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## **INTRODUCTION**

### **CAREFULLY READ THESE INSTRUCTIONS**

For the start and optimal use of your disc harrow, respect the following instructions.

These instructions must be considered an integral part of the disc harrow and handed over in case of reselling.

The left or right side of the disc harrow is determined by looking from the rear of the disc harrow towards the drawbar.

All the information, drawings and specifications indicated in these instructions are the newest at the time of publication.

We reserve the right to bring modifications at any time without previous notice.

Arbitrary modifications made on the disc harrow exclude the manufacturer's responsibility if any damage should result from these modifications.

**THIS SIGN IS USED THROUGHOUT THE LEAFLET TO CALL YOUR  
ATTENTION TO THE INSTRUCTIONS REGARDING YOUR SAFETY.  
RESPECT THEM AT ALL TIMES.**

# **SAFETY INSTRUCTIONS**

## **ATTENTION !**

**Disc harrows "GREGOIRE-BESSON" are manufactured to be used only for usual agricultural work.**

**The operator is responsible for every use out of this context.**

### **a) ADJUSTMENT**

- Carry out adjustment and maintenance work only when the disc harrow is not in operation.
- Wear appropriate safety clothes when doing maintenance work.
- Ensure a safety zone for other people.
- Do not carry out any adjustment and maintenance work without perfectly understanding the procedure.
- For all maintenance work, use the appropriate tools and equipment.

### ***RECOMMENDATIONS***

- Get used to the disc harrow functioning and disc harrow controls. Do not let anybody use the disc harrow without previous training.
- Only the operator is allowed to be in the tractor cab. He must not leave the seat while working.
- Nobody is allowed to climb onto the machine during work.

## b) MAINTENANCE

During maintenance, be sure that the safety instructions are respected.

Maintenance zone must be clean, dry and well-lit.

- In case of intervention or dismantling of a disc gang with the machine lifted, shore to support the gangs.
- After intervention, make sure that all the tools and equipment are out of the maintenance area.
- All the articulations must be greased at regular intervals with quality grease.
- Check regularly tightening of nuts and bolts.
- Keep a correct tyre inflation pressure. Do not exceed recommended inflation pressure.

WHEEL 15 R 22.5 → 5.5 bars
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### ATTENTION !

**Explosion of the tyre with the rim can provoke serious injuries. Only experienced people are allowed to repair tyres and rims with the appropriate tools.**

- Always use genuine GREGOIRE-BESSON parts; these parts only correspond to the manufacturer's technical particularities.

**THE GOOD MAINTENANCE OF YOUR MACHINE GUARANTEES  
ITS LONG LIFE**

## **STORAGE OF THE DISC HARROW**

- If the machine is unused after season, clean the disc harrow carefully to prevent from every risk of corrosion and dampness.
- If necessary, carry out paint touchings up.
- Check that there are no worn or broken parts on the disc harrow. If the case arises, order the parts and ensure maintenance work.
- Park your disc harrow under cover from bad weather.


## **c) HYDRAULIC CONNECTION**

The hydraulic connection can be subjected to high pressures.

- When the machine is fitted with several oil plugs, respect the oil flow direction of each one.
- Before assembling oil plugs, check that the pressure is a nil draw on the tractor and the disc harrow.
- If you notice hoses in bad condition, do not hesitate to change it. Respect its dimensions.
- Never search for a leak with your hand. Leaking fluids (oil) can come through the skin and provoke serious injuries.
- In case of injury, consult a doctor immediately.
- In case of an intervention on the hydraulic system, lower the machine onto the ground, stop the pressure by stopping the tractor motor and then by acting on the spool-valve.

#### d) ROAD TRANSPORT

**FOR YOUR SAFETY AND THE SAFETY OF OTHERS,  
RESPECT THE FOLLOWING SAFETY INSTRUCTIONS:**

- 
- The lifting system of the machine is fitted with a safety pin. Position the safety pin (see fig. page ?). It operates as a safety in case hose breaks during transport.  
*↳ Mettre n° de page .*
  - When you hitch the machine to the tractor, check the drawbar height and also the fixation which locks the drawbar ring to the tractor drawbar.
  - The use of the GREGOIRE-BESSON machines must always be made in accordance with the current directives and rules regarding road safety.
  - Drive at a reasonable speed in conformity with the laws to be able at any time to control both tractor and machine.
  - Do not drive when somebody is standing near the tractor or the machine.
  - Comply with all the safety rules when driving, particularly on bends or on narrow roads.
  - During road transport, the machine must be fitted with warning lights, which are to be removed during work to prevent them from damage.
  - Take all the precautionary measures when you leave the tractor - stopped motor - removed ignition key - apply hand brake on some models.
  - During road transport, nobody is allowed to climb onto the machine or between the tractor and the machine.

## ***VSL 400 - IDENTIFICATION***

### *Overall View*

#### ***VSL 400***

Vérin double-effet	DOUBLE-ACTING RAM
Chassis porteur	MAIN FRAME
Train de disques	DISC GANG
Flèche d'attelage	DRAWBAR
Bobine	SPACER
Palier	BEARING
Train porteur	CARRYING WHEELS
Décrottoir	DISC SCRAPER
Vis de réglage	ADJUSTING SCREW
Barre de poussée	TOOTHED BAR
Ressort de compensation	COMPENSATION SPRING
Barre de limitation de terrage	DEPTH LIMITING BAR

## ***ATTACHMENT TO THE TRACTOR***

Bague

RING

Broche

PIN

Barre de limitation de terrage

DEPTH LIMITING BAR

Attachment of the disc harrow to the tractor.

(Fig.)



## ***ATTACHMENT TO THE TRACTOR***

- Make sure that the hydraulic spool-valves are clean before coupling the machine to the tractor.
- Hitch the ring of the drawbar to the tractor hook, operating the spool-valve (use the prop if necessary).
- If necessary, modify the position of the axle into the holes which are located at the end of the drawbar cylinder.
- When working, observe the drawbar position according to below figure.
- When the machine is in transport position, slide the ring into the depth limiting bar located under the ram. Position the pin in the hole which comes through the ring and also depth limiting bar. This operation brings safety in case a hose breaks during road transport.

## ***DRAWBAR ADJUSTMENT***

To attain the best soil reaction from the discs of a "V" shaped disc harrow, it is necessary to adjust the drawbar. This adjustment is dependent on the gang angle and soil conditions.

This adjustment is carried out by the adjustment of rod (A). The greater the opening angle, the more the drawbar should be moved left; this is in relation to the disc harrow forward direction. In all cases, the disc harrow has to perfectly follow the tractor alignment.

In working position, adjust the working depth of the disc gang by means of the collar (B) which serves as a stop; when the drawbar cylinder is against the stop, tighten the lock-nut.

## ***GANG ANGLING ADJUSTMENT***

The disc gang cutting angle adjustment is carried out by means of an adjusting block (A) equipped with a pin (B). The position of this pin into one of the holes determines the cutting angle. An efficient tightening between the disc gang supporting beam and the main frame can be obtained with help of nut (C).

### Procedure :

- Put the machine into transport position.
- Loosen nut (C).
- Place pin (B) in selected hole.
- Slide the disc gang by means of the adjusting screw, ensuring the pin (B) is on its stop in the oblong hole in the opposite side of the disc harrow forward direction.
- Retighten the nuts.

The good working of the machine depends on the correct adjustment of the disc gangs. A proper balance between the opening of the front and rear gangs is necessary.

The working depth adjustment is obtained by increasing the cutting angle of the front discs, i.e. by pivoting the front gang to the front part of the machine.

To obtain a correct working action, the front gang angle has to be greater than the rear gang angle.

## ***WORKING DEPTH ADJUSTMENT***

Located under the lift ram, the depth limiting bar makes it possible for the working depth to be adjusted.

### Procedure :

- Put the machine into transport position.
- Slide the ring (B) for the ring to be placed in line with the selected hole on the depth limiting bar.
- Engage the pin (C) through the ring and the depth limiting bar and place the safety pin. (The two holes located on the depth limiting bar enable precise adjustment).
- Find a proper balance between the opening of the disc gangs, the drawbar position and the required depth wheel.

## ADVICE FOR CORRECT ADJUSTMENT

EFFECTS	POSSIBLE CAUSES	ANSWERS
Insufficient working depth.	Cutting angle not large enough. Wheel-train touches.	Increase cutting angle. Lift the wheels.
Work is too deep.	Cutting angle too large. Wheel-train does not touch.	Reduce cutting angle. Lower the wheels.
Front gangs penetrate in the soil more than rear gangs.	Front gang opening angle too large, or drawbar cylinder stop badly adjusted.	Close front disc gangs, or adjust the drawbar cylinder stop.
Machine offsets from traction axis of the tractor.	Angle opening badly adjusted. Drawbar badly adjusted.	Balance the angle opening. Adjust the drawbar.
Trash between discs	Scrapers badly adjusted. Unfavourable working conditions	Adjust scrapers. Reduce cutting angle.

## ***MAINTENANCE***

- ☞ General joints of the different machines need a regular maintenance.
- ☞ Grease the general moving device every 14 hours.
- ☞ The bearings of the disc gangs will be greased every day, according to the use frequency. (Do not grease in an intensive way ; a few grease gun pumps are sufficient).
- ☞ Use a grease recommended for ball bearings. When the soil is abrasive or sandy, greasings can be carried out more frequent.
- ☞ Check the pressure and the tightening of the wheels.
- ☞ In case of dismantling of a complete disc gang, stead it correctly before taking it apart from the chassis.
- ☞ Before loosening the disc gang, remove the breaking nut. Note the assembling order.
- ☞ When you reassemble discs, bearings, spacers and  $\frac{1}{2}$  spacers, check that the support sides on the discs are correct.
- ☞ Grease the worm and the inner side of the nut. Tighten the nut at the end of the shaft with a power of about 150 kg/m.

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