ELIET

MANUAL

DZC600

ou will find dinformation about the actual use and maintenance of the machine. **Read it carefully and keep it in a safe place.**

Please also keep your **purchasing invoice** or the proof of receipt together with this booklet.

Register your purchase online at **www.eliet.eu**

1. Introduction

1.1 Read this operating manual carefully

ELIET machines are designed for safe and reliable use if they are operated in accordance with the instructions provided. Carefully read these operating instructions before using the machine. Failure to do so may result in personal injury or damage to the equipment.

1.2 Identification data – ELIET OVERSEEDER COMBI DZC600

Write the identification data of your machine in the text boxes:

Motor:	
Stock no.:	MA 028
Serial number:	
Year of manufacture:	

2. Warranty

2.1 Warranty card

To be entitled to warranty, the machine has to be registered online within one month after purchase at: www.elietmachines.com

European customers : ELIET EUROPE NV
Diesveldstraat 2
8553 Otegem - Belgium
T (+32)(0)56 77 70 88 - **F** (+32)(0)56 77 52 13
www.eliet.eu
Please read the warranty conditions "15.5 Warranty conditions" on page 75

US customers : ELIET USA Inc.
3361 Stafford street (office B) - USA
15204 Pittsburgh (PA) - USA
T 412 367 5185 - **F** 412 774 1970
www.elietusa.com

3. Welcome

Welcome to the family of ELIET users.

We thank you for the trust that you have placed in ELIET and we are convinced that you have purchased the very best machine. The operating life of your ELIET machine depends on how you care for your machine. This manual and the motor manual included will help you on your way. Strict adherence to the instructions and suggestions in these manuals will guarantee optimum performance of your ELIET machine for a very long time.

Read this manual carefully before operating the machine. This will prevent incorrect operation of the machine.
For your own safety, please observe the safety instructions specified in the relevant chapter. Even if you are thoroughly familiar with operating such equipment, it is still advisable to read these pages carefully.

All ELIET equipment and machines are continually being updated and improved and therefore the specification of your machine may differ slightly in terms of shape, technology and accessories. The descriptions and technical data in this manual are accurate at the time of printing. Certain illustrations and descriptions may not be applicable to your specific machine, but instead relate to a different version of the machine. For this reason, discrepancies or deviations in the texts and illustrations in this manual cannot give rise to any claims, as you may well understand. Should you have any questions not fully addressed in this manual, please contact your ELIET dealer.

ELIET AT YOUR SERVICE

ELIET®

ELIET EUROPE NV/SA
GMT + 1 :
opening hours: 8 to 12 and from 13 to 18
T (+32) (0)56 77 70 88 - F (+32) (0)56 77 52 13
service@eliet.eu
www.eliet.eu

ELIET USA
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opening hours: 8 AM to 6 PM
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Service@elietmachines.com
www.elietmachines.com

4. Table of contents

5. Safety symbols

In the operating manual, a number of symbols are used to provide additional information and warn of any dangers.

5.1 For your information

For your information:
This symbol is used to draw your attention to **specific information** and/or actions, or it is used to indicate where you can find additional information relating to the topic.

5.2 Caution

Caution:
This symbol suggests **safe practices**. The purpose is to prevent incorrect operation that could result in personal injury or damage to the machine.

5.3 Warning

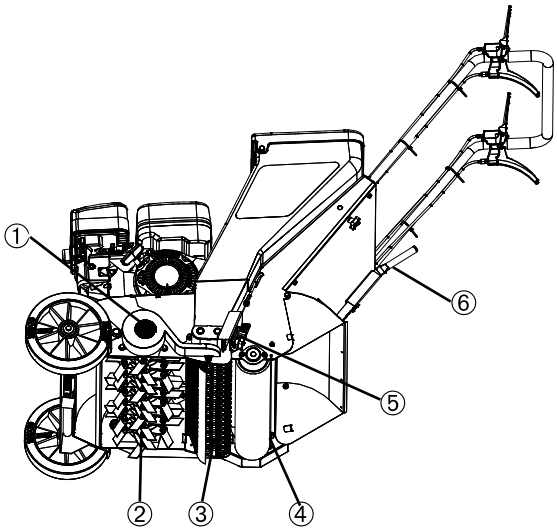
Warning:
This notice warns you about any **extreme dangers** of which you must be aware in these specific circumstances. So for the sake of your own safety, remain alert at all times.

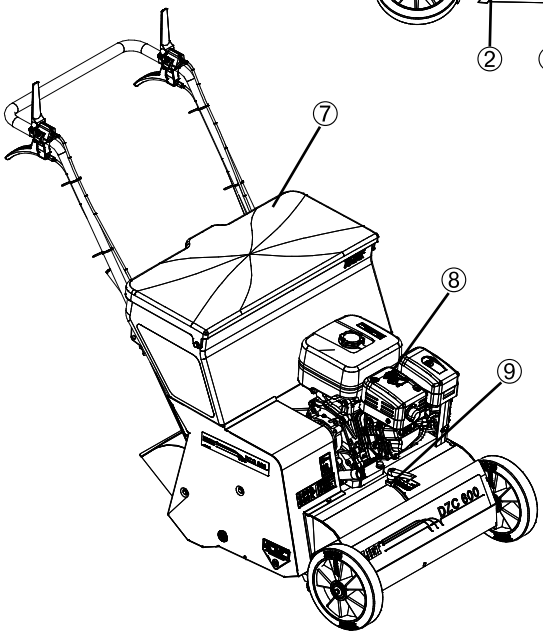
6. Most important parts

To fully understand the content of this operating manual you need to be fully conversant with the terminology used for the descriptions. This chapter refers to a broad range of machine parts and identifies their names. We recommend that you take the time to study the machine prior to its use for a better understanding of the descriptions provided in this operating manual.

6.1 Overall view

Essential machine parts

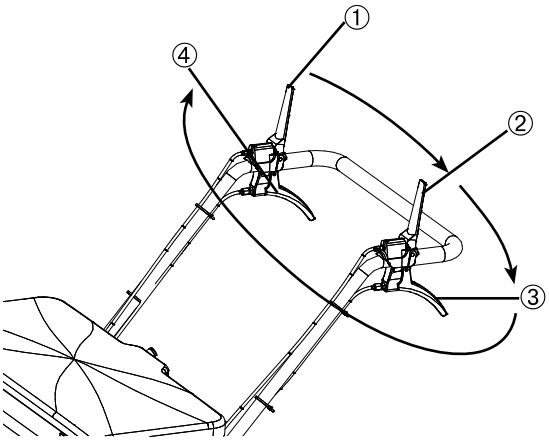




1) Ventilator with air duct
2) Blade axle
3) Seed output adjustment funnel
4) Bearing roller
5) Seed flow rate control
6) Blade
7) Seed container
8) Engine
9) Depth control

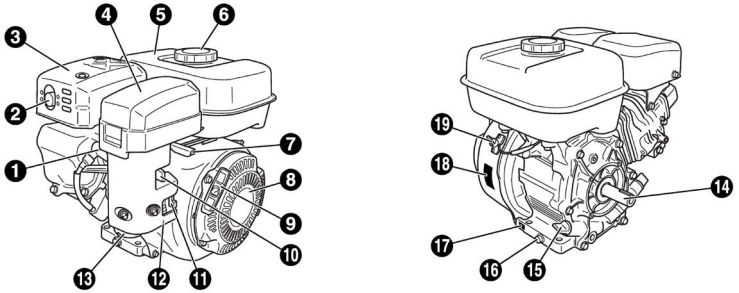
6.2 Handlebars

There is a logical sequence in the set-up of the DZC600's steering gear. This makes operating the machine even easier.



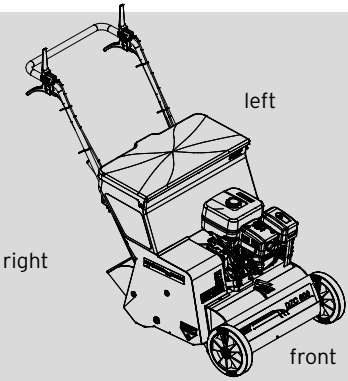
1) Engaging the blades
2) Opening the seed container
3) Setting the DZC600's work depth
4) Drive

6.3 Engine



1. Spark plug
2. Exhaust
3. Silencer
4. Air filter
5. Fuel tank
6. Fuel cap
7. Speed control
8. Kickback starter
9. Starter handle
10. Choke
11. Fuel tap
12. Fuel supply
13. Carburettor
14. Engine axis
15. Oil dipstick and oil filler cap
16. Oil drainage plug
17. Engine serial number
18. Engine name label
19. Engine ignition lock

For your information:
If the terms for back, front, left, and right are used, in the manual, then this is always viewed from the perspective of the operator directing the machine.



For your information:
Your authorised ELIET dealer is at your service for any maintenance or advice, ensuring that your ELIET machine always remains in perfect condition. You can contact him/her for original ELIET parts and lubricants at any time. These service parts are manufactured according to the same strict rules and craftsmanship as the original equipment.

For your information:
Chapter 11 contains an overview of the maintenance requirements for this machine and advises you on maintenance requiring the assistance of an authorised dealer.

Caution:
For your own safety, only original SUBARU or ELIET parts may be mounted onto this ELIET machine.

7. Safety instructions

7.1 Safety messages:

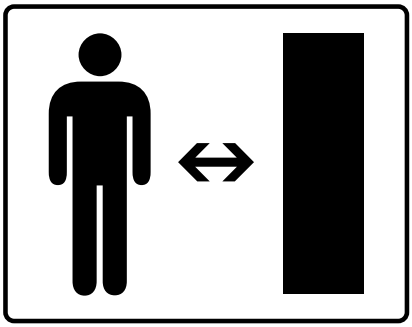
For your information:
The safety stickers are applied to the machine in clearly visible places. Take notice of the warning messages on these stickers prior to using the machine.

This sticker is attached onto the top plate of the protective cover. This is a central position on the machine, which remains visible for the operator. The sticker consists of three parts:

The first part shows icons that summarise the general safety instructions:

1. Before operating the machine the manual should be read and understood.
2. Suitable safety clothing (safety goggles, gloves, ear protection) must be worn whenever and wherever it is required.
3. Working with or performing maintenance on the machine poses the risk of cuts to the hands. Be attentive and cautious.

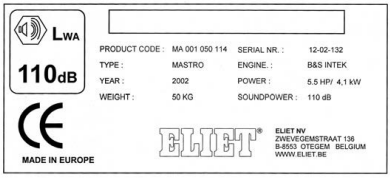
The second part of the sticker reminds the operator that the motor must be turned off and the spark plug cap removed before starting maintenance on the machine.



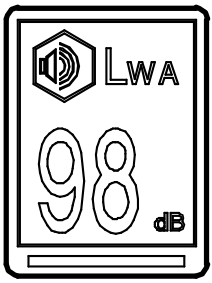
The third part of the sticker reminds bystanders to observe a 10 m safe distance when approaching the machine.
This sticker has stock no.: BQ 505 010 171

There is a safety sticker on the inside of the protective cover to warn against any work without the protective cover. There is an immediate danger of clothes or limbs being caught by the drive and cut off.
This sticker carries item number BQ 505 010 130.

This sticker is also attached on the top of the protective cover.
The sticker points at the danger of cuts when reaching hands or limbs into the relevant zone.
This sticker has stock no.: BQ 505 010 070



Identification sticker
This sticker is attached to the right hand side of the machine body. It contains the machine's identification data:
Model
Model no.
Serial no.
Year of manufacture
Motor
Capacity
Weight

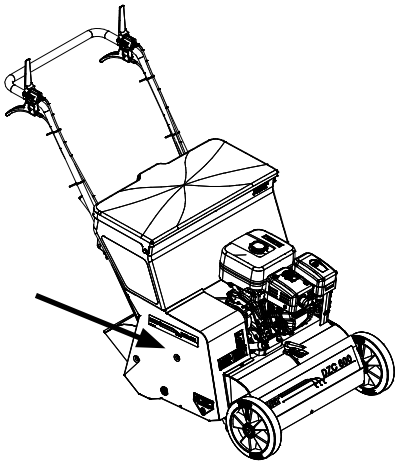


Guaranteed A-weighted sound power Lw(A): This sticker also includes information on the manufacturer. The CE label confirms that the machine is in compliance with the applicable European machine directive.

This label is applied to the right hand side of the machine body. The figures on it represent the guaranteed sound power levels (LwA) produced by the machine under normal operating circumstances.
This sticker has stock no.: BQ 505 112 098

Caution:
Safety stickers that as a result of use or cleaning are either damaged, have been removed or become illegible must be replaced immediately. Stickers can be obtained from any authorised ELIET dealer.

7.2 Safety features



Protective cover:
All moving parts are safely shielded by the protective cover

Sturdy construction:
The robust construction is testimony to the sustainability of the machines and offers a guarantee for the operator's safety under unforeseen circumstances.

Noise reduction: The powerful motor that provides increased torque by means of a built-in reduction gearbox, takes away the need to work at full throttle. It also decreases the noise by a few decibels. Additional interior rubber cladding absorbs the impact on the plate, resulting in reduced noise and protecting the shields at the same time.

7.3 Safety instructions

7.3.1 General safety instructions

- The owner of the machine will keep this manual during its complete service life. A reference guide for the user, it also ensures that the machine is used and maintained correctly at all times. Always refer to this instruction manual if you have any doubts about operations that you are about to perform.
- Always observe the applicable regulations of the Labour Inspectorate to avoid accidents.
- If the instructions stated in this manual are not clear to you, do not hesitate to contact your ELIET dealer for further explanation. The help desk at ELIET NV/SA is at your service to answer all of your questions. (EU +32 56 77 70 88 - USA 412 367 5185). (info@eliet.be)
- Under no conditions whatsoever may the original design of the machine be modified without explicit and written consent of ELIET EUROPE NV/SA.
- Always observe all safety instructions when using this ELIET machine! Carefully read all the instructions relating to the operation of the machine. They are important for your own personal safety.
- Read the chapter meant for the dealer (read *"8. Dealer's duties" on page 19*) and immediately verify whether the machine has been delivered in accordance with the instructions.
- Get advice from the dealer or another professional when purchasing the machine.

For your information:
Also read through the safety instructions in the SUBARU motor manual. It contains useful tips about proper use and maintenance of the motor.

- Read and observe all safety messages labelled on the machine. (for the sticker location, *"7.1 Safety messages:" on page 10*)

7.3.2 Careful and proper use

- The purpose of this machine is to renovate and rejuvenate an existing lawn. This is done by removing any unwanted vegetation from the lawn and injecting new grass seeds into it. The effect is a considerably higher proportion of young and healthy grass, giving your lawn a better look and an increased resistance.

- The machine combines several functions that are executed in one single operation:

A. Preparatory work:

- Carve sowing trenches into the soil. (depth between 0mm and 15mm)

B. Sowing seeds:

- Gradually spreading the grass seed, the helix Seed Duct™ conducts the seed below the projected stream of dirt and distributes it precisely above the hollowed-out grooves through small pipes.
- Injecting the seed through the air generator.
- Closing the grooves and tightening the soil around the grass seeds with a back roller.
- Putting a protective layer onto the seed by covering the sown area with the projected soil.

Caution:
This machine is not intended for soil cultivation and must therefore be used only for the above mentioned application.

- Overseeding requires physical effort that demands the concentration of the operator. It is therefore advisable to take sufficient breaks as well as adequate food and drink.
- It is unsafe for persons with heart problems and/or balance disturbances to operate the machine.
- Think about what you are doing at every manoeuvre. Do not be tempted to let routine dull your attention. Never act impulsively or on reflex.
- Although the machine is equipped with extensive safety features, please avoid seeking out any dangers. (read "15.2 Hazard analysis" on page 73)

Warning:
Most accidents are caused by carelessness or reckless behaviour.

- The machine may never be used on pastures, only on existing ornamental lawns.
- It will never be used to work on sites that do not comply with the soil characteristics (read *§ "9.2 Characteristics of the work area" on page 21*)
- Only work the machine in a forward travelling direction.
- Never operate the machine on frozen soil.
- Never work when light intensity is below 500 Lux.
- The machine may never be used as a means of transport for people or heavy loads.
- Thoroughly inspect the area where the machine is to be used. Remove roots, stones, sticks, textile, steel wires and other debris. Also pay attention to leads on the surface (electric cables, water, etc.).
- Avoid lawns that contain stones. Choose the slowest operating speed where necessary and reduce the blade depth. Be alert on large stones - immediately lift the machine into transport mode to pass the obstacle.

Caution:
The machine's work depth is 15 mm at most; each obstacle in the top layer of the soil therefore constitutes a risk of damage or breakage of the blade system.

- ELIET cannot beheld liable for damage to property.
- When the blades are operating and the machine has been set to work depth mode, the operator shall work in - practically - straight lines only. With the machine in this position turning is strictly prohibited.
- Avoid inhaling the machine's exhaust fumes. Exhaust fumes contain toxins, which can lead to poisoning and result in death. Consequently, the motor may never run in a closed environment for more than 30 seconds.

7.3.3 Operator's responsibilities

- The operator of this machine is assumed mature enough and with enough common sense to make decisions by himself.
- All persons using the machine are assumed to be fully conversant with the safety instructions. The operator is fully liable for the use of the machine in regard to himself and to third parties.
- The machine may not be operated by underage persons. This does not apply to youths over 16 who are learning to operate the machine under the supervision of an experienced operator.
- Children and animals must be kept outside the machine's danger zone. A minimum distance of 10 meters must be observed.
- ELIET advises against lending the machine to others but, if this should occur, it should only be lent to persons who are familiar with the machine. Always make sure that the user is aware of the potential hazards and ensure that he/she reads the manual before using the machine. (Read "15.2 Hazard analysis" on page 73)
- This machine must only be operated by persons who are well-rested and in a good physical condition. Take a rest if you become tired whilst operating the machine.

- Do not operate the machine after alcohol or hallucinogenic drug use.
- When overseeding on ground that is unfamiliar, you must investigate and notify the person who owns the land of the potential obstacles or foreign objects in the subsoil before undertaking any work.

Warning:
A moment of carelessness or distraction can lead to life long regrets.

7.3.4 Personal Protective Equipment (PPE)

- Suitable clothing must be worn when operating this machine, i.e. covering the entire body. The clothing should never be loosely worn. (e.g. a scarf, is out of the question).
- Long hair must be contained using a cap or a headband, or worn in a ponytail.
- Although the risk of personal injury is limited with this ELIET overseeder, the operator's feet are most vulnerable. Sturdy closed shoes with a steel top are highly recommended.
- For protection of the most sensitive senses, ELIET recommends hearing protection.
- Be extra alert when wearing hearing protection: it can impair the ability to hear warning sounds (such as yelling, signal tones, etc.). With this in mind, ELIET strongly advices against hearing protection with a built-in music player.
- As indicated on the safety sticker on the machine, the operator must wear safety gloves and safety goggles in addition to hearing protection.
- Working the soil can cause a large amount of dust, especially under warm and dry weather circumstances. ELIET recommends using a dust mask if your respiratory airways become agitated as a result
  (masks should comply with the 89/686/EEC standard).

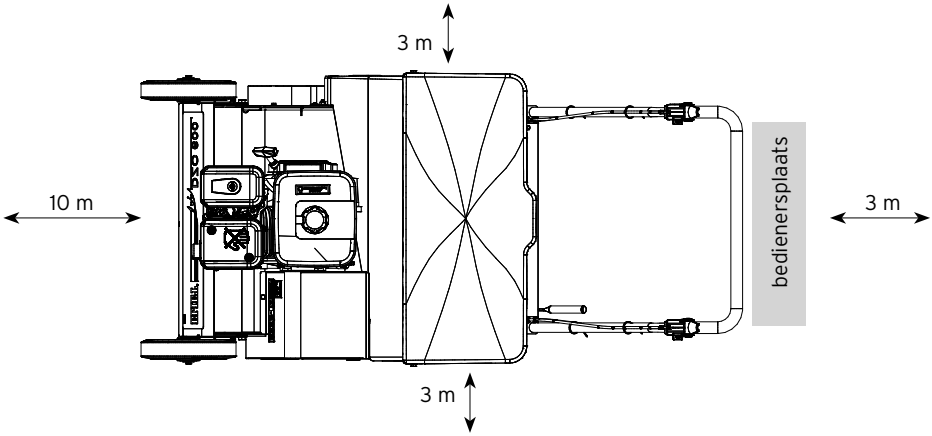
For your information:
The operator of the machine can reduce the risk of injury by wearing the proper personal protection equipment.

7.3.5 Ergonomics

- Make sure to wear shoes with a proper sole that provide sufficient support.
- Hold the handlebars with both hands.
- The seed reservoir can hold approximately 70 L of grass seed. For this reason, choosing seed bags of equally large volume will prevent back problems caused by lifting the bags.

7.3.6 Danger zone

The image below shows the position of the operator and the machine's danger zone:



- Whilst working, the operator must always operate the machine from the operating post. This area is safe from flying debris, it provides a clear overview of the machine and all necessary operating tools are within reach.
- For the sake of safety, the operator should never allow bystanders within the danger zone, which stretches up to 10 m around the machine during work.
- Children and animals must be kept well away from the machine at all times.
- Do not take risks! When someone comes within the danger zone, immediately stop your activity.
- Shut off the motor when leaving the machine unattended. Turn the motor switch to the OFF position
- Once the motor is running, focus all your attention on operating the machine.

7.3.7 Periodic maintenance

For your information:
For your own safety, and in the interest of preserving the life of the machine, this machine should undergo regular maintenance.
.

- Periodic maintenance is essential. Strictly follow the maintenance schedule included in this operating manual (see §"11.2 Maintenance schedule" on page 47).
- The maintenance meter can be a critical tool and resource for keeping track of the exact number of work hours. For this, consult your authorised ELIET dealer.

- Inspect the machine prior to every job. (Read § "9.1 Preliminary checks" on page 20 en § "11.4.1 Visual inspection" on page 53)
  Any defects must be repaired immediately.
- Always ensure the motor is switched off before performing repairs or maintenance. Always wait until the blades have come to a full stop before performing any action whatsoever.
- If parts must be replaced as a result of wear or failure, you must always turn to your authorised ELIET dealer for original replacement parts. This is of key importance for your own safety.

Warning:
Repairs, maintenance and cleaning must only be performed with the motor disengaged and the spark plug cap decoupled.

7.3.8 Limits of the machine

- ELIET recommends a maximum work depth of 15 mm. In view of your own safety and a long life span of your machine, increasing the work depth is not recommended.
- The DZC600 should not be used at low temperatures or when there is frost forming.
- The machine weighs 124(*) kg. Please take this into account when transporting the machine.

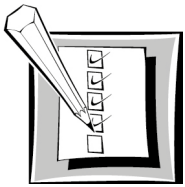
- The minimum passage width is: 800 mm

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

7.3.9 In harmony with nature

- Use the machine in a manner that respects environmental regulations:
  a) Avoid running the machine without actively using it.
  b) Avoid spilling petrol whilst refuelling.
  c) Oil leaks in the motor or transmission should be repaired immediately.
  d) Service the motor regularly for optimum combustion.
  e) Any waste materials resulting from performing maintenance on the machine should always be disposed of properly and in their designated place either for recycling or other environment-friendly processing.

8. Dealer's duties



Each ELIET DZC600 overseeder combi that leaves the factory has been subjected to a test run and checked for all functionalities. The machine is then packed for transport.

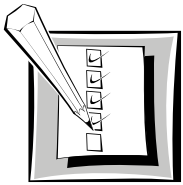
- The dealer unpacking the machine will check it for any damage occurred during transport.
- The machine will be filled up with petrol (Read§"9.4.2 Refuelling" on page 28)
- Prior to delivery to the customer, the dealer will check the oil level in the motor (Read "11.3.3 Checking the oil level of the motor." on page 49).
- The dealer checks that the RPM setting is at the correct level of 3,200 RPM.
- The dealer leaves the machine to run for a few minutes and checks that all devices function properly.
- The dealer will set the correct depth in advance (read §"9.4.1 Machine set-up" on page 24)

- Every ELIET dealer warrants a long life span of ELIET machines. He will lubricate all grease nipples before delivering the machine to the client. (Read §"11.4.2 General lubrication treatment" on page 54)

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

a) The dealer familiarizes the new owner with the machine's operation.
b) The dealer informs the new owner of potential dangers.
c) The dealer insists that the machine be returned for first maintenance after 10 hours of operation.
d) The dealer indicates the points that require regular lubrication.
e) The dealer ensures that the warranty card is filled out and signed. This is a precondition for any warranty claim. Please read the attached warranty conditions for more details.
f) Since the customer would be able to make a claim under warranty, the customer shall register the purchase on the ELIET website: **www.eliet.eu.**

9. Operating instructions



9.1 Preliminary checks

Caution:
Before starting the work, it is recommended to get into the habit of checking the following points:

Check-list

A. Voer een visuele controle uit over de staat van de machine (lees §"11.4.1 Visual inspection" on page 53).

B. Check whether there is enough oil in the machine. Pull out the dipstick and check whether the oil level is below the minimum. (If necessary, read "11.3.3 Checking the oil level of the motor." on page 49).

C. Check that the fuel tank is full. If not, the machine must be refuelled (Read § "9.4.2 Refuelling" on page 28).

D. Check that the air filter is not heavily soiled (if necessary, read "11.3.1 Cleaning the air filter" on page 48).

E. Check that all safety provisions on the machine are still operating properly. (See §"7.2 Safety features" on page 12).

After verification and approval of all points on the check-list, the work area can be prepared (Read § "9.3 Preparation of the work area" on page 22) and you can proceed to the working area with the machine.

9.2 Characteristics of the work area

So as to avoid damaging the machine and to guarantee a quality result in your efforts, it is advised to operate the machine only on amicable terrain.

- The machine will only be used on an ornamental lawn. An ornamental lawn is understood to be soil covered with grass, possibly containing some low-growing weeds (moss, clover, dandelion, daisy, etc.), and that is mowed regularly (once or twice a week).
- The grass must have been cut to a length of 20 mm at most.
- Meadows are excluded from the machine's work area.
- The bottom of the ornamental lawn is flat and does not contain bumps bigger than 20 mm.
- Preferably, the soil does not contain any stones above a depth of 30 mm.
- Check whether there are any foreign objects on the lawn. (stones, rope, electrical cables, steel wire, branches, etc.). Remove any of these objects before operating the machine.
- The soil of the lawn may not be frozen.
- Working a dried out soil under the lawn is useless and had better be avoided.
- Work on a terrain that is wet and soggy after heavy rainfall must be postponed.
- The work speed must be adjusted to hardness and type of soil.
- The maximum allowed (forward) slope gradient is 15º.
- For overseeding purposes, the lateral slope gradient may not exceed 10º.
- Beware that turning the machine requires a minimum surface of 4m ^{2} (2 x 2 m). Consequently, it is pointless to use the machine on small surfaces.
- The lawn needs to be scarified before seeding. Clean up the lawn after scarifiying so that the bottom is free..

Caution:
Do not operate the machine on frozen or dried soil.

For your information:
The rollers are somewhat profiled in order to prevent grass and dirt from sticking to it. Should the rollers soil too quickly nonetheless, this implies that the terrain is too wet and the work will consequently have to be postponed.

If the terrain does not meet the above mentioned requirements, preparatory activities should be carried out first (read § "9.3 Preparation of the work area" on page 22)

9.3 Preparation of the work area

Overseeding is a cheap and effective way of rejuvenating your lawn. The DZC 600 is a precision overseeder that can bring the seed in optimum growth circumstances under a minimum loss of seed. Some preparation of the terrain is required in order to guarantee an optimum result and enhance growth possibility.
Efficient restoration of the lawn requires the following preparations:

A. Preparing the terrain
B. Examine the state of the grass and the soil.
C. Choice of seed mix, depending on the soil, the use of the lawn and the climate.
D. Determining the treatment after overseeding to enhance germination.

A. **Preparing the terrain** :

- As indicated in § "9.2 Characteristics of the work area" on page 21 aangegeven wordt, the terrain must be free from foreign objects. If this is not the case, then all objects that might otherwise hinder smooth operation must be removed (stones, branches, rope, steel wire, electrical lines, water hoses, parasol base, pickets, lawn furniture, etc.)
- If certain obstacles cannot be removed, then they should be visibly marked (tree roots, water drain covers, gas lines, sprinkler systems, power outlets, lawn lighting).
- Also pay attention to any low voltage wires marking the terrain of robotic lawn mowers, electric dog fencing, etc.
- Large stones in the ground must be removed to avoid damage to the blades.
- If the lawn is very uneven in places (height differences in excess of 20 mm), it is recommended to roll the lawn several times, preferably following rainy weather. Fill any deep pits with soil. (Lawn aeration (to approx. 60 mm) can be required after overseeding to prevent the upper soil layer from suffocating.)

For your information:
The operable terrain must be checked prior to operation in order to detect any possible problems in advance. (Read "9.6.2 Planning and determining the track and the work pattern." on page 32).

B. **Examine the state of the grass.**
Look at the current vegetation of your lawn: I there a lot of moss or other weeds growing? What is the grass proportion in the lawn? Does it contain several grass varieties? Are there dense grass patches, or just a few worn grass stalks? ...

If the ratio of moss to grass is 3/4 to 1/4 per m^2, do the following:
- Treat the lawn two weeks in advance, preferably before rainfall, with anti-moss spray or a herbicide against broad-leafed weeds.
- Once moss and weeds have died and turned brown and dry, rake them off the lawn (preferably with a dethatching machine).
- Clean the lawn from the raked debris.
- Just before overseeding, cut the grass to a length of 2 cm at most.

If the proportion of grass to weeds or bare spots per m^2 is approximately 3/4, proceed as follows:
- Just before overseeding, cut the grass to a length of 2 cm at most.

If pro-active overseeding is the objective (e.g. on a healthy lawn that is rusty after prolonged drought), or when the remainder of mulch has produced a felt layer on the lawn; or if the lawn comprises a mono grass type culture with low resistance, do the following:
- Thoroughly dethatch the existing lawn and clean up the dry and old grass.
- Mow the lawn using the shortest mow setting so that it the height of the grass is 2 cm at most.

Once these preparations have been made, overseeding may start. It is recommended to choose the sowing moment prior to a rainy period.

C. **Choice of seed mix, depending on the soil, the use of the lawn and the climate.**
In order to achieve a good result in your overseeding treatment, it is essential that the correct gas mixture be chosen that suits the properties of the soil and the climate. Ask your seed specialist for advice.

D. **Determining the treatment after overseeding to enhance germination.**
After overseeding, it is best to use a top-dresser with compost across the lawn in order to cover up grooves. Compost is also a perfect organic fertiliser that encourages germination of your grass.
If you carried out overseeding during a wet period and the rain stopped just before you started sowing, you must continue to irrigate the lawn copiously for at least 20 days.

If the overseeding was carried out during a dry period, you must provide the lawn with no extra water.

For perfect grass, the lawn must be regularly aerated in order to improve root growth. Grass must also be re-sown every one or two years.

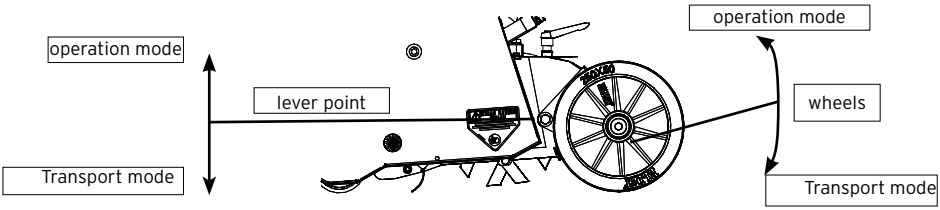
9.4 Preparing the machine

9.4.1 Machine set-up

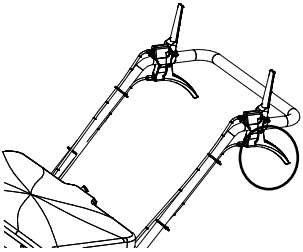
Transport mode – Operation mode

Transport mode: the locked state of the machine where the blades are retracted to the maximum height and do not make any more contact with the ground soil.

Operation mode: the state of the machine where the blades are set to the work depth (blades cut into the topsoil)



The lever on the left bottom side of the steering gear allows you to change the machine from transport mode to operating mode. To do so, the DZC's steering gear needs to be pushed down slightly, so that the pressure on the lock is removed. Then, push down the lever and lower the machine.



To change the machine from operating mode to transport mode, let go of the lever and push the steering gear down slightly..

Caution :
When you start sowing, and the power is turned on, please ensure that the machine does not lock itself back into transport mode due to acceleration.

Setting the work depth

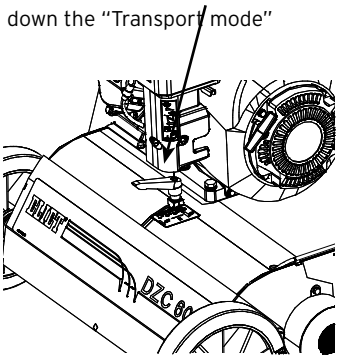
To maximize the growing chances of the newly-sown grass seeds, they should be covered by a thin layer of soil. In principle, this equals a sowing depth of +- 3 mm to 5 mm. To realise this, the machine should be set to a slightly deeper level. The recommended work depth is 8 to 10 mm. This means that the blades will enter the soil up to this depth, which will correspond with the average groove depth.

The depth control is installed on the front of the machine. It includes an adjustment button and a size designator. Please bear in mind that the blades will shorten due to normal wear, and that this will interfere with the depth setting. Therefore, the size designator on the machine does not reflect the exact depth, and only serves as a framework of reference regarding the adjustment. The distance between two lines on this size designator corresponds with a depth adjustment of 1 mm.

Caution:
For this setting, one should always wear gloves..

How to set the depth:

- Place the machine on flat, stabilized ground (e.g. concrete or asphalt, etc.).
- Switch off the engine.
- Let the machine lower down into operation setting by pushing down the "Transport mode" lever until the blades touch the ground.
- Rotate the blades manually so that the tips of the blades rest on the ground.
  (= zero point)
- Check the depth setting shown on the size designator on the front plate.
- Now set the stopper at the 8th line above this designation, so that the work depth is set to 8 mm.
- Firmly tighten the stopper to prevent it from moving while operating.
- Reset the machine to transport mode.



To check the actual depth, it is recommended to run a test prior to the overseeding work

- This is done by placing the machine on an even lawn area.
- Switch on the engine of the machine (see § "9.5 Starting the petrol motor" on page 29)
- Operate the lever and lower the machine to its operating mode
- Push the machine forward by 1 m (see § "9.6.1 Driving the machine" on page 31)

- Return the machine to transport mode, and move the machine backwards by 1 meter so that the grooves under the machine become visible.
- Measure the grooves at various places and compare the measurements to your desired work depth.
- Adjust as needed.

Caution:

- Due to wear and tear on the blades, it is advised to regularly check and (if needed) adjust the work depth before starting the work.
- If the soil is fairly moist, you should decrease the depth setting to prevent too much soil being milled. This moist soil will accumulate inside the machine and interfere with the normal functioning.

Setting the sowing rate

1. The engine must be turned off prior to refilling the seed container.
2. Three things must be checked before refilling the seed container:

o Verify that the scattering outlets underneath the seed container are not blocked and that they are free of condensation and moisture. Moisture would cause the seed to stick, resulting in blockage of the seed outlets.

o Check whether the seed container lid closes properly when the machine is in transport mode. This is to prevent any unwanted seed spillages when in transit.

o Check the sides of the seed container for moisture.

3. The seed must be sieved when refilling the seed container to remove any foreign objects (small stones, sticks, grass clippings) that could otherwise prevent proper closing of the seed outlets.

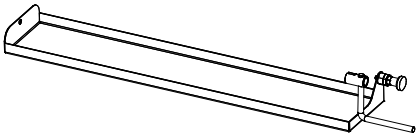
Caution:
It is strongly advised not to transport the machine when the seed container is full. The jack continuously rotates in the seed container, and the pressure that builds up as a result, could seriously damage the machine.
Do not fill the seed container until you have arrived at the sowing site. Also make sure to empty the container every time the machine is relocated.

Keep the seed container filled up above the vertical funnel to ensure a constant and even spread.

Before spreading the seed, you must set the desired sowing volume. The quantity of seed in kg needed per 100 m2, will depend on the instructions of the seed supplier, the type of seed and the landscaper's experience.

In principle, any grass seed can be used. However, ELIET recommends seed mixtures developed especially for overseeding or renovation. The setting of the seed flow rate depends on the composition of the seed mixture, and therefore needs to be adjusted via measurement.

A dosing kit is optionally available with item number MA 028 001 001



To adjust the seed flow rate, the stopper can be realigned. The position of the stopper determines the opening width of the seed outlets, and the amount of seed that will be spread.

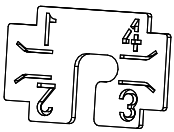
Following a flow rate measurement which was carried out for the overseeding mixture Renova (Recover II) by Advanta, these values may be used as a guideline:

A realignment starting from the zero point, results in the following setting:

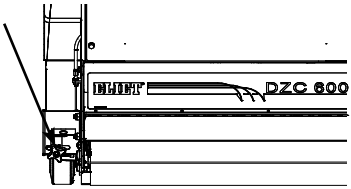
Position 4 - 3 mm	results in a seed flow rate of	± 1,5kg/100 m²
Position 3 - 4 mm	results in a seed flow rate of	± 2,5kg/100 m²
Position 2 - 5 mm	results in a seed flow rate of	± 3,5kg/100 m²
Position 1 - 6 mm	results in a seed flow rate of	± 4,5kg/100 m²

Caution:
These are guidelines only, which may strongly vary depending on the soil, the moisture level, the engine's rotational speed, slippage,... (the flow rate setting can be adjusted with the dosing kit).

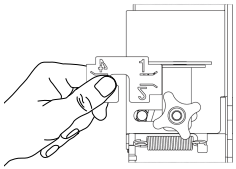
- A template was developed to enable a quick adjustment of the flow rate



- Unlock the stopper by unscrewing the star knob.



- Using the template, you can push the stopper to the set-point of the corresponding number
- Check whether the stopper is positioned properly and firmly re-tighten the star knob.



Caution:
Do not close the seed container lid beyond position 4. This is the minimum position. Operating the DZC600 when the seed container lid is closed can cause serious damage to the machine.

9.4.2 Refuelling

When petrol in the machine is running low, it must be refuelled. The use of fresh petrol is recommended at all times. Use unleaded petrol, preferably with an octane index of 98 or 99.

Warning:
Under certain conditions, petrol is extremely flammable and highly explosive. Fires and petrol explosions can inflict severe burns and cause damage to personal property. Consequently, the following points should be observed:

- Never add petrol whilst the motor is running. Always allow the motor to cool off for several minutes prior to fuelling.
- Only use fresh petrol. ELIET is environmentally conscious and, therefore, recommends using unleaded petrol. To preserve fuel freshness for longer periods of time, additives may be used.
- Store the petrol in an approved tank. Keep out of reach of children.
- Never refuel at the location where the machine is later to be operated Keep a distance of at least 10 m from the selected work area Doing so will avoid creating a fire hazard.
- Clean off the area around the cap of the fuel tank and remove it.
- Take note that a fuel filter can be inserted into the opening of the tank. Refrain from pouring too quickly; allow the petrol sufficient time to penetrate the filter without overflowing.
- If there is no tank sieve present, then select a hopper with a filter that can be used to keep unwanted rubbish from getting into the tank.
- Do not fill the tank completely. Fill up to approximately 10 millimetres from the brim. So never fill it up to the brim.
- Considering petrol's flammability, keep in mind that the hot exhaust is right next to the tank.
- Put the cap back on the fuel tank as quickly as possible. If any petrol is spilled whilst refilling, then the motor should be immediately cleaned.
- Also be aware that clothing does not come in contact with the petrol. If this happens, the clothing should be immediately changed.
- It is irresponsible and, thus, strictly forbidden to refill the tank in the vicinity of smokers or

near an open fire.

- If fuel is swallowed or comes in contact with the eyes, consult a doctor immediately.

9.5 Starting the petrol motor

For your information:
Please also read your motor manual for more information. The 'General' chapter in the manual identifies the key motor functions in"6. Most important parts" on page 7

Caution:
Never start the machine when dust has settled on the motor or between its cooling fins. It reduces proper cooling of the motor and can cause a fire. Furthermore, sand and ground dust can block the motion of any external machine parts.

If this has not been done when going through the check-list, the motor must be checked for adequate oil *(read "11.3.3 Checking the oil level of the motor." on page 49*) and fuel levels *(read* § "9.4.2 Refuelling" on page 28) before starting it.

- Also check that the air filter is clean *(read* "11.3.1 Cleaning the air filter" on page 48)and that the grid covering the opening for suctioning in cooling air is unblocked.

- Prior to starting the machine, ensure that it is in transport mode.

Caution:
For optimum protection of your hearing it is recommended to put on hearing protection prior to starting the motor.

Warning:
Under no circumstances should you ever allow the motor to run for an extended period (that is, more 30 seconds) in a closed space. The exhaust fumes contain toxins that may cause poisoning or suffocation.

- Several idle efforts to start the motor may point to a wet spark plug. In that case the spark

plug must be cleaned or replaced (see "11.3.5 Checking and/or changing the spark plug" on page 52).

Warning:
The machine becomes a source of danger when the motor is running. A wrong action can put the machine in motion. In a situation that could lead to loss of control over the operation the motor must be switched off immediately.

Ways to quickly stop the machine:

- By turning the general on/off switch to the OFF position, the motor will stop running and, of course, there will be no more driving force.

9.6 Working with the machine

9.6.1 Driving the machine

Warning:
Never let the motor run in a closed space in view of the risk of carbon monoxide poisoning from the exhaust.
If the machine is stored inside, doors and windows will be opened for maximum ventilation before starting the motor to move the machine.

9.6.1.1 Driving

The DZC600 is equipped with a powered drum roller, which can be operated by the bottom right lever.

The machine can be moved in work mode or in transport mode

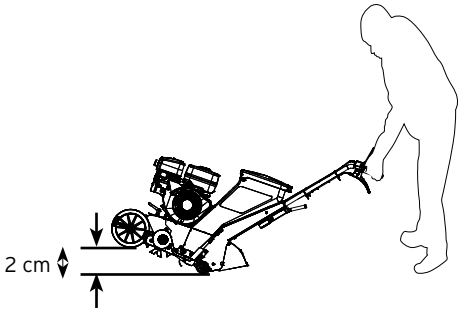
A. In transport mode, the blades will be lifted up to their maximum height.

B. In operating mode, the blades are set to their work depth. Because in this mode the 57 blades are cutting through the top layer of the lawn, any sudden changes of direction must be avoided, as these could result in the removal of parts of the lawn.

9.6.1.2 Turning

If you have reached the end of a strip and you wish to turn to overseed the adjoining strip, the machine will have to be turned 180° degrees within a limited amount of space.

To turn around with the DZC600, the seed container needs to be shut. Push the steering gear down, so that the front wheels are lifted 2 cm above the soil and the machine is resting only on the drive roller. Keep the wheel drive activated and turn the machine so that it's ready to start a new strip. Lower the machine into work depth again and re-open the seed container to continue the overseeding.



9.6.1.3 General remarks

Caution:
Speed must be reduced whilst headed to the work area. The higher the speed, the quicker the reaction required when running into obstacles and the greater the inertia forces that need to be controlled.

- Choosing an obstacle-free access route towards the terrain will considerably reduce the risk of damage to the surface.
- Avoid riding the machine across unstable or soggy surfaces.
- If you ever start losing control over the machine, immediately release grip on the handlebars so that all operating levers revert back to neutral and all driving forces are disengaged.
- ELIET cannot be held liable for damage to property.
- Should the machine be transported in or out of a commercial van: (Read § "10. Transporting the machine" on page 42)

For your information:
Machine breakage or defects resulting from incompetent operation are not covered under warranty.

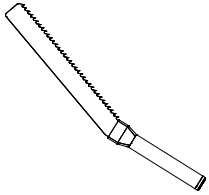
9.6.2 Planning and determining the track and the work pattern.

- A work pattern will depend on the state of the terrain and the preparations already made. The following criteria apply:
  - o **Layout** of the terrain. One can work faster in long stretches with fewer turns.
  - o The **profile** of the terrain. Slight slopes can best be worked by traversing the slope lengthwise. For steeper slopes, the best work method is to drive up and down the slope.
  - o What **obstacles** must be taken into account? The angle for approaching obstacles depends on where it is easiest to make a turn.
  - o Eliminating **turning zones.** This can be important for an easy and quick finish of the turning zones after completion of the rest of the terrain.
  - o If the work is done under **windy conditions**, the route will be arranged such that the dust produced during the operation will be blown away from the machine.

9.6.3 Overseeding

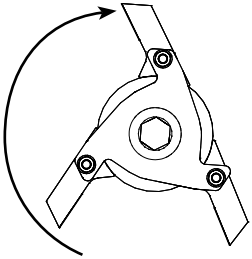
Caution:
The operator must comply with clothing prescriptions and wear the required personal protection (see §. "7.3 Safety instructions" on page 13)

- Proper gardening starts with studying the work area, removing any obstacles and determining a work pattern and a route (read § "9.6.2 Planning and determining the track and the work pattern." on page 32). It also involves proper preliminary machine inspection and settings (read §"9.1 Preliminary checks" on page 20 en "9.4 Preparing the machine" on page 24).
- The overseeding procedure can start as soon as the machine is on the work area, at the beginning of the defined route.
- Always situate the machine to move in a straight line relative to the intended lane; it avoids having to immediately turn and adjust course whilst the blades are protracted to at work depth.
- Set the motor to full throttle (3,200 RPM)
- The machine now becomes a dangerous object, requiring the operator to concentrate on his movements. As long as he is operating the machine, his full attention must be on the job.
- Now, let the machine drop down from transport mode to operation mode.
- It is recommended to regularly clean the areas between the rollers, using the supplied tool.

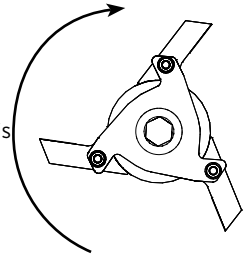


9.6.4 Dethatching

The overseeder can also act as a dethatcher. The following items must be taken into consideration:

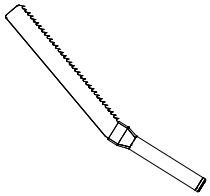


- De blades of the seeder are mounted in the perfect position for overseeding with the machine. This position means that for every blade disc 2 blades cut grooves in the ground for the seed injection, the third blade is mounted in a pulling position



- To have a maximum return at scarifying it is necessary to make a choice in the position of the blades. This has an effect on overseeding with the machine. The ideal position for scarifying is to mount the tree blades in the pulling position

- The preparations with respect to the machine and work area listed for the overseeding procedure also apply to dethatching.
- It is recommended to cut the grass very short before dethatching.
- Contrary to overseeding, dethatching is a superficial operation. The objective of dethatching being to mechanically remove all parasites (moss, felt, weeds, dried grass, etc.) from the lawn, the blades should only make slight contact with the soil (max. 3 mm)
- Since we have yet to do any overseeding, no seeds should be in the seed reservoir.
- Machine operation is identical to that for overseeding.
- Because dethatching requires less capacity than overseeding, a higher work speed is allowed.
- The same routes can be applied as for overseeding.
- In case of excessive amounts of moss it is recommended to make two runs of the entire surface, the second one perpendicular to the first.
- During dethatching, the seed grooves may get filled with debris. It is therefore recommended to clean out the seed grooves after dethatching and prior to overseeding.
- Scarifying work leads to build-ups of dirt between the rollers. Therefore, it is necessary to stop regularly and clean the areas in between the rollers with the supplied tool.



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9.7 Cleaning the machine

Warning:
Repairs, maintenance and cleaning must only be performed with the motor disengaged and the spark plug cap decoupled.

Warning:
Always wear safety gloves when checking defects or performing maintenance to the machine.

Failure to clean the machine will induce quicker wear. A machine functioning sub-optimally can compromise the operator's safety.

Failure to clean the machine can cause:
1. Increased wear of the bearings
2. Increased wear of covers
3. Jamming of moving parts
4. Reduced cooling
5. Risk of fire
6. Inability to notice cracks or tears
7. Damage to the paint
8. Illegibility of stickers

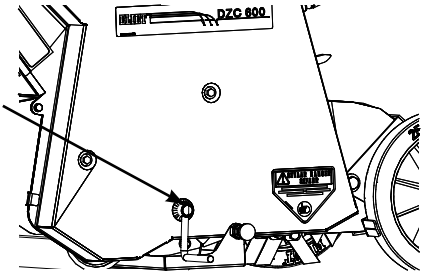
- Thus, after each use, it is recommended to clean the machine. Cleaning the machine can also be regarded as a visual check. It offers an opportunity to timely notice any breakage or need for lubrication.

Tip: clean the machine immediately after overseeding. Mud and soil then won't have a chance to dry up and stick to parts which makes cleaning and rinsing considerably easier.

Caution:
Wear suitable clothing for cleaning activities. Utility gloves are necessary.

The following points require special attention:

- Always remove the seed from the seed container after an overseeding session (use a vacuum cleaner to remove the seed from the bottom parts). The model with a seed collector vessel has a lever to manually screw the jack into the seeding compartment. This also enables you to remove any remaining seed from the collector vessel (item number MA 028 001 001).



- Also check that the seed funnels are completely clear.
- The engine should be clear of dust and dirt. Particularly the cooling fins, the exhaust and the area around the exhaust must be clear. The area around the fuel cap must be kept clean to avoid dirt entering the fuel tank. Blow away any dirt that might block the throttle control.
- Check and clean the air filter on a regular basis.
- Check and lubricate the chain drives.
- The bushings must be cleared from sand and dirt, as this sticks to the lubricant. Afterwards, new lubricating grease needs to be applied (see § "11.2 Maintenance schedule" on page 47).
- Use a dry cloth or soft brush for any cleaning. To remove grease and lubricants, use MoS2-based penetrating oil. This spray acts both as a lubricant and as a rust solvent.
- It is advised to keep transmission parts and hinges located under the large cover dust-free. (Ideally, the chain drives are lubricated during the cleaning work: see § "11.4.2 General lubrication treatment" on page 54.)
- Check that the blades (see §"11.4.8 Checking the blades" on page 65) are not damaged or bent.
- Clean the traction roller so the drum doesn't get covered in dry mud.
- Use a dry cloth to remove any dirt from the chassis, especially from the safety warning stickers.
- A steamer may be used to clean the machine. Do not spray excessive amounts of water on the bearings, electric contacts and filler caps. Water is the number one cause of rust and this must be avoided at all times. Allow the engine to cool down properly before spraying cold water on it.
- A number of additional points must be observed in the cleaning procedure before long-term storage of the machine (read more in §"12.Storing the machine" on page 68)

9.8 Fault diagnosis

9.8.1 The motor fails to start after idle periods

If the machine fails to start up after periods of inactivity, then this could be the result of any of the following causes:

a) No petrol
c) Stale petrol
d) Bad spark plug
e) Low on oil

Caution:
Before examining possible reasons for the fault, make sure the ON/OFF switch for the motor is turned to the OFF position.

a) No petrol
In § "12.Storing the machine" on page 68 you are advised to remove any residual petrol before long term storage of the machine. If this slipped your mind, you may have forgotten to refill the machine. Check that the tank is adequately filled and refuel if necessary (read § "9.4.2 Refuelling" on page 28)
Let the starter motor run for a while after refuelling. Close the throttle (choke) - the petrol will now be sucked into the line. The motor will start running as soon as the carburettor has filled.

c) Stale petrol
Petrol has a limited shelf life. Petrol that has been sitting in petrol tank for more than a few months can cause starter problems. It also smells totally different than fresh petrol.
Pump out the contents of the fuel tank and refuel with fresh petrol (read § "9.4.2 Refuelling" on page 28)

Caution:
Always exercise precaution. Even stale petrol can still be incredibly flammable.

d) Bad spark plug

Without the proper ignition, it will be impossible to get the motor up and running. For this reason, check the spark plug. (Read §"11.3.5 Checking and/or changing the spark plug" on page 52)

e) Low on oil

The motor's crankcase is filled with motor oil to lubricate and cool the pistons. Lack of oil can lead to increased wear of the motor. To protect the motor the machine has been equipped with a control switch that will disengage the motor if the machine is low on oil. Check the oil level and refuel as necessary (read "11.3.3 Checking the oil level of the motor." on page 49)

9.8.2 Motor shuts off whilst in use

If the motor suddenly shuts off during operation, this could be the result of a number of factors:

a) No petrol
b) Lack of oil in the motor
c) Machine is on a slope
d) Technical defect

Caution:
Before examining possible reasons for the fault, make sure the ON/OFF switch for the motor is turned to the OFF position.

Take the following steps to restart the machine in case of one of the following:

a) No petrol

Might you become so absorbed in your work that you fail to realise from the indicator arrow that the machine is running on empty, then it could suddenly turn off. In this case, refuel the tank (read § "9.4.2 Refuelling" on page 28)
Let the starter motor run for a while after refuelling. Close the throttle (choke) - the petrol will now be sucked into the line. The motor will start running as soon as the carburettor has filled.

b) Lack of oil in the motor

Also read "9.8.1 The motor fails to start after idle periods" on page 37

c) Machine is on a slope

Whilst working on a slope in the lengthwise direction, the motor may suddenly stop. This is caused by the oil alarm which works on the basis of level measurement; it detects a false oil level when the machine is in a slanted position. This is enough reason for the system to switch off the motor.
The solution is to wait a few moments before restarting the motor. The problem will return if you

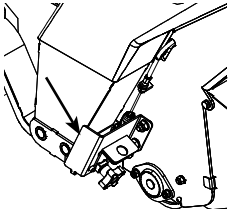
continue to do work on an incline. After checking the oil level on an even surface (read "11.3.3 Checking the oil level of the motor." on page 49) the oil safety system may be disengaged temporarily. Don't forget to switch it back on after the work is finished.

Warning:
Neither ELIET, nor SUBARU shall accept warranty claims based on a lack of oil in the machine.
If slopes are a recurring factor in a particular area, adding 0.2 litres of extra oil to the tank will resolve the problem.

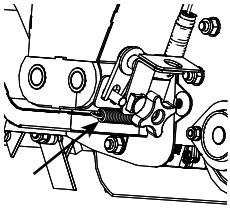
d) Technical defect
If neither of the aforementioned checks identifies the cause, the problem could be more technical in nature. A defect in the motor or a problem with the carburettor could be the issue. For assistance with these problems, please visit your authorised ELIET dealer or an authorised service centre for the motor brand.

9.8.3 Loss of seed during transport

During transport, the machine leaves a trail of grass seed. This can result in vegetation between paving stones and must therefore be avoided. Possible causes:



- During transportation, the machine's dosing plate was bent, which also caused the lid to bend. Bend both of them straight again, or have these machine parts replaced.



- Closing the seed container lid happens by means of a tension spring. If this tension spring is broken or has come loose for a specific reason, the seed container will not shut itself. This will result in unwanted grass seed spillages.

- It can also occur that the operating cable was tightened too much or got stuck for one reason or another.

- As a result of dirt caking up under the sliding lid of the seed container, the spring may not be strong enough to shut the lid. Clean the gaps in between the sliding lid (with compressed air) when the seed container is empty.

9.8.4 Irregular sowing pattern

If the seed flow rate has been set correctly, the seed on the overseeded surface should be hardly visible. The seed visible in the grooves should have constant density along the entire work width. If you notice an irregular seeding pattern whilst working, i.e. no seed in some places and lots of seed in others, then this be the result of the following cause:

- The seed dispensed from the seed container is guided into the groove through outlets, using air injection.
- Sometimes, one or more outlets get blocked because of dirt, moisture or a blocked scattering slot, and they will no longer be able to scatter seeds. These blockages will usually dissolve automatically, and the seed that was obstructed in the outlet(s) will be scattered in one go, causing an abundance of seed in places. This will obviously be visible in the lawn once the seed germinates. As soon as any irregularities are detected, the problem outlets should be inspected.

Reoccurring seed flow irregularities across the work width could be the result of the following:

- To ensure a continuous seed flow, a jack is fitted at the bottom of the seed container. This is driven by a chain and runs synchronously with the machine's operating speed. A failing drive will result in a slow and irregular seed flow. Possible causes of failure:
    - Broken chain.
    - Dislocated chain.
    - Locking pin on the sprocket of the jack axis failed.
    - Sprocket on roller came loose.
    - Locking pins of the jack on the driving axis came loose.

9.8.5 A trail of damage to the lawn

Whilst overseeding, one could suddenly inflict an abnormal trail of damage in a worked lane. This damage could be caused by the following:

- Since the blades do the ground work, they will be the first to be examined. Presumably, one or more blades struck an object in the ground, causing it to become bent and carve out wide, unsightly grooves. Read § "11.4.8 Checking the blades" on page 65
- It is possible that an object has become wrapped around the blade axle and causes a damage trail apart from the blades themselves.

9.8.7 Undesired activation from transport or operation mode.

If ever during operation or overseeding, the machine suddenly switches from operation mode to transport mode or vice versa, then the following problems could arise as a result:

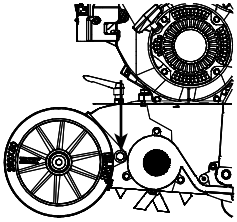
- The safety lock remains stuck after operation: check, clean, or replace the locking mechanism as necessary.
- The cable that operates the locking mechanism or the locking mechanism itself is unwillingly overpowered by some obstacle or another (for example, when passing by a bush or shrub, etc.)
- The locking mechanism cable is too tightly stretched. Ease up on the cable tension.

9.8.8 The machine remains locked in its set height (transport or operation mode).

If during operation or overseeding, the machine fails to respond to the command to return to either transport or operation mode, then the following may have occurred:

1. The machine remains stuck in work mode:

- The hinges of the front roller body are stuck because of dirt or insufficient lubrication: clean the hinge and apply lubricant liberally.
- Dirt is piling up between the front roller body and the frame of the machine: thoroughly clean the gap between the front roller body and the frame.
- The cable that operates the locking mechanism is too loose or broken. Adjust or replace it if necessary.



2. The machine remains stuck in transport mode:

- The hinge of the front roller body is stuck because of dirt or insufficient lubrication: clean the hinge and apply lubricant properly.
- Dirt is piling up between the front roller body and the frame of the machine: thoroughly clean the gap between the front roller body and the frame.
- The cable that operates the locking mechanism is too loose or broken. Adjust or replace it if necessary.

10. Transporting the machine

Actions to take before loading

Wear the appropriate clothing for loading and off-loading the machine.

For your information:
Also read § "9.6.1 Driving the machine" on page 31, this chapter contains useful instructions for safely operating the DZC 600.

Always empty the seed container before moving the machine. Operating the machine with the seed container lid closed and seed in the seed container, can cause serious damage to the machine.

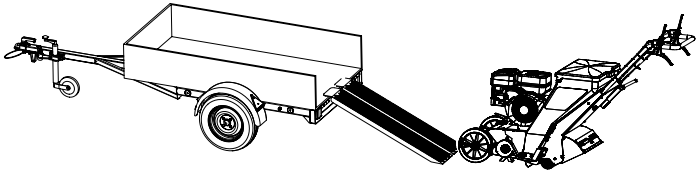
Warning:
Loading and off-loading the overseeder requires preparation and concentration.

- When pushing the machine onto the ramps, keep it in a straight line and avoid steering corrections.
- Bystanders must remain at a safe distance (10 m) during transport, loading and off-loading.

Caution:
Never activate the blades during transport!

Loading the machine in the trailer

- Use a non-slip ramp to load the machine into a van or onto a trailer.
- Ensure that the ramps are securely hitched onto the vehicle or trailer. Ensure that the traction of the rollers cannot dislodge the ramps.
- The machine weighs around 124 kg; make sure that the ramps have enough bearing capacity to carry both the machine and the operator.
- When loading the machine onto a trailer, the trailer should be hitched onto a vehicle.
- Under no circumstances should the angle of the incline exceed 25°.



- Ask someone to assist you if you feel insecure about loading the machine.
- Also ensure that the vehicle has sufficient loading capacity to transport the machine.

Warning:
Never run the machine for more than 30 seconds in a closed environment where animals or people are present. Exhaust fumes from petrol motors contain toxins that can cause poisoning or suffocation.

- Don't run the engine longer than necessary when (off)loading the overseeder into/from a closed van. Open all the doors of the loading area to ensure sufficient ventilation.

Attaching the machine in the trailer

- Make sure the machine is properly attached in the vehicle during transport. Attach ropes to the fixed chassis parts to secure the machine.
  The steering is a good place to attach the machine. Attach your rope as low as possible on the steering on both sides, and secure the rope in the front of the trailer so that the machine is pulled towards the front. Make sure that the rope does not damage the cabling of the machine.
- The ropes, belts or tensioner belts used must be in a perfect state.

For your information:
Always close the petrol tap on the machine before transport. Failure to do so may result in excessive amounts of petrol being fed into the motor, causing starter problems and the risk of having to change the spark plug.

For your information:
Machine breakage or defects resulting from incompetent operation are excluded from the warranty conditions.

11. Maintenance

11.1 General

For your information:
The dealer and his staff are readily at your service and can also rely on the ELIET help desk for support. This combination guarantees you the best joint effort to find a solution to any problems you may have. For repairs or maintenance you can turn to your authorised ELIET dealer or a service centre authorised by the motor manufacturer. Please always submit the model and serial numbers of the machine and the motor, as well as a complete description of the problem.

Caution:
Use only original ELIET or SUBARU replacement parts for any repairs.
These service parts are manufactured according to the same strict quality requirements and craftsmanship as the original equipment.

- Maintenance or repairs that are not described in this manual must be performed by an authorised ELIET dealer.

Perform maintenance in a room intended for this purpose.
The area must meet the following criteria:
- Spacious
- Easily accessible
- Well lit
- Dust-free
- Clean and tidy
- Quiet

These characteristics are important to properly carry out maintenance works.

Caution:
Maintenance performed in an incorrect manner may compromise the operator's safety.

- Maintenance should be always carried out with the motor turned off. As a precaution, the spark plug should also be removed or the lead detached.
- Wear safety gloves as much as possible when performing maintenance. Safety goggles may be required for certain operations. These are supplied standard with the machine.

TIP: In principle, the maintenance works described may be carried out by any person with technical skills. However, ELIET recommends that the machine be brought to an authorised ELIET service centre for a major overhaul each year.

Your ELIET dealer is always ready to carry out maintenance and provide advice. He stocks genuine ELIET replacement parts and lubricants. His staff can always obtain advice and service from ELIET's help desk in order to provide you with impeccable after-sales service.

11.2 Maintenance schedule

Special maintenance:

"11.3.4 Changing the motor oil" on page 50
General check-up (checking bolts)

Each work session
"11.4.1 Visual inspection" on page 53
"11.4.8 Checking the blades" on page 65
"11.3.1 Cleaning the air filter" on page 48
"11.3.3 Checking the oil level of the motor." on page 49

Every 25 hours
"11.3.4 Changing the motor oil" on page 50
"11.4.3 Belt tension check and adjustment" on page 59
"11.3.5 Checking and/or changing the spark plug" on page 52
"11.4.2.3 Chains and gears" on page 57
"11.4.2 General lubrication treatment" on page 54

Every 100 hours
"11.4.9 Replacing the blades" on page 66
"11.3.2 Changing the air filter" on page 49
"11.3.5 Checking and/or changing the spark plug" on page 52
"11.4.5 Replacing the belt tensioning roller" on page 63

Every 200 hours
"11.4.4 Belt replacement" on page 62

Every 500 hours
"11.4.7 Replacing chains and gears." on page 65

11.3 Motor maintenance

11.3.1 Cleaning the air filter

The purpose of the air filter is to clear the air that is sucked in for combustion from sand and dust particles. There are two important issues in this respect:

- The filter may not become damaged, allowing unfiltered air to pass through the motor.
- The filter must allow sufficient air to pass through it, ensuring an optimum air-fuel ratio for proper combustion. Regular inspection of the air filter is essential.

For your information:
Before starting maintenance, also always read the manual provided by the motor supplier. If a different procedure is suggested, then you should always follow the procedure in the motor manual.

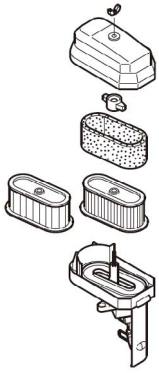
- The air filter is located under a black hood on the motor.

How to clean the filter:

For your information:
Always read through the manual of the motor supplier

Caution:
Petrol is highly flammable; avoid open fire or hot objects in the direct vicinity.

- Before removing the filter, any dirt and dust inside the filter box must be blown out with compressed air.
- Carefully slide the front filter off the cartridge.
- Remove the nut and the plate of the filter element and lift out the cartridge. (Prevent dust in the carburettor).
- Clean the front filter using a liquid detergent and water. Squeeze the filter dry with a clean cloth, then soak it in oil and squeeze it again with an absorbing cloth to remove any excess oil.
- Clean the cartridge by softly tapping it onto a flat surface.
- Reposition the cartridge (the UP indication pointing up) and secure



it with the screw.
- Slide the front filter over the cartridge again.

Caution:
Releasing a stream of compressed air too closely to the filter element may cause micro-perforations that will render the filtering properties completely useless.

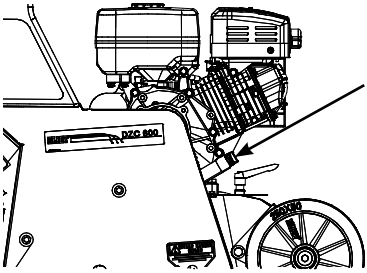
- Using compressed air, completely clean the plastic hood and the filter socket from dust and dirt.
- After cleaning, remount the filter elements in their original position.

11.3.2 Changing the air filter

This action is almost identical to cleaning the air filter (see "11.3.1 Cleaning the air filter" on page 48). The only difference is that in this case, the element is replaced.
New air filters suitable for your machine are available from your ELIET dealer or an authorised service centre of the relevant motor brand.

11.3.3 Checking the oil level of the motor.

A shortage of engine oil will irreparably damage the engine. Hence, regular checks should be carried out.
- Place the machine on flat ground so that the engine plate is completely horizontal.
- Switch off the engine.
- Take a clean cloth.
- Remove the dipstick and clean it with the cloth (the oil level at the initial measurement is not always correct). Therefore, the dipstick needs to be re-inserted and pulled out again. The oil level should reach the "F" (Full) mark.
- If this is not the case, please replenish the oil (Caution: do not overfill).
- Before replenishing the oil, please clean the area around the filler cap.
- Open the filler cap and remove the dipstick to allow ventilation in the crankcase.



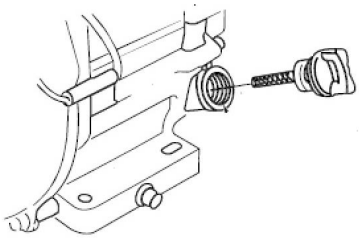
Caution:
You must replenish the oil carefully, as an excessive amount of engine oil in the crankcase is not beneficial for the performance or the life span of the engine.

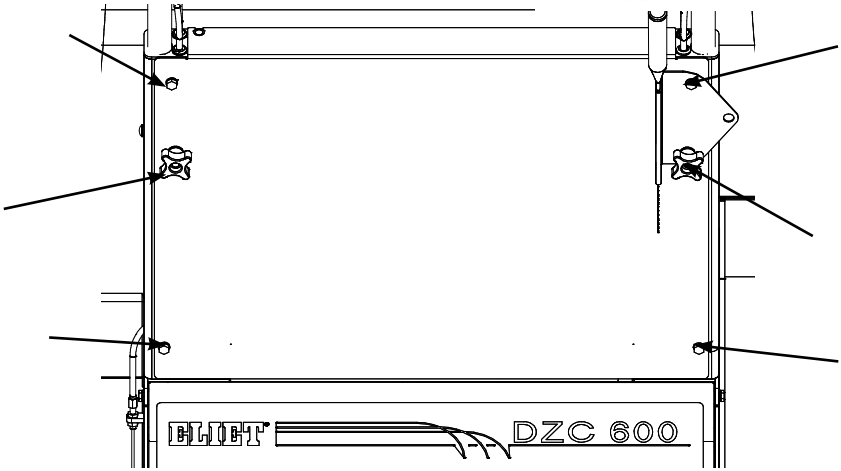
- Replenish the oil carefully. Every now and again, you should check if the desired level has been reached.
- Only use the recommended oil (see engine manual).
- Once the engine has been replenished, re-insert the dipstick and screw the filler cap on firmly.
- Immediately remove any spilled oil.

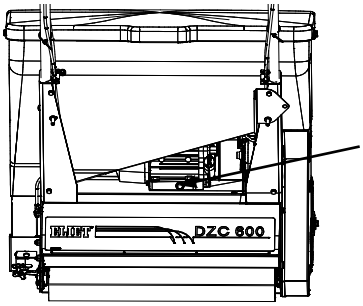
Caution:
Avoid any dirt from leaking into the crankcase via the filler cap.

11.3.4 Changing the motor oil

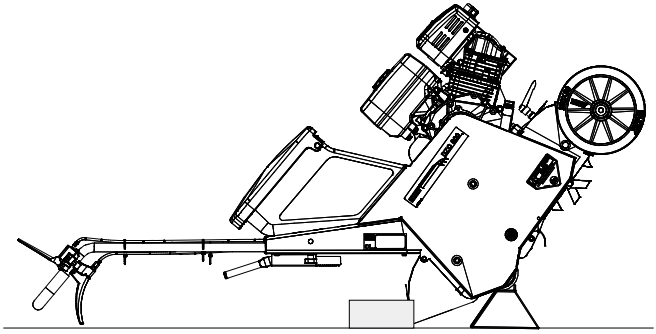
- Prior to changing the engine oil, it is recommended to remove the rear plate of the DZC600. This makes it easier to reach the plug and to drain the oil.
- To remove the rear plate, undo the 2 torx screws and the 4 bolts.





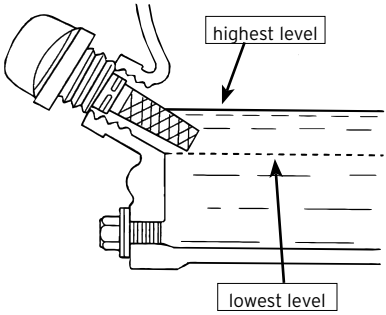


- Put the DZC 600 into the easy clean (option) to change the oil.



- Keep a 2 litre receptacle nearby before unscrewing the plug.
- Clean the area around the oil filler cap on the other side of the engine and unscrew the cap, allowing the crankcase to vent while emptying the tank.
- Now unscrew the drainage plug. Use a 22 mm wrench.
- Empty the full contents (1.1 L) from the engine. Make sure that all the oil is properly collected in the receptacle.

- Tilt the machine forward again.
- Reposition the drainage plug and tighten it. (Attention: don't tighten it too much: the engine base might crack.)
- Wipe away any spilled oil with a clean cloth.
- Refill the engine with new oil through the front filler cap.
- Gradually add the required oil, approx. 1.1 litres, until it reaches the brim of the filler hole.
- Reposition and tighten the filler cap after refilling and wipe away any spilled oil.

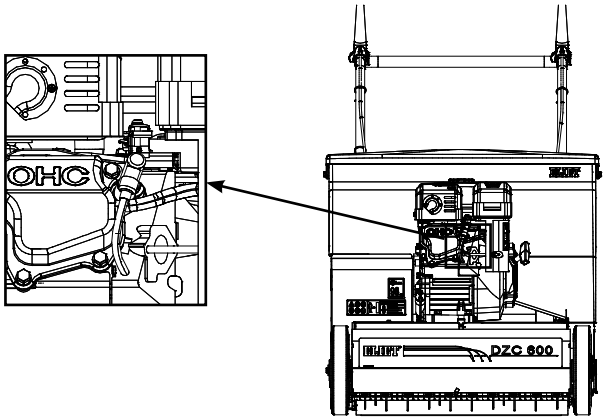


Warning:
Oil shortage causes severe damage to the motor (This type of defect is not covered under warranty).

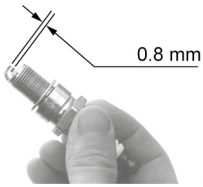
Warning:
Respect the environment: bring the oil to an authorised collection point for expert processing or recycling. Never pour oil down the drain.

11.3.5 Checking and/or changing the spark plug

- Make sure that the machine is secured in transport mode.
- Switch off the motor and let it cool down for a bit.
- The spark plug is at the front end of the DZC600.



- Pull off the cap from the spark plug.
- Clean off the area around the spark plug and rotate it out of the cylinder head
  (spanner size : Imperial 13/16 inches).
- Using a feeler gauge, check whether the distance between electrodes is 0.8 mm.
- The spark plug must be replaced if it shows heavy deposits or is very dirty.



Take the following steps to verify ignition quality:

1. Put the spark plug cap back on.
2. Grab the rubber of the spark plug cap and press the outermost electrode against a large part of the motor.
3. Pull the starter cord.
4. Meanwhile, check for sparks between the two electrodes.
5. If the spark is a clear, continuous, bright beam and is nicely centred between the electrodes, then the spark plug is still good.
6. Weak, irregular and not well-centred sparks indicate that the spark plug must be changed.

Caution:
Replacing an old spark plug or putting in a new one must be done with utmost caution, avoiding any possible damage to the screw thread in the cylinder.

- Secure the spark plug with a torque of 20Nm.

11.4 Machine maintenance

11.4.1 Visual inspection

It is essential before commencing the work that the machine undergo an inspection. This will allow you to anticipate breakage or wear and tear that affects the life span of the machines.

- Check whether the machine operates at the proper rotational speed at full throttle (3200 RPM)
- Never attempt to change the default settings of the motor.
- Inspect the blades. Blades may bend on impact with a hard object under the surface. To avoid damage to the lawn, these types of blades must be straightened out again (Read § "11.4.8 Checking the blades" on page 65)
- Check that there is no build-up of dirt in the blade compartment.
- Check if the depth setting needs to be adjusted to compensate for the wear and tear on the blades (read § "9.4.1 Machine set-up" on page 24)
- Check that the chains are lubricated enough (read § "11.4.2.3 Chains and gears" on page 57)
- Check that no parts have been deformed, that welded seams are not cracked and that parts are not excessively loose.
- If problems are found, carry out the necessary repairs or maintenance first.

Consult your authorised ELIET service centre for assistance if necessary or to obtain replacement parts. Find an ELIET service centre nearest you at **www.eliet.eu.**

11.4.2 General lubrication treatment

ELIET is committed to using high-quality materials that extend a machine's life cycle, despite the machine being subjected to what can be extreme working conditions.
For this reason, special lubrication products have already been applied in the factory. Periodical and regular lubrication will extend the machine's life and performance. During periods of drought, the frequency of lubrication treatments should be increased.

LOTS OF DUST => REGULAR CLEANING AND LUBRICATION

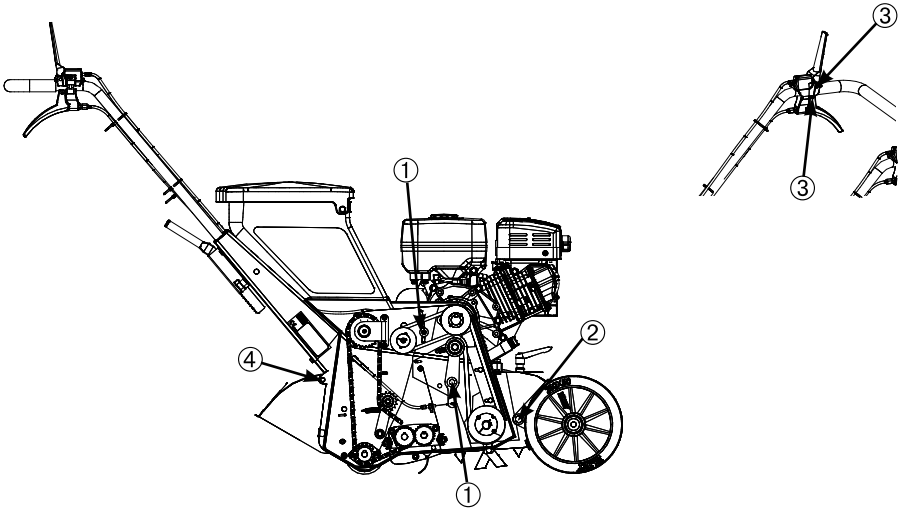
The parts below must be lubricated with care.
- Hinges (Read 11.4.2.1 Hinges 55)
- Bearings (Read §"11.4.2.2 Bearings" on page 56).
- Chains and gears (Read § "11.4.2.3 Chains and gears" on page 57).
- Friction surfaces (Read § "11.4.2.4 Friction surfaces" on page 58).

Caution:
As for other maintenance, the engine must be switched off and the starter key removed from the starter lock before performing any lubricating activities. Always lock the machine in transport mode beforehand. Protective gloves must be worn.

Caution:
Most lubricants are flammable. Always read the safety messages on the packaging. Keep away from open fire or hot objects when performing lubrication works.

11.4.2.1 Hinges

Hinges are places where two moving parts are attached to each other. Because this is a turning point, it involves friction. Friction without lubrication leads to wear, excessive play and finally in breakage. Some of these items require specific attention:



1. Hinge of the belt tensioners
2. Hinge of the front wheelbase (L & R)
3. Hinges of the levers
4. Hinges of the protective cover at the back (L & R)

Lubricating the hinges:

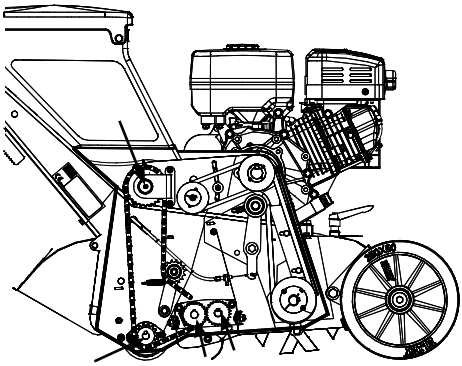
- To reach the points indicated, some protective covers and shields will have to be removed (Read § "15.1 Removing the protective covers" on page 71 if necessary)
- To avoid wear and subsequent play on hinges, lubricant must be applied to the contact surfaces that undergo friction.
- Before applying fresh lubricant, it is essential to first clean off any old, dirty lubricant and remove any dust sticking to the hinge.
- Where possible, the hinging parts must be disassembled for proper cleaning of all elements within.
- To dissolve lubricant,spray the product onto the hinging parts. Leave the product for a few minutes to enable it to perform its degreasing action.
- Wipe the parts clean. Repeat the procedure if necessary to ensure that the parts are complete-

ly clean.
- Make sure that all of the cleaning agent is either evaporated or wiped away.

- Apply new lubricant to the friction areas. Ensure that it covers the entire contact surface.
- ELIET recommends NOVATIO CLEARLUBE, a lubricant with an extremely long operating time, great adhesion and resistant to high pressure. It is available in spray cans for easy application.
- Reassemble the hinge and fasten all parts.

11.4.2.2 Bearings

Bearings' biggest enemies are an excessive load, dirt and lack of lubrication. Sowing machines are not the best media to guarantee a long bearing life. Regular maintenance is therefore required.



- To reach the points indicated, some protective covers and shields will have to be removed (Read § "15.1 Removing the protective covers" on page 71 if necessary)
- The bearings have dust seals to keep the dirt out. However, the lubricant applied on the bearing at the factory will also become old and dry. To compensate this lack of lubricant, new lubricant must be added from outside.
- To prevent any dirt from penetrating the bearing together with the lubricant, the bearing must be cleaned first.
- Spray NOVATIO KLEENSPRAY onto the bearing seals and joints. The liquid will soak off any dust attached to the bearing.
- Leave the cleaning liquid to work for a few minutes.
- Remove all the dirt clinging to the bearing with a soft cloth.
- Apply a second round of spray to the bearings, particularly on the joints. The cleaner will dissolve the grease that has dried up in the joint. This is necessary to ensure that new grease can penetrate the joint.
- Blow compressed air into the bearing joints to enable the KLEENSPRAY to expel all the dirt.
- Wipe away all the spray and wait 10 minutes to allow any residue to evaporate.
- Now apply a new layer of lubricant. Spray good amounts of NOVATIO PTFE OIL into the joints

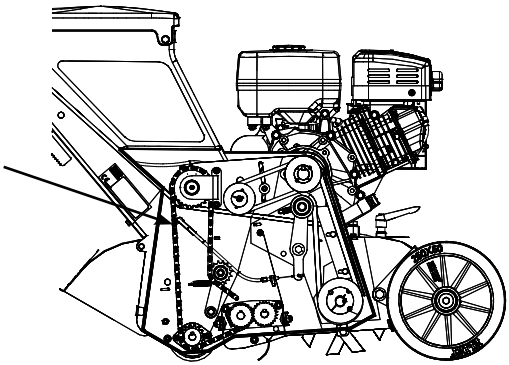
of the bearing seals and the bearing bushing.

- This is a thin lubricant with great penetrating properties. It is corrosion resistant and moisture and dust repellent and also has great lubricating properties, even at high temperatures.

11.4.2.3 Chains and gears

The chain grease applied will have worn away after a certain time, or dirt and dust will be stuck to it. Regular lubrication is needed to prevent wear and tear on the chain transmission. The DZC600 includes one Simplex chain for transmission from the rollers to the rotating seed distributor.

- To reach the points indicated, some protective covers and shields will have to be removed (Read § "15.1 Removing the protective covers" on page 71)
- It is useful, before lubricating the chain, to first clean off the chain and wipe away any old lubricant cluttered with dirt and debris. The use of KLEENSPRAY may help to soak off and dissolve any old grease.

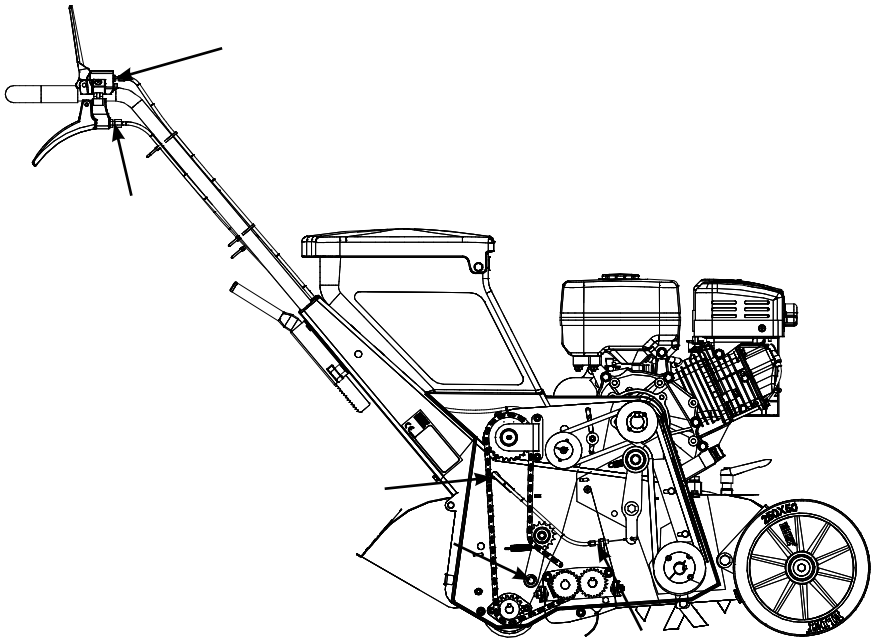


- Wipe away any old grease before applying new lubricant.
- So as to prevent the lubricant from wearing away all too quickly due to the rotation of the line shaft or the gravitational pull of the line, we opt for a less viscous, and more adhesive oil.
- Since both the chain inside and the contact surface with the gears need to be lubricated, ELIET recommends using a combination of two lubricants.
- NOVATIO PTFE OIL, is very viscous and will easily penetrate the chain links.
- NOVATIO CLEARLUBE, a more viscous oil, will cling to the outside of the chain. This lubricant diminishes the friction between the chain and the gears.
- When replacing the protective cover, ensure proper closure to keep the inside free from dust.

Caution:
Particularly in periods of dryness, where dust production while working is important, you will need to run an inspection and lubricate the chain after each session.

11.4.2.4 Friction surfaces

Friction surfaces are all machine parts subject to wear from lateral friction with other parts. Here, too, the message is to apply a film of lubricant between the rubbing parts that will reduce movement resistance and minimise wear. These surfaces include:



Cable guides
Guiding the chain tensioners

- Proper functioning of the control levers is crucial and regular lubrication of the cables is therefore of vital importance.
- In particular during dryer periods, operating the machine will produce a lot of dust that settles

everywhere, including on the cables.

- Prior to lubricating, the cables must be cleaned. KLEENSPRAY is again an ideal tool.
- Also spray it into the cable guide and simultaneously move the cable back and forth to ensure that the cleaner penetrates the guide.
- Use compressed air to clean the cable guide of both cleaner and dirt.
- Repeat this procedure until the guides are completely clean.
- New lubricant may now be sprayed into the guide. ELIET recommends NOVATIO PTFE OIL.
- The procedure is the same for all other friction surfaces mentioned earlier: first loosen old lubricant with KLEENSPRAY and wipe it away.
- Then spray NOVATIO PTFE OIL on the friction part.

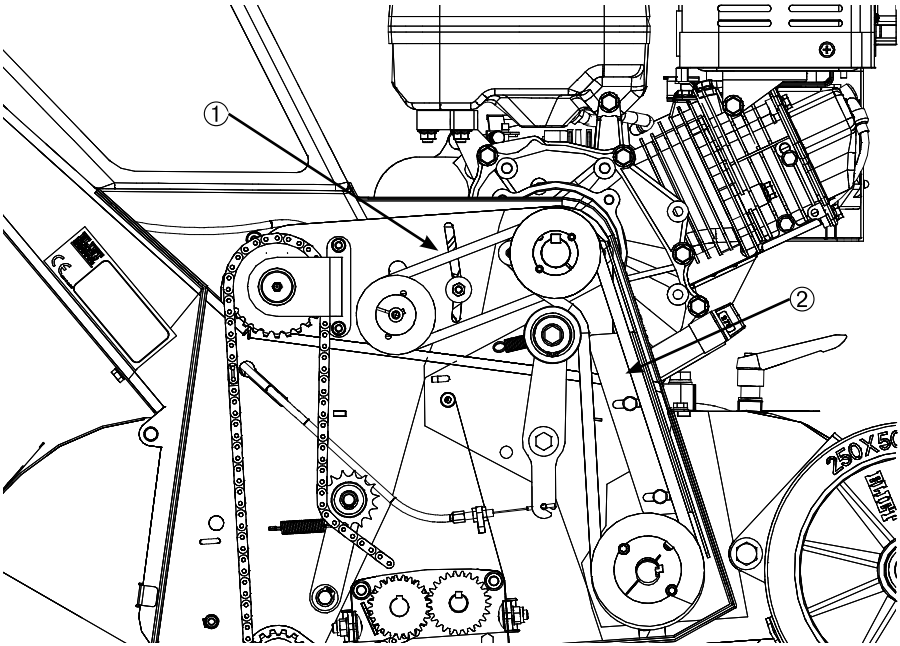
All lubricants indicated are available from your authorised ELIET dealer.

11.4.3 Belt tension check and adjustment

The DZC600 contains 2 belt drives:

1. Belt drive of the engine crankshaft to the angular gearbox.
2. Belt drive for blades

The following describes the procedure for tightening the belts.



Caution:
Belt tightening must be done with the engine switched off.

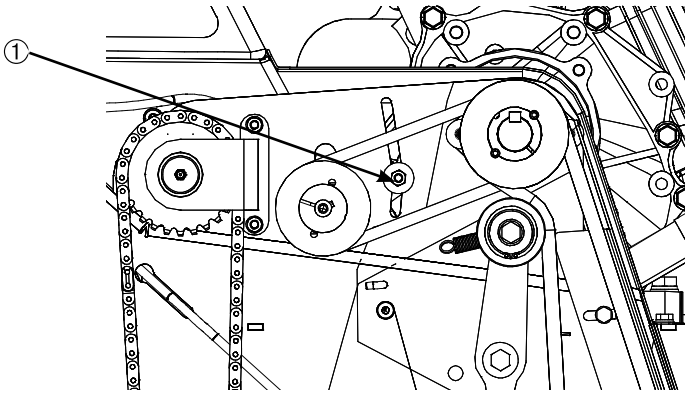
Caution:
Always wear suitable clothing for performing this type of maintenance.

First belt drive (engine - angular gearbox)

This is the primary belt drive which transmits the full engine power to every powered element in the machine. This belt is permanently under tension. The transmission cannot be disengaged.

Should you ever feel as if the machine loses power when operating under load, or you hear a squeaking sound coming from the belt, it is best to check the belt tension, because this is often a sign that the belts are too loose and are slipping:

- To re-tighten the belt, the belt cover needs to be removed (see § "15.1 Removing the protective covers" on page 71).). The ideal belt tension can be tested as follows: when the back of the belt is pressed halfway the belt centre distance between the two pulleys with a force of 8 kg, the inward movement should not exceed 10 mm.
- If you are able to press it in any further, then the belt needs to be re-tightened.
- The belt tension can be adjusted by loosening the centre bolt M6 (1).



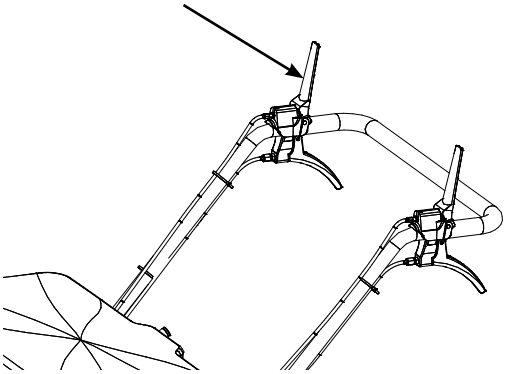
- By moving the bolt downwards, the belt tension will increase. By moving the bolt upwards, the belt tension will decrease.

- Re-attach the bolt once the belt has the correct tension.

After performing this maintenance, the belt covers can be remounted like they originally were.

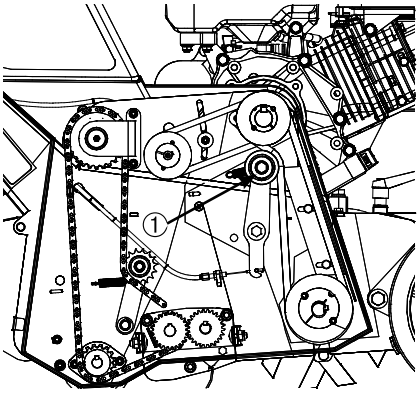
Second belt drive (blade drive)

These belts can be tightened with a flat tensioning roller that is pulled against the back of the belt while pushing down the lever that engages the blades. This belt drive transmits power to the blades and, thus, also carries the heaviest load. It is also a belt transmission that is frequently switched on and off, and it is therefore subject to slippage.

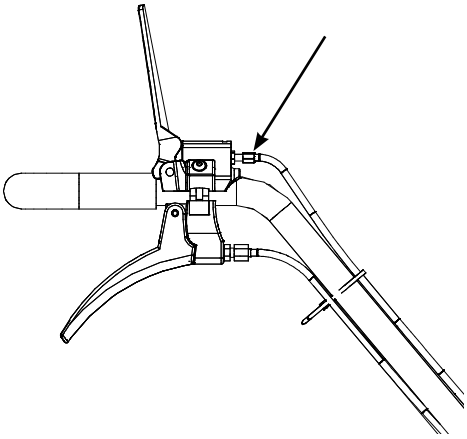


- If the belt starts to make a squeaking sound, or if the lever resistance is too low, it is clear that the belt tensioning roller needs to be adjusted.

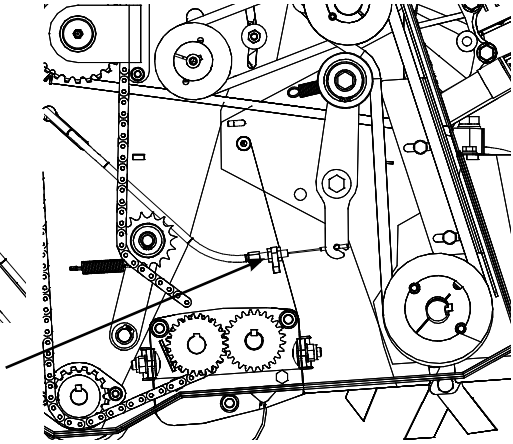
- To re-tighten the belt, the first cover on the left-hand side of the machine needs to be removed (see § "15.1 Removing the protective covers" on page 71).



- You will know that you have reached the proper amount of tension if, just before fully pushing down the lever (with 20 mm to spare up to the handle), the belt tensioning roller (1) is already fully pressed against the belt.
- If this is less than 20 mm, the force of pressure from the tensioning roller will need to be increased by adjusting the length of the starter cord.



- The cable guide provides two control options. One close to the lever and one near the belt drive. .



- Remove the M6 lock nut (10 mm spanner) and rotate the control guide counter-clockwise a few times. Use a spanner (size 9) if necessary.
- Next, test the belt tension, and adjust as needed.
- Afterwards, secure the lock nuts tightly so that vibrations cannot cause the setting to become distorted again.

After performing this maintenance, the belt covers can be remounted like they originally were.

11.4.4 Belt replacement

After many hours of operation, the belts may wear and require replacement. Replacement parts must always be obtained from an authorised ELIET dealer.

Belt 1 : (motor crankshaft – mitre gearbox transmission) BA 521 404 870
Belt 2 : (blade drive): BA 527 708 3801

Follow the procedure below for replacing the belts:

Caution :
Belt tightening or replacement must be done with the motor switched off. Remove the key from the starter lock as a precaution.

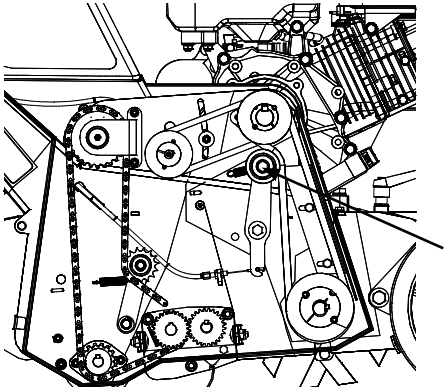
Caution :
Always wear suitable clothing for performing this type of maintenance.

- To detach the first belt drive, the belt drive of the blades needs to be detached first.
- To reach the belt, the belt case needs to be removed (see § "15.1 Removing the protective covers" on page 71)
- Remove the M6 lock nuts (10 mm spanner) and rotate the control guide counter-clockwise a few times. Use a spanner (size 9) if necessary. This will reduce the belt tension to a minimum.
- The belts will now be loose, and can be removed easily.
- Next, loosen belt 1 (engine crankshaft - angular transmission) by loosening the central nut and sliding the bolt up as far as possible. The belt will now be loose, and can be removed easily.

•• Before positioning the belts, check whether they are of the same type and length.
- Now re-apply the proper amount of belt tension (see §"11.4.3 Belt tension check and adjustment" on page 59)
- After calibrating and testing the belt tension, place the protective covers back on.

11.4.5 Replacing the belt tensioning roller

The machine has 1 belt drive that is provided with a decoupling mechanism via a tensioning roller. After many hours of operation, the tensioning roller may show signs of wear and tear on the bearing and tread. This may contribute to increased wear and tear on the belts and cause the machine to break down. To prevent this, the tensioning roller will need to be inspected regularly and possibly replaced as a precaution.



Caution :
For performing this maintenance, switch the motor off and pull the spark plug cable from the spark plug.

Caution :
Leave the tensioning roller to cool down before disassembling it.

Tensioning roller of the blade drive

The roller that tightens the belt in is under extreme pressure :
:

- The runner rotates against the belt at 2300 RPM.
- Due to friction with the belt the latter becomes very hot; lubricants become liquid and will leak from the bearings as a result.
- During periods of drought, dust will inevitably develop when operating the machine. Stand and dust will find their way into the bearings and cause damage.

Due to the combination of these three factors the tensioning roller is sensitive to wear. Regular lubrication can counter accelerated wear.
As soon as the bearing starts to make a growling sound, we recommend to replace the tensioning roller as a precaution. Failure to do this will result in blockage of the tensioning roller and consequently, damage or breakage of the belt.

How to proceed:
- Disassemble the front protective cover on the left side of the machine. (Read § "15.1 Removing the protective covers" on page 71)
- Loosen the centre bolt (M6) from the tensioning roller, while holding the nut on the back side of the tensioning roller's holder in place.
- If there is any serious damage or wear and tear on the tread, the tensioning roller should be replaced. The tensioning roller can be ordered from an authorised ELIET dealer.
- If the tread exhibits no severe wear and tear, then you should only replace the bearings.
- For stability purposes, this tension roller is provided with two bearings.
- On the front of the roller, you will notice a safety clip, which secures those bearings in the compartment. Using a special tong, you will be able to remove the safety clip.
- Using an axle and a hammer, the bearings can be tapped out of the compartment. To simplify this, you can spray some penetrating oil onto the bearings beforehand.
- The replacement bearings can be ordered from an authorised ELIET Service Centre.
- Press the new bearings into the compartment evenly. For this, press on the outer casing of the

bearing, taking particular care not to damage the dirt seal.
- Once the two bearings have been pushed entirely into the back of the compartment, secure them into place by putting the safety clip back into the groove.
- Apply some extra lubricant to the bearing joints to avoid dirt entering at the new tensioning roller.
- Re-assemble everything to its original position and securely tighten the tensioning roller.
- Remount the black cover plate. (Read § "15.1 Removing the protective covers" on page 71).

11.4.6 Chain tightening

The DZC600 has 1 chain drive, and that is the chain which powers the rotating disk in the seed container as soon as the machine begins to move.

- Its capacity and RPM are very limited, hence the choice for a single (Simplex) chain.
- This chain may turn forwards or backwards, depending on the direction the machine is moving in. Therefore, a chain tensioner which works in both directions has been provided.
- The chain tensioner keeps the chain continuously tight, so re-tightening the chain is not needed.

11.4.7 Replacing chains and gears.

If the teeth are worn the sprockets and chain must be replaced. Visit your authorised ELIET dealer for assistance.

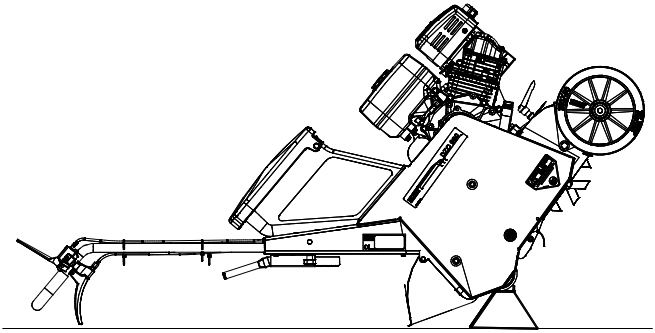
11.4.8 Checking the blades

Caution :
When performing this type of maintenance, always wear safety gloves and safety goggles.

- After each session, the blades must soon be subjected to an inspection.
- Before performing a blade inspection, make sure that the motor is always switched off and the spark plug cable is detached from the spark plug.

- To see the blade axle clearly, the DZC600 should be positioned in easy clean.

- Manually twist on the blade axle and, then, check to see that there are no blades that have



become bent. A blade may have been bent or twisted after impact with a hard object just below the surface.
- Bent blades do not always need replacing; rather, they can be bent back to their original shape.
- At the ELIET dealer, a special wring rod can be ordered for this:

For your information:
This check is a good opportunity to clean the blade compartment.

11.4.9 Replacing the blades

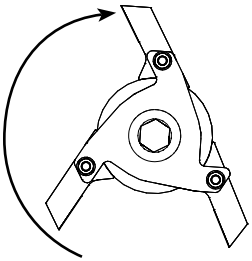
The blades of the DZC600 are individually bolted onto the blade disks. Each blade can be replaced individually.

Caution :
Replacing blades must always be done with the motor switched off. Carefully pull off the cap of the spark plug.

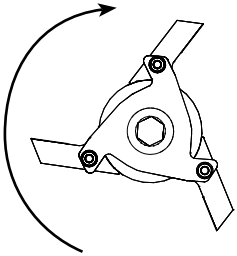
Caution :
Always wear suitable clothing for performing this type of maintenance.

- When mounting new blades, please pay attention to the following two points:
  - During the original assembly, the blades of the overseeding machine have been perfectly positioned for overseeding work with the machine. This position is such that 2 blades per blade disk will cut grooves into the soil in which the grass seed will be injected, while the third blade has been assembled in a scooping position.

Blade position
overseeding



Blade position
scarifying

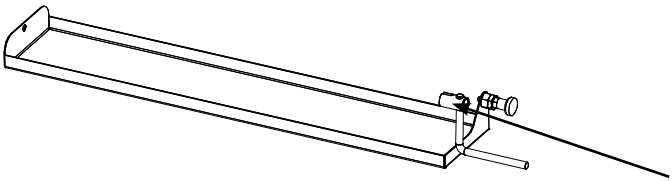


Assemble the blades in the position of your preference.

12.Storing the machine

When storing the machine for an extended period, we recommend that you follow the steps below:

- Clean the entire machine thoroughly. (Read §"9.7 Cleaning the machine" on page 35).
- Ensure that the seed container has been fully emptied before storing the machine. Any remaining seeds in the seed container or seed duct may germinate and block the seed flow. The model with a seed collector vessel has a small rotating device, which enables you to rotate the seed distributor manually. This way you can completely empty the seed container.



- Carry out a full service (see § "11.2 Maintenance schedule" on page 47).
- Check all nuts and bolts and tighten them where necessary. Most bolts require the use of two spanners of 10, 13, 14, 17 or 19 mm and wrenches 4, 5 or 6.
- Empty the fuel tank either by running the engine until the machine runs out of fuel, or by using a siphon to pump the petrol back into the jerry can (read the safety instructions under §"9.4 Preparing the machine" on page 24).
- Remove the spark plug (see § "11.3.5 Checking and/or changing the spark plug" on page 52). Spray a little penetrating oil on the basis of MoS2 into the cylinder cavity. Pull the starter cord until the piston is in its uppermost position. Replace the spark plug.
- To avoid rust on the machine touch up all chipped areas or treat them with anti-rust grease. Original paints/enamels in the appropriate colours are available from your ELIET dealer.
- Store the machine in a dry storage area, away from possible rain. If necessary, cover it with canvas.
- If the machine is stored outdoors, it must be properly covered with canvas. Avoid direct precipitation on the machine. ELIET highly recommends a sheltered storage place.

13. Equipment specifications

DZC 600	
Measurements	155 x 76 x 102 cm
Weight	124 kg
Motor	Subaru EX27
Power	9 HP
Type engine	Petrol
Operations width	550 mm
Number of blades	57
Type of blades	Permanenty sharp blades™
Blade spacing	25 mm
Depth adjustment	recommended 10 tot 15 mm
Seed transportation	Helix Seed Duct™
Clutch	Belt
Transmission	Belt
Seed hopper capacity	70L
Seedoutput adjustment	0 to 31 gr/m^2
Driving speed	2,4km/h
	4 km/h < 0 > 4 km/h

14. EC Declaration of Conformity

Machine: **Overseeder**
Model: **ELIET DZC 600**
Type: **MA 028 010 438**
MA 028 011 438

This machine has been designed and manufactured to comply with the folowwing European CE regulations:

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

The ELIET machine factory hereby declares that after perfomring a hazard analysis, it is fully aware of the potential hazards and risks associated with the machine. In this knowledge, the necessary steps have been taken in line with Machine Directive 2006/42/EG in order to ensure absolute operator safety for the operator, when the machine is used correctly.

The sound power level and the guaranteed sound power level have been determined in accordance with the measurements in European directive 2000/14/EG annex III and based on certain measurement instructions of EN 13684..
Sound power level Lw(A) : 96dB(A)
Guaranteed sound power level Lw(A) : 97 dB(A)

Date : 01/06/2014
Signature :

Frederic LIETAER
Managing director ELIET EUROPE NV

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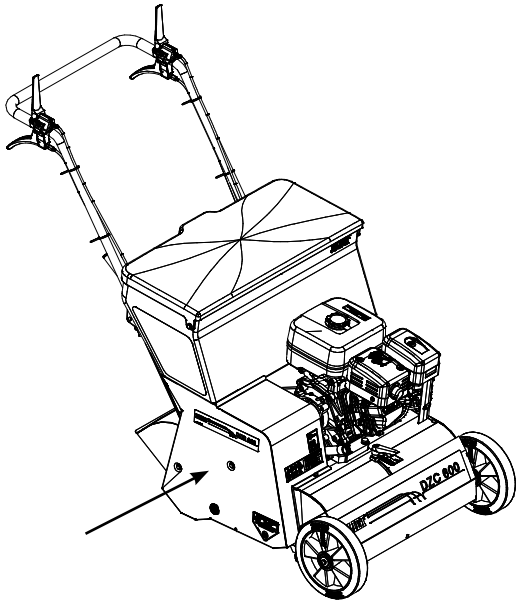
15. Annexes

15.1 Removing the protective covers

- Before performing any maintenance, the protective covers must be removed in order to reach the machine parts or drives that require attention. Proceed as follows:



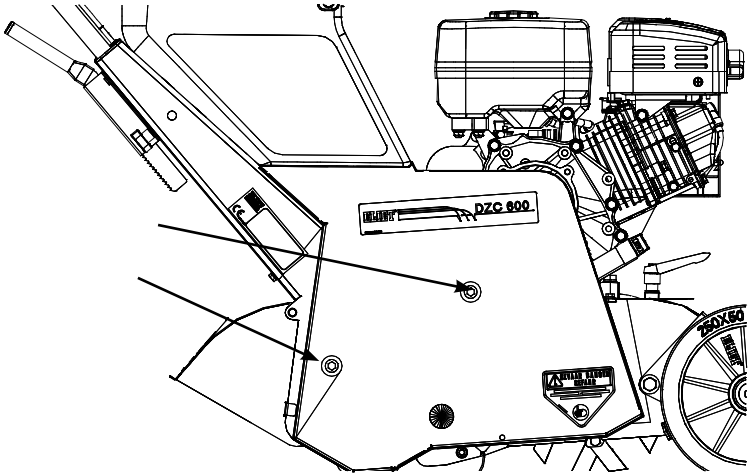
Caution :
Removing protective covers is considered to be maintenance. Consequently, the motor must be turned off and appropriate clothing must be worn.

Caution :
Protective covers are intended to shield off dangerous areas to avoid accidents. It is therefore strictly prohibited to operate the machine or to activate the motor or any drive with any protective cover removed.

Caution :
Anyone who removes a protective cover acknowledges that he /she is creating a potential hazard and, thus, is responsible for guaranteeing his / her own safety and that of others in these situations by removing the starter key from the lock to avoid that others could start the machine against his will.

Caution :
Make sure the cables are not jammed between the chassis and the protective caps before replacing the caps.

To remove the protective cover, loosen the 2 x M6 bolts on the front plate.



15.2 Hazard analysis

Please find below a list of hazards and risks connected with transportation or operation of this overseeder. Take good notice of these dangers and avoid risks by following the instructions in the manual. Beware that risks are not limited to the operator: bystanders can be exposed as well. Ensure that bystanders are always kept at a safe distance.

- Danger of flying debris during overseeding activities.
- Injuries from flying debris from the outlet while the machine is being used without a collector.
- Injuries from flying debris while lifting the machine into transport mode.
- Bruises or injuries when the machine is lowered, namely at the transfer point between transport mode and work mode.
- Danger of cuts to the feet when engaging the blades with the machine locked in transport mode.
- Injuries from contact with the blades when reaching under the machine.
- Injuries from contact with the blades during deblocking, maintenance or cleaning activities.
- Squeezing or jamming when the seed reservoir lid slams shut.
- Reaching into the rotating drum in the seed reservoir introduces the risk of fractured or bruised fingers.
- Reaching into chain drives when removing chain covers introduces the risk of fractured, entangled or severed fingers or limbs.
- Reaching into belt drives when removing belt covers introduces the risk of fractured, entangled or severed fingers or limbs.
- Spraining of feet or knee joints when lower limbs get stuck under the swivel caster or anti-scalping roller.
- Injuries caused by the machine toppling over as a result of unsafe transport.
- Physical injury can occur when traversing a terrain that cannot support the weight of the machine.
- Heat exhaust or heat from the engine can cause scorching.
- Rubbish build-up around the exhaust or poor cleansing of the engine creates a fire hazard.
- Petrol spills also create a fire hazard.
- Heavy inhalation of exhaust fumes can induce intoxication.
- Air passages and the lungs are prone to irritation from breathing in dust particles produced during operation.
- Hearing loss as a result of not wearing the proper ear plugs or hearing protection during operation.
- Nerve damage or rheumatic disease can develop when exposed to the jarring for too long, without pausing for breaks.
- Back problems caused by lifting the machine in an irresponsible way.
- Risk of perforation of the skin or senses by the oil jet when a hydraulic component breaks.
- ...

The list is not exhaustive and is only provided as information in relation to the operator's safety.

15.4 List with torque values

BOLT HEAD ACCORDING TO DIN 931, DIN 912, ...

		Strenght (Nm)	
strongness thread		**8.8**	**10.9**
Normal 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 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

(friction factor μ = 0,14)

15.5 Warranty conditions

Dear Customer,

We thank you for purchasing an ELIET product. Congratulations on your purchase of this machine which is sure to meet your expectations and needs over the coming years. At Eliet, we do everything to ensure that our products function correctly. That is why your product qualifies for a two year guarantee.

What is warranty ?

At Eliet, we have strict quality rules on designing and manufacturing products. The priorities given by these rules are to guarantee a long service life and permanent safety. That is why at Eliet, we are willing to repair at no charge hidden defects or faults during the whole run-in period (aka the warranty period), provided the prescribed procedure is followed.

Warranty conditions

ELIET's warranty obligations for new machines is governed by the following conditions.

I. Warranty period

The warranty period starts the day the dealer delivers the machine to the customer (maximum one week after the purchase) and expires :

- after two years of private use.
- after twelve months or 100 running hours of rental use.
- after twelve months or 100 running hours in semi-professional or in professional use.

To be eligible to obtain warranty the customer is invited to register the newly purchased machine with ELIET. You should complete the registration card online on Eliet's webiste : **www.eliet.eu.** If you don't have access to the Internet, please complete the attached registration card in its entirety and return it to ELIET.

II. What is covered by the warranty ?

- Wear items are not covered by the warranty conditions : (such as blades, bearings, belts, chains, gearwheels, tyres, bulbs, fuses, etc).
- If failures are found to be caused by improper use, neglect or consequential damages by an external source (fall, foreign objects, accident).
- If failures are found to be caused by improper maintenance of the machine, that is not in accordance with the prescribed periodic maintenance.
- When a defect is caused by improper repair made by anyone other than an authorized ELIET dealer or after using not genuine Eliet service parts.
- When the defect is caused by making improper changes to the original design of the machine.
- When the fault develops when the machine has been used not in accordance with the instructions contained within this manual.
- When the prescribed warranty procedure has not been adhered to or when the warranty

period has expired.
- For all problems relating to the motor, please contact an authorized service centre of the engine manufacturer.

III. Procedure
- **Step 1 :** On the date of purchase, the customer should register his/her purchase online by completing the registration card at **www.eliet.eu**. In addition, the enclosed registration card should be completed in its entirety on the day of purchase. The first part of the form should be returned to ELIET within one month. The customer should keep all remaining parts of the card along with the purchase invoice for the duration of the warranty period.
- **Step 2:** In the event of a defect becoming apparent, the customer shall have this verified by the authorized ELIET dealer. If the dealer feels that there is a factory defect, the dealer may invoke the warranty, under the terms specified.
- **Step 3 :** Every warranty application must be accompanied by a fully completed official application form. Copies of this warranty application are available to dealers at ELIET or even at an importer/agent.
- **Step 4 :**The dealer then orders the parts needed to perform the repairs. Next, the dealer faxes the order form together with the completed warranty form and a copy of the registration card.
- **Step 5 :** The warranty form should be stapled to the purchase invoice and mailed to ELIET or an importer/agent of ELIET.
- **Step 6 :** ELIET will send the parts ordered to the dealer under the regular delivery and payment conditions.
- **Step 7 :** The defective part will be examined by the technical department first prior to approving or rejecting the warranty. ELIET reserve the right to solely decide whether or not the customer has complied with the conditions for the validity of this guarantee, i.e. 1 year or 2 years. Faulty components shall become the property of ELIET.
- **Step 8 :** When a warranty claim is found to be valid, ELIET will credit the warranty parts. Customers shall never be entitled to apply for a refund of labour costs.

IV. In case of damage caused by transport
- All goods are supplied ex factory. Transport risks are borne by the customer. It follows, that ELIET highly recommend to check the goods for damage on arrival.
- Any damage found should be stated on the delivery form before signing. Make sure the driver of the haulage company puts his signature next to the damage on your copy.
- In the absence of a written and signed declaration on the delivery form, the insurance of the haulage company will not accept any liability.
- Damages can be claimed from the hauler using a copy of the delivery form and a covering letter stating your complaint.
- The damaged machine should be kept in its original condition until the hauler's insurer has performed any examination.