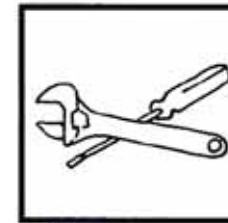


## DISCS HARROW X DESIGN SEMI-MOUNTED

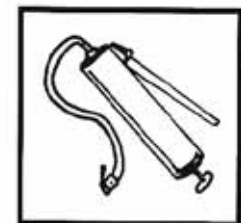


### OPERATOR MANUAL 2007

RÉGLAGE



ENTRETIEN



## XPRC

SEMI-MOUNTED - VERTICAL FOLDING

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**GRÉGOIRE  
BESSON**

## NOTES

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## INTRODUCTION

### READ CAREFULLY THIS MANUAL

In this operator's manual are given all information for proper and safe adjustment, operation and maintenance of the machine.

Read it entirely and carefully before using the machine and follow all safety recommendations.

For an easier and optimal use of the machine, read this manual entirely and follow recommendations in the given order.

This instruction manual must be considered as an integral part of the machine and handed over in case of reselling.

Right hand side and left hand side, front end and rear end are determined by facing in the direction the machine will work in the field.

All information, drawings, and specifications given in this manual are the newest at the time of publication.

Manufacturer reserves right to make any modification at any time without any obligation to notice or to modify any delivered or already sold machine.

**If the machine has been modified in any way from the original design without written agreement from Grégoire-Besson, the manufacturer does not accept any liability for injury or warranty. Warranty would become void.**



This symbol is used in the following manual to **catch your attention on warnings concerning your safety.**

So please when you see it in this manual or on the equipment, **strictly follow given information.**

Grégoire-Besson equipments are exclusively designed to be used by professionals for regular farm tillage in farmed fields. Manufacturer shall not be responsible for damage or injury resulting from any other use.

## NOTES

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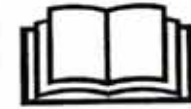
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# NOTES

## SAFETY STICKERS

**READ THE INSTRUCTIONS. BOOKLET.**



Read the instructions booklet and the safety instructions before the machine start. Respect them during work.

**SAFETY ZONE**



Stay in the background of the safety zone when the machine is unfolding.

**MOVE AWAY FROM THE MACHINE.**



Danger in the working zone : stay in the background.



**LOCKING BEFORE ACTION.**  
Install the locking system before any intervention on the machine.

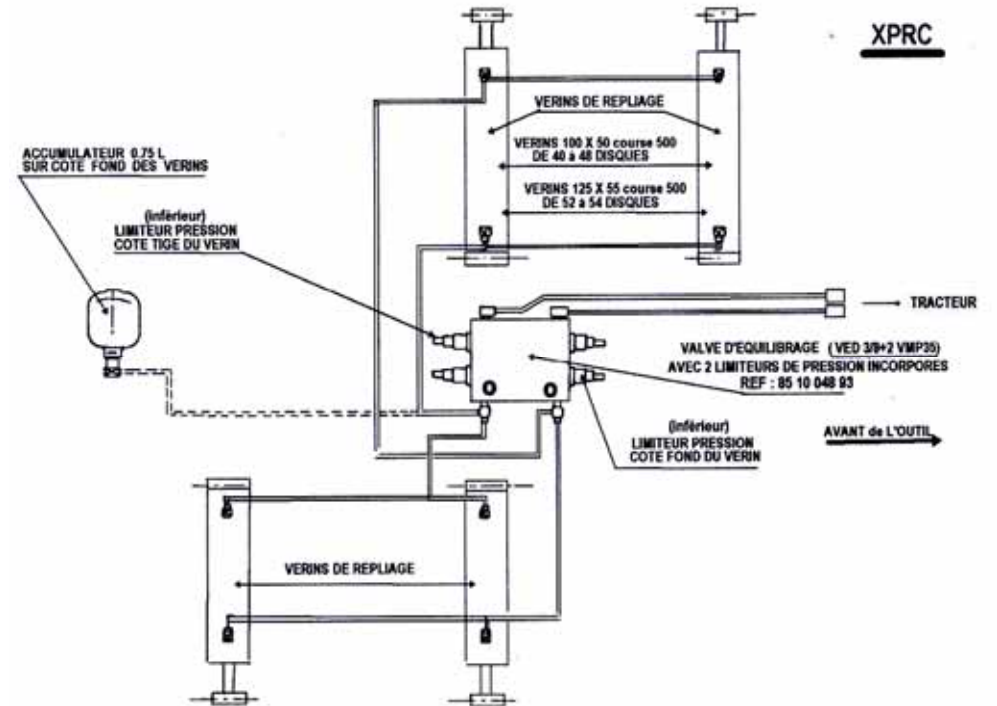


**LEAK AND MAINTENANCE.**  
Be careful of the leaks of fluids under pressure. Refer to the instructions of this booklet for the maintenance.

## NOTES

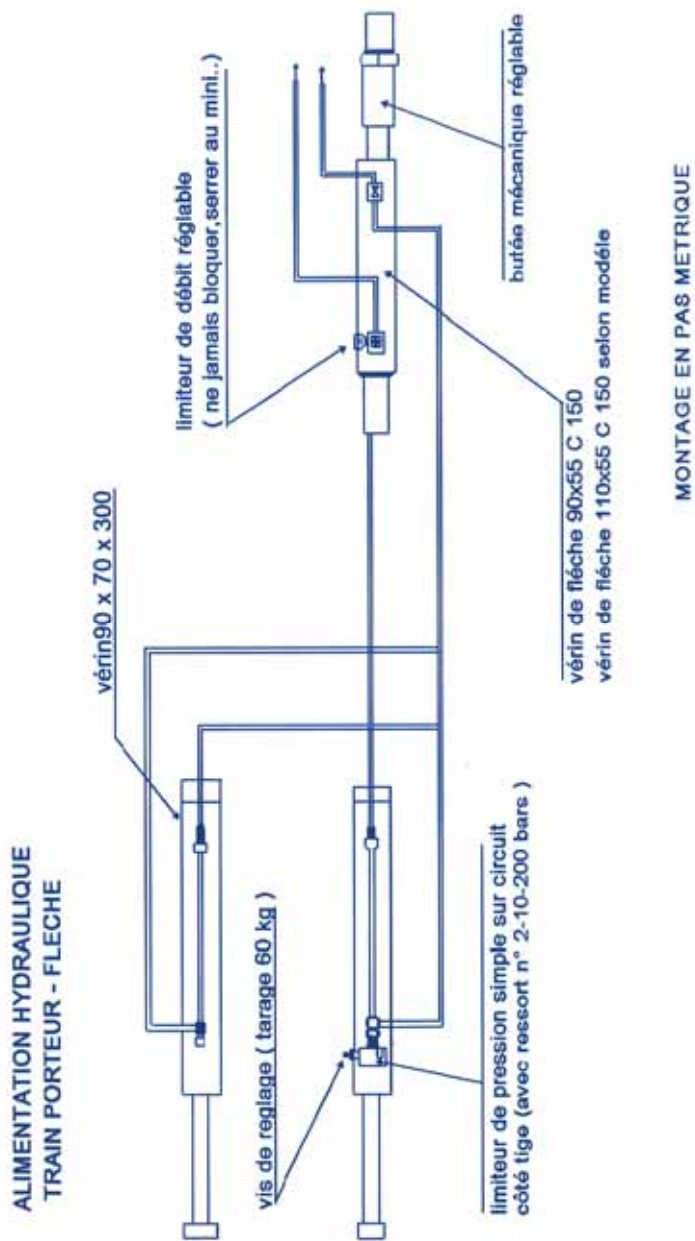
## HYDRAULIC CONNECTIONS

### FOLDING CIRCUIT

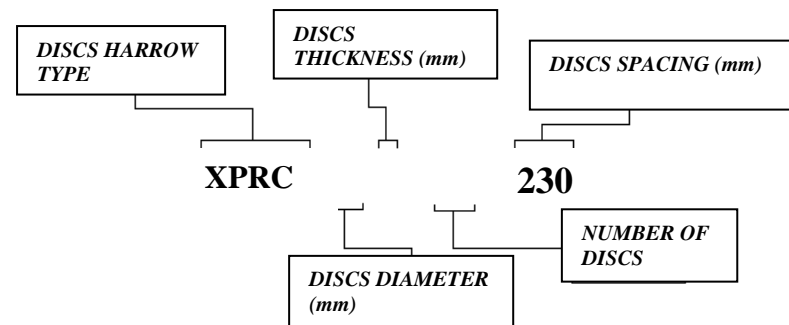


# HYDRAULIC CONNECTIONS

## LIFTING CIRCUIT



# MACHINE IDENTIFICATION



These indications are given on the serial number plate set on the front end of the main frame. Record here after purchasing date, model and serial number of the machine. Always refer to these information to get prompt and good service.

SERIAL NUMBER

MODEL

PURCHASING DATE

### NEVER REMOVE IDENTIFICATION PLATE

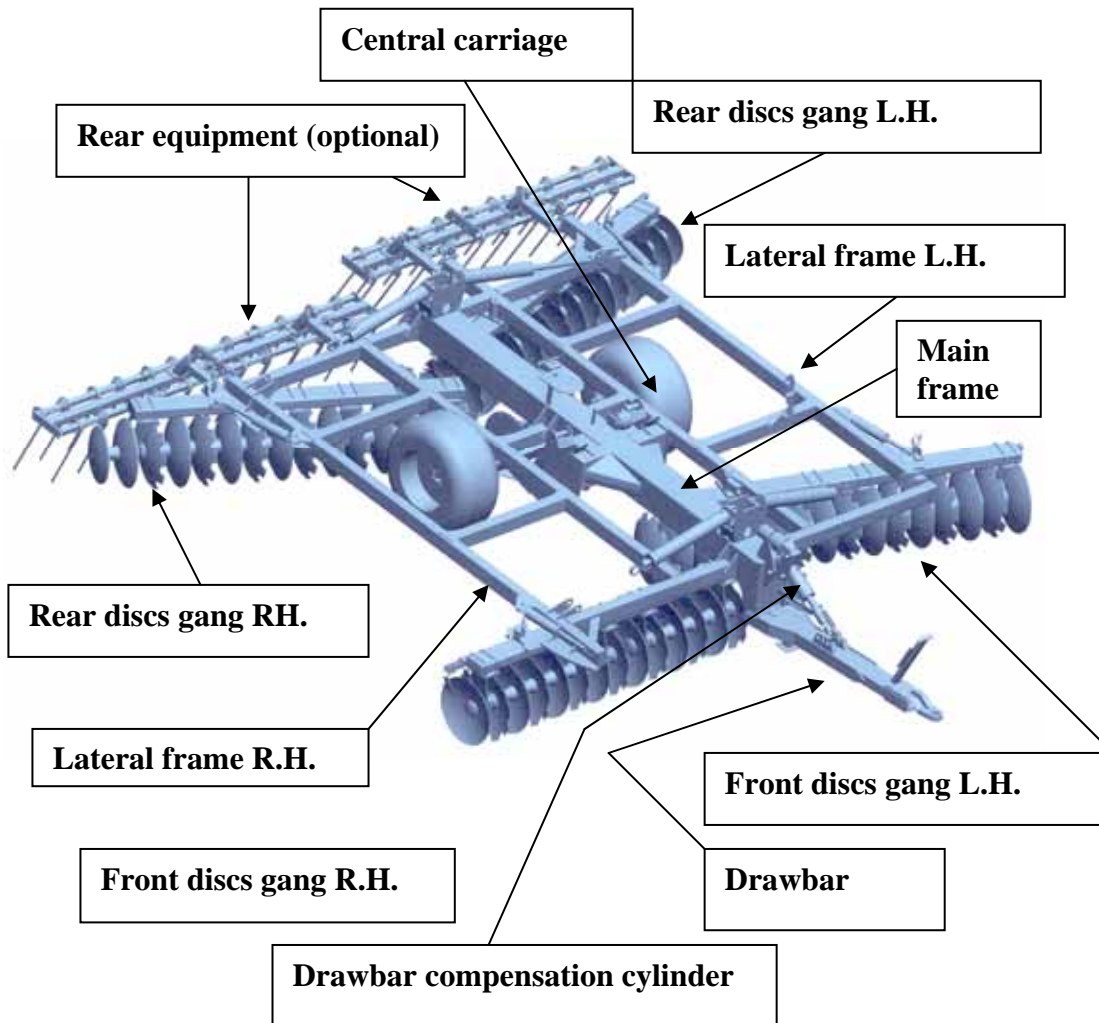
This machine is equipped with an hydraulic rear 3 points hitch. Available rollers for combination : RBRV2 or SRV2.



MAXIMUM SPEED ON PUBLIC ROAD (km/h)

## MACHINE IDENTIFICATION

### IDENTIFICATION VIEW XPRC front



## 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 and sandy, greasing can be carried out more frequently.

Check the pressure and the tightening of the wheels which equip the wheeled carriage.

In case of dismantling of a complete disc gang with carrying tube, 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.

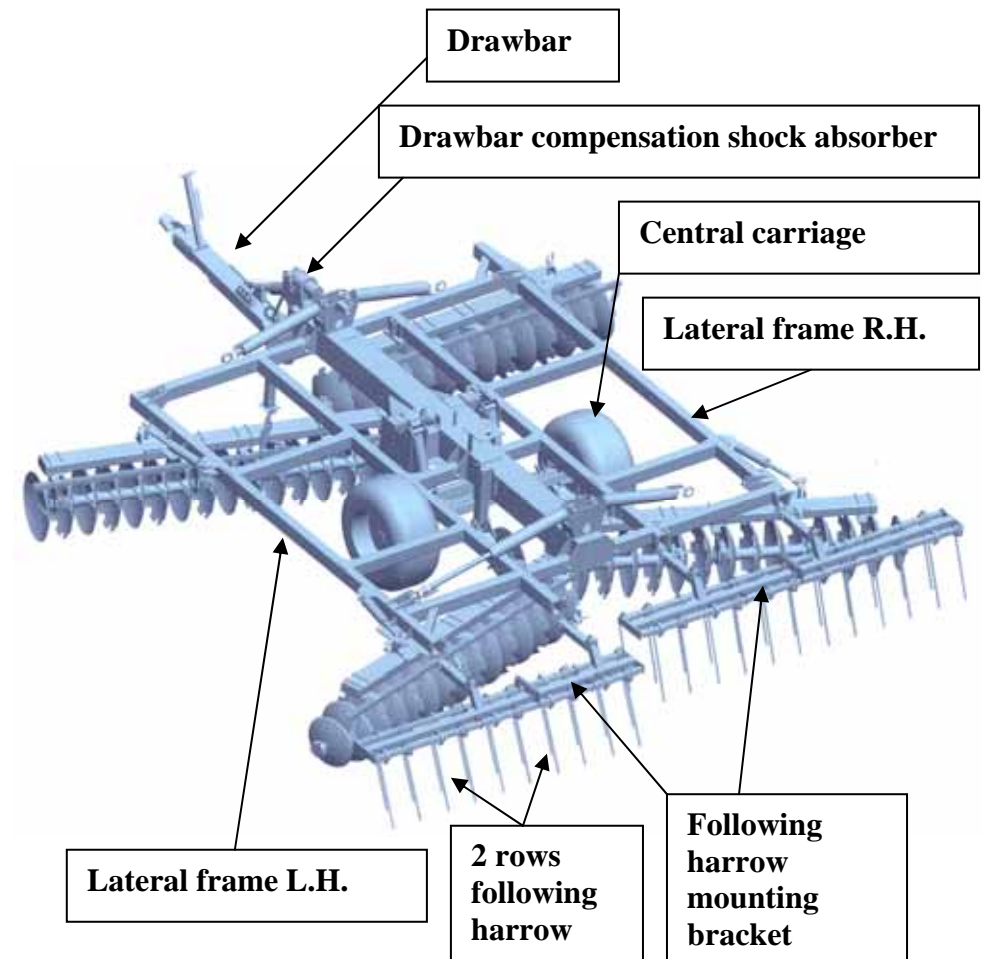
Grease shaft threads and nuts inner sides. Tighten the nut at the end of the shaft with a power of about 150 kg/m.

## ADJUSTMENT ADVICES

PROBLEMS	ORIGIN	SOLUTIONS
Working depth insufficient	Not enough angling Depth wheels are too low	Increase the angling Raise the wheels
Working depth too deep	Too much angling Depth wheels are too high	Reduce the angling. Lower the wheels
Stuffing of the disc gangs.	Scrappers not correctly adjusted. Working conditions not suitable	Adjust the scrappers. Reduce the angling.
Machine is not pulling straight	Discs gangs angles are not the same on each side	Modify discs gangs angle

## MACHINE IDENTIFICATION

### IDENTIFICATION VIEW XPRC rear





## SAFETY INSTRUCTIONS

This Gregoire-Besson implement has been exclusively designed to be used by professionals for regular farm tillage in farmed fields.



Manufacturer shall not be responsible for any damage or injury resulting from any other use.

Machine shall be operated, maintained and serviced by persons knowing its particular specifications and corresponding required safety equipments and procedures.

Learn how to operate the machine before using it in the field. Then it will be too late.

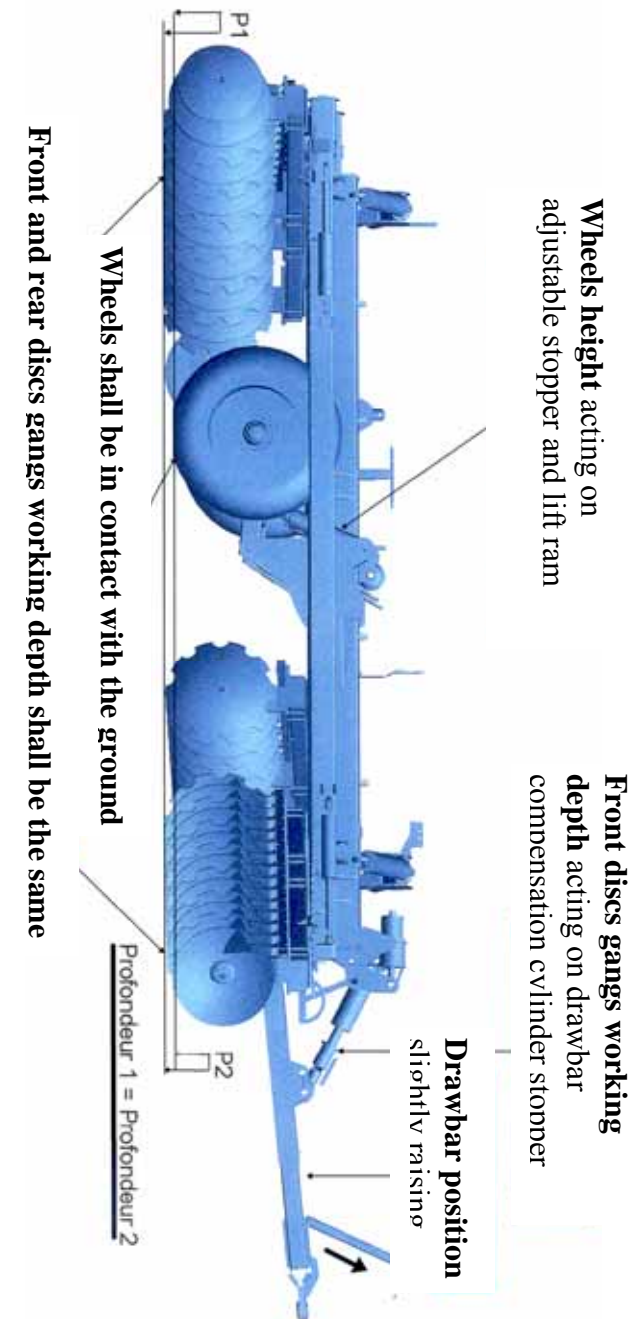
- Never attempt any intervention on the machine while it is in motion.
- Wear close fitting clothes and safety equipments appropriate to the job to do.
- Define a safety area for bystanders.
- Never perform any adjustment as long as its procedure is not perfectly understood.
- Always use tools or equipments appropriate to the job to do.



### RECOMMANDATIONS

- Get used to the disc harrow functioning and disc harrow controls. Do not let anybody use the disc without previous training.
- Only the operator is allowed to be in the tractor cab. He can not leave his seat during is working.
- Nobody is allowed to be on the implements during the work..
- In case of unfolding the disc gangs and the roller, be sure that there is nobody standing in the turnover area of the implements. Operate the folding system only from the cab of the tractor..

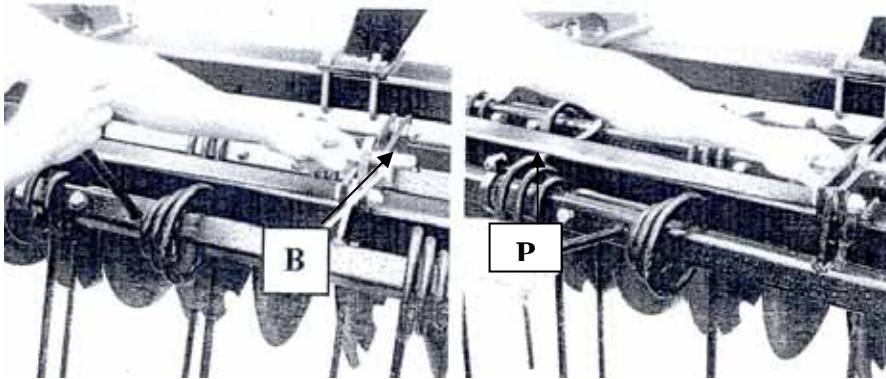
## QUICKLY STARTING XPRC



## MAINTENANCE

During maintenance, be sure that the safety instructions are respected. Maintenance area must be clean, dry and well lighted.

- In case of intervention or unmaking of a disc gang with lifted machine, do systematically a shoring by means of holders. Make sure all tools and equipments are removed after any intervention.
- All the articulation and greasing points must be greased at regular intervals with quality grease.
- Check regularly tightening of nuts and bolts.
- Always use original genuine parts.
- Keep a correct tyre inflation pressure. Do not exceed recommended inflation pressure.



To leave a good finish, all tines from both rows shall be in contact with the ground. Pin **B** allows tine angle adjustment.

For this adjustment, take handle **P** on one hand and change pin B position with the other hand.

WHEEL 15 R 22.5	→ 6.0 bars
WHEEL 500x45-22.5	→ 3.3 bars



### WARNING

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

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

## STORAGE

- If the machine is unused after the season, clean it carefully to prevent from every risk of corrosion and dampness.
- If necessary, carry out paint touching up
- Check, if there is some worn or broken parts, and place an order, to be sure to have your implements ready for the next season.
- Park machine in working position (unfolded), under cover, ram rods retracted or greased.
- Remove pressure from hydraulic lines.



## HYDRAULIC CONNECTIONS

Hydraulic connexions are subjected to high pressures.

- When the machine is equipped with several plugs, be sure to put them right.
- Before plugging a push-pull, be sure that there is no pressure on both sides (tractor and machine).
- If a hose is damaged don't hesitate to replace it..
- Never search a leak of oil with your finger. Leaking fluids and especially oil can provoke some very serious injuries. Contact a doctor in case of contact
- In case of an intervention on the hydraulic system, bring the implement in contact with the ground; remove pressure by switching off the engine and then acting the spool valve.

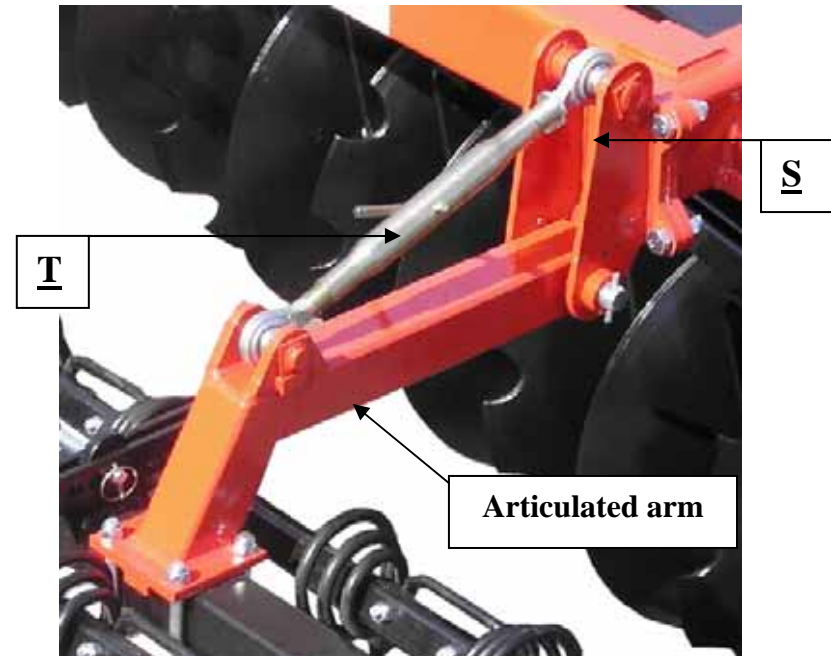
## **FOLLOWING HARROW ASSEMBLY AND ADJUSTMENT**

A double row following harrow may be set on XPRC as an option.

Rear equipment mounting brackets **S** (four) are set on lateral frames by four bolts.

Harrowes are carried by articulated arms.

On each arm a turnbuckle **T** allows harrow height adjustment. All turnbuckles shall have the same length. Then tines pitch shall be checked.



## ADJUSTING WORKING DEPTH

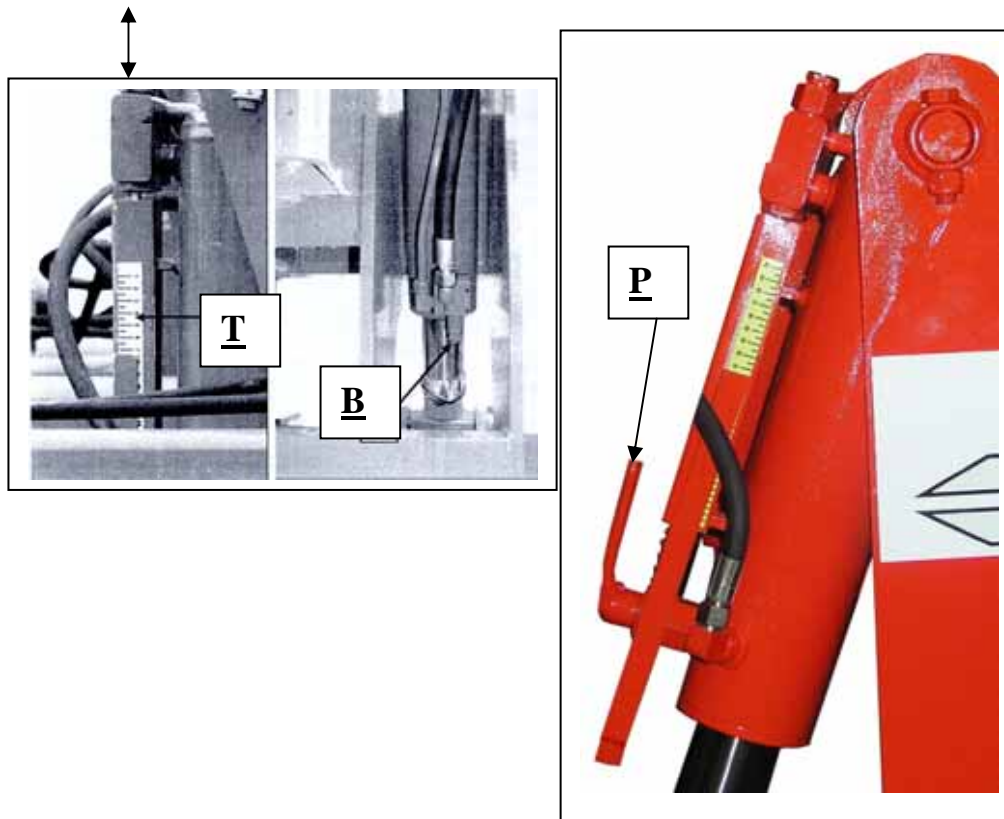
On one of the lift rams an adjustable stopper limits wheels raising.

To modify this adjustment, loose handle **P** and move rod **T**.

Refer to graduated scale to visualize adjustment.

On the other lift ram a pressure valve is used to give rams enough strength to lift the machine.

If it does not occur, tight screw **B** to increase pressure. this adjustment is done at the manufacture and shall be changed only exceptionally.



## TRANSPORT ON THE ROAD.



### **FOR YOUR SAFETY AND THE ONE OF THE OTHERS RESPECT FOLLOWING RECOMMENDATIONS**

- While hitching the machine to the tractor, check hitch height and tractor drawbar fixing (centred).
- If machine if foldable, make sure there is no one in the area and fold it.
- All Gregoire-Besson equipments shall be used complying with current applicable laws concerning road safety and occupational medicine.
- Drive at reasonable speed to keep control of vehicle at any time. Stay alert and careful. Pay special attention on rough roads, drive slowly and avoid sharp turns. Do not accelerate or stop suddenly. Drive safely on curves or narrow roads.
- Never attempt any manoeuvre if someone is close from the machine or from the tractor.
- Operate the machine with daylight or use lighting kit. All lights, reflectors and signs required shall be installed for road transport and may be removed during field operation to prevent from any damage.
- When leaving the tractor, even for a short period, shut off engine, remove ignition key, set parking brakes. If machine is equipped, set its brakes too.
- No one shall stand on the machine or between machine and tractor during road transport.
- Regularly check hitching ring state, do not hesitate to change any worn part.
- Regularly check tyre pressure and wheel stud tightness.

## ASSEMBLY

To facilitate transport from manufacture, machine may not be totally assembled at delivery.

XPRC has a main frame on which one 4 lateral frames are set to receive discs gangs. These lateral frames are equipped with vertical hydraulic folding for transport position.

The four discs gangs (= machine working elements) are set per pair on the machine.

### HITCHING MACHINE TO THE TRACTOR

- Check hydraulic connectors cleanness before plugging them to the tractor.
- Connect hydraulic lines following the logical way.

**Function A = hoses with red tie rap** : lift rams and compensating ram on drawbar.

**Function B = hoses with yellow tie rap** : lateral frames folding / unfolding rams.

### LATERAL DEPTH WHEELS ASSEMBLY AND ADJUSTMENT

Wheels supports are set with U bolts on each side on both lateral chassis.

The wheels keep a constant working depth depending of the relief.

The adjustment is operated by a manual turnbuckle (T) placed on the top of the support. To increase the working depth, reduce the length by screwing turnbuckle.

Opposite manoeuvre to reduce the working depth.

To obtain a good finishing it is important to have the same adjustments on both sides.



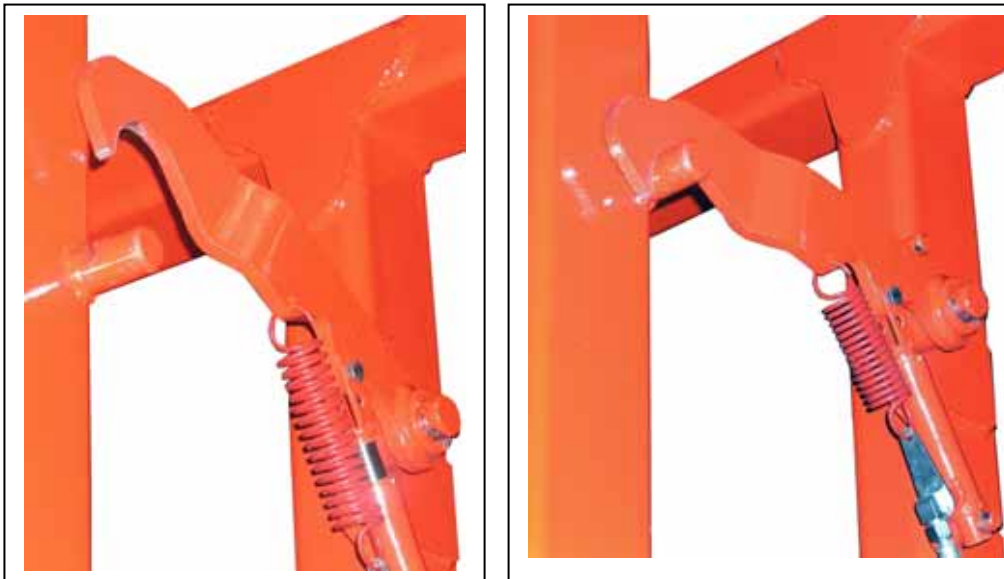
### TRANSPORT POSITION :



Important : When you are operating the folding or unfolding, be sure that nobody is in the manoeuvring area.

Act on tractor control lever connected to folding circuit (function B, yellow). When lateral frames are vertically oriented, a safety hook automatically locks them in transport position. Keep holding pressure with control lever to make sure hook is correctly positioned.

To go from the transport position to the working position, pull you distributor in the opposite way. The locking system will be unlocked automatically.



### LOCKING LATERAL FRAMES IN TRANSPORT POSITION

For machines equipped with hydraulic spool valve, it is set on hoses without marks. Acting on switch operator will choose the function he controls (discs gang angling).

Hydraulic spool valve has to be connected to the 12 V plug at the rear of the tractor.

- **Attach** machine ring hitch to the tractor hitch acting on remote controlling carriage height and drawbar compensating ram (function A = red). Machine main frame shall run parallel with the ground working in the field and driving on the road. For that, attach drawbar compensation cylinder on the right hole on drawbar (3 available positions according to tractor hitching point). Properly lock hitch pin once machine is attached.

- **Raise** machine and pivot parking leg, lock it in working position with its pin.

- **Unfold** machine, put lateral frames parallel with the ground.

- **Put** lateral frames 1.10 m approx. above ground surface to attach discs gangs.

## ATTACHING DISCS GANG UNDER LATERAL FRAME



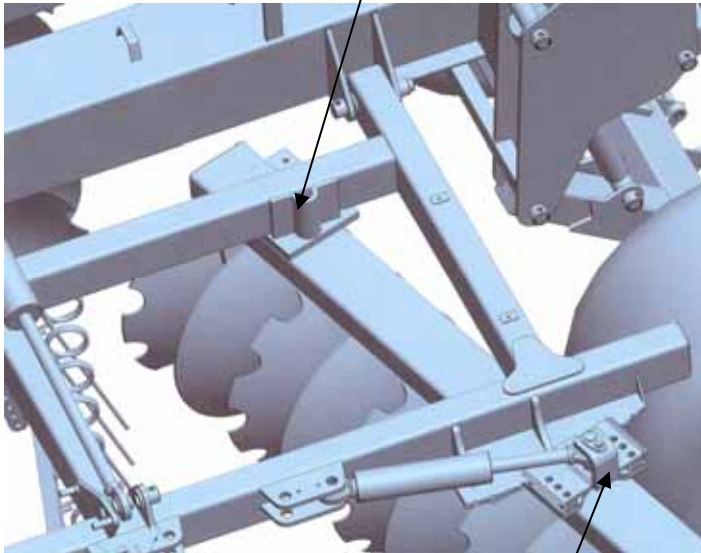
**WARNING :** This operation is dangerous due to the fact of the weight of the discs gangs (350 to 1000 kg depending on the model) and also because of the difficulties to fix the disc gangs. This operation requires people specially qualified and trained for such intervention.

A telescopic handler or a crane, are required to lift the disc gangs. Be sure that the weight of the disc gangs will not exceed the lifting capacity of the crane or the telescopic handler.

Each discs gang is fitted on lateral frame by a threaded yoke axle and a sector plate.

The spanner to tight the nuts is fitted on the drawbar.

Threaded yoke axle (fixing discs gang)



Sector plate (fixing discs gang)

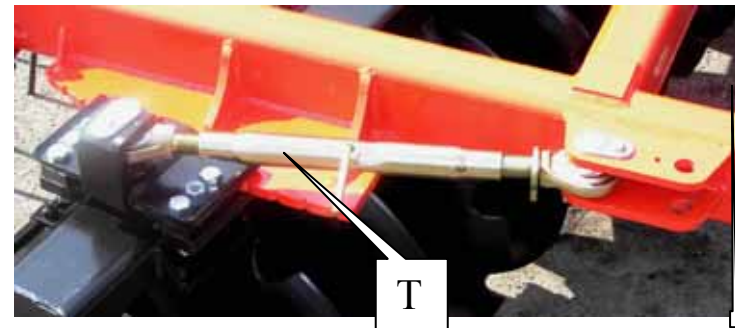
## ADJUSTING DISCS GANG ANGLE

This adjustment depends on soil conditions and desired working depth.

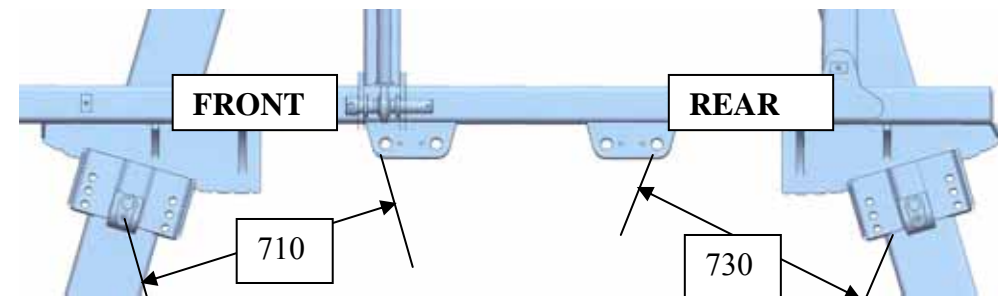
Increasing gangs angle, will increase the aggressivity of the discs. It is better to increase the angle in heavy soil, and reduce it in light conditions.

A good compromise is necessary between the rear and front discs gangs. If in the central part, there is a small hill, you will have to reduce the angling of the rear discs gang. By opposition if the machine leaves a small hole, increase rear discs gang angle (opposite way of the front disc gang).

To modify the angle : Screw or unscrew the adjusting drawbar rod T. Always make sure angle is the same on both sides of the machine.



## **ANGLING ADJUSTMENTS**



**For machines equipped with hydraulic discs gangs angling** : angling may be modified from the cab. Acting on control lever, L.H. and R.H. gangs opening will be the same.