

JOKER XL SPORTFIELD HARROW

INSTRUCTIONS FOR USE



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PREAMBLE

Thank you for your confidence in the Joker. In order to ensure safe use and optimize its service life, we recommend that you read these operating instructions carefully. A thorough knowledge of this document is essential for safe operation.

The Joker XL is not a stand-alone machine. It is the user's responsibility to select a compatible tractor and to ensure that the tractor/Joker combination complies with safety requirements, particularly with regard to noise level, operating instructions and risk assessment.

The following pages set out general safety instructions, which all users must be familiar with and observe.

We guarantee that the information and technical specifications contained in this document are up-to-date and conform to the latest version available. However, design specifications are subject to change without notice.

This document is the original version.

Date of last update: July 3, 2025

WARRANTY PROVISIONS

1. Warranty

The product is covered by a **five-year** warranty from date of receipt, provided it is used and maintained in accordance with the manufacturer's technical documentation. Wear parts are not covered by this warranty.

2. Conditions

To invoke the warranty, the customer must provide the machine's serial number and year of manufacture. This information can be found on the manufacturer's nameplate.

EC DECLARATION OF CONFORMITY

EC DECLARATION OF CONFORMITY

We, **Hege Applications**, manufacturer, domiciled at 118 Schafbusch - 67160 STEINSELTZ, declare under our sole responsibility that the product :

JOKER XL

to which this declaration refers, conforms to the essential health and safety requirements of the Machinery Directive **2006/42/EC** .

The customer hereby declares that he has read the information contained in the manufacturer's user manual, a copy of which has been supplied to him* and of which he is fully aware.

Signed in **Steinseltz** **march 14th, 2025**

Samuel Escach

President

HEGE APPLICATIONS

118 Schafbusch

67160 STEINSELTZ

SASU au capital de 10.000 euros

RES Strasbourg TI B 844 788 786

n° TVA : FR 34 844 788 786

*in the form of a QR code downloadable from the start-up sheet included in the package, and whose presence has been notified on the packaging.

**IMPORTANT: The machine has not been designed for outdoor storage.
It must be protected from the elements.**

1. General

When using the machine, the operator must have the necessary skills and ensure that the equipment is optimally adjusted to the soil to be treated.

The manufacturer accepts no liability for improper use or resulting damage; the user assumes full responsibility for the associated risks.

Before starting up the Joker, it is essential to inspect the work area, remove any obstacles and avoid excessive irregularities in the ground.

The operator is responsible for checking the general condition of the Joker and identifying any visible damage or defects.

2. Compliance with operating instructions

All persons involved in the operation, maintenance or repair of the Joker must have read and understood the entire operating manual, and in particular this section "**Safety instructions**".

3. Machine modification


For safety reasons, any modification or addition not approved by the manufacturer is strictly forbidden. Any alteration to the Joker will result in the loss of the CE mark, and responsibility for obtaining a new mark will rest with the person making the alteration.

4. Maintenance

Before each use of the Joker, it is imperative to check the condition of bolts, nuts, spare parts and safety pins.

The Joker is designed according to the latest technological advances and guarantees safe use. However, its use, maintenance or repair by unqualified persons may entail risks of injury, both to the user and to third parties. It is essential to prevent such situations.

The Joker must always be used with a suitable tractor, in accordance with the manufacturer's technical specifications.

 **Never reach under the Joker to replace the tines.** If necessary, dismantle the platform and tilt it to one side.

During maintenance or repair operations, the machine must be stabilized to avoid any risk of falling or slipping.

To ensure the safety of the equipment and the user, only original Joker parts may be used for maintenance and repair.

5. Transport

SAFETY INSTRUCTIONS

In addition to the instructions specified in this manual, general safety and working rules must be scrupulously observed.

When using on public roads, compliance with the **Highway Code** is mandatory.

 **Transporting people is strictly forbidden.**

6. Operating the machine

Before commissioning, all Joker users must be fully conversant with all functions and controls.

The Joker must not be operated in conditions of poor visibility, rain, storm or inclement weather, or on a slope greater than **30°**.

The Joker must be coupled in accordance with the towing vehicle manufacturer's instructions, to prevent any risk of injury.

Before starting work, the operator must ensure optimum visibility, both near and far.

The Joker is fitted with safety stickers with self-explanatory meanings. These must remain perfectly legible at all times, and must be replaced if damaged (see page 11 for detailed meaning).

Before use, be sure to check the lifting capacity of the towing vehicle to avoid any risk of accident.

Wear appropriate clothing:

- Wear safety **wear safety shoes complying with EN ISO 20345**
- Wear **tight-fitting pants** and avoid loose-fitting clothing.
- Tie back **long hair** to prevent snagging.

1. TECHNICAL DATA

Machine type	JOKER 3600 D5	JOKER 4600 D5	JOKER 3600 D6	JOKER 4600 D6	JOKER 5000 D6
Working width	3,60 m	4,60 m	3,60 m	4,60 m	5,00 m
Height	1,10 m	1,10 m	1,10 m	1,10 m	1,10 m
Length	1,50 m	1,50 m	1,50 m	1,50 m	1,50 m
Folded height	1,52 m	2,00 m	1,52 m	2,00 m	2,20 m
Folded width	2,40 m	2,40 m	2,40 m	2,40 m	2,40 m
Ø Linkage pin Lifting arm	Cat 1 (22 mm) or Cat 2 (28.7 mm)	Cat 1 (22 mm) or Cat 2 (28.7 mm)	Cat 1 (22 mm) or Cat 2 (28.7 mm)	Cat 1 (22 mm) or Cat 2 (28.7 mm)	Cat 2 (28.7 mm) or Cat 3 (37.4 mm)
Ø 3-point hitch	Cat 1 (19 mm) or Cat 2 (25.7 mm)	Cat 1 (19 mm) or Cat 2 (25.7 mm)	Cat 1 (19 mm) or Cat 2 (25.7 mm)	Cat 1 (19 mm) or Cat 2 (25.7 mm)	Cat 2 (25.7 mm) or Cat 3 (32.0 mm)
Machine weight	347 kg	410 kg	380 kg	450 kg	490 kg
Cylinder hydraulic coupling	Male ½	Male ½	Male ½	Male ½	½" male
Number of teeth	363	469	313	401	441
Distance between 2 teeth	4,6 mm	4,6 mm	5 mm	5 mm	5 mm
Minimum power requirement	40 HP	50 HP	50 HP	80 HP	120 HP
OPTION 300 L seed drill: Number of outlets	8 outlets	10 outlets	8 outlets	10 outlets	12 outlets

2. **DEPALLETIZING**

Palletizing configuration may vary according to order (kits, accessories, etc.).

Please follow the steps below to unpack and install the machine correctly:

1. **Remove** protective film.
2. **Cut** straps.
3. **With two people**, remove the kits from the base comb
4. **Unscrew** the parts holding the machine to the pallet **1**.
5. **Slide** sheets sideways to remove.
6. **Attach** the machine to the towing vehicle.
7. **Raise** machine and **remove** pallet.



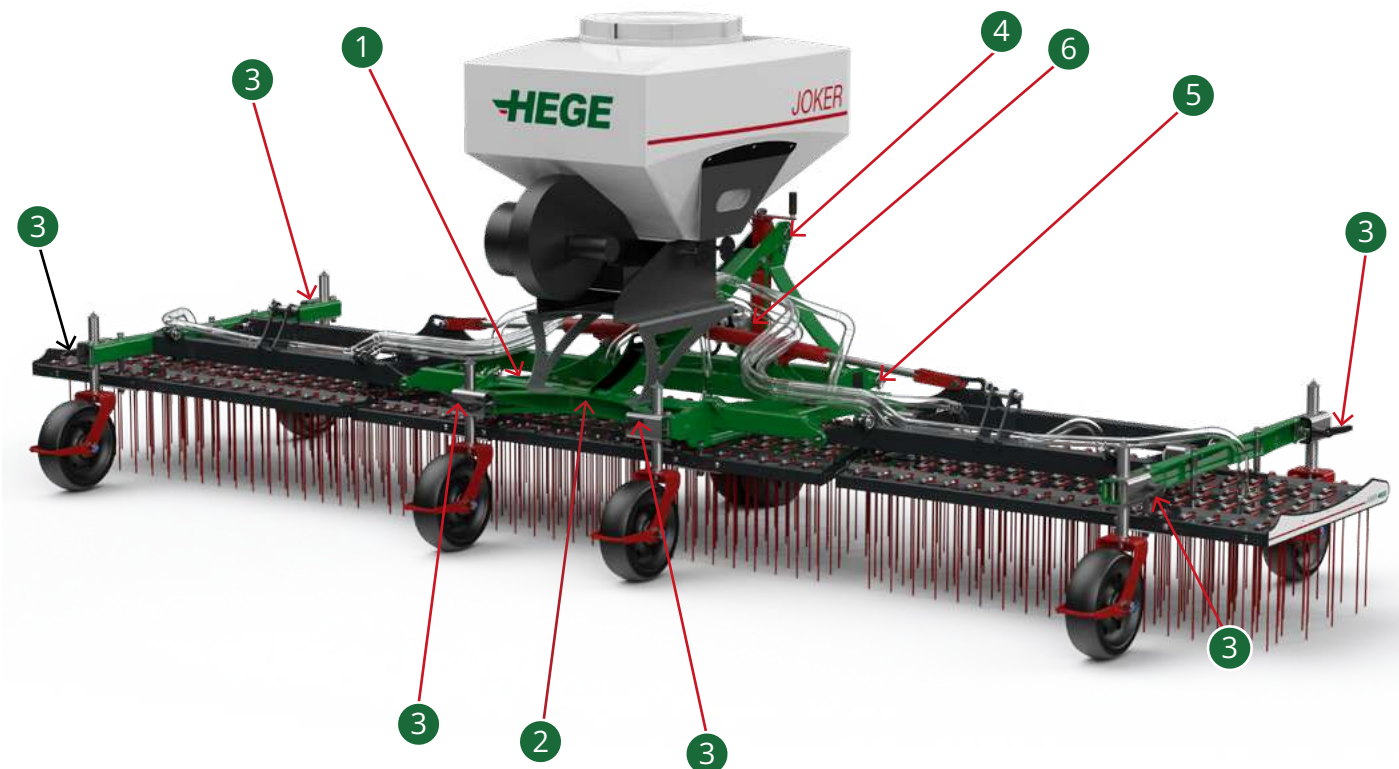
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3. GENERAL PARTS LIST




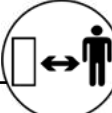
- 1 Safety stickers (see details on next page)
- 2 Serial number
- 3 Working depth adjustment handle
- 4 3-point hitch pin
- 5 Lifting arm axle
- 6 Front gauge wheel



3. GENERAL PARTS LIST

1 Safety decals :



Pictogram	Illustration	Meaning
Pictogram 1 General safety		The Joker is designed for safe operation, provided that the safety instructions described in this manual are strictly observed.
Pictogram 2 Reading the manual		Before using the Joker, it is imperative that you read and understand the operator's manual. Failure to follow the instructions may result in personal injury and/or damage to the machine.
Pictogram 3 Safety during maintenance		When carrying out maintenance, installation or repair work, always switch off the tractor engine and remove the ignition key. Any technical intervention must be carried out by qualified and authorized personnel only.
Pictogram 4 Danger zone		When operating the Joker, no-one should be in the danger zone, as there is a risk of injury from flying material. It is imperative to maintain a minimum safety distance of 4 meters.

Important note:

All safety decals must remain permanently visible on the machine and be understood by users.

4. TRANSPORTING THE JOKER



Important note The Joker **must always be folded** when moving.
It is forbidden to lift the machine when the wings are unfolded.

- **It is strictly forbidden to drive with the machine in the unfolded position.**

- **The machine must only be folded when it is on the ground.**

It is dangerous and forbidden to fold the Joker when it is not resting on the ground.

User's responsibility

The user is entirely responsible for transporting the Joker coupled to the tractor, especially on public roads. It is the user's responsibility to :

- Comply with current national legislation concerning the transport of agricultural or maintenance equipment hitched to a vehicle.
- Check the requirements for signage, lighting and authorized widths in your country.

Permissible speed

- **In green areas**, when the machine is coupled and in operation, the maximum speed allowed is **12 km/h**, due to the weight of the machine.

- Exceeding this speed may :
 - Pose a risk to the driver or bystanders.
 - Cause serious damage to the machine.

5. PRELIMINARY CHECKS BEFORE USING THE MACHINE IN THE FIELD

Before starting to work with the Joker on a given surface, the operator must make sure of the following points:

1. No obstacles on the ground

Check that the ground is clear of any objects that could interfere with driving (eg. any foreign objects (e.g. golf balls, branches, animals, etc.).

If such items are present, the machine must not be used until they have been removed.

2. Terrain inclination

Identify any slopes.

The maximum admissible slope for Joker operation is 30°.

3. Safety requirements

Check that there is no risk of slipping or falling (eg. unstable, damp or frozen ground).

If in doubt about safety, postpone work to a more favourable time.

4. Number of passes over surface

It is possible to make several successive passes over the same area to improve work efficiency:

- following the same direction,
- or cross-passing to achieve the desired result.

5. Handling in the field

Avoid sharp turns.

Prefer straight trajectories to preserve the integrity of the soil and the machine.

6. Aggressiveness setting

Setting the tines too aggressively can cause irreversible damage to the machine.

Carefully adjust the working parameters to suit the type of soil and the desired results.

6. TRACTOR ATTACHMENT

1. Pre-hitching checks

Before attaching the Joker to the tractor, the following checks must be carried out:

- Check the machine for any damage that could compromise safety. If there are any defects, carry out the necessary repairs before using the machine.
- Check that all nuts, bolts and safety pins are correctly tightened and secured.
- Check that all safety decals are present and in good condition. They must be legible and in good condition.

2. Hitching method (to be adapted to tractor model)

The Joker is designed to be coupled to the tractor via the lifting links and 3-point system. The standard procedure is as follows:

a. Tractor positioning

Back the tractor slowly and carefully until the attachment arms are aligned with the machine's lifting pins.

Make sure the tractor is safely immobilized before coupling.

b. Securing the linkage arms

Lock the tractor's lifting arms to the Joker's lifting pins.

- In most cases, the tractor has a category 1 linkage (lower pin Ø22 mm; upper pin Ø19 mm)
- In the case of a category 2 linkage: it is essential to install the appropriate adapter sleeves (lower pin Ø28 mm; upper pin Ø25 mm).

c. Lifting arm stabilization

Adjust the linkage stabilizer to ensure the machine's lateral stability.

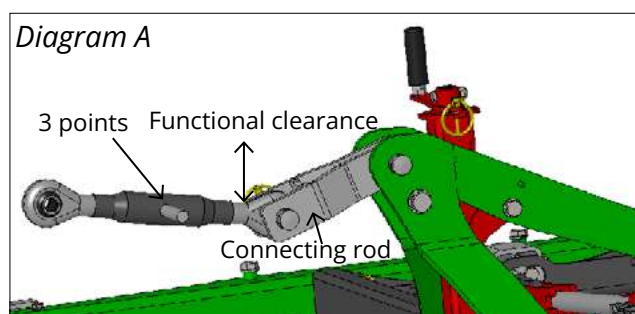
d. 3-point adjustment

There are 2 types of adjustment:

- the **floating mode** the tines work above ground level to straighten grass blades, break up earthworm castings and lightly dethatch
- the **aggressive mode** for mechanical weeding and deep dethatching operations.

Floating mode

Adjust the length of the 3-points so that there is a "break" between the 3-points and the connecting rod (see diagram A). In this way, the machine remains free to follow the terrain.



6. ATTACHMENT TO TRACTOR

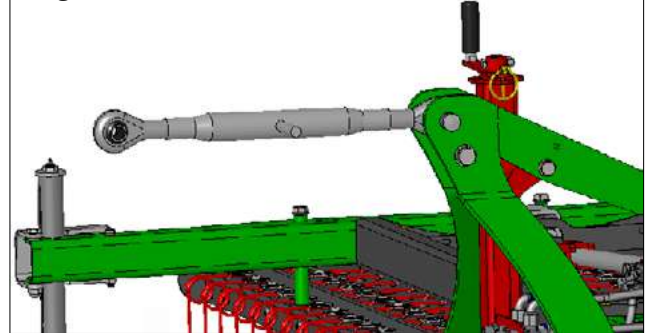
Aggressive mode

For undulating terrain only

Connect the Joker to the tractor using a standard 3-point linkage (no connecting rod)

To ensure that the platter remains horizontal during operation, and that the tines work evenly, the bar of the 3-point linkage needs to be lengthened slightly.

Diagram B



e. Hydraulic connection

Check that there is no pressure in the tractor's hydraulic circuit.

Then connect the hydraulic hoses (1/2" male connectors), which control the opening and folding of the side wings (see diagram C for connection points)

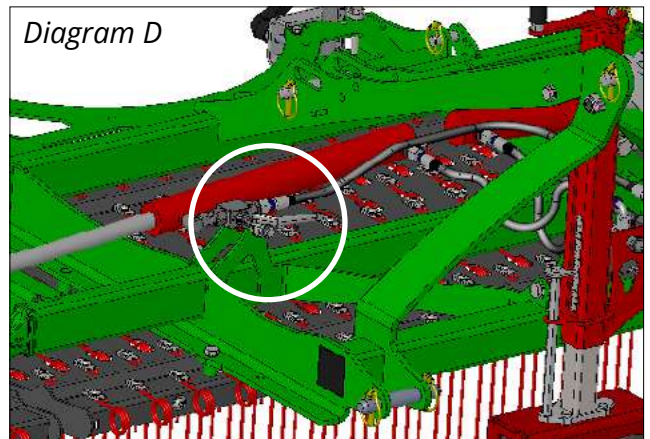
Diagram C



! f. Fender deployment

Before deploying the "wings", open the 2 quarter-turn valves located next to each of the 2 hydraulic cylinders. The "open" direction is when the handle is aligned with the cylinder. Conversely, a perpendicular handle confirms a closed valve. Fully extend the "wings" by operating the hydraulic cylinders to their limit positions.

Diagram D



7. FENDER AXLE ADJUSTMENT

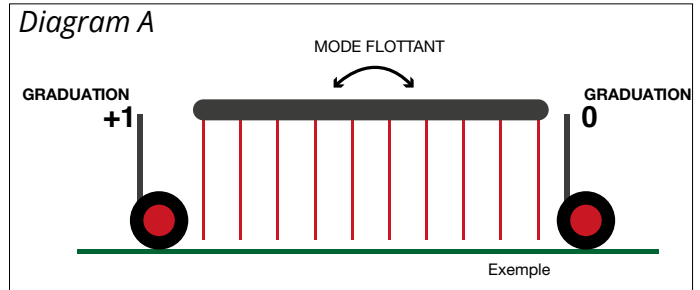
MODELS 3600 AND 4600

1. Float mode (diagram A)

Fold the wings.

Set the axes to the position **2** (diagram C) to free up the front/rear movement of the chainring.

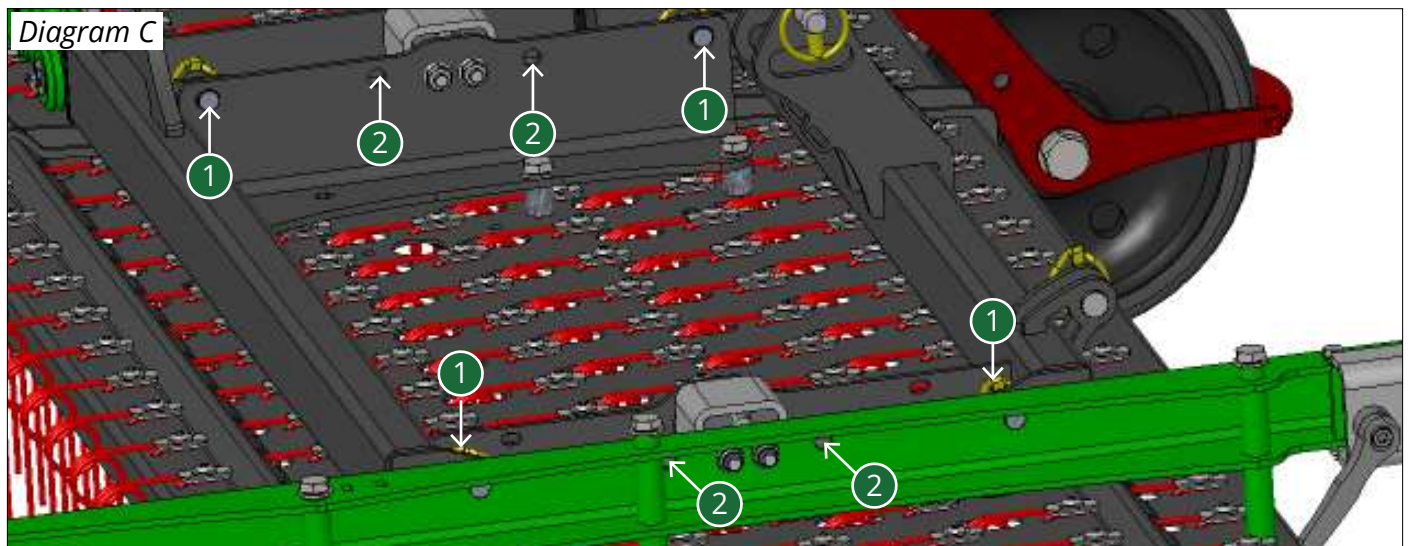
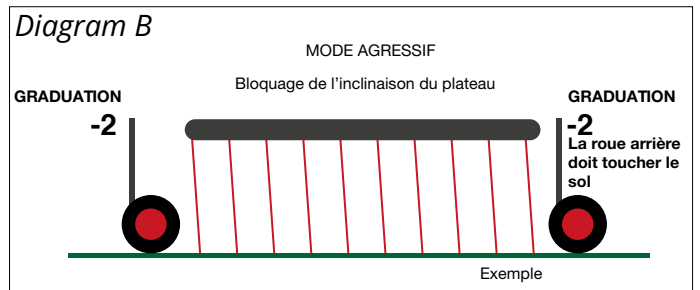
The degree of freedom is allowed by removing the 4 Ø12 mm axles per wing to allow the chainrings to follow the terrain. It is advisable to adjust the front wheels 1 cm lower than the rear, as aggressive work tends to cause the platters to "nose dive" forward. By compensating for wheel height, you can ensure that you get the most out of your work.



2. Aggressive mode (diagram B)

Fold the wings.

Move axes into position **1** (diagram C) to lock the platter in position.



3. How to set the height of a gauge wheel

- Evaluate the desired aggressiveness
- Raise the machine
- Loosen the clamp locking handles
- Adjust wheel position
- Tighten handles
- Rest the machine on the ground
- Move forward a few meters to ensure correct positioning wheels and center plate

8. UNCOUPLING THE JOKER

The Joker can be uncoupled from the tractor as follows:

1. Choice of location

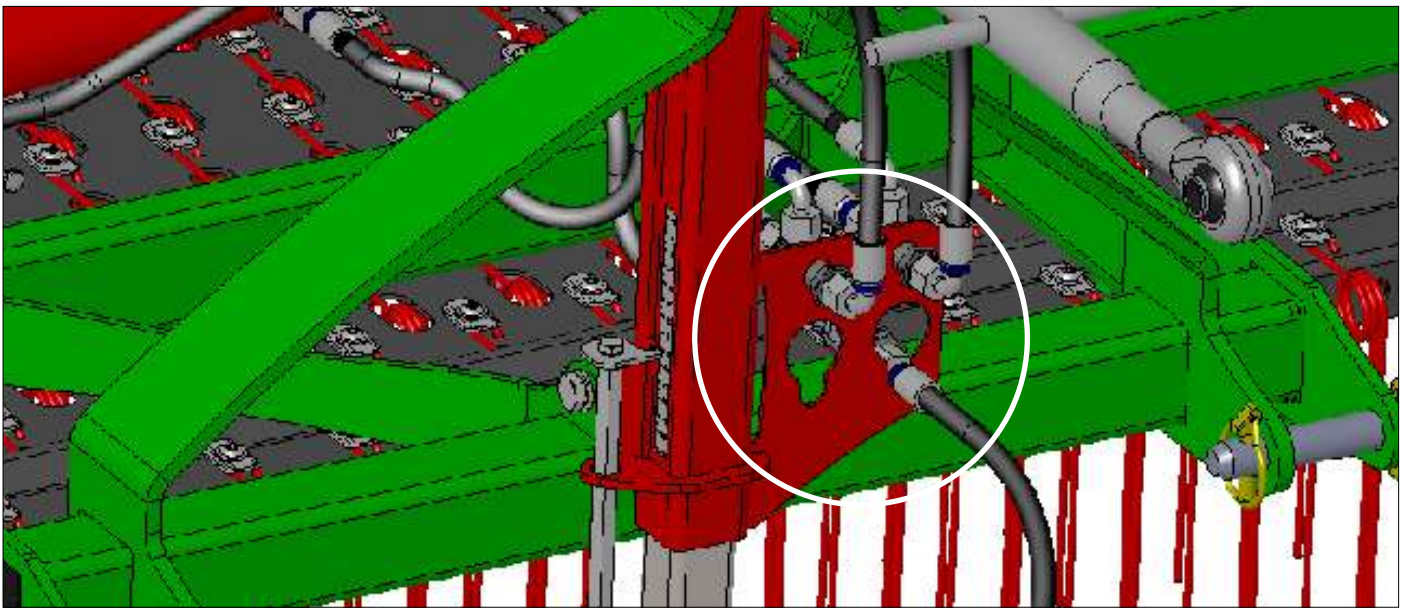
Move the machine to a **flat, stable and safe** storage area.
Make sure the tractor is stationary.

2. Placing the machine on the ground

Carefully lower the machine until it rests completely on the ground.

3. Disconnecting the hydraulic system

- Remove any residual pressure in the tractor's hydraulic system.
- **⚠ Lock the quarter-turn valves on the cylinders (see diagram D on page 16).**
- Then disconnect the hydraulic hoses.
- Store them in the hose rack to prevent damage (see below).



4. Uncoupling the linkage arms

Depending on the type of tractor linkage :

- Remove the safety pins, then the lifting pins.
- Unlock and lower both lifting arms.

5. Removing the 3-point pin

- Remove safety pin.
- Remove the 3-point link pin.

Check that the Joker rests stably, without risk of slipping or sliding

6. Move away from tractor

Restart the tractor and **drive slowly forward** to free yourself from the machine.

9. PROBLEM ANALYSIS

CENTER PLATE

Problem	Possible cause	Solution
Tines not working efficiently enough	Platform not horizontal	<ul style="list-style-type: none"> In aggressive mode, adjust the length of the 3-point linkage. Adjust the height of the gauge wheels (or the height of the front double gauge wheel) so that the platter is perfectly horizontal.
	Working depth incorrectly set	Adjust the height of the gauge wheels to obtain more aggressive tines on the platter.
	Unsuitable tooth diameter	The D5 tine plates on the Joker XL can be replaced by D6 tine plates.
Too much material coming out of the teeth	Machine set too aggressively	Reduce aggressiveness by raising the tine plate slightly.
Poor finishing quality	Soil too wet	Wait for more favorable weather conditions
Tines break or detach from platter	Machine set too aggressively	<ul style="list-style-type: none"> Reduce aggressiveness by raising the platter slightly Replace broken tines, see page 21
	Incorrect tine diameter	The D5 tine plates on the Joker XL can be replaced by D6 tine plates.

10. MAINTENANCE

Control points	Action
Check bolts/nuts for loose fit	Tighten bolts/nuts to appropriate torque: - Tooth attachment, M8 screws: torque 23 Nm - Wheel attachment, M10 screw: torque 47 Nm - Fixing the chainring to the frame, M12 screw: 70 Nm
Presence and legibility of stickers	Replace if missing/damaged
Check presence of locking pins safety	Replace missing pins
Check wing rotation shafts and pins	Replace missing pins and/or pins
Check that the 10 rubber buffers are still tight	Retighten rubber buffers



Wheels are maintenance-free.

Once a year :

- **Apply lubricant** on gauge wheel adjustment handles
 - **Grease wheel pivots and wing hinges.**
 - **Check ROSTA elastic elements** spring elements (connecting systems between the wing plates and their respective frames).
- > These components are maintenance-free, but a periodic **visual check** is imperative.

If necessary:

- **Replace teeth if any are missing**
- If a large number of teeth come loose, this may indicate that the machine has been **set up too aggressively**.

See chapter 11.

11. REPLACING TEETH

On the Joker, the teeth are attached to the chainring using nuts, screws and washers. Depending on operating conditions, the teeth may wear or break. If necessary, please contact us to obtain the appropriate replacement parts (teeth and hardware).

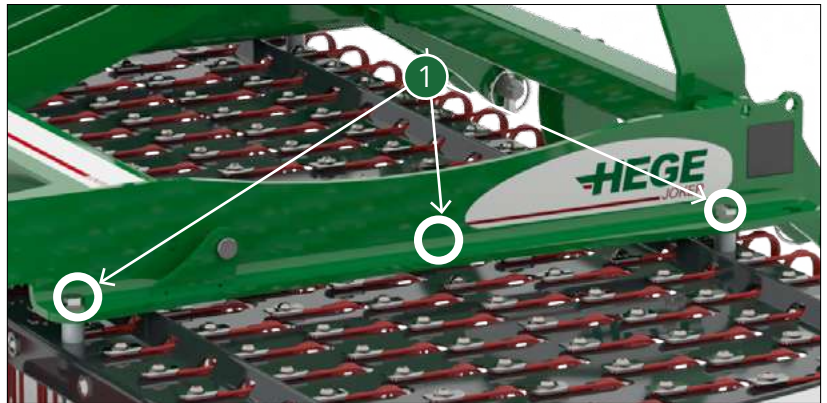
Replacement procedure :

1. When the machine is attached to the tractor:

- Remove the **4 or 6 screws** connecting the plate to the frame **1**.

2. Raise the machine and move it slightly forward to **release the platform**.

3. Position the table **vertically** and secure it in place.



4. Remove the string and safety karabiners.

5. Dismantle the teeth using a screwdriver, taking care to use the **appropriate tools** (6 mm Allen wrench + 10 mm socket wrench).

Note: Base nuts must not be unscrewed, as this may damage the surface. The screw must be unscrewed from the top.

6. To ensure safety and reliability, each new tooth must be fitted with a new nut, screw and flange supplied by us.

Tightening torques to be respected :

- Tooth mounting - M8 screws : **23 Nm**
- Wheel mounting - M10 screws : **47 Nm**
- Fixing the chainring to the frame - M12 screw : **81 Nm**

7. Replace strings and karabiners.

12. OPTION: COMB KIT

An optional **comb kit** is available. It consists of **three separate elements**, allowing independent attachment to the **central tray** and **side wings**.

Each element is mounted using **two pins per bracket** **1** each element is mounted on two pins with pins per support, and can be **adjusted** via the **three-point system** **2**.



13. OPTION: SEEDER KIT OPERATION

Before using the seed drill kit, it is essential to read the Delimbe seed drill user manual, available on our website in the Customer Area(<https://hege-applications.com/login/>).

1. ⚠ **Electrical connection**

The tractor must be equipped with a **3-pin 12 V** socket (diagram 1) protected by a **30 A** fuse (minimum cross-section 6 mm²).

The necessary **wiring harness** is supplied with the machine.

The **pneumatic seeder** works thanks to a **blower ①** driven by a **12 V electric motor**.

Fig. 1

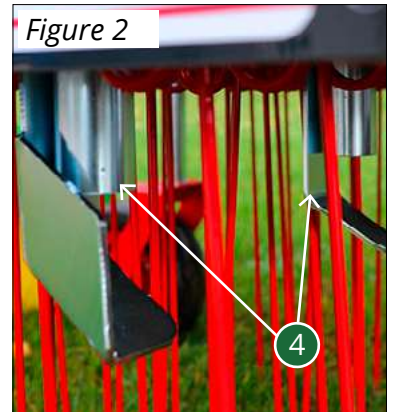


2. Seed distribution

Mechanical seed distribution is provided by a grooved cylinder.

This cylinder is driven by a **self-regulating electric motor ②**.

Figure 2



3. Seed transport

The **air flow generated by the blower** transports the seeds through **flexible plastic tubes ③** to the **seed diffusers ④**.



13. OPTION: SEED DRILL KIT ORDER

When purchasing the **seed drill kit**, a **fixing clamp** is included **1** is supplied to enable installation of the cab-mounted **control box**. This box, included in the kit, is equipped with **three control elements**, as detailed below:

Blower start switch **2**

- Switches on the blower (to blow the seed into the pipes).
- This switch must remain activated continuously throughout the seeding phase.

Seed distribution switch with indicator light **3**

- Activates the seed distribution motor which blows seed into the pipes.
- A green light indicates that seed distribution is in progress.

Rotary flow adjustment switch **4**

- A knob graduated from 1 to 28 enables precise adjustment of seed flow.
- The setting must be adapted to several factors:
 - the type of seed used,
 - the tractor's forward speed,
 - and specific working conditions.

As every situation is different, it's essential to adjust the settings accordingly.

Setting instructions and recommendations :

- For grass seed, please refer to table p. 25
- For all other types of seed, please refer to the manufacturer's documentation.



13. OPTION: SEEDER KIT

SETTING SEED TANK 300 LITERS

Hege Applications recommends the following settings for optimum use of the seeder.

Characteristics of equipment tested:

- **Seeder capacity** : 300 liters
- **Spline used** : Red, 8 fins
- **Motor** : standard wiring, red wire
 - Maximum speed : **50 rpm at 12 V, 70 W**
- **Seed tested: Mixture of 3 Ray-grass varieties**

Important :

The values given below are for guidance only, as actual output may vary according to fluctuations in the tractor's 12 V voltage.

Remark:

The **number of outlets** (nozzles) has no influence **on flow rate**.

Only the **number of turns of the spline** determines the quantity of seed distributed.

	Tractor forward speed (km/h)	Quantity seed (g/m ²)	Setting potentiometer	Spline rotation speed	Autonomy
JOKER 3600 D5, D6	5	12	26	38	9 600
	8	8	max	40	14 400
JOKER 4600 D5, D6	5	10	max	40	11 500
	8	6	max	40	19 000
JOKER 5000 D5, D6	5	9	max	40	12 800
	8	5	max	40	23 100