

From serial number 0814XXXX



Instructions for Use and Maintenance

Roller Brush AH250, AH280, AH300, AH330



Note!
Read instructions before use



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INTRODUCTION

Congratulations on your new TREJON ROTARY BROOM! The product is designed and manufactured by Trejon AB and made of first-rate materials. It features components supplied by well-known manufacturers. Strict quality requirements and quality control criteria have been observed in all phases of design and production. This manual contains the instructions needed to use and maintain the sweeper in an efficient manner. By following the instructions in this manual carefully, you will ensure a long and trouble-free service life for your sweeper.

Please make sure that every driver and person in charge of maintenance reads this manual thoroughly before using the sweeper or starting maintenance work. Attention must be paid to safety factors in all situations. This manual is part of the sweeper and must be transferred to the new owner upon sale or handover.

Should this manual be lost or become illegible, obtain a new manual immediately from Trejon AB or via the company website at www.trejon.se

Due to the continuous nature of its product development, Trejon AB reserves the right to make structural and technical changes without advance notification. Therefore, it is possible that some information in this manual may have changed after printing.

Please contact Trejon AB or the retailer of the sweeper if you need more information on the use or maintenance of the sweeper.

The content of this manual is based on information available in March 2015.

Trejon AB cannot be held liable for any errors or deficiencies in the manual.

SAFETY COMES FIRST



In this manual, this safety symbol is featured next to all important safety-related information. Pay particularly close attention to these sections and observe all safety instructions carefully.

In addition to the instructions of this manual, all the effective laws, decrees and regulations must be followed when using and maintaining the rotary broom.

The maintenance and adjustment instructions in this manual must be followed. This ensures that the sweeper can be used safely and without interruptions.

If a fault occurs in the sweeper, please contact the retailer's maintenance service. Stop working immediately, if there is even the smallest chance of injury.

Do not exceed the manufacturer's recommended operating temperature ranges and pressure levels for the hydraulics.

Never disconnect a hydraulics hose by pulling on the hose, never paint a hose and never tighten the hydraulics connectors excessively, in order to prevent damage.

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1. DECLARATION OF CONFORMITY

EC-Certificate of Conformity

Conforming to EEC Directions 2006/42/EG

We **TREJON FÖRSÄLJNING AB**
(name of supplier)

SE – 911 35 Vännäsby, Företagsvägen 9
.....
(full address of company – where this concerns authorized agents within the Common Market, also state the company name and manufacturer)

Declare in sole responsibility, that the product

Roller Brush OPTIMAL AH250, AH280, AH300 and AH330
.....
(make, model)

to which this certificate applies, conforms to the basic safety and health requirements of EEC Directions 2006/42/EG,
(if applicable)
and to the other relevant EEC Directions.

(title and/or number and date of issue of the other EEC Directions)

(if applicable)

To effect correct application of the safety and health requirements stated in the EEC Directions, the following standards and/or technical specifications were consulted:

EN ISO 12100-1 : 2010 EN ISO 12100-2 : 2010
.....
(title and/or number and date of issue of standards and/or specifications)



Henrik Johansson

Managing Director

Vännäsby, 2016.12.01
.....
(Place and date of issue)

.....
(Name and job function of authorized person)

2. PURPOSE OF USE

Rotary brooms are designed for sweeping sand, litter and snow.

The rotary broom can be equipped with a high-pressure dust suppression system and a pressure washer. High-pressure dust suppression ensures dust-free sweeping, and the pressure washers enables cleaning areas that are difficult to reach, as well as the vehicle. The rotary brooms can also be equipped with a lifting mechanism that allows the broom to be attached to a lorry.

3. SAFETY INSTRUCTIONS



Please read and observe the following safety-related instructions carefully.

3.1 GENERAL

Ensure that a sweeper of this type and weight can be attached to the tractor/loader/lorry in question.

Only persons who have familiarised themselves with the device and its functions may operate it.

Familiarise yourself with the sweeper and its operation before you start using it in a safe area in which hazardous situations are not likely.

Observe all warning and instruction labels on the sweeper. Do not operate the sweeper under the influence of alcohol, medication or narcotic substances. Fatigue may also lead to hazardous situations.

Never get close to the sweeper when the hydraulics system is connected, because a system failure may cause a crushing hazard.

Before use, ensure that all sweeper maintenance has been conducted correctly and on time.

Check the wear and adjustment of mechanical parts, and immediately replace any worn and damaged parts. Check the tightness of the bolts and nuts at regular intervals.

Never position yourself under the sweeper, unless the sweeper has been supported or lifted with an appropriate and locked mechanical lifting or support device. A failure of the vehicle's hydraulics system or some other unanticipated occurrence may result in a crushing hazard.

Do not modify the structure of the sweeper, as this may lead to unanticipated safety risks.

Do not let an inexperienced person handle the sweeper. Any party lending the device is responsible for any damage and accidents.

3.2 WARNING LABELS

The warning symbols attached to the product are described below. Ensure that you understand what they mean before you start using the product.

Clean/replace any unreadable or missing warning labels. More information on ordering the labels is available from Trejon AB.

Crushing hazard**Warning**

Do not enter this area when the machine is running. Beware of placing your hands in this area when the machine is in operation.

Remain at a sufficient distance from the machine when it is running or in motion. Neglecting this regulation may lead to severe injury or death.

Always read the instructions and safety regulations before use



Do not operate the device before you have carefully studied all the instructions and safety regulations and ensured that you understand their content. If you do not understand something, please contact Trejon AB. Misinterpretations may lead to severe injury or even death.

Beware of rotating rollers**Beware of rotating rollers**

Beware of placing your hands and feet in this area when the machine is in operation. Your clothes may also become caught between the rotating rollers.

4. IDENTIFYING INFORMATION AND SPARE PARTS

4.1 TYPE PLATE

The type plate of rotary brooms is located on the right-hand side of the support frame (Figure 1).



Figure 1

The type plate contains the following information:

Model

Serial number

Weight


4.2 SPARE PARTS

Only use original spare parts relating to maintenance and repair, and ensure that the sweeper stays in its original condition.

Always provide the type and production number of the sweeper when ordering spare parts. Record the type and serial number of the sweeper in the space below.

Type _____

Serial number _____

	<p><i>Ensure the structural safety and functionality of the sweeper, and only use original spare parts.</i></p>
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5 MAIN COMPONENTS OF THE SWEEPER

5.1 SWEEPER FROM THE SIDE

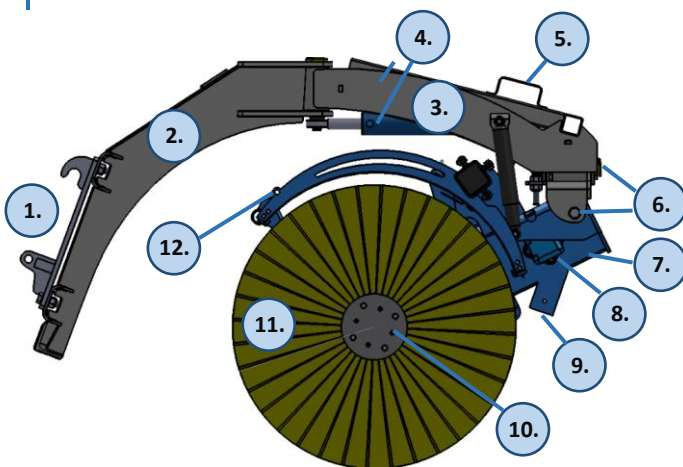


Figure 2

- 1) Bolt connection
- 2) Sweeper support frame (can be replaced with a zinc coated water tank frame)
- 3) Sweeper swivel frame
- 4) Turn cylinder
- 5) Lifting lug and support leg holder during transportation
- 6) Plugs for vertical and horizontal flotation
- 7) Pulling cover
- 8) Hydraulics motor
- 9) Support leg holder
- 10) Side flange of brush roller
- 11) Brush discs (outer diameter 915 mm, inner diameter 7 inches)
- 12) Support frame for mudguard (with bolts)

5.2 SWEEPER FROM THE TOP

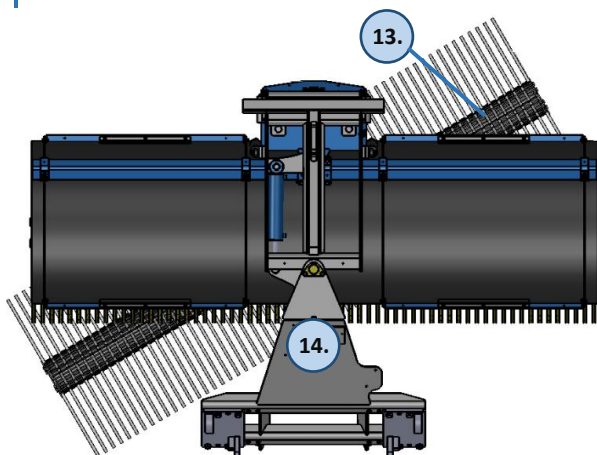


Figure 3

- 13) Brush roller
- 14) Hydraulics electrical valve

6 CONNECTING THE SWEEPER TO THE VEHICLE

This section covers the safe attachment and detachment methods for Trejon rotary brooms. By observing these instructions, you can safely connect and disconnect the sweeper.

6.1 ATTACHING THE SWEEPER

It is recommended that you attach the sweeper on a level surface, as a slanted surface makes the process more difficult, and may result in the device being damaged.

Engage the handbrake for the duration of the connection process, to ensure that it is safe to position yourself between the sweeper and vehicle.

	<p><i>Never position yourself under the sweeper or the arms unless they have been separately supported.</i></p>
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When connecting the device for the first time, ensure that the quick fastening hooks fit their intended slots and that the locking pins can be properly locked into place. Adjust also the height limiters at a suitable level. It is advisable to check the connection and the height limiter adjustments before each use.

Begin connecting the hydraulics by ensuring that the hydraulic system is depressurised.

Next, clean the quick connectors of the sweeper and vehicle. Connect the hoses and electrical cables, as shown in section 8 (Technical data). It is recommended to mark the hoses with colours to facilitate reconnection.

6.2 DETACHING THE SWEEPER

Remember to engage the handbrake for the duration of the connection process. Never position yourself under the sweeper or the arms unless they have been separately supported.

First, disconnect the electrical cables and then the hydraulics hoses. Remember to protect the quick connectors and the electrical connector against weather and dirt.

If the sweeper will be in storage for an extended period, remember to lubricate it, according to the weekly maintenance instructions (section 7.3), before disconnection. Use all the device's movements to ensure a thorough lubrication.

6.3 ADJUSTING THE SWEEPER

Rotation speed adjustment

Adjust the rotation speed with the flow adjustment valve that is attached to the brush frame (Figure 4). If the brush is equipped with a flow adjustment valve, you can leave the smaller valve open and adjust rotation speed only with the flow adjustment valve.



Figure 4

6.4 SWEEPING

	<p><i>Before sweeping, always ensure that the mechanical fastening is locked, and that the electrical and hydraulics connections have been appropriately carried out.</i></p>
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Also, ensure that the hoses and cables are not subjected to crimping or abrasion. Operate all the functions a few times and check that there are no oil leaks.

If the operator is unfamiliar with the device, he or she must learn how to use the device in a safe area, where any mistakes do not cause dangerous situations.

Instructions for sweeping:

- Detach the support leg and place it in the holder on top of the brush before operation.
- Start the brush and lower it on the ground.
- Ensure that the brush can float both up and downwards during sweeping.
- Do not press the brush against the ground with excessive force, as the brush discs can wear down very quickly, resulting in sweeper damage.
- The sweeping result is optimal, when the brush disc bristles press to against the ground by 1–2 cm (Figure 5).
- Do not direct the brush towards people, cars or buildings, because the brush can blow debris.

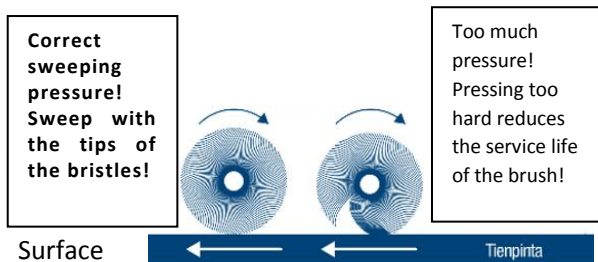


Figure 5

6.5 USING THE HIGH-PRESSURE DUST SUPPRESSION SYSTEM

Rotary brooms can be equipped with a high-pressure dust suppression system (accessory), which makes sweeping virtually dust-free. In addition to dust suppression, the system can be used for pressure washing during sweeping.

	<p><i>Never direct the water jet towards people or animals. High-pressure water can cause serious accidents.</i></p>
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Using the high-pressure pump for the first time:

Adjust the water pressure of the high-pressure pump before operation. The adjustment instructions are below.

1. The nozzles of the sweeper must be activated (Figure 6) (valve 2 in position A). Note! Valve 2 is only installed on sweepers that have a washing gun and hose reel, in addition to the high-pressure pump.
2. Connect the electrical reel on the adjustment mechanism (the pump is switched on).
3. Turn the ON/OFF valve (Figure 7) anticlockwise to the OFF position. This will switch the sweeping mechanism off.
4. Switch the hydraulics on and check the water pressure.
5. The water pressure range is 40–180 bar (Figure 8). The recommended sweeping pressure is 60–100 bar. Control the water pressure with the screws (number 1 in

Figure 8). Turn the screws with an 8-mm hexagon spanner.

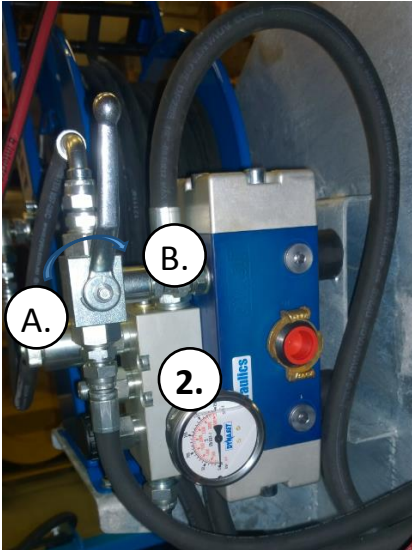


Figure 6

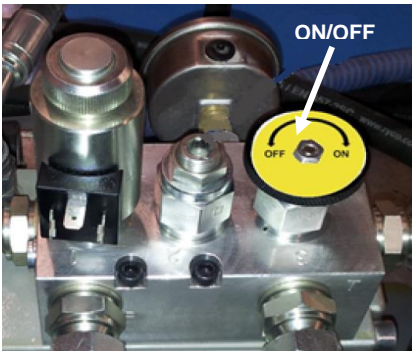


Figure 7

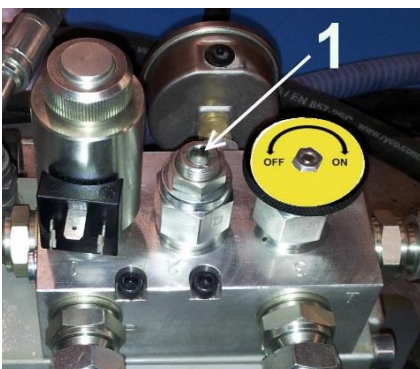



Figure 8



 *The water pressure of the pressure pump may not exceed 200 bars, under any circumstances.*

Using the high-pressure pump during sweeping:

Check the water pressure before operation by reading the meter on top of the pump. The operating range of the high-pressure water pump during sweeping is 40–180 bar. High water pressure increases the amount of water mist, but it also increases consumption. The recommended pressure during sweeping is 60–100 bar.

Note! The water pressure during operation also affects the water pressure of the washing gun. Therefore, please take care to check the water pressure, both when the control switch is on and off.

Connecting the electrical valve activates the high-pressure nozzles. Valve 2 (Figure 6) must be in position A.

Using the high-pressure washing gun:

When you are only using the washing gun, turn the rotation hydraulics of the brush off by turning the control switch on the pump (Figure 7). Activate the washing gun by turning the valve (number 2 in Figure 6) to position B.

Valve 2 (Figure 6) activates the washing nozzles (position A) or the manual washer (position B).

Storing the washer in cold weather:

Drain the washer after use or fill it with windscreen washing fluid (this is the better alternative), if it is to be stored at temperatures below +1°C!

Draining instructions:

- Remove the draining plug from the bottom of the water tank.
- Allow the pump to run with valve 2 in position A (Figure 6), until all the water is drained from the nozzles.
- Turn valve 2 to position B and pull the trigger. Allow the pump to run until all the water is drained from the washing gun.

Filling with washing fluid:

- Remove the draining plug from the bottom of the water tank.
- Extract the suction hose from the water tank and place it in a container with windscreen washing fluid (resistant to temperatures of up to -35°C).
- Use the pump for the brush nozzles, until washing fluid comes out of the nozzles.
- Turn the ball valve to the washing gun position and use the gun until only washing fluid comes out of it.
- Freezing water will damage the hose reel and washer. Thus, it is important to drain the system and fill it with washing fluid, if the sweeper is to be stored at temperatures below +1°C.
- The warranty does not cover equipment damage caused by freezing!

6.6 USING THE IRRIGATION SYSTEM

A normal irrigation system is also available for sweepers. This section covers the use of the irrigation system.

The irrigation system of a rotary broom is active when water is added to the tank and the power is connected to the water pump (red + and black -). Remember to check the pump's voltage before connection. When connecting the water pump, it is also advisable to install a fuse (10A) in the red + cable as close to the battery as possible to prevent vehicle fire.

6.7 DRIVING THE VEHICLE TO ANOTHER LOCATION




Exercise great caution when driving the plough to another location. Read the text below and prevent the sweeper from

IMPORTANT: Raise the sweeper high and check its condition before setting off. Reduce the speed, if the road is uneven. Excessive speed will damage the sweeper.

Turning the rotary broom to the side lowers the inner side of the brush during transportation. Thus, prevent the brush discs from touching the ground during the transfer.

7 MAINTENANCE

7.1 GENERAL

	<p>Observe the following instructions!</p> <ul style="list-style-type: none"> • When performing maintenance or repair measures, observe all safety-related laws, decrees and regulations, as well as the safety instructions in this manual. • Park the vehicle on an even and firm surface. • Lower the sweeper to rest on the wheel and lip plate. • Prevent the vehicle from moving. • Stop the motor of the vehicle and remove the ignition key. • Only use appropriate and suitable tools that are in good condition. • Observe a safe working procedure under all circumstances and dress appropriately for the work tasks. • Wear eye protection and a respirator, if necessary. • Remember to reinstall all covers and safety equipment that may have been removed. • Ensure that all labels of the machine are in good condition after the maintenance work. Replace damaged labels with new ones. • Collect waste oil, liquids and used filters, and deliver them to a processing plant for hazardous waste. • Do not allow oil or other fluids to spill on the ground, and take care of your environment.
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7.2 DAILY MAINTENANCE

It is recommended to check the sweeper daily to prevent problems.

The daily maintenance measures encompass the following inspections:

- Check the wear of the brush discs.
- Check that there are no leaks in the hydraulics and that the hoses are in good condition.
- Check the overall mechanical condition of the sweeper.

7.3 WEEKLY MAINTENANCE

In addition to daily maintenance, conduct the following measures.

- Check the tension of the fastening bolts of the joints and tighten them if necessary.
- Grease all lubrication points, in accordance with Figure 10.
- The recommended lubricant is Neste OH GREASE or similar.

In a rotary broom, the lubrication points are located as follows (Figure 10):

- On nipple in the swivel joint on the frame (no.1)
- Two nipples in the cylinder (no. 2)
- Two nipples in the sleeves of the flotation mechanism (no. 3)



Figure 10

7.4 CLEANING THE NOZZLES

The high-pressure nozzles may become blocked, if water is not fed to them continuously. It is easiest to clean the nozzles with an ultrasonic washer, available at well-stocked car shops (average price EUR 40). You can also clean the nozzles with a pin or another sharp object.

Detach the nozzles with a 9/16-inch ring spanner or adjustable spanner. Each nozzle has a filter that can be turned open at the frame of the nozzle.



Figure 11

7.5 MAINTENANCE AFTER THE SWEEPING SEASON

We recommend that you perform at least the measures that are listed in sections 7.2 and 7.3. Replacing the oil of the brush cover and checking the transmission chain are also part of the seasonal maintenance routine.

Remove oil from the cover by removing the plug from the bottom of the cover (no.1 in Figure 10). Add new oil through the hole in the bottom corner (no. 2). You will need 0.5 litres of oil. It is easiest to replace the oil upon changing the brush discs, because the oil plugs are exposed at that point. Check the oil that you remove from the device. If there are metal particles mixed within the oil, you should replace the chain wheel or chain.

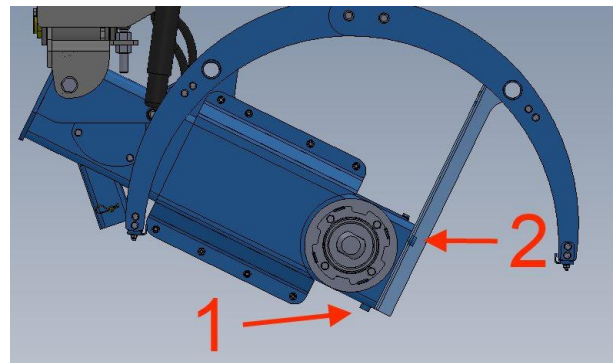


Figure 12

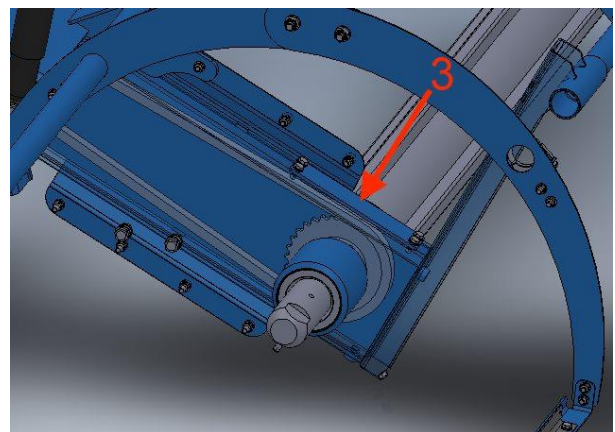


Figure 13

Check the condition of the chain through the hole on top of the frame (no. 3 in Figure 12). The chain should be replaced when it becomes loose enough to hit the inner walls of the brush frame during operation.

In addition, it is advisable to paint and varnish the sweeper, if the paint coating is badly worn. It is recommended to perform maintenance at the end of the season so that parts with possible wear can be repaired before they rust.

The code for the grey colour used on the sweepers is RAL7043 and the code for the blue colour is RAL5015. For more thorough painting in the autumn, we recommend a two-component anti-corrosion paint, such as Tikkurila Temadur SC80 or Teknos Teknodur Combi 3430. Please ensure that you clean the surface to be painted with a silicone removal agent before painting.

Drain the water tanks before winter storage! Water expands upon freezing and causes the tank to bulge and possibly rupture. Also drain the high-pressure water system. More detailed instructions are in section 6.5.

7.6 REPLACING THE BRUSH DISCS

Replace the brush discs safely by first lifting the sweeper to the correct maintenance height and supporting it mechanically.

1. Detach four bolts from the end flange of the brush roller.
2. Remove the old brush discs and spacer rings.
3. Attach the new brush discs and spacer rings.
4. Attach the end flange.

The brush discs feature a small holding nub on the inside rim. Place this in the opposite position in every other disc, as the position of the nub is slightly

elevated. If you position all brush discs in the same way, the discs will be slightly slanted.

It is easiest to attach the new brush discs to the brush roller by lifting the roller to the correct height and then inserting the discs and spacer rings. It is a good idea to place one or two extra brush discs at the roller end (the brush discs protrude 1 cm past the brush roller), so that the brush roller is sufficiently compressed when the brush flange is reinstalled on the brush end. This makes the holding nubs firmer.

7.7 DISCONNECTING THE BRUSH ROLLER

You need to disconnect the brush roller only relating to major maintenance operations, such as replacing the bearings/seals or chain wheels.

1. Lift the brush, so that it is convenient for you to work on it.
2. Support the brush mechanically.
3. Turn off the vehicle and engage the handbrake.
4. Detach the disc brushes from the brush rollers.
5. Unscrew the holding screw of the brush roller by approximately 2 cm (Figure 14) and extract the brush roller from the shaft.
6. Mark the position of the brush roller and attach the brush roller back to its place in the same position.

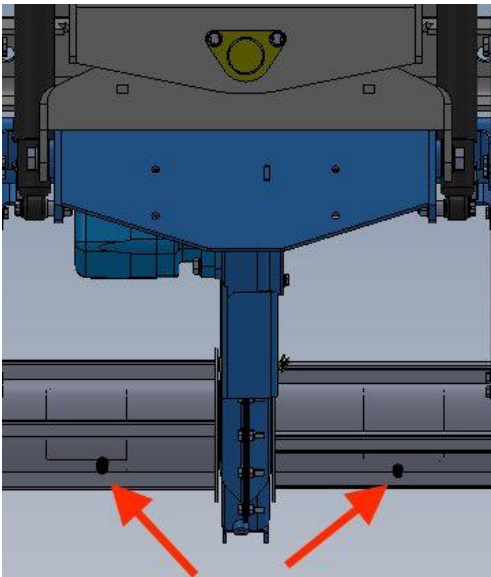


Figure 14

8 TECHNICAL DATA

8.1 HYDRAULICS DIAGRAMS

Sweeper hydraulics vary, depending on the vehicle's properties. The sweeper can be connected with a single double cylinder hydraulics arrangement or two double cylinder hydraulics arrangements.

When using two hoses, an electrical valve is needed for selecting whether to rotate the brush roller or the brush. Figure 15 illustrates this connection.

When using four hoses, the rotation and lifting functions of the brush have their own pairs of hoses. The high-pressure washer can be connected, either to its own double cylinder hydraulics system or in series with the motor rotation system. Figure 16 illustrates this connection.

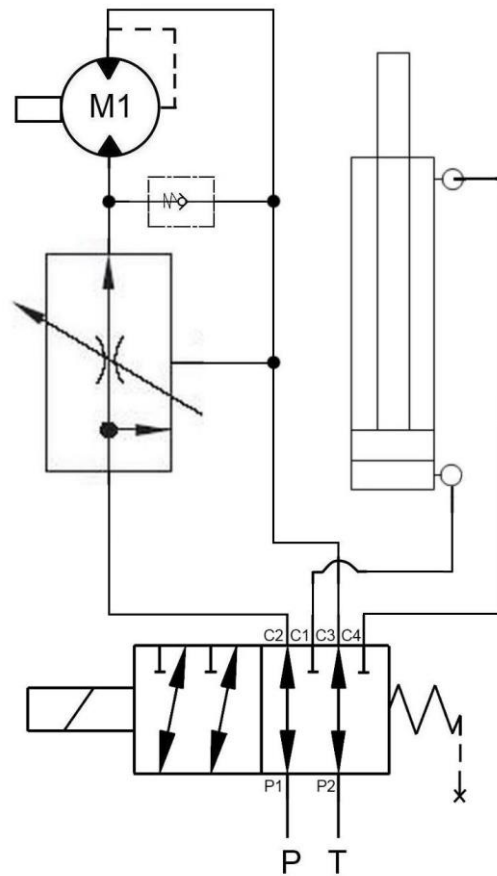


Figure 15

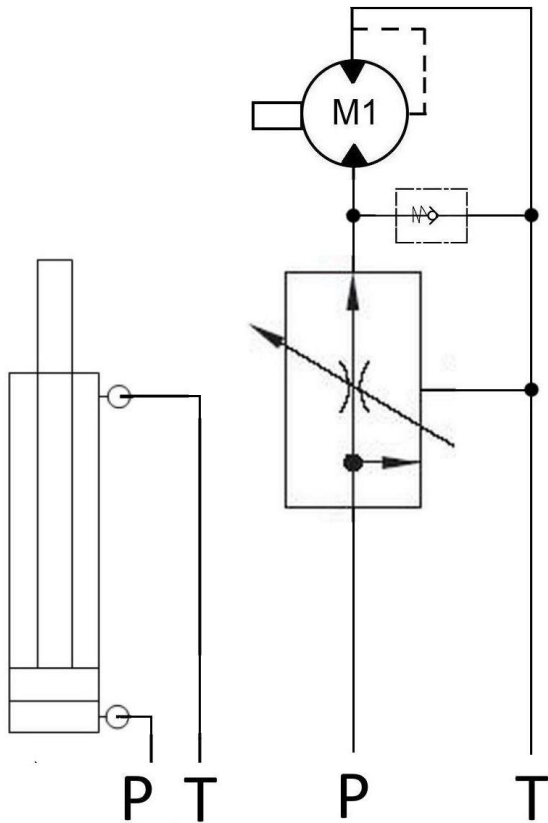


Figure 16

Symbols

- M1= Brush motor
- P = Pressure line
- T = Return line

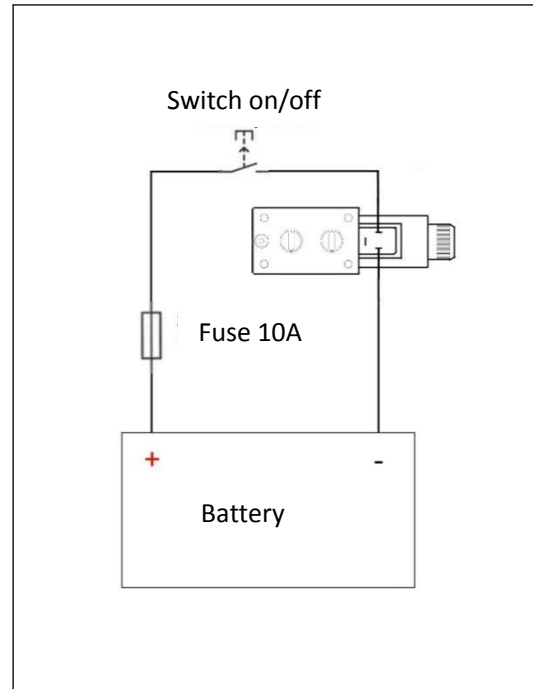


Figure 17

The connections of the wiring harnesses supplied with the sweepers have been made as follows:

Single-coupling cable: Brown = plus, blue = minus, green-yellow = extra.

Two-coupling cable: black = the plus of the plug at the end of the wire, brown = the plus of the other plug, blue = common minus.

The couplings feature LED lights that are lit when power is supplied to the couplings.

8.2 ELECTRICAL DIAGRAMS

This section covers the electrical connection diagrams of the sweepers.

Figure 17 shows the electrical connection diagram for 6/2 valves (hydraulics arrangement with two hoses). The electrical reel in the high-pressure washer is connected in the same way. Remember to install fuses in the connections, as connections made without a fuse cause a fire hazard.

9 WARRANTY TERMS



TREJON AB
Företagsvägen 9
SE – 911 35 Vännäsby

Guarantee- /assignment certificate

- | | |
|------------------------------|---|
| Guarantee terms | - Valid between retailer (Trejon AB dealer) and machine purchaser. |
| General about guarantee | - In order to obtain valid guarantee terms set forth below, and the specific guarantee terms set by each provider. These are attached to the user manual for each machine, as appropriate. |
| Validity of guarantee | - The guarantee is 12 months from date of purchase.
In some cases, the guarantee can be limited by running time. |
| The guarantee covers | - Damaged parts, which have broken down because of defective production operations of materials in course of <u>normal use of the machine</u> .
- Only the labor cost for replacement of defective warranted part. |
| The guarantee does not cover | - Transport costs applicable to the machine or the parts.
- Travel costs.
- Any resulting costs incurred as a result of damage to the machine.
- If the machine has been modified by the owner.
- Damage due to normal wear and tear of the machine – Not related to manufacturing defects, poor service, user inexperience or use of spare parts that are not original.
- Excessive or inappropriate use of the machine.
- The guarantee is not applicable to parts which are subject to wear, for example hoses, sealing, oil, belts, batteries, chains, knives etc.
- The guarantee period for replaced parts during the guarantee period expires with the machine's guarantee.
- Normal adjustments, maintenance or supervision |
| Guarantee procedures | - Contact place of purchase as soon as any damage or malfunction is detected.
Do not use the machine if the damage can be worse.
- Guarantee repairs must be performed by Trejon AB approved workshop. |

ATTENTION!

The guarantee shall enter into force provided that the machine **GUARANTEE/ ASSIGNMENT CERTIFICATE** has been fully completed and signed by both parties (archived by the seller), and recorded on the Trejon web portal no later than 14 days from date of sale (the seller is responsible for this happening).

Assignment certificate:

Machine Buyer shall confirm with his signature that he had received manual containing operating instructions, and received information about the operating, security and maintenance requirements described in this and made the final inspection of the machine.

PLEASE FILL IN!



Product: _____	Serialno. _____
Salesman: _____	Company: _____
Signature of salesman: _____	Date of purchase: _____
Name of buyer: _____	Telephone: _____
E-mail: _____	
Address: _____	Zipcode: _____
City: _____	Country: _____
Date: _____	Signature of buyer: _____

Product serial number

