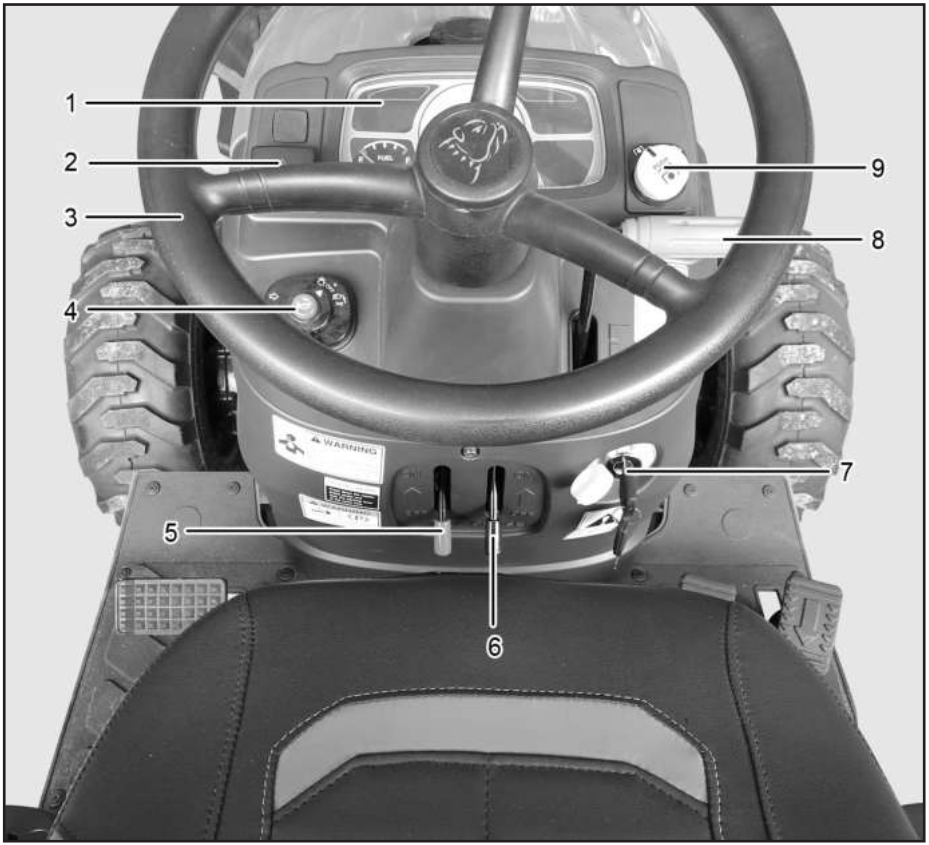


(1) Seat
(2) Turn Signal Lamp
(3) Sub-fender
(4) Rear Tire
(5) Front Tire
(6) Muffler Pipe
(7) Head Lamp
(8) HOOD
(9) Steering Wheel
(10) ROPS



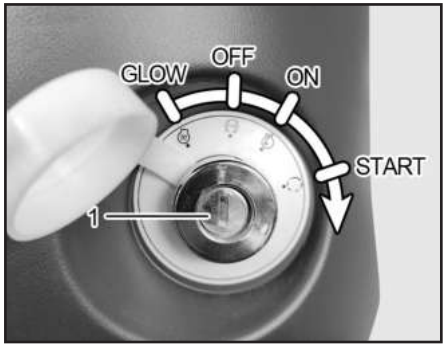
(1) Top Link
(2) Check Link
(3) Towing Hitch
(4) Brake Lamp
(5) PTO Safety Cover
(6) Lower Link
(7) PTO Shaft

SWITCHES AND LEVERS



(1) Tachometer
(2) Hazard Switch
(3) Steering Wheel
(4) Combination Switch
(5) Parking Brake Lever
(6) Cruise Control Lever
(7) Key Switch
(8) Hand Throttle Lever
(9) PTO ON/OFF Switch

MAIN SWITCH



(1) Main Switch

It is used to start and stop the engine.

- **"OFF" position**

  The ignition key can be inserted and removed in this position.
  When turning the switch to the OFF position with the engine running, the engine is stopped.

- **"ON" position**

  The engine is kept running and the switch is energized in this position.

- **"START" position**

  The engine can be started in this position. When releasing the key, the switch is returned to the "ON" position.

- **"GLOW" position**

  The engine's combustion chamber is preheated in this position.

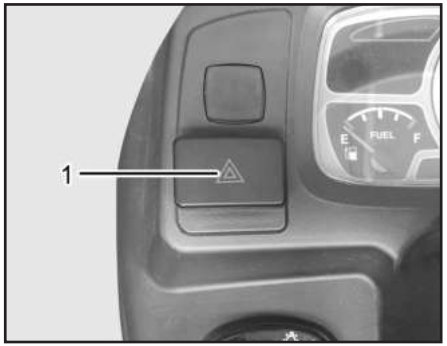
⚠ CAUTION

- **To start the engine, put the shuttle shift lever to the "Neutral" position to release the safety start system.**

⚠ CAUTION

- **When the tractor is not in use, take out the key and keep it in a safe place.**

HAZARD SWITCH



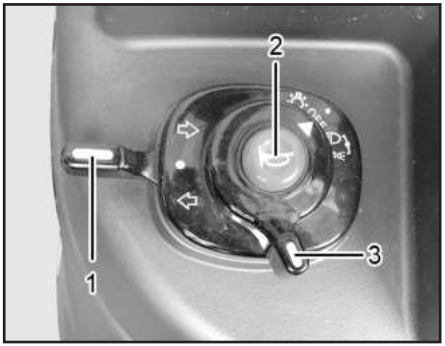
(1) Hazard Switch

This switch can be used to warn other vehicles when malfunction occurs in the tractor while driving on a public road. When pressing the switch once, the left and right hazard warning lamps blink. Pressing the switch again turns off the lamps.

COMBINATION SWITCH

⚠ CAUTION

- **Prolonged operation can consume electricity excessively. Therefore, use it only in emergency. Use it only when necessary as it can discharge the battery and obstruct other drivers' view.**



(1) Turn Signal Switch (2) Horn
(2) Head Lamp Switch

(1) Turn signal lamp operation

The turn signal lamps can be operated with the main switch in the "ON" position.

- **Left turn**
  Turn the turn signal switch counterclockwise. Then, the left turn signal lamp and the left turn signal indicator on the instrument cluster blink.
- **Right turn**
  Push the turn signal switch clockwise. Then, the right turn signal lamp and the right turn signal indicator on the instrument cluster blink.

(2) Horn

To sound the horn, press the red button of the center.

(3) Light switch operation

The light switch can be operated with the main switch in the "ON" position.

- **「OFF」: All light OFF**
  Instrument lamp, tail lamp and low beam lamp ON.

NOTE

- **If one side is blinking, The other side is still.**
- **This lever is not automatically returned to the neutral position. Therefore, set it back to the neutral position after turn.**

CRUISE CONTROL LEVER



(1) Cruise Control Lever

▶Engaging Cruise Control

DO NOT engage cruise control when reversing.

Engage the cruise control as follows:

– Depress the forward speed control pedal until the required speed is achieved.

– push up the cruise control lever to engage cruise control.

– Release the forward speed control pedal.

▶Disengaging Cruise Control

To disengage the cruise control you can either depress forward speed control pedal or the master brake pedal.

PTO ON/OFF SWITCH

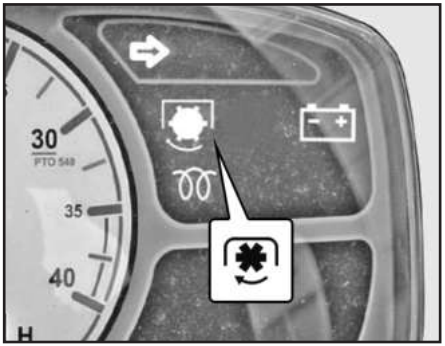


(1) PTO ON/OFF Switch

PTO ON/OFF switch is situated on the right hand side on the instrument panel and can be identified easily with its built in yellow colored indicator.

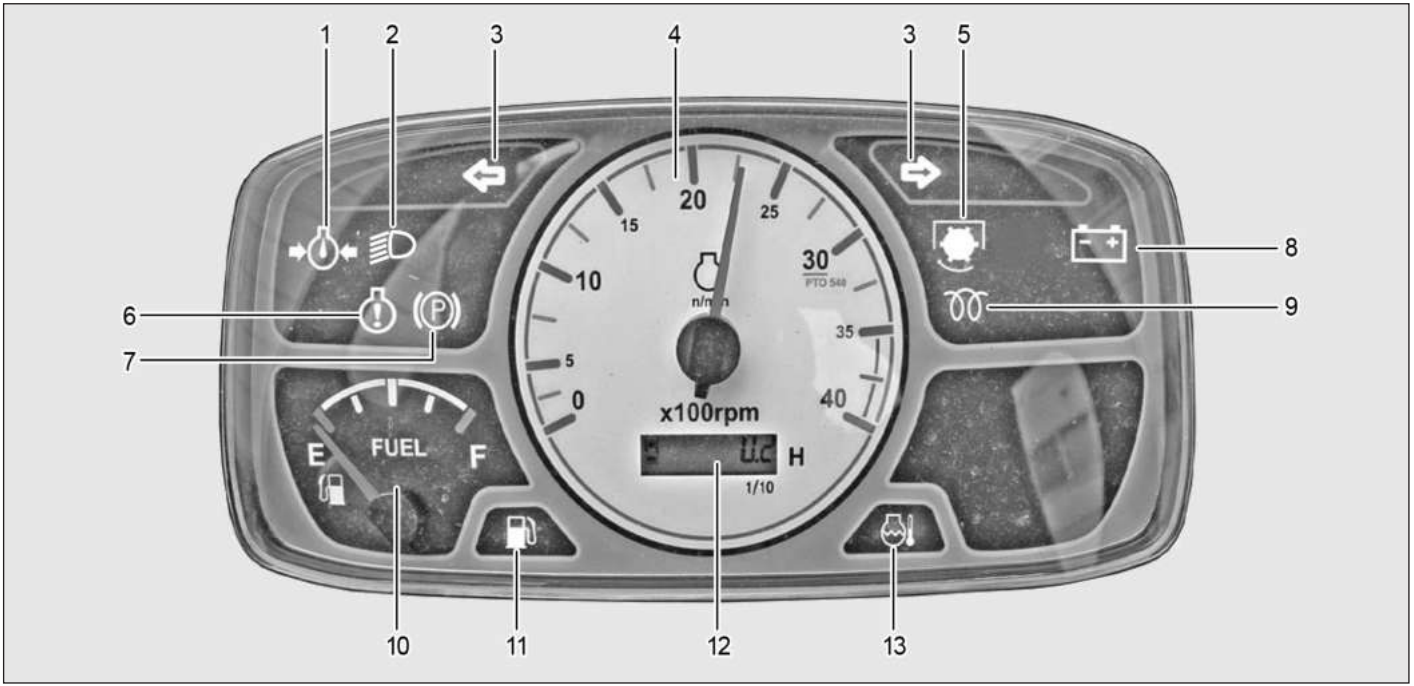
When the switch is pushed down to start the PTO indicator glows to indicate that the switch and the PTO are in ON position.

If the switch is pushed down and turn counter clock wise the indicator goes off signaling that the PTO is OFF.



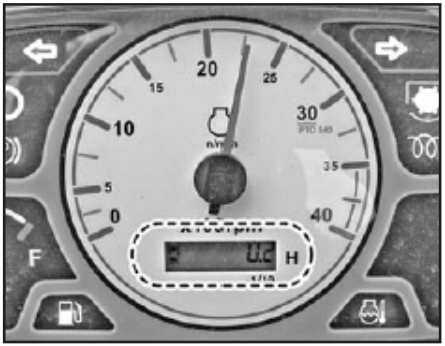
- **PTO operation indicator**
  ON - The PTO shaft is rotating.
  OFF - The PTO shaft is stopped.

INSTRUMENT CLUSTER



(1) Engine Oil Pressure Warning Lamp
(2) Low Beam Lamp
(3) Turn Signal Indicator
(4) Tachometer
(5) PTO Indicator
(6) Engine Warning Lamp
(7) Parking Indicator
(8) Charge Warning Lamp
(9) Glow Indicator
(10) Fuel Gauge
(11) Fuel level Warning Lamp
(12) Hour Meter
(13) Coolant Temperature Warning Lamp

HOUR METER



It indicates the total time of use. The last digit indicates one tenth hours. (decimal place) While the hour meter on the leftmost section is in operation, the lamp below it blinks.

FUEL GAUGE



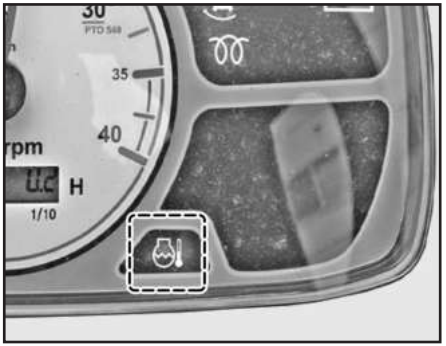
This indicates the amount of fuel while the main switch is in the "ON" position.

F - Full / E - Empty

NOTE

- **Poor fuel quality can damage the engine. Make sure to use only the specified genuine Diesel fuel.**
- **Use fuel for winter season in winter to enhance engine starting performance.**

COOLANT TEMPERATURE WARNING LAMP



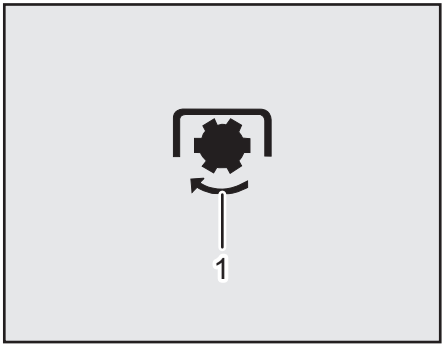
This indicates the temperature of coolant while the main switch is in the "ON" position.

If the needle is in the red "H" zone during driving, the coolant is overheated. In this case, stop driving and take any necessary action according to the troubleshooting instructions.

NOTE

- **The engine can be damaged if increasing its speed too fast.**

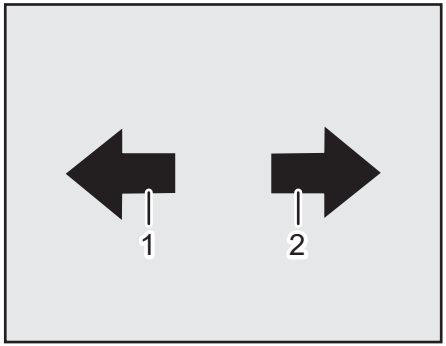
PTO INDICATOR



(1) PTO Indicator

This comes on while the PTO shaft is rotating.

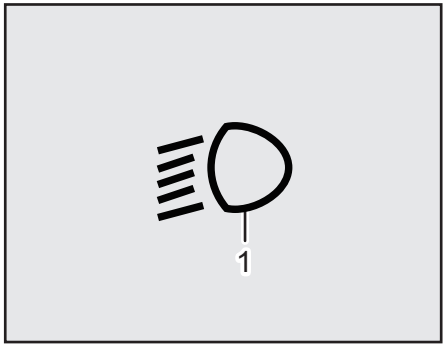
TURN SIGNAL INDICATOR



(1) Left Turn Signal Indicator
(2) Right Turn Signal Indicator

This lamp is used to indicate the intended turning direction of the driver. When pulling down the turn signal switch, the left turn signal lamp blinks. When pushing up the turn signal switch, the right turn signal lamp blinks. These lamps are operated when pressing the hazard warning lamp switch as well.

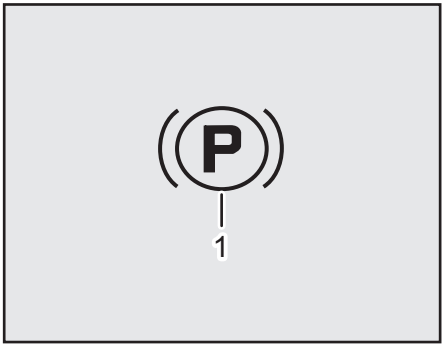
LOW BEAM INDICATOR



(1) Low Beam Indicator

This comes on when the low beam is turned on.

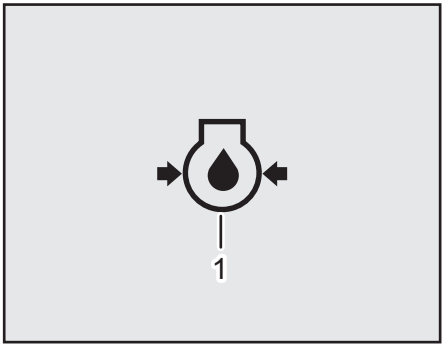
PARKING INDICATOR



(1) Parking Indicator

This comes on when the parking brake is applied.

ENGINE OIL PRESSURE WARNING LAMP



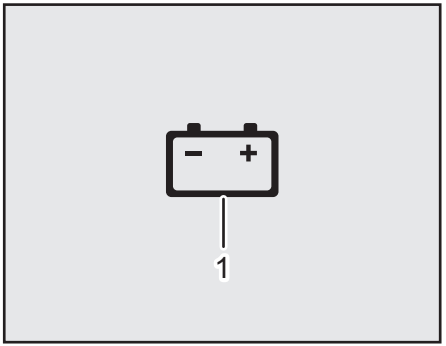
(1) Engine Oil Pressure Warning Lamp

This is illuminated when the engine oil pressure or oil amount is insufficient during driving.

NOTE

- **When the oil pressure warning lamp comes on, this indicates malfunction of the lubrication system. Check the engine oil immediately and have your vehicle serviced by your workshop as necessary.**

BATTERY CHARGE WARNING LAMP



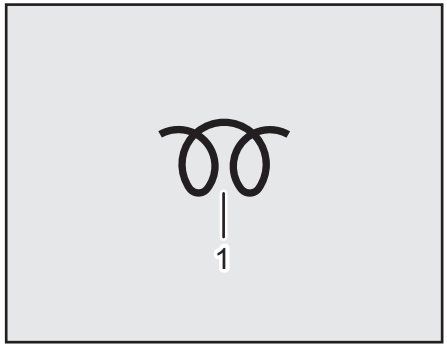
(1) Battery Charge Warning Lamp

This comes on when the Key switch is turned to the “ON” position, and goes off as soon as the engine is started.

NOTE

- **If the charge warning lamp comes on while driving, the battery is not properly charged. Therefore, turn off any unnecessary electrical devices and have your vehicle checked by your workshop immediately.**

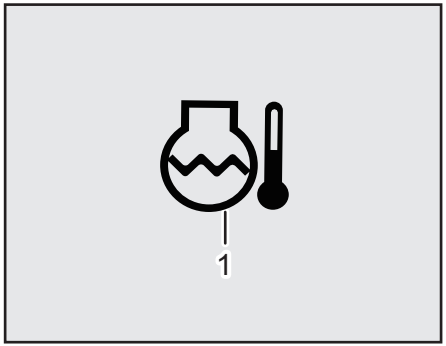
GLOW INDICATOR



(1) Glow Indicator

This comes on while the engine preheating function is activated. It goes off as soon as preheating is completed.

COOLANT TEMPERATURE WARNING LAMP



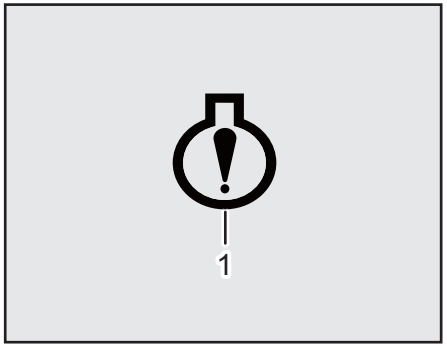
(1) Coolant Temperature Warning Lamp

If this lamp comes on, coolant is overheated.

NOTE

- **When the coolant temperature warning lamp comes on, coolant is overheated so check the coolant.**
- **Coolant temperature over 5℃: 1 sec. or shorter / Less than 5℃: 3 - 30 seconds**

ENGINE WARNING LAMP



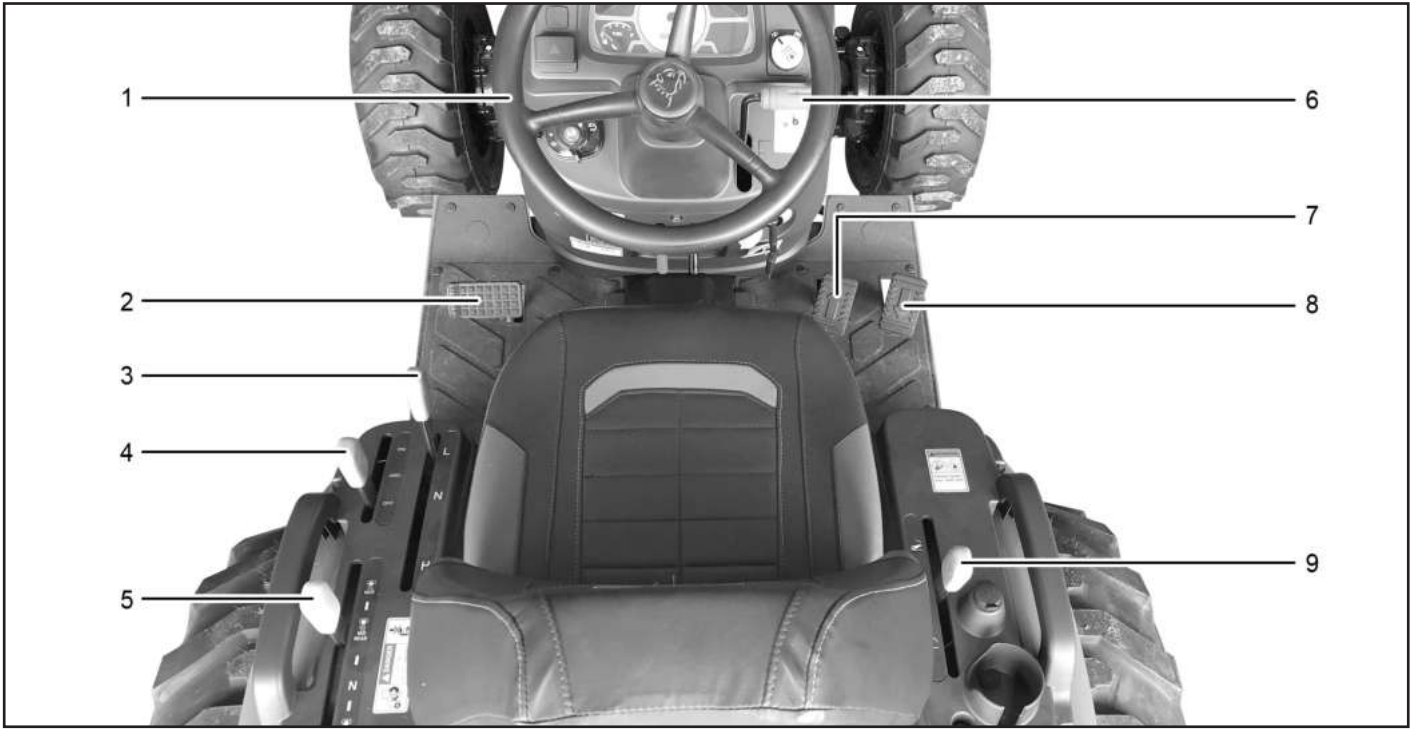
(1) Engine Warning Lamp

It comes on when the engine is malfunctioning.

⚠ CAUTION

- **When Engine warning lamp is it, ensure that you operator the tractor only after the engine RPM reaches at the normal speed if this instruction is not kept, it may cause a performance degradation or accident due to a system error.**

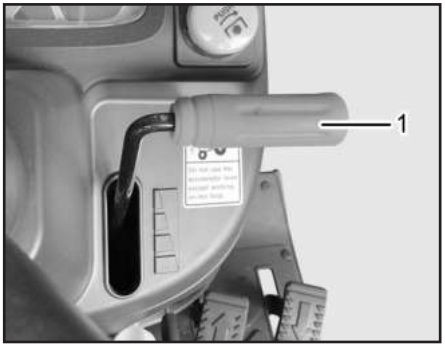
OPERATION THE CONTROLS



(1) Steering Wheel
(2) Brake Pedal
(3) Sub Gear Lever
(4) 4WD Shift Lever
(5) Rear/Mid PTO Lever
(6) Throttle Lever
(7) Forward Speed Control Pedal
(8) Reverse Speed Control Pedal
(9) Position Lever

※ Refer to the relevant content for further detailed information

HAND THROTTLE LEVER



(1) Hand Throttle Lever

The hand operated throttle lever is located on the RHS of the dash cover.

To increase the engine speed, pull the lever downward.

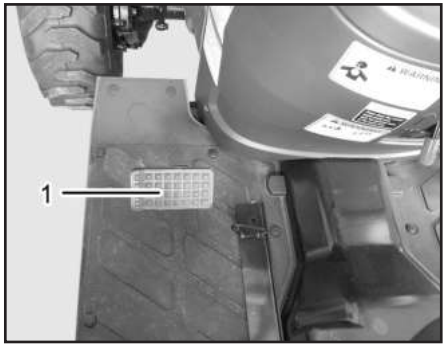
To decrease the engine speed, push the lever upward.

The Lever can be left in any position between idle and maximum as required.

NOTE

- **Use the foot throttle pedal during driving for travel, not the hand throttle lever.**

BRAKE PEDEL



(1) Brake pedel

The brake pedal is located on the LHS of the operator.

It is used for two functions.

- To stop the tractor
- To release cruise control

PARKING BRAKE LEVER



(1) Parking Brake Lever

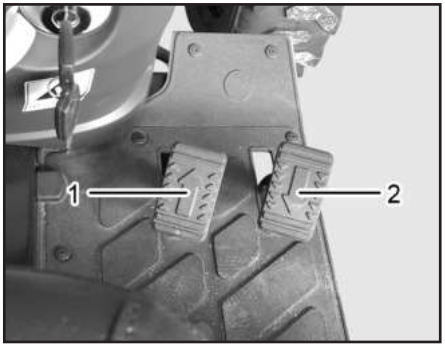
Push the brake pedal down while pulling the parking brake lever up to engage.

Push down the parking brake lever and push the brake pedal to release.

IMPORTANT

- **Traveling with the parking brake on will damage the brakes.**

DRIVING SPEED CONTROL PEDAL



(1) Forward *(2) Reverse*

The Speed Control Pedal is located in the RHS of the Operator floor.

Depress the forward speed control pedal to move forward.

Depress the reverse speed control pedal to move backward.

The speed control pedal will return to neutral position and the tractor will stop when the speed control pedal is released.

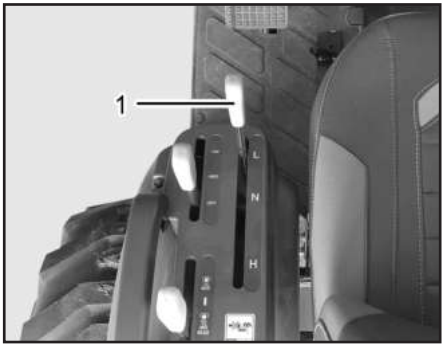
IMPORTANT

- **Do not change from forward to backward or backward to forward suddenly in high range.**
- **Sudden change may result in damage to mechanism and place the operator at risk of injury.**

⚠ CAUTION

- **Perform tight turns only at a slow safe speeds.**
- **Doing so at a high speed can cause rollovers and very serious injury or death.**

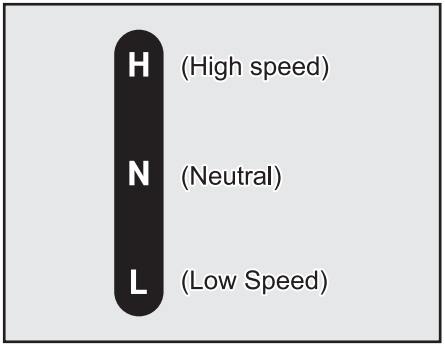
SUB GEAR LEVER (RANGE SHIFT LEVER)



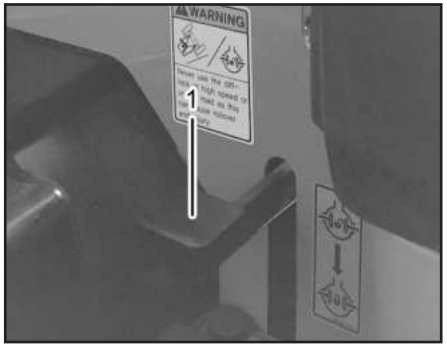
(1) Sub Gear Lever

The Sub Gear Lever is located on the LHS of the operator.

Operate the sub gear lever to select the appropriate speed for different applications.



DIFFERENTIAL LOCK PEDAL



(1) Differential Lock Pedal

The Differential Lock Pedal is located below the LHS of the Seat.

In case of wheel slippage use the diff-lock by pushing down on the diff lock pedal.

To release it, remove the foot from the pedal.

Engagement - Depressing pedal

Disengagement - Releasing pedal

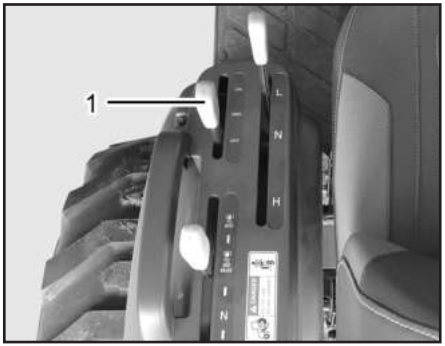
FRONT WHEEL DRIVE LEVER (4WD)

⚠ DANGER

- **Tractor will be difficult to turn if the Diff-lock is engaged, ensure the lock is disengaged before turning the steering wheel.**
- **Tractor will be difficult to turn if the Diff-lock is engaged, ensure the lock is disengaged before turning the steering wheel.**

⊕ IMPORTANT

- **Do not use high speed when engaging Diff lock.**
- **If the diff lock does not release after removing the foot from the diff lock pedal, alternatively brake with the left and right brake until it gets released.**



(1) Front Wheel Drive Lever(4WD)

Front wheel drive lever is located below the LHS of the Operator.

In the ON position the front wheels are engaged and in the OFF position they are disengaged.

Engage & disengage the front wheel drive with the front wheels in the straight position and at low speed.

The use of front wheel drive improves traction performance.

⊕ IMPORTANT

- **Do not use front wheel drive at high speed or on the road as premature wear of components will result.**

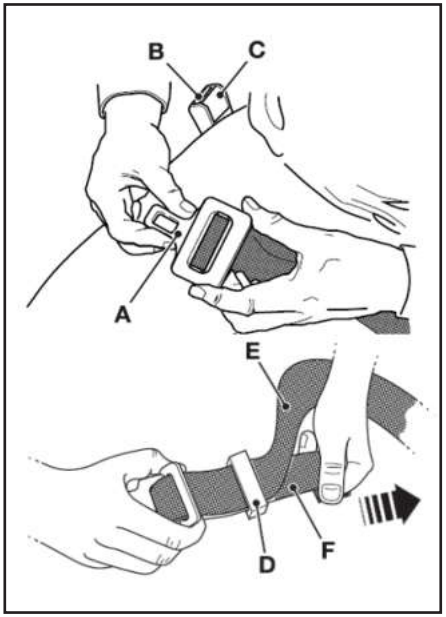
SEAT



(1) Seat Sliding

The seat can be adjusted by moving it forwards and backwards with the seat sliding lever on its front pushed to the left. After adjustment, make sure that the seat is firmly secured.

SEAT BELT



▶ Release the Seat Belt

Press button C and Pull the Male Fitting A from the Buckle B.

▶Adjusting the Seat Belt

Make Sure the belt is across your hip and not over your stomach.

To adjust the male fitting A:

1. Pull toggle D down the strap by the required distance.
   a. To make the strap longer, pull end E as far as it will go.
   b. To make the strap shorter, pull end F as far as it will go.

PTO

Both of the rear and mid PTO are provided for variable utility. They can be engaged simultaneously or separately at same time.

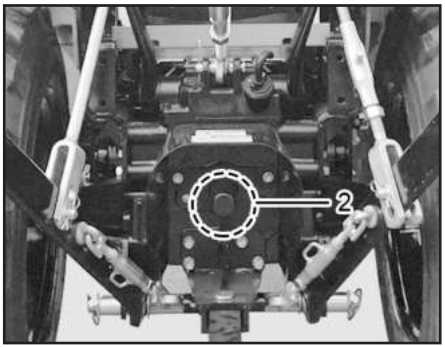
The engine will not start if PTO switch is ON position.

The engine will shutoff if the operator leaves the seat with parking brake released and PTO engaged.

⚠ CAUTION

- **To avoid damage of transmission and implement, do not engage PTO with the engine running at high speed.**





(1) PTO Lever
(2) Rear PTO Shaft

- **REAR PTO**

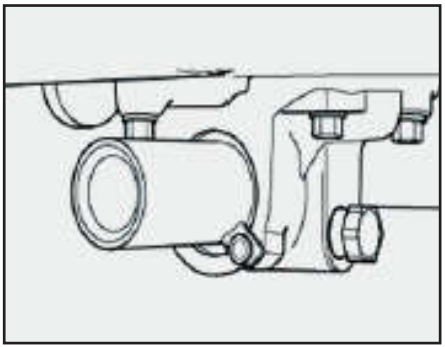
The tractor has one speed PTO (540rpm). Use the PTO lever to engage.

The PTO switch must be OFF before PTO is engaged.

1. Decrease engine speed to near idle.
2. Make sure that PTO switch is OFF.
3. Engage rear PTO using the PTO lever.
4. Turn on the PTO switch.
5. Increase engine speed to desired speed.

Engine RPM	REAR PTO SPEED
2,893	540 RPM
3,000	560 RPM





(1) PTO Lever

- **MID PTO**

  The speed of mid PTO is 2,000rpm. Use the PTO lever to engage.

  The PTO switch must be OFF before PTO is engaged.

  1. Decrease engine speed to near idle.
  2. Make sure that PTO switch is OFF.
  3. Engage mid PTO using the PTO lever.
  4. If rear PTO is needed to engage, shift the PTO lever to correct position.
  5. Turn on the PTO switch.
  6. Increase engine speed to desired speed.

Engine RPM	MID PTO SPEED
2,875	2,000 RPM
3,000	2,087 RPM

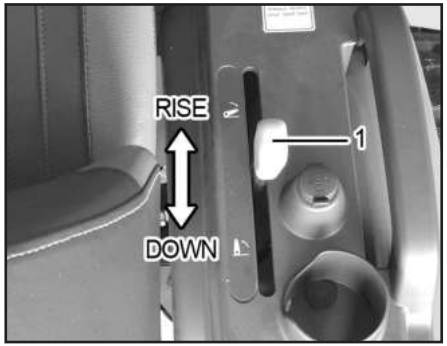
IMPORTANT

- **If operator turns off PTO switch, rear PTO and mid PTO are off at once.**

⚠ CAUTION

- **Do not operate any implement at a high speed than is specified for it.**
- **When making adjustments to the implement stop the engine to avoid serious injury.**
- **When leaving the tractor stop the engine, and remove the key. Set the parking brake.**

POSITION CONTROL LEVER



(1) Position Control Lever

> **⚠ WARNING**
>
> - **After finishing the work, always lower the implement to the ground and switch off the engine, set the parking brake to avoid injuries and accidents.**

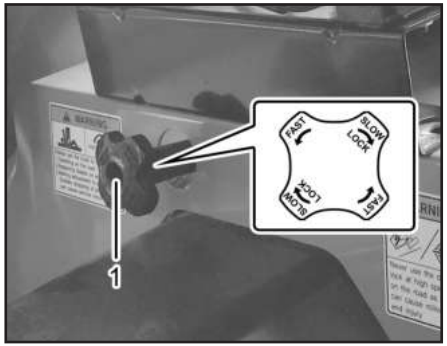
The Hydraulic Position Control Lever is located on the RHS of the operator.

Implements can be raised and lowered with the hydraulic position control lever and can be stopped at any position by stopping the lever.


To raise the implement :
Pull the lever backward.


To lower the implement :
Push the lever forward.

LOWERING SPEED CONTROL KNOB



(1) Lowering Speed Control Knob

This knob controls the downward speed of the Hydraulic's three point linkage and is located below the seat.

To slow the downward speed, turn the knob clockwise.

To increase the downward speed, turn the knob counter clockwise.

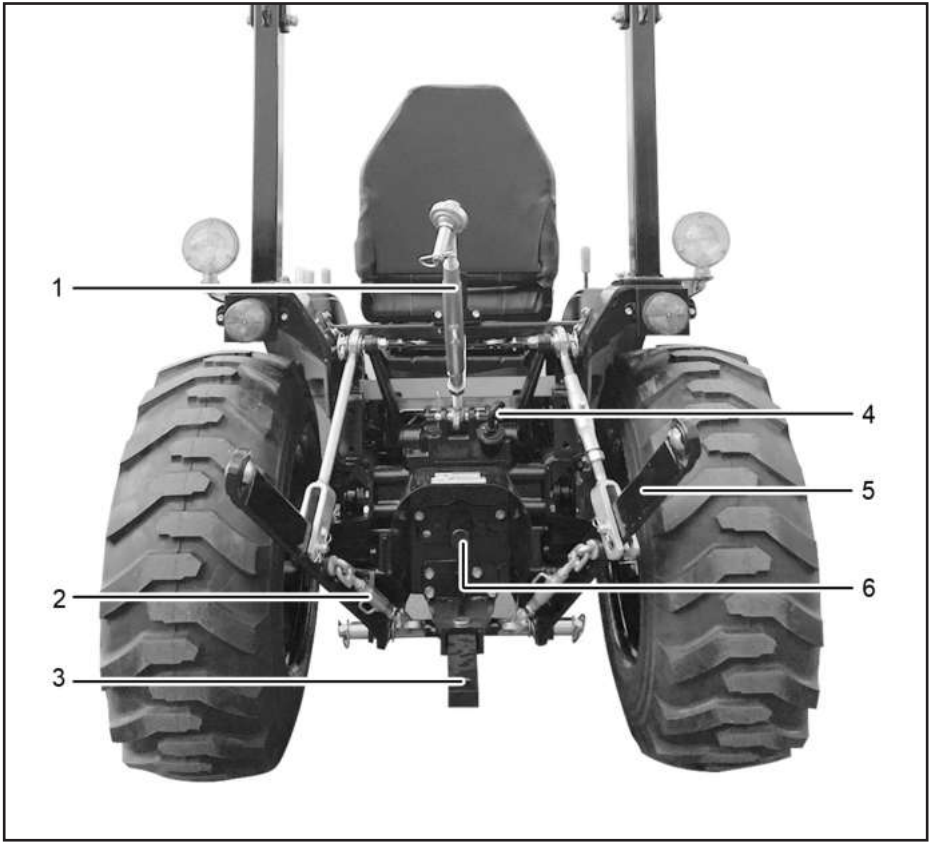
To lock, turn the knob clockwise;

Do not over tighten the knob.

⚠ CAUTION

- **Always set the knob to lock when**
  1. **Traveling on the road**
  2. **Replacing tires or blades on an implement.**
  3. **Making adjustments to an implement.**
- **The sudden dropping of an implement due to hydraulic problems can cause serious injury or death.**

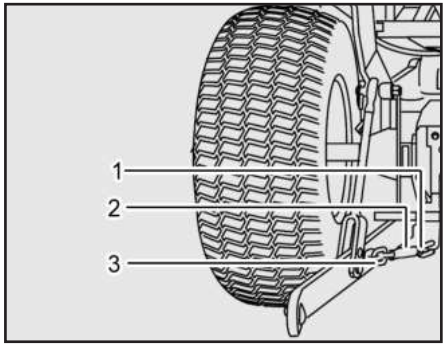
OPERATING THE 3 POINT LINKAGE (TPL)



(1) Top Link
(2) Check Chain
(3) Trailer Hitch
(4) T/M Oil Filler
(5) Lower Link
(6) PTO Shaft

※ Refer to the relevant content for further detailed information

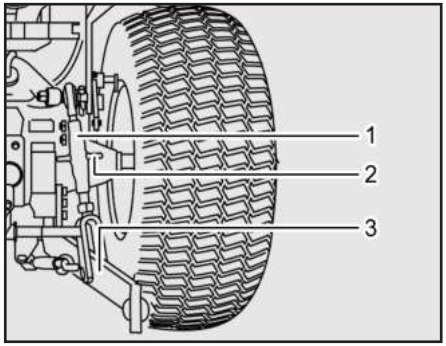
CHECK CHAIN



(1) Fixing Nut (2) Turn Buckle
(3) Check Chain

To adjust the check chain turn the turnbuckle to lengthen or shorten the chain and tighten the lock nut when the correct adjustment is achieved.

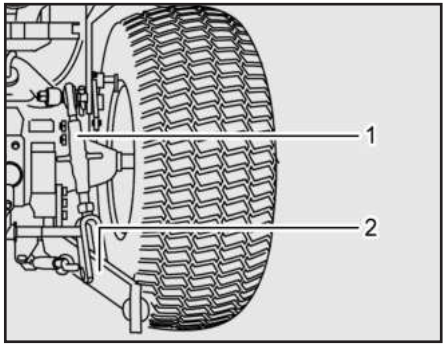
LIFT ROD



(1) Lift Rod (2) Adjusting Handle
(3) Lower Link

Adjust the length of the lift rod by screwing the Adjusting Handle (Turnbuckle) in or Adjust the length of the lift rod as necessary to set the implement in its working position parallel to the ground.

LOWER LINK



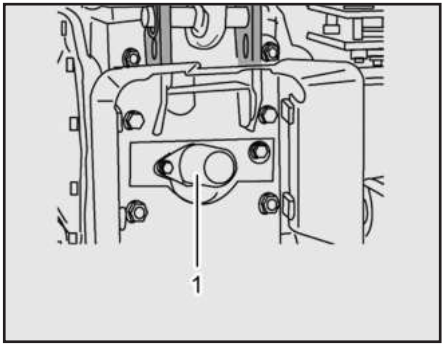
(1) Lift Rod (2) Lower Link

For different applications change the position of the Yoke rod on the lower link holes as shown and insert the pin in the direction of the arrow.

MOUNTING IMPLEMENT

⚠ DANGER

- **Only use drawbar to tow and keep the 3 point linkage in the raised position when towing with the drawbar.**
- **Position can create unbalance causing the tractor to roll-over & result in the death or serious injury.**



(1) Rear PTO Shaft Cover

⚠ CAUTION

- **Do not attach a PTO shaft with the engine running and ensure all safety shields are in place.**

Adjust the yoke rod on the lower links to suit the implement in use. Attach the left lower link, then attach the right lower link using the adjusting handle on the leveling box if required.

Attach the top link. Attach the PTO shaft to the tractor if used, making sure that it is locked in place.

Adjust the check chains to suit the implement and tighten the locknuts. To remove an implement reverse the procedure.

SAFETY FRAME ROPS



(1) ROPS

> **⚠ WARNING**
>
> - **If a rollover accident occurs without the safety frame, the frame cannot protect the driver, leading to a severe injury or even death. Never drive with the safety frame detached.**

The safety frame is intended to reduce damage of an accident in case of a rollover, so it cannot prevent an accident.

Always have the safety frame installed securely for driving to ensure your safety unless going under an area with a low ceiling such as a garage.

MEMO

5. OPERATION

DAILY INSPECTION BEFORE STARTING 5-2

PRE-OPERATION CHECK.....5-2

RUNNING-IN PERIOD 5-9

STARTING / STOPPING THE ENGINE.....5-10

STARTING THE ENGINE..... 5-10
STOPPING THE ENGINE 5-11
WARMING UP 5-11
NORMAL BRAKING AND PARKING 5-12
DRIVING DOWNHILL..... 5-13
OPERATION OF THE DIFF LOCK 5-14
DRIVING ON THE SLOPE 5-14
DRIVING ON THE ROAD..... 5-15
ENTERING AND LEAVING THE PAVEMENT 5-15
TURNING ON THE PAVEMENT 5-16

ATTACHMENT OF IMPLEMENT 5-17

INSTALLATION OF PTO DRIVEN IMPLEMENT..... 5-17
CYLINDER HOSE CONNECTION 5-18
PRECAUTIONS FOR CONNECTING THE IMPLEMENT .. 5-19
PRECAUTIONS FOR HANDLING IMPLEMENT 5-20
ROTAVATOR 5-20
EFFECTIVE PLOWING PATTERN..... 5-21

TOWING INSTRUCTIONS.....5-24

LOADER OPERATION 5-24

CARRYING THE LOAD 5-26

HANDLING LARGE HEAVY OBJECTS.....5-27

ROPS FOLDING METHOD 5-28

HOW TO FOLD DOWN THE ROPS 5-28
HOW TO STAND UP THE ROPS 5-28

DAILY INSPECTION BEFORE STARTING

1. Check the engine oil level.

   After wiping out the dipstick, insert it fully and then withdraw it. Oil should be between the two marks on dipstick.

   Do not operate the engine if oil level is below minimum mark. If below, add the corresponding grade oil according to the season through the filler.
2. Feed grease to all greasing points indicated below every 10 hours when working in damp and muddy conditions.
   - Front axle pin
   - Steering shaft and Cylinder end
   - Tie rod both ends
   - Front axle supporter
3. After cleaning the machine with highly pressurized water, lubricate the indicated points with grease below if necessary.
   - Bonnet latch
   - Seat sliding rail

PRE-OPERATION CHECK

⚠ DANGER

- **Do not provide illumination with a lit cigarette or a lighter when fueling.**
- **Never fill the fuel tank while the engine is running or hot.**
- **After filling the fuel tank, close the fuel filler cap completely and wipe off the excess fuel thoroughly.**
- **If the fuel hoses are damaged, fuel will leak. Make sure that you check for any leakage.**

⚠ WARNING

- **Perform the maintenance on a flat and safe location that will keep the tractor in place and will not cause a risk to people passing by. Before carrying out the maintenance, place blocks at the front tires to prevent movement.**

[Otherwise]

An unexpected accident may occur, such as overturning of the tractor.

- **When going under the implement, fully close the slow/stop valve.**

[Otherwise]

There is a risk of injury due to implement falling.

⚠ CAUTION

- **Stop the engine during checking, maintenance, or repair**
- **Carry out the maintenance work after heated area such as the muffler or the engine have fully cooled down.**

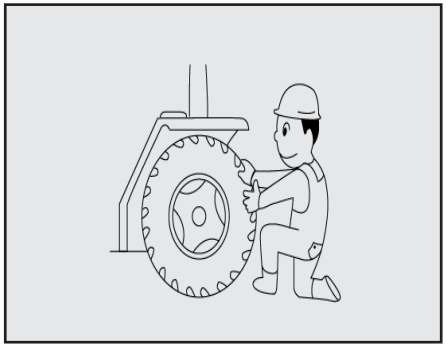
[Otherwise]

There is risk of burn.

- **After detaching the covers for checking or maintenance, make sure to put them back in their place.**

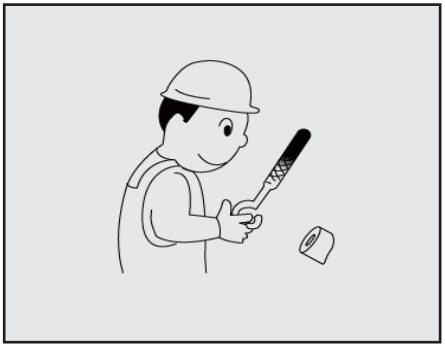
[Otherwise]

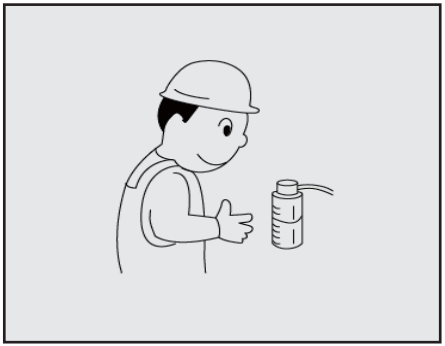
There is a risk that you may get entangled in the tractor or get injured.

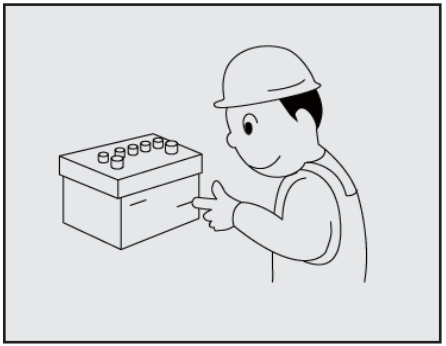


To ensure a safe and comfortable operation, please carry out the routine check-up everyday before starting work. Correct any problem immediately, and also check for problems after work. This checking should be done in the following sequence.

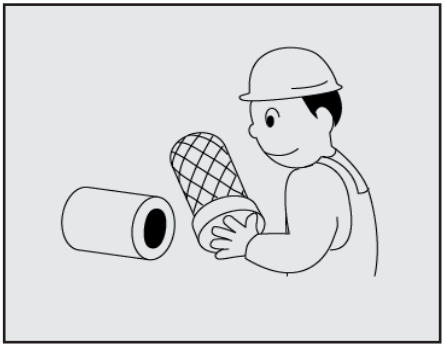
1. Check the suspicious parts of the previous day.
   - Check the parts that you thought were not normal during the work of previous day.
2. Check around the tractor.
   - Deformation, damage or stains.
   - Tire pressure and abrasion.
   - Damage to the tractor, or loosened bolts.
   - Loosening of wheel bolts.
   - Fuel quantity, fuel leaks, or damage to the fuel hose.



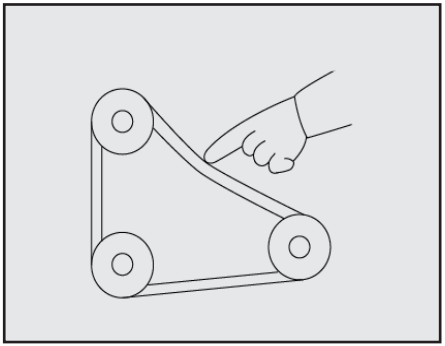




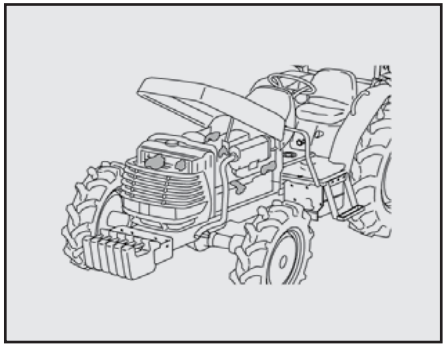
3. Open the engine hood.
   - Engine oil level, contamination, or leakage.
   - Engine coolant level, leakage, or damage to the hose.
   - Battery solution level.



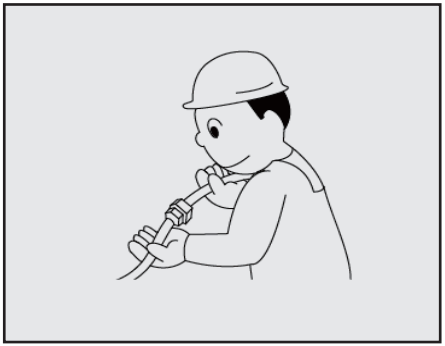
• Air cleaner.

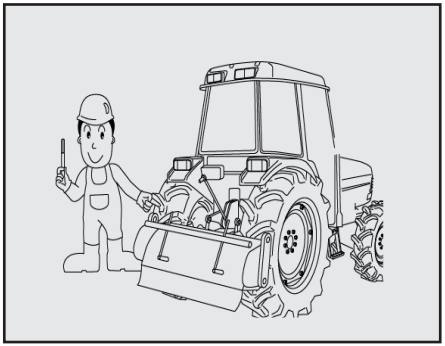


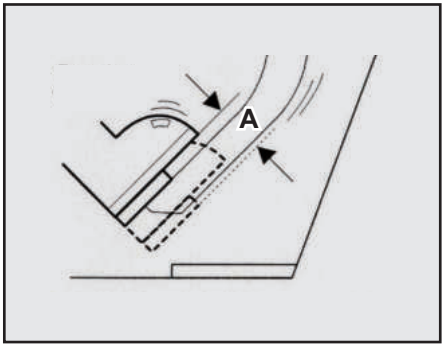
• Fan belt tension, damage.



• Dust or straw on the radiator grill or the engine.





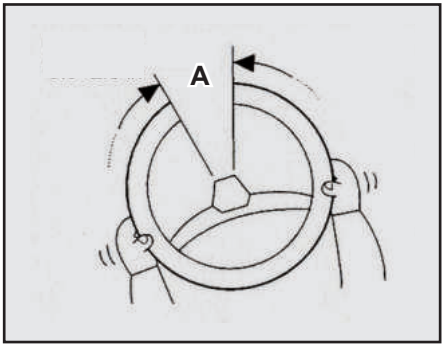


(A) Free play 0.2 ~ 0.4 in

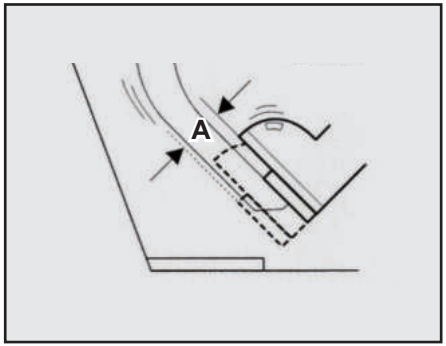
- Damage to the coating of the cables, or loosening of the contacts.

4. Check around the implement.
   - Condition of the locking pin of the universal joint inserted in the PTO shaft.
   - Condition of pins in each part.
   - Loosening of the bolts holding the blade.
   - Quantity of oil in each part. For more details, please refer to the implement manufacturer's instructions.

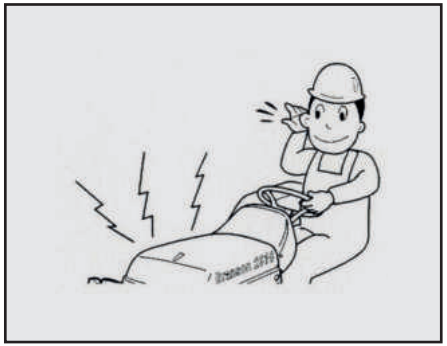
5. Check on the driver seat.
   - Operational condition and free play of the brake. (0.2~0.4 in)



(A) Free play 0.8 ~ 2.0 in



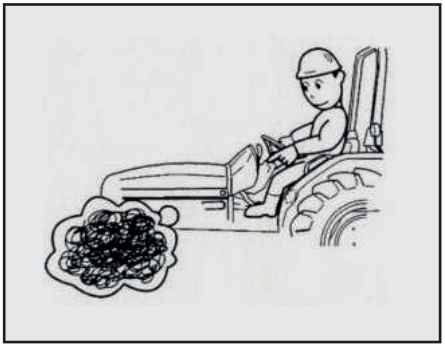
(A) Free play 1.0 ~ 1.4 in

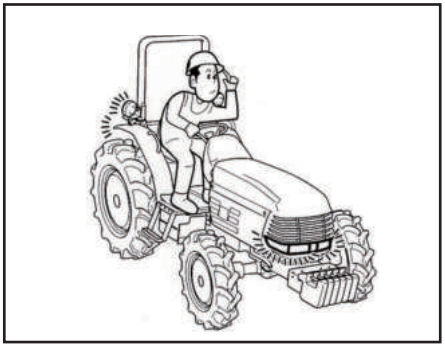


- Free play of the steering wheel. (0.8~2.0 in)

- Operational condition and free play of the clutch pedal. (Manual transmission only)

6. Start the engine.
   - Abnormal noise from the engine.







• Color of the exhaust gas.

• Operation of lamps and gauges

►Boarding and Leaving The Tractor

Use Steps and Hand-holds Correctly

1. Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps and handrails. Never use machine controls as hand-holds.
2. Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free

of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine

⚠ DANGER

- **Getting off the tractor, make the implement descend.**

[Otherwise]

The implement descends itself, and then causes some unexpected accident.

RUNNING-IN PERIOD

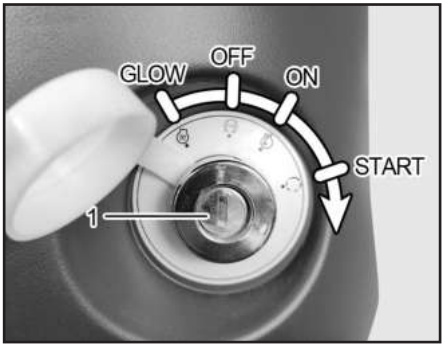
⊕ IMPORTANT

- **Always keep wheel bolts tightened to prevent any accident. Confirm that the wheel bolts are tight before operation. Check wheel bolt torque at least twice within the first 10 hours of operation, check it periodically at every 50 hours thereafter. Change the oil and filter after first 50 hours of operation.**

▶ Within first 10 hours of operation
- Inspect daily or every 10 hours
- Tighten the wheel bolts

▶ After first 50 hours of operation
- Tighten the wheel, disc and hub bolts
- Check the alternator and fan belt tension as well as air inlet
- Tighten the cooling system's hose and clamp
- Perform the scheduled 50-hour maintenance
- Change the transmission/hydraulic oil and oil filter element
- Change the engine oil and filter
- Change the front axle fluid

STARTING / STOPPING THE ENGINE
STARTING THE ENGINE



(1) Main Switch

1. Sit on the driver seat.
2. Apply the footbrake.
3. Put the hydraulic lever in the neutral position.
4. Put the sub gear lever in neutral.
5. Insert the ignition key and turn it on.
6. Ensure that the warning lights are working.
7. Always turn the ignition key to left for a moment & release it. The automatic heater will start working as will be indicated by a light on the instrument panel. As the lamp goes off, turn the key to the start position to start the engine.
8. Ensure that all the warning lights are off with the engine running.

IMPORTANT

- **Never turn the key to the start position while the engine is running as this can cause serious damage to the starter and engine flywheel.**
- **Only engage the starter for a period of not more than 10 seconds.**
- **If the engine does not start, rest the starter for about 20 seconds and try again for a maximum of 10 seconds.**
- **If the engine does not start after repeated attempts, refer to the fault tracing guide.**

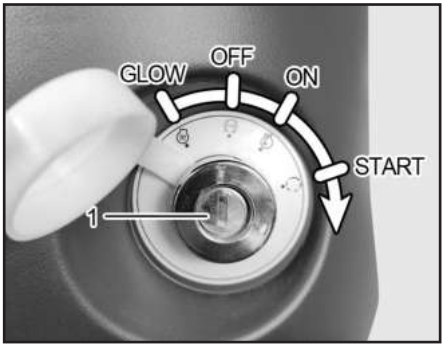
IMPORTANT

- **Especially in cold weather, always allow the tractor to idle for a while to warm up & build up sufficient oil pressure to ensure normal operating temperature for a longer engine life.**

IMPORTANT

- **A statement indicating that no deliberate tampering with or misuse of the engine emissions control system should take place.**

STOPPING THE ENGINE



(1) Main Switch

After light work, let the engine idle for a while and than turn the key off.

WARMING UP

When starting the engine, allow it to warm up to operating temperature by allowing it to idle 5-10 minutes to ensure full lubrication and operating temperature.

Failure to do so can shorten engine life substantially.

▶WARMING UP IN COLD WEATHER

Cold weather will change the viscosity of the oil, resulting in a reduced oil pumping capacity, which can cause damage to the engine if it is not warmed up correctly.

It also causes problems with the hydraulic system and the synchromesh in the transmission.

Correct times for warming up are:

Temperature	Time for warming up
Above 50°F	5~10 min.
50°F~ 32°F	10~20 min.
32°F~14°F	20~30 min.
14°F~-4°F	30~40 min.
Below –4°F	Over 40 min.

IMPORTANT

- **Ensure the parking brake is engaged during the warming period.**
- **Failure to warm up correctly can result in problems.**

IMPORTANT

- **Block heater is a start aid device that is useful in 20℃ and below.**
- **Do not use block heater in 10℃ and more.**
- **If you use block heater at 10℃ or above, diagnosis at engine start might be effected.**

When the engine is warm push down the clutch and engage the sub gear levers to the required position.

Push down on the brake pedals and release the handbrake.

Increase the engine revolutions and let out the clutch smoothly.

▶STORING ENGINE

When the engine is not operated during storage periods of three months or more, internal engine parts can rust and lose oil film. As a result, the engine can seize when it is started after storage.

To prevent such a rust, the engine must be operated periodically during storage.

NORMAL BRAKING AND PARKING



Let the engine come back to idle and at the same time push in the clutch and brake simultaneously.

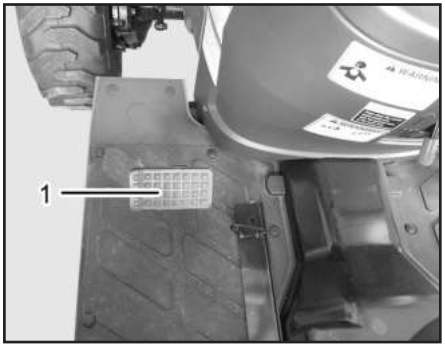
When the tractor has come to a halt, lower any implement to the ground, and put the sub gear in neutral.

Apply the parking brake, stop the engine, and remove the key.

DRIVING DOWNHILL

⚠ CAUTION

- **Always apply the parking brake when parking.**
- **Failure to do so can cause accidents and damage.**
- **As an extra precaution when parking on a slope, chock the rear wheels.**



(1) Brake Pedal

Use the engine's ability to brake when traveling downhill.

Never rely on the brakes only and never travel downhill with the gears

in neutral.

⚠ DANGER

- **When operating in hilly terrain the risk of rollover is increased substantially, please drive with extra care.**
- **When towing trailers in hilly terrain, ensure that they are equipped with brakes, use a lower gear to get maximum engine braking and do not change gears on a down hill run.**

OPERATION OF THE DIFF LOCK

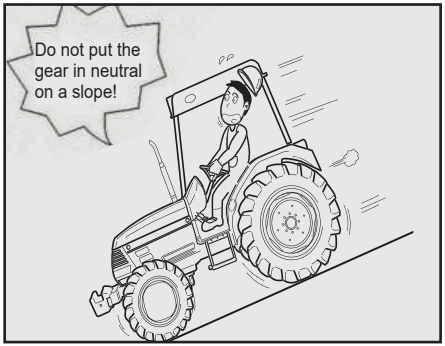
While the diff lock is a very useful feature, care should be taken in its use as misuse can lead to dangerous situations.

The diff lock should only be used in situations where traction is lost on one of the rear wheels.

⚠ WARNING

- **Use low engine revolutions when using the diff lock.**
- **Do not try to engage or use the diff lock on tight turns as serious damage can result.**

DRIVING ON THE SLOPE



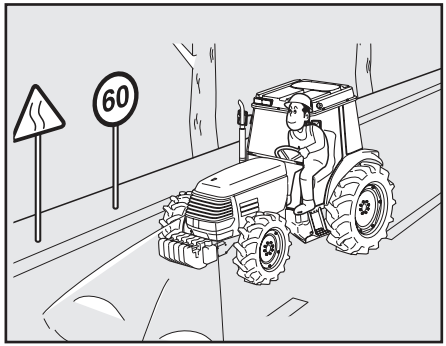
⚠ WARNING

- **Select a proper speed, and do not shift the gear.**
- **Do not park on a slope. Otherwise, the tractor may slip or overturn and cause an accident.**
- **Reduce speed and pay special attention to the speed.**

⚠ WARNING

- **Do not depress the clutch pedal when driving on a slope. The tractor may slide down and lead to a serious situation.**
- **When starting the tractor upwards on a slope, start slowly in low gear with low engine rpm. Otherwise, the front of the tractor may be lifted and cause a very dangerous situation.**
- **You may shift the gear when you are no longer on the slope. If you stop on a slope, apply the parking brake. Otherwise, you may be exposed to a risk of accident.**

DRIVING ON THE ROAD



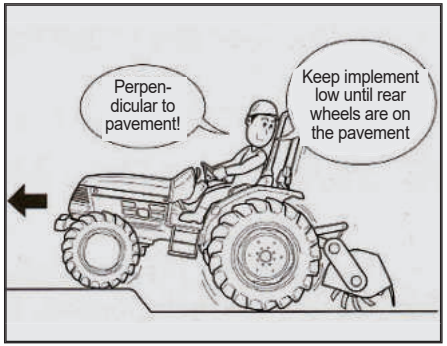
⚠ WARNING

- When driving on a road or crossing a dike, make sure to connect the brake pedals. Otherwise, the tractor may turn abruptly or turn over due to one-sided braking.
- Observe the traffic regulations when driving on the road. Otherwise, you may be involved in an accident.

⚠ WARNING

- This tractor is designed to accommodate only one person. Do not allow anyone on the tractor other than the driver. Otherwise, you will be exposed to a risk of accident.
- Put the PTO lever into "N" and connect the brake pedals.
- When making a turn, turn on the direction indicator lamp to inform other vehicles of your intention.
- Pay particular cautions to narrow farm roads, slopes, and grassy shoulders, and reduce the speed.
- Put the position control lever to UP and lock it with the stopper. Otherwise, you will be exposed to a risk of an accident.
- Connect the brake pedals when driving on a road. Otherwise, there is a risk of abrupt turning or overturning due to one-sided braking.
- Before every operation, make sure that operator wears safety belt.

ENTERING AND LEAVING THE PAVEMENT



⚠ WARNING

- Make sure to connect the brake pedal. Otherwise, the tractor may turnover due to one-sided braking.

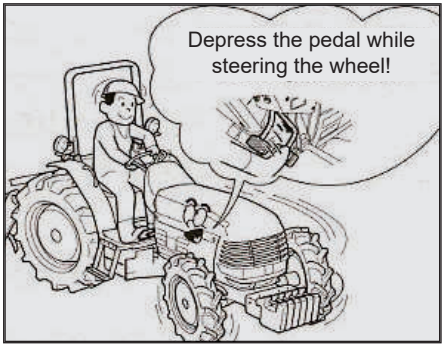
TURNING ON THE PAVEMENT

⚠ WARNING

- **When you cross a dike or raised ground to enter or leave the pavement, use loading ramps with sufficient strength, and lower the implement to achieve a lower center of gravity.**
- **Drive backward when climbing up a steep slope, and drive forward when climbing down.**

NOTE

- **Enter or leave the pavement in a perpendicular direction. When climbing onto the pavement, lower the implement to achieve a lower center of gravity. Once all wheels of the tractor are on the pavement, raise the implement.**



When making a turn, reduce the engine rpm and make a slow turn. When making a turn on the pavement, remove the connector of the brake pedals. Depress the brake pedal on the side to which to make a turn, while steering the wheel, this will allow the tractor to make the turn without moving ahead. Make sure to keep the implement in the up position when making a turn.

⚠ WARNING

- **Make sure to release the differential lock before making a turn.**

[Otherwise]

The tractor will not turn in the intended direction. It may cause an accident.

ATTACHMENT OF IMPLEMENT
INSTALLATION OF PTO DRIVEN IMPLEMENT

1. Attach the implement to the tractor.
2. Lift the implement off the ground.
3. Stop the engine and put the PTO shift lever in the neutral position.
4. After opening the PTO cover, connect the universal joint shaft while turning the PTO shaft by hand so as to align the splines.
5. To check the PTO shaft is secured, check if the pin is returned to the original position by pulling the universal joint shaft.
6. Close the PTO cover.
7. Adjust the PTO shift lever according to the working speed.
8. Check if the safety shields are in place and working environment is normal. If the master safety shield is not installed, do not operate the PTO. Stop the engine to check the PTO shaft and its guards Repair or lubricate if required.
9. The PTO shaft should not be interfered by any surrounding parts.

8. Check if the safety shields are in place and working environment is normal. If the master safety shield is not installed, do not operate the PTO. Stop the engine to check the PTO shaft and its guards Repair or lubricate if required.
9. The PTO shaft should not be interfered by any surrounding parts.

⚠ CAUTION

- **If someone is entangled in the rotating part, it can cause a fatal injury. Always wear protective gear and install the safety shields and guards to the drive line. Don't wear loose clothing.**
- **Do not remove the installed protective cover of the PTO drive shaft without permission. If working with this protective cover removed, it can cause a severe injury. Refer to the warning decal on the cover.**

CYLINDER HOSE CONNECTION

1. **Make sure to use the correct hoses for expansion and retraction. The expanding hose must be connected to the left coupler. The retracting hose must be connected to the right coupler.**
2. **Remove the dust cap from the end of the hose.**
3. Slide the coupler cap.
4. Make sure the end of the hose and the coupler are clean. Insert the hose tip correctly into the coupler. Pull the hose once to make sure the hose is correctly inserted into the coupler.
5. When connecting an external hydraulic hose, be careful not to let foreign substances enter. Be sure to clean the connector and assemble it in a clean state.

⚠ CAUTION

- **High pressure oil leaking under pressure can penetrate the skin and cause severe wounds. Avoid danger by reducing pressure before disconnecting hydraulic or other wires. Tighten all connections before applying pressure.**
- **To check for leakage, use a piece of cardboard and protect your hands and feet from the pressurized fluid.**
- **Get medical attention immediately in case of accident. Fluids injected into the skin may rot if not removed surgically within a few hours.**
- **External hydraulic hoses can be damaged by physical damage, aging and explosion. Check the hoses regularly. If the hose is damaged, replace it immediately.**

PRECAUTIONS FOR CONNECTING THE IMPLEMENT

1. When engaging or disengaging the implement by moving the tractor, make sure that no one is allowed around the tractor or between the implement and the tractor.
2. Engage or disengage the implement on a flat and safe place. Supply proper lighting at all times and especially at night.
3. When engaging a heavy implement, load the weight on the front to keep the balance of the tractor.
4. When adjusting the implement, apply the parking brake, switch off the engine, and confirm that the PTO lever is on the “OFF” position.
5. When towing something, make sure to use the draw-bar.
6. Increase the wheel tread on a slope or when towing.
7. Depending on the implement, the overall length may become very long. Pay particular attention to people or objects nearby when making a turn.
8. Do not substitute the balance weight with a person or anything else. Always use the recommended balance weight.
9. For front loader work, mount an implement on the rear to keep the balance of the tractor.
10. Read the instruction manual of the implement mounted to the tractor.

⚠ WARNING

- **When the PTO shaft is not in use, affix the safety cover on it.**

[Otherwise]
There is a risk of getting entangled in the tractor or injured.

PRECAUTIONS FOR HANDLING IMPLEMENT

1. When driving the tractor to attach or detach an implement, make sure that there is no one in between or around the tractor and implement.
2. Install and remove the implement only on safe and level ground.
3. When engaging a heavy implement, load the weight on the front to keep the balance of the tractor.
4. When adjusting an implement, apply the parking brake, stop the engine and set the PTO switch in the OFF position in advance.
5. To tow anything, use the towing-hitch only.

⚠ WARNING

- **Read instructions on warning decals on each implement thoroughly before work.**
- **To avoid an injury due to mishandling of an implement, read the user's manual of the implement thoroughly and work safely and precisely with caution.**
- **Installation of an improper implement can lead to an injury. Install only implements specified by the Manufacturer.**

ROTAVATOR

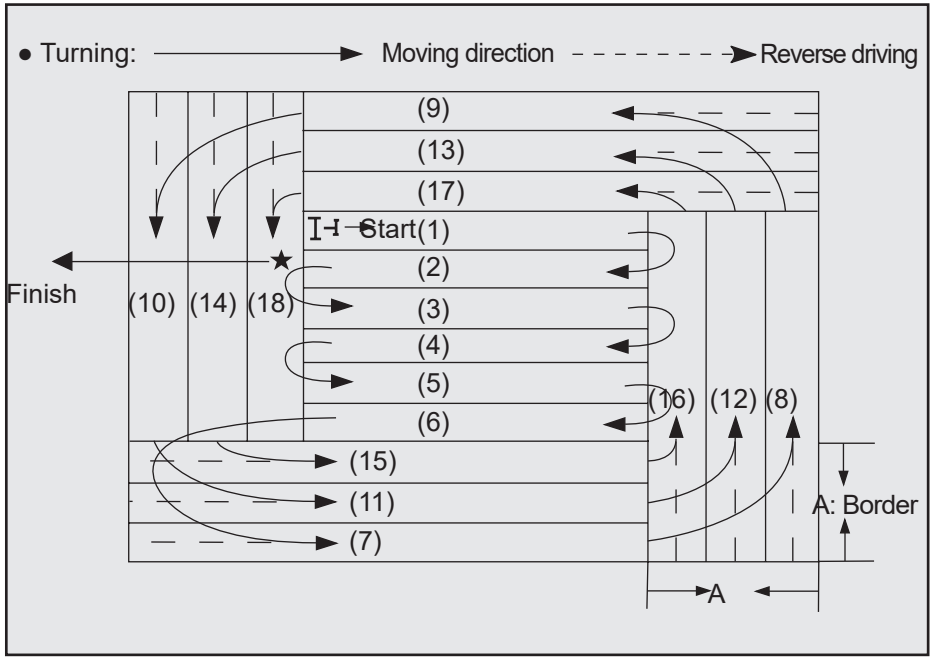
▶Safety precautions for rotavator

- Never remove the safety cover of the rotavator.
- Do not remove the PTO shaft cover and safety cover on the universal joint.
- When adjusting each part, disengage the PTO and stop the engine in advance.
- When driving on a road, keep the PTO disengaged. Also, keep the rotavator lowered on a road as long as it does not hit the ground.
- For the universal joint, its inner shaft and outer shaft should be overlapped at least 15 cm.
- Check that the universal joint is firmly fixed to the tractor and rotavator shaft.

EFFECTIVE PLOWING PATTERN

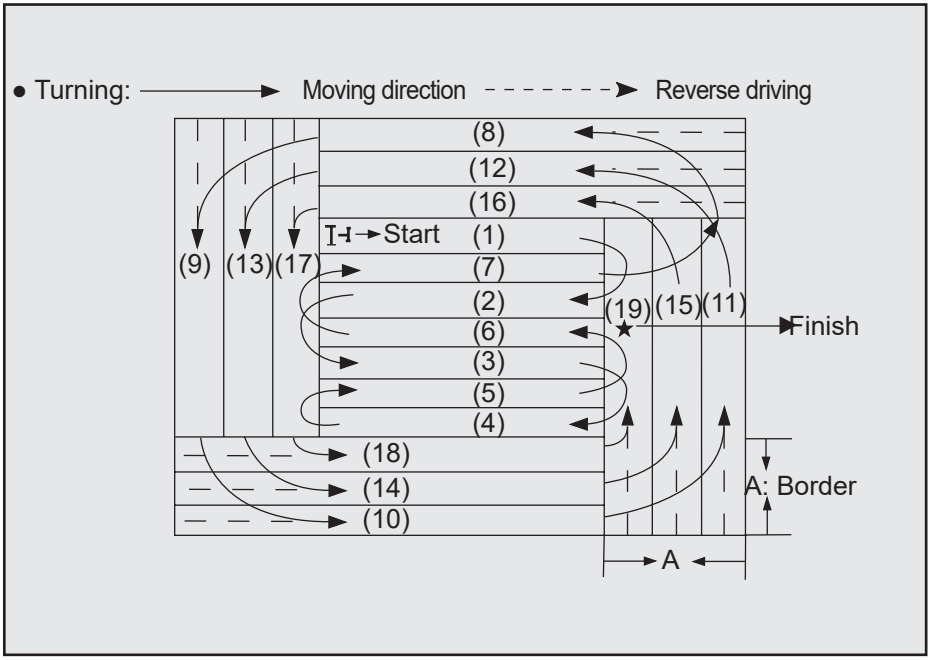
▶Safety precautions for rotavator

- This pattern can be useful in a well-planned field in a good condition.
- The border shown in the figure is the effective plowing width of the rotavator and should be set a little narrower than three times of one plowing width.
- The starting point is the ending point.
- Plow in a sequential pattern from (1) to (6) and in a circular pattern from (7) to (18).
- When driving forward to plow, have the bank on the right side.
- Be careful not to press already-plowed soil with the wheels.



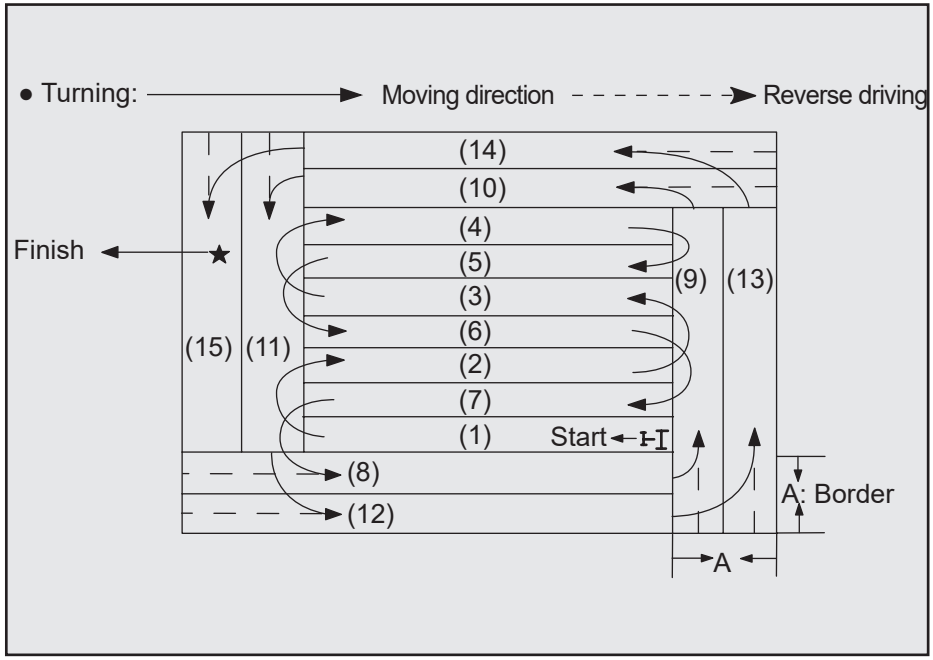
▶ Alternating returning plowing pattern

- This pattern is useful for narrow or short fields or poorly planned fields in which are not easy to turn.
- In the figure, the plowing width for (1), (2), (3) and (4) should be overlapped with the one for (5), (6) and (7) for approx. 10 cm.
- For the sections (1) to (7), perform plowing in an alternating pattern. For the sections (8) to (19), plow in a circular pattern.
- Refer to the sequential returning pattern for other details.

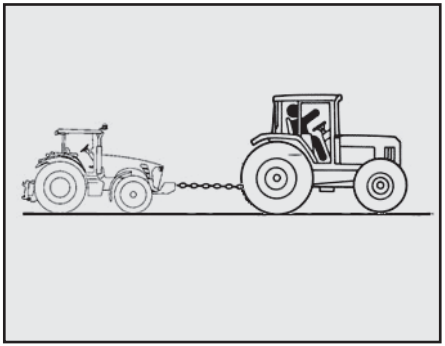


▶Land leveling pattern

- The land leveling work may be performed after crushing soil or not.
- The vehicle speed can be set faster when performing the land leveling work with soil crushed already.
- When working in a wet field, fill the field with a sufficient amount of water so that the trace of plowing cannot be seen.
- The border shown in the figure should be set a little narrower than two times of one plowing width.
- Refer to the alternating returning pattern for other details.

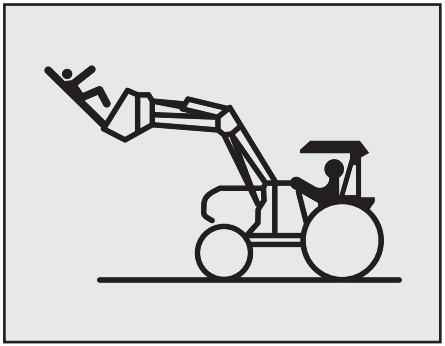


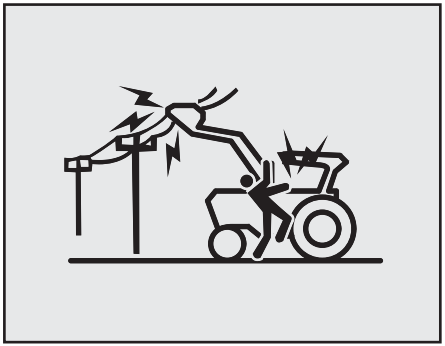
TOWING INSTRUCTIONS



1. Tractor traction should be conducted in short distance. (For instance, from inside to outside)
2. Long distance towing is not allowed in traffic congestion.
3. In case tractor needs to tow, use strong and safe checked chain.
4. Traction must be conducted from the rear in usage of tow bar, tow hook and 3-point linkage.
5. When driver turns the handle, use the brake if necessary.
6. During traction, the transmission and other parts, are not being lubricated but rotating. In order to prevent breakage, please note the following:
7. Towing should be in short distance.
8. Traction speed is restricted to less 8 km/h.
9. If possible, start the engine in order to make the power steering lubricated.
10. Place the main gearshift and sub gearshift in neutral.

LOADER OPERATION

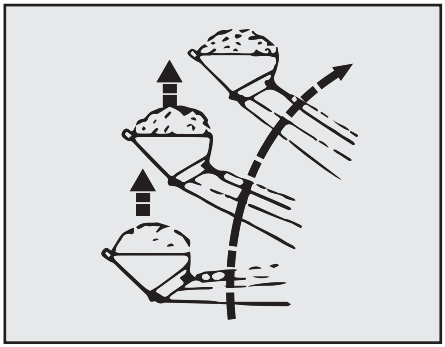




Work with front-end loader. (Risk of falling objects)

⚠ WARNING

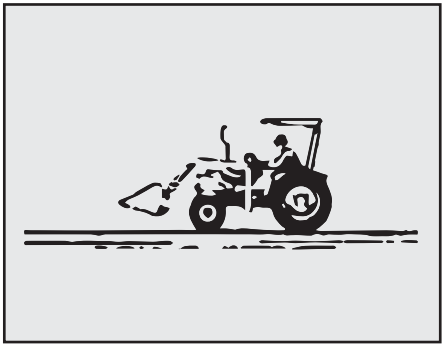
- **Avoid contact with electrical power lines by loader or attachments.**
- **Do not lift or carry anyone in the bucket or on any other position of loader attachment.**
- **Inadvertent movement of the loader or attachment could result in serious injury or death from falling or crushing.**



⚠ CAUTION

- **Make sure material in bucket cannot roll out and down on tractor when bucket is raised to full height.**
- **Keep clear of overhead obstructions such as trees, limbs or power lines when raising bucket.**
- **When lifting the load, keep the bucket positioned to avoid spillage.**

CARRYING THE LOAD

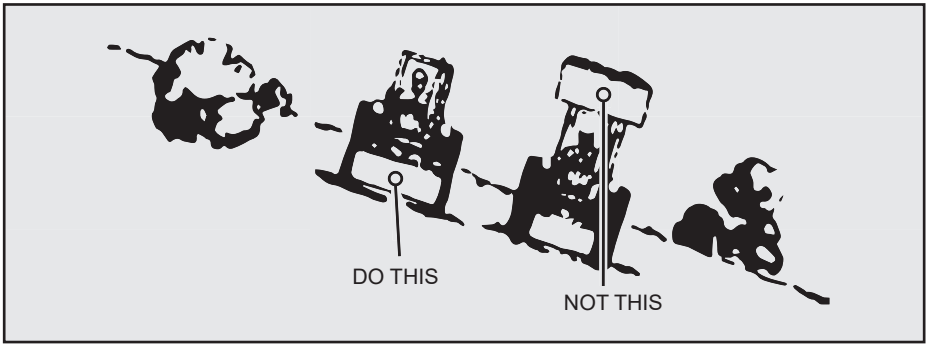


⚠ CAUTION

- **Operating the loader on a hillside is dangerous. extreme care is recommended.**

1. Position the bucket just below the level of the tractor hood for maximum stability and visibility, whether the bucket is loaded or empty.
2. Use extreme caution when operating the loader on a slope, keep the bucket as low as possible, this keeps the bucket and tractor center of gravity low and will provide maximum tractor stability.

HANDLING LARGE HEAVY OBJECTS





When transporting the load, keep the bucket as low as possible to avoid tipping, in case a wheel drops in a rut.

⚠ WARNING

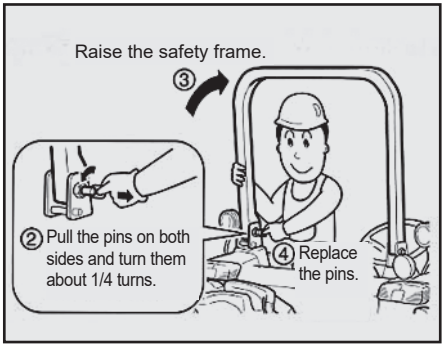
- **Do not use front end loaders for handling large, heavy objects such as large, round or rectangular bales, logs and oil drums.**
- **Handling large heavy objects can be extremely dangerous due to.**
  1. **Possibility of rolling the tractor over.**
  2. **Possibility of upending the tractor.**
  3. **Possibility of the object rolling or sliding down the loader arms onto the operator.**

⚠ CAUTION

- **When transporting the load, keep the bucket as low as possible to resist tipping, in case a wheel drops in a rut. This will avoid tipping and possible injury.**

ROPS FOLDING METHOD

HOW TO FOLD DOWN THE ROPS



1. Turn the handle to separate the push plate and the ROPS.
2. Pull the pins on both sides of the tractor and turn them about 1/4 turns to release the lock of the ROPS.
3. Raise the ROPS a little.
4. Replace the pin.
5. Fold down the ROPS, and the pins will lock into place.

※ If it is not certain whether the pins are fixed, shake the frame a little bit to fix the pins for sure.

HOW TO STAND UP THE ROPS

1. Pull the pins on both sides of the tractor and turn them about 1/4 turns to release the lock of the ROPS.
2. Raise the ROPS a little.
3. Replace the pins.
4. Stand the ROPS up, and the pins will lock into place.

※ If it is not certain whether the pins are fixed, shake the ROPS a little bit to fix the pins for sure.

5. Turn the handle to fix the push plate and the frame.

⚠ CAUTION

- **Don't fasten your seat belt after folding ROPS.**
- **When you drive tractor, fold up vertically.**
- **Fasten your seat belt after folding up ROPS.**
- **When working with the tractor, don't fold down ROPS.**
- **Don't change ROPS without authority.**
- **Before using tractor, check your ROPS support and other parts.**
- **If there is damage to the ROPS, change ROPS at once.**

[Otherwise]

If the tractor rolls over, you could be injured or death may occur.

※ROPS are a very important structure for protection on roll over, always check your ROPS.

6. MAINTENANCE

MAINTENANCE SCHEDULE CHART.....6-2

FUEL, OIL AND COOLANT CHART 6-4

OPENING COVERS 6-5

FUEL.....6-5

BLEEDING THE FUEL SYSTEM.....6-5
CLEANING THE FUEL FILTER 6-6
CLEANING OIL WATER SEPARATOR 6-6

CHANGING THE OILS IN THE TRACTOR.....6-7

CHANGING ENGINE OIL.....6-7
CHANGING THE TRANSMISSION OIL.....6-8
CHANGING OIL IN THE FRONT AXLE 6-9

CLEANING AND CHANGING FILTERS 6-10

ENGINE OIL FILTER 6-10
ENGINE OIL FILTER CARTRIDGE.....6-10

CHANGING THE COOLANT 6-10

ANTI FREEZE 6-11

GREASING THE TRACTOR 6-12

GAP ADJUSTMENT.....6-12

ADJUSTING THE BRAKES 6-12
ADJUSTING TOE-IN.....6-13

CHECKING THE BATTERY 6-13

BATTERY MAINTENANCE 6-14
BATTERY CHARGING 6-14

FAN BELT ADJUSTMENT.....6-15

SERVICING THE AIR CLEANER 6-15

AIR CLEANER DUST VALVE.....6-15

CHECKING HOSES AND LINES.....6-16

CHECKING THE WIRING HARNESS AND FUSES 6-17

REPLACING FUSES 6-17
MAIN FUSES.....6-18

TIRE INFLATION PRESSURE.....6-19

MAINTENANCE SCHEDULE CHART

Meanings of symbols=▲: Replace ●: Check ○: Adjust ⊙: Clean

RUNNING HOURS / CHECK ITEMS	50	100	150	200	250	300	350	400	450	500	550	600	650	700	1YR	2YR
1. Engine oil	⊙					▲				▲						
2. Engine oil filter	⊙					▲					▲					
3. Transmission oil	⊙						▲						▲			
4. Transmission oil filter	⊙						▲						▲			
5. Front axle oil	⊙						▲						▲			
6. Radiator cleaning	At the time the coolant is replaced															
7. Fuel oil filter and element		●		●		●		●		●		●		●		
						▲						▲				
8. Coolant	Check before every work (Replace every year)															
9. Air cleaner element	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙	⊙	⊙		
										▲						
10. Fan and radiator cleaning	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		
11. Battery solution	Replace every two years															
12. Battery (specific gravity)		●		●		●		●		●		●		●		
13. Fuel pipe and connection	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
																▲
14. Steering wheel hose	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
																▲
15. Radiator hose				●				●				●				
																▲

RUNNING HOURS / CHECK ITEMS	50	100	150	200	250	300	350	400	450	500	550	600	650	700	1YR	2YR
16. Hydraulic oil hose		●		●		●		●		●		●		●		
															▲	
17. Fuel hose		●		●		●		●		●		●		●		
															▲	
18. Electric cables	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
19. Greasing	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
20. Tightening handles		●		●		●		●		●		●				
21. Tightening bolts & Nuts	●	●		●		●		●		●		●		●		
22. Cooling fan belt	○	○		○		○		○		○		○		○		
23. Clutch		○		○		○		○		○		○		○		
24. Brake		○		○		○		○		○		○		○		
25. Engine breed pipe	●	●		●		●		●		●		●		●		
26. Engine crankcase cleaning						⊙						⊙				
27. Intake/exhaust gas valves												●				
28. Fuel injection valve												●				
29. Generator motor	●	●				●				●						
30. Hydraulic system	●	●				●				●						

※ Meanings of symbols=▲: Replace ●: Check ○: Adjust ⊙: Clean
※ Inspection should be done every 50 hours. If the tractor is not used much, inspect every year.
※ Replace parts every two years regardless of running hours.

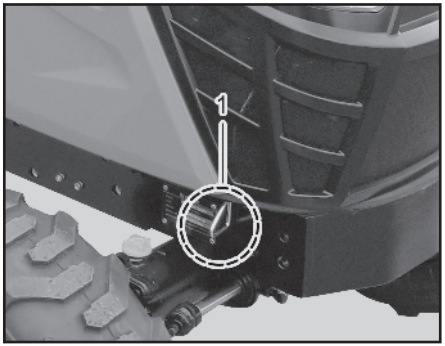
FUEL, OIL AND COOLANT CHART

NO	ITEM	TYPE	1025H
1	RADIATOR	Fresh clean water(L.L.C) with an antifreeze, mixed in ratio of minimum 50%	0.96 gal (3.6ℓ)
2	ENGINE	API : CD/CE grades Above:25°C(77°F)…SAE30 or 10W-30 0°C to 25°C(32°F to 77°F)…SAE20 or 10W30 Below 0°C(32°F)…SAE 10W or 10W-30	0.71 gal (2.7ℓ)
3	TRANSMISSION	(API GL-4 Grade) Tractor transmission and hydraulic oil Below -4ºF(-20ºC) ISO VG32 Above -4ºF(-20ºC) between ISO VG46 and 68	3.83 gal (14.5ℓ)
4	FRONT AXLE	(API GL-4 Grades)Gear oil #80 or #90	0.85 gal (3.2ℓ)
5	FRONT AXLE PIVOT PIN	Grease	As required
6	FUEL TANK	Diesel fuel	5.81 gal (22ℓ)

IMPORTANT

- **Above listed fuel, oil and coolant table is only for initial filling, and may be reduced at the time of replace.**

OPENING COVERS



(1) Hood Lock Lever

Pull the lower center lever of the front grille counter clock wise, pull the lower edges of hood panel upward, and pull the whole panel forward until the guide hook lock is hooked to the groove.

FUEL



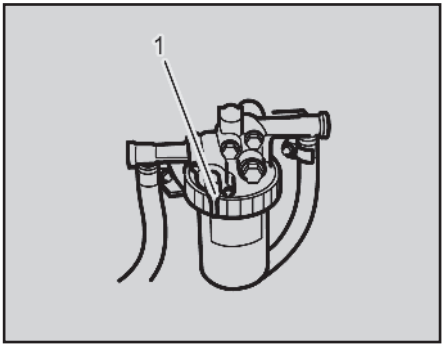
(1) Fuel Filler

Use clean diesel fuel only.

IMPORTANT

- **As diesel fuel equipment is susceptible to contamination by dust or water, ensure that all dust and water is kept well away from the fuel tank.**

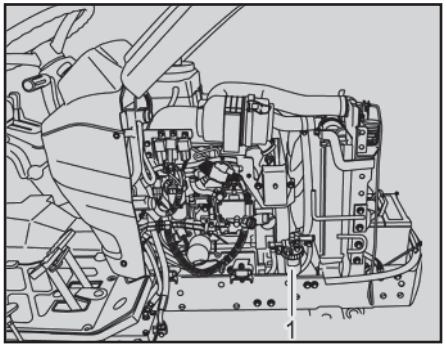
BLEEDING THE FUEL SYSTEM



(1) Fuel Filter Cock

1. Fuel filter cock「ON」
2. Open the cock on the fuel injection pump
3. Fill the tank with fuel and turn the ignition key to on.
4. Start the engine and allow it to run for a while
5. Close the fuel injection pump cock.
6. The bleeding of the system is now finished.

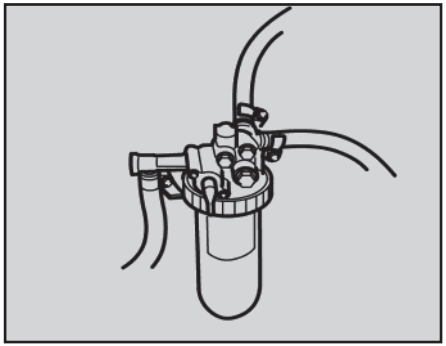
CLEANING THE FUEL FILTER



(1) Fuel Filter Element

1. Close the fuel cock.
2. Remove the fuel filter element.
3. Wash the fuel filter element in clean diesel fuel.
   If necessary, replace it.
4. Fit a cleaned or new fuel filter element.
5. Open the fuel cock.
6. Bleed the fuel system

CLEANING OIL WATER SEPARATOR



If any foreign material or water is seen through the sight glass, remove it by performing the following steps

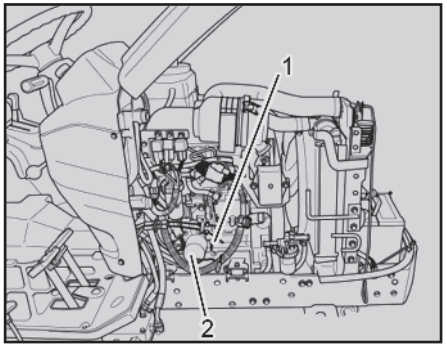
1. Prepare a container to collect fuel from the oil water separator.
2. Open the drain plug.
3. After a sufficient amount of fuel is drained, tighten the drain plug with a hand.
4. Do not use any tool.

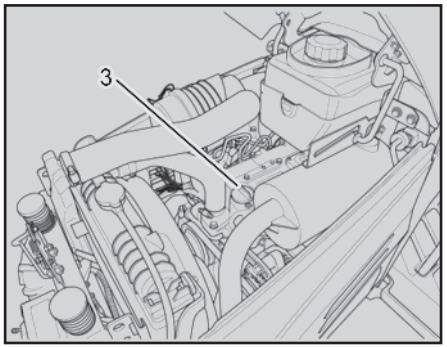
IMPORTANT

- **Never use petrol, thinners or any other similar flammable material to clean the fuel filter.**

CHANGING THE OILS IN THE TRACTOR

CHANGING ENGINE OIL





(1) Engine Oil Gauge
(2) Engine Oil Filter
(3) Engine Oil Filler

Park tractor on a level surface, shut-off the engine and Remove the sump plug & drain oil. Replace and check the sump plug and refill the engine with oil to the correct level on the dipstick (approx. 2.7ℓ(0.71 US gal)).

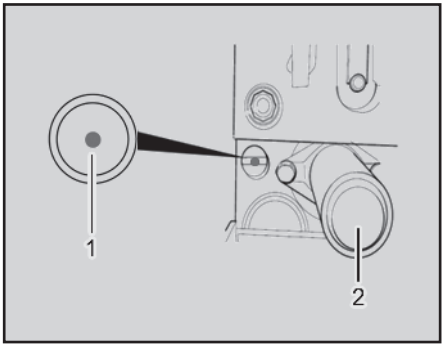
The grade of oil to be used will depend on the ambient temperature.

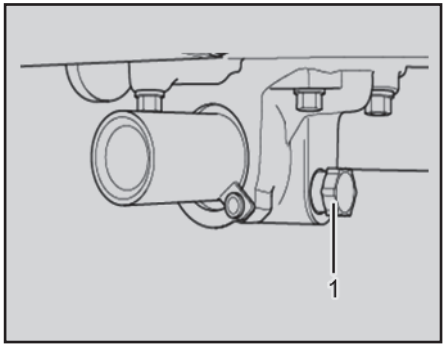
The tractor is shipped from the factory with 15W-40.

IMPORTANT

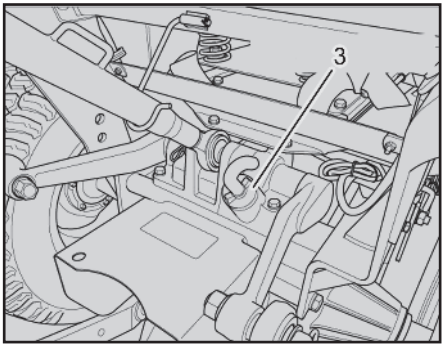
- **When changing the oil always change the filter.**
- **Always use the same oil, as using different oils or specifications can cause damage.**
- **Dispose of the old oil as per local regulations.**

CHANGING THE TRANSMISSION OIL





(1) T/M Drain Plug



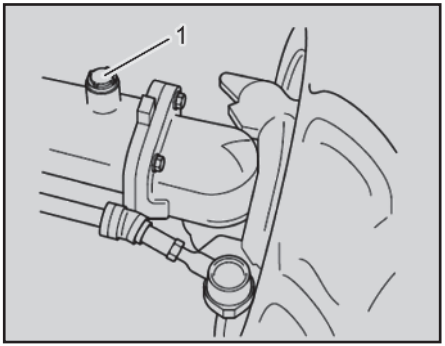
(1) Level Gauge
(2) Rear PTO
(3) T/M Oil Filler

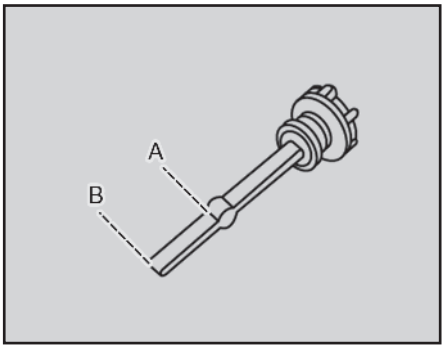
1. Allow the transmission oil to cool.
2. Remove the drain plug from bottom of the transmission and drain the oil.
3. Replace and check the drain plug.
4. Refill the transmission to the correct level on the dipstick with new oil: Qty 14.5ℓ (3.83 US gal)

IMPORTANT

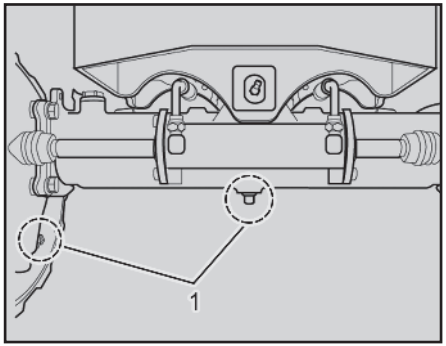
- **Always use the same grade and specified oil as Replacements.**
- **Dispose off the old oil as per local regulations.**

CHANGING OIL IN THE FRONT AXLE





(1) Fill/Level Plug
(A) Upper Level (B) Lower Level



(1) Front Axle Drain Plug

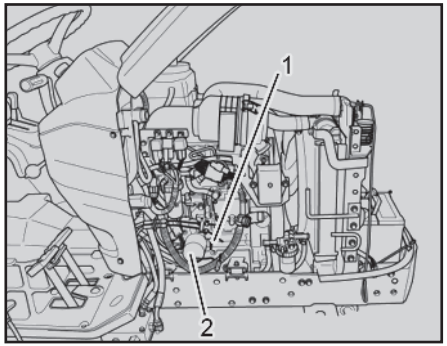
1. Drain the oil from the center diff plug and the drain plug in each drive.
2. Replace and tighten all drain plugs.
3. Remove the Fill/Lever plugs from each final drive to vent air from the final drives.
4. Remove the dip stick from the filter hole and fill with front axle oil capacity to 3.2ℓ (0.85 US gal) and allow time for the oil to drain into the final drives.
5. Check the oil level with the dipstick and replace the Fill/Lever plugs on both final drives and tighten

IMPORTANT

- **Some operators have found that when they fill up with the correct amount of oil ,the level on the dipstick is too high due to the fact that it takes a while for the oil to run into the final drives.**
- **Opening the Vent plugs helps to speed this up.**

CLEANING AND CHANGING FILTERS

ENGINE OIL FILTER



(1) Engine Oil Gauge
(2) Engine Oil Filter

Using a filter wrench turn the filter counterclockwise to remove it.

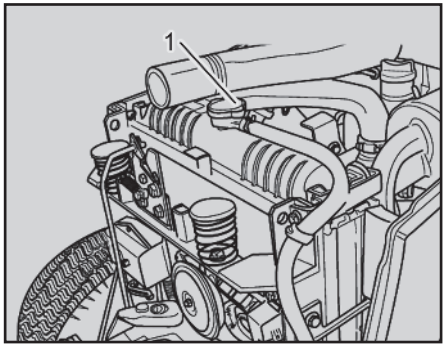
Lightly smear the rubber seal on the new filter with oil to ensure, turn it clockwise until the seal contacts the base and then turn it another 2/3 turn to tighten it.

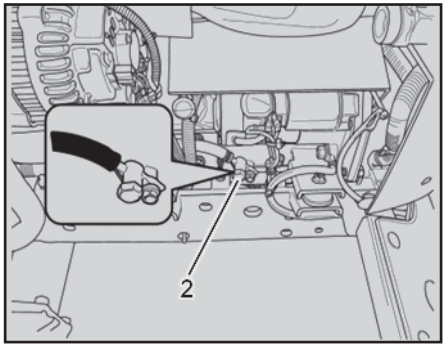
ENGINE OIL FILTER CARTRIDGE

Remove the filter with a filter wrench.

To replace, apply oil or grease on the seal, fit by hand until the seal contacts, then turn it a 2/3rd turn further to tighten it; check for leaks.

CHANGING THE COOLANT





(1) Radiator Cap
(2) Drain Cock

1. Open to drain cock.
2. Open the radiator at the same time.
3. To give a thorough clean, run a hose into the radiator and flush it out.
4. Close the tap and refill the radiator with a coolant mixture of water and corrosion inhibitor or anti freeze.

(5) Start the engine and allow it to run for approx 5 minutes, check the water level again and top off if required.

⚠ CAUTION

- **Do not remove the radiator cap on a hot engine.**
- **Allow the engine to cool down and then turn the cap slowly to ensure, that**
- **there is no excessive pressure in the radiator.**

⚠ CAUTION

- **Serious burns can result from the contents of pressurized, hot radiators.**
- **Allow the engine to cool down completely before opening the radiator.**

ANTI FREEZE

Frozen cooling water can damage the engine.

Before replacing the anti freeze solution flush the radiator.

Mix the anti freeze solution in accordance with the instructions applicable to the brand of anti freeze and the local climate.

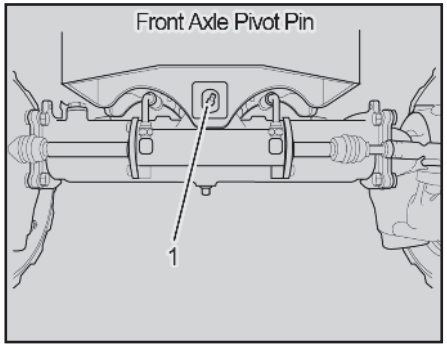
Replace the solution in the radiator.

In the case of the loss of solution due to evaporation or overflow, replace with the original mixture ratio.

⊕ IMPORTANT

- **Water or air under high pressure can distort the cooling fins on the radiator and reduce their efficiency.**

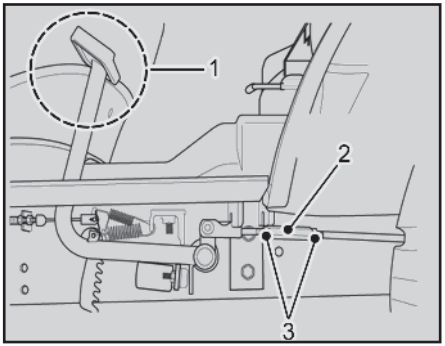
GREASING THE TRACTOR



(1) Grease Nipple

Ensure that grease nipples are cleaned well before any attempt is made to grease them.

GAP ADJUSTMENT ADJUSTING THE BRAKES



(1) Brake Pedal (2) Turn Buckle (3) Locknut

As is the case with the clutch, use of the brakes will change the pedal free play and the balance between the right and left pedal.

The correct pedal free play is 30~40mm(1.18~ 1.57 in.)

▶ Adjusting Method

Loosen the locknuts to adjust the brake.

Turn the turnbuckle counterclockwise to increase the free play, or turn the turnbuckle clockwise to decrease.

Tighten the locknut and confirm, to fix the nuts.

Check that the free play is correct and the same on both pedals to ensure even braking.

⚠ CAUTION

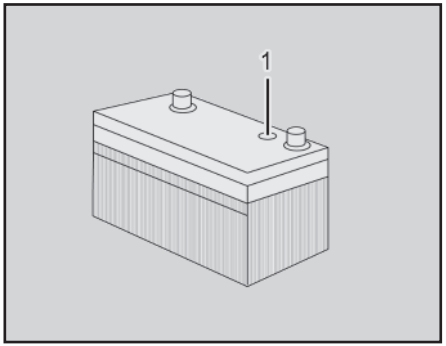
- **An uneven adjustment of the left and right pedal will result in one sided braking when the pedals are connected and can cause serious accidents, especially at high speeds.**
- **Double check to ensure that free play is the same on both pedals.**

ADJUSTING TOE-IN

If the toe-in adjustment is incorrect, it can cause the severe shaking of both the steering wheel and the entire tractor. The correct toe in is 2~6 mm (0.08~0.24in.)

We recommend that this adjustment is made by the dealer.

CHECKING THE BATTERY



(1) Indicator Condition

Check the Indicator

COLOR	CONDITION
Green	Good condition
Black	Replace battery

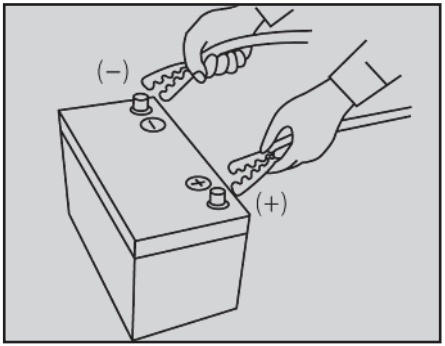
IMPORTANT

- **Low electrolyte levels can cause premature battery failure and corrosion.**

CAUTION

- **Electrolyte contains acid and can cause serious burns.**
- **Any spillage on the skin should be washed off by running water immediately.**

BATTERY MAINTENANCE



To keep them in good condition, charge them once a month in summer and every second month in winter.

When replacing the original battery, ensure that the replacement battery is the same size.

Failure to do so can cause problems with the electrical circuit.

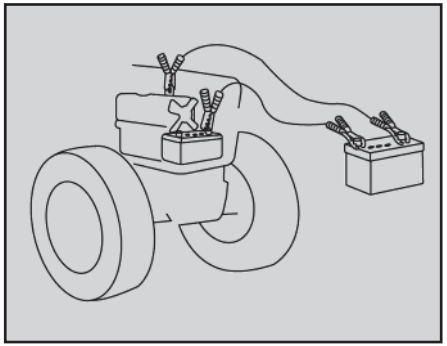
Low temperatures will affect the performance of batteries so take particular care of it in winter.

For the long-term storage of the tractor remove the battery and keep it in a cool dry room.

If it is on the tractor while stored, disconnect the negative terminal.

Batteries will self discharge if left for a period of time without use.

BATTERY CHARGING



A boost charge is only for emergencies. It will partially charge the battery at a high rate and in a short time.

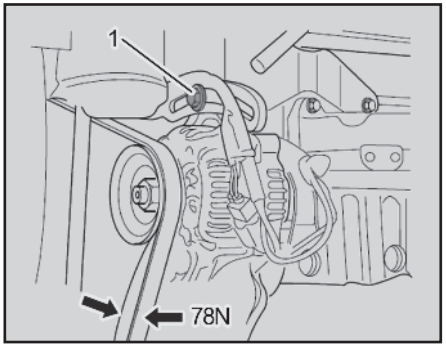
When using a boost-charged battery, it is necessary to recharge the battery as early as possible.

Failure to do this will shorten the battery's service life.

FAN BELT ADJUSTMENT

⚠ CAUTION

- **Always disconnect the negative terminal first when removing the battery and always connect the positive terminal first when fitting the battery.**
- **When connecting the battery leads make sure not to reverse the polarity.**
- **Quick charging will reduce battery life.**
- **Disconnect the terminals prior to charging the battery to avoid damage to the circuit and electrical instruments.**

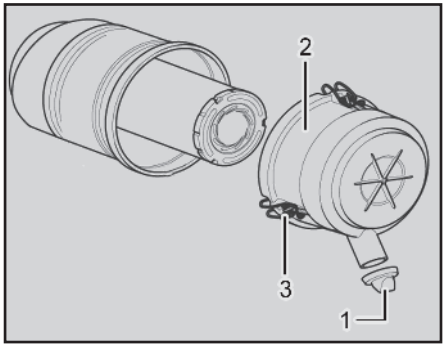


(1) Pivot Bolt

1. Loosen the alternator pivot bolt.
2. Move the alternator in order to increase or decrease the belt tension. Tighten the alternator pivot bolt and the link bolt to 22 N.m (16 lb ft).

SERVICING THE AIR CLEANER

AIR CLEANER DUST VALVE



(1) Dust Valve (2) Cover (3) Clip

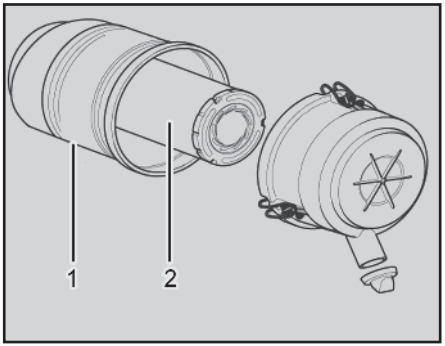
▶ Cleaning the Air Cleaner Dust Valve

Check that the dust valve is not blocked.

Inspect the rubber flaps for cuts and nicks and check that the rubber is not perished. Renew if necessary.

To remove dust from the dust valve, squeeze it between thumb and fingers. Wipe around the dust valve to remove dust collected on the outside.

CHECKING HOSES AND LINES



(1) Element(Outer) (2) Element(Inner)

▶ Cleaning/Changing the Element

Release the two clips on the air cleaner end cover and remove the element.

Remove dust by blowing compressed air through the element.

Check the element for damage, if necessary, change the elements.

Check all hoses for condition and tightness.

IMPORTANT

- **Never beat the element on a stone or concrete floor/wall to clean it.**
- **Check all connections and hoses especially on the clean side of the air cleaner to ensure no dusty air can enter the engine.**
- **Check the element for flaws by putting a light inside the element.**
- **When reassembling, make sure all surfaces seal correctly to keep dust out.**
- **When working in dusty conditions, increase the service frequency.**

▶ Replace the element after cleaning it 5 times or if it is damaged.

The fuel lines, radiator hoses, hydraulic and rubber hoses are consumables, which deteriorate by age and use.

Check them regularly and replace if faulty.

⚠ CAUTION

- **Damaged fuel lines leak and cause fires.**
- **Damaged radiator hoses can cause hot water burns and in severe cases seize the engine.**

CHECKING THE WIRING HARNESS AND FUSES

Loose wires make inferior connections and damaged wires can cause short circuits, fires burnt wiring or reduce the efficiency of the components.

Replace or repair any faulty wiring or insulation.

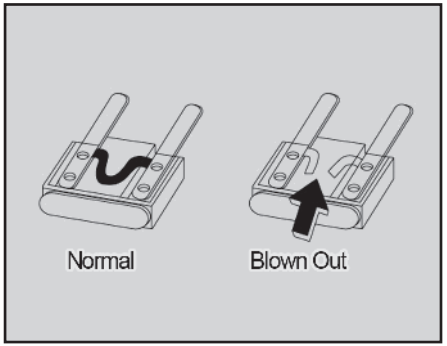
If a fuse burns out again after it has been replaced, do not replace it with wire or a high capacity fuse, find the cause and rectify it or get an auto electrician to do so.

Where insulation is chafed or peeled off, recover the area with a good quality insulation tape. Where wiring comes out of it's fitting, replace it correctly with the standard fitting.

IMPORTANT

- **Incorrect wiring or fuses can cause fires to both the tractor and surrounding area so get the dealer to check it annually.**
- **Likewise fuel pipes and wiring age with use.**
- **Ask your dealer to check it at least once every 2 years and replace as required.**

REPLACING FUSES

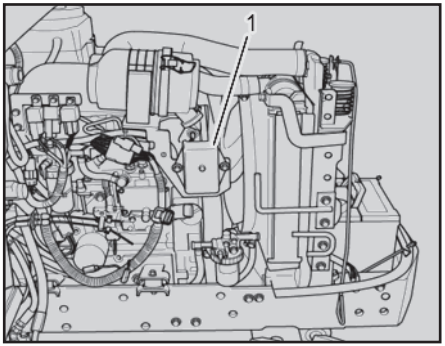


The circuit has blade type fuses in its wiring circuit When a fuse has blown, replace it with one of the same value.

Using a large capacity fuse or wire burns out the wiring system.

Use fuse tongs to replace fuses.

MAIN FUSES



(1) Fuse Case

The wiring harness is equipped with main fuses whose function is to preserve the wiring.

However when a main fuse blows the entire circuit is dead.

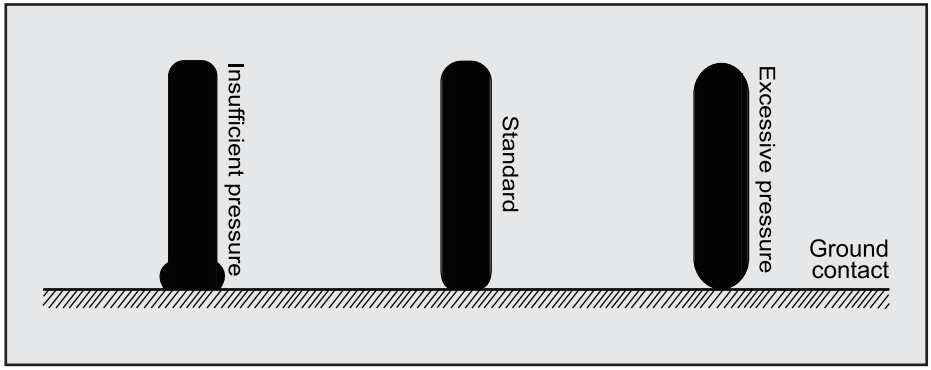
Always check the reason & rectify before replacing with a fuse of the same value.

To indicate that the fuse is blown it will be discolored.

IMPORTANT

- **Always check the reason for a blown fuse otherwise the new fuse is also likely to blow.**
- **NEVER EVER USE WIRE in place of a correct grade fuse.**

TIRE INFLATION PRESSURE



Check if the inflation pressure of the front and rear tires is correct.
If not, adjust it to the specification.

Tire	Division	Size	Inflation Pressure
Ag Tires	Front	6-12	2.0 kg /㎠
	Rear	9.5-16	2.2 kg /㎠
Turf Tires	Front	20 x 8-10	2.8 kg /㎠
	Rear	29 x 12.5-15	1.4 kg /㎠
Industrial Tires	Front	23 x 8.5-12	1.6 kg /㎠
	Rear	27 x 12-16.5	2.8 kg /㎠

▶SPEED CHART(km/h)
(Engine Rated Speed)

	L	H
Ag Tires	6.8	16.9
Turf Tires	5.9	14.7
Industrial Tires	5.6	14.1

MEMO

7. TROUBLESHOOTING

TROUBLESHOOTING - ENGINE 7-2
TROUBLESHOOTING - CLUTCH AND BRAKE 7-5
TROUBLESHOOTING - HYDRAULIC SYSTEM 7-6
TROUBLESHOOTING - ELECTRICAL SYSTEM 7-7

TROUBLESHOOTING - ENGINE

Symptom	Inspection item	Action
1. The starter motor does not start when the ignition switch is turned to "START".	• Is the clutch depressed?	• Depress the clutch pedal fully and turn the ignition switch to the "START" position.
	• Is the battery discharged?	• Charge the battery.
	• Is the battery terminal loosened or corroded?	• Clean and tighten the terminals.
	• Is the main fuse blown out?	• Replace the fuse.
	• Is the ignition switch broken?	• Contact the dealer for repair or replacement.
	• Is the starter motor damaged?	• Contact the dealer for repair or replacement.
2. The starter motor runs, but the engine does not start.	• Is the fuel tank empty?	• Fill up the fuel tank and bleed the system.
	• Is the fuel mixed with air?	• Bleed the fuel system.
3. The engine revolution is irregular.	• Is air mixed in the fuel system?	• Bleed the fuel system.
	• Is water mixed in the fuel?	• Drain water and replace fuel.
	• Is the injection nozzle clogged?	• Contact the dealer for repair or replacement.
	• Is the fuel filter clogged?	• Clean or replace it.

Symptom	Inspection item	Action
4. The engine is over-heated.	• Is the coolant level low?	• Refill the coolant.
	• Is the fan belt loosened or damaged?	• Adjust the belt tension or replace it.
	• Is the radiator fin clogged?	• Clean it.
	• Is the engine oil level low?	• Refill the engine oil.
	• Is the engine running under overload?	• Reduce the load.
5. The engine power is too weak.	• Is the air cleaner clogged?	• Inspect the air cleaner and replace the element.
	• Is the nozzle damaged?	• Contact the dealer for repair.
	• Is the compression force weak?	• Contact the dealer for repair.
	• Is the valve clearance adjusted properly?	• Contact the dealer for repair.
	• Is the injection timing incorrect?	• Contact the dealer for repair.

Symptom	Inspection item	Action
6. The coolant warning lamp is turned “ON” during operation.	• Is the coolant level in the reservoir tank low?	• Refill the coolant.
7. The engine oil pressure lamp is turned “ON” during operation.	• Is the engine oil level low?	• Refill the engine oil up to required level.
	• Is the viscosity of the engine oil low?	• Replace the engine oil with proper viscosity.
	• Is the pressure switch defective?	• Replace the switch.
	• Is the oil pump defective?	• Contact the dealer for repair.
8. The battery charge warning lamp is turned “ON” during operation.	• Is the alternator defective?	• Contact the dealer for repair.
	• Is the fan belt loosened or damaged?	• Adjust the fan belt tension or replace it.

TROUBLESHOOTING - CLUTCH AND BRAKE

Symptom	Inspection item	Action
1. The clutch slips or does not be disengaged.	• Is the free play of clutch pedal proper?	• Adjust the free play of the pedals.
2. The brake does not work or works only on one side.	• Is the free play of the brake pedals proper?	• Adjust the free play of the pedals.
3. The brake pedal does not return to its original position properly and it makes a noise.	• Is the brake pedal return spring damaged?	• Replace the spring.
	• Is each sliding part well greased?	• Remove the rust and apply grease.

TROUBLESHOOTING - HYDRAULIC SYSTEM

Symptom	Inspection item	Action
1. The implement does not be lifted.	• Is the hydraulic flow control dial in the close position?	• Adjust the hydraulic flow control dial.
	• Is the transmission oil level low?	• Refill the transmission oil.
	• Is the air taken in the fluid suction system?	• Tighten the filter or connection parts. Replace the pipe or O-ring if damaged.
	• Is the oil filter clogged?	• Clean or replace it.
	• Is the Selective control valve lever in the detent position?	• Put the Selective control valve lever in the neutral position.
	• Is the hydraulic pump defective?	• Contact the dealer for repair.
	• Is the cylinder damaged?	• Contact the dealer for repair.
2. The implement does not be lowered.	• Is the hydraulic flow control dial in the close position?	• Adjust the hydraulic flow control dial.
	• Is the position control lever on the lowest position?	• Move the position control lever.
	• The implement cannot be lowered even though the position control lever is placed in the lowest position.	• Contact the dealer for repair.

TROUBLESHOOTING - ELECTRIC SYSTEM

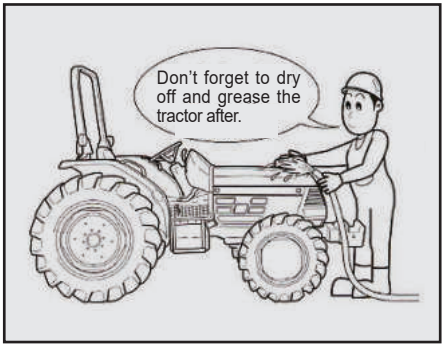
Symptom	Inspection item	Action
1. The headlamp does not turn “ON”.	• Is the bulb blown?	• Replace the bulb.
	• Is the fuse blown?	• Replace the fuse.
	• Is the cable connector separated from the socket?	• Inspect it.
	• Is the contact in a poor condition?	• Inspect and clean the grounding and terminals.
2. The turn signal lamp does not come “ON”.	• Is the bulb blown?	• Replace the bulb.
	• Is the fuse blown?	• Replace the fuse.
	• Is the cable connector separated from the socket?	• Inspect it.
	• Is the contact in a poor condition?	• Inspect and clean the grounding and terminals.
3. The other lamp does not turn "ON".	• Is the bulb blown?	• Replace the bulb.
	• Is the fuse blown?	• Replace the fuse.
	• Is the cable in a poor contact?	• Inspect the cable and secure the contact.
	• Is the switch defective?	• Replace the switch.

MEMO

8. STORAGE AND DISPOSAL

DAILY STORAGE 8-2
LONG-TERM STORAGE 8-3
OPERATING TRACTOR AFTER LONG-TERM STORAGE 8-6
USAGE AND DISPOSAL 8-7

DAILY STORAGE



After work, clean the tractor and dry the moisture and supply grease into each grease nipple.

Avoid water on electrical parts whenever possible, as it will cause equipment breakdown.

1. Store the tractor after cleaning it. Especially, clean it thoroughly after harrowing or working in a wet field.
2. Be sure to lower the implement.
3. Store it indoors if possible. If it should be kept outside, cover it.

⚠ CAUTION

- **Unless the battery is removed from the vehicle, make sure to disconnect the negative(-) battery cable. The wiring can be gnawed by rodents, leading to a fire.**

4. Remove the battery from the tractor in winter and store it indoors for easy starting.
5. Add anti-freeze to the tractor in winter season in order to prevent the radiator from freezing.
6. Remove the ignition key and store it separately.

⚠ DANGER

- **When covering the tractor, make sure that the engine or the muffler has fully cooled down.**

[Otherwise]

There is a risk of fire.

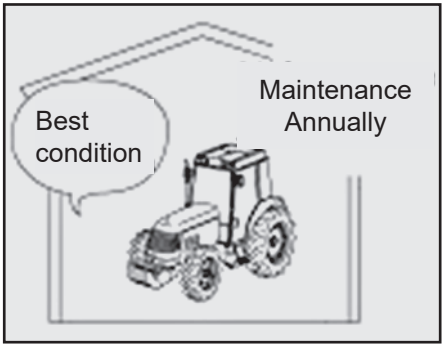
⚠ CAUTION

- **When carrying out checking, maintenance, or repair, make sure to turn off the engine.**

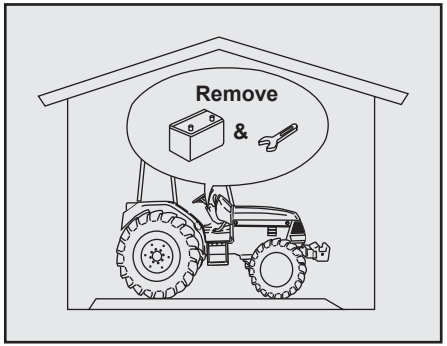
[Otherwise]

There is a risk that you may be entangled in the tractor or get injured.

LONG-TERM STORAGE



In particular, we recommend that the electrical cables and the rubber hoses, such as fuel hose, steering hoses and radiator hoses, be replaced every two years.



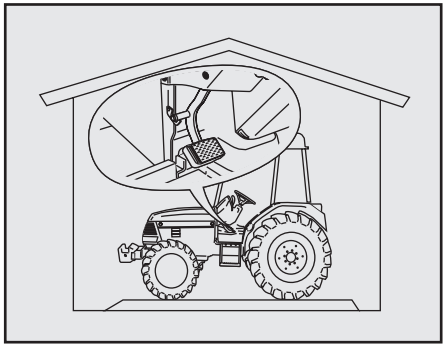
If you carry out maintenance during the off season, you can ensure optimum condition of the tractor as well as safe and comfortable working conditions during the busy season. Also, in order to secure the safety of each part of the tractor and to prevent an accident that may occur due to poor maintenance, arrange with your authorized dealer for periodic maintenance once a year.

If the tractor is not used for a long time, store it in the following manner.

1. For long storage, put the ignition switch to “OFF”.
2. Select a dry and well-drained place for storage. Remove detach the weight & implement or put it down onto the ground.
3. Fill up the fuel tank. Empty space in the fuel tank will produce dew-

drops that will produce condensation that will be the cause of rust formation. And lock the fuel cock to “C”. (Closed)

4. Disconnect the battery completely and store it away from the tractor in a well-ventilated, dry, dark place if possible. When the battery is attached to the tractor, make sure to connect the (+) terminal first.
5. Change the engine oil and run the engine to circulate oil throughout all the engine parts for about 5 minutes.
6. Drain the coolant from the radiator. After draining the coolant, attach a tag of "No coolant, do not start" to the steering wheel. If there is anti-freeze in the cooling system, it is not necessary to drain it.
7. Check the bolts and nuts for looseness, and tighten if necessary.
8. Add oil, fluid and fuel to each part according to the maintenance chart.
9. Apply a slight coat of grease or oil onto the tractor parts where is easy to be rust such as bare metal surface.
10. Inflate the tires to a pressure a little higher than usual.
11. Place chocks behind and in front of the rear wheels.
12. Store it in a dry indoor place to avoid rain or snow and cover the body.



13. Keep the clutch pedal in a depressed position to avoid rust on the clutch.
14. Put all controls into the neutral position.

IMPORTANT

- When cleaning the tractor, be sure to stop the engine. Allow sufficient time for the engine to cool before washing.
- Cover the tractor after the muffler and engine have cooled down completely.

WARNING

- Carry out maintenance on a flat and safe place where the tractor will not fall or move and there is no traffic danger. Also, block the front tires to prevent moving of the tractor. Otherwise, there is a risk of accident, such as overturning of the tractor.

WARNING

- Carry out checking and maintenance for each part every year.
- In particular, replace the fuel hoses and the steering hoses every two years. Otherwise, there is a risk of accident or machinery breakdown due to poor maintenance.
- When carrying out checking or maintenance, make sure to stop the engine.
- Replace the covers that have been defected for checking or maintenance.
- Carry out checking or maintenance after heated parts, such as muffler, engine or transmission, have fully cooled down. Otherwise, there is a risk of getting burnt.

CAUTION

To avoid a personal injury,

- Never clean the tractor body while the engine is running.
- Never run the engine in an enclosed area without proper ventilation system in order to prevent poisoning by exhaust gas.
- When storing the tractor, remove the key from the switch and store it separately in order to prevent an unauthorized person from operating the tractor and being injured.

OPERATING TRACTOR AFTER LONG-TERM STORAGE

Keep the following instructions when operating the tractor after its long-term storage.

1. Perform the inspection procedures before operation.
2. Check the tire air pressure and inflate the tires if it is low.
3. Install a fully charged battery. Check that the battery is fully charged before installing it.
4. Check the fan belt tension.
5. Check all fluid levels. (Engine oil, transmission/hydraulic oil, and engine coolant)
6. Remove grease from the exposed cylinder rod.
7. Apply grease to the lubrication points.
8. Remove the cover from the exhaust pipe.
9. Get onto the tractor and start the engine. To prolong the life and to enhance the performance of the engine, idle the engine for about 30 minutes before starting work.
10. Start the engine, release the parking brake, and check the brake condition by depressing the brake pedal. Adjust the free play of the brake pedals if necessary.
11. Check if the instrument panel and all parts operate correctly while running the engine for a few minutes.
12. Drive the tractor outside and check if it is operating properly. Park the tractor outside and idle the engine for at least 5 minutes. Stop the engine and visually inspect the tractor. Check if there is leakage.
13. Stop the engine and check for leakage. Repair any part as required.

⚠ WARNING

- **When operating the tractor in an enclosed area, ventilate the area to release exhaust gas to the outside. Exhaust gas is colorless and not visible, but is harmful.**

USAGE AND DISPOSAL

It is recommended to keep the following to protect the environment:

1. Overload on the machine shortens the product life and increases the harmful exhaust gas which causes air pollution due to the incomplete combustion.
2. When changing the fluid (engine oil, transmission/hydraulic oil, and engine coolant) by yourself, be careful not to spill it and dispose used oil and coolant properly according to the applicable regulations. Otherwise, it can pollute the ground and water.

MEMO

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