



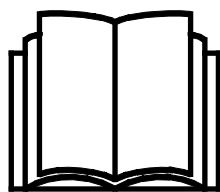
## Operator's Manual for Attachment



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### Edge trimmer with weed brush

Product number A446497



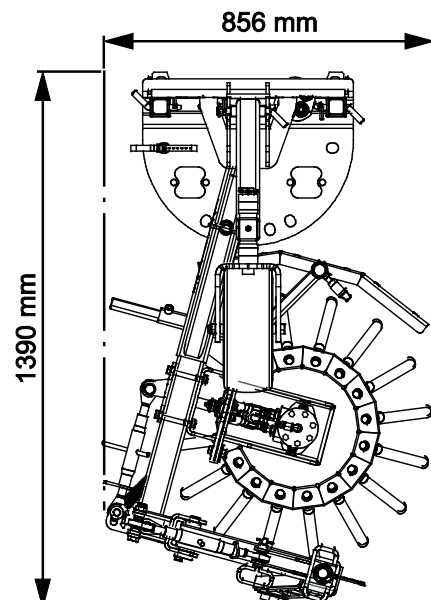
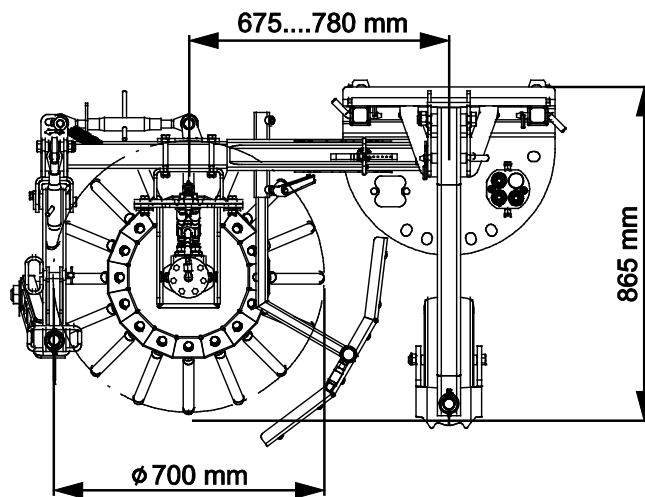
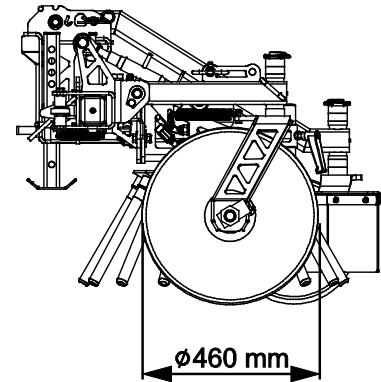
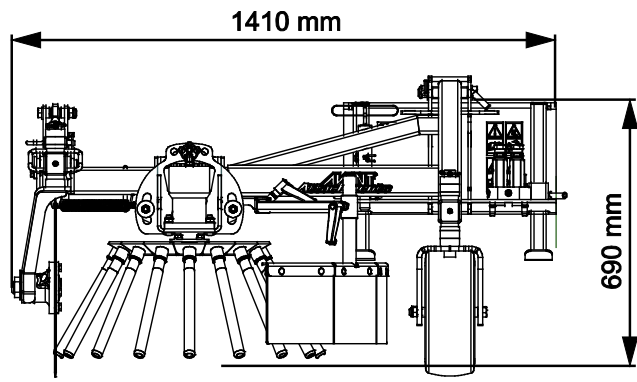
Please read this manual carefully before using the equipment, and follow all instructions.

Keep this manual for later reference.

Manufacturer:

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## I. Foreword

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Avant Tecno Oy would like to thank you for your purchase of this attachment for your Avant loader. It has been designed and manufactured based on years of experience on product development and manufacturing. By familiarizing 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.

The purpose of this manual is to help you to:

- operate the equipment in a safe and efficient manner
- observe and prevent any hazardous situations
- keep the equipment intact and ensure a long service life

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, each attachment that are used, and all safety instructions before using the equipment. Using the equipment for other purposes or use in any other way than described in this manual is prohibited. Keep this manual at hand throughout the service life of the equipment. If you sell or transfer the equipment, be sure to hand over this manual to the new owner. If the manual is lost or damaged, you can request a new one from your Avant dealer or from the manufacturer.

In addition to the safety instructions included in this Operator's Manual, you must observe all occupational safety regulations, local laws, and other regulations concerning the use of the equipment. Particularly the regulations concerning the use of the equipment on public road areas must be observed. Contact your Avant dealer for more information about local requirements before you operate the loader on road areas.

Contact your local AVANT dealer for any questions, service, spare parts or about any problems that may occur with the operation of your machine.

This manual contains the original instructions in English. Due to continuous product development some of the details shown in this manual may differ from your equipment. Pictures may also depict optional equipment or features that are not currently available. We reserve the right to change the contents of the manual without notification. Copyright © 2021 Avant Tecno Oy. All rights reserved.

## Warning symbols used in this manual

The following warning symbols are used throughout this manual. They indicate factors that must be taken into account to reduce the risk of personal injury or damage to property:



### WARNING SAFETY ALERT SYMBOL

This symbol means: **“Warning, be alert! Your safety is involved!”**

Carefully read the message that follows, it warns of an immediate hazard that could cause serious personal injury.

The safety alert symbol by itself and with related safety statement indicates important safety messages throughout this Manual. It is used to draw attention to instructions involving your personal safety or the safety of others. When you see this symbol, be alert, your safety is involved, carefully read the message that follows, and inform other operators.

### DANGER

This signal word indicates a hazardous situation which, if not avoided, will cause death or serious injury.

### WARNING

This signal word indicates a potentially hazardous situation which, if not avoided, could cause serious injury or death.

### CAUTION

This signal word is used when minor injury could result if the instructions are not followed properly.

### NOTICE

This signal word 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.

## 2. Designed purpose of use

The Avant Edge trimmer with weed brush is an attachment that is suitable for use with Avant compact loaders that are shown in Table 1 below. The edge trimmer is intended for trimming the edges of lawn areas, hedges, pathways, flower beds, and similar garden and street areas. It consists of a hydraulically rotated trimmer brush that is mounted next to a freely rolling cutting disc. It is shielded with manually adjustable guard that will protect against flying objects.

The cutting disc makes a sharp line, and the hydraulically rotated trimmer breaks up and mixes the soil next to the cutting disc, leaving a good looking finish. The attachment can be used also as a weed brush by lifting the cutting disc off the ground. As standard, the trimmer is equipped with a robust wire rope brush. For lighter sweeping a softer metal bristle brush is available as an option.

The edge trimmer is equipped with manually extendable arm which can be turned to the sides, or towards the front to make the attachment narrower for transport. The cutting depth is adjustable, as well as the distance between the disc and the brush. As standard, the edge trimmer is configured to trim the right side of the loader while driving forwards.

To configure the trimmer to trim the left side, an additional bracket for the disc is provided as an option. The instructions how to install the disc for left side operation are shown in this manual. Installation instructions in this manual about how to connect the hydraulic hoses to different order for easier continuous use on the left side are intended for persons with experience and knowledge about hydraulic assemblies.

The Edge trimmer with weed brush is not designed for any other use than what is specified in this manual and must not be used for any other purposes than what is intended for.

The attachment has been designed to require as little maintenance as possible. The operator can perform regular maintenance tasks. All repair work can't be performed by the operator, and demanding repair and maintenance operations are to be left for professional technicians. All maintenance work must be done using proper safety equipment. Spare parts must be identical with original specifications, which can be ensured by using only original spare parts. A separate spare parts catalogue may be available, consult your Avant dealer.

Familiarise yourself with the manual's instructions regarding service and maintenance. Please contact your AVANT dealer if you have additional questions about the operation or maintenance of the equipment, or if you require spare parts or maintenance services.

**Table 1 - Edge trimmer with weed brush - Compatibility with Avant loaders**

Avant	220 <sub>series 2</sub> 225 225LPG	313S 320S	420 423 520 523 R20	525LPG R28 528 530	630 R35 635 640 645i 650i	735 745 750 755i 760i	850 860i	e5 e6
A446497	•	-	•	•	•	•	•	(•)

It is recommended to use the attachment only with loaders marked with • in Table 1. When using with models marked with (•), full performance may not be achieved. Additional counterweights may also be required. For compatibility with a model not shown in table, contact your Avant dealer.

## 3. Safety instructions for using the edge trimmer

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, all operators must carefully familiarise themselves about correct use and the operator's 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.



**Misuse, careless use, or using an attachment that is in poor condition may cause risk of serious injuries.** Familiarise yourself with the controls of the loader, correct coupling procedure, and the correct way to operate the attachment at a safe area. Study especially how to stop the equipment in a safe manner. Read all safety precautions carefully.

### *Read all safety instructions carefully before handling the attachment*



- When attaching an 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.** Never lift or move an unlocked attachment.
- This attachment is designed to be used by one operator at a time. Do not let others near the danger area of the equipment when it is in use.
- Always transport the attachment as low as possible to keep the centre of gravity low, and keep the telescopic boom retracted during driving.
- **Impact hazard - Thrown objects.** Do not let bystanders stand closer than the safety distance of 5 metres from the machine. Stop the attachment if others get within the safety distance.
- **Hazard of entanglement - Rotating parts. Never leave the driver's seat when the attachment is running or if the auxiliary hydraulics control is locked on.** Always keep a safe distance between persons and machinery that may start or move. Stop the equipment following the safe stopping procedure and lower the attachment firmly on the ground before leaving the driver's seat, or when other persons are present at the working area.
- **Risk of crushing under the attachment or the loader boom - Lower the attachment firmly on the ground before leaving the driver's seat.** Make sure that the attachment is properly supported during any maintenance or inspections. Do not leave the driver's seat when the loader boom is lifted. Going under a raised attachment or loader boom is dangerous, as the boom may lower due to loss of stability, mechanical fault, or if another person operates the controls of the loader.
- Keep hands and feet away from moving components. Wearing loose clothes, such as loose shoelaces, or long scarves, should be avoided when working with the attachment.
- Always transport the attachment as low and close to the machine as possible to keep the centre of gravity low. On slippery surfaces drive slowly and deliberately. Operate the controls of the loader slowly and calmly especially on inclined terrain.
- Use the attachment only for its intended use and only with original tools on the attachment.
- Shut down the loader and place the attachment to a safe position as shown in Safe stopping procedure before any cleaning, maintenance, or adjustments.



**WARNING**

- Pay attention to the surroundings and any other persons and machines moving in the vicinity. Pay attention to the contours of the terrain and other hazards, such as branches and trees that can reach to the driver's area, loose rocks, and slippery surfaces.
- Make sure to use only an attachment that is in good condition. Check the attachment thoroughly in regular intervals. Do not modify the attachment in a manner that would affect its safety. It is prohibited to drill holes on the attachment, and welding or other means of fixing hooks or other objects on the attachment is strictly prohibited.
- Use the equipment only for its intended purpose. Other use may create unnecessary safety risks, and the equipment may get damaged.
- Make sure that the loader is equipped with necessary safety components, and that they are in working condition. Seat belt must be used. If there are specific hazards related to the operating area, use appropriate safety equipment.
- Also read the safety instructions and correct use of the loader from the operator's manual of the loader.



**DANGER**

**Wrong, improper, or careless use of the attachment causes serious risk of severe injuries or death.** Familiarise yourself with the controls of the loader in a safe area. Pay particular attention to the safe stopping of the attachment and the loader; follow the safe stopping procedure shown in this manual before leaving the driver's seat.



**WARNING**

**Hazard of thrown objects - Keep bystanders away.** Note that the attachment can throw stones, gravel, or other objects found in the area at high speed. Always keep a safety distance of at least 5 metres to other persons.



**WARNING**

**Entanglement hazard - Keep away from moving parts.** Keep a safety distance of at least 5 metres from the attachment when it is running and stop the attachment immediately if anyone gets too close. Beware of the rotating parts which create entanglement hazard. Never reach into a running attachment by any means. Shut down the loader engine following the safe stopping procedure if reaching into the work tools of the attachment.





## 3.1 Personal protective equipment

**Remember to wear proper personal protective equipment:**



- The noise level at the driver's seat may exceed 85 dB(A) depending on loader model and operating cycle. Extended exposure to loud noise can cause hearing impairment. Wear hearing protection while working with the loader.



- Wear protective gloves.



- Wear safety boots whenever working with the loader.



- Wear safety glasses e.g. when handling hydraulic components.



- At some operating areas using the attachment may cause spreading of dust. Wear respirator mask when operating on dry, dusty surfaces.

## 3.2 Safe shutdown procedure

**Safe stopping of the attachment, before going near the attachment:**



**WARNING**

**Always stop the attachment following safe stopping procedure before leaving the driver's seat.** Safe stopping procedure prevents all unintentional movements of the attachment. Note that the loader boom can move down even if the engine of the loader is turned off. Safe stopping procedure:

- Lower the boom and the attachment on the ground.
- Shut down the loader engine and lock the parking brake.
- Release residual pressure from the hydraulic system; move all hydraulic control levers to their extreme positions a couple of times.
- Prevent starting of the machine, remove ignition key.

## 4. Technical specifications

**Table 2 - Edge trimmer with weed brush - Specifications**

Product number	A36621
Cutting depth:	max 150 mm
Cutting disc diameter:	460 mm
Brush diameter:	700 mm
Maximum width in working position:	1410 mm
Minimum width in transport position:	856 mm
Weight:	160 kg
Recommended hydraulic flow:	20-30 l/min, 20,0 MPa (200 bar)
Maximum input of hydraulic energy:	40 l/min, 22,5 MPa (225 bar)
Suitable Avant loaders:	See Table 1
Options	
Weed brush 600 mm:	A452184
Left handed mounting bracket for cutting disc	A449096

### 4.1 Safety labels and main components of the attachment

Listed below are the labels and markings on the attachment. They must be visible and readable on the equipment. Replace any unclear or missing label. New labels are available via your retailer or contact information provided on the cover.



**WARNING**

**Make sure all warning decals are readable.** The warning labels contain important safety information and they help to identify and remember the hazards related to the equipment. Replace damaged or missing warning labels with new ones.



**A46771**



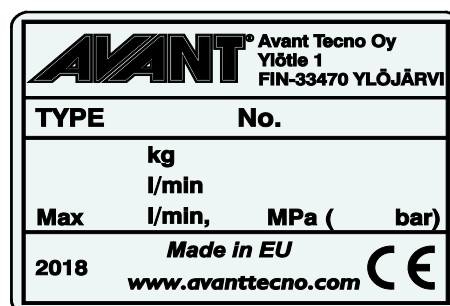
**A46772**



**A46799**



**A46803**

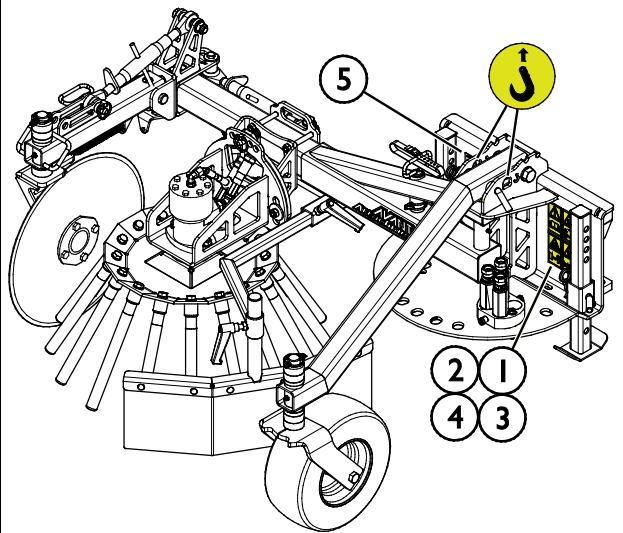


Attachment identification plate A446834

**To apply a new label:** Clean the surface thoroughly to remove all grease. Allow it to dry completely. Peel off the protective film of the label and press firmly to apply. Take care not to touch the glue of the label.

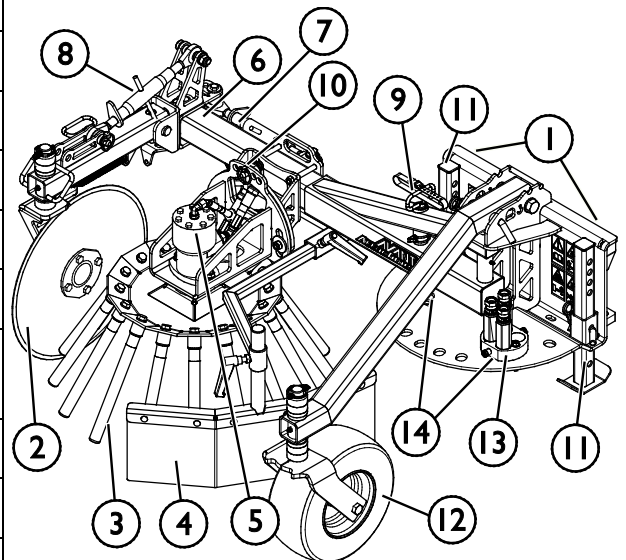
**Table 3 - Decal locations and warning messages**

Decal	Warning message
1 A46771	Misuse hazard - Read instructions before use.
2 A46772	Crushing hazard - Do not go under a raised attachment; stay away from raised equipment.
3 A46803	Pinching and cutting hazard, keep clear of moving parts, do not leave the equipment running. Operate the attachment only from the driver's seat.
4 A46799	Beware of thrown objects; keep a safe distance from the equipment (2 m minimum, up to 30 m).
5 A446834	Attachment identification plate



**Table 4 - Edge trimmer with weed brush - Main components**

1	Frame with quick coupling brackets
2	Cutting disc
3	Wire rope brush
4	Guard
5	Hydraulic motor of brush
6	Extendable trimmer arm
7	Side reach fine adjustment
8	Cutting depth fine adjustment
9	Arm locking pin: left/right/front positions and trimmer arm extension
10	Brush tilt adjustment
11	Storage support legs
12	Support wheel
13	Multiconnector
14	Multiconnector holder (2 holders on frame)



## 5. Attaching the attachment

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 coupling plate on the loader boom and the counterpart on the attachment.

If the attachment is not locked to the loader, it may fall from the loader and cause a hazardous situation. Never drive with the loader and never lift the loader boom if the attachment has not been fully locked. To prevent hazardous situations, always follow the coupling procedure shown below. Also remember the safety instructions shown in this manual.



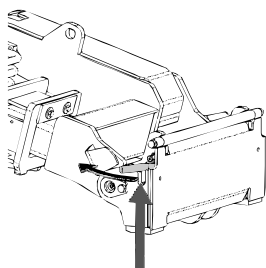
**Crushing risk - Make sure that an unlocked attachment will not move or fall over.**

Do not stay in the area between the attachment and the loader. Mount the attachment only on level surface.

Never move or lift an attachment that has not been locked.

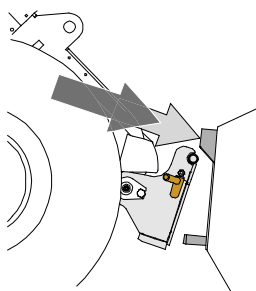
### *Avant quick coupling system:*

#### Step 1:



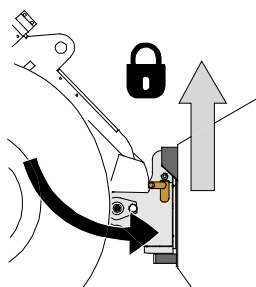
- Lift the locking pins of the quick coupling plate of the loader up, and turn them backwards into the slot, so that they are locked in the upper position.
- If your loader is equipped with a hydraulic attachment locking system, see additional instructions about the use of the locking system from the operator's manual of the loader.
- Make sure that the hydraulic hoses are positioned so that they will not get in between the coupling plate of the loader and the attachment, and that they will not get squeezed or chafed against sharp edges.

#### Step 2:



- Turn the quick coupling plate hydraulically to an obliquely forward position.
- Drive the loader onto the attachment. If your loader is equipped with a telescopic boom, you can use it to reach to the coupling brackets of the attachment.
- Align the upper pins of the loader's quick coupling plate so that they are under the corresponding brackets of the attachment.

#### Step 3:



- Lift the boom slightly – pull the boom control lever backward to lift the attachment just off the ground.
- Turn the boom control lever left to turn the bottom section of the quick coupling plate of the loader onto the attachment.
- Lock the locking pins manually or lock the hydraulic locking.
- **Always check the locking of both locking pins.**



**WARNING**

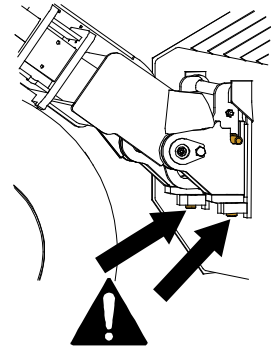
**Risk of crushing - Avoid tipping over the attachment.** Excessive tilting or lifting of an unlocked attachment increases the risk of tipping the attachment over. Do not use the automatic locking of the locking pins when the attachment is lifted more than one meter from the ground. If the locking pins do not return to the normal position when tilting, do not tilt or raise the attachment any more. Lower the attachment on the ground and secure the locking manually.



**WARNING**

**Risk of falling objects - Prevent dropping of attachment.**

An attachment that has not been completely locked to the loader may fall on the boom or towards the operator, or fall under the loader during driving, causing loss of control of the loader. Never move or lift an attachment that has not been locked. Before moving or lifting the attachment, make sure that the locking pins are in the lower position and come through the fasteners on the attachment on both sides.



**WARNING**

**Make sure the loader is compatible with the attachment.** Stability of the loader, possible overload of the attachment, and compatibility of loader control systems must be ensured in addition to mechanical compatibility of the attachment. If you use the attachment with a loader that is not fit to be used with the attachment model you have, risks include tipping over, damage to attachment due to overload, and risks related to uncontrolled motion of attachment and its parts. If your loader is not listed in Table 1 on page 6, ask your Avant dealer before using this attachment.

## 5.1 Connecting and disconnecting hydraulic hoses

On Avant loaders the hydraulic hoses are connected using the multi connector system. If you have an older model Avant 300-700 series loader with the conventional quick couplers, and you want to change to the multi connector system, contact your Avant dealer or service point for instructions or installation services.



**WARNING**

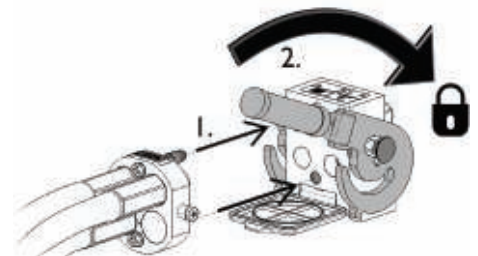
**Risk of movement of the attachment and ejection of hydraulic oil - Never connect or disconnect quick couplings or other hydraulic components while the control lever of the auxiliary hydraulics control lever is locked on or if the system is pressurized.** Connecting or disconnecting the hydraulic couplings while the system is pressurized may lead to unintended movements of the attachment, or ejection of high-pressure fluid, which can cause serious injuries or burns. Follow safe stopping procedure before disconnecting hydraulics.

### NOTICE

Keep all fittings as clean as possible; use the protective caps 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 the couplings onto the holder on the attachment.

#### Connecting the multiconnector system:

1. 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.
2. Connect and lock the multiconnector by turning the lever towards the loader.

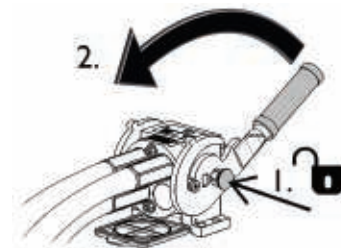


The lever should move easily all the way to its locking position. If the lever does not slide smoothly, check the alignment and position of the connector and clean the connectors. Also shut down the loader and release the residual hydraulic pressure.

#### To disconnect the multiconnector system:

Before disconnecting put the attachment down on a solid and even surface.

1. Switch off the auxiliary hydraulics of the loader.
2. While pushing unlock button, turn the lever to disconnect the connector.
3. After ending operation put the multiconnector on its holder on the attachment.



#### Disconnecting hydraulic hoses:

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

### NOTICE

When uncoupling the attachment, always disconnect the hydraulic couplings before unlocking the quick coupling 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 back and forth before disconnecting the couplings.

## 6. Operating the attachment

Check the attachment and the operating environment once more before starting to work, and that all obstacles have been removed from the operating area. Quick inspection of the equipment and the operating area before use are parts of ensuring safety and the best performance of the equipment.



### Entanglement hazard - Keep away from moving parts.

Keep a safety distance of at least 5 metres from the attachment when it is running and stop the attachment immediately if anyone gets too close. Beware of the rotating parts which create entanglement hazard. Never reach into a running attachment by any means. Shut down the loader engine following the safe stopping procedure if reaching into the work tools of the attachment.



### Risk of cutting and entanglement from contact with moving parts - Never leave the equipment unattended while the engine is running.

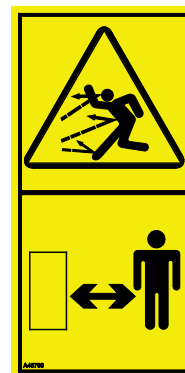
The attachment may start unexpectedly when removing a blockage, for example, if the hydraulic system is pressurized. Always stop the attachment following the safe stopping procedure before leaving the driver's seat. Do not go near the attachment, if another person is operating the controls of the loader. Shut down the loader engine and release the residual pressure first.

## 6.1 Safety distance

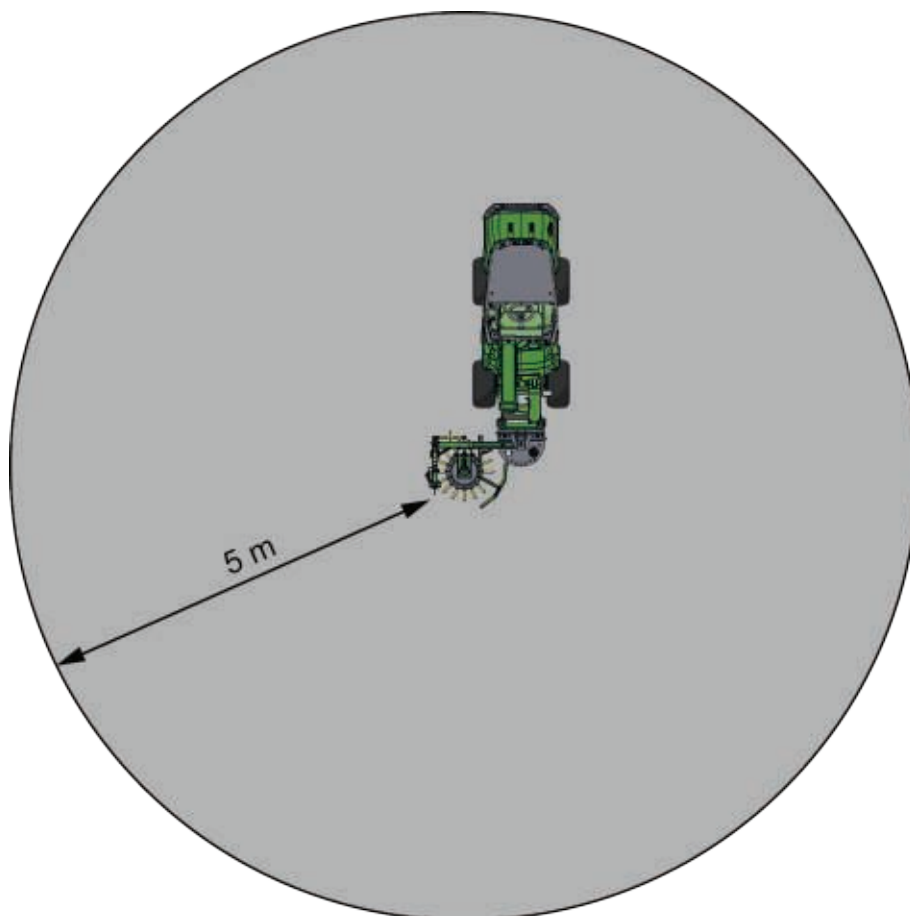


**WARNING**

**Hazard of thrown objects - Keep bystanders away.** Note that the attachment can throw stones, gravel, or other objects found in the area at high speed. Always keep a safety distance of at least 5 metres to other persons.



The minimum safety distance of the attachment is 5 metres from the machine. Do not let bystanders get any closer than 5 metres from the attachment. Stop the attachment if others get within the safety distance.





## **6.2 Checks before use**

- Check that the cutting disc and brush can rotate freely and that there is no string or other foreign material around them.
- Check that the cutting disc and disc arm can move freely laterally.
- Use only when all pins are locked and secured in place.
- Ensure that bystanders are at a safe distance when operating the equipment. Do not let anyone to enter danger area of the boom or to stay directly in front of the loader. Also make sure that it is safe to reverse with the loader. Never assume that bystanders will remain where you last saw them; especially children are often attracted to the moving equipment.
- Check the general condition of the attachment and the loader, and check for possible hydraulic oil leaks. Do the daily checks of the loader, see the operator's manual of the loader. The attachment must not be used, if there is a fault in the hydraulic system of the loader or the attachment. Refer to Chapter 7 for maintenance instructions.
- Operate the attachment and the controls of the loader only when seated on the driver's seat. Ensure that the loader and the attachment are used in a safe manner and as intended. Do not allow children to operate the equipment.
- Remember correct working methods and avoid leaving the driver's seat unnecessarily. Practise the use of the attachment and the controls of the loader in a safe area. If you are unfamiliar with the particular loader model, it is recommended to practice its use without any attachments.

## **6.3 Operator qualification**

Anyone who intends to use the attachment must:

- Know the intended use of the attachment.
- Know how to use the loader safely in different operating conditions.
- Read and always follow the instructions concerning the use of the attachment in this operator's manual.
- Have this manual and the operator's manual of the loader available.
- Ensure that the loader and the attachment are used in a safe manner and as intended.
- Never allow children to operate the equipment.
- Never operate the loader or attachments while under the influence of alcohol, drugs, medication that may impair judgement or cause drowsiness, or if not otherwise medically fit to operate the equipment.
- Complete any possible mandatory training required by the employer before use.

## 6.4 Use



**Risk of crushing or entanglement from contact with moving parts - Never leave the equipment unattended while the engine is running.** Follow safe stopping procedure.

### **Before starting the Edge trimmer:**

Set and adjust the Edge trimmer to working position. Also see the following chapters about adjustments.

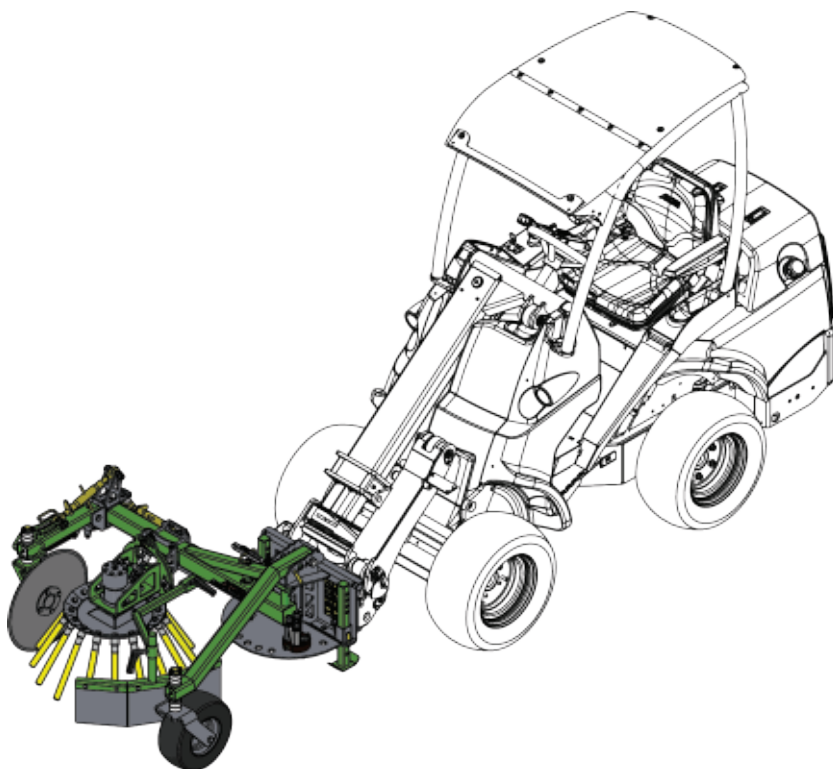
### **NOTICE**

Unless the edge trimmer is configured to be used on the left side of the loader, always lock the trimmer arm to the right side of the loader, as shown in the figure below. See page 28 for information about how to set the attachment for use on the left side.

### **Using the Edge trimmer:**

1. Cut the surface of the soil by pushing the cutting disc against the ground. Move the loader a little in forward or reverse to make the first cut easier.
2. Start the brush by turning the auxiliary hydraulics control lever of the loader, or by depressing the electric joystick buttons. As standard, the trimmer will rotate counter-clockwise when the auxiliary hydraulics control lever is moved to its locking position (or red button of electric joystick is depressed, if equipped).
3. Drive forwards carefully, and adjust the position of the trimmer as necessary.

During use, the attachment should be kept in near upright position.



- Operate the attachment with loader engine rpm that produces auxiliary hydraulics flow within the recommended range for the attachment.
- Always drive slowly while operating the trimmer. Adjust the drive speed according to the operating conditions and the material being handled. Tilt the attachment slightly forwards for better result, if necessary.
- If your loader is equipped with a telescopic boom, you can utilize it for a better view to the working area.
- The Edge trimmer with weed brush can be operated while driving forward or reversing, depending on operating conditions.

### **NOTICE**

Avoid hitting the ground hard with the cutter, and avoid pressing the attachment too hard against the ground. If the front wheels of the loader tend to lift off the ground, the attachment is pressed too hard against the ground. To avoid damaging the cutter disc, operate at shallower depth, and make multiple passes, if necessary.

## NOTICE

Avoid sharp turns while operating the trimmer. Lift the trimmer off the ground before sharp turns.

## 6.5 Adjustments

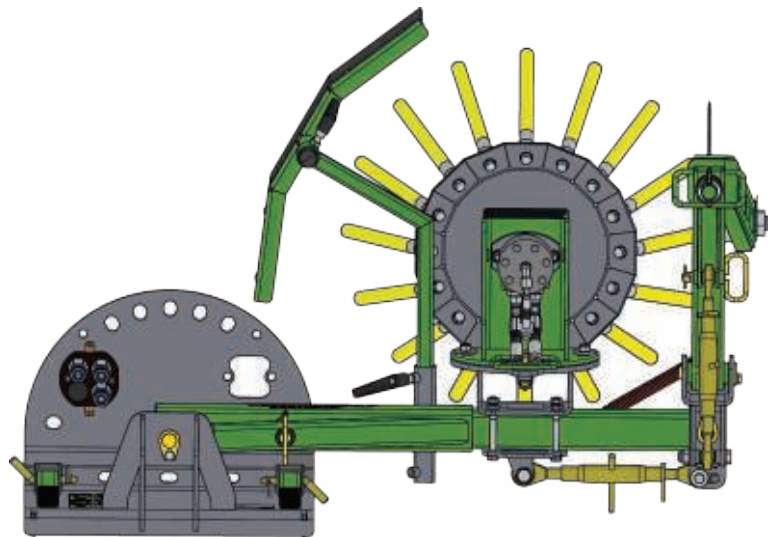
The trimmer can be adjusted in many ways, as shown in the following chapters. The best way to operate the trimmer depends on the surfaces the trimmer is operated at, and the direction of travel.

### 6.5.1 Orientation

The trimmer arm can be locked on either side, for easier use in different operating areas. For transport, lock the arm so that the overall width of the attachment is as narrow as possible. For more information about the transport position see page 23.

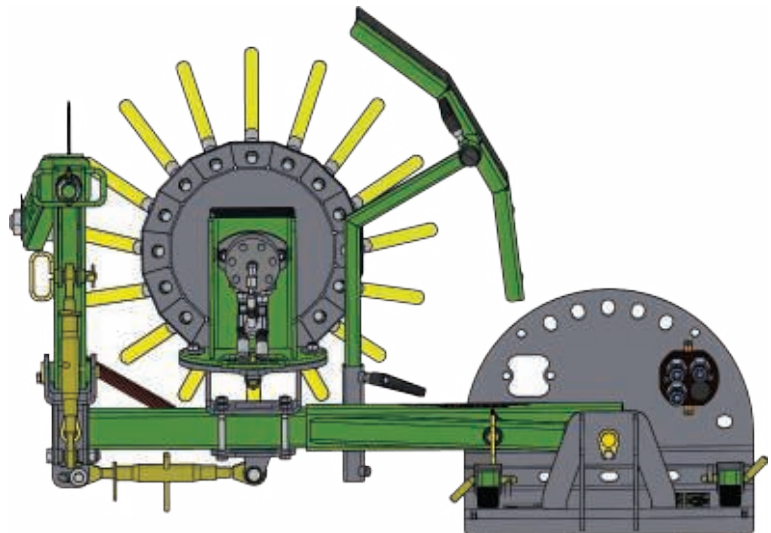
#### *Right side*

The trimmer arm is assembled on the right as standard.



#### *Left side*

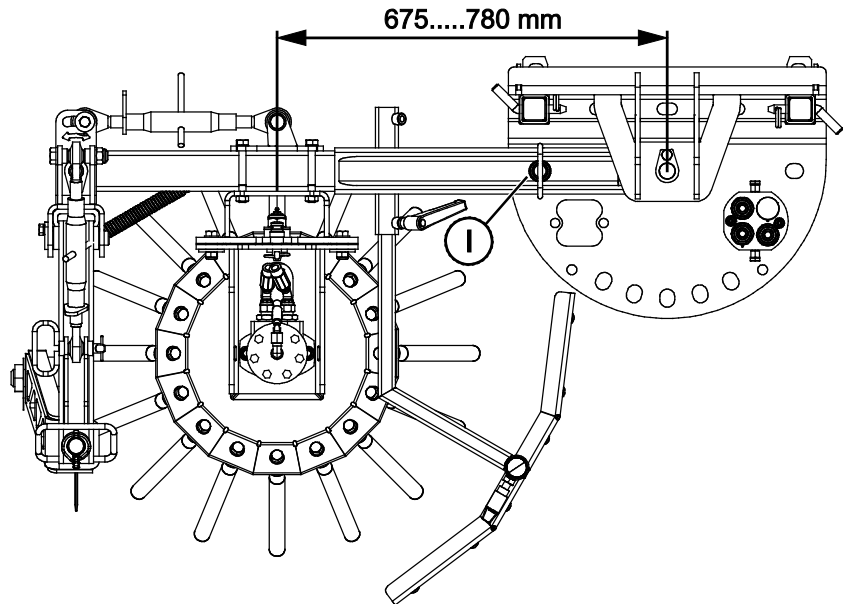
For assembling the trimmer arm on the left see page 31.



### 6.5.2 Side reach adjustment

Adjust the side reach with the locking pin (1).

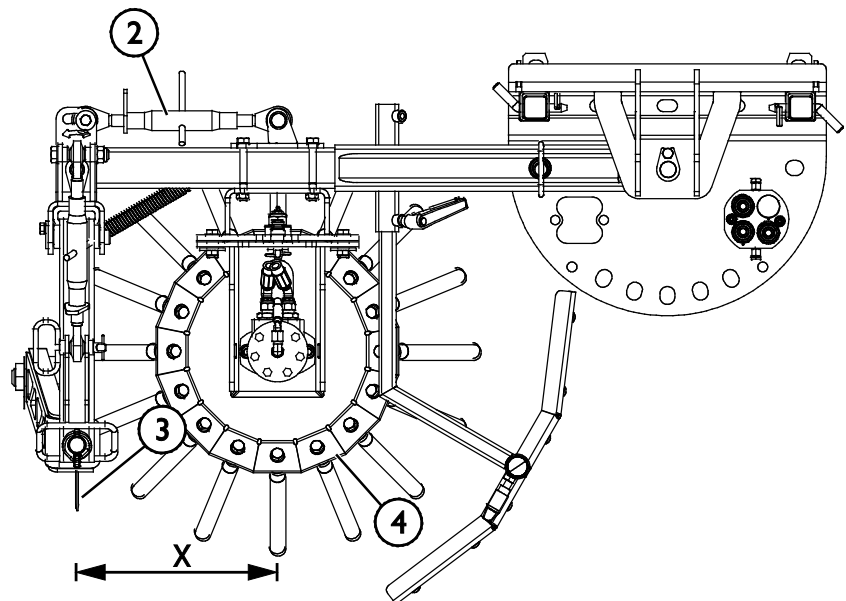
Make sure to lock the pin after adjusting the reach.



### Horizontal fine adjustment

The distance (X) between the cutting disc (3) and brush (4) can be adjusted with the top link (2).

The gap between the disc and brush is sufficient enough when the wire rope of the brush lightly touches the disc during operation.



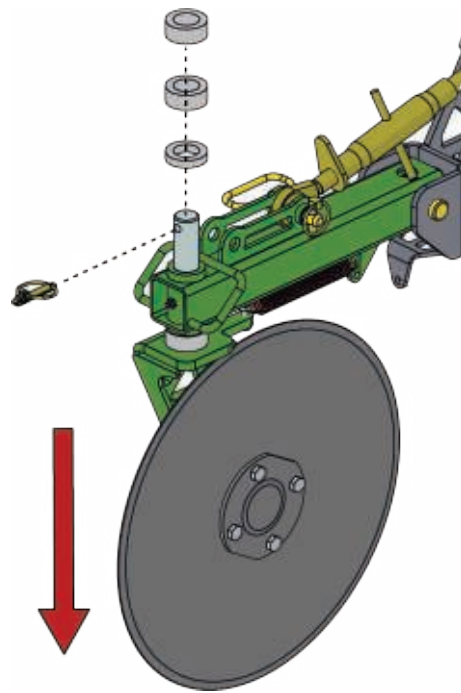
## 6.5.3 Adjusting the cutting depth

It is possible to adjust the cutting depth by adjusting either the axle height or the cutting disc position.

### Axle height adjustment

The cutting depth can be adjusted by using the plastic sleeves on the vertical axles of the cutting disc. It is not necessary to uncouple the attachment from the loader while adjusting the height. To adjust the height:

1. Lift the attachment slightly off the ground with the loader and shut down the engine.
2. Remove the cotter pin from the vertical axle of the cutting disc. Pull the disc 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 cutting disc.
4. Push the axle back in through the bracket and reinstall the cotter pin.

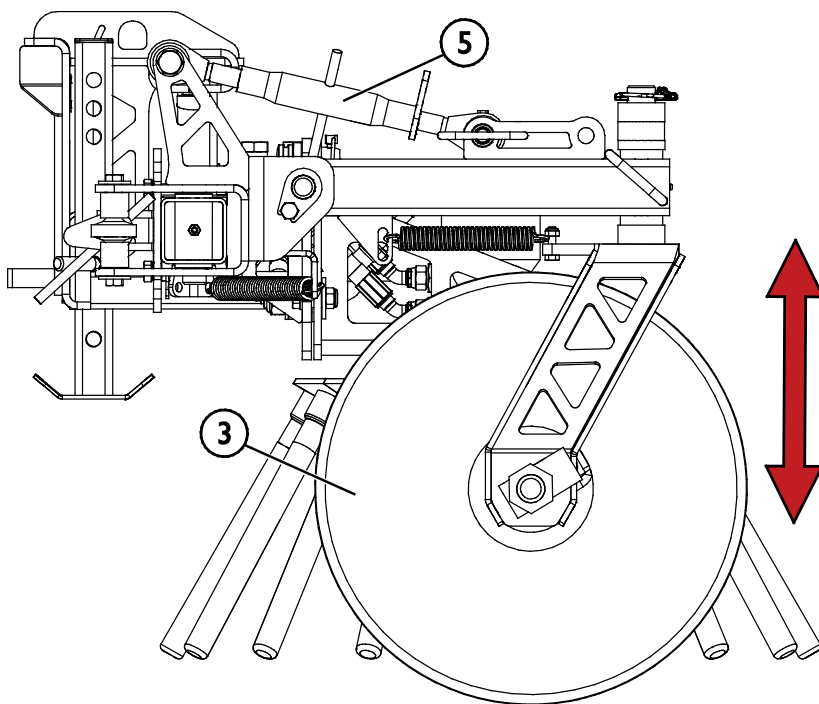


### NOTICE

There are two thicknesses of plastic sleeves (10 & 20 mm) for more accurate adjustment of the operating height.

### Vertical fine adjustment

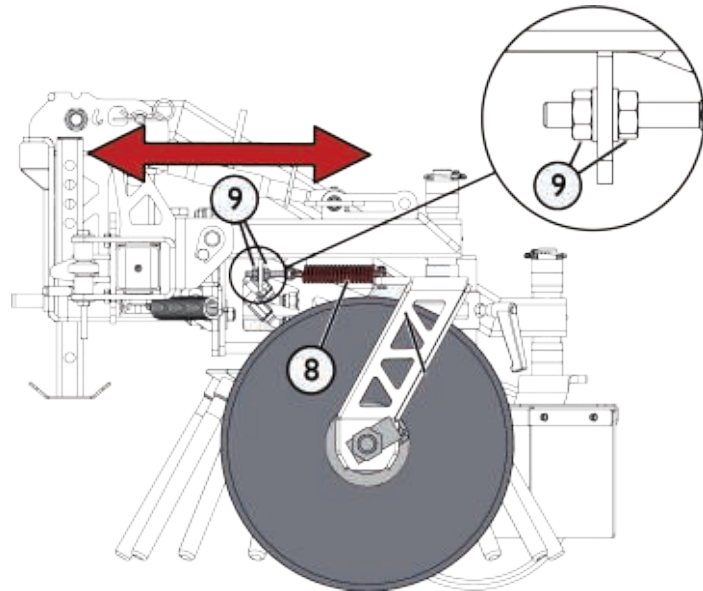
The height of the cutting disc (3) can be adjusted with the top link (5).





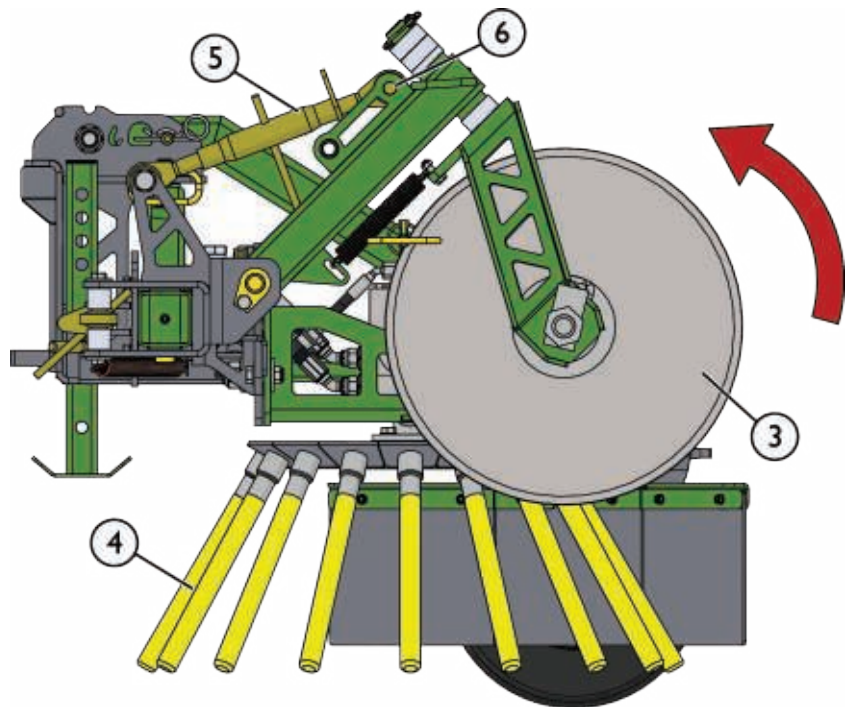
**Retaining spring adjustment**

The tension of the cutting disc retaining spring (8) can be adjusted with nuts (9).

**Brushing mode**

In case only the brushing mode is necessary, the trimming mode can be disabled manually. When using the brush (4) only:

1. Lift the cutting disc (3) assembly up.
2. Lock the cutting disc (3) assembly with top link (5) to the extreme locking point (6) as shown in the adjacent figure.

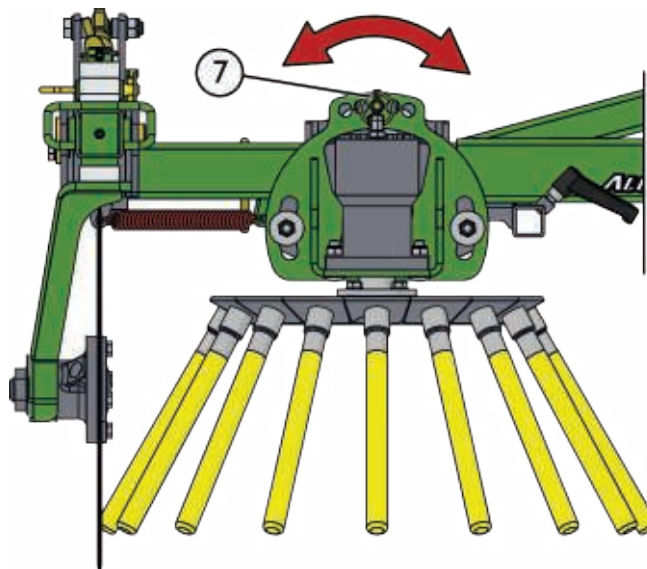


## 6.5.4 Brush angle

Depending on the operating area, the brush should typically be adjusted so that it is slightly tilted. If the brush is parallel to the ground surface, it will not move debris efficiently, but instead will rotate it around.

The brush angle can be adjusted by turning the brush in one of five different positions. To adjust the angle:

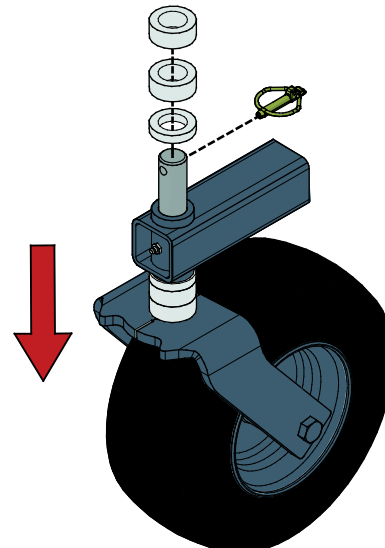
1. Remove locking pin (7).
2. Turn the brush in desired angle.
3. Reinstall locking pin (7).



## 6.5.5 Support wheel

The height of the support wheel can be adjusted by using the plastic sleeves on the vertical axes of the wheels. It is not necessary to uncouple the attachment from the loader while adjusting the height. To adjust the height:

1. Lift the attachment slightly off the ground with the loader and shut down the engine.
2. Remove the cotter pin from the vertical axle of the yoke. 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 mower.
4. Push the axle back in through the bracket and reinstall the cotter pin.



### NOTICE

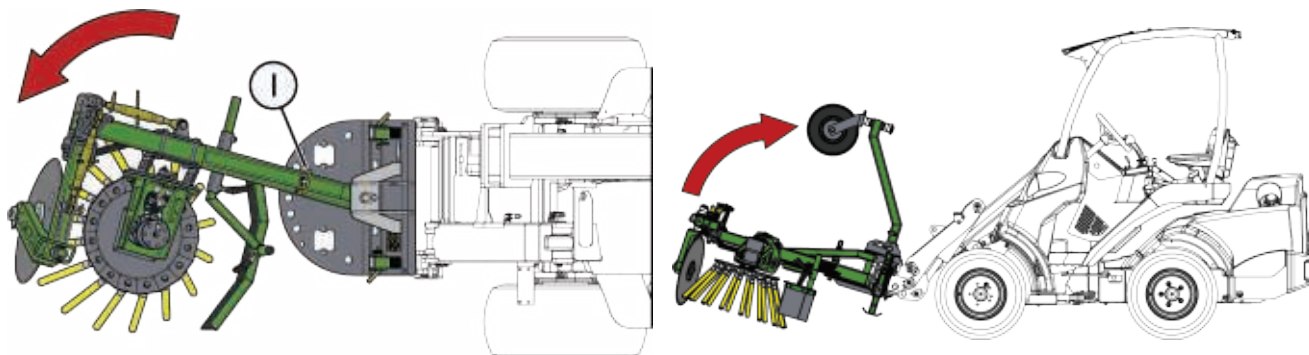
There are two thicknesses of plastic sleeves (10 & 20 mm) for more accurate adjustment of the operating height.

The correct operating position is reached when the wheel slightly touches the ground. For transport or storage, lift the support wheel up, and lock the wheel with lock pin after reaching the desired position, see pages 23 and 25.

## 6.6 Transport position

Before transporting the Edge trimmer, while it is connected to the loader, lock the attachment so that the overall width of the attachment is as narrow as possible. Use locking pin (1) for locking, as shown in the figure below. When driving with the loader, keep the Edge trimmer lifted off the ground and the support wheel folded backwards, as shown in the figure below.

Retract the telescopic boom of the loader completely for the best stability of the loader. To eliminate the possibility of accidental start of the attachment, it is recommended to disconnect the auxiliary hydraulics multiconnector before transport drive.



**WARNING**

Keep the loader stable. Always transport the attachment as low and close to the ground as possible. Keep the telescopic boom retracted during transport drive.

## 6.7 Storage

Uncouple and store the attachment on level ground. The best way to store the attachment is a place where it is protected from direct sunlight, rain, and extreme temperatures.

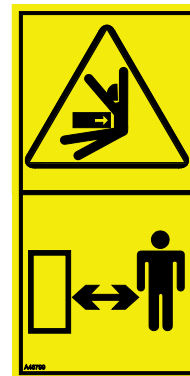
- Avoid leaving the attachment laying directly on the ground. Place it on blocks of wood or on a pallet, for example.
- Place the multiconnector on to its holder as indicated with an arrow in the figure below. Never leave the hydraulic connector on the ground.
- Make sure that the attachment is secured against all movements during storage.
- Never climb on the attachment.

To ensure the stability of the attachment during storage, lay it down on a pallet so that the quick coupling plate is easily accessible with the loader, as shown in figure below.



**DANGER**

**Risk of crushing - Uncoupled Edge trimmer may tip over; keep a safe distance during coupling.** Ensure stability of uncoupled attachment by placing the Edge trimmer firmly on a pallet so that the quick coupling plate is easily accessible with the loader.



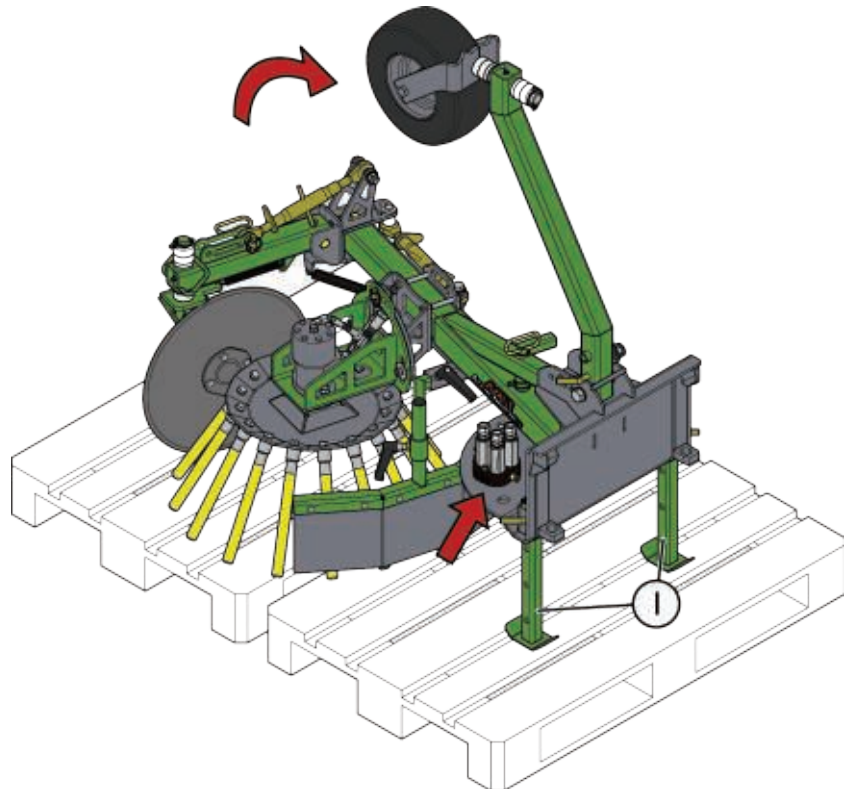


## Correct storage position:

To ensure the stability of the attachment during storage, set the support legs (1) in storage position, turn the cutting head in rotated position, and lift the support wheel up as shown in the adjacent figure.

Make sure that hydraulic hoses will not be left under the attachment. Place the multiconnector to its holder as indicated with an arrow in the adjacent figure.

To prevent the bristles from bending, it is important to ensure that the brush is stored correctly, in a way that the weight of the attachment is applied on the bristles equally.



## 7. Maintenance and Service

The attachment has been designed to be as maintenance free as possible. Continuous maintenance includes regular cleaning and lubrication, and monitoring the condition of the attachment. Because of the crushing hazard caused by lowering machine parts, all maintenance work must be done when moving parts have been lowered down completely and the attachment is lowered flat against the ground.



**Risk of crushing - Never go under lifted attachment.** Make sure the attachment is properly supported during all maintenance work. Never go under a lifted attachment. The loader boom may lower unexpectedly during maintenance causing serious injuries from crushing or impact even when the loader engine is not running. All maintenance and service must be performed when the attachment has been lowered down to a safe position.

### 7.1 Inspection of hydraulic components

Check the condition of the hydraulic hoses and components when the engine has been turned off, system has cooled down, and the pressure has been relieved. Do not use the equipment, if you have discovered a leak in the hydraulic system of the attachment or the loader. Leaking hydraulic fluid may penetrate skin and cause serious injuries. Seek medical attention immediately in case hydraulic fluid penetrates the skin. Wash any part of body that has been in contact with hydraulic oil carefully with water and soap. Hydraulic fluid is also harmful to the environment and any leak to the environment must be prevented. Repair all leaks immediately after detecting them; a small leak can quickly grow into a big one. Operate the attachment only with type of hydraulic oil that is accepted for use in Avant loaders.



**Risk of high pressure fluid injection through skin - Release residual pressure before maintenance.** Never handle hydraulic components when the hydraulic system is pressurised, since a fitting may break or become loose and the released oil may cause serious injuries. Do not use the equipment, if you have discovered a fault in the hydraulic system.



Check hoses visually for cracks or abrasions. If there are signs of leaks, to check a component, hold up a piece of cardboard in the area where a leak is suspected. Do not use hands to search for leaks. Monitor the wearing of the hoses and stop the use, if the surface layer of any hose has worn off. Check the routing of the hoses; adjust the hose clamps to avoid abrasion to the hoses. The hoses have limited service life. Depending on operating conditions all hoses must be inspected thoroughly no later than after 3 to 5 years of use, and if required, they must be replaced with new ones.

Finding any fault means that the hydraulic hose or component must be replaced and the equipment must not be used until it is repaired. Spare parts are available from your nearest AVANT retailer or authorised service point. Leave the repair work to professional service technicians, if you don't have adequate knowledge and experience about hydraulic assemblies and how to perform the repairing safely.

## 7.2 Cleaning the attachment

Clean the attachment regularly to prevent accumulation of dirt which is more difficult to remove. A pressure washer and mild detergent can be used for cleaning. Do not use strong solvents, and do not spray directly at the hydraulic components, or at the labels on the attachment.

## 7.3 Inspection of metal structures

Also the metal structures of the attachment must be inspected regularly. Check visually for damages and inspect the quick attach brackets and their surrounding area carefully. The attachment must not be used if it is deformed, cracked, or torn.

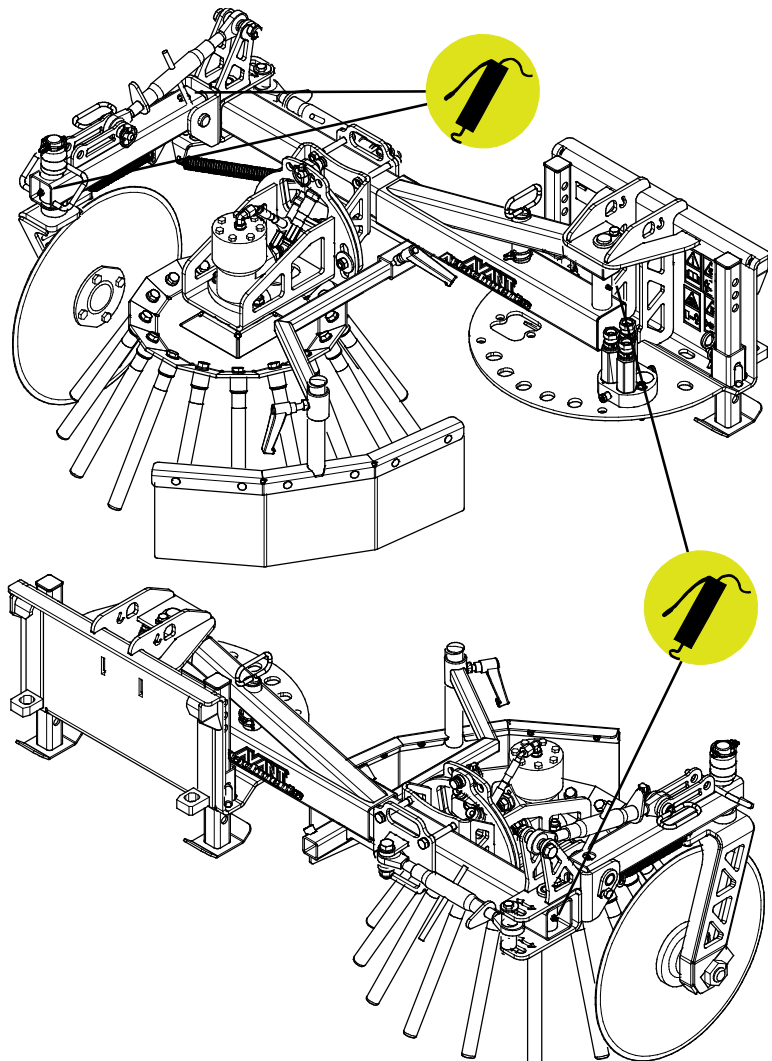
Welding repairs are only allowed to be carried out by professional welders. When welding, only methods and additives suited for steel used in attachment must be used. For more information about repairs contact your nearest service point.

## 7.4 Lubrication

There are a total of 4 lubricating points at the joints of the attachment.

Appropriate lubrication interval depends heavily on use and operating conditions. Lubricant must be added at least after every 10 hours of use. Adequate lubrication must be ensured, and if the bearings are dirty, lubricant must be added; added lubricant will push out dirt.

Clean the end of the nipple before greasing and add only a small amount of grease at a time. All lubrication nipples are standard M6 or R1/8" nipples. Replace any damaged nipples.



## 7.5 Assembling cutting head on the left

When the Edge trimmer is configured to be used on the left side of the loader, the bracket of the cutting disc should be replaced to the optional left-handed bracket. In frequent use on the left side, the coupling order of the hydraulic hoses on the multiconnector should be reversed.

Any installation work related to hydraulic components must be done by qualified personnel only, using appropriate tools and protective equipment. If you do not have the experience or knowledge about how to install hydraulic components safely, contact the Avant service or your Avant dealer. These instructions are intended only for persons who have received a proper training and have the necessary knowledge and skills to install hydraulic components properly and safely.

### 7.5.1 Safety instructions for hydraulic assemblies

**High-pressure ejection of fluid may penetrate skin and cause serious injuries:**



**DANGER**

**Risk of high pressure fluid injection through skin - High-pressure ejection of fluid may penetrate skin and cause serious injuries.**

Before handling hydraulic components, make sure that the hydraulic system of the attachment and the loader are completely depressurized. Never handle pressurized fittings.

Never hold your hand tightly around or near a fitting when tightening or opening it, or when searching for leaks. Use a piece of cardboard to find leaks.

Seek medical attention immediately in case hydraulic fluid is injected through the skin. Also general skin contact with the oil can be harmful. Always wear protective gloves, safety goggles and protective clothing.

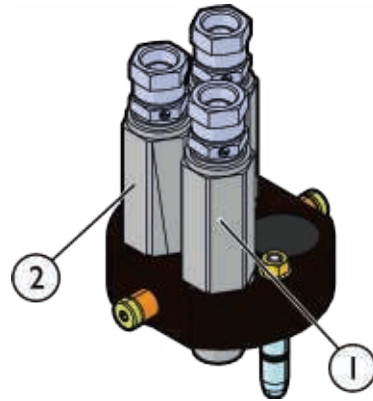


1. Allow the hydraulic systems of the loader and of the attachment to cool down completely before any work on hydraulic systems.
2. Make sure that the loader boom or any other part of the attachment can't move causing crushing or pinching hazards.
3. Lower the loader boom to its lower position and lower the attachment firmly on the ground. For the best stability, keep the attachment locked on the loader.
4. Shut down the loader engine.
5. Move the auxiliary hydraulics control lever to its extreme positions several times to release residual pressure.
6. Uncouple the multiconnector or quick couplings from the loader to prevent draining of hydraulic oil.

## 7.5.1.1 Reversing the order of the hydraulic connections

If the direction of rotation of the brush must be reversed, the hydraulic hoses must be connected in different order. Interchange the place of the hydraulic connectors 1 and 2, see adjacent figure.

Tighten the hydraulic fittings carefully with hand tools using moderate torque. Make sure that the routing of the hydraulic hoses does not prevent the reinstallation.



## 7.5.1.2 Tightening hydraulic fittings

Tighten the fittings carefully according to given instructions and safety procedures. Keep in mind that over tightening will break a fitting. Tighten basic fittings carefully with hand tools using moderate torque. The elbow fittings should be tightened at last, after hoses have been fitted to their clamps.

### Tapered JIC-type fittings:

- Lubricate the inner surfaces and threads of the fittings.
- A JIC type fitting is not tightened only by torque and it will not need a lot of force at any point when tightening. Overtightening or misalignment will break the fitting.
- Turn the fitting manually as far as possible, and then lightly with tools ensuring that the fitting is threaded properly. When noticing clear increase in needed force, tighten the fitting to its final tightness by turning only 1/3 to 1/2 turns using tools.
- After tightening, try to twist the hydraulic hose manually, the fitting should stay firm.

### NOTICE

### Test to find any leaks



**DANGER**

**Before checking for leakages, or going near any hydraulic fitting, to avoid possible ejection of pressurized hydraulic oil:**

- Shut down the loader engine
- Depressurize the hydraulic system completely
- Wipe the hydraulic components clean to find leaks more easily.
- Place pieces of cardboard around the fittings to detect leaks.
- Start the engine. While running on idle, operate the auxiliary hydraulics control lever briefly a couple of times. Shut down the engine, depressurize the hydraulics, and check for any sign of leak. Tighten if necessary.
- Repeat the test by gradually increasing engine rpm and operating time. Use both directions of the auxiliary hydraulics control lever.



**DANGER**

**Risk of high pressure fluid injection through skin - Test the tightness of the hydraulic fittings carefully.** Use idle rpm when starting the first time and keep a safe distance due to the risk of hydraulic fluid ejection. Shut down the loader and release the residual pressure before checking for leaks. Remember to use and wear protective equipment.

**DANGER**

**Risk of high pressure fluid injection through skin - Never test the tightness of the hydraulic components by placing hands near the fittings.** Never tighten a pressurized hydraulic fitting, since the fitting may break and the released oil may cause serious injuries.

***Check the routing of hoses and movements of the attachment***

After tightening the hydraulic components, test the movements of the attachment thoroughly. Check that the hydraulic hoses cannot get stretched or pinched in any position of the loader boom or the attachment, and check that the hoses are not in contact with sharp edges.

After thoroughly checking visually that the hoses are connected and fittings are tightened, check the tightness of the fittings as described above. The hydraulic system will de-air itself when using the auxiliary hydraulics of the loader.



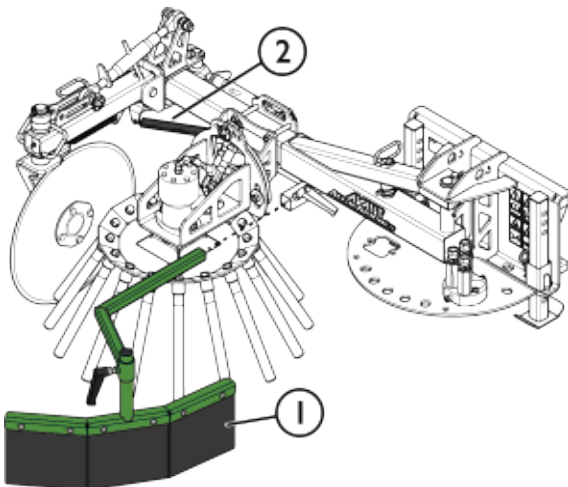
## 7.5.2 Installation

It is also possible to attach the cutting head on the left hand side of the cutting arm, but it must be done carefully. The cutting head is mounted on the left of the cutting arm by using existing fixing points and left-handed cutting arm bracket.

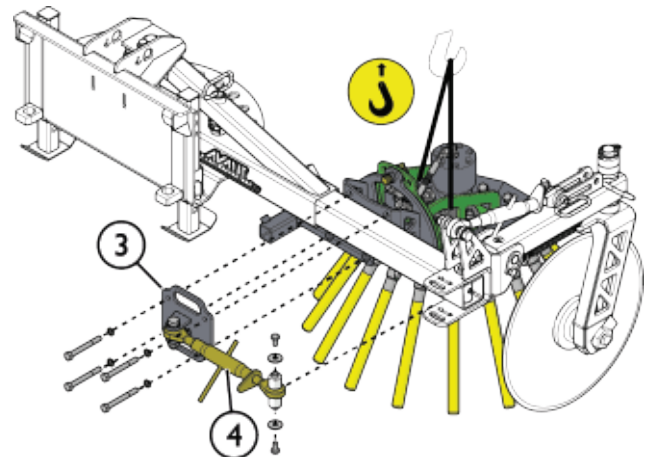


**Risk of serious injuries - Assembly instructions are intended for persons who are experienced and have training about hydraulic assemblies.** Wrong assembly procedures and work methods can result in personal injuries. Wrong installation order of hydraulic or mechanic components can cause injuries during assembly work, or cause the attachment to operate in a way that causes risk of injuries. Contact your Avant dealer or service if you are unsure about safe procedures, or need more information, or installation service.

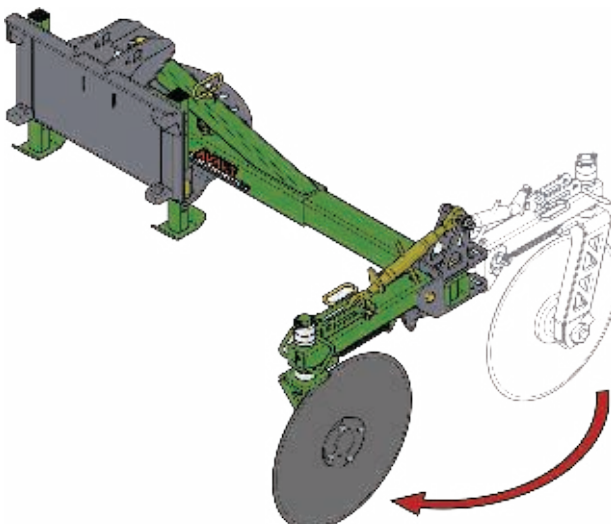
- 1 Remove the guard (1) and release the tension spring (2).



- 2 Undo the fastening screws of the bracket (3) and top link (4), and remove them. Lift the brush assembly away by means of lifting device.

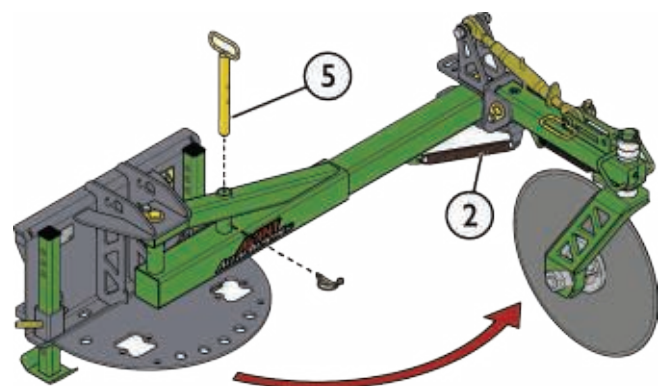


- 3 Turn the cutting head approximately 180 degrees on the other side of the cutting arm.



- 4 Remove the locking pin (5) and turn the cutting arm to the desired position on the left hand side. Lock the arm with the pin (5).

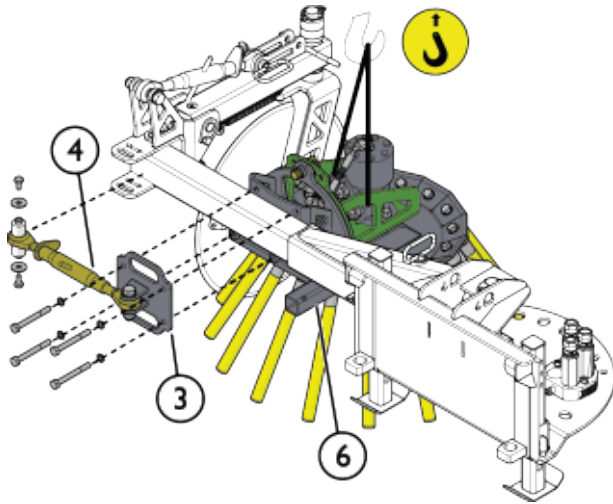
Reinstall the tension spring (2).



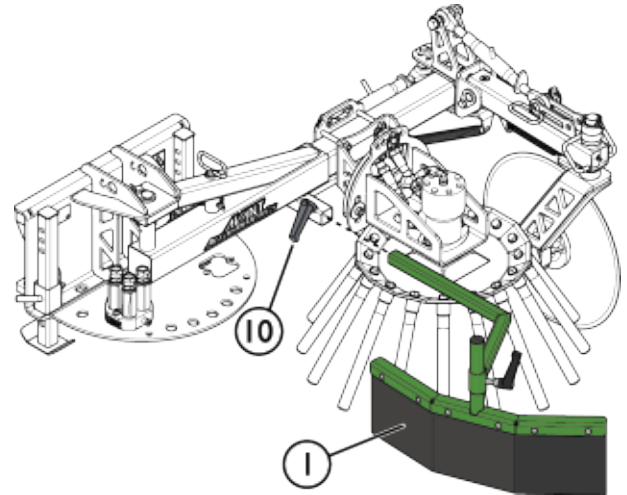
- 5 Turn the bracket (6) the other way around.

Reinstall the brush assembly by fastening the top link (4) and tightening the screws of the bracket (3) as shown in the adjacent figure.

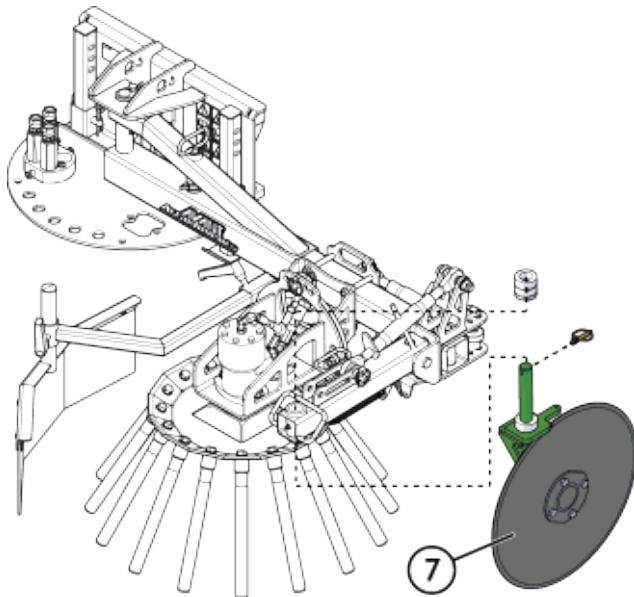
Use lifting device to ease the installation.



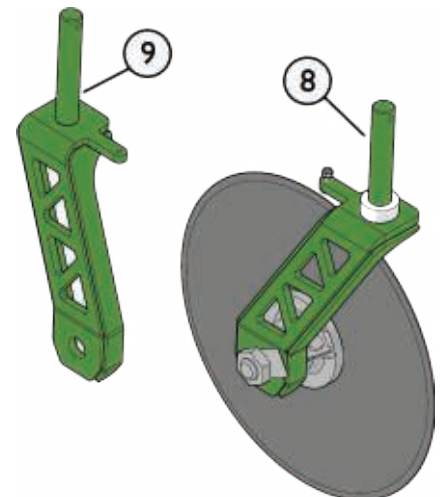
- 6 Loosen the guard (1) from its fastener, and fix it the other way around. Reinstall the guard (1) to the cutting arm. Install the hand lever (10) on the other end of the bracket as shown in the figure below.



- 7 Undo the locking pin and remove the cutting head (7).



- 8 Replace the right-handed bracket (8) with left-handed bracket (9). Reinstall the cutting head (7). Lock the cutting head with the locking pin.



- 9 Connect the hydraulic hoses in different order. See page 28.



## **7.6 End of life disposal**

When the attachment is at the end of its useful life recycle and dispose of the attachment properly. Dismantle the attachment and separate the different materials, such as plastic, steel, rubber, and oils, for example. Drain and collect all oils and handle them by following the current local regulations. Never leave any oil or other material in the environment.

Recycle each material by delivering them to a proper collecting place. Let a waste management company do the recycling, if possible.

## 8. Warranty terms

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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.

**FI EY-vaatimustenmukaisuusvakuutus**  
**SE EG-försäkran om överensstämmelse**  
**EN EC Declaration of Conformity**

Alkuperäinen kieliversio  
 Originalversion  
 Original language



Valmistaja / Tillverkare / Manufacturer  
 Osoite / Adress / Address

AVANT TECNO OY  
 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 /

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 /

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, SFS-EN ISO 4413

Mallit / Modeller / Models

Avant	
Hydraulitoiminen reunaleikkuri; Avant-kuormaajan työlaite Hydraulisk kanttrimmare; arbetsredskap för Avant lastare Hydraulic edge trimmer; attachment for Avant loaders	A446497



6.9.2021 Ylöjärvi, Finland

Risto Käkelä,  
 Toimitusjohtaja / Verkställande direktör /  
 Managing Director



**AVANT<sup>®</sup>**