GAMUL
powered by LUMAG

PETROL SWEEPER

original operating instructions

GAMUL K6

CE

DANGER!

The machine is delivered without engine oil and without fuel.

Both the model number and the serial number can be found on the rating plate on the machine. You should keep both numbers in a safe place for future reference. This manual explains the functions and uses of the machine.

FOR YOUR SAFETY

Before commissioning, read the operating instructions, safety and Warnings must be observed!

overview

1. Foreword

Before assembly and before commissioning, read the entire text of the operating instructions. Use these instructions to familiarize yourself with the machine, its correct use and the safety instructions.

1.1 Information on the operating instructions

This operating manual provides important information on how to use the GAMUL K6 sweeper. The prerequisite for safe work is correct compliance with all safety instructions and handling instructions. In addition, the local accident prevention regulations and general safety regulations applicable to the area in which the machine is used must be observed.

1.2 Limitation of Liability

We have endeavoured to provide you with as much information as possible about accident prevention when operating the machine, but we accept no liability for incomplete information on the danger points and sources listed.

The manufacturer assumes no liability for damages resulting from:

– Failure to follow the operating instructions
– Improper use of the machine
– Improper assembly, commissioning, operation and maintenance of the machine
– Operating the machine with defective safety devices or not properly installed or non-functional security and protective devices
– Failure to observe the instructions in the operating manual regarding transport, storage, function, operation, maintenance and care of the machine
– Unauthorized structural changes to the machine
– Defective surveillance from machine parts, the one wear and tear subject to
– Improperly performed repairs
– Disasters caused by foreign bodies and force majeure

1.3 Designation of machine

The Designation machine replaced the Trade name of the item to which this operating manual – see cover page – refers.

1.4 Copyright

1.5 Reservations

Information on technical data, dimensions and illustrations of the machine, as well as changes to safety standards, are subject to further development and are therefore not binding for delivery in every case.

Subject to printing and wording errors.

2. Intended use

use

The GAMUL K6 hand-held sweeper – including the optional attachments approved by the manufacturer – was specially developed for the maintenance and cleaning of paved outdoor areas (e.g. courtyards, parking areas, sidewalks), as well as for winter service.

The machine is suitable for sweeping or collecting loose dirt (if a waste collection container is attached). If the snow plow is attached, the machine can also be used to clear snow.

The machine is equipped with brushes as standard. The machine's sweeping brush can be swiveled to the left or right using a rod. A mounting system allows the machine to be equipped with a waste collection container (optional) and a snow blade (optional).

The machine's chassis is mechanically driven by engine power. The engine is suitable for use on slopes up to an incline of 20° (37%).

The machine is not intended for road traffic.

The machine is not designed for commercial use.

The general rule is: keep highly flammable substances away from the machine (risk of explosion/fire).

WARNING!

Danger through not intended use Use.

Any use of the machine other than that described in the intended use may lead to dangerous situations.

- The machine may only be used for its intended purpose in accordance with the information in this document, particularly in compliance with the application limits specified in the technical data.
- Do not use the machine for any other purpose or in any other way.
- Conversion, refitting or modification of the construction or individual equipment parts with the aim of changing the the area of application or the usability of the machine.
- Improper operation of the machine (misuse).

Claims of any kind for damages resulting from improper use are excluded.

The operator is solely liable for any damage caused by improper use.

Foreseeable misuse

WARNING!

Injury due to misuse.

Misuse of the machine can lead to dangerous situations for persons and cause serious damage to property.

- Avoid any misuse of the machine.
- The machine never:
  - use other than as intended (-Intended use) in enclosed spaces, such as halls
  - or stables
  - use on unpaved surfaces, such as gravel roads
  - on roofs or flat roofs use
  - use in insufficient lighting
  - use in rain, snowfall and frozen ground
- The following is particularly prohibited:
  - Collect burning or smoldering objects.
  - Collect wires, cables or large stones. (Risk of damage to the machine and risk of injury!) Push objects under the
  - sweeping brushes with your foot to push. (Risk of injury!)
  - Collect materials that could block the sweeping brushes. (Property damage!)

-Staying in the danger zone is prohibited.
Operation in potentially explosive environments is prohibited.

DANGER!

Persons who are not familiar with the operating instructions, children, young people and persons under the influence of alcohol, drugs or medication are not permitted to operate the machine.

Suitable coverings

- asphalt
- industrial floor
- screed
- concrete
- paving stones

3. Security

This section provides a comprehensive overview of all important safety aspects for adequate protection of the operator as well as for safe and trouble-free operation.

Failure to follow the instructions and safety information contained in this manual may result in significant hazards.

3.1 Warnings

Warnings are marked with symbols in this operating manual. The safety instructions are introduced by signal words that express the extent of the danger.

The instructions must be strictly followed to avoid accidents, personal injury and property damage.

DANGER!

Failure to follow these instructions may result in serious danger to life or death.

WARNING!

Failure to follow these instructions may result in death or serious injury.

CAUTION!

Failure to follow these instructions may result in minor to moderate injury.

IMPORTANT NOTE!

Failure to follow these instructions may result in damage to the engine or other property.

3.2 Safety instructions

WARNING!

Familiarize yourself with the machine. Proper training is a prerequisite for working safely with this machine. Machines that are operated incorrectly or by untrained personnel can be dangerous.

Read the operating instructions for this machine carefully and observe the labels on the machine. Familiarize yourself with the application and limitations as well as the specific potential hazards associated with it.

Also, familiarize yourself with the controls and how to use them properly. Learn how to stop the machine and turn it off quickly. Inexperienced operators must be instructed by personnel who are familiar with the machine. Only then may they operate the machine.

In addition to the occupational safety instructions in this operating manual, the safety, accident prevention and environmental protection regulations applicable to the area of application of the machine, as well as the road traffic regulations, must be observed.

responsibility of the operator The operator must make the operating manual available to the operator and ensure that the operator has read and understood it. The operating manual must be handed over. In addition, the operator must train the staff at regular intervals and inform them about the dangers involved in using the machine.

Furthermore, the operator is responsible for ensuring that the machine is always in technically perfect condition.

operator's responsibility
Only trained persons may start, operate and switch off the machine. The operator must be trained in the correct operation of the machine and be familiar with the necessary safety devices be. trusted

Inadequately informed operators can endanger themselves and others through improper use.

First-time users should seek instruction from the seller to familiarize themselves with the characteristics of the machine, its intended use and the necessary safety devices.

operating personnel

WARNING!

Persons who are not familiar with the operating instructions, children, young people under the age of 18 and people under the influence of alcohol, drugs or medication are not permitted to operate the machine. Young people aged 16 and over may use the machine as part of a training course and under the supervision of a trained person.

The machine is designed to be operated by one person only! Two or more people must never operate and load the machine.

It is forbidden for children or other people to remain in the danger area during the work process. Also watch out for animals.See... SAFETY / Danger zone (3.6).

The machine may only be operated outdoors and not in enclosed spaces.

The operator is liable for all damage to third parties and their property.

work area
Working with the machine requires a high level of attention.

- Good visibility and lighting conditions must be ensured at the workplace.**Poor lighting can significantly increase the risk of injury!**
- When working with the machine, always ensure you have a secure footing and a natural posture.
- Remove foreign objects from the work area. **When sweeping, dirt, stones and branches can be thrown up.**
- Keep third parties away from the danger area.

Operation

Only use the device if it is in perfect technical condition.
Do not override safety and protective devices.

Keep hands and feet away from the sweeping brush.

Only work when you are in good physical condition.

Carry out all work calmly and carefully.

Operate the machine over as level terrain as possible.

The driving speed always the corresponding environmental conditions to-
Only operate the machine at walking pace.

Do not work on slopes with an incline of more than 20°.

Always work across the slope.

machine not in quite or partially closed work areas operate.

Danger of poisoning!

Mufflers and the areas around the muffler can become very hot during operation and remain hot for a long time even after the engine has been switched off.**Danger of burns!**

Do not leave the machine unattended.

Motor immediately turn off at noticeable Changes in the behavior of the machine.

Observe local regulations regarding quiet zones.

end of work

During repair or maintenance work, as well as when leaving the workplace:

- Turn off the engine
- Wait for the sweeping brush to stop

-Close the fuel tap

-Remove the spark plug connector

3.3 Personal protective equipment (PPE)

When handling the machine, it is essential to wear personal protective equipment (PPE) to minimize risks to the operator. The following protective measures must be observed:

– Tight-fitting**work clothes**that does not hinder movement. It is primarily used to protect against being caught by moving parts.
– **soundproofing agents**such as hearing protection, earmuffs, etc. to protect against hearing damage. **ATTENTION! Noise can be harmful to health. If the permissible noise level of 80 dB(A) is exceeded, hearing protection must be worn.**
– **face mask** for the Protection before Respiratory diseases to retain fine dust or particles.
– **safety glasses with side protection**to protect the eyes from dust or splinters.
– **work gloves**made of sturdy leather to protect against sharp edges, splinters or excessive vibration.
– **safety shoes or boots**with steel caps to protect against uneven, sharp-edged surfaces or falling objects. The safety footwear also ensures a secure stand.
– **protective helmet**to protect the head from falling parts and swinging loads.
It can also protect against injuries in confined situations.

3.4 Safe handling of operating materials/ refueling

DANGER!

Internal combustion engines pose a particular danger during operation and when refueling. Read and observe the warnings in the engine's operating manual and the safety instructions in this manual.

Do not start or run the engine indoors, in a garage or in a confined space. The engine's exhaust fumes contain poisonous carbon monoxide. Being in an environment containing carbon monoxide can lead to unconsciousness and death.

Before refueling, switch off the engine and let it cool down.

Smoking and any open fire are not permitted.

The fuels may contain solvent-like substances. Avoid skin and eye contact with mineral oil products. Wear gloves when refueling.

refueling
When refueling, be careful not to spill fuel or oil or get it on your clothing. If fuel or oil is spilled, clean the machine immediately. If fuel gets on your clothing, change your clothes immediately.
Make sure that no fuel or oil gets into the ground (environmental protection!). Use a suitable base.

Carefully loosen the tank cap so that the existing pressure in the tank can slowly dissipate. Check the fuel lines, tank cap and tank for leaks or cracks. The machine must not be operated if there is such damage.

Close the tank cap properly after refueling.

To start the machine, change location (at least 3 meters away from the refueling area).

Fuels cannot be stored indefinitely. Only buy as much as you plan to use in a few months. Do not use old fuel!

Transport and store fuel and oil only in approved and marked canisters.

Do not transport or store fuel and oil near flammable or easily combustible materials, sparks or open flames.

Never operate a machine with a damaged ignition cable and spark plug cap.**Danger of sparking!**

fuels and oils are according to Safety regulations must be kept out of the reach of children.

3.5 Service/Security

WARNING!

Repair, setup, maintenance and cleaning work, as well as transporting the machine, should only be carried out when the drive is switched off and the tools are at a standstill. In the event of a malfunction, the drive must always be switched off and the spark plug connector removed.

Do not perform maintenance, cleaning or adjustments while the machine is running. Moving parts can cause serious injury.

Before carrying out maintenance, cleaning or repair work, pull out the spark plug connector and unscrew the spark plug to prevent accidental starting.

Do not run the machine without an air filter and a silencer.

Check nuts and bolts regularly to ensure they are tight and tighten if necessary.

defeat protective devices and If work tools show signs of wear, they must be checked regularly and replaced if necessary.

Operate the machine with minimal noise and emissions. Only operate the engine under the *"Technical Data"* run with certain information.

Machine stickers warn of dangers. The machine must always be kept clean and any damaged stickers and markings must be replaced immediately.

Do not use fuels or other flammable solvents to clean machine parts.**Danger of explosion!**

Do not use a high-pressure cleaner to clean the machine. Water penetrating the machine and the engine can damage it.

Keep moisture away from live parts. This can lead to a short circuit.

Always keep the machine clean and clean it after each use. Always keep the machine controls dry and free of resin, oil and grease.

Control elements must not be improperly locked, manipulated or modified.

Do not stack flammable material near the engine housing. Components such as silencers etc. can become potential sources of ignition.

Clean the engine cooling fins of any dirt.

tank cap regularly on tightness check.

Only use original LUMAG spare parts and accessories. The use of other spare parts and accessories increases the risk of accidents. We accept no liability for any resulting damage.

3.6 Danger zone

WARNING!

Danger when staying in the danger area.

Staying in the danger zone involves risks that cannot be assessed by unauthorized persons.

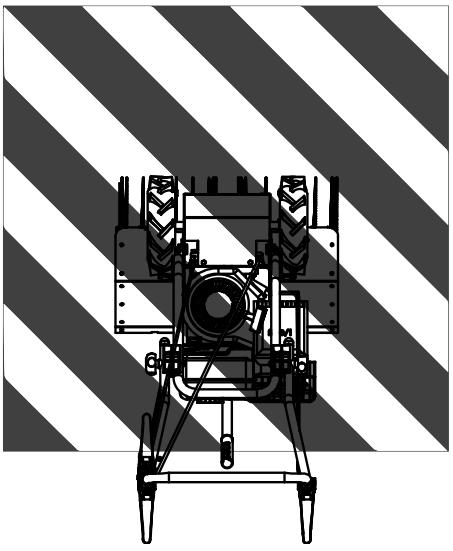
- The danger zone while des Always monitor the work process and ensure that no one is present there.

- If an unauthorized person enters the danger area, warn the person and stop operation immediately.

The area around the machine with a safety distance of at least 5 meters is declared a danger zone.

This area must be free of people during the work process in order not to influence the work process and cause hazards.

Depending on their size, attachments and thrown-out debris can increase the danger area of the machine.



danger zone

3.7 Safety instructions for attachments

DANGER!

Only attachments approved by the machine manufacturer may be used!

- For assembly, secure the machine against rolling away and position the attachments
- securely. Only install attachments when the engine is switched off.See... APPENDIX 1 and APPENDIX 2 / Accessories (optional)

3.8 Electrical system

People wearing a pacemaker must not touch the live parts of the ignition system when the engine is running.

3.9 Residual risks

The machine has been subjected to a risk assessment. The hazards identified have been eliminated as far as possible and identified risks have been reduced. However, the machine still poses residual risks, which are described in the following section.

-The warning and safety instructions listed here and in the operating instructions must be observed in order to avoid possible health damage and dangerous to avoid situations.

Risks from mechanical hazards **pinch points on moving components** During operation, the moving parts can crush body parts!

- Do not enter the danger area during operation.
- furnishing and maintenance work, as well as Always carry out troubleshooting with particular caution and attention to pinch points.

-When working in hazardous areas, wear protective equipment to protect against crushing.

Danger of being pulled into rotating components During operation, the rotating components can pull in body parts and crush, cut or sever them!

- Work on rotating components may only be carried out by qualified personnel with specific knowledge.
- Before the start from maintenance or Before carrying out repair work, switch off the machine and secure it against being switched on again.
- Wear protective equipment when working in hazardous areas.

Sharp edges and pointed corners
Sharp edges and pointed corners can cause abrasions, scrapes and cuts.

- Always exercise caution when working near sharp edges and pointed corners.

- Wear protective gloves.

Slipping, tripping or falling of persons
Objects lying around, as well as unstable and uneven surfaces, create slip and trip hazards and can lead to serious injuries.

-Always keep the work area tidy.
-Remove unnecessary tools and objects.

- Sweep on flat surfaces if possible.
- Wear appropriate work shoes.

Thrown objects
When working with the machine, people can be injured by objects thrown out (stones and other objects).
- Secure the work area against access by unauthorized persons.

-In the work area personal Protection- Wear equipment (safety glasses, safety helmet).

Risks from electrical hazards **Danger to life from electric current!** Touching live parts can be fatal. Damage to the insulation or individual components can be life-threatening.

- Before starting any work on the electrical system, switch off the electrical machine. Check that it is de-energized!
- Before maintenance, cleaning and repair work the electric Switch off the power supply and secure it against being switched on again.
- If the insulation is damaged, switch off the power supply immediately and arrange for repairs.

-Do not bridge or disable fuses.

- When replacing defective fuses, always ensure that the current rating is correct.
- wetness and moisture from the Keep away from live parts. Any work on the
- electrical machine may only be carried out by qualified electricians.

Risks from neglecting ergonomic principles

careless use personal protective equipment (PPE)
negligent use or omission personal protective equipment can result in serious injury.
-Wear required protective equipment.

Insufficient local lighting
Poor lighting poses a high safety risk.

- Always ensure adequate lighting at the workplace.
- Adjust driving speed.

Human behavior, misconduct
Always concentrate fully on all work. Residual danger can never be ruled out.

Risks from thermal hazards **Danger of burns from hot surfaces!** Contact with hot components and machine parts can cause burns.
- Wear protective clothing and gloves when working near hot components.

-Before carrying out any work, allow hot components and engine parts to cool down to below +30 °C.

risks from noise
Hearing impairment due to noise! Prolonged, unprotected work with the machine can lead to hearing damage.
→ Always wear hearing protection.

Risks from Vibration
whole-body vibrations mountains significant Health risks!
Prolonged work with the machine can lead to physical impairments due to vibrations.

-Take regular breaks.

Risks from materials and substances

Poisoning when handling lubricants!

Lubricants can cause poisoning or skin irritation.

- Observe the safety instructions of the lubricant manufacturer.
- Avoid spilling and spraying. Do not eat,
- drink or smoke when using the product.
- Avoid contact with skin and eyes.

Preventive measures

- Avoid skin and eye contact
  - Before working on containers, pipes and utilities, apply suitable skin protection cream.
  - Wear protective plastic gloves when working, and wear safety glasses with side protection when working with oils.
  - Wash thoroughly before breaks and after work and use skin care cream

Poisoning when handling carbon monoxide!

Inhalation of carbon monoxide can lead to to poisoning, unconsciousness and death.

-Avoid inhalation of carbon monoxide.
-Do not use the machine in enclosed spaces.

- Do not eat and/or drink while working.

risks from fire and explosion **Risk of injury due to defective or old fuel hoses!**

Fuel hoses and connections that are defective or have become porous due to age can burst and lead to accidents due to the sudden release of pressurized media.

- Regularly visually check all fuel hoses and their connections for perfect technical condition, secure connections, leaks, cracks and external damage.

- If any defects are discovered, stop the machine immediately and have it repaired by qualified personnel.
- Do not reuse fuel hoses that have already been used.
- When replacing fuel hoses, make sure that the new fuel hose is sufficiently dimensioned and designed to withstand the loads that will occur.

Risk of fire and explosion when handling fuels!

Fuels can burn explosively and cause poisoning or skin irritation.

-Observe the fuel manufacturer's safety instructions.
-Do not refuel the machine in enclosed spaces.

- Avoid spilling and spraying.

-Collect spilled liquids and dispose of them in an environmentally friendly manner.

- Do not eat, drink or smoke while using the
- product. Avoid contact with skin and eyes. Have a
- suitable fire extinguishing agent ready.

Preventive measures

-Avoid inhalation, ingestion, skin and eye contact

- Wear suitable personal protective gloves when working and wear safety glasses with side protection when working with oils.
- Wash thoroughly before breaks and after work and use skin care cream.

3.10 Safety and protective devices

WARNING!

Danger to life due to defective or bypassed safety devices!

Non-functioning, bypassed or disabled safety devices do not protect against the hazards and can lead to serious injury or death.

- Before starting work, always check that all safety devices are correctly installed and functioning.

-Never override safety devices.

-Ensure, that the security facilities are always freely accessible.

3.10.1 Safety switch

The clutch levers for the drive and brush rotation are designed as safety switches. By pressing down the clutch levers on the guide bar, the drive and brush drive are switched on. To bring the machine to a standstill, all you have to do is release both clutch levers.

3.10.2 Belt housing (7)

The drive belts on the machine represent hazardous areas and are protected against access by the belt housing and cover.

3.10.3 Brush deck (15)

The brush deck is mounted like a protective plate above the sweeping brush and prevents the operator from being hit by thrown-up debris.

3.11 Behavior in an emergency

At one possibly incoming Accident accordingly necessary first aid Take action and seek qualified medical attention as soon as possible.

dial emergency number

They provide the most important information for the emergency services:

1st**WHERE**did the accident happen?
2nd**WHAT**happened?
3.**HOW**How many injured are there?
4th**WHICH**What kind of injuries do they have?
5th**WAIT**to queries from the emergency call center?

4. Warning and information symbols used

Symbols are provided on the machine to provide important information about the product and instructions for use.

DANGER!
This is about your safety. The symbol indicates a danger, warning or caution.

DANGER!
Health and explosion hazards from combustion engines

The engine's exhaust contains poisonous carbon monoxide. Being in an environment containing carbon monoxide can lead to unconsciousness and death.

Do not run the engine in an enclosed space.

Keep the machine away from heat, sparks and flames. Do not smoke near the machine.

Petrol is extremely flammable and explosive. Before refueling, turn off the engine and let it cool down.

Use unleaded fuel Super 95 (=E5).

To read She this instructions completely before using the machine. Failure to do so increases the risk of injury to the operator and other persons.

Carry She hearing protection and safety glasses.

Wear safety shoes.

Wear protective gloves.

WARNING! Risk of injury from flying foreign objects (stones, broken glass, metal parts or other waste material). Keep bystanders and pets away from the danger area. **Keep a sufficient safety distance when the engine is running!**

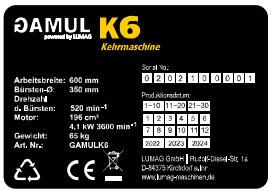
Warning of hot surfaces. Danger of burns!
Do not touch hot engine parts. These remain hot for a short time even after the machine has been switched off.

WARNING! Keep hands and feet away from rotating parts. Keep a sufficient distance from the sweeping brush when the engine is running! Only touch machine parts when they have come to a complete stop. Never open or remove protective devices when the engine is running.

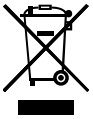
Protective and safety devices must not be removed or modified.

Guaranteed
sound power level LWA

unauthorized persons Persons, particularly Children must not be in the working area of the machine when it is in operation or being repaired.



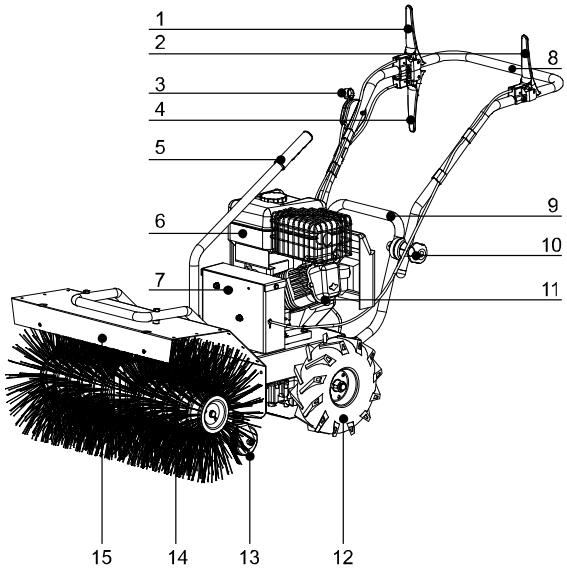
nameplate
Equipped with model name, year of manufacture and serial number. Please always state this information when ordering spare parts or for service information.



Old electrical/motor devices are recyclable materials and therefore do not belong in household waste. Please dispose of the components in an environmentally friendly manner.

5. Part designation

5.1 Sweeper

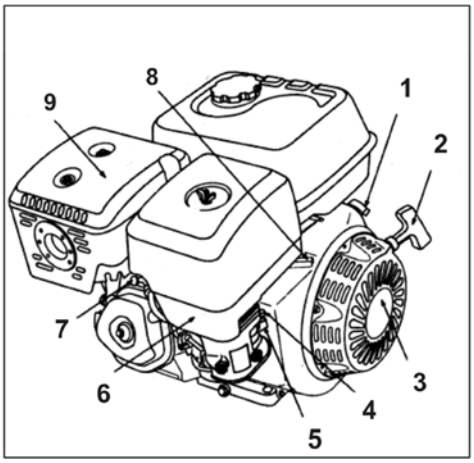


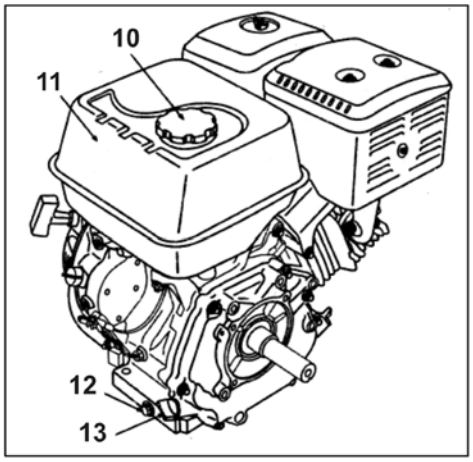
part name, sweeper

1 Clutch lever for drive Clutch lever for
2 brush drive Throttle control (throttle
3 lever on the machine)

4 Gear lever for reversing Lateral adjustment,
5 mechanical (swivel lever) Gasoline engine
6
7 belt housing
8 guide bar, top
9 guide bracket, bottom
10 Guide bar adjustment 11 Center of gravity of the machine 12 Drive wheel with pneumatic tires 13 Brush support wheel
14 sweeping brush
15 brush deck

5.2 gasoline engine





part name, gasoline engine

1 engine switch (ignition switch)
2 starter handle
3 recoil starter
4 choke
5 fuel tap
6 air filter
7 Spark plug, spark plug connector
8 throttle lever
9 silencer
10 tank cap
11 fuel tank
12 oil drain plug
13 Oil screw/dipstick

IMPORTANT NOTE!

4-stroke engines may only be tilted slightly and must always be horizontal. The maximum permitted angle of inclination is 15°.

6. Controls

6.1 Motor unit

engine switch (ignition switch) (1)
The engine switch in the OFF position prevents the machine (engine) from starting. To restart, turn the engine switch to the ON position,then start the engine as described in COMMISSIONING/Starting process (11.4).

starter handle, recoil starter, (2+3)
The recoil starter allows the engine to be started manually. To do this, pull the starter handle firmly towards the operator.

IMPORTANT NOTE!

Do not let the starter handle swing back against the engine, but move it back slowly to avoid damaging the starting device.

choke (4)
The choke is used when starting a cold engine. It closes and opens the choke valve of the carburetor.

Choke is pulled/closed (CLOSE) - for COLD START

Choke is not pulled/open (OPEN) - for WARM START/NORMAL OPERATION

fuel tap (5)
The fuel tap opens and closes the connection between the tank and the carburetor.
1. In ON position – open
2. In OFF position – closed

throttle (8)
The throttle control regulates the engine speed. For normal operation, select the FAST/HIGH position.

IMPORTANT NOTE!

*The sweeper uses a remote-mounted throttle control (3) instead of the engine-mounted throttle lever shown here.*See... PART NAME/ Sweeper (5.1) and COMMISSIONING/ Starting process (11.4)

6.2 Machine unit

Right upper lever - clutch lever for drive (1)

Controls forward movement. Pressing the clutch lever activates the drive mode. As long as you keep the clutch lever pressed, the machine moves forward. To stop the machine, release the clutch lever.

Left upper lever - clutch lever for brush drive (2)
Controls the brush rotation. Pressing the clutch lever activates the rotation of the brushes. As long as you keep the clutch lever pressed, the brushes rotate. To stop the brush rotation, release the clutch lever.

throttle valve control (3)
Regulates the speed of the motor. Move the control lever between MIN. and MAX. This means that as the motor speed increases, the driving speed and speed of the brushes increase.

Right lower lever - gear lever for driving direction, reverse (4)
Controls the reverse movement. Pressing the gear lever activates the reverse gear. As long as you keep the gear lever pressed, the machine moves backwards. To stop the machine, release the gear lever.

lateral adjustment, mechanical (5)
Controls the direction of the sweeping brush. Pressing the lever rotates the sweeping brush 20 degrees to the right or left.

guide bar adjustment (10) Different handle heights allow for an ergonomic guide bar, adapted to the respective body size. Loosen the two knobs and swing the handle forwards or backwards to the desired height. Tighten the knobs again.

drive wheels with pneumatic tires (12)
Allow transport to the desired location.

support wheels (13)
Used to support and rotate the machine and to adjust the brush height.

sweeping brush (14)
Sweeps and removes snow, leaves, dirt, light gravel and other materials from packing areas, sidewalks and other paved areas.

7. Technical data

model number	GAMUL K6
Motor	4-stroke OHV gasoline engine LONCIN G200F
displacement	196 cm^3
Engine power, max.	4.1 kW*
Engine speed max.	3,600 min^{-1}
starting system	hand start
spark plug	Type F7RTC or equivalent spark plug
sweeping width	60 cm
brush diameter	35 cm
speed of the brush	520 $minutes^{-1}$
forward gears	1
reverse gears	1
Dimensions (installation dimensions)	L / 173 cm W / 62 cm H / 102 cm
Weight approx.	approx. 65 kg

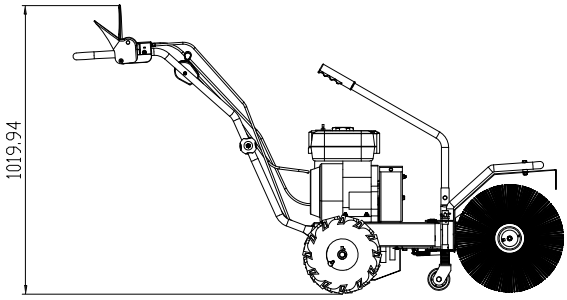
The technical data was valid at the time of printing and is subject to change without prior notice.

operating resources	
fuel	Super 95 (=E5) unleaded
fuel volume	3.6 liters
engine oil	SAE 10W-30
oil tank volume	~ 0.6 liters

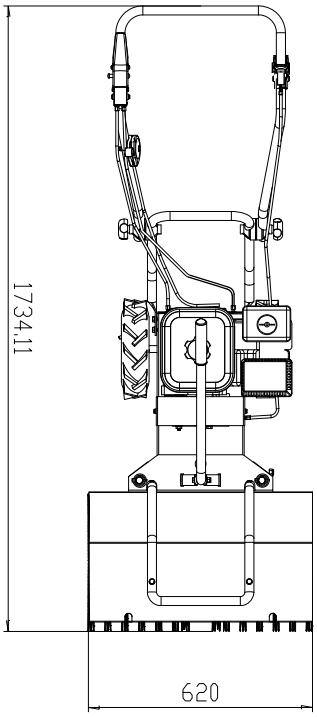
vibrations and noises*	
vibration level on the hand lever	5.52 m/s^2
sound pressure level L_p	87.0 dB(A)
uncertainty K_W	3 dB(A)
Guaranteed sound power level L_W	103 dB(A)

* The specified noise emission values were determined according to EN ISO 3744 for sound power and EN ISO 11201 for sound pressure.

7.1. Dimensions



Dimensions, height in mm



Dimensions, length x width in mm

7.2. Electrical connection

WARNING!

Work on the electrical installation and electrical equipment may only be carried out by qualified electricians.

8. Scope of delivery

After unpacking, check the contents of the box or transport box for

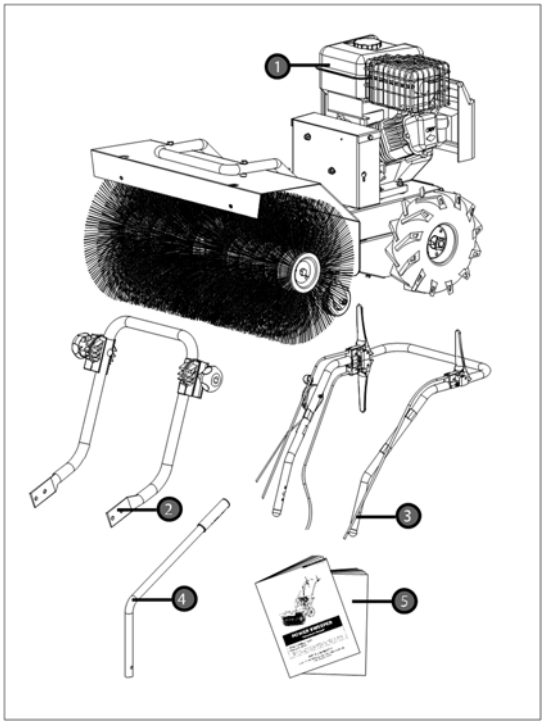
- completeness and
- possible transport damage.

Report any complaints to the dealer or manufacturer immediately. Complaints made later will not be accepted.

The machine is delivered partially disassembled.The assembly work in point 9 must be observed.

If you have any questions or problems with the machine, please contact us. You can reach us by email:

info@lumag-maschinen.de or by phone at +49 8571/92 556-0.



scope of delivery

1 Sweeper with petrol engine
2 guide bar, bottom
3 guide bar, top
4 swivel lever
5 operating instructions

9. Assembly

IMPORTANT NOTE!

At least two people are required to assemble the machine. The relevant assembly parts must be fitted with the engine switched off.

9.1 Installing the lower guide bracket

(Figure A)

1. Remove the shaft lock (a) on the left and right of the drive axle and pull off the wheels.
2. Screw the lower guide bracket to the machine as shown using 4 hexagon screws M8x25, spring washers and flat washers.
3. Place the wheels on the right and left side of the drive axle and secure them with the shaft lock.

DANGER!

Before removing the wheels, position a block under the engine base, centrally under the machine.

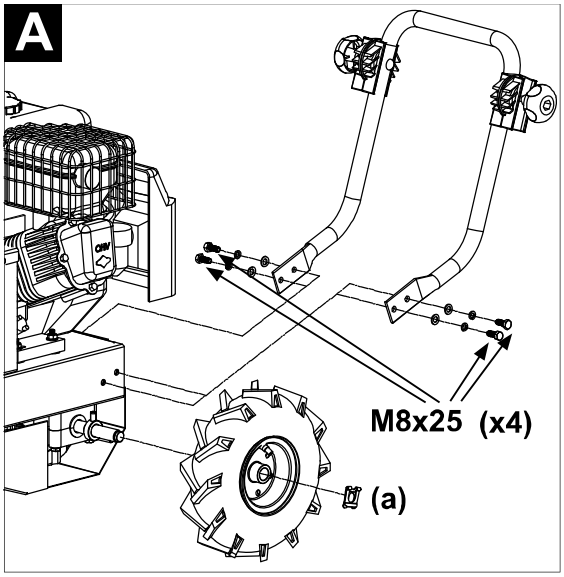


Fig. A Installing the lower guide bracket

9.2 Installing the upper guide bracket
(Figure B+C)

1. Remove the rotary knobs.
2. Place the upper guide bracket onto the lower guide bracket and assemble as shown in Figure B.

DANGER!

Pay attention to the Bowden cables when installing the upper guide bracket!

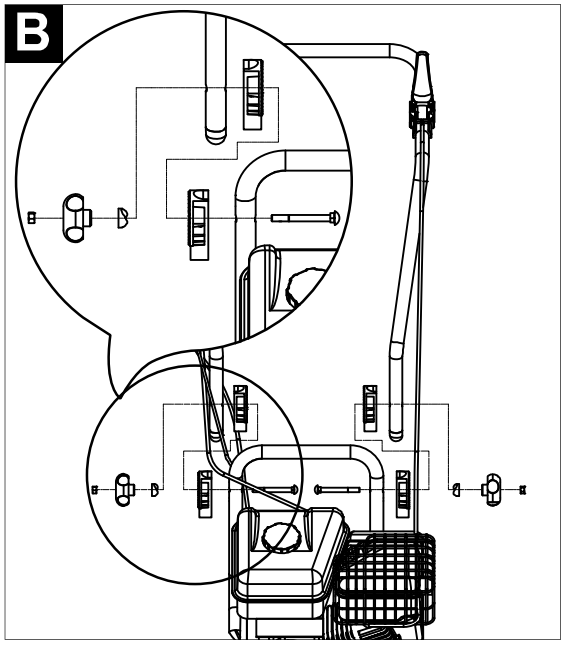


Fig. B Installing the upper guide bracket

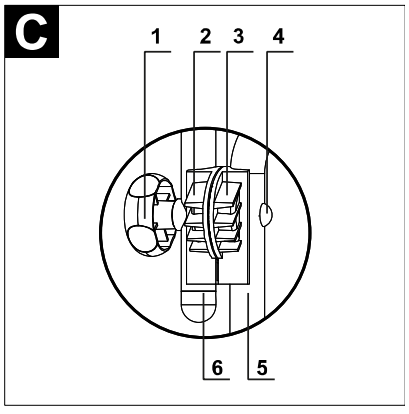


Fig. C Rotary knob

1 rotary knob
2 bracket, outside
3 bracket, inside
4 lock nut
5 guide bracket, bottom
6 guide bar, top

WARNING!

Risk of injury and property damage when raising the guide bar.

When raising the guide bar, there is a risk of crushing between the bar and the motor. Bowden cables (for the brush and drive) can become trapped and damaged when raising the guide bar.

9.3 Fixing Bowden cables
(Figure D)

1. Adjust the Bowden cables correctly.See... MAINTENANCE AND REPAIR WORK / Adjusting the Bowden cable (13.8)
2. Fix the laid Bowden cables to the upper guide bracket with 5 cable clamps.

DANGER!

Lay Bowden cables correctly!

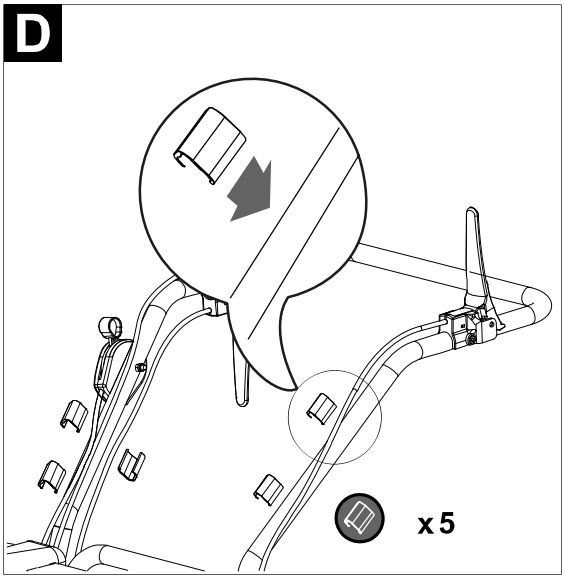


Fig. D Secure Bowden cables

9.4 Installing the swivel lever

(Figure E)

1. Fasten the swivel lever to the bracket using the M8x45 hexagon screw and lock nut.

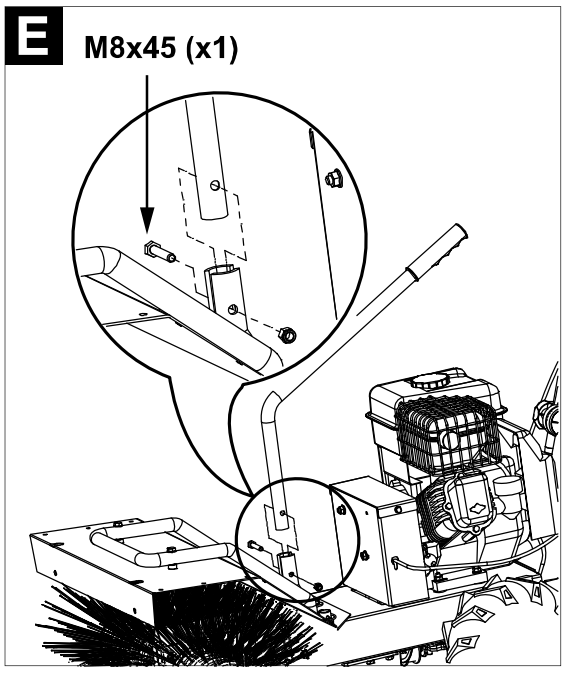


Fig. E Installing the swivel lever

10. Drive type

10.1 Gasoline engine

The machine is powered by a petrol engine. For information on starting and stopping the petrol engine, please refer to the engine operating instructions or the following pages of this manual.For this purpose, see... COMMISSIONING / Starting process (11.4) and Switching off the engine (11.5).

IMPORTANT NOTE!

When delivered, the machine's engine does not contain any engine oil or fuel. Fill the drive motor as described under "FUELLING".

10.2 Refueling

WARNING!

You may only carry out the work described in this chapter after you have read and understood the safety instructions. It concerns your personal safety.

10.2.1 Filling engine oil

IMPORTANT NOTE!

The engine oil must be topped up before the first use! Incorrect oil filling can lead to irreparable damage to the engine. In this case, the seller and manufacturer will not provide any warranty.

– Place the machine on a level surface and place it on a stable surface so that the motor is horizontal.

– Unscrew and remove the oil screw/dipstick (13).

- engine oil cautious fill in. Not spill!
- Engine oil quantity: See She in addition... TECHNICAL DATA (7.)

– Retighten the oil screw/dipstick by hand.

– Collect oil residues/contamination and dispose of in an environmentally friendly manner.

Check engine oil level Turn off the engine and let it cool down.

1. Unscrew and remove the oil screw/dipstick (13).
2. Wipe the dipstick with a clean, lint-free cloth.

3. Reinsert the oil screw/dipstick completely into the device (do not tighten it) and then pull it out again.
4. There are two marks on the dipstick. The lower one marks the **minimal**Oil level, the upper one**maximum**The oil film should be between minimum and maximum.

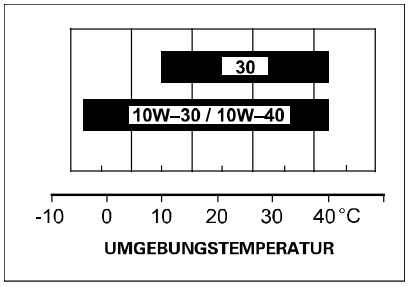
If the oil level is too low, top up with recommended engine oil.

5. Fill engine oil up to the lower edge of the oil filler opening (13a). Use a funnel!

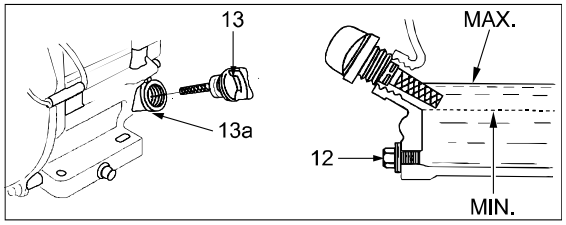
6. Retighten the oil screw/dipstick by hand.

7. Collect oil residues/contamination and dispose of in an environmentally friendly manner.

Engine oil: SAE 10W-30
Capacity: approx. 0.6 liters



engine oil viscosity



refill engine oil

13 oil screw/dipstick
13a Oil filler opening (bottom
12 edge) Oil drain plug

10.2.2 Refueling

DANGER!

health and risk of explosion through Combustion engine. Be careful when handling fuel!


The engine's exhaust contains poisonous carbon monoxide. Being in an environment containing carbon monoxide can lead to unconsciousness and death.


Do not run the engine in an enclosed space.


Before operating the machine, read the operating instructions and the engine manual.


Keep the engine away from heat, sparks and flames. Do not smoke near the machine!

Petrol is extremely flammable and explosive. Before refueling, turn off the engine and let it cool down.

This engine requires only unleaded petrol Super 95 (=E5). Use only fresh, clean fuel. Water or impurities in the petrol will damage the fuel system.

When refilling fuel, please note:

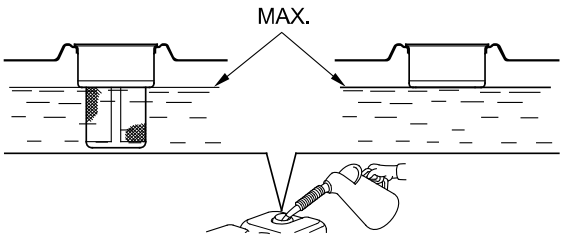
– Switch off the engine and allow it to cool for at least 10 minutes before removing the fuel tank cap.
– Keep the engine away from heat, sparks and flames.
– Fill fuel outdoors or in a well-ventilated area to dissipate fumes.
– Keep gasoline away from sparks, open flames, pilot lights, heat sources and other sources of ignition.
– Do not spill fuel, use suitable filling aids.

– If fuel is spilled, wait until the vapors have dissipated before starting the engine.

refueling

1. Turn the fuel tap (5) to OFF.
2. Unscrew and remove the tank cap (10).
3. Carefully fill in fuel (max. 3.6 l). The fuel may be filled to a maximum of 15 mm below the lower edge of the filler neck.**Never fill the tank to the brim, as the fuel may expand!**
4. Check the seal in the tank cap for damage and clean if necessary. Replace any damaged seal immediately!
5. Retighten the tank cap onto the tank neck by hand.
6. Wipe up any spilled gasoline immediately.

Fuel: Use Super 95 (=E5) unleaded. Tank volume: approx. 3.6 liters



refueling

storing fuel

– Fuels can only be stored for a limited time; they age. Fuels or fuel mixtures that have been stored for too long can lead to starting problems. Only store as much fuel as you will use in a month.
– Only store fuel in containers that are specifically approved for this purpose. Store fuel containers in a dry and safe place.
– **Store fuel containers out of the reach of children.**

11. Commissioning

WARNING!

Danger due to improper handling

Improper handling can result in serious injury or serious property damage.

-Read and follow all safety instructions in this manual.See... SECURITY (3.)

– The machine may only be put into operation by qualified persons and in compliance with the safety instructions.
– Before starting the machine for the first time, check that all tools and foreign parts have been removed from the machine.
– Check safety and protective devices before each use.See... SAFETY / Safety and protective devices (3.10).

11.1 Working surface

Uneven floors and edges can lead to tripping, falling and slipping accidents.

- The paved surface must be level, solid, dry and free of burning or smoldering objects, stones, broken glass, metal parts, etc. and must be load-bearing.

- A safety distance must be maintained around buildings and enclosed areas.

– When used in an inclined position, the maximum inclination of 20° must not be exceeded.

11.2 Requirements for commissioning

DANGER!

The service life and operational reliability of the engine depends to a large extent on the running-in period.

Please also note:
– let the cold engine warm up for a few minutes and do not demand full power immediately

– during the first 20 hours of operation (running-in period), do not push the engine to the limit of its performance
– use fresh and clean (branded fuel petrol)
– only use approved fuel canisters available from specialist retailers (rusty metal canisters are not permitted)
– to avoid starting difficulties, fill the fuel tank completely when first starting up the machine or when it is not in use for a long period of time
– Be careful when handling fuel and follow the manufacturer's instructions (see safety data sheet)

In order to put the machine into operation, the following conditions must be met:

- Check fuel and oil levels.See... DRIVE TYPE / Refueling (10.2)
- Check fuel lines and connections for leaks and mechanical damage. Check fuel tank
- and cap for cracks and leaks.

-Sweeping brush for wear Replace wornheck. brushes with new ones. See... MAINTENANCE AND REPAIR WORK / Removing/installing/replacing sweeping brushes (13.11)
- Adjust the distance between the brushes and the surface.See... OPERATION / Adjusting the sweeping height (12.3)
- clutch lever on functionality check.
- nuts, screws and other Check that fastening parts are firmly in place and tighten if necessary
- Check tire pressure, max. 2.0 bar (30 PSI)
- Check the machine completely, the visual inspection allows defects and faults to be identified and rectified at an early stage

If any faults or defects occur, the machine must not be put into operation until they have been rectified.

11.3 Preparations for commissioning

The machine can be put into operation without any special effort and without any special installations.

IMPORTANT NOTE!

If you have any questions or problems before commissioning, you can contact us by email: info@lumag-maschinen.de or by phone at +49 8571/ 92556-0.

DANGER!

Do not start the engine in enclosed spaces. The exhaust fumes contain carbon monoxide, which is very toxic if inhaled!

CAUTION!

Warning of hot surfaces!

The muffler and other engine parts become very hot during operation. Never touch the hot engine. Keep a safe distance from hot surfaces and keep children away from the running engine.

11.4 Startup process

-Manual start (HANDSTART)

1. Turn the fuel tap (5) to the ON position.

2. In<u>cold state of the engine</u> Pull out the choke (4) (CLOSE). Push the choke lever to the left.
   In the<u>warm state of the engine</u> Push the choke (4) in (OPEN). Push the choke lever to the right or leave it in the basic position.

3. Push the throttle lever (3) on the guide bar slightly downwards from the idle position LOW (= TORTOISE) towards HIGH (= RABBIT).

4. Turn the engine switch (1) to the ON position.

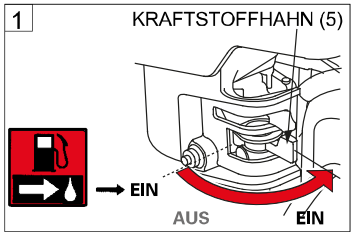
5. Slowly pull the starter handle (2) out of the recoil starter until you feel resistance, then pull it with a quick but gentle movement and slowly pull it back again. The engine starts.

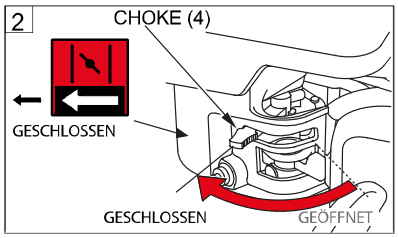
DANGER!

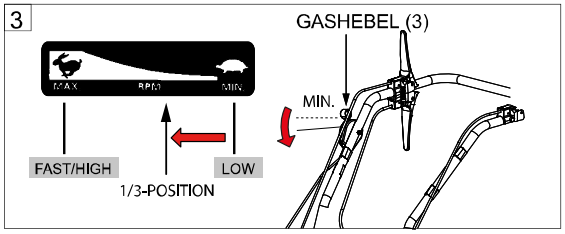
Do not pull the starter rope all the way out and do not let the starter handle hit the engine.

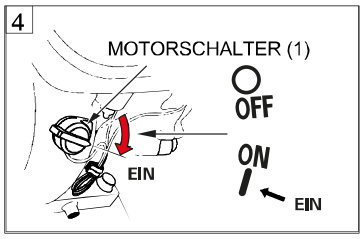
6. If the choke (4) was pulled to start the engine (CLOSE), gradually move it back (OPEN) while the engine warms up.

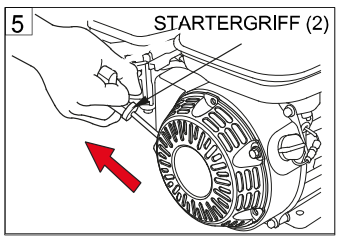
7. To operate, open the throttle lever (8) fully and slowly move it towards HIGH/FAST (=RABBIT).

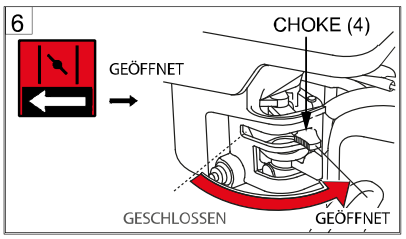












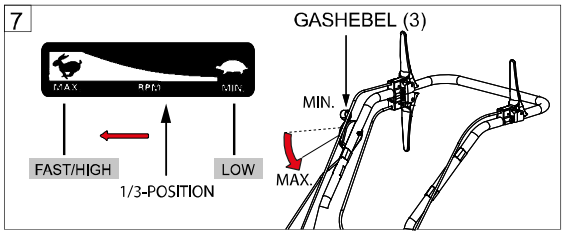


Fig. 1 – 7 Manual start (HANDSTART)

11.5 Switching off the engine

1. Push the throttle lever (3) on the guide bar up to the idle position LOW (=TURTLE).

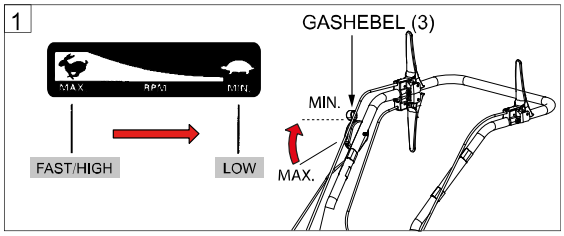
2. Turn the engine switch (1) to the OFF position.

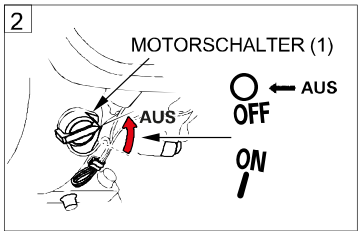
3. Then turn the fuel tap (5) to the left to the OFF position to close it.

When leaving the machine, remove the spark plug connector (7) = protection against unauthorized use!

DANGER!

Never move the choke to CLOSE to stop the engine. This may cause backfiring or engine damage.





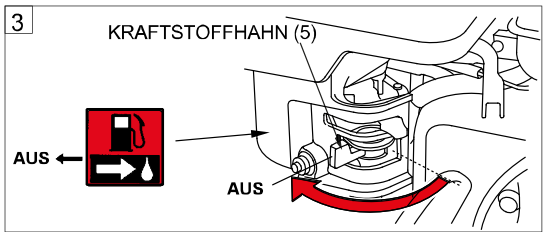


Fig. 1 – 3 Switch off the engine

IMPORTANT NOTE!

Stopping the engine suddenly at full throttle can cause engine damage.

11.6 Stopping the engine in an emergency

In dangerous situations, machine movements must be stopped as quickly as possible and the power supply switched off.

In case of danger:

1. Release both clutch levers (for drive and brush drive) as quickly as possible.**An emergency stop is initiated.**
2. Inform those responsible at the site.
3. If necessary, alert a doctor and fire brigade.

4. Rescue injured persons and initiate first aid measures.
5. Switch off the motor switch (1) and secure it against being switched on again.
6. Access roads for emergency vehicles keep free.

To restart, turn the engine switch to the ON position,then start the engine as described in COMMISSIONING / Starting process (11.4).

11.7 Idle speed

When not working, move the throttle lever (3) on the handlebar up to the LOW idle position (=TURTLE) to reduce the load on the engine.

Reducing the engine speed when idling extends the life of the engine, saves fuel and reduces noise levels.

12. Operation

IMPORTANT NOTE!

The machine is not approved for use on public roads.

12.1 Turning

WARNING!

Danger from rotating machine parts.

The sweeping brush can throw stones or grit forward. Make sure that no people, animals or objects are endangered.

CAUTION!

Do not sweep ribbons, wires or similar items as this may damage the sweeping mechanism.

IMPORTANT NOTE!

If possible, carry out work in the direction of the wind to protect yourself from dust and restricted visibility.

To achieve optimal cleaning results, the driving speed should be adapted to the conditions.

Sweep so that the swept tracks overlap slightly.

12.2 Adjusting the sweeping angle

(Figure B1)

Swing the machine's brushes to the left or right (max. 20°) to throw the sweepings to the corresponding side.

1. Press and hold the swivel lever (5).
2. Swing the brushes in the desired direction until they stop.
3. Release the swivel lever.**The swivel lever must engage!**

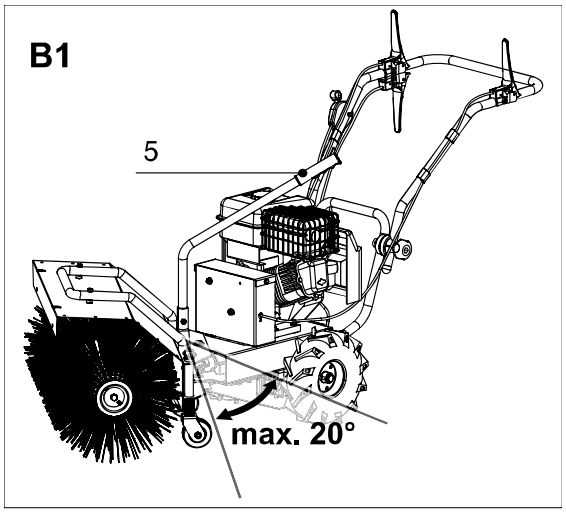


Fig. B1 Adjusting the sweeping angle

DANGER!

When working with the dirt container (optional), the brush position is always 90° to the direction of travel.

12.3 Adjusting the sweeping height

(Figure B2, B3)

The working height of the brush is adjusted manually using two support wheels (13) and a number of spacer rings. (Figure B2)

The brushes should – with optimal settings – sweep between 5 and 10 cm from the surface. (Figure B3)

Setting the sweeping brush too low will overload the drives and cause unnecessary wear on the brushes.

Once the sweeping brush is worn out, the distance between the brushes and the ground must be readjusted.

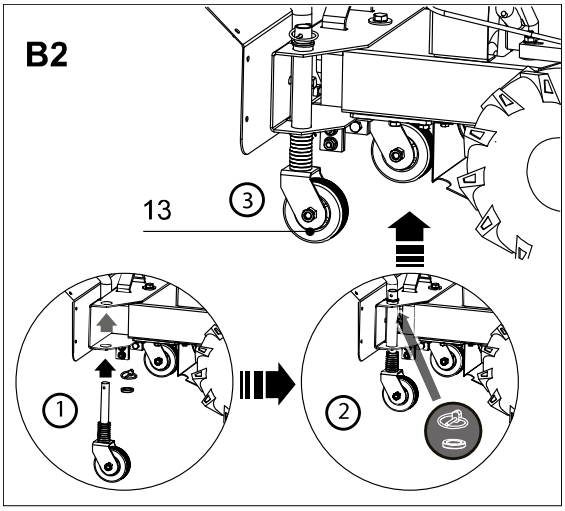
Adjust the height

Before using the machine, adjust the brush support wheels as follows:

1. Remove the cotter pin
2. Depending on requirements:
   - Remove spacer rings from the bottom, the sweeping brush lowers.
   - Add spacer rings to the bottom, sweeping brush is raised.
3. Replace the brush support wheel and place the removed spacer ring(s) on the top and secure with the cotter pin.

DANGER!

The number of upper and lower spacer rings must be the same on both brush support wheels.



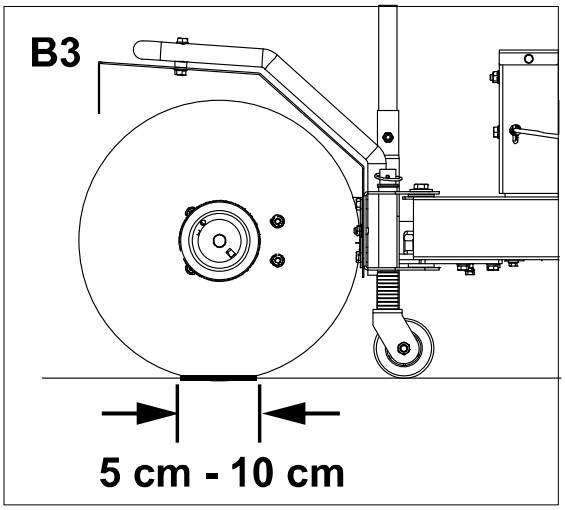


Fig. B2 – B3 Adjusting the sweeping height

12.4 Starting the engine

-Start the engine as described in the operating instructions.For more information, see... COMMISSIONING / Start-up process (11.4).

12.5 Driving the machine

(Figure B4)

DANGER!

The machine can travel forwards and backwards at the same speed. Therefore, gently pull the gear lever (4/B) upwards for reversing.

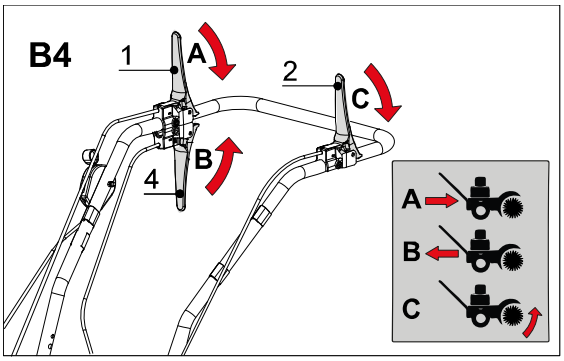


Fig. B4 Driving the machine

12.5.1 Starting

DANGER!

Allow the engine to warm up before starting.

forward or backward driving

1. Press the upper right clutch lever for forward drive (1/A) or the lower right gear lever for reverse drive (4/B) down or up as far as it will go and hold it.

12.5.2 Machine starts

Activate sweeping brush

2. Slowly press the upper left clutch lever for the brush drive (2/C) down until it stops and hold it.

DANGER!

Always switch on the drive first and then switch on the brush drive.

12.5.3 Stopping

– Release the clutch lever or gearshift lever for the drive (1/A, 4/B).
– Release the clutch lever for the brush drive (2/C).
- Turn off the engine.For this purpose, see... STARTING UP / Switching off the engine (11.5).

IMPORTANT NOTE!

The machine is equipped with a safety switch. To bring the machine to a standstill, simply release both clutch levers or the gear lever.

12.6 End of work or breaks

After completing the last sweeping cycle, let the machine run for another 1 to 2 minutes at idle speed without load (engine cooling phase).

When leaving the machine, secure it against rolling away and unauthorized use (wheel chock). Switch off the engine, close the fuel tap.

DANGER!

Never leave the machine unattended while the engine is running.

13. Maintenance and maintenance work

Before any maintenance or repair work on the machine:

- Turn off the engine
- Wait for the sweeping brush to
- stop Close the fuel tap
- Remove the spark plug connector

CAUTION!

Risk of injury from hot surfaces!

Contact with hot components may can cause burns.

-Wear protective clothing and gloves when carrying out maintenance and repair work near hot components.
-Allow hot components to cool to ambient temperature before starting work.

Never leave the machine running unattended.

Never work without protective devices. Refit all protective devices after maintenance work.

Only use original LUMAG spare parts. Other parts can cause unforeseeable damage and injuries.

Work on the electrical equipment may only be carried out by qualified electricians.

Before starting work, the operator must ensure that the machine is in a safe operating condition.

13.1 Maintenance work

To maintain the warranty, the recommendations for care and maintenance must be followed.

Clean the machine thoroughly after each use, especially the sweeping brush!

-Ventilation slots should be kept clear and clean.
-Check the fuel system and tank cap for leaks.

- The machine is exposed to vibrations during operation. Check the screw connections for tightness.
- Wheels, sweeping brush, brush deck and locking mechanism of the attachments must be carefully maintained to avoid damage and injury.
- Lubricate the pivot and joint points as well as the Bowden cables with oil and then let the machine's engine run for 1 - 2 minutes so that any water that has penetrated is forced out again.

-Clean the machine after use. First remove coarse dirt with water and a brush, then remove deep-seated dirt with a cloth.**Avoid using aggressive cleaning agents or solvents, as these can attack the material of the machine and in many cases cause more harm than good.**

-Do not clean the machine with running water or a high-pressure cleaner. Please treat
- bare metal parts with an environmentally friendly, biodegradable spray oil after each use to protect against corrosion.

13.2 Maintenance plan

The following sections describe the maintenance work required to ensure optimal and trouble-free operation.

- If increased signs of wear on the components are detected during regular inspections, shorten the maintenance intervals based on the actual signs of wear!

- In some cases, the execution of the specified work is time- and/or load-dependent. When intervals are specified both in terms of periods and operating hours (Bh), the case that occurs first applies.
- If you have any questions about maintenance work and intervals, contact the manufacturer.

interval	maintenance work	note
Before each commissioning	Check the machine	visual inspection
	Check fuel and engine oil levels	-refueling point 10.2
	Check oil bath air filter	- Clean/change oil bath air filter point 13.5
	Check drive belt	- Check/replace drive belt point 13.12
	Check safety devices	- Check safety devices / clutch lever for functionality Point 13.7
After use	cleaning the machine	-Maintenance work point 13.1
First 5 Bh	Check screw connections for tightness	- Check screw connections point 13.10
First 20 Bh	change engine oil	-Engine oil change point 13.4
	Check/adjust Bowden cables	-Adjusting Bowden cables point 13.8
25 Bh	Check brush wear	earlier if necessary - sweeping brushes remove/install/replace point 13.11
	Check tire pressure	- Check wheels and tire pressure point 13.9
50 Bh	Clean the oil bath air filter and check for damage	when used in dusty areas, service more frequently - Clean/change oil bath air filter point 13.5
	Check screw connections for tightness	Check screw connections for tightness after the first 5 operating hours - Check screw connections point 13.10
	Check transmission oil	Authorized specialist workshop -Refilling the transmission oil point 13.13
Every 6 months or after 100 hours	change engine oil	-Engine oil change point 13.4
	Check/clean spark plug	- spark plug check/clean/change point 13.6
Yearly	Check fuel line (replace if necessary)	Authorized specialist workshop
	changing the spark plug	- spark plug check/clean/change point 13.6 - Technical data point 7.
	Replace drive belt	earlier if necessary - drive belt check/exchange point 13.12
	Adjusting Bowden cables	Check/adjust Bowden cables after the first 20 hours of operation -Adjusting Bowden cables point 13.8

general maintenance plan

13.3 Lubricants

IMPORTANT NOTE!

Fuels and lubricants used must comply with the operator's operating fluids regulations and the specified specifications; if necessary, consult the supplier.

fuel	module	specification	filling quantity
fuel	Motor	Super 95 (=E5) lead-free	3.6 liters
engine oil	Motor	SAE 10W-30	0.6 liters
engine oil	engine/oil bath air filter	SAE 10W-30	60 ml

operating fluid specification

13.4 Engine oil change

IMPORTANT NOTE!

The engine oil must be changed after the first 20 hours of operation.

Change the engine oil when the engine is warm (the oil will then drain quickly and completely). Dispose of in accordance with environmental regulations.

module	Number	interval (Bra*)	Crowd
Engine oil change - initial commissioning	1	20	0.6 liters
engine oil change operation * or once per season	1	100	0.6 liters

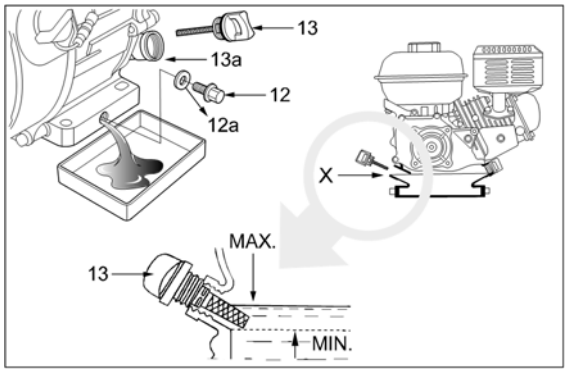
** Operating hours*

For oil changes:

1. Unscrew the oil drain plug (12).
2. Hold a container (at least 2.0 liters) under the oil drain plug.
3. Have a second person tilt the machine so that the oil drains out.
4. Thoroughly clean the area around the oil outlet.
5. Screw the oil drain plug (12) with the sealing ring (12a) back in.
6. Fill with new, clean engine oil SAE 10W-30, approx. 0.6 l up to the first thread of the filler opening (13a). Oil level (X) must be between MIN and MAX (L and H) should be visible on the dipstick.
7. Tighten the oil screw/dipstick (13) firmly.
8. Remove any oil residue or dirt.
9. Dispose of used oil in an environmentally friendly manner in accordance with local regulations.

DANGER!

Check oil level. Do not operate the engine with too much or too little engine oil.



oil change

13 oil screw/dipstick
13a Oil filler opening (bottom
12 edge) Oil drain plug
12a washer
X oil level

13.5 Cleaning/changing the oil bath air filter

DANGER!

Risk of fire and explosion when handling flammable liquids!

Fuels can burn explosively and cause poisoning or skin irritation.

-Do not clean the filter insert with flammable liquids

To clean and/or change the oil bath air filter or insert:

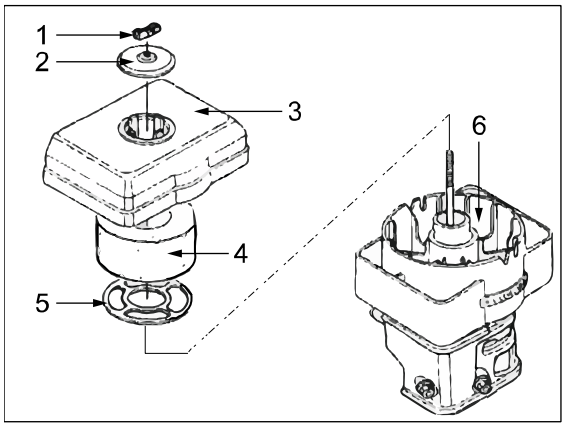
1. Unscrew the wing nut (1), remove the cap (2), filter cover (3) and grille (5).
2. Pull the filter insert (4) out of the filter cover and check for damage; replace any damaged filter insert if necessary.

8. Remove dirt and dust from the inside of the filter cover with a clean, damp cloth.

3. Clean the filter insert in warm water and a mild soap solution, rinse the filter insert thoroughly with clean water and allow it to dry well.
4. Immerse the filter insert in clean engine oil and squeeze out excess oil.**If too much oil remains in the filter element, it will cause heavy smoke when starting the engine.**
5. Empty and clean the filter housing (6). (Observe environmental protection regulations!)
6. Fill the filter housing with engine oil exactly up to the oil level mark, approx. 60 ml.
7. Reassemble parts in reverse order and tighten wing nut.

Interval: Every 50 operating hours or if defective or wear and tear

Specification:
engine oil SAE 10W-30
Unit: approx. 60 ml



Cleaning/changing the oil bath air filter

1 wing screw
2 cap
3 filter cover
4 filter insert
5 grid
6 filter housing

13.6 Check/clean/replace spark plug

DANGER!

Danger of burns!

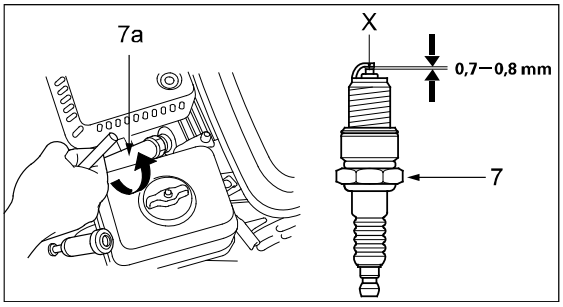
The engine and parts (e.g. silencer or cooling fins) heat up considerably during operation. Observe cooling times.

-Wear heat-resistant work gloves

To check, clean and/or replace the spark plug:

1. Remove the spark plug connector from the spark plug (7) and remove any dirt in the spark plug area.
2. Unscrew the spark plug using the spark plug wrench (7a) and check its condition. If there is any damage such as breaks or cracks in the insulation, damage to the sealing ring or wear on the electrode, replace the spark plug.
3. Clean the spark plug electrode (X) with a wire brush.
4. Check electrode gap (0.7-0.8 mm), adjust if necessary.
5. Screw in the spark plug manually and tighten it with the spark plug wrench.
6. Place the spark plug connector onto the spark plug.

Interval: Every 100 operating hours or if defective or wear and tear



Check/clean/replace spark plug

7 spark plug
7a spark plug wrench
X electrode gap

IMPORTANT NOTE!

A loose spark plug can overheat and damage the engine. Over-tightening the spark plug can damage the threads in the cylinder head.

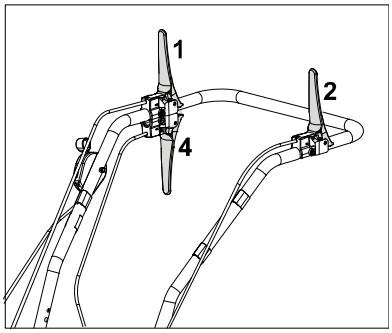
guideline:
-Used spark plug: 1/8 - 1/4 turn
-New spark plug: 1/2 turn

13.7 Check safety devices

Check safety devices such as clutch levers (1+4) for drive and brush drive (2) and their Bowden cables for functionality and perfect technical condition; replace damaged components if necessary.

The clutch levers must be safely disengaged by the springs at the lower end of the Bowden cables. Any necessary adjustment of the Bowden cables should be made using the adjusting screws at the end of the handle.

Interval: Before each start-up



clutch lever

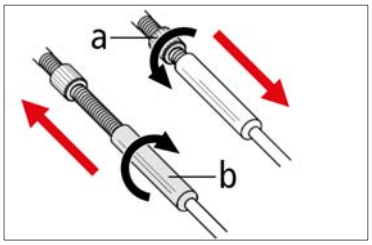
13.8 Adjusting the Bowden cable

Check Bowden cables for smooth operation.

Any necessary adjustment is made using the adjusting screw:

1. Loosen the lock nut (a)
2. Turn the adjusting screw (b) in the direction of the arrow until the Bowden cable no longer sags (is slightly taut). Hold the cable firmly while turning to prevent it from twisting.
3. Tighten the lock nut (a) again

Interval: After the first 20 hours of operation and thereafter annually



Adjusting the Bowden cable

13.9 Check wheels and tire pressure

Wheels (tread and tire condition) and tire pressure:

– Check that the shaft lock on the wheel axles is correctly seated
– Check for cuts and foreign objects in the tire tread
– Check tire pressure, max. 2.0 bar (30 PSI)

If the tire pressure is too low, the tube could rotate on the rim and become damaged.

Interval: Every 25 operating hours

13.10 Check screw connections

Check screws and nuts for tightness for the first time after 5 hours of operation and then regularly (every 50 hours) and tighten if necessary.

Self-locking nuts must be replaced after each disassembly.

Interval: First after 5 hours of operation, then every 50 operating hours

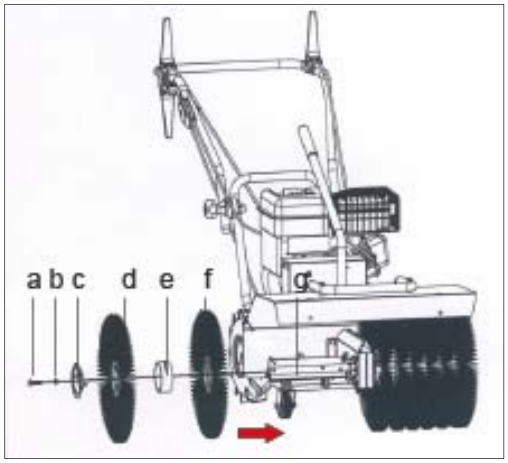
13.11 Removing/installing sweeping brushes/ to exchange

sweeping brushes regularly at least all 25 Check the operating hours. If the sweeping result is no longer satisfactory or the brush diameter is only approx. 280 mm, the brushes must be replaced.

1. Park the machine on a level surface.
2. Lift the sweeping brush and secure the machine with wedges to prevent it from rolling away.
3. Loosen the side fastening screw M10x30 (a) with toothed washer (b) and remove the outer retaining washer (c).
4. The straight sweeping segments (d), spacers (e) and the conical Sweeping segments (f) can now be removed individually from the support axis (g).
5. The sweeping segments on the other side are dismantled in the same way.
6. Replace old sweeping segments with new ones.

The installation of these sweeping segments is carried out in reverse order.

Interval: Every 25 operating hours or wear or defect



Removing/installing/replacing sweeping brushes

Parts after disassembling one side:

a Hexagon screw M10x30
b toothed washer
c retaining disc
d Sweeping segments, straight (6
e pieces) Spacer disc (5 pieces)
f Sweeping segment, conical (1 piece)
G carrier axle

13.12 Checking the drive belt/ to exchange

IMPORTANT NOTE!

The both drive belt before everyone Check their condition before commissioning.

To check the drive belts:

1. Remove belt cover (7a)
2. Remove the belt housing (7)
3. If the drive belts show wear, both must be replaced - replace the drive belt

To replace the drive belts:

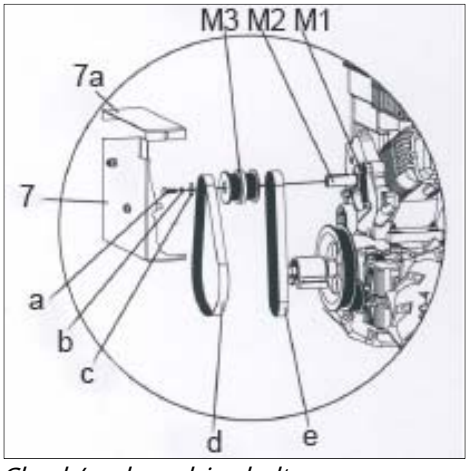
IMPORTANT NOTE!

When changing a belt, both drive belts must always be replaced.

1. Remove belt cover (7a)
2. Remove the belt housing (7)
3. Loosen the spring (M1) on the petrol engine and remove the screw (a), the spring washer (b) and the washer (c)
4. Remove the drive pulley (M3) from the motor shaft (M2)
5. Remove drive belts (d) and (e)
6. Install new drive belts
7. Drive and motor pulley must be aligned

The installation of these drive belts is done in reverse order.

Drive belt 2 pieces: 8PJ685 and 8PJ620
Interval: when worn



Check/replace drive belt

! DANGER!

To long, damaged or worn Always replace drive belts with new original drive belts.

13.13 Refilling the transmission oil

The gearbox located under the engine is sufficiently filled with a multi-purpose gear oil and sealed at the factory.

The oil usually only needs to be changed if the gearbox needs repairs. However, if the gearbox is making noise or is jamming regularly, it should be checked by an authorized workshop.

To refill the transmission oil:

The gearbox does not have a dipstick. The level may be checked using an electronic device. We do not recommend manual checking in a sealed gearbox.

DANGER!

In this case, have the oil level checked by an authorized workshop, e.g. during a check once a season or every 50 hours of operation.

refill transmission oil

Specification:
Multipurpose Gear Oil GL4 SAE 80W-90
Unit: As needed

Interval: Every 50 operating hours or once per season

14th transport

CAUTION!

Danger of burns from hot surfaces on the engine!

Contact with hot components can cause burns.

– Wear protective clothing and gloves when working near hot components.

– Before any work, place hot components on Allow to cool to + 30 ° C.

14.1. Safety instructions for transport

WARNING!

Danger to life from falling load!

Falling loads or parts thereof can kill people.

– Never stand under a suspended load.
– Do not enter the swivel range of lifting equipment during operation.
– Always wear a protective helmet when working with cranes.

WARNING!

Risk of injury from swinging transport goods!

Goods being transported with an off-center center of gravity can swing out of control when lifted and seriously injure people nearby.
– Before lifting goods, leave the swivel range of lifting equipment as far as possible.

– Observe transport instructions and symbols on the goods being transported.
– Always wear a protective helmet when working with cranes.

staff

– Transport work without the aid of lifting or conveying equipment that requires supervision may only be carried out by trained personnel appointed by the operator.

– Transport work with the assistance of lifting or conveying equipment that requires monitoring may only be carried out by trained, authorized and qualified personnel appointed by the operator.

Personal protective equipment (PPE)

– Always wear the following during all transport work:
- protective work clothing
- protective gloves
- Non-slip safety shoes

– During all transport work using lifting or industrial trucks such as pulleys, cranes or forklifts, also carry:
- industrial safety helmet

14.2. Transporting the machine

Before dem transport or before one relocation or dem Turn off in interiors:

1. Turn off the machine's motor and allow it to cool down to avoid burns and to eliminate the risk of fire.
2. Align the swivel lever (5) to the neutral position.
3. Close the fuel tap.
4. Empty the fuel tank to avoid um a fuel overflow.
5. Secure the machine against slipping and tipping over.

The machine may only be tilted to a maximum of 20°.

! DANGER!

The machine is heavy and must not be lifted alone. Appropriate preparation is essential.

Lifting requires several people or technical aids.

pallet transport with industrial truck

Goods on pallets can be transported with an industrial truck, e.g. forklift truck, under the following conditions:
– The industrial truck must be designed for the transport weight.
– The operator must be authorized to operate the industrial truck.
– Insert the forklift truck with the forks between or under the bars of the pallet until the forks protrude on the opposite side.
– Secure the pallet with the goods to be transported with tensioning straps so that the pallet with the goods to be transported cannot tip over; if necessary, correct the center of gravity. It is also important to ensure that the tensioning straps are of sufficient size.
– Lifting the transported goods and for the destination.

Transporting goods with lifting equipment

Goods can be transported directly with a lifting device under the following conditions:
– The lifting gear must be designed for the transport weight.
– The operator must be authorized to operate the lifting equipment.
– Ropes, straps or multi-point slings may only be used on the wheels/axle.**Never lift by the handlebar or brush deck!**

– Slowly lift the load and check that it is hanging vertically; if necessary, correct the centre of gravity using the lifting gear.

– Transport the goods to their destination.

15. Storage

Storage of the machine and temporary decommissioning.

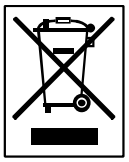
Store the machine under the following conditions:

– do not store outdoors
– store upright
– store in a dry place, cover to protect from dust
– do not expose to extreme and sudden temperature changes
– protect from sunlight
– avoid mechanical shocks
– Storage temperature 5 to 45 °C
– relative humidity, max. 60%.
– Remove dirt, deposits and dust from the engine and machine
– treat moving parts with environmentally friendly oil (do not use grease!) and briefly operate the machine (let it run for 1-2 minutes)
– Drain the fuel by running the engine until the fuel is used up
– Clean the oil bath air filter and replace if heavily soiled or damaged
– Check the function of all moving parts and repair or replace if necessary
– Remove the spark plug connector
– Spray the sweeping brush and chassis with anti-corrosion oil
– secure against unauthorized use
– during long-term storage, regularly check the general condition of the machine

! DANGER!

operating materials only in approved and marked canisters store.
Do not make operating materials accessible to children.

16. Disposal



This machine does not belong in the household waste! Dispose of the machine properly. Information is available from the responsible waste management association.

When the machine is no longer serviceable and is to be scrapped, it must be deactivated and dismantled, that is, it must be brought to a condition where it can no longer be used for the purposes for which it was designed.

Disposal of the machine must be carried out by trained personnel. The machine may only be disposed of via the designated and approved methods.

16.1 Decommissioning

Disused machines must be taken out of service immediately and professionally in order to avoid later misuse and endangerment of persons or the environment.

Drain all environmentally hazardous operating materials from the old device and dispose of them in an environmentally friendly manner. Oil residues must never be discharged into the soil or wastewater.

Block every moving part of the machine and dismantle the machine into its individual parts. Hand over machine components to controlled disposal sites.

Remove rubber and plastic parts from the machine and take them to a designated collection point

16.2 Disposal of electrical equipment

Electrical components are classified as hazardous waste and must be disposed of separately from the machine. In the event of a fire in the electrical system of the device, extinguishing agents approved for this purpose must be used (e.g. powder extinguishers).

16.3 Disposal of lubricants

The disposal instructions are in the product-specific data sheets. If necessary, ask your lubricant manufacturer.

16.4 Disposal of packaging

The packaging consists of cardboard and appropriately marked plastics that can be recycled.

– Please recycle these materials.

17. Troubleshooting

WARNING!

Any faults in the machine or engine that require major intervention should always be repaired by your LUMAG specialist workshop or an authorized specialist workshop. Improper intervention will void the warranty.

Before any troubleshooting
– Turn off the engine
– Wait for the sweeping brush to stop
– Close the fuel tap
– Remove the spark plug connector

PROBLEM	POSSIBLE CAUSE	PROPOSED REMEDY
engine does not start	fuel tap closed (OFF position)	Open the fuel tap (ON position)
	fuel tank empty	filling fuel
	spark plug connector loose	Insert the plug firmly into the spark plug
	spark plug defective	Clean/replace spark plug
	Engine oil level too low	Check engine oil level
	Engine cold and choke set to OPEN (right)	Set choke to CLOSE position (left)
Engine runs irregularly	Too rich fuel mixture	Set the choke to OPEN (right) position
	Spark plug dirty	Clean/replace spark plug
	fuel line clogged	Clean fuel performance
	carburetor incorrectly adjusted	Have the adjustment carried out by an authorized specialist workshop
Machine does not return	Drive belt loose or broken	Install new drive belts Contact an authorized workshop
	Clutch lever for brush drive (2) loose/worn	tighten/replace lever
	Clutch cable for brush drive (2) adjusted	Check clutch/adjust Bowden cable
Machine does not run	V-belt loose or torn	Install new drive belts Contact an authorized workshop
	Clutch cable for drive (1) adjusted	Check clutch/adjust Bowden cable
Sweeper brush does not sweep correct	Faster wear of the brushes	Check sweeping brushes, replace if necessary
	Heavy wear of the brushes	Lower or raise sweeping brush with height adjustment
Excessive vibration	Loose parts or damaged brush roller	Turn off the engine immediately Tighten all fasteners, replace damaged parts

If these measures do not resolve the problem or if errors occur that are not listed here, have your machine checked by a specialist.

18. Warranty/Guarantee/ Customer Service

WARRANTY
On the device becomes the legal warranty period given. performers Defects that can be proven to be due to material or assembly errors must be reported to the seller immediately. Proof of purchase of the device must be provided by presenting the invoice and receipt when making a warranty claim.

The warranty is excluded with regard to the parts if defects are caused by natural wear, temperature, weather influences, as well as by defects resulting from negligent assembly, defective connection, false fuel/fuel mixture, setup, operation, maintenance, lubrication or violence.

Furthermore, no warranty is provided for damage caused by unsuitable or improper use of the machine, such as improper modifications or repair work carried out by the owner or third parties, or by intentional overloading of the machine.

Wear parts with a limited service life (e.g. V-belts, clutch, throttle cable, spark plug, air filter, battery, blades, hoses, wheels, tools and other aids), as well as all setting and adjustment work are excluded from the warranty.

GUARANTEE
LUMAG guarantees impeccable quality and, without prejudice to the statutory warranty, provides a guarantee in the event of material or manufacturing defects. The guarantee for LUMAG products is 24 months for exclusively private use, and 12 months for commercial or professional use or rental, from the date of delivery.

The buyer must always prove warranty claims by means of the original purchase receipt. A copy of this must be enclosed with the warranty application. The buyer's address and machine type must be clearly identifiable for professional or commercial use. Without the original purchase receipt we can only carry out the repair for a fee.

Please do not send any devices back to us without a SERVICE NUMBER that you have received from our service department. If we receive devices unsolicited, we cannot accept and process them. To request a SERVICE NUMBER, please contact our service team at:

info@lumag-maschinen.de

Please clearly label the shipping box with the SERVICE NUMBER to ensure quick identification.

Warranty work is carried out exclusively by our LUMAG service workshop. Defects that occur within the warranty period due to material or manufacturing defects must be remedied by repair if they have occurred despite proper use and care of the device. We reserve the right to make two repairs if the same defect occurs. If repair fails or is impossible, the device can be exchanged for an equivalent device. If the exchange is also unsuccessful or impossible, the device can be exchanged.

Normal Wear and tear, natural aging, Improper use, as well as cleaning, maintenance and adjustment work are generally not covered by the guarantee (e.g. cutting device, air and fuel filters, spark plug and recoil starter, drive belt and the like). Due to operation and use, some components are subject to normal wear and tear, even when used as intended, and must be replaced in good time if necessary.

CUSTOMER SERVICE
If you have any technical questions, information about our products or would like to order spare parts, our service team is available as follows:

Service time:	Monday to Thursday from 7.30 a.m. to 12 p.m. and 1 p.m. to 5 p.m. Friday from 7.30 a.m. to 12.30 p.m.
Phone:	+ 49 / 8571/92 556-0
Fax:	+ 49 / 8571/92 556-19
E-mail:	info@lumag-maschinen.de

19. CE declaration of conformity

In accordance with the provisions of the EC directives

Machinery Directive 2006/42/EC
EMC Directive 2014/30/EU
Outdoor Directive 2000/14/EC

explains the company

LUMAG GmbH
Rudolf-Diesel-Straße 1a
D-84375 Kirchdorf a.Inn
Phone: +49 8571/92 556-0
Fax: +49 8571/92 556-19

that the product

Designation:	gasoline sweeper
Type designation:	GAMUL K6
Absolute installed capacity:	4.1 kW

meets the essential protection requirements of the above-mentioned EC directives. Conformity is based on the following standards:

EN 13019:2001+A1
Road cleaning machines - safety requirements

ISO 3744:2010-10
Acoustics - Determination of sound power and sound energy levels of noise sources from sound pressure measurements - Envelope method of accuracy class 2 for an essentially free sound field above a reflecting plane

EN 55012:2007+A1
Vehicles, boats and equipment powered by internal combustion engines - Radio interference characteristics - Limits and measurement methods for protecting external receivers

EN IEC 61000-6-1:2019
Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential areas, commercial and industrial sectors as well as small businesses

Person authorized to compile the technical documentation: Christopher Weißenhorner

The declaration of conformity refers only to the machinery in the condition in which it was placed on the market; it does not take into account any parts and/or interventions subsequently fitted by the end user.

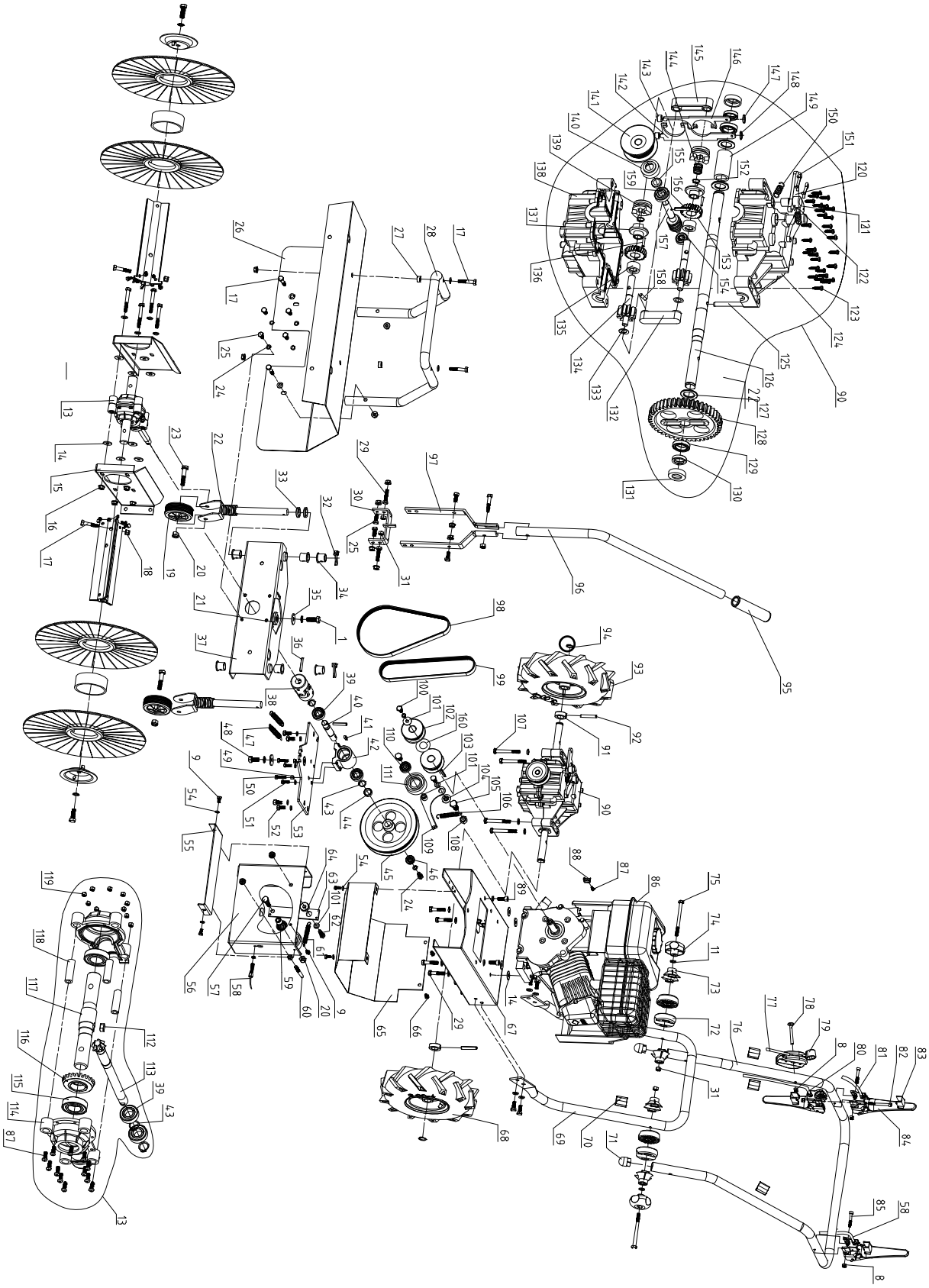
Kirchdorf, September 15, 2023 — Christopher Weißenhorner, Managing Director

Place, date

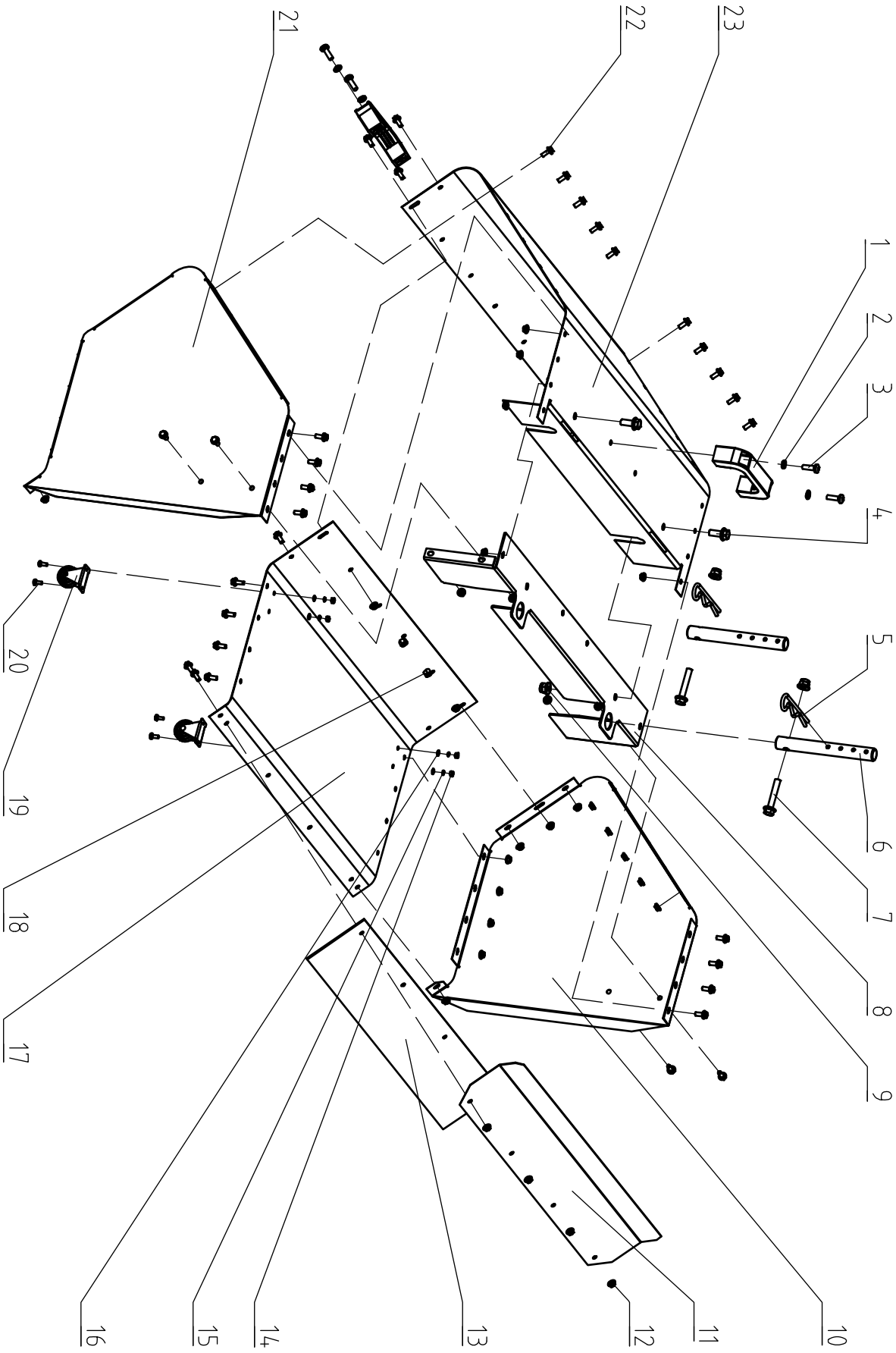
distributor, authorized representative

Signature

20. Components GAMUL K6



21. Components Accessories (optional) for waste collection container



APPENDIX 1

accessories (optional)

galvanized waste collection container 76l

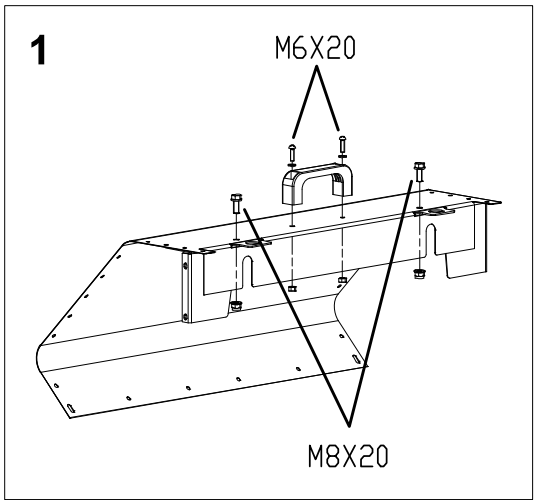
60 cm wide, easy emptying thanks to swiveling and removable container.

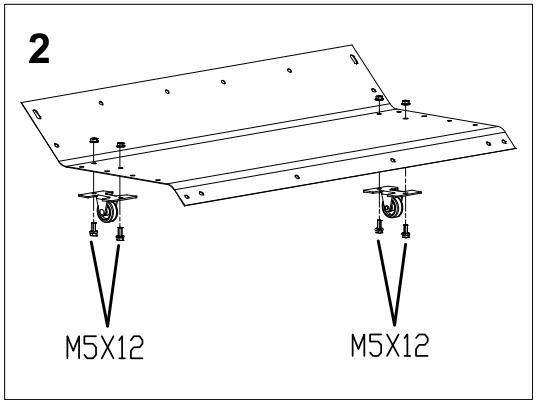
Art. No. 5GAMULK6KGB

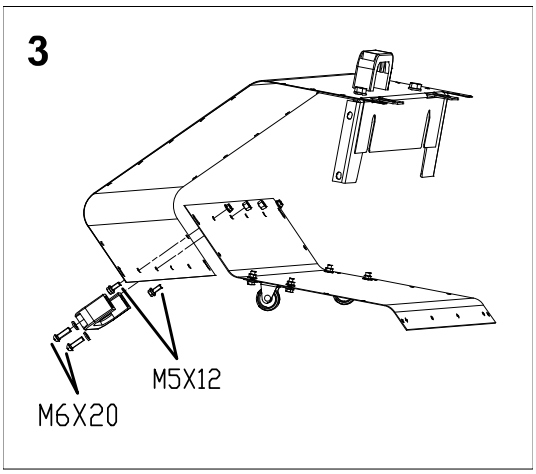
waste collection container

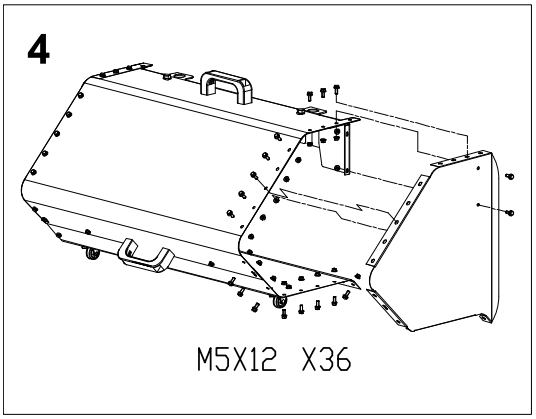
1st assembly
(Figure 1-5)

The following illustrations show the Assembly steps for the waste collection container.









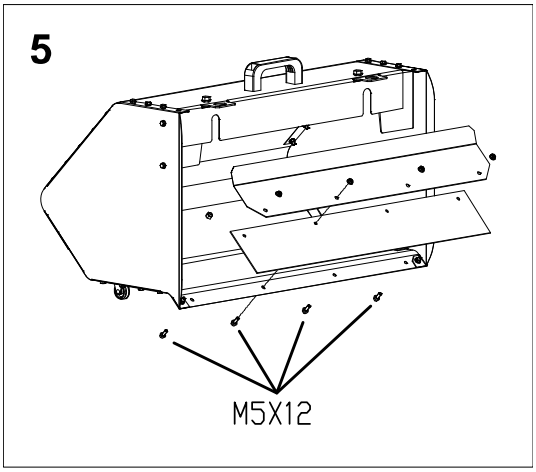


Fig. 1 – 5 Installing the waste collection container

2nd cultivation
(Figure 6)

WARNING!

Switch off the engine and secure it against restarting and unauthorized operation.

-Clean the machine of any dirt.

OVERVIEW

The locking mechanism consists of:
- 2 mounting holes on the brush deck of the machine for mounting
- 2 mounting bolts with 4 rows of holes 2
- hexagon screws M8x35 and nuts 2 spring
- pins

1. Position the two mounting bolts into the designated openings on the brush deck.
2. Fix the mounting bolt to the brush deck using the M8x35 hexagon screws.
3. Hang the waste collection container on the mounting bolts and press the spring pins into the mounting bolts, using the lowest hole if possible.

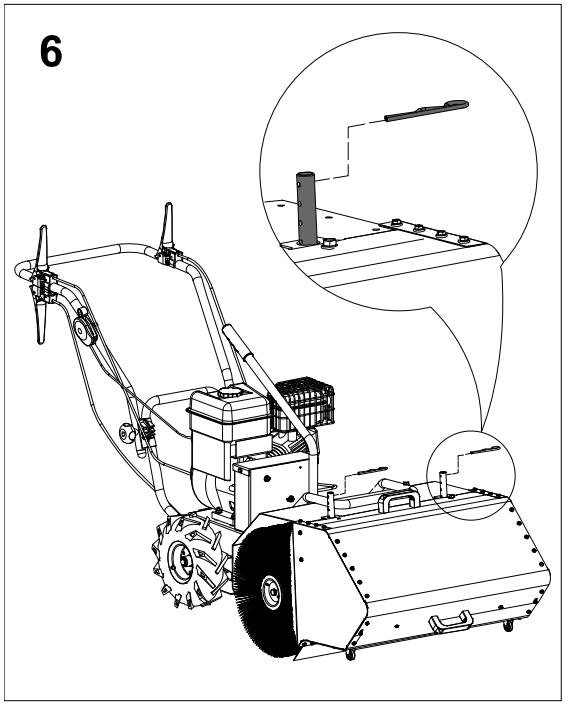


Fig. 6 Installing the waste collection container

DANGER!

Before starting work, check that the waste collection container is securely attached to the machine.

APPENDIX 2

accessories (optional)

snow plow

Working width: 65 cm

Art. No. 5GAMULK6SS

snow plow

1st assembly
(Figure 1)

1. Spacers with the supplied hexagon screws M8x20 and nuts (2x)
   Mount on the back, in the middle of the snow plow blade.

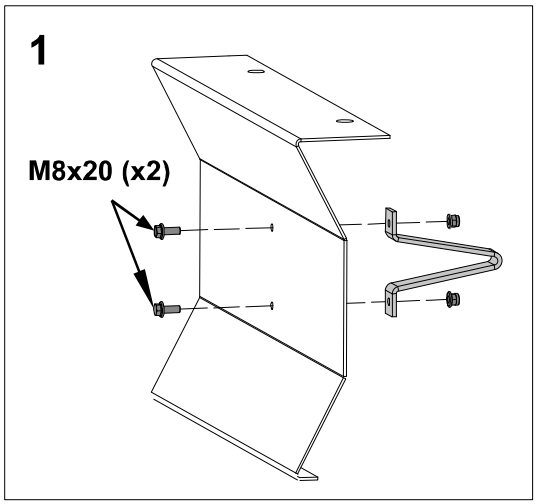


Fig. 1 Installing spacers

1st cultivation
(Figure 2)

WARNING!

Switch off the engine and secure it against restarting and unauthorized operation.

-Clean the machine of any dirt.

OVERVIEW

The locking mechanism consists of:
- 2 mounting holes on the brush deck of the machine for mounting
- 2 mounting bolts with 2 rows of holes 2
- hexagon screws M8x35 and nuts 2 spring
- pins

1. Position the two mounting bolts into the designated openings on the brush deck.
2. Fix the mounting bolt to the brush deck using the M8x35 hexagon screws.
3. Attach the snow plow blade to the mounting bolts and press the spring pins into the mounting bolts, using the lower hole if possible.

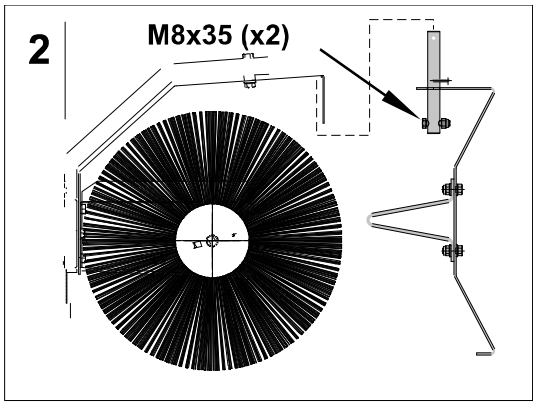


Fig. 2 Installing the snow blade

DANGER!

Before starting work, check that the waste collection container is securely attached to the machine.

APPENDIX 3

maintenance log

The required maintenance intervals depend on the intensity of use of the machine at the operator's site and the resulting actual signs of wear.

In order to be able to adapt the maintenance intervals to these conditions of use, the general condition of the machine as a whole and of the individual assemblies and components must be recorded during regular and, if necessary, unscheduled maintenance work.

- Use the following table as a template and copy it.
- Record all maintenance work carried out. Keep
- maintenance records.

Maintenance log No. ____

Date	maintenance work	Maintenance/Event Information	Name of the performers

Date	maintenance work	Maintenance/Event Information	Name of the performers

maintenance log

GAMUL K6
powered by LUMAG

Subject to change!

Version GAMUL K6 (09.23 D)

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