

# SOLIS



## SOLIS 50

### OPERATOR MANUAL



# ***OPERATOR MANUAL***

**SOLIS - 50**



**INTERNATIONAL TRACTORS LIMITED  
HOSHIARPUR  
INDIA**

**PART NO :— 10071297AA**



# OWNERSHIP AND TRACTOR DETAILS

<b>OWNER'S NAME &amp; ADDRESS</b>	-----
	----- <b>TEL No.</b> -----

Model :	Delivery Date :
Chassis No.	Bill No. / Date :
Engine No.	Alternator Make / Sr. No.
Battery Make / Sr. No.	Starter Motor Make / Sr. No.
FIP Sr. No. :	Hydraulic Pump Make / Sr. No. :

Tire	Make	Size	Sr. No.
Front (Left)			
Front (Right)			
Rear (Left)			
Rear (Right)			

I have under stood all the terms & conditions of the maintenance of the tractor, terms of warranty, systems, Scheduled services & understood operation of tractor in the field and other operations

Received a new defect free tractor Chassis No. .. Engine No.  
.....

& fully satisfied with the transaction.

<b>OWNER SIGNATURE</b>	<b>DEALER STAMP &amp; SIGNATURE</b>
	<b>PH. No.</b> ..... <b>DATE :</b> .....

\* **IMPORTANT INFORMATION TO CUSTOMER:** For any assistance with regard to our product, please contact our authorized dealer or authorized service center.



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## PREFACE

Dear Customer, we welcome you with great pleasure in your joining the **ITL** family and thank you for the faith and trust you have placed in the careful selection of your tractor.

Before using this tractor it is highly recommended to read this manual thoroughly. Any person who regularly or occasionally uses your tractor should be encouraged to read these instructions.

Daily and routine maintenance operations can be easily performed with the use of this manual. Our dealers would be pleased to assist you in the maintenance of your tractor and help economical operation.

Use only genuine ITL spare parts from dealers/stockist. It would fetch you a reliable and durable performance.

Information provided in this operator manual is accurate at the time of printing. Improvement and modifications is a continuous process at **International Tractor Limited (ITL)**, we reserve the right to modify at any time without prior notice.

You are the proud owner of the best product for your prosperity. In case of any help/support required please feel free to call our dealership with the tractor details like Engine number and Chassis number. We wish your prosperity and our growth.

### **Export Department**

#### **INTERNATIONAL TRACTORS LIMITED**

Vill.-Chak Gujran, P.O. Piplanwala 146022

Jalandhar Road, Hoshiarpur, Punjab, India.

Phone: +91-1882-302-525/526

E-mail: [exports@sonalika.com](mailto:exports@sonalika.com)



### YOUR RIGHTS

While taking delivery of new "ITL" Tractor, kindly ask the dealer to give following items free of cost:

**1. Tool kit which includes**

Grease gun (4 Cylinder)	1pc
Cutter plier 8"	1pc
Screw driver 5"	1pc
D-spanner 10 X 11	1pc
D-spanner 12 X 13	1pc
D-spanner 14 X 17	1pc
D-spanner 18 X 19	1pc
D-spanner 20 X 22	1pc
D-spanner 30 X 32	1pc
Ring spanner 16 X 17	1pc
Ring spanner 24 X 27	1pc
Battery Guarantee card	1pc
Hydraulic Jack (Optional)	1pc
Rear Wheel Spanner Kit (Optional)	1pc

**2. Farmer Kit**

Diesel Filter( Primary)	3pc
Diesel Filter( Secondary)	3pc
Lub. Oil Filter	2pc
Fan Belt	1pc
Cap Radiator	1pc
Cap Fuel Tank	1pc
Linch Pin	3pc
Fuse Box	1pc
Tyre pressure gauge	1pc

**3. To avail the services.**

**4. To call dealers any time for any breakdown.**

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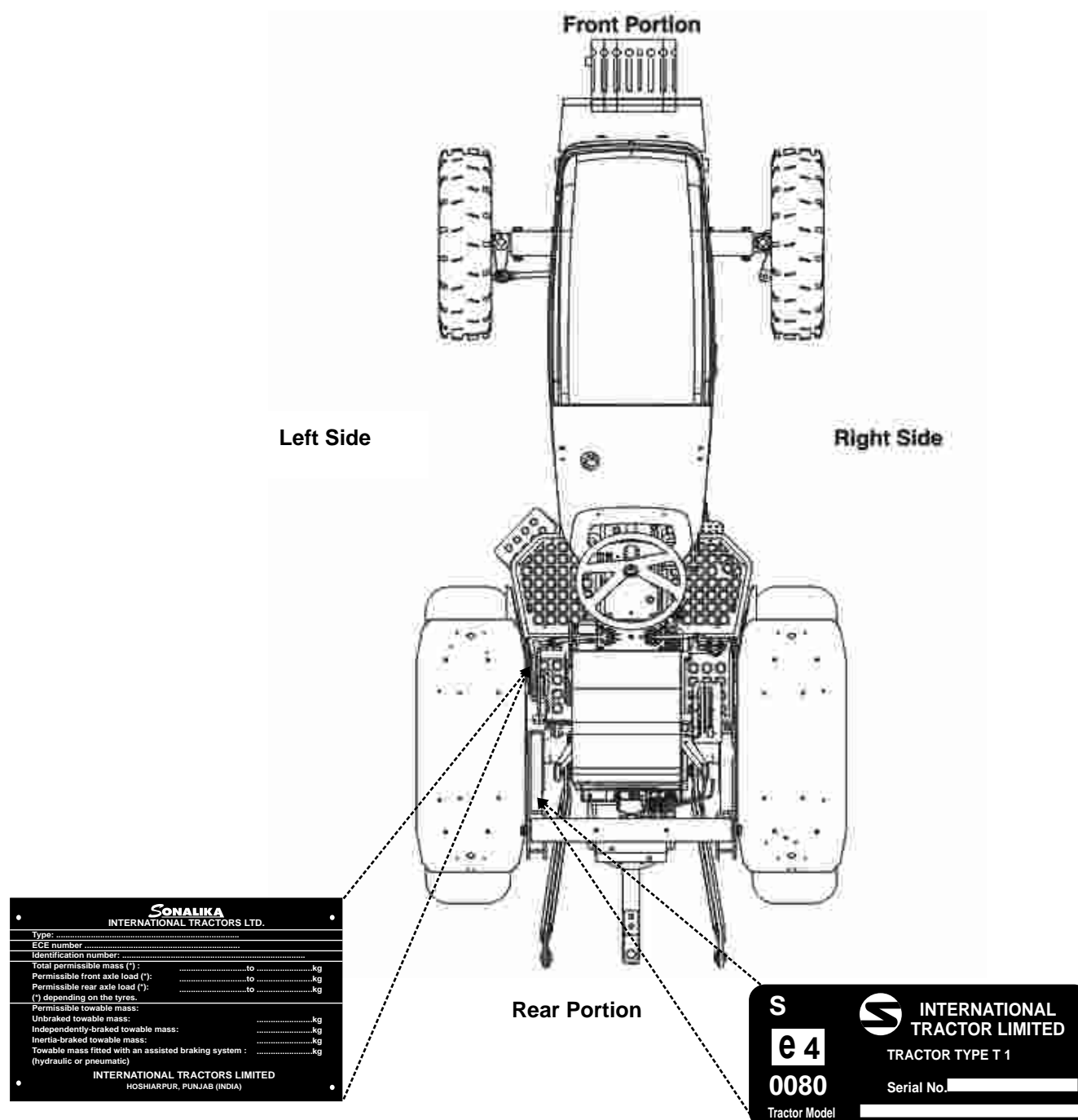
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## IDENTIFICATION OF TRACTOR

1. In this manual it is written many times **front portion, rear portion, left side, right side**, understand these terms as per reference Fig.
2. While ordering spare parts always mention the chassis number of the tractor and engine. These numbers are punched on the data plate which is riveted on left hand fender. By giving these numbers correctly you will get delivery of the right parts at right time. Refer Fig. Fordata plate.
3. The serial No for E Marked ROPS is also riveted on the left side of the ROPS refer Fig.



## WHOLE VEHICLE TYPE APPROVALS FOR TRACTOR

TRACTOR EC TYPE APPROVAL NO	TRACTOR MODEL
e4*2003/37*0057*01	SOLIS 50 4WD Including all variants with up Draft/ Down Draft, Power Steering/ Mechanical Steering, Radial Tyres, Air Trailer Brake/Hydraulic Trailer Brake
e4*2003/37*0051*03	SOLIS 50 2WD Including all variants with up Draft/ Down Draft, Power Steering/ Mechanical Steering, Radial Tyres, Air Trailer Brake/Hydraulic Trailer Brake

### E-marked Components

Sr. No.	Name of Device	Component Type approval No.
1	Main Beam Head Lamp	E4-112R-000223
2	Dim Beam Head Lamp	E4-112R-000223
3	Front Direction Indicator	E4-6R-0111359
4	Front Position Lamp	E4-7R-0211359
5	Rear Direction Indicator	E4-6R-0111358
6	Stop Lamp	E4-7R-0211358
7	Rear Position Lamp	E4-7R-0211358
8	Registration Plate Lamp	E4-4R-004125
9	Reflector	E4-3R-023232
10	Driver Seat	e4*78/764*1999*/57*0009*00
11	Audible Warning Device	E4-28R-000153
12	Rear View Mirror	E4-46R-022764
13	ROPS	e4*2009/75*2009/75*0080*00
14	Swinging Drawbar	e4*2009/144*2010/62*0049*00

## SAFETY NOTES

### A. SAFETY ALERT SYMBOLS AND TERMS

This safety alert symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



The safety alert symbol identifies important safety messages on machines, safety signs, in manuals or elsewhere. When you see this symbol, be alert to the possibility of personal injury or death.

**Why is SAFETY important to you? \*ACCIDENT DISABLE and KILL\***

**\* ACCIDENTS are COSTLY \*\* ACCIDENTS can be AVOIDED\***

#### SAFETY: TRACTOR and IMPLEMENT

- ◆ The tractor is a source of power: Both mechanical and hydraulic.
- ◆ On its own, the tractor is of little practical value. Only when used in conjunction with an implement or other attachment does it become a working unit.
- ◆ This instruction book is compiled to cover those safe working practices that are associated with the base tractor operation.
- ◆ It does not cover all operation and safety instructions relevant to all known implements and attachments that may be fitted at the time of tractor delivery or at some future date.
- ◆ It is essential that operators use and understand the relevant instruction manual of such implements and attachments.

### B. SAFETY: INTRODUCTION

This safety section of your Operator Instruction book is intended to point out some of the basic safety situations which may be encountered during the normal operation and maintenance of your PLATFORM, and to suggest possible ways of dealing with these situations. This section is NOT a replacement for other safety practices featured in other sections of this book.

Additional precautions may be necessary depending on attachments used and conditions at the work site or in the service area. The tractor manufacturer has no direct control over tractor application, operation, inspection, lubrication or maintenance. Therefore it is YOUR responsibility to use good safety practices in these areas.

### C. SAFETY: A WORD TO THE OPERATOR

It is YOUR responsibility to read and understand the safety section in this manual before operating your tractor. You must follow these safety instructions that

In reading this section, you will note that illustrations have been used to highlight certain situations. Each illustration is numbered and the same number appears in the text in parenthesis. This number is placed at the end of the written text that refers to the illustration and is made up of two digits, separated by a hyphen: the first digit designates the chapter, the second one of the figure number in that chapter, Remember that YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Study the features in this manual and make them a working part of your safety program. Keep in mind that this safety section is written only for this type of machine. Practice all other usual and customary safe working precautions, and above all REMEMBER: SAFETY IS YOUR RESPONSIBILITY. YOU CAN PREVENT

## D. SAFETY: DANGER, WARNING and CAUTION

Whenever you see the words and symbols shown below, used in this book and on decals, you **MUST** take note of their instructions as they relate to personal safety.



**DANGER:** The symbol and the word **DANGER** indicates an imminently hazardous situation, which, if not avoided, will result in **DEATH OR VERY SERIOUS INJURY**.



**WARNING:** The symbol and the word **WARNING** indicate a potentially hazardous situation. if the instructions or "procedures are not correctly followed it could result in **DEATH OR SERIOUS INJURY**.



**CAUTION:** The symbol and the word **CAUTION** indicate a "potentially hazardous situation, which, if not avoided, may result in **MINOR INJURY**.

**IMPORTANT:** The word **IMPORTANT** is used to identify special instructions or procedures which, if not strictly observed, could result in damage to, or destruction of the machine, process or its surroundings.

**NOTE:** The word **NOTE** is used to indicate point of particular interest for more efficient and convenient repair or operation.

## SAFETY: DECALS



**WARNING: DO NOT remove or obscure Danger, Warning, Caution or Instruction decals.**

Replace any Danger, Warning, Caution or Instruction Decals that are not readable or are missing. Replacement decals are available from your Dealer in the event of loss or damage. The actual location of these safety Decals is illustration at the end of this section.

If a used tractor has been purchased, refer to the illustration at the end of this section to ensure that all the safety warning decals are in the correct position and are readable.

## E. SAFETY: FOLLOW A SAFETY PROGRAM

### For safe operation:

For safe operation of an agricultural tractor, you must be a qualified and authorized operator. To be qualified you must understand the written instructions supplied in this Operator Instruction Book, have training, and know the safety rules and regulations for the job.

Some regulations specify, for example, that no one under the age of 18 years (according to European Rules) may operate power machinery. This includes tractor, it is your responsibility to know what these regulations are, and obey them, in the operating area of situation.

These will include, but are not limited to, the following instructions for safe tractor operations:



**WARNING :** An operator should not use alcohol or drugs which can change his/her alertness or co-ordination. An operator on prescription or 'over the counter' drugs needs medical advice on whether or not he or she can properly operate machines.

### Observe the following precautions:

- ◆ NEVER allow children or unqualified persons to operate your tractor. Keep others away from your area of work.
- ◆ Securely fasten your seat belt when the tractor has a safety frame in the upright position.
- ◆ Where possible, avoid operating the tractor near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slippery, or muddy surfaces.
- ◆ Stay off slopes too steep for safe operation.
- ◆ Watch where you are going, especially at row ends, on roads, and around trees.
- ◆ DO NOT permit others to ride on the tractor or the implement unless an approved passenger seat is fitted.
- ◆ Hitch only to the drawbar and recommended hitch points, and never above the center line of the rear axle.
- ◆ Operate the tractor smoothly - no jerky turns, starts or stops, when the tractor is stopped, apply the parking brakes securely.
- ◆ Never modify or remove any part of the equipment.

## F. SAFETY FRAME

A Safety Structure and seat belt is fitted as standard equipment to the platform tractor at the time of factory assembly. If the safety frame was deleted by the original purchaser or has been removed, it is recommended that you equip your tractor with a Safety Structure and a seat belt. Safety frames are effective in reducing injuries during overturn accidents. A tractor overturning without safety frame can result in serious injury or death.

Depending on laws in force in the various markets, a seat may be installed. Always raise the safety frame before it may be installed. Always raise the safety frame before fastening the seat belt.

If a fold-down safety frame is installed. **DO NOT** wear a seat belt when the safety frame is in folded down position. **NEVER** keep the safety frame in the folded down position when working with the tractor.

### Operation:

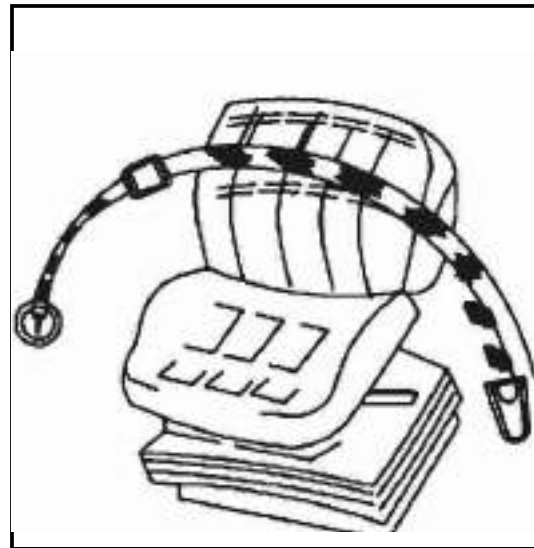
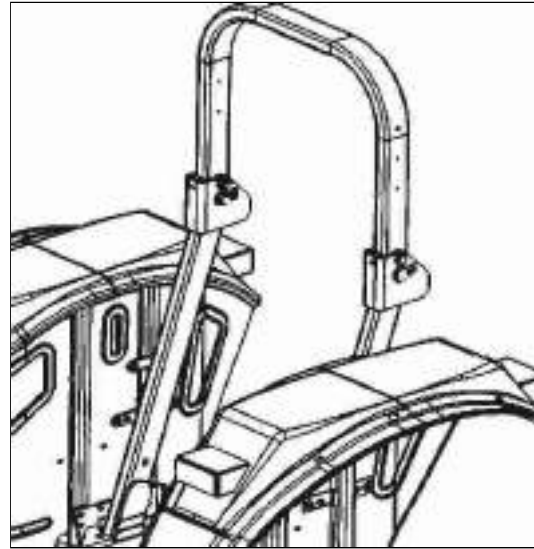
- ◆ Before using the tractor ensure that the safety frame is not damaged, that it is securely fastened to the tractor, and, if a hinged section is fitted, that it is in the raised position and secured.
- ◆ If the safety frame has been removed from the tractor, or folded down for a specific operation, it must be refitted or erected immediately using the proper hardware and applying the recommended torque value.
- ◆ **DO NOT ATTACH** chains, ropes or cables to the safety frame for pulling purposes; this will cause the tractor to tip backwards. Always pull from the tractor drawbar.
- ◆ If a seat belt is installed, always wear your seat belt-adjusted snugly except when operating with a folded down safety frame or if the safety frame has been removed.
- ◆ Check the seat belt for damage. A damaged seat belt must be replaced.

### Damage to the safety frame

If the tractor has rolled over or the safety frame has been damaged (such as striking an overhead object during transport), the safety frame must be replaced to provide the original degree of protection.

After an accident, check for damage to the safety frame operator's seat, seat belt and seat mountings. Before you operate the tractor, replace all damaged parts.

**DO NOT WELD, DRILL, BEND OR STRAIGHTEN THE SAFETY FRAME. IF DONE, reduce the protection it offers.**





## G. SAFETY: PREPARE FOR SAFE OPERATION

### Protect yourself:

Wear all the protective clothing and personal safety devices issued to you or called for by job conditions. Don't take risk hence you may carry/wear the following

- (a) A hard hat.
- (b) Safety glasses, goggles or face shield.
- (c) Hearing protection.
- (d) Respirator or filter mask.
- (e) Inclement weather clothing.
- (f) Reflective clothing.
- (g) Heavy gloves (neoprene for chemical, leather for rough work).
- (h) Safety shoes.

DO NOT wear loose clothing, jewellery or other items and tie up long hair which could catch on controls or other parts of the tractor.

Learn where fire extinguishers and first aid or emergency equipment is kept and where to get help in a hurry. Make sure you know how to use this equipment.



(a)



(b)



(c)



(d)



(e)



(f)



(g)



(h)

## H. Know your equipment:

Know your tractor. Know how to operate all equipment on your machine and the implements and attachments used with it. Know the purpose of all the controls, gauges and dials. Know the rated load capacity, speed range, braking and steering characteristics turning radius and operating clearances.

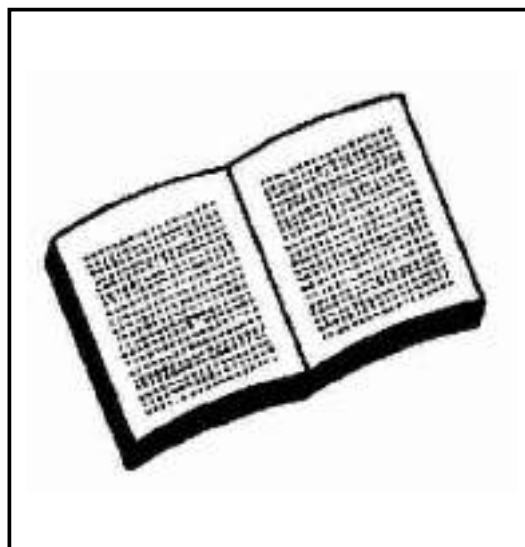
Keep in mind that rain, snow, ie, loose gravel, soft ground, etc. can change the way your tractor operates. ***Under poor conditions, slow down and be extra careful, engage four wheel drive, if fitted.***

Study the DANGER, WARNING or CAUTION safety signs on your tractor and the information signs also. read this operator instruction book before starting the engine.

study it before you start the work.

if there is something in the manual you don't understand, ask someone (such as your equipment dealer) to explain it to you.

**IMPORTANT:** This manual covers general safe practices for agricultural tractor it must always be kept with the tractor. For further copies contact your Dealer.



## I. Use all available protective devices

Keep all protective devices in place and securely fastened. Make certain all guards, shields safety signs are properly installed, as specified, and are in good condition.

**IMPORTANT: To help keep you and others around you safe, your tractor should be equipped with:**

Safety belt. It must always be mounted in protection position. A seat belt is recommended according to law requirements on the respective market when ROPS is erected.

Tractors PTO shield.

Your tractor may also need:

- Rear view mirrors.
- Fire extinguisher.

SMV (Slow Moving Vehicle) emblem, Additional guards, lights or decals and additional alarm.

Know which devices are required for safe operation of your tractor. Use them. Make sure they are in place and in good condition. NEVER remove or disconnect any safety device.

### Check the equipment:

Before you begin your working day, take time to check your tractor and ensure that all systems are in good operational condition.

DO NOT smoke while refueling the tractor. Keep any type of open flame away

Check for loose, broken, missing, or damaged parts. Have everything put into good repair. Make certain all safety devices are in place.

Check safety frame and seat belt for damage. A damage safety frame or seat belt MUST be replaced. Ensure that implements and attachments are properly installed and that the tractor and implement PTO RPM ratings match.

Check the tires for cuts, bulges and correct pressure.

Replace worn or damaged tires. Check foot and parking brakes for proper operation. Adjust if necessary.

AREA FOR REFILLING FUEL



- ◆ Stop the engine and wait for it to cool before refueling. Check the engine oil level and add oil if required.
- ◆ Perform all maintenance procedures outlined in the maintenance and adjustment section of this manual.
- ◆ Check that the PTO drive locking devices are latched.
- ◆ Check that the tractor PTO shield and driveline guards are in place and operating properly.
- ◆ Check the tractor and implement hydraulic system. Have any leaks or damaged parts repaired or renewed.



**WARNING:** Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause serious personal injury, blindness or death. Fluid leaks, under pressure, may not be visible. Use a piece of cardboard or wood to find leaks. Never use your bare hand. Wear safety goggles for eye protection. If any fluid is injected into the skin, it **MUST** be surgically removed within a few hours by a doctor familiar with this type of injury

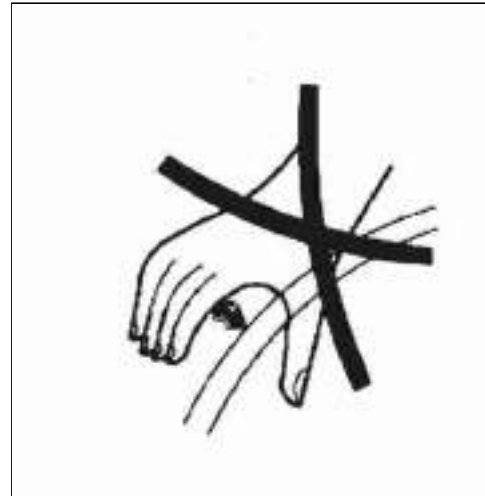
Before applying pressure to the fuel or hydraulic system, be sure all connections are tight and that lines, pipes, and hoses are not damaged. Before disconnecting fuel or hydraulic lines, be sure to relieve all pressure.

Make sure that all hydraulic lines are correctly installed and not tangled.



**WARNING :** Liquid cooling systems build up pressure as the engine gets hot. Before removing the radiator cap, stop the engine and let the system cool.

Check the engine cooling system and add coolant as required.



## J. Clean the tractor:

- ◆ Keep work surfaces and engine compartments clean.
- ◆ Before cleaning the machine, always lower implements to the ground, place transmission in neutral, engage the parking brake, shut off the engine and remove the key.
- ◆ Clean steps, pedals and floor. Remove grease or oil, Brush away dust or mud. In winter, scrape away snow and ice. Remember-slippery surfaces are dangerous.
- ◆ When plastic parts need to be cleaned (such as console, instrument panel, monitors, indicators etc.), do not use petrol, paraffin, diluents etc.
- ◆ They could cause discoloration, cracking or warping of the cleaned parts.
- ◆ These parts should **ONLY** be cleaned with water, neutral soap and a soft cloth..
- ◆ Remove and store implements, keys, hitches etc. in their proper places.

**K. Protect the environment:**

It is illegal to pollute drains, water courses or soil. Use authorized waste disposal facilities, including civic amenity sites and garages providing facilities for disposal of used oil. If in doubt, contact your local authority for advice.

To get to know the correct methods to dispose of oils, filters, tyres etc. contact your Dealer or the local agency for waste recycling.

**L. Only for North America:**

The safety sheets of each material give information on chemicals contained in a product, procedures to use it safely, first-aid and procedure to be followed in case of leakage or spills. In all North America such safety sheets are available at the Dealer's.

Before any maintenance on the machine refer to the above mentioned safety sheets for fluids, oils etc. used in this machine. The sheets inform about risks and safe maintenance procedures. We strongly recommended following these indications during any maintenance operations.

Disposal of the tractor: The tractor is made up of parts subjected to rules and laws for their disposal. When the tractor is not used any more, it must be disposed of through proper agencies according to such rules. Do not pollute the environment with the tractor or its parts.

**M. SAFETY: SERVICING THE TRACTOR**

DO NOT service the tractor while the engine is running or hot, or if the tractor is in motion

Before making adjustments to, or servicing the electrical system, disconnect the battery cables, negative (-) cable first.

To prevent fires or explosions keep open flames away from the battery to cold weather starting aids. To prevent sparks which could cause explosion use jumper cables according to instructions.

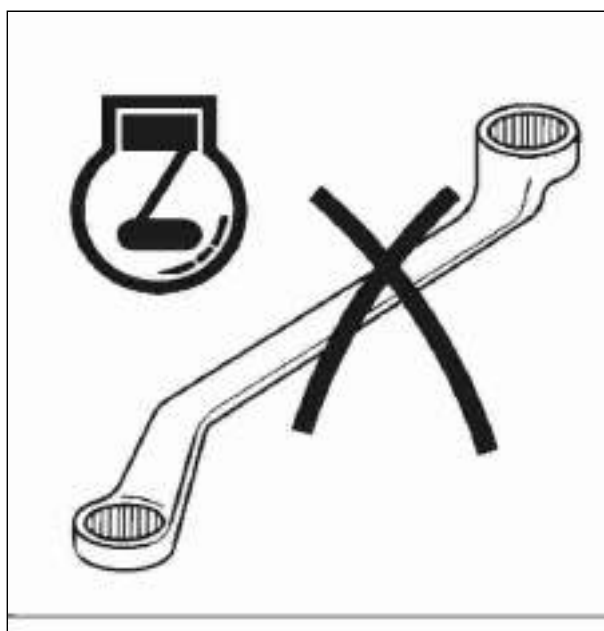
When making repairs or adjustments it is recommended that you consult your Dealer, and have the work carried out by trained personnel.

The implement and/or tractor must be supported on suitable wooden blocks or stands, NOT a hydraulic jack.

Check all nuts and bolts periodically for tightness especially wheel hub and rim nuts. Tighten to the prescribed torque values.

Check the power steering reservoir regularly and top up as necessary with approved oil.

Check the brakes regularly, top up the reservoir and/or adjust where necessary. Make sure that the brakes are evenly adjusted.



## N. SAFETY: STARTING

### Warn bystanders before starting:

Before starting, Walk all around the tractor and any attached equipment. Make sure that no one is under it, on it, or close to it. Let other workers and bystanders know you are starting up and don't start until everyone is clear of the tractor, implements and towed equipment.

Ensure that all bystanders, particularly children are in a safe position before starting the engine.

### Mount and dismount properly:

Always use 'three point contact' with the machine, and face the machine when you mount it. Three point contact means both hands and one foot or one hand and both feet are in contact with the machine at all times during mounting and dismounting.

Clean the soles of your shoes and wipe your hands before climbing on. Use handrails, grip handrails, ladders or steps (as provided) when mounting or dismounting.

NEVER use control levers as a hand hold and NEVER step on foot controls when mounting or dismounting.

NEVER attempt to mount or dismount from a moving tractor. NEVER jump off a tractor in any circumstances.

### Start safely.

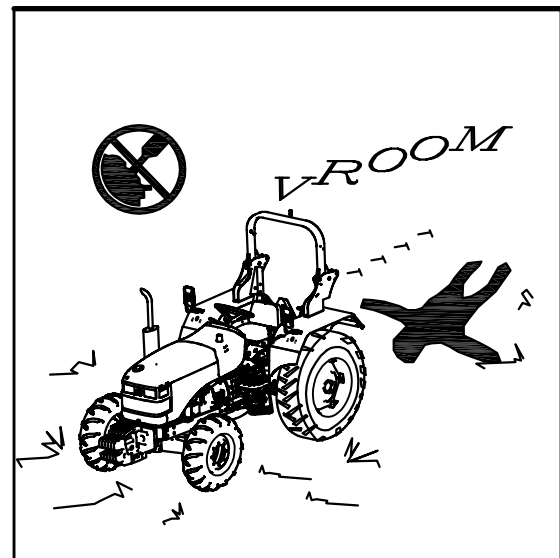
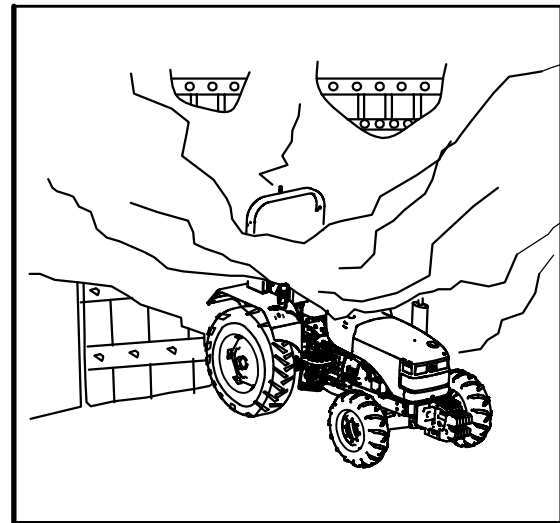


**WARNING :** Before starting the engine, make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.

Always start the engine from the operator's seat with all the transmission levers and PTO lever in neutral.

Make sure that the tractor dual brake pedals are locked together at all times unless you are making turns in the field which require independent use of the brakes. Make sure the brakes are properly adjusted so that both brakes engage at the same time.

Adjust the seat, fasten the seat belt (where applicable as outlined in this manual), apply the parking brake and put all controls in neutral before starting up.



**DANGER :** Start the engine, with the starter key, from the operator's seat only. Never attempt to start the engine by shorting across the starter terminals. The machine will start in gear if the neutral start circuit bypassed. This could cause serious injury or death to anyone near the tractor.

## O. Follow recommended starting procedures

Follow the starting procedures recommended in the operation section of this Operator instruction Book. This includes normal starting, cold starting and use of starting fluids.

### Test the controls

After starting, recheck all gauges and lights. Make sure everything is functioning correctly. If the tractor does not respond correctly which each control is operated, DO NOT use the machine until the fault is rectified

Ensure that the starter solenoid cover is always in position.

### Starting fluid



**WARNING :** It is very important that you read the label on the can before using starting fluid. DO NOT use aerosol can of starting aid on tractors with the thermostat connected to the electrical system. Ether combined with thermostat can cause an explosion with damage to engine, personal injury or both.

Handle starting fluid correctly. Starting fluid must only be used when an ether start aid is fitted as original equipment by the manufacturer or when installed by a Dealer as an accessory, in case of tractors being fitted with glow plugs or thermostat, this must be removed prior to the installation.

If aerosol cans of starting fluid are to be used the thermostat must be disconnected. Remove the wire from the thermostat unit which will be found on the induction manifold. Tape the end of wire to prevent an electrical short circuit.

Before starting the tractor, ensure that no persons or hindrances are present in its range.

## P. SAFETY: WORK SAFETY



**WARNING :** An unbalanced tractor could overturn and cause injury or death. Make sure front frame counterweights, wheel weights and wheel ballast are used as recommended by the manufacturer. NEVER add extra counter weights to compensate for an overload, better to reduce the load.

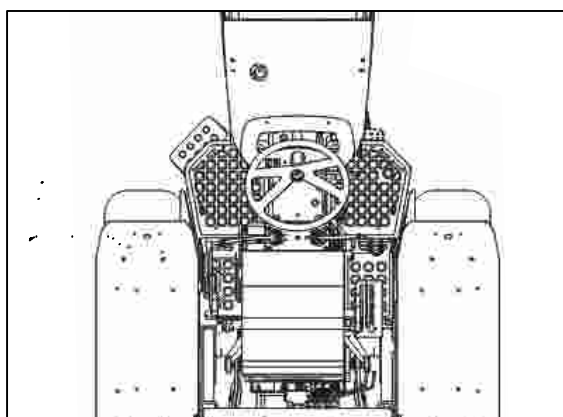
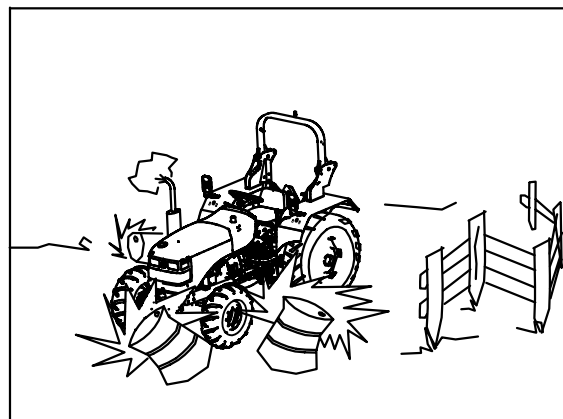
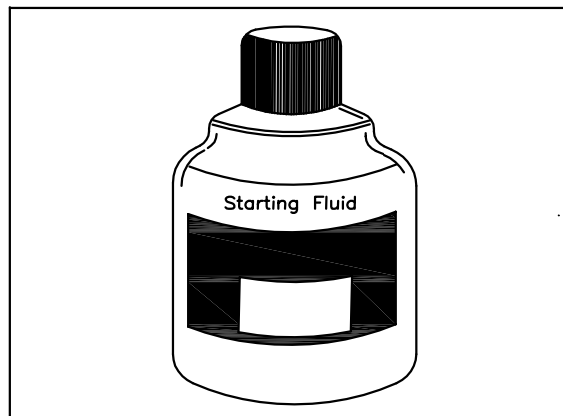


**WARNING :** Keep all parts of your body inside the operator's compartment while operating the tractor.

## Q. Make the right moves

Make sure your tractor is ready for the job it must do. Know the rated load capacities of your tractor and never exceed them. Be certain that any equipment or implements you intend to use DO NOT exceed the load rating of your tractor. Be sure the tractor and implement PTO rev/min match.

Keep in mind that tractors normally operate on uneven, unpaved, and often bumpy or sloping surfaces. Operating conditions can reduce the amount of weight you should carry or pull.



**WARNING:** Do not start the tractor without ensuring a perfect command of speed and steering controls

**R. Follow safe operating practices:**

- ◆ **Operating the controls smoothly:** don't jerk the steering wheel or other controls.
- ◆ **DO NOT** get on or off a moving tractor, keep a firm grip on the steering wheel at all times, with the thumbs clear the spokes when driving the tractor.
- ◆ **Make sure** you have adequate clearance in all directions for tractor, safety frame and implement.
- ◆ **NEVER** play games with a tractor or equipment.
- ◆ **NEVER** attempt to work the controls expect from the operator's seat.
- ◆ **Before getting off the tractor,** always disengage the PTO, lower all attachments and implements to the ground, place the tractor in neutral, engage parking brake, shut off the engine and remove the key.

**DO NOT** touch, lean on, or reach through any implement mechanism or permit others to do so.

**Stay alert.** Should something break, come loose, or fail to operate in your equipment, stop work, shut off the engine, inspect the machine and have repairs or adjustments made before resuming operation.

**S. Watch out for others**

**Be aware of what is going on.** Never allow an untrained or unqualified person to operate your tractor. They could injure themselves or someone else.

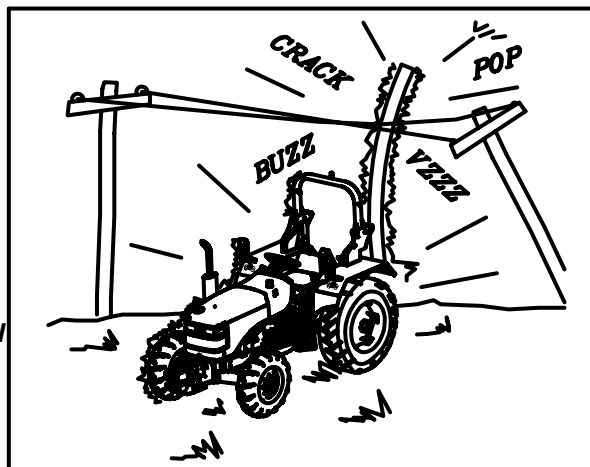


**WARNING:** Your tractor is a one person machine. **DO NOT** permit others to ride on the tractor or the implement. In some countries a passenger seat must be fitted to carry passengers. Never allow anyone to ride on the implements or other equipment including trailers, except on certain harvesting equipment, specially designed for riders during the actual harvest operation only (not during transport). Such equipment must have provision for a safe riding area. **NEVER** allow children on a tractor.



**WARNING:** Be certain you can control both speed and direction before moving. Move slowly until you are sure that everything is operating properly. After starting, recheck the steering, right and left. Be certain you have full steering and brake control. If differential is locked, **DO NOT** operate at high speed or turn the tractor until the differential lock is disengaged.

**Before starting, inspect the work area to establish the best and safest procedure. Plan your work so that you drive as straight as possible forward. Beware of trenches, pits, ditches, slopes, trunks or stumps, ponds etc. Watch for any possibly dangerous condition. If you are using a front loader or foldable implements or implements with high components, watch out for obstacle in the tractor's way.**



**WARNING:** Accidental contact with high-voltage, lines cause death. In case of contact with high-voltage conductors **DO NOT** leave the tractor, bid move the tractor and/or the loader in such a way as to eliminate the contact and reach a safe distance






**WARNING : Never lift a load over anyone**

- ◆ Keep others away from your operation. Never allow anyone to stand or pass under a raised implement
- ◆ DO NOT lift object that cannot be contained safely in the bucket, get the appropriate attachment. Never allow anyone to stand on the safety frame or fenders,.
- ◆ When using a loader, avoid sudden stops, starts, turns, or change of direction. Keep loads as near to the ground as possible.
- ◆ **Never stand (or allow anyone else to stand) in front of, under, or behind loaded or loading equipment.** Never drive a tractor up to someone standing in front of a fixed object.
- ◆ Keep others away from articulation joints, hitches, drawbar, lift arm, PTO drive, cylinders, belts, pulleys, and other moving parts. Keep all shields and guards in place.

**T. Risk of overturning**

For your safety, it is recommended that all platform tractors are fitted with safety frame and seat belts

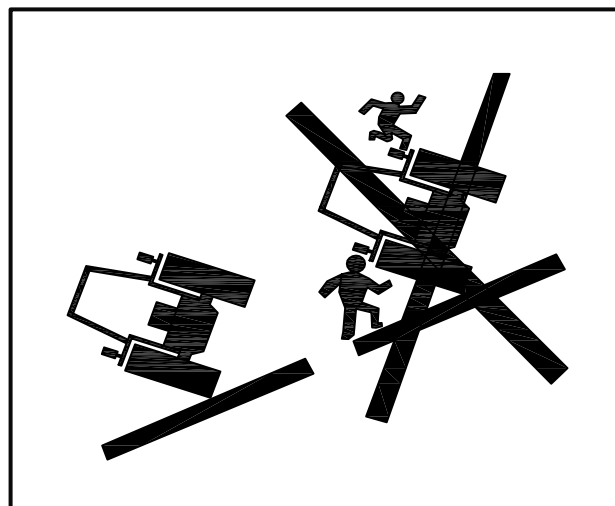
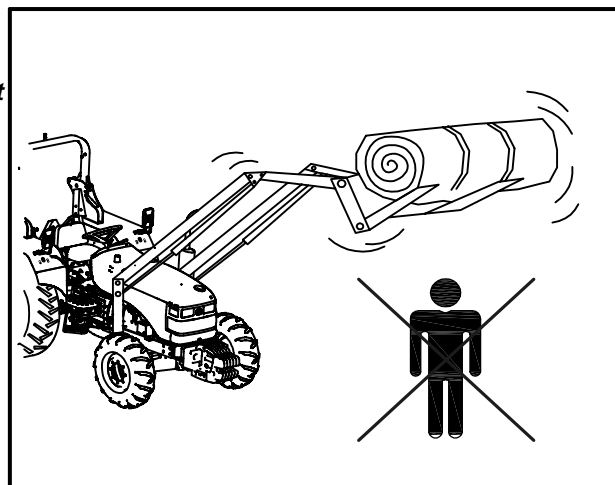
In the event of overturning with a tractor fitted with a safety frame, hold the steering wheel firmly and DO NOT attempt to leave the seat until the tractor has come to rest.

**U. To avoid side overturns:**

- ◆ Set the wheel track at the widest setting suitable for the job being done.
- ◆ Lock the brake pedals together before driving at transport speeds.
- ◆ Reduce speed to match operating conditions. If the tractor is equipped with a front end loader, carry the bucket and load as low as possible.
- ◆ Make wide slow turns at reduced speed. DON'T let your tractor bounce. You may lose steering control.
- ◆ DON'T pull a load too heavy for your tractor. It could run away on the down slope or the tractor could jackknife around a towed load.
- ◆ DON'T brake suddenly. Apply brakes smoothly and gradually.
- ◆ When going down a slope use the throttle to slow the tractor engine and use the same gear you would use to up the slope. Shift into gear before you start downhill.
- ◆ Engine four-wheel drive (if fitted), this will give four-wheel braking.



**WARNING : NEVER stand, or allow anyone else stand between the tractor and implement unless the engine is turned off parking brakes is engaged, the transmission is in neutral, and all attachments or implements are lowered to the ground.**





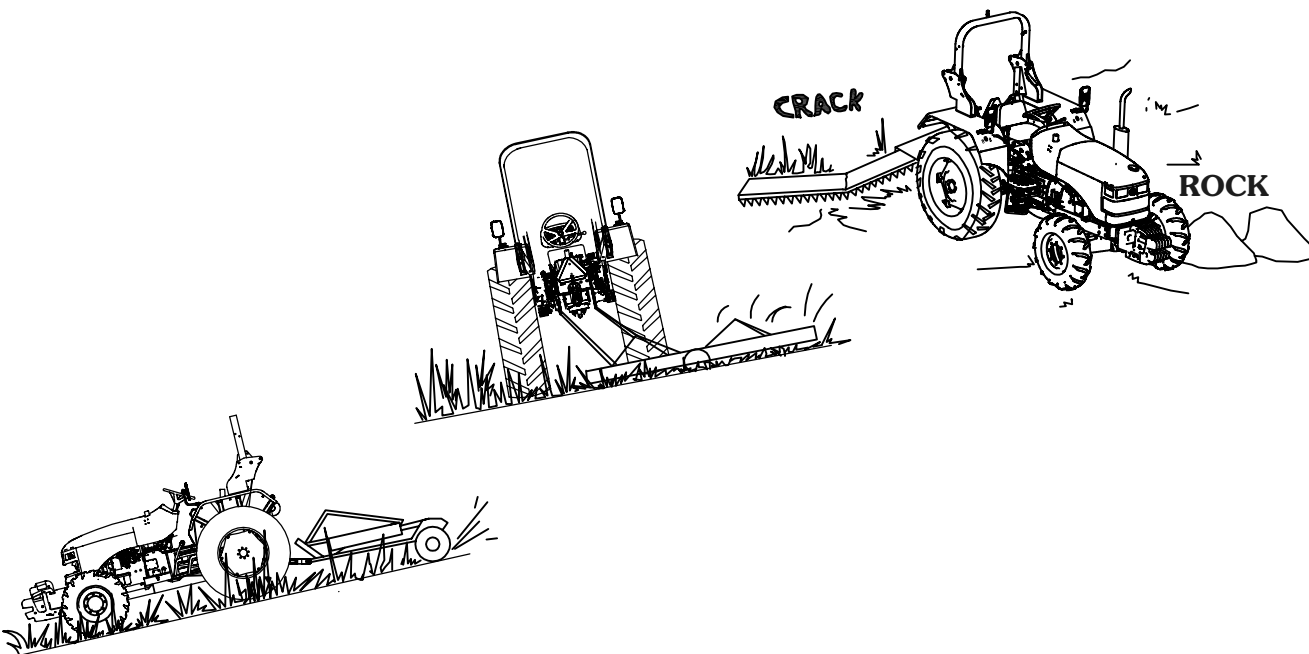
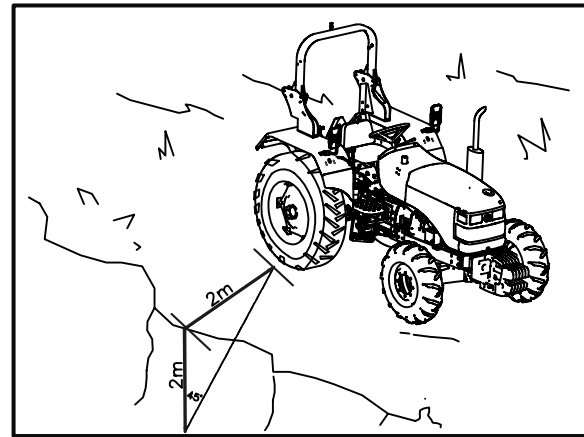
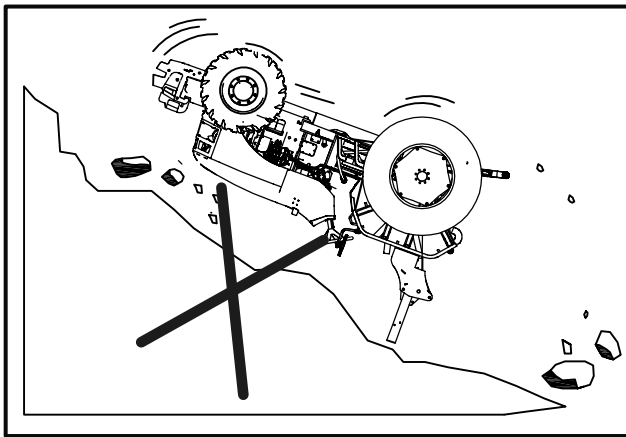
**WARNING :** NEVER disengage the clutch or attempt to shift gear after you have started downhill.

- ◆ It is always preferable to straight up or down a steep slope rather than across it.
- ◆ Avoid crossing steep slopes if possible. If you must do so, avoid any holes or depressions on the downhill side. Avoid any stumps, rocks, bumps or raised areas on the uphill side. When operating near ditches or banks, always keep your tractor behind the shear line .

If it is necessary to cross a steep slope, avoid turning uphill, slope down and make a wide turn. Travel directly up or down the slope, never across it. When traveling up or down a slope, keep the heavy end of the tractor pointed uphill.

When traveling across a slope with side mounted implements, keep the implement on the uphill side. Don't raise the implements, keep them as low to the ground as possible when crossing a slope.

Avoid crossing steep slopes if possible. If you must do so, avoid any holes or depressions on the downhill side. Avoid any stumps, rocks, bumps or raised areas on the uphill side.



## V. To avoid rear overturns



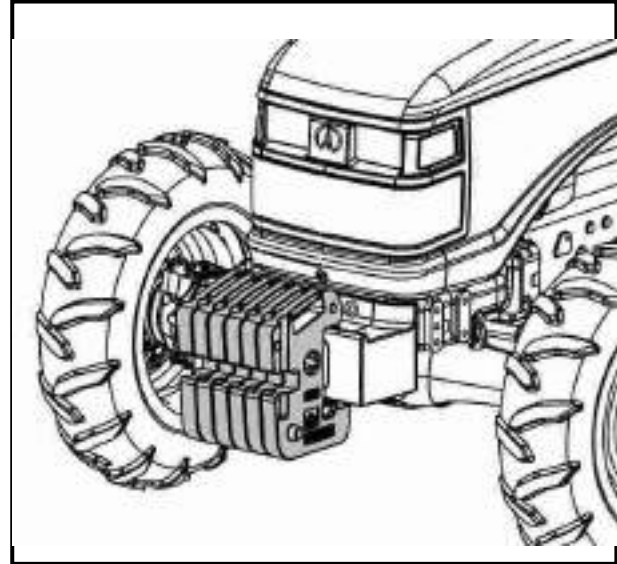
**WARNING :** *Hitching to the rear axle, or any other point above the swinging drawbar, can cause a rear overturn.*

DO NOT pull anything using the top link connection, or from any point above the centre line of the rear axle. Always use an approved drawbar, and only use a drawbar pin that locks into place.

High hitching can cause rear overturn, which may cause serious injury or death. Hitch loads to the drawbar only.

When using a three-point linkage drawbar, the stays must be fitted and kept in the down position.

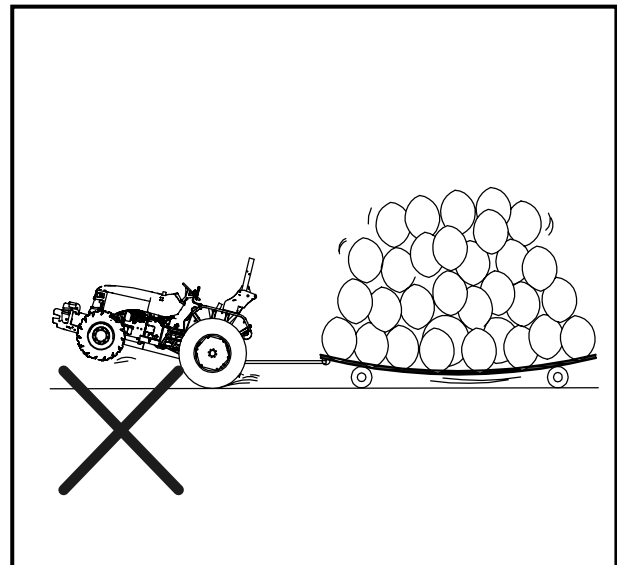
Use front counterweights to increase tractor stability when towing a heavy load or to counterbalance a heavy rear mounted implement



DO NOT overload your tractor and DO NOT ballast it beyond its carrying capacity. Never add ballast weight to counterbalance an overload. Reduce the load instead.

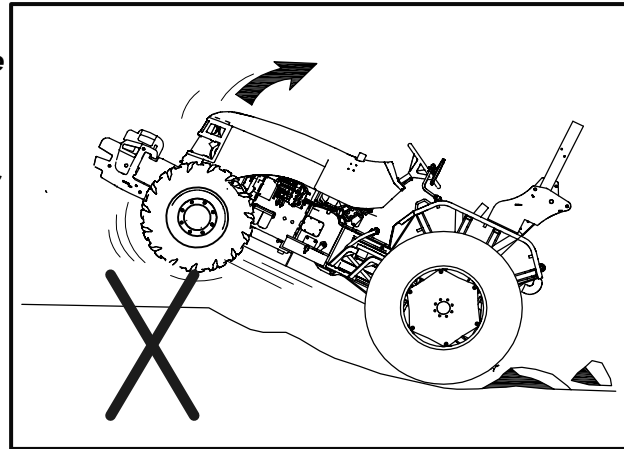


**WARNING :** *An overload is always dangerous. Check the loading capacity of your tractor and NEVER overload*



*If the front end of the tractor starts to lift, reduce your speed and, if necessary, disengage the clutch .*

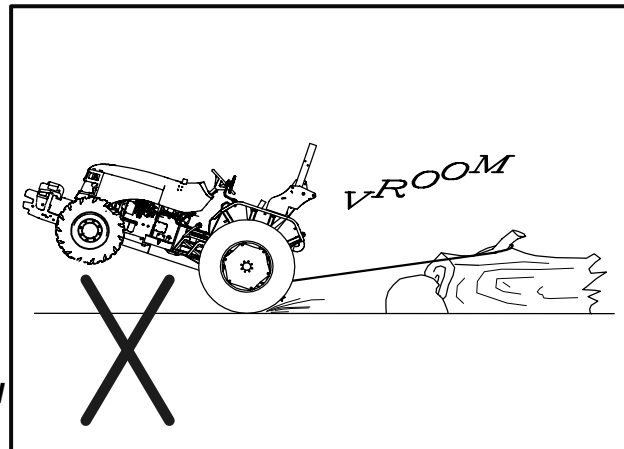
*If your tractor is bogged down in the mud or frozen to the ground, DO NOT attempt to drive forwards. The tractor can rotate around its rear wheels and overturn .Lift any attached implement and attempt to BACK OUT. If this is not possible, tow it out with another vehicle.*



*Start forward slowly and gradually increase your speed. DO NOT rev the engine or drop the clutch. If the tractor is attached to a heavy load, or immovable object, improper clutching may cause overturn*

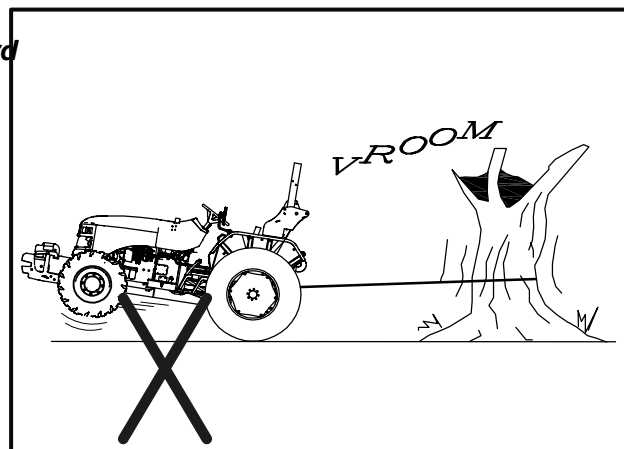
*If you get stuck in a ditch, BACK OUT, if possible. If you must go forward, do it slowly, and carefully.*

*A bare tractor or a tractor with rear mounted attachments should be backed up the slope in reverse and travel forward downhill.*



*A tractor with a loaded front end bucket should be backed down the slope and travel forward uphill. Keep the loader bucket as low as possible.*

*Always keep the tractor in gear when going down hill Never permit the tractor to coast with clutch disengaged or transmission in neutral*



## W. General operating hazards

Ensure that the PTO shield (1) is in plane and that the cap (2) is fitted when the PTO driveline is not in use

**Before attaching, detaching, cleaning or adjusting PTO driven implements, disengage the PTO, stop the engine remove the key, and make sure that the PTO driveline has stopped.**

**Ensure that all the PTO driveline guards are in place and observe all safety signs .**

**Be sure everyone is clear of your machine before engaging the PTO. For stationary PTO operation, always place transmission in neutral, engage parking brake and lock both tractor and implement wheels.**

**When operating mobile PTO driven equipment, never leave the tractor seat until the PTO drive is disengaged, the transmission is in neutral, the parking brake is engaged, the engine shut off and the key removed.**

**DO NOT use PTO adaptors, reducers or extensions as they extend the PTO coupler and universal joint out beyond the protection offered by the PTO shield. The top link rods must not be extended beyond the point where threads begin to show. Fig.**



**WARNING :** NEVER attempt to unplug the hydraulic connections, or adjust an implement with the engine running or the PTO drive in operation. To do so may result in serious injury or death.

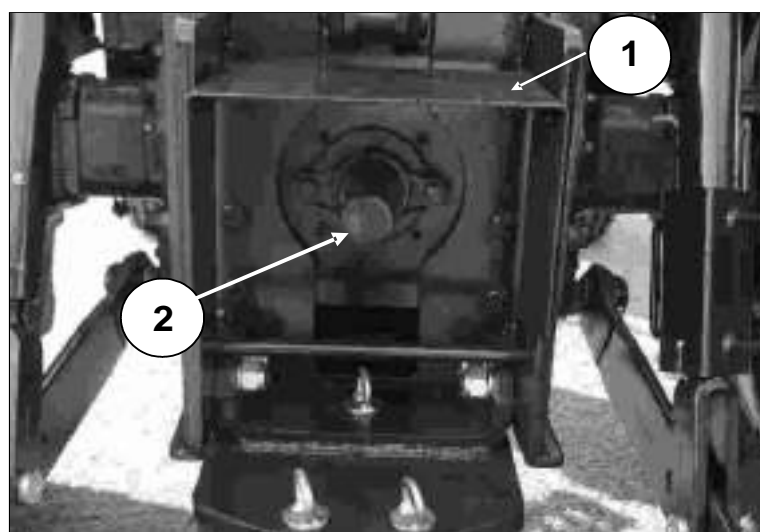
**When using chemicals, carefully follow the chemical manufacturer's instructions for use, storage and disposal. Also follow the chemical application equipment manufacturer's instructions.**

**When operating under poor visibility conditions, or in the dark, use your ground speed. (DO NOT use your field lights when traveling on a roadway because rear pointed white lights are illegal except when reversing and may confuse following drivers).**

**Operate your tractor with the wheels set the widest setting possible, consistent with the particular task you are performing. To adjust wheel settings refer to Maintenance and Adjustment section.**

**Reduce your speed when operating over rough or slippery ground when foliage restricts your view of hazards.**

**DO NOT make sharp turns at high speed.**





**WARNING :** A front-end loader (bucket or forks) must be equipped with a suitable restraining device to prevent the load, bales, fence posts, rolls of fence, wires etc.) from rolling down the lift arms into the operator's compartment and crushing the driver when the loader is raised. Inadequately secured objects could also fall and injure bystanders. Do not use implements for different purpose or to handle materials they are not expected to . For the operation of front loaders and relative safety rules, please refer to the Operation Manual of the loader.

Threepoint hitch and side mounted implements make a much larger arc when turning that towed equipment. Make certain to maintain sufficient clearance for safe turning.

When using attachments or implements with the tractor, be sure to thoroughly read the Operator Instruction Book for that attachment or implement and follow its safety instructions.

Pull only from the approved drawbar. Towing or attaching to other locations may cause the tractor to overturn.

Improper use of the drawbar, even if correctly positioned, may cause the tractor to overturn to the back.

DO NOT overload an attachment or towed equipment. Use proper counterweights to maintain tractor stability. Hitch loads to the drawbar only.

## X. Road Transport

Before operating your tractor on a public road, a number of precautions must be taken.

Familiarize yourself - and comply - with all local bylaws, and national laws appropriate to your tractor.

Lock your brake pedals together.

Raise all implements to their transport position and lock them in place.

Place all implements into their narrowest transport configuration.

Disengage the PTO and differential lock.

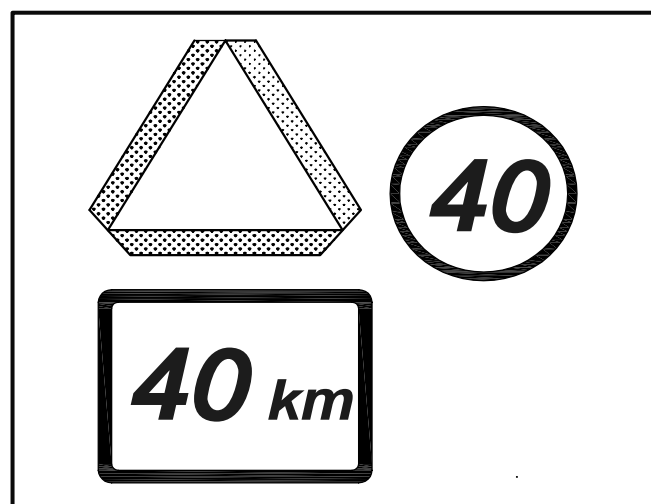
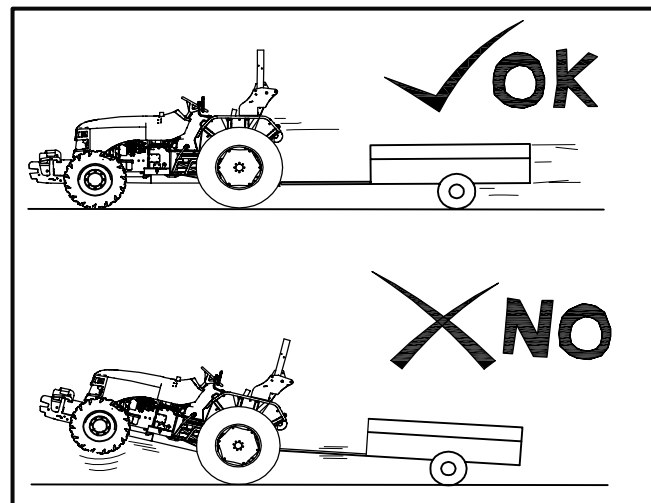
Make sure tractor and equipment are equipped with slow moving vehicle (SMV) signs or beacon if the law requires them and that loads do not obscure them or other lights.

Make sure any required clearance flags or hazard lights are in place and in working order.

Make sure you use a proper hitch pin with a clip retainer.

Clean off all reflectors and road lights, front and rear, and be certain they are in working order.

Implements mounted on the 3-point hitch and mounted implements projecting from the side need a wider turn radius than trailed implements. Always be sure to keep enough clearance when making a turn.



Use the symbol valid in your country.

## Y. Road regulations

*When operating your tractor on a public road a number of precautions must be taken.*



**WARNING :** DO NOT allow any passengers on the tractor or towed equipment.

*Know the route you are going to travel.*

*Use flashing lights or beacon when traveling on roads, day or night, unless prohibited by law .*

*Use caution when towing a load at transport speeds especially if the towed equipment is NOT equipped with brakes.*

*Observe all local or national regulations regarding the road speed of your tractor.*

*Use extreme caution when transporting on snow-covered or slippery roads.*

*Wait for traffic to clear before entering a public road.*

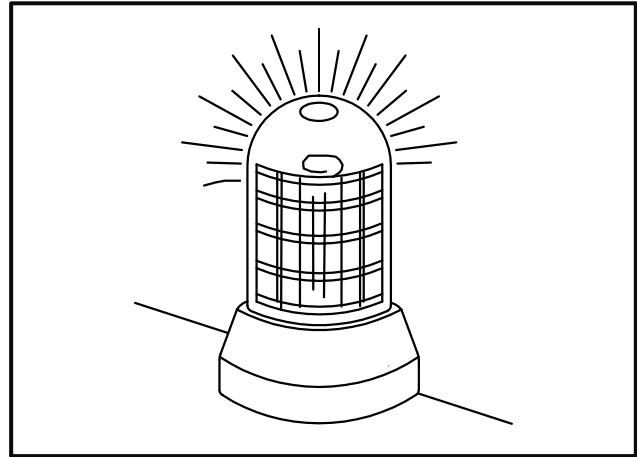
*Beware of blind intersections. Slow down until you have a clear view.*

*DO NOT attempt to pass at any intersection. Slow down for turns and curve*

- ◆ *Make wide, gentle turns.*
- ◆ *Signal your intent to slow, stop or turn.*
- ◆ *Shift to lower gear before going up or down hills.*
- ◆ *Keep tractor in gear. Never coast with the clutch disengaged or transmission in neutral.*
- ◆ *STAY OUT of the path of oncoming traffic.*
- ◆ *Drive in your correct lane keeping as near to the kerb as possible.*
- ◆ *If traffic builds up behind you, pull off the road and let the road and let it go by.*
- ◆ *Drive defensively. Anticipate what other drivers might do.*
- ◆ *When towing a load, start braking sooner than normal and slow down gradually.*
- ◆ *Watch out for overhead obstructions.*

## Z. SAFETY-AFTER OPERATION

*When stopping at any time, bring the tractor to a secure halt (DO NOT park on a slope), apply the parking brake, engage the Park-Lock (if installed), disengage the PTO, place all gear shift levers in neutral, lower the implement to the ground, stop the engine and remove the key BEFORE leaving the seat.*



## AA. Risks deriving from exposure to noise:

### Noise characteristics and measurement

Noise is a pressure variation in an elastic medium, generally the air, produced by the variation of a material body (source) that determines an undesired and often annoying acoustic sensation. Noise is mainly characterized by;

- ◆ **Sound intensity or level:** expresses the entity of the pressure variation due to the sound wave. Measured in decibels (dB), It doubles the sound intensity and, thus, the energy that reaches the ear.
- ◆ **Frequency:** expresses the number of pressure variations of the wave per second and is measured in Hertz (Hz)- acute noises have high frequencies (2000-4000 Hz or more) while low-pitched noises have low frequencies (250 Hz or less).
- ◆ **How the risk is evaluated:** The higher the sound level and exposure time, the greater the noise risk will be:
- ◆ **LAeq:** (Equivalent continuous weighted level A): this is a sound level measurement that takes into account noise fluctuations and the varying sensitivity of the ear to the frequencies: LAeq is measured with a sound level meter;
- ◆ **PEL** (Personal Exposure Level): this is a measurement that takes the various noise levels into account along with the time the worker remains on the individual machines or working at determined processes: PEL is calculated mathematically.

### Noise pathologies

#### Damage to the hearing

Noise causes hyperdulia or deafness because it destroys the acoustic receptors, nervous cells able to transform the mechanical sound vibrations into nervous impulses that, on reaching the brain, determine the aural sensation. These receptors are irreplaceable if they are destroyed and the resulting damage is irreversible: hyperdulia worsens if exposure to noise continues and does not improve even if this terminates.

Moreover, it is also bilateral since it can be accompanied by annoying buzzing and whistling sounds, and by intolerance to loud noise.

The damage is insidious since it proceeds slowly and unexpectedly: in the initial phase, when it is limited to a diminished ability to perceive acute sounds (music, bells) or the spoken voice when there is a background noise, it can only be detected by means of an

audiometric test. Pulsating noises of great intensity lasting a very short time are highly damaging since the ear is unable to actuate any physiological protective measures in time. Hyperdulia from noise generally arises after several years of exposure and depends on the PEL (risk almost null below 80 dBA) and on individual characteristics. It is an incurable disease: the only efficacious means of protection against it is prevention.

### Other effects

Noise does not just determine aural sensation. For levels exceeding\* 70dBA, it causes stress by means of the cerebral integration centers and determines a specific neurovegetative reaction responsible for effects that lead to cardio circulatory and gastro enteric diseases. Amongst these, it is worthwhile noting: an increase in gastric acidity, a decrease in the heart rate, visual range and reflex speed; a sensation of discomfort and weariness with an increased sense of fatigue.

These effects are dangerous because they also increase the risk of accidents.

### Personal equipment to protect against noise

Individual protective equipment attenuates the sound energy transmitted to the ear through the air. This equipment is used when dangerous exposure cannot be avoided in any other way.

There are different types of devices with different attenuating capacities: helmets, ear muffs, ear plugs. Helmets and ear muffs offer the greatest protection but they are bulky and inconvenient to wear. They are therefore only of use for exposure to high noise levels but for short periods of time (max. 2 hours).

Ear plugs are generally tolerated to a greater extent and are of particular use in the case of lengthy exposure to noise of a lesser intensity.

Always use adequate individual protective equipment to safeguard the hearing when the personal daily level of exposure to noise is 85 dBA or more. Consult the "specifications" chapter of this manual in relation to tractor noise measured in instantaneous conditions in compliance with the laws in force.

