

# Operator's manual



**Suction sweeper  
City Ranger 3070**

# Introduction

## Dear Customer

Congratulations with your Egholm product

The City Ranger 3070 is a Danish designed and manufactured product, which offers a very flexible way of maintaining outdoor areas.

## Optimal use of your City Ranger 3070 Suction sweeper

To ensure optimal performance of your City Ranger 3070 Suction sweeper, please read this manual carefully before using the machine. Failure to do so can result in personal injury and damage to the machine.

## Safety

The Suction sweeper is equipped with various devices to ensure optimal operational safety both for the user and the surroundings. We ask you to pay particular attention to section 1.1 Safety. The machine must only be serviced by professionals.

The Suction sweeper is designed only for use by professionals. On delivery, the user will receive thorough training to become a Competent operator.

Do not lend to anyone who has not been thoroughly trained and who has not read this manual carefully. The operator's manual should be considered as a permanent part of the machine and must remain with it if the machine is sold.

## Warnings

Some items in this operator's manual are marked with this warning symbol.

The warning indicates areas where extra care has to be taken to avoid personal injury or damage to the machine and its accessories. The warning also shows what you should pay special attention to.



## Reservations

As it is the Egholm policy to make continuous improvements, we reserve the right to alter the specifications and equipment at any time without notice. Egholm accepts no liability for errors or omissions in the operator's manual.

## Contact us

Should you have questions of any kind regarding your Egholm product, do not hesitate to contact Egholm.

Best regards

## Egholm A/S

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## Egholm app - easy access to useful material

Download our Egholm app, enter the serial number of your machine and possibly add attachments, and get access to videos, manuals, technical specifications and much more.

If you agree to receive notifications, you will be notified about product and service information, offers etc. The app is available for Apple and Android mobile phones.

General information	5
1.1 Safety	5
1.2 EC Declaration of Conformity	6
1.3 Technical data	7
Operator's manual	9
2.1 Using the Attachment frame	9
2.2 Assembly / disassembly	10
2.3 Checks before start-up	12
2.4 Suction sweeper start-up	15
2.5 Using the brushes	16
2.6 Using electric flap in suction mouth (option)	16
2.7 Using external suction hose (optional)	17
2.8 Emptying the hopper	19
2.9 Emptying the hopper for water	20
2.10 Protect the Suction sweeper against ice during the winter	20
2.11 Adjustment	21
2.12 Recycle water system	23
2.13 High-pressure cleaner (optional equipment)	26
2.14 Option side brush	28
2.15 Option Tilttable front brush	33
Service and maintenance	35
3.1 Suction sweeper service and maintenance chart	35
3.2 Cleaning/replacing filter system and turbine	36
3.3 Maintenance	38
3.4 Maintenance – Front brushes	40
3.5 Maintenance – Fresh water system	41
3.6 Maintenance – Suction system	44
3.7 Maintenance – External vacuum hose (option)	45
3.8 Maintenance – High pressure (option)	46
3.9 Maintenance – Recycle water system (option)	47
3.10 Troubleshooting	48
Conditions	52
4.1 Warranty	52
4.2 Complaints	53

The Suction sweeper is effective everywhere – on paths and pavements, verges, driveways, outdoor and indoor parking areas.

Dust is cleaned away in two stages using the Suction sweeper. Two water-sprayers dampen dust before it is sucked up. The well-known Egholm rotary filter system binds even the finest of dust to the water inside the hopper.

Emptying the collection tank is easy and done from the comfort of the cab seat.

The Suction sweeper can be attached or detached quickly and easily, using the specially designed moveable frame. The hopper can be attached to the frame. This handy design feature means they can be smartly stored away too!

### **Adjusting brush speeds**

Brush speed can be controlled in dry conditions, slowing the brushes to prevent dust spreading.

# General information

**Honest  
Machines**

# General information

## 1.1 Safety



### Avoid roll-overs

Do not drive the machine in a place where it can slide, tip or roll. Do not drive on slopes with an incline of more than 5°. (Picture 1)

①



Max. 5°

Do not drive on slopes with an incline of more than 5°

### Tyre pressure

The tyre pressure must be checked and adjusted to 2.5 bar (36 psi) when the Suction sweeper is attached. Lower tyre pressure increases the risk of roll-overs.

### Emptying the hopper

Before emptying the hopper, make sure that:

- A) The machine is on a level surface and the machine is straight.
- B) That there is sufficient space for the open back cover.

②



Locking handle



### Make sure the hopper is secured

Check the hopper is firmly attached to the machine. (Picture 2)



### Prevent people from standing close to the Suction sweeper

Make sure there is no one close to the machine when it is in use.

③



Fresh water tank Waste tank Cap Rear cover  
Hopper is placed on the machine

### Attention

As it is articulated, the rear end of the machine swings out when turning. Make sure that no one is near the machine while it is in use as there is a danger of crushing.

### Risk of impact when using the lever

Do not let go of the lever when the hopper tank is lowered as that is dangerous. Keep a good grip of the lever until the hopper is on the machine. (Picture 3)

④



Hopper is lowered

### Risk of crushing

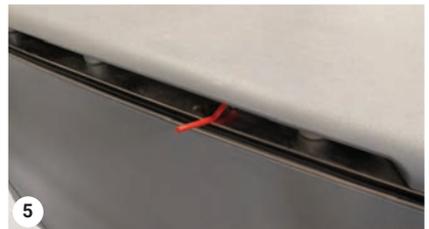
Make sure no one gets their fingers trapped when the hopper is lowered after tipping. (Picture 4)



### Transport

During transport and transporting the machine, the transport lock must be turned out so the cap/lid of the hopper is secured. This to avoid opening and damage to the cap. (Picture 5) Turn the handle inwards when work is to be started with the machine. Located at the left side.

⑤



Transport lock

# General information

## 1.2 EC Declaration of Conformity

Manufacturer: **Egholm A/S**  
Address: **Transportvej 27 · DK-7620 Lemvig**  
Telephone: **+45 97 81 12 05**

hereby declares that

Machine: **Suction sweeper**  
Type: **30 SH BA = Hopper**  
**30 FB BA = Sweeper unit**

- has been manufactured in conformity with the provisions of the Machinery Directive, Directive 2006/42/EU
- has been manufactured in conformity with the provisions of Directive 2000/14/EU

and in accordance with

- DS/EN 13019 Machines for road surface cleaning – Safety requirement

Any alteration, rebuilding or addition of implements, accessories or other equipment not manufactured by Egholm automatically results in the cancellation of type approval, CE approval, any other approval, as well as any warranty on machine and attachments.

Unless otherwise agreed in writing between the operator, customer and Egholm, Egholm is the data originator of all data generated by the machine and attachments during use.

Person authorized to compile the technical documentation:

Mr. Rainer Flanz  
Egholm A/S  
Transportvej 27 · DK-7620 Lemvig

Place: Lemvig  
Date: \_\_\_\_\_  
Signature: 

Rainer Flanz, R&D Manager

## 1.3 Technical data

### Dimensions

<b>Suction sweeper with two brushes</b>	<b>Assembled</b>	<b>Storage dimension on stand</b>
Length (L1) .....	4.242 mm.....	2.600 mm
Width (W1) .....	1.430-1.700 mm.....	1.700 mm
Height (H).....	2.000 mm.....	2.060 mm

### Technical data

Noise level LwA - 2100 rpm (ISO 3744).....	99 dB(A)
Hopper volume.....	950 l
Max. weight in hopper (without options).....	730 kg (Empty water tank)
Water tank volume.....	190 l
Working width - 2 brushes min. ....	1.700 mm
Working width 2 brushes max.....	2.300 mm
Tipping height.....	1.700 mm
Ground clearance under suction mouth.....	110 mm
Ground clearance below brushes.....	170 mm
Suction hose diameter.....	Ø160mm
Fresh water capacity 190L.....	1 nozzle 316 min.
.....	3 nozzles 158 min.
.....	5 nozzles 105 min.
Hydraulic oil.....	Texaco Rando HDZ 68 or equivalent
PM10 certified.....	4 stars

### Technical data High-pressure cleaner (extra equipment)

Hose reach .....	7 m
Water pressure - adjustable up to.....	100 bar
Water capacity.....	6.5 l/min.

### NB

Specifications may be changed without prior notice.

# Operator's manual

**Honest  
Machines**

## 2.1 Using the Attachment frame

### Fitting the hopper

1. Reverse the machine up to the hopper, which is placed on the hopper frame.
2. Stop the machine.
3. Check the locking handle is in the open position. The hooks must be in the position shown in the picture. (Picture 1)
4. Press the grip on the locking handle in and turn it anti-clockwise. Pull the lever out and move it up. (Picture 1)
5. Check that the hydraulic couplings are clean and not dirty. If necessary, wipe with a dry cloth. (Picture 2)

The attachment frame is used to attach and de-attach the hopper from the Basic machine.

To lift the hopper tank of the attachment carrier the ratchet load carrier must be in most open position. (Picture 3)

Press up the hook lift arm (lifting hooks in lowest position) (Picture 4)

Push the Attachment frame to the hopper and ensure the hooks are in place in the hoppers lifting devices. (Picture 5)



### Attention

The hopper water tank and waste tank must be emptied for water and waste before lifting the hopper with the hopper frame.



Locking lever – unlocked



Cleaning couplings



Ratchet load carrier open position



Press up the hook lift arm



Push the Attachment frame and ensure the hooks are in place in the lifting devices.

# Operator's manual

## 2.1 Using the Attachment frame - continued

Push the hopper in over the loading panel until it is 5-10 cm from end position.  
carefully lower the hopper into the loading panel by using the ratchet load carrier. (Picture 2)  
When the hopper is set on the loading panel remove the attachment frame and push the hopper into position.  
The hopper must be centrally placed over the machine.



Fitting the hopper

## 2.2 Assembly / disassembly

1. Check the hopper is correctly attached to the machine.
2. Free the hopper frame from the hopper.
10. Press the grip on the locking handle in and turn it anti-clockwise. Pull the lever out and move it up. (Picture 3)
3. Fix the hopper securely to the machine by turning the lever 1/3 clockwise. (Picture 4)
4. Push the lever in, opposite way to point 10.



Lower the hopper on to the frame with the ratchet load carrier



The locking handle is pulled out



### Attention

Keep fingers and hands away as there is a danger of crushing. Keep a good grip of the hopper frame lever when the hopper is lowered.

### Removing the hopper

Follow the fitting procedure in reverse order.



The locking handle is turned

## 2.2 Assembly / disassembly - continued

### Fitting the front brush

1. The locking handle on the A-frame of the basic machine must be in the unlocked position. (Picture 1)
2. Drive the base machine right up to the A-frame of the brushes, so the A-frames fit into each other.
3. Raise the A-frame by pulling the joystick back until the brushes are free of the ground.



#### Note

Its important not to lift the brush completely, if its completely lifted its not possible to lock and connect the brush.

4. Stop the machine.
5. Lock the front brush and connect the hydraulic's by turning the lock handle to locked position. (Picture 2)
6. Click up the kickstand. (Picture 3)  
Do not drive with kickstand in parked position (kickstand down). The kickstand can hit the ground and will be damaged.

### Removing the front brush

Follow the fitting procedure in reverse order



#### Avoid burn injuries

The hydraulic components get hot when operating with the Suction sweeper unit. Do not touch the components before they are cooled or use gloves.



Locking handle



Turn the lock handle to locked position.



Kickstand

# Operator's manual

## 2.3 Checks before start-up

### 1. Topping-up the water

It is important the water tank is filled up before starting. (Picture 1)

The water level can be read in the display on the machine. (Picture 2)

A water-sprayer is positioned in the hopper (Picture 3) and two water-sprayers is positioned in front of each brush (Picture 4) the two outer sprayers can be manually opened or closed. (Picture 5)

3 nozzles approx. 1,6 l/min.

5 nozzles approx. 2,6 l/min.

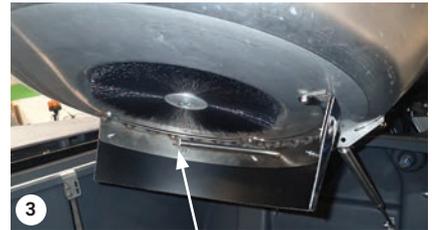
If you only use the nozzle in the hopper, it uses approx. 0,6 l/min.



Topping-up the water



Tank gauge (the selection screen of the hopper)



Water-sprayer in the hopper



Water-sprayer – front brush



Valve placed on the front brush for 3rd and 4th nozzle

## 2.3 Checks before start-up - continued

### 2. Checking the rotary filter and turbine

Checking the rotary filter and turbine. (Picture 1)  
Remove any dirt before starting (See Section 3.1).  
Check that no brush hair is stocked in the rotating filter grill above the brush.

### 3. Checking the rotary filter water-sprayer

3.1. Set the FPR switch to neutral position to engage parking brake.

3.2. Turn the ignition key to position 1 WITHOUT starting the machine. (Picture 2)

3.3. See section 3.2, cleaning the water-sprayer

3.4. Check water comes out of the water-sprayer below the filter in the hopper tank. (Picture 4)



#### Attention

The Suction sweeper must not be used if the water-sprayer in the hopper is not working.

Stop the turbine immediately if there is imbalance/vibration in the filter or in the turbine.

The water pump is shut down if the water tank is below 5% water.

The water level indication shows how much water that is left. A red "H<sub>2</sub>O" symbol is activated when the water level is below 5%.

### 4. Adjusting front brushes.

Correctly adjusted brushes last longer. Make sure the brushes do not press too hard against the surface being cleaned (See Section 2.10).



1 Checking the rotary filter and turbine



2 Ignition key – position 1



3 Work mode button



4 Water-sprayer in the hopper

# Operator's manual

## 2.3 Checks before start-up - continued

### Avoid roll-overs

#### Check tyre pressure

The tyre pressure must be checked and adjusted to 2.5 bar (36 psi) when the Suction sweeper is attached.

Do not drive the machine in a place where it can slide, tip or roll. Do not drive on slopes with an incline of more than 5°. (Picture 1)

#### Transport – Load suspension

When activating the load suspension, the front attachment will be load suspended and reduce the overall vibrations, when driving on uneven surfaces. The hardness of the load suspension can be hardened by pulling the right joystick back or softened by pushing the right joystick forward. (Picture 2+3)

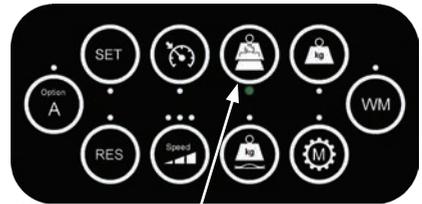


#### Attention

Always activate the load suspension in still position as the A-frame can drop depending on the pre-load in the hydraulic system.



1 Do not drive on slopes with an incline of more than 5°



2 Load suspension - activated  
(green light on)



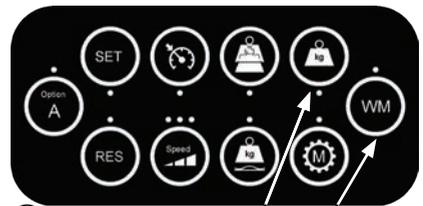
3 Load suspension – deactivated

## 2.4 Suction sweeper start-up

1. Start the machine.
2. Select sweeper unit and hopper in "selection menu". (Picture 1)
3. Make sure nobody is near the brushes.
4. Push and hold WM button for minimum 3 sec. The brushes will now lower and rotate, press load transfer. Use the weight transfer to get the right brush pressure. (Picture 2)  
To disable work hydraulics, press the WM button briefly. To disable Work Mode completely, press the button for 2 seconds.
5. Now select desired suction power, brush speed, water spray etc. (Picture 3)



① Select hopper and brush



② Weight transfer Start work mode

- 5.1 Suction power: 4 steps are available. Step 1(Eco), step 2, step 3 and Step 4 (Boost).
- 5.2 Brush speed, in 10 steps.
- 5.3 Water front nozzle usage: On/Off.  
(To preserve water, the nozzle, when activated, will only spray if the tractor is set to drive forward)
- 5.4 Recycle water: On/Off.

### Note regard vacuum sensor

When operating the machine with the Suction sweeper. The vacuum level will in normal condition with a complete clean system have an level indication around 1/3 of the height.

An alarm will be given both visual (A red square box with an exclamation mark in the display) and with a warning beep. The warning will be activated if the vacuum exceed 60% of any given turbine speed max vacuum.

If this occur the system is close to clog up and a reduction in sweeping speed is recommended. If this do not reduce the vacuum indicator the system might be clogged and a cleaning is needed.



③ Adjust work settings to desired level

- a. Turbine speed.
- b. Recycle water.
- c. Autolift when FPR is set to R. (Option)
- d. Turbine boost.
- e. Brush speed.
- f. Reverse brush.
- g. Nozzle at brushes.
- h. Weight transfer level.
- i. Operation vacuum indicator.
- j. Fresh water indicator.

# Operator's manual

## 2.5 Using the brushes

The joystick's controls the brush' movements.  
(Picture 1)

The right side brush is operated by the right joystick.  
The left side brush is operated by the left joystick.

### Using right brush

Moving the joystick to the right moves the brush out.  
Moving the joystick to the left moves the brush back in.

### Using left brush

Moving the joystick to the left moves the brush out.  
Moving the joystick to the right moves the brush back in.

### Note

Using both brushes at same time:  
press blue botton, Joystick forward both brushes  
moves out, joystick back both brushes moves in.

## 2.6 Using electric flap in suction mouth (option)

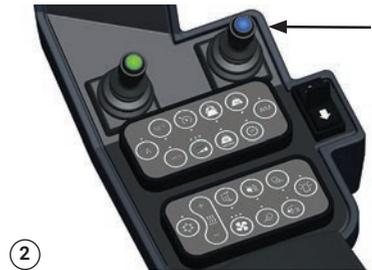
The left joystick controls the opening of the flap in  
the suction mouth. (Picture 3)

Moving the joystick forward lifts the flap.  
(Bigger opening).

Mowing the joystick backwards lowers the flap.  
(smaller opening).



Left and right joystick



Left joystick to left brush  
Right joystick to right brush

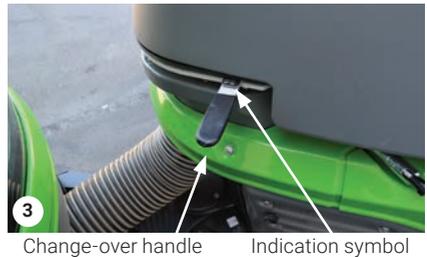


Left joystick

## 2.7 Using external suction hose (optional)

### Ready for use

1. Set FPR in parking position. (Picture 1)
2. Switch on external suction by holding the manual start button down. (Make sure Hopper tool is selected.) Then press and hold "Manual Work Mode" for minimum 3 sec. (Picture 1)
3. On the manual work screen, make sure the external hose is selected. If not, press the external hose button. (Picture 2)
4. Turn the change-over handle so the handle is at the external hose symbol. (Picture 3)
5. Open the rear cover. Push the locking clip and pull the suction hose out. (Picture 4)
6. Pull out the vacuum nozzle and adjust the handle to comfortable work angle. (Picture 5)



# Operator's manual

## 2.7 Using external suction hose - continued

### Storing the external suction hose

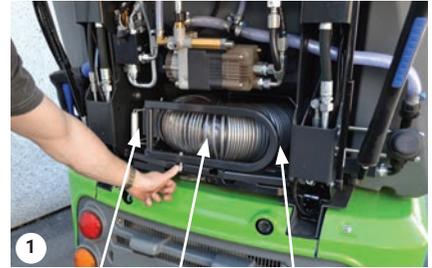
1. Place the vacuum nozzle in the holder.  
The hose rolls up together. (Picture 1)

2. Fold the handle in.

3. Snap the handle into the lock.

4. Turn the change-over handle so the handle is at the machine symbol. (Picture 2)

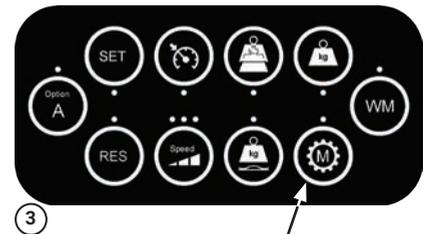
5. Hold and press Manual work mode button for minimum 3 sec to turn off work mode.  
Or press back key on the display. (Picture 3)  
Make sure that the driver is placed in the seat otherwise it will not get activated.



Locked Vacuum nozzle Handle



Change-over handle



Turn off manual work mode

## 2.8 Emptying the hopper

The hopper can empty directly onto the ground or tip into a container.  
Tipping height 170 cm.

### Attention

Before emptying the hopper, make sure that:

A) The machine is on a level surface and the machine is straight.

B) There is sufficient space and height to tip the hopper.

1. STOP "Work mode" or "Manual mode" by holding the activated work type button down for minimum 3 seconds. (See Basic machine manual, under 1.6 controls for more information). (Picture 1)

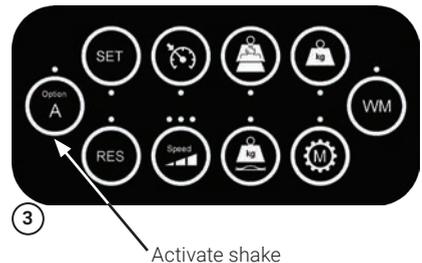
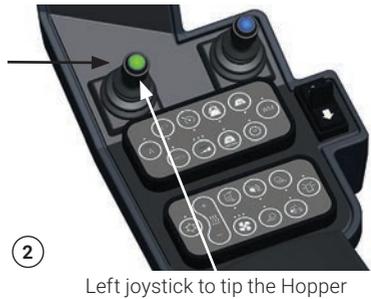
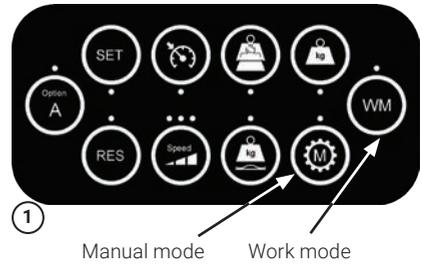
2. Drive to the nearest disposal area.

3. To empty the hopper, press the green button on the left joystick before moving the joystick and then pull the joystick back while holding the green button. (Picture 2)

4. To help emptying the hopper a "rattle" can be activated when the hopper is open. To do this, press the Option A button on "Keypad 1" and hold it around 5 seconds to shake the hopper a few times. (Picture 3)

5. To lower the hopper tank, press the green button on the left joystick before moving the joystick. Now push the joystick forward while holding the green button.

Release the handle when the hopper is back in position.



# Operator's manual

## 2.8 Emptying the hopper - continued



### Attention

The top cover must not be opened until suction has ceased. Otherwise there is a risk of personal injury. The suction continues to run for approx. 15 s after the turbine (Work mode) has been switched off.

There is a risk of crushing while the hopper is being emptied.

When shake option is activated the tractor will shake as well and risk of hitting container etc. can occur. Do not drive with the hopper open. Risk of personal and mechanical damage. Make sure the hopper is completely lowered after emptying!

## 2.9 Emptying the hopper for water

The water in the fresh water tank of the hopper can be emptied by opening the water valve. (Picture 1). Water from waste tank can be either tipped off or drained through the water level hose - just release the hose and tip it to the side. (Picture 2).



### Attention

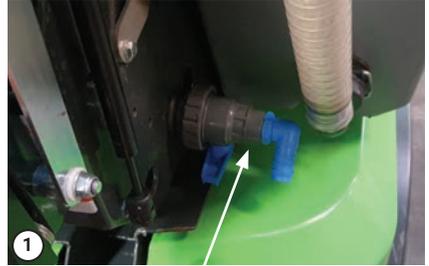
The hopper must be empty when stored on stand. Both waste tank and water tank.

## 2.10 Protect the Suction sweeper against ice during the winter

1. Pouring a solution of water and anti-freeze into the water tank – the same solution as if protecting a sprinkler system against ice.

2. Activate work mode and turn on brush nozzles. Set the machine to drive forward and the liquid runs through the whole system and protects it against ice.

3. Alternative, completely empty the water in the tank and the rest of the system.



Open water valve (dumping fresh water)



Waste tank water level hose

## 2.11 Adjustment

### 1. Adjusting brushes

Adjust the brushes using machine weight transfer system. Make sure the sweeper system is chosen. (Picture 1)

1.1. Start the machine - press the Work Mode button and the sweeper system starts.

1.2. Press the weight transfer button on key panel 1.

1.3. Press the turn button on display and the weight display turns green and now turn the turn button until the brush pressure on ground is OK.

Adjust the brushes so that they precisely brush the ground to give a maximum clearing width, with half of the brush bristles touching the ground at any given time. (Picture 3)

### 2. Adjusting the suction mouth

Adjust the distance between the surface and suction mouth is done by loosen or tighten the 4 screws holding the suction mouth.

Rubber in front end 2-3 mm above ground.

Rubber in back end 8-10 mm above ground.

### 3. Adjusting the brush angle forward

3.1. Loosen the counter nut. (Picture 2)

3.2. Unscrew the parallel rod. The forward edge of the brush lowers.

3.3. Screw the parallel rod back. The forward edge of the brush lifts.

3.4. The optimal brushing position is with the forward 1/3 of the brushes in contact with the ground.



Weight transfer



Adjusting nuts



Counter nut - parallel rod

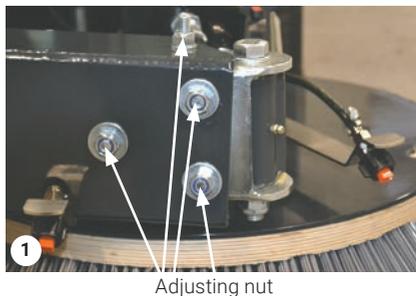
# Operator's manual

## 2.11 Adjustment - continued

### Horizontal

To adjust the brushes horizontally, loosen the 3 nuts on the front beam,. Then turn the nut on the top of the beam for adjusting manually.

Use Spanner NV17 (Picture 1)



## 2.12 Recycle water system

The recycle water system is using water inside the waste tank to clean the suction system. It is well suited to clean the suction hose from suction mouth through the suction hose on the machine to pipe path through the water tank and up to the waste tank. The system is best used in the early spring and autumn period of the year. Dust etc. is wet during these periods and tends to stick on the suction system. During very dry periods, it is recommended to reduce usage or not at all.

To fill water in the waste tank open the coupling and fill Water through the hole, water level can be seen through the hose – fill to min. Water lable – approx. 125 L. (Picture 1)

The recycling system is placed in the right side of the Waste tank. (Picture 2)

The recycling pump is mounted directly on to the filter. (Picture 3)

The filter – pump assembly is easy to dismount from the Waste tank for cleaning and service. Tip up the tank completely. Loosen the hose clamp and pull off the recycling water hose and electrical connector, unscrew the handle. (Picture 4)



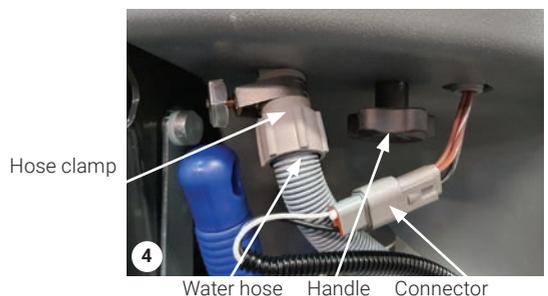
Open filter coupling fill water to min. Water lable (approx. 125 L)



Recycling filter and water pump.



Recycling filter and pump assembly.



Hose clamp

Water hose Handle Connector

# Operator's manual

## 2.12 Recycle water system -continued

Turn and pull down the filter assembly, carefully take out the electrical connector through the hole. When the connector is free take down the filter assembly. (Picture 1)

### Cleaning / check the pump

Pull down the pump filter and clean it. (Picture 2)

### Clean the pump rotor

1. Turn the red part marked "H" counter clockwise and pull out the pump rotor. When re-mounting make sure the "H" is turned upward. (Picture 3+4)

2. When mounting the filter again. Make sure the filter area is free from dirt. The pump end of the filter is placed in two slots in the bracket in the waste tank. (Picture 5)

3. Re-mount and tighten the handle, re-connect the electric connector and recycle water hose. (Picture 6)



Turn to side and pull out. Connector hole



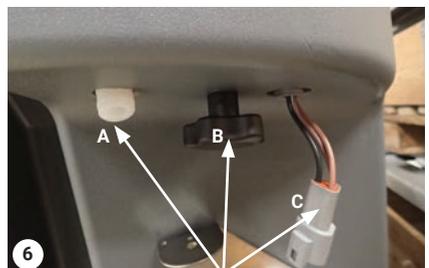
Pump filter



De-mounting pump rotor



Slots placed in bracket



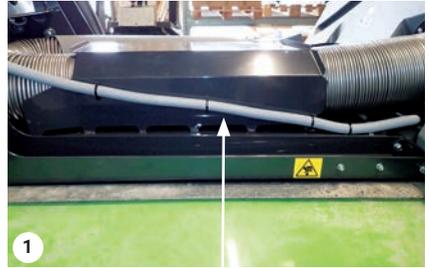
A) Water hose connection. B) Handle. C) Electric connector

## 2.12 Recycle water system -continued

Always make sure path through recycle system is free. Flush the system daily with clean water, de-mount the Recycling hose on the back and flush from back end. (Picture 1)

Recycling hose can be separated in the articulated joint for cleaning. (Picture 2)

To start and use the recycling system press the recycle water button, and the system will start. The pump has an automatic function stopping the pump if there are no water around it. When water is covering the pump it starts again. This on/ off situation will occur if the recycling water is very dirty and the filter close. (Picture 3)



Recycling hose



Separate recycling hose for cleaning



Recycle water button  
Adjust work settings to desired level

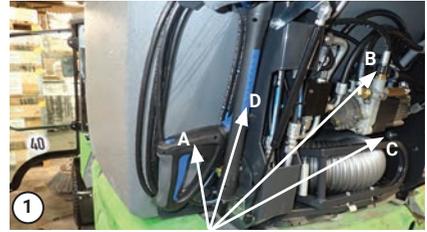
# Operator's manual

## 2.13 High-pressure cleaner (optional equipment)

The high-pressure cleaner is stored in a hollow space behind the hopper. To gain access to the high-pressure cleaner, pump and filter, the back cover must be opened. (Picture 1)

### To use

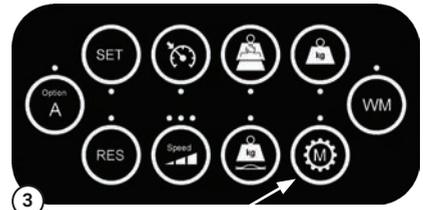
1. Set FPR in parking position. (Picture 2)
2. Make sure The Hopper and front sweeper tool is selected. Then press and hold the "Manual Work Mode" button for minimum 3 sec. (Picture 3)
3. On the manual work screen, make sure the high pressure cleaner is selected. If not, press the high pressure button. (Picture 4)
4. Take out the pistol and lance and connect them. Clean as required. (Picture 5)
5. To clean activate the handle on the pistol.
6. To stop high pressure hold the manual work mode button for minimum 3 sec.
7. Roll the hose tightly in a counter clockwise direction and return the pistol and lance to its holder. It is important that the hose is rolled tightly so that it fits snugly into the hose holder.



A) Pistol B) Pump D) Lance  
C) High-pressure cleaner



FPR to Parking position



Hold manual work mode button for min. 3 sec.



High pressure mode  
Manual work mode main screen



Connect pistol and lance

## 2.13 High-pressure cleaner (optional equipment)-continued



### **NB**

The water pump is fitted with a bypass function to ensure that the pump does not overheat in "neutral", when the high-pressure cleaner is not using water. We recommend that you do not run the high-pressure cleaner in "neutral" for more than 10 minutes at a time.



### **Important**

The water pump must never run when the water tank is empty. If the water pump runs for more than 1 min. without water, the pump will be damaged and will fail quickly.



### **Warning**

When you turn the switch valve back to "external suction hose", the suction system immediately restarts.

# Operator's manual

## 2.14 Option side brush

1. The side brush is an option for the standard front brush.

The side brush is designed as a light construction only to be used for sweeping.

The brush has anti collision springs in the brush arm and in the cylinder for the brush arm.

The front brush with side brush can be lifted in the A frame top. (Picture 1).



Side brush      lifting point

2. In transportation, the side brush must be in folded position. (Picture 2).



### Warning

Never transport the front brush with an unfolded side brush.

3. To use the front brushes and side brush.

- 1) Start the engine.
- 2) Choose the sweeper menu. (Picture 3).
- 3) Choose the 3 brush and hopper. (Picture 4).



Transportation position



### Warning

Make sure no one is near the machine when operating the front brush system. Some movements are automatic.



Sweeper menu



3 brush      Hopper

## 2.14 Option side brush - Continued

1. It is now possible to move either the front brushes or the side brush without starting the brushes.

### To move front brushes

- Left joystick to left brush.
- Right joystick to right brush. (Picture 1).

2. To change using the side brush, press the option button on the keypad. (Picture 3)  
Green Led above option button will light up. (Picture 2)

3. The side brush is now active!  
Use the right joystick to move the sweeper arm.  
When moving the arm, the brush automatic lower to the ground.  
When folding the brush arm, the brush automatic raise to transport position.  
Use the left joystick to tilt the side brush. (Picture 3).

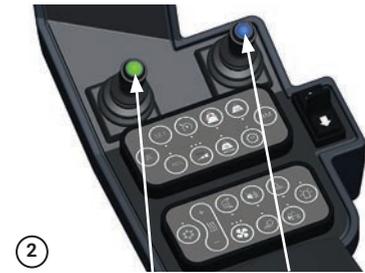
4. To switch between the front brushes and side brush – just press option button on keypad.  
If green LED is on – The side brush is active. (Picture 4).

### Note

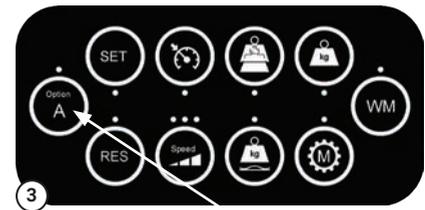
The machine must be in sweeper selection menu to move sidebrush without being in work mode. (Picture 4).



Sweeper selection menu.



Left joystick right joystick



Option button / green LED



Tilt (left joystick) Move arm (right joystick)

# Operator's manual

## 2.14 Option side brush - Continued

For starting the brushes / sweeper.

Adjusting brush speed, see section 2.4.

The brush speed for side brush is adjusted together with front brushes.

In work mode the brushes start, but if the side brush is in folded position the side brush don't start together with the front brushes. When moving the arm out the side brush starts. When folding the brush again the side brush stops. The front brushes keeps running.

### Water spraying

1. The water to the brush is started when the water to the front brushes is started.

It is possible to open or close for the water manually using the water valve on the side brush arm. (Picture 1).



Water valve



Screws

Adjust

### Adjusting the brush

1. The Brush is manual adjusted forward and back.

Loosen 2 screws on brush arm. Turn the brush to the wanted position. Egholm recommend 2-3 deg forward. It is possible to adjust up to 10 deg forward and 5 deg back. (Picture 2).



3

Tilt function left joystick

2. Side tilt.

Use left joystick. (Picture 3).



4

3 brush

Hopper

## 2.14 Option side brush - Continued

1. It is possible to change the lifting point of the side brush by loosen or tighten the nut on the lift arm. (Picture 1).

(Tighten – Brush arm will lift earlier.)

2. Adjusting the lifting height of the side brush when the arm is out.

This function is only for keeping the side brush above ground when the A frame is lifted.

3. Remove the shield above the brush arm by loosen 4 pcs M6 screws – lift of the shield. (Picture 2).

4. Loosen or tighten the M8 nut. (Picture 3).

5. When adjusting, it is important that the side brush is in outer position. The cylinder must be able to move freely after adjustment. If the cylinder is fixed and does not move the nut is too loose. (Picture 4).



Adjusting lifting point (M10 nut)



Remove shield (brush in out position)



M8 nut



Cylinder may not be locked.

# Operator's manual

## 2.14 Option side brush - Continued

### Maintenance

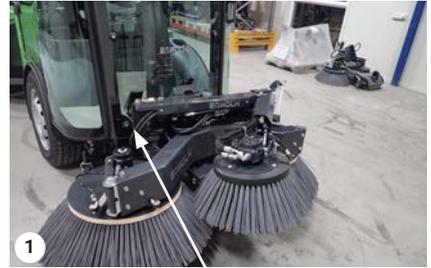
1. The side brush has 4 greasing points.
  - 1) Main beam.
  - 2) Each end of turning cylinder.
  - 3) Eye bearing on parallel arm.

### Replace Brush

2. Fold the side brush to minimum and tilt up the brush.

3. Loosen the 3 nuts inside the brush and replace it with a new brush:

PP Brush:..... E01103000  
PP/steel brush.....E50002259



Grease nipple



Grease nipples



Brush folded and tilted



Loosen 3 nuts and replace brush

## 2.15 Option Tiltable front brush

The tiltable function is an option for the standard front brush. The option is available for both left and right side of the front brush.

If the front brush is equipped with the tiltable option, the front brush can tilt up to  $7^{\circ}$  extra outwards. It's only possible to tilt the brush when the brush is at its widest position. (Picture 2).

### To tilt the front brush

1. Turn the brush outwards, when the brush is at its widest position, the brush will begin to tilt. (Picture 3).

### To tilt the front brush back

2. When the brush is turned inwards, the brush will tilt back first and then turn inwards. (Picture 4).



Front brush not tilted



Front brush tilted – up to  $7^{\circ}$



Turn and tilt the right brush outwards



Tilt and turn the right brush inwards

# Service and maintenance

**Honest  
Machines**

# Service and maintenance

## 3.1 Suction sweeper service and maintenance chart

We recommend that service and maintenance procedures are carried out by authorised Egholm dealers.

◆ Clean      ■ Lubricate      ○ Check      ● Replace

Operation	Service schedule					
	Daily	40 h	120 h	500 h	yearly	See §
Walk-around inspection	○					
Spray pipe nozzle	○					3.1
Rotation filter grill	○				●	3.1
Rotation filter	○				●	3.1
Turbine		○				3.2
Suction mouth	◆		○			3.2
Suction mouth rubber					●	3.2
Suction hose front brush	◆				●	3.2
Suction hose (On tractor)	◆				●	3.5
Suction pipe in water tank	◆	○				3.5
Fresh water system		○				3.4
Nozzles brushes			◆			3.4
Nozzles suction mouth		◆				3.4
Brushes		○	■			3.3
Hinges (tip, cylinders)				■		
High pressure cleaner (Optional equipment)						3.6
External suction hose (Optional equipment)		◆				
Recycle water system (Optional equipment)	◆	◆				3.7

# Service and maintenance

## 3.2 Cleaning/replacing filter system and turbine

Daily cleaning and maintenance will extend the lifetime of both the machine and the attachment.

Clean the Suction sweeper with water after use. Avoid high pressure cleaning of the snap couplings.

Clean the snap couplings with a cloth. (Picture 1)



Clean the snap couplings with a cloth

### Cleaning/replacing filter system and turbine



#### Attention

In case of imbalance in the filter or turbine, the machine must be stopped immediately to prevent vibration damage.

#### Checking the filter and turbine daily

Dirt can cause imbalance in the rotary filter and turbine. It must be removed immediately! Give special attention to the filter and turbine while the machine is operating in difficult conditions.

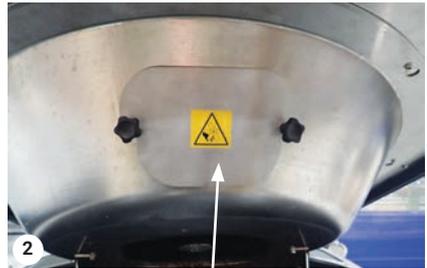
#### Cleaning the rotary filter and turbine

1. To remove the turbine inspection hatch, loosen the knobs on the hopper. Rinse the turbine clean with water, preferably using the high-pressure cleaner. (Picture 2)

2. If the turbine is very soiled, remove the rotary filter and perhaps the rotary filter grill to give better access for cleaning the turbine. (Picture 3+4)

3. Check for dirt on the turbine and clean. (Picture 4)

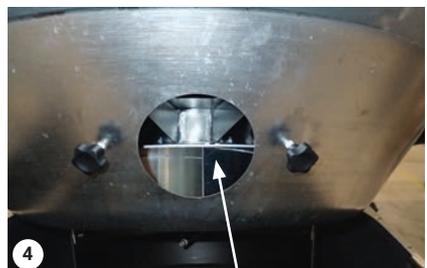
4. Flush the turbine until it is clean. A high-pressure cleaner is recommended for this purpose.



Inspection hatch



Rotary filter grill



Turbine

# Service and maintenance

## 3.2 Cleaning/replacing filter system and turbine -continued

5. Attach the rotary filter grill and rotary filter. The center bolt should be tightened with a torque of 45 Nm.

If the rotary filter cannot be cleaned or is worn, it should be replaced. New filters can be ordered from an authorised Egholm dealer.

### Replacing the turbine

The turbine should be replaced at an authorised Egholm dealer.

### Cleaning the water-sprayer

1. By hand: Press the black plastic ring behind the nozzle away from the nozzle, and then pull the nozzle out. (Picture 1)

2. Clean the nozzle with a nozzle cleaner or similar. (Picture 2)

3. Set the machine in ignition, **do not turn on** the machine.

4. Go to the sweeper menu, make sure the hopper is selected.

Press and hold the "bucket" for 3 sec. until the green light turns on. (Picture 4)

The water pump starts and water will flush the hose to the hopper.

5. Remount the nozzle with the banjo bolt. Make sure the nozzle is mounted correctly.



Spray pipe



Nozzle



Press and hold "bucket" for 3 sec.

# Service and maintenance

## 3.2 Cleaning/replacing filter system and turbine -continued

### IMPORTANT

#### Imbalance/vibrations in the hopper

If the turbine is not cleaned and maintained imbalance/vibrations will occur in the hopper. The reasons for this may be:

1. Dirt stuck in the rotary filter, rotary filter grill or turbine.
2. The filter or turbine is damaged. New filters, rotary filter grills and turbines can be ordered from an authorised Egholm dealer.

Imbalance and vibrations in the filter and turbine can in long operation result in fatigue failure.

## 3.3 Maintenance

### Replacing the rubber sleeve

1. Remove the front brush from the basic machine.
2. Dismount all bolts holding the rubber, replace the rubber, remount the bolts.

Same for front and backside rubber.

New rubber sleeves can be ordered from your authorised Egholm dealer.



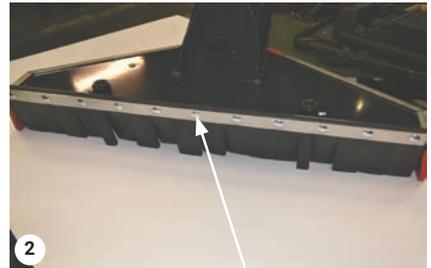
### Attention

To avoid excessive wear and tear, it is important to readjust the front brush. (See section 2.10)

Always keep the hydraulic connectors clean (Picture 3)



Backside rubber  
on screw all bolts, change the rubber



Front rubber on screw all bolts and change  
the rubber



Hydraulic connectors

# Service and maintenance

## 3.3 Maintenance - continued

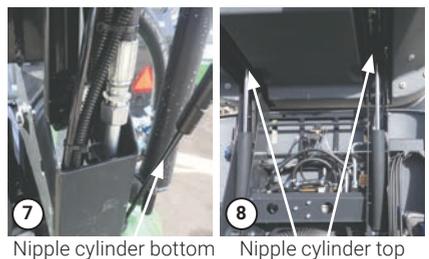
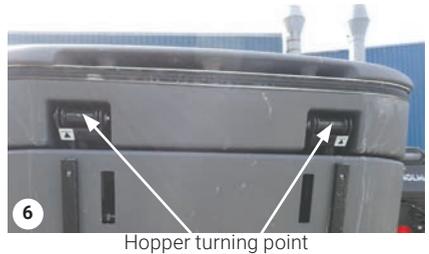
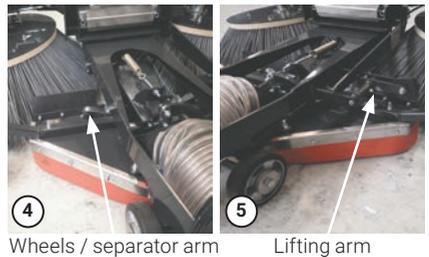
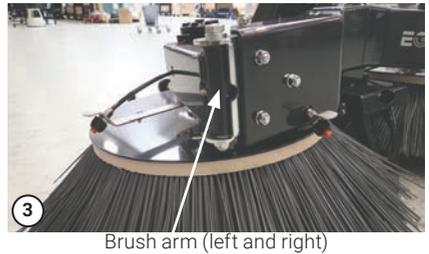
### Greasing nipples - Front brush

1. Cylinder in both ends. (Picture 1 + 2)
2. Brush arm (left and right). (Picture 3)
3. Wheels and separator arm. (Picture 4)
4. Lifting arm. (Picture 5)



### Greasing nipples - Hopper

1. 2 grease nipples in hopper turning point. (Picture 6)
2. Grease nipple cylinder bottom (left and right cylinder). (Picture 7)
3. Grease nipple cylinder top. (Picture 8)



# Service and maintenance

## 3.4 Maintenance – Front brushes

### Replacing the two front brushes

1. Loosen the four nuts on each brush plate.  
(Picture 1)
2. Remove the old brush (The brush plate should not be removed from the hydraulic motor).
3. Fit the new brushes. New brushes can be ordered from an authorised Egholm dealer.



Brush plate      Nuts

### Replacing the suction hose at the front brush

The suction hose should be replaced at an authorised Egholm dealer.

# Service and maintenance

## 3.5 Maintenance – Fresh water system

### Clean water filter

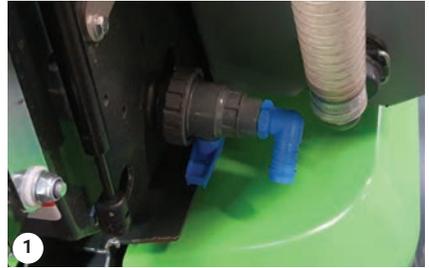
1. Open the rear cover and Drain off the water by opening the water drain valve. Close rear cover again after draining.

2. Tip up the waste tank complete and shut off the machine. The filter is located next to the fresh water tank.

Unscrew the cap of the filter (keep an eye on the filter cap). (Picture 2)

4. Clean or replace the filter. (Picture 3)

5. Assemble the filter again.



Drain fresh water



Unscrew the filter cap



Clean or replace filter

# Service and maintenance

## 3.5 Maintenance – Fresh water system - continued

### Front brush nozzles

1. Unscrew the nut. (Picture 1)
2. Take out the filter and nozzle and clean/replace them. (Picture 2)
3. Set the machine in ignition, do not turn on the machine.
4. Go to the sweeper menu, make sure the hopper is selected. Press and hold the “bucket” for 3 sec. until the green light turns on. (Picture 3)  
The water pump starts.
5. Press the “brush” symbol above the “bucket” (only possible when the “bucket” is on), water will flush the hose to the nozzles.
6. Assemble the nozzles again.
7. Make sure the nozzles are aligned so the flat water spray is tangent to the brushes.



Unscrew nozzle nut



Take out filter and nozzle and clean



Press and hold the “bucket” for 3 sec. until the green light turns on.

### Recycle system Valve actuation (Optional)

1. Check the valve and the fittings.
2. Make sure the hoses are fitted correctly.
3. Check the fitting and hose at valves.

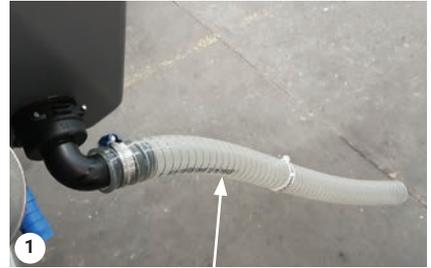
# Service and maintenance

## 3.5 Maintenance – Fresh water system - continued

### Ice protection

When the Suction sweeper is stored away during the winter, or is in a very cold environment, it can be protected against ice by:

1. Emptying the water tank. (See Section 2.8)
2. Pouring approx. 10 l of anti-freeze solution into the water tank.
3. Turning the water pump on. (See Section 2.4)
4. When the solution begins to flow out of the front brushes and the turbine sprayer, this liquid can be bled from the tank and subsequently reused.
5. Make sure the waste tank is empty before leaving the machine in freezing weather either by tipping the tank or drain water level hose. (Picture 2)



water level hose from waste tank



Turn on the brush above the bucket

# Service and maintenance

## 3.6 Maintenance – Suction system

### Blocked vacuum nozzle

1. Stop the machine.
2. Remove the front brushes.
3. Reverse the machine away from the front brushes.
4. Start suction manual suction mode.
5. Open the rear cover. Take the cleaning tool fixed on the right side of the hopper. (Picture 1)
6. Remove any material blocking the suction system with the cleaning tool. Hose at articulation joint can be pulled down and out to easy clean the suction system half way. This also give access to pipe section inside the water tank. (Picture 2+3)
7. Clean the external suction hose (Option). See 3.6 for recomendation of cleaning.
8. Put the cleaning tool back.
9. Attach the front brushes.



### Attention

Always clean the suction hose from below.

### Cleaning under the raised hopper

If the hopper is raised and you need to clean under it, the following should be observed:

1. The hopper is fully-tipped.
2. The machine is off and the handbrake is engaged.
3. The hopper's own weight will hold it in position. (Picture 4)

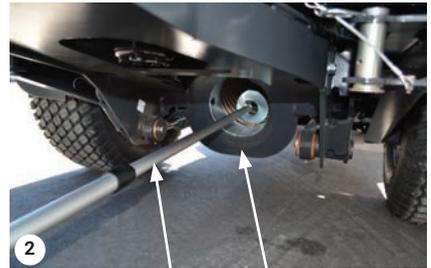


### Attention

The hopper has break valves fitted to ensure the hopper do not fall eminently if hoses should break.



Cleaning tool



Cleaning tool Suction hose



Clean hose at the articulation joint



Hopper fully-tipped

# Service and maintenance

## 3.7 Maintenance – External vacuum hose (option)

As the external suction system is attached to the main suction system. Cleaning is needed minimum once a week but preferable once each day to keep system clean and functional. To maintain.

1. Start manual work mode with external suction mode activated. See 2.6 for this.
2. Use the external hose for a short time. (Picture 1) Preferable have the external suction cleaned with water while using the system.
3. If system is clogged up the hose can additional be detached at the water tank. The hose can then be pulled out. Inlet in water tank will be freely accessible and can be cleaned. (Picture 2+3)



Use external hose to clean system



Detach external hose by loosen the hose clip



Inlet through the water tank

# Service and maintenance

## 3.8 Maintenance – High pressure (option)

### Daily maintenance of the high-pressure cleaner

No special maintenance is required. However, the fresh water filter must be cleaned once a day. If you are aware that the water used contains a lot of sand or iron, you may need to clean the water filter more often. Check the system for leaks. Check hoses and spray lance for damage. (Picture 1+2)



#### Warning

Never use a damaged hose or lance. Replace immediately.

### Ice protection of the high-pressure cleaner

1. To drain the water tank and suction system, open the water valve. (Picture 3)

Check that the water filter is empty. See also Section 3.2. Ice protection.

2. Insert filter and screw back filter cap and add liquid anti-freeze.

3. Start the high-pressure cleaner, activate the spray lance until antifreeze escapes from the nozzle.

4. The system is now protected.



#### Important

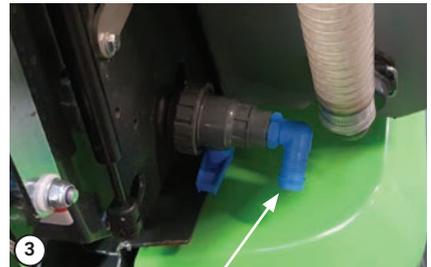
If the system has been exposed to light frost, start the pump and allow it to run in neutral (max. 1 min.) until the water in the pump has melted.



Water filter for fresh water



Hose Spray lance



Drain water tank - using the blue handle

# Service and maintenance

## 3.9 Maintenance – Recycle water system (option)

The recycle system must be cleaned minimum once a day to keep the system working. If it is not cleaned the mud that will pass through the filter will dry out and clog the system.

### To clean

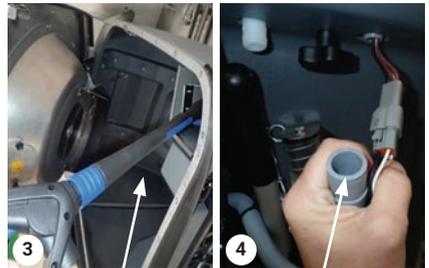
1. Unmount the front brush from the machine.
2. Tip the waste tank to gain access to the filter. (Picture 1)
3. The filter and pump are located in the waste tank right side. When the waste tank is tipped the filter is open in top and it can be cleaned with water. If the filter is very dirty it is easy to remove for cleaning. (see 2.12 page 27 for how to do) (Picture 2)
4. Clean the filter inside and outside with the machine high pressure unit (see 2.11 usage) or use alternative water cleaning units. (Picture 3)
5. Clean the recycle hose system for the recycle system. The hose is running from the backside of the tank through tractor B frame and ends in the A frame. Dismount hose and let water run through the hose.



Tip waste tank completely



Remove hatch on each filter



Clean the filter and tank with a high pressure washer. Check the recycling water hose is clean. (Let water run through the hose).



Clean pipe exit system on the A-frame of the machine

# Service and maintenance

## 3.10 Troubleshooting

### **Possible causes of lack of water pressure in the water-sprayers**

1. The water tank is empty.
2. The water-sprayers for the brushes are switched off and the machine is in parking mode!
3. The water-sprayers are blocked. To clean the water-sprayers:
  - Remove the sprayer holder hose connection (See Section 3.2 page 36 and 37).
  - Clean the sprayer with water or compressed air.
  - Refit the sprayer holder hose connection so that it is spread evenly across the machine.
4. Blocked sprayer in the hopper. Dismount the water nozzle and clean. (See Section 3.2 page 36 and 37).
5. No power to the pump.
6. Faulty sensor or relay.
7. Faulty pump.
8. Water hose is leaking or not fitted correctly.
9. The fresh water filter is clogged.

New pump/filter/nozzles etc. can be ordered from an authorised Egholm dealer.

## 3.10 Troubleshooting - continued

**If the sweeping result is not optimal, it may be caused by the following reasons**

### **Generally**

1. Too high operating speed.
2. The brush speed should be adjusted.
3. The distance between the front brushes and the ground should be adjusted  
(See paragraph 2.10, adjusting the brushes).
4. Vacuum leakage in the suction system. Check all openings and sealings.
5. The suction system may be clogged up. Inspect the system and clean if needed.
6. Check suction mouth front and rear rubber for damage and for correct clearance to ground.

# Service and maintenance

## 3.10 Troubleshooting - continued

### Air leaks

1. The rubber gasket between the waste tank and the water tank does not close tightly, is deformed and/or faulty. Adjust or replace the rubber gasket.

2. The rubber gasket between waste tank and cap does not close tightly. Adjust or replace the rubber gasket.

3. The hopper has not been lowered completely after emptying.

4. The change-over handle between suction at the front brushes / external suction hose is placed in the wrong position. (See paragraph 2.6, using external suction hose).

### Cleaning/maintenance

1. Blocked or faulty suction hose/ external suction hose.

2. Blocked rotary filter / faulty rotary filter (See paragraph 3.1, cleaning / replacing the filter system).

3. Blocked change-over handle between suction at the front brushes / external suction hose.

4. The hopper is full.

5. Clean the steel filter at the vacuum sensor to reduce false vacuum indication in the hopper. (Picture 1+2+3)



Steel filter



Vacuum



Clean the steel filter at the vacuum

# Conditions

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# Conditions

## 4.1 Warranty

The warranty period of this City Ranger 3070 Suction sweeper is valid from the date of purchase and mandatory filled out Start-up Warranty form. For more information, take contact to the Regional Sales Manager of Egholm.

In case of errors or defects on the machine within the warranty period, the ccs system should be used to report the issues. Egholm will analyze and look into each situation. If instructions are correctly followed and misuse, incorrect or improper use is not the case, Egholm will carry out the necessary repairs without charge for materials and working hours in accordance with the terms and conditions listed below.

### **The scope of the warranty**

1. The Egholm warranty is only valid on presentation of the original receipt, supplied with model description, serial number and date of purchase.
2. Regular checks, adjustments, services and technical alterations are not covered by the warranty.
3. All inquiries concerning the warranty are to be addressed to the dealer from whom the machine was purchased.
4. This warranty does not cover faults and defects which cannot be traced back to defects in material or production errors.
5. This warranty is valid for persons who have legally acquired the machine within the warranty period.
6. In the event of failure to perform and substantiate service in accordance with the applicable instructions, Egholm reserves the right to reject any claim made within the warranty period.
7. Egholm reserves the right to make improvements and design-related alterations to the machine without being obliged to modify previously delivered models in relation hereto.

### **The warranty does not cover**

- Wear and tear, accidents, damage to the equipment caused by operating errors, changes to the construction of the machine or use of non-Egholm spare parts or attachments.
- Machines with illegible serial numbers.
- Damage caused by force majeure such as lightning, flood, fire, war, civil disturbance, etc. or other causes over which Egholm has no control.

## 4.2 Complaints

All inquiries regarding the machine should be made at the Egholm-dealer from whom the machine was purchased. This applies to inquiries concerning normal use, service, maintenance and spare parts as well as any complaints.

We wish you many years of safe and satisfactory use of your machine.

Best regards  
Egholm A/S

## 4.3 Disposal

When, many years from now, your Suction sweeper has reached the end of its working life, it should be disposed of in a responsible manner that conforms to relevant disposal regulations.

1. Used hydraulic oil is to be disposed of at an approved waste disposal facility or site.
2. Remove the plastic and rubber parts and dispose of them in accordance with the applicable environmental legislation.
3. After the parts mentioned have been removed, the machine is ready to be handed over to one of your local approved scrap merchants.

# Notes



# Honest Work.

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