



Leaf suction unit Park Ranger 2150

Introduction

Dear Customer.

Congratulations on your new Egholm product

The Park Ranger 2150 is a Danish-designed and manufactured product, which offers a very flexible way of maintaining outdoor areas.

Get the most out of your Park Ranger 2150 leaf suction unit

To ensure optimal performance from your Park Ranger 2150 leaf suction unit, 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 leaf suction unit 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 leaf suction unit is designed for use by professionals only. On delivery, the user will receive thorough training to become a competent operator. Do not lend the machine to anyone who has not been thoroughly trained and who has not read this manual carefully.

The operator's manual should be considered 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 must 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.



Disclaimer

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

Contact Egholm

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

Best regards.

Egholm A/S · Transportvej 27 · DK-7620 Lemvig

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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.

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Ideal for park areas, the leaf suction unit efficiently cleans up after defoliation and hedge trimming.

It has a working suction width of 1.05 metre, and with the leaf collection hose it is able to reach even less accessible areas like behind stonework and around hedges.

The leaf collection hose has a 4.2 metre reach and is fitted with a supporting arm to prevent it from damaging hedges and ornamental plants while working. When not in use, it is discreetly stored on top of the leaf suction unit, occupying a minimum of space but always close at hand.

The leaf suction unit uses the hopper for grass collecting. The hopper is an efficient two-inone attachment, used for both grass collecting when mowing and leaf collecting in combination with the leaf suction unit.

Two sturdy turbines (one in the leaf suction unit and one in the hopper) chop the leaves to bits and suck them up into the hopper, ready for composting. When full, the hopper is simply emptied by a hydraulic tip function directly onto the compost heap, or – as enabled by a high tipping level of up to 1.8 m – into a container. The leaf collection hose does not have to be dismounted first.

Honest Machines

1.1 Safety

Assembly

Always ensure that the engine cover lock on the bonnet is closed and locked before fitting the hopper. (Picture 1)

Ensure that the hopper is correctly fitted and that the locking handle is locked in position during use. (Picture 2)

Ensure that the leaf suction unit is locked in place with the attachment Lock during use. (Picture 3)

Avoid injury to fingers when attaching/detaching Take care when attaching or detaching front or rear-mounted attachments.



Avoid tipping accidents

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 10 degrees. (Picture 4)



Be sure to park on a horizontal and even surface when emptying. Ensure the machine is not in an articulated position when emptying.



Check and adjust the tyre pressure - min. 1.5 bar (22 psi) max. 2.5 bar (36 psi). Low tyre pressure increases the risk of tipping.

General information



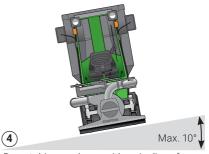
The engine cover lock must be engaged



Locked position



Attachment lock in locked position



Do not drive on slopes with an incline of more than 10°

1.1 Safety - continued



Make sure no-one stands close to the machine while in use

Make sure that no one is near the machine while it is in use as there is a danger of crushing.



NB!

As it is articulated, the rear end of the machine swings out when turning. Make sure that no-one stands near the machine while it is in use. (Picture 1)



Avoid damage to your hearing

Always wear approved ear protectors when using the machine. (Picture 2)



The leaf suction unit must not be started if the leaf suction hose is not fitted and the selector switch is set to suction from the leaf suction hose! (Picture 3)



Note that the turbine will continue to rotate for 20-30 seconds after the hydraulics have been disengaged.

The cab of the Park Ranger 2150 is approved as a roll-over protection structure (ROPS). It is recommended that this cab is fitted for operation in areas with a high risk of tipping.

Refer to the operator's manual for the grass collector (section 1.1 Safety) for safety precautions when using the hopper for leaf collecting.





Ophold i knækområdet er forbudt

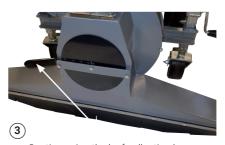
Aufenthalt im Knickbereich ist verboten Activities around the articulation point is forbidden Ne séjournez jamais dans la zone d'articulation

Ensure that no-one stands in the working area



(2)

Use approved hearing protection



Suction using the leaf collection hose



Avoid crushing hazard

1.2 EC Declaration of Conformity

Owner Egholm A/S
Address: Transportvej 27 · DK-7620 Lemvig

Tel.: +45 9781 1205

hereby declares that

The machine: Leaf Suction Unit

Type: LS100U

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

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 (data originator) of all data generated by the machine and attachments during use.

Place: Lemvig, Denmark

Date:

Signature:

Rainer Flanz, R&D Manager

1.3 Technical data

Dimensions Length (L)	Attached	Storage dimensions800 mm
0 ()		1,100 mm
Height with cab and hopper	1,950 mm	
Height, leaf suction unit		900 mm
Technical data		
Type		LS100U
Sound level, under Directive	2000/14/EU	LwA: 108 dB(A)
Weight of leaf suction unit.		90 kg
		1,050 mm
		180 mm
		4,200 mm
		470 litres
		1,800 mm
		2,250 m ³ /hour
Air speed between the two t	urbines	51 m/s
Air speed in the leaf collection	on hose	184 km/hour

NB:

Specifications may be changed without prior notice

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2.1 Unpacking the leaf suction unit

The leaf suction unit and leaf collection hose are delivered on a pallet wrapped in plastic. (Picture 1)

The package contains:

- 1. The leaf suction unit and leaf collection hose
- 2. The suction hose connector for installation between the leaf suction unit and hopper for grass collecting.

Remove the plastic packaging and lift the leaf suction unit down from the pallet (use the lifting eye if necessary). (Picture 2)

Place the leaf suction unit on the A-frame set-down feet. During storage, the leaf suction unit must stand as shown in picture 3, with the casters turned towards the vacuum nozzle, and standing on the A-frame feet. (Picture 3)

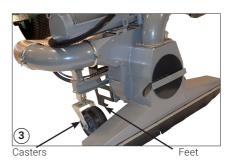
If the leaf suction unit has to be transported later without using a Park Ranger 2150, it should be securely mounted on a pallet to avoid accidents. (Picture 4)



Delivery



Lifting eye





Pallet mounting

2.2 Supplied components

1. Suction hose

The hopper for grass collecting comes standard with a suction hose for grass collection. The leaf collection hose is mounted on the leaf suction unit when delivered.

Remove the grass collection hose.

Attaching the suction hose to machines without cab

Install the hose holder kit from the hopper on machines without a cab. (Picture 2)

- 1. Install the threaded pin on the right side of the utility machine chassis, behind the seat. (Picture 3)
- 2. Insert the hose hanger over the threaded pin. (Picture 3)
- 3. Affix the suction hose using the rubber strap. (Picture 4)

Attaching the suction hose to machines with cab

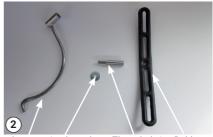
The hose holder is already attached to the cab. Use the supplied rubber strap to affix the suction hose. (Picture 5)

5

Affix the suction hose using the rubber strap for machines with cab

1

Grass collection hose Leaf collection hose



Hose hanger Lock washer Threaded pin Rubber strap
Hose holder kit for machines without cab



Mount the hose hanger on the threaded pin to the right behind the seat



Affix the suction hose using the rubber strap for machines without cab

2.3 Assembly / Disassembly

Attaching the leaf suction unit

- 1. Check that the leaf suction unit is standing on its set down feet
- 2. Spread the suction hose and hydraulic hoses out to the sides so they cannot be driven over during attachment. (Picture 1)
- 3. The locking handle on the A-frame of the machine must be in the open position. (Picture 2)
- 4. Drive the machine right up to the leaf suction unit. Use lever A to lower the A-frame until it is level with the leaf suction unit (push the lever away from the seat). (Picture 3)
- 5. Drive forward until the A-frames overlap. (Picture 4)
- 6. Raise the A-frame by pulling lever A towards the seat until the leaf suction unit is suspended free of the ground. (Picture 3)
- 7. Stop the engine and lock the handbrake. Lock the attachment in place with the locking handle on the A-frame. (Picture 5)

See the operator's manual for the grass collector for instructions on installing this.



Spread the suction hose and hydraulic hoses out to the sides before attaching



Locking handle on the A-frame, open



Lever A raises/lowers the A-frame



Attachment locking handle in locked position



Interlink the A-frames from the attachment and the machine

2.3 Assembly / Disassembly - continued

Hydraulically linking the leaf suction unit and hopper



Always check that all hydraulic hoses are correctly attached. Incorrect connection of hoses can result in a breakdown

Connect the hydraulic hoses for the tip function with hydraulic connector C on the machine. The hydraulic hoses come out on the left side of the hopper. (Picture 1)

Connect the oil overflow hose (1/4") from the hopper with hydraulic connector D-3 on the right-hand side of the machine. (Picture 2)

Connect the return hose from the hopper with hydraulic connector D2 (1/2" - female connector) on the right-hand side of the machine. (Picture 3) Connect the oil overflow hose (1/4") from the leaf suction unit above the oil overflow hose from the hopper on hydraulic connector D-3. (Picture 4)

Then connect the hydraulic hose (1/2") from the leaf suction unit with connector D-1 on the machine (male connector from the leaf suction unit).

Operator's manual



C connector



Oil overflow hose at connector D-3



Connector D-2



Oil overflow hoses at connector D-3 Connector D-1

2.3 Assembly / Disassembly - continued

Feed the return hose from the leaf suction unit around the machine to the left and attach it to the hopper (female snap coupling on the leaf suction unit). (Picture 1)

Position the hydraulic hoses on the right side of the machine as shown. Attach the rubber strap on the hydraulic hose firmly to the bracket underneath the chassis. (Picture 2)

Position the hydraulic hose on the left side of the machine as shown. Attach the rubber strap on the hydraulic hose firmly to the bracket underneath the chassis. (Picture 3)

The connections must match what is shown in pictures 4 and 5.

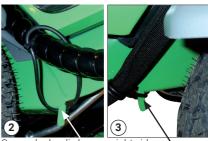
Removal

Remove by following the above steps in reverse order.

Remember to put the protective caps back on the hose connections after use



Return hose from the leaf suction unit
– with female connector



Secure hydraulic hoses - right side Secure hydraulic hoses - left side





Hydraulic hoses attached - front

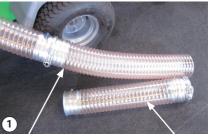
2.3 Assembly / Disassembly - continued

Attaching the leaf collection hose

- 1. Remove the grass collection hose. (Picture 1)
- 2. Attach the leaf collection hose instead. (Picture 1)
- 3. Connect the suction hose using the snap-lock hose clip. (Picture 2)
- 4. Affix the suction hose using the rubber strap to the hose holder on the cabin, if the machine has a cab. (Picture 3)
- 5. Affix the suction hose using the rubber strap to the hose holder on the front chassis, if the machine does not have a cab. (Picture 4)
- 6. Always check that the suction hose is properly affixed before operating

Removal

Remove by following the above steps in reverse order



Grass collection hose

Leaf collection hose



Connect the suction hose using the hose clip



Machines with cab



Machines with no cab

2.4 Checks before start-up

Transportation

1. Lock the leaf suction unit in the horizontal position using the locking pin during transportation. (Picture 1)

When using the leaf suction unit the locking pin must be in the open, floating, position. The floating position ensures that the leaf suction unit follows the terrain independently of the Park Ranger 2150. (Picture 2)

2. Lock the A-frame on the Park Ranger 2150 using the transport lock during transit to and from the work area. (Picture 3)

Suction using the vacuum nozzle

For suction using the vacuum nozzle, the selector switch must be turned to the right, viewed from the front. (Picture 4)

Suction using the leaf collection hose

For suction using the leaf collection hose, the selector switch must be turned to the left, viewed from the front. (Picture 5)



Warning!

Never start the leaf suction unit with the leaf collection hose disconnected and the selector switch set to suction using the leaf collection hose.

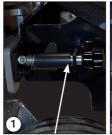
Suction height adjustment

The suction height can be adjusted using the height adjustment handle. This handle adjusts the wheel height of both casters.

The closer the vacuum nozzle is to the ground, the more powerful the suction will be. (Picture 6)

There is a height scale (1-7) on the side of the wheel spindle

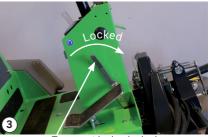
Please also refer to section 2.4 of the operator's manual for the grass collector – Checks before start-up.



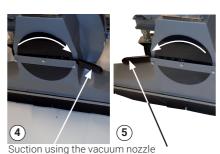


Locking pin locked - Transit open - In use

Locking pin



Transport lock - locked



Suction using the leaf collection hose



Handle for adjusting the suction height

2.5 Start-up

The leaf suction unit and hopper have been developed for connection in series. This means both must be started at the same time

- 1. Start the Park Ranger 2150 (See the operator's manual for the basic machine, section 2.2)
- 2. Lower the leaf suction unit by pushing lever A away from the seat. (Picture 1) Hold lever A out for approx. 2 seconds, as the leaf suction unit is then in a floating position and will follow the contours of the terrain
- 3. Turn the throttle until it is at least half open. (Picture 2)
- 4. Start the leaf suction unit by pulling lever D on the right-hand side of the machine in a slow movement. (Picture 3)
- 5. Stop the leaf suction unit by pushing lever D towards the centre (neutral position) in a slow movement. (Picture 3)



Warning!

Make sure no one is standing close to the machine while it is in use.



Warning!

As it is articulated, the rear end of the machine swings out when turning. Make sure that no-one stands near the machine while it is in use.



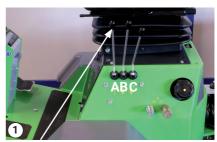
NB!

It is recommended not to drive with a higher engine speed than necessary, to reduce the noise and the energy consumption.



Warning!

The turbine will continue to rotate for 20-30 seconds after stopping.



Raise and lower the leaf suction unit using lever A



The throttle must be at least half open



Start the leaf suction unit using lever D

2.5 Start-up - continued

Starting the leaf suction unit

- 1. Start "manual activation" of the leaf suction unit. (Picture 1) (See the operator's manual for the Park Ranger 2150 basic machine, section 1.5 Operating levers and pedals).
- 2. Turn the throttle to fully open run at full speed.
- 3. Turn the selector switch to suction using the leaf collection hose. (Picture 2)
- 4. Open the leaf collection hose handle by pulling the handle lock. (Picture 3)
- 5. Loosen the transport lock on the leaf collection hose. (Picture 4)
- 6. The leaf collection hose is kept in place in the holder by the vacuum of the turbines. Take the vacuum nozzle out of the holder. The leaf collection hose will now come out and is ready for use. (Picture 5)



Button to manually activate the leaf collection hose



Suction using the leaf collection hose



Pull out the lock and open the handle



Take the vacuum nozzle out of the holder



Leaf collection hose transport lock

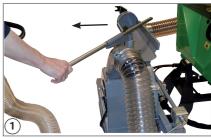
2.5 Start-up - continued

Using the supporting arm for the leaf collection hose

Use the supporting arm when reaching the leaf collection hose across hedges and ornamental plants.

- 1. Pull the supporting arm out of the lock. (Picture 1)
- 2. Attach the leaf collection hose to the supporting arm by clicking the snap hooks together one on the leaf collection hose and one on the supporting arm. (Picture 2)
- 3. The leaf collection hose is now ready for use with the supporting arm. (Picture 3)

Operator's manual



Pull the hose supporting arm out of the lock and rotate out



Connect the snap hooks on the supporting arm and leaf collection hose



Using the leaf collection hose

2.5 Start-up - continued

Storing the leaf collection hose

Place the vacuum nozzle in the holder and push the leaf collection hose into place. The turbine vacuum will then compact the leaf collection hose. (Picture 1+2)

Remove the supporting arm by unclicking the snap hooks. Help the leaf collection hose properly into position. (Picture 2)

Lock the handle around the leaf collection hose. (Picture 3)



Important!

When driving on public roads or over long distances, the leaf collection hose must be secured using the transport lock. (Picture 4)



Place the vacuum nozzle in the holder



Help the leaf collection hose into position



Lock the handle around the leaf collection hose



Leaf collection hose transport lock

2.6 Adjustment

Adjust the height of the leaf suction unit to achieve the desired suction power and avoid stones etc. being drawn into the hopper (stones can cause extensive wear).

Adjusting the leaf suction unit

Set the leaf suction unit in the floating position by opening the locking pin. (Picture 1)

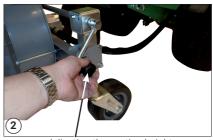
Adjust the suction height using the height adjustment handle. This handle adjusts the wheel height of both casters.

The closer the vacuum hose is to the ground, the more powerful the suction will be. (Picture 2)

There is a height scale (1-7) on the side of the wheel spindle



Locking pin open – leaf suction unit in floating position



Adjusting the suction height

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3.1 Cleaning

To avoid turbine imbalances and vibration, the leaf suction unit must be regularly cleaned and as required.

Clean using clean water and eventually a highpressure cleaner



Warning!

Stop the engine and completely detach the leaf suction unit and hydraulic hoses before cleaning. Wait until the turbine has completely stopped rotating before cleaning the vacuum nozzle.

After cleaning, it is important to set the leaf suction unit selector switch to suction using the vacuum nozzle and briefly start the turbine to remove all water from the turbine housing. (Picture 1)



Suction using the vacuum nozzle

3.2 Maintenance



Warning!

Stop the engine, remove all hydraulic hoses from attachments and disconnect power before performing service and maintenance on the machine and attachments

Lubricating the leaf suction unit

Lubricate the floating position grease nipples (2) at least once a week. Apply universal grease using a grease gun. (Picture 1)

Lubricate the locking pin using WD40 or a similar product at least once a week. (Picture 2)

Lubricate the grease nipples (2) of the wheel adjustment system at least once a week. Apply universal grease using a grease gun. (Picture 3)

Lubricate the grease nipples (2) for the rotating pipe for the leaf collection hose at least once a week.

Apply universal grease using a grease gun. (Picture 4)

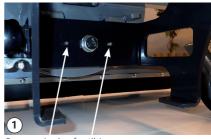
Lubricate the handle lock on the leaf collection hose using WD40 or a similar product as required. (Picture 5)



Imbalance/vibration in the turbines

Imbalances can arise in the turbines in certain situations, causing vibrations. This can be due to grime stuck to the turbine, which must be cleaned!





Grease nipples for tilting



3

Lubricating the height adjustment



Lubricating the rotating pipe

3.3 Tips and Tricks

1. Regularly check air filters.

Collecting organic material can be dusty work, and this can cause blockages in the intake filters of the Park Ranger. Blocked filters will cause the machine to overheat. Check (and clean where necessary) the filters regularly.

- 2. Collecting leaves at a high driving speed can result in blockages. Adjust the working speed in line with the quantity of leaves being collected.
- 3. Regularly clean the suction hose so you can monitor the collection process. It is easier to see through a clean hose. You can vacuum a little water into the suction nozzle for this purpose.
- 4. Stop collection if the speed of the collected material inside the suction hose drops (the hopper is almost full).
- 5. Start the turbines at full speed after emptying, to ensure the suction hose is completely empty. This ensures an easy start-up when collecting again.
- 6. Turn the machine fully to the left when the turbines are restarted after emptying (especially in the case of wet material). This fully straightens the suction hose and makes it easier to empty it.
- 7. If results of collection are unsatisfactory, the driving speed may be too fast or the suction height may be incorrectly adjusted. Check the suction height and reduce the driving speed where necessary.
- 8. If there is a thick layer of leaves (particularly if dry), it can be useful to remove the deflector plate inside the hopper. (Picture 1)
- 9. Where there is a thick layer of leaves it can be a good idea to make two passes. Set the vacuum nozzle a little high for the first pass and then lower the suction height for the second pass.
- 10. When collecting leaves on gravel paths or using the leaf collection hose, it is important to avoid picking up too many stones. Stones can cause extensive wear!
- 11. Always replace worn or damaged rubber on the vacuum nozzle. Poor or missing rubber has a major impact on the suction strength.



Deflector plate

3.4 Troubleshooting

The leaf suction unit has poor suction Possible causes:

- 1. The hopper is full. Empty the hopper. See the operator's manual for the grass collector, section 2.6 Emptying the hopper.
- 2. The grass/leaf filter is blocked and must be cleaned. (Picture 1) See the operator's manual for the grass collector, section 3.2 Maintenance.
- 3. The vacuum nozzle or leaf collection hose is blocked

How to unblock the vacuum nozzle or leaf collection hose:

- a. Stop the leaf suction unit
- b. Raise the leaf suction unit and lock in the transportation position. (see section 2.2)
- c. Stop the engine and brake the machine.
- d. Detach all hydraulic hoses and switch off at the main switch. (Picture 4)
- e. Manually remove any branches and twigs stuck in the vacuum nozzle.
- f. Detach the leaf collection hose and remove the blockage if the blockage is in the hose.
- g. Reattach in the reverse order.
- 4. Poor collection results can be due to incorrect suction height. Adjust the suction height, see section 2.5 Adjustment.



Grass/leaf filter



Suction hose

Vacuum nozzle



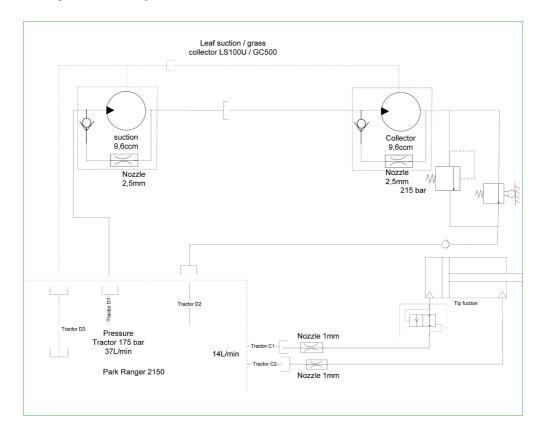
Intake filter, rear

Intake filter, right side



Main switch ON/OFF

3.5 Hydraulics diagram



Conditions

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4.1 Warranty

The warranty period for the materials and manufacture of the leaf suction unit is 12 months from the date of purchase.

In case of errors or defects on the machine within the warranty period, Egholm will carry out the necessary repairs at no charge for materials and working hours in accordance with the terms and conditions listed below.

The scope of 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 place where 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.

Conditions

4.2 Complaints

All inquiries regarding the machine should be made at the distributor 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 satisfied use of your machine.

Best regards, Egholm A/S

4.3 Disposal

When – many years from now – your leaf suction unit comes to the end of its working life, it should be disposed of in a responsible manner and conform with the 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 an authorised municipal scrap merchant.

Notes

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