

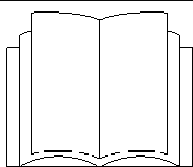


Operator's manual for Attachment



Rotary Broom

Product number:	300-700-series loaders:	A33260 A1334 A33540 A2968 A2941
	200-series loaders:	A33261 A33539



Please read this manual carefully before using the equipment, and follow all instructions.

Keep this manual for later reference.

Manufacturer:

AVANT
AVANT TECNO OY
e-mail: sales@avanttecno.com

Ylötie 1
33470 Ylöjärvi
FINLAND
Tel. +358 3 347 8800
Fax +358 3 348 5511

CONTENTS

1.	Foreword	3
2.	Designed purpose of use	3
3.	Safety instructions for using the broom	3
4.	Technical specifications	5
5.	Assembly of the rotary broom	6
5.1.	Attaching the broom to the loader	6
5.2.	Connecting and disconnecting the hydraulic fittings	7
5.3.	Electrical connection	8
5.4.	Storage	9
6.	Instructions for use	9
6.1.	Use	9
6.1.1.	Floating attachment bracket	10
6.2.	Adjusting the operating height	10
6.3.	Broom slewing	11
6.3.1.	Mechanical slewing	11
6.3.2.	Hydraulic slewing	11
6.4.	Water spraying system	11
7.	Maintenance and servicing	12
7.1.	Cleaning and lubricating the attachment	12
7.2.	Brush	13
8.	Warranty terms	14

Appendix: EC Declaration of Conformity

This manual uses the following warning symbols to indicate factors that must be taken into account to reduce the risk of personal injury or property damage:

	DANGER:
	This safety symbol refers to important safety information in this manual. It warns of an immediate hazard that could cause serious personal injury or property damage. Read the warning text accompanying the symbol carefully and ensure that other operators are also familiar with the warnings, since personal safety is at stake.



Note:

This notice symbol indicates information about the correct operation and maintenance of the equipment.

Failure to observe the instructions accompanying the symbol can lead to equipment breakdown or other property damage.

In addition to the safety instructions included in this manual, you must observe all occupational safety regulations, local laws and other regulations concerning the use of the equipment particularly the use of the equipment on road traffic. Due to continuous product development, some of the details in this manual may differ from your equipment. We reserve the right to change the contents of the manual without notification. Original instructions.

1. Foreword

Avant Tecno Oy would like to thank you for your purchase of this AVANT attachment. It has been designed and manufactured on the basis of years of product development and experience. By familiarising yourself with this manual and following the instructions, you ascertain your safety and ensure the reliable operation and long service life of the equipment. Read the instructions carefully before starting to use the equipment or performing maintenance.

With these instructions, even an inexperienced user can use the attachment and loader safely. The manual includes important instructions for experienced AVANT operators as well. Ensure that all persons using the loader have received proper guidance and familiarised themselves with the manual of the loader and attachment and all safety instructions before using the equipment. Keep this manual at hand throughout the service life of the equipment. If the manual is lost or damaged, you can request a new one from the retailer or manufacturer. If you sell or transfer the equipment, be sure to hand over this manual to the new owner.

2. Designed purpose of use

The AVANT Rotary Brooms are attachments designed to be suitable for use with AVANT multi purpose loaders. They are intended for removing materials, such as sand, trash and snow, from roads, garden areas and other even surfaces. The strong broom is able to move a thick layer of gravel at once.

The broom is directly operated by a hydraulic motor. Depending on the model, the broom slewing is operated either manually or by a hydraulic cylinder. The hydraulic slewing makes the use of the broom more efficient, as the slewing can be controlled directly from the driver's seat during operation. When operating a rotary broom, the loader should be equipped with a cooler for hydraulic oil. The rotary broom is an excellent and powerful broom for various brooming tasks. However, if clearing areas from snow is the most common task, we recommend the AVANT Rotary broom for Snow Removal.

The attachments have been designed to require as little maintenance as possible. Regular maintenance tasks can be performed by the operator. In this manual, part numbers for common wear parts are shown. Demanding repair and maintenance operations, especially those concerning hydraulic assemblies, are to be left for professional maintenance. Appropriate protective equipment and original spare parts must be used for the maintenance. Familiarise yourself with the manual's instructions regarding service and maintenance. Please contact your AVANT retailer if you have additional questions about the operation or maintenance of the equipment or if you require spare parts or maintenance services.

3. Safety instructions for using the broom

Please bear in mind that safety is the result of several factors. The loader-attachment combination is highly powerful, and improper or careless use or maintenance may cause serious personal injury or property damage. Due to this, you should carefully familiarise yourself with the manuals of both the loader and the attachment before starting operation. Do not use the attachment if you have not completely familiarised yourself with its operation and the related hazards. The purpose of these instructions is to help you to:

- use the equipment in a safe and efficient manner
 - observe and prevent any hazardous situations
 - keep the equipment intact and ensure a long service life
-
- 
- When mounting the attachment to the loader, ensure that the locking pins of the loader's quick attach plate are **in the lower position** and that they have **locked** the attachment **to the loader**.
 - The broom is to be used by one operator at a time. Do not approach or allow others to approach the area where the machine is in operation. Keep a **safety distance of at least two metres** from the broom when it is running.
 - Never leave the driver's seat when the broom is running. Keep hands and feet away from moving parts.



- Be sure not to tilt the attachment too far up, since this will make it fall onto the boom due to the movement made possible by the floating system. Never go under a raised attachment. Support the attachment carefully before performing inspections or cleaning.
- When removing the broom from the loader, ensure that it is secured against accidental movement. To prevent the broom from moving, and to prevent damage to the bristles, lower the broom onto blocks of wood, for example.
- Pay attention to the surroundings and any other persons and machines moving in the vicinity. Pay attention to the contours of the terrain as well as other hazards, such as loose rocks or branches and trees reaching the driver's area.
- Always transport the broom as low and close to the machine as possible to keep the centre of gravity low.
- Do not use the broom if all cover plates are not in place.
- Never perform any maintenance or adjustments while the loader engine is running.
- Do not modify the structure of the attachment in a manner that would affect its safety.
- Also read the safety instructions for the loader in the loader manual.



Beware of the hazard of entangling around the broom or crushing of hands between the moving components of the broom, especially during maintenance or when removing blockages. Always stop the attachment by turning the auxiliary hydraulics control lever to its neutral position before leaving the driver's seat, shut down the loader engine and release the residual pressure of the hydraulic system. Note that the loader boom moves down and may be tilted even if the engine has been stopped. Never go under a raised boom or any component of the attachment.



Improper or careless use of the broom may serious injuries or property damages. Familiarise yourself with the loader controls in a safe area. Pay particular attention to the safe stopping of the attachment and the loader.



Always keep a safety distance of at least two metres to other persons. Note that the broom may throw gravel or other objects found in the area at high velocities. Do not allow others near the machine operating area.

Remember to wear proper protective clothing:



- The noise level in the driver's seat exceeds 85 dB(A). Wear hearing protection while working with the loader.



- The use of safety boots is recommended while working with the loader.
- Wear protective gloves when handling hydraulic hoses.



- Wear dust mask when brushing sand or other dusty materials.

4. Technical specifications

Listed below are the labels and markings, which must be visible on the equipment. Replace the warning labels, if they have become unclear or detached completely. New labels are available via your retailer or contact information provided on the cover.



The warning labels contain important safety information. Replace damaged or missing warning labels with new ones.



A46771



A46772



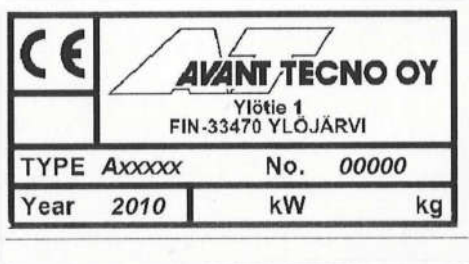
A46803



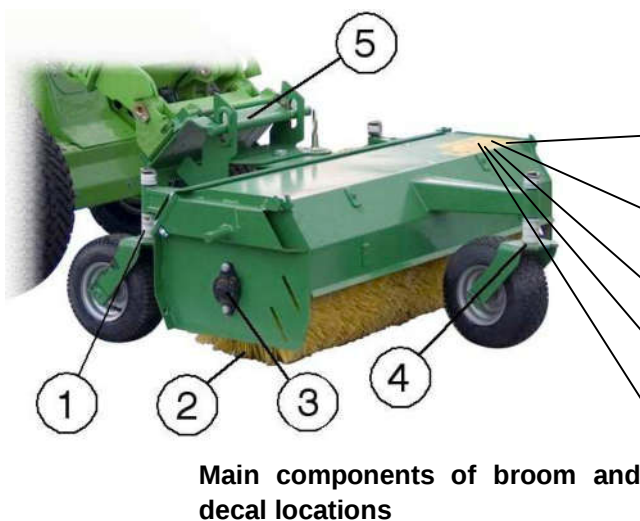
A46799



A46806


Table 1 – Main components of broom

1	Support wheel (2 wheels)
2	Main broom
3	Bearing
4	Nose wheel
5	Floating attachment bracket


Table 2 – Decal warning messages

Decal	Explanation
A46771	Read instructions before use.
A46772	Do not go under a raised attachment; stay away from raised equipment.
A46803	Crushing hazard, keep clear of moving components.
A46799	Beware of thrown objects; keep a safe distance from the equipment. (2 m).
A46806	Entanglement hazard, do not go near the broom when in operation. Beware of entanglement of clothes, hair or jewellery.

Table 3 – Rotary Broom specifications

Product number	A33261	A33539	A33260	A33540	A1334	A2968
Working width:	1050 mm				1300 mm	
Weight:	130 kg				160 kg	
Broom slewing:	manual	hydraulic	manual	hydraulic	manual	hydraulic
Bush type:	Diameter: 500 mm, Material of bristles: Nylon					
Brush spare part number:	64660, 31 pcs				64660, 41 pcs	
Maximum input of hydraulic energy:	50 l/min, 22,5 MPa (225 bar)				70 l/min, 22,5 MPa (225 bar)	
Availabel options:	Watering system A2882: nozzle tube with four nozzles, Tank volume 80 litres					
Suitable AVANT loader:	216, 218, 220		300-700		400-700	

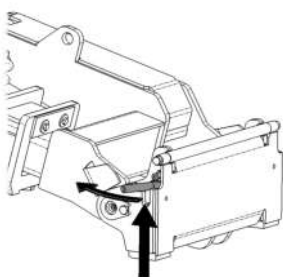
5. Assembly of the rotary broom

The broom is ready for use as delivered. Mount the attachment and its hydraulic hoses to the loader as instructed below.

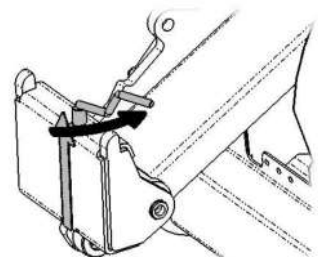
5.1. Attaching the broom to the loader

Attaching the attachment to the loader is quick and easy, but it must be done carefully. The attachment is mounted to the loader boom by using the quick attach plate and the counterpart on the attachment. If the attachment is not locked to the loader, it may detach from the loader and cause hazardous situations. In the worst case, the attachment may slide onto the driver along a raised boom. For this reason, the attachment must under no circumstances be raised over one metre when it has not been locked. To prevent hazardous situations, always follow the attachment mounting instructions provided in the following pages. Also remember the safety instructions shown in Chapter 3. The attachment is mounted to the loader as follows:

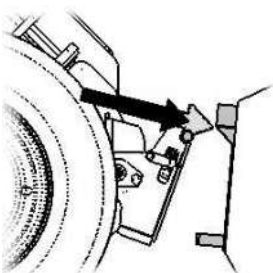
Step 1:



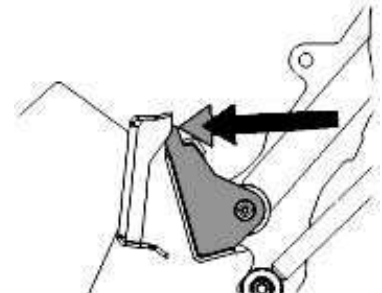
- Lift the quick attach plate locking pin / locking pins up and turn them backwards into the slot so that they are locked in the upper position.
- If your loader is equipped with a hydraulic attachment locking system, see additional instructions about the use of the locking system from the relevant manuals.
- Ensure that the hydraulic hoses are not in the way during installation.



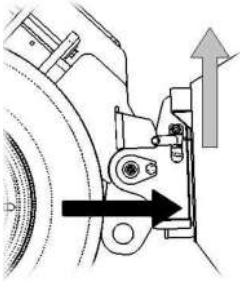
Step 2:



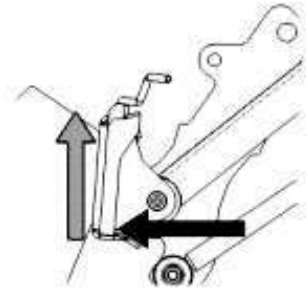
- Turn the quick attach plate hydraulically to an obliquely forward position.
- Drive the loader onto the attachment. If your loader is equipped with a telescopic boom, you can utilise this.



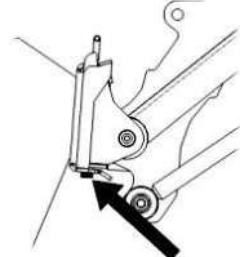
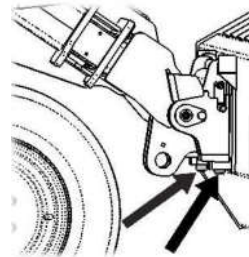
Step 3:



- Lift the boom slightly – pull the boom control lever backward to raise the attachment off the ground.
- Turn the boom control lever left to turn the bottom section of the quick attach plate onto the attachment.
- Lock the locking pins.



Unlocked attachment may fall on the boom or operator and cause serious injuries. Before moving or lifting the attachment, ensure that the locking pins are in the lower position and come through the fasteners on both sides.



Do not use the automatic locking of the locking pins. Excess tilting increases the risk of toppling over. We recommend that you lower the attachment onto the ground and secure the locking manually.

5.2. Connecting and disconnecting the hydraulic couplings

The attachment is equipped with either standard quick couplings or the multiconnector system. If you want to change the type of the hydraulic couplings, contact your Avant dealer or service point for instructions or installation services. For 200-series loaders only conventional quick couplings are available.



Never connect or disconnect quick couplings or other hydraulic components while the system is under pressure or if the control lever of the auxiliary hydraulics control lever is locked on. Connecting or disconnecting the hydraulic couplings while the system is pressurized may lead to unintended movements of the attachment, or ejection of high-pressure fluid, which can cause serious injuries.

Keep the fittings as clean as possible; use the protective caps for the quick couplings on both the attachment and the loader. Dirt, ice, etc. may make using the fittings significantly more difficult. Never leave the hoses hanging on the ground; place them on top of the equipment.

Connecting standard quick couplings:

Before connecting or disconnecting the standard quick couplings, shut down the loader engine and move the auxiliary hydraulics lever on the loader to its extreme positions a few times. This way, there will be no residual pressure in the system and it is possible to connect the fittings.

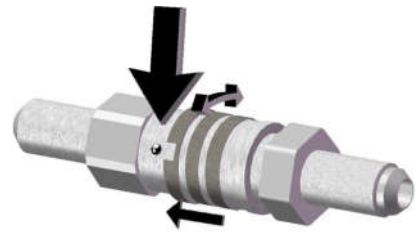
To connect and disconnect the standard couplings, move the collar at the end of the female fitting. The hoses should be connected so that the coupling equipped with a coloured cap is connected to the corresponding coupling of the loader. Note that the protective caps on the loader and the attachment can be fastened to each other during operation to reduce the accumulation of dirt. When disconnecting the standard quick couplings a small amount of oil may drip from the couplings. Wear protective gloves and have some cloth at hand to keep the equipment clean.





Make sure that all three couplings are properly connected, otherwise the hydraulic motors of the attachment may get damaged.

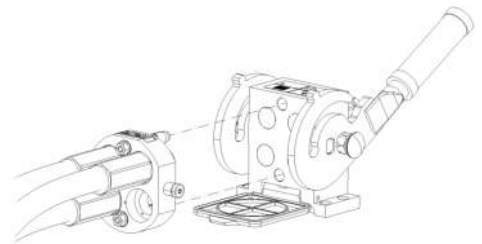
In a 200-series machine, the hose can be connected by pushing the coupling directly into its counterpart. When connecting and disconnecting the 200-series hydraulics quick couplings, you should pay attention to their locking. There is a small groove in the collar of all female couplings, and a small ball near the collar. When connecting or disconnecting, the groove and the ball must be aligned. The locking prevents the couplings from being disconnected from each other by accident when the attachment moves. The collar may also turn by accident into the locking position, making it impossible to connect or disconnect the couplings.



Connecting the multiconnector system:

Align the pins of the attachment connector with corresponding holes of the loader connector. The multiconnector will not connect if the attachment connector is upside down. Connect and lock the multiconnector by turning the lever towards the loader.

The lever should move easily all the way to its locking position. If the lever does not slide smoothly, check the alignment and position of the connector and clean the connectors. Also shut down the loader and release the residual hydraulic pressure.



Disconnecting the hydraulics:

Before disconnecting the fittings, lower the attachment on solid and level surface. Turn the control levers of the auxiliary hydraulics to its neutral position.



When removing the attachment, always disconnect the hydraulic couplings before unlocking the quick attach plate, to prevent hose damage and any oil spills. Reinstall the protective caps on the fittings to prevent impurities from entering the hydraulic system.

Releasing residual hydraulic pressure:

In case residual pressure is left in the hydraulic system of the attachment, it is often possible to disconnect the hydraulic couplings, but it may be difficult to connect them the next time. If the fittings will not connect, the residual pressure must be released by turning the auxiliary hydraulics control lever of the loader, when the engine is turned off. To make sure that there will not be residual pressure in the hydraulic system of the attachment, shut down the loader engine and move the auxiliary hydraulics control lever of the loader before disconnecting the couplings.

5.3. Electrical connection

In broom models equipped with hydraulic side slewing, to operate the slewing, the electric harness of the broom must be connected to the loader. There are two options for the electrical connection:

- The cable harness, delivered with the attachment and equipped with a switch, is connected to the power plug on the loader. Instructions concerning the loader plug are provided in the loader manual. Select the location of the switch in the cab to ensure that it is easily accessible but will not be used inadvertently.
- Alternatively, the optional attachment control switch pack, available for 400-700 loader models, can be used to control the slewing cylinder. In this case, the separate cable with the switch is not needed, and the plug of the system can be connected directly to the socket on the loader boom.

Route the selected cable in a way that it cannot get stuck or squeezed or stretch when the equipment moves. With the help of the attachment control switch pack available for the loader, the attachment control switches are easily accessible at the end of the boom control lever.

5.4. Storage

When finished working with the broom, lower it on an even surface, where it cannot move by accident. Prevent unintended movements of the attachment by placing it e.g. on blocks of wood. Do not store the attachment directly against the ground. Before winter storage, clean the brush carefully. Touch up the paint where needed and grease the lubrication points to prevent rust damage.



Always store the broom in a way that no weight is applied on the bristles. Set the support wheels to the highest position, or lower the broom blocks of wood, for example. Make sure the broom is secured against any movement during storage. The bristles may bend permanently, if these instructions are not followed.

6. Instructions for use

Check the attachment and the operating area once more before starting to work. Quick inspection of the broom before starting to use it is part of ensuring safety and the best performance of the equipment.

Practise the use of the broom and its controls in an open and safe area. If you are unfamiliar with the loader to be used, it is recommended to practice its use without any attachments.

- Before each use, check the operation of the broom and ensure that the brush can rotate freely. Check that there is no string or other foreign material coiled around the broom.
- Remove all obstacles, such as trash, large tree branches or stones, from the working area before operation. Remember correct working methods and avoid leaving the driver's seat unnecessarily.
- Check regularly to ensure there are no hydraulic leaks. Refer to Chapter 7 for maintenance instructions.
- Ensure that the loader and the attachment are used in a safe and intended manner. Do not allow children to operate the machine.
- Operate the attachment from the driver's seat only.



Regularly clean the loader oil cooler core; refer to the loader manual for more instructions. Overheating of the oil decreases the power and affects the service life of the hydraulic components of both the attachment and the loader.

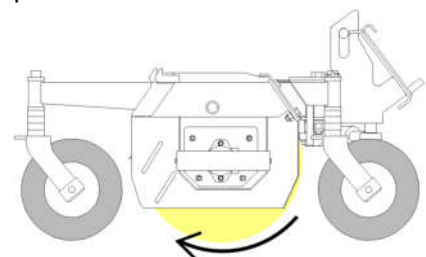


Do not leave the driver's seat when the broom is in operation. Never perform any adjustments, maintenance or cleaning of the machine if the broom can start by accident. Shut down the loader engine before going near the broom.

6.1. Use

The broom is started by turning the auxiliary hydraulics control lever of the loader to its locked position. Depending on the loader model, the auxiliary hydraulics control device is a lever that is locked in the front or side position, or on 200-series machines a pedal that is locked to lower position.

The broom is designed to rotate only to its normal operating direction, as shown in adjacent figure. When the auxiliary hydraulics control lever of the loader is pushed towards its locking position, the broom will operate normally, if the hydraulic quick couplers are connected correctly. At the first use, ensure the correct connection of the hydraulic hoses and the correct rotating direction.





The broom may be operated only to the intended rotating direction. Do not use the broom for pushing purposes, without rotating it simultaneously. The broom may get damaged.

Use high engine rpm for the best operating performance. Depending on the loader model, one or two hydraulic pumps may be used. Note that unnecessarily high rotating speed will wear the broom down more quickly, so the rotating speed should be set according to operating conditions, material being moved and the drive speed.



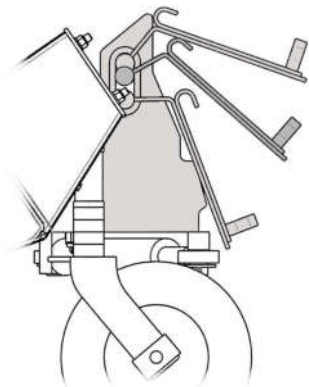
Note that regardless of the protective housing of the broom, the broom may eject sand, stones, pieces of wood or other material far from the broom. Discontinue using the broom if there are others closer than 3 meters from the front of the broom.

6.1.1. Floating attachment bracket

The broom is equipped with a mechanical floating system, which allows the broom to follow the contours of the terrain without moving the loader boom. The operation of floating is greatly affected by its setting. If the floating has been set too high, the broom is easily left in the air. When it is too low, the loader's front wheels are easily raised off the ground. Floating can be adjusted by lifting and lowering the loader boom, and tilting the loader front plate. The position of the attachment plate should be adjusted in a way that the broom is lowered onto its own wheels, so that the floating mechanism can move freely both up and down, as shown below.

Setting of the floating: The adjacent figure shows the extreme positions of the floating, and in the middle, the suitable initial position for the floating is shown. This correct position will allow the broom to move freely up and down following the ground surface.

If your loader is equipped with the broom floating system, it should be switched on. Switch the loader boom floating on when the broom floating mechanism is at its lowest position. Using the loader boom floating allows greater moving range for uneven terrains. See more information about the loader boom floating in your loader manual.



6.2. Adjusting the operating height

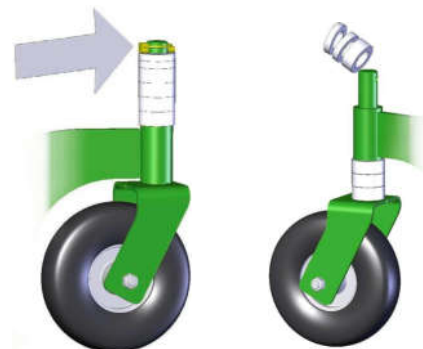
The operating height of the broom can be adjusted with the plastic sleeves on the vertical axles of the support wheels. Suitable height is adjusted according to the operating area and the material being handled, and the height should be adjusted as the broom wears down. The broom does not need to be uncoupled for adjustments.



Adjust the operating height only a little at a time. The broom is at correct level, when the bristles touch the ground only lightly. If the broom is set at a too low level, it will need more power to operate and will wear down more quickly.

To adjust the height:

1. Raise the broom slightly off the ground with the loader and shut down the engine.
2. Remove the cotter pin from the vertical axle of the support wheel. Pull the wheel off its holder.
3. Move some plastic sleeves from above the bracket to below it or vice versa, depending on whether you wish to raise or lower the setting.
4. Push the axle back in through the bracket and reinstall the cotter pin.





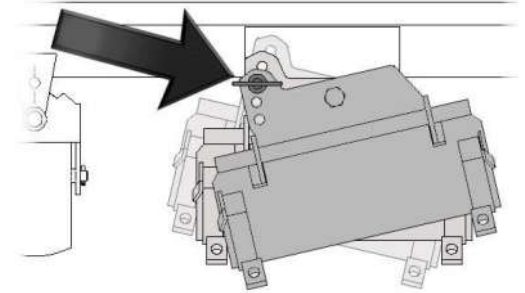
There are two different thicknesses of plastic sleeves (10 and 20 mm) for more accurate adjustment of the height. Adjust both wheels to the same height.

6.3. Broom slewing

With the broom slewing material can be directed aside. The brooms are equipped with either mechanical or hydraulic slewing.

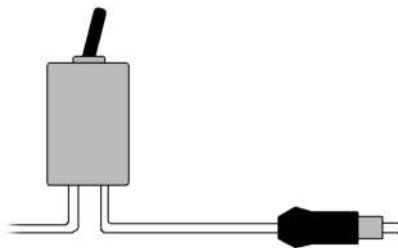
6.3.1. Mechanical slewing

Stop the broom before adjustment. To help the slewing, the broom should be lifted slightly off the ground, so that the bristles will not touch the ground. Lift the pin shown in adjacent figure and turn the broom so that one of the three possible positions can be used.



6.3.2. Hydraulic slewing

The hydraulic slewing cylinder is operated by the same hydraulic flow as the broom rotation. The flow can be controlled by an electric switch which operates the electro-hydraulic valve on the broom. When using the attachment control switch pack, the switch number 2 is used for slewing.

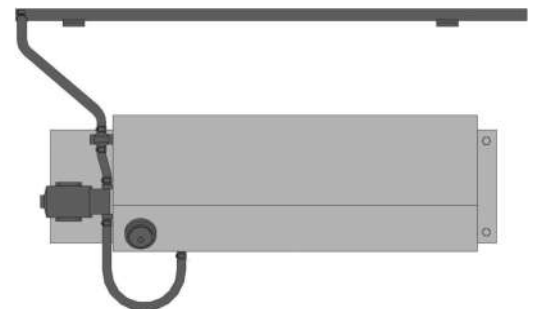


In order to get enough pressure for the slewing cylinder, the brush has to be kept rolling against the ground. When the brush is off the ground, you may not be able to turn the brush, as not enough pressure is diverted to the cylinder.

6.4. Water spraying system

A water spraying system A2882 is available to reduce the spreading of dust during brushing. Normally, the watering system is installed to the broom at the factory by order. The later installing of the water spraying system should be left to AVANT service. Contact your dealer for information.

The water spraying system consists of an 80-litre water tank, an electric pump and a nozzle tube with four spraying nozzles. The electric cable and switch needed to control the system are provided with the system.



The spraying system is intended for spraying water only. Using solvents or cleaning agents is not allowed, as they might damage the components of the system. Do not leave water lying in the tank for long periods.

The electric harness needed to control the watering system is delivered with the system. If the water spraying system is installed to a broom that has also hydraulic slewing, the loader must be equipped with an attachment control switch pack. Normally the watering system is installed to the broom by order at the factory.

7. Maintenance and servicing

Continuous maintenance of the broom includes regular cleaning and lubricating of the equipment and monitoring the condition of the brush. If the broom vibrates or makes abnormal noise during use, clean the brush thoroughly and remove any trash stuck on the bristles or the axle. Contact the service if the broom remains unbalanced after thorough cleaning of the equipment.



Ensure that the broom is properly supported during all maintenance work. Ensure the support also when the broom is mounted to the loader, for the loader boom moves even if the engine is turned off.

Check the condition of the hydraulic hoses and components when the engine has been turned off and the pressure has been relieved. Repair all leaks immediately after detecting them; a small leak can quickly grow into a big one. Do not use the equipment, if you have discovered a leak in the hydraulic system. Leaking hydraulic fluid may penetrate the skin and cause serious injuries. Hydraulic fluid is also harmful to the environment.

Check hoses visually for cracks or abrasions. Monitor the wearing of the hoses and stop the use, if the surface layer of the hose has worn off. If there are signs of leaking, to check the component, hold up a piece of cardboard in the area where a leak is suspected. Finding any of these faults means that the hydraulic hose or component in question must be replaced. Spare parts are available from your nearest AVANT retailer or service point. Leave the repairing task to service professionals, if not certain about how to perform the tasks safely.



Never tighten a hydraulic fitting under pressure, since the fitting may break and the released oil may cause serious injuries. Do not use the equipment, if you have discovered a fault in the hydraulic system.



7.1. Cleaning and lubricating the attachment

Right after use, raise the broom slightly off the ground and use it for a moment on high rotations to remove any remaining dirt from the broom. You may use a pressure washer and mild detergent to wash the broom. Avoid using solvents or spraying directly at the bristles or hydraulic parts at high pressure. In addition, mind the labels on the attachment.

Clean the attachment before long storage periods, touch up the paint where needed and grease the lubrication points to prevent rust damage. Apply a little oil to the visible part of the opening cylinder shaft, the cylinder ends and the slewing joint.

Three of the total of four lubrication points of the broom are located in the wheel support shafts. The fourth point is at the bearing of the broom axle, on the right side of the broom. The bearing should be lubricated after every 5 to 10 hours of use. The other lubrication points should be lubricated at least twice a year.



Lubricant must be added to the bearing approximately every 5 to 10 operating hours. Clean the end of the nipple before greasing. Only add the grease amount of a couple of grease press pushes at a time.

7.2. Brush

The material of the brush bristles is nylon and in normal operating conditions they it has a good wear resistance capability. As the brush wears down it loses its effectiveness, and an excessively worn brush should be replaced. As the diameter of the brush decreases, its circumferential velocity decreases as well and at some point it becomes insufficient for throwing material efficiently for collecting operation.

The brush consists of several parallel discs connected on the shaft. If you notice that a specific part of the brush has worn clearly more than the rest of it, the discs may be rearranged on the shaft to achieve even wearing. The damaged brush discs may be changed individually, but usually a larger section should be replaced for even performance. If the damaged brush discs are clearly more worn than new ones, all of the discs should be replaced. By order, also steel bristle discs are available.

The spare part number for a nylon bristle disc is 64660. Needed number of discs for renewing the whole broom:

- Collecting Broom 105 cm: 31 pcs
- Collecting Broom 130 cm: 41 pcs

To replace the brush discs the broom shaft needs to be removed. The brush is made denser at the ends of the shaft by setting three discs the same way round at the both ends of the shaft. The discs are held together on the shaft by a tightening flange. When tightening the flange, the total compression of the discs must be no more than 5 – 10 mm.

8. Warranty terms

Avant Tecno Oy grants a warranty of one year (12 months) from the date of purchase for the attachment it manufactures.

The warranty covers repair costs as follows:

- Work costs are covered, if the repair is not performed at the factory.
- The factory replaces any defective components or consumables.

The factory may reimburse the price of components purchased by the customer in special cases that have been agreed in advance.

The warranty does not cover:

- Normal maintenance work or parts and consumables required for it.
- Damages caused by unusual operating conditions or ways of use, negligence, structural changes made without the consent of Avant Tecno Oy, use of non-original parts or lack of maintenance.
- Consequences of a defect, such as interruption of work or other possible additional damages.
- Travel and/or freight costs caused by the repair.

EY-vaatimustenmukaisuusvakuutus
EG-försäkran om överensstämmelse
EC Declaration of Conformity
EG-Konformitätserklärung



Valmistaja / Tillverkare / Manufacturer / Hersteller:

AVANT TECNO OY

Osoite / Adress / Address / Adresse:

Ylötie 1

33470 YLÖJÄRVI, FINLAND

Vakuutamme täten, että alla mainitut tuotteet täyttävät konedirektiivin turvallisuus- ja terveysvaatimukset (direktiivi 2006/42/EY muutoksineen). Seuraavia yhdenmukaistettuja standardeja on sovellettu:
 SFS-EN ISO 12100-1, SFS-EN ISO 12100-2, SFS-EN 982, SFS-EN 13019

Vi försäkrar härmed att nedan beskrivna produkter överensstämmer med hälso- och säkerhetskrav i EG-maskindirektiv (EG-direktiv 2006/42/EG som ändrat). Följande harmoniserade standarder har tillämpats:
 SFS-EN ISO 12100-1, SFS-EN ISO 12100-2, SFS-EN 982, SFS-EN 13019

We hereby declare that the products listed below are in conformity with the provisions of the Machinery Directive (directive 2006/42/EC as amended). The following harmonized standards have been applied:
 SFS-EN ISO 12100-1, SFS-EN ISO 12100-2, SFS-EN 982, SFS-EN 13019

Wir erklären hiermit, dass die nachstehend aufgeführte Maschine konform ist mit den Bestimmungen der EG-Maschinenrichtlinie (EG-Richtlinie 2006/42/EG mit Änderungen). Die folgende harmonisierte Normen wurden angewandt:
 SFS-EN ISO 12100-1, SFS-EN ISO 12100-2, SFS-EN 982, SFS-EN 13019

Kuvaus: Avant-kuormainten kanssa käytettävä hydraulitoiminen harjalaite
 Beskrivning: Hydraulisk sopvals; arbetsredskap för Avant lastare
 Description: Hydraulic rotary broom; attachment for Avant loaders
 Beschreibung: Hydraulische Kehrmachine; Anbaugerät für Avant Radlader

Mallit / Modeller / Models / Modellen:

Avant		200 series	300-700 series	
		105 cm		130 cm
Avoharja Sopvals Rotary broom Kehrmachine	mekaaninen kääntö mekanisk sväng manual slewing manuelles Schwenken	A33261	A33260	A1334
	hydraulinen kääntö hydraulisk sväng hydraulic slewing hydraulisches Schwenken	A33539	A33540	A2968

Allekirjoitus / Namnteckning / Signature / Unterschrift:

10.6.2010 Ylöjärvi, Finland

Risto Käkelä,
 Toimitusjohtaja / Verkställande direktör /
 Managing Director / Geschäftsführer





AVANT[®]