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Originalfassung

DE BETRIEBSANLEITUNG

KEHRMASCHINE

Übersetzung / Translation

EN USER MANUAL

SWEEPER



ZI-KM1000

EAN: 9120039233222



ACHTUNG: Öl (SF 15W40) kontrollieren!



ATTENTION: Check Oil (SF 15W40)!



10 PREFACE (EN)

Dear Customer!

This manual contains important information and advice for the correct and safe use and maintenance of the sweeper ZI-KM1000.

Following the usual commercial name of the machine (see cover) is substituted in this manual with the name "machine".

The manual is part of the machine and may not be stored separately. Read it profoundly before first use of the machine and keep it for later reference. When the machine is handed to other persons always put the manual to the machine.

Please follow the security instructions!

Please read the entire manual, to prevent misunderstandings, machine damage or even injuries!



Due to continuous development of our products illustrations, pictures might differ slightly.

If you however find errors in this manual, please inform us.

Technical changes excepted!

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11 SAFETY

11.1 Intended Use

The machine must only be used for its intended purpose! Any other use is deemed to be a case of misuse. To use the machine properly you must also observe and follow all safety regulations, the assembly instructions, operating and maintenance instructions lay down in this manual.

All people who use and service the machine have to be acquainted with this manual and must be informed about the machine's potential hazards.

It is also imperative to observe the accident prevention regulations in force in your area.

The same applies for the general rules of occupational health and safety.

The machine is used for:

Sweep of paved areas and paths; with mounted snow blade also for snow clearing

This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety. Never allow children or people unfamiliar with these instructions to use the machine. Supervise children. This will ensure that children do not play with the machine.

Any manipulation of the machine or its parts is a misuse, in this case ZIPPER-MASCHINEN and its sales partners cannot be made liable for ANY direct or indirect damage.

Prohibited use:

- The operation of the machine outside the stated technical limits described in this manual is forbidden.
- Operation of the machine function without any protection devices is forbidden
- Any manipulation of the machine and parts is forbidden.
- The machine is not approved for transporting passengers
- The machine is not approved for public traffic
- The machine is not approved for sweeping unpaved surfaces, (flat) roofs and enclosed areas!
- The use of the machine for any purposes other than described in this user-manual is forbidden.
- It is not allowed to leave the immediate work area during the work is being performed!

11.2 Safety instructions

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

To avoid malfunction, machine defects and injuries, read the following security instructions!

The locally applicable laws and regulations may specify the minimum age of the operator and limit the use of this machine!

- **Use the machine only in good enough light to allow a safe operation can be guaranteed.**
- **In tiredness, decreased concentration or under the influence of alcohol or drugs, the work on the machine is prohibited!**
- **Caution in slippery conditions - slip hazard - risk of injury. When working, robust and non-slip footwear. Slides / stumble / traps are a major cause of serious injury or death.**
- **The machine must be operated only by trained persons (knowledge and understanding of this manual), which have no limitations of motor skills compared with conventional workers.**
- **Unauthorized persons, especially children and not trained personnel must be kept away from the running machine**
- **No other person, children or pets shall remain within 15m!**
- **If you pass the machine to third, these instructions must be attached to the machine.**
- **Before each use, the reliability of the machine is to be checked**
- **Work attentively, safety conscious and always be fully aware safe stand when working! Caution on uneven work surfaces and work surfaces with a slope!**



- **Never operate the machine on slopes where the angle is over 20°!**
- **Regular breaks reduce the security risk to loss of control due to fatigue.**
- **Walk! Never run with the machine**
- **Be especially careful when you turn the machine or move backwards!**
- **Never use the machine on soft ground. Risk of tipping!**
- **Take especially care, if the ground contains many stones or roots. An unattended stalling of the drill might easily cause an accident!**
- **Use personal safety equipment: ear protectors, safety gloves in EN 388, class 3111, safety shoes S1, safety goggles or face protection when working with the machine!**
- **Never operate the machine without or with soft shoes!**
- **Danger of burns! During the operation flow of hot exhaust gases and engine parts such as the muffler and engine become hot.**
- **WARNING: Gasoline is highly flammable!**
- **Stop the engine before refuelling**
- **Smoking and open flames are prohibited during refuelling.**
- **Do not refuel when the engine and carburettor are still very hot**
- **Refuel only outdoors or in a well ventilated area.**
- **Avoid contact with skin and clothes (fire hazard).**
- **Check after refuelling tank cap and check for leaks.**
- **Spilled fuel is to wipe immediately.**
- **Keep the fuel in suitable containers only**
- **Make sure the fuel does not overflow. If the fuel overflows, the engine must not be started. Remove any dirt from the appliance and prevent any attempt at ignition until fuel fumes have evaporated.**
- **Damaged fuel tank or other tank cap must be replaced immediately**
- **After the operation the fuel cock must be closed (if available)**
- **Do not operate in an enclosed or confined areas. Exhaust contains poisonous carbon monoxide. The exposure can cause unconsciousness and death.**
- **If the fuel tank has to be emptied it must be done outdoors. Keep the drained fuel in a specially designated container or dispose of carefully**
- **Never leave the machine running unattended! Before leaving the working area switch the machine off and wait until the machine stops.**
- **Never remove the fuel tank cap when the engine is running or hot**

Switch of the engine and remove the spark plug:

- **Before check, clean or work on the machine**
- **Before refueling**
- **Always if you leave the machine**



11.3 Remaining risk factors

Even if the machine is used as required it is still impossible to eliminate certain residual risk factors totally. The following hazards may arise in connection with the machine's construction and design:

- **Risk of noise**

Working for a long time can damage your hearing if you do not use a very good hearing protection.

- **Risks of working area**

Keep attention for stones and other things that can be thrown around by the machine.

- **Risk to the hands or fingers**

Risk of crushing: Operate the machine firmly with both hands.

Risk of burns: Access while it is working in the mowing apparatus. After the operation, the machine must cool down. Otherwise, there is an acute risk of scalding!

- **Risk of fire and explosion**

Gasoline is highly flammable and explosive under certain conditions.

NEVER refuel fuel or engine oil while the machine is in operation or is hot.

When refueling and at places where fuel is stored not smoke or allow open flames or sparks.

Do not overfill the fuel tank and avoid the spillage of gasoline during refueling. If fuel is spilled make sure the area is completely dry and cleaned before starting the engine.

Make sure that the filler cap is tightly closed again after refueling safely.

- **Chemical risks**

Never use or refuel a gasoline or diesel engine in a closed area without adequate ventilation.

Carbon monoxide emissions from the internal drive units of the engine can cause in confined spaces through inhalation health effects and death. Therefore use the machine only in well-ventilated rooms or outdoors in operation.

Liquid fuels can cause serious damage on the skin and the environment.

- **Vibration:**

The declared vibration emission value has been for a standardized test is measured and can be used to compare one machine with another machine.

The declared vibration emission value may also be used for a preliminary assessment of exposure.

Warning:

Emission level of vibration can be different from the specified value during the actual use of the machine, depending on the manner in which the machine is used. When you feel uncomfortable or notice discoloration of skin on your hands during the use of the machine, stop working immediately. Observe sufficient break times to rest. Failure to have sufficient break times may result in a hand-arm vibration syndrome.

The extent of exposure depending on the type of work or machine use should be estimated and appropriate breaks taken. In this way, the extent of exposure can be considerably reduced over the entire work time. Minimize the risk caused by vibrations. Maintain this machine according to the instructions in the manual.

These risk factors can be minimized through obeying all security and operation instructions, proper machine maintenance, proficient and appropriate operation by persons with technical knowledge and experience.

In spite of all safety is and remains her healthy common sense and their corresponding technical qualification / training for use of the machines most important safety factor!



12 ASSEMBLY

Please check the product contents immediately after receipt for any eventual transport damage or missing parts. Claims from transport damage or missing parts must be placed immediately after initial machine receipt and unpacking before putting the machine into operation. Please understand that later claims cannot be accepted anymore.

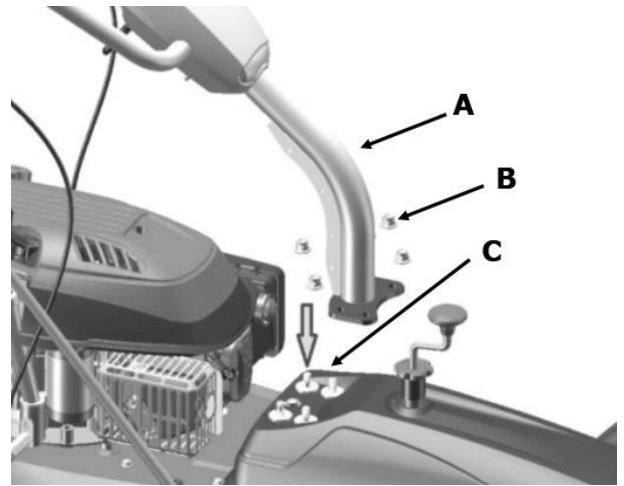
12.1 Assembly

NOTICE

- **At least 2 persons are required for the assembly!**
- **Secure machine against rolling when assembling (use wheel chocks!)**
- **Pay attention to Bowden cables during all assembly work! Do not pinch or kink!**

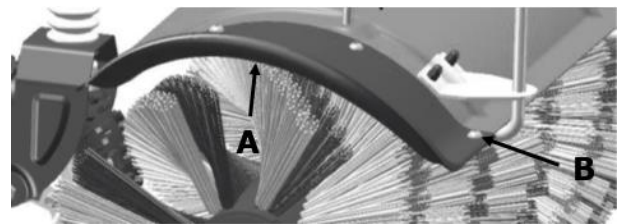
12.1.1 Steering handlebar

Install the steering handle bar (A) to fixing plate (C) with 4 safety nuts (B).



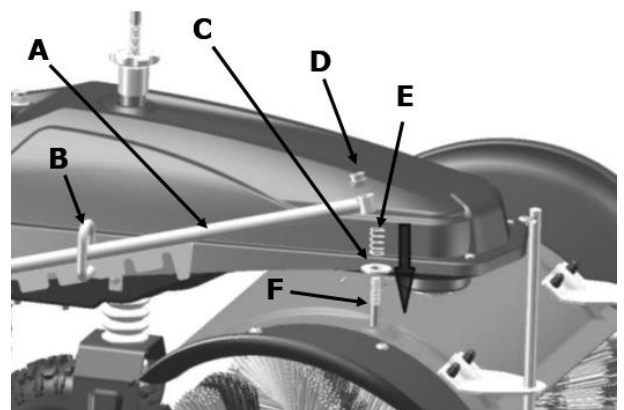
12.1.2 Brush protection

Install the brush protection (A) in both sides with 4 screws (B).



12.1.3 Brush direction lever

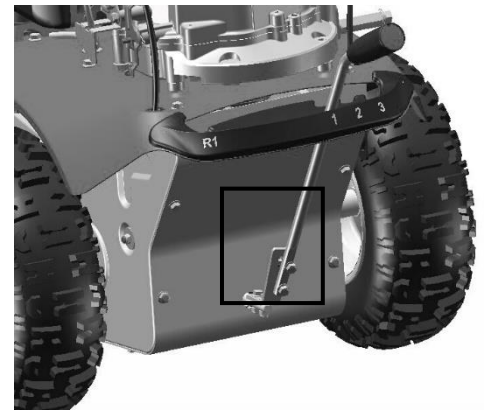
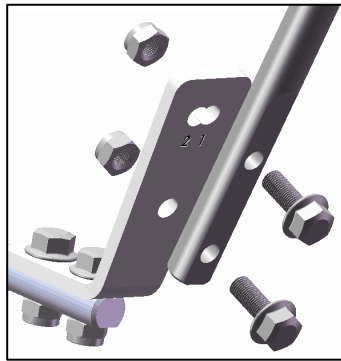
Insert the brush direction lever (A) to the support (B) and install with washer (C), spring (E) and safety nut (D) on the threaded bolt (F).





12.1.4 Shift lever

Install shift lever with bolts and nuts.
Note: you should install the shift lever into mounting hole "1" for new machine after 100 hours or if walking speed becomes very slow you can adjust the shift lever to mounting hole "2".



12.1.5 Brush

1. Slide the left brush (outer brush threads white!) onto the brush rod (A)
2. Insert the brush rod through the drive shaft from the left.
ATTENTION! Make sure that the grooves of the brushes engage in the cams of the drive disc.
3. Slide the right brush onto the brush rod.
ATTENTION! Make sure that the grooves of the brushes engage in the cams of the drive disc.
4. Insert mounting disc and big washer (B)
5. Tighten safety nut M6 (C)



12.1.6 Accessories

KM1000AFB-dust collector:


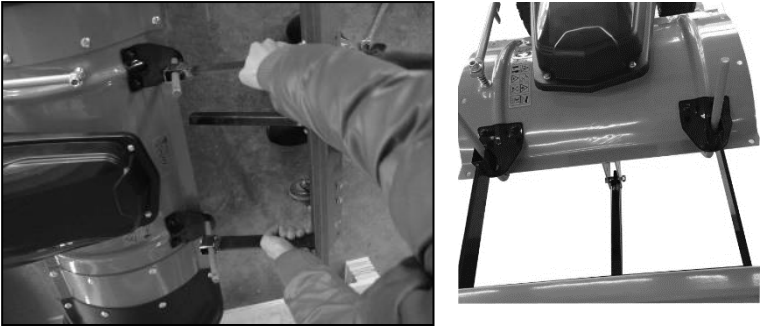


KM1000SSD-snow blade:

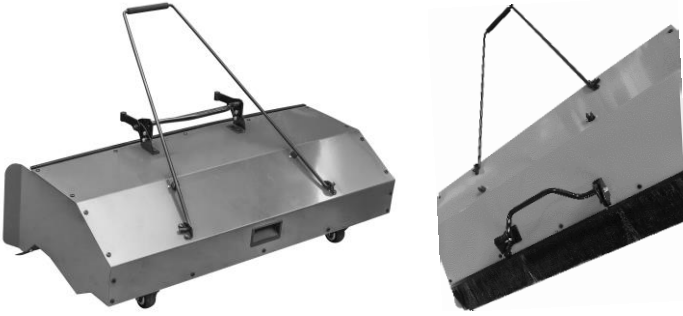
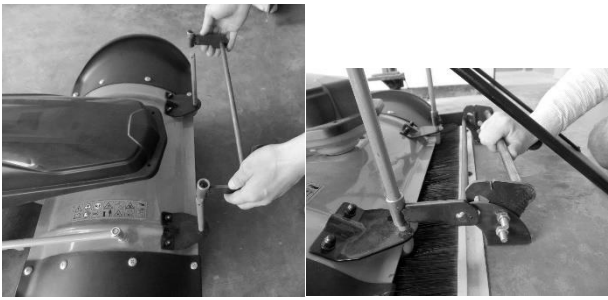




12.1.7 Assembly instruction snow blade:

| | |
|--|---|
|  A large, curved metal snow blade with two support pillars and two wheels attached to its underside. | <p>Snow blade assembly :</p> <ol style="list-style-type: none">1. Mount two wheels on the snow blade with bolts.2. Mount two support pillars onto snow blade. (see picture)3. Mount the support pillar (in the middle) onto the snow blade. |
|  Two photographs showing the snow blade being mounted onto a machine. The left photo shows a person's hands adjusting a support pillar. The right photo shows the snow blade fully mounted on the machine's frame. | <p>Snow blade assembly onto machine:</p> <p>It is recommended to disassemble the brush first, when using the snow blade. Afterwards mount the support pillars onto the machine as shown in pictures.</p> |

12.1.8 Assembly instruction Dust collector

| | |
|--|---|
|  Two photographs showing the dust collector assembly. The left photo shows the dust collector unit with a support rod. The right photo shows the dust collector unit with a support rod and a handle. | <p>Dust sweeper assembly:</p> <ol style="list-style-type: none">1. Mount two holders onto the dust collector with bolts.2. Place the rods onto the sweeper |
|  Two photographs showing the dust collector being mounted onto a machine. The left photo shows a person's hands adjusting a support rod. The right photo shows the dust collector fully mounted on the machine's frame. | <p>Dust sweeper assembly onto machine:</p> <p>Put the supporter onto the machine. Mount the dust collector onto the machine as it shown on the picture.</p> |



13 OPERATION

Machine to be operated in a perfect state only. Inspect the device visually every time it is to be used. Check in particular the safety equipment, fuel system and screwed connection for damage and if tightened properly. Replace any damaged parts before operating the device.

13.1 Operation instructions



NOTICE

- Disengage clutch lever before starting the engine
- Always hold the machine with both hands when operating
- Do not rapidly accelerate, turn sharply or stop
- Change the gears only when the machine stands still
- Never operate the machine without an air filter



ATTENTION

Turn the machine off, disconnect the spark plug and let the machine cool down before performing any maintenance and cleaning work!

13.2 Start up

13.2.1 Fill in engine oil



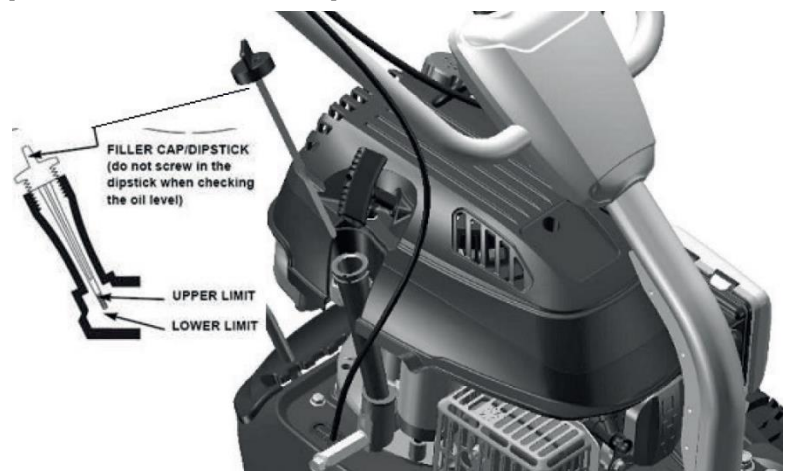
WARNING

ATTENTION! For transport engine oil has been drained. Fill up with 4-stroke quality motor oil before first operation! Failure to do so will result in permanent engine damage and void guarantee!

- Use engine oil (SF 15W40)
- Remove oil cap
- Fill in engine oil (**Engine oil tank capacity 0,6l: do not overfill!**)
- Tighten the oil cap
- Wipe any oil residues

Check oil level:

- Place machine on a level ground
- Remove oil cap
- Wipe oil from the dipstick
- Replace the dipstick without tightening the oil cap!
- Pull out the dipstick again.
- Check the oil level. Oil level must be between UPPER LIMIT and LOWER LIMIT
- Fill in oil if low level



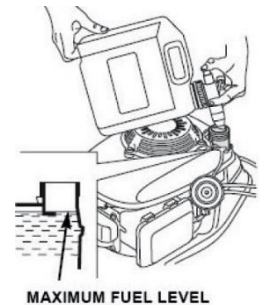


13.2.2 Refuel

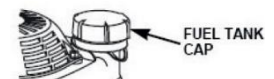
WARNING

**Use only unleaded fuel with min. 91 octane or higher
Never use 2-stroke mixture or diesel! DAMAGE OF ENGINE**

- Refuelling only outdoors!
- Before removing the filler cap, turn the engine off and let it cool machine
- Clean the fuel filler cap area
- Remove the filler cap carefully
- Fill in fuel
- Fuel tank capacity: 1,0 l. Fill tank only up to 1,5 cm below the rim of the filler neck, so that the fuel has place for expansion.
- Replace and tighten the filler cap
- Wipe any fuel residues and wait until it evaporates



MAXIMUM FUEL LEVEL

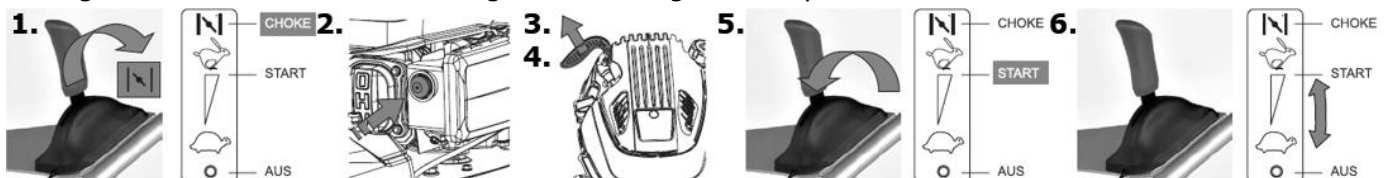


13.3 Operating

13.3.1 Start Engine

Start the engine, if you have your machine mounted correctly:

1. Set throttle to position CHOKE
2. Pull the primer several times so that the carburettor is filled with gasoline.
3. Pull the starter handle, pull-out until resistance is felt. Let the rope rewind slowly across and then move expeditiously.
4. Run the pull-starter handle slowly to the rope guide back as soon as the engine starts.
5. After a few seconds engine run set the throttle to position START.
6. Regulate the throttle until the engine is running smoothly.



To start the engine is warm the throttle is not be set to position CHOKE. If the engine will not start repeat the procedure at point 1.

13.3.2 Stop the engine

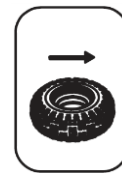
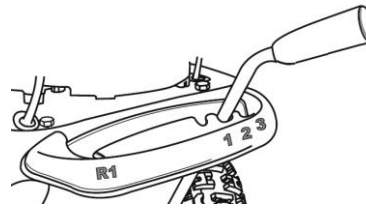
1. Set throttle to neutral position MIN and let the engine run for approx. 30 sec. to cool down.
2. Set throttle to position OFF (AUS)





13.3.3 Wheel drive

1. Set gear and direction
2. Push clutch lever wheel drive and the machine will move
3. Release clutch lever wheel drive and the machine will stop



13.3.4 Brush drive

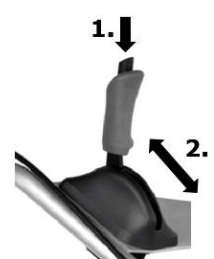
1. Push clutch lever brush drive and the brush will run
2. Release clutch lever brush drive and the brush will stop



13.3.5 Brush speed

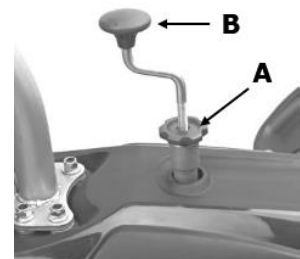
1. Push lock button
2. The brush speed will be set stepless with the brush speed lever

Adjustment only with brush running!



13.3.6 Adjustment brush height

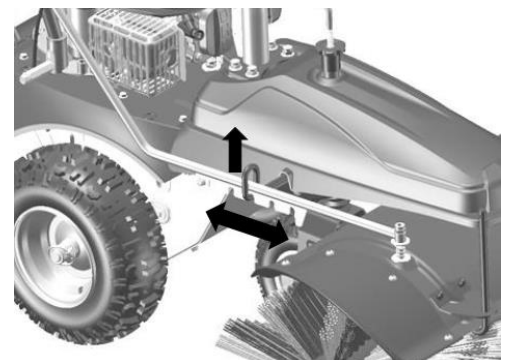
1. Move knob (A) upward
2. Set the height with lever (B)
3. Tighten knob (A)



13.3.7 Brush direction

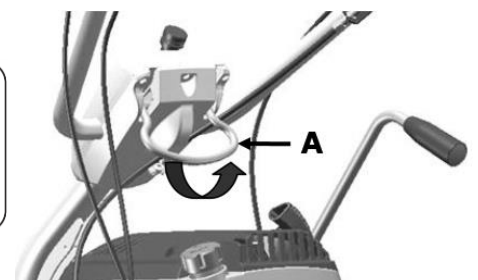
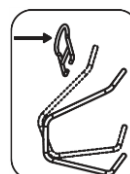
1. Lift the brush direction lever out of the detents
2. Set brush in desired position
3. Let the brush direction lever engage

ATTENTION! Adjustment with dust collector only in 90°!



13.3.8 Height adjustment of steering handlebar

1. Pull the lock lever (A) upward
2. Set steering handlebar in desired position (3 steps)
3. Let the lock lever engage





14 MAINTENANCE



ATTENTION

Turn the machine off, disconnect the spark plug and let the machine cool down before performing any maintenance and cleaning work!

The machine does not require intense maintenance. However, to ensure a long lifespan, we strongly recommend following the upkeep and maintenance plan.

Repairs must be carried out by specialists! Use original ZIPPER parts only!

NOTICE

Only a properly maintained equipment may be a satisfactory tool. Care and maintenance deficiencies can cause unpredictable accidents and injuries.

Repairs should be performed only by authorized service centers.

Improper operation may damage the equipment or endanger your safety.

14.1 Maintenance plan

| Servicing period | | Before any using | After: 1 month 5 HOO | After: 3 month 25 HOO | After: 6 month 50 HOO | After: 12 month 100 HOO | After: 25 month 250 HOO |
|----------------------|------------|------------------|----------------------|-----------------------|-----------------------|-------------------------|-------------------------|
| Engine oil I (15W40) | Inspection | X | | | | | |
| | Change | | X | | X | | |
| Air filter | Inspection | X | | | | | |
| | Change | | | | X | | |
| Spark plug | Inspection | | | | | X | |
| | Change | | | | | | X |
| Wheels | Inspection | X | | | | | |
| | Change | | | | | | |
| V-belt | Inspection | X | | | | | |
| | Change | | | | | | |
| Fuel-system | Inspection | X | | | | | |
| | Change | | | | | | |

Provide appropriate servicing upon the earlier of the following: in the given month or after the specified hours of operation (HOO) have expired.

14.2 Cleaning

Clean the machine and the working attachment from soil, dustetc.

NOTICE

The use of solvents, harsh chemicals or abrasive cleaners leads to damage to the machine!

Therefore: When cleaning, use only mild detergent

The use of high pressure cleaners is not recommended. It shortens the service life and reduces the operational integrity. (Water can get into the gear!)

Impregnate bare surfaces of the machine against corrosion (e.g., anti-rust WD40)



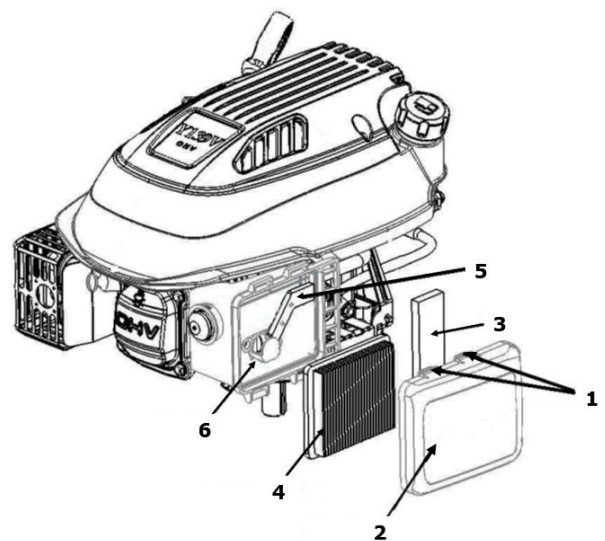
14.3 Changing engine oil

Change engine oil after the first 5 hours of operation and every 50 hours thereafter.

1. Remove oil drain screw
2. Remove the oil filler cap
3. Hold a suitable container (1.5 liters) under the oil drain plug
4. Tilt the machine and drain oil into the container
5. Replace the oil drain screw and tighten
6. Fill in engine oil
7. Replace the oil filler cap and tighten
8. Check the oil level
9. Wipe off any oil residues

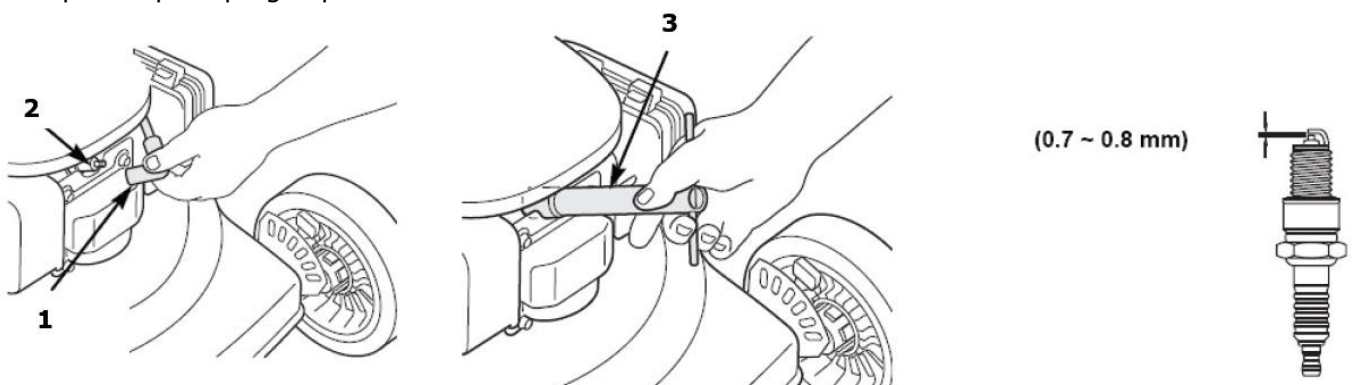
14.4 Air filter

1. Press down on the cover tabs (1) and remove the cover (2)
2. Remove the filter from the air cleaner base (6).
3. Clean the foam filter insert (3) with mild soapy water, rinse and allow to dry
4. Tap paper filter element (4) or blow out with compressed air
5. Replace air filter
6. replace cover



14.5 Spark plug

1. Disconnect the spark plug cap (1)
2. Remove the spark plug (2) with a spark plug wrench (3)
3. Clean the spark plug with a brass brush
4. Measure the spark plug electrode gap with a suitable gauge. The gap should be 0.7 - 0.8mm).
5. Replace spark plug
6. Replace spark plug cap



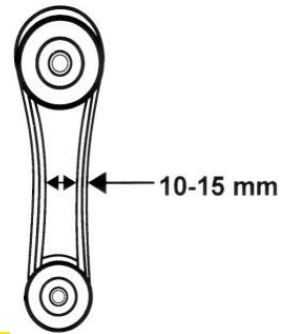
14.6 Wheels

Check the pressure of tires periodically to make sure they are properly inflated.
Recommended pressure is: Driven wheels **1 bar**, support wheel **1,5 – 2 bar**



14.7 V-belt

Especially with new machines or even after the change of the v-belt this itself is getting wider and loses purchase. If the V-belt yields more than 10-15mm on thumb pressure, it is necessary to adjust the V-belt again.



14.8 Transport

ATTENTION

ALWAYS shutdown engine before transporting.

Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.

Drain fuel when transporting rammer over long distances or bad roads.

When placing the rammer inside a truck-bed for transport, always tie-down the rammer

Transport the machine in an upright position. However it is important to ensure that the unit may not fall over. The machine must be lashed firmly to prevent rolling or moving.

- Always turn off the engine when transporting!
- Prevent fuel leaks.
- Empty the fuel tank if the transport way is very long.

14.9 Storage

If the machine is stored for longer than 30 days:

- Let the machine cool down.
- Clean the machine and dry
- Empty Tank and carburetor completely, avoid fuel spillage.
- Store in a dry, out of reach of children place, well packaged.

14.10 Disposal

Do not dispose the machine, machine components fuel and oil in residual waste. Contact your local authorities for information regarding the available disposal options. When you buy at your local dealer for a replacement unit, the latter is obliged to exchange your old..





15 TROUBLE SHOOTING

| Trouble | Possible cause | Trouble |
|---|---------------------------------------|---|
| Engine will not start | • Incorrect starting sequence | • Observe the correct starting sequence |
| | • Dirty air filter | • Clean/replace air filter |
| | • No fuel supply | • Refuel |
| | • Fault in the fuel line | • Check the fuel line for kinks or damages |
| | • Engine flooded. | • Screw off, clean and dry the spark plug. Then pull the cranking rope several times and reinstall the spark plug |
| | • Spark plug connector not placed on. | • Place on the spark plug connector |
| | • No ignition spark | • Clean/replace spark plug • Check ignition cable |
| Engine starts and is stalled immediately | • Incorrect idle adjustment | • Contact customer service |
| Machine works with interruptions | • Carburetor incorrectly adjusted | • Contact customer service |
| | • Spark plug fouled | • Clean/replace spark plug • Check spark plug connector |
| Machine does not work with full performance | • Machine overloaded | • Too much pressure |
| | • Dirty air filter | • Clean/replace air filter |
| | • Carburetor incorrectly adjusted | • Contact customer service |
| Machine does not run while the engine is running | • Gear is not engaged properly | • Shift lever in right position switch |
| Brush stops | • Bowden cable not set correctly | • Adjust bowden cable |
| Machine is not running straight | • Different wheel pressure | • Check wheel pressure |

NOTICE



Should you in necessary repairs not able to properly to perform or you have not the prescribed training for it always attract a workshop to fix the problem.