

VITRA

USER MANUAL

VITRA SWEEPING
SUCTION SYSTEM

C2FS1010

VERSION: ENGLISH V. 1.0



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MADE IN DENMARK
..designed for the world

DEAR CUSTOMER

CONGRATULATIONS ON YOUR NEW ATTACHMENT FOR YOUR VITRA TOOL CARRIER

The Vitra tool carrier is designed to work with various attachments, mounted or retightened and is built for use in the three work areas exterior cleaning, green area care and winter service.

The machine may only be used with original Vitra attachments or attachments approved by Vitra. Vitra assumes no responsibility for damages or accidents using unapproved attachments.

USER MANUAL

This user manual is developed in accordance with the requirements of ISO standard 3600: 1996 and 2006/42EG. It contains important information about operation, maintenance and servicing and must be read carefully before the machine is used and operated for the first time until sufficient understanding and knowledge has been obtained to carry out operation and the daily service and maintenance tasks properly.

It is recommended to always keep the manual easily accessible if questions arise during the use of the attachment. The user is advised to read the manual from time to time to update their knowledge of the attachment.

Should the manual be damaged or lost, a new one can be ordered from your local dealer. To order a copy of the user manual, please refer to part number: **KA5012**

SERVICE

The daily service can be performed by the users themselves and if the instructions and the prescribed service and maintenance intervals are observed, an optimal and efficient yield of the attachment is ensured.

In some of the illustrations used in this manual, security panels and guards may be removed to clarify the illustration. The attachment must never be operated without these safety panels and guards fitted correctly.

If it is necessary to remove safety panels and guards to perform the daily service, these must therefore always be reassembled correctly before the attachment is used again.

To ensure the factory warranty, it is recommended that all service and maintenance tasks, except those that may be performed by the users themselves, always are performed by an authorized Vitra dealer. All service and maintenance tasks must be performed with original spare parts - When using non-original spare parts, all warranty is void.

QUESTIONS

Your local dealer has prepared your new attachment before delivery and will be able to advise and instruct you on daily operating and maintenance instructions as well as correct and safe operation of the machine. Always contact your local Vitra dealer if questions arise after delivery of the machine.

DISCLAIMER

Der er i udarbejdelsen af denne manual gjort alt for at give dig som ejer, så præcise og korrekte oplysninger som muligt, ude fra de informationer der har været tilgængelige på udgivelsestidspunktet.

Alle oplysninger, illustrationer og specifikationer, der er benyttet i denne manual, er baseret på de seneste oplysninger, som er til rådighed på tidspunkt for offentliggørelse af manualen.

Der forbeholdes retten til, til enhver tid, at kunne foretage ændringer, uden forudgående varsel.

PLEASE NOTE

This manual only covers the Vitra C2FS1010 Sweeping Suction System and its functions.

When the attachment is used with your Vitra tool carrier or other machine, it is extremely important to always read and understand the manual or manuals that come with the individual machine before the attachment is mounted.



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VITRA



ATTACHMENT DATA

Below you will find relevant data on your new Vitra attachment.

Based on this data, your authorized Vitra dealer can quickly find all the necessary information about your attachment and thereby service both you and your Vitra in the best way.

Therefore, always state the data below when contacting your authorized dealer or service partner.

ATTACHMENT DATA:

- Model: _____
- Serial Number: _____
- Start-up Date: _____
- Serviceinterval: _____ Hours

Should the above data unexpectedly not have been filled in upon receipt of the attachment, these must be filled in immediately in collaboration with the dealer who delivered the machine.

SYMBOL OVERVIEW

The sections of this manual which require extra attention and where the necessary precautions must be taken to maintain safety are marked with the following symbols:



DANGER

Indication of a direct hazard with a high risk and where death or serious physical injury may occur if the proper precautions are not taken.



WARNING

Indication of a possible hazard with an average risk and where death or serious physical injury may occur if the proper precautions are not taken.



CAUTION

Indication of a low-risk hazard where a minor to moderate physical injury or damage to property may occur if the proper precautions are not taken.



REMEMBER

Indication of relevant information that should always be remembered to ensure the correct and efficient implementation of the ongoing use or servicing.



NOTE

Indication of information that facilitates or provides more efficient and economical use of the machine, attachment or provides better working conditions for the operator.



ENVIRONMENTAL CONSIDERATIONS

Indicates where special conditions must be taken to ensure an environmentally correct treatment, of e.g. drained liquids so that no safety or environmental risks arise.



PROPER DISPOSAL

Indicates where special conditions must be taken to ensure a correct disposal of e.g. used spare part so that no safety or environmental risks arise.

SAFE OPERATION

1. HOW TO BE A SAFE OPERATOR

- 1.1. Before using the machine and attachments, it is important that the user obtains the necessary knowledge about construction and functions, by reading the associated manual before start-up and use.
- 1.2. Always only allow instructed persons to operate machine and implements.
- 1.3. Machines and attachments must never be operated by persons who:
 - Suffers from mental instability.
 - Cannot operate machine properly due to fatigue.
 - Cannot operate the machine properly due to illness, drowsiness from medication, etc.
 - Is too young to operate the machine legally.

Always be careful with your own health by taking necessary breaks from the work.

- 1.4. Wear appropriate clothing and necessary protective equipment during operation and maintenance.
- 1.5. Always use the necessary protective equipment to protect the respiratory tract, eyes and skin when handling toxic chemicals, dust or gases.
- 1.6. It is the owner's / tenant's responsibility to instruct other people who use the machine, and to ensure that they read the necessary manuals before use.

Always inspect and service machine and attachments correctly and in accordance with the instructions and regulations described in the manuals, to ensure safe use and long life.

2. BEFORE STARTING THE ENGINE

- 2.1. Always plan the work tasks so that you have the necessary time to complete the tasks. Hasty work can result in dangerous situations and unexpected accidents.
- 2.2. Inspect and service machine and attachments in accordance with the instructions in the manuals. This ensures safe use and long life of the machine and associated attachments.
Be especially aware that the brake, driving and safety functions are functioning properly. This will significantly minimize the risk of an accident.
If some safety precautions do not work properly, contact your local Vitra dealer immediately.
- 2.3. If it is necessary to remove safety measures and safety guards, in order to be able to perform servicing and maintenance, always ensure that the machine is switched off and the ignition key removed so that unintentional start-up is prevented.
Safety measures and safety guards, must always be refitted before the machine or attachment is used again.
- 2.4. Always pay attention to the conditions around the machine to avoid damage to surrounding effects and people. Always exercise caution when operating!

3. DURING OPERATION

- 3.1. Always pay attention to the conditions around the machine and attachments to avoid damage to surrounding effects and people. Keep general distance to persons and animals as machine and attachments, or flying pieces from these, can cause personal injury.
- 3.2. Always make sure that there are no people between the machine and the attachment you want to mount and always be aware of potential emergencies when mounting attachments to the machine.
- 3.3. Make sure that the machine's parking brake is activated while the attachment is mounted on the machine.

- 3.4. Never place other persons on the machine or on attached attachments, unless the machine or attachment is fitted with a seat or platform which must be manned in order to perform the necessary work. Such a seat or platform may only be used during the execution of the work and not during transport.
- 3.5. Be careful not to make too sharp turns as this can cause the machine to tip over!
 When driving on sloping terrain, always drive at a reduced speed.
 When driving uphill, always make sure that the front wheels do not lift off the terrain.
 When driving downhill, never try to control the speed solely with the brakes.
 Use the engine brake effectively and pay attention to reduced stability when driving on slopes.
- 3.6. If the machine is fitted with an approved tow hitch, trailers without brakes or trailers with inertia brakes can be connected. For more information about the maximum permitted trailer weight on the different types of trailers, see the machine's type plate.
 In the case of trailers with inertia brake, its safety wire must always be attached to the tow hitch.
 Note that there is no brake assist system (brake pipe connection) for trailers.
 Therefore, do not connect trailers with brake assist system to the machine.

4. LOADING OR UNLOADING FROM TRUCK OR TRAILER

- 4.1. When loading the machine or attachment on a truck or a trailer, always make sure that the engine is switched off on the truck and that the parking brake is applied. Otherwise, this may cause the truck or trailer to move during loading and cause damage to the machine or the attachment.
- 4.2. Always pay attention to the safety conditions around the machine when loading or unloading from truck or trailer to avoid damage or injury to effects and people around the machine.
 Never allow people to come near the machine during loading and unloading, so that the risk of person injury is minimized in the event of an accident. Always have a helper to observe at a proper distance.
- 4.3. Always use ramps with the same or better specifications than those mentioned below. If your machine is equipped with equipment that makes it deviate from the data below, ask your local Vitra dealer for advice.
- | | | |
|-------------------------------------|-----------|--|
| SPEVIFICATIONS OF THE RAMPS: | LENGTH: | At least 4 times the height of the truck or trailer bed. |
| | WIDTH: | At least 150 mm. wider than the width of the tire. |
| | CAPACITY: | At least 1700 kg. (Per ramp) |
- 4.4. The ramp must be equipped with a non-slip surface
- 4.5. Always drive carefully when driving the machine from the ramp to the truck or trailer.
 The angle of the ramps can suddenly change.

5. INSPECTION, SERVICE AND MAINTENANCE

- 5.1. Always place the machine and attachments on a firm and level surface, with adequate lighting, when performing servicing and maintenance. Always use good quality tools and protective equipment.
 Never perform servicing and maintenance on machine or attachments while these are in operation.
 This can lead to a high risk of accident and/or personal injury!
- 5.2. When servicing and maintaining, always follow the instructions below:
- Place any direction selector in neutral
 - Fully lower the front lift / attachment
 - Disable all PTO functions
 - Apply the parking brake
 - Stop the engine
 - Remove the ignition key
- 5.3. Engine, exhaust, radiator etc. have high temperatures during operation and for a while after.
 Therefore, always wait to work on the machine and attachments until the parts have cooled down.

- 5.4. Always use only original spare parts on the machine!
If non-original spare parts are used, this means that all warranty is void.
- 5.5. If it is necessary to remove safety measures and safety guards, in order to be able to perform servicing and maintenance, these must always be refitted before the machine or attachments is used again.
- 5.6. Always be careful when working on and around the radiator.
Never open the radiator cap while the engine is hot or running - wait until the engine has cooled down. Then carefully loosen the radiator cap and let pressure in the radiator leaks out before removing the cap.
Careless and fast opening of the radiator cap can cause serious damage due to overheated water vapor. Never fill water in the radiator before it has cooled down, as this may damage the radiator and engine.
- 5.7. Always use the required protective equipment when checking the system for leaks.
- 5.8. Exercise extreme caution when working with pressurized fluids.
Liquids under pressure can cause skin damage and cause serious person injury!
If eyes or skin come in contact with liquids, rinse immediately with clean water.
Then always consult a doctor immediately and state which fluids are involved.
- 5.9. If there is a need to lift the machine or attachment during servicing and maintenance, the lifted must always be supported with approved trestles or stands - Never only use a jack.
Lifting the machine and attachment must always be done separately.
Therefore, always disassemble any attachment before lifting either the machine or the attachment.
Never attempt to lift the machine or attachment without the use of the correct equipment and knowledge. Instead, have your local Vitra dealer perform service where lifting of machine or attachment is required.
- 5.10. When replacing tires, never exceed the prescribed tire pressure, as this may result in an explosion, resulting in person injury and property damage. If a tire is damaged with deep scratches, cuts or puncture, this must be replaced immediately by qualified personnel!

ALWAYS CONSULT YOUR LOCAL VITRA DEALER IF THERE ARE QUESTIONS
ABOUT SERVICE AND MAINTENANCE BEFORE STARTING THE WORK.

6. MAINTENANCE OF THE ELECTRICAL SYSTEM

- 6.1. Servicing of the electrical system may only be carried out to the extent described in the manual. Additional maintenance of the electrical system must always be performed by an authorized Vitra dealer.
Defective or incorrectly fitted connections not only result in reduced electrical performance but also a high risk of short circuits, which can lead to damage to the machine or attachments and can in the worst case lead to fire - Defects in the electrical system must therefore always be repaired immediately!
- 6.2. Before servicing the electrical system, always follow the same procedure as described in section 5.2. Failure to follow the procedure can result in damage to the electrical system and accident or person injury!
- 6.3. Before disconnecting parts of the electrical system, always disassemble the ground cable (-) on the battery, otherwise there is a risk of short circuits and electric shocks - Info about handling the battery, see section 7
- 6.4. Keep the areas around the battery and terminals clean, as dirt and dust can pose a risk of fire.

7. HANDLING THE BATTERY

- 7.1 The battery should always be inspected before starting the engine.
Before inspecting and handling the battery, always follow the same procedure as described in section 5.2. Failure to follow the procedure can result in damage to the electrical system and accident or person injury!
- 7.2 Check the battery acid level daily through the indicator on the battery, which should always be green.

- 7.3 When using non-maintenance-free batteries, it is necessary to remove the plugs on the top of the battery, to visually check the acid level.
- Always exercise extreme caution when handling battery acid!
Battery acid is corrosive, so always wear eye protection and gloves and avoid direct contact.
- If eyes or skin come into contact with battery acid, immediately rinse thoroughly with clean water.
Then always consult a doctor immediately and state which acid are involved.
- 7.4 When charging the battery, explosive hydrogen and oxygen gases are generated - Therefore always avoid open flames, embers and sparks near the battery and ensure good ventilation during charging.
- 7.5 When disassembling and installing batteries, great care must always be taken when loosening/tightening the battery terminals, as there is a great risk of a short circuit when using tools on and around the battery.
- Always disconnect the machine's main switch before removing the battery cables.
 - When disconnecting the battery, always disassemble the ground connection (-) first.
 - When reconnecting the battery, always connect the positive conductor (+) first.
- Be careful when mounting the poles - Careless handling can create sparks
- 7.6 The electrolyte (the liquid in the battery) in a fully charged battery freezes at about -70 °C
In a fully discharged battery, the liquid can freeze at low freezing temperatures (0 to -5 °C)
Therefore, always store the battery frost-proof or fully charged during winter storage.

8. HOW TO USE JUMP CABLES

Always follow the instructions below when using jump cables.

- 8.1 Always stop the engine of the assistant vehicle before connecting the jump cables.
- 8.2 Always use jump cables that are at least dimensioned for the battery's current (Amps)
Using undersized cables can lead to heat generation and can therefore lead to a risk of fire.
- 8.3 First connect the positive connections - First with one end to the positive terminal (+) of the empty battery and then with the other end to the positive terminal (+) of the battery of the assisted vehicle.
- Then connect the ground cable - First with one end to the negative terminal (-) on the battery of the assisting vehicle and with the other end to the negative terminal (-) on the empty battery.
- For non-maintenance-free batteries, always remove the battery plugs before connecting the jump leads.

9. STORAGE

- 9.1. Never cover the machine or attachments before they have cooled down, otherwise there is a risk of fire.
- 9.2. If the machine is to be stored for a longer period, the main switch is disconnected and the battery cables are removed. Always store the battery frost-proof or fully charged, during winter storage.

Safe storage:

- Take appropriate safety precautions to prevent accidents.
For example, by placing in a locked room or by proper covering.
- Always store fuel, gas cylinders and other flammable materials in a safe place.
Label the location with "Avoid Fire" or "Fire Dangerous".
- Storage locations with gas cylinders and other cylinders under pressure must also be marked with "Pressure cylinders removed in case of fire"

INFORMATION ABOUT POSSIBLE RISKS

During daily use and servicing of the machine, various risks may arise which must be taken into account in order to prevent dangerous and undesirable situations. This may include, but is not necessarily limited to:

EXHAUST GASES

Never let the engine run in enclosed spaces as the exhaust gas contains toxic carbon monoxide. Inhaling exhaust gases is injurious to health and can lead to unconsciousness and death!

REFUELING

Always exercise extreme caution when handling fuel as there is an increased risk of fire!

Never refuel near open flames, embers or sparks - Never smoke while refueling.
Switch off the engine, remove the ignition key and apply the parking brake before refueling.

DANGEROUS AREAS ON THE MACHINE

Always exercise extra caution when staying within the danger zones, as there is a significantly increased risk of jamming and personal injury in these zones. The dangerous areas are marked with warning labels.

ACCIDENTAL MOVEMENT

Always apply the parking brake before leaving the machine, even if only for a short period of time.
If the seat is left while the machine is on, without the parking brake being activated, an acoustic signal is activated.

UNFIXED LOAD

Always fasten the load securely before driving.
Failure to fasten entails a risk of personal injury and property damage.

RAISED ATTACHMENTS

Never perform service on attachments raised only by the front lift of the machine. There is a risk of jamming.
Always lower attachments, mounted on the machine, all the way to the ground when parking the machine.

NOISE

Always close the cabin doors while driving, to maintain the least possible noise in the cabin.
When using attachments with a larger noise emission, the use of hearing protection is recommended.

OILS, GREASES AND OTHER CHEMICAL SUBSTANCES

Always exercise caution when handling oils, greases and other chemical substances (eg battery or sulfuric acid)!
Always observe the applicable safety regulations for the product being handled.

HOT MATERIALS AND SURFACES

Engine, exhaust, radiator etc. have high temperatures during operation and for a while after.
Therefore, always wait to work on the machine and attachments until the parts have cooled down.
Always exercise caution - There is a risk of burns and scalds!

Always use the required protective equipment, described in the individual sections.
It may be, but is not necessarily limited to:



EYE PROTECTION



HEARING PROTECTION



HELMET



GLOVES



SAFETY FOOTWEAR

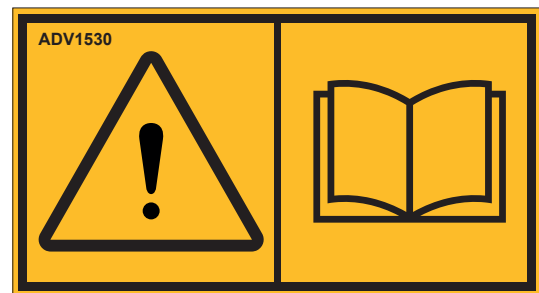
OVERVIEW OF WARNING LABELS

The areas on the machine where potentially dangerous situations can occur are marked with a warning label. The warning label visually indicates the danger that may occur.

Damaged warning labels must always be replaced immediately.
When ordering new warning labels, please enter the spare part numbers below.



WARNING: ROTATING PARTS
Part number: ADV1510



IMPORTANT: READ THE USER MANUAL
Part number: ADV1530

LOCATION OF WARNING LABELS

The sweeping suction system is equipped with two warning labels. Both are located at the top of the cyclone.



TECHNICAL DATA

Specifications are subject to change without notice

TECHNICAL DATA

VITRA SWEEPING SUCTION SYSTEM C2FS1010

SWEEPING UNIT

Brush Diameter:	mm.	650
Mounting:		Standard A-Frame (Cat. 0)

CONTAINER

Capacity:	l.	500
Dump height:	mm.	135
Maximum load:	Kg.	450
Mounting:		Vitra quick lock attachment

WATER SYSTEM

Water capacity:	l.	70
Water pressure:	Bar	10
Water nozzles:	Pcs.	6

SUCTION SYSTEM

Type:		Cyclone
Airflow:	m ³ /h	4000
Air speed	Km/h.	216
Theoretical Performance:	m ² /h	10.000

COLORS

Container:	RAL	9006
Cyclone:	RAL	7021
Sweeping unit:	RAL	7021

TECHNICAL DATA

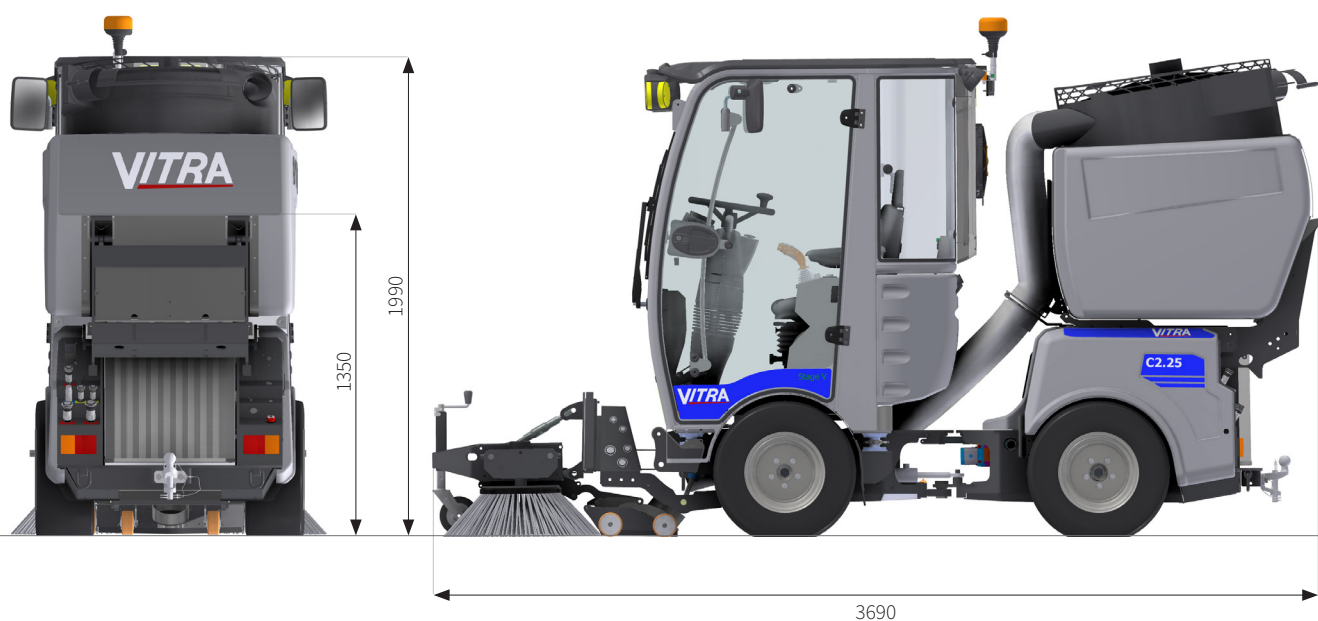
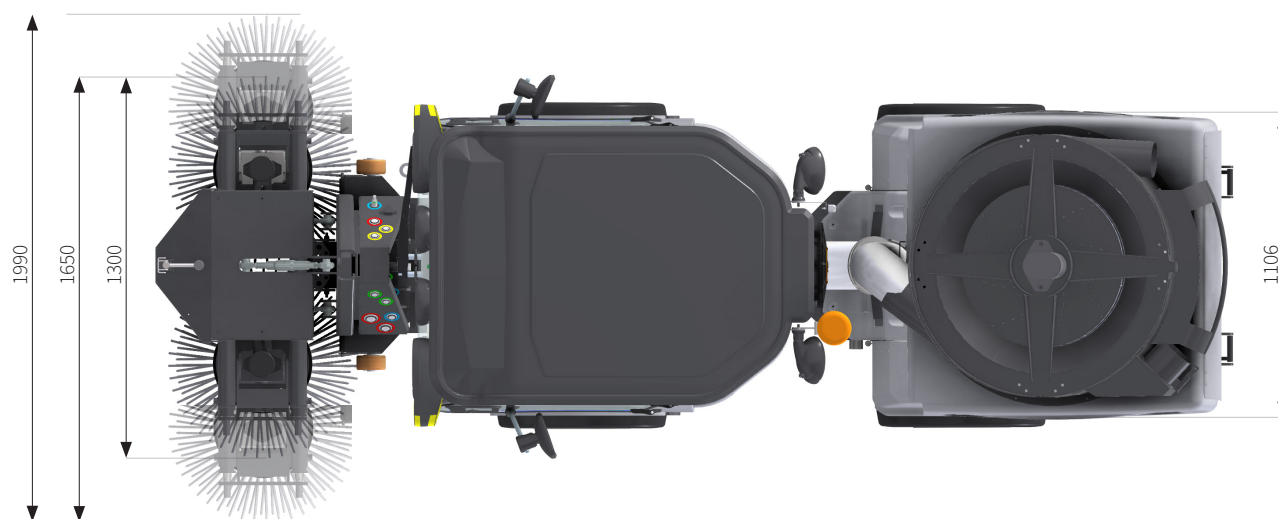
Specifications are subject to change without notice

TECHNICAL DATA

VITRA SWEEPING SUCTION SYSTEM C2FS1010

DIMENSIONS (All dimensions are with the system mounted on the VITRA C2)

Length	mm.	3690
Width:	mm.	1300
Hight:	mm.	1990



IDENTIFICATION PLATES

The attachment is installed with an type plate which contains relevant data about the attachment.



1. PRODUCTION YEAR:

Describes which year the attachment was produced.

2. TYPE / MODEL DESCRIPTION:

Describes the type designation of the attachment.

3. SERIAL NUMBER:

Each attachment has an identification number, also called serial number. Based on this number, different data about the attachment can be read.

Explanation of identification number:

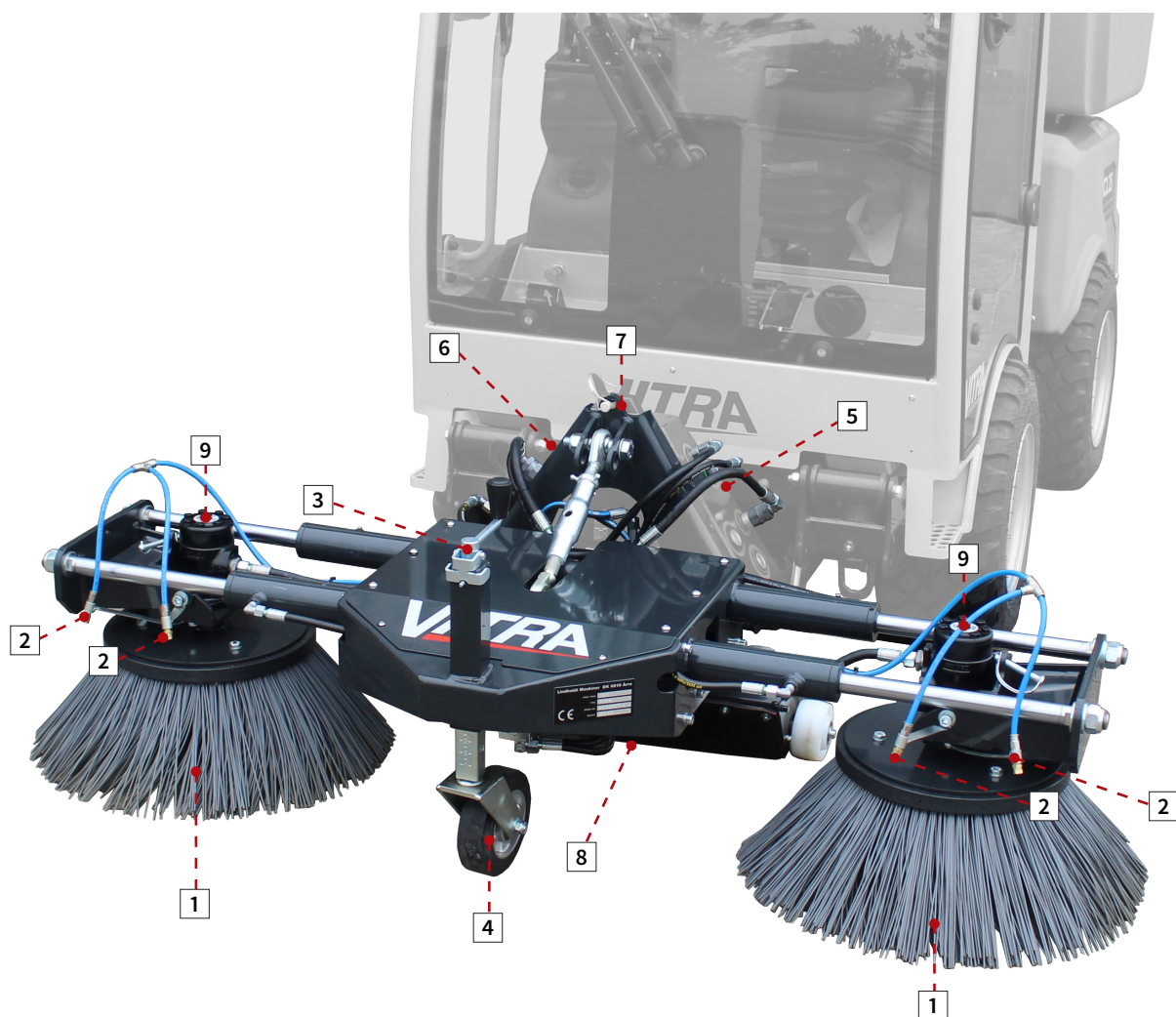
1: Model **2:** Production month **3:** Production year **4:** Production number

When contacting your dealer or service center, the serial number should always be provided.

4. WEIGHT:

The weight of the attachment.

SWEEPING UNIT



NO.	DESCRIPTION	NOTE
1	Brushes	
2	Water nozzles	
3	Adjustment handle	
4	Support wheel	
5	Hydraulic connections	
6	Water and electrical connections	
7	Lock for A-frame	
8	Suction head	
9	Oil Engines	

CONTAINER



NO.	DESCRIPTION	NOTE
1	Cyclone	
2	Water tank	
3	Container	
4	Unloading flap	
5	Handheld Suction Hose	
6	Shaft for handheld Suction Hose	
7	Fixation points - Front	
8	Fixation points - Rear	
9	Lock bracket	
10	Hose holder	
11	Hydraulic connections	

MOUNTING THE CONTAINER

The container is fitted with Vitra quick change and is delivered with a transport trolley, for easy storing, when the container is not in use. Note, that the container must always be empty when placed on the trolley.



WARNING

Always pay attention to the conditions around the machine and attachment to avoid damage to surrounding effects and people. Always exercise caution when operating and keep a good distance to people or animals during operation - There is a risk of injury.

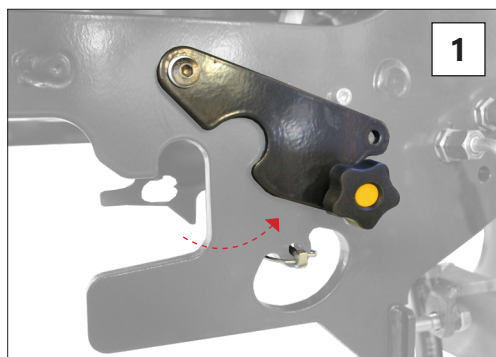
1. PREPARATION

The container is held in place on the machine with four fixing points and two lock bracket. The lock fittings must be unlocked before the container can be mounted

- 1.1 The lock bracket [1] is located on each side, on the rear of the container.



- 1.2 To open the locking brackets, remove the locking pin and push the locking brackets back.



- 1.3 Now the coupling on the suction hose [2] located at the front of the container must be tilted up.
- 1.4 To be able to tilt the coupling on the suction hose up, loosen the bracket on both sides.

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2. MOUNTING

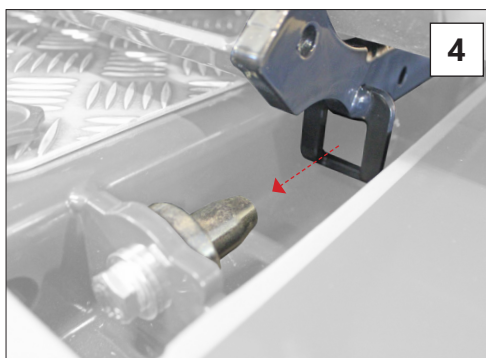
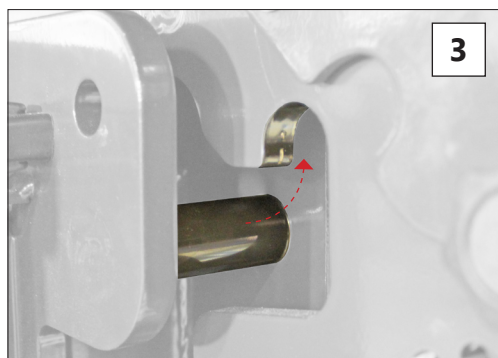
- 2.1. The container can now be mounted by pushing the trolley so that the lower part of the container's mounting frame fits in the mounting rails, at the top of the rear part of the machine chassis

Note that it is necessary to press the handle on the trolley down so that the container is lifted to the maximum, just when the container's mounting frame is notched in the mounting rails on the machine.

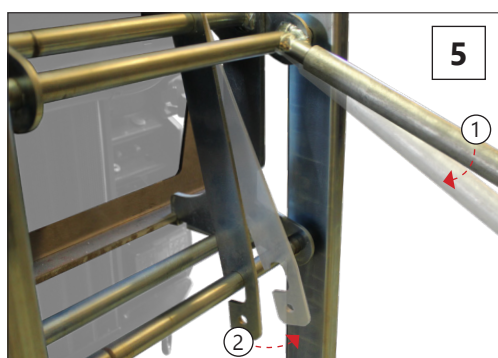


- 2.2 When the mounting frame fits into the machine's mounting rails, the trolley must be pushed so far forward that the rear locking brackets [1] fit over the machine's rear fixing points [3]

At the front, the mounting fram [4] must fit into the notch with the front fixing points in the mounting rails.



- 2.3 When the container has the correct position, it can be lowered into place on the machine. The container is lowered by pressing the handle down [5] and release the securing bracket.



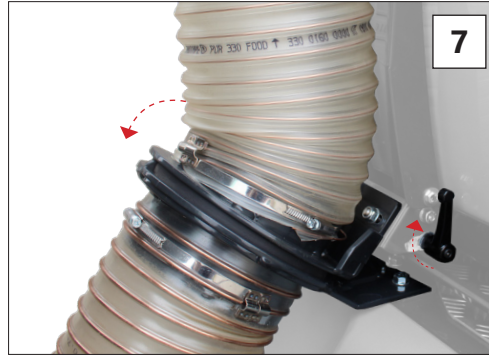
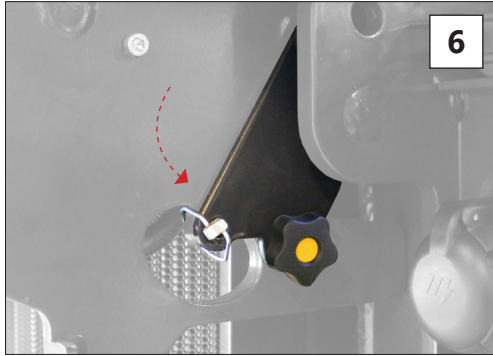
When the securing bracket is released, the handle can be gently released again and the rear locking bracket [3] of the container will now be lowered into place in the fixing points.

Always lock the container as described in the next section before starting the machine or removing the trolley.

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3. LOCKING

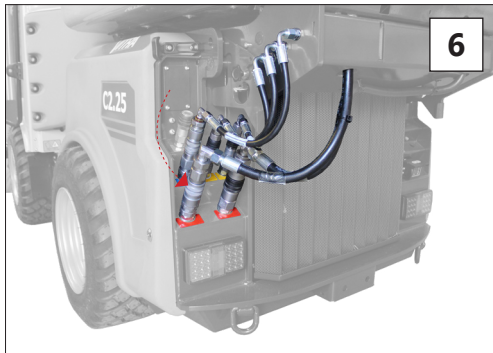
- 3.1. When the container is into correct notch with the fixing points, the container must be locked.
- 3.2. The rear locking brackets are pushed forward **[6]** to secure them around the rear fixing points of the machine. Remember to lock the bracket in the position with the locking pin.



- 3.3. The coupling on the suction hose on the container must now be tilted down so that it ends tightly with the suction hose on the machine **[7]** and locked in position by tightening the thumbscrews on both sides.
- Once the container is locked in position, the trolley can be removed from the container.

4. CONNECTION

- 4.1. When the trolley is removed, connect hydraulics **[9]** to the correct connections.



MOUNTING THE SWEEPING UNIT

The sweeping unit is fitted with a standard A-frame and is easily mounted on the machine's front lift. Note that the sweeping unit for the Vitra C2 is mounted with a Cat.0 A frame.



WARNING

Always pay attention to the conditions around the machine and attachment to avoid damage to surrounding effects and people. Always exercise caution when operating and keep a good distance to people or animals during operation - There is a risk of injury.

1. PREPARATION

Place the sweeping unit on a level surface and check that the hydraulic hoses are positioned so that they are not damaged between the A-frame and the machine's front lift during assembly.

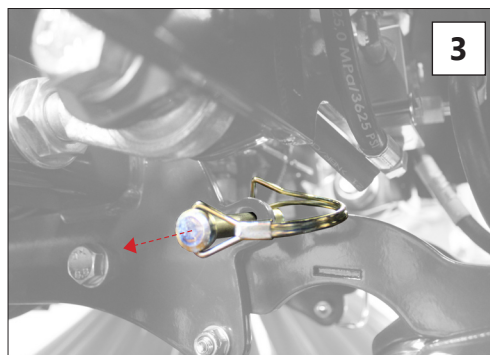
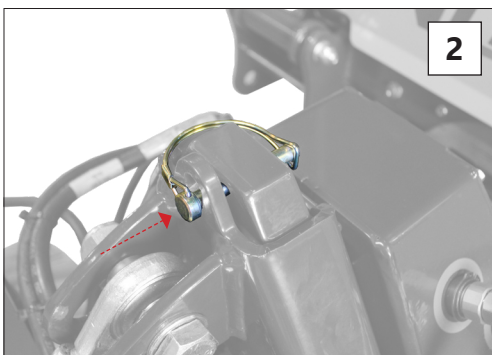
- 1.1 Drive the machine in front of the sweeping unit and raise the front lift **[1]** to fit the A-frame and so that the suction hose from the sweeping unit fits under the A-frame on the front lift.



- 1.2 Drive forward so that the A-frame on the front lift goes into the correct notch with the counterpart on the sweeping unit and raise the front lift until the top of the front lift's A-frame is visible over the counterpart.

2. MOUNTING

- 2.1 When the top of the front lift's A-frame is visible over the counterpart on the sweeping unit, the locking pin **[2]** is mounted so that it passes through both of the two A-frames.

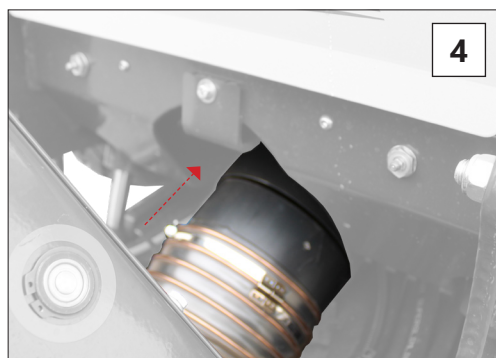


- 2.2 Now raise the front lift so that the two locking pins **[3]** mounted on each side of the suction head during storage, can be removed so that the suction head comes into the floating position.

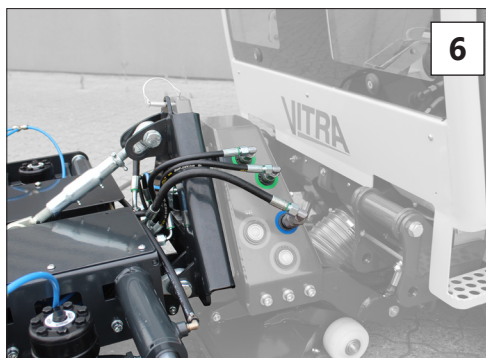
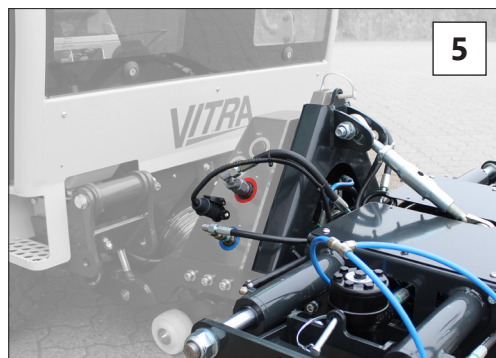
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3. CONNECTION

- 3.1. When the sweeping unit is mounted and locked correctly on the A-frame and the locking pins are removed from the suction head, lower the front to the ground before starting connections.
- 3.2. Check that the suction hose from the sweeping unit **[4]** is inserted correctly with the suction coupling on the machine. Otherwise, install the suction hose manually correctly in the suction coupling.



- 3.3. Now connect quick couplings, as well as water and electrical connections from the sweeping unit to the corresponding couplings on the right **[5]** and left **[6]** sides of the machine's A-Frame.



ADJUSTING THE SWEEPING UNIT

Adjustment must be made if the brushes have too much contact with the surface, or the suction head too little ground clearance - Correct adjustment is necessary to achieve the optimal performance of the sweeping unit.



DANGER

Never let the engine run in enclosed spaces as the exhaust gas contains toxic carbon monoxide. Inhaling exhaust gases is injurious to health and can lead to unconsciousness and death!

1. CHECKING THE BRUSH ADJUSTMENT

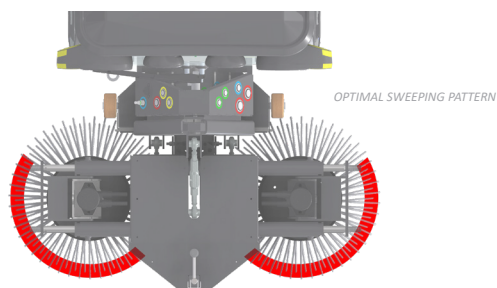
In order to check the current brush adjustment and thereby see where adjustments can advantageously be made to achieve the best sweeping result, the brush adjustment can be checked quickly and easily.

- 1.1 Place the machine on a level and dry surface and apply the parking brake.
Raise the sweeping unit and adjust the engine speed to approx. 2500 rpm.
- 1.2 Activate the Small-PTO system and adjust the rotation speed of the brushes to medium speed.
- 1.3 Activate the water system and let the water nozzles wet the brushes.
This is so that the brushes can leave clear traces on the surface.
- 1.4 When the brushes are wet, drive forward until the surface is dry and put the front lift in floating position.
Let the brushes run against the surface for 1 to 2 minutes.
- 1.5 Switch off the water system and brushes, raise the front lift and drive the machine backwards.
Now read the impression from the brushes on the surface.

OPTIMAL SWEEPING PATTERN

If the sweep pattern looks like this illustration, the adjustment and sweep result are optimal.

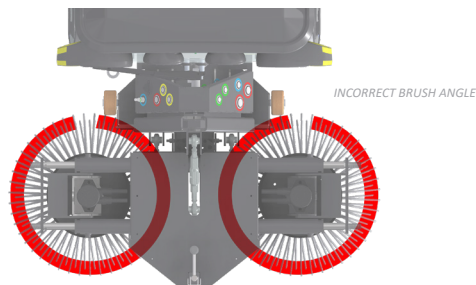
The brushes will collect maximum material from the surface and make an optimum suction result.



INCORRECT BRUSH ANGLE

If the sweep pattern looks like this illustration, the angle of the brushes is not adjusted correctly.

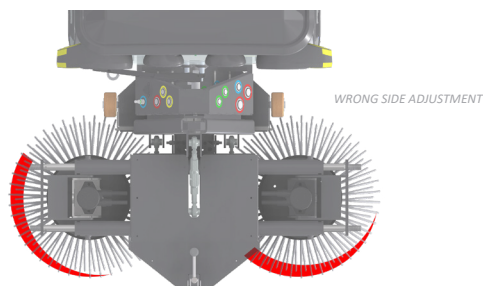
The brushes have too much contact with the surface and a correct angel adjustment should be made.



INCORRECT SIDE-WAY ADJUSTMENT

If the sweep pattern looks like this illustration, the front have a incorrect side-way adjustment

The brushes have an oblique impact on the surface and a correct side-way adjustment should be made.

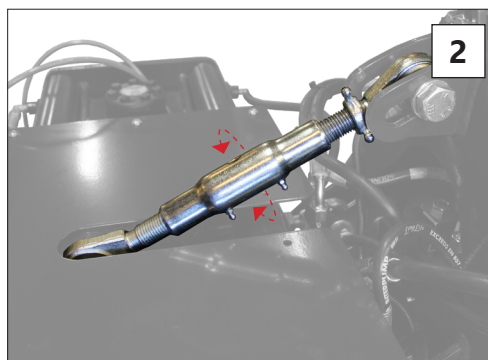
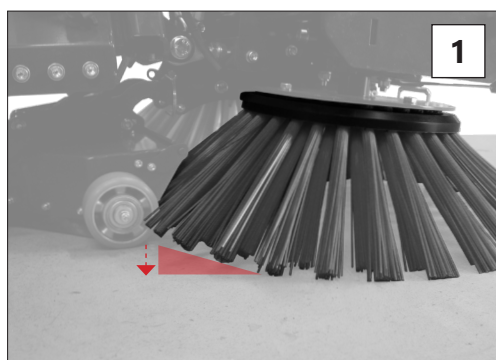


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2. ADJUSTING THE BRUSH ANGLE

If the brushes have too much contact with the surface, the angle of the brush heads should be adjusted so that only the front part of the brush heads has contact with the substrate.

- 2.1 Place the machine on a level and dry surface and apply the parking brake.
Raise the sweeping unit and adjust the engine speed to approx. 2500 rpm.
- 2.2 Activate the Small-PTO system and adjust the rotation speed of the brushes to medium speed.
Now put the front lift in floating position.
- 2.3 When the brushes rotate, the rear half of the brushes should have a ground clearance [1] of 1-2 cm. to the surface, so that the material is not thrown backwards instead of being swept to the suction head.

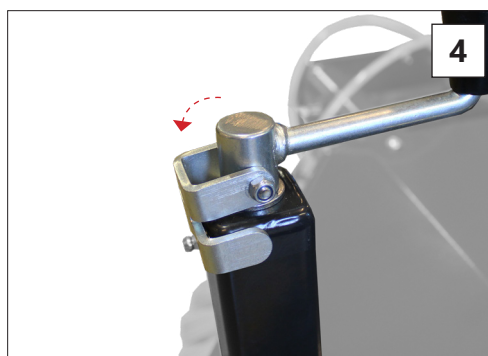


- 2.3 If the brushes have too much or too little contact to the surface, adjust the angle of the sweeping unit by turning the top bar [2] located at the top, until the brushes have the correct angle. Always remember to lock the top bar again, after adjusting.

3. ADJUSTING THE HEIGHT OF THE SWEEPING UNIT

When the angle of the brushes is correctly adjusted, it may be necessary to adjust the height of the sweeping unit so that the front part of the brushes have proper contact with the surface.

- 3.1 Place the machine on a level and dry surface and apply the parking brake.
Raise the sweeping unit and adjust the engine speed to approx. 2500 rpm.
- 3.2 Activate the Small-PTO system and adjust the rotation speed of the brushes to medium speed.
Now put the front lift in floating position.
- 3.3 Now adjust the height of the sweeping unit by turning the adjusting lever [3] to the nose wheel, until the brushes have proper contact with the ground, on the front part of the brush heads. Always remember to lock the adjustment lever [4] again after adjustment.



THE FIRST 50 HOURS

BEFORE THE FIRST START-UP

Before the first start-up is a detailed instruction necessary.

The first-time instruction must be given by a specialist from your authorized VITRA dealer.

In addition to the instruction, the user must obtain the necessary understanding and knowledge to operate the attachment safely and properly by reading and understanding the user manual before using the attachment.

Also remember to read the manual for the machine on which the attachment is mounted.



WARNING

The first 50 operating hours are crucial for the further performance and durability of the attachment.

Proper treatment of the engine is always crucial for both the engine and the attachment's performance.

Therefore, it is always recommended to follow the guidelines below, but especially the first fifty hours of operation it is necessary to ensure a good maintenance basis for the engine and the attachment.

- Always make sure the engine has full operating temperature before running at max rpm.
- Avoid excessive load of the PTO system, the first 50 operating hours.
- Check the coolant level and the engine- and hydraulic oil level daily. Watch for possible leaks.
- Check and if necessary tighten wheel bolts, bolts and nuts to the correct torque.
- Always keep the areas around filling covers and filter housings clean.

Proper maintenance of the attachment is essential to ensure trouble-free and safe operation

Therefore, always follow and observe the prescribed service and maintenance instructions carefully.

BEFORE DAILY START-UP

BEFORE OPERATION

To ensure the optimum safety and working conditions as well as the efficiency of the attachment, points in the following section must be reviewed and checked daily before the attachment is used.

Before a new user has to use a attachment for the first time, he must always obtain the necessary understanding and knowledge to operate the attachment safely and properly by reading and understanding the user manual.



DANGER

Never let the engine run in enclosed spaces as the exhaust gas contains toxic carbon monoxide. Inhaling exhaust gases is injurious to health and can lead to unconsciousness and death!

1. READ THE MACHINE USER MANUAL

Follow the steps in the section “Before daily start-up” in the machine’s user manual.

2. MOVING PARTS

Check all moving parts on the attachment and lubricate if necessary.

For more info, see the section: *Lubrication*

3. MANEUVERING FUNCTIONS

Make sure that all maneuvering functions work properly.

For more info, see the section: *Control*

4. LOCK FITTINGS

Check that all locking fittings on both the sweeping unit and the container is securely locked.

For more info, see the sections: *Mounting the sweeping unit* and *Mounting the container*

5. SUCTION HOSE

Check that there is free passage through the entire suction hose and clean if necessary.

For more info, see the section: *Cleaning the suction hose*.

6. WATER SYSTEM

Check that the water nozzles and the water filter are not clogged.

For more info, see the section: *Water system*

7. BRUSHES & SUCTION HEAD

Check that the brushes on the sweeping unit are in good condition and adjusted correctly.

For more info, see the section: *Adjusting the suction front*

CHECK BEFORE STARTING



DANGER

Never let the engine run in enclosed spaces as the exhaust gas contains toxic carbon monoxide. Inhaling exhaust gases is injurious to health and can lead to unconsciousness and death!

Always exercise extra caution when staying within the danger zones marked with warning labels. In these zones there is an increased risk of trapping and personal injury which can be life threatening!



WARNING

Driving speed must always be adjusted to the surrounding conditions and to the loads to which the machine and attachment are exposed. Avoid sudden turns when driving up or downhill or across slopes. There is a risk of the machine tipping over, resulting in damage to property and personal injury.

Drive with especial care and caution on embankments, on slippery ground, snow or ice. There is a risk that the machine slip, resulting in damage to property and personal injury.

The machine is generally not suitable or approved for the transport of hazardous, flammable or explosive liquids and materials - However, there may be exceptions in connection with different types of attachments.

Engine, exhaust, radiator etc. have high temperatures during operation and for a while after. Therefore, always wait to work on the machine and attachments until the parts have cooled down.



WARNING

The illuminated maximum slope is only indicative, since the center of gravity and thus the stability of the machine are dependent on several factors.

Including, among others:

- Which attachment mounted on the machine.
- The driver's weight and movement
- Fuel and hydraulic oil level in the tanks
- Amount of material in container or truck bed.

Always use common sense and pay attention to the surroundings in which you drive so dangerous situations can be avoided.

IF THE MACHINE OVERTURNS

If it should happen, that the machine tips over, it is important not to try to jump out of the machine. This can cause danger and risk of crushing under the machine.

Instead hold the steering wheel and push your body back in the seat - Always use the safety belt!

CONTROL



WARNING

Always pay attention to the conditions around the machine and attachment to avoid damage to surrounding effects and people. Always exercise caution when operating and keep a good distance to people or animals during operation - There is a risk of injury.

1. START-UP

- 1.1 Before start-up and use it must be ensured that the system is correctly and securely mounted. For more info, see the sections: *Mounting the sweeping unit* and *Mounting the container*
- 1.2 Follow the start-up procedure for the machine and drive to the work area - Do not start-up the sweeping suction system until you have reached your destination and are ready to start work.
- 1.3 Adjust the engine speed to approx. 1,500-2,000 rpm. and activate the suction cyclone by activating the PTO system with the PTO switches **[1]** located on the left side of the instrument panel.



On standard machines, the cyclone is activated with the PTO button **“PTO 1”**

On machines where “grass collector kit” is mounted, the cyclone is activated with the PTO button **“PTO 2”**

- 1.4 Now activate the brushes on the sweeping unit by activating the Small-PTO system with the Small-PTO switch **[2]** located to the right in the control panel, behind the joystick.
- 1.5 If running on a dry surface, the water system can be activated to reduce dust formation. The water system is activated with the AUX button **[3]** located on the right side of the dashboard.



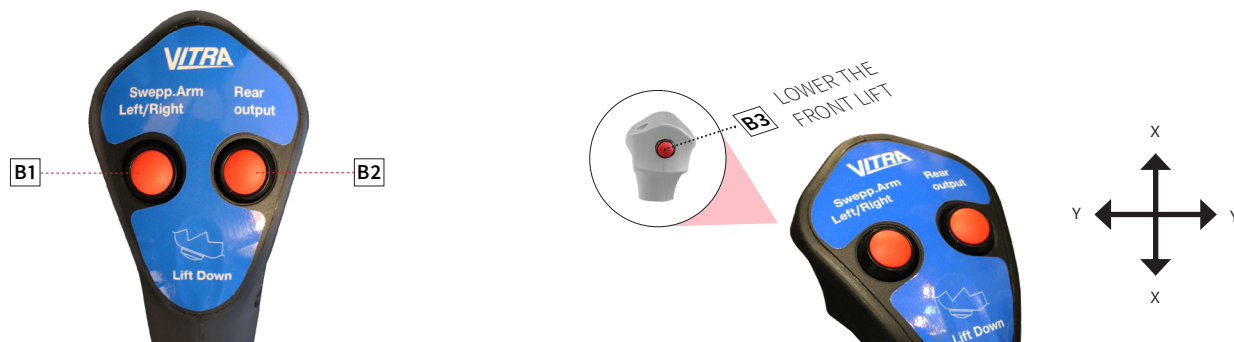
- 1.6 The amount of water can be adjusted on the tap **[4]** located at the back of the control panel.
By deactivating the water system for a short period, the tap can simply be closed completely.
If the water system is to be deactivated for a longer period, it is switched off with the AUX button.

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2. MANEUVER

After start-up, the system is operated with the machine's joystick.

- 2.1 The maneuvering axes on the joystick, "X" (forward / backward) and "Y" (right / left), both have a primary and a secondary function - Switch between the primary and secondary functions is done with the two buttons "**B1**" and "**B2**", located at the top of the joystick.



- 2.2 When none of the buttons are activated and no indicators are on, the joystick has the following primary functions:

No.	Movement	Function
1	Forward	Front lift in floating position
2	Backward	Raise the front lift
3	Left	Left sweep arm - Out
4	Right	Left sweep arm - In

- 2.3 While holding the "**B1**" button, the indicator  lights up and the joystick will now have the following functions

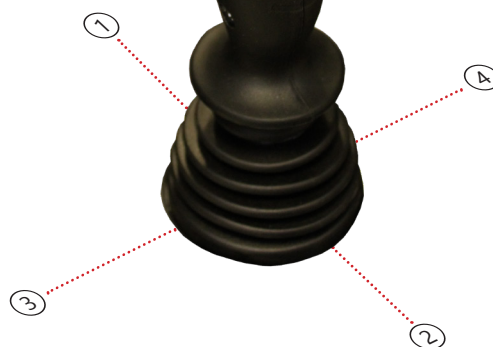
No.	Movement	Function
3	Left	Right sweep arm - In
4	Right	Right sweep arm - Out

- 2.4 While holding the "**B2**" button, the joystick will have the following functions:

No.	Movement	Function
1	Forward	Lower the container
2	Backward	Raise the container

- 2.5 The sweeping unit is equipped with a hydraulic flap, for collecting larger pieces of trash or larger amounts of leaf.

To open the flap, press the button **[1]** located to the right of the joystick. The flap will remain open until the button is released again.

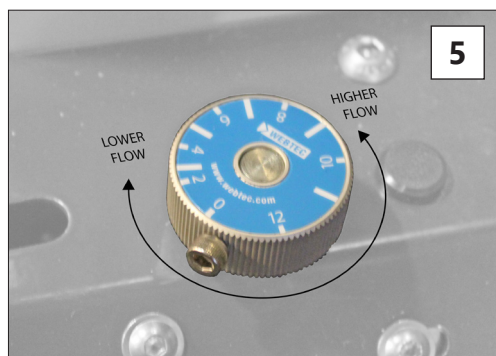


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3. **ROTATIONAL SPEED OF THE BRUSHES**

The brushes on the sweeping unit are driven by the machine's Small-PTO system and therefore the rotational speed of the brushes can be adjusted by adjusting the oil flows in the Small-PTO.

- 3.1 The small-PTO oil flow is adjusted with the flow-valve **[5]** located behind the control panel



- 3.2 With the flow-valve, the oil flow can be infinitely adjusted. The valve is equipped with numbers. Adjusting to a higher number means higher oil flow and thereby faster rotational speed.

4. **HAND-HELD SUGGESTION HOSE**

The sweeping suction system comes with a hand-held suction hose that can be used for collecting leaves under benches, in cellar shafts or other places where tragic sweep is not possible.

- 4.1 The hand-held suction hose **[6]** is located at the top of the container, behind the cyclone.



- 4.2 The hand-held suction hose comes with a practical shaft that is located just below the suction hose. The shaft is held in rubber holders, mounted on the container and released with a fixed lift upwards.

- 4.3 The shaft is clicked into the holder on the suction head of the hand-held suction hose **[7]** after which the suction head can be loosened from the holder on the cyclone and the hose can be pulled out.

In order for the hand-held suction hose to be used without the user sitting in the driver's seat and thereby activating the safety switch in the seat, it is necessary to override the switch in order for the PTO system to remain active. For more info about override, see the section: *PTO override function*

- 4.4 After endt use of the hand-held suction hose, re-insert the suction head into the holder on the cyclone while the system is still activated - The hose will then suck itself together, after which it can easily be pushed into place in the holder

The shaft is disassembled from the holder and re-fitted securely into the rubber holders.

Continued from previous page ..

5. EMPTYING CONTAINER

When the container is filled, the sweeping suction system is stopped and the contents can be unloaded in container, trailer or other suitable place, with a maximum height of 135 cm.



WARNING

The machine must always be aligned, so front and rear wheels are on a straight line before unloading. Unloading where the machine is not aligned may cause a risk of overturning and damaged material.



- 5.1 Drive to the destination where the container must be unloaded and aligned the machine so that the front and rear wheels are placed on a straight line

Make sure the surface is flat and not smooth, so there is no risk of the machine overturning or slipping when unloading and thereby moving the center of gravity of the machine.

- 5.2 When the machine is parked where unloading is desired, hold button **"B2"** as described in section 2.4 and unloading can now be done by pulling the joystick backwards.

- 5.3 The container's hopper flap opens automatically when the container is emptied. For larger quantities of leaves, plastic pieces or other large parts of collected material, it may be necessary to assist the material out of the container, e.g. using the shaft from the suction hose.

- 5.4 After emptying, the container is lowered again by moving the joystick forward, while still holding button **"B2"**. Do not drive until the container is fully lowered.

When the container is lowered into place, the work can be continued.



PTO OVERRIDE

The machine is equipped with a safety switch which is built into the driver's seat.

The safety switch ensures that the PTO system cannot be activated without the driver sitting in the driver's seat.

If the PTO system is already activated and the driver leaves the driver's seat, the PTO system will automatically stop.

If it is necessary to operate the PTO system without the driver sitting in the driver's seat, e.g. when using an external suction hose for the sweep-suction system, the machine is equipped with a PTO override function of the seat switch.



CAUTION

If the PTO override function is used, this requires extra caution when the driver is not in the seat during use to avert a potentially dangerous situation.

Remember that before the override function is used, the parking brake must be activated.

1. ACTIVATE THE PTO OVERRIDE

1.1. To activate the PTO override function, the override switch **[1]** must be activated while the driver is still in the driver's seat, - The override switch is located on the far left of the dash board.

1.2. When the override switch is activated, an acoustic tone will sound from the steering column. This indicates that the override function is activated and the driver can now leave the driver's seat.

The override function will now be active until the driver sits in the driver's seat again, and thereby activating the safety switch, after which the override function will automatically be deactivated again.

2. ACTIVATE THE PTO SYSTEM

2.1. When the PTO override function is activated, the PTO system can be activated with the switches **[2]** located in the dash board, in the same way as if the driver were in the driver's seat.



WATER SYSTEM

The sweeping suction system is equipped with a water system, with water nozzles at each brush head. If running on a dry surface, the water system can be activated to reduce dust formation.

The system is supplied with water from the machine's water tank, which contains up to 70 liters.

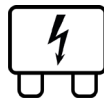


WARNING

If the sweeping suction system is used during the winter, the water must be frost-proof when filling. This is done with glycol-free antifreeze - Never use normal coolant in the water.

1. WATER FILTER

- 1.1. The Water system is mounted with a filter **[1]** between the water tank and the pump. The filter is located just below the cabin on the right side.
- 1.2. If the filter is dirty, screw the bottom of the filter housing and clean or replace the filter cartridge.



FUSE FOR WATER SYSTEM

The water system water pump is supplied through the machine fuse: **F12**
For location, see machine manual.

2. WATER FILLING

- 2.1. The water tank is located at the rear of the cabin. At normal use, the tank must only be filled with clean tap water, drained from an ordinary water connection.
- 2.2. Filling can be done directly in the water tank through the cover **[2]** placed on top of the tank.

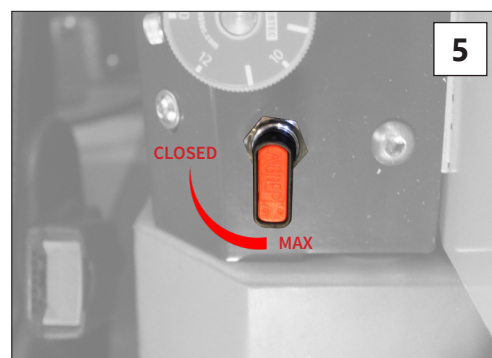


- 2.3. As an option, the sweeping suction system, from the factory, can be equipped with two extra water tanks **[3]** located on each side of the suction hose, at the front of the container. If these are mounted, filling can be done directly in the water tank through the cover on top.

Continued from previous page ..

3. ACTIVATION & DOSAGE

- 3.1 The water system is activated with the AUX button [4] located on the right side of the dashboard.



- 3.2 The amount of water can be adjusted on the tap [5] located at the back of the control panel. The more the tap is opened, the more water is fed to the nozzles.

By deactivating the water system for a short period, the tap can simply be closed completely. If the water system is to be deactivated for a longer period, it is switched off with the AUX button.

4. NOZZLES

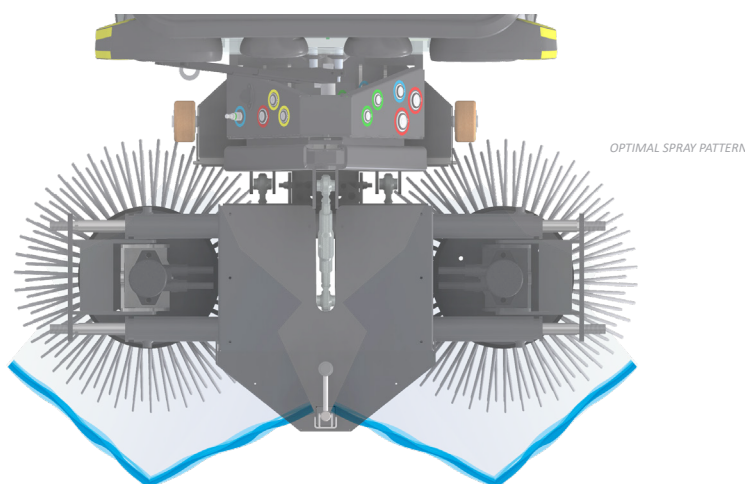
For optimum effect, it is important that the water system has an optimal spread pattern. It is therefore important to check the adjustment of the nozzles before using the system.

- 4.1 To check the spread pattern, use a dry and clean surface where the water system can be activated while the machine stands still so the water makes a clear impression on the surface.
- 4.2 When there is a clear impression, switch off the water system and drive the machine backwards.

OPTIMAL SPREAD PATTERN

In order for the water sprays to provide an optimal spread, they must be set so that the spread just overlaps and covers the entire working area of the brushes without hitting the brushes.

If the spread pattern looks like the illustration below, the nozzles are optimally adjusted.



If the spread pattern is not correct, the nozzles must be adjusted. This is done by turning the entire water nozzle in the winch, with a suitable wrench.

WINTER USE AND STORAGE

It is possible to use the sweeping-suction system during the winter months.

However, preparation of the water system must be carried out during the winter season.

The system must also be prepared if it is stored in an uninsulated garage during winter.



WARNING

If the sweeping suction system is used during the winter, the water must be frost-proof when filling. This is done with glycol-free antifreeze - Never use normal. coolant in the water.

1. WINTER USE

1.1. If the sweeping-suction system is used during the winter, frost protection must be added to the water so that it ensures that the system does not freeze and damage the system's hoses and water pump.

1.2. Frost protection is added directly into the water tank.
For more info, see the section: *Water system*

Newer add normal. coolant, as it contains glycol, which will clogge the water nozzles.

2. WINTER STORAGE

If the system is stored in an uninsulated garage during winter, where there is a risk of frost, the water system must be drained so that the system does not freeze and damage the system.

Since it is not possible to drain the system 100%, it is advisable to add a little frost protection into the water tanks before draining the system so that it is rinsed through the system.

2.1. Place the machine in a place where the water must be drained and apply the parking brake.

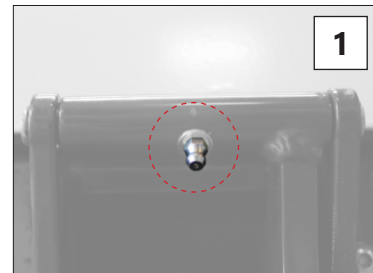
2.2. To empty the system, remove the filter housing and water filter **[1]** and let the water run out. The filter is located just below the cabin on the right side.



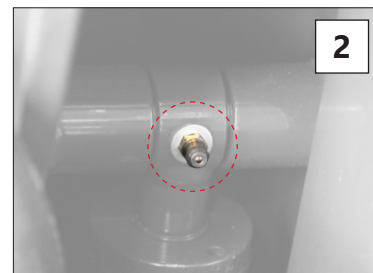
LUBRICATION

The sweeping-suction system is fitted with eight grease nipples, located with two on the suction front and six on the container. Besides two pieces on the container, everyone can be accessed without the use of tools.

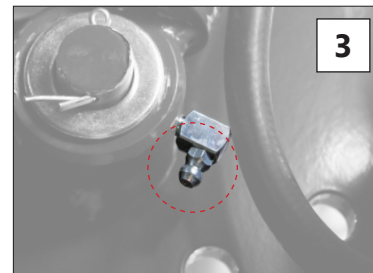
All grease nipples must be lubricated at least once a week.



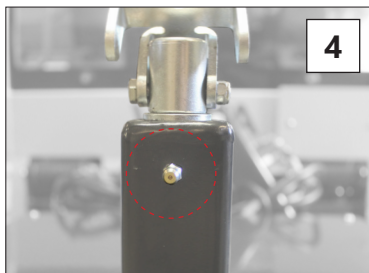
Hinge - Right / Left side



Cylinder (Top) - Right / Left side



Cylinder (Bottom) - Right / Left side
Located behind the back plate



Adjustment handle - Nose wheel



CLEANING THE SUCTION HOSE

The part of the suction hose that is fixed to the machine goes from the front of the machine, under the cabin and to the suction clutch which is located behind the cabin. There are no sharp bends on the hose and clogging is therefore rare. However, after prolonged use, it may be necessary to clean the suction hose. The hose and clutch can also be clogged by collecting larger materials or e.g. wet foliage that packs itself.



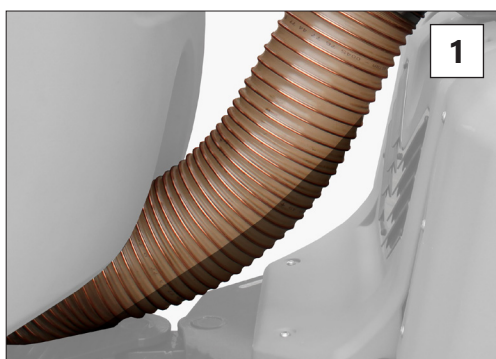
WARNING

Always take great care when servicing the suction system. Pay attention to the surroundings and never put hands or arms into the suction hose or container while the system is activated.

If the sound level from the cyclone changes suddenly, without the container being filled, it may indicate that the system is clogged - Such a fault must always be rectified before continuing the work.

1. CLOGGED SUCTION HOSE

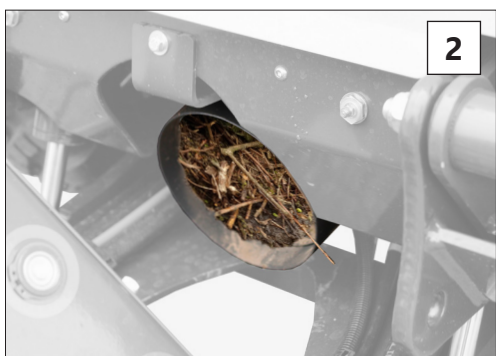
- 1.1 If the suction hose is clogged, it can often be seen through the hose, which is partially transparent. A Clog [1] may be of the entire hose, but may also occur only at the bottom of the hose.



- 1.2 If there is less clogging, the suction cyclone can be activated again and then the hose is carefully tapped, where the clogged material blocks it. However, this only works for light blockages.
- 1.3 If this does not work, the suction hose must be rinsed so that the clogging dissolves. This is done by placing a lit water hose at the suction fronts, suction head. Now activated the suction cyclone so that the water is sucked up through the suction hose.

2. CLOGGED SUCTION CLUTCH

- 2.1 If the suction clutch itself [2] is clogged, the hose is removed and the clutch is manually cleaned. Always make sure that the machine is off and the ignition key is removed before starting work.



CHECKING GASKETS

In order to ensure that false air cannot be drawn into the container, it is important that the gasket placed around the container's unloading flap is checked regularly and replaced if it is damaged.

If false air is drawn into the container, this can result in reduced suction power and, at worst, can cause the collected material to be sucked up into the suction cyclone, thereby being thrown out of the container.

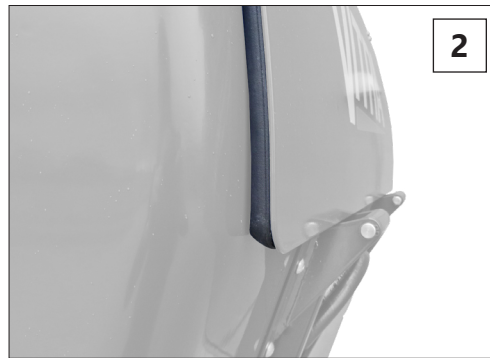
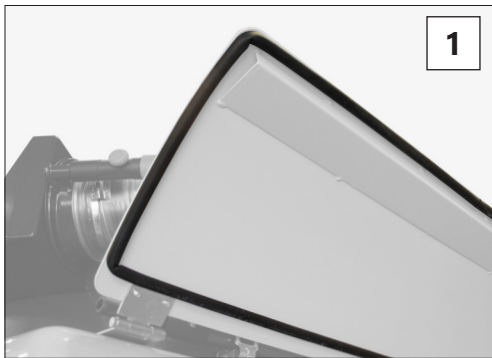


WARNING

Always take great care when servicing the suction system. Pay attention to the surroundings and never put hands or arms into the suction hose or container while the system is activated.

1. GASKET

- 1.1 Lift the unloading flap and check that the gasket **[1]** is intact all the way around. If there is a fault or damage to the gasket, it must be replaced before the work is continued.



- 1.2 If false air is sucked into the container, even if the gasket is not damaged, check that the unloading flap **[2]** connects tightly to the container all the way around when closed.

The unloading flap is not adjustable so if it does not close tightly and the gasket is not damaged, the flap must be adjusted, which must be done at a suitable service center.



MADE IN DENMARK
..designed for the world

USER MANUAL

VITRA SWEEPING
SUCTION SYSTEM
C2FS1010



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