



# **Translation of original Operating Instructions**

## **Sand brush TERRA GROOM**

# **515.002**

**From equipment I.D. No. : 515 AA 1001**

**Status : January 2012**

**515 99 01**



## EC DECLARATION OF CONFORMITY

We

**Wiedenmann GmbH  
Am Bahnhof  
89192 Rammingen**

declare under our sole responsibility that the product

**Sand brush  
TERRA GROOM**

to which this declaration refers, corresponds with the relevant basic safety and health requirements of the machinery directive 2006/42/EC.

<b>Rammingen, the 02.03.2011</b>	<b>Horst Wiedenmann</b>
(Place and date of issue)	<b>Managing Partner</b>
	(Name, function and signature of authorised person)

<b>Rammingen, the 02.03.2011</b>	<b>Peter Rischar</b>
(Place and date of issue)	<b>Technical office manager Authorised representative for tech. documentation</b>
	(Name, function and signature of authorised person)

**NOTE: The declaration of conformity is no longer valid if changes are made to the machine that have not been agreed with the manufacturer.**



## Declaration of conformity

We

**Wiedenmann GmbH  
Am Bahnhof  
89192 Rammingen**

hereby declare that the product

**Sand brush  
TERRA GROOM**

referred to by this declaration complies with the requirements of  
Machinery Directive 2006/42/EC.

<b>Rammingen, the 02.03.2011</b>	<b>Karl Wiedenmann</b>
(Place and date of issue)	<b>Sales Manager</b>
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# Preface

**READ THESE OPERATING INSTRUCTIONS CAREFULLY** to familiarise yourself with the correct way to operate and service your machine, and to prevent personal injury or damage to the machine.

These operating instructions and the adhesive safety signs on your machine can also be obtained in other languages  
(your dealer can order these for you).

**THESE OPERATING INSTRUCTIONS ARE** a permanent part of your machine and should be handed over to the new owner if the machine is sold.

**MEASUREMENTS** in these operating instructions are given in the metric system. Only use suitable parts and screws. Different wrenches are required for metric and inch screws.

**THE DESIGNATIONS "RIGHT" AND "LEFT"** refer to the forward driving direction of the mounted equipment.

**ENTER THE PRODUCT IDENTIFICATION NUMBERS** in the appropriate "Technical data" or "Product - Identification Number" sections. Please ensure that all figures are accurately entered. These numbers can be of invaluable assistance for tracing the machine should it be stolen. Your dealer also needs these numbers when you order spare parts. We recommend that you additionally file these identification numbers in a secure place away from the machine.

**BEFORE INITIAL OPERATION**, please take into consideration and clarify the following:

"The maintenance requirement for synthetic turf fields differs depending on the layout and the used synthetic turf. We recommend that you consult with your groundsman or synthetic turf manufacturer to clarify the suitability of maintenance machines before usage."

The cleaning and maintenance activities should conform to the written maintenance suggested guidelines provided by the synthetic installation builder.

**BEFORE DELIVERY OF THIS MACHINE**, your dealer performed a pre-delivery inspection to ensure optimal performance.

**THIS MACHINE IS DESIGNED SOLELY** for industrial use and regular operation in agriculture and forestry, and for the maintenance of grassy areas and parks ("SPECIFIED USE").

**This includes the following work:**

- brushing golf greens
- brushing sand into golf greens
- brushing sand and granulate into synthetic turf

Usage for any other purpose beyond this is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this improper use. These risks are borne solely by the user. Compliance with and strict adherence to the operating, maintenance and repair conditions as specified by the manufacturer also form essential elements of the intended usage.

**FORESEEABLE INCORRECT USE/MISUSE.** It is not permitted to use the attached device to transport persons or things.

**THIS MACHINE MUST ONLY BE** operated, maintained and repaired by persons familiar with all its particular characteristics and acquainted with the relevant safety regulations. The relevant accident prevention regulations, all other generally recognised safety-related, occupational medicine and road traffic regulations must be adhered to. Any modifications carried out to this machine without the express approval of the manufacturer excludes the manufacturer of all liability for any resulting damage.

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# 1.0. Safety Measures

## RECOGNISE WARNING SYMBOLS

This symbol draws your attention to the safety instructions attached to the machine or contained in these operating instructions. It means that there is a risk of injury.

Follow all recommended safety instructions as well as the accident prevention regulations.



## FOLLOW THE SAFETY INSTRUCTIONS

Ensure that you carefully read all safety instructions contained in these operating instructions as well as all those attached to the machine. The warning signs must be kept in good condition, i.e. readable. Replace missing or damaged warning signs. Ensure that new equipment and spare parts are provided with the appropriate safety signs. Replacement warning signs are available from your dealer.

Familiarise yourself with the operation of the machine and its control devices before working with the machine. Never allow a person without the appropriate knowledge to operate the machine.

Keep your machine in good working order. Unauthorised modifications to the machine can impair the function, operational reliability and service life of the machine.

If you do not understand any part of these operating instructions and need assistance, please contact your dealer.



## 1.0. Safety Measures

### OBSERVE THE ROAD TRAFFIC REGULATIONS

Always observe local road traffic regulations when using public roads.



### WEAR PROTECTIVE CLOTHING

Wear close-fitting clothing and the appropriate safety equipment for the work at hand.

Prolonged exposure to loud noise can result in impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs.

A safe operation of the machine requires the full attention of the operator. Do not wear radio or music headphones while operating the machine.



### SAFETY AND PROTECTIVE DEVICES

Safety and protective devices must be kept in proper working order and be fitted to the relevant location.

Always disengage the drive sections and shut off the engine before removing any of the safety and protective devices.

Keep hands, feet and clothing away from moving parts.



## 1.0. Safety Measures

### STAY CLEAR OF ROTATING DRIVE SHAFTS

Carelessness in the area of the rotating drive shafts can result in serious injury or even death.

Always ensure that all shaft protection devices are fitted i.a.w. regulations and that the universal-joint shaft sheath tubing can turn freely. Wear close-fitting clothing. Shut off the engine and wait until all moving parts are at a standstill before adjusting or cleaning as well as connecting or disconnecting the PTO-driven machines.



### EXERCISE CAUTION IN THE CASE OF LINE LEAKAGE

Leaking high-pressure fluids can penetrate the skin and cause serious injury.

The system must therefore be depressurised before lines are disconnected. Ensure that all line connections are leak-proof before the pressure builds up again in the system.

It is difficult to see hydraulic oil leaking from a small opening. For this reason, use a piece of cardboard when searching for leaks. Protect the hands and body from high-pressure fluids.

If any fluid penetrates the skin, this must be immediately removed by a doctor who has experience with this kind of injury. Failure to seek medical attention can lead to serious infection.

Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.





## 1.0. Safety Measures

### USE SAFETY LIGHTS AND EQUIPMENT

Avoid collisions with other road users. Slow moving tractors with mounted or towed equipment, and self-propelled machines on public roads pose a specific danger. Frequently check for traffic coming behind you, especially when making turns. Ensure safe traffic conditions by using hand signals or indicators. Use headlights, hazard warning lights, indicators and other safety equipment i.a.w. the respective legal provisions. Keep safety equipment in good working order. Replace missing or damaged parts. A set of safety lights is available from your dealer.



### AVOID HEAT DEVELOPMENT NEAR PRESSURISED FLUID LINES

A highly flammable mist can form due to heat development near pressurised fluid lines. This can result in severe burns. Do not cause heat development by welding, soldering or using a welding torch near pressurised fluid lines or other flammable materials. Pressurised lines can be accidentally cut through when heat goes beyond the immediate flame area.



## 1.0. Safety Measures

### REMOVE PAINT BEFORE WELDING OR HEATING PARTS

Welding should only be carried out by persons with a relevant qualifying certificate i.a.w. EN287.

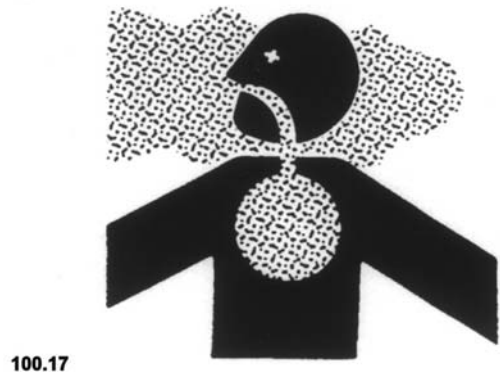
Avoid the formation of toxic fumes and dust.

Hazardous fumes can be generated when paint is heated due to welding, soldering, or using a welding torch.

All work is to be performed outdoors or in a well-ventilated area. Dispose of paints and solvents i.a.w. the appropriate regulations.

Remove paint before welding or heating parts:

- The dust generated due to the sandblasting or grinding of parts must not be inhaled. For this reason, wear suitable breathing protection.
- Where a solvent or paint stripper is used, it must be rinsed off using water and soap before carrying out any welding. Then wait at least 15 minutes before welding or heating for the fumes to disperse.



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# 1.0. Safety Measures

## 1.1. Adhesive Safety Signs

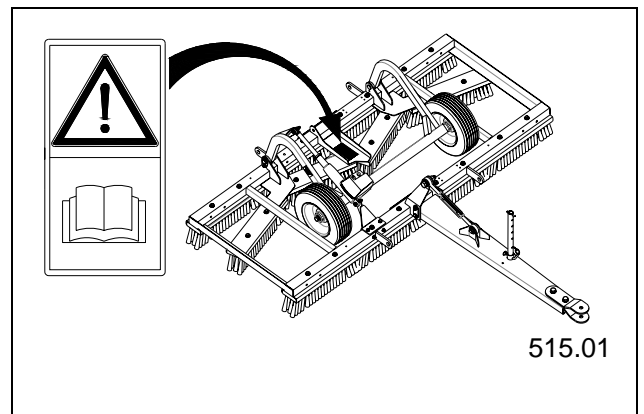
### Warning symbols

Warning symbols indicating danger are attached at some important areas on the machine. The hazard is identified via a warning triangle. A second symbol informs you how the injury can be prevented by acting appropriately. These warning signs, their placement on the machine and a brief explanation are given below.



### Operating Instructions

These Operating Instructions contain all important information necessary for the safe operation of the machine. Carefully observe all safety instructions to avoid accidents.



## 1.0. Safety Measures



### 1.2. Safety instructions

In addition to the information provided in these Operating Instructions, please also observe generally applicable safety and accident-prevention standards !

Familiarise yourself with all equipment and operating elements and their functions before starting work. Ensure that all protective equipment has been properly installed. It is too late to do this when you have started work !

In the working area, the user is responsible for the safety of other persons !

During operation on public highways, the relevant traffic regulations must be observed.

Before moving off, ensure that the immediate area of the machine is clear e.g. no children nearby. Ensure that your visibility is not impaired !

Keep all persons clear of the danger zone of the machine !

Ensure that the front-axle load is sufficient as the tractor must remain steerable.

Do not exceed the max. authorized axle load of the tractor.

The driving and operational characteristics of the tractor may be influenced by the attachment of the TERRA GROOM. Always adapt your driving style to match the terrain and ground conditions. Special care should be taken when working and turning on a slope.

## 2.0. Assembly

### 2.1. General Information

Only carry out attachment on firm, even ground.

For this work, please use your personal protective equipment (PSA) such as: gloves, goggles, ear protectors.

The machine must only be attached when the engine is

shut off and the PTO shaft drive is switched off.

The warning and information signs on the machine contain important information to ensure safe operation. Observe these instructions for your own safety.

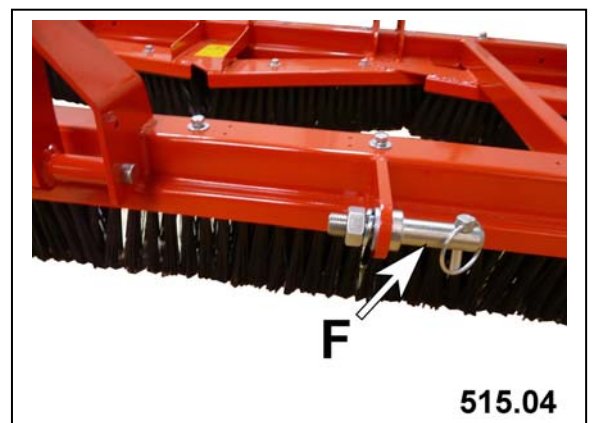
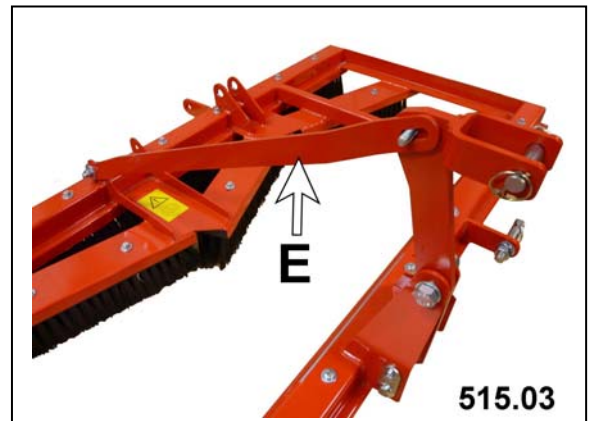
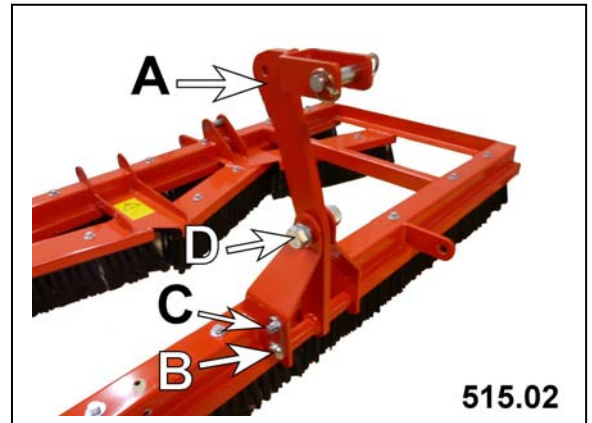
### 2.2. Mounting three-point frame

Secure mounting frame (A) using locking bolt (B) and screw in screw (C) as an anti-twist device.

Swivel mounting frame (A) upwards and secure using screw (D) at the mounting brackets of the basic unit.

Screw bar (E) onto mounting frame (A) via the slotted hole

Screw on stud bolts (F) at the front mounting brackets of the basic unit as shown in figure 515.04.

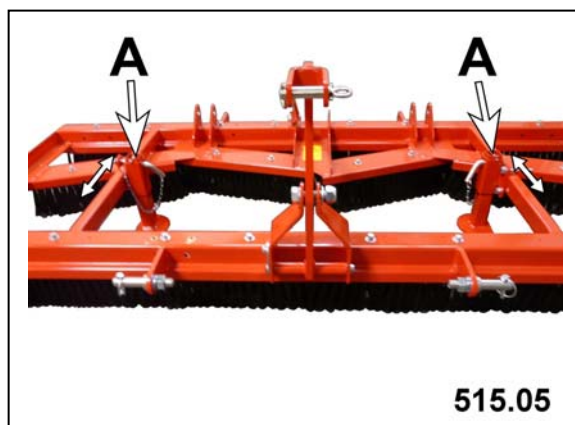


## 2.0. Assembly

### 2.3. Positioning the supports

#### 2.3.1. Three-point hitch version

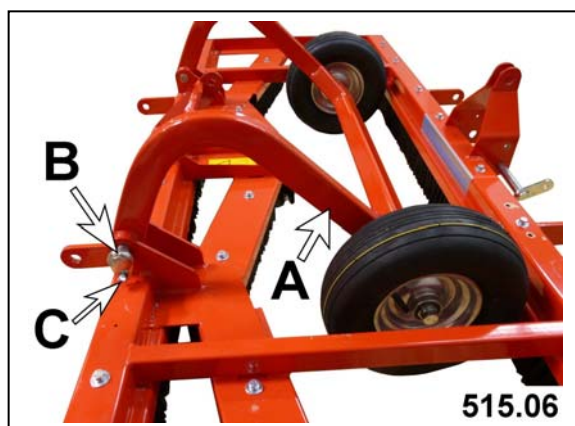
Both parking supports (A) are to be secured to the square pipes of the basic unit so that no bristles are touching the ground when the machine is in the parking position.



### 2.4. Mounting the chassis

Insert chassis (A) on basic unit using bolt (B).

To secure, screw in screw (C).

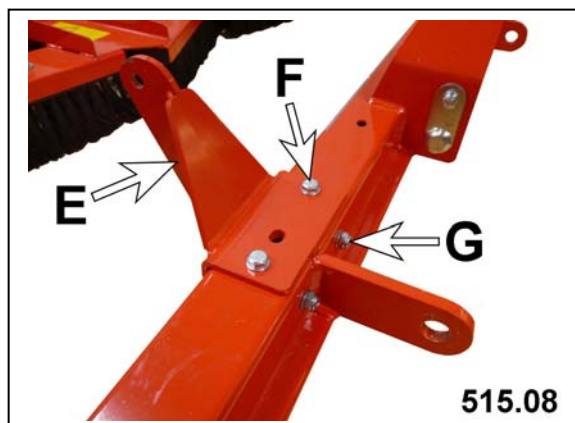


Slide distance bushing (D) into wheel hub.

Securely screw wheel onto chassis (A) using screw, snap ring and washer.



Secure bracket (E) on basic unit using screws (F and G).





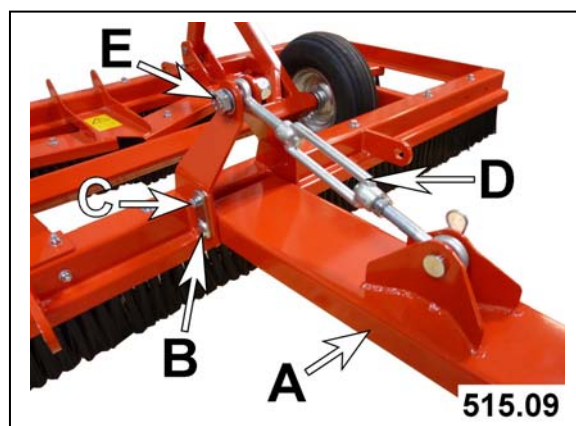
## 2.0. Assembly

### 2.5. Installing the drawbar

Insert drawbar (A) on basic unit using locking bolt (B).

To secure, screw in screw (C).

Secure turnbuckle (D) on basic unit using screw (E).



### 2.6. Mounting electric lifting equipment for chassis

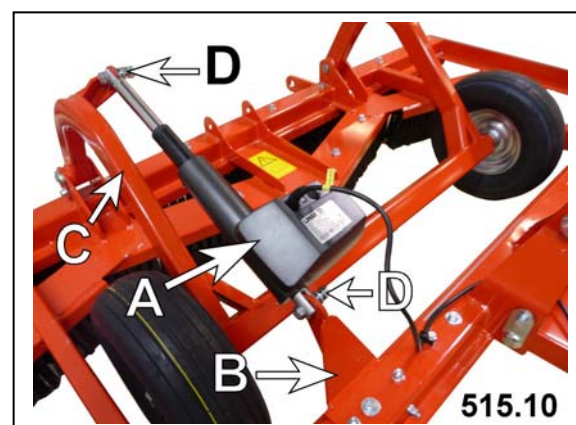
Secure electro spindle (A) on chassis (C) using screw (D).

Position bracket (B) on electro spindle (A).

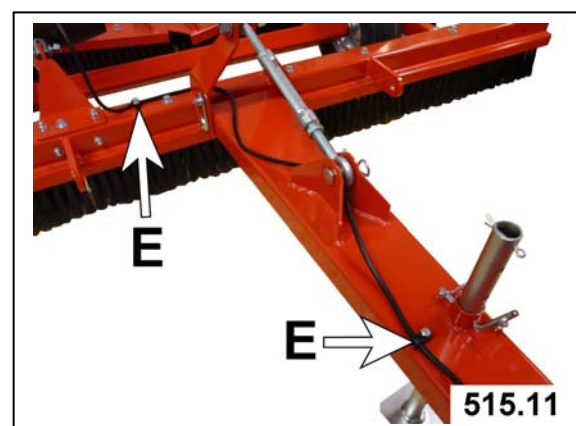
Secure electro spindle (A) with bracket (B) using screw (D).

#### NOTE:

Electro spindle (A) must NOT be energised.

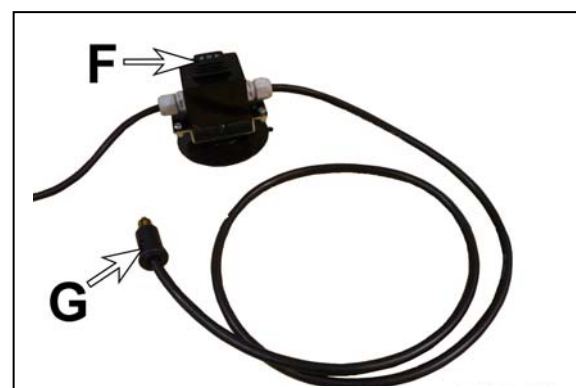


Secure cable in the available bore holes using fastening clamps (E).



Install the electric cable with rocker switch (F) and plug (G) to the tractor.

Connect plug (G) into socket.





## 2.0. Assembly

### 2.7. Install strip brushes

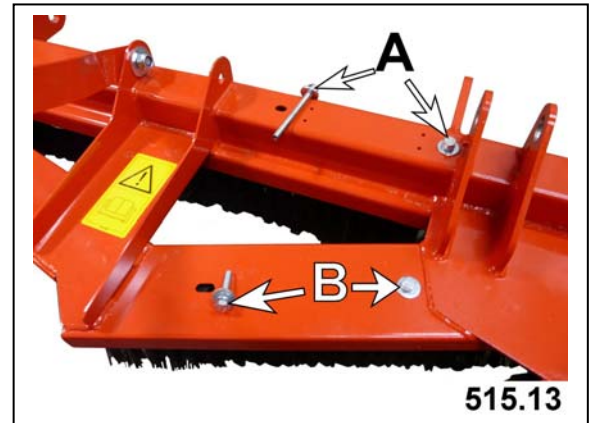
Hold the strip brushes from underneath in the guide.

Manually screw in long hexagon head screws (A) with washers at the straight guides.

Manually screw in short hexagon head screws (B) with washers at the offset guides.

Align strip brushes.

Firmly tighten hexagon screws.



**NOTE:**

When mounting the strip brush, always begin in the centre. Arrange the strip brushes so that the bristles overlap (see arrow in fig. 515.14).

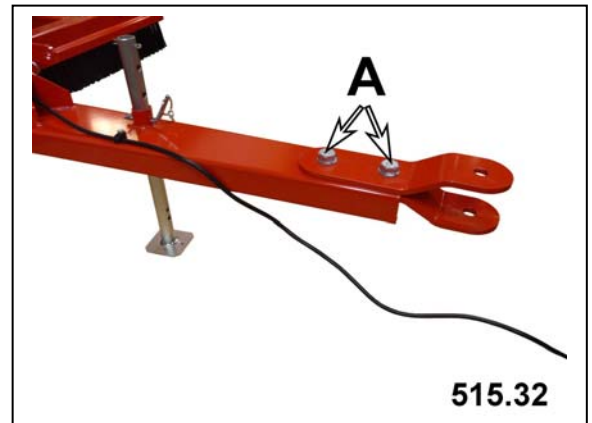
When the strip brushes are mounted in such a manner, this prevents streaks.



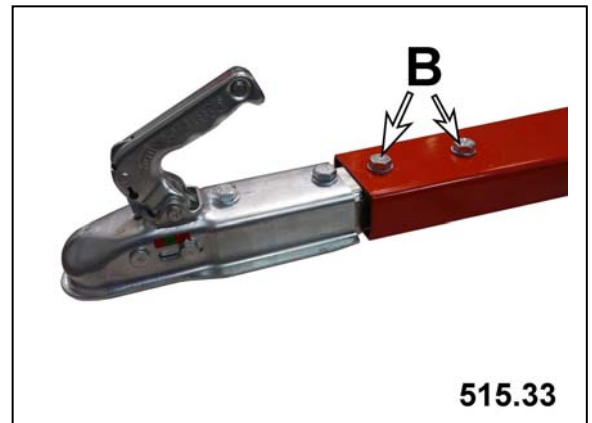
## 2.0. Assembly

### 2.8. Mounting the spherical coupling

Release fixing screws (A) and remove with the draw shackles.




Secure the spherical coupling, instead of the draw shackles, on the drawbar profile using supplied screws (B).



## 2.0. Assembly

### 2.9. Mounting the magnetic bar

Warning	Pacemakers	
	<p>Magnets can influence the function of pacemakers and implanted defibrillators.</p> <ul style="list-style-type: none"> <li>A pacemaker may be switched to test mode and cause discomfort.</li> </ul>	<ul style="list-style-type: none"> <li>A defibrillator may no longer function under certain circumstances.</li> <li>Please maintain <u>sufficient distance</u> to the magnets if you have a pacemaker/defibrillator</li> <li>Please warn all persons, who have these devices, against coming too close to the magnets.</li> </ul>

#### 2.9.1. In the case of the 3-point hitch version

The magnetic bar is attached to the rear lugs of the basic unit.

Slide the brackets of the magnetic bar onto lugs **(A)** and securely screw on.

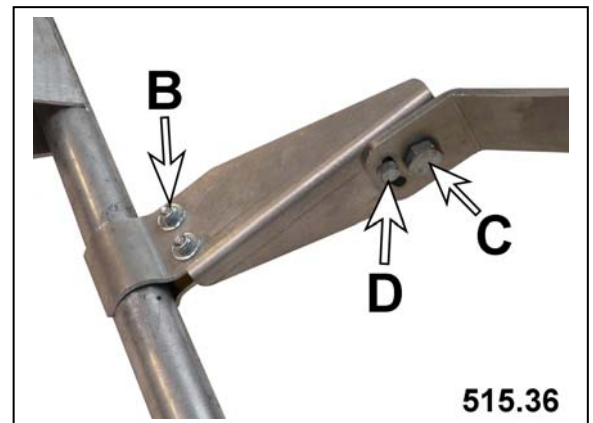
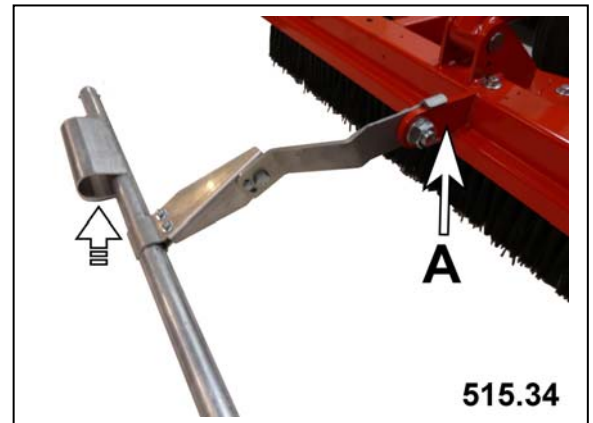
Release clamping screws **(B)**.

Place the magnets on the lower holder surface **(arrow)** and align laterally.

The holder is always to the rear.

Tighten clamping screws **(B)**.

Screws **(C and D)** may not be tightened as the magnetic bar must remain movable.



## 2.0. Assembly

### 2.9. Mounting the magnetic bar

#### 2.9.2. In the trailed version

The magnetic bar is attached to the front lugs of the basic unit.

Slide the brackets of the magnetic bar onto lugs (**E**) and securely screw on.

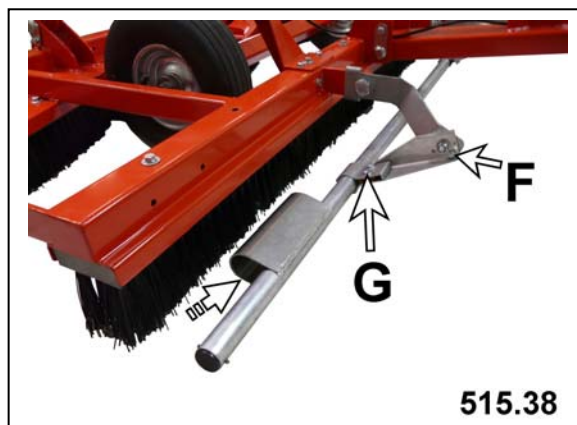
Remove set screw (**F**) for swivelling the magnetic bar. Then insert the set screw in the suitable hole pattern and secure.

Release clamping screws (**G**). Place the magnets on the lower holder surface (**arrow**) and align laterally.

The holder is always to the rear.

Tighten clamping screws (**G**).

Screws (**H and J**) may not be tightened as the magnetic bar must remain movable.



## 2.0. Assembly

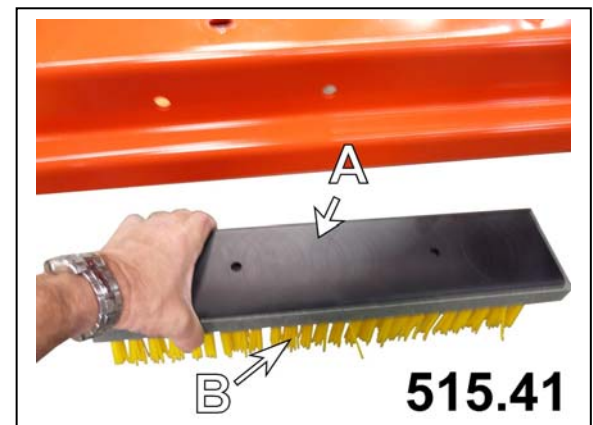
### 2.10. Mounting the decompaction brush set

Remove the brush strips in the front support.  
A washer and snap ring are required for the new installation.



Place plate (A) on brush strip (B) and align with the mounting holes

Hold brush strip (B) from underneath in the guide.



Align the brush strips.

Manual screw in the screws

**NOTE:**

When mounting the strip brush, always begin in the centre. Align the strip brushes so that the bristles overlap.



## 3.0. Transport

### 3.1. General Information



#### **CAUTION DANGER:**

- The TERRA GROOM is delivered secured to a transport frame.
- Only use fork lifts, cranes or hoisting gear with sufficient lifting capacity.
- Never stand under lifted loads. There is an imminent danger to life if the load falls.

Improper transport and mounting of the TERRA GROOM can result in:

- injury to persons,
- damage to property.

Pay special attention to the direction of approach when lifting the machine with the transport frame.

Pay special attention to the direction of approach when lifting the machine with the transport frame.



#### **CAUTION DANGER:**

Caution must be exercised when cutting through the securing straps. Risk of injury due to ends "springing open".

## 3.0. Transport

### 3.2. Transport of the TERRA GROOM

#### 3.2.1. Transport Using a Forklift

If the TERRA GROOM is still secured on the transport frame:

- Insert the forks under the transport frame (pay attention to the direction of approach),
- carefully lift the transport frame,
- unload TERRA GROOM from transport device, when it is balanced,
- remove top part and side parts of the transport frame,
- cut through the securing straps,
- and lift TERRA GROOM off the transport frame.





## 4.0. Connecting to the Tractor

### 4.1. General Information



#### CAUTION !

Switch off the engine before performing any work. The ignition key must be removed.

Secure the tractor against rolling away.

**The following is required for attaching the machine:**

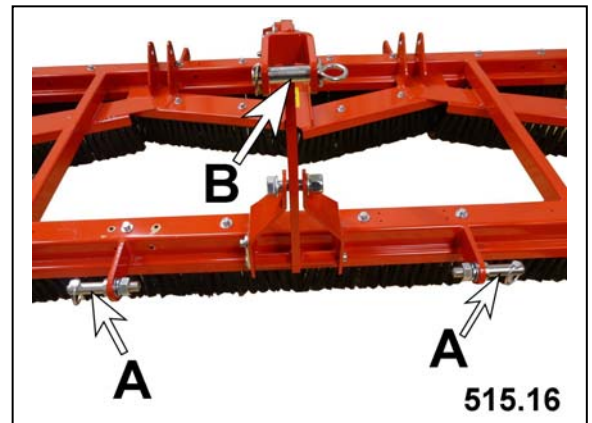
- Tractors with at least 9 kW (12 hp)
- Hydraulic three-point hoist cat. 1 or
- connection point for drawbar

### 4.2. Installation with three-point hitch

Mount lower guide bar to pins (A) and secure.

Insert upper guide bar (C) using pin (B) to three-point frame (B) and secure.

Firmly tighten turnbuckles of the stabilising chains.

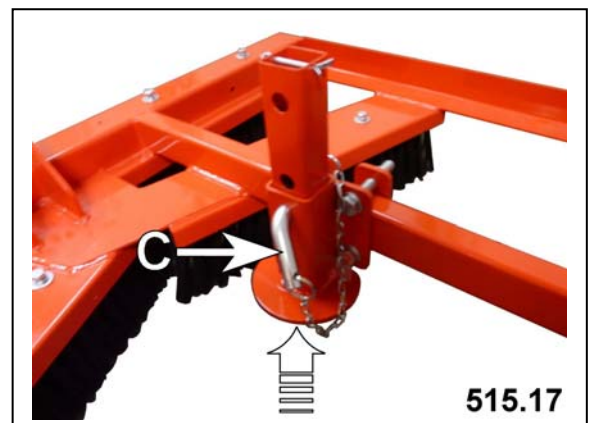


Lift mounted machine using the tractor rear hydraulic system.

Lift the parking supports.

Release and remove locking bolt (C) for this purpose.

Slide parking support (D) to the topmost position and insert and secure there using locking bolt (C).



## 4.0. Connecting to the Tractor

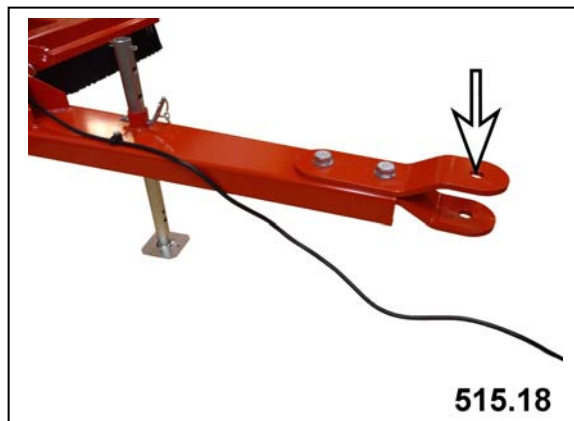
### 4.3. Mounting with drawbar

Insert drawbar on tractor and secure.

For a description of the setting, please see Chapter 6.2.

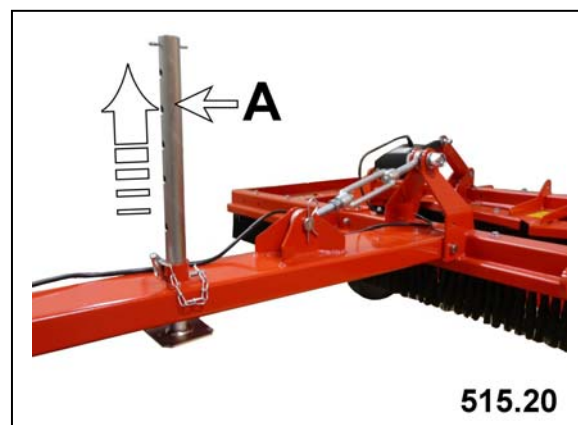
If your tractor is not equipped with such a socket, please consult your dealer or have one installed by a specialist technician.

Press chassis of attached machine downwards using the electric hoist so that the machine is lifted.



### 4.4. Support for drawbar

Push supports into the most upper position, peg out and secure.



## 4.0. Connecting to the Tractor

### 4.5. Ballast



#### ATTENTION:

Specifications in the Operating Instructions for the tractor must be observed.

When mounting equipment at the rear, always ensure there is sufficient front axle load; steering must remain supported. Loads must always be attached to the mounting points provided in accordance with regulations.

When selecting the front axle load, ensure that the permissible axle load weight, as well as the permissible overall weight including the mounted equipment, is not exceeded.

### 4.6. Electric connection to battery

Only appropriately qualified professionals may carry out the connection work.

Mount 3-pin socket (A) at a suitable location in the area of the driver's seat.

Install cable (B) from the battery to 3-pin socket (A).

Insert flat connector (C) of line 1 in socket (A) at position (D).

Insert flat connector (E) of line 2 in socket (A) at position (F).

Insert flat connector (G) of green/yellow line in socket (A) at position (H).

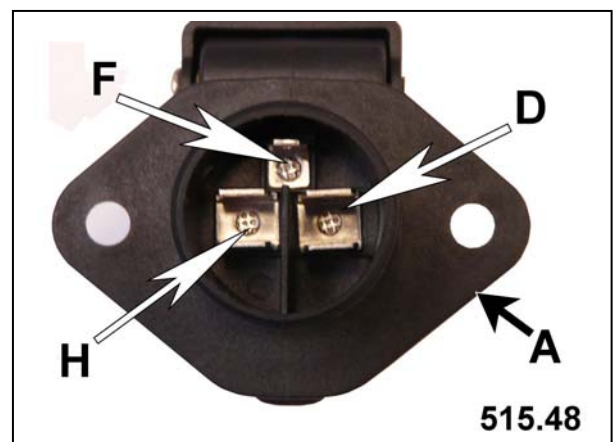
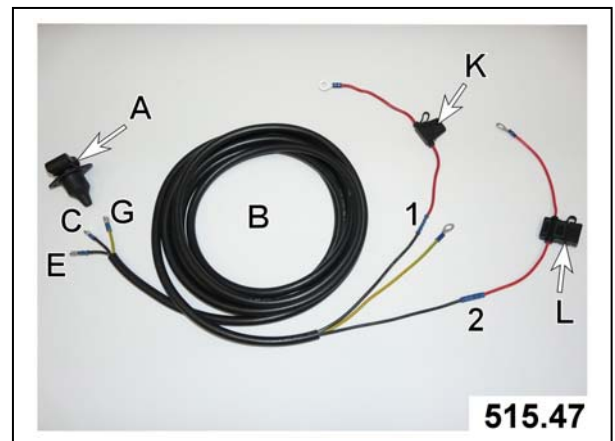
Connect ring shoe of lines 1 and 2 to positive terminal of battery.

Connect ring shoe of green/yellow line to negative terminal of battery.

The lines are fused as follows:

Line 1 with 25 A (K)

Line 2 with 10 A (L)



## 5.0. Disconnecting from the Tractor

### 5.1. General Information



#### CAUTION !

Switch off the engine before performing any work. The ignition key must be removed.

Secure the tractor against rolling away.

Always park on a paved and even surface when detaching the machine.

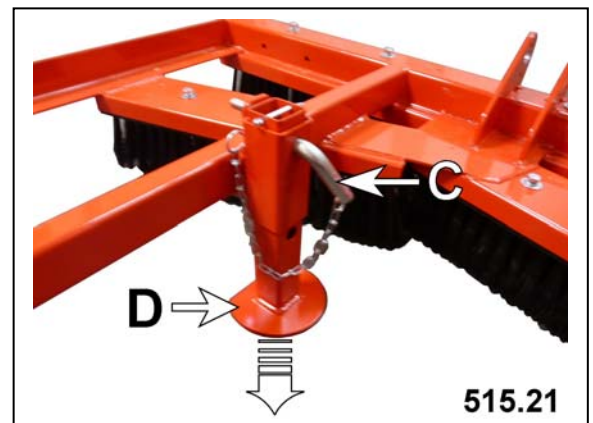
### 5.2. Removal with three-point hitch

Before setting down the machine.

Detach spring cotter and remove pin (C).

Insert supports (D) in the topmost bores.

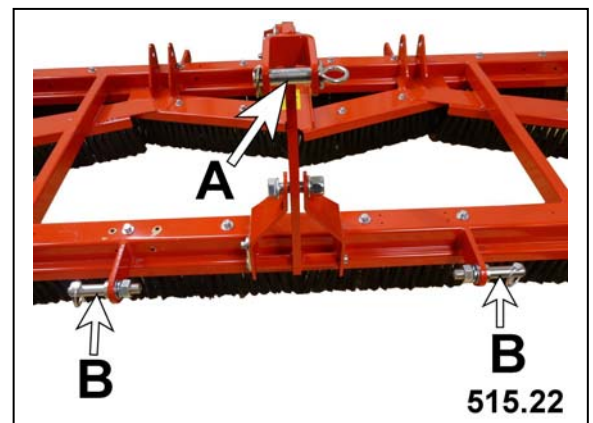
Secure pin (C) with spring cotter.



Lower TERRA GROOM to ground.

Release upper guide bar and disconnect pins (A) from three-point frame.

Release lower guide bar turnbuckles and remove lower guide bar from locating pins (B) on three-point frame.



## 5.0. Disconnecting from the Tractor

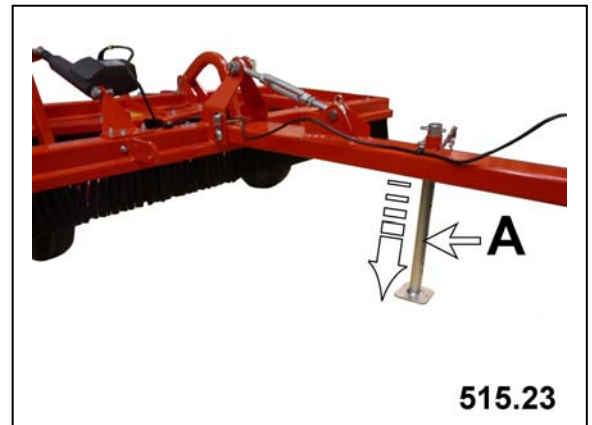
### 5.3. Removal with trailer version

Lower support at drawbar and secure.

Disconnect plug.

The mounted machine is set down in the transport position.

Disconnect drawbar from tractor.



## 6.0. Before Initial Operation

### 6.1. General Information



#### CAUTION !

Familiarise yourself with all equipment and operating elements and their functions before starting work. Ensure that all protective equipment has been properly installed.

It is too late to do this when you have started work !

In addition to the information provided in these

Operating Instructions, please also observe generally applicable safety and accident-prevention standards !



#### CAUTION !

The equipment version with a drawbar is **NOT** approved for travel on public roads!

### 6.2. Setting the TERRA GROOM

The setting is to be realised on an even, secure surface with the machine in the mounted condition.

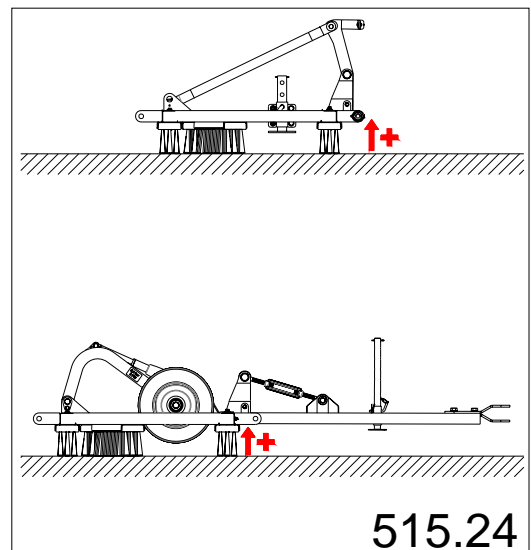
Lower TERRA GROOM onto the ground.

#### Three-point version

Using the upper guide bar (rear hydraulics of tractor), set the basic unit so that all the brushes lie evenly against the ground or are slightly raised at the front.

#### Trailer version

Using the turnbuckle (on the drawbar), set the basic unit so that all the brushes lie evenly on the ground or are slightly raised at the front.



## 7.0. Operation

### 7.1. General Information



#### CAUTION:

In the working area, the user is responsible for the safety of other persons !

Avoid driving in tight corners with the machine version with drawgear.

In the case of the equipment version with a three-point frame, the rear hydraulic system of the tractor must always be in the floating position during operation.

The ground must be dry for the use of the Terra Groom.

Use of the Terra Brush requires dry ground. In wet conditions, the bristles would clog, yielding a bad work result.

### 7.2. Driving characteristics



#### CAUTION:

The driving and operating characteristics of the tractor can be influenced by the disconnection of the machine.

- Always adapt your driving style to match the terrain and ground conditions.
- The equipment version with a drawbar is **NOT** approved for travel on public roads!
- Special care should be taken when working and turning on a slope.
  - **DANGER OF TOPPLING !**



## 7.0. Operation

### 7.3. Malfunctions and troubleshooting



#### CAUTION:

Switch off the engine before performing any work. The ignition key must be removed.

Secure the tractor against rolling away.

Description	Cause	Remedy
Chassis cannot be raised or lowered	Safeguard on tractor faulty	Check safeguard, replace where req.
	Cable faulty	Check voltage at rocker switch and adjustment drive.
	Adjustment drive faulty	Replace
	Rocker switch faulty	Check
	Connectors detached	Check
Chassis lowers of its own accord	Adjustment drive faulty	Replace
Strip brushes deformed	Due to regular work in the same direction	Turn strip brushes at certain intervals (see Chapters 7.4. and 8.5.)
	Temperature influence during work	
Strip formation in centre area	Gap between strip brushes	Check attachment and position (see Chapter 2.7.)
	Loose fixing screws	
	Bristles too short	Replace strip brushes
	Granulate too damp	Allow granulate to dry
Strip formation in outer area	Insufficient overlap during the individual passes	Increase overlap
	Operating speed too high	Reduce operating speed (see Chapter Technical Data)
	Granulate too damp	Allow granulate to dry
Machine "chatters" during operation	Incorrect setting. Machine inclined towards the front and presses too hard on the front row of brushes	Check setting (see Chapter 6.2.)
<b>When used on golf greens</b>		
Quartz sand is not satisfactorily brushed in	Sand too damp	Allow sand to dry
	Zu große Sandmenge ausgebracht	Repeat brush-in procedure several times

## 7.0. Operation

### 7.4. Deformed strip brushes

We recommend that you turn all strip brushes at certain intervals (see Chapter 8.5.).

In the case of seriously bent bristles, replacement of the set is necessary.



## 8.0. Maintenance

### 8.1. General Information



#### **ATTENTION :**

Only qualified personnel are permitted to perform maintenance, repair and disassembly tasks.

Switch off the engine before performing any work. The ignition key must be removed.

Apply the parking brakes to ensure the tractor does not roll away.

### 8.2. Lubrication

- Switch off the machine for all lubrication work.
- Lubricate more often, if required, (until all lubrication points are sufficiently lubricated).
- Keep all exposed machine parts, threaded spindles and guides slightly lubricated.
- Clean grease nipple before lubricating it.
- Clean up leaking grease.
- Before starting the machine after a longer standstill, lubricate and maintain the entire machine

## 8.0. Maintenance

### 8.3. Wheels and tyres

Check the air pressure  
regularly : 0,6 bar (9 psi)



**CAUTION:**

**Serious or fatal injuries  
may result from explosive  
tyres and tyre or rim  
parts.**

Always ensure the tyre pressure  
is correct and do not exceed  
the maximum pressure stated.

Check the wheels and tyres  
daily for underpressure,  
incisions, protrusions and  
swellings or damaged rims.

Only carry out tyre  
installation if you have  
appropriate experience and  
equipment.

### 8.4. Cleaning



**ATTENTION:**

**Only use a hand brush and  
water when cleaning. Never  
clean using your hands.  
- RISK OF INJURY! -**

Clean the machine daily after  
the work is finished to ensure  
faultless functioning when it  
is next used.

Only cleaned strip brushes  
ensure optimal functioning.

Store the cleaned machine in  
dry conditions only.

## 8.0. Maintenance

### 8.5. Replacing strip brushes

The strip brushes must always be replaced in sets.

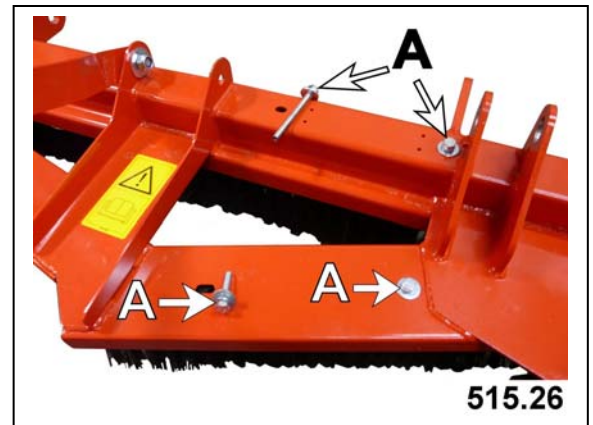
Release hexagon screws (A)

Replace strip brush

Screw hexagon screws (A) in manually.

Align strip brushes.

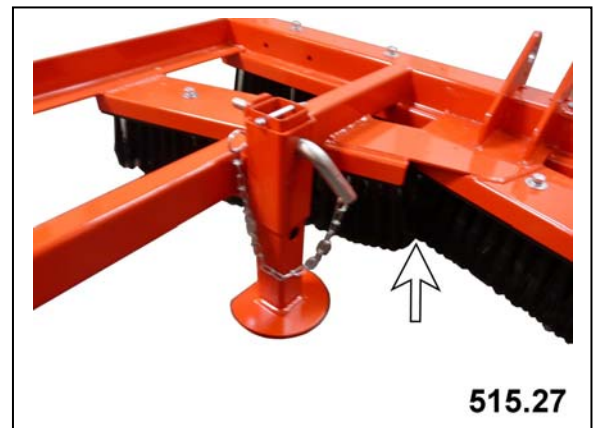
Firmly tighten hexagon screws.



**NOTE:**

When mounting the strip brush, always begin in the centre. Arrange the strip brushes so that the bristles overlap (see arrow in fig. 515.27).

When the strip brushes are mounted in such a manner, this prevents streaks.



## 8.0. Maintenance

### 8.6. Disassembly / Disposal



#### ATTENTION !

Exercise caution when disassembling the machine. Take into account the Chapter "Safety measures" and local safety regulations.

The dangers are as follows:

- heavy parts might fall down after being disconnected,
- sharp edges,
- the machine might tilt and crush someone.

#### Disassembly for disposal

1. Place the equipment on firm ground.
2. Disassemble the machine, working from top to bottom.

#### NOTE

Strictly observe the regulations and laws concerning the disposal of environmentally hazardous substances. Get detailed information about their disposal.

### 8.7. Unauthorised modification and spare part manufacturing

- Conversion or modifications to the TERRA GROOM are only permitted after prior consultation with the manufacturer!
- Original parts and accessories authorised by the manufacturer serve for your safety. The use of other parts can change the properties of the TERRA GROOM. We assume no liability for the consequences of using other parts.

## 9.0. Equipment

### 9.1. Scope of Delivery

Basis unit

Chassis with drawbar and  
electric hoist

or

three-point linkage

Brush set (selective)

Operating instructions,  
transfer declaration with  
guarantee card.

### 9.2. Machine designs

	Three-point version	Trailer version
Basic unit	<b>S</b>	<b>S</b>
Three-point frame	<b>S</b>	- - -
Parking support set	<b>S</b>	- - -
Chassis and drawbar	- - -	<b>S</b>
Brush set, black	<b>W</b>	<b>W</b>
Brush set, white	<b>W</b>	<b>W</b>
Spherical coupling	- - -	<b>O</b>
Magnetic bar	<b>O</b>	<b>O</b>
Decompaction brush set	<b>O</b>	<b>O</b>

<b>S = standard</b>	<b>W = selective</b>	<b>O = optional</b>
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## 9.0. Equipment

### 9.3. Special equipment

#### Spherical coupling

Only for trailed version



**515.43**

#### Decompaction brush set

Only suitable for use on synthetic turf for the purpose of loosening the granule material



**515.44**

#### Magnetic bar

For picking up dangerous metal objects  
e.g. hairpins



**515.45**

## 10.0. Technical Specifications

### 10.1. Technical Data

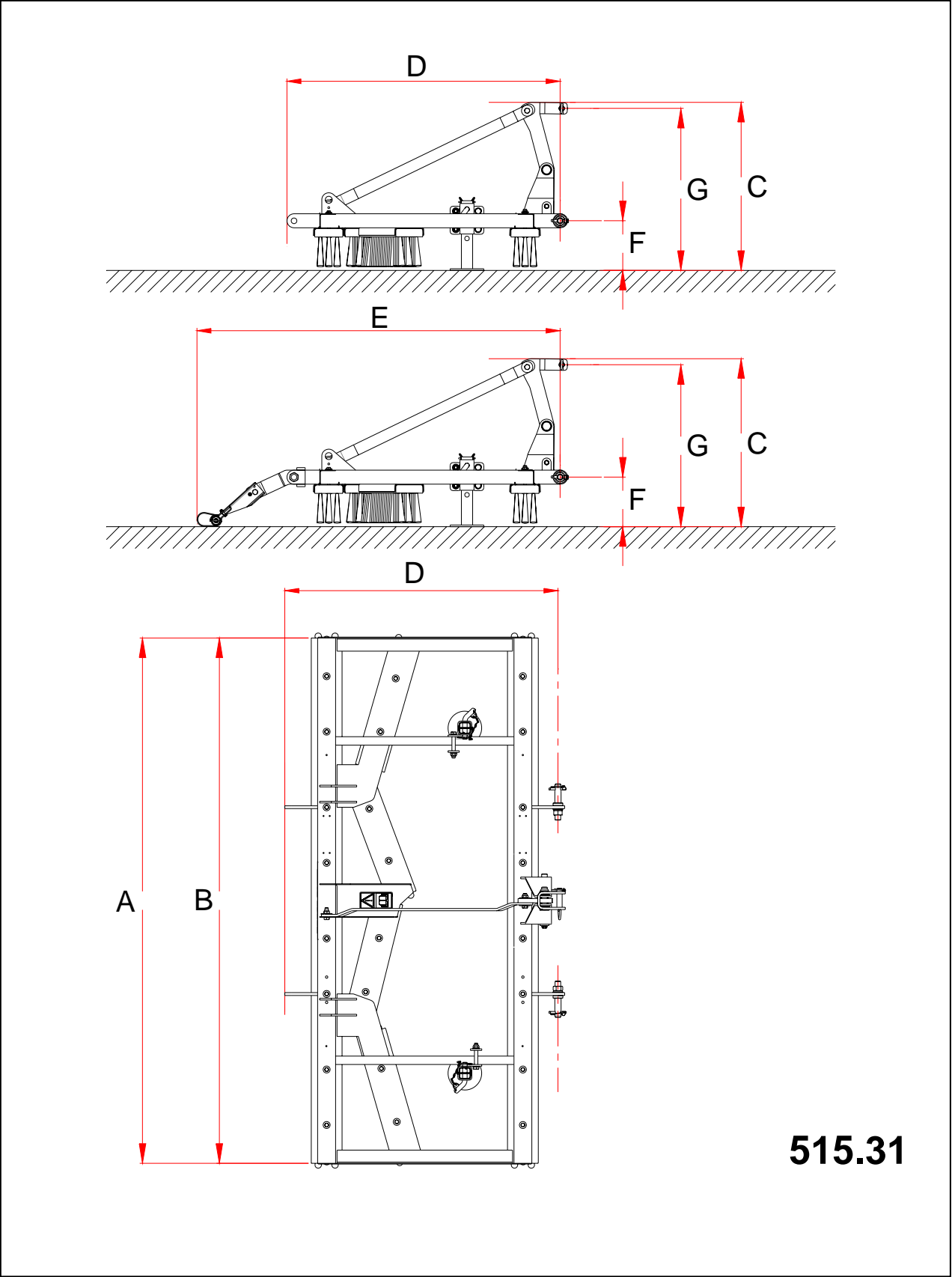
#### Three-point version:

<b>A</b>	Working width	1880	mm
<b>B</b>	Machine width	1880	mm
<b>C</b>	Height of device in parked position	600	mm
<b>D</b>	Device length from lower guide bar connection	975	mm
<b>E</b>	Device length with magnetic bar	1355	mm
<b>F</b>	Height to middle of lower guide bar connection	180	mm
<b>G</b>	Height up to middle of upper guide bar connection	570	mm
	Min. power required for tractor	11 (15)	KW (PS)
	Min. lifting power of tractor	100	kg
	Operating speed	5	km/h
	Terra Groom neutral	78	kg
	Magnetic bar	+ 10	kg
	Decompaction brush set	+ 2	kg
	Max. total weight	90	kg

# 10.0. Technical Specifications

## 10.1. Technical Data

Three-point version:



## 10.0. Technical Specifications

### 10.2. Technical Data

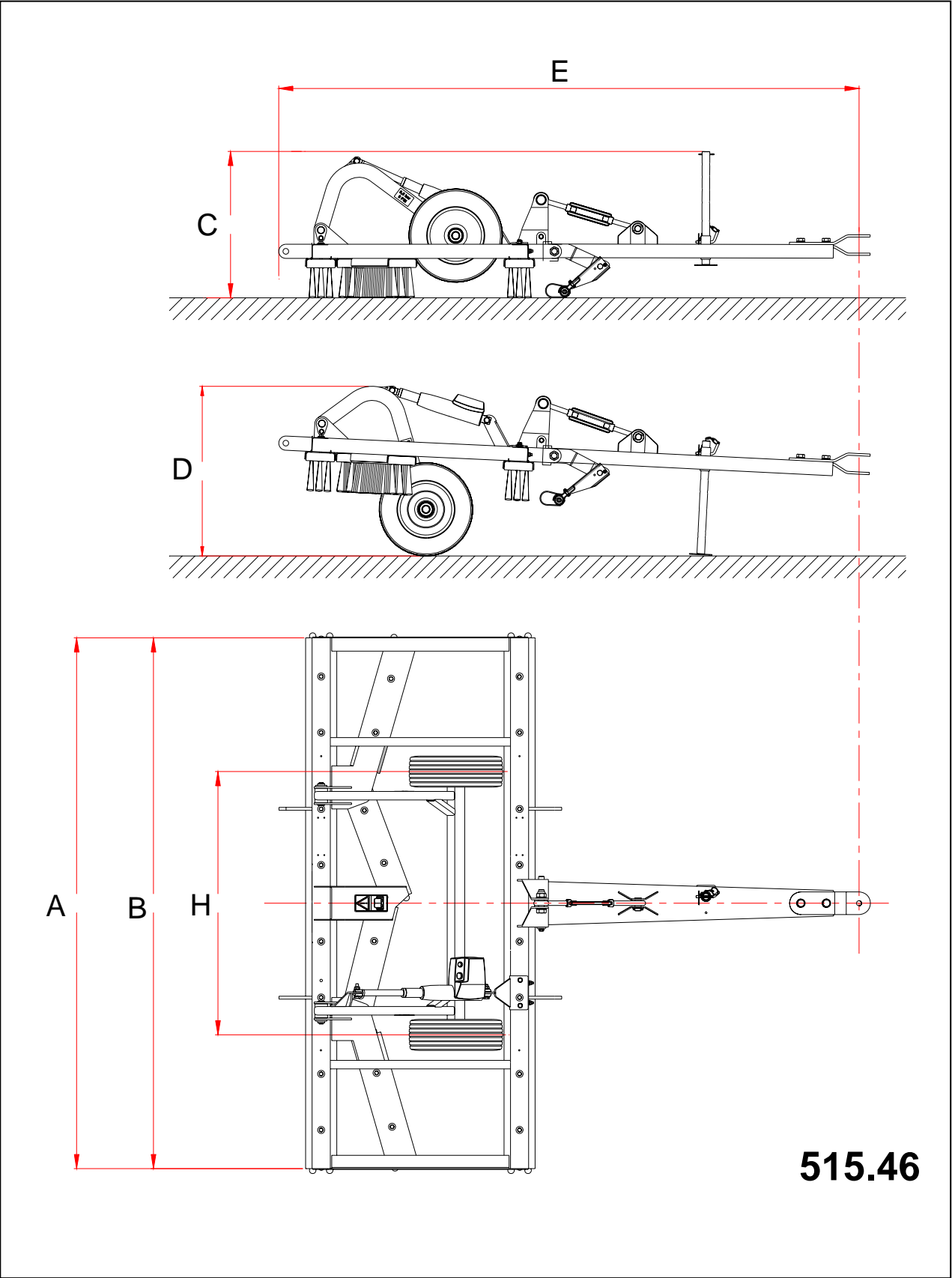
**Trailer version:**

<b>A</b>	Working width	1880	mm
<b>B</b>	Machine width	1880	mm
<b>C</b>	Machine height in working position	560	mm
<b>D</b>	Height of device in parked position	600	mm
<b>E</b>	Machine length with chassis and drawbar	2050	mm
<b>F</b>	Device length with chassis and spherical coupling	2195	mm
<b>G</b>			mm
	Min. power required for tractor	11 (15)	KW (PS)
	Operating speed	5	km/h
	Tyres	13x5.00-6/4PR	
	Tyre pressure	0,6	bar
<b>H</b>	Track width	930	mm
	Number of axles	1	Quantity
	Number of wheels per axle	2	Quantity
	Terra Groom neutral	104	kg
	Magnetic bar	+ 10	kg
	Spherical coupling	+ 4	kg
	Decompaction brush set	+ 2	kg
	Max. total weight	118	kg

# 10.0. Technical Specifications



















## 10.2. Technical Data

Trailer version:



## 10.0. Technical Specifications

### 10.3. Metric bolt and cap screw torque values

Property Class and Head Markings	<div><div><div>4.8</div><div></div><div></div><div>4.8</div></div><div><div>8.8</div><div></div><div></div><div>8.8</div></div><div><div>9.8</div><div></div><div></div><div>9.8</div></div><div><div>10.9</div><div></div><div></div><div>10.9</div></div><div><div>12.9</div><div></div><div></div><div>12.9</div></div></div>															
	Property Class and Nut Markings	<div><div><div>5</div><div></div><div></div><div>5</div></div><div><div>10</div><div></div><div></div><div>10</div></div><div><div>10</div><div></div><div></div><div>10</div></div><div><div>12</div><div></div><div></div><div>12</div></div><div><div></div><div></div><div></div><div></div></div></div>														
Size		class 4.8				class 8.8 or 9.8				class 10.9				class 12.9		
	Lubricated *		Dry **		Lubricated *		Dry **		Lubricated *		Dry **		Lubricated *		Dry **	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
M6	4,8	3,5	6	4,5	9	6,5	11	8,5	13	9,5	17	12	15	11,5	19	14,5
M8	12	8,5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	255	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designet to fail under predetermined loads. Always replace shear bolt with identical property class

Fasteners should be replaced with the same or higher property class. If higher property class fasteners used, these should only be tightened to the strength of the original.

\*\* "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phossphate and oil coatings.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

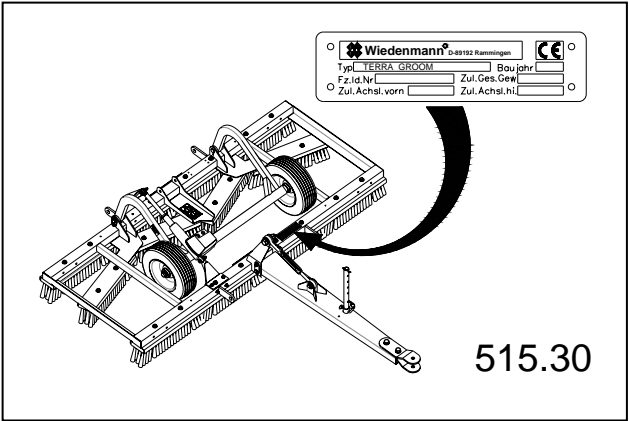
Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

\*\* "Dry" means plain or zinc platend without any lubrication.

# 10.0. Technical Specifications

## 10.4. Chassis Number

Enter the respective product identification no. in the space provided below. Always quote this number when ordering spare parts or in case of warranty claims.



Veh. Id. no. ....