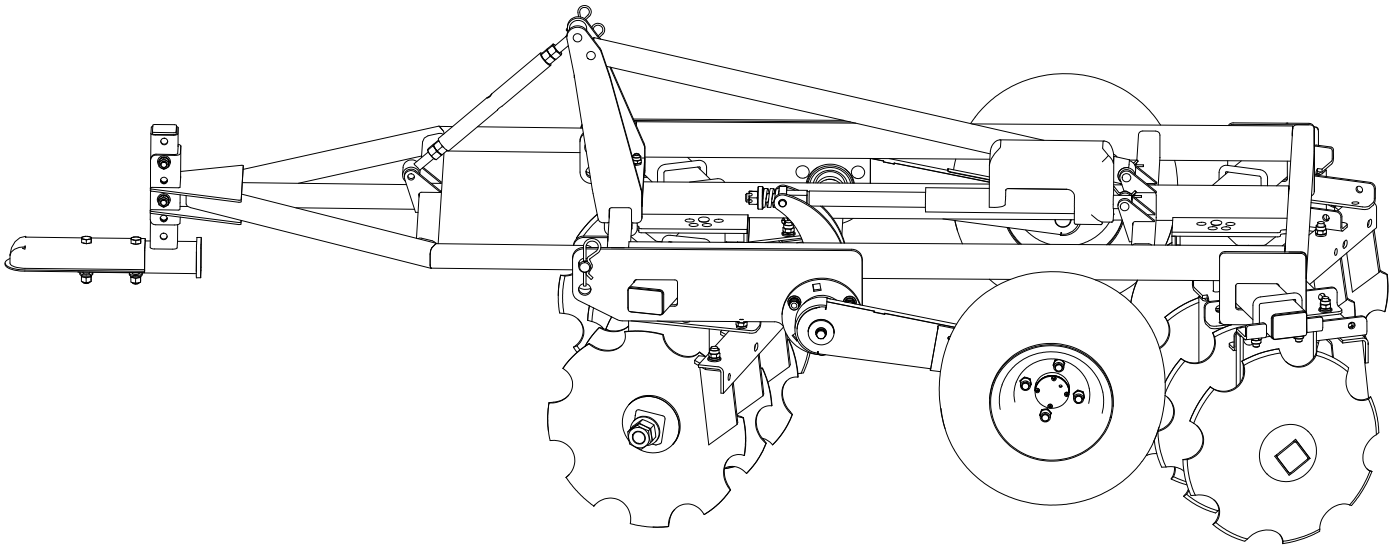
Faunamaster®



# DH120 Disc Harrow
# User Manual

Please carefully read this manual and follow all the instructions. Failure to comply with the warnings and precautions may result in serious injury or death.

# Thank you for purchasing a Faunamaster DH120

This manual provides the main technical parameters, safety rules, structure of main parts, installation, adjustment, operation and daily maintenance, as well as common faults and troubleshooting.

The main service object of the manual is the driver. It will help you to be familiar with the structure, installation method, safe operation, daily maintenance and adjustment of the machine, as well as the troubleshooting of common faults. In order to give full play to the good performance of the machine, extend the service life of the machine, and create considerable economic benefits for you, we hope you read this operation manual carefully before using the machine; strictly implement the provisions in the book, use, maintain and maintain the disc harrow; and welcome you to write to our company about the valuable experience and opinions accumulated in the process of using the machine, so that we can make further progress Step by step to improve the design and product quality.

This instruction manual is not a product quality guarantee, so it is not allowed to put forward any requirements based on the data, illustrations and instructions in this book. With the development of technology and the needs of users, this product will continue to improve and perfect. The contents in the manual may be different from the actual structure. If there is any difference with the real object, the real object shall prevail without further notice. Please pay attention to it.

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

# Catalogue

# 1. Summary

DH 120 disc harrow is a disc harrow specially designed by our factory for small tractors or ATV/UTV. The disc harrow and the ATV/UTV are matched as traction disc harrows, and when matched with the tractor, the traction beam part needs to be removed, which is a suspended disc harrow. The supporting power of this machine is 11-29.4kW, mainly used for breaking soil and leveling after plowing. It can also be used for soil stirring, weeding, fertilizer mixing, and seed covering after aircraft sowing. Sometimes raking can also be used as a substitute for tillage. It is a topsoil tillage machine.

In this manual, safety warning symbols indicate important safety information. When seeing this symbol, one should be alert to 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, you can contact the company.

# 2. Intended use

The DH120 disc harrow is only used for conventional agricultural operations that are paired 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 rack.

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

Before using the equipment, add sufficient lubricating oil.

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

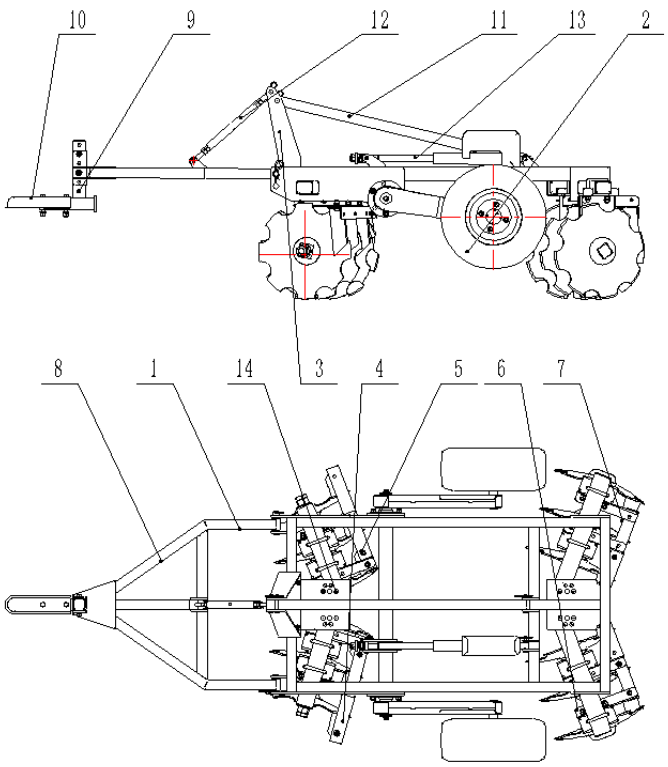
The tire must be disassembled and assembled without air pressure.

# 4. Main technical specifications

| | | | |
|---|---|---|---|
| 1 | Model&Name | / | DH120 Disc Harrow |
| 2 | Overall dimensions (LxWxH) | mm | 2562×1262×852 |
| 3 | Tractor (ATV/UTV) Power | kW/HP | Tractor +11 KW<br>ATV/UTV + 30HP or 450 ccm |
| 4 | Working Width | mm | 1200 |
| 5 | Speed | km/h | 4-12 |
| 6 | Wheel Diameter | mm | 420 |
| 7 | Weight | kg | 265 |
| 8 | Wheel Type | / | Pneumatic Rubber Wheel |
| 9 | Disc Diameter | mm | 380 |
| 10 | Disc Qty | Pcs | 12 |
| 11 | Disc Space | mm | 165 |
| 12 | Transport ground Clearance | mm | 220 |
| 13 | Gang Angle of Offset | ° | 7°-20° |
| 14 | Axle Size | mm | 28×28 |
| 15 | Working Depth | mm | 80 |

# 5. The structure of a disc harrow

The disc harrow mainly includes:

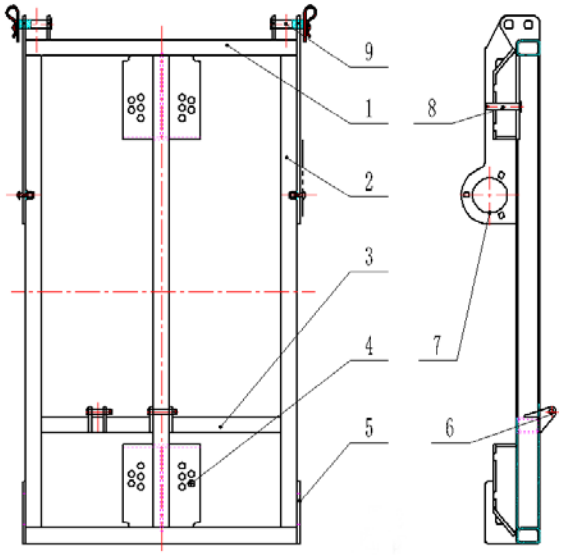



| | |
|---|---|
| 1 | Frame welding |
| 2 | Ground wheel assembly |
| 3 | Upper suspension assembly |
| 4 | Left front gang assembly |
| 5 | Left rear gang assembly |
| 6 | Left rear gang assembly |
| 7 | Right rear gang assembly |
| 8 | Traction frame welding |
| 9 | Adjustment seat assembly |
| 10 | Trailer ball hitch |
| 11 | Rear stretching bar assembly |
| 12 | Front stretching bar assembly |
| 13 | Actuator |
| 14 | Adjustment pin |

Figure 1

## 5.1 Frame welding assembly

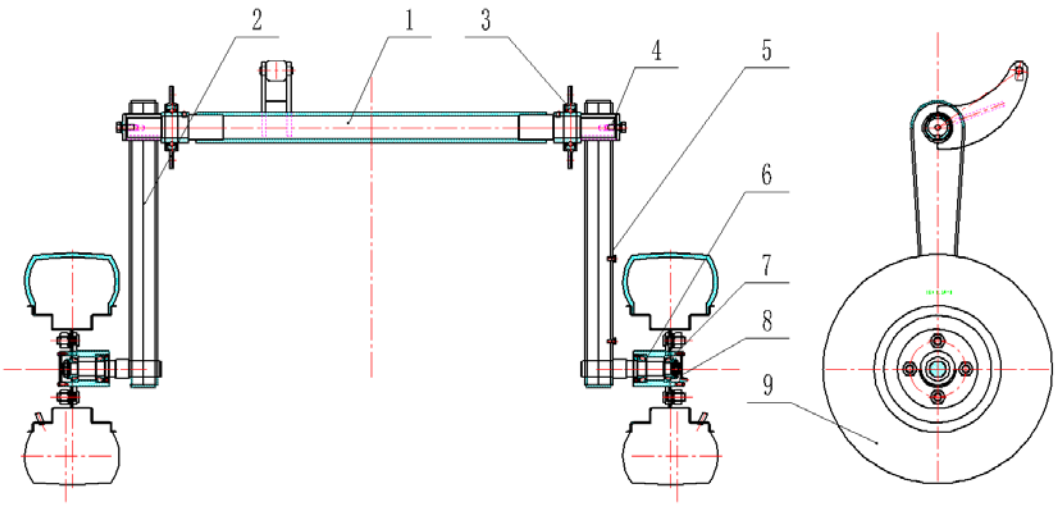
The frame is the foundation for the installation of various components, and other components are installed on the frame to form the whole machine.




| | |
|---|---|
| 1 | Frame crossbeam |
| 2 | Frame longitudinal beam |
| 3 | Tie rod seat crossbeam |
| 4 | Rake string angle adjustment plate |
| 5 | Frame rear side plate |
| 6 | Tie rod fixing seat |
| 7 | Frame front side plate |
| 8 | Adjustment pin |
| 9 | Traction frame connecting pin |

Figure 2

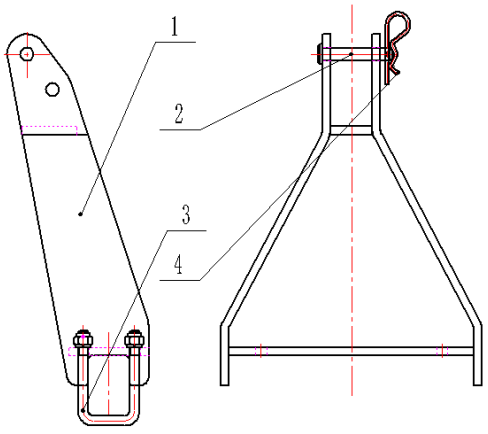
## 5.2 Ground wheel assembly




| | |
|---|---|
| 1 | Ground wheel shaft welding |
| 2 | Ground wheel support arm welding |
| 3 | External spherical ball bearing UC208 |
| 4 | Key C8×63 |
| 5 | Support arm guard plate |
| 6 | Bearing 30205 |
| 7 | Bearing 30204 |
| 8 | Small round nut M20×1.5 |
| 9 | Tire rim combination16×6.50-8 |

Figure 3

## 5.3 Upper suspension assembly

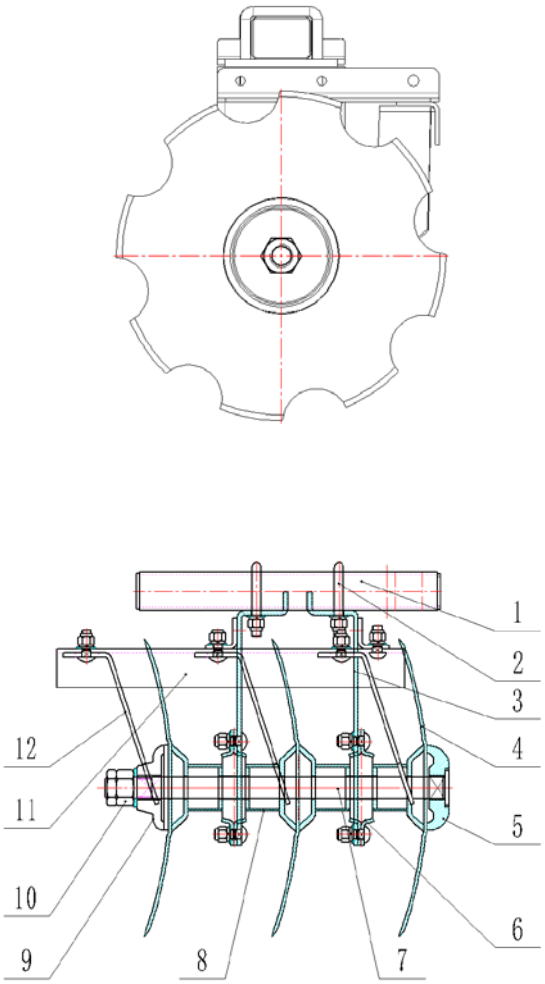



| | |
|---|---|
| 1 | Upper suspension welding |
| 2 | Upper suspension pin |
| 3 | U-shaped bolt |
| 4 | Spring pin |

The upper suspension assembly is installed on the front beam of the frame, and the two holes at the upper end are connected to the front and rear tie rods respectively.

Figure 4

## 5.4 Gangs Assembly




| | |
|---|---|
| 1 | Beam welding |
| 2 | U-bolt |
| 3 | Fixed seat connecting plate |
| 4 | Notched disc |
| 5 | End stopper inside |
| 6 | Square hole bearing combination F29 |
| 7 | Rake string square shaft |
| 8 | Half pipe welding |
| 9 | End stopper outside |
| 10 | Lock nut M27 |
| 11 | Scraper fixing plate |
| 12 | Scraper |
| There are 4 types of gangs combinations, 1 each for front left, front right, rear left, and rear right. | |

Figure 5

## 5.5 Traction beam and adjustment combination

Mainly includes: traction frame welding, adjustment seat combination, trailer cover. (See Figure 1)

Its function is to connect the main machine part with the ATV/UTV by traction. There are multiple upper and lower holes on the adjustment seat for selection, which are combined with the front tie rod to ensure that the working depth of the rake string is consistent before and after the unit is working.

# 6. Installation of disc harrow

Before installing the disc harrow, first check the types and quantities of parts according to the packing list, separate the parts by parts and place them in a clean place, remove the dirt on the bearings and friction parts, and apply lubricating oil. Referring to the aforementioned “Structure of Disc Harrow”, the installation sequence is as follows:

6.1 Take the disc harrow out of the wooden box.

6.2 Assemble and fix the ground wheel to the corresponding hole position of the frame welded longitudinal beam.

6.3 Install the upper suspension welded assembly on the front beam. Sit in the middle of the left and right positions.

6.4 Install the traction frame welded, the adjustment seat assembly, and the trailer ball hitch.

6.5 Install the front and rear tie rod assembly.

6.6 Install the actuator.

6.7 Debug after installation

# 7. Adjustment of disc harrow

## 7.1 Adjustment of the deflection angle of the front and rear harrows

The disc harrow blade needs to be deflected at a certain angle to complete the soil cutting and turning operation. The deflection adjustment range of the disc harrow blade is generally 10° to 20°, with a total of 5 installation positions. Its working angle is determined according to the requirements of land preparation. Generally speaking, the larger the deflection angle, the better the turning effect, but the greater the working resistance, the shallower the working depth. The deflection angle of the rear harrow group should be equal to or greater than the deflection angle of the front harrow string. If the harrowing depth is too shallow, the counterweight can be appropriately increased. Note that the left and right harrow string angles should be consistent. For the front row harrow string, the closer the mounting hole is, the smaller the working deflection angle. The opposite is true for the rear row.

## 7.2 Adjustment of the whole machine level

After the four-wheeled ATV/UTV is hooked to the disc harrow, adjust the length of the traction rod so that the frame is in a horizontal position, otherwise it will affect the consistency of the working depth of the front and rear rows of harrow blades. It may also be necessary to adjust again after entering the field operation.

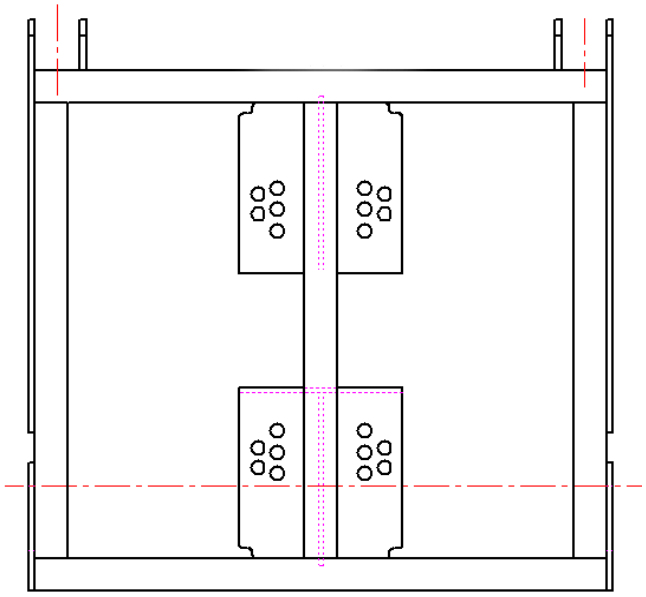


Figure 6

# 8. Operation Instructions

## 8.1 Inspection before operation

(1) Check and tighten all fasteners.

(2) Fill all parts that need lubrication with lubricating oil.

(3) Check the working condition of the actuator and whether the ground wheel is raised and lowered normally.

## 8.2 Precautions for use

(1) Adjust the working angle of the harrow blade according to the ground conditions and needs.

(2) When the working depth is not enough, add appropriate counterweights to the frame and fix them reliably.

(3) Use the actuator to lift the ground wheel off the ground during field operations and lower the ground wheel during transportation.

## 8.3 Safety rules for use

(1) Stop and drive strictly according to regulations. Only after confirming that it is safe and giving a signal can the ATV/UTV be started.

(2) It is strictly forbidden to adjust, repair, etc. while the agricultural machinery is moving.

(3) When the disc harrow is in operation, it is forbidden for people to stand between the ATV/UTV and the disc harrow or sit on the disc harrow.

(4) When troubleshooting or repairing the machine, it must be stopped.

# 9. Maintenance and storage

## 9.1 Daily technical maintenance

(1) After the completion of each shift, the soil on each part of the equipment should be cleaned in a timely manner.

(2) After each shift 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 once per shift.

## 9.2 Storage during out of season

After the seasonal operation, all parts should be thoroughly cleaned.

Add lubricating grease to the parts that need lubrication.

The paint removal components of the disc harrow should be repainted, and damaged and worn parts should be repaired or replaced.

The disc harrow should be placed in a dry and snow-proof agricultural machinery shed.

The harrow and ground wheel should be padded with wooden boards.

The spare parts and tools of the machine should be properly stored.

# 10. Common faults and troubleshooting methods

| Faults | Fault cause | Troubleshooting |
|---|---|---|
| Offset to one side during operation | Unbalanced force | Adjusting the angle of the shafts |
| Inconsistent depth of front and rear shafts | 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<br>2. Work when low soil moisture |
| Shallow working depth | 1. The soil is too hard<br>2. Insufficient overall weight<br>3. The working angle of the gangs are too large | 1. Add counterweight<br>2. Reduce the working angle of the shafts. |

# 11. List of Wearing Parts

| | Product Number | Name | Qty |
|---|---|---|---|
| 1 | SDH120B204 | Tapered roller bearings | 2 |
| 2 | SDH120B205 | Tapered roller bearings | 2 |
| 3 | SDH120BSPF | Bearing Seat PF208 | 2 |
| 4 | SDH120DISC | Notched Disc | 12 |
| 5 | SDH120LSCL | Scraper Left | 6 |
| 6 | SDH120RSCR | Scraper Right | 6 |
| 7 | SDH120B396 | Bearing 39602F29 | 8 |

# 12. Appendix

Register your new Faunamaster DH120 for warranty, on Faunamaster.com
https://faunamaster.com/garantiregistrering

## 12.1 Under-warranty Regulations

1. The warranty period for this product is 12 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 situations do not include guarantees, and reasonable repair fees will be implemented:

(1) Due to improper use, maintenance, or upkeep.

(2) Self modification due to violation of regulations.

(3) There are guarantees vouchers and shipping receipts.

(4) Failure to maintain the damaged part in its original condition.

(5) Faults caused by force majeure.

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