Wiedenmann®

Translation of original Operating Instructions

Sweeper Combi Clean

2600.002

Ab Geräte-Id.-Nr. :

Stand : January 2010

2600 99 01

EC DECLARATION OF CONFORMITY

We

Wiedenmann GmbH
Am Bahnhof
89192 Rammingen

declare under our sole responsibility that the product

Sweeper Combi Clean
Typ 2602 / 2603 / 2604

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

Rammingen, 26.04.2010	**Horst Wiedenmann**
(Place and date of issue)	**Managing Partner**
	(Name, function and signature of authorised person)

Rammingen, 26.04.2010	**Peter Rischar**
(Place and date of issue)	**Technical office manager Authorised representative for tech. documentation**
	(Name, function and signature of authorised person)

NOTE: The declaration of conformity is no longer valid if changes are made to the machine that have not been agreed with the manufacturer.

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Declaration of conformity

We

Wiedenmann GmbH
Am Bahnhof
89192 Rammingen

hereby declare that the product

Sweeper Combi Clean
Typ 2602 / 2603 / 2604

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

Rammingen, 26.04.2010	**Karl Wiedenmann**
(Place and date of issue)	**Sales Manager**
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Introduction

READ THIS MANUAL carefully to learn how to operate and service your machine correctly Failure to do could result in personal injury or equipment damage. This manual and safety signs on your machine may also be avaiable in other languages (see yourdealer to order).

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct repacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

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

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predlivery inspection to ensure best performance.

THIS DEVICE IS DESIGNED EXCLUSIVELY for commercial use and regular application in the maintenance of greens and parks of snow and dirt removal in the maintenance of greens and parks ("SPECIFIED USE").

Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

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

THIS MACHINE SHOULD BE OPERATED, serviced and repaired only by persons familiar with all ist particular characteristics and acquainted with the relevant safety rules (accident prevention) The accident prevention regulation, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times. Any arbitrary modifications carried out on this material collection system will relieve the manufacturer of all liability for any resulting damage or injury.

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C O N T E N T S **Page**

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1.0. Safety

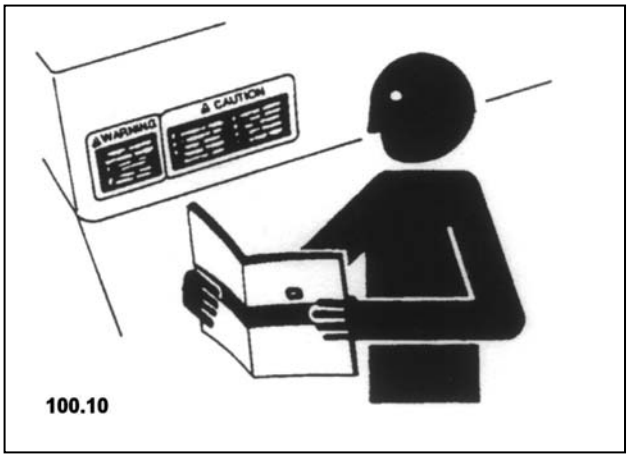
Recognize safety information

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

Follow safety instuctions

Carefully read all safety messages in this manual and on your machine safety sings. Keep safety sings in good condition. Replace missing or damaged safety sings. Be sure new equipment components and repair pqarts include the curret safety sings.Replacement safety sings are available from your dealer.



Learn how to operate the machine and to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the fuction and/or safety and afect machine life.

If you do not understand any part of this manual and need assistance, contact your dealer.

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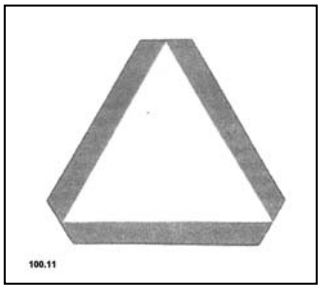
1.0. Safety

Observe road traffic regulations

Always observe llocal road traffic regulations when using public roads.



Wear protective clothing

Wear close fitting clothing and safety equipment appropriate to the job.

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

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safety requires the full attention of the operator. Deo not wear radio or music headphones while operating machine.

Stay clear of rotating drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

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Guard and shields

Keep guards and shields in place all the times. Ensure that they are in good condition and installed correctly.

Always disengage the driveline, shut off engine and remove key before removing any guards or shields.

Keep hands, feet and clothing away from moving parts.

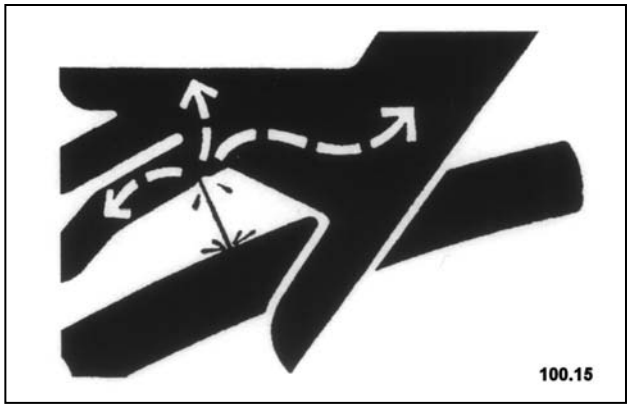
Avoid high - pressure fluids

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.



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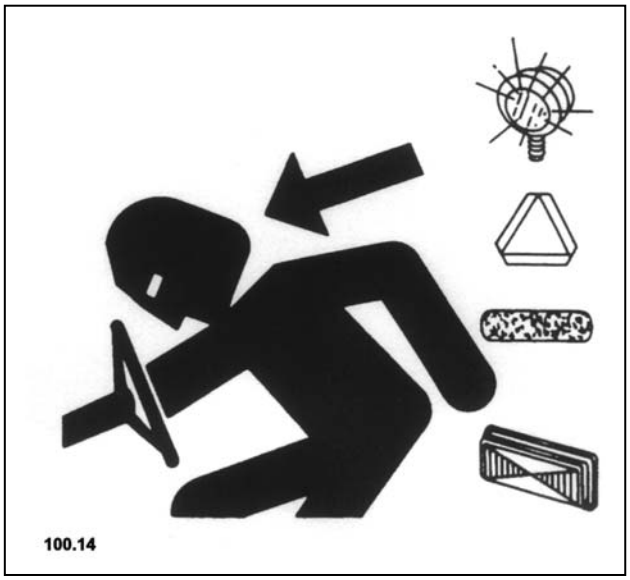
Use safety lights and devices

Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use hand signals or turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your dealer.



Avoid heating near pressurized fluid lines

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flamme area.

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Remove paint before welding or heating

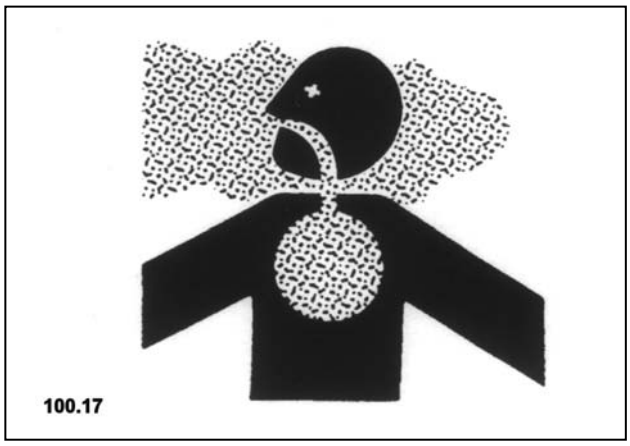
Avoid potentially toxic fumes and dust.

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

Do all work outside or in a well ventilated area. Dispose of paint and solvent properly.

Remove paint before welding or heatingh:

- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stipper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.



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1.0. Safety

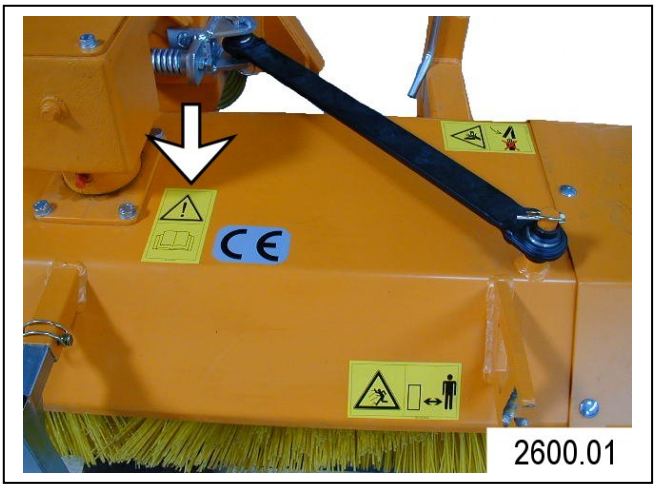
1.1. Safety Decals

Pictorial safety sings

At several important places of this machine safety sings are affixed intendent to signify potenial danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety sings, their placement on the nachine and a brief explanatory text are shown below.

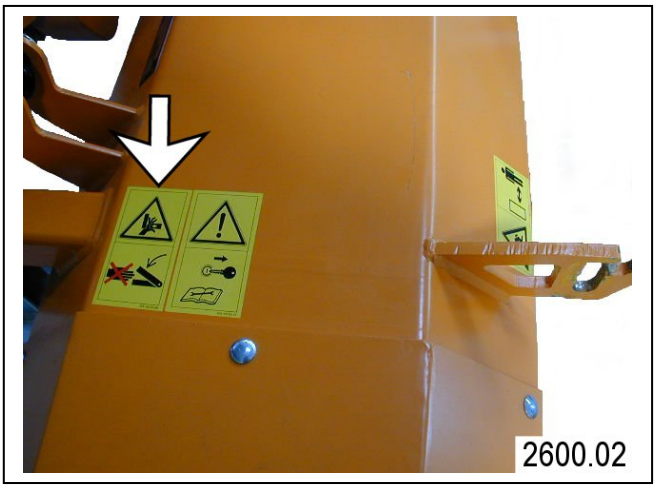
Operator' manual

This operator's manual containsall important information necessary for safe machine operation. Carefully observe all safety rules to avoid accidents.



Protectors

Never reach into areas of crushing hazard as long as any parts may move.



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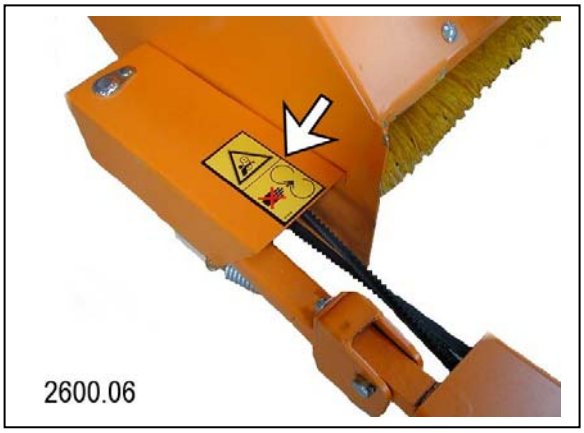
1.0. Safety

1.1. Safety Decals

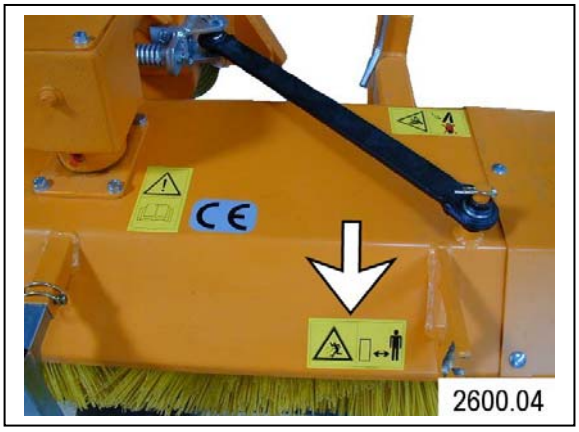
Avoiding injury from rotating blade

When the engine is running, keep a safe distance from the mowing blades.



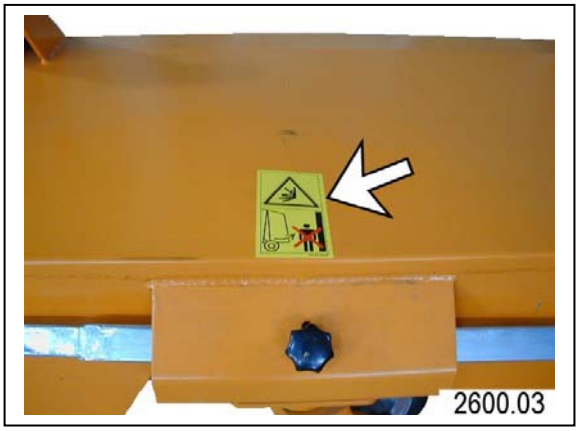
Tools

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



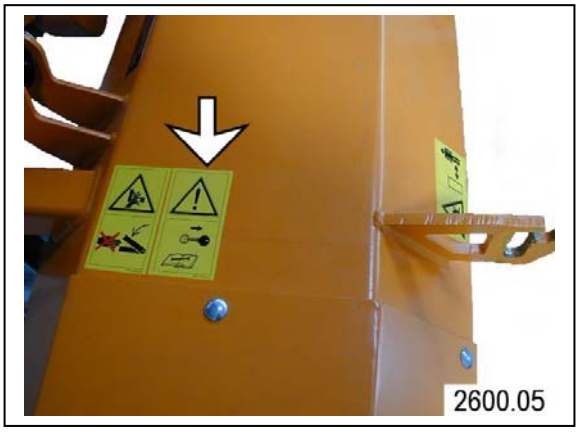
Container opening

When the tractor engine is running, stay clear of the swivel area of the container



Service

Before performing service or repair work, turn off engine and remove key.



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1.2. Safety instructions 

- Besides the information in these operating instructions, please also observe generally applicable safety and accident-prevention standards!
- Familiarise yourself with all equipment and operating elements and their functions before starting work. Ensure that all protective equipment has been properly installed. It is too late to do this when you have started work!
- During work operation, the user is responsible for the safety of third parties!
- During operation on public highways, the relevant traffic regulations must be observed!
- Before moving off, ensure that the immediate area of the machine is clear e.g. no children nearby. Ensure that your visibility is not impaired!
- Keep all persons clear of the danger zone of the machine!
- Mount the appliance only when the motor and the power take-off shaft have been switched-off.
- Use only cardan shafts prescribed for the machine which is being mounted.
- When driving the machine outside the work area, the drive should be switched off and the attachment placed in transport position.
- In event of malfunctions (vibrations) or if the machine runs over a foreign object, turn off the drive, switch off the engine (remove ignition key or spark-plug connector) and examine the machine, particularly the equipment, for damage.
- Damaged equipment must be replaced.
- When working on the tool, precautions should be taken to prevent injury (e.g. gloves).
- The driving and operational characteristics of the tractor may be influenced by the attachment of the sweeper. Always adapt your driving style to match the terrain and ground conditions.
- Before carrying out any maintenance work, the machine and the tractor engine must be switched off.
  All protective devices must be mounted before initial operation.

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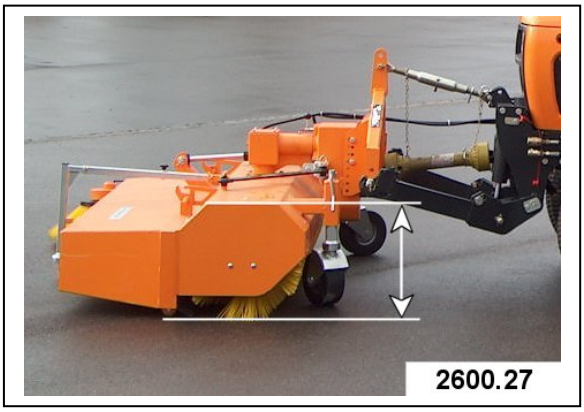
2.0. Connecting

2.1. General

Ensure that the tyre pressure of the vehicle tyres is correct.

Please observe the following when selecting the correct mounting points (for the installed parts):

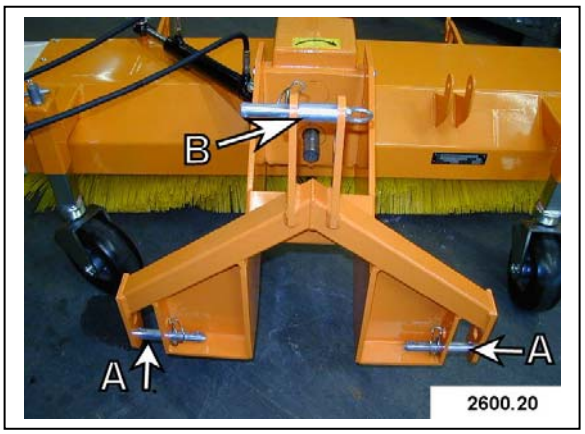
1. Lowest position of tractor - frontal lifting
2. Top position of tractor - frontal lifting
3. Clearance for the p.t.o shaft
4. Enough clearance between sweeping machine and ground in order to overcome obstacles (e.g. kerbs).
5. Installed sweeping machine must be in float position in order to be able to adapt to the unevenness of the ground.
6. The protective cover of the cylinder broom must be parallel with the ground. The setting is made via the upper guide of the tractor.



2.2. INSTALLATION WITH STANDARD THREE-POINT LINKAGE CAT.1

The installation stand is as standard equipped with category I connection components.

- Insert and secure the lower link to the installation stand using suitable pin (A).
- Insert and secure upper link with plug (B) to suitable bore hole of the installation stand.
- Mount the PTO shaft.
- Raise sweeping machine with front hydraulics.



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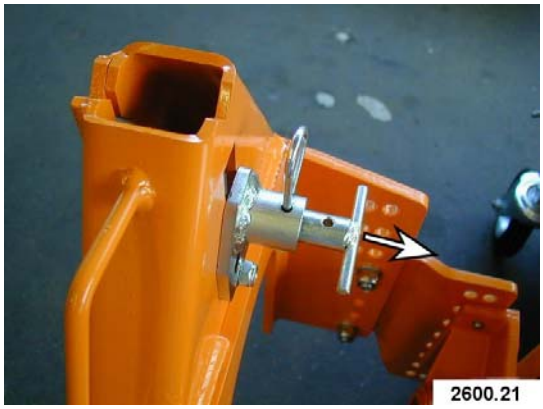
2.3. MOUNTING USING THE COUPLING TRIANGLE

Version 1

- Pull off the spring pin and pull out the locking pin up to the second bore.
- Lock position using the spring pin.
- Lower the front power lift.
- Drive the coupling half of the tractor into the coupling triangle.
- Lift the front power lift.
- Pull off the spring pin and push in the locking pin up to the first bore; if necessary adjust the height of the guide.
- Lock the position usingthe spring pin.
- Mount the propeller shaft.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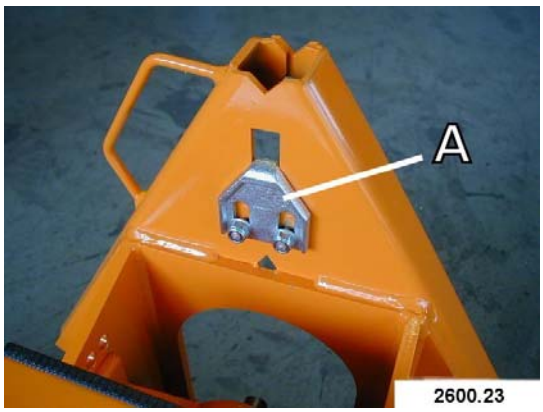
2600.22

Version 2

- Some tractors are equipped with safety hooks.
- Locking plate (A) must be adjusted to the safety hooks.



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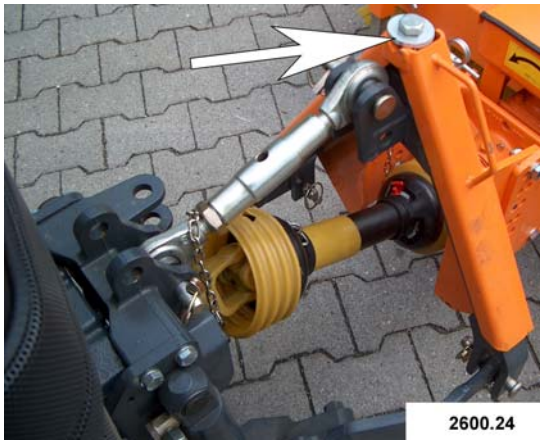
Version 3

- Raise sweeping machine with front hydraulics.
- Secure the triangular coupling against jumping out using screw and U-disc.


2600.24

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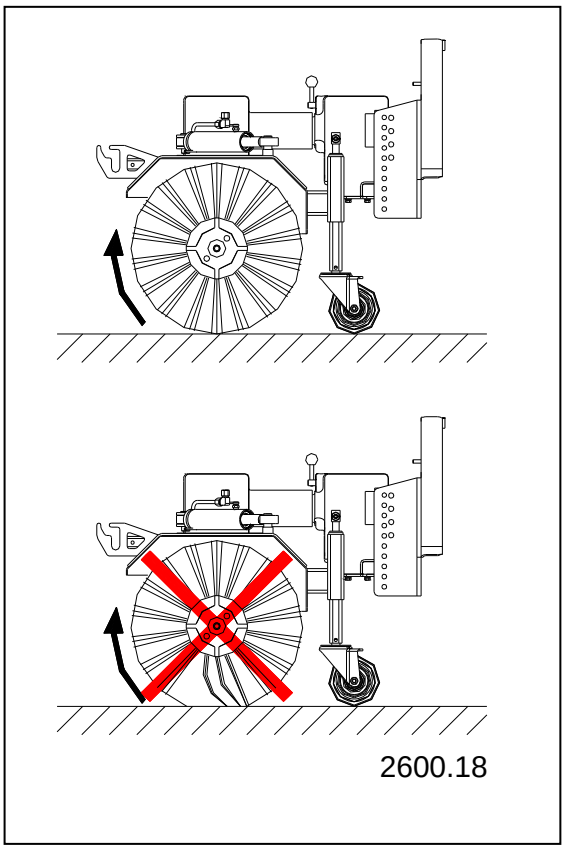
2.4. EXTENSION FOR STANDARD THREE-POINT LINKAGE AND TRIANGULAR COUPLING

This could lead to installation problems with some tractors. There is the possibility of remedying this problem with extension plates.

2.5. SETTING CYLINDER BROOM

Adjust the sweeping roller so that the bristle ends just touch the ground (see picture 2600.18).

The sweeper should be horizontal in relation to the ground when installed. If necessary, correct at the connector to the vehicle.



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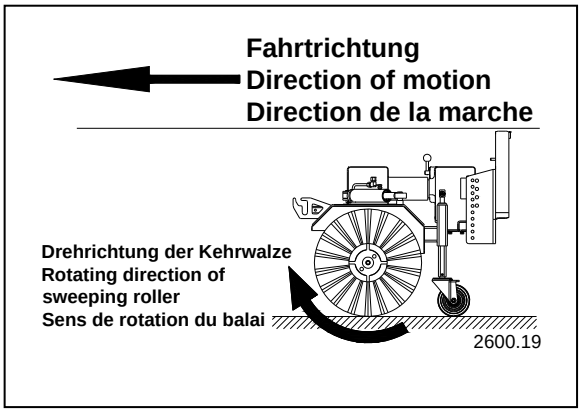
2.0. Connecting

2.6. DIRECTION OF ROTATION OF CYLINDER BROOM

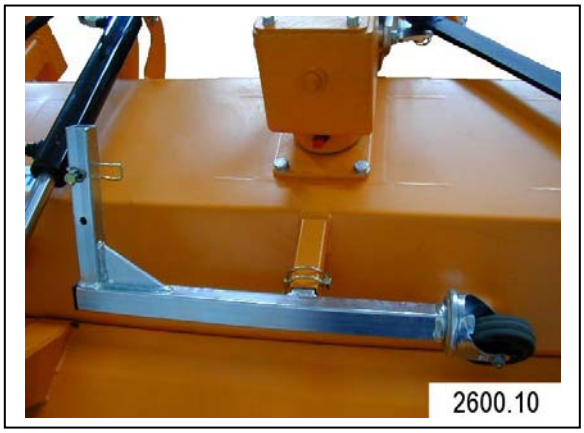
The sweeping roller must as shown on picture 2600.19.

You can set the direction of rotation yourself by turning the brushing gear 180°. To do this, the brushes must be disassembled and the four screws between the brushing gear and the swivel part must be released.



2.7. Support leg

After a successful installation, refit the park supports as shown in the diagrams.



The extension is secured at the dirt container.

2.8. CONNECTING THE HYDRAULICS

If a hydraulic swivel device is fitted, the hydraulic hoses to the vehicle must be installed so that shearing and chafing is prevented.

If necessary, secure cable binders at suitable positions. Mount quick-action couplings on the coupling fitted on the vehicle.

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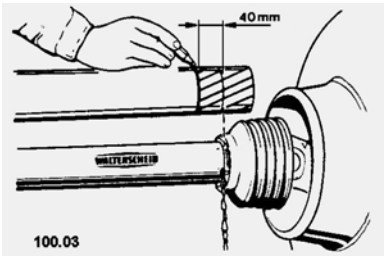
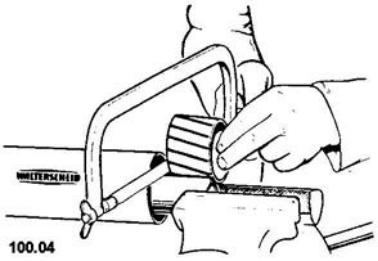
2.9. CARDAN SHAFT ADJUSTMENT

Connect the cardan shaft and check that it has the correct length in working position and in raised position; shorten if necessary. Secure cardan shaft guard with attached chain.

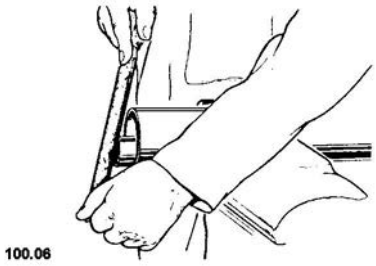


For adjusting the length hold the two shaft parts side by side within the shortest operating position and mark them out.



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.



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

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3.0. Disconneting

3.1. General

Only set the dirt sweeping machine down:

- **on a firm, level surface**
- **on the mounted park supports**
- **with the lateral broom folded up**

The dirt sweeping machine is thus secure. The cylinder broom and lateral broom are not damaged.

3.2. Support leg

The parking supports must be mounted as shown in the diagrams before the sweeping machine is lowered.

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3.0. Disconnecting

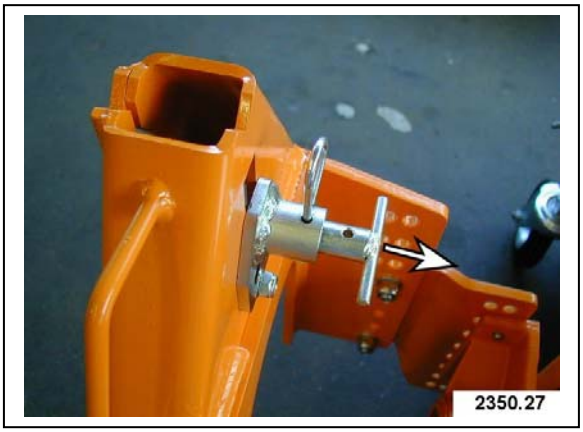
3.3. DISMANTLING WITH STANDARD THREE-POINT LINKAGE CAT.1

- Disconnect hydraulic lines and detach p.t.o shaft on tractor.
- Lower sweeping machine.
- Release tension in upper link and release from sweeping machine.
- Release lower connecting rod turnbuckles and pull out the bolt for the lower connecting rod.

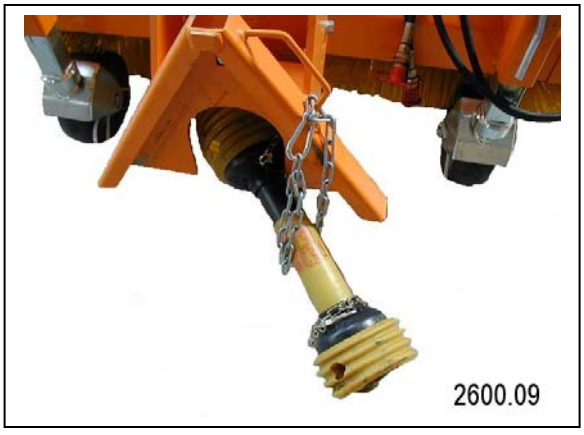
- Lay down the unrigged PTO-Shaft for storing as illustrated in picture 2600.30.

3.4. DEMOUNTING WITH COUPLING TRIANGLE

- Disconnect hydraulic lines and detach p.t.o shaft on tractor.
- Pull off the spring ring pin and pull out the locking pin up to the second bore.
- Lock position using the spring pin.
- Lower sweeping machine.



- Lay down the unrigged PTO-Shaft for storing as illustrated in picture 2600.09.



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4.0. Operating

4.1. General

ATTENTION:

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

Before switching on the p.t.o. shaft, ensure that nobody is in the danger zone of the machine and the rotating p.t.o shaft.

Besides the information in these operating instructions, please also observe generally applicable safety and accident-prevention standards!

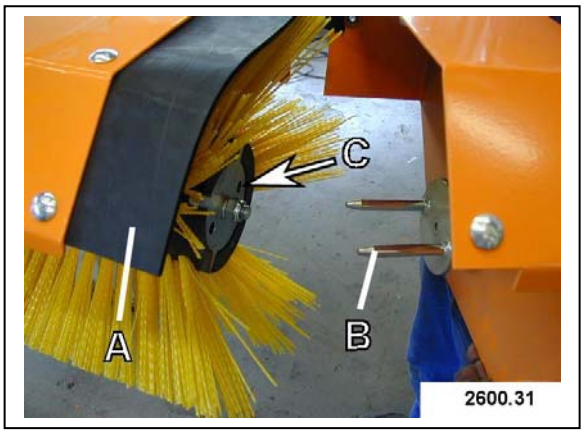
During operation on public highways, the relevant traffic regulations must be observed!

Ensure a reliable front axle load as the steerability of the tractor must be ensured (where required attach weights i.a.w. the tractor's operating instructions).

Exercise caution when working on a slope.
- RISK OF TIPPING OVER - !

4.2. INSTALLATION OF THE SIDE MOUNTING

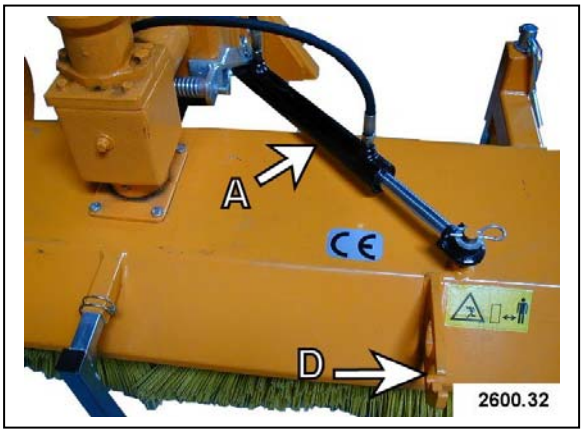
- Remove rubber tabs (A).
- To install the side parts, the attachment pins (B) must be inserted into the bore holes of fixing plate (C).
- Screw on side part to guard plate.



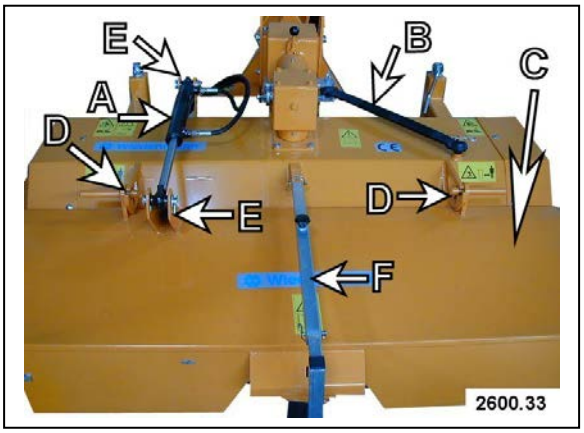
4.0. Operating

4.3. INSTALLATION OF DIRT CONTAINER

- Demount hydraulic cylinder (A).
- Install bar (B) in the place of the hydraulic cylinder. The mechanical tangential deviation of the sweeping machine can be set using the bar.



- Attach container (C) to hooks (D).
- Insert and secure hydraulic cylinder (A) to mounting links (E) of guard plate and container.
- The supplied extension (F) is for the park supports.



NOTE:
On even surfaces, the guide roll on the dirt tank must not touch the ground.

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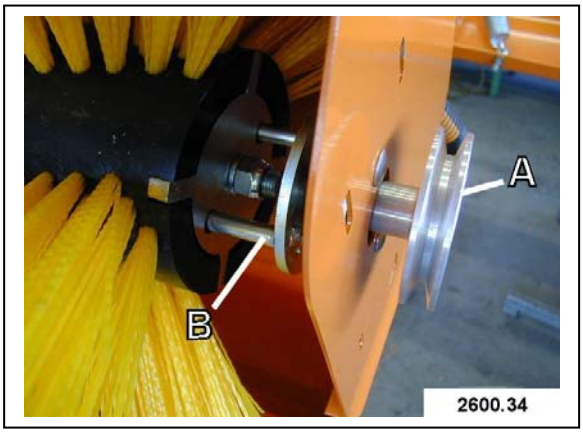
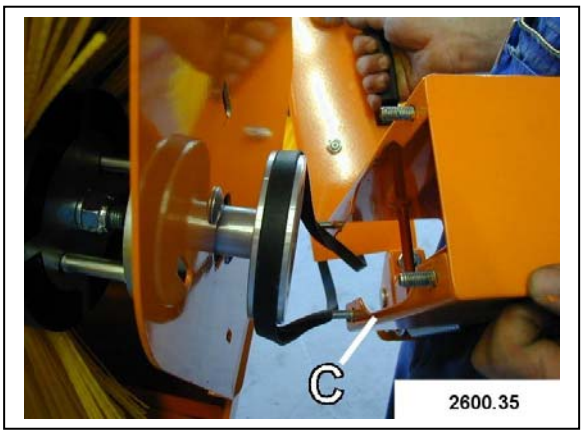
4.4. INSTALLING LATERAL BROOM

- Screw on V-belt pulley (A) to attachment (B) on the right of side part.



- Insert V-belt into the profile of the V-belt pulley.
- Insert lateral broom retainer (C) with the screws to side part (middle slot) and secure with nuts.
- Release nuts to retension. Push lateral broom retainer forward. Secure setting by tightening the nuts.



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5.0. Operation

5.1. GENERAl

ATTENTION:

During work operation, the user is responsible for the safety of third parties!

Never operate the dirt sweeping machine without the safety devices. Otherwise you will be exposing yourself and others to extreme danger.

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

Never reverse while the dirt sweeping machine is in operation. Avoid making rash steering movements when using articulated tractors.

The p.t.o. shaft:

- never switch on when engine is off
- always switch off when it is not required,
- always switch off before raising the dirt sweeping machine

5.2. WORKING WITH THE SWEEPING MACHINE

Raise the machine in the event of obstacles.

Never switch the drive under full load.

Maintain a working speed of approx. 5-6 km/h.

When raising the equipment and driving in reverse, the sweeper drive must be switched off.

Operate the machine only in float position so that the support wheels are not subject to load on uneven terrain.

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5.3. WORKING SPEED

The sweeping machine is designed with a standard transmission for 2 broom speeds.

CAUTION !
Settings must only be carried out when at a standstill.

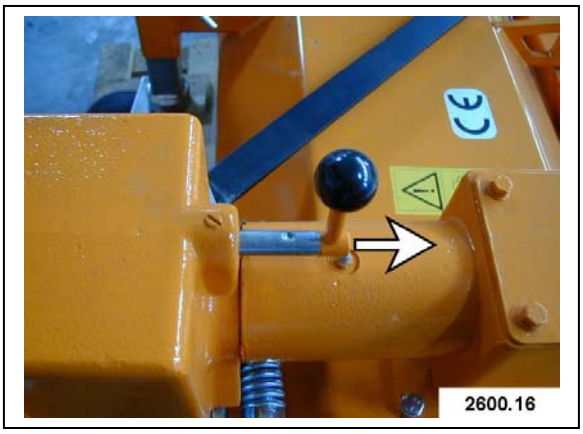
To facilitate the switching, we recommend that you slightly turn the cylinder broom.

Move the shift lever to the engaging mark.

Switch step 1

Slow speed :

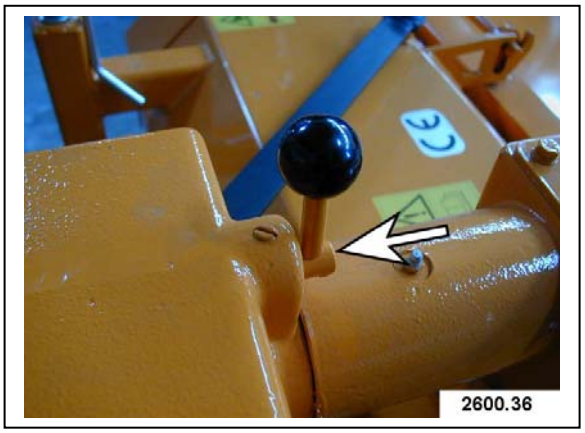
- for dirt removal without a container



Switch step 2

Quick speed :

- for sweeping snow
- for dirt removal with a container



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5.0. Operation

5.4. SWITCHING OFF LATERAL BROOM DRIVE

To switch off the lateral broom, pull handle upwards.

5.5. SWITCHING ON LATERAL BROOM DRIVE

Lower lateral broom to the front.

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6.0. Maintenance

6.1. General

ATTENTION

Carry out maintenance work only with the equipment installed. Switch off the tractor and secure it against inadvertent starting.

Check security of screw fittings on a regular basis and tighten if necessary.

Replace wear parts in good time.

Use original spare parts only.

Shut the machine down before carrying out maintenance / repair work.

Reinstall guard decays after maintenance / repair work.

6.2. CHANGING THE CYLINDER BROOM

- Release nut (A).
- Remove cover disc (B).
- Remove cylinder broom.

- Slide new cylinder broom onto shaft axle.
- Slide cover disc (B) onto shaft axle and insert into recesses ⇒ of the cylinder broom.
- To secure the cylinder broom, tighten nut (A) to a specified torque of 35 Nm.

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6.0. Maintenance

6.3. Cleaning

ATTENTION:

Clean with a hand brush or water only never with your bare hands. RISK OF INJURY !

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

Only cleaned cylinder brooms ensure optimal functioning.

6.4 Hydraulic installation

ATTENTION

- The hydraulic system is under high pressure!
- Looking for leaks use proper devices due to risk of injury!
- To work on the hydraulic system it is imperative to switch off the motor and secure the tractor against rolling away!
- Connecting hydraulic cylinders and motors, attention must be paid to the prescribed hydraulic tube’s connection!
- Exchangilng the connections the functions will be inversed (f. raising / lowering).
  – RISK OF ACCIDENT! -
- Examine periodically the hydraulic tubes conditions for damages or aging and change them if necessary!
- High-pressure fluids, (fuel, hydrailic oil) emerging under high pressure can penetrate the skin causing severe injuries. Therefore contact immediataly a physician, otherwise severe infections can be caused.
- Oils, fuels and filter must be duly cleared!
- Be careful raking hot oil off.
  – RISK OF BURNING! -

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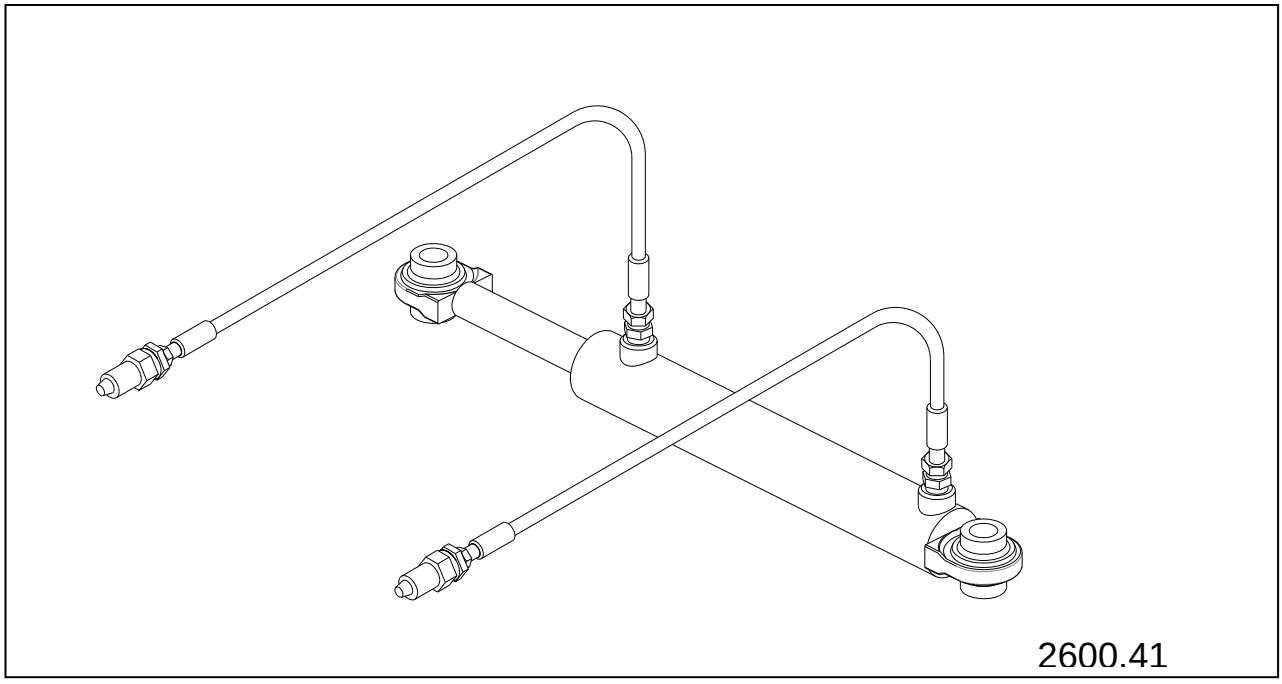
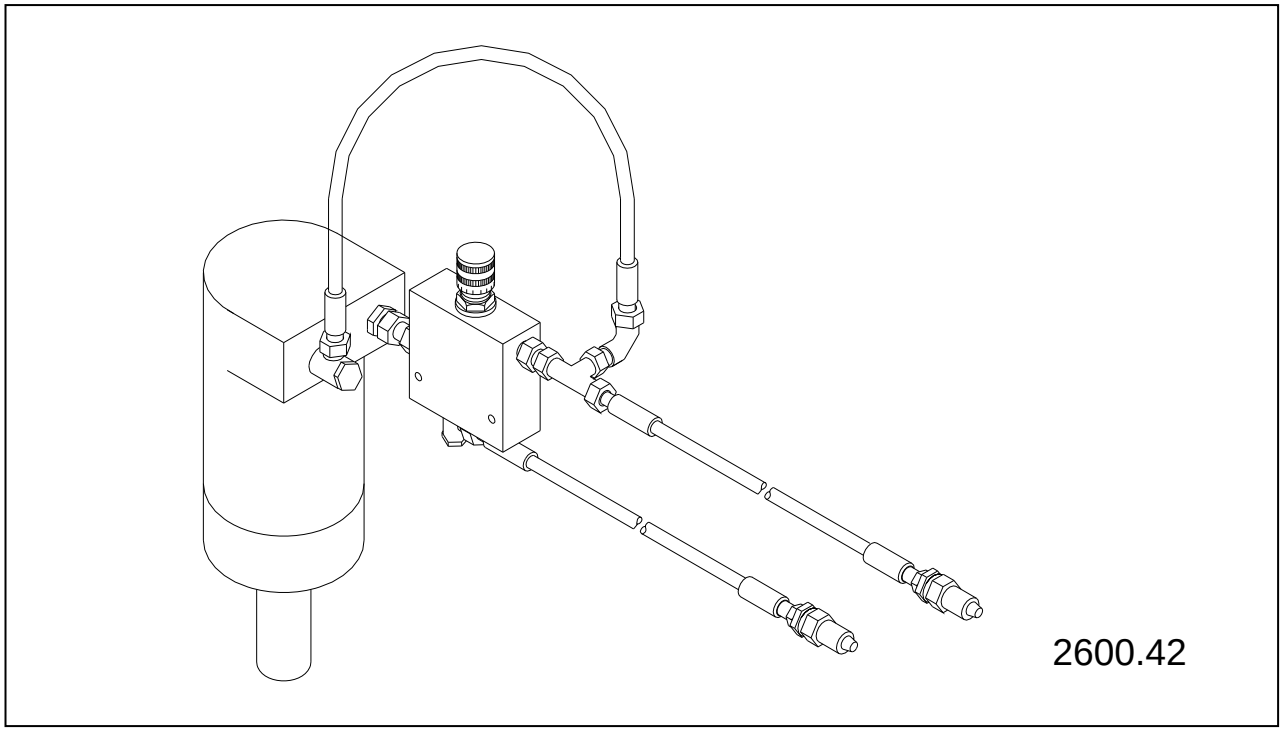
6.5. Hydraulic connection diagram

Hydraulic system for inclination
or
Hydraulic system for emptying the hopper



Lateral broom with
hydraulic drive



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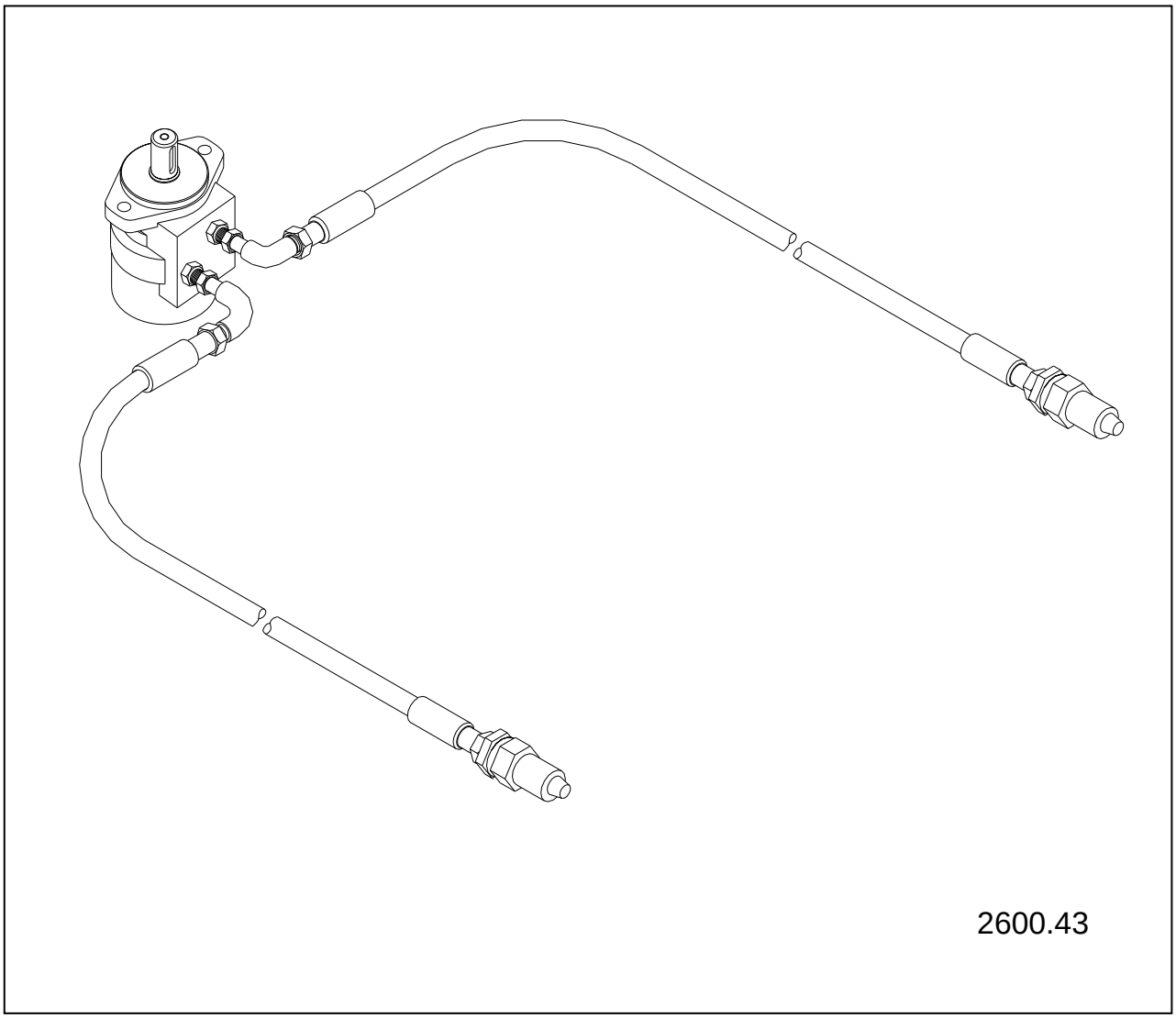
6.0. Maintenance

6.5. Hydraulic connection diagram

Basic unit with hydraulic drive



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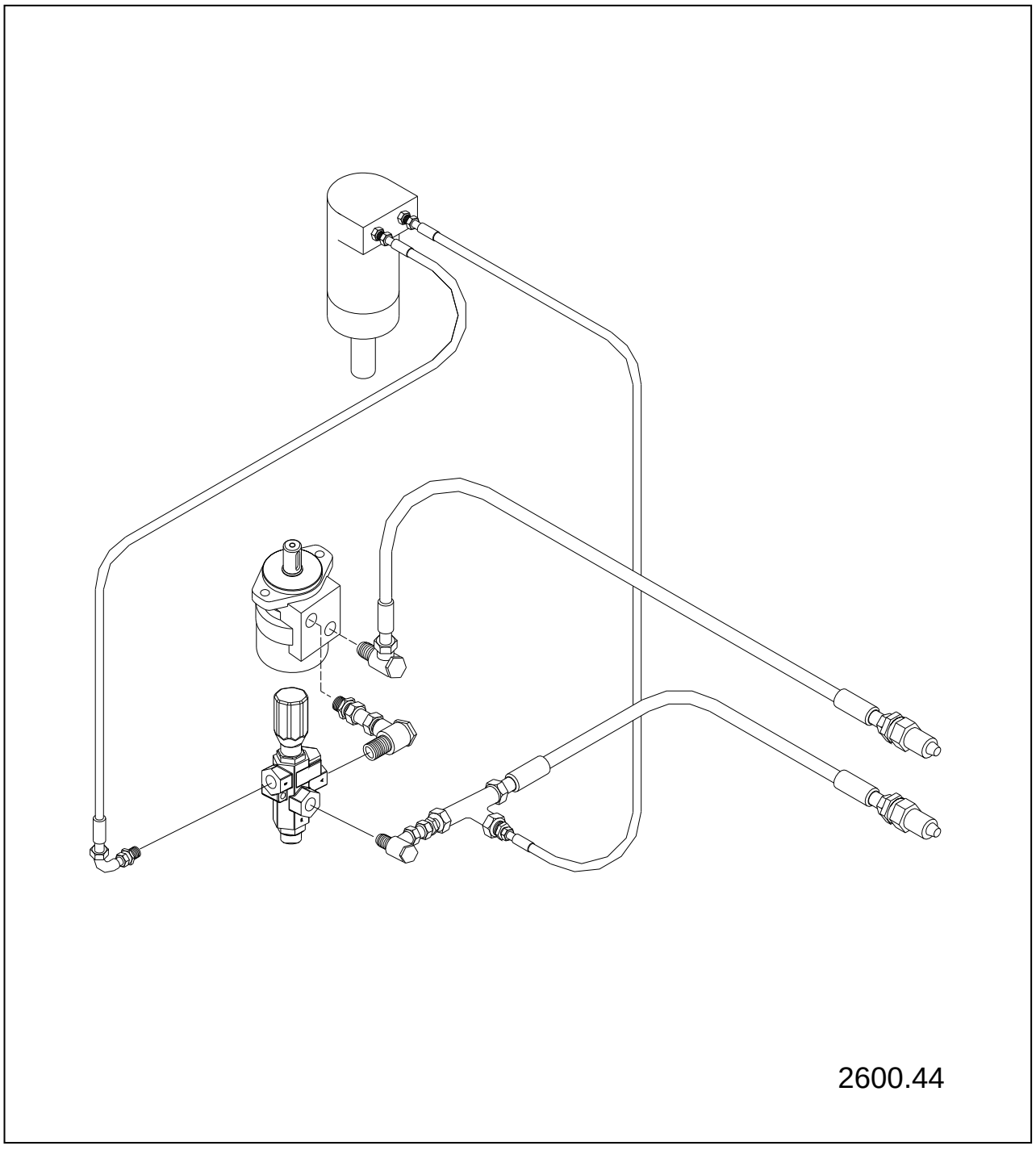
6.5. Hydraulic connection diagram

Main drive and lateral
broom drive



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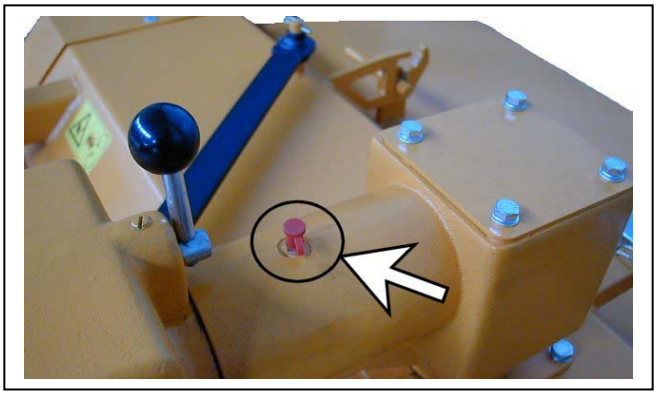
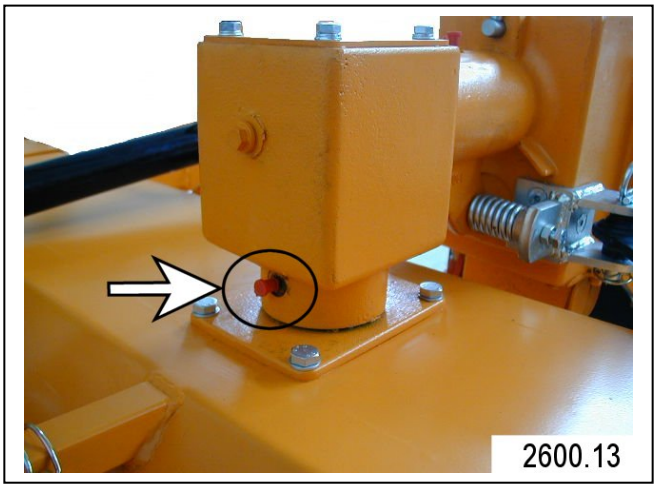
6.6. LUBRICATION POINTS

The lubrication nipple on the self-aligning bearing, swivel part, the wheel hubs and the cardan shaft must be greased after every 50 operating hours.

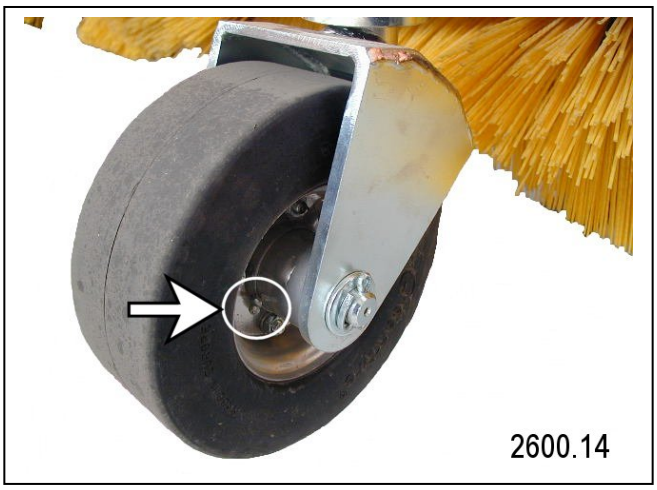
6.5.1. Gear unit top



6.5.2. Gear unit front



6.5.3. Support wheels



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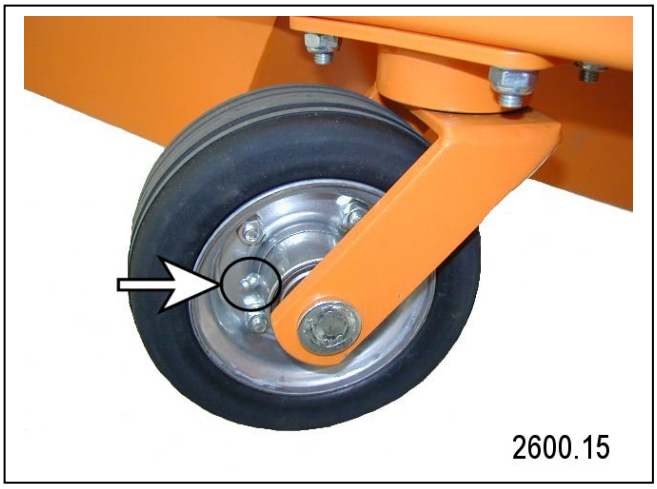
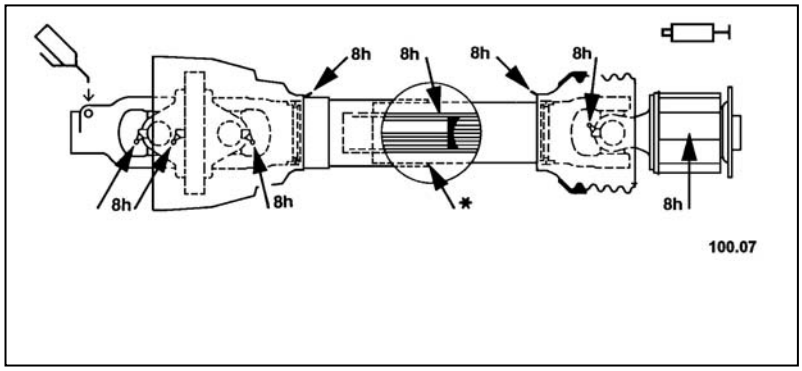
6.6. LUBRICATION POINTS

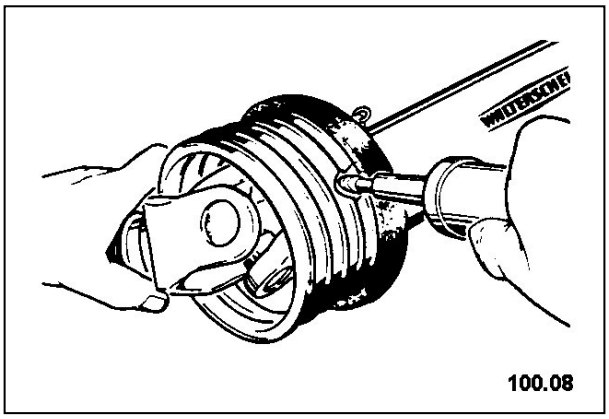
6.5.4. Guide roller



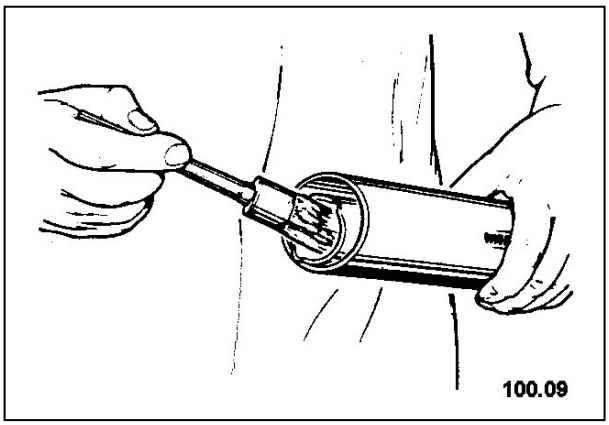
6.5.5. Cardan shaft



- Grease the inside of the outer sliding profile.



- Prior to long out-of-service periods, clean and degrease the cardan shaft.



- Clean the profile pipes and protective pipes if they are contaminated.

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6.7. Dismounting / Disposal

ATTENTION:

Take care when you dismount the sweeper. Read the chapter "Safety and Precaitions" and observe local safety regulations.

The following dangers exist:

- **Residual pressure in lines and adjusting elements,,**
- **Heavy parts might fall down after dismounting,**
- **Sharp edges,**
- **The machine might tilt and crush someone.**

Dismouting for disposal

1. Place the sweeper on stable ground.
2. Remove the oil of the gear unit and dispose of it.
3. Disassemble sweeper from the top downwards.

NOTE

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

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6.8. Unauthorized modification and spare part manufacturing

- **Modifications of the sweeper are only authorized with the permission of the manufacturer!**
- **Original spare parts and accessories authorized by the manufacturer guarantee your safety. The use of other parts might change the characteristics of the sweeper. In this case we do not accept any liability. Place contact us.**

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7.0. Device combinations

7.1. Versions

For types	2602	2603	2604
Combi Clean Neutral	**X**	**X**	**X**
Drive 1000 rpm, right	**W**	**W**	**W**
Drive 1000 rpm, left	**W**	**W**	**W**
Drive 2000 rpm, right	**W**	**W**	**W**
Drive 2000 rpm, left	**W**	**W**	**W**
Hydraulic drive	**W**	**W**	**W**
Mounted coupling triangle	**W**	**W**	**W**
Mounting with three-point linkage cat. 1	**W**	**W**	**W**
Special attachments	Upon request, dep. on vehicle type		

S = Standard	W = selective	O = optional

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8.0. Additional equipment

8.1. Scope of Delivery

- Basic unit for PTO drives
  1000 r.p.m. right or left-hand operation;
  or
  2000 r.p.m. right or left-hand operation;
  or
  hydraulic drive
- Attachment components
  triangular coupling
  or
  three-point frame
  or
  special attachment according to
  type of tractor
- PTO-shaft
- Operating instructions,
  transfer declaration with
  guarantee card.

8.2. Accessories

For types	2602	2603	2604
Side brush with V-belt drive	**O**	**O**	**O**
Side brush with hydraulic drive, controllable	**O**	**O**	**O**
Dirt container 130 l	**O**	**- - -**	**- - -**
Dirt container 150 l	**- - -**	**O**	**- - -**
Dirt container 170 l	**- - -**	**- - -**	**O**
Splash guard 1.35 m	**O**	**- - -**	**- - -**
Splash guard 1.55 m	**- - -**	**O**	**- - -**
Splash guard 1.75 m	**- - -**	**- - -**	**O**
Side mount (necessary with container and side brush)	**O**	**O**	**O**

S = Standard	W = selective	O = optional

9.0. Technical Specifications

9.1. TECHNICAL DATA TYP 2602

A	Machine width standard version	mm	1350
B	Effective width in straight position	mm	1350
C	Effective width in inclined position	mm	1150
D	Machine width with side mounting and dirt container	mm	1380
E	Device width with side brush	mm	1700
F	Effective width with side brush	mm	1700
G	min. height to middle of drive	mm	380
	max. height to middle of drive	mm	570
H	Machine height	mm	750
K	Plastic brushing roller with spiral fitting D=	mm	500
L	Standard machine length	mm	750
M	Machine length with dirt container	mm	1300
N	Machine length with lateral broom	mm	1500
	Drive with right or left rotation	rpm	1000
	Drive with right or left rotation	rpm	2000
	Hydraulic drive rpm	litres	30
	at an operating pressure of	bar	150
	Attachment to vehicles up to	KW (PS)	44 (60)
	Min. hydraulic operating pressure	bar	150
	Brushing roller speed stage 1	rpm	225
	Brushing roller speed stage 2	rpm	460
	Diameter of side brush	mm	550
	Capacity of dirt container	litres	ca. 130
	Weight:		
	without dirt container and side brush	kg	190
	Splash guard	kg	4
	Max. weight without dirt tank	kg	194
	Dirt container	kg	54
	Side mount	kg	16
	Side brush	kg	16,5
	Max. weight without additional load	kg	277
	Perm. load capacity in dirt tank	kg	117
	Max. weight with additional load	kg	394

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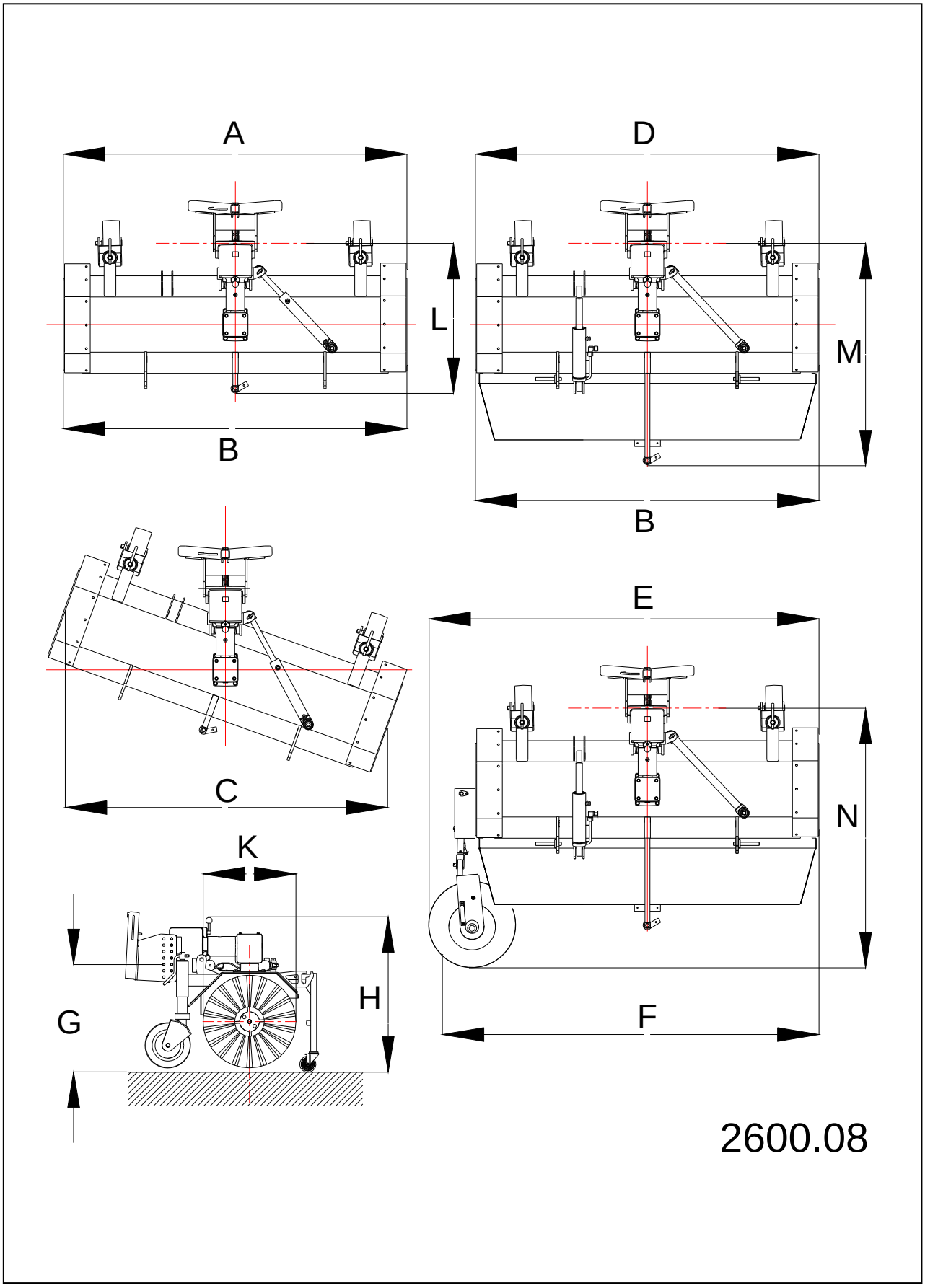
9.0. Technical Specifications

9.1. TECHNICAL DATA TYP 2602



9.0. Technical Specifications

9.2. TECHNICAL DATA TYP 2603

A	Machine width standard version	mm	1550
B	Effective width in straight position	mm	1550
C	Effective width in inclined position	mm	1350
D	Machine width with side mounting and dirt container	mm	1580
E	Device width with side brush	mm	1900
F	Effective width with side brush	mm	1900
G	min. height to middle of drive	mm	380
	max. height to middle of drive	mm	570
H	Machine height	mm	750
K	Plastic brushing roller with spiral fitting D=	mm	500
L	Standard machine length	mm	750
M	Machine length with dirt container	mm	1300
N	Machine length with lateral broom	mm	1500
	Drive with right or left rotation	rpm	1000
	Drive with right or left rotation	rpm	2000
	Hydraulic drive rpm	litres	30
	at an operating pressure of	bar	150
	Attachment to vehicles up to	KW (PS)	44 (60)
	Min. hydraulic operating pressure	bar	150
	Brushing roller speed stage 1	rpm	225
	Brushing roller speed stage 2	rpm	460
	Diameter of side brush	mm	550
	Capacity of dirt container	litres	ca. 150
	Weight:		
	without dirt container and side brush	kg	195
	Splash guard	kg	5
	Max. weight without dirt tank	kg	200
	Dirt container	kg	58
	Side mount	kg	16
	Side brush	kg	16,5
	Max. weight without additional load	kg	286
	Perm. load capacity in dirt tank	kg	134
	Max. weight with additional load	kg	420

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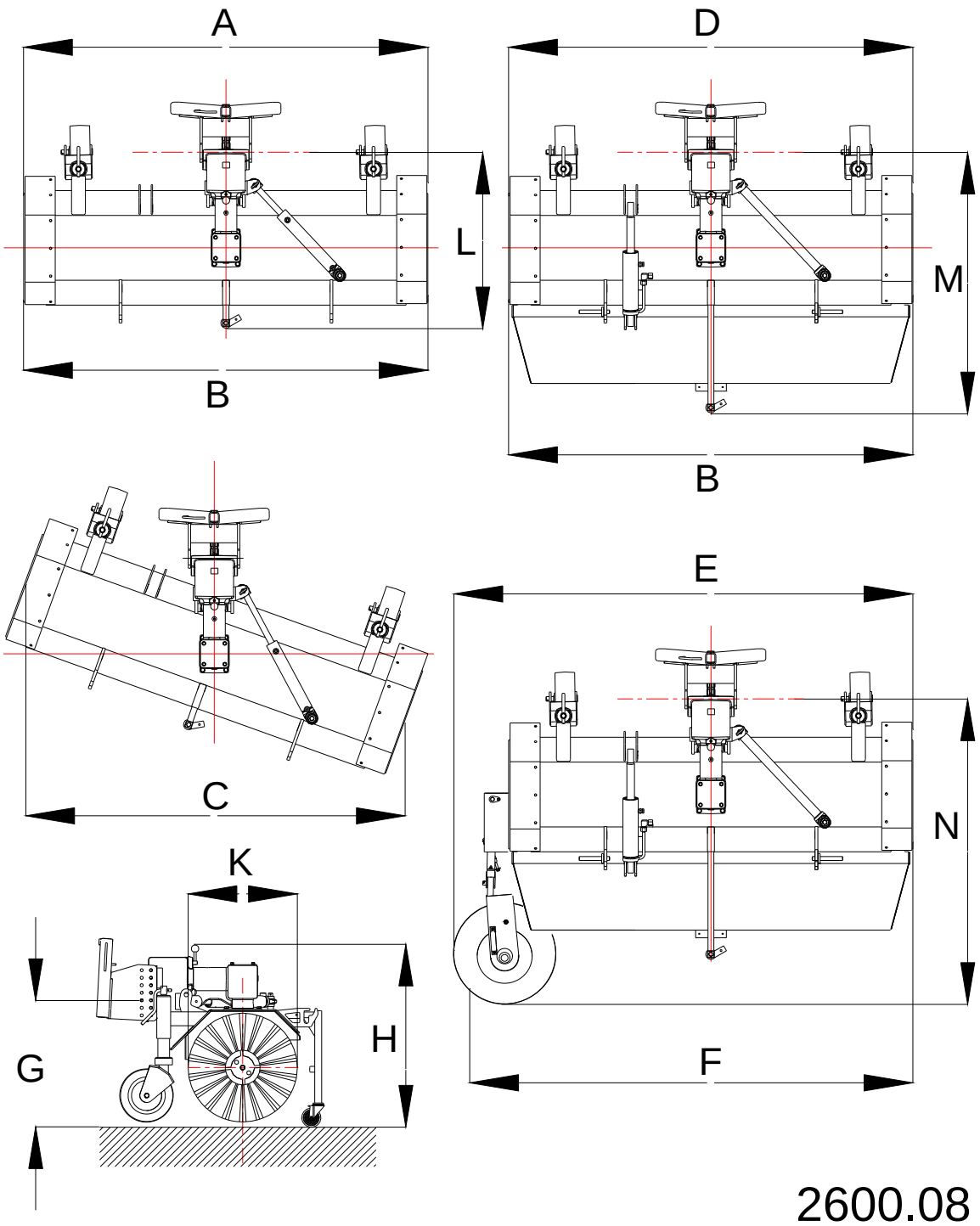
9.0. Technical Specifications

9.2. TECHNICAL DATA TYP 2603



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9.0. Technical Specifications

9.3. TECHNICAL DATA TYP 2604

A	Machine width standard version	mm	1750
B	Effective width in straight position	mm	1750
C	Effective width in inclined position	mm	1550
D	Machine width with side mounting and dirt container	mm	1780
E	Device width with side brush	mm	2100
F	Effective width with side brush	mm	2100
G	min. height to middle of drive	mm	380
	max. height to middle of drive	mm	570
H	Machine height	mm	750
K	Plastic brushing roller with spiral fitting D=	mm	500
L	Standard machine length	mm	750
M	Machine length with dirt container	mm	1300
N	Machine length with lateral broom	mm	1500
	Drive with right or left rotation	rpm	1000
	Drive with right or left rotation	rpm	2000
	Hydraulic drive rpm	litres	30
	at an operating pressure of	bar	150
	Attachment to vehicles up to	KW (PS)	44 (60)
	Min. hydraulic operating pressure	bar	150
	Brushing roller speed stage 1	rpm	225
	Brushing roller speed stage 2	rpm	460
	Diameter of side brush	mm	550
	Capacity of dirt container	litres	ca. 170
	Weight:		
	without dirt container and side brush	kg	210
	Splash guard	kg	6
	Max. weight without dirt tank	kg	216
	Dirt container	kg	65
	Side mount	kg	16
	Side brush	kg	16,5
	Max. weight without additional load	kg	307
	Perm. load capacity in dirt tank	kg	153
	Max. weight with additional load	kg	460

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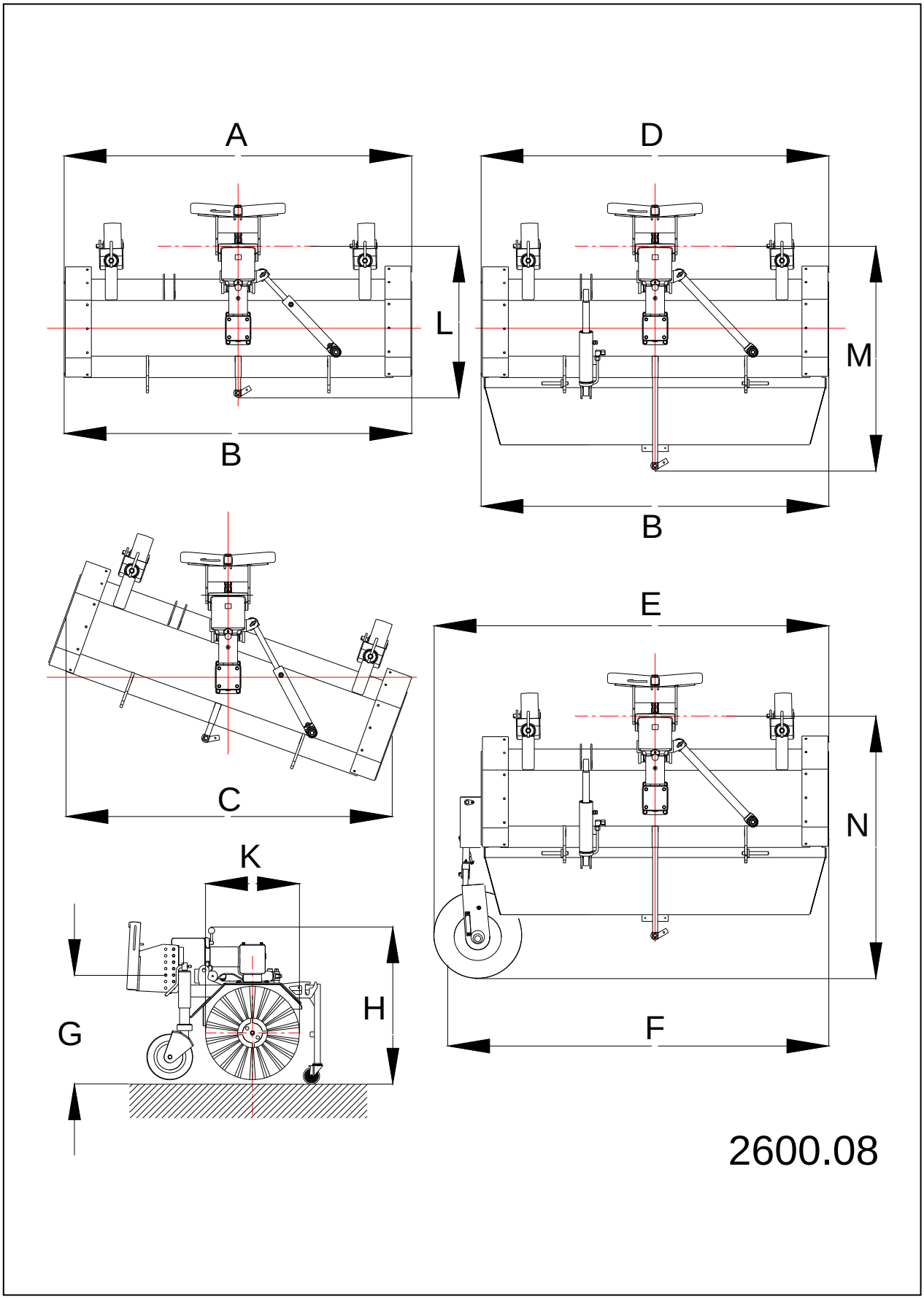
9.0. Technical Specifications

9.3. TECHNICAL DATA TYP 2604



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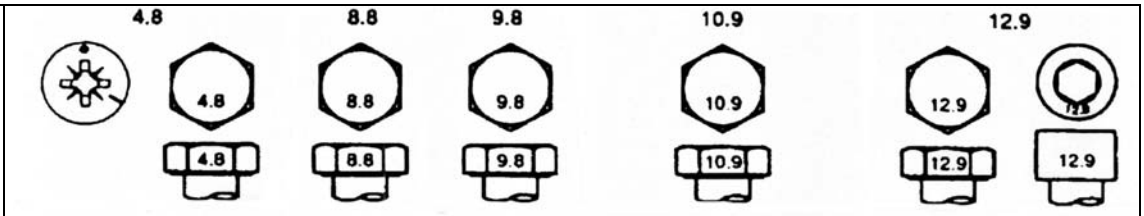
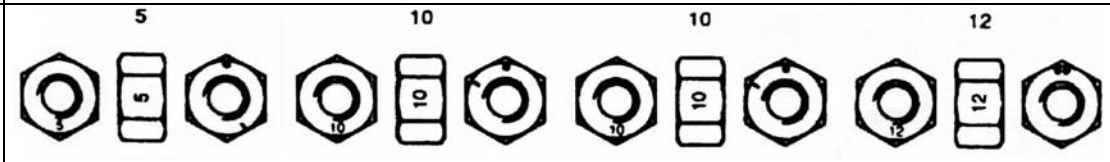
9.0. Specification

9.4. METRIC BOLT AND CAP SCREW TORQUE VALUES

Property Class and Head Markings	
Property Class and Nut Markings	

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

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

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

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

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.

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

** “Dry“ means plain or zinc platend without any lubrication.

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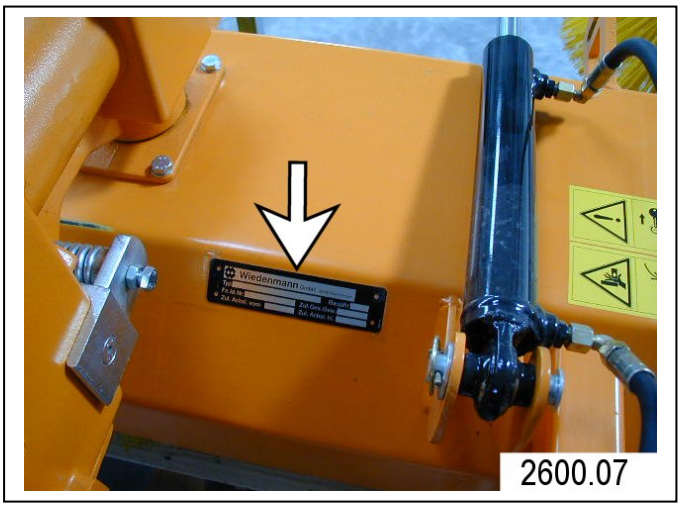
9.0. Technical Specifications

9.5. SERIAL NUMBER

Record product indentification no. (serial no.) in the space provided below. Always quote this number when ordering spare parts or making warranty claims.



Prod Ident No.: 260_ _ _ _ _ _ _ _

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