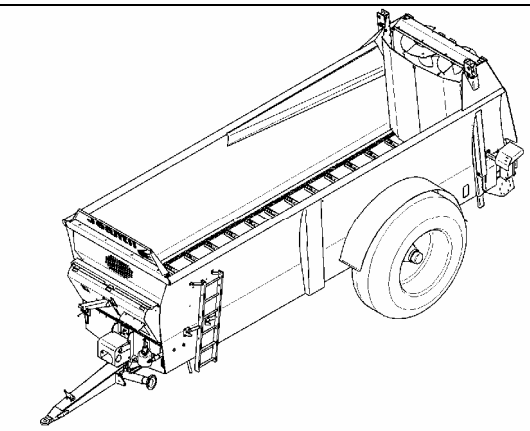
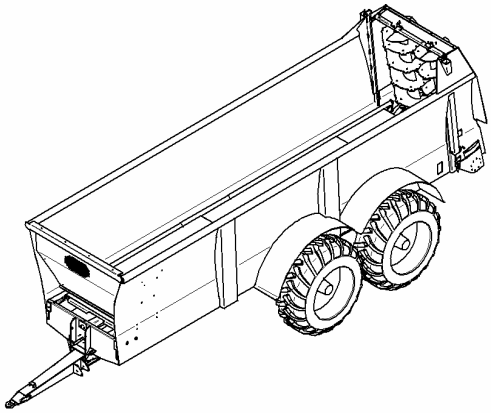
INSTRUCTION MANUAL N°10
11/2007

PLEASE READ CAREFULLY AND UNDERSTAND BEFORE USING THE EQUIPMENT

SPREADER WITH VERTICAL BEATERS





EVR 8-6 **EVR 10-6** **EVR 12-8** **EVR 13-10** **EVR 15-12**	**540revs/min**
EVR 14-11 **EVR 14-12** **EVR 16-12** **EVR 16-12 T** **EVR 18-14** **EVR 18-14 T** **EVR 21-15**	**1000revs/ min**

JEANTIL
Rue de la Tertrais
ZI La Hautière BP1
35590 L'HERMITAGE France
Tel : 00 33 (0)2.99.64.04.04
Fax : 00 33 (0)2.99.64.19.56
Spare parts shop tel: 00 33 (0)2.99.64.04.02
Spare parts shop fax: 00 33 (0)2.99.64.09.36
E-mail: jeantil@jeantil.com – Web site: www.jeantil.com

1. **Aim of the Instruction Manual**

a) General

- The manual concerns all users of the equipment and any person responsible for assembling, installing, operating, adjusting, servicing, repairing or transporting the equipment and its accessories.
- The manual contains practical information for the correct and safe operation, handling, adjusting and maintenance of your equipment.
- Read carefully and ensure you understand the content before using the equipment. Comply with the instructions and the safety-related advice.

b) Warning symbols

This warning symbol identifies important advice that must be followed for your safety. When you see this symbol, be aware that there is a potential risk of injury; read carefully the advice that follows it and inform other users.

c) Keeping the manual

Always keep this manual within easy reach or at your place of work (or operating site).
Pass it on to any other user, including if you lend or sell the equipment.

d) Contact details (customer service)

JEANTIL
Rue de la Tertrais
ZI de La Hautière
35590 L'HERMITAGE – France
Tel : 00.33. (0)2.99.64.04.04
Fax : 00.33. (0)2.99.64.19.56
Spare parts shop tel: 00.33. (0)2.99.64.04.02
Spare parts shop fax: 00 33 (0)2.99.64.09.36

e) Statement of compliance with the European 'Equipment' directive N°98/37/CE

And to any relevant transposition regulations

The manufacturer: JEANTIL

Rue de la Tertrais
ZI de La Hautière
35590 L'HERMITAGE – France

DECLARES THAT THE EQUIPMENT manufactured by JEANTIL as designated below:

EVR 8-6	**EVR 10-6**	**EVR 12-8**	**EVR 13-10**	**EVR 15-12**	**EVR 14-11**
EVR 14-12	**EVR 16-12**	**EVR 16-12T**	**EVR 18-14**	**EVR 18-14T**	**EVR 21-15**

SERIAL N°: ……

COMPLIES WITH:

1. **Labour regulations**
2. **The revised European equipment directive N°98/37/EC**
3. **Revised EMC directive (electromagnetic compatibility) N° 89/336 EC**
4. **Specific safety standards: NF / En 690 (Spreaders)**
5. **General safety standards: NF/EN/ISO 12100-1**
   NF/EN/ISO 12100-2
   NF/EN 294
   NF/EN 349
   NF U 02-001-ISO 4254/1
   NF EN 1553
   NF EN 811
6. **Highway code**

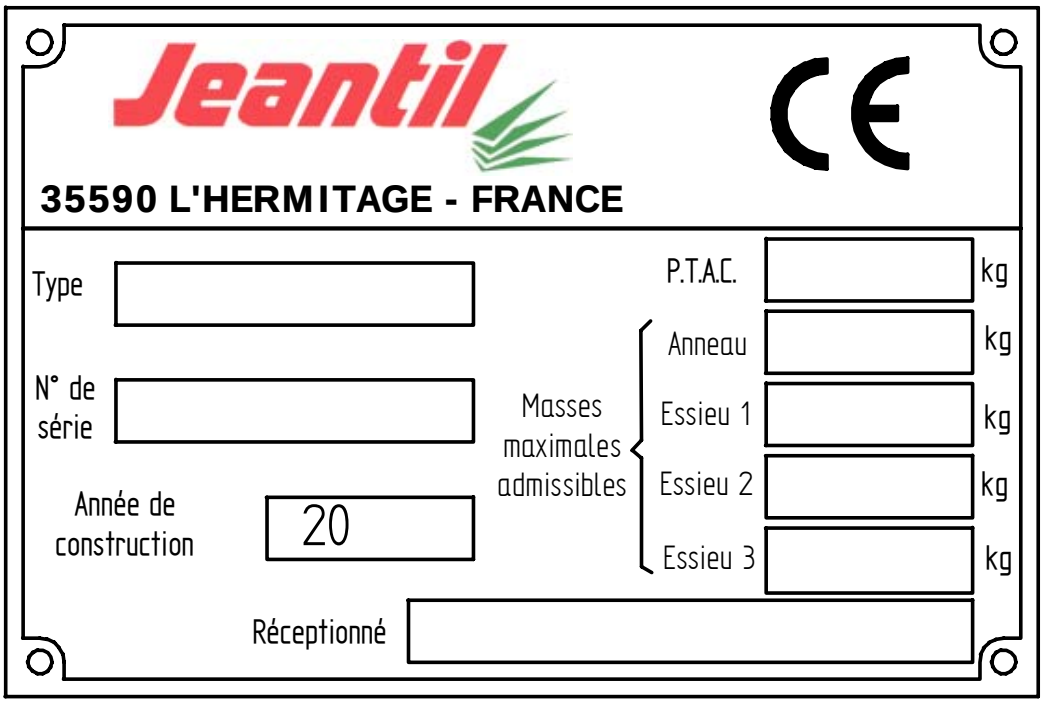
SIGNED AT L'HERMITAGE (DATE)

NAME OF SIGNATORY: JEANTIL Philippe

SIGNATURES :

2. Contents

3. Equipment identification



Ref: 892 770
Manufacturer's plate to EC standards.
Never remove the manufacturer's plate and the EC marking fixed to the equipment.

4. Standard operating conditions

a) Applications of the equipment:

1. This equipment is intended exclusively for general agricultural purposes i.e.: Transporting and spreading products such as: bovine manure, thick mud and slurry, lime and compost.

2. Any other use falls outside normal usage and is therefore forbidden.

3. For any other use, please contact the manufacturer.

b) Operator qualification:

1. The equipment must only be used, maintained and repaired by trained operators; see page 2 “Aim of the Instruction Manual”.

2. Before using your equipment, acquaint yourself with all controls and their correct operation.

3. All users, prior to using the spreader, must have carefully read this Manual, have understood it and applied all the safety instructions. Once working, it will be too late to do this.

c) Defining the operating stations:

1. The only operating station for the equipment is the tractor’s driving station.

2. Never leave the driving station when the engine of the tractor and the equipment are operating.

3. To access the operating station, use the access devices provided by the manufacturer (ladder, running board).

d) Environmental conditions

1. Never approach or remain in the areas that are dangerous when the equipment is in operation.

2. Adapt your speed and driving style to the lands, roads and tracks. Be cautious and careful!

3. Do not operate vehicles on slopes (tilting backwards, forwards or on the side) when there is a risk of tipping or overturning.

4. Do not start or brake abruptly.

5. Operate your equipment with sufficient light to ensure safety; use appropriate artificial light if necessary (contact your dealer or mechanic).

e) Manufacturer's and user's responsibilities

1. Follow all advice contained in this manual regarding levels of knowledge, installation procedures, operation, adjustment, maintenance and repair.

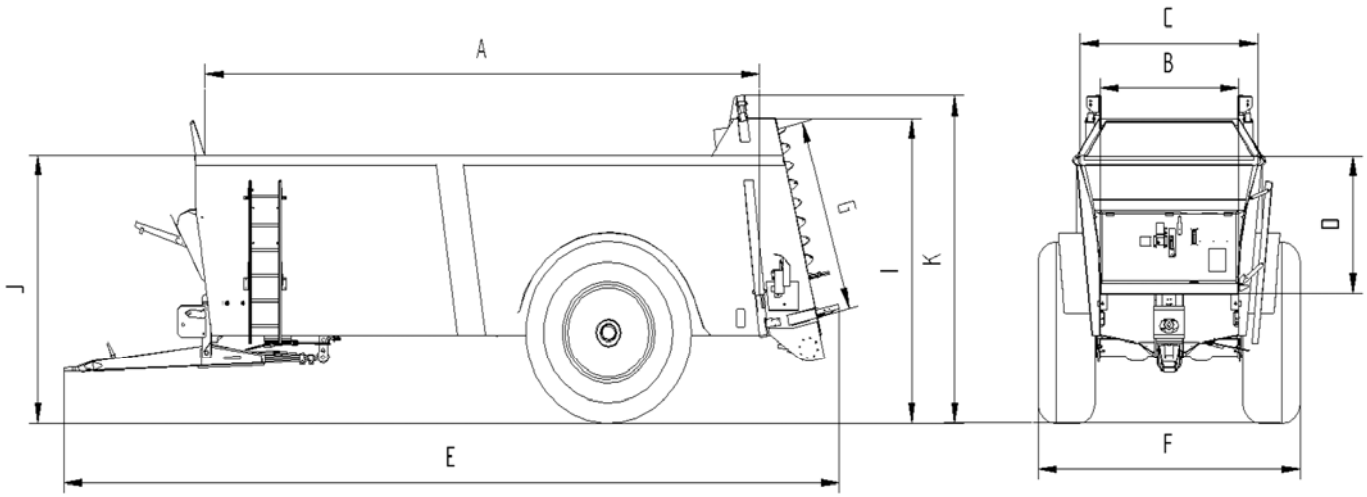
2. Only use spare parts and accessories that comply with the manufacturer's recommendations.

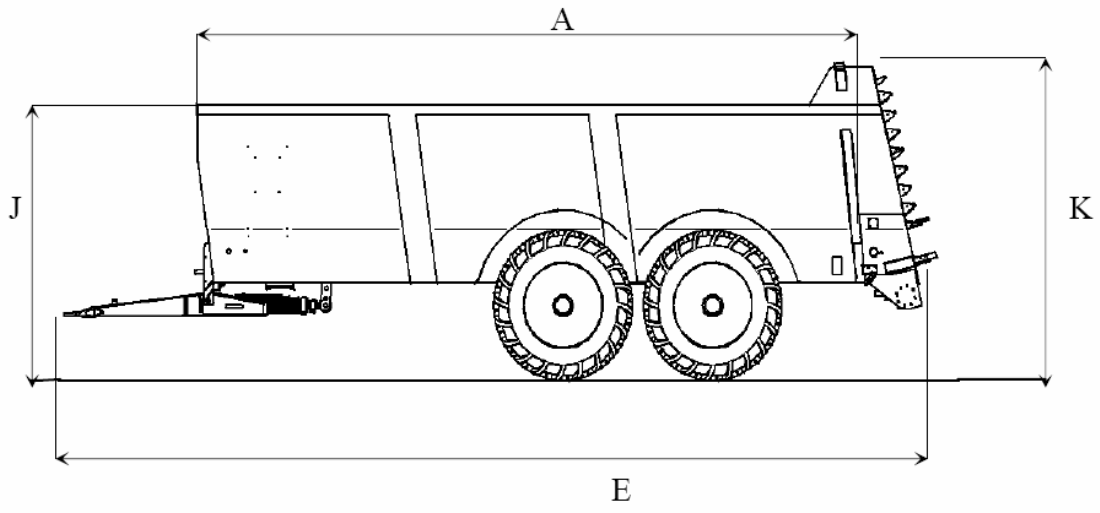
3. Do not carry out any modifications yourself and do not allow others to modify your equipment and its accessories (mechanical, electrical, hydraulic or pneumatic characteristics) without requesting prior written approval from the manufacturer.

4. Failure to comply with these requirements may make the machinery dangerous. The manufacturer disclaims any responsibility if damage or injury arises from such action.

5. Technical characteristics

1 Dimensions:

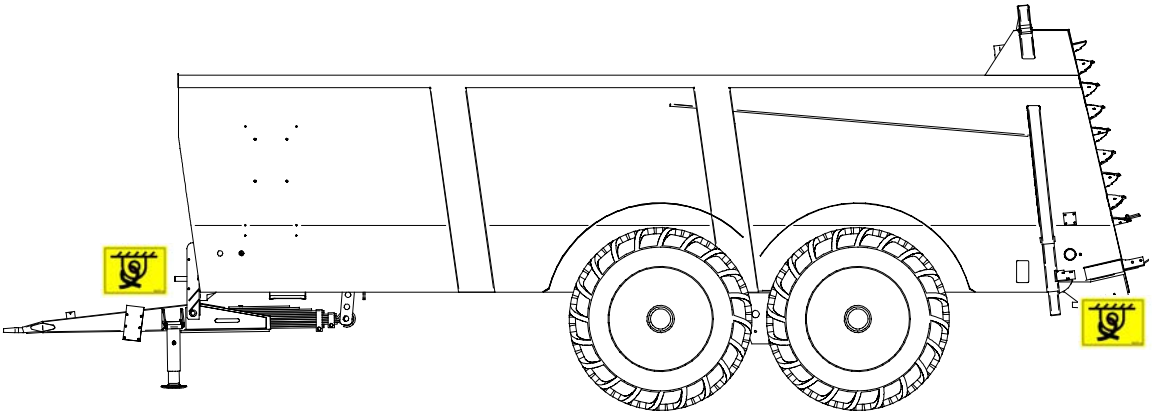


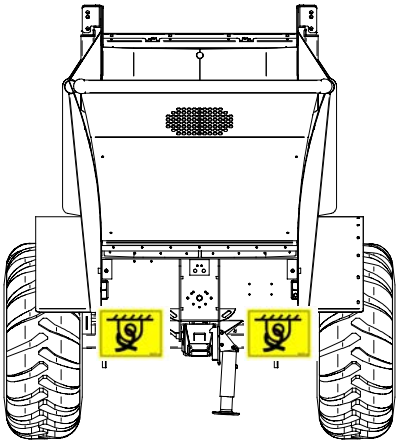


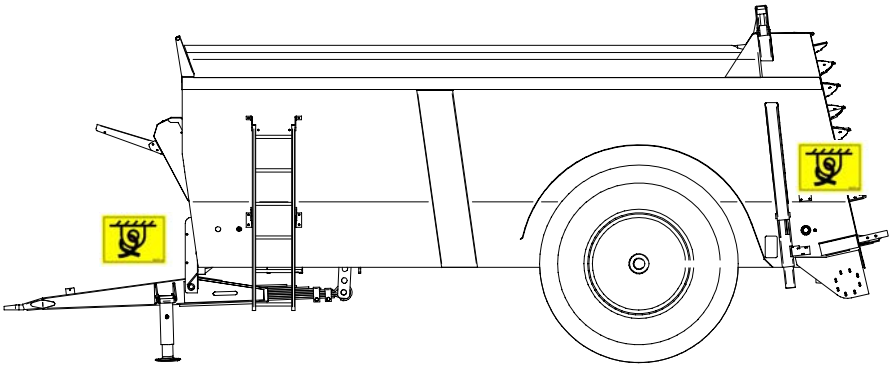
TYPES	EVR 8.6	EVR 10.6	EVR 12.8	EVR 13.10	EVR 15.12	EVR 14.11	EVR 14.12	EVR 16.12	EVR 16.12 T	EVR 18-14	EVR 18-14 T	EVR 21-15
Manure volume	8 m³	10.5 m³	11.5 m³	12.8 m³	14.5 m³	14.5 m³	14.5 m³	16 m³	16 m³	17.6 m³	17.6 m³	20.6 m³
Working load	6 t	6 t	8 t	10 t	12 t	11 t	12 t	12 t	12 t	14 t	14 t	15 t
Road working load (standard equipment without options)	4.2 t	4.3 t	7.51 t	7.34 t	7.30 t	7.10 t	7.10 t	8.22 t	12 t	10.06 t	14 t	15 t
A : Internal length of body	4,20 m	4,20 m	4,65 m	5,15 m	5,65 m	5.15 m	5.15 m	5.65 m	5.65 m	6,25 m	6,25 m	7,25 m
B : Internal width of body	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m	1.50 m
C : Internal width of body upper part	1.85 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m
D : Internal height of body	1.00 m	1.20 m	1.20 m	1.20 m	1.20 m	1.40 m	1.40 m	1.40 m	1.40 m	1.40 m	1.40 m	1.40 m
E : Overall length	6.40 m	6.40 m	6.85 m	7.35 m	7.85 m	7.35 m	7.35 m	7.85 m	7.85 m	8.45 m	8.45 m	9.45 m
F : Overall width	2.55 m	2.55 m	2.55 m	2.55 m	2.55 m	2.55 m	2.55 m	2.70 m	3.00 m	2.85 m	3.00 m	3.00 m
G : Beater length	1.60 m	1.80 m	1.80 m	1.80 m	1.80 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m	2.00 m
H : Height under frame	1.30 m	1.50 m	1.50 m	1.50 m	1.50 m	1.70 m	1.70 m	1.70 m	1.70 m	1.70 m	1.70 m	1.70 m
I : Overall height (with standard wheels and equipment)	2.75 m	2.75 m	2.80 m	2.80 m	2.85 m	3.00 m	3.05 m	3.05 m	3.08 m	3.04 m	3.08 m	3.13 m
J : Loading height (with standard wheels and equipment)	2.15 m	2.35 m	2.40 m	2.40 m	2.45 m	2.62 m	2.67 m	2.67 m	2.70 m	2.66 m	2.70 m	2.75 m
K : Overall height (with guillotine door)	2.90 m	2.90 m	2.95 m	2.95 m	3.00 m	3.15 m	3.20 m	3.20 m	3.23 m	3.19 m	3.23 m	3.28 m

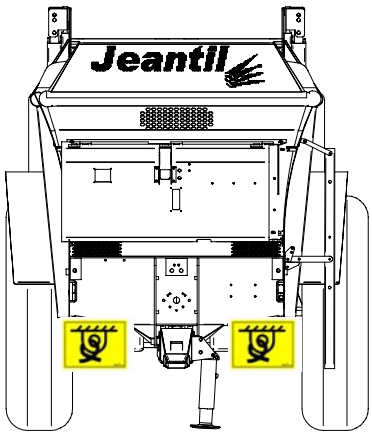
The equipment complies with safety standards. We reserve the right to change our equipment and their characteristics at any time.

2 Stowing diagram:









6. General safety rules

1) General

1. Never forget that knowledge, awareness and caution are the best way to ensure your safety.

2. Regulations and rules relating to accident prevention, health and safety at work, and the operation of vehicles on the public highway must be observed at all times.

3. Chapter 4 (Standard operating conditions) of this Instruction Manual, contains basic directives that must be followed for the sake of your safety.

4. Make sure that no person, animal or obstruction is located near the equipment before it is set in motion and throughout its operation or any other manoeuvre.

5. Children must never be allowed near the equipment.

6. Never carry passengers on the equipment.

7. Do not step on the hoods or on any other parts of the equipment, except areas provided for this purpose (ladder, platform, and means of access to the work station).

8. Before carrying out any work on the equipment, ensure that it cannot be started up accidentally.

9. All controls (ropes, cables, rods, hoses, etc.) must be positioned in the locations provided for them so that they cannot accidentally initiate a manoeuvre likely to cause an accident or damage.

10. Before use and after any adjustment or maintenance, ensure that all protective devices are in position and in good condition, and that their latches are engaged.

11. Before use, check tightness of screws, nuts, connectors and wheels. Retighten if required.

12. Do not wear loose clothing, long untidy hair and jewellery that might get caught in the moving parts of the equipment.

13. Keep your hands, arms and feet well away from any moving parts, even those that are slow-moving. Keep well away from moving parts.

14. If you detect any unusual noise or vibration, stop the equipment, and identify and eliminate the cause of the incident before resuming work. Contact your dealer if required.

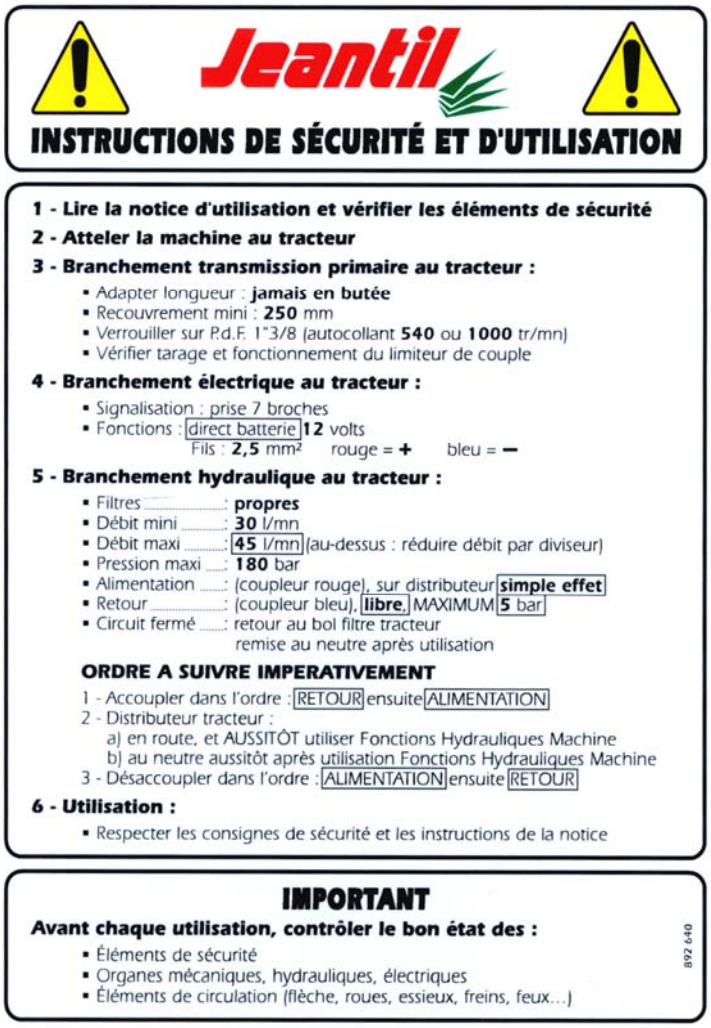
2) Warning / Pictograms

1. Warnings and pictograms placed on the equipment provide information about safety measures to be taken, that will contribute to avoid accidents.

2. Make sure that these warnings and pictograms remain clean and legible. If they are damaged, ask for new stickers from the manufacturer (or agent).

3. If repairs are carried out, check that the replacement parts carry the same stickers as those that have been removed.

Ref: 892 640



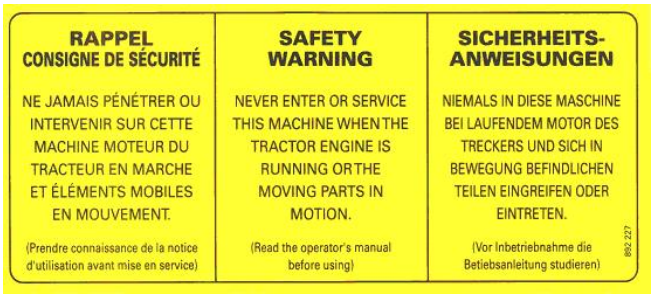
SAFETY AND OPERATING STICKER CLEARLY placed IN FULL VIEW on the front of all items of equipment, close to the components used to connect the unit to the tractor.

Ref: 892 651
Placed on the left side of the drive shaft casing

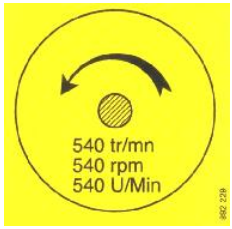
Ref: 892 653
Placed at the back of wheel mudguard

Ref: 892 453
Placed above right and left tail lights

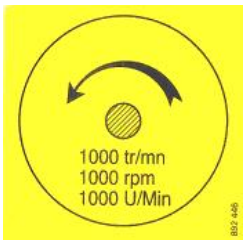
Ref: 892 299
Placed on rear left side, near rear door valve



Ref: 892 227
Placed on the right and left sides of the body



Ref: 892 229

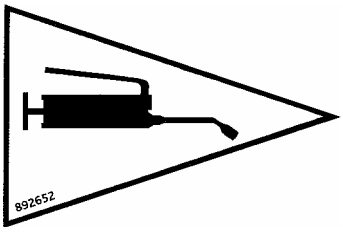


Ref: 892 446

Placed on primary drive shaft metal casing

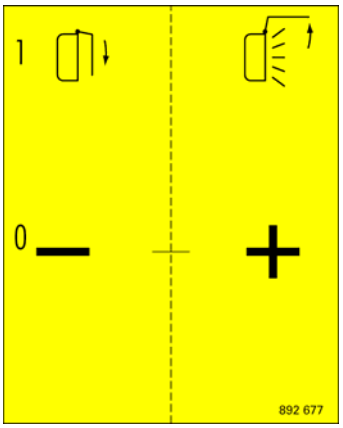
Ref: 892 687
Placed on the rear right and left sides of spreader

Ref: 892 230
Placed at the front of the spreader

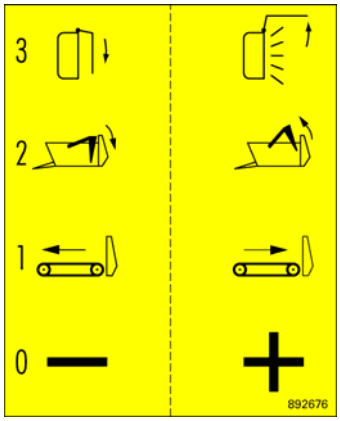


Ref: 892 652
Placed next to parts which need greasing, See diagram

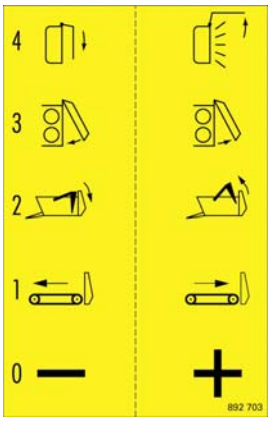
Stickers for use of equipment:



Ref: 892 677
EVR without distributor



Ref: 892 677
EVR without distributor



Ref: 892 703
EVR with distributor and rear cover

3) Coupling

1. See chapter 5, Technical characteristics, page 8.

2. Hitching the machine to the tractor must only be carried out using the tractor's rear coupling points provided for this purpose.

3. Check the compatibility of the machine with the tractor (minimum engine power, type of coupling, tractor PTO characteristics, etc.). Keep clear of the area between the tractor and the machine until you have stopped the tractor's engine and removed the starter key.

4. Keep clear of the area between the tractor and the machine during any lifting manoeuvre of the tractor.

5. When manoeuvring, select the lowest possible tractor gear ratio. When coupling, attach the equipment's electric control unit in the tractor cab, ensuring that it cannot move during operations.

6. Once the equipment has been coupled up, the hitch must be locked. Check the coupling is correctly locked and in good condition before any movement.

7. Check that the equipment's coupling does not create either an overload or poor weight distribution on the tractor that might compromise stability:
- Do not exceed the maximum allowed loading for the tractor and equipment attachment points.
- Where necessary, fit ballast weights to the mounts provided for this purpose in accordance with the tractor manufacturer's recommendations.

Couple the equipment to a tractor whose linkage is equipped with lateral and vertical locking devices.

8. To drive on roads, respect the coupling height specified in the instruction manual.

4) PTO (power take-off) / Drive shaft

1. Read and learn the manufacturer's instructions for the drive shaft, attached to the transmission.

2. Check that the PTO guards are in place and in a good condition. Replace them immediately if damaged.

3. Adjust the length between the tractor and the machine, retaining maximum engagement.

4. The minimum engagement length is **250mm**. See white instruction stickers placed on the front of the unit, n° 892 640 (page 12).
Before each operation, check that the drive shaft is in good condition and that it is fitted and locked correctly.

5. Only use the drive shaft provided with the equipment or recommended by the manufacturer.

6. Check before each use that the speed and direction of rotation of the tractor PTO are compatible with the planned usage of the equipment.

5) Failure (or jamming of the equipment)

1. Stop the machine.
2. Disengage the tractor PTO.
3. Wait until all the moving parts are completely at a halt.
4. Stop the tractor engine and remove the starter key or disconnect the battery (or the electric connector)
5. Select the gear shift into neutral.
6. Engage the parking brake.

6) Maintenance and repair

6. a / General:

1. Maintenance and repair operations must only be carried out by qualified people.
2. Always maintain the equipment and its accessories in perfect working order to ensure safe and efficient operation.
3. Check the cleanliness of the oil.
4. Respect maintenance periods.

Before any servicing or repair:

5. Check the stability of the machine and its components.
6. Lower the equipment to the ground.
7. Fit any provided stability devices (stands, etc.).
8. Check that all moving parts are stopped.
9. Disengage the tractor PTO.
10. Disconnect the hydraulic power hoses between the tractor and the machine.
11. Stop the engine and remove the starter key, disconnect the battery (or the electric connector).
12. Engage the handbrake.
13. Allow any component likely to be at a high temperature to cool down.

6. b / Welding operations:

1. When carrying out any welding operation on the equipment, disconnect the electric connector and the tractor battery.

2. Disconnect and protect any hoses (particularly rubber) and any electric cables to ensure that they are not damaged by incandescent particles that could cause oil loss or a short circuit.

6. c / Servicing the tyres:

1. Only carry out work on tyres if you have the necessary specific tools and experience.

2. Incorrect fitting could seriously compromise your safety.

3. If in doubt, call in qualified staff.

4. Do not fit tyres of a different type from those recommended by the manufacturer.

5. Ensure that the tyres are inflated to the pressures recommended by the tyre manufacturer (See sticker page 16).

6. d / Electric servicing:

Before carrying out any work on the electric system, disconnect the electric connector.

6. e / Hydraulic servicing:

1. Place all hydraulic distributors into neutral (rest).

2. Stop the tractor engine and remove the starter key.

3. Before working on the hydraulic system, check that the installation is not under pressure.

4. Eliminate pressure before disconnecting hydraulic lines.

5. Before restoring pressure in the hydraulic lines, check that all connectors are fully tightened and that the hydraulic hoses are in good condition and correctly protected.

6. f / Repairs:

1. Any failure that might compromise safety must be eliminated.

2. Carry out immediate repairs on any leak or failure affecting the hydraulic or electrical systems. These must be done by qualified staff.

3. Do not attempt to find a hydraulic oil leak (under pressure) using fingers.

4. Damaged or defective protective devices or casings must be replaced immediately.

5. Any original protective device fixed to the equipment must not be removed or modified.

6. Hydraulic hoses that originate from another hydraulic system must not be re-used.

7. When a rigid or flexible line is damaged, it must be replaced immediately.

8. Repairs affecting components under pressure or electrically powered require special tools and procedures. They must only be carried out by qualified staff.

7. Environmental protection

Ground pollution:

1. Make sure that you do not spill or discard in any drainage system used lubricating oil or other substances such as hydraulic oil…

2. Collect used fluids in sealed, clean containers designed for the purpose. Avoid using containers used for food or drink bottles.

3. Used tyres. It is against the law to store tyres or to dump them, dispose of them in the natural environment or burn them in the open air. Take them to a dealer or an approved collector.

8. Fitting and installation

Hitching to the tractor

1 - COUPLING

1. See page 8 technical characteristics / and page 16 coupling.

2. Read the sticker page 12 ref: 892 640.

3. Couple the ring on the drawbar of the spreader to the attachment point or axle hook on the rear of the tractor.

4. Check the lockings.

2 – DRIVE SHAFT

A/ Primary drive shaft

1. See page 14 PTO / Drive shaft

2. Read sticker page 12 ref: 892 640.

3. Read the manufacturer's instructions concerning the drive shaft, attached to the transmission.

4. Check the safety conditions of the guard. If it shows any sign of damage, it must be replaced before the equipment is used.

5. The drive shaft is placed between the tractor and the spreader.

6. Fit the spreader's primary drive shaft to the tractor's rear PTO outlet, and adjust its length, retaining maximum engagement. Minimum engagement length is **250 mm**.

7. Ensure that **both** jaws have engaged correctly.

8. The primary drive shaft must be connected to the rear PTO of:
   -the tractor, **540revs/min,** for EVR 8-6 / 10-6 / 12-8 / 13-10 / 15-12.
   -the tractor, **1000 revs/min,** for EVR 14-11 / 14-12 / 16-12 / 16-12T / 18-14 / 18-14T / 21-15.

B/ Secondary drive shaft

1. The secondary drive shaft is located between the spreader's longitudinal main shaft and the vertical beater drive. It is equipped with a declutchable cam limiter on the spreaders 10-6 to 21-15 or with a shear bolt on the 8-6 near the vertical beaters, and a freewheel on the spreader's front side.

2. The instructions from the transmission manufacturer come with the transmission.

3 - HYDRAULICS

1. See page 16, hydraulic servicing and repairs.

2. Read sticker page 12 ref: 892 640.

3. Spreaders are designed to operate with a maximum oil flow rate of **45 l/min** at a maximum pressure of **180 bars.**

4. All EVR spreaders are equipped with a simple flow regulator for the moving floor speed (standard), or with a hydraulic distributor with an integrated flow regulator for the moving floor speed.

5. Regulators or distributors are equipped with a pressure limiting valve set at **180 bars**.

6. The distributor must be **linked directly** to the tractor's pump pressure via its **single-acting distributor**, with the **return always routed directly and unrestrictedly to the tractor's oil reservoir**.

7. The flow regulator of the moving floor should be connected to the tractor's DUAL-ACTING distributor. Make sure that on the end of one of the 2 hydraulic hoses there is no check valve.

8. Avoid connecting to a dual-acting tractor distributor (pressure loss, except for point 4).

9. The hydraulic pressure hose is always located close to the pressure limiter on the spreader's distributor; it has a **red** collar. The return hose has a **blue** collar

10. The distributor is set at **180 bars** (main valve).

11. The hydraulic braking hose, ended by a PUSH-PULL half-valve should always be connected to the pressure outlet – tractor's braking.

12. **Tractor with flow which exceeds 45 l/min**:
Provide a flow divider to be installed on the spreader, before the "PRESSURE" orifice on the distributor unit, or contact your dealer to check whether it is possible to adjust the tractor's flow rate.

13. **Closed circuit tractor**: (Example: John DEERE)

a- To operate the equipment without the tractor having problems, activate the tractor distributor and immediately use the equipment's hydraulic functions.

b- As soon as the equipment's hydraulic functions have been used, return the tractor's distributor to NEUTRAL.

c- For earlier models of John Deere tractors (prior to the 6000 series), check that the tractor's hydraulic system is not vibrating and that the equipment's return hose is connected to the tractor's filter bowl; this is to avoid CAVITATION and pump unpriming (if you experience problems, contact your John Deere dealer).

4 – ELECTRICITY

1. See page 15 and 16 section 6: Maintenance and repair.

2. **Read sticker page 12 ref: 892 640.**
All types of equipment (direct control from tractor or distributor) require electrical power:
- Connection is made to the battery from a direct electrical line.
-Voltage: **12 volts** DC

- Two conductors: **2.5 mm²** the **brown** wire should be connected to **battery + ,** and the **blue** wire to **battery - .**

3. Signalling:
The spreaders are equipped with rear signal lights, which comply with the French Highway Code with standard **7**-contact connectors, type **12** N Normal, **ISO standard 1724 N° NF 43.407,** which should be connected to the socket at the back of the tractor.

9. Adjustments and maintenance

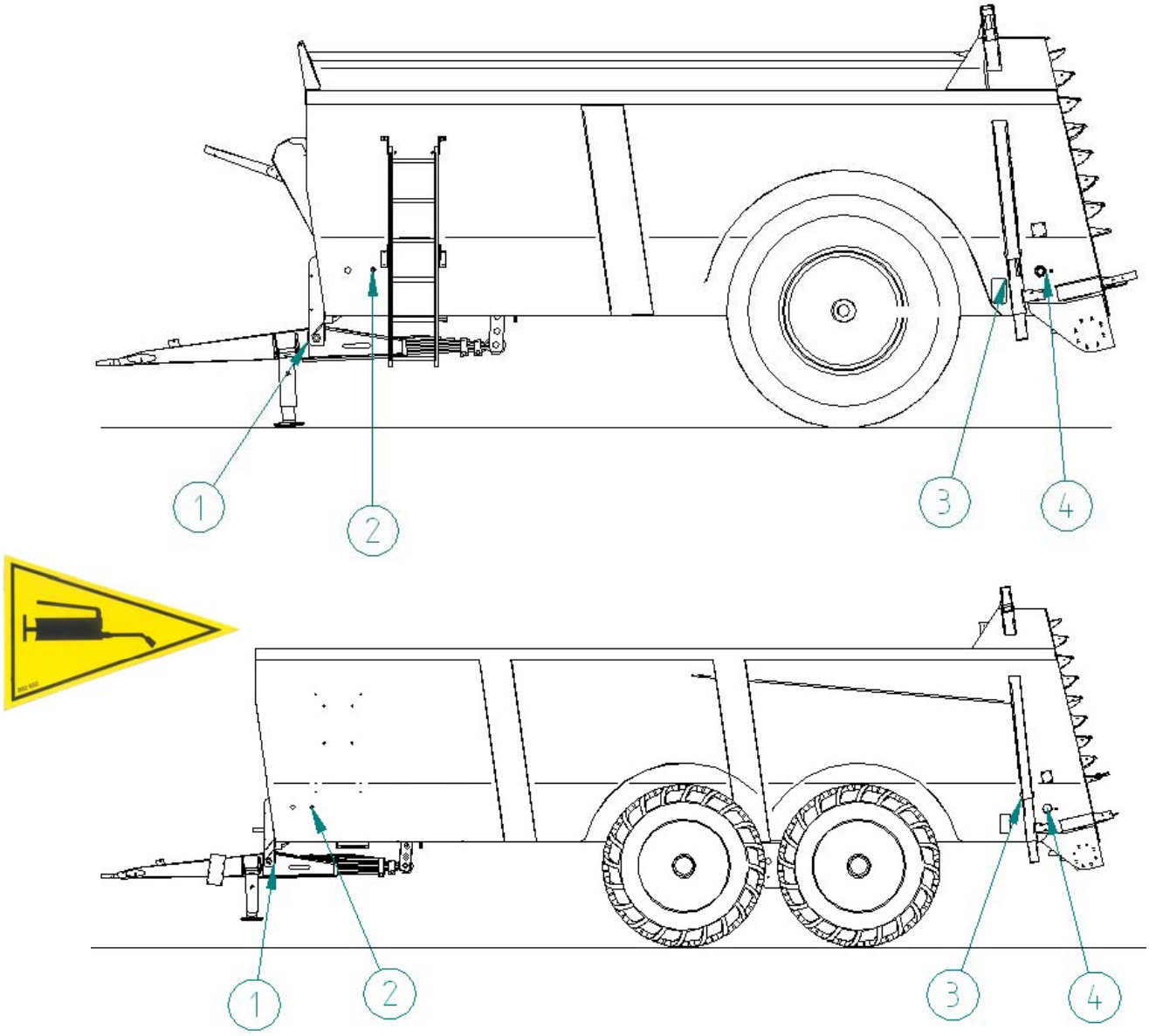
1 - GREASING

1. Whilst using the equipment, **grease every day.**

2. The various greasing points are arranged as follows:
   1- Drawbar pin **(2)**
   2- Front shaft of moving floor, left and right side (**1 Left** + **1 Right**)
   3- Upper bearings of spreading device (**1 Left** + **1 Right**)
   4- Rear shaft of moving floor, left and right side (**1 Left** + **1 Right**)

3. **Regularly oil** hinges and pins which are not fitted with greasers.

GREASING DIAGRAM:



2 – REDUCTION GEAR

The oil change of all gearboxes should be carried out **at least once a year**, depending on the frequency of use of the equipment:

Rep Item Pos.nr	Type Type Typen	Boîtes d'engrenages / gear box / getriebekasten				Qté Qty Menge Litres Liter Liter	Huile Oil Ol	Marques Makes
		N°	Monté sur	Fitted on	Auf gehoben			
1	EVR 8-6	814 181	EPAN 5	EPAN 5	EPAN 5	3 x 2 l.	SAE 90	GB
2	EVR 10-6 to 15-12	814 173 Ou 814 181	EPAN 5 EPAN 5	EPAN 5 EPAN 5	EPAN 5 EPAN 5	11 l. 3 x 2 l.	SAE 90	BERMA GB
3	EVR 14-11 to 21-15	814 174 ou 814 182	EPAN 5 EPAN 5	EPAN 5 EPAN 5	EPAN 5 EPAN 5	15,5 l. 3 x 2 l.	SAE 90	BERMA GB
4	EVR 14-11 to 21-15	814 186	2 plateaux EPAN 6	2 plates EPAN 6	2 tafellander epan 6	20 l.	SAE 90	BERMA
5	EVR 14-11 to 21-15	814 190	Vis horizontales EPAN 6	EPAN 6 horizontal beaters	Horizontale schrauben	2 x 2 l.	SAE 90	GB
6	EVR 8-6 to 10-6	814 160	Fond mouvant	Moving floor	Rollboden	2 l.	SAE 90	ROCHLING
7	EVR 12-8 to 15-12	814 136	Fond mouvant	Moving floor	Rollboden	2.4 l	SAE 90	ROCHLING
8	EVR 14-11 to 16-12	814 130	Fond mouvant	Moving floor	Rollboden	2 l.	SAE 90	ROCHLING
9	EVR 18-14 and 21-15	814 161	Fond mouvant	Moving floor	Rollboden	3,5 l.	SAE 90	ROCHLING
10	EVR 8-6 to 21-15	814 177	pompe	Pump	Pumpe	2,22 l.	SAE 90	BIMA

3 - CHAINS

Marine or vaucanson transmission chains (moving floor).

1. Follow instructions on the stickers placed at the front of the spreader for moving floor chains (see page 13).

2. The **tension** of the chains should be **moderate**. CONTROL THE CHAIN ALIGNMENT.

3. During the running in period, the chains may stretch significantly, **tighten again if necessary**.

4. When the tensioners are at their maximum for adjusting chain, **cut two links** and tighten again.

5. Check the **tightness of attachment screws** on the moving floor connector bars, especially during the first hours of operation.

6. Check the **state of the drive sprockets** for the moving floor chains. As soon as they are damaged change them to avoid any risk of derailment.

4 - WHEELS

1. Fixing: Check tightness of wheels regularly and after having used the equipment for **10 hours**.

2. Inflation: Regularly check pressure.

Ref	N°	Profile	Dimensions	Diameter	Tyre width	Load per wheel in kg mini-maxi	Inflation pressure in bars	Nbre of plys
1	842129		18,4x34 Alliance 324	1,65 m	0,47 m	4660	2,7	14
2	842172		18,4x38 Voltyre	1,75 m	0,47 m	5880	3.2	16
3	842138		18,4x30 Alliance 324	1,55 m	0,47 m	4185	3	14
4	842179		24,5x32 Alliance 347	1,80 m	0,62 m	5490	1,7	12
5	842142		23,1x26 Alliance 347	1,60 m	0,59 m	4880	2.0	14
6	842256		650/75R32 Alliance A360	1.80 m	0.63 m	6990	3.2	Radial
7	842130 or 842253		600/60x30,5 Trelleborg	1,50 m	0,60 m	7290	2,6	12
8	842255		600/55R26,5 ELS Nokian	1.33 m	0.60 m	6750	3.2	Radial
9	842 170		710/55R34 ELS Nokian	1,65 m	0,71 m	9200	2,8	Radial
10	842 222		650/65R30,5 Michelin	1,62 m	0,66 m	12780	4,0	Radial

3. Braking:

Regularly check:
The surface condition of cables
The tightness of the cable clamps
The cable tension
The thickness of the drum brake lining

5 – HYDRAULIC HOSES

1. See page 16 section: Maintenance and repairs.

2. Once a week check the state of the hydraulic hoses, especially sections in contact with the equipment.

3. Once a week, control that there are no leaks from the hydraulic connectors.

4. Retighten the hydraulic connectors if required after the first few hours of operation.

6- HYDRAULIC SAFETY VALVE

1. All distributors are equipped with a general hydraulic safety valve set at **180 bars** and located at the pressure inlet of the distributor unit.

2. With the motorized regulator n° **824 404,** the hydraulic safety valve fitted in the regulator is set at **180 bars.**

3. To check the valve calibration, connect a pressure gauge in parallel on the pressure line:

   a) With hydraulic door:
   - activate the dual-acting cylinders to limit,
   - read the set pressure.

   b) With moving floor hydraulic motor:
   - block the return port of the forward running motor,
   - activate the distributor component of the forward running moving floor,
   - read the set pressure.

4. To calibrate or decalibrate, screw or unscrew the valve's adjusting screw, and control with pressure gauge.

7- SAFETY VALVE OF HYDRAULIC DOOR

1. Valve N° **825 246** fitted on the lower port, piston side, of one of the hydraulic door cylinders.

2. Safety for any interventions on or inside the spreader (see safety instructions).

3. Should be completely open when operating and completely closed for interventions on or inside the spreader (see sticker page 13).

4. Check at least once a week the mechanical functioning of the valve by operating the lever **2 to 3 times** without using the hydraulic distributor functions.

8-TAIL LIGHTS FOR ROAD SIGNALLING

1. An articulated case on each light, activated by an electric cylinder (electrically protected by an internal resettable thermal fuse) is controlled with the last button at the top of the electric control unit.

2. Each case hides and protects the light whilst spreading. The lights can be completely uncovered for driving on the road.

3. Before driving on the road, check that both lights are clean and fully visible. Also check the mechanisms and lights to make sure that they are working properly.

9-SPEED OF MOVING FLOOR'S HYDRAULIC MOTOR

1. The speed of the moving floor's hydraulic motor is electrically controlled. The **first electric button** marked **0 (- +)** located at the bottom of the electric control unit, enables to adjust the speed of the moving floor depending on the load in the body and in certain cases of certain difficult products: (ex: compact manure, etc.).

2. The flow regulator vernier scale graduated **0-1-2-3-4-5,** and located behind a transparent screen on the front housing, is used to control the adjustment.

*10-TORQUE LIMITER WITH TWO ADJUSTABLE AND DECLUTCHABLE CAMS (***secondary EPAN 5)** WALTERSCHEID

1. It protects the spreading device against overload, foreign matters and an excessive speed of the moving floor.

2. Located on the secondary transmission **(K64/22R).**

3. The jaw with freewheel is fitted on the main longitudinal shaft side, towards the front of the spreader.

4. The jaw with torque limiter is fitted on the vertical beater drive side.

5. The torque limiter calibrations are:

Transmissions		**Limiters**			**Machines**	**Gear box**
N°	Speed	Type	Calibration	Dimension A	EVR	
811103	**540revs/min**	2 declutchable cams K 64/22R	**200 daNM**		10-6 12-8 13-10 15-12	SRT 8
811 101	**1000revs/min**		**165 daNM**		14-11 14-12 16-12 16-12 T 18-14 18-14 T 21-15	SRT 12
814181	**540revs/min**		**200 daNM**		10-6 12-8 13-10 15-12	GB 540
814182	**1000revs/min**		**165 daNM**		14-11 14-12 16-12 16-12 T 18-14 18-14 T 21-15	GB 1000

Adjustment (recalibration)

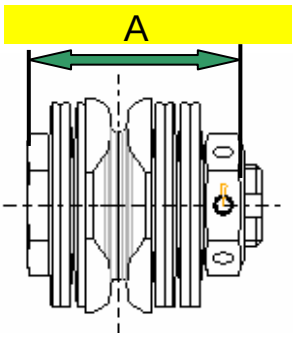
1. **To be carried out once if the limiter disengages too often in normal operating conditions**, i.e.: normally loaded body and standard moving floor speed.

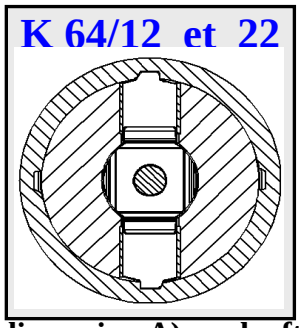
Place the secondary half-transmission on limiter side.

2. **Take the limiter apart** with the following tools:
   1. Flat screwdriver to remove the yellow plastic flange
   2. Internal circlip pliers (∅ **150 width 4 mm**),
   3. Flat spanner **32 mm**
   4. Pin punch ∅ **4**
   5. Caliper

3. **Remove** the spring pack with belleville washer

4. **Measure dimension A**





The first step is to determine the length of the spring pack (dimension A), and, after removing the elastic pin, to adjust the limiter according to the table bellow:

Limiter type	Exterior diameter	Spring type	Number of springs	Adjustment value 1mm = 1 turn Corresponds to	Longuest adjustment dimension maxL (mm)	Shortest adjustment dimension minL (mm)
K64/22	170 mm	60x20.5x2	6	about 35 daNM	53 mm	47.5 mm

NOTE

To avoid the limiter getting stuck, it is important to make sure, during the adjustment or readjustment, that the shortest adjustment dimension is not lower than the indicated dimension.

After adjustment, the elastic flange should be changed in the hexagon nut hole.

For greasing, only use special grease (Agraset 116 or 147).

A/ WITH TRACTOR HYDRAULIC PUMP

1. Whilst unloading, when the resisting torque reaches the sliding torque towards the centre of the hub which comes to a halt, they are driven back up by the two springs in the rotating casing, which causes the noise.

2. Disengage the tractor PTO and slow the tractor engine's speed right down.

3. Invert the moving floor's speed to maximum, preferably for **10 seconds**, to bring the heap of manure back towards the front.

4. When the heap of manure is cleared from the spreading device, **restart the tractor's PTO** and gradually accelerate its speed.

5. The limiter will then be activated again at about **200revs/min**. (PTO).

B/ WITH HYDRAULIC POWER UNIT (OPTION)

1. When the limiter disengages, **keep the same rotating rate for the tractor's PTO (540 or 1000revs/min)**, and do not slow down in spite of the constant noise produced by the two beating cams. The limiter can remain disengaged for a certain time without risks for the cams or the carter's notches.

2. **Invert** the moving floor's speed to clear the heap of manure as explained above.

3. Reduce the speed of rotation of the tractor's PTO to about **200revs/min** to engage the limiter again.

4. Gradually **accelerate** the PTO's speed of rotation.

C/ FOREIGN MATTER

1. When the limiter has difficulty engaging again, check that there are no foreign matters in front or inside the spreading beaters.

2. If there are foreign matters, remove them before starting the spreader again.

3. **Be extremely careful** (see safety section)

***11-TORQUE LIMITER WITH 1 SHEAR BOLT*, Secondary EVR 8-6 EPAN 5**

WALTERSCHEID
***Calibration 160 daNM* (screw M8 x 60, class 8.8)**

12-TORQUE LIMITER WITH SIDE CAMS EPAN 6

WALTERSCHEID
K 64/22L
See pages 24-25-26

13-*ASSEMBLING THE BEATER FINGERS AND SMALL KITS / DLG*

See technical documents: 904 009-1-A (See attached document page 39-40)

10. Start-up and operation

1. Our spreaders will give reliable and satisfactory service if used within their normal limits.

2. Never exceed the maximum load indicated on the manufacturer plate.

3. Before loading the spreader when it is used for the first time and every time it is used after a period of inactivity, operate the moving floor so that it goes round once.

4. In case of frost, check that the guillotine door is working (option).

11. Uses

1 – SPREADING QUANTITY PER HECTARE

I. Determine the weight to be loaded

1. **Manure density (D)** = **P1** (weight of container full (kg) – **P2** (weight of container empty (kg)
   V1, volume of container (in litres)

   Example: **P1**=11 kg **P2**=3kg **V1**=10 litres

   $$\mathbf{D} = \frac{\mathbf{P1-P2}}{\mathbf{V1}} = \frac{11-3}{10} = 0{,}8$$

2. **Calculate the weight P (in tonnes) to be loaded:**
   P= **V2** (volume of spreader body in M^3) x **D**
   Example: **V2** = $12M^3$ D=0,8
   P= 12x0, 8 = 9,6 tonnes

II. Determine the distance L (in metres), to travel to cover **1 hectare**

1. **Knowing the spreading width** l (in metres), of the spreader (example: l = 6 metres)

2. $$\mathbf{L} = \frac{\text{1 hectare} = 10\,000\ m^2 = 10\,000}{l \text{ (in metres)}} = \frac{}{6} = 1\,666 \text{ metres}$$

III. Determine the distance d (in metres), that the tractor needs to cover, to empty a spreader loaded with the weight P in tonnes

1. Example :
   Q=35 tonnes/hectare (set)
   P= 9,6 tonnes (calculated)
   l **=** 6 metres (known = spreading device characteristic)
   L= 1666 metres (calculated)

2. Calculation of **d**: $\mathbf{d} = \frac{PxL}{Q} = \frac{9,6 \times 1666}{35} = 457$ metres

3. Spread surface **S:** $\mathbf{S} = d \times l = 457 \times 6 = 2\,742\ m^2$
   $= 0,274$ hectare $= 27,4$ ares

4. In order to obtain the quantity **Q** to spread per hectare, according to the distance **d** that the tractor should cover, adjust the moving floor's speed **in metres per minute** with the spreader's electrically controlled hydraulic flow regulator, and adjust the tractor's speed in **km/h**.

2nd method

It is possible to work out the speed of the tractor V2 that is necessary to spread a new set quantity Q2 of manure, if one knows the quantity of manure Q1 (in tonnes) to spread per hectare, and the speed of the tractor V1 (in km/h).

1. $\mathbf{V2} = \frac{\mathbf{V1 \times Q1}}{\mathbf{Q2}}$
2. **Example**: **Q1** = 40 tonnes per hectare
   V1= 6 km/h
   To spread **Q2** = 50 tonnes per hectare, the tractor will have to move at a speed **V2**:

   $\mathbf{V2} = \frac{\mathbf{V1 \times Q1}}{\mathbf{Q2}} = \frac{6 \times 40}{50} = 4.8$ km/hour

2 - LOADING

Ensure that under no circumstances during operation does anyone enter the potential danger areas around the spreader.

.

1. Place the equipment next to the heap.

2. Before leaving the tractor, **engage** the handbrake, **stop** the engine and remove the starter key.

3. Get in the tractor equipped with the loader **to carry out the loading**. If this operation is carried out by another person, do not stand in the loading area.

4. The loading should be uniform and regular and carried out lengthways and transversely and should not rise above the rotor to guarantee regular spreading and stability of the equipment.

5. Whilst spreading heavy manure, the equipment's balance could be altered as the load could move towards the back on certain types of grounds (slopes). When coupling take this seriously into account as vertical vibrations could unhitch the ring.

3- SPREADING

1. ***Activating the rotor,*** GRADUALLY ENGAGE the PTO (**540 or 1000revs/min** depending on spreader model)

2. ***Opening the guillotine door:*** *(*if the spreader has one), the guillotine door is equipped with a hydraulic safety system, which stops the moving floor if the door is not open enough.

3. ***Moving floor with hydraulic geared motor***

FUNCTION:
With a hydraulic control, the moving floor can have a regular or variable speed.

Use:
A- With hydraulic control from the tractor pump**:** pressurize the power circuit (engaging the tractor distributor)

B- With independent hydraulic control from the spreader's hydraulic power unit:

1. Turn the moving floor on, using the **spreader's distributor at low speed.**

2. **Adjust** the moving floor's speed by pushing the button **-** **+** on the flow regulator.

3. The distributor enables the moving floor to move forwards or backwards. (NOTE: If the spreader is equipped with a Vaucanson chain the moving floor cannot move backwards).

4. When unloading, the **limiter** can disengage: see engagement and disengagement functioning page 25.

5. When spreading is almost finished, it is necessary to increase the moving floor speed as the product will not always reach the rotor.

4- WHEN THE SPREADING IS FINISHED

After unloading, never forget:

1. To stop the moving floor.
   - With hydraulic control from the tractor, cut the spreader's power by putting the tractor distributor into neutral.
   - With independent hydraulic control, put the spreader's distributor in neutral, halt.
2. To stop the rotor using the PTO.
3. To close the guillotine door. The door should never remain open during transfers.
4. To cut the tractor's hydraulic circuit.
5. To reduce the speed of the moving floor using the moving floor regulator.

12. Additional equipment information

1 – INDEPENDENT HYDRAULIC POWER UNIT (Price ref 2236)

1- PUMP, MODEL 540 revs/min EVR 8-6 10-6 12-8 13-10 15-12 N° 821019
2- PUMP, MODEL 1000 revs/min EVR 14-11 14-12 16-12 18-14 21-15 N° 821020

SAFETY
As the pump is driven by the rotating PTO, do not forget to put the control distributors for hydraulic parts in neutral such as the moving floor, heavy slurry door…etc.

FUNCTION
Avoids using the tractor's hydraulic circuit.

USE

1. Activate the tractor's PTO.
2. Regularly check the oil level which should be displayed on the reservoir indicator.

MAINTENANCE

1. Empty the reservoirs once a year:
2. Quality of oil: Mineral oil | **HFO 32** / **UNIL - OPAL** | formerly HYDRO 32
3. Quantity of oil | **49 litres** | **Between the 2 indicators – level**

4. Change the cartridge of the pressure filter and return filter once a year.

Return filter	Ref. 823243
Pressure filter	Ref. 825262
Level indicator	Ref. 825443
Filler cap with strainer	Ref. 825245

Reversing gearbox N° 814177 R = 1/1.9	Oil SAE 90 **2.22 Litres**

2- SPREADER METER (Price ref 2155)

SAFETY

- The meter should always be read when the tractor engine is completely stopped.

FUNCTION

Counting the number of rotations of the rear shaft in order to carry out the spreader's unloading.

USE

Turn the moving floor on, the meter is automatically activated.

3- REAR DOOR FOR THICK SLURRY (Price ref 2860 / 2862)

SAFETY

1. Carefully check that the door is not in contact with an electric line as there is a potential risk of electrocution.

2. The guillotine door is equipped with a hydraulic safety system, which stops the moving floor if the door is not open enough.

FUNCTION

It enables to halt and control the quantity of product to spread such as liquid and viscous products.

USE

1. The door can be adjusted in height with a hydraulic distributor, according to the nature of the product and the quantity to spread.

2. Do not use the door to regulate the unloading of products such as marl, limestone or other products which have the same characteristics.

3. Before activating the door, check that the maintenance safety valve n° **825 246** fitted on one of the door cylinders is **completely open**.

4. In case of frost check functioning before using the equipment.

4 – SINGLE-ACTING HYDRAULIC STAND (Price ref 2147) N° 822007

SAFETY

Never put your foot under the stand.

FUNCTION

1. It replaces on high tonnage machines, the angle transmission mechanical stand.

2. The user can with less effort adjust the height of the equipment when hitching it to the tractor.

USE

1. To send the oil in the stand-cylinder, operate the lever from top to bottom.

2. For return, slowly open the valve of the pump.

MAINTENANCE

1. Change oil at least once a year.

2. Oil quality: Mineral oil **HFO 32 UNIL-OPAL**

3. Oil quantity: **4 litres**

Stand	N° 822007
Hand pump	N° 821001
Hose	N° 827076

5 – DUAL-ACTING HYDRAULIC PUMP (Price ref 2147) N° 891 008

It is equipped with a double pilot valve which enables it to be completely immobile when it is not controlled. It is connected to the equipment's distributor with 2 hoses.

6 – SPREADING DEVICE EPAN 6 (Price ref 2837)

1. *Description*

The spreading device Epan 6 is fitted with two horizontal beaters, a rear cover and two lower plates with almost vertical axis.
The beaters are used for shredding the product, the cover directs the product which then falls on the plates.

Drive train: The lower gearbox is activated by the tractor's PTO. The latter drives the ejection plates and the horizontal beaters via a side transmission.

2. *Safety*

1. ***Before using the spreader the operator should make sure that no one is near dangerous areas such as: the lower drive shaft, the spreading device (horizontal beaters and plates), the side transmission etc. and that no one is inside the spreader.***

2. ***Be extremely careful as projections coming from the plates can go very far and can contain stones or other foreign matters.***

3. During maintenance, the cover should be open and locked by closing a hydraulic valve. This valve is located on the left side of the equipment and is marked with a sticker.

4. Depending on the models, some machines are equipped with automatic pilot valves which do not need to be operated by the user. (Valve on the cover cylinder).

5. Any intervention (maintenance, repair…) should be carried out with the tractor engine stopped, the spreading device at a complete halt, valves or safety check valves activated and the hydraulic motor stopped.

6. The mechanical safety of the spreading device is guaranteed by a cam limiter at the entry of the lower gearbox, which protects the entire device, and by the declutchable cam limiter on the side transmission which protects the horizontal beaters.

3. *Function*

This device enables the user to obtain a very wide and precise spreading in a small volume.

4. *Use*

Activating the tractor PTO drives the two plates and the two horizontal beaters via the monobloc gearboxes and the transmission shafts which connect the gearboxes.

PTO speed:

Tractor rate 1000 revs/min = wide spreading of light products
Tractor rate 750 revs/min = spreading of heavy products on smaller width

NB: The 540 revs/min rate is not recommended: the device's safety system would not be effective enough against strong jolts.

The spreading width and thinness can be adjusted with the mobile shutter (deflector) on the cover, manually controlled with a crank.

REMINDER: The adjustment of the device should be carried out with tractor motor stopped, spreading device and hydraulic motor completely at a halt.

5. *Maintenance*

The oil change of all gearboxes should be done at least once a year, depending on the frequency of use.

7 – HYDRAULIC DIVIDER FOR TRACTOR FLOW RATES EXCEEDING 45L/ MIN (Price ref: 8958)

- To be fitted between the tractor pressure outlet and pressure inlet on the spreader's hydraulic distributor.

- Read sticker page 12.

13. Cleaning

13. a / Cleaning method

- Cover all parts that need protection from water penetration or from cleaning products.

- Periodically wash the equipment with a water hose.

- If a high pressure water hose is used, do not hold it too close to the spreader; avoid directing the hose on electronic components, the engine or electric connections, hydraulic lines and hoses, seals, filler plug, etc.

- Grease the equipment as soon as it is dry.

14. List of technical documents

I. Supplier spare parts

1. ***Hydraulic equipment:***

- **904 028-1-A**: Filler cap
- **904 029-1-A**: Return filter
- **904 032-1-A**: Pressure filter *EVR with hydraulic power unit*
- **904 037-1-A**: Hydraulic cylinder, slurry door / side shutter / cover Epan 6
- **904 103-1-A**: Hydraulic cylinder, braking
- **904 207-1-A**: Hydraulic protection cover cylinder
- **904 208-1-A**: Hydraulic cylinder for trapdoor opening
- **904 023-1-A**: Drawbar stand
- **904 066-1-A**: Return pressure valve
- **904 007-1-A**: Moving floor hydraulic motor
- **904 008-1-A**: Pump 27 cm^3/revs *EVR with hydraulic power unit (540revs/min)*
- **902 096-1-A**: Cylinder choke
- **904 041-1-A**: Pump 51 cm^3/revs *EVR with hydraulic power unit (1000revs/min)*
- **904 127-1-A**: Double pilot check valve
- **904 123-1-A**: Single pilot check valve
- **904 025-1-A**: Flow deviator
- **904 063-1-A**: Distributor components 60L/min
- **904 064-1-A**: Distributor components 45L/min
- **904 061-1-A**: Single-acting manual pump
- **904 024-1-A**: Dual-acting hydraulic stand
- **904 027-1-A**: Level indicator
- **904 031-1-A**: Two-way valve
- **904 036-1-A**: Safety plug valve ALFAGOMMA
- **904 038-1-A**: Check valve and coupler on return
- **904 065-1-A**: Braking valve
- **904 126-1-A**: Shuttle valve 6/2
- **904 124-1-A**: Double pressure limiter
- **904 125-1-A**: Reuniting deviator

2. ***Hydraulic diagrams:***

- **904 144-1-A**: HDS 11 *EVR 8-6 to 21-15 EPAN 5*
- **904 145-1-A**: HDS 15 *EVR 8-6 to 21-15 EPAN 5*
- **904 143-1-A**: Electric control + opening indicator of PAL *EVR 8-6 to 21-15 (update)*
- **904 149-1-A**: Sequence valve on grid *EVR Germany*

3. ***Electric equipment and diagrams:***

-**904 021-1-A**: Connector 12 channels
-**904 022-1-A**: Connector 4 channels
-**904 026-1-A**: Electric cylinder
-**904 172-1-A**: Electric unit 2 buttons
-**904 173-1-A**: Electric unit 4 buttons
-**904 171-1-A**: Electric unit 5 buttons

4. ***Drive shaft:***

- **904 033-1-A**: Primary drive shaft WALTERSCHEID
- **904 034-1-A**: Homokinetic primary drive shaft WALTERSCHEID
- **904 057-1-A**: Homokinetic primary drive shaft WALTERSCHEID *(CANADA).*

- **904 035-1-A**: Secondary drive shaft WALTERSCHEID - *EVR 8-6*
- **904 209-1-A**: Secondary drive shaft WALTERSCHEID - *EVR EPAN 5- 540 revs/min*
- **904 004-1-A**: Secondary drive shaft WALTERSCHEID- *EVR EPAN 5- 1000 revs/min*
- **904 165-1-A**: Secondary drive shaft with cam limiter and freewheel BONDIOLI
- **904 167-1-A**: Side drive shaft with bolt limiter BONDIOLI

5. Gear box:

- **904 016-1-A**: Reduction gearbox *EVR 8-6 / 10-6 5 (Rochling)*
- **904 017-1-A**: Reduction gearbox *EVR 12-8 / 13-10 / 15-12 (Rochling)*
- **904 047-1-A**: Reduction gearbox moving floor *EVR 13-10 / 15-12 (Bondioli)*
- **904 166-1-A**: Reduction gearbox RT 400 moving floor *EVR 14-11 / 14-12 / 16-12(Bondioli)*
- **904 015-1-A**: Reduction gearbox *EVR 14-11 / 14-12 / 16-12* (*Rochling)*
- **904 006-1-A**: Reduction gearbox *EVR 18-14 / 21-15*
- **904 003-1-A**: Set of 3 angle transmission gearboxes GB / *EVR EPAN 5 / EVR 8-6 / 10-6 / 12-8 / 13-10 / 15-12*
- **904 156-1-A**: Set of 3 angle transmission gearboxes Berma / *EVR 10-6 / 12-8 / 13-10 / 15-12*
- **904 039-1-A**: Set of 3 angle transmission gearboxes GB / *EVR EPAN 5 / EVR 14-11 / 14-12 / 16-12 / 18-14 / 21-15*
- **904 157-1-A**: Set of 3 angle transmission gearboxes Berma / *EVR 14-11 / 14-12 / 16-12 / 18-14 / 21-15*
- **904 158-1-A**: Set of 4 angle transmission gearboxes Berma / *EVR 14-11 / 14-12 / 16-12 / 18-14 / 21-15*
- **904 040-1-A**: Double side gearbox *EVR EPAN 6 / 14-11 / 14-12 / 16-12 / 18-14 / 21-15*
- **904 018-1-A**: Pump reversing gearbox

6. Axles and drawbar spring:

-904 189-1-A: Brake bearing A410 8-6 / 10-6 (Square 80)
-904 191-1-A: Brake bearing 408E 12-8 (Square 90)
-904 192-1-A: Brake bearing 408E 13-10 / 14-11 / 14-12 / 15-12 (Square 100)
-904 193-1-A: Brake bearing 412S 16-12 / 18-14 (Square 110)
-904 194-1-A: Brake bearing 412S 16-12 / 18-14 (Square 140)
-904 067-1-A: Brake A410
-904 068-1-A: Brake 408E
-904 005-1-A: Brake 412S
-904 092-1-A: Drawbar spring 8-6 / 10-6 / 12-8 / 13-10
-904 091-1-A: Drawbar spring 14-11 / 14-12 / 15-12 / 16-12
-904 090-1-A: Drawbar spring 16-12 T / 18-14 / 18-14 T / 21-15

II. JEANTIL spare parts.

- **904 205-1-A**: Side shutter
- **904 203-1-A**: Ladder assembly
- **904 201-1-A**: Plate assembly EPAN 6
- **904 206-1-A**: Beater assembly EPAN 6
- **904 196-1-A**: Electric control lights
- **904 168-1-A**: Parking brake
- **904 199-1-A**: Protection cover
- **904 202-1-A**: Exploded view EPAN 6
- **904 160-1-A**: Spreading device EPAN 5 with slurry door
- **904 197-1-A**: Meter MESTRAC

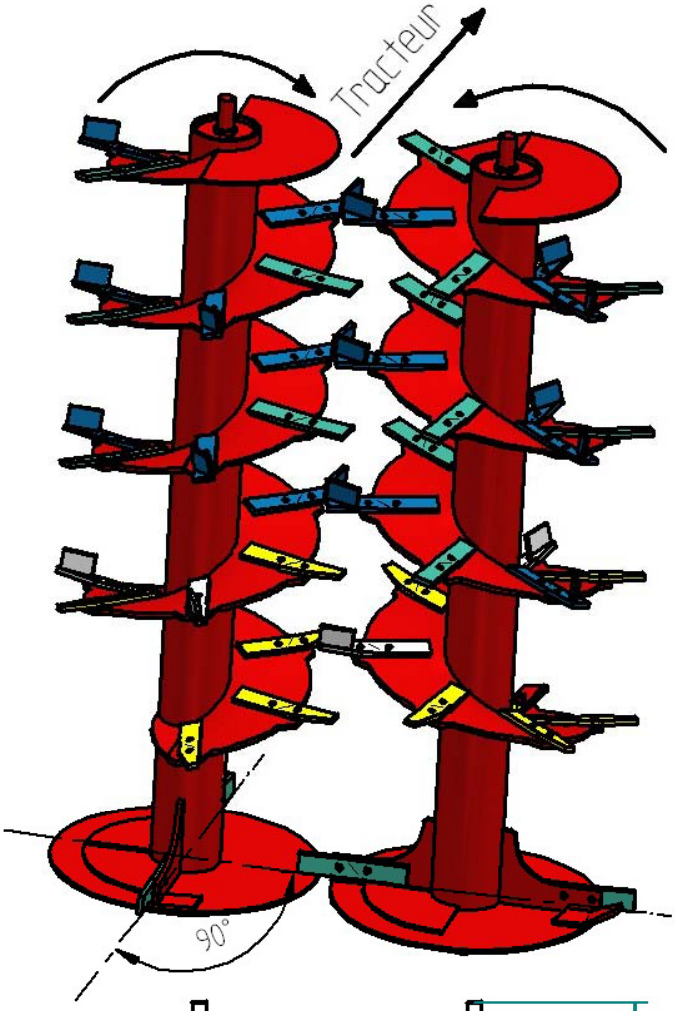
III.Other.

- **904 131-1-A**: Moving floor speed EVR 8-6
- **904 132-1-A**: Moving floor speed EVR 10-6
- **904 085-1-A**: Moving floor speed EVR 12-8
- **904 133-1-A**: Moving floor speed EVR 13-10
- **904 134-1-A**: Moving floor speed EVR 15-12
- **904 135-1-A**: Moving floor speed EVR 14-11 / 14-12
- **904 095-1-A**: Moving floor speed EVR 16-12
- **904 137-1-B**: Moving floor speed EVR 18-14
- **904 138-1-A**: Moving floor speed EVR 21-15
- **908 001-1-A**: Coupling questionnaire
- **904 086-1-A**: Hydraulic distributor control hds11 or hds15
- **900 002-1-A**: Moving floor irregular speed HDS 15
- **900 003-1-A**: Moving floor irregular speed HDS 11
- **900 006-1-A**: Vertical beater drive replacement

14. Possible incidents and solutions

INCIDENTS	CAUSES and SOLUTIONS
1 – Abnormal functioning of all hydraulic motors when starting equipment	1- Check tractor and spreader electric circuit 2- Check hydraulic connection of spreader and tractor single-acting distributor. 3- Too important return pressure.
2 – Lack of hydraulic power	1- Too much pressure loss with dual-acting distributor. Connect to single-acting distributor and free return 2- Check calibration of distributor unit on spreader and tractor (180 bar) 3- Pollution in tractor's hydraulic circuit (see tractor filter) 4- Tractor pump failure (flow and pressure)
3 – Damaged hydraulic motor seal	1- Back pressure on hydraulic return (see hydraulic connection) 2- Reduce flow to 45 l/min
4 - Brutal movements and/or hydraulic circuit overheat	1- Too important flow ; reduce flow to 45 l/min
5 – Rear door stuck because of frost	1- In case of frost, check the rear door is functioning before loading equipment.
6- The safety of the declutchable cam limiter sets off	1- Conveyor speed is too fast: reduce speed 2- Important wear of blades on rotors 3- Foreign matters in manure
7- Moving floor does not start	1- Too heavy load, reduce it 2- Foreign matter ; check and remove it 3- Check electric circuit 4- Check hydraulic pressures on tractor

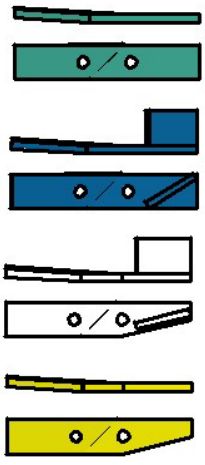
Jeantil	FICHE TECHNIQUE 904 009-1- B		15 11 2007	Page 1/2	
Montage doigts de vis verticales Assembling the vertical beater fingers	EVR 14-11 à 21-15 Vis hauteur 2.00 m				



Côté gauche
Left hand side

Côté droit
right hand side

Vis Gauche
Vertical beater

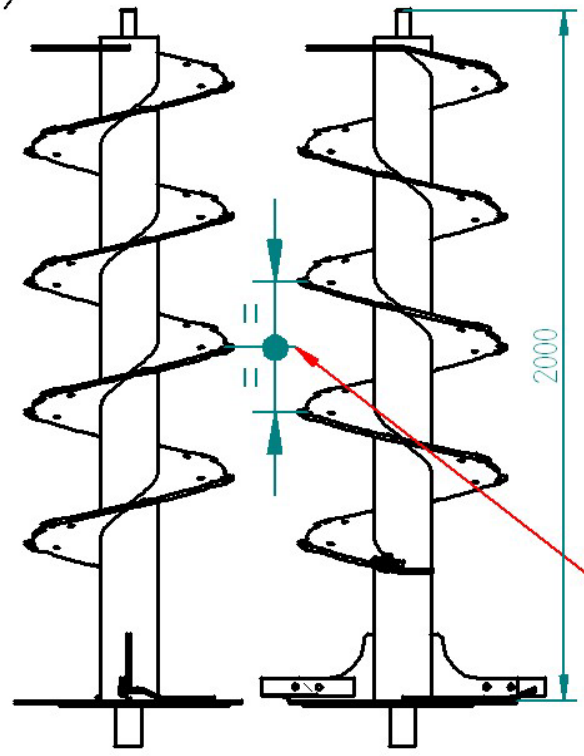


36570 = 8

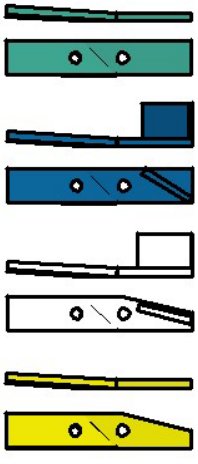
86518 = 8

86520 = 2

36566 = 6



Vis droite
Vertical beater



36562 = 8

86519 = 8

86521 = 2

36567 = 6

Configuration Doigts N° Fingers N° Finger N°	1 Compost sec Dry compost Trockener Kompost	2 Compost Compost Kompost	3 (Standard) fumier std Standard manure Standarddünger	4 fumier court Short manure Kurzdünger	5 fumier long, grossier Long manure Langerdünger
28 *					
27 *					
26 *					
25 *					
24 *					
23 *					
22 *					
21*					
20*					
19*					
18					
17					
16					
15					
14					
13					
12					
11					
10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

* :Appareils vis 2.25 m seulement

*: Appareils vis 2.00 m seulement

*: Appareils vis 1.80 m seulement

LA VIS ICI REPRESENTEE EST LA VIS GAUCHE

PRODUIT SEC DRY PRODUCT TROCKENER PRODUKT	<----------	----------	---------->	PRODUIT LOURD HEAVY PRODUCT SCHWERES PRODUKT

NB: Numérotation des doigts: le doigt n°1 est le premier doigt situé sur la vis, en commençant par le bas de la vis.
NB : Classification of the fingers : the finger N°1 is the first finger located on the screw, while starting with the bottom of the screw.

REMARQUE IMPORTANTE: Ce tableau ne peut servir de référence stricte, car on observe des disparités dans l'épandage suivant les densités des produits.
IMPORTANT REMARK : This table cannot be used as strict reference, because we can see some disparities i

Cependant, il convient de noter:
However, you can note that :
Jedoch, kann man notieren dass :

		- Les doigts avec méplat, ont tendance à centrer les projections - these fingers (with the aslant cut) tend to center the projections - Diese Finger neigen dazu, die Projektionen zu zentrieren
		- Les doigts avec plat soudé, ont tendance à disperser le produit - The finger with welded iron part tend to disperse the product - Die Finger mit geschweisstem Eisen Teile neigen dazu, die Produkte zu zersreuen.

	Vis gauche Left hand side	Vis droite Right hand side	
	36570 (10 - 8 - 6 - 5)	36562 (10 - 8 - 6 - 5)	Quantité pour Vis 2.25 m Quantity for 2.25 m hand side
	86518 (10 - 8 - 7 - 5)	86519 (10 - 8 - 7 - 5)	Quantité pour vis 2.00 m Quantity for 2.00 m hand side
	86520 (2 - 2 - 2 - 2)	86521 (2 - 2 - 2 - 2)	Quantité pour vis 1.80 m Quantity for 1.80 m hand side
	36566 (6 - 6 - 6 - 6)	36567 (6 - 6 - 6 - 6)	Quantité pour vis 1.60 m Quantity for 1.60 m hand side