Operator's Manual

MASSEY FERGUSON

MF 7700 - Operation

versions Efficient and Exclusive

MF 7719
MF 7720
MF 7722
MF 7724
MF 7726

Dyna-6

Beauvais
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Beauvais - France - RC B562 104 539

Original Operator's Manual

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English

Foreword

We would like to welcome you to the ever-growing number of people who own a Massey Ferguson tractor; people who appreciate quality. We are proud of every tractor that leaves our factories, each being technically advanced and of a high quality.

This Operator's Manual contains the specifications for your new tractor. Please ensure that all operators read the instructions and follow them carefully. The pages that follow contain vital information on your tractor; please read them carefully.

This Operator's Manual contains the specifications for your new equipment. Please ensure that all operators read the instructions and follow them carefully. This will allow you to benefit from a long service life with complete safety and peace of mind. The pages that follow contain vital information about your new equipment; please read them carefully.

Your Massey Ferguson dealer will guarantee you quality servicing and will provide you with all the assistance you need. When it comes to servicing, remember that your dealer knows your tractor best and that he wants you to be completely satisfied.

Your Massey Ferguson dealer will guarantee you all the assistance you need.

Please leave this Operator's Manual in the tractor if resold. The subsequent owner will need the information it contains.

All information and specifications in this manual are up to date at the time of publication. However, our ongoing policy to improve our products obliges us to reserve the right to make alterations at any time without notice.

Please note that this manual relates to all models and refers to both standard and optional equipment. You may therefore find details relating to equipment that is not fitted on your tractor.

This Operator's Manual complies with Directive 2010/52 EC.

Massey Ferguson

MF 7700 - Operation

1. Tractor identification

1.1 Locating serial numbers

1.1.1 Locating serial numbers

IMPORTANT:
Please quote the serial number of your tractor in all correspondence with your dealer or agent.

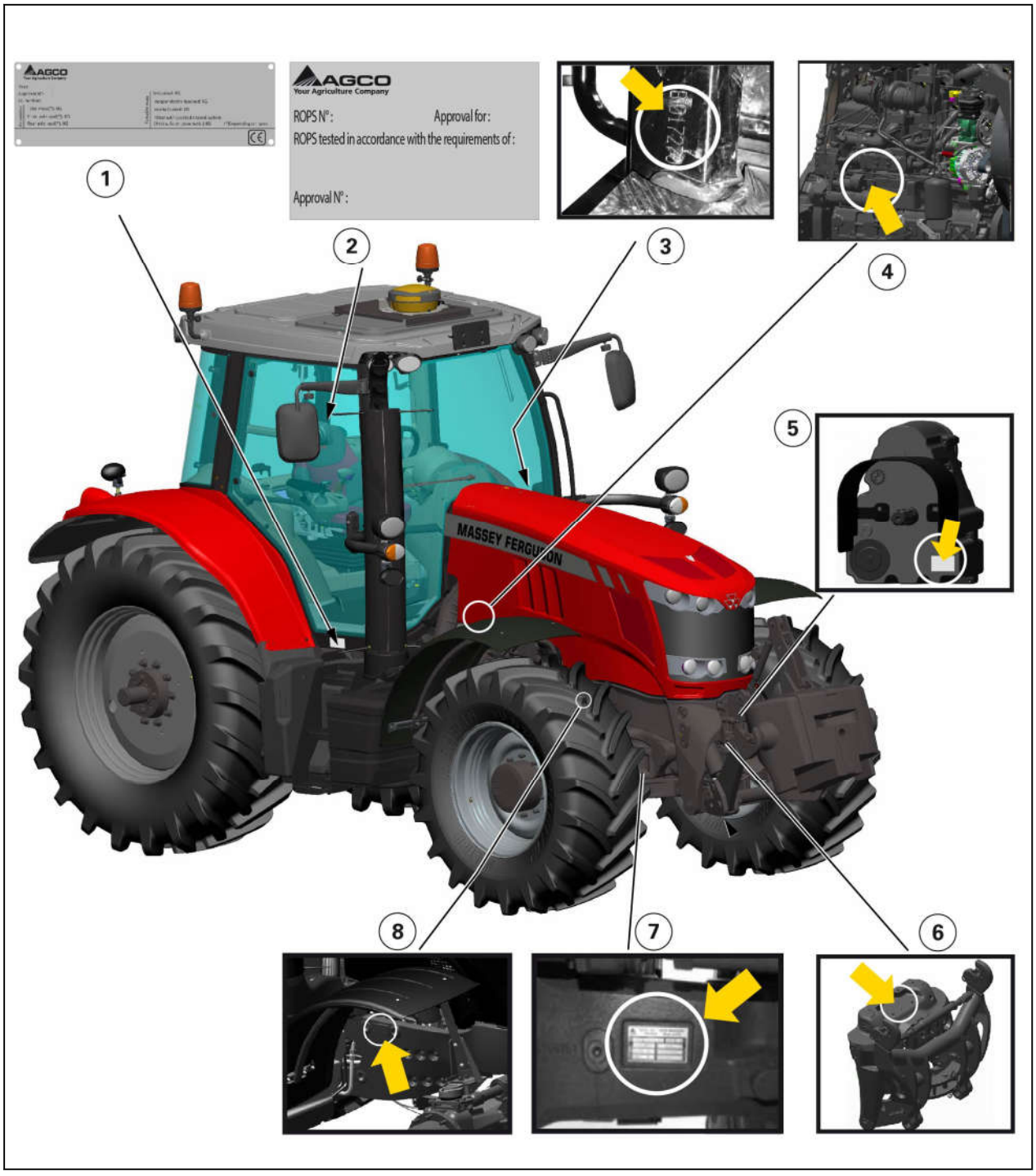


Fig. 1

(1) Name plate with serial number
(2) Homologation plate (according to country)
(3) Cab serial number
(4) AGCO Power engine serial number
(5) Front PTO serial number
(6) Front linkage serial number
(7) Front axle serial number
(8) Chassis number

1.2 Your tractor identification details

1.2.1 Your tractor identification details

Model: _____

Serial number: _____

Engine serial number: _____

Owner's name: _____

Street: _____

Postcode: _____

Town: _____

County: _____

Country: _____

Dealer code: _____

Tractor received from (tick one of the following):

☐ Factory ☐ Other dealer (transfer)

Notes: _____

2. Safety instructions and safety points - Warranty

2.1 Introduction

2.1.1 Introduction - Safety instructions

Operator's Manual

NOTE: *This Operator's Manual is widely published and distributed and the availability of the attachments indicated, whether fitted to the basic tractor or as an accessory, may vary depending on the country or region in which the tractor is used. To find out which attachments are available in a given region, contact a Massey Ferguson dealer.*

The purpose of this manual is to enable the owner and the operator to operate the tractor appropriately under normal conditions of use. Providing they follow the instructions carefully, the tractor will give many years of service in the Massey Ferguson tradition.

Use for any other activity (particularly forestry work) is considered to be contrary to the intended use.

The commissioning of equipment by the Massey Ferguson dealer on the user's premises enables the dealer to ensure that these operating and service instructions are properly understood. Always consult the Massey Ferguson dealer if there is any part of this manual that you do not understand. It is important that these instructions are understood and followed.

This manual does not cover all operation and safety instructions relevant to the implements and accessories that may be fitted at the time of tractor delivery or later. It is essential that operators use and understand the Operator's Manuals relating to these implements and accessories.

IMPORTANT: *This manual must always be kept with the tractor. For extra copies, contact your Massey Ferguson dealer.*

This chapter in the Operator's Manual highlights certain basic safety-related situations that may be encountered during normal operation and servicing of the tractor and provides the information needed to handle these situations.

This chapter supplements any safety instructions given in other chapters of this manual.

It may be necessary to take additional precautions, depending on the implements and accessories used and the working conditions on-site or in the service area. Massey Ferguson can under no circumstances exercise direct control over the commissioning, operation, inspection, lubrication or servicing of the tractor. It is therefore YOUR responsibility to take suitable safety precautions in such areas.

WARNING:
It is your responsibility to read and understand the instructions that appear in this chapter before using the tractor.
They must then be strictly adhered to throughout the working day.

Servicing, spare parts, accessories and conditions of use

Daily servicing should become a routine, and a logbook of operating hours should be kept.

When spare parts are required, it is important to use only genuine Massey Ferguson parts. Massey Ferguson dealers supply genuine parts and can offer advice concerning their fitting and use. The use of lower quality parts may cause serious damage. Customers are advised only to purchase their spare parts from an approved Massey Ferguson dealer. In the same way, you must only use accessories specifically adapted to your tractor.

Owing to the considerable variation in operating conditions, it is not possible for the manufacturer to formulate complete or absolute assertions in its publications concerning the performance or operating methods of its machines or to accept liability for any loss or damage which may result from such assertions or possible errors or omissions.

If the tractor is to be used in abnormal conditions which could cause damage (use in deep water or in paddy fields for instance), you should consult your Massey Ferguson dealer to obtain special instructions to prevent the warranty from becoming void.

These tractors are designed only for usual farming activities (intended use). Use for any other activity (particularly forestry work) is considered to be contrary to the intended use.

Strict compliance with the repairs, service and operating conditions as specified by Massey Ferguson is also an essential component of the intended use.

IMPORTANT: *Massey Ferguson accepts no responsibility in the event of damage to equipment or personal injury resulting from improper use.*

The tractor must only be used, serviced and repaired by personnel who have full knowledge of its specific features and who are aware of the applicable safety measures (prevention of accidents).

Customers are strongly advised to contact a Massey Ferguson dealer in the event of after-sales problems and for any adjustments which may be necessary.

2.2 Safety — Symbols and terms

2.2.1 Safety — Symbols and terms

Signal

This safety alert symbol means CAUTION! BE ALERT! YOUR SAFETY DEPENDS ON IT!

The safety alert symbol identifies important safety notices on machines, safety signs, in instruction books or elsewhere. When you see this symbol, be alert to the risk of injury or death. Follow the instructions in the safety notice.

SAFETY is paramount! Why?

- ACCIDENTS DISABLE AND KILL
- ACCIDENTS ARE COSTLY
- ACCIDENTS CAN BE AVOIDED

Terms

The terms **DANGER**, **WARNING** and **CAUTION** are used with the safety alert symbol. It is essential to learn how to recognize these safety messages and to follow the recommended safety measures and instructions.

DANGER:
indicates an imminently hazardous situation which, if not avoided, will result in DEATH or VERY SERIOUS INJURY.

WARNING:
indicates a potentially hazardous situation which, if not avoided, could result in DEATH or SERIOUS INJURY.

CAUTION:
indicates a potentially hazardous situation which, if not avoided, may result in MINOR or MODERATE INJURY.

The terms **IMPORTANT** and **NOTE** are not directly related to personal safety, but are used to provide additional information and advice on the operation or maintenance of equipment.

IMPORTANT: *identifies specific instructions or procedures which, if not strictly applied, could damage or destroy the tractor, its equipment or the surrounding area.*

NOTE: *identifies points of particular interest for the most effective and suitable operation or repair.*

2.3 Safety decals and instructions

2.3.1 Checking and replacing the safety decals and instructions

WARNING:
Never remove or obscure the safety decals and instructions.

Replace any safety decals and instructions that are illegible or missing. Replacement decals are available from the dealer in the event of loss or damage. If a second-hand tractor has been purchased, check that all safety and instruction decals are correct, legible and in the correct location: To do this, refer to the section on the presentation and location of decals.

2.3.2 Presentation and location of the safety decals and instructions

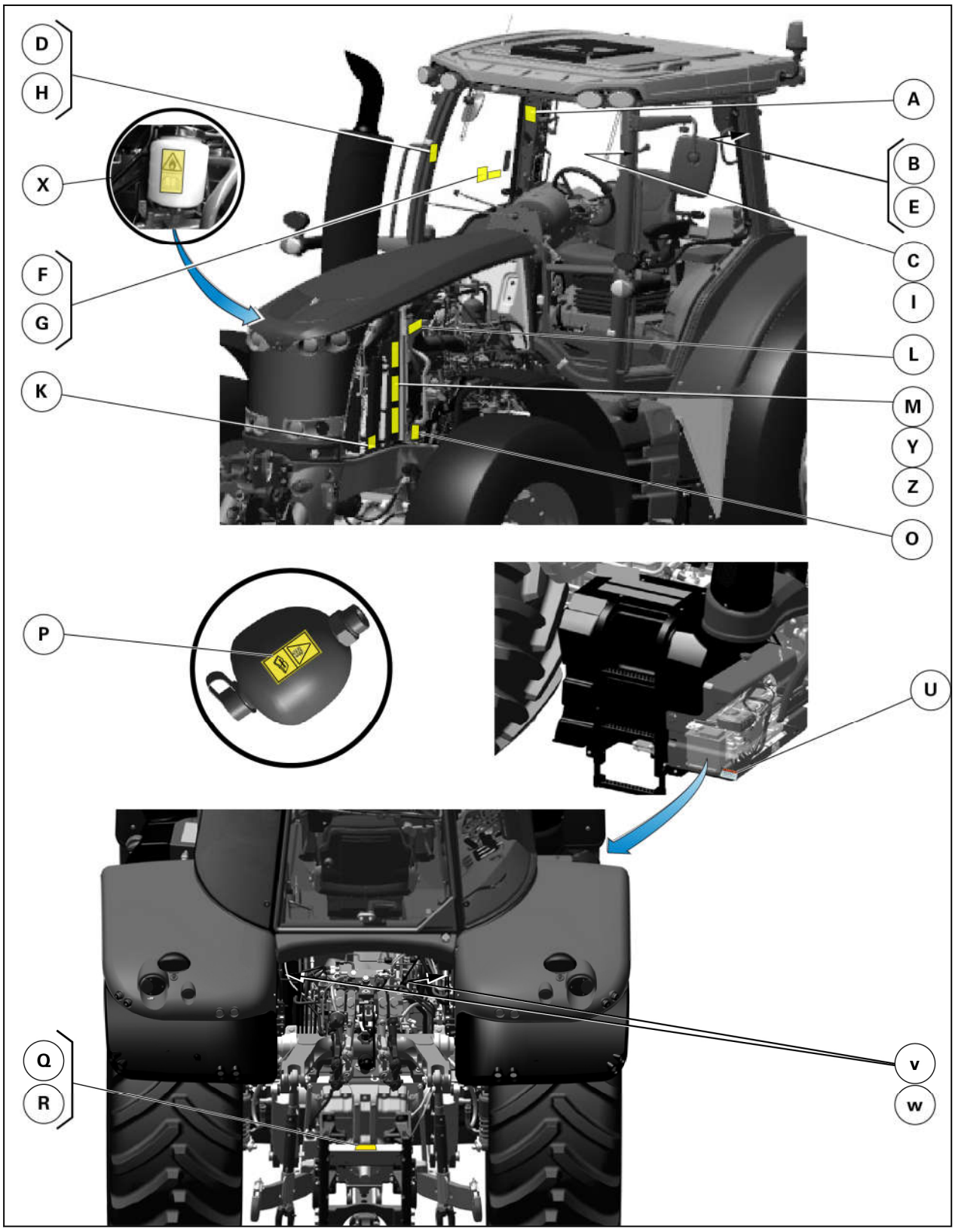
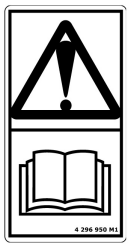
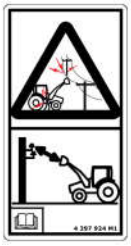
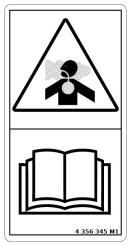
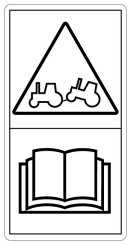
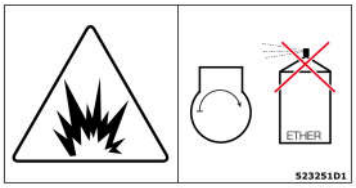
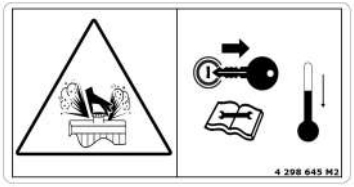
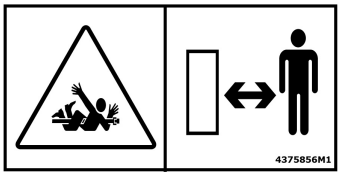
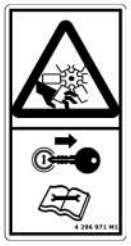


Fig. 1

	• **4296950M1** ((A)) • **DANGER:** General safety Read the servicing manual and the safety advice before start-up and observe their contents during operation.
	• **ACW0487380** ((B)) • **WARNING:** Overturning of the tractor - Roll Over Protective Structure (ROPS) Fasten your seat belt once you are in the seat (operator and instructor) and before the tractor moves. **IMPORTANT:** *The instructor seat will be used only for field applications. When using the instructor seat on the road, refer to the laws in force in the country of use. Read the safety instructions in the Operator's Manual.*
	• **4296946M1** ((C)) • **WARNING:** Risk of being crushed or run over by the tractor. Stop the engine and remove the key before you commence any maintenance or repair operation.
	• **4297924M1** ((D)) • **DANGER:** Risk of the front loader coming into contact with overhead power lines. Risk of extremely serious or fatal injuries. Tractors fitted with a front loader: Exercise extreme caution to avoid coming into contact with power lines. • Keep a safe distance from the overhead power lines whenever you use the front loader. Refer to any current national regulations concerning safe distances from power lines.
	• **4356345M1** ((E)) • **WARNING:** Possible inhalation of dangerous substances. • Read the instructions in the Operator's Manual and refer to the safety instructions provided by the product manufacturer. Wear personal protective equipment where necessary.
	• **4349217M1** ((F)) • **WARNING:** Towing • Carefully read the specific instructions from the Operator's Manual before towing the tractor.

	• **4352953M2** ((H)) for Efficient/Exclusive versions only • **DANGER:** Road safety. • Road traffic: Deactivate the automatic guidance system and the SpeedSteer system.
	• **523251D1** or **ACW0232290** ((K)) • **DANGER:** Risk of engine explosion. • Never spray ether toward the engine air intake.
	• **4298645M2** ((L)) • **WARNING:** High-temperature liquid in the reserve. Risk of skin burns. Stop the engine, remove the key and wait for the assembly to cool before commencing any maintenance or repair operation.
	• **4296967M1** ((M)) • **WARNING:** Burn hazard – hot surfaces. Keep away from hot engine components when engine has been running. Shut off engine, remove key and wait for system to cool before performing maintenance or repair work.
	• **4296985M1** ((O)) • **DANGER:** Crushing of fingers or hands. • Never work in an area where there is a risk of crushing while parts could move.
	• **ACW0018280** ((P)) • **DANGER:** Explosion hazard. The hydraulic accumulator contains pressurised gas and oil. • The hydraulic accumulator contains pressurised gas and oil. Refer to the instructions in the technical manual when removing and reconditioning.

	• **4375856M1** ((Q)) • **DANGER:** Entanglement hazard in a PTO shaft connected to an instrument. • Do not mount the moving part of the PTO.
	• **4297148M1** ((R)) • **WARNING:** Falling hazard Maintain a safe distance in relation to the tractor.
	• **4392020M1** ((V)) • **WARNING**: Danger of torso being crushed: force directed sideways. • Remain out of the vertical movement area while the swivel arm is moving.
	• **4354351M1** ((X)) • **WARNING:** Risk of fire Read the safety instructions in the Operator's Manual.
	• **4296944M1** ((Y)) • **WARNING:** Entanglement hazard in belt drives Keep hands clear of rotating parts and belts while engine is running. Switch off the ignition and remove the key before working on the tractor.
	• **4296971M1** ((Z)) • **WARNING:** Shearing hazard – engine fan. Keep your hands away from the fan and the belts when the engine is running. Shut off engine and remove key before performing maintenance or repair work.

2.4 General safety instructions

2.4.1 Awareness of the safety instructions and symbols

Remember that you alone are responsible for safety. Good safety practices protect not only you, but also bystanders. Before using the tractor, study the instructions given in this book with care, as well as all of the safety decals and instructions fixed to the tractor: Make them an integral part of your safety procedure. Also note all the usual protective measures that should be taken when working and above all, don't forget:

Safety depends on you. You can prevent accidents which could cause serious injury or death.

WARNING:

In some of the illustrations in this book, the safety panels and guards have been removed for reasons of clarity. Never use the tractor if these parts are not in place. If some of these parts have been removed for repair purposes, they must be refitted before use.

2.4.2 Operator familiarity in the use of the tractor

WARNING:
The operator must not drink alcohol or take any medication that may affect his concentration or co-ordination.
If taking medication, whether prescribed or not, the operator must seek medical advice with regard to his ability to operate machinery safely.

Fig. 2

- To be able to use your tractor, it is first necessary:
  - to be familiar with operating an agricultural tractor
  - to have been trained in the operation of the tractor that you have just purchased
  - to have read and understood this entire book — to always consult the dealer as soon as there is any doubt or lack of understanding
  - find out about the rules and safety regulations applicable to the work you are doing. Some regulations specify that no one under the age of 16 may operate power machinery, for example. This includes tractors. It is your responsibility to know what these regulations are and to observe them in the operating area or situation. These rules include, but are not limited, to the safety instructions relating to correct operation of the tractor as described in this book.
- Do not allow children or unqualified persons to operate the tractor.
- Do not allow children to use the instructor seat.
- The instructor seat is only intended for short periods of use.

WARNING:
In poor conditions, slow down and be extra careful, and engage 4-wheel drive if fitted.

It is important to have good knowledge of the operation of the tractor as well as all of its accessories and attached implements.

Remember that rain, snow, ice, loose gravel or soft ground can change the performance of the tractor.

2.4.3 Filling the fuel tank

WARNING:

- **Always switch off the engine before filling up.**
- **Do not smoke while refueling the tractor. Keep away from naked flames .**
- **Proceed with care to prevent any splashes.**

Fig. 3

2.4.4 Mounting and dismounting the operator's seat

- Always use three-point contact with the tractor and face the tractor when mounting and dismounting the operator's seat. (Three-point contact means that both hands and one foot or one hand and both feet are in contact with the tractor at all times when getting on and off).
- Clean your shoes and wipe your hands before getting in the tractor.
- Use handrails, grab handles, ladders or steps (if fitted) when getting on and off.
- Do not use the control levers as a handhold.
- Do not step on pedals when getting in and out.
- Never attempt to mount or dismount a moving tractor.
- Never jump off a tractor when it is running except in an emergency.

2.4.5 Mandatory procedure before dismounting the tractor

Before getting out of the operator's seat, whether during the course of or at the end of the working day, always:

Procedure

1. Immobilize the tractor by applying the parking brake or engaging ParkLock in the locked position (closed padlock symbol) (depending on option).

   DANGER:
   Position the shuttle lever or depending on option, the PowerShuttle lever, in neutral position.

2. Disengage the front and rear PTO.
3. Lower the implements to the ground.
4. Switch off the engine (see the Operation chapter of the Operator's Manual). Make sure that the engine is not running at idling speed and that it has stopped.
5. Remove the ignition key.

2.5 Special instructions

2.5.1 Specific recommendations for agricultural and forestry tractors

Hot surfaces

Be careful of surfaces which may be hot, in particular engine and hydraulics components, during operation and services.

FOPS (Falling Object Protection Structure)

- Alternative 1 (no FOPS available): Protection against falling objects is not provided, unless clearly specified otherwise.
- Alternative 2 (optional FOPS fitted): Protection against falling objects is provided under OECD-code 10 (Energy level 1365 J). If a higher protection level is necessary, additional safety equipment should be installed on the tractor (no original equipment available).

OPS (Operator Protection Structure)

- Alternative 1 (no OPS available): Protection against penetrating objects is not provided, unless clearly specified otherwise.
- Alternative 2 (optional OPS fitted): Protection against penetrating objects is provided under ISO 8084 (Machinery for forestry). Before operating, check if protection is adapted to your work conditions.

Dangerous substances for tractors with ROPS

NOTE:
A mark indicating the ROPS' level of protection against hazardous substances is located on the ROPS.

IMPORTANT:
Always wear personal protective equipment when handling the filters.

- Tractor without cab: Protection against hazardous substances (agricultural chemicals etc.) in the form of dust, aerosols and fumes is not provided. These tractors are not intended for spraying pesticides without additional protection. Personal protective equipment must be used according to the chemical manufacturer's recommendations.

Dangerous substances for tractors with a cab

NOTE:
A mark indicating the cab's level of protection against hazardous substances is located on the front left-hand pillar inside the cab. For platform tractors, this mark is displayed on the arch.

IMPORTANT:
Always wear personal protective equipment when handling the filters.

- Alternative 1 (less cab or cab under category 1): Protection against hazardous substances (agricultural chemicals etc.) in the form of dust, aerosols and fumes is not provided. In particular, tractors fitted with these cabs are not to be used for spraying pesticides without any additional protection. Personal protective equipment must be used according to the chemical manufacturer's recommendations.

- Alternative 2 (cab under category 2): Protection against hazardous substances (agricultural chemicals etc.) in the form of aerosols and fumes is not provided. In particular, tractors fitted with these cabs are not to be used for spraying pesticides without any additional protection. Personal protective equipment must be used according to the chemical manufacturer's recommendations.

  Protection against dust (category 2 of standard EN15695-1:2009) is provided under the following conditions:

  - all roof hatch, cab doors and cab windows are closed
  - cab ventilation is running
  - air filter is clean and is serviced under maintenance interval (refer to service guide). When replacing the filter, only a filter certified for at least category 2 cabs is permitted. Activated carbon filters do not improve the cab's level of protection. Always refer to the user instructions provided with the filter.
- Alternative 3 (cab under category 4): The cab is equipped with protection against hazardous substances (agricultural chemicals etc.) in the form of dust, aerosols and fumes. For pesticide spraying, tractors fitted with these cabs must also have a specially designed filter for category 4 cabs.

  This protection (category 4 of standard EN 15695-1:2009) is provided under the following conditions:

  - all roof hatch, cab doors and cab windows are closed
  - cab ventilation is running
  - air filter is clean and is serviced under maintenance interval (refer to service guide).

  Given the risk associated with contaminants entering the cab when opening the door to enter or exit the vehicle, this protection is designed to supplement, but not necessarily replace, the use of personal protective equipment when working in an environment with aerosols and/or fumes, such as pesticides. The chemical manufacturer's instructions concerning the use of personal protective equipment must be followed.

  When replacing the filter, only a filter certified for at least category 4 cabs is permitted.

  Always refer to the user instructions provided with the filter. Once spraying operations are complete, it is important to return the special filter to its case and replace it with a standard anti-dust filter.

Instructor (passenger) seat

- If an instructor (passenger) seat is provided, protection for the occupant of the seat is provided by the same roll-over protective structure (ROPS) that protects the operator.
- This seat may only be used to transport a passenger when driving on public roads.
- Always use the seat belt correctly adjusted.

2.6 Special safety instructions for preparing the tractor for use

2.6.1 Protective clothing

Wear all the protective clothing and equipment with which you are provided or which is appropriate for certain working conditions.

For example, you may need:

- A safety helmet
- Safety glasses
- A protective mask
- Ear protection
- A respirator or filter mask
- Inclement weather clothing
- Reflective clothing
- Gloves suitable for the work to be carried out
- Safety footwear

Fig. 4

DANGER:
Do not wear loose clothing, jewelry or other items and tie up long hair which could catch on controls or other parts of the tractor.

2.6.2 Activated carbon filter information

WARNING:
Due to the risk of contaminants entering the cab when the door is opened to enter or exit, use of a carbon filter is intended to supplement but not necessarily replace the use of personal protective equipment when operating in an environment containing aerosols and/or vapors, such as pesticides.
The specific chemical manufacturer's instructions regarding personal protective equipment (PPE) must be followed. If the cab being fitted with this filter does not already have a safety sign like the one included with this filter, install the safety sign in a prominent place inside the cab in view of the operator.

This filter is designed to reduce the concentration of aerosols and vapors entering the cab. To be effective, it must have an effective seal to prevent leakage around the filter and must be used in a cab air system that does not have leaks, especially in the zone between the filter and the fan. In addition, the cab and its ventilation system must be capable of maintaining a positive pressure inside the cab and an air flow of at least 30 cubic meters per hour (18 cubic feet per minute).

The cab with carbon filter is intended to be used as only one part of a managed system of occupational health and safety, as noted below:

Operator Enclosures as Part of an Occupational Health and Safety Management System (OHSMS)

Many self-propelled agriculture vehicles have operator enclosures (cabs) for comfort and protection of the operator and riders. The cab can provide an effective physical barrier between the occupants and the environment, but that barrier must, by necessity of occupant respiration, allow air to enter and exhaust the cab. This requirement is met by the cab's heating, ventilation and air conditioning (HVAC) system.

The HVAC system should employ a filter through which air entering the cab is first passed for contaminant reduction. Filters should also be provided in the recirculation air-stream to reduce airborne contaminants already in the cab air space. In either application, these filters must be designed specifically for the HVAC system within which they are operating. The filters must also incorporate the correct media required to remove the specific air-born contaminant for which it is being employed.

For such applications, the HVAC system must be of robust design, manufacture and maintenance. In such a system, fresh air and cab pressurization requirements are provided by an air supply drawn through a filter with negligible filter bypass.

Even with an appropriate cab and HVAC system, there are other opportunities for contaminates to enter the cab. While outside the cab, a person can become contaminated on his/her body or clothing. Contaminated objects can be brought into the cab. Another potential for cab contamination exists when doors or windows are open in a contaminated environment.

In any case, whenever the cab interior has been contaminated, the effectiveness of the cab to provide contamination protection will be diminished. Health and safety for agricultural machine operators as well as others working in, on or around these machines can only be addressed through a comprehensive program. Such a program is defined as an Occupational Health and Safety Management System (OHSMS). While cabs may be used as an effective engineering control within an OHSMS, this is not intended to imply that the cab alone is appropriate for any specific application.

That determination can only be made by those responsible for the OHSMS in a specific application. It is the responsibility of those charged with managing the use of the vehicle on which the cab is attached to define and manage an appropriate OHSMS, and ensure that all federal, state and local regulatory requirements are followed.

Cabs should not be used as a replacement for any other engineering control or PPE that has been specifically required by federal, state or local regulatory authorities.

Hierarchy of Controls

The Hierarchy of Controls, in their preferred order of action:

1. Elimination
2. Substitution of less hazardous materials, processes, operations or equipment
3. Engineering controls
4. Warnings
5. Administrative controls
6. Personal protective equipment (PPE)

Continuous Improvement Cycle

Cabs should only be used to control operator air contaminant exposures within an OHSMS. This management system must consider occupational safety and health as a continuous improvement cycle that includes these on-going processes:

1. Management, Leadership and Employee Participation: This step in the cycle involves the formulation of the management system, the establishment of policy, statements of responsibility and the integration of the employees into the management system.
2. Planning: This step is based upon initial and going reviews of the management system and numerous factors affecting occupational safety and health within an organization. Included in these reviews is a review of the hazard, risks and controls and data collected to evaluate the hazards and the efficacy of the control measures. In explanatory comments, exposure measurements are included as part of the assessment processes. The results of audits and measurements are also to be reviewed.
3. Implementation and Operation: This section describes the organization components of a occupational safety and health program. It describes the hierarchy of controls mentioned above and several broad classes of management function. Among these requirements are employee training and evaluation of employee training. Furthermore, this section requires a written, clearly documented occupational safety and health program.
4. Evaluation and Corrective Actions: The section specifically requires management processes to monitor and evaluate hazards, risks and their controls. Explanatory comments note that this includes quantitative measures of worker exposure. Practically, this involves physically testing the efficiency of the cab being used as an engineering control within an OHSMS.

5. Management System Review: Management is required to review the management system to ensure its suitability, adequacy and effectiveness. This cycle includes provisions for exposure monitoring and the monitoring of control measure performance. It is the responsibility of the manager of the safety and health program to determine how worker exposure to air contaminants and other hazards are to be controlled. It is also the responsibility of this manager to take whatever actions are needed to control work-place hazards. This includes but is not limited to exposure assessment, audits of varies programs such respiratory protection, ventilation system maintenance, etc.

Limitations of Cabs Used in Hazardous Environments:

While it may seem that respiration (breathing) exposure would present the greatest risk for personal exposure to contaminants, this is not the case when working with pesticides. The most prevalent method of exposure for applicators and those working around agricultural pesticides is through dermal (skin) contact.

Dermal contact with contaminants may occur directly from air-borne contaminants. It may also happen when contaminants are transferred from one object to another or when air-borne contaminants settle on objects that are subsequently contacted. Any surfaces in or out of the cab that have been contaminated are potential hazards for dermal exposure.

Within the cab, seats, upholstery, controls and other surfaces that become contaminated will pose such a hazard. In addition to dermal exposure, a contaminated cab interior will also pose a respiration hazard as the contaminant may, after settling on a surface, become air-borne once again whereby it may be inhaled.

Recirculation filters can be used to help reduce these contaminates from the cab interior air space. When a vehicle is operated in an environment where air-born contaminants exist, the cab can be an effective engineering control for reduction of exposure risk to persons within it.

In order for a cab to be used for this purpose, it must be of appropriate design. It must also be manufactured, maintained, tested and operated according to the specific requirements defined by evaluation of the hazards.

No cab should ever be considered an effective engineering control unless it has been qualified as such within a comprehensive OHSMS. While the cab manufacturer can design and manufacture a cab to physical specifications, the cab manufacturer can not qualify the cab as an appropriate engineering control for any specific application.

Site-specific information is needed to evaluate the appropriateness of control measures. To use the cab to control hazards, the managers of the OHSMS must carefully consider and evaluate the effectiveness of all engineering controls in their specific application.

The Cab as an Engineering Control

The engineering control requirements of the respiratory protection regulation may be fulfilled by the application of a cab, but this can only be done properly within an OHSMS. Elements of such a program are:

1. Assessment of the hazard with identification of the risk involved.
2. A survey of the machine and the cab involved in the hazardous operation.
3. Reviewing the cab ventilation system and the filter to ensure the filter provides the reduction in contaminants required.
4. Defining how long the filter can be used in this application.
5. Testing the cab ventilation system to ensure it provides the protection required for the operation to be performed. This also includes a review of any monitoring equipment to ensure it is working properly.
6. Repair and/or replacement of any defects or defective equipment found.
7. Retesting of the cab air system as required.
8. Recording in the appropriate log book all information regarding the test results, and repairs and replacement of parts and/or components.
9. Assessment of the effectiveness of the program at a specified time in the cycle of the activity.

2.6.3 Safety devices and items

Ensure that all safety devices and items are fitted as required and are in good condition.

WARNING:
The location of all these safety devices and items must be known and their use mastered. Never take off, remove or disconnect any of them.

Standard safety devices and items according to country regulations

- ROPS (Roll Over Protective Structure)
- Seat belt
- Power take-off guard
- SMV warning triangle
- Signaling lights
- Safety signs
- Fire extinguisher
- First aid kit

WARNING:
Also make sure you know the emergency numbers.

Fig. 5

Additional devices and items

Depending on the work to be carried out, other safety devices and items may be required; for example, guards or additional lights and signs.

2.6.4 Checking the tractor

Check the tractor and ensure that all systems are in good operational condition before beginning the working day. Pay particular attention to the points mentioned below.

- Check for loose, broken, missing or damaged parts. Ensure that everything has been properly repaired.
- Check that the seat belt is in good condition. If it is not, replace it.
- Check that implements are correctly installed.
- Check that the PTO output speed is in keeping with the implement PTO input speed.
- Ensure that all PTO shaft locking devices are engaged.
- Ensure that the tractor PTO guard and the shaft guards are in place and operating correctly.
- Check to ensure that the tractor is correctly balanced.

WARNING:
An unbalanced tractor could overturn and cause serious injury or death.
Ensure that front frame counterweights, wheel weights and wheel ballasts are used as recommended by the manufacturer. Do not add extra counterweights to compensate for an overloaded tractor; the load must be reduced instead.

- Check the condition and pressure of tires (absence of cuts and bulges). Replace worn or damaged tires.
- Check the correct operation of the brake pedals and the parking brake. Adjust if necessary.
- Check the hydraulic system for the tractor and the implement as well as the tractor fuel system: Correct tightening of all the unions; no damage to the lines, pipes and hoses; hydraulic systems do not cross one another.

WARNING:

Leaks of pressurized fluid may not be visible. Diesel fuel or hydraulic fluid under pressure can penetrate the skin or eyes and cause serious physical injury, blindness or death. Use a piece of cardboard or wood to detect leaks. DO NOT USE YOUR BARE HANDS. Wear safety goggles for eye protection. If any fluid penetrates the skin, seek medical advice within a few hours from a doctor familiar with this type of injury.

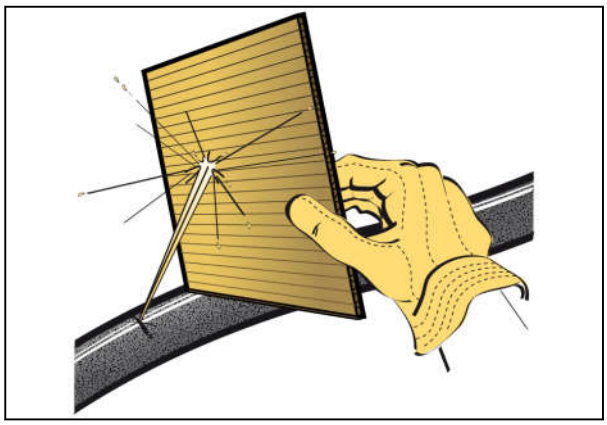


Fig. 6

WARNING:
Release the pressure of the hydraulic or fuel systems before disconnecting them.

- Have any leakages or damaged parts repaired or replaced. Do this before each working day
- Check the engine cooling system and add coolant if required.

WARNING:
The liquid cooling system builds up pressure as the temperature increases. Stop the engine and let the system cool before removing the radiator filler plug.

- All maintenance procedures must have been complied with.
- Check that the weight of the tractor/implement assembly is less than the tractor total permissible load.

2.7 Specific safety instructions for starting the tractor

2.7.1 Protection of persons other than the operator

Procedure

1. Before starting up, walk all the way round the tractor and any attached equipment. Ensure that no one is under it, on it or close to it.
2. Warn anyone nearby that the tractor is about to start.
3. Only start up if there is nobody in the vicinity of the tractor/implement assembly. Pay particular attention to looking out for children.

2.7.2 Start up safely

General instructions

WARNING:

Before starting the engine, ensure there is plenty of ventilation in the area. The exhaust fumes may cause asphyxiation. Do not operate the engine in an enclosed space.

IMPORTANT:

For tractors equipped with an electromechanically controlled brake on the steering column (ParkLock) For safety reasons, when the engine is stopped, the ParkLock engages automatically regardless of the position of the control. After the engine is started, it is necessary to initialise the ParkLock control in order to deactivate it. If this is not carried out, when a gear is shifted, a beep will sound and the padlock symbol on the instrument panel indicates that the ParkLock remains engaged.

- Always start the engine from the operator's seat.
- Adjust the seat before using the tractor to ensure it is correctly positioned in relation to the controls and to minimize vibration (see description of seat).
- For road use, ensure that the tractor brake pedals are locked together.
- Fasten the seat belt.
- Check that the parking brake is applied or that ParkLock is engaged.
- For tractors with a PowerShuttle, position the PowerShuttle lever in neutral.
- For tractors with mechanical reverse shuttle, position the reverse shuttle lever and the gear shift lever in neutral.
- Deactivate the power take-off (PTO) controls.
- Follow the start-up procedures described in the chapter Operation of this book.

DANGER:
Start the engine with the ignition key and from the operator's seat only.

Do not attempt to start the engine by short-circuiting the starter terminals: The tractor may start in gear and this can cause serious injury or death to anyone in the vicinity.

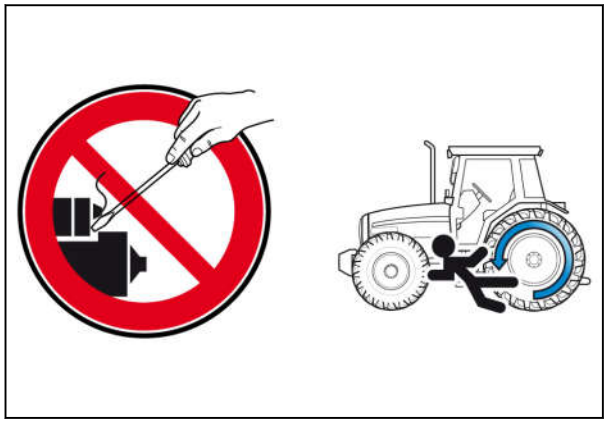


Fig. 7

Starting assistance

WARNING:
Never use any starter fluid or aerosol sprays.

This could cause an explosion and very serious injuries.

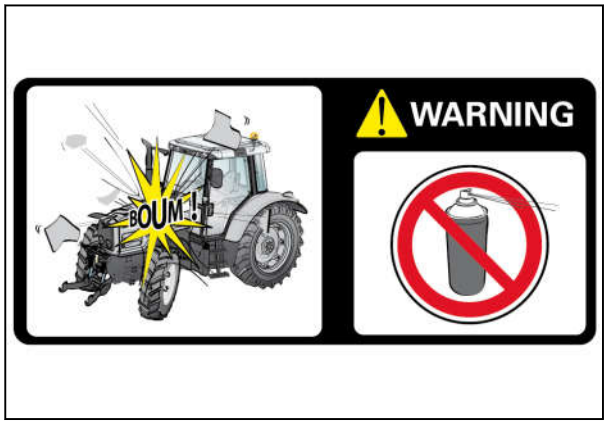


Fig. 8

2.7.3 Checks to be carried out after start-up

Controls and indicator lights

After having started the engine, check all the controls and all the indicator lights again. Ensure everything is functioning correctly.

WARNING:
In case of malfunction of a control or an indicator light, resolve the problem before using the tractor.

Mastering of the tractor

Move slowly until you are sure that everything is operating correctly. Be certain that you have full control of the steering and brakes. If the differential is locked, unlock it before continuing your route.

2.8 Specific safety instructions for using the tractor

2.8.1 General instructions

- Tractors and implements are not toys. Always comply with the conditions of use defined by the manufacturers.
- Never bring a heat source close to the tractor.
- Never exceed the tractor total permissible weight.
- When using the tractor, always consider the fact that the centre of gravity of the tractor/implement assembly changes according to the load being transported or towed.
- Check that the emergency exits open correctly.
- Check to ensure that the tractor is correctly balanced.

WARNING:
An unbalanced tractor could overturn and cause serious injury or death.
Ensure that front frame counterweights, wheel weights and wheel ballasts are used as recommended by the manufacturer. Do not add extra counterweights to compensate for an overloaded tractor; the load must be reduced instead.

- Check that the PTO output speed is in keeping with the implement PTO input speed.
- Keep all parts of your body inside the safety zone defined by the ROPS arch for platform tractors.
- Operate the controls smoothly — do not jerk the steering wheel or other controls.
- Always operate the controls from the operator's seat.
- Keep a firm grip on the steering wheel at all times, with your thumbs clear of the spokes when driving the tractor.
- Operate the tractor smoothly: avoid jerky turns, starts or stops.
- Do not turn at high speed.
- Avoid driving close to ditches and banks.
- Avoid slopes that are too steep.
- Reduce speed when negotiating turns and slopes and on rough, slippery or muddy surfaces.
- Carefully observe the areas surrounding the route.
- Never remain, or allow anyone else to remain, between the tractor and the towed or trailed vehicle when the tractor is in use.
- Ensure that you have adequate clearance in all directions for the tractor and the implement.
- When using chemicals, follow the chemical manufacturer's instructions for use and storage carefully.
- Adapt the tractor speed according to visibility, weather conditions and the type of terrain.

WARNING:
If a part breaks, loosens or does not operate correctly:

- **stop work**
- **Immobilise the tractor using the park brake or ParkLock**
- **switch off the engine**
- **check the machine and make the necessary adjustments and repairs before resuming work.**

DANGER:
Do not attempt to unplug the hydraulic connections or adjust an implement with the engine running or the PTO in operation.
To do so may result in serious injury or death.

2.8.2 Protection of persons other than the operator

WARNING:

A tractor is a machine with a single operator. Do not permit anyone to ride on the tractor or implements, including trailers, unless the implements are specially designed to carry passengers during field work. In the latter case, transport is permitted only for field work, but not for traveling on the road. In all cases, never allow a child to ride on the tractor or implements.

Fig. 9

- When operating, attention to the environment of the tractor/implement assembly.
- Never lift loads above someone.
- Do not allow anyone to stand or pass in front of, under or behind an implement.

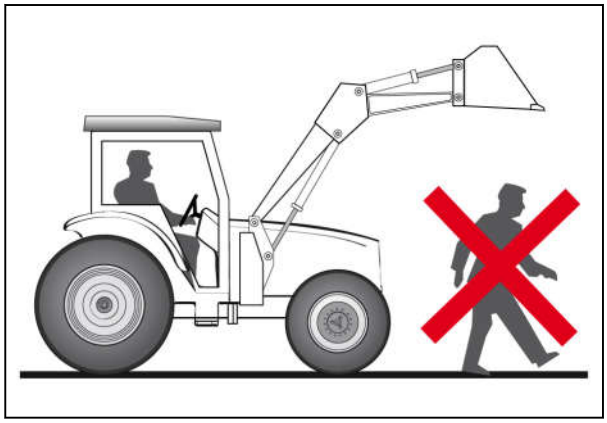


Fig. 10

- Do not allow anyone to stand between the tractor and the implement.
- Keep other people away from the working area.
- Beware of the load and implement falling in the event of unexpected lowering of the loader.

2.8.3 Overturning

Overturning angle

DANGER:
For your safety, never exceed the maximum angle limits listed in the table below.

NOTE:
These angle limits assume a maximum oil level in the rear axle.
The recommendation is to add 15 liters of oil when working on maximum-gradient slopes.

Models	Speed	Maximum angle: Roll/pitch/combined
Dyna-6	>15 kph	15°/15°
	<15 kph	22°/22°

WARNING:
The following list is not exhaustive.
Do not use the tractor beyond its ground gradient and stability limits, as indicated later in this manual. Exceeding these limits may cause overturning or tipping of the tractor. Follow the recommendations provided in this Manual when driving down slopes with the tractor loaded.

- **Do not use the tractor near or on the edges of channels or streams or on banks and borders dug by rodents. The tractor may overturn and tip**
- **Do not use the tractor on unstable footbridges and fragile platforms. These structures may collapse and cause the tractor to overturn. Always examine the condition and the permissible load of bridges and ramps before crossing.**
- **Do not use the tractor without a safety belt system during operations that involve a risk of tilting or overturning.**
- **Do not use the tractor beyond its dynamic stability limits. High speed, abrupt maneuvers and sudden, tight turns increase the risk of overturning.**
- **Do not use the tractor for towing if you do not know whether the load will yield, for example for transporting stumps. The tractor is at risk of tipping backward if the stumps are impossible to tow.**
- **Exercise extreme caution when working with the tractor on forage silos without concrete walls.**
- **Do not forget that the tractor center of gravity may increase when loads on the front loader or the three-point hitch are lifted. In these conditions, the tractor may overturn earlier than expected**

Procedure to follow if the tractor overturns

If the tractor should overturn, keep the safety belt fastened, hold the steering wheel firmly and do not attempt to leave the seat until the tractor has come to a complete stop.

For tractors fitted with a cab, if the doors are obstructed, leave through the rear window or roof hatch.

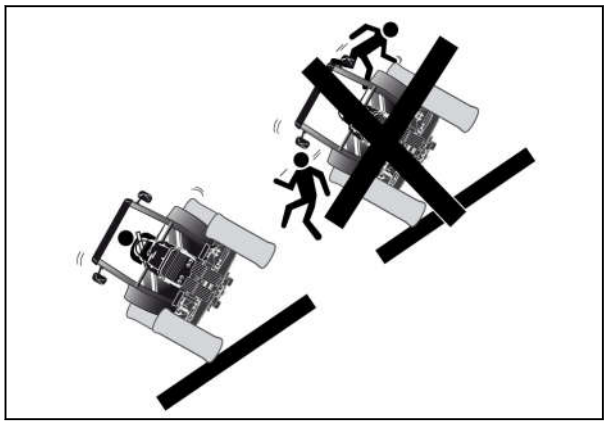


Fig. 11

Preventing a lateral overturn

- Set the track width to the most appropriate width for the work being carried out.
- Lock the brake pedals together before driving at transport speed.
- Adapt the tractor speed according to visibility, weather conditions and the type of terrain for the implement in use.
- If the tractor is fitted with a front-end loader, carry the bucket and load as low as possible.
- Make wide turns at reduced speed.
- Do not allow the tractor to bounce as this may cause you to lose control.
- Never exceed the tractor total permissible weight.
- Do not brake suddenly. Apply brakes smoothly and gradually.

- **WARNING:**

  Risk of overturning. Do not disengage the clutch or attempt to shift gear after you have started downhill.

  When driving down a slope, use the engine brake to slow the tractor down and choose the same gear ratio as used when climbing a slope.
- Engage four-wheel drive (if fitted) to enable four-wheel braking.
- Do not work near the edge of ditches and banks as there is a risk of them collapsing. The tractor must always be kept a distance from the edge that is equal to or greater than the height of the bank or ditch .

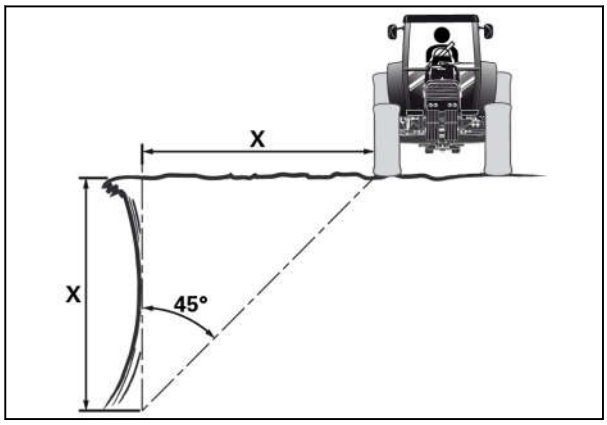


Fig. 12

Preferably, climb or descend a slope in a straight line, but do not cross it. When this is not possible, adhere to the following precautions:

- Avoid holes and dips when driving downhill
- Avoid stumps, stones and raised areas when driving uphill
- when turning, avoid turning toward the top of the slope; always slow down and take a wide turn
- keep the heavier end of the tractor facing toward the top of the slope when driving up and down it.

When driving across a slope with a tractor fitted with implements on one side, these implements must:

- always be facing toward the top of the slope
- never be raised,
- be left as close as possible to the ground

When towing a load at road speed, lock the drawbar in the center position and use a safety chain.

Do not use the tractor to round up livestock.

Preventing a rear overturn

- **WARNING:**

  Risk of overturning. Hitching a load to the rear axle or on any other part located above the rear axle may cause a rear overturn.
- Do not pull anything using the top link connection or from any point above the center line of the rear axle. Always use a Massey Ferguson-approved drawbar and only use a lockable drawbar pin.
- When using a drawbar for a three-point hitch, use the stabilizers and keep the drawbar in the bottom position.
- Use front weights to increase tractor stability when towing heavy loads or to counterbalance the weight of a heavy rear-mounted implement.
- Start off slowly and then gradually increase speed.
- Do not release the clutch suddenly.
- If a heavy load or immovable object is attached to the tractor, incorrect use of the clutch may cause the tractor to overturn.
- If the front end of the tractor starts to lift, disengage the clutch.

- If the tractor is bogged down in mud or frozen to the ground:
  - Do not attempt to drive forward as the tractor could then rotate around its rear wheels and overturn
  - Lift any attached implements and attempt to reverse If this is not possible, tow the tractor out with another vehicle.
- If the tractor is stuck in a ditch, if possible, attempt to reverse out. If you must go forward, do so slowly and carefully.
- A bare tractor or a tractor fitted with a rear implement must climb a slope in reverse gear and descend the slope in forward gear.
- A tractor fitted with a full loader at the front must climb a slope in forward gear and descend the slope in reverse gear. The loader must be kept as close to the ground as possible.
- Always engage a gear when driving downhill. Do not allow the tractor to coast down the slope with the clutch disengaged or the transmission in neutral.
- When parking on a slope, turn the wheels in the opposite direction to the slope.

2.8.4 Tractor towing

Comply with the instructions described in the "Operation" chapter of this book.

2.8.5 Regulatory data on maximum permitted trailed weights

Drawbars and towing equipment

IMPORTANT:
Before attaching a trailed implement, read the following carefully.

Maximum permitted towed weight

The equipment identification number plate provides important information on tractor and towed equipment weight combinations. The figures represent the maximum weights authorized for the vehicle and towed equipment which should not be exceeded so as not to affect tractor safety.

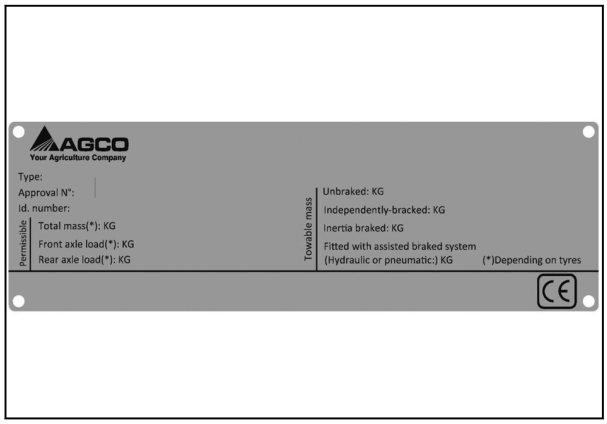


Fig. 13

Before transporting towed equipment, read the equipment's Operator's Manual. Check that the equipment is properly installed, find out how to safely transport it, and determine the maximum permitted transport speed. Check that the tractor/towed equipment combination is in compliance with local and national legislation.

Never transport at speeds higher than the equipment's maximum transport speed. By exceeding the maximum transport speed of the equipment, there is a risk of reducing the braking performance and/or losing control of the tractor and its towed equipment.

Unless otherwise specified by the equipment manufacturer or the legislation, observe the following rules when towing.

For towed equipment:

Do not tow equipment:

- Without brakes and which, when fully loaded, weighs over 3000 kg
- With independent brake and which, when fully loaded, exceeds 6000 kg
- With overrun brake and which, when fully loaded, exceeds 16,000 kg
- With assisted braking (hydraulic or pneumatic) and which, when fully loaded, exceeds 32,000 kg

Total permitted weight of tractor-implement combination

	Weight technically permissible for the tractor/trailer assembly		
	MF 7719/MF 7720 Standard final drives (GPA 41)	MF 7722/MF 7724/ MF 7726 Reinforced final drives (GPA 42)/ Sealed reinforced final drives (GPA 44)	MF 7724/MF 7726 Composite final drives (GPA 45)
With trailer without brakes	15,000 kg	16000 kg	17,000 kg
With trailer equipped with independent brake	18,000 kg	19,000 kg	20,000 kg
With trailer equipped with overrun brake	28,000 kg	29,000 kg	30,000 kg
With trailer with hydraulic braking	44,000 kg	44,000 kg	44,000 kg

Load and ballast distribution per axle

Axle load distribution

		4-wheel drive			
		MF 7719/MF 7720/MF 7722		MF 7724/MF 7726	
Weights of unladen vehicle based on optional equipment		min.	max.	min.	max.
		6,500 kg	9,500 kg	7,000 kg	9,500 kg
Total weight distribution	Front axle	2500 kg	4300 kg	2500 kg	4300 kg
	Rear axle	4000 kg	6200 kg	4,500 kg	6200 kg

Ballast distribution per axle

		4-wheel drive		
		MF 7719/MF 7720 Standard final drives (GPA 41)	MF 7722/MF 7724/MF 7726 Reinforced final drives (GPA 42)/ Sealed reinforced final drives (GPA 44)	MF 7724/MF 7726 Composite final drives (GPA 45)
Maximum technically permissible loaded weights of the vehicle		12,000 kg	13,000 kg	14,000 kg
Maximum distribution of weight per axle	Front axle	6,400 kg	6,400 kg	6,400 kg
	Rear axle	9000 kg	9,500 kg	10,000 kg
Minimum percentage of maximum permissible	Front axle	20%	20%	20%
	Rear axle	42%	46%	50%

		4-wheel drive		
		MF 7719/MF 7720 Standard final drives (GPA 41)	MF 7722/MF 7724/MF 7726 Reinforced final drives (GPA 42)/ Sealed reinforced final drives (GPA 44)	MF 7724/MF 7726 Composite final drives (GPA 45)
distribution of weight between axles				

When ballasting the tractor, observe the following conditions:

- The minimum load on the front axle must be more than 20% of the unladen tractor weight.
- The load capacity of the rear tires must be taken into account. Do not overload the rear axle. (Refer to the load capacity table).

2.8.6 Road use

WARNING:
Never allow any passengers to ride on the tractor and implements.

WARNING:
Do not use the work lights when traveling on a road because rear white lights are illegal except when reversing and may confuse following drivers.

WARNING:
When using a towed vehicle ensure you are always outside of the area lying between the tractor and the towed vehicle.

- Ensure that all clearance flags and rotary beacons that indicate an abnormal load are in position and are in working order.
- Clean all the reflectors and the front and rear lights. Ensure that they are visible and in working order.
- Ensure that the tractor and implements are fitted with SMV warning triangles and other markings recommended to improve visibility when driving on roads (unless the regulations state otherwise).

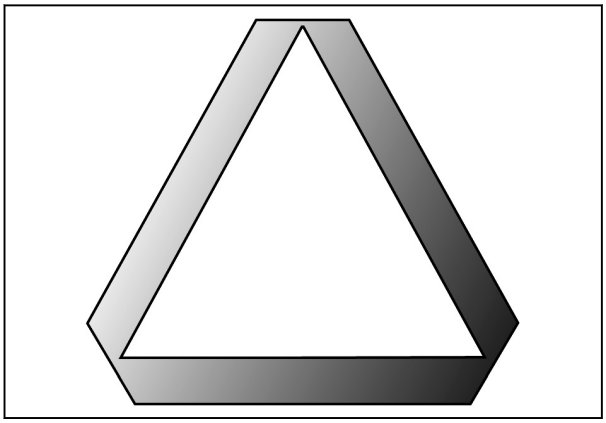


Fig. 14

- Place all implements in the transport position (as specified in the national road traffic regulations) so that they take up minimum space and lock them in position.
- Lock the brake pedals together.
- Disengage the power take-off and the differential lock.
- Observe all current local and national regulations regarding the use of a tractor on the road.
- Depending on the equipment fitted to the tractor and unless regulations state otherwise, use the rotary beacons or the hazard warning lights day and night.
- Familiarize yourself with the road you will be traveling on.

- Exercise the utmost caution when driving on snow-covered or slippery roads.
- Wait for traffic to clear before entering a public road.
- Beware of blind intersections: Slow down until you have a clear view.
- Do not attempt to push your way through at any intersection.
- Slow down for turns and curves.
- Make wide turns at a moderate speed.
- Signal your intention to slow down, stop or turn.
- Shift to a lower gear before going up or down hills.
- Always drive the tractor in gear. Do not coast with the clutch disengaged or transmission in neutral.
- Do not overlap the lane of traffic for vehicles traveling the other way.

  Stay in your lane, as close as possible to the roadside.
- If a traffic jam forms behind the tractor, pull off the road and allow the vehicles behind to pass.
- Drive carefully. Anticipate what other drivers might do.

If towing a load

- Always anticipate obstacles, especially if the trailed implement is not fitted with brakes.
- Start braking much earlier than usual and slow down gradually.
- Ensure that the load is not concealing the lights or the rotary beacons.
- Take account of your load, especially for high obstacles.

2.8.7 Parking brake

If the brakes fail and in an emergency situation, use the park brake located to the left of the operator.

NOTE:
For tractors equipped with a ParkLock, this function acts as a parking brake. Its control is located on the steering wheel.

IMPORTANT:
If the brakes fail, contact your dealer to resolve the problem.

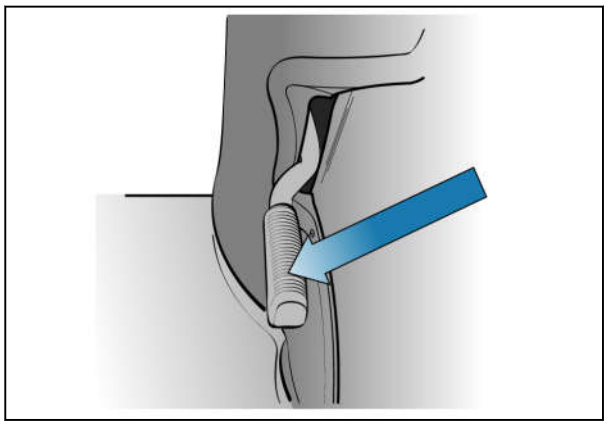


Fig. 15

2.8.8 Power take-off

DANGER:

Do not attempt to unplug the hydraulic connections or adjust an implement with the engine running or the PTO in operation. To do so may result in serious injury or death. To avoid any accidents, do not stand on the implement or between the implement and the tractor when external linkage or PTO controls are being used.

- Ensure that all the PTO shaft guards are in place and check the presence of all safety decals .

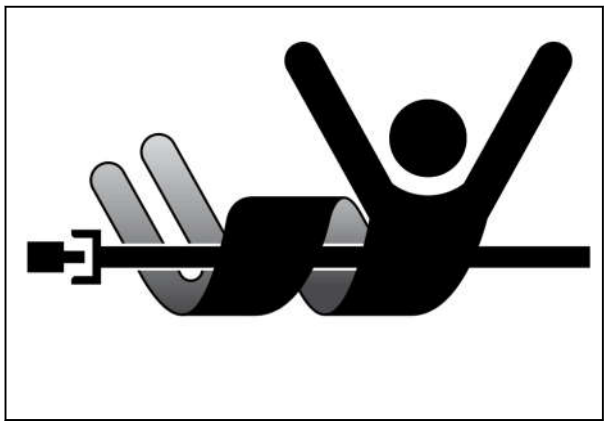


Fig. 16

- Ensure that the PTO cap (1) is fitted when the PTO shaft is not in use .
- Before hitching, unhitching, cleaning or adjusting the implements driven by the PTO, follow the "mandatory procedure before dismounting the tractor" .
- Ensure that there is nobody in the vicinity of the implement before engaging the PTO.
- For stationary PTO operation, place the transmission lever and/or the shuttle lever (both if the tractor is fitted with them) in neutral, apply the hand brake or engage ParkLock (depending on option) and chock the wheels of the tractor and the implement.
- Do not use PTO adapters, reducers or extensions as they extend the PTO coupler beyond the protection offered by the guard.

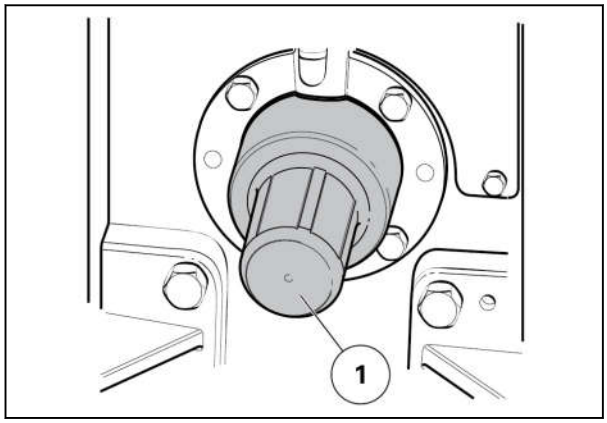


Fig. 17

(1) Correct assembly
(2) Incorrect assembly

IMPORTANT:
To prevent any rotation problems or damage to the PTO guard, observe the correct fitting position of the transmission shaft.
Make sure that the shaft does not collide with the surrounding area when the implement hitched to the tractor moves (this is a particular risk for short type 3 PTO shafts with a shield measuring 290 mm wide, as this limits the space available for the assembly).

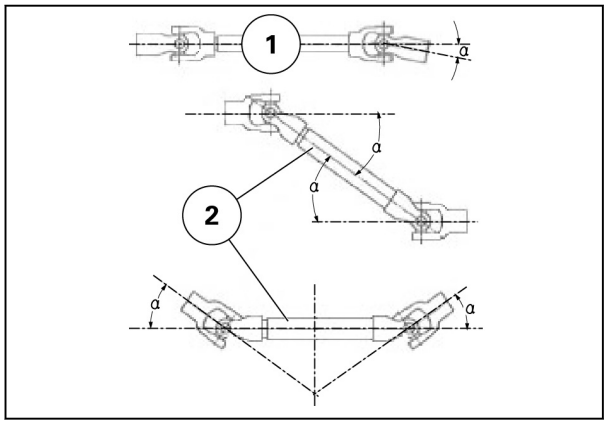


Fig. 18 Transmission shaft

2.8.9 Implements

WARNING:
The special implements are not supplied with the tractor.

Tractors and implements are not toys. Always comply with the conditions of use defined by the manufacturers.

DANGER:
To avoid serious injury or death due to falling loads resulting from inadvertent raising or roll-back of the loader, do not connect loader hydraulics to any tractor auxiliary valve that has detents which cannot be locked out or removed, except for the float function in the loader lower circuit.
If the tractor is equipped with such a valve, a dedicated, properly configured loader valve must be installed.

DANGER:
A front-end loader with a bucket or forks must be fitted with a holding device.
This device must prevent the load (bales, fence posts, rolls of fence, wire, etc.) from rolling down the length of the loader arms when the loader is raised, as it could crush the operator.
Objects that are incorrectly secured may also fall and injure people in the vicinity of the tractor.

- When using a loader, avoid sudden stops, starts, turns or changes in direction. Keep loads close to the ground when transporting.
- Never lift loads above someone.
- Implements fitted to the three-point hitch or to the side of the tractor make a much larger arc when turning than trailed implements. Ensure there is enough room to maneuver in complete safety.
- Always use implements suitably adapted to the desired conditions of use (load to transport, speed, slope etc.) to ensure that work is carried out in complete safety.
- Always read the implement instruction books fully for implements to be used with the tractor and comply with the safety instructions they contain. If these instructions cannot be observed in full, do not use the tractor fitted with the machine or trailer.
- Do not modify nor remove any parts of an implement.
- Do not touch the mechanism of an implement nor lean over it or attempt to reach it. Do not allow anyone else to do this either.
- Do not allow anyone (including yourself) to stand or pass in front of, under or behind an implement.
- If the tractor is not immobilized in accordance with the mandatory procedure before dismounting the tractor, never stand or allow any person to stand between the tractor and the implement.
- Always use implements that are capable of safely carrying the load that you wish to place in it.

  (See the information on the name plate and the chapter about the hitch.)
- Do not overload a trailed implement. Use appropriate weights to maintain tractor stability.
- The top link and the lift rods must never be taken beyond the point where the thread starts to appear.
- When using chemicals, follow the chemical manufacturer's instructions for use and storage carefully.
- All trailed implements and trailers should be connected to the tractor by a safety chain (1) .

  Should a trailed implement accidentally become separated from the drawbar during transport, this safety chain will help to retain the trailed implement. Using the appropriate adapter parts, attach the chain to the tractor's drawbar anchor or any other specified anchor point. Leave only enough slack in the chain to allow for maneuvering.

  The safety chain must have a strength equal or greater than the weight of the trailed implement: contact your Massey Ferguson dealer to obtain a suitable chain.

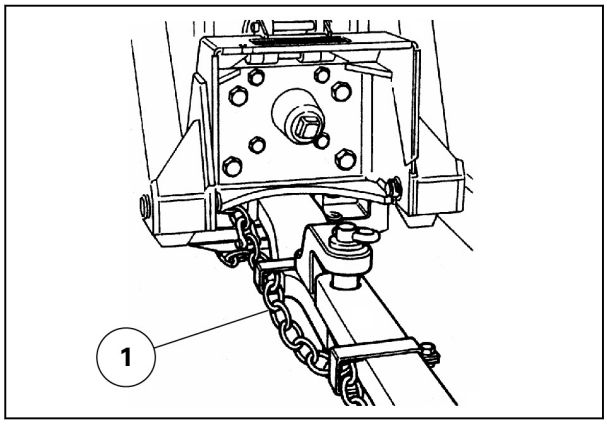


Fig. 19

- Only tow using the drawbar. Attaching the trailed implement to another location could cause the tractor to overturn.

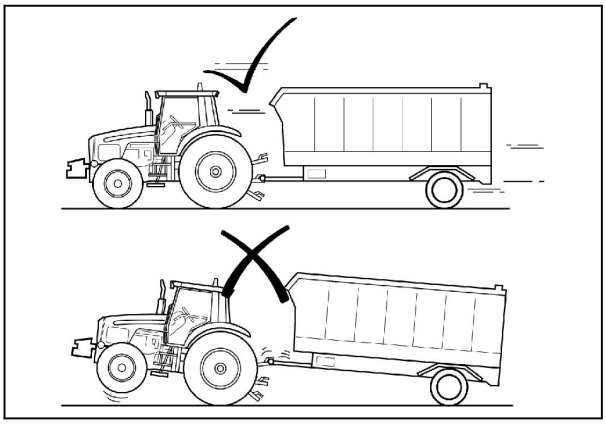


Fig. 20

Towing: permissible load and speed

WARNING:

The stopping distance increases with the speed and weight of the trailed implements, and also on a slope. Whether they are fitted with a brake system or not, trailed implements that are too heavy for the tractor or that are towed at too high a speed may lead to a loss of control. Take account of the total weight of the trailed implement (including the load).

The maximum permitted trailed weights are indicated on the name plate. In particular, comply with the following loads:

- Trailed weight without brakes: 3000 kg
- Trailed weight with independent brake system: 6000 kg
- Inertia braked trailed weight: 16000 kg
- Trailed weight with braking assistance (hydraulic or pneumatic): 32,000 kg

Never tow an implement:

- at a speed exceeding the speed limit in force in the relevant country and
- if the true weight of the tractor/implement assembly is greater than the tractor total permissible loaded weight indicated on the name plate.

Towed equipment without brakes:

Do not tow equipment that does not have brakes:

- at speeds greater than 32 kph; or
- at speeds above those recommended by the manufacturer; or
- with a weight that is greater than 1.5 t when fully loaded and is more than 1.5 times the mass (weight) of the tractor.

Towed equipment with brakes:

Do not tow equipment that has brakes:

- at speeds greater than 50 kph; or
- at speeds above those recommended by the manufacturer; or
- with a mass (weight) more than 4.5 times the mass (weight) of the tractor when fully loaded;
- at speeds greater than 40 kph if, when fully loaded, it has a mass (weight) greater than three times the mass (weight) of the tractor.

2.8.10 Front-end loader

WARNING:
The tractor must be fitted with a FOPS (Falling Object Protection Structure) roof if using a loader.
The programmable functions of the joystick or any other control MUST NOT be used to operate a loader. In order to prevent involuntary loader movement, the loader joystick controller must be of the self-cancelling type. When the operator releases his grip on the joystick, the joystick must return to a non-operational neutral position - except for float detent position in the loader lower direction.
Always read the implement instruction books fully for implements to be used with the tractor and comply with the safety instructions they contain.
For the attachment points, refer to the specifications chapter.

DANGER:
The use of front-end loaders involves the risk of falling objects; if used for forestry work there is a risk of objects penetrating into the passenger compartment.
This tractor is not designed for forestry applications; its use is prohibited unless a FORESTRY KIT is installed.
Contact the dealer to find out if a forestry kit is available for this tractor model.
Only a specific forestry kit can provide the necessary protection against falling trees and the penetration of objects.

Protection offered by the FOPS roof of the tractor

WARNING:

The use of sprayers fitted on the tractor or towed involves the risk of exposure to hazardous substances. The FOPS roof does not guarantee protection against dust, aerosols and fumes. In the event of application of crop protection products (e.g. pesticides, fungicides, herbicides etc.), see the chemical manufacturer's instructions as well as those supplied by the sprayer manufacturer. Personal protective equipment should be used if it is recommended by these instructions for tractors without a cab.

2.9 Specific safety instructions for servicing the tractor

2.9.1 Pollution warning to observe when servicing the tractor

IMPORTANT:
It is illegal to pollute drains, water courses or soil.
Use authorized waste disposal facilities for the collection and treatment of waste; public refuse tips or garages providing facilities for the disposal of used oil.
If in doubt, ask local authorities for advice.

2.9.2 General instructions

- Never bring a heat source close to the tractor
- Never service the tractor while the engine is running or hot or if the tractor is in motion .

  The operator must ensure that potentially hot parts have cooled down before carrying out any work

Fig. 21

- Before making adjustments to or servicing the electrical system, disconnect the battery cables, negative (-) terminal first.
- To prevent risks of fire or explosion, keep batteries and cold weather starting aids away from naked flames.
- To prevent sparks which could cause explosions, use jump leads according to instructions.
- Consult your Massey Ferguson dealer for repairs or adjustments and have the work carried out by trained personnel.
- The implement and/or tractor must be supported on suitable blocks or stands and not on a hydraulic jack, see the relevant chapter (installation points of the axle stands).

  The blocks and supports must be adapted to the load carried and must be sufficiently stable to prevent tilting.

  The blocks and supports must be approved and regularly checked by the appropriate authorities.

  Place the blocks and supports on solid ground that can support the load.
- Check all nuts and bolts periodically for tightness, especially wheel hub and rim nuts. Tighten to the torque values stipulated.
- Regularly check the brakes.

  Ensure that the brakes are uniformly adjusted, especially if a trailer is used.

  In case of malfunction, consult your dealer.

- Accumulators.

  The accumulators contain nitrogen and are pressurized.

  They may become hot and cause burns.

  Modifications must not be made to the accumulators (by welding, drilling, attempting to open, cutting etc.).

  The repair, maintenance and commissioning of the accumulators must only be carried out by trained personnel.

  Consult your Massey Ferguson dealer regarding any maintenance.

2.9.3 Handling instructions

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

The blocks and supports must be adapted to the load carried and must be sufficiently stable to prevent tilting.

Place the blocks and supports on solid ground that can support the load.

The blocks and supports must be approved and regularly checked by the appropriate authorities.

Positioning axle stands at the front of the tractor

Depending on the requirements of the removal procedure, the axle stands must be placed under one of the following locations:

- (1) Under the low point of the front linkage
- (2) Under the front axle final drives
- (3) Under the engine oil sump (if the front axle is to be removed)
- (4) and (5) Under the front axle beam

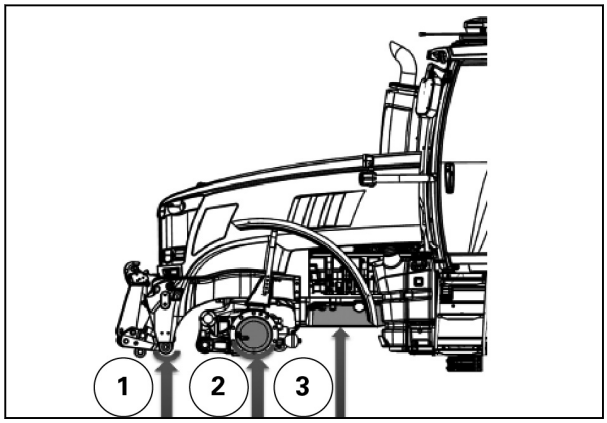


Fig. 22

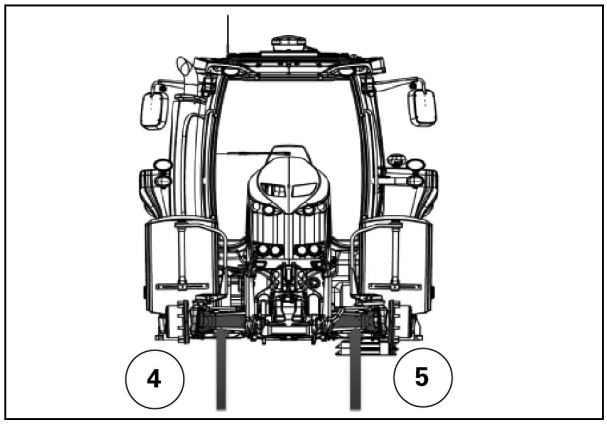


Fig. 22

Positioning axle stands at the rear of the tractor

- (6) and (7) Under the rear axle beams

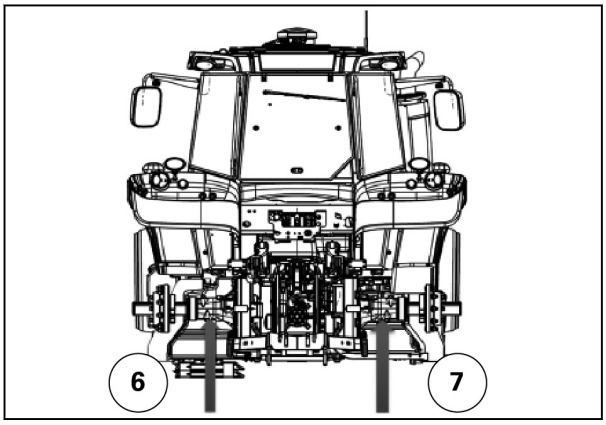


Fig. 23

Front sling points

- (8) On the side fixing holes of the front linkage
- (9) On the weight support hole

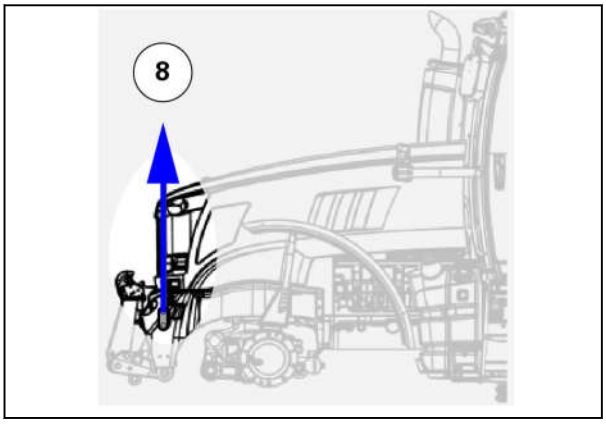


Fig. 24

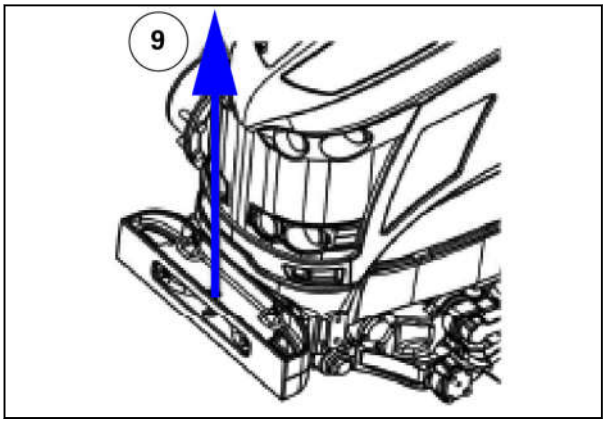


Fig. 24

Cab sling points

Fig. 25

2.9.4 Special instructions for cleaning the tractor

- Before cleaning the tractor, always:
  - Follow the mandatory procedure before dismounting the tractor
  - remove or put away implements, buckets, chains and hooks.
- Clean steps, pedals and floor. Remove grease or oil. Brush away dust and mud. In winter, scrape away snow and ice. Remember — slippery surfaces are hazardous.
- When washing the tractor with a jet of water, do not direct the jet straight onto electrical components.
- If using a high-pressure cleaning device, maintain a sufficient distance so as not to damage the paintwork and the sealed sections.
- Keep work surfaces and engine compartments clean.
- After washing, grease the lubrication points, the hinged sections and the bearings.

2.10 Protective structures

2.10.1 Protective structures - Use and accreditation

The protective structures (ROPS, seat belts) limit injuries as far as possible in case of an accident or if the tractor overturns.

They comply with all the regulations in force for agricultural tractors.

2.10.2 Cab

- The cab has been designed to be suitable for this tractor series and meet all the legal requirements in terms of safety
- Never weld parts onto the cab
- Never bend or straighten the cab
- Never drill or modify the cab to fit accessories or implements.

  If other controls or displays have to be fitted in the operator's area of maneuver, contact your dealer to find out what to do
- Do not attach chains or ropes to the cab in order to pull or tow anything
- If the cab has been removed, refit it and tighten the fixings to the specified torque before using the tractor again

WARNING:
A cab damaged as a result of an accident, overturning or other incident must be replaced before using the tractor again.

2.10.3 Seat belt

- Wearing the seat belt is an important part of this protection.
- Always wear the seat belt adjusted correctly.

WARNING:

A damaged seat belt must be replaced before using the tractor again. The seat belt approval number is visible after the seat belt has been completely unraveled.

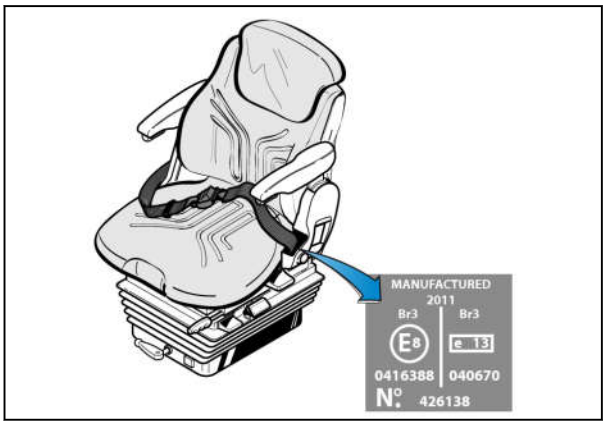


Fig. 26

2.10.4 Instructor seat

- Use of the instructor seat is exclusively reserved for an instructor or technician. The seat is NOT suitable for children.
- The seat belt must always be worn and correctly adjusted when using the instructor seat.

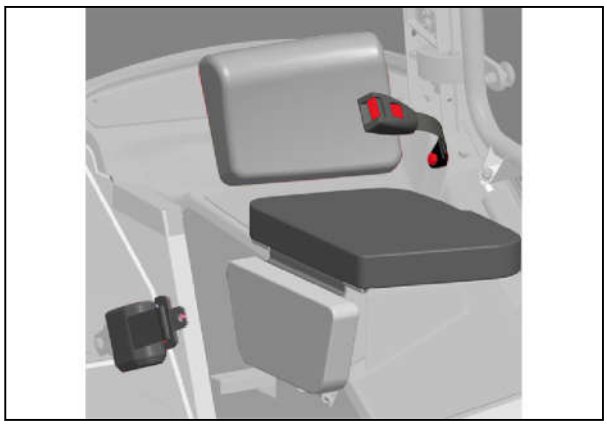


Fig. 27

2.11 Warranty

2.11.1 General

When selling new products to its dealers, the manufacturer provides a warranty which, subject to certain conditions, guarantees that the goods are free from defects in material and workmanship. Since this book is published worldwide, it is impossible to detail the exact terms and conditions of warranty that apply to all retail customers in all countries. Purchasers of new Massey Ferguson equipment should therefore request full details from their supplying dealer.

In accordance with the manufacturer's policy of continuous improvement of its products, the manufacturer reserves the right to make alterations to the specifications of machines at any time without notice. The manufacturer disclaims all liability for discrepancies which may occur between the specifications of its products and the descriptions thereof contained in its publications.

2.11.2 Pre-delivery inspection and commissioning on the user's premises

The dealer is required to carry out certain activities when supplying a new tractor. These consist of carrying out a full pre-delivery inspection to ensure that the tractor supplied is ready for immediate use, and providing full instructions to the user on the basic principles of operation and servicing of the tractor. These instructions will cover instruments and controls, and routine servicing and safety precautions. All persons who will be involved in the operation and servicing of the tractor should be present when these instructions are given.

IMPORTANT:
Massey Ferguson disclaims all liability in the event of any claim resulting from the fitting of non-approved parts, accessories, implements or attachments or unauthorized modifications or alterations.

2.11.3 Warranty procedure

Correct commissioning on the user's premises and routine servicing help to prevent breakdowns. However, if operating problems do occur during the warranty period, follow this procedure:

- Immediately inform the dealer you purchased the tractor from, stating the model and serial number. It is very important not to delay, as even if the defect is covered by the original warranty, the coverage may no longer apply if the repair is not carried out immediately.
- Provide the dealer with as much information as possible. The dealer will need to know how many hours the tractor has been in service, what type of work it is used for and the symptoms of the problem.

Routine service operations not covered by the warranty

It should be noted that routine service operations such as tuning, brake and clutch adjustment, and the supplies used for the tractor service (oil, filters, seals, fuel, antifreeze etc.), are not covered by the warranty.

Warning concerning spare parts

Parts other than Massey Ferguson parts are likely to be of lower quality. Massey Ferguson disclaims all liability in the event of loss or damage arising as a result of such parts being fitted. The manufacturer's warranty may also become void if such parts are fitted during the normal warranty period.

2.11.4 Procedure to follow if changing region

Only the dealer from whom the tractor was purchased is liable for the protection provided by the warranty. Any repairs should, wherever possible, always be carried out by this dealer. If, however, the owner moves to another region or if the tractor is to be used temporarily at a location a long way from the dealer from whom it was bought, it is advisable to ask this dealer for the name and address of the dealer closest to the new address and arrange to have the obligations remaining to be fulfilled under the warranty transferred to this dealer.

If the customer leaves the region covered by the original dealer without having taken these steps, the new dealer will offer its services if needed, but may invoice them at the normal rate unless:

- the customer has clearly stated that the warranty period has not expired, and
- the repair dealer has been given the possibility of taking the necessary steps with the selling dealer.

2.11.5 Servicing during and after the warranty period

During the warranty period, all service and repair work must be carried out by the dealer, who will carefully carry out detailed checks of the progress and performance of the new tractor.

To obtain best results from a Massey Ferguson tractor, it is important to continue regular servicing and periodic inspections after the warranty has expired. All major service work on the tractor must be carried out by a local dealer; an experienced technician will detect any problems which may arise between one service and the next. Technicians regularly follow training courses to update their knowledge of the product and service and repair techniques, and the use of special tools and modern diagnostic equipment. They receive regular Service Bulletins and have access to all the workshop manuals and technical publications required to carry out repairs or services in accordance with the quality standards required by Massey Ferguson.

3. Operation

3.1 Cab

3.1.1 Steering console

Fig. 1

(1) Instrument panel
(2) Control unit. This assembly controls the direction indicators, high beam and low beam lamps, windscreen wipers, windscreen washer and horn.
(3) Steering wheel adjustment
(4) Setup and Information Screen menu access controls
(5) PowerShuttle control and ParkLock electrohydraulic brake

3.1.2 Instrument panel

Fig. 2

(1) Tachometer The tachometer shows the engine speed in hundreds of revolutions per minute.
(2) Left-hand indicator light and function light panel
(3) Right-hand indicator light and function light panel
(4) Left-hand direction indicator light and 1st trailer direction indicator light
(5) Right-hand direction indicator light and 2nd trailer direction indicator light
(6) Engine coolant temperature
(7) Display for monitoring engine oil pressure or checking the pressure of the pneumatic braking system
(8) Not used
(9) Fuel gage for the fuel tank (with or without secondary tank)
(10) Digital display for monitoring primary functions
(11) Digital display for monitoring the Setup and Information Screen functions
(12) Main beam lights indicator light.

Left-hand indicator light panel

Fig. 3

Indicator light	Description
	Left-hand direction indicator light
	Direction indicator light for the first trailer
	Engine air filter blockage indicator light
	Blockage indicator light for auxiliary hydraulic oil filter
	General failure warning light This lights up at the same time as the other alert lights.
	Tractor forward travel indicator light
	Tractor reverse travel indicator light
	Engine preheater (Grid Heater) activation indicator light
	Front PTO engaged indicator light
	4WD front axle engaged indicator light

Indicator light	Description
	High-pressure transmission oil filter blockage indicator light
	Not used
	Not used
	Differential lock indicator light
	Rear PTO engaged indicator light

Right-hand indicator light panel

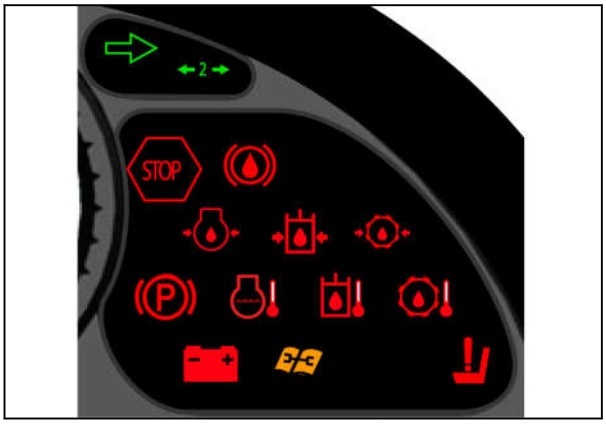
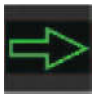


Fig. 4

Indicator light	Description
	Right-hand direction indicator light
	Direction indicator light for the second trailer
	Indicator light for an engine fault that causes the engine to stop
	Pressure light for brake (ParkLock, depending on model) and pneumatic brake
	Engine oil pressure indicator light

Indicator light	Description
	This indicator light comes on when the ignition key is in the ON position (3) (see start switch), but should switch off when the engine is started and is running. If the indicator light stays on when the engine is running, stop the engine and determine the cause of the low pressure or consult your dealer.
	Lubrication pressure indicator light
	Transmission oil pressure indicator light If the indicator light comes on during operation, stop the tractor and consult your dealer.
	Transmission operating temperature indicator light
	Temperature indicator light for auxiliary hydraulic oil
	Engine coolant temperature indicator light
	Parking brake indicator light
	Alternator charge light If the indicator light comes on or flashes at an engine speed above 1000 rpm, determine the cause of the failure (see the Maintenance section of the Operator's Manual) or consult your dealer.
	Service indicator light This lights up when a service is due.
	Presence detector in the seat indicator light

Monitoring display panel

(1) Engine temperature monitoring display (range from 60°C to 110°C): Segment display
If it reaches the red zone, stop the hydraulics and the PTO, place the transmission in neutral and check whether the cooler is blocked. If necessary, unblock it after stopping the engine, accelerate fully until it returns to the normal operating zone (green). If the problem still persists, contact your dealer.

(2) Diesel fuel level monitoring display: Segment display

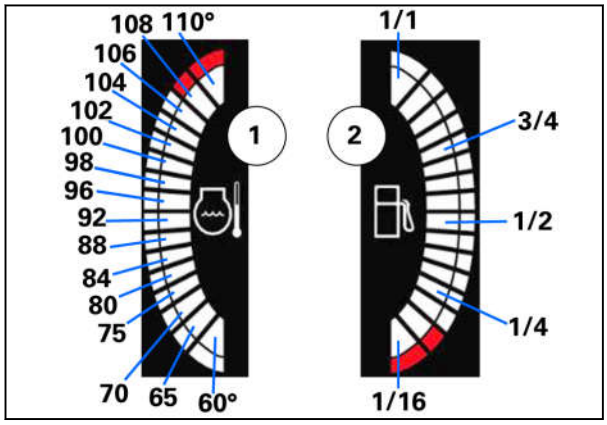


Fig. 5

(3) Dual-purpose display unit

(4)
- Monitors pneumatic braking pressure (3) (from 0 bar to 10 bar (145 psi)
- (4) Not used

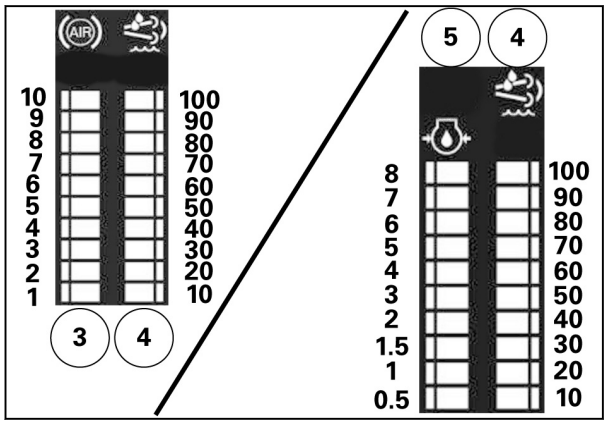


Fig. 6

To switch from display (3) to display (5), use the navigation key on the control keypad for the Setup and Information Screen functions when the main screen is displayed.

(5)(4) Dual-purpose display unit

- Monitors engine oil pressure (5) (from 0 bar to 8 bar)
- (4) Not used

To switch from display (3) to display (5), use the navigation key on the control keypad for the Setup and Information Screen functions when the main screen is displayed.

Main monitoring display

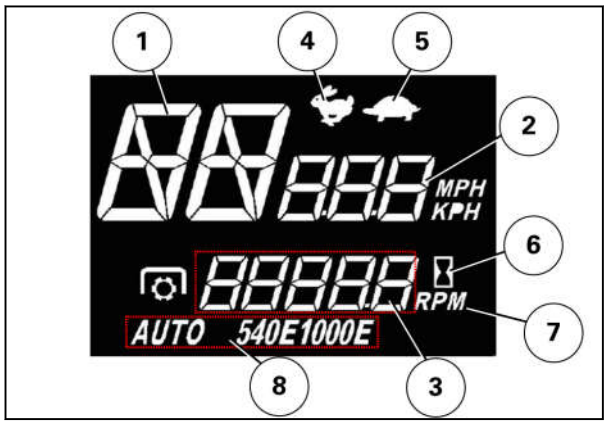


Fig. 7

(1) Forward/neutral/reverse display
(2) Forward speed display
(3) Digital display (linked to the symbols (6) or (7)):

- Rear PTO speed
- Engine speed
- Hours worked
- Total engine time.

  Alternating display of number of hours and hundredths.

These parameters can be selected by pressing button (17) on the right-hand side of the steering wheel

NOTE: *Resetting the working time: Display the parameter in question, then press and hold the button* (17) *for approx. 5 seconds to reset the display to 0.*

(4) (Hare) road mode engaged display
(5) (Tortoise) field mode engaged display
(6) Display of symbols according to display (3):

- Hours worked
- Total engine time

(7) Display of symbols according to display (3):

- Rear power take-off (PTO)
- Engine speed

(8) Display of rear PTO speed selected:

- **AUTO**: Automatic mode
- **540**: 540 rpm
- **540E**: 540 rpm economy
- **1000**: 1000 rpm
- **1000E**: 1000 rpm economy

Setup and Information Screen monitoring display

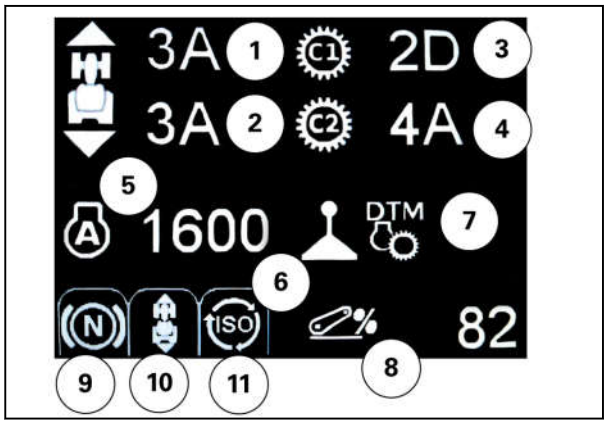


Fig. 8

(1) Forward travel start-up speed value display
(2) Reverse travel start-up speed value display
(3) Display of the forward speed stored in C1
(4) Display of the forward speed stored in C2
(5) Display of the engine speed stored in A (display of the engine speed stored in B if active)
(6) Display of Lever mode or Pedal mode
(7) Display of Upper and lower limits of the engine speed function if active
(8) Display of the function selected by the user (selection by pressing the key)

- Area worked
- Hourly consumption
- Area worked per hour
- Power consumption in relation to the area worked
- Current rate of slip (%)
- Rear power lift position (%)

(9) Icon displayed if the function is active (the transmission shifts into neutral every time the brake pedals are pressed and the clutch automatically re-engages when they are released)
(10) Icon displayed if the right-hand reverse shuttle function is active
(11) Icon displayed if the Isobus function is active

Setup and Information Screen menu access controls

(11) Up scrolling key
(12) Down scrolling key
(13) Left scrolling key.
(14) Right scrolling key.
(15) Confirmation key
(16) Cancel key.
((17)) Parameter display selector for the Setup and Information Screen

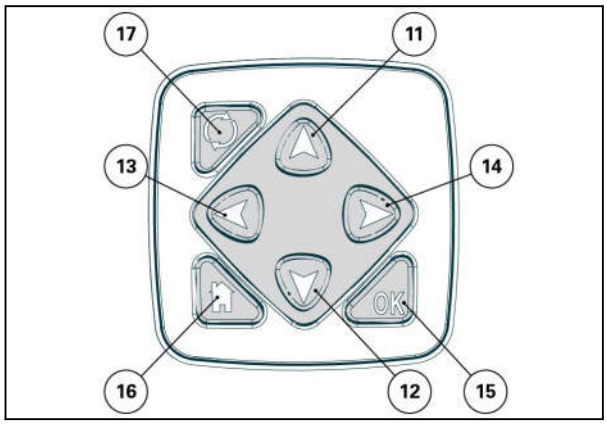


Fig. 9

3.1.3 Control unit

(1) Windscreen wiper

- 0. Off
- J. Intermittent
- I. First speed
- II. Second speed

(2) Left-hand indicator:

- (A): momentary. Cancels once it is released.
- (B): locked. Cancels when the steering wheel returns to the center (straight line).
- It is the left-hand indicators that flash.

(3) Right-hand indicator:

- (A): momentary. Cancels once it is released.
- (B): locked. Cancels when the steering wheel returns to the center (straight line).
- It is the right-hand indicators that flash.

(4) Horn
(5) Main beam lights flash.
(6) High beam lamps position (after engaging the main lighting)
(7) Front windscreen washer.

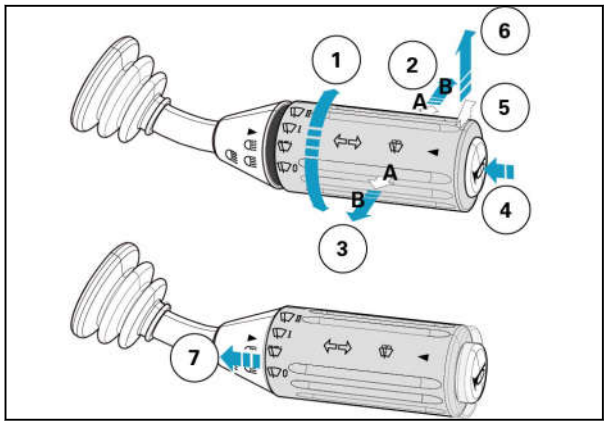


Fig. 10

3.1.4 Pedals

(1) Clutch pedal
(2) Brake pedals
(3) Brake pedal locking latch.
(4) Throttle pedal.

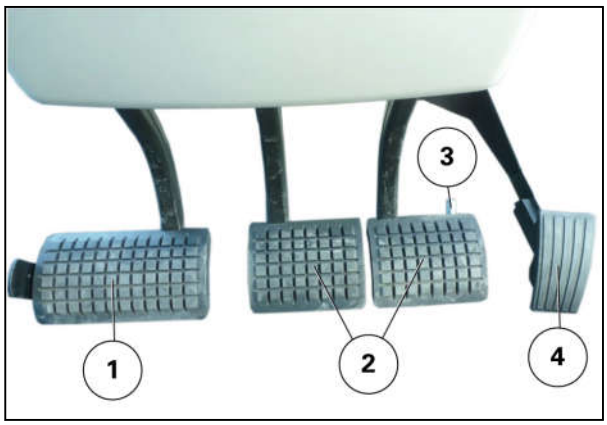


Fig. 11

Clutch pedal

The clutch pedal has a safety start switch. The clutch pedal must be depressed fully before operating the starter switch.

IMPORTANT: *Never keep your foot on the clutch pedal or keep it halfway engaged.*

Brake pedals

The two brake pedals can be used either separately or locked together using the latch (3).

IMPORTANT: *The two brake pedals must be locked together when being used on the open road.*

Throttle pedal.

Use of the throttle pedal enables a momentary increase of the engine speed set by the hand throttle. With the Datatronic CCD option installed, the engine speed setting and the maximum tractor speed setting in pedal mode can be set (refer to the "Transmission application" chapter of the Datatronic CCD Operator's Manual).

WARNING:
When traveling on the road, only the throttle pedal should be used; the throttle lever should be moved to the idle position so that engine braking can be operational.

3.1.5 Steering wheel

The steering wheel tilt and height can be adjusted. Both adjustments are made using a single lever :

- height adjustment: pull the lever upward to adjust the height (1)
- tilt angle adjustment: press the lever downward to adjust the tilt angle (2).

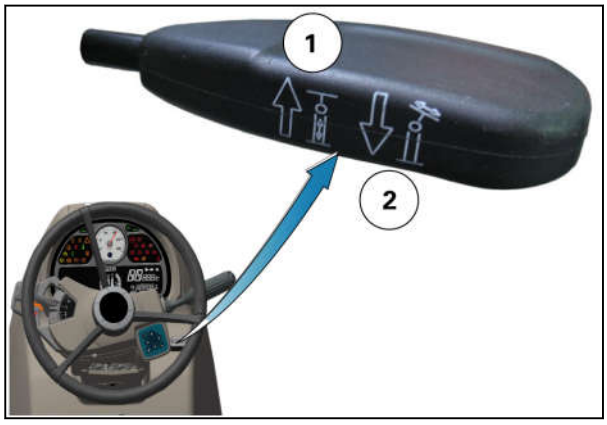


Fig. 12

3.1.6 Operator presence detector

Operator presence detector

A presence detection system is built into the operator's seat. When the tractor is moving, if the operator leaves the seat, a specific icon appears on the control panel screen. The tables below summarize the operating conditions for the detector.

Operator presence detector status:

- OFF = No operator detected on seat
- ON = Operator detected on seat

Fig. 13

Logic of operation:			
Rear power take-off status	**Presence detector status**	**Position of the parking brake or ParkLock**	**Result**
OFF	OFF	OFF	Power take-off cannot be engaged
OFF	OFF	ON	• Power take-off cannot be engaged using the cab control • Can be engaged using the power take-off switch on the fender
OFF	ON	ON or OFF	• Power take-off can be engaged using the cab control • Cannot be engaged using the power take-off switch on the fender
ON	ON	ON or OFF	The power take-off is in operation
ON	OFF > 2 seconds and < 5 seconds	ON or OFF	The power take-off (PTO) continues to operate but an audible signal sounds (ten seconds) and a symbol is displayed on the instrument panel
ON	OFF > 5 seconds	ON	The power take-off continues to operate
ON	OFF > 5 seconds	OFF	The PTO stops If there is a presence detector fault, depressing and keeping the clutch pedal pressed will re-engage the PTO in the cab, using the ON/OFF switch to unblock/clean an implement (for example: a round

Logic of operation:			
Rear power take-off status	**Presence detector status**	**Position of the parking brake or ParkLock**	**Result**
			baler). The power take-off stops for five seconds after the clutch pedal is released.

Front power take-off status	Presence detector status	Position of the parking brake or ParkLock	Result
OFF	OFF	ON or OFF	Power take-off cannot be engaged
OFF	ON	ON or OFF	Front power take-off can be engaged using the cab control
ON	ON	ON or OFF	The power take-off is in operation
ON	OFF > 2 seconds and < 5 seconds	ON or OFF	The power take-off (PTO) continues to operate but an audible signal sounds (ten seconds) and a symbol is displayed on the instrument panel
ON	OFF > 5 seconds	ON	The power take-off continues to operate
ON	OFF > 5 seconds	OFF	The PTO stops If there is a presence detector fault, depressing and keeping the clutch pedal pressed will re-engage the PTO in the cab, using the ON/OFF switch to unblock/clean an implement (for example: mower). The power take-off stops for five seconds after the clutch pedal is released.

Headland Mode status	Presence detector status	Position of the parking brake or ParkLock	Result
OFF	OFF		Headland mode cannot be engaged
OFF	ON		Headland mode can be engaged
ON	OFF < 2 seconds		Headland mode remains ON
ON	OFF > 2 seconds		An audible signal sounds (10 seconds) and a symbol is displayed on the control panel screen and headland mode OFF

Shuttle control	Presence detector status	Position of the parking brake or ParkLock	Result
Neutral	OFF	OFF	An audible signal sounds (10 seconds) and the symbol is displayed on the control panel screen
Neutral	OFF	ON	Normal safety condition
Neutral to forward or reverse travel	ON	OFF	Forward or reverse travel can be engaged
Neutral to forward or reverse travel	OFF	OFF	Forward or reverse travel cannot be engaged Pressing the clutch pedal allows the tractor to be driven if a presence sensor fault occurs
Forward or reverse travel	ON	OFF	Normal operation
Forward or reverse travel	OFF < 2 seconds	OFF	Normal operation
Forward or reverse travel	OFF > 2 seconds	OFF	The tractor continues to move but an audible signal sounds (10 seconds) and a symbol is displayed on the control panel screen

Initial status of the Auto-Guide™ function (optional)	Presence detector status	Position of the parking brake or ParkLock	Result
OFF	OFF		Auto-Guide™ cannot be engaged
OFF	ON		Auto-Guide™ can be engaged
ON	OFF < 2 seconds		Auto-Guide™ continues to operate
ON	OFF > 2 seconds		An audible signal sounds (10 seconds), and the symbol is displayed on the control panel screen and Auto-Guide™ OFF

Initial status of electrical switches H3 and H4 on the Multi Function Joystick	Presence detector status	Position of parking brake	Result
OFF	ON	ON or OFF	Operation of the H3 and H4 electrical switches (3rd and 4th function) possible
OFF	OFF	ON	Operation of the H3 and H4 electrical switches (3rd and 4th function) impossible
OFF	OFF < 3 seconds	OFF	The H3 and H4 electrical switches (3rd and 4th functions) can operate for three seconds
OFF	OFF > 3 seconds	OFF	Operation of electrical switches H3 and H4 not possible (an audible signal sounds and the symbol is displayed on the control panel)

3.1.7 Automatic adjustment pneumatic seat

Availability of adjustments varies according to the seat option fitted

WARNING:

Runaway machine and runover hazards. Never adjust the seat when the tractor is in motion.

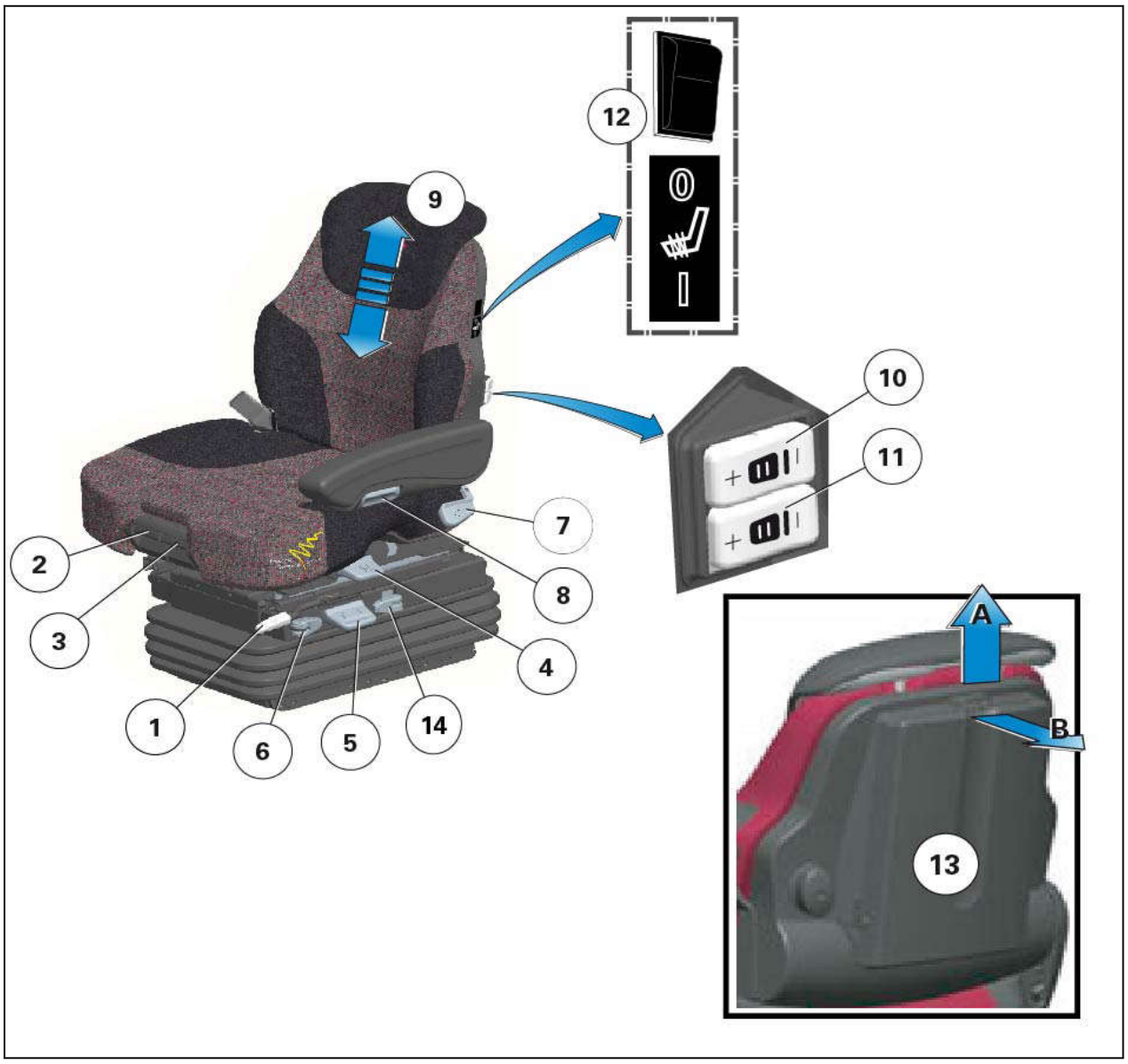


Fig. 14 Deluxe Air seat with automatic adjustment pneumatic suspension

(1) Legroom adjustment
(2) Seat depth adjustment
(3) Seat tilt adjustment
(4) Seat swivel control
(5) Seat weight and height adjustment
(6) Fore/aft shock absorber
(7) Backrest tilt adjustment
(8) Armrest tilt
(9) Backrest extension
(10) Mechanical adjustment of the lumbar support or electrical adjustment of the high lumbar support (depending on model)
(11) Electrical adjustment of low lumbar support
(12) Seat heater (depending on model)
(13) Storage space for books and user instructions
(14) Vertical shock absorber adjustment control

Legroom adjustment

Move the locking lever (1) upward to enable legroom adjustment. After the adjustment has been carried out, the locking lever should be engaged in the required position. It should not be possible to move the operator's seat into another position when it is locked .

IMPORTANT:
Do not lift the locking lever with your leg or calf.

Fig. 15

Seat depth adjustment (depending on model)

To adjust the depth of the seat, pull the handle (1) upward while moving the seat backward or forward to find the required position .

NOTE:
There are two tilt angles, spaced 2.5° apart.

Fig. 16

Seat tilt adjustment

To adjust the tilt angle of the seat, pull the handle (2) upward while pressing on the seat or releasing pressure on the seat to find a comfortable position .

NOTE:
There are two tilt angles, spaced 2.5° apart.

Fig. 17

Seat swivel

Pull the locking lever (1) to enable the rotation mechanism and swivel the seat 20° to the right or left (the seat can be locked in position every 10°). After the adjustment has been carried out, the locking lever should be engaged in the required position. It should not be possible to move the operator's seat into another position when it is locked .

IMPORTANT:
There will be a click when the lever locks into place. The swivel should be in the central position for driving.

Fig. 18

Seat weight and height adjustment

The weight adjustment is carried out automatically when the operator sits on the seat. It is not necessary to operate the handle.

The height adjustment is continuously adaptable due to the pneumatic system: Raise or lower the seat by pulling or pressing on the weight adjustment handle (1). When the upper or lower height limit is reached, the height adjusts automatically, providing minimum shock absorption travel .

Release the handle at the required height or at the upper stop.

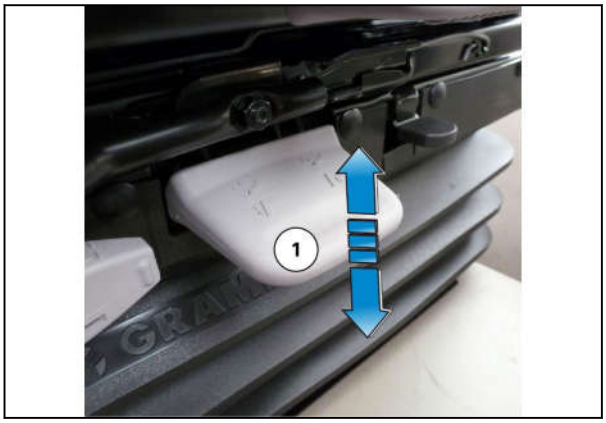


Fig. 19

IMPORTANT:
To avoid causing any damage, do not activate the compressor for more than one minute when adjusting the seat height.

Vertical shock absorber

The vertical shock absorber can be adapted to the structure of the land or road. Seat comfort is individually adjustable using the lever (1). There are five adjustment positions:

- Position A: Very soft shock absorption
- Position B: Soft shock absorption
- Position C: Medium shock absorption
- Position D: Firm shock absorption
- Position E: Very firm shock absorption

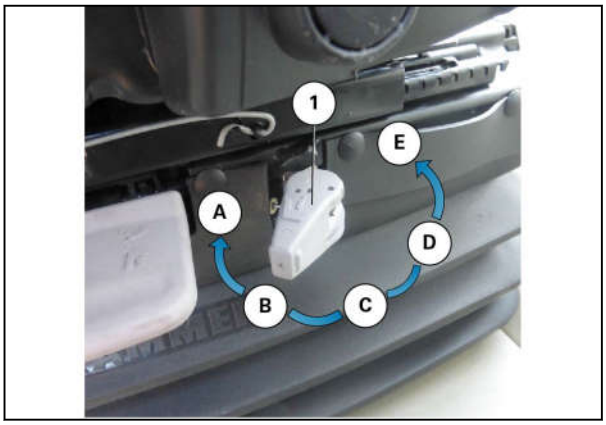


Fig. 20

Fore/aft shock absorber (depending on model)

Under certain conditions of use (driving with a trailer), it is advisable to use the fore/aft shock absorber; the operator's seat is then better protected against jerks in the direction of travel. The fore/aft shock absorber can be activated and deactivated using the locking lever (2) :

- Position A: Fore/aft shock absorber OFF
- Position B: Fore/aft shock absorber ON

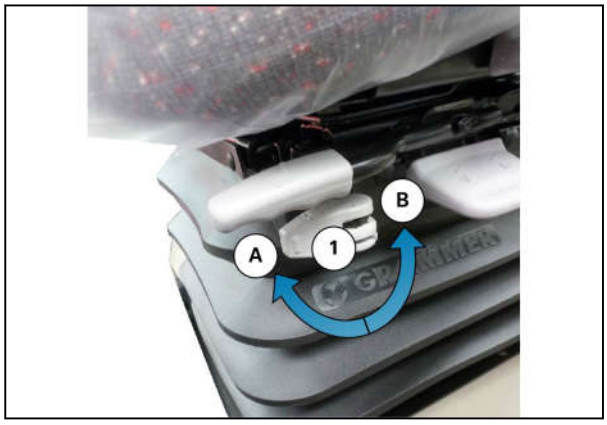


Fig. 21

Backrest tilt adjustment

The seat backrest adjustment mechanism can be enabled by moving the locking lever (1) upward. After the adjustment has been carried out, the locking lever should be engaged in the required position. It should not be possible to move the backrest into another position when it is locked. The backrest tilt angle (positions spaced 2° apart) can be adjusted between -10° and +30° .

Fig. 22

Armrest tilt

The tilt angle of the armrests (1) can be adjusted by turning the thumb wheel by hand. Turning the thumb wheel toward the outside of the seat (+) raises the front of the armrest. Turning the thumb wheel toward the inside of the seat (-) lowers the front of the armrest .

The armrests can be tilted backward and their height can be adjusted as necessary. Remove the protective cover on the left-hand side of the seat (2) by unscrewing the hexagonal nut located behind.

Adjust the armrests to the required height (5 notches) and retighten the hexagonal nut. Then, refit the protective cover (2).

Fig. 23

Backrest extension

The height of the backrest extension can be adjusted by pulling it up to the upper stop. To remove the backrest extension, pull firmly upward past the end stop.

Fig. 24

Lumbar support adjustment

By operating the upper switch (1) or the lower switch (2), the lumbar support can be individually adjusted in the upper or lower section of the backrest. This adjustment increases seat comfort and operator freedom of movement.

- Electrical adjustment version: The curvature of the lumbar adjustment is adjusted by pressing "+" or "-" on the relevant switch. Stop pressing "+" and release the switch when maximum backrest curvature is reached. If you continue to press the switch, the seat could drop .

  NOTE:
  To prevent the loss of air, stop pressing the "+" symbol on the switches as soon as the air chambers are completely filled.
- Manual adjustment version: Turn the adjustment thumb wheel (1) in either direction to stiffen or soften the adjustment.

Fig. 25

Fig. 25

Heating

Place the switch in position (2) to activate seat heating and place the switch in position (1) to turn it off .

Fig. 26

Storage space for books and user instructions

The storage compartment or storage pocket (depending on model) is located on the back of the seat. To open the compartment, first pull the tab (A) upward and then pull the cover backward (B) .

Fig. 27

Seat belt

Wearing the seat belt plays an essential role in protecting the operator.

WARNING:
Always wear the seat belt adjusted correctly.

3.1.8 Instructor seat

- Use of the instructor seat is exclusively reserved for an instructor or technician. The seat is NOT suitable for children.
- The seat belt must always be worn and correctly adjusted when using the instructor seat.

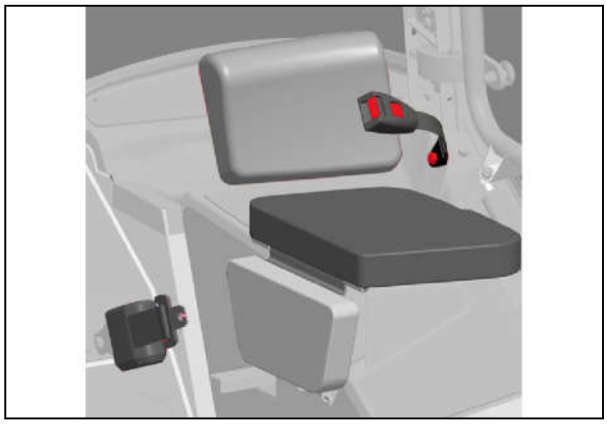


Fig. 28

3.1.9 Right-hand console

(A) Multifunction armrest
(B) Dyna-6 control module.
(C) Auxiliary hydraulic controls.
(D) Front power take-off ON/OFF switch/rear power take-off ON/OFF switch.
(E) Fuse box location (see fuse box description in the Maintenance section of the Operator's Manual).
(F) Datatronic CCD on-board computer (see the Operator's Manual)

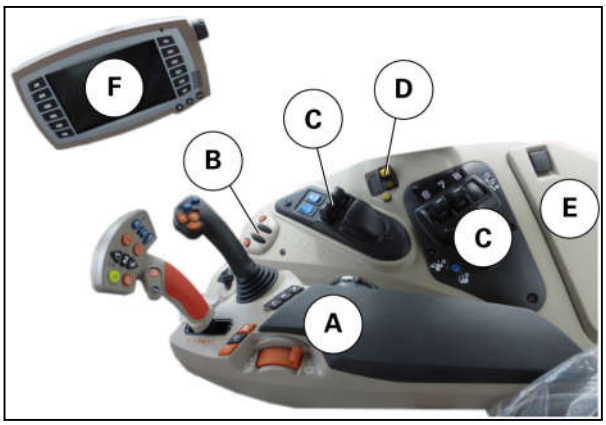


Fig. 29

3.1.10 Command Control Armrest

Version with T-handle lever

(1) Transmission cycling control.
(2) Range shift switch or field mode (tortoise)/ road mode (hare)
(3) Control of the 1st rear spool valve (or the 1st front spool valve, if fitted)
(4) Control of the 2nd rear spool valve (or the front power lift, if fitted)

Fig. 30

Version with MultiPad lever

(1) Headland Management switch (see the Datatronic CCD Operator's Manual) or Auto-Guide™ system activation switch if no sequence is stored (see the Auto-Guide™ Operator's Manual) (default factory settings)
(2) PowerShuttle switch
(3) Rear linkage lifting switch
(4) Rear linkage lowering switch
(5) Rear linkage shift to neutral switch
(6) Stored transmission ratio C1 switch
(7) Stored transmission ratio C2 switch
(8) Rear power take-off restart switch
(9) Stored engine speed (A) switch
(10) Hydraulic spool valve control (ram rod extension phase)
(11) Hydraulic spool valve control (ram rod retraction phase)
(12) (Floating position) hydraulic spool valve control

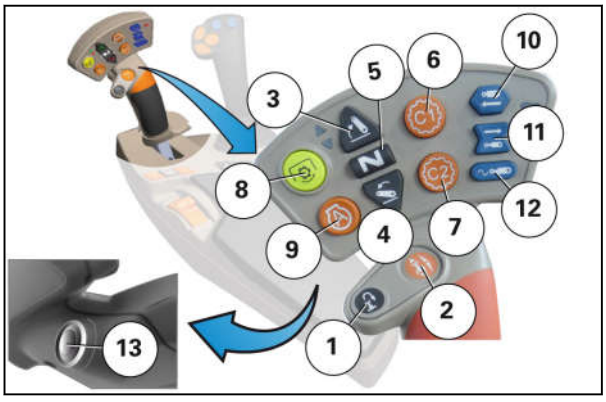


Fig. 31

(13) Range shift confirmation switch

Version with Multi Function Joystick (optional)

(1) PowerShuttle switch
(2) Switch to decrease ratios A/B/C/D/E/F.
(3) Switch to increase ratios A/B/C/D/E/F.
(4) H3 switch for hydraulic loader function or other tractor functions
(5) H4 switch for hydraulic loader function or other tractor functions
(6) Transmission shift to neutral switch

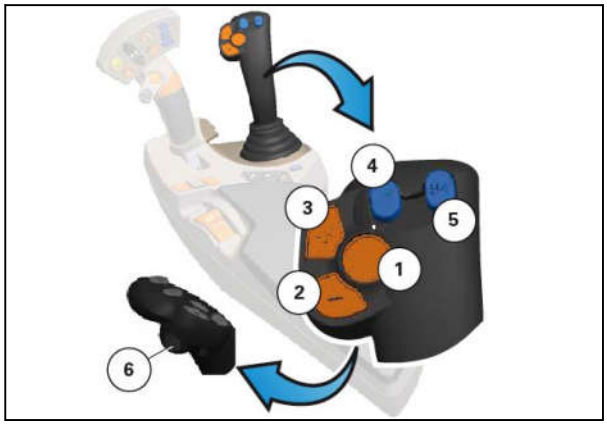


Fig. 32

Throttle control

(1) Hand throttle

Fig. 33

Transmission functions with the version with T Handle

(1) Stored transmission ratio C1 switch
(2) Stored engine speed (A) switch
(3) Headland Management switch or stored transmission ratio C2 switch

NOTE:
The Headland Management switch activates stored transmission ratio C2 if no Headland sequence is programmed.
If a Headland sequence is programmed by default, the Headland Management switch will be reassigned to its Headland function.

Fig. 34

Transmission functions with MultiPad version

(1) Maximum engine speed switch
(2) ISO switch to allocate MultiPad functions to an Isobus implement via the Datatronic CCD
(3) field mode (tortoise)/road mode (hare) switch

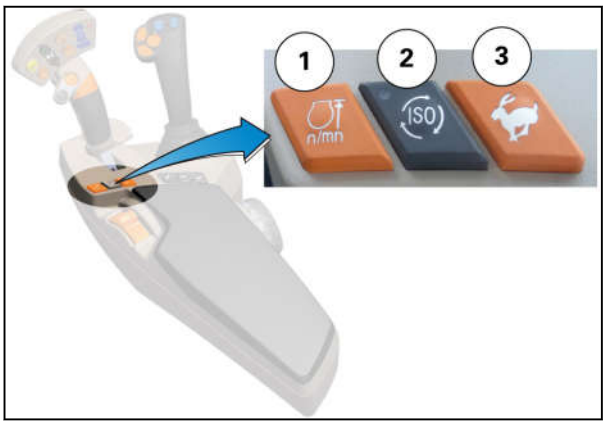


Fig. 35

Rear linkage control on the armrest

(1) Rear linkage switch in lifting position
(2) Rear linkage switch in neutral position
(3) Rear linkage switch in lowering position
(4) Height/depth adjustment thumb wheel with adjustable control stop

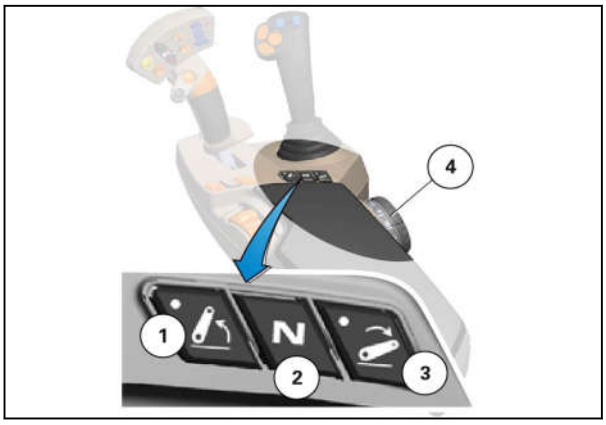


Fig. 36

3.1.11 Right-hand pillar

(A) Work lights module
(B) Selecting the power take-off speed
(C) Electronic linkage control plate
(D) Hazard warning lights indicator light and switch
(E) Activation switch of the front loader (if this option is fitted)
(F) Start switch
(G) Control switches: Side lights/low beam lamps, 4-wheel drive front axle/differential, suspended front axle/Auto-Guide™ (if this option is fitted)/SpeedSteer steering system (if this option is fitted).

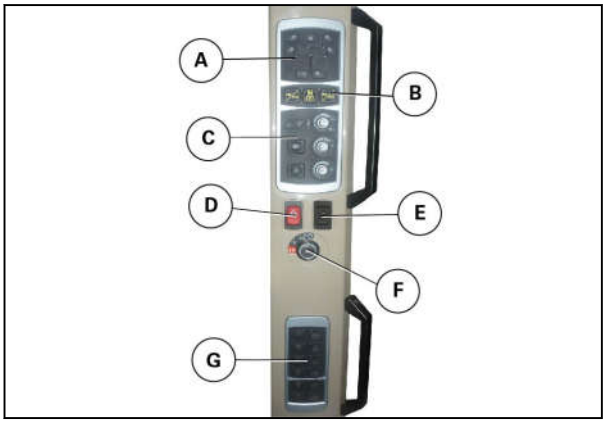


Fig. 37

3.1.12 Left-hand console

(1) Main storage tray
(2) Passenger seat
(3) Can/bottle holder
(4) Mobile phone support
(5) Cigarette lighter socket
(6) Electrical control for adjusting external rear-view mirrors (optional).
(7) External rear-view mirror defrosting control (optional).
(8) Rear windscreen wiper control and rear windscreen washer control

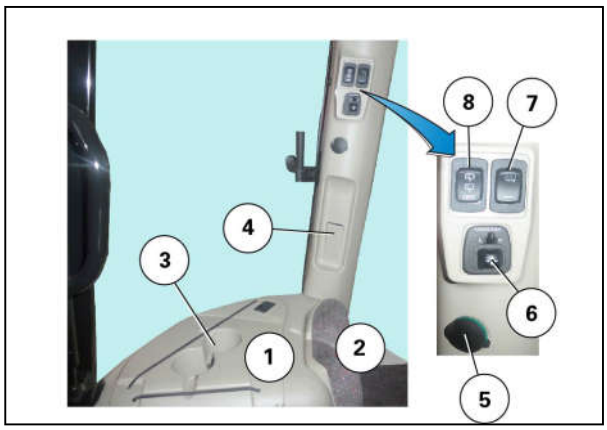


Fig. 38

3.1.13 Upper console

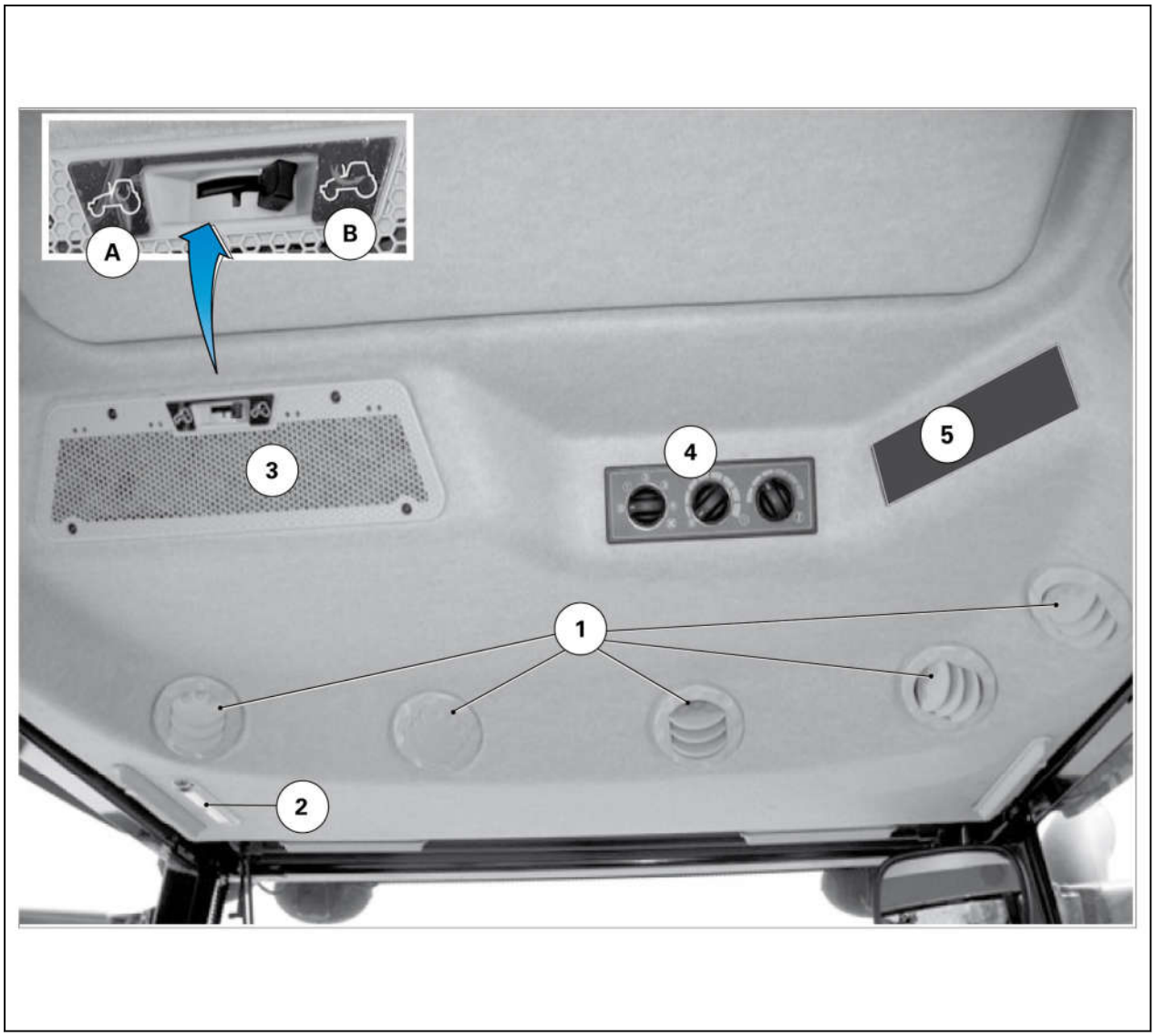


Fig. 39

(1) Adjustable air circulation vents.
(2) Interior light

(3) Adjustable ventilation grilles: (A) Recycling of air inside the cab, (B) outside air intake

(4) Air conditioning control module
(5) Radio slot.

Interior light

(0) Off
(1) Light comes on when opening the left-hand door
(2) Permanently on

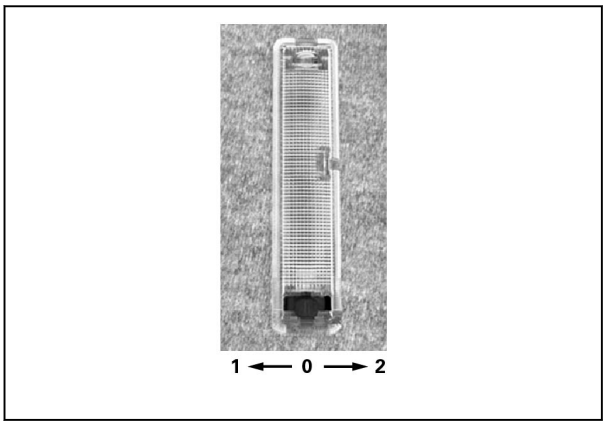


Fig. 40

3.1.14 Manual air conditioning

IMPORTANT:
When the air conditioning system is in use, the cab doors and windows must be closed to ensure optimum efficiency. Switch off the system before starting up the engine. Ensure that the cab air filter is clean.

IMPORTANT:
To prevent seizure of the compressor and keep the cooling system in good condition, the air conditioning must be operated for a few minutes at least once a week, even in winter.

NOTE:
Have the refrigerant level checked by your dealer once a year.

WARNING:
Do not attempt to disassemble any part of the air conditioning system.

Description

(1) Manual ventilation control and side ventilation control knob
(2) Air conditioning (minimum/maximum) control knob
(3) Heating (minimum/maximum) control knob

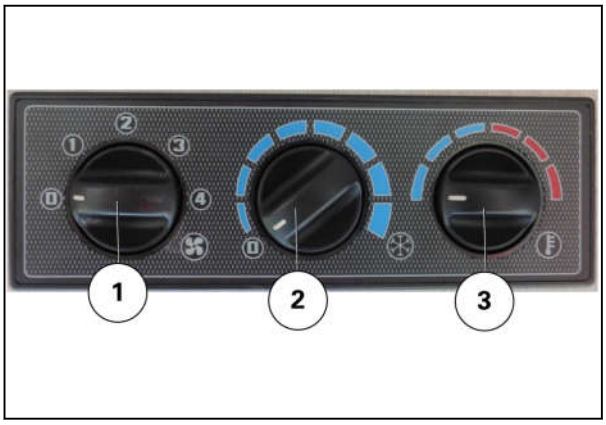


Fig. 41

Changing the air flow

Turn the knob (1) clockwise to increase the ventilation and counterclockwise to decrease it. The variation in the air flow is instantaneous.

To shut it off, move the fan control knob (1) to position "0".

Fig. 42

Stopping operation

The fan control knob is placed in position "0" (The fan is deactivated)

The air conditioning control knob is in position "0".

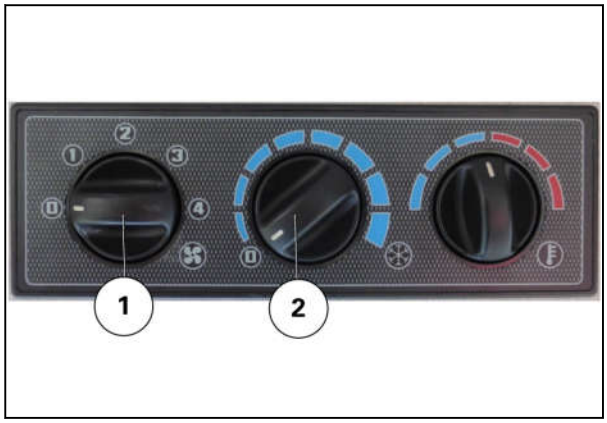


Fig. 43

Pre-selecting the cab temperature

Preselect the desired temperature setting using the knob (3).

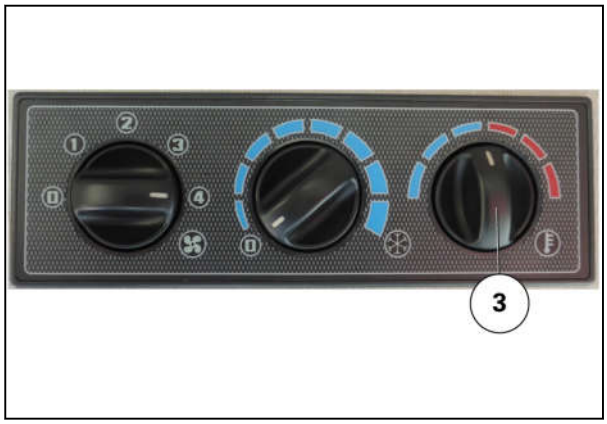


Fig. 44

Maximum temperature

The maximum heating is obtained by turning the knob (3) clockwise to the maximum.

The fan knob (1) is placed in position "3" (the fan speed is 75% of maximum)

The recirculation control (4) is placed in position "A", the recirculation function is deactivated (the air is taken from outside the cab)

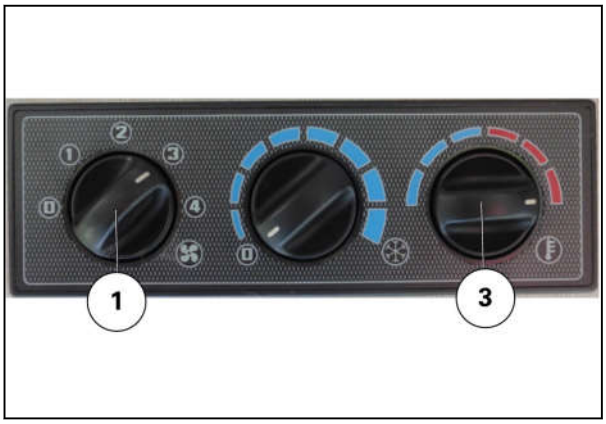


Fig. 45

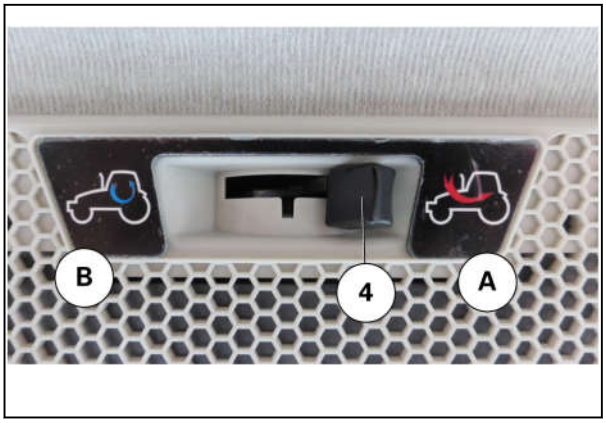


Fig. 45

Minimum temperature

The maximum cooling is obtained by turning the knob (3) counterclockwise to the maximum.

The fan knob (1) is placed in position "4" (the fan speed is then maximum)

The air conditioning knob (2) is turned clockwise to the maximum, the air conditioning compressor is activated.

The recirculation control (4) is placed in position "B", the recirculation function is activated (the air inside the cab is recirculated in a closed circuit)

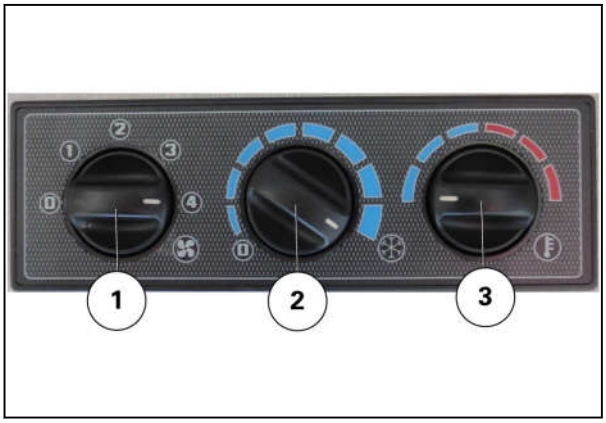


Fig. 46

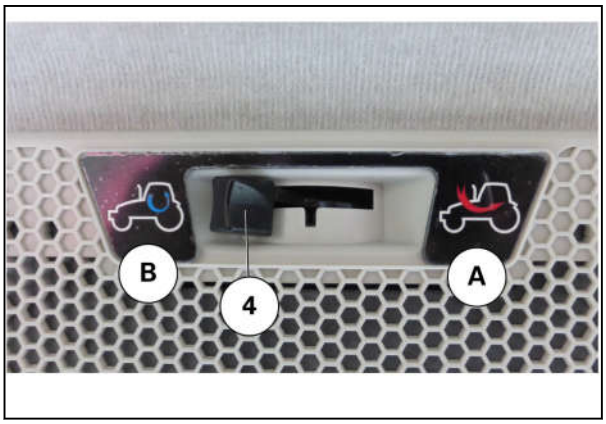


Fig. 46

Defroster button

The maximum heating is obtained by turning the knob (3) clockwise to the maximum.

The fan knob (1) is placed in position "3" (the fan speed is 75% of maximum)

The air conditioning knob (2) is turned clockwise to the maximum, the air conditioning compressor is activated.

The recirculation control (4) is placed in position "A", the recirculation function is deactivated (the air is taken from outside the cab)

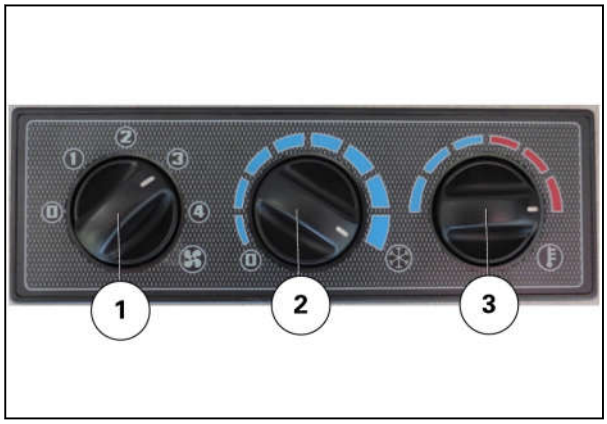


Fig. 47

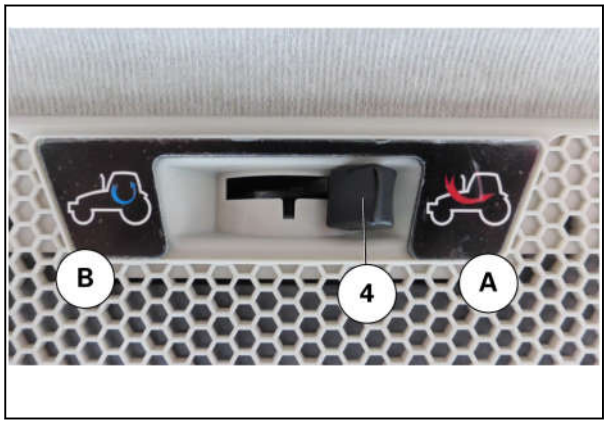


Fig. 47

To increase the effectiveness of the defrost function, you are advised to close all air vents (A) when the function is active.

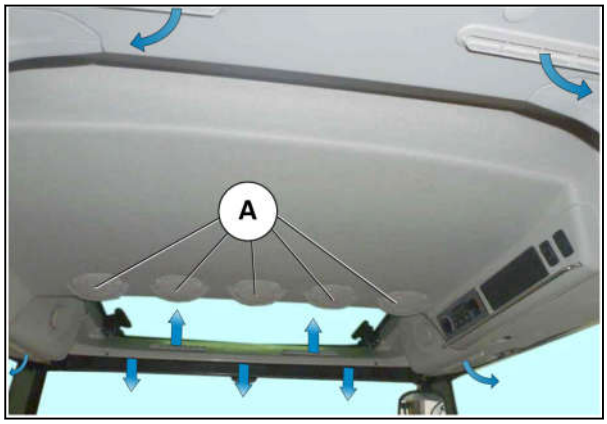


Fig. 48

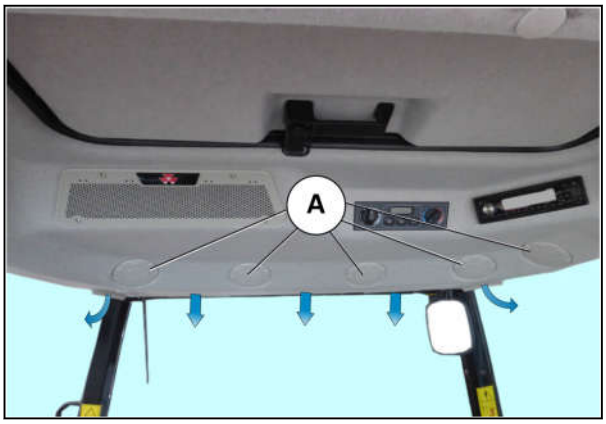


Fig. 48

Activating/deactivating air conditioning

The cab air conditioning is activated by adjusting the button ((2)) clockwise according to the required level of cooling.

The air conditioning compressor can be activated to maintain the required temperature level.

The air conditioning system can be deactivated by turning the knob ((2)) counterclockwise to the maximum

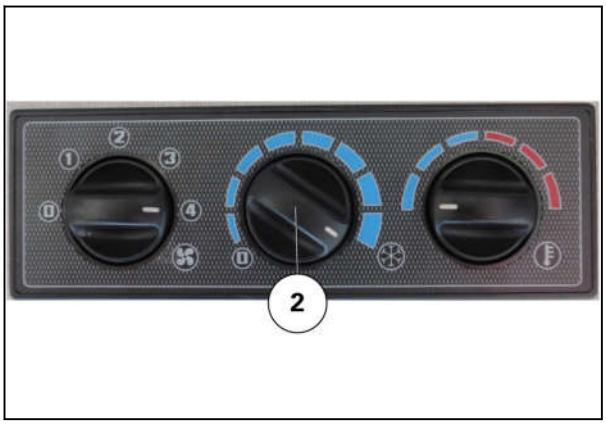


Fig. 49

Recirculation button

CAUTION:
Each time the unit is activated, if the external temperature is higher than a pre-determined level, wait 2 minutes for the air to change before starting recirculation.

NOTE:
If external temperatures are high, it is advisable to work with the recirculation mode active.

Active recirculation

It is used primarily during operation in an environment with an unpleasant odor.

- Place the recirculation control (4) in position "B", the recirculation function is activated (the air inside the cabin is recirculated in a closed circuit)

  NOTE:
  If the recirculation is active for more than 25 minutes, the recirculation must be deactivated for 1 minute in order to take in new outside air.

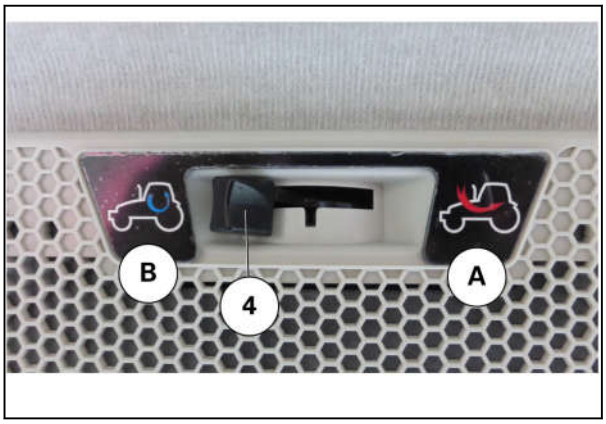


Fig. 50

Recirculation deactivated

- Place the recirculation control (4) in position "A", the recirculation function is deactivated (the air is taken from outside the cab)

NOTE:
When using aerosols and sprayers or in dusty conditions, it is advisable to work with recirculation deactivated in order to create a pressurization in the cab (provided that the cab filters are maintained).
The air filter element does not provide protection from chemical products. Please ask your dealer for information concerning the availability of the specific particle filter.

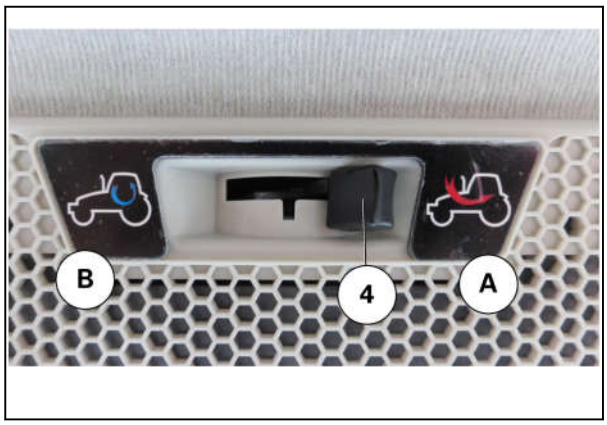


Fig. 51

3.1.15 Automatic air conditioning

IMPORTANT:
When the air conditioning system is in use, the cab doors and windows must be closed to ensure optimum efficiency. Switch off the system before starting up the engine. Ensure that the cab air filter is clean.

IMPORTANT:
To prevent seizure of the compressor and keep the cooling system in good condition, the air conditioning must be operated for a few minutes at least once a week, even in winter.

NOTE:
Have the refrigerant level checked by your dealer once a year.

WARNING:
Do not attempt to disassemble any part of the air conditioning system.

Description

(1) Manual/automatic fan control
(2) Digital display (LCD)
(3) Air conditioning ON/OFF switch
(4) Defroster button
(5) Recirculation button
(6) Temperature adjustment control

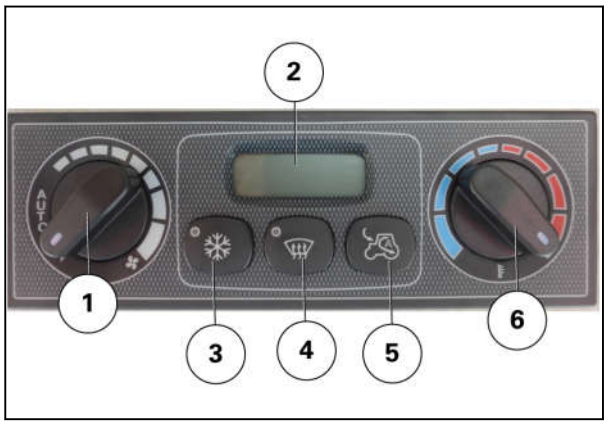


Fig. 52

The temperature inside the cab is controlled automatically by the air conditioning system, which controls the air temperature at the air vents, fan speed, recirculation and compressor operation.

The required temperature can vary by increments of 0.5°C between 20°C and 24°C and by increments of 1°C outside this temperature range.

°C	°F
LO	LO
18	64
19	66
20	68
20.5	69
21	70
21.5	71
22	72
22.5	73
23	74.
23.5	75
24	76
25	78
26	80
27	82
28	84.
HI	HI

Temperature scale in Celsius and Fahrenheit:

The HI and LO displays and tractor icon indicate the upper and lower temperature limits and the recirculation function.

Changing the display from Celsius to Fahrenheit

1. Switch off the tractor ignition.
2. Set fan knob (1) to OFF.
3. Move temperature knob (6) to maximum heat position (red)
4. Switch on ignition and, within 5 seconds, press defroster button (4) and recirculation button (5) simultaneously.
5. The temperature symbol (°C or °F) appears on LCD screen (2). Resume steps (1) to (4) to move from one symbol to another.
6. Turn the fan control knob (1) to the AUTO position.
7. Turn the knob (6) to adjust the temperature and confirm the unit of measurement.

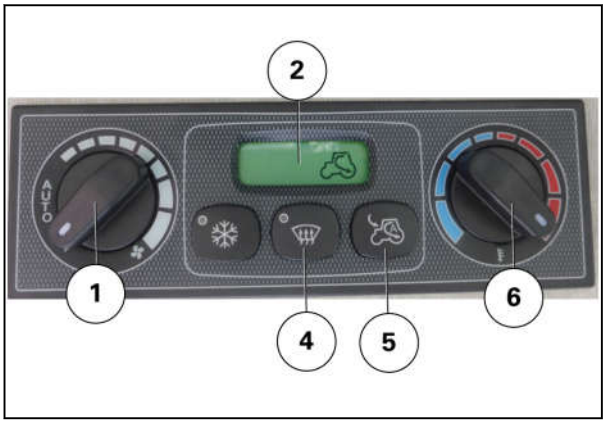


Fig. 53

NOTE:
*When there is a problem or error, an **E** symbol is displayed to warn the user (contact your dealer to determine the cause of the problem).*

Storing the function

All manual actions carried out before the tractor is switched off are stored.

When the tractor is started, these actions are suggested in successive order (with the exception of the defrosting function).

Changing the air flow

Automatic fan

When the fan control knob (1) is in auto position (A), air flow is selected automatically. Air flow changes are gradual.

Depending on the level of solar radiation, the air flow adjusts automatically

Air flow can be adjusted to maintain the temperature inside the cab at pre-selected levels.

To turn off automatic mode, move fan control knob (1) to the "OFF" position.

It is possible to set the system to economy mode by pressing switch (3) (the compressor cannot be activated and the indicator light on the air conditioning switch is off)

If the desired temperature is lower than the outside temperature, the temperature indicator on the LCD screen flashes

The ventilation is then increased.

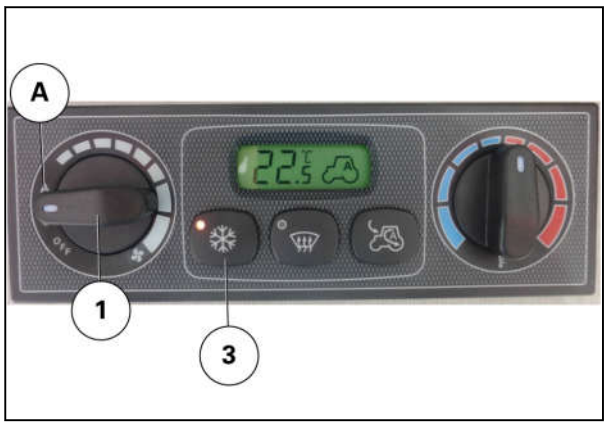


Fig. 54

Manual ventilation

It is possible to manually select an air flow that is different to the air flow selected automatically. When the knob is moved to a different position, air flow change is instantaneous.

Air flow can be adjusted to maintain the temperature inside the cab at pre-selected levels.

To turn it off, move fan control knob (1) to the "OFF" position.

It is possible to set the system to economy mode by pressing switch (3) (the compressor cannot be activated and the indicator light on the switch is off)

If the desired temperature is lower than the outside temperature, the temperature indicator on the LCD screen flashes

The ventilation is then increased.

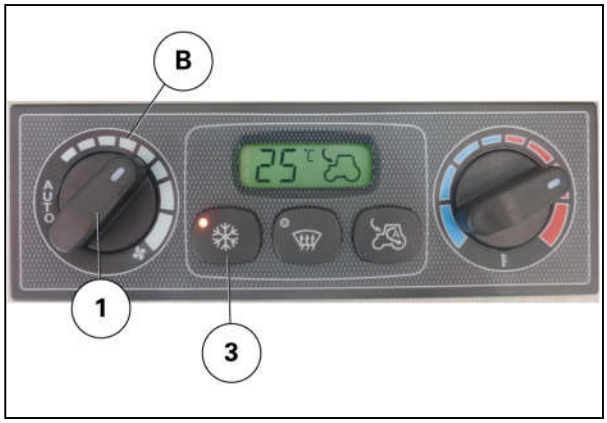


Fig. 55

Stopping operation

The fan speed is deactivated (1)

The air conditioning compressor is disabled (the switch indicator light ((3)) is off).

The recirculation function is activated (the internal air in the cab is recirculated in a closed system) and the symbol appears on LCD screen (2)

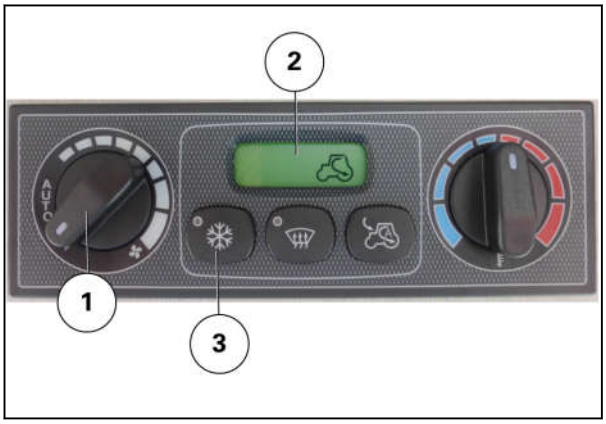


Fig. 56

Pre-selecting the cab temperature

Preselect the required temperature value using knob (6). The preselected value is shown on LCD screen (2).

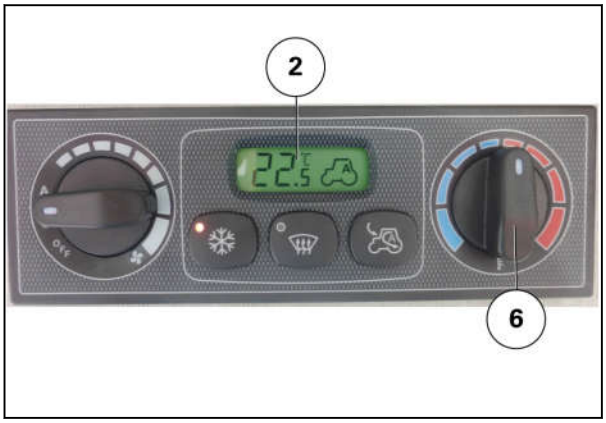


Fig. 57

Maximum temperature

To reach maximum temperature, use knob (6) to adjust the cab temperature to over 28°C.

HI is displayed on LCD screen (2).

The fan speed is 75% of the maximum if automatic mode is activated (1)

The air conditioning compressor is not active but can be enabled (the switch indicator light (3) is lit).

The recirculation function is deactivated (the air is taken from outside the cab) and the symbol appears on LCD screen (2)

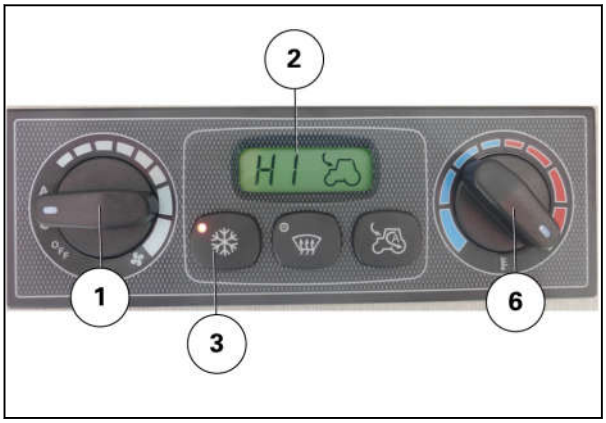


Fig. 58

Minimum temperature

To reach maximum cooling, use knob (6) to adjust the cab temperature to below 18°C.

LO is displayed on the LCD screen ((2)).

The fan speed is then at its maximum if automatic mode is activated ((1))

The air conditioning compressor is active (the switch indicator light ((3)) is lit).

The recirculation function is activated (the internal air in the cab is recirculated in a closed system) and the symbol appears on LCD screen (2)

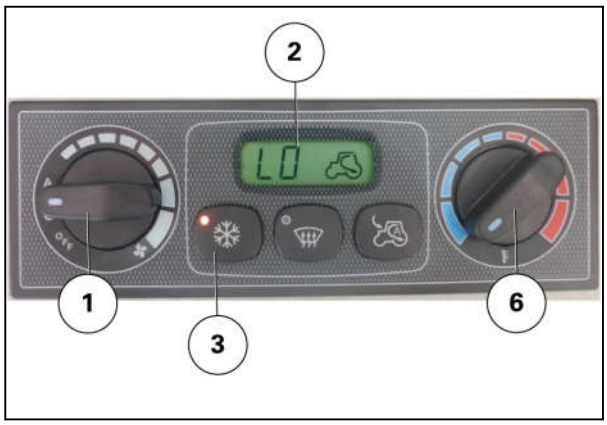


Fig. 59

Defroster button

The defrost function is activated by pressing the switch ((4)) (the switch indicator light comes on).

HI is displayed on LCD screen (2).

The air conditioning compressor is active (the switch indicator light ((3)) is lit).

The recirculation function is deactivated (the air is taken from outside the cab) and the symbol appears on LCD screen (2)

To deactivate this function and return to the previous state, press switch (4) again (the switch indicator light goes out); otherwise, it will switch off automatically after approximately 3 minutes.

To increase the effectiveness of the defrost function, you are advised to close all air vents (A) when the function is active.

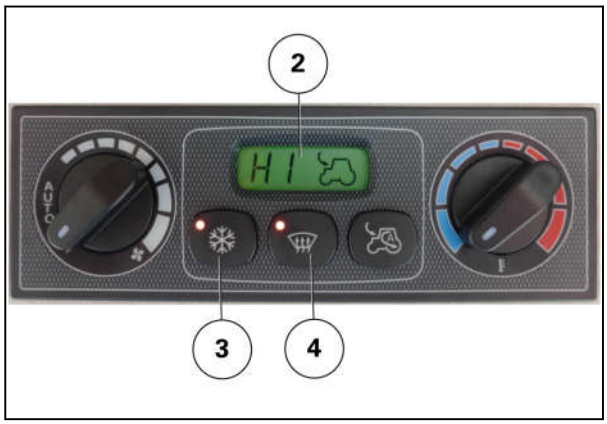


Fig. 60

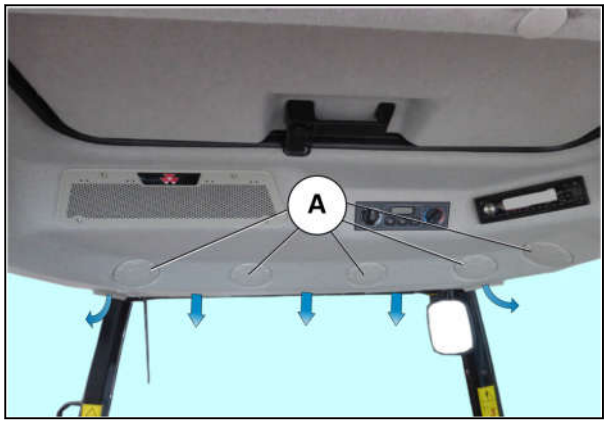


Fig. 61

Activating/deactivating air conditioning

The cab air conditioning is activated by pressing switch (3) (the switch indicator light illuminates).

The air conditioning compressor can be activated to maintain the required temperature level.

The air conditioning can be deactivated by pressing switch (3)

NOTE:
If the indicator light is illuminated, this indicates that the air conditioning is activated and the compressor can operate (regardless of the effective status of the compressor)

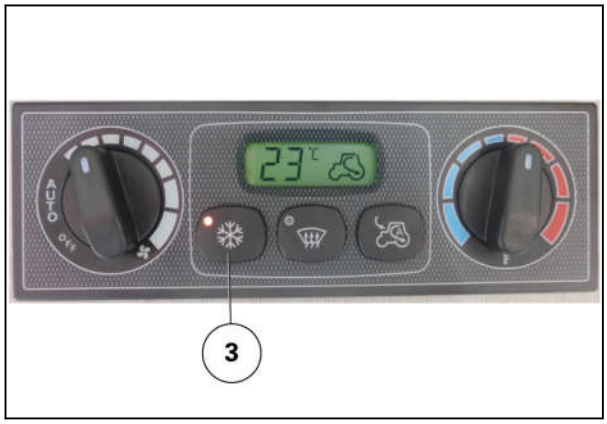


Fig. 62

Recirculation button

CAUTION:
Each time the unit is activated, if the external temperature is higher than a pre-determined level, wait 2 minutes for the air to change before starting recirculation.

NOTE:
If outside temperatures are high, it is advisable to work with the system in active recirculation mode, this is selected automatically if automatic recirculation is active.

Active recirculation

The tractor icon indicates the recirculation status on the LCD screen.

It is used primarily during operation in an environment with an unpleasant odor.

- If the recirculation button (5) is pressed once, an arrow is displayed inside the tractor icon on LCD screen (2).

  The recirculation function is activated and the air inside the cab is recirculated in a closed system.

  NOTE:
  If recirculation is active for more than 25 minutes, recirculation is automatically deactivated for 1 minute in order to take in external air once again.

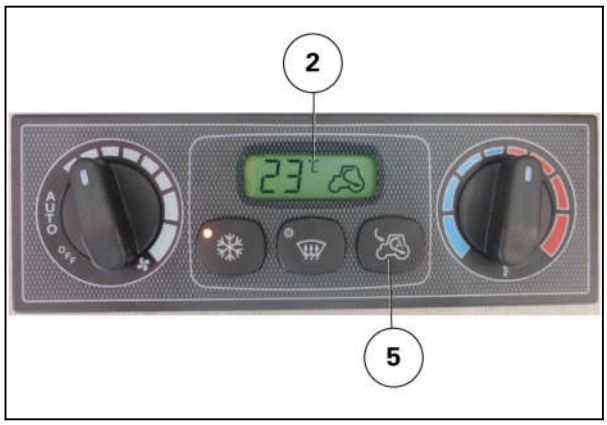


Fig. 63

Recirculation deactivated

The tractor icon indicates the recirculation status on the LCD screen.

- If the recirculation button (5) is pressed a second time, an arrow is displayed outside the tractor icon on the LCD screen.

  Air is taken from outside the cab.

NOTE:
When using aerosols and sprayers or in dusty conditions, it is advisable to work with recirculation deactivated in order to create a pressurization in the cab (provided that the cab filters are maintained).
The air filter element does not provide protection from chemical products. Please ask your dealer for information concerning the availability of the specific particle filter.

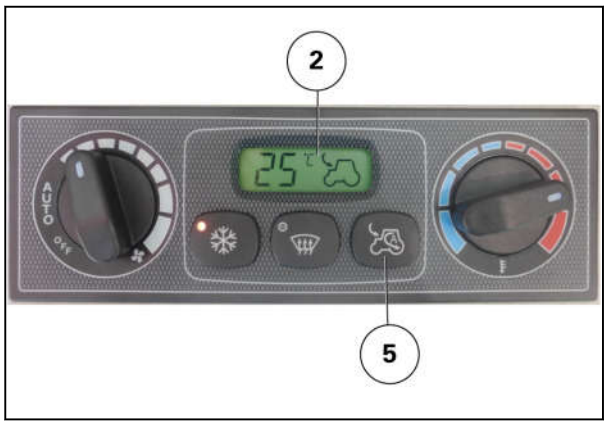


Fig. 64

Recirculation in automatic mode

The tractor icon indicates the recirculation status on the LCD screen.

NOTE:
The regulation in automatic mode varies according to the outside temperature.

- If the recirculation button (5) is pressed a third time, the letter "A" (Automatic) is displayed inside the tractor icon on the LCD screen.

  Automatic recirculation control is restored

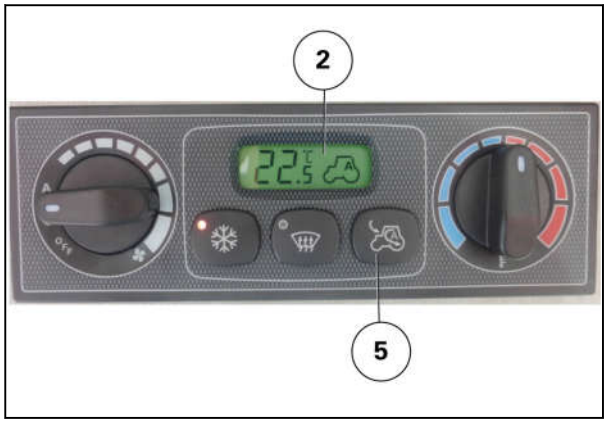


Fig. 65

3.1.16 Additional heater

Additional heating device (optional): This device rapidly heats the cab interior at floor level.

Operation: Press the electrical switch (A) to start the heater: in position (1) to activate the fan or (2) for heat without the fan.

To set the temperature (blue zone, cold/red zone, hot), turn the control knob (B)

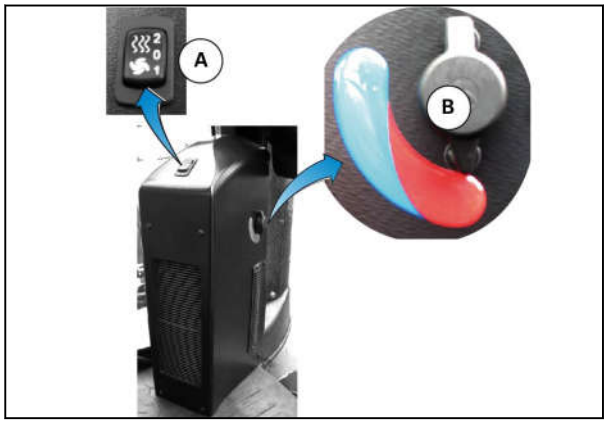


Fig. 66

3.1.17 Accessories sockets

Sockets on the right-hand console

(A) 12-volt electrical connector for connecting monitoring screens, control units and other accessories.
(B) Tractor signal transmittal socket as per ISO 11786 standard.
(C) Control switch for + 12 volt of electrical connector (A)

- Switch set in 12 Volt position: +12 V permanent power supply.
- Switch set in headland position: No permanent +12 V power supply. In this position, the +12 V power supply is controlled by an icon in the headland mode of the Datatronic CCD or by the H3 or H4 switch of the joystick (see the Datatronic CCD Operator's Manual).

(D) Cigarette lighter socket
(E) Isobus connection as per ISO 11783 standard. For example, to connect a joystick or an Isobus control unit.

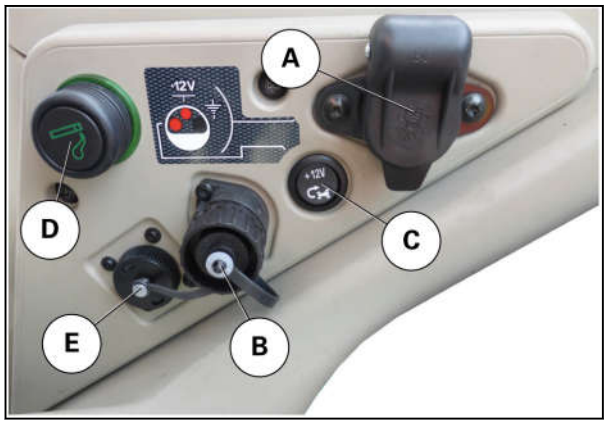


Fig. 67

Front right-hand fender arch sockets

(F) 12 volt electrical connector for connecting monitoring screens, control units and other accessories.

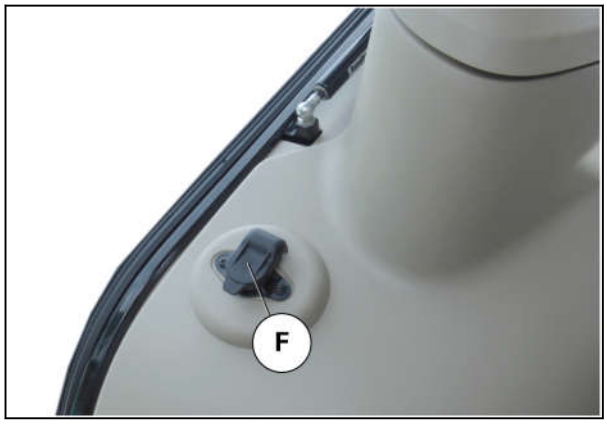


Fig. 68

Sockets on left-hand side

(G) Cigarette lighter socket.

Fig. 69

Identifying the connectors

12 V electrical connector on pillar (A)

((1) (15/30)) +12 V permanent or controlled by switch (C) protected by fuse F8 (30 A) or F52 (15 A)
((2) (82)) +12 V ignition on protected by fuse F14 (10 A)
((3) (31)) - Earth

NOTE:
A male plug (G 205900900020) that connects to the power socket (1) *is available from your dealer.*

Fig. 70

12 V electrical outlet on front right-hand fender (F)

((1) (15/30)) +12 V permanent protected by fuse F48 (30 A)
((2) (82)) +12 V ignition on protected by fuse F14 (10 A)
((3) (31)) - Earth

NOTE:
A male plug (G 205900900020) that connects to the power socket (1) *is available from your dealer.*

Fig. 71

Signal transmission socket (B)

(1) Actual forward speed signal
(2) Theoretical forward speed signal
(3) Rear PTO rotational speed signal
(4) Linkage signal in transport position or work position
(5) Rear power lift position signal
(6) Power supply +12 V ignition on
(7) Earth

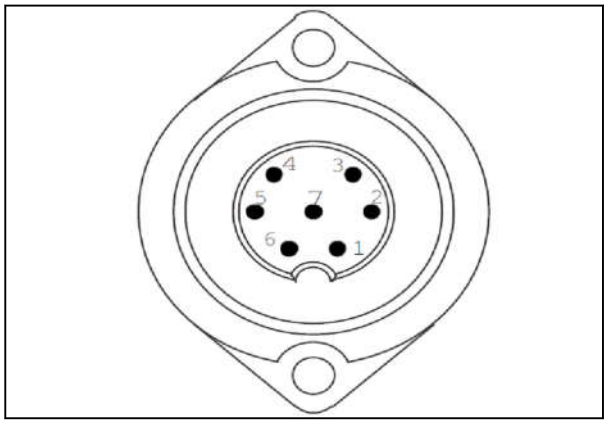


Fig. 72

3.1.18 Emergency exits

The emergency exits can differ depending on the tractor models and options available.

- For standard cabs: Right-hand door, rear window.
- For panoramic cabs: Rear window and hammer to break the glass .

To open, turn the handle to 90° and push the window outward.

Fig. 73

3.1.19 Sun visor

Sun visor for front windscreen

The front sun visor is adjustable by notches.

To change its position, pull the visor (1) downward until the required position is reached.

To raise the sun visor, pull the cord (2).

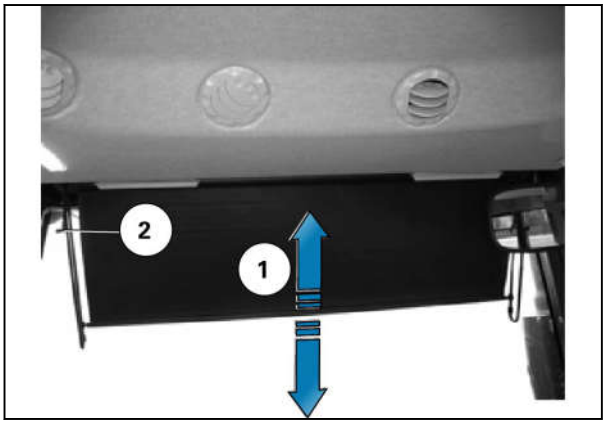


Fig. 74

Sun visor for high-visibility roof hatch

Pull the sun visor on the roof (3) and fit it into the left- and right-hand retaining hooks (4).

To store it away, release the visor from the right and left-hand retaining hooks.

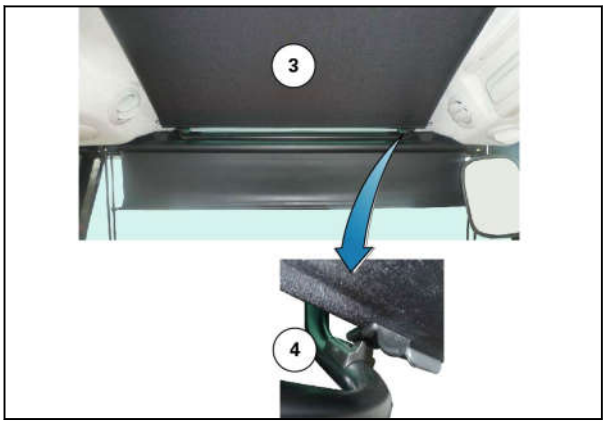


Fig. 75

3.1.20 Roof hatch

Standard roof hatch

This hatch has 2 functions:

1. Ventilation function

   The hatch is opened by pressing button (1), which is located on the handle, and pushing the hatch upward using handle (2).

   To close the hatch, pull handle (2) and make sure that the lock is correctly engaged.
2. Emergency exit function

   To open the hatch fully (emergency exit), press the button (1) to unlock the hatch and then push hard on the handle (2) to force the gas rams from their holders.

   To close the hatch, pull it downward using the handle (2), taking care to ensure the ends of the gas ram rods engage in the supports. Continue pulling the hatch downward until the lock is fully engaged.

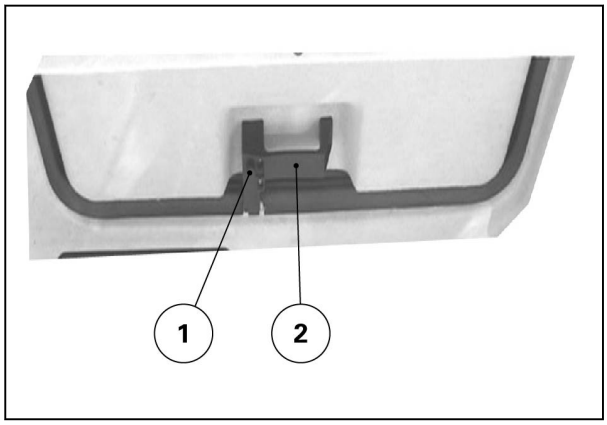


Fig. 76

High-visibility roof hatch

The high-visibility roof hatch may also be used as an air vent.

It is opened at the front by turning the two locks (1) located at either side of the hatch.

Opening:

1. Turn the two locks (1) to release the hatch.
2. Push upward as per (2) to open it partially
3. Slide the glass backward as per (3) to open it completely

Closing:

1. Slide the glass forward
2. Pull it downward
3. Turn the two locks (1) to lock the hatch.

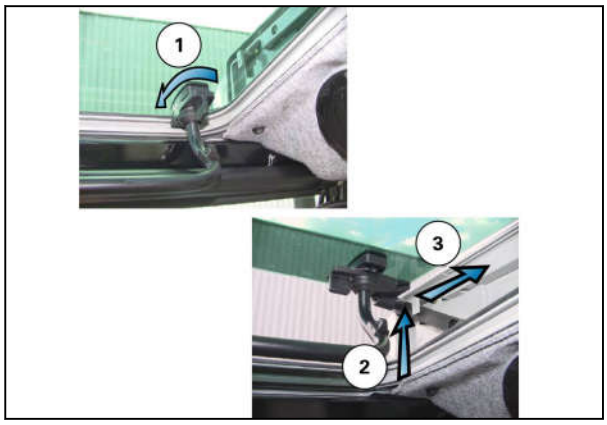


Fig. 77

3.1.21 Wheel chock(s) (optional)

Wheel chock location

Located on the left-hand side below the tank, this chock (depending on option) immobilizes the tractor when required.

Unscrew the wing nuts to slide the chock out of its housing.

Fig. 78

Using the wheel chock

1. Once the wheel chock has been extracted from its housing, place it on the ground with the larger side facing down.
2. **IMPORTANT:** *The chock springs open automatically.*

   Hold down the top of the chock and press (1) to open.

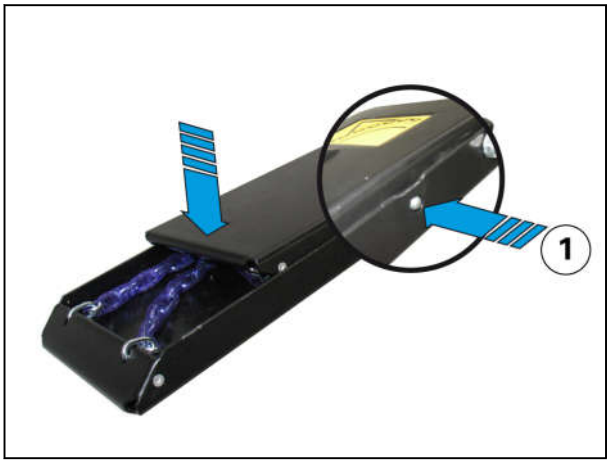


Fig. 79

3. Gently release the top of the chock.

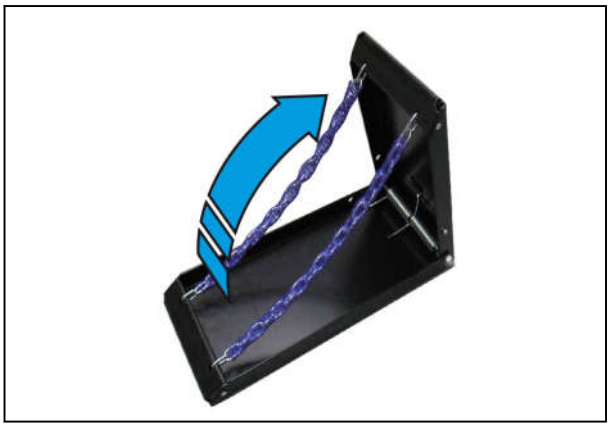


Fig. 80

4. **IMPORTANT:**
Ensure the chock is facing in the right direction before placing it under the vehicle.

To immobilize the tractor, position the chock underneath a wheel as shown.

Fig. 81

3.2 Setup and Information Screen control screens on the instrument panel

3.2.1 Using the Setup and Information Screen

For details on the controls and monitoring display of the Setup and Information Screen, refer to the chapters on the instrument panel.

(1) Setup and Information Screen monitoring display
(2) Setup and Information Screen controls

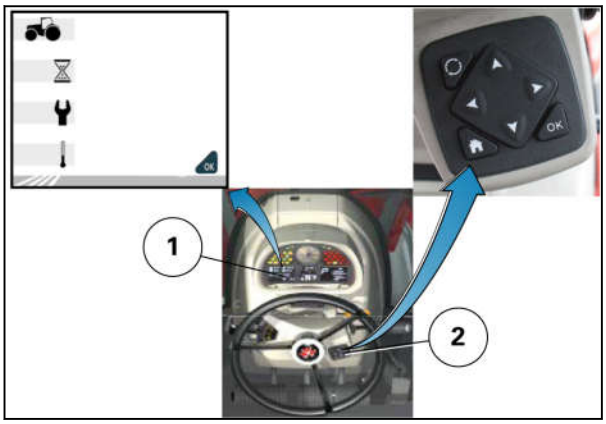


Fig. 82

- When the engine is started, the start screen appears .
- This screen displays the model and serial number of the tractor, the tractor hours, the number of hours before the next service period and the external temperature.
- It automatically disappears after 5 seconds or after a press on the OK button

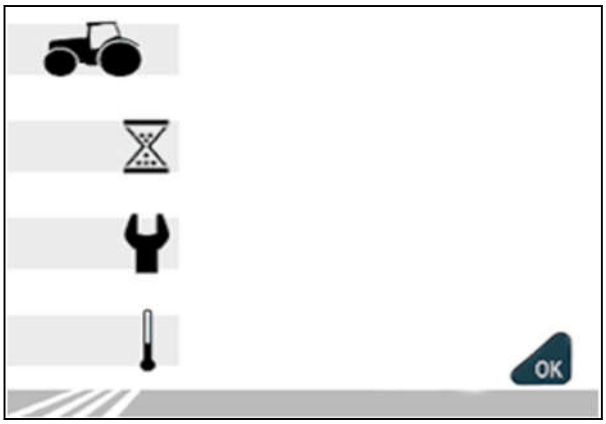


Fig. 83

- When the engine is first started, the main screen, the contrast adjustment and the error codes screen are available.
- To access all the screens, press keys OK and ⌂ for approximately 5 seconds; all the screens then become available and are stored
- Press OK to return to the start screen

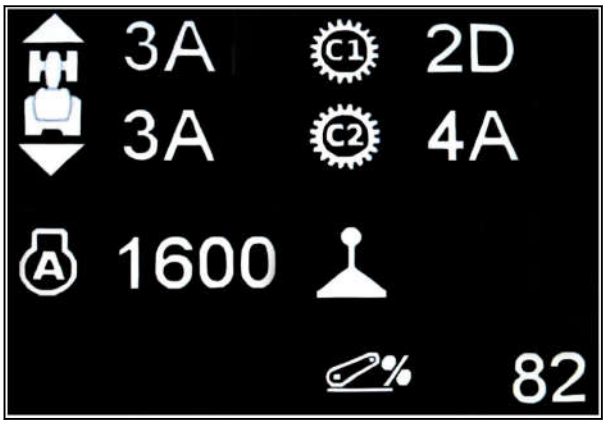


Fig. 84

- Press the left or right keys ◁▷ to access the list of setting screens (A).
- The main screen reappears after approximately 5 seconds or after pressing the ⌂ key.

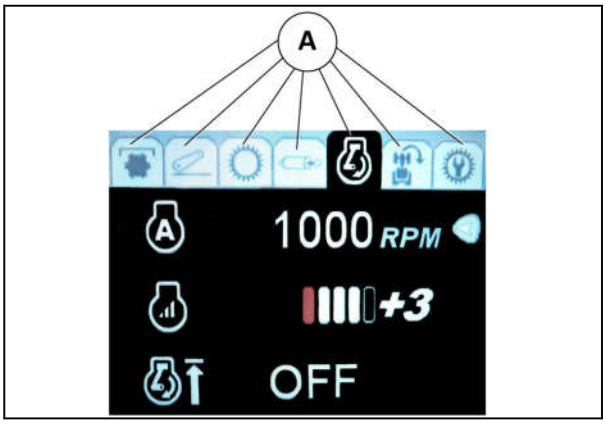
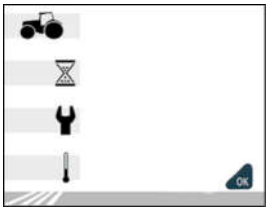
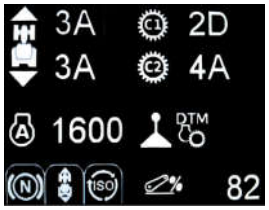
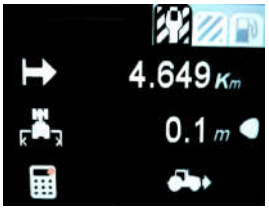
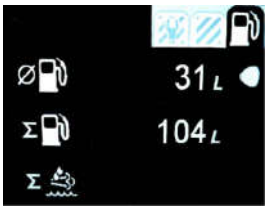
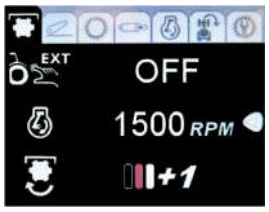


Fig. 85

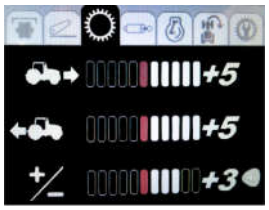
3.2.2 Setup and Information screens

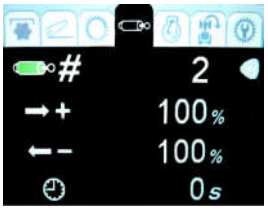
Screen	Function
	**Start-up screen** This screen displays the model and serial number of the tractor, the tractor hours, the number of hours before the next service period and the external temperature. The default value of 400 hours for the number of hours before the next service period can be reset by pressing the OK key for 5 seconds.
	**Main screen** Displays the restart forward speeds, the stored engine speed (A), the stored forward speeds (C1) and (C2), the lever/pedal mode, the Upper and lower limits of the engine speed function (if enabled and only with the Datatronic CCD), the neutral brake pedal function (displayed only if the function is active), the right-hand reverse shuttle (displayed only if the function is active), the ISOBUS function (displayed only if the MultiPad lever is configured on the ISOBUS joystick) and the function selected by the user. Press the key to select the function to display on the main screen: • Area worked • Hourly consumption • Area worked per hour • Power consumption in relation to the area worked • Current rate of slip (%) • Rear power lift position (%)
	**Area worked setting screen** This screen allows you to view the distance traveled (ability to reset to 0), adjust the working width of the implement and set a trigger to start the counting (rear linkage in working position, rear PTO activated, all the time, hydraulic spool valve no. 1 in floating position or Kick-out activated in ram rod retracted position,

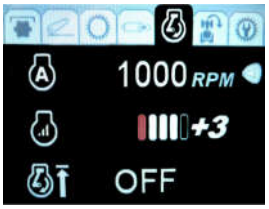
Screen	Function
	hydraulic spool valve no. 1 with Kick-out activated in ram rod extended position, tractor in the forward travel position and signal on diagnostics connector X184) Press the or arrows to choose which function to adjust (the index moves), then press (the function is greyed out when it can be adjusted) • Press the arrow to reset the distance traveled to 0 and then press to confirm • Press the or arrows to increase/decrease the working width of the implement (from 0 to 50 m), and then press to confirm • Press the or arrows to adjust a trigger element for the count and then press to confirm
	**Area worked screen** This screen allows you to view the area worked (ability to reset to 0), the hourly surface and the consumption in relation to the worked area Press the or arrows to choose which function to adjust (the index moves), then press (the function is greyed out when it can be adjusted)

Screen	Function
	• Press the arrow to reset the worked area to 0 and then press OK to confirm
	**Fuel counter screen** This screen allows you to view the trip meter (quantity of fuel consumed since the last reset), the total counter (total quantity of fuel consumed) **NOTE:** *The last counter is not used.* Press the or arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted) • Press the arrow to reset the trip meter to 0 and then press OK to confirm
	**Rear power take-off settings screen** This screen allows you to enable/disable the function of engaging an engine speed during activation of the rear power take-off using the controls located on the fenders and adjust the engine speed that will be engaged. **NOTE:** *Apply the parking brake in order to operate the PTO using the controls located on the fenders.* Press the or arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)

Screen	Function
	• Press the  or  arrows to enable/disable the automatic function (**ON** and **OFF**), and then press  to confirm • Press the  or  arrows to increase/decrease the engine speed engaged by the switch for the rear power take-off located on the fenders and then press  to confirm • Press the  or  arrows to increase/decrease the progressivity of rear power-take-off engagement (from -1 (slow progressivity) to +1 (fast progressivity)), and then press  to confirm
	**Rear power lift settings screen** This screen allows you to enable/disable the wheel slip control, to set the maximum permissible wheel slip, to view the current slip and to prioritize the hydraulic flow to the rear power lift. Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows to enable/disable the wheel slip control (**ON** and **OFF**), and then press  to confirm

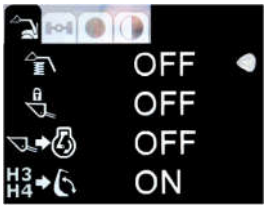
Screen	Function
	• Press the or arrows to increase/decrease the maximum permissible slip (from 0% to 60 %) then press to confirm • Press the or arrows to increase/decrease the distribution of the hydraulic flow to the rear power lift (0% to 100 %) then press to confirm
	**Transmission settings screen 1** This screen is used to adjust the reverse shuttle sensitivity in both directions of travel and the sensitivity of transmission ratio shifts. Press the or arrows to choose which function to adjust (the index moves), then press (the function is greyed out when it can be adjusted) • Press the or arrows to increase/decrease the reverse shuttle sensitivity in forward travel (from -5 (slow shuttling) to +5 (quick shuttling)) and then press to confirm • Press the or arrows to increase/decrease the reverse shuttle sensitivity in reverse travel (from -5 (slow shuttling) to +5 (quick shuttling)) and then press to confirm

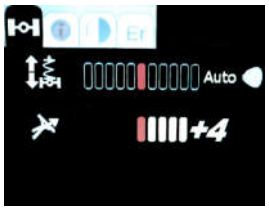
Screen	Function
	• Press the  or  arrows to increase/decrease the sensitivity of transmission ratio shifts (from -5 (slow shifting) to +5 (quick shifting)) and then press  to confirm
	**Auxiliary hydraulic settings screen** This menu allows you to choose the spool valve to change (rear spool valves 1 to 5 (depending on options), front spool valves 1 and 2 (depending on options) and front power lift spool valve) Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows to choose the spool valve to change, then press  to confirm • Press the  or  arrows to increase/decrease the hydraulic flow in the cylinder rod extension phase (from 0% to 100%) and then press  to confirm • Press the  or  arrows to increase/decrease the hydraulic flow in the cylinder rod retraction phase (from 0% to 100%) and then press  to confirm

Screen	Function
	• Press the  or  arrows to increase/decrease the activation time of the hydraulic flow in one of the phases (cylinder rod extension or retraction) (time delay of 0 s to 60 s or continuous flow ∞) and then press  to confirm
	**Engine settings screen** This screen allows you to adjust the stored engine speed in (A), the responsiveness of activation of stored engine speeds (A) or (B) and enable/disable the maximum engine speed Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows to increase/decrease the stored engine speed (A) then press  to confirm • Press the  or  arrows to increase/decrease the responsiveness of activation of stored engine speeds (A) or (B) (from 1 (slow response) to 4 (rapid response)) and then press  to confirm

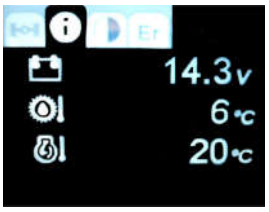
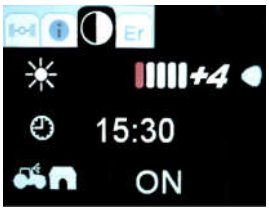
Screen	Function
	• Press the  or  arrows to enable/disable (**ON** and **OFF**) and increase the maximum engine speed (1400 to 2160 rpm), and then press  to confirm
	**Quick headland management screen** This screen allows you to enable/disable the stored engine speed (A) during the activation of the stored forward speed C1 and to enable/disable the stored engine speed (A) when changing the power lift status (work or transport). Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows or to enable/disable the activation of the stored engine speed (A) when engaging the stored forward speed (C1) and then press  to confirm • Press the  or  arrows to enable/disable the activation function of stored engine speed (A) when changing the position of the rear power lift (work or transport) (**ON** and **OFF**), and then press  to confirm The rear linkage controls must be unlocked to activate this function

Screen	Function
	• Press the  or  arrows to increase/decrease the activation time of stored engine speed (A) when the rear power lift is in working position and a ground speed >0 km, and then press  to confirm • Press the  or  arrows to increase/decrease the deactivation time of stored engine speed (A) when the rear power lift is in transport position and a ground speed >0 km, and then press  to confirm
	**Transmission settings screen 2** This screen allows you to activate/deactivate the neutral brake pedal function and the C2/pedal mode function. Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows to enable/disable the neutral brake pedal function (shifting the transmission to neutral when the brake pedals are pressed with a forward speed below 20 kph) and then press  to confirm

Screen	Function
	• Press the or arrows to activate/deactivate the anti-stalling function (enables transmission shift to neutral when the engine speed drops below 650 rpm) then press OK to confirm • Press the or arrows to enable/disable the C2/pedal mode function (**ON** and **OFF**), and then press OK to confirm
	**Front loader screen (optional)** This screen is used to activate and deactivate the front loader functions. Press the or arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted) • Press the or arrows to activate/deactivate the front-end loader suspension then press OK to validate • Press the or arrows to lock/unlock the front accessory then press OK to validate

Screen	Function
	• Press the  or  arrows to activate/deactivate the front loader/engine speed automation function then press  to validate • Press the  or  arrows to activate/deactivate the H3/H4 switches with the 3rd function, then press  to validate
	**Front axle settings screen** This screen allows you to adjust the height of the front axle (only with a forward speed <5 kph) and to adjust the SpeedSteer accelerated steering. Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows to increase/decrease the height of the suspended front axle (for attaching a front implement for example) and then press  to confirm. The suspended front axle returns to Auto mode when you exit the setting screen or when the forward speed is >5 kph.

Screen	Function
	• Press the  or  arrows to increase/decrease the setting level (1 to 4) of the SpeedSteer accelerated steering (the more lines there are, the less it is necessary to turn the steering wheel for the same steering angle) and then press  to confirm
	**The H3/H4 functions screen of the Multi Function Joystick (if Datatronic CCD is not installed)** The Multi Function Joystick can also be configured on the Setup and Information Screen to control other functions of the tractor using the H3 and H4 switch. The following functions are available: Activation of rear linkage lowering, rear linkage lifting, rear linkage lifting/lowering, 4-wheel drive front axle, differential lock, stored engine speed (A), stored transmission ratio C1, stored transmission ratio C2 Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows to enable/disable (**ON** in operation, **OFF** not in operation) the H3/H4 joystick switches, and then press  to confirm • Press the  and  arrows to select the function to assign to switch H3, and then press  to confirm

Screen	Function
	• Press the  and  arrows to select the function to assign to switch H4, and then press  to confirm
	**Information screen** This screen allows you to view the battery voltage, the transmission temperature and the engine temperature.
	**Instrument panel settings screen** This screen allows you to adjust the brightness and time and enable/disable the Comfort lights delay function Press the  or  arrows to choose which function to adjust (the index moves), then press  (the function is greyed out when it can be adjusted) • Press the  or  arrows to increase/decrease the brightness of the instrument panel (1 to 4) and then press to  confirm. • Press the  or  arrows to increase/decrease the time on the instrument panel and then press  to confirm

Screen	Function
	• Press the  or  arrows to enable/disable the Comfort lights delay function (**ON** and **OFF**), and then press  to confirm
	**Error code screen** This screen is displayed as soon as a tractor-related error is active.

3.3 Body

3.3.1 Opening the bonnet

NOTE:
If the tractor has a front-end loader, before opening the bonnet, see the following paragraph on the protective structure for the bonnet.

The bonnet is fitted with two rams for easy opening to provide free access to the engine.

To open it, press the lock button and lift the bonnet; a retaining strap restricts the movement.

To lift the bonnet fully, release the strap by removing the retaining screw (A).

Fig. 86

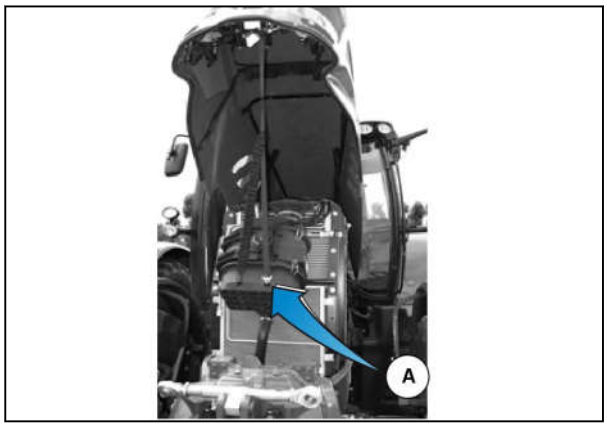


Fig. 86

3.3.2 Adjusting the external rear-view mirrors

3.3.2.1 Positioning the arms

Procedure

1. The arms supporting the rear-view mirrors are hinged and must be positioned correctly for routine use of the tractor.
2. Move the hinged arm until it lines up with the two marks.

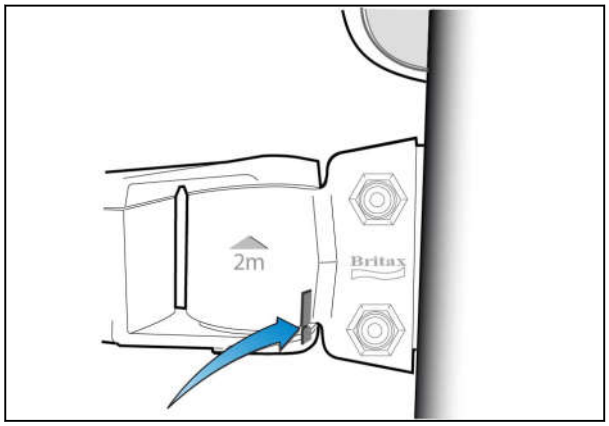


Fig. 87

3.3.2.2 Rear-view mirror with manual adjustment

Procedure

1. Loosen the notched thumb wheel (1) or the screws (3) in order to move the rear-view mirror.
2. Retighten the notched thumb wheel or the screws to lock the rear-view mirror in place.
3. The rear-view mirror can be manually adjusted on mirrors not fitted with an electric control: Use both hands, diagonally opposed, to turn the rear-view mirror in the direction required.

   NOTE:
   Depending on the model, it may be necessary to loosen the notched thumb wheel (1) *or the screws* (3) *to make the adjustment.*

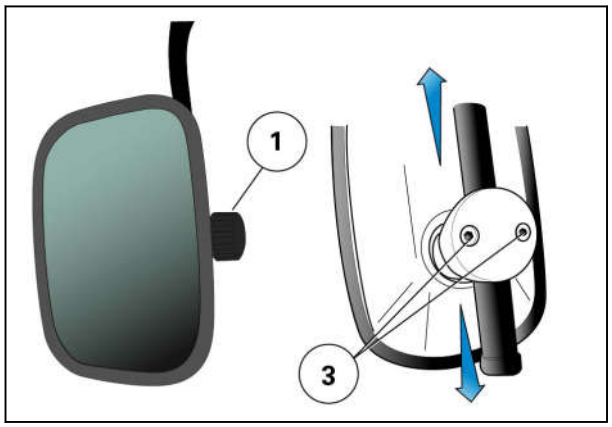


Fig. 88

3.3.2.3 Adjusting the arm extensions (depending on model)

Procedure

1. The length of the rear-view mirror arms can be adjusted to improve rear visibility according to the size of the implements hitched to the tractor.
2. Loosen the notched thumb wheel (2) and move the extension in the direction required.
3. Retighten the notched thumb wheel to lock the arm extension in place.

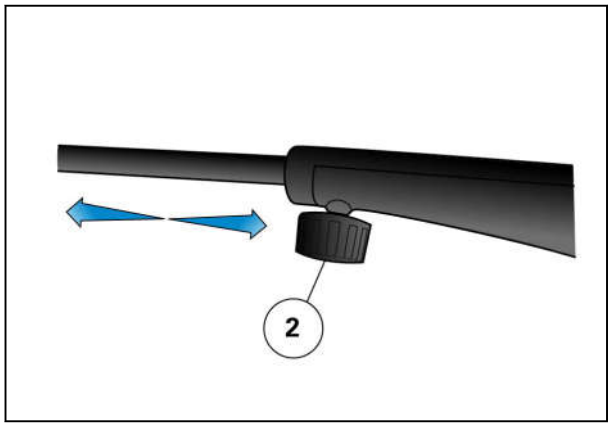


Fig. 89

3.3.2.4 Rear-view mirror with electric adjustment

Procedure

1. Move the selector (1) to position (L) to adjust the left rear-view mirror or to position (R) to adjust the right rear-view mirror
2. Move the switch (2) into position to adjust the rear-view mirror correctly
3. When you have made the adjustment, return the switch (1) to the neutral position

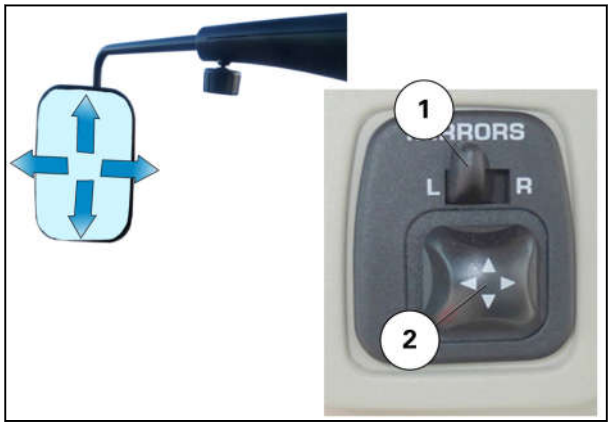


Fig. 90

4. If the mirror electrical adjustment is insufficient, it may be necessary to manually adjust the mounting to obtain the required level of adjustment: Loosen the four screws (1) to remove the rear casing of the rear-view mirror
5. Slightly loosen the screws (2) of the mirror support in order to rotate the mirror
6. Make the required horizontal or vertical adjustment
7. Retighten the four screws (2).
8. Refit the rear-view mirror casing (1).

Fig. 91

Electric defroster

9. The external rear-view mirror defrosters can be activated by pressing the switch (3)
   - Red LED lit: Defroster activated
   - Red LED not lit: Defroster deactivated

Fig. 92

3.3.3 Adjusting the left-hand step

Initially, the lowest of the left-hand steps is fitted in a vertical position. It can be adjusted to facilitate access to the cab.

Original fitting (A)

The step uprights are fitted vertically using the marking (1) as the mounting.

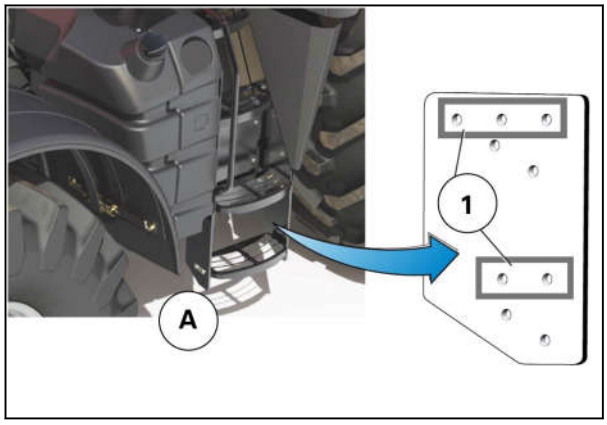


Fig. 93

Change of position (B)

Procedure

1. Remove the lower step
2. Remove the step uprights
3. Use the mark (2) to refit the step uprights in the offset position (X)
4. Refit the step
5. Torque tighten the screws.

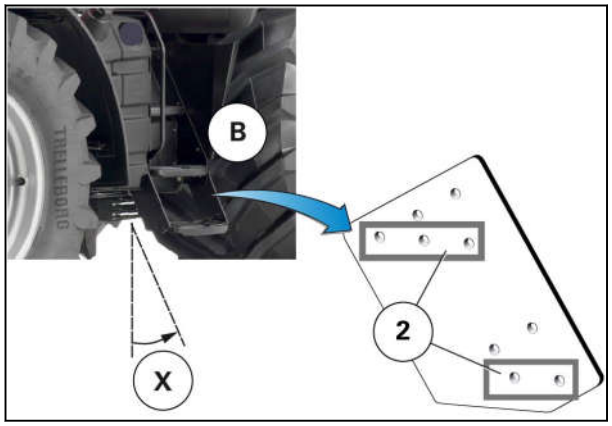


Fig. 94

3.4 Engine

3.4.1 Running-in

- Experience has shown that the first 50 hours of tractor operation have a significant effect on the performance and life of the engine.
- From the first operation, the tractor must run with the engine at full load. The engine should be allowed to reach a temperature of 60°C before being subjected to full load.
- It is quite normal for oil consumption to be relatively high during the running-in period. Therefore, during running-in, the engine oil level must be checked twice a day during the first 50 hours of operation to avoid the risk of lubrication failure.
- During running-in, check the tightness of all nuts, bolts and screws frequently. The wheel nuts must be retightened daily until their torque has stabilized.

3.4.2 Filling with fuel

Before filling, ensure that the fuel being used is in compliance with applicable regulations (see the Maintenance section of the Operator's Manual).

WARNING:

Always switch off the engine before filling up. Do not smoke while refueling the tractor. Keep away from naked flames . Wear suitable gloves when filling up.

Diesel fuel

The filler port is located on the left-hand side of the tractor. The tank is filled after removing the BLACK plug. Fuel quality: See the Maintenance section of the Operator's Manual.

Fig. 95

3.4.3 Start switch

(1) Off
(2) Contact position to be used for electrical equipment when the engine is not running.
(3) Preheating position
(4) Start-up

NOTE:

- *The tractor starts with the key in position* (4).
- *When the engine is running, the key is in position* (3).
- *Always make sure that the ignition key is in position* (1) *before getting out of the tractor so that the electrical system is switched off.*

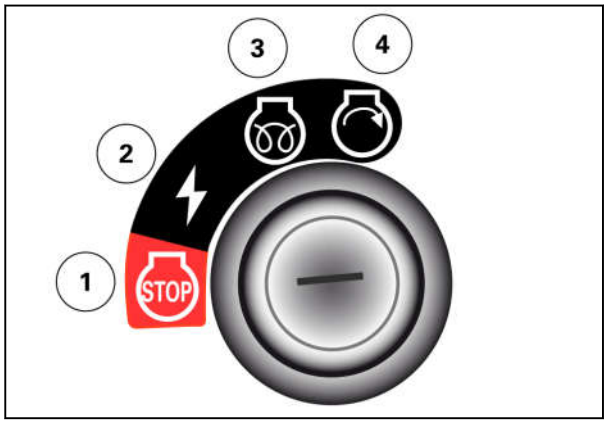


Fig. 96

3.4.4 Start-up

DANGER:
Never run the tractor in an enclosed space unless the exhaust can be ventilated to the outside air. Never run the engine unless you are sitting at the steering wheel of the tractor.

WARNING:
Check that the ParkLock control is engaged on the Power Control lever or that the park brake is in the engaged position.
Deactivate the power take-off (PTO) controls.

NOTE:
Also refer to the instructions in the startup sheet.

Procedure

1. Turn the ignition key to the **ON** position. The indicator lights on the instrument panel should light up.
2. Depress and hold down the clutch pedal.
3. Turn the key to the preheating position and hold there for 2 seconds.
4. Start the engine and release the key.
5. Release the clutch pedal.

3.4.5 Starting the engine in cold weather

Engine block preheating (optional)

A 1000 W preheater and a connector (1) are provided to assist cold weather starting. The preheater operates with a mains power supply of 220 V or 110 V (depending on option) and in general heats the engine coolant in two hours. In extreme cold, it may be required to operate all night.

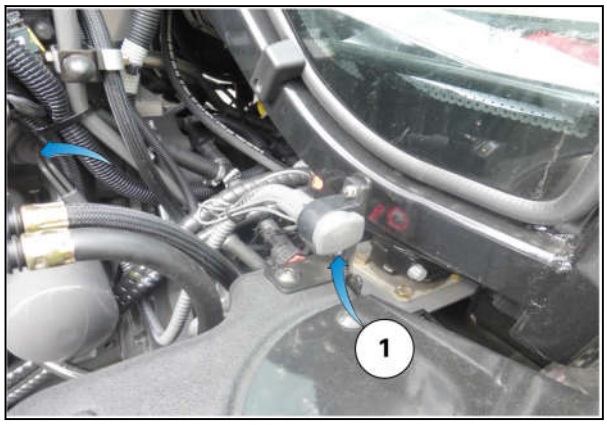


Fig. 97

WARNING:
DO NOT test the heating element unless it is immersed in coolant. It is dangerous to connect a heating element in the open air, as the heat released can cause injury and the element could explode.

NOTE:
An identical system is available as an option for preheating the transmission oil.

3.4.6 Stopping the engine

Procedure

1. **WARNING:**

   Check that the Power Control controller is in neutral. If there is a ParkLock on your tractor, check that the control is engaged on the Power Control lever. If not, apply the parking brake. Deactivate the PTO controls and the hydraulic controls.

After stopping the tractor, allow the engine speed to return to idle.

2. **DANGER:**

Never run the tractor engine in an enclosed space unless the exhaust can be ventilated to the outside air. Never run the engine unless you are sitting at the steering wheel of the tractor.

Leave the engine running for several seconds at idle speed. It is necessary to allow the turbocharger to reduce speed.

NOTE:
If the tractor has been operating under heavy load, allow the engine to run at idle speed for 1 to 2 minutes, depending on the ambient temperature, to allow the turbocharger to cool before stopping the engine.

3. **IMPORTANT:**
Do not stop the engine suddenly when the engine is running at a high speed, because the turbocharger will continue running under its own momentum and will no longer be lubricated. Slow the engine before stopping it.

Return the ignition key to the "Stop" position.

3.4.7 Engine speed

Hand throttle

IMPORTANT:
Protection against engine overspeed: For example, if the demand for engine speed is lower than 1700 rpm and the engine speed exceeds 1900 rpm, gear shifting is locked. If the demand for engine speed exceeds 1900 rpm, there is no lock.

Using the hand throttle (1) allows you to vary the engine speed and to maintain a constant speed. To do this, simply push or pull the lever to select a speed. The lever remains in this position to maintain the selected speed. The lever in rear position corresponds to idle speed.

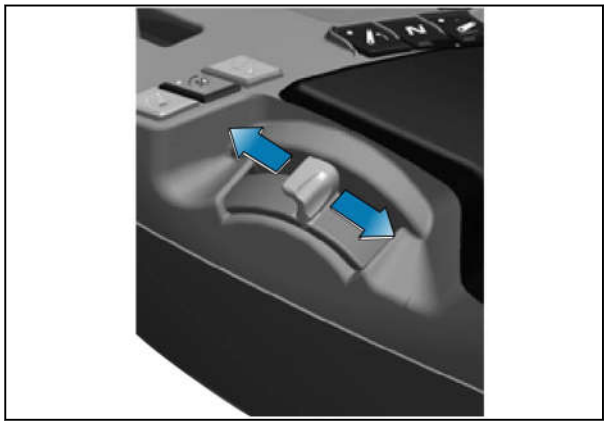


Fig. 98

Foot throttle

The foot throttle is used to control the engine speed as well as the forward speed. When the pedal is released, the engine rpm returns to that preset by the hand throttle.

CAUTION:

- **When using the foot throttle, the hand throttle should be placed in the idle position.**
- **Do not keep your foot on the clutch pedal or keep it halfway engaged.**
- **Always descend slopes with the tractor in gear and never with the clutch disengaged.**
- **When turning on headlands with heavy mounted implements, reduce the engine rpm.**
- **Steering is not power assisted when the engine is not running.**

Choosing the correct gear ratio

Select the ratio which gives the optimum fuel consumption without overloading the engine and the transmission. Bear in mind that soil conditions can vary within a matter of a few yards in the same field. Select a ratio which allows the engine to operate comfortably at about 75% of its maximum power.

Maximum engine speed setting

The maximum engine speed can be set on the Setup and Information Screen screen.

- Press the ⓘ or ⓓ arrows to choose which function to adjust (the index moves), then press ⓞ (the function is grayed out when it can be adjusted)
  - Press the ⓘ or ⓓ arrows to enable/disable (**ON** on, **OFF** off) and increase the maximum engine speed (1400 rpm to 2160 rpm) and then press ⓞ to confirm

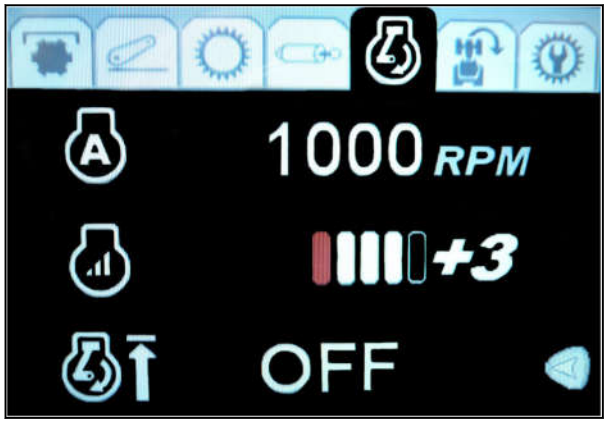


Fig. 99

It is possible to set the maximum engine speed by choosing the desired engine speed using the foot throttle pedal or the hand throttle then pressing and holding the switch (1) for 3 seconds

The maximum engine speed (2) is displayed in green on the main display of the Setup and Information Screen

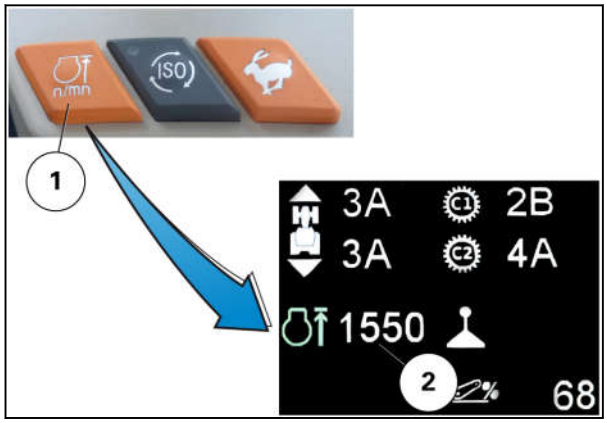


Fig. 100

3.4.8 Storing engine speeds

This function allows the operator to have permanent access to two stabilized engine speeds, displayed on the Setup and Information Screen.

Storing engine speeds with the switches

- It is possible to store engine speed "A" (e.g. 1700 rpm) by selecting the desired engine speed using the foot throttle pedal or the hand throttle and then pressing and holding the switch (1) on the MultiPad lever or on the armrest for 3 seconds. An audible signal notifies the user of storing. Stored engine speed "A" is activated and displayed in green on the display of the Setup and Information Screen.
- It is also possible to store and activate engine speed "B" in the Datatronic CCD (see the Datatronic CCD Operator's Manual). When stored engine speed "B" is activated, it is displayed in green on the display of the Setup and Information Screen.
- During work, the user can now activate or deactivate stored engine speed "A" by pressing the corresponding switch once

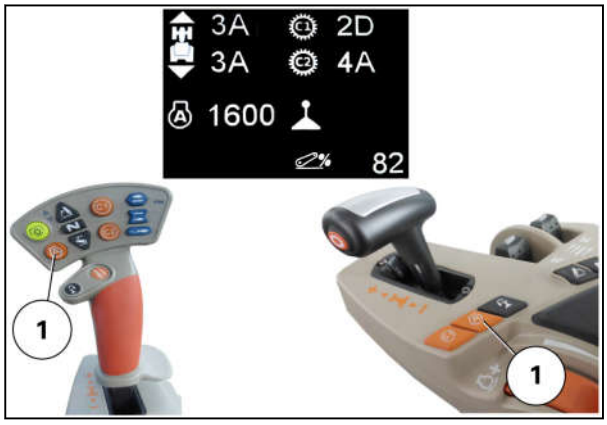


Fig. 101

NOTE:
By default, only engine speed "A" is displayed on the main display of the Setup and Information Screen Stored engine speeds A and B may be different according to field mode (tortoise) or road mode (hare).

Deactivation conditions.

- Press the switch corresponding to the stored and activated engine speed
- Action on the right and/or left brake pedals with a forward speed in excess of 20 kph and with the rear PTO disabled
- Disengagement of stored forward speed C1 with automation function (C1/stored engine speed A) activated

Preselection of engine speed A in the Setup and Information Screen

The engine speed stored in (A) can also be adjusted via the display of the Setup and Information Screen The progressivity parameters can also be adjusted to achieve the engine speeds stored in "A" or "B" (the more lines there are, the faster the switch to the stored engine speed) and to adjust the maximum engine speed.

- Press the ⓘ or ⓘ arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)
  - Press the ⓘ or ⓘ arrows to increase/ decrease the stored engine speed (A) then press OK to confirm

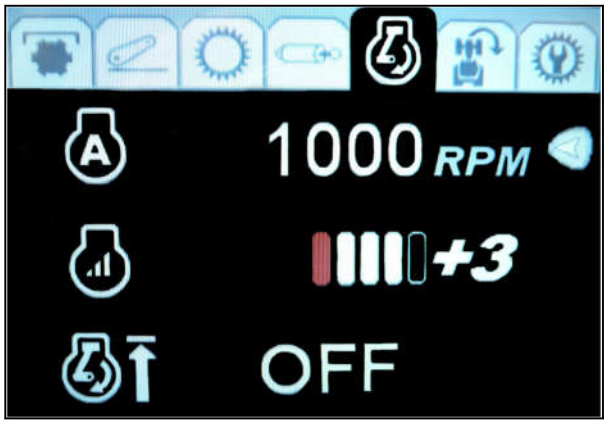


Fig. 102

Adjusting the activation response of the stored engine speeds

The progressivity parameters can be adjusted to achieve the engine speeds stored in "A" or "B" (the more lines there are, the faster the switch to the stored engine speed).

- Press the or arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)
  - Press the or arrows to increase/ decrease the responsiveness of activation of stored engine speeds (A) or (B) (from 1 (slow response) to 4 (rapid response)) and then press OK to confirm

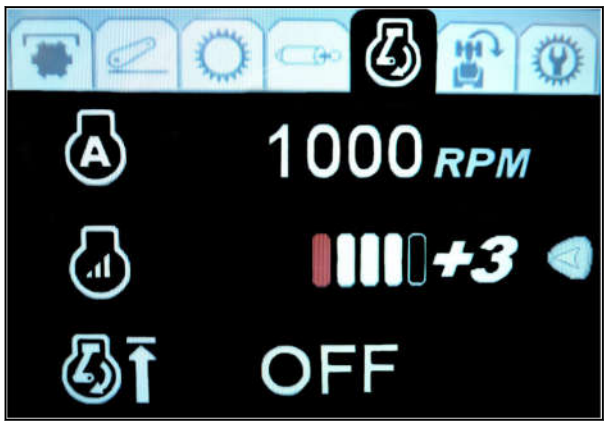


Fig. 103

3.5 Transmission

3.5.1 Presentation of the different driving modes

The Dyna-6 transmission is a forward and reverse sequential transmission. It provides 6 Dyna-6 ratios plus 4 mechanical ranges (1 to 4) without declutching.

The transmission electronic control system offers two driving modes:

- **Lever mode (Speedmatching), based on the sequential system**

  NOTE:
  An Upper and lower limits of the engine speed function is available in Lever mode

  A mode can be selected according to tractor use:

  - road mode (hare)
  - field mode (tortoise)
  - Creeper range (snail)
- **Pedal mode (AutoDrive), based on the sequential system**

  NOTE:
  An Upper and lower limits of the engine speed function is available in Pedal mode

  A mode can be selected according to tractor use:

  - road mode (hare)
  - field mode (tortoise)
  - Creeper range (snail)

3.5.2 Clutch function

Clutch function

Although the transmission has no forward clutch or coupler, the tractor does have a clutch pedal. This pedal allows traction effort to be controlled (as with standard clutch slip). When an obstacle appears suddenly, the tractor can be stopped rapidly by pressing the clutch and brake pedals, just like a standard tractor.

Neutral brake pedal function

The "neutral brake pedal" function allows the operator to place the transmission in neutral when he presses the brake pedals and to restart it when he releases them (e.g. using a round baler). The "neutral brake pedal" function is deactivated temporarily above 20 kph (the corresponding symbol flashes on the main screen). When the forward speed goes below 5 kph again, the function is reactivated automatically (the corresponding symbol is displayed continuously on the main screen)

- Press the ⏏ or ⏏ arrows to choose which function to adjust (the index moves), then press OK (the function is grayed out when it can be adjusted)
  - Press the ⏏ or ⏏ arrows to activate/ deactivate the shift of the transmission to neutral when the brake pedal is pressed, then press OK to validate

Fig. 104

NOTE:
The neutral brake pedal function is "OFF" by default at start-up, whatever the status when the tractor stops.

3.5.3 PowerShuttle

Operating principle of the Power Control lever

Control located to the left of the steering wheel Power Control lever (1) is used to select the direction of travel (forward or reverse) without disengaging the clutch.

It also allows the forward speed to be quickly modified.

DANGER:
Use the clutch pedal for all maneuvering (hitching implements etc.).

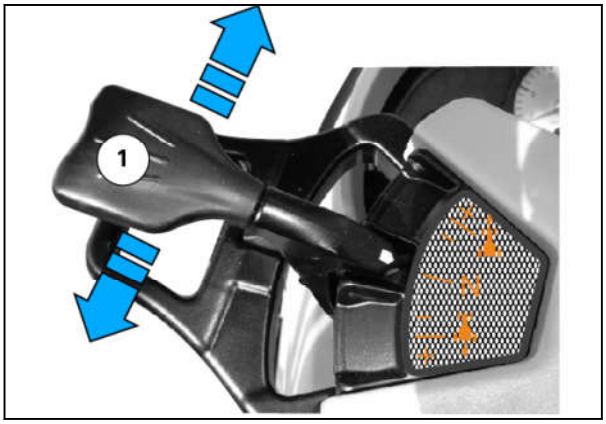


Fig. 105

Using the Power Control lever

(N) Neutral position: The transmission is in neutral.
(1) Forward travel: Position the lever toward the front; the letter **F** appears on the right-hand screen of the instrument panel.
(2) Reverse travel: Position the lever toward the rear; the letter **R** appears on the right-hand screen of the instrument panel.
(3) Moving toward the **(+)** symbol increases the tractor's forward speed.
(4) Moving toward the **(-)** symbol reduces the tractor's forward speed.

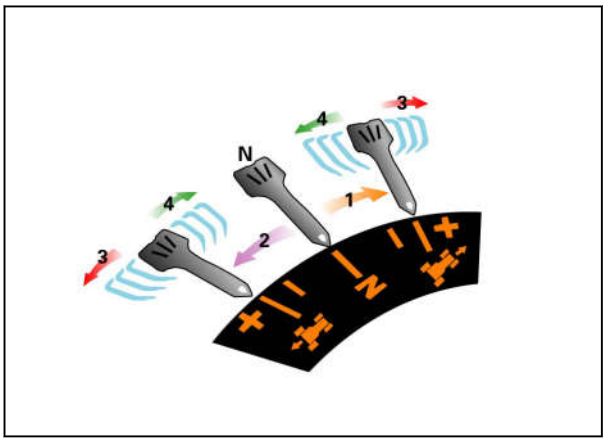
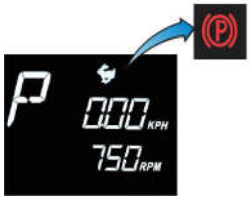


Fig. 106

NOTE:
When the tractor is in motion, each change to the direction is made using this control without disengaging the clutch.

DANGER:
Before leaving the seat, it is essential to engage the parking brake.

Lever position	Corresponding instrument panel screen
Neutral	
Forward	
Reverse	
Parking brake engaged	

Fast shifting

When changing the direction of travel, the tractor slows to a halt, then accelerates in the opposite direction.

- Shifting cannot operate while the following functions are active:
  - the underspeed supervisor
  - the speed regulators
  - the coupler function If the clutch pedal is pressed during fast shifting, a temporary stop may occur.

Right-hand reverse shuttle switch

The direction of travel can be reversed using the reverse shuttle switch (1) on the MultiPad lever. To activate this function, put the Power Control lever into neutral, declutch fully and press the right-hand reverse shuttle switch (1). The direction of travel can then only be reversed by pressing on this switch. To deactivate this function, the Power Control lever must be placed out of neutral position, or the hand brake applied.

Fig. 107

3.5.4 Adjusting the start ratios (1A, 1B, 1C etc.)

This function allows the start-up ratios to be pre-set in both of the tractor's directions of travel.

It is possible to set a restart ratio for forward travel (1) and another for reverse travel (2).

Setting procedure:

1. With the engine running and the tractor immobilized on flat ground.
2. Keep the clutch pedal depressed.
3. Place Power Control lever (3) in the direction of travel to be set.
4. Simultaneously move Power Control lever (3) and the T-handle lever or the MultiPad lever (depending on version) toward the "+" or the "-" to set the required restart value. They may differ for the two modes. Move the Power Control lever (3) toward "+" or "-" and press the "+" or "-" switch on the Joystick lever (4) at the same time to adjust the restart value.

   NOTE:
   Adjusting the restart ratios in forward travel changes the reverse gear ratio.

   NOTE:
   The restart ratios are adjustable in field mode (tortoise) and road mode (hare).

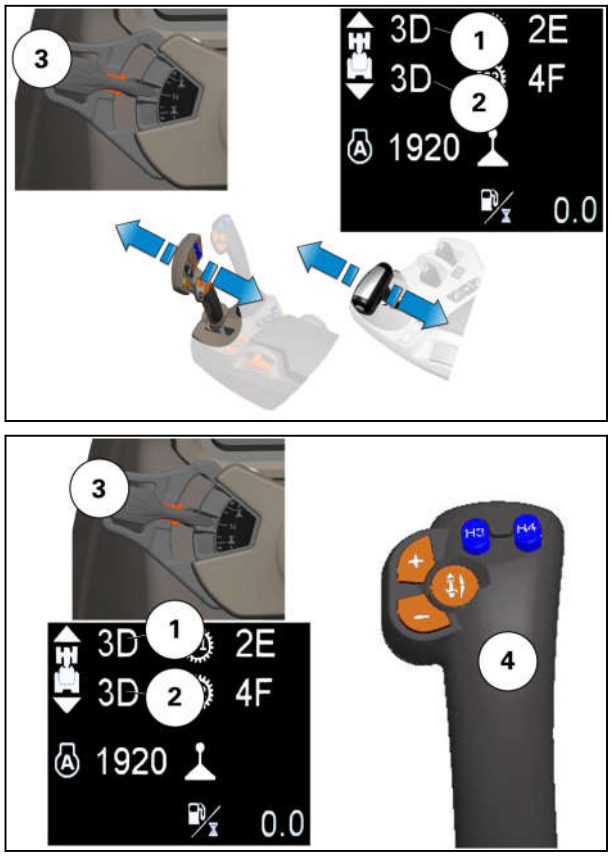


Fig. 108

3.5.4.1 Starting ratio

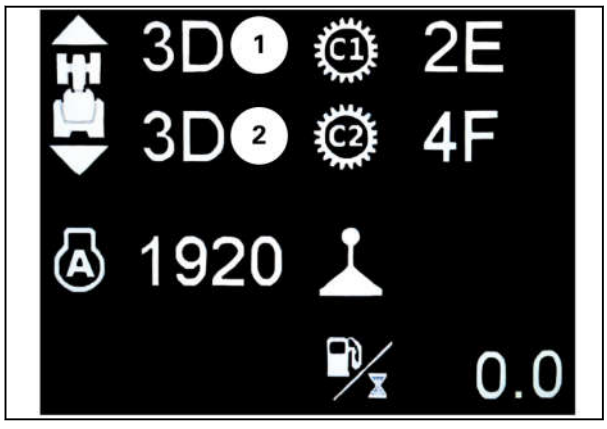


Fig. 109

	Ratio in road mode (hare)	Ratio in field mode (tortoise)
Forward	1A to 4A	1A to 4A
Reverse	1A to 4A	1A to 4A

For ease of use, the start ratio can also be adjusted in 0F for forward and reverse travel.

In this case, there is no longer any start ratio stored and the last ratio used corresponds to the restart ratio.

3.5.5 Storage of transmission ratios (1A, 1B, 1C, etc.)

It is possible to store two transmission ratios C1 and C2

They can be activated in both directions of travel and in the following modes:

- Lever (Speedmatching)
- Pedal (AutoDrive)

NOTE:
The C1 and C2 stored transmission ratios may be different depending on the field mode (tortoise) or the road mode (hare).

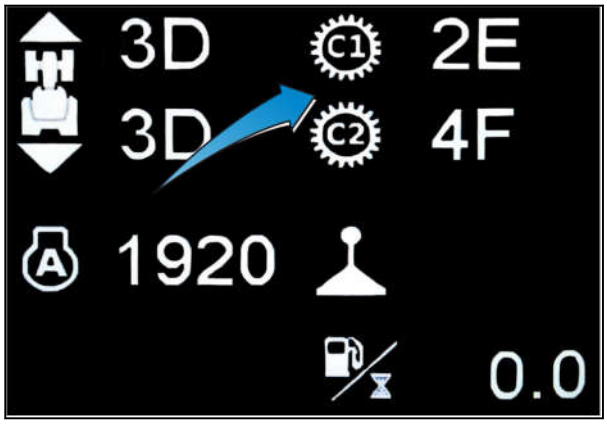


Fig. 110

To adjust the stored transmission ratios C1 and C2, go to the main screen in lever mode and use the C1 and C2 potentiometers respectively.

The recorded transmission ratios remain in the memory after the engine is switched off.

The stored transmission ratios can be easily recalled by pressing the C1 or C2 switch.

Fig. 111

MultiPad lever

It is also possible to store the transmission ratios using the C1 and C2 switches.

The desired transmission ratios must be selected using the MultiPad/Power Control lever.

Then hold down the transmission ratio switch for C1 ((2)) or C2 ((3)) positioned on the MultiPad lever ((A)) for 3 seconds.

The transmission ratio is then stored and activated, and is displayed in green on the main screen of the Setup and Information Screen

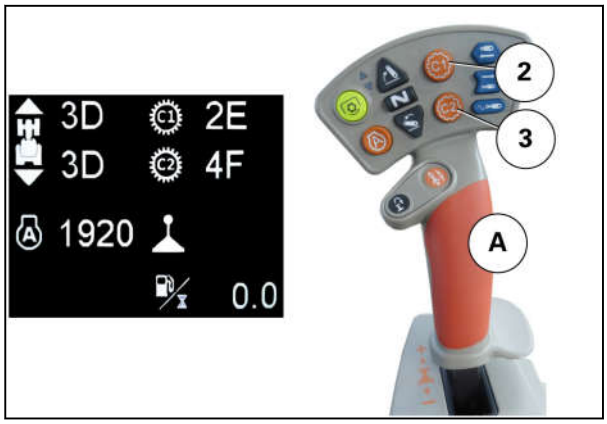


Fig. 112

T-handle lever

The desired transmission ratios must be selected using the MultiPad/Power Control lever.

Using the T-handle (B), hold down the transmission ratio switch C1 (2) or C2 (3) for 3 seconds.

The transmission ratio is then stored and activated, and is displayed in green on the main screen of the Setup and Information Screen

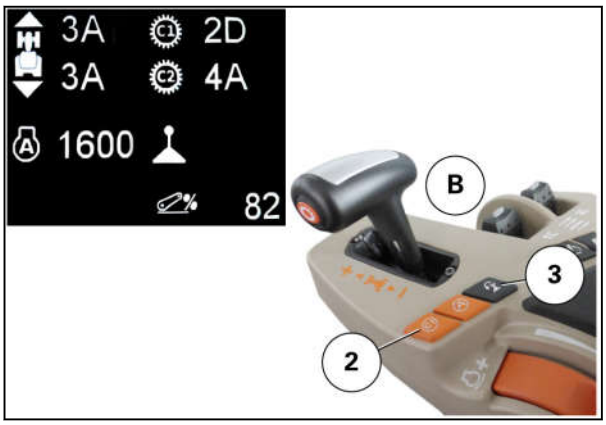


Fig. 113

NOTE:
The headland switch activates the transmission ratio C2 if no headland sequence is programmed. If a headland sequence is programmed by default, the headland switch will be reassigned to its headland function.

When the transmission ratio C1 or C2 is active, it can be modified using the C1 or C2 potentiometers respectively

The user can now activate or deactivate the stored transmission ratios "C1" or "C2" by simply pressing the corresponding switch.

NOTE:
Exclusively in Pedal mode, if the C2/Pedal function is "ON", it is not possible to engage the transmission ratio stored for C2

Conditions to be met for activation.

- Clutch pedal not activated

Deactivation conditions.

- Shift the Power Control controller
- Clutch pedal depressed
- Action on the armrest control lever
- Press the switch corresponding to the stored and engaged transmission ratio
- Press the left-hand and/or right-hand brake pedals

C1 automation function and A stored engine speed

This function allows you to activate the stored engine speed (A) when the stored transmission ratio C1 is activated.

Press the or arrows to choose which function to adjust (the index moves), then press (the function is grayed out when it can be adjusted)

- Press the or arrows to activate/ deactivate the stored engine speed (A) when engaging the stored transmission ratio (C1), and then press to confirm

Engine speed A is activated automatically after switch C1 is pressed.

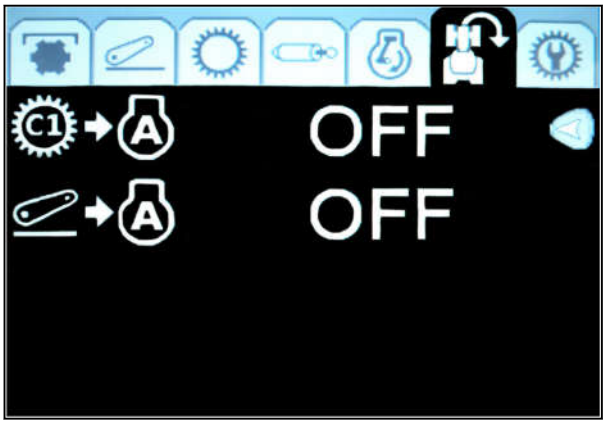


Fig. 114

3.5.6 Lever (Speedmatching) mode

This mode is accessed via the Lever (Speedmatching)/Pedal (AutoDrive) mode switch.

The tractor forward speed depends on the position of the armrest lever or the Power Control lever and the stored transmission ratios C1/C2.

The engine speed depends on the position of the throttle pedal/hand throttle or the engine speeds stored in A or B.

NOTE:
The selected mode is stored when the tractor is stopped.

Fig. 115

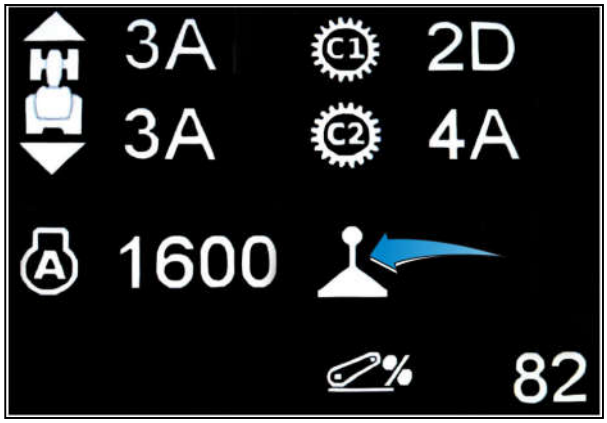


Fig. 115

In Lever mode, two modes can be selected according to tractor use

Mode choices:

- field mode (tortoise) (A) for field use.
- road mode (hare) (B) for road use.

NOTE:
see forward speeds in the Maintenance section of the Operator's Manual

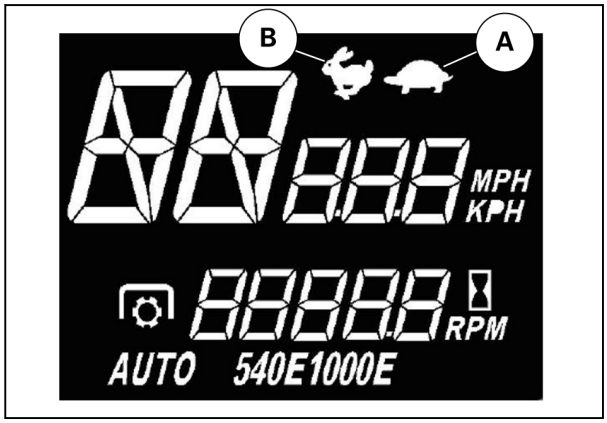


Fig. 116

Function: Upper and lower limits of the engine speed (only available with the Datatronic CCD)

With this function, it is possible to adjust the engine's maximum operating range (upper limit) and minimum operating range (lower limit) with a trigger.

However, if the user wishes, he can interrupt the engine speed using the throttle pedal/hand throttle or a stored A/B engine speed.

To access DTM mode, press the corresponding switch .

Depressing the right-hand and/or left-hand brake pedals temporarily disables the Upper and lower limits of the engine speed function (engine at idle speed)

Fig. 117

IMPORTANT:
All the control screens of the Setup and Information Screen must be accessed to make this mode operational

On engagement of the Upper and lower limits of the engine speedfunction, an icon appears on the Setup and Information Screen.

The settings of the Upper and lower limits of the engine speed function can only be configured using the Datatronic CCD (see the Datatronic CCD Operator's Manual).

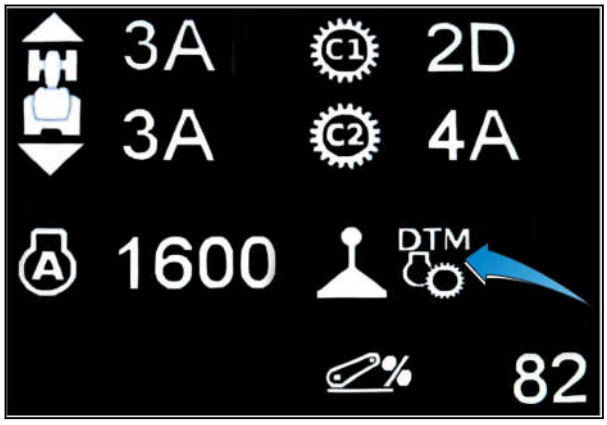


Fig. 118

3.5.7 Pedal (AutoDrive) mode

When the tractor is started, it is necessary to release the throttle and press the Pedal (AutoDrive)/Lever (Speedmatching) mode switch (1); the selected mode appears on the screen.

The transmission can be controlled by the throttle pedal/the Power Control lever or the hand throttle.

The maximum transmission ratio (C) is set using the C2 potentiometer (B):

- Ranges and ratios 1A to 4D in road mode (hare) for Dyna 4.
- Ranges and ratios 1A to 4F in road mode (hare) for Dyna 6.
- Ratios A to D only in field mode (tortoise) for Dyna 4.
- Ratios A to F only in field mode (tortoise) for Dyna 6.

The engine speed for shifting transmission ratios (D) is set using the potentiometer C1 (A):

Fig. 119

- "Auto": Transmission ratios are shifted automatically between 1550 rpm and 2000 rpm, depending on the engine load
- 1400 to 2000 rpm: Transmission ratios are shifted based on the operator's choice

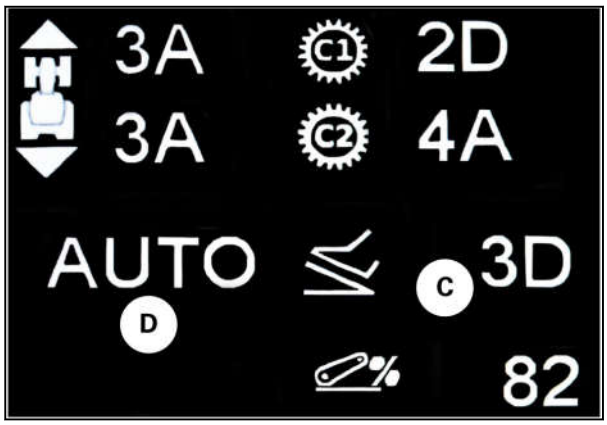


Fig. 119

In Lever mode, two modes can be selected according to tractor use

Mode choices:

- field mode (tortoise) (A) for field use.
- road mode (hare) (B) for road use.

NOTE:
see forward speeds in the Maintenance section of the Operator's Manual

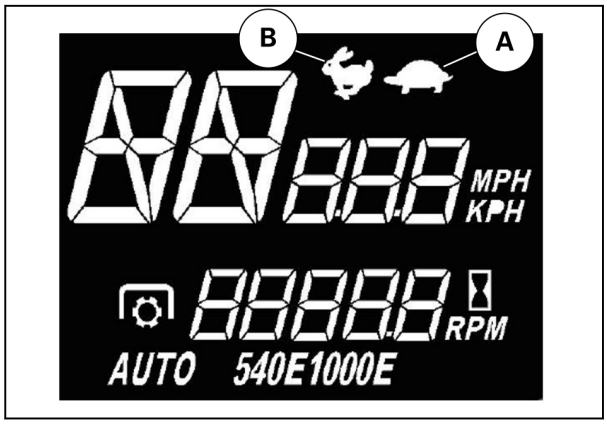


Fig. 120

Function: Upper and lower limits of the engine speed (only available with the Datatronic CCD)

With this function, it is possible to adjust the engine's maximum operating range (upper limit) and minimum operating range (lower limit) with a trigger.

However, if the user wishes, he can interrupt the engine speed using the throttle pedal/hand throttle or a stored A/B engine speed.

To access DTM mode, press the corresponding switch .

Depressing the right-hand and/or left-hand brake pedals temporarily disables the Upper and lower limits of the engine speed function (engine at idle speed)

Fig. 121

IMPORTANT:
All the control screens of the Setup and Information Screen must be accessed to make this mode operational

On engagement of the Upper and lower limits of the engine speedfunction, an icon appears on the Setup and Information Screen.

The settings of the Upper and lower limits of the engine speed function can only be configured using the Datatronic CCD (see the Datatronic CCD Operator's Manual).

NOTE:
In Pedal (AutoDrive) mode, if the engine speed for shifting transmission ratios is higher than the engine speed upper limit selected, then the engine speed when shifting becomes the engine speed upper limit.

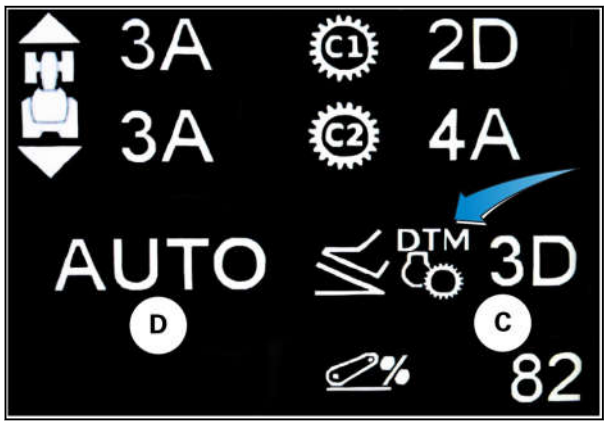


Fig. 122

Function: C2/Pedal mode

Press the ⓗ or ⓘ arrows to choose which function to adjust (the index moves), then press ⓞ (the function is grayed out when it can be adjusted)

- Press the ⓗ or ⓘ arrows to enable/disable the C2/pedal mode function, then press ⓞ to confirm

Fig. 123

This C2/pedal mode function allows you to have a second maximum transmission ratio

After pressing switch C2, the stored transmission ratio C2 (A) (e.g., 4A) becomes the maximum transmission ratio(A), and the maximum transmission ratio (B) (e.g., 3D) previously chosen becomes the stored transmission ratio C2 (B).

NOTE:
If this function is "ON", it is not possible to engage the stored transmission ratio C2

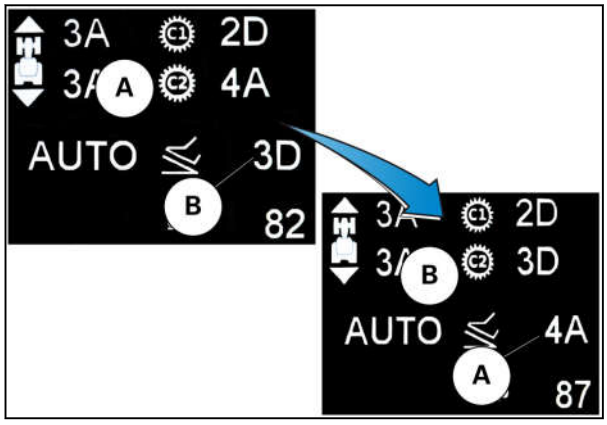


Fig. 124

3.5.8 Road mode (Hare)/Field mode (Tortoise)

road mode (hare) or field mode (tortoise) can be selected after choosing a driving mode (Lever or Pedal).

- There are two modes available:
  - road mode (hare) (B) for road use.
  - field mode (tortoise) (A) for field use.

NOTE:
(see forward speeds in the Maintenance section of the Operator's Manual)

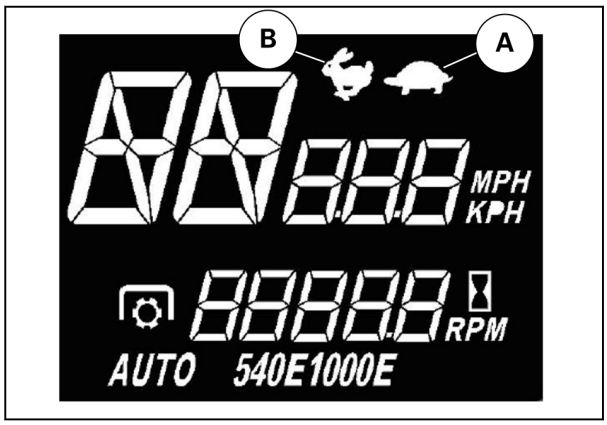


Fig. 125

Changing road mode (hare)/field mode (tortoise)

The transmission is managed using the T-handle lever or the MultiPad lever. It is possible to modify road mode (hare)/field mode (tortoise). These changes can be made when stopped or while in operation.

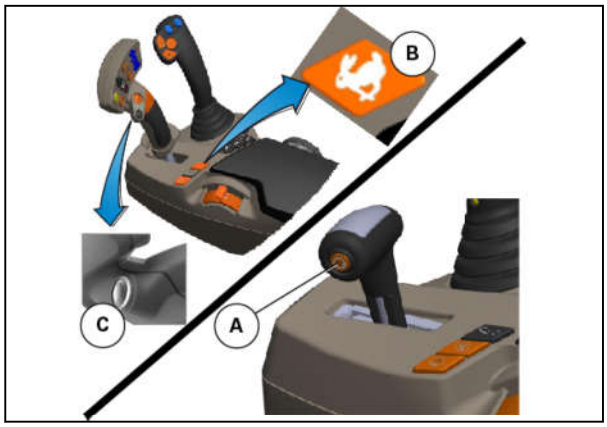


Fig. 126

	Transmission control type	Changing field mode (tortoise)/ road mode (hare) **NOTE:** ***The selection is stored after the engine is switched off.***
Power Control lever in neutral • Forward speed equal to 0 kph	With the T-handle lever	Press the switch (A) on the T-handle lever with the clutch disengaged, or press the switch (A) on the T-handle lever for more than 5 seconds
	With the MultiPad lever	Press the switch (B) on the armrest
Power Control lever not in neutral • Forward speed greater than 0 kph • Forward speed equal to 0 kph (clutch disengaged)	With the T-handle lever	Press the switch (A) on the T-handle lever for more than 5 seconds
	With the MultiPad lever	Press the switch (B) on the armrest

3.5.9 Changing the transmission ratios (1A, 1B, 1C etc.)

The transmission is managed using the T-handle lever or the MultiPad lever. The ranges (1, 2, 3, 4) and the ratios (A, B, C, D, E, F) can be modified.

These changes can be made when stopped or while in operation.

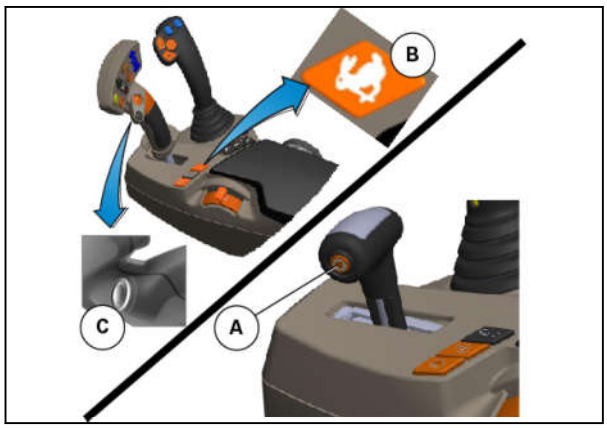


Fig. 127

	Transmission control type	Changing ranges (1, 2, 3, 4)	Changing ratios (A, B, C, D, E, F)
Power Control lever in neutral • Forward speed equal to 0 kph	With the T-handle lever	Not used with the Power Control lever in neutral	Not used with the Power Control lever in neutral
	With the MultiPad lever	Not used with the Power Control lever in neutral	Not used with the Power Control lever in neutral
Power Control lever not in neutral • Forward speed greater than 0 kph • Forward speed equal to 0 kph (clutch disengaged)	With the T-handle lever	Press the switch (A) with the T-handle lever in forward or reverse position	Put the T-handle lever in forward or reverse position
	With the MultiPad lever	Press the switch (C) with the MultiPad lever in forward or reverse position	Put the MultiPad lever in forward or reverse position

3.5.10 Optional creeper range (snail)

CAUTION:
To prevent accidents, always position the Power Control lever in neutral and apply the parking brake before leaving the operator's seat.

IMPORTANT:
Only move the Creeper range (snail) lever when the tractor is stationary.
Under no circumstances should the creeper gears be used to obtain a pulling force greater than that available in field mode (tortoise) or road mode (hare).
Move the lever at least once a month to prevent the system from seizing.
The 14:1 super creeper gears may be used in all ranges.

If the tractor is fitted with a super-creeper gearbox (14:1), normal gears are obtained when the lever is placed in the road mode (hare)/field mode

Fig. 128

(tortoise) position and the super-creeper gears are obtained when the lever is placed in Snail position.

When Creeper range (snail) is engaged, the corresponding icon is displayed on the Setup and Information Screen

3.5.11 Tractor towing

DANGER:
Before disengaging, chock the wheels of the tractor to avoid any movement and risk of accident. After the ParkLock parking brake is disengaged, the parking brake will not operate.

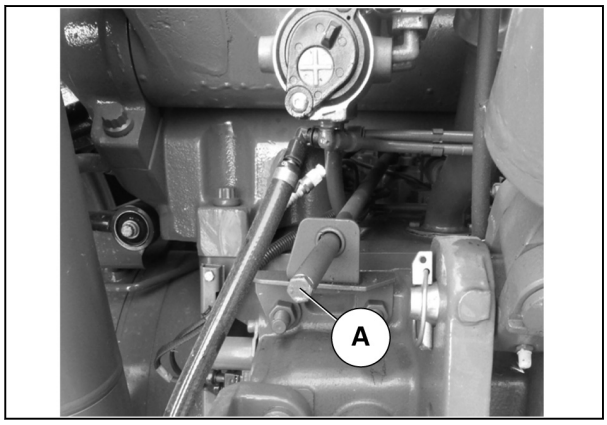


Fig. 129

IMPORTANT:

1. *Creeper gear must be disengaged and the gearbox in neutral.*
2. *Towing with the engine stopped or no hydraulics: Transport by trailer is recommended. As the gearbox is no longer lubricated when the engine is stopped, tow the tractor no further than 50 m, and do not exceed a speed of 5 kph. Release the parking brake (ParkLock option) by turning the special screw* (A) *clockwise. This screw is located behind the center housing.*
3. *Towing with engine running: Turn off engine. Wait 10 minutes for the low pressure to drop. Start the engine and do not touch any gearbox controls to keep transmission in neutral. Leave the engine running to keep the transmission lubricated, release the parking brake (ParkLock option) by turning the special screw* (A) *clockwise. This screw is located behind the center housing.*
4. *Activate the hazard warning lights when towing the tractor on the road.*
5. *With regard to the load assembly, check the road traffic conditions.*

If the gearbox oil pressure indicator light comes on, only tow the tractor on a trailer.

3.5.12 Forward speed calibration

General

This calibration allows improved precision of forward speed depending on:

- the different tire sizes available
- radar (if fitted)

Procedure

1. Mark out a distance of 100 m, depending on the selected unit of measurement, on a firm surface.
2. Start up the tractor, and then press and hold the display selector switch (A) for 15 seconds.

   NOTE:
   The daily hourmeter resets to 0 after 5 seconds.

3. "CAL" should appear on the screen .
4. Drive the tractor forward at normal working speed.

   NOTE:
   The tractor must be moving at a constant speed before starting out on the measured course. Otherwise, the calibration is not correct.
5. Press the display selector switch (A) when the starting line of the 100 m course has been passed.

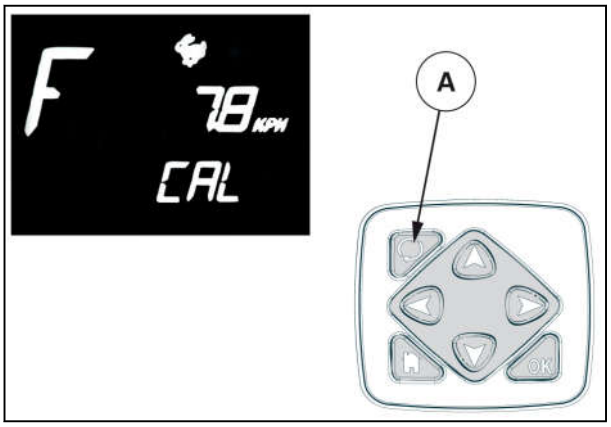


Fig. 130

6. "run" should appear on the screen .
7. Press the display selector switch (A) when the finish line of the course has been passed.
8. Press the display selector switch (A). The constant forward speed (theoretical) measured during calibration is displayed.
9. Press the display selector switch (A) again. The actual constant forward speed (radar) measured during calibration is displayed on tractors fitted with radar.
10. Press the display selector switch (A) one final time to return the instrument panel to normal operating mode.

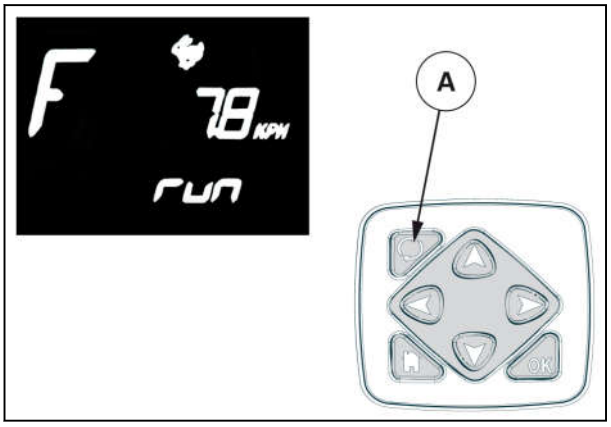


Fig. 131

3.6 Brakes

3.6.1 Brake pedals

WARNING:

- **When driving on the road:**
  - **The brake pedals must stay locked together**
  - **Only the foot throttle should be used**
  - **The hand throttle lever must be in the idle position**
  - **Check that the memorized A/B speed is not activated.**

- Use the brake pedals separately to apply the brake to just one wheel at a time. To uncouple the brake pedals:
  - Pull the lever (1) outward
  - Push the locking lever (1) downward
  - Use the brake pedal corresponding to the side the brake is to be applied

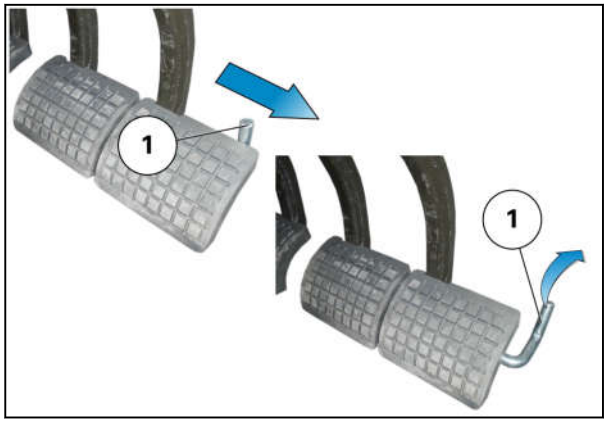


Fig. 132

- Use the brake pedals locked together when traveling on the road. To lock the brake pedals together:
  - Raise the locking lever (1)
  - Pull the lever (1) inward

    NOTE:
    A spring enables an automatic return.
  - The brake acts on the two rear wheels, the front axle (4-wheel drive only) and on the trailer brake.

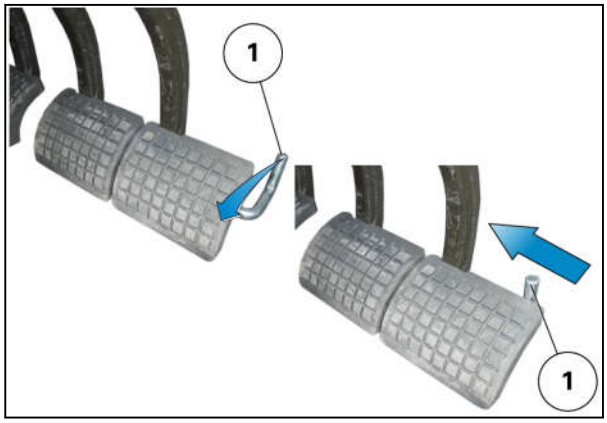


Fig. 133

3.6.2 Hydraulic trailer brake

WARNING:
When using the trailer brake, it is recommended that the brake pedals are locked together .

Trailer brake system available as an option.

If a trailer equipped with a hydraulic brake system is hitched to the tractor and connected, the trailer brakes are activated as soon as the operator presses the tractor brake pedals.

1. Connection:
   a. Remove the plastic cover and check for contamination. Clean if necessary
   b. Connect the trailer hose to the union located at the rear of the tractor.
   c. After disconnecting, refit the cover to prevent any possible clogging and damage to the contact faces.

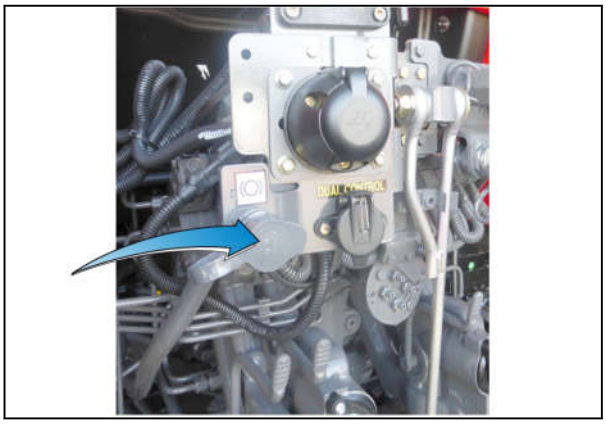


Fig. 134

3.6.3 Pneumatic trailer brake

WARNING:
Before activating the trailer brake, lock the brake pedals together .

Identification of coupling heads:
(A) Brake line (Yellow)
(B) Emergency brake line (Red)

Colors	Description
Red	8.3 bar constantly, brake assistance line used for dual braking
Yellow	0 to 8.3 bar, used in a double brake line

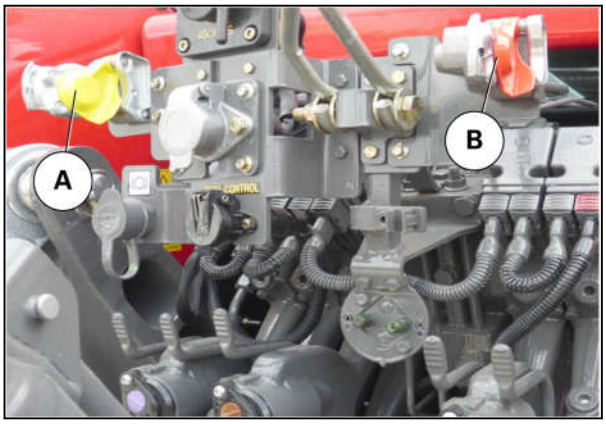


Fig. 135

Coupling/uncoupling the trailer

Remove the cover ref. (1) and connect the head of the trailer connection hose ref. (2), turning it downward until it engages correctly.

Carry out the operation in reverse, turning the coupling head upward and refitting the cover ref. (1) to prevent any possible clogging and damage to the contact faces.

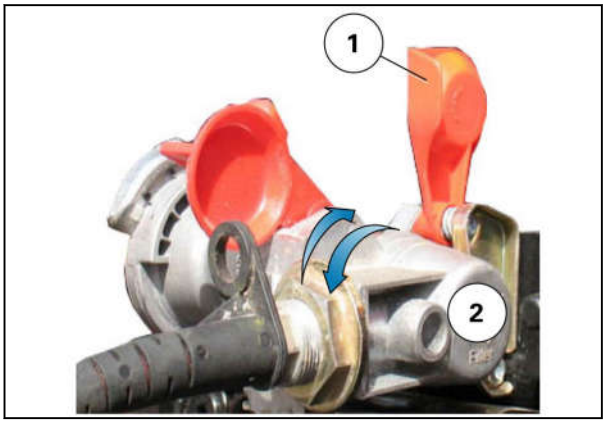


Fig. 136

IMPORTANT:
Disconnect the red coupling head before the yellow one in order to avoid an excess of pressure in the system.

Pressure available depending on type of braking

CAUTION:
When the ParkLock is activated (engine running or stopped), the pneumatic trailer brake is engaged.

Brake pedals/ hand brake not used	Braking with pedal or hand brake lever	Color of coupling heads
8.3 bar	8.3 bar	Red
0	8.3 bar	Yellow

NOTE:
If the trailer brakes too sharply, it is possible to have the pneumatic braking adjusted. Contact your dealer to have these adjustments made.

Driving the tractor/trailer assembly

When driving, it is advisable to activate the relevant display on the instrument panel screen to monitor the display of pressure in the system (in bar) (see description on the instrument panel).

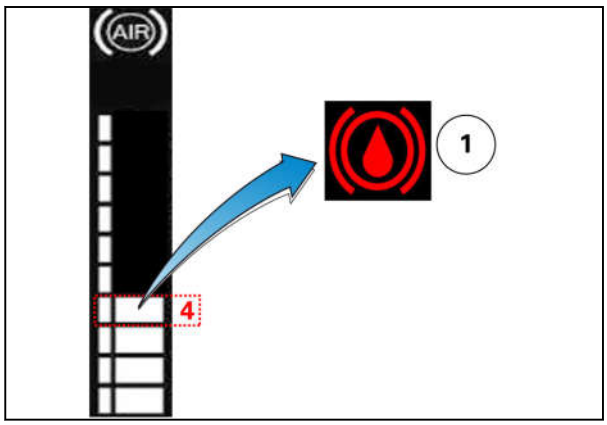


Fig. 137

WARNING:
When starting, wait for the brake control indicator light (1) to switch off before starting to drive. If the pressure drops below 4 bar, trailer braking is no longer operational; the brake indicator light (1) lights up on the instrument panel. Stop the tractor carefully and consult your dealer.

IMPORTANT:
The system must be protected by antifreeze at the start of each cold season (temperatures below +5°C. See the chapter on maintenance.

3.6.4 Electromechanically controlled brake on the steering column (ParkLock)

General

A control located on the left of the steering column is used to engage and disengage the parking brake (ParkLock). (A) = disengaged position; (B) = engaged position.

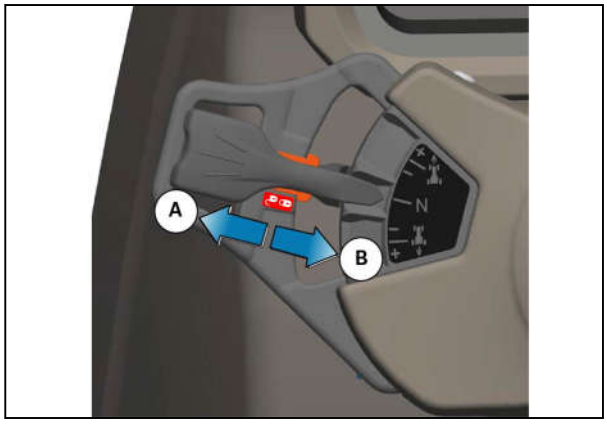


Fig. 138

WARNING:
To compensate for gravity and to prevent the tractor from moving when starting on an ascent or descent, the brake pedals must be applied before releasing the ParkLock.

WARNING:
Position the ParkLock control in the engaged position (closed padlock symbol) before leaving the operator's seat and switching off the engine.

3.6.4.1 ParkLock engaged

Procedure

1. The shuttle lever must be in neutral position. The letter **N** appears on the digital display indicating that the shuttle lever is in neutral position.
2. The forward speed must be less than 2 kph.

Fig. 139

3. The control must be **pushed** toward the steering column **B** (closed padlock symbol); the brake is then engaged.

   NOTE:
   The indicator light (P) *illuminates on the instrument panel and the digital display indicates the symbol* (P)*, representing the parking position.*
4. The ParkLock engages automatically when the engine is stopped.

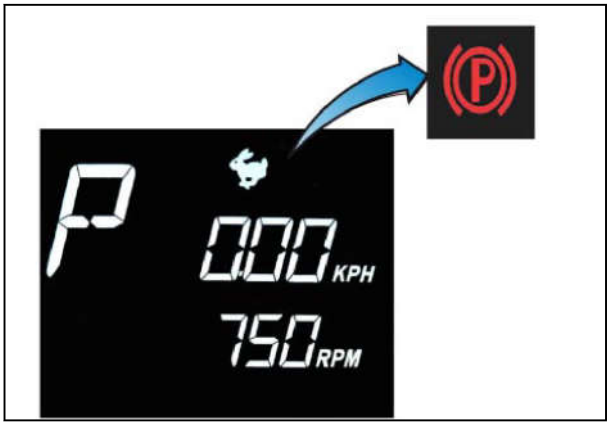


Fig. 140

3.6.4.2 Disengagement of the ParkLock

IMPORTANT:
For the ParkLock to disengage after engine start-up, the electronic control must record a switch of the control from the closed padlock position to the open padlock position . If this condition is not met, the ParkLock will remain engaged, even if the control is in the padlock open position. When shifting gear, if the ParkLock is not properly disengaged, a beep will sound and the padlock symbol on the instrument panel indicates that the ParkLock remains engaged.

Procedure

The control must be **pulled** outward (**A**) (open padlock symbol). After switching the ParkLock control (from the closed padlock position to the open padlock position), the ParkLock is only disengaged after the brake pedals are pressed then released or if the Power Control lever is placed in the raised position.

3.6.4.3 Manual disengagement of the ParkLock

In the event of an electronic fault with the ParkLock, it is possible to manually release it in order to move the tractor.

WARNING:
Please contact your dealer after manually disengaging the ParkLock.

Procedure

1. **DANGER:**
The ParkLock will not operate once its screws have been loosened. Before loosening, chock the tractor to prevent the wheels from drifting.

2. Loosen the ParkLock by turning the screw (A) clockwise. This screw is located behind the center housing.

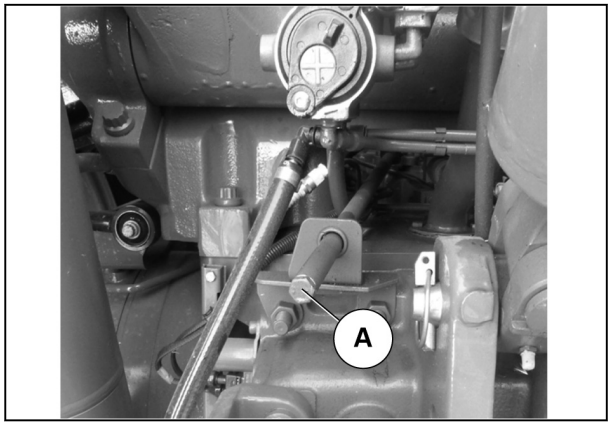


Fig. 141

3. Clear the ParkLock indicator light from the instrument panel.
   - Engine running
   - Display main instrument panel screen
   - Keep the clutch pedal depressed
   - Press the (OK) key on the control keypad for 5 seconds
   - The indicator light and the (P) display will disappear.

Fig. 142

3.6.5 Parking brake

WARNING:
To compensate for gravity and to prevent the tractor from moving when starting on an ascent or descent, the brake pedals must be applied before the parking brake is released.

- When the parking brake is engaged, if the Power Control reverse shuttle control is moved forward, the tractor remains stationary and an audible signal warns the operator.

  NOTE:
  If the clutch pedal is fully depressed and the Power Control lever is moved forward or backward, the tractor begins to move forward when the clutch pedal is released. An audible signal warns the operator.
- If the parking brake is engaged at forward speeds below 2 kph, the tractor stops and an audible signal warns the operator.

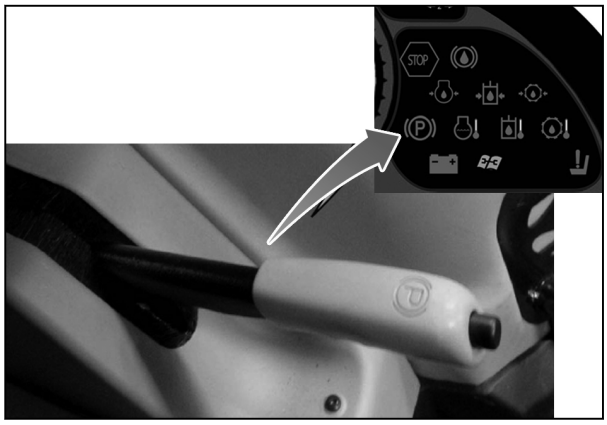


Fig. 143

- If the parking brake is engaged at forward speeds above 2 kph, the tractor continues moving and an audible signal warns the operator.

  NOTE:
  When the parking brake is engaged, the corresponding indicator light remains illuminated on the instrument panel.

3.7 Steering

3.7.1 Steering

General

The steering is hydrostatic, which means there is no mechanical connection between the steering wheel and the wheels.

The tractor may be fitted with electronic power-assisted steering as an option. The electronic power-assisted steering comprises a pump and an electrohydraulic steering valve. This type of valve offers two additional options: quick steering (SpeedSteer) and automatic steering (Auto-Guide™).

CAUTION:
When the engine stops, the booster pump no longer feeds the system.
If the tractor is stopped, the hydrostatic steering cannot be maneuvered.

- **However, no hydraulic system can operate efficiently unless:**
  - **it is correctly maintained and the recommended fluids are used**
  - **the tightness of all unions, and the oil level, are regularly checked**

WARNING:
Do not use quick steering (SpeedSteer) or Auto-Guide™ under normal driving conditions on the open road.

SpeedSteer accelerated steering

This system enables the operator to reduce the number of steering wheel turns to operate the steering quicker. It disengages automatically above 25 kph. Switch (A) is used to activate SpeedSteer accelerated steering. The indicator light on the switch lights up. The number of steering wheel turns is adjustable by pressing the keys on the Setup and Information Screen keypad after the screen is displayed on the instrument panel.

Fig. 144

CAUTION:

When the system is engaged, the operator must remain seated in the operator seat at all times. He must remain vigilant and be ready to take back the controls of his tractor at any time as required. The system disengages automatically above 25 kph In the event of a drop in forward speed, the SpeedSteer steering must be reactivated.

The number of steering wheel turns is adjustable by pressing the keys on the Setup and Information Screen keypad after the screen is displayed on the instrument panel.

- Press the ⓘ or ⓘ arrows to choose which function to adjust (the index moves), then press ⓞⓚ (the function is greyed out when it can be adjusted)
  - Press the ⓘ or ⓘ arrows to increase/ decrease the setting level (1 to 4) of the SpeedSteer accelerated steering (the more lines there are, the less it is necessary to turn the steering wheel for the same steering angle) and then press ⓞⓚ to confirm

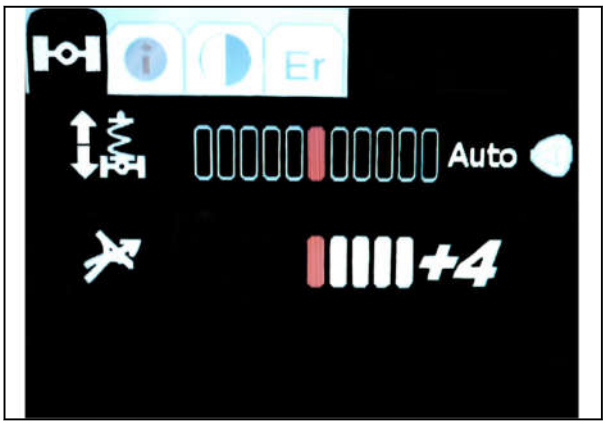


Fig. 145

Auto-Guide™

To activate the aerial, press the switch (A) located on the right-hand pillar. The indicator light on the switch illuminates. On the roof, some aerial indicator lights also illuminate.

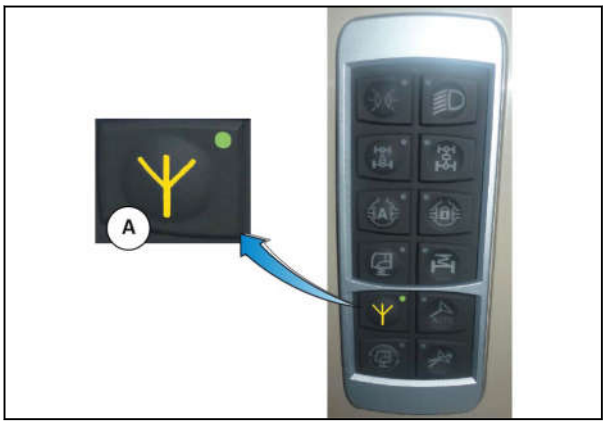


Fig. 146

The system electronically guides the tractor. The operator no longer has to make corrections to the steering while the system is engaged. For more information, please consult the Auto-Guide™ Operator's Manual.

To activate the electrohydraulic steering valve system for the Auto-Guide™, press the switch (B) located on the right-hand pillar; the indicator light on the switch lights up.

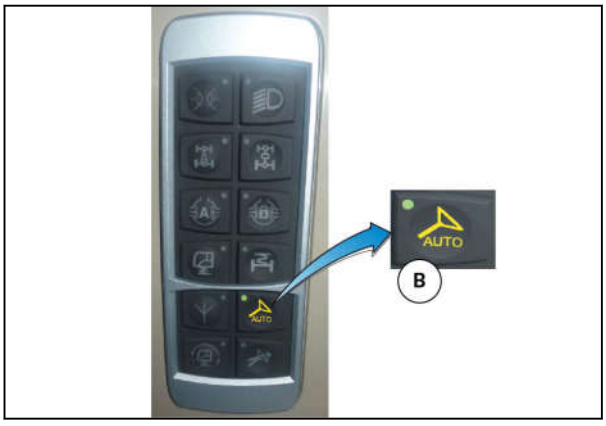


Fig. 147

WARNING:
Under no circumstances should the Auto-Guide™ power-assisted steering system be used to compensate for the operator's lack of concentration.

CAUTION:

When the system is engaged, the operator must remain seated in the operator seat at all times. He must remain vigilant and be ready to take back the controls of his tractor at any time as required. The system disengages automatically above 25 kph In the event of a drop in forward speed, the Auto-Guide™ must be reactivated.

1. The Auto-Guide™ can be engaged and disengaged:
   a. Via the Auto-Guide™ screen. Consult the Auto-Guide™ manual
   b. Via the Datatronic CCD screen using the Headland Management sequence. Consult the Datatronic CCD manual
   c. Using the Headland Management switch (1) with only the MultiPad lever

   NOTE:
   The Auto-Guide™ function can only be used when there is no sequence programmed. Otherwise, Headland Management is engaged by default.

Fig. 148

3.8 Front axle

3.8.1 Four-wheel drive front axle

Engaging the 4-wheel drive front axle activates traction by the front wheels. This function is strongly advised for field work to keep wheel slip to a minimum.

The 4-wheel drive front axle may be used in accordance with the following operating modes:

1. Manual mode
2. Automatic mode

IMPORTANT:
So as not to damage the tractor, it is essential to disengage the 4-wheel drive front axle prior to use on the open road.

NOTE:
When the tractor is started, the 4-wheel drive front axle will be in the mode stored when the engine was last switched off.

Special conditions

- The front axle is engaged whenever the engine is stopped and the front axle indicator light is off
- If both brake pedals are depressed, the front axle engages to provide 4-wheel braking, regardless of forward speed.
- The front axle will engage whenever the differential lock is engaged
- The front axle engages as soon as the parking brake is applied
- To switch from automatic mode to manual mode, press the switch corresponding to the respective function.

Use of the 4-wheel drive front axle in manual mode

Press the switch (1) to engage the 4-wheel drive front axle in manual mode

The 4-wheel drive front axle indicator lights on the instrument panel and on the switch (1) illuminate.

NOTE:
In manual mode, the 4-wheel drive front axle is permanently engaged, irrespective of the forward speed.
This manual mode is available with Headland Management

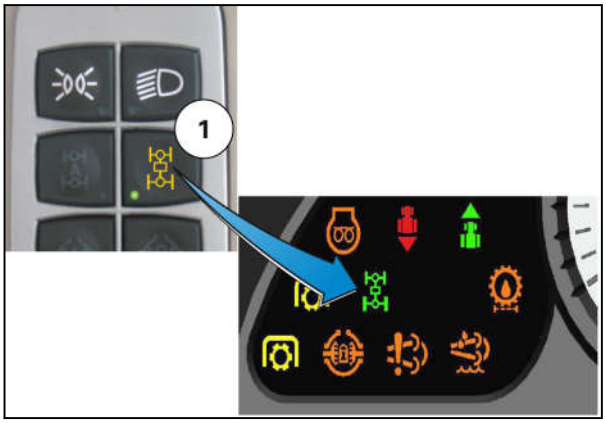


Fig. 149

Use of the 4-wheel drive front axle in automatic mode

Press the switch (1) to engage the 4-wheel drive front axle in automatic mode.

This procedure cancels manual mode if it was engaged

The 4-wheel drive front axle indicator lights on the instrument panel and on the switch (1) illuminate.

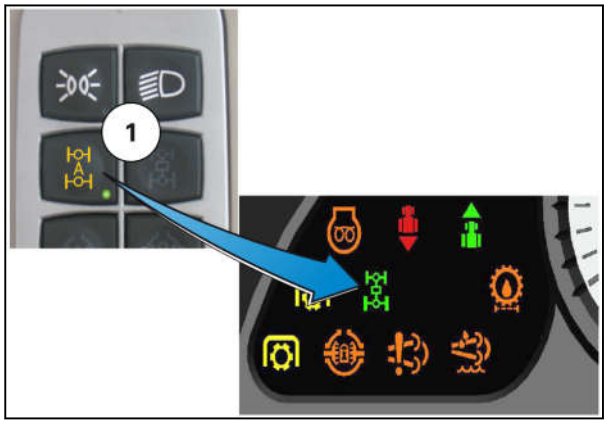


Fig. 150

Actions	Consequences
Forward speed of tractor greater than 20 kph	Temporary disengagement of the 4-wheel drive front axle
Forward speed of tractor less than 19 kph	Re-engagement of the 4-wheel drive front axle
Steering angle greater than 25° (with steering angle sensor option)	Temporary disengagement of the 4-wheel drive front axle
Steering angle less than 23° (with steering angle sensor option)	Re-engagement of the 4-wheel drive front axle
Wheel slip rate < 15%	Temporary disengagement of the 4-wheel drive front axle
Wheel slip rate > 20%	Re-engagement of the 4-wheel drive front axle

NOTE:
The disengagement angle can be adjusted by your dealer.
This automatic mode is not available with Headland Management

3.8.2 Suspended front axle

The suspended front axle (optional) is designed to improve the operator's comfort by enabling better shock absorption during road use and also to increase the vehicle's stability at high speeds by improving contact with the road surface.

The axle suspension can be activated and deactivated using the switch located on the right-hand pillar in the cab.

Activation/deactivation

- On starting the engine, the axle suspension remains in the position (activated or deactivated) that it was in when the engine was stopped.
- To activate the suspension, press the switch (A); the switch indicator light lights up.

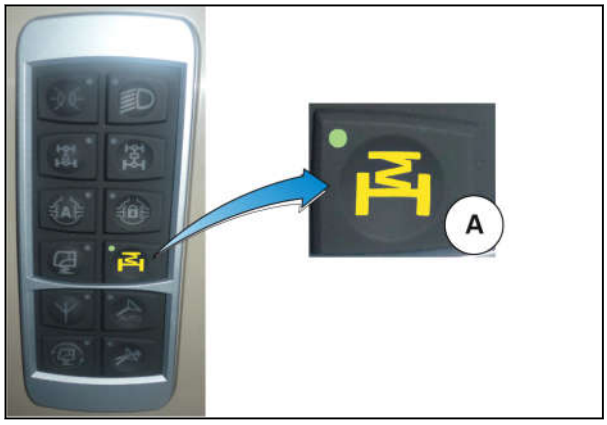


Fig. 151

NOTE:
If after 30 seconds the required value is not obtained, the suspension is deactivated for 30 seconds. After 3 attempts, the system switches to overload mode. The suspended front axle locks in position; the indicator light (A) *flashes (to resolve this issue, see indicator light panel in the Maintenance section of the Operator's Manual).*

- To deactivate the suspension, press the switch (A); the indicator light goes out.
- The front axle suspension is activated automatically when the speed exceeds 30 kph.

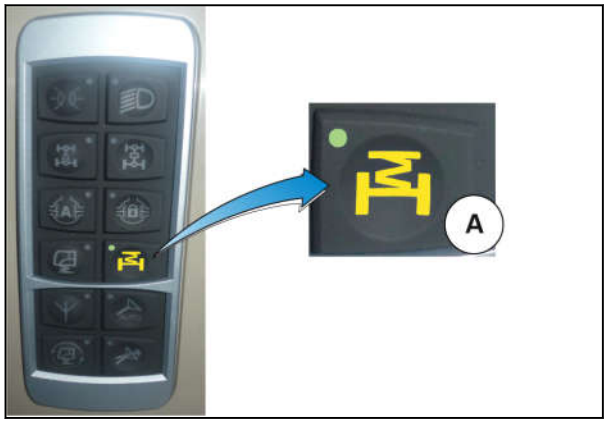


Fig. 152

Adjusting the position

From the menu on the Setup and Information Screen, it is possible to adjust the height of the suspended front axle, for example to hitch a front implement (with a forward speed of < 5 kph)

- Press the ⌂ or ⌂ arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)
  - Press the ⌂ or ⌂ arrows to increase/ decrease the height of the suspended front axle. The suspended front axle returns to Auto mode when you press OK, when you leave the settings screen or when the forward speed is > 5 kph.

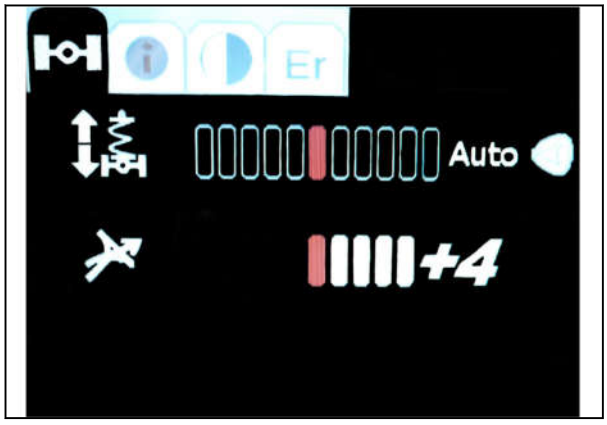


Fig. 153

3.8.3 Permissible load on the front axle

The tractor track width (V) is measured from the center of one wheel to the center of the other for single wheels.

For dual wheels, it is measured from the center of the right wheel assembly to the center of the left wheel assembly.

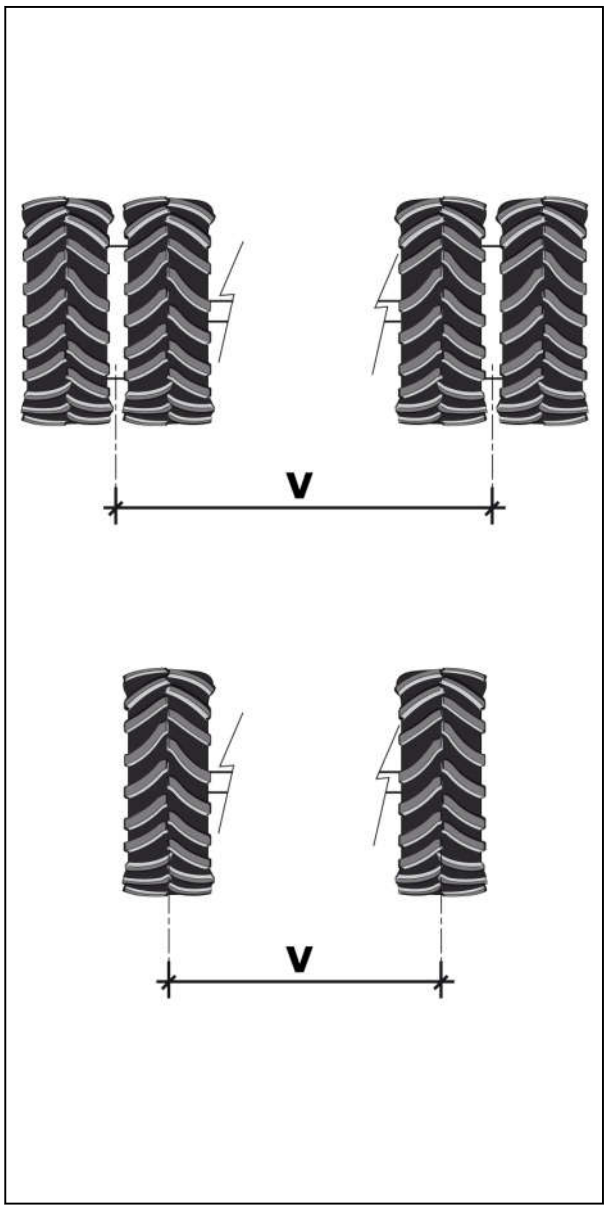


Fig. 154

The load allowed on the front axle varies with the forward speed, track width adjustment and depends on whether dual front wheels are used.

The graph below shows the different adjustment options.

Front axle type 750

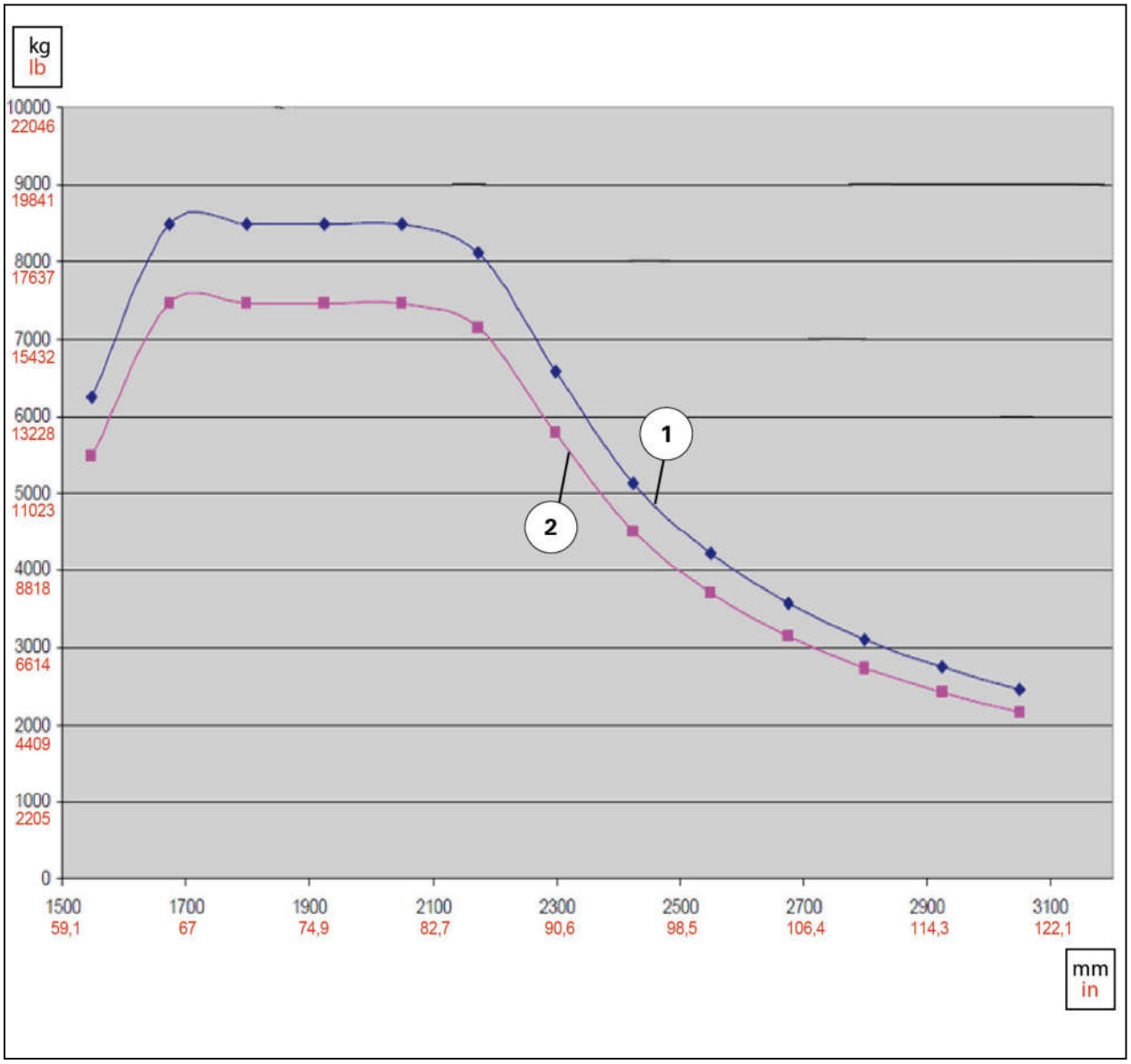


Fig. 155

Models	Description of the 4-wheel drive front axle	Plate-to-plate distance
MF 7719/MF 7720	DANA 750/561 or DANA 750/640	1892 mm
MF 7722	DANA 750/559 or DANA 750/638	1892 mm

The load allowed on the front axle varies with the track adjustment and the forward speed.

Front axle type 755

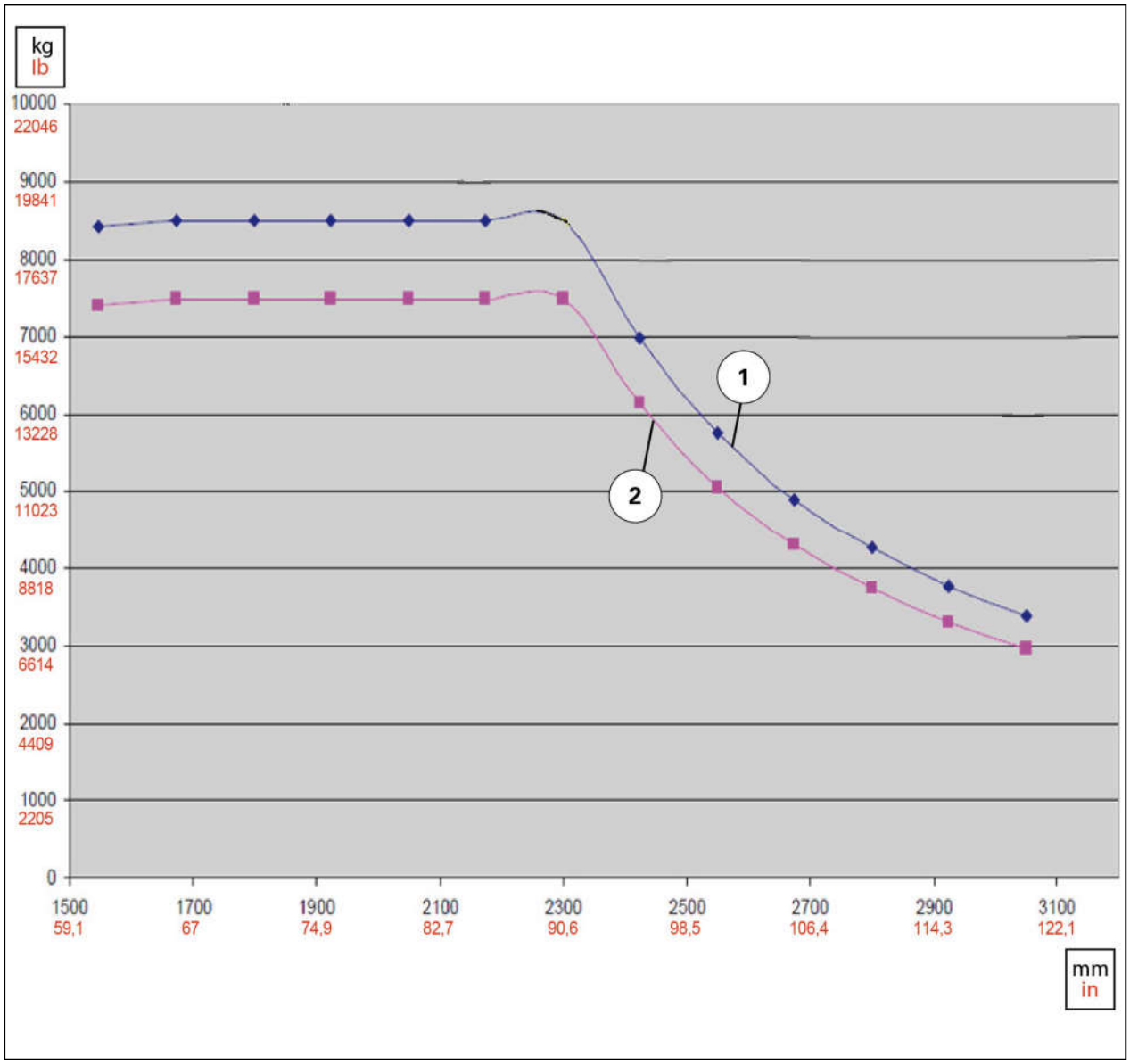


Fig. 156

(1) Forward speed of 9 kph

(2) Forward speed of 50 kph

Models	Description of the 4-wheel drive front axle	Plate-to-plate distance
MF 7724/MF 7726	DANA 755/507 or DANA 755/607	1892 mm

The load allowed on the front axle varies with the track adjustment and the forward speed.

3.9 Differential lock

3.9.1 Differential lock

DANGER:

Not to be used on the road or when turning. Maximum forward speed of operation is automatically limited to 20 kph

IMPORTANT:
Do not engage the differential lock if a wheel is already spinning.

If wheel slip is anticipated, the differential lock devices can be activated in manual mode by pressing the switch(3) or in automatic mode by pressing the switch (4). The 4-wheel drive front axle in manual or automatic mode is engaged depending on the activation mode of the differential lock. The indicator lights of the differential lock (1) and 4-wheel drive front axle (2) are illuminated on the instrument panel and on the switches (3) and (4). The rear and front differentials are locked and the wheels therefore rotate in unison.

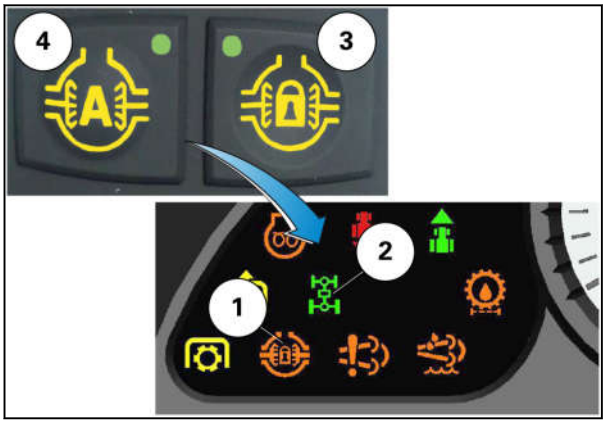


Fig. 157

Differential lock functions in manual mode

Press the switch (3) to engage the differential lock in manual mode. The 4WD front axle is also activated in manual mode. The indicator lights of the differential lock (1) and the 4WD front axle (2) are illuminated on the instrument panel and on the switch (3).

NOTE:
The differential lock is activated when the engine is switched off. When the engine is restarted, the differential lock is disengaged but the 4WD front axle remains engaged in manual mode. It must be manually disengaged by pressing the corresponding switch .

Actions	Consequences
Depress either the left-hand or right-hand brake pedal (uncoupled)	The differential lock is temporarily disengaged
Depress the left-hand and right-hand brake pedals (coupled)	The differential lock is permanently disengaged
Forward speed of tractor greater than 20 kph	The differential lock is permanently disengaged

Differential lock functions in automatic mode

Press the switch (4) to engage the differential lock in automatic mode. The 4WD front axle is also activated in automatic mode. The indicator lights of the differential lock (1) and the 4WD front axle (2) are illuminated on the instrument panel and on the switch (4).

NOTE:
If the differential lock is activated when the engine is switched off, when it is restarted the differential lock is disengaged but the 4WD front axle remains engaged in automatic mode. It must be manually disengaged by pressing the corresponding switch .

Actions	Consequences
Depress either the left-hand or right-hand brake pedal (uncoupled)	The differential lock is temporarily disengaged
Depress the left-hand and right-hand brake pedals (coupled)	The differential lock is permanently disengaged
Forward speed of tractor greater than 20 kph	The differential lock is permanently disengaged
The rear linkage control is in lifting position or the linkage is in high position	The differential lock is temporarily disengaged
The rear linkage control is in lowering position or the linkage is in low position	The differential lock is re-engaged
The steering angle is greater than 7° (with steering angle sensor option)	The differential lock is temporarily disengaged
The steering angle is less than 5° (with steering angle sensor option)	The differential lock is re-engaged

3.10 Power take-off

3.10.1 Front power take-off

This PTO is driven by the engine.

WARNING:
Always disengage the PTO before hitching, unhitching or adjusting an implement. Take all necessary safety precautions for any operation involving implements that are driven by the PTO.

DANGER:
Never go beyond the universal joint shaft. Never use the universal joint shaft as a step. Never wear loose-fitting clothes. Remain at a safe distance from the universal joint shaft.

Table of specifications

Front power take-off specifications	
Number of selections possible for front PTO	1000 rpm
Maximum permissible power, hp (kW)	Clockwise: 136 (78)
	Counterclockwise: 150 (86)
Maximum permissible input torque	Clockwise: 497 Nm
	Counterclockwise: 549 Nm
Maximum permissible output torque	Clockwise: 955 Nm Counterclockwise: 1054 Nm
Rotational direction	Base: 1 clockwise (viewed from the front of the tractor) Option: 1 counterclockwise: (viewed from the front of the tractor)
Engine speed for 1000 rpm PTO	1920 rpm
Ratio	1.92
Clutch type	Hydraulics
Splined shaft type	Fixed shaft with 6 splines, diameter 35 mm (1"3/8)
	Fixed shaft with 21 splines, diameter 35 mm (1"3/8)

Engaging the power take-off

Press the selector switch (A). The PTO engaged indicator light (C) comes on and an engaged symbol appears on the digital display.

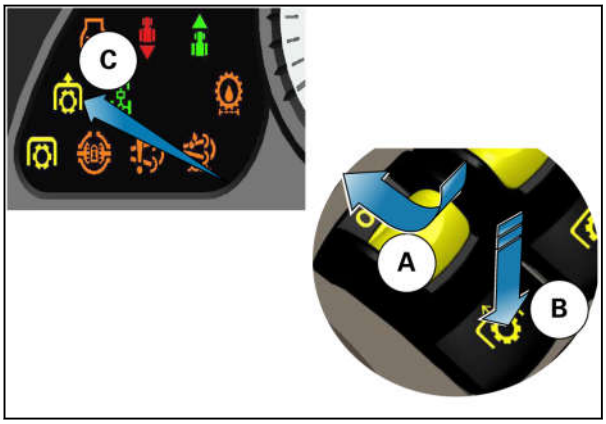


Fig. 158

Disengaging the PTO

To stop the PTO, press the selector switch as shown by (B)

3.10.2 Rear power take-off (PTO)

General

The PTO can be engaged and disengaged independently of the transmission. The 540 rpm, 540 rpm ECO, 1000 rpm and 1000 rpm ECO speeds can be obtained by selecting the appropriate speed on the control plate located on the right-hand pillar, which illuminates the corresponding indicator light on the instrument panel.

IMPORTANT:
Engage the PTO at low engine speed to protect the clutch and transmission.

WARNING:
Always disengage the PTO before attaching, detaching or adjusting an implement. Take all necessary safety precautions for any operation involving implements that are driven by the PTO.

DANGER:

Never go beyond the universal joint shaft. Do not use the tractor or trailer drawbars as a step. Never use the universal joint shaft as a step. Never wear loose-fitting clothes. Remain at a safe distance from the universal joint shaft.

Transmission shaft

IMPORTANT:
To prevent rotation problems, observe the correct fitting position of the transmission shaft.
Ensure that the angle of the shaft does not pose a risk of collision with the surrounding area during rotation (this is a particular risk for short PTO shafts).

1. Correct assembly
2. Incorrect assembly

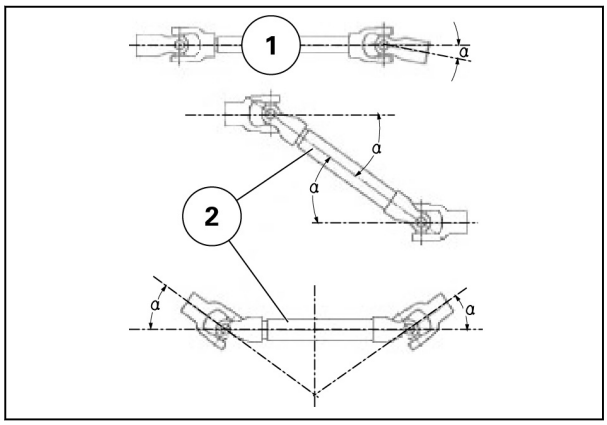


Fig. 159

NOTE:
In addition, refer to the technical documentation from the transmission shaft manufacturer.
If the permissible torque is exceeded due to the nature of use (see manufacturer information), use a transmission shaft fitted with a torque limiting device.

3.10.2.1 Selecting the power take-off speed

Procedure

1. To engage the power take-off, you must first select the 540-rpm speed or 1000-rpm speed (1) using the corresponding switch. The display appears on the right-hand digital display. The neutral switch (**N** (3)) is not used.

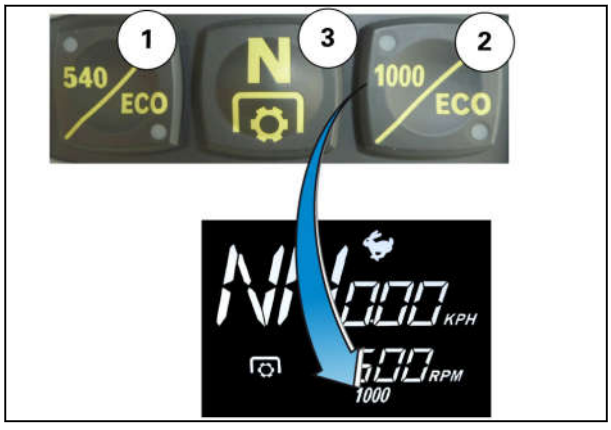


Fig. 160

2

IMPORTANT: *To avoid damaging implements driven by the PTO, the engine speeds in the table below must be complied with.*			
Models	**Selected PTO speed**	**Display**	**Maximum engine speed**
MF 7719/MF 7720/MF 7722/MF 7724/MF 7726	540 rpm	540	1890 rpm
MF 7719/MF 7720/MF 7722	1000 rpm	1000	2000 rpm
MF 7724/MF 7726	1000 rpm	1000	1930 rpm

3.10.2.2 Adjusting the progressivity of power-take-off engagement

This feature allows you to adjust the progressivity of the rear power-take-off engagement depending on whether the implement requires an aggressive or gradual start-up.

Press the ⓐ or ⓑ arrows to choose which function to adjust (the index moves), then press ⓞ (the function is grayed out when it can be adjusted)

- Press the ⓐ or ⓑ arrows to increase/decrease the progressivity of rear power-take-off engagement (from -1 (slow progressivity) to +1 (fast progressivity)), and then press ⓞ to confirm

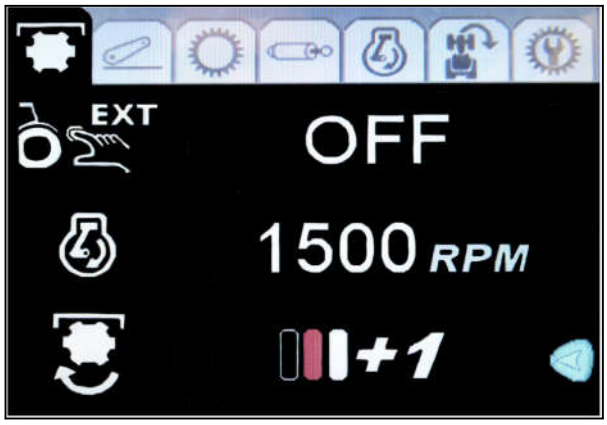


Fig. 161

3.10.2.3 Engaging PTO in manual mode:

Procedure

1. Press the selector switch (A). The PTO indicator light (C) comes on and an engaged symbol appears on the digital display. If no speed is pre-selected before pressing the PTO switch, the PTO will not operate.
2. For models fitted with the MultiPad lever, after the PTO has been engaged, it can be stopped and restarted by pressing twice on the switch (D); the indicator light (C) on the instrument panel indicates the operating status (on/off) of the PTO.
3. To fully shut down the PTO, press the selector switch (B). The PTO brake is then activated.

Fig. 162

3.10.2.4 Engaging PTO in automatic mode:

This function stops the PTO temporarily and automatically when the linkage control is in Lift position (e.g. operation at headlands).

Procedure

1. Press the PTO engagement control button (A) once a PTO speed has been selected. The PTO engaged indicator light (C) is illuminated.

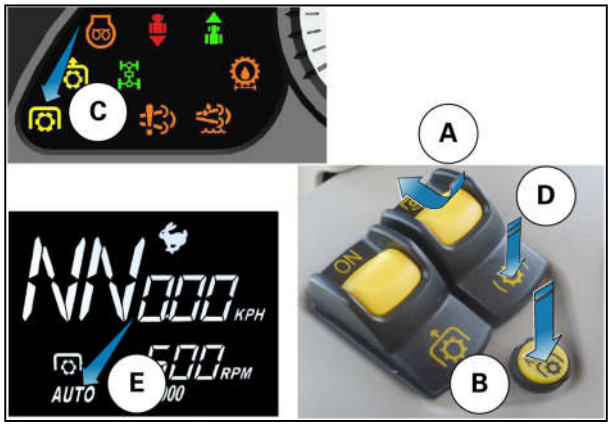


Fig. 163

2. Move the Lift/Lower switch of the rear linkage to Lower position.
3. Press the automatic mode engage button (B). The **AUTO** symbol appears on the digital display (E).

4

Initial setting	Actions	Consequences
Rear linkage control is in lowering position and forward speed is greater than 0.1 kph	The rear linkage control is in the lifting position	The rear PTO is temporarily disengaged and the indicator light (C) flashes
Rear linkage control is in lifting position and forward speed is greater than 0.1 kph	If the rear linkage control is in lowering position and is not reactivated within 150 seconds	The rear PTO is permanently disengaged and the indicator light (C) is off
Rear linkage control is in lifting position and forward speed is greater than 0.1 kph	The rear linkage control is in the lowering position	The rear PTO is re-engaged and the indicator light (C) is permanently lit
Rear linkage control is in lowering position and forward speed is greater than 0.1 kph	Forward speed equal to 0 kph	The rear PTO remains engaged and the indicator light (C) remains permanently lit
Rear linkage control is in lowering position and forward speed is equal to 0 kph	The rear linkage control is in the lifting position	The rear PTO is temporarily disengaged and the indicator light (C) flashes
Rear linkage control is in lifting position and forward speed is equal to 0 kph	The rear linkage control is in the lowering position	The rear PTO remains temporarily disengaged and the indicator light (C) flashes
Rear linkage control is in lowering position and forward speed is equal to 0 kph	Forward speed greater than 0.1 kph	The rear PTO is re-engaged and the indicator light (C) is permanently lit
Forward speed equal to or greater than 0 kph	Forward speed greater than 25 kph	The rear PTO is permanently disengaged and the indicator light (C) is off

5. Press the selector switch (D) to disengage the rear PTO permanently

3.10.3 Economy PTO

Operating the engine at a lower speed saves fuel. The economy PTO is designed to drive lightweight implements that do not require a large amount of engine power.

Electrical controls

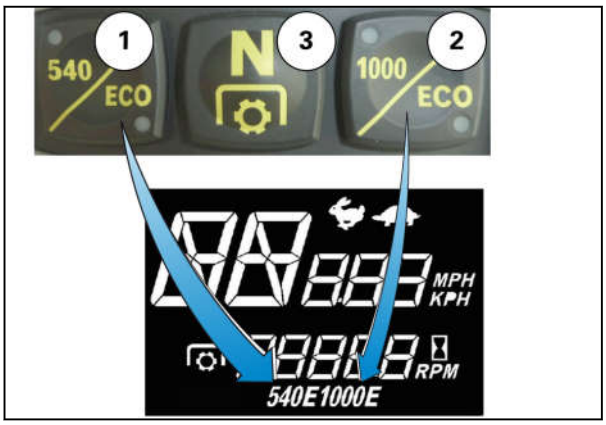


Fig. 164

To obtain 540 rpm ECO speed, press the switch (1) once if the 540 rpm speed is engaged, or press the switch (1) twice if another speed is engaged.

To obtain 1000 rpm ECO speed, press the switch (2) once if the 1000 rpm speed is engaged, or press the switch (2) twice if another speed is engaged.

The key (**N**) (3) is not used.

IMPORTANT: ***To avoid damaging implements driven by the PTO, the engine speeds in the table below must be complied with.***		
Selected PTO speed	**Display**	**Maximum engine speed**
540 E rpm	540E	1524 rpm
1000 E rpm	1000E	1595 rpm

3.10.4 Changing the flanged shaft

End-fittings that can be fitted:

- Shaft 35 mm (1"3/8) with 21 splines (1000 rpm)
- Shaft 35 mm (1"3/8) with 6 splines (540 rpm)
- Shaft 45 mm (1.8 in) (1"3/4) with 20 splines (1000 rpm)

CAUTION:

Risk of entanglement. Rotating components. The engine must be shut off to change the shaft.

Changing the shaft

Procedure

1. Rotate the flanged shaft to have the space (A)
2. Place a rod (B) into the space (A) to immobilize the shaft
3. Remove the 6 screws (C), and then remove the shaft
4. Install the new shaft, and then tighten the six screws (C) to a torque of 140 Nm

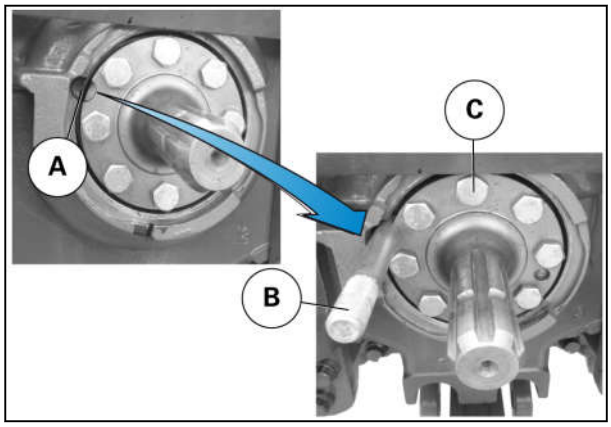


Fig. 165

3.10.5 PTO external control

DANGER:

Risk of entanglement. Rotating components. Keep at a safe distance from the PTO drive shaft when operating the external control.

The PTO external control (1) is located on the left-hand fender. It is used to engage the PTO, stop rotation and restart the PTO.

(1) PTO engagement To engage the PTO, press the switch (1) for a minimum of five seconds (see description of seat)

(2) Stopping rotation One press on the switch (1) temporarily disengages the PTO The PTO indicator light illuminates on the instrument panel.

(3) Restart To re-engage the PTO, press the switch (1) for a minimum of 5 seconds (restriction on use: (see description of seat).

ATTENTION: *To engage the rear PTO from the fenders, you must deactivate the rear PTO brake and engage the parking brake.*

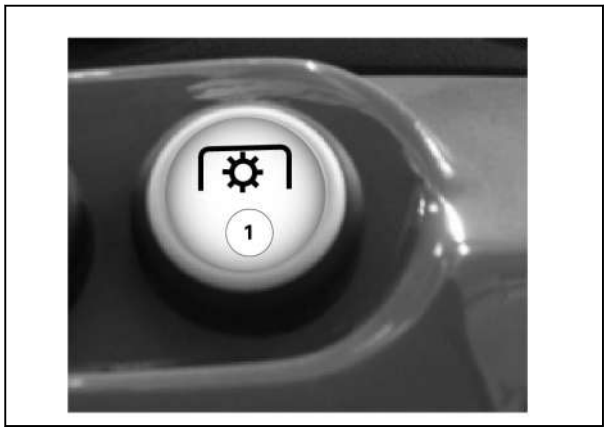


Fig. 166

Rear PTO/engine speed automation

This screen is available in the Setup and Information Screen and is used to engage a specific engine speed when the rear PTO is activated using the controls located on the fenders.

Press the ⏏ or ⏏ arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)

- Press the ⏏ or ⏏ arrows to enable/disable the automatic function (**ON** and **OFF**), and then press OK to confirm
- Press the ⏏ or ⏏ arrows to increase/decrease the engine speed engaged by the switch for the rear power take-off located on the fenders and then press OK to confirm

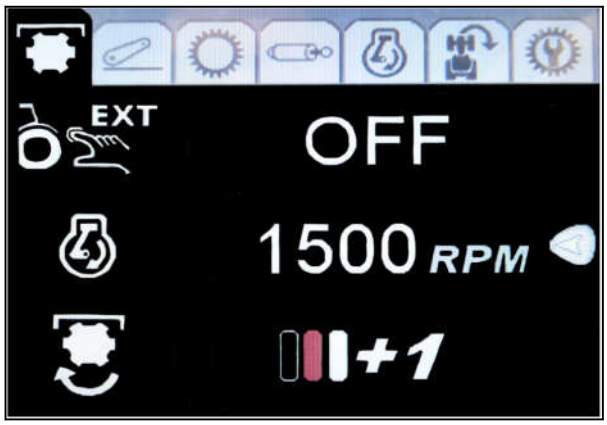


Fig. 167

3.10.6 Power take-off electronic controls

NOTE: *The PTO electronic controls are designed to protect the tractor and the implement.*

- If the main PTO selector switch is in the "engaged" position when starting the engine, the PTO is disengaged and the PTO indicator light on the instrument panel flashes. No error will be transmitted or displayed. To start the PTO, the PTO selector switch must be moved to the OFF position and then to the ON position.
- Protection against engine stalling: If PTO engagement causes the engine speed to drop more than 50% below the initial speed, the transmission control will turn off the PTO solenoid valve and transmit an error message via the CAN bus and cause the PTO indicator light on the instrument panel to flash.
- When the economy PTO is engaged and if the engine speed exceeds the authorized limit, the PTO is not disengaged but its indicator light on the instrument panel will flash.

3.10.7 Power take-off protection

Power take-off cap

When the power take-off is not in use, fit the protective cap to prevent any faults occurring related to the rotation of the power take-off shaft.

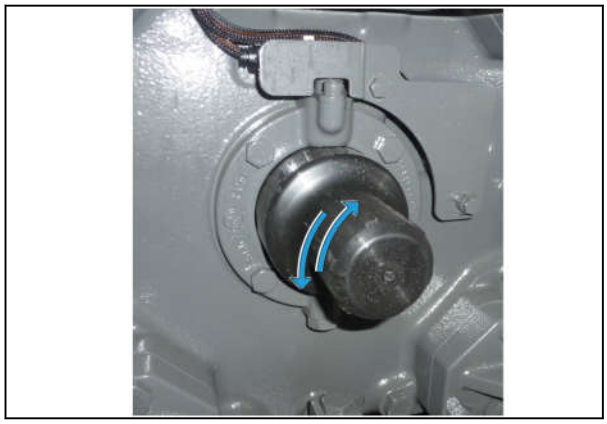


Fig. 168

Power take-off guard

WARNING:

- **To avoid risk of injury, always fit the power take-off guard in the correct position.**
- **Do not use the power take-off guard as a step.**

For instruments fitted to the three-point linkage, observe the lifting limit so that the operating angle of the universal joint is not exceeded.

It may be necessary to deactivate the PTO during maneuvers for towed implements.

Adjustment of the universal joint

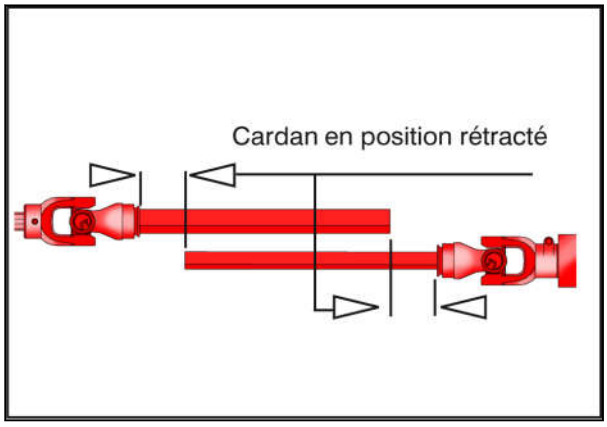


Fig. 169

Maximum angle to observe for the use of an implement hitched to the three-point linkage.

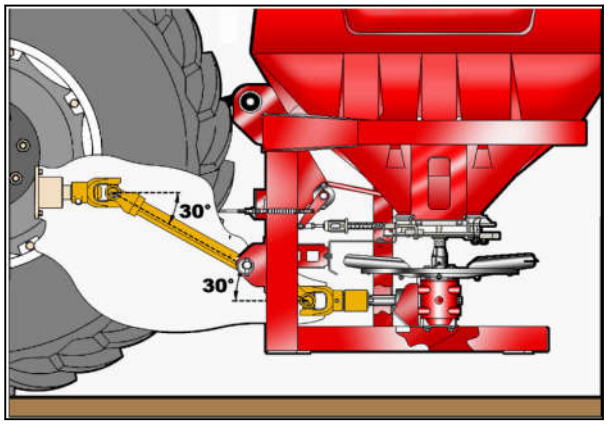


Fig. 170

Maximum angle for the universal joints present on towed implements.

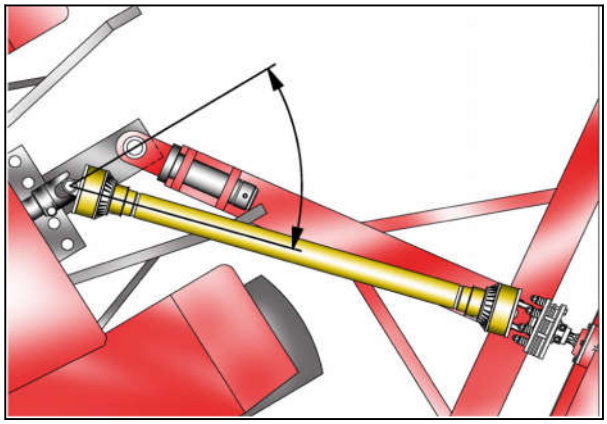


Fig. 171

3.11 Linkage

3.11.1 General

The tractor is supplied with drawbars fitted with category 3 ball joints or with optional category 3 quick linkage hitches.

(1) Lift rod
(2) Bottom link
(3) Ball joints
(4) Rear linkage travel

To increase the height of the linkage, fit the lift rods on the bottom links in position T1

The linkage capacity will therefore be reduced.

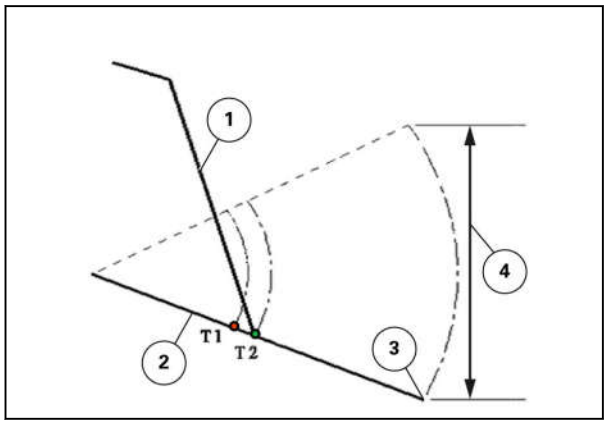


Fig. 172

IMPORTANT:
To prevent linkage damage when operating trailed attachments, care should be taken when turning to prevent interference between the drawbar and the linkage.
When the external controls are used, ensure you are outside of the area of travel of the three-point linkage.

Models	Rear axle type	Category	Lift rod position	Linkage capacity at the ball joints		Linkage capacity of 610 mm from the ball joints	
				Maximum linkage capacity at end of travel	Capacity over the entire length of travel of the linkage	Maximum linkage capacity at end of travel	Capacity over the entire length of travel of the linkage
MF 7719 Dyna-6/MF 7720 Dyna-6	GPA 41	Category 3	T1	9300 kg	6250 kg	6950 kg	6050 kg
MF 7722 Dyna-6	GPA 42	Category 3	T1	9300 kg	6250 kg	6950 kg	6050 kg
MF 7724 Dyna-6/MF 7726 Dyna-6	GPA 44	Category 3	T1	9,950 kg	6450 kg	7150 kg	6150 kg
MF 7724 Dyna-6/MF 7726 Dyna-6	GPA 45	Category 3	T1	9,950 kg	6450 kg	7150 kg	6150 kg

3.11.2 Rear linkage electronic controls

- The tractor may be fitted with two linkage systems:
  - A rear linkage, which is fully incorporated into the rear axle.
  - A front linkage built into the front of the tractor.

The two linkages are electronically controlled and are equipped with their own hydraulic spool valve.

Fig. 173

(A) Maximum linkage height adjustment potentiometer.
(B) Potentiometer for manual or automatic adjustment of the lowering speed.
(C) Intermix potentiometer (draft control and position control).
(D) Linkage lowering indicator light
(E) Linkage lifting indicator light
(F) Lowering speed automatic control indicator light
(G) Console locking and operating failure self-diagnostic indicator light
(H) Active transport control system selection button
(I) Active transport control system indicator light
(J) Not used
(K) Rear linkage height/depth adjustment thumb wheel
(L) Rear linkage lift/lower and neutral position switches

3.11.3 Rear linkage operation

Lifting/lowering in the cab

When the tractor engine is started, the rear linkage is locked. The rear linkage is controlled by the three switches (lifting/neutral/lowering) (I) located on the armrest or on the MultiPad lever (depending on the version installed). Use of the rear linkage on first start-up requires deactivation of the safety device. This is done by pressing the neutral switch (N) twice or pressing the neutral switch (N) once and then pressing the (lifting) switch.

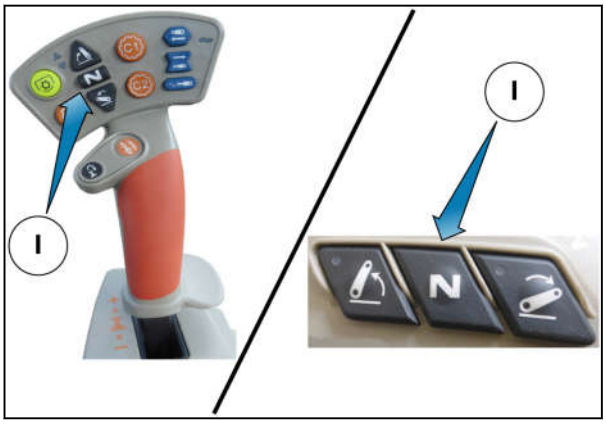


Fig. 174

(A) Normal soil engagement
(B) Quick soil engagement

This function quickly buries the rear implement in ground. Press and hold the rear linkage lowering switch to activate quick soil engagement.

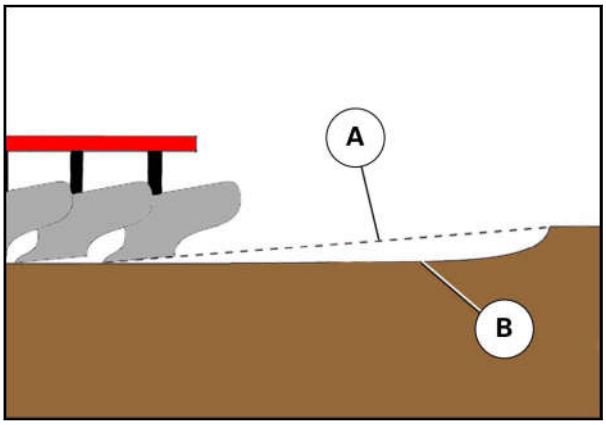


Fig. 175

Active suspension

The rear linkage has an active suspension function when the linkage is in the transport position. To engage this function, simply press switch (2) located on the linkage console.

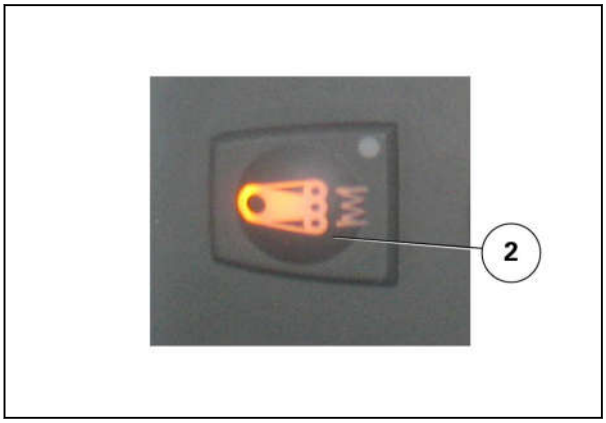


Fig. 176

Adjusting the depth

Using the potentiometer (J) located on the right-hand side of the armrest, it is possible to adjust the depth of the rear linkage for particularly accurate work conditions and to index it with the cursor (1) located on the outside part.

- Available adjustment range:
  - Minimum 0 to maximum 9,

Fig. 177

Adjusting the upper stop

On the linkage console, the potentiometer (A) is used to adjust the linkage raised position. It is normally used for mounted implements driven by the PTO where an excessive rear linkage height may damage the implement universal joint. It can also be used during headlands by avoiding lifting the implement in the maximum position (to save time).

Fig. 178

Adjusting the lowering speed

Potentiometer (B) is used to adjust the rear linkage lowering speed.

- It is used to select two separate modes:
  - Manual mode: Potentiometer travel in (1)
  - Automatic mode: Potentiometer travel in (2)

In automatic mode, lowering speed is governed by two parameters: the implement load on the linkage and the tractor forward speed. It is possible to lock the lowering of the rear linkage by placing the potentiometer at the start of its travel by turning the potentiometer counterclockwise.

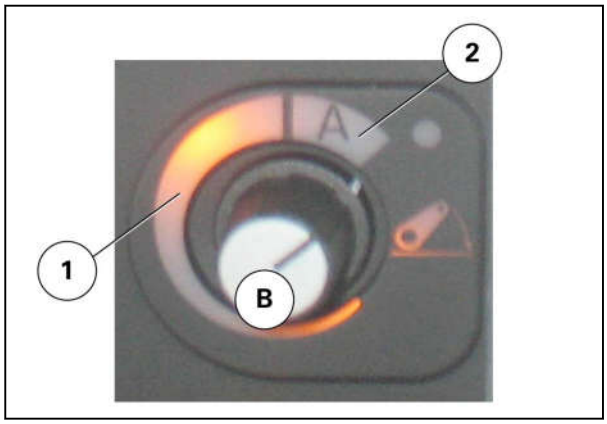


Fig. 179

Adjusting the intermix (draft/position control regulation)

On the linkage console, the potentiometer (C) is used to adjust the regulation between the draft control and the linkage position control.

Fig. 180

Position control

The potentiometer (C) must be in the minimum position to obtain the position control When working, the linkage is then held in a fixed position corresponding to the working position set by the potentiometer (J)

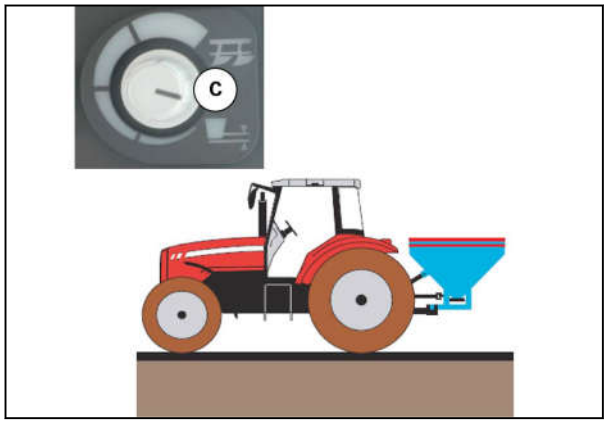


Fig. 181

Floating position

Mounted implements fitted with a depth wheel (for example: sowing assembly) may require the use of the floating position to follow the ground profile. The potentiometer (C) must be in the minimum position to obtain the position control Press the rear linkage lowering control to assume the floating position.

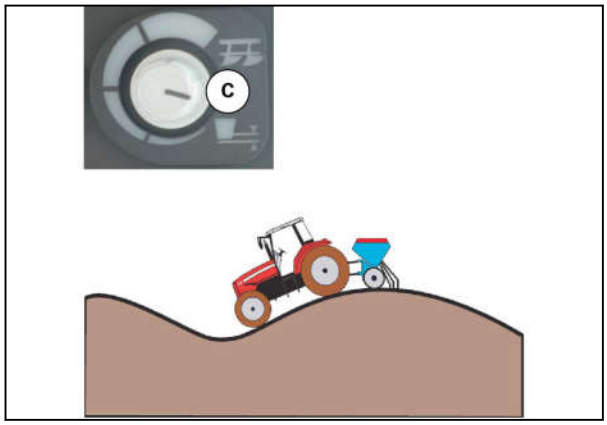


Fig. 182

Position for maximum draft control

The potentiometer (C) must be in the maximum position to obtain maximum draft control In the maximum draft control position, there is more sensitivity when reacting to draft variations.

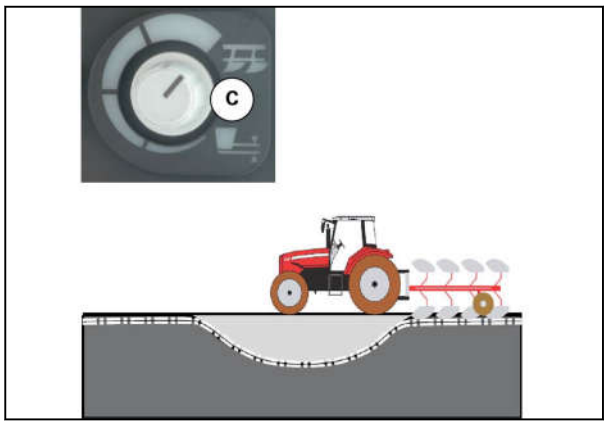


Fig. 183

Intermediate position

The potentiometer (C) must be in the middle position to obtain the mixed control. In this position, there is less sensitivity when reacting to draft variations.

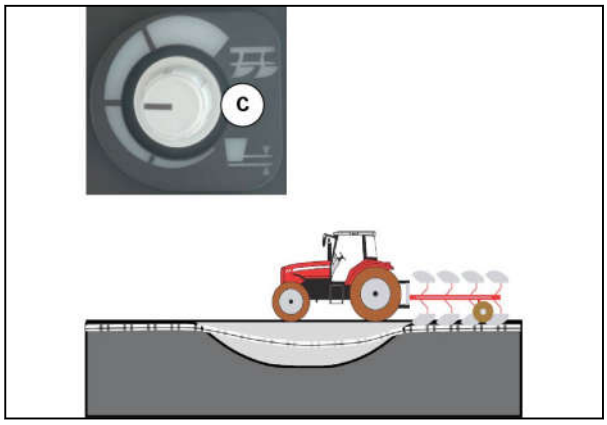


Fig. 184

Wheel slip control

Significant rear wheel slip is inevitable in order to achieve the best pulling force of the tractor in the field It becomes a problem if the slip rate exceeds 25–30%.

This wheel slip control function can be accessed from the Setup and Information Screen settings window. It is used to display the current wheel slip and to adjust the maximum permissible wheel slip.

A low setting enables a higher correction rate to maintain traction, which results in a more irregular working depth. A higher setting reduces corrections, which results in a more regular working depth

- The wheel slip control offers the following advantages:
  - Saves time and fuel
  - Reduces tire wear
  - Causes less damage to the soil

- Press the ⏻ or ⏻ arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)
  - Press the ⏻ or ⏻ arrows to enable/disable the wheel slip control (**ON** and **OFF**), and then press OK to confirm
  - Press the ⏻ or ⏻ arrows to increase/decrease the maximum permissible slip (from 0% to 60 %) then press OK to confirm

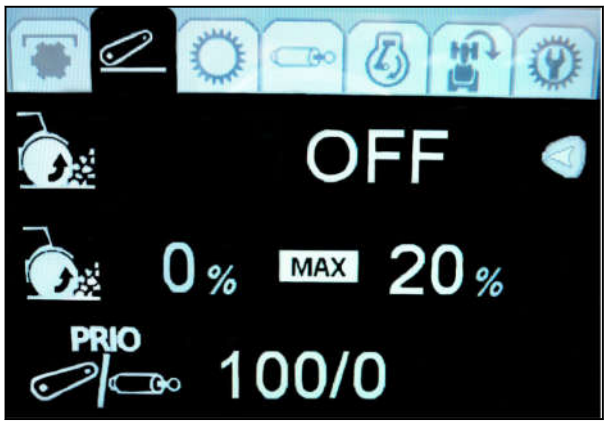


Fig. 185

Wheel slip % ((theoretical speed - actual speed)/ theoretical speed) x 100%	Consequences for the rear linkage
If wheel slip increases	The rear linkage lifts and reduces the pulling force by decreasing the working depth
If wheel slip decreases	The rear linkage lowers

Rear linkage/engine speed automation

This function can be accessed from the Setup and Information Screen settings window. This screen is used to adjust the engine speed when changing the rear linkage status (work or transport).

- Press the ⏻ or ⏻ arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)
  - Press the ⏻ or ⏻ arrows to enable/disable the activation function of stored engine speed (A) when changing the position of the rear power lift (work or transport) (**ON** and **OFF**), and then press OK to confirm

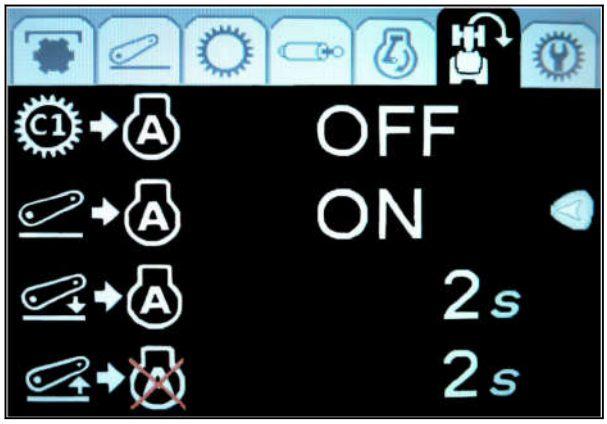


Fig. 186

NOTE: *The rear linkage controls must be unlocked to activate this function*

- - Press the ⏻ or ⏻ arrows to increase/decrease the activation time of stored engine speed (A) when the rear linkage is in working position and the forward speed is > 0 kph, and then press OK to confirm
  - Press the ⏻ or ⏻ arrows to increase/decrease the deactivation time of the stored engine speed (A) when the rear linkage is in transport position and the forward speed is > 0 kph, and then press OK to confirm

With a forward speed > 0 kph	Consequences
Rear linkage in working position	Engine speed stored in (A) is activated after the preset time
Rear linkage in the transport position	Engine speed stored in (A) is deactivated after the preset time

Hydraulics priority to the rear linkage

This function can be accessed from the Setup and Information Screen settings window. This screen is used to prioritize the hydraulic flow rate to the rear linkage, it increases or decreases the lifting speed. The remaining flow displayed is for the hydraulic spool valves (only when the rear linkage is in use).

This function also limits the rear linkage flow rate so as to increase the hydraulic flow rate when the hydraulic motor is in use, for example.

- Press the ⓐ or ⓑ arrows to choose which function to adjust (the index moves), then press ⓞ (the function is greyed out when it can be adjusted)
  - Press the ⓐ or ⓑ arrows to increase/ decrease the distribution of the hydraulic flow to the rear power lift (0% to 100 %) then press ⓞ to confirm

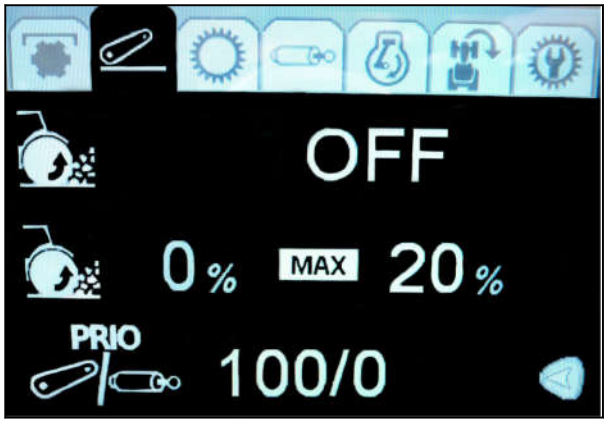


Fig. 187

3.11.4 Rear linkage external controls

The linkage lifting controls (2) and lowering controls (1) located on the rear left-hand and rear right-hand fenders are used to activate the rear linkage.

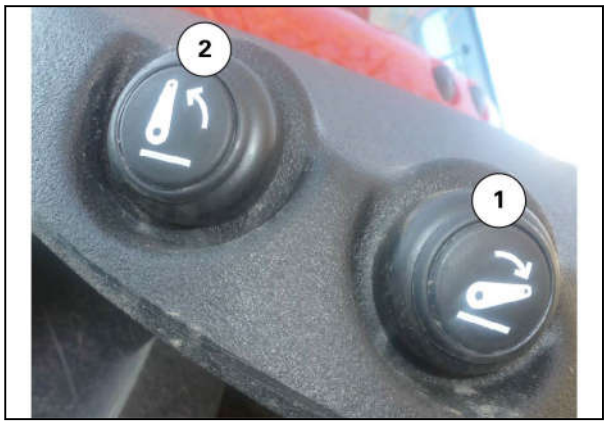


Fig. 188

Initial setting	Actions
Cab controls for the rear linkage are locked	Press the external lowering switch then the lifting switch to activate the rear linkage

The movement of the rear linkage is proportional to the length of time the external switches are held down.

WARNING:
Risk of crushing.
To avoid any risk of crushing between the implement and the tractor tire, only use the external controls when you are on the outside of the tires and outside the linkage movement area.

3.11.5 Front linkage

General

The front linkage can carry and/or push an implement.

The design of the front linkage is adapted to the power of the tractor. Do not exceed the capacity for which the linkage was designed.

The capacity of the front linkage is marked in kN on the plate (A) fitted on the top of the linkage casting.

Example: 40 kN = 4000 kg

MF 7719/MF 7720/MF 7722/MF 7724/MF 7726: Capacity of 4000 kg

The front linkage should be used exclusively for agricultural purposes, i.e. for hitching mounted and/or pushed agricultural machinery.

IMPORTANT:
When using a snow blade or equivalent implements (not fitted with leveling wheels): Fit the blade or implement with a safety device, allowing the part in contact with the ground to overturn and release in the event of an impact. Limit the forward speed to 25 kph.

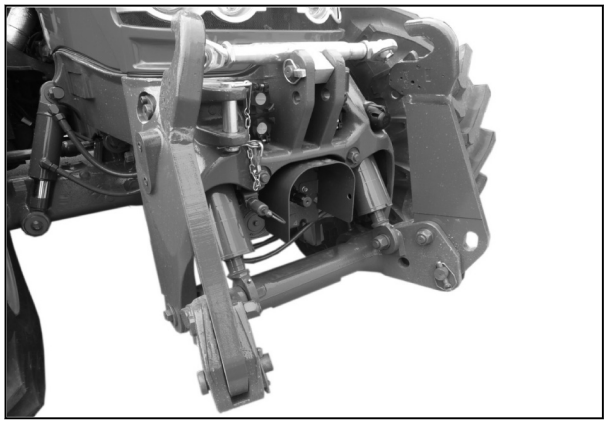


Fig. 189

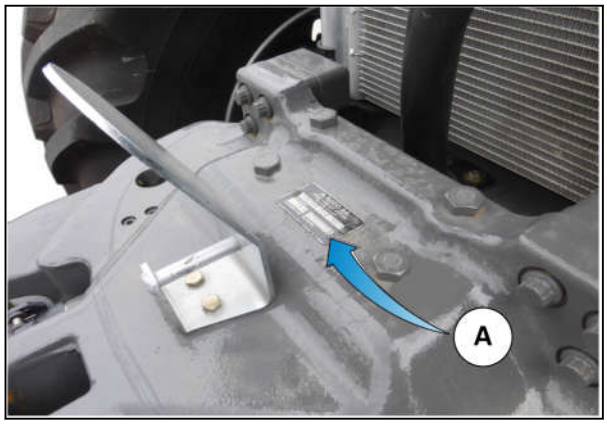


Fig. 189

Activation

When the front linkage is used, the auxiliary hydraulics must be activated by pressing the switch (1), indicator light off.

WARNING:

When the front linkage is not in use, it is essential to lock the hydraulic functions to deactivate them, by pressing the switch (1). The indicator light comes on. The front loader (if fitted) must be uncoupled when using the front linkage and the front hydraulic spool valves. For driving on roads, raise the tools to the required height and lock the tractor's hydraulic functions.

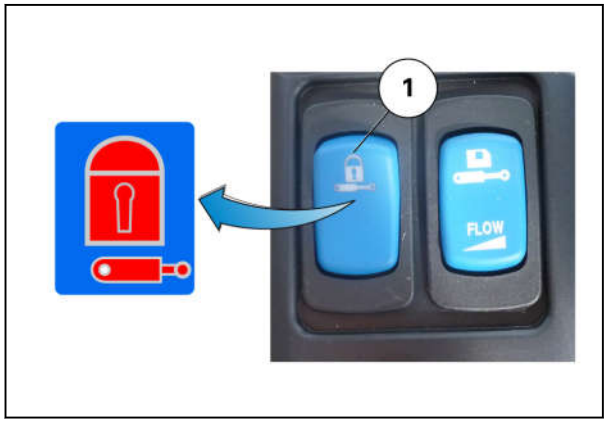


Fig. 190

IMPORTANT:
If one of the spool valve controls remains in the locked floating position before the engine is started, the hydraulic valve will not operate until this control is returned to neutral position.

Operation

The front linkage arms can be folded into transport position to minimize the space they take up.

IMPORTANT:
The front linkage arms must be free of implements and equipment in order for them to be folded into transport position.

Linkage in transport position

1. Position the arms vertically to reduce bulkiness.
2. Place the pins/cotter pins in the position (1).

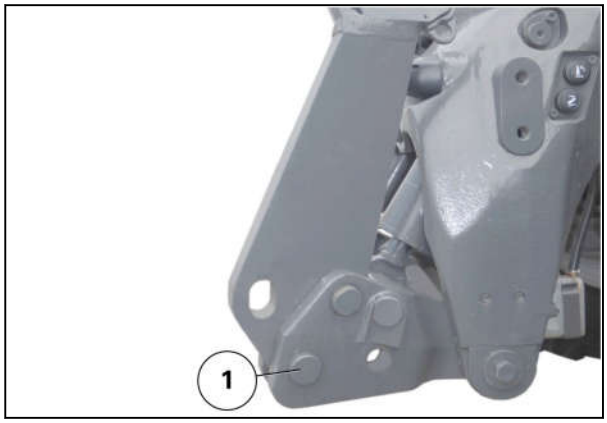


Fig. 191

Linkage in fixed position

1. Position the arms horizontally.
2. Place the pins/cotter pins in the position (2).

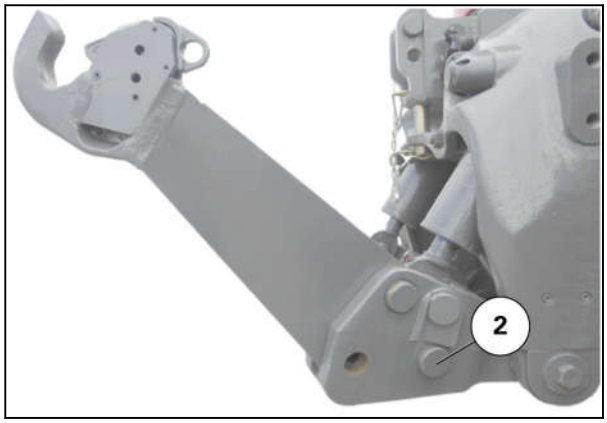


Fig. 192

Linkage in floating position

1. Position the arms horizontally.
2. Place the pins/cotter pins in the position (3).

   This position can also be used to compensate for sloping ground, thus enabling the implement to follow the natural lie of the land.

   NOTE:
   Example: Implement with one soil engagement wheel on each side or a roller.

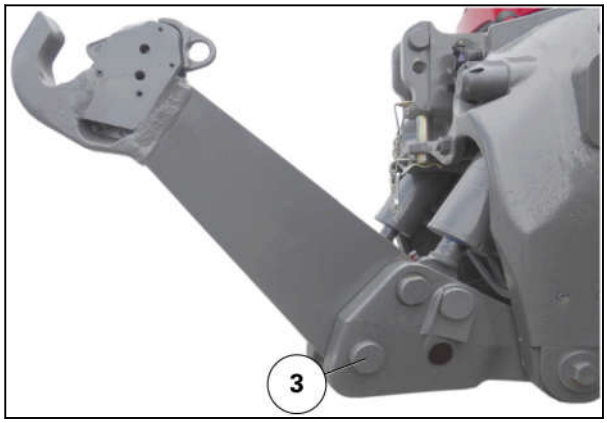


Fig. 193

Cab controls

Depending on the configuration of the tractor and the position of the control change-over switch, the front linkage is controlled either by FingerTIP no. 6, FingerTIP no. 2 or the Multi Function Joystick (depending on option).

This decal is present on the rear right-hand window of the cab

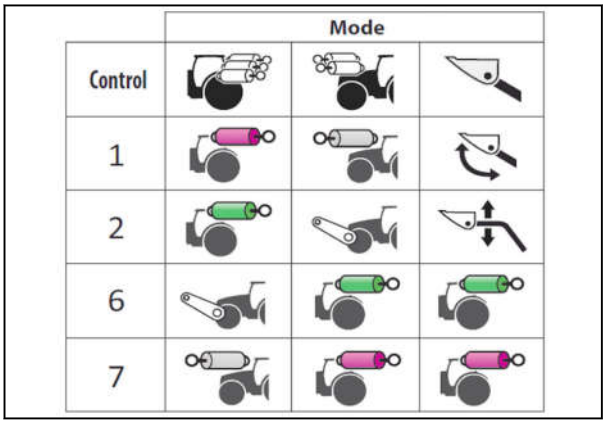


Fig. 194

Control on the right-hand console

(A) Lifting
(B) Lowering
(C) Floating position

Press the control change-over switch (1). The LED on this switch should be off.

The front linkage is controlled by an electrical FingerTIP control (4) located on the right-hand console.

Fig. 195

Control on the armrest

(A) Lifting
(B) Lowering
(C) Floating position

Press the control change-over switch (1). The LED on this switch should be on.

The front linkage is controlled by an electrical control, either the second FingerTIP lever (2) or the Multi Function Joystick (3) on the armrest.

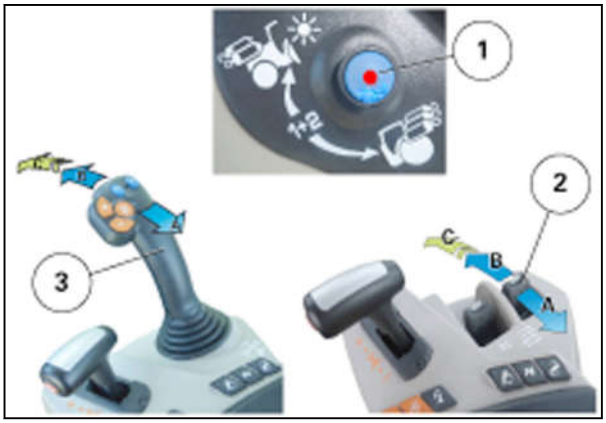


Fig. 196

Adjustment of the hydraulic flow rates

Adjustment of the hydraulic flow rates with the Datatronic CCD

If the tractor is fitted with a Datatronic CCD, refer to the Datatronic CCD Operator's Manual for details on how to make adjustments in relation to the front linkage

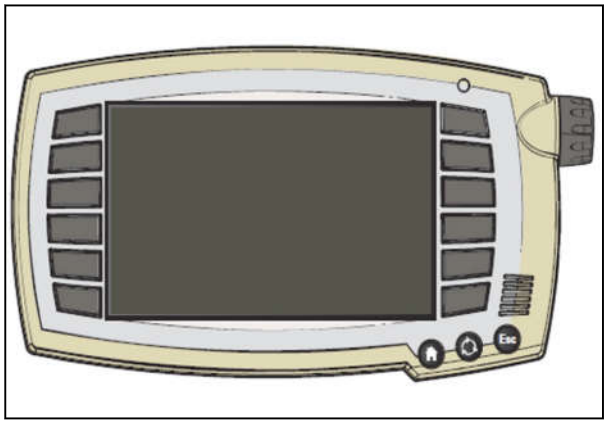


Fig. 197

Adjustment of the hydraulic flow rates with the Setup and Information Screen

NOTE:
If the tractor is fitted with a Datatronic CCD, it is not possible to adjust the hydraulic flow rates via the screen (it is only possible to view the flow rates).

Press the ⓫ or ⓬ arrows to choose which function to adjust (the index moves), then press ⓪ (the function is greyed out when it can be adjusted)

- Press the ⓫ and ⓬ arrows to select the front linkage function and then press ⓪ to validate
- Press the ⓫ and ⓬ arrows to increase/ decrease the hydraulic flow rate for the front linkage lifting phase (from 0% to 100%) and then press ⓪ to validate
- Press the ⓫ and ⓬ arrows to increase/ decrease the hydraulic flow rate for the front linkage lowering phase (from 0% to 100%) and then press ⓪ to validate
- Press the ⓫ and ⓬ arrows to increase/ decrease the activation time of the hydraulic flow rate for one of the phases (lifting or lowering) (time setting of 0 to 60 s or permanent flow rate ∞) and then press ⓪ to validate

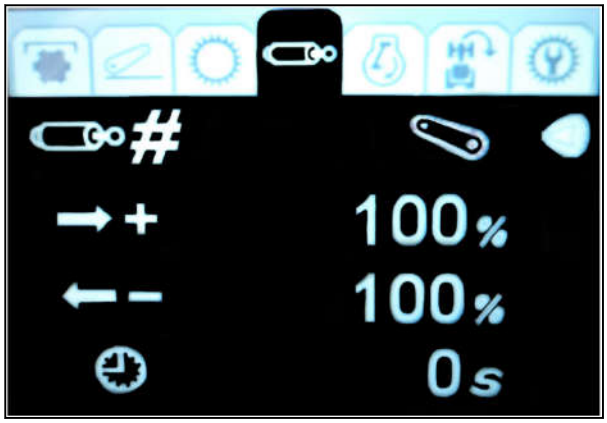


Fig. 198

External controls

External controls (3) located on the front linkage allow maneuvering in order to hitch or unhitch implements.

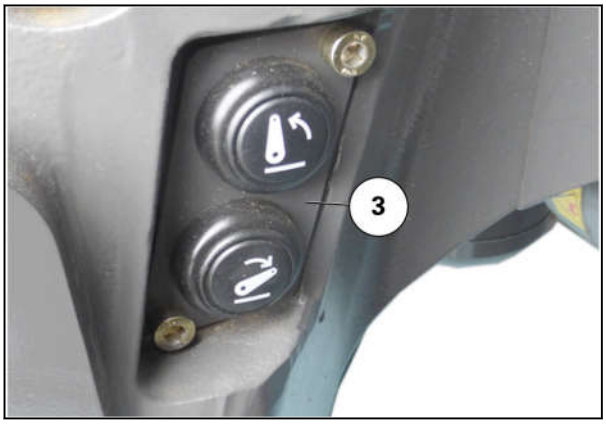


Fig. 199

NOTE:
Use of the external controls requires activation of the hydraulics using the switch (1, indicator light off). *However, as soon as the external controls are used, the cab controls are locked.*

NOTE:
They can be unlocked from outside by pressing the lowering control button then the lifting control button.

3.11.6 Top link

(1)(2) Link with category 3 hook
(3) Link with category 3 ball joint
(4) Hydraulic link with category 3 hook

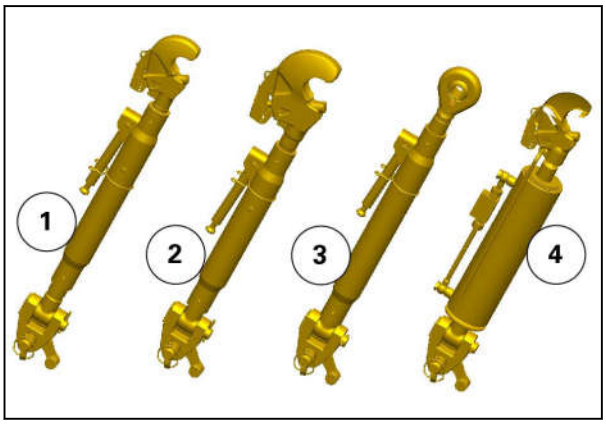


Fig. 200

Position of the top link on the rear linkage

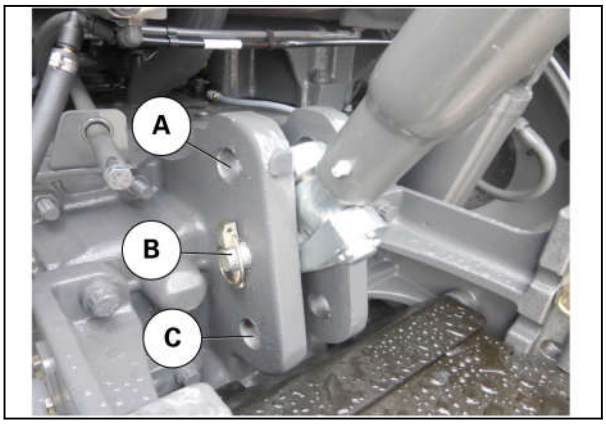


Fig. 201

There are holes in the rear linkage to fasten the top link. The position of the top link depends on the use and the implement installed on the rear linkage.

- The top link in the upper hole (A) gives greater lift power and lower lift height; there is wide clearance between the cab and implement.
- The top link in the center hole (B) gives a better compromise between lift capacity and soil penetration Use this position with equipment driven by the rear power take-off or for horizontal operation.
- It is not possible to use the top link in the lower hole (C) as this could damage the rear PTO guard

Adjusting the mechanical top link

The mechanical top link is fitted on ball joints. Adjustment must be based on the type of implement hitched to the tractor.

To adjust the length of the top link (1), unfold the anti-rotation safety (2), then use the safety to turn the tube in the corresponding direction to increase or decrease the length.

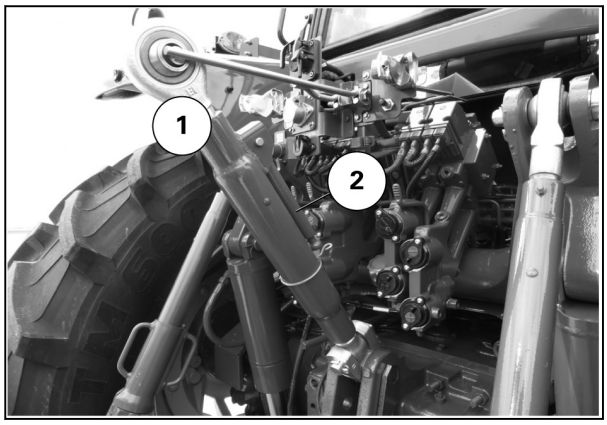


Fig. 202

NOTE:
The threading must always be the same length on each side

IMPORTANT:
Remove the hitching clevises to prevent contact with the top link.

After making the adjustment, fold down the anti-rotation safety (2) to lock the assembly.

When adjusting the length of the top link (1), do not exceed the extension limit (2) of the threading.

IMPORTANT:
Non-compliance with this limit could lead to loss of the implements hitched to the tractor and cause serious accidents.

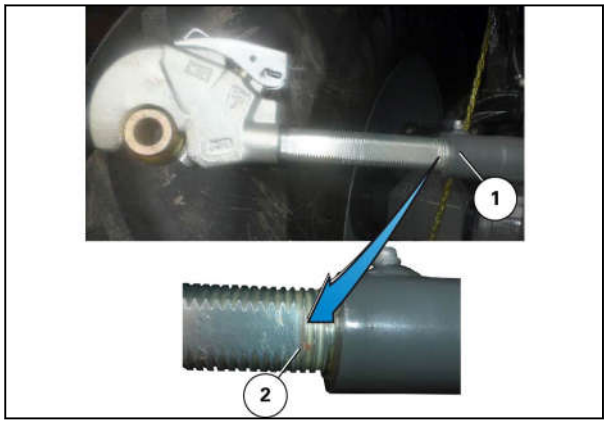


Fig. 203

Adjusting the hydraulic top link

The hydraulic top link (optional) simplifies hitching and unhitching and also makes it possible to control the forward/rear tilt of the implement using a hydraulic spool valve control in the cab.

To use the hydraulic top link, connect the two supply hoses (1) to the "+" and "-" couplers of one of the hydraulic spool valves of the tractor Operate the hydraulic spool valve control to extend or shorten the travel of the top link. It is possible to see the adjustment setting of the top link using the sliding scale (2) on the ram.

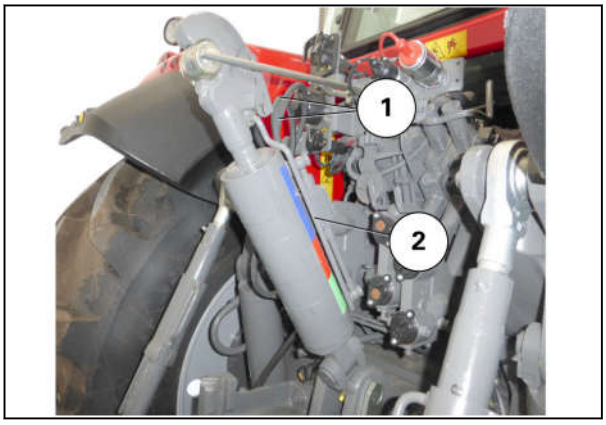


Fig. 204

IMPORTANT:
Remove the hitching clevises to prevent contact with the top link.

WARNING:
It is imperative for the auxiliary hydraulics to be locked during transport on the road in order to prevent any unwanted movement of the controls After using this hydraulic top link and refitting it in its original support, it is advisable to disconnect the hoses to avoid damaging the hitching points in the event of incorrect operation of the controls in the cab.

Front top link

When the front top link (1) is not in use, it must be put back in its original position.

WARNING:
Shorten the top link before putting it back in position. Otherwise, putting the front linkage into maximum position could damage the top link.

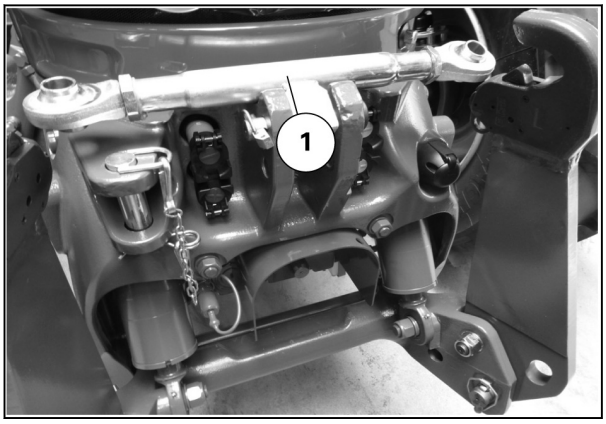


Fig. 205

3.11.7 Bottom links

(5) Link with category 3 hook
(6) Category 3 telescopic link

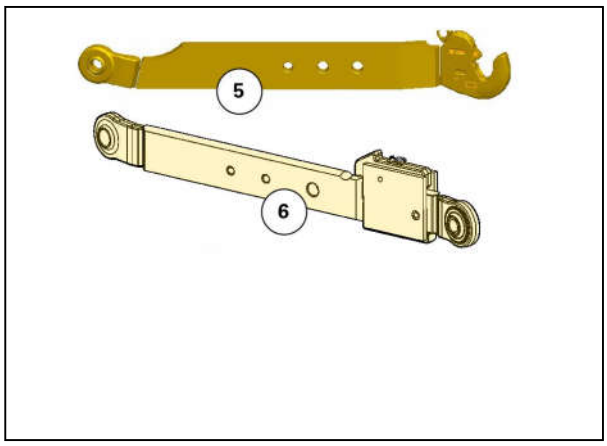


Fig. 206

Links with category 3 hook (5)

The hooks engage automatically in the ball joints which are fitted to the hitch pins.

The normal balls are used for clevis-end hitches.

The balls with guide cones are used for single pin linkages.

The hooks can be unlocked for uncoupling from the cab, using specific cables (supplied as an accessory).

For use under harsh conditions (e.g. forestry work), place a screw (M8 x 55 class 8.8) into the hole (A) for each link with hook, then lock it with a nut (standard flat washer and nylon locknut) to prevent unintentional unlocking.

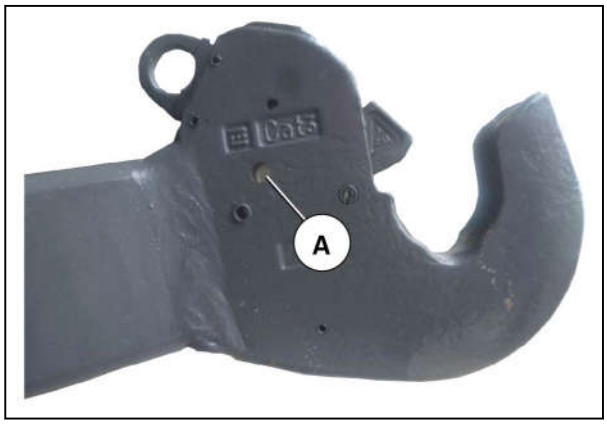


Fig. 207

IMPORTANT:
Check the locking of the hooks after hitching an implement

Category 2 or 3 telescopic bottom links (6)

The ends of these links are telescopic to make hitching implements easier.

To release the joints, pull the ring (1) and slide the end of the links toward the rear (A) (extended position).

During hitching, connect the links to the implement and carefully back up the tractor until the ends (B) lock (locked position).

The ends can be unlocked for unhitching from the cab using specific cables (available as accessories) fixed onto the rings (1).

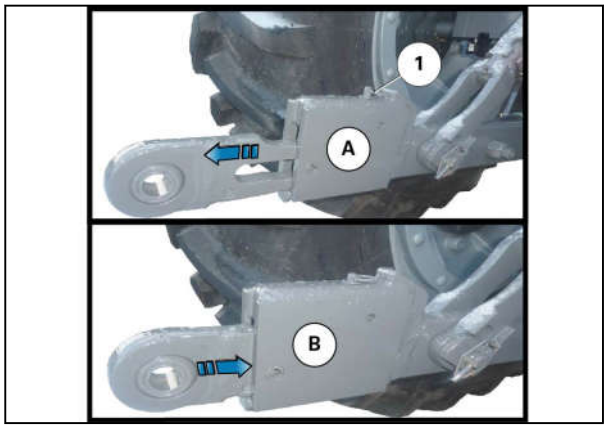


Fig. 208

IMPORTANT:
Check that the telescopic links are locked before transporting or using the equipment.
Remove the drawbar to prevent any contact with the hitched implement.

3.11.8 Lift rods

Adjusting the lift rods

CAUTION:

Before adjusting the lift rods, put the linkage in work position (low position) and activate the parking brake. Make sure that the equipment is well hitched and that the lift rods are securely attached. Non-compliance with these instructions can lead to serious accidents.

To adjust the lift rods (B), lift the tensioner (1) using the handles, then turn it in the corresponding direction to increase or decrease the length of the lift rod. After making the adjustment, allow the tensioner to lower to position (A). Check that the tensioner is all the way down and that it is properly engaged in the locking system to prevent unintentional rotation of the lift rod.

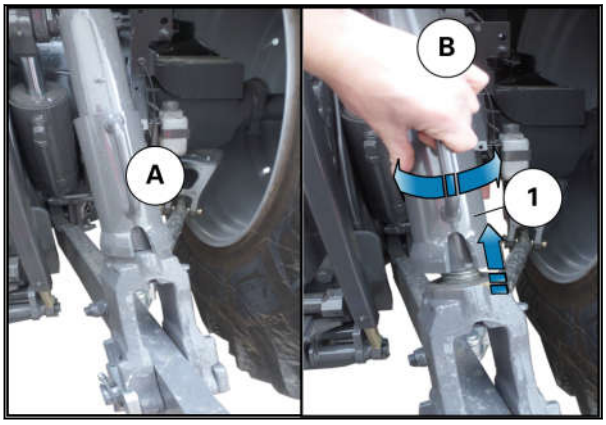


Fig. 209

Floating/fixed position of lift rods

The floating position of the lift rods is used with wide implements or those that must be able to move independently. Floating allows limited movement in the oblong hole.

For a fixed position (A), remove the pin (1) and place the plate in the lower part of the opening in a horizontal position (2). This position stops the vertical movement of the lift rod. For a floating position (B), remove the pin (1) and put the plate in a vertical position (3) in the oblong hole. This position allows vertical movement of the lift rod.

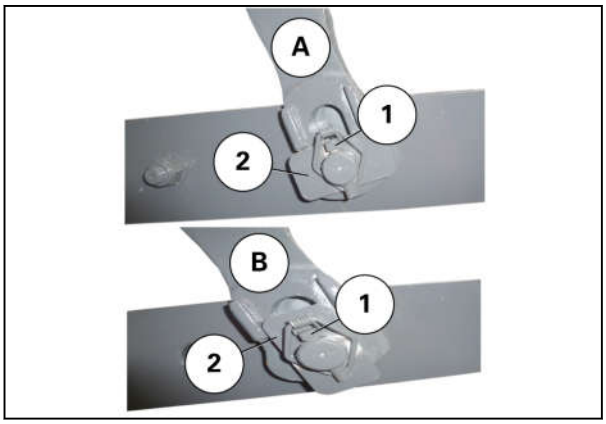


Fig. 210

IMPORTANT:
Take care to always refit the pins correctly. When driving, the lift rods must be in the fixed position to prevent excessive bouncing of the attached rear equipment.

Position of lift rods on the bottom links

The lift rods can be set to different bottom link positions based on use.

Put the lift rods (1) into the hole (2) to achieve the maximum lift capacity; the linkage height is then decreased. For maximum lift height, put the lift rods (1) into the hole (3) (closest to the tractor); the lift capacity is then decreased.

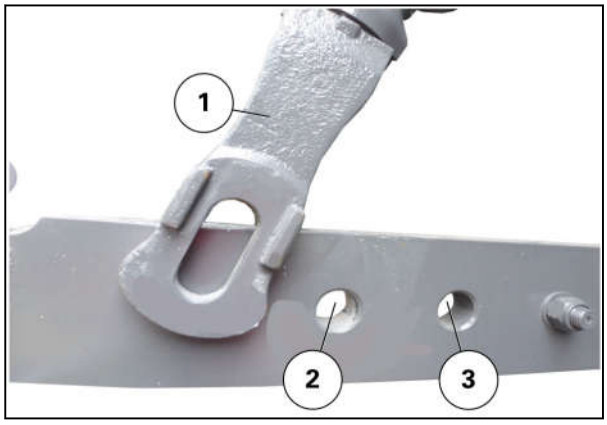


Fig. 211

NOTE:
Make sure there is enough clearance between the cab and rear window (in open or closed position) when hitching a mounted or semi-mounted implement to the rear linkage and when there is any change in the position of the lift rods on the bottom links.

3.11.9 Stabilizers

Description

Stabilizers are used to restrict the lateral movement of the rear bottom links.

There are three models:
(1) Automatic stabilizer:
(2) Stabilizer with manual telescopic adjustment
(3) Stabilizer with shoes

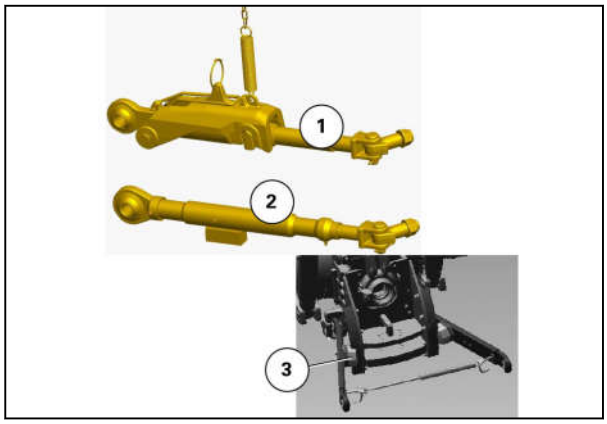


Fig. 212

3.11.9.1 Stabilizers with manual telescopic adjustment

CAUTION:
The linkage must be in the work position (low position) in order to adjust the stabilizers. Non-compliance with these instructions can lead to equipment damage or serious accidents.

Adjusting the stabilizers for transport

Procedure

1. Unlock the linkage and press the lowering switch for the rear linkage
2. Apply the parking brake
3. Unscrew the tube (1) of the stabilizer in direction (A) to lock and center the bottom link to prevent lateral movement. Carry out the same operation for the other stabilizer.
4. Press the rear linkage lifting switch to assume the transport position.

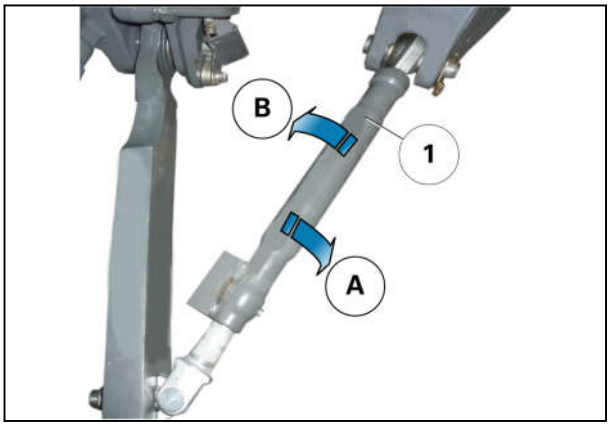


Fig. 213

5. **NOTE:**
   Check that the two stabilizers have the same length. The rear implement must be centered with respect to the top link.

Adjusting the stabilizers for work

6. Unlock the linkage and press the lowering switch for the rear linkage
7. Apply the parking brake
8. For particular conditions of use, such as with a seeder, unscrew the tube (1) of the stabilizer in direction (A) to lock and center the bottom link and prevent lateral movement. Carry out the same operation for the other stabilizer.
9. For particular conditions of use, such as with a plough, tighten the tube (1) of the stabilizer in direction (B) to unlock the bottom link. Carry out the same operation for the other stabilizer.

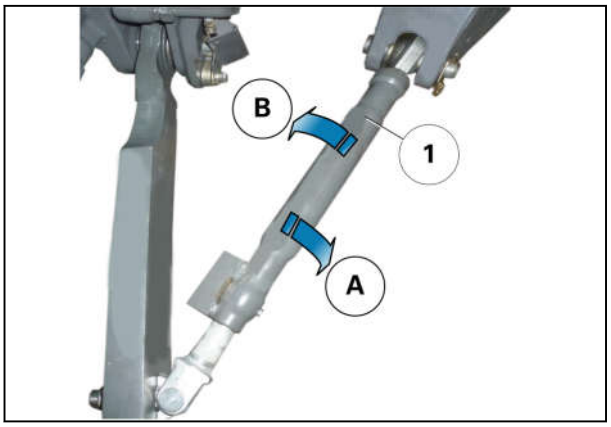


Fig. 214

10. **NOTE:**
    Check that the two stabilizers have the same length. The rear implement must be centered with respect to the top link.
11. **NOTE:**
    Make sure the bottom links and stabilizers cannot strike the rear tires.

3.11.9.2 Automatic stabilizers

Position of the stabilizers for transport

When the rear linkage is in the transport (high) position, the clevis lock (1) is lowered onto the threaded section (2) so that the stabilizers (4) cannot move. The chain (3) is then slack when the rear linkage is in the transport (high) position.

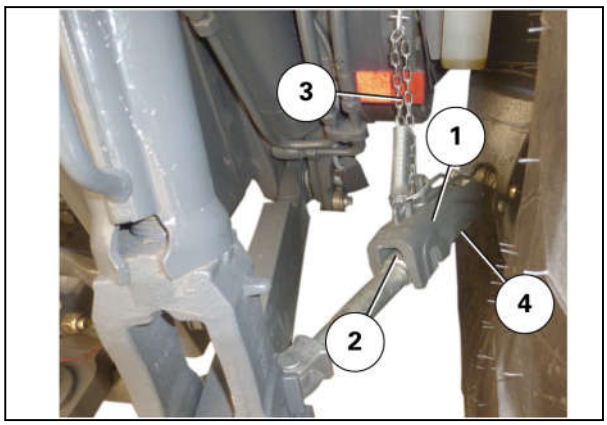


Fig. 215

Position of the stabilizers for work

When the rear linkage is in the work (low) position, the clevis lock (1) is raised so that the stabilizers (4) can freely deploy. It is possible to screw or unscrew the threaded section (2) to increase or decrease the thread length. The chain (3) must be correctly adjusted so that the clevis lock (1) rises when the linkage is in the work (low) position.

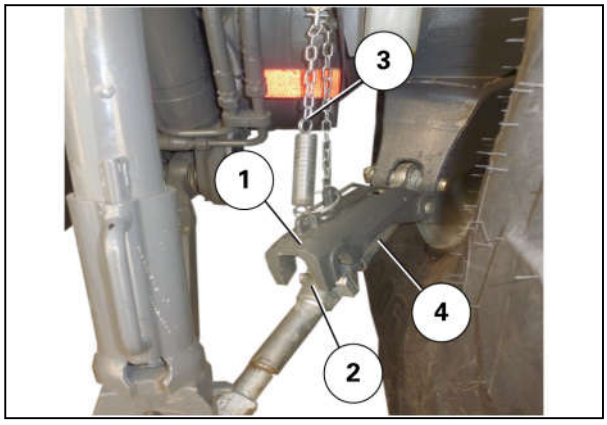


Fig. 216

IMPORTANT:
Make sure the bottom links and stabilizers cannot strike the rear tires.

NOTE:
For particular conditions of use, such as with a seeder, fold the clevis lock (1) *onto the threaded section* (2) *to lock and center the bottom link and prevent lateral movement. Check that the two stabilizers have the same length. The rear implement must be centered with respect to the top link.*

Adjusting the length of the stabilizers

To adjust the length of the stabilizer, remove the safety ring (1) and raise the locking spring (2) of the clevis. Next raise the locking clevis (3), then lift the adjustment lever (4); it is then possible to use the lever to turn the threaded section in the corresponding direction to increase or decrease the length.

After making the adjustment, put the adjustment lever (4) back between the tab (initial position), then fold the locking clevis (3) onto the threaded section. It is also necessary to fold down the locking spring (2) and put back the safety ring (1).

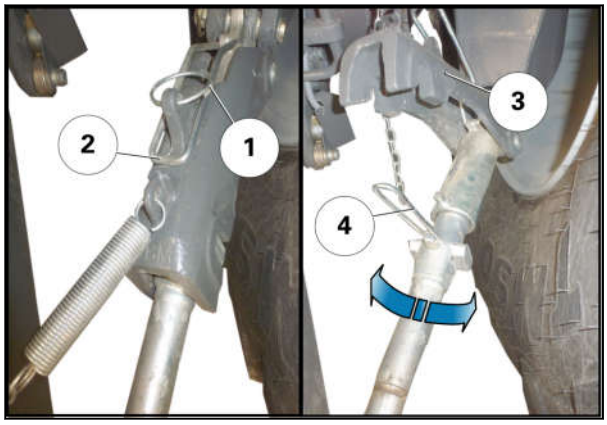


Fig. 217

3.11.10 Ball joint support

Ball joints can be stored in the shaft (1), located near the rear linkage.

NOTE:
Remember to put a pin into the shaft to avoid losing the ball joints.

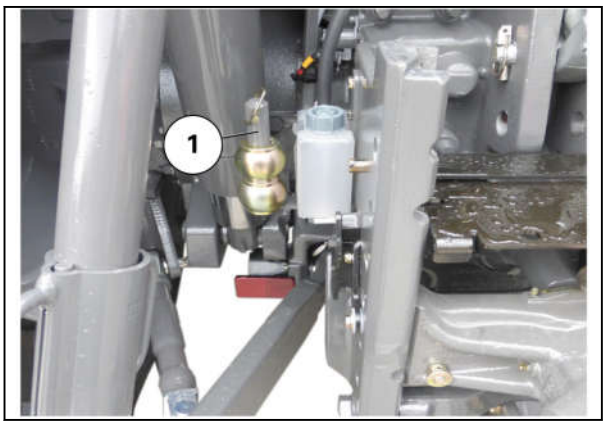


Fig. 218

3.12 Towing equipment

3.12.1 General

IMPORTANT:
To prevent linkage damage when operating trailed attachments, care should be taken when turning to prevent interference between the drawbar and the linkage.
When the external controls are used, ensure you are outside of the area of travel of the three-point linkage.
Comply with the maximum vertical load capacity allowed for the trailer hitch.
Comply with the weight and loads allowed for the vehicle and follow the guidelines given in the highway code.
Follow the instructions provided by the trailer manufacturer.
Only use the correct hitch pin-ring combination.
If there are different values on the identification plate of the trailer coupling and on the trailer hitch, it is the minimum value that must be taken into consideration.
Do not raise the tractor using the front trailer hitch
During coupling and uncoupling, ensure that the trailer is chocked to stop it from rolling.

CAUTION:
We reserve the right to make technical modifications. The details indicated on the identification plate take priority.

Types of linkage authorized	Trademarks	EC component-type approval mark	Maximum horizontal load	Maximum vertical load	Height of linkage above ground
Swinging drawbar	Dromone - P50	e11-1243 ext 1	24000 kg	2450 kg	572 mm
Hitch	Dromone - P50	e11-1242	24000 kg	2,940 kg	586 mm
Swinging drawbar	Rockinger - 801L10	e1*89/173*2006/26*0385*00	26,000 kg	2000 kg	1073 mm
Swinging drawbar	Rockinger - 820L10	e1*89/173*2006/96*0388*00	34000 kg	2000 kg	1025 mm
Clevis	Sauermann - HS 1500-KUD	e1*89/173*2006/96*0171*07	34000 kg	2000 kg	1025 mm
Clevis	Sauermann - HS 1400-KUD	e1*2009/144*0170*05	34000 kg	2000 kg	1025 mm
Swinging drawbar	Scharmüller - 960321	e1*2009/144*2013/8*0570*00	34000 kg	2000 kg	1025 mm
Swinging drawbar	AGCO - SRT E50	M10149	29,000 kg	2000 kg	1025 mm

3.12.2 Swinging drawbar

ISO standard

See loads indicated on the hitch plate.

Model available:	Trailed weight:
Category 2 drawbar	See General chapter

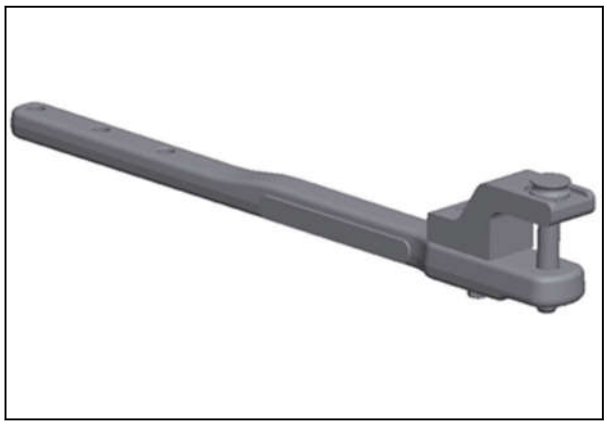


Fig. 219

Category 2 drawbar

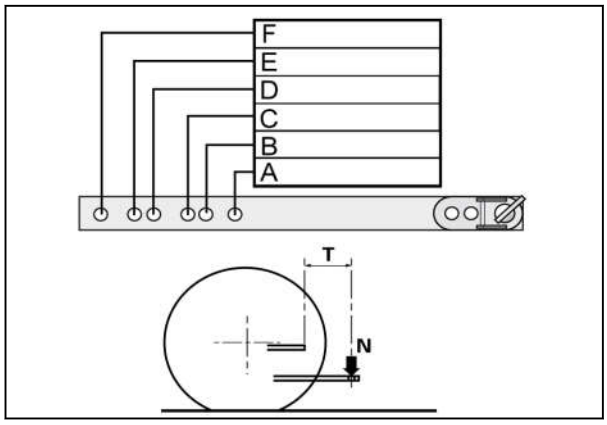


Fig. 220

Category 2 (ISO) drawbar	Length T	Position	PTO speed (rpm)	PTO type	Number of splines	Diameter of the PTO (mm)	Vertical static load N (lbf)
Minimum	250 mm	A	540 or 1000	1 or 2	6 or 21	35 mm	2000 kg
	350 mm	B	540 or 1000	1 or 2	6 or 21	35 mm	2000 kg
Standard	400 mm	C	540 or 1000	1 or 2	6 or 21	35 mm	1500 kg
	500 mm	D	540 or 1000	1 or 2	6 or 21	35 mm	1500 kg
Maximum	550 mm	E	540 or 1000	1 or 2	6 or 21	35 mm	1000 kg
	650 mm	F	540 or 1000	1 or 2	6 or 21	35 mm	1000 kg
Ø of pin	30 mm						
Width of drawbar	80 mm						
Thickness of drawbar	50 mm						

3.12.2.1 Fitting the swinging drawbar

Procedure

1. Unscrew the 2 screws (1)
2. Extract the pin (2).

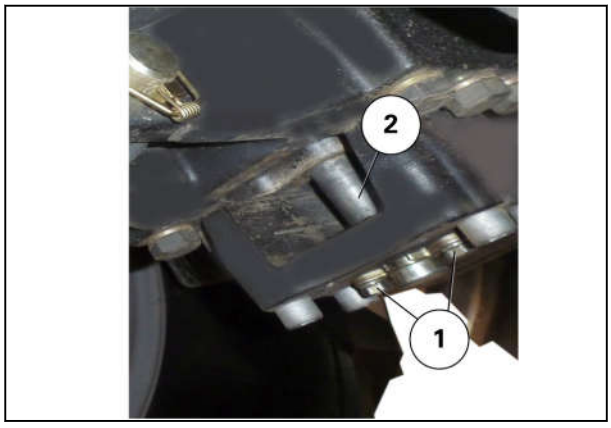


Fig. 221

3. Insert swinging drawbar (3) and move it into the desired position.

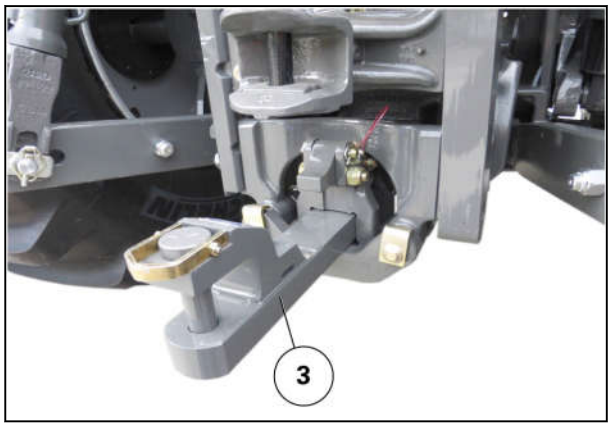


Fig. 222

4. Check the pin (4) and reinsert it into the bore.
5. Tighten the two screws (5) to a torque of 60 Nm

   NOTE:
   Replace the pin and the screws if they are damaged.

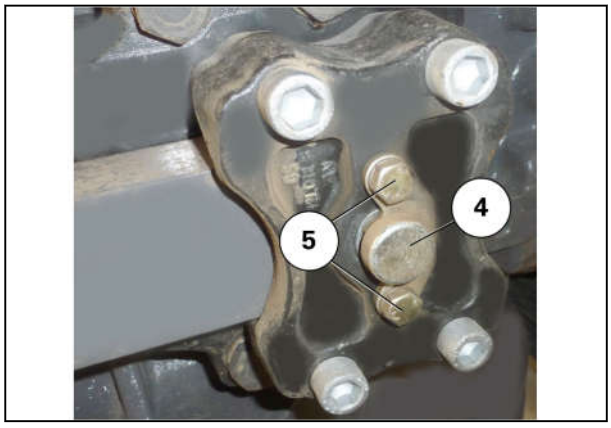


Fig. 223

3.12.3 4-wheel trailer clevis hitch

This clevis is intended to hitch trailers with four wheels, which transfer little or no load onto the hitch.

NOTE:
See loads indicated on the clevis hitch.

Manual clevis hitch

The height of the clevis hitch can be adjusted using the sliding frame. To adjust the towing height, pull the handle (1) upward to unlock, then pull to the left to slide the clevis up or down. Press the handle (2) to withdraw the towing pin.

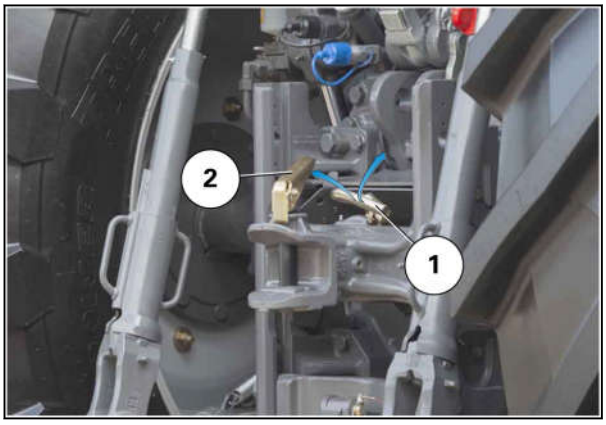


Fig. 224

Automatic clevis hitch

The height of the clevis hitch can be adjusted using the sliding frame. To adjust the towing height, pull the handle (2) upward to unlock, then pull to the left to slide the clevis up or down. To hitch a trailer, lift the unlocking lever (1) into a vertical position to refit the pin.

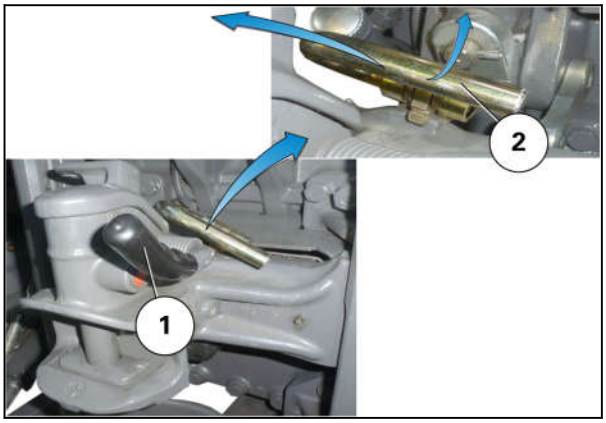


Fig. 225

During towing, the pintle eye presses on the component (2) which automatically locks the pin. The unlocking lever (1) will then be in a horizontal position.

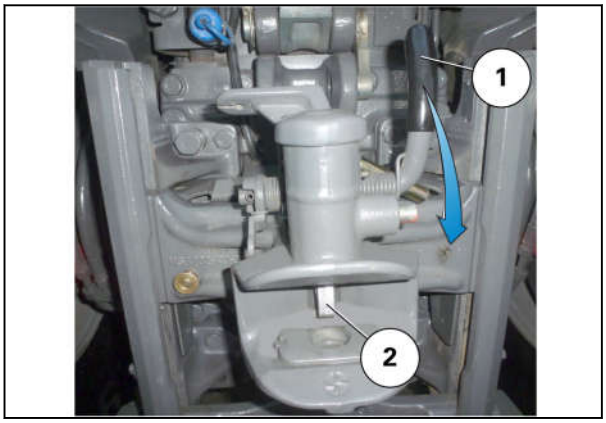


Fig. 226

3.12.4 Pick-up hitch

Authorized load

This hitch is designed to tow trailers that transfer heavy loads to the tractor and require frequent hitching and unhitching.

See loads indicated on the hitch plate.

Maximum permitted tire type: 20.8R38.

NOTE:
Maximum vertical static load: See Equipment chapter for towing
Maximum trailed weight: See Equipment chapter for towing

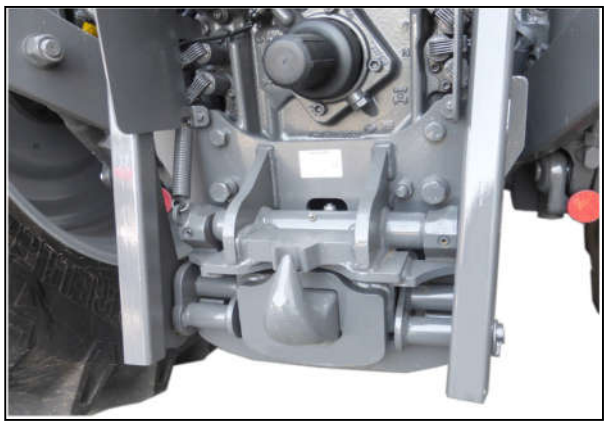


Fig. 227

3.12.4.1 Lowering the hook

Procedure

1. Unlock the electronic linkage by pressing on the lifting switch (1) then the lowering switch (2).
2. Raise the hitch to its maximum using the lifting switch (1) to unlock the hook.

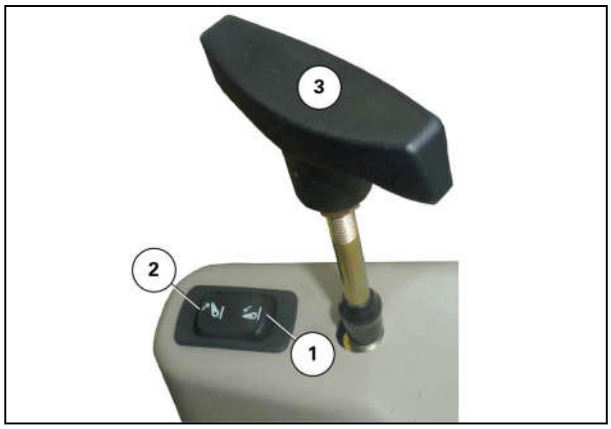


Fig. 228

3. Pull the locking lever (3) to release the hook, then press the lowering switch (2) to lower the hook to the ground (A).

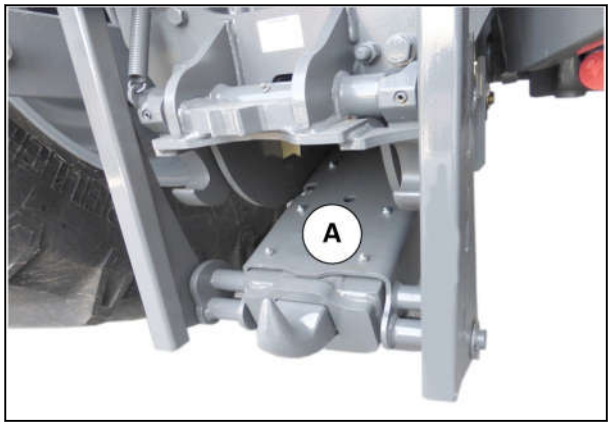


Fig. 229

4. To assist trailer hitching, the end of the hook (B) can be moved with the hydraulic ram by pulling the auxiliary spool valve lever located in the cab after opening the system using the valves (4).

   NOTE:
   The ram output is connected to the third spool valve

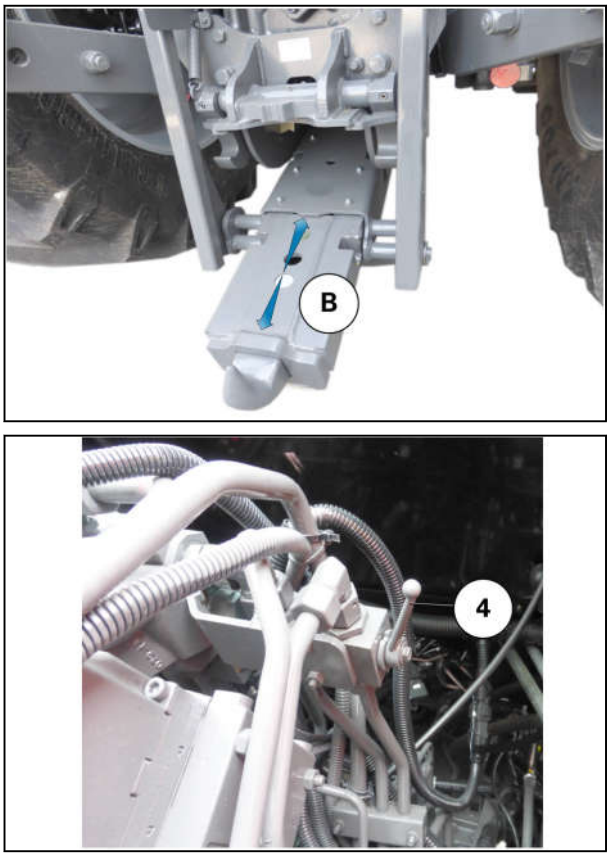


Fig. 230

3.12.4.2 Lifting the hook

DANGER:
Check that the safety locks are in place after hitching the implement
Move the pickup hitch control lever in both directions to ensure locking

Procedure

1. Reverse toward the trailer and align the hook with the trailer drawbar.
2. Move the spool valve control lever in the cab to retract the hook ram, keeping the tractor stationary.

   NOTE:
   It is not necessary to engage the parking brake to retract the hook
3. Press the auto-hitch linkage lifting switch (1) until you hear the safety lock engage.

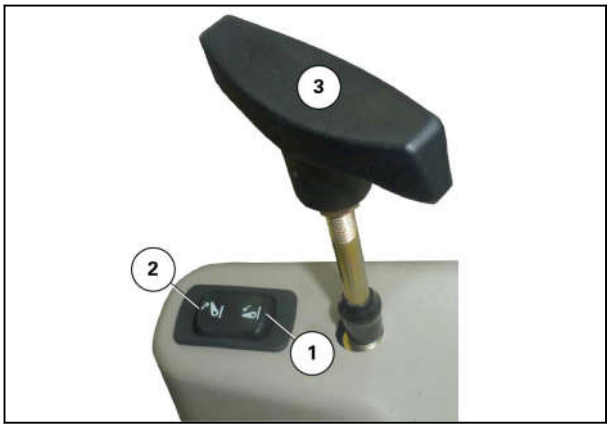


Fig. 231

4. Gently lower the hitch, pressing linkage lowering switch (2) so that the weight of the trailer is supported by the hook.

   NOTE:
   Close the valve (4) *again to enable normal use of the auxiliary spool valve.*

3.12.4.3 Fitting the swinging drawbar

Procedure

1. Remove the drawbar adjustment from its support at the front of the tractor
2. Lower the hook

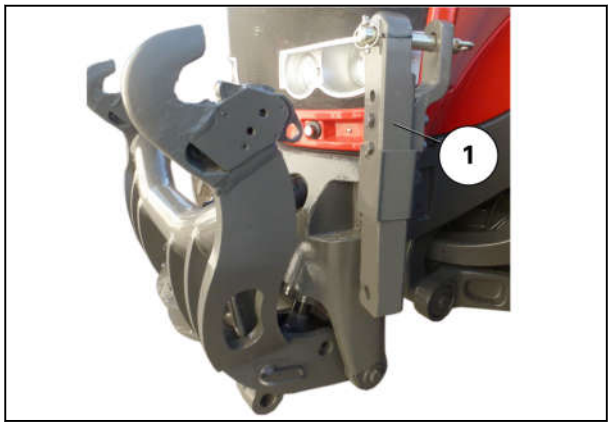


Fig. 232

3. Extract the pin (2) from the hook.
4. Remove hook (3).

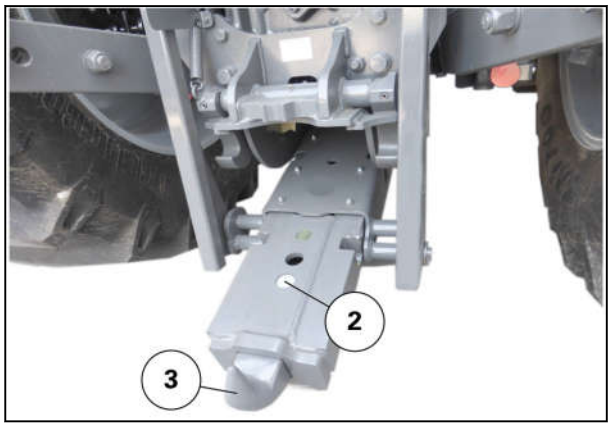


Fig. 233

5. Insert drawbar adjustment (4)
6. Check the pin and reinsert it into the second bore (5) (the nearest to the tractor) then refit the retainer ring.
7. Refit the hook

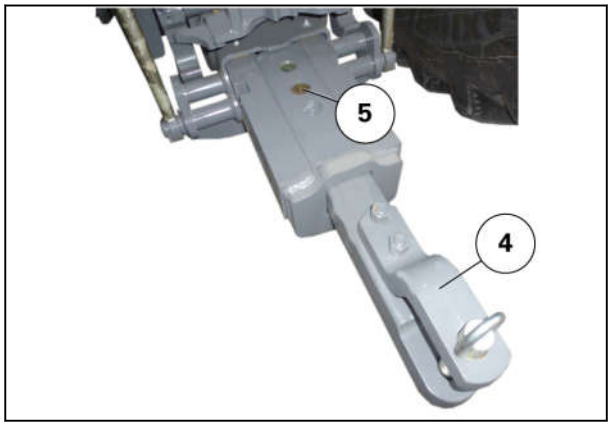


Fig. 234

3.13 Auxiliary hydraulics

3.13.1 General

MF 7700 Dyna-6 tractors are sold with the 110 l/min, 200 bar hydraulic system, or with the 150 l/min, 200 bar hydraulic system as an option.

The tractor may be fitted with a maximum of 5 spool valves. It may be fitted with up to 5 pairs of couplers at the rear and 2 pairs of couplers at the front.

The spool valve controls are grouped together on the right-hand console or on the armrest (according to the option fitted).

IMPORTANT:
Do not operate the hydraulics unless the oil is warm. If necessary, allow the engine to run for several minutes before use. In the event of the hydraulics overheating, stop the tractor immediately.

3.13.2 Description of hydraulic couplers on Closed Center system (Load Sensing)

The tractor is fitted with rear couplers and front couplers.

Description of the rear couplers

Valves

(1) Spool valve no. 1
(2) Spool valve no. 2
(3) Spool valve no. 3
(4) Spool valve no. 4
(5) Spool valve no. 5

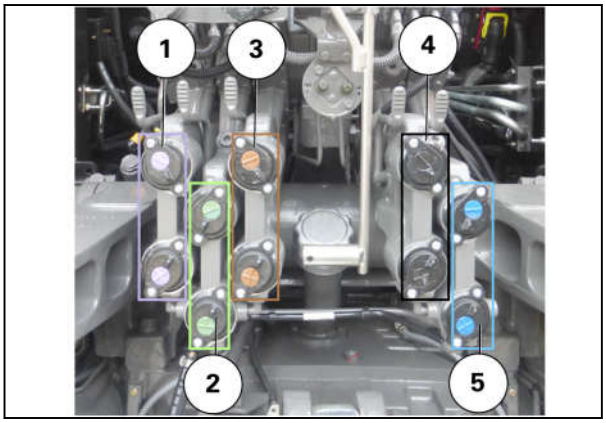


Fig. 235

NOTE:
Each spool valve controls one pair of couplers

All spool valves have slight internal leakage.

The spool valves on this tractor avoid this inconvenience.

- **All electrohydraulically controlled spool valves except the last spool valve (no. 4 or no. 5 depending on options):** The spool valves in the cylinder-rod extension phase (+) or in the cylinder-rod retraction phase (-) are equipped with a zero-leak valve that prevents pressure losses and the need to modify the height of the implements.
- **All mechanically controlled spool valves:** The spool valves in the cylinder-rod extension phase (+) are equipped with a zero-leak valve that prevents pressure losses and the need to modify the height of the implements.

Oil recovery unit

The rear couplers are fitted with an oil recovery unit (1), which are located on the rear right-hand or left-hand trumpet housings.

Drain the recovery unit at regular intervals and under conditions that respect the environment.

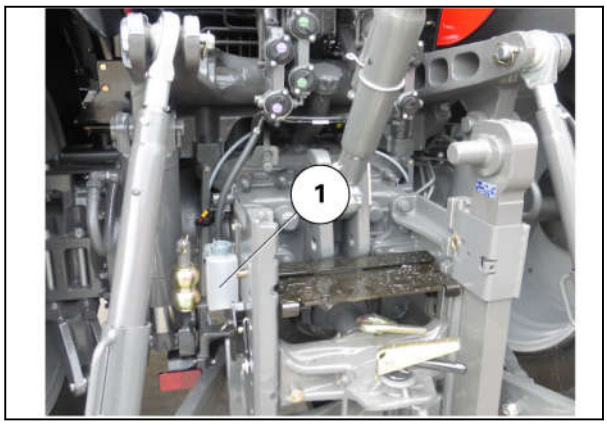


Fig. 236

Description of the front couplers

(1) Spool valve no. 1
(2) Spool valve no. 2

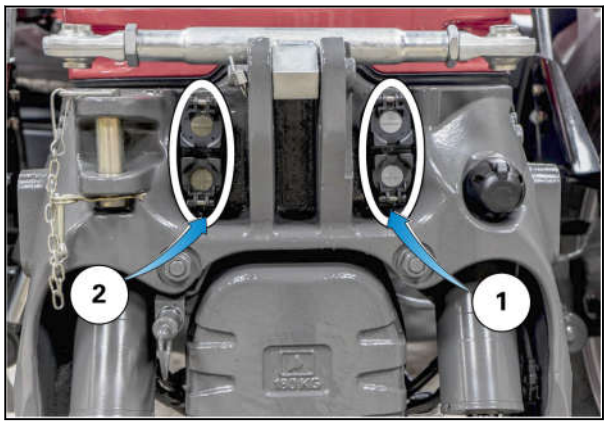


Fig. 237

NOTE:
Each spool valve controls one pair of couplers

All spool valves have slight internal leakage.

- **All electrohydraulically controlled spool valves:** The spool valves in the cylinder-rod extension phase (+) or in the cylinder-rod retraction phase (-) are equipped with a zero-leak valve that prevents pressure losses and the need to modify the height of the implements.

Oil recovery unit

The front couplers are fitted with an oil recovery unit (1), which is located behind the tractor front linkage.

Drain the recovery unit at regular intervals and under conditions that respect the environment.

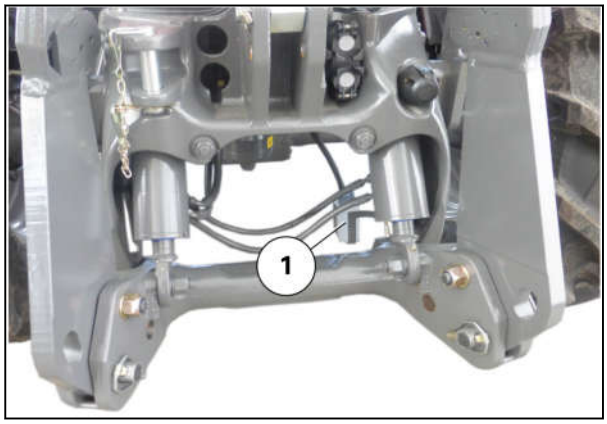


Fig. 238

Description of the additional hydraulic unions

Tractors are fitted with additional hydraulic unions for connecting accessories hitched to the tractor.

(1) Direct outlet pressure (P)
(2) Tank return (T)
(3) LS line (Load Sensing) (LS)
(4) Drain (D)

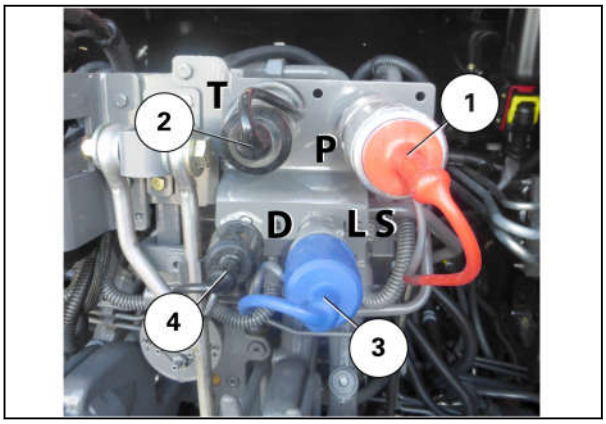


Fig. 239

The Load Sensing line allows you to have a load sensor on an external circuit. It is therefore possible to supply this directly via the variable displacement pump without passing through the spool valves.

The Load Sensing line connection (3) means that a potato harvester-loader implement or a self-loading trailer will have a flow rate adapted to demand and that can reach the maximum level supplied by the tractor pump.

NOTE:
The drain (4) *is connected directly to the auxiliary hydraulic tank.*

IMPORTANT:
The fluid passing through this union returns directly to the tank and is not filtered. Ensure that there are no impurities in the system.

Tractors are fitted with additional hydraulic unions for connecting accessories hitched to the front of the tractor.

(2) Tank return (T)

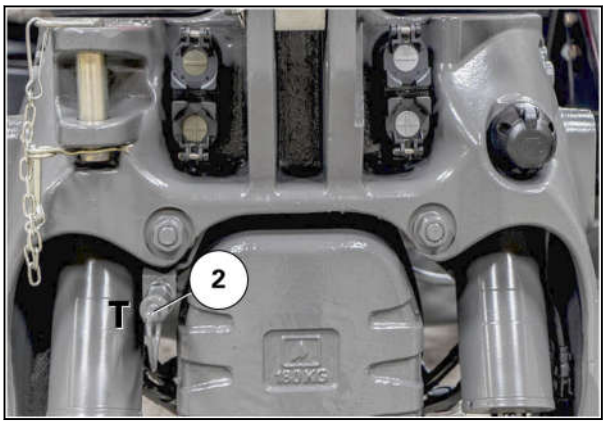


Fig. 240

NOTE:
The free return (2) *is connected directly to the auxiliary hydraulic tank.*

IMPORTANT:
The oil that passes through this union returns directly to the tank and is not filtered. Ensure that no impurities are drawn into the system.

3.13.3 Use of hydraulic couplers on Closed Center system (Load Sensing)

These couplers provide a fast and sealed connection of the hoses for the implement being connected.

CAUTION:

Before connecting an implement's hydraulic hoses to the tractor, make sure that the implement's hydraulic unions and the tractor's rear couplers are clean. When the rear spool valves are not in use, refit the protectors on the rear spool valves. Once the implement's hydraulic hoses have been disconnected, refit the protectors on the hydraulic unions. The implement's hydraulic unions must be compatible with ISO 7241-1 Standard "A" Also make sure that the oil inside the implement system is not contaminated to ensure that it does not contaminate the tractor's hydraulic functions.

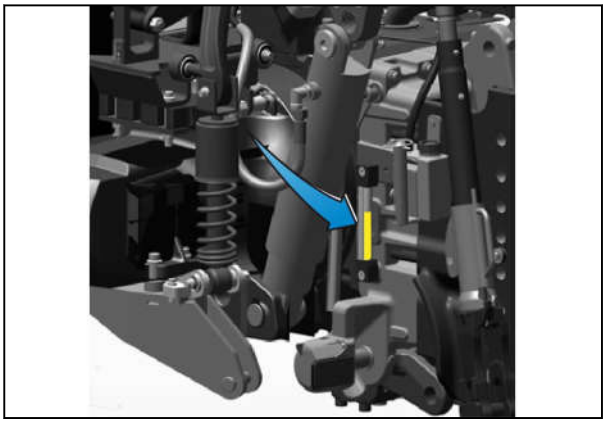


Fig. 241

If the hydraulic implements are used continuously and take a large quantity of oil out of the drive train (hydraulic motors, large-capacity cylinders), top up to the maximum level on the dipstick (100%).

When the tractor is used on steeply sloping ground, top up to the maximum level on the dipstick (100%).

Using rear hydraulic couplers

A decompression control is fitted to all of the hydraulic spool valves, allowing easy removal of the implement hoses connected to the couplers.

To decompress the couplers, push lever (1) in the direction shown in the photo.

Fig. 242

There are different connecting methods, depending on the implement to be connected to the tractor (see examples below).

Connecting single-acting rams

Connect the single-acting ram hose (1) to the lower coupler of the auxiliary hydraulic spool valve.

Use the control lever located in the cab to activate the single-acting ram (see Hydraulic control lever).

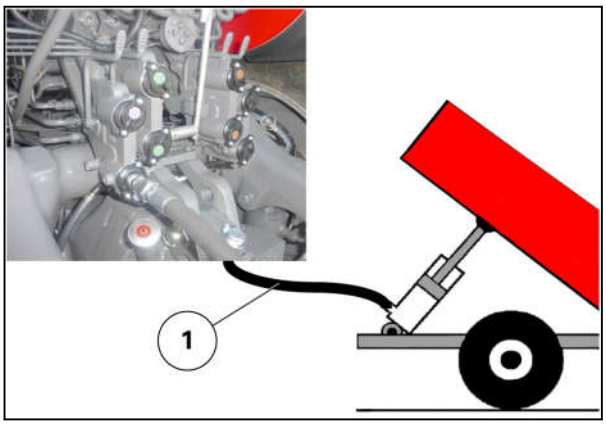


Fig. 243

Connecting double-acting rams

Connect the double-acting ram supply hose (1) to the lower coupler and connect the return hose (2) to the upper coupler of the same spool valve.

Use the control lever located in the cab to activate the double-acting ram (see Hydraulic control lever).

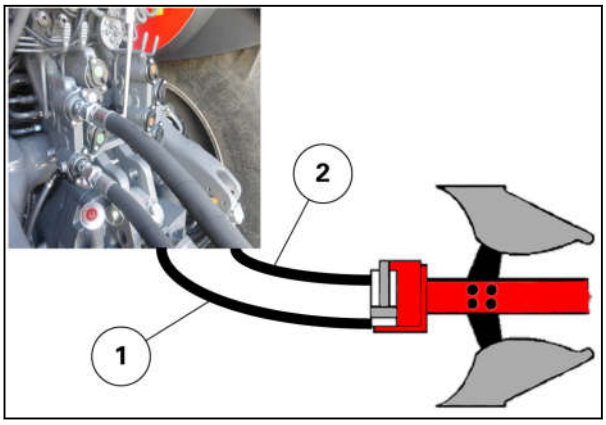


Fig. 244

Connecting a uni-directional hydraulic motor

Connect the hydraulic motor supply hose (1) to the upper coupler of the auxiliary hydraulic spool valve and connect the return hose (2) to the lower coupler of the same spool valve.

NOTE:
A hydraulic motor can be supplied by two spool valves (combination of the two flows).
For hydraulic motors with little inertia, return hose (2) *can be connected to direct return "T".*

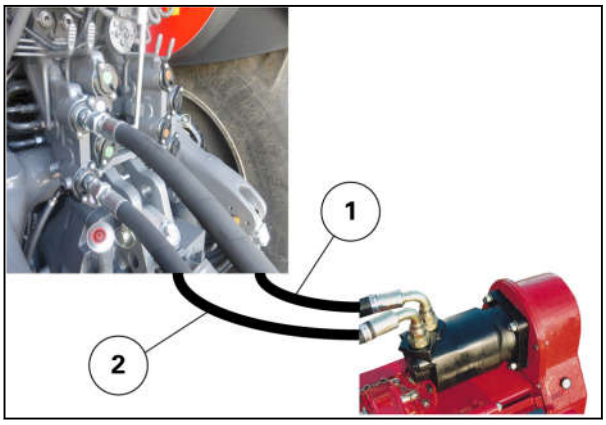


Fig. 245

Put the lever in the ram rod retracted position (see Hydraulic control lever) to supply the hydraulic motor.

Put the lever in the floating position to gradually stop the hydraulic motor and prevent it from getting damaged.

CAUTION:
The hydraulic motor only turns in one direction; do not put the lever in the ram rod extended position as the hydraulic motor may get damaged

NOTE:
The hydraulic flow can be adjusted so that the hydraulic system only supplies the quantity of oil required by the hydraulic motor (see Adjusting the flows).

Connecting a bi-directional hydraulic motor with a drain

Connect the hydraulic motor supply hose (1) to the lower coupler of the auxiliary hydraulic spool valve and connect the return hose (2) to the upper coupler of the same spool valve.

The drain (3) must be connected to free return line "D" (without counter-pressure) and must be directly connected to the tank (4).

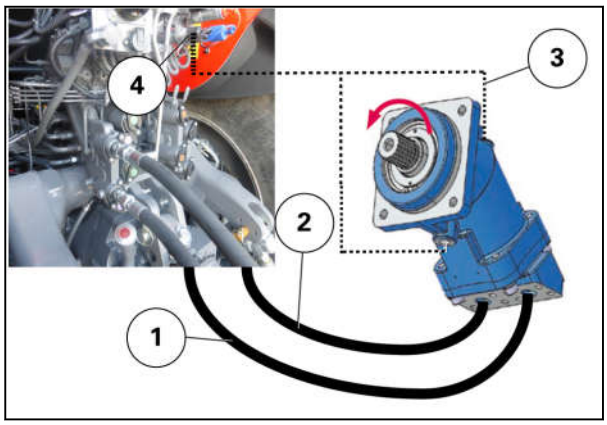


Fig. 246

Use the control lever located in the cab to supply the hydraulic motor (see Hydraulic control lever).

NOTE:
A hydraulic motor can be supplied by two spool valves (combination of the two flows).
For hydraulic motors with little inertia or a high flow rate, the return hose (2) *can be connected to return "T".*

CAUTION:
Do not connect the drain to the return hose as the hydraulic motor can operate in both directions of rotation.There must be no pressure in the drain as it may damage the hydraulic motor.

NOTE:
The hydraulic flow can be adjusted so that the hydraulic system only supplies the quantity of oil required by the hydraulic motor (see Adjusting the flows).

Using front hydraulic couplers

Connecting single-acting rams

Connect single-acting ram hose (1) to the upper coupler of the auxiliary hydraulic spool valve.

Use the control lever located in the cab to activate the single-acting ram (see Hydraulic control lever).

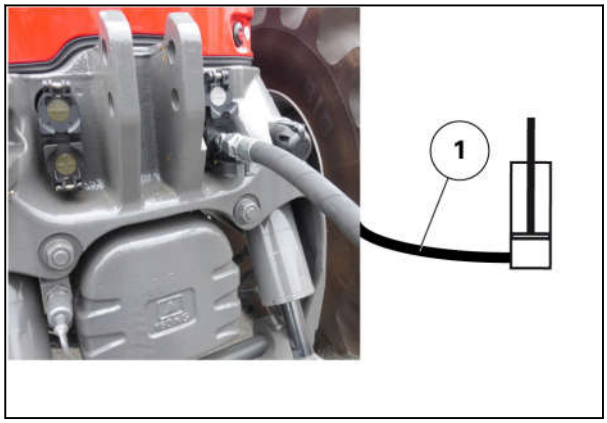


Fig. 247

Connecting double-acting rams

Connect double-acting ram supply hose (1) to the upper coupler and connect return hose (2) to the lower coupler.

Use the control lever located in the cab to activate the double-acting ram (see Hydraulic control lever).

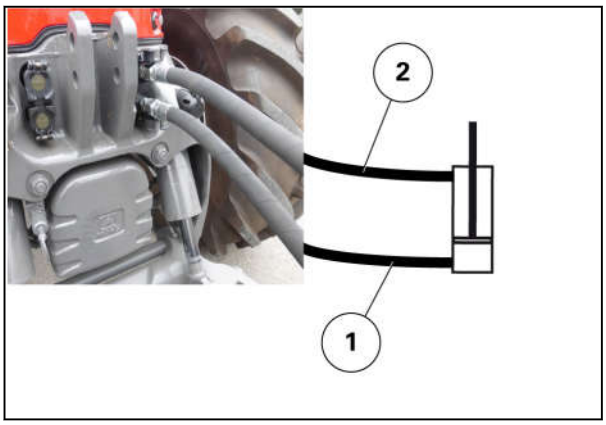


Fig. 248

Connecting a uni-directional hydraulic motor

Connect hydraulic motor supply hose (1) to the lower coupler and connect return hose (2) to the upper coupler.

NOTE:
A hydraulic motor can be supplied by two spool valves (combination of the two flows).
For hydraulic motors with little inertia or a high flow rate, the return hose (2) *can be connected to free return* (3).

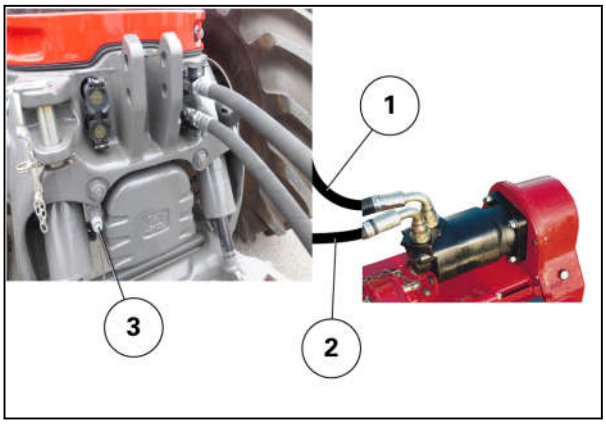


Fig. 249

IMPORTANT:
The oil passing through union (3) *returns directly to the tank and is not filtered. Ensure that no impurities pollute the system.*

Put the lever in the ram rod retracted position (see Hydraulic control lever) to supply the hydraulic motor.

Put the lever in the floating position to gradually stop the hydraulic motor and prevent it from getting damaged.

CAUTION:
The hydraulic motor only turns in one direction; do not put the lever in the ram rod extended position as the hydraulic motor may get damaged

NOTE:
The hydraulic flow can be adjusted so that the hydraulic system only supplies the quantity of oil required by the hydraulic motor (see Adjusting the flows).

Connecting a bi-directional hydraulic motor with a drain

Connect the hydraulic motor supply hose (1) to the upper coupler of the auxiliary hydraulic spool valve and connect the return hose (2) to the lower coupler of the same spool valve.

The drain (3) must be connected to the free return line (without counter-pressure) and must be directly connected to the tank (4).

Use the control lever located in the cab to supply the hydraulic motor (see Hydraulic control lever).

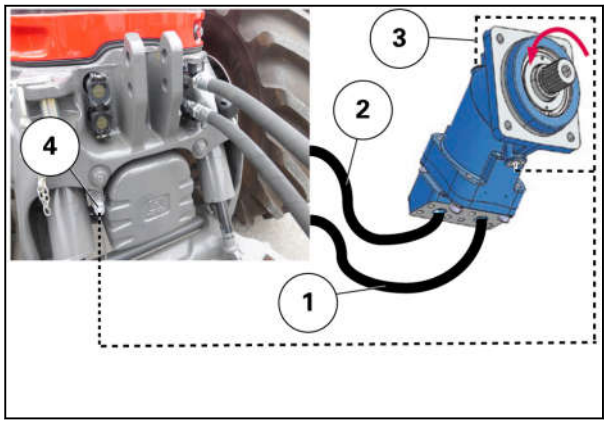


Fig. 250

NOTE:
A hydraulic motor can be supplied by two spool valves (combination of the two flows).
For hydraulic motors with little inertia or a high flow rate, the return hose (2) *can be connected to free return* (4).

IMPORTANT:
The oil passing through union (4) *returns directly to the tank and is not filtered. Ensure that no impurities pollute the system.*

CAUTION:
Do not connect the drain to the return hose as the hydraulic motor can operate in both directions of rotation.There must be no pressure in the drain as it may damage the hydraulic motor.

NOTE:
The hydraulic flow can be adjusted so that the hydraulic system only supplies the quantity of oil required by the hydraulic motor (see Adjusting the flows).

Using additional hydraulic unions

Rear hydraulic unions

(1) Direct outlet pressure (P)
(2) Tank direct return (T)
(3) Connection to the Load Sensing (LS) load signal
(4) Valve and flow rate control valve
(5) Drain

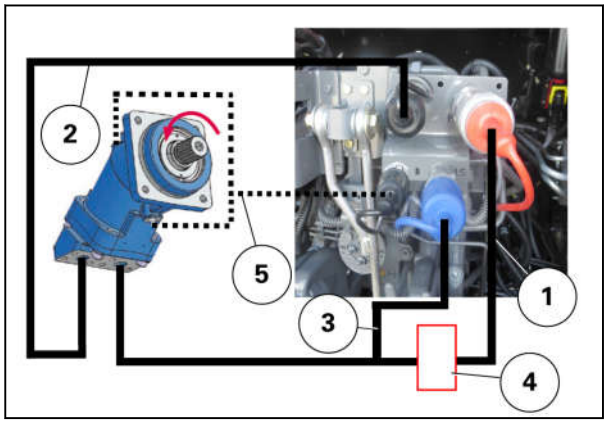


Fig. 251

The pressure (1) from the hydraulic pump supplies the hydraulic motor. Fit a valve (4) to control the hydraulic motor and a flow regulator (4) to adjust the hydraulic demand.

The oil is returned directly from the hydraulic motor to the tank (2)

The drain (5) must be connected to a free return line (without counter-pressure) and must be directly connected to the tank.

The Load Sensing line (3) allows you to have a load sensor.

IMPORTANT:
The oil passing through the union (5) *returns directly to the tank and is not filtered. Ensure that there are no impurities in the system.*

3.13.4 Auxiliary hydraulics locking/unlocking

The auxiliary hydraulic controls can be locked or unlocked using switch (1) on the right-hand console.

An LED on the locking/unlocking switch displays the operating status of the controls.

- LED status
  - On: Hydraulic functions locked (valves deactivated)
  - Off: Hydraulic functions unlocked (valves activated)

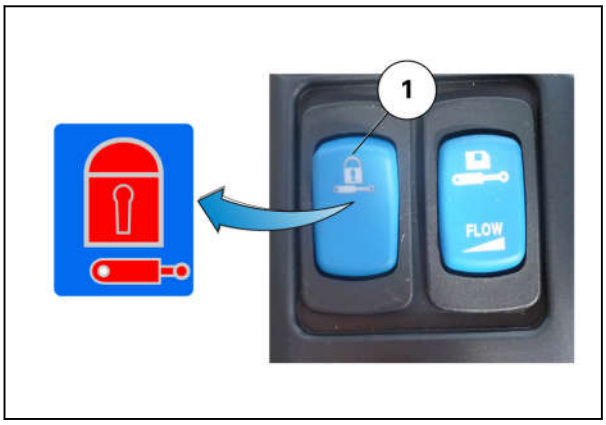


Fig. 252

WARNING:
When the hydraulic functions are not in use, they must be locked by pressing the switch. The indicator light comes on. For driving on roads, raise the implements to the required height and lock the tractor hydraulic functions by pressing the switch. The indicator light comes on.

IMPORTANT:
If, before the engine is started, one of the spool valve controls remains in the locked floating position, the hydraulic valve will not operate until this control is returned to the neutral position.

If the tractor is fitted with a Datatronic CCD, it is possible to activate/deactivate the auxiliary hydraulics using the onboard computer (see the Datatronic CCD Operator's Manual).

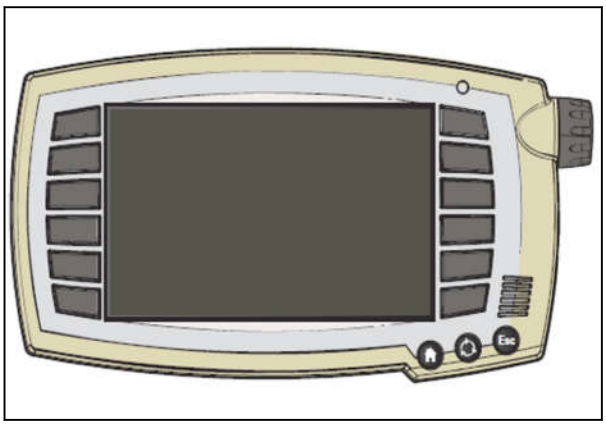


Fig. 253

3.13.5 Hydraulics control lever

Using the control levers

(A) Mechanical levers

- Neutral position Each spool valve controlled by a lever can be set in various positions by actuating the lock (D)

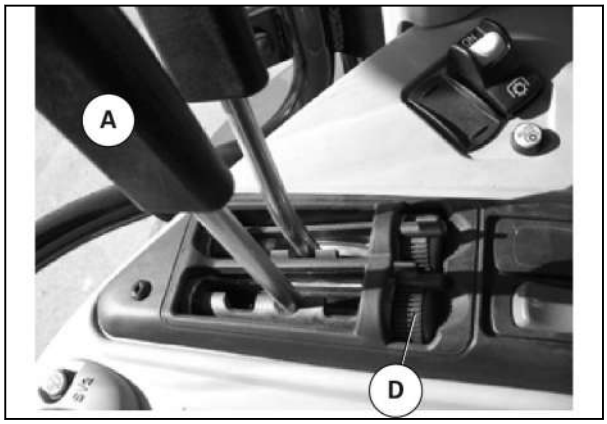


Fig. 254

- Ram rod extended position

Fig. 255

- Ram rod retracted position

Fig. 256

- Floating position:

  To activate the floating position, push the lever to its maximum position, then release it. The lever returns to its initial position, while the spool valve is in floating position.

  To deactivate the floating position, move the lever to any position. The spool valve switches to neutral position.

Fig. 257

3.13.6 Description and use of the cab controls

Description

Hydraulic functions controlled by a joystick and FingerTIP controls on the armrest.

(A) Joystick: Rear spool valves 1 and 2 or front lift and front spool valve 1 (depending on option) or front loader (depending on option)
(B) FingerTIP no. 3: Spool valve 3 at the rear of the tractor
(C) FingerTIP no. 4: Spool valve 4 at the rear of the tractor
(D) FingerTIP no. 5: Spool valve 5 at the rear of the tractor
(E) Auxiliary hydraulics locking/unlocking switch
(F) FingerTIP no. 6: front lift or rear spool valve 2 of the tractor (depending on option)
(G) FingerTIP no. 7: front spool valve 1 or rear spool valve 1 of the tractor (depending on option)
(H) FingerTIP no. 8: front spool valve 2 (depending on option)
(I) Control change-over switch

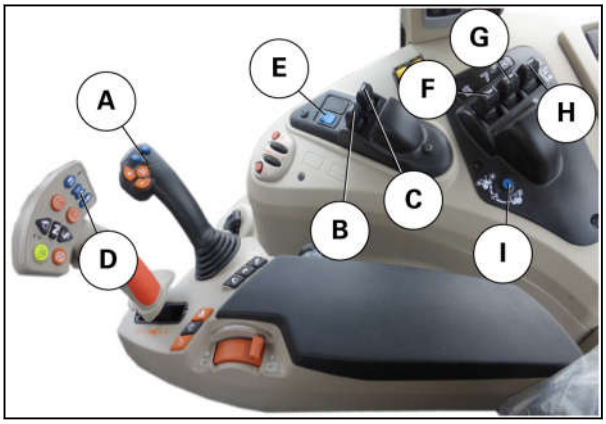


Fig. 258

Using the FingerTIP controls

This decal is present on the rear right-hand window of the cab

- Depending on the configuration of the tractor and the position of the control change-over switch, FingerTIP nos. 1 and 2 allow you to control rear spool valves 1 and 2 or front spool valve 1 and the front lift
- Depending on the configuration of the tractor and the position of the control change-over switch, FingerTIP nos. 6 and 7 (optional) allow you to control the front lift and front spool valve 1 or rear spool valves 2 and 1
- FingerTIP nos. 3 and 4 only control the rear spool valves
- FingerTIP no. 8 only controls front spool valve 2 (optional)

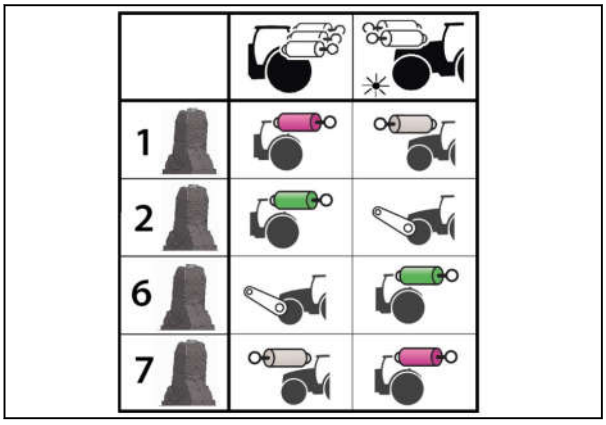


Fig. 259

NOTE:
Additional FingerTIP nos. 6, 7 and 8 located on the right-hand console are only present if the tractor is fitted with a front lift

Using rear spool valves 1 and 2 with the armrest controls

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

NOTE:
The Datatronic CCD hydraulic spool valve menu can be used to prevent the joystick from shifting to the floating position.

Fig. 260

Press switch (1); the LED located on this switch must be off

NOTE:
The control change-over switch is only present if the tractor is fitted with a front lift
The position of the control change-over switch is stored when the engine stops

FingerTIP no. 1 controls the 1st rear spool valve.

FingerTIP no. 2 controls the 2nd rear spool valve.

Using front spool valve 1 and the front lift with the right-hand console controls (optional)

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

NOTE:
The Datatronic CCD hydraulic spool valve menu can be used to prevent the joystick from shifting to the floating position.

Fig. 261

Press switch (1); the LED located on this switch must be off

NOTE:
The position of the control change-over switch is stored when the engine stops

FingerTIP no. 6 controls the front lift.

FingerTIP no. 7 controls the 1st front spool valve.

Using front spool valve 1 and the front lift with the armrest controls (optional)

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

NOTE:
The Datatronic CCD hydraulic spool valve menu can be used to prevent the joystick from shifting to the floating position.

Fig. 262

Press switch (1); the LED located on this switch must be on

NOTE:
The position of the control change-over switch is stored when the engine stops

FingerTIP no. 1 controls the 1st front spool valve.

FingerTIP no. 2 controls the front lift.

Using rear spool valves 1 and 2 with the right-hand console controls (optional)

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

NOTE:
The Datatronic CCD hydraulic spool valve menu can be used to prevent the joystick from shifting to the floating position.

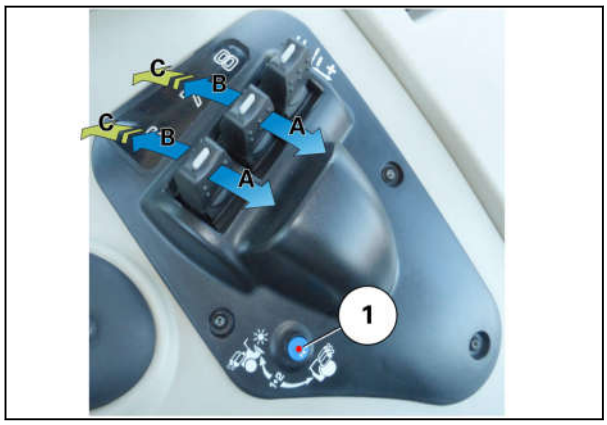


Fig. 263

Press switch (1); the LED located on this switch must be on

NOTE:
The position of the control change-over switch is stored when the engine stops

FingerTIP no. 6 controls the 2nd rear spool valve.

FingerTIP no. 7 controls the 1st rear spool valve.

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

FingerTIP nos. 3 and 4 only control the rear spool valves

FingerTIP no. 8 only controls front spool valve 2 (optional)

Fig. 264

(D) Floating position locking switch.

To activate the floating position, press down and push the switch (D) located above the FingerTIP so as to lock the floating position.

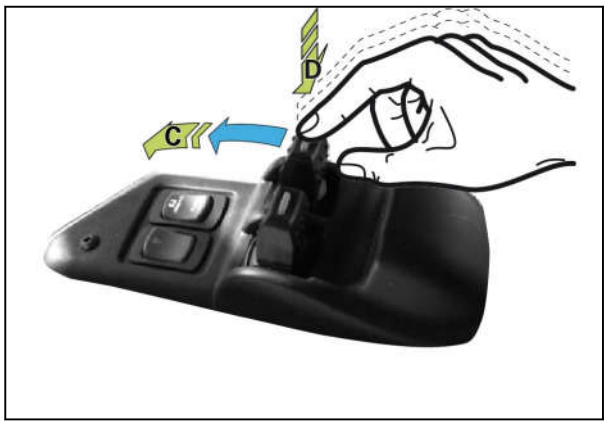


Fig. 265

Using the joystick (optional)

Depending on the configuration of the tractor and the position of the control change-over switch, the joystick (depending on option) allows you to control rear spool valves 1 and 2 or front spool valve 1 and the front lift

This decal is present on the rear right-hand window of the cab

CAUTION:
If the tractor is fitted with a front loader, it must be detached to make it possible to use the front hydraulic spool valves

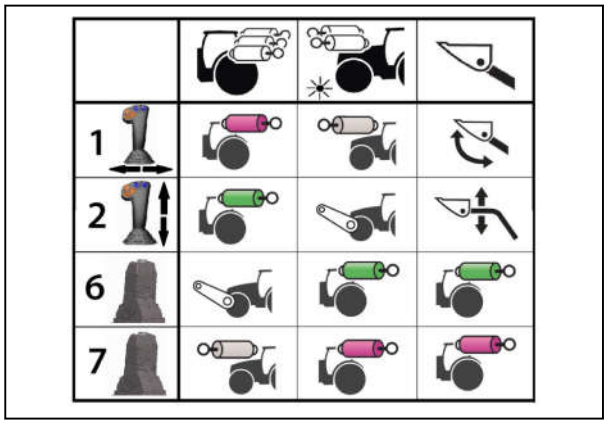


Fig. 266

Use of rear spool valves 1 and 2

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

NOTE:
The Datatronic CCD hydraulic spool valve menu can be used to prevent the joystick from shifting to the floating position.

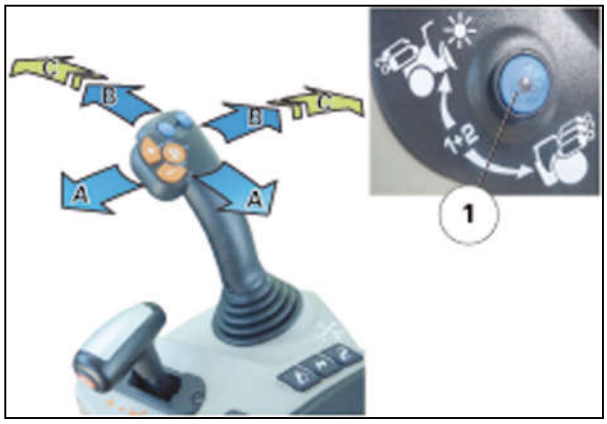


Fig. 267

Press switch (1); the LED located on this switch must be off

NOTE:
The control change-over switch is only present if the tractor is fitted with a front lift
The position of the control change-over switch is stored when the engine stops

Using the joystick in the horizontal position controls the 1st spool valve.

Using the joystick in the vertical position controls the 2nd spool valve.

Using front spool valve 1 and the front lift

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

NOTE:
The Datatronic CCD hydraulic spool valve menu can be used to prevent the joystick from shifting to the floating position.

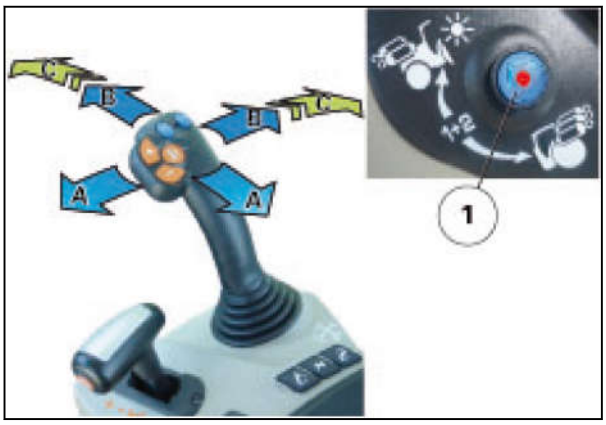


Fig. 268

Press switch (1); the LED located on this switch must be on

NOTE:
The position of the control change-over switch is stored when the engine stops

Using the joystick in the horizontal position controls the 1st front spool valve.

Using the joystick in the vertical position controls the front lift.

The Multi Function Joystick can be configured to control the external hydraulic valves on the tractor using the two switches (2) and (3).

To perform this installation and use this function, please contact your dealer.

Fig. 269

Customized configuration of the Multi Function Joystick (for tractors fitted with Datatronic CCD)

The Multi Function Joystick can also be configured to control other functions of the tractor using the 3rd function switch (2) and the 4th function switch (3) (see the Datatronic CCD Operator's Manual to configure the Multi Function Joystick switches).

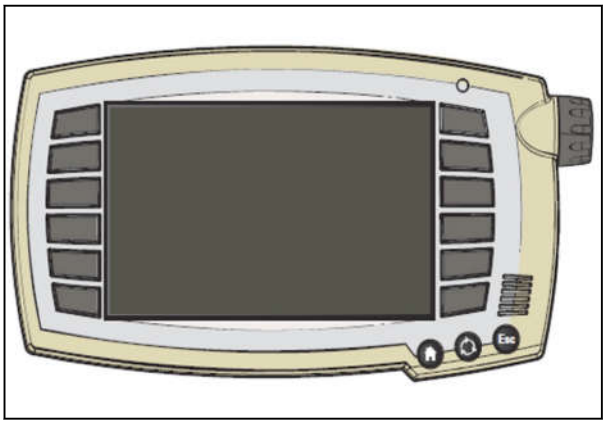


Fig. 270

Customized configuration of the Multi Function Joystick (for tractors not fitted with Datatronic CCD)

The Multi Function Joystick can also be configured on the Setup and Information Screen display to control other functions of the tractor using the 3rd function switch (2) and the 4th function switch (3).

Press the or arrows to choose which function to adjust (the index moves), then press (the function is grayed out when it can be adjusted)

- Press the or arrows to enable/disable (**ON** in operation, **OFF** not in operation) the H3/H4 joystick switches, and then press to confirm
- Press the and arrows to select the function to assign to switch H3, and then press to confirm
- Press the and arrows to select the function to assign to switch H4, and then press to confirm

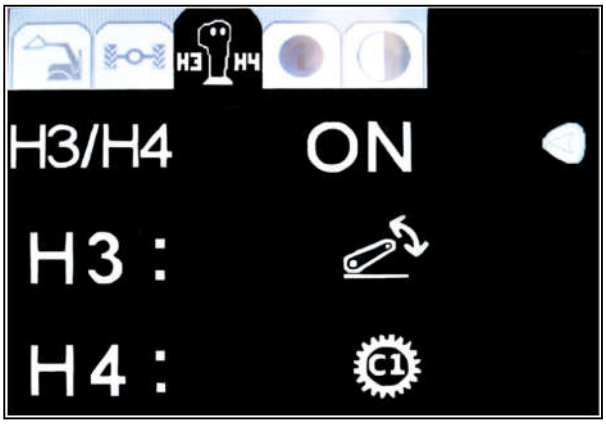


Fig. 271

Functions available on the Setup and Information Screen display for the H3 and H4 switches
Activate rear linkage Lowering
Activate rear linkage Lifting
Activate lowering or activate lifting of the rear power lift
Activate/deactivate the 4-wheel drive front axle
Activate/deactivate the differential lock
Activate/deactivate stored engine speed (A)
Activate/deactivate stored forward speed C1
Activate/deactivate stored forward speed C2

Customized configuration of joystick controls

The joystick can be configured by the user to control various hydraulic valves

The settings are configured using the Datatronic CCD (see the Datatronic CCD Operator's Manual)

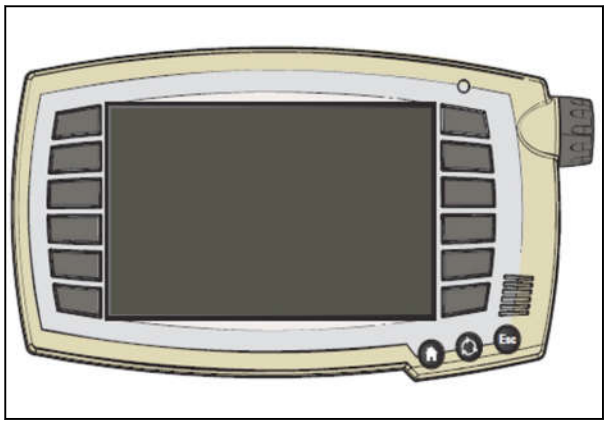


Fig. 272

Using the hydraulic control switches of the MultiPad

Depending on the configuration of the tractor, rear spool valve no. 4 or no. 5 can be controlled using the switches of the MultiPad.

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position with control indicator light

Switch (C) must be pressed twice to activate the floating position

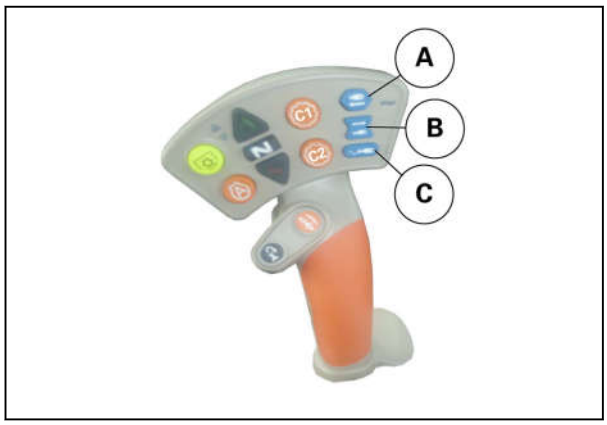


Fig. 273

Customized configuration with the Datatronic CCD:

The hydraulic control switches of the MultiPad can be configured by the user to control the various hydraulic spool valves. (See the Datatronic CCD Operator's Manual to configure the switches of the MultiPad).

Using the spool valve activation time function (Kick-out)

(A) Cylinder rod extension
(B) Cylinder rod retraction
(C) Ram floating position

Fig. 274

After you have enabled the activation time function for a spool valve, operate the hydraulic control in a position (cylinder rod extension (A) or cylinder rod retraction (B))

- If the tractor is fitted with a joystick (1), the control must be moved to a maximum position to activate the spool valve activation time function (Kick-out)
- If the tractor is fitted with FingerTIP controls (2), the control must be moved beyond the stop to activate the spool valve activation time function (Kick-out)

IMPORTANT:
If the spool valve control is in the floating position (C) *or neutral, the activation time function (Kick-out) is disabled*

3.13.7 Description and use of the external controls

(1) Ram rod extension switch **+** coupler on the spool valve
(2) Ram rod retraction switch **-** coupler on the spool valve

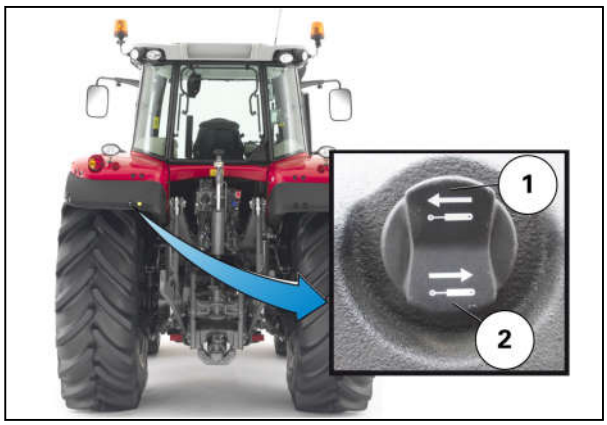


Fig. 275

By default, the external hydraulic controls operate spool valve no. 1. If the tractor is fitted with a Datatronic CCD, it is possible to operate another hydraulic spool valve using the controls (refer to the Datatronic CCD Operator's Manual)

- Before it is possible to use the external controls, unlock the hydraulics.
  - Either by pressing the cab control.
  - Or by pressing the ram extension external control switch (1) then the ram retraction switch (2).

The spool valve control is active when the button is pressed. Using the external controls locks the spool valve controls in the cab. The external controls are inactive as soon as the forward speed exceeds 2 kph. They are reactivated as soon as the speed drops below 2 kph

3.13.8 Setting flow rates and time delay

Adjustment of the hydraulic flow rates with the Datatronic CCD

If the tractor is fitted with Datatronic CCD, refer to the Datatronic CCD Operator's Manual for details on how to adjust the hydraulic spool valves.

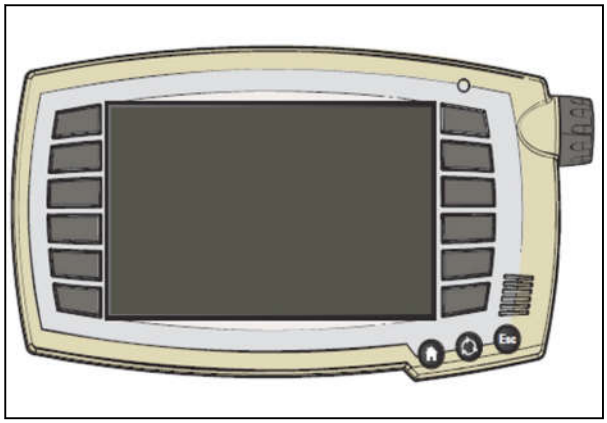


Fig. 276

Adjustment of the hydraulic flow rates with the Setup and Information Screen

NOTE:
If the tractor is fitted with a Datatronic CCD, it is not possible to adjust the hydraulic flow rates via the screen (it is only possible to view the flow rates).

This menu allows you to choose the spool valve to change (rear spool valves 1 to 5 (depending on options), front spool valves 1 and 2 (displays F1 and F2) and front power lift spool valve)

- Press the ⓘ or ⓓ arrows to choose which function to adjust (the index moves), then press ⓞ (the function is greyed out when it can be adjusted)
  - Press the ⓘ or ⓓ arrows to choose the spool valve to change, then press ⓞ to confirm
  - Press the ⓘ or ⓓ arrows to increase/ decrease the hydraulic flow in the cylinder rod extension phase (from 0% to 100%) and then press ⓞ to confirm
  - Press the ⓘ or ⓓ arrows to increase/ decrease the hydraulic flow in the cylinder rod retraction phase (from 0% to 100%) and then press ⓞ to confirm
  - Press the ⓘ or ⓓ arrows to increase/ decrease the activation time of the hydraulic flow in one of the phases (cylinder rod extension or retraction) (time delay of 0 s to 60 s or continuous flow ∞) and then press ⓞ to confirm

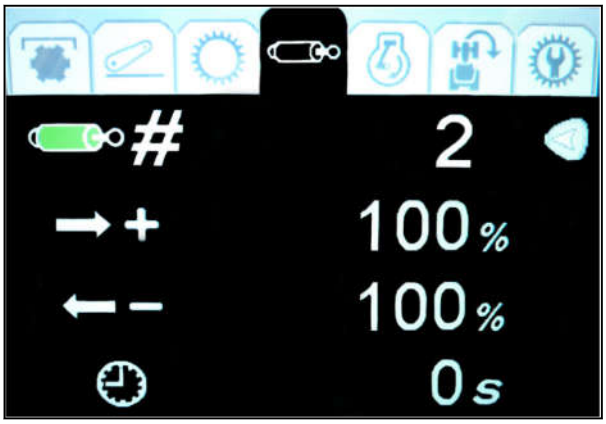


Fig. 277

- The activation time function (Kick out) is used to adjust the activation time of each spool valve. There are two modes available:
  - Time delay: An activation time (from 0 to 60 seconds) can be set for each spool valve The engaged spool valve is cut off after the set time delay has elapsed
  - Permanent flow rate: Select the infinity icon ∞ to have the spool valve remain permanently engaged after it is engaged using the control

Adjustment with the flow rate setting/memory switch

It is also possible to adjust the hydraulic flow rate of a spool valve using the flow rate setting/memory switch.

First, access the screen for the hydraulic spool valves of the Setup and Information Screen and then choose the spool valve concerned

- Tilt the Multi Function Joystick or the FingerTIPs into a position and press the flow rate memory switch (1) for 2 seconds

  The stored value for a position will be displayed on the screen.
- Press the flow rate setting switch (2) to apply the values 0% or 25% or 50% or 75% or 100%.

  The flow rates are identical for the ram rod extension phase and ram rod retraction phase of the spool valve and are displayed on the screen.
- Keeping the switch (1) pressed for 5 seconds deletes all memories and provides 100% of the flow rate for the ram rod extension phase and ram rod retraction phase of the spool valve.

Fig. 278

Hydraulic flow rate adjustment at the rear of the tractor

For mechanically operated spool valves, adjustments to the hydraulic flow rates are made at the rear of the tractor.

To adjust the oil flow, turn knob (1) of the relevant spool valve.

To increase the flow rate, turn the button to **+** and to reduce the flow rate, turn it to **-**.

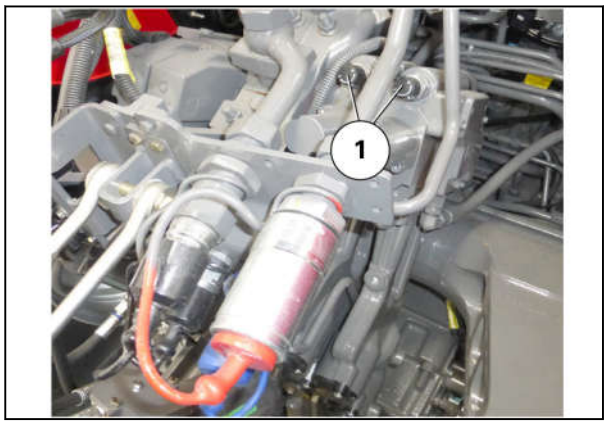


Fig. 279

3.13.9 Emergency manual spool valve control

In the event of operating faults of the joystick or spool valve electrical controls, an emergency control fitted to the last spool valve is available to lift and lower installed attachments manually.

Operation

NOTE:
On tractors that have only electrohydraulic spool valves, the last spool valve (no. 4 or no. 5 depending on option) is different. It comprises an emergency mechanical control system. This mechanical control means the spool valve can be used if the electrohydraulic steering system should fail. Use a 9 mm Allen key.

Using a 9 mm Allen key, turn the external control to use the emergency spool valve.

- (A): Supply for the ram rod extension phase
- (B): Supply for the ram rod retraction phase
- (F): Floating position

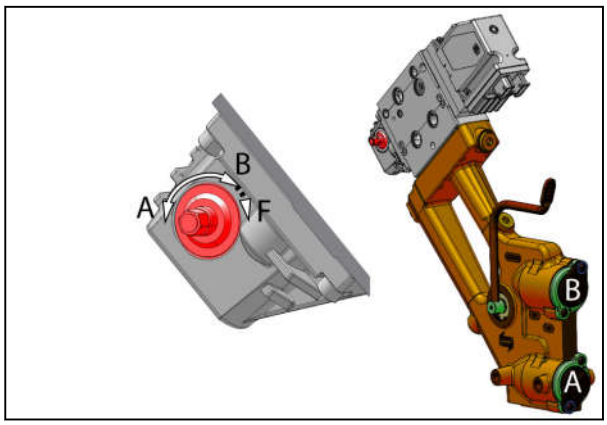


Fig. 280

3.14 Front-end loader function

3.14.1 Front-end loader

WARNING:
The tractor must be fitted with a FOPS (Falling Object Protection Structure) roof if using a loader.
The programmable functions of the joystick or any other control MUST NOT be used to operate a loader. In order to prevent involuntary loader movement, the loader joystick controller must be of the self-cancelling type. When the operator releases his grip on the joystick, the joystick must return to a non-operational neutral position - except for float detent position in the loader lower direction.
Always read the implement instruction books fully for implements to be used with the tractor and comply with the safety instructions they contain.
For the attachment points, refer to the specifications chapter.

DANGER:
The use of front-end loaders involves the risk of falling objects; if used for forestry work there is a risk of objects penetrating into the passenger compartment.
This tractor is not designed for forestry applications; its use is prohibited unless a FORESTRY KIT is installed.
Contact the dealer to find out if a forestry kit is available for this tractor model.
Only a specific forestry kit can provide the necessary protection against falling trees and the penetration of objects.

Protection offered by the FOPS roof of the tractor

WARNING:

The use of sprayers fitted on the tractor or towed involves the risk of exposure to hazardous substances. The FOPS roof does not guarantee protection against dust, aerosols and fumes. In the event of application of crop protection products (e.g. pesticides, fungicides, herbicides etc.), see the chemical manufacturer's instructions as well as those supplied by the sprayer manufacturer. Personal protective equipment should be used if it is recommended by these instructions for tractors without a cab.

3.14.2 Layout of components

Joystick lever

The joystick lever controls 4 functions of the front-end loader.

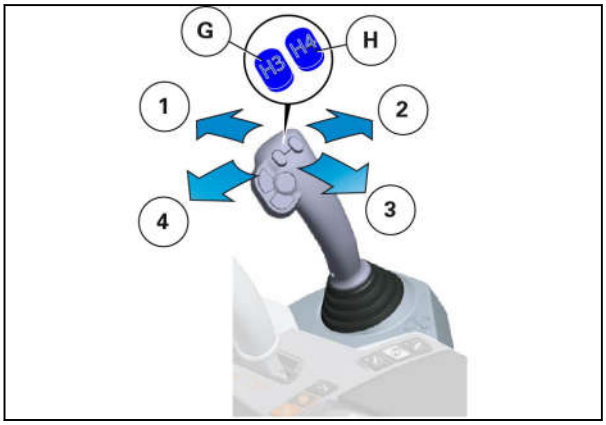


Fig. 281

Hydraulic activation

(1) Auxiliary hydraulics locking/unlocking button
(2) Auxiliary hydraulics flow rate change/ memory switch

To unlock the auxiliary hydraulics, press switch (1). The red indicator light should extinguish.

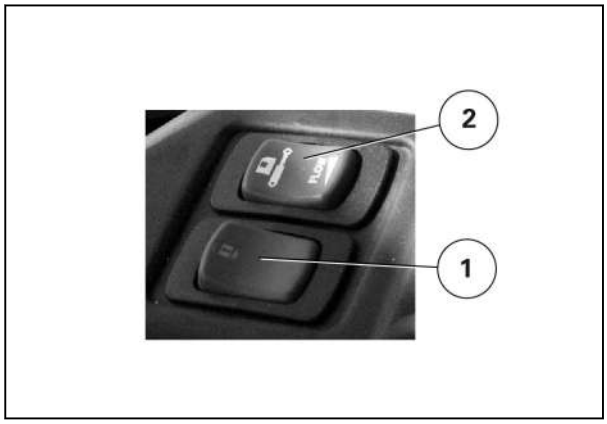


Fig. 282

3.14.3 Using the electric joystick of the front-end loader

Activating the front-end loader

CAUTION:
Before using the loader, fold the front linkage arms.
When the front loader is used, the front linkage (if fitted) and the spool valves located at the front (if fitted) cannot be used for another function.

Procedure

1. Unlocking: Activate the front-end loader hydraulic function by pressing on position (1) of the switch located on the right-hand pillar.
2. Locking: Lock the front-end loader hydraulic function by pressing on position (2) of the switch located on the right-hand pillar. The red indicator light on the switch is extinguished.
3. **WARNING:**
   For driving on roads, raise the implements to the required height and lock the loader hydraulic functions.

Fig. 283

3.14.3.1 Joystick functions for the front-end loader

Procedure

1. Lower the front-end loader arms by pushing on the joystick toward (1)
2. Tilt the front-end loader implement forward by pushing on the joystick toward (2)
3. Raise the front-end loader arms by pulling on the joystick toward (3)
4. Tilt the front-end loader implement backward by pushing on the joystick toward (4)

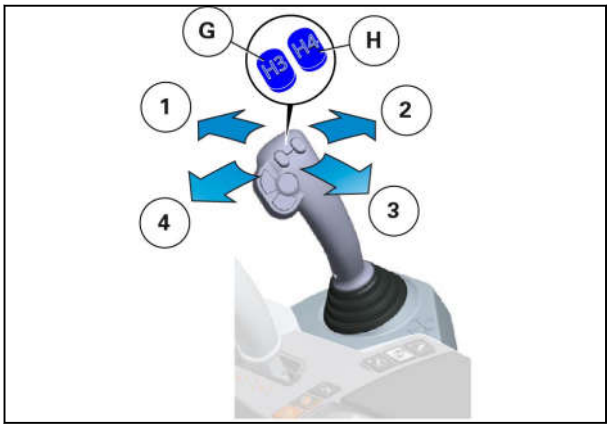


Fig. 284

3.14.3.2 Floating position

Activation

1. Push the joystick lever as far as it will go toward (1) to obtain the floating position.

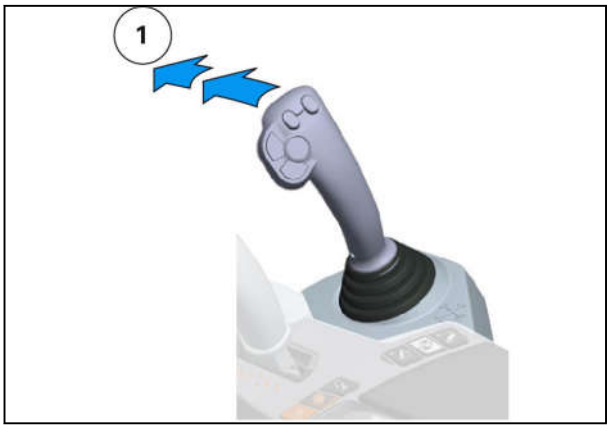


Fig. 285

Canceling

2. Pull the joystick toward (3) to cancel the floating position.

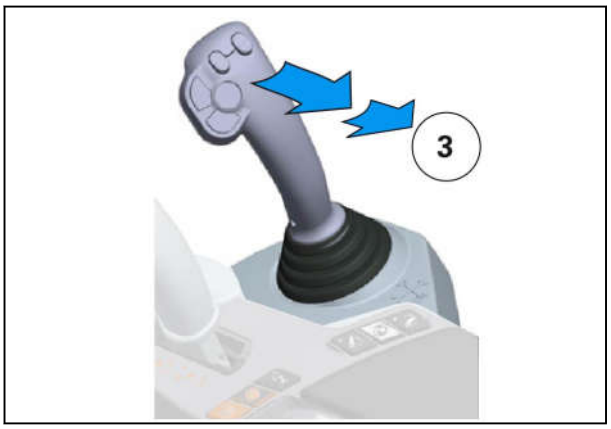


Fig. 286

3.14.3.3 Display of front-end loader flow rates

NOTE:
Display in the Setup and Information Screen

Press the or arrows to choose which function to adjust (the index moves), then press (the function is greyed out when it can be adjusted)

- Press the or arrows to select the front loader lifting/lowering function and then press to validate
- Press the or arrows to increase/decrease the hydraulic flow rate for the front loader lifting phase (from 0% to 100%) and then press to validate
- Press the or arrows to increase/decrease the hydraulic flow rate for the front loader lowering phase (from 0% to 100%) and then press to validate
- Press the or arrows to activate/ deactivate the front loader floating position then press to validate

  NOTE:
  The status of the floating position remains stored when the engine is switched off

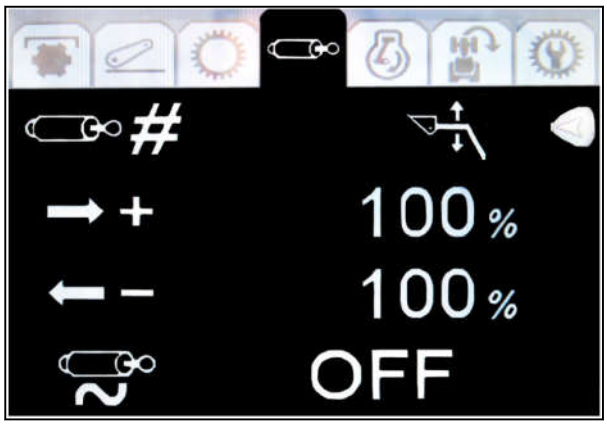


Fig. 287

Press the or arrows to choose which function to adjust (the index moves), then press (the function is greyed out when it can be adjusted)

- Press the or arrows to select the front loader dumping/scooping function and then press to validate
- Press the or arrows to increase/decrease the hydraulic flow rate for the front loader scooping phase (from 0% to 100%) and then press to validate
- Press the or arrows to increase/decrease the hydraulic flow rate for the front loader dumping phase (from 0% to 100%) and then press to validate
- Press the or arrows to activate/ deactivate the front loader floating position then press to validate

  NOTE:
  By default, the floating position is deactivated ("OFF") when the engine is started.

Fig. 288

It is also possible to adjust the hydraulic flow rate of a spool valve using the flow rate setting/memory switch.

First, access the screen for the hydraulic spool valves of the Setup and Information Screen and then choose the front loader function concerned

- Tilt the Multi Function Joystick into a position and press the flow rate memory switch ((1)) for 2 seconds

  The stored value for a position will be displayed on the screen.
- Press the flow rate setting switch (2) to apply the values 0% or 25% or 50% or 75% or 100%.

  The flow rate values will be identical for raising/lowering and tilting/dumping and will be displayed on the screen.
- Keeping the switch (1) pressed for five seconds deletes all memories and provides 100% of the flow rate for the raising/lowering or dumping/scooping phases of the front loader.

Fig. 289

3.14.3.4 Third hydraulic function option: Tractor equipped with a loader without front linkage.

IMPORTANT:
This option is available only on tractors equipped with a front loader and without front linkage.
The front loader is different from the standard model (model with only two hydraulic functions)

This front loader is provided with a quick coupling system.

Fig. 290

There is also an additional screen for operating this third hydraulic function, in addition to the two standard screens.

Standard screens in Setup and Information Screen

Fig. 291

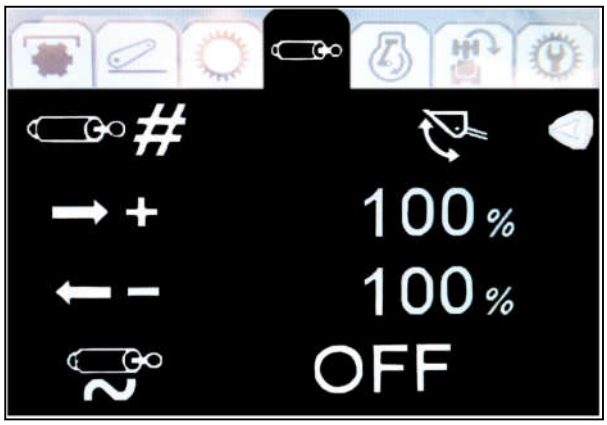


Fig. 291

Additional screens in Setup and Information Screen

Press the ⏏ or ⏏ arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)

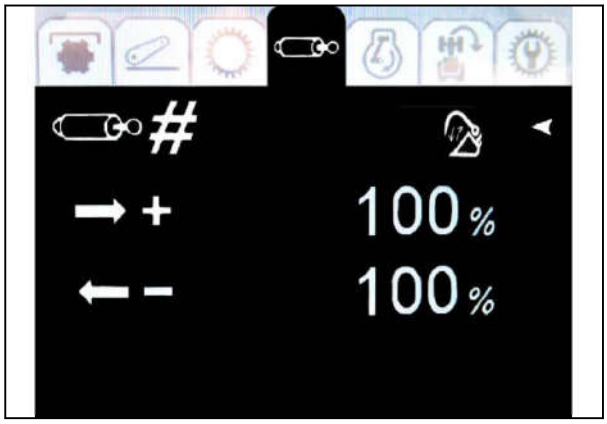


Fig. 292

- Press the ⏏ or ⏏ arrows to select the front loader third function (gripper) and then press OK to validate
- Press the ⏏ or ⏏ arrows to increase/decrease the hydraulic flow rate for the gripper opening phase (from 0% to 100%) and then press OK to validate
- Press the ⏏ or ⏏ arrows to increase/decrease the hydraulic flow rate for the gripper closing phase (from 0% to 100%) and then press OK to validate

It is also possible to adjust the hydraulic flow rate of a spool valve using the flow rate setting/memory switch.

First, access the screen for the hydraulic spool valves of the Setup and Information Screen and then choose the front loader function concerned

- Tilt the Multi Function Joystick into a position and press the flow rate memory switch (1) for two seconds.

  The stored value for a position will be displayed on the screen.
- Press the flow rate setting switch (2) to apply the values 0% or 25% or 50% or 75% or 100%.

  The flow rate values will be identical for lifting/lowering, dumping/scooping and gripper opening/closing and will be displayed on the screen.

Fig. 293

- Keeping the switch (1) pressed for five seconds deletes all memories and provides 100% of the flow rate for the lifting/lowering, dumping/ scooping or gripper opening/closing phases of the front loader.

Arm suspension

NOTE:
The arm suspension function position is stored by the tractor's electronic system when the engine is stopped.

Press the ▲ or ▼ arrows to choose which function to adjust (the index moves), then press OK (the function is greyed out when it can be adjusted)

- Press the ▲ or ▼ arrows to activate/ deactivate the front-end loader suspension then press OK to validate

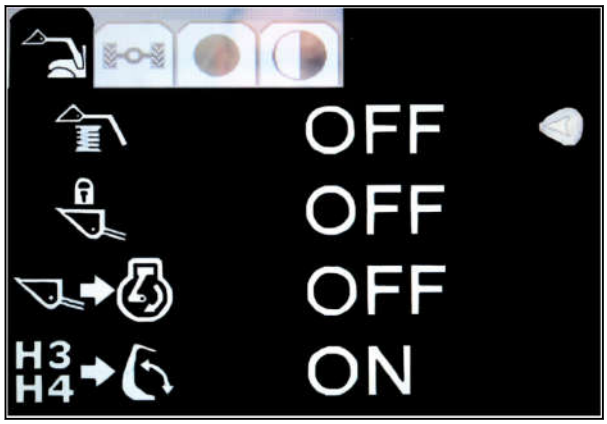


Fig. 294

3.14.3.5 Locking and unlocking accessories

NOTE:
This is a temporary function.

The function is deactivated as soon as the ▼ arrow is released.

Procedure

1. Go to the corresponding display of the Setup and Information Screen.
2. Press OK (the function turns gray when it can be modified).
3. Hold down the ▼ arrow and, at the same time, press (H3) and move the joystick to the right or left to lock or unlock the accessories.
4. Once the accessory has been locked or unlocked, release the joystick and the ▼ arrow.
5. Press OK to validate.

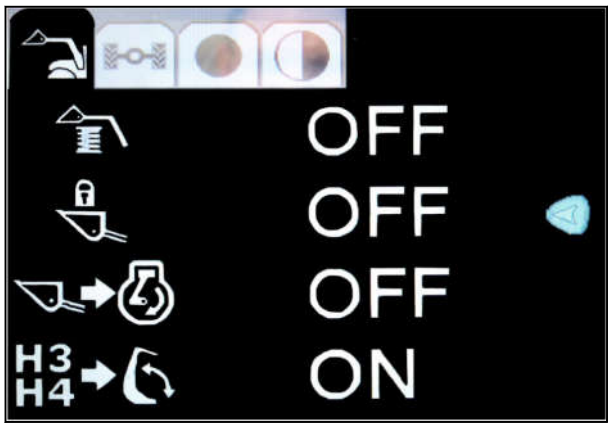


Fig. 295

3.14.3.6 Front loader/engine speed automation

The engine speed increases according to the action on the front loader control.

Press the ⓫ or ⓬ arrows to choose which function to adjust (the index moves), then press ⓪ (the function is grayed out when it can be adjusted)

- Press the ⓫ or ⓬ arrows to activate/ deactivate the front loader/engine speed function then press ⓪ to validate

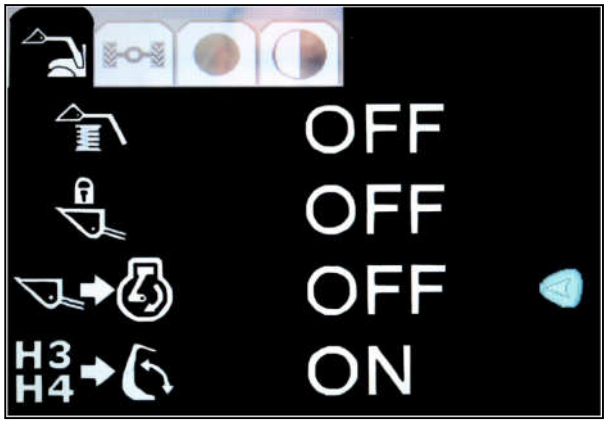


Fig. 296

3.14.3.7 3rd and 4th functions

IMPORTANT:
The 3rd and 4th functions are activated temporarily.
When using the 3rd and 4th functions, check in the Datatronic CCD or in the Setup and Information Screen that there are no functions assigned to switches H3 and H4.

Press the ⓫ or ⓬ arrows to choose which function to adjust (the index moves), then press ⓪ (the function is grayed out when it can be adjusted)

- Press the ⓫ or ⓬ arrows to activate/ deactivate the 3rd function with switches H3/ H4, then press ⓪ to validate

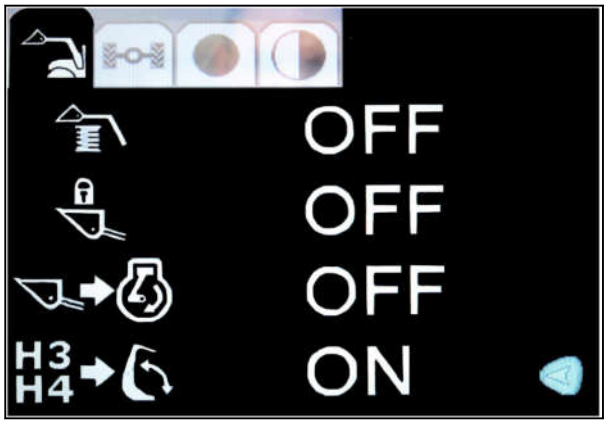


Fig. 297

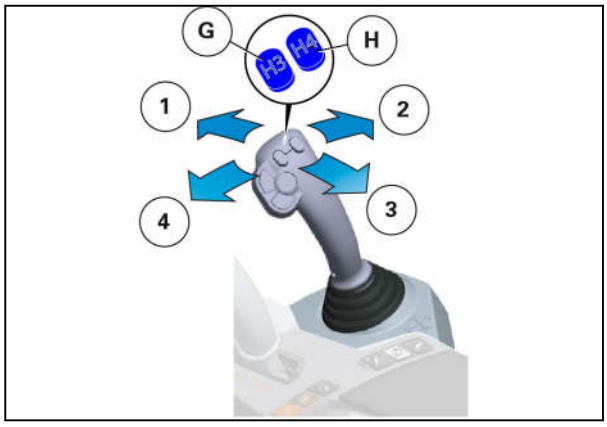


Fig. 298

Mode choices	Operation in different modes
H3/H4: OFF	• Press and hold the H3 (G) button, then tilt the Multi Function Joystick to the right (2) or to the left (4) to activate the 3rd function (for example: a gripper). • Press and hold the H4 (H) button, then tilt the Multi Function Joystick to the right (2) or to the left (4) to activate the 4th function (for example: other front loader implement functions)
H3/H4: ON	• Press and hold button H3 (G) to close the gripper (3rd function). • Press and hold button H4 (H) to open the gripper (3rd function).

3.14.3.8 Automatic shaking function for the implement

Press switch H4 twice to activate this function.

3.15 Lighting

3.15.1 Main lighting control module

(1) Side lights: switch and indicator light for operation of side lights only

- Switched on, indicator light illuminated: pressing the switch operates the side lights (1) (all work lights stored the last time the engine was switched off will also be switched on).
- Switched off, indicator light extinguished: pressing the switch turns off all the lights even those activated by switch (2) (all work lights in operation at this time will be stored when the engine is switched off).

(2) Dipped beam lights/main beam lights: dipped beam lights activation switch and indicator light

- Switched on, indicator light illuminated: pressing the switch (2) activates the dipped beam lights and the side lights (all work lights stored the last time the engine was switched off are extinguished but can be manually reactivated).

  The front work lights on the bonnet are switched off automatically and cannot be reactivated.

  Dipped (3) and main beam (4) light positions are selected using the control unit.
- Switched off, indicator light extinguished: pressing the switch (2) switches off the dipped beam lights and leaves the side lights on automatically.

  The front work lights on the bonnet are then activated (depending on the stored setting) or can be reactivated by pressing the corresponding switch.

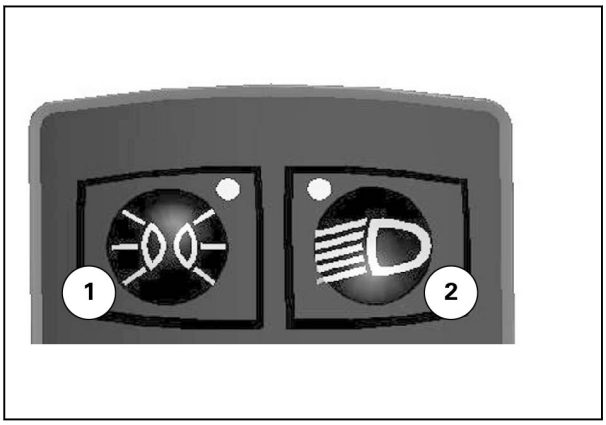


Fig. 299

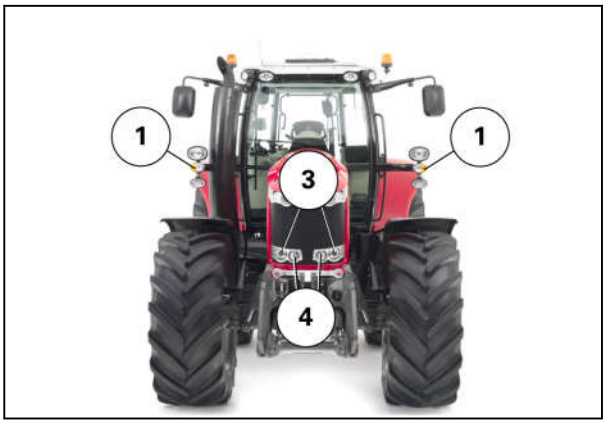


Fig. 299

Fig. 299

3.15.2 Work lights module

(1) Control module and indicator lights for work lights.

Work lights: Press button(s) (2) to (8) to operate the required function(s). The corresponding indicator light will illuminate

(2) Front work lights

(3) Work lights on hand rails (optional)

(4) Work lights on fenders

(5) Rotary beacon

The rotary beacon may be activated automatically at 35 kph

To enable this function, press and hold the switch for 10 seconds

The rotary beacon does not deactivate if the forward speed falls below 35 km, instead the switch must be pressed and held for 10 seconds.

(6) Work lights at rear of roof

(7) Work lights on front of roof

(8) Main beam lights/dipped beam lights on hand rails (optional): Press the high beam lamps switch (2) and the switch (8) to activate the hand rail lights (low beam lamps/ high beam lamps changed using the control unit).

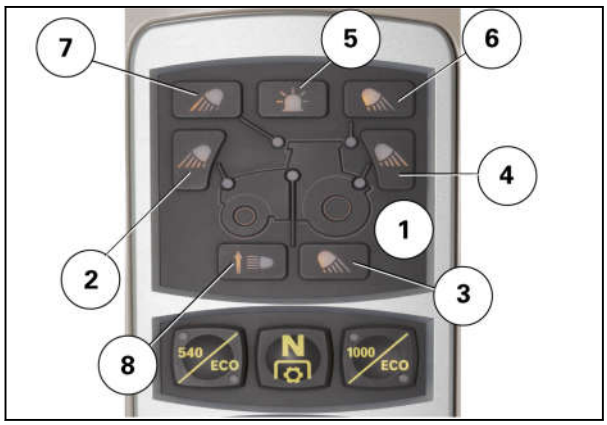


Fig. 300

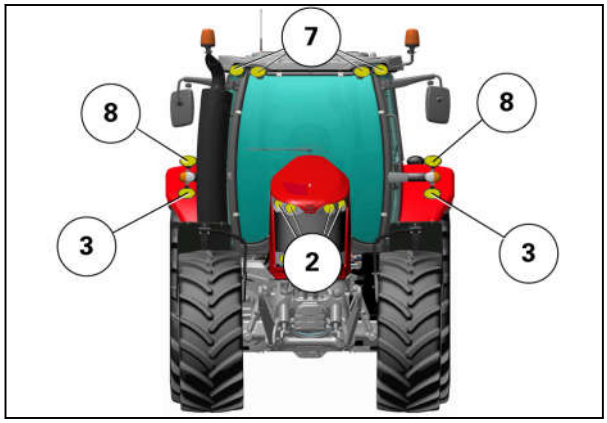


Fig. 300

Fig. 300

Comfort lights delay function

This function allows the work lights to remain on after the ignition is switched off (e.g. to leave a shed lit by the tractor)

When the function is active, it is possible to activate the work lights for 15 seconds after the ignition has been switched off

If no action is taken in 15 seconds, the work lights cannot be activated.

The work lights remain activated for 60 seconds after the control module switches (1) are pressed

This function makes it possible to activate exclusively:

- Work lights on hand rails (3)
- Work lights on fenders (4)
- Work lights at rear of roof (6)
- Work lights on front of roof (7)

Press the ⓤ or ⓓ arrows to choose the Comfort lights delay function (the index moves), then press ⓞⓚ (the function is grayed out when it can be adjusted)

- Press the ⓤ or ⓓ arrows to enable/disable the Comfort lights delay function (**ON** and **OFF**), and then press ⓞⓚ to confirm

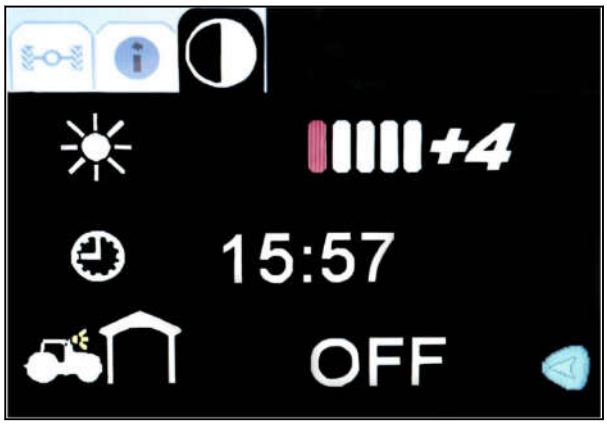


Fig. 301

3.16 Suspended cab

3.16.1 Suspended cab

General

The tractor is fitted with the following cab suspension system:

- Mechanical version: cab damping is provided by two shock absorbers at the rear of the cab. No adjustment can be made by the user.
- Active mechanical version: Cab damping is provided by two shock absorbers at the rear of the cab. The two shock absorbers are individually controlled to improve the reaction of the cab. This assembly is also controlled by a controller located in the cab and two accelerometers. This version can be adjusted by the operator via the cab controls.

Active mechanical cab suspension control

Press the switch (A) to change to suspension mode; the indicator light on the switch illuminates. Press again to deactivate the suspension.

NOTE: *When starting the machine, pressing either the switch* (A) *or the switch* (B) *authorizes activation of the cab suspension*

Fig. 302

Fig. 302

By default, the suspension is optimally adjusted in automatic mode. However, users wishing to change the adjustment may soften or harden the damping using the switch (B). The suspension status is stored in the memory after the engine has been switched off.

Fig. 303

The suspension can only be adjusted after activating the suspended cab. The screen only appears on the main screen after the switch (B) is pressed. Each press on the switch (B) increases or decreases the firmness of the cab damping system.

Several suspension modes are available:

- Automatic active mechanical suspension mode: Default, optimum mode.

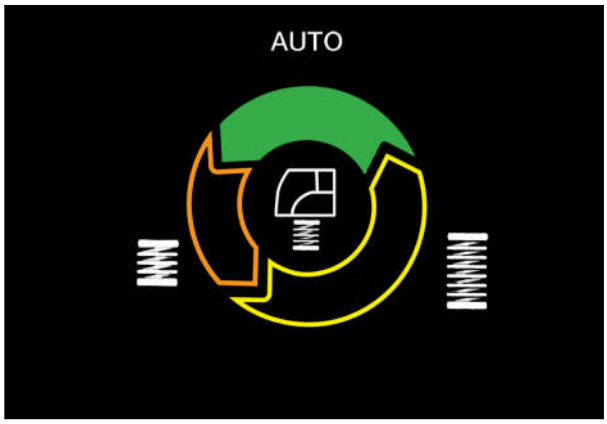


Fig. 304

- Soft active mechanical suspension mode: Soft

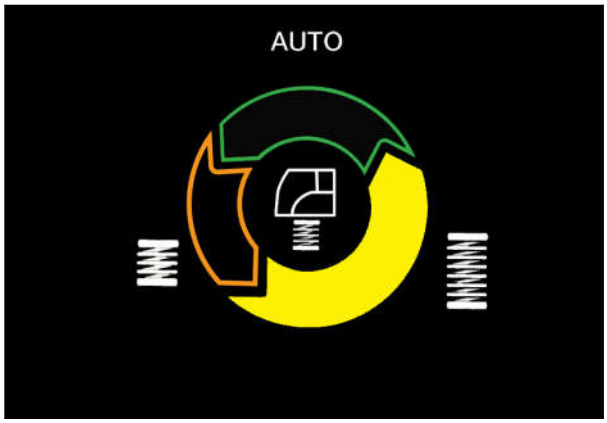


Fig. 305

- Hard active mechanical suspension mode: Hard

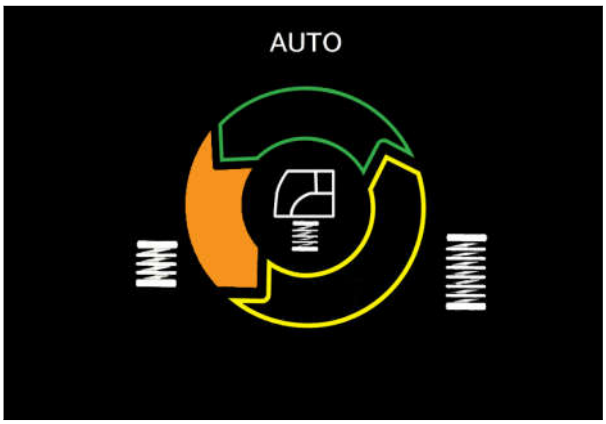


Fig. 306

3.17 Front tires and track widths

3.17.1 Wheel studs

WARNING:
Always tighten the wheel screws and nuts to the correct tightening torque.

WARNING:

1. **It is prohibited to apply grease to any of the screws and/or studs used for installing the wheels.**
2. **Check the tightness of the wheels every day, until there is no longer a variation in the torque provided.**

After refitting a wheel, check the tightness of the wheel after the first two hours of operation and then every day.

3.17.2 Installation points of the axle stands

ATTENTION:
The installation points of the axle stands must be strictly adhered to in order to prevent accidents.

Installing the front axle stands

The axle stands must be installed under the front axle beam

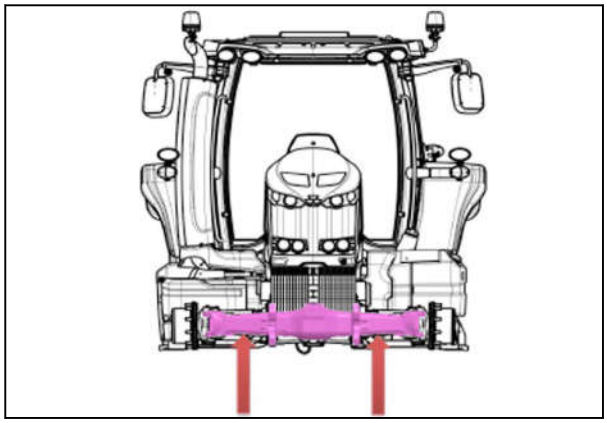


Fig. 307

Installing the rear axle stands

The axle stands must be installed under the rear axle trumpet housings

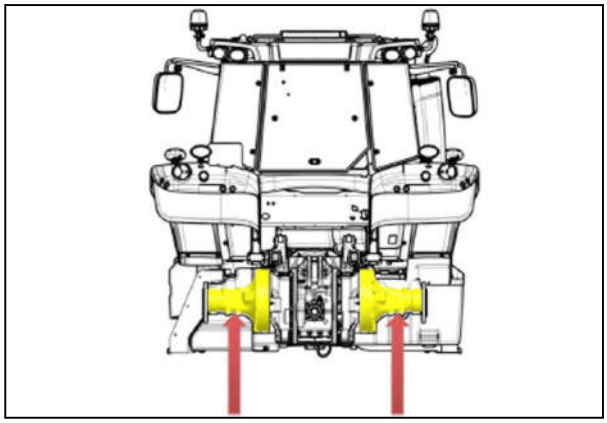


Fig. 308

3.17.3 Adjusting the front wheel track width

General

The track widths available depend on the type of wheel rim and the tire dimensions.

(A) Center of the tractor
(B) Wheel to wheel distance

The wheel to wheel distance is the inner distance between the two front tires

(C) Track width

The track width is the distance between the center of the right tire and the center of the left tire

(D) Plate-to-plate distance

The plate-to-plate distance is the distance between the two bearing faces of the left and right rims

(E) External dimension

The external dimension is the longest distance between the outer sides of the tires

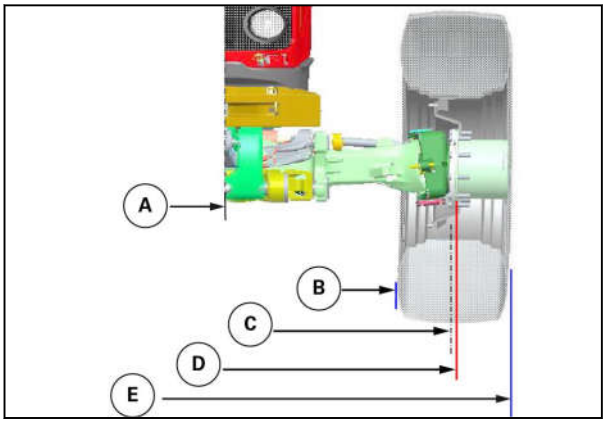


Fig. 309

Models	Description of the 4-wheel drive front axle	Plate-to-plate distance
MF 7719/MF 7720	DANA 750/561 or DANA 750/640	1892 mm
MF 7722	DANA 750/559 or DANA 750/638	1892 mm

Models	Description of the 4-wheel drive front axle	Plate-to-plate distance
MF 7724/MF 7726	DANA 755/507 or DANA 755/607	1892 mm

Rims with fixed disk

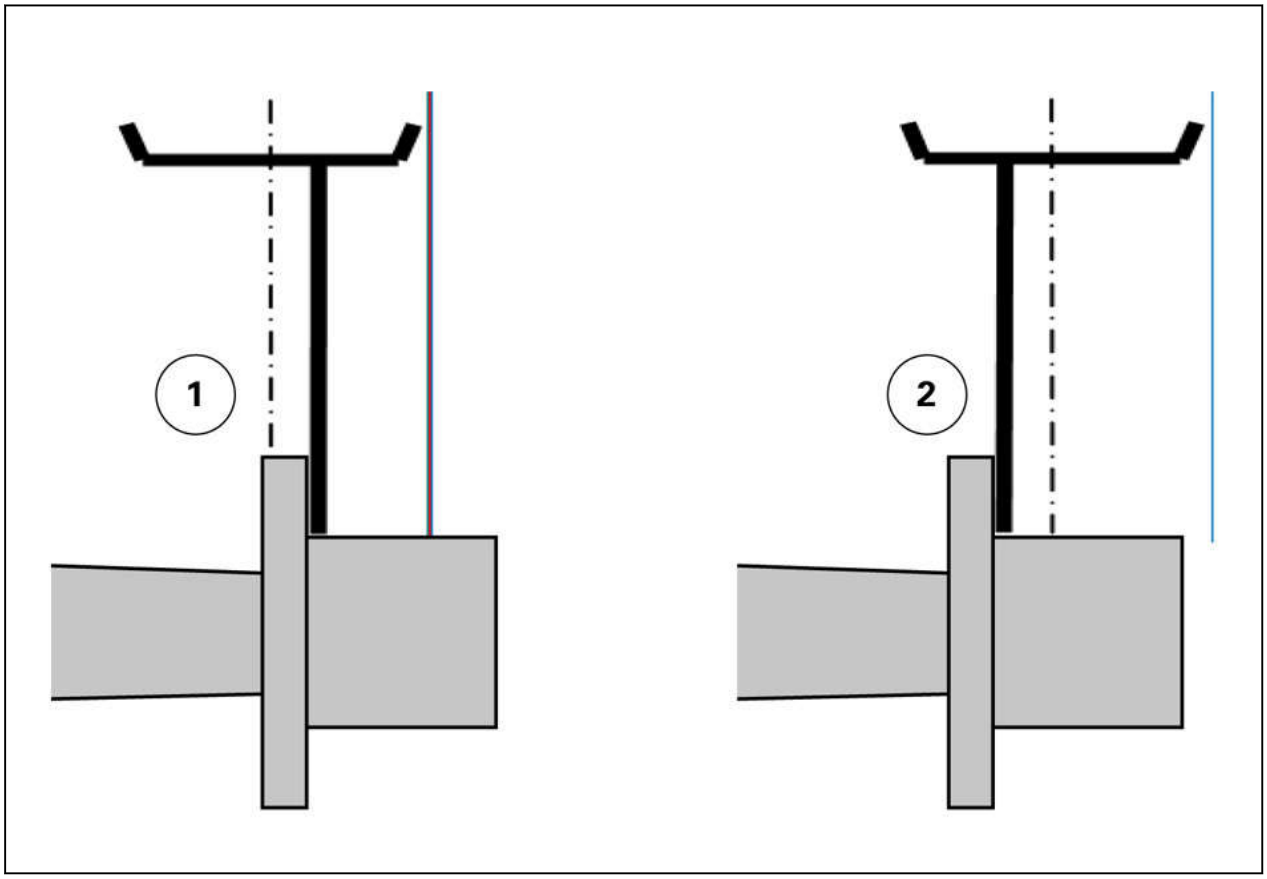


Fig. 310

Steel rims fitted to front axle (depending on front axle model), two track widths can be obtained by reversing the rims.

Description of the 4-wheel drive front axle	Plate-to-plate distance	Minimum track width (1)	Maximum track width (2)
DANA 745/750/755	1892 mm	1842 mm	1992 mm

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

Rims with adjustable disk

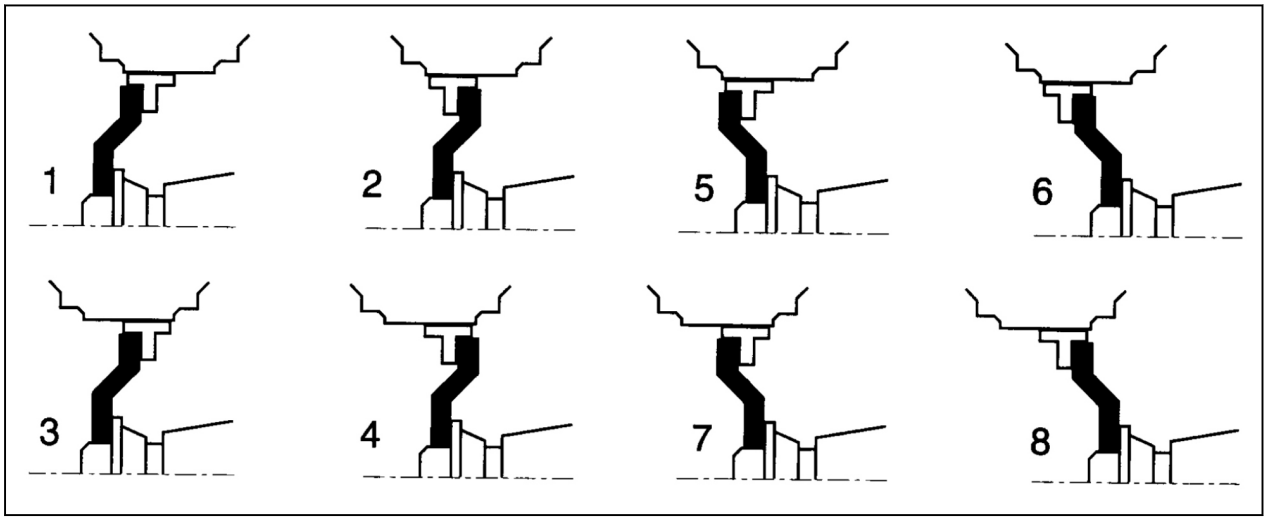


Fig. 311

Eight track widths can be obtained by changing the position of the rim in relation to the disk or by reversing the wheels.

Position	Rims	Plate-to-plate distance	
		DANA 745/750/755: 1892 mm	
		Disk offset of 42 mm	Disk offset of 100 mm
Wheel disk facing inward	(1)	1658 mm	1548 mm
	(2)	1772 mm	1652 mm
	(3)	1826 mm	1752 mm
	(4)	1864 mm	1856 mm
Wheel disk facing outward	(5)	1940 mm	1948 mm
	(6)	1978 mm	2052 mm
	(7)	2032 mm	2152 mm
	(8)	2146 mm	2256 mm

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

Adjustment after changing track widths

NOTE:
With narrow track widths and with certain tire fittings, the wheels may touch the bonnet when turning at maximum lock. To prevent this, the hubs are fitted with threaded stops (1) *that can be adjusted to limit the steering angle.*
The adjustment made in the factory complies with the modification requirements for tractor transport.

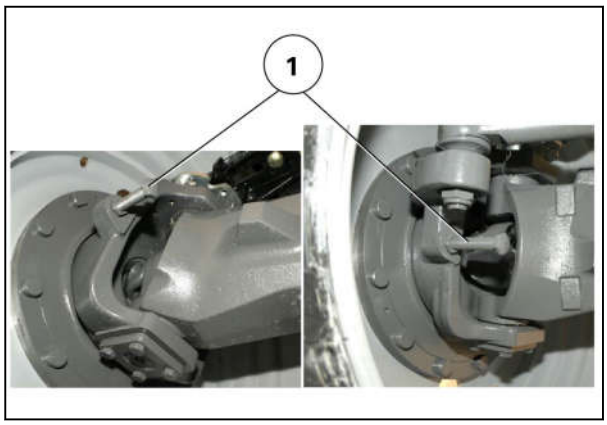


Fig. 312

3.17.4 Adjusting the 4WD front axle stops

General

Check and, if necessary, adjust the front axle stops each time the front track width is altered or following a wheel and/or tire change.

Oscillation stop (optional): Stops are available as an option to limit front axle oscillation.

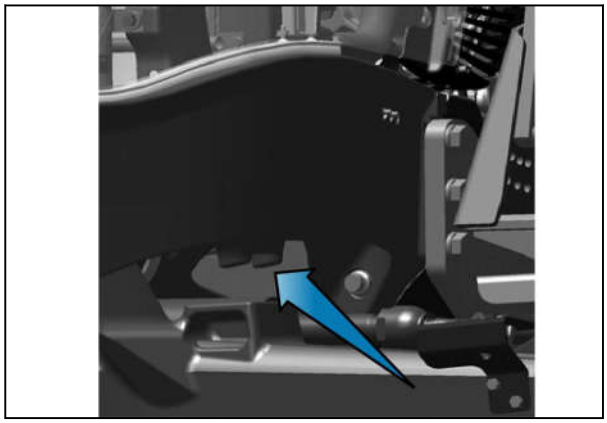


Fig. 313

3.17.4.1 Fitting the oscillation stops

Procedure

Fit each stop using the retaining screw.

3.17.4.2 Adjusting the steering angle

NOTE:
The front axles are intended for a maximum steering angle of 55°.

Procedure

1. Place the front of the tractor on a fixed support so that the front axle is able to swing freely over the entire length of its high and low travel.
2. Switch the engine on and activate the front axle suspension.
3. Start by adjusting the rear stop screw on the side that presents the greatest risk for the front wheel of contact with the immediate environment, move the axle over the entire length until it touches the oscillation stop in order to adjust the stop screw while maintaining a minimum clearance of 40 mm between the tire and the nearest point (e.g.: body/attachments).
4. Bring the diagonally opposed stop screw in contact with the front axle and tighten the locknut.
5. Repeat the adjustment operations (3) and (4) to adjust the remaining stop screws.
6. Swing to the right and left once more to check that the adjustment has not moved and/or there is no contact with the immediate surrounding area of the tractor and then tighten the stops fully.

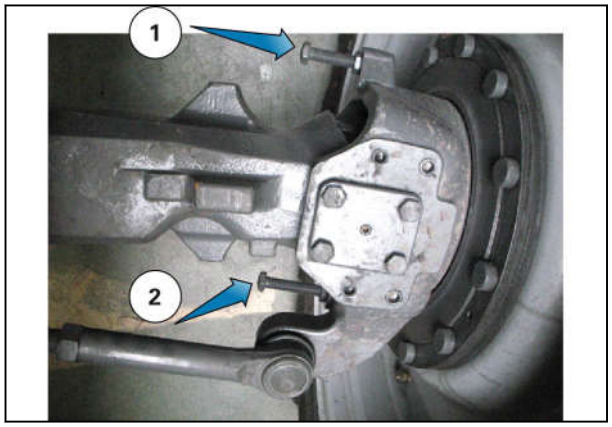


Fig. 314

(1) Front adjustment screw
(2) Rear adjustment screw

3.17.4.3 Toe-in check

The toe-in check requires specific tools; please consult your dealer if a problem occurs.

3.17.4.4 Adjusting the front fenders Adjusting the lateral position of the fender on the support (two adjustments are possible)

Procedure

1. Move the fender in relation to the support (5) by changing the position of the screws (3).
2. Move the fender in relation to the support by loosening the screws (4) to move the fender into the required position.

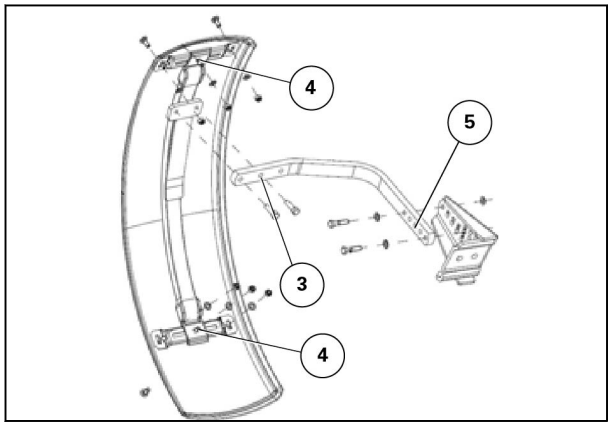


Fig. 315

3.17.4.5 Adjusting the front fenders Shoe side adjustment on the front axle

Procedure

1. Loosen the screw (1) to slide the shoe from the fender.
2. After changing the position, retighten the screw (1) to a torque of 22 Nm.

   NOTE:
   After adjusting the position of the front fenders, it may be necessary to adjust the stop (2) *to limit the movement when the wheels are turned.*

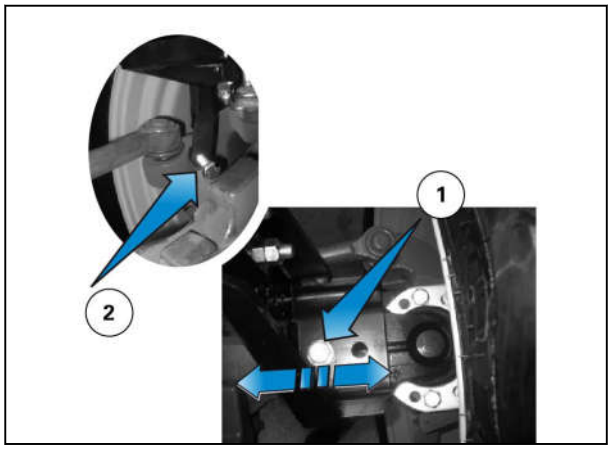


Fig. 316

3.17.4.6 Adjusting the front fenders Adjusting the height of the support on the shoe

Procedure

Modify the position of the support (5) to adapt the height of the fender to the size of the wheel.

3.17.5 Tires

Agricultural tire markings

(1) Tire size in inches or millimetres
(2) Type of manufacture (e.g. radial)
(3) Nominal rim diameter in inches
(4) Side/tire size ratio
(5) Load capacity index per tire 121 = 1450 kg; 153 = 3650 kg
(6) Speed symbol A8 = 40 kph
(7) Reference pressure: 1.6 bar
(8) Tubeless: Without inner tube

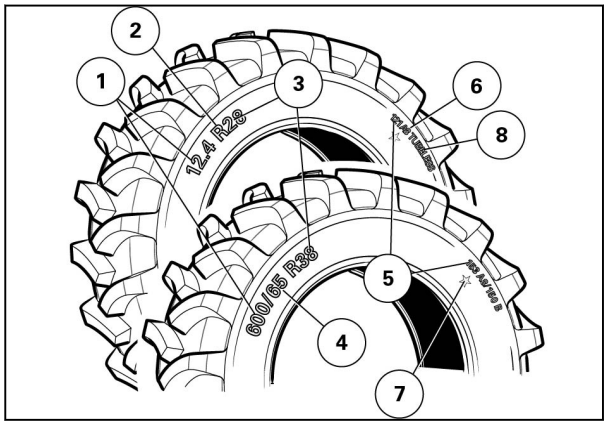


Fig. 317

3.17.6 Tire pressures

Pressure under load

Check the tire pressures every 100 hours. Tire pressures vary according to make, load and speed as well as to the type of work being carried out. Refer to the inflation tables issued by the tire manufacturers.

3.18 Rear tires and track widths

3.18.1 Wheel studs

WARNING:
Always tighten the wheel screws and nuts to the correct tightening torque.

WARNING:

1. **It is prohibited to apply grease to any of the screws and/or studs used for installing the wheels.**
2. **Check the tightness of the wheels every day, until there is no longer a variation in the torque provided.**

After refitting a wheel, check the tightness of the wheel after the first two hours of operation and then every day.

3.18.2 Installation points of the axle stands

ATTENTION:
The installation points of the axle stands must be strictly adhered to in order to prevent accidents.

Installing the front axle stands

The axle stands must be installed under the front axle beam

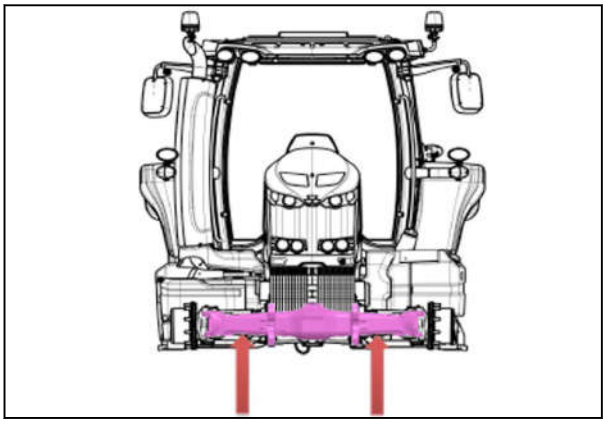


Fig. 318

Installing the rear axle stands

The axle stands must be installed under the rear axle trumpet housings

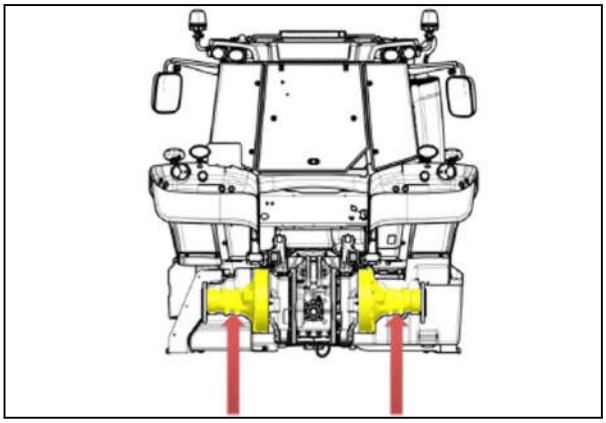


Fig. 319

3.18.3 Rear track width with flanged shafts

General

The various track widths are obtained by changing the position of the rim in relation to the disk or by reversing the wheels.

(A) Center of the tractor
(B) Wheel to wheel distance

The wheel to wheel distance is the inner distance between the two rear tires

(C) Track width

The track width is the distance between the center of the right tire and the center of the left tire

(D) Plate-to-plate distance

The plate-to-plate distance is the distance between the two bearing faces of the left and right rims

(E) External dimension

The external dimension is the longest distance between the outer sides of the tires

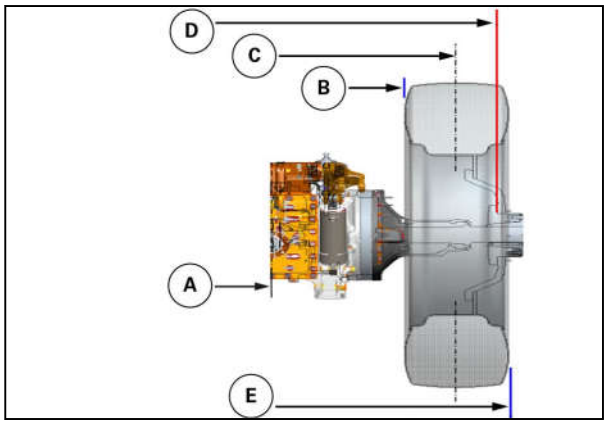


Fig. 320

Models	Description of rear axle	Plate-to-plate distance
MF 7719 Dyna-6	GPA 41	1908 mm
MF 7720 Dyna-6	GPA 41	1908 mm
MF 7722 Dyna-6	GPA 42	1940 mm

Rims with fixed disk

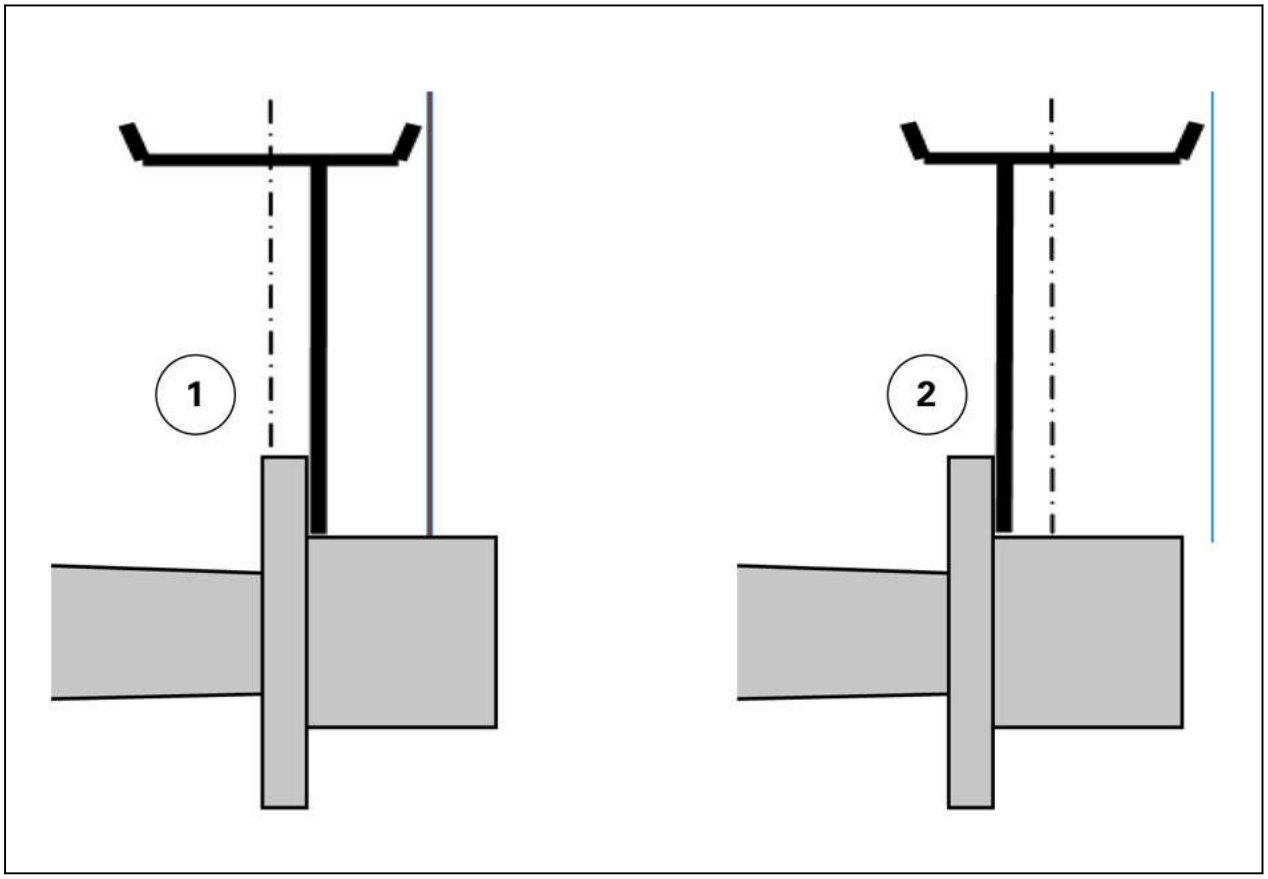


Fig. 321

2 track widths can be obtained by reversing the rims:

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

Rear axle	Position of rims	Plate-to-plate distance	
		1908 mm (GPA 41)	1940 mm (GPA 42)
		Track widths	Track widths
Without spacer	Minimum (1)	1758 mm	1790 mm
	Maximum (2)	2084 mm	2116 mm
With one 25-mm spacer on each side	Minimum (1)	1808 mm	1840 mm
	Maximum (2)	2134 mm	2166 mm
With two 25-mm spacers on each side	Minimum (1)	1858 mm	1890 mm
	Maximum (2)	2184 mm	2216 mm

Track widths possible with welded wheels (rims with fixed disk)

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

3.18.4 Rear track width with short straight shafts

General

The various track widths are obtained by changing the position of the rim in relation to the disk or by reversing the wheels.

(A) Center of the tractor
(B) Wheel to wheel distance

The wheel to wheel distance is the inner distance between the two rear tires

(C) Track width

The track width is the distance between the center of the right tire and the center of the left tire

(D) Plate-to-plate distance

The plate-to-plate distance is the distance between the two bearing faces of the left and right rims

(E) External dimension

The external dimension is the longest distance between the outer sides of the tires

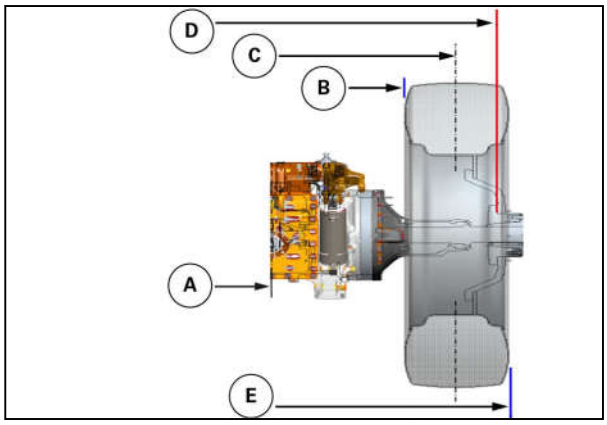


Fig. 322

Models	Rear axle type	Diameter of the straight shaft	Plate-to-plate distance	
			Min.	Max.
MF 7719/MF 7720	GPA 41	95 mm	1826 mm	2144 mm
MF 7722	GPA 42	95 mm	1766 mm	2138 mm
MF 7724/MF 7726	GPA 44	110 mm	1688 mm	2072 mm
MF 7724/MF 7726	GPA 45	110 mm	1738 mm	2202 mm

Rims with fixed disk

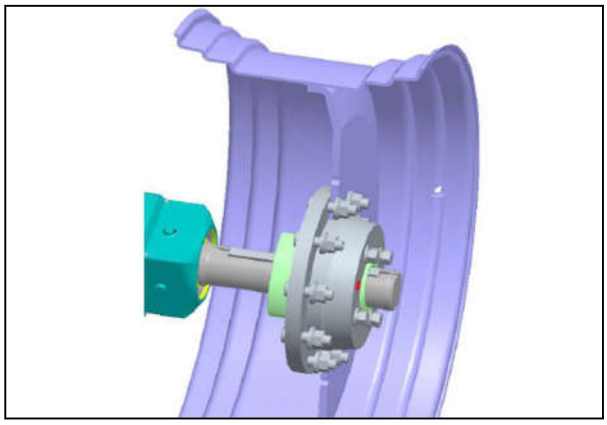


Fig. 323

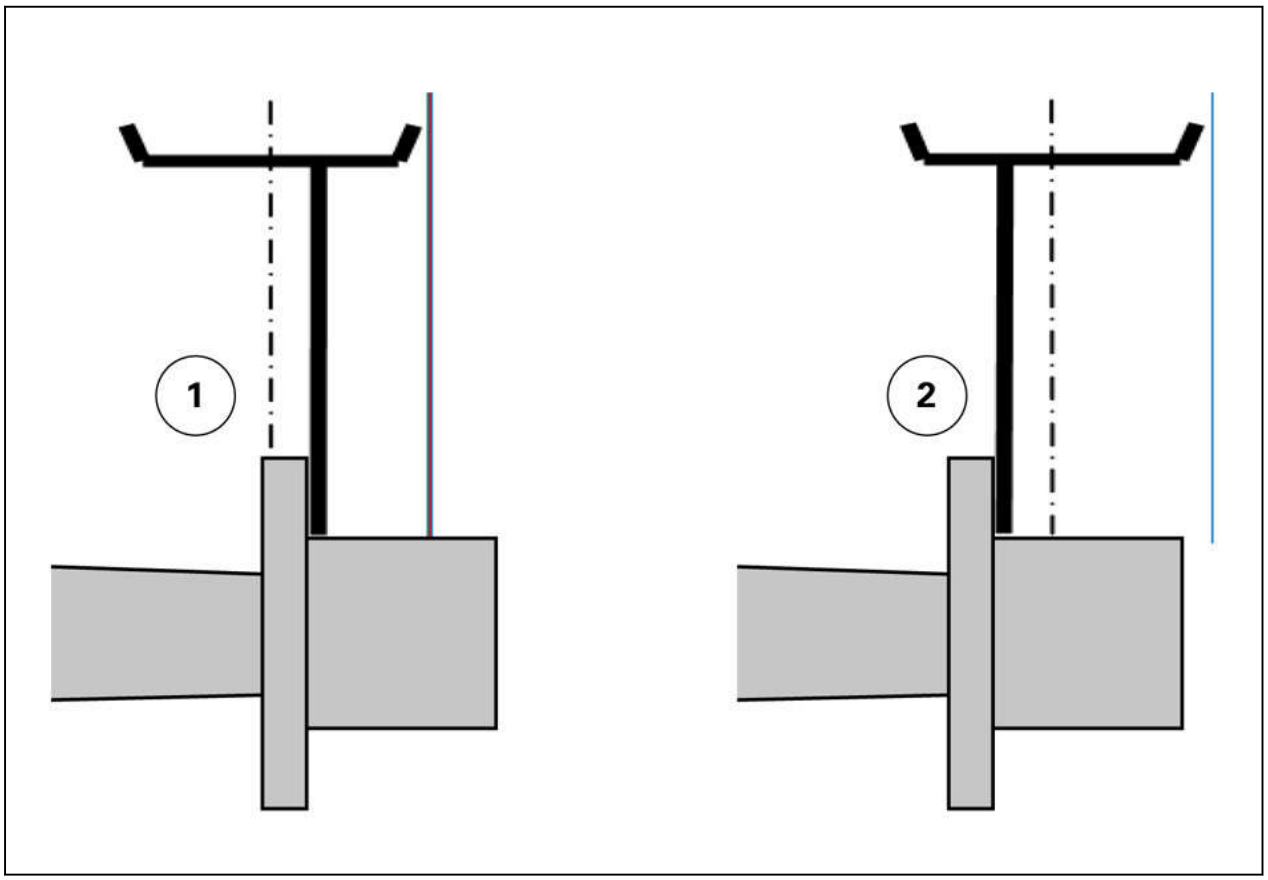


Fig. 324

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2144 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2144 mm
GPA 41	1676 mm	1994 mm	2002 mm	2320 mm

Track widths possible with rims with steel disks

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2138 mm	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2138 mm
GPA 42	1616 mm	1988 mm	1942 mm	2314 mm

Track widths possible with rims with steel disks

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2072 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2072 mm
GPA 44	1538 mm	1922 mm	1864 mm	2248 mm

Track widths possible with rims with steel disks

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 2202 mm	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 2202 mm
GPA 45	1588 mm	2052 mm	1914 mm	2378 mm

Track widths possible with rims with steel disks

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

Rims with adjustable disk

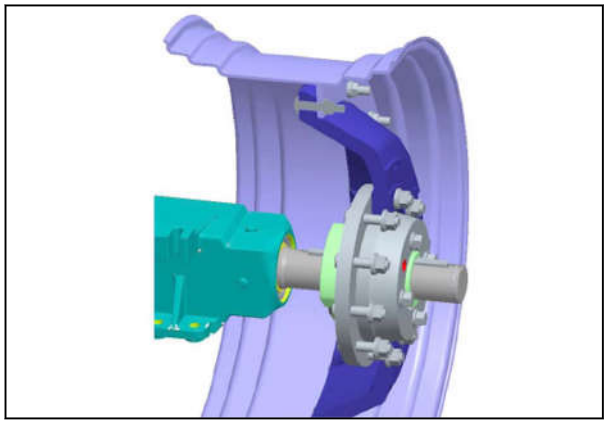


Fig. 325

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

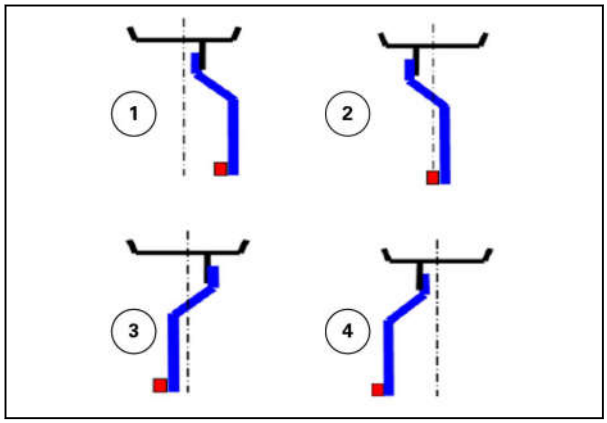


Fig. 326

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2144 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2144 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2144 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2144 mm
GPA 41	1461.6 mm	1779.6 mm	1787.6 mm	2105.6 mm	1966.4 mm	2284.4 mm	2292.4 mm	2610.4 mm

Track widths possible with rims with cast iron disk

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	Minimum track width	Maximum track width	Minimum track width	Maximum track width	Minimum track width	Maximum track width	Minimum track width	Maximum track width

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	with plate-to-plate distance of 1766 mm	with plate-to-plate distance of 2138 mm	with plate-to-plate distance of 1766 mm	with plate-to-plate distance of 2138 mm	with plate-to-plate distance of 1766 mm	with plate-to-plate distance of 2138 mm	with plate-to-plate distance of 1766 mm	with plate-to-plate distance of 2138 mm
GPA 42	1401.6 mm	1773.6 mm	1727.6 mm	2099.6 mm	1906.4 mm	2278.4 mm	2232.4 mm	2604.4 mm

Track widths possible with rims with cast iron disk

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2072 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2072 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2072 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2072 mm
GPA 44	1323.6 mm	1707.6 mm	1649.6 mm	2033.6 mm	1828.4 mm	2212.4 mm	2154.4 mm	2538.4 mm

Track widths possible with rims with cast iron disk

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 2202 mm	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 2202 mm	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 2202 mm	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 2202 mm
GPA 45	1373.6 mm	1837.6 mm	1699.6 mm	2163.6 mm	1878.4 mm	2342.4 mm	2204.4 mm	2668.4 mm

Track widths possible with rims with cast iron disk

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

3.18.5 Rear track width with long straight shafts

General

The various track widths are obtained by changing the position of the rim in relation to the disk or by reversing the wheels.

(A) Center of the tractor
(B) Wheel to wheel distance

The wheel to wheel distance is the inner distance between the two rear tires

(C) Track width

The track width is the distance between the center of the right tire and the center of the left tire

(D) Plate-to-plate distance

The plate-to-plate distance is the distance between the two bearing faces of the left and right rims

(E) External dimension

The external dimension is the longest distance between the outer sides of the tires

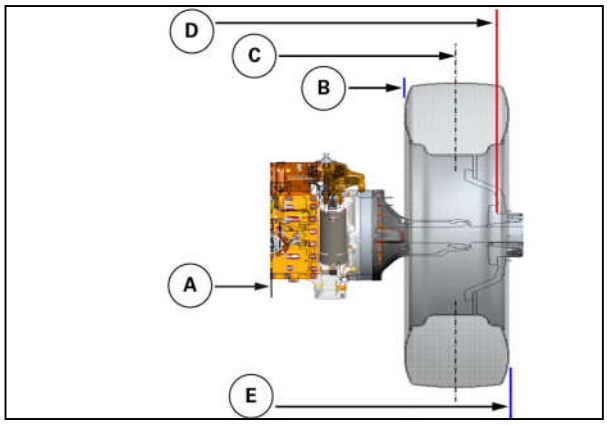


Fig. 327

Models	Rear axle type	Diameter of the straight shaft	Plate-to-plate distance	
			Min.	Max.
MF 7719/MF 7720	GPA 41	95 mm	1826 mm	2847 mm
MF 7722	GPA 42	95 mm	1766 mm	2846 mm
MF 7724/MF 7726	GPA 44	110 mm	1688 mm	2997 mm
MF 7724/MF 7726	GPA 45	110 mm	1738 mm	3002 mm

Rims with fixed disk

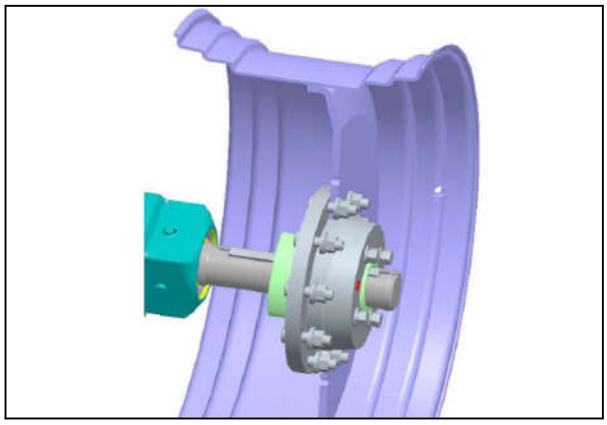


Fig. 328

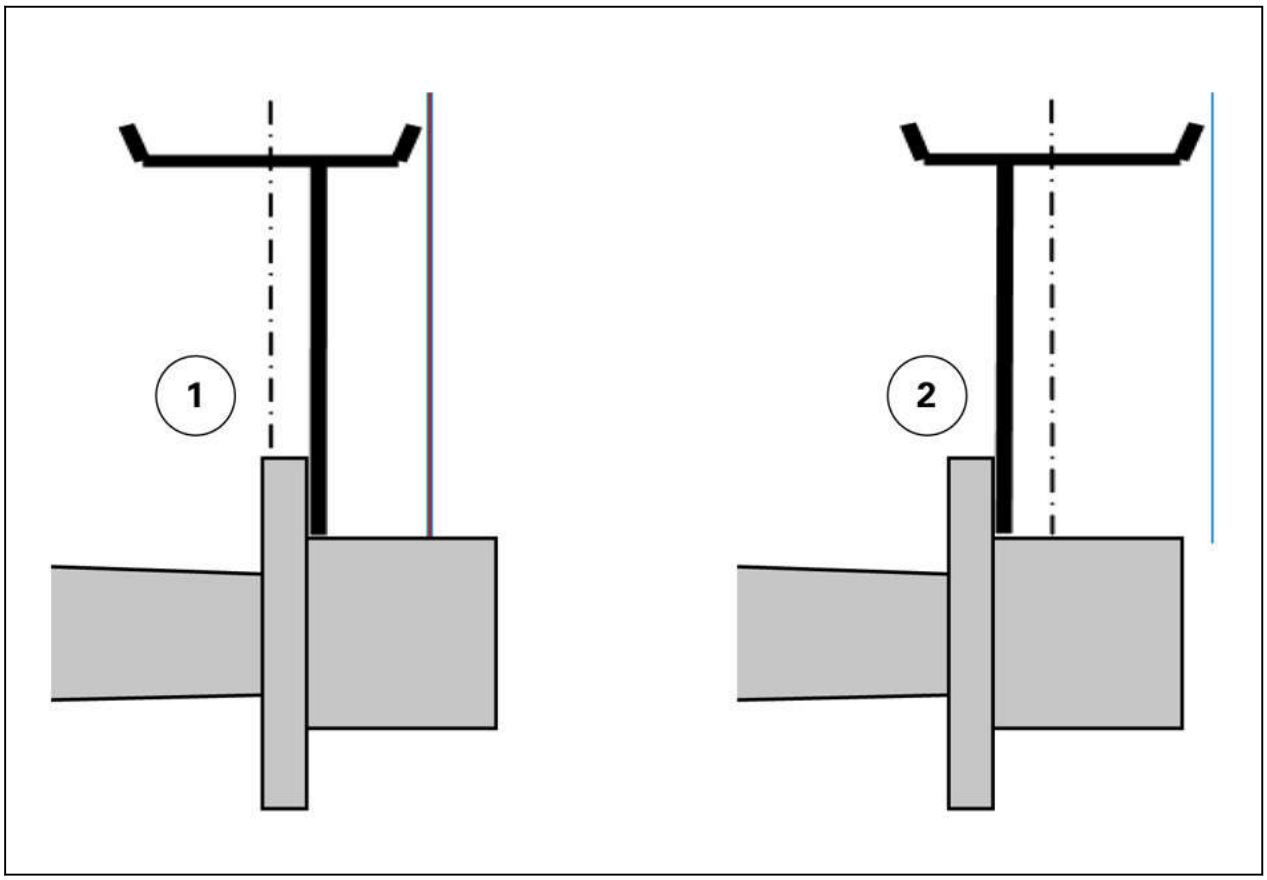


Fig. 329

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2847 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2847 mm
GPA 41	1676 mm	2697 mm	2002 mm	3023 mm

Track widths possible with rims with steel disks

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2846 mm	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2846 mm
GPA 42	1616 mm	2696 mm	1942 mm	3022 mm

Track widths possible with rims with steel disks

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2997 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2997 mm
GPA 44	1538 mm	2847 mm	1864 mm	3173 mm

Track widths possible with rims with steel disks

Rear axle type	Rim in position (1)		Rim in position (2)	
	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 3002 mm	Minimum track width with plate-to-plate distance of 1738 mm	Maximum track width with plate-to-plate distance of 3002 mm
GPA 45	1588 mm	2852 mm	1914 mm	3178 mm

Track widths possible with rims with steel disks

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

Rims with adjustable disk

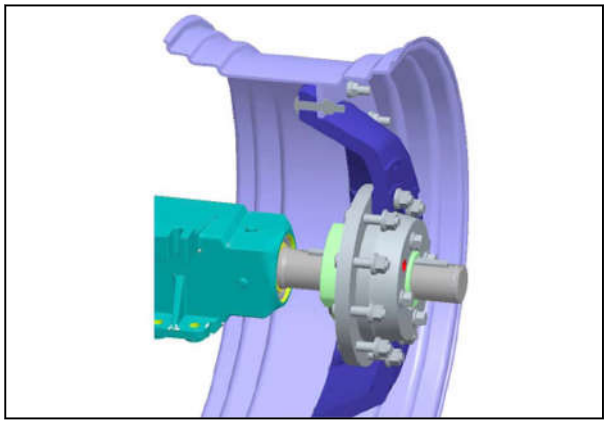


Fig. 330

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

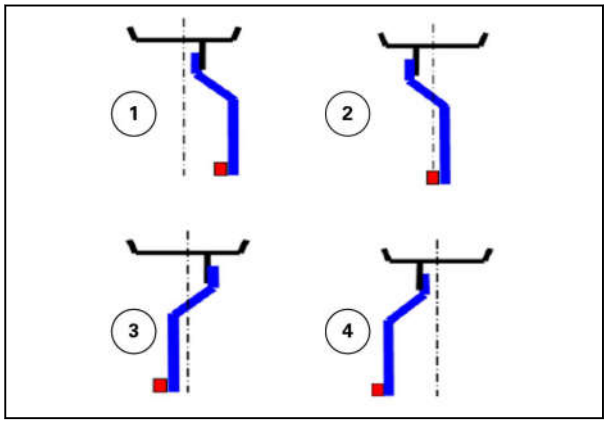


Fig. 331

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2847 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2847 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2847 mm	Minimum track width with plate-to-plate distance of 1826 mm	Maximum track width with plate-to-plate distance of 2847 mm
GPA 41	1461.6 mm	2482.6 mm	1787.6 mm	2808.6 mm	1966.4 mm	2987.4 mm	2292.4 mm	3313.4 mm

Track widths possible with rims with cast iron disk

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2846 mm	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2846 mm	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2846 mm	Minimum track width with plate-to-plate distance of 1766 mm	Maximum track width with plate-to-plate distance of 2846 mm
GPA 42	1401.6 mm	2481.6 mm	1727.6 mm	2807.6 mm	1906.4 mm	2986.4 mm	2232.4 mm	3312.4 mm

Track widths possible with rims with cast iron disk

Rear axle type	Rim in position (1)		Rim in position (2)		Rim in position (3)		Rim in position (4)	
	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2997 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2997 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2997 mm	Minimum track width with plate-to-plate distance of 1688 mm	Maximum track width with plate-to-plate distance of 2997 mm
GPA 44	1323.6 mm	2632.6 mm	1649.6 mm	2958.6 mm	1828.4 mm	3137.4 mm	2154.4 mm	3463.4 mm

Track widths possible with rims with cast iron disk

Rear axle type	Rim in position (1)	Rim in position (2)	Rim in position (3)	Rim in position (4)

table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

3.18.6 Adjusting the rear wheel track width

General

WARNING:
If work is carried out on the wheels, make sure that the tractor is immobilized. If work is carried out on the tractor raised on a jack, no one is allowed to be underneath the tractor.

The various track widths are obtained by moving the wheel on the straight shaft.

3.18.6.1 Adjustment of wheel position on the straight shaft

Procedure

1. Lift the rear of the tractor to lift the wheels off the ground and carefully chock the tractor
2. Loosen the 3 screws (A) from each half cone, so 6 screws in total for the whole wheel
3. Tighten these 6 screws in the holes (B) (3 screws in each half cone), which loosens the cone mounting.
4. Adjust to the desired track width

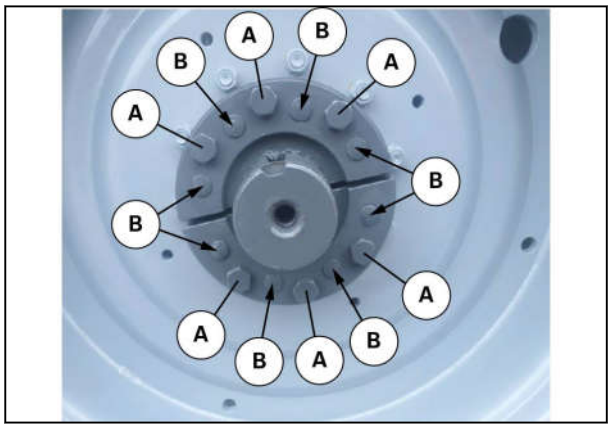


Fig. 332

5. Tighten the 6 screws on the cone, so 3 screws per half cone
6. Tighten the screws to the tightening torque (see tightening torque in the Maintenance section of the Operator's Manual) in the specified order (1 to 6). After refitting, check the tightness of the screws after the first two hours of use and then every day until the specified torque no longer varies.

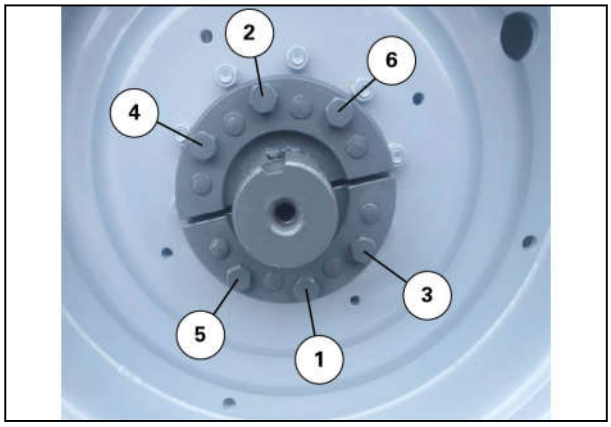


Fig. 333

3.18.6.2 Adjustment of wheel position on the straight shaft

Procedure

1. Lift the rear of the tractor to lift the wheels off the ground and carefully chock the tractor.
2. Remove the two mounting screws (1) and fit them into the holes (2)
3. Slacken off the other two screws by three or four turns
4. Tighten screws (1) alternately until the outer hub is released from the inner hub.
5. Adjust the position of the wheel on the shaft according to the required track width.
6. Refit the 4 screws (1) in their original location and retighten them (see tightening torque in the Maintenance section of the Operator's Manual). When fitting, gradually tighten the nuts to the torque setting according to the recommendations in the table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

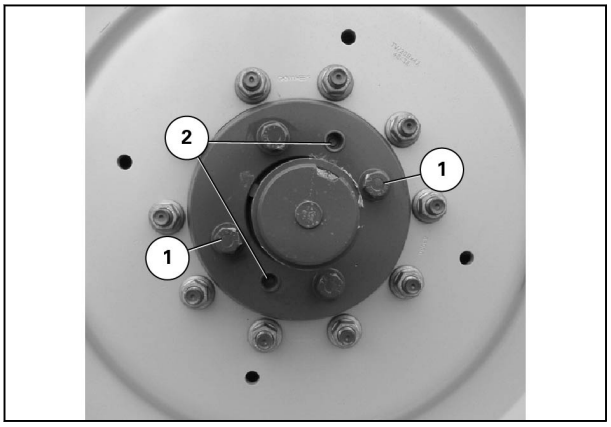


Fig. 334

3.19 Dual wheels

3.19.1 Dual wheels

In general, dual wheels should be used only for reducing soil compaction work (surface treatment work).

WARNING:

If work is carried out on the wheels, check to ensure the tractor is immobilized. If work is carried out on the tractor while it is raised on a jack, there should be nobody underneath the tractor.

For dual rear wheels, it is recommended to place the original wheel on the outside and a wheel with a thicker disk on the inside.

When selecting dual wheels that reuse the rims fitted as standard in the factory with a disk thickness less than 16 mm, you must obtain additional wheels with a thickness equal to or greater than 16 mm and fit them on the inside and then lock together with the standard rims (factory fitted) on the outside.

IMPORTANT:
Use a tube type dual wheel kit, which is fitted to the hubs and not to the rims (kit available from your dealer).

The following four criteria must be taken into account when selecting the correct dual rear wheels:

1. Soil conditions
2. Traction (narrow wheels)
3. Overall dimensions (2.50 m for road use)
4. Tire type

IMPORTANT:
The wrong choice of dual wheels has a direct influence on the mechanical components and the wheel rims of the tractor. Avoid using dual wheels for intensive pulling, even for short periods (hauling out a tractor stuck in the mud etc.).

NOTE:
It is preferable to use wide tires or low-pressure tires instead of dual wheels.

Conditions of use of dual wheels

IMPORTANT:
Certain conditions must be respected with dual wheels

- *Double the rear lights, marker lights and reflectors when the fitted series lights are more than 400 mm away from the sides of the tractor.*
- *Maximum forward speed of the tractor is limited to 25 kph*
- *Check that the steering angle is large enough.*

Use of dual wheels

- Set the inner wheels to minimum track width

  NOTE:
  The use of very wide tires on dual wheels is not recommended.
  The most efficient dual wheel arrangement is to use two tires of the same specification.
- When fitting dual wheels with tires of different widths, fit the wider tire on the inside.
- When fitting dual wheels with tires of the same width, fit the tire with the most wear on the outside.
- The inflation pressure of the outer tires should be slightly reduced by approximately 0.2 bar.
- On clay soil, the minimum track width should be increased in proportion to the size of the tires.

IMPORTANT:
Dual wheels do not double the load capacity of the tractor.

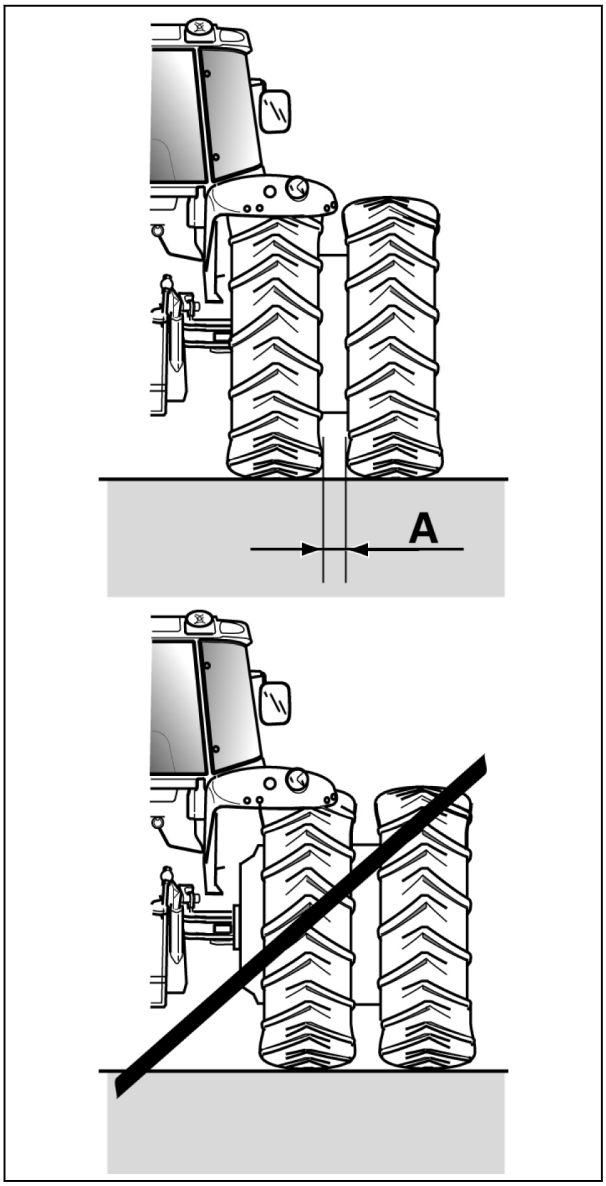


Fig. 335

3.19.2 Installation points of the axle stands

ATTENTION:
The installation points of the axle stands must be strictly adhered to in order to prevent accidents.

Installing the front axle stands

The axle stands must be installed under the front axle beam

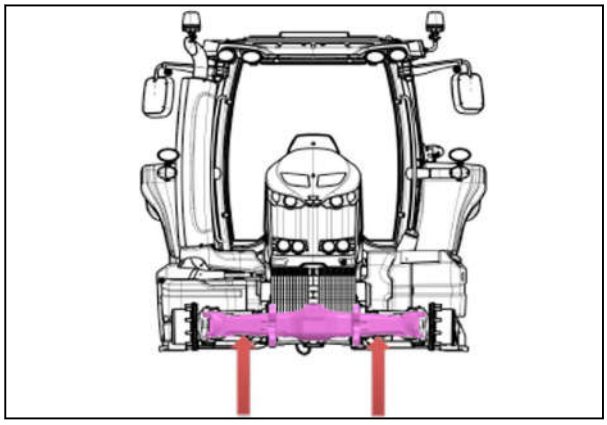


Fig. 336

Installing the rear axle stands

The axle stands must be installed under the rear axle trumpet housings

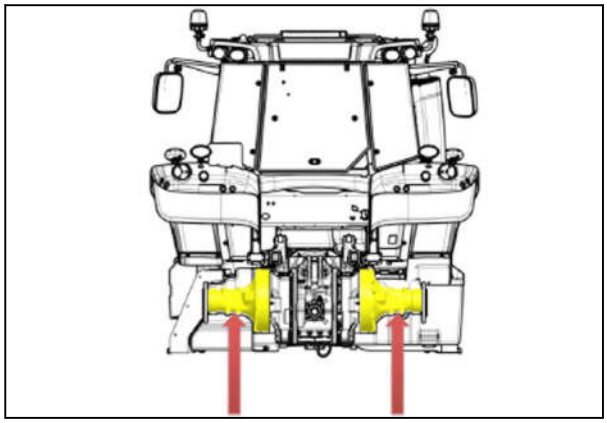


Fig. 337

3.19.3 Dual rear wheel track width with short straight shafts

General

The various track widths are obtained by changing the position of the rim in relation to the disk or by reversing the wheels.

(A) Center of the tractor

(B) External dimension

The external dimension is the longest distance between the outer sides of the tires

(C) Outer track width

The outer track width is the distance between the center of the right outer tire and the center of the left outer tire

(D) Outer plate-to-plate distance

The outer plate-to-plate distance is the distance between the two bearing faces of the left and right outer rims

(E) Inner plate-to-plate distance

The inner plate-to-plate distance is the distance between the two bearing faces of the left and right inner rims

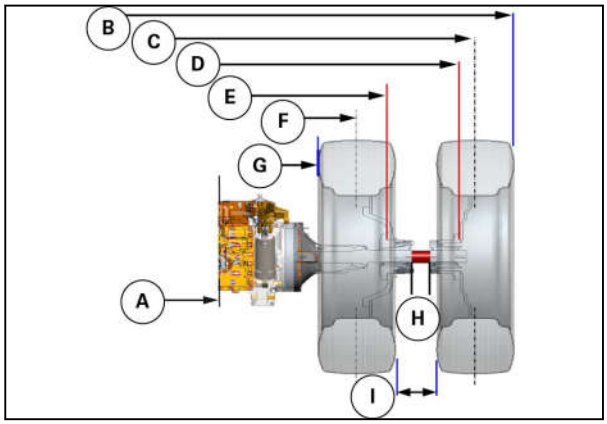


Fig. 338

(F) Inner track width

The inner track width is the distance between the center of the right inner tire and the center of the left inner tire

(G) Wheel to wheel distance

The wheel to wheel distance is the inner distance between the two rear tires

(H) Free space

Free space is the distance between two cone/hub assemblies from the same side allowing variation in twinned track widths

(I) Wheel to wheel distance of the dual wheels

The wheel to wheel distance of the dual wheels is the free space between two tires on the same side of the tractor

Models	Rear axle type	Diameter of the straight shaft	Inner plate-to-plate distance	Outer plate-to-plate distance	Free space
			Min.	Max.	
MF 7719/MF 7720	GPA 41	95 mm	1826 mm	3226 mm	1 mm
MF 7722	GPA 42	95 mm	1766 mm	3220 mm	28 mm
MF 7724/MF 7726	GPA 44	110 mm	1688 mm	3412 mm	37 mm
MF 7724/MF 7726	GPA 45	110 mm	1738 mm	3542 mm	77 mm

Assembly with rims with fixed disk/rims with fixed disk

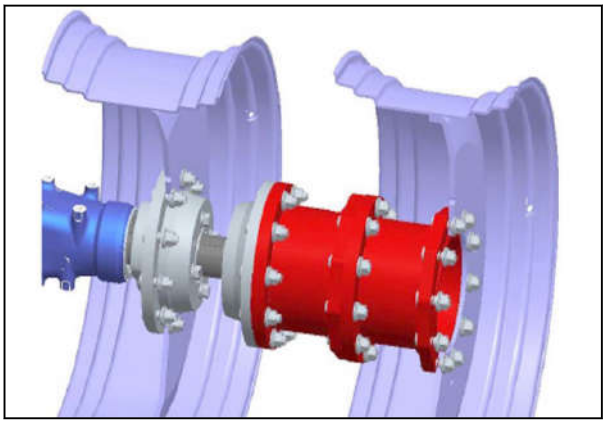


Fig. 339

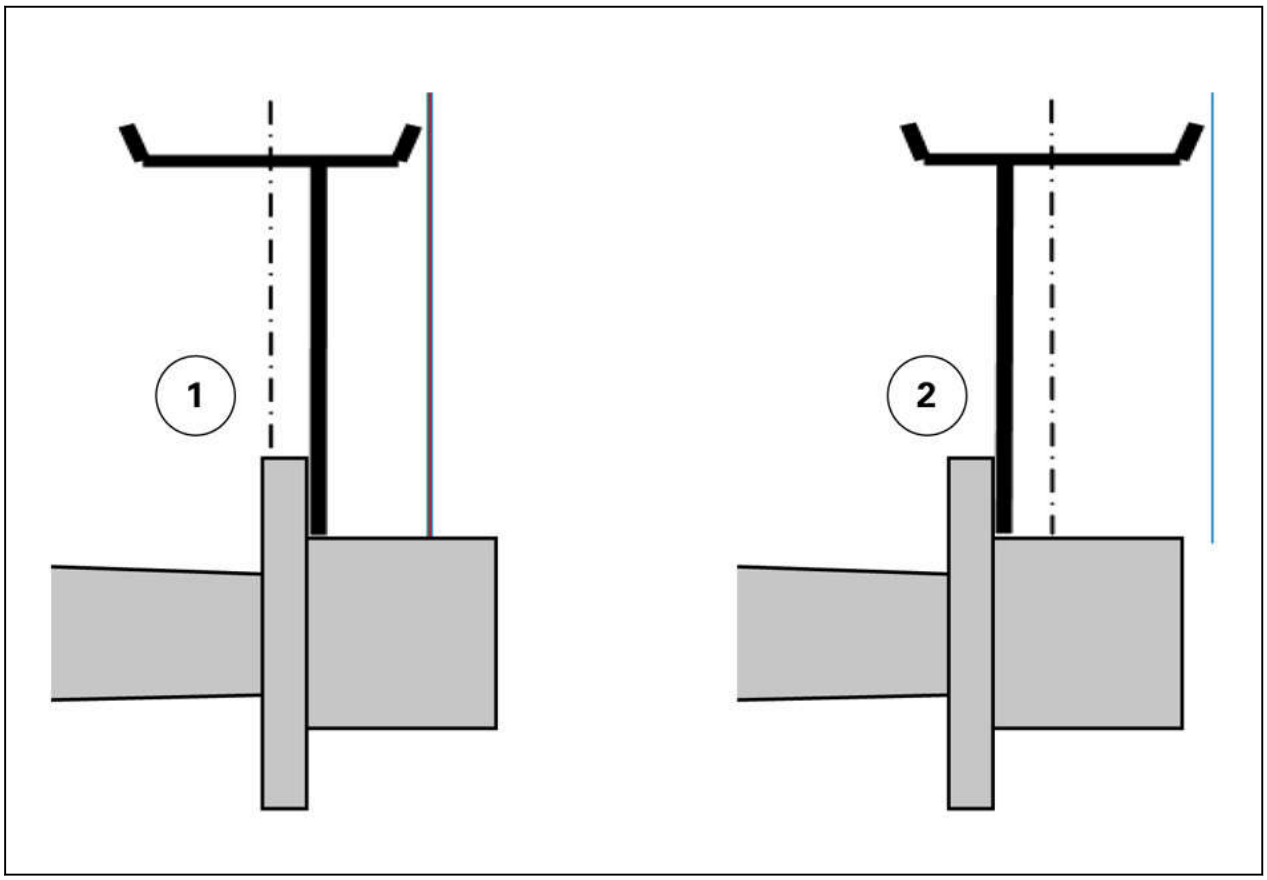


Fig. 340

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

Rear axle type	Inner rim in position (1)		Inner rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	1676 mm	1678 mm	2002 mm	2004 mm

Inner wheel: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	3074 mm	3076 mm	3400 mm	3402 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Inner rim in position (1)		Inner rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	1616 mm	1672 mm	1942 mm	1998 mm

Inner wheel: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	3014 mm	3070 mm	3340 mm	3396 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Inner rim in position (1)		Inner rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	1538 mm	1612 mm	1864 mm	1938 mm

Inner wheel: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	3188 mm	3262 mm	3514 mm	3588 mm

Outer tire: track widths possible with rims with steel disks

table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

Assembly with rims with adjustable disk/rims with fixed disk

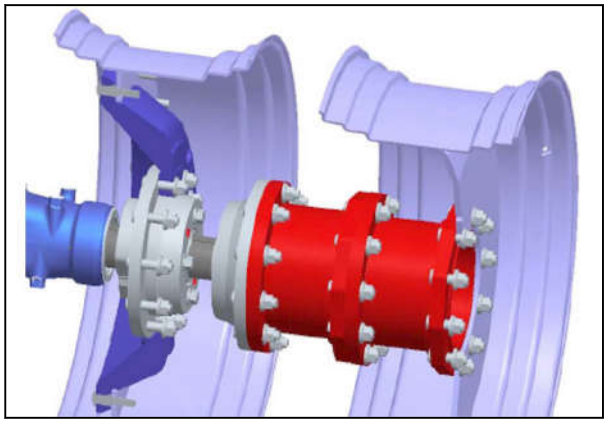


Fig. 341

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

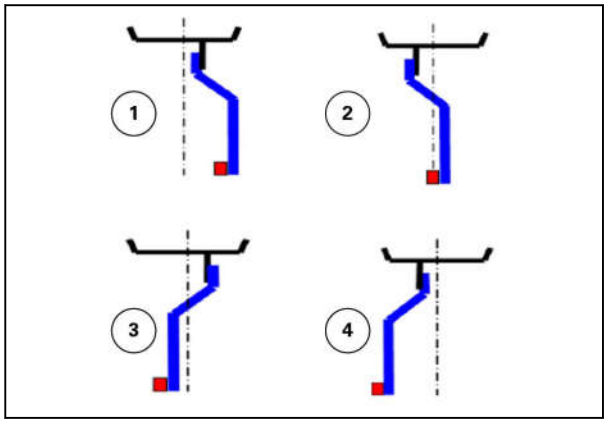


Fig. 342

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	1461.6 mm	1463.6 mm	1787.6 mm	1789.6 mm	1966.4 mm	1968.4 mm	2292.4 mm	2294.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	1401.6 mm	1457.6 mm	1727.6 mm	1783.6 mm	1906.4 mm	1962.4 mm	2232.4 mm	2288.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	1323.6 mm	1397.6 mm	1649.6 mm	1723.6 mm	1828.4 mm	1902.4 mm	2154.4 mm	2228.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	1373.6 mm	1527.6 mm	1699.6 mm	1853.6 mm	1878.4 mm	2032.4 mm	2204.4 mm	2358.4 mm

Inner wheel: track widths possible with rims with cast iron disk

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the

table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

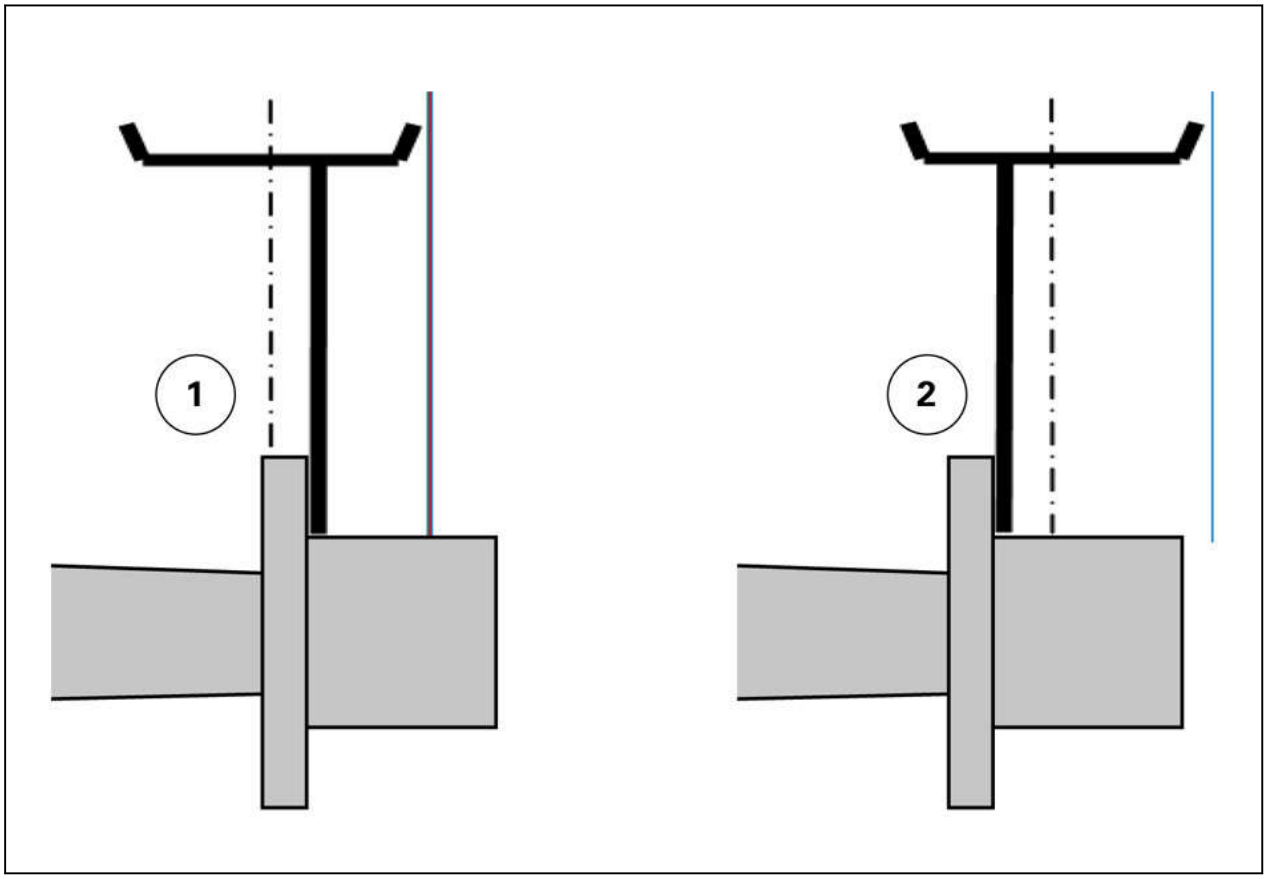


Fig. 343

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	3074 mm	3076 mm	3400 mm	3402 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	3014 mm	3070 mm	3340 mm	3396 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	3188 mm	3262 mm	3514 mm	3588 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	3238 mm	3392 mm	3564 mm	3718 mm

Outer tire: track widths possible with rims with steel disks

Assembly with rims with adjustable disk/rims with adjustable disk

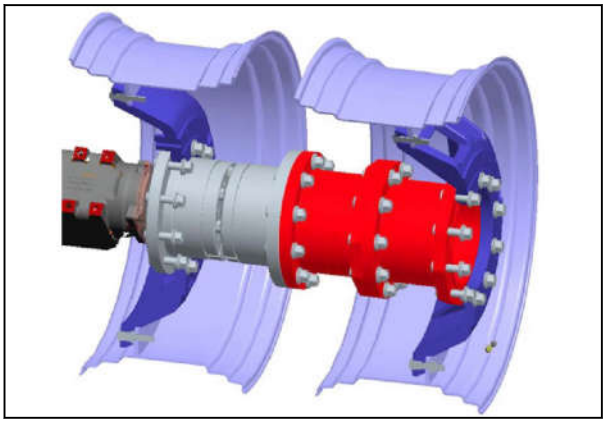


Fig. 344

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

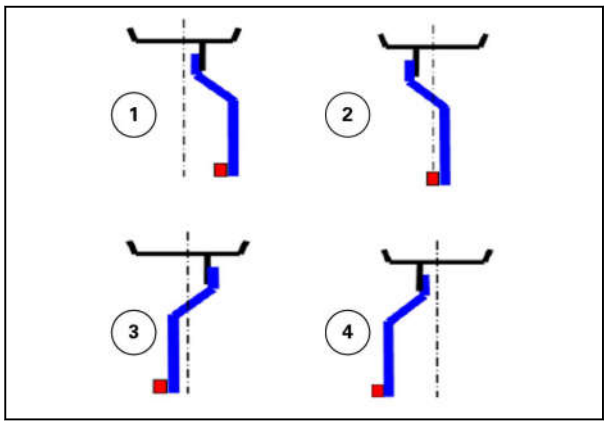


Fig. 345

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	1323.6 mm	1397.6 mm	1649.6 mm	1723.6 mm	1828.4 mm	1902.4 mm	2154.4 mm	2228.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Outer rim in position (1)		Outer rim in position (2)		Outer rim in position (3)		Outer rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	2973.6 mm	3047.6 mm	3299.6 mm	3373.6 mm	3478.4 mm	3552.4 mm	3804.4 mm	3878.4 mm

Outer tire: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	1373.6 mm	1527.6 mm	1699.6 mm	1853.6 mm	1878.4 mm	2032.4 mm	2204.4 mm	2358.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Outer rim in position (1)		Outer rim in position (2)		Outer rim in position (3)		Outer rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	3023.6 mm	3177.6 mm	3349.6 mm	3503.6 mm	3528.4 mm	3682.4 mm	3854.4 mm	4008.4 mm

Outer tire: track widths possible with rims with cast iron disk

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the

table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

3.19.4 Dual rear wheel track width with long straight shafts

General

The various track widths are obtained by changing the position of the rim in relation to the disk or by reversing the wheels.

(A) Center of the tractor
(B) External dimension

The external dimension is the longest distance between the outer sides of the tires
(C) Outer track width

The outer track width is the distance between the center of the right outer tire and the center of the left outer tire
(D) Outer plate-to-plate distance

The outer plate-to-plate distance is the distance between the two bearing faces of the left and right outer rims
(E) Inner plate-to-plate distance

The inner plate-to-plate distance is the distance between the two bearing faces of the left and right inner rims
(F) Inner track width

The inner track width is the distance between the center of the right inner tire and the center of the left inner tire
(G) Wheel to wheel distance

The wheel to wheel distance is the inner distance between the two rear tires
(H) Free space

Free space is the distance between two cone/hub assemblies from the same side allowing variation in twinned track widths
(I) Wheel to wheel distance of the dual wheels

The wheel to wheel distance of the dual wheels is the free space between two tires on the same side of the tractor

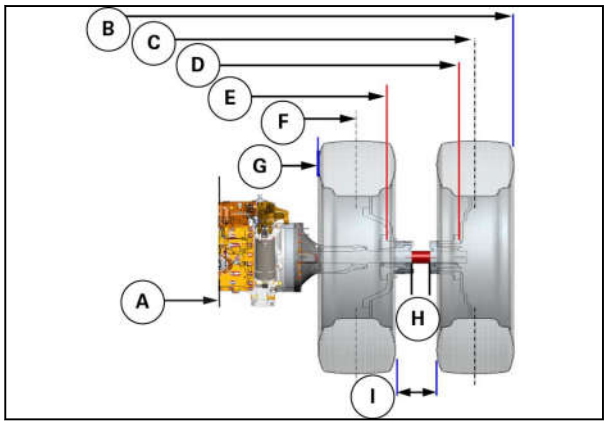


Fig. 346

Models	Rear axle type	Diameter of the straight shaft	Inner plate-to-plate distance	Outer plate-to-plate distance	Free space
			Min.	Max.	
MF 7719/MF 7720	GPA 41	95 mm	1826 mm	2847 mm	291.5 mm
MF 7722	GPA 42	95 mm	1766 mm	2846 mm	321 mm
MF 7724/MF 7726	GPA 44	110 mm	1688 mm	2997 mm	309.5 mm
MF 7724/MF 7726	GPA 45	110 mm	1738 mm	3002 mm	287 mm

Assembly with rims with fixed disk/rims with fixed disk

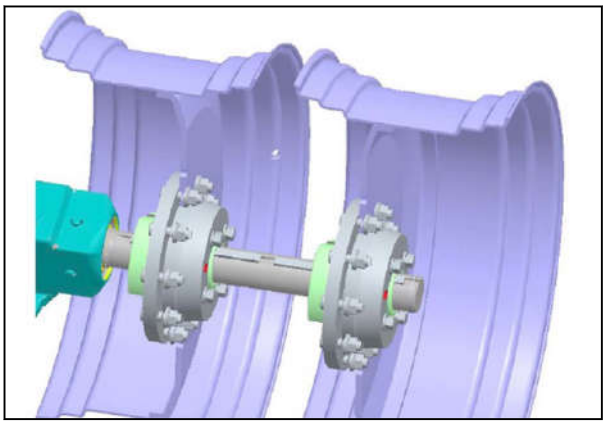


Fig. 347

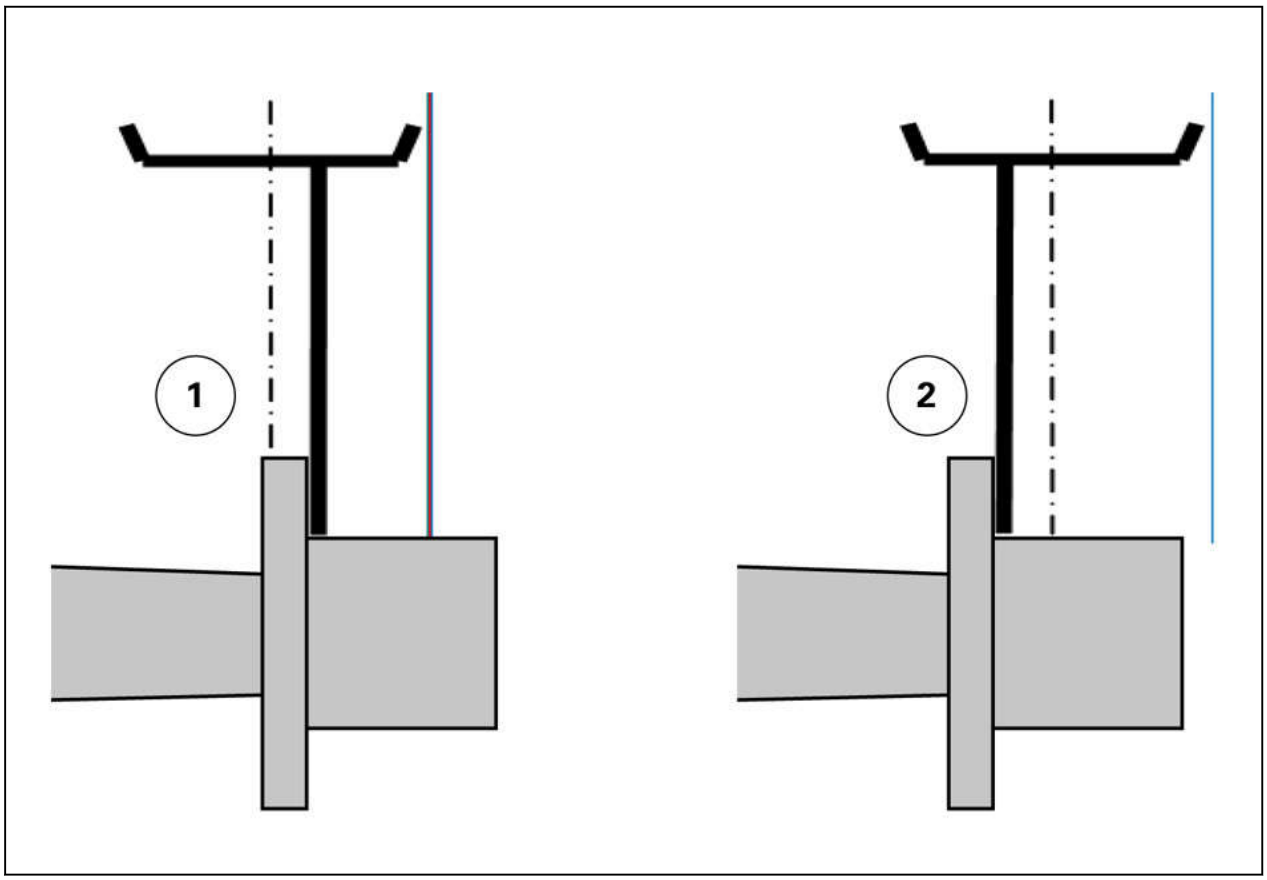


Fig. 348

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

Rear axle type	Inner rim in position (1)		Inner rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	1676 mm	2259 mm	2002 mm	2585 mm

Inner wheel: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	2114 mm	2697 mm	2440 mm	3023 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Inner rim in position (1)		Inner rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	1616 mm	2258 mm	1942 mm	2584 mm

Inner wheel: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	2054 mm	2696 mm	2380 mm	3022 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Inner rim in position (1)		Inner rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	1538 mm	2157 mm	1864 mm	2483 mm

Inner wheel: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	2228 mm	2847 mm	2554 mm	3173 mm

Outer tire: track widths possible with rims with steel disks

table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

Assembly with rims with adjustable disk/rims with fixed disk

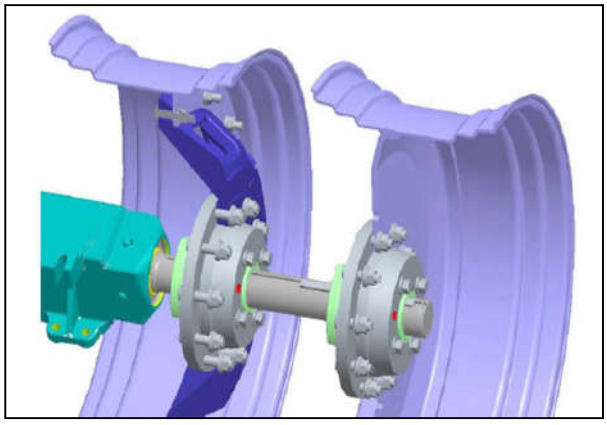


Fig. 349

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

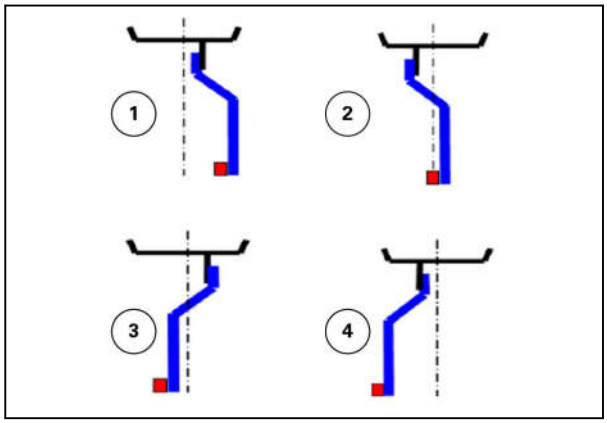


Fig. 350

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	1461.6 mm	2044.6 mm	1787.6 mm	2370.6 mm	1966.4 mm	2549.4 mm	2292.4 mm	2875.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	1401.6 mm	2043.6 mm	1727.6 mm	2369.6 mm	1906.4 mm	2548.4 mm	2232.4 mm	2874.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	1323.6 mm	1942.6 mm	1649.6 mm	2268.6 mm	1828.4 mm	2447.4 mm	2154.4 mm	2773.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	1373.6 mm	1947.6 mm	1699.6 mm	2273.6 mm	1878.4 mm	2452.4 mm	2204.4 mm	2778.4 mm

Inner wheel: track widths possible with rims with cast iron disk

When refitting, gradually tighten the nuts to the torque setting according to the recommendations in the

table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

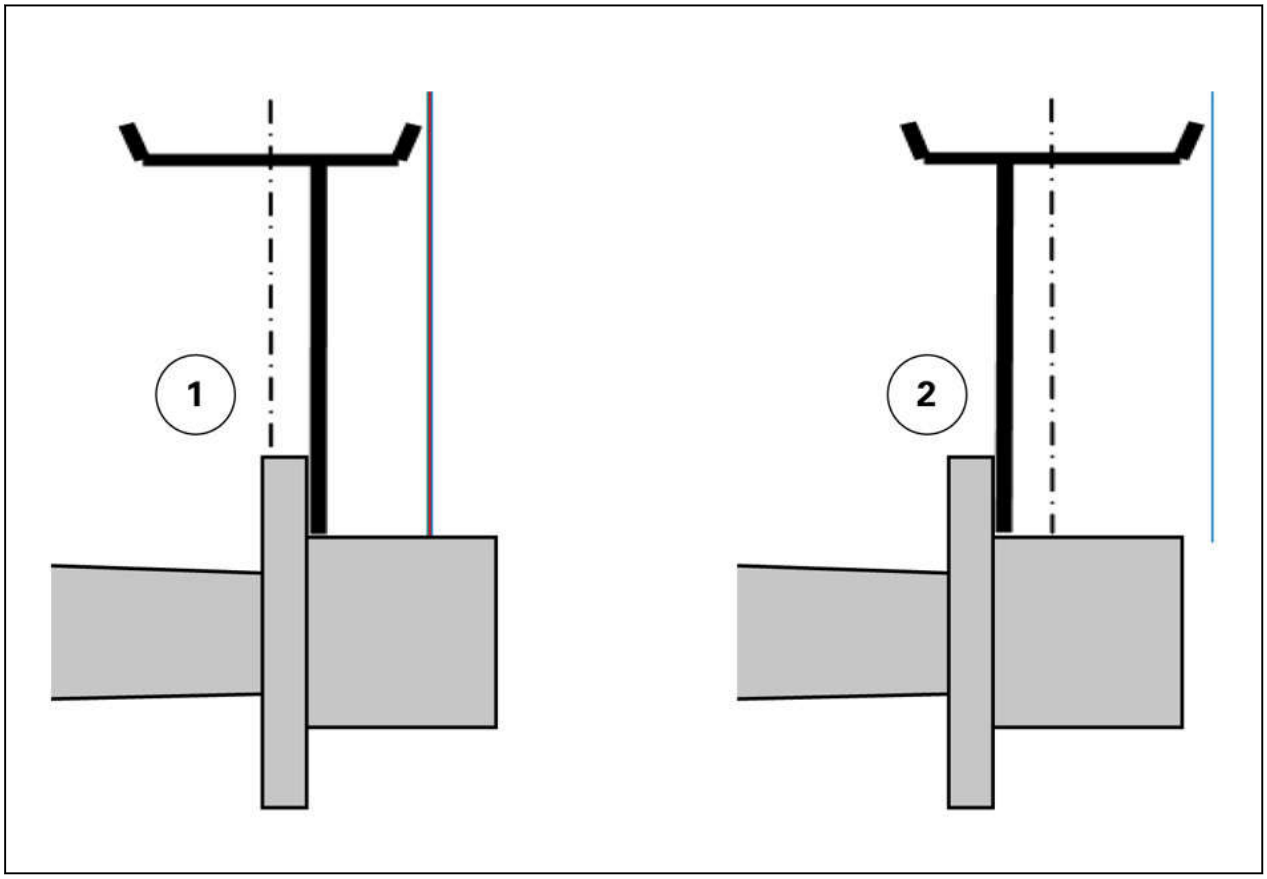


Fig. 351

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	2114 mm	2697 mm	2440 mm	3023 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	2054 mm	2696 mm	2380 mm	3022 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	2228 mm	2847 mm	2554 mm	3173 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	2278 mm	2852 mm	2604 mm	3178 mm

Outer tire: track widths possible with rims with steel disks

Assembly with rims with adjustable disk/rims with adjustable disk

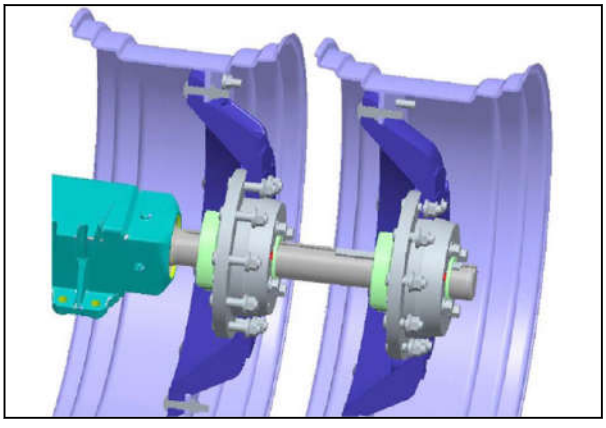


Fig. 352

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

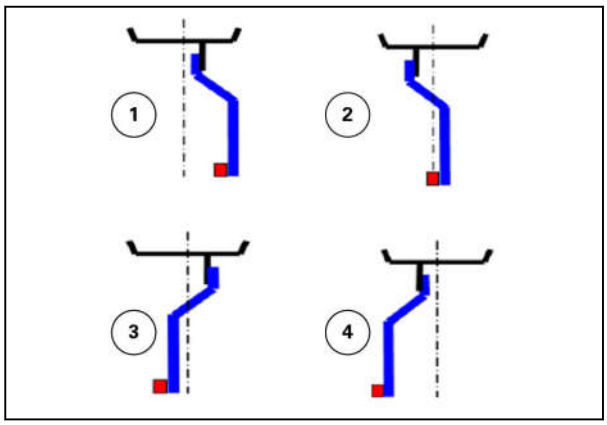


Fig. 353

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	1461.6 mm	2044.6 mm	1787.6 mm	2370.6 mm	1966.4 mm	2549.4 mm	2292.4 mm	2875.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Outer rim in position (1)		Outer rim in position (2)		Outer rim in position (3)		Outer rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 41	1899.6 mm	2482.6 mm	2225.6 mm	2808.6 mm	2404.4 mm	2987.4 mm	2730.4 mm	3313.4 mm

Outer tire: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	1401.6 mm	2043.6 mm	1727.6 mm	2369.6 mm	1906.4 mm	2548.4 mm	2232.4 mm	2874.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Outer rim in position (1)		Outer rim in position (2)		Outer rim in position (3)		Outer rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 42	1839.6 mm	2481.6 mm	2165.6 mm	2807.6 mm	2344.4 mm	2986.4 mm	2670.4 mm	3312.4 mm

Outer tire: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in	Inner rim in	Inner rim in	Inner rim in

table of tightening torques (see tightening torque in the Maintenance section of the Operator's Manual).

Special assembly with rims with adjustable disk/spacers/rims with fixed disk

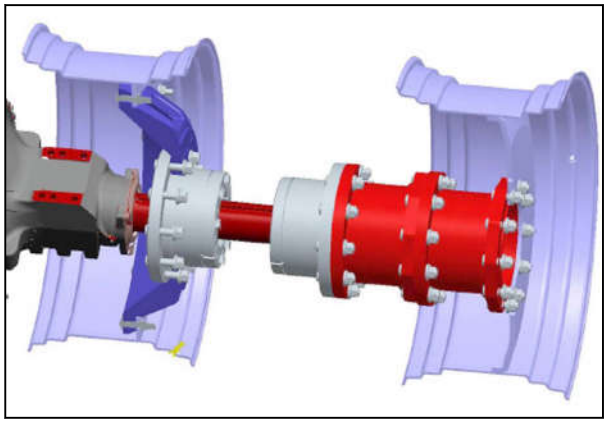


Fig. 354

Rear axle type	Diameter of the straight shaft	Inner plate-to-plate distance	Outer plate-to-plate distance	Free space
		Min.	Max.	
GPA 44	110 mm	1688 mm	3957 mm	309.5 mm
GPA 45	110 mm	1738 mm	3962 mm	287 mm

CAUTION:
The distance between the side of the inner tire and the cab must always be higher than or equal to 40 mm (European Directive 89-173)

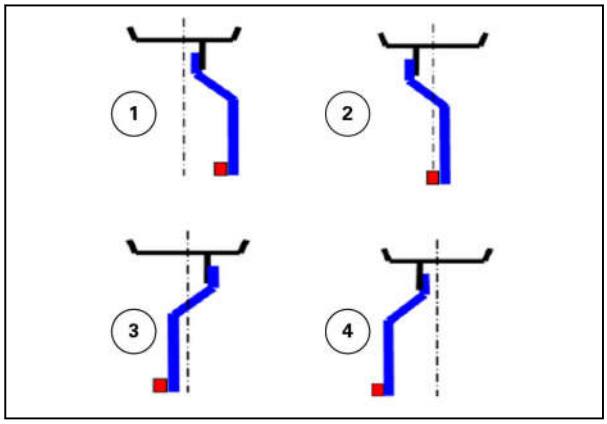


Fig. 355

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	1323.6 mm	1942.6 mm	1649.6 mm	2268.6 mm	1828.4 mm	2447.4 mm	2154.4 mm	2773.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	1373.6 mm	1947.6 mm	1699.6 mm	2273.6 mm	1878.4 mm	2452.4 mm	2204.4 mm	2778.4 mm

Inner wheel: track widths possible with rims with cast iron disk

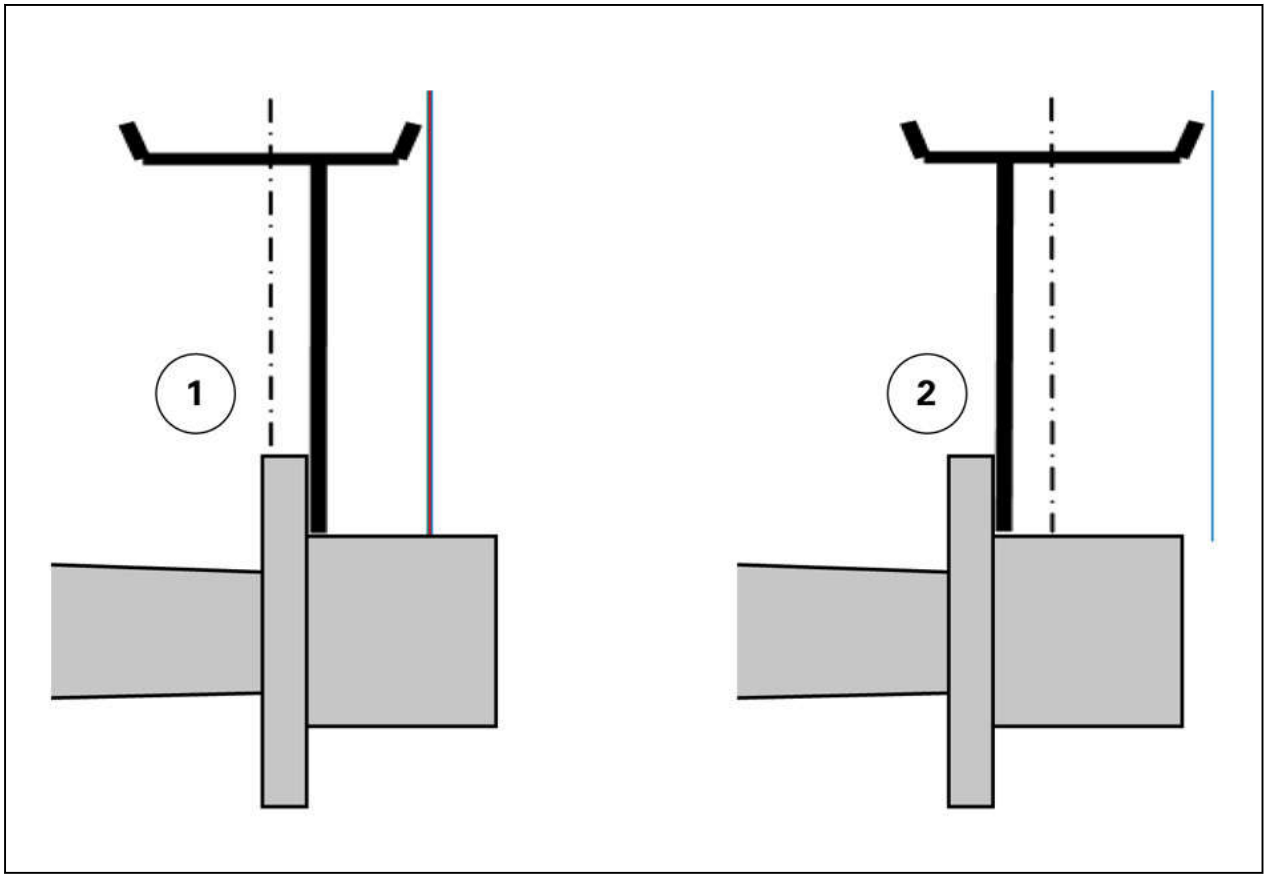


Fig. 356

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	3188 mm	3807 mm	3514 mm	4133 mm

Outer tire: track widths possible with rims with steel disks

Rear axle type	Outer rim in position (1)		Outer rim in position (2)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	3238 mm	3812 mm	3564 mm	4138 mm

Outer tire: track widths possible with rims with steel disks

Special assembly with rims with adjustable disk/spacers/rims with adjustable disk

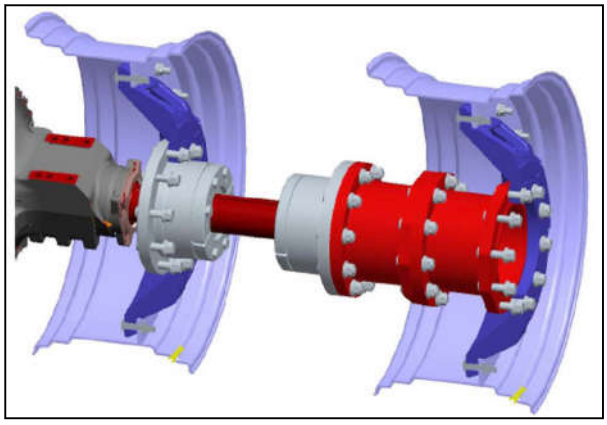


Fig. 357

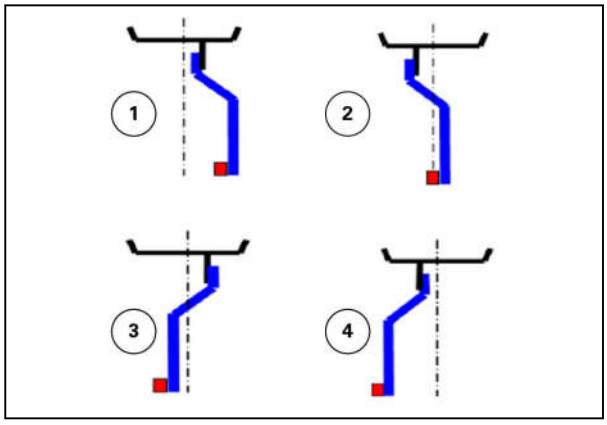


Fig. 358

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	1323.6 mm	1942.6 mm	1649.6 mm	2268.6 mm	1828.4 mm	2447.4 mm	2154.4 mm	2773.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Outer rim in position (1)		Outer rim in position (2)		Outer rim in position (3)		Outer rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 44	2973.6 mm	3592.6 mm	3299.6 mm	3918.6 mm	3478.4 mm	4097.4 mm	3804.4 mm	4423.4 mm

Outer tire: track widths possible with rims with cast iron disk

Rear axle type	Inner rim in position (1)		Inner rim in position (2)		Inner rim in position (3)		Inner rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	1373.6 mm	1947.6 mm	1699.6 mm	2273.6 mm	1878.4 mm	2452.4 mm	2204.4 mm	2778.4 mm

Inner wheel: track widths possible with rims with cast iron disk

Rear axle type	Outer rim in position (1)		Outer rim in position (2)		Outer rim in position (3)		Outer rim in position (4)	
	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track	Minimum wheel track	Maximum wheel track
GPA 45	3023.6 mm	3597.6 mm	3349.6 mm	3923.6 mm	3528.4 mm	4102.4 mm	3854.4 mm	4428.4 mm

Outer tire: track widths possible with rims with cast iron disk

3.20 Ballast

3.20.1 Liquid ballasting

Steering and braking performance can be considerably affected by attaching implements. To maintain the required ground contact pressure, ensure that the tractor is ballasted correctly. Advice is available from your Dealer.

Tires with inner tube

These tires can be inflated with water mixed with calcium chloride. Refer to your dealer.

WARNING:

When preparing a calcium chloride solution for ballasting the tractor tires with water, NEVER pour the water onto the calcium chloride. This may produce chlorine, which is a toxic and explosive gas. This can be avoided by slowly adding calcium chloride flakes to the water and stirring until they are dissolved.

Tires without inner tubes (tubeless):

Use a monoethylene glycol-based liquid containing corrosion inhibiting agents other than nitrites (Na No2). Example: Agrilest, Castrol, Lestagel, Igol, etc.

3.20.2 Front-end weight

Front weight

(A) Front weight
(B) Hitch weight

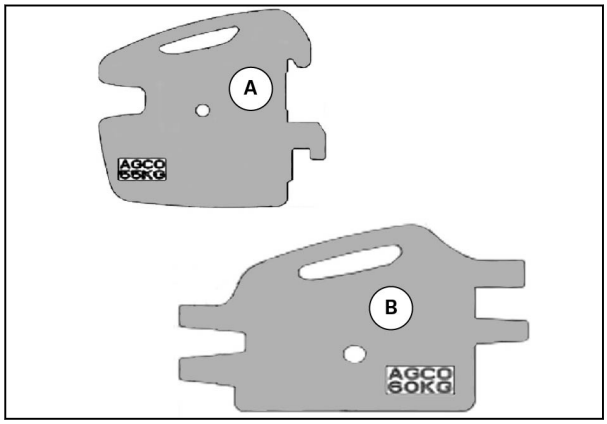


Fig. 359

The front weights can be installed with the hitch weight on the front support of the tractor

Single-piece weight

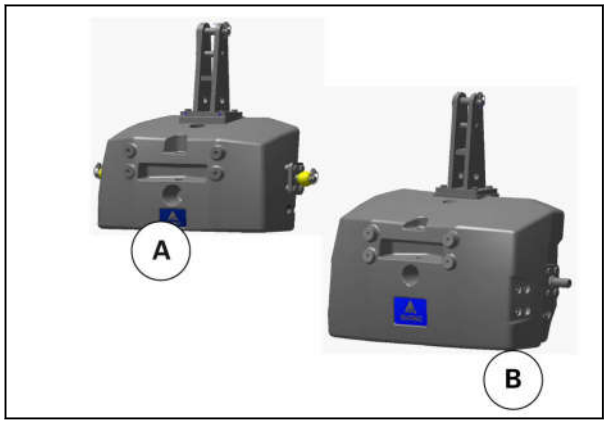


Fig. 360

Type of single-piece weight	Total weight	Material
Single-piece weight (A)	850 kg	Cast iron
Single-piece weight (B)	1500 kg	Cast iron

The single-piece weights can be installed on front power lift (1) or front support (2) of the tractor

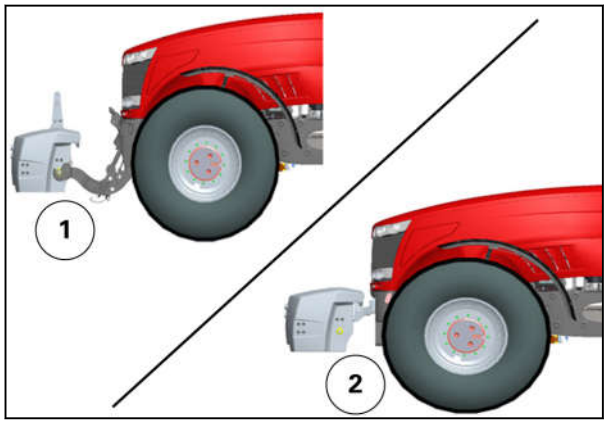


Fig. 361

Mounting the single-piece weight installed on the front support

IMPORTANT: *When mounting this weight, it is imperative to have the following weight frame:*

Fig. 362

This weight frame allows single-piece weights of 850 kg or 1500 kg to be installed.

CAUTION:
It is not permitted to attach additional weights to the single-piece weights installed on the front support

DANGER:
It is imperative that you lock the single-piece weight on the weight frame using the screws and washers that are in the tool box.

Fig. 363

The weight is locked by fitting these screws in the holes that are provided in the weight frame for this purpose.

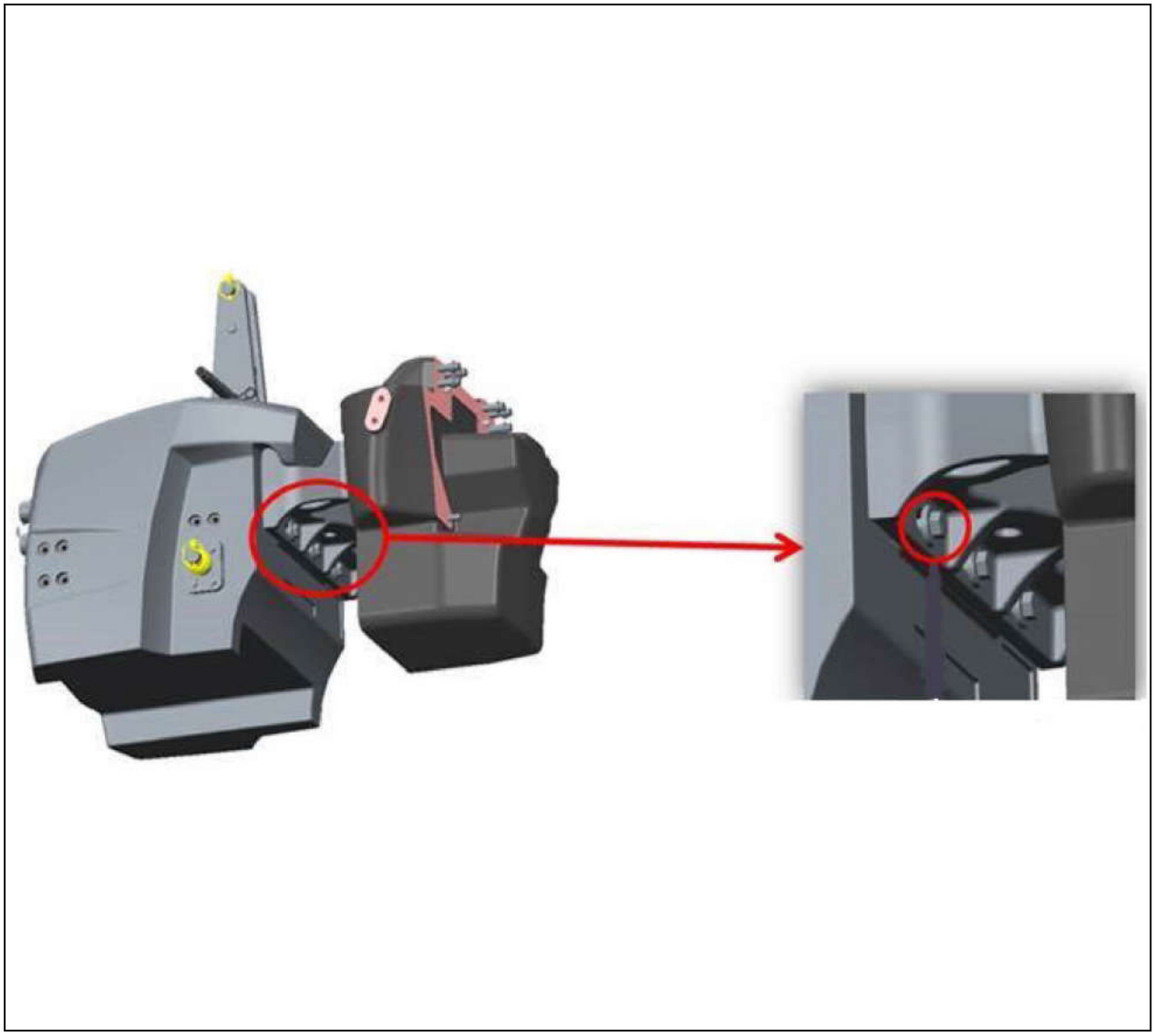


Fig. 364

Mounting additional weights on the single-piece weight installed on the front power lift

CAUTION:
It is not permitted to attach additional weights to the single-piece weights installed on the front support

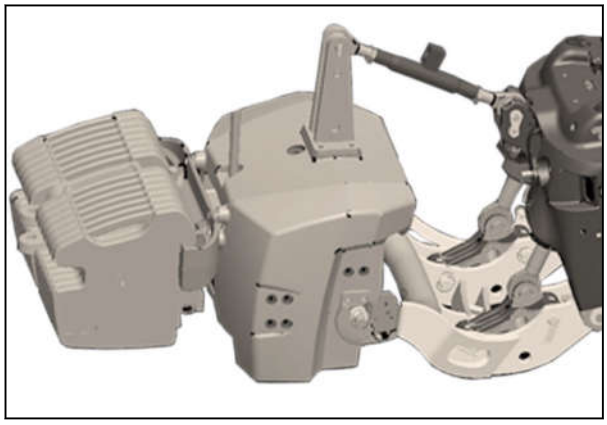


Fig. 365

Additional weights may be added to the 1500 kg single-piece weight installed on the front power lift.

Single-piece weight	Additional weights	Total weight
Single-piece weight (B) of 1500 kg	10 max. weights x 55 kg + weight support of 40 kg + hitch weight of 60 kg	2150 kg

Center weight

The center weight (A) cannot be installed on tractors with a front power take-off The center weight (B) is installed on tractors with a front power take-off

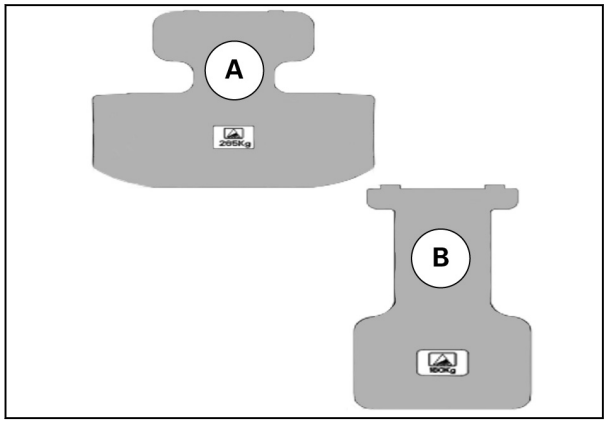


Fig. 366

Type of center weight	Total weight	Material
Center weight (A)	265 kg	Cast iron
Center weight (B)	170 kg	Cast iron

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January 2016


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