

OPERATOR'S MANUAL
Flail Mower/Verticutter



Introduction

Dear Customer

Thank you for buying an Egholm product

The Egholm 2100 is a Danish designed and manufactured product which offers a very flexible way of maintaining outdoor areas.

Optimal performance of your Egholm Flail Mower/Verticutter:

To ensure the optimal performance of your Egholm Flail Mower/Verticutter, please read this operator's manual carefully before starting to use the machine. Failure to do so can result in personal injury and damage to the machine.

Safety:

The Flail Mower/Verticutter is equipped with various devices to ensure optimal operational safety both for the user and the surroundings. We therefore ask you to pay particular attention to Section 1.1 Safety. The machine must only be serviced by professionals.

The Flail Mower/Verticutter is designed only for use by professionals. On delivery, the user will be given a thorough training in using the machine, so that he becomes a competent operator. Do not lend the machine to anyone who has not been thoroughly trained and has not read this manual carefully.

The operator's manual should be considered as a permanent part of the machine and so 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 Maskiner A/S accepts no liability for errors or shortcomings in the operator's manual.

Contact us:

Should you have questions of any kind regarding your new Egholm product, do not hesitate to contact Egholm Maskiner A/S.

Best regards

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

Tel: (+45) 97 81 12 05 - Fax: (+45) 97 81 12 10

e-mail: egholm@egholm.dk - www.egholm.dk

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1. General information

The Egholm 2100 is perfect for cutting very high grass or for chemical-free weed-control of lawns.

The Flail Mower

For rough grassed areas which are not regularly mown, the Egholm Flail Mower is the perfect tool. Watching it deal with very high grass, with a cutting width of 1226 mm, is an impressive sight.

The Verticutter

The Verticutter is the perfect means to keep a lawn neatly mown and improve the resistance of the grass to weeds without the use of weed-killers. Grass needs lots of light and air, and so the Verticutter removes moss and also cuts a thin score in the lawn to allow air to the roots.

The Verticutter is fitted to the Egholm 2100 in a floating position and has four wheels to ensure the correct scoring depth. It operates very close to the ground and so provides a thoroughly level and even lawn surface.

The Flail Mower/Verticutter must not be used for any purpose other than cutting grass and removing moss from lawns in accordance with this operator's manual.

1. General information

1.1 Safety



Make sure no one is standing close to the machine.

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



N.B!

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



Warning! Rotating parts!

Make sure no one puts their fingers or toes under the mower while it is moving to avoid personal injuries.



Warning! Avoid flying stones:

Remove stones and branches from the lawn as they can be unintentionally thrown out and cause damage to people and property. Regularly check the protective screens on the front and back edges of the mower guard for cracks or wear.



Reduction of noise and energy consumption:

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



Avoid damage to hearing:

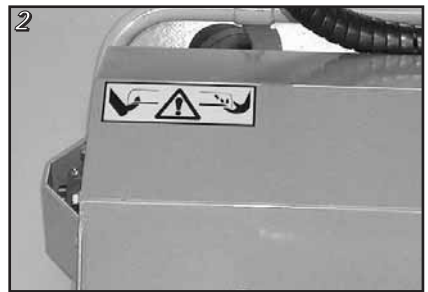
Use approved hearing protectors while the machine is in use.

1



Prevent people from standing in the working area.

2



Warning label

3



Warning label

4



Use approved hearing protectors

1. General information



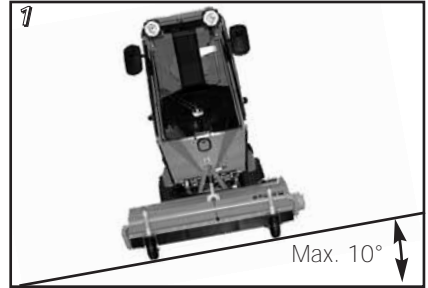
Avoid roll-overs:

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 10°. (Picture 1)

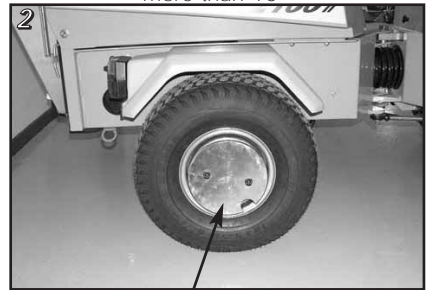


Avoid roll-overs:

It is recommended that counterweights be fitted to the rear wheels to prevent the machine tipping forwards. (Picture 2)



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



Use counterweights on the rear wheels

1. General information

1.2 EC Declaration of Conformity for Machinery

Manufacturer: Egholm Maskiner A/S
Address: Transportvej 27, DK-7620 Lemvig
Phone: (+45) 97 81 12 05

hereby declares that

- *The machine:* Flail Mower/Verticutter *Type:* SLK
Serial no.: _____ *Year:* _____
- is in conformity with the provisions of the Machine Directive, (directive 98/37/EC) and with national implementing legislation.
- is in conformity with the provisions of the following EC directive:
Directive 2000/14/EC

The Egholm 2100 fitted with the cab FH 2100 (ROPS approved)

- has been tested at the Danish Institute of Agricultural Sciences at Bygholm in conformity with directive 86/298/EEC concerning rear mounted, roll-over protection structures of narrow-track wheeled agricultural and forestry tractors.

Place: Lemvig

Date: _____

Signature: 
Managing Director Kaj Egholm

1. General information

1.3 Technical data

Dimensions:

	Assembled:	Storage dimensions:
Length (L):	2895 mm	955 mm
Width (W):	1475 mm	1475 mm
Height without cab (H)		435 mm
Height with cab (H1)	1935 mm	

Technical data:

Type description:	SLK
Sound power level, re Directive 2000/14/EU.	
Sound pressure level, with cab (operator seat):	86 dB(A)
Sound pressure level, without cab (operator seat):	84 dB(A)
Rotor revolutions, max:	2800 rpm

Flail mower:

Cutting width:	1226 mm
Cutting height:	0-110 mm
Number of flails:	76
Cutting area per hour, approx:	10,000 m ²

Verticutter

Scoring width:	1172 mm
Scoring depth:	0-15 mm
Number of vertical blades:	38

N.B!

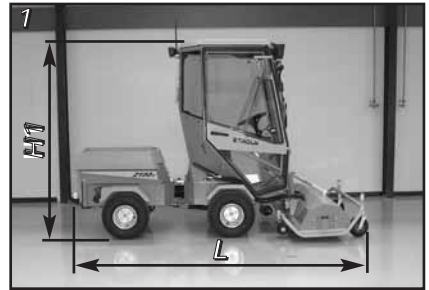
Specifications may be changed without prior notice.

Extra equipment:

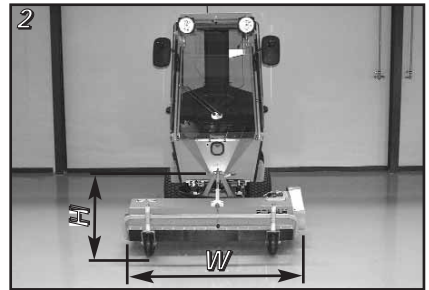
Vertical blades: used for scoring which provides air to the root system of the lawn and removes moss.

Counterweights: fitted to the rear wheels as stabilising weights to the cutter. (Picture 3)

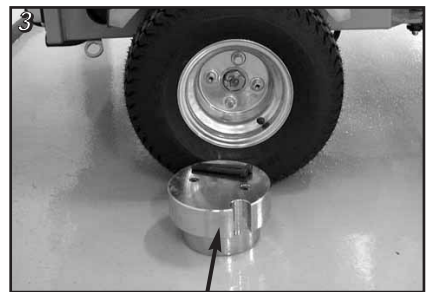
Big radiator cover: recommended for frequent cutting in dry periods. (Picture 4)



Side view



Front view



Counterweights

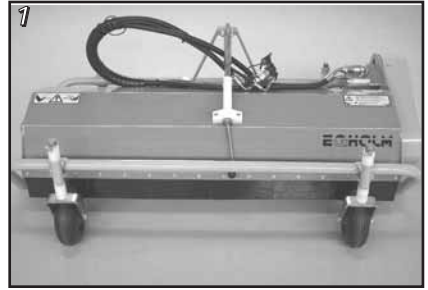


Big radiator cover

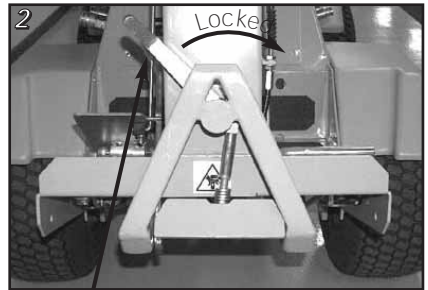
2. Operator's manual

2.1 Assembly / Disassembly

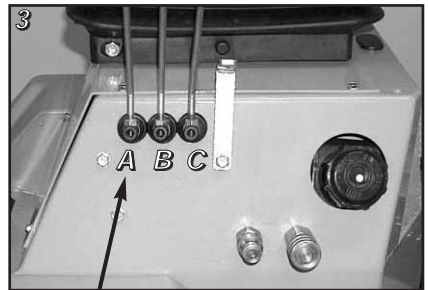
1. It is recommended that the hydraulic hoses should be run over the frame of the mower to keep them clear and free from dirt when the mower is fitted. (Picture 1)
2. The locking handle on the A-frame of the basic machine must be in the open position. (Picture 2)
3. Drive the basic machine right up to the A-frame of the mower, so the A-frames fit into each other.
4. Raise the A-frame with lever A on the left-hand side of the basic machine until the support wheels are freely suspended above the ground. (Picture 3)
5. Lock the mower in place with the locking handle on the A-frame. (Picture 2)
6. Stop the machine. (See the operator's manual for the base machine, Section 2.2)
7. Attach the hydraulic hoses with the rubber ring under the running board to ensure it runs correctly over the screen. (Picture 4)
8. Fit the hydraulic hoses to the D-connectors on the right-hand side of the machine. The oil overflow hose D3 **must** be fitted. (Picture 5)



Hydraulic hoses



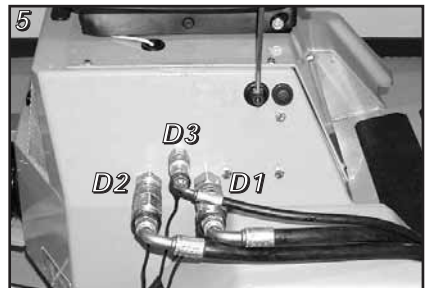
Locking handle on the A-frame - open



Lever A on the left-hand side of the machine



The hoses are fastened with a rubber strap



D-connectors

2. Operator's manual

Fitting the counterweights:

1. Replace every second wheel bolt on both rear wheels with the bolts supplied, with an internal thread in the heads. (Picture 1)
2. Locate the counterweights on the wheel bolts and fasten them with the bolts supplied to a torque of 65 Nm. (Picture 2)

Removing:

Follow the procedure for fitting in reverse order. Put the protective caps on the snap couplings to protect them from dirt. (Picture 3)



Change the wheel bolts



Fit and tighten the counterweights



Protective caps on the connectors

2.2 Important before start-up

Check the blades are sharp, intact and free from cracks before fitting the mower. This avoids unnecessary breaks in operation while mowing. (Picture 4)



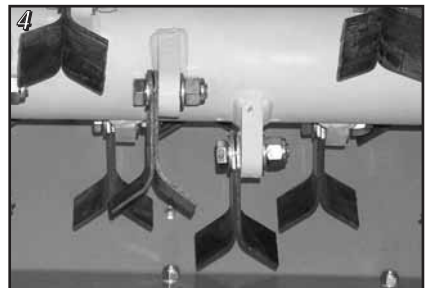
Warning!

Remove stones and branches from the lawn as they can be unintentionally thrown out and cause damage to people and property.



Warning!

Make sure to avoid driving over well covers or similar obstacles to avoid damaging the blades, wheels or guard.

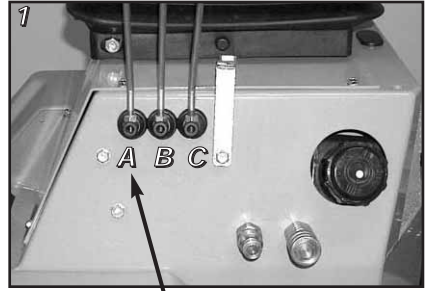


Checking the blades

2. Operator's manual

2.3 Start-up

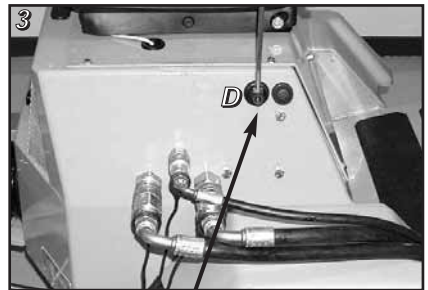
- A) Start the machine. (See the operator's manual for the base machine, Section 2.2)
- B) Lower the mower by pushing lever A on the left-hand side of the machine down to position 2. (Picture 1)
- C) It is recommended to hold the lever down for about 2 seconds, as after this the mower is in a floating position and follows the contours of the ground.
- D) Turn the throttle until it is at least half open. (Picture 2)
- E) Start the mower by slowly pushing lever D on the right-hand side of the machine up to position 1. (Picture 3)
- F) Now open the throttle fully (full power) to achieve the correct blade speed. Adjust the driving speed to suit the conditions.
- G) While mowing, make sure to keep the water cooler, oil cooler and radiator cover free from grass, to avoid overheating. (See Section 3.1 Cleaning).



Lever A on the right-hand side



Turn the throttle until it is half open



Lever D on the right-hand side



Warning — Rotating parts:
Make sure no one puts their fingers or toes under the mower while it is moving to avoid personal injuries.



Warning!
Make sure there is no one close to the machine when it is running.



N.B!
When turning, the rear of the machine swings out, so there is a risk of crushing or collision.

2. Operator's manual

2.4 Adjustment

Adjusting the cutting height (Flail Mower):

Adjust the cutting height as follows:

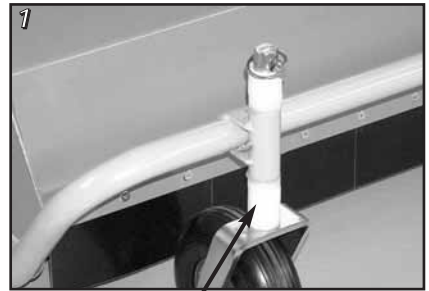
- 1) Stop the machine and disconnect the hydraulic hoses.
- 2) Rough adjustments are made with the 7 adjusting rings in the interval 0-110 mm (see table). Remove the locking ring, take off the wheel and place the required number of adjusting rings between the wheel and the mower bracket (the same number on both front wheels). (Picture 1). *For example, 4 adjusting rings between the wheel and the mower bracket allow the mower to be finely adjusted to a height of between 25 and 78 mm.*
- 3) Fine adjustment is made with the stepless adjustment handle, which adjusts the height of the rear edge of the mower.
- 4) For very tall grass, the mower should have a bigger opening at the back, big enough to eject the grass without squeezing it into clumps. (Picture 2) *In other words it is an advantage to use as few adjusting rings as possible to achieve the required cutting height.*

Cutting height of Flail Mower	
Adjusting rings (number)	Cutting height (mm)
0	0 - 50
1	3 - 58
2	11 - 63
3	18 - 70
4	25 - 78
5	33 - 95
6	40 - 103
7	47 - 110

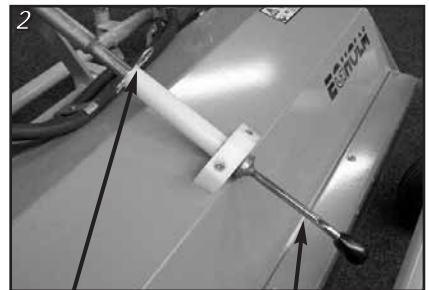
Adjusting the scoring height (Verticutter):

Adjust the depth of the Verticutter as follows:

- 1) Stop the machine and disconnect the hydraulic hoses. Remove the locking ring, take off the wheel and place the required number of adjusting rings between the wheel and the mower bracket (the same number on both front wheels) to achieve the required scoring depth. We recommend a depth of between 5 and 10 mm.
- 2) For vertical cutting, the R-cotter pin must be removed so that the mower is in floating position, as this ensures an even depth and results in an even and thorough treatment of the lawn. (Picture 2)



Adjusting rings



R-cotter pin

Fine adjustment handle

3. Service and maintenance

3.1 Cleaning

Cleaning the cutter:

- A) Stop the machine. (See the operator's manual for the base machine, Section 2.2)
- B) Remove the mower. (See Section 2.1)
- C) Tip the mower forward. (Picture 1)
- D) Clean the mower with water.

It is recommended to clean the mower immediately after mowing to stop the grass sticking to the guard and the blades.

Cleaning the water cooler:

- A) The cover of the water cooler is easily removed by turning the two spring-loaded handles out to the side.
- B) Blow the ribs and the cover clean with compressed air.
- C) The ribs can be washed with clean water.



Warning!

Do not use hard implements for cleaning the cooling element, as this can damage the ribs.

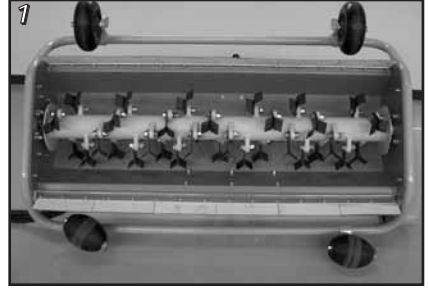
Cleaning the oil cooler:

- A) Remove the oil cooler cover (See the operator's manual for the basic machine, Section 1.8)
- B) Blow the cover and cooler clean with compressed air.



Warning!

The cooler must be cleaned with compressed air before it is washed, otherwise dirt will stick to it.



Mower tipped forward



Radiator cover for the oil cooler



Radiator cover for the water cooler



Big radiator cover for the water cooler

3. Service and maintenance

3.2 Maintenance

Lubricating the bearings – checking and adjusting the drive belts:

The rotor axle bearings must regularly (approx. every 50 hours of operation) be lubricated with good quality lubricating grease.

1. Stop the machine and remove the guard which protects the drive belts on the left-hand side of the cutter.
2. Clean the lubricating nipple and lubricate the bearing while turning the axle until grease starts to come out of the bearing. (Picture 1)
3. Wipe off the excess grease with a cloth so it does not come into contact with the drive belts.
4. Check the drive belts for cracks and wear, replace them if necessary. (Picture 2)
5. Tighten the drive belts so they can be twisted approximately 90 degrees with two fingers.
6. Replace the guard on the right-hand side of the cutter.
7. Repeat the procedure for the bearing on the right-hand side. (Picture 3)

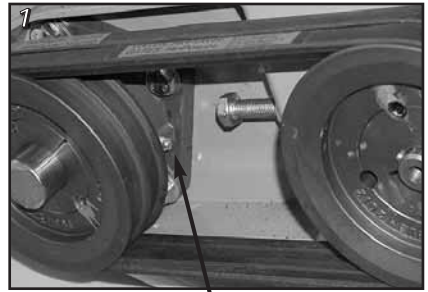
Lubricating the castor wheel forks:

Clean the lubricating nipples and lubricate the castor wheel forks as necessary with grease. Make sure to remove excess grease. (Picture 4)

Protective screens

(avoid stones being thrown out):

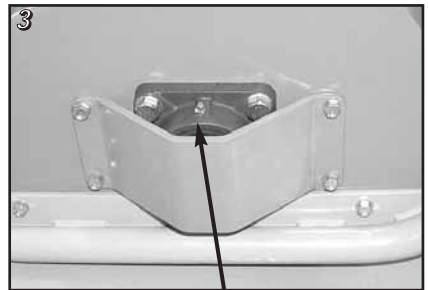
Check the screens on the front and rear edges of the mower guard for wear and replace if necessary.



Lubricate the bearing on the left-hand side



Adjust the belts



Lubricate the bearing on the right-hand side



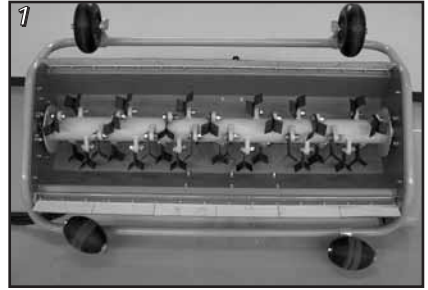
Lubricate the castor wheel forks

3. Service and maintenance

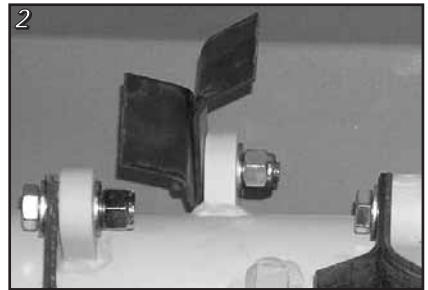
Replacing the flails:

Replace the flails as follows:

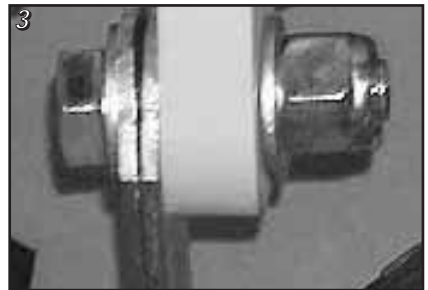
1. Stop the machine. (See the operator's manual for the base machine, Section 2.2)
2. Remove the mower. (See Section 2.1)
3. Tip the mower forward. (Picture 1)
4. Remove the nut from the bolt that holds the flails and remove the flails. (Picture 3)
5. Put on the flails lying next to each other on the same side of the bolt, at its head. The nut and bolt must not be tightened so much that the flails cannot move. (Picture 2)



Mower tipped forward



The flails are fitted together



Fitting bolt for blades



The vertical blades are fitted individually

Replacing the vertical blades:

1. Stop the machine. (See the operator's manual for the base machine, Section 2.2)
2. Remove the mower. (See Section 2.1)
3. Tip the mower forward. (Picture 1)
4. Remove the nut from the bolt that holds the vertical blades and remove the vertical blades. (Picture 3)
5. Fit the vertical blades one by one onto the axle. The nut and bolt must not be tightened so much that the vertical blades cannot move. (Picture 4)



Check the nuts and bolts for wear and replace when necessary.

The nuts **must** be self-locking.

New blades, nuts and bolts can be ordered from an authorised Egholm distributor.

3. Service and maintenance

Winter storage:

When it is time to store the mower for the winter, the following steps are recommended:

1. Remove any loose paint and repaint any damaged areas.
2. Spray the mower with preservative oil.

4. Conditions

4.1 Warranty

The warranty period for the materials and manufacture of this Flail Mower/Verticutter is 12 months from the date of purchase.

In case of errors or defects on the machine within the warranty period, Egholm Maskiner A/S will carry out the necessary repairs without charge for materials and working hours in accordance with the terms and conditions listed below. The customer is to cover the costs for transportation.

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 guarantee.
- 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) Egholm Maskiner A/S reserves the right to make improvements and design-related alterations to the machine without being obliged to modify previously delivered models in relation hereto.
- 6) This warranty is valid for persons who have legally acquired the machine within the warranty period.

The guarantee does not cover:

- * Wear and tear, accidents, damage to the equipment caused by operating errors, improper utilization of the machine, changes to the construction of the machine or use of non-Egholm spare parts or implements.
- * 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 Maskiner A/S has no control.

4. Conditions

4.2 Conditions of complaint

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 to any complaints.

If there are questions that the distributor cannot answer, please do not hesitate to contact Egholm Maskiner A/S directly. Also feel free to contact us with suggestions or requests for special implements and/or features for the machine. We wish you many years of safe and satisfied use of your machine.

Best regards

Egholm Maskiner A/S - Transportvej 27 - DK -7620 Lemvig, telephone: +45 97 81 12 05, fax: +45 97 81 12 10

4.3 Disposal

When – many years from now – your Egholm Flail Mower/Verticutter 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 all plastic and rubber parts and discard in a dustbin.
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

Notes

