

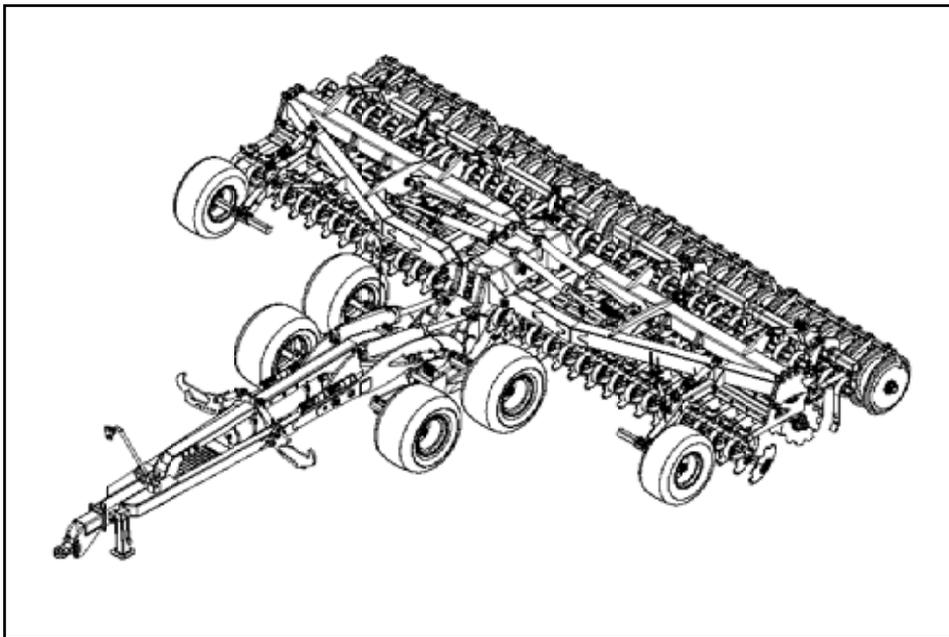
Operator Manual

Simba 8-10m Press

 **Great Plains**
Manufacturing, Inc.
www.greatplainsmfg.com



Read the operators manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!



Illustrations may show optional equipment not supplied with standard unit.

ORIGINAL INSTRUCTIONS

© Copyright 2013 Printed 18/05/16

608-205M-ENG

EN

DECLARATION OF CONFORMITY

Great Plains UK Ltd. hereby declare that the **Great Plains Simba 8-10m Press**, as defined by the Serial Number attached to the Machine Chassis, conforms with the following Directives and Regulations, and has been certified accordingly.

EC Machinery Directive 2006/42/EC.

The Supply of Machinery (Safety) Regulations 2008.

The Provision and Use of Work Equipment Regulations 1998.

Specifically related harmonised standards are:

EN ISO 12100-1: 2003 (Safety of Machinery).

EN ISO 12100-2: 2003 (Safety of Machinery).

EN ISO 4254-1: 2009 (Agricultural machinery - Safety - General Requirements).

THE MANUFACTURER:

Great Plains UK Ltd.
Woodbridge Road
SLEAFORD
Lincolnshire
NG34 7EW
England

Telephone (+44) (0)1529 304654.

CERTIFIED ON BEHALF OF GREAT PLAINS UK LTD.:



Colin Adams
Managing Director



WARRANTY

TERMS AND CONDITIONS

In this warranty Great Plains UK Ltd., is referred to as “the Company”.

1. Subject to the provisions of this warranty the Company warrants each new machine sold by it to be sold free from any defect in material or workmanship for a period of 12 months from date of installation with the end-user.

Some specific items have additional warranty over and above the standard 12 months. Details of these can be obtained upon request directly from the distributor or Great Plains UK Ltd.

2. If the machine or part thereof supplied by the Company is not in accordance with the warranty given in clause 1 the Company will at its option:
 - (a) make good the machine or part thereof at the Company’s expense, or
 - (b) make an allowance to the purchaser against the purchase price of the machine or part thereof, or
 - (c) accept the return of the machine and at the buyers option either:
 - I) repay or allow the buyer the invoice price of the machine or part thereof, or
 - II) replace the machine or part thereof as is reasonably practical.
3. This warranty shall not oblige the Company to make any payment in respect of loss of profit or other consequential loss or contingent liability of the Purchaser alleged to arise from any defect in the machine or impose any liability on the Company other than that contained in clause 2.
4. Any claim under this warranty must be notified to the Company in writing specifying the matters complained of within 14 days from the date of repair.
5. Any claim under this warranty must be made by the original purchaser of the machine and is not assignable to any third party.
6. If the purchaser hires out the machine to any third party the warranty shall apply only to matters notified to the Company in writing within 90 days of the date of delivery and clause 1 shall be read as if the period of 90 days were substituted for the period of 12 months.
7. The warranty will cease to apply if:
 - (a) any parts not made, supplied or approved in writing by the Company are fitted to the machine or
 - (b) any repair is carried out to the machine other than by or with the express written approval of the Company or
 - (c) any alterations not expressly authorized by the Company in writing are made to the machine or
 - (d) the machine is damaged by accident or
 - (e) the machine is abused or overloaded or used for a purpose or load beyond its design capabilities, or used in conjunction with a tractor whose power output capability exceeds the stated implement power requirement by more than 40%. For the purpose of these terms and conditions, “stated implement power requirement” refers to wheeled tractors unless specifically stated. These power requirements should be reduced by 20% when used in conjunction with tracked tractors.
 - (f) the machine is operated as part of a ‘cultivation train’ where more than one implement is being towed, without the express written approval of Great Plains UK Ltd.
 - (g) any maintenance is not carried out in accordance with the service schedules in the operator’s manual.
 - (h) the Installation and Warranty Registration Certificate is not received by Great Plains UK Ltd., Service Dept., Woodbridge Road, Sleaford, Lincolnshire, England, NG34 7EW, within 7 days of installing a new machine.

Machine Identification

Enter the relevant data in the following list upon acceptance of the machine:

Serial Number	
Type of Machine	
Machine Width	
Year of Construction	
Delivery Date	
First Operation	
Accessories	

Dealer Address: Name: _____
Street: _____
Place: _____
Tel.: _____

Dealer's Customer No.: _____

Great Plains Address:

Great Plains UK Ltd.
Woodbridge Road Ind. Est.
Sleaford
Lincolnshire
NG34 7EW

Tel.: +44 (0) 1529 304654
Fax: +44 (0) 1529 413468
E-Mail: simba@greatplainsmfg.com

Great Plains Customer No.: _____

Contents

Introduction.....	8
Foreword	8
Warranty Guidelines	8
1. Safety Data	9
1.1 Safety Symbols.....	9
1.2 Use for the Intended Purpose	11
1.3 Operational Safety	11
1.3.1 No Liability for Consequential Damage	11
1.4 Road Traffic Safety	12
1.5 Accident Prevention.....	12
1.5.1 Hitching-up the machine	12
1.5.2 On the Hydraulic System.....	12
1.5.3 Changing Equipment	12
1.5.4 During Operation	13
1.6 Servicing & Maintenance.....	13
2. Transportation and Installation	14
2.1 Delivery.....	14
2.2 Transportation.....	14
2.3 Installation.....	14
2.4 Hitching Up	14
2.4.1 Hitching up a Tractor to the Press / Preparing for Transport	14
2.5 Folding and Unfolding.....	16
2.5.1 Unfolding into the Work Position.....	16
2.6 Air Brake Coupling Procedure	18
2.6.1 When Coupling	18
2.6.2 When De-coupling	18
2.7 When driving on the road.....	18
2.8 Parking the machine	18
2.8.1 If the machine is to be left in the unfolded position.....	19
2.8.2 If the machine is to be left in the folded position.....	19
3. Technical Data 8-10m Press Range	21
4. Adjustment/Operation.....	22
4.1 Description.....	22
4.1.1 X-Press	22
4.1.2 CultiPress	23
4.2 Limit/Tilt Switch.....	24
4.3 Pro-Active Tines (CultiPress models only).....	24
4.4 Disc Units (X-Press models only)	24
4.5 Levelling Boards	25
4.6 Double Disc Roller	25
4.7 Out-Rigger Wheels	25
4.8 Work Settings	26
4.8.1 General Instructions For All Machine Variations	26
4.9 Depth Control.....	27
4.10 Adjusting Tine Depth (CultiPress models only).....	27

4.10.1	Placing Tines Deeper into Work	27
4.10.2	Lifting the Tines Out of Work	27
4.11	Out-Rigger Wheel Adjustment	28
4.12	Levelling Boards (if fitted)	28
4.13	Transport wheel adjustment	28
4.13.1	Adjusting the Transport Wheel Height	28
4.14	Adjusting Disc Angle (X-Press model only)	29
4.15	Work Instructions	29
4.16	Parking the machine	29
4.17	Using Shims.....	30
4.18	Checks.....	30
5.	Servicing and Maintenance.....	33
5.1	Servicing	33
5.2	Cleaning.....	33
5.3	Disc Hub Maintenance	33
5.3.1	Tightening Disc Hubs.....	33
5.3.2	Bearing Seals	34
5.4	Tines	34
5.5	Double Disc Axles.....	35
5.6	Wing Pitch.....	35
5.7	Hydraulics	35
5.8	Preparation for Storage	35
5.9	Brakes & Wheel Hubs.....	36
5.10	Operator Support	36
5.11	Maintenance Intervals.....	36
5.12	Maintenance Overview	37
5.13	Overview of Lubricating Points	38
5.14	Lubricating the Machine.....	39
5.15	Handling of Lubricants	39
5.16	Lubricants & Hydraulic Oil	40
5.17	End of Season Service/Storage.....	41
6.	Faults and Remedies	42

Introduction

Foreword

Make sure you have read and follow the Operating Instructions carefully before using the machine. By doing so, you will avoid accidents, reduce repair costs and downtime and increase the reliability and service life of your machine. Pay attention to the safety instructions!

Great Plains will not accept any responsibility for any damage or malfunctions resulting from failure to comply with the Operating Instructions.

These Operating Instructions will assist you in getting to know your machine and in using it correctly for its intended purposes. First, you are given general instructions in handling the machine. This is followed by sections on servicing, maintenance and the action to be taken should a malfunction occur.

These operating instructions are to be read and followed by all persons working on or with the machine, e.g.:

- Operation (including preparation, remedying of faults in the operating sequence and servicing).
- Maintenance (maintenance and inspection)
- Transportation.

Together with the Operating Instructions, you receive a Spare Parts List and a Machine Registration form. Field service technicians will instruct you in the operation and servicing of your machine. Following this, the Machine Registration form is to be returned to your dealer. This confirms your formal acceptance of the machine. The warranty period begins on the date of delivery.



We reserve the right to alter illustrations as well as technical data and weights contained in these Operating Instructions for the purpose of improving the machine.

Warranty Guidelines

The period of liability for material defects (warranty) relating to our products is 12 months. In the case of written deviations from the statutory provisions, these agreements shall apply.

They shall become effective upon installation of the machine with the end customer. All wear parts are excluded from the warranty.

All warranty claims must be submitted to Great Plains via your dealer.

1. Safety Data

The following warnings and safety instructions apply to all sections of these Operating Instructions.

1.1 Safety Symbols On the machine



Parts may fly off during operation. Keep a safe distance away from the machine!



Read and observe the Operating Instructions before using the machine!



Keep clear of the working range of foldable machine components!



Watch out for escaping pressurised fluids! Follow the instructions in the Operating Instructions!



No passengers are allowed on the machine!



Never reach into areas where there is a danger of being crushed by moving parts!



Never reach into any revolving parts!



Refer to Operating Instructions before attempting maintenance.

Operating Instructions:

The Operating Instructions distinguish between three different types of warning and safety instructions. The following graphic symbols are used:



Important!



Risk of injury!



Risk of fatal and serious injuries!

It is important that all the safety instructions contained in these Operating Instructions and all the warning signs on the machine are read carefully.

Ensure that the warning signs are legible. Replace any signs that are missing or damaged.

These instructions must be followed in order to prevent accidents. Inform other users of the warnings and safety instructions.

Do not carry out any operations which may affect safe use of the machine.

All references to left and right in this manual are made from the rear of the machine, facing the direction of travel (unless otherwise stated).

1.2 Use for the Intended Purpose

The Great Plains Simba 8-10m Press is built using the latest technology and in accordance with the relevant recognised safety regulations. However, risks of injury for the operator or third parties and impairment of the machine or other tangible assets can arise during use.

The machine is only to be operated when in a technically perfect condition and for the intended purpose, taking into consideration safety and risks and following the Operating Instructions. In particular, faults that can impair safety are to be remedied immediately.

Original parts and accessories from Great Plains have been specially designed for this machine. Spare parts and accessories not supplied by us have not been tested or authorised. Installation or use of non-original Great Plains products may have a detrimental effect on specific design features of the machine and affect the safety of machine operators and the machine itself. Great Plains will accept no liability for damage resulting from the use of non-original parts or accessories.

The Great Plains Simba 8-10m Press is designed solely as a cultivation implement. Use for any other purpose, e.g., as a means of transport, will be deemed to be improper use. Great Plains will accept no liability for damage resulting from improper use. The risk will be borne solely by the operator.

Use of the Simba 8-10m Press behind high power tractors (in excess of 40% above the maximum recommended) can lead to high loads and stresses which can cause long term structural damage to the chassis and key components. Such overloading can compromise safety and is to be avoided.

1.3 Operational Safety

The machine is to be put in operation only after instruction has been provided by an employee of the authorised dealer or an employee of Great Plains. The "Machine Registration" form is to be completed and returned to your dealer.

All protective and safety equipment, such as removable protective equipment, must be in place and functioning reliably before the machine is put in use.

 Check screws and bolts regularly for tightness and retighten if necessary.

 In the event of malfunctions, stop and secure the machine immediately.

 Ensure that any faults are remedied immediately.

1.3.1 No Liability for Consequential Damage

The 8-10m Press has been manufactured with great care. However, problems may still occur when it is used for the intended purpose. These may include:

- Worn wearing parts.
- Damage caused by external factors.
- Incorrect driving speeds.
- Incorrect setting of the unit (incorrect attachment, non-adherence to the Setting instructions).

 Therefore, it is crucial to always check your machine before and during operation for correct operation and adequate application accuracy.

Compensation claims for damage which has not occurred to the machine is excluded. This includes any consequential damage resulting from incorrect operation.

1.4 Road Traffic Safety

When driving on public roads, tracks and areas, it is important to observe the relevant road traffic laws as well as the specific regulations relating to this machine.



Pay attention to the permitted axle loads, tyre carrying capacity, and total weight in order to maintain adequate braking and steerability.



Passengers on the machine are strictly forbidden!



Check that lights / indicators (if applicable) are working before transporting the machine.



Max. road transport speed 16mph (25km/h).

1.5 Accident Prevention

In addition to the Operating Instructions, it is important to observe the accident prevention regulations specified by agricultural trade associations. It is the Operator's responsibility to ensure that all other persons are excluded from the danger zones surrounding or on the machine during its operation.

It is the Owner's responsibility to ensure:

- the Operator is trained and competent to use the machine & tractor,
- the tractor is suitable for the machine
- adequate Risk and COSHH assessments have been undertaken regarding the machine's use. Specifically, these include issues concerning contact with the soil, dust, crop residues, chemicals, lubricants and other compounds during operation or maintenance, and the possibility of stones being ejected at high speed during work.



Beware of trapping hazards when manipulating the light arms or any other moving parts. Ensure any heavy components are fully supported when removing pins / bolts.

1.5.1 Hitching-up the machine

There is a risk of injury when hitching/unhitching the machine. Observe the following:

- Secure the machine against rolling.
- Take special care when reversing the tractor!
- There is a risk of being crushed between the machine and the tractor!
- Park the machine on firm, level ground.

1.5.2 On the Hydraulic System

Do not connect the hydraulic lines to the tractor until both hydraulic systems (machine and tractor) are depressurised.

Only use appropriate aids when checking for leaks. Repair any damage immediately. Spurting oil can cause injuries and fires!

In case of injury, contact a doctor immediately.

The socket and plugs for the hydraulic connections between the tractor and the machine should be colour-coded in order to avoid incorrect use.

1.5.3 Changing Equipment

- Secure the machine to prevent it from accidentally rolling away!
- Use suitable supports to secure any raised frame sections suspended above you!
- Caution! Risk of injury due to projecting parts!

 Never climb on to rotating parts such as the roll unit. These parts may rotate causing you to slip and suffer serious injury!

 Removing components during maintenance may affect the stability of the machine. Ensure it is fully supported in case of unexpected weight shifts.

1.5.4 During Operation

Ensure that the working range and the area around the machine are clear (children!) before operating the machine.

Always ensure adequate visibility!

Do not stand on the machine while it is in operation!

Operators must have a valid driving licence in order to drive on public roads.

The person in charge must:

- provide the operator with a copy of the Operating Instructions.
- ensure that the operator has read and understood the instructions.
- make sure that the operator is aware of the specific regulations relating to the machine when driving on public roads.

As transport regulations vary regionally, the regulations which apply to your locality should be complied with in terms of this machine. Note specific requirements regarding implement width, speed, and features such as lights and brakes: ensure these are complied with (for example keep to maximum transportation speeds with machines if not fitted with brakes, and/or according to machine transportation width).

1.6 Servicing & Maintenance

Ensure that regular checks and inspections are always carried out within the periods required by law or specified in these Operating Instructions.

When carrying out service and maintenance work always:

- switch off the tractor engine and remove the ignition key.
- wait until all the machine parts have stopped moving.
- depressurise the hydraulic system.

Many hydraulic circuits contain lock or over-centre valves which can retain pressure in the lines even after depressurising the tractor side of these circuits. If in doubt, consult trained personnel (such as your local Great Plains Dealer) to ensure such valves are depressurised to the correct procedure before removing or servicing any parts connected downstream of these valves.

Check all hydraulic lines for leaks, loose connections, chafe marks and damage. Remedy any deficiencies immediately! Pay particular attention to hose renewal intervals as outlined in the specific sections which follow. ALL hydraulic hoses have a safe maximum working life of 6 (SIX) years from date of installation, provided they remain in a safe condition. Hoses which exceed 6 years of age should be replaced, or inspected and certified by a suitably qualified person to have an extended life period which should be recorded.

Pay particular attention to those items which require specialist service tools or training to be carried out by qualified personnel. Do not attempt to service these items yourself! These include items retaining pressure (e.g. accumulator circuits), or force (e.g. spring tines), and DD axles of any type.

2. Transportation and Installation

Transportation and initial installation of the machine are described in this chapter.

2.1 Delivery

The machine is normally delivered fully assembled.

- The machine should be hitched to a tractor and driven off a low-loader.

2.2 Transportation

The Press can be transported on public roads by hitching it up to a tractor or on a low-loader.

- It is important to observe the permitted dimensions and weights when transporting the machine.
- If the machine is transported on a trailer or a low-loader, it must be secured using straps or other devices.
- Before transporting the machine on public roads, it must be adjusted to its transportation position and the stipulations relating to road transportation fulfilled.
- The maximum permissible speed is 25 km /h.

2.3 Installation

When carrying out installation and maintenance work there is a higher risk of injury. It is important that you familiarise yourself with the machine and read the Operating Instructions beforehand.

Operator instruction and initial installation of the machine are carried out by our service technicians or authorised distributors.

The machine must not be used in any way beforehand! The machine can only be released for operation after instructions have been provided by our service technicians or authorised distributors.

- If any modules or parts have been removed for transportation, these shall be mounted by our service technicians/ authorised dealers before the instruction takes place.
- Check all important screw connections!
- Lubricate all nipples and joints!
- Check all hydraulic connections and lines for damage.

2.4 Hitching Up

2.4.1 Hitching up a Tractor to the Press / Preparing for Transport



When hitching-up the machine, ensure that no-one is between the tractor and the machine.



On machines fitted with air brakes refer to the procedure on page 18 (Section 2.6) for coupling / decoupling the brake lines.



When the Press is parked for extended periods of time it should ideally be left in the unfolded position: ie; work position for stability, safety and ease of access for maintenance. However parking the Press resting on its front jack is acceptable in the normal course of operation.



Tractor Oil Flow Adjustment: As a general rule the tractor oil flow rate should be set in the lowest setting before starting. This can then be increased to allow the desired rate of operation as applicable. This will minimise excessive oil flow and consequent power usage and heat generation.

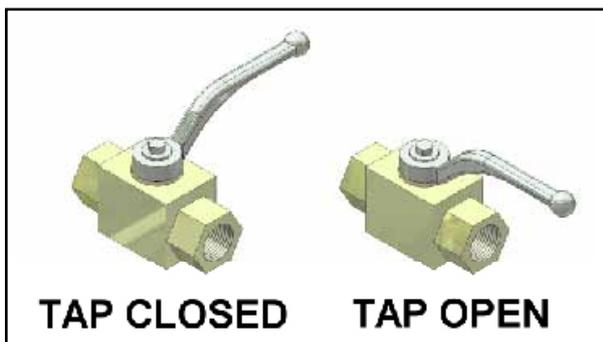


Fig. 2.01: Hydraulic Taps



Do not open taps while tractor hydraulics are in float.



The hoses in the lift circuit have a maximum rated pressure of 415bar, and should be replaced every 6 years. Other components in this locking circuit have a maximum rated pressure of at least 350bar.

Hitching up machine when left on parking stand

1. Back tractor up towards the front of the drawbar. Attach the hydraulic hose for the jack. If the jack has been left with the machines weight resting on it

be sure not to have the tractor in float when you open the in line tap. Doing this will result in the machine dropping suddenly. Adjust the height of the drawbar eye to the level of the tractor hitch.

2. Back up and fit tractor drawbar pin. Lower the machine using the jack so the weight is now on the tractor. With the tractor now supporting the machine place the jack spool in float, the jack will then return to closed ready for swinging into the transport position.
3. Remove the locking pin and swing the jack round into the transport position. Connect all other pipes and the light cable.
4. The machine is now ready to transport.

Hitching up machine when left in work position

1. Back the tractor up towards the front of the drawbar. Attach the tilt ram hydraulic hoses (red).
2. By operating the spool in the tractor cab it is possible to lift the drawbar from the ground up to the tractor hitch height. Back the tractor up and fit the tractor drawbar pin. Connect all other hydraulic hoses and light cable.
3. If the machine has been left open overnight it is advisable to tilt the machine forward (as if it were to be folded) and operate the wing circuit cylinders to open and lock the wings out to the set pressure. After doing that tilt the machine completely rearwards onto the DD roll.
4. The press is now ready to be set for work.

2.5 Folding and Unfolding

2.5.1 Unfolding into the Work Position

1. Open the machine if possible on level ground, if this is not possible try and orientate the machine so the drawbar and tractor is pointing up any slope.
2. Fold down the light units and open the inline hydraulic tap on the wing catcher circuit (A).
3. Operate the wing circuit (yellow) spool. This will then lower the catchers (B) then open the wings out (C and D). Continue to pressure the wings out keep pumping until the wing cylinders have reached full stroke.



When the wings are fully open they will appear not to be parallel. This is to enable the machine to 'float' over uneven ground in work and is normal.

4. With the wings fully open (E) operate the tilt (red) spool to lower the machine rearwards (F). Continue to operate the tilt spool once the working elements have touched the ground to roll the machine rearwards onto the DD roll (G). NOTE: when tilting rearwards from folded there will be a delay (5-15 seconds depending on flow) before the machine begins to tilt. This is normal, continue to pump oil as normal.
5. With the machine now tilted onto the rear roll fully turn off the inline hydraulic tap on the wing (yellow) circuit. This will isolate the catcher arm circuit.
6. The machine is now ready to be set for work.

Unfolding



Unfolding *Continued***2.5.2 Folding into the Transport Position**

Before folding the machine move the tines into their shallowest setting in order to achieve a transport width of less than 3 metres when folded.

1. Remove any excess soil and debris from the machine.
2. If it has not already been done, turn off the inline hydraulic tap on the catcher line (yellow).
3. Raise the transport wheels fully by extending the wheel cylinders (blue) to full stroke! **This must be done to avoid any damage to the machine.**
4. Turn off the power source to the solenoid valve (the machine comes with this wired into the side light function on the light cable). This must be done to allow oil flow out of the tilt cylinders.
5. With the wheel unit fully raised operate the tilt cylinder (red) circuit to fold the machine forward. Continue to pump until the spine touches the stops on the drawbar.
6. With the wings now vertical, checking the taps on the catcher line is closed, operate the wing (yellow) circuit to close the wings around the drawbar.
7. With the wings closed around the drawbar open the tap on the catcher line.
8. With the catcher inline tap open continue to operate the wing (yellow) circuit to lift the catchers and take the load of the machine.
9. Turn off the inline tap to lock the catchers up, fold the light units up and make one final check around the machine.
10. The press is now ready for road transport.

2.6 Air Brake Coupling Procedure

Please refer to the following procedure when coupling or decoupling any item of Great Plains machinery fitted with an AIR brake or AIR and HYDRAULIC brake system. Please note that this procedure does not apply to any machines fitted with a HYDRAULIC system ONLY.

2.6.1 When Coupling

1. Reverse up to the machine and connect the machine to the tractor as instructed to in Section 2.4.1.
2. With the machine connected couple the air lines. When coupling ensure the yellow line is attached first followed by the red line.
3. Your brake hoses are now attached and are ready for operation.
4. Continue with the coupling process as instructed in Section 2.4.1.

2.6.2 When De-coupling

1. Bring the machine to the parking position as instructed to in Section 2.8.
2. With the machine still connected to the tractor remove the red brake line followed by the yellow line.
3. Your brakes will now be ON and will hold, ensuring they have been adjusted and maintained correctly, the machine in position. (note: if the machine's tank is drained of air once all lines have been detached the brakes will come off (same situation as pushing the shunt valve).

4. Continue de-coupling the machine until it is fully disconnected.



By following the above instructions you will see that at NO point in the coupling or decoupling process has the red line been left in the tractor on its own. This is intentional and should be considered the 'rule' to coupling the hoses.

2.7 When driving on the road

When driving on the road the machine must be converted to the transportation position.



When driving on the road, raise the machine completely to prevent the working elements dragging on the ground.



Road transport speed should not exceed 16mph (25kph)

2.8 Parking the machine

In order to avoid damage as a result of moisture, the machine should be parked, if possible, indoors or under cover.



When manoeuvring the machine, pay attention to your surroundings. Ensure that nobody is in the manoeuvring area (watch for children!).



Park with the machine on level solid ground, if leaving parked for a long period of time it is advised the machine is left in the unfolded or work position.

2.8.1 If the machine is to be left in the unfolded position

1. Follow the steps to unfold the machine but stop at the point where all working elements are touching the ground.
2. At this point it will be possible to raise the drawbar and relieve the weight on the tractor hitch.
3. Turn off the tractor and remove the hitch pin.
4. Checking that the tilt cylinders are supporting the weight of the drawbar draw the tractor forward enough so as to clear the hitch.
5. Lower the drawbar onto the ground. Fit the wheel chocks.
6. Turn off the tractor, depressurize all hydraulic lines and remove all hoses and cables from the rear of the tractor, slowly draw the tractor forward.

4. Draw the tractor forward to clear the hitch. Lower the jack down so the ram rod is completely hidden e.g.; there is now no oil pressure in the hydraulic hose. At this point turn off the tractor and place all spools into float. Remove all hoses and slowly draw the tractor forward.

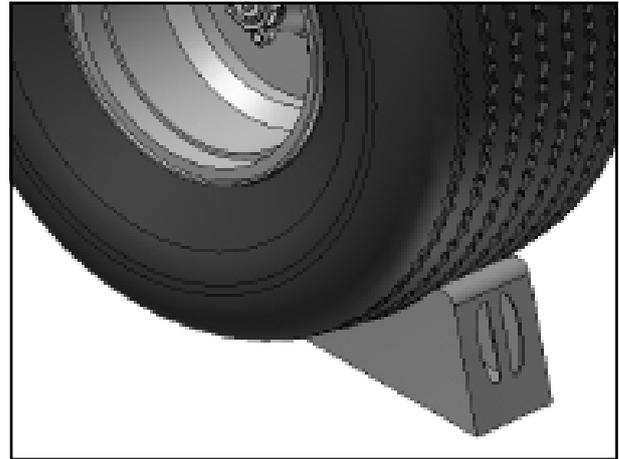


Fig. 2.01. Wheel chocks

2.8.2 If the machine is to be left in the folded position

1. Turn off the tractor. Swing the hydraulic jack from the transport position into the work position.
2. Fit the wheel chocks under the wheels.
3. Open the inline hydraulic tap and operate the hydraulic jack to take the weight of the machine. Turn off the tractor and remove the drawbar pin.

3. Technical Data 8-10m Press Range

	CultiPress 8m	CultiPress 10m	X-Press 8m	X-Press 10m
Working Width	8.0m	10.0m	8.0m	10.0m
Transport Width	2950mm	2950mm	2950mm	2950mm
Transport Height	3750mm	3995mm	3750mm	3995mm
Length	6800mm	7800mm	6800mm	7800mm
Weight	10600kg	13000kg	11200kg	13500kg
Tractor Power Required (H.P.)*	300 - 350	380-450	300-350	350-400

* It is important to correctly match your implement to your tractor for optimum performance.

4. Adjustment/Operation

4.1 Description

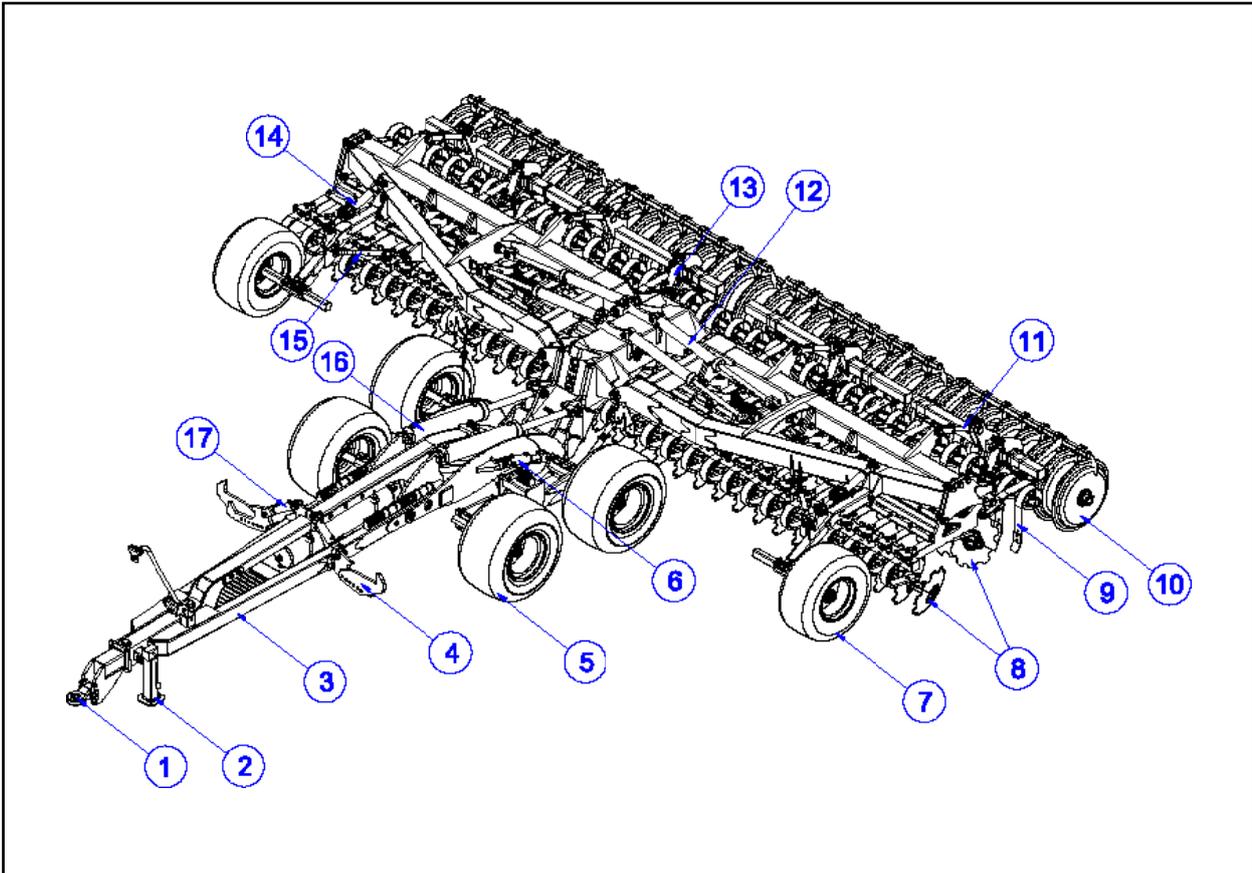


Fig. 4.01: Great Plains 8-10m Simba X-Press

4.1.1 Simba X-Press

1. Hitch
2. Parking Jack
3. Drawbar
4. Wing Catcher
5. Transport Wheels
6. Wheel Cylinders
7. Out-Rigger Units
8. Discs
9. Levelling Board (if fitted)
10. Single Row 700DD Roll
11. Roll Depth Adjuster
12. Wing Fold Cylinders
13. Levelling Board Cylinders
14. Out-Rigger Adjuster (Vertical)
15. Out-Rigger Adjuster (Lateral)
16. Main Tilt Cylinders
17. Wing Catcher Cylinders

In the Simba X-Press configuration the machine can be used in reduced tillage systems to incorporate stubble or to work down ploughing on lighter soil types. Due to the massive clearances throughout the machine the X-Press can operate in situations where high levels of surface trash exist. The X-Press is designed for high speed operation, 8-12 km/h with high volumes of trash flow being added by the 700mm DD roller at the rear.

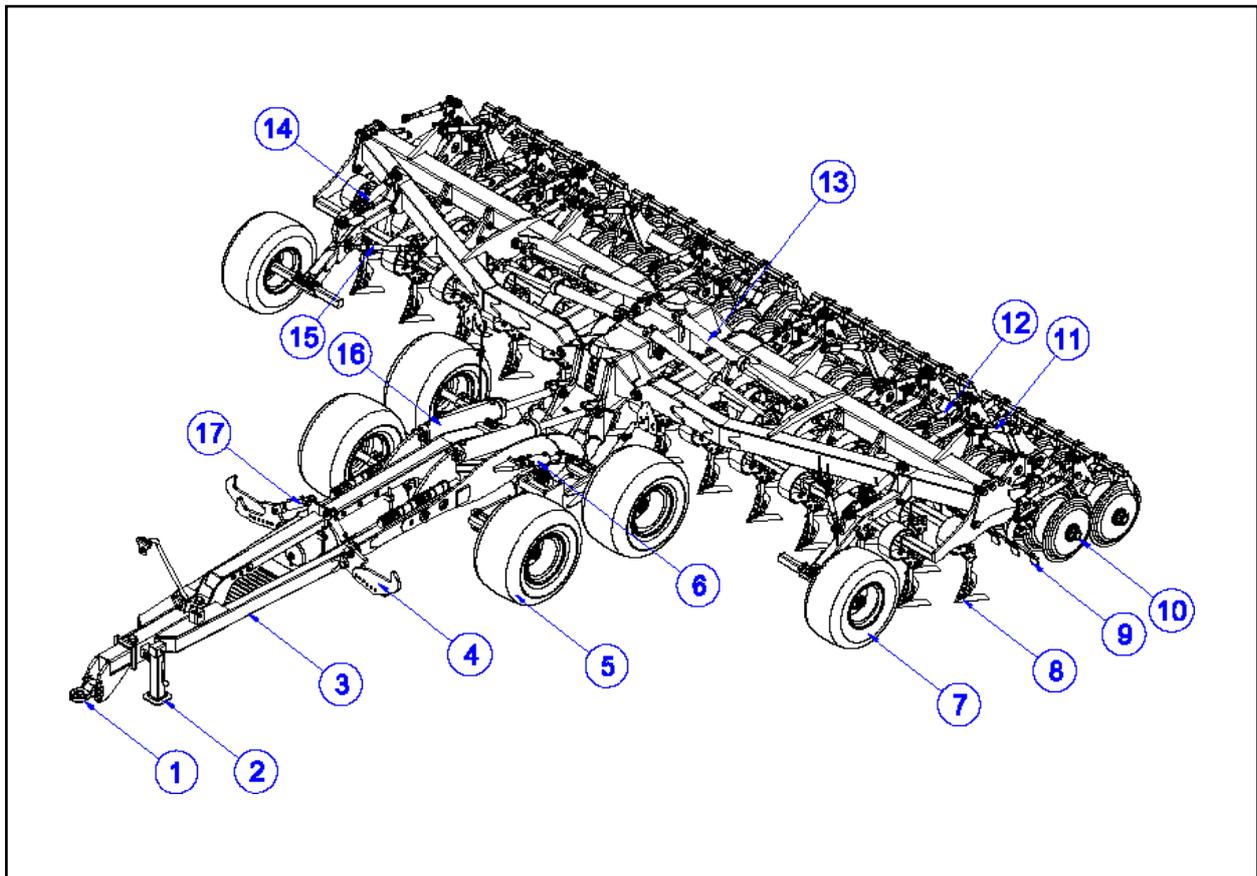


Fig. 4.02: Great Plains 8-10m Simba CultiPress

4.1.2 CultiPress

1. Hitch
2. Parking Jack
3. Drawbar
4. Wing Catcher
5. Transport Wheels
6. Wheel Cylinders
7. Out-Rigger Units
8. Pro-Active Tines
9. Levelling Board (if fitted)
10. Intermeshed Twin Row 600DD
11. Roll Depth Adjuster
12. Roll Pitch Adjuster
13. Wing Fold Cylinders
14. Out-Rigger Adjuster (Vertical)
15. Out-Rigger Adjuster (Lateral)
16. Main Tilt Cylinders
17. Wing Catcher Cylinders

In the Simba CultiPress configuration the machine can be used to work down ploughing in a reduced tillage operation in heavy soil type areas. With twin rows of Proactive tines, followed by a hydraulically operated intermeshing sprung-leaf levelling board ending in a twin 600DD roll it offers a perfect cultivation and consolidation tool.

4.2 Limit/Tilt Switch

The Limit/tilt switch allows the operator to adjust the pitch of the machine. If the machine is running nose low then the trip (profile) can be moved forward (toward the tractor). If the machine is running nose high then the trip (profile) can be moved backward. When setting this switch it is necessary to tilt the machine fully rearward each time to reset the limit switch.



Fig. 4.03: Limit/Tilt Switch

4.3 Pro-Active Tines

(CultiPress models only)

The Pro-Active tines are designed to move soil and shatter clods to a greater degree than traditional rigid leading tines. The ability to move in all directions (upwards and sideways) allows them to clear stones and other obstructions. They feature simple, pinned tine depth adjustment for easy depth variation.

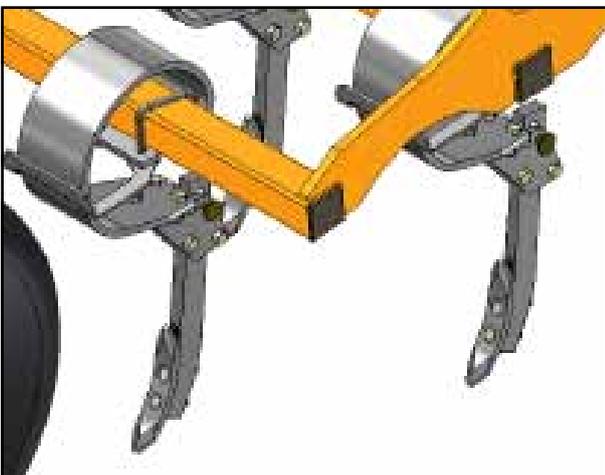


Fig. 4.04: Pro-Active Tines

4.4 Disc Units *(X-Press models only)*

The Simba X-Press features two rows of discs which chop and mix the crop residue. A disc spacing of 250mm ensures a fine tilth, leaving the machine to pull straight making the most efficient use of the power available.

The discs fitted to the X-Press are 500mm in diameter (20") and 6mm thick. They are manufactured from heat treated chrome boron steel which ensures excellent wear resistance and enhanced working life.

Each disc is mounted on a Pro-Flex sprung leaf linked to a track rod system. Gang angles can be varied with ease and accuracy using a shims on a hydraulic cylinder.

Adjustable angling of the discs (between 10°-25°) ensures penetration and stubble mixing are achieved in one pass. Working depth can be varied simply via shimmed hydraulic cylinders. All this is achieved without compromise to consolidation.

A level, evenly cultivated finish is maintained by adjusting the balance of soil throw between the front and rear discs.

Sprung Pro-Flex leaves offer protection against damage as well as offering a degree of contour following as they flex up and down in work.

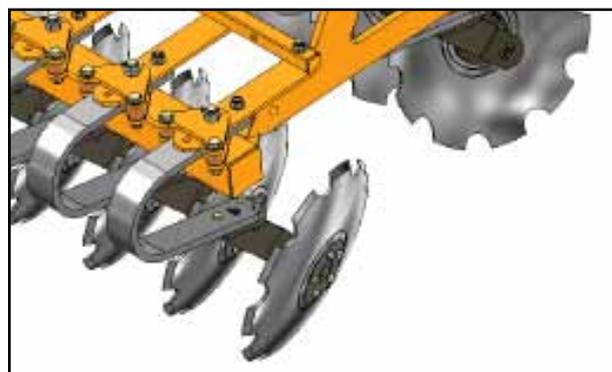


Fig. 4.05: Discs

4.5 Levelling Boards

The action of the sprung leaf type levelling boards is to carry and drop soil to level in front of the press rings, to rub clod against clod for additional soil breakdown, to force clods down into the soil profile and to present remaining clods passing between the leaves into the path of the press rings.

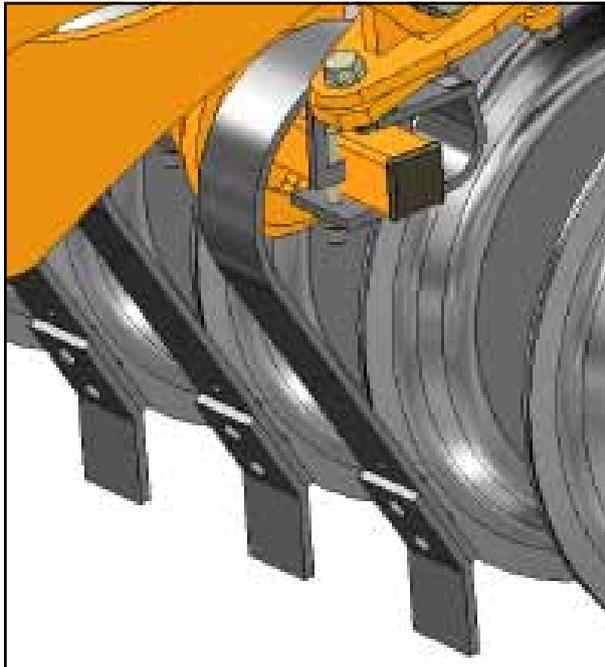


Fig. 4.06: Levelling Boards

4.6 Double Disc Roller

The standard DD600/DD700 roller is made up of individual Double Disc (patented) Ring segments.

The DD rings are designed to consolidate the soil whilst cutting and crushing any clods.

Even in heavy, wet soils it can easily be operated with minimal blockages occurring.

The rear DD roller carries a proportion of the machine's weight to ensure consolidation. It also regulates the depth of the machine. The corrugated surface left by the roller is weatherproof both for wet or dry situations.

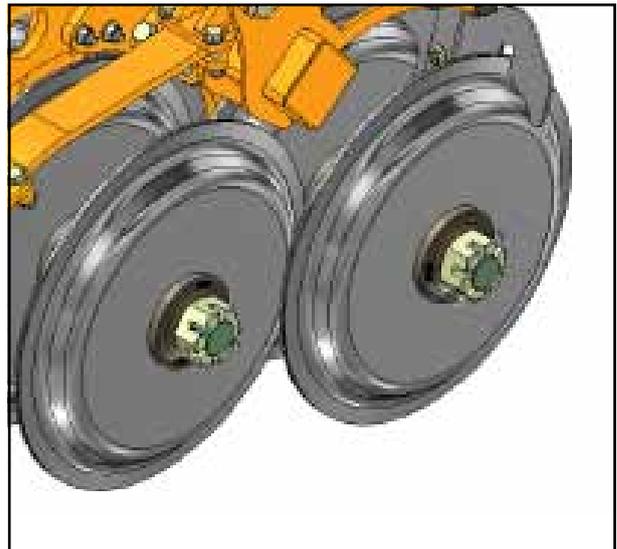


Fig. 4.07: Double Disc Roller

4.7 Out-Rigger Wheels

The Out-Rigger units support the wing tips in work ensuring a level soil finish. The out-Rigger units also support and lock the wings during road transport.



Fig. 4.08: Out-Rigger Units

4.8 Work Settings

In work the wing cylinders should be fully extended. A simple pressurized hydraulic circuit automatically sets itself as the wings are unfolded.

Optimum performance has been found to be when the press roll rings have worn away the painted finish leaving a smooth shiny surface. When the press roll rings are new or rusty, soil may tend to pick up on the surface and a blockage may occur. This will reduce when the rings are shiny again.

The press should be run with the chassis level by extending the tilt cylinders to the necessary position then adjusting the trip switch. NOTE: to ensure the correct machine pitch is achieved it is necessary to extend the tilt rams enough to reset the switch then lower it back into work again. If this is not done it may appear that continual switch movement has not effect.

In practice it is possible to operate the press on ground conditions that are unsuitable to achieve the desired effect, and it is usually possible to operate without regular blockage. As such, especially under wet conditions, it is advisable to check on the cultivation effect of the press.

Generally a forward speed of 5-9 mph (8-12kph) will achieve optimum results, maximizing inversion and burial. Speeds in excess of those stated above will tend to give a deterioration in the quality of the work. This may be seen as ridges or troughs across the work surface due to soil being thrown too far by the disc/tine elements.

In normal operation the machine should be drawn on forward on the tilt cylinders until the limit switch is activated. For this to happen the power to the solenoid valve must be on (switch on the side lights). With this system it is possible to run the tilt cylinder circuit in the float position. This will allow the implement to contour follow as the tractor drawbar drops (e.g.: over the brow of a hill).

4.8.1 General Instructions For All Machine Variations

- When carrying out a headland turn reduce forward speed and operate the tilt hydraulics to ensure all ground engaging elements are out of work and clear of the ground with all weight being carried on the rear roll.
- Depending on field conditions (type of soil, surface trash) it is possible to operate the X-Press and CultiPress with a forward speed up to 9mph (12km/h)
- X-Press Version only. When levelling boards are fitted it is not possible to adjust both the levelling board rake angle and disc angle whilst moving. It is only possible through the 6 port divert valve to operate one system or the other.

General Rules when Setting the Simba X-Press

- The lighter the land conditions the less the disc angle required and the forward speed can be increased.
- The wetter the land conditions the less the disc angle required and the forward speed will need to be decreased.
- Heavier land will require more of a disc angle and a slower forward speed.
- The more the trash the less the angle on the discs and forward speed will have to be decreased.
- On ploughed land reduce the disc angle to give a cutting/chopping action.
- In hard conditions increase the disc angle to increase penetration.

4.9 Depth Control

With the wing cylinders fully extended and the machine tilted back onto the rear roll the machine is ready for setting.

On CultiPress models there are two main methods of adjustment.

- **Coarse** adjustment can be made by lowering or lifting the tines within the mounting plates, this will give a +/- 25mm depth change per hole.
- **Fine** adjustment can be made by adding or removing shims on the rear roll cylinders.

On the X-Press models depth adjustment is made in the same way as the **FINE** adjustment method mentioned above.

4.10 Adjusting Tine Depth (CultiPress models only)

Crowd the machine rearwards until the weight of the machine is on the rear DD roll. Continue to extend the tilt rams until they are at full stroke. Stop the tractor and TURN OFF THE SHUT OFF TAPS AT THE RAM PORTS. This will then allow access under the machine. Once all tines have been adjusted, ensure none is under or near the machine open the shut off taps on the ram ports and then lower the machine until the working elements are on the ground.

4.10.1 Placing Tines Deeper into Work

Operate the main tilt circuit (red) to extend the cylinders and support the weight of the machine on the rear roll, continue to extend the cylinders until all tines/discs are out of work. Now, operate the wheel cylinder circuit (blue). This will push the wheel cylinders open whilst at the same time extend the rear

roll cylinders. Remove the required number of shims from the rear roll cylinders, if weight is being supported on the transport wheels it may be necessary to add shims to the wheel cylinders. Once the required amount of shims have been removed from the rear roll, pressure the circuit in the opposite direction to draw the roll cylinders closed and then draw the wheel cylinders closed. NOTE: it is important to pressure the hydraulics until all shims, with special note being made to the wheel cylinders, are clamped tight. Making sure there is no one near the machine lower the machine back into the work position. As long as the power to the limit switch is still on then the press will return to the previously set pitch.

4.10.2 Lifting the Tines Out of Work

Operate the main tilt circuit (red) to extend the cylinders and support the weight of the machine on the rear roll, continue to extend the cylinders until all tines/discs are out of work. Now, operate the wheel cylinder circuit (blue). This will push the wheel cylinders open whilst at the same time extend the rear roll cylinders. Add the required number of shims to the rear roll cylinders, if weight is being supported on the transport wheels it may be necessary to remove shims from the wheel cylinders. Once the required number of shims have been added to the rear roll, pressure the circuit in the opposite direction to draw the roll cylinders closed and draw the wheel cylinders closed. NOTE: it is important to pressure the hydraulics until all shims, with special note being made to the wheel cylinders, are clamped tight. Making sure none is near the machine lower the machine back into the work position. As long as the power to the limit switch is still on then the pressure will return to the previously set pitch.

4.11 Out-Rigger Wheel Adjustment

When in work these units are designed to help support the wing tips. After making any adjustment to the working depths it is important to check that both of these units are still in light contact with the soil surface. Adjustment is made by tilting the machine back onto the rear roll and extending or contacting the top link bar. Add or remove shims to give a solid lock. The side mounted link bar should be tight at all times.

4.12 Levelling Boards (if fitted)

With the press set level rotate the levelling boards until they are carrying soil. The levelling boards will need to run slightly higher during first pass operations especially on ploughed land where large clods may not be able to pass under or between the sprung leaves.

The boards need to carry a certain amount of soil to effect a levelling operation and also to give a clod to clod crushing action. Use the hydraulics to rotate the levelling boards to carry more or less soil when levelling the headland troughs for example.

When reversing the press into corners ensure that the levelling boards are fully rotated (fully meshed into DD's) and the machine is tilted fully onto its rear roll so all ground engaging elements are clear of the ground. Failure to do so could result in serious damage.

4.13 Transport wheel adjustment

If when in work the center of the machine begins to dip or the machine enters a wet spot it is possible to support weight on the middle transport wheels.

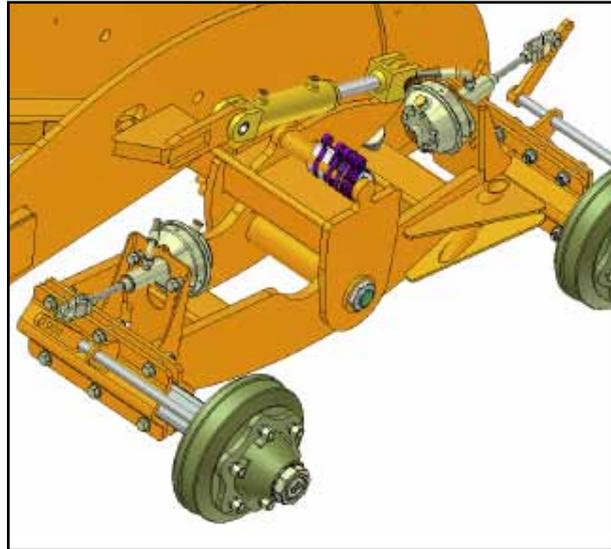


Fig. 4.09: Transport Wheel Adjustment

4.13.1 Adjusting the Transport Wheel Height

Operate the main tilt circuit (red) to extend the cylinders and support the weight of the machine on the rear roll, continue to extend the cylinders until all tines/discs are out of work. Now, operate the wheel cylinder circuit (blue). This will push the wheel cylinders open (the rear roll cylinders will also extend at the same time). Add/remove the required number of shims from the wheel cylinders then operate the circuit in the opposite direction to close the wheel cylinders. NOTE: ensure the shims on the wheel cylinders and the rear roll are clamped up tight. Making sure no one is near the machine lower the machine back into the work position. As long as the power to the limit switch is still on then the pressure will return to the previously set pitch.

4.14 Adjusting Disc Angle (X-Press model only)

If the machine is fitted with levelling boards you first turn the divert tap to the angle setting.

When stationary crowd the machine onto the rear roll to ease the working elements from work. Operate the hydraulics (orange/green) so that the disc angle rams open to full stroke. Add/remove shims as required. Once the shims are set reverse the hydraulics to nip the shims tight. This has now set the maximum cut angle of the discs. In work it is possible to relieve this angle (straighten the cut) if a blockage occurs and return to this setting. NOTE: It is not possible to operate both the levelling boards and gang angle on the move.

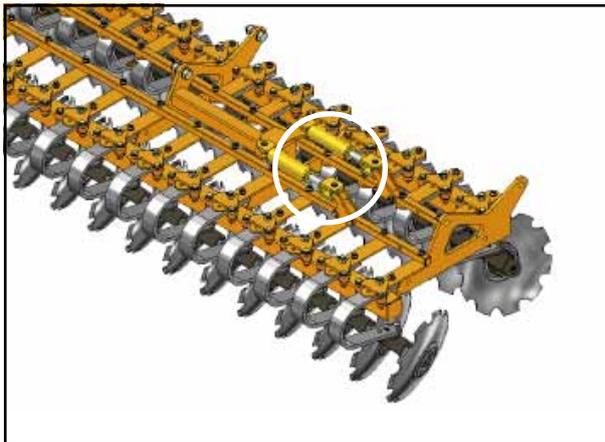


Fig. 4.10: Disc Angle Adjustment

4.15 Work Instructions

Driving speed

The Press can be driven at speeds of up to 14 km/h.

This depends on the field conditions (type of soil, surface trash, etc.).

Drive more slowly if the conditions are difficult or a firmer finish is required.

Turning:



Before turning, the machine should be eased out of work while driving. Likewise, it should be eased back into work once the turn has been completed.



When reversing the (ie. into the corner of a field) the machine should be tilted onto its rear roll. On machines fitted with levelling boards it is imperative that the levelling board cylinders are fully extended (intermeshing the sprung leaves with the DD roll) before reversing. Serious damage can occur if the levelling board leaves are in contact with the soil when reversing the machine.

4.16 Parking the machine

In order to avoid damage as a result of moisture, the machine should be parked, if possible, indoors or under cover.



When manoeuvring the machine, pay attention to your surroundings. Ensure that nobody is in the manoeuvring area (watch for children!).

- Park with the machine on level solid ground, if leaving parked for a long period of time it is advised the machine is left in the unfolded or work position. Fit the wheels chocks under the wheels.

- Switch off the tractor. Swing the jack into the work position.
- Switch the tractor back on and operate the hydraulic jack to raise the drawbar from the jaw of the tractor and remove the pin.
- If the machine is being left folded on the jack ensure the catcher arm tap (YELLOW) is left closed. Depressurise all hydraulic lines and remove pipes and cables from tractor.
- Slowly draw the tractor forward.

4.17 Using Shims

Before using shims to alter machine settings ensure the machine is stationary and the tractor is turned off with the keys out. Ensure that all operators are clear of the machine and that no load is being held on any existing shims in the cylinder.

To fit the shims hold them by the handle and, using a firm action, clip them onto the rod as shown in *Fig. 4.12*. They are removed by using a finger to pull firmly on the handle.



Check the cylinders for damage and debris before fitting shims.



Only attempt to add or remove shims using the handle. Trying to manipulate shims using the jaws could result in injury.



When changing machine settings ensure both sides of the machine mirror each other. The left hand cylinder should contain the same amount of shims as the right, for example. Failure to do this could result in damage to the machine.

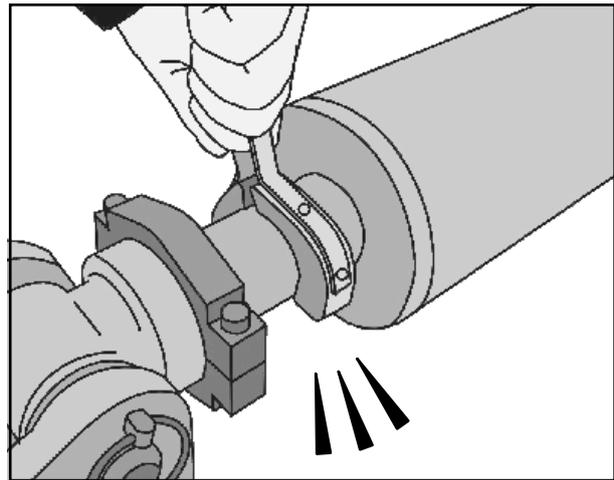


Fig. 4.12: Shims

4.18 Checks

The working quality depends on the adjustments and checks made prior to and during work, as well as on regular servicing and maintenance of the machine.

Before beginning work it is therefore important to carry out any necessary servicing and to lubricate the machine as required.

Checks prior to, and during work:

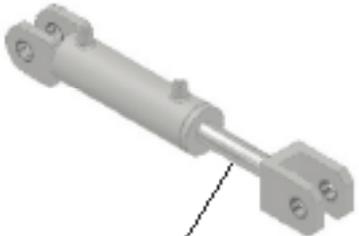
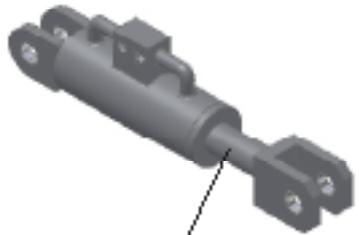
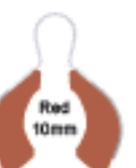
- Is the machine correctly hitched up and the coupling device locked?
- Have the hydraulic lines been connected according to the colour coding?
- Is the machine in a level operating position and the working depth set correctly?

Working Elements

- Are the discs and other cultivation tools in a serviceable condition?
- Are the scrapers still operable, so that the rolls do not jam?

4.19 Starting Settings

This section details the recommended starting settings for the Press. These settings can then be used as a base for further adjustment in order to get the optimum performance from your machine. Ensure all settings from the left and right hand sides of the machine mirror each other.

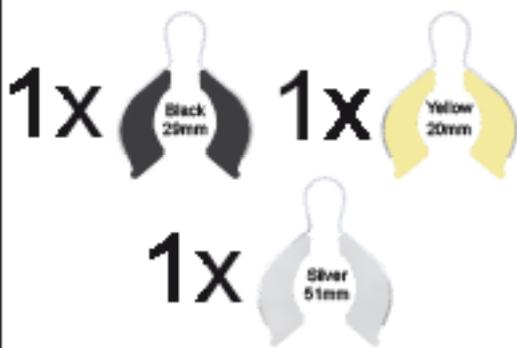
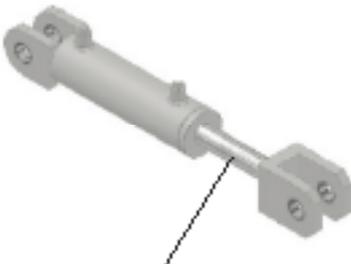
<p>CultiPress Starting Settings</p> <p>Wheel Height Cylinder</p>  <div data-bbox="231 929 774 1142"> <p>1x </p> </div>	<p>Out-Rigger Adjuster</p>  <div data-bbox="861 828 1404 1187"> <p>1x  1x </p> <p>1x </p> </div>
<p>Lev. Board Cylinders</p>  <div data-bbox="231 1545 774 1915"> <p>1x  1x </p> <p>1x </p> </div>	<p>Rear Roll Cylinder</p>  <div data-bbox="861 1612 1404 1859"> <p>1x  1x </p> </div>

X-Press Starting Settings

Wheel Height Cylinder



Lev. Board Cylinders



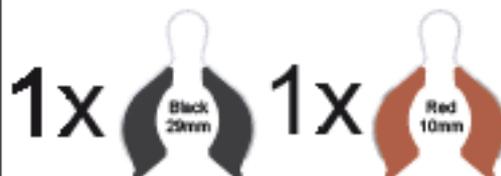
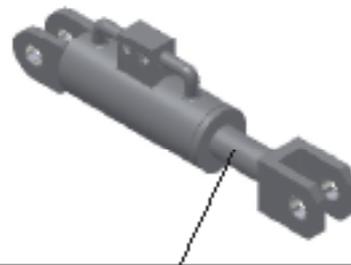
Out-Rigger Adjuster



Disc Angling Cylinder



Rear Roll Cylinder



5. Servicing and Maintenance



Follow the safety instructions for servicing and maintenance.

5.1 Servicing

Your machine has been designed and constructed for maximum performance, operational efficiency and operator friendliness under a wide variety of operating conditions.

Prior to delivery, your machine has been checked at the factory and by your authorised dealer to ensure that you receive a machine in optimum condition.



To ensure trouble-free operation, it is important that servicing and maintenance work is performed at the recommended intervals.



If for any reason the operator needs to work on the ground engaging elements it is important that the machine is safe and secure to do so. This can be done in two ways:

- Tilt machine rearwards fully onto the DD roll. Once fully extended lock the two taps on the top of the main tilt ram.
- Fold the machine up completely as if it were to be transported. It is now possible to access all working elements safely from the outside.

5.2 Cleaning

In order to ensure that the machine is always in operating condition and to achieve optimum performance, perform the cleaning and servicing work at regular intervals.

Avoid cleaning the roll / disc bearings with a high-pressure hose or a direct water jet. The housing, screwed connections and ball bearings are not watertight.

2016-05-18

5.3 Disc Hub Maintenance



Grease every disc hub until grease shows from the seals according to the lubricating intervals outlined on pages 37-38.



Check disc hubs regularly for tightness.



Regularly examine hub caps, seals, shear and pivot bolts and all tracking bolts for tightness and effectiveness twice weekly or every 50 working hours (whichever is more frequent).

5.3.1 Tightening Disc Hubs

- 1 Ensure that the bearing seal is in the correct orientation when replacing / assembling components.
- 2 Ensure that the stub axle is free from dirt and the nut and outer bearing can easily slide on it.
- 3 Tighten the crown nut with a hand spanner (a torque wrench is not required) while turning the hub clockwise until the bearing drags slightly (you feel the hub turning heavily). Some resistance will be due to friction from the seal.
- 4 Turn back the crown nut to the next locking position. Even if the tightening of the nut has reached an exact fixing position, turn it back.
- 5 Insert the retaining pin.

Continued over.

- 6 Try to shake/rock the outer edge of the hub/spindle: play of 0.1 / 0.2mm will not reduce the bearings' life and, in addition, prevents overheating. If the adjustment is correct the hub should turn freely with the only friction being from the seal.

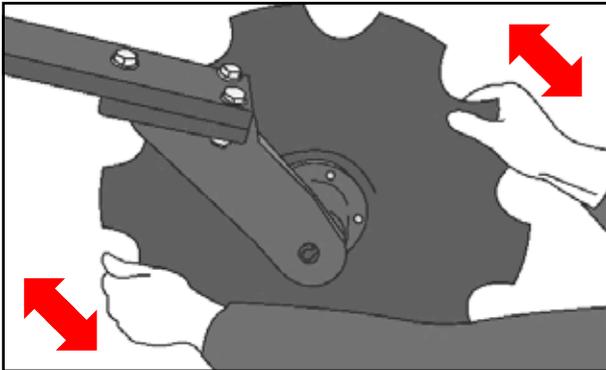
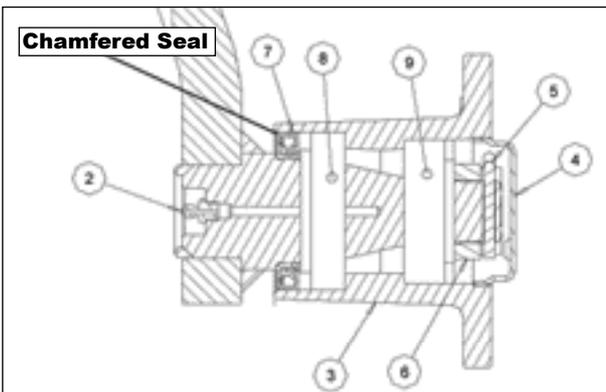


Fig. 5.01: Checking Disc Bearing Adjustment

5.3.2 Bearing Seals

It is important when replacing the labyrinth type bearing seals in disc hubs that the seal is fitted the right way round. The chamfered lip side should be at the outside of the bearing housing, nearest the disc arm (see Fig. 5.02). This chamfered lip prevents dirt ingress into the housing and also allows grease to be flushed through when greasing.



ITEM	PART NO	DESCRIPTION
1	---	DISC ARM
2	P12900	NIPPLE - GREASE M8
3	P14593	HUB CASTING
4	P14594	HUB CAP
5	P12908	SPRING PIN
6	P12907	NUT CASTLE M27x1.5
7		SEAL 64x45x9.5
8	P12415	BEARING 32008 40x68x19
9		BEARING 32206 30x62x21

Fig. 5.02: Correct Seal Orientation

5.4 Tines



When performing maintenance work on tines extreme care should be taken. Wear goggles and gloves at all times when maintaining tines.



Safely support unfolded machine in raised position using taps and stands before attempting maintenance work on tines.



Do not attempt to assist fitting tine points with a steel headed hammer, this can lead to splintering of the metal due to its hardness, which can cause injury. If tine fitting requires assistance, a copper/hide or plastic mallet should be used.

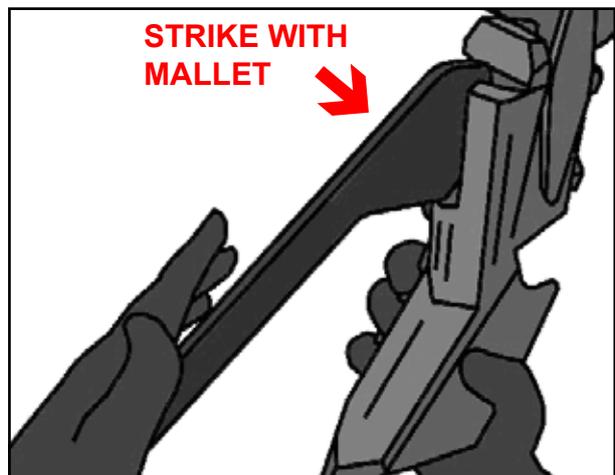


Fig. 5.03: Knock-on Tine Point Removal Tool

5.5 Double Disc Axles

The axles on this roller are tensioned by the main axle through the centre of the rings and bearings.



Specialist equipment is required for the disassembly of Double Disc axles. Please consult your dealer under any circumstances that require disassembly of these axles.

Maintenance of these rollers is limited to daily greasing of the bearings to flush out dirt, and regular inspection to ensure the assemblies are tight, and scrapers are correctly set. The axles can be tightened provided the bearing pillar 'U' bolts are loosened to avoid preloading the bearings as they move sideways to each other. Ensure the bearing pillars are re-tightened to the mainframe after this.

5.6 Wing Pitch

The pitch of the wings can be altered by using the threaded ends of the wing cylinders. Tightening will raise the outer tips of the wings and loosening will lower the tips of the wings.

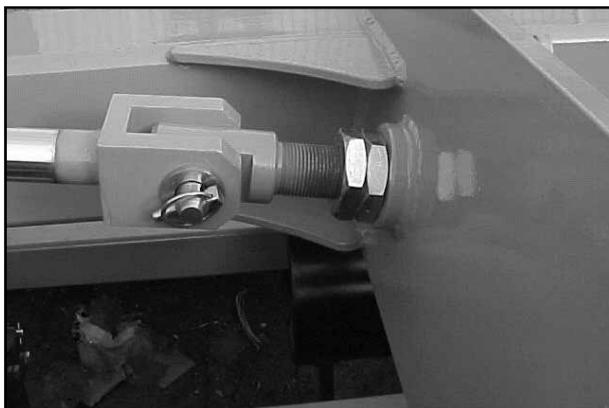


Fig. 5.04: Wing Pitch Adjustment

5.7 Hydraulics



A low oil flow should be used, i.e., tractor tickover or low flow selected.



The wing circuit is controlled by an overcentre valve contained within the manifold block which positively locks oil flow until pressurised by the tractor. System pressure can be retained in the circuit **even after depressurisation** of the tractor quick release couplings.



Exercise extreme care when checking the valve or circuits, and *under no circumstances* attempt to adjust or loosen fittings without prior reference to your authorised Great Plains dealer, and detailed maintenance instructions.

5.8 Preparation for Storage

If you need to store the machine for a longer period, observe the following points:

- Park the machine undercover if possible.
- Protect the roll / discs against rust. If you need to spray the implements with oil, use light biologically degradable oils, e.g. rape oil.

5.9 Brakes & Wheel Hubs

The brakes should be tested before using for the first time and after the first laden journey.



Check that the road and parking brakes operate and release correctly before using the machine.



Check for hydraulic fluid and air leaks.



Brake and hub maintenance and servicing should be carried out by an authorised Great Plains dealer.

5.10 Operator Support

If you have a problem, please contact your dealer. They will endeavour to solve any problems which may occur and provide you with support at all times.

In order to enable your dealer to deal with problems as quickly as possible, it helps if you can provide them with the following data. Always state the:

- Customer Number
- Name and Address
- Machine Model
- Serial Number of Machine
- Date of Purchase and Operating Hours
- Type of Problem

5.11 Maintenance Intervals

Apart from daily maintenance, the maintenance intervals are based on the number of operating hours and time data.

Keep a record of your operating hours to ensure that the specified maintenance intervals are adhered to as closely as possible.

Never use a machine that is due for maintenance. Ensure that all deficiencies found during regular checks are remedied immediately.



Avoid sharp-edged and pointed parts (disc blades, etc.) when working on the machine.



Place the machine on suitable supports when working underneath! Do not work under a machine which is not supported!

On a new machine tighten all nuts and bolts after 5 hours work and again after 15 hours. This also applies to parts that have been moved or replaced. After the initial 15 hours of work a once a week check should be sufficient depending on daily work rates.

5.12 Maintenance Overview

8-10m Press Range Maintenance Overview			
	Instructions	Interval	Note
After first operation			
Check all screw, bolt and plug connections	Check they are firmly seated. Tighten / Secure if necessary	—	—
Check wheel studs for tightness	Check on delivery and before transporting the machine	—	—
Lubricate machine	See overview of lubricating points	—	Page 38
During operation			
Lubricate machine	See overview of lubricating points	—	Page 38
Wheel studs	Check tightness before transporting the machine	daily	—
Disc Angle, Working Depth (X-Press)	Check setting and ensure they are firmly secured	daily	Page 27, 29
Hydraulic system and components	Check seals, signs of crushing/wear, function and condition	daily	Page 35
Disc Bearings (X-Press)	Check condition, mountings and smooth operation	daily	Pages 24, 34
Leveling Boards	Check condition, mountings and smooth operation	daily	Pages 25, 28
Roll Axle bearings	Check condition, mountings and smooth operation	daily	Pages 25, 35
Double Disc roller ring segments	Check condition and ensure they are firmly secured	daily	Pages 25, 35
Safety devices (Transport Locks, chocks etc.)	Check condition and function	daily	—
After season			
Lubricate machine	See overview of lubricating points	—	Page 38
Bolts / Lock Bolts	Grease any exposed threads	—	—
Entire machine	Carry out cleaning and maintenance	—	—
Spray Double Disc roll with oil	Use biological oil if possible - cover rubber elements	—	—
After 6 years			
Hydraulic pipes	Replace	MRL Ann I	EN 1533

5.13 Overview of Lubricating Points

8-10m Press Range Lubrication Points	Interval	Diag. No.
DD Roll Bearings	10 Hours	5.08
Wheel Carriage Pivots	10 Hours	5.09
Wing Pivots	50 Hours	5.10
Wheel Bearings	50 Hours	5.11
Disc Bearings	200 Hours*	5.12
Adjusters	200 Hours	5.13

* See page 40, section 5.16 for details

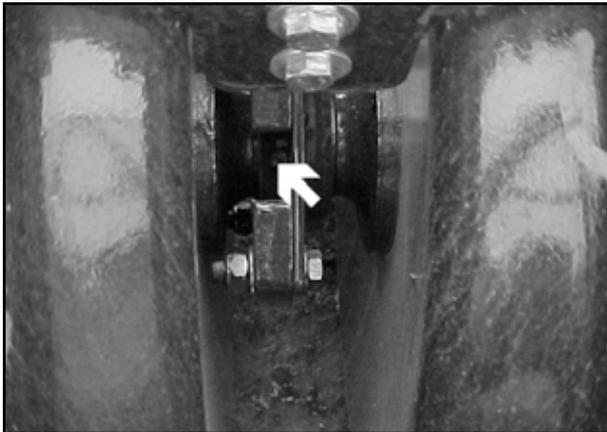


Fig. 5.08: DD Roll Grease Points

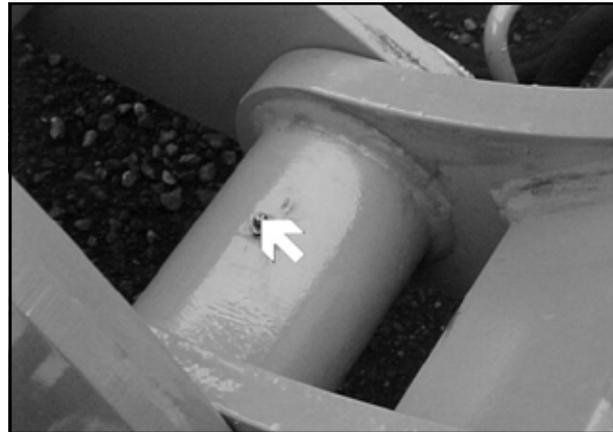


Fig. 5.09: Wheel Carriage Pivot Grease Points

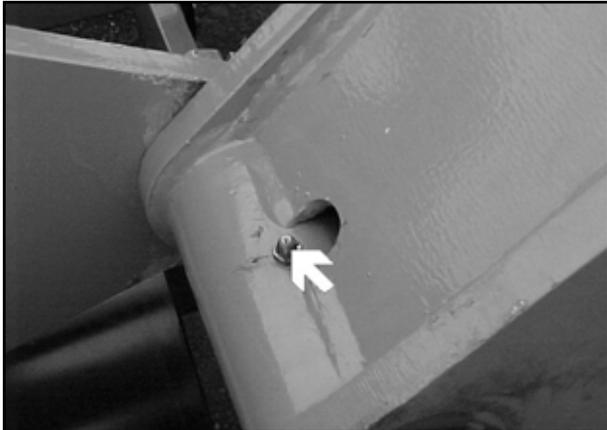


Fig. 5.10: Wing Pivot Grease Points

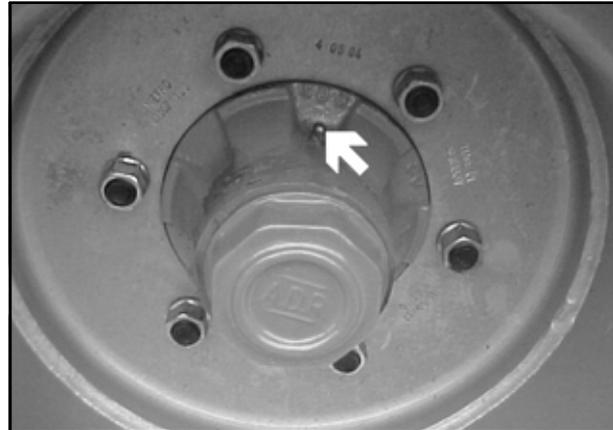


Fig. 5.11: Wheel Bearing Pivot Grease Points



Fig. 5.12: Disc Bearing Grease Points

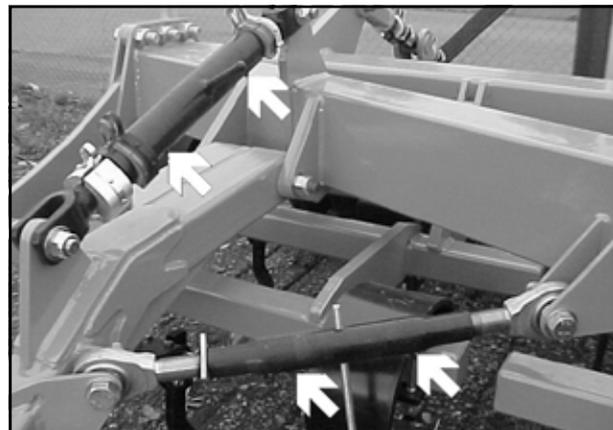


Fig. 5.13: Adjuster Grease Points

5.14 Lubricating the Machine

Please read the section entitled “Handling of Lubricants” carefully before lubricating the machine.

The machine must be lubricated regularly in order for it to remain serviceable. Regular lubrication also contributes towards extending the service life of your machine. The recommended lubricating intervals are specified in “Maintenance Intervals”.

After it has been washed using a high-pressure hose or steam cleaned, the machine should always be lubricated using a grease gun.

5.15 Handling of Lubricants

Please ensure that you read the following instructions as well as the relevant information. This also applies to any of your employees who handle lubricants.

Hygiene

Lubricants do not present a health hazard provided they are used for their specified purpose.

In the case of prolonged skin contact, lubricants - especially low-viscosity oils - may remove the natural layer of fat contained in the skin, resulting in dryness and possible irritation .

It is important to take extreme care when handling waste oil as it may contain other irritants.

Vapours given off by cleaning agents and oils are also a potential health hazard. You should therefore not carry any oily cloths around. Change soiled work clothing as soon as possible.

Always exercise extreme care and observe the recommended hygiene rules when handling mineral oil products. Details of these handling regulations can be found in information provided by the health authorities.

Storage and Handling

- Always store lubricants where they cannot be accessed by children.
- Never store lubricants in open or unlabelled containers.

Fresh Oil

- Apart from taking the usual care and observing hygiene rules, there is no need to take any special precautions when handling fresh oil.

Waste Oil

- Waste oil can contain harmful contaminants which may cause skin cancer, allergies and other illnesses.

Attention!

Oil is a toxic substance. Should you swallow any oil, do not try to vomit. Contact a doctor immediately.

Protect your hands with barrier cream or wear gloves to avoid contact with the skin. Wash off any traces of oil thoroughly with soap and hot water.

- Wash your skin thoroughly with soap and water.
- Use special cleaning agents to clean any dirt off your hands.
- Never wash oil residue from your skin with petrol, diesel fuel or paraffin.
- Avoid skin contact with any oily clothing.
- Do not keep any oily rags in your pockets.
- Wash soiled clothing before wearing it again.
- Ensure that any oily footwear is disposed of in the proper manner.

Measures in case of injury through oil

Eyes:

Should any oil be splashed into your eyes, rinse with water for 15 minutes. If the eye is still irritated, contact a doctor immediately.

If oil is swallowed

If oil is swallowed, it is important not to induce vomiting. Contact a doctor immediately.

Skin irritation caused by oil

In case of prolonged skin contact, wash off the oil with soap and water.

Oil Spills

Use either sand or a suitable granular absorbent to soak up any spilt oil. Dispose of the oil-contaminated absorbent in the proper manner.

Oil Fires

Never use water to extinguish an oil fire. The oil will float on the water causing the fire to spread.

Burning oil/lubricant must be extinguished using a carbon dioxide powder or foam extinguisher. Always wear respiratory equipment when dealing with fires of this type.

Waste Oil Disposal

Oil-contaminated waste and used oil must be disposed of in accordance with current legislation.

Waste oil must be collected and disposed of in accordance with local regulations. Never pour used oil into unsealed sewage systems or drains or onto the ground.

5.16 Lubricants & Hydraulic Oil

Hydraulic System

The hydraulic fluid from the tractor is mixed with the hydraulic fluid from the machine.

The supplied machine hydraulic system contains Total AZOLLA ZS 32 oil.

Lubricants

Great Plains strongly recommend the use of **Lithium Complex EP2 Grease** in the disc of your X-Press. This grease is a Lithium Complex soap dispersed in a mineral oil and is interpreted by IARC as being non-carcinogenic. Grease cartridges are available from Great Plains (P12710). Using this grease in combination with the labyrinth type seal it is permissible to lengthen the greasing interval on the disc hubs to 200 hours. If using a standard agricultural grease the disc hubs should be lubricated every 50 hours.

Advantages of Lithium Complex EP2 Grease

- Excellent mechanical stability.
- Excellent load carrying properties.
- Wide temperature range.
- Excellent oxidation stability.
- Excellent water resistance.
- Compatibility with other greases.

All other lubricating points on the machine can be lubricated with multigrade lubricating grease as specified in DIN 51825 KP/2K - 40.

5.17 End of Season Service/Storage

The machine should be left parked in the unfolded position

Wheel bearings should be inspected and re-packed with grease if required

All greased pins/pivots should be lubricated.

Check for worn or damaged components and hardware, replace where required.

If fitted, check and where required adjust DD roller tension

Where hydraulic cylinder rods are exposed, re-coat chrome with oil/grease.

If the machine has been washed before storage it is good practice to function all hydraulic cylinders and services before storage.

Remove all fertiliser and seed from all metering units and hoppers.

Remove all metering cassette elements.

6. Faults and Remedies

Troubleshooting		
Fault	Possible cause	Remedy
Machine will not lift from work to transport position	Taps on lift cylinders closed	Open taps on lift cylinders
	Power to limit/tilt switch is left on	Turn off power to limit/tilt switch
	Hyd. hose has detached from tractor	Turn off tractor, depressurize hydraulics and reattach hose
	Trace pressure present in wheel cylinder circuit	Operate wheel cylinder circuit so that axle cross beam is raised fully
Cannot unfold wings	Catcher arms are up and holding wings in	Operate wing hydraulics in opposite direction then open taps on catcher circuit
	Pressure is higher than relief pressure setting	Ensure machine is on level, even ground. If the tractor is facing down a slope the required pressure to fold is greatly increased. If this does not work consult Simba or your dealer for instructions how to increase the wing pressure relief setting.
Wing lips riding out / light. Middle of machine low.	Wing cylinders not fully extended	Tilt the machine forward and pressure wing cylinders out fully
	Out-Rigger wheels carrying too much weight	Roll machine onto rear roll and adjust the shim setting on Out-Rigger wheels
	Pressure in wing circuit too low	Adjust wing lip pressure setting
	No weight being carried on transport wheels	Adjust the height of the transport wheels to carry more drawbar weight

Great Plains

Troubleshooting		
Fault	Possible cause	Remedy
Pressure showing on gauges but tilt cylinders not moving	Taps on tilt cylinders closed	Open taps on tilt cylinders
	Power to limit/tilt switch is left on	Turn off power to limit/tilt switch
Centre of machine rides out / high	Pressure in wing circuit too high	Reduce pressure in wing circuit
	Transport wheels carrying too much weight	Add shims to wheels cylinders to raise them out of work
Disc angle cylinders or levelling boards will not move	Diverter tap not engaged correctly / supplying oil to wrong system	Pull diverter tap to either ANGLE or BOARDS
Machine appears to be nose diving in work	Power to limit/tilt switch is off	Ensure cable is plugged into rear of tractor (turn on sidelights)
	Position of limit/tilt switch is incorrect	Reposition limit/tilt switch to trip at desired height. Note: when setting this switch it is necessary to tilt the machine fully rearwards each time to reset the limit switch. If this is not done it will appear that even with adjustment the front to rear pitch of the machine will not have changed.
Wings hit catchers when folding in and are not able to hook around stub axles	Taps on catcher line has not been closed before attempting to fold machine	Reverse pressure in wing system to open wings. Turn off tap in catcher line then fold wings in. Once wings are in fully, open tap lift catchers then close taps to lock in transport position
Cannot retract wheel cylinders to carry machine weight/rip up shims	Too much weight is on the wheel units	Tilt machine rearwards onto DD roll until working elements are clear of the ground. Operate wheel cylinder hydraulics, add/remove shims then reverse pressure to rip shims up tight on wheel cylinders



Great Plains UK Ltd.	Tel.: +44(0)1529 304654
Woodbridge Road, Sleaford	Fax: +44(0)1529 413468
Lincolnshire, NG34 7EW	E-Mail: simba@greatplainsmfg.com
United Kingdom	Web: www.greatplainsmfg.co.uk