ELIET®

MANUAL

DZC 450



In this manual you will find information on the proper operation and maintenance of the machine. **Read it carefully and keep it in a safe place.**



Please keep your **purchase invoice** or proof of payment with this manual.



Register your online purchase at www.eliet.eu

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1. Introduction



1.1 Read the instruction leaflet carefully

ELIET machines are designed to operate safely and reliably as long as they are used in accordance with the instructions. You should read these operating instructions carefully before using the machine. Failure to do so may result in personal injury or property damage.

1.2 Identification data – ELIET OVERSEEDER DZC 450

Write down your machine's identification data in the frames:

Article number:	MA 033 010 206
Engine:	HONDA GX 200
Serial Number:	
Year of Manufacture:	20

2. Warranty



2.1 Warranty Card

European customers:
ELIET EUROPE S.A.
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8553 Otegem
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e-mail: info@eliet.eu, www.eliet.eu

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Philadelphia, PA 19118
T +1 412 367 5185
e-mail: info@elietusa.com, www.elietusa.com

Read the warranty conditions "15.5 Warranty Conditions" on page 103.

3. Welcome

English



Welcome to ELIET customers.

We thank you for having shown your trust in us by purchasing an ELIET machine. We are convinced that you have just bought the best machine ever. The lifespan of your ELIET machine depends on how you treat it. This instruction manual and the engine manual that comes with the machine will help you with this. By respecting the instructions and the advice contained therein, your ELIET machine will work for a very long time in optimal conditions.

Please read this manual carefully before using the machine. This will prevent the machine from being operated wrongly. It is in your interest to also read the chapter on safety instructions. Even if you are familiar with this type of machine, it is highly recommended that you read these pages carefully. As ELIET is constantly improving its machines and equipment, we reserve the right to make some slight modifications to the delivery machine both in terms of its configuration and equipment as well as in terms of the technique implemented. The descriptions and technical specifications in this manual are those in force at the time of publication. Some sketches and descriptions may not be for the type of machine you purchased, but may refer to a different model of the machine. In

Therefore, we ask you to be understanding that we are not responsible for the texts and illustrations in this manual. If you still have questions after reading this manual, please do not hesitate to contact your ELIET distributor.

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4. Table des matières

1. Introduction 3

1.1 Lisez attentivement la notice d'instructions 3
1.2 Données d'identification – ELIET REGARNISSEUR DZC 450 3

2. Garantie 3

2.1 Carte de garantie 3

3. Bienvenue 4

4. Table of contents 5

5. Symboles de sécurité 6

5.1 For information 6
5.2 Attention 6
5.3 Caution 6

6. Composants principaux 7

6.1 Vue d'ensemble 7
6.2 Guidon 8
6.3 Moteur 9

7. Consignes de sécurité 11

7.1 Messages de sécurité 11
7.2 Dispositifs de sécurité 14
7.3 Consignes de sécurité 15

8. Obligations du distributeur 23

8.1 Déballage de la machine 23
8.2 Autres tâches 24

9. Mode d'emploi 26

9.1 Contrôles préalables 26
9.2 Caractéristiques de l'aire de travail 27
9.3 Préparation de l'aire de travail 28
9.4 Préparation de la machine 32
9.5 Travailler avec la machine 42
9.6 Nettoyage de la machine 52
9.7 Recherche des pannes 58

10. Transport de la machine 65

11. Entretien 68

11.1 Généralités 68
11.2 Lubrifiants recommandés 69
11.3 Contrôle de routine avant chaque séance de travail 70
11.4 Entretien toutes les 25 heures de travail 74
11.5 Entretien toutes les 100 heures de travail 87
11.6 Entretien toutes les 200 heures de travail 89
11.7 Entretien toutes les 500 heures de travail 93

12. Entreposage de la machine 94

13. Fiche technique 95

14. Déclaration de conformité CE 96

15. Annexes 97

15.1 Dépose des carters de protection 97
15.2 Couples de serrage pour vis & écrous 99

16. Dangers 100

17. Conditions de garantie 102

5. Safety symbols

This manual includes a series of symbols to provide more information and to indicate potential hazards.





5.1 For information



For information: This symbol serves to draw your attention to special information and/or special handling or to indicate that detailed information is available elsewhere on this subject.

5.2 Attention



Attention: This symbol explains how to avoid mishandling. This will prevent any manipulation that could cause personal injury or material damage to the machine.

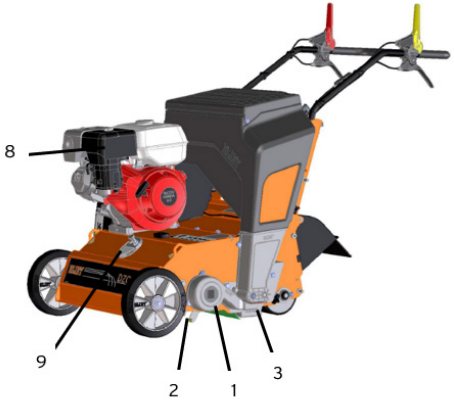
5.3 Caution

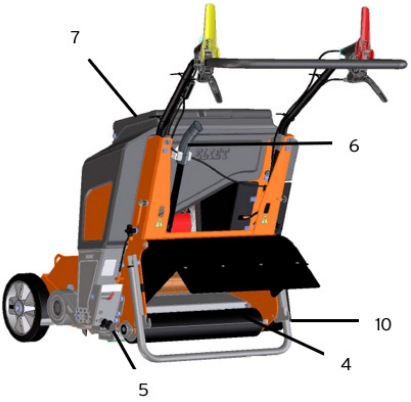


Caution: This symbol draws your attention to an imminent danger that you must take into account in certain circumstances. So be vigilant to keep you safe.

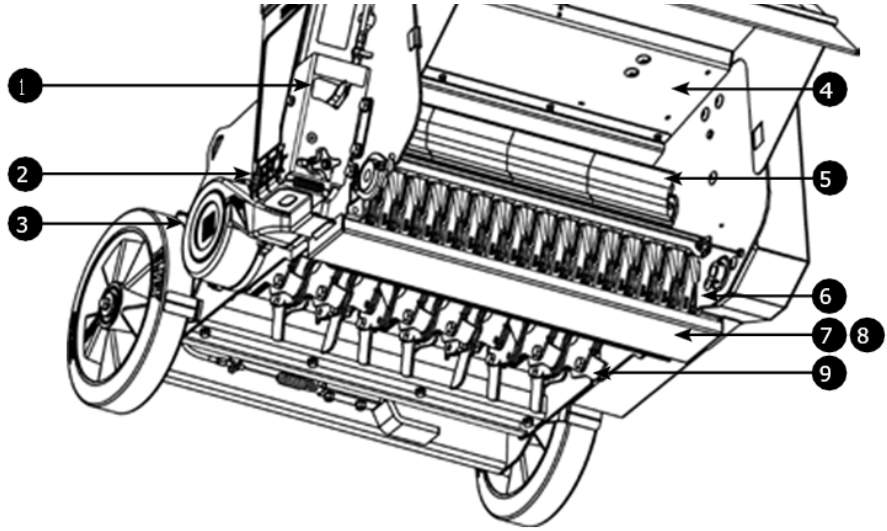
6. Main Components

6.1 Overview





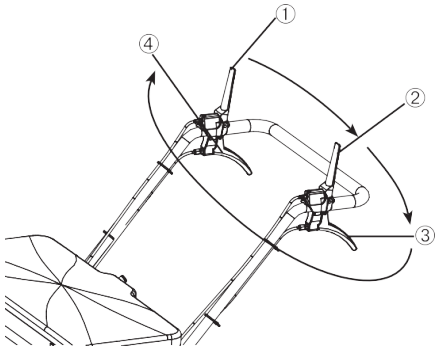
1. Helix Seed Duct Fan
2. Blade shaft
3. Seeder drain slide
4. Roller
5. Seed flow adjustment
6. Knife – cleaning scraper
7. Seed Tank
8. Engine
9. Depth adjustment
10. Retractable support device



1. Seed rate adjustment
2. Seed distributor drive check point
3. Fan with ventilation duct
4. Discharge conveyor
5. Discharge accelerator/Topdress Rotor™
6. Seed outlet ports
7. Seed distribution system
8. Seed drill discharge slide
9. Blade shaft

6.2 Handlebar

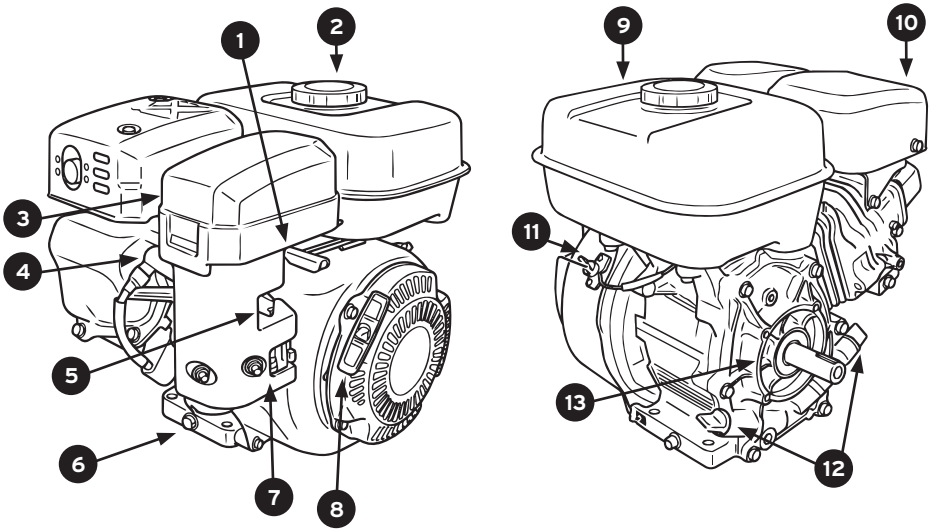
A logical chronological order must be followed when using the DZC450 controls. This simplifies the operation of the machine.



1. Engage the rotation of the blades
2. Initiate seed distribution
3. Engage the Depth of Work
4. Traction drive

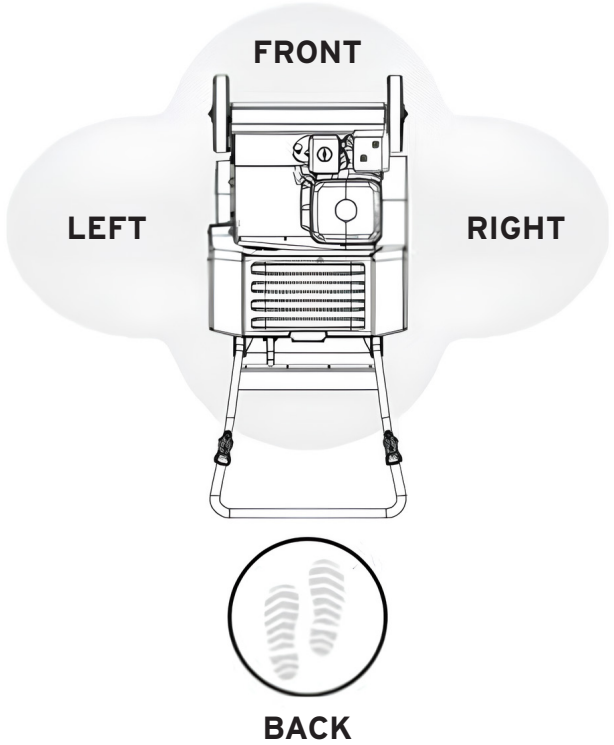
6.3 Engine

HONDA GX 200 (6.5 HP)



1. Throttle lever
2. Fuel tank cap
3. Air filter
4. Spark plug
5. Choke lever
6. Oil drain plug
7. Fuel supply valve
8. Starter handle
9. Fuel tank
10. Exhaust outlet
11. On/off switch
12. Oil filler cap/oil level dipstick
13. Crankshaft

For information: The terms back, left and right used in the manual are in all cases understood from the position of the operator on the handlebars of the machine.



For information: Your authorized Eliet distributor is there to advise you and maintain your machine so that it always offers optimal performance. You can also contact the latter for your parts and lubricants needs. These parts are designed with the same craftsmanship and precision as the original parts.

For information: Chapter 11 provides a summary of the maintenance that the machine requires and also tells you for which maintenance an authorized distributor should be consulted.

Attention: For your own safety, only use genuine ELIET or HONDA parts on this ELIET machine.

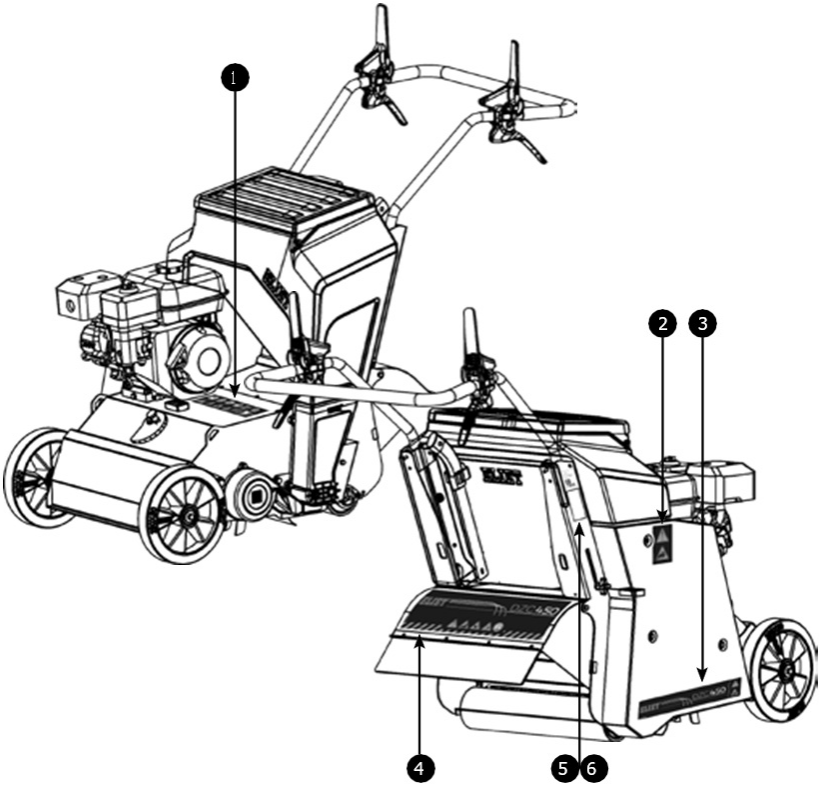
7. Safety Instructions





7.1 Safety Messages

For information: The safety stickers are applied to clearly visible places on the machine. Pay attention to the warnings on these stickers before using the machine.





This sticker is stuck on the upper side of the bodywork (1). This is a central place on the machine that is always clearly visible to the operator.

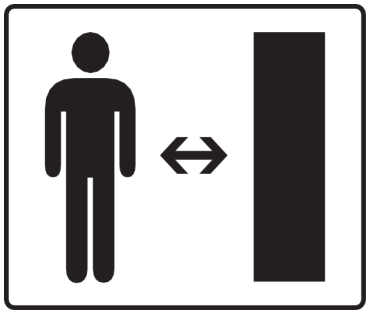
The sticker has three parts:

The first part summarizes the general safety instructions by means of icons:

1. The operator must read and understand the manual before operating the machine.
2. The operator must wear protective clothing (gloves, glasses, hearing protection) if necessary.
3. Working or maintaining the machine creates a possible danger of hand cuts. Be attentive and careful.



A second part of the sticker signals the operator to stop the engine and remove the spark plug cap before starting machine maintenance.



The third part of the sticker reminds anyone other than the user to consider a safety distance of 10m when approaching the machine.

This sticker is referenced: BQ 505 010 171



A safety sticker is affixed to the transmission guard (2) and specifies that the work cannot be carried out without this guard. There is a danger that clothing or limbs could get stuck in the drive of this transmission and be injured.

This sticker is referenced: BQ 505 010 130

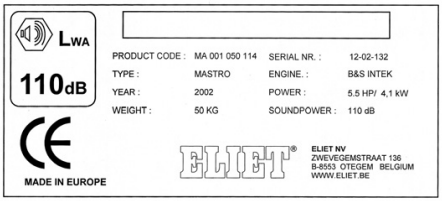


This sticker is also affixed to the housing (3). Sticker warns of the danger of cuts in case the hands or other limbs are in the vicinity of the area provided.

This sticker is referenced: BQ 505 010 070

Autocollant d'identification de la machine. Cet autocollant est apposé sur le côté droit du guidon (5). Il reprend l'ensemble des données d'identification de la machine :

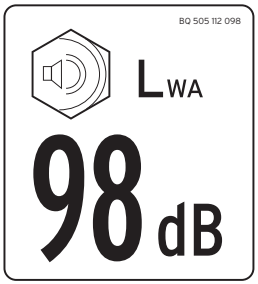
Machine identification sticker.



This sticker is affixed to the right side of the handlebars (5). It includes all the machine's identification data:

Model Number
Serial Number
Year of Construction Engine
Power Weight

Guaranteed sound power level weighted Lw(A):



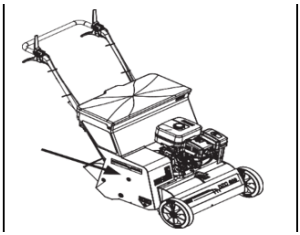
This sticker (6) also provides the manufacturer's data. The CE mark also indicates that the machine complies with the European directive applicable to these machines.

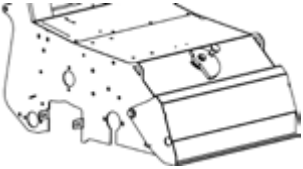
This label is affixed to the right side of the handlebars. The title symbolises the guaranteed sound power (LwA) that the machine produces under normal operating conditions.

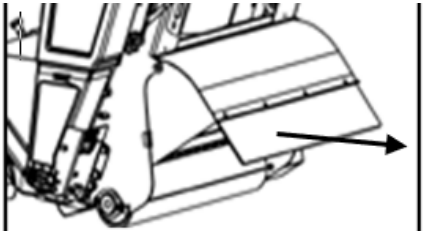
This sticker is referenced: BQ 505 112 098

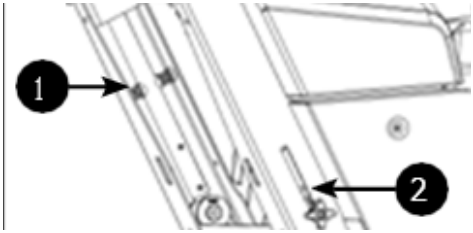
Attention: A security sticker that is damaged, peeled off or rendered illegible as a result of use or cleaning should be replaced immediately. Stickers can be ordered from your authorized Eliet distributor.

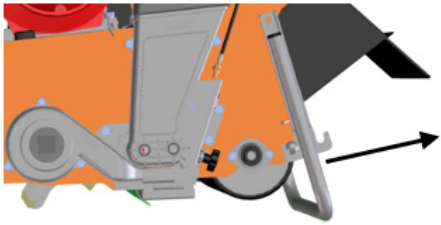
7.2 Safety Devices











Protective cover:

All moving parts are duly protected by the protective housing.

Robust construction:

The solidity of the structure is a guarantee of the resistance of ELIET machines and also offers a guarantee of safety to the user in unforeseen situations.

Sound isolation:

The choice of a powerful motor where the torque increased by an integrated gearbox eliminates the need to work at full power. The sound power then decreases by a few decibels. An anti-spray rubber mud flap is also fitted, so as to reduce noise pollution from impacts.

Height-adjustable and vibration-dampening handlebars

In order to minimise the harmful consequences for the joints and nervous system, the handlebars have been equipped with a suspension that dampens vibrations (1). In addition, the handlebar is adjustable in height (2), so that the operator can limit the load on the spine as much as possible.

Built-in retractable reclining bracket

To ensure simple and safe maintenance of the machine, ELIET provides this accessory with the machine. By placing the machine on its retractable stand, you can tilt it backwards to carry out inspection or cleaning operations safely.



The Clean Tool cleans up dirt that sticks to the blade housing, around the traction roller, the splash deflector and keeps a safe distance from the individual components.

7.3 Safety Instructions

7.3.1 General Safety Instructions

- The owner of the machine must keep this manual for the life of the machine. The user will use it as a reference book to operate and maintain the machine according to the rules of the art. If you are unsure about how to perform an operation, always refer to this manual.
- In order to prevent accidents, always follow the instructions of the labour inspectorate in force.
- If the instructions in this manual are not clear, please do not hesitate to ask your ELIET distributor for further explanations. The ELIET helpdesk is at your disposal to answer your questions: (UE +32 (0) 56 77 70 88). (service@eliet.be)
- The original version of the machine must not be modified under any circumstances without
- the explicit prior written consent of ELIET EUROPE NV.
- When using the machine, all safety instructions must be observed! Read all instructions for using the machine carefully. All of these instructions are intended to ensure your personal safety.
- Refer to the section for distributors (see "8. Distributor's Obligations" on page 23) and immediately check whether the machine has been delivered to you as instructed.
- When purchasing the machine, ask the distributor or a competent person to help you explain how it works.

For information: Also read the safety instructions in the engine manual. This includes the information necessary for proper operation and maintenance of the engine.

Assimilate all the safety messages present on the machine in the form of stickers. (For the location of the stickers, refer to the "7.1Safety Messages:" on page 10.

7.3.2 Use with caution

The machine is designed to renovate and rejuvenate an existing lawn. The process consists of remediate the existing turf vegetation and inject new complementary turf grasses into the existing herbaceous carpet. By doing so, new budding grass growth will be increased, which will improve the appearance of the grass and increase its strength.

To this end, the machine combines several functions that can be carried out in a single operation:

A. Preparatory work:

- Creation of furrows for seeding in the soil (depth from 0 to 15 mm).

B. Reseeding:

- Dosed distribution of grass seed. The Helix Seed Duct™ directs the seeds below the soil spray stream and spreads the seeds via small ducts precisely above the preformed furrows.
- Propulsion of seeds in the furrows by the fan.
- Filling of furrows and compression of the soil around the grass seed by the compaction generated by the rear roller.
- Covering the seeds with a protective layer by spreading the soil extracted during the creation of the furrows.



Attention: The machine is not designed to work on milled or ploughed soil and will be used exclusively for the application described above.

- Seeding is a physical effort that requires the concentration of the operator. It will therefore be necessary to take regular breaks by eating and drinking enough.
- It is not recommended for people with heart problems and/or the balance of working with the machine.
- Think about every operation you perform with the machine. Don't let yourself be distracted by the force of habit. Never act impulsively or reflexively.
- Don't take undue risks despite the presence of many security. (see "16 Dangers" on page 101).



Caution: The majority of accidents are the result of reckless or thoughtless behaviour.

- The machine will not be used on clams, but only on an existing lawn. It is forbidden to work on land that does not meet the characteristics of the soil (see § "9.2 Characteristics of the work area" on page 28).
- The work is always to be done in the direction of travel.
- Never use the machine on frozen ground.
- Never use the machine when the light intensity is too low.
- Never use the machine to transport people or any other load.
- Carefully inspect the area where the machine is being used. Remove tree roots, stones, branches, textiles and other waste. Also think about surface pipes (electricity, water, cable for robot mowers, etc.).
- Avoid its use on a lawn with stones. If necessary, choose the lowest speed and reduce the depth of the blades. Be careful, when you hit a heavy stone, immediately engage the transport position and lift the machine over this obstacle.



Attention: The working depth of the machine is a maximum of 15 mm, any obstacle in the top layer of the ground represents a risk of damage or breakage of the blade system.

- ELIET cannot be held responsible for any material damage.
- When the blades are working and the machine is set to the working depth, only straight or almost straight sections will be processed. It is then strictly forbidden to turn around.
- Avoid inhaling the exhaust fumes from the machine. Exhaust fumes contain harmful particles that can cause poisoning, resulting in death. It is therefore forbidden to run the engine for more than 30 seconds in a confined space.

7.3.3 Responsibility of the user

- The machine operator is supposed to have a certain maturity that allows him to
- make decisions based on common sense.
- The person working with the machine is supposed to know the safety instructions. She is fully responsible for the machine to itself and third parties.
- The machine cannot be entrusted to a minor. However, this prohibition does not apply to those over 16 years of age who learn to use them under adult supervision.
- Children and pets should be kept away from the machine. Safety distance to be respected for this purpose is 10m.
- ELIET EUROPE SA advises you not to lend the machine. If you still decide to do so, lend it only to people who are familiar with the machine. In any case, draw their attention to the potential risks, and force them to read the manual beforehand. (See § 16 "Dangers" page 101).
- Anyone who will be working with this machine must be well rested and in good physical condition. As soon as fatigue starts to set in, it's time to take a break.

- It is forbidden to work with the machine after consuming alcohol or products narcotics.
- If the seeding is taking place on unfamiliar land, the owner of the land should be asked about any obstacles or foreign objects buried in the soil before starting the work.



Caution : A moment of inattention or recklessness can destroy a life.

7.3.4 Personal Protective Equipment

- Working with this machine requires proper clothing, i.e. clothing that covers the entire body. Never wear loose clothing (a scarf, for example, is strictly forbidden).
- If the operator has long hair, he will tie it in a ponytail and wear a cap or a headband.
- The dangers inherent in this ELIET reliner are limited, but the feet run the greatest risk. Solid, closed-toe shoes with a steel toe are not superfluous.
- For the protection of the most delicate senses in case of prolonged use, ELIET recommends the use of hearing protection.
- Wearing hearing protection requires increased attention and vigilance since noises announcing danger (such as screams, signals, etc.) are only faintly audible. With this in mind, ELIET advises against hearing protection with a built-in music player.
- As mentioned on the safety sticker on the machine, the operator will wear, in addition to required hearing protection, gloves and safety glasses.
- Especially in hot and dry weather, tillage can give off a lot of dust. If this dust irritates your respiratory tract, ELIET recommends that you wear a dust mask (dust mask in accordance with standard 89/686/EEC).



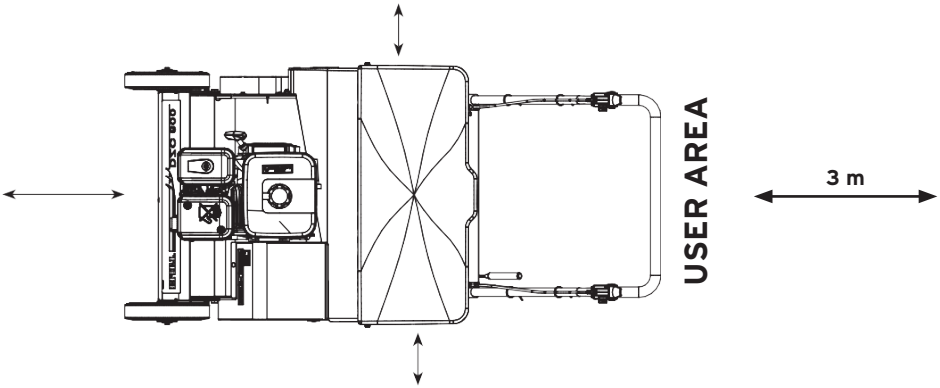
For information: The operator can reduce the risk of accidents by wearing suitable personal protective equipment.

7.3.5 Ergonomics

- Wear shoes with sufficient support soles.
- Hold the handlebars with both hands.
- Since the capacity of the seedling tray is about 43 l, choose seed bags of an appropriate volume to fill the seed container. This will prevent back pain during handling.

7.3.6 Hazardous areas

The illustration below shows where the operator should stand and the hazardous areas of the machine:



- The operator's area is behind the machine with both hands on the handlebars. This is where you have the best access to the various controls that control the machine.
- Do not allow third parties to enter the 10m danger zone around the machine when working.
- Children and pets must be kept out of the machine's reach at all times.
- Even when moving the machine, no one will be allowed within 10m of the machine. The feet of people in the vicinity can get under the machine and suffer serious injuries. A person nearby may find themselves trapped between the machine and an obstacle.
- Don't take any chances! If a person enters the danger zone, stop the drive of the blades and traction immediately.
- The machine is designed for outdoor use. It should not be used in an enclosed or poorly ventilated area. There is a risk of exhaust poisoning.
- Once the blades are activated, there is a risk of projection through the exhaust channel, but also at the front of the machine. So always be careful when activating the blades. Never let the blades rotate for longer than necessary.
- As soon as you move away from the machine, the engine should be stopped.
- Once the motor is running, the operator must devote his full attention to controlling the machine.
- Protective covers are intended to protect hazardous areas and thus prevent accidents. It is therefore forbidden to work or to start the engine or a drive without these protective covers.

- Even when the engine is switched off after work, the exhaust and the engine remain warm for several tens of minutes. Any contact can cause burns, so do not let anyone near the hot engine.
- Do not park the machine on a steep slope. The machine could move under the influence of gravity, and this can cause damage or injury.
- Safety features will never be removed or deactivated.



Attention: When wearing hearing protection, increased attention and vigilance are required as noises that indicate danger (such as screams, signals, etc.) are only faintly audible. ELIET does not recommend the use of a mobile phone, smartphone or portable MP3 player during work.



Attention: Repair, maintenance and cleaning work cannot be carried out. be carried out only if the engine is stopped and the spark plug cap removed.



Attention: In some areas, an internal combustion engine machine cannot be used on natural, bushy, or grassy non-wooded terrain unless the engine exhaust is equipped with a spark arrestor. Check local regulations before using the machine.



Attention: Due to the inertia of the weight of the blade-holder shaft, the blades will continue to rotate for a certain period of time after they are deactivated. As a precaution, care should be taken to wait one minute after deactivating the blades before performing any maintenance operations.

7.3.7 Regular Maintenance



For information : Maintain your machine regularly to ensure your safety and long service life.

- Periodic maintenance is essential. Therefore, strictly follow the maintenance schedule provided in this manual (see §"11 Maintenance Diagram" on page 69.
- A maintenance meter can be a great help in keeping track of the exact number of operating hours. Your authorized ELIET distributor will be happy to inform you about the possibility of equipping your machine with this device.
- Inspect the machine before each work session. (See § "11.3 Routine check-up before each work session" on page 70 and in § "11.3.1 Visual check" on page 70). Any anomalies must be repaired immediately.
- Repair and maintenance operations can only be carried out when the engine is stopped. Always wait for the blades to come to a complete stop before performing any manipulation.
- When some worn or damaged parts need to be replaced, always contact an authorized Eliet distributor who will order the original ELIET spare parts for you. Your safety is at stake.



Caution : Repair, maintenance and cleaning work can only be carried out if the engine is stopped and the spark plug cap is disconnected.

7.3.8 Machine Limitations

- The maximum working depth recommended by ELIET is 15 mm. In the interest of your own safety and for a long service life of the machine, it is not advisable to exceed this depth.
- In low temperatures or frost, the DZC450 will not be used.
- The machine weighs 125 (*) kg. Take this into account when you need to transport it.
- Minimum width of a passage is: 700 mm

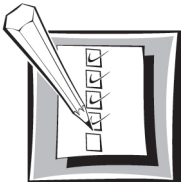
(*) = weight of the machine with an empty seed tank.

7.3.9 Environmental Friendliness

Make sure to respect the environment:

1. Do not leave the machine running unnecessarily when not in use.
2. Avoid wasting gas when filling the tank.
3. If there is an oil leak in the engine or transmission, have it repaired immediately.
4. Perform regular engine maintenance to ensure proper combustion.
5. Dispose of all waste resulting from the maintenance of the machine in a suitable location for environmentally friendly treatment or recycling.

8. Obligations of the distributor



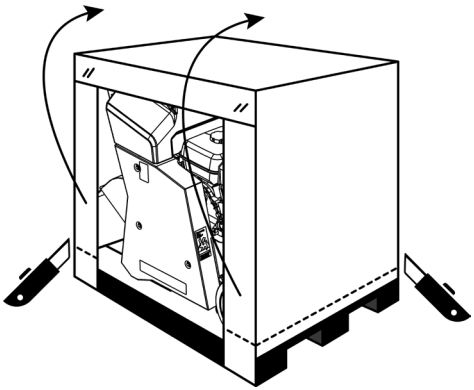
Any ELIET DZC reupholsterer that leaves the ELIET factory has been tested in terms of function. The machine is then packed for transport.

8.1 Unpacking the machine

For information: Deliveries are always made ex works. ELIET therefore declines all responsibility in the event of any damage incurred during transport.

ELIET machines are packaged in accordance with the usual rules for safe transport.

- If the packaging is found to be damaged upon receipt of the goods, check the condition of the machine as a precautionary measure. Report each anomaly on the delivery note before signing it for receipt.
- If the machine is damaged, a complaint will be made immediately after delivery to the transport company. Before opening the packaging, check whether the information on the label on the box corresponds to what is indicated on the delivery note and what was ordered. If necessary, the ELIET representative will be contacted immediately to report any discrepancy.
- The machine will be unpacked after checking the packaging.
- The machine is fixed on a wooden pallet. It is enclosed in a cardboard envelope to protect the contours of the machine. An opening is provided on each side so that the contents and weight distribution can be estimated before lifting and moving the package. The cardboard packaging is wrapped with a transparent strip to protect the machine.



- The transparent strip must first be removed. A quick visual check of the machine's condition can already be carried out through the openings on the side sides.
- To easily remove the cardboard packaging, the box will be cut just above the pallet, and on each side.
- Lift the wrapper sideways to remove it from the pallet.

The following items can be found in the box:

1. DZC 450 machine
2. Machine & Engine Manuals
3. Cleaning tool (knife/scraper)
4. Stickers for flow adjustment with seeding*

*Subject to existing partnership with regional seed supplier.

8.2 Other tasks

- The distributor is responsible for preparing the machine for delivery to the end user.
- The machine is filled with petrol (see § 9.4.2, page 41).
- The distributor checks the engine oil level and adds more if necessary. (see § 11.3.2, page 71).
- Every ELIET distributor guarantees the long service life of the ELIET machine. It will lubricate the machine completely. All articulated and friction-prone surfaces will be lubricated. Chains, bearings and cables are lubricated. (see § 11.4.1, page 75)



For information : consult the list of lubricants to be used (see § 11.2, page 70)

- The distributor ensures that the speed is set at 3500 rpm.
- The distributor keeps the machine running, checking that all controls are working properly.
- The dispenser ensures that all safety devices are working perfectly. (see § 7.2, page 14).
- The distributor will set the correct working depth. (see § 9.4.1 B, page 33).
- The distributor will calibrate the seeding rate according to the seedling mix chosen. (see § 9.4.1 C, page 36).



Caution: As an ELIET distributor, it is your duty to explain to your customers how the machine works and also to draw their attention to the potential dangers associated with the use of the machine. With the new owner, carefully go through the machine's service points. Repeat these explanations until the new owner has fully understood them.

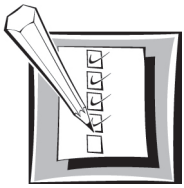
Important information for the new owner at the time of delivery :

- The distributor explains how to set the depth and what the optimal working depth is.
- The distributor explains how to adjust the seeding rate and how to control it.
- The distributor explains how to handle the machine to the new owner.
- The distributor gives practical tips for efficient use of the machine.
- The distributor will clearly explain that before sowing, the grass must be mowed and must be well scarified and cleaned, raked.
- The distributor expressly states that after use, the seed tank and the seeder distribution system must be emptied. It shows how to do it.
- The dispenser will indicate that the machine should be cleaned after use and will explain how to recline the machine on its retractable stand and how to use the cleaning knife/scraper.
- The distributor draws the attention of the new owner to the potential dangers.
- The distributor will inform the new owner that a belt tension check will need to be performed within the first 10 hours of use, and that the machine will need to be returned to them for this check. A first oil change of the engine is also recommended during this check.
- The distributor advises the new owner to check the tightness of all screws and nuts after the first 5 hours of operation as a precautionary measure.
- The dealer will tell the new owner which points need to be lubricated regularly.



Attention: The distributor informs the new owner that he must register his machine on www.eliet.eu to maintain his right to the warranty. The distributor ensures that the warranty card is duly completed and signed. This will prevent any further litigation on this subject. Read the warranty conditions for more information.

9. Directions for Use



9.1 Due diligence

Attention: Before starting the machine, make it a habit to carry out the following checks:

Checklist

1. Carry out a visual check of the condition of the machine (see § "11.3.1 Visual check" on page 70).

2. Check the oil level of the machine. Remove the level gauge from the engine and check that the oil level is not below the minimum mark. (See "11.3.2 Engine Oil Level Control" on page 71).

3. Make sure the gas tank is sufficiently filled. (Tank capacity: 3.1 L). If this is not the case, top up the fuel (see § "9.4.2 Fuel top-up" on page 41).

4. Make sure the air filter is not too dirty (if applicable, "11.3.3 Cleaning the Air Filter" on page 72).

5. Make sure that all safety devices on the machine are working properly (see §"7.2 Safety Features" on page 14).

If these points have been checked and approved, the preparation of the work area can begin (see § "9.3 Preparation of the work area" on page 28) and you can go there with the machine.

9.2 Work Area Characteristics

In order not to damage the machine and to guarantee a good result of the work, the soil must meet a series of conditions:

- The machine will only be used on a lawn. A lawn should be understood as soil that is grassed, possibly with a small amount of ground cover plants (including moss, clover, dandelion, daisy), and which is mowed regularly (1 to 2 times a week).
- The lawn must be mowed and its height cannot exceed 20 mm.
- A meadow is not part of the land that this reseeder can treat.
- The ground of the lawn is level and does not have any irregularities of more than 20 mm.
- The floor should preferably not contain stones up to a depth of 30 mm.
- Check that the lawn does not contain any foreign objects (stones, cord, electrical cables, etc.). metal wire, branches...) Remove them before using the machine.
- The ground cannot be frozen.
- Treating a dry lawn does not make sense, it is also an operation to be avoided.
- Land that is still wet and muddy after heavy rains will not be treated.
- The speed will be adapted to the hardness of the soil and the type of soil.
- The slope (in forward gear) may not exceed 15° under any circumstances.
- When sowing, the lateral slope may not exceed 10°.
- Take into account that you need to have a minimum area of 4m2 (2 x 2 m) to make a U-turn. This eliminates the need to use the machine on small plots.



Attention: It is forbidden to work when the ground is frozen or dried out.



For information: The rollers feature a smooth profile to prevent adhesion. If the rollers still get dirty too quickly, it means that the soil is soaked and the work has to be postponed.

If the terrain is not suitable for the above instructions, pre-treatment should be carried out as far as possible (see § "9.3 Preparation of the work area" on page 28).

9.3 Preparation of the Work Area

Seeding a lawn is a quick and cheap method of rejuvenating the lawn. The DZC 450 is a precision replenishing machine that ensures optimal conditions for seed growth with minimal losses. In order to guarantee this good result and increase the chances of further growth, a preparation of the ground is necessary.

preliminary study is necessary to restore a lawn effectively:

A. Structural preparation of the land.

- As indicated in § 9.2. Characteristics of the work area on page 27', the land must be free of foreign objects. If the land contains foreign objects, you must first remove all items that could slow down the work (e.g., stones, branches, ropes, wires, electrical cables, water hoses, umbrella bases, stakes, garden furniture, etc.).
- Objects or obstacles that cannot be removed (e.g. tree roots, water cistern cleat, curb stones, sprinkler nozzles, sockets, garden lighting, etc.) will be visibly marked.
- Always consult with the property owner to find out where any invisible obstacles may be located (e.g., irrigation pipes, marking points on gas and water pipes, electrical cables for garden lighting, drainage systems, mole traps, etc.). They will be indicated in a visible way.
- Also think about any cables that delimit the work area of robot mowers , electric fences for dogs, etc. They will be indicated in a visible way.
- Large stones in the ground should be removed so as not to damage the boards.
- If the turf has many irregularities (height difference > 2 cm) (e.g. molehills), they should be removed beforehand and the turf should be rolled several times, preferably after rain. Backfill the deep holes with topsoil beforehand.



For information: The land will be reviewed before relining to detect any problems. (See § 9.3 page 28).

B. Inspection of the condition of the herbaceous mat and the soil

Check the current vegetation of your lawn:

- Is there a lot of moss or weeds?
- How much grass is left in the lawn?
- Is the lawn still dense enough?
- What is the quality of the grass that remains?...

Depending on these observations, the preliminary treatment can be adapted:

If we observe that the lawn is:

1. More than 50% covered by moss or weeds:

Clean the grass and rid it of all other pests:

- Spray the sod two weeks before reseeding with a defoamer or broadleaf weed killer . Do it before it rains.
- Once moss and weeds have died, rake them completely (e.g., intensive scarification).
- Mow just before reseeding to the shortest height, so that the blades of grass ideally do not exceed 2 cm.

2. Is 3/4 grass and the remainder includes bare areas or sparse areas:

- Seed in this area to restore the density of the lawn:
- Mow just before reseeding to the shortest height, so that the blades of grass ideally do not exceed 2 cm.

3. Has turned 3/4 brown after a dry period:

Remove dead plants, but also weaker plants:

- Scarify the existing herbaceous mat very carefully (in both directions, and perpendicularly). Make sure the blades penetrate at least 2 mm into the soil to break up the dry soil crust on the surface.
- Remove the residue from this scarification.
- Mow the lawn again so that any residue is sucked up by the mower.



Be careful: after a period of drought and the return of rain, first let the soil become saturated with water in order to build up sufficient water reserves to allow the germination and growth process.

If you want to proactively replenish annually or every two years:

If the lawn is still in good condition, but you want to preventively rejuvenate the vegetation to fight against weeds and degradation. You'll remove the felt and weaker herbaceous plants, so you can make room for new grass shoots.

- Mow at the shortest height, so that the blades of grass do not exceed 2 cm.
- Scarify the turf thoroughly in two perpendicular directions.
- Remove all residue from scarification.
- Mow again at the shortest height in order to suck up all the residue from the lawn.

After the pre-treatment has been carried out, in each of the above-mentioned cases there will remain a smooth, clean and thinned turf surface, where the bare earth among the remaining herbaceous vegetation is clearly visible.

The ground is now ready to start reseeding.

Important information : A good result of relining can only be expected if the following conditions are met: presence of water and heat.

Carefully define the relining period. Choose a period when the average day and night temperature is above 10°C. Choose a time when it rains enough. Make sure that the soil has absorbed enough water and that the relining is followed by a period of sufficient rainfall.

C. The definition of seedling mix according to subsoil, turf use and climate

In order to achieve a good reseeding result, it is essential to choose the grass seed mix that corresponds to the soil properties and climate. Seed growers make mixtures that grow quickly. Get advice from a seed company.



Attention: Always use new grass seed. Older grass seeds lose a significant part of their germination.

D. Post-reline treatment to accelerate germination and growth

After relinshing, it's up to nature to do its job. However, it can be helped to accelerate growth and achieve a good result.

- Immediately after reseeding, you can spread a layer of compost on the lawn using a spreader to cover the seedbed. The latter will thus be well protected. The dark colour of the compost will also allow the heat of the sun to be stored and returned to the soil after sunset. The compost will absorb heavy downpours and conserve water. Compost is also a soil amendment and ensures better nutrient uptake. This will promote the growth of the new lawn in the longer term (0.5 to 0.75 m3/are of compost will be spread).



Attention: Choose compost with a quality certificate. Quality compost has been matured in a controlled manner, with pathogens and weed seeds killed, and it contains a slightly alkaline soil amendment with 20% organic substances. If you use poor quality compost, you can import diseases or weeds into the lawn, which is not the goal.

- If you have reseeded during a rainy period and a drought occurs shortly afterwards, you will need to irrigate the lawn twice a day for at least 14 days. Spray 5 litres/m2 in the morning (8:00 am) and 5 litres/m2 in the evening (6:00 pm).



Attention: during hot and dry periods, it will be necessary to water consistently and without interruption. A few watering sessions can be enough to dry out a recent sprout and cause it to lose permanently.

- To accentuate the growth of the lawn, you can add a fertilizer containing a growth accelerator. The nutrients will be made available directly and will therefore have an immediate effect. Fertilize just before rain, so that the fertilizer dissolves quickly and penetrates the soil.



Attention: : get help for the dosage of the fertilizer. Using too much fertilizer could "burn" new plants and jeopardize the original purpose of reseeding.

- Once the new shoots have become well established, it is important that their roots develop well to suck up water at great depths during periods when it is lacking. This can be ensured by aerating the lawn. You can make vertical holes by drilling the compacted layers between 6 and 10 cm deep. The holes also ensure better water drainage and drainage of the top layer.



Attention : You must NOT aerate before summer or when a period of drought is forecast. The perforations would cause the soil to dry out more quickly, which would be harmful to the vegetation. It is preferable to aerate at the beginning of spring or at the end of summer. To maintain the effect of the aeration, the holes formed in this way can be filled with sand or compost using a spreader. Then, this added material must be spread out in order to fill the holes properly.

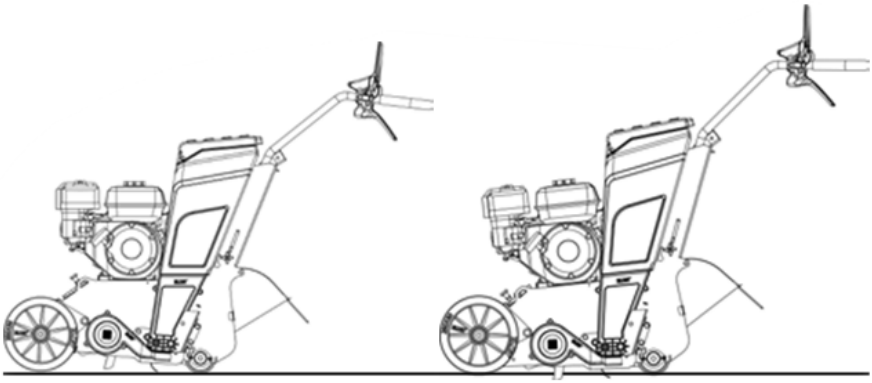
9.4 Preparing the Machine

9.4.1 Setting the Machine

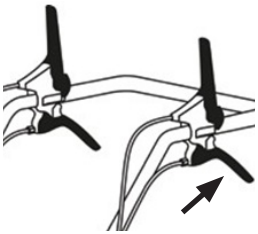
A. Transport Position - Working Position

Transport position: in the upper and locked position, the blades are raised to the maximum height and there is no contact with the turf floor.

Working position: In the lower position, the planks are set to the selected working depth (the planks groove the top layer of the floor).



The handle on the left under the handlebars allows the machine to be switched from the transport position to the



working position. To make this switch, press lightly on the handlebars to remove the resistance on the lockout. Therefore, press lightly on the handlebars while holding the switch handle and allow the machine to descend to its working position to its depth adjustment stop.

To switch the machine from the working position to the transport position, press the handlebar again to automatically re-lock the machine in the transport position.

Before returning the machine to the transport position, make sure that the depth handle is not kept pressed.



Attention: When working, make sure that the machine does not automatically reposition itself in the transport position due to too much pressure on the handlebars.

By pressing on the handle, the front wheel support automatically hinges and locks into the transport position. Gradually press on the handlebars so that the front wheels lift off the ground. The machine is now in the transport position.

B. Working depth adjustment



Attention: For this adjustment, you should always wear gloves.



Attention: When you start working and activate the traction drive, the machine can lift slightly from the front. It could therefore unfortunately find itself in a transport position. So hold the depth switch handle to prevent unintentional locking. Once the machine has reached cruising speed, you can release the switch lever.

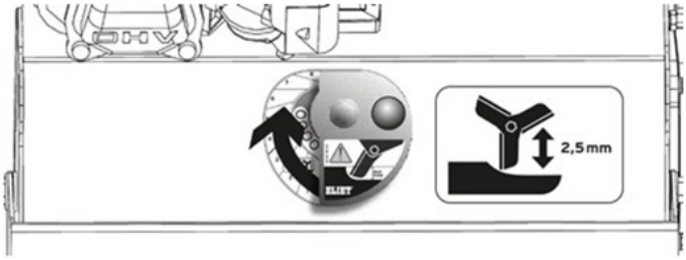
How do I run the setting?

To maximize the germination rate of the seeds spread, they should preferably be covered with a thin layer of soil. Generally, this corresponds to a seeding depth of +/- 3 to 5 mm. In order to achieve this, the working depth of the machine must be increased somewhat in order to collect more soil, which is then expelled to the rear as a seed cover. A working depth of 8 to 10 mm is therefore recommended. This means that the blades sink at this depth into the ground and that this will be the average depth of the furrows dug by the blades.

The depth adjustment is located on the central part at the front of the machine : this is where the adjustment disc (depth stop) is provided with a diagram with reference indications.



Attention: The depth adjustment is not only used to make the blades work deeper, but above all to compensate for the loss of working depth due to the natural wear of the blades.



When the new slats are first commissioned, the depth adjustment indication (see red line) corresponds to a depth of 10 mm.

Keep in mind that the blades can be shortened by wear and tear and therefore this affects the depth adjustment. The depth adjustment is intended to be able to correct the working depth under the effect of this wear. The indication on the diagram does not illustrate the depth, but is only a reference indication for this setting. Sliding the adjustment disc one position will change the depth by about 2.5 mm.

Place the machine on a flat surface of the lawn.

- Check if the machine is in the transport position.
- Start the engine (see § 9.5.1, page 42).
- Rotate the blades by pressing the red lever (top right).
- Press the handlebars down so that the front wheels lift.
- Press the depth switch lever (bottom left) while pressing the handle and let the machine gradually descend into the working position.
- Then pull the machine with the blades activated and in the working position in reverse for about 50 cm.
- Then press down on the handlebars to move the machine into the transport and stop the blades as well as the motor.
- You can now observe in front of the machine, the traced grooves are now clearly visible.
- Measure the depth of the grooves at different locations and compare with the prescribed working depth of 8 to 10 mm.
- Depending on the deviation observed, you can adjust the depth by rotating the adjustment stop. To be able to rotate the adjustment stop, you have to pull the locking lever to release the rotation of the stop.
- The more clockwise you rotate the adjustment stop, the greater the working depth. By rotating the adjustment stop of a notch, the working depth will change by 2.5 mm.
- The depth adjustment is only selected if the locking knob is fully repositioned in its notch.
- Once the depth setting is adjusted, the test procedure described above will be repeated to check whether the desired working depth has been achieved.

Tip:

Since the blades wear out naturally during work, it is advisable to check the depth regularly during work and correct it if necessary.

- If lawn seed is incorporated too deeply, emergence will be reduced and the end result will not be good.
- Working too deeply leads to an additional load on the engine, and also on the various transmission components (chains, belts, etc.).
- An exaggerated working depth also causes premature wear of the blades.
- Working deeply increases the risk of impact with foreign objects.
- Working in excess depth also leads to excessive residual soil clearing, which can unnecessarily clog the machine.
- Working deep generates additional fuel consumption.

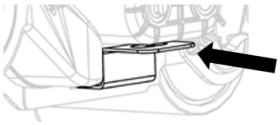
The prescribed working depth should therefore be followed correctly.

Attention: Each court is different. Factors such as soil compactness, vegetation, soil moisture and soil type can affect the depth of tillage. The depth of work will therefore be checked again at each change of terrain.

Attention: The blades should not be adjusted to a depth of more than 10 mm. Blades set too deep lead to a whole series of negative consequences.

Setting the seeding rate

1. Before supplying the hopper, you should always stop the motor.
2. 3 points must be checked before filling the seed tank:



- Check that the seeding holes on the seeder device are not blocked, and also check for condensation or moisture. Humidity would promote seed clogging, causing the seeding holes to become clogged.
- Check that the seeder drain drawer is securely closed when the machine is in transport mode. This is to prevent seeds from being lost during transport.
- Also check that there is no moisture deposit on the walls of the seed tank.

3. When replenishing the tank, sieve the grass seed to prevent foreign objects (stones, sticks, tufts of grass) from entering the hopper. They may clog the outlet holes.

Adjusting the seeding rate

Attention: These are only reference values. They can fluctuate greatly depending on the type of soil, the humidity level, the engine speed, the speed, etc. (flow rate adjustment can be controlled using the calibration kit)

The adjustment stop of the seeder must be positioned at the desired seeding rate. The position of this stop determines the size of the opening of the seeding openings and therefore the quantity of seed finally distributed.



To adjust the seeding rate , an adjustment device is provided on the left of the machine, at the height of the seeder.

Attention: The sowing rate always depends on the chosen seedling mix and the year of production. The seeding rate should always be checked and adjusted if another seed mixture is selected or if seed from another production lot is used.

Preparation:

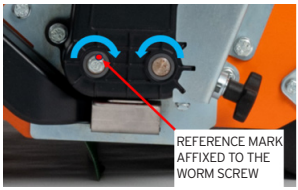
To adjust the seeding rate, fill the seed bank with the desired mixture (always pour a full 10 kg bag into it.

Five points must be checked before filling the seed tray:

A. Check the seed distribution system funnels for clogging. Place the machine for inspection on its retractable support device (see § 9.7.4, page 61) If necessary, unclog the clogged dispensing holes.
B. Visually check through its transparent walls whether the seed distribution system is completely empty. If necessary, drain it (see § 9.5.6, page 51).
C. Check the seed distribution system for condensation or moisture deposits. If there is moisture, it should be dried first.
D. Check that the movable seed flow slider makes back and forth movements when activating the yellow seed lever, and without hindrance.
E. Check whether both cables are well stressed when the yellow seed flow lever is pressed; The first cable controls the opening of the seed opening slide, the second drives the rotation of the two augers integrated into the seed distributor.

To test this operation, the machine must be in motion (traction engaged, black lever placed on the right of the handlebar pressed) (see § 9.5.5, page 48).

The seed flow slider must therefore be positioned against its adjustment stop, and the augers of the seed distributor must both rotate in opposite directions. A red marker is affixed to one of the two augers to allow the operator to observe the correct rotation when the machine is in motion.



If all of the above checkpoints are met, you can proceed with the flow adjustment.

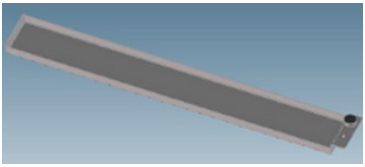
Attention: When filling the seed tank, the seeds should be poured in a measured manner and the seed flow should be controlled. The aim is to prevent foreign bodies (small stones, sticks, tufts of grass, etc.) from ending up in the tank. Also prevent a piece of paper from the seed bag from ending up in the tray. This can cause the seed distribution system to jam or the seed distribution slide to close improperly when you release the seed distribution lever (yellow handle).En principe, tout type de semence peut être utilisé. Toutefois, ELIET recommande des mélanges de semences spécialement conçus pour la rénovation. Le réglage du débit de semis dépend de la composition du mélange de semences et doit donc être réalisé via un étalonnage.

Recommended Dosage:

- For the proactive relining of healthy grass with normal growth: 20 gr/m^2.
- For the restoration of a lawn after a drought or moss removal: 25 gr/m^2.
- For sparse places with little vegetation: 30 gr/m^2.
- Total renovation: 35 gr/m^2.

The flow rate indication of the slider on the flow table is only an indicative value for the flow rate adjustment when using a conventional seed mixture. To ensure an exact adjustment, we stick to it and then refine the dosage via a practical measurement.

To adjust the seeding rate, an optional calibration kit is available under the order code: **MA 033 001 001.**



Attention: The indication on the dial has two red areas: these are areas that cannot be used with normal grass seed.

If the seed is set in the red area on the right, the openings through which the seeds are projected are very small, so there will be little or no seed flow.

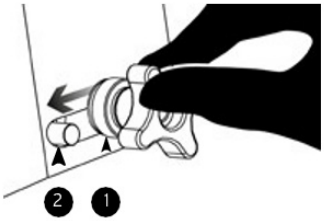


If the seed is set in the red zone on the left, the openings through which the seeds are projected are very large, so that most of the seed will be distributed on the left side, instead of spread over the entire working width.

This will result in an unbalanced seed distribution, which will not cover the entire working width.

Set the indicative value:

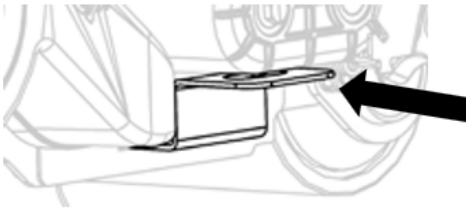
- Loosen the flow adjustment lock dial counterclockwise until it no longer exerts pressure.
- Now gradually press the seed dispensing lever (yellow) on the handlebars. At the same time, check the indication displayed by the cursor on the flow chart.
- If the slider indicates the desired flow setting, hold the yellow lever in that position.
- Take the locking wheel and slide it sideways until the stop (1) comes up against the hinge of the slide (2). See illustration.
- Tighten the locking dial tightly to lock the selected flow setting.



Flow Adjustment Test:

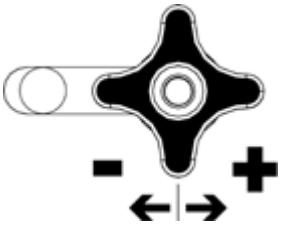
- Place the machine in the transport position.
- Check if the seeder drain drawer is closed (if the red sticker on it is visible from the top, the drain drawer is open).

Place the machine on its retractable tilt stand (see § 9.6.1 on page 54) and tilt it by pressing the handle downwards, so that you have easy access to the seed dispensers.



Push to close

- Position the calibration kit seed collection container under the seed dispenser.
- Insert the seed collection container from the right side of the machine (transmission side) by suspending it (via the hole drilled on the side post of the collection container) on the seed dispenser support screw.
- Next, hold the collection container slightly tilted downwards and bring the left side of the two augers together.
- Position the seed collector horizontally and bring it closer so that its magnetic left end can "stick" to the machine frame.
- If the seed collection container is well suspended under the machine, the engine can be started to start the flow test (see Section 9.4.1, page 39).
- Put the engine on full throttle (maximum – 3500 rpm.)
- Measure a distance of 23 metres (which corresponds to 10 m2 covered) and mark the start and end point of this distance.
- Place the machine with the front wheel at the starting point of this course.
- Press the seed dispensing lever (yellow, top left) down and engage the pull lever (bottom right).
- Drive with the machine until the arrival point marking.
- As soon as the front wheel reaches the arrival marking, let go of the yellow seed lever.
- Stop the engine.
- Remove the seed collection container from under the machine (be careful not to allow seeds to fall out of the container).
- Return the seed collected during this first test run to the seed tank (this test is not yet representative, as it is necessary to prime and therefore fill the entire seed distribution system on the first use).
- Place the seed collection container under the machine and repeat the test run again.
- We will now weigh the quantity of seeds collected. If we divide the weighed seed by a factor of 10, we get the quantity of seed actually spread per m2.
- Depending on the deviation from the desired value, the flow rate will be increased or decreased.
- To reduce the flow rate, you have to slide the stop to the left.
- To increase the throughput, you have to slide the stop to the right.
- After adjustment, the test procedure will be repeated until the desired flow rate has been achieved.



Tip:

If you always use the same type of seed mixture, after the correct setting of the seeding rate, you can make a marking mark inside the collection container. This will allow you to set the right flow rate faster.

Warning: you will have to check the setting from time to time. Lawn seed is a natural product that can vary in size, weight and shape each year.

Although the mixture is the same, there may be a difference in flow rate.

9.4.2 Handlebar height adjustment

To make relining as comfortable as possible, the ergonomic handlebar is height-adjustable.

Two points of attention are important when choosing the right handlebar height:

When working with the machine, three control levers must be pressed. It is important that the operator's wrists are in a relaxed position so as not to cause unnecessary fatigue.

To activate the blades and turn the machine, or make a U-turn, the front of the MacHine often needs to be lifted by pressing down on the handlebars. To do this, you will use your body weight by leaning with your arms outstretched on the handlebars.

A clamping knob is placed on each side of the handlebar mount to secure it to the chassis. This attachment point is also the hinge around which the handlebars are hung floatingly.

A slide is present at each attachment and allows the handlebar height to be adjusted over a range of 10 cm continuously .

To make this adjustment, loosen the counterclockwise clamping knob on each side by about 3/4 turn so that there is no more pressure on the handlebar mount.

Now slide the handlebar up or down until you can adjust the desired height.

Check if the height is uniform on each side of the handlebar mount.

Then, tighten the clamping knobs firmly in order to lock the handlebars at the chosen height position.

9.4.3 Fuel top-up

If there is not enough petrol in the machine, you must top up the fuel. It is recommended to use only fresh gasoline, ideally not more than 30 days old after its supply at the service station. It is preferable to use 98 RON E5 petrol.



Caution: Under certain circumstances, gasoline is extremely flammable and highly explosive. Ignition and explosion of gasoline can cause serious burns or extensive damage to properties. Please therefore take the following points into account.

- Fuel can never be topped up when the engine is running. Let it cool for a few minutes before topping up.
- Use only fresh gasoline. In order to extend the life, additives can be added.
- Store gasoline in a suitable tank. Keep it out of the reach of children.
- Never top up the gas where the machine will be used next. Stand at least 10 m away from the work area. This will prevent any risk of fire.
- Never top up gas in a confined space.
- Clean the contour of the gas tank cap. Do not fill the tank to its rim but fill it to a maximum of 1 cm from the rim. So never fill it to the opening, to avoid possible oozing.
- Always make sure to use a suitable funnel or spout to fill the tank. Your ELIET distributor can provide you with suitable funnels or pourers.
- If there is no filter screen in the tank, choose a funnel with a filter to prevent unwanted dirt from ending up in the tank.
- Given the flammability of gasoline, take into account that the hot exhaust is located a short distance from the tank. Avoid spraying gasoline next to the funnel.

Tip:

Take your time to carry out this operation, tilt your jerry can slightly at an angle to avoid the "eddies" generated by the draught when pouring the petrol out of the jerry can.

This will prevent you from spilling petrol everywhere.

- Screw the cap back on the tank as quickly as possible. If petrol has leaked during topping-up, the engine must be cleaned and wiped immediately.
- Be careful not to spill gasoline on your clothes. If so, change them immediately.
- It is irresponsible and therefore strictly forbidden to fill the tank near smokers or an open flame.
- Seek immediate medical attention if you have swallowed fuel or if it has come into contact with your eyes.



Warning: Smoking is not permitted while filling with gasoline.

9.5 Working with the Machine

9.5.1 Starting and Stopping the Gasoline Engine



Attention : Never turn on the machine if there is dust or dirt on the engine, or between the engine cooling fins. This reduces engine cooling and can cause a fire.



Pour information : The engine starting procedure may differ slightly from one engine brand to another. Always consult the engine manufacturer's manual.



Attention : Make sure there is no one within a radius of 10 meters around the machine before starting the engine.

- Before starting the engine, check that it contains sufficient oil (see § 11.3.2, page 71) and fuel (see § 9.4.2, page 41) if these points have not been checked previously.
- Also check that the air filter is clean (see section 11.3.3, page 72) and that the cooling air intake port grille is not blocked (starter cap).
- Before starting the engine, place the machine in the transport position.



Attention: Avoid starting the engine in an enclosed space. If this is unavoidable due to machine storage, make sure the room is well ventilated and never run the engine in a closed room for more than 30 seconds.



Attention: Appropriate work clothing and personal protective equipment must be worn before starting the engine.

Starting the engine



Attention : Bring and wear hearing protection before turning on the machine.

- If the gas tank has a fuel inlet valve, turn it on.
- Depending on the make of the engine, position the lever or turn the ignition switch to the "ON" position.
- Position the choke lever to "Close".
- Place the throttle lever in the maximum position, symbolized by the image of the hare.
- Start the engine by pulling the starter handle.
- As soon as the engine is running, quickly set the choke lever to "Open". The goal is to prevent the engine from consuming an excessive amount of gasoline. If you forget about it, the engine will slow down and start to give off a lot of smoke, and eventually shut down. Then restart the engine without using the choke.
- If it is impossible to restart the engine, it means that the spark plug is dirty, or that the engine is "flooded". In this case, the spark plug will have to be cleaned or replaced (see § 11.6.3, page 93)
- Check that at full throttle the engine is running at 3500 rpm.



Caution: Under no circumstances should the engine be left running for long periods of time (> 30 sec) in an enclosed space. Exhaust gases contain toxic substances and can lead to poisoning or asphyxiation.



Caution: The machine is dangerous as soon as the engine is running. A wrong move could set the machine in motion. The engine should therefore be stopped as soon as you find yourself in a situation where you are in danger of losing control of your work.



Pour information: The above description is indicative, also read the engine manufacturer's manual.

Engine shutdown

Place the engine speed control lever in the idle position (turtle symbol) and press/turn the ignition switch to the "OFF" position to stop the engine.

It is advisable to also turn off the fuel inlet valve.

9.5.2 Moving with the machine



Caution : Do not operate the machine for more than 30 sec. in a confined space. In such a case, the fumes from the engine could lead toa risk of poisoning. If the machine is stored indoors, first open all windows and doors for maximum ventilation before starting the engine in preparation for moving the machine.



Attention : Make sure that no one is within a radius of 10 m when driving with the machine.



Attention : Before driving the machine, determine the route to take so as to avoid dangerous areas or obstacles.

- The DZC 450 is equipped with a rubber traction roller. This pull roller can be driven to drive the machine autonomously. The drive only occurs in forward gear.
- The traction only works when the engine is running. Therefore, always start the engine to benefit from the traction drive (see § 9.5.2, page 43).
- To activate the pull, press the black pull lever (at the bottom right of the handlebars).
- When riding, always keep this pull lever pressed against the handlebar tube.
- The machine has a fixed traction speed (2 km/h). This speed of movement corresponds to the speed needed to work comfortably.



Pour information : For machine storage or driving between obstacles, you can reduce the tractive speed by reducing the engine speed. Be careful : during work, you need the full power of the engine and it will always be running at full throttle.

- You can use the machine's pull in either work mode or transport mode.
- The machine is equipped with an automatic "freewheel" system that ensures that the machine can be pushed manually if the traction drive is not used.
- If you find yourself in a complex situation, where the speed is too high to guarantee safety, you will immediately let go of the traction lever and manually push the machine until the situation allows the traction to be used again.
- As soon as the traction lever is released, the traction drive stops, but the machine is not braked.



Attention : Due to the freewheel on the drive system, the machine is not braked when stationary. The machine does not have a parking brake. During storage or transport, please ensure that the machine is secured to prevent it from rolling and causing damage. ELIET declines all responsibility in the event of damage to property.

The DZC 450 has only limited ground clearance. Avoid driving the machine over unstable, muddy, or bumpy ground. The seed distribution system, and especially the seeder distribution holes, could hit the ground and cause the holes to be clogged by a pile of soil.

- Avoid driving on damp grass (e.g. morning dew or after a shower). Moisture on the lawn will settle on the holes in the seed distribution system and the seed will stick, causing clutter and clogging in the seeder device. Clogged openings mean that the seed distribution will not be homogeneous, and that the desired result will not be obtained.

9.5.3 Make a U-turn:



Attention: Due to inertia, the machine can still move forward a little. Be attentive and plan ahead to avoid collisions.



Pour information : Machine breakage or breakdowns resulting from improper operation are not covered by the warranty.

- Let go of the seed dispensing lever (yellow handle) so that the seed dispensing system is closed and to prevent seed spillage into the U-turn area.
- Press down on the handlebars to position the machine in the transport position. Make sure that the front wheels are raised about 2 cm off the ground and that the machine only rests on the traction roller.
- Keep the pull drive activated and rotate the machine so that it can take a position in front of a new work belt. If you have enough space, try to perform this maneuver in one smooth motion.
- If space is rather limited, turn off the traction to take the time to evaluate this U-turn maneuver calmly and in a controlled manner.
- As soon as the machine is ready to process the new working belt, press the switch lever to the working position (black handlebar, left side of the handlebar) and position the machine to the working position.
- Press the seed opening lever (yellow handle at the top left) at the same time so that the seed distribution system is reactivated and you sow as soon as the new work strip begins.
- When making a U-turn maneuver, press the handlebars down to lift the front wheels to achieve the rotational motion on the traction roller.



Attention : When seeding is started and the roller drive is activated, the machine may lift slightly from the front. The machine can therefore accidentally end up in the transport position. So always hold the elevator lever pressed to release the lock. Once the machine has reached cruising speed, you can release the elevator lever.



For information: in order to avoid soliciting the back muscles and arms, during the rotation, the weight of the body should be used as much as possible by leaning on the handlebars. So adjust the handlebar height correctly so that this can be done in the most ergonomic position possible.

9.5.4 Plan and determine the relining circuit

Depending on the state of the field and the preparations already made, the approach chosen may be different. A number of criteria must be examined :

- The shape of the land. You can work faster with long belts that require fewer turns.
- The relief of the terrain. If the slope is low, you can work faster by riding longitudinally along the sidewall. If the slope is steeper, it is better to go up and down.
- What obstacles should be taken into account? The direction from which you approach the obstacles depends on where turning around is the easiest.
- Clearing U-turn areas; To finish the relining with a quick and easy correction of the U-turn areas, it is important to take this into account when determining the working circuit.
- If possible, you will determine the circuit so that the wind does not push the dust produced towards the engine.

9.5.5 Relining

Attention: The operator must wear the prescribed clothing and necessary personal protective equipment (see § 7.3.4, page 18).

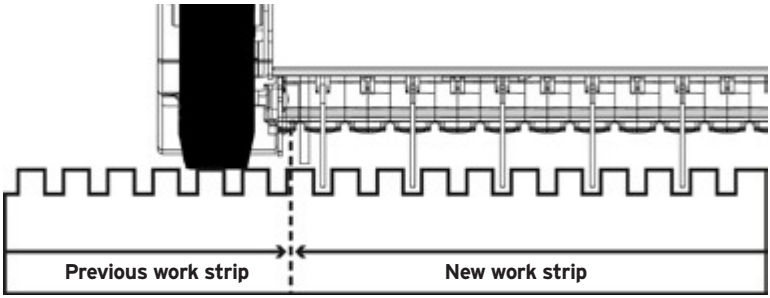
Attention: When you carry out the relinting, make sure that everyone present respects a safety distance (10 m).

- A good gardener has carefully studied his work area, eliminated obstacles and determined his work path (see § 9.5.4, page 46).
- He has also inspected and adjusted his machine beforehand (see § 9.4.1, page 32).
- Once the machine is installed on the work area at the beginning of the circuit, the relining procedure can begin.
- Beforehand, calculate the quantity of seeds that will be needed (surface area in m^2 / flow rate (gr/m^2) x 1000 = number of kilos needed).
- Determine where you are arriving with a bag and place the bags in places where you think the seed bin will be empty. This makes it possible to see during the work whether the seed consumption corresponds to the needs, so that any necessary adjustments can be made in due course.
- Always place the machine straight in the axis of the strip you want to process, and adjust to put the machine on the right track. This way, you won't have to force the handle to maintain the trajectory of the machine when the knives are in working depth.
- Always put the engine on full throttle (3500 rpm).
- Press the handlebars down so that the front wheels lift off the ground.
- The control levers have been placed on the handlebars in such a way as to create a logical and intuitive order to activate the machine:



1. Squeeze the red blade lever (1) to operate the blades.
2. Then press the yellow seed lever (2) to activate the seed distribution system.
3. Now press the depth lever (3) and let the machine go down to the working depth so that the blades can make furrows in the ground.
4. Finally, press the pull lever (4) so that the wheel drive is activated and the machine moves forward.

- During reseeding, roll in parallel strips and ensure that the seeding areas match well. To do this, you will drive with the front wheel overlapping on the previous working strip. Roll with the inside of the front wheel along the penultimate furrow of the already treated work strip so that the spacing between the seeding lines of the next work strip can be retained.



- Avoid making sudden handlebar movements when reupholstering. Take into account that the planks are at a working depth of about 1 cm and that in the event of lateral movement, they will make wider furrows.
- To achieve a beautiful, uniform reseeding result, it is important to avoid overlapping or double seeding areas.
- The U-turn areas should therefore be completed last by sowing several strips perpendicular to the normal working strips.
- So try at the end of each working band where you interrupt the relining to stop at an equal distance from the previous belt to start the U-turn movement. This will prevent unnecessary overlapping of the final perpendicular strips of the U-turn area.

When relinquishing, several elements will be taken into account:

1. Check the area at the back of the machine to see if the seed is still well projected across the entire width of the belt. This will detect any clogging of the seeder. In the event of uneven sowing, reseeding should be interrupted to check the seed distributor.

2. We will follow the flow of projection of the residual earth. In normal operation, the projection should be evenly distributed across the entire width. If it is observed that no soil is sprayed into a certain area, this may indicate a plugging in the discharge channel or in the area around the extraction accelerator. Relining should be interrupted to clean the extraction duct (see § 9.6, page 52).

3. The correct rotation of the distributor screw on the left side of the machine should be checked regularly. This is a hex head screw head that protrudes from the seed distributor. If you see this screw head rotating during relinting, it means that the worm screws of the seed distributor are rotating and the drive of the seed distributor is working well. As soon as the screw head no longer rotates and the seed opening levers and the traction are pressed, the relining should be interrupted to examine the cause of the malfunction in the drive (see § 9.4.1, page 37).

4. After pressing the seed opening lever (yellow), check whether the indicator on the flow scale is reaching the selected flow rate. It is possible that the presence of dirt prevents the movement of the dosing drawer and that the dispensing holes do not open properly. This therefore generates distorted seeding results. We will stop the relining and we will first analyze the cause to solve the problem.

5. Check the level of seeds in the tank regularly. The goal is to avoid running out of seed and to treat an area without spreading lawn seed.

6. After each cumulative surface area of 1,000 m2, the working depth of the machine will be checked . A possible loss of working depth due to the natural wear of the blades is possible and the working depth will be adjusted.

- If the seed storage is empty just before the end of the work, only the amount necessary to complete the plot being treated should be supplemented. This means less work to empty the seed tank and the distributor at the end of the project.
- If an obstacle is hit in the ground during relinting, the machine should be stopped immediately and the engine switched off. Check the blades for damage. If the blades are bent, they will first be straightened before continuing the work.

If you notice that the engine has difficulty maintaining its revs in a certain area, for example because the machine sinks a little deeper into the ground or the top layer is made up of a dry, hard crust, you can press the handlebars down slightly at this point so that the blades are lifted a little and the load on the engine is reduced

9.5.6 After relining

During reseeding, the residual soil is redeposited as a kind of spreading on the seedbed. The quality of this residual material depends on the extent to which the ground preparation has been carried out. If the old lawn has not been properly cleaned and there is still a lot of felt, moss and dry grass, some of this residue will also be discarded during reseeding. This can lead to a neglected aspect.



For information: it is important to carry out the preparation well to avoid a lot of work (see § 9.3, page 28).

In this case, the following can be done:

A. **Let the residual soil that has been sprayed dry. Once the moisture has evaporated, the soil will crumble and fill in the furrows.**
B. **You can then collect any residues with a rake. The piles of residual earth will be extended at the same time.**

Relining is likely to be successful. Under normal conditions, with sufficient humidity and heat, the new lawn will already appear after 10 to 14 days.

If it is too dry or too cold, it may take longer for the seeds to germinate. If the seed has not received moisture after refilling and the germination process has not yet begun, water should not be done. The seed still has all the germinative power in it and it will germinate when enough moisture is available. Wait patiently for a rainy period.

If the seed has started to germinate after refilling and a period without rain is announced, additional irrigation **is required** to ensure successful refilling. If this is not done, the germ will dry up and the seed will be lost.

What are the elements that can influence the result:

- **Wind:** Strong wind can blow surface seeds or cause them to end up off the ground. The risk is greatest when the seeds have not yet germinated and when the wind arrives after a dry period.
- **Plenty of water:** If a storm follows the refilling and brings heavy rainfall, the land may not have time to absorb the water. The seeds could then float and be carried away by the excess water and be gathered at the bottom of the field.
- **Drought:** As we have already explained above, drought is the worst enemy of a young germ. Especially if the nascent roots are not yet sufficiently developed to absorb moisture from deeper soil as it is very vulnerable to drying out. Particular vigilance must be taken during this phase in order to provide the missing water by watering if necessary.

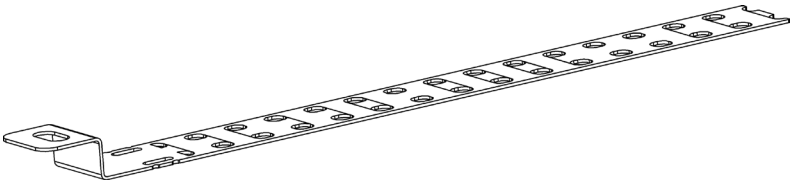
C. **The renovated lawn should be mowed for the first time when the new lawn has reached a height of 5 cm.**
D. **As described in '§ 9.5.6 Post-reseeding treatment to accelerate germination and growth on page 50', fertilizer application may also be carried out to optimize the results of reseeding.**

Empty the seed distribution system

Caution: It is mandatory to remove all seeds from the tank and the seed distribution system after each job. When storing the machine in wet conditions, the seeds in the machine may germinate. If this germination process takes place in the augers and the seed distribution system, the machine can no longer be used until the entire system has been dismantled and cleaned. These problems can be avoided by systematically removing the seeds from the machine at the end of the job

Procedure:

- Install the machine on a flat surface, such as in a garage. Sweep the surface beforehand to ensure that it is free of dust.
- Remove the seeds from the tank, scoop it as much as possible with a cup.
- Open the drain drawer of the seeder device.
- Open the lid of the seed container so that you have a good view of its contents.
- Place the machine on its integrated tipping and cleaning device, so that the pulling roller no



  longer touches the floor (see § 9.6.1 Placing the machine on its integrated tilting and cleaning device, page 54).
- Start the engine (see § 9.5.1, page 43).
- Squeeze the seed lever (yellow handle).
- Then press the pull lever so that the pull roller starts spinning in the air.
- The seed distribution mechanism, which is indirectly driven via the roller, now comes into action and will project all remaining seeds from the distribution system and seed tank onto the ground.
- When it is found that all the seed is removed from the tank and the auger distribution mechanism, release the pull and open controls on the planter.
- Stop the engine.
- Collect all the seeds spread on the ground, make sure not to pick up any foreign bodies (gravel, grass fetuses, etc.).

- Place the machine back on its traction roller, replace the integrated tilting and cleaning device by articulating and locking it in its location.
- Don't forget to close the seeder drain drawer.

Tip: To make it easier to empty the tank and the seeder device, thanks to good monitoring of consumption, please ensure that the seed tank is practically empty at the end of the current work. Open the seeder drain drawer and activate the seed distribution system as you move away from the turf. The remaining seed will be poured onto the turf, which is a simple way to empty the machine.

Tip: You can also suck up the remaining seeds in the machine.

9.6 Cleaning the Machine



Attention: Machine maintenance, such as cleaning, will only be performed when the engine is off.



Attention: There are also hazards associated with cleaning the machine. Safety clothing should be worn and more sensitive organs should also be protected by wearing personal protective equipment. (Goggles and gloves)

ELIET recommends cleaning the machine after each use. It is advisable to take advantage of each cleaning to carry out an inspection of the machine, which allows you to check the good condition of the components and the machine. This will allow you to intervene in time and prevent breakdowns. You will also extend the life of your machine.

Disadvantages of a lack of cleaning :

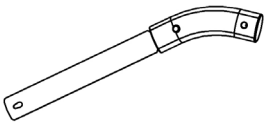
- Machine that may malfunction at the next relinting.
- Irregular seeding.
- Accelerated bearing wear.
- Accelerated seal wear.
- Moving parts can get stuck, seize.
- Reduced engine cooling, accelerated engine wear
- Increased risk of fire.
- Undetected cracks or breakage.
- Deterioration of the paint.
- Deterioration of the legibility of the security stickers.

Tip:

Perform the cleaning immediately after completing a relining session. This way, the clogged soil will not have time to dry, which makes cleaning easier and faster. The machine should be cleaned immediately after a job is finished, so that the soil and residual debris do not clog up as they dry.

ELIET recommends cleaning the machine with brushes, cloths, and also the scraper knife provided with the machine.

A special cleaning tool (knife – scraper) is delivered with the machine in order to safely remove soil and sticky dirt from hard-to-reach places. To clean, also use a dry cloth and compressed air.

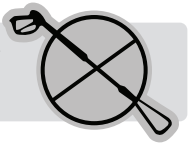


To remove grease and lubricant, use penetrating oil containing molybdenum disulfide (MoS2). This lubricating product also dissolves rust. It is important to thoroughly clean the knife rotor housing, any soil build-up on the knives, the discharge conveyor, the edges of the traction roller and the residual soil ejection propeller.

Make sure that the seed distribution holes are not blocked by soil or the like, in this case, they should be cleared and cleaned with a soft brush.

The cleaning of the machine and its individual components should ideally be carried out with the help of the above-mentioned cleaning tools, and for optimal cleaning, also with compressed air.

Attention: It is **forbidden** to clean the machine with a jet of water or a high-pressure cleaner.



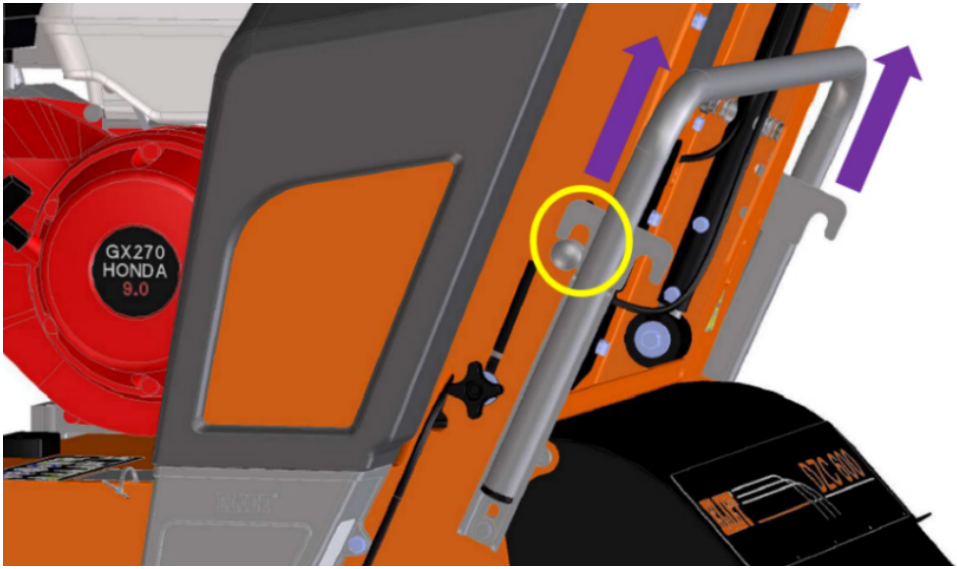
Attention: You lose the benefit of the warranty if you neglect the daily cleaning of the machine.

9.6.1 Use of the Integrated Tilt Device

The DZC 450 is equipped with an integrated device that allows it to be tilted onto a retractable stand. When this device is deployed and the machine rests on it, the traction roller no longer rests on the ground and access is facilitated for emptying the seeder and cleaning the machine.

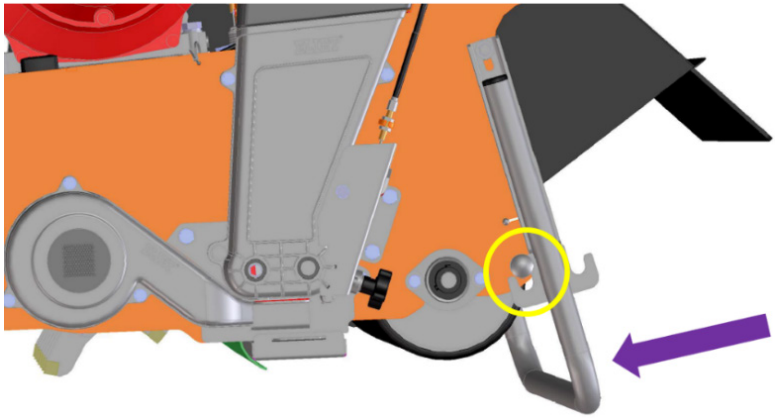
The machine can be lifted from the rear, allowing easier access to the soil evacuation conveyor, but also be tilted backwards on its support so that the front wheels are facing upwards and the machine is tilted backwards at approximately 45 degrees.

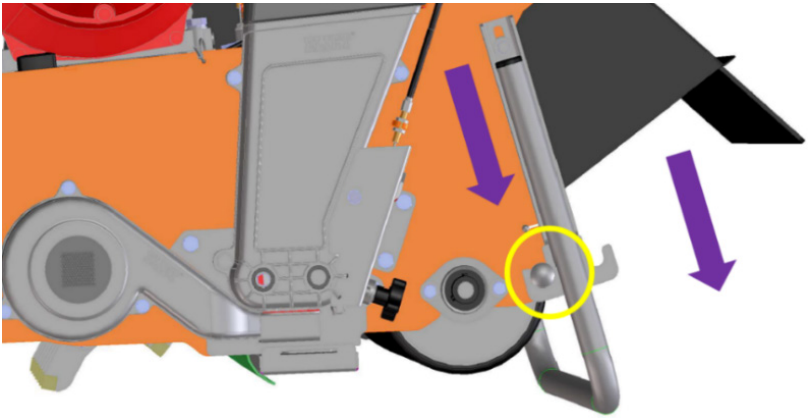
In this position, access to the rotor of the knives and the seeder device is facilitated for maintenance and cleaning operations.

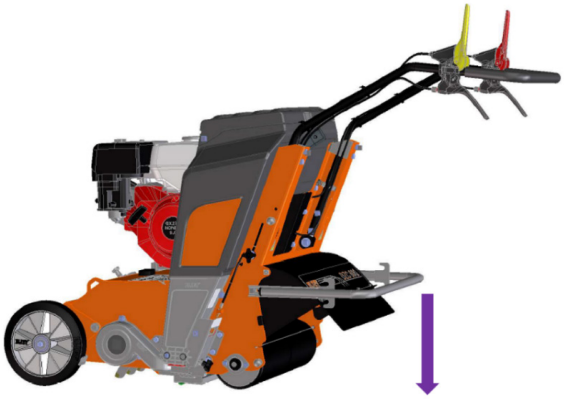


A. Position the machine on its integrated tilting bracket

- Place the machine on a flat, stable surface.
- Grasp the frame of the support and pull it upwards so that it is unlocked from its slot.
- Tilt the support frame and place it on the ground.







- Lift the machine by the handlebars so that the frame fully extends.
- Hold the armature in its extended position and allow the machine to gradually lower so that its locking notches fit into their position. It is recommended to seek assistance in carrying out this operation because the DZC represents a certain weight.

- The DZC 450 is now locked to its stand and the traction roller no longer touches the ground. In this position, the operator may place the machine to clean the discharge conveyor or place it to empty the seeder as described in § 9.6.6 After relining - emptying the seed distribution system, page 51.
- The machine can now be tilted on its stand, so that the front wheels are raised and the handlebars of the machine rest on the ground.
- To do this, the operator must push the handlebars downwards, assisted by a third party, and exert pressure so that the machine can tilt the machine and place the handlebars on the ground.



Attention: Positioning the machine on its tilting and cleaning device is an operation that recommends the assistance of a third party. Be aware of the weight of the machine and the effort required to lift it and position it on its support.

B. Place the machine back on the ground, placed on its wheels and traction roller

Perform the reverse operation, respecting the points mentioned above.

Tip: Take into account the weight of the machine and get help from a third party for these operations.



Attention: When tipping the machine, petrol may leak out of the tank. If this happens, return the machine to its front wheels and remove gasoline from the tank before continuing with maintenance or cleaning.

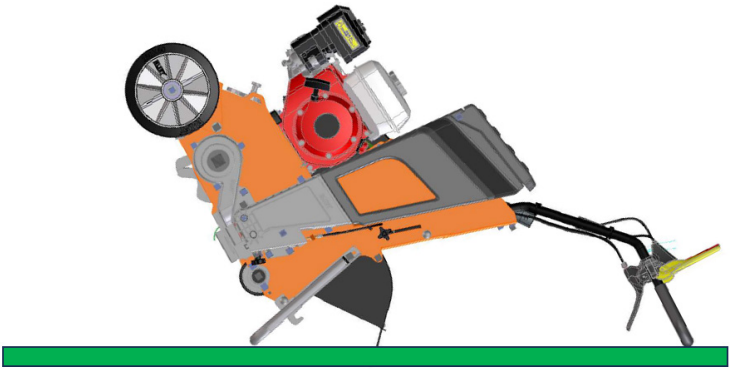


Attention: It is forbidden to clean the machine with a high-pressure cleaner.



The following points should be given special attention:

- After each use, always remove the seeds from the tank as well as from the seeder device (see Section 9.6.6, page 51).
- The engine's cooling fins and exhaust outlet must be clean. Remove any accumulation of soil, seeds or plant residues. Clean the area around the gas cap regularly to prevent dirt from getting into it. Similarly, always clean dirt that could block the engine speed control control.
- Check and clean the air filter after each use.
- Check the blades for damage or kinks.
- Check to see if anything is wrapped around the blade shaft.
- Remove all clogged soil inside the knife rotor and in the discharge conveyor. Use the cleaning tool provided (scraper knife) for this.
- Remove all impurities and clogged soil from the seed distribution device. Make sure that the transparent wall is translucent again so that you can detect any seed clumps in the system. To do this, the use of a soft brush is recommended.
- Also check the seeder distribution holes for clogging.
- Clean the traction roller and remove any clumps of dirt in the housing around this roller.
- Clean the suction grid in front of the air suction turbine of the seeder device ("helix seed duct").
- Remove the transmission guard (right side) and remove any clumps of dirt and dirt.
- Check and grease the chain drivetrain.
- Bearing bearings and hinge points must be free of dust and dirt that could clump into the residual lubricant. Reapply lubricant after cleaning. (see § 11.4.1, page 76).
- Blow compressed air onto cables and control levers to remove residual dust.
- Use a dry cloth to remove dirt from the chassis, especially where stickers with safety messages are affixed.



9.7 Troubleshooting



Attention: Before you start looking for the cause of the failure, the ON/OFF switch on the motor should always be set to "OFF".

9.7.1 The engine refuses to start after a period of inactivity.

The following causes can explain why the machine does not start after a period of inactivity:

A. Lack of petrol



Attention: Always be careful, as old gasoline always remains flammable.

First, check to see if the fuel inlet valve is open. According to '§ 12. On page 95', it is advisable to drain the gasoline before prolonged storage. Check if there is enough petrol in the tank and refuel if necessary. It may take several restart attempts to restart the engine after a period of inactivity.

B. Gasoline too old

The essence has a limited shelf life. If this gasoline has been in the tank for several months, it may cause problems when starting. In such a case, the gasoline also smells completely different.

Tip: It is recommended that you use gasoline within 30 days of purchase at the gas station, or add stabilizer-preservative to prevent natural deterioration. Empty the contents of the fuel tank and drain the carburettor (via the drain screw on the carburettor bowl). Refill the petrol tank with new petrol (see § 9.4.2, page 41).

C. Defective spark plug

Without a good ignition, it is impossible to start an engine. So check the candle (see § 11.6.3, page 93).

D. Lack of oil

In order to preserve the motor, it is equipped with a level control sensor. If there is a lack of oil, this sensor cuts off the ignition of the engine. Check the oil level and top up the oil if necessary (see § 11.3.2, page 71).

E. Other cause

If the above points do not indicate the origin of the problem, please contact your authorized ELIET distributor.

9.7.2 Engine Shutdown During Operation

There are several causes that can cause the engine to suddenly shut down during use:

A. Sloping machine

If you are working on a relatively steep slope and moving the machine in a longitudinal direction, the engine may stop suddenly.

In this case, wait a moment and try to restart the engine. If the phenomenon occurs, make sure that the engine oil level is correct after checking the level on flat ground, (see § 11.3.2, page 71).

If the phenomenon occurs again, check whether the slope is not too steep for the use of the machine in these conditions. Also consult the engine manufacturer's manual to ensure the limits of the authorised inclinations, and if necessary do not work in these conditions.



Caution: Neither ELIET nor the engine manufacturer will accept a warranty call due to a lack of oil.

B. Motor overload

During work, it is possible that the planks come into contact with an obstacle in the ground, such as a stone or other object. The engine may jam as a result of this impact. Sometimes the object gets lifted off the ground and gets stuck in the blade system or the residual earth removal system. It can also cause the engine to shut down. Check the condition of the blades and the rotor housing of the knives for damage. Remove objects that are wrapped around the blades or that are blocking them. After clearing the blades, you can restart the engine normally and resume work.

C. Technical fault



Attention : Before you start looking for the cause of the failure, the ON/OFF switch on the motor should always be set to "OFF".

If previous inspections have not been able to detect the cause of the problem, it may be of technical origin. This can be due to a fault in the engine or a problem with the carburation or ignition. In this case, contact your authorised ELIET dealer or an authorised service centre of the engine brand.

9.7.3 Loss of seed during transport

During transport, the machine leaves a trail of grass seed. This should be avoided, as we want to prevent grass growth in and between pavements. Possible causes :

A. The seeder drain drawer does not close properly

The most obvious cause is that the seed opening slide does not close properly after releasing the seed opening lever (yellow handle). This seed opening slide is brought back to its closed position by means of a return spring. Under certain circumstances, this spring can break or detach, preventing the seed opening slide from closing. Check the condition and correct position of this spring. The seed opening slide is operated by means of a cable that is connected to the seed opening lever (yellow handle). If this cable encounters too much resistance due to fouling or deformation and does not close when the lever is released, the seed opening slide remains open. The operator can quickly realize this, because the seed opening lever does not return on its own when released. Check that it is working properly and lubricate it if necessary.

A foreign object may become found among the seed and become trapped in one of the seeder's spreading holes. The opening slide cannot then be closed mechanically. Check whether the seed opening slide can move within its entire reach and, if necessary, remove any foreign bodies.

If the seed opening slide slides poorly due to fouling of the guide line (e.g. due to dust deposits or powdery seed coating), it is possible that the pull spring does not have enough force to overcome this resistance and the seed opening slide remains open. Check the correct movement of the seed opening slide and perform a cleaning if necessary.

B. The seeder drain drawer is open

If the drain drawer is opened by forgetting or following an impact, it is normal for seeds to fall out of the seed distribution system there. Check the position of the drawer and close it. Also check that this drain drawer is not impacted or deformed.

C. The seeder device is clogged

One or more seed distribution holes may be plugged in the lower part of the seeding device.

Make sure there is no moisture in and around the seed distribution holes, which could cause the seeds to stick and eventually cause clogging buildup. Make sure that the machine does not work in too humid conditions, or that it has not been cleaned with water during its last use. The presence of moisture water in the planter could also cause the seed to swell, which would inevitably increase the clogging of the seeder and the distribution holes.

9.7.4 Irregular distribution of seed

When reseeding, it is normal to notice that seeds have been spread in and around the dug furrows. Under normal circumstances, the seeds are evenly distributed over the entire working width. If we nevertheless observe some areas without seeds, with too many seeds, or with an uneven distribution of seeds, the causes may be the following:

A. Empty seed tank

When restocking, it is possible that the operator loses sight of the seed level as the seed tank empties. The augers will carry an insufficient amount of seed to the planter, resulting in a weakened distribution that will become irregular and eventually interrupted. Refill the seed tank. Caution: It is necessary to move the machine forward a few meters using the traction (black handle to the right of the handlebar) and also with the pressed seed opening lever (yellow handle) to restart the seed distribution system and regain a regular distribution of seeds.

B. Incorrect flow adjustment:

As already described in '§ c. Setting the sowing rate on page 35', an imperfect seed distribution will be achieved if the flow rate is adjusted in the red areas shown on the flow diagram. Adjust the sowing rate well outside the red areas shown on the diagram.

C. Plugging the seeder distribution holes:

During work, one or more seed distribution holes may be plugged in the lower part. After a certain time, the plugs can be absorbed on their own, allowing the seeds piled up in their distribution orifice to be spread at once, and thus generate a localized excess of seeds. We will check for the possible presence of plugs in the seed distribution system.

D. Problems with the seeder drain drawer:

As described in '§ 9.7.3. Loss of seeds during transport on page 60', many causes can lead to the incorrect positioning of the seed drain drawer and thus lead to irregular or distorted flow.

E. Sudden stop of the auger drive of the seed distributor:

The seed distribution system works on the basis of two augers that convey the seeds from the seed tank across the width of the machine. These augers are driven by a chain and are synchronized with the pulling speed of the machine. A friction clutch (torque limiter) is present to protect this rotation drive from the worms, among other things. When the friction clutch is stressed, the seed distribution is stopped and the traction of the machine is interrupted simultaneously.

Possible causes of training interruptions include:

1. Accumulation of dirt between the two gears of the worm pins, blocking their rotation.
2. Belt slippage on tensioning pulleys. If the belt that transfills to the drill's augers slips, they are no longer driven. Check the condition and position of the cable, and its tension. If necessary, clean the pulleys and check the condition of the belt.
3. If a gear wheel of the worm drive is free and movable, the coupling key may be broken. The distribution of seeds is therefore interrupted.
4. If the friction clutch slips (torque limiter), the drive to the traction roller and the drive to the seed delivery system will be interrupted simultaneously.
5. If the chain tensioner spring is broken or out of place, the chain will be too loose and it could jump out of its gear into the tensioner sprocket causing the worms to rotate.
6. In the event of a chain break, the drive to the traction roller and the seed distribution system is interrupted immediately.
7. If the drive belt of the strain reducer slips, the drive of the pull roller and seed distribution system will be stopped immediately.

9.7.5 Marking marks or damage to turf

During relinquishment, you may notice traces of markings or surface damage in the strip being processed. Here are the possible causes:

- Since the blades work the soil, we will look at this track first. It is likely that one or more blades has/have touched an obstacle in the ground, they are probably bent and milling wide unsightly grooves.
- See '§ 11.3.4. Checking the slides on page 74' to detect irregularities.
- A foreign object could also have wrapped itself around the blade pin and caused a trace of damage.

9.7.6 Unintentional activation of the working or carrying position

If the machine suddenly shifts to the transport position or vice versa during work, the following causes are likely:

- The locking system is blocked: check, clean or replace the locking system if necessary.
- The unlocking cable is dirty and slides poorly in its sheath. After releasing the transport-work position switch lever (black handle on the left of the handlebar), the cable prevents the locking system from closing completely. Check and clean this cable and its sheath, replace them if necessary.
- The transport-work switching lever has been unintentionally activated by one or the other obstacle (e.g. when driving along a hedge or near branches of a shrub).

9.7.7 The machine remains locked in the transport position

If during the re-moving or re-upholstering process, the movable structure of the front frame including the wheels can no longer be moved to the transport position or if it is not possible to change from the transport position to the working position, the following problems may be the cause:

- The hinge points of the front movable structure are stuck with dirt or not sufficiently lubricated: clean the hinge points and lubricate them sufficiently.
- There is an accumulation of dirt between the movable structure of the front frame and the main frame of the machine : clean the space between the front movable structure and the chassis well.
- The locking control cable is too loose, broken or stuck. Adjust and clean, lubricate, or replace if necessary.

9.7.8 Loss of Traction During Work or Movement

If you have the impression during rolling or relining that the machine is losing traction and that you have to push to move forward, the causes may be the following :

A. The friction clutch (torque limiter) slips :

To protect the drive system in the event of a jamming of the roller or seed distributor, a torque limiter is placed on a transmission sprocket. If this friction clutch has frequently slipped as a result of a multiple overload, wear will have appeared on the friction discs at this level , causing a reduced slip limit value. To do this, all the discs of this friction clutch mechanism must be tightened. To do this, consult your authorized ELIET service center.

B. Insufficient chain tension:

If the spring of the automatic chain tensioner is broken or has jumped out of its location, the chain is relaxed. The pinion on the traction roller will therefore not be able to be driven or it will be driven irregularly. Check the condition of the chain and its tension (see § 11.7.2, page 94).

C. Chain break:

In an extreme case, a chain can break. Check the condition of the chain and have it repaired or replaced by your authorized ELIET service center.

D. Uncoupled pinion :

The pinion on the traction roller axis can be disconnected. The coupling key may be broken and the drive is no longer transmitted. Check the pinion and coupling key. Replace the key and/or pinion if necessary.

E. Traction hesitations:

The strain reduction box is engaged using a cable connected to the traction lever. If this cable is relaxed, the transmission will not be clear and the drive will not be well ensured. Check if the lever on the gearbox is fully activated when you operate the traction lever. Make an adjustment if necessary.

F. Problem with the gearbox:

If during the engagement of the traction, the axis coming out of the traction reduction box does not rotate, there is probably a problem with this transmission box. Contact your authorized ELIET service center for a check or repair.

G. Glued "freewheel" bearing:

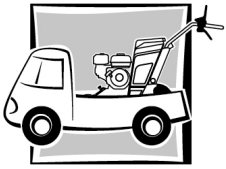
If the axle coming out of the gearbox rotates during the engagement of the traction gearbox, but the friction clutch (torque limiter) does not rotate, the "freewheel" bearing in the core of this friction clutch is probably glued by hardened grease.

Spray a little lubricant on the rollers of this "freewheel" bearing housed on the core of the friction clutch to release it, also inject new grease via the grease tip. If this does not work, contact your authorized ELIET service center to clean this bearing.

H. Dirty cable:

The transmission is engaged by pressing the traction lever, which controls the lever of the traction box via a cable. If the cable no longer slides properly in its sheath due to dirt, the cable may not return sufficiently when the pull lever is released , causing the drive to not be fully deactivated. This can lead to dangerous situations. Clean and lubricate the cable and its sheath.

10. Transporting the machine



A. Actions to take before loading

Attention: When transporting the machine, appropriate work clothes and personal protective equipment must also be worn.

Attention: Also make sure that no one comes within 10 m during the transportation, loading and unloading of the machine.

For information: Always read '§ 9.5.2. Moving with the machine on page 44'; This chapter contains useful instructions for the safe movement of the machine.

Caution: Proceed in a thoughtful and controlled manner when loading and unloading the machine.

Attention: Never activate the blades during transport

- Climb ramps as straight as possible while avoiding steering control corrections.

B. Loading the machine into the trailer

- This machine can only be moved and transported by adult people.
- Choose your route wisely so that you encounter a minimum of obstacles.
- Opt for a flat and uneven route.
- To load the machine into a van or trailer, use non-slip ramps ideally with a minimum width of 30 cm. Make sure that these are securely attached to the vehicle or trailer. The slope may not exceed 25° under any circumstances.
- Make sure that the pull roller drive cannot move the ramps

- Make sure that the loading ramps can support the weight of the machine (125 kg) and the operator.
- When loading the machine onto a trailer, the trailer must always be hitched to a vehicle.
- If you don't feel able to load the machine on your own, always ask for help from a second person.
- Make sure that the vehicle also has a payload that is high enough to transport the machine.



Caution: Never run the machine in an enclosed space for more than 30 seconds in the presence of people or animals. The exhaust gases of petrol engines contain toxic substances that can lead to asphyxiation or poisoning, or even death.

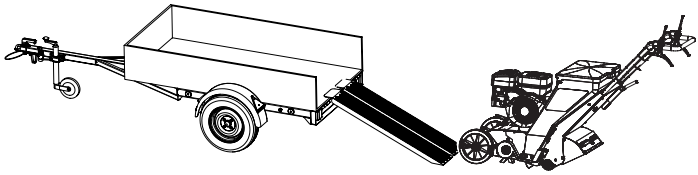
- If you need to load or unload the machine from an enclosed van, use the engine in this confined space as little as possible. Open all cargo doors wide to ensure adequate ventilation.

C. Fixing the machine in the trailer

- Place the machine against the front wall of the cargo space or lock the front against a solid object so that the machine does not slide forward when braking.
- During transport, the machine must be securely secured to the vehicle. Use the attachment points provided to attach ropes or straps. Use only fixed chassis parts to secure ropes or straps.



Pour information: Damage to the machine or breakdowns resulting from improper fastening are not covered by the warranty.



For information: Always turn off the fuel inlet valve before transporting the machine. If you don't, you risk causing a backflow of gasoline into the engine and drowning it.

- The ropes and straps, the tensioners used will be in good condition. ELIET cannot be held liable for accidents or damage arising as a result of negligence in securing the machine for transport.

11. Maintenance

11.1 General

ELIET recommends that you take your machine to an authorized ELIET distributor for service every year for a complete inspection (you can find the authorized ELIET distributor in your region on www.eliet.eu). Your ELIET dealer is always at your disposal for your consultations and advice. It has a stock of genuine ELIET parts and lubricants in store. Its staff can call on the advice and service of the ELIET helpdesk at any time and thus offer you an impeccable after-sales service.

All maintenance must take place in a room specially provided for this purpose. This room must meet the following criteria:

- Spacious
- Dust-free
- Easily accessible
- Tidy
- Well lit
- Calm

These arrangements are essential for the proper conduct of the interview.

Tip: The maintenance work described below can in principle be carried out by anyone with the necessary technical knowledge. However, ELIET advises to bring the machine back annually for major maintenance at an ELIET service center.

Scheduled maintenance schedule

The machine must undergo an initial service after 10 hours of use at an ELIET dealer. This includes: tensioning the drive belts and replacing the first engine oil, as well as a general machine check.

Then, the following maintenance schedule should be followed:

Routine check-up before each work session" on page 70.

- "11.3.1. Visual inspection of the condition of the machine" on page 70.
- "11.3.2. Engine Oil Level Check and Top-Up" on page 71.
- "11.3.3. Cleaning the air filter" on page 72.
- "11.3.4. Blade Control" on page 74.

Maintenance every 25 hours of work" on page 75.

- "11.4.1. General lubrication" on page 75.
- "11.4.2. Engine Oil Replacement" on page 82.
- "11.4.3. Belt tension control and tightening" on page 83.

Maintenance every 100 hours of work" on page 88.

- "11.5.1. Replacement of blades" on page 88.
- "11.2.2. Replacing the air filter" on page 89.

Maintenance every 200 hours of work" on page 90.

- "11.6.1. Replacement of belts" on page 90.
- "11.6.2. Replacing the belt tensioner" on page 90.
- "11.6.3. Checking and replacing the spark plug" on page 93.

Maintenance every 500 working hours" on page 94.

- "11.7.1. Replacement of chains and sprockets" on page 94.
- "11.7.2. Tightening the chain" on page 94.

11.2 Recommended Lubricants

Engine	MOBIL DELVAC MX 10W30
Points of articulation	NOVATIO CLEAR LUBE-S
Friction surfaces	NOVATIO CLEAR LUBE-S
Grease Fittings	MOBILGREASE XHP222
Cables and ducts	NOVATIO PTFE OIL H1
Channels	NOVATIO CLEAR LUBE-S / NOVATIO PTFE OIL H1
Bearings	NOVATIO PTFE OIL H1

These references are given as a guideline, any equivalent lubricant that meets the same standards and properties as the above references may be used.

11.3 Routine check-up before each work session

11.3.1 Visual inspection of the condition of the machine

It is essential to inspect the machine after each use. This allows for early detection of problems and possible wear and tear. Necessary repairs can be made to ensure that the machine is still in good condition for the next use.

A few points deserve special attention :

- Check if the machine is running at the recommended speed (3500 rpm) at full speed.
- Never change the standard engine settings.
- Check the condition of the blades, an impact with a foreign object can bend a blade. In order to avoid damage to the lawn to be treated, the planks must be straightened if they are bent (see § 11.3.4, page 74).
- Check the knife rotor housing housing and the residual soil conveyor for dirt build-up.
- Check for seed left in the tank and in the seed distribution system.
- Check that the depth adjustment does not need to be corrected due to blade wear (see § 9.4.1, page 33).
- Check that the chains are sufficiently greased (see § 11.4.1, page 76).
- Make sure that parts are not deformed, that welds do not have any cracks and that the various moving parts do not show excessive play.
- Check for damage to the components of the seed distribution system.
- If you notice any problems, carry out the necessary repair work first. If necessary, consult your authorized ELIET service center for assistance or replacement parts . You can find the nearest ELIET service center on www.eliet.eu.

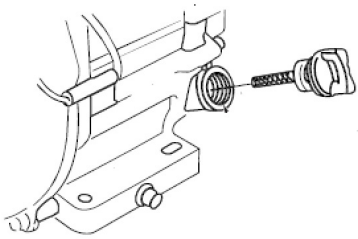
11.3.2 Engine Oil Level Check and Top-Up

If the oil level in the engine drops below a given minimum level, the engine will automatically shut down. To avoid unwanted engine shutdowns, regular oil level checks are essential.

Do this to check the engine oil level:

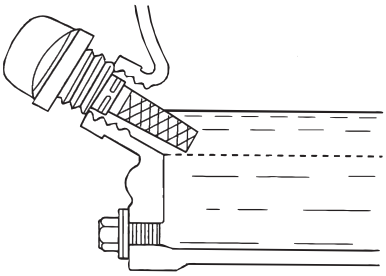
Stop the engine.

- Place the machine on a flat floor so that it is in a perfectly horizontal position.
- Allow the engine to cool for +/- 15 minutes.
- Then unscrew the filler cap (1) from the crankcase.
- The oil must be visible up to the edge of the cap orifice (2).



For information: The above description is for guidance only; please also refer to the engine manufacturer's manual.

- If the oil level does not reach the edge, it means that there is too little oil.
- If the oil level is too low, (3) simply add oil through this fill port. Pour in oil until you reach the desired level.
- Use the recommended oil (see the list of recommended oils in the engine manual).
- Since the fill port is in an inaccessible location, use a suitable filling hose or funnel to avoid spilling oil elsewhere. Clean the funnel first before pouring oil into it.



Be careful when adding oil, the amount to be added is usually small. Avoid spilling oil, if you spill any, wipe it off immediately.

Attention: Please bear in mind that it takes a certain amount of time for all the oil to reach the sump. You should therefore top up the oil in small increments, so that the dipstick gives an accurate reading of the oil level. A lack of oil in the engine will inevitably lead to serious damage. (Such damage is not covered by the warranty).

11.3.3 Cleaning the Air Filter

The air filter is used to purify the air sucked in for combustion, retaining impurities and dust particles.

The following two points are very important:

- The filter cannot be damaged, in order to prevent unfiltered air from entering the engine.
- The filter must allow enough air to pass through so that the air/fuel ratio is optimal to ensure proper combustion. It is essential to inspect the filter regularly.

How to clean the filter:

- Remove the black filter cover by loosening the thumb nut on the top of the cover.
- Loosen the attachment wing nut on the top of the filter cartridge so that it can be extracted. This filter cartridge is composed of a paper element covered with a mesh and a foam element placed around the paper element.



Attention: Veillez toujours à ce qu'aucun objet ne tombe dans l'ouverture du carburateur en retirant le filtre à air. Par précaution, couvrez-le d'un morceau de papier propre.

- For the foam filter element, it can be cleaned simply by rinsing it in a little petrol and drying it with compressed air. Then, this foam element can be covered with a thin veil of lubricating oil, in order to extend its life and allow it to capture the finest impurities.
- For the paper element part, it can only be cleaned by dusting it or by blowing compressed air between all the paper fins, in order to dislodge as many impurities as possible and extend its life as much as possible.
- **Tip:** Keep the air gun at a distance from the filter so that the air jet does not puncture the paper filter element.
- If the air filter is too dirty, it will be replaced. To do this, contact a service centre of the engine manufacturer and order the original replacement air filter.
- Always make sure that the filter cartridge fits snugly into its housing. Avoid creating a gap through which unfiltered air could enter the engine. Dirty air in the engine leads to irreversible damage!

Note: The filter element rests on a rubber gasket when positioned on the engine air filter mount. Check that this rubber gasket is in place before repositioning the air filter. The absence of this seal would result in an unfiltered air intake and can generate irreversible damage. Replace everything in the original position after cleaning.



Attention : If the machine should tip over, check the air filter as soon as possible. Since the engine is in an unusual position, the oil could end up in the air filter, through the carburetor. If the filter paper is soaked in oil, it will no longer allow air to pass through. So replace an oil-soaked filter.



Pour information : The above description is indicative, also read the engine manufacturer's manual.

11.3.4 Blade Control

Attention: Wear gloves and safety glasses for this maintenance in all cases.

Attention: To check the blades, turn off the motor in all cases and remove the spark plug cap as a precautionary measure.



- After each service, it is always important to systematically submit the planks to a quick check.
- In order to have a clear view of the blade shaft, place the machine on its integrated tilt and cleaning device.
- Before carrying out the check, clean the machine so that no damage is hidden by dirt.
- Rotate the blade pin by hand and inspect each blade.

Attention: in the event of breakage, a new blade should always be mounted on the support. The length of the new blade will be trimmed to the same length as the blades used.

Points to check:

- Check the blades for signs of wear.
- Check that the blades are not bent as a result of impact with an object on the ground.
- Check that the fixing bolts are still tight.
- Check that there is no damage to the blade supports.
- Check that there is no lateral play between the blade supports.
- If you find that one or more blades are bent, they will need to be straightened.

To do this, use a pair of pliers or any other suitable tool.

- Ensure that the straightened blade is once again aligned with the other blades on the same support. If the damage to the blade means it cannot be reused, it must be replaced.
- If, whilst checking the tightness of the bolts, you notice that any screws or nuts show signs of wear, they should be replaced.

Caution: Always make sure that the nuts are mounted on the belt drive side (right side of the machine).

- If you observe any damage to any of the blade holders, you will need to replace it before using the machine again. To do this, please contact your authorised ELIET service centre.
- If you notice that the blade holders are loose on the axis and there is lateral play between the blade holders and the bushings, the machine is no longer needed in order to avoid consequential damage. Contact your authorized ELIET service center to re-tighten the blade shaft

11.4 Maintenance every 25 working hours

11.4.1 General Lubrication

To keep the machine in top condition and maintain optimal performance, it is necessary to lubricate the machine regularly. ELIET recommends lubricating the machine at intervals of about 25 hours and checking the areas that are sensitive to friction / wear.

LOTS OF DUST = CLEAN AND LUBRICATE REGULARLY

Parts to be lubricated: hinge points

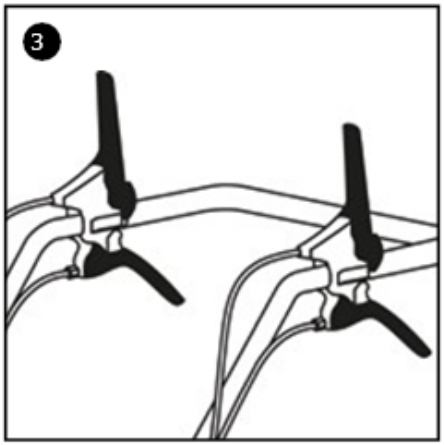


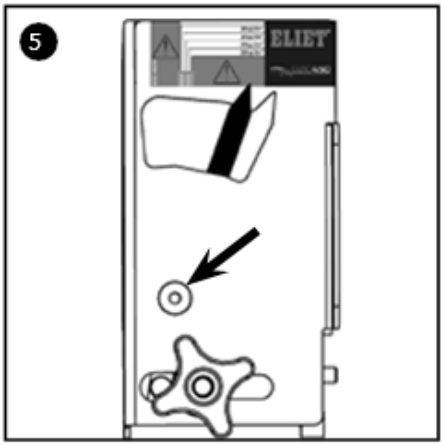
Attention : Most lubricants are flammable. Always read the warning on the package. Be sure to keep any direct flames or hot objects away when using lubricants.

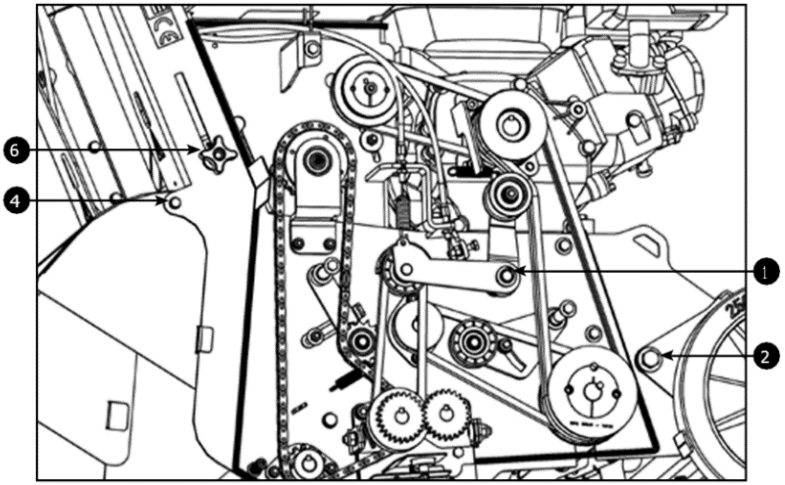
Articulation points are places where two moving parts are attached to each other. Since it is a rotation point, friction occurs there. Any friction that is not lubricated causes wear, exaggerated play and ultimately breakage.

The lubrication points are:

1. Belt tensioner joint
2. Nose Gear Joints (Transport-Work Switching) (L&R)
3. Handlebar lever joints (L&R)
4. Deflector Joints Anti-Spray (L&R)
5. Articulation of the seeding rate adjustment
6. Handlebar articulation points (L&R)







Remove the protective guards to access the points indicated (see § 15.1, page 98).

To prevent wear and therefore excessive play at the hinge points, a lubricant should be applied to the friction surfaces.

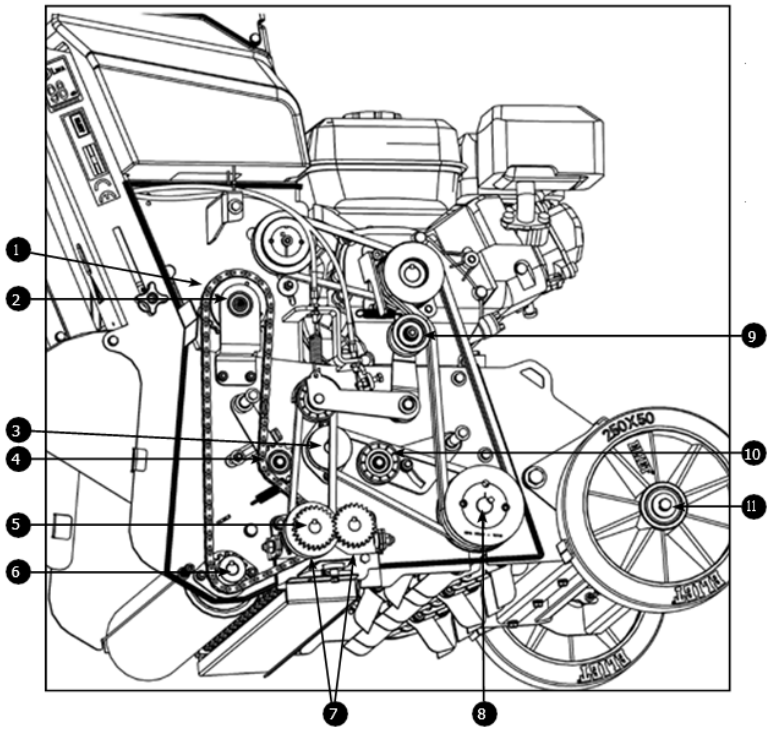
- Before applying a new lubricant, any old lubricant or dust that has clumped into it must first be removed.
- Where possible, disassemble the hinge points to allow for a perfect cleaning of the inside of the moving parts.
- Spray the lubricant on the hinge points. Leave the product on to get a good degreasing of the parts.
- Wipe down the parts. If necessary, repeat until the workpiece is completely degreased and clean.
- Then apply new lubricant to the areas of friction. Make sure that the lubricant covers the entire contact surface.
- ELIET recommends the use of NOVATIO CLEARLUBE. It is a lubricant with exceptional durability over time, excellent adhesion and resistance to high pressures. The lubricant is packaged in an aerosol form, which makes it easy to apply.
- Pull the joint up by tightening all its elements.

Bearings

The main enemies of bearings are too high pressures, dirt and a lack of lubricant. And their use in an application such as a seed drill is certainly not a guarantee of a long service life. Regular maintenance is therefore strongly recommended.

The machine is equipped with the following bearings:

1. Nylon Pad in Pull Box Support (1x)
2. Ball bearing support traction box (1x)
3. Mining accelerator ball bearings (L&R) (2x)
4. Ball Bearing Chain Tensioner (1x)
5. Ball Bearing, Tension Pulley, Seed Dispenser (1x)
6. Ball Bearings Pull Roller (L&R) (2x)
7. Nylon Pads for Seed Drill Augers (L&R) (4x)
8. Blade Shaft Ball Bearings (L&R) (2x)
9. Ball bearings, tension pulley, blade drive (2x)
10. Ball bearings, extraction accelerator tension pulley (2x)
11. Front Wheel Ball Bearings (L&R) (4x)



Remove the protective guards to access the points indicated (see § 15.1, page 98).

The bearings have dust-tight seals to prevent dirt from getting in. However, the grease applied to the bearing during manufacturing ages and dries out. To compensate for this, a new lubricant should be applied from the outside.

To prevent dust from entering the bearing with the lubricant, the outside of the lubricant should be cleaned beforehand.

- To do this, spray NOVATIO KLEENSPRAY on the blockages as well as on the bearing seal. This liquid will loosen the sticky dust on the bearing.
- Leave the liquid on for a few minutes.
- Using a cloth, remove any dirt stuck to the outside of the bearing.
- Spray the product again on the bearing, especially in the seals. This detergent will dissolve the grease that has dried along the joint. This is necessary to allow the new grease to penetrate the bearing.
- Blow compressed air into the bearing seals so that the KLEENSPRAY removes any dirt that may arise.

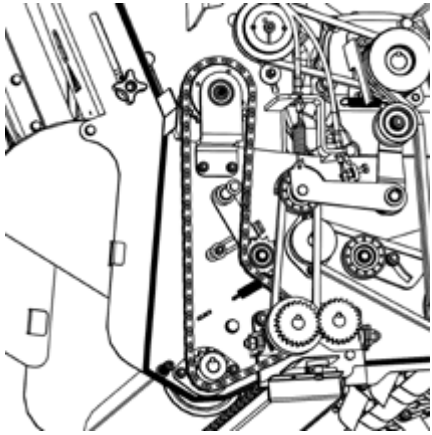
- Wipe off any traces of aerosol and wait until it has evaporated from the joints (about 10 minutes).
- Apply a fresh coat of lubricant. Spray NOVATIO PTFE OIL abundantly into the bearing seals and bearing. During application, rotate the bearing so that lubricant can be applied along the entire length of the bearing seal.
- This lubricant is liquid and has excellent penetration. It is resistant to corrosion as well as moisture and dust. It also has good lubricating properties, even at high temperatures.
- Rotate the bearings manually so that the lubricant is evenly distributed.
- After a few minutes, spray NOVATIO PTFE OIL a second time into the joints and leave it to work.
- After lubricating the bearings, replace the protective housings in their original locations.

Chain and sprocket lubrication

The applied chain lubricant will be dislodged over time, or will become clogged with dust and dirt. To combat wear and ageing of the chain drive, it is necessary to lubricate regularly. The DZC450 is equipped with a single Simplex chain for transmitting the rollers to the seed distribution system.

For this maintenance, the large protective guard should be removed (see § 15.1, page 98).

- Before lubricating the chain, it is recommended to first clean the chain and wipe off any used lubricant where dust has clumped. If necessary, use KLEENSPRAY to dissolve old lubricating grease.



- Thoroughly remove all traces of the old grease before applying new lubricating grease. Use compressed air to blow the chain and clean it.
- To prevent the lubricant from being drained and lost too quickly, we choose an adherent oil.
- Since the grease must lubricate the chain from the inside as well as its contact surface with the sprockets, ELIET recommends using a combination of two lubricants :
- NOVATIO PTFE OIL is a highly fluid oil that will easily penetrate to the core of chain links.
- NOVATIO CLEARLUBE is a bit more viscous and will stick to the outer side of the chain instead.

This lubricant reduces the friction of the chain with the sprockets.

- Apply PTFE oil first. Move the machine while the lubricant is being applied so that the chain is moving and every part is lubricated.
- After applying the PTFE oil, it should be left on for 5 minutes. Then apply the Clear Lube.
- Spray the Clear Lube inside the chain, move the machine again so that the chain rotates when you apply the lubricant.
- Wipe off any lubricant that may have settled on the pulleys and belts. Degrease the pulleys and belts well with a KLEENSPRAY. There can be no slippage at this level, otherwise the traction and distribution of the seeds will not run smoothly (risk of belt slippage).
- When reinstalling the protective shroud, make sure to maintain a good seal so that the interior is free of any dust.

Attention: The chain should be checked and lubricated after each work session, especially during dry periods when the dust generated is high.

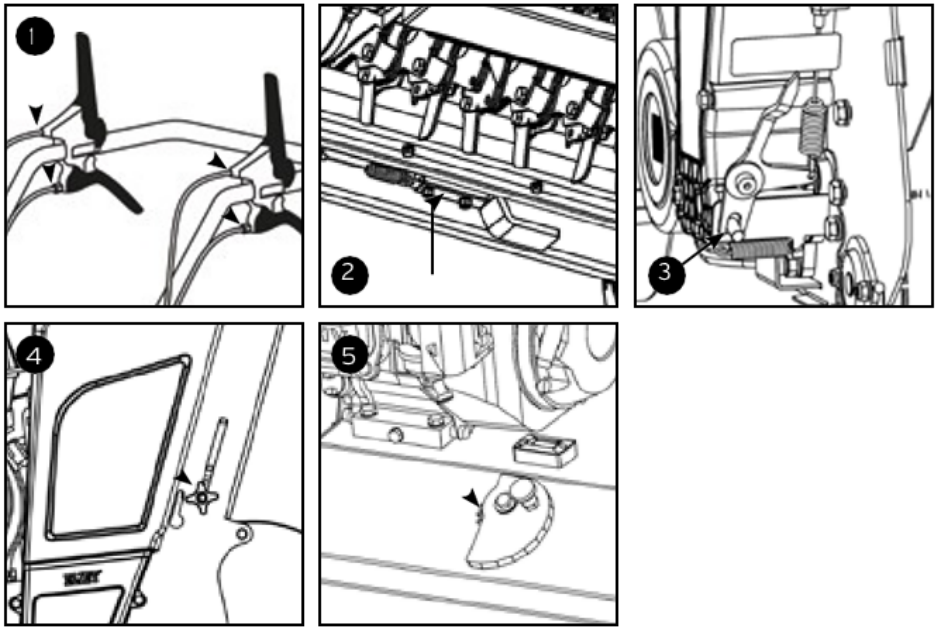
Friction surfaces



We commonly refer to all parts that are worn by lateral friction with other parts as "friction surfaces". Again, it is important to apply a film of lubricant between the friction surfaces that reduces the resistance of the movement and minimizes wear.

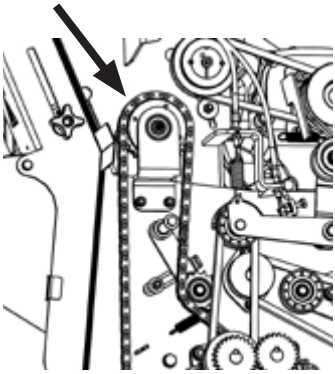
These friction surfaces are located in the following locations:

1. Cables & Jackets **(1)**
2. Locking pin for transport position **(2)**
3. Fork for the opening movement of the seed drawer **(3)**
4. Handlebar Height Adjustment **(4)**
5. Locking pin for depth adjustment **(5)**



- Since the proper functioning of the control levers is essential, regular lubrication of the cables is extremely important.
- Relining releases a lot of dust, especially during drier periods. This dust settles everywhere, including on the cables.
- Before lubricating, the cables must first be cleaned. KLEENSPRAY is an ideal product for this.
- Spray the cleaner into the cable sheaths while pressing the handles, so that the liquid is distributed by the cables sliding through their sheaths.
- Then blow compressed air into the cable ducts to expel the degreaser along with the dirt from the bottom of the duct.
- Repeat this procedure several times until all dirt is removed from the duct.
- You can now spray lubricant into the cable sheaths.
- For the other friction surfaces listed, you should also start by dissolving the old grease and dirt with KLEENSPRAY and then wipe it off with a cloth.
- Then spray NOVATIO CLEAR LUBE on the friction surface. (NOVATIO PFTE OIL for cables and sheaths).

Oiler



The machine has a single oiling machine, which is located at the end of the shaft coming out of the gearbox and is used to lubricate the roller bearing in the friction clutch (torque limiter).

- To access the lubricator, remove the large transmission guard (see § 15.1, page 98).
- Using a grease pump, inject new grease into the oiler. Use the lubricant listed in § 11.2. Lubricants on page 70'.
- Wipe off any excess grease that drips from the seals or oiler when removing the hose from the pump with a cloth.
- Then replace the protective guard in its original location.

All of the above lubricants are available from your authorized Eliet distributor.

Attention: As soon as you feel pressure when lubricating at the pump or grease comes out of the bearing seals, you should stop immediately.

11.4.2 Changing the Engine Oil

Before changing the oil, run the engine briefly. When hot, the oil is more fluid, allowing it to drain faster from the engine block.



Always turn off the engine before performing the oil change.

Preferably use the drain plug on the left side of the engine base.

Install the DZC450 on its built-in tilt bracket to drain the oil.

Clean the oil cap area on the other side of the engine and unscrew the cap so that the sump is emptied during the oil change.

- Take a container with a capacity of at least 2 liters before unscrewing the drain plug.
- Now unscrew the drain plug.
- Allow the engine to drain completely (about 0.6 liters). Check that the oil flows completely into

the collection container. If necessary, lift the machine further to collect all of the engine oil to be drained.

- Wipe off any oil residue that may have dripped next to it with a clean cloth.
- Place the machine horizontally on the floor.
- Clean the edges of the oil fill holes to prevent dirt from spreading into the crankcase.
- Pour about 0.6 litres of oil into the filling hole. Fill until the oil reaches the edge of the fill port. Then wipe off any oil that may have overflowed during filling.
- Before replacing the oil filler cap, wait a few minutes for the level to stabilize. Add additional oil if necessary, then replace the cap on the fill port.



Caution: Any lack of oil irremediably causes seriousness engine damage. (This damage is not covered by the warranty).



Caution: Think about the environment: take used oil to an approved collection point, responsible for its professional treatment or recycling. Discharge into the wastewater network is strictly prohibited!

11.4.3 Belt Tension Control

The DZC450 has 4 belt drives:

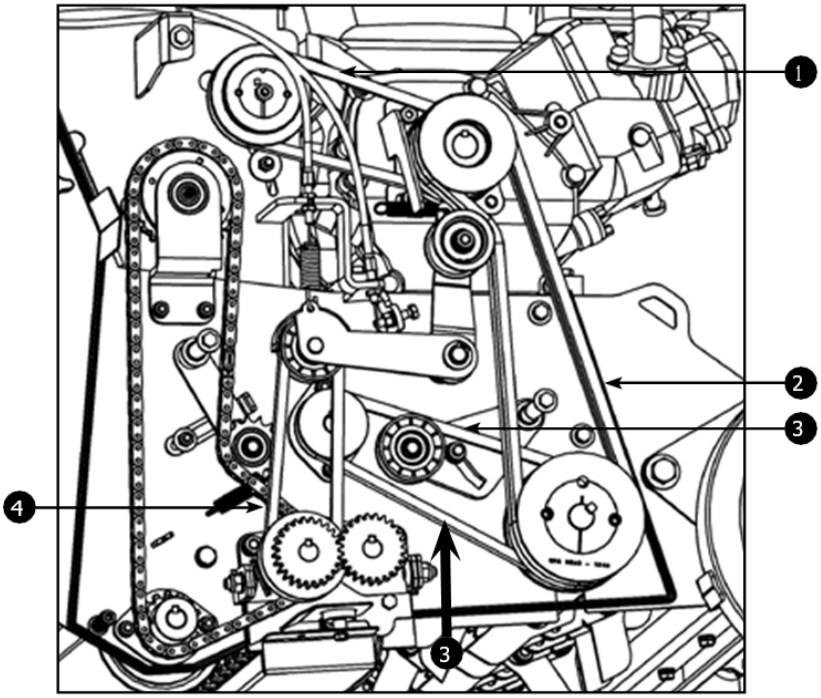
1. Belt drive from the engine crankshaft to the traction box (1).
2. Belt drive from the engine crankshaft to the blade rotor (2).
3. Belt drive from the rotor to the extraction accelerator (3).
4. Belt drive of the tensioning roller from the seed distributor to the seed distributor (4).



Attention: Stop the motor before checking or adjusting the drive belts . Let the engine cool down sufficiently so that you don't burn yourself with the exhaust pipe.



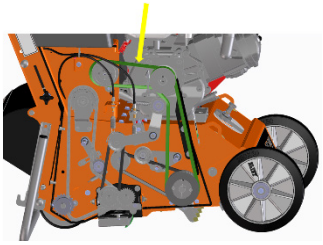
Attention: Wear appropriate clothing to perform this maintenance.



To check the tension of the belts, follow these steps:

1st belt drive (motor – traction box)

This is the primary belt drive, with which the power of the motor is transmitted directly to the traction box, which ensures a reduction in rotation and generates the power needed for traction. The belt used has a small profile, and is permanently tensioned without decoupling using a belt tensioner.

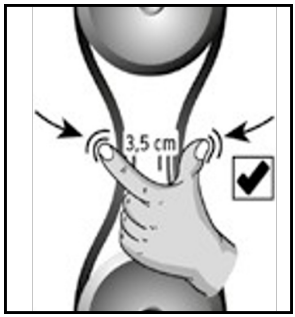


If, while working or moving, it seems to you that the machine loses tractive force or makes a squealing sound when engaging the traction lever, it is best to check the tension of the belt because it is often a signal that the belt is slipping:

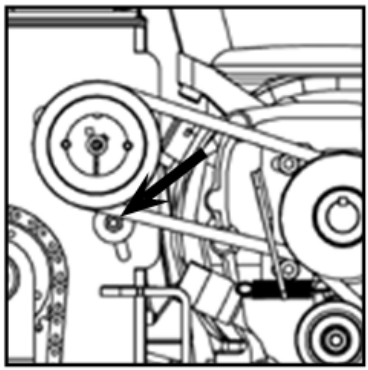


Caution: When tensioning belts, there is a risk of getting your fingers caught between the belts and pulleys. So be careful and wear gloves.

- To tension the belt, remove the protective guard (see § 15.1, page 98).
- This belt should not be too tight. General rule of thumb : With your thumb and index finger halfway between the two pulleys, bring the belt parts closer together. If the tension is good, there will be an interval of at least 3.5 cm. If you can bring the belt parts closer together, the belt tension should be adjusted.



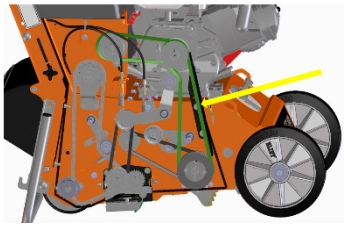
- You can adjust the belt tension by tilting the pulling box a little more. A buttonhole adjustment is provided when it is attached to the chassis.
- To do this, loosen the M6 fixing nut by one turn (counterclockwise) using a 10 mm socket wrench.
- Reassemble the pull box and tighten the M6 fixing nut again.
- Check again and repeat the above procedure if necessary until the tension is right.
- Return the belt guard to its original position after performing this service.



2nd belt drive (blade drive)

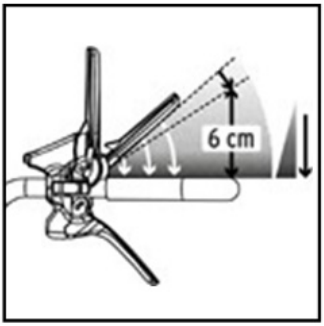
The two drive belts are tensioned using a flat tensioning pulley that is pressed against the back of the belt when the blade engagement lever is engaged. This is the belt drive that transmits power from the motor to the blades and is therefore the most stressed. It is also a belt drive that is regularly switched on and off, and therefore more exposed to slippage.

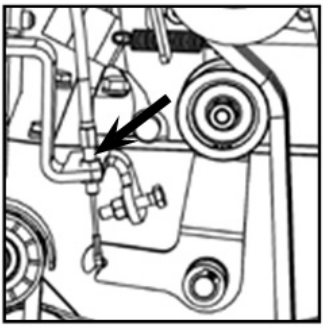
If the belt makes a squealing sound when activated in the ground or when the load is too high, this indicates that the belt tensioner needs to be adjusted.



To tension the drive belts, remove the large protective guard (see § 15.1, page 98).

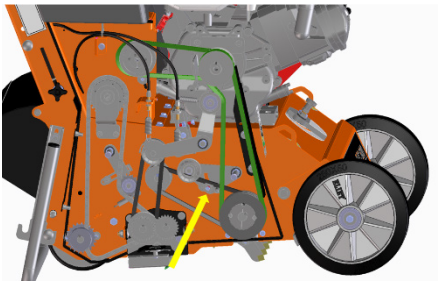
- **General rule of thumb:** Press the tensioner pulley with your thumb until it is pressed against the belts as much as possible. Lower the blade lever in this position and you should feel tension when it is 6 cm from the handle-bar tube.
- If the distance is less than 6 cm, the pressure force of the tensioner pulley will be increased by adjusting the length of the pulling cable. This can be adjusted at the end of the cable sheaths in the vicinity of the tensioning pulleys.
- Loosen the M6 lock nut (10 mm wrench) and then turn the adjustment guide a few turns counterclockwise . If necessary, use a 9 mm open-end wrench.
- Then test the belt tension again and correct it if necessary.
- Then tighten the lock nuts firmly so that the adjustment cannot be adjusted on its own.
- Replace the belt guard after performing this service.





3rd belt drive (extraction accelerator)

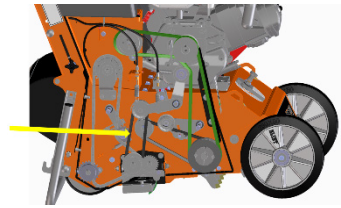
The extraction throttle receives its drive via the rotor pulley via a secondary belt transmission. Since decoupling is provided on the primary drive to the rotor, this belt drive is permanently tensioned by a fixed tensioning pulley. Since the load on the extraction accelerator is relatively limited, this belt has a relatively small cross-section.



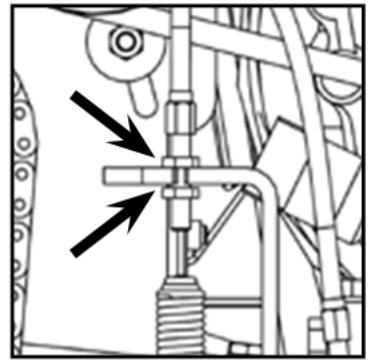
- To access the drive belt, remove the large protective guard (see § 15.1, page 98).
- If you can press more than 2 cm with your thumb on the drive belt in the center between the pulleys, the belt will need to be tensioned.
- Then test the belt tension again and correct it if necessary.
- Replace the belt guard after performing this service.

4th belt drive (seed dispenser)

- The seed dispenser is driven by two augers that convey the seeds throughout the device; The transmission of this rotation is ensured by a belt that is connected to the worm drive pulley and a movable tensioning pulley



- Remove the large protective guard (see § 15.1, page 98).
- At the end of the cable is an adjustable cable tensioner.
- To do this, loosen the lock nut at the bottom of the cable tensioner bracket 5 turns clockwise towards the end of the adjustable tensioner. Use a 10mm open-end wrench.
- Then turn the nut on the top of the tensioner also clockwise so that the tensioner adjustment rises in relation to the bracket.



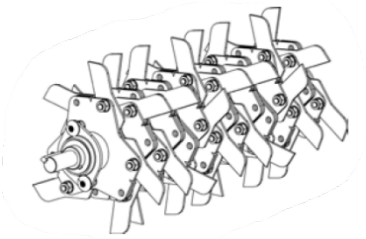
- Check the tension by pressing the yellow lever at the handlebars.
- Repeat the above procedure until you notice that sufficient tension can be applied to the belt again.
- The nut at the bottom of the bracket will then be tightened (turn counterclockwise) to tighten the adjustment. If the adjustment tensioner rotates when tightening, you can hold it in place with a 9 spanner.
- Return the belt guard to its original position after performing this service.

Tip : This coupling function of this belt can also be affected by lubricant fouling from other nearby drives. So clean the belt and the running surfaces of the pulley halves with a degreasing spray and wipe well.

11.5 Maintenance every 100 working hours

11.5.1 Inspection and possible replacement of the blades

The blades of the DZC450 are bolted to the blade supports. These blades can be replaced individually.

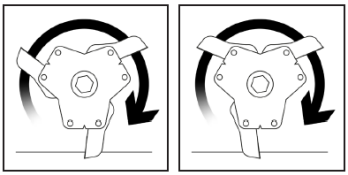


These blades are equipped with a hardening treatment that is characterized by a very high resistance to wear over time but which deserves to be checked, especially following numerous impacts with foreign objects (such as stones).

Attention: Blade replacement is always done with the motor stopped. Remove the spark plug cable as a precaution.

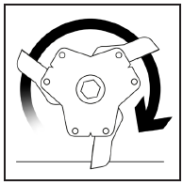
Caution: Wear appropriate clothing to perform this maintenance.

Each blade support disc is provided with three blade positions with 120° placement in relation to each other.



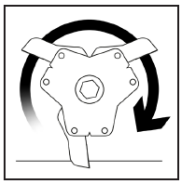
Each of these three blade positions has two mounting holes, allowing the boards to be mounted in two positions :

1. The blade can be mounted on "shovel".



The tip of the blade is then mounted in the direction of rotation of the blade shaft. A blade that is mounted on "shovel" is needed to create a furrow and shovel the soil. The furrow created is deep. The furrow also retains its depth in dry, solid soil. Blades that are mounted on "shoveling" generate more residual soil and create a spreading effect.

2. The blade can be mounted on "level". The tip of the blade is then mounted in the opposite direction of the rotation of the blade shaft. The blades that are mounted on "level" will only be able to create a furrow by pushing back and compacting the soil. The planks mounted on "level" make a smooth furrow, but find it difficult to form a deep furrow, especially if the ground is a little more solid. The blades that are mounted on "level" reject less residual soil, so the furrow stays open longer.



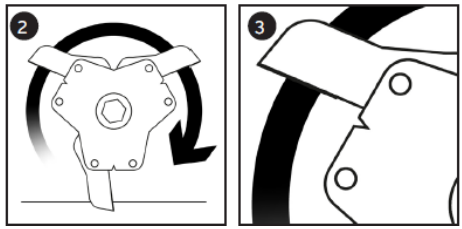
- However, you can choose to use a combination by placing one or two planks on "level" on each blade support. Ensure that the choice continues consistently for each blade holder. If one or two planks are mounted on "level" for each blade holder, they should always be mounted on the following board holders at 120° to create a spiral circuit.

- **Important point of attention:** Always make sure that the tips of the blades are rotated 120° **(2)**. The mounting position (choice of fixing hole) will therefore be matched according to the chosen blade orientation.

- To help you, a notch **(3)** has been provided on the blade discs indicating where to place the blade tip.

- After the planks have been dismantled, the space between the blade discs should be cleaned with a spatula. Blow compressed air at this level.

- It is always possible to order new blades from your authorized ELIET distributor with the reference BU 402 300 145.



- When mounting the new blades, the nuts and fastening bolts should always be replaced.

Attention: When installing bolts, always make sure that the nuts are mounted on the same side as the drive pulley. This will ensure that the bolts tighten themselves with the direction of rotation of the blade pin.

After placing new blades, the depth will be adjusted again.

If you replace blades, you frequently replace all the blades at once. Care must be taken to ensure that all blades always have the same level of wear. It is therefore not recommended to mix new and old blades.

11.5.2 Air Filter Replacement

Although the air filter has been cleaned regularly, it is prone to wear and deep contamination over time. Micro-cracks or tiny dirt that penetrate deep into the filter fabric can be difficult to spot with the naked eye. Nevertheless, they will affect the operation of the engine or its wear. That's why it's important to replace the air filter preventively after a certain amount of time.

New filter cartridges can be ordered from the ELIET distributor or an authorized service center of the engine manufacturer.

For replacement, a procedure similar to that described in § 11.3.3 is followed. Cleaning the air filter on page 72'.

11.6 Maintenance every 200 working hours

11.6.1 Replacing Belts

Over time, belts need to be replaced due to wear and tear. You should always contact the authorized ELIET service center for any spare parts :

Belt 1: (motor – traction box) (1x)

Belt 2: (motor – blade drive) (2x)

Belt 3: (blade rotor – extraction accelerator) (1x)

Belt 4: (tensioner pulley - seed distributor) (1x)

To replace the belts, follow the steps below:



Attention: Always turn off the engine before re-tensioning or replacing the belts . Turn the engine start button to the OFF position or pull the spark plug cable.

- To replace belt 1 and belt 3, we will always remove belt 2.
- To easily remove the belts 2, the belt guarantor should be unscrewed. To do this, the two M8 nuts will be unscrewed. Use a 13 socket wrench for this purpose.
- Now lift the two belts one by one out of the pulley grooves and remove them.
- To remove belt 1, first remove the belt tension by loosening the M6 fastening nut (socket wrench of 10) and tilting the pull box downwards.
- Lift the pulley belt from the pullbox and remove it entirely.
- To remove belt 3, first loosen the tensioning pulley. To do this, loosen the M8 clamping nut (socket wrench of 13) and turn the pulley holder downwards.
- Now lift the belt from the exhaust accelerator pulley so that you can then remove it.
- Now replace the new belts in the opposite direction.
- Tighten the belt again as required (see § 11.43, page 83).
- Place the belt guard 2 mm parallel to the blade drive belts. Secure this position by tightening the two M8 nuts firmly in a clockwise direction (wrench of 13).
- After making the adjustment and testing the belt tension, replace the guard guard.

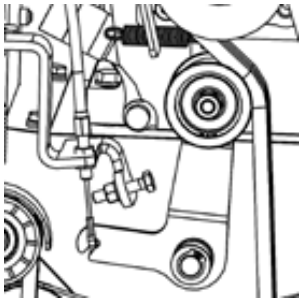
11.6.2 Replacing Belt Tensioners

- The DZC450 features a belt drive with tensioning pulleys. Over time, tensioner pulley bearings and pulley friction surface may show signs of wear. To overcome this, the tensioning pulleys should be checked regularly and, if necessary, replaced as a preventive measure.

Attention: To perform this service, turn off the engine and remove the spark plug cable.

Attention: Allow the tensioner pulleys to cool sufficiently before disassembly.

1. **Belt tensioner tensioning roller blade drive**



The tensioning pulley that tightens the belt when the blade decoupling lever is activated is heavily stressed:

- The rotation speed of this tensioner pulley, once resting against the belt, is about 2,300 rpm.
- By friction with the belt, it heats up, which causes the lubricants to liquefy and cause them to flow out of the bearings.
- This tillage in dry weather produces an inevitable dust release . Sand and dust can get into the bearings and this causes damage.

The combined effect of these three factors means that the tensioner pulley is subject to wear stresses. Lubrication at regular intervals prevents premature wear.

As soon as you hear that the bearings start to make a thud, you should replace the bearings of the tensioner pulleys as a precaution. If the running surface wears, the entire tensioner pulley should be replaced. Otherwise, the bearing may seize up, which usually leads to the destruction of the belt.

Follow these steps:

- Disassemble the transmission housing of the machine (see § 15.1, page 98).
- Loosen the M8 center bolt of the tensioner pulley, hold the nut against the back of the tensioner roller bracket (socket wrench 13 and box wrench 13).
- The tensioner pulley will be replaced if the tread shows serious signs of damage or wear. This tensioner pulley can be ordered from an authorized ELIET distributor.
- Only the bearings will be replaced if the tread does not show serious signs of wear.
- Two bearings are placed in this tensioner pulley to ensure its stability.
- In front of the tensioner pulley is a circlip that holds the bearings in the housing. The locking circlip can be removed with a suitable pliers.
- The bearings can be removed from the housing using a hammer and a hammer. To make this easier, spray graphite oil on the bearings beforehand.
- Replacement bearings can be ordered from an authorized ELIET service center (order number BL 001 203 703).

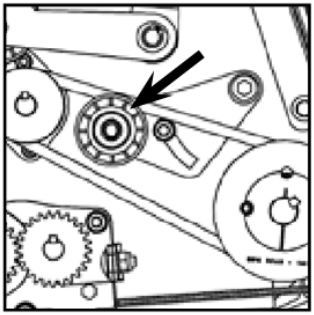
- Gradually push the new bearings into the housing. To do this, push on the outer casing of the bearing, taking care not to damage the dust seal.
- As soon as the two bearings are fully embedded in the housing, they will be locked by replacing the circlip in the groove of the tensioner pulley.
- Apply additional lubricating oil to the dust seals of the bearings to prevent the intrusion of impurities into the tensioner pulley.
- Return everything to its original state and tighten the tensioning roller (M8, hex wrench and socket 13) firmly.
- Reassemble the black protective housing in its original position (see § 15.1, page 98).

2. **Replace the Exhaust Throttle Belt Tensioner Pulley**

The tensioning pulley is made of plastic and is provided with a bearing. Since a pulley is used to tension the belt, there is a larger contact surface, and therefore less slippage. Since this tensioning pulley has no coupling function but only a guiding function, multiple activation and deactivation generates less wear. However, it is advisable to regularly inspect the condition of the pulley groove and to check for any play in the bearing. As soon as wear is noticed, the tensioning pulley must be replaced

Follow these steps:

- Disassemble the transmission housing of the machine (see § 15.1, page 98).
- The tensioning pulley is on the axis fixed with a locking circlip . With the help of a special clamp, it is possible to remove the locking clip from the groove.
- Extract the tension pulley from its support pin.
- Sand the pin a little and apply some lubricant so that the new tensioning pulley can be easily mounted.
- Apply additional lubricating grease to the dust seals of the bearings to prevent the intrusion of impurities into the new tensioning pulley.
- Replace the locking circlip in the groove.
- Reassemble the black protective housing in its original position (see § 15.1, page 98).



11.6.3 Checking and replacing the spark plug

ELIET recommends the following candles:

ENGINE: Honda GX 200 – 9,0 HP BPR6ES (NGK) & RN 11 YC (CHAMPION)



- Stop the engine and disconnect the spark plug cable.
- Clean the area around the spark plug and remove it from the engine cylinder head.
- Using thickness gauges, make sure that the distance between the electrodes is 0.8 mm.
- The spark plug should be replaced if it is heavily corroded or dirty.

To check the quality of the ignition, follow these steps:

- Replace the candle cap.
- Grasp the rubber from the spark plug head and place the outer electrode against the motor ground.
- Pull the launcher handle after setting the ignition switch to "ON", examine the sparks between the electrodes.
- If the sparks are clear and well centered between the electrodes, the spark plug is still in good condition.
- If the sparks are weak, irregular, and not well centered between the electrodes, the spark plug should be replaced.

For information : When refitting an old spark plug or fitting a new one, take the utmost care not to damage the thread in the engine. Tighten the spark plug to a torque of 20 Nm.

Attention: The above description is for guidance only; please also refer to the engine manufacturer's manual.

11.7 Maintenance every 500 working hours

11.7.1 Replacing Chains and Sprockets

Due to the low engine speed, the chain and sprockets are subject to little wear. If you notice that the teeth are very worn over time, replace the sprockets as well as the chain. Contact your authorized ELIET distributor for this purpose.

11.7.2 Re-Tightening the Chain

The DZC450 features a chain drive, which is the chain that drives the seed distribution system and traction.

In view of the low speed and the limited load, a single chain (Simplex) was chosen in this case.

The chain tensioner keeps the chain with a spring continuously under tension and compensates for any elongation that may occur in the chain. There is no need to actively re-tighten the chain.

12. Machine Storage



Before storing the machine for a longer or shorter period of time, do the following:

- Clean the machine thoroughly before long-term storage (see § 9.6, page 52)
- Make sure the seed container is completely empty when storing the machine. Seed that remains in the seed tank or seed distributor can germinate and clog the distribution holes. Use a vacuum cleaner to completely remove the last remaining seed residues (see § 9.6 page 52).
- Perform a major maintenance (25-hour cycle). (see § 11.4, page 75).
- Perform a complete lubrication.
- Check that all screws and nuts are properly tightened and tighten them if necessary. To check most screws and nuts, always take two 10, 13, 17, 19 wrenches as well as 4, 5 and 6 mm Allen wrenches.
- Empty the gas tank. You can do this simply by running the machine until it runs out of fuel. Optionally, use a siphon pump to transfer the gasoline into a canister.
- Disassemble the spark plug (see § 11.6.3, page 93). Spray a little MoS2-based penetrating oil into the combustion chamber through the spark plug hole. Pull the handle of the launcher until the plunger is in the up position. Then replace the candle.
- Touch up the paint or lubricate the areas where the paint has disappeared, to prevent rust from forming. You can get the original paint in the same colour from your ELIET distributor.
- Store the machine in a dry place away from the rain and cover it with a tarpaulin if necessary.
- Always allow time for the engine to cool down well before storing the machine.
- If the machine is stored outdoors, protect it properly with a tarp. Avoid exposing the machine directly to the elements. However, ELIET strongly recommends storing the machine in a protected area.

13. Technical sheet



Engine	Honda GX200
Power	6.5 hp
Engine type	Gasoline
Tank capacity	3.1 liters
Working width	450 mm
Number of blades	45
Type of blades	Permanently Sharp Knives™ Self-Sharpening (3 mm)
Rotor	Ø 230 mm
Recommended working depth	8 to 10 mm (2.5 mm increase per position)
Number of seeding lines	15
Seeding line spacing	25 mm
Seed distribution system	ELIET Helix Seed Duct™ System
Activation of seeding	Engagement of a handlebar grip at the start
Standard planter flow adjustment	20 gr/m² - 25 gr/m² - 30 gr/m² - 35 gr/m²
Seed Tank Capacity	43 liters
Finishing	seedbed spreading effect (Topdress Rotor™ Ø 100 mm)
Traction	Traction roller drive (mechanical - 1 forward speed)
Movement speed	2.0 km/h
Pull Roller	Rubberized cylinder Ø 100 mm x 450 mm
Sound power Lw(A)	101 dB(A)
Dimensions (L x W x H)	1430 x 650 x 1000 mm
Weight	125 kg
Comfort	vibration-damping handlebar
Height-adjustable handlebar	900 mm – 1000 mm
All handlebar controls, intuitive layout	Clear and simple design
Standard Accessories	Built-in & retractable tilt device
Standard Accessories 2	Clean Tool

14. EC Declaration of Conformity



Machine.....Overseeder
Type.....ELIET DZC450
Model Number ..... MA 033 010 206

The design and construction of this machine is inspired by the requirements of the following directive :

EN 13684: Garden Equipment – Pedestrian controlled lawn aerators and scarifiers–Safety

The machine manufacturer ELIET declares that it has carried out a risk analysis and certifies that it is aware of the risks and dangers of the machine. In this knowledge, the necessary measures have been taken in accordance with Directive 2006/42/EC in order to ensure – in the context of proper use – the safety of the user.

The value of the measured and guaranteed sound level has been obtained by applying the procedures of the European Directive 2000/14/EC, Annex III and is based on certain specifications of the EN 13684 standard.

Measured sound level Lw(A): 99 dB(A) Guaranteed sound level Lw(A): 101 dB(A)

Date: 01/07/2023

Signature:



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CEO ELIET EUROPE S.A.
Born 02/01/1975

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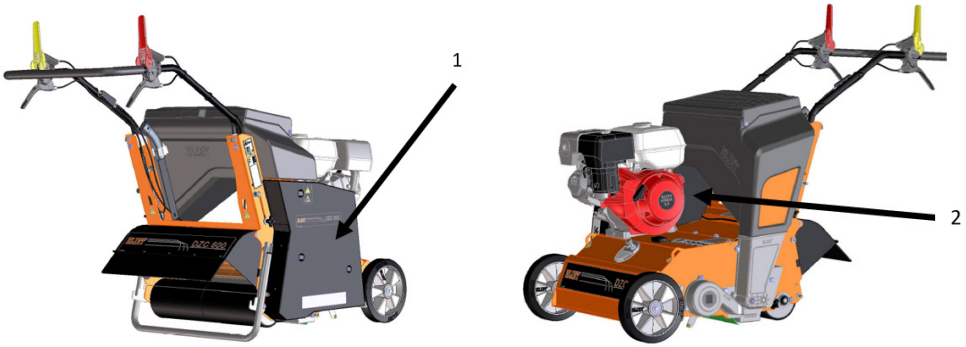
15. Appendices

15.1 Removing the Protective Guards

To perform a given service, remove the protective housings to access the parts or drives. Proceed in the following steps :

There are two housings:

1. Large housing for drives
2. Protective housing housing



- The side drive housing is secured with three M6 fixing screws.
- Use a 10 socket wrench to loosen the three screws counterclockwise .
- When removing, make sure that the rubber sealing strips inserted on the edge of the housing do not detach from the protective housing.
- The housing of the traction box is fixed with 4 M6 bolts.
- Use a 10 box wrench to loosen them counterclockwise .
- When removing these crankcases, you should always take the opportunity to clean the areas hidden behind them and remove the piles of dirt.

Attention: Removing the protective covers is considered part of routine maintenance. Always switch off the engine and wear suitable clothing.



Attention: Guard covers are designed to protect hazardous areas and thus prevent accidents. It is therefore prohibited to work on the machine or to start the engine or a drive mechanism without these guard covers in place.



Attention: Anyone removing the protective cover is expected to be aware that they are creating a hazardous situation and is therefore responsible for ensuring safety by other means. They must therefore always switch off the engine and remove the spark plug cap to prevent third parties from starting the machine without their consent.



Attention: When refitting the casings, always check that there are no cables trapped between the chassis and the casing.

15.2 Tightening Torques for Screws & Nuts

Screw and nut heads according to DIN 931, DIN 912, ...

Thread strength class	Threading	8.8	10.9
Standard thread	M4	3,0	4,4
	M5	5,9	8,7
	M6	10	15
	M8	25	36
	M10	49	72
	M12	85	125
	M14	135	200
	M16	210	310
	M18	300	430
	M20	425	610
	M22	580	820
	M24	730	1050
	M27	1100	1550
	M30	1450	2100
Fine-pitch thread	M8 x 1	27	39
	M10 x 1,25	52	76
	M12 x 1,5	89	130
	M14 x 1,5	145	215
	M16 x 1,5	225	330
	M18 x 1,5	340	485
	M20 x 1,5	475	680
	M22 x 1,5	630	900
	M24 x 2	800	1150
	M27 x 2	1150	1650
	M30 x 2	1650	2350

(Coefficient of friction μ = 0,14)

16. Hazards

Please find below a list of hazards and risks involved in transporting or working with this reupholsterer. Take note of these hazards. Avoid these risks by following the instructions in the instruction leaflet.

Be aware that not only the user is at risk, but that third parties may also be at risk. Be sure to keep third parties at bay.

- Injury by earth and stone projection on the evacuation side of the machine in operation.
- Injury caused by flying earth and stones when moving the machine to the transport position.
- Injury by projection after breakage of a blade or part of the blade pin or extraction accelerator.
- Risk of strangulation or tying up if loose clothing is caught in the drives or blades.
- Risk of cuts to the feet when the blades turn.
- Risk of injury/amputation of hands due to contact with rotating blades when approaching the lower part of the machine (from the edges).
- Risk of injury/amputation of hands due to contact with rotating blades when approaching the machine from the discharge side.
- Risk of finger entrapment or crushing due to contact with the rotating extraction accelerator when approaching the machine from the discharge side.
- Risk of injury due to contact with blades during unclogging, maintenance or cleaning of the machine.
- Risk of crushing or entrapment when closing the seed container lid.
- Risk of jamming when moving the machine from the transport position to the working position .
- Risk of fracture or bruising of fingers caught in seed container augers.
- Risk of fracture, strain, or nick of fingers or other body parts caught in chain drives after disassembling chain guards.
- Risk of fracture, strain, or nick of fingers or other body parts caught by belt drives after disassembly of protective housings.
- Risk of strains or nicks of the fingers caught by the gears after dismantling protective housings.
- Risk of ankle or knee strains when the lower limbs of the body are trapped under the pull-up rollers.
- Risk of getting caught between the machine and an obstacle when moving.
- Risk of hands getting caught between the handlebars and an obstacle when riding in narrow passages or when manoeuvring.
- Risk of injury due to the machine tipping over during careless transport or loading of the machine.

- Risk of injury due to a fall when transporting on ground that does not support the weight of the machine.
- Risk of bruising due to the recoil effect when starting the engine.
- Risk of burns from contact with a hot exhaust outlet or engine.
- Risk of fire due to a build-up of waste around the exhaust outlet or due to improper cleaning of the engine.
- Risk of electrocution on contact with the high voltage line of the engine ignition.
- Fire hazard if gasoline spills on a hot engine.
- Risk of burns or skin irritation from contact with fuel, oils or lubricants.
- Risk of poisoning by ingesting fuel, oils or lubricants.
- Risk of poisoning from excessive inhalation of exhaust fumes.
- Risk of irritation of the respiratory tract or lung problems due to inhalation of dust produced by the machine during work.
- Risk of hearing impairment caused by insufficient ear protection during work.
- Risk of nervous system disorders or rheumatic conditions due to prolonged exposure to vibration without taking breaks.
- Risk of back problems after careless lifting of the machine.
- ...

This list is not exhaustive and is provided for information purposes only, for the benefit of the user's safety.

17. Warranty conditions

Dear Customer,

Thank you for purchasing an ELIET product. We congratulate you on your choice of machine and have no doubt that it will far exceed your expectations in the years to come. At ELIET, we do everything we can to ensure that our products work properly. That's why you benefit from the ELIET guarantee.

What is the warranty?

The design and manufacturing procedures of ELIET products are subject to strict quality guidelines. The purpose of these is to guarantee the longevity and permanent safety of the product. For this reason, ELIET will repair all defects or anomalies free of charge during the entire warranty period, as long as the prescribed procedure is followed.

Warranty conditions

ELIET's warranty obligation on new machines is governed by the following conditions:

1. **Warranty Period**

The warranty period begins on the date the distributor delivers the machine to the customer and ends:

- After two years of private use.
- After twelve months or 100 hours of rental use.
- After twelve months or 100 hours of semi-professional and/or professional use.

Customers wishing to benefit from this warranty must register the product purchased from ELIET and complete the registration form on the website :www.eliet.eu.

If you do not have an internet connection, please complete the registration card by hand and send it back to ELIET.

2. **What are the cases excluded from the warranty?**
   - Wear parts (blades, bearings, belts, chains, sprockets, tires, warning lights, fuses, etc.) are not covered by the warranty conditions.
   - Breakdowns due to incorrect use, negligence or an external factor (fall, projections, foreign objects, accident).
   - Breakdowns due to a lack of maintenance of the machine in accordance with the recommended periodic maintenance .
   - A breakdown occurring after maintenance carried out by someone other than an ELIET author-

ised distributor or after the use of non-ELIET original spare parts.

- A failure due to unauthorized changes to the original design of the machine.
- A failure resulting from operation of the machine not in accordance with the instructions specified in this manual.
- When the prescribed warranty procedure has not been followed or when the warranty period has expired.
- For any engine problems, contact a technical service of the engine brand approved by the manufacturer.

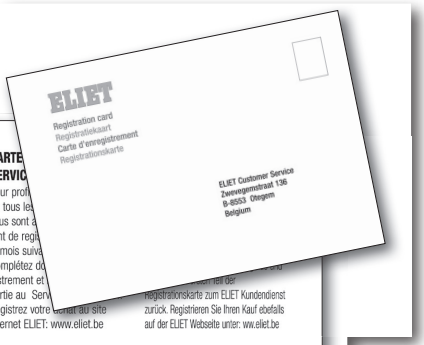
3. **Procedure**

- **Step 1:** On the day of the purchase, the customer will proceed to the online registration of his purchase by completing the registration form on www.eliet.eu. If they do not have an internet connection, the customer must complete the attached registration card by hand. The first part of the form must be returned to ELIET within the month, and the customer will keep all the other parts of the card as well as his purchase invoice until the warranty expires.
- **Step 2:** When a breakdown occurs, the customer must have it checked by their authorized ELIET distributor. If the customer believes that it is indeed a manufacturing defect, he or she can claim the warranty in accordance with the specified conditions.
- **Step 3:** All warranty claims will be accompanied by a completed official claim form. Distributors can obtain copies of this form from ELIET or an ELIET importer/agent.
- **Step 4:** The distributor orders the spare parts needed to carry out the repair. The distributor then sends the order form to ELIET along with the completed warranty form and a copy of the registration card.
- **Step 5:** The warranty form must be attached to the purchase invoice and sent to ELIET or the ELIET importer/agent.
- **Step 6:** ELIET will ship the ordered parts to the distributor in accordance with the current delivery and payment terms.
- **Step 7:** ELIET Technical Service will first review the defective components before accepting or rejecting a warranty service claim. ELIET reserves the right to decide independently whether the customer has complied with the one-year or two-year warranty conditions . Defective components automatically become the property of ELIET.
- **Step 8:** If the warranty intervention request is deemed justified, ELIET will credit the parts delivered under warranty. Repair labor is not supported by ELIET.

4. **In case of damage during transport**

- All goods are deemed to be sold ex works. The risks associated with transport are entirely borne by the customer. ELIET therefore strongly advises the customer to examine the goods upon receipt.

- Visible damage must be reported on the delivery note before it is signed . Make sure that the carrier signs this mention of any damage on your copy. The insurance company will not be liable without such written statement signed on the delivery note.
- Any claim for damages must be submitted to the transport company, together with a copy of the delivery note and a letter detailing your claim.
- The machine must be kept in its original condition until it is examined by the insurer of the transport company.



REGISTRATIONCARD ELIET CUSTOMER SERVICE

To be able to claim the full rights to which you are entitled, it is important to register within a month after the date of purchase. Therefore fill out this registration-form and return the first registra-tioncard to the ELIET Customer Service. Your purchase should be registered on the ELIET website: www.eliet.be

REGISTRATIEKAART ELIET KLANTENDIENST

Om als klant, aanspraak te kun-nen maken op waarborg dient men zich binnen de maand na aankoop bij ELIET te registreren. Hiervoor vult u onderstaand docu-ment volledig in en stuurt het eer-ste deel van deze registratiekaart naar de ELIET klantendienst terug. Registreer uw aankoop op de ELIET website: www.eliet.be

CARTE SERVIC

Pour prof… de tous le… vous sont … tant de regi… le mois suiva… Complétez do… gistrement et … pertie au Serv… Registrez votre … au site Internet ELIET: www.eliet.be

… Kundendienst zurück. Registrieren Sie Ihren Kauf ebenfalls auf der ELIET Webseite unter: ww.eliet.be

Customer Identity / Klantgegevens / Données du Client / Kundendaten

Name / Naam / Nom / Name

First Name / Voornaam / Prénom / Vorname

Street / Straat / Rue / Strasse

Nr / Nr / N° / Nr

Box / Bus / Boîte / App.

City code / Postnr / Code Postal / Postleitzahl

City / Plaats / Ville / Stadt

Country / Land / Pays / Land

Telephone / Telefoon /Téléphone / Telefon-Nr.

Fax / Fax / Télécopieur / Fax

E-mail

Machine identity / Machinegegevens / Données de machine / Daten Maschine

Model / Model / Modèle / Modell

Year of manufacture / Bouwjaar / L'année de construction / Baujahr

Article Code / Artikel code / Code d'article / Artikel-Nr.

Serialnumber / Serienummer / Numéro de série / Serien-Nr

Date / Datum / Date / Datum

Signature
Handtekening
Signature
Unterschrift

Stamp of dealer
Stempel van handelaar
Cachet de revendeur
Stempel Fachhändler

I declare that all information that was filled in is correct and truthful. I also declare to have read and understood the operation-manual and the warranty conditions.
Ik verklaar dat al deze gegevens waarheidsgetrouw werden ingevuld.Hierdoor geef ik te kennen de garantievoorwaarden en handleiding te hebben gelezen en begrepen.
Je déclare que tous les données complétées sont correctes et véridiques. Je déclare également d'avoir lu et compris les notices du mode d'emploi et les conditions de garantie.
Ich erkläre hiermit, dass alle angegebenen Daten korrekt und warheitsgemäss gemacht wurden. Ich erkläre ebenso, dass ich die Garantiebedingungen gelesen und verstanden habe.

Put a crossmark to which application this machine was used
Zet een kruis bij de toepassing waarbij deze machine wordt ingezet
Indiquez avec une croix l'environnement dans lequel la machine a été utilisée.
Kreuzen Sie an, für welche Art von Gebrauch die Maschine bestimmt ist.

- ☐ Home use / Particulier gebruik / Usage particulier / Private Nutzung
- ☐ Profesional Landscaping / Hoveniersbedrijf / Usage Professionel / Gewerbliche Nutzung
- ☐ Forestry / Bosbouw / Forêt / Forstbetrieb
- ☐ Public Groudscare/ Openbare groenvoorziening / Espaces Verts Public / Öffentliche Grünflächenversorgung
- ☐ Rental / Verhuur / Location / Vermietung

Dit document dient binnen de maand na aankoop teruggestuurd te worden naar de ELIET Klantendienst.
This document has to be returned to ELIET Customer Service within a month after purchase.
Renvoyez ce document au Service après-vente ELIET dans le mois suivant à la date d' achat.
Dieses Dokument muss innerhalb eines Monats nach Kaufdatum an den ELIET Kundendienst zurückgeschickt werden.

SPECIMEN

BZ 201 450 003