Instructions

TANDEM UNI - DRILL DP300 / DP 400

PLEASE READ CAREFULLY BEFORE USING THE MACHINE

August -dp-version 1.0

Thank you for trusting our equipment and choosing the Tandem UNIDRILL.

To ENSURE correct operation, and make full use of your seed drill's capabilities, we recommend that you read this operators manual carefully.

Please do not hesitate to make suggestions or comments based on your experience; they will always be of use to us, and will help us improve our products.

Please return the duly completed guarantee form to us.

We wish you success with your seed drill.

Yours sincerely

Sam Moore Managing Director



Drill Limited

33 Kirk Road , Ballymoney, Co. Antrim , N. Ireland, BT53 6PP Tel : (0044) 28276 64444 Fax (0044) 28276 65696

Machine Width:		
Serial Number:		
Customer Name: Address:		
Tel:	•	
Mobile No:		
E. mail :	. Post	Code :
I HAVE RECEIVED THE ABOVE MAD THE CORRECT SPECIFICATION. I HAVE RECEIVED AND READ CORRECT OPERATION OF MA	THE OWNERS	
I WISH TO REGISTER MY MAC	HINE FOR WA	RRANTY
SIGNED : custon	MER DA	TE : -

- 1. To be completed, detached and returned to Moore Uni Drill within 14 days of customer receipt / purchase.
- 2. It is essential that all details be completed.
- 3. Failure to complete and return this form will prevent claim settlement

Declaration of Conformity



Declaration	of	Conf	form	itν
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Moore Uni Drill Limited,
Of 33 Kirk Road, Ballymoney, Co. Antrim, N. Ireland. BT53 6PP
hereby declare that
Model
Serial No

Date

conforms with the following Directives and Regulations, and has been certified accordingly.

The Essential Health and Safety Regulations Directive. 98 - 37 - EC

The Proposed Seed Drills Safety Document 2000 (00/714171 DC)

Certified on behalf of Moore Uni - Drill Limited

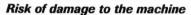
James A O' Kane

Technical Engineer



Risk of accident







- These symbols are used in these instructions every time recommendations are provided concerning your safety, the safety of others or the correct operation of the machine.
- These recommendations must be given to all users of the machine.

GENERAL SAFETY REGULATIONS

Every time the tractor/machine assembly is to be started up and used, you should ensure beforehand that it complies with current legislation on safety at work and Road Traffic regulations.

GENERAL

- 1 In addition to the instructions contained in this manual, legislation relating to safety instructions and accident prevention should be complied with.
- **2** Warnings affixed to the machine give indications regarding safety measures to be observed and help to avoid accidents.
- **3** When traveling on public roads, abide by the provisions of the Highway Code.
- 4 Before starting work, it is essential that the user is familiar with the control and operating elements of the machine and their respective functions. When the machine is running, it may be too late.
- **5** The user should avoid wearing loose clothing, which may be caught up, in the moving parts.
- **6** We recommend using a tractor with a safety cab or roll bar conforming to standards in force.
- 7 Before starting up the machine and beginning work, check the immediate

- surroundings, particularly for children. Make sure that visibility is adequate. Clear any persons or animals out of the danger zone.
- **8** It is strictly forbidden to transport any persons or animals on board the machine whether it is in operation or not.
- **9** The machine should only be coupled up to the tractor at the specially provided towing points and in accordance with applicable safety standards.
- **10** Extreme care must be taken when coupling or uncoupling the machine from the tractor.
- 11 Before hitching up the machine, ensure that the front axle of the tractor is sufficiently weighted. Ballast weights should be fitted to the special supports in accordance with the instructions of the tractor manufacturer.
- **12** Do not exceed the maximum axle weight or the gross vehicle weight rating.
- **13** Do not exceed the maximum authorized dimensions for using public roads.
- 14 Before entering a public road, ensure that the protective and signaling devices (lights, reflectors, etc) required by law are fitted and working properly.
- 15 All remote controls (cords, cables, rods, hoses etc) must be positioned so that they cannot accidentally set off any manoeuvre, which may cause an accident or damage.
- **16** Before entering a public road, place the machine in the

- transport position, in accordance with the manufacturer's instructions.
- **17** Never leave the driver's position whilst the tractor is running.
- **18** The speed and the method of operation must always be adapted to the land, roads and paths. Avoid sudden changes of direction under all circumstances.
- 19 Precision of the steering, tractor adhesion, road holding and effectiveness of the braking mechanism are influenced by factors such as the weight and nature of the machine being towed, the front axle stage and the state of the land or path. It is essential, therefore, that the appropriate care is taken for each situation.
- 20 Take extra care when cornering, taking account of the overhang, length, height and weight of the machine or trailer being towed.
- 21 Before using the machine, ensure that all protective devices are fitted and in good condition. Damaged protectors should be replaced immediately.
- 22 Before using the machine, check that nuts and screws are tight, particularly those for attaching tools (discs, flickers, deflectors, etc). Tighten if necessary.
- **23** Do not stand in the operating area of the machine.
- **24 Caution!** Be aware of any crushing and shearing zones on remote-controlled and particularly hydraulically controlled parts.

Safety Regulations

- 25 Before climbing down from the tractor, or before any operation on the machine, turn off the engine; remove the key from the ignition and wait until all moving parts have come to a standstill.
- 26 Do not stand between the tractor and the machine until the handbrake has been applied and/or the wheels have been wedged.
- **27** Before any operation on the machine, ensure that it cannot be started up accidentally.
- 28 Do not use the lifting ring to lift the machine when it is loaded.

PROPER USE OF THE MACHINE

The seed drill must only be used for tasks for which it has been designed. The manufacturer will not be liable for any damage caused by using the machine for applications other than those specified by the manufacturer. Using the machine for purposes other than those originally intended will be done so entirely at the user's risk. Proper use of the machine also implies:

- complying with instructions on use, care and maintenance provided by the manufacturer;
- using only original or manufacturer recommended spare parts, equipment and accessories.

The seed drill must only be operated, maintained and repaired by competent persons, familiar with the specifications and methods of operation of the machine. These persons must also be informed of the dangers to which they may be exposed.

The user must strictly abide by current legislation regarding:

- accident prevention
- safety at work (Health and Safety Regulations)
- transport on public roads (Road Traffic Regulations).

Strict compliance with warnings affixed to the machine is obligatory.

The owner of the equipment shall become liable for any damage resulting from alterations made to the machine by the user or any other person, without the prior written consent of the manufacturer.

HITCHING

- 1 When hitching or unhitching the machine form the tractor, place the control lever of the hydraulic lift in such a position that the lifting mechanism cannot be activated accidentally.
- 2 When hitching the machine to the three-point-lifting mechanism of the tractor, ensure that the diameters of the pins or gudgeons correspond to the diameter of the tractor ball joints.
- **3 Caution!** In the three-point lifting zone, there may be a danger of crushing and shearing
- **4** Do not stand between the tractor and the machine whilst operating the external lift control lever
- **5** When in transport, lifting mechanism stabilizer bars must be fitted to the machine to avoid floating and side movement.
- **6** When transporting the machine in the raised position, lock the lift control lever.

DRIVE EQUIPMENT

(Power take-off and universal drive shafts)

- 1 Only use universal drive shafts supplied with the machine of recommended by the manufacturer.
- **2** Power take-off and universal drive shaft guards must always be fitted and in good condition.
- **3** Ensure that the tubes of the universal drive shafts are properly guarded, both in the working position and in the transport position.
- 4 Before connecting or disconnecting a universal drive shaft, disengage the power take-off, turn off the engine and remove the key from the ignition.
- **5** If the primary universal drive shaft is fitted with a torque limiter or a free wheel, these must be mounted on the machine power take-off.
- **6** Always ensure that universal drive shafts are fitted and locked correctly.
- **7** Always ensure that universal drive shaft guards are immobilized in rotation using the specially provided chains.
- **8** Before engaging power takeoff ensure that the speed selected

- and the direction of rotation of the power take-off, comply with the manufacturer's instructions.
- **9** Before engaging power takeoff, ensure that no persons or animals are close to the machine.
- 10 Disengage power take-off when the universal drive shaft angle limits laid down by the manufacturer are in danger of being exceeded.
- 11 Caution! When power takeoff has been disengaged, moving parts may continue to rotate for a few moments. Do not approach until they have reached a complete standstill.
- **12** On removal from the machine, rest the universal drive shafts on the specially provided supports.
- 13 After disconnecting the universal drive shafts from the power take-off, the protective cap should be fitted to the power takeoff.
- **14** Damaged power take-off and universal drive shaft guards must be replaced immediately.

HYDRAULIC CIRCUIT

- 1 **Caution!** The hydraulic circuit is pressurized.
- 2 When fitting hydraulic motors or cylinders, ensure that the circuits are connected correctly in accordance with the manufacturer's guidelines.
- **3** Before fitting a hose to the tractor's hydraulic circuit, ensure that the tractor-side and machineside circuits are not pressurized.
- 4 The user of the machine is strongly recommended to identify the hydraulic couplings between the tractor and the machine in order to avoid wrong connection. **Caution!** There is a danger of reversing the functions (for example: raise/lower).
- **5** Check hydraulic hoses once a year, for:
- Damage to the outer surface
- Porosity of the outer surface
- Deformation with and without pressure
- State of the fittings and seals The maximum working life for hoses is 6 years. When replacing them, ensure that only hoses with the specifications and grade recommended by the machine manufacturer are used.

Safety Regulations

- 6 When a leak is found, all necessary precautions should be taken to avoid accidents.
- 7 Pressurized liquid, particularly hydraulic circuit oil, may cause serious injury if it comes into contact with the skin. In the case of injury, consult a doctor immediately. There is a risk of infection.
- 8 Before any operation on the hydraulic circuit, lower the machine, release the pressure from the circuit, turn off the engine and remove the key from the ignition.

MAINTENANCE

1 - Before commencing any maintenance, servicing or repair work, or before attempting to locate the source of a breakdown or fault, it is essential that the power take-off is disengaged, the engine turned off and the key removed from the ignition.

- 2 Check regularly that nuts and screws are not loose. Tighten if necessary.
- Before 3 – carrying maintenance work on a raised machine, prop it up using appropriate means of support.
- 4 When replacing a working part (seed drill coulter or disc etc) wear protective gloves and only use appropriate tools.
- 5 To protect the environment, it is forbidden to throw away oil, grease or filters of any kind. Give them to specialist recycling firms.
- 6 Before operating on the electric circuit, disconnect the power source.
- 7 Protective devices likely to be exposed to wear and tear should be checked regularly. Replace them immediately if they are damaged.
- 8 -Spare parts should comply standards the specifications laid down by the manufacturer. Only use Moore spare parts.

- 9 Before commencing any electric welding work on the tractor or the towed machine, disconnect the alternator and battery cables.
- 10 Repairs affecting parts under stress or pressure, (springs, pressure accumulators, should be carried out by suitably qualified engineers with special tools

Danger

A = Risk of crushing

B = Marker operating zone

C = Moving parts

D = Do not travel on the platform **E** = Rotating agitator shaft



Safety Stickers

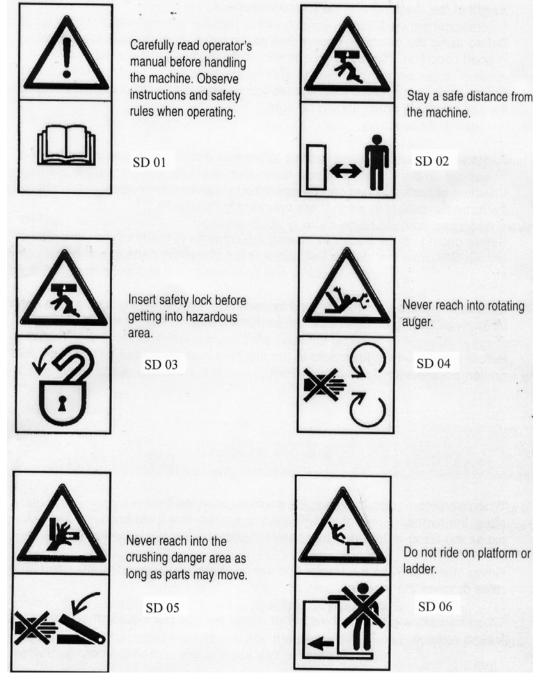
Warning notices relating to safety are affixed to your machine.

Their aim is to contribute to your safety and to the safety of others.

Know their contents and check their location.

Review the safety notices as well as the instructions contained in this operating manual.

If any safety notices become illegible or lost they should be replaced.



Safety Stickers

SD 07

SD 08

Tighten implement wheel studs after the first

4 working hours and then daily thereafter



Ensure wheel nuts are tight

Ensure transport pins are used when working under raised machine

SD 09 SD 10



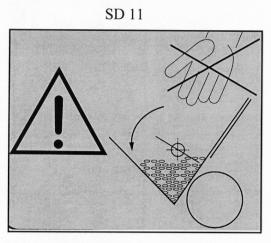


OPERATOR INFORMATION

IT IS THE RESPONSIBILITY OF THE DRILL OPERATOR TO CHECK THE TRAMLINE IS FUNCTIONING IN THE CORRECT SEQUENCE, AFTER EVERY HOPPER REFILL, AND ALSO ENSURE THE TRAMLINE SYSTEM FUNCTIONS IN THE CORRECT SEQUENCE WITH THE DRILLING TRACTORS 12V POWER SOURCE.

Do not work under raised marker

Ensure the tramline system is functioning correctly after each fill



Never reach into rotating auger



Forward speed should not exceed 25 KPH

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A : Technical Specifications

When accepting ownership of your machine note the following information:
Serial Number:
Type of machine
Accessories:

MOORE UNIDRILL		DP300	DP400
Width	(m)	3	4
Number of rows		18	24
Row spacing	(cm)	16.6	16.6
Width in transport	(m)	3	4
Hopper capacity	(I)	1150	1600
Weight	(Kg)	3150	3750
Horse Power Requir	ed (HP)	100	125

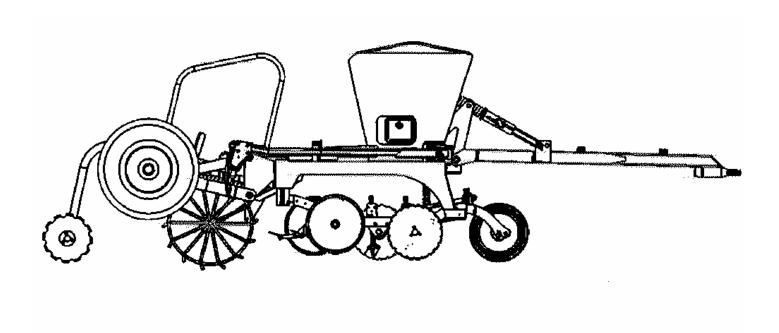
B: Operator Check list

It is the owner / drill operators responsibility to set up the drill for:

- 1. Sowing depth according to conditions in each soil type and pre worked condition
- 2. Tramline bout number to suit tramlines
- 3. Tramline track width
- 4. Number of rows shut off whilst tram lining
- 5. Marker width setting to allow matching of bouts
- 6. Operation of half width shut off

It is also the owner / operator's responsibility to check the operation of the various functions of the machine between each hopper fill, or at least once every hour to check the machine is operating correctly.

C: Hitching





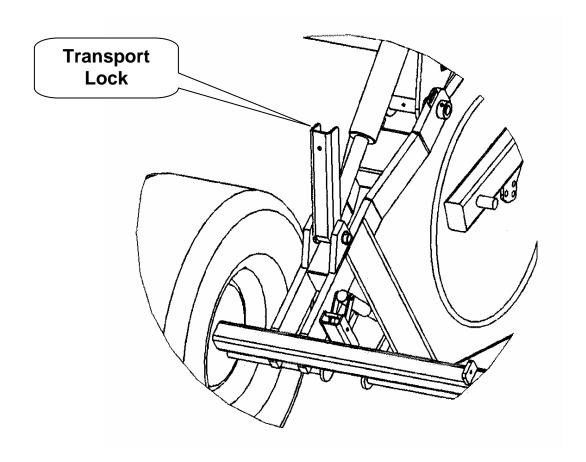
- To unhitch, set the machine with the transport wheels resting on the ground
- Beware of the drawbar motion

1 Hitching height

The height of the hitching point greatly influences the performance of the device (+/- 450 mm).

- The hitching point must be fixed.
- Low hitching heights should be preferred,
- The drawbar should be preferred when twin wheels or wide tyres are used, to make field-end manoeuvering easier.

D: TRANSPORT





Users must scrupulously observe traffic regulations on open roads. Travel only with an empty hopper.

Users must also use the transport pins when making adjustments to the drill

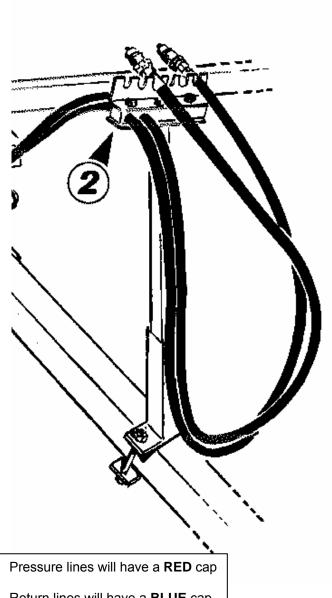
The Road Transport Speed must not exceed 25 KPH

TRANSPORT

- Positioning of the transport locks
 - Raise the seed drill
 - Insert the transport locks
 - Lower the machine to rest mandatorily on both transport locks

Do not stand near the axle during operation

E: HYDRAULIC CONNECTIONS



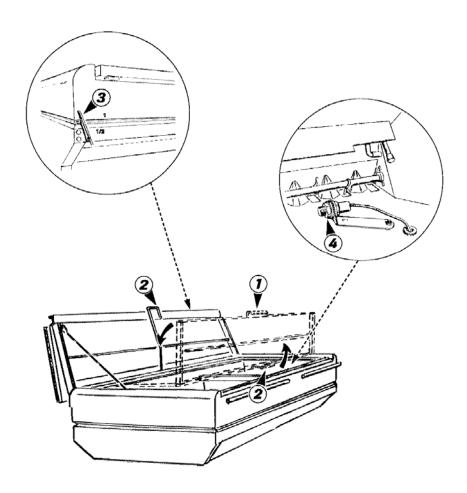
Return lines will have a **BLUE** cap

Hydraulic connections

For Manual Headland Control

- 1 Double-action spool valve to raise the front ram and axle.
- 1 Single-action spool valve to operate the bout markers.
- Set the hoses on bracket (2).
- Take care to keep connectors clean

F: Filling the seed box



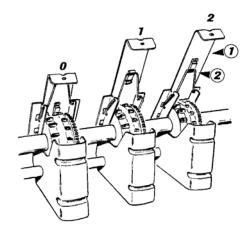


Beware of the rotating agitator shaft. Check that there are no foreign bodies in the seed box. It is recommended not to leave grain inside the seed box to avoid possible damage by rodents. It is strictly forbidden to stand on the drill when operating.

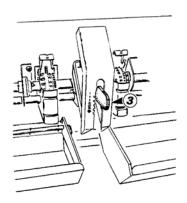
Filling the seed box

- Lower the drill to the ground.
- Use the step and gangway.
- Open the first cover with the handle (1). Place on top of the second cover before opening the seed box completely with the second handle (2).
- Check that there are no foreign bodies in the seed box.
- The seed level can be checked from the driver's position by means of a mechanical level indicator (3).
- With the optional Moore Tronic unit, an adjustable "seed box low" (4) sensor is placed inside the seed box (low position for small grain, high position for large grain).
- Note: during seed loading, avoid direct contact with treated seed and wear a dust-mask.





2)



a) Distribution settings (please refer to page 39 for settings)

1) Distribution shutter

- Raise or lower the shutter (1) according to recommendations. Insert the spring (2) into the appropriate catch.
- 3 opening positions are available for the shutter.
- Marker
- **0**. Closed (when sowing one row in two, for instance)
- 1. Small seeds < 8 kg/ha
- 2. Large seeds

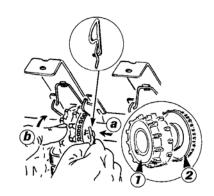
2) Base flap

- Move the lever (3) slightly to the right and position at the appropriate marker.
- Marker
- 1. Cereal
- 2.
- 3.
- 4. Peas for canning
- 5. Peas
- 6. Beans

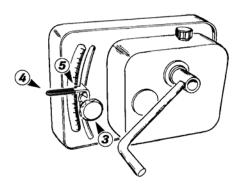
Max. Lower position, hopper emptying

• The aim is to have the seeds metered out by the peg wheel with the base flaps open as little as possible (e.g. marker 1 for wheat and barley). However, if you notice constant projections of seeds from the distribution system, position the lever one marker above the recommended setting (e.g. marker 2 for wheat and barley).

3)



4)

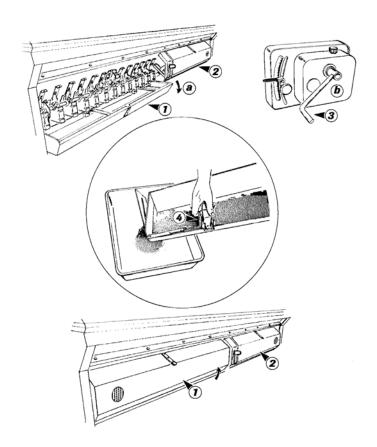


3) Selecting the peg wheel

- (1) Standard wheel for cereal and large seeds.
- (2) Fine wheel for small seeds
- o Take hold of the pin located on the shutter of the first unit to the right
 - To select the distribution wheel:
 - (a) Press
 - (b) Turn

4) Variator

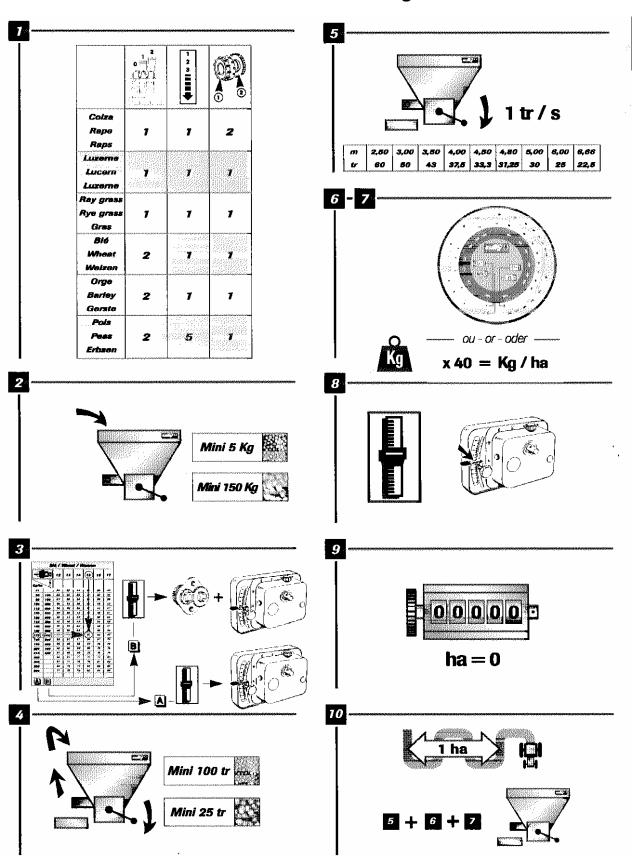
- Using the knob (3) and the lever, position the marker according to the results of the calibration test (4).
- o Read the setting above the flat part (5).
- Each marker change must be followed by a calibration test. For your information, 3
 graduations on the adjustment scale equal a 10 kg/ha increase/decrease with cereal.
- Scale range from 0 to 90.



Very precise sowing requires a calibration test. Make sure your scales are accurate.

Preparing the calibration test

- Use accurate scales and a container.
- o Before carrying out the test, check that no-one is standing near the seed drill.
- o Procedure
 - a). Open trays (1) and (2) and push them downwards in order to lower them below the distributions.
 - b). Fit the calibration handle (3) onto the variator shaft.
- Check that the distributions in use are engaged.
- Perform your calibration test according to the recommendations issued in the following pages.
- To empty the seeds from the tray more easily, open the flap by slightly lifting the lever (4).
- Raise the trays back into guard position.



Carrying out the calibration test

1) Fixed unit test

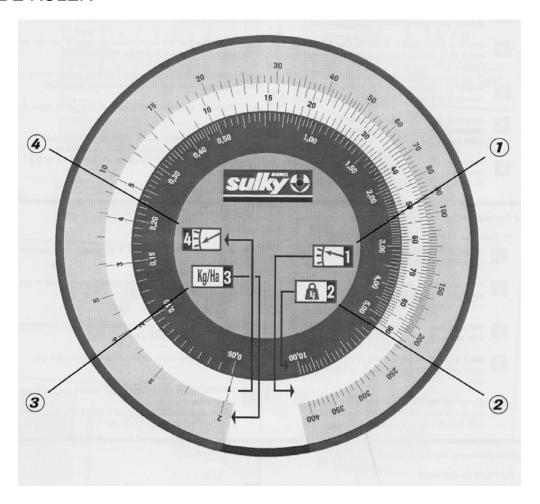
- 1 Set the distribution as indicated in the manual (plugs, baffle, plate, shutters etc.).
- 2 Put the grain in the seed box **on the day of sowing** (5 kg of rape, 150 kg of cereal) and carry out the following test.
- 3 **Set** the variator to the mark indicated in the table (see section 5).
- **Start** distribution: a **minimum** of **25 turns** of the crank (the trough may be filled), or **100 turns** for rape.
- Carry out the test by completing the appropriate number of turns for the width of the seed drill.
 N B Turn steadily at 1 turn per second.
- 6 **Weigh** the quantity collected in the trough using accurate scales.
- 7 **Multiply by 40** to obtain the quantity per hectare or use the calculator (see next page).
- **Correct** the variator setting (lower the lever completely then bring it back up to the required value).
- **9** Reset the area meter to zero after the calibration test.
- The most representative test is one carried out under real working conditions.
 - After sowing a hectare, carry out a further check (proceed as above from step 5).

Checking the distribution system

Distribution of seed to the seed tubes should be checked at regular intervals through out the day, for example every hour.

- Check both sides of the drill appear to be delivering the same amount of seed to each coulter.
- Manually turn the drive wheel with the fan running to ensure seed is blown out of each coulter.
- Engage tramline mechanism and repeat the above procedure, Note the voltage the tramline system receives from the tractor affects the way in which the tramline will work. IF THE TRACTOR IS SUPPLING AN INVERSE POLARITY VOTAGE TO THE TRAMLINER, THE TRAMLINE MECHANISM WILL WORK IN THE OPPOSITE MANNER, i.e TRAMLINE WHEN IT SHOULD'NT AND NOT TRAMLINE WHEN IT SHOULD
- When calibrating the seed box check each side of the drill is delivering the right amount of seed.

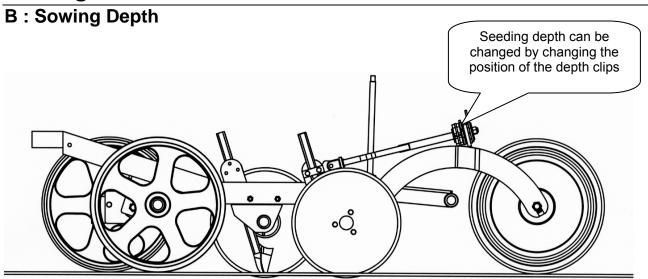
SLIDE RULER



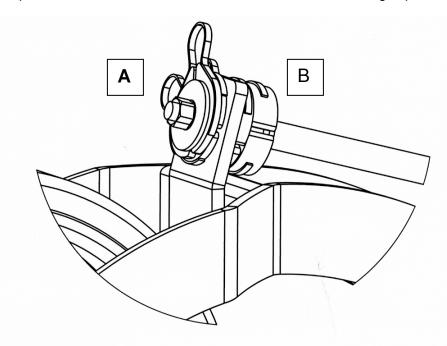
Test using the slide ruler

- This slide ruler enables you to determine the new variator index after the first flow rate test.
- Adjust distribution settings and carry out a test according to the recommendations contained in the preceding pages.
- Operation:
 - Set line (1) of the variator index used for the first flow rate test on line (2), which corresponds to the amount in kg collected in the tray during that test
 - Without moving the slide ruler discs, find the target flow rate in Kg/ha on the line (3)
 - On line (4), read the new variator index corresponding to your seed and conditions
- After sowing one hectare, perform another verification test.
- If you want to change the rate/ha with the same seed but on another plot, use the slide rule to determine the new variator index from the weight value of the first flow rate test.

Settings



By moving depth clips from the 'A' side to the 'B' side and vise versa the seeding depth can be adjusted



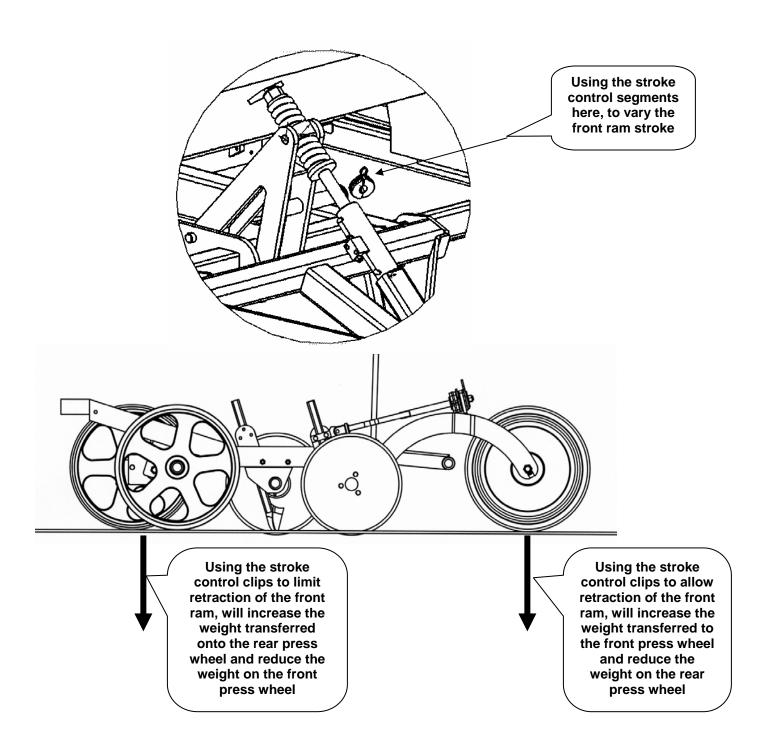
The table on the right shows how it is possible to get a range of depth stages from the depth clips

'A' side	'B' side	Depth stage
1/4",1/4" 1/2",1"		1 (Deep Sowing)
1/4",1/2",1"	1/4"	2
1/2",1"	1/4",1/4"	3
1/4",1"	1/2",1/4"	4
1"	1/4",1/4",1/2"	5
1/4", 1/2"	1/4", 1"	6
1/4", 1/4"	1",1/2"	7
1/4",	1/4",1/2",1"	8
	1/4",1/4",1/2",1"	9 (Shallow Sowing)

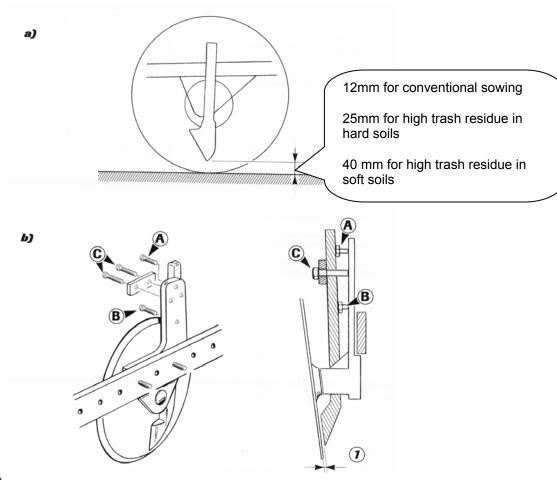
The sowing depth should be checked regularly throughout the day, for example every 4 hectares. Check sowing depth midway between tractor tracks, within a tractor track and at each side of the seed drill.

C: Weight Transfer

Using the front ram, it is possible to transfer weight, onto the front or rear press wheels, this is done by inserting stroke control segments onto the front ram to limit its stroke.



D: COULTER ADJUSTMENT



Coulter adjustment

a) Adjusting coulter height:

The tip of the coulter is approximately 20 mm above the disc edge for drilling in high trash volumes, it should be set 12mm above the disc edge, when being used in conventional seed beds.

- This is the minimum clearance that must imperatively be observed to protect the coulter from impacts
- Adjusting that clearance is easy, the machine being set on a flat and level area with a block under the coulter

Note: When operated on very soft soil encumbered by trash, it is recommended to raise the coulter to 40 mm above the disc edge to facilitate disc motion.

b) Recline adjustment:

The coulter (1) leading edge should be:

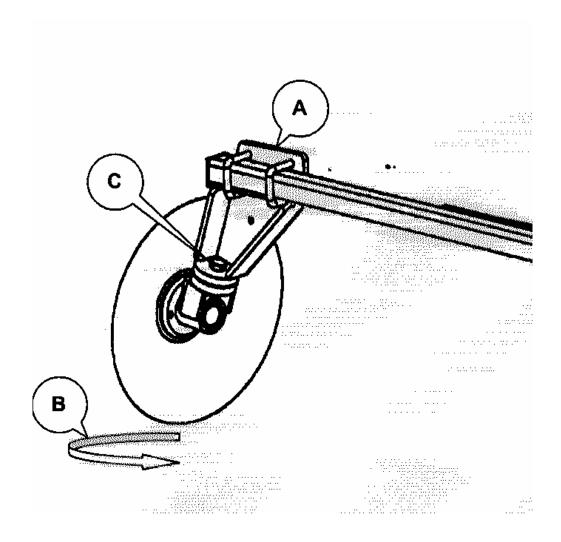
- Parallel to the disc
- As close as possible to the disc but not hampering its rotation

Should the discs jam, coulter adjustment is necessary. Use screws A and B to set the coulter closer to or further from the disc.

Ensure that the coulter leading edge is parallel to the disc:

- Use C screws to adjust parallelism by swiveling the coulter around A and B screws

E: Markers



Setting Markers to working position

Markers are designed for marking the tractor centerline.

Markers are pre –adjusted in the factory, but they need to be checked in the field, if adjustment is required move the disc bracket (A) along the tube

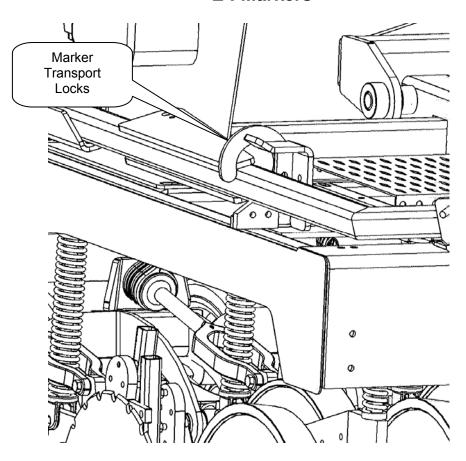
The distance between the first sowing row and the marker disc equals $\frac{1}{2}$ sowing width plus $\frac{1}{2}$ the seed row spacing, which is 83mm

The disc angle (B) can be changed by loosening bolt (C) and increasing the disc angle to get the desired marking intensity.



Secure the side markers for transport, withdraw the oil pressure before unhitching the seed drill

E : Markers



Safety

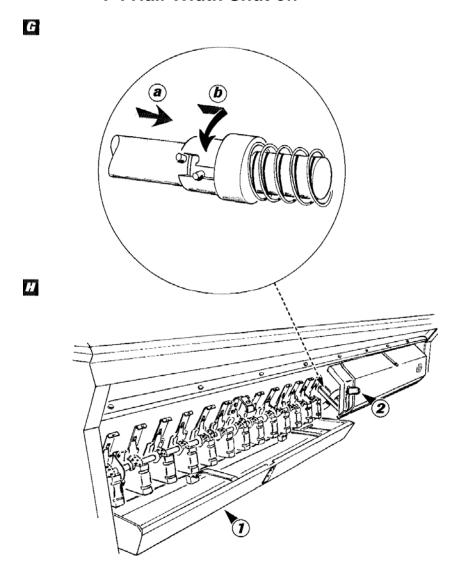
Always make sure the marker transport locks are in the position shown above when transporting the machine on the highway

Operation



The markers should be operated in a gentle manner, beware of obstacles when drilling, turning at the headlands should be carried out with the markers in the folded away position

F: Half Width Shut off



The hopper must imperatively be emptied after sowing to avoid any damage caused by rodents

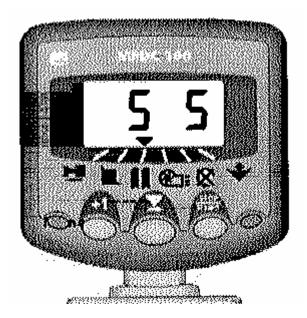
G Disengaging half the seed drill

- The central coupling between the distributor half-shafts can be uncoupled in order to match the current tramlining setting. Only the left-hand side can be disengaged.
- o To disengage
 - A. Press
 - B. Turn

H Emptying the hopper

- o Empty the hopper into the tray (1).
- o Lower the trays beneath the metering device and push the lever (2) down fully.
- To interrupt the seed flow when the hopper is only partly empty, raise the lever very slightly, without raising it to its upper position.

G: Electronic Tramlines



See the attached booklet for Instruction for using the Mooretronic drill control

The electronic tramliner disengages 2 or 4 seed flow outlets to form tramlines to facilitate further crop treatments

The table below shows typical tramline rhythms for different widths of tramline bouts

Drill (meters)	Width of Sprayer	Half drill shut off for	Target Bout	No. of bouts to start tramline
		tramlining		
	9	No	3	2
	12	Yes	4	2
3M	15	No	5	3
	18	Yes	6	3
	21	No	7	4
	24	Yes	8	4
	12	No	3	2
	16	Yes	4	2
4M	20	No	5	3
	24	Yes	6	3
	28	No	7	4
	32	Yes	8	4
	36	No	9	5

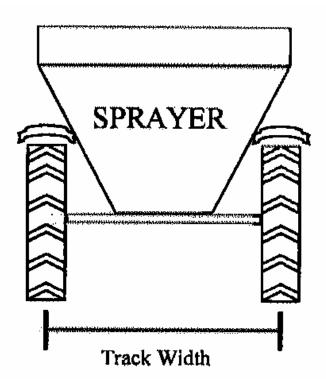


When using half width shut off begin on the right of the field. Don't forget to re – engage the half width shut off before the second drilling bout

H: Tramline Track Width

The tramline track width is not set in the factory. This will have to be set to correspond with your own sprayer.

Please make the following measurements



The above measurement can then be used to determine the coulters on each side of the drill that will allow a tramline track width approximately equal to your sprayer track.

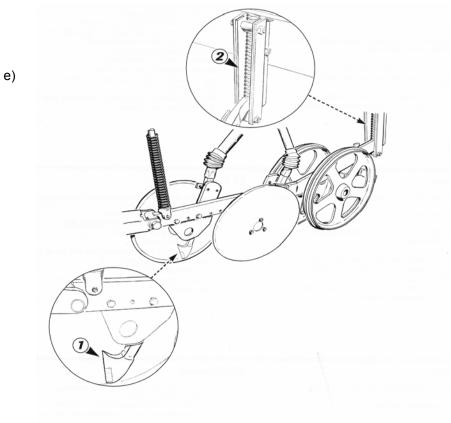
Take one half of the sprayer track width, and use this measurement from the center of the drill to determine the coulters that will be used to tramline. Repeat this procedure on the other side of the drill.

The selected coulters must then be attached to the tramline pipes on either side of the drill.

Please ensure that if the seed pipes are changed onto different coulters they have sufficient length for working position as well as transport position.

Maintenance

A: Wear Check





These checks should be regularly repeated, especially when the seed drill has been used on hard or stony soil.

e) Checks

Wear check

- of coulters (1)

Coulters are the essential furrowing part and must retain aggressive shape. Coulters can be rebuilt with suitable welding rods before wear becomes too pronounced.

- of seed drill arm rear guides (2) NEVER LUBRICATE.
- turn or replace the plates as soon as their thickness is significantly reduced.

Tightening check

- After 10 hours of operation:

Check the tightening of the furrowing system screws: disc securing screws and check tapered roller bearings.

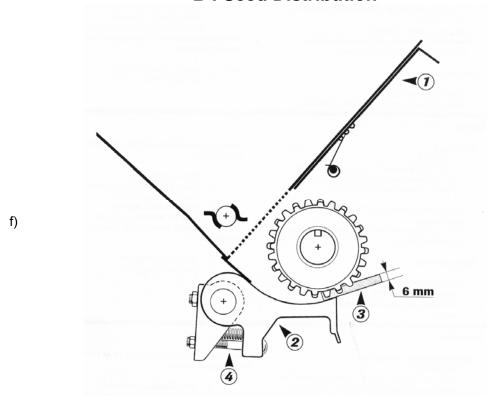
If those roller bearing have play, they should be tightened:

- Remove the dust cover
- Tighten the nut until the disc rotates forcibly
- Release the nut by 1/4 turn
- After 20 hours of operation : Check the tightening of the main nuts.

Periodically check wheel rim tightening and tyre pressure:

Tyres – 400/60 – 15.5 (DP300): 1.5 bar - 19.0/45 – 17 (DP400): 1.75 bar

B: Seed Distribution



f) Metering devices

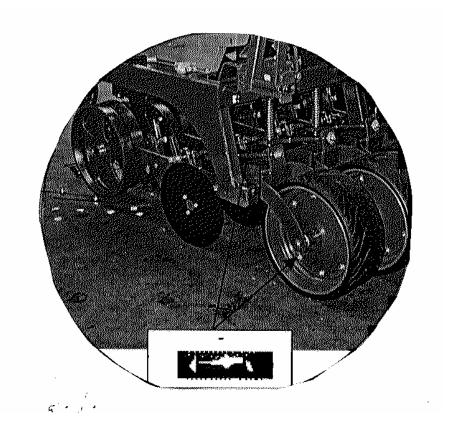
- Never leave seed for any length of time in the hopper
- Open shutters (1) and flaps (2) during the storage period
- Never lubricate or grease metering devices and seed pips
- <u>Checks</u> Incorrect setting of flaps (2) may induce oversowing in the course of work.

It is recommended to check and adjust if necessary after each sowing period-

- -Set the flap lever to index 1
- -Begin with visually assessing the distance between the flap and the peg wheel $\,$
- -If necessary, insert a 6mm spacer (3) between the flap and large space peg wheel.

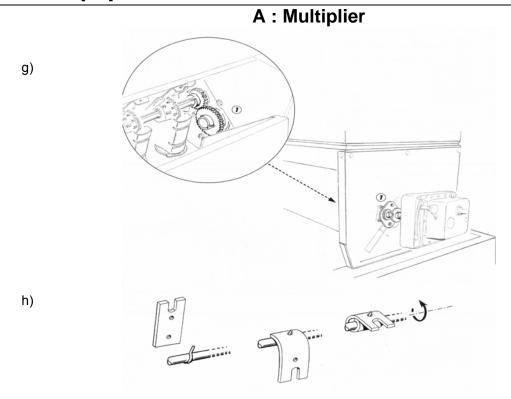
Adjust the distance with screw (4).

C : Greasing and Lubrication



- Lubricate the sowing equipment regularly at the beginning and end of the sowing campaign
- Grease the front Otico press wheels every 120 hours
- Lubricate markers every 20 hours
- Oil tramline springs with spray releasing oil
- Oil distribution chains
- Check variator oil level [horizontal seed drill],top up the red dot with ATF DEXTRON II D
- Change oil every 500 ha or 2 years if the area has not been covered.

Optional Equipment





Follow the mounting instructions

g) Variator rate multiplier

- Multiplier (1) is to be used for high-speed operation (≥ 12 km/h) with high seed rate.

Fitting

- Remove the variator (3 screws accessible through the hopper)
- Remove the couplings
- Fit the multiplier from the outside
- Check alignment and tighten the multiplier and variator securing screws.

Operation

- In relation to baseline settings, the flow rate is doubled.
- Follow the column [B] in flow rate tables.

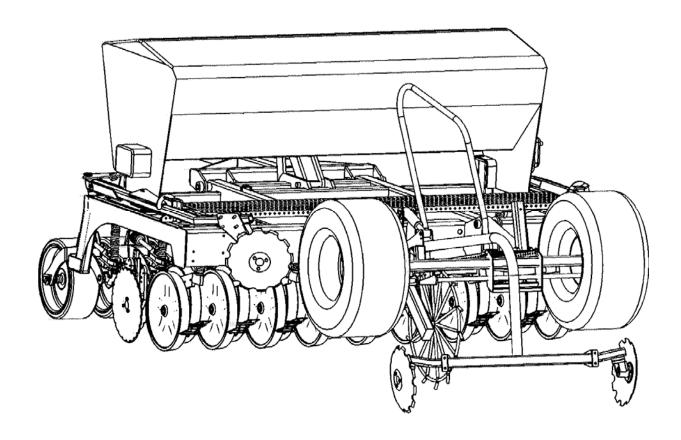
h) Flexible agitator

- Use the flexible agitator with very poorly flowing seed, eg, Ray grass

Fitting

- Hold the rubber flap and roll it around the agitator finger according to the diagram
- Beware of the rotating direction

C: Pre - Emergence Marking



- Pre Emergence discs operate simultaneously with post emergence marking out. (Tramlines)
- The marking out track must match that of the disengaged rows
- Ground marking is adjusted by letting the discs "catch" more or less soil.

It is recommended to let the disc "catch in the edge of the first seeded row, so as to project soil

Practical Recommendations

Practical Recommendations



HOW TO PREVENT COMPACTION

Generalise the use of low-pressure tyres on field equipment to restrict surface compaction.

Fitting wide tyres or twin wheels is not enough; pressure has to be adapted.

The target is 0.6 bar, in agreement with the tyre manufacturer. When in tow, UNIDRILL does not load the rear wheels of the tractor and weights are not needed in the front!

Reducing axle load to reduce deep compaction.

The target load is 6 tonnes per axle; leave all heavier loads on the track. Light tractors are preferable; UNIDRILL is perfect for moderate power, hence lighter tractors.

Working on dried-out soil.

Be patient and wait for the right moment to intervene. According to researchers, the soils resists better to compaction as soon as its surface changes colour. After 4-5 years of conservation tillage, the soil drains water faster and becomes more bearing, which reduces waiting.

Bring calcium and magnesium supplements to compensate medium acidification.

Aim to maintain pH between 6.5 and 7 to ensure good stability of the clay-humic complex.

Enrich the soil with organic matter to protect it from compaction and improve resistance.

Return straw and harvest residues, bring manure, grow forage, avoid plowing...



HOW TO BURY STRAW

Select the right variety.

Depending on variety the amount of straw produced varies, as does its resistance to impact. A disease-resistant variety that does not necessarily need end-cycle fungus protection will also be more vulnerable to decomposition agents.

2. Fit and adjust the combine.

Faster rolling and beating breaks down straw more. Well dried, straw is more brittle: harvest those plots first. Fit the harvester with a small straw distributor. Shred the straw in 5-6 mm bits (sharpen the shredder blades, tension the belts...) and distribute it evenly.

Shred straw and thatch behind the harvester.

In particular, when catch-crop is short, cutting high and straw poorly distributed, when planning to use a toothed tool...

Thoroughly mix the straw in the soil and press.

Do not exceed 5-6cm in depth to facilitate decomposition and not to dilute residues. Pressing with a heavy roll promotes soil/straw contact and decomposition agent action.

Practical Recommendations



HOW TO FEND OFF SLUGS

- 1. Plough up stubble early to restrict slug feeding sources.
- 2. Work surface soil rather finely and press to upset and make slugs uncomfortable.
- 3. Keep soil clean by mechanical and chemical destruction and sow early.
- Detect the presence of slugs upon the first rainfall and set traps.
- 5. Sow a little deeper and under fast-emergence conditions.
- 6. Properly close up the sowing furrow, possibly roll. In a risk situation, treat with an
 - appropriate agent.
- Carefully monitor growth after sowing, especially under humid conditions.



HOW TO FIGHT WEED

1. Setup conservation tillage only in clean plots

In particular, perennial weeds should be controlled during the preceding crop.

2. Plan fighting weed within the cropping cycle.

Alternate cereals with dicotyledon plants (peas, rape, beet...) as well as winter and spring crops. Take advantage of dicotyledon crops to take effective action against graminaceous weed, and of cereal crops to destroy dicotyledons.

3. Perform blank sowing between crops to get rid of annual weeds and regrowth.

Upon combine passage, prepare a bed of homogenous seed with fine, superficial and pressed dirt to obtain an even and as comprehensive emergence of weed seeds as possible. A week before sowing, destroy the emerged plants mechanically or with a total non-remanent weed killer

4. Do not sow too early to optimize blank seed effectiveness.

The longer the catch-crop, the more effective the weed killing. Sow the foulest plots last. Trust the swiftness of UNIDRILL action and the quality of its emergences and sow on schedule without any risks.

5. Setup a clean and strong crop upon sowing

Use clean, weed-free seed with high germination potential. Lay the seed to obtain fast and grouped emergence, competing with weed.

6. Use a seed drill that moves little soil, like UNIDRILL

UNIDRILL only works the seed row, thus reducing the risk of blank-seed-escaped seed emerging. Wide intervals between rows are preferable, like those of the UNIDRILL (16.6cm). Only use the seed drill near harrow when necessary.

7. Closely monitor flora evolution during growth

With conservation tillage, usual weeds no longer occur in the same amounts and on the same dates; furthermore, other species may occur. Be prepared for that evolution by updating your botanical knowledge. Do a weekly tour of growing crops, progress through plots along large W-shaped patterns, identify plants and their growing stage, take notes and keep a record for each plot.

8. Vary the weed-killer chemical family from one year to another.

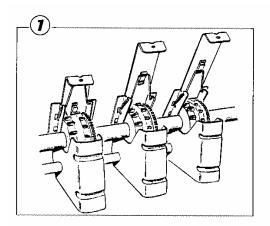
9. Trim borders, fallows and crops before seeding.

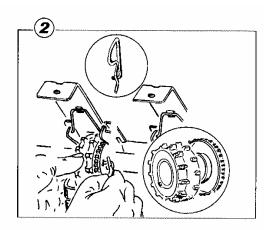
Mow, shred embankments, borders, ditches, fallows rather than applying total weed-killers; this could lead to perennial weed selection and make them hard to eliminate. Some prefer growing Ray-grass on borders; it smothers weeds and is easily controlled with a mower. In crops, destroy residual weed patches by tropical treatment with a regular spraying equipment or manual atomizer.

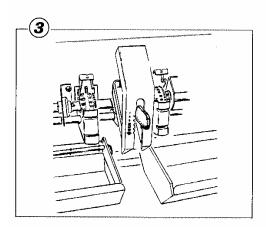
10. Avoid disseminating weed seed at harvest.

Start with cropping the cleanest plots. In weed-infested plots, crop the cleanest parts first. Clean the combine after each passage in a fouled plot.

Reminder of Pre Settings







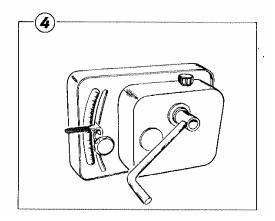




Table settings are merely indicative. Check you flow rate/ha.

REMINDER OF PRE-SETTINGS

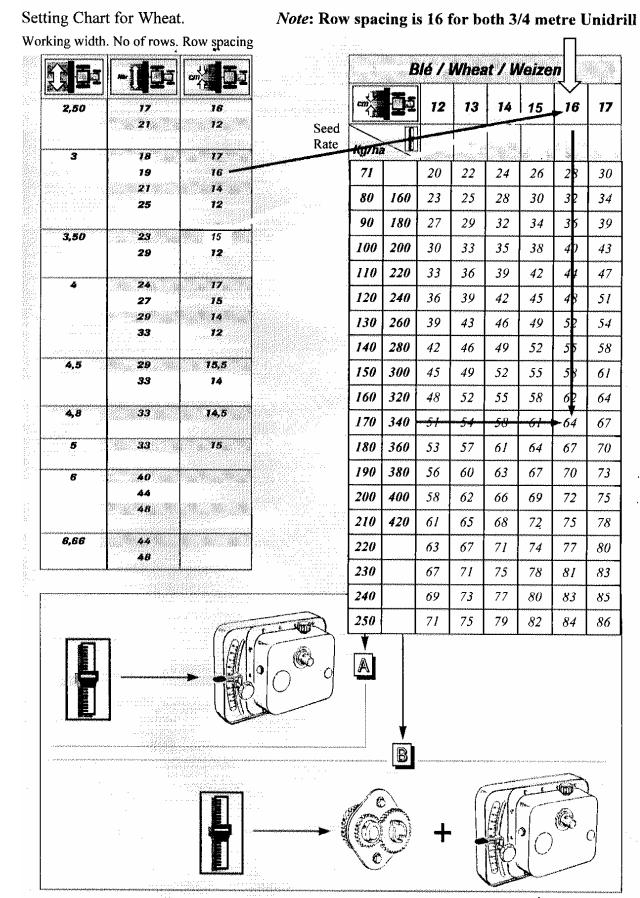
- [1] Shutters (3 positions)
- [2] Peg wheels (2 positions)
- [3] Base Flap (6 positions)
- [4] Variator (Indices 0 90)

FLOW RATE TABLES

- Wheat
- Rapseed Barely Peas Field peas
- Oats Mustard Phacelia Radish
- Alfalfa Linseed Ray-grass Clover

		1 2 3	
Colza			
Rape	1	1	2
Raps		***************************************	
Luxerne			
Lucem Luzeme	7		7 - 57 57
Ray grass			
Rye grass	,	7	7
Ray gras		,	•
BI6			
Wheat	2	7	
Weizen			
Orge		a negara potenti i un celengi i da la profesion placomi dessi i fami a messegli i data dessida activa caste a	anii ka fi ka
Barley	2	1	7
Gerste			
Pois			1997
Peas	2 1-1255 XEV	5	y forwald
Erbsen			***************************************
Phacélia			
Phacelia	7	7	7
Phazelia Avoine	Color de Caracterio		
Avoine Oat	2		i kalendaria Karatari
Hater	Activis		7 ************************************
Lin			
Linseed	7	7	7
Leinsaat	•	,	-
Radis	***************************************	***************************************	
Redish	1		
Radieschen			
Moutarde			
Mustard	7	7	2
Senfsamen		***************************************	
Féverole			
Field beans	2		7
Ackerbohnen			
Trèfle Clover		•	_
Klee	1	7	7
niee .			

An example detailing how to use the calibration chart.



	(Colza	/Ra	pe /	Raps	S*	
cm	P i	12	13	14	15	16	17
Kg/ha							
7	2	4	4	5	5	5	5
1,5	3	6	6	7	7	7	8
2	4	7	8	9	9	10	11
2,5	5	9	10	11	12	12	13
3	6	11	12	13	14	15	16
3,5	7	13	14	15	16	18	19
4	8	15	16	18	19	20	22
4,5	9	17	18	20	22	23	25
5	10	19	21	22	24	26	27
5,5	77	21	23	25	27	29	30
6	12	23	25	27	29	31	33
7	14	27	30	32	34	37	39
8	16	31	34	37	39	42	44
9	18	35	38	41	44	47	50
10	20	39	43	46	49	52	54
77		43	47	50	53	56	58
12		47	50	54	57	59	62
13		50	54	57	60	62	64
14		54	57	60	63	65	66
15		57	60	63	65	66	
A	B						

	I	Pois /	' Pea	s / E	rbsei	7	
cm		12	13	14	15	16	17
Kg/ha							
120	240		11	13	16	18	20
130	260	11	13	16	18	21	23
140	280	13	15	19	21	24	26
150	300	16	18	21	24	26	29
160	320	18	21	24	26	29	32
170	340	20	23	26	29	32	35
180	360	22	25	28	32	34	37
190	380	24	28	31	34	37	40
200	400	26	30	33	36	39	42
210	420	28	32	35	39	42	45
220	440	31	34	38	41	44	47
240	480	34	38	42	45	49	52
250		36	40	44	47	51	54
260		38	42	46	49	53	56
280		42	46	50	53	57	60
300		45	49	53	57	60	63
320		49	53	57	60	63	66
340	7	52	56	60	63	66	69
360		55	59	63	66	69	72
380		57	62	65	69	72	74
\mathbb{A}	B						

cm ,	<u>J</u> ą	12	13	14	15	16	17
Kg/ha							
90	180	33	36	38	41	44	47
95	190	35	38	41	44	47	49
100	200	36	40	43	46	49	52
105	210	38	42	45	48	51	54
110	220	40	44	47	50	54	57
120	240	44	48	51	55	58	61
130	260	48	52	55	59	62	65
140	280	51	55	59	63	66	69
150	300	55	59	63	66	70	73
160	320	58	62	66	70	73	76
170	340	61	65	69	73	76	80
180	360	64	68	72	76	79	83
190	380	67	71	75	79	82	86
200		70	74	78	82	85	89
210		72	77	81	85	88	
220		75	79	83	87		
240		79	84	88			
250		82	86				
160		84	89				
280		88					

cm\	T i⊒	12	13	14	15	16	17
Kg/ha							
100	200	12	14	15	16	18	19
105	210	13	14	16	17	19	20
110	220	14	15	.17	18	20	22
120	240	15	17	19	21	22	24
130	260	17	19	21	23	25	27
140	280	19	21	23	25	27	30
150	300	21	23	25	27	30	32
160	320	22	25	27	30	32	35
170	340	24	27	30	32	35	38
180	360	26	29	32	35	38	41
190	380	28	31	34	37	40	44
200	400	30	33	36	40	43	47
210	420	32	35	39	42	46	49
220	440	34	37	41	45	49	52
240	480	38	42	46	50	54	58
250		40	44	48	52	56	60
260		42	46	51	55	59	63
280		46	51	55	60	64	68
300		50	55	60	64	69	73
320		54	59	64	69	73	77

			e / 0	at / I	iaici		6.4
cm\\		12	13	14	15	16	17
Kg/ha							
80		40	42	45	48	51	54
85		42	45	48	51	54	57
90	180	44	47	51	54	57	60
95	190	46	50	53	57	60	63
100	200	48	52	56	59	63	66
105	210	51	54	58	62	65	69
110	220	53	57	61	64	68	71
120	240	57	61	65	69	72	76
130	260	61	66	70	73	77	81
140	280	65	70	74	78	82	86
150	300	69	73	78	82	86	90
160	320	72	77	82	86	91	93
170	340	76	81	86	90	93	94
180	360	79	85	90	93	94	88
190	380	83	88	93	94	89	74
200	5-3/	86	91	94	91	78	47
210		90	94	93	82	55	
A	B						

F	Phacé	lia /	Phac	celia	/ Pha	azelia	9
cm	D a	12	13	14	15	16	17
Kg/ha							
16	32	8	9	10	10	11	11
18	36	9	10	11	11	12	12
20	40	10	11	12	12	13	14
22	44	11	12	13	13	14	15
24	48	12	13	13	14	15	16
26	52	13	14	14	15	16	17
28		13	14	15	16	17	18
30		14	15	16	17	18	19
32		15	16	17	18	19	21
34		16	17	18	19	21	22
38		17	19	20	21	23	24
40		18	20	21	23	24	25
42		19	21	22	24	25	27
45		20	22	24	25	27	29
48		22	23	25	27	29	30
50		23	24	26	28	30	32
A	B	illia ai					

cm	D ia	12	13	14	15	16	17
Kg/ha							
2	4	8	9	9	10	10	77
2,5	5	9	10	11	11	12	13
3	6	11	12	12	13	14	15
3,5	7	12	13	14	15	16	17
4	8	13	14	15	17	18	19
4,5	9	15	16	17	18	20	21
5	10	16	18	19	20	22	23
6	12	18	19	21	22	24	26
7	14	21	23	24	26	28	30
8	16	24	26	28	30	32	34
9	18	27	29	32	34	36	38
10	20	30	32	35	37	39	42
77		33	35	38	41	43	46
12		36	38	41	44	47	51
13		38	41	45	48	52	55
A	B						

cm,		12	13	14	15	16	17
Kg/ha							
30	60	9	10	11	11	12	13
34	68	10	11	12	13	14	15
36	72	11	12	13	14	15	16
38		12	13	14	15	16	17
42		13	14	15	16	18	19
45		14	15	16	17	19	20
48		15	16	17	19	20	21
50		15	17	18	20	21	22
53	40.	16	18	19	21	22	24
56		17	19	21	22	24	25
60		19	20	22	24	26	27
	В						

	Luze	erne i	/ Luc	ern./	Luz (erne	
cm ;		12	13	14	15	16	17
Kg/ha							
20	40	5	6	7	8	8	9
22	44	6	7	8	9	9	10
24	48	7	8	9	9	10	7.7
26		8	9	10	10	11	12
28		9	10	10	11	12	13
32		10	11	12	13	14	14
34		11	12	13	14	15	15
38		12	13	14	15	16	17
40		13	14	15	16	17	18
45		14	15	17	18	19	20
50		16	17	19	20	22	23
A	В						

		īl T	1	T	T	RayGı	T
cm\	P	12	13	14	15	16	17
Kg/ha	F						
16	32	7	8	10	11	12	14
17	34	8	10	11	12	14	15
18	36	9	11	12	13	15	16
19	38	10	12	13	15	16	17
20	40	11	13	14	16	17	19
21		12	14	15	17	18	20
22		13	15	16	18	20	21
24		15	17	18	20	22	23
25		16	18	19	21	23	24
26		17	19	20	22	24	26
28		18	20	22	24	26	28
30		20	22	24	26	28	30
32		22	24	26	28	30	32
34		23	26	28	30	32	34
36		25	27	29	32	34	36
38		26	29	31	33	36	38
40		28	30	33	35	38	40
42		29	32	35	37	39	42
45		32	34	37	40	42	45
48	1	34	37	39	42	45	47

cm		12	13	14	15	16	17
Kg/ha							
50	100	19	21	23	25	27	29
53	106	21	23	25	27	29	31
56	112	22	24	26	28	30	32
60	120	24	26	28	31	33	35
63	126	25	28	30	32	34	37
67	134	27	29	32	34	37	39
71	142	29	31	34	36	39	41
75	150	31	33	36	38	41	43
80	160	33	35	38	41	43	46
85		35	38	40	43	46	48
90		37	40	43	45	48	51
95		39	42	45	48	50	53
100		41	44	47	50	53	55
105		43	46	49	52	55	57
110		45	48	51	54	57	59
120		48	51	55	58	61	64
130		51	55	58	61	64	68
140		55	58	62	65	68	72
150		58	61	65	69	72	76

Trèfle / Clover / Klee					un pro-		
cm ,	P a	12	13	14	15	16	17
Kg/ha							
14	28						5
16	32					5	6
18	36				5	6	7
20	40			5	6	7	8
22	44		5	6	7	8	9
24	48	5	6	7	8	9	10
26		6	7	8	9	10	77
28	1	7	8	9	10	11	12
30		8	9	10	11	12	13
32		9	10	11	12	13	14
34		10	11	12	13	14	15
36		7.7	12	13	14	15	16
38		12	13	14	15	16	17
40		13	14	15	16	17	18
42		14	15	16	17	18	19
45		15	16	17	18	19	20
48		16	17	18	19	20	21
A	В					á.	

Warranty

In this warranty Moore Uni-Drill 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.
- 2. If the machine or part there of 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 at the Company's expense, or
- (b) make an allowance to the purchaser against the purchase price, or replace the machine as soon as reasonably practicable.
- 3. This warranty shall not oblige the Company to make any repayment 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 12 months from the date of receipt be the purchaser or his/her nominee of the machine.
- **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 within 90 days of the date of delivery and clause 4 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 authorised 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.
- 8. Any dispute as to whether the goods are sold free from any defect in workmanship or materials shall be referred to a single arbitrator to be agreed between the company and the buyer.

Important

This instruction manual is based on experience and results obtained during development of the Tandem Uni – drill. Hints and guide lines are to be regarded as general advice, entailing no responsibility whatsoever on the part of Moore Uni drill and / or its representatives. All responsibility for usage, road transport, maintenance and repair of the drill rests with the owner/driver.

Local conditions affecting crop sequence, soil type, climate etc. may require procedures different to those mentioned in this manual.

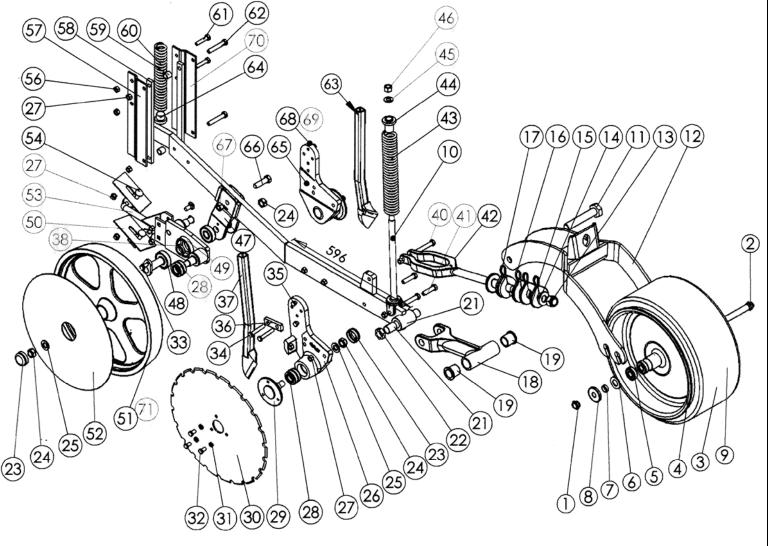
The owner/driver is solely responsible for using the drill correctly in every respect. Moore Uni – Drills are subject to thorough quality assurance inspection and function testing before delivery. The user/purchaser shall retain sole liability for insuring the equipment is functioning correctly when in use. Moore Uni-Drill Ltd accepts no liability for losses arising from incorrect use of the drill, including its depth control and seed dosage equipment. Follow the instructions carefully for setting the depth control and seed rate dosage.

In accordance with the program of continuous development at Moore Uni-Drill Ltd, alterations in the specification may be made at any time without notice.

Therefore Moore Uni-Drill Ltd will not accept responsibility for any discrepancies which may occur between the specifications contained in this publication.

DP300A and DP400A Parts booklet

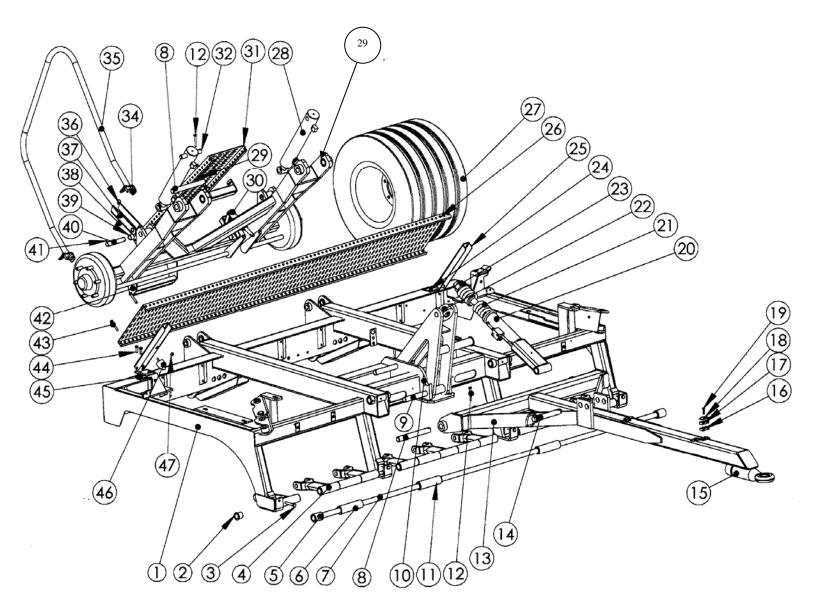




59	180002	30mm Uni Pac Bearing
60	010223	Classic Bogie Scraper Mounting
59	010027	Distance piece
60	690002	Tandem Rear Springs
61	140033	M10 x55 bolt
62	140024	M12 x 80 bolt
63	020009	Left Hand Tungsten Coulter
64	720003	Rear Spring Locator
65	570003	Disc Mounting Bracket L/H
66	140011	M16 x 55 bolt
67	140018	M16 Binx nut
68	020063	R/H Disc Coulter bracket c/w bearing
		and hub
69	020064	L/H Disc Coulter bracket c/w bearing
		and hub
70	010024	Drag Arm Guide Plate Left Hand
71	020010	Chamfered Press Wheel Complete

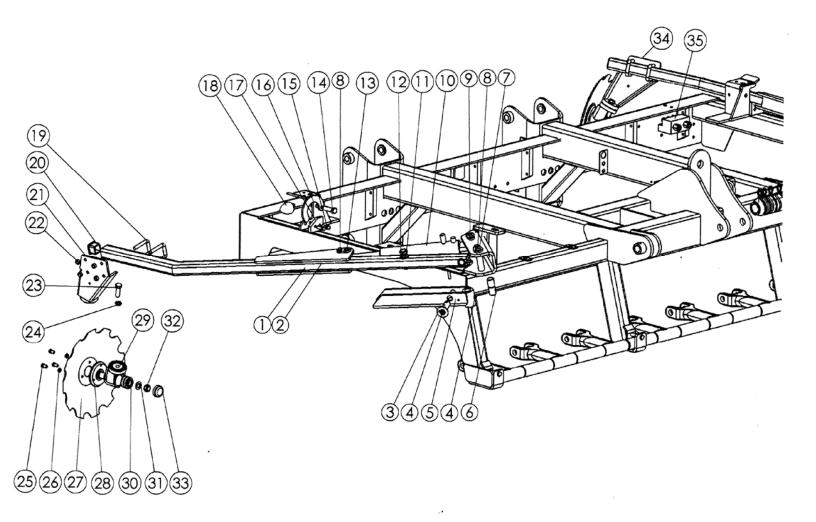
2003 and 2004 Specification

Ref	Part No	Description
1	010015	M20 Recessed Binx Nut
2	010013	Farm Flex wheel Axle
3	210003	Farm Flex Tyre
4	210002	Farm Flex Rim
5	210004	Farm Flex Wheel Bearings
6	210005	Dust Washer
7	210006	Spacer Tube
8	210007	Outer Washer
9	210001	Complete Farm Flex Wheel
10	570005	Front Spring Rod
11	020015	Pivot Arm Bolt
12	020005	Front wheel carrier
13	140080	M24 nyloc
14	010021	Depth Clip Stopper
15	550003	¼" depth clip
16	550002	½" depth clip
17	550001	1" depth clip
18	020018	Tandem Swinging Arm
19	720002	Pivot Arm Bushes
20	020001	Tandem Drag Arm Bar
21	720004	Tandem Drag Arm Boss Bush
22	010023	1" UNF Slim Binx Nut
23	560004	Small Dust Cap
24	140057	3/4" UNF Cone Lock
25	140006	M20 x 35 x 5mm HD washer
26	570004	Disc Mounting Bracket R/H
27	140030	M12 Nyloc
28	180001	1" Timken Taper Roller Bearing Pack
29	010016	Disc Hub
30	600001	450 mm notched disc
31	140039	3/8" Spring washer
32	140055	3/4" x 3/8" UNF setscrew
33	140040	M10 x 20 set screw
34	140078	M12 x 30 set screw
35	140096	M10 x 35 set screw
36	051522	Quick Coulter Support
37	020011	Right Hand Tungsten Coulter
38	010208	Boggie Bearing Spacer
39	N/A	N/A
40	140025	M12 x 75 Bolt
41	140029	M12 x 55 Bolt
42	570006	Depth Control Rod
43	690003	Tandem Front Spring
44	720001	Tandem Front Spring Locator
45	140016	M16 Heavy duty washer
46	140017	M16 Nyloc
47	570002	Boggie Carrier
48	690001	Boggie Bearing 63025RS
49	020004	Boggie Centre
50	020081	Boggie Centre Pin
51	570001	Chamfered Press wheel
52	580001	Press Wheel Cover
53	570007	Scraper mounting bracket
54	140026	M12 x 30 Cup square
55 56	200004	Chamfered Press Wheel Scraper
56 57	140041	M10 Nyloc
58	010165 010026	Drag Arm guide plate R/H Steel Wear Bar
Jð	010026	Steet wear Bar



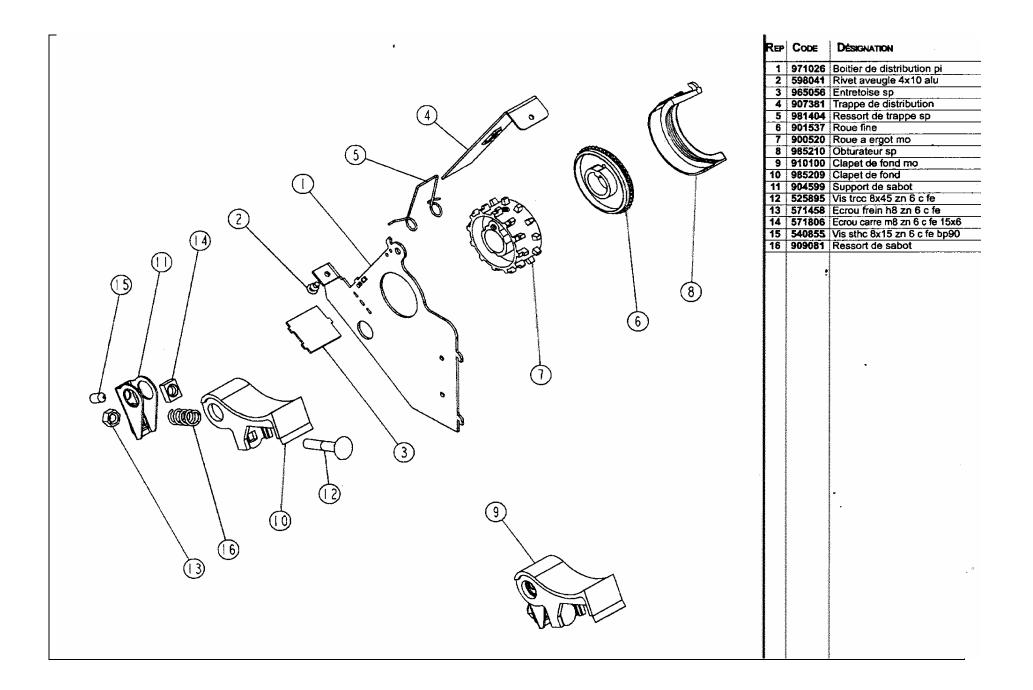
REF	Part No	Description
1	020025	C3000T Frame MK1
2	720002	Pivot Arm Bush
3	140025	M12 x 75 Bolt
4	020015	Tandem Pivot Arm
5	010068	Bushed end spacer
6	010070	Spacer Bush
7	010090	3000 Front Pivot
8	010054	1 ¼" Main Chassis pin (270)
9	010055	Trunion Bracket Pins (225)
10	140097	M10 x 60 Spirol Pin
11	010068	Bushed Spacer
12	140031	M10 x 80
13	020030	C3000T Draw bar MK1
14	460009	1 ¼" x 7" pin and chain
15	490005	Swivel Hitch
16	400001	3/8" hyd pipe clamp
17	N/A	N/A
18	400003	3/8" hyd clamp top plate
19	140088	M8 x 35 set
20	020036	Tandem MK1 Front Ram
21	690007	C3000T front Ram spring
22	020029	Trunion Bracket
23	010209	1 ½" UNC flange nut
24	020026	Platform Hinge left
25	310004	Rear Platform Bracket
26	010089	C3000T Rear Platform
27	320001	19/45/17 Floation +
28	080008	Tandem Rear Axle Ram
29		C2000T B A - 1 - A
	020031	C3000T Rear Axle Assy Brake Ram Assy
30	490001	Rear Axle Safe deck
31	010082 010052	1" rear axle pin (170)
32		
33	N/A	N/A
34	140096	M10 x 35 set
35	020033	Rear Hand Rail
36	620002	Small male buffer
37	310034	Transport lock
38	620003	Small female buffer
39	670001	1 ¼" x 1" x 1" hardened bush
40	010053	Rear axle short pin
41	140083	M8 x 40 Spirol pin
42	020032	Rear Step
43	140032	M10 x 70 bolt
44	140096	M10 x 35 set
45	020027	Platform hinge right
46	620001	KP buffer
47	140041	M10 nyloc
		,

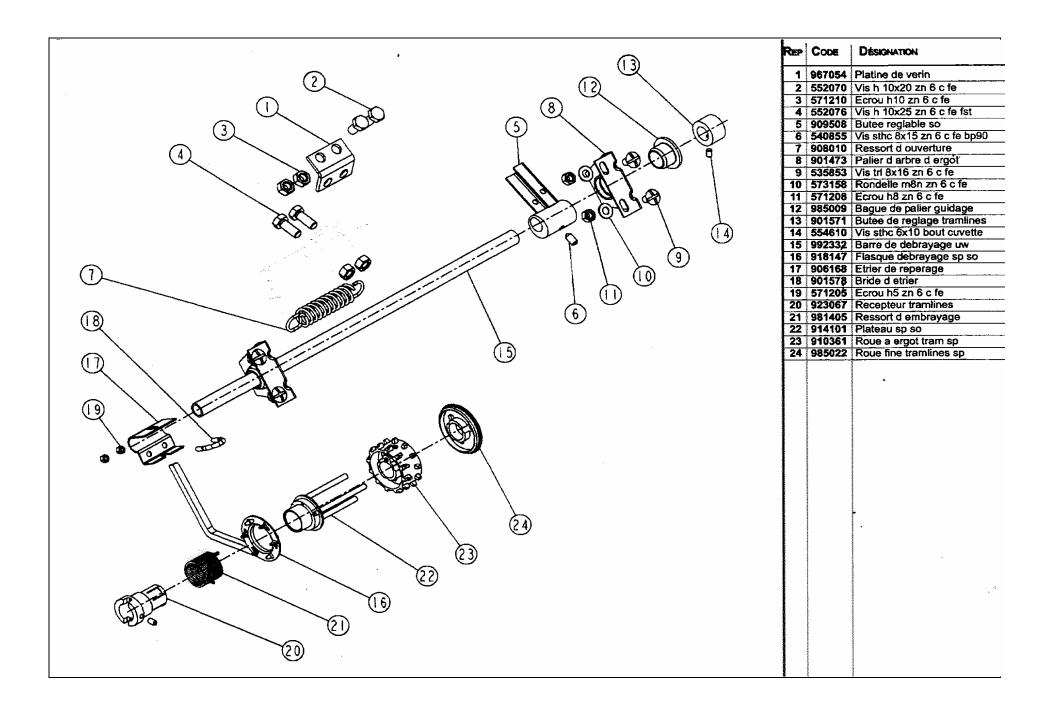




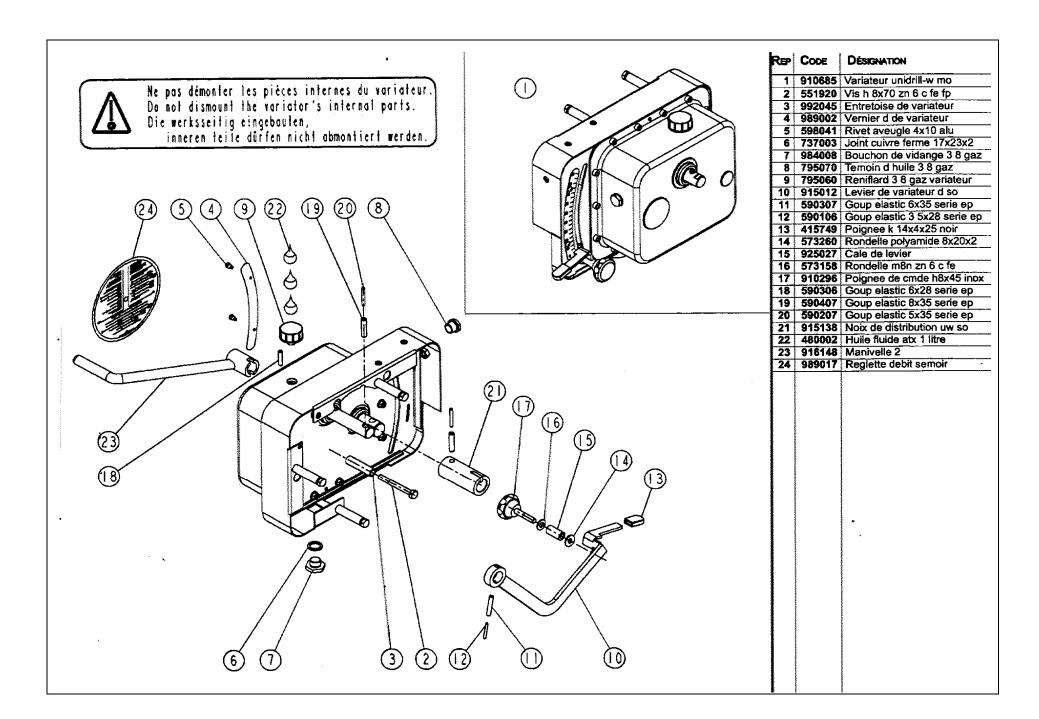
REF Part No		Description		
	020128	C3000T Marker Kit		
		Assembly		
	020129	C4000T Marker Kit		
		Assembly		
1	020060	C3000T Marker Arm		
2	020130	C4000T marker arm		
3	020069	DP Marker Pin Assy		
4	140090	M8 Straight grease nipple		
5	020041	C series Marker Hinge		
6	720006	Devol Drag Arm Bush		
7	020068	DP Marker Swivel Pin		
8	140038	M10 x 25 set screw		
9	020127	3/4 marker ram long pin		
10	080006	C series Marker Ram		
11	140140	M20 ½ nut		
12	140129	M20 x 80 set screw		
13	020126	3/4 Ram pin short		
14	140014	M16 x 30 set screw		
15	140096	M10 x 35 set screws		
16	310052	Marker Lock		
17	010093	Marker Ramp		
18	620001	Elasto KP buffer		
19	250001	U bolt for 50 x 50 box		
20	480001	50 x 50 End cap		
21	020123	Main Marker Disc		
		Bracket Right Assy		
22	140030	M12 Nyloc		
23	140011	M16 x 55 set screw		
24	140087	M16 Lock washer		
25	140055	3/4" x 3/8" UNF set screws		
26	140039	3/8" HD Spring washers		
27	600002	Marker disc Notched		
28	010016	Disc Hub		
29	020125	Marker hub mounting		
		assy		
30	180001	1" Taper Roller bearing		
31	140006	M16 x 32 HD washer		
32	140057	3/4" UNF cone lock		
33	560004	Small dust Cap		
34	020124	Main Marker Disc		
		Bracket left Assy		
35	510001	Marker Sequence Valve		

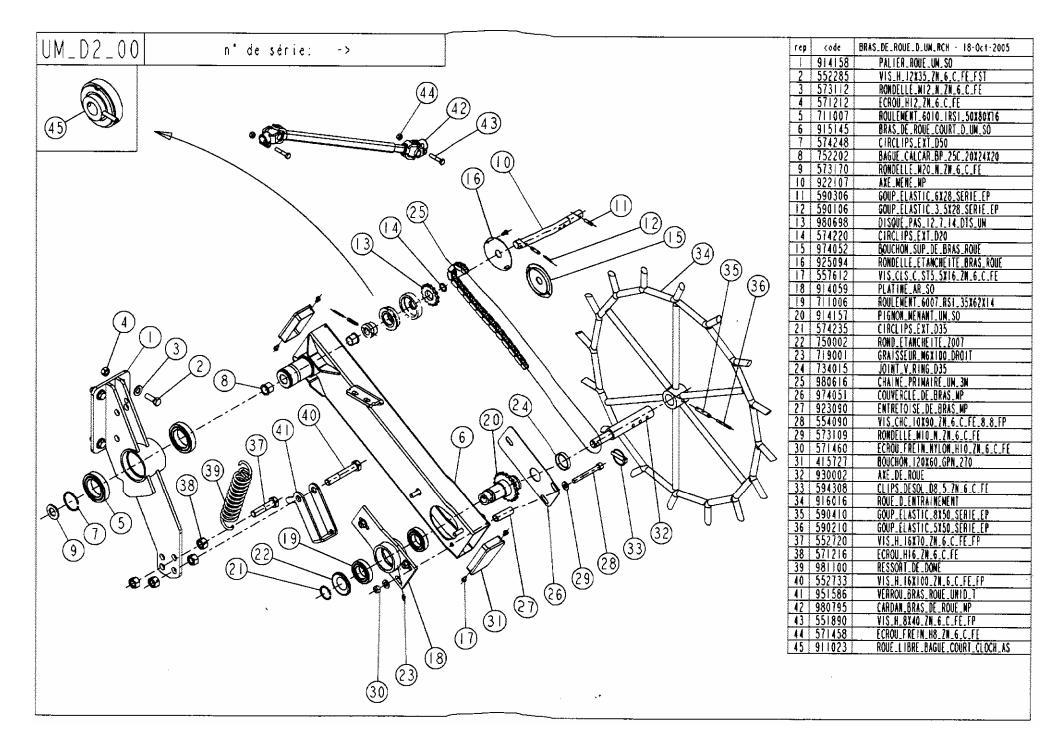
Marker Hydraulic Circuit VUE ECLATEE **DETAIL BLOC100** SCHEMA HYDRAULIQUE B1 B2 P2

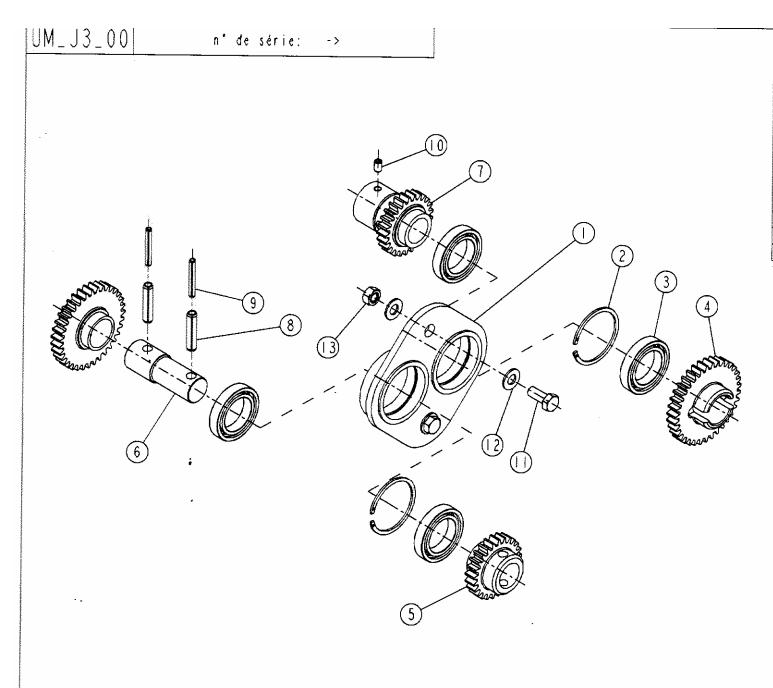




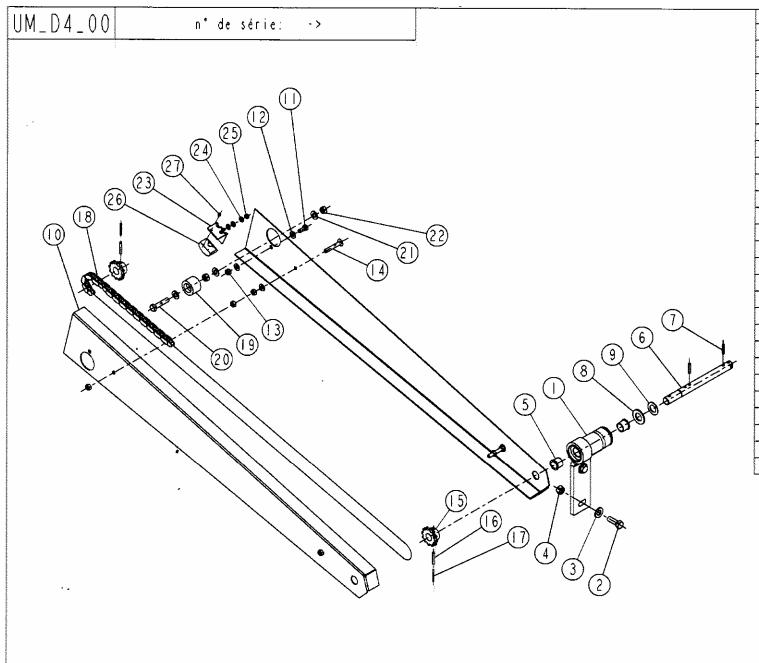








rep	code	KIT_MULTIPLICATEUR_RCH - 20-Oct-2005
	914114	PLATINE_MULTIPLICATEUR_SO
2	574251	CIRCLIPS_INT_D47
3	711015	ROULEMENT_61906_2RS1_30X47X9
4	980781	PIGNON_MULTIPLICATEUR_35D
5	980780	PIGNON_MULTIPLICATEUR_25D
6	930024	ARBRE_RENVOL_MULTIPLICATEUR
7	9 504	PIGNON_MULTI_25D_SO
8	590407	GOUP_ELASTIC_8X35_SERIE_EP
9	590207	GOUP_ELASTIC_5X35_SERIE_EP
ΙÔ	554610	VIS_STHC_6XIO_BOUT_CUVETTE
Ш	551870	VIS_H_8X20_7N_6_C_FE_8_8_FST
12	573158	RONDELLE_M8_N_ZN_6_C_FE
13	571208	ECROU_H8_ZM_6_C_FE



rep	code	RELAT_UN_RCH - 20-0ct-2005
	914159	MOYEU_RELAIS_UN_SO
	552285	VIS_H_12X35_ZN_6_C_FE_FST
3	573112	RONDELLE_M12_N_ZN_6_C_FE
4	571212	ECROULHI2_ZN_6_C_FE
5	752202	BAGUE_CALCAR_BP_25C_20X24X20
	922107	AXE_MENE_MP
7	590306	GOUP_ELASTIC_6X28_SERIE_EP
8	573170	RONDELLE_M20_N_ZN_6_C_FE
9	926066	RONDELLE_ROUE_FARMFLEX_UNID_T
10	972128	CARTER_DE_CHAINE_UN
Ш	551870	VIS_H_8X20_7M_6_C_FE_8_8_FST
12	573158	RONDELLE_M8_N_ZN_6_C_FE
13	571208	ECROU_H8_ZN_6_C_FE
14	535861	VIS_TRL_8X50_ZN_6_C_FE_8-8
15	993116	PIGNON_PAS_12_7_12_DTS
16	590307	GOUP_ELASTIC_6X35_SERIE_EP
17	590107	GOUP_ELASTIC_3X36_SERIE_EP
18	980617	CHAINE_SECONDAIRE_UM_3M
19	998116	GALET
20	552100	VIS.H.IOX50.ZN.6.C.FE.FP
21	573109	RONDELLE_NIO_N.ZN_6_C_FE
22	571210	ECROULHIOLZNL6LCLFE
23	900171	SUPPORT_TENDEUR_SO
24	573107	RONDELLE_M6_N_ZN_6_C_FE
25	571206	ECROULH6_ZN_6_C_FE
26	904551	TENDEUR_DE_CHAINE
27	557610	VIS_CBL_Z_ST3_5X9_5_IMOX_A2_70

