

Zetor

UTILIX HT

OPERATOR'S MANUAL

2/2019



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Tractor is Zetor. Since 1946.

ZETOR



This Operator's Manual for the Zetor tractors, which we are presenting to you will help you to become familiar with the operation and maintenance of your new tractor.

Although many of you have rich experience with the operation of other tractors, please, read the information contained in this Operator's Manual very carefully.

In the Manual you will find a lot of new information and get a perfect overview of how to use the tractor with maximum efficiency during various kinds of work.

If you observe the rules of tractor operation and maintenance and driving safety, your new tractor will become your reliable and long-term friend.

The manufacturer of the tractor wishes you thousands of hours of satisfactory work.

ZETOR
Brno

The technical specifications and information about the design, equipment, material and appearance are valid at the time of print. The manufacturer reserves the right to implement changes.

The instructions for use are a part of the machine.

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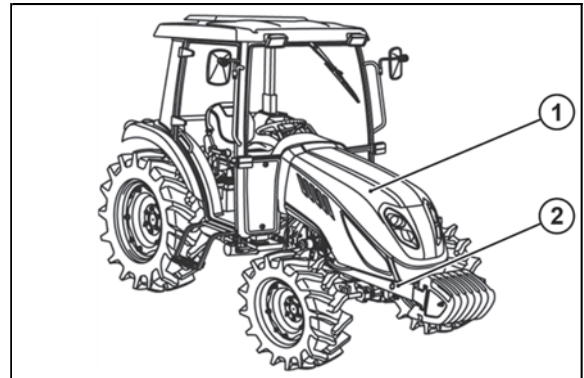
TRACTOR IDENTIFICATION

The engine number is stamped on the left hand side of the engine block.

The chassis number is shown on the left hand side of the tractor as shown in the drawing.

1 - Stamped position of the Engine type or Number

2 - Stamped position of the chassis number



U18N001

Warranty of the product

The manufacturer warrants this product and full details of the warranty are provided on a separate warranty schedule.

Parts

To obtain spare parts please contact your nearest dealer and give him the details listed below.

Tractor model

Tractor serial number

Tractor engine number

Part number and description

Quantity required

NOTES

ABOUT THIS MANUAL

This manual has been prepared to assist you in following / adopting the correct procedure for running-in operation and maintenance of your new ZETOR Tractor.

Your tractor has been designed and built to provide maximum performance, low fuel consumption and ease of use. To maintain the condition and ensure trouble-free performance, it is important that maintenance is performed at the recommended intervals as described in this manual.

Read this Manual carefully and keep it in a convenient place for future reference.

If at any time you require advice concerning your Tractor, do not hesitate to contact your Authorized ZETOR dealer / Distributor. He has trained personnel, genuine parts and necessary equipments to undertake all your service requirements.

All data given in this book is subject to production variations. Dimensions & weight are approximate only and the illustrations do not necessarily show Tractors in standard condition.

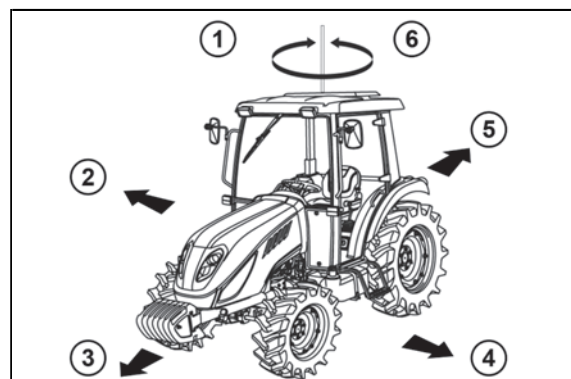
For exact information about any particular Tractor, please consult your ZETOR dealer / Distributor.

NOTES

INTRODUCTION & DESCRIPTION

Tractor an introduction

- 1 - Right turn (Clockwise)
- 2 - Right
- 3 - Front
- 4 - Left
- 5 - Rear
- 6 - Left turn (Counterclockwise)



U18N002

The word 'tractor' is derived from 'traction', which means towing.

A tractor is necessary for drawing or towing equipment, implements or carts that are suitably connected to the tractor body.

The tractor can also be used as a driving machine, thanks to the Power Take-off or PTO shaft.

This manual provides instructions for the operation, maintenance and storage of all Zetor tractor models.

This material has been elaborated in detail to help you better understand maintenance and efficient operation.

If you need information not provided in this manual or the services of a trained mechanic, please contact Zetor Dealer/distributor at your location. Dealers and distributors are kept informed about the latest methods of servicing tractors.

They are supplied with original spare parts and are fully supported by the manufacturer.

Through this manual

The use of the terms LEFT, RIGHT, FRONT and REAR must be understood, to avoid any confusion when following the introductions. The LEFT and RIGHT means left and right sides of the Tractor when facing forward in the driver's seat, Reference to the FRONT indicates the radiator end of the Tractor, while the REAR, indicates the drawbar end (Fig. U18N002).

When spare parts are required, always specify the Tractor and engine serial number when ordering these parts. (See Fig. U18N001). This will facilitate faster delivery and help ensure that the correct parts for your particular Tractor is received. The tractor serial number is punched on a plate attached to the left hand side of the engine body (See Fig. U18N001), For easy reference, we suggest you to write the number in the space provided in the owner's personal data.

INTRODUCTION & DESCRIPTION

Description

General construction

The transmission case, clutch, clutch housing, engine and front axle support are bolted together to form a rigid unit.

Front Axle and wheels

The 4WD front axle is a center-pivot, reverse Eliot type. The front wheel drive mechanism is incorporated as a part of the axle.

The front wheel drive power is taken off the rear transmission and transmitted to the differential in the front axle where the power is divided into right and left and to the respective final cases.

In the final cases, the transmitted revolution is reduced by the level gears to drive the front wheel. The 4WD mechanism with level gears provides wider steering and greater durability.

Engine

The tractors are fitted with fuel efficient engine with 4 cylinders manufactured by Perkins.

Hydrostatic transmission

The tractor is equipped with a three-speed hydrostatic transmission with power steering, individual speed ranges are shifted using the selector lever. The tractor is equipped with two pedals, for speed and for forward / reverse travel. The tractor with an independent PTO is equipped with an electro-hydraulic clutch.

Brakes

Tractors are equipped with independent disc brakes. The handbrake lever is adapted for parking.

Rear axle and wheels

This is mounted on ball bearings and is enclosed in removable housing which are bolted to the transmission case. The rim & Disc fitted with rear tires are bolted to the outer flange of rear axle.

Hydraulic system & Linkages

ZETOR Tractors are fitted with Live independent, very touch of hydraulic System.

Three point Linkages can be used for Category 1 type of implements.

Steering

It consists of hydrostatic power steering system, which has a hydraulic cylinder and tandem type hydraulic pump.

Electrical system

A 12 Volt lead acid propylene battery is used to activate the engine through the starter motor and the electrical system comprising horn, head lamp. Side indicator lamps, plough lamp, brake light, gauge lamp, hazard lamp. Generator or alternator, fuse box also from part of the electrical system.



Warning: When operating the tractor at High speed, Do not attempt to make sharp turns by using the brakes. This may result in overturning of the Tractor causing serious injury or DEATH.

ROPS (ROLL OVER PROTECTION STRUCTURES)

Roll over protective structures (ROPS)

ZETOR Tractors are equipped with a frame for the protection of operators.

In the case of cab tractors the frame is incorporated in the cab structure.

The objective of the frame or cab structure is to protect the operator in the event of a roll over and they are designed to support the entire weight of the tractor in that event.

Each ZETOR ROPS frame or cab structure is designed and has been tested to meet industry and or Government standards.

Included in these tests were all mounting bases and bolts or other fasteners.

DANGER

For ROPS frames to be effective and protect the operator, the seat belt provided must be worn in order to keep operators within the ROPS protected area in the event of a roll over. Failure to use the seat belt can still cause serious injury or death.

On some models the ROPS frame has a fold down feature, which can be used to enter low buildings etc.

Take care when lowering the upper section of the ROPS frame and take extreme care while driving the tractor with the ROPS frame lowered.

Do not wear the seat belt with the ROPS lowered and please remember that the fold down facility is for special circumstances only and must not be lowered for general use.

Use of the tractor with the ROPS lowered can cause fatal injuries

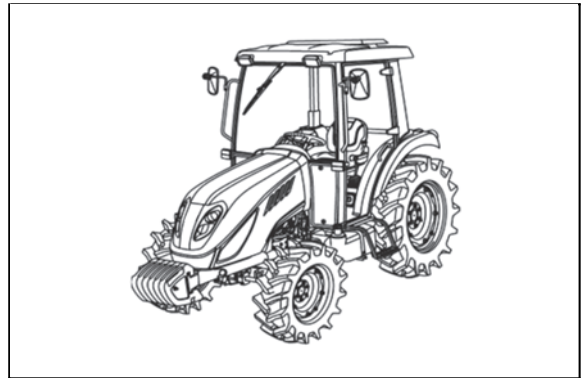
As the ROPS frame or cab together with the seat belt was designed to meet certain standards, they must be maintained in good order and condition. To achieve this objective, both the structure and the seat belt should be inspected on a regular basis (every time the tractor is serviced).

In the event that the seat belt is damaged or frayed, it should be replaced and in the event that the ROPS frame or any part of the mounting structure is damaged or cracked, the faulty component must be replaced with a new unit. Such a unit must meet all of the test criteria of the original unit. Fitment of an inferior item or items affects the certification of the entire ROPS structure and the effectiveness of the structure in the event of an accident. **Drilling or welding of the ROPS structure is forbidden.**

Damage of the ROPS

Cabin type

If the tractor has rolled over or the ROPS has damaged (such as striking an overhead object during transport), it must be replaced to provide the original protection. After an accident, check for damages to the 1.ROPS.2.Seat 3.seat belt & seat mountings. Before you operate a Tractor, replace all damaged parts.



U18N003



Warning: Do not weld, drill or straighten the ROPS.



Warning: Never attach chains, ropes to the ROPS for pulling purposes; this will cause the Tractor to tip backwards. Always pull from the Tractor drawbar. Be careful when driving through door opening or under low overhead objects. Make sure there is sufficient overhead clearance for the ROPS fatal injuries.



Warning: If the ROPS is removed or replaced, make certain that the proper hardware is used to replace the ROPS and the recommended torque values are applied to the attaching bolts.

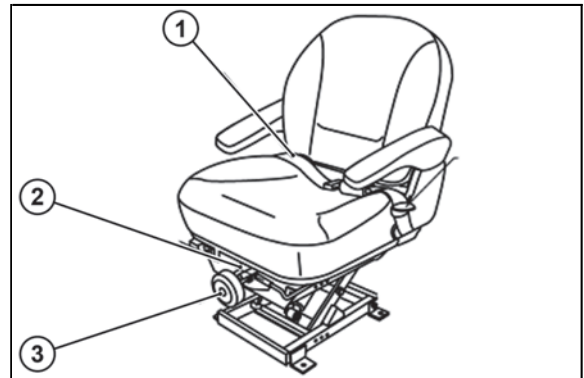


Warning: Always wear your seat belt if the tractor is equipped with ROPS.

ROPS (ROLL OVER PROTECTION STRUCTURES)

How to adjust the Seat

- 1 - Seat Belt
- 2 - Forward / Backward adjustment lever
- 3 - Knob for weight adjustment



U18N005

NOTE: Do not use solvents to clean the seat. Use warm water with a little detergent added.

Before operating a Tractor it is important to adjust the seat to the most comfortable position & check whether it is properly locked in its position. Figure 1 identifies the seat fitted to your Tractor.

For sliding seat

To select seat position, move adjusting lever and slide seat closer to or away from dash panel and controls.



3



Caution: *Do not put a hand between the seat and the slides when adjusting the seat position. You can get injured unexpectedly.*

ROPS (ROLL OVER PROTECTION STRUCTURES)

Seat suspension adjustment knob

To adjust the seat correctly, turn Weight adjustment knob clockwise or counterclockwise, while seated in the driving position.



Caution: *Do not put a hand between the seat and the slides when adjusting the seat position. You can get injured unexpectedly.*



Danger: *Check whether the seat properly locked in its position before driving the tractor.*



Danger: *Always use the seat belt when the ROPS is installed. Do not use the seat belt if a foldable ROPS is down or there is no ROPS. Check the seat belt regularly and replace if frayed or damaged.*



Danger: *Check whether the seat properly locked in its position before driving the tractor.*



Danger: *Always use the seat belt when the ROPS is installed. Do not use the seat belt if a foldable ROPS is down or there is no ROPS. Check the seat belt regularly and replace if frayed or damaged.*

Cushion strength adjustment

The seat cushion can be adjusted according to the weight of the driver.

Turning the cushion adjustment lever counterclockwise to the 50 kg position makes the cushion lighter, and turning the lever clockwise to the 130 kg position makes the cushion heavier.

NOTES

SAFETY INSTRUCTIONS

Introduction to safety information



This symbol means **ATTENTION! YOUR SAFETY IS INVOLVED**. The message that follows the symbol contains important information about safety. Carefully read the message.

Signal words



Danger



Warning



Caution

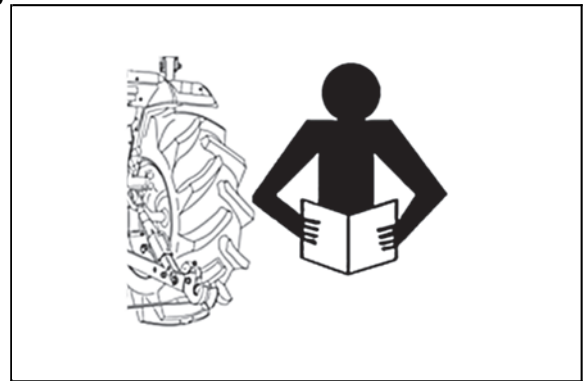
A signal word - DANGER, WARNING OR CAUTION - is used with safety alert symbol. DANGER identifies the most serious hazards. Safety signs with signal Word - DANGER OR WARNING - are typically near specific hazards. General precautions are listed on CAUTION safety signs.

Introduction to safety instructions Introduction to safety instructions

Carefully read all safety instructions given in this manual for your safety. Tempering with any of the safety devices can cause serious injuries or death. Keep all safety signs in good condition.

Replace missing or damaged safety signs.

Keep your tractor in proper condition and do not allow any unauthorized modifications to be carried out on the tractor, which may impair the function/safety and affect tractor life.



U18N134

Protection children

When using the tractor, prevent other persons from accessing the tractor.

Reverse travel

- Look around if someone is not behind the tractor.
- Do not allow anyone to ride on the tractor or implement.



U18N135

SAFETY INSTRUCTIONS

Use of rops and seat belt

The Roll Over Protective Structure (ROPS) has been certified to industry and/or government standards. Any damage or alternation to the ROPS, mounting hardware, or seat belt voids the certification and will reduce or eliminate protection for the operator in the event of a roll-over. The ROPS, mounting hardware, and seat belt should be checked after the first 100 hours of tractor and every 500 hours thereafter for any evidence of damage, wear or cracks. In the event of damage or alternation, the ROPS must be replaced prior to further operation of the tractor.

The seat belt must be worn during machine operation when the machine is equipped with a certified ROPS. Failure to do so will reduce or eliminate protection for the operator in the event of a roll over.



U18N136

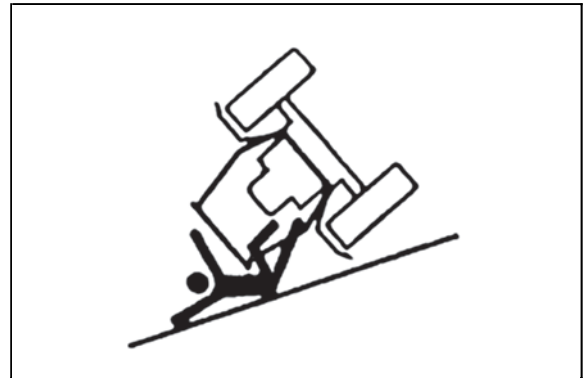
Precaution to avoid tipping

Do not drive where the tractor could slip or tip.

Stay alert for holes and rocks in the terrain, and other hidden hazards.

Slow down before you make a sharp turn.

Driving forward out of a ditch or mired condition could cause tractor to tip over backward. Back out of these situations if possible.



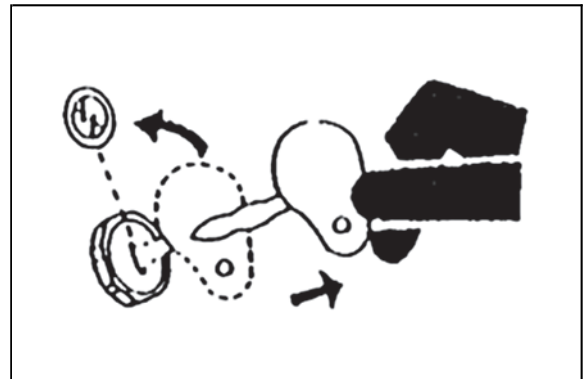
U18N137

Safe parking of the tractor

Before working on the tractor:

Lower all equipment to the ground.

Stop the engine and remove the key.



U18N138

Keep riders off tractor

Do not allow other persons to ride on the tractor besides the operator.

Persons on the tractor are exposed to the risk of injury, e.g. due to the impact of a foreign object or falling from the tractor.



U18N139

SAFETY INSTRUCTIONS

Handle fuel safely-avoid fires

Handle fuel with care; it is highly flammable. Do not refuel the tractor while smoking or near open flame or sparks. Always stop engine before refueling tractors. Always keep your tractor clean of accumulated grease, and debris. Always clean up spilled fuel.



U18N140

Stay clear of rotating shafts

Entanglement in rotating shaft can cause serious injury or death.

Keep PTO shield in place at all times.

Wear close fitting clothing. Stop the engine and be sure PTO drive is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

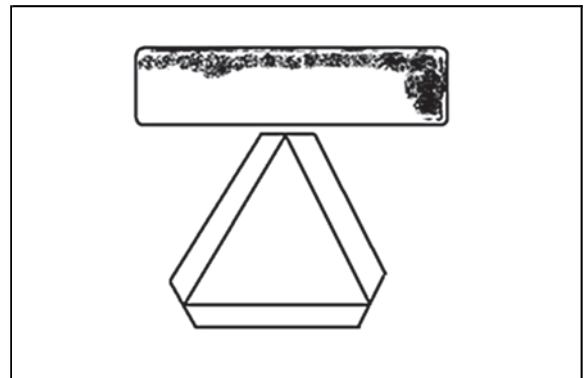


U18N141

Always use safety lights and devices

Use of hazard warning lights and turn signals are recommended when towing equipment on public roads unless prohibited by state or local regulations.

Use slow moving vehicle (SMV) sign when driving on public road during both day & night time, unless prohibited by law.



U18N142

SAFETY INSTRUCTIONS

Practice safe maintenance

Be thoroughly familiar with the service procedure before performing work.

Keep the tractor area clean and dry.

Do not attempt to service the tractor while it is in motion.

Be careful not to let your body or clothing get into the rotating shaft.

Always lower all attached equipment on the ground. Turn off the engine.

Remove the ignition key. Let the tractor cool down before any repairs.

All parts of the tractor that need to be lifted for service work must be securely supported.

Keep all parts in good conditions and properly installed. Replace worn or damaged parts. Replace damaged/missing plates.

Remove any accumulated excess grease or oil from the tractor.

Disconnect the battery ground cable (-) before making adjustments to electrical systems or performing welding work on the tractor.

Avoid high-pressure fluids

Liquid escaping under pressure can penetrate the skin and cause serious injury. Be especially careful when handling the injection elements - there is a risk of injecting liquids under high pressure under the skin of your hands or other parts of your body. If ANY liquid penetrates the skin, contact your doctor immediately.



U18N143



U18N144

Prevent battery explosions

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode. Never check battery charge by placing a metal object across the poles.



U18N145

SAFETY INSTRUCTIONS

Prevent acid burns

Protect the top of the battery from sparks, flammable materials and open flames. Accumulated battery fumes can explode. Never check the battery charge by connecting the battery terminals with a metal object.

Sulfuric acid in the battery electrolyte is hazardous to health. It is strong enough to burn the skin, burn through the clothing and cause blindness when it gets into the eyes.

To ensure adequate safety, always:

1. Refill the batteries in a well-ventilated place.
2. Wear eye protection and acid-resistant gloves.
3. Do not inhale the released vapors after the electrolyte has been added.
4. Do not add water to the electrolyte, as it may cause expansion and subsequent severe burns.

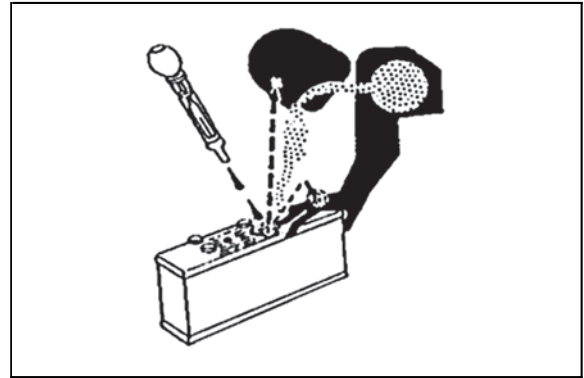
If you get stained with acid:

1. Rinse skin with water.
2. Rinse eyes with water for 10 - 15 minutes. Seek medical advice immediately.

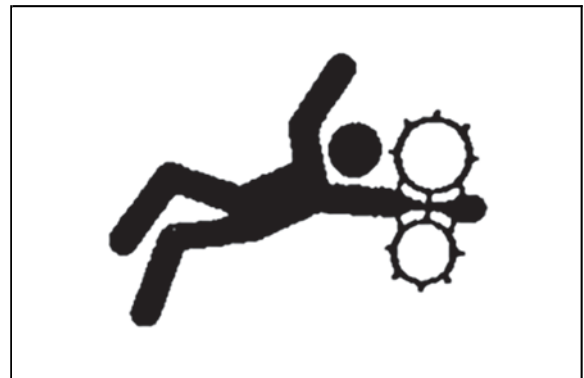
Service tractor safely

Do not wear a tie, scarf or any other loose clothing when working near moving parts. If any of these garments is caught, a serious injury may occur.

Do not wear rings or other jewellery to avoid electrical short circuits and entanglement in moving parts.



U18N146



U18N147

SAFETY INSTRUCTIONS

Work in ventilated area

Do not start the tractor in an enclosed building unless the doors & windows are open for proper ventilation, as tractor fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area remove the exhaust fumes by connecting exhaust pipe extension.



U18N148

Tractor runaway

1. To increase safety, leave the emergency stop control (fuel cut-off control) in the fully extended position. When using the starter switch or other work on the tractor, the foot brake pedal must be depressed and the PTO lever disengaged.

Safety starter switch

1. On some models, the starter switch is available on the 'high / low' gearshift lever and the PTO shift lever. The tractor can only be started when the 'high / low' gearshift lever is in the neutral position.
2. Do not disable or modify this starter switch. It is recommended that only authorized dealers handle the starter switch.



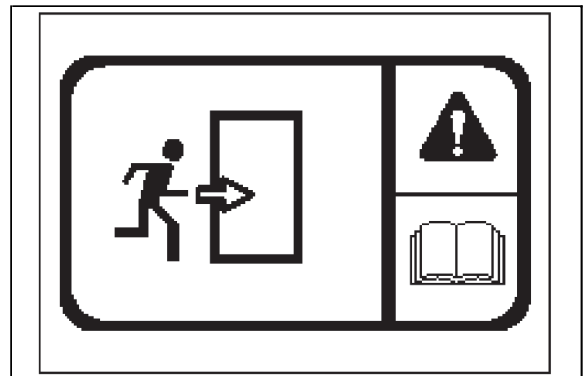
Caution: *Safety starter switch is to be replaced after every 2 000 hours / 4 years, whichever is earlier.*

Emergency exits

If exit from the cab side doors is blocked (following an accident or vehicle overturn) the alternative safety exits are indicated by decals.

The possible safety exits are:

- Rear window hatch (all tractors)
- Front window (for versions with openable front window).

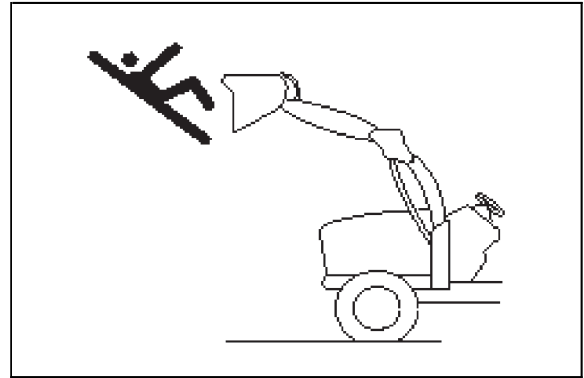


U18N005_1

SAFETY INSTRUCTIONS

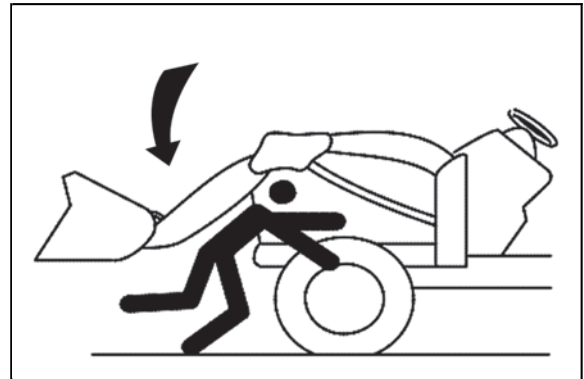
Safety precautions when using the loader

Do not allow persons to enter the attached loader adapter or the loader boom operating area. Failure to do so may result in serious injuries or even death.



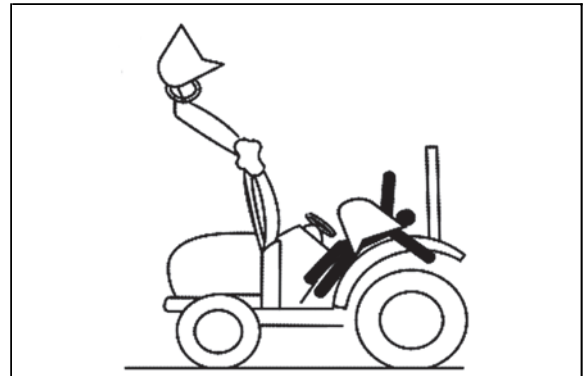
U18N005_2

Do not stay under the lifted loader or do not approach it. Lower the loader boom to the ground before leaving the tractor. Failure to do so may result in serious injuries or even death.



U18N005_3

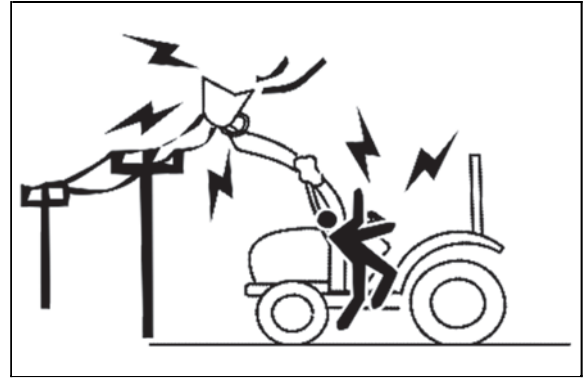
When mounting or dismounting the loader, secure all parts that are attached to the adapter and the boom. The adaptor or the boom may unexpectedly drop, which can lead to injury or even death.



U18N005_4

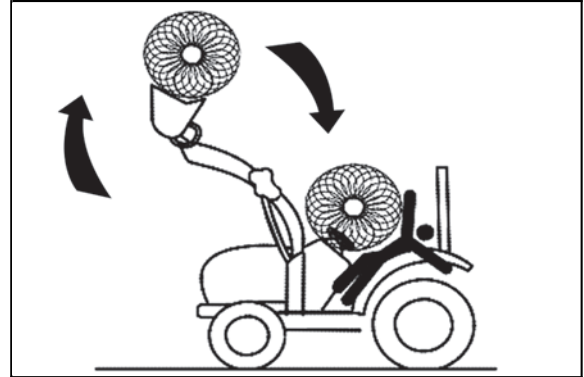
SAFETY INSTRUCTIONS

Do not allow the boom or attached adapter or equipment to come into contact with electrical lines or other electrical equipment. Electric current causes serious injuries or death.



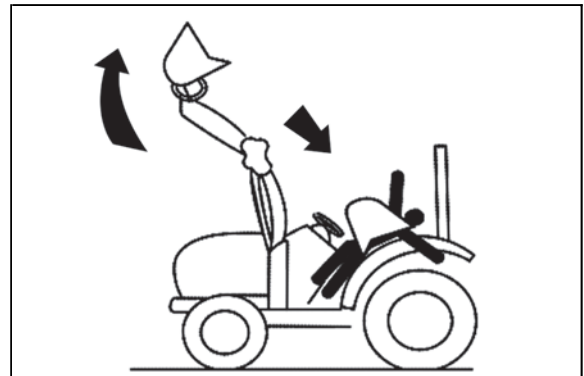
U18N005_6

For safe handling of loads, always use a suitable type of adapter for your work. While driving, keep the boom loaded with a load at a low position above the mat. Failure to do so may result in machine damage, serious injury or even death.



U18N005_7

When mounting or dismounting the loader, secure all parts that are attached to the adapter and the boom. The adaptor or the boom may unexpectedly drop, which can lead to injury or even death.



U18N005_8

SAFETY INSTRUCTIONS

Towing safely

For the maximum permissible load of the hitch, see 'Maximum hitch load' in the Specifications section.

- Maintain a suitable speed taking into account the weight of the load towed or carried by the tractor and the inclination of the surrounding terrain, remembering that the braking distances will be greater than that of a unloaded tractor. Attached trailers or semi-trailers with or without brakes that exceed the specified technically permissible maximum authorized weight may cause loss of control of the tractor unit.
- Always take into account the total weight of the attached machine and its load.
- When semitrailers are attached to the tractor, remember to switch all controls to neutral position, lock the parking brake, turn off the engine, engage first gear (for mechanical transmission), and remove the ignition key before leaving the operator's seat. ALWAYS secure the wheels of the tractor and the trailer with wedges. The safest and recommended way to transport a damaged tractor is to transport it on a low-load trailer. Always attach the tractor to the low-load trailer with chains. Before transporting the tractor on a low-load trailer or on a railway wagon, make sure that the engine cover, door, openable roof (if available) and windows are closed and securely locked. Never tow the tractor at a speed higher than 10 km/h. In this case, the operator must remain in the operator's seat to drive and brake the tractor.



Caution: *When a trailers is hitched to the tractor, before you leave the driving seat remember to put all the controls in neutral, apply the handbrake, switch off the engine, engage first gear (if the tractor has a mechanical transmission) and remove the key from the starter switch. If the tractor is not parked on level ground, ALWAYS place chocks under the wheels of both the tractor and the trailer For further information on safe working procedures, refer to the chapter 'Parking the tractor' in the safe section of this manual.*

ROPS (roll-over protective structure), sun visor and cab are not FOPS protective structures (falling-object protective structure).

It can never protect the operator from falling objects.

Avoid driving in dangerous terrain or areas where a foreign object can fall on the roof of the cabin and injure or even kill the operator.



U18N005_5

Falling Object Protective Structure (FOPS)

The term F.O.P.S refers to structure installed on the tractor intended to reduce the risk to the operator of injury from falling objects during normal use of the vehicle.

Important:

- ***This tractor is equipped with a FOPS.***
- ***The energy level of drop test is 1 365J.***

Operator Protective Structure (OPS)

The term OPS refers to a protective structure installed on a tractor in order to minimize risk of operator injury caused by objects penetrating into the operator position area.

SAFETY INSTRUCTIONS

Use of hazardous substances

European standard EN 15695-1 is applicable to the cabs of agricultural or forestry tractors and self-propelled sprayers. The purpose of the standard is to limit the exposure of the operator (driver) to hazardous substances when applying plant protection products and liquid fertilisers.

In accordance with the provisions of EN 15695-1 concerning cab classification, the measurement of the internal positive pressure difference shall be made in accordance with ISO 14269-5:

1. Engine operating at rated speed;
2. Maximum air flow brought to the cab (closed recirculation);
3. Fan set to maximum speed.

The following terms and definitions are applied:

- Hazardous substances: substances such as dust, vapours and aerosols, with the exception of fumigants which can be dispersed during the application of plant protection products and liquid fertilisers, which may have a harmful effect on the operator.
- Dust general term identifying solid air-borne particles, finely divided and sedimented
- Aerosol: suspension of solid, liquid or solid and liquid particulate in gaseous medium with a negligible fall rate (generally less than 0.25 ms⁻¹) Vapour: gaseous phase of a substance whose liquid or solid state is stable at 20° C and 1 bar (absolute). This cab, even when closed, does not protect against the inhalation of hazardous substances. If the manufacturer's instructions for using these substances recommend personal protective equipment, wear the equipment even in the cab.

Cabs are classified as follows:

Category 1: the cab does not provide protection against hazardous substances.

Category 2: the cab provides protection exclusively from dust.

Category 3: the cab provides protection from dust and aerosol.

Category 4: the cab provides protection from dust, aerosol and chemical vapours.



Danger: Use all the personal protective equipment suitable for the tasks in hand and relative substances, in compliance with the requirements of statutory legislation in your country.

SAFETY INSTRUCTIONS

Use of Hazardous Substances

The category of the cab installed on this series of tractors, classified according to ISO 14269-5, is listed below:

- Engine operating at rated speed

- Maximum air flow brought to the cab (closed recirculation) - with fan set to maximum speed

The manufacturer of your tractor has made every effort to make it as safe as is humanly possible.

Beyond this point it is the responsibility of the operator to avoid accidents and we ask that you read and implement our suggestions for your safety.

Ensure that this tractor is only used by trained and authorized operators. Ensure that the operators are fully familiar with the machine and understand all its controls and safety features. Operators should not operate a tractor or attached machines or equipment if they are not properly trained or if they are physically unfit to operate the machine. To avoid accidents, make sure that the operators wear clothes that might not get caught in the moving parts of the tractor or the machine and, on the contrary, protect them from these elements. When applying or using chemicals, ensure that clothes and protective equipment are used to prevent breathing problems or skin irritation.

For detailed information contact the manufacturer of chemicals.

To avoid prolonged exposure to noise, ensure that the protection of ears is used.

If modification of the tractor or machine is necessary, ensure that the tractor or machine is stopped beforehand.

When operating the tractor a certified roll-over protective structure (ROPS) must be used.

When operating the tractor a safety belt must be worn.

Under all circumstances, it is necessary to ensure the safety of the operator and others near the machine.

Ensure that no one is between the tractor and the towed vehicle (trailer or implement).

Ensure that this tractor is used only by trained and competent operators. Ensure that the operators are fully familiar with the machine and understand all its controls and safety features. Operators should not operate a tractor or attached machines or equipment if they are not properly trained or if they are physically unfit to operate the machine. To avoid accidents, make sure that the operators wear clothes that might not get caught in the moving parts of the tractor or the machine and, on the contrary, protect them from these elements. When applying or using chemicals, ensure that clothes and protective equipment are used to prevent breathing problems or skin irritation.

Technical data	
CAB / ROPS Category of cab protection against hazardous substances	Category 1

SAFETY INSTRUCTIONS

Safety tips during maintenance

1. Check all oil levels at least once a day. Check the amount of water in the radiator and the electrolyte level in the battery and perform service according to the service schedule of the machine.
2. Ensure that the tire pressure is even and corresponds with the work to be performed.
3. Check that all preventive and service operations are properly performed on the tractor.
4. Ensure that adequate service facilities are available for maintenance and minor repairs.
5. Ensure that all service work and repairs are performed on flat concrete surface or similar surface. Do not perform service work on the tractor until it is stopped, the parking brake is applied, and the wheels are secured with wedges. If the tractor is started in an enclosed area, ensure that the area is well ventilated as the exhaust fumes are very harmful and can cause intoxication or death.
6. It is forbidden to perform service work on the mounted equipment in the lifted position.
7. When changing wheels or tires, ensure that a suitable stand is placed under the axle before removing the wheel and that the remaining wheels are secured with wedges.
8. If it is necessary to remove guards or covers when servicing or repairing, ensure that the guards or covers are properly installed before starting the tractor.
9. Never fill the fuel near open flames or with an overheated engine. The engine must be stopped before filling the fuel.
10. The cooling system operates under pressure, so be careful not to scald yourself with steam or hot water when removing the hot engine radiator cap. Do not add water to the radiator when the engine is hot. Only add water to the radiator after the engine has cooled down completely.
11. To prevent fire, keep the tractor, including its engine, clean and free from combustible material, at a safe distance from fuel and other combustible material.

SAFETY INSTRUCTIONS

Mounting and demounting implements

1. Ensure that all assembly and disassembly of implements (attachments) is carried out on a secure, level surface. To prevent accidental injuries, ensure that no one is between the tractor and the implement or under the implement.
2. After mounting the implement, ensure that all hanging parts such as chains or hoses are properly secured and, where PTOs are used, properly fastened and secured.
3. Where heavy implements are used, ensure that the unit is well balanced, using suitable ballast to ensure this balance.
4. Before leaving the tractor, lower the implement onto the ground, deactivate the PTO, apply the parking brake and stop the engine.
5. When working with an implement that uses PTO, make sure that no other persons are near the moving parts and do not make any modifications to the implement while the machine is in operation.
6. A tractor equipped with a ROPS protective frame only performs its function in combination with a fastened seat belt.
7. If children are present in the immediate vicinity of the machine or unit, caution and anticipation of possible risks related to the movement and operation of the machine are necessary.
8. The tractor may only be used by trained operators who must ensure that no worker is injured. Extra caution is necessary in dusty environment with significantly reduced visibility.
9. Never start the tractor unless the transmission is in the neutral position, the operator is in the driver's seat, and there is no other danger when the engine is started up.
10. Only the operator sitting in the driver's seat can operate the tractor. Never turn or brake suddenly at high speed, as this may cause the tractor to roll over, resulting in serious injury or death.
11. When driving on public roads, observe all legal requirements of the country in which the tractor is operated, including the requirements for accompaniment. When driving with wide implements, use the warning devices specified by the applicable legislation in the country in which the machine is used.
12. When operating under adverse conditions, in hilly or bad terrain, adjust the speed of the tractor to the following conditions:
Never drive down the hill rashly or with the transmission in the neutral position.
Use engine braking capability together with service brakes.
Do not attempt to shift gears in a steep slope and engage a suitable gear before starting to drive the tractor.
13. When driving uphill with a heavy implement, be careful to prevent overloading and loss of front axle adhesion and consequent loss of control.
14. Never remove or modify the seat belt.
15. Never remove, modify or repair the ROPS protective frame.

PLEASE REMEMBER THAT A LITTLE BIT OF EXTRA CARE CAN PREVENT SERIOUS INJURY OR TEATH AND AVOID DAMAGE TO YOUR TRACTOR.

SAFETY INSTRUCTIONS

The following precautions are suggested to help prevent accidents

The best operator is the careful operator. Most accidents can be prevented by observing certain safety measures. Before using the tractor, read the following measures and observe them to avoid accidents. The tractor may only be operated by authorized persons who are properly trained for this operation.

Tractor

1. Read the operating and maintenance manual of the machine carefully before operating the tractor. Insufficient knowledge of machine operation can lead to accidents.
2. For safe operation, use an approved protective structure and seat belt. Roll-over of a tractor without a protective structure can result in serious injuries or even death.
3. **Do not remove the roll-over protective structure (ROPS).** Always use the seat belt.
4. The laminated roof of the tractor cab does not provide protection against the breakthrough of external objects with higher weight.
5. To avoid falling while entering and leaving the cab, keep the stairs and platform clean, free of mud and oil.
6. Do not allow anyone other than the operator to ride on the tractor. There is no safe seat or approved passenger seat on the tractor.
7. Replace any missing, illegible or damaged safety signs.
8. **Keep safety signs clean, free of dirt and grease.**

Tractor service

1. For your safety, keep the tractor in good operating conditions. An inadequately maintained tractor can be dangerous.
2. Stop the engine before servicing the tractor.
3. The cooling system operates under pressure. **If the engine and its cooling system are hot, it is dangerous to remove the cap.** Turn the cap slowly to the stop, then let the pressure escape before removing the cap.
4. **Do not smoke while refueling the tractor. Never refuel the machine near an open flame.**
5. The fuel in the injection system is under high pressure and can penetrate the skin. Unqualified persons must not disassemble or modify the fuel pump, injectors, nozzles or other parts of the fuel injection system. Failure to follow these instructions may result in serious injuries.
6. **To prevent fire or explosion, keep the battery and the cold start devices away from open flames.**
7. **Do not change or modify anything on the tractor and do not allow anyone to change or modify anything on the tractor or any part of the tractor or its function.**

SAFETY INSTRUCTIONS

Operating the tractor

1. Before starting the tractor, apply the parking brake, place the PTO lever in the 'OFF' position, the hydraulic control lever in the lower position, the remote controls lever in the neutral position (if fitted), and put the gear shift lever in neutral position.
2. Do not start the engine or controls while standing next to the tractor. Always sit in the tractor seat when starting the engine or controls. To prevent the tractor from starting accidentally, a safety switch is installed.
3. The starter system of the tractor is connected via this switch, which allows starting the tractor only when the clutch pedal is depressed. On some models, the reverse shift lever and the PTO button must also be in the neutral position to start the tractor. Do not bypass the starter safety switch. If the safety switch fails, consult it with the Zetor dealer / distributor.
4. Avoid accidental contact with the gear shift lever while the engine is running. This may cause the tractor to move unexpectedly.
5. Do not enter or leave the tractor while the tractor is moving.
6. Before leaving the tractor, stop the engine, remove the ignition key and engage the parking brake of the tractor.
7. Do not operate the tractor in a closed building without proper ventilation. Exhaust fumes can cause intoxication or death.
8. Do not park the tractor on a steep slope.
9. If the power steering or engine ceases to function, stop the tractor immediately and prevent it from being used by others.
10. Only use the swinging drawbar or the drawbar of the lower link in the lower position for towing. Use only the drawbar pin that is locked in that position. Towing by the tractor using the rear axle brackets or any point above the rear axle may cause the front of the tractor to lift.
11. If the front of the tractor tends to lift while a heavy implement is attached to the three-point hitch, install ballast on the front of the tractor or on the front wheels. Do not use a tractor with insufficiently weighted front part.
12. Always use the hydraulics position control levers when attaching equipment / implements and transporting equipment. Ensure that the hydraulic couplers are properly mounted and they disconnect safely if the implement is accidentally released.
13. Never leave the equipment / implement in the lifted position.
14. Unless prevented by national or local regulations, when driving on public roads, day and night, use the warning light / turn signal lights and warning triangles for slow-moving vehicles.
15. Low beam lights of the tractor used when passing oncoming vehicles at night. Check the adjustment of the lights to prevent the driver of oncoming vehicles to be dazzled.
16. Emergency stop instruction: If the tractor does not stop when brakes are applied, pull the fuel cut-off lever.

Tractor control

1. Watch where you drive, especially at the ends of the rows, the headlands, on the roads, around the trees and at obstacles hanging low to ground.
2. To prevent the tractor from rolling over, drive the tractor at a safe speed, especially when driving on uneven ground, when driving over ditches or slopes, and when turning in corners of areas and parcels.
3. When driving on the road, do not disconnect the two brake pedals of the tractor from each other to ensure better braking.
4. When driving downhill, shift the same gear in the tractor as uphill. Do not drive downhill with the engine stopped or idling.
5. For safety reasons, any towed vehicle and/or trailer, the weight of which exceeds the maximum towed weight, must be fitted with its own brakes.
6. If the tractor gets stuck or its tires are frozen to the ground, try to reverse to prevent the tractor from rolling over.

Always make sure you have enough space above you, especially when transporting the tractor.

SAFETY INSTRUCTIONS

Operating the PTO

1. When you operate the PTO-powered attachments, stop the engine and wait for the PTO to stop before you leave the tractor and disconnect the equipment.
2. Do not wear loose clothing when operating the PTO or near rotating parts of the connected implement.
3. When operating PTO-driven stationary equipment, always secure the tractor with the tractor parking brake and secure the rear wheels from the front and rear side with wedges.
4. To avoid injury, always cover the PTO outlet. Do not clean, modify or repair the PTO-driven equipment while the tractor engine is running.

Always make sure that the main PTO cover is installed and always install the PTO end piece cover whenever the PTO is not in use.

Diesel fuel

1. Keep the equipment clean and properly maintained.
2. Under no circumstances should gasoline, alcohol or blended fuels be added to diesel fire or explosive hazard. Such blends are more explosive than pure gasoline. In a closed container, such as a fuel tank. DO NOT USE THESE BLENDS.
3. Never remove the fuel cap or refuel the tractor with the engine running.
4. Do not smoke while refueling or when standing near fuel.
5. Maintain control of the fuel filler pipe when filling the tank.
6. Do not fill the fuel tank to capacity. Allow room for expansion.
7. Wipe up spilled fuel immediately.
8. Always tighten the fuel cap securely.
9. If the original fuel tank cap is lost, replace it with genuine cap. A none approved cap may not be safe.
10. Do not drive equipment near open fire.
11. Never use fuel for cleaning purpose.
12. Arrange fuel purchases so that winter grade fuel are not held over and used in the spring.

Note: It is suggested that after repairs if any of the safety decal/sign is peeled/defaced, the same may be replaced immediately in interest of your safety.

SAFETY INSTRUCTIONS

DO'S AND DON'T'S

DO'S-for better performance

YES Ensure that protective covers are returned immediately and they are in good conditions.

YES Read all operating instructions before operating the tractor

YES Perform all maintenance tasks completely and without error.

YES Keep the air filter clean.

YES Ensure that lubricating oils of the appropriate standard and quality are used and that they are refilled and changed at recommended intervals.

YES After replacing the filter elements, install new sealing rings.

YES Observe the warning light on the oil pressure gauge and if it lights up, check immediately for any abnormality.

YES Make sure the radiator is always filled with clean water and use antifreeze in cold weather. Drain the system only in case of emergency and refill before starting the engine.

YES Ensure the transmission is in the neutral position before starting the engine.

YES Store all fuel in clean environment and use a filter when filling the tank.

YES Perform minor adjustments and repairs as soon as necessary.

YES Allow engine to cool before removing radiator filler cap and adding water; remove the radiator cap slowly.

YES Engage a lower gear when going downhill steep slopes.

YES Connect the brake pedals together when driving on the road.

YES If the draft control lever is not in use, keep it in the lower limit position.



SAFETY INSTRUCTIONS

Don'ts - for safe operation

DO NOT USE the engine with the air filter disconnected.

DO NOT START the tractor in a closed building without proper ventilation

DO NOT OPERATE the tractor or engine during lubrication or cleaning

DO NOT LET the diesel fuel tank run out completely, otherwise the system will need to be bled.

DO NOT INTERFERE with the engine injection pump. The warranty is void if the seal is broken

DO NOT LET the engine idle for a long time.

DO NOT RUN the engine if all cylinders do not work.

DO NOT DRIVE with the clutch or brake pedal depressed. This leads to excessive wear of the brake lining, clutch-driven elements and clutch release bearing.

DO NOT USE independent brakes to turn while driving on the road or at high speed.

DO NOT REFILL the fuel in the tractor with the running engine.

DO NOT SET the hydraulic control levers beyond the upper stop limit.

DO NOT USE the draft control lever to lift implements.

DO NOT START the engine with the PTO engaged.

DO NOT USE the hand throttle control lever while driving on the road.

DO NOT MOVE the hydraulic levers backwards.

SAFETY SIGNS

General safety information

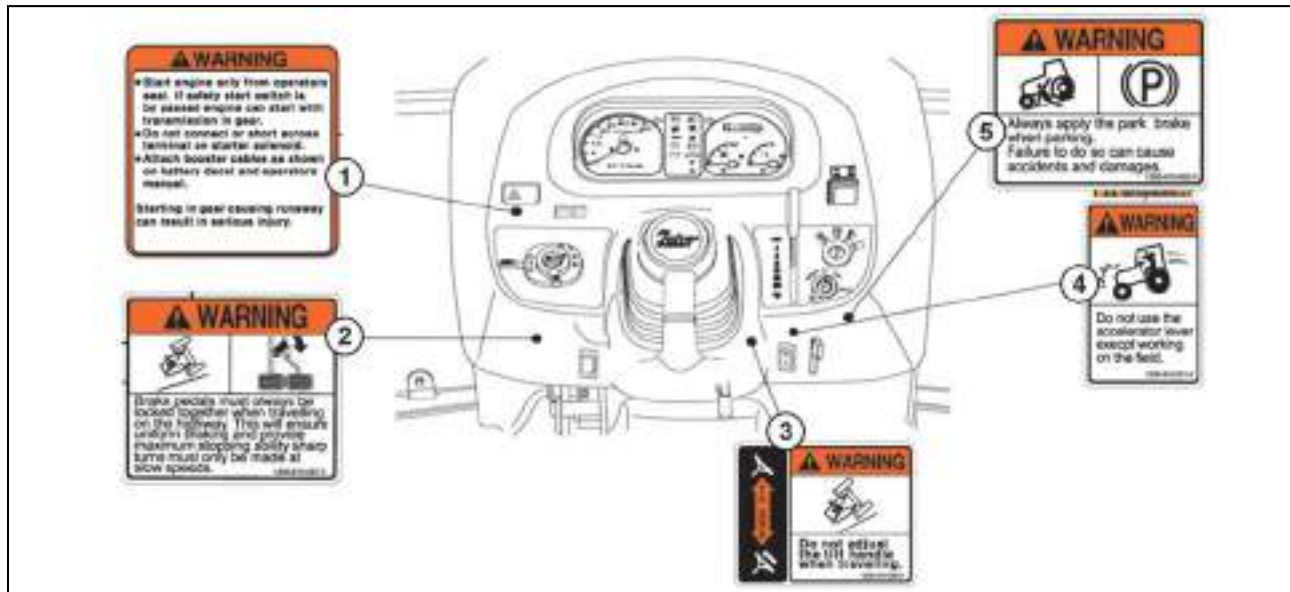
(Replace all missing, damaged or illegible signs)

IMPORTANT: This "General safety Information" should be kept with the machine at all times as reference data.



*This symbol means **ATTENTION! YOUR SAFETY IS INVOLVED**. The message that follows the symbol contains important information about safety. Follow recommended precautions and safe operation practice.*

Decals on the dash cover



U18N006

1- Warning:

- Start the engine only from the driver's seat. If the starter switch is disabled, the engine can be started.
- Do not connect the terminal block on the starter solenoid.
- Connect the booster cables as shown on the battery plate and in the Operator's manual. Shifting a gear that causes uncontrolled tractor movement can result in serious injury.

2- Warning:

When driving on the road, brake pedals must always be connected together. This ensures even braking and provides maximum braking performance. Sharp turns must be performed at moderate speeds.

3 - Warning:

Do not adjust the seat while driving.

4 - Warning:

Do not use the accelerator lever except for field work.

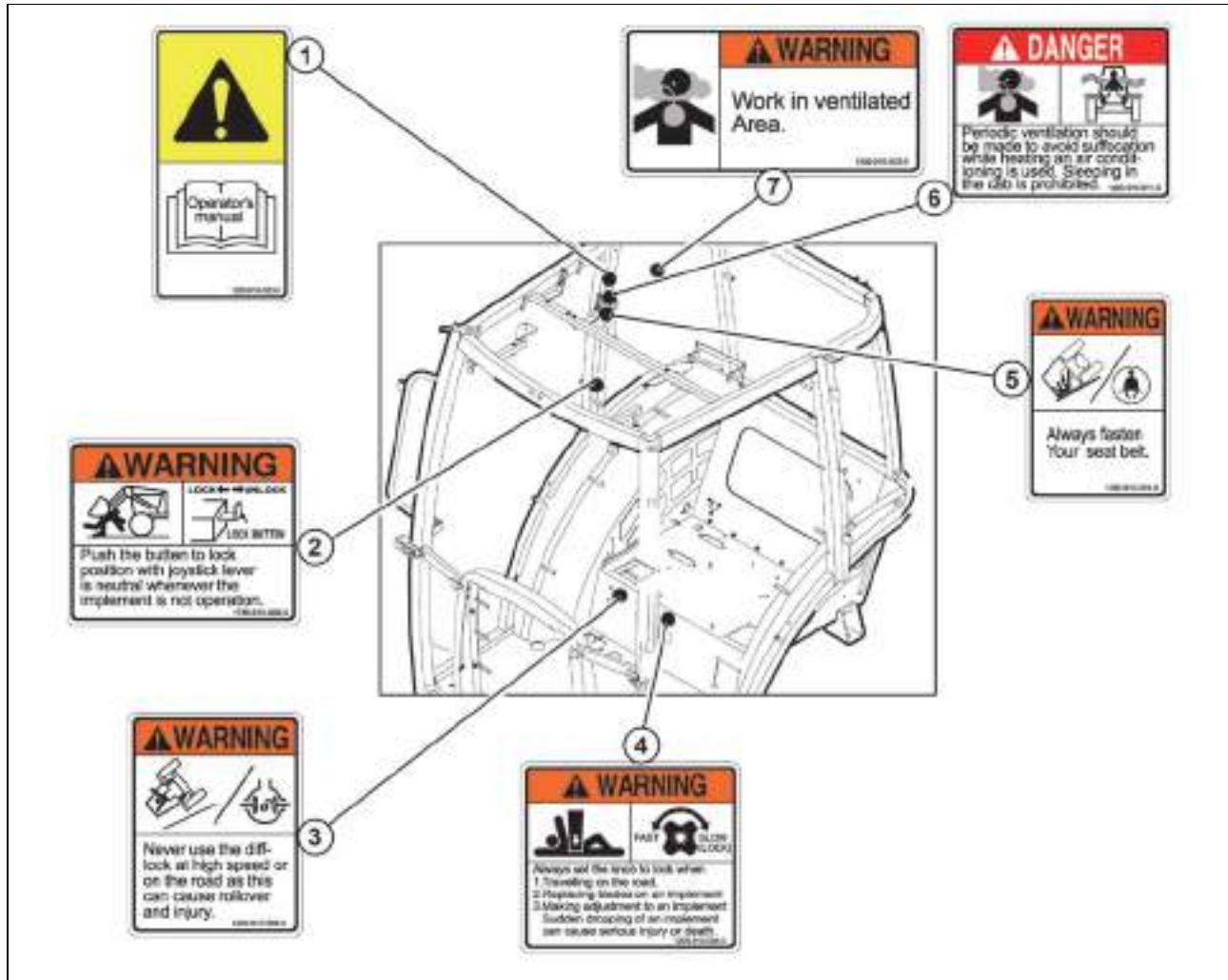
5 - Warning:

Always apply the parking brake when parking.

Failure to do so may result in accidents, damage and personal injury.

SAFETY SIGNS

Decals on the chassis



U18N007

1 -Operator's manual of the tractor

2 - Warning:

Push the button into the locked position with the front loader control joystick lever in the neutral position, whenever the implement is not in use.

3 - Warning:

Never use the differential lock at high speed or on the road, as it may cause damage to the machine, risk to road safety or cause accidents and injuries to persons.

4 - Warning:

Always lock the hydraulic circuit control when:

1. You drive on the road.
2. You perform maintenance / change working implements.
3. You set up the machine. Sudden lowering of the implement can cause serious injuries or death.

5 - Warning:

Always use the seat belt.

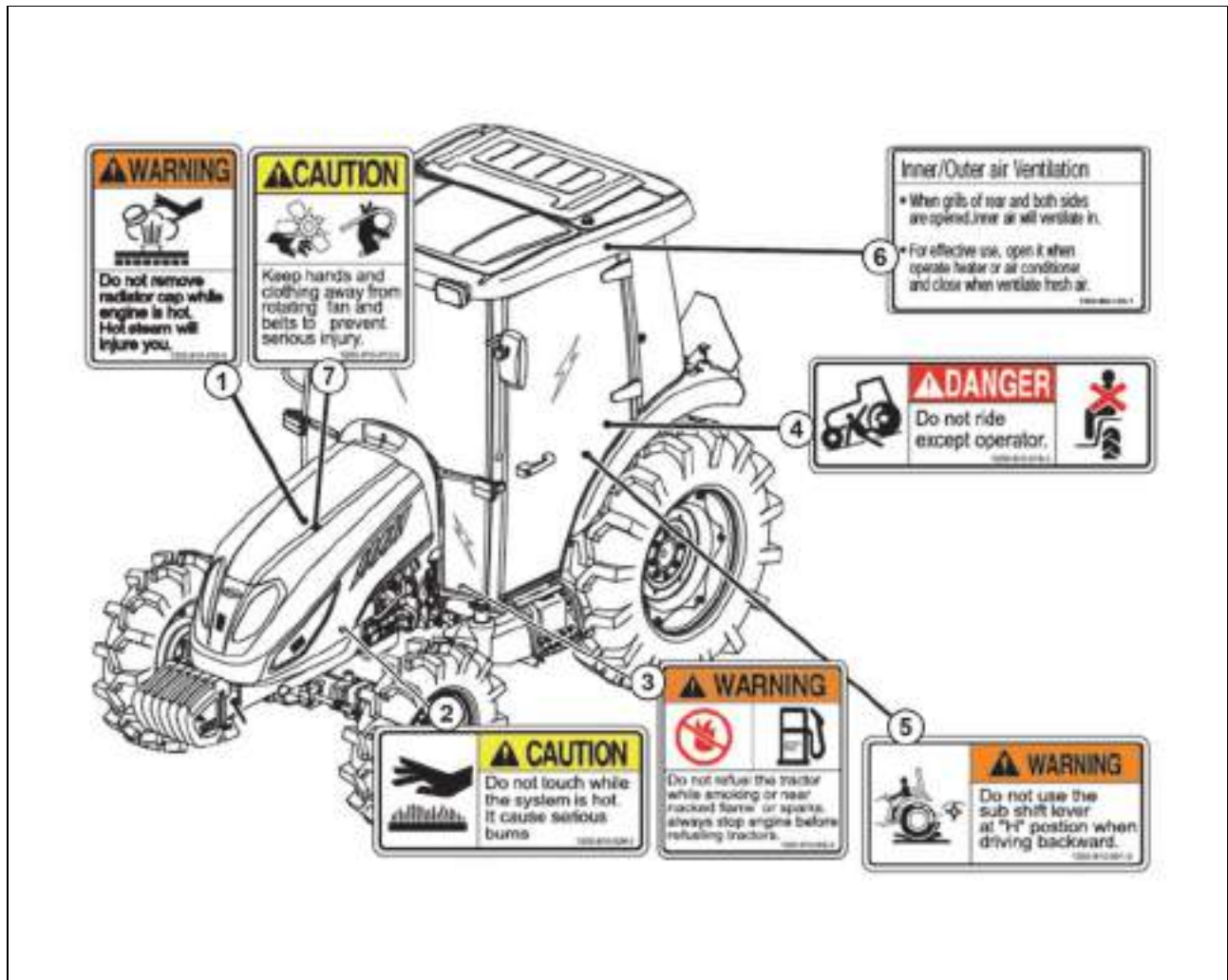
6 - Danger:

If heating and air conditioning is used, regular ventilation is required to avoid suffocation. It is forbidden to sleep in the cab.

7 - Warning: Work in ventilated areas.

SAFETY SIGNS

Decals on the cabin



U18N008

1 - Warning:

Do not remove the radiator cap while the engine is hot. Hot steam can cause injuries.

2 - Caution:

Do not touch the engine and cooling system while it is hot. It may cause severe burns.

3 - Warning:

Do not refuel the tractor near an open flame or other source of danger, nor smoke when handling fuel. Always switch off the engine before refueling the tractor.

4 - Danger:

Only the operator can be transported on the tractor.

5 - Warning:

Do not move the gearshift lever to H position when reversing.

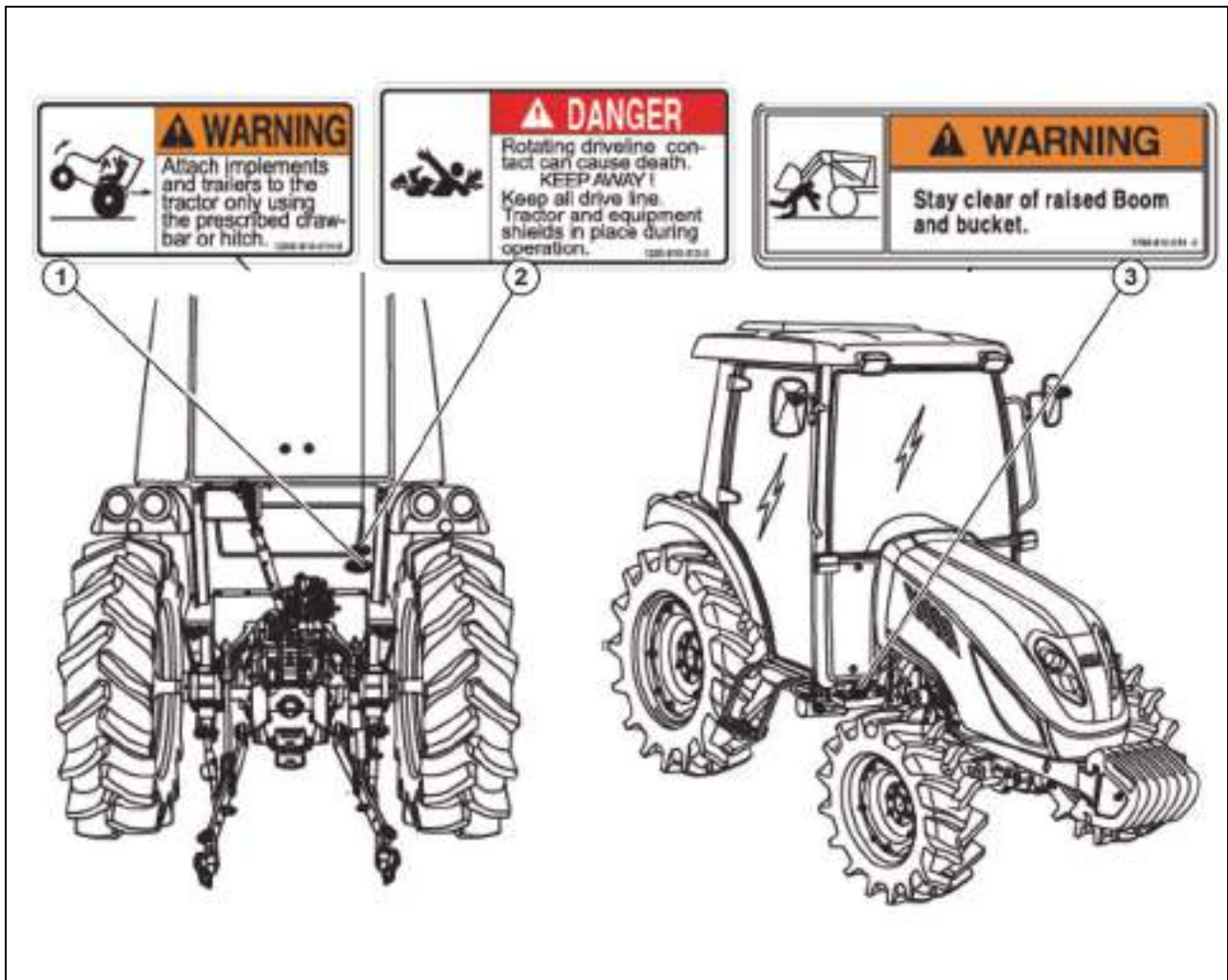
6 - Internal / external air ventilation:

- If the rear and side grilles are open, the internal air will be recirculating.
- For short-term efficient use of heating or air conditioning, use air recirculation, then close the rear and side grilles.

7 - Caution:

Be careful not to get your hand or clothing into the rotating radiator fan or belts, otherwise serious injury may result.

SAFETY SIGNS



U18N009

1- Warning:

Only attach implements and trailers to the tractor using the prescribed drawbar or hitch.

2- Danger:

Contact with the rotating shaft may cause injuries or death.

Stay away!

When operating, keep all the covers of the shaft, tractor and connected device mounted.

3- Warning:

Keep away from lifted arms and other parts of the loaders and implements.

UNIVERSAL SYMBOLS

Some of the universal symbols have been shown below with an indication of their meaning.

 Engine speed rev/minX100	 Pressured-open slowly	 Corrosive substance
 Hours, recorded	 Continuous variable	 "Tortoise" Slow or minimum setting
 Engine coolant temperature	 Warning	 "Hare" fast or maximum setting
 Fuel level	 Hazard warning	 Transmission oil pressure
 Engine stop control	 Neutral	 Turn signal
 Lights	 Fan	 Transmission oil temperature
 Horn	 Power take off engaged	 Parking brake
 Engine oil pressure	 Power take off disengaged	 Work lamps
 Air filter	 Lift arm/raise	 Differential lock
 Battery charge	 Lift arm/lower	 See operator's manual

NOTES

CONTROLS, INSTRUMENTS & OPERATIONS

Description of tractor controls

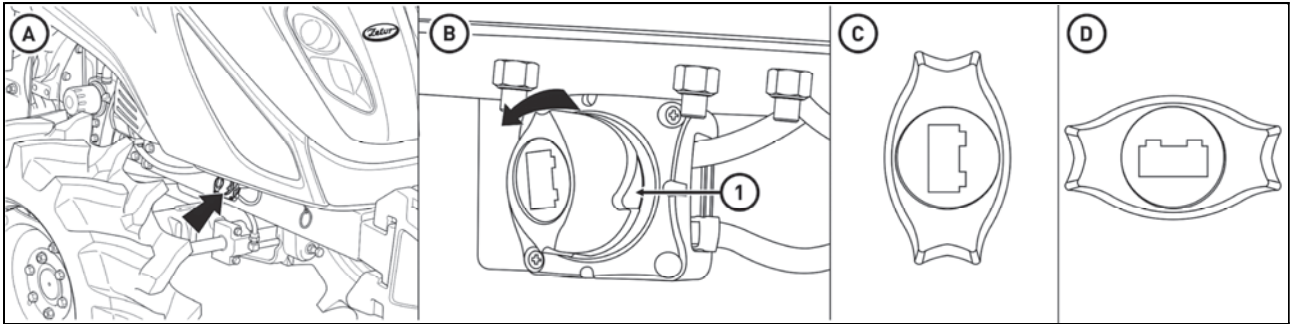
The following pages in this section detail the location and function of various instruments, switches and controls on your tractor. Even if you operate other tractors, you should read through this section of the manual and ensure that you are thoroughly familiar with the location and function of all the features of your new tractor.

Do not start the engine or attempt to drive or operate the tractor until you are fully accustomed to all the controls. It is too late to learn once the tractor is moving.

Particular attention should be paid to the recommendations for running-in to ensure that your tractor will give long life and dependable service for which it was intended.

If in doubt about any aspect of the operation of the tractor consult your ZETOR tractor dealer / distributor.

Battery disconnecter



UCL18NN012

The battery disconnecter is located on the front axle bracket under the right front corner of the hood (A). Turn the battery disconnecter handle in the direction of the arrow (B) to disconnect the battery from the tractor's electrical installation. To connect the battery to the tractor's electrical installation, turn the battery disconnecter handle counterclockwise. Battery connection is indicated by a visible green field (1).

(C) The position of the battery disconnecter handle when the battery is connected.

(D) The position of the battery disconnecter handle when the battery is disconnected.



When the tractor is parked, disconnect the battery using the battery disconnecter (1). If the tractor is parked for a long period of time, it is necessary to recharge the battery at least once a month due to self-discharge.



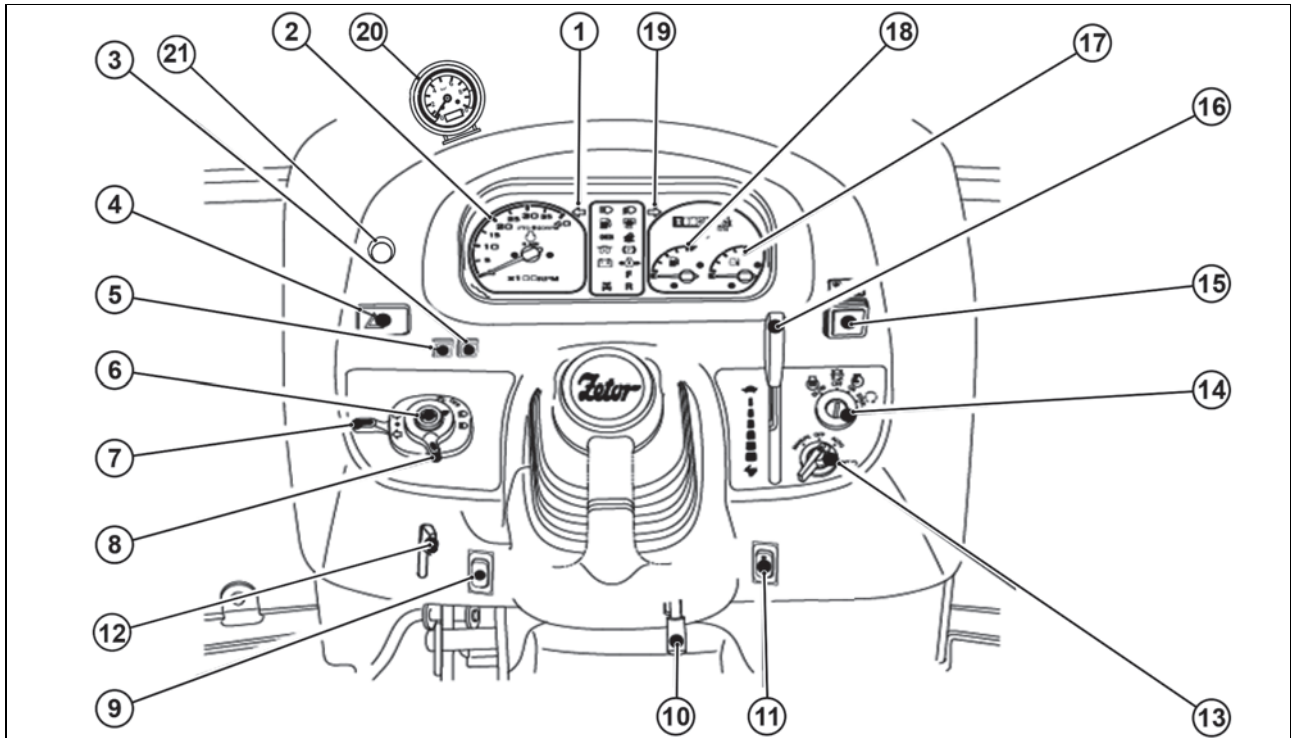
When the engine is switched off, the engine control unit remains active for about 2 minute because of storage of operation data. During this time the supply of current from the accumulator must not be interrupted. Do not disconnect the accumulator before this time expires.



After connecting the battery using the battery disconnecting switch, wait at least 30 seconds before turning on the ignition key.

CONTROLS, INSTRUMENTS & OPERATIONS

Instrument and switches



U18NN010

- 1 - Left Turn Indicator
- 2 - Tachometer
- 3 - Load Sensing Button
- 4 - Warning Lights Switch
- 5 - Cruise Control Button
- 6 - Horn Switch
- 7 - Turn Signal Switch
- 8 - Headlight and Beacon Light Switch
- 9 - Progressivity Setting (Sensitivity Switch)
- 10 - Steering Wheel Adjustment Lever
- 11 - Speed Control of Cruise Control
- 12 - Parking Brake Lever
- 13 - PTO Mode Control
- 14 - Key Switch
- 15 - PTO Switch
- 16 - Hand Throttle Lever
- 17 - Temperature Display
- 18 - Fuel Gauge
- 19 - Left Turn Indicator
- 20 - Air Pressure Gauge, only for tractors equipped with trailer air brakes
- 21 - Temporary Trailer Brake Deactivation Button, only for tractors equipped with trailer air brakes

CONTROLS, INSTRUMENTS & OPERATIONS

Main switch (key switch)

[OFF]- The key can be inserted or removed.

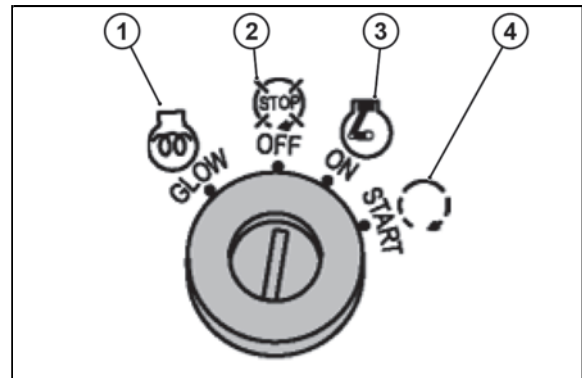
[ON]- The electric circuit is on.

[GLOW] - Glow plugs preheat the combustion chamber.

[START]- The starter motor is engaged.

When the key is released it will return to the ON position.

- 1 - Glow
- 2 - Off
- 3 - On
- 4 - Start



U18N011

Headlights, turn signal lights, beacon and horn switch

Front light switch

High beam and low beam lights are controlled by the main switch

Position 3 - high beam light and beacon light

Position 4 - low beam light and beacon light

Turn signal light switch

Pull down the turn signal light lever to activate the left turn signal light.

Push up the turn signal light lever to activate the right turn signal light.

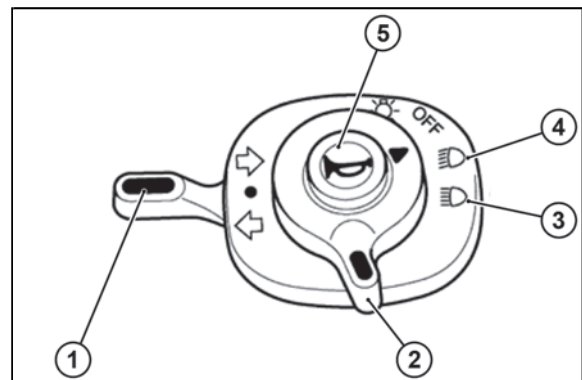
Horn

Press the red button.

Beacon

The beacon is switched on simultaneously when the low beam lights or high beam lights are switched on

- positions 3 and 4

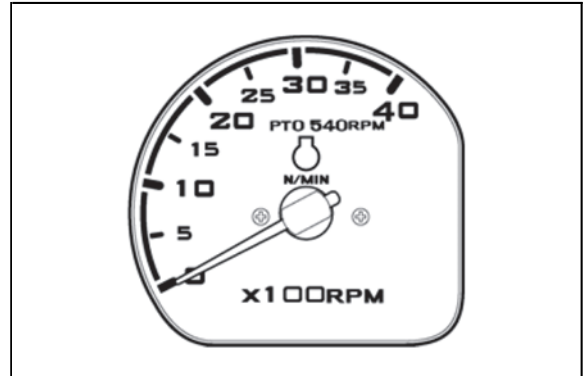


U18N012

CONTROLS, INSTRUMENTS & OPERATIONS

Tachometer

This meter shows the revolutions of the engine and the PTO shafts as well as the travel speed in top gear.

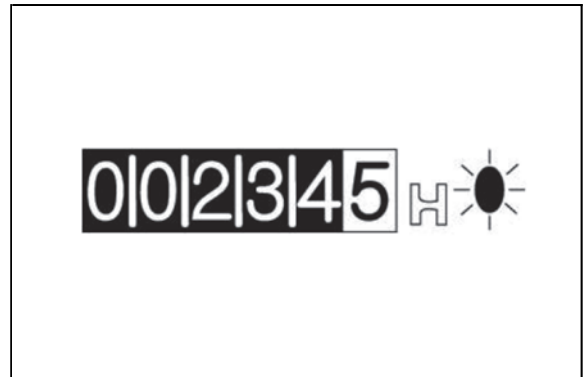


U18N014

Hour meter

The operating hour meter consists of digits where the last digit indicates 1/10 of an hour. It shows the number of operating hours of the tractor.

The indicator light at the bottom of the operating hour meter should flash during operation to indicate that the system is operating properly.



UCL18N013

Fuel gauge and water temperature gauge

Fuel gauge

Shows the amount of fuel in the tank when the ignition switch is ON.

Water temperature gauge

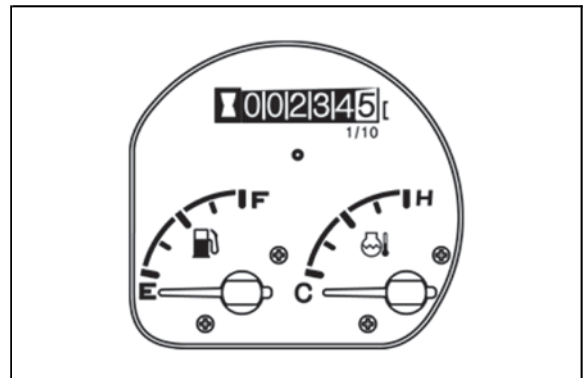
Shows the water temperature with the ignition switch ON.

C is low to normal temperature.

H is high temperature.

If the pointer is in the red H segment the engine is overheating.

Refer this book to rectify the problem.

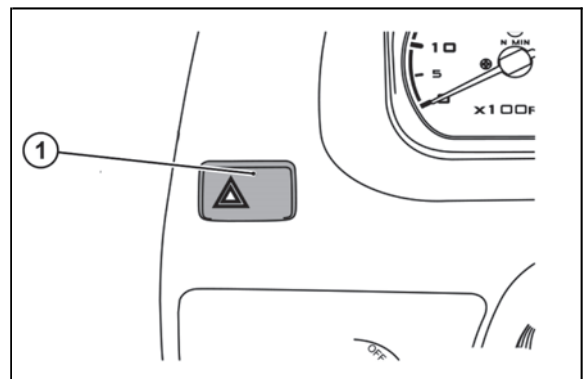


U18N015

Hazard warning signal switch

Push the hazard warning signal once to operate the hazard warning light. (Left and right turn indicators flash). Push the hazard warning light switch again to switch off the hazard warning lights.

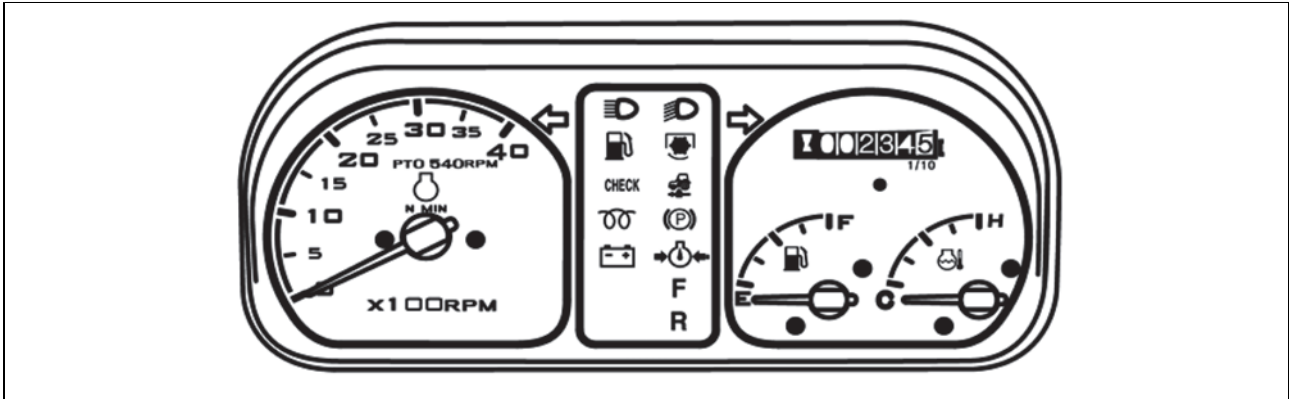
1 - Hazard warning signal S/W



UCL18N015

CONTROLS, INSTRUMENTS & OPERATIONS

Warning lights



U18N017



The **high beam indicator light** comes on on the instrument panel.



The **low beam indicator light** comes on on the instrument panel.



The **parking brake** lights up when the tractor is braked with the manual parking brake.



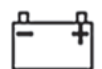
PTO monitor lamp Shows the revolution of PTO.



Fuel Level If it comes on while the engine is running, fill the tank with fuel.



The **oil pressure indicator light** turns off when the engine starts, in case the oil pressure is OK. If it comes on while the engine is running, stop the engine and contact a specialized service.



Charge lamp

This light will go off as soon as the engine starts to run to indicate that the alternator is charging. (Please note, as broken fan belt can cause the light to come on, please stop the engine as overheating can occur if not rectified immediately)



The **glow indicator** light indicates preheating when starting at low temperatures.



Cruise Control Lamp

Will turn on when cruise control is engaged.



The **Forward F indicator light** comes on when the forward travel pedal is depressed. The **Forward R indicator light** comes on when the backward travel pedal is depressed.

The **indicator light** comes on when the start key is in ON position and the safe start conditions are not met.

Conditions for safe start:



1. The brake pedal is depressed.
2. The PTO ON / OFF switch is in the OFF position.

If the light comes on when safe start conditions are met, there is a problem with one of the electrical parts of the machine.

CONTROLS, INSTRUMENTS & OPERATIONS

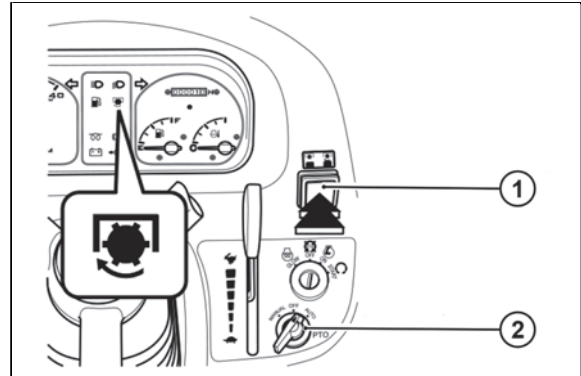
Independent PTO

Your tractor is equipped with 2 Speed rear PTO to suit range of applications and conditions. Use the PTO switch to engage or disengage rear PTO.

If the driver leaves the seat or is out of the driver's seat while the PTO is operating, the PTO indicator lamp flashes and emits an audible signal and the PTO stops operating.

Two switches operate the independent PTO.

- 1 - PTO On-Off S/W
- 2 - PTO Mode S/W



UCL18N017



The **PTO indicator light** on the instrument panel indicates the PTO status.

1. If the indicator light is on: PTO rotates.
2. If the indicator light is off: PTO is off.
3. If the indicator flashes: PTO is not currently in motion, but shall be activated when the clutch pedal is released or the implement is lowered.

1. ON/OFF SWITCH FOR PTO: The **PTO ON / OFF switch** is located on the right side of the steering column and can be easily identified by the built-in red indicator light. When the switch is pressed, the PTO indicator lights up to indicate that the PTO switch and PTO are both in the ON position. If you press the switch again, the light turns off, indicating that the PTO is off.

2. PTO CONTROL SWITCH: This switch is located near the starting key location on the dash panel. There are three positions marked for this switch.

- **OFF** at the center
- **MANUAL** at the left
- **AUTO AT THE RIGHT.**

CONTROLS, INSTRUMENTS & OPERATIONS

The PTO does not rotate when one of the two switches is in the OFF position

The following table explains how the PTO operates in two different positions (Manual & Auto) of the PTO control switch with the PTO ON / OFF switch in the ON position.

PTO ON/OFF Switch	PTO Control Switch	Hydraulic Position Control Lever.	PTO Monitor Lamp on the dash panel	PTO SHAFT
On	Manual Mode	Either raised or lowered	Glows	Rotates
On	Auto Mode	Either raised or lowered	Blinks	Stationary
On	Auto Mode	Raised	Blinks	Stationary
On	Auto Mode	Lowered	Glows	Rotates

- The table above provides information on PTO safety functions. If the indicator light on the instrument panel flashes, this indicates to the operator that the PTO is in the ON position but is not currently rotating temporarily because the implement is lifted.
The PTO starts to rotate immediately when the implement is lowered.
- The operator must observe the warning signal in order to ensure that there are no other persons or bystanders in the area around the tractor, as rotating parts of some implements may accidentally cause injury to persons near the tractor.
- Stopping the PTO when lifting the implement while controlling position shall prevent damage to the implement or PTO.

CONTROLS, INSTRUMENTS & OPERATIONS

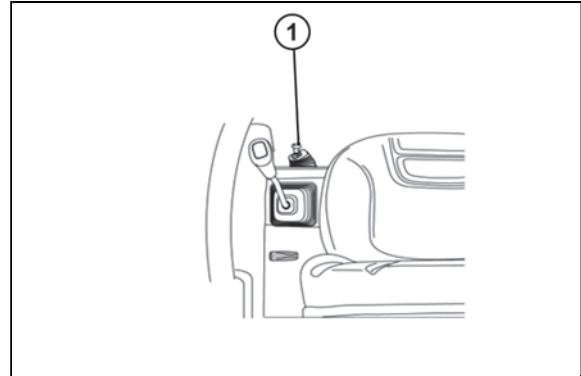
PTO shaft revolutions 540 and 1000 rpm shifting lever

The rear PTO shift lever is located on the left side under the driver's seat and can be moved to the upper position (540 rpm) or to the lower position (1,000 rpm) from the center, neutral position, according to the specification of the attached implement.

In no case shall the specified speeds be exceeded, as this may result in serious damage to the tractor / attached implement.

When the PTO is not in use, the gear shift lever must be placed in the neutral position to prevent accidental lowering.

1 - PTO Shift Lever



U18N032A

Model	Position	PTO (RPM)	Engine (RPM)	Remark
UTILIX HT 45/55	1	540	2,608	
	2	1,000	2,500	



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.



Warning:

1. When working with a rotary implement on hard ground, the PTO switch must be set to the OFF position to prevent the PTO from rotating. If this is not done, the rotating implement blades come into contact with the hard ground under the implement, causing the entire tractor to move. This accident can result in serious injury or even death.
2. When using PTO-driven implements, special precautions must be taken to ensure that no persons or bystanders are in the area around the tractor. Contact with rotating implement blades can result in serious injury. The warning signaled by the PTO flashing indicator light allows the operator to remember that the PTO is in the ON position and will start rotating immediately when the clutch pedal is released or the implement is lowered (or both).
3. The rotational speeds specified by the implement manufacturer must not be exceeded under any circumstances, as this could result in serious damage to the tractor / implement and / or serious injury to bystanders.

CONTROLS, INSTRUMENTS & OPERATIONS

Connecting and disconnecting implement

If the PTO is used, remove the cover (1) from the PTO shaft.

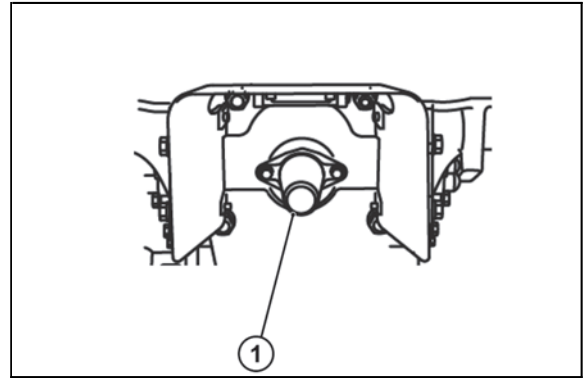
Connect the lower left link, then connect the lower right link using the adjusting handle, if necessary.

Connect the upper link.

Connect the PTO shaft to the tractor and make sure it is properly locked in place.

Adjust the stabilizer bars so that it corresponds to the implement and tighten the retaining nuts.

To disconnect the implement, proceed in the reverse order.



U18N048



Caution: *Do not attach a PTO shaft while the engine is running and ensure all safety shields are in place.*



Caution: *Be especially careful when working with an aggregated implement near other people or vehicles. Take into account the overall width of the unit to prevent traffic accidents.*

CONTROLS, INSTRUMENTS & OPERATIONS

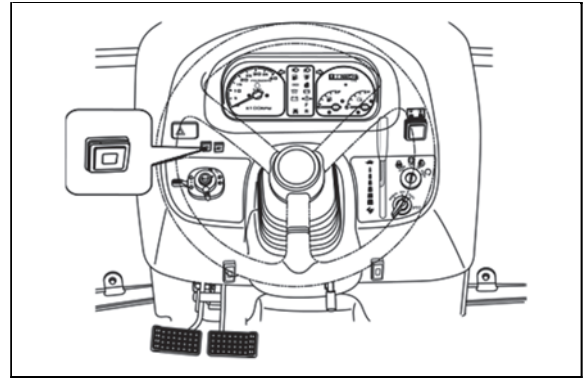
Cruise control button

- **Engaging Cruise Control**

- Depress the forward speed control pedal until the required speed is achieved.
- Press the cruise control button to engage cruise control.
- Release the forward speed control pedal.
- The cruise control is only operational when the machine is traveling forward.

- **Disengaging Cruise Control**

To disengage the cruise control you can either press the cruise control button or depress the brake pedal.



U18N020

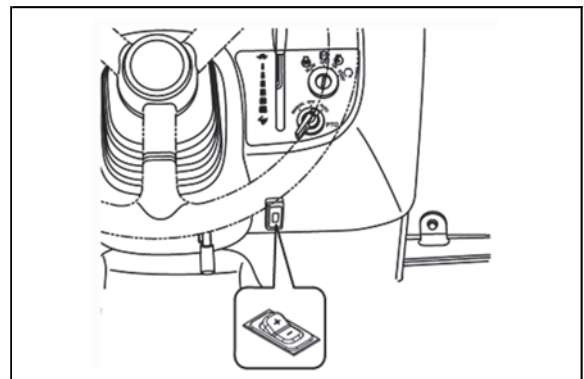
Cruise speed control switch

The cruise control speed can be increased and decreased when the cruise control function is activated.

To increase the cruise control speed by a certain increment, press and release the upper part of the cruise control (+) switch. Press and release again to increase cruise control speed by one more step.

To decrease the speed by a certain increment, press and release the lower part of the cruise control (+) switch. Press and release again to decrease cruise control speed by one more step.

The setting is canceled when the cruise control function is deactivated.



U18N021

Load sensing button

The load sensing function is used to prevent the motor from stopping at high load.

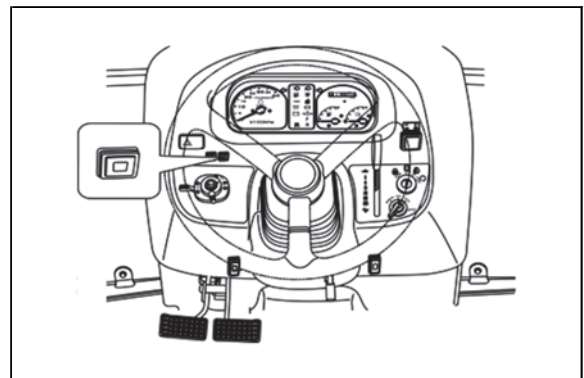
Press the load sensing button to activate the load sensing function.

If the engine speed is less than 2000 rpm, the engine speed shall be 2000 rpm.

If the engine speed is higher than 2000 rpm, the engine speed shall be maintained at this level.

If the engine speed decreases below the set range, the control adjusts the hydrostatic transmission ratio to avoid engine choking. The higher the engine load is, the more engine revolutions and speed are reduced.

Press the button again to deactivate the load sensing function.



U18N022

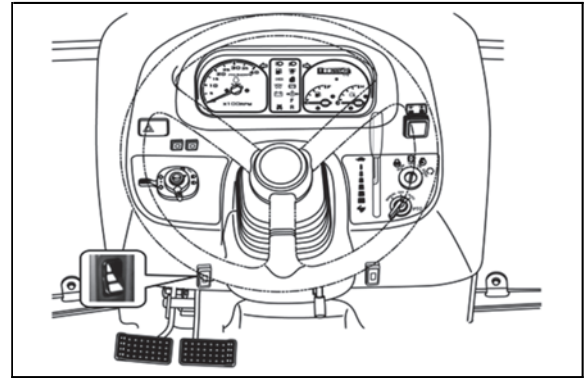
CONTROLS, INSTRUMENTS & OPERATIONS

Mode (sensitivity) switch

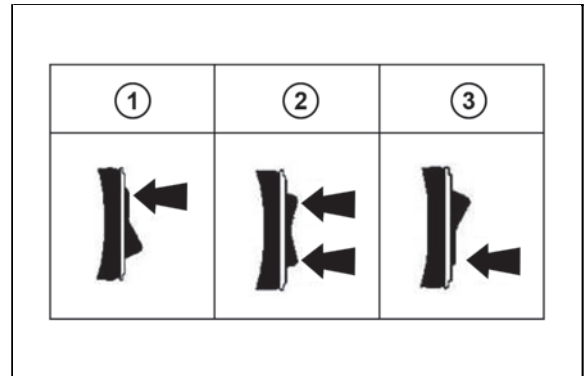
The tractor allows the user to select the response sensitivity in three different modes.

- **Mode 1**
To activate mode 1, fully press the top of the mode switch. This mode provides greater response sensitivity when controlling pedal movement. This results in faster changes of speed or direction. The movement of the tractor may not be smooth in this mode.
- **Mode 2**
To activate mode 2, fully press the top or bottom of the mode switch. This mode provides moderate response sensitivity when controlling pedal movement, which is typical of standard operating conditions.
- **Mode 3**
To activate mode 3, fully press the bottom of the mode switch. This mode provides less aggressive response when controlling pedal movement.

- 1** - Mode 1
2 - Mode 2
3 - Mode 3



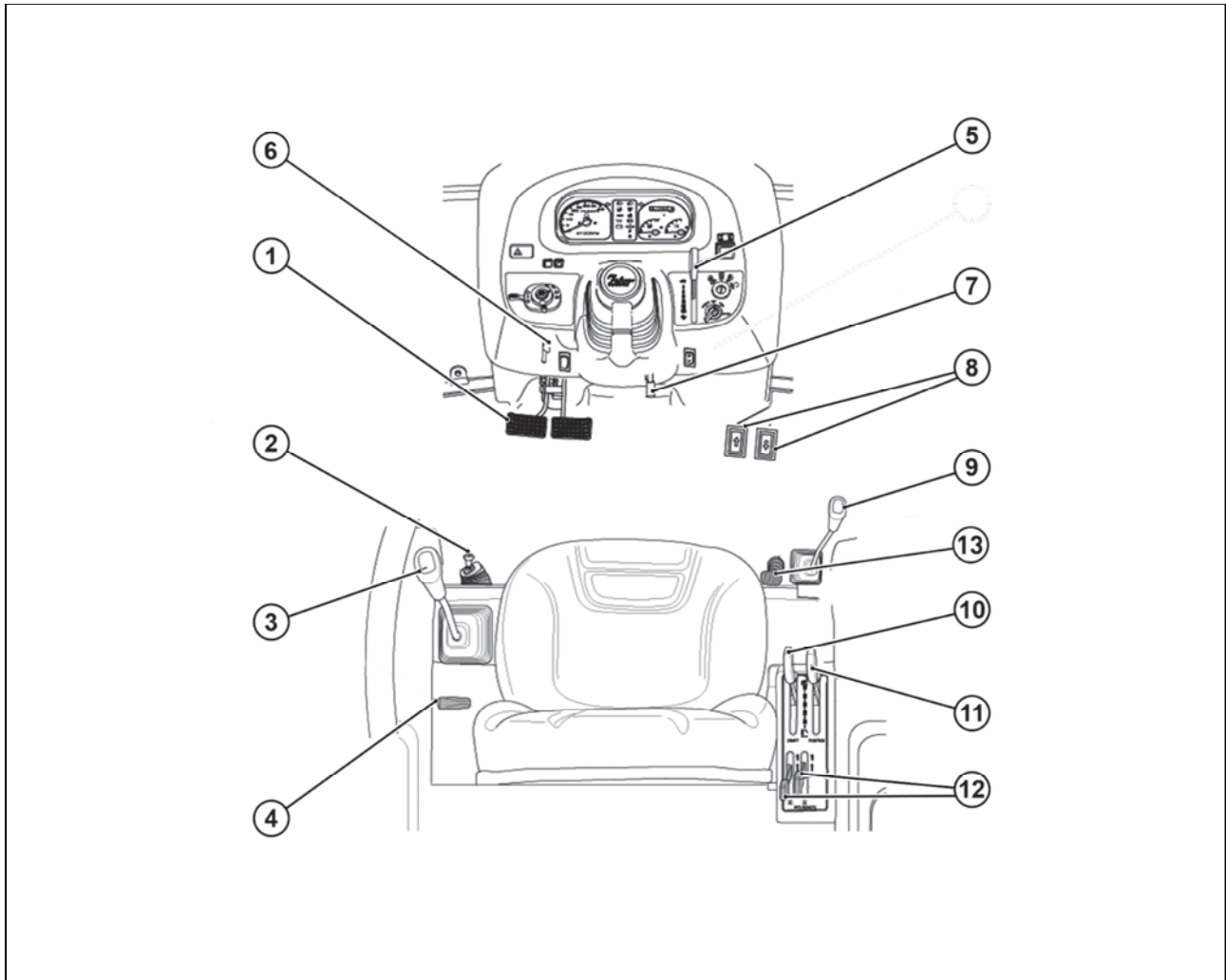
U18N023



U18N024

CONTROLS, INSTRUMENTS & OPERATIONS

Tractor controls



U18NN025

- 1 - Brake Pedal
- 2 - PTO Speed Selection Lever
- 3 - Gearshift Lever
- 4 - 4WD Shift Lever
- 5 - Hand Throttle Lever
- 6 - Parking Brake Lever
- 7 - Steering Wheel Adjustment Lever
- 8 - Forward / Reverse Travel Pedal
- 9 - Front Loader Control Lever
- 10 - Draft Control Lever
- 11 - Position Regulation Lever
- 12 - Sectional Control Lever - External Hydraulic Circuits
- 13 - Differential Lock Pedal

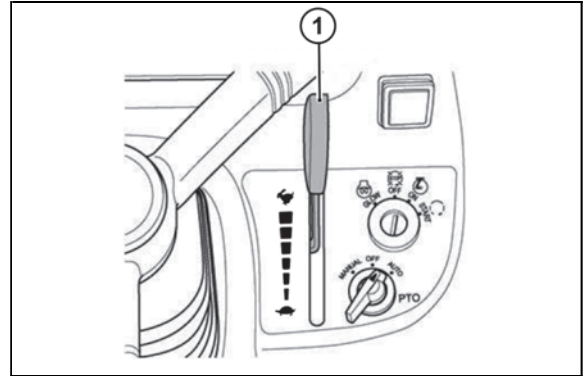
CONTROLS, INSTRUMENTS & OPERATIONS

Hand throttle (Throttle lever)

1 - Throttle Lever

Pulling the hand throttle towards the driver reduces the speed.

Pushing the hand throttle away from the driver increases the speed.



UCL18N020

Speed and direction control pedals

The speed and direction control pedals are located on the right side of the cab floor.

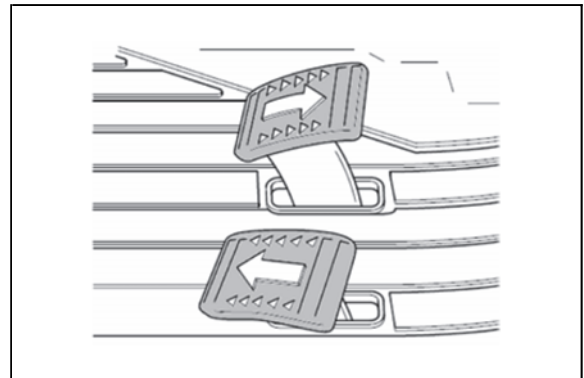
To drive forward, depress the forward speed control pedal.

To reverse, depress the reverse speed control pedal.

Once the speed control pedal is released, it returns to the neutral position and the tractor stops.



The braking effect of a hydrostatic transmission is considerably different from a classical mechanical transmission. When the pedal is released, the speed changes instantly depending on its position; i. e. more intense and immediate deceleration of the machine. It is therefore necessary to avoid violent and reckless handling of the pedals.



U18N027

CONTROLS, INSTRUMENTS & OPERATIONS

Foot brakes

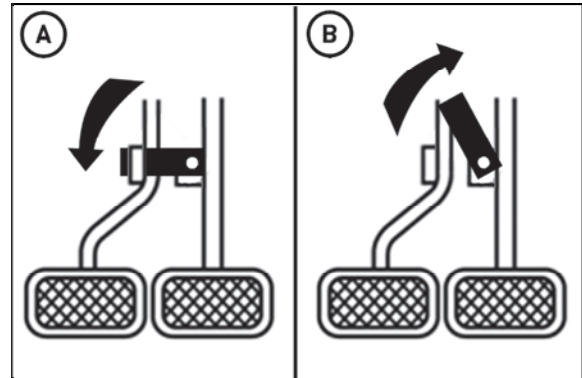
When depressing both pedals connected by a latch, both rear wheels are braked.

When one brake pedal is depressed after the latch is released, only one rear wheel is braked, depending which brake pedal is depressed. The right brake pedal brakes the right rear wheel, the left brake pedal the left rear wheel.

Braking with one brake pedal is used to make the tractor's off-road turns easier. When turning is complete, the brake pedals must be again latched together.

A - Brake pedals connected by a latch

B - Brake pedal latch disconnected



U18NN015



When driving on the road, both pedals must be connected by a latch. Disconnect the right or left wheel brakes only when working off-road and in the field.

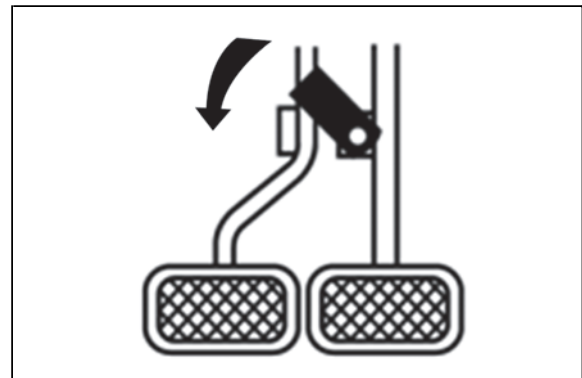
Note: When driving down a steep slope with a trailer or semi-trailer equipped with brakes, the foot brake must be applied from the beginning of the descent!



When braking with one brake pedal, the trailer brakes are not engaged!



Caution: A connecting latch is provided to connect the right and left brake pedals for high speed or road use. In the interest of safety always use it on the road or at high speed as using one side only can cause rollovers. When servicing the tractor ensure that the adjustment on both sides is the same.



U18NN014

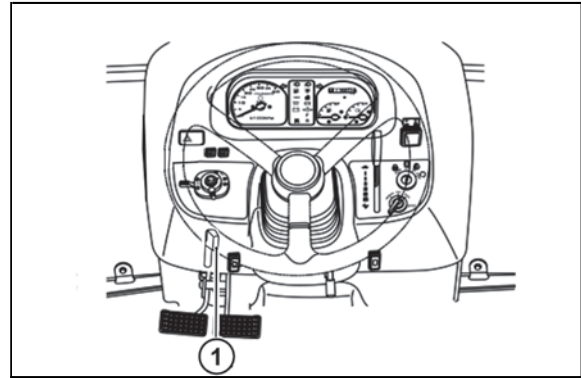
CONTROLS, INSTRUMENTS & OPERATIONS

Parking brake lever

With the connected brake pedals depressed, lift the parking brake lever (1) upwards and release the brake pedals.

The parking brake lever remains lifted and the brake pedals are depressed. This brakes the tractor.

To unbrake the tractor, depress the brake pedals, the parking brake lever (1) shall move to the lower position and the brake pedals shall return to the upper position when released. This unbrakes the tractor.



U18NN022_1



Important: *Traveling with the parking brake on will damage the brakes.*

To avoid personal injury:

- When leaving the tractor, make sure that you have applied the parking brake and switched off the engine.
- When using the brakes:
 - To use the tractor, make sure that the parking brake is released. Improper use of the brakes can damage the transmission.

Air brakes of trailers and semi-trailers

The control of the air brakes of trailers (semi-trailers) and the control of the tractor brakes is designed in such a way that the braking effect of both vehicles is synchronized.

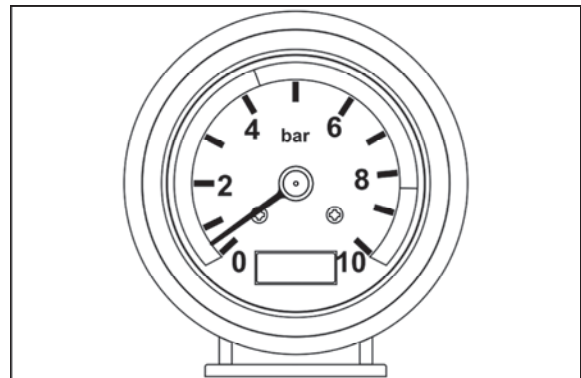
Air pressure indication

The air pressure in the trailer or semi-trailer air brakes is indicated by an air pressure gauge located on the instrument panel.

If the air pressure gauge needle is in the red field, the air pressure in the trailer or semi-trailer air brake system is low.

If the air pressure gauge needle is in the green field, the value of the air pressure in the trailer or semi-trailer air brake system is correct.

If the air pressure gauge needle is in the yellow field, the air pressure in the trailer or semi-trailer air brake system is high, this is a malfunction, contact a service immediately.



UCL18NN016

When driving a tractor with a trailer or semi-trailer with air brakes, the air pressure gauge needle must be in the green field.



If the pressure gauge needle of a tractor with attached trailer or semi-trailer with air brakes drops into the red field, the tractor with trailer or semi-trailer with air brakes must not continue to travel. It is necessary to stop the unit and wait until the air pressure increases and the pressure gauge needle is within the green field of the pressure gauge.

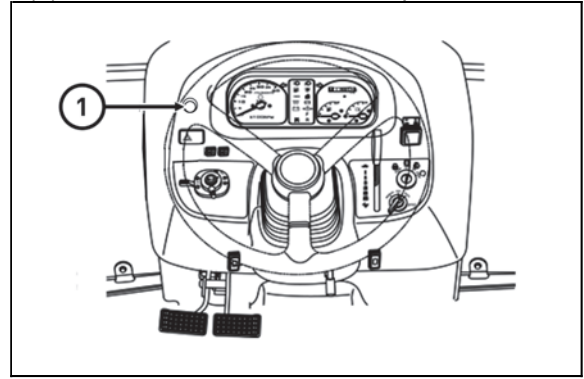
CONTROLS, INSTRUMENTS & OPERATIONS

The button for temporary deactivation of brakes of the trailer or semi-trailer

The temporary trailer or semi-trailer brake deactivation button (1) is located on the dashboard panel.

The button for temporary deactivation of brakes of the trailer or semi-trailer can be used by the operator of the tractor with the connected trailer or semi-trailer to make sure that the effect of the parking braking system of the tractor with the connected trailer or semi-trailer when the tractor is braked with the hand brake is sufficient.

If there is a tractor with the connected trailer or semi-trailer which is braked with the hand brake and the key in the switch box is in the position (I), and we press the button for temporary deactivation of brakes of the trailer or semi-trailer, the trailer or semi-trailer is deactivated for the time when the button is pressed (the trailer or semi-trailer does not brake). When the button for temporary deactivation of brakes of the trailer or semi-trailer is released, the brakes of the trailer or semi-trailer are activated (the trailer or semi-trailer brakes).



Prior to using the button for temporary deactivation of brakes of the trailer or semi-trailer, it is always necessary to provide sufficient space in front of the tractor and behind the connected trailer or semi-trailer where no obstacles or persons will be present for the case that the effect of the parking braking will not be sufficient and the combination of vehicles moves.



Only the air brakes are deactivated by the button for temporary deactivation of brakes of the trailer or semi-trailer.

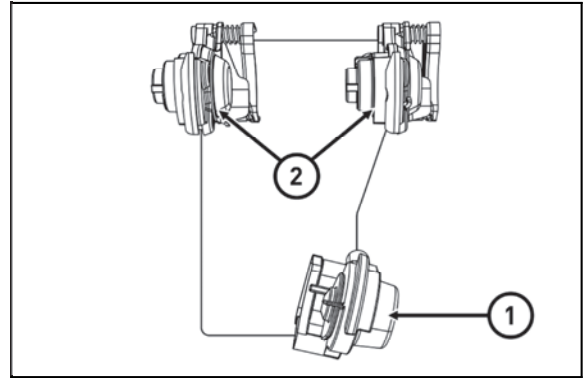
CONTROLS, INSTRUMENTS & OPERATIONS

One-hose and two-hose brakes

1. clutch head of one-hose brakes
2. clutch heads of two-hose brakes



Clutch heads after disconnection or without a connected trailer, articulated trailer must be closed by a valve.



UCL18NN018

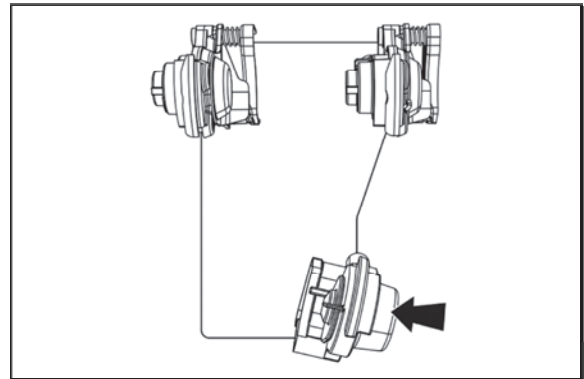
One-hose brakes

The coupling head of a single-hose air brake has a flap marked black.

The coupling head marked black serves both for filling and controlling for the single-hose air brake system of the trailer or semi-trailer.



The maximum permitted speed of the unit is given by the maximum permitted speed of the slower unit vehicle.



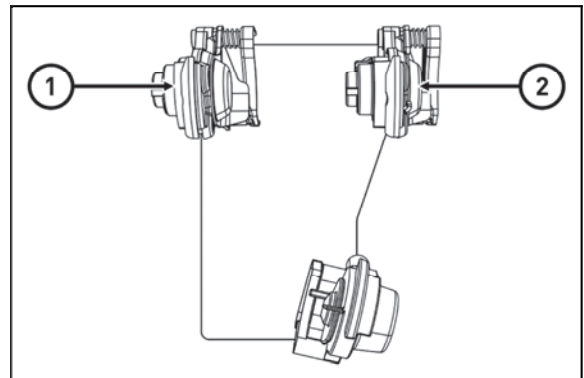
UCL18NN019

Two-hose brakes

The left-hand flap (1) is marked yellow (braking line), the right-hand flap (2) is red (filling line).



The maximum permitted speed of the unit is given by the maximum permitted speed of the slower unit vehicle .



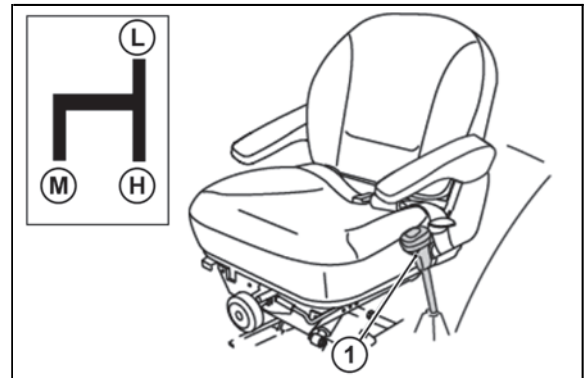
UCL18NN020

CONTROLS, INSTRUMENTS & OPERATIONS

Sub gear lever (Linear shift lever)

1 - Sub gear lever

H	highest gear (fastest)
M	medium gear
L	lowest gear (slowest)

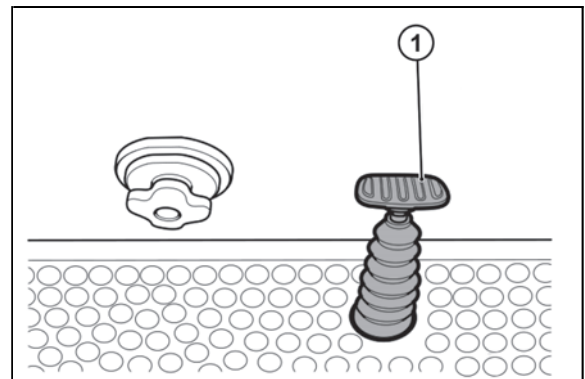


U18N029

Diff-lock pedal

1 - Diff-lock pedal

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.



UCL18N026



Danger: 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 engine speeds when turning on the differential lock. If the differential lock is not released after the foot is removed from the differential lock pedal, apply the left or right brake alternately until it is disconnected.



Caution: Never use the diff lock at high speed or on the road as this can cause roll over and injury.

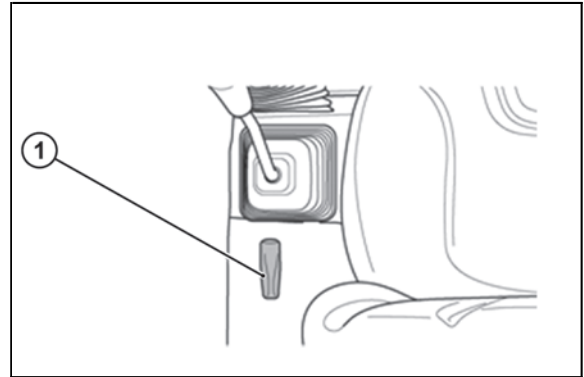
CONTROLS, INSTRUMENTS & OPERATIONS

Front Axle Drive Lever

Using front-wheel drive improves passability in difficult terrain and the traction of the tractor.

1 - Front Axle Drive Lever

In the ON position the front axle drive is connected and in the OFF position the front axle drive is disconnected. Activate and deactivate the front axle drive when driving straight at low engine speeds.



U18N031



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

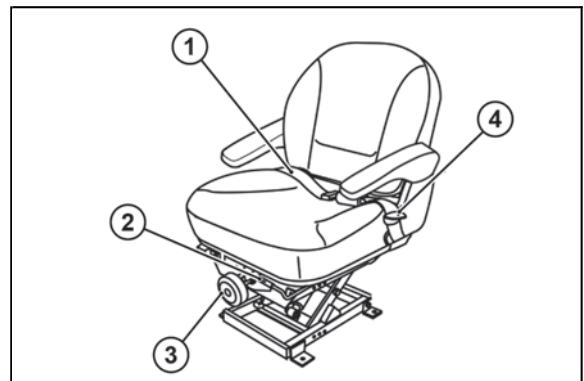


Important: *Always use the clutch when shifting the front axle drive.*

Driver's seat

- 1 - Seat belt
- 2 - Forward / backward adjustment lever
- 3 - Knob for weight adjustment
- 4 - Seat back angle adjustment lever

To adjust the seat backwards and forwards lift the lever at the front of the seat and set it to the desired position.



UCL18N027

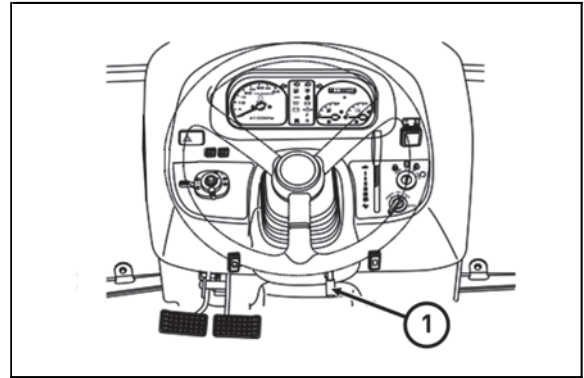


Caution: *Check whether the seat properly locked in its position before driving the tractor.*

CONTROLS, INSTRUMENTS & OPERATIONS

Tilt lever

1 - Tilt lever



U18NN028

To adjust the inclination of the steering wheel with a 3 stages and set it to the desired position.



Danger: *Ensure that the tilt pedal has locked before moving the tractor.*

CONTROLS, INSTRUMENTS & OPERATIONS

Operating the hydraulics

The hydraulics are powered with an engine driven hydraulic pump and controlled with a position control lever mounted beside the driver.



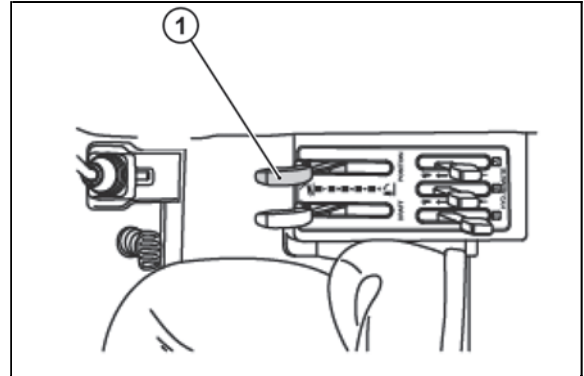
Danger: *When working with the three-point hitch, it is necessary to stay away from the radius of lift arms and all connected equipment. This eliminates the risk of injury in case of improper handling.*

Position control

1 - Position Regulation Lever

The implements can be raised and lowered using the position regulation lever and can be stopped at any position by stopping the lever shift.

To ensure a constant working depth, an adjustable stop can be used to ensure that the implement always returns to the same depth.



U18N033

To raise the implements: Pull the lever backwards

To lower the implement: Push the lever forwards.



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.*

Internal hydraulic circuit control lever

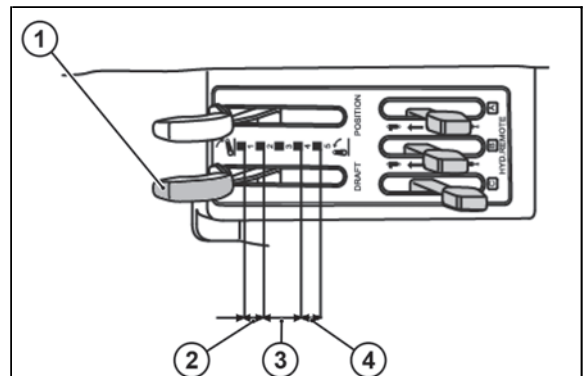
1 - Draft Control Lever

2 - Floating position

3 - Draft Control Range

4 - Lifting

For precise work, the soil tillage implement can be adjusted using draft control. When the lever is moved forward, the depth increases. When the lever is pulled back, the depth decreases.



U18N034

CONTROLS, INSTRUMENTS & OPERATIONS

Lowering speed control knob for the 3 point hitch

1 - Three-Point Hitch Lowering Speed Control

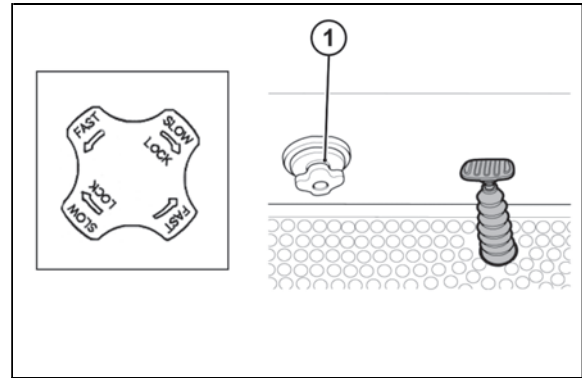
This knob controls the downward speed of the hydraulics three point linkage and positioned at the front of the driver's seat.

To slow the downward speed - turn the knob clockwise.

To increase the downward speed, turn the knob anticlockwise.

To lock the knob clockwise.

Do not over tighten the knob.



U18N035

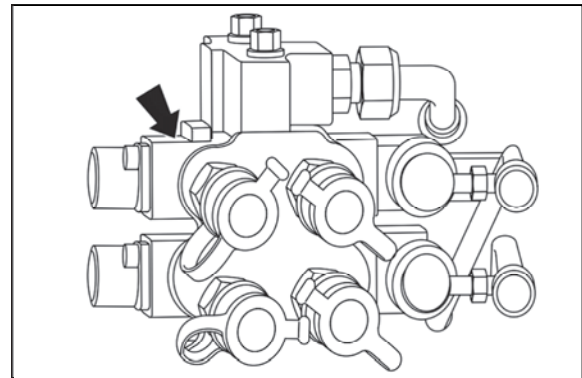


Caution: *Always set the knob to lock when*

1. ***Traveling on the road***
2. ***Replacing tires or blades on an implement.***
3. ***Making adjustments to an implement. Sudden dropping of an implement due to hydraulic problems can cause serious injury or death.***

Outer hydraulic circuit

It supplies pressure oil for hydraulic devices on outer drives of hydraulics ended with couplers. Coupler sockets with 12.5 mm bore are in accordance with the international recommendation of ISO.

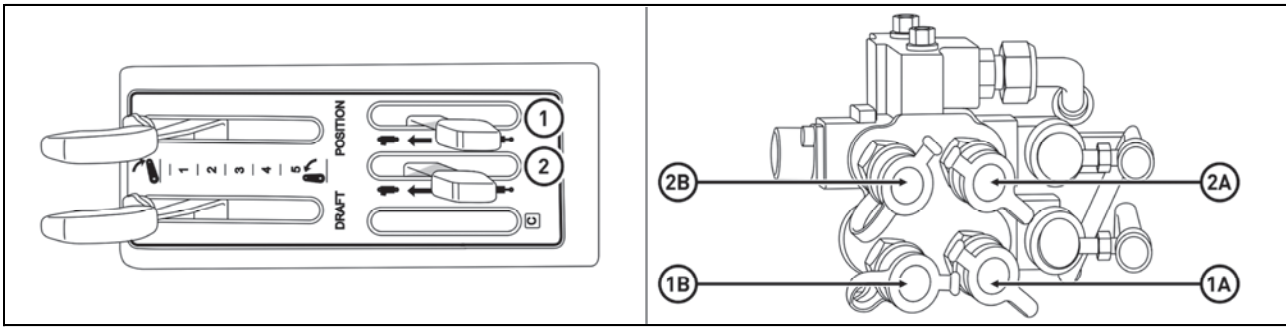


UCL18NN028

CONTROLS, INSTRUMENTS & OPERATIONS

Outer hydraulic circuit controls

The SCVs quick couplers are operated by levers (1) and (2) located on the panel on the right side of the driver's seat.



UCL18NN029

By moving the lever (1) forward, pressure oil is supplied to the quick coupler (1A).
By moving the lever (1) backwards, pressure oil is supplied to the quick coupler (1B).
By moving the lever (2) forward, pressure oil is supplied to the quick coupler (2A).
By moving the lever (2) backwards, pressure oil is supplied to the quick coupler (2B).

Important:

As soon as the implement operated by the pressure oil from the quick couplers reaches the end of the stroke, return the lever to the middle (neutral) position, when there is no oil pressure in the quick couplers; otherwise the oil will flow through the relief valve. When the oil is pushed through the relief valve for a longer period of time, oil becomes overheated. When using the tractor hydraulic system to drive the front loader, do not use the SCVs and the loader at the same time.

Remote hydraulic control valve coupler connecting and disconnecting



When connecting and disconnecting the quick-couplers pay increased attention with regard to the residual oil that remains in the socket or on the plug of the quick-coupler. For environmental reasons after every disconnection of quick-couplers this residual oil must be removed with any textile material.

Connection

- 1) Do not forget to stop the engine before connecting the implement.
- 2) Move the lever of the double-acting valve forward and backward 4 to 5 times to release the pressure in the tractor's hydraulic lines. Otherwise it may be difficult to attach the couplers and hydraulic fluid may splash out of the hoses and strike the eyes when coupling.
- 3) Remove any dirt around the couplers. If dirt enters the hydraulic parts, the system may fail.
- 4) Open the dustproof clutch cover on the tractor and connect the implement coupler. You should hear a click when the coupler is engaged.
- 5) Pull the hydraulic hose to check that the couplers are correctly connected.
- 6) Start the engine and check for operation and leaks.

Disconnection

- 1) Do not forget to stop the engine before disconnecting the implement.
- 2) Relieve the residual pressure in the hydraulic hoses of the machine and the tractor by moving the lever of the double-acting valve 4 to 5 times backwards and forwards.
- 3) Remove any dirt around the quick couplers.
- 4) Keep the implement unloaded by removing all load (e.g. by lowering or placing the implement on the mat). If the hose is disconnected when the implement is loaded, it will be difficult to reconnect it in the future.
- 5) Disconnect the quick couplers by pulling them backwards.
- 6) Close the dustproof cover of the quick couplers of the tractor. Cover the quick coupler of the disconnected implement so that no dirt can penetrate.



Warning:

- **Never connect or disconnect the implement hydraulic hose while the pressure in it is not released or the engine is running. It is hard to connect and disconnect the hose and hydraulic fluid can be sprayed from the hose, and get into your eyes or skin.**
- **Stop the engine and wear protective glasses and gloves before work.**

CONTROLS, INSTRUMENTS & OPERATIONS

Joystick lever

To control the front loader and the front three-point hitch, the joystick lever is used. It allows to control the lifting, lowering and unloading of the front loader with one lever.

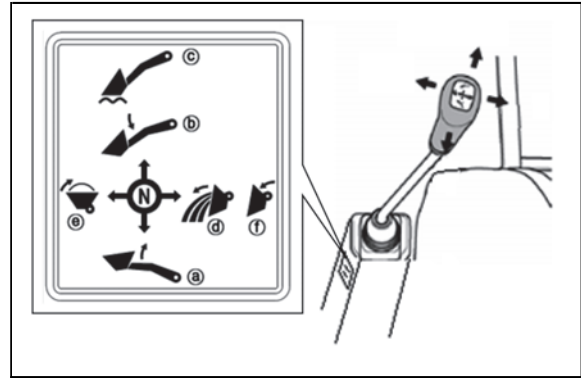
To lift the front loader: Pull the lever backwards.

To lower the front loader: Push the lever forwards.

To roll back the adapter: Push the lever to the left.

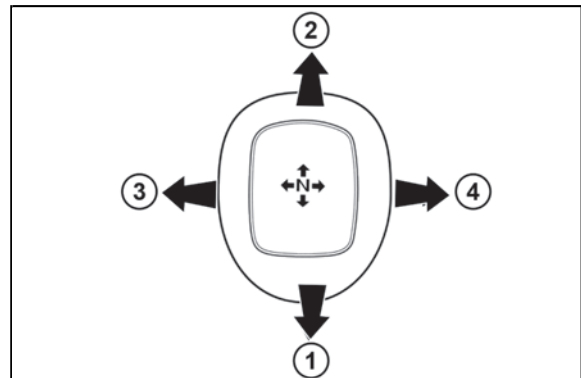
To dump (unload) the adapter: Push the lever to the right.

To control the third loader function, the button located on the joystick head is used.



U18N038

1. Lifting of the front loader boom
2. Lowering of the front loader boom
3. Rolling the front loader adapter back
4. Dumping the front loader adapter



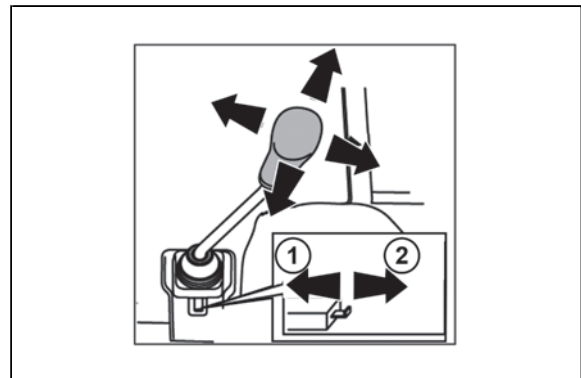
UCL18N035

NOTE: The joystick can also be used for other applications if the front loader is not attached. 3rd function of the loader is controlled by the button on the joystick head.

Safety implement for joystick lever

- 1 - Lock
- 2 - Unlock

This simple **Safety** locking system can lock the joystick by pushing the Button and unlocked by pulling.



U18N040



Warning:

Hydraulic fluid escaping under pressure can have enough force to penetrate the skin.

Hydraulic fluid may also infect a minor cut or opening in the skin.

If injured by escaping fluid. See a doctor at once.

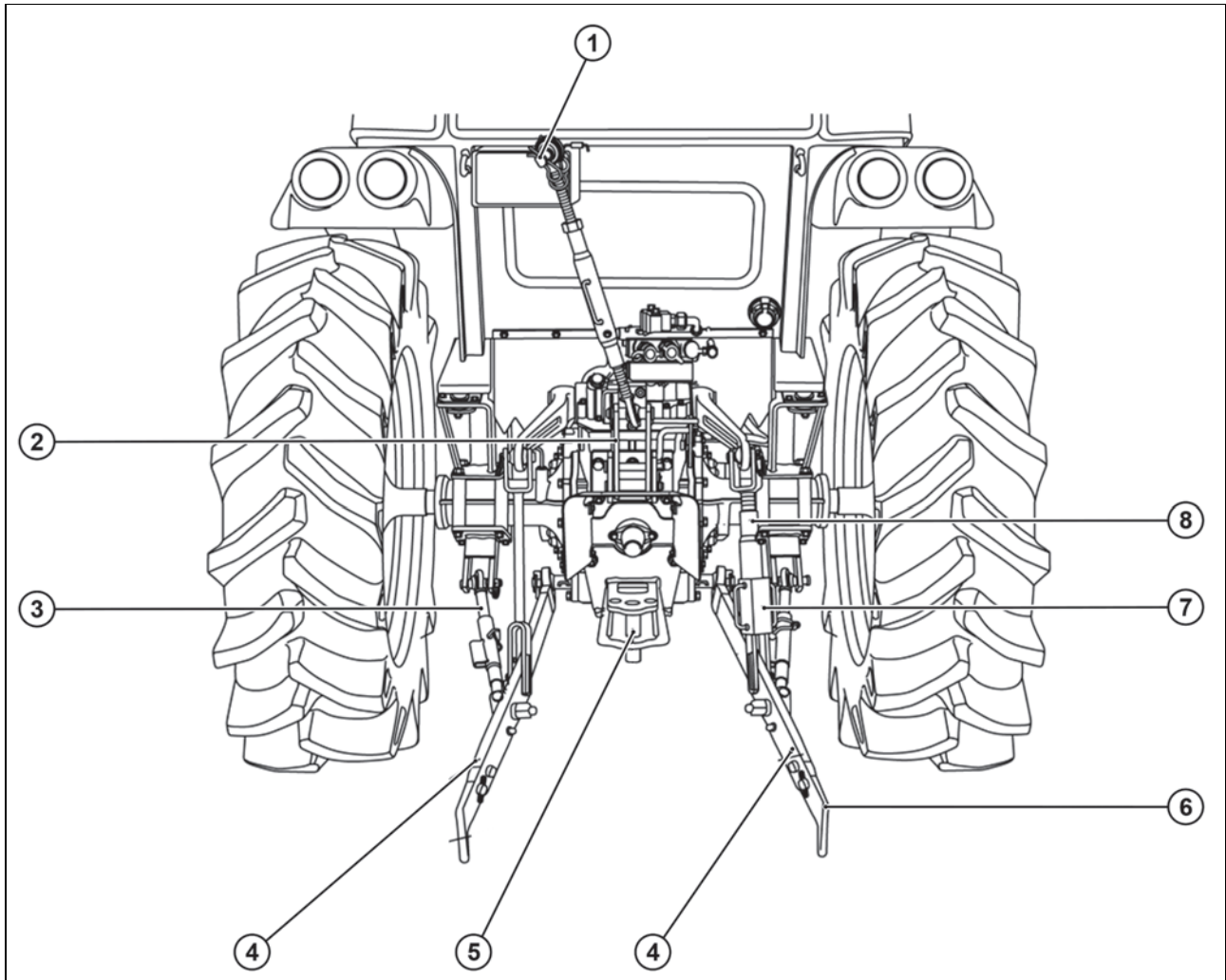
Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system.

Release all pressure before disconnecting the lines or performing other work on the hydraulic system.

To find a leak under pressure use a small piece of cardboard or wood. Never use hands.

CONTROLS, INSTRUMENTS & OPERATIONS

Rear three-point hitch



U18N041

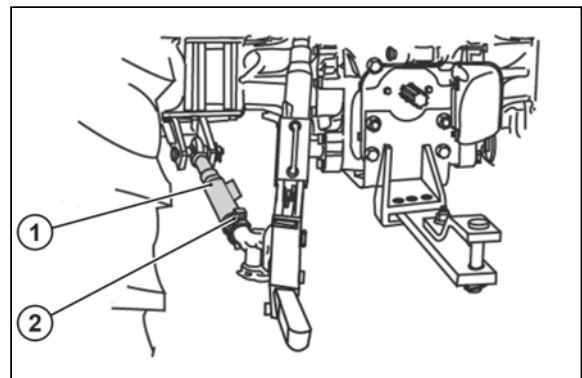
- 1 - Upper Link
- 2 - Link Bracket
- 3 - Stabilizer bar
- 4 - Extendable Type of Lower Link
- 5 - Lower Swinging Hitch
- 6 - Lower Link
- 7 - Length Adjustment Handle of the Vertical Link
- 8 - Vertical Link

Adjustment of the stabilizer bars

The stabilizer bars are designed to limit or prevent lateral movement of the implement.

No clearance is permitted when transporting implements and when working on slopes, with rollers, mowers, seeders, drills and similar implements (**position 1**). However, a slight clearance (**position 2**) is necessary when working with plows, harrows, excavators, cultivators, etc., especially when working with draft control.

The length of the stabilizer bars is adjusted after removal of the pin by turning the tensioner through which the threaded plugs are connected.



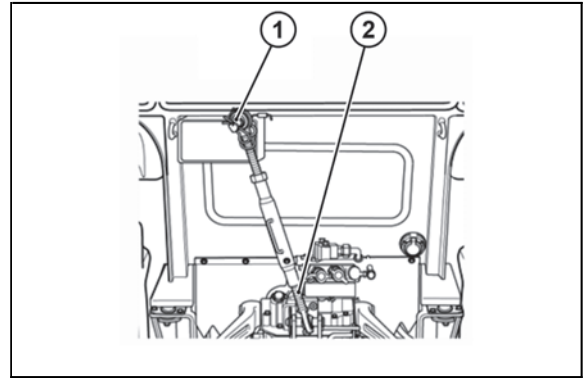
U18N042

CONTROLS, INSTRUMENTS & OPERATIONS

Adjustment of the top link

- 1 - Upper Link
- 2 - Length Adjustment Handle of the Upper Link

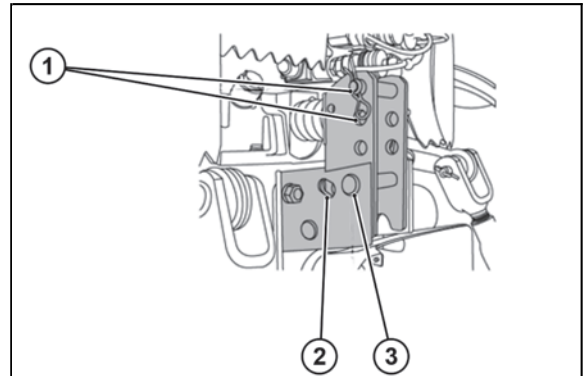
Extending or shortening the upper link changes the angle of the implement.



U18N043

1 - Position of Top Link

- 1) For general implement: Use the Pin to **Position 3** point.
- 2) For Draft control: Use the Pin to **Position 2** point.

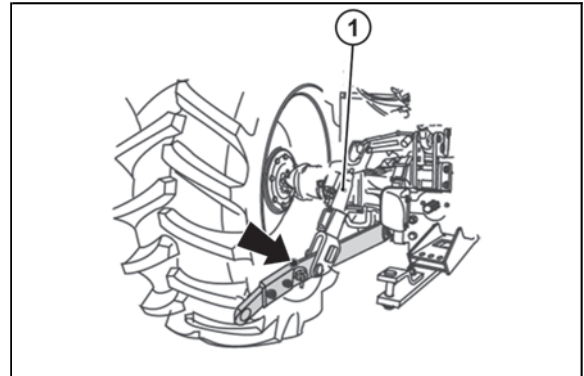


U18N044

Adjustment of the lower links of the three-point hitch

1 - Vertical link

Adjustment is made using the adjustment handle of the right vertical link. Turn the handle clockwise to retract and turn the handle counterclockwise to extend. After proper adjustment, secure the handle against spontaneous rotation.



U18N045

Retraction of the lower link (if it is the extendable type)

Push the point area and pull the end of the lower link to adjust the length of lower link.



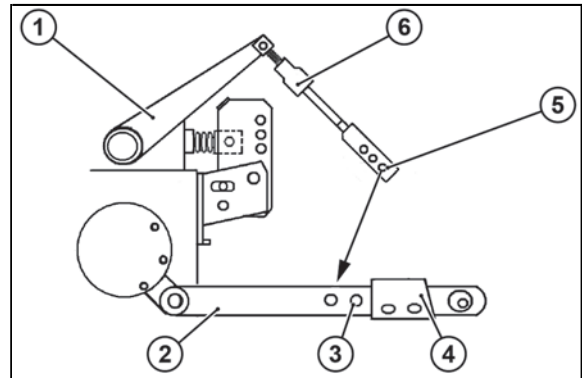
Danger: Only use drawbar to tow and keep the 3 point linkage in raised position when toeing with the drawbar. Position can create unbalance causing the tractor to roll-over & result the death or serious injury.

CONTROLS, INSTRUMENTS & OPERATIONS

Adjustment of the lift link on the lower link

- 1 - Lifting Arm
- 2 - Lower Link
- 3 - Holes for Stabilizer Bar
- 4 - Extendable Type of Lower Link
- 5 - Position Holes of the Vertical Link
- 6 - Vertical link

For various applications, the lifting height of the lower links can be adjusted by adjusting the pins in the holes of the vertical links.

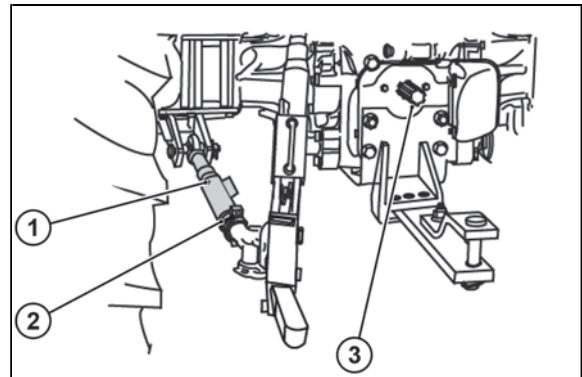


U18N046

Mounting implement

- 1 - Length Control Handle of the Stabilizer Bar
- 2 - Connection Pin of the Stabilizer Bar and the Lower Link
- 3 - PTO

Adjust the appropriate length using the side links so that the setting is suitable for the implement being used and secure it with the lock nut.
If the PTO is used, attach it to the tractor and make sure it is locked in its position.
Use the reverse procedure to remove the implement.



U18N047



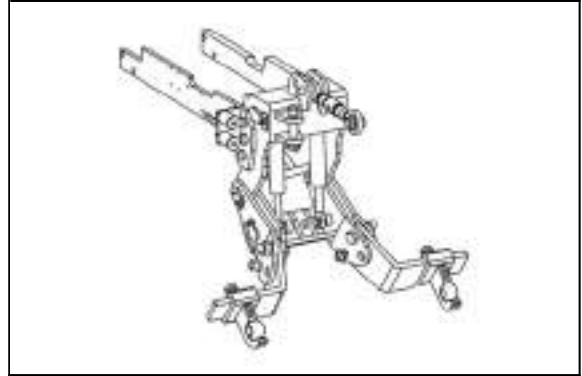
Caution:

**When driving on public or agricultural roads, connect the two brake pedals and ensure that the weight of all the aggregated implements is distributed and the unit remains balanced.
At the same time, monitor the width of the vehicle to avoid endangering other road users. If the tractor is equipped with warning lights or beacons, use them.
Strictly observe local traffic rules.**

CONTROLS, INSTRUMENTS & OPERATIONS

*Front three-point hitch

It is used for attachment of front mounted implements and tools with hitch points of category I. according to ISO.



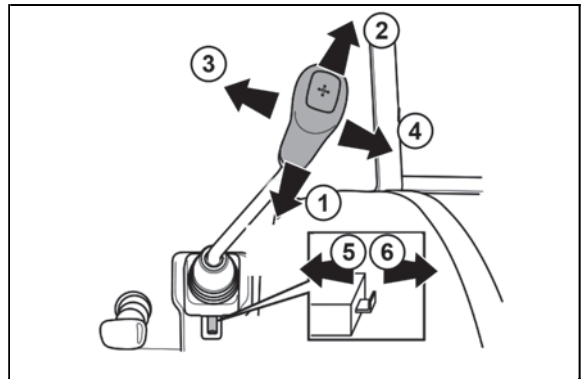
UCL18NN005

Controlling front three-point hitch

The hitch is equipped with two hydraulic cylinders. Lifting and lowering is performed by the joystick lever located on the right side of the driver's seat.

- 1 - Lifting of Front Three-Point Hitch Arms
- 2 - Lowering of Front Three-Point Hitch Arms
- 3, 4 - Oil pressure release to the quick couplers of the SCV located on the front three-point hitch
- 5 - Joystick lever is locked
- 6 - Joystick lever is unlocked

The button on the joystick head is not functional in this case.



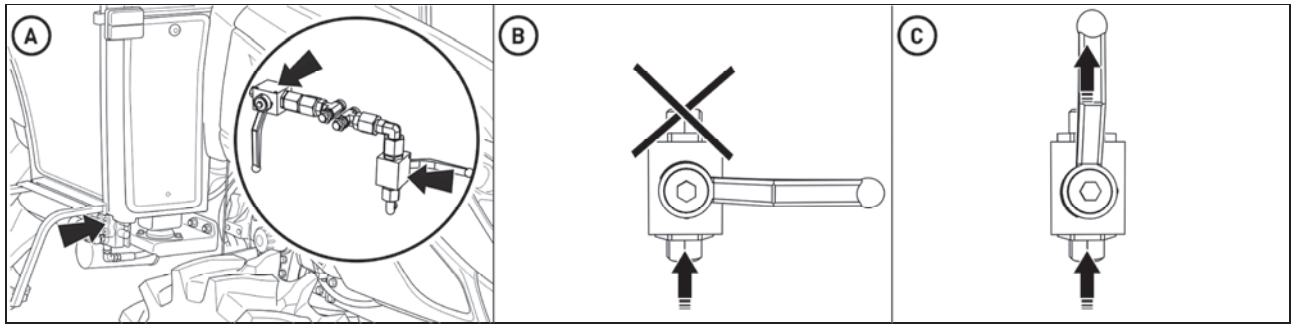
UCL18N036



After lowering or lifting the front three-point hitch arms to the required position, lock the joystick lever with the lock (5) to prevent it from moving when accidentally leaning against the joystick lever.

CONTROLS, INSTRUMENTS & OPERATIONS

Hydraulic lock of the front three-point hitch



UCL18NN004

Hydraulic locking of the front three-point hitch is performed in any position of the hydraulic cylinders by two valves located on the right side of the tractor under the cab, in the area of the right footrest (A).

To close the valves (lock the movement of the arms), move the lever to the position shown in figure (B). To open the valves (unlock the movement of the arms), move the lever to the position shown in figure (C).



The locking or unlocking of the arm movement must always be performed on both valves. It is forbidden to have one valve open and the other closed during the operation of the tractor.



If the front three-point hitch is not used, both valves must be closed.



When transporting mounted implements, always lock the hitch in the raised position hydraulically, with valves located on the right side of the tractor under the cab.

This hydraulic lock is recommended even if no equipment is connected to the three-point hitch.

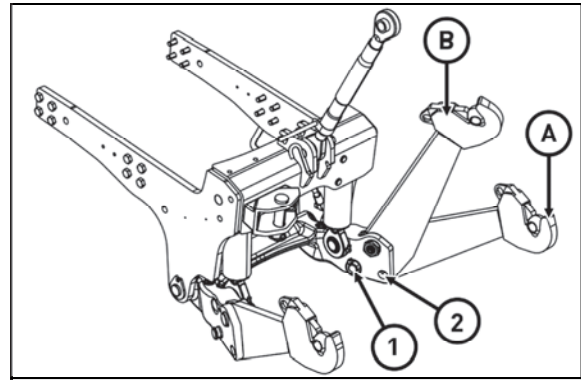
CONTROLS, INSTRUMENTS & OPERATIONS

Working and transport position of the front three-point hitch

A	Working position of the front three-point hitch
B	Transport position of the front three-point hitch

Changing the position of the draw-bars of the front three-point hitch:

1. Release and remove the pin (1) from the opening.
2. Lift the arm from position (A) to position (B).
3. Lock the arm by inserting the pin (2) in the opening (2) and secure the pin.



PCLPN062



Only insert the pin in the openings, never check whether the opening is free with your fingers!

Driving with agricultural machines attached to the front three-point hitch



The maximum permissible speed of the tractor with agricultural machines attached to the front three-point hitch is 15 km.h⁻¹. If no implement or weight is attached to the front three-point hitch, we recommend you to lift the lower lifting draw-bars to the transport position.

Towing equipment

Maximum permissible load of the hitch

Hitch type	Maximum draft force (dynamic load)	Maximum permissible vertical load
Lower hitch	29,4 kN	500 kg
Multi-level hitch attachment tail piece	42,8 kN	1,200 kg



Warning: All implements mounted on the tractor must be firmly attached and must be in accordance with the implement manufacturer's instructions. Use only authorized devices.



Warning: The front towing hitch should be used for emergency trailer towing or for towing the tractor in the yard or in an authorised service centre.



Caution: Never transport partially attached implements, trailers or agricultural machines by attaching them to the upper link of the three-point hitch. This could cause the tractor to get stuck or turned over.



Warning: When towing, always secure the hitch pin with a suitable safety pin with a safety clip to prevent the hitch pin from being pulled out spontaneously. The safety pin must always be attached to the hitch.



Warning: The maximum permissible hitch load (horizontal and vertical), the maximum permissible hitch height for road. Use and the maximum trailed load are indicated in the tractor registration document.

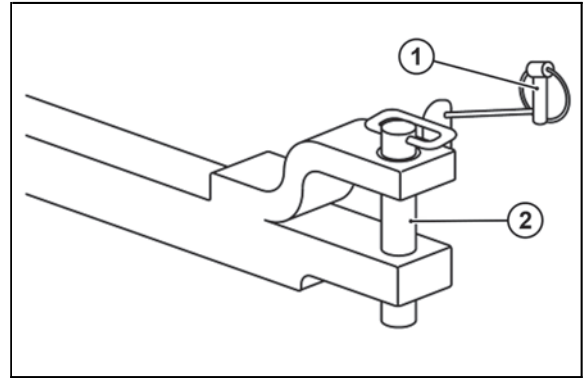


Caution: Do not allow another person to ride on the drawbars or the lower links when the tractor is in motion.

CONTROLS, INSTRUMENTS & OPERATIONS

Lower hitch

- 1 - Lock pin
- 2 - Pin



U18N050

Connection and disconnection of implements

To connect implements in the lower hitch, proceed as follows

- Remove the locking pin 1
- Remove the pin 2
- Slowly reverse the tractor up to the implement
- Insert pin 2
- Secure the locking pin 1

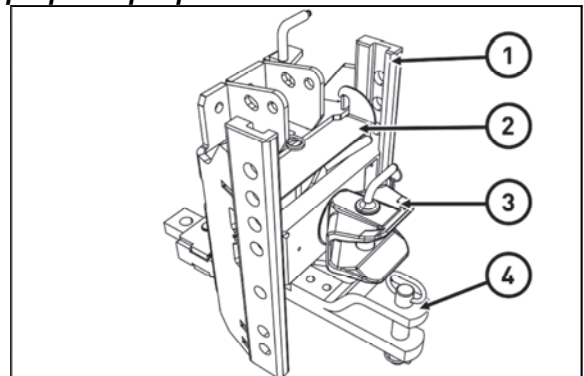
Multistage adjustable suspension

Serves for connecting double axle or lighter single-axle trailers. Guidance nozzle is vertically adjustable. When working with various agricultural machines it is necessary to adjust the suspension vertically or demount where necessary.



All hitch pins must always be secured with the appropriate pin protections.

- 1. Multi-Level Hitch Console
- 2. Rear PTO Cover
- 3. Multi-Level Hitch Attachment Tail Piece
- 4. Lower Hitch



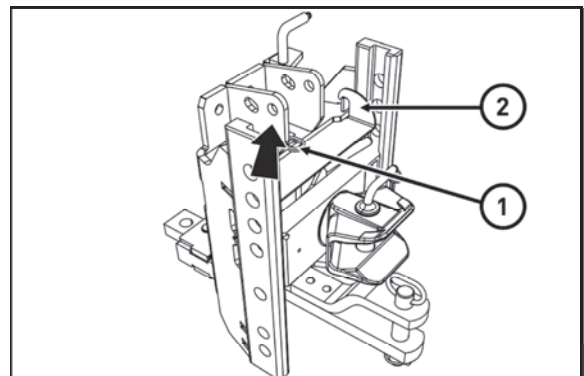
UCL18NN006

Disassembly of the rear PTO cover

Pull the locking device (1) towards yourself to remove it. Grasp the back of the cover and lift the cover in the direction of the arrow into the vertical position. Pull the cover upwards to remove it from the hooks (2). Follow the reverse procedure to reassemble the cover.



When working with the rear PTO, the cover must always be installed.



UCL18NN007

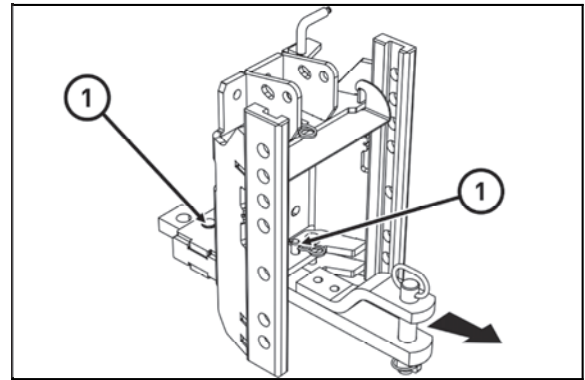
CONTROLS, INSTRUMENTS & OPERATIONS

Lower hitch disassembly

After releasing the locking devices, remove the two pins (1).

Remove the lower hitch by pulling it backwards in the direction of the arrow.

Follow the reverse procedure to reassemble the lower hitch.



UCL18NN009

Height adjustment and disassembly of the multi-level hitch attachment tail piece

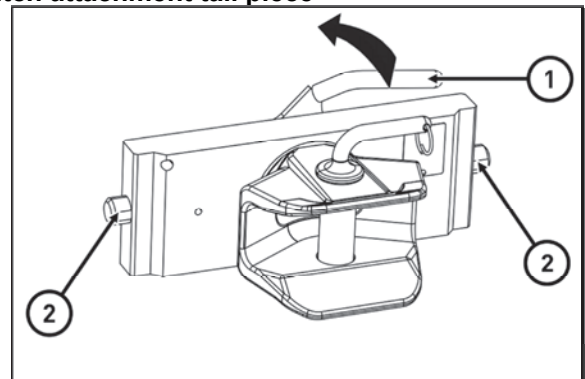
Remove the rear PTO cover and, if necessary, the lower hitch before handling the multi-level hitch attachment tail piece.

Grasp the multi-level hitch attachment tail piece firmly. Moving the lever (1) in the direction of the arrow (upwards) engages the locking pins (2) and the tail piece is freely movable in the grooves of the multi-level console.

Adjust the multi-level hitch attachment tail piece to a suitable height so that the locking pins (2) are aligned with the holes in the multi-level hitch console and release the lever (1); the locking pins (2) slide into the holes in the multi-level hitch console.

Check that the pins (2) slightly overlap the outer edge of the multi-level console.

Perform the disassembly of the multi-level hitch attachment tail piece after pulling the lever (1), by sliding the tail piece upwards out of the grooves of the multi-level console. Perform the assembly in the reverse order.



UCL18NN008



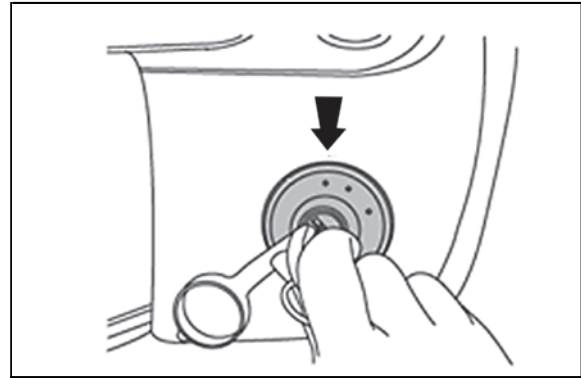
Never insert your fingers into the holes in the multi-level hitch console as there is a risk of injury.

CONTROLS, INSTRUMENTS & OPERATIONS

Starting the engine

Before starting the engine, perform pre-operation check as described in the chapter Safe Operation of Tractor.

- (1) Sit into the driver's seat.
- (2) Depress the foot brake.
- (3) Move the hydraulic lever in the lower position.
- (4) Move the gearshift lever to neutral.
- (5) Insert the ignition key and turn it to the ON position.
- (6) Check that all indicator lights are working.
- (7) The operator must turn the key to the ON position. The glowing circuit is automatically activated. The operator must wait until the glowing indicator light switches off. When it switches off, turn the key to the start position and start the engine.
- (8) Check that the engine is running and all warning lights are off.



U18N049



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 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 longer engine life.

Stopping the engine

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



Important: After long or heavy work allow the engine to idle for 5- 10 minutes and 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.

Running-in Period

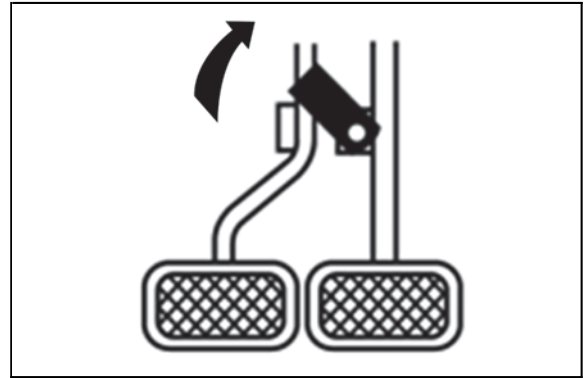
Make sure to observe the following instructions for use in the first 50 hours of machine operation.

- (1) Do not drive at excessive speed and do not overload the tractor.
- (2) Only use the tractor's full power if the engine is sufficiently warmed up.
- (3) Do not run the engine to maximum speed.
- (4) Perform regular maintenance and change oil and fluid after 50 hours of use.
- (5) To refill and replace engine oil, see Maintenance.

CONTROLS, INSTRUMENTS & OPERATIONS

Sharp change of direction in the field

Allow the engine speed to return to idle, simultaneously depress the clutch and apply the brakes. When the tractor stops, lower the attached implement and move the main transmission to the neutral position. Apply the parking brake, stop the engine and remove the ignition key.



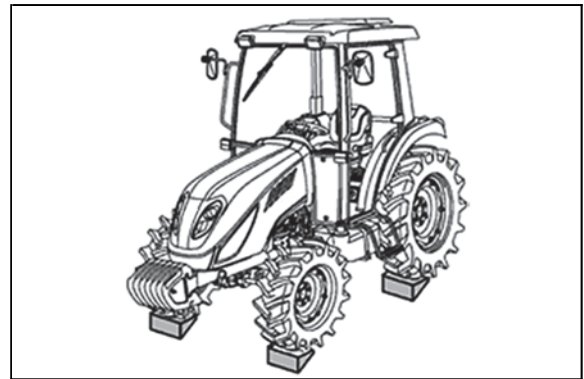
U18NN050



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

Normal service braking and parking

Let the engine come back to idle and at the same time push in the brake and brake simultaneously. When the tractor has come to a halt, lower any implement to the ground, and put the main gear in neutral. Apply the park brake, stop the engine, and remove the key.



U18N053



Caution: *Always apply the park 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.*

CONTROLS, INSTRUMENTS & OPERATIONS

Driving downhill

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.



Caution: *When operating in hilly terrain the risk of the 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

Although the differential lock is a very useful thing, caution is required when using it, as misuse can lead to hazardous situations.

The differential lock should only be used in situations where one of the rear wheels loses traction.



Warning: *Use low engine revolutions when using the diff lock. If the diff lock does not release after removing the foot from the pedal use the left and right brake pedals in turn to release it. Do not try to engage or use the diff lock on tight turns as serious damage can result.*

CONTROLS, INSTRUMENTS & OPERATIONS

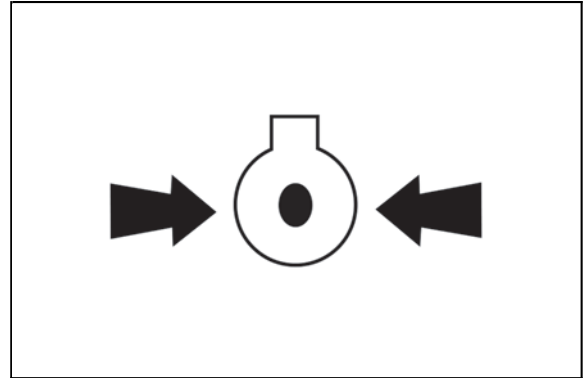
Check during driving

Constantly observe the warning lights on the instrument panel and if any of them comes on, stop the tractor to determine the cause.

Oil pressure light

If the oil pressure light comes on check the oil level first of all.

If the oil level is OK ask a qualified dealer to check the reason for the light coming on.

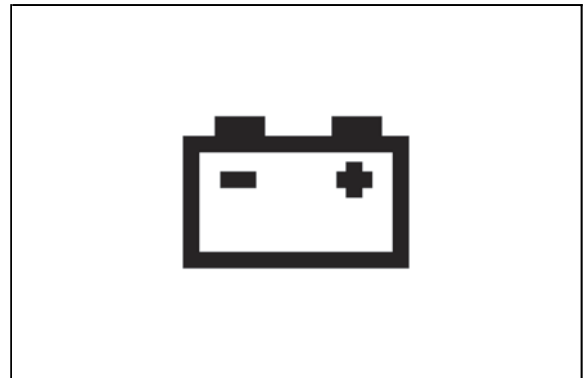


UCL18N044

Battery charging

If the alternator warning light comes on check all connections and ensure that the fan belt is not broken.

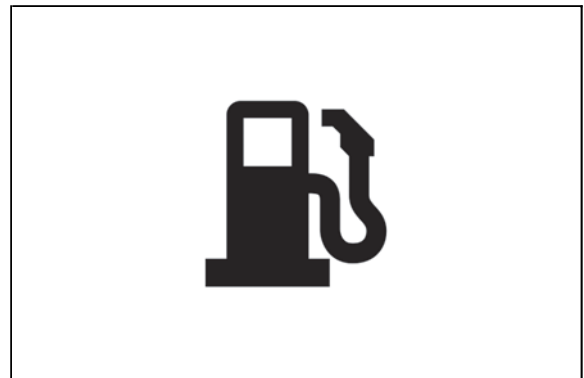
If all connections and the fan belt are intact consult your dealer to determine the cause of the problem.



UCL18N045

Fuel gauge

To prevent excessive condensation in the fuel tank, refill the fuel at the end of each day and ensure that the level during the day does not fall to a level when the fuel system needs to be bled after refueling.

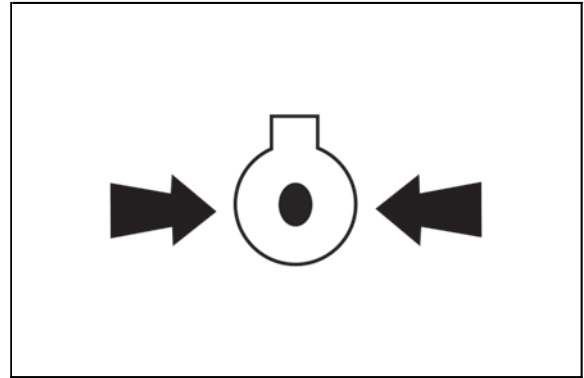


UCL18N046

CONTROLS, INSTRUMENTS & OPERATIONS

Engine cooling water

If the indicator indicates that the engine is overheating, stop the tractor and check the radiator coolant level.



UCL18N047



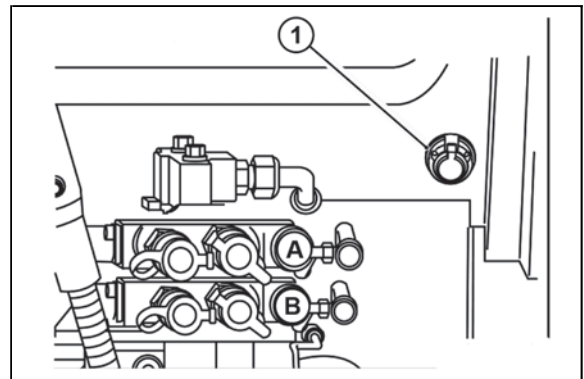
Danger: *Allow the engine to cool down before opening radiator cap as serious burns may result due to hot steam & boiling water.*

Also check that the radiator fins are not clogged or that the tractor fan belt is not broken or slipping.

Trailer socket (seven terminal electrical socket type)

1 - Trailer socket

To operate the electrical systems of implements, trailer lighting, warning lamp etc.

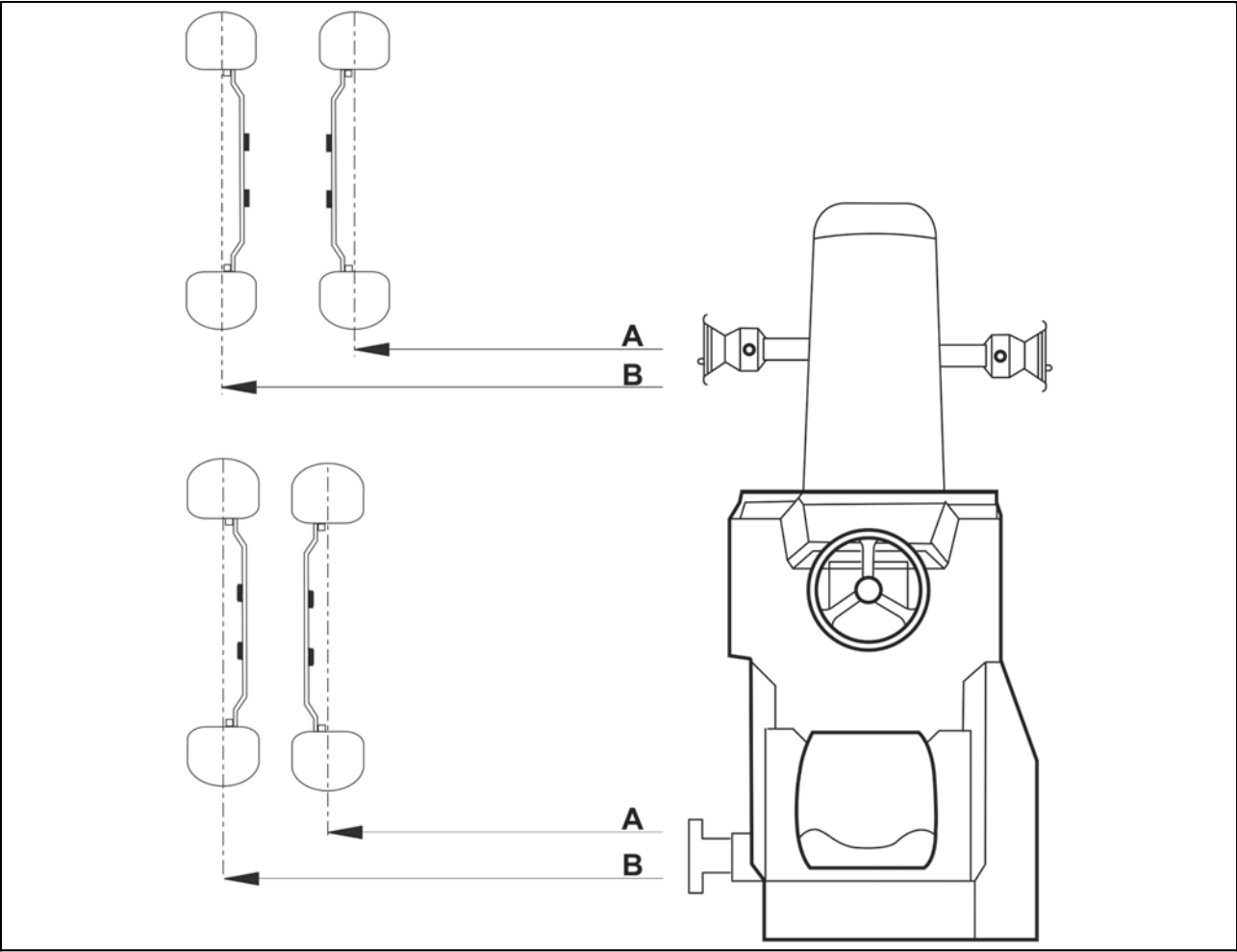


UCL18N048

CONTROLS, INSTRUMENTS & OPERATIONS

Treads

Front and rear wheels can be set in two positions. This will change the tread.



UCL18NN027

		Tire size	A Standard tread (mm)	B tread (mm)
R1	Front	240/70 R16	1,330	1,427
	Rear	320/70 R24	1,264	1,172
R4	Front	12-16,5	1,321	1,436
	Rear	17,5L-24	1,370	1,070

CONTROLS, INSTRUMENTS & OPERATIONS

Changing the front wheel tread



Secure the tractor against movement first, lift the axle with a jack and support it. Tighten the front wheel bolts and nuts to the torque of 157 Nm.

The tread is changed by turning the wheel around and mounting the rim offset inwards, while swapping the two front wheels to maintain the correct direction of the tire tread with the arrow forwards.

- Remove the front wheels.
- Swap the front wheels and mount with the rim offset inside.
- Tighten the front wheel bolts and nuts to 157 Nm.
- After driving 100 m with the unloaded tractor, retighten the front wheel bolts and nuts to the specified torque.
- After loading the tractor, tighten the front wheel bolts and nuts after 3 hours of operation to the specified torque.
- After 10 hours of operation, recheck the tightening of the front wheel bolts and nuts.

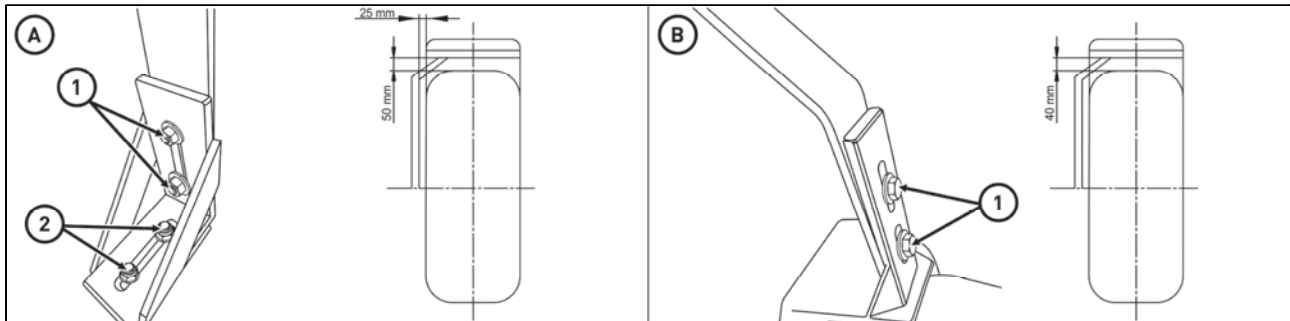
Changing the rear wheel tread



Secure the tractor against movement first, lift the axle with a jack and support it. Tighten the rear wheel bolts and nuts to the torque of 363 Nm. The tread is changed by turning the wheel around and mounting the rim offset inwards, while swapping the two back wheels to maintain the correct direction of the tire tread with the arrow forwards.

- Remove the rear wheels.
- Swap the rear wheels and mount with the rim offset inside.
- Tighten the rear wheel bolts and nuts to 363 Nm.
- After driving 100 m with the unloaded tractor, retighten the rear wheel bolts and nuts to the specified torque.
- After loading the tractor, tighten the rear wheel bolts and nuts after 3 hours of operation to the specified torque.
- After 10 hours of operation, recheck the tightening of the rear wheel bolts and nuts.

Front drive axle fenders



UCL 18NN025

There are two versions of the front fenders

A - Front fenders for 12-16,5 wheels

They are on adjustable brackets that can be adjusted vertically after loosening the screws and nuts (1) and laterally after loosening the screws and nuts (2) according to the values in figure (A).

B - Front fenders for 240/70 R16 wheels

They are on adjustable brackets that can be adjusted vertically after loosening the screws and nuts (1) according to the values in figure (B).



If the front fender brackets settings are changed, check the wheel stop setting on the front-wheel drive axle.

CONTROLS, INSTRUMENTS & OPERATIONS

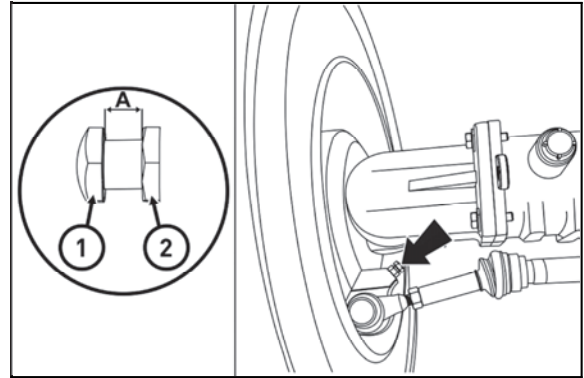
Setting wheel stops with front drive axle

Wheel stops with front drive axle must be set so that there would be a distance of at least 50 mm between front drive axle tires and tractor with full lock and full axle swing around central pin.

Setting wheel stops with front drive axle check

1. Set full lock to one side and check that the distance between a tire and the nearest solid point on the tractor is at least 50 mm. Check both front tires.
2. Turn the steering to full lock to the other side and check according to point 1.
3. Heave one side of the front axle to the maximum swing (front axle leans against the bracket) and check according to point 1 and 2.
4. Hoist the other side of front axle to the maximum swing (front axle leans against the bracket) and check according to point 1 and 2.

The setting of stops (A) changes after the release of a nut (2) and unscrewing or screwing in a screw (1).



ucl18nn026



After the change in setting wheel stops with front drive axle, it is always necessary to check their setting according to points 1 to 4.

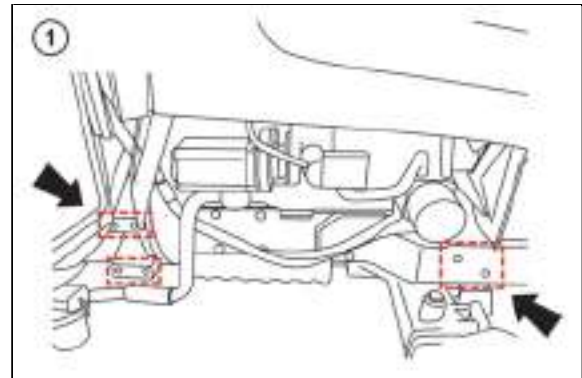
CONTROLS, INSTRUMENTS & OPERATIONS

Front loader mounting points



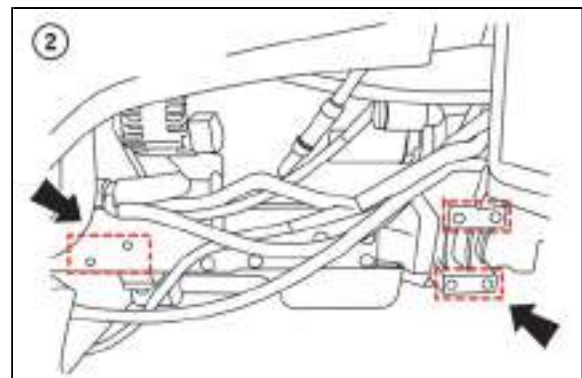
For detailed information on the assembly and operation of the front loader, refer to the documentation supplied with your specific front loader.

1 - Right (front)



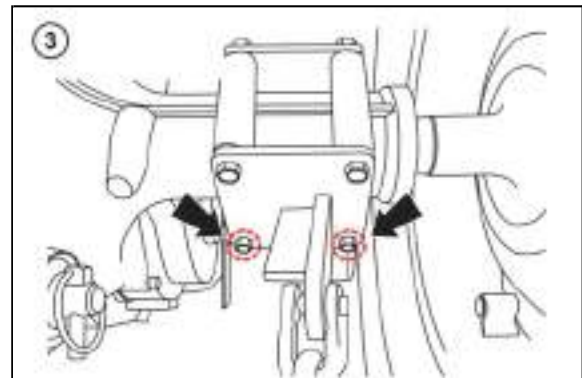
UCL18N050

2 - Left (front)



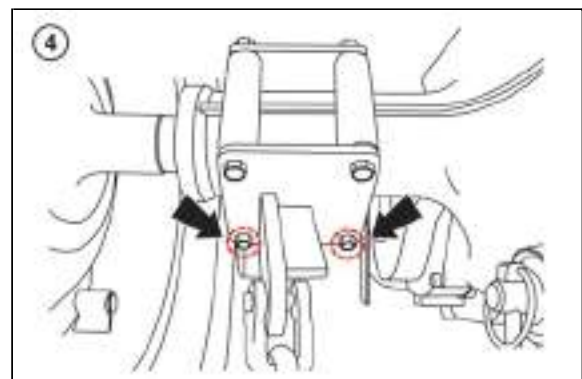
UCL18N051

3 - Right (rear)



UCL18N052

4 - Left (rear)



UCL18N053

NOTES

MAINTENANCE INSTRUCTIONS

Check and service

This section gives full details of the service procedures necessary to maintain your tractor at peak efficiency while the lubrication and maintenance chart provides a ready reference to these requirements.

Service inspections

Service inspections are performed as follows:

The first service inspection at the state of the engine hour counter of 50 EH maximum, but not later than 6 months after commissioning of the tractor. The second service inspection after covering another 200 EH (at the state of the engine hour counter of 250 EH maximum) but not later than 12 months after the first service inspection. Next service inspections always after covering another 250 EH but not later than 12 months after the previous service inspection. The service inspections are a part of tractor maintenance. The services authorized by Zetor will provide professional performance of service inspections according to the manufacturer's instructions.

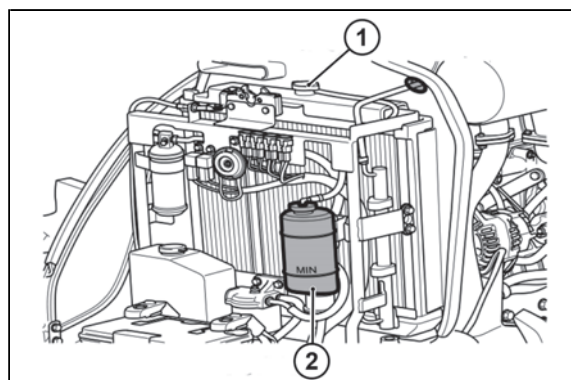
Pre-start checks

To avoid problems it is recommended that a range of checks be carried out daily before starting the tractor. For full details of the items and frequency please refer to the following tables - Periodical check and service tables.

Engine coolant

Remove the radiator cap and make sure that the coolant reaches up to the filler neck and that it is clean. Check that the correct antifreeze or anti-corrosion mixture is used.

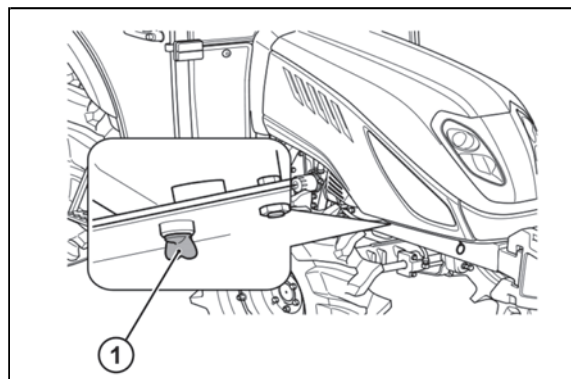
- 1 - Radiator Cap
- 2 - Expansion Vessel



UCL18N054

If corrosion of the cooling system is noticeable in the coolant color, completely drain the system and fill with the correct mixture of water and antifreeze or corrosion inhibitor.

- 1 - Drain Valve



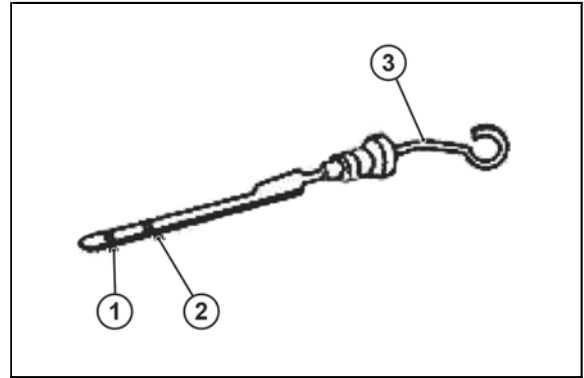
UCL18N055

MAINTENANCE INSTRUCTIONS

Engine oil

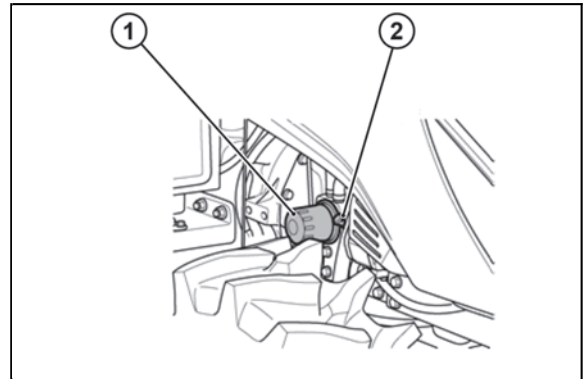
- 1 - Minimum Level Mark
- 2 - Maximum Level Mark
- 3 - Engine Oil Dipstick

Remove the dipstick, wipe it and immerse in the oil pan. Make sure the oil level is between the upper and lower mark, near the upper mark. If the oil level is too low, add more oil. Never exceed the replacement interval. Always check the oil before starting the engine or at least after 30 minutes after stopping the machine. Never check the oil level when the engine is running or immediately after it has been stopped.



UCL18N056

- 1 - Engine oil filter
- 2 - Engine Oil Dipstick



U18N059



Important: Do not overfill the crankcase with oil.

MAINTENANCE INSTRUCTIONS

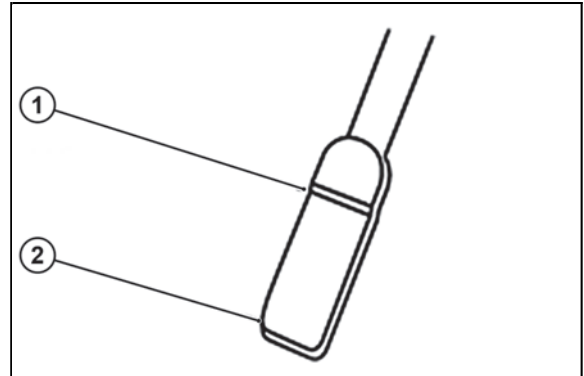
Transmission oil

Check the level using the dipstick at the top of the transaxle.
If the level is low, add more oil through the filler.



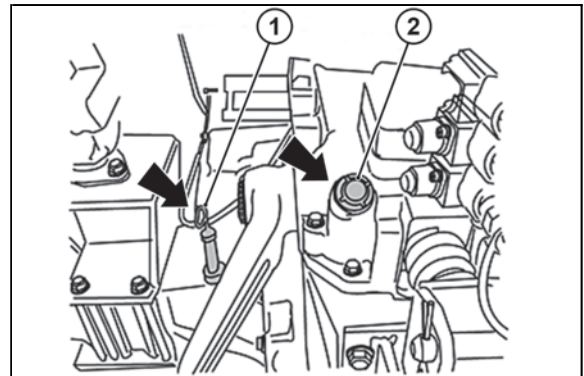
Caution: *Always ensure that you use the correct oil for topping up or oil changes.*

- 1 - Maximum Level
- 2 - Minimum Level



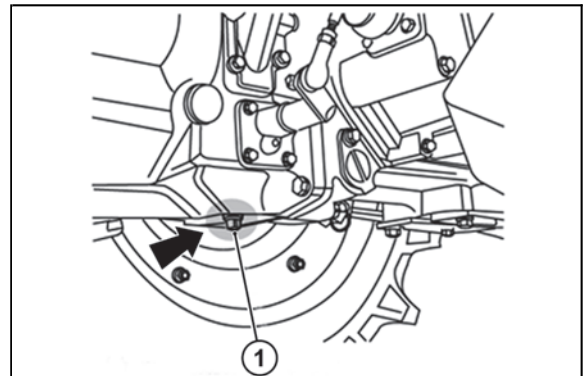
U18N061

- 1 - Oil dipstick
- 2 - Filler



U18N062

- 1 - Drain plug



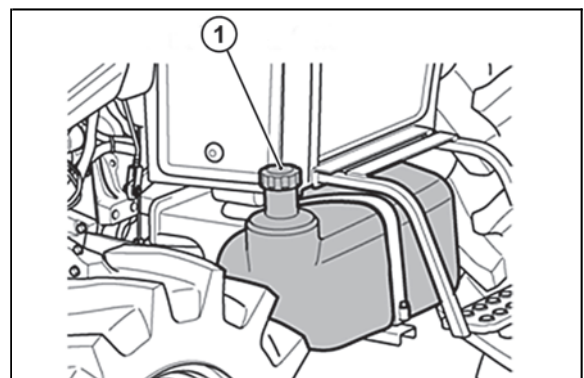
U18N063

Fuel

- 1 - Fuel Tank

Look at the fuel gauge to check the fuel level and refill if it is too low.

It is good to refill the tank after using the tractor to avoid condensation of water in the tank.



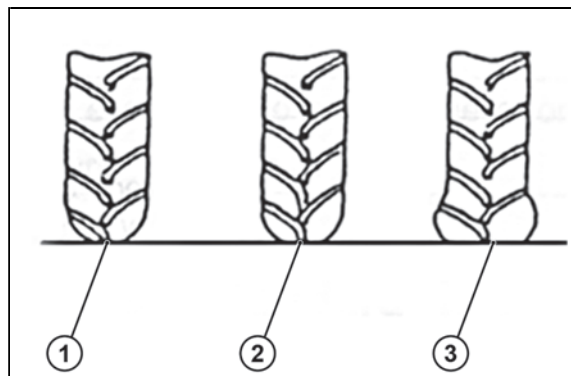
U18N064

MAINTENANCE INSTRUCTIONS

Tyre pressure

The air pressure used in the tires has a direct bearing on the life of the tire and its performance in the field. Ensure that the tire pressures are correct and in accordance with the table in chapter Track adjustment. To make a visual judgment see the drawing on the right.

- 1 - Excessive
- 2 - Correct
- 3 - Insufficient



U18N065

Tire size and inflation pressure

Tire sizes and combinations available from Zetor.

		Tire size	Rim size	Air pressure (bar)
R1	Front	240/70 R16	W8x16	2.4
	Rear	320/70 R24	W11x24	1.6
R4	Front	12-16,5	W9, 75x16,5	4.5
	Rear	17,5L-24	W15Lx24	2.7



The air pressure values in the table are indicative, the tire pressure values given by the tire manufacturer are preferred.



Important: It is strongly recommended that the tire pressure is checked with the correct gauge, as well as a visual check of the pressure before starting to drive.



Danger: Excessive tire pressure can cause excessive tire wear, poor manoeuvrability and accident!

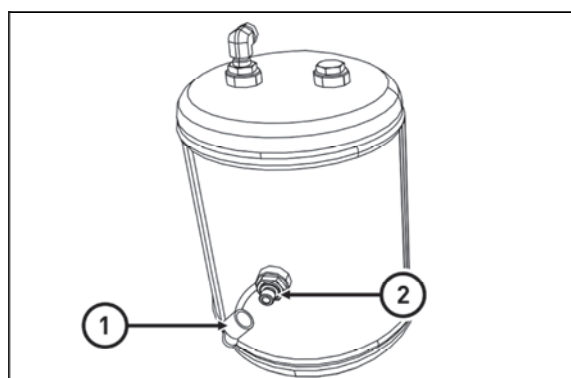
Tire inflation

If the tractor is equipped with air brakes for trailers and semi-trailers, the tractor air pressure system can be used to inflate the tires.

Remove the cap (1) on the left compressed-air tank (accessible from the rear of the tractor) and screw the tire inflation hose onto the fitting (2).

Inflate the tires while the engine is running and the tractor is secured against movement by using the hand brake, if necessary by wedging the wheels.

When tire inflation is complete, remove the tire inflation hose and attach the cap (1) to the fitting (2).



UCL18NN024

MAINTENANCE INSTRUCTIONS

Steering

Check the steering wheel for excessive play.

Brake

Check that both the left and right brakes are correctly adjusted and functioning at the same time. The correct play of the brake is 30 ~ 40 mm.

Electrical installation

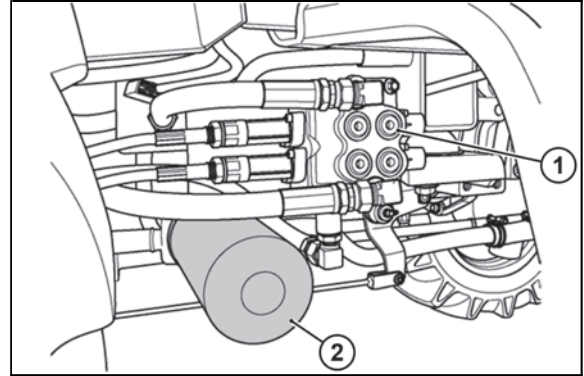
Check of state and function of electrical equipment and accessory.

Installation of the Front Loader

Follow the instructions supplied with the loader to connect and disconnect the loader.

1 - Loader and Front Three-Point Hitch Distributor

2 - Transmission Oil Filter



U18N066

MAINTENANCE INSTRUCTIONS

Maintenance and adjustment schedule

Periodical check and service table

O Check, refill, modify or clean

XX First Replacement

X Replace

Group	Item	Daily	Service interval (operating hours, indicate)										Frequency	Comment
			5 0	1 0 0	1 5 0	2 0 0	2 5 0	3 0 0	3 5 0	4 0 0	4 5 0	5 0 0		
Engine	Engine oil and filter	O	xx				x					x	First change after 50 hours or 6 months, then every 250 hours and 12 months.	
	Air cleaner (engine + air brake compressor, if fitted)			O		O	x	O		O		x	Clean every 100 hours	
	Refrigerant in the radiator	O											Check daily, refill if necessary, change every 24 months	
	Radiator	O											Check daily for damage and leaks	
	Fuel	O												Refill tank
	Fuel cleaner	O	xx	O		O		O		O		x		
	Fan belt	O											Check daily	
	Battery			O		O		O		O		O	Check daily	
	Loose nuts and bolts	O											Check daily	Tighten
	Radiator hose connections	O											Check daily	Tighten, if necessary



Caution: *These intervals are for operation under normal conditions and need to be reviewed under severe conditions to a greater frequency.*

MAINTENANCE INSTRUCTIONS

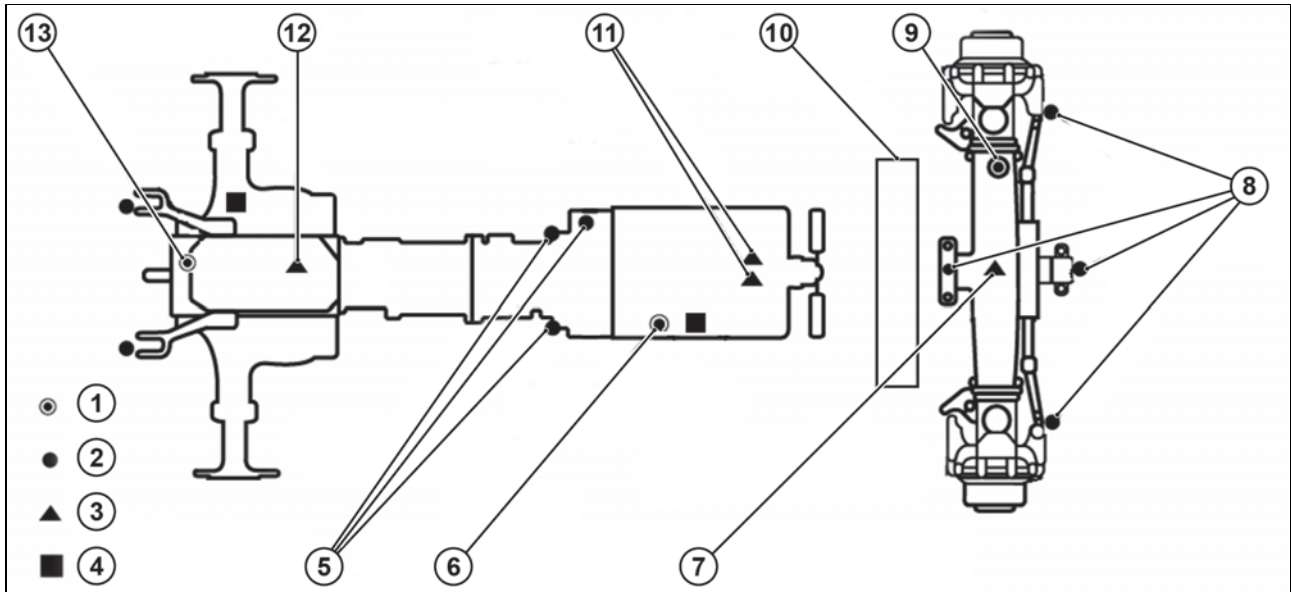
Group	Item	Daily	Service interval (operating hours, indicate)										Frequency	Comment
			5 0	1 0 0	1 5 0	2 0 0	2 5 0	3 0 0	3 5 0	4 0 0	4 5 0	5 0 0		
Chassis	Transmission oil	O	xx										First change after 50 hours or 6 months, then every 500 hours and 12 months.	
	Clutch pedal clearance	O											Check daily	(20~30 mm)
	Brake pedal clearance	O											Check daily	(30~40 mm)
	Condition of both brake pedals	O											Check daily	Adjust so that both work simultaneously and brake simultaneously
	Individual lever functions	O											Check daily	Operation and function
	Steering wheel clearance	O											Check daily	Approx. 50 mm on the steering wheel circumference
	Convergence						O					O	Check every 250 hours	(2~6 mm)
	Lubricant in front wheel hub						O					O	Lubricate every 250 hours	
	Hydrostatic steering check						O					O		

MAINTENANCE INSTRUCTIONS

Group	Item	Daily	Servisní interval (provozní hodiny, vyznačte)										Frequency	Comment
			5 0	1 0 0	1 5 0	2 0 0	2 5 0	3 0 0	3 5 0	4 0 0	4 5 0	5 0 0		
Chassis	Check the wheel nuts for tightness	O											Check daily	Tighten, if free Front: 157Nm Rear: 363Nm
	Instruments and indicator lights	O											Check daily	
	Lubricant for each lubrication point		O	O	O	O	O	O	O	O	O	O	Add every 50 hours (in dusty conditions daily)	
	Loose bolts and nuts	O											Check daily	Tighten to the correct moment.
	Hydraulic oil filter		xx									x	Change every 500 hours	
	Hydrostatic transmission oil filter		xx									x	Change every 500 hours	
	Front 4WD axle oil		xx		O		O		O		O	x	Check every 100 hours Change every 500 hours	Refill, if leaking.
	Check electrical wiring	O						O					Check every year	No loose or damaged terminals, damaged or missing wiring. Proper connection.
	Accelerator pedal adjustment						O					O	Check every 250 hours	
	Hydraulic pipes and hoses						O							

MAINTENANCE INSTRUCTIONS

Diagram of filling points and lubrication points



U18N067

- 1 - Oil Filler
- 2 - Lubrication Point
- 3 - Drain Plug
- 4 - Sight Gauge
- 5 - Grease Nipple
- 6 - Engine Oil Filler Neck
- 7 - Front-Wheel Axle Oil Drain Plug
- 8 - Front Axle Lubrication Point
- 9 - Front-Wheel Axle Oil Filler
- 10 - Radiator
- 11 - Engine Oil Drain Plug
- 12 - Transmission Oil Drain Plug
- 13 - Transmission Oil Filler

MAINTENANCE INSTRUCTIONS

Fuels, coolants and lubricants used - amounts

No.	Filling point	Fillings	Quantity Liter (gal.)
	MODEL		UTILIX HT45/ HT55
1	RADIATOR	50/50 : Ethylene Glycol/Water (L.L.C) ASTM D4985 / D6210	8.5 l (2.24 US gal)
2	ENGINE	API : CH4 grades Recommended SAE viscosity grades A: Viscosity B: Temperature	8.2 l (2.16 gal)
3	TRANSMISSION CASE	(API GL-4 Grades) Gear oil #80 or #90	35 l (9.24 US gal)
4	FRONT AXLE	(API GL-4 Grades) Gear oil #80 or #90	10 l (2.64 US gal)
5	FINAL DRIVE CASE(B)	(API GL-4 Grades) Gear oil #80 or #90	
6	BALL JOINT	Grease	As required
7	FUEL TANK	Diesel fuel	60 l (15.85 US gal)

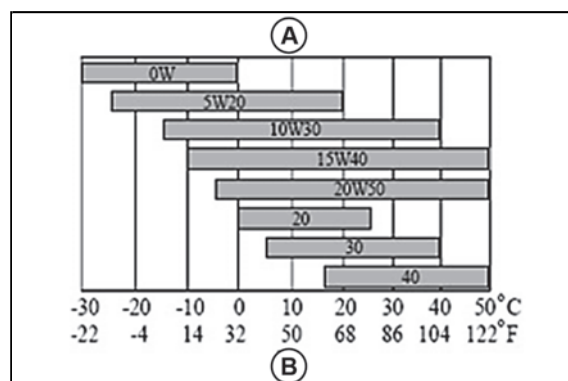


The manufacturer does not take responsibility for any damages caused by the usage of service fillings that do not comply with requirements stated in this service manual.

Recommended SAE viscosity grades for engine oil

A - Viscosity

B - Temperature



U18N068

ZETOR service fillings

To maintain best operational characteristics of your tractor, original operational **Zetor** fillings are recommended to be used.

Motor oils

Engine oil **Zetor 10W-40 L-SAPS**

Oil in the gearbox and final drivehousing

Oil for gearing mechanisms of tractors **ZETOR EXTRA 10W30 STOU**

Oil for the front driving axle

Oil for the front axle **ZETOR LS 80W**

Other recommended service fillings tested on Zetor tractors

Oil to gear systems of tractors

1 - RPM Tractor Hydraulic Fluid or Textron TDH Premium (CALTEX)

2 - TDH Oil or TDH Oil special (TEXACO)

3 - Chevron 1 000THF (CHEVRON)

Fuel

Diesel oil complying with the regulation of **EN 590**

MAINTENANCE INSTRUCTIONS

Procedure to open the front hood

Front bonnet opening

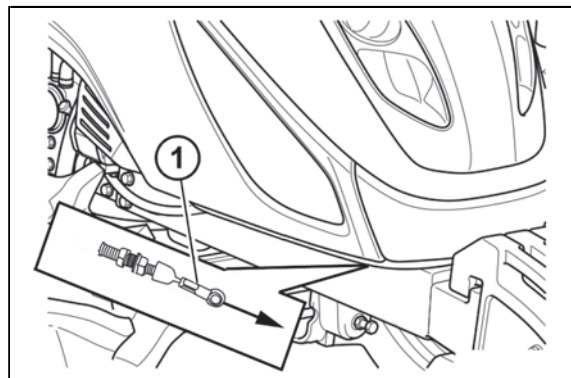
To open the hood:

Unlock the hood by pulling the handle (1) in the direction of the arrow (forward).

The handle is located under the right front corner of the hood.

Grasp the hood and lift it.

In the raised position, the hood is locked by the gas-liquid safety stops.



UCL18NN011

To close the hood:

Check that the handle (1) has returned to the rear position.

Pull the hood down and snap it down until the hood lock engages.

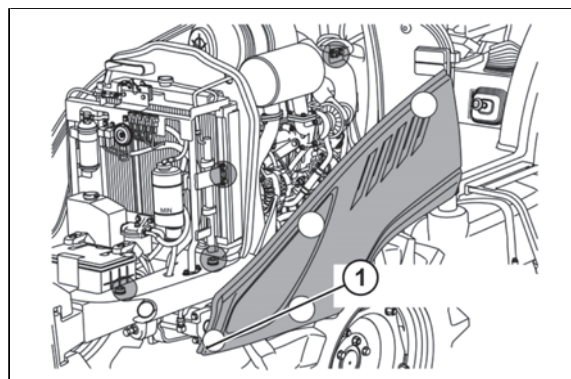


When the front hood is slammed shut, the headlight bulbs located in the front hood may be damaged.

Opening the side cover

1 - Support Pin (1)

To open it, grasp the side panel of the hood and pull the front panel upward to separate it from the guiding support pin (1). Then pull the hood side panel forward.



UCL18N061

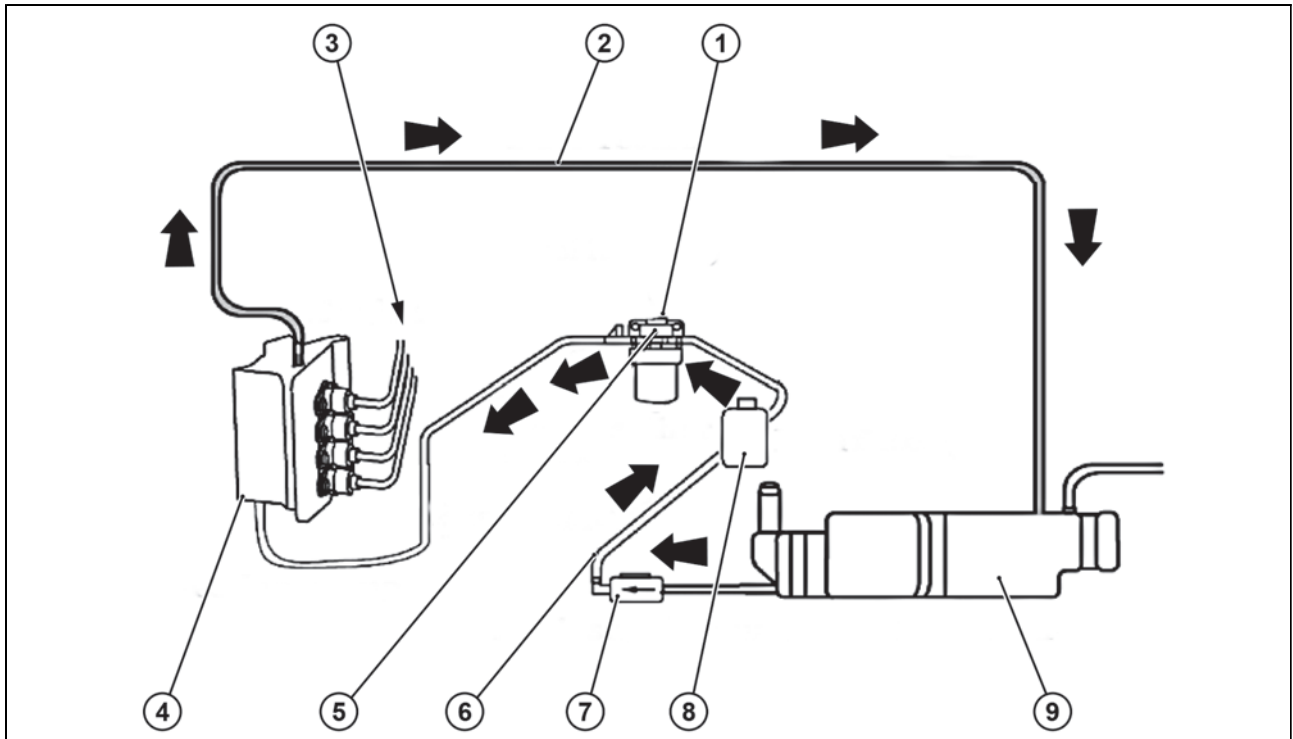
MAINTENANCE INSTRUCTIONS

Fuel system

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.



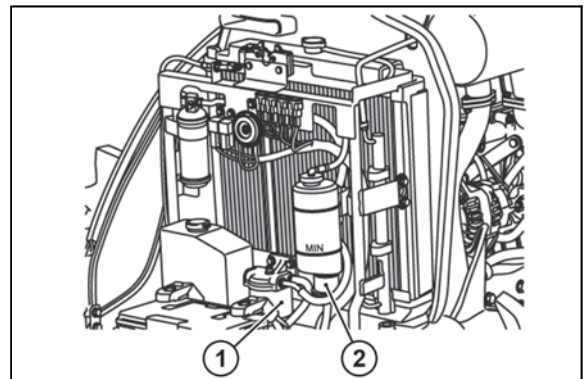
U18N072

- 1 - Fine Fuel Filter (B)
- 2 - Fuel Return Line
- 3 - Engine
- 4 - Injection Pump
- 5 - Bleed Screw
- 6 - Fuel Supply Line
- 7 - Transport Pump
- 8 - Coarse Fuel Filter (A)
- 9 - Fuel Tank

Bleeding the fuel system

1. Fill the tank with fuel and turn the ignition key to on.
2. Loosen the fuel pipe nut of the Injection pump two or three turns.
3. When fuel free from air flows (bubbles) from the fuel pipe nut, tighten the fuel pipe nut.
4. The bleeding of the system is now finished.

- 1- Fuel Cleaner
- 2 - Transport Pump



U18N073

MAINTENANCE INSTRUCTIONS

Changing oil in tractor

Always use quality oils as engine or transmission oil (refer to the chapter: Recommended transmission oil)
Refer to the tables 'Periodical check and service table' for the change frequency.

Changing engine oil

The grade of oil to be used will depend on the ambient temperature.
The tractor is shipped from the factory with 15W/40.

- For summer use over 77°F (25°C) use SAE 30.
- For temperatures from 32°F~77°F (0°C~25°C) use SAE20 or 15W/40.
- For temperatures below 32°F (0°C) use SAE 10W.



Important:

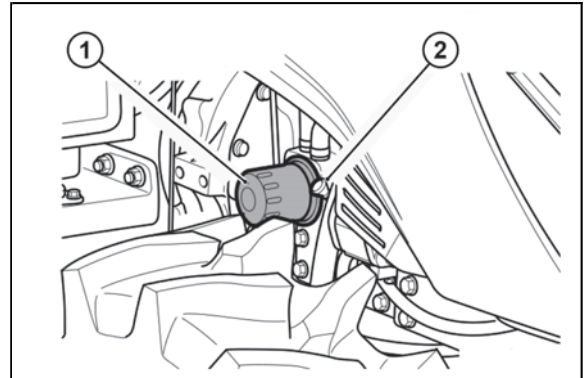
When changing the oil, replace the filter at the same time.

Always use the same oil, as using different types of oils or oils with different specifications can cause damage.

Dispose of the old oil according to valid legal regulations.

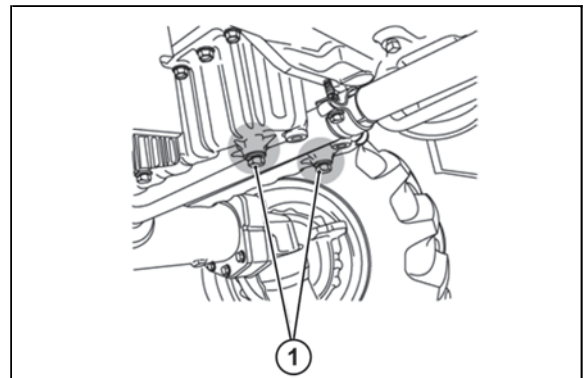
1 - Engine oil filter

2 - Level gauge



UCL18N063

1 - Engine oil drain plug



U18N060

MAINTENANCE INSTRUCTIONS

Draining oil from engine

1. unscrew the drain plugs, best immediately after terminating the drive or after heating the engine to working temperature
2. drain oil
3. clean the drain plugs
4. screw the drain plugs back in

Engine oil filter

Using the oil filter wrench, screw the filter anticlockwise to remove it. Lightly lubricate the rubber seal ring on the new filter with oil, rotate clockwise until the seal reaches the sealing surface, and then rotate another 2/3 turn to tighten it properly.

Pouring oil to engine

Pour the set amount of motor oil engine by filling hole, start the engine and allow it to run for 2 - 3 minutes with engine revolutions of 750 - 800.

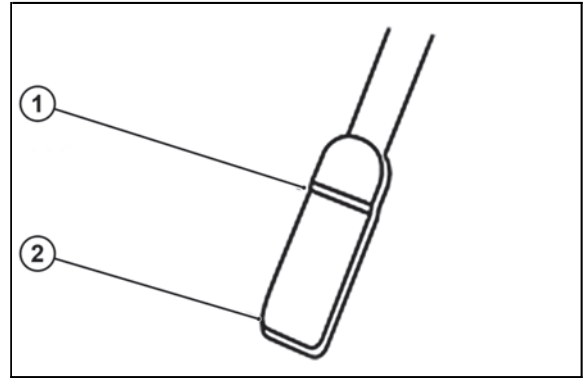
After stopping the engine and settling the level recheck the amount of oil with a dipstick and check the tightness of filter, drain plugs and other joints.

MAINTENANCE INSTRUCTIONS

Changing the transmission oil

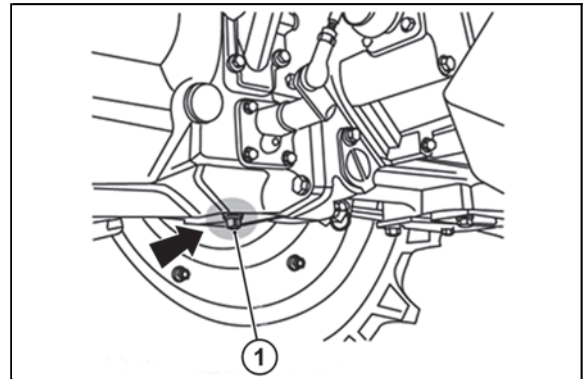
- 1 - Maximum Level
- 2 - Minimum Level

Remove the drain plug from the bottom of the transmission and drain the oil.
Return the drain plug and check for tightening and leakage.



U18N075

- 1 - Transmission oil drain Plug

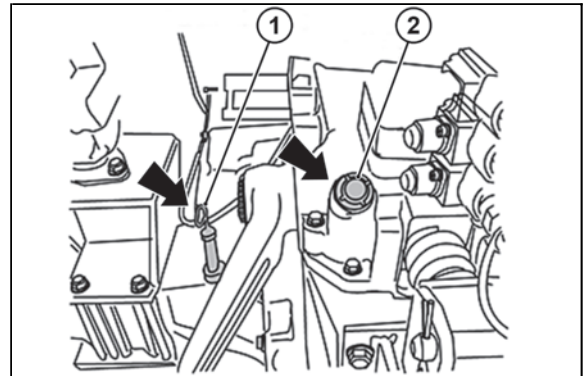


U18N076

- 1 - Dipstick
- 2 - Filler

Fill the transmission with new oil not exceeding the maximum level marked on the dipstick.

- Capacity 35 l (9.24 US Gal)



U18N077



Important: Always use the same type of oil. Using another type of oil or oil with different specifications may damage the transmission. Dispose of the old oil according to valid legal regulations.

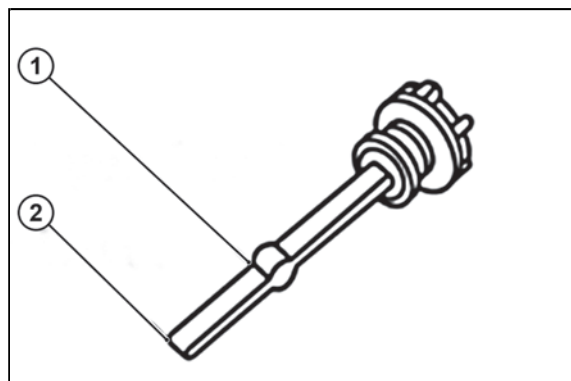
MAINTENANCE INSTRUCTIONS

Changing front axle oil

1. Remove the drain plug from the center of the differential and drain the oil. Do the same for all other front axle drives.
2. Return and tighten all drain plugs.
3. Remove the top plug (bleed plug) from each rear wheel drive to bleed it.
4. Remove the dipstick from the filler hole, pour 10 liters of oil and wait until it flows into the rear wheel drives.
5. Check the oil level using the dipstick, return the bleed plugs on both rear wheel drives and tighten them.

1 - Maximum Level

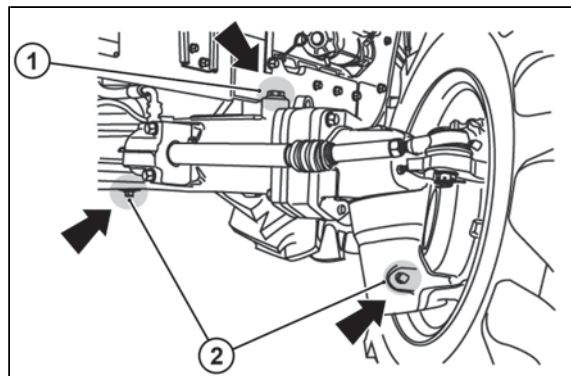
2 - Minimum Level



U18N078

1 - Level gauge & oil filler

2 - Front axle oil drain plug



U18N079



Important:

After refilling the prescribed amount of new oil, the level measured by the dipstick may be higher than permitted - due to incomplete filling of the front-wheel axle drive mechanism - this discrepancy will disappear after being put back into operation. Unscrew the bleed plugs to accelerate the proper pumping of the oil by the front axle drive system.

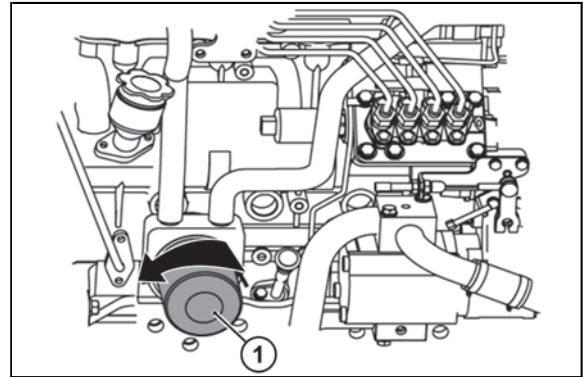
MAINTENANCE INSTRUCTIONS

Cleaning and replacing filters

Engine oil filter

1 - Engine Oil Filter

Using the oil filter wrench, screw the filter anticlockwise to remove it. Lightly lubricate the rubber seal ring on the new filter with oil, rotate clockwise until the seal reaches the sealing surface, and then rotate another 2/3 turn to tighten it properly.



U18N080

MAINTENANCE INSTRUCTIONS

Fuel filter

Perkins does not usually supply a fuel filter / water separator (if installed).

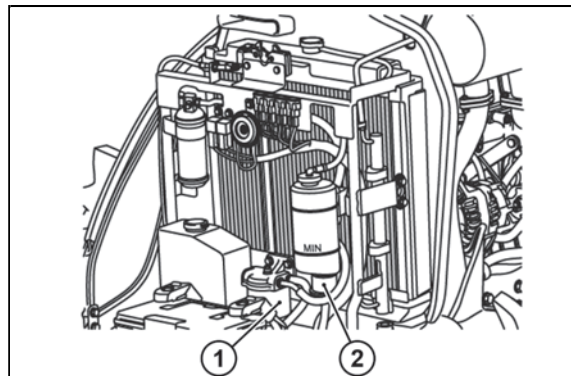
The following text describes a typical fuel filter / water separator.

For more information about the fuel filter / water separator, refer to the OEM information.

Turn the fuel shutoff valve (if fitted) to the OFF position before performing this maintenance operation. Place a container under the fuel filter to catch any spilled fuel. Discard spilled fuel immediately.

1 - Palivový filtr

2 - Čerpadlo pro přívod paliva



U18N081

1. Close the fuel shutoff valve (if equipped).

2. Remove any contamination around the fuel system.

Note: If the fuel filter element is not equipped with a drain, remove cap. Remove the nylon insert in order to reduce the level of fuel in the fuel filter element. A reduction in the level of fuel in the fuel filter element will help prevent fuel from being spilled when the element is removed.

Notice: Do not use any tool to remove the fuel filter. If you attempt to remove the fuel filter with a filter wrench or a filter installation aid, the sealing ring may be damaged.

3. Grasp the fuel filter and turn the quick-clamping device anti-clockwise.

Note: If the element is equipped with a sediment bowl, remove the sediment bowl from the element.

Thoroughly clean the sediment bowl. Inspect the O-ring seals. Install new O-ring seals, if necessary. Install the sediment bowl to the new element. Hand tighten the sediment bowl. Hand tightening is the only method that should be used.

Notice: Do not fill fuel filters with fuel before installing them. Contaminated fuel will cause accelerated wear to fuel system parts.

4. Make sure the bottom of the fuel filter is clean. Push the new filter element all the way into the bottom of the fuel filter.

5. Hold the fuel filter in its place. Attach the detent ring. Turn the detent ring clockwise to attach the fuel filter to the bottom part of the fuel filter.

6. Open the fuel shutoff valve (if equipped).

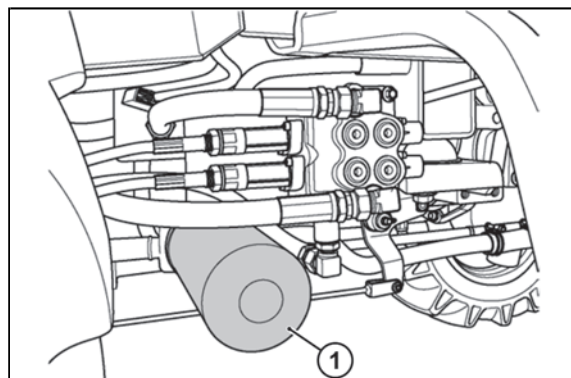


Important: *Never use petrol thinner or any similar flammable material to clean the coarse fuel filter. Always bleed the system after replacing the filter.*

Hydraulic oil filter

1 - Transmission oil Filter

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



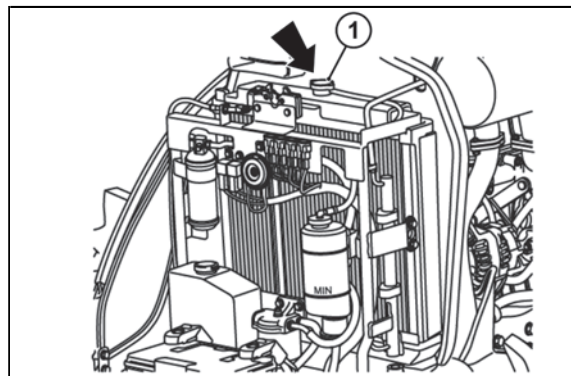
U18N082

MAINTENANCE INSTRUCTIONS

Changing coolant

1 - Radiator Cap

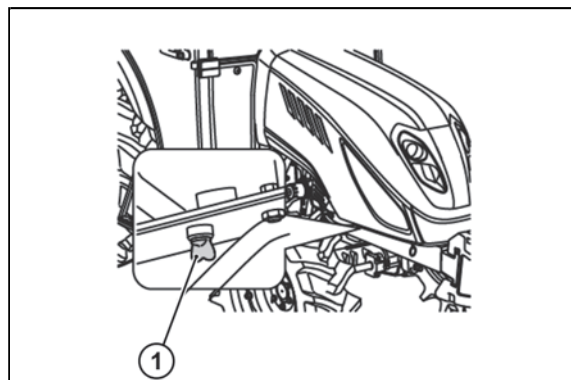
1. Open the drain valve in front of the engine oil filter and drain the coolant.



U18N084

1 - Drain Valve

2. Simultaneously open the radiator cap.
3. To clean the cooling system thoroughly, flush it with a gentle stream of water.
4. Close the drain valve and fill the cooling system with new coolant.
5. Start the engine and let it idle for about 5 minutes, then check the fluid level again and add more coolant if necessary.



U18N085



Caution: *Do not remove the radiator cap while the engine is hot. Allow the engine cool down and then turn the cap slowly to make sure 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 radiator cap.

Anti freeze

If the coolant freezes, it may damage the engine.

Flush the radiator before replacing the antifreeze.

Prepare the antifreeze solution according to the specific antifreeze instructions and local climatic conditions.

Replace the solution in the radiator.

In case of loss of solution due to evaporation or overflow, add more solution of the original composition.

MAINTENANCE INSTRUCTIONS

Cleaning the radiator

Insects, blades of grass and dust can all clog the radiator and reduce its efficiency.

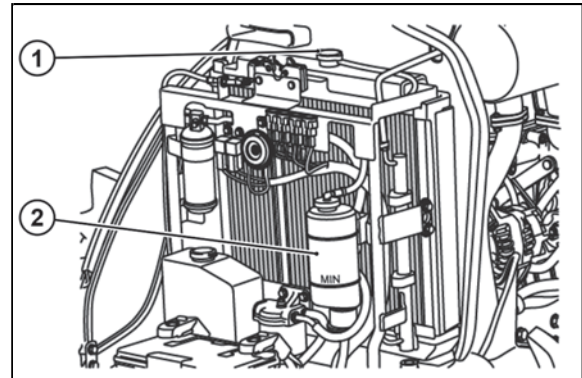
Remove the radiator cover so that you can clean it together with the radiator.

Loosen the screw and pull to remove it.

Then clean the inside of the radiator between the ribs and the tube using clean water.

1 - Radiator Cap

2 - Expansion Vessel



U18N086



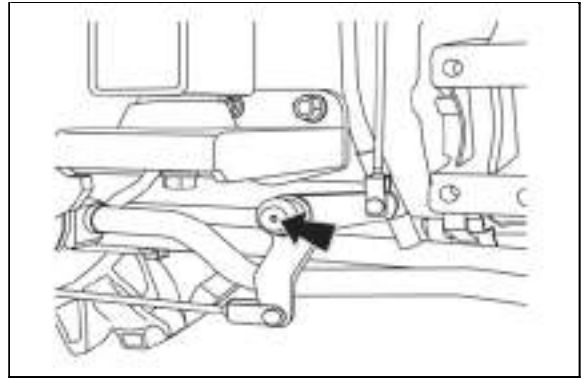
Important: *Water or air under high pressure can distort the cooling fins on the radiator and reduce its efficiency.*

MAINTENANCE INSTRUCTIONS

Greasing the tractor

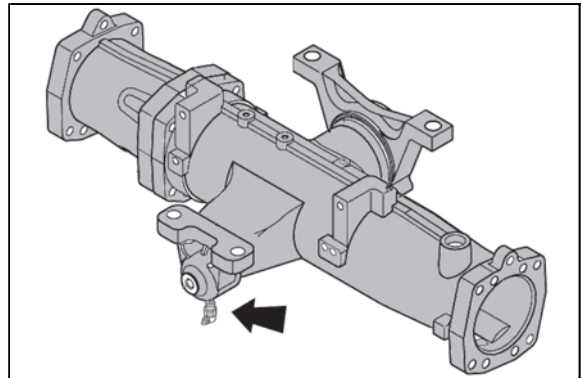
Grease the tractor according to the service schedule (Tables: Periodical check and service table)
Ensure that grease nipples are cleaned well before any attempt is made to grease them.

Brake area / Clutch area - Grease Nipple



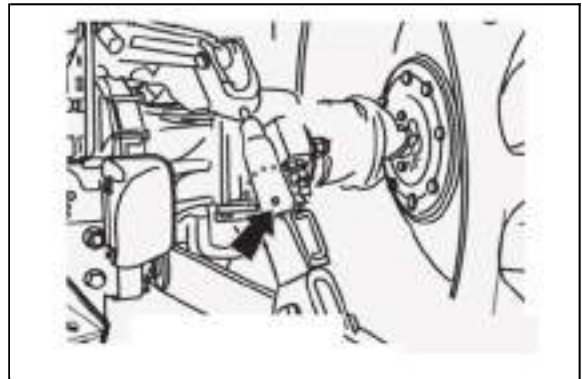
U18N087

Front axle mounting - lubrication point



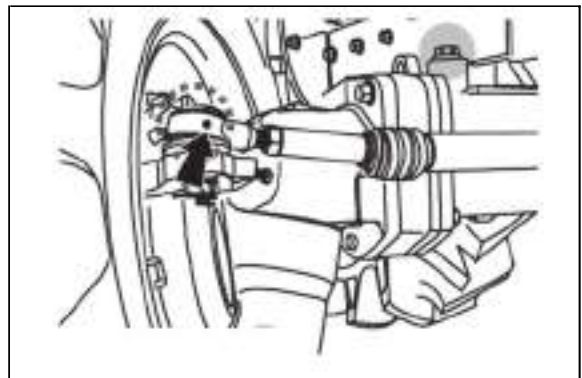
U18N088

Vertical link - lubrication point



U18N089

Front axle ball joints - lubrication point



U18N090

MAINTENANCE INSTRUCTIONS

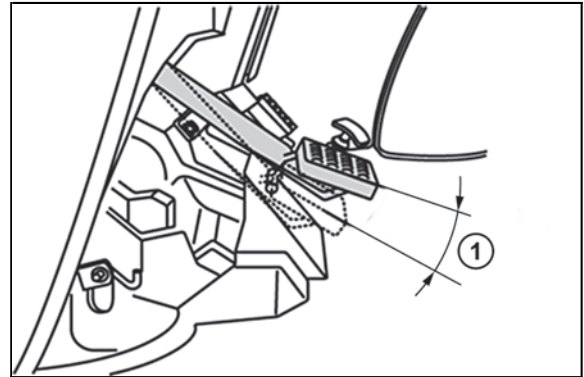
Setting the play of controls

Adjusting the brake

1 - Free play

Using the brake over a period of time will increase the free play.

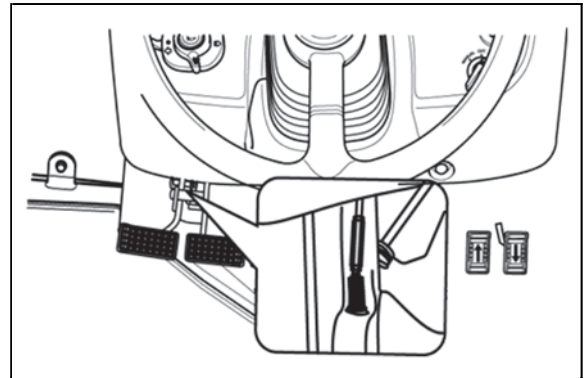
The correct free play of the pedal is 0.78~1.18 in. To adjust, loosen the locknut on the turnbuckle and adjust. Check the adjustment and tighten the locknut if the free play is correct.



U18N091

Adjusting method

Loosen the double lock nut to adjust the brake. Rotate to increase or decrease play. Tighten the double lock nuts and secure the nuts. Check that the play is correct and the same on both pedals for even braking effect.



U18N092



Caution: *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 free play is the same on both pedals.*

Adjusting the throttle lever

If this lever is loose or difficult to move, please contact an authorized service to help you solve the problem.

Adjusting toe-in

If the convergence is set incorrectly, it can cause severe vibration of both the steering wheel and the tractor. The correct convergence is 0.08 ~ 0.24 in. (2 ~ 6 mm). We recommend that this setting is carried out by an authorized service.

MAINTENANCE INSTRUCTIONS

Checking the battery

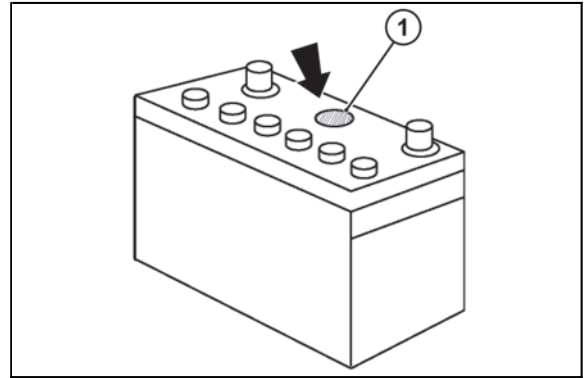
1 - Indicator condition

Check the Indicator condition

Green color - Good condition

Black color - Charging necessary

White color - Replace battery



U18N093



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



Caution:

The electrolyte contains acid which can cause severe burns.

If acid comes into contact with the skin, rinse the affected area immediately with running water.

Battery maintenance

Low temperatures affect battery performance, so pay special attention to them in winter.

Remove the battery and store it in a cool, dry place before prolonged shutdown.

If the battery remains in the tractor, disconnect the negative terminal.

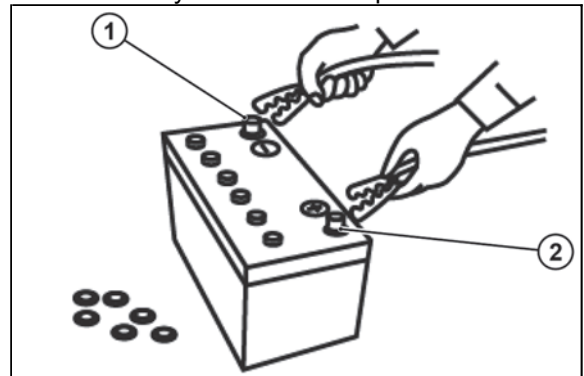
If the batteries are not used for a long period of time, they will self-discharge.

To keep the battery in good condition, charge it once a month in summer and once in two months in winter.

When replacing the original battery, make sure that the replacement battery has the same specifications.

1 - (-) Terminal

2 - (+) Terminal

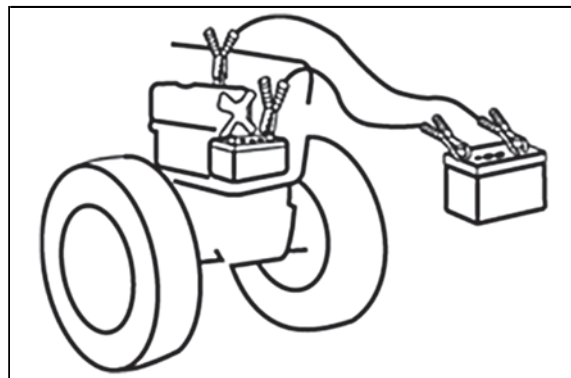


U18N094

MAINTENANCE INSTRUCTIONS

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.



U18N095



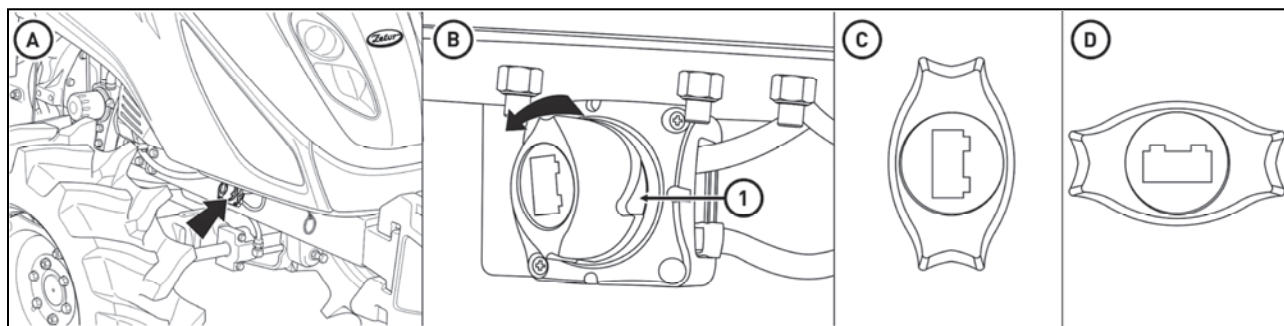
Caution: *Always disconnect the negative terminal first when removing the battery and always connect the positive terminal first when fitting the battery. When connecting the battery leads make sure not to reverse the polarity. Quick charging will reduce battery life. Disconnect the terminals prior to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

Battery Disconnect

The function of the battery disconnection switch is to disconnect the supply voltage from the electrical system by interrupting the connection to the battery. The main advantages of this solution are:

1. Protection of the electrical system from short circuits
2. Reducing battery self-discharge, especially when the machine is shut down for long time
3. Allows maintenance and repair work in safe conditions

Battery disconnecter



UCL18NN012

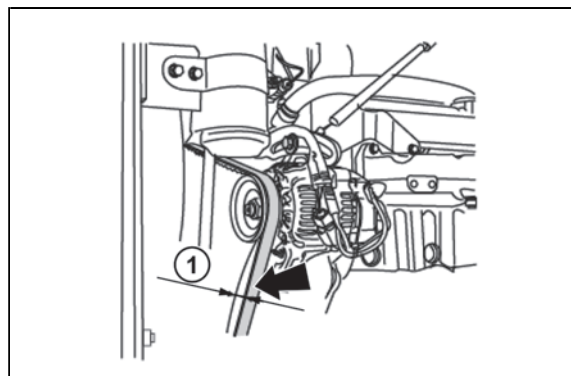
The battery disconnecter is located on the front axle bracket under the right front corner of the hood (A). Turn the battery disconnecter handle in the direction of the arrow (B) to disconnect the battery from the tractor's electrical installation. To connect the battery to the tractor's electrical installation, turn the battery disconnecter handle counterclockwise. Battery connection is indicated by a visible green field (1). (C) The position of the battery disconnecter handle when the battery is connected. (D) The position of the battery disconnecter handle when the battery is disconnected.

MAINTENANCE INSTRUCTIONS

Fan belt adjustment

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)(1)

1 - 7~9 mm



U18N096

Alternator inspect

Perkins recommends a scheduled inspection of the alternator. Inspect the alternator for loose connections and proper battery charging. Inspect the ammeter(If equipped) during engine operation in order to ensure proper battery performance and/or proper performance of the electrical system. Make repairs, as required.

If the batteries are properly charged ,the ammeter reading should be very near Zero. All batteries should be kept warm because temperature affects the cranking power. If the battery is too colt,the battery will not crank the engine.When the engine is not run for long periods of time or if the engine is run for short periods.The batteries may not fully charge. A battery with a low charge will freeze more easily than a battery with a full charge.

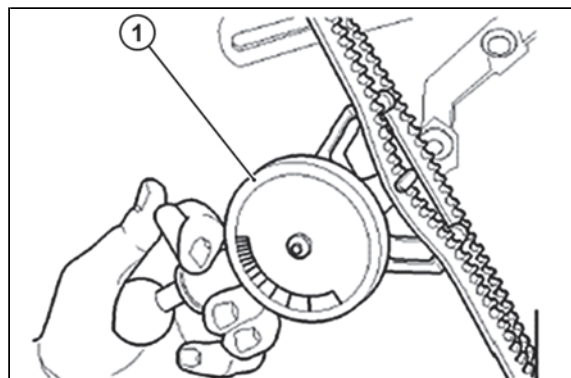
Alternator and Fan Belts Inspect/Adjust/Replace

For applications that require multiple drive belts, Replace the belts in matched sets. Replacing only one belt of a matched set will cause the new belt to carry more load because the older belt is stretched. The additional load on the new belt could cause the new belt to break. If the belts are too loose.Vibration causes unnecessary wear on the belts and pulleys. Loose belt may slip enough to cause overheating. To accurately check the belt tension ,a suitable gauge should be used.

Fit the gauge(1) at the center of the longest free length and check the tension.The correct tension is 535 N (120 lb). If the tension of the belt is below 250 N (56 lb) adjust the belt to 535 N (120 lb).

If twin belts are installed,check and adjust the tension on the both belts.

1 - Burroughs gauge



U18N097

MAINTENANCE INSTRUCTIONS

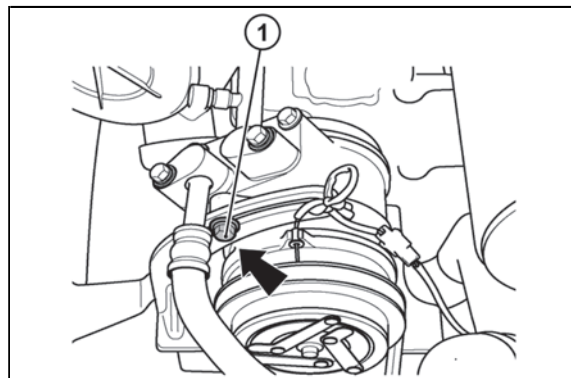
Air conditioner compressor belt adjustment

1 - Tension Adjusting Bolt

Check the compressor belt tension regularly and adjust. If required. The correct tension is if the center of the belt is Pushed With a finger it moves in approx. 10 mm (0.39 in) as shown in the picture.

To adjust the belt, loosen the top bolt on the alternator, move the alternator to the desired position and tighten the bolt.

Also ensure that the bottom alternator bolts are tighten.



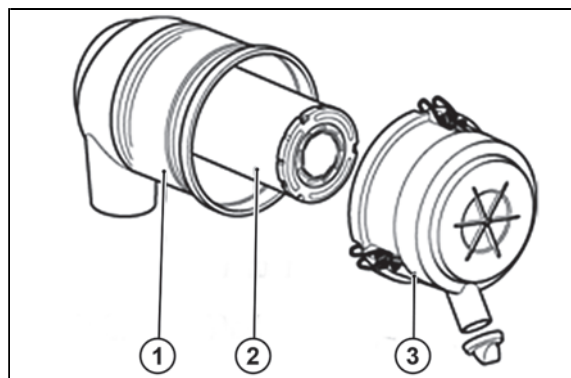
U18N098

Air filter maintenance

1 - Air cleaner body

2 - Element

3 - Cover



U18N099

To remove the dust from the evacuator valve squeeze it between thumb and fingers to let excess dust out and wipe around the valve to keep it clean from outside.

To clean the main element, remove the left side cover.

Remove the element by unloading the wing nut.

Remove dust by blowing it out of the element with compressed air. Check the element to ensure it is not damaged. Reassemble the element.



Important:

When cleaning the element, never hit the filter with a solid object or never hit the filter against the floor.

Check all connections and hoses, especially on the clean side of the air filter, to ensure that air with dust does not enter the engine. Visually check the inside of the filter for visual defects of the element.

When reassembling, make sure all surfaces are properly sealed to prevent dust from entering.

Increase the frequency of service inspections when working in dusty environment.

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

MAINTENANCE INSTRUCTIONS

Checking hoses and lines

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 worsen the connection, and damaged wires can cause short circuit, burns of the wires, or reduction of the efficiency of individual parts. Replace or repair damaged wires or wires with damaged insulation.

If the fuse still blows after replacement, do not replace it with a wire or a stronger fuse, but look for the cause and fix it or consult the electrician.

If the insulation is worn or chipped off, repair it with high-quality insulating tape. If the wire terminals are not in good conditions, replace them with the same part.



Important:

Incorrect wires or fuses can cause a fire, both on and around the tractor, so have it checked by an authorized service every year. Similarly, over time, the fuel lines wear out and deteriorate.

Ask an authorized service to have them checked at least once in two years and replace if necessary.

MAINTENANCE INSTRUCTIONS

Replacing fuses

The circuit has 8 blade type fuses in its wiring circuit (See UTILIX 45 / UTILIX 55 Cabin wiring diagram)

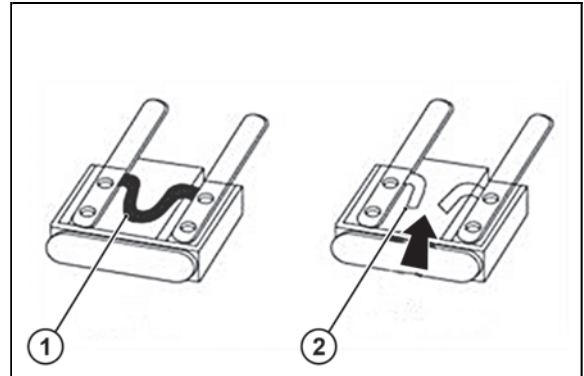
When a fuse has blown replace it with one of the same value.

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

Use fuse tongs to replace fuses.

1 - Normal

2 - Blown out



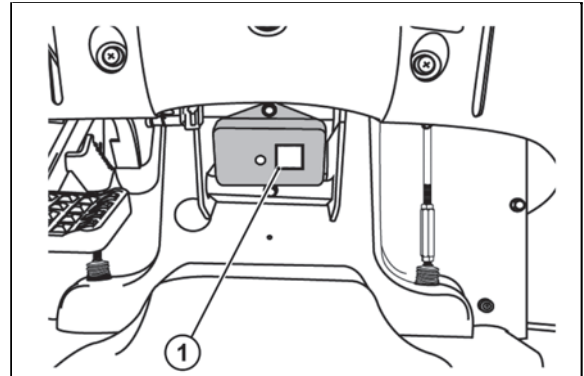
U18N100

Main fuses

1 - Fuse case

The wiring harness is equipped with 3 main fuses who's function is to preserve the wiring. However when a main fuse blows the entire circuit is dead.

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



U18N101



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 correct grade fuse.

MAINTENANCE INSTRUCTIONS

Storage

Service prior to daily and short terms storage.

Wash the tractor and keep it clean.

Refill the fuel tank to prevent water condensation and corrosion.

Lower all implements on the mat before parking the tractor.

If you want to shut down the tractor for a long period of time, consult an authorized service.

For daily or short term storage

Clean the tractor and remove any dirt accumulated during work.

Refill the fuel tank to prevent water condensation and corrosion.

Lower all tractor implements onto the mat.

Park the tractor in a covered and dry place, if this is not possible, cover the machine with a solid waterproof material (tarpaulin).

Under very cold conditions, it is recommended to remove the battery and store it in a warm, dry place.

Thanks to this measure, the tractor can be started up smoothly if necessary.

If the outside temperature falls below 0 °C, completely change the antifreeze or drain the refrigerant to protect the engine from damage due to the freezing of the coolant.



Important: When washing the tractor ensure that the water does not get near electrical components or the oil filter points.

To prevent short circuits remove the ignition key.

Do not wash the tractor when the engine is running.

Long-term storage

If the tractor is not to be used for a longer period of time, clean it in the same way as for a short-term shutdown.

Drain the oil and replace it with new one. Allow the engine to run for approx. 5 min to ensure that all new oil is pumped through the entire engine.

Drain the refrigerant from the radiator and remove the ignition key.

Put a tag with the inscription 'No refrigerant' on both the key and the steering wheel. Add grease, i.e. oil, to all lubrication points on the tractor.

Check the pressure values and all of them increase slightly. Lower all implements onto the mat and park the tractor in a covered, dry place.

Using the clutch disconnection arm, disconnect the clutch. Support each tire with a piece of wood to protect it.

Disconnect the battery.



Important: After refilling the engine with the coolant run the engine for approx. 5-10 min. at 1 500-2 000 rpm every month as a corrosion prevention measure. Either removes the battery or the negative terminal as mouse damage to wiring can cause short circuits and fires. Remove the ignition key and store in a safe place.

Re-use after long term storage

Perform a complete check of all oil fillings and coolant. Reinstall the battery and idle the engine for 30 min. to ensure optimum engine service life.

Fuel saving tips

To save fuel and extend the life of the oil in the tractor, keep the following in mind:

Air cleaning system

- Clean the air filtration system on a regular basis to avoid dust accumulation.
- Every 50 hours and every day in sandy / dusty conditions.
- Clean the air filter element with compressed air from a sufficient distance to prevent its damage.
- If the rubber ring is torn or stretched, replace it. Install the new seal in the correct place and check for tightness.
- If air leaks through the hose couplers, check for leaks and repair them.

Note: If the air purification system is not properly maintained, premature wear of the piston rings and boots occurs, resulting in problems such as loss of engine power, excessive fuel or oil consumption.

MAINTENANCE INSTRUCTIONS

Engine

1. After starting the engine and warming up the cooling circuit (indicator needle in the green field), put it into a high load.
2. If excessive black smoke is visible, check the air filter paper element, fuel injection pump, and injector nozzles.
3. Do not run the engine for more than 2 minutes without load. It is better to stop the engine than to let it idle.

Fuel system

1. Always use only diesel as fuel in the fuel system.
2. After finishing work, it is advisable to fill the tank with fuel to prevent condensation of water in the tank.

Replace the fuel filter if the engine misses or stalls. If these instructions are not followed, the service life of the injection pump and nozzles is shortened. There is also excessive smoke and excessive diesel consumption.

Oil system

1. Always use the recommended type of oil.
2. Every day before starting the engine, check the oil level using the dipstick and add fuel so that it is between the minimum and maximum levels.
3. Change the engine oil. If replacement is required, replace the filter and the O-ring together.

Cooling system

1. Check the fan belt tension regularly. Adjust if necessary.
2. Check the radiator coolant regularly.
3. If it is necessary to replace the radiator cap, use an original spare part.
4. Do not disconnect the thermostat, but replace it with a new one if necessary.
5. Do not change the water in the radiator too often.

Note:

- 1) Always resolve any fuel or oil leaks immediately.**
- 2) Perform regular maintenance; failure to do so may increase fuel consumption by up to 25%.**
- 3) Regularly check that the cylinder head bolts are tight to the correct torque and adjust the valve clearance. In case of any technical questions or malfunctions, contact an authorized service.**
- 4) Check the tire pressure and adjust to the prescribed pressure if necessary.**

Note:

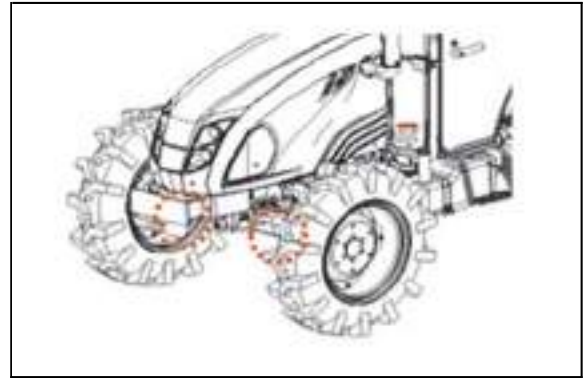
- 1) Always purchase original spare parts from an authorized dealer/distributor.**
- 2) Always service the tractor only at an authorized dealer / distributor.**

* For any other information, contact your nearest authorized dealer / distributor.

MAINTENANCE INSTRUCTIONS

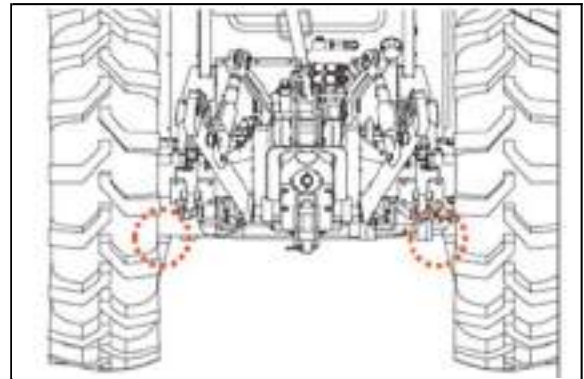
How to use of jacks

Front axle



U18N114

Rear axle



U18N115

- If the tractor must be lifted for servicing, take it to a suitably equipped workshop.
- Carry out the following operations before any operation about the tractor. Engage the four-wheel drive, the first gear and the parking brake and put chocks to the wheels touching the ground.
- Before lifting the tractor, avoid its swinging by means of wooden wedges applied to the front axle
- Use jack lifts of suitable capacity and apply them at the centre of the front and rear axles and paying due attention to weight distribution.

- No decals for the lifting point are applied on the tractor, as they would be, too difficult to apply in the available spaces and would be all too easily removed or effaced during normal operation of the tractor.

Note: Apply the jack lift to the lifting points according to the type of operation and following the safety procedures given before.

NOTES

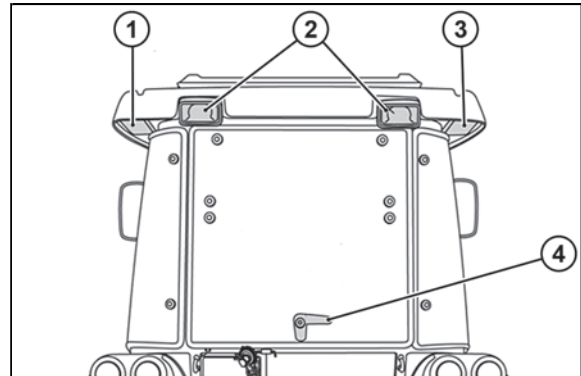
CABIN

The cab fully complies with international standards in terms of safety and sound insulation. It is equipped with ventilation, heating and air conditioning systems.



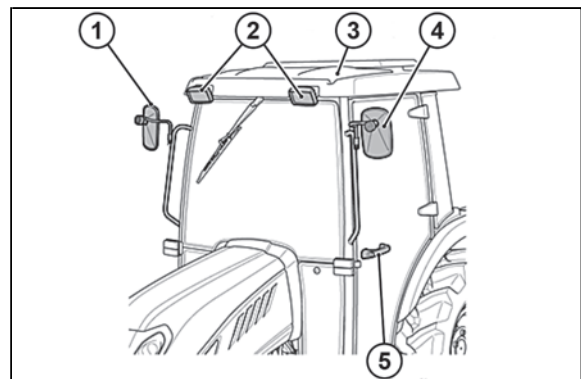
The cab is in full conformity with the international standards as to the cab's soundproofing. Be very careful when operating in small spaces and always protect your ears whenever other working equipment is generating dangerous noise levels.

- 1 - Air Filter
- 2 - Working Lamp (Rear)
- 3 - Air Filter
- 4 - Door Handle



U18N105

- 1 - Rear Mirror
- 2 - Working Lamp
- 3 - Roof hatch
- 4 - Rear Mirror
- 5 - Door Handle



U18N106



Remember that steering, braking and operational performances are highly influenced by the implements mounted, the trailers transported and the ballasts applied to the tractor.



When transporting heavy loads (exceeding the weight of the tractor) reduce the speed under 15 km/h..



All the implements mounted onto the tractor must be safely secured.



Be very careful during implement hitching and unhitching operations. When using implement supports, be sure they are suitable and sufficiently strong.

CABIN

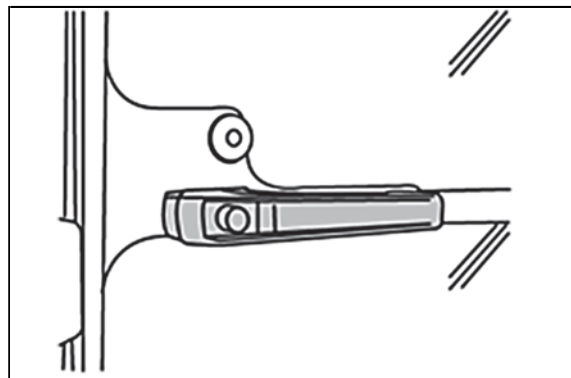
Instruments and related parts

Doors

The doors are provided with key locks.

To open from the outside, when unlocked, depress the push button.

To open from inside, push the lever downwards.

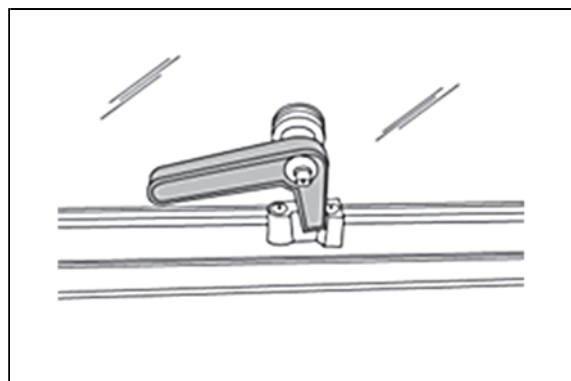


U18N107

Rear window

The rear window is fitted with central handle for opening.

When opened it is held in place by two dampers.

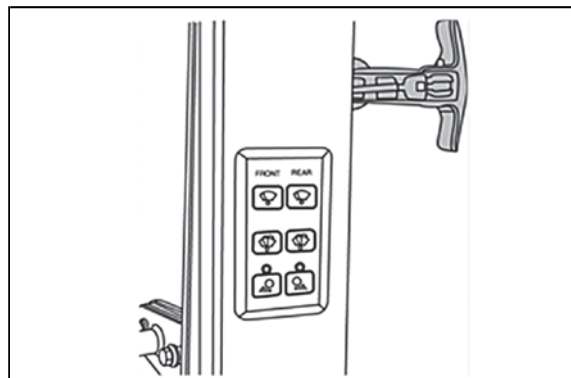


U18N108

Side window

The side window is fitted with central handle for opening.

When opened it is held in place by holder.

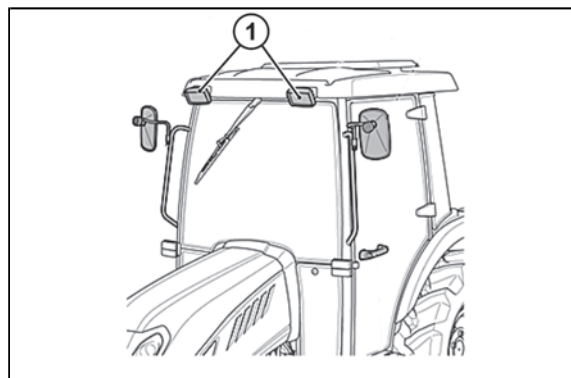


U18N109

Work lights (front and rear)

The work lights are located on the cab roof (two at the front and two at the rear). They are switched on using special switches on the roof console.

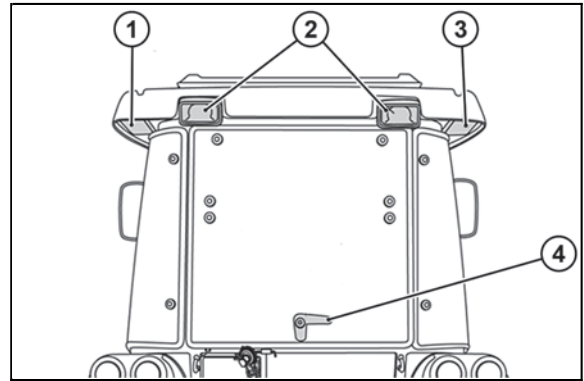
1 - Work lights



U18N110

CABIN

- 1 - Cab Air Filter
- 2 - Work Light (Rear)
- 3 - Cab air filter
- 4 - Rear Window Handle



U18N111

Rearview mirrors

The cab is provided with rearview mirrors on both sides. They can be adjusted and folded, whenever necessary, to avoid interference with external obstacles.

The mirror have a telescopic arm to allow positioning for maximum convenience by the user.

Remember that mirrors must always be positioned in compliance with road traffic regulations when driving on a public highway.

Cab ceiling

The roof of the cab is lined with insulating material, the task of which is to retain thermal radiation in the cab and to maintain the cab temperature at a low temperature when working in hot sunny weather.

The cab platform is covered with a heavy-duty material in the most commonly used parts.

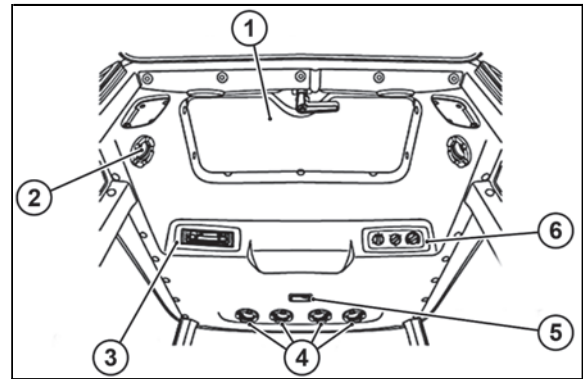
It is recommended to keep the floor clean, free of soil, mud, etc., so that the operator can enter and exit the tractor completely safely.

CABIN

How to controls cabin

Interior devices

- 1 - Roof Hatch
- 2 - Recirculation Input
- 3 - Player
- 4 - Rotary Diffuser
- 5 - Dome Lights
- 6 - Air conditioning unit, heating control



U18N112

Ventilation

The ventilation unit is housed in the cab ceiling.

To switch it on and adjust it, turn the electrical fan switch to the desired speed.

The cab becomes slightly pressurized when the ventilation system is in operation, so that the fresh air can enter only by way of the filter installed in the rear section of the cab roof.

The fan switch can be operated only after the ignition key is inserted.

The air flow can be regulated and directed by suitable positioning the air diffusers.

Air can be taken in fresh from outside or recirculated from within the cab by way of the relative side inlets.

Re-circulation inlets fully closed

Air is taken in entirely from outside the cab through the rear grille and filtered through a paper element positioned behind the grille.

Note: It is very important that the air diffusers never be completely closed so as to allow for a steady air flow. To obtain a greater pressurization inside the cab, it is necessary to take the air from the outside, therefore the inside air recirculation grille should be fully closed.

CABIN

Control panel on right cab pillar

1 - Front Wiper Switch

2 - Rear Wiper Switch

Press the switch to turn on the corresponding wiper, press the switch again to turn off the wiper.

3 - Front Washer Switch

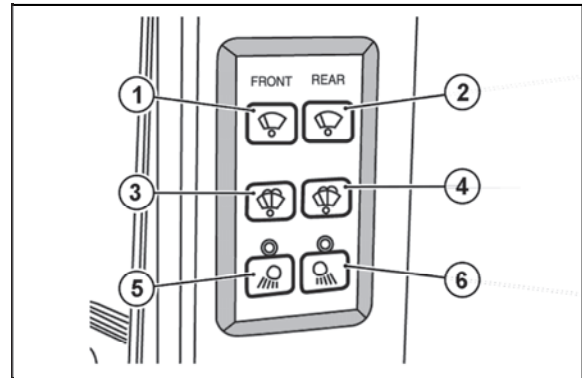
4 - Rear Washer Switch

Press the switch to turn on the washer, when the switch is released, the washer turns off.

5 - Front Work Lights Switch

6 - Rear Work Lights Switch

Press the switch to turn on the corresponding worklights, press the switch again to turn off the corresponding worklights. When the headlights are switched on, the indicator light above the relevant switch is on.

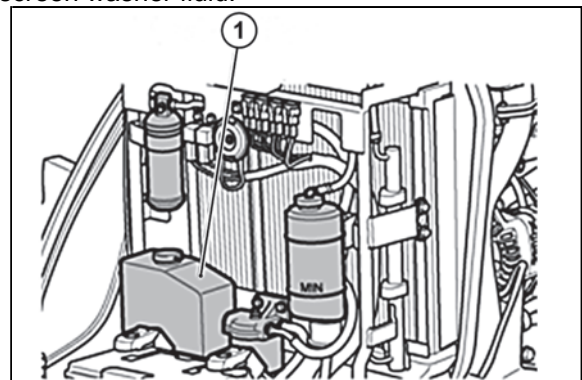


U18NN113

Windscreen washer tank

Check the level of windscreen washer fluid in the plastic reservoir located on the rear side of tractor. During winter it is advisable to add a suitable antifreeze to the windscreen washer fluid.

1 - Washer tank



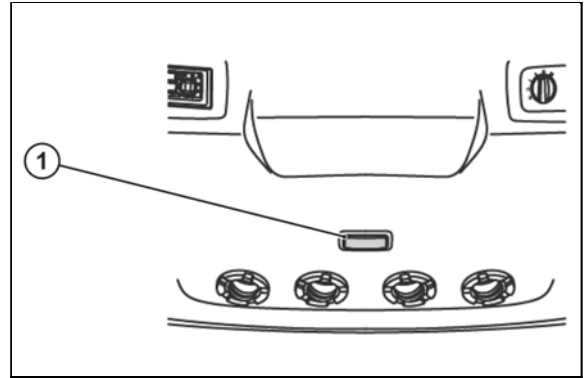
U18N114

CABIN

Interior lamp

Press the button to switch on.
To switch it off, press it again.

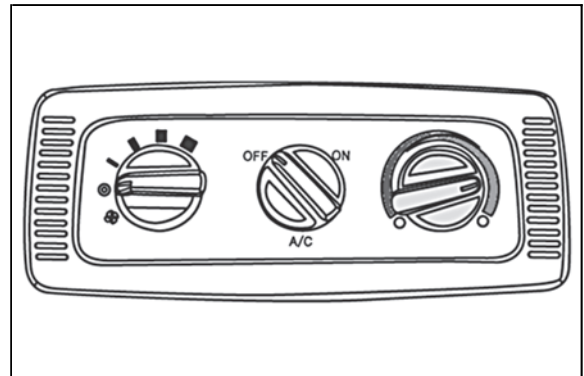
1 - Interior lamp



U18N115

Blower control switch

Four-position rotary switch



U18N116

Temperature control

Set temperature control as required fully clockwise.
For maximum cool and fully counterclockwise for heat.



U18N117

Air conditioner switch

To operate the air conditioner the blower must be on the blower speed temperature control and all vents must be adjusted to obtain the best cooling for the ambient temperature and dust conditions.

Under normal operating conditions, and the windows and doors closed, temperatures in the cab of 6 °C to 15 °C (10 °F to 25 °F) less than the ambient temperature will occur. When operating the air conditioner system, the moisture level is decreased.

Note:

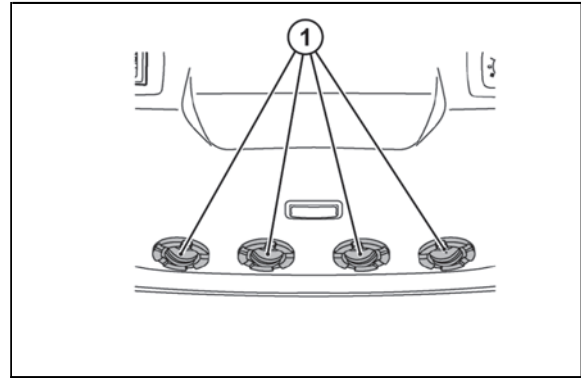
- 1) During cold weather, with ambient temperature above 0 °C (32 °F) operate the air conditioner at least once per month for a period of 10 to 15 minutes. This will lubricate the seals to prevent them becoming brittle and help prevent the loss of refrigerant from the system.
- 2) The system is equipped with an environmentally safe refrigerant, R134a. Never recharge the air conditioning system with refrigerant other than R134a as this will result in loss of cooling and permanent damage to all air conditioning components.

CABIN

Circulation diffuser

1 - Circulation diffuser

With the circulation vent set in any position outside Air will still be pulled into the cab.



U18N118

Heating system

The heater is switched on and adjusted by rotating the control knob at the roof console, then switching on the blower and setting the selector at the preferred speed.

To warm the cab up quickly, the knob should be rotated fully clockwise and the blower set to speed 3.

The screen is demisted or defrosted by air directed through a slot vent. For defrost or fast demist, all other vents should be closed off.

Important:

Ventilation is provided by a single blower unit serving both the heating system and the air conditioning system.

After reaching the desired temperature adjust the system to suit your needs.

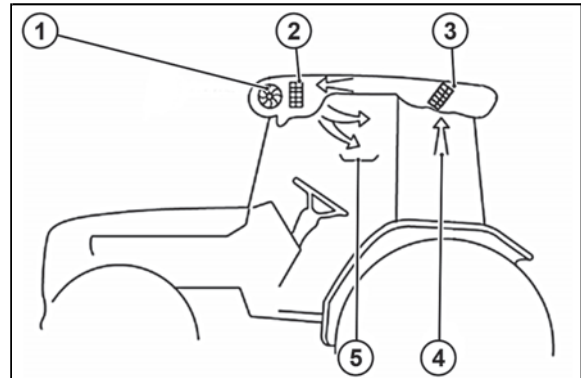
Note: For ideal system operation, the engine must run at 1 000 rpm.



Warning: Before starting the engine, make sure the system is off (by turning off the ventilation fan) so as not to overload the battery.

After the system at full power for a long period of time, never turn it off suddenly but let it first idle for about 20 seconds.

- 1 - Heating Fan
- 2 - Electric heating
- 3 - Air Filter
- 4 - Recirculation connections
- 5 - Rotary Air diffuser



U18N119

Heating system configuration

The heating system consist of two units:

1. Electric heater and blower unit installed behind roof console.
2. Power supplying set, consisting of an auxiliary alternator located front of the engine and driven by a belt directly linked to the engine pulley.
If the air does not come out from the diffusers right away as soon as the system is started, turn off immediately and identify the fault.

N.B: Never turn on the heating system when working in dusty environments.

CABIN

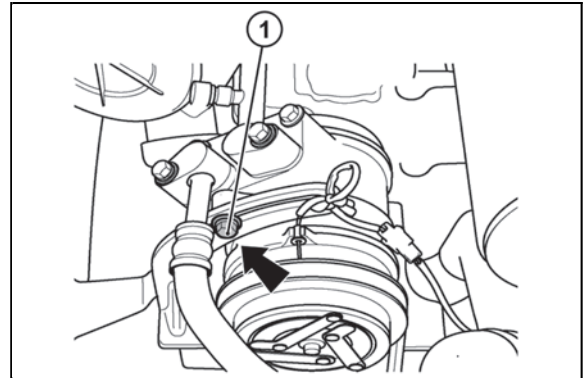
Compressor belt adjustment

Check the compressor belt tension regularly and adjust if required.

The correct tension is if the center of the belt is pushed. With a finger it moves in approx. 10 mm (0.39 in) as shown in the picture.

To adjust the belt, loosen or tighten the nut as shown in the picture.

1 - Tension Adjusting Bolt

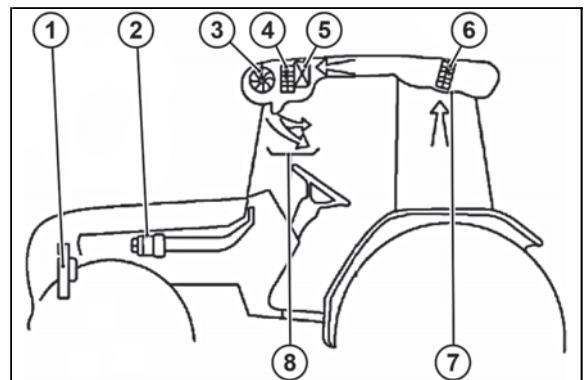


U18N120

Air conditioning system

The system is designed to provide optimum temperature inside the cab and provide the operator with maximum comfort and safety. However, if you want to make repairs or adjustments, it is recommended to consult our specialist workshops. Do not approach the system with open flames, as lethal and explosive gas can be generated when the media leaks from the circuit.

- 1 - Alternator
- 2 - Compressor
- 3 - Speed fan
- 4 - Electric resistance
- 5 - Evaporator
- 6 - Air filter
- 7 - Recirculation inlets
- 8 - Pivotal air diffusers



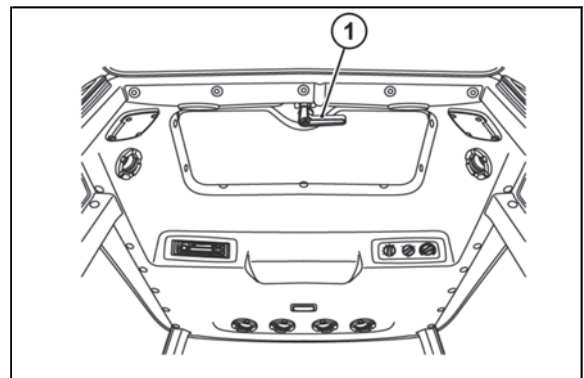
U18N121

Roof hatch (if equipped)

1 - Roof hatch

Ventilation-push the latch towards the front of the tractor and then push the hatch up.

Emergency Exit-Push firmly upwards to release the support struts from the lower retainer clips.



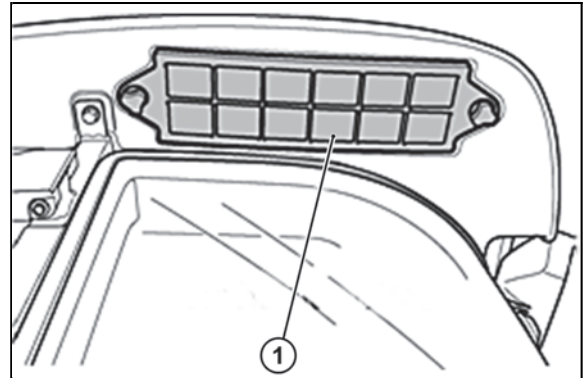
U18N122

CABIN

Cab air intake filter

The filter is not suitable for the treatment of pesticides and so must be replaced by an active carbon filter available optionally. Once the pesticide treatment is finished, it is necessary to once again replace the "ACTIVE CARBON" filter with the paper filter, since this is the only type suited for filtering foreign particles from the air. Optional ACTIVE CARBON FILTER is informed to parts Catalogue.

1 - Air intake filter



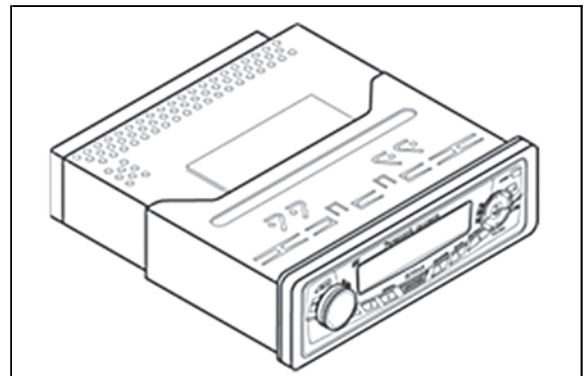
U18N123



Warning: *Cab air filters remove dust in the air, but are not capable of removing chemicals used in spraying crops or in weed control. Many chemicals used for these purposes are toxic when improperly used and can be hazardous to operators and others in the area. Follow the instructions of manufacturers of both the equipment and the chemicals regarding prohibition of dust or spray, personal hygiene practices, and other precautions noted by the manufacturers.*

Radio, CD player (if equipped)

For operation refer to the radio, CD player manufacturers instructions.



U18N124

CABIN

Ash tray

Located at right side of near side window in cabin.

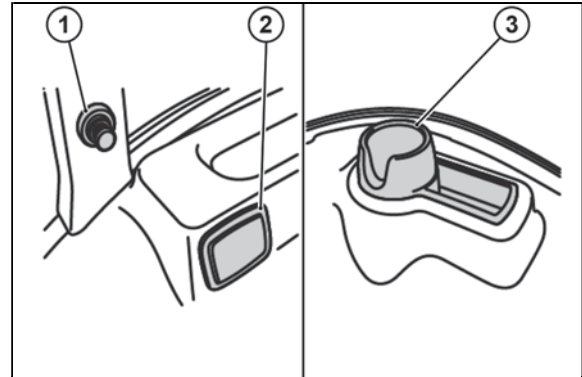
Cup holder

Put the bottles and personal belongings.

Cigarette lighter

Push the button. Use that is retune to original position.

- 1 - Cigarette lighter
- 2 - Ash tray
- 3 - Cup holder



U18N125

1. Check of the air-conditioning system.

1- High economy and gentle refrigerant: R134a 0,7~0,85 kg.

The presence of air and water in the system can harm its efficiency.

- Air is unnecessarily circulated by the compressor as it has practically no cooling effect.
- Moisture tends to rise to obstacles and joints, which significantly reduces cooling efficiency.

2- Check the belt tension; press your finger on the middle point between the two rollers.

3 - The radiator fins must always be properly cleaned using water or compressed air.

2. Checking the air conditioning system charge

(1) Check the refrigerant charge.

- Run the engine at 1 500 rpm.
- Set the air conditioning system in the coldest for 5 minutes.
- Check the sight glass clear or cloud.



Caution:

- *If the air-con. is operated with not charged.*
- *The lubrication in the compressor can cause the damage.*

CABIN

3. Diagnosing malfunctions

(1) Tracing faults

	FAULT	SYMPTOM	CAUSE	SOLUTION
1. Compressor	Unusual sound	Input sound Output sound	Lack of lubricant	Add
			Loose belt	Adjust
			Loose console	Tighten the screws
			Clutch failure	Check
	Abnormal speed	Input cause	Damaged parts	Check, replace
			Clutch slips	Check, replace
			No lubricant	Add
		Output cause	Belt loosened	Adjust
	Refrigerant or oil leakage	Refrigerant or oil leakage	Sealing washer damaged	Replace
			Loose screw on the head	Tighten
			O-Ring damaged	Replace
	Excessive pressure	Low, high pressure	Lack of refrigerant	Adjust
			Compressor	Replace

CABIN

	FAULT	SYMPTOM	CAUSE	SOLUTION
2. Engine	Low pressure or not working	Engine operation normal	Air supply clogged	Remove
			Evaporator freezes	Adjust the minimum pressure
			Fan switch damaged	Replace the switch
			Compressor	Replace
		Engine operation is not normal	Engine failure	Replace
			Broken wire	Replace
		Air leak	Pipe leak	Check, tighten
	Fan cannot be operated	Engine	Pneumatic control switch error	Check, tighten
		Irregular engine operation	Engine failure	Replace
3. Clutch	Noise	Regular noise	Collision with roller	Check the position of the compressor
		Irregular noise		
	Disengagement	Disengaged occasionally	Wire failure	Check the wire
		Always engaged	Large clutch play	Adjust
			Low voltage	Check the battery
		Press by hand	Low voltage	Check the battery
		No wire defective	Malfunction	Replace
	Slippage	Slippage during rotation	Low voltage	Check the battery
			Clutch contaminated by oil	Clean
			Malfunction	Replace

(2) How to check the air conditioning system with the needle of high low gauge

To connect with manifold pressure gauge can find the cause of air conditioning system.

Because manifold pressure gauge is various sensibly (Ambient Temp. is based on 30~35 °C)

Caution: Operating E/G RPM 1 500~2 000 is must, and so to that you can check the correct cause and air conditioning. (In case below the figure of indicated pressure gauge has some clearance, confirm with approximate indicated needle data.)

Gauge pressure conversion

- $\text{lb/in}^2 = \text{PSI}$
- $1 \text{ kg/cm}^2 = 14.223 \text{ lb/in}^2$
(Ex) 200 PSI = 14 kg/cm^2

MAIN TECHNICAL PARAMETERS

The specifications on the following pages are given for your information and guidance.
For further information concerning your Tractor and equipment, consult your Authorized ZETOR Dealer/
Distributor.

Dimensions and weights are approximate only and the illustrations do not necessary show Tractors in
standard condition. For exact information about any particular Tractor, please consult your ZETOR
Authorized Dealer/Distributor.

Model			UTILIX HT45	UTILIX HT55
Engine	Manufacturer		Perkins	Perkins
	Model		404D-22	404D-22
	Type		Indirect injection, in-line, water-cooled, four cycle diesel	Indirect injection, in-line, water-cooled, four cycle diesel
	Number of cylinders		4	4
	Total displacement, cm ³		2,216	2,216
	Gross power kW (PS)		31.4 (42.7) @ 2,600rpm	36.3(49.4) @ 2,800rpm
	Rated speed (rpm)		2,600	2,800
	Maximum torque Nm at rpm		130 @ 1,800 rpm	140 @ 1,800 rpm
Electrical system	Battery		12V 80AH	12V 80AH
	Alternator		12V 65A	12V 65A
Driveline	Transmission type		HST	HST
	Shifting		Infinitely variable / 3 speed ranges	Infinitely variable / 3 speed ranges
	Brakes		Wet, disc	Wet, disc
	Steering		Hydrostatic	Hydrostatic
	Clutch		N/A	N/A
Hydraulic system	Pump capacity (main) L / min		33.5	36.5
	Pump capacity (power steering) L / min		17.5	19.2
	Number of auxiliary hydraulic valves (option)		2	2
Three-point hitch	Type		Category 1	Category 1
	Lifting Force	At the point of lifting	1,503	1,503
		25 inches behind lifting points (kg)	1,336	1,336
	Stroke control		Mechanical control - position / draft	Mechanical control - position / draft
Front three-point hitch	Type		Category 1	Category 1
	Category		I	I
	Lift capacity (kg)		700	700
	Control - SCV Joystick		Mechanical	Mechanical

MAIN TECHNICAL PARAMETERS

Volumes of liquids (L)	Fuel tank volume	60	60
	Cooling system	8.5	8.5
	Crankcase (with filter) (L)	6.7	6.7
	Transmission and hydraulic system	3.5	3.5
	Front axle housing	10	10
Dimensions	Total length with three-point hitch mm	3,590	3,590
	Total width (mm)	1,620	1,620
	Total height (mm)	2,530	2,530
	Total maximum permissible width according to the used rear tires mm (in.)		
	320-70 R24	1620 (64)	1620 (64)
	17,5L-24	1870 (74)	1870 (74)
	Wheelbase (mm)	1,935	1,935
	Ground clearance (mm)	350	350
	Min. turning radius without brakes (mm)	3,820	3,820
	Weight with ROPS or cab	1,900	1,900

MAIN TECHNICAL PARAMETERS

Maximum permissible weight of the unit (tractor with trailer or semi-trailer)

Brake type of trailer or semi-trailer	Tractor with cab (kg)	Tractor without cab (kg)
Unbraked	4,425	4,250
With overrun brake	9,325	9,150
With air brakes	9,325	9,150

Maximum permissible tractor axle load

	Maximum permissible axle load (kg)
Front axle	1,400
Rear axle	1,925



The maximum permissible load on individual axles must not be exceeded, even if the maximum load capacity of the tires allows it.

Permitted maximum weight of set 'tractor + mounted machine' (kg)

Maximum permissible weight of the unit (kg)
3,325

Manoeuvrability condition

Tractor front axle load from total weight - tractor + integral machine
Minimum 20%

Permissible wheel combination for tractors and load capacity of tires

		Tire size	Tire load capacity for one piece of tire (kg)
R1	Front	240/70 R16	900
	Rear	320/70 R24	1,250
R4	Front	12-16,5	2,900
	Rear	17,5L-24	3,150



The load capacity values in the table are indicative, the tire load capacity values provided by the tire manufacturer are preferred.

MAIN TECHNICAL PARAMETERS

Traveling speed

Km/h (Mi/h)			
MODEL		UTILIX CL45/45NC/55/55NC	
Range shift	Man shift	Forward	Reverse
LL	1	0.65 (0.40)	0.55 (0.34)
	2	0.87 (0.54)	0.73 (0.45)
	3	1.32 (0.82)	1.11 (0.69)
	4	1.56 (0.97)	1.32 (0.82)
L	1	1.86 (1.16)	1.57 (0.98)
	2	2.46 (1.53)	2.08 (1.29)
	3	3.76 (2.34)	3.17 (1.97)
	4	4.44 (2.76)	3.74 (2.32)
M	1	3.88 (2.41)	3.27 (2.03)
	2	5.15 (3.20)	4.34 (2.70)
	3	7.86 (4.89)	6.62 (4.11)
	4	9.27 (5.76)	7.82 (3.00)
H	1	12.29 (7.64)	10.36 (6.44)
	2	16.30 (10.13)	13.74 (8.54)
	3	24.89 (15.47)	20.98 (13.04)
	4	29.37 (18.25)	24.76 (15.39)

*The specifications are subject to change for improvement without notice.

MAIN TECHNICAL PARAMETERS

Noise levels

The tractor is approved in accordance with the applicable EC Directives.

To avoid increased noise levels, proceed as follows:

- After maintenance work or repairs, reassemble all the soundproof panels and materials correctly
- Do not make any changes to the tractor which may increase the noise emission.
- Beware of any abnormal noise or vibration; if you notice unusual noise or vibration, park the tractor safely. Inform the authorized service about the situation. Avoid prolonged operation.

Reference standards for the measurement of noise levels:

- The maximum driver-perceived noise level, with the engine at normal operating temperature and measured in accordance with the test method described in the European Directive 2009/76EC
- The maximum noise level measured with the tractor in motion and the tractor stationary, measured in accordance with the method described in European directive 2009/63/EC.

Model	NOISE LEVELS		
	Maximum noise level in CAB with Doors open(Roof hatch and front and rears windows open), db(A)	Maximum noise level in CAB with doors closed, db(A)	ROPS Driver-perceived sound level[dB(A)]
UTILIX HT45/ HT55(ROPS)	-	-	78
UTILIX HT45/ HT55(CABIN)	82	81.5	-

Model	NOISE LEVELS	
	Maximum external noise level With tractor moving, db(A)	Maximum external noise level With tractor stationary, db(A)
UTILIX HT45/ HT55(ROPS)	78	76.2
UTILIX HT45/ HT55(CABIN)	77	75.4

MAIN TECHNICAL PARAMETERS

Vibration referred to the operator position

The value is referred to the amount of mechanical vibration transmitted by the tractor to WHOLE-BODY as defined by UNI ISO2631-1:2008. Said value must be utilised for assessment of the vibration exposure risk, but it cannot cover all the possible conditions of use of the tractor since it may vary in accordance with parameters that are not always related to the tractor (terrain, implements, etc.). If the risk assessment cannot be considered to be exhaustive or if the risk may exceed the values defined in 2002/44/EC, the use of a vibration meter is prescribed.

In order to minimise the vibration transmitted to the whole-body the following best practice rules should be observed

- - Use the most suitable implement for the tractor and the task in hand
- - Adjust the seat to suit your weight and stature
- - Periodically check the condition of the cab suspensions and renew them if damaged
- - Check tyre inflation pressure
- - Use front axle suspensions, if fitted
- - During transfers, adjust tractor speed in order to minimise the vibration level.

The seat vibration values, as obtained from the seat approval in compliance with 78/764/EEC (amended by 1999/57/EC) are shown in the following table.

Technical data

Input vibration : Category A, Class II

Ambient temperature : 23 °C

Seat type	Seat load	Corrected vibration level on seat
W09SSS	59 kg	1.24m/sec ²
	98 kg	1.12m/sec ²

FAULT TRACING

Engine troubleshooting

SYMPTOM		CAUSE	CORRECTIVE MEASURE
Engine	Starter does not start when switched on	No clutch depressed Battery is discharged Defective switch	Depress the Clutch Recharge or replace the battery Contact repair service
	Starter is working but not enough to start the engine	Low battery capacity Poor grounding Oil too dense	Recharge the battery Clean the ground wire and tighten Drain and change oil
	The starter is working properly, but the engine does not start	Air in the fuel system Fuel filter plugged No fuel supply Glow plug disconnected or not working	Bleed the system Clean or replace both filters Fill the tank or turn the tap Contact repair service
	Engine speed is irregular	Air in the fuel system Incorrectly set injection Leak in the fuel lines	Bleed the system Contact repair service
	Engine stalls at low rpm	Poor fuel injection Defective injection pump Faulty valve clearance Incorrect idle setting Incorrectly set injection	Contact an authorized service Contact an authorized service Contact an authorized service Contact an authorized service Contact an authorized service
	Engine suddenly stops	Lack of fuel Incorrectly set injection Choked engine due to lack of oil, incorrect oil or lack of coolant	Fill the tank and bleed the fuel system Contact an authorized service

FAULT TRACING

SYMPTOM		CAUSE	CORRECTIVE MEASURE
Engine	Engine is overheating	Lack of coolant Broken or incorrectly set fan belt Air filter plugged Clogged radiator Low oil level	Refill coolant Set or replace Clean or replace air filter Clean the radiator fins Refill the oil to the right level
	Reduced engine power	Injectors are clogged, carbonated and sticky Low compression Leaking valve Incorrect valve clearance adjustment Incorrect timing Lack of fuel Air filter plugged	Contact an authorized service Contact an authorized service Contact an authorized service Contact an authorized service Refill tank and check fuel quality Clean
	The oil indicator light comes on when the engine is running	Low oil level Unsuitable oil Indicator light or switch error Oil filter plugged	Refill to correct level Replace with correct oil Replace defective part Contact an authorized service
	The alternator indicator light comes on when the engine is running	Faulty wiring Defective alternator Low electrolyte level or defective battery Broken or loose fan belt	Contact an authorized service Contact an authorized service Add or replace Replace or adjust

FAULT TRACING

Brake and hydraulic system troubleshooting

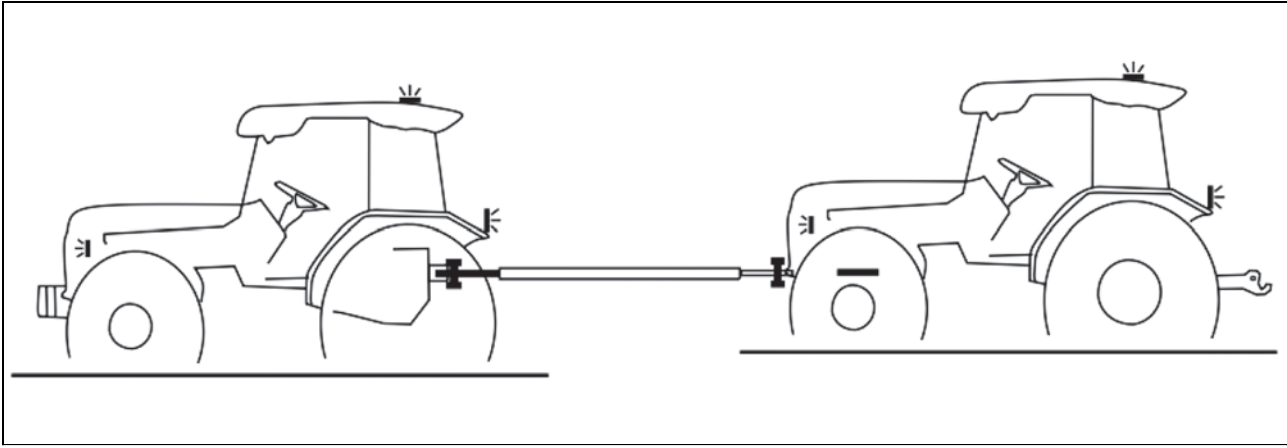
PROBLEM		CAUSE	SOLUTION
Brakes	Brakes do not work	Improper clearance Worn or burned lining Different left and right clearances	Adjust the correct clearance Contact an authorized service center Adjust the same clearance
	Brake pedal does not return	Defective return spring Lack of lubricant in joints	Replace the spring Remove corrosion and lubricate with lubricant
Hydraulic system	Three-point hitch does not respond	Engine speed is too low Lack of transmission oil Air leaks from piping Suction filter plugged Defective pump Defective hydraulic valve Defective cylinder	Increase the engine speed. Refill oil to the desired level Repair or replace the piping, replace the O-ring on the joint and tighten Clean filter and change oil Contact an authorized service center Contact an authorized service center Contact an authorized service center
	Oil leakage from lines	Loose connection Cracked lines	Tighten the joint Repair or replace the lines
	The relief valve squeaks while lifting	Stop slipped	Adjust the stop
For any other hydraulic problems, please consult your authorized service center, which has the appropriate equipment to diagnose and repair the entire system.			

FAULT TRACING

Steering wheel and electric instruments troubleshooting

SYMPTOM		CAUSE	REMEDY
Steering wheel	Steering wheel shaking	Wrong toe-in Unequal tire pressure Loose component	Adjust toe-in Inflate both to correct pressure Tighten or replace if worn
	Excessive play in the steering	Worn steering shaft Worn components	Contact dealer for repair Contact dealer for repair
Electric instruments	Flat battery	Faulty wiring Faulty alternator Faulty regulator Broken or loose fan belt	Repair, reconnect or tighten as needed Contact dealer for repair Contact dealer for repair Replace or adjust
	Before anything else, check the electrolyte level of the battery and the connections. Top up it required and clean and retighten the terminal		
	Dim head lights	Low battery Faulty wiring	Charge or replace Repair or replace as needed
	Headlights not working	Blown bulb Blown fuse Faulty contact	Replace bulb Replace fuse Repair or replace and check the earth
	Horn not working	Faulty horn button Faulty wiring Faulty horn	Replace button Repair or replace Replace
	Indicator not working	Blown bulb Faulty flasher unit Faulty wiring	Replace bulb Replace unit Repair or replace

TOWING THE TRACTOR



U18N137

The tractor may only be towed at a short distance, for example from the building outside, etc. A damaged tractor should be towed to the minimum necessary distance to remove it from a potentially hazardous situation or area. Comply with all legal provisions specified in the Road Traffic Act.



Caution: *We recommend transporting the tractor on a low loader in the case of longer transport distances. Comply with the maximum width and height regulations for road transport. Check that the loader is suitable for the weight of the tractor to be transported.*



Caution: *An operator must always be at the tractor's controls when the tractor is being towed.*

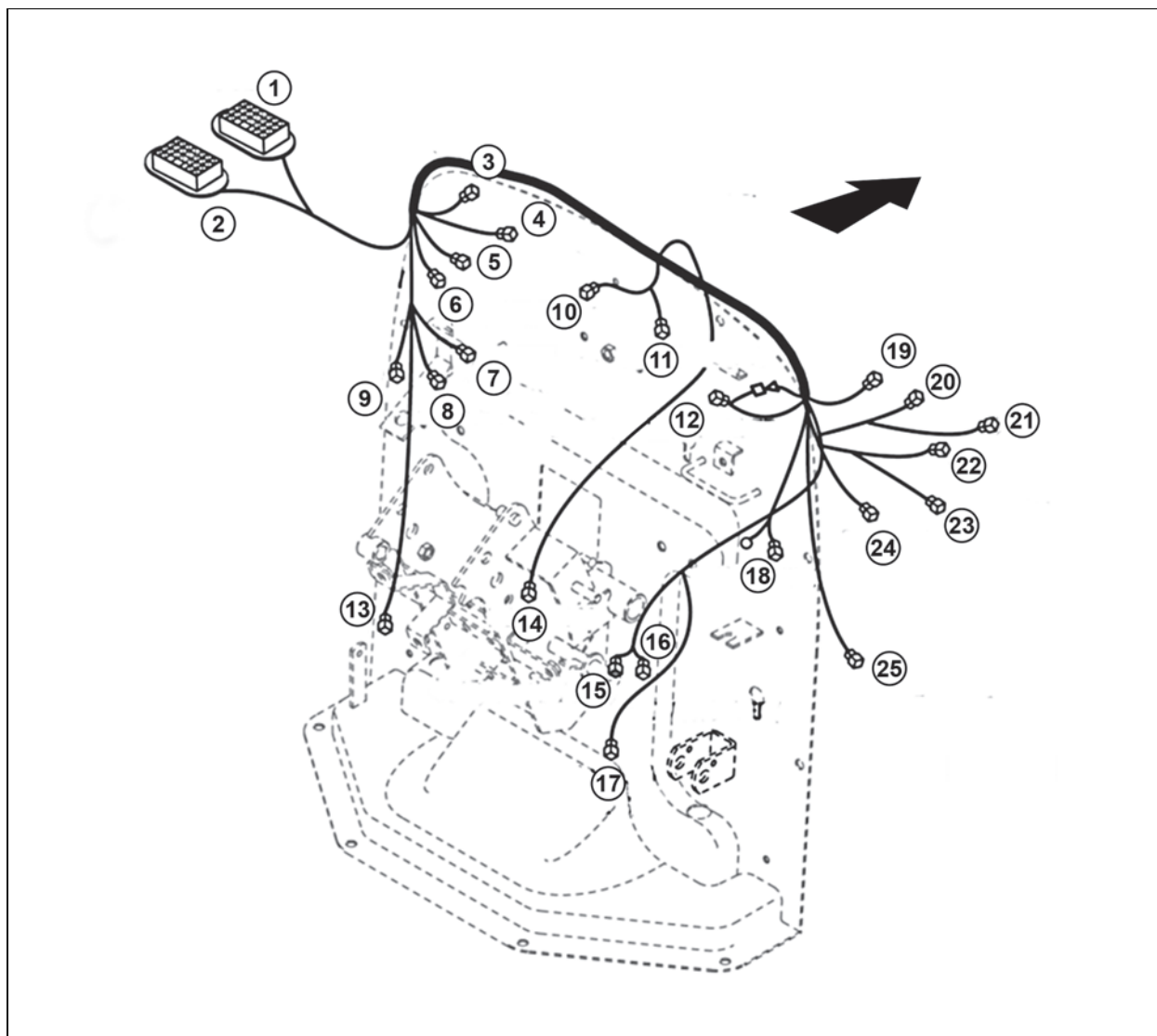


Caution: *NEVER permit other persons to access the tractor operator position during towing.*

NOTES

WIRING DIAGRAM

UTILIX HT 45 / UTILIX HT 55 Electric system diagram (1)

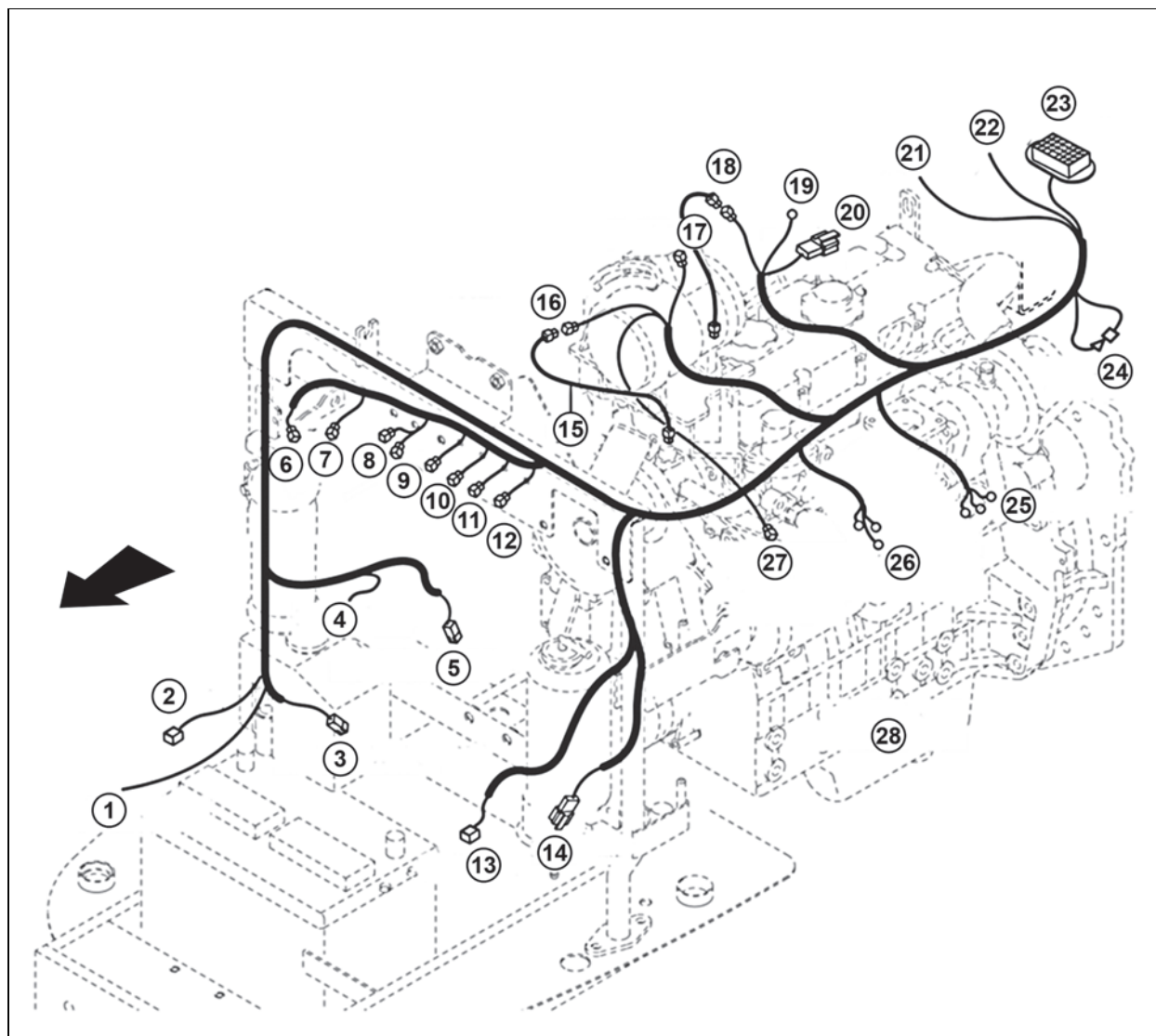


U18N126

- | | |
|--------------------------------|--------------------------------------|
| 1 - Harness (engine) | 14 - Fuse box |
| 2 - Harness (rear) | 15 - Controller (A) |
| 3 - Accel sensing S/W | 16 - Controller (B) |
| 4 - Load sensing S/W | 17 - Cruise speed control S/W |
| 5 - Cruise S/W | 18 - PTO mode S/W |
| 6 - Parking pedal S/W | 19 - Meta panel (A) |
| 7 - Combinatin S/W | 20 - RPM motor |
| 8 - Hazard lamp S/W | 21 - RPM volume sensor |
| 9 - Metapanel (B) | 22 - Key S/W |
| 10 - Ext power relay | 23 - PTO S/W |
| 11 - Flasherunit | 24 - PTO S/W |
| 12 - Monitor controller | 25 - Cruise speed |
| 13 - Brake S/W | |

WIRING DIAGRAM

UTILIX HT 45 / UTILIX HT 55 Electric system diagram (2)

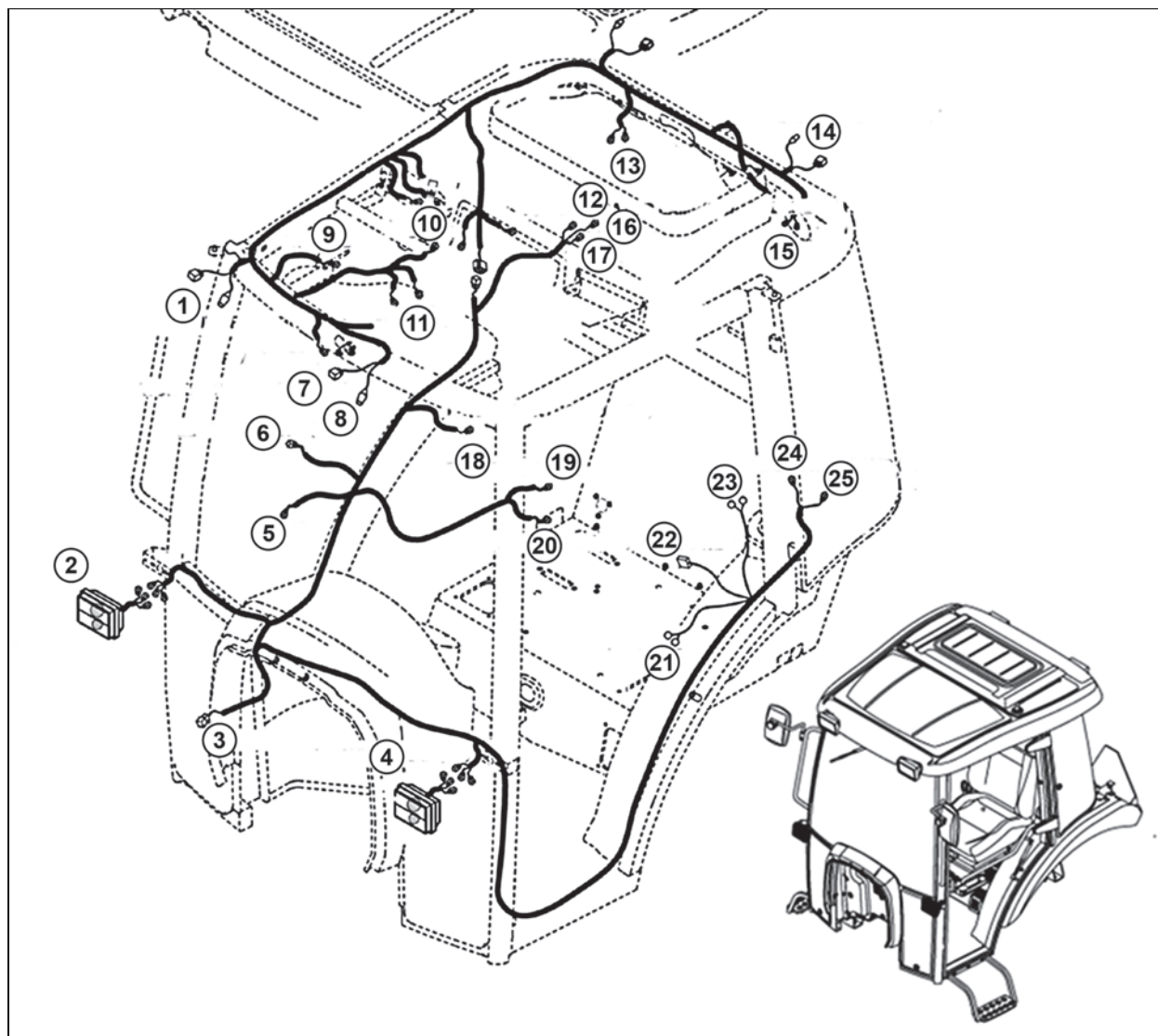


U18N127

- | | |
|----------------------------|--------------------------|
| 1 - Nozzle (front) | 15 - 10 |
| 2 - Battery (-) | 16 - Oil pressure S/W |
| 3 - Washer tank (front) | 17 - Compressor |
| 4 - Nozzle (rear) | 18 - Injection pump |
| 5 - Washer tank (rear) | 19 - Glow plug |
| 6 - Start relay | 20 - Lighter |
| 7 - Glow relay | 21 - Nozzle (rear) |
| 8 - Horn | 22 - Nozzle (front) |
| 9 - Glow fuse | 23 - Main connector |
| 10 - Cabin fuse | 24 - Interrupt connector |
| 11 - Main fuse | 25 - Start motor |
| 12 - Battery charging fuse | 26 - Alternator |
| 13 - Battery (+) | 27 - Water temp sensor |
| 14 - Fuel pump | 28 - Engine |

WIRING DIAGRAM

UTILIX HT 45 / UTILIX HT 55 Cabin wiring diagram (1)

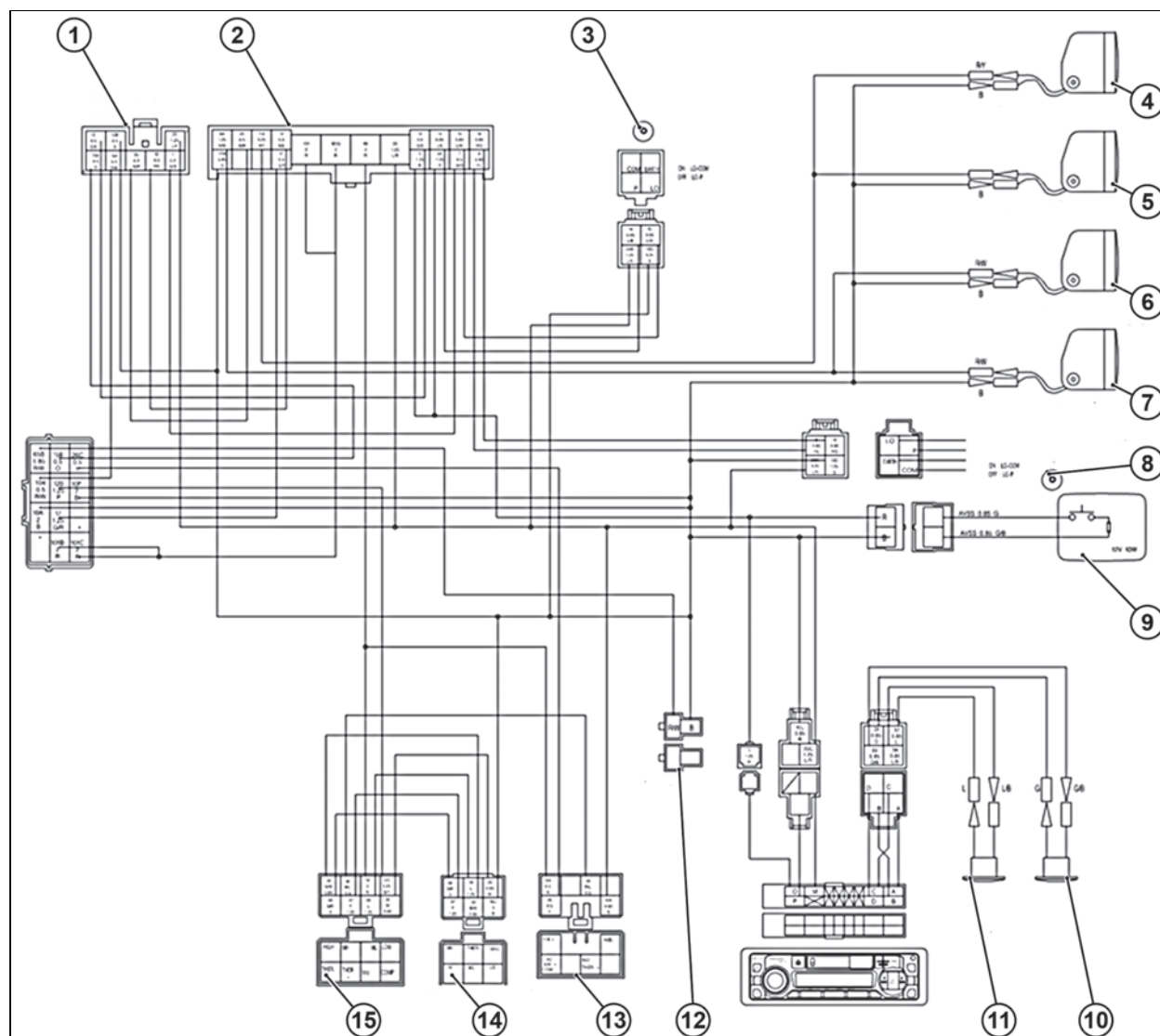


U18N128

- | | |
|-------------------------------|-------------------------------|
| 1 - Working Lamp (Front.RH) | 14 - Working Lamp (Rear.L) |
| 2 - Combination Lamp (RH) | 15 - Speaker (LH) |
| 3 - Harness (Main) | 16 - Ext. S/W |
| 4 - Combination Lamp (LH) | 17 - Stop Lamp (RH) |
| 5 - PTO Valve | 18 - Level Control (Upper) |
| 6 - Level Control (Lower) | 19 - Trailer Coupler |
| 7 - Front Wiper | 20 - Hydraulic Lever (S/W) |
| 8 - Working Lamp (Front.LH) | 21 - Reverse Horn |
| 9 - Eva Assy | 22 - Ext. Power |
| 10 - Audio A/C S/W | 23 - No. Lamp |
| 11 - Interior Lamp | 24 - Turn Indicator Lamp (LH) |
| 12 - Turn Indicator Lamp (RH) | 25 - Stop Lamp (LH) |
| 13 - Speaker (RH) | |

WIRING DIAGRAM

UTILIX HT 45 / UTILIX HT 55 Cabin wiring diagram (2)

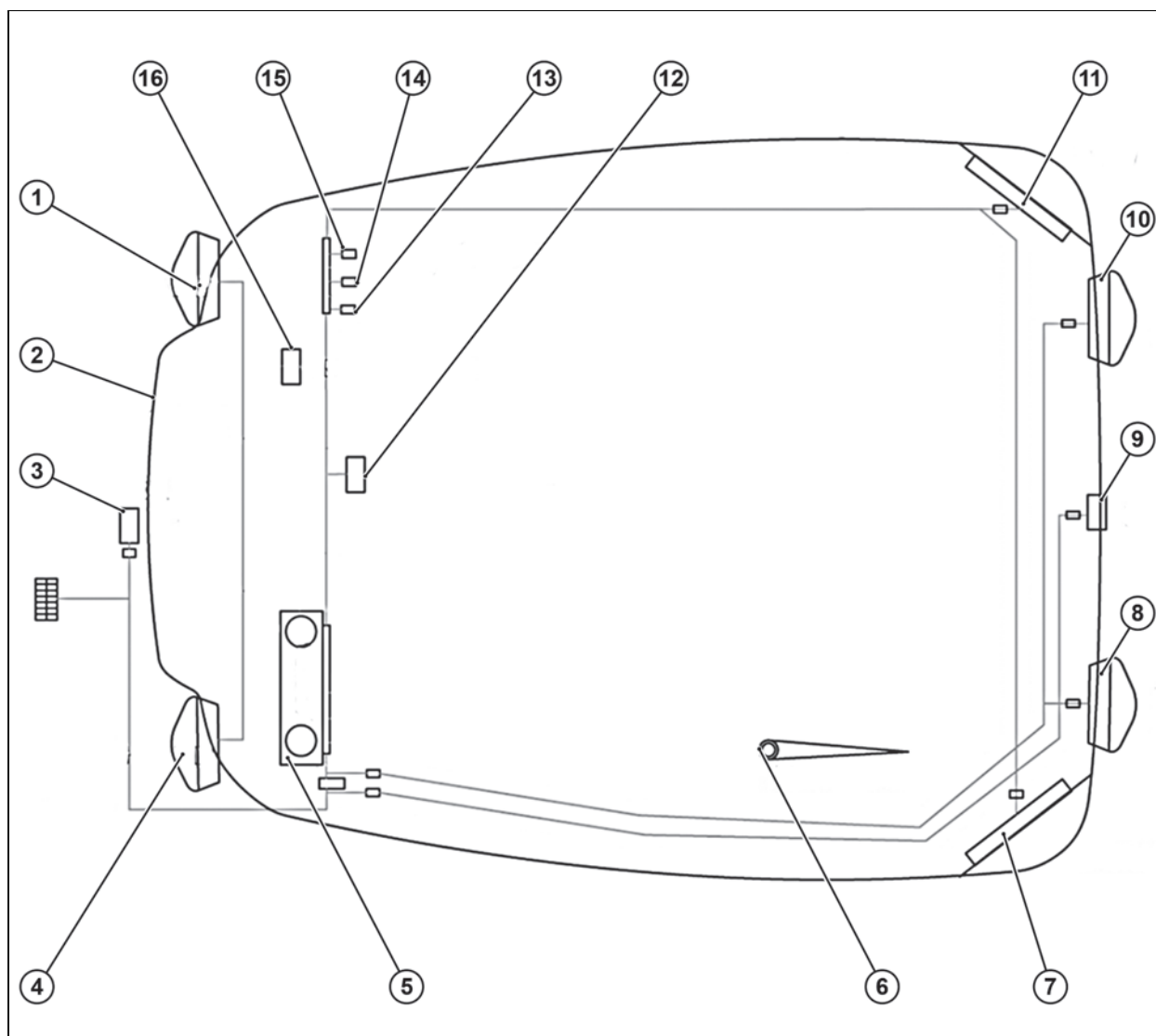


U18N129

- 1 - Switch set
- 2 - Relay set
- 3 - Wiper motor (Front)
- 4 - Front working Lamp (LH)
- 5 - Front working Lamp (RH)
- 6 - Rear working Lamp (RH)
- 7 - Rear working Lamp (LH)
- 8 - Rear wiper (Optional)
- 9 - Room lamp
- 10 - Speaker (LH)
- 11 - Speaker (RH)
- 12 - Lighter
- 13 - A/C switch
- 14 - Blower Switch
- 15 - Evaporator

WIRING DIAGRAM

UTILIX HT 45 / UTILIX HT 55 Cabin wiring diagram (3)

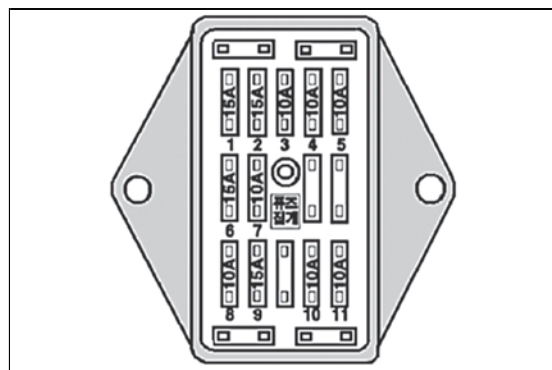


U18N130

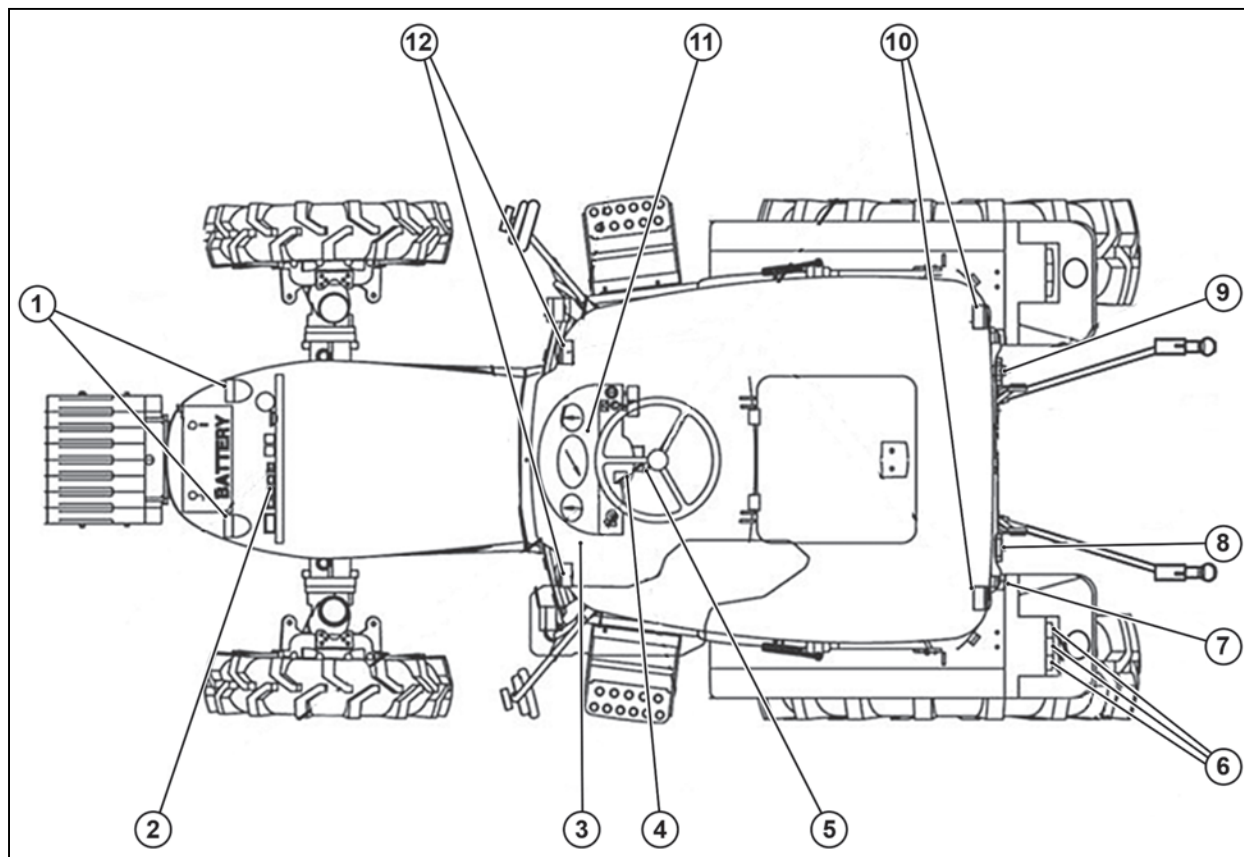
- 1 - Front working lamp (RH)
- 2 - E/V unit
- 3 - Front wiper
- 4 - Front working lamp (LH)
- 5 - Audio
- 6 - Antenna
- 7 - Speaker (LH)
- 8 - Rear working lamp (LH)
- 9 - Rear wiper
- 10 - Rear working lamp (RH)
- 11 - Speaker (RH)
- 12 - Interior light
- 13 - H/T S/W
- 14 - A/C S/W
- 15 - Blower S/W
- 16 - Relay box

WIRING DIAGRAM

- 1 - Panel, range RPM sensor
- 2 - Head lamp, horn
- 3 - Working lamp
- 4 - Stop lamp, reversing lamp
- 5 - Turn signal
- 6 - PTO
- 7 - Fuel pump engine stop
- 8 - Not used
- 9 - Coupler
- 10 - Controller
- 11 - E-hydro



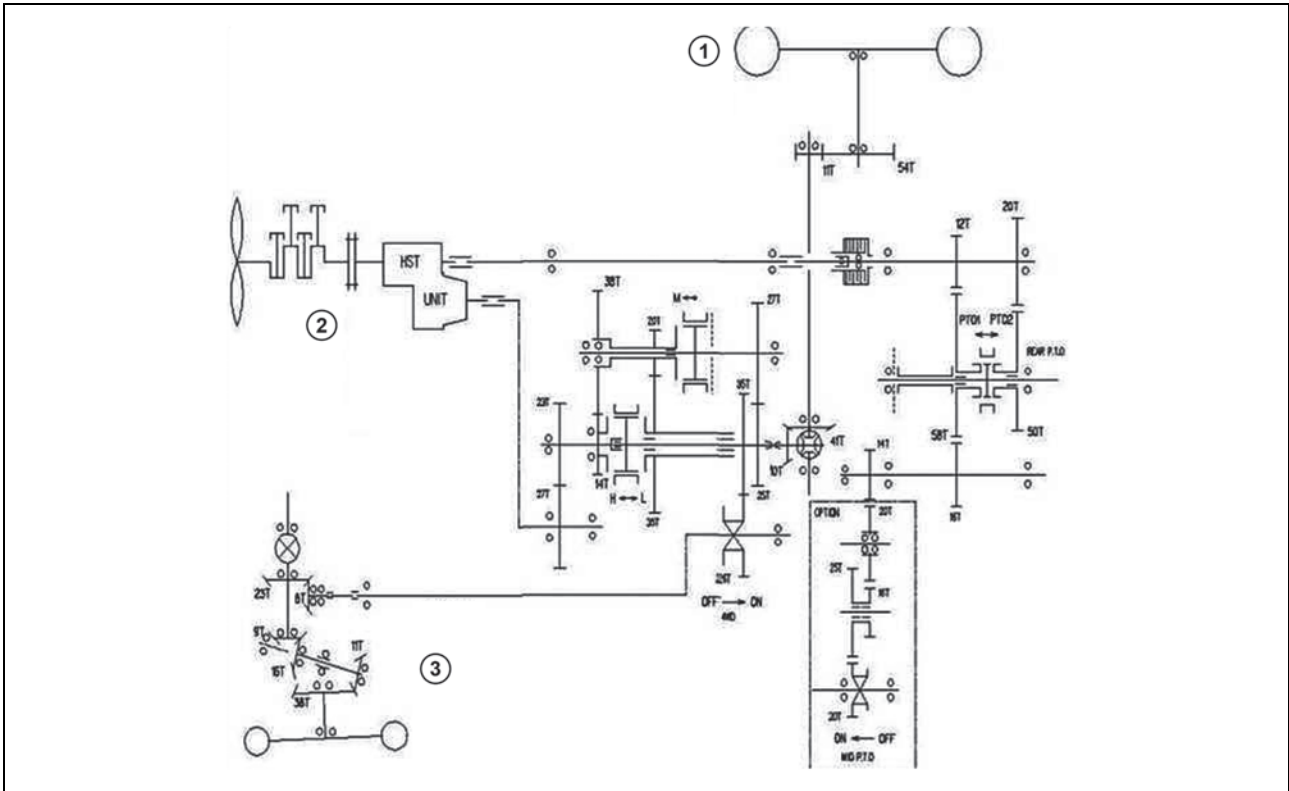
U18N132



U18N133

- 1 - Head lamp - 12V55W
- 2 - Slow blow fuse
- 3 - Units for direction signal relay for the power
- 4 - PTO monitor
- 5 - Fuse box
- 6 - Turn signal lamp (rear) - 12V21W; Stop lamp, Tail lamp - 21/5W
- 7 - Coupler for the power max rated ampere
- 8 - Reversing lamp - 12V20W
- 9 - Coupler for the trailer
- 10 - Working lamp - 12V35W
- 11 - Instrument panel lamp - 12V3.4W
- 12 - Turn signal lamp (front) - 12V21W; Front position lamp - 21V5W

POWER TRAIN



U18N146

- 1 - Rear - Tyres, 13.6 - 26 8 PR, 17.5L - 24 R4 8PR
- 2 - Engine, 2800RPM / HT55, 2600RPM / HT45
- 3 - Front - Tyres, 9.5 - 16 6PR, 12L - 16.5 R4 10PR

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Utilix HT 55

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ZETOR TRACTORS a.s.
Department of Technical Documentation
Trnkova 111
628 00
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Zetor



www.zetor.com
zetor@zetor.com



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