

# **CREWZER JR.**

March 2014

#### Introduction

- **READ THIS MANUAL** carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual may also be available in other languages (your dealer can order it for you).
- 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. Only use suitable parts and screws. Metric and inch fasteners may require a specific metric or inch wrench.
- **RIGHT-HAND AND LEFT-HAND** sides refer to the direction of travel when going forward.
- WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Specification or Identification Numbers section. Please ensure that all numbers are correctly recorded. to help in tracing the machine should it be stolen. Your dealer also requires this number when you order spare parts. File the identification numbers in a secure place away from the machine.
- **BEFORE OPERATING FOR THE FIRST TIME** read and understand the following: "The requirements for care of synthetic turf areas are different depending on the structure and the type of synthetic turf. Before operation of one of the turf care machines we recommend consulting the person who install the synthetic turf or the manufacturer to check the characteristics of the turf care machine."
- **BEFORE DELIVERING THIS MACHINE,** your dealer performed a pre-delivery inspection to ensure best performance.
- THIS SYNTHETIC TURF CARE MACHINE IS EXCLUSIVELY designed for standard use in synthetic turf care for cleaning and collecting surface waste such as leaves, broken fibers, paper, waste and twigs on sand or granulate-based synthetic turf areas ("INTENDED USE").

Use in any other way is considered 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. Using the equipment in accordance with the specifications also includes observance of the operating and maintenance conditions as specified by the manufacturer.

- **PREDICTABLE MISUSE AND ABUSE**. Persons and objects must not be transported with the machine attached.
- THIS MACHINE SHOULD BE OPERATED, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety requirements (accident prevention). The accident prevention regulations, all other generally recognized regulations on occupational health and safety, and the road traffic regulations must be observed at all times. Any unauthorized modifications carried out on this machine will relieve the manufacturer of all liability for any resulting damage or injury.

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# **RECOGNIZE SAFETY INFORMATION**

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

Please observe all safety instructions and the general accident prevention regulations.



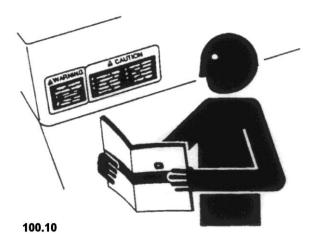
# FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and warning signs on your machine. Keep warning signs in good condition. Replace missing or damaged warning signs. Make sure that new equipment, components and replacement parts include the current warning signs. Replacement warning signs are available from your dealer.

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

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

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



# 1.0. Safety Measures

# **OBSERVING ROAD TRAFFIC REGULATIONS**

Always observe local road traffic regulations when using public roads.



# WEAR PROTECTIVE CLOTHING

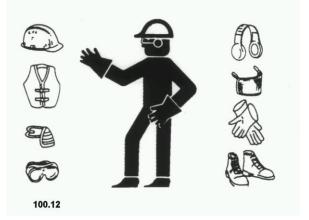
Wear tight-fitting clothing and appropriate protective equipment when working with the machine.

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

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

Operating equipment safely requires the full attention of the operator.

Do not wear radio or music headphones while operating the machine.



# **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 drive components, turn off engine and remove key before removing any guards or shields.

Keep hands, feet and clothing away from moving parts.

# 1.0. Safety Measures

### STAY CLEAR OF ROTATING DRIVE SHAFTS

Inattentiveness in the area of rotating drive shafts can have serious, or even fatal, consequences.

Keep all drive shaft guards in place at all times. Make sure rotating shields can turn freely. Wear close fitting clothing. Stop the engine and make sure PTO shaft is stopped before making adjustments, connections, or cleaning out PTO-driven equipment.



#### Avoid high-pressure fluids

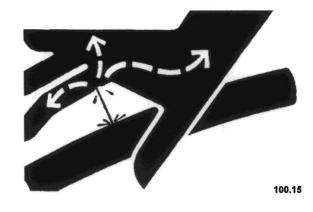
High-pressure fluids which leak under high pressure can penetrate the skin and cause serious injury.

For this reason, always depressurize the system before disconnecting lines. Tighten all connections before applying pressure.

Hydraulic oil escaping from a small leak is virtually invisible, therefore search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

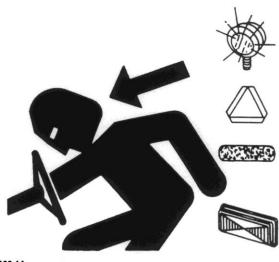
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.

Doctors unfamiliar with this type of injury should check a reliable medical reference.



# **USE SAFETY LIGHTS AND DEVICES**

Avoid collisions with other road users. Slow moving tractors with attachments or towed equipment and machines are a particular hazard on public roads. Frequently check for traffic from the rear, especially in turns. Use hand signals or turn signal lights for safe operation in traffic. Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Always keep the safety devices in good condition. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your dealer.



100.14

# AVOIDING HEAT DEVELOPMENT IN THE AREA OF PRESSURE LINES

Highly flammable liquid mist can be caused by heat development near pressure lines. resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or use a welding torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut if heat goes beyond the immediate flame area.



# Remove paint before welding or heating

Welding must be conducted only by persons with appropriate qualifications.

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 heating:

- If you sand paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, clean 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.



100.17

# 1.1. Safety Decals

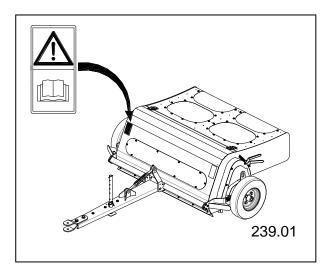
#### **Pictorial warning signs**

Warning signs are attached to several important places on this machine to indicate potential danger. The hazard is identified by an exclamation point in a warning triangle. An adjacent symbol shows information on how to avoid personal injury. These safety signs, their placement on the machine and a brief explanatory text are shown below.



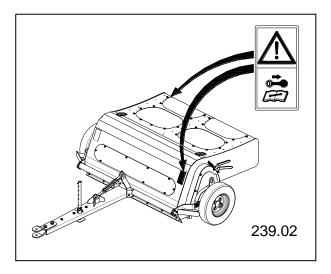
# **Operating Instructions**

These Operating Instructions contain important information on the safe operation of this machine. Carefully observe all safety rules to avoid accidents.



# Service

Before starting maintenance and repair work, shut down the engine and remove the ignition key.



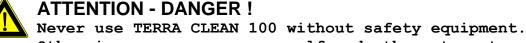
# 1.0. Safety Measures

# 1.2. Safety Equipment

#### **GENERAL WARNING SIGN REQUIREMENTS**

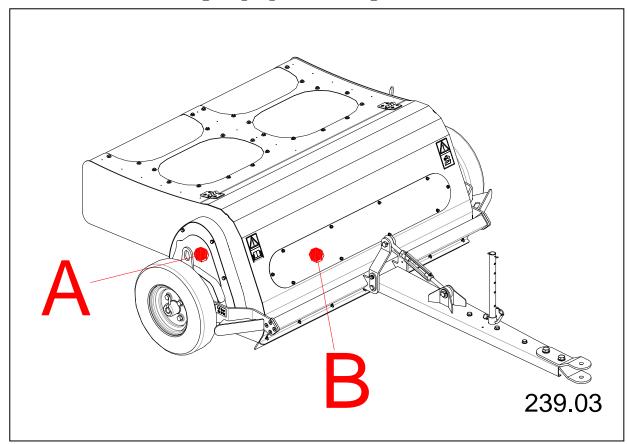
A warning sign with the following safety practices or similar set of messages must be attached to the machine. The label should be visible from the operator's position, if possible.

- a) Read the operator's manual.
- b) Do not operate the machine without guards, shield, and safety devices in place and working.
- c) Do not operate the machine when children and others are around.
- d) Do not allow operation of the machine by untrained personnel.



Otherwise, you expose yourself and others to extreme danger.  $\Rightarrow$  Moving parts may cause serious injuries.

Where to Find Safety Equipment on your Machine



A = Mount guards in drive area, detachable only with a tool.

**B** = Cover, detachable only with a tool.

# 1.0. Safety Measures

# 1.3. Safety instructions



- Besides the information in these operating instructions, please also observe all generally applicable safety and accident-prevention standards!
- 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!
- During work operation, the user is responsible for the safety of third parties!
- 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 clear of the danger zone of the machine!
- Switch off the engine before performing any work. The ignition key must be removed.
- For this work, please use your personal protective equipment (PSA) such as: gloves, goggles, ear protectors.
- Special care should be taken when working and turning on a slope.
   RISK OF TIPPING OVER!

All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. We reserve the right to make changes at any time without notice.

#### 2.1. General



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

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

# 2.2. Unpacking Terra Clean

The shipping frame has the following parts:

bottom section (A)

front section (B)

rear wall

top section

Individual boards right and left

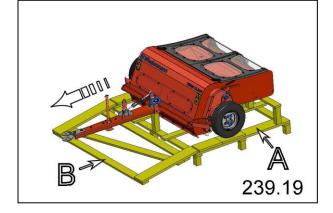
Remove top section and side walls.

Place the front section at the bottom section as a ramp.

Attach drawbar (see Chapter 2.3.).

Place Terra Clean 100 in transport position (see Chapter 4.4.). Pull the Terra Clean 100 over the ramp from the bottom section or lift it with a crane

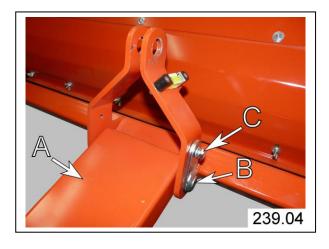
(see Chapter 3.2.2.).



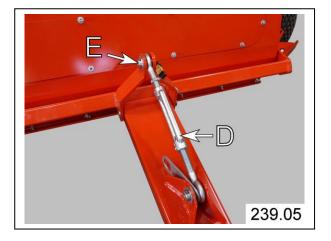
# 2.0. Assembly

# 2.3. Installing drawbar

Attach drawbar (A) to the frame with the locking pin (B). Screw in bolt (C) to secure it.



Insert and lock turnbuckle (D) with the pin (E) on the frame.



#### 3.1. General



- TERRA CLEAN 100 is delivered fastened to a pallet.
- Use only forklift trucks, cranes or lifting equipment with a sufficient loadbearing capacity.
- Keep well clear of hoisted loads. If the load falls it may cause fatal injuries.

Improper transport and mounting of TERRA CLEAN 100 may cause:

- Injury to persons
- Damage to property.

Pay special attention to the driving direction when lifting the TERRA CLEAN 100 with the shipment frame.

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



# ATTENTION DANGER:

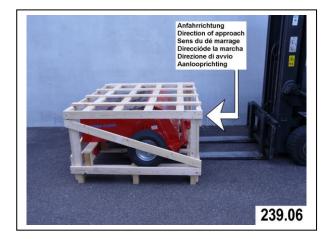
Be careful when cutting through the tension straps. There is a risk of being injured when the straps are cut.

# 3.2. Transporting the TERRA CLEAN 100

#### 3.2.1. Transport Using a Forklift

If the TERRA CLEAN 100 is still fastened to the pallet :

- move the forks into the shipping frame, (note direction of approach)
- carefully raise the shipping frame,
- unload the TERRA CLEAN 100 from the carrier vehicle when balanced,
- Remove the upper and side parts of the shipping frame,
- cut through the tension straps,
- lift the TERRA CLEAN 100 from the shipping frame.



# 3.2.2. Transport Using a Crane

Use the following three attachment points on the trailer to lift it with a crane.

Point A: 2 points on the right and left wheel holders

Point B: 1 point bracket on the drawbar



# 3.2. Transporting the TERRA CLEAN 100

3.2.3. Hitching point for transport on a trailer

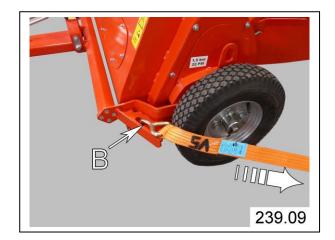
ATTENTION DANGER: Note the description of removal in Section 5.2. - RISK OF TIPPING OVER!

Tighten the belts evenly at diagonally opposite points.

• Attach belt to front on both sides at attachment points A.



• Attach belt to rear on both sides at attachment points B.

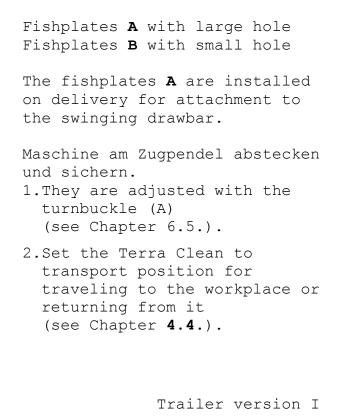


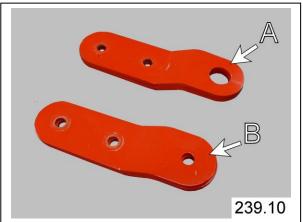
# 4.1. Allgemeine Hinweise

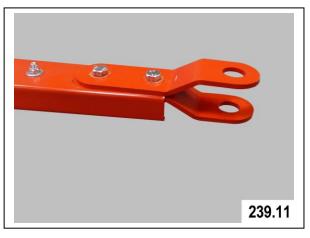
For attachment note the following:

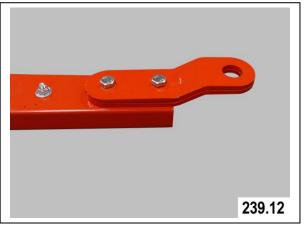
- tractors with min. 16 HP (12 KW)
- One swinging drawbar.

# 4.2. Attachment to tractors with swinging drawbar









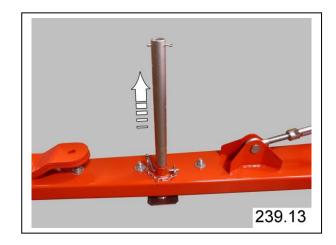
Trailer version II

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# 4.0. Attachment to tractor

#### 4.3. Drawbar support

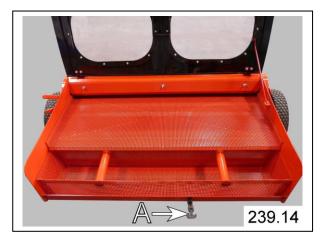
Machine support in top position, insert pin and lock.



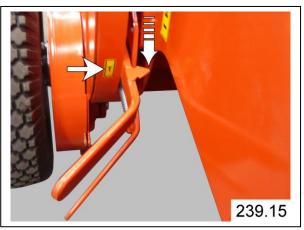
# 4.4. Transport with the TERRA CLEAN 100

Note the following before transport:

- Switch off drive system (see Section 7.3)
- 2. The flexible latch (A) must be attached to the hook (B)!



- Set the Terra Clean to transport position with the central working height adjustment for travel.
- 4. The "T" decal means transport position.



# 5.0. Disconnecting from the Tractor

#### 5.1. Allgemeiner Hinweis

Always place the machine on a firm and smooth surface to disconnect it.

Only disconnect the machine with the engine stopped.

Disconnect the machine from the tractor only when it is unloaded.

Secure the TERRA CLEAN 100 to prevent it from rolling away.

Brushes must not be in contact with the ground when the machine is not attached.

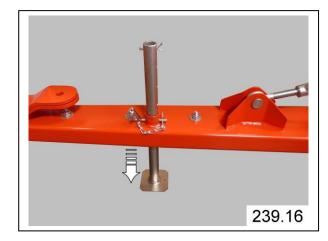
Store machine in a dry place only.

# 5.2. Disconnecting synthetic turf care machine from the tractor

The attached machine is parked in transport position.

Proceed as follows to disconnect the machine:

- 1. Lower support to the required position and lock
- Disconnect tractor coupling pin and drive tractor forward away from the machine.
- Place coupling pin on tractor and lock.



# 6.0. Before Using

#### 6.1. General

If use of the Terra Clean 100 machine has been approved by the owner or the synthetic turf manufacturer.

#### CAUTION:

The wheel drive means that this machine is suitable for surface cleaning only. If it is set to a greater depth, the wheels may become blocked and the area may be damaged.

#### 6.2. Setting the working depth

Drive on to the synthetic turf with the tractor and machine.

The Terra Clean 100 has a central working height adjustment.

Move the adjustment lever (A) up to the 0-position (B).

The correct working position must be adjusted tooth by tooth depending on the status of the area or the compression of the granulate.

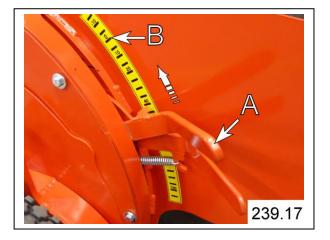
Check the adjustment again after a few yards.

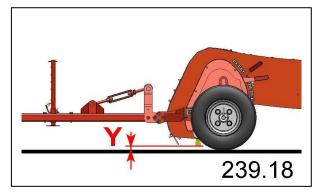
#### NOTE:

Adjustment by one tooth means a height difference of 5 mm.

The negative range on the scale is required for worn strip brushes.

At position 20 with a new strip brush the distance (Y) from the bottom edge of the strip brush to the hard ground is approx. 20 mm.





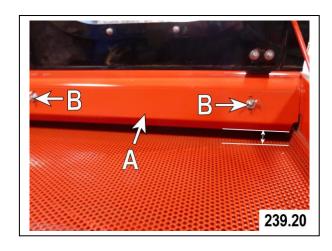
# 6.3. Adjusting deflector plate in container

The deflector plate (A) must be adjusted for the available space.

The deflector plate (A) can be infinitely adjusted to influence the material flow and thus separation of dirt. Loosen wing nuts (B) for the adjustment.

#### HINWEIS:

Bei neu angelegten Plätzen ist ein hoher Anteil von losen Fasern zu erwarten.



Tilt angle of vibration unit	Description	Deflector plate setting				
+	<ul> <li>under dry conditions</li> <li>neuer oder stark verfüllter Platz mit new or heavily filled area with a small proportion of dirt</li> <li>on regularly maintained areas with little coarse dirt</li> <li>for deep surface cleaning</li> </ul>	Position in top slot				
	on regularly maintained areas with little coarse dirt	Center of slot				
Neutral 0	<ul> <li>on regularly maintained areas with coarse dirt</li> <li>under dry conditions with fiber content</li> </ul>	Center of slot				
	<ul> <li>not regularly maintained areas with broken fiber content</li> <li>under dry conditions and flat surface cleaning</li> <li>for working flat areas with low leaf content</li> </ul>	Position centered in slotted hole or above depending in the leaf type and size				

# 6.0. Before Using

# 6.4. Adjusting tilt angle of vibration unit

The angle is adjusted with the turnbuckle on the drawbar.

#### Position "0"

- for regularly maintained areas with coarse dirt
- under dry conditions with fiber content

#### Position "rising to the back = +"

- new or heavily filled area with a low proportion of dirt
- for regularly maintained areas with little coarse dirt
- for deep surface cleaning
- damp with dew and flat surface cleaning

#### Position "falling to the back = -"

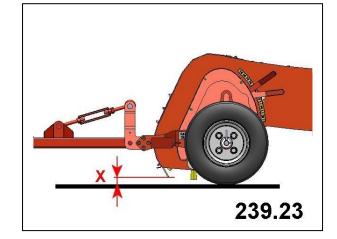
- not regularly maintained area with broken fiber content
- under dry conditions and flat surface cleaning
- for working flat areas with leaf content

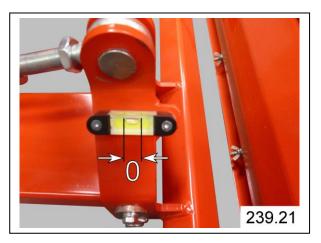
# 6.5. Adjusting the front baffle flap

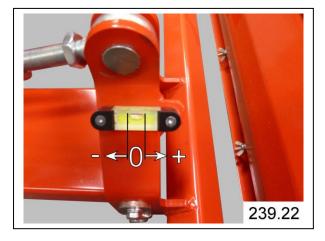
On delivery the baffle flap is in the bottom position.

If the strip brushes are worn, the baffle flap must be adjusted on a flat hard surface.

The distance (dimension **X**) from the bottom edge of the baffle flap to the ground should be a min. of **10 mm** more than the distance of the strip brush to the ground.







# 7.0. Operation

#### 7.1. General

#### CAUTION:

The wheel drive means that this machine is suitable for surface cleaning only. If it is set to a greater depth, the wheels may become blocked and the area may be damaged.

The machine must be driven at moderate speed.

Avoid abrupt braking and acceleration, because otherwise the artificial turf can be displaced or the blades of grass that form the artificial turf can be sheared.

The same applies to steering movements.

Avoid tight turns, since the artificial turf might otherwise be displaced.

The artificial turf maintenance machine should not be used on wet granulate material because wet fibers will clog the holes of the vibrating screen.

The granulate should fall to the ground through the screen.

If the holes in the screen are blocked the granulate will be transported into the collection trough.

#### **CAUTION!**

The Terra Clean 100 is **NOT** approved for operation on public roads!

#### 7.2. Driving properties



ATTENTION:

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

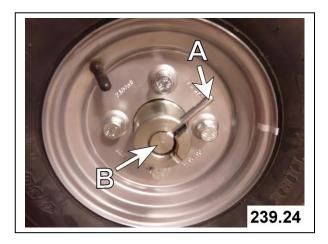
- If the manufacturer or installer of the synthetic turf does not indicate the speed, the working speed should note exceed
   5 mile/hour.
- With greater quantities of granulate the operating speed must be reduced to
   4 mile/hour.

# 7.0. Operation

# 7.3. Switching ground drive on and off

Switch on drive:

- use lever (A) to pull carrier shaft (B) slightly outwards.
- Rotate lever (A) in the direction of the deep slot and lock it.
- Slow movement locks the carrier shaft (B) in its end position.



#### Switch off the drive:

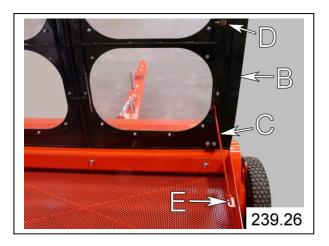
- reverse a short distance
- use lever (A) to pull carrier shaft (B) outwards from the deep slot.
- Rotate lever (A) in the direction of the shallow slot and lock it.

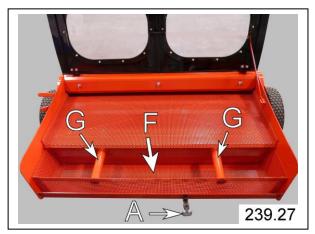


# 7.4. Emptying waste container

**CAUTION:** Switch off the machine engine and the tractor engine when performing any maintenance work. - **RISK OF INJURY!** 

- 1. Release flexible latch (A).
- Swivel protectors (B) upwards.
- Pull support lever (C) out of the spring clamp (D) and attach it to the slot in bracket (E) of the protectors.
- Use the reinforcing tubes
   (G) to lift and hold the hopper (G).
- 5. Place the emptied hopper in the frame.
- Disconnect support lever (C) from the bracket (E) and press into the spring clamp (D).
- Swivel protectors (B) downwards.
- 8. Attach flexible latch (A).





# 7.0. Operation

# 7.5. Faults and remedies

Description	Cause	Remedy			
	Brush frequency may be too low.	Increase speed to max. 5 mile/hour Caution! Reduce speed to < 5 mile/hour when turning.			
	Gap between guide plate and brush too large.	Check brush; if necessary, replace strip brushes (see Chapter 8.5.)			
	Brush roller set too high	Lower adjustment by one tooth, if necessary try only a fine adjustment at the turnbuckle. Note the max. working depth of 0.1 in.			
Unsatisfactory pickup		Clean area twice			
quality	Area very dirty.	Adjust cleaning intervals to the amount of dirt, (see Chapter 8.2.)			
		Use wider coverage if the proportion of leaves is low.			
	Coarse dirt blows away or works into the cleaned area.	Adjust front baffle flap as specified (see Chapter 6.6.), correct slightly if necessary.			
Machine or brush roller operates to one side	Different tire pressure at wheels	Check tire pressure, correct if necessary.			
	Too much play due to worn friction bearing	Replace friction bearing			

# 7.0. Operation

# 7.5. Faults and remedies

Description	Cause	Remedy				
	Artificial turf too wet	Allow area to dry.				
		Reduce working depth accordingly.				
Many granules in dirt	Driving speed too low for dry working conditions.	Increase speed to max. 8 mile/hour. Caution! Reduce speed to < 3 mile/hour when turning.				
container	Pickup brush set too low	Lower adjustment by one tooth, if necessary try only a fine adjustment at the turnbuckle. Note the max. working depth of 0.1 in.				
	Screen angle set too negative	Adjust screen angle as specified (see Chapter 6.5.), correct slightly if necessary.				
Drive is becoming or is too loud	Vibration unit drive chain is running dry	Lubricate				
	Gear wheels have too much	(see Chapter 8.7.)				
	backlash.	Check backlash, if necessary replace gear wheels.				

#### 8.1. General



All work for maintenance, repair and disassembly must be done by qualified technicians only.

Carry out maintenance work only with the machine attached. Switch off the tractor and ensure that it can not be accidentally switched on.

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

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

Use original parts only; parts from other manufacturers are often not of the required quality and therefore constitute safety hazards. Furthermore, the guarantee only retains its validity, and legitimate guarantee claims can only be recognized, if original parts from Wiedenmann have been used exclusively. We would like to draw your attention, in particular, to the fact that original parts which are not supplied by Wiedenmann have neither been tested nor approved by Wiedenmann. The installation and / or employment of such products can, in some circumstances

therefore, have negative structural effects on your vehicle and negatively affect active and / or passive safety.

The manufacturer is in no way liable for damage resulting from the use of parts from other manufacturers.

After completion of the maintenance work, remove everything that does not belong to the TERRA CLEAN 100. Reinstall all paneling.

If the wheel bearings cause problems or are damaged, please contact your dealer. Special equipment is required for accurate installation and setting.

Inaccurate setting may result in excessive wear of sprockets.

# 8.2. Maintenance and inspection list

Maintenance interval	Area	Maintenance task					
First action after 5 hours.	Machine	Check all moving parts, bolts and screws to ensure that they are tight.					
First action after 20 hours.	Chain tension	First-time check see Chapter 8.6.					
Deile	Screen	Basic cleaning					
Daily	Brush roller	Clean					
	Wheels	Check air pressure					
As necessary	Strip brushes	If the brush length is less than 65 mm, install new strip brush set, see Chapter 8.5.					
20 hours	Chain	Lubricate; with chain grease or adhesive lubricant					
40 hours	Chain tension	Check in accordance with Section 8.6.;retension if necessary					
Annually	Machine	Look after					

# 8.3. Cleaning the synthetic turf care machine

CAUTION: Always clean the machine with a cloth or water never with your bare hands. - RISK OF INJURY!

Clean the machine daily after completion of work to ensure that the machine is in perfect working order the next time you use it.

The main points of attention are:

- all sweeping bars
- vibrator screen in container
- perforated screen in collection trough

#### 8.4. Cleaning the brush roller



#### CAUTION:

Always clean the machine with a cloth or water never with your bare hands. - RISK OF INJURY!

- 1. Remove cover (A).
- 2. Switch off brush roller
   drive
   (see Chapter 7.3.)
- Clean sweeping head and strip brushes.
- After cleaning, replace cover (A).



# 8.0. Service

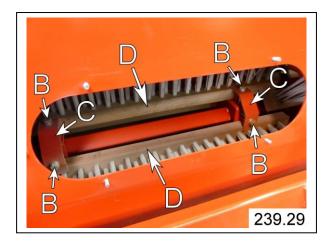
# 8.5. Rotating and replacing the brush bars

CAUTION: Stop tractor and remove the ignition key. - RISK OF INJURY!

- 1. Remove cover (A).
- 2. Unscrew the hexagon bolts (B) and remove them with the plates (C).
- 3. Remove and inspect the strip brush **(D)**.



- 4. If the strip brushes are slightly deformed, they can be rotated by 180 ° and reinstalled.
- 5. If the strip brushes are seriously deformed, they must all be replaced.
- 6. Place the strip brush (D) on the brush tube and fasten with plate (C) and bolts (B).
- On completion of the work, install the cover (A).



# 8.0. Service

# 8.6. Tensioning chain



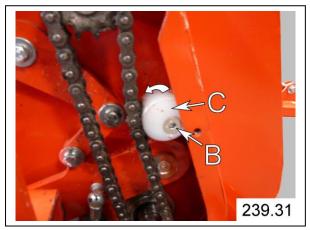
Stop tractor and remove the ignition key.

- RISK OF INJURY!

Proceed to tension the chain as follows:

- Stop tractor and remove the ignition key.
- 2. Remove cover (A) on the right side.
- 3. Unscrew bolt (B).
- 4. Rotate chain tightener **(C)** to the required position.
- 5. Tighten bolt **(B)** snugly.
- 6. After the setting, replace cover (A).





# 8.7. Lubrication – general instructions

- During all lubrication work the engine must be switched off and the ignition key removed.
- If necessary lubricate more often than specified.
- Keep all exposed machine parts, threaded spindles and guides slightly lubricated.
- Oil chain lightly
- Before starting the machine after extended downtime, lubricate and service the entire machine.

#### 8.8. Wheels and tires

Check the tire pressure regularly: **22 psi** 



#### CAUTION:

If the tires burst and parts of the wheel rims fly off they may cause serious or fatal injury.

Install tires only if you have the necessary experience and equipment.

Always maintain the specified tire pressure. Never inflate tires above the recommended pressure. Do not heat wheels or tires or carry out welding work on them. Heating tires may cause them to burst because heating greatly increases the pressure in the tire. Welding may deform or damage a wheel.

When inflating a tire select a filler connection with a safety strap and an extension hose with sufficient length to allow the operator to stand clear of the tire during inflation. Never stand in front of or on the tire. Use a safety cage if available.

Check wheels and tires daily for low pressure, cuts, bulges, damaged rims, missing wheel studs or nuts.

#### 8.9. Disassembly / Disposal



#### CAUTION:

Proceed cautiously when dismounting the machine. Read the chapter "Safety and Precautions" and observe local safety regulations.

#### Danger points are:

- heavy parts that may fall after removal,
- sharp edges
- crushing injuries caused by tipping parts.

#### **Disassembly for disposal**

- Place machine on a firm surface.
- 2. Disassemble machine from the top downwards.

#### **IMPORTANT:**

Strictly observe the regulations and laws concerning the disposal of environmentally hazardous substances. Familiarize yourself completely with the procedure for disposal.

# 8.10. Unauthorized modification and spare part manufacturing

Conversion or modifications of the machine 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 machine. In this case, the manufacturer is exonerated from liability in the event of damage.

# 9.1. Equipment supplied

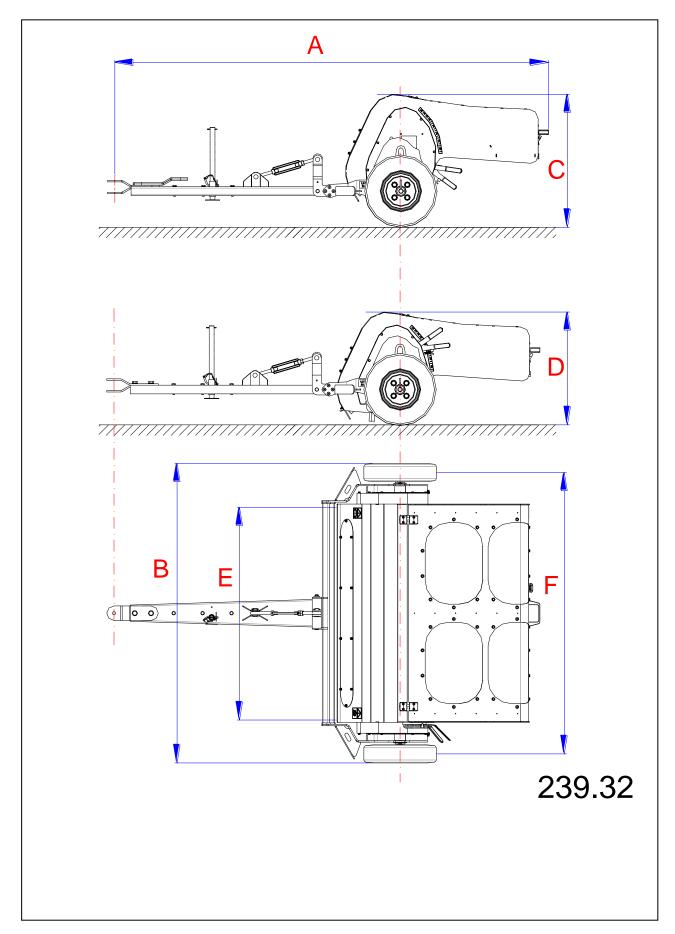
- \* Terra Clean 100 with ground drive and vibrating screen hole 0.24 in.
- \* Attachments, drawbar
- \* Collection trough 13 US.gal.
- \* Manual, transfer declaration with warranty card.

# 10.0. Specifications

# 10.1. Technical details

Α	Machine length in transport position	95 in.
В	Machine width	65 in.
С	Machine height in transport position	29 in.
D	Machine height in working position	25 in.
Ε	Working width	47 in.
F	Track width	61 in.
	Drive speed at 5 mile/ourh	
	Working speed of brush roller	ça. 680 rpm.
	Working speed of eccentric shaft	ça. 680 rpm.
	Min. power required for tractor	16 HP / 12 KW
	Operating speed	4 - 5 mile/hour
	Working depth of brush roller	0.2 – 0.3 in.
	Tires	400-8 / 4PR
	Diameter of tires	16 in.
	Tire pressure	22 psi
		40.110
	Volume of collection trough	13 US gal.
	Weights:	
	Model with drawbar	481 lb.
	Approved load	26 lb.
	Max. total weight	507 lb.

# 10.1. Technical details



# 10.0. Specification

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

Property Class and Head Markings	4.8 (***) (**)	8.8 8.8 9.8 8.8 8.8 8.8 9.8 9.8	10.9 10.9	12.9 (12.9) (12.9) (12.9) (12.9) (12.9)
Property Class and Nut Markings	\$ • •			

				ss 4.8				s 8.8 or	9.8		class 10.9				class 12.9		
Size Dry **		y **			]	Dry **				Dry **				Dry **			
				Lut	Lubricated *		Lubricated *		ĸ	Lub		Lubricated *		Lu		ibricated *	
		N-m	N-m lb-ft		n lb-						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 1	1 8,5	13	9,5	17	12	15	11,5	19	14,5
M8		12	8,5	1.	5 1	1 22	2 10	5 2	3 20	32	24	40	30	37	28	47	35
M10	)	23	17	29	9 2	1 43	3 32	2 5:	5 40	63	47	80	60	75	55	95	70
					-	_			-		_	-	_	-	-	-	
M12	40	29	9 5	0	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	4′	7 8	30	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	) 7.	73 125		92	190	140	240	175	275	200	350	255	320	240	400	300
M18	135	5 10	00 1	75	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	) 14	40 2	40	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	) 19	90 3	30	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	) 23	50 4	-25	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	) 30	60 6	525	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	5 49	90 8	50	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
		•															
M33	900	) 6'	75 1	150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	115	50 8	50 1	450	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

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

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.

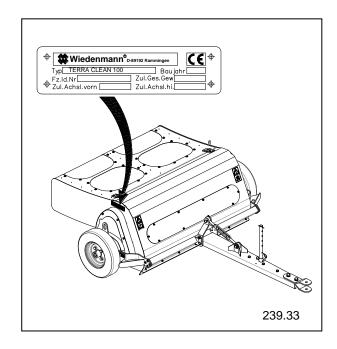
Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

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

# 10.0. Specifications

#### 10.3. Serial Number

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



Vehicle ID no.