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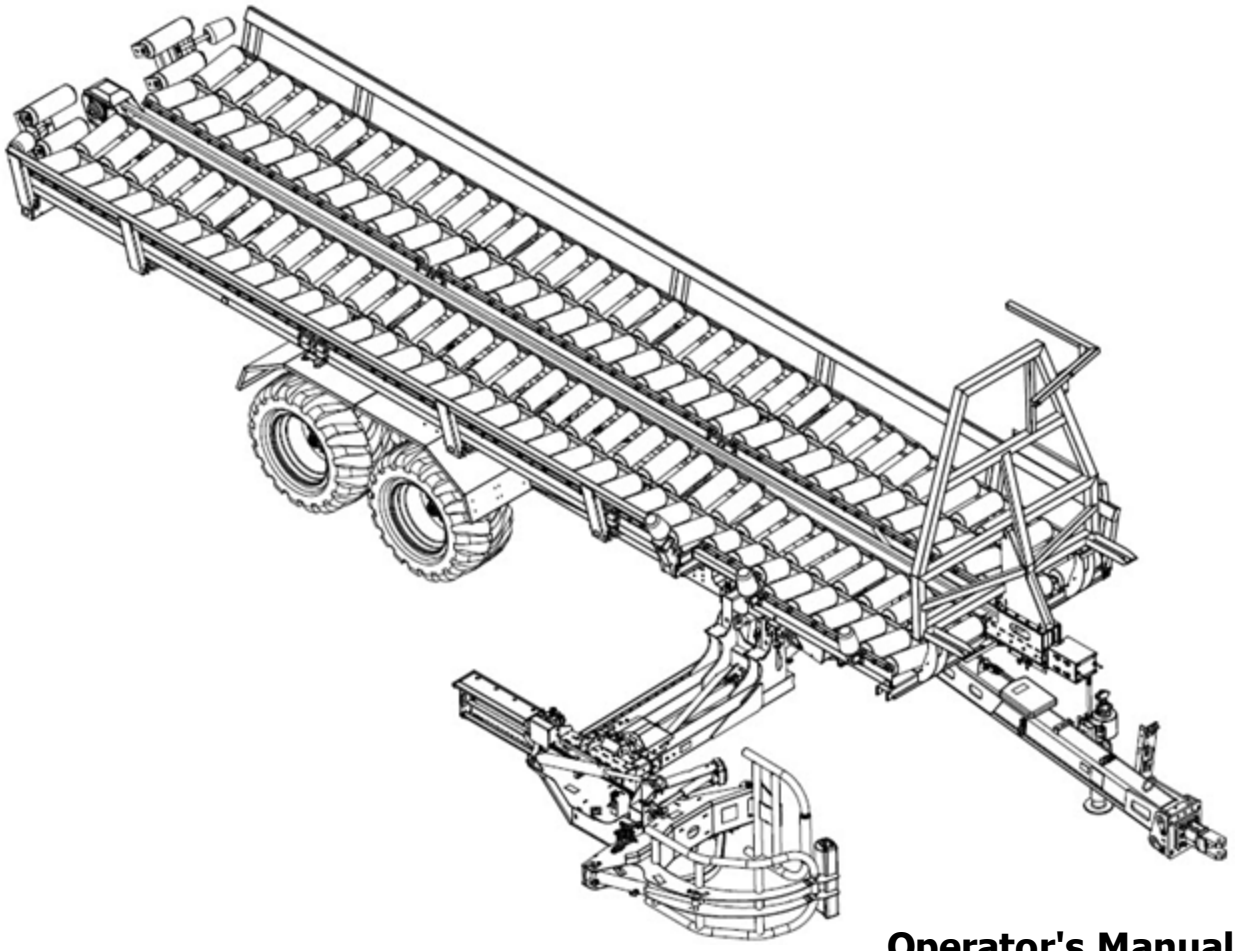
ANDERSON

Self-loading Trailer

RBMPRO 2000



Operator's Manual

2018-2019

Document No.: **CE_RBMPRO-2018_EN**
In accordance with EN ISO 17050-1

ANDERSON

CE

EC DECLARATION OF CONFORMITY

WE

MANUFACTURER:	**Anderson Group inc.**
ADDRESS:	5125, rue de la Plaisance Chesterville, QC, Canada, G0P 1J0
PHONE:	819-382-2952
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DECLARE UNDER SOLE RESPONSABILITY THAT OUR PRODUCT,

PRODUCT:	SELF-LOADING BALE CARRIER
TRADEMARK:	RBMPRO
MODEL:	RBMPRO 2000

WHICH IS SUBJECT OF THIS STATEMENT, COMPLIES WITH THE ESSENTIAL REQUIREMENTS OF THE FOLLOWING DIRECTIVE(S):

	DIRECTIVE NO.	TITLE	DATE
❖	2006/42/EC	Machinery Directive	2006

AND, IF APPROPRIATE, CONFORMS THE GENERAL PROVISIONS OF THE FOLLOWING STANDARDS:

	STANDARD NO.	TITLE	DATE
❖	EN ISO 12100	Safety of machinery – General principles for design – Risk assessment and risk reduction	2010
❖	EN ISO 4413	Hydraulic fluid power – General rules and safety requirements for systems and their components	2011
❖	NF ISO 3600	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Operator's manuals — Content and format	2015
❖	EN ISO 4254-1	Agricultural machinery – Safety – Part 1: General requirements	2013
❖	EN 1853	Agricultural machinery – Trailers with tipping body– Safety	2009

DONE AT: **CHESTERVILLE (Quebec) Canada,** ON: **May 10, 2018**

SIGNATURES:

GROUPE ANDERSON INC. ANDERSON GROUPE ANDERSON INC.

M. Patrice Desrochers
President

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How to reach us

When contacting us, please have the following information ready:

- The product model and serial number;
- Your name, address and phone number;
- The purchase date and invoice number;
- The dealer's name, address and phone number and the sales representative's name;
- A detailed description of your problem.

Please always call your representative first. If your representative is absent or helping another customer, our support team can provide immediate assistance. Anderson service department works in partnership with your dealer. Together, we will ensure any problems you encounter are resolved quickly and efficiently.

You can reach our service department at:

Address: ANDERSON GROUP
5125 De la Plaisance
Chesterville, QC
CANADA
Phone: +1-819-382-2952
Fax: +1-819-382-2218
Email: service@grpanderson.com
Website: www.grpanderson.com

Starting guidelines

Before starting your Anderson equipment, we strongly recommend that you:

- Carefully read and understand the contents of this manual
- Follow all safety guidelines
- Follow the start-up procedures

NOTE:	This manual contains important information about equipment maintenance and use. Please give it to the new owner when selling or transferring it.

Anderson limited warranty

- The one-year warranty begins on the date the new equipment is sold to the customer.
- If during the year following the purchase of a new equipment, your Anderson equipment fails to function properly due to defective design, materials, manufacturing or assembly, our company will repair your equipment free of charge.
- Keep your original invoice or a photocopy. Please refer to your invoice when ordering parts or inquiring about your equipment's operating procedures or your warranty.
- An authorized Anderson dealer must replace and/or repair equipment parts. This only applies to parts and labour. All work must be preauthorized by the Anderson customer service department.
- The customer will be responsible for transporting the equipment to / from the authorized dealer.
- The dealer will describe the terms of this warranty to the customer before the retail sale and will record the date of purchase, serial number and equipment description.
- To have equipment repaired under warranty, the customer must advise the dealer of the problem as soon as possible and request that the repairs be made according to the terms of the applicable warranty.
- Given that we are always seeking to improve our products, our company reserves the right to modify our equipments, their characteristics and their parts at any time without prior notice or obligation.
- In no event will Anderson be liable for any incidental or consequential damages or injuries, including but not limited to loss of profits, rental of substitute equipment, or other commercial or personal loss or damages arising as a result of a fundamental breach or breach of a fundamental term.

Notwithstanding the foregoing:

Warranty Policies, Procedures, & Provisions Summary

Purpose of warranty:

The fundamental responsibility of the warranty is to correct defects in material and workmanship of the products sold by Anderson Group Inc. (hereafter called "Anderson"). This outline is intended to help you understand Anderson's warranty policies and ensure that you receive the best service possible for your Anderson equipment.

- The warranty is limited to 1 year (12 months). This specified period begins on the date the new equipment is sold to the customer.

- The warranty is non-transferable in the event of resale unless the resale is through an authorized Anderson dealer.

Warranty exemptions:

- Your warranty may be voided if Anderson determines that the equipment has been subjected to bad treatment or negligence, inappropriate use, insufficient maintenance, improper protection during storage or damage due to vandalism, bad weather, natural elements, collision or an accident.
- The warranty is void if your equipment has been modified in any way without Anderson's express authorization.
- The warranty does not cover towing expenses or service calls.
- No warranty is extended to regular service items such as fluids, paint and tires.
- Certain parts, such as the Honda engine and battery, are covered under warranties from their respective manufacturers. Details on these warranties can be obtained from your dealer.
- Warranty does not cover damage caused by harsh weather conditions or unstable ground conditions. Such as frozen parts on the equipment or performance issues on inadequate terrain.
- No warranty is issued for performance issues, such as downtime and capacity issues.

No dealer warranty:

- Except for conditions or warranties which may not be excluded by law, the selling dealer makes no warranty of its own on any item warranted by Anderson unless it delivers to the purchaser a separate written warranty document specifically warranting the item. The selling dealer has no authority to make any representation or promise on behalf of Anderson or to modify the terms or limitations of this warranty in any way.

Anderson’s responsibilities:

- In the event that parts must be shipped from Anderson, freight will be paid by Anderson and will be shipped by the most economical means to arrive in the shortest possible time. Air, Next Day Air, Priority and other special shipment methods requested by the dealer will be at the customer’s expense.

About this manual

This technical manual will teach you how to maintain and safely operate the self-loading bale carrier.

Disclaimer

The illustrations and information in this manual are accurate as of printing. Anderson Group reserves the right to modify its machines without prior notice.

Conventions

"Danger!" messages identify information that should be read to prevent serious or fatal injuries to people and animals.

"Warning!" messages identify information that should be read to prevent minor injuries to people and animals or damage to the machine.

"Important" messages identify information that is particularly important for the use and maintenance of the machine.

NOTE: Notes provide additional information about the section content.

1 Introduction

Congratulations! You have just acquired an Anderson self-loading trailer, a quality machine designed specifically for handling wrapped round bales.

1.1 Overview

The following figures show the main components of the RBMPRO 2000 trailer.

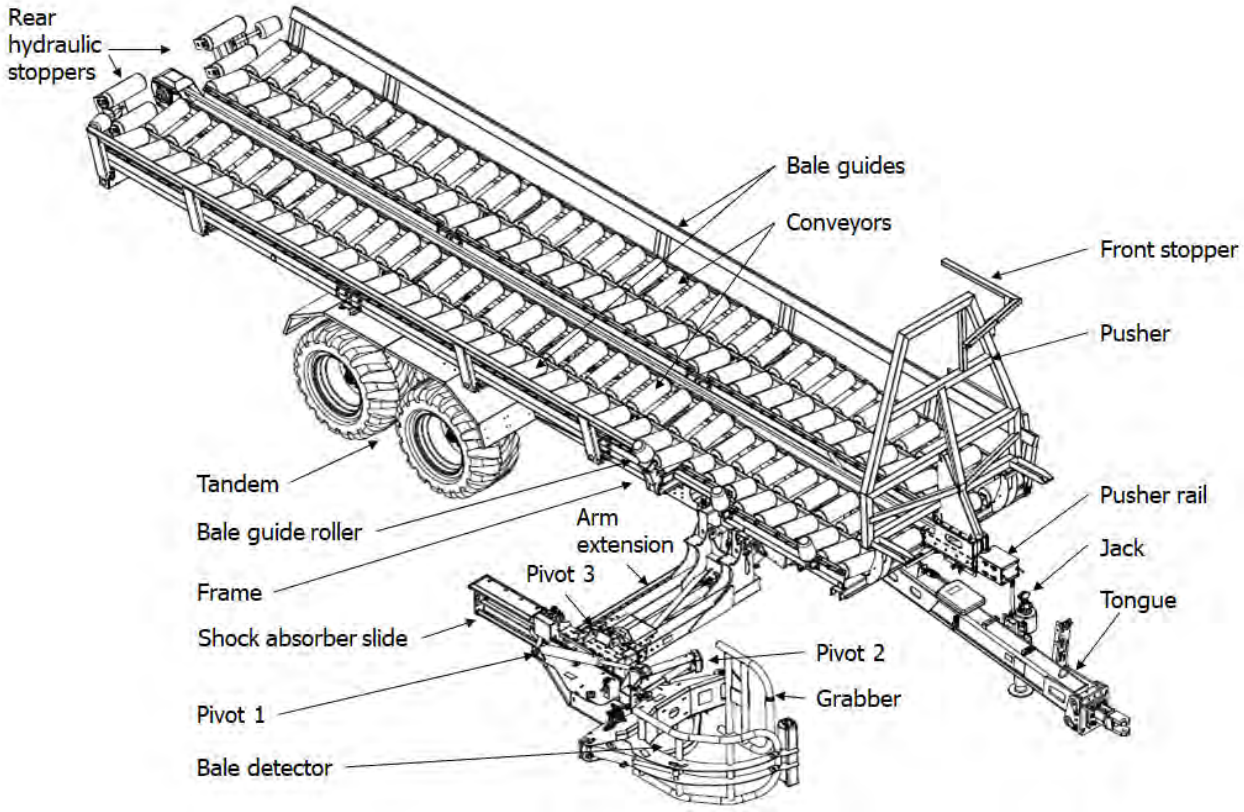


Figure 1 — Main Components of the Self-Loading Trailer

The trailer is also equipped with a control box for common operations (see the following figure). The control box must be installed on the tractor.

Figure 2 — Control Box

Table 1 — Description of the Control Box Components

Component	Description
A	Control touch screen (see section 5.1)
B	Electrical power supply cables
C	Trailer connection cable
D	USB port to export client data
E	Fuse
F	CAN bus communication cable (to program the trailer's computer)
G	Control screen On/Off switch

1.2 Technical specifications

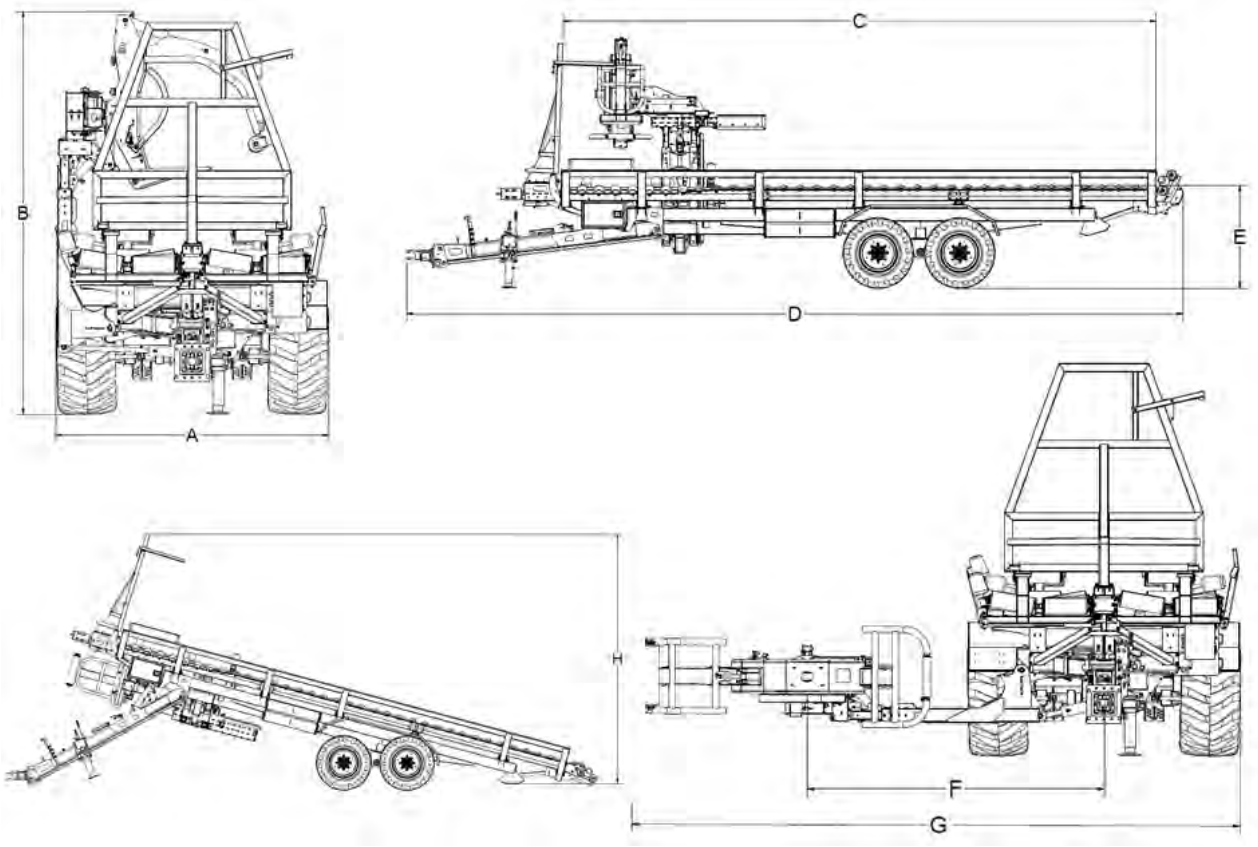


Figure 3 — Dimensions

Table 2 — Dimensions and Weights

Width (A)	2.55 m (100 in.)
Height (B)	3.81 m (150 in.)
Platform length (C)	9.00 m (354 in.)
Total length (D)	11.76 m (463 in.)
Platform height (E)	1.55 m (61 in.)
Distance between the grabber and the centre of the trailer (F)	2.80 m (110 in.)
Total width with arm extended (G)	5.71 m (225 in.)
Maximum height when unloading (H)	4.88 m (192 in.)
Tare weight	7,000 kg (15,432 lb.)
GVWR (gross vehicle weight rating)	19,000 kg (41,888 lb.)

Table 3 — General Specifications

Load capacity	12,000 kg (26,456 lb.)
Maximum number of bales	1.2 m (4 ft.) bales: • 14 (two rows on one level) • 19 or 20 (three rows on two levels) Note: Check the local regulations before driving on public roads to comply with the maximum allowable height and width. 1.5 m (4.5 ft.) bales: • 12 (two rows on one level) • 16 or 17 (three rows on two levels) Note: Check the local regulations before driving on public roads to comply with the maximum allowable height and width.
Maximum weight per bale	1,134 kg (2,500 lb.)
Bale dimensions	Diameter: 1.2 to 1.5 m (4 to 5 ft.) Length: 1.2 to 1.5 m (4 to 5 ft.)
Hydraulic system	Type: Open Pressure: Max. 207 bar (3,000 psi) Flow: 60 lpm (15 US gpm)
Power supply	Connection to the tractor battery (cable comes with the trailer) or any other 12 V outlet that can provide a minimum current of 20 amps.
Tires	Dimensions: 550/45-22.5 Recommended pressure: 3.2 bar (45 psi)
Required tractor	130 HP (minimum) Minimum tractor hydraulic flow: 60 lpm (15 gpm) Minimum tractor hydraulic pressure: 172 bar (2,800 psi) 1 direct pump outlet 1 free return fitting 1 hydraulic load-sensing outlet 2 or 3 double-acting hydraulic control valves

1.3 Machine identification

A 5 x 10 cm (2 x 4 in.) nameplate is located near the trailer arm. It displays the following information about your equipment:

- Model
- Serial number
- Tare weight
- Gross weight
- Manufacturing year

> **NOTE:** You must always have this information on hand when ordering replacement parts or requesting assistance from our customer service department.

You can record the identification information of your equipment in Figure 4.

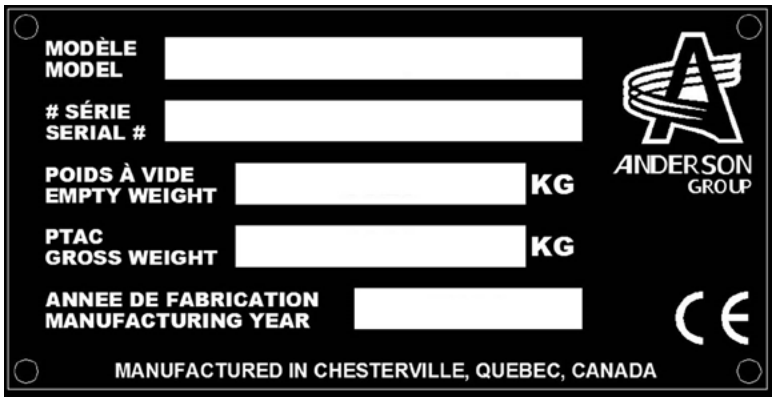


Figure 4 — Nameplate

Important!

Do not remove the plates affixed to your equipment.

1.4 Safety and maintenance pictograms

The RBMPRO 2000 trailer has a number of pictograms that illustrate the main safety and maintenance considerations. Ensure that you see and understand them.

Table 4 — Safety and Maintenance Pictograms

Pictogram	Meaning
	Warning! Check the screwdown torque of the wheel bolts.
	Lubricate with grease at the frequency recommended in Graissage.
	Lubricate with oil at the frequency recommended in "Maintenance schedule" on page 79.
	Warning! Carefully read and understand the contents of the operator's manual before using the machine.
	Warning! Install the cotter pin and safety chain on the trailer's anchor.
	Warning! Crushing hazard. Never walk underneath suspended loads. Before beginning maintenance, install the necessary restraints.

Pictogram	Meaning
	Warning! Risk of collision with a moving part Always maintain a safe distance
	Warning! Risk of crushing hands
	Warning! Before doing any maintenance or repairs on the machine, stop the engine, remove the key from the ignition and consult the operator's manual section Entretien.
	Warning! Hydraulic hoses under pressure. See Entretien.
	Warning! Risk of electrocution by electric wires
	Warning! Before welding the equipment or working on the electrical system, disconnect the tractor power supply and unplug and remove the control module.

Pictogram	Meaning
	Maximum allowable hydraulic pressure (see "Technical specifications" on page 15).
	Warning! Chains and gears. Keep away from moving parts. Danger of being caught in the drive chains. Do not open or remove the guard when the engine is running.
	Warning! Never climb on the conveyors or the equipment when it is operating.
	Warning! Falling bales. During work, keep clear of the equipment.

Pictogram	Meaning
	Warning! Danger of being caught or crushed by the equipment or a bale when the machine is operating. Keep at least 5 m (16 ft.) away from the loading arm when it is operating.
	Warning! Components must be locked during transport.
	Warning! Disengage the handbrake before moving the trailer.
	Maximum speed of 25 km/h (15 mph).

2 Safety precautions

Your Anderson trailer was designed to minimize risk to the operator. Nevertheless, it must only be used for its intended purpose. Misuse of the trailer may result in injury to the operator.

The trailer has a hydraulic system and moving mechanical parts. All these parts may cause serious and even fatal injuries to people and animals. It is strongly recommended that you carefully read and follow the guidelines below.

2.1 Basic safety tips

2.1.1 General

- Follow the safety tips and instructions in all sections of this guide.
- Always follow the safety guidelines shown in the pictograms on your equipment.
- Remember that vigilance and caution are the best tools for staying safe.
- Proper maintenance will make your equipment safer, more effective and longer lasting.
- Always leave safety devices in place. If they have been removed or damaged, do not use your trailer until they have been replaced or fixed.
- Wear protective clothing. Avoid scarves, jewelry, long hairstyles and loose clothing (pants, shirts or coats) that can easily get stuck in the equipment's moving parts.
- Always follow all accident prevention, safety, occupational health, environmental protection and traffic rules and regulations.
- On public roads, follow the rules of the road and obey the 40 km/h speed limit.
- The equipment must be operated by a single trained individual. The owner must train any trainees or other temporary external help and inform them of the safety and operating rules.
- All people, animals and obstacles must be clear of the equipment before and during operation.
- The equipment must never be used to transport people, animals or objects.
- Never attempt to remove material from the equipment before the equipment and tractor have come to a complete stop.
- Always turn off the tractor engine before working on the equipment (greasing, adjustments, maintenance). Disconnect all power sources (drive shafts, hydraulic and electrical connections).
- Before working on the equipment, ensure that it cannot be started accidentally.
- Completely shut down the equipment if you detect any unusual noises or vibrations. Locate and eliminate the cause of the noise or vibration before proceeding. Call your dealer if necessary.
- Before each use, check the screws, nuts and couplings and tighten them as needed.
- Before each use and after adjustments and maintenance, ensure that all safety devices are in place, locked and in good condition.
- Do not walk on any part of the equipment, except the areas intended for this purpose.
- Ensure that all remote controls (cables, hoses, etc.) are placed in the designated areas to prevent them from accidentally being triggered and causing an accident or damage.

NOTE: Terms such as right, left, front and rear are based on a person standing behind the equipment and looking toward the front of the equipment.

2.1.2 Operator qualifications

- The machine must only be used, maintained and repaired by people who are familiar with its features and know how to operate it safely.
- Familiarize yourself with the machine before operating it. A full understanding of all the tractor controls is particularly important.

2.1.3 Surroundings

- Adjust your speed and driving style to the terrain, roads and paths. Be vigilant and cautious!
- Always drive slowly and avoid sudden changes of direction, especially on rough or steep terrain and while turning.
- Avoid suddenly braking and accelerating when going up or down a slope.
- Ideally, use your machine in daylight. Otherwise, ensure that you have adequate artificial lighting.

2.1.4 Manufacturer and user responsibilities

Failure to comply with the following rules can make your machine dangerous. The manufacturer shall not be held liable in the event of damage or injury.

- Follow all installation, operating, adjustment, maintenance and repair instructions in this manual.
- Use only the recommended replacement parts and accessories.
- Do not modify or have another person modify your machine and its accessories (mechanical, electrical, hydraulic) without the prior written consent of the manufacturer.

2.1.5 Warnings/pictograms

- The warnings and pictograms on the machine provide safety information and help prevent accidents.
- Ensure that the warnings and pictograms remain clean and clearly visible. In the event of damage, ask your manufacturer (or dealer) for new labels.
- During repairs, ensure that any replacement parts bear the same labels as the original parts.

2.1.6 Toxic materials

- Keep a first aid kit handy.
- Avoid contact with skin, eyes and mouth when using products such as fuels, oils, solvents and cleaning products, most of which contain harmful substances.

- In the event of an incident, see a physician.
- Carefully follow safety label instructions on toxic substance containers.
- Pressurized hydraulic fluid can be released with sufficient force to penetrate the skin and cause serious injury. In the event of contact, see a physician immediately.

2.1.7 Fire

- To prevent fire, keep the machine and its accessories clean and clear of grass, leaves or excess grease.
- Always keep a working fire extinguisher handy.
- Check with your insurance provider that using your equipment in the intended locations does not pose any risk.

2.1.8 Overhead power lines

- Ensure that the machine and its accessories have sufficient clearance at all times.
- If the machine comes in contact with a power line, immediately stop the tractor and apply the handbrake. If you can exit the tractor without touching the electrical cables, jump out without touching the machine and the ground simultaneously. Ensure that nobody touches the machine until the power lines no longer carry a current. Ask for the power line to be disconnected.

2.2 Safety tips for transport

When driving on the road, adjust your speed to the load and terrain.

Follow the rules of the road, particularly the 40 km/h speed limit.

Check the local regulations before driving on public roads with a load. Check the maximum allowable height and width and whether the load must be attached.

NOTE: The trailer's standard tires are generally not prescribed for long distances on public roads.

NOTE: Make sure the hand brake is not activated before moving the trailer.

Before a long trip:

- In the main menu on the control screen, press  . The loading arm will automatically retract to make the trailer as small as possible.
- Check that the lights are visible and functional, and that the tractor's rotating beacon is visible from behind the equipment.
- Check the tire pressure (see section 7.6).
- Attach the safety chains to the attachment point between the equipment and your tractor and secure the locking pin with a cotter pin.
- Attach the bale guides and bale guide roller in position A (Details A and B).
- Insert the loading arm locking pin (Detail C).
- Close the ball valve for the unloading cylinders (Detail D).
- Make sure the conveyors are closed.
- Make sure that the rear stoppers are raised.

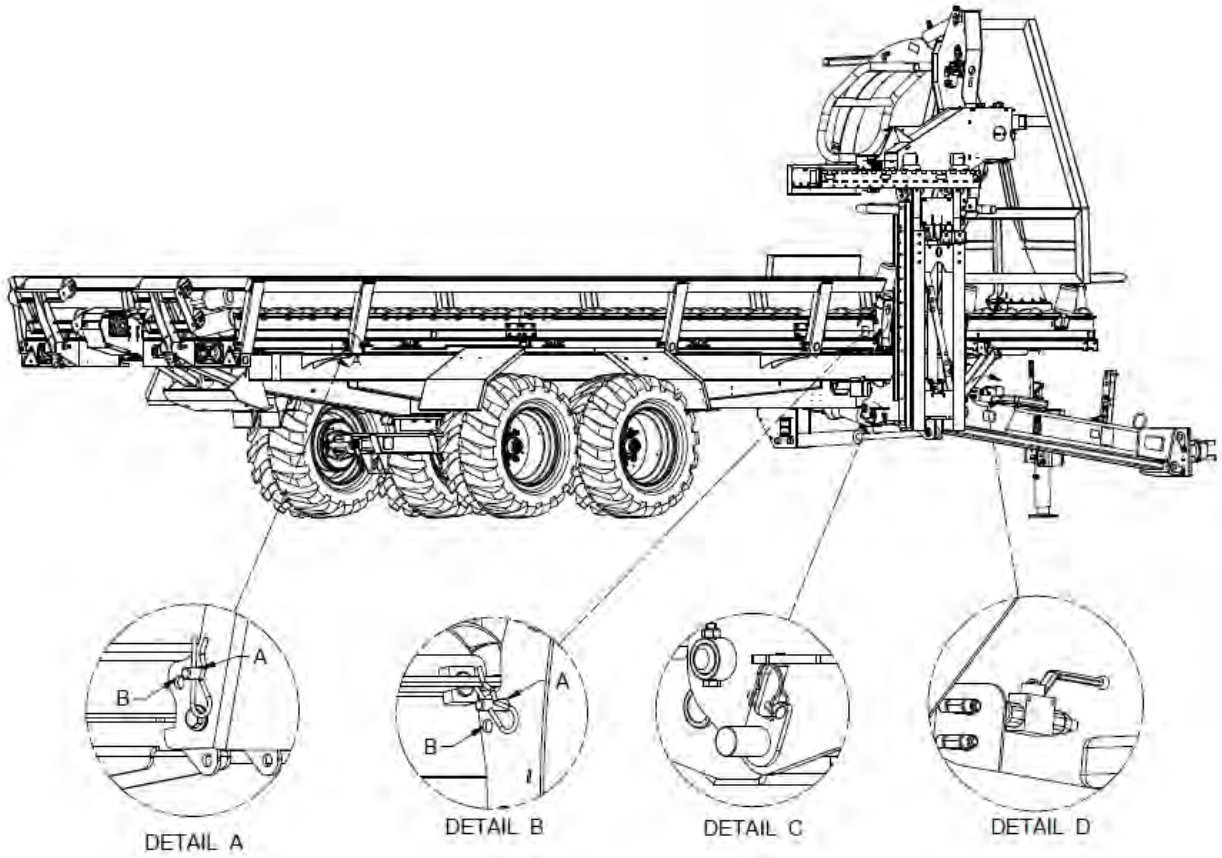


Figure 5 — Safety Tips for Transport

2.3 Safety tips for hitching

The hitching area involves pinching and crushing hazards.

Do not stand between the tractor and the machine during a tractor lifting procedure, regardless of whether it is controlled from inside the cab or outside the tractor.

- The equipment must be hitched to the tractor using only the intended hitch points.
- Ensure that the equipment is compatible with the tractor (minimum engine power, hitch type, tractor PTO specifications, etc.).
- Do not stand between the tractor and the equipment without first putting the gearshift in neutral and applying the parking brake on both the tractor and the equipment.
- When positioning the equipment, select the slowest possible speed on the tractor.
- Before hitching the equipment, ensure that the tractor lift controls are set so that the tractor cannot move during the process.
- Once the equipment is hitched, lock the coupling device. Check that the hitch is correctly locked and in good condition before moving.
- Ensure that hitching the equipment will not overload or improperly distribute weight on the tractor, which could compromise stability.
- Hitching the equipment changes the weight distribution. Do not exceed the maximum load per axle (see the tractor manufacturer's instructions).
- Do not exceed the maximum load permitted on the hitching points.
- If necessary, place ballast weights on the supports provided in accordance with the tractor manufacturer’s instructions.
- When hitching the machine, install all the support and stability equipment to prevent instability.

2.4 Safety tips for maintenance and repairs

2.4.1 General

Moving parts involve pinching and cutting hazards.

- Maintenance and repairs must be performed by qualified individuals.
- Always keep the equipment and its accessories in perfect condition.
- Keep the oil tanks clean.
- Follow the maintenance intervals.

- Before beginning work:
  - Turn off the engine and remove the key from the ignition;
  - Put the gearshift in neutral and apply the handbrake;
  - Disengage the PTO and uncouple the drive shaft from the PTO;
  - Disconnect the hydraulic supply hoses;
  - Wait for all moving parts to come to a complete stop;
  - Place the support and stabilizing devices (wedges, stand, etc.);
  - Let the gearboxes and hydraulic components cool, as well as any other parts of the machine that may be hot.

2.4.2 Welding

When welding, place the grounding device as close to the welding area as possible.

Before welding the equipment or working on the electrical system, disconnect the tractor power supply and unplug and remove the control module.

- For welding operations on the equipment or tractor, disconnect the battery or electrical power supply and protect the lines (especially rubber hoses) to prevent them from being damaged by sparks, which could cause a loss of oil, hydraulic fluid, etc.
- Move any combustible materials (hay, organic matter, gasoline, etc.) away from the area before welding.
- Eliminate any risk of fire.

2.4.3 Electrical

- Before starting work on the electrical system, disconnect the battery or electrical power supply.

2.4.4 Hydraulics

A pressurized oil leak can penetrate the skin and cause serious injury. In the event of injury, see a physician immediately to prevent serious infection.

Do not use your hands to locate leaks in a hydraulic line.

- Turn off the engine and remove the key from the ignition before beginning work on the hydraulic system.
- Before working on the hydraulic system, ensure that it is not pressurized. Relieve the pressure before disconnecting the hydraulic lines.
- Before repressurizing the hydraulic lines, ensure that all the couplings are correctly tightened.

- Check the hydraulic lines regularly and replace them if they are damaged.
- The replacement lines must meet the manufacturer's technical requirements.

2.4.5 Tires

- Tire repairs must be carried out by qualified personnel equipped with the appropriate tools.
- If the air pressure is too high, the tires may explode. Use the recommended air pressure (see Spécifications techniques).
- Ensure that the machine is immobilized, stable and protected against accidental movement before beginning work on the wheels. Use chocks and ensure that the lifting equipment has sufficient lifting capacity.

2.4.6 Repairs

- Replace worn parts with genuine parts.
- Eliminate any defects that may compromise safety.
- Immediately repair any leaks or damage to the equipment's hydraulic system.
- Do not use your fingers to search for a (pressurized) hydraulic oil leak. Instead, use an object, such as a piece of cardboard, to find the source of the leak.
- Immediately replace any damaged or defective guards or locks. Original guards affixed to the machine must not be removed or modified.
- The hoses must not come from piping used in another system.
- Immediately replace any damaged hoses.

2.5 Waste recovery

Do not mix fuels and oils.

- Avoid spilling on the ground and do not empty used grease or substances such as hydraulic oil into the drain.
- Empty liquids into clean, leak-proof containers designated for this purpose. Avoid using food containers and beverage bottles.
- Return used fluids to a collection and reprocessing centre so that they are recycled or disposed of in accordance with legislation.
- Stockpiling, abandoning or dumping tires is prohibited, as is burning them outdoors. Return them to an approved distributor or collector.

3 Getting started

3.1 Hitching to the tractor and unhitching

Use extreme caution when hitching and unhitching the equipment.

Before proceeding, securely immobilize the equipment with the devices provided.

NOTE: The instructions in this manual for hitching the equipment to the tractor are provided solely for illustrative purposes.

NOTE: For best results, ensure that the trailer is level when it is hitched to the tractor.

NOTE: Ensure that the tractor has the required specifications before hitching the equipment (see "Connecting the hydraulic and electrical systems" on page 34).

To adjust the position of the trailer coupler, see "Adjusting the coupler" on page 39.

To adjust the position of the trailer jack, see "Adjusting the jack height" on page 40.

To hitch the equipment:

1. Place the tractor in front of the equipment so that its drawbar is facing the equipment tongue.
2. Chock the wheels and apply the trailer handbrake (if applicable).
3. Insert the hitch pin (Figure 6-1) and secure it with a cotter pin (Figure 6-2).
4. Attach the safety chain (Figure 6-3) between the trailer and the tractor using the provided anchor points.
5. Put the trailer jack in transport position (Figure 7).
6. Remove the wheel chocks and disengage the trailer handbrake (if applicable).

To unhitch the equipment:

1. Position the equipment on a level and stable surface, turn off the tractor engine and relieve the pressure in the hydraulic hoses.

2. Disconnect the hydraulic hoses and the power to the lights (see "Connecting the hydraulic and electrical systems" on page 34).
3. Put the jack in vertical position (Figure 7).
4. Chock the wheels and apply the trailer handbrake (if applicable).
5. Remove the cotter pin from the hitch pin, remove the hitch pin, and remove the safety chain (Figure 6).
6. Uncouple the equipment drawbar from the tractor drawbar.

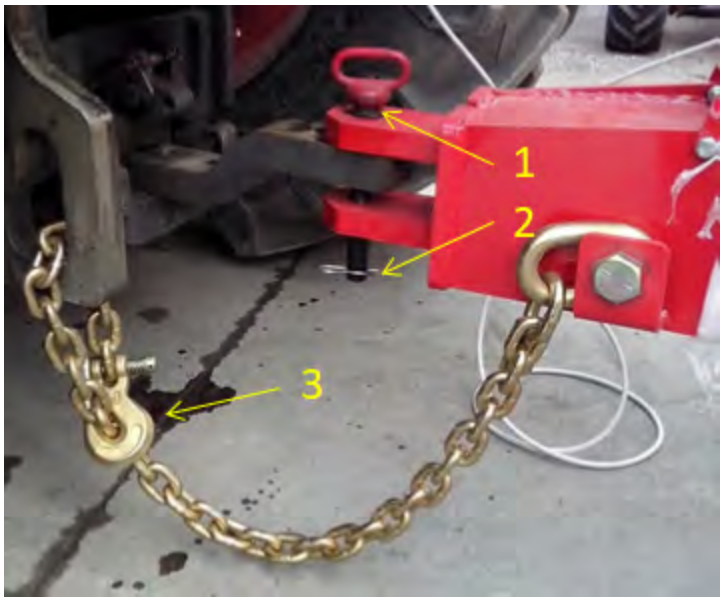


Figure 6 — Hitching to the Tractor

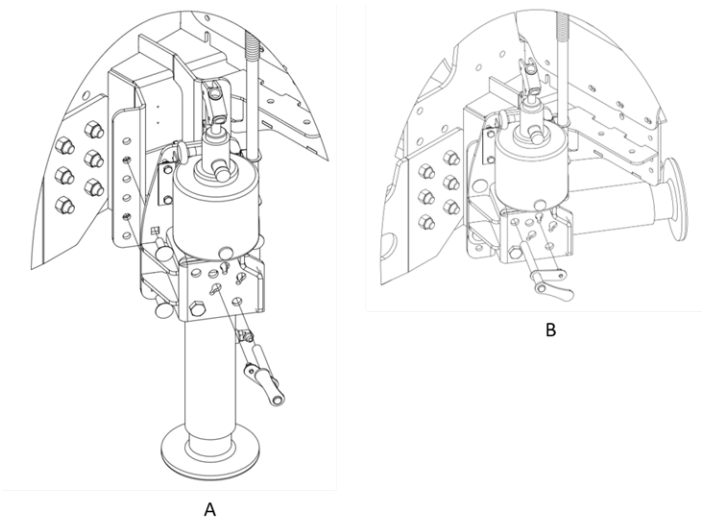


Figure 7 — Hydraulic Jack Extended (A) and in Transport Position (B)

NOTE: If driving on public roads, comply with all local identification and lighting regulations.

Before moving or using the equipment, ensure that it is correctly hitched to the tractor, that the safety chains are attached securely, and that there is no risk of the ring or pin falling out.

If not hitched properly, the equipment could come loose while it is being transported or used. This could injure the operator or other people, or damage the tractor or equipment.

3.2 Connecting the hydraulic and electrical systems

There are two ways to connect the hydraulic system:

- Using load sensing (ideal);
- Directly to the hydraulic outlets on the tractor.

NOTE: Consult the operator's manual for your tractor to identify the hydraulic hoses.

To use the RBMPRO 2000 self-loading trailer, the tractor must have:

- 2 double-acting hydraulic valves (one valve corresponds to one 1/2-in. valve female inlet and outlet);
- 1 free return fitting;
- 1 direct pump outlet;
- 1 load-sensing outlet;
- 1 12-V electrical power supply

For optimal use, one of the valves must have a detent for continuous pumping.

If the connections are reversed:

- **The equipment will not work;**
- **An error message will be displayed on the control screen.**

This could result in equipment failure!

Relieve the pressure in the tractor's hydraulic system and ensure that the couplings are clean before connecting them to the tractor. Dirt will contaminate the hydraulic oil.

The recommended oil flow rate is 60 lpm (15 US gpm).

The tractor must be stopped before the fittings are connected.

To connect the hydraulic and electrical systems:

1. Connect the hydraulic hoses.

Function	Identification
Load sensing	3 green cable ties
Pressure	2 green cable ties
Return	1 green cable tie
Move the conveyors farther apart	2 blue cable ties
Move the conveyors closer together	1 blue cable tie
Raise the platform	2 yellow cable ties
Lower the platform	1 yellow cable tie

2. Connect the hydraulic hoses for the hydraulic brakes or the pneumatic fittings for the air brakes, as appropriate.

> **NOTE :** Ensure that the hoses between the tractor and trailer cannot be twisted, entangled or prematurely worn during operations.

3. Install the control screen in the tractor cab using the mounting holes on the back of the screen.

> **NOTE:** Install the control box in a place that:
>
> - Does not interfere with the other tractor controls;
> - Allows you to comfortably control the machine from the tractor seat.

4. Connect the 12-V power cord (provided with the trailer) directly to the terminal block or the COBO plug inside the tractor. This cord powers the electrical/hydraulic controls and the control screen for the trailer.

NOTE: If there is no terminal block or COBO plug in the tractor, connect the power cord directly to the tractor battery using the provided adapter.

5. Connect the other end of the 12 V power cord to connector A on the control box (Figure 8).
6. Plug connector B on the control box (Figure 8) into the trailer computer.
7. Plug the rear lights into the 7-pin socket on the tractor.
8. Check that the tractor and trailer turn signals correspond to one another.
9. One by one, operate the hydraulic controls that control the width of the conveyors and the angle of the platform to check that each hose is connected properly.

NOTE: If you do not have a load-sensing outlet, you can replace the two 3/4-in. fittings (pressure/return) with standard 1/2-in. fittings. With this configuration, the load-sensing hose will not be used. Coil it and store it in a suitable place.

Figure 8 — Connecting the Control Box

3.3 Preliminary maintenance and initial testing

Before using your trailer for the first time, it is strongly recommended that you carry out preliminary maintenance and do a test run.

3.3.1 Preliminary maintenance

Carrying out preliminary maintenance on the trailer ensures that all its components are in good condition. Perform maintenance as described in Table 14 of "Maintenance" on page 77.

3.3.2 Initial testing

Once the preliminary maintenance is complete, carry out the following tests to ensure that your trailer is working properly.

1. Actuate the hydraulic outlet on the tractor.
2. On the trailer, manually operate the hydraulic controls to test each function (see "Hydraulic controls" on page 67).
3. On the control screen, select manual mode and test each function (see "Operations in manual mode" on page 61).

4 Adjustments

Adjustments for hitching the trailer

When hitching the trailer to the tractor, several adjustments will need to be made.

- Adjusting the coupler
- Adjusting the jack height

Adjustments for loading bales

In order to effectively handle various bale sizes, you must make certain adjustments.

You must make the adjustments BEFORE starting to load bales.

Here are the adjustments to make, depending on the length of the bales:

- Adjusting the bale guides and bale guide roller
- Adjusting the width of the conveyors
- Adjusting the front stopper

4.1 Adjusting the coupler

The coupler on the equipment is normally adjusted for a tractor drawbar that is 432 mm (17 in.) off the ground (Figure 9, B).

If the difference between the height of the coupler (Figure 9, A) and that of the tractor drawbar (Figure 9, B) is greater than 50 mm (2 in.), you will need to adjust the height of the coupler.

NOTE: Take the measurements on a level surface when the mixer is empty and uncoupled.

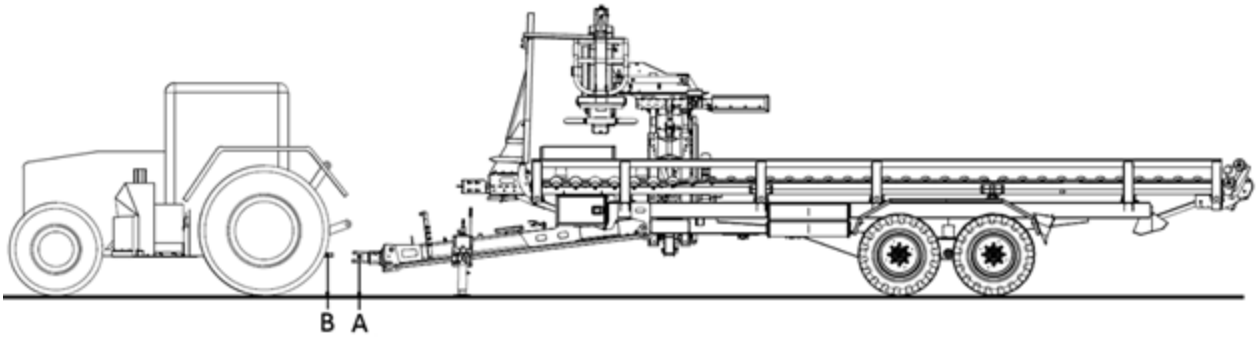


Figure 9 — Measurements for Hitching

The coupler (A) can be adjusted to various heights between 380 and 560 mm (15 and 22 in.).

> Danger! **Before hitching the machine, ensure that the tractor's front axle is sufficiently weighted. The load on the front axle must be at least 20% of the empty weight of the tractor.**

> Danger! **Place ballast weights on the supports provided in accordance with the tractor manufacturer's instructions.**

To adjust the height of the coupler:

1. Remove the mounting bolts from the coupler.
2. Adjust the height of the coupler on the trailer frame to align with the desired holes.
3. Put the mounting bolts back in the coupler.

4.2 Adjusting the jack height

> **NOTE:** Follow the transport instructions in the user guide for your trailer (see "Safety tips for transport" on page 25).

The jack height is adjustable. Select the position that is most suitable for the tractor drawbar. To adjust the jack height:

1. Hitch the trailer to the tractor.
2. Remove the mounting bolts from the jack.
3. Slide the jack to the desired height.
4. Re-insert the mounting bolts in the jack.
5. Unhitch the trailer from the tractor.

NOTE: In transport mode, the jack must be folded up and the lever must be placed on its support (Figure 10).

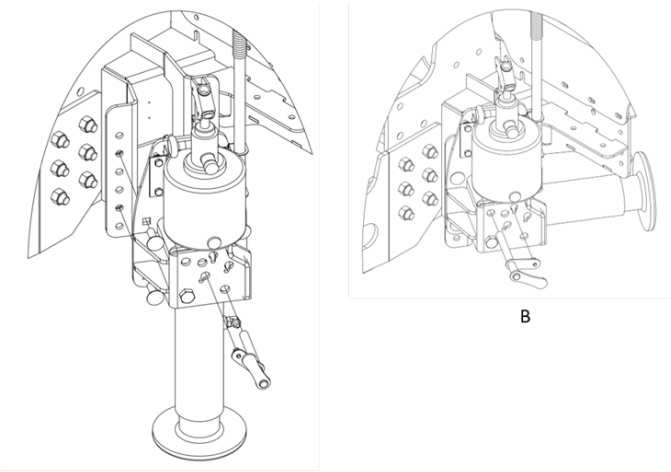


Figure 10 — Hydraulic Jack Extended (A) and in Transport Position (B)

4.3 Adjusting the bale guides and bale guide roller

> **Warning!**
>
> **Once the bale guides have been adjusted, the trailer may be too wide to comply with road transport regulations.**
>
> **Always follow the rules of the road.**

The two bale guides on each side of the trailer prevent bales from falling out when they are being loaded and transported. The bale guides must be adjusted to the dimensions of the bales being transported. There must be 15 cm (6 in.) of space between each bale guide and bale.

The bale guide roller is located near the loading arm and protects bales to ensure that their wrappers do not rip when they are loaded.

To adjust the bale guides and bale guide roller:

1. Remove the cotter pins and locks from the bale guides and bale guide roller (see Figure 11).
2. Put the cotter pins and locks in the desired position, A or B (see Table 5).

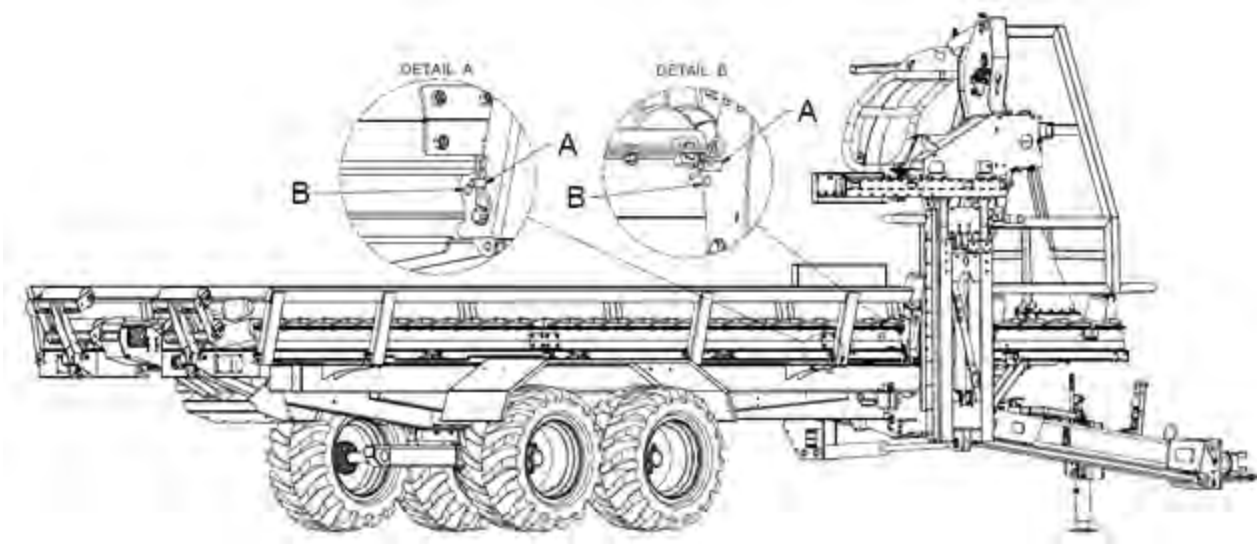


Figure 11 — Adjusting the Bale Guides (Detail A) and Bale Guide Roller (Detail B)

Table 5 — Position of the Bale Guides and Bale Guide Roller Based on the Diameter of Bales

Position	Bale diameter
A	1.2 m (4 ft.)
B	1.35 to 1.5 m (4.5 to 5 ft.)

4.4 Adjusting the width of the conveyors

The conveyors help move bales on the trailer when loading and unloading. They must be adjusted to the dimensions of the bales being transported (Figure 12).

The width of the conveyors is adjusted using the tractor's hydraulic controls. A conveyor position indicator is located on the front of the trailer (Figure 12) and is visible from inside the tractor. Using the hydraulic controls, move the conveyors closer together or farther apart until the visual indicator shows that they are correctly positioned for the diameter of the bales to be collected (Figure 13).

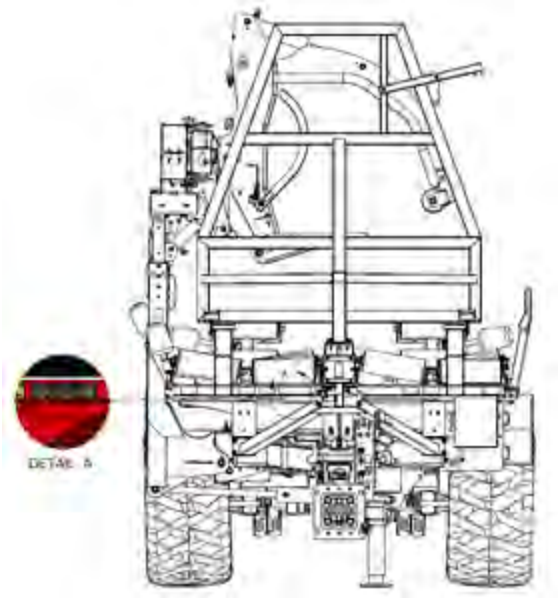


Figure 12 — Location of the Visual Indicator

Figure 13 — Visual Indicator

4.5 Adjusting the front stopper

The front stopper secures the bale that is on the top level and opposite the loading arm. The stopper must be adjusted to the dimensions of the bales being transported.

To adjust the height of the stopper, remove the bolt and put the stopper in the desired position (see Figure 14 and Table 6).

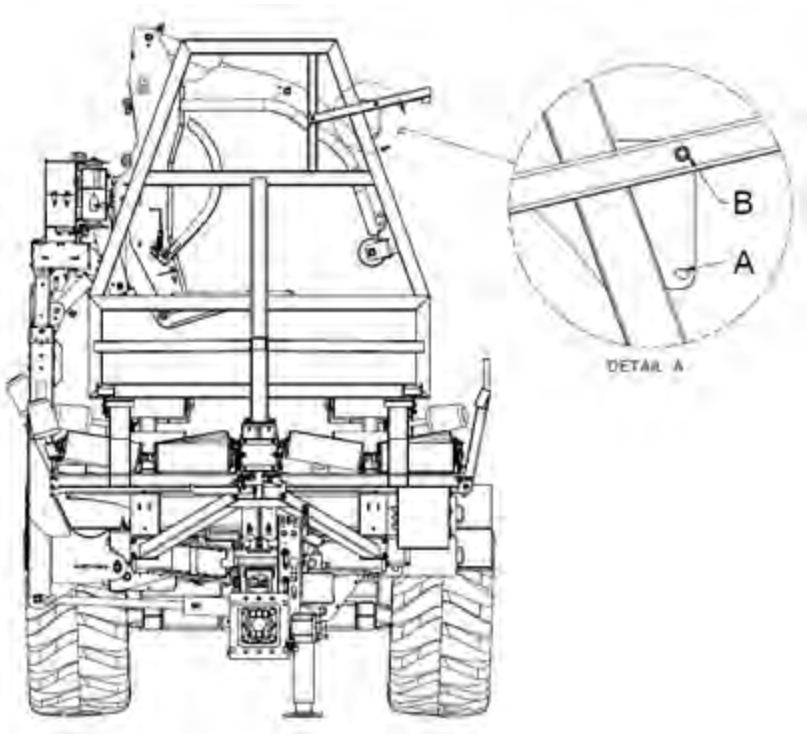


Figure 14 — Adjusting the Front Stopper

Table 6 — Position of the Front Stopper Based on the Diameter of Bales

Position	Bale diameter
A	1.2 m (4 ft.)
B	1.35 to 1.5 m (4.5 to 5 ft.)

4.6 Adjusting the pusher travel stroke

Adjusting the pusher travel stroke increases or decreases the amount of space in front of and behind the last row of bales that are loaded and moved by the pusher. Adequate spacing prevents the bale on top (if applicable) from falling after it is loaded.

To adjust the spacing, adjust the position of the LS_PO_R sensor that detects when the pusher is at the front of the trailer, as well as the LS_PO_M1 sensor that detects when the pusher is in middle 1 position and that corresponds to the distance travelled by the pusher once the row is complete.

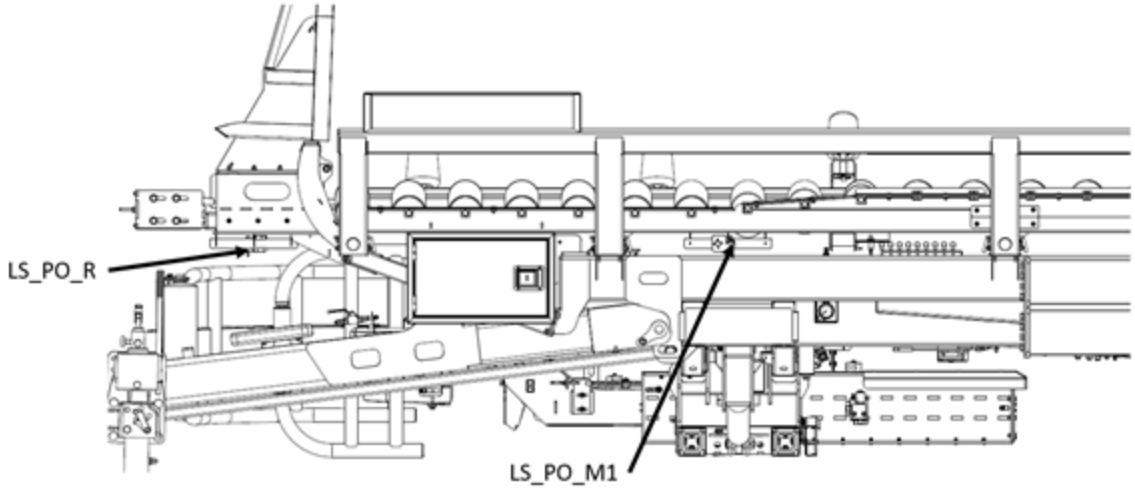


Figure 15 — Position of the Sensors to Adjust the Pusher Travel Stroke

5 Operation

5.1 Controls

The control screen (see Figure 2) is used to operate the trailer during common operations. For example, it is used for loading (see "Loading bales" on page 51), preparing the trailer for transport (see "Safety tips for transport" on page 25), and operating all the different parts of the trailer."Operations in manual mode" on page 61

NOTE: The width and angle of the platform are adjusted directly with the tractor's hydraulic controls.

To carry out the various operations, you can use either the touch screen or the buttons on the control screen. Figure 16 and Table 7 describe the functions of the control screen buttons.

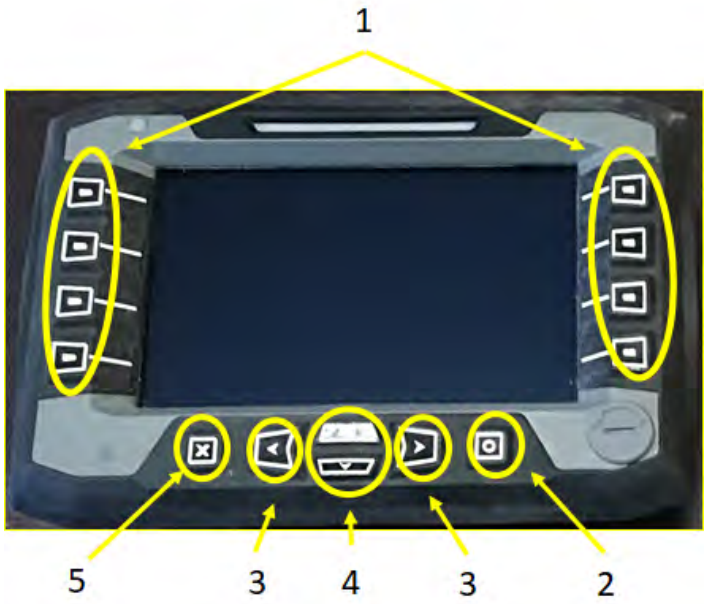


Figure 16 — Control Screen Buttons

Table 7 — Control Screen Button Functions

Component	Function
1	Allows you to select modes, menus and operations.
2	Simulates a bale being loaded. For testing purposes only; do not use.
3	Move the cursor to the right or left when adjusting the date and time.

Component	Function
4	Moves the cursor to the next function in manual mode (see "Operations in manual mode" on page 61). Moves the cursor from top to bottom when adjusting the date and time.
5	Returns the screen to the previous menu.

The hydraulic control levers located on the side of the trailer must never be used to manoeuvre the trailer. They are only used for diagnostics and troubleshooting.

See chapter 6 Troubleshooting to learn which part is activated by each hydraulic lever.

The control screen has two menus: the main menu and the settings menu. When the control screen comes on, the main menu is displayed. To access the settings menu, press ⚙.

5.1.1 Main menu

The control screen main menu (see Figure 17) is used to select the trailer mode. In this menu, you can also specify the orientation of the bales to be loaded (vertical or horizontal).

In the main menu, you can also access the settings menu and activate the emergency stop.

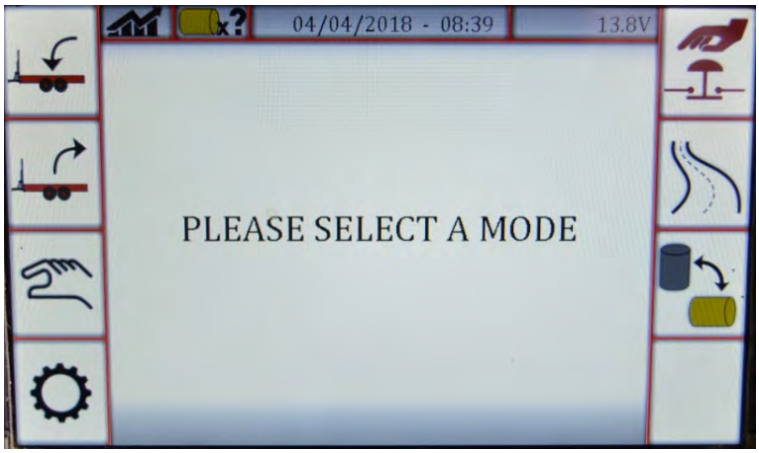
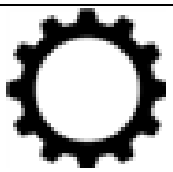
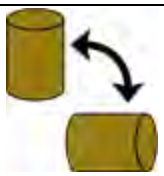


Figure 17 — Main Menu on the Control Screen

Table 8 describes the various options in the main menu.

Table 8 — Description of the Main Menu Options

Option	Description
	Activates automatic loading (see section 5.2.3) and opens the automatic loading screen.
	Activates semi-automatic unloading (see section 5.3) and opens the automatic unloading screen.
	Activates manual mode (see section 5.4) and opens the manual operations screen.
	Opens the settings menu (see section 5.1.2).
	Activates the trailer's emergency stop.
	Puts the trailer in transport position (see section 2.2).
	Allows you to select the orientation of the bales to be loaded.
	Opens the menu for managing client data (see "Selecting a client" on page 53) and adjusting the client bale counters (see "Adjusting the counters and exporting the data" on page 63).
	Opens the menu for adjusting the bale counter on the trailer (see "Adjusting the counters and exporting the data" on page 63).

5.1.2 Settings menu

The settings menu (see Figure 17) is used to view and edit the trailer settings.

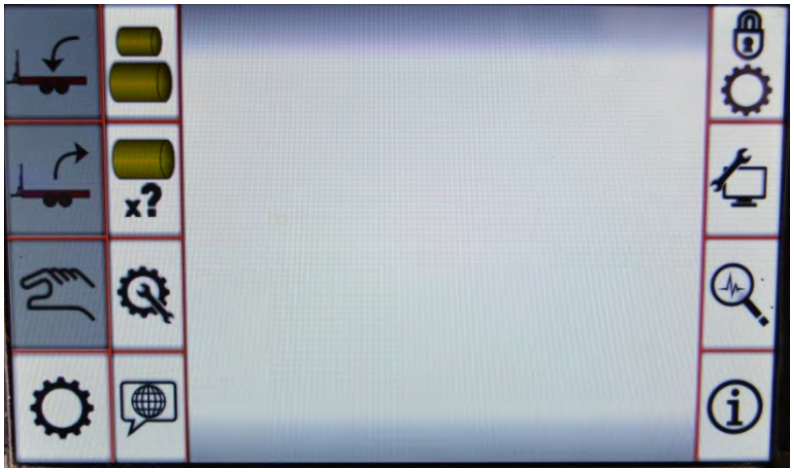


Figure 18 — Settings Menu on the Control Screen

Table 9 — Description of the Settings Menu Options

Option	Description
	Allows you to select the dimensions of the bales to be loaded (see section 5.2.1). Note: Various trailer components must also be adjusted to the bale dimensions (see section 4).
	Opens the menu for adjusting the bale counter on the trailer (see "Adjusting the counters and exporting the data" on page 63).
	Opens the menu for adjusting the loading arm angle and grabber pressure (see "Adjusting the loading arm angle and grabbing pressure" on page 63).
	Allows you to select the control screen language (English, French, or Spanish).
	Opens the factory settings screen. Note: A code is required to access this menu.

Option	Description
	Opens the general settings for the control screen: • Contrast () • Metric or imperial measurements () • Colour () • Date and time ()
	Displays the state of the sensors. (see "Sensors" on page 69).
	Displays the function associated with the option selected in the main menu.

5.2 Loading bales

The RBMPRO 2000 trailer collects bales in the position that the baler placed them on the ground (vertical or horizontal).

When using the trailer, the loading arm should never touch the ground. This could damage it or cause an accident.

NOTE: Bales should be loaded in automatic mode only. Manual mode should only be used when automatic mode cannot be used to complete certain tasks.

See section 5.4.

NOTE: Make sure the hand brake is not activated before moving the trailer.

NOTE: Make sure the necessary adjustments have been made before you start loading bales. See section 4.

5.2.1 Selecting the bale dimensions and number of rows

Before you begin loading bales, first select the dimensions of the bales to be loaded.

To select the dimensions of the bales to be loaded:

1. In the settings menu, select  . The following screen will appear:

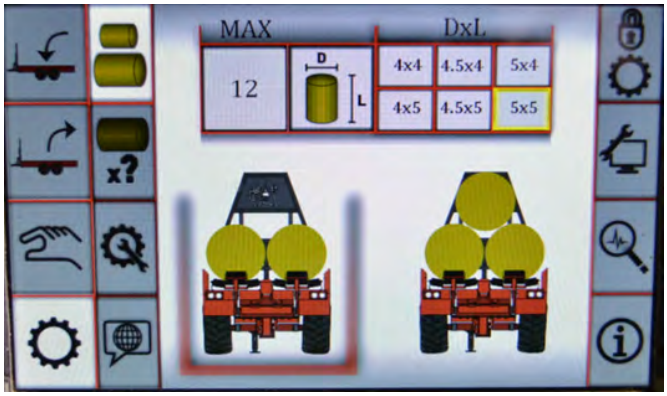


Figure 19 — Screen for Selecting Bales and the Number of Rows

2. Select the dimensions of the bales to be loaded.
3. Select the number of rows of bales to be loaded (2 or 3) by pressing  or  .

NOTE: If you are planning to unload the bales so that they stand upright, only load two rows of bales (see "Unloading bales" on page 59).

The MAX column shows the maximum number of bales that can be loaded for the selected dimensions. In some cases, two options are available for the maximum number of bales. Select the maximum number of bales you want to load.

Warning!	**When you are loading the maximum number of bales, the loading arm may not be able to fold up all the way to position itself in transport mode. As a result, the trailer will exceed the maximum allowable height and width for vehicles on the road. Take the additional steps to comply with current safety regulations.**

In the previous example, 12 bales that are 1.5 m x 1.5 m will be loaded before the automatic loading process is complete.

NOTE: Various trailer components must also be adjusted to the bale dimensions (see section 4).

5.2.2 Selecting a client

You can associate a loading job with a particular client to track the number of bales loaded for that client.

To select a client or enter a new client:

1. In the main menu or on the loading screen, press . The following screen will appear:

Figure 20 — Client Data Screen

2. Select a line number or press to enter the name of a new client.

> **NOTE:** You can also modify the number of bales for a client counter by pressing .

3. Press to return to the previous menu.

5.2.3 Loading bales

> Warning!
>
> **In the event of emergency, press . All the hydraulic functions will stop.**
>
> **To resume loading, press . The automatic loading process will resume where it left off.**

To load bales:

1. In the main menu, select . The various trailer components will move into loading position, and the following screen will appear:

Figure 21 — Automatic Loading in Progress Screen

NOTE: When the bale counter on the trailer indicates that loading is complete, automatic loading cannot be activated. The screen will display "Trailer full".

To adjust the counters, see section 5.6

2. If needed, adjust the grabber position to the orientation of the bale to be loaded by pressing  .

NOTE: If needed, adjust the angle of the loading arm and the grabber pressure to get a better grip on the bales (see "Adjusting the loading arm angle and grabbing pressure" on page 63).

3. Position the grabber so that its arms are on either side of the bale and slowly move forward. When the grabber sensors detect the bale, the loading sequence starts automatically. See Figure 22 for the loading sequence.

NOTE: Make sure that the bale is in the centre of the grabber when you pick it up, especially if it is vertical; if it is not, it could topple over and you could drop it.

4. Repeat steps 2 and 3 for each bale to be loaded until the trailer is full or the maximum number of bales has been reached. Once loading is complete, the loading arm automatically returns to transport position and the transport mode screen appears.

NOTE: To stop loading before the trailer is completely full, press ▶II. The loading arm will automatically be raised 10 degrees.

To resume loading, press ▶II again. The automatic loading process will resume where it left off.

NOTE: If a sensor stops working while bales are being automatically loaded, the process is automatically interrupted and the control screen shows the source of the problem. If the trailer components are in the correct positions to resume the process, press  . The sequence will resume normal operations (see section 6.2).

If the components are not in the correct positions, use manual mode to complete the process (see "Operations in manual mode" on page 61).

If you continue in manual mode, make sure that the counter shows the correct number of loaded bales. Adjust it, as needed. To adjust the counter, see section 5.6.

5.2.4 Description of the automatic loading steps

Figure 22 shows the automatic loading sequence for bales that were placed in vertical position, and Figure 23 for bales placed in horizontal position.

- Steps 1 to 7 show how a bale is loaded.
- Step 8 shows how bales are placed side by side.
- Steps 9 to 12 show the pusher in action, which pushes bales to the back so that new bales can be loaded.
- Step 11 shows a bale being loaded on top of the bottom two rows when three rows of bales need to be loaded (see section 5.2.1).

NOTE: Never load a bale on top of the first two bales that are loaded. The bale could fall off the trailer when the trailer is fully loaded.

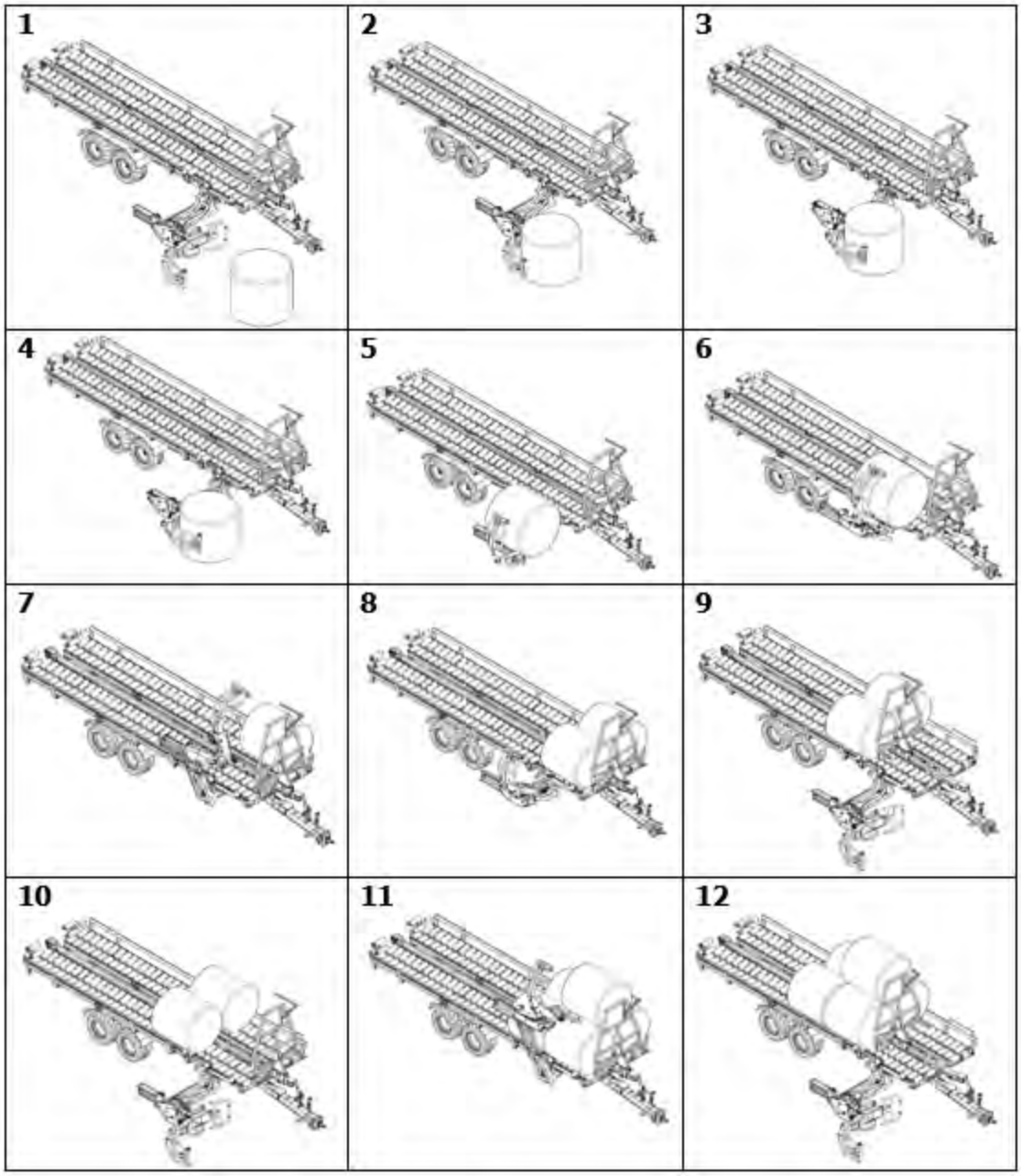


Figure 22 — Steps for Loading Vertical Bales

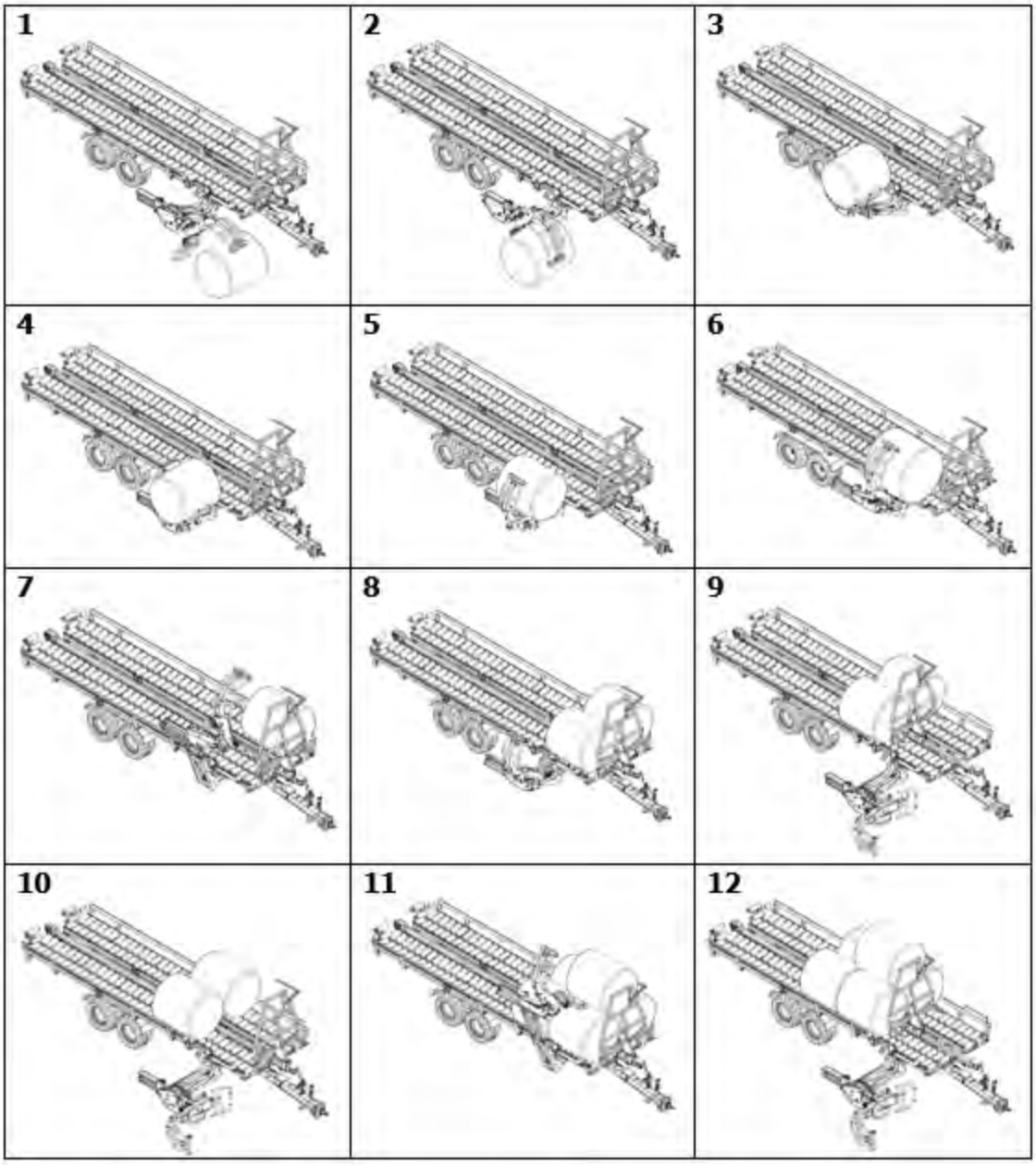


Figure 23 — Steps for Loading Horizontal Bales

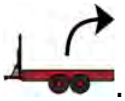
5.3 Unloading bales

Warning!	**To unload bales, make sure to select flat terrain without obstacles (e.g. Electrical Ensure that the tractor has enough space to move forward until all the bales are unloaded.**

NOTE: Make sure the hand brake is not activated before moving the trailer.

Bales are unloaded using the tractor's hydraulic controls. In unloading mode, the control screen will provide written instructions for the steps to follow when unloading.

To unload bales:

1. Stop the trailer where you want to begin unloading bales.
2. In the main menu, select  . The following screen will appear:

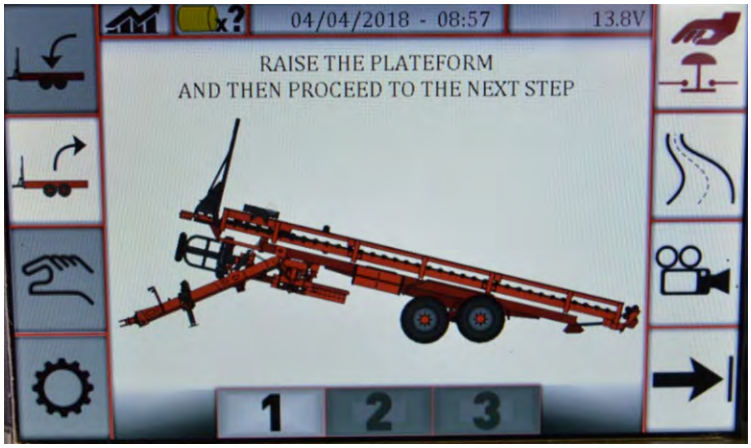


Figure 24 — Unloading Screen, Step One

NOTE: Use the camera to see what is happening behind the trailer.

To activate the rear camera, press  .

3. Using the tractor's hydraulic controls, raise the platform all the way to unload horizontal bales, or raise the platform halfway to unload vertical bales.

4. Press →|. The following screen will appear:

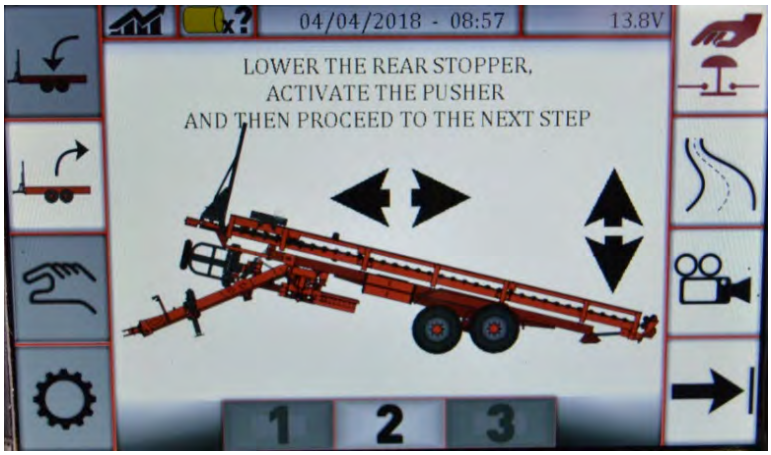


Figure 25 — Unloading Screen, Step Two

5. Lower the rear stoppers using the hydraulic controls.
6. Slowly move the trailer forward and use the hydraulic controls to activate the pusher.
7. Continue moving the trailer forward until all the bales are unloaded, and then press →|. The following screen will appear:

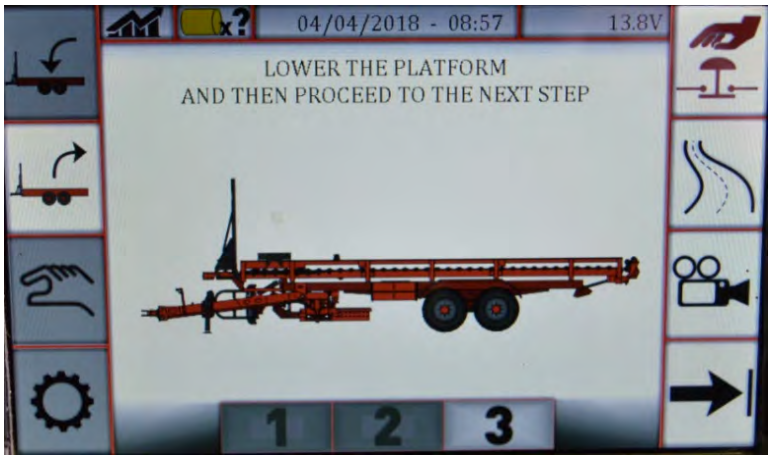


Figure 26 — Unloading Screen, Step Three

8. Lower the platform into its original position and then press →|. Automatically:
   - The pusher will return to the front of the trailer;
   - The rear stoppers will be raised;

- The loading arm will return to transport position;
- The transport mode screen will appear;
- The bale counter on the trailer will be reset to zero.

5.4 Operations in manual mode

When using the trailer, the loading arm should never touch the ground. This could damage it or cause an accident.

NOTE: Make sure the hand brake is not activated before moving the trailer.

Bales must only be loaded in automatic mode. However, manual mode can be used to finish any tasks that could not be done solely in automatic mode for reasons such as a defective sensor.

To carry out these operations in manual mode:

1. In the main menu, press  . The following screen will appear:

Figure 27 — Manual Mode Screen

NOTE: Use the camera to see what is happening behind the trailer.

To activate the rear camera, press  .

functions). In the previous example, the function that opens and closes the grabber was selected.

3. Press ▲ or ▼ to move the selected component.
4. Press ≈ to return to transport mode. The loading arm will automatically be placed in transport mode.

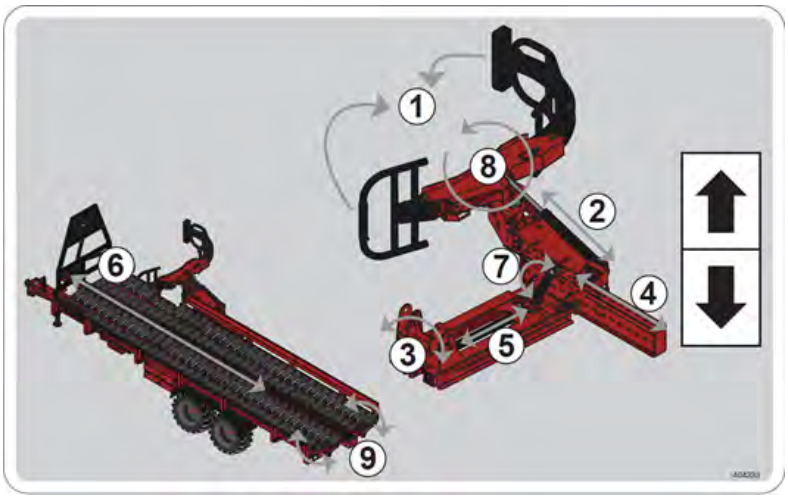


Figure 28 — Manual Functions

Table 10 — Description of the Manual Functions

Function	Description
1	Opens (▼) and closes (▲) the grabber
2	Extends (▼) and retracts (▲) pivot #1 on the loading arm
3	Raises (▲) and lowers (▼) the loading arm
4	Moves the loading arm forward (▲) and backward (▼) on the shock absorber slide
5	Extends (▲) and retracts (▼) the loading arm
6	Moves the pusher forward (▲) and backward (▼)
7	Extends (▲) and retracts (▼) pivot #3 on the loading arm
8	Pivots pivot #2 on the loading arm clockwise (▲) and counter-clockwise (▼)
9	Raises (▲) and lowers (▼) the rear stoppers

5.5 Adjusting the loading arm angle and grabbing pressure

The loading arm angle can be adjusted to get a better grip on bales when the terrain is not perfectly flat.

The grabber pressure can be adjusted to the density of the bales to grasp them better.

NOTE:	The loading arm angle and grabber pressure are factory programmed. These values can be adjusted to the bales and terrain.

1. In the settings menu or on the loading screen, press . One of the following screens will appear, depending on the bale position that was selected:

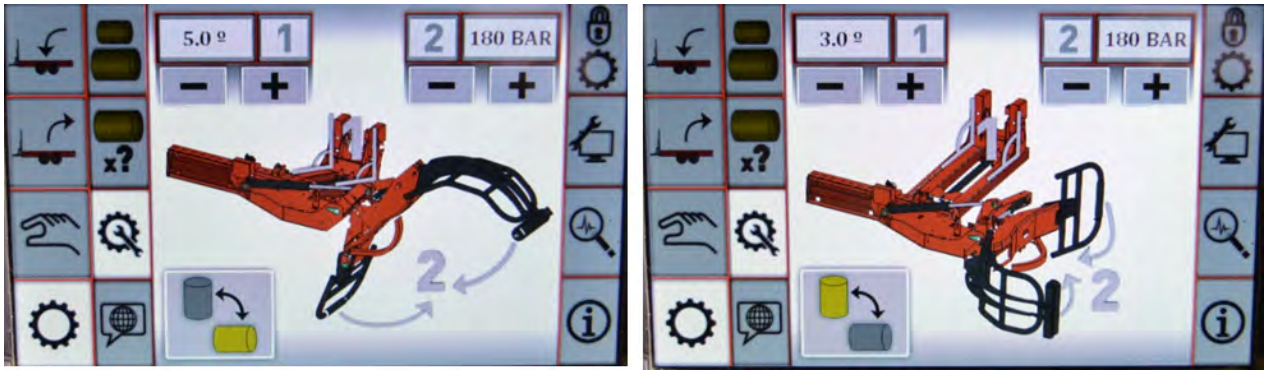


Figure 29 — Loading Arm Angle and Grabber Pressure Adjustment Screen

2. Press + or — under value 1 to adjust the loading arm angle in relation to the trailer. The angle is in degrees.
3. Press + or — under value 2 to adjust the pressure exerted by the grabber on the bale. The pressure is in psi or bar.
4. To adjust the angle and grabbing pressure for bales in the other position, press and repeat steps 2 and 3.
5. Press to return to the settings menu.

5.6 Adjusting the counters and exporting the data

5.6.1 Correcting the bale counter

To correct the number shown in the bale counter on the trailer:

1. In the settings menu, press  .
   OR

   On the loading screen, press  .

   The following screen will appear:

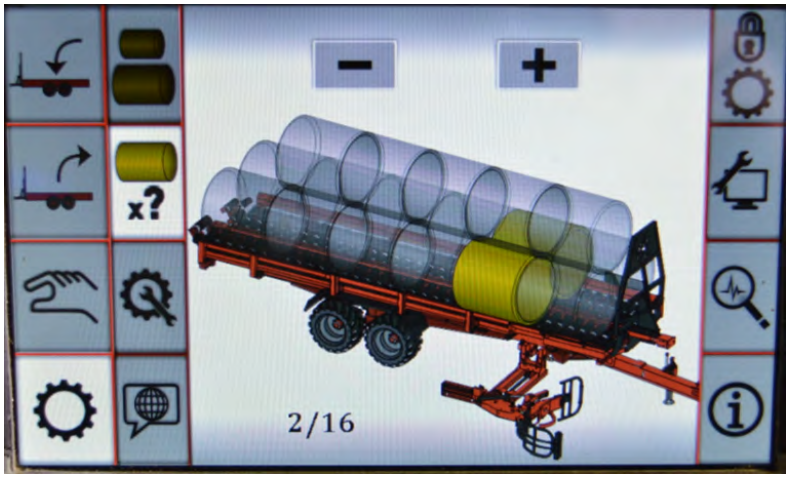


Figure 30 — Bale Counter Screen

2. Press + or − to adjust the number of bales.
3. Press  to return to the settings menu.

5.6.2 Correcting the client bale counter

To modify the bale counter for a client:

1. In the main menu or on the loading screen, press . The following screen will appear:

Figure 31 — Client Data Screen

2. Press beside the number to correct and enter the correct quantity.
3. Press to return to the previous menu.

5.6.3 Exporting the client bale counter data

All the client bale counter data can be exported to CSV format.

To export counter data:

1. Remove the protective cap from the USB port on the control box (see Figure 2) and insert a USB key.
2. Press EXPORT in the bottom right corner of the screen to begin the export.
3. When a message pops up to indicate that the export is complete, remove the USB key.

The name of the exported file will be in mmddhhhh.csv format by default, such as 04280923.csv.

6 Troubleshooting

6.1 Hydraulic controls

Your self-loading trailer is equipped with hydraulic controls allowing you to manually operate the trailer's various components. These controls must be used for maintenance and diagnostic purposes only.

The hydraulic controls must never be used if the trailer can be put in motion.

Before using the hydraulic controls, ensure that no one will operate the controls at the same time on the tractor.

Figure 32 — Hydraulic Controls

Table 11 — Hydraulic Control Functions

Function	Description
1	Opens (▲) and closes (▼) the loading grabber
2	Extends (▼) and retracts (▲) pivot #1 on the loading arm
3	Raises (▼) and lowers (▲) the loading arm
4	Moves the loading arm forward (▼) and backward (▲) on the shock absorber slide
5	Extends (▼) and retracts (▲) the loading arm
6	Moves the pusher forward (▼) and backward (▲)
7	Extends (▼) and retracts (▲) pivot #3 on the loading arm
8	Pivots pivot #2 on the loading arm clockwise (▲) and counter-clockwise (▼)
9	Raises (▼) and lowers (▲) the rear stoppers

6.2 Sensors

Your RBMPRO 2000 trailer is equipped with various sensors for use in automatic and manual mode.

6.2.1 Defective sensors

The lights on the sensors show that they are working properly.

However, a sensor may appear to be working correctly (light on) even though no signal is being emitted. To check that a sensor is working properly:

1. In the main menu, press to enter manual mode.
2. Using or , perform an operation that should activate the sensor that needs to be checked (see Table 7).
3. Press once the operation is complete and check that the box for the sensor is green.

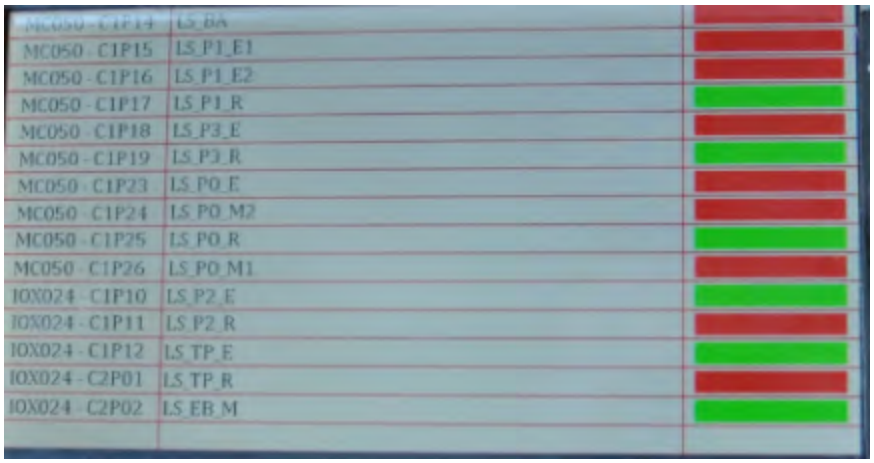


Figure 33 — Sensor Status Screen

If a sensor stops working properly while the trailer is in use, the operation that is underway will automatically stop and the following screen will appear to show which sensor is causing the problem.

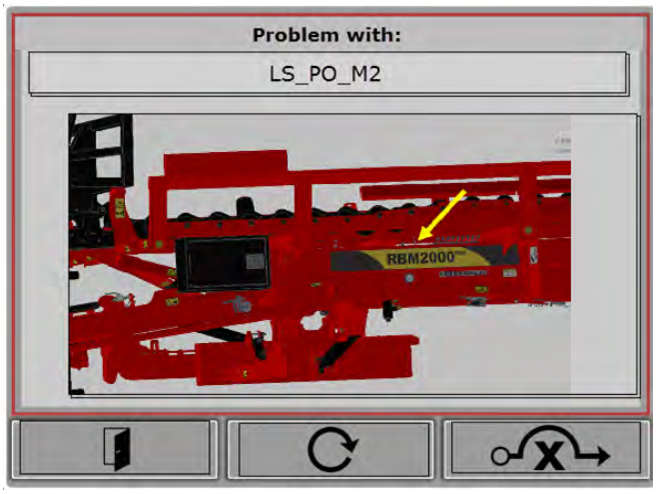


Figure 34 — Sensor Problem Warning

Replace the defective sensor as soon as possible. You can still complete the operation that is underway by pressing  .

6.2.2 Sensor functions and locations

The following table lists all the sensors on the trailer, as well as their functions and locations.

Table 12 — Sensor Functions

Output	Name	Function	Location
MC050-C1P14	LS_BA	Detects when bales are in the grabber	Figure 35
MC050-C1P15	LS_P1_E1	Detects when pivot #1 is positioned for vertical bales	Figure 35
MC050-C1P16	LS_P1_E2	Detects when pivot #1 is positioned for horizontal bales	Figure 35
MC050-C1P17	LS_P1_R	Detects when pivot #1 is retracted	Figure 36
MC050-C1P18	LS_P3_E	Detects when pivot #3 is in open position	Figure 36
MC050-C1P19	LS_P3_R	Detects when pivot #3 is in closed position	Figure 36
MC050-C1P23	LS_PO_E	Detects when the pusher is in rear position	Figure 38
MC050-C1P24	LS_PO_M2	Detects when the pusher is in middle 2 position	Figure 37
MC050-C1P25	LS_PO_R	Detects when the pusher is in front position	Figure 37
MC050-C1P26	LS_PO_M1	Detects when the pusher is in middle 1 position	Figure 37

Output	Name	Function	Location
IOX024-C1P10	LS_P2_E	Detects when pivot #2 is in open position	Figure 36
IOX024-C1P11	LS_P2_R	Detects when the grabber is in closed position	Figure 35
IOX024-C1P12	LS_TP_E	Detects when the shock absorber slide is in forward position	Figure 35
IOX024-C2P01	LS_TP_R	Detects when the shock absorber slide is in rear position	Figure 35
IOX024-C2P02	LS_BR_M	Detects when the arm is extended	Figure 36
MC050-C1P06	Pressure switch "T"	Detects when there is 1,000 psi of pressure on the hydraulic connection to the tractor (return side)	Figure 38
MC050-C1P07	Pressure switch "P"	Detects when there is 200 psi of pressure on the hydraulic connection to the tractor (return side)	Figure 38
MC050-C1P29	LS pressure	Measures the pressure in the hydraulic system	Figure 38
CAN	Arm angle	Detects the angle of the arm	Figure 38

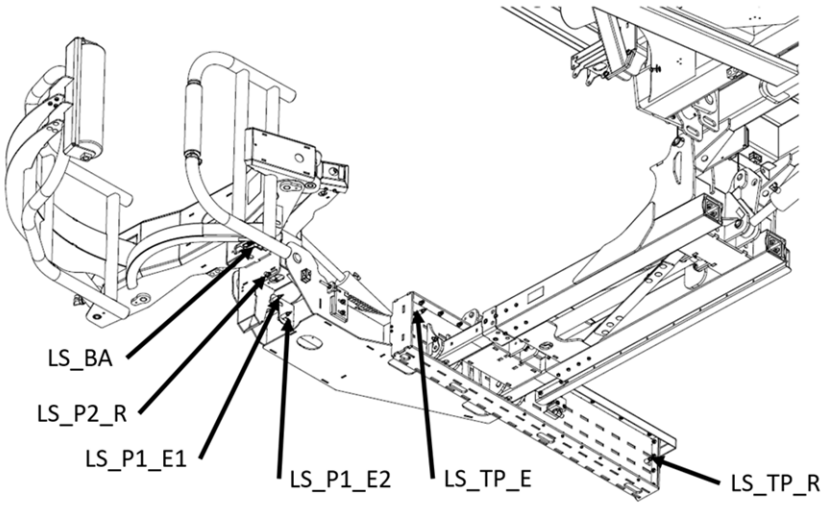


Figure 35 — Locations of the Bale and Shock Absorber Slide Sensors

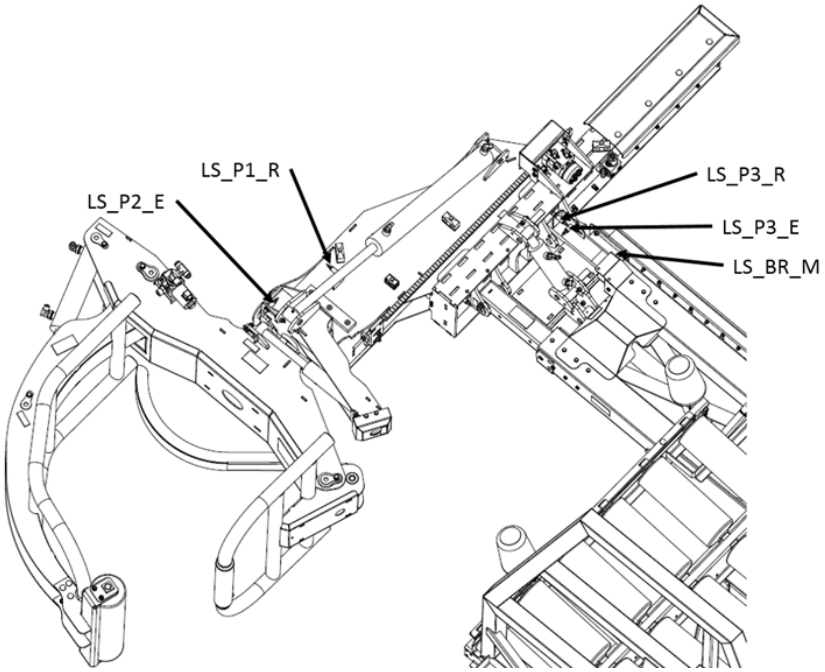


Figure 36 — Locations of the Pivot and Arm Extension Sensors

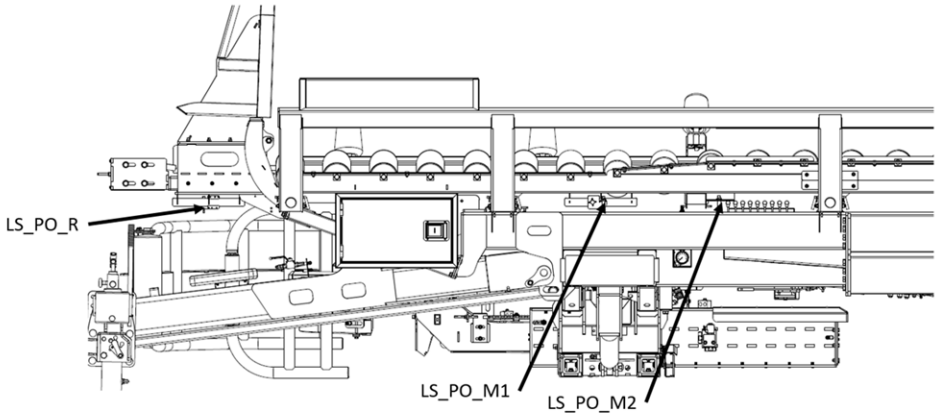


Figure 37 — Locations of the Pusher Middle Position Sensors

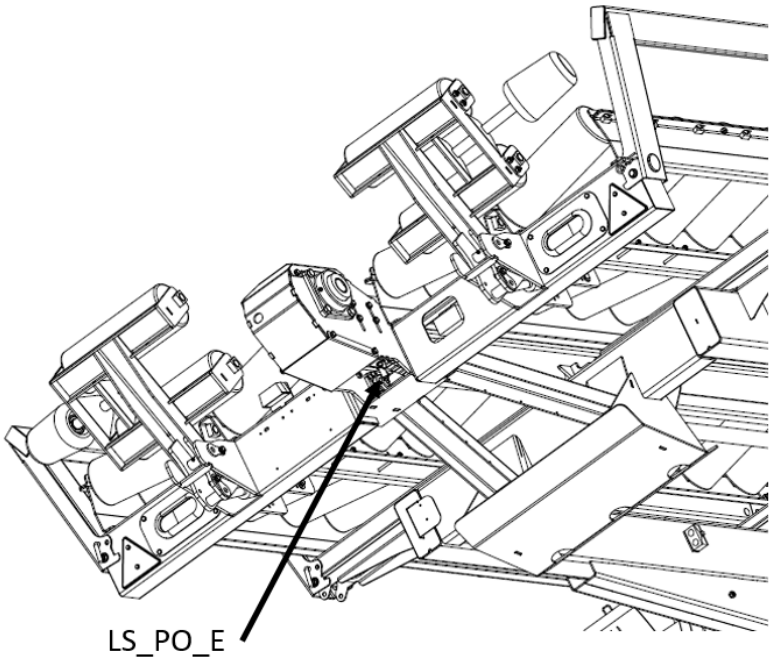


Figure 38 — Location of the Pusher Rear Position Sensor

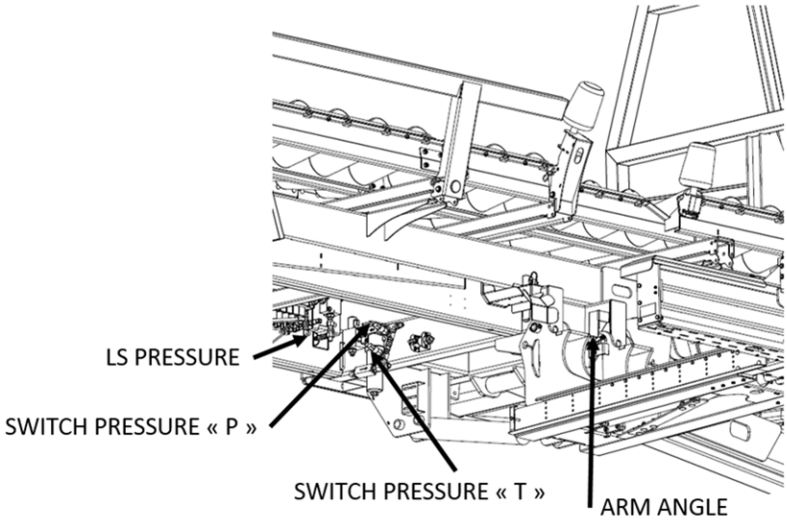


Figure 39 — Locations of the Pressure and Arm Angle Sensors

6.3 Common problems

The following table describes the most common problems you may encounter with your self-loading trailer. It also provides solutions for resolving them. If your problem is not in this table, or if you cannot resolve it yourself, contact your dealer's customer service or our technical service (see How to reach us at the front of this manual for our contact information).

Table 13 — Common Problems

Problem	Possible cause	Solution
The operation that is underway stops and the WARNING screen indicates that there is a problem with a sensor.	The detection distance is not correct.	Adjust the detection distance to 6 mm (3/8 in.).
	A sensor is not working.	Replace the defective sensor as soon as possible. You can still complete the operation that is underway as follows: • If the various trailer components are in the correct positions to resume the operation, press  . The operation will continue normally. • If certain trailer components are not properly positioned, complete the operation in manual mode. If you continue in manual mode, make sure that the counter shows the correct number of loaded bales. Adjust it, if needed ("Adjusting the counters and exporting the data" on page 63).
The control screen is not working.	The power cable is unplugged or damaged.	Plug the power cable back in or replace it.
	The fuse has blown.	Replace the fuse.
The control screen has no power.	The multi-connector is unplugged.	Plug in the connector.
	The main cable is damaged.	Repair or replace the cable.

Problem	Possible cause	Solution
A sensor is not working properly.	The sensor is defective.	Replace the sensor, cable or connector.
	The cable is damaged.	
	The connector is not making good contact.	
	The detection distance is not correct.	Adjust the detection distance to 6 mm (3/8 in.).
Oil is leaking from a cylinder head.	There are scratches on the chrome rod of the cylinder head.	Replace the cylinder head chrome rod.
	The cylinder head gasket is defective.	Replace the cylinder head gasket.
One of the cylinders is moving when the trailer is stopped and is not achieving the desired force.	There are leaks inside the cylinder.	Replace the cylinder piston seals.
One of the cylinders does not have the recommended pressure or flow rate.	The mechanical stops on the main valve are not adjusted properly.	Adjust the mechanical stops on the manual arms of the main hydraulic valve to allow for maximum movement.
The hydraulic unit is leaking oil.	The seals inside the hydraulic unit are in poor condition.	Replace the seals inside the hydraulic unit.
Some trailer components are not moving properly.	A hydraulic spool valve is blocked.	Disassemble, clean and reassemble the hydraulic spool valve.
	The hydraulic load-sensing valve is defective.	Replace the hydraulic load-sensing valve.
The system is losing pressure.	The filters are blocked.	Replace the filters.

Problem	Possible cause	Solution
The loading arm grabber is not grasping the bale.	The grabbing pressure is too low.	Adjust the grabbing pressure (see "Adjusting the loading arm angle and grabbing pressure" on page 63).
When bales are loaded on the platform, they get too jammed together.	The selected bale format is incorrect.	Select the correct bale format (see "Selecting the bale dimensions and number of rows" on page 52).

For any other problems, please contact your dealer or our technical service department.

7 Maintenance

Only qualified and trained individuals are authorized to perform maintenance.

See "Safety tips for maintenance and repairs" on page 27 before beginning maintenance.

The user is responsible for machine maintenance. Carefully follow the instructions below for optimal durability and smooth performance.

- Let the hoses and other hydraulic components cool before beginning maintenance.
- Follow the recommended maintenance intervals.

Before doing any repairs, maintenance or cleaning, turn off the tractor engine and remove the key from the ignition.

Never perform maintenance while the machine is running.

Dispose of used oil and filters in accordance with current standards.

Safety stand

A safety stand is provided so that you can safely perform maintenance and repairs underneath the trailer platform. The stand is stored on the side of the trailer, as shown in Figure 40.

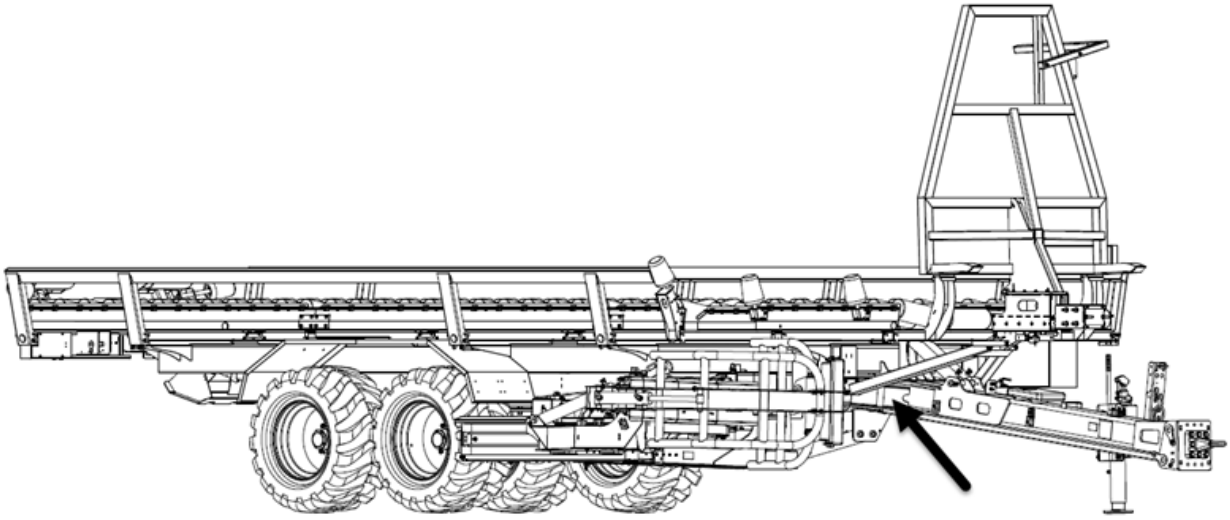


Figure 40 — Stored Safety Stand

To set up the safety stand:

1. Raise the platform as high as possible.
2. Place the stand on the cylinder rod, as shown in Figure 41.
3. Insert the locking pin in the hole and insert the cotter pin to keep it in place.
4. Slowly lower the platform until its weight is resting on the stand.

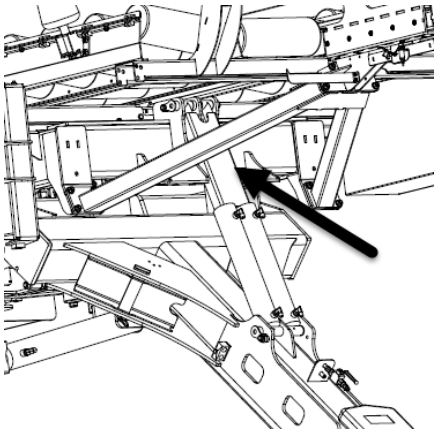


Figure 41 — Setting Up the Safety Stand

Ensure that you do not crush the stand.

If the stand is bent, replace it. A stand in poor condition may be unable to support the platform.

7.1 Maintenance schedule

The following table summarizes the maintenance tasks and their required intervals, which will be covered in the following sections.

Table 14 — Maintenance Schedule

	Before the first use	Every 10 hours	After 50 hours	Every 50 hours	Every 100 hours	After 300 hours	Every 6 months	Every 900 hours	Reference
Remove any accumulated debris (hay, dust, etc.)		X							See section 7.10
Check the tire pressure	X	X							See section 7.6
Check that the lug nuts are tight	X			X					See section 7.7
Check that the hubcaps are attached securely	X								See section 7.7
Check the wheel bearing play			X				X		See section 7.7
Lubricate the wheel bearings								X	See section 7.7

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	Before the first use	Every 10 hours	After 50 hours	Every 50 hours	Every 100 hours	After 300 hours	Every 6 months	Every 900 hours	Reference
Check that the brakes are working properly	X								See section 7.8
Check the brake clearance and wear							X		See section 7.8
Adjust the brake slack							X		See section 7.8
Lubricate the cylinder joints				X					See section 7.2
Lubricate the tandem axle pivots (4)				X					See section 7.2
Lubricate the drawbar pivot (1)				X					See section 7.2
Lubricate the wheel bearings (2)							X		See section 7.2
Lubricate the bearings				X					See section 7.2
Lubricate the transmission chains				X					See section 7.2

	Before the first use	Every 10 hours	After 50 hours	Every 50 hours	Every 100 hours	After 300 hours	Every 6 months	Every 900 hours	Reference
Lubricate the pivots				X					See section 7.2
Replace the high-pressure oil filter						X		X	See section 7.9
Check the condition of the high-pressure oil filter cartridge				X					See section 7.9
Adjust the pusher transmission chain tension			X		X				See section 7.4
Adjust the conveyor chain tension			X		X				See section 7.3
Adjust the shock absorber slide chain tension			X		X				See section 7.5

7.2 Lubrication

Your self-loading trailer must be lubricated using a gun in various places indicated by the sticker in the following figure:

Figure 42 – Lubrication point marker

NOTE: Anderson Group recommends using **synthetic grease**.

Table 15 — Lubrication

Frequency	Part (number of lubrication points)
Every 50 hours of use	Tandem axle pivots (4) Drawbar pivot (1) All other pivots (17) All cylinder joints (22) All bearings (6) All chains (3)
Every 6 months	Wheel bearings (2)

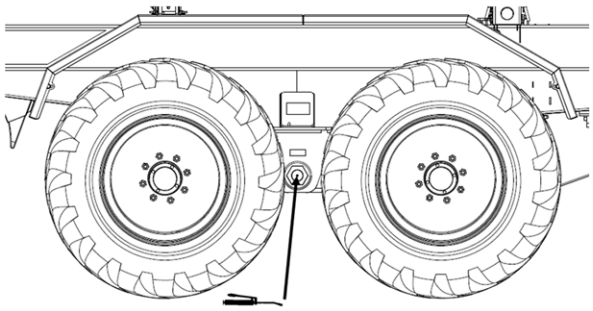

Figure 43 — Tandem Axle Pivots

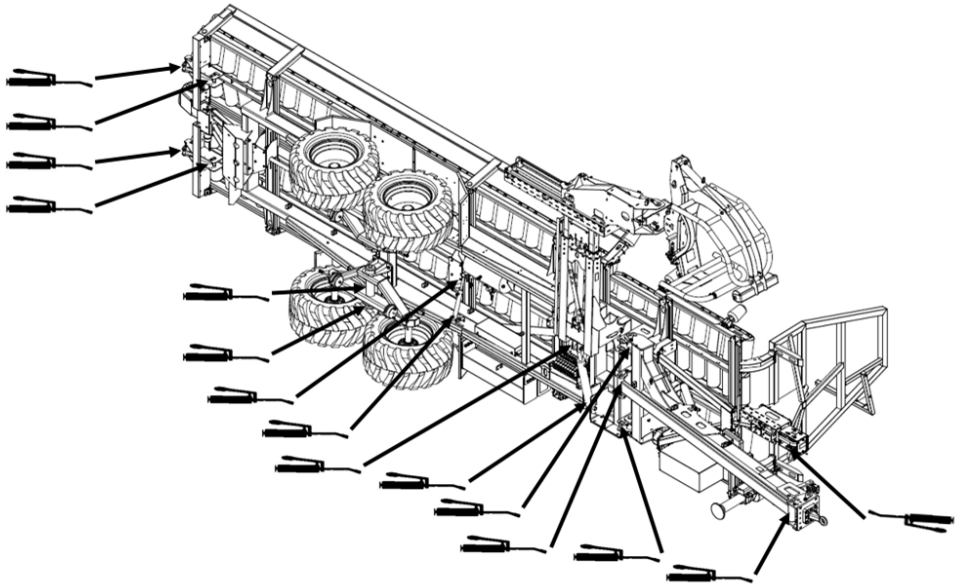

Figure 44 — Platform Lubrication Points

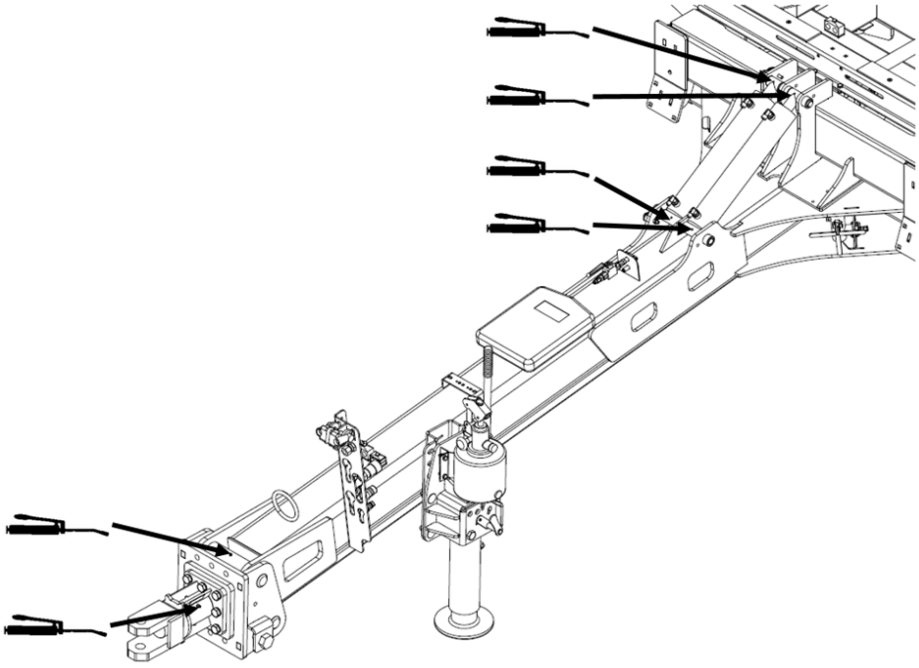

Figure 45 — Drawbar Lubrication Points

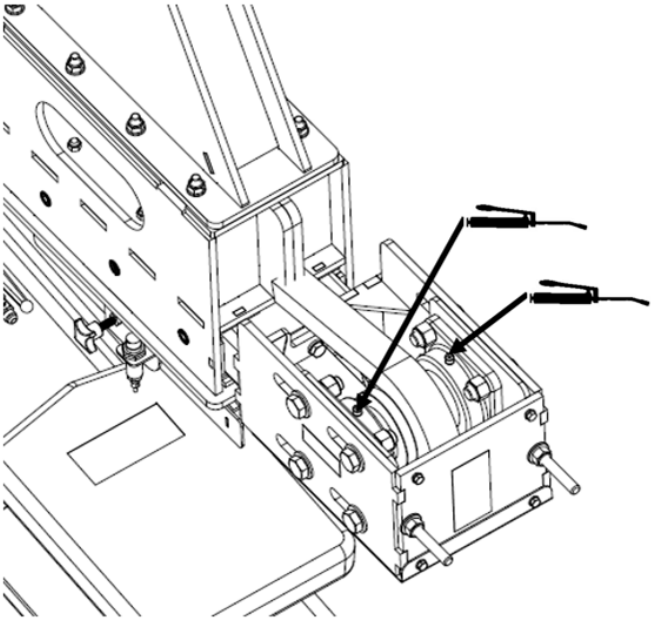

Figure 46 — Pusher Chain Bearings

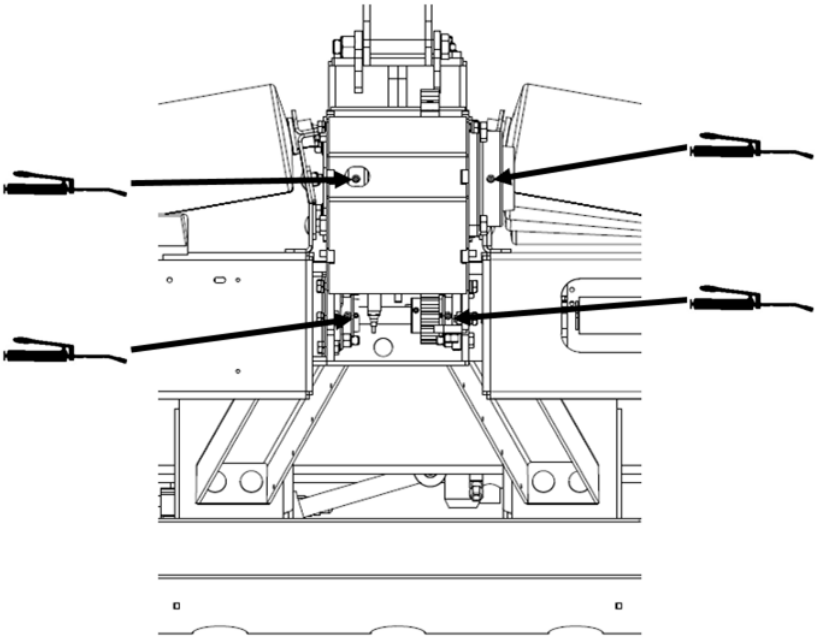

Figure 47 — Pusher Transmission Chain Bearings

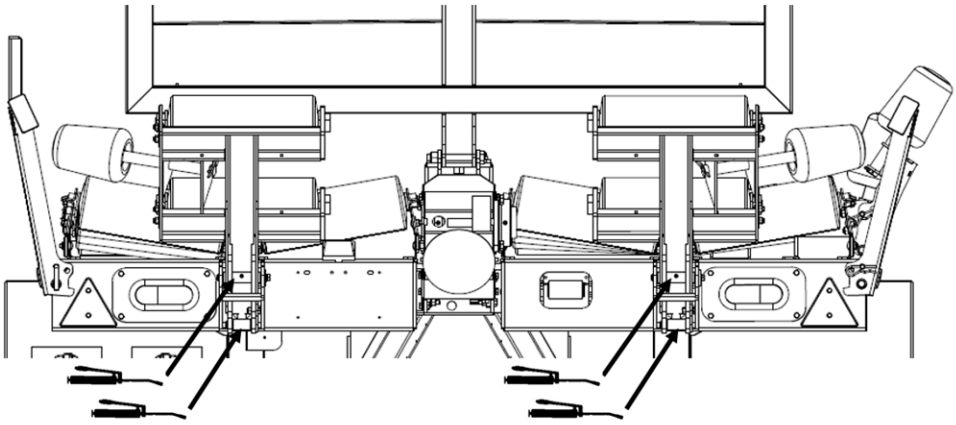

Figure 48 — Rear Stopper Pivots

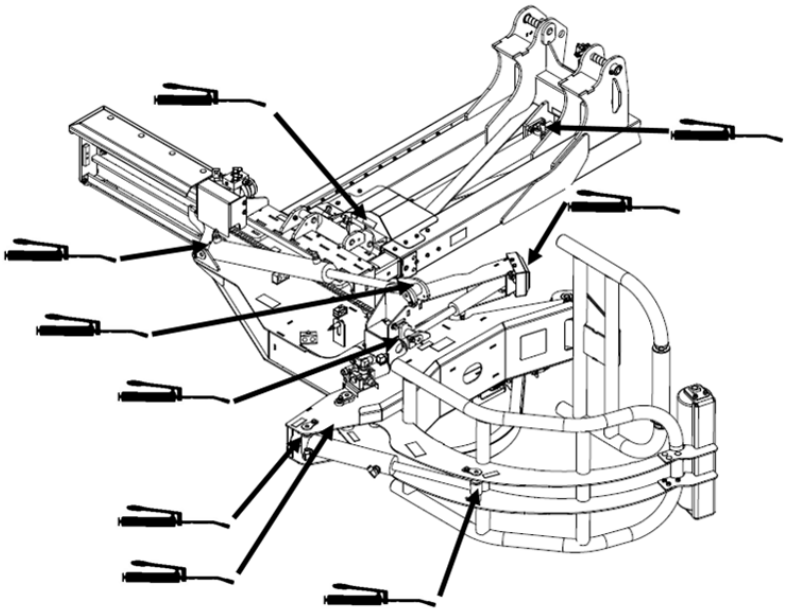

Figure 49 — Loading Arm Lubrication Points

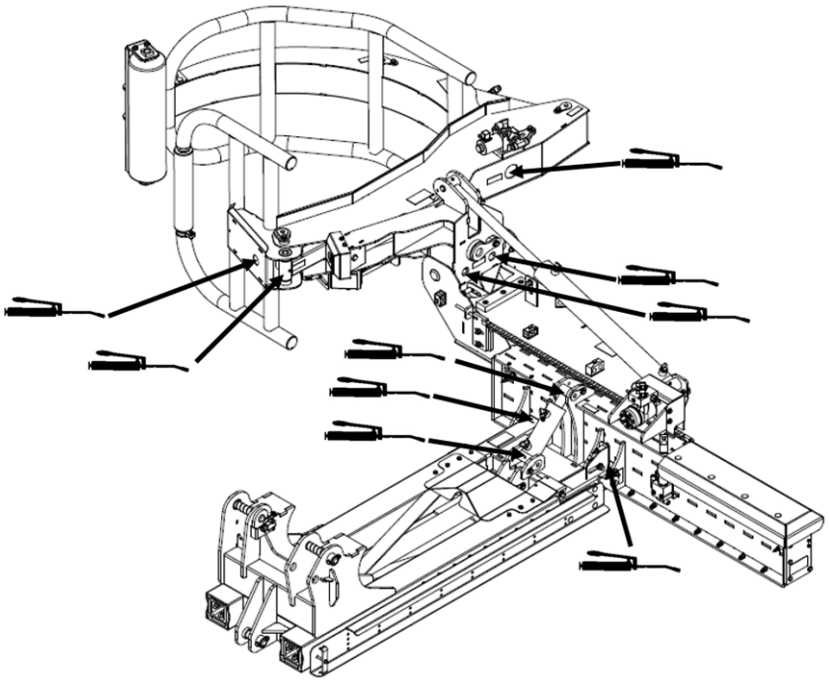

Figure 50 — Loading Arm Lubrication Points (continued)

7.3 Adjusting the pusher chain tension

After the first 50 hours of use and every 100 hours thereafter, you will need to adjust the pusher chain tension.

To adjust the chain tension:

1. Loosen the eight bolts on both sides of the chain box (A, Figure 51).
2. Tighten the two nuts on the tension bolts on the end of the box (B, Figure 51) until the correct tension is reached.

> Important! **Tighten the two tension bolts an equal amount, ensuring that the visible parts of both bolts are the same length.**

3. Tighten the eight bolts on both sides of the chain box (A, Figure 51).

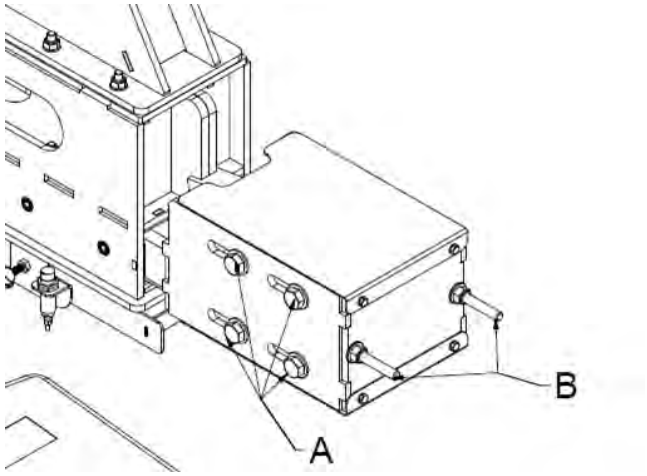

Figure 51 — Adjusting the Pusher Chain Tension

7.4 Adjusting the pusher transmission chain tension

After the first 50 hours of use and every 100 hours thereafter, you will need to adjust the pusher transmission chain tension.

To adjust the chain tension:

1. Loosen the four bolts on the side of the transmission (A, Figure 52).
2. Tighten the nut on the tension bolt underneath the transmission (B, Figure 52) until the correct tension is reached.
3. Tighten the four bolts on the side of the transmission (A, Figure 52).

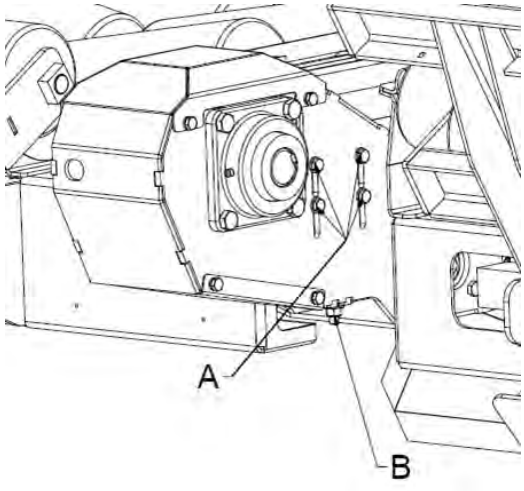

Figure 52 — Adjusting the Pusher Transmission Chain Tension

7.5 Adjusting the shock absorber slide chain tension

After the first 50 hours of use and every 100 hours thereafter, you will need to adjust the shock absorber slide chain tension.

To adjust the chain tension:

1. Loosen the bolts on the side of the loading arm (A, Figure 53).
2. Tighten the tension bolt (B, Figure 53) until the correct tension is reached.
3. Tighten the bolts (A, Figure 53).

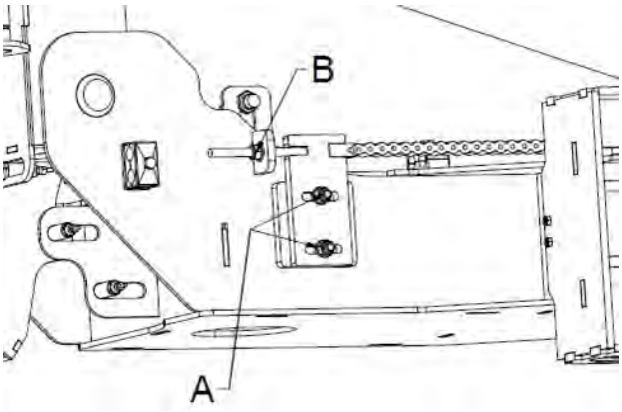

Figure 53 — Adjusting the Shock Absorber Slide Chain Tension

7.6 Tire pressure

Check the tire pressure before each use. The pressure should be 3.1 bar (45 psi).

7.7 Maintaining and adjusting the axles

7.7.1 Assembling and attaching the wheels

Your trailer axles have washer nuts (model with the optional brakes) or tapered nuts (model without the optional brakes), as shown in Figure 54. Table 16 shows the correct tightening torque for the socket and wheel stud dimensions. The last two columns in Table 16 show the length of the lever and the force to use when a torque wrench or pneumatic drill cannot be used.

The holes in the rim must be countersunk to fit the spherical part of the washer or the tapered part of the nut. The nuts are tightened once the spherical part of the washer or the tapered part of the nut is in the countersunk hole.

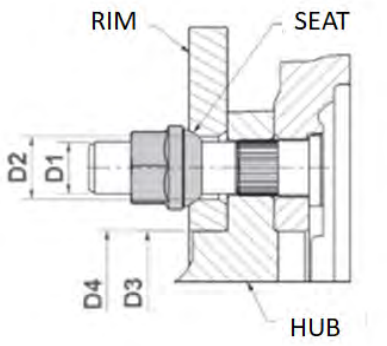

Figure 54 — Nut with Washer or Tapered Nut

Table 16 — Tightening Torque

Sockets	Wheel Stud D1	Tightening Torque	Lever Length	Force
27 mm	M18 x 1.5	270 (+20/0) N m (200 (+15/0) lb.-ft.)	450 mm (18 in.)	60 kg (132 lb.)
30 mm	M20 x 1.5	350 (+30/0) N m (258 (+22/0) lb.-ft.)	600 mm (24 in.)	60 kg (132 lb.)
1 1/16 in.	5/8-18	270 (+20/0) N m (200 (+15/0) lb.-ft.)	450 mm (18 in.)	60 kg (132 lb.)

7.7.2 Tightening the lug nuts

Using a torque wrench, the nuts must be gradually tightened one after another in the order shown in Figure 55.

Figure 55 — Order for Tightening the Nuts

To tighten them with a hand tool (such as a pneumatic torque wrench), you will need to adjust the tool to apply the correct tightening torque.

If you do not, the wheel studs and lug nuts may become overloaded, which could result in them being damaged or broken.

An impact wrench can be used to loosen the nuts, but not to tighten them, since the tightening torque cannot be controlled with this type of wrench.

Check and tighten the lug nuts:

- After the first use.
- After the first loaded run.
- After the first 1,000 km.
- Every 6 months or 25,000 km.
- Each time a wheel is changed or removed.

See Table 16 for the tightening torque to apply to each nut.

7.7.3 Checking that the hubcaps are secure

Regularly check that the hubcaps are firmly in place and are in perfect condition. Immediately replace missing or damaged hubcaps to prevent dirt from getting inside the hub, which could damage the bearings.

- For pop-on hubcaps, visually check that they are all the way on.
- For hubcaps with screws, replace the gasket each time the hubcap is removed and tighten the screws every 6 months.

7.7.4 Checking the condition and play of the wheel bearings

The lifespan of the wheel bearings depends on the operating conditions, load, speed, adjustments and lubrication.

Check the condition and play of the wheel bearings:

- After the first 50 hours or 1,000 km;
- Every 6 months or 25,000 km.

To check the wheel bearings:

1. Lift the wheel slightly off the ground.
2. Slowly turn the wheel in both directions to check for any resistance.

3. Turn the wheel quickly to check for unusual noises such as grating or knocking.

If a bearing is damaged, replace all the bearings and seals (see section 7.7.7).

To check the wheel bearing play:

1. Lift the axle until the wheel is no longer resting on the ground.

> **NOTE:** Make sure that the vehicle is completely immobilized.

2. Release the brake.
3. Grasp the top and bottom of the wheel and attempt to rock it to check for play.

If there is any play, take it up (see section 7.7.5).

> **NOTE:** For self-steering axles, make sure that the play is not coming from the suspension or pivot.

7.7.5 Adjusting the wheel bearing play

Figure 56 and Table 17 show the various components of a wheel bearing.

To adjust the wheel bearing play:

1. Lift the axle until the wheel is no longer resting on the ground. For large wheels, remove the wheel to make it easier to feel the play and see what you are adjusting.
2. Remove the hubcap.
3. Remove the cotter pin or hair pin clip from the castle nut.
4. Tighten the castle nut (right-hand threads) to take up all the internal play. The tapered roller bearings will be firmly in contact with the hub shoulders, support ring, spindle, and castle nut, and the rotation of the hub or wheel will drag slightly.
5. Loosen the castle nut until there is no more friction between the castle nut and outer bearing. Make sure that the hole for the cotter pin or hair pin clip corresponds to the notch in the nearest nut.
6. Tap the hub with a mallet to make sure the assembly is seated.
7. Check that the hub rotates freely. It is better that it be slightly loose than too tight. If needed, repeat steps 4 and 5.
8. Once it has been adjusted properly, insert a new cotter pin or the hair pin clip, as appropriate.
9. Put the hubcap back on.
10. Put the wheel back on (see section 7.7.1 and section 7.7.2).

Once the wheel is back on, turn it slightly. The wheel should come to rest with a slight rocking movement.

Figure 56 — Wheel Bearings

Table 17 — Wheel Bearing Components

	Component
1	Spindle
2	Oil seal
3	Inner bearing
112	Inner bearing grease retainer
5	Hub
6	Outer bearing grease retainer
7	Outer bearing
8	Castle nut
9	Hair pin clip or cotter pin
10	Hubcap gasket
11	Hubcap
12	Hubcap screws

7.7.6 Lubricating the wheel bearings

Lubricate the wheel bearings:

- Every 2 years or 50,000 km;
- Each time the brake shoes are replaced.

NOTE: In harsh conditions, these intervals can be reduced.

Use multipurpose EP grease for lubricating plain, ball and roller bearings that support heavy loads and are subjected to shock, like those for heavy vehicles, agricultural machinery, etc.

All the components (hub, spindle, bearing parts, seals, castle nuts, hubcap, cotter pin) must be degreased and completely clean before being reassembled. The slightest dirt could damage the bearings or even the spindle. You will need to reassemble everything in a clean area using the appropriate tools.

If your trailer has the optional brakes, take this opportunity to check the condition of the brake linings, drum, and return springs, dust the brake, and clean and lubricate the brake cam bearing.

To remove the wheel bearings for cleaning and inspection (see Figure 56 and Figure 57):

1. Loosen the lug nuts.
2. Lift the axle until the wheel is no longer resting on the ground.
3. Remove the wheel and release the brake.

NOTE: Make sure that the vehicle is completely immobilized.

4. Remove the hubcap.
5. Remove the cotter pin or hair pin clip from the castle nut, and then remove the castle nut.
6. Remove the hub/drum assembly (with a hub puller if necessary), the outer races, the grease seals inside the hub (depending on the model), the inner race and the small bearing cage.
7. Inspect and clean all the parts that were removed. The outrer races and grease seals can stay inside the hub during cleaning.
8. Remove the cage and inner ring of the large bearing from the spindle (with an extractor if necessary).
9. Check the condition of the seal between the spindle and the large bearing (or the wheel bearing seal, depending on the model). Replace these parts if necessary, using a puller to remove the wheel bearing seal if needed. Note the position of the seal for reassembly.
10. Inspect the bearing and seal contact surfaces on the spindle, as well as the threads on the end of the spindle. Remove any bumps or burrs.
11. Repeat the process for the hub.
12. Check the contact surface of the castle nut.
13. Clean and degrease all these parts with a suitable product.

To reassemble and lubricate the wheel bearings:

1. Apply a coat of grease to the spindle.
2. Put the oil seal or wheel bearing seal on in the correct direction.

NOTE: Using a driver makes it easier to insert a wheel bearing seal and protects the seal.

3. Apply a generous coat of grease to the cage and bearings in the large bearing, making sure to get grease around the bearings and under the cage.
4. Put the inner race of the large bearing all the way onto the spindle. Be careful to avoid damaging the bearing cage. If needed, use a tool to put the inner race/rollers/cage assembly back on the spindle, as shown in Figure 58. The force must only be applied to the inner race, and never to the cage or rollers, which could damage the bearing.
5. Apply a coat of grease (15 mm for small axles, 20 mm for large axles) all the way around and across the outer races of the large and small bearings that remained in the hub. For hubs without a grease retainer, put a generous amount of grease in the centre of the hub bore.
6. Slide the hub/drum assembly onto the spindle and brake shoes, keeping it perfectly centred and on the pin, making sure to insert the joint all the way back on the spindle.
7. Apply a generous coat of grease to the cage and rollers of the small bearing, and put the small bearing on the spindle.
8. Tighten the castle nut and make the adjustments indicated in section 7.7.5.
9. Lock the castle nut with a new cotter pin or the hair pin clip, as appropriate.
10. For hubs without grease retainers, fill the hubcap with grease.
11. Put the hubcap back on.

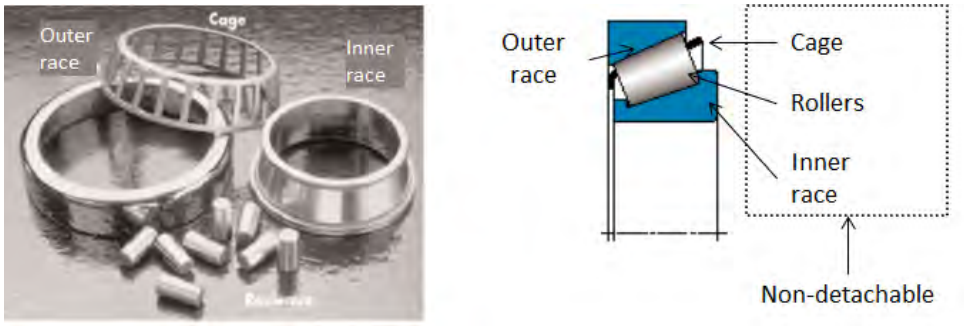

Figure 57 — Disassembling the Wheel Bearings

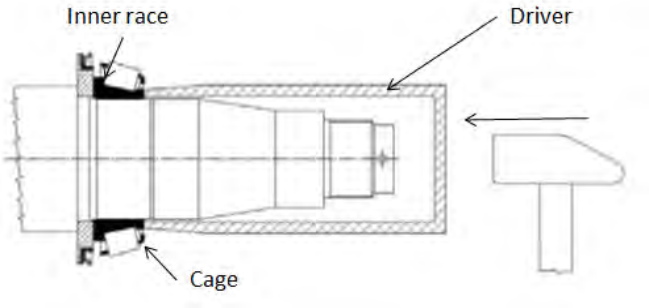

Figure 58 — Reassembling the Wheel Bearings

7.7.7 Replacing the wheel bearings

NOTE: For axles with grease retainers (see Figure 56), you will need to get new grease retainers, since they will be damaged in the process of removing the outer races.

NOTE: Unpack the bearings at the last minute and be careful to avoid mixing up their parts.

To replace the wheel bearings:

1. Remove the wheel bearings as described in section 7.7.6.
2. Remove the outer races of the bearings, which are inside the hub (see Figure 59).

NOTE: Note the positions of the outer races and grease retainers for reassembly.

NOTE: If the axle has grease retainers, they will come out at the same time as the outer races and will be have been damaged as a result.

3. Insert the outer races as shown in Figure 60.

NOTE: Make sure to put the outer races and grease retainers in the correct positions.

NOTE: If the axle has a grease retainer, first put the retainer in its housing (in the correct direction). Make sure it is centred and remains in place throughout the process of putting the outer race back in.

4. Perform a final check.

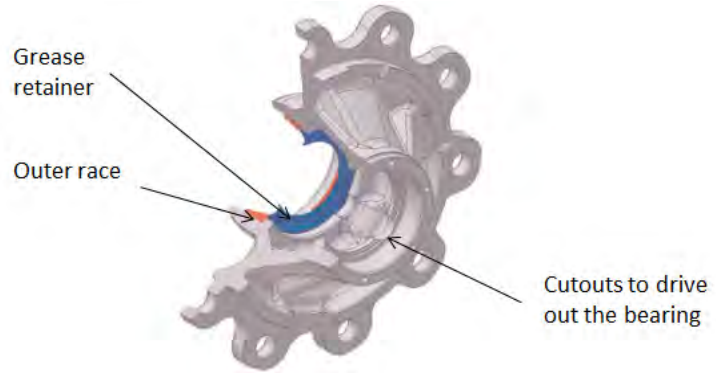

Figure 59 — Outer Race

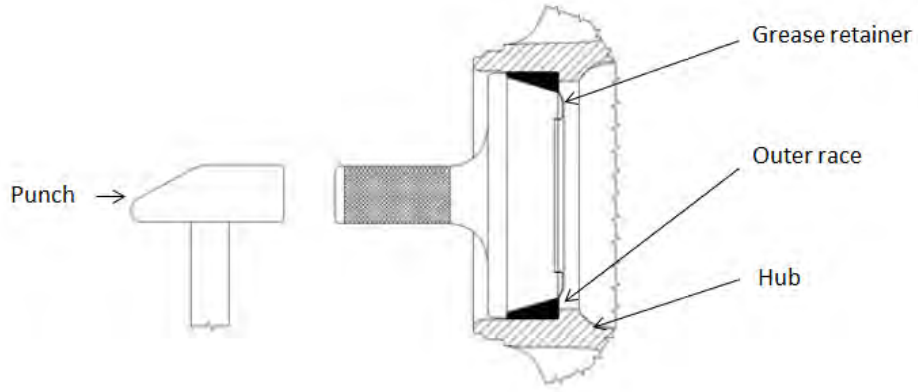

Figure 60 — Inserting New Outer Races

7.8 Maintaining and adjusting the brakes (available as an option)

7.8.1 Checking the brakes when getting started

When getting started and after the first loaded run, check that the brakes are working properly:

- Check that the actuators and return springs are secured and check the forward and return travel of the cylinders.
- Check that the service and parking brakes are working properly.

- Check that the screws and nuts are tight (covers, fulcrum…) and that the cotter pins, pins, retaining rings, etc. are secured.
- Check for any oil or air leaks.

7.8.2 Checking the brake clearance and wear

Every 6 months, check the brake clearance and wear:

- Check the brake clearance and the wear between the linings and the drum by looking through the brake inspection window (see Figure 61). A pushrod stroke that has increased significantly is a sign of wear.
- Check the thickness of the brake linings (see Table 18). The brake shoes must be replaced when the lining has reached the minimum thickness.
- Check that the brakes are clean and dust them if needed.
- If the cam bearings have lubrication fittings, lubricate them (see Figure 62). Use a moderate amount to avoid getting any grease on the linings or drums.
- Carry out the same checks as when getting started and after doing the first loaded run (section 7.8.1).

Figure 61 — Brake Inspection Window

7.8.3 Adjusting the brake clearance

You will need to take up the slack when the push rod stroke is approximately 2/3 of the maximum travel.

To do so, move the lever one or more notches relative to the cam.

Never change the position of the actuator on the lever without the authorization of the vehicle manufacturer, as the vehicle has been approved for use with this setting (brake levers have multiple holes; they must be kept in their original position).

If a slack adjuster has been installed, turn the adjusting screw on the slack adjuster to adjust its relative position to the cam bearing (see Figure 62).

Important! **Turn it in the direction that the cam bearing rotates (see Figure 62). To take up the slack, turn the screw so that the cam turns in the same direction.**

Important! **To prevent the brake from overheating, make sure that the wheel turns freely when the brake is not engaged.**

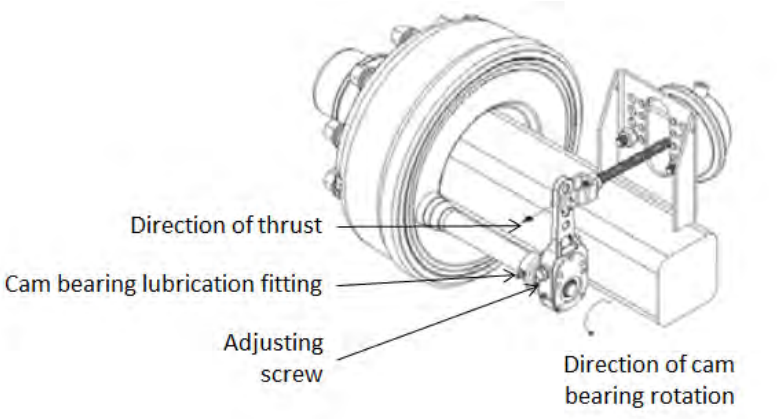

Figure 62 — Adjusting a Brake with a Slack Adjuster

7.8.4 Replacing the brake shoes

The brake shoes must be replaced when the lining has reached the minimum thickness. Use this opportunity to lubricate the wheel bearings (see section 7.7.6).

Table 18 — Minimum Lining Thickness

Brake type	Dimensions (inside diameter of the drum x thickness of the lining)	Minimum lining thickness (mm)
356 E	350 x 60	2
359 E	350 x 90	2
412 E	406 x 120	5

See section 7.7.5 and section 7.7.6 for how to disassemble and reassemble the wheel hub, as well as how to lubricate and adjust the play of the wheel bearings.

During this process, inspect all the brake mechanisms:

- The condition of and wear on the drums.
- The condition of the cam shafts and brake levers, especially the play on the splines.

- The wear on the bushings.
- The condition of the protective bellows (depending on the model).
- The condition of the shoe return springs.
- The condition of the anchor pins (depending on the model).
- For shoes with rollers, check that they rotate properly and lightly lubricate the roller pin before assembling.

Replace any components that are defective or worn.

When reassembling, apply a thin coat of grease to all contact surfaces (cams, anchor points, bushings...), being careful to avoid getting grease on the drums and shoe linings.

For brakes with a centre the shoes before

1. Once the hub/drum/brake assembly has been reassembled, slacken the nut slightly and engage the brake in the correct direction (the direction of the cylinder stroke) by manually pulling the lever.

> **NOTE:** To make it easier, you can put a tube handle on the lever (see Figure 63). The shoes will then make contact with the drum.

2. Tighten the anchor pin while maintaining pressure on the lever.
3. Replace the pin if using a cotter pin.

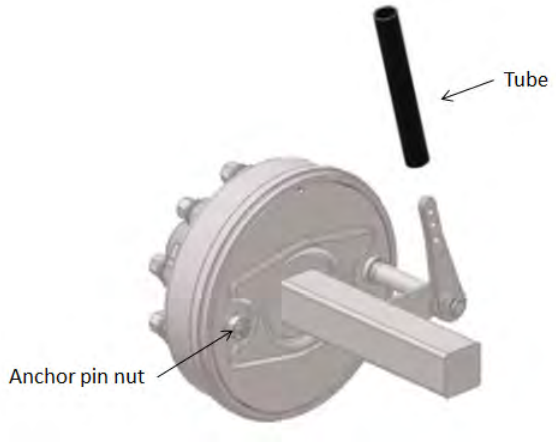

Figure 63 — Centring the Brake Shoes

7.9 Maintaining the high-pressure filter

The condition of the high-pressure filter on the trailer must be checked after every 50 hours of use. The filter is underneath the frame, on the left side, behind the tongue (Figure 64).

An indicator on the filter shows the condition of the cartridge. If the indicator is green, the cartridge can continue being used. If it is red, it must be replaced.

NOTE: If your filter does not have an indicator, remove the filter in order to inspect the cartridge and replace it if needed.

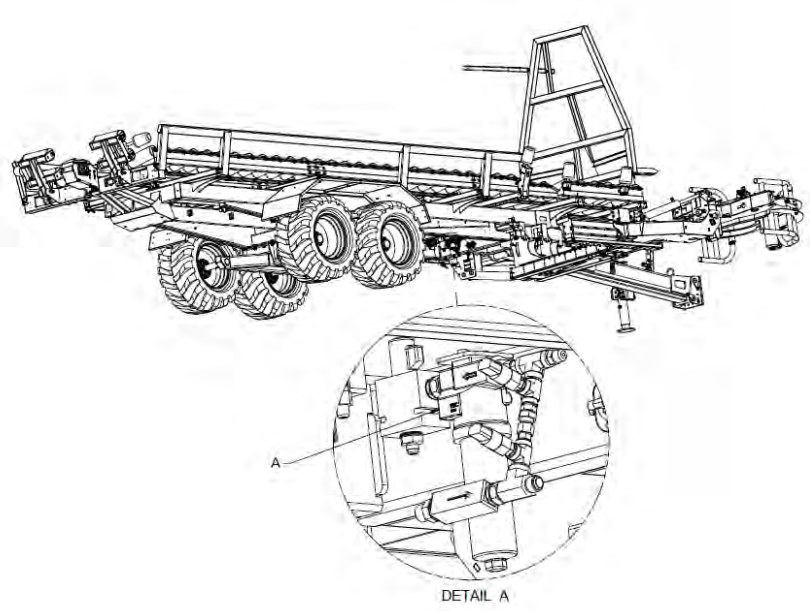

Figure 64 — High-Pressure Filter

7.10 Cleaning

At the end of each day using the trailer, ensure that the hydraulic valve and platform rollers are clean. Any debris (hay, dust, and mud) that has accumulated on or in these components can prevent them from working properly.

7.11 Storage

If you do not plan on using the trailer for a long period, store it in a place with a flat surface. For your safety, chock the wheels to prevent the trailer from moving.

NOTE: Anderson Group strongly recommends cleaning and performing general maintenance on the machine before storing it for long periods.

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