



ZIPPER MASCHINEN GmbH
Gewerbepark 8 · 4707 Schüsslberg
AUSTRIA
Tel. +43 7248-61116-700
info@zipper-maschinen.at
www.zipper-maschinen.at

Originalfassung

DE

BETRIEBSANLEITUNG

HÄCKSLER

Übersetzung / Translation

EN

USER MANUAL

SHREDDER



ZI-HAEK2120
EAN: 9120039235394



ACHTUNG: Öl kontrollieren!



ATTENTION: Check Oil!



DE Warnung vor feuergefährlichen Stoffen;
nicht während des Betriebs befüllen.
EN Warning of flammable liquids;
turn off the engine before filling (gasoline)



DE **Vergiftungsgefahr!** Nicht in Innenräumen und in der Nähe von offenen Fenstern und Belüftungen verwenden.

EN **Danger of Intoxication!** Only use outdoors and far from open windows and vents!



DE Warnung vor wegschleudernden Teile!

EN Warning against thrown-off items!



DE Sicherheitsabstand einhalten!

EN Keep safe distance!



DE Warnung vor Schnittverletzungen!

EN Warning about cut injuries!



DE Hineinfassen verboten!

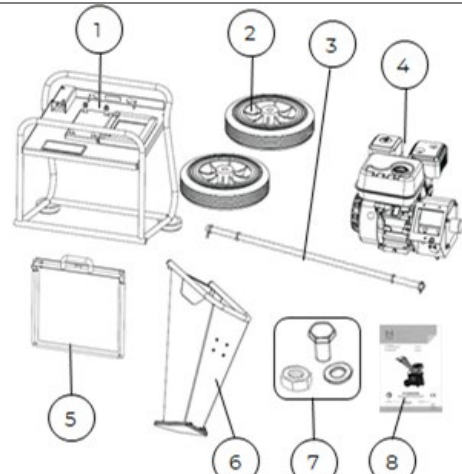
EN Don not reach in!

DE Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder entfernt wurden, sind umgehend zu erneuern.

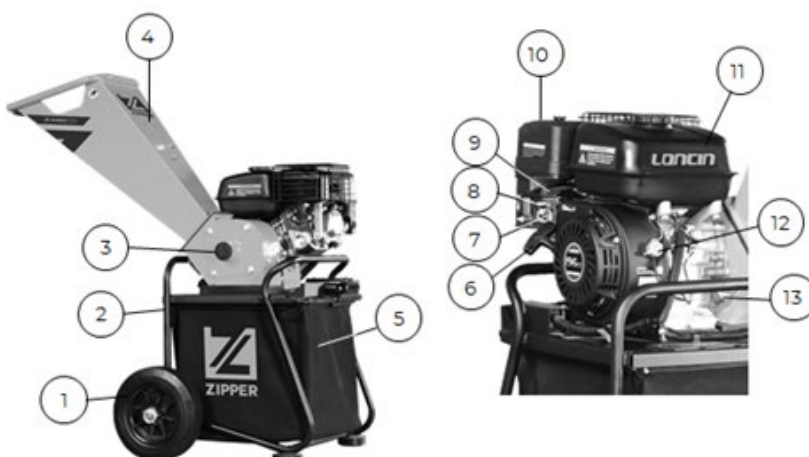
EN Missing or non-readable security stickers have to be replaced immediately.

3 TECHNIK / TECHNICS

3.1 Lieferumfang / Delivery content

|  | | |
|---|--|-------|
| Nr. | Bezeichnung / Description | Qty. |
| 1 | Basisgestell / base frame | 1 |
| 2 | Reifen / wheels | 2 |
| 3 | Radachse / wheel axle | 1 |
| 4 | Motor / engine | 1 |
| 5 | Auffangsack / collecting bag | 1 |
| 6 | Einzugstrichter / feed hopper | 1 |
| 7 | Befestigungsmaterial / mounting material | 1 Set |
| 8 | Betriebsanleitung / usermanual | 1 |

3.2 Komponenten / Components





| Nr. | Bezeichnung / Description | Nr. | Bezeichnung / Description |
|-----|---|-----|----------------------------------|
| 1 | Reifen / wheel | 8 | Choke-Hebel / choke-lever |
| 2 | Rahmen / frame | 9 | Gashebel / throttle lever |
| 3 | Messergehäuse / blade housing | 10 | Luftfilter / air filter |
| 4 | Einzugstrichter / feed hopper | 11 | Kraftstofftank / fuel tank |
| 5 | Auffangsack / collecting bag | 12 | Ein-Aus-Schalter / On-Off-switch |
| 6 | Seilzugstarter / recoil starter | 13 | Ölmessstab / oil dipstick |
| 7 | Kraftstoffabsperrhahn / fuel shut-off valve | | |

3.3 Technische Daten / technical data

| Spezifikation / Specification | ZI-HAEK2120 |
|---|--|
| Motortype / engine type | 1-Takt-4Zyl. / 1 stroke 4 cyl. Loncin G200F |
| Motorleistung / engine power | 4,1 kW |
| Motordrehzahl / motor speed | 3600 min ⁻¹ |
| Hubraum / displacement | 196 ccm |
| Starter / starter | Seilzugstarter / recoil start |
| Kraftstoff / fuel | Benzin ROZ95 / gasoline RON95 |
| Kraftstofftankkapazität / fuel tank capacity | 3,6 l |
| empfohlenes Motoröl / recommended engine oil type | 15W40 |
| Motoröltankkapazität / engine oil tank capacity | 0,6 l |
| max. Astdurchmesser / max. Chipping capacity | Ø 50 mm |
| Anzahl Messer / amount of blades | 2 |
| Messermaterial / blade material | Cr12 |
| Reifen / wheels | Ø 254 mm Gummi / Ø 254 mm rubber |
| Auffangsack Volumen / collection bag volume | 65 l |
| Schutzart / degree of protection | IPX0 |
| Verpackungsmaße (L×B×H) / packaging dimensions (L×W×H) | 660×570×610 mm |
| Maschinenmaße (L×B×H) / machine dimensions (L×W×H) | 943×873×1063 mm |
| Gewicht (Brutto) / weight (gross) | 55 kg |
| Gewicht (Netto) / weight (net) | 51 kg |
| Garantierter Schallleistungspegel L _{WA} / guaranteed sound power level L _{WA} | 108 dB(A) |

(DE) Hinweis Geräuschangaben: Die angegebenen Werte sind Emissionswerte und müssen damit nicht zugleich auch sichere Arbeitsplatzwerte darstellen. Obwohl es eine Korrelation zwischen Emissions- und Immissionspegeln gibt, kann daraus nicht zuverlässig abgeleitet werden, ob zusätzliche Vorsichtsmaßnahmen notwendig sind oder nicht. Faktoren, welche den am Arbeitsplatz tatsächlich vorhandenen Immissionspegel beeinflussen, beinhalten die Eigenart des Arbeitsraumes und andere Geräuschquellen, d. h. die Zahl der Maschinen und anderer benachbarter Arbeitsvorgänge. Die zulässigen Arbeitsplatzwerte können ebenso von Land zu Land variieren. Diese Information soll jedoch den Anwender befähigen, eine bessere Abschätzung von Gefährdung und Risiko vorzunehmen.

(EN) Notice noise emission: The values given are emission values and therefore do not have to represent safe workplace values at the same time. Although there is a correlation between emission and immission levels, it cannot be reliably deduced whether additional precautions are necessary or not. Factors influencing the actual immission level at the workplace include the nature of the workspace and other noise sources, i.e. the number of machines and other adjacent operations. The permissible workplace values may also vary from country to country. However, this information should enable the user to make a better assessment of hazard and risk.



11 PREFACE (EN)

Dear Customer!

This manual contains information and important notes for safe commissioning and handling of the SHREDDER ZI-HAEK2120, hereinafter referred to as “machine” in this document.



This manual is part of the machine and must not be removed. Save it for later reference and if you let other people use the machine, add this manual to the machine.

Please read and note the safety instructions!

Before first use read this manual carefully. It eases the correct use of the machine and prevents misunderstanding and damages of machine.

Due to constant advancements in product design, construction, illustrations and contents may deviate slightly. If you notice any errors, please inform us.

We reserve the right to make technical changes!

Check the goods immediately after receipt and note any complaints on the consignment note when taking over the goods from the deliverer!

Transport damage must be reported separately to us within 24 hours.

ZIPPER MASCHINEN GmbH cannot accept any liability for transport damage that has not been reported.

Copyright

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The place of jurisdiction is the regional court Linz or the court responsible for 4707 Schlüsslberg is valid.

Customer service contact

ZIPPER MASCHINEN GmbH

4707 Schlüsslberg, Gewerbepark 8

AUSTRIA

Tel. +43 7248 61116 – 700

info@zipper-maschinen.at

www.zipper-maschinen.at



12 SAFETY

This section contains information and important notes on the safe commissioning and handling of the machine.



For your safety, read this manual carefully before commissioning. This will enable you to handle the machine safely and thus prevent misunderstandings as well as personal injury and damage to property. Pay special attention to the symbols and pictograms used on the machine as well as the safety information and danger warnings!

12.1 Intended use of the machine

The machine is designed exclusively for the following activities:

For shredding branches of all kinds (depending on the type of wood and freshness). Only shred wilted, moist garden waste that has been stored for several days in alternation with branches, within the specified technical limits!

NOTE



ZIPPER MASCHINEN GmbH assumes no responsibility or warranty for any other use or use beyond this and for any resulting damage to property or injury.

12.1.1 Technical restrictions

The machine is designed for the work under the following conditions:

| | |
|----------------------------------|------------------|
| Relative humidity: | max. 70 % |
| Temperature (for operation) | +5° C to +40° C |
| Temperature (storage, transport) | -20° C to +55° C |

12.1.2 Prohibited applications / Dangerous misuse

- Operating the machine without adequate physical and mental fitness.
- Operating the machine without knowledge of the manual.
- Modifying the machine design.
- Operating the machine in a potentially explosive environment.
- Operating the machine outside the technical limits specified in this manual.
- Operating the machine in wet or rainy conditions.
- Operating the machine in a potentially explosive environment.
- Operating the machine indoors or in enclosed areas.
- Removing of the safety markings attached to the machine.
- Modifying, circumventing or disabling the safety devices of the machine.
- Do not use the machine as a climbing aid.
- Towing the machine on public roads.

The non-intended use or the disregard of the explanations and instructions described in this manual will result in the expiration of all warranty claims and compensation claims for damages against ZIPPER MASCHINEN GmbH.

12.2 User requirements

The machine is designed to be operated by one person. The prerequisites for operating the machine are physical and mental fitness as well as knowledge and understanding of the operating instructions. Persons who, due to their physical, sensory or mental capabilities, inexperience or lack of knowledge, are unable to operate the machine safely must not use the machine without supervision or instruction by a responsible person.

Please note that locally applicable laws and regulations determine the minimum age of the operator and may restrict the use of this machine!

Work on electrical components or equipment may only be carried out by a qualified electrician or under the guidance and supervision of a qualified electrician.

Put on your personal protective equipment before working on the machine.

12.3 Safety devices

The machine is equipped with the following safety devices:



- Safety switch: The machine only works if the collection bag (1) is properly installed and closed.
- Collection bag (2)



12.4 General safety instructions

To avoid malfunctions, damage and health impairments when working with the machine, the following points must be observed in addition to the general rules for safe working:

- Check the machine for completeness and function before starting. Only use the machine if the separating and other non-separating protective devices required for machining have are fitted.
- Make sure that the guards are in good working order and properly maintained.
- Select a level, vibration-free surface as the installation area.
- Ensure sufficient space around the machine.
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects.
- Ensure a clean working environment.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut-off workpiece parts, etc.).
- Only use tools that are in perfect condition and free of cracks and other defects (e.g. deformations).
- Remove tool keys and other setting tools before switching on the machine.
- Check the machine's connections for strength before each use.
- Never leave the running machine unattended. Switch off the machine before leaving the working area and secure it against unintentional or unauthorized restarting.
- The machine may only be operated, maintained or repaired by persons who are familiar and who have been informed about the dangers arising from this work.
- Ensure that unauthorized persons keep a safety distance (25 m) from the machine and keep children away from the machine.
- Always work with care and the necessary caution and never use excessive force.
- Do not overload the machine.
- Hide long hair under hair protection.
- Wear close fitting protective work clothing and suitable protective equipment (eye protection, face protection, ear protection).
- Never wear loose jewellery, loose clothing or accessories (e.g. tie, scarf).
- Do not work on the machine if you are tired, not concentrated or under the influence of medication, alcohol or drugs!
- Do not use the machine in areas where vapours of paints, solvents or flammable liquids represent a potential danger (danger of fire or explosion!).
- Switch off the machine before carrying out adjustment, retooling, cleaning, maintenance or servicing work, etc. Before starting work on the machine, wait until all tools and machine parts have come to a complete standstill and secure the machine against unintentional re-starting.
- Warning signs and/or stickers on the machine that are illegible or have been removed must be replaced immediately!
- Only use spare parts and accessories recommended by Zipper Maschinen.

12.5 Special safety instructions for this machine

- Never put your hands, feet or other parts of your body into the feed hopper, the discharge opening or near or under moving parts while the motor is running. Always keep your distance from the discharge opening. If you need to push material into the discharge chute, use a small stick and not your hands.
- Keep your face and body away from the infeed/outfeed to avoid accidental bouncing of material.
- The machine should only be operated on a flat surface. Never operate the machine on a slippery, wet, muddy or icy surface.
- If the cutting unit strikes a foreign object or if your machine makes unusual noises or vibrations, stop the engine immediately.
- Exercise caution to avoid slips or falls.
- Turn off the engine when leaving the operating position and when making repairs, adjustments and inspections.
- Always use the collection bag when chipping.
- Before cleaning, repairing or inspecting, turn off the engine and make sure that the fly-wheel and all moving parts have come to a complete stop. Disconnect the spark plug cable and keep the cable away from the spark plug to prevent accidental starting.
- Do not overload the machine or attempt to shred material beyond the specified limits.
- Never operate the machine during transportation.
- Never allow bystanders near the machine while it is running.
- Never lift or transport the machine while the engine is running.
- When loading material into the machine, make absolutely sure that no metal parts, stones or other foreign objects are present. This could result in injury or damage to the machine.



- Make sure that the collection bag does not overfill with material. An overfilled collection bag leads to a blockage in the discharge chute and to a blockage in the cutting housing.
- Ensure that no part of the motor, especially around the cooling fins and the silencer, is blocked with processed material, leaves, oil, grease or other flammable substances.
- Never carry cargo or wood on your machine.
- If for any reason it is necessary to open the intake or exhaust ports or to inspect or repair the machine where a moving part may come in contact with your body or clothing, turn off the machine, allow all moving parts to stop, disconnect the spark plug and allow the engine to cool before attempting to unclog, inspect or repair.
- Check the blade fastening screws for tightness before each use. Also visually check the blade for wear or damage. Replace the blade with parts that meet the original equipment specifications.
- Check the distance between the blade and the wear plate each time you sharpen or replace the blade.

12.6 Safety instructions for machines with combustion engine

Fuel is highly flammable and explosive. Handling with fuel can cause burns or serious injuries.

- Do not touch the engine and/or muffler during operation or immediately after switching off! These areas become hot during operation and can cause burns.
- Do not touch the spark plug connector when the engine is running (electric shock!).
- Do not operate the machine in closed areas or in poorly ventilated rooms unless there is adequate ventilation through exhaust fans or hoses (Risk of suffocation from carbon monoxide!).
- Do not smoke while the machine is in operation.
- Do not smoke when refuelling the machine.
- Refuel the machine only in a well ventilated area.
- Do not refuel the machine when the engine is running or the machine is still hot.
- Do not refuel the machine near naked flames.
- Do not spill fuel when refuelling.
- Do not crank a gas flooded engine as long as the spark plug is removed- fuel in the cylinder sprays out of the spark plug opening.
- Do not carry out an ignition spark test on engines if the engine is flooded or gas can be smelled. A stray spark could ignite the vapours.
- Do not use fuel or other types of fuel or flammable solutions to clean the machine parts, especially indoors. The vapours of fuels and solutions may explode.
- Always keep the area around the muffler free of foreign substances such as leaves, paper, cardboard, etc. A hot muffler could ignite these substances and cause a fire.
- Close the fuel filler cap after refuelling.
- Check the fuel line and tank regularly for leaks and cracks. Do not operate the machine if leaks in the fuel system are known.
- Store fuel only in designated and approved containers.

12.7 Hazard warnings

12.7.1 Residual risks

Despite intended use, certain residual risk factors remain.

Danger from noise

Working without hearing protection can permanently damage your hearing.

Danger from the working environment

Watch out for stones and other objects that can be thrown around by the machine.

Danger to hands and fingers

Cut/crush hazard: Never put your hands, feet or other body parts into the feed hopper, the discharge opening or near or under moving parts while the motor is running

Risk of burns

Touching the silencer, exhaust and other heat able machine components can cause severe burns after prolonged continuous operation or when the engine is hot.

Fire and explosion hazards

Gasoline is highly flammable and explosive under certain conditions.

NEVER add fuel or engine oil while the machine is running or hot.

When refueling and in places where fuel is stored, do not smoke and keep open flames or sparks away.

Do not overfill the fuel tank and avoid spilling fuel when refueling. If fuel has been spilled, make absolutely sure that this area is completely dry/clean before starting the engine.

Make sure that the tank cap is properly closed again after refueling.

Chemical hazards

Never operate or refuel a fuel or diesel engine in a sealed area without adequate ventilation. Carbon monoxide exhaust fumes from the internal drive units of the combustion engine can cause damage to health and death if inhaled in confined spaces. Therefore, only operate the machine in well-ventilated rooms or outdoors. Liquid fuels can cause serious damage to the skin and the environment.



12.7.2 Hazardous situations

Due to the structure and construction of the machine, hazardous situations may occur which are identified in this manual as follows:

DANGER



A safety instruction designed in this way indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING



Such a safety instruction indicates a potentially hazardous situation which, if not avoided, may result in serious injury or even death.

CAUTION



A safety instruction designed in this way indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTE



A safety note designed in this way indicates a potentially dangerous situation which, if not avoided, may result in property damage.

Regardless of all safety regulations, your common sense and your appropriate technical aptitude/training are and remain the most important safety factor in the error-free operation of the machine. **Safe working depends on you!**

13 TRANSPORT

Transport the machine in its packaging to the installation site. To maneuver the machine in its packaging, a pallet truck or a forklift truck with the appropriate lifting capacity and a fork length of at least 1200 mm can be used, for example. The information can be found in the Technical data chapter. To ensure proper transport, follow the instructions and information on the transport packaging regarding the center of gravity, lifting points, weight, means of transport to be used and prescribed transport position, etc. Ensure that the selected lifting equipment (forklift, pallet truck, load slinging equipment, etc.) is in perfect condition.

The machine may only be lifted and transported by qualified personnel with appropriate training for the lifting equipment used.

14 ASSEMBLY

14.1 Preparation

14.1.1 Checking delivery content

Check the delivery immediately for transport damage and missing parts. Report any damage or missing parts to your dealer or the shipping company immediately. Visible transport damage must also be noted immediately on the delivery note in accordance with the provisions of the warranty, otherwise the goods are deemed to have been properly accepted.

14.1.2 Requirements for the installation site

The selected installation location must meet the safety requirements of the machine. Place the machine on a level, solid surface to prevent the machine from tipping over. The selected installation location for the machine must comply with the local safety regulations and the special safety instructions for the machine for feeding/ejecting shredding material as well as the ergonomic requirements for a workplace with sufficient lighting conditions.

NOTE



The floor at the installation site must be able to bear the load of the machine!

When calculating the required space, take into account that the operation, maintenance and repair of the machine must be possible at all times without restrictions. With long wood chips, there must be no crushing or shearing points in the extension area (= danger zone)



14.2 Assemble

The machine comes pre-assembled, it is necessary to assemble the components dismantled for transport according to the following instructions and to make the electrical connection.

| | |
|--|---|
| | <p>1. Mounting the axle and wheels</p> <ul style="list-style-type: none"> Push the axle through the hollow cross strut of the frame (1). Fit a wheel with washers, locking pins and cover caps to each end of the axle (2). |
| | <p>2. Mounting the motor</p> <ul style="list-style-type: none"> Mount the motor on the base frame using 4 hexagon bolts M8x35 together with washers and nuts (3). |
| | <p>3. Mounting the feed hopper</p> <ul style="list-style-type: none"> Place the rubber seal (4) on the opening of the blade housing and fit the feed hopper. Mount the feed hopper to the blade housing using 4 M6x20 hexagon bolts with spring washers and washers (5). |
| | <p>4. Cable connections</p> <ul style="list-style-type: none"> Connect the plugs (1) of the two safety switches to the sockets of the connection cable (2) |
| | <p>5. Mounting the collecting bag</p> <ul style="list-style-type: none"> Place the collecting bag on the base frame (6). <div style="background-color: #0056b3; color: white; padding: 5px; text-align: center;">NOTE</div> <div style="display: flex; align-items: center;"> <p>The collecting bag must be fitted and fully inserted in order to press the safety switch and to ensure to make the machine ready to start.</p> </div> |
| | <p>6. Adjusting the safety switches (3)</p> <p>Collecting bag</p> <ul style="list-style-type: none"> Turn the screw (1) into the correct position and fix it with the nut (2) The screw must actuate the safety switch when the collection bag is fully inserted (4) <p>Feed hopper</p> <ul style="list-style-type: none"> Turn the screw (1) into the correct position and fix it with the nut (2) The screw must actuate the safety switch when the feed hopper is mounted (3) |



15 OPERATION

Only operate the machine when it is in a perfect condition. Before each operation, a visual inspection of the machine must be carried out. Safety devices and operating elements must be checked carefully. Check screw connections for damage and tight fit.

15.1 Operating instructions

- Check the fuel system regularly. Check for wear, leaks, loose or missing fuel hoses and shut-off valves. Repair or replace defective parts.
- Check that the machine is in perfect condition. Damaged or missing parts must be replaced or repaired immediately.
- The running engine emits carbon monoxide, which is odorless and tasteless and can lead to unconsciousness. Avoid inhaling the exhaust fumes.
- Never pull the recoil starter while the engine is running. This will damage the engine.
- Never work near sources of sparks or flames. Never smoke near the running machine.
- Keep hands and feet away from the openings. Keep hands, feet and clothing away from moving machine parts (blades, etc.).
- Never remove the feed hopper while the motor is running!
- Avoid contact with hot surfaces (engine), hot fuel or oil and exhaust fumes. After operation, allow the machine to cool down before carrying out maintenance or adjustment work.

15.2 Checklist before commissioning

Before commissioning, check

- the locking nuts and bolts are tight (screws or bolts loosened by vibrations can lead to accidents!),
- the engine oil level,
- the amount of fuel in the tank,
- w the fuel lines for leaks and wear,
- the tires for tight fit and mobility,
- the contents of the collection bag.

15.3 Information on initial start-up

NOTE



Note that the machine is delivered without engine oil and fuel. Ensure that these operating fluids are topped up before initial start-up.

CAUTION: Machine will not start until engine oil is topped up to the upper limit Oil starvation!

15.3.1 Test run initial start-up

- Allow the engine to idle for about 3 minutes
- Pay attention to abnormal noises
- Pay attention to the exhaust gases (black or white smoke)

15.3.2 Notes for the first 5 operating hours

To maximize the lifespan of our machine you should follow these points

- Change the engine oil after the first 5 operating hours.

15.4 Operation

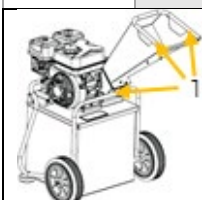
15.4.1 Position the machine

Position the machine on a level and stable surface.

NOTE



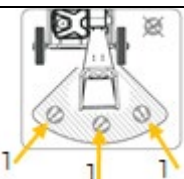
Do not operate the appliance on concrete or other hard surfaces.



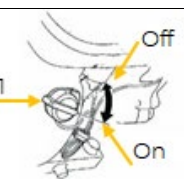
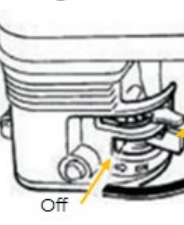
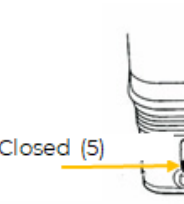
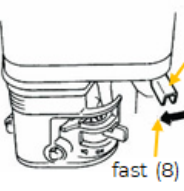
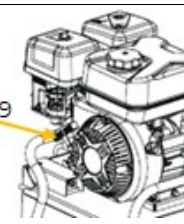
- Hold the machine by the handles and tilt the machine (1).
- Pull the machine to the place of use and secure it with wheel chocks to prevent it from moving.



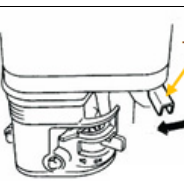
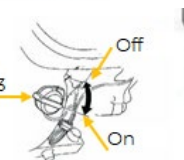
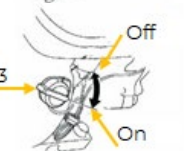
15.4.2 Operator position

| | |
|---|--|
|  | <ul style="list-style-type: none"> The operator position is located on the side of the feed hopper (1). |
|---|--|

15.4.3 Start the machine

| | |
|---|--|
|  | <ol style="list-style-type: none"> Turn the On-Off-switch to the "on" position (1). |
|  | <ol style="list-style-type: none"> Turn the fuel shut-off valve (2) to the "On" position. |
|  | <p>NOTE: The "Closed" position (5) of the choke lever (3) enriches the fuel mixture for starting a cold engine. The "Open" position (4) provides the correct fuel mixture for normal operation after starting and for restarting a warm engine.</p> <ol style="list-style-type: none"> Move the choke lever (3) to the "Closed" position (5), only for a cold engine. |
|  | <ol style="list-style-type: none"> Move the throttle lever (6) to the "slow" (7) position. |
|  | <ol style="list-style-type: none"> Grasp the cable starter (9) and pull it out slowly. The resistance is strongest at a certain point. This point corresponds to the compression point. Allow the rope to roll back a little from this point and then pull it out forcefully. <p>NOTE: Do not pull the starter rope all the way to the end and do not let it rewind after pulling, but only rewind it quickly.</p> <ol style="list-style-type: none"> Move the choke lever (3) to the "Open" position when the engine is running. |

15.4.4 Stop the machine

| | |
|---|---|
|   | <p>Normal Stop</p> <ul style="list-style-type: none"> Move the throttle lever (1) to the "slow" position (2). Allow the engine to idle for 1 to 2 minutes. Turn the On-Off-switch (3) to the "Off" position (2). Turn the fuel shut-off valve (4) to the "Off" position. Wait until the machine has come to a complete standstill |
|  | <p>Stop in an emergency situation</p> <ul style="list-style-type: none"> Turn the On-Off-switch (3) to the "Off" position. |



15.4.5 Chipping wood chips

The machine shreds dry and green organic materials such as branches, twigs, roots, stalks, leaves, etc. with a maximum diameter of 50 mm, depending on the hardness of the wood.

NOTE



Wait until the machine has reached full speed before filling the wood chips into the hopper.
Wear protective gloves when filling the hopper with wood chips.

NOTE



Stop the machine as soon as you hear unusual noises or vibrations or if the machine becomes blocked.

- Move the throttle lever towards the “Fast” position to increase the speed.
- Always feed branches and twigs into the feed hopper with the cut end first. The branches and twigs are caught and fed through the machine's self-feeding mechanism.
- Cut off any protruding side branches beforehand.
- Rotate the branches when feeding them into the feed hopper.
- Use a stick to push short and leafy material into the feed hopper.
- Do not force the material into the machine. If the chipped material is not shredded well, the chipping blades must be sharpened or replaced or the gap between the chipping blades and the wear plate must be adjusted.
- Do not overload the machine by filling too much material into the feed hopper. If you hear that the speed is decreasing, stop the material feed. Only restart the material feed when the motor has reached full speed.
- Dry branches dull the blades more quickly. Green material is easier to process.
- The machine can clog up with soft, wet or fibrous material. Feed dry branches into the feed hopper from time to time to remove any remaining soft residue.
- Check the quantity in the collection bag regularly and empty the collection bag.
- When not shredding, set the throttle lever to the “Slow” position.

In the event of a blockage due to overloading, clogging or the intake of a foreign object, proceed as follows:

- Switch the machine off immediately.
- Set the throttle lever to the “slow” position.
- Wait until the blades have come to a complete standstill.
- Allow the engine to cool down.
- Disconnect the spark plug cable from the spark plug.
- Check and empty the collection bag.
- Remove the drain funnel by removing the screws and washers.

NOTE: Always wear cut-resistant gloves when handling the cutting roller and chipper blade!

- Remove all materials that have become caught in the cutting roller.
- Check the machine for defective parts and repair them if necessary. Retighten any loose parts.
- Check whether the cutting roller can rotate freely.
- Secure the feed hopper with the screws and washers.
- Reconnect the spark plug cable.
- Switch the machine on and continue feeding the material.

16 CLEANING, MAINTENANCE, STORAGE, DISPOSAL

WARNING



Risk of injury!

Always switch off the engine before cleaning, maintenance and repair work and secure the machine against unintentional switching on by removing the spark plug.

- Allow the engine to cool down.
- Take particular care when working on the shredder!

16.1 Cleaning

Regular cleaning guarantees the long service life of your machine and is a prerequisite for its safe operation.

NOTE



Incorrect cleaning products can attack the finish of the machine. Do not use any solvents, nitro thinners or other cleaning products that could damage the machine's finish.
Observe the specifications and instructions of the cleaning agent manufacturer.



- Remove dust and deposits from the machine after each use, especially from the guards, air slots and motor housing. Clean the machine with dry compressed air and blow out the machine parts. Never use a high-pressure cleaner to clean the machine.
- Lubricate bare machine parts against corrosion with an acid-free lubricating oil (e.g. WD40 rust inhibitor). Remove dust and deposits from the machine after each use, especially from the guards, air slots and motor housing.

16.2 Maintenance

The machine is low-maintenance and only a few parts need to be serviced. Malfunctions or defects that could affect your safety must be repaired immediately!

- Before each operation, check the perfect condition of the safety devices.
- Regularly check the perfect and legible condition of the warning and safety labels of the machine.
- Use only original spare parts recommended by the manufacturer.

16.2.1 Maintenance plan

The type and degree of machine wear depends to a large extent on the operating conditions. The following intervals apply when the machine is used within the technical limits:

| Intervall | Komponenten | Maßnahme |
|--------------------------|------------------------------------|--|
| before usage | • screws | • Tighten if necessary or replace if lost. |
| | • machine parts | • Check, repair if necessary. |
| | • cutting roller blades | • Check, whether it turns feely (with a long stick). |
| | | • Visual inspection for damage. |
| after usage | • engine oil level | • Check, top up if necessary. |
| | • fuel tank | • Check fill level, refuel if necessary. |
| | • fuel lines | • Check for leaks, replace if necessary. |
| | | |
| every 10 operating hours | • machine | • clean |
| | • collecting bag | • empty |
| every 40 operating hours | • blade and wear plate | • Check sharpness. |
| | • gap between blade and wear plate | • Check fastening screws for tightness. |
| every 40 operating hours | • spark plug | • Check, adjust if necessary. |
| | • air filter and precleaner | |
| | • engine oil | • Clean or replace. |
| | | • Clean or replace. |
| | | • replace |

16.2.2 Checking / filling up with fuel

Only use containers approved for fuel for transportation and storage. Place the container on the ground and fill it with fuel from the fuel pump to minimize static charge. Never fill the machine with fuel directly at the fuel pump.

WARNING



Fire and explosion hazard due to gasoline!

Petrol is highly flammable and explosive. Heat, sparks and flames can ignite gasoline vapors, which can spread during refuelling. This can result in a flash fire and/or explosion, which can lead to serious injury or death.

- Keep away from naked flames, sparks and heat sources!
- Only refuel outdoors!
- Clean up spilled fuel or splashes immediately.



- Switch off the engine and allow it to cool down.
- Remove the fuel filler cap (1).
- Visually check the fuel level.
- If necessary: Fill fuel from the transport container into the filler opening. Filter the fuel. The recommended fuel can be found in the Technical data chapter.

NOTE: Only use transport containers approved for fuel.

- Only fill the tank with fuel up to approx. 3 cm below the rim.
- Close the fuel filler cap (1).

If fuel has been spilled:

- Wipe the filler opening with rags.
- Wait 5 minutes until the fuel has evaporated before starting the machine.
- Rags soaked with fuel are flammable and must be disposed of properly.

NOTE: Change clothing contaminated with fuel immediately and wash your skin.



NOTE



Observe the safety instructions when filling and storing the transport container for the fuel!

16.2.3 Check / change engine oil

NOTE



Too low oil level will damage the engine and shorten the life of the machine. Therefore, check the engine or oil level before every start and top up the engine oil if necessary.


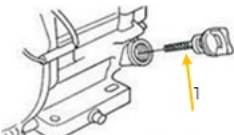
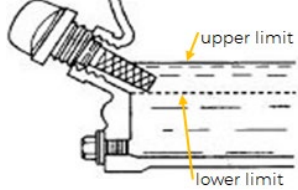

Engine stops and does not start with low oil quantity!

NOTE

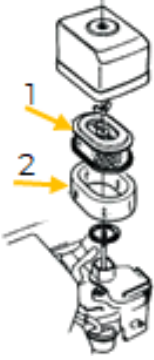


Waste oils are toxic and must not be released into the environment!

Follow the manufacturer's instructions and, if necessary, contact your local authorities for information on proper disposal.

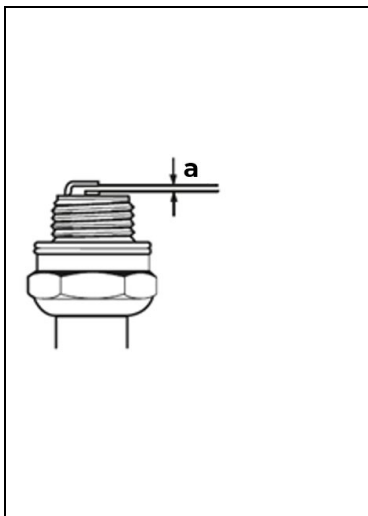
| | |
|---|--|
|  | <ul style="list-style-type: none"> • Check the fill lever • To check the engine oil level, park the machine on a safe, level surface. Switch off the engine and allow the machine to stand for ten minutes so that the circulating oil can collect in the oil pan. • Unscrew the oil dipstick (1) and wipe with a clean, lint-free cloth or a lint-free paper towel. |
|  | <ul style="list-style-type: none"> • Push the measuring rod back into the opening as far as it will go, but do not screw it in (1). (Make sure that the rod is really pushed in all the way - sometimes it can get jammed). |
|  | <ul style="list-style-type: none"> • Pull the oil dipstick out again and read the oil level. There are two markings for this. • If the oil level is low, top up with the recommended oil up to the upper edge. • Push the oil dipstick back in and tighten. |
|  | <p>Change the engine oil</p> <ul style="list-style-type: none"> • Remove the oil dipstick from the filler opening (1). • Remove the oil drain plug (2) and allow the engine oil to drain into a collection container. • Close the oil drain plug (2). • Fill the engine oil into the filler opening (1). • Close the filler opening (1). • Dispose of the used oil in an environmentally friendly manner. |

16.2.4 Clean / replace the air filter

| | |
|---|--|
|  | <p>A contaminated air filter can contribute to problems starting the machine, loss of performance during operation and shorten engine life. <i>Zipper Machines does not accept any liability for engine damage caused by failure to clean the air filter regularly.</i></p> <ul style="list-style-type: none"> • To clean the air filter, first loosen the wing nut on the air filter housing, remove the cover (foam filter element (2)) and remove the air filter cassette (paper filter element (1)). Clean both elements mechanically with a soft brush. • If only the air filter cassette is to be cleaned, blow a dry jet of compressed air from the inside against the filter until all dust has been removed. <p>An air filter change is necessary when:</p> <ul style="list-style-type: none"> - The engine power drops and the fuel consumption increases at the same time, - the oil consumption increases, - the starting of the engine becomes more difficult. |
|---|--|



16.2.5 Check / change spark plug



- After the engine has cooled down, remove the spark plug connector and clean it with compressed air.
- Unscrew the spark plug with a spark plug wrench.
- Check the spark plug for dirt and, if necessary, clean it with a copper wire brush.
- Check electrode gap (a: see technical data of the spark plug).
- The sealing washer should also still be in good condition.
- If the electrodes are worn or the sealing washer is damaged, replace the spark plug.

NOTE: Use only recommended spark plugs.

- Screw the spark plug back in by hand the first few turns.
- When the spark plug is firmly seated, tighten it a further 1/4 turn with the spark plug wrench.
- Reattach spark plug connector and check for tight fit.

NOTE: A loose spark plug can overheat and damage the engine. Overtightening the spark plug, in turn, can damage the thread in the cylinder head.

16.2.6 Check / replace blades

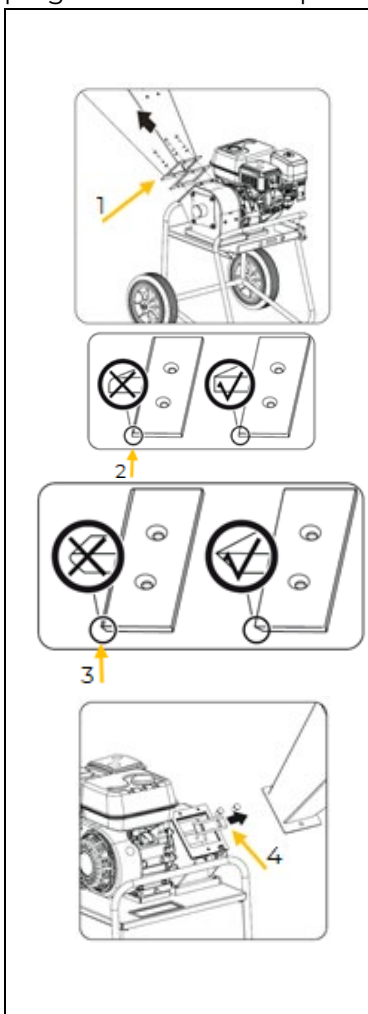
WARNING



Risk of injury from sharp blades!

- Always use cut-resistant gloves when working with chipping blades!
- Work with great care!

The machine is equipped with 2 blades mounted on the cutting roller. Regularly check the chipping blades and wear plate for sharpness and sharp edges



Check blades

- Remove the feed hopper by loosening and removing the screws and washers (1).
- Turn the cutting roller until the chipping blade is visible.
- Blunt chipping blades (2) and rounded wear plates (3) reduce the performance of the machine and cause strong vibrations. If the chipping blades or notches become dull, the machine loses its self-closing function

Change blades

- Loosen and remove the nuts and bolts securing the blade (4).
- Remove the blunt or damaged chipping blades.
- Check the slot between the cutting roller and the mounting area of the chipper blades.
- Make sure that the cutting roller and the chipper blade are clean.
- The chipper blade should lie flush against the cutting roller.

NOTE: A dirty surface of the cutting roller or an inaccurate position of the chipper blades can lead to breakage when tightening the screws.

- Insert new or sharpened chipper blades with the knife edges facing upwards.
- The distance between the chipper blades and the wear plate should be approx. 1 mm at the position closest to the cutting roller and 3 mm at the position furthest away from the cutting roller. They are slightly tapered so that the chipper blade bites into the wood when piercing.
- Make sure that all lock nuts are properly tightened. Make sure that the cutting roller can rotate freely. To do this, turn the cutting roller with a long wooden stick.

Secure the feed hopper with the previously removed screws and washers (1).



16.3 Storage

Store the cleaned machine in a dry, frost-proof and lockable place when not in use. Disconnect the machine from the power supply. Make sure that unauthorised persons and especially children do not have access to the machine.

NOTE



Improper storage can damage and destroy important components. Only store packed or already unpacked parts under the intended ambient conditions!

WARNING



Risk of ignition due to fuel vapors!

- Do not store the machine near heat sources, open flames or sparks
- Store the machine in a well-ventilated place.

Storage up to 30 days:

- Allow the machine to cool down.
- Clean the machine.
- Remove the ignition cable.
- Store the machine in an upright position in a dry and clean place with good ventilation.

If the machine is stored for longer than 30 days:

- Drain the fuel from the tank and the carburetor into a suitable collecting vessel and store the drained fuel in a suitable container.
- Start the machine and let it run until it stops. This prevents the formation of deposits inside the carburetor. This prevents possible engine damage.
- Change the engine oil.
- Wait until the machine has cooled down sufficiently.
- Remove the spark plug and fill the cylinder with 60 ml of high-quality 15W40 engine oil.
- Pull the starter rope slowly to distribute the oil.
- Reinsert the spark plug, but do not connect the ignition cable.
- Clean the machine.
- Store the machine in an upright position in a dry and clean place with good ventilation.

16.4 Disposal



Observe the national waste disposal regulations. Never dispose of the machine, machine components or operating equipment in the residual waste. If necessary, contact your local authorities for information regarding available disposal options.

If you purchase a new machine or equivalent equipment from your specialist dealer, he is obliged in certain countries to dispose of your old machine properly.

17 TROUBLESHOOTING

If you are unable to carry out the necessary repairs properly and/or do not have the required training, always consult a specialist to solve the problem.

WARNING



Hot surfaces and rotating machine parts while the engine is running can cause serious injury or even death.

- Set the on/off switch to the "Off" position and remove the spark plug connector.
- Allow the machine to cool down.

| Trouble | Possible cause | Remedy |
|-----------------------|---|---|
| Engine fails to start | • Incorrect sequence during start-up. | • Observe the correct starting sequence. |
| | • Air filter dirty. | • Clean/replace air filter |
| | • On-Off-switch and/or fuel shut-off valve is not in "On" position. | • Switch on the On-Off-switch and fuel shut off valve. |
| | • Lack of fuel supply. | • Top up with fuel. |
| | • Blocked fuel line. | • Check the fuel line for kinks or damage |
| | • Choke lever is not in "Closed" position. | • Move the choke lever to the "Closed" position for a cold start. |
| | • Engine flooded. | • Wait a few minutes before restarting, but do not bleed the air. |
| | • Spark plug wire is disconnected. | • Plug in the spark plug connector. |
| | • Fouled spark plug. | • Clean/replace spark plug. |
| | • ON-Switch not activated / safety-switch not pressed | • Check ignition cable. |
| | | • Switch ON-OFF switch to position "ON" |
| | | • Check if safety-switch is pressed |



| | | |
|--|---|--|
| Engine runs erratically | <ul style="list-style-type: none"> Spark plug wire is loose Machine is running with choke lever in "Closed" position. | <ul style="list-style-type: none"> Connect and tighten spark plug wire. Move choke lever to "Open" position. |
| | <ul style="list-style-type: none"> Blocked fuel line or stale fuel. | <ul style="list-style-type: none"> Clean fuel line, fill tank with clean, fresh gasoline. |
| | <ul style="list-style-type: none"> Vent plugged. | <ul style="list-style-type: none"> Clear vent. |
| | <ul style="list-style-type: none"> Water or dirt in fuel system. | <ul style="list-style-type: none"> Drain fuel tank, refill with fresh fuel. |
| | <ul style="list-style-type: none"> Dirty air cleaner. | <ul style="list-style-type: none"> Clean or replace air cleaner. |
| | <ul style="list-style-type: none"> Improper carburetor adjustment. | <ul style="list-style-type: none"> Refer to engine manual. |
| Engine overheats | <ul style="list-style-type: none"> Engine oil level low. | <ul style="list-style-type: none"> Top up engine oil. |
| | <ul style="list-style-type: none"> Dirty air cleaner. | <ul style="list-style-type: none"> Clean air cleaner. |
| | <ul style="list-style-type: none"> Air flow restricted. | <ul style="list-style-type: none"> Remove housing and clean. |
| | <ul style="list-style-type: none"> Carburetor not adjusted properly. | <ul style="list-style-type: none"> Refer to engine manual. |
| Shredding action seems too slow, cutting roller stalls, or no material is discharged when engine is running | <ul style="list-style-type: none"> Blades are dull or damaged. | <ul style="list-style-type: none"> Sharpen or replace blades. |
| | <ul style="list-style-type: none"> Cutting roller is jammed by debris from the feed hopper and discharge chute. | <ul style="list-style-type: none"> Remove any built-up debris and turn cutting roller with a wooden stick to be sure it turns freely. |
| | <ul style="list-style-type: none"> Discharge chute is clogged. | <ul style="list-style-type: none"> Clean out debris. |
| When shredding the branch seems to vibrate and move excessively and with unusual noises | <ul style="list-style-type: none"> Blades are dull or damaged. | <ul style="list-style-type: none"> Sharpen or replace blades. |
| | <ul style="list-style-type: none"> Blades are not properly seated on the cutting roller. | <ul style="list-style-type: none"> Loosen the blade mounting screws, reset the blades and tighten the screws. |
| | <ul style="list-style-type: none"> The gap between the blades and wear plate is too large. | <ul style="list-style-type: none"> Adjust the gap. |
| Blades are hitting the wear plate | <ul style="list-style-type: none"> Rotor is overloaded with material. | <ul style="list-style-type: none"> Allow unit to clear itself before adding more material to the hopper. |
| | <ul style="list-style-type: none"> The gap between the blades and wear plate is set incorrectly. | <ul style="list-style-type: none"> Adjust the gap. |
| The machine's wheels track left or right while being towed | <ul style="list-style-type: none"> Low tire pressure. | <ul style="list-style-type: none"> Add air to tires. |

18 ERSATZTEILE / SPARE PARTS

18.1 Ersatzteilbestellung / Spare parts order

(DE) Mit ZIPPER-Ersatzteilen verwenden Sie Ersatzteile, die ideal aufeinander abgestimmt sind. Die optimale Passgenauigkeit der Teile verkürzen die Einbauzeiten und erhöhen die Lebensdauer.

HINWEIS



Der Einbau von anderen als Originalersatzteilen führt zum Verlust der Garantie! Daher gilt: Beim Tausch von Komponenten/Teile nur vom Hersteller empfohlene Ersatzteile verwenden.

Bestellen Sie die Ersatzteile direkt auf unserer Homepage – Kategorie ERSATZTEILE, oder kontaktieren Sie unseren Kundendienst

- über unsere Homepage – Kategorie SERVICE/NEWS – ERSATZTEILANFORDERUNG,
- per Mail an eg01@zipper-maschinen.at.

Geben Sie stets Maschinentype, Ersatzteilnummer sowie Bezeichnung an. Um Missverständnissen vorzubeugen, empfehlen wir, mit der Ersatzteilbestellung eine Kopie der Ersatzteilzeichnung beizulegen, auf der die benötigten Ersatzteile eindeutig markiert sind, falls Sie nicht über den Online-Ersatzteilkatalog anfragen.

(EN) With original ZIPPER spare parts you use parts that are attuned to each other shorten the installation time and elongate your products lifespan.

NOTE



The installation of parts other than original spare parts leads to the loss of the guarantee! Therefore: When replacing components/parts, only use spare parts recommended by the manufacturer.

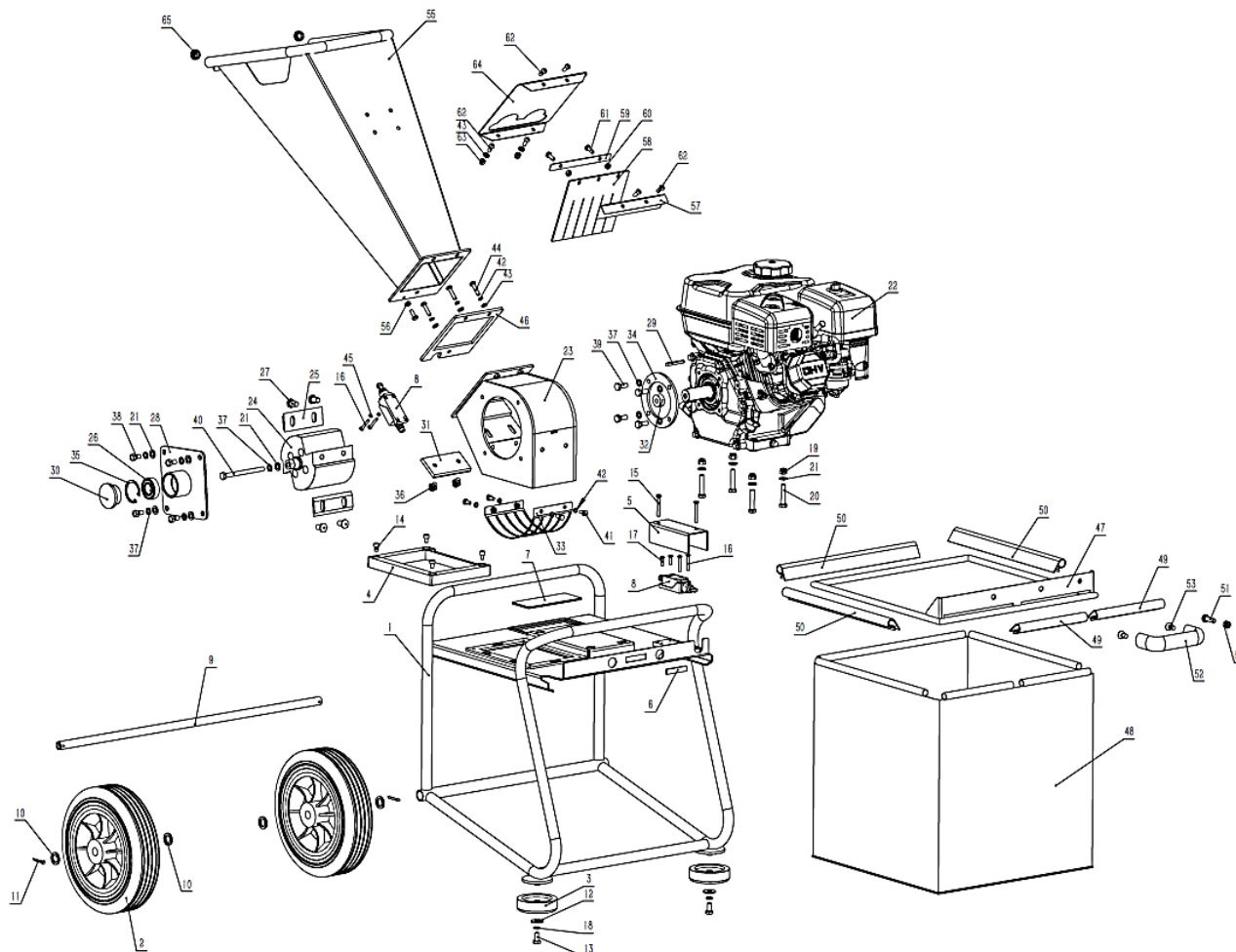
Order the spare parts directly on our homepage – category SPARE PARTS or contact our customer service

- via our Homepage – category SERVICE/NEWS - SPARE PARTS REQUEST,
- by e-mail to eg01@zipper-maschinen.at.

Always state the machine type, spare part number and designation. To prevent misunderstandings, we recommend that you add a copy of the spare parts drawing with the spare parts order, on which the required spare parts are clearly marked, especially when not using the online-spare-part catalogue.



18.2 Explosionszeichnung / Exploding view



18.3 Ersatzteilliste / Spare part list

| No. | Description | Qty. | No. | Description | Qty. | No. | Description | Qty. |
|-----|------------------------|------|-----|-----------------------|------|-----|--------------------------------------|------|
| 1 | Base Frame | 1 | 23 | Blade Housing | 1 | 45 | Spring Washer 4 | 2 |
| 2 | Wheel | 2 | 24 | Roller | 1 | 46 | Flang Rubber Pad | 1 |
| 3 | Rubber feet | 2 | 25 | Blades | 2 | 47 | Bracket for Collecting Bag | 1 |
| 4 | Rubber Pad | 1 | 26 | Bearing | 1 | 48 | Collecting Bag | 1 |
| 5 | Safety switch cover | 1 | 27 | Hex Bolt M10×16 | 4 | 49 | Buckle I | 2 |
| 6 | Magnet | 1 | 28 | End Cap | 1 | 50 | Buckle II | 3 |
| 7 | Acrylic plate | 1 | 29 | Flat Key | 1 | 51 | Hex Bolt M8x25 | 1 |
| 8 | Safety switch | 2 | 30 | Plug | 1 | 52 | Handle | 1 |
| 9 | Axle | 1 | 31 | Anvil | 1 | 53 | Head screw M8x16 | 2 |
| 10 | Flat Washer 16 | 4 | 32 | Spacer bush | 1 | 54 | Hex Nut M8 | 2 |
| 11 | Split Pin 4x25 | 2 | 33 | Screen | 1 | 55 | Feeding Chute | 1 |
| 12 | Spring Washer 8 | 2 | 34 | | | 56 | Hex Nut M6 | 1 |
| 13 | Hex Bolt M8X16 | 2 | 35 | Internal circlips | 1 | 57 | Mounting Plate for the rubber Baffle | 1 |
| 14 | Hex socket screw M6x10 | 4 | 36 | Hex flange bolt M8x10 | 2 | 58 | Rubber chip baffle | 1 |
| 15 | Head Screw M5x40 | 2 | 37 | Spring Washer 8 | 9 | 59 | Rubber Baffle Clamp | 1 |
| 16 | Head Screw M4×30 | 4 | 38 | Hex Bolt M8X16 | 4 | 60 | Hex Nut M6 | 2 |
| 17 | Head Screw M4×16 | 2 | 39 | Hex Bolt M8X20 | 4 | 61 | Hex Bolt M6×16 | 3 |
| 18 | Spring Washer 8 | 2 | 40 | Hex Bolt 5/16-24x4 | 1 | 62 | Hex Bolt M6×16 | 6 |
| 19 | Hex lock Nut M8 | 4 | 41 | Hex Bolt M6x12 | 1 | 63 | Hex Lock Nut M6 | 2 |
| 20 | Hex Bolt M10×16 | 4 | 42 | Spring Washer 6 | 7 | 64 | Feeding Safety Guard | 1 |
| 21 | Flat Washer 6 | 9 | 43 | Flat Washer 8 | 9 | 65 | Plug 20 | 2 |
| 22 | 196cc Loncin | 1 | 44 | Hex Bolt M6x25 | 4 | | | |