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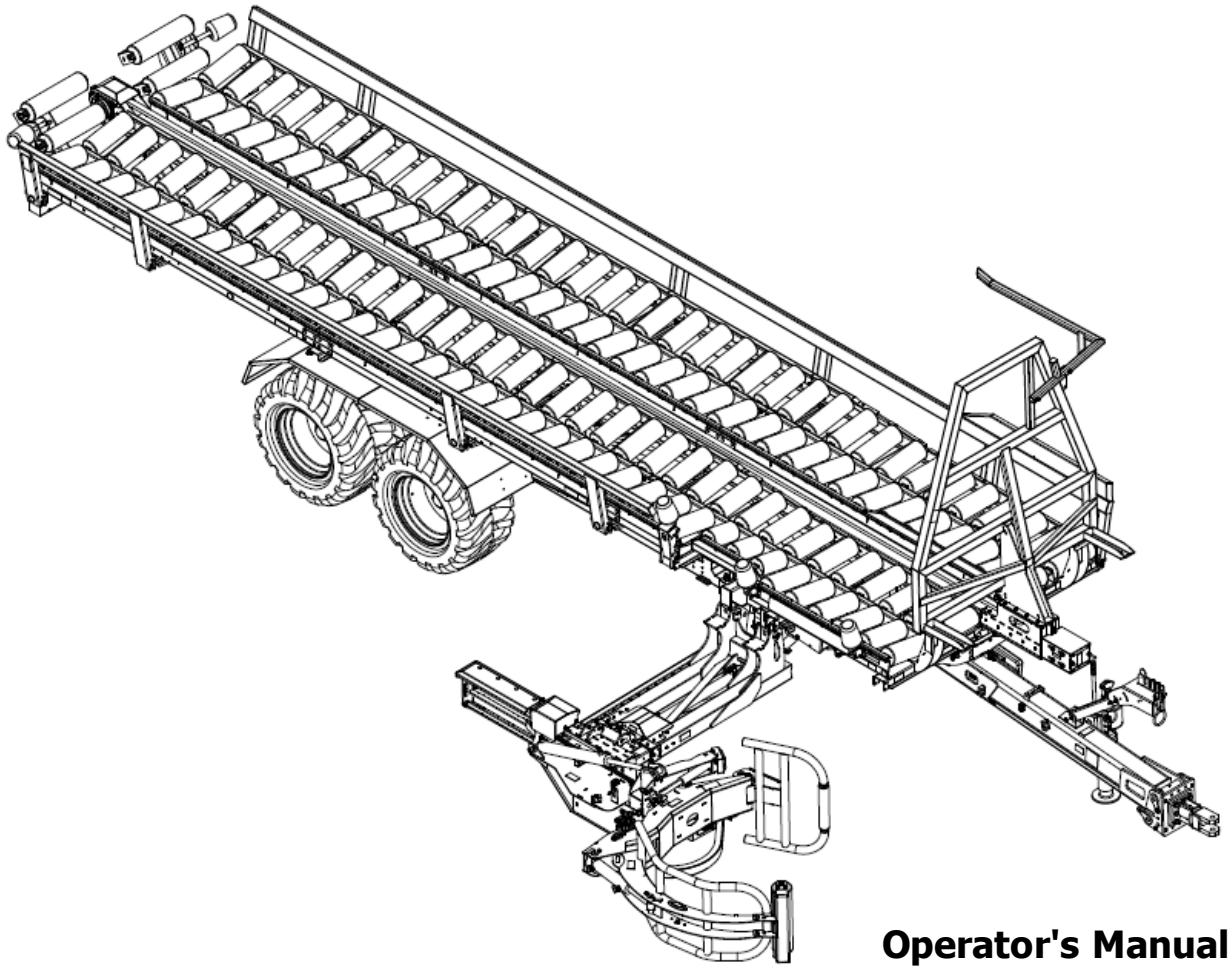
ANDERSON

# Self-Loading Trailer

# RBMPRO 1400 and RBMPRO 2000



## Operator's Manual

## 2020

Document No.: **CE_RBMPRO-2020_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<br>Chesterville, QC, Canada, G0P 1J0 |
| PHONE: | 819-382-2952 |
| FAX: | 819-382-2643 |
| WEB SITE: | www.grpanderson.com |

**DECLARE UNDER SOLE RESPONSABILITY THAT OUR PRODUCT,**

| | |
|---|---|
| PRODUCT: | SELF-LOADING BALE CARRIER |
| TRADEMARK: | RBMPRO |
| MODEL: | RBMPRO 2000 & RBMPRO 1400 |

**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: **January 20th, 2020**

**SIGNATURES:**

ANDERSON GROUP CO. ANDERSON ANDERSON GROUP CO.

**M. Patrice Desrochers**
President

# Table of contents

# 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. The 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 St.
Chesterville, QC G0P 1J0
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 the machine. |

# 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 and 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 your self-loading trailer.

## 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 trailer models (the figures show the RBMPRO 2000 model).

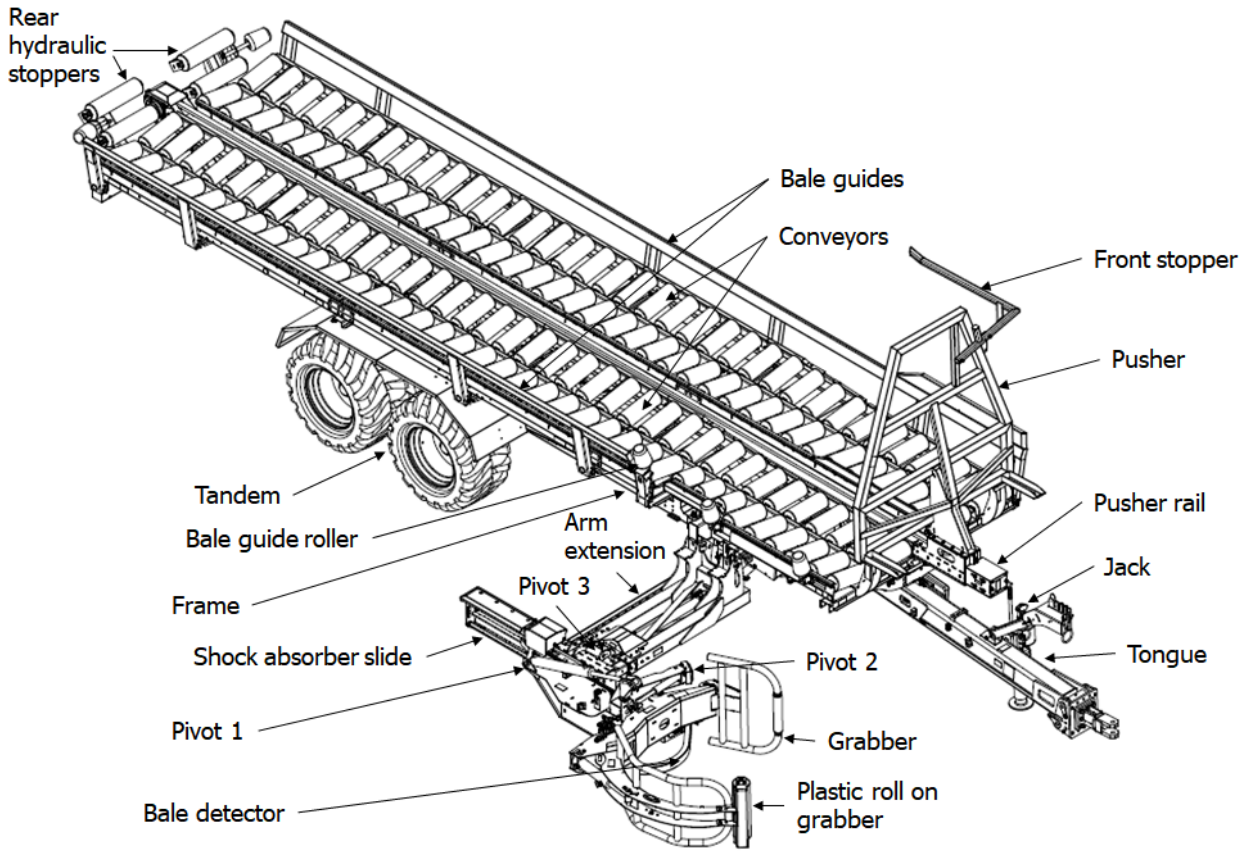



**Figure 1 — Main Components of the Self-loading Trailer**

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

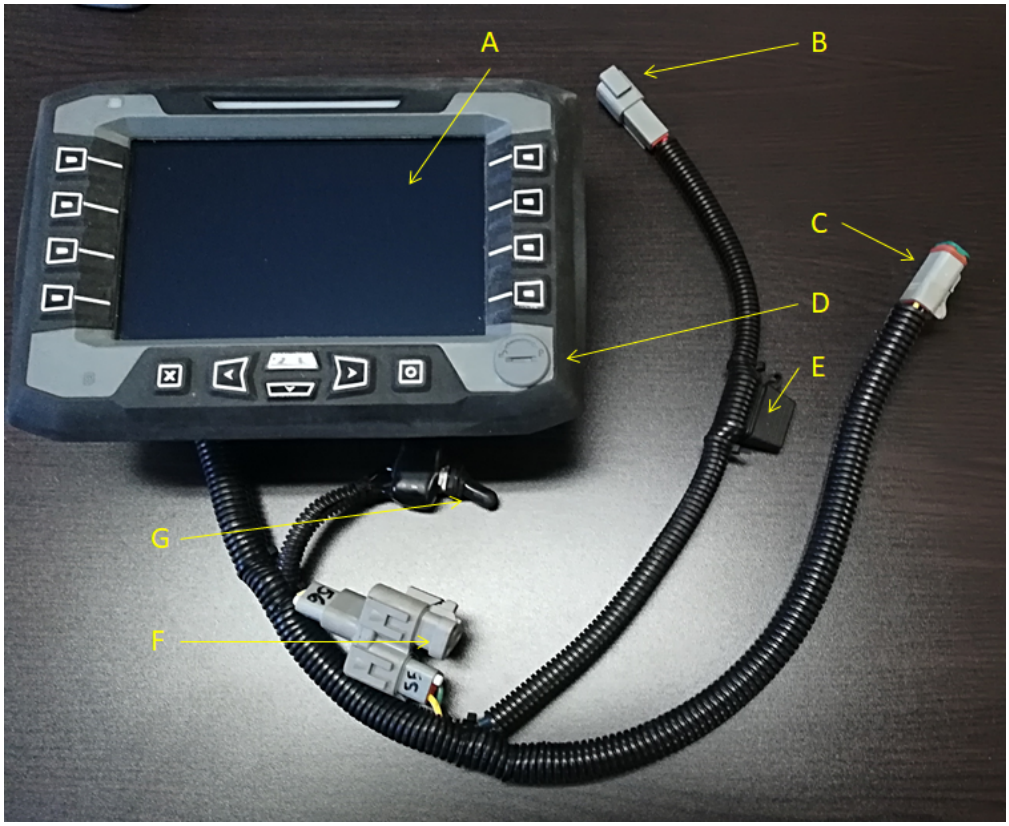



**Figure 2 — Control Box**

**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

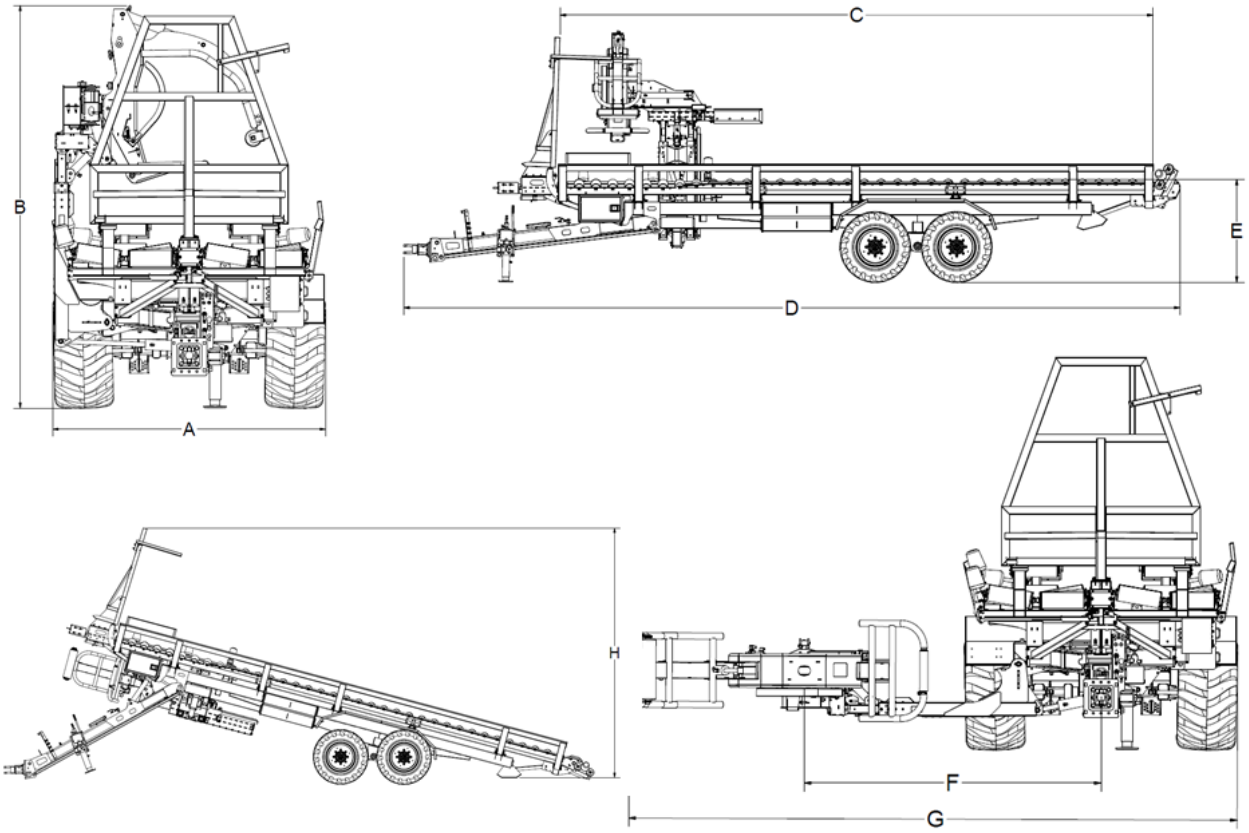



**Figure 3 — Dimensions**

**Table 2 — Dimensions and Weights**

| | RBMPRO 1400 | RBMPRO 2000 |
|---|---|---|
| Width (A) | 2.55 m (100 in.) | 2.55 m (100 in.) |
| Height (B) | 3.81 m (150 in.) | 3.81 m (150 in.) |
| Platform length (C) | 6.55 m (258 in.) | 9.00 m (354 in.) |
| Total length (D) | 9.27 m (365 in.) | 11.76 m (463 in.) |
| Platform height (E) | 1.55 m (60 in.) | 1.55 m (60 in.) |
| Distance between the grabber and the centre of the trailer (F) | 2.80 m (110 in.) | 2.80 m (110 in.) |
| Total width with arm extended (G) | 5.71 m (225 in.) | 5.71 m (225 in.) |
| Maximum height when unloading (H) | 4.67 m (184 in.) | 4.88 m (192 in.) |

| | RBMPRO 1400 | RBMPRO 2000 |
|---|---|---|
| Empty weight | 6,173 kg (13,610 lb.) | 7,000 kg (15,432 lb.) |
| GVWR (gross vehicle weight rating) | 19,000 kg (41,888 lb.) | 19,000 kg (41,888 lb.) |

**Table 3 — General Specifications**

| | RBMPRO 1400 | RBMPRO 2000 |
|---|---|---|
| Load capacity | 12,854 kg (28,278 lb.) | 12,000 kg (26,456 lb.) |
| Maximum number of bales | 1.2 m (4 ft.) bales:<br>• 10 (two rows on one level)<br>• 13 or 14 (three rows on two levels)[1]<br>1.5 m (5 ft.) bales:<br>• 8 (two rows on one level)<br>• 10 or 11 (three rows on two levels)[1] | 1.2 m (4 ft.) bales:<br>• 14 (two rows on one level)<br>• 19 or 20 (three rows on two levels)[1]<br>1.5 m (5 ft.) bales:<br>• 12 (two rows on one level)<br>• 16 or 17 (three rows on two levels)[1] |
| Maximum weight per bale | 1,134 kg (2,500 lb.) | |
| Bale dimensions | Diameter: 1.2 to 1.5 m (4 to 5 ft.)<br>Length: 1.2 to 1.5 m (4 to 5 ft.) | |
| Hydraulic system | Type: Open<br>Pressure: Max. 207 bar (3,000 psi)<br>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<br>Recommended pressure: 3.2 bar (45 psi) | |
| Required tractor | 130 HP (minimum)<br>Minimum tractor hydraulic flow: 60 Lpm (15 gpm)<br>Minimum tractor hydraulic pressure: 172 bar (2,800 psi)<br>1 direct pump outlet<br>1 free return fitting<br>1 hydraulic load-sensing outlet<br>2 or 3 double-acting hydraulic control valves | |

[1]: Check local regulations on maximum allowable height and width before driving on public roads.

## 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
- Empty 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.

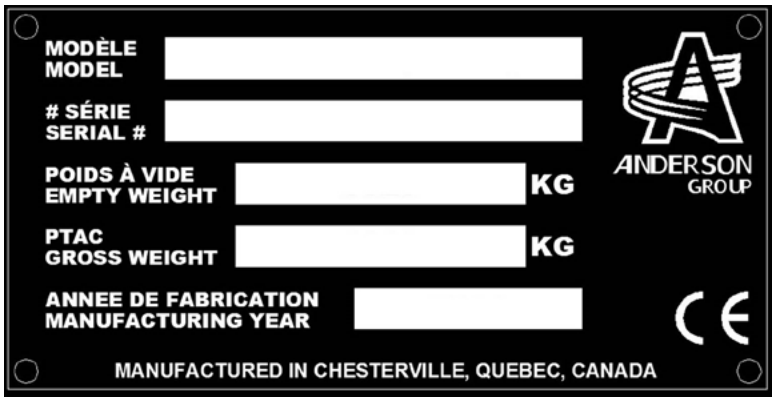



**Figure 4 — Nameplate**

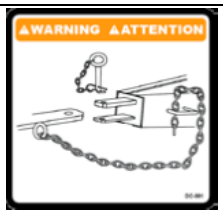
Important!

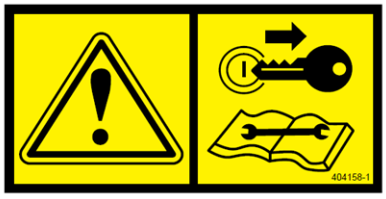
**Do not remove the plates on your equipment.**

## 1.4 Safety and maintenance pictograms

The RBMPRO 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 tightening torque on the lug nuts. |
|  | Lubricate with grease at the frequency recommended in Section 7.2. |
|  | Lubricate with oil at the frequency recommended in "Maintenance schedule" on page 85. |
|  | Warning! Carefully read and understand the contents of the operator's manual before using the machine. |
|  | Warning! Install the locking 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. Keep a safe distance away. |
|  | Warning! Risk of crushing hands. |
|  | Warning! Before doing any maintenance or repairs, turn off the engine, remove the key from the ignition, and refer to Chapter 7 Maintenance. |
|  | Warning! Pressurized hydraulic hoses. See Chapter 7 Maintenance. |
|  | Warning! Risk of electrocution by electrical wires. |
|  | Warning! Before welding the equipment or working on the electrical system, disconnect the tractor power supply and disconnect 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.<br>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 s 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 guidelines

### 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.
- Maintain your equipment properly. 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 (25 mph) 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 other than those for which the trailer was designed.
- 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 (transmissions, 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 products such as fuels, oils, solvents and cleaning products coming into contact with your skin, eyes, or mouth. 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 free of grass, leaves or excess grease.
- Always have a working fire extinguisher nearby.
- 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 engage 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

| | |
|---|---|
| Warning! | **When driving on the road, adjust your speed to the load and terrain.**<br>**Follow the rules of the road, particularly the 40 km/h speed limit.** |

| | |
|---|---|
| Warning! | **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 standard trailer tires are generally not approved for driving long distances on public roads. |

| | |
|---|---|
| **NOTE:** | Ensure that the handbrake has been disengaged before moving the trailer. See "Using the handbrake" on page 31 for how to engage and disengage the handbrake on your trailer model. |

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.

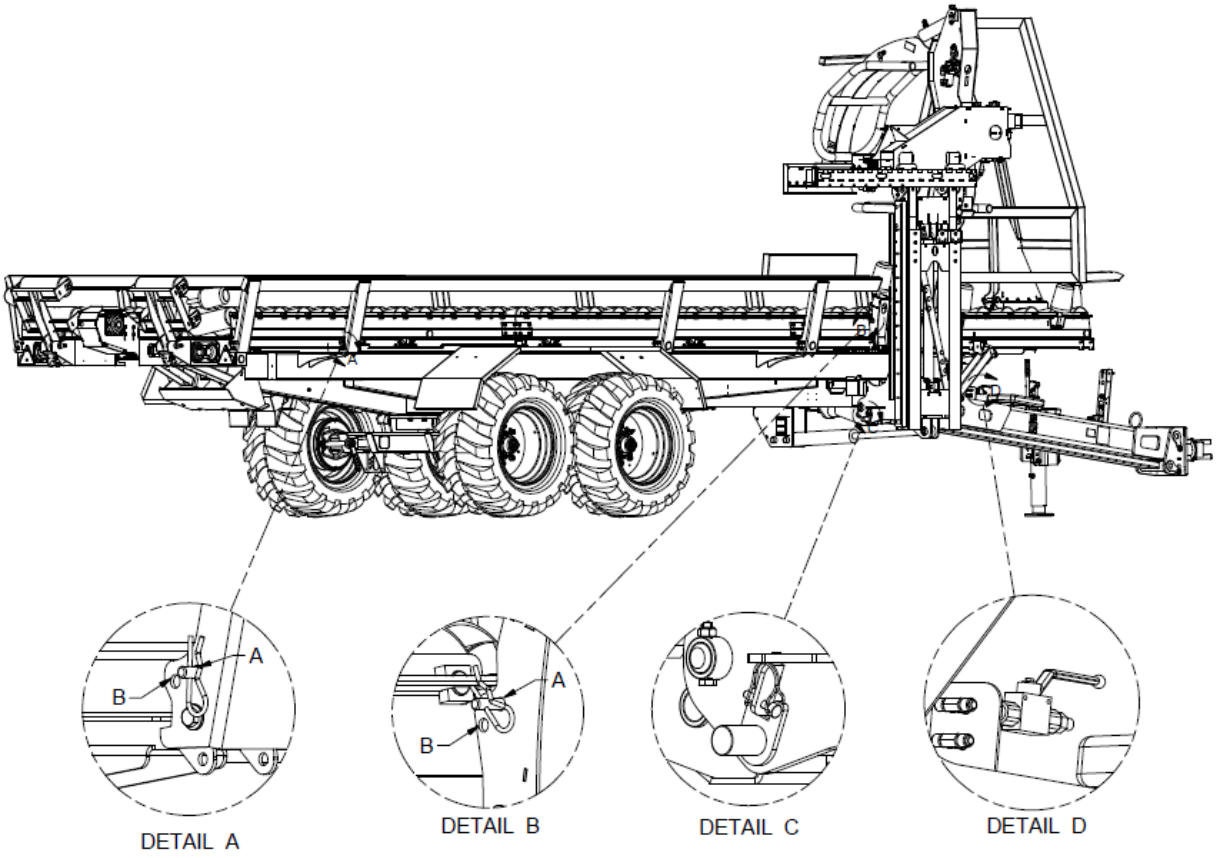



**Figure 5 — Safety Tips for Transport**

## 2.3 Safety tips for hitching

> **Warning!**
>
> **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 engaging the parking brake on both the tractor and the equipment (see "Using

the handbrake" on page 31 for how to engage and disengage the handbrake on your trailer model).

- 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 engage the handbrake (see "Using the handbrake" on page 31 for how to engage and disengage the handbrake on your trailer model);
  - 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 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 Wiring

- 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 "Technical specifications" on page 15).
- 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 Using the handbrake

You must engage the trailer handbrake before carrying out certain tasks (hitching or unhitching, maintenance, etc.) and disengage it before moving the trailer, or in the case of the RBMPRO 1400, before raising the platform.

### 3.1.1 RBMPRO 1400 handbrake

To engage the RBMPRO 1400 handbrake, turn the crank clockwise.

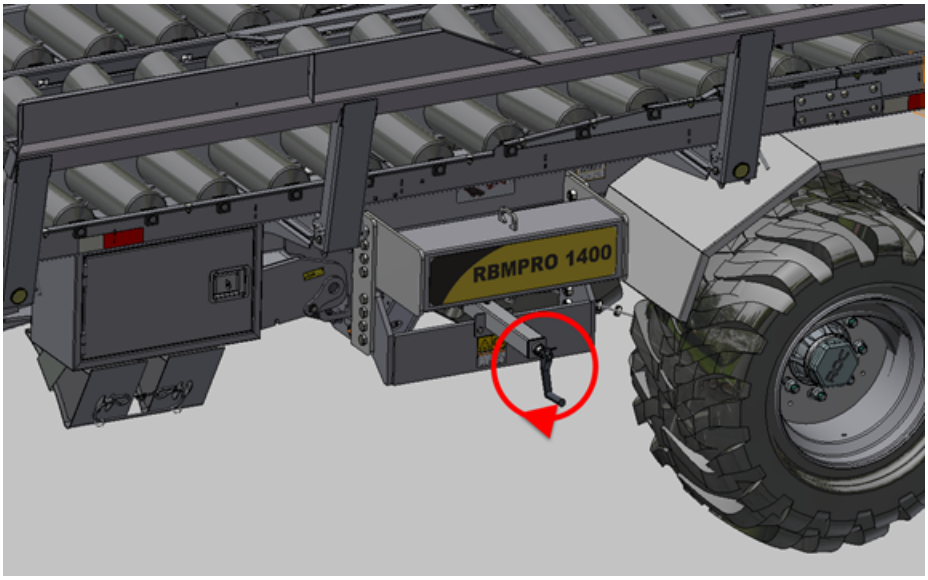



**Figure 6 — Engaging the RBMPRO 1400 Handbrake**

To disengage the RBMPRO 1400 handbrake, turn the handle counter-clockwise.


**Always loosen the handbrake all the way when it is not being used.**

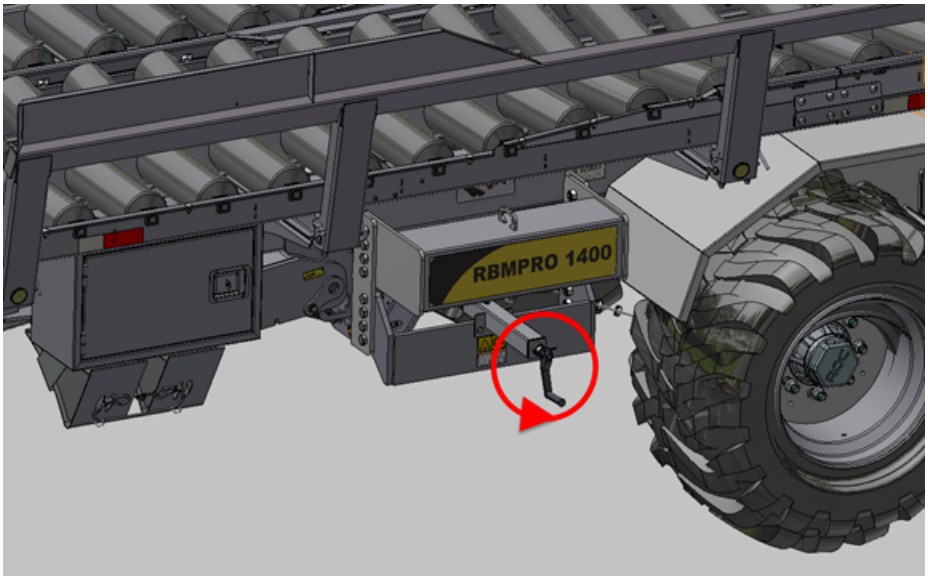



**Figure 7 — Disengaging the RBMPRO 1400 Handbrake**

Before raising the platform to unload bales, ensure that the handbrake is disengaged. If you raise the platform when the handbrake is engaged, a safety ring will break to protect the handbrake mechanism. You will need to replace it with the spare ring provided in the box on the trailer.

**Figure 8 — Handbrake Safety Ring for the RBMPRO 1400**

### 3.1.2 RBMPRO 2000 handbrake

To engage the RBMPRO 2000 handbrake, move the lever from left to right several times (see Figure 9), until the handbrake cables are taut and it is difficult to move the lever back to the left.

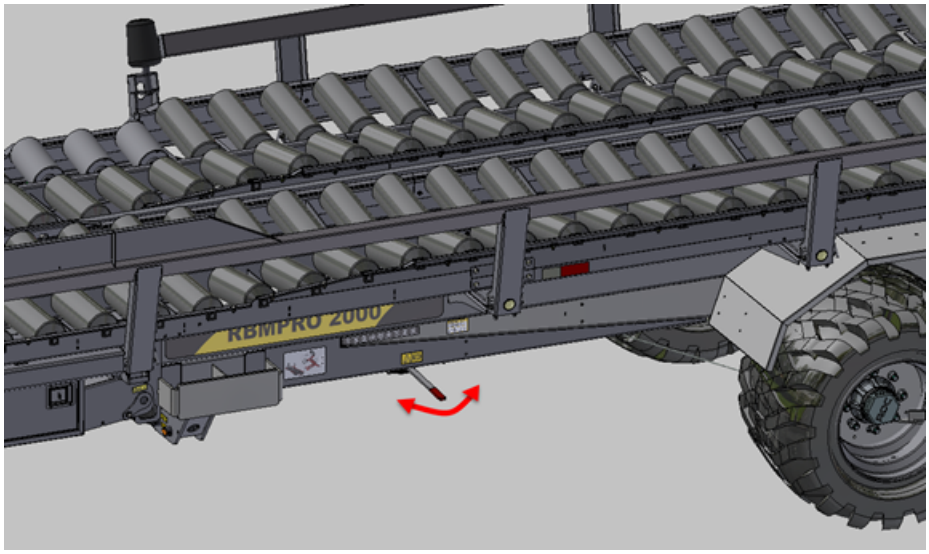



**Figure 9 — Engaging the RBMPRO 2000 Handbrake**

To disengage the RBMPRO 2000 handbrake, hit the lever to the right to release the handbrake cables.

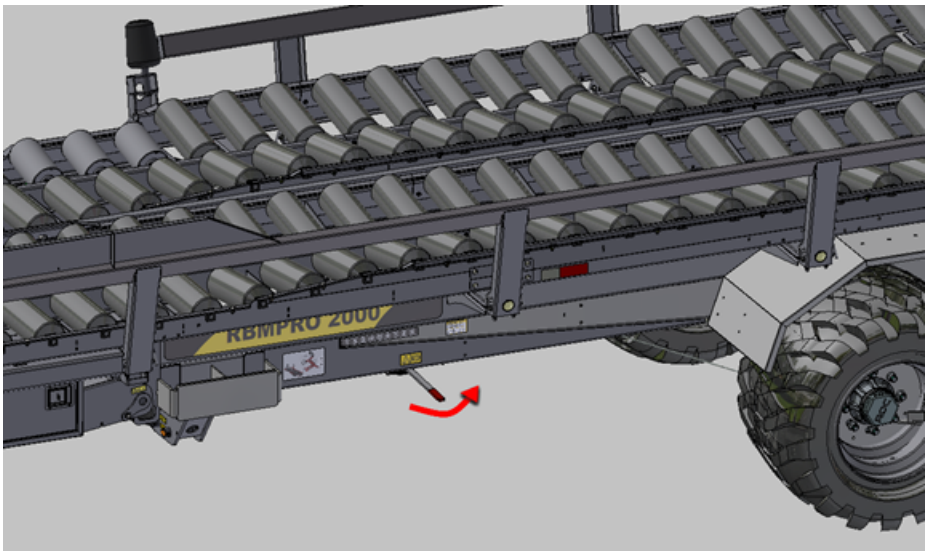



**Figure 10 — Disengaging the RBMPRO 2000 Handbrake**

## 3.2 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 meets the required specifications before hitching the equipment (see "Connecting the hydraulic and electrical systems" on page 37).

To adjust the position of the trailer hitch, see "Adjusting the hitch" on page 41.

To adjust the position of the trailer jack, see "Adjusting the jack height" on page 43.

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 engage the handbrake (if applicable) (see "Using the handbrake" on page 31 for how to engage and disengage the handbrake on your trailer model).
3. Insert the hitch pin (Figure 11-1) and secure it with a cotter pin (Figure 11-2).
4. Attach the safety chain (Figure 11-3) between the trailer and the tractor using the provided anchor points.
5. Put the trailer jack in transport position (Figure 12).
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 37).
3. Put the jack in vertical position (Figure 12).

4. Chock the wheels and engage the trailer handbrake (if applicable).
5. Remove the cotter pin from the hitch pin, remove the hitch pin, and remove the safety chain (Figure 11).
6. Uncouple the trailer drawbar from the tractor drawbar.

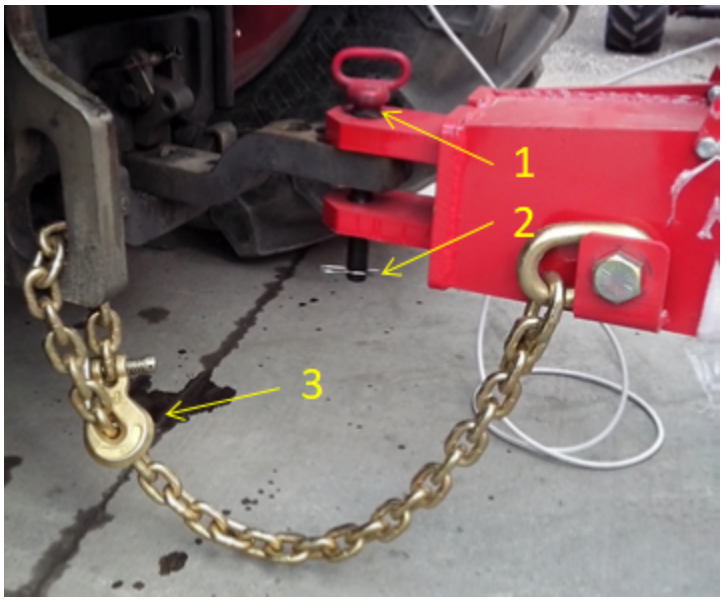



**Figure 11 — Hitching to the Tractor**

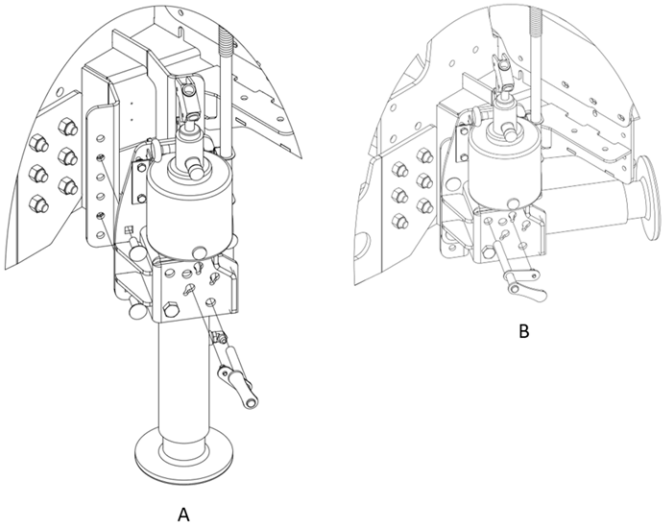



**Figure 12 — Hydraulic Jack Extended (A) and in Transport Position (B)**

**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.**

## 3.3 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.

In order to use the RBMPRO 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;
- One 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. Dirt will contaminate the tractor's 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. The cable powers the electrical/hydraulic controls and the trailer control interface.

**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 13).
6. Plug connector B on the control box (Figure 13) 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 13 — Connecting the Control Box**

## 3.4 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.

### 3.4.1 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 83.

### 3.4.2 Initial testing

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

1. Actuate the hydraulic output on the tractor.
2. On the trailer, manually operate the hydraulic controls to test each function (see "Hydraulic controls" on page 71).
3. On the control screen, select manual mode and test each function (see "Operating in manual mode" on page 66).

# 4 Adjustments

### Adjustments for hitching the trailer

When hitching the trailer to the tractor, several settings will need to be adjusted:

- Adjusting the hitch
- Adjusting the jack height

### Adjustments for loading bales

To effectively handle various bale sizes, you must make certain adjustments.


**You must make the adjustments BEFORE starting to load bales.**

Here are the settings to adjust, depending on bale length:

- Adjusting the bale guides and bale guide roller
- Adjusting the conveyor width
- Adjusting the front stopper

## 4.1 Adjusting the hitch

The hitch on the equipment is normally adjusted for a tractor drawbar that is 432 mm (17 in.) off the ground (Figure 14, B).

If the difference between the height of the hitch (Figure 14, A) and that of the tractor drawbar (Figure 14, B) is greater than 50 mm (2 in.), you will need to adjust the height of the hitch.

**NOTE:** Take the measurements on a level surface when the machine is empty and unhitched.

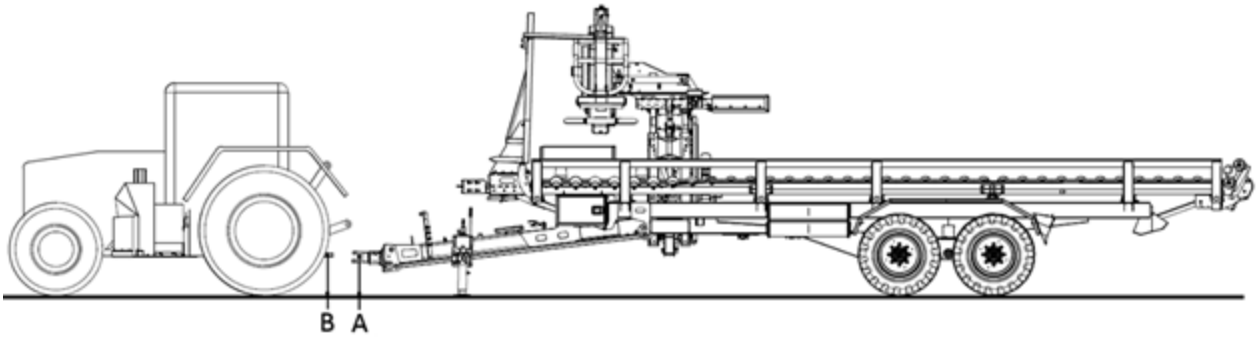



**Figure 14 — Measurements for Hitching**

The hitch (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 hitch:

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

## 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 26).

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 15).

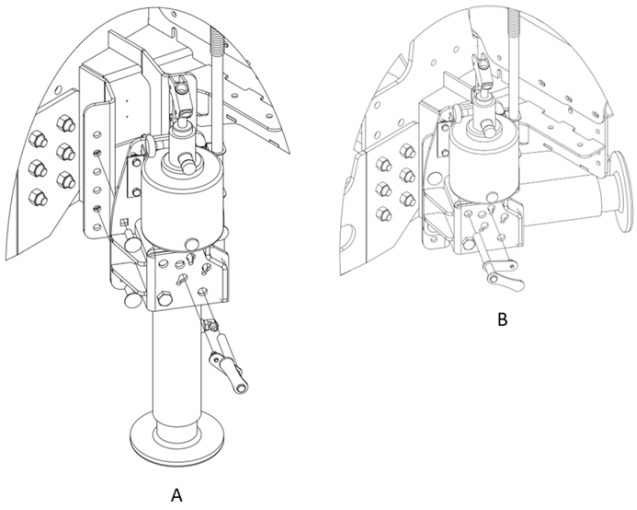



**Figure 15 — Hydraulic Jack Extended (A) and in Transport Position (B)**

## 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 locking pins and locks from the bale guides and bale guide roller (see Figure 16).
2. Put the locking pins and locks in the desired position, A or B (see Table 5).

**NOTE:** The conveyors must be apart (see "Adjusting the conveyor width" on page 45) in order to put the bale guides in position B.

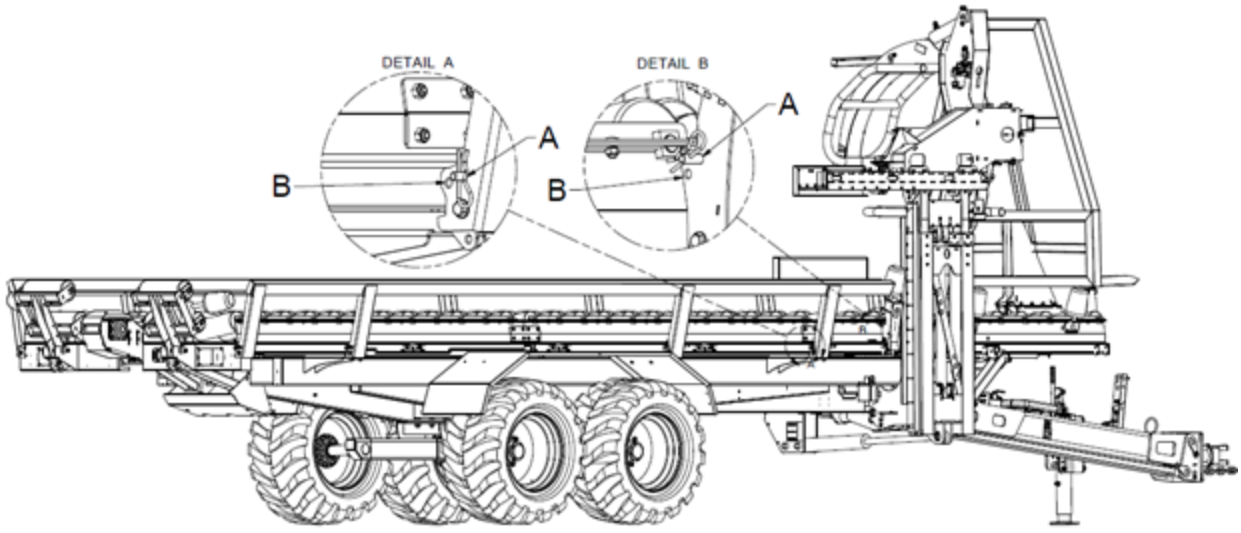



**Figure 16 — Adjusting the Bale Guides (Detail A) and Bale Guide Roller (Detail B)**

**Table 5 — Position of the Bale Guides and 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 conveyor width

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

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 17) 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 18).

**NOTE:** The bale guides must be in position A (see "Adjusting the bale guides and bale guide roller" on page 44) in order to set the width of the conveyors to 1.2 m (48 in.).

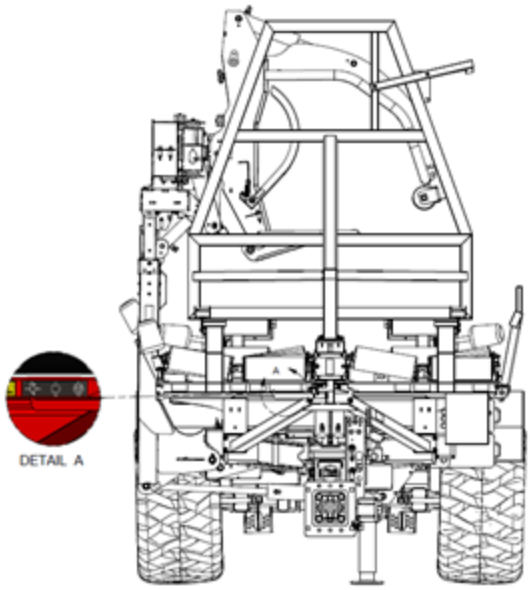



**Figure 17 — Location of the Visual Indicator**


**Figure 18 — 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 19 and Table 6).

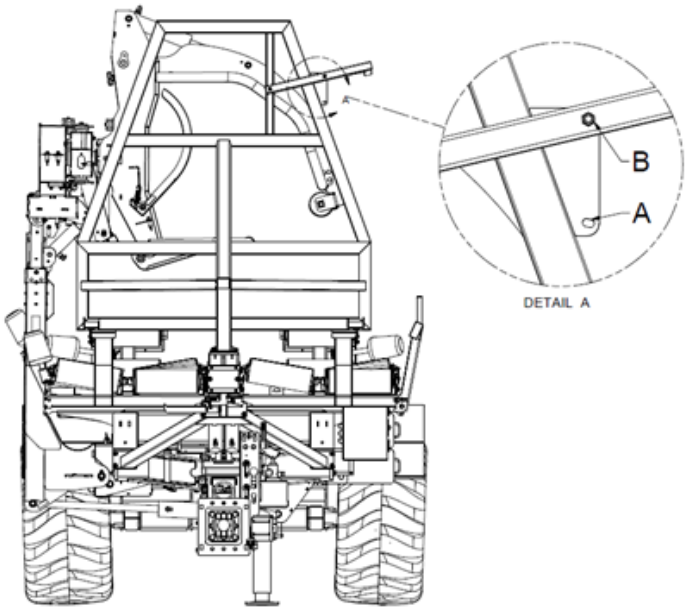



**Figure 19 — Adjusting the Front Stopper**

**Table 6 — Position of the Front Stopper Based on Bale Diameter**

| 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.

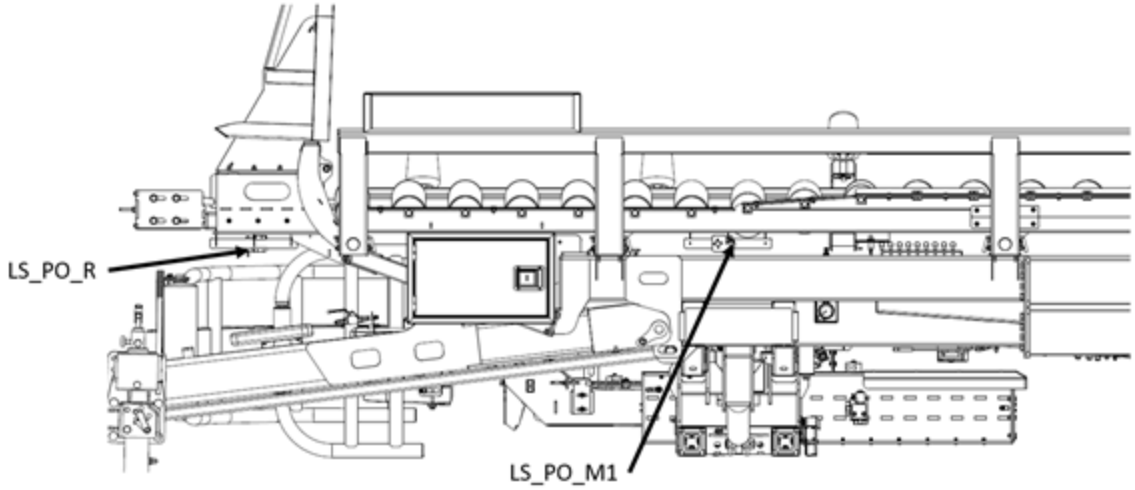



**Figure 20 — Position of the Sensors to Adjust the Pusher Travel Stroke**

## 4.7 Adjusting the position of the plastic roll on the grabber

A plastic roll on the end of the outer grabber arm protects the plastic film from the bales during collection. The position of the roll must be adjusted to the bale dimensions.

To adjust the position of the roll:

1. Remove the two bolts that hold the roll in place (indicated by the arrows in the figures).
2. Swivel the roll into the desired position, based on the bale dimensions.
    - For 1.2 m and 1.35 m (4 ft. and 4.5 ft.) bales, see Figure 21.
    - For 1.5 m (5 ft.) bales, see Figure 22.
3. Put the bolts back in to hold the roll in place.

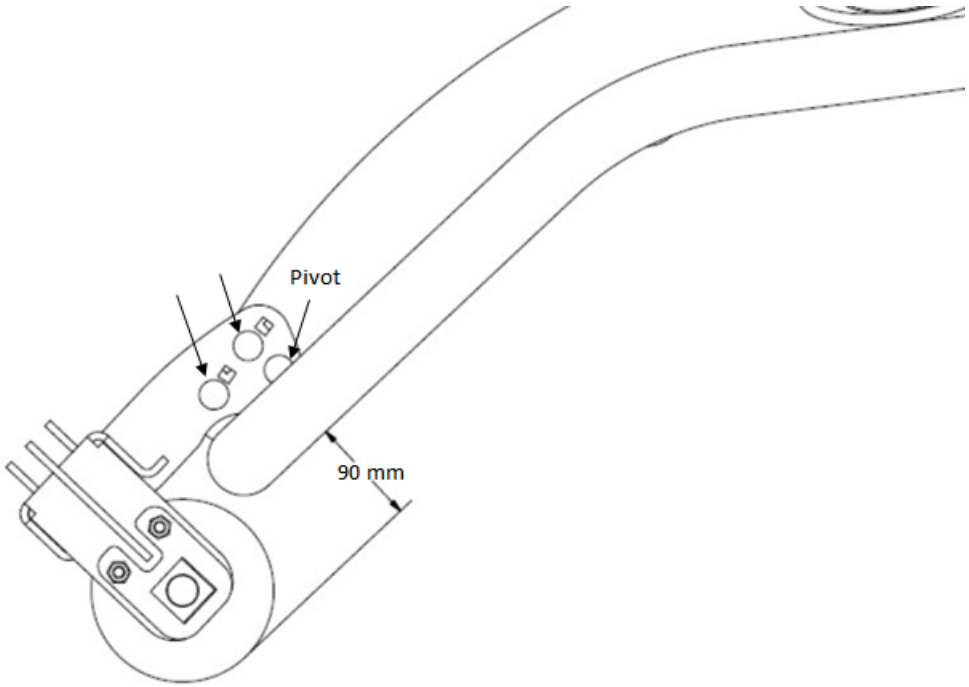



**Figure 21 — Bolt Locations for 1.2 m and 1.35 m (4 ft. and 4.5 ft.) Bales**

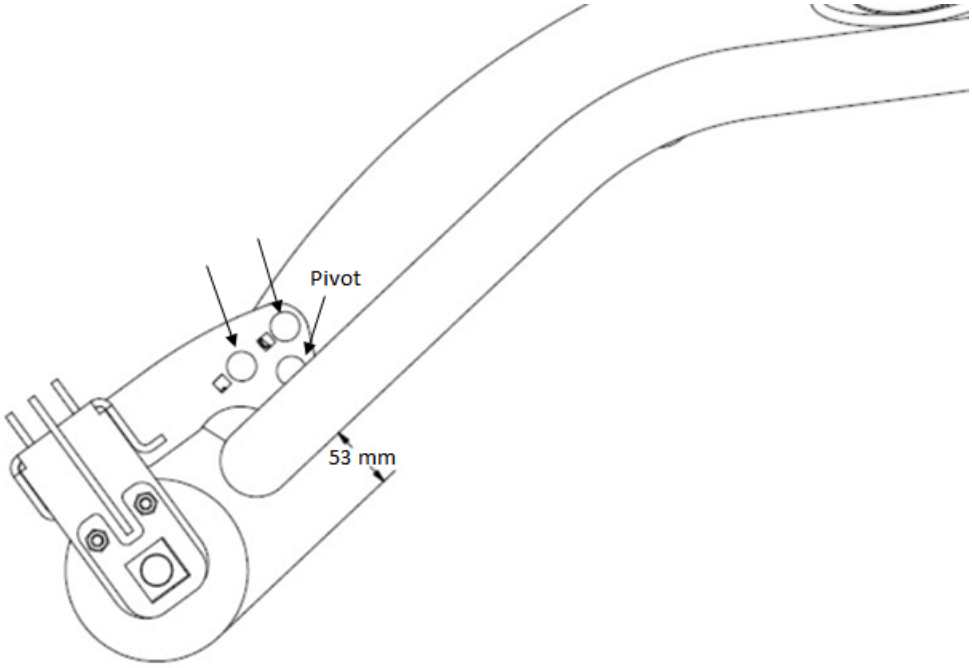



**Figure 22 — Bolt Locations for 1.5 m (5 ft.) Bales**

# 5 Operation

## 5.1 Controls

The control screen (see Figure 23) is used to operate the trailer during common operations. For example, it is used for loading (see "Loading bales" on page 55), preparing the trailer for transport (see "Safety tips for transport" on page 26), and operating all the different parts of the trailer (see "Operating in manual mode" on page 66).

**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 23 and Table 7 describe the functions of the control screen buttons.

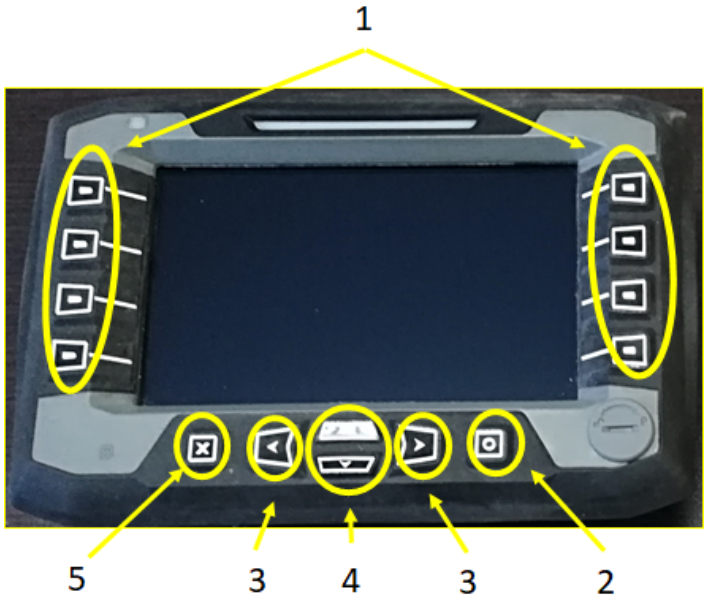



**Figure 23 — Control Screen Buttons**

**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 "Operating in manual mode" on page 66).<br>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 control 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 24) 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.

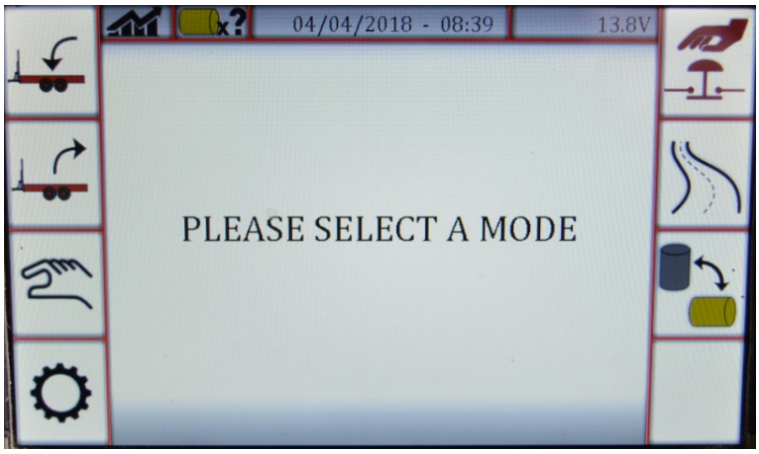
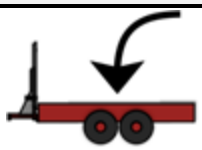
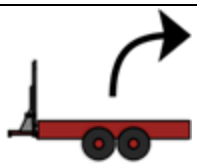
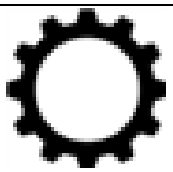
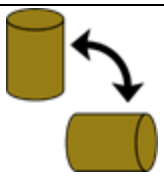



**Figure 24 — Main Menu on the Control Screen**

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 57) and adjusting the client bale counters (see "Adjusting the counters and exporting the data" on page 69). |
|   | Opens the menu for adjusting the bale counter on the trailer (see "Adjusting the counters and exporting the data" on page 69). |

### 5.1.2 Settings menu

The settings menu (see Figure 25) is used to view and edit the trailer settings.

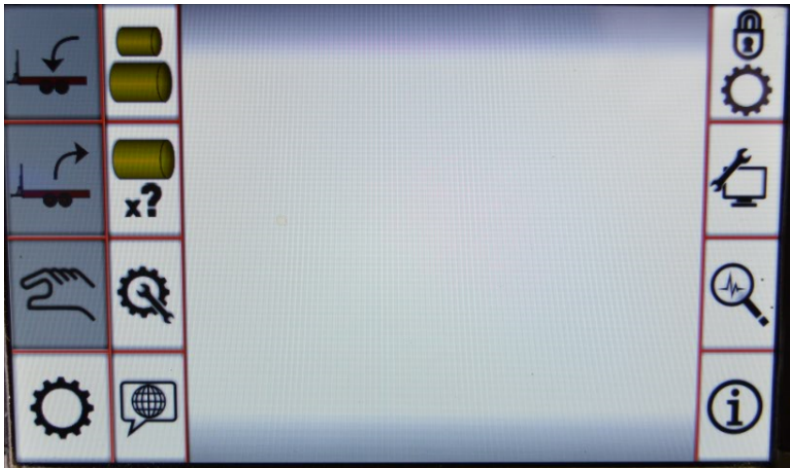
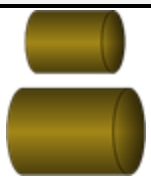



**Figure 25 — Settings Menu on the Control Screen**

**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).<br>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 69). |
|  | Opens the menu for adjusting the loading arm angle and grabber pressure (see "Adjusting the loading arm angle and grabbing pressure" on page 68). |
|  | Allows you to select the control screen language (English, French, or German). |
|  | Opens the factory settings screen.<br>Note: A code is required to access this menu. |

| Option | Description |
|---|---|
|  | Opens the general settings for the control screen:<br>• Brightness (  )<br>• Metric or imperial units of measurement (  )<br>• Lighting (Day  or Night  mode)<br>• Date and time (  ) |
|  | Displays the state of the sensors (see "Sensors" on page 73). |
|  | Displays the function associated with the option selected in the main menu. |

## 5.2 Loading bales

The RBMPRO 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:** Ensure that the handbrake has been disengaged 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:

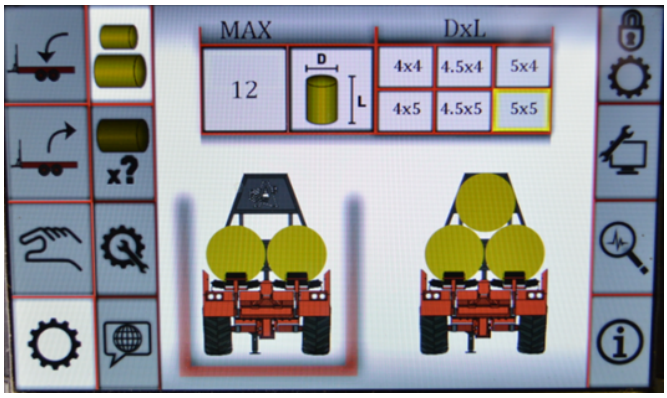



**Figure 26 — Screen for Selecting Bales and the Number of Rows**

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 63).

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.


**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 27 — Client Data Screen**

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

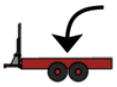
> **NOTE:** You can also modify the number of bales for a client counter by pressing .

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:

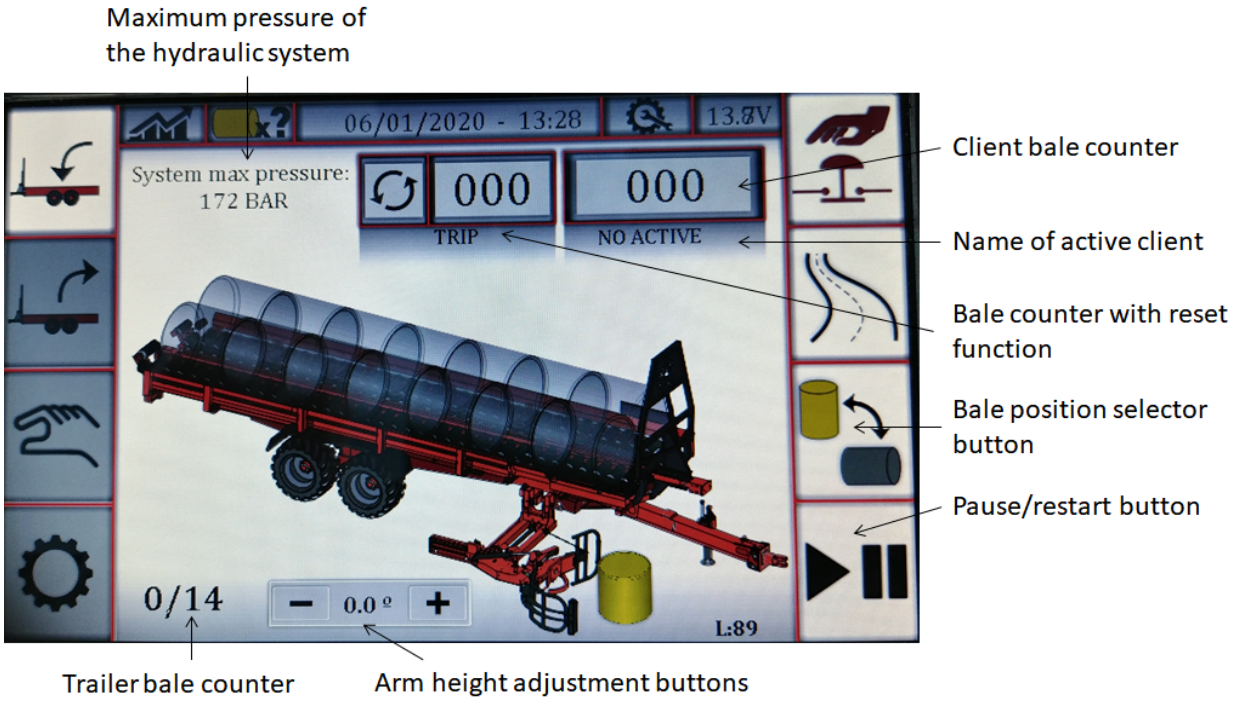



**Figure 28 — Automatic Loading in Progress Screen**

**NOTE:** When the bale counter on the trailer indicates that a load 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 68).

3. Align the loading grabber such that the two arms are on either side of the bale to charge and slowly move forward. When the grabber sensors detect the bale, the loading sequence starts automatically. See Figure 29 and Figure 30 to understand 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 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 X. 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 "Operating in manual mode" on page 66).
>
> 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 automatic loading

Figure 29 shows the automatic loading sequence for bales that were placed in vertical position, and Figure 30 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.

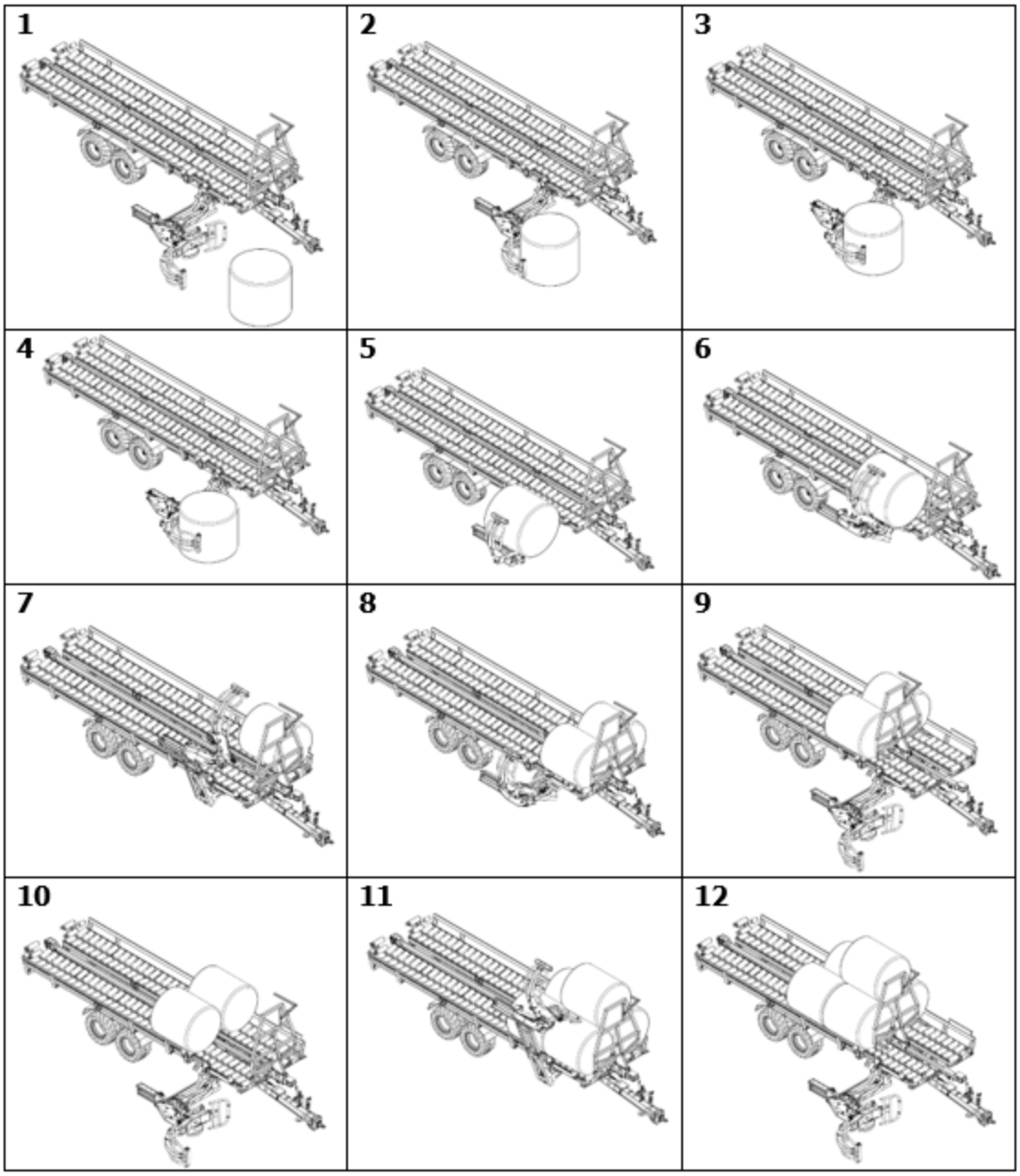



**Figure 29 — Steps for Loading Vertical Bales**

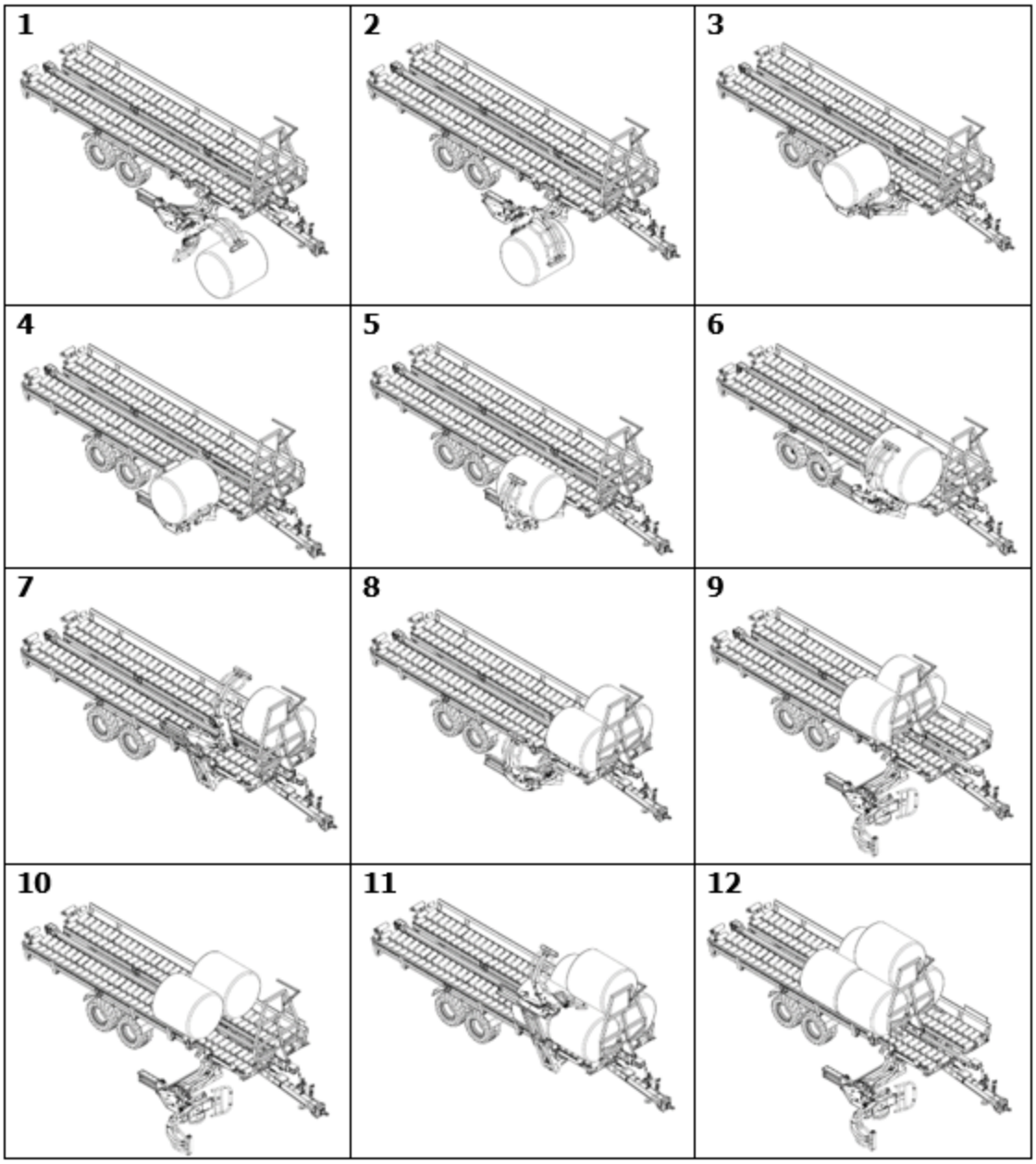



**Figure 30 — Steps for Loading Horizontal Bales**

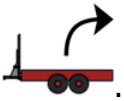
## 5.3 Unloading bales

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

**NOTE:** Ensure that the handbrake has been disengaged 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:

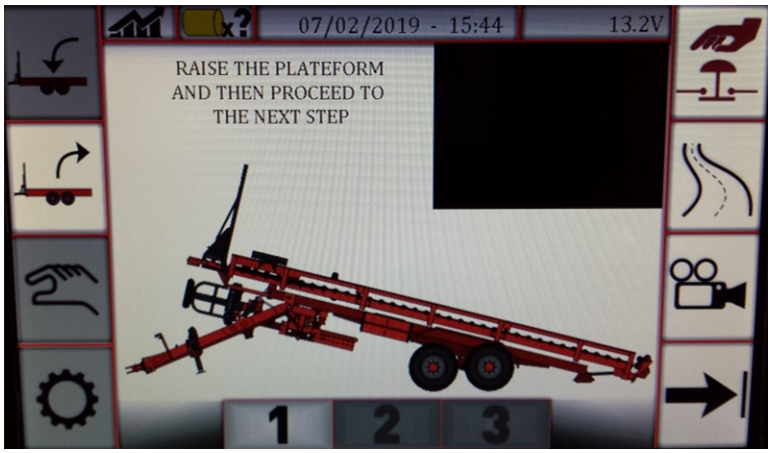



**Figure 31 — Unloading Screen, Step One**

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

To put the rear camera in fullscreen mode, 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.

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**Warning!**

**RBMPRO 1400 only: Before raising the platform to unload bales, ensure that the handbrake is disengaged. If you raise the platform when the handbrake is engaged, a safety ring will break to protect the handbrake mechanism. You will need to replace it with the spare ring provided in the box on the trailer.**

**NOTE:** If the platform does not rise, push the bales back with the pusher so that the weight is as far toward the back of the trailer as possible.

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

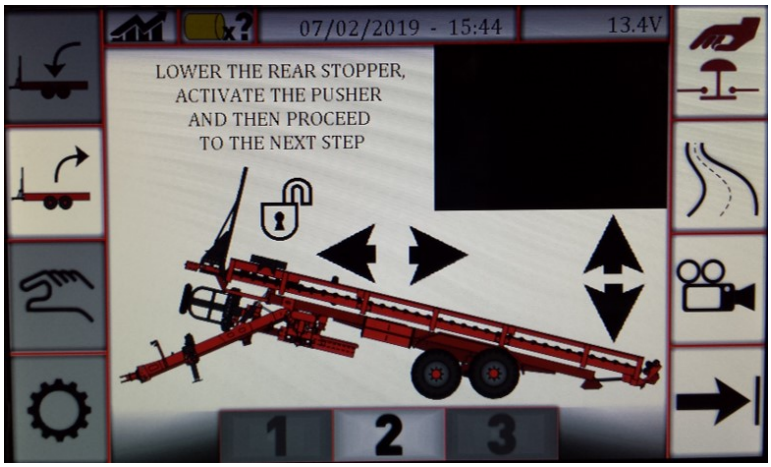


**Figure 32 — Unloading Screen, Step Two**

5. Lower the stoppers by tapping ▼.
6. While slowly moving the trailer forward, move the pusher backward by tapping ➤.

   You can also operate the pusher in continuous mode so that it continues moving backwards without you having to tap the arrow throughout the whole unloading process. To enter continuous mode, tap the lock, and then use + and − to adjust the length of the countdown (0 to 10 seconds). Then tap ➤ to move the pusher backward. The countdown will begin, and once it ends, the pusher will enter continuous mode. To exit continuous mode,

tap ◀ or ▶.

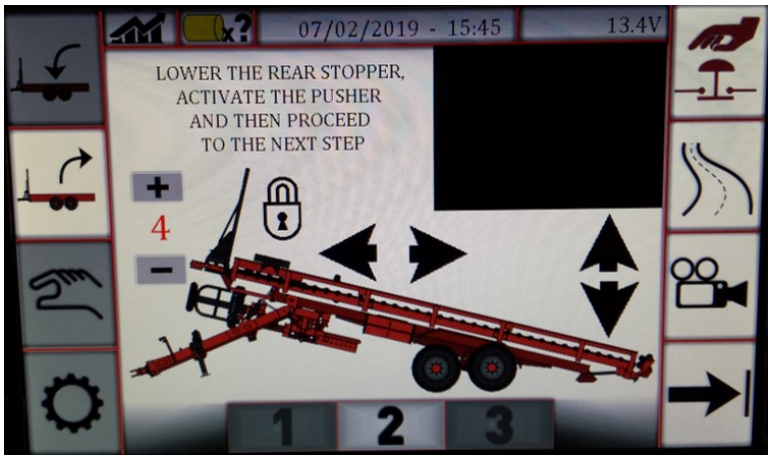


**Figure 33 — Adjusting the Countdown**

7. Continue moving the trailer forward until all the bales are unloaded, and then press →|. The following screen will appear:

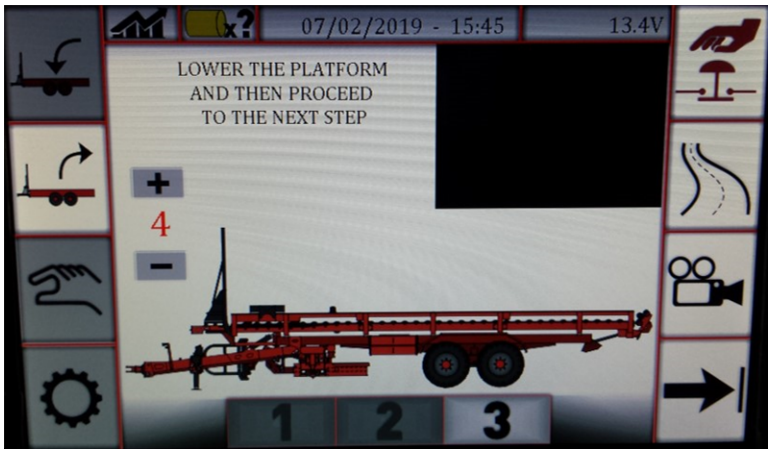


**Figure 34 — Unloading Screen, Step Three**

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 Operating in manual mode

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

**NOTE:** Ensure that the handbrake has been disengaged 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:

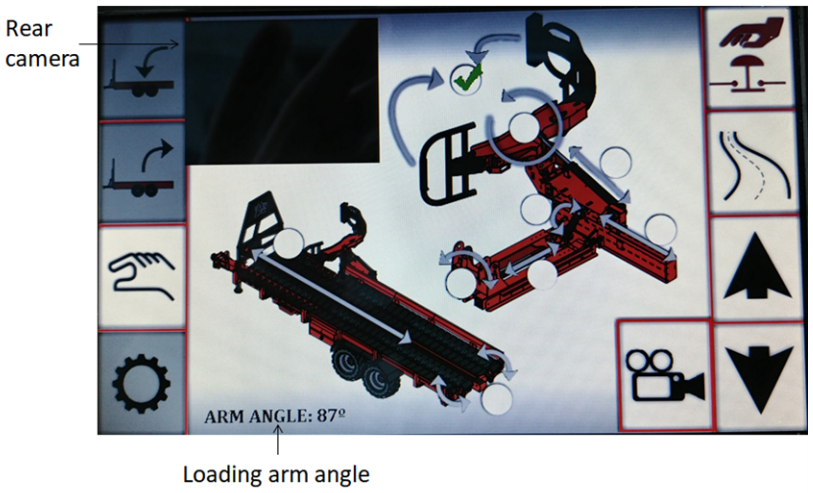


**Figure 35 — Manual Mode Screen**

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

To put the rear camera in fullscreen mode, press  .

2. Touch the part of the trailer you want to activate. A green checkmark will appear in the circle that corresponds to the function (see Figure 36 and Table 10 for a description of the 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.

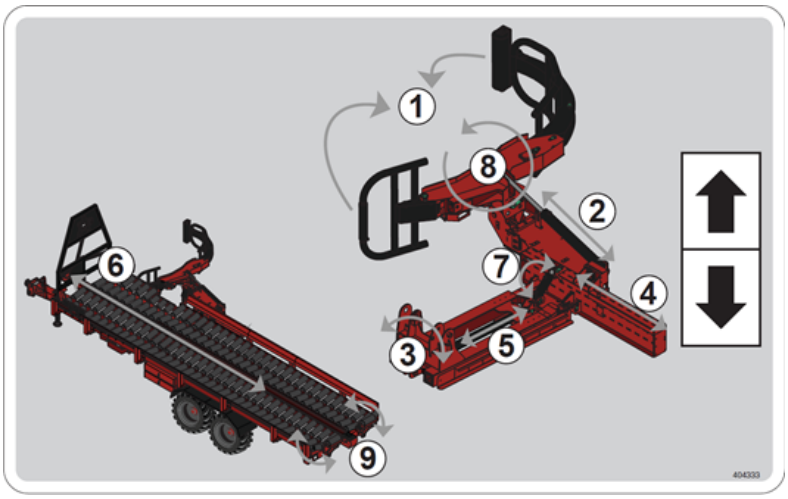


**Figure 36 — Manual Functions**

**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 | Swivels 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:

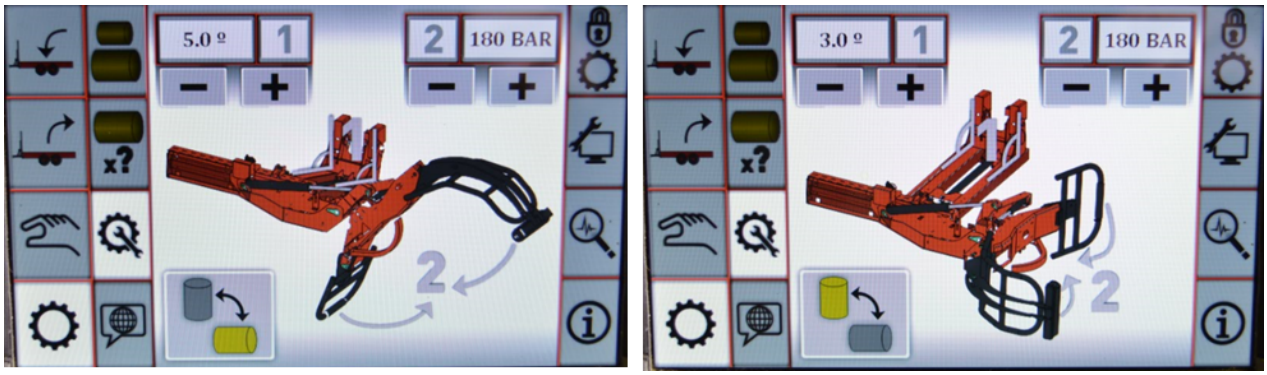


**Figure 37 — Loading Arm Angle and Grabber Pressure Adjustment Screen**

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:

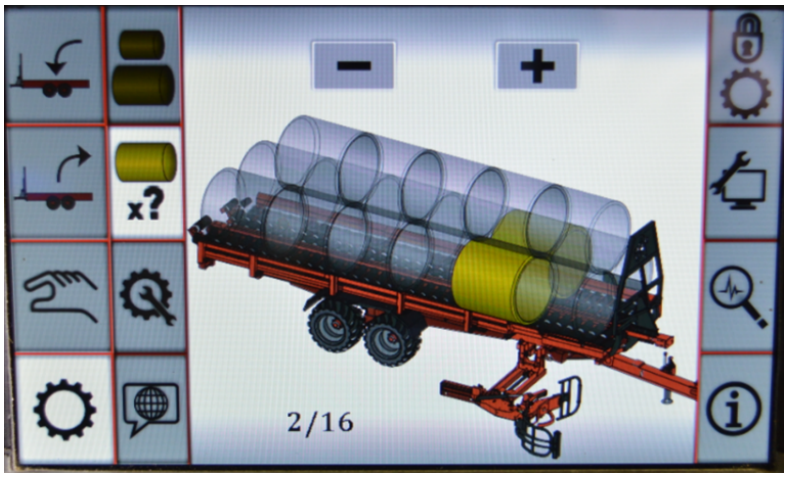


**Figure 38 — Bale Counter Screen**

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 39 — 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 has hydraulic controls that enable you to manually operate the various components of the trailer. 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 40 — Hydraulic Controls**

**Table 11 — Hydraulic Control 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 | Swivels pivot 2 on the loading arm clockwise (▲) and counter-clockwise (▼) |
| 9 | Raises (▼) and lowers (▲) the rear stoppers |

## 6.2 Sensors

Your RBMPRO 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.

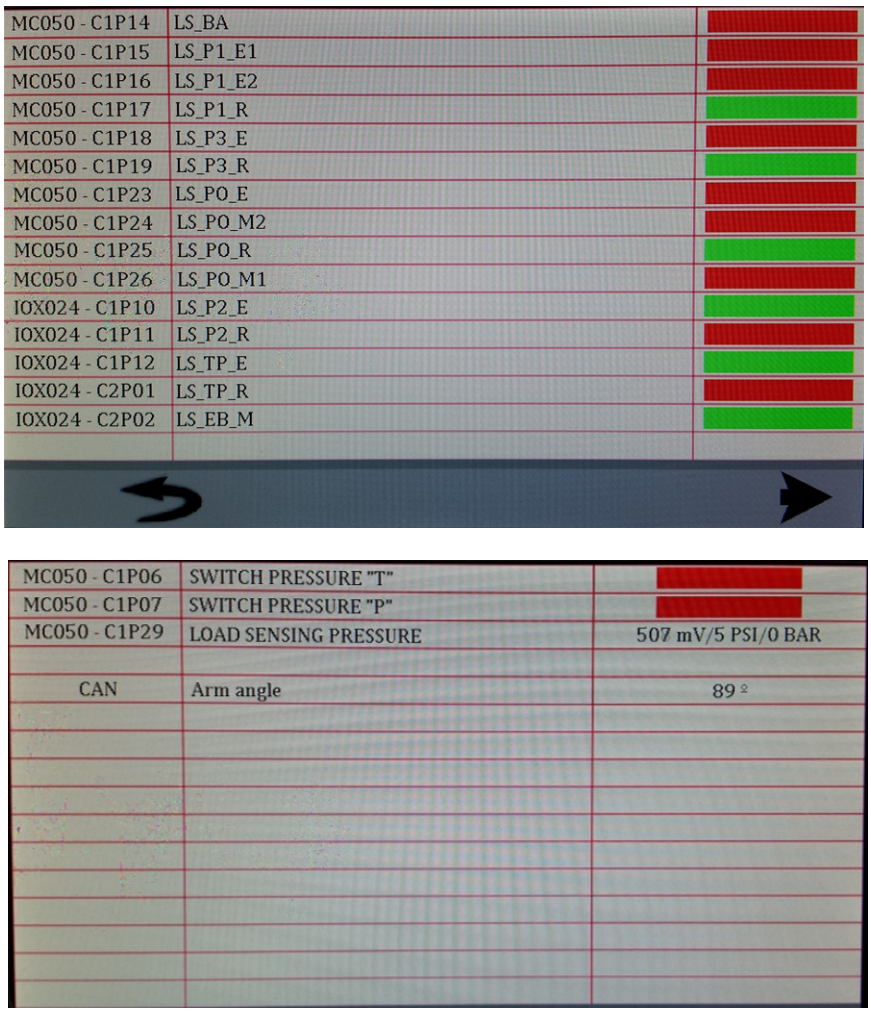


**Figure 41 — Sensor Status Screens**

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.

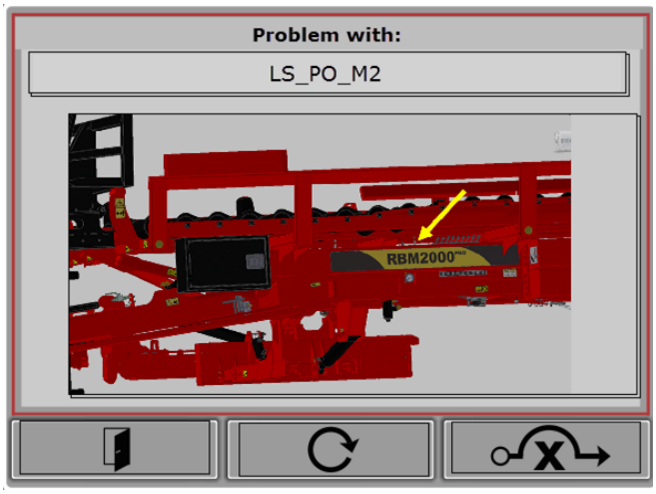


**Figure 42 — Sensor Problem Warning**

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 bales in the grabber | See Figure 43 |
| MC050-C1P15 | LS_P1_E1 | Detects when pivot 1 is positioned for vertical bales | See Figure 43 |
| MC050-C1P16 | LS_P1_E2 | Detects when pivot 1 is positioned for horizontal bales | See Figure 43 |
| MC050-C1P17 | LS_P1_R | Detects when pivot 1 is retracted | See Figure 44 |
| MC050-C1P18 | LS_P3_E | Detects when pivot 3 is open | See Figure 44 |
| MC050-C1P19 | LS_P3_R | Detects when pivot 3 is closed | See Figure 44 |
| MC050-C1P24 | LS_PO_M2 | Detects when the pusher is in middle 2 position | See Figure 45 |

| Output | Name | Function | Location |
|---|---|---|---|
| MC050-C1P25 | LS_PO_R | Detects when the pusher is in front position | See Figure 45 |
| MC050-C1P26 | LS_PO_M1 | Detects when the pusher is in middle 1 position | See Figure 45 |
| IOX024-C1P10 | LS_P2_E | Detects when pivot 2 is in open position | See Figure 44 |
| IOX024-C1P11 | LS_P2_R | Detects when the grabber is in closed position | See Figure 43 |
| IOX024-C1P12 | LS_TP_E | Detects when the shock absorber slide is in forward position | See Figure 43 |
| IOX024-C2P01 | LS_TP_R | Detects when the shock absorber slide is in rear position | See Figure 43 |
| IOX024-C2P02 | LS_BR_M | Detects when the arm is extended | See Figure 44 |
| MC050-C1P06 | Pressure switch "T" | Detects when there is 1,000 psi of pressure on the hydraulic connection to the tractor (return side) | See Figure 46 |
| MC050-C1P07 | Pressure switch "P" | Detects when there is 200 psi of pressure on the hydraulic connection to the tractor (return side) | See Figure 46 |
| MC050-C1P29 | LS pressure | Measures the hydraulic system pressure | See Figure 46 |
| CAN | Arm angle | Detects the angle of the arm | See Figure 46 |

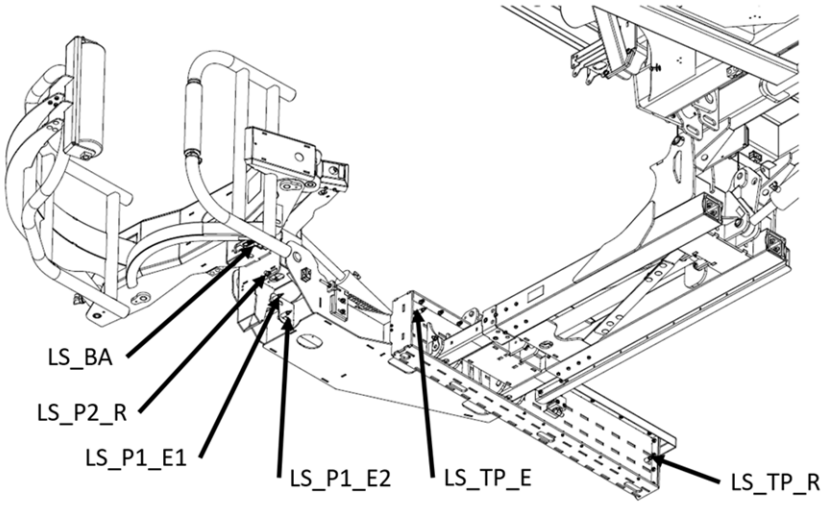


**Figure 43 — Locations of the Bale and Shock Absorber Slide Sensors**

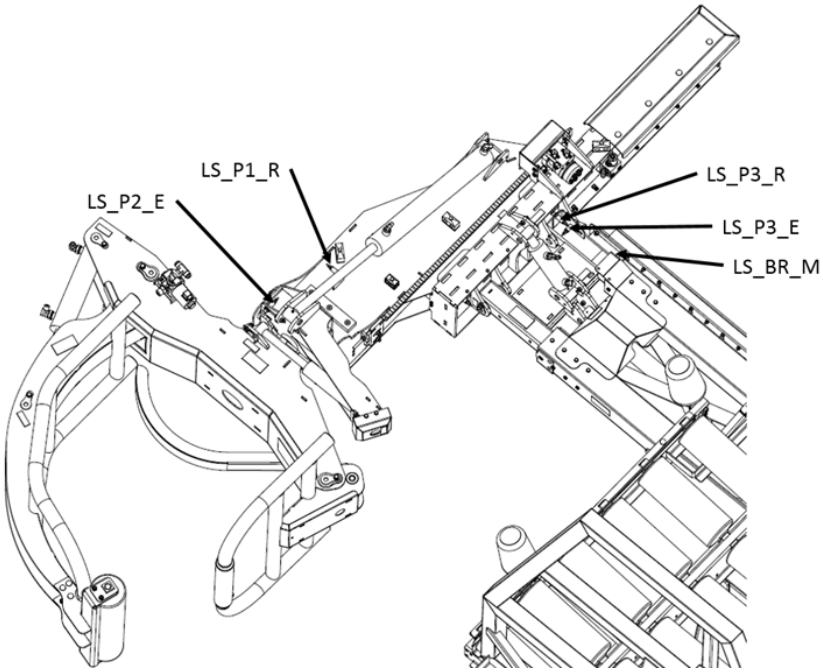


**Figure 44 — Locations of the Pivot and Arm Extension Sensors**

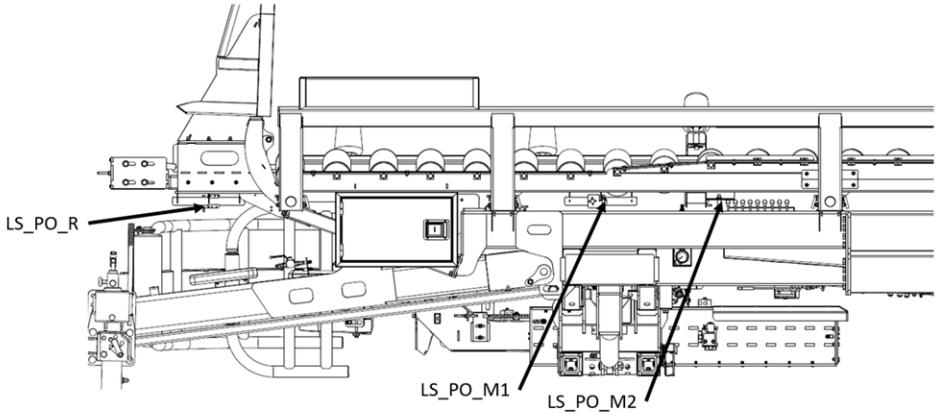


**Figure 45 — Locations of the Pusher Middle Position Sensors**

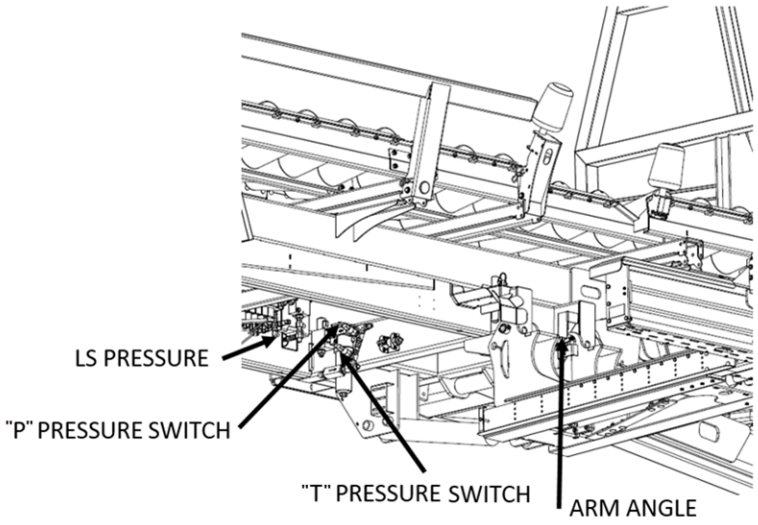


**Figure 46 — Locations of the Pressure and Arm Angle Sensors**

## 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" on page 5 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:<br>• If the various trailer components are in the correct positions to resume the operation, press  . The operation will continue normally.<br>• If certain trailer components are not properly positioned, complete the operation in manual mode.<br>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 69). |
| 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. |

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| 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 moves when the trailer is stopped and is not achieving the desired force. | There are leaks inside the cylinder. | Replace the cylinder piston seals. |
| | There is air in the hydraulic system. | Bleed the air from the hydraulic system. |
| 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 defective. | 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 68). |
| 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 56). |
| The unloading platform is not rising. | The ball valve for the unloading cylinders is closed. | Open the ball valve for the unloading cylinders. |
| | There is too much weight at the front of the trailer. | Push the bales toward the back. |


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

# 7 Maintenance

**Warning!**

**Only qualified and trained individuals are authorized to perform maintenance.**

**Warning!**

**See "Safety tips for maintenance and repairs" on page 28 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.

**Warning!**

**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.**

**Important!**

**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 47.

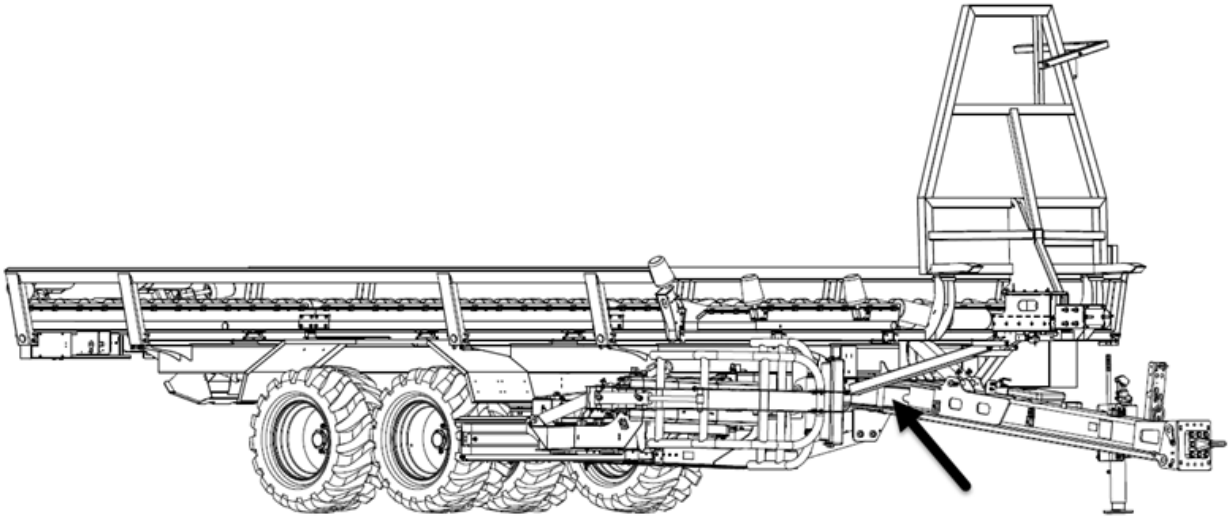

**Figure 47 — Stored Safety Stand**

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 48.
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.

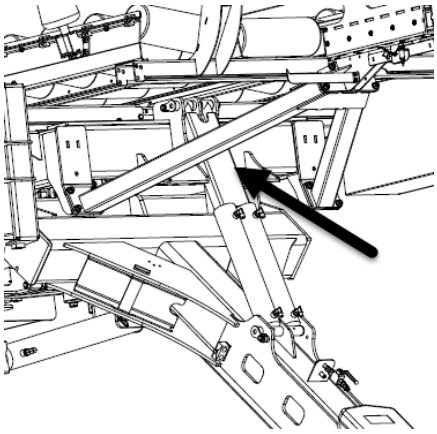

**Figure 48 — Setting Up the Safety Stand**

**Warning!**

**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 slack 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 Greasing points

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


**Figure 49 — Greasing Point Marker**

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

**Table 15 — Greasing**

| Frequency | Part (number of greasing points) |
|---|---|
| Every 50 hours of use | Tandem axle pivots (4)<br>Drawbar pivot (1)<br>All other pivots (17)<br>All cylinder joints (22)<br>All bearings (6)<br>All the chains (3) |
| Every 6 months | Wheel bearings (2) |

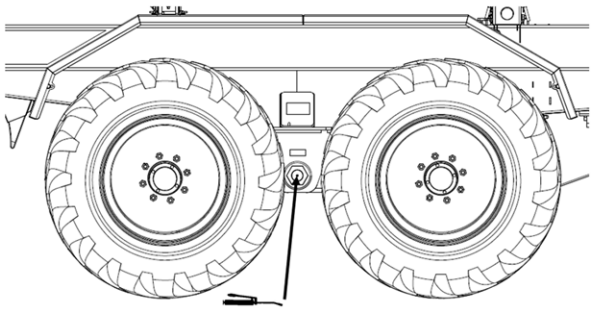

**Figure 50 — Tandem Axle Pivots**

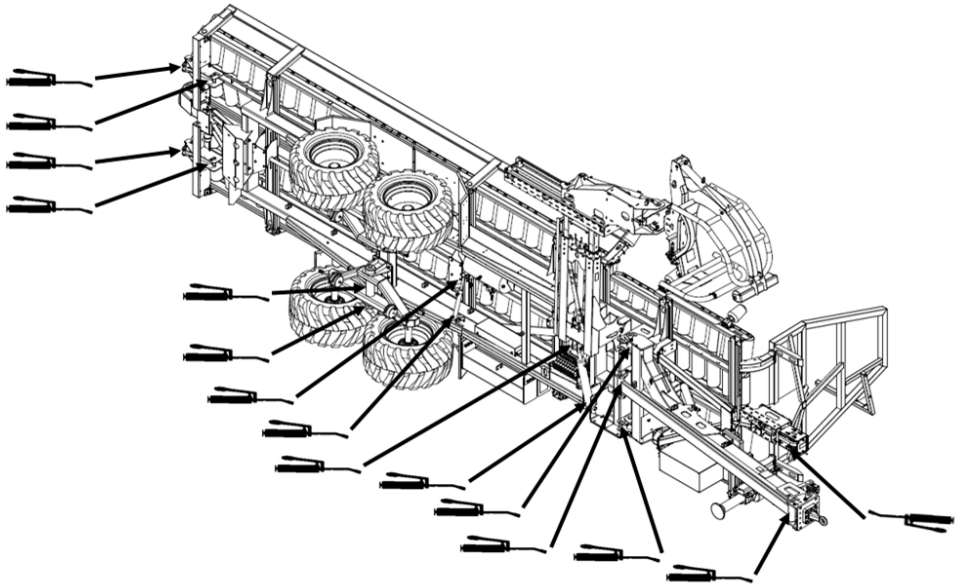

**Figure 51 — Platform Lubrication Points**

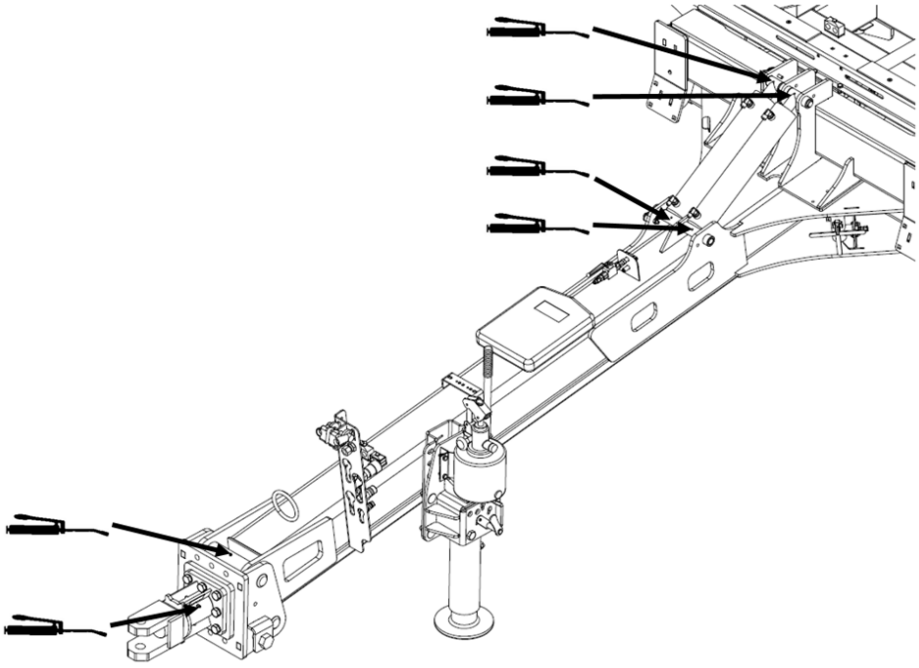

**Figure 52 — Drawbar Lubrication Points**

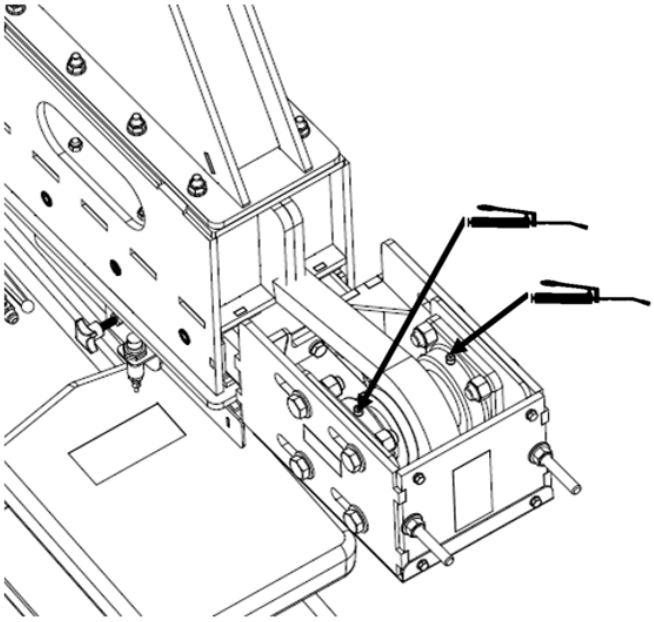

**Figure 53 — Pusher Chain Bearings**

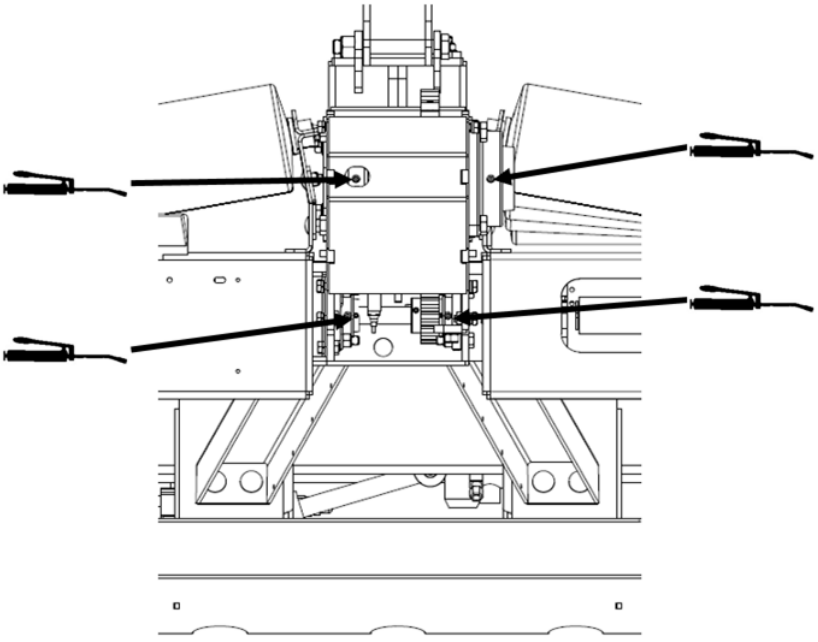

**Figure 54 — Pusher Transmission Chain Bearings**

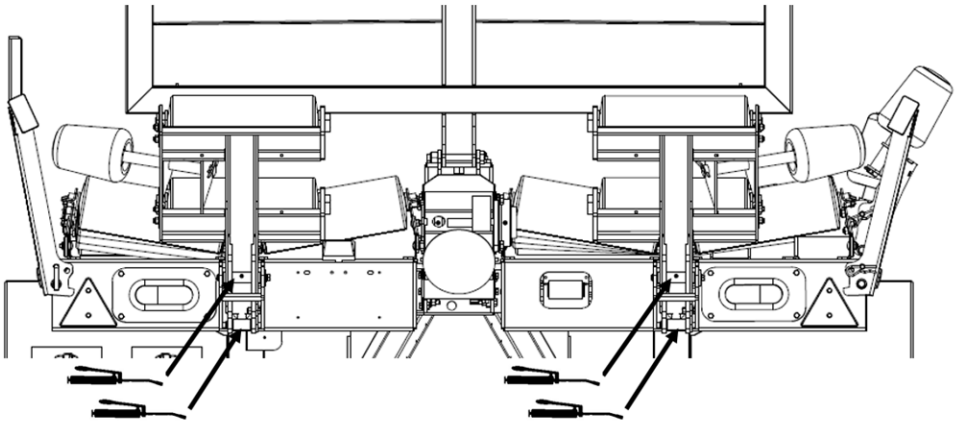

**Figure 55 — Rear Stopper Pivots**

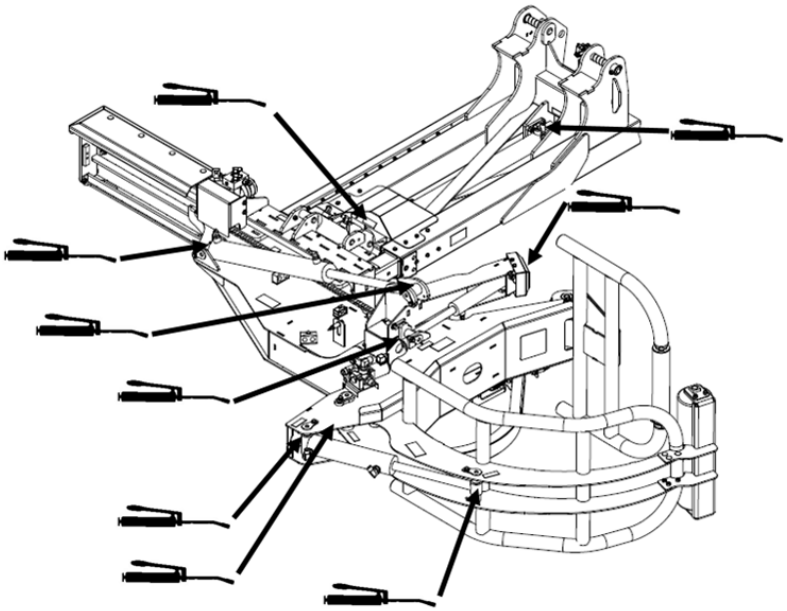

**Figure 56 — Loading Arm Lubrication Points**

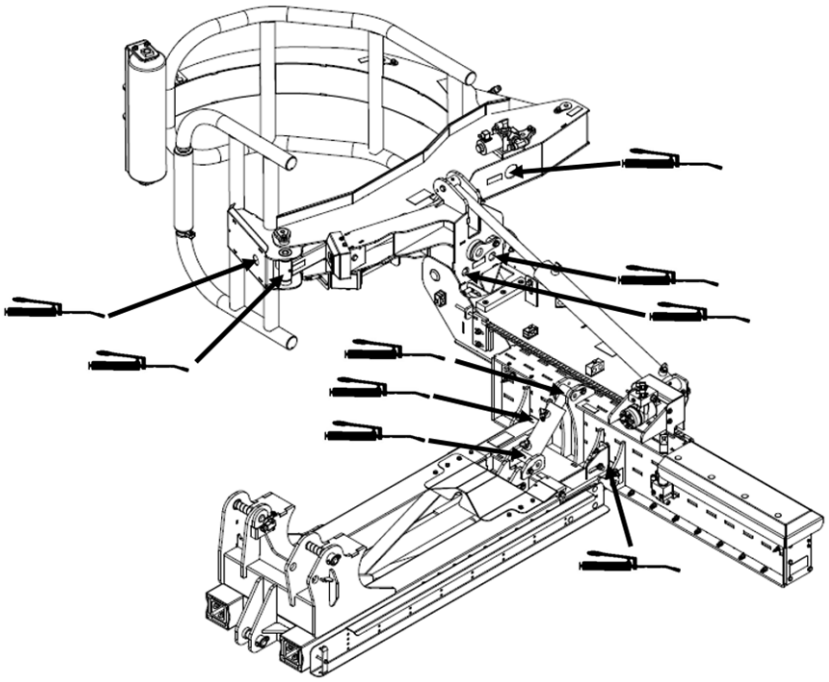

**Figure 57 — Loading Arm Lubrication Points (continued)**

## 7.3 Adjusting the pusher chain tension

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

To adjust the chain tension:

1. Loosen the eight bolts on both sides of the chain box (A, Figure 58).
2. Tighten the two nuts on the tension bolts on the end of the box (B, Figure 58) 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 58).

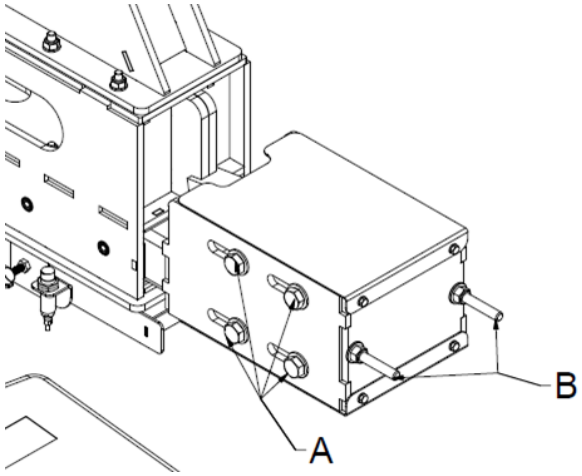


**Figure 58 — Adjusting the Pusher Chain Tension**

## 7.4 Adjusting the chain tension on the pusher transmission

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 59).
2. Tighten the nut on the tension bolt underneath the transmission (B, Figure 59) until the correct tension is reached.
3. Tighten the four bolts on the side of the transmission (A, Figure 59).

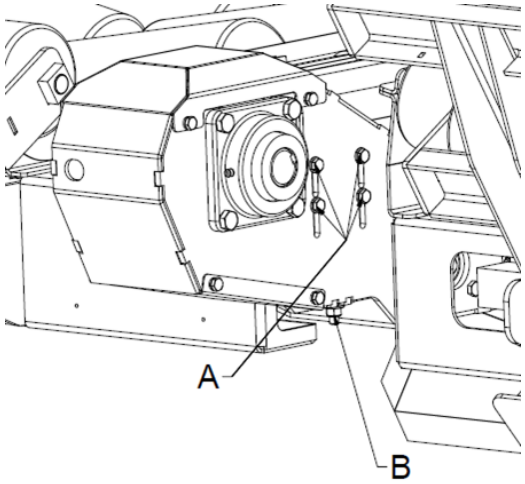


**Figure 59 — Adjusting the Pusher Transmission Chain Tension**

## 7.5 Adjusting the chain tension on the shock absorber slide

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 60).
2. Tighten the tension bolt (B, Figure 60) until the correct tension is reached.
3. Tighten the bolts (A, Figure 60).

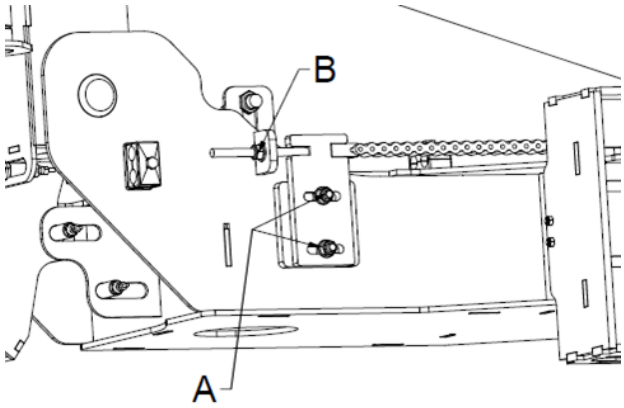


**Figure 60 — Adjusting the Shock Absorber Slide Chain Tension**

## 7.6 Checking the 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 61. 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.

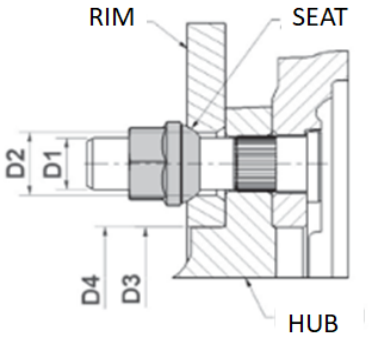


**Figure 61 — Nut with Washer or Tapered Nut**

**Table 16 — Tightening Torque**

| Socket | 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 62.


**Figure 62 — Order for Tightening the Nuts**

Important!

**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.**

Important!

**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 a 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 "Replacing the wheel bearings" on page 101).

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 "Adjusting the wheel bearing play" on page 97).

**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 63 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-handed 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 lines up with the nearest notch in the 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 "Assembling and attaching the wheels" on page 94 and "Tightening the lug nuts" on page 95).

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

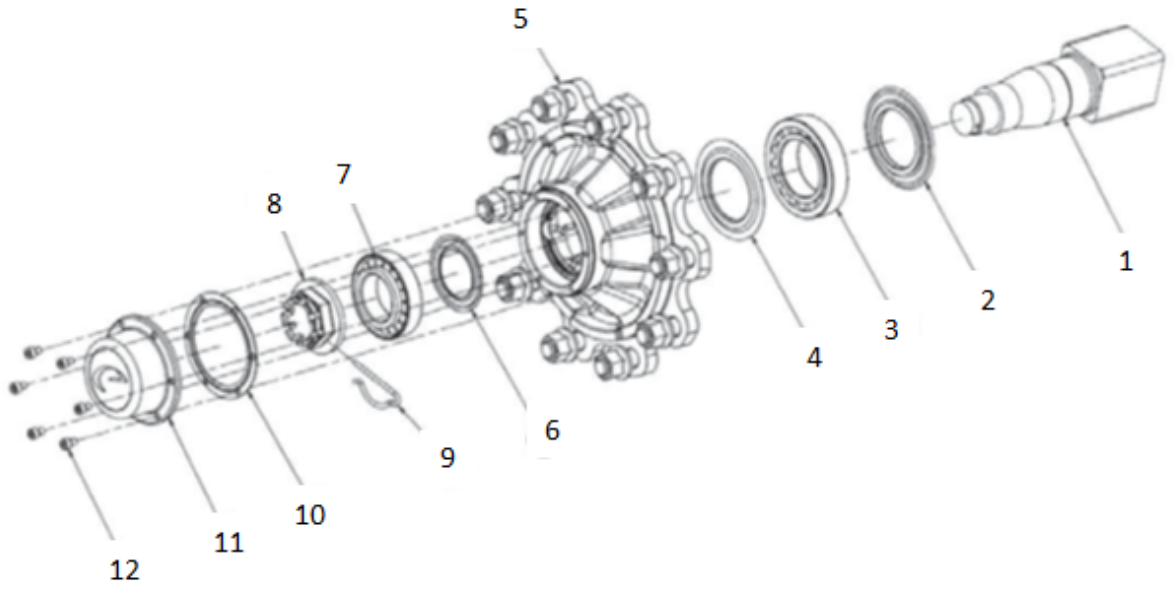


**Figure 63 — Wheel Bearing**

**Table 17 — Wheel Bearing Components**

| | Component |
|---|---|
| 1 | Spindle |
| 2 | Oil seal |
| 3 | Inner bearing |
| 4 | 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 63 and Figure 64):

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 outer 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 condition of 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 grease 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 65. 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 "Adjusting the wheel bearing play" on page 97.
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.

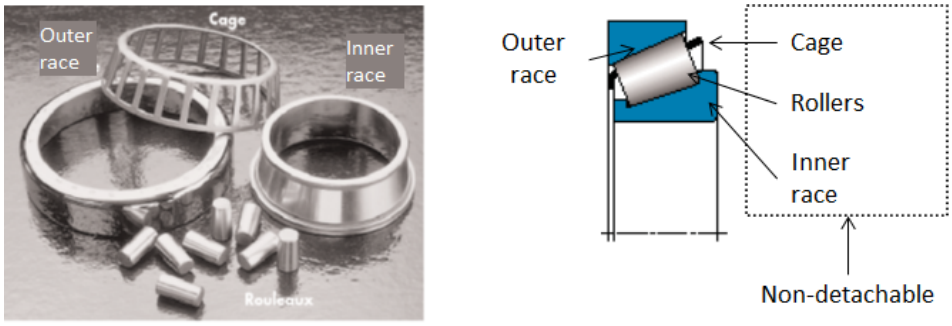


**Figure 64 — Disassembling a Wheel Bearing**

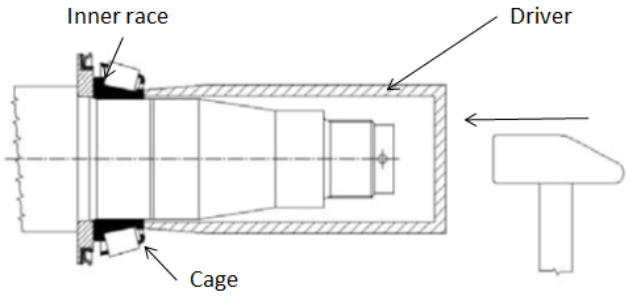


**Figure 65 — Reassembling a Wheel Bearing**

### 7.7.7 Replacing the wheel bearings

**NOTE:** For axles with grease retainers (see Figure 63), 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 "Lubricating the wheel bearings" on page 99.
2. Remove the outer races of the bearings, which are inside the hub (see Figure 66).

**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 67.

**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.

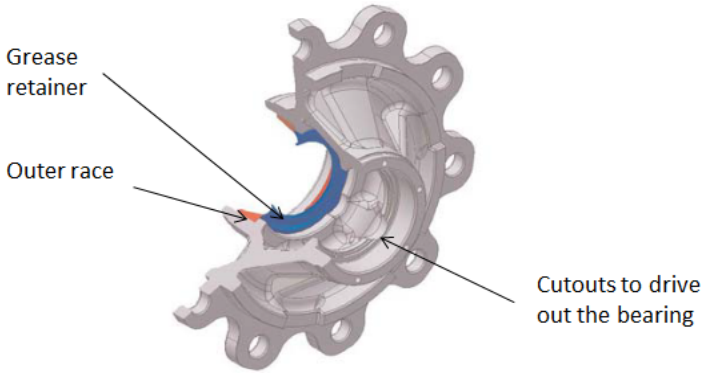


**Figure 66 — Outer Race**

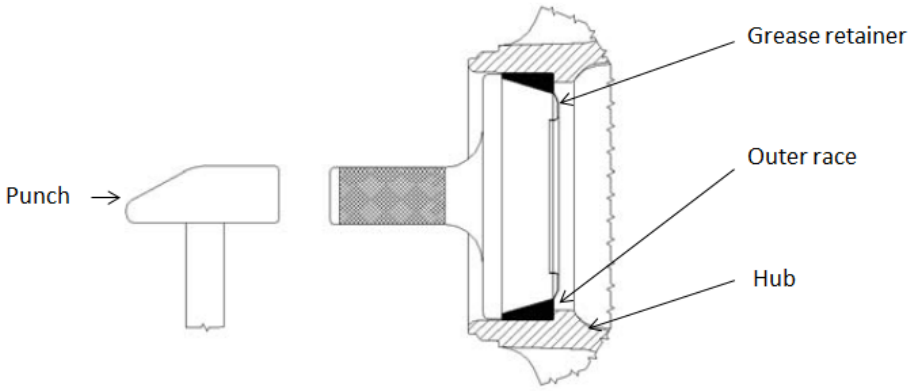


**Figure 67 — Inserting New Outer Races**

## 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 68 ). 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 grease fittings, grease them (see Figure 69). 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 (see "Checking the brakes when getting started" on page 102).

**Figure 68 — 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. Ensure that it stays in the 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 69).

**Important!** **Turn it in the direction that the cam bearing rotates (see Figure 69). To take up the slack, turn the screw so that the bearing 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.**

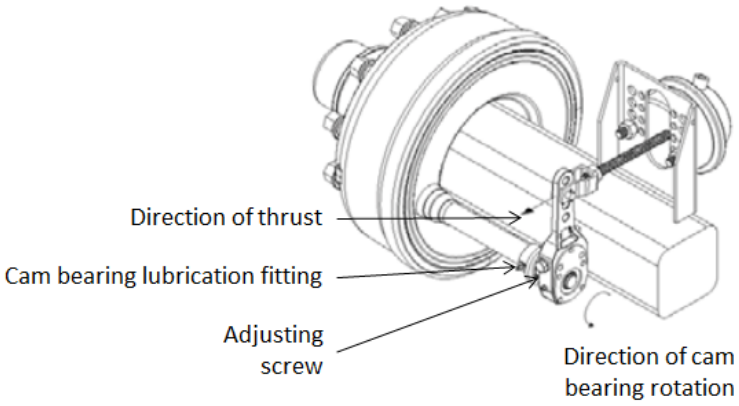


**Figure 69 — Adjusting a Brake with a Slack Adjuster**

### 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 grease the wheel bearings (see "Lubricating the wheel bearings" on page 99).

**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 "Adjusting the wheel bearing play" on page 97 and "Lubricating the wheel bearings" on page 99 for how to disassemble and reassemble the wheel hub, as well as how to grease 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 and tightness of the anchor pins (depending on the model).
- For shoes with rollers, check that they rotate properly and lightly oil 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 70). 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.

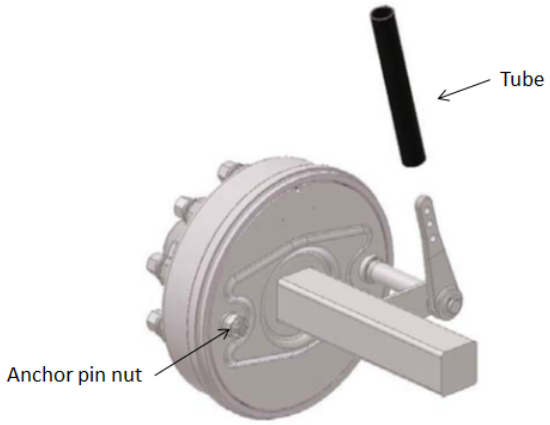


**Figure 70 — Centring the Brake Shoes**

## 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 71).

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.

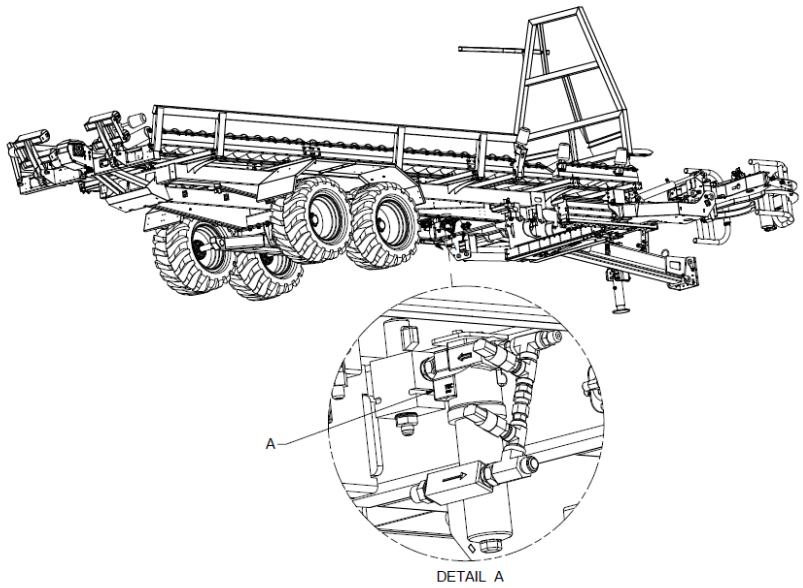


**Figure 71 — High-Pressure Filter**

## 7.10 Cleaning

At the end of each day using the trailer, ensure that the hydraulic valve and platform rollers are clean. Accumulated debris (hay, dust, and mud) on or in these components may hinder their correct operation.

## 7.11 Storage

If you do not plan on using the trailer for a long time, store it on 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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