

# Translation of original Operating Instructions

# Lawn Maintenance Machine Super 600

# 275.001

From equipment I.D. No. : 10102750005142001

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# 275 99 01



## **EC DECLARATION OF CONFORMITY**

We

#### Wiedenmann GmbH Am Bahnhof 89192 Rammingen

declare under our sole responsibility that the product

#### Lawn Maintenance Machine Super 600

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

11.1

	Uhl	
Rammingen, the 28.02.2012	Horst Wiedenmann	
(Place and date of issue)	Managing Partner	
	(Name, function and signature of authorised person)	
Rammingen, the 28.02.2012	Peter Rischar	
Rammingen, the 20.02.2012	Feler Riscilar	
(Place and date of issue)	Technical office manager Authorised representative for tech. documentation	

NOTE: The declaration of conformity is no longer valid if changes are made to the machine that have not been agreed with the manufacturer.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

#### Lawn Maintenance Machine Super 600

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

N. Milita Karl Wiedenmann Rammingen, the 28.02.2012 **Sales Manager** (Place and date of issue) (Name, function and signature of authorised person) Rammingen, the 28.02.2012 Harald Reuen (Place and date of issue) **Operations Manager** (Name, function and signature of authorised

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person)

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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"** are applicable to the trailed device moving in forward direction.
- 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 DELIVERY OF THIS MACHINE,** your dealer performed a pre-delivery inspection to ensure optimal performance.
- THE LAWN MAINTENANCE MACHINE SUPER 500 IS SOLELY intended for conventional maintenance of lawns (INTENDED USE).

This includes following tasks:

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- Gathering and collecting cuttings, leaves and twigs
- Mowing lawns, parks, recreational areas, golf courses, extensively cultivated areas and eco-meadows using the multifunction head
- Verticutting golf courses and sports fields with different line distances using the multifunction head

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 trailed device to transport persons or things. The machine is NOT designed for picking up balls of earth and similar materials.
- 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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#### **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.



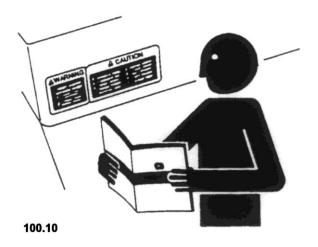
#### FOLLOW THE SAFETY INSTRUCTIONS

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.

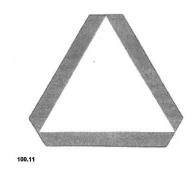
Keep your machine in good working order. Unauthorised modifications to the machine can impair the function, operational reliability and service life of the machine.

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



#### **OBSERVE THE ROAD TRAFFIC REGULATIONS**

Always observe local road traffic regulations when using public roads.



#### WEAR PROTECTIVE CLOTHING

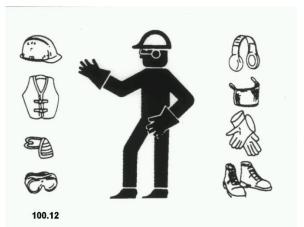
Wear close-fitting clothing and the appropriate safety equipment for the work at hand.

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.

#### 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.

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#### **EXERCISE CAUTION IN THE CASE OF LINE LEAKAGE**

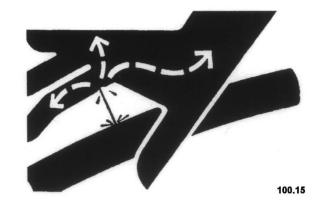
Leaking high-pressure fluids can penetrate the skin and cause serious injury.

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.

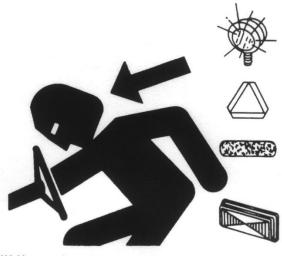
If any fluid penetrates the skin, this must be immediately removed by a doctor who has experience with this kind of injury. Failure to seek medical attention can lead to serious infection.

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



#### 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.



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#### 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.



#### 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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#### 1.1. Adhesive Safety Signs

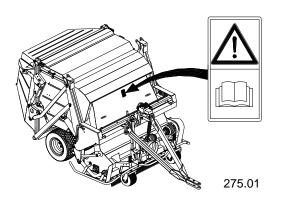
#### Warning symbols

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.



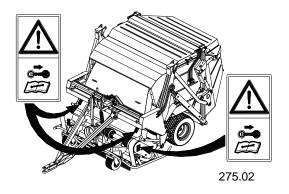
#### **Operating Instructions**

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



#### Maintenance

Shut off the engine and remove the key before performing maintenance or repair work.



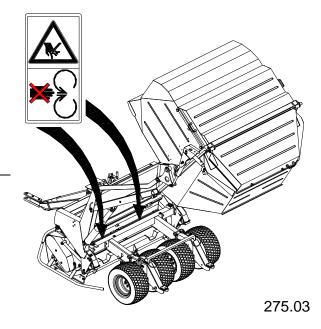
#### 1.1. Adhesive Safety Signs

#### Tools

Never touch the moving parts of the machine. Wait until they have come to a complete standstill.

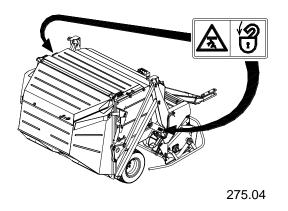
#### Tools for the multifunction head

Never operate the multifunction head when the container is elevated. There is danger of injury from the spinning tool drum and from parts flung out of it.



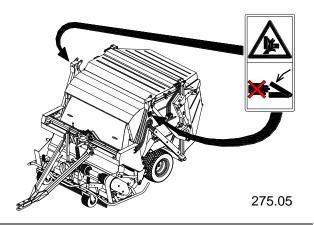
Hydraulic system for the elevated emptying unit

Close the safety valve on the hydraulic cylinder before lingering near the elevated container. The closed safety valve prevents the elevated container from unintended lowering.



#### **Raising the container**

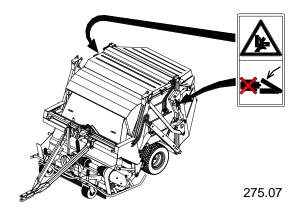
Never reach into crushing hazard zones while parts located there can still move.



#### 1.1. Adhesive Safety Signs

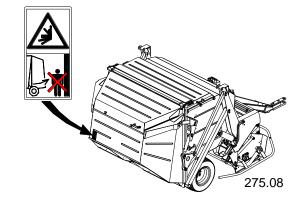
#### Trap opening and emptying

Never reach into crushing hazard zones while parts located there can still move.



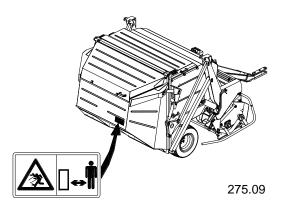
#### Latch opening

Do not linger in the pivoting range of the latch while the engine is running.



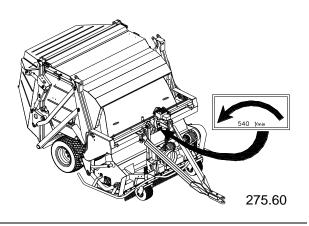
# Perforated screen and service flap

When the Super 600 is running, no persons may stand in front of the perforated screen on the rear of the machine. There is a risk of injury from thrown or flying objects.



#### Cardan shaft drive

Indicating label for the direction of rotation and the max. drive speed



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#### **1.2. Safety instructions**

- Only persons who are qualified and instructed on the operation of the machine may operate the machine.
- Observe the generally applicable safety and accident prevention regulations as well as the notes in these operating instructions!
- Familiarize 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.
- Observe the applicable regulations when using public roads!
- Check the immediate surroundings before driving (children!)! Ensure that your visibility is not impaired!
- Keep all persons clear of the danger zone of the machine!
- Only attach the machine when the engine is at a standstill and the P.T.O. drive is switched off.
- Only use the cardan shaft allocated to the machine.



- Observe the maximum permissible trailer and drawbar load of the tractor.
- Ensure that the front axle has a sufficient load. The tractor must be steerable.
- The driving and operating properties of the tractor may be influenced by the attachment of the Super 600! Always adapt your driving style to match the terrain and ground conditions. Special care should be taken when working and turning on a slope.
- Switch the P.T.O. drive of the tractor off before elevating the container.
- Lingering under the elevated container without a safeguard is forbidden. Always close the safety valve on the hydraulic cylinder.
- The container may only be elevated when the Super 600 is attached to a tractor. Otherwise the Super 600 can tip.
- Switch the machine and the motor of the tractor off and remove the ignition key before carrying out maintenance.
- All safety devices must be assembled before initial operation of the Super 600.

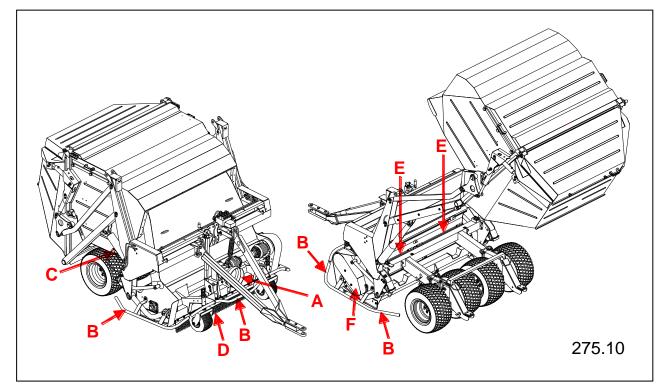
#### 1.3. Safety Equipment

1.3.1. on the machine

ATTENTION DANGER!

Never operate the Super 600 without safety devices. Otherwise you expose yourself and others to great danger. Serious injury by moving parts can result.

Where to find safety equipment on your machine:



- A Protection device for cardan shaft connection (can only be undone with tools)
- B Screwed safety bars on centre, right and left as spacers.
- C Safety valves on both telescopic cylinders (prevent an unintentional lowering of the lifted container)

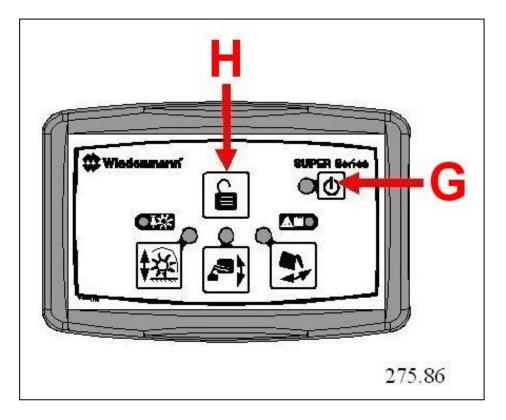
- D Chain curtain or feeler
  roller
- E Flaps for tool replacement on multifunction sweeper head (only for multifunction sweeper head)
- F Protection for belt drive on multi-cultivation rail (can only be removed with tool)

#### 1.3. Safety Equipment

1.3.2. on the remote control

```
ATTENTION DANGER!
Lift multi-cultivation
rail. Otherwise you will
be exposing yourself and
others to extreme
danger.
Serious injury by moving
parts can result.
```

Positions of the buttons:



- **G** ON/OFF button When the control unit is switched off, all valves are locked.
- **H** Only after pressing the unlock button is it possible to switch modes.

#### 2.1. General Information



- The lawn maintenance machine is delivered secured on 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 transportation and attachment of the lawn maintenance machine can:

- injury to persons
- damage to property.

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

We do not accept any liability for damage resulting from improper handling.



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

#### 2.2. Super 600 transportation

#### 2.2.1. Transport using a forklift

If the lawn maintenance machine is still secured on the transport frame:

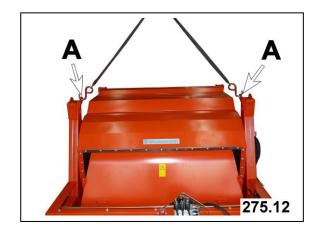
- Insert the forks under the transport frame (pay attention to the direction of approach),
- carefully lift the transport frame,
- unload the lawn maintenance machine from the transport device, where said device is in equilibrium,
- Remove top part and side parts of the transport frame,
- cut through the securing straps,
- lift the lawn maintenance machine off the transport frame.



#### 2.2.2. Transport Using a Crane

The following 3 points are provided on the lawn maintenance machine for attachment to a crane.

Point A: 2x on the frame



#### 2.0. Transport

#### 2.2. Super 600 transportation

#### 2.2.3. Mounting point for transport on a trailer

Point C: 2x on the drawbar (position arrow left)

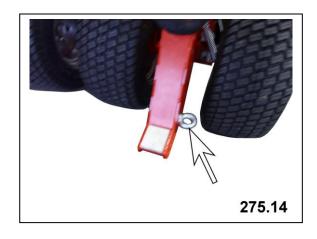
or

on a hole in the lug on the frame (position arrow right)

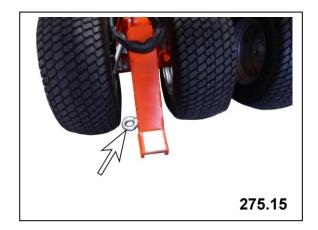
depending on the lashing gear



Point D: 1x on the right on the chassis frame



Point E: 1x on the left on the chassis frame

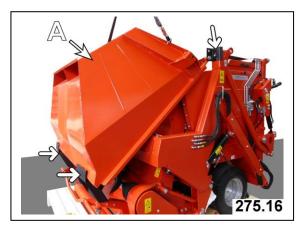


#### 2.2. Super 600 transportation

#### 2.2.4. Transport frame

During transport, the hopper gate (A) and drawbar (B) are not fitted.

The hopper gate (A) is inserted at the front of the machine with special parts and secured at the top.



The drawbar (B) is secured onto the transport base at the rear with special parts.



For description of hopper gate assembly, see Chapter 3.3.

#### 3.1. General Information



#### **ATTENTION DANGER!**

Only perform this work when the machine is connected to the tractor. The tractor must be switched off and secured against unintentional activation.

Close the safety valves on both telescopic cylinders in order to secure the container against unintentional lowering. For this work, please use your personal protective equipment (PSA) such as: gloves, goggles, ear protectors.

Only carry out attachment on firm, even ground. Only carry out attachment on firm, even ground.

#### 3.2. Attaching the drawbar

Two persons are required for attachment of the drawbar.

To ensure that the parking support (A) remains active, the bottom securing screw must not be removed.

Position the drawbar (B) at the front on the tension strap.

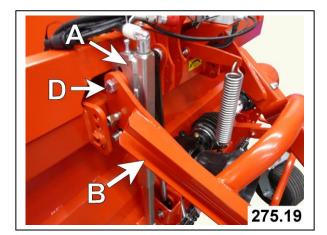
Insert the bottom hexagon screws (C) in the bottom holes of the drawbar (B) from the inside out.



Only tighten the nuts by hand.

Swivel the drawbar (B) upwards and insert with the hexagon screws (D) from the outside in.

Turn and tighten all hexagon nuts.



#### 3.3. Installing the hopper gate

At least 2 persons are required for this work.

Remove top part and side parts of the transport frame.

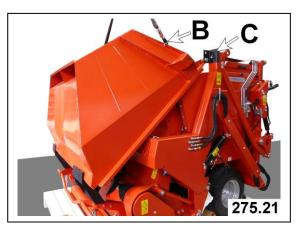
Release the drawbar (A) from the transport frame.



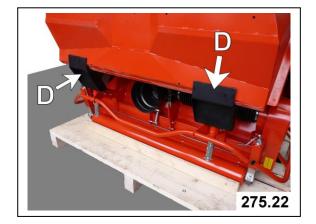
Suspend the hopper gate at the two ring screws (B) and secure.

Remove the top fastening parts (C) (for transport only) complete with fixing materials.

Carefully raise the hopper gate and pull backwards at the same time.



Remove the two bearing plates (D) (for transport only).



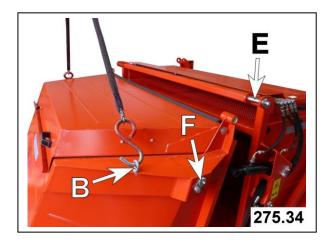
#### 3.0. Assembly

#### 3.3. Installing the hopper gate

Carefully move the suspended hopper gate to the rear of the Super 600.

Remove the bearing bolts (E) which support the hopper gate.

Remove the bearing bolts (F) which support the hydraulic cylinder (G).



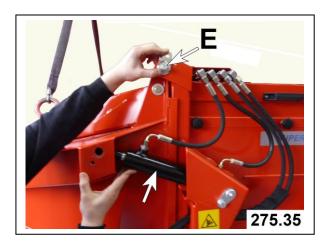
Bring the hopper gate into position for insertion.

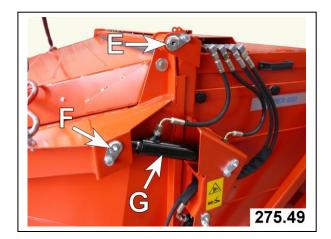
Insert the bearing bolts (E).

Carefully lift the hydraulic cylinder slightly by hand and lower the hopper gate carefully.

Insert the hydraulic cylinder with the bearing bolt (F).

To secure the bearing bolts, tighten the hexagon screws.





#### 3.4. 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).

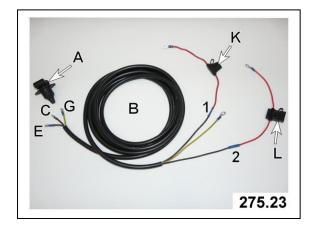
Insert flat connector (E) of line 2 in socket (A) at position (F).

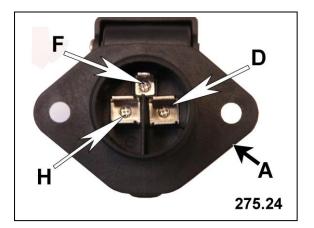
Insert flat connector (G) of green/yellow line in socket (A) at position (H).

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)

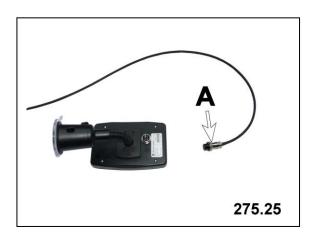


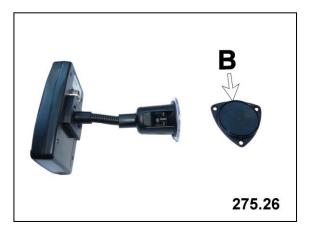


#### 3.5. Connecting the control unit

The control unit has a 4-pin connection on its rear side to which the connection cable (A) must be connected.

The control panel must be in a suitable bracket during operation. A suction cup holder is included with the machine. It must be attached to a smooth and clean glass surface. A screw-on adapter plate (B) is included for mounting at other positions.





#### 3.6. Option: Attaching anti-scalp rollers

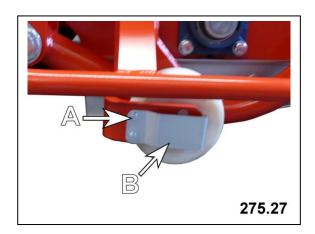
The anti-scalp rollers ensure that only the verticutting blades come into contact with the ground and not the flywheels.

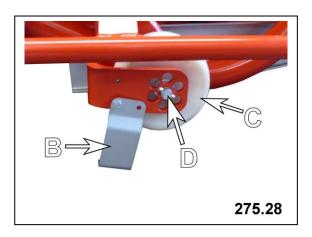
#### Setting the anti-scalp rollers

#### NOTE

Set the anti-scalp rollers the same on both sides.

- Release upper screw (A) and remove with retaining washer.
- Swivel locking plate (B) downwards.
- Hold anti-scalp roller (C) and withdraw pin (D).
- Secure anti-scalp roller (C) using pin (D) in another bore in the desired height.
- Swivel locking plate (B) upwards and tighten.





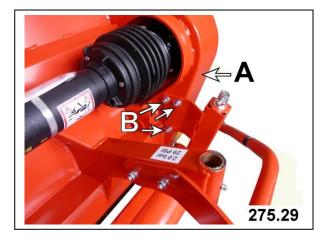
#### 3.7. Option: Attaching golf course kit

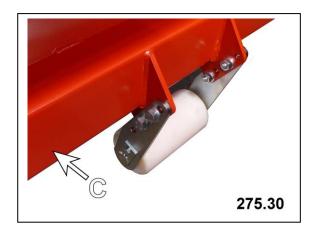
#### Assembly

The feeler roller replaces the two front support wheels on the machine. Attach these parts and the chain curtain.

- Screw the front roller to the boreholes in the fixture plates on the left (A) and right (not shown) of the machine.
- Use 3 hexagonal screws (B) with matching washers and nuts each on the right and left side.

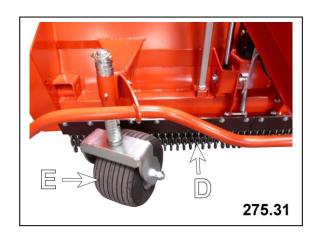
As standards, the safety roller is fitted at the rear on the multi-cultivation rail (C). It therefore offers increased protection on very uneven ground.





#### NOTE

If the feeler roller is removed for specific work then the chain curtain (D) and front support wheels (E) must be reinstalled.



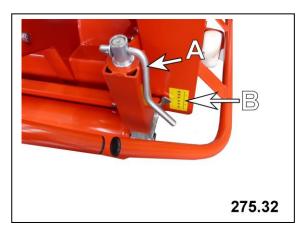
#### 3.7. Option: Attaching golf course kit

Setting the working height for the multifunction head

The working height is set by turning the cranks on the right (A) and left (not shown) side of the front roller.

- Turn the cranks clockwise: The multifunction head is lowered.
- Turn the cranks anticlockwise: The multifunction head is raised.
- Use the scale on the left

   (B) and right (not shown) to set the working height identically on both sides.



#### 3.8. Option: Attaching super contour kit

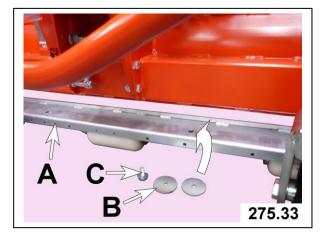
The super contour kit consists of two assemblies:

- Front impact flap rail with roller
- Rear divided trailing roller

Remove the chain curtain and use the fixing screws to fit the impact flap rail with the roller (A)

Screw the impact flap rail with the roller (A) onto the multicultivation rail instead of the chain curtain.

For depth adjustment, a maximum of 2 U-washers (B) per fixing screw (C) can be used.



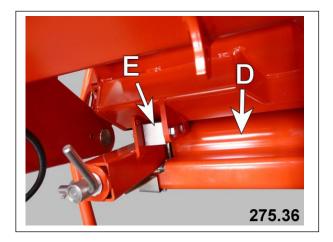
#### 3.0. Assembly

#### 3.8. Option: Attaching super contour kit

Close the safety valves on both telescopic cylinders in order to secure the container against unintentional lowering.

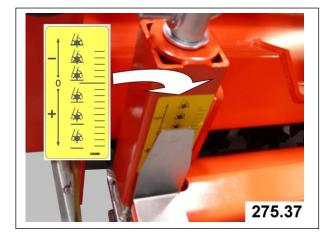
Position the divided trailing roller (D) between the multicultivation rail and chassis.

The trailing roller is screwed securely into the upper holes of the multi-cultivation rail clips with the appropriate hole pattern for the distance block (E).



It can be adjusted using the spindles on both sides of the roller brackets.

Ensure that any adjustments are made evenly and in accordance with the sticker.



After the adjustment has been made using the handle (F), turn the adjustment spindle downwards to secure the adjustment in place.



#### 4.0. Connecting to the Tractor

#### 4.1. General Information



#### ATTENTION:

Only connect on firm and even ground. - DANGER OF TILTING!

Only attach the machine when the engine is at a standstill and the P.T.O. drive is switched off.

The warning and information signs on the machine provide important information for safe operation. Observe them for your own safety.

Compare the specified revolution speed and direction of rotation of the cardan shaft (sticker on the machine) to the specifications of your tractor. The stickers state which revolution speed and direction of rotation the machine is set to.

#### 4.0. Connecting to the Tractor

#### 4.2. Adjusting the drawbar

- Fasten the bottom drawbar at the height of the bottom tow bar.
- Always use all 4 screws for fastening each drawbar.
- Fasten the drawbar to the tractor and secure it.
- Swivel the support upwards and check whether the hitched machine stands up straight.



• fits the tractor if you change the tractor. Adjust the height of the drawbar if necessary.

#### 4.3. Connecting hydraulics

Secure hydraulic lines for connection to the tractor at the fastening clamps (A) of the drawbar.

The hydraulic system is connected to the hydraulic sockets on the rear of the tractor.

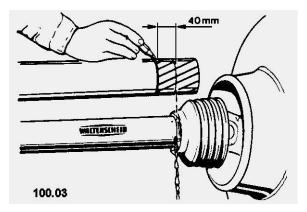
If your tractor is not equipped with such a socket, please contact your dealer.



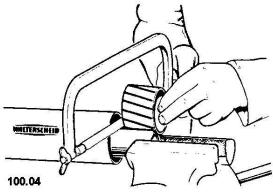
#### **4.0.** Connecting to the Tractor

#### 4.4. Cardan shaft adjustment

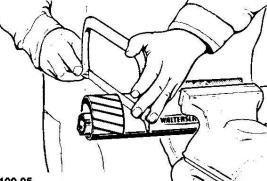
For adjusting the length hold the two shaft parts side by side at the shortest operating position and mark them out.



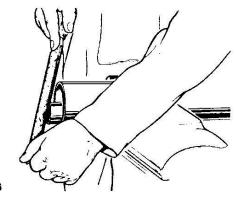
Cut off the inner and outer sliding profile by the same length as the sheath tube.



Cut off the inner and outer sheath tube evenly.



100.05



Smooth off division edges, remove chips carefully. Lubricate sliding profile.

100.06

#### 5.1. General Information



#### ATTENTION:

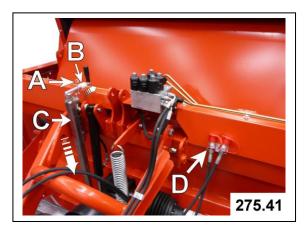
Always park on a paved and even surface when detaching the machine.

Only detach the machine when the engine is at a standstill and the P.T.O. drive is switched off. Never detach the machine when the container is elevated.

Only detach the machine from the tractor when it is empty.

#### 5.2. Dismantling

- Lower the multi-cultivation rail to the ground.
- Switch off the control unit.
- Disconnect the connection cable on the control unit
- Release the spring cotter (A)
- Slide the anti-twist device
  (B) of the parking supports
  (C) in the direction of the arrow.
- Swivel the support (C) down.
- Secure the machine against rolling away by using blocks on both sides.
- Disconnect the hydraulic connections and hook them into the holder (D).
- Release and set aside the cardan shaft on the tractor.
- Unhitch the drawbar.





#### 6.0. Before Initial Operation

#### 6.1. General Information

- Check whether all connection parts necessary for complete delivery are there.
- Observe the technical data when connecting to other tractor types.
- Compare the revolution speed and direction of rotation of the cardan shaft (sticker on the machine) with the specifications of your tractor.
- The sticker states which revolution speed and direction of rotation the machine is set to.
- Lubricate the cardan shaft (see cardan shaft operating instructions).
- The warning and information signs on the machine provide important information for safe operation. Observe them for your own safety.



 Do not carry out a test run of the multifunction head on paved surfaces. The cutting blades and verticutter knives can be damaged.



• Electronic devices are basically not fail-safe. The user is responsible for bringing the drive to a safe state in the case of the failure of the machine, as otherwise personal and/or property damage can arise.



• For safety reasons, the remote control may only be used, when driving in road traffic, so that the road safety is not affected. The country-specific regulations and specifications must be observed!

#### 6.0. Before Initial Operation

#### 6.2. Setting the working height



#### ATTENTION:

Only adjust the working height when the P.T.O shaft is switched off.

The working height is adjusted by setting the support wheels higher or lower on an even surface. Select the corresponding spacer rings in the wheel bracket in the multicultivation rail in order to disconnect the support wheels evenly; then secure with a foldable cotter pin.

Take the following into account when setting the working height:

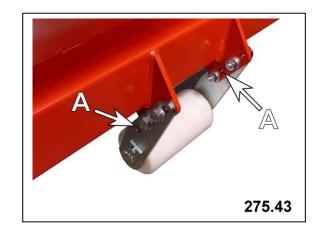
- Take into account unevennesses of the ground (bumps).
- Note the level of wear of the tools on the multi- cultivation rail
- Scarifying blades must only penetrate the ground by a maximum of 5 mm!

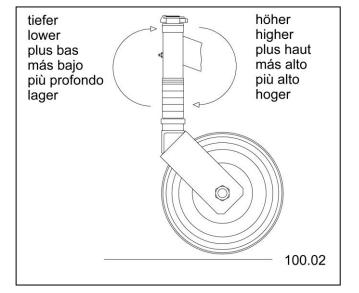
#### 6.3. Setting the protection roller

The safety roller protects the lawn surface on uneven ground against the tools of the multicultivation rail penetrating the ground.

The holder of the protection roller contains several mounting boreholes (A).

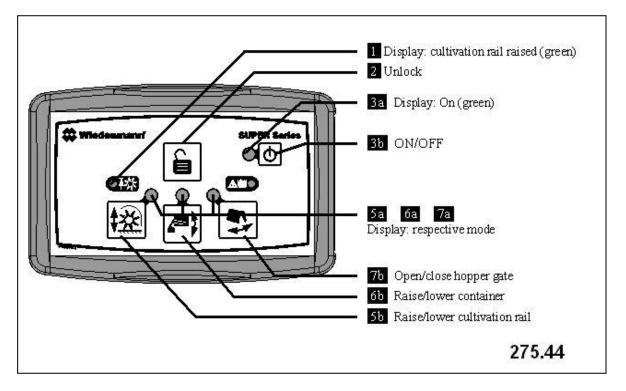
Adjust the height of the protection roller to suit the requirements of the ground by choosing different boreholes.





# 6.4. Description of the individual functions on the control unit

The valve control offers security when working with the hydraulic systems on the lawn maintenance machine.



In principle, the controller must be activated for operation via button 3b "On/Off".

The controller automatically switches off if no buttons are pressed for more than 60 minutes ("Standby mode").

The controller is switched on if the "Display: **3a** On/Off" lights up, if it is not lit then the controller is in "Standby mode", i.e. it is switched off and only requires a small amount of power from the battery. All valves are closed when the control unit is switched off.

Three modes can be selected on the controller, which correspond to the three functions of the lawn maintenance machine.

For safety reasons, the three mode buttons must be unlocked with button 2 "Entriegeln/Unlock" before actuation.

After pressing button 2 "Unlock", the available modes flash for a short time. If a different mode is not selected within this time, the previous selection is retained and the mode buttons are locked again.

Thus, the three functions are selected as follows:

Mode 5
Raise/lower rail:
Button 2 "Unlock"
Button 5b "Raise/lower rail"

Mode 6
Raise/lower container:
Button 2 "Unlock"
Button 6b "Raise/lower container"

Mode 7
Open/close hopper gate:
Button 2 "Unlock"
Button 7b "Open/close hopper gate"

After switching on, no mode is selected, all valves are closed and none of the displays **5a 6a 7a** "Display: respective mode" flashes.

To close all valves again, switch the controller off via button 3b.

## 6.0. Before Initial Operation

#### 6.5. Using the tool sets

# Tool set: Cutting blades (flail blades)

- For flail mowing any lawns in parks or on golf courses, as well as extensively cultivated areas and eco-meadows, in any weather
- For siphoning off and collecting cuttings, leaves and small twigs

# Tool set for verticutting with a 38 mm interval

Suitable for verticutting in spring and late summer/autumn. This treatment is more gentle than that of a 19 mm interval. This tool set can also be used to siphon off and collect grass, small twigs and leaves.

# Tool set for verticutting with a 57 mm interval

Verticutting with a 57 mm interval, for year-round, relatively gentle verticutting (standard proportioning). This tool set can also be used to siphon off and collect grass, small twigs and leaves.

#### NOTE

For tool breakdown, see Chapter 8.12.

#### 7.1. General Information



## ATTENTION:

The driving and operational characteristics of the tractor may be influenced by the attachment of the machine.

- Always adapt your driving style to match the terrain and ground conditions.
- Special care should be taken when working and turning on a slope.
- The multi-cultivation rail must always be lifted to empty the container.
- Take into account unevennesses of the ground (bumps).

## 7.2. Transport

The following must be observed during transport:

- The container must be empty.
- The multi-cultivation rail must be raised.
- The front supporting wheels may not touch the road.
- Switch off the control unit and bring the hydraulic control lever of the tractor to 0-position, in order to secure the machine against unintentional movement.

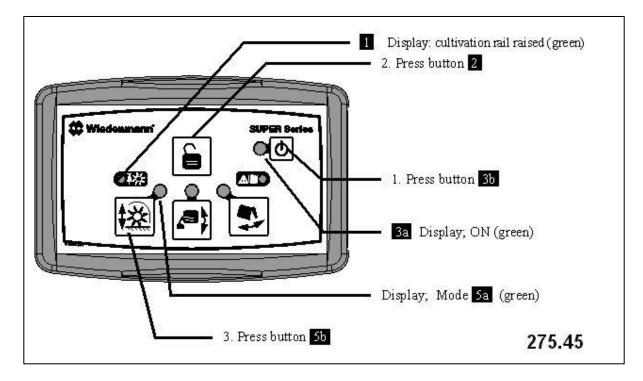
#### • CAUTION !

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

## 7.3. Start-up

Observe the following sequence during start-up:

- Drive onto the surface that is to be treated.
- Switch on the control unit using button 3b.
- Lower the multi-cultivation rail onto the support wheels or onto the feeler roller in **Mode 5**.



- **IMPORTANT !** Shift the hydraulic control lever of the tractor to open-centre position.
- Switch the P.T.O. drive on and slowly set to the prescribed revolution speed.
- Start driving.

## 7.4. Emptying the container

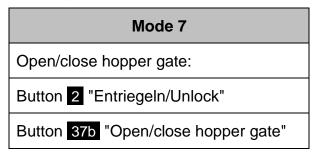
7.4.1. without high dumping

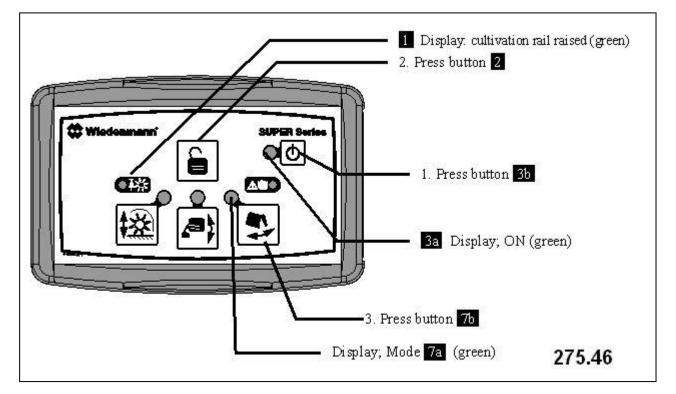
#### NOTE

The hopper gate can only be opened if the cultivation rail is fully raised and display **1** is lit up green.

Switch on the control unit using via button 3b.

#### Emptying is performed in:





Open the hopper gate by actuating the control valve on the tractor.

To close the hopper gate, bring the control valve lever of the tractor into the required position and keep it there until the hopper gate is closed.

## 7.4. Emptying the container

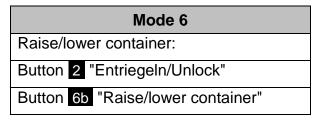
7.4.2. with high dumping

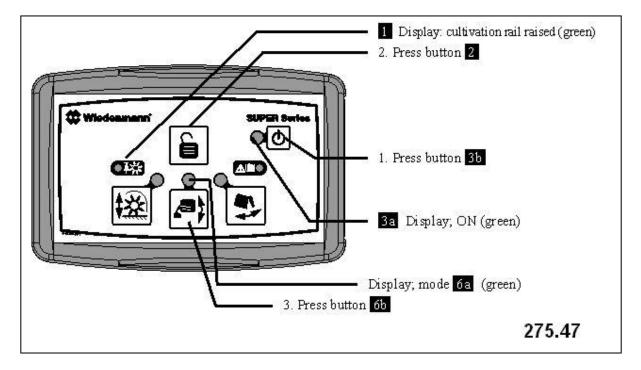
#### NOTE

The container can only be raised and emptied if the cultivation rail is fully raised and display 1 is lit up green.

Switch on the control unit using via button 3b.

The container is raised in:





Drive to just before the filling device.

Raise container by actuating the control valve on the tractor.

Carefully and with container raised, drive towards desired filling device.

## 7.4. Emptying the container

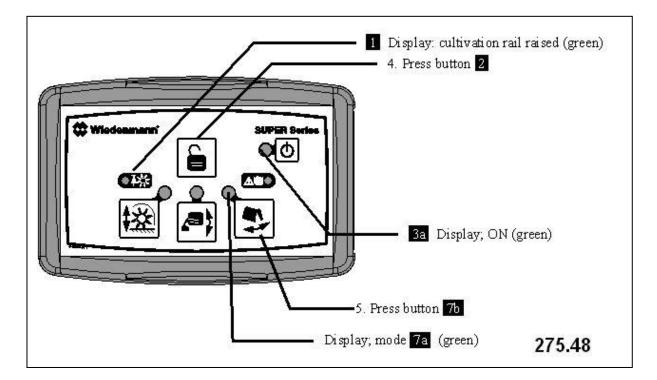
#### 7.4.2. with high dumping

#### NOTE

The container can only be raised and emptied if the cultivation rail is fully raised and display 1 is lit up green.

Die Emptying is performed in:

Mode 7
Open/close hopper gate:
Button 2 "EntriegeIn/Unlock"
Button 7b "Open/close hopper gate"



Open the hopper gate by actuating the control valve on the tractor.

Drive away from filling device when emptying is completed.

To close the hopper gate, bring the control valve lever of the tractor into the required position and keep it there until the hopper gate is closed.

To lower the container, switch to mode 6

To lower the container, move lever of the control valve on the tractor into the required position.

## 7.0. Operation

#### 7.5. Cleaning the discharge openings

Remove the star grip screws of the rear protective cover (A).

Swivel the protective cover (A) upwards to the stop.

Clean all perforated screen surfaces.





## ATTENTION:

Cleaning must only be carried out using hand brushes or water - never with bare hands.

- RISK OF INJURY!

#### NOTE

Only cleaned perforated screens ensure optimal filling and functioning.

To improve cleaning of the perforated screens of the container, you can remove the front protective cover (B).

Remove the star grip screws on both sides.

Push the protective cover (B) forwards and lift up.

After cleaning, refit all protective covers or bring them into work position and secure.



## 7.6. Malfunctions and troubleshooting

Description	Cause	Solution	
Super 600 is not running	Drive belt is torn	Replace the drive belt	
even though the cardan shaft is running	Drive belt slips through	Tense the drive belt	
Super 600 vibrates or engine runs erratically	Tools are damaged or the tool roller is missing tools	Replace tools or add missing tools	
	Verticutting knives have been shortened by wear	Replace the verticutting knives	
	Verticutting knives have been worn down unevenly	Turn the verticutting knives by 180° or replace them	
		Reduce working depth	
		Reduce operating speed	
	Damp pickup cuttings	Fit with wider spacing	
		Reduce working depth	
		Reduce operating speed	
	Heavy dew	Wait until the ground has dried	
		Reduce working depth	
Material is being collected badly or not at all during		Reduce operating speed	
verticutting	Too much intake	Fit with wider spacing	
		Reduce working depth	
	Too narrow spacing	Reduce operating speed	
	between scarifying blades	Fit with wider spacing	
	Perforated screen surfaces of hopper gate and container are dirty	Clean (see Section 7.5.)	
	Channel dirty Channel dirty	Clean	

# 7.0. Operation

## 7.6. Malfunctions and troubleshooting

Description	Cause	Solution	
The conveyer channel is blocked	Height of the tools is too low, so earth is being gathered up	Adjust the height of the tool roller on the front support wheels	
Wear on outside of guard rollers on multifunction sweeper head	Guard rollers set too deep	Set guard rollers so that they are not in constant contact with the ground	
	Verticutting knives have been shortened by wear	Replace the verticutting knives	
	Verticutting knives have been worn down unevenly	Turn the verticutting knives by 180° or replace them	
Turf is damaged in part	Driving round bends that are too tight during operation	Switch the P.T.O. shaft off when driving round tight bends	
	Different tyre pressures in the wheels	Check the air pressure and correct if necessary	
	Different adjustment of the support wheels or feeler roller	Check adjustment or readjust	
	Different adjustment of the support wheels or feeler roller	Check adjustment on a firm, even surface and readjust if necessary	
The multi-cultivation rail	Parking stand was not turned sufficiently upright	Turn parking stand to the highest position	
cannot be lifted high enough	Drawbar for hitch set incorrectly	Set position of drawbar so that the upper edge of the machine is horizontal	
Container is not raised for high dumping	Weight of the permissible load is exceeded. Weight of the permissible load is exceeded.	Without high dumping, empty part of the load	
Hydraulics for raising and emptying the container do not	Cultivation rail not raised to end position, therefore NO	Raise the cultivation rail fully	
work	release of the pressure switch for other functions	Check the pressure switch, solenoid valve or electrical control lines. In the event of any problems, contact your dealer.	

## 8.1. General Information

- Only qualified personnel are permitted to perform maintenance, repair and disassembly tasks.
- Carry out all maintenance work while the machine is attached to a tractor.
- Only carry out repairs, maintenance, cleaning and troubleshooting when the drive is switched off and the motor is at a standstill. Remove the ignition key from the tractor.
- Only original parts should be used. Parts from other manufacturers are often not of sufficient quality and so endanger your safety. In addition, the warranty and claims against warranty can only be guaranteed if only original parts by Wiedenmann were used. We explicitly inform you that parts not delivered by Wiedenmann are not tested or released by Wiedenmann. Therefore, installing or using such products may negatively influence preset properties of your vehicle and therefore endanger your active or passive safety. Damage caused by the use of parts other than original parts are excluded from the manufacturer's liability.
- Welding of bearing parts of the vehicle may only be carried out according to the accepted rules of welding technology.

- Replace damaged tools.
- Cutting blades do not need sharpening. Replace the cutting blades if they are blunt.
- The edges of the verticutting knives that enter the gound are rounded by use. In this case, you should turn the verticutting blade around. Replace verticutting knifes when they are round on both sides.
- When installing the tools, take into account that the first and outermost as well as the last and outermost tool retainer can often only be partially or not equipped at all.
- For this work, please use your personal protective equipment (PSA) such as: gloves, goggles, ear protectors.
- The maintenance of the tools includes a lubrication as well as a cleaning process. After finishing the mowing operation the machine should be washed out and checked thoroughly.

## 8.2. Lubricating greases

Select a lubricating grease suitable for the outside temperature expected until the next maintenance.

We recommend the following lubricating greases:

SAE high pressure multipurpose grease with 3-5 % molybdenum disulphide

#### 8.3. Maintenance and inspection list

#### **Machine general**

48

Area	Maintenance measure	Maintenance interval
Whole machine	hole machine Clean the machine after use to ensure faultless functioning during the next operation	
	Clean the machine thoroughly and conserve with spraying oil	Yearly, at the end of the mowing season
	Carry out yearly inspections	Yearly, before the start of the mowing season
Lifting and tilting mechanism for ground-level and elevated emptying	No maintenance as plastic plain bearings are used	
Perforated screen surfaces in hopper gate and container	Clean	Daily
Pressure switch	Check ease of movement	100 Std.

## 8.3. Maintenance and inspection list

#### **Multifunction head**

Area	Maintenance measure	Maintenance interval
Gearbox	Check the oil level and top up if necessary (see 8.7.)	100 Std. 500 Std.
Rotor bearing	Lubricate both outer flange roller bearings and the upper flange roller bearing (see 8.4.1. and 8.4.2.)	50 Std.
Front supporting rollers	Lubricate the guide bushing of the height adjustment (see 8.4.3.)	100 Std.
	Check the air pressure and correct if necessary	100 Std.
	The wheel bearings of the feeler wheels need no maintenance	When necessary
Cardan shaft	Lubrication intervals according to manufacturer's instructions	8 Std.
V-ribbed belt drive	Check the tension of the v- ribbed belt, tense if necessary (see 8.8.) First inspection Further inspections	20 Std. 100 Std.
Linkage points for control guide	No maintenance as plastic plain bearings are used	
Work tools	Check the shape of the cutting blades	When necessary
	Check the shape and length of the verticutting knives	When necessary

## 8.3. Maintenance and inspection list

#### Sweeping head

Area	Maintenance measure	Maintenance interval	
Quadruple swing bogey Lubricate the brass bushes of the swing units (see 8.4.7.) Check the air pressure and correct if necessary		100 hrs.	
		When necessary	
	Tightening torque wheel nuts <b>80 Nm</b>	When necessary	

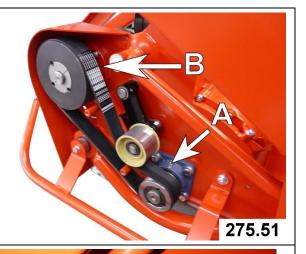
#### Front roller

Area	Maintenance measure	Maintenance interval
Pedestal bearing unit	Lubricate pedestal bearing units left (see 8.4.8.) and right (see 8.4.9.)	100 hrs.

## 8.4. Lubricating points

#### 8.4.1. Multifunction head

Left outer flange roller bearing (A). Upper drive flange roller bearing (B)



#### 8.4.2. Multifunction head

Right outer flange roller bearing



#### 8.4.3. Multifunction head

Guide bushing of the support wheel bracket



#### 8.4.4. Multifunction head

Wheel bearing of the support wheels



## 8.4. Lubricating points

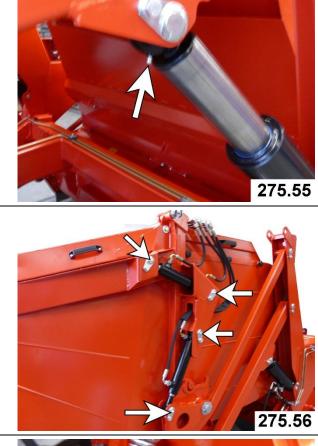
#### 8.4.5. Container emptying

8.4.6. Container emptying

cylinder

Joint of the telescopic

Bearing bolts of the hydraulic cylinder on the left and right



8.4.7. Pivoting axle Bearing bushing

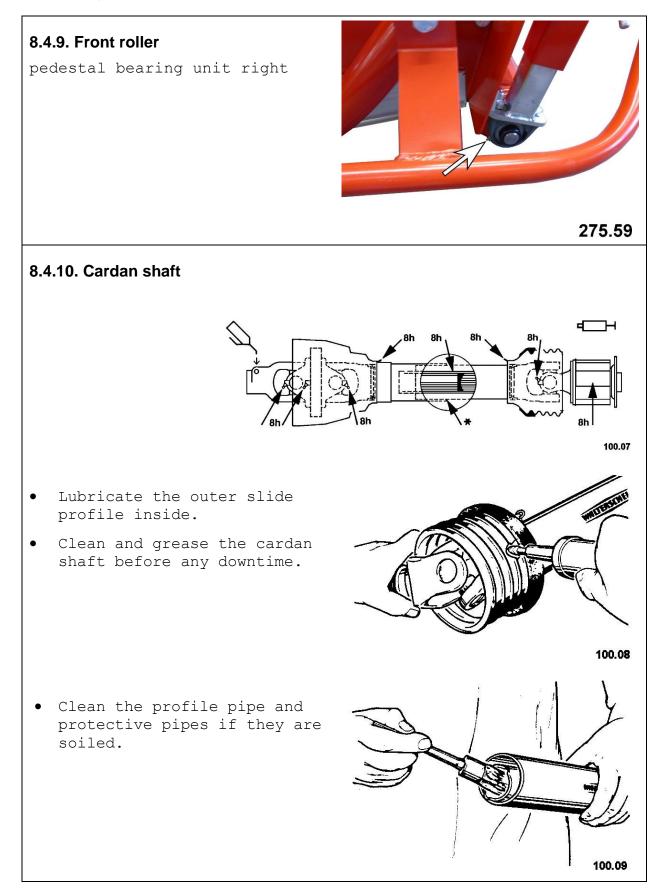


8.4.8. Front roller pedestal bearing unit left



All information, illustrations and specifications in these Operating Instructions are based on the latest information available at the time of publication. We reserve the right to make design changes at any time without prior notification

#### 8.4. Lubricating points

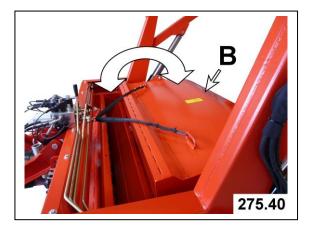


#### 8.5. Cleaning the channel

ATTENTION DANGER!

Only perform this work when the machine is connected to the tractor. The tractor must be switched off and secured against unintentional activation. Close the safety values on both telescopic cylinders in order to secure the container against unintentional lowering.

- Remove and set aside the cardan shaft on the tractor.
- Fully lift the container.
- Close safety valves (A) on left and right (without illustration) on both telescopic cylinders.
- Swivel channel (B) backwards.
- After cleaning, swivel the channel upwards.
- Screw in and tighten the front fixing screws.
- Open safety valves (A) on left and right (without illustration) on both telescopic cylinders.
- Switch on the control unit and adjust.
- Lower the container.



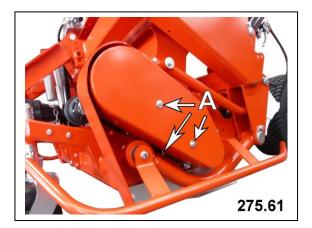
## 8.6. Dismantling the drive protection

# ATTENTION DANGER:

Before dismantling the drive protection, you must disengage the drive elements, switch the motor of the tractor off, remove the ignition key, and wait for all moving parts to come to a standstill.

The drive protection must be dismantled for maintenance on the drive of the sweeping head or multifunction head.

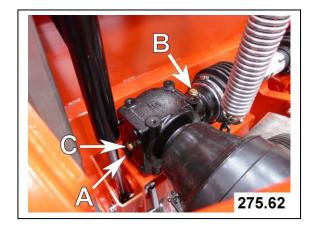
- Loosen the three screws (A) and remove.
- Remove the drive protection.



## 8.7. Gearbox

# Changing the gear oil of the multifunction head

- Place a drip tray under the multifunction head.
- Unscrew the drain screw (A).
- Unscrew the venting screw (B).
- Catch the oil draining out in a suitable vessel.
- Screw the drain screw in again.
- Top up the oil up to the level of the inspection opening (C).
- Dispose of old oil and empty packaging in an environmentally responsible way.



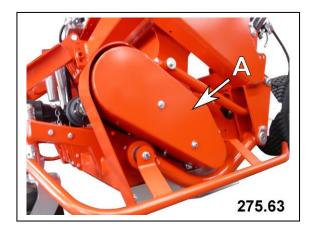
#### 8.8. Replacing the V-ribbed belt

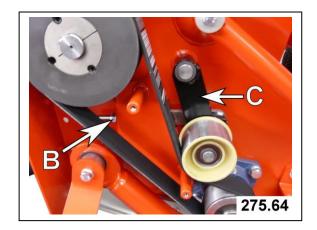


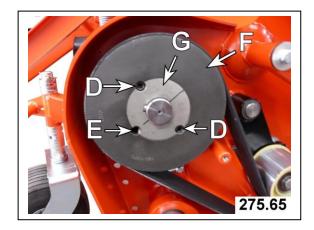
#### **ATTENTION:**

Only replace the drive belt when the machine is attached to a tractor. The tractor must be switched off and secured against unintended switching on.

- Dismantle the drive protection (A) (see 6.4).
- Loosen the hexagonal nut (B) and unscrew until the tension pulley lever with the tension roller (C) can be moved easily.
- Unscrew both headless setscrews (D).
- Screw one of the headless setscrews into the borehole
  (E) until the v-ribbed wheel
  (F) and the stress bushing
  (G) separate. Pull the stress bushing
  (G) off the shaft. Take off the old vribbed belt.

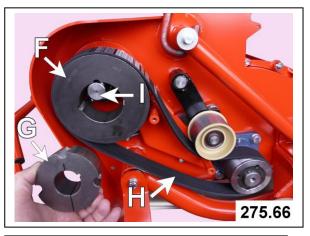




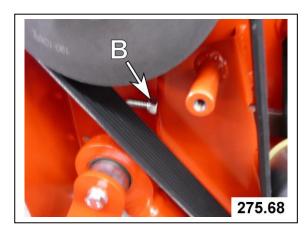


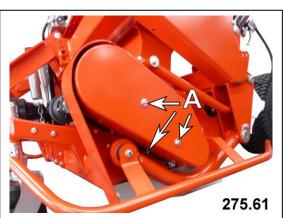
## 8.8. Replacing the V-ribbed belt

- Put the new v-ribbed belt (H) onto the v-ribbed wheel.
- Put the stress bushing (G) onto the shaft (I) and push into the v-ribbed wheel (F).
- Align the stress bushing (G) and the v-ribbed wheel (F) on the shared fastening boreholes (D).
- Insert the headless screws manually.
- Align the v-ribbed pulley (F) roughly with the vribbed pulley (J) using a ruler.
- Tighten the headless screws so that the v-ribbed pulley can be aligned parallel by tapping lightly with a softheaded hammer.
- Once they have been aligned precisely tighten the headless screws fully.
- If the parallel alignment of the v-ribbed pulleys is outside the tolerance (1mm) repeat the procedure.
- It is essential that the tensioning roller is centrally aligned and parallel to the rear of the belt.
- Tighten the hexagon nut (B) of the v-belt lever so that the v-ribbed belt on the untensioned side can be extruded by 4 mm, given a pressure of 100 N.
- Reassemble the drive protection (A).









#### 8.9. Hydraulic system

Check hydraulic lines at regular intervals for damage and aging. Change when necessary.



The Super 600 lawn sweeper can not be used with BIO oils.

Only persons expressly trained for this purpose may carry out maintenance on the hydraulic system.

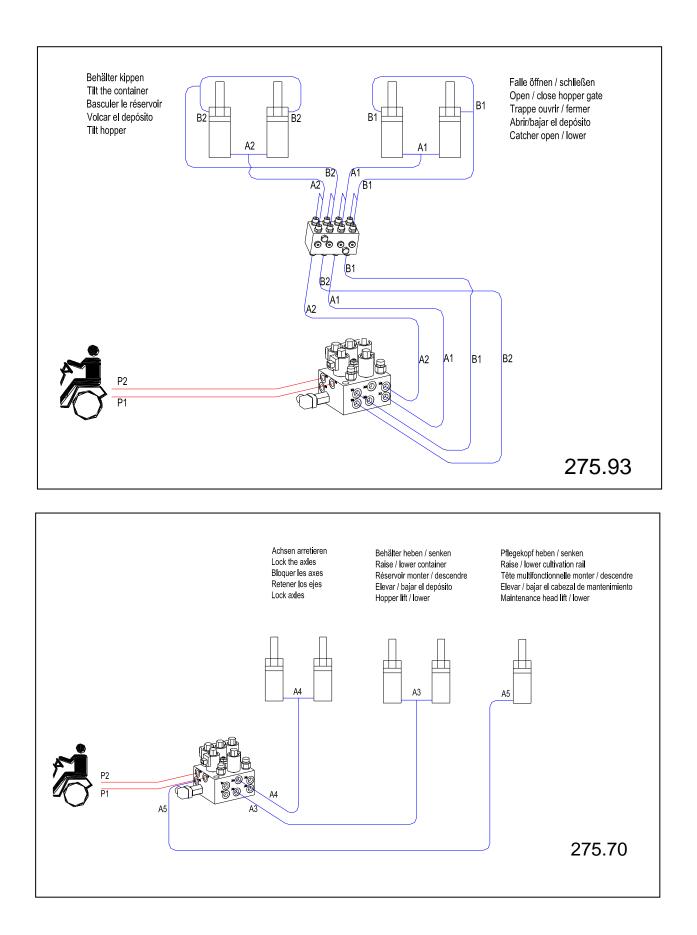
High-pressure fluids which leak under pressure can penetrate the skin causing serious injury. For this reason, always depressurize the system before disconnecting lines.

Tighten all connections before applying pressure.

Hydraulic oil escaping from a small opening is hardly visible. A piece of cardboard should therefore be used when looking for leaks. Protect hands and body.

If a fluid penetrates the skin, it must be removed immediately by a doctor who is familiar with such injuries; otherwise serious infections could result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.

## 8.10. Hydraulic connection diagram



# 8.11. Tool replacement on multifunction sweeper head



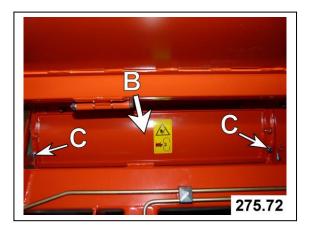
## ATTENTION:

Only replace tools when the machine is connected to the tractor. The tractor must be switched off and secured against unintentional activation.

Close the safety values on both telescopic cylinders in order to secure the container against unintentional lowering.

- Remove and set aside the cardan shaft on the tractor.
- Fully lift the container.
- Close safety valves (A) on left and right (without illustration) on both telescopic cylinders.
- Fully lift the multifunction sweeper head and secure against lowering.
- Switch off the control unit and bring the hydraulic control lever of the tractor to 0-position, in order to secure the machine against unintentional movement.
- Loosen 2 screws (C) in each case at both service flaps (B) and remove together with locking rings and washers.
- Open both service flaps (B) and engage.



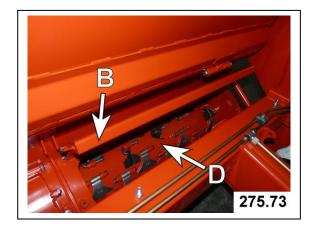


# 8.11. Tool replacement on multifunction sweeper head

#### NOTE

The following chapter "Tool division" describes possible tool divisions. The figures show a top view through service flaps (B) on tool drum (D) of the multifunction sweeper head.

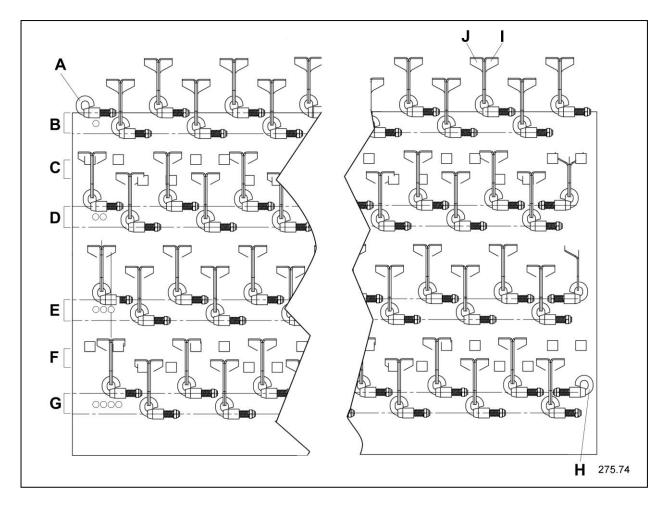
- After tool replacement ensure that all loose parts, in particular all old tools, have been removed from tool drum (D).
- Close both service flaps (B) and in each case tighten using two screws (C), retaining washers and washers.
- Open safety valves (A) on left and right (without illustration) on both telescopic cylinders.
- Switch on the control unit and adjust.
- Lower the container.



#### 8.12.1. Tool division

Flail blade

- Flail mowing, fully fitted (100 %)
- Collecting

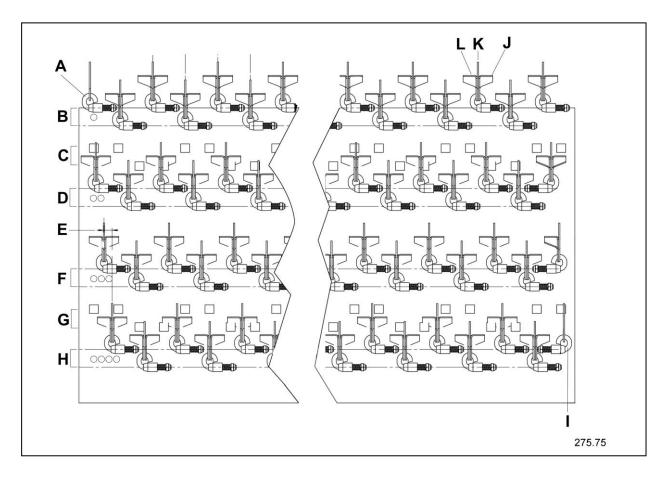


- A First and outer tool bracket, left side (not equipped)
- B Double row 1
- C Wind paddle double row (not shown)
- D Double row 2
- E Double row 3
- F Wind paddle double row (not shown)

- G Double row 4
- H Last and outer tool bracket, right side (not equipped)
- I Cutting blade long, right, Article number 1230374 (82 pieces)
- J Cutting blade long, left, Article number 1230375 (82 pieces)

#### 8.12.2. Tool division

- Verticutting with a 19 mm interval
- Verticutting with a 19 mm interval and simultaneous mowing
- Collecting

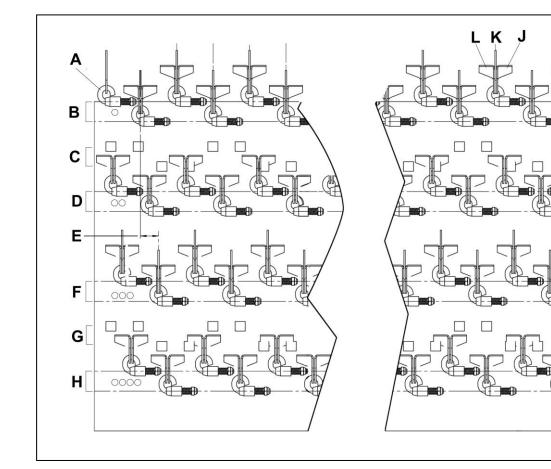


- A First and outer tool bracket, left side (without cutting blades)
- B Double row 1
- C Wind paddle double row (not shown)
- D Double row 2
- E Interval 19 mm
- F Double row 3
- G Wind paddle double row (not shown)

- H Double row 4
- I First and outer tool
   bracket, right side
   (without cutting blades)
- J Cutting blade short, right, Article number 1230376 (82 pieces)
- K Verticutting knife, Article number 1230370 (84 pieces)
- L Cutting blade short, left, Article number 1230377 (82 pieces)

### 8.12.3. Tool division

- Verticutting with a 38 mm interval
- Verticutting with a 38 mm interval and simultaneous mowing
- Collecting



- A First and outer tool bracket, left side (without cutting blades)
- B Double row 1
- C Wind paddle double row (not shown)
- D Double row 2 (only cutting blades)
- E Interval 38 mm
- F Double row 3
- G Wind paddle double row (not shown)

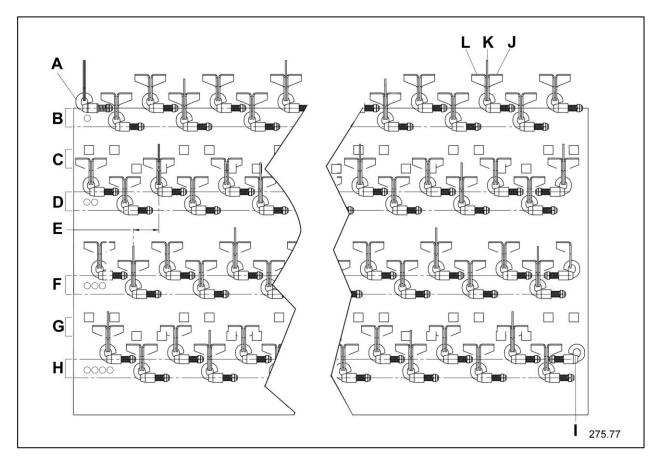
H Double row 4 (only cutting blades)

275.76

- I Last and outer tool
   bracket, right side
   (not equipped)
- J Cutting blade short, right, Article number 1230376 (82 pieces)
- K Verticutting knife, Article number 1230370 (42 pieces)
- L Cutting blade short, left, Article number 1230377 (82 pieces)

#### 8.12.4. Tool division

- Verticutting with a 57 mm interval
- Verticutting with a 57 mm interval and simultaneous mowing
- Collecting



- A First and outer tool bracket, left side (without cutting blades)
- B Double row 1
- C Wind paddle double row (not shown)
- D Double row 2
- E Interval 57 mm
- F Double row 3
- G Wind paddle double row (not shown)

- H Double row 4
- I Last and outer tool
   bracket, right side
   (not equipped)
- J Cutting blade short, right, Article number 1230376 (82 pieces)
- K Verticutting knife, Article number 1230370 (28 pieces)
- L Cutting blade short, left, Article number 1230377 (82 pieces)

#### 8.13. Wheels and Tyres

Regularly check the tyre pressure: **200 kPa** 



#### ATTENTION:

Serious or fatal injuries can be caused by the explosion-type bursting of the tyres and by the rim parts.

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

Always adhere to the recommended tyre pressure. Never inflate the tyres over the recommended pressure. Do not heat the wheels or tyres or carry out welding on them. Heating the tyres can lead to explosion-type tyre bursts as the pressure in the tyre thereby becomes very high. Welding can lead to deformations or damage of the wheel.

When inflating the tyres, select a filling connection with a safety clip and an extension hose with sufficient length so that you can stand to one side when inflating the tyres. Never stand in front of or on the tyre. If available, use a safety cage.

Check wheels and tyres daily for low pressure, slits, bulges, damaged rims, missing wheel bolts or -nuts.

### 8.14. Disassembly/Disposal



## ATTENTION:

Proceed with caution when disassembling the machine. Please refer to the chapter "Safety measures" and local safety regulations.

Dangers are:

- residual pressure in lines and components
- heavy parts that could fall after disassembly
- sharp edges
- crushing if machine topples

#### **Disassembly for disposal**

- Place the machine on firm ground.
- Drain the hydraulic oil and collect it in a suitable vessel.
- Disassemble the machine from top to bottom.

#### INFORMATION

Regulations and laws concerning the disposal of hazardous substances and pollutants must be observed in all cases. Familiarize yourself completely with the procedure for disposal.

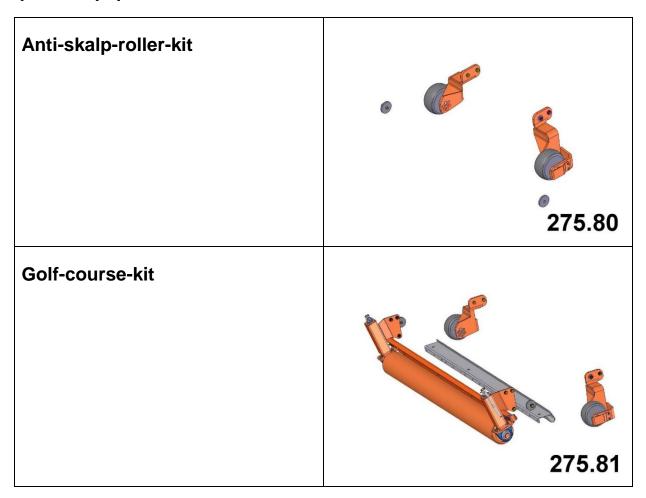
# 8.15. Unauthorized conversion and spare part manufacture

- Only convert or change the machine with the express permission of the manufacturer!
- The use of original parts and accessories authorized by the manufacturer is in the interest of your safety. Using parts not released by the manufacturer can have a negative impact on the properties of the machine. In this case, the manufacturer will assume no responsibility for the resulting consequences.

## 9.1. Scope of Delivery

- Lawn maintenance machine Super 600
- Attachment components for drawgear
- Connection parts for power supply
- Control unit; suitable suction cup holder; incl. suction cup adapter and fixing screws
- PTO-shaft cpl.
- Operating instructions, transfer declaration with guarantee card.

## 9.2. Special equipment



## 9.0. Equipment

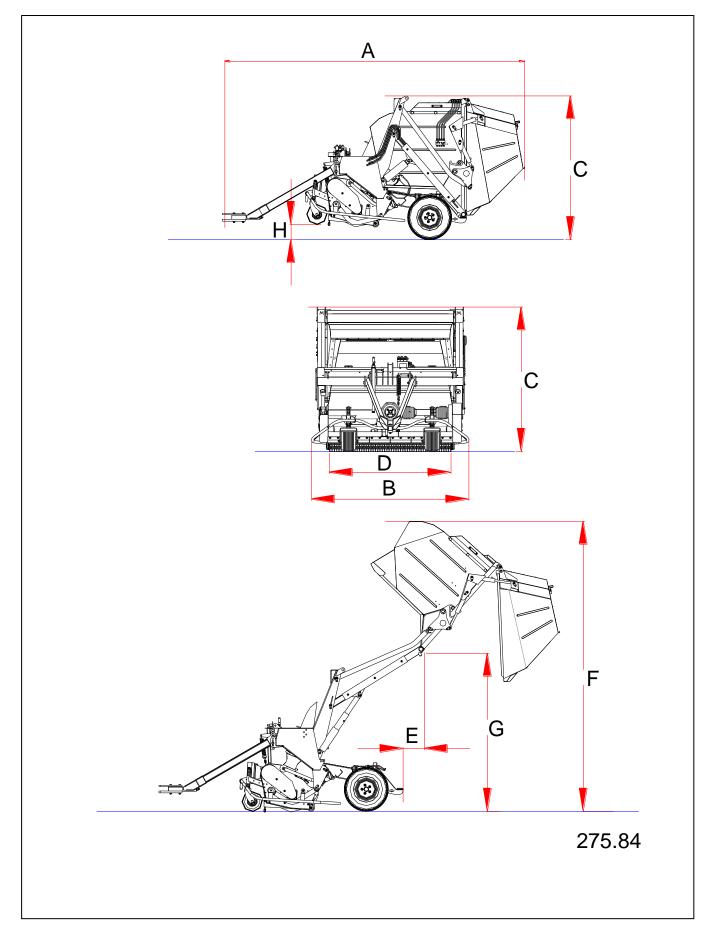
## 9.2. Special equipment

Super-contour-kit	المعالم ا 329.82
Core crusher-kit	275.83
Lighting system	329.94

## 10.1. Technical Data

A Machine length       mm       3940         B Machine width       mm       2070         C Machine height       mm       1890         D Working width       mm       1600         E Projection with elevated container       mm       280         F Max. total height with raised container       mm       280         G Lower edge of the completely raised container       mm       280         H Ground clearance when driving in road traffic with raised multi-cultivation rail       mm       180         1 Max. drive speed       1/min.       540         32 Working revolution speed multifunction head       1/min.       2600         3 Min. power required for tractor       KW (PS)       38 (50)         4 Min. hydraulic operating pressure       bar       250         6 Operating speed       km/h       3 - 6         7       8 Container volume       litre       4500         9				
C       Machine height       mm       1890         D       Working width       mm       1600         E       Projection with elevated container       mm       280         F       Max. total height with raised container       mm       3680         G       Lower edge of the completely raised container       mm       3680         F       Ground clearance when driving in road traffic with mm       180       raised multi-cultivation rail         Min       Dever edge of the completely raised container       mm       180         1       Max. drive speed       1/min.       540         32       Working revolution speed multifunction head       1/min.       2600         3       Min. power required for tractor       KW (PS)       38 (S0)         4       Min. hydraulic operating pressure       bar       175         5       Max. hydraulic operating pressure       bar       250         6       Operating speed       km/h       3 - 6         7       Tyre equipment at front       11x7-4 AM       11         11       Air pressure, front tyres       bar       2         12       Tyre equipment at back       23x10.50-6PR       13         13       Air pressure, f	Α	Machine length	mm	3940
DWorking widthmm1600EProjection with elevated containermm280FMax. total height with raised containermm3680GLower edge of the completely raised containermm2050HGround clearance when driving in road traffic with raised multi-cultivation railmm1801Max. drive speed1/min.54032Working revolution speed multifunction head1/min.54032Working revolution speed multifunction head1/min.54034Min. power required for tractorKW (PS)38 (50)4Min. hydraulic operating pressurebar1755Max. hydraulic operating pressurebar2506Operating speedkm/h3 - 67	В	Machine width	mm	2070
E       Projection with elevated container       mm       280         F       Max. total height with raised container       mm       3680         G       Lower edge of the completely raised container       mm       2050         H       Ground clearance when driving in road traffic with mm       nm       180         raised multi-cultivation rail       mm       1         1       Max. drive speed       1/min.       540         32       Working revolution speed multifunction head       1/min.       2600         3       Min. power required for tractor       KW (PS)       38 (50)         4       Min. hydraulic operating pressure       bar       175         5       Max. hydraulic operating pressure       bar       250         6       Operating speed       km/h       3 - 6         7	С	Machine height	mm	1890
F       Max. total height with raised container       mm       3680         G       Lower edge of the completely raised container       mm       2050         H       Ground clearance when driving in road traffic with raised multi-cultivation rail       mm       180         1       Max. drive speed       1/min.       540         32       Working revolution speed multifunction head       1/min.       2600         3       Min. power required for tractor       KW (PS)       38 (50)         4       Min. hydraulic operating pressure       bar       175         5       Max. hydraulic operating pressure       bar       250         6       Operating speed       km/h       3 - 6         7       7       7         8       Container volume       litre       4500       9         10       Tyre equipment at front       11x7-4 AM       11       Air pressure, front tyres       bar       2         14       Meights:       1       1       1       1       1       1       1       1       1       2       3       1       1       1       1       1       1       1       1       1       1       1       1       1       1	D	Working width	mm	1600
GLower edge of the completely raised containermm2050HGround clearance when driving in road traffic with raised multi-cultivation railmm1801Max. drive speed1/min.54032Working revolution speed multifunction head1/min.26003Min. power required for tractorKW (PS)38 (50)4Min. hydraulic operating pressurebar1755Max. hydraulic operating pressurebar2506Operating speedkm/h3 - 67778Container volumelitre45009910Tyre equipment at front11x7-4 AM11Air pressure, front tyresbar212Tyre equipment at back23x10.50-6PR13Air pressure, back tyresbar2141491215Weights:1416Net weightkg147517Option Anti-scalp-roller-kitkg+ 1218Option Super-contour-kitkg+ 1320Option Super-Contour-Kitkg+ 1321Option Lighting systemkg+ 1322Max. permissible payloadkg25023Permissible drawbar loadkg25024Permissible total weightkg250	Ε	Projection with elevated container	mm	280
H       Ground clearance when driving in road traffic with raised multi-cultivation rail       mm       180         1       Max. drive speed       1/min.       540         32       Working revolution speed multifunction head       1/min.       2600         3       Min. power required for tractor       KW (PS)       38 (50)         4       Min. hydraulic operating pressure       bar       175         5       Max. hydraulic operating pressure       bar       250         6       Operating speed       km/h       3 - 6         7       7       7       7         8       Container volume       litre       4500         9       9       9       11       11x7-4 AM         11       Air pressure, front tyres       bar       2         12       Tyre equipment at back       23x10.50-6PR       13         13       Air pressure, back tyres       bar       2         14       15       Weights:       12       14         15       Weights:       kg       14         16       Net weight       kg       14         19       Option Anti-scalp-roller-kit       kg       +14         19       Option Super	F	Max. total height with raised container	mm	3680
raised multi-cultivation rail         mm           1         Max. drive speed         1/min.         540           32         Working revolution speed multifunction head         1/min.         2600           3         Min. power required for tractor         KW (PS)         38 (50)           4         Min. hydraulic operating pressure         bar         175           5         Max. hydraulic operating pressure         bar         250           6         Operating speed         km/h         3 - 6           7         7         7         7           8         Container volume         litre         4500           9         7         7         7           10         Tyre equipment at front         11x7-4 AM           11         Air pressure, front tyres         bar         2           12         Tyre equipment at back         23x10.50-6PR         1           13         Air pressure, back tyres         bar         2           14         1         1         Kg         14           15         Weights:         1         kg         114           16         Net weight         kg         14           19         Optio	G	Lower edge of the completely raised container	mm	2050
1         Max. drive speed         1/min.         540           32         Working revolution speed multifunction head         1/min.         2600           3         Min. power required for tractor         KW (PS)         38 (50)           4         Min. hydraulic operating pressure         bar         175           5         Max. hydraulic operating pressure         bar         250           6         Operating speed         km/h         3 - 6           7         7         7         7           8         Container volume         litre         4500           9         10         Tyre equipment at front         11x7-4 AM           11         Air pressure, front tyres         bar         2           12         Tyre equipment at back         23x10.50-6PR           13         Air pressure, back tyres         bar         2           14         11         11         Kg         14           15         Weights:         11         Kg         14           16         Net weight         kg         414           19         Option         Super-contour-kit         kg         +14           19         Option         Super-contour-Kit <th>н</th> <th></th> <th>mm</th> <th>180</th>	н		mm	180
32         Working revolution speed multifunction head         1/min.         2600           3         Min. power required for tractor         KW (PS)         38 (50)           4         Min. hydraulic operating pressure         bar         175           5         Max. hydraulic operating pressure         bar         250           6         Operating speed         km/h         3 - 6           7         7         7         7           8         Container volume         litre         4500           9         7         7         7           10         Tyre equipment at front         11x7-4 AM           11         Air pressure, front tyres         bar         2           12         Tyre equipment at back         23x10.50-6PR           13         Air pressure, back tyres         bar         2           14         1         1         14           15         Weights:         16         Net weight         kg         114           19         Option Anti-scalp-roller-kit         kg         +114           19         Option Super-contour-kit         kg         +13           20         Option Super-Contour-Kit         kg         +13     <			mm	
3         Min. power required for tractor         KW (PS)         38 (50)           4         Min. hydraulic operating pressure         bar         175           5         Max. hydraulic operating pressure         bar         250           6         Operating speed         km/h         3 - 6           7         7         7           8         Container volume         litre         4500           9         7         7         7           10         Tyre equipment at front         11x7-4 AM         11           11         Air pressure, front tyres         bar         2           12         Tyre equipment at back         23x10.50-6PR         13           13         Air pressure, back tyres         bar         2           14         7         7         14         11           15         Weights:         11         Kg         14           15         Option Anti-scalp-roller-kit         kg         114           19         Option Super-contour-kit         kg         114           19         Option Super-Contour-Kit         kg         12           12         Max. permissible payload         kg         125	1	Max. drive speed	1/min.	540
4         Min. hydraulic operating pressure         bar         175           5         Max. hydraulic operating pressure         bar         250           6         Operating speed         km/h         3 - 6           7	32	Working revolution speed multifunction head	1/min.	2600
5         Max. hydraulic operating pressure         bar         250           6         Operating speed         km/h         3 - 6           7	3	Min. power required for tractor	KW (PS)	38 (50)
6         Operating speed         km/h         3 - 6           7	4	Min. hydraulic operating pressure	bar	175
7       8       Container volume       litre       4500         9       10       Tyre equipment at front       11x7-4 AM         11       Air pressure, front tyres       bar       2         12       Tyre equipment at back       23x10.50-6PR         13       Air pressure, back tyres       bar       2         14       15       Weights:       16         16       Net weight       kg       1475         17       Option       Anti-scalp-roller-kit       kg       +12         18       Option       Golf-course-kit       kg       +14         19       Option       Super-contour-kit       kg       + 18         20       Option       Super-Contour-Kit       kg       + 13         21       Option       Lighting system       kg       + 13         22       Max. permissible payload       kg       225         23       Permissible hubload       kg       2550         25       Permissible total weight       kg       2700	5	Max. hydraulic operating pressure	bar	250
8         Container volume         litre         4500         9         9           10         Tyre equipment at front         11x7-4 AM         11 Air pressure, front tyres         bar         2           11         Air pressure, front tyres         bar         2         12         Tyre equipment at back         23x10.50-6PR           13         Air pressure, back tyres         bar         2         14           15         Weights:         16         Net weight         kg         1475           16         Net weight         kg         1475         17         Option         Anti-scalp-roller-kit         kg         +12           18         Option         Golf-course-kit         kg         +14           19         Option         Super-contour-kit         kg         +18           20         Option         Super-Contour-Kit         kg         +13           21         Option         Lighting system         kg         113           22         Max. permissible payload         kg         225           23         Permissible drawbar load         kg         250           24         Permissible total weight         kg         2700	6	Operating speed	km/h	3 - 6
9           10         Tyre equipment at front         11x7-4 AM           11         Air pressure, front tyres         bar         2           12         Tyre equipment at back         23x10.50-6PR           13         Air pressure, back tyres         bar         2           14         15         Weights:         16           16         Net weight         kg         1475           17         Option         Anti-scalp-roller-kit         kg         +12           18         Option         Golf-course-kit         kg         +14           19         Option         Super-contour-kit         kg         +18           20         Option         Super-Contour-Kit         kg         +13           21         Option         Lighting system         kg         +13           22         Max. permissible payload         kg         1225           23         Permissible drawbar load         kg         2450           24         Permissible total weight         kg         250	7			
10       Tyre equipment at front       11x7-4 AM         11       Air pressure, front tyres       bar       2         12       Tyre equipment at back       23x10.50-6PR         13       Air pressure, back tyres       bar       2         14       15       Weights:       16         15       Weights:       17       Option Anti-scalp-roller-kit       kg       +12         18       Option Golf-course-kit       kg       +14       19       Option Super-contour-kit       kg       + 13         20       Option Super-Contour-Kit       kg       + 13       20       21       Option Lighting system       kg       + 13         22       Max. permissible payload       kg       225       23       Permissible hubload       kg       2450         24       Permissible total weight       kg       250       25       2700	8	Container volume	litre	4500
11 Air pressure, front tyresbar212 Tyre equipment at back23x10.50-6PR13 Air pressure, back tyresbar21415 Weights:16 Net weightkg147517 Option Anti-scalp-roller-kitkg+1218 Option Golf-course-kitkg+1419 Option Super-contour-kitkg+1820 Option Super-Contour-Kitkg+1321 Option Lighting systemkg+1322 Max. permissible payloadkg22523 Permissible drawbar loadkg245024 Permissible total weightkg2700	9			
12Tyre equipment at back23x10.50-6PR13Air pressure, back tyresbar21415Weights:1616Net weightkg147517Option Anti-scalp-roller-kitkg+1218Option Golf-course-kitkg+1419Option Super-contour-kitkg+1820Option Super-Contour-Kitkg+ 1321Option Lighting systemkg+ 1322Max. permissible payloadkg122523Permissible hubloadkg245024Permissible drawbar loadkg25025Permissible total weightkg2700	10	Tyre equipment at front	11x7-4 A	M
13 Air pressure, back tyresbar21415 Weights:16 Net weightkg147517 Option Anti-scalp-roller-kitkg+1218 Option Golf-course-kitkg+1419 Option Super-contour-kitkg+1820 Option Super-Contour-Kitkg+2021 Option Lighting systemkg+1322 Max. permissible payloadkg122523 Permissible hubloadkg245024 Permissible drawbar loadkg25025 Permissible total weightkg2700	11	Air pressure, front tyres	bar	2
1415Weights:16Net weight17OptionAnti-scalp-roller-kitkg18OptionGolf-course-kitkg19OptionSuper-contour-kitkg20OptionSuper-Contour-Kitkg21OptionLighting systemkg22Max. permissible payload23Permissible hubload24Permissible drawbar load25Permissible total weight25Permissible total weight	12	Tyre equipment at back	23x10.50-	6PR
15Weights:16Net weightkg17Option Anti-scalp-roller-kitkg18Option Golf-course-kitkg19Option Super-contour-kitkg20Option Super-Contour-Kitkg21Option Lighting systemkg22Max. permissible payloadkg23Permissible hubloadkg24Permissible drawbar loadkg25Permissible total weightkg	13	Air pressure, back tyres	bar	2
16Net weightkg147517OptionAnti-scalp-roller-kitkg+ 1218OptionGolf-course-kitkg+ 1419OptionSuper-contour-kitkg+ 1820OptionSuper-Contour-Kitkg+ 2021OptionLighting systemkg+ 1322Max. permissible payloadkg122523Permissible hubloadkg245024Permissible drawbar loadkg25025Permissible total weightkg2700	14			
17OptionAnti-scalp-roller-kitkg+ 1218OptionGolf-course-kitkg+ 1419OptionSuper-contour-kitkg+ 1820OptionSuper-Contour-Kitkg+ 2021OptionLighting systemkg+ 1322Max. permissible payloadkg122523Permissible hubloadkg245024Permissible drawbar loadkg25025Permissible total weightkg2700	15	Weights:		
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19OptionSuper-contour-kitkg+ 1820OptionSuper-Contour-Kitkg+ 2021OptionLighting systemkg+ 1322Max. permissible payloadkg122523Permissible hubloadkg245024Permissible drawbar loadkg25025Permissible total weightkg2700	17	Option Anti-scalp-roller-kit	kg	+ 12
20OptionSuper-Contour-Kitkg+ 2021OptionLighting systemkg+ 1322Max. permissible payloadkg122523Permissible hubloadkg245024Permissible drawbar loadkg25025Permissible total weightkg2700	18	Option Golf-course-kit	kg	+14
21OptionLighting systemkg+ 1322Max. permissible payloadkg122523Permissible hubloadkg245024Permissible drawbar loadkg25025Permissible total weightkg2700	19	Option Super-contour-kit	kg	+ 18
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23Permissible hubloadkg245024Permissible drawbar loadkg25025Permissible total weightkg2700	21	Option Lighting system	kg	+ 13
24 Permissible drawbar loadkg25025 Permissible total weightkg2700	22	Max. permissible payload	kg	1225
25 Permissible total weight kg 2700	23	Permissible hubload	kg	2450
¥	24	Permissible drawbar load	kg	250
26	25	Permissible total weight	kg	2700
	26			

## 10.1. Technical Data



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

Property Class and Head Markings		8.8	9.8 9.8 9.8	10.9 10.9	12.9 12.9 12.9 12.9 12.9
Property Class and Nut Markings	¢ ٩ ٩	$\sim$			

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

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.

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

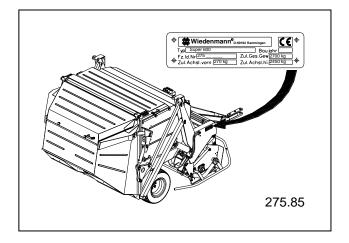
Fasteners should be replaced with the same or higher property class. If higher property class fasteners used, these should only be tightened to the strength of the original. Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent therm from failing when 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.
- \* "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phossphate and oil coatings.

### 10.3. 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. .\_.\_.\_.