Faunamaster

HARROW

Usermanual

Thank you for purchasing a Faunamaster Harrow DH140

This disc harrow is designed by Faunamaster and is used for small tractors or ATV/UTV.
This manual provides the main technical info, safety rules, structure of main components, installation, adjustment, operation and daily maintenance of the Faunamaster harrow, as well as common faults and troubleshooting methods.

This user manual, will help you and understand the structure, installation method, safe operation. In order to fully utilize the good performance of this machine, extend its service life, and create benefits for you, we hope that you carefully read this user manual before using this machine.
We welcome you to write to our company the valuable experience and opinions you have accumulated during the use of this machine, so that we can further improve our design and product quality.

With the development of technology and the needs of users, this product will continue to be improved and developed, in the future.

For assemble or adjustments instructions, get more info on www.Faunamaster.com

1. Overview

The Faunamaster disc harrow is a harrow specially designed for ATV/UTV and small tractors.
In this manual, safety warning symbols indicate important safety information. When seeing this symbol, the user should be alert of potential harm, carefully read the information below the symbol, and inform other operators.

⚠ **Danger: Indicates a critical and dangerous situation that, if not avoided, could result in death or serious injury.**

⚠ **Warning: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.**

⚠ **Attention: indicates a potential danger that, if not avoided, may cause lower or moderate injury.**

⚠ **Important: Indicates that if not avoided, it may cause damage to the disc harrow or damage the environment.**

This user manual is an integral part of the machine and is provided to the user together with the disc harrow. Please keep it properly. If you encounter any parts that you do not understand during the use of this manual, please feel free to contact Faunamaster.

2. Intended use

The Faunamaster harrow is only used for conventional agricultural operations with tractors or ATV/UTV, and can be used for crushed soil and flat land after cultivation. It can also be used for soil stirring, weeding, fertilizer mixing, and seed covering.

This machine can only be operated, maintained, and repaired by personnel who are familiar with its characteristics and have relevant safety operation knowledge. At all times, it is necessary to comply with the rules to prevent accidents, other safety regulations, and road traffic rules. The manufacturer shall not be responsible for any degradation in machine performance, damage to machinery, or personal injury caused by unauthorized restructuring.

3. Safety technical rules

3.1 Safety precautions

Before use, carefully read the user manual and familiarize yourself with the structure, installation, performance, usage adjustment, maintenance, and common troubleshooting methods of this machine.

During machine operation, it is strictly prohibited to stand on the machine.

It is strictly prohibited to turn before the machine is lifted.

Before using the equipment, add sufficient lubricating oil and greese.

The removal of entangled weeds and troubleshooting must be carried out after the machine is shut down.

The tire must be disassembled and assembled without air pressure.

3.2 Safety warning signs

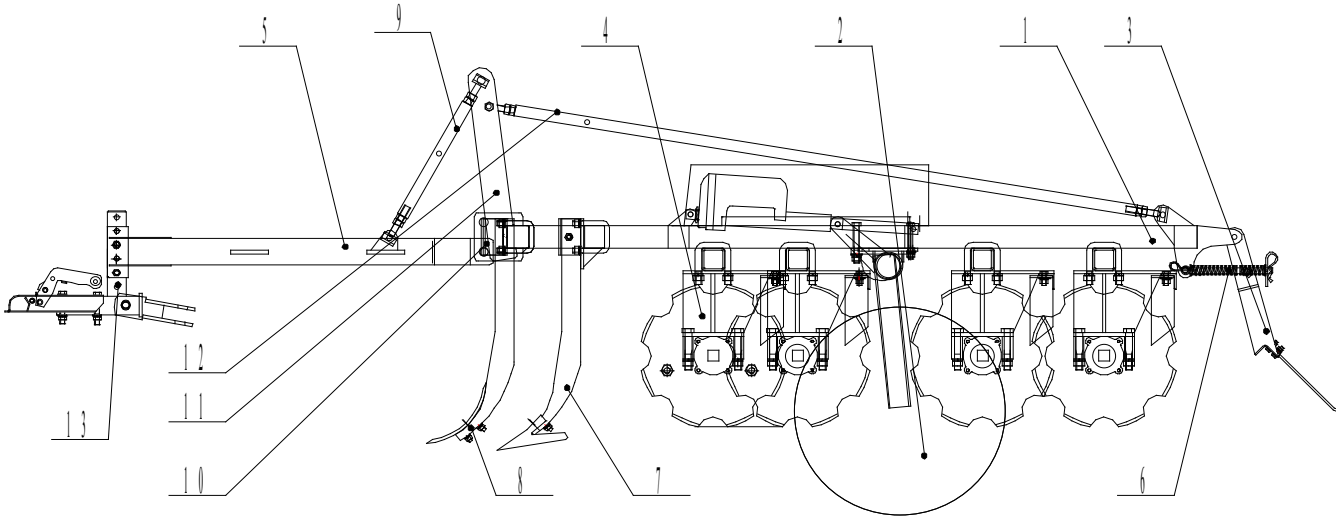
This sign is on the suspension bracket.

4. Main technical specifications

1	Model&Name	/	Faunamaster Harrow DH140
2	Structure	/	3 Point Hitch / ATV / UTV
3	Overall dimensions (LxWxH)	mm	3570×1660×1200
4	Tractor (ATV/UTV) Power	kW	20kW or 27 HP
5	Working Width	mm	1400
6	Speed	km/h	12-15
7	Wheel Diameter	mm	560
8	Weight	kg	400
9	Wheel Type	/	Pneumatic Rubber Wheel
10	Type	/	Offset
11	Disc Diameter	mm	380
12	Disc Qty	Pcs	16
13	Disc Space	mm	164
14	Transport Clearance	mm	240
15	axel Angle of Offset	°	7°-20°
16	Axle Size	mm	28×28
17	Working Depth	mm	100

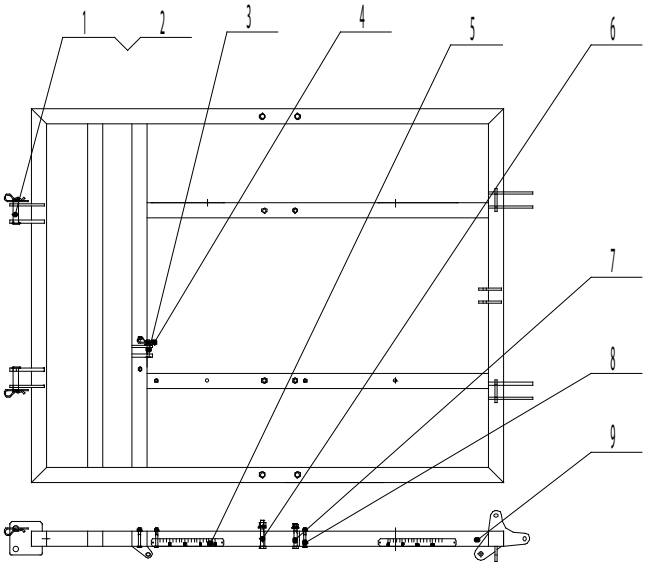
5. The structure of a disc harrow

The disc harrow mainly includes: 1BQX1.4-01 frame welding combination; 2. 1BQX1.4-02 ground wheel assembly; 3. 1BQX1.4-03 soil covered spring tooth welding combination; 4. 1BQX1.4-04 (07) Front and rear Disc Assembly; 5. 1BQX1.4-05 Traction frame welding combination; 6. 1BQX1.4-06 Spring Rod welding combination; 7. 1BQX1.4-08 Weeding Tyne Assembly; 8. 1BQX1.4-09 Loosen Soil Tyne Assembly; 9. 1BQX1.4-10 traction rod combination; 10. 1BQX1.4-11 Tyne Seat welding combination; 11. 1BQX1.4-12 upper suspension welding combination; 12. 1BQX1.4-13 Suspension pull rod welding combination; 13. 2BFQ7-6-3Adjusting seat welding combination (as shown in the figure)



5.1 Frame welding combination mainly including:

1. Pin shaft B22 × 902; 2. 2BFY4C-4-602A4.5 Spring Pin; 3. Pin Shaft B12 × 604, 1BQX1.4-03-6043.5 Spring pin; 5. Angle indicator plate; 6. M14 × 100 bolt combination; 7. M12 × 90 bolt combination; 8. M8 × 80 bolt combination; 9. Frame welding (as shown in the figure)



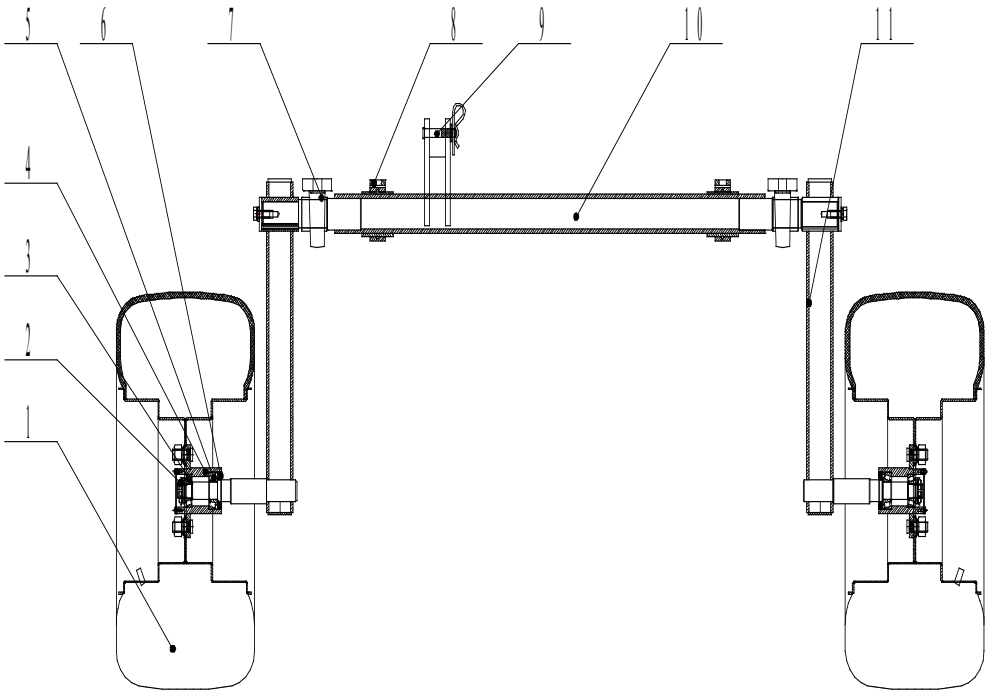
The weeding tyne consists of 1, Tyne 2, small wing point.

The soil loosening tyne consists of 1, Tyne 2, soil loosening point. Connect with countersunk square neck bolts. Two types of shovels have universal handles.

These two components are installed on the front beam of the frame for weeding and soil loosening operations. (These two components cannot be used simultaneously)

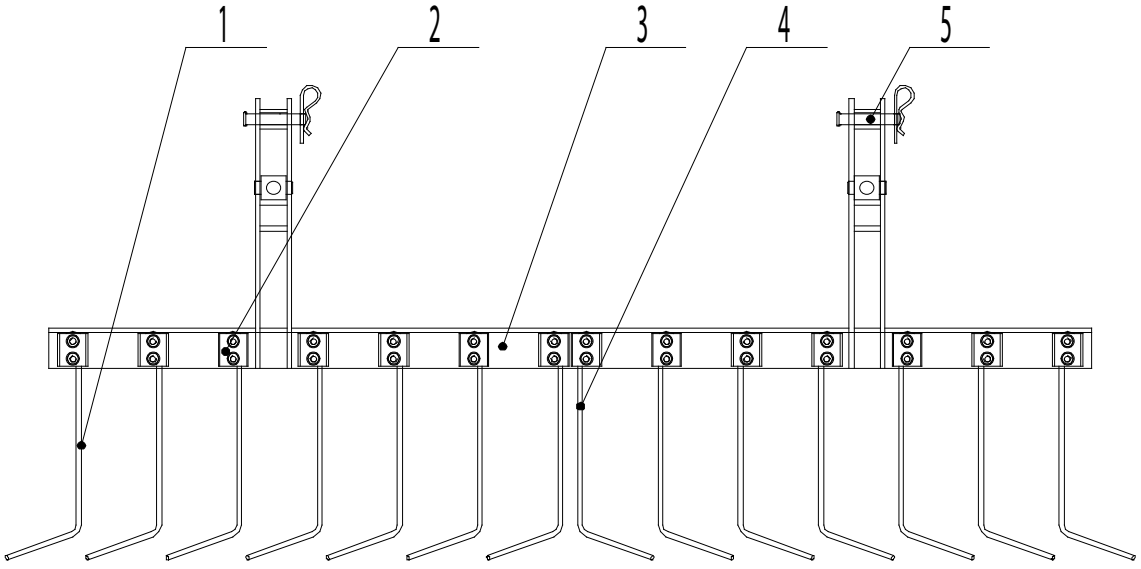
5.2 Ground wheel assembly: mainly including:

1. 1BQX1.4-02-522 × 11-10 Wheel and rim combinations; 2. Small round nut M20 × 1.5;
3. Tapered roller bearing 30204; 4. 1BQX1.4-02-3X tire hub welding combination; 5. Tapered roller bearing 30205;
6. Lip shaped sealing ring FB30 ×52 × 8; 7. Seat bearing UCP208; 8. 1BQX1.4-02-4 Welding of shaft reinforcement sleeve; 9. Pin shaft B12 × 6010, 1BQX1.4-02-2X Welding of ground wheel shaft; 11, 1BQX1.4-02-01 ground wheel support arm welding (as shown in the figure)



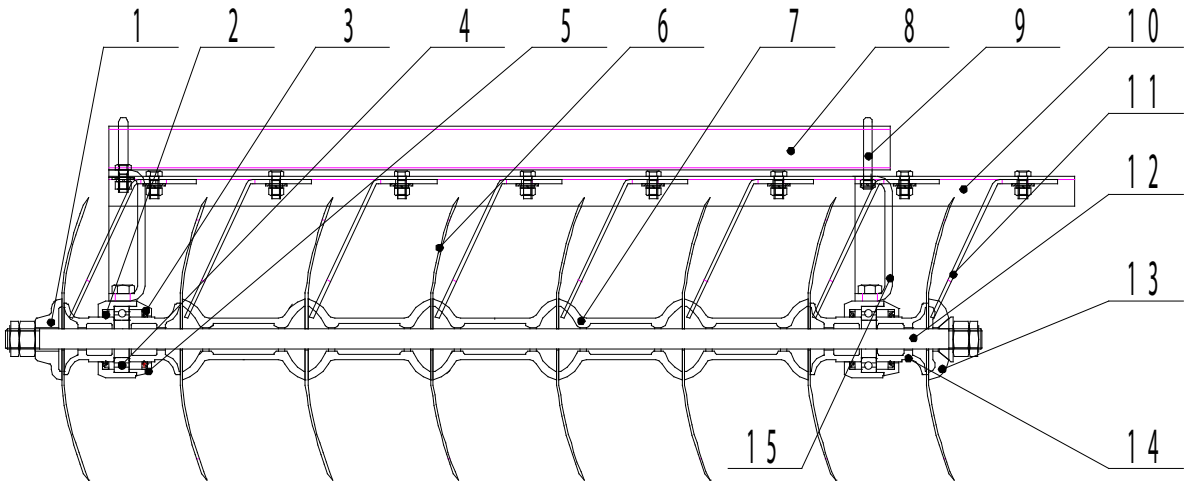
5.3 Spring Tooth Welding Combination: mainly includes:

1. 1BQX1.4-03-601 Spring Tooth Left; 2. 1BQX1.4-03-401 Spring Tooth fixing plate; 3. Spring Tooth Frame Welding;
4. 1BQX1.4-03-602 Spring Tooth Right; 5. Pin Shaft B14 × 75 (as shown in the figure)



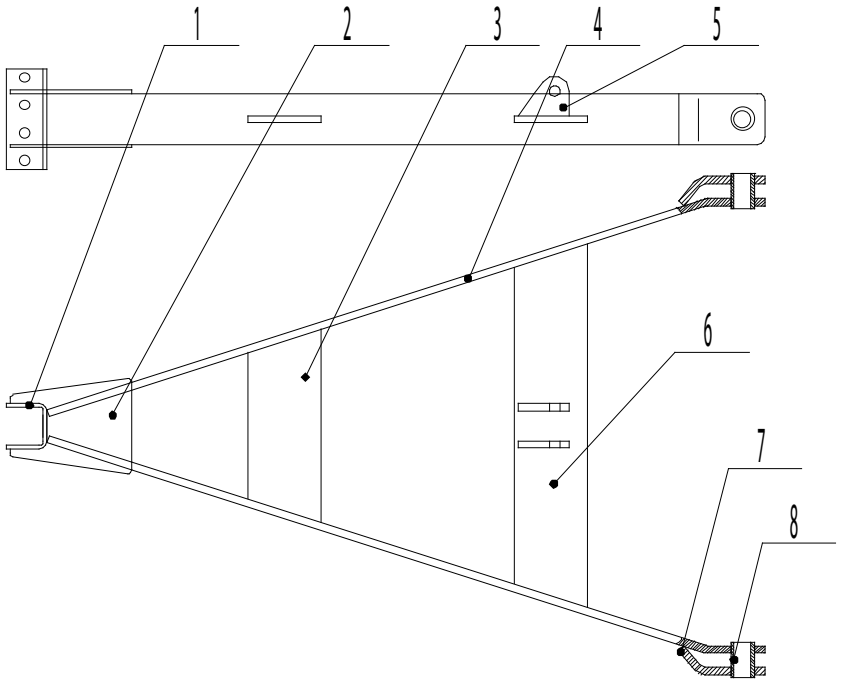
5.4. The combination of front and rear harrow assembly mainly includes:

1. 1BQX1.4-04-202 End stop A; 2. 1BQX1.4-04-2046210 bearing seat; 3. sealing ring FB60 × 80 × 84; 4. Deep Groove Ball Bearing 6210; 5. 1BQX1.4-04-206 Bearing Block Cover; 6. 1BQX1.4-04-401 Notched Disc; 7. Spacer; 8. 1BQX1.4-04-2 Disc Assembly installation beam; 9. 2BFX16-02-601 U-bolt M16; 10. Front (Rear) Scraper Plate Fixed Angle Steel; 11. Front (Rear) Scraper Plate; 12. 1BQX1.4-04-601 Square Shaft; 13. Welding of 1BQX1.4-04-203 End stop B; 14. 1BQX1.4-04-205 Half Spacer; 15. 1BQX1.4-04-3 Disc Assembly Installation seat welding.



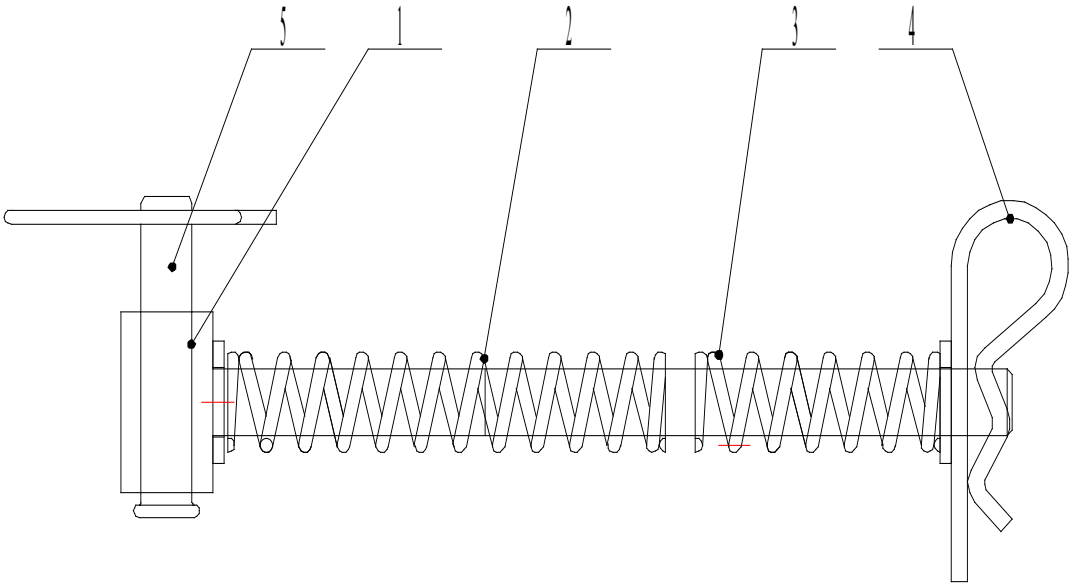
5.5 Welding of traction frame mainly includes:

1. Adjusting and fixing the seat plate; 2. Strengthening ribs; 3. Supporting plate A; 4. Traction plate; 5. Traction rod seat; 6. support plate B; 7. connecting plate; 8. traction sleeve.
This welding is used for tractors (ATV/UTV) Connection to the implement.



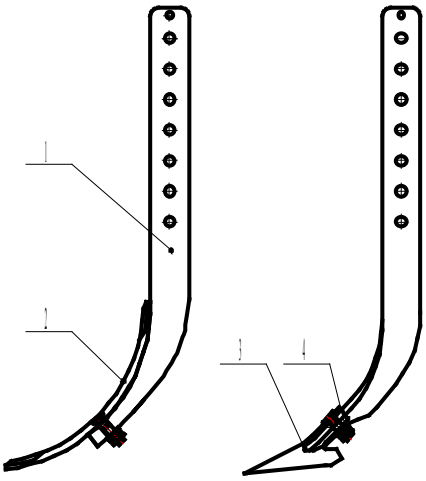
5.6 Guide rod welding combination mainly includes:

1. Rod welding combination; 2. Spring A; 3. Spring B; 4. Spring pin; 5. Pin shaft B14x75



5.7 Weeding tynewelding combination

5.8 Loosening tynewelding combination

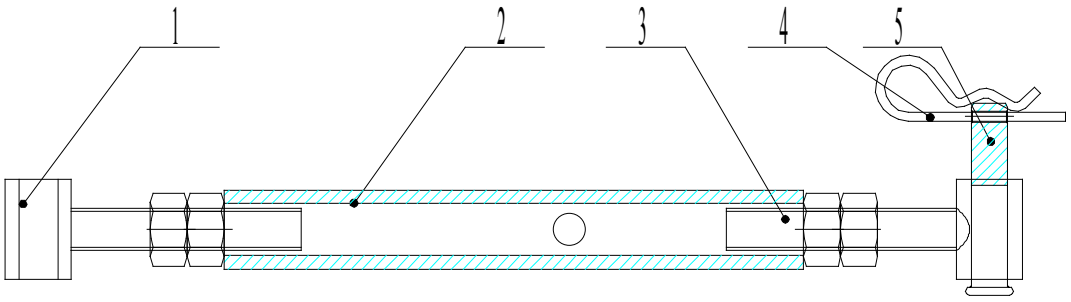


This piece is welded by 1.Tyne Seat 2. U-bolt

Composed of locking pins and other components. This component is installed in front of the rack on the two crossbeams of. Tyne seat is used to install a deep loosening tyne alternatively, a deep loosening tyne with adjustable up and down positions.

5.9 Traction pull rod combination is used to connect the suspension and the rear beam of the frame, improving the overall strength of the machine.

5.10 Suspension Tie Rod Assembly,the traction rod combination connects the suspension frame and the traction frame, and can adjust the height position of the traction point appropriately.

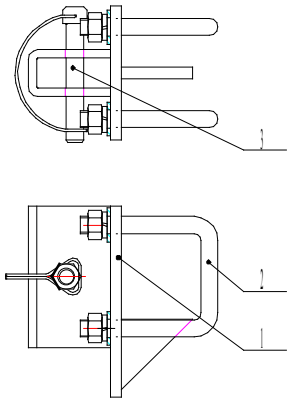


Both of these components are composed of:
1. Left screw welding; 2. Pull rod welding; 3. Right screw welding; 4. Spring pin; 5. Pin shaft B14 * 70.
The welding length of the traction pull rod combination and suspension Tie Rod Assembly are different.

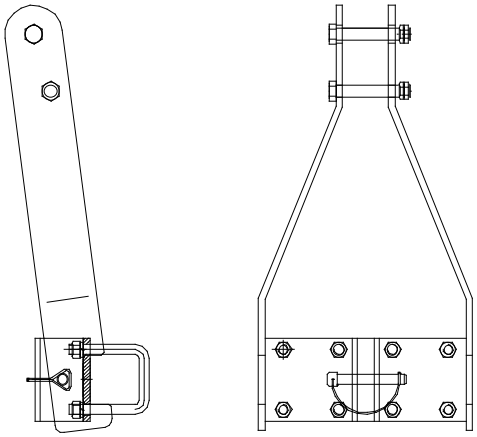
5.11 Tyne Seat welding combination

This piece is welded by 1.Tyne Seat 2. U-bolt

1. Composed of locking pins and other components. This component is installed in front of the rack on the two crossbeams of. Tyne seat is used to install a deep loosening tyne alternatively, a deep loosening tyne with adjustable up and down positions.



5.12 Upper suspension welding combination



The suspension is fixed to the front of the rack with U-bolts. When paired with a ATV/UTV, the upper hole position is used to connect the traction rod combination and the suspension rod combination. When working with a tractor suspension, connect it to the tractor top link.

6. Installation of disc harrow

Before installing the disc harrow, first check the type and quantity of components according to the packaging list. Separate the parts into clean areas, remove dirt from the bearings and friction parts, and apply lubricating oil. Referring to the aforementioned “Part Manual of Disc harrow”, the installation sequence is as follows:

1. Support the Frame welding combination and leave the underground clearance not less than 750mm. place it steadily for assembling other parts.
2. Fix the front/rear disc assembly and fixed plate onto the middle two longitudinal beams of the frame welding assembly using bolts M16 * 170 and washers and nuts.
3. Assemble and fix the ground wheel assembly on the corresponding hole position of the welded longitudinal beam of the frame.
4. Fix the Tyne Seat welding combination on the two crossbeams in front of the frame, with two on the front crossbeams and two on the back crossbeams.
5. Install the upper suspension welding combination on the front beam.
6. Install the loosening tyne or weeding tyne into the corresponding hole of the Tyne Seat. (One of them is mounted on the upper suspension).
7. Press the actuator onto the corresponding holes on the frame and ground wheel shaft.
8. Install the traction frame, traction rod combination, and suspension rod combination.
9. Install the Spring Tooth Board Welding Combination.
10. Connection of wire kits.

7. Adjustment of disc harrow

7.1 Adjustment of front and rear gang angle

The disc harrow needs to be at a certain deflection angle to complete the soil cutting and turning operation. The adjustment range of the gang angle of the disc harrow is generally 14 ° -23 °, which is determined according to the requirements of land preparation. Generally speaking, the larger the disc axel angle, the better the soil plowing effect, but the greater the working resistance, the shallower the working depth. To ensure that the resistance of the front and rear harrow axel´s are nearly equal, the axel angle of the rear gang should be greater than the front axel. If the harrow depth is too shallow, the counterweight can be appropriately increased.

7.2 Adjustment of soil loosening and weeding shovels

Adjust the installation position on the left and right sides of the frame tyne seat according to agricultural requirements, paying attention to staggered front and rear, and symmetrical arrangement on the left and right sides. The general spacing can be adjusted to 300 millimeters. Adjust the upper and lower installation positions of the deep loosening tyne(weeding tyne) to achieve the desired working depth. Depth adjustment can be carried out during field work.

7.3 Adjustment of overall machine level

After hooking the ATV/UTV with the disc harrow, adjust the length of the traction rod to keep the frame in a horizontal position, otherwise it will affect the consistency of the working depth of the front and rear rows of harrow blades. After entering the field for operation, it may also need to be adjusted again.

7.4 Adjustment of the working position of the soil cover spring tooth

In the field, the pop-up working position can be adjusted as needed by adjusting the installation position of the guide rod welding combination spring pin.

8. Operating instructions

8.1 Inspection before operation

1. Check and tighten all fasteners.
2. Fill all parts that need to be lubricated with lubricating oil.
3. Check the operation of the actuator and whether the ground wheel lifting is normal.

8.2 Precautions for use

1. Adjust the working angle of the harrow blade according to the ground conditions and needs.
2. During transportation, the soil covered spring tooth components can be folded up and forward.
3. When the working depth is not enough, appropriately add counterweights on the rack and securely fix them.
4. When working in the field, use an actuator to lift the ground wheel off the ground, and put it down during transportation.

8.3 Safety rules for use

1. Strictly stop or driving according to regulations, and only after confirming safety and issuing a signal can the tractor/ATV/UTV be started.
2. It is strictly prohibited to adjust, repair, and other operations during the movement of agricultural machinery.
3. During the operation of the disc harrow, it is prohibited for personnel to stand between the tractor (ATV/UTV) and the disc harrow or sit on the disc harrow.
4. When troubleshooting or repairing the machine, it is necessary to stop the machine before proceeding.

9. Maintenance and storage

9.1 Daily technical maintenance

1. After the completion of each use, the soil on each part of the equipment should be cleaned in a timely manner.
2. After each use of work, check and tighten the fasteners in all parts.
3. Check whether each transmission part rotates flexibly. If it is abnormal, check and adjust it in a timely manner.
4. The lubrication point should be filled with grease before each use.

9.2 Storage during out of season

1. After the seasonal operation, all parts should be thoroughly cleaned.
2. Add lubricating grease to the parts that need lubrication.
3. The paint removal components of the disc harrow should be repainted, and damaged and worn parts should be repaired or replaced.
4. The disc harrow should be placed in dry conditions.
5. The harrow and ground wheel should be padded with wooden boards.
6. The spare parts and tools of the machine should be properly stored, under dry conditions.

10. Common faults and troubleshooting methods

Faults	Fault cause	Troubleshooting
Offset to one side during operation	Unbalanced force	Adjusting the angle of the axel
Inconsistent depth of front and rear axel	The front and rear of the disc harrow are not level	Adjust the length of the traction rod to keep the frame level
Discs with dirt	High soil moisture	1. Adjust the position of the mud scraper 2. Work when low soil moisture
Shallow working depth	1. The soil is too hard 2. Insufficient overall weight 3. The working angle of the axel´s are too large	1. Add counterweight 2. Reduce the working angle of the axel´s.

11. List of Vulnerable Parts

	Drawing Number	Name	Qty
1	GB/T 297	Bearing 30204	2
2	GB/T 297	Bearing 30205	2
3	1BQX1.4-03-601	Rake Spring Rod Left	7
4	1BQX1.4-03-602	Rake Spring Rod Right	7
5	2BFX16-02-601	U Bolt M16	4
6	1BQX1.4-04-401	Notched Disc	16
7	1BQX1.4-04-402	Front Scraper	8
8	1BQX1.4-07-401	Rear Scraper	8
9	1BQX1.4-04-204	6210 Bearing houes	4
10	GB/T 276	Bearing 6210	8
11	GB/T 9877.1	Seal FB 60×80×8	8
12	1BQX1.4-04-205	Half Spacer	8
13	1BQX1.4-04-206	Bearing House Cap	4
14	3ZFG6-11-402	Weeding Point	5
15	1BQX1.4-09-402	Loosen Soil Point	5
16	1BQX1.4-11-601	U Bolt	2

12. Appendix

12.1 Under-warranty Regulations

1. The warranty period for this product is 24 months, calculated from the date of purchase (invoice filling date).
2. During the warranty period, if the equipment is damaged or the performance deteriorates due to product quality, and it is confirmed that the manufacturer is responsible, a warranty will be given.
3. No warranty beyond the warranty period.

The following is not covered by the 24 month warranty.

(1) Due to improper use, or lack of maintenance.

(2) Self modification.

Fauna master HARROW

Faunamaster ApS · Tårnvej 32 · VAT No. DK42053767
Phone +45 61404080 · Web: www.faunamaster.com · Mail: sales@faunamaster.com