The logo features a stylized green bull head with two upward-pointing horns, positioned above a horizontal brown line. Below the line, three brown arrows point downwards and outwards, representing tilling.

BULLOCK TILLAGE



Read carefully before operating

TITANUM OPERATOR MANUAL

Table of contents

	Page
Description.....	2
Warning signs.....	3
Warning signs.....	4
Location of labels 3 metre machine.....	5
Location of labels 4, 5 and 6 metre machines.....	6
Location of labels semi mounted machines.....	7
Location of labels on Titanum H with hydraulic linkage lift.....	8
Safety precautions.....	9
Hitching up to a tractor.....	10
Operation and adjustment.....	11
Driving instructions / Folding for transport.....	12
Maintenance and checks.....	13
Grease points.....	14
Grease points and Titanum H with hydraulic linkage lift.....	15
Warranty.....	16
Details.....	17

Description

The Titanium range of Disc Harrows are universal machines capable of operating directly into cultivated, uncultivated and ploughed land.

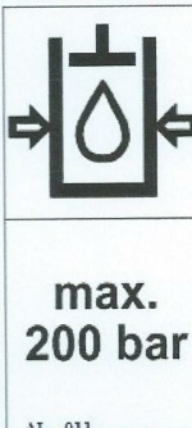
The Titanium Disc Harrows are available in 3, 4, 5, and 6 metre working widths with the option of being semi mounted in 4, 5 and 6 metre widths. Each machine has two rows of 560mm discs mounted on maintenance free bearings with rubber shock absorbers followed by a full width packer for reconsolidation of worked ground.

Titanium Disc Harrows



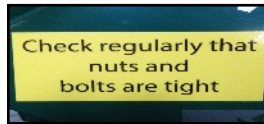
- Warning signs and other notices on the machine provide important information for the safe operation. Observing them will serve your safety.

 AL - 001	Read and observe the Operating Instructions before starting up the machine!
 AL - 002	Never reach into areas where there is a danger of being crushed by moving parts!
 AL - 003	No passengers are allowed on the machine!
 AL - 005	Watch out for escaping pressurised fluids! Follow the instructions in the Operating Instructions!
 AL - 006	Parts may fly off during operation. Keep a safe distance away from the machine!

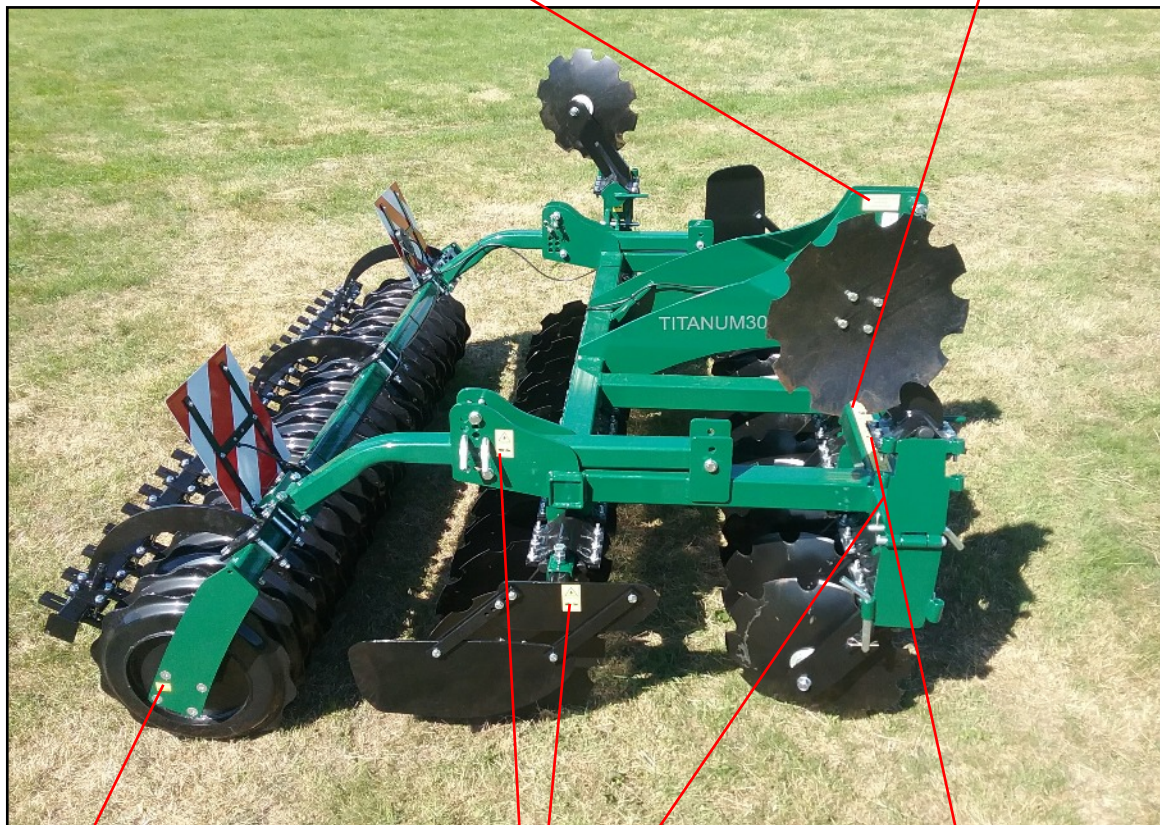
 AL - 007		The mark indicates the space hitch lifts.
 AL - 010		Risk of injury! Refer to Operating Instructions before attempting maintenance.
 AL - 011		The maximum hydraulic pressure - 200 bar.
 AL - 014		Keep clear of the working range of foldable machine components!

- Before starting work, make yourself familiar with all the equipment and controls as well as their functions.

Location of Labels on the 3 metre Titanium



Identity plate



Grease point



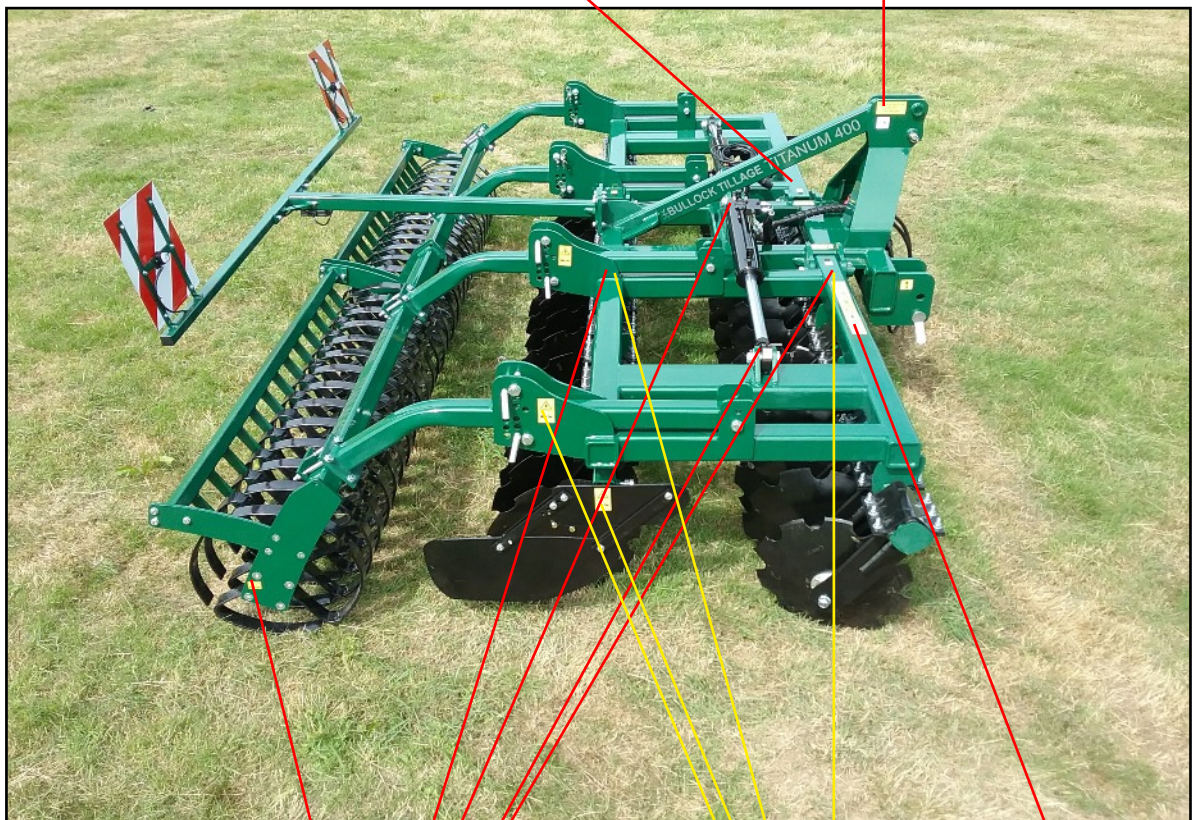
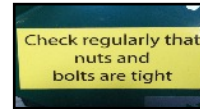
Danger of being crushed by moving parts



Warning label

Location of labels on 4, 5 and 6 metre hydraulic fold

Identity plate



Warning label

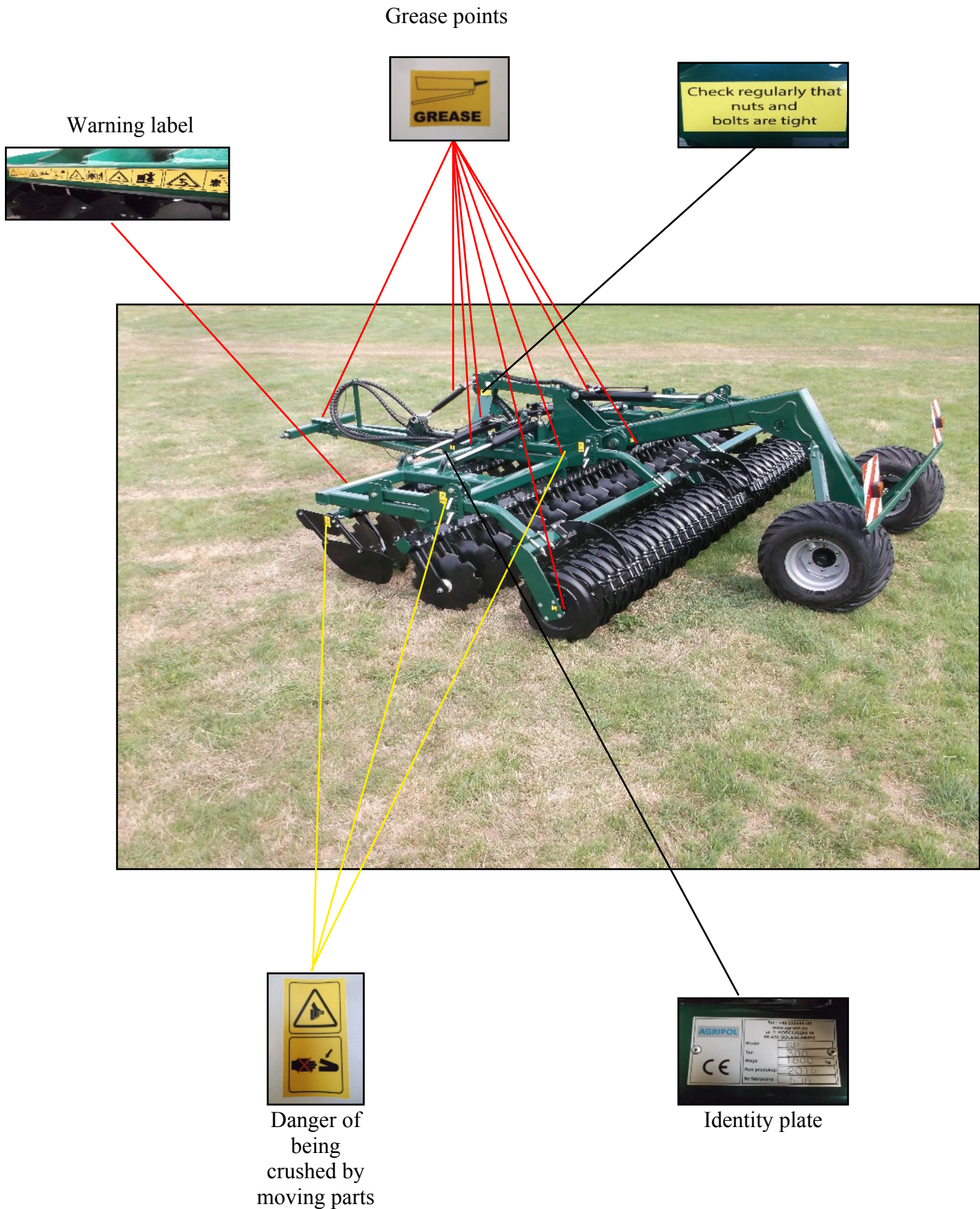


Grease points, applicable to both sides of the machine.

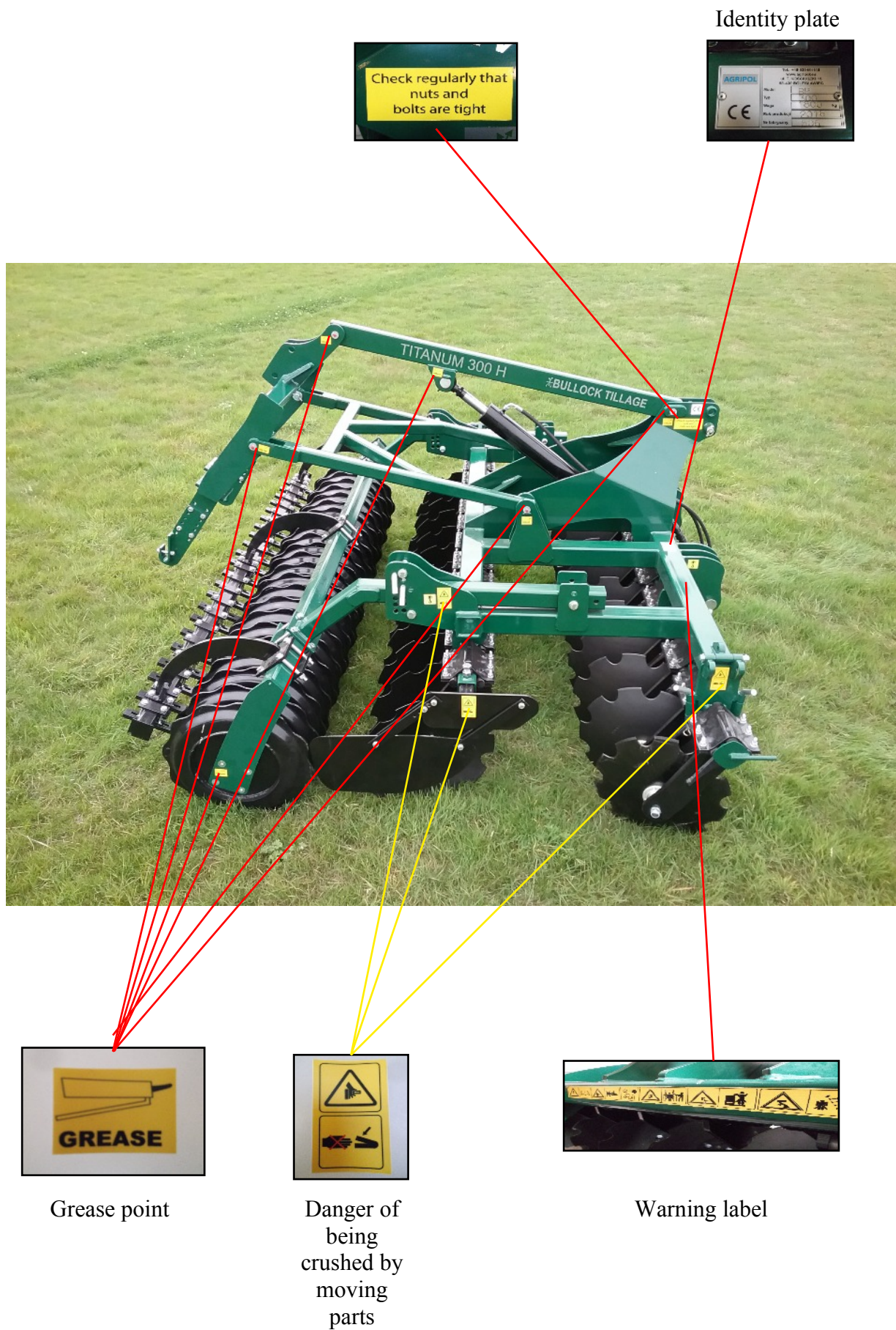


Danger of being crushed by moving parts

Location of labels on Titanium Semi Mounted



Location of labels on 3 metre Titanium H with one ton hydraulic lift



Safety precautions

Operators must read and understand the instructions before using the machine.

Operators must make themselves familiar with all the controls and equipment as well as their functions.

! Before using the machine check all nuts and bolts are tight, **especially on disc units and bearings.** Check again after the first days work and periodically during the working season.

It is forbidden to allow persons to ride on the machine at any time. Keep all observers at a safe distance and make sure you have adequate all round visibility.

Do not stand between the tractor and the implement when backing up to attach the implement and always take extreme care when hitching and unhitching the machine from the tractor.

Always use a tractor of suitable size and horsepower. Check the tractor tyres and wheels are designed for the weight of the machine and ensure tyres are inflated correctly. (Weight of machine is on the identity plate)

Because the machine is heavy, for most applications front mounted weights should be added to the tractor. To assure safe road transport, always make sure the tractor has sufficient weight on the front axle. Ensure adequate steering and braking ability.

During road transport secure the packers using the pins to prevent any shock loading when encountering undulating ground. **Always drive at a safe speed during transport, respect the ground terrain.** **Driving too fast in the transport position can result in shock loading and damage to the machine or the tractor. The warranty does not cover damage that occurs as a result of careless transport on the road or in the field!**

Pay attention to the width and the extended turning area of the implement during road transport. Avoid sudden turning manoeuvres especially when driving up or down and across a hill.

Observe the respective regulations when using public roads.

Use lights on the implement in accordance with local traffic regulations.

Prior to road transport, remove any dirt that may fall off the implement or tractor.

Always park the machine on a level and solid surface.

Never stand or work beneath suspended loads.

When making adjustments to the machine care should be taken not to trap body parts in moving or pivoting parts. Wear adequate protective clothing as parts of the machine are sharp.

The fully mounted Titanium Disc Harrows are designed for three point hitching, either category 2 or 3. Due to the physical nature and weight of the Titanium category 3 is recommended along with a category 3 top link enclosed ball.

Due to exaggerated loads experienced during normal working conditions, the top link pin and the lower link pins should be checked for wear on a regular basis.

Before road transport with the 3 metre Titanium fold up the outer discs, secure the packer using the pins to avoid shock loading.



Hitching up to a tractor

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

Hydraulic folding and semi mounted machines should always be left in the unfolded position.

Mounted machines are attached by the lower link arms of the tractor and the top link. Category 2 and 3 pins are available and it is advisable to use the category 3 pins especially with machines above 3 metres in working width.



Hydraulic folding mounted machines have hydraulic hoses that require one double acting valve. Hydraulic rams are fitted with lock out valves.

Ensure the tractor hydraulics are depressurised and in the locked (not float) setting before attaching the hoses.



Semi mounted machines are attached to the tractor via the lower link arms which are category 3.



Semi mounted machines have 4 hoses requiring two double acting valves, one to fold the disc units and one to raise and lower the transport wheels.



Operation and adjustment.

Never turn with the machine in the ground, always work in straight lines.

Working depth. The working depth of the discs is controlled by the packer and the height of the hydraulic arms on the tractor. With trailed machines disc depth is also adjusted by adjusting the drawbar turnbuckle as required. The retaining pins are used to select depth positions on the packer.

To acquire best stability, the front and rear rows of discs should operate at the same depth. Make sure the chassis is horizontal.

If the front discs work at a greater depth the machine will turn to the right when working and if the rear discs are at a greater depth the machine will turn to the left. Adjustment is made by raising or lowering the hydraulics on the tractor, adjusting the packer or adjusting the top link.



The side panels (to avoid ridging) on either side are adjustable both in height and distance from the outer disc. When conditions are wet or on certain soil types it may be necessary to adjust the side panels further away from the outer disc to avoid excessive soil building up on the panel. This is done by releasing the lock nut and slackening off the retaining bolt. Reverse this process when the required position is selected. Ensure the retaining bolt and locking nut are securely fastened. **IMPORTANT** for none folding models the side panels need to be adjusted back to the closed position for road transport.



For none folding models, when in work the two outer discs should be lowered and the two retaining pins used to secure the discs position. Lower the machine to a reasonable height before attempting to raise or lower the outer discs. Take care when lowering or lifting the discs as they are sharp and appropriate protective clothing should be worn. Always ensure the discs are secured by the retaining pins in the folded position before road transport.



Driving instructions.

The Titanium Disc Harrows can be driven at speeds of up to 12 km/h. However, this depends on soil conditions, surface trash and soil type. Drive more slowly if the conditions are difficult.



Turning: Always fully raise mounted machines before turning in the field. Semi mounted machines should be eased out of work onto the transport wheels before turning, under no circumstances should the discs or packer be in contact with the soil when turning.



Important

Never lower the machines onto the ground unless they are fully unfolded.

Folding for transport

Operate the hydraulics to fully raise the machine and lower the wheels on semi mounted machines.

Fold the machine fully. All hydraulic cylinders have lock out valves fitted but do not operate the tractor hydraulic valves when in transport.



For transport lower the machine to maximise stability while ensuring adequate clearance for road transport.

If the Titanium is to be unhitched from the tractor it must be in the unfolded position to avoid damage to disc units.



REMEMBER! Always drive at a safe speed when in transport to avoid any shock loads or accidents especially on the public highway.

Maintenance and checks

IMPORTANT! Before use check nuts and bolts are tight.

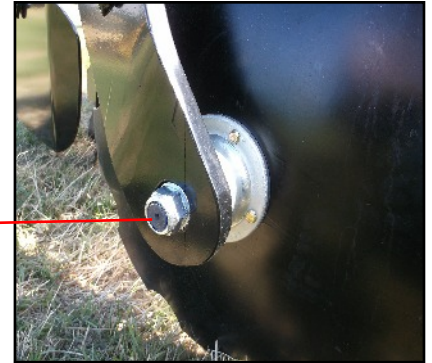
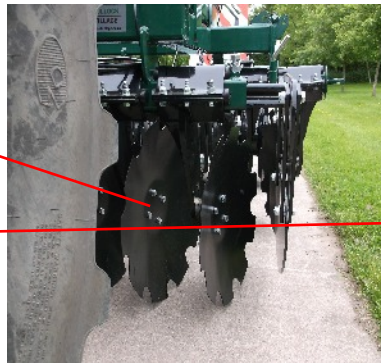
After initial use of one day, check all nuts and bolts are tight and periodically check during the working season. **NOTE** nuts and bolts will stretch after initial use! Failing to tighten bolts could result in the loss of discs or deformation of holes on leg arm retaining the disc bearings.

Check disc units are tight.

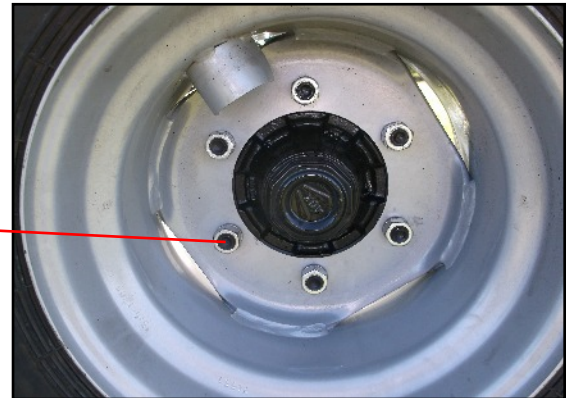


Check bolts on discs are tight.

Check bearings are tight



Semi mounted, check wheel nuts are tight.



Check all nuts and bolts on the main frame are tight



Grease points

Grease points are all labelled.

All machines have grease points on the packer bearings at either end of the packers. These are the only grease points on a 3 metre Titanium.



Hydraulic folding machines have grease points on either end of each ram and on the folding joint of each wing section. The grease point is found by removing the plastic protective cap.



Semi mounted machines have additional 2 grease points on the linkage swivel point at the end of the drawbar, 2 grease points on the drawbar pitch adjuster and a grease point under the main beam of the wheel assembly unit.



All disc bearings are maintenance free.



Grease points

The Titanium H with hydraulic linkage lift has grease points on all the pins that swivel on the linkage system also on either end of the hydraulic cylinder and at either end of the packer. The linkage has a One Ton lift capacity and is ideal for small seeder units.



All points should be greased every 100 hours and prior to winter storage. Machines should be stored under cover and in the unfolded position.

3 metre Titanium H Hydraulic lift.

The Titanium H with Hydraulic linkage lift has a capacity to lift one ton. To operate the linkage it requires one double acting tractor valve.

REMEMBER! With suspended loads at the rear of the disc harrow always drive at a safe speed when in transport to avoid any shock loads or accidents especially on the public highway.



The hook ends are adjustable for height by removing the bolts and adjusting the hole position. Ensure both linkage arms are adjusted to the same height and take care that the linkage arms do not make contact with the packer when in the lowered position.



WARRANTY TERMS AND CONDITIONS

In this warranty AGRIPOL 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 AGRIPOL.

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. IMPORTANT! The implement is heavy, adjust the speed to the road and field conditions. The warranty does not cover damage that occurs as a result of careless transport on the road or in the field.
- (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 AGRIPOL COMPANY.
- (g) any maintenance is not carried out in accordance with the service schedules in the operator's manual.

<u>Technical detail</u>			
<u>Working width</u>	<u>no of discs</u>	<u>weight *</u>	<u>power hp</u>
3 metre	24	1370 kg	90 - 130
3 metre with hydraulic linkage	24	1470 kg	100 - 140
4 metre (Hydraulic fold)	32	2200 kg	140 - 180
5 metre (Hydraulic fold)	40	2600 kg	160 - 200
6 metre (Hydraulic fold)	48	2800 kg	180 - 250
4 metre semi mounted	32	2850 kg	140 - 180
5 metre semi mounted	40	3400 kg	160 - 200
6 metre semi mounted	48	3600 kg	180 - 250

* Minimum weight, dependant on packer choice.

The Titanium disc harrows are built and CE marked by :

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