



OPERATION MANUAL & SAFETY INSTRUCTIONS

VARI-TILTH (STD & XL)



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INDEX

GLOSSARY	3
INTRODUCTION	4
1. PURPOSE OF THE CULTIVATOR VARI-TILTH HD	5
2. LIABILITY AND WARRANTY	5
3. DANGER AND SAFETY DECALS.....	6
4. THE LOCATION OF THE DECALS	8
5. SAFETY INSTRUCTIONS	9
5.1 GENERAL	9
5.2 ROAD TRANSPORT AND USE	9
5.3 MOUNTING AND DISMOUNTING	10
5.4 HYDRAULIC SYSTEM.....	10
5.5 MAINTENANCE.....	11
5.6 TYRES.....	12
6. MOUNTING AND DISMOUNTING	13
6.1 MOUNTING	13
6.2 DISMOUNTING AND STORING	14
7. ADJUSTING THE CULTIVATOR.	15
7.1 ADJUSTING THE WORKING DEPTH.....	15
8. INSTRUCTIONS FOR USE	16
9. MAINTENANCE.....	17
9.1 GENERAL	17
9.2 LUBRICATION	18
10. TECHNICAL SPECIFICATIONS	19
11. ORDERING PARTS.....	20
12. EC CERTIFICATE OF CONFORMITY	21
APPENDIX I: PARTSLIST	22
1.1 TINES AND SHARES VARI TILTH	22
1.2 TINES AND SHARES VARI TILTH XL	23
1.3 LOWER HITCH PIN / TOP LINK PIN / DEPTH CONTROL PIN	24
1.4 IDENTIFICATION PLATE AND SAFETY DECALS	25

GLOSSARY



If you come across this symbol and heading, there is a direct hazard to life and health of man and animal!



This heading refers to possible risks of damage to machine(s), crops, buildings, etc. But also to possible financial and/or legal problems (warranty, liability, and the like)!

NOTE

This indicates a tip to make work easier, better and safer.

All figures, dimensions and weights are free of engagement.

References to direction in the text, such as "left", "right", "front" and "rear", are always meant to be seen from the forward travel direction of the tractor.

The same applies to the directions clockwise and counter clockwise.

INTRODUCTION

Dear user,

This is the operation manual for the Vari-Tilth cultivator. These have a tine spacing of 59 or 63 cm. This short built cultivator is specially designed to be mounted between an Evers Vari-Disc and the tractor and has a working width of 225 up to 350 cm.



Read the operation manual carefully before starting to work with the machine and observe all instructions!

Pass on all safety instructions to other (fellow) users!

In order to use the Vari-Tilth cultivator as safely as possible, you should be well aware of all recommendations and instructions in this manual. Damage and accidents caused by non-observance of these recommendations and instructions are your responsibility.

Make sure to store this operation manual carefully and in a safe place for future use.

Please speak to your dealer if you still have questions after reading this manual.

EVERS AGRO B.V.
Almelo, 16 May 2012

1. PURPOSE OF THE CULTIVATOR VARI-TILTH HD

Field of application

The Vari-Tilth (XL) cultivator is solely for use in regular arable farming. The Vari-Tilth HD is fitted with fixed tines with a free spacing of 59 or 63 cm. The tines are fitted with a round steel bar, welded in front it. The standard chisels are replaceable and 6 cm wide. The Vari-Tilth is specially designed for mounting in front of the Evers Vari-Disc Duo and Quad. With the fixed tines it is possible to carry out a deeper tilling, up to 30cm deep. It is ideal for breaking up harvesting tracks, because the working depth of the Vari-Disc is limited to 10 to 14 cm. Another advantage is in cases of mulch haulm or stubble which can be worked in by the Vari-Disc more effectively when the soil is first loosened by the Vari-Tilth.



Any deviating use is considered not matching the intended purpose. The user bears the risk of any damage and/or accidents. The above does not apply if in advance written approval has been obtained from the manufacturer!

2. LIABILITY AND WARRANTY

Anyone who uses this machine and/or works on it (adjustment, maintenance) should read this manual and observe the instructions to prevent danger.

This also means:

1. That work may only be carried out within the functional limits (e.g. max. speed), as laid down in the instructions for operation, maintenance and repair.
2. That locally applying regulations for accident prevention, safety, traffic and transport are to be observed.
3. That exclusively original or equivalent parts and lubricants must be used and mounted according to the instructions. A part and/or lubricant is considered equivalent when it has been approved by the manufacturer or when it can be demonstrated that it has the properties required for the function(s) in question.
4. That changes/modifications on the machine that have not been approved in writing by the manufacturer, exclude all liability of the manufacturer for any damage.



Non-observance of the above rules shall be considered negligence. It will rule out any liability of the manufacturer for all possible damage and/or consequences. The user is fully and solely responsible for any risk!

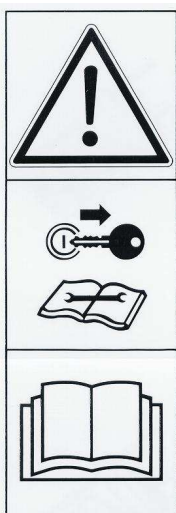
3. DANGER AND SAFETY DECALS



Working safely also means that you take proper notice of the various decals on the machine. You must know what they warn you for!

There are a number of safety decals on the machine. The ones used and their place on this machine are shown on the next page.

They have the following meaning:



Danger:

Stop the engine and remove the key from the ignition when working on the machine!

Attention:

Carefully read the operating manual before taking the machine into operation!



Danger:

There is a risk of flying objects and / or clods!

Keep clear!



Danger:

Keep away from the fold-down parts when the locking pins with inserted retaining clip are not mounted!

Keep clear!



Danger:

There is a risk of parts folding down!

Fix the locking pins with inserted retaining clip!



Danger:

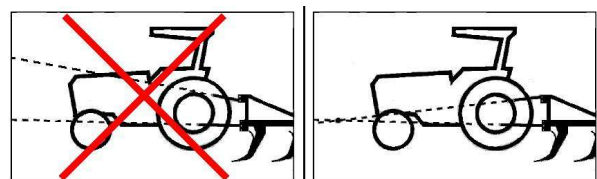
Never stand between the tractor and the machine when the power lift is being operated!



Danger:

Risk of injection at a leaking hydraulic system!

Liquid under pressure easily penetrates through skin and clothing this can cause heavy injuries!



Danger:

In operating position the top link must be higher on the machine side than on the tractor side!

[illegible]

VARI-TILTH

5. SAFETY INSTRUCTIONS



Read and understand these instructions before working with the machine!

If these safety instructions aren't observed, all liability of the manufacturer for any damage is excluded!

5.1 General

- The machine must only be used, operated and maintained by people who are familiar with the machine and who are aware of the risks!
- The operator should familiarise him-/herself with all controls and their functions before starting work. During work could be too late!
- In addition to the specific instructions of this manual, you should also study the general regulations for safety and accident prevention in your country!

5.2 Road transport and use

- Always observe the road traffic regulations when using public roads!
- Check the safety of the machine and tractor before use as regards work and traffic!
- Observe the maximum permissible axle load, total weight and transport dimensions!
- Prior to road transport, check and mount transport accessories such as lighting, warning signs and any protective parts!
- Put the machine in the position intended for road transport and lock it according to the instructions!
- Always make sure that the machine has sufficient lateral stability in transport position!
- In case of road transport with the machine in lifted position, the control lever of the power lift must be locked to prevent lowering!
- Look around the machine and the tractor before driving off or starting to work. Make sure your view is not obstructed. Look out for children!
- It is strictly prohibited to be on the machine during work or transport!
- The driver's seat must at all times be occupied during driving!
- Handling, manoeuvrability and brake performance are influenced by mounted machines and front weights. Therefore, make sure you work with an adequate steering and braking installation.
- Always adapt the forward speed to the condition of the terrain!
- When making turns, take into account the length/width (turning circle) and/or swinging out, due to the large mass of the machine!
- Only work with machines with the protective provisions complete, intact and in the functional position!
- There must be nobody within the operating and danger range (including turning and swinging circle) of the machine. At the rear of the machine clods or other objects may fly out!

- There must be nobody between the tractor and the machine, until the vehicle is prevented from moving by means of the parking brake and/or wheels chocks!
- When leaving the tractor, put the machine on the ground, switch off the tractor engine and remove the ignition key!
- The warning decals on the machine give important instructions for safe use; observing them is for your own safety!
- The user must wear closely fitting clothes. Avoid loose clothing!
- Always mount weights on the tractor according to the instructions on the fixation points intended for that purpose!

5.3 Mounting and dismounting

- Mount machines and accessories according to the instructions and mount the machine and/or parts/accessories only to the provisions intended for that purpose. Make sure they are locked effectively!
- Special care must be taken when mounting or dismounting the machine on or off the tractor
- When mounting or dismounting the machine on or off the three-point linkage, put the power lift control in a position in which inadvertently lifting or lowering is not possible!
- For a three-point linkage the linkage category of the machine must always match that of the tractor!
- The three-point linkage system constitutes a risk of accidents by getting caught and jack-knifing. The same risk exists with the cylinders (if mounted) and the linkage arms and lift rods!
- The control for the three-point power lift outside the tractor cab must be operated without getting between the tractor and the machine!
- The release ropes for the quick coupler should hang freely and in the lowered position and must not release the quick coupler by themselves!

5.4 Hydraulic system

- The hydraulic system carries a high pressure!
- When connecting hydraulic cylinders the instructions for connecting hydraulic hoses must be observed!
- Hoses from the cylinders must be routed in such a manner that under all transport and operating conditions they cannot cause obstructions and/or cannot hinder any functions!
- Never try to locate or shut off a leak in the hydraulic system with your hands. Fluid under high pressure can easily penetrate skin and clothing and it can cause severe injuries. When injured see a doctor immediately! Danger of infection!
- Ensure that the hydraulic system of the tractor and that of the machine are not under pressure when connecting or disconnecting the hose!
- The hydraulically operated parts may only be operated when there is nobody within the danger zone (turning circle) of these parts!
- When hydraulically folding frame sections are in the transport position (folded up) the lock pins with inserted retaining clip must be placed in the holes intended for that purpose!
- For hydraulic connectors between the tractor and machine the couplings and plugs must be marked. When connections are interchanged, the function reverses (e.g. lifting/lowering) - Risk of accidents!

- Check the hydraulic hoses, pipes and all connections regularly and replace them in case of deterioration and damage. New hoses must satisfy the technical specifications prescribed by the manufacturer!
- Before carrying out work on the hydraulic system, the machine must be lowered to the ground and the hydraulic system must not be under pressure (move the lever of the control valve a few times back and forth with the engine switched off)!
- In transport position the control valve of the hydraulic functions must be in the neutral position!
- Always lay down a disconnected hydraulic hose in such a manner that the plug stays clean!

5.5 Maintenance

- Repair, maintenance and cleaning activities, as well as repairing malfunctions, must only be carried out with the tractor engine switched off. Remove the ignition key!
- When the machine is in the lifted position for repair, cleaning or maintenance, support legs must be used. Only work on a firm surface!
- Regularly check whether all bolts and nuts are still tight. Tighten if necessary!
- Parts must at least satisfy the technical specifications prescribed by the manufacturer!
- Always check whether replaced and/or dismantled parts are mounted correctly before using the machine again!
- Ensure that any damage is repaired at once before using the machine again!
- When conducting electrical welding operations on the tractor or on the mounted implement remove cable from the generator and the battery!
- Before working on the electric gear disconnect battery cables!
- For replacing any tools with cutting edges, always use the suitable tools and gloves!
- Dispose of old oils and grease as prescribed by law.
- After using the machine and/or cleaning, grease the rams of the cylinders to prevent corrosion.



After using the machine and/or after cleaning the machine with water, grease the rams of the cylinders to prevent corrosion!

5.6 Tyres

- Fitting tyres requires knowledge and special tools!
- When working on the tyres, make sure that the machine has been placed on the ground safely and that it is secured by shocks against unintentional rolling!
- Repair work on tyres may only be conducted by trained staff and with suitable tools!
- Check the tyres regularly and replace them in case of deterioration and damage. New tyres must satisfy the technical specifications prescribed by the manufacturer!
- Check the tension of the tyres regularly and adhere to the advised air pressure. (See table).
- In case of doubt, contact your dealer or see a tyre tension table.

Tyre	Max. speed	Min. pressure in Bar	Best pressure in Bar	Max. Pressure in Bar
195 65/15	30 km/h	2	2,5	3
10.0/75 - 15,3 14pr	40km/h	3.5	5.5	7

6. MOUNTING AND DISMOUNTING



Always place the supplied pins and retaining clips and check whether they are locked securely!

The standard version is based on a three-point linkage: Category II three-point linkage. (= lift pins \varnothing 28 mm, top link pin \varnothing 25 mm and retaining clips \varnothing 11 mm and \varnothing 8 mm).

Do **not** use pins with a smaller diameter!

Make sure that the three point linkage has enough stabilisation to the side! The machine should not be able to move more than 5 cm sideways.

During mounting, dismounting and transport of the machine, the power lift of the tractor must be in position control, and must be protected against accidental lowering!

6.1 Mounting

There are two mounting options for the top link pin, 2 round holes, A and B. In operating position the top link must be higher on the machine side than on the tractor side! Only in this position is it possible for the machine to move up in cases where the soil is not completely flat. The lift pins can be placed in the holes C.

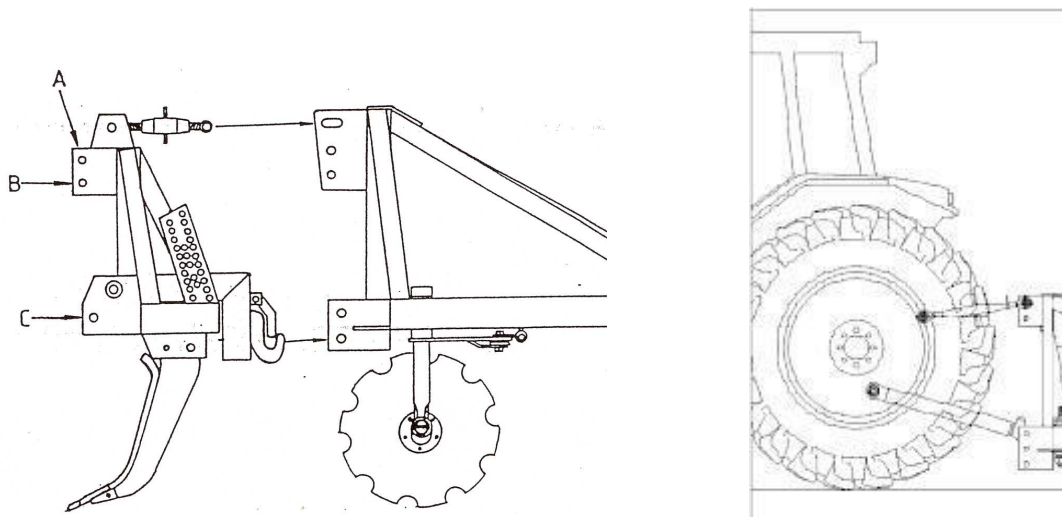


Fig 6.1 Mounting the machine to the tractor.

On standard version the three-point linkage on the back of the Vari-Tilth is of category II, see to it that the three-point linkage on the Vari-Disc is of the same category. The mounting of the Vari-Disc on the Vari-Tilth is done in the same way as mounting the Vari-Disc to the tractor. (See the manual of the Vari-Disc)

- Put the cultivator/Vari-Disc in the lifted position and remove the support legs.
- Adjust the check rods or chains of the tractor correctly to prevent lateral sway.
- When the machine is in working position, the tractors power lift must be in floating position (see the manual of the tractor).

6.2 Dismounting and storing

When the user is not going to work with the cultivator for any period of time the machine should be dismantled from the tractor and support legs must be placed under the machine.

- Make sure that the tractor hydraulic is set to position control.
- It is important to thoroughly clean the machine with water.
- The joints should be greased as prescribed in chapter 9 Maintenance.
- Dispose of old oils and grease as prescribed by law.
- Let the machine rest on a flat soil.
- Make sure the machine has enough stability.
- Dismount the machine from the tractor.
- Grease the rams of the cylinders to prevent corrosion.

7. ADJUSTING THE CULTIVATOR.

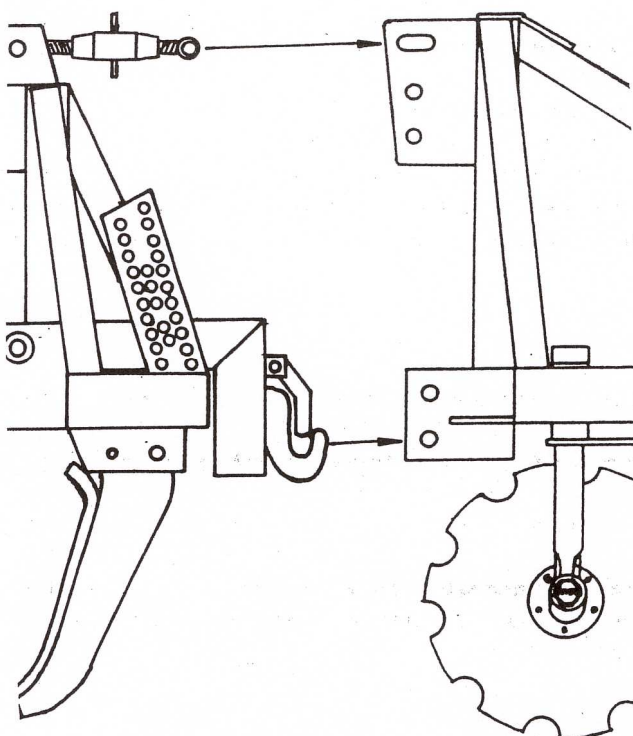
NOTE

The mounting height depends on the tyre size of the tractor. It is recommended to have the lower links as level as possible, while the top link is mounted higher to the machine than to the tractor.

7.1 Adjusting the working depth

Adjusting the working depth of the cultivator Vari-Tilth can only be done by using the draft control of the tractor.

- Remove the pins of the support arms of the cultivator Vari-Tilth with mounted Vari-disc
- Put the cultivator Vari-Tilth at the required depth by driving forward a few meters. At the same time the Vari-Disc will take its working depth, which can be adjusted by placing the pins above the roller arms of the Vari-Disc. (see the manual of the Vari-Disc)
- Level the frame using the top link between the Vari-Tilth and Vari-Disc
- Switch on the automatic draft control of the tractor.
- If required, pins can be placed under the supporting arms of the cultivator to prevent loose connection of the Vari-Disc during folding out.
- No pins must be placed over the supporting arms. In this manner the working depth of the Vari-Tilth can vary, during the tilling, by the draft control of the tractor.



8. INSTRUCTIONS FOR USE

- We recommend not to use the cultivator on soil that contains many heavy rocks (rocks ≥ 15 cm)
- Tight turns should be avoided as much as possible
- The cultivator will only work when travelling forward.
- Set the rate of drop of the power lift in such a manner that when lowering into the soil or putting down the machine does not bump on the ground, so as to prevent damage to tines and shares.

9. MAINTENANCE



See chapter 5 "SAFETY INSTRUCTIONS" sub 5.5 "Maintenance"



When the machine is in lifted position for repair, cleaning and maintenance activities, support legs must be placed under the machine and it must rest on them.
Switch off the engine and remove the ignition key!

9.1 General

- Regularly check whether all bolts and nuts are tight.
- After use the machine should be cleaned with water.
- It is recommended to grease the rams of the cylinders to prevent corrosion.



After using the machine and/or after cleaning the machine with water, grease the rams of the cylinders to prevent corrosion!

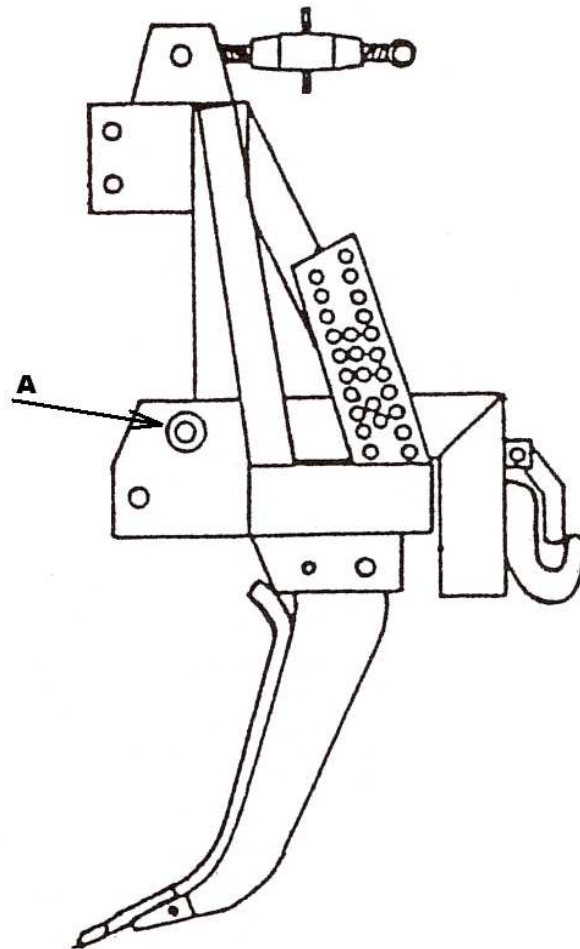


The tines and shares are sharp, especially the KG tines (fitted with the sharp manganese steel cutting knives). Avoid wrenches slipping when working near tines or shares. Avoid climbing on machine above the tines where there is possibility of slipping or falling. Serious injury could occur!

9.2 Lubrication

Grease nipples are installed in the following places:

A) THE ARMS OF THE THREE-POINT LINKAGE OF THE CULTIVATOR VARI-TILTH



- a) They should be greased twice a year

10. TECHNICAL SPECIFICATIONS

Technical specifications cultivator Vari-Tilth:

Type	KH-4B	KH-5	KH-5B	KH-5 XL
Tine types	Burma with wear shin	Burma with wear shin	Burma with wear shin	Haflinger with wear shin
Number of tines	4	5	5	5
Tine spacing (cm)	55	50	55	62,5
Share width (cm)	6	6	6	6
Tine rows	1	1	1	1
Max. working depth (cm)	30	30	30	35
Working width (cm)	190	225	245	275
Transport width (cm)	171	206	226	260
Transport length (cm)	75	75	75	75
Free passage (cm)	59	59	59	65
Tractor power (HP)				
Tractor power (kW)				
Linkage category front	II	II	II	II
Linkage category back	II Pin cat III	II Pin cat III	II Pin cat III	II Pin cat III
Weight (kg)	280	310	320	460

Type	KH-6	KH-6B	KH-7	KH-7B
Tine types	Burma with wear shin	Burma with wear shin	Burma with wear shin	Haflinger with wear shin
Number of tines	6	6	7	7
Tine spacing (cm)	50	55	50	55
Share width (cm)	6	6	6	6
Tine rows	1	1	1	1
Max. working depth (cm)	30	30	30	30
Working width (cm)	275	300	325	355
Transport width (cm)	256	281	306	336
Transport length (cm)	75	75	75	75
Free passage (cm)	59	59	59	59
Tractor power (HP)				
Tractor power (kW)				
Linkage category front	II	II	II	II
Linkage category back	II Pin cat III	II Pin cat III	II Pin cat III	II Pin cat III
Weight (kg)	350	360	385	395

The noise level of the cultivator Vari-Tilth does not exceed 70dB(A) during work.

11. ORDERING PARTS

Contact your local dealer to order spare parts.

Please state the following data when ordering parts.

1. Machine Type (MT) and the production identification number (PIN), these data can be found on the EC certificate of conformity.
2. Name, article number and quantity of the article.

If you are not sure of the correct part number of a part, you can take it to your local dealer or send in the original to prevent incorrect delivery.



ATTENTION

If decals are loose, have become illegible or are no longer on the machine, these must be replaced as well!

12. EC CERTIFICATE OF CONFORMITY

EG-VERKLARING VAN OVEREENSTEMMING
EC-DECLARATION OF CONFORMITY FOR MACHINERY
EG-MASCHINENÜBEREINSTIMMUNGSERKLÄRUNG
DÉCLARATION DE CONFORMITÉ "CE" POUR MACHINES

Fabrikant/Manufacturer/Fabrikant/Fabricant:

EVERS AGRO B.V.

Adres/Address/Adresse/Adresse:

Bedrijvenpark Twente 326
7602 KL Almelo
The Netherlands

Verklaart hier mee dat/Herewith declares that/Erklärt hiermit das/Déclaré ci-après que

Machine type/Machine type/Maschine Type/Type de machine:

Ordernummer/Order number/Bestellnummer/Numéro de commande:

Naam/Name/Name/Nom:

Machine/Machine/Maschine/Machine:

Product identificatie nummer/Product identification number/

Produkt Identifikation Nummer/ Numéro l'identification de produit:

Gewicht/Weight/Gewicht/Masse:

Paste sticker here

- *Voldoet aan de bepalingen van de Machinerichtlijn (Richtlijn 2006/42/EG, zoals laatstelijk gewijzigd) en de nationale wetgeving ter uitvoering van deze richtlijn;*
- *Is in conformity with the provisions of the Machine Directive (Directive 2006/43/EC, as amended) and with national implementing legislation;*
- *Konform ist mit den einschlägigen Bestimmungen der EG-Maschinenrichtlinie (EG-Richtlinie 2006/42/EG), inklusive deren Änderungen, sowie mit dem entsprechenden Rechtserlaß zur Umsetzung der Richtlinie in nationales Recht;*
- *Est conforme aux dispositions de la Directive "Machines" (Directive 2006/42/EC telle que dernièrement modifiée) et la législation nationale adoptée en application de ladite directive.*

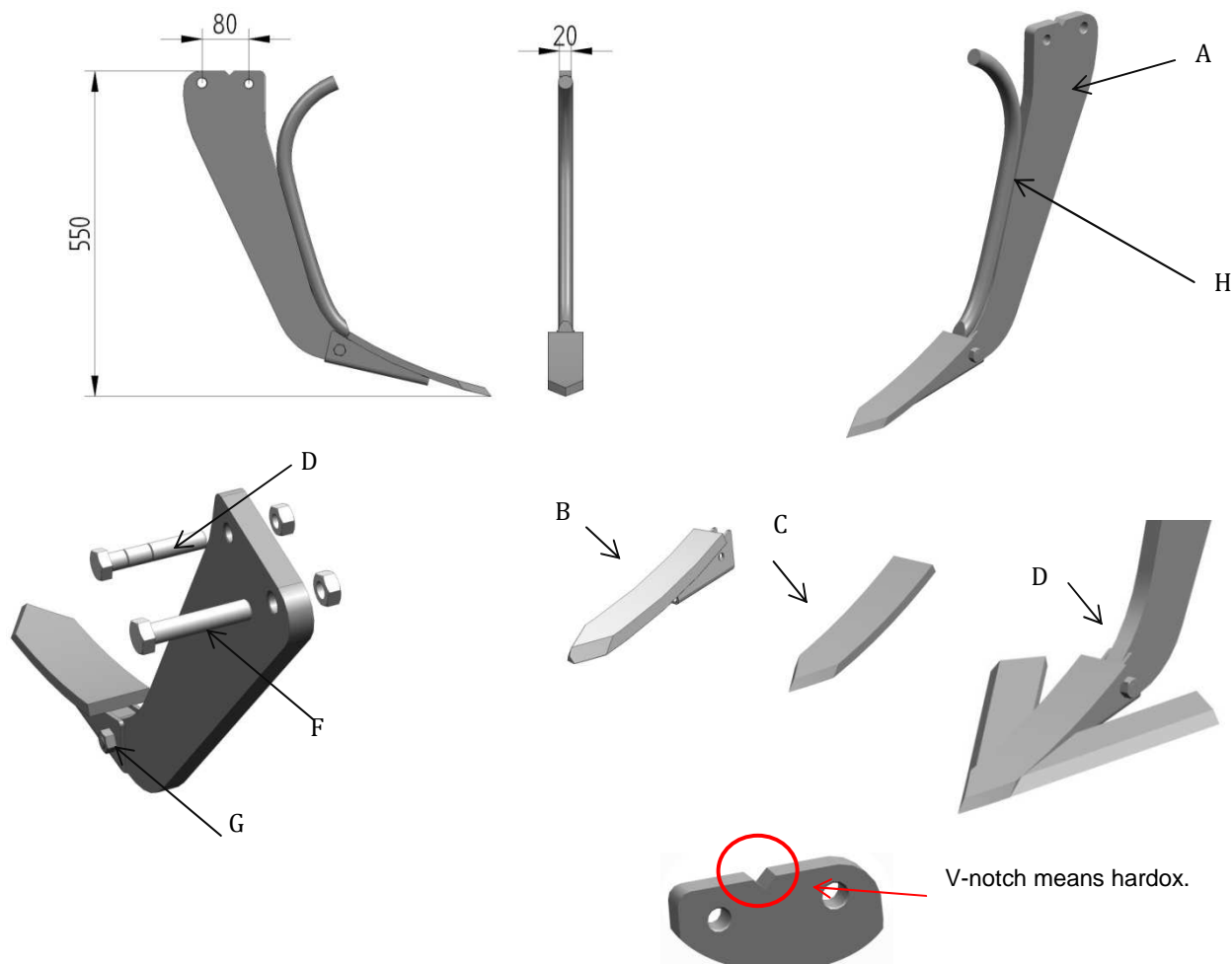
EVERS AGRO B.V.
Almelo, 16 May 2012

G.J. Kamp,
Director

APPENDIX I: PARTSLIST

1.1 Tines and shares Vari Tilth

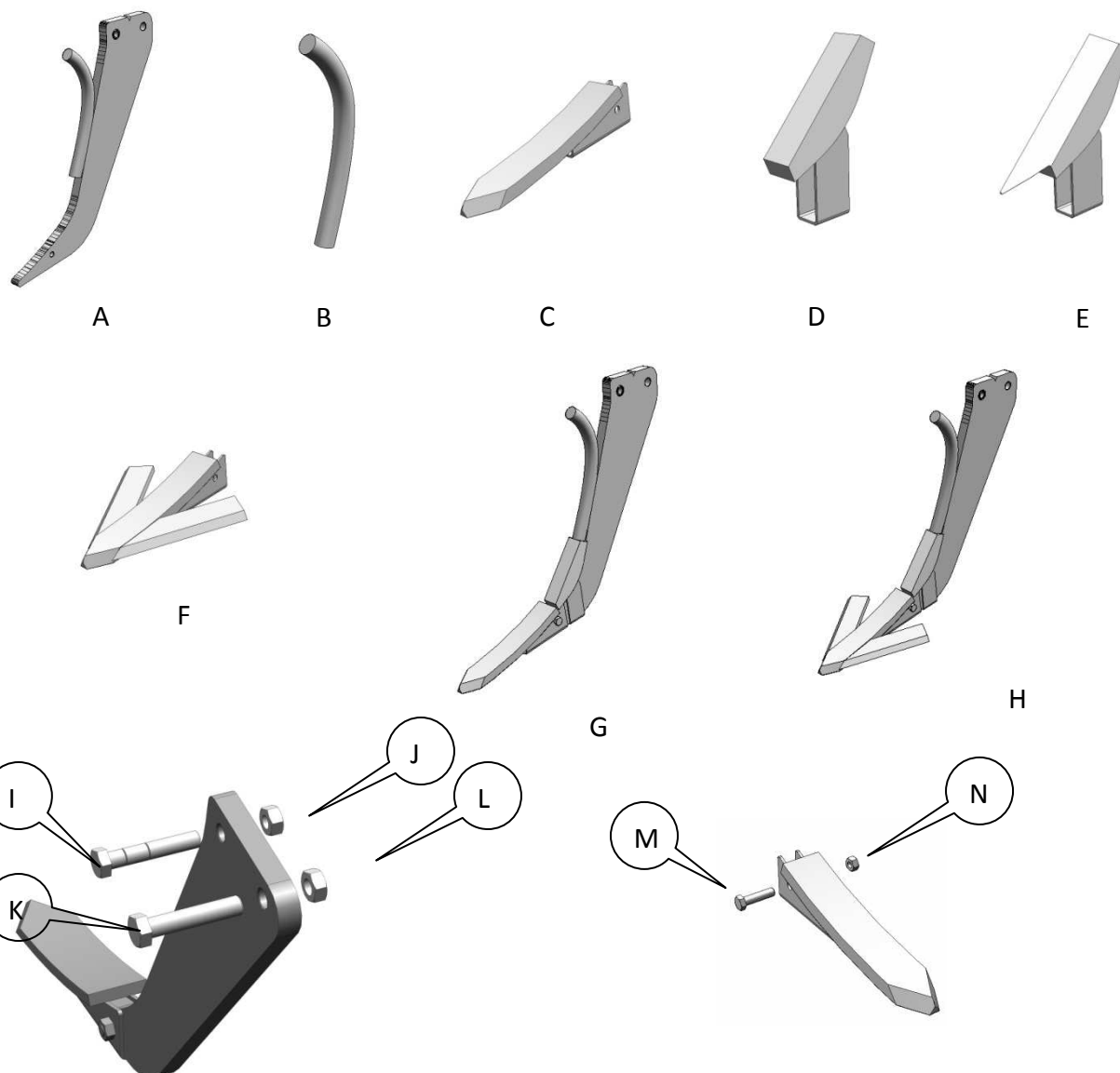
2



>>> Vari-Tilth tines have 59 cm frame clearance <<<

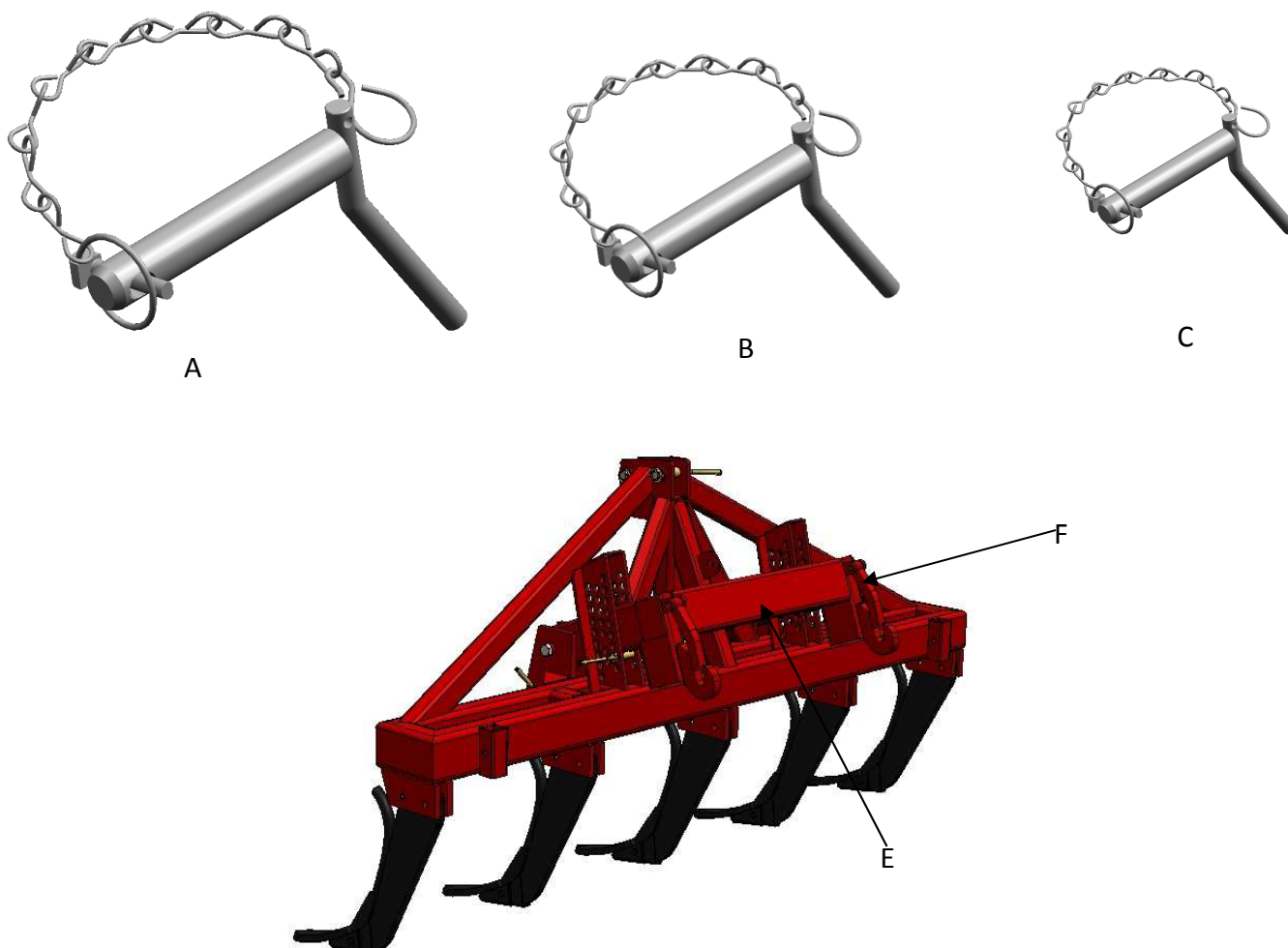
Pos.	Part no.	Description
A	990446	Vari Tilth Tine K (Hardox) (with wear shin) without point
B	990245	Manganese steel point 6cm (removable)
D	990247	Manganese steel duck foot point 25cm
E*	990119	Shear bolt M14x80 Quality 10.9
F	990128	Pivoting bolt M16x80 Quality 8.8
G	101204	Bolt for fixing point onto the tine M12x45 Quality 8.8
H	990354	Wear shin

I.2 Tines and Shares Vari Tilth XL



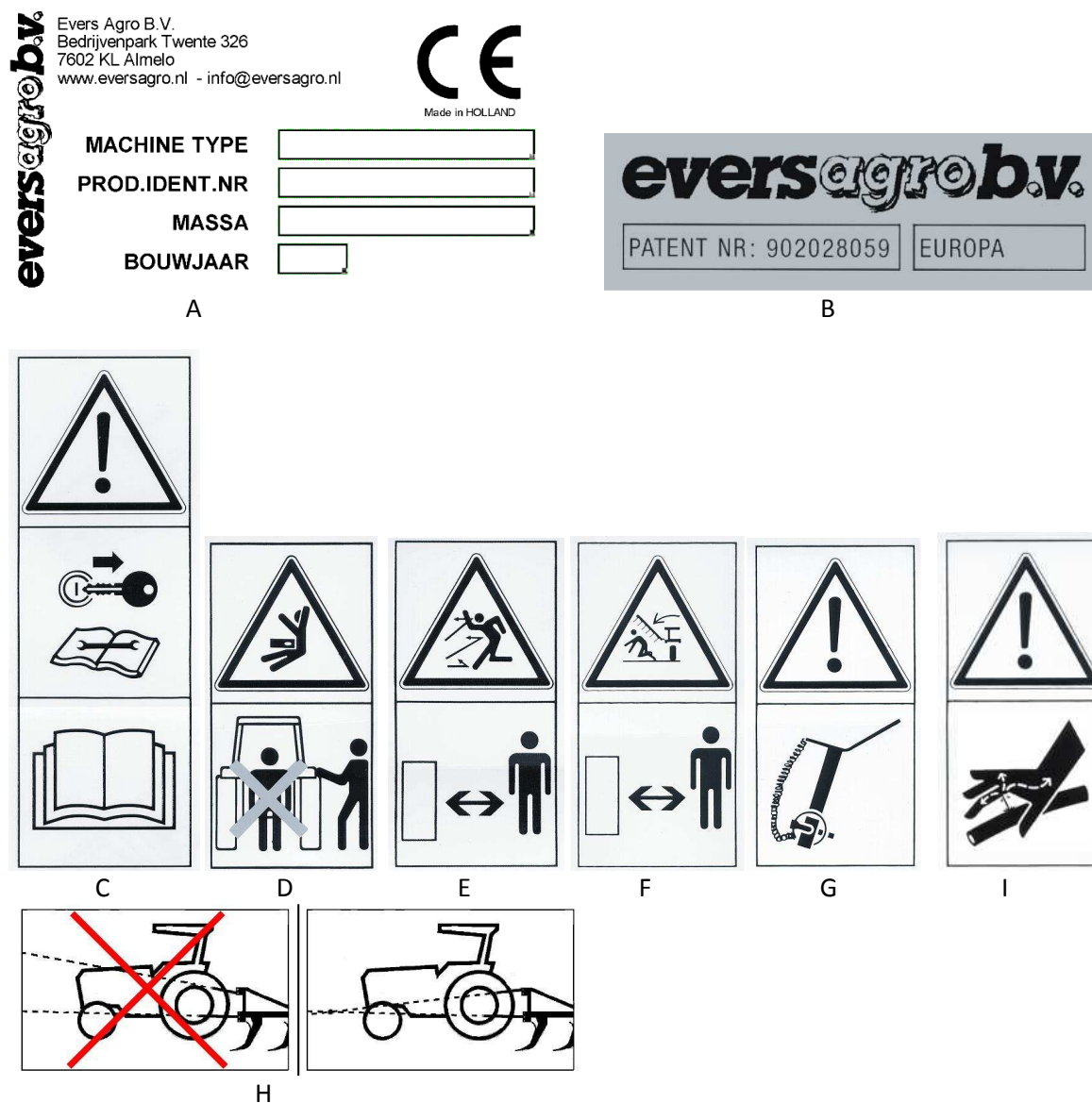
Pos.	Part no.	Description
A	991553	Vari Tilth Tine K (Hardox) (with wear shin) without point
B	990352	Wear shin
C	990250	Manganese steel point 6cm
D	990364	Wear block
E	990365	Wear block (knife)
F	990260	Manganese steel duck foot 25 cm wide
I	990120	Shear bolt M16x90 Quality 10.9
J	100016	Hexagon nut M16
K	990120	Pivoting bolt M20x900 Quality 10.9
L	100020	Hexagon nut M20
M	101204	Bolt for fixing point onto the tine M12x45 Quality 8.8
N	100012	Hexagon nut M12

I.3 Lower hitch pin / top link pin / depth control pin



Pos.	Part no.	Description
A	992208	Lower hitch pin Ø36,5 mm Cat. 3
A*	992204	Lower hitch pin Ø28 mm Cat. 2
B	992207	Top link pin Ø31,5 mm
B*	992205	Top link pin Ø25 mm
C	992206	Depth control pin Ø 20mm
E	928000	Lift Vari-Tilth
E*	928005	Lift Vari-Tilth XL
F	928010	Retaining locks for catching hook lift Vari-Tilth

I.4 Identification plate and safety decals



Pos.	Part no.	Description
A	992061	Identification plate
B	992062	Patent plate, Evers disc harrow Vario-Disc
C	992054	Safety decal "Read operation and safety instructions"
D	992055	Safety decal "Do not stay between tractor and machine"
E	992056	Safety decal "Keep clear"
F	992057	Safety decal "Keep away from folding parts"
G	992058	Safety decal "Fix locking pins with inserted retaining clip"
H	992066	Attention decal "Correct mounting topline between tractor and machine"
I	992063	Safety decal "Watch out for hydraulic leakings"