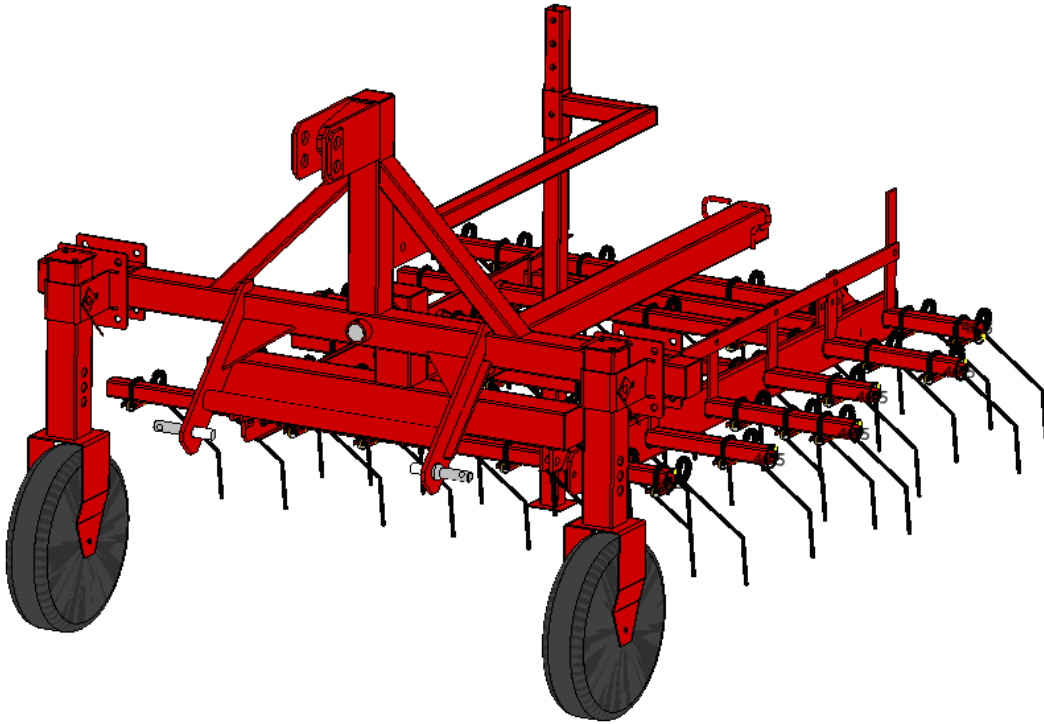


USER MANUAL OF GARLIC WEEDER



You should read this user manual carefully before using an equipment.

Dear Customer,

Thank you for purchasing this JUSRAMA tool. Before using this tool for the first time, please read this manual carefully, paying particular attention to the safety regulations outlined below.

Contact our Customer Service Department with any questions or concerns.

- www.jusrama.com
- info@jusrama.com
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Safety regulations

During the use of the tool, while driving from the farm to the work place and at all maintenance and repair works you must observe the general rules for the work safety applicable while operating the mechanized equipment.

The use according to the purpose means the application to the instructions and regulations included in the operation manual as well as during the adjustment and maintenance.

Safety work rules

- The safety rules refer to the garlic weeder and regardless of that you must follow general safety rules and protection against accidents, technical regulation for approval of vehicles for traffic on public roads, road traffic laws.
- You should get familiar with the operation manual both before the first start-up of the machine, and after long break in the use.
- It is forbidden to operate the garlic weeder by "third" persons not familiar with the instructions as for the use of the prototype, sick or intoxicated people, under age persons, including children, persons under the influence of alcohol or drugs.
- All repairs, lubrications or possible blocking during work must be conducted only after stopping the tool, lowering it, immobilizing the tractor and taking off the ignition key. It is forbidden to work with the tool on the stony grounds.
- It is forbidden to work with the tool which has its operational parts damaged.
- Coupling the tool with a tractor must be done according to the instructions remembering about inserting the safety pins after dismantling the joints of lower strands on the suspension axle pivots.
- It is forbidden to stay between a tractor and the tool when the engine is on.
- It is forbidden to step on the frame or other parts of the tool during the work.
- You must not reverse a tractor or do turnings with the tool lowered in the working position.
- You must not use independent brakes of a tractor during the turnings.
- During the turnings you must be particularly careful, if there are unauthorized people or objects nearby.
- During the work breaks the tool must be lowered to the ground and the engine must be stopped.
- While folding the tool for transportation you must take all precautions, paying special attention whether there are no unauthorized people nearby.
- The tool should be uncoupled from a tractor only after it is placed on the support.
- Steering the lever of a tractor hydraulic lift must be done only from the seat position.
- Use supports in case of works with lifted tool.
- Lift and lower the tool on the tractor lift smoothly, without jerks and hits, paying special attention whether there are no unauthorized people nearby and be careful not to damage the frame and working parts.
- Work on slopes – it is allowed to operate the tool on the fields with the slope max. 12°.

- It is unacceptable to leave the tool on the slopes and other land inclines without securing it against inadvertent rolling.
- You must be particularly careful while passing and overtaking other vehicles or people.
- It is forbidden to place any materials on the tool in order to carry them or make additional load on the tool for work time.
- A person operating the tool must wear protective clothing. Working clothes should fit closely to the body with no loose parts.
- The operation of the tool must be carried out only by trained staff. You must follow the law permissible minimum age.
- The tool must be stored in roofed places and secured to prevent hurting any people and domestic animals.
- For securing the position of the working parts and for connecting the components you must use only typical screws, pins, bolts, cotter pins.
- For cooperation with the tool you must use the tractors with proper power and suspension category, equipped with frontal ballasts.

Fire regulations

- The fire-fighting equipment must be an integral part of a tractor and placed in its cabin (ABC extinguisher).
- It is unacceptable to smoke cigarettes and use open flame near the working machine.
- It is unacceptable to do any repairs, in particular do some welding without previous cleaning the machine from the material residues that may cause fire. Before any welding, please disconnect the tractor battery and protect electric and hydraulic conduits against any damage.

Intended Use of Garlic weeder

The garlic weeder is specifically designed for efficient weed control in garlic cultivation. This equipment is built to optimize the weeding process while preserving the integrity of the garlic plants.

Key Functions:

- Weed Removal: Designed to remove weeds closely surrounding the garlic plants without damaging the garlic bulbs and roots. It ensures that the garlic plants have adequate space and resources to grow without competition from weeds.
- Soil Aeration: While removing weeds, the garlic weeder also lightly aerates the soil, improving soil texture and facilitating better air and water penetration to the garlic roots.
- Enhanced Productivity: By mechanizing the weeding process, the garlic weeder increases productivity and reduces the labor typically required for manual weeding in garlic fields.

Appropriate Use:

- This weeder is to be used in fields specifically prepared for garlic cultivation.
- It is most effective in organic garlic farming setups but can be adapted for use in conventional farming with appropriate settings adjustments.
- The equipment should be operated at recommended speeds and conditions as stated in the user manual to ensure effective weeding without harming the crop.

Prohibited Use:

- The garlic weeder is not intended for primary tillage or for use with crops other than garlic unless explicitly specified by the manufacturer.
- Avoid using the weeder in overly wet conditions which can lead to soil compaction and potential damage to both the soil structure and the weeder.
- It should not be modified in any way that is not approved by the manufacturer, as modifications could impair functionality and safety.

Environmental Considerations:

- When operating the weeder, ensure that it does not disrupt the natural habitat or adversely affect the local biodiversity.
- Use the weeder in a way that promotes sustainable agricultural practices, minimizing soil disruption while maximizing weed control efficiency.

Garlic Weeder is designed to provide efficient and sustainable weed control in garlic cultivation, enhancing both yield and quality of the crop through proper use. It is essential that this equipment be operated as intended to maintain its effectiveness and to ensure the safety of the operator and the health of the crop.

Tool preparation for the work

Preparation of the tool for the first start-up**WARNING!**

All adjustment and service works must be carried out only when the tool is lowered on the ground, the tractor engine is switched off, and ignition key is taken off.

Before the first start-up of the tool you must:

- do general inspection of the tool,
- check whether working elements and parts are firmly attached,
- check whether all screws and nuts are tightened up, screw in the loose ones,

- proper attachment of the slings,
- function of adjustment,
- ease of roller feelers rotation.

Tool coupling with a tractor

The tool has a three-point suspension system of category 2. To make the connection of the tool with a tractor easier the axle blocked with clasp locks is used. Before suspension of the tool on the tractor's three-point linkage you must check the pressure in the tractor tyres, equipping with ballasts and placement of deflection limiters for the tractor lower strands and the height of strands. The pressure in the tyres must be consistent with the producer's recommendations. The strands must be placed at the same height, in the spacing corresponding to the pivot spacing of the suspension axle i.e. 825 mm, and their side deflections should be limited with chains.

Lifting and lowering of the tool with the tractor lifting device must be done smoothly without jerky movements, and after lifting under the lowest positioned working parts, there should be kept the clearance minimum 30 cm, and the load of the tractor front wheels should ensure its steering qualities (unnoticeable wheel tearing off).

In order to disconnect the garlic weeder from the tractor, you should proceed in a reverse order.

Operation and adjustments

To start the work, you must initially determine the position of particular working parts and level the tool crosswise with right suspension rod of tractor and lengthwise with upper coupling. The so-prepared tool must be used for the first testing drive to correct the setting of the working parts and determine the working speed possible to be reached in given conditions. In the properly adjusted tool the frame should be parallel to the ground, and all operating parts should have steady contact with the treated soil.

Roller feelers should be set at the same height so that the expandable frame after lowering to the ground would be supported on all wheels. The wheels are adjusted manually, and their position is blocked in the holders with pins. The wheels should hold the frame with the slings at the same height, to have the working fields of the grassland harrow or tine harrow evenly pulled. The front feed chains should be directed slightly upwards, and the back bearing chains should be loose. When the field front tearing off occurs you should reduce the frame height on the wheels, and when there is excessive penetration of the field fronts you should increase the frame height on the wheels. During work the working fields should be parallel to the ground surface so that all tines penetrate the soil evenly. The oscillating slings and chains enable to adjust the fields to the land configuration.

Approach angle of the weeder tines is adjusted centrally for each field (by increments of 5°) in the range of 60° to 105°. To adjust the tines, you must unscrew the screw blocking the regulating link, turn round the beams with tines by pulling or pushing a handle and insert the screw in a new pair of the coupling holes and the regulating plate. You must pay attention to set the approach angle of tines for all working fields the same way. The approach angle decides on the tine penetration and intensity of weed

destruction. While harrowing the cereals at an early development stage you should use small penetration of tines by deflecting them backwards not to destroy the small seedlings of cereals. When the crops are bigger, the harrowing may be more intense, and the tines set more vertically, then the clearance is also increased under the beams on which the tines are fixed. The tine penetration at defined approach angle depends in fact on the soil compactness, so in case of heavy and hard soils the smaller approach angles should be used for obtaining proper penetration. After changing the approach angle it is also necessary to change the position of wheels, so that the frame slings would be placed at the proper height.

Front cross boards should be adjusted at the proper height in relation to the tines of the working fields. To change the position of cross boards you must unscrew the screws fastening the shafts in the sling holders, lift or lower the crossboard, and then relock it with press bolts. You must pay attention to set the cross board strips parallel to the sling feed beams and to set all cross boards at the same height. It depends not only on the shaft locking at the same height, but also on even fastening the strips on the fixing springs meeting the function of overload protection. Too low adjustment of the cross boards causes excessive raking of the soil and unnecessary increase of working resistance and too high adjustment will not provide sufficient levelling to the roughness of the ground. In case of grassland treatment, the properly adjusted cross boards should level only the upper part of the molehills, and in case of presowing cultivation it should cut only the biggest soil ridges before the harrow fields. It is also possible to adjust the cross board approach angle and to do so you should lose the fixing bolts on the shafts, shift them and screw in the bolts again.

Work conditions and run of the machine

After arriving at the field you must:

- do general inspection of the tool.
- Before starting the work, you should do the test drive in order to settle the proper position of particular working parts of the tool.
- The drive speed should be adjusted to the local land conditions and type of performed treatment not to overload the tool and to prevent from its „blocking”.
- In case of blocking you must stop the tractor, lift the tool for a while and start the work after removing the blocking. But in case when manual cleaning is necessary, you must do it when the tool is lowered and the tractor engine is switched off.
- In case when you have noticed any irregularities in the tool operation you must stop the work immediately and after switching off the engine, check the cause.
- In case when there is an accident or failure you must switch off the tractor engine, take off the ignition key, and take actions appropriate to the situation nature.

Technical service of the tool

IMPORTANT!

All adjustment and service works you must carry out with due care to avoid crushing or hurting operator's hands by applying the proper personal protective equipment.

ATTENTION!

- Repairs, cleaning, lubrication, checking the technical condition must be done only when the tool is lowered, after the engine is switched off and the ignition key is taken out or on the tool uncoupled from the tractor, steadily supported in the resting position.
- Fasteners – nuts and screws must be regularly checked and tightened up if necessary. Use proper tools for any replacements
- For the repairs you must use only the spare parts meeting the technical requirements of the producer of the tool – original spare parts.
- While carrying out the welding work you must disconnect the battery (in the tractor) if the tractor is coupled with the tool.
- It is unacceptable to perform any repairs under the tool which is lifted and not secured against self-falling.

EVERYDAY SERVICE

Every time after finishing work the tool must be cleaned out from soil and plant residues, check the screw connections and pins as well as the condition of working parts and other components. In case when the part damage or worn-out is found you must replace them. All loosen screw connections must be tightened up, and damaged pins and cotter pins must be replaced.

PERIODIC SERVICE

After ending the work season, the tool must be cleaned out carefully, you must complete the paint damage, and the torn working surfaces of the tines and cross board beams, as well as the regulating screw threads must be washed out with kerosene “Antykor” and protect against the corrosion with lubricant “Antykor 1”. Moreover, you must do the complete lubrication of the tool. During the use break it is recommended to store the tool under the roof. However, when it is impossible, you should check the condition of the protection from time to time and complete the lubricant washed out by the rain, if necessary.

REPLACEMENT OF WORKING PARTS

The natural worn-out as a result of soil contact concerns mostly the tines and cross board beams. The excessively worn out tines must be replaced for new ones.

The replacement of the working parts must be done on the tool supported steadily on the ground. After lowering the tool, switching off the engine, taking out the ignition key and activating the hand brake you must check the stability of the tractor-tool assembly.

For fastening new components, you must use only typical screws. In case when the whole working fields are replaced, the load-bearing frame must be supported on the roller feelers and expanded support so that the fixing chains of the field would stay loose.

Lubrication

WARNING

Lubrication must be done when the tractor engine is switched off and the ignition key is taken out.

The basic service activities include observing the lubrication periods. Before doing the lubrication you must clean all lubrication points from any dirt.

Protection against oil and lubricant:

- While handling oil and lubricants you must wear suitable protective clothing and gloves.
- Avoid direct contact of oil and lubricants with skin because there is a risk of sensitization.
- Never use oil or lubricants for cleaning skin! These materials may contain small metal particles, which may hurt your epidermis and the oil may make the situation worse.
- Follow OHS instruction and rules on handling the lubricants.
- Synthetic oils have very often the corrosive properties and are strongly sensitizing to skin.

The lubrication must be done as described below:

No	Places of lubrication	Frequency	Type of lubricant
1	sling pivots of working fields	every 50 h of work	ŁT-43
2	frame pins	every 50 h of work	ŁT-43

Defects and malfunctions

Defect, malfunction	Cause	Method of repair
catching of working field fronts	puller chains placed too high	lift the feeler wheels
catching of working field backs	puller chains placed too low	lower the feeler wheels
too small penetration of the harrow tines		too big approach angle

too deep penetration of the harrow tines	too small approach angle	increase the approach angle by leaning the tines back
excessive scraping of soil by the front cross board	cross board lowered too low	lift the cross board

Technical specifications

working width	150 cm
Working depth	up to 8 cm
type	suspended
Number of working units	1 pcs
width of working units	150 cm
Spring tine type	available diameters of spring tines are 7 mm, 8 mm, 9 mm, 10 mm. The default diameter is 7 mm.
Number of tooth	48 pcs
Total number of tooth	48 pcs
Type of front sweeper	sectional with adjustable height and angle
Number of support wheels	0 (2 -optional) pcs
Working speed	up to 10 km/h
Working Capacity	up to 1.5 ha/h
Power demand	low power tractor
weight	120 kg
dimensions (length x width x height)	2130 x 1750 x 1200 mm

WARRANTY CARD

GARLIC WEEDER

Serial number

Date of production

Inspector signature

Date of sale

Seller signature

.....
Seller stamp


.....
Manufacturer stamp

CAUTION: It is seller's obligation to fill in the warranty card and complaint forms carefully (legibly). Lack of e.g. date of sale or stamp of sales point will put the user at risk of not acknowledging possible complaints. Warranty card with any written corrections or filled in illegibly – is invalid.

Warranty proceedings rules

1. A user is understood as a natural or legal person purchasing an agricultural equipment and a seller – as a corporate unit providing equipment to the user and a manufacturer - as a manufacturer of agricultural equipment.
2. Manufacturer ensures good quality and efficient operation of the grader, to which the warranty card is attached.
3. Any defects or damage of the grader shall be fixed free of charge at the place of the purchaser in the period of 12 months from the sales date.
4. Any revealed defects or damages shall be reported on a complaint form in person, by post mail or by phone.
5. If during warranty period, a necessity of performing 3 warranty repairs occurs, and the product will still reveal defects disabling its usage according to its intended use, the purchaser is entitled to have the product exchanged into a new, flawless one or refund.
6. If the manufacturer, a seller and a user will not establish another deadline for considering the complaint, exchanging the product or refund should be made within 14 days from the date of reporting it by the user.

7. Warranty repairs do not cover repairs caused by:

- using the grader inconsistently with the manual and intended use,
- acts of God or others for which the manufacturer does not take responsibility.

These repairs can be made only at the expense of the user, purchaser.

8. The manufacturer can cancel warranty on the product in case of stating:

- introducing structural changes,
- occurring any damages caused by acts of God,
- lack of necessary records or any records made by one's own in the warranty card,
- using the planter inconsistently with intended use or manual.

Complaint form No. 1

GARLIC WEEDER

Serial number Date of sale

.....
seller's signature and stamp

Complaint protocol number

Complaint form No. 2

GARLIC WEEDER

Serial number Date of sale

.....
seller's signature and stamp

Complaint protocol number

Complaint form No. 3

GARLIC WEEDER

Serial number Date of sale

.....
seller's signature and stamp

Complaint protocol number

After repair I received technically efficient machine on

.....
user's signature

Notes:

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.....
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After repair I received technically efficient machine on

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user's signature

Notes:

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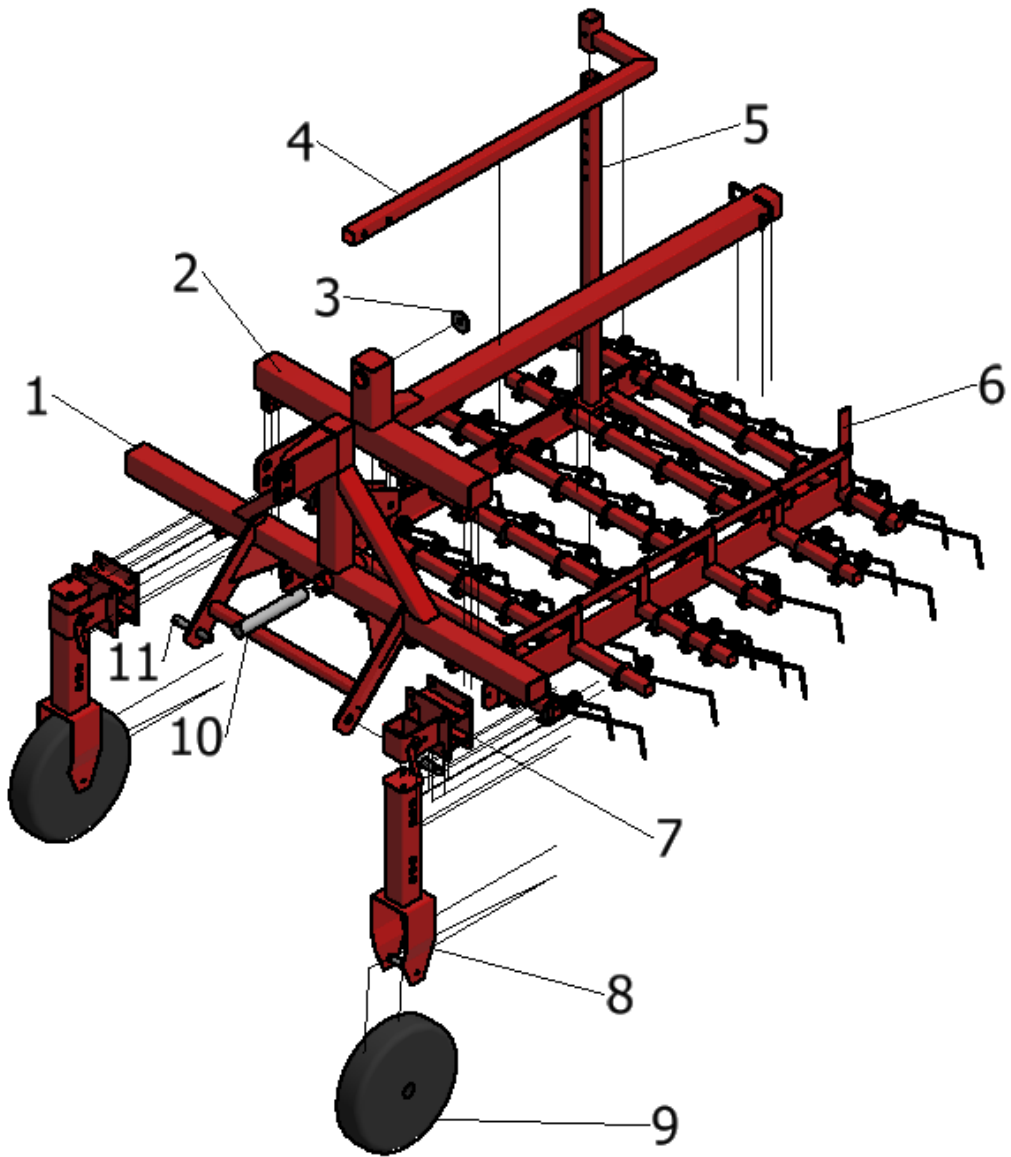
After repair I received technically efficient machine on

.....
user's signature

Notes:

.....
.....
.....

Exploded drawing and part list



№	name	Unique number	quantity
1	A frame made of one-beam structure	GOH1501	1
2	An oscillating sling	GOH1502	1
3	A washer	GOH1503	1
4	A support's frame	GOH1504	1
5	A support's leg	GOH1505	1
6	harrow field frame with tins	GOH1506	1
7	A wheel holder	GOH1507	1
8	A Wheel frog	GOH1508	1
9	A wheel ZABI_symbol-380X4K	GOH1509	1
10	A pin	GOH15010	1
11	An implement pin	GOH15011	1



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DECLARATION OF CONFORMITY



"Technical Regulation on the Safety of Machinery," approved by Order No. 4-506 of the Minister of Economy on 30 June 2009 and European Union Directive 2006/42/EC of 17 May 2006 (Journal of Laws UE L157 p.24-86)



we declare with full responsibility that the machine:

Machine: GARLIC WEEDER
Type/model: GOH150
Serial number:
Year of production:
Function: to control weed in garlic cultivation

to which this declaration relates, is in conformity with:

"Technical Regulation on the Safety of Machinery," approved by Order No. 4-506 of the Minister of Economy on 30 June 2009 and European Union Directive 2006/42/EC of 17 May 2006 (Journal of Laws UE L157 p.24-86)

Person responsible for technical documentation of the machine: Ramūnas Šiaulys, Rozalimo g. 19-6, LT-82212, Pakalniskiai, Lietuva

Following harmonized standards have been applied:

PN-EN ISO 12100:2012
PN-EN ISO 4254-1:2016P

This EC Declaration of Conformity loses its validity if the product is misused or modified without proper authorization.

THE MANUAL CONSTITUTES MACHINE BASIC EQUIPMENT!

.....
Place and date of issue

.....
Name and function of the signatory