



Operating Instructions



Weed remover AS 60 EWeedHex

Starting from serial No.: 040124050001

EN Translation of the original Operating Instructions
Issued: 24.06.2024, V1.0EN

www.as-motor.com

You can find the electronic version of these Operating Instructions on the website of **AS motor** on the card of this product. We recommend that you download the instructions to your desktop computer, mobile phone or tablet as a backup in case you lose the paper version or in case you will need the larger depiction of the images in order to better understand the content.

The manufacturer stipulates its right to implement technical changes and innovations not affecting the machine's operability and safety. These changes may not show in these Operating Instructions.

Printing errors reserved.

The figures in these Operating Instructions may not show the design of the machine, to which they were attached.

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EN BASIC INFORMATION

i Request the machine unpacking and basic training from your dealer as part of the pre-sale service!

Please, fill in all data concerning your device. When ordering spare parts notify your dealer of the serial numbers of the device and the motor.

EN Type	AS 60 EWeedHex
EN Motor type	EGO PU2700S
EN Identification No. ¹	
EN Motor serial No. ²	
EN Date of delivery/sale	
EN Supplier (stamp)	

i We advise you to make your own copy of this page with the filled-in machine purchase data in case of loss or theft of the original manual.

An example of a type plate on the device providing information about the type of the device and its technical data.

Appearance	Description
1 AriensCo GmbH Ellwanger Str. 15, D74424 Böhlermann Made in Germany 2 AS MOTOR 3 Wildkrautbürste 4 AS 60 EWeedHex 5 3,47 KW (4,72 PS) 3000 1/min 6 Gewicht 56 kg 7 2024 8 SNR: 040124050001 9 56V 10 IPX5 11 CE UK CA 12	1 Manufacturer's name and address 2 Machine designation 3 Type designation 4 Maximum motor power 5 Weight (batteries and brush not included) 6 Year of manufacture 7 Serial number 8 Motor speed in the TURBO mode 9 Nominal voltage 10 Enclosure 11 DC voltage 12 CE mark

1 Fill in the serial number from the type plate.

2 Fill in the serial number from the type plate of the motor, located on the rear motor flange.

EN OPERATING INSTRUCTIONS

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1.1 INTRODUCTION

Dear customer!

Congratulations on your purchase! You have acquired a reliable quality product by **AriensCo GmbH**. This product has been manufactured according to up-to-date manufacturing methods and in line with comprehensive quality assurance measures. Only when you are satisfied with your device, we have achieved our goal.

Read these operating instructions carefully so that your device operates smoothly and you and others are safe from any hazards.

International partners are invited to visit our website at <https://www.as-motor.com/company/international/>.

AriensCo GmbH wishes you much joy with your new machine.

1.1.1 GENERAL NOTICE

This product is exclusively intended for cleaning paved surfaces and edges covered with moss and weeds.

Only use attachments and tools authorized by AriensCo GmbH.

Any use beyond this purpose is not permitted. The manufacturer shall not be made responsible for any damage resulting from any such unauthorized use. Follow the required maintenance and repair guidelines.

The product user shall be responsible for any accidents or injury to other persons or damage to their property!

In particular, the product must not be used:

- on roads
- as a unit in a system for any type of work tools/tool sets not approved by "AS-Motor GmbH"
- for sweeping or mowing on unpaved surfaces.

The product must not be connected to and/or used with batteries that are worn by a human on their body. This also applies to batteries carried on one's back. A battery designed for carrying on one's back may be used only if tightly fixed to the machine by using parts approved by "AS-Motor GmbH".

The user is **obliged** to read these Operating Instructions thoroughly and follow all the machine operating instructions in order to prevent any health risks or damage of the user's or other persons' property.

The safety instructions specified in these operating instructions do not cover all the possible conditions and situations that may occur in practice. Safety factors such as a reasonable approach, care and caution are not described in these operating instructions but are assumed to exist with every person using the machine or doing any maintenance on it.

Only mentally and physically fit persons are permitted to operate this machine. Where the machine is to be used on a professional basis, the machine owner is obliged to provide the operator(s) with occupational safety training and machine operation training, and keep records of such training. **They must also assess their work in accordance with the relevant local legislation.**

If any information contained in the manual is unclear to you, please contact **your dealer**³ or directly the **device manufacturer**.

Operating instructions provided with this machine form an integral part of it. The document must be available at all times, stored at a safe accessible place. When selling the machine to another person/entity, the operating instructions must be handed over to the new owner. The manufacturer bears no responsibility for the risks, hazards, accidents or injuries resulting from operation of the machine if the above-mentioned conditions and requirements were not met.

The manufacturer bears no responsibility for the damage caused by any unauthorized use, inappropriate operation or damage caused by any machine modification made without the manufacturer's approval.

During work, follow all applicable safety regulations to avoid any injury to yourself or other persons present nearby and to avoid any property damage.

Such instructions are marked with the following warning symbol in the operating instructions:

	<i>If you see this symbol in the operating instructions, read thoroughly the statement that follows it.</i>
	This international safety symbol indicates important safety-related instructions. If you see this symbol, be alert to avoid your or other persons' injury and carefully read the statement that follows the symbol.

Table 1: Symbols

1.2 SAFETY REGULATIONS

- For your safety, read thoroughly this user's manual and manuals for the use of the batteries, charger and electric motor.
- Familiarize yourself with the control elements and the proper use of the device. Share these operating instructions with other users of the device.
- Before you use the device for the first time, ask the dealer to instruct you regarding its safe use.
- Get familiar with the device in a wide, open and flat terrain first.
- When working on or adjacent to public roads, observe the local regulations, if necessary.

1.2.1 USER RESTRICTIONS

- Never allow children or persons who are not familiar with the operating instructions to use the device.
- Persons under 18 years of age may operate the device only under proper supervision. Local regulations determine the minimum age of the operator and the operating times.
- The device must not be operated by the persons under the influence of alcohol, drugs or reaction retarding medicines or persons with physical and mental/emotional impairments or tired or sick persons.

	Electric shock hazard!		Exposing the device to rain or to work in humid environment is prohibited.
	Persons with pacemakers may not operate this machine.		Careless handling or incorrect storage of the battery may lead to explosion or fire.

1.2.2 LITHIUM-ION BATTERIES: SAFETY PROVISIONS

		Sound lithium-ion batteries are safe, any risks and safety measures apply only if the battery cover is damaged and the lithium-ion cells are opened.
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-  **Lithium-ion is harmful upon ingestion or contact with skin.**
-  **Lithium-ion can cause a serious eye injury.**
-  **Lithium-ion can cause an allergic skin reaction.**
-  **Lithium-ion can cause damage of organs upon prolonged or repeated exposure.**
-  **Avoid breathing lithium-ion dust or vapours.**
-  **Use personal protective equipment while handling a damaged lithium-ion battery.**
-  **Wash your hands thoroughly after handling damaged product with lithium-ion components.**
-  **Do not eat, drink and smoke while handling lithium-ion products.**
-  **Clothing contaminated with lithium-ion must be disposed of immediately.**

³ Fill in the dealer's address in the table in the heading of this manual (unless already filled in by the dealer).

1.2.3 FIRST AID

Each battery cell contains chemical materials enclosed in hermetically sealed casing, designed to resist temperatures and pressure present during normal use. During normal use there is no physical danger of ignition or explosion and chemical danger of leakage of dangerous materials.

If the battery casing is exposed to fire, hard mechanical impacts, if it is cracked or exposed to external electrical voltage during incorrect use, harmful substances may be released. In such case, do not touch the leaked substances.

The following first aid information is relevant only if the battery is damaged and a person came in direct contact with the battery components.

	■ Inhalation: Upon inhalation, take the affected person to fresh air. If the affected person doesn't breathe, perform CPR: If breathing is laboured, provide oxygen and seek medical assistance. ■ Contact with skin: In case of contact with skin remove the contaminated clothing immediately and wash the affected are with water. Seek medical assistance. ■ Contact with eyes: Do not rub your eyes after contact with eyes! Flush carefully with water for several minutes. Remove contact lenses, if worn and can be easily removed. Continue flushing. Seek medical assistance. ■ Ingestion: Do not swallow. Do not provide mouth-to-mouth resuscitation to an unconscious person. Seek medical assistance immediately.
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1.2.4 LITHIUM-ION BATTERIES: GENERAL SAFETY

Read the instructions below thoroughly and understand them: this is a prerequisite for a correct use, maintenance and storage of the batteries and the charger.

In order to prevent a serious injury, risk of fire, explosion and the electric shock hazard:

- ⚠ **Do not allow children or handicapped persons to play with the battery or the charger.**
- ⚠ **Under no circumstances open the battery or charger, only an adequately qualified person is authorized to do so.**
- ⚠ **Do not squeeze the battery, prevent pressure and impacts on it, do not step on it.**
- ⚠ **Do not solder directly on the battery, do not pierce it with nails or any other sharp objects.**
- ⚠ **Do not expose the battery to water or other liquids.**
- ⚠ **Do not store the battery in hot places, such as near fire, heaters, etc.**
- ⚠ **Store batteries in a cold, dry and dark place at 10°C to 35°C.**
- ⚠ **If the cover is damaged, do not use the battery or charger. Replace it.**
- ⚠ **The charger is not designed for use by persons with reduced physical or mental capacity or lack of experience and knowledge.**
- ⚠ **If the power-supply cable is damaged, it has to be replaced by the manufacturer or its service engineer to prevent risk.**
- ⚠ **We recommend the charger to be connected to power grid with a circuit breaker with breaking current not exceeding 30mA.**
- ⚠ **Use the charger only indoors. Do not charge the battery outdoors or in direct sunlight.**
- ⚠ **Remove the battery from the product or charger before cleaning or storage.**
- ⚠ **Do not test conductive materials using the charger.**
- ⚠ **Never connect two chargers together.**
- ⚠ **If any part of the charger is broken or damaged, do not replace it. Only trained professional in manufacturer's authorized service may perform repairs.**
- ⚠ **Do not charge the battery from any other charger type.**
- ⚠ **Do not charge alkaline batteries in the charger.**
- ⚠ **Prevent penetration of liquids and other debris into the battery or charger.**
- ⚠ **Do not try to use the charger for other products.**
- ⚠ **Do not short the battery terminals.**
- ⚠ **Do not modify the battery or charger in any way.**

-  **Do not charge the battery in rain or in wet conditions.**
-  **If you can feel any unusual odour or smoke, or if the battery is hot, changes its colour or shape or is changing in any way, remove the battery from the product immediately.**
-  **Do not submerge the battery or charger into water or other liquids.**
-  **Prevent the battery or charger from heating. If the battery or charger is hot, let it cool down for 1 hour as a minimum before attempting to charge the battery. Charge only at room temperature, i.e. between 10°C and 35°C.**
-  **Do not cover the ventilation holes in the top of the charger or on the sides of the battery.**
-  **Do not place the charger on soft surface, i.e. a blanket, pillow etc., because the ventilation slit might be blocked. Keep the ventilation holes for the battery/charger clean at all times.**
-  **When not in use, keep the battery or charger away from metallic objects, such as paper clips, coins, keys, nails, bolts or other small metallic objects, which might create a contact between the terminals. Shorting of leads may cause fire or burns.**
-  **Prior to cleaning and storage, disconnect the charger from power.**

1.2.5 INSPECTION OF THE DEVICE BEFORE USE

Prior to each machine use make sure that the screws fastening the brush to the carrier are adequately tight. This also applies to all screwed connections of the protective elements, guards, covers and the motor. If you find any deficiency, remove it immediately.

-  **It is forbidden to operate the device without the protective guard and the bottom polyurethane flap!**
-  **Do not remove, change or override any safety devices or control elements.**
-  **Observe the maintenance instructions and replace damaged or worn parts immediately.**

1.2.6 PROCEED WITH CAUTION DURING OPERATION

Always switch off the motor and wait until the brush comes to a standstill:

-  before you start any activity near the device
-  prior to leaving the machine unattended
-  before driving to a different location
-  before transporting the device

Always switch the motor off, wait for the brush to stop and remove all batteries before starting inspecting, cleaning or doing any work on the machine or in its vicinity.

1.2.7 PRIOR TO STARTING THE WORK USING THE MACHINE

Personal protective measures

Required:

- Protect your hearing using suitable protective equipment according to **EN 352-1:2002** (earmuffs) or **EN 352-2:2002** (earplugs).
- Wear protective glasses approved according to **EN 166:2001**

Recommended:

- Close-fitting clothes with long trouser legs
- Firm non-slipping work shoes
- Work gloves
- Mask protecting your respiratory system against the dust in case of the high dustiness

Preparing the work area

When checking the area to be brushed remove all large solid objects (such as stones, sticks, wires, plastic packaging and similar municipal waste) that can be propelled away from the device or damage the device.

No network cables with electric current flowing through them must remain on the surface to be cleaned: they might get damaged and cause electric shock or a short circuit.

1.2.8 TAKE EXTRA CARE WHEN HANDLING THE MACHINE.

The machine is fitted with a rotating working tool. The maximum peripheral velocity is **6.22 m.s⁻¹**.

-  **Make sure that other persons (particularly children and animals) are at a safe distance of at least 15 metres from the running device - possibility of thrown objects!**

- The area in front of and next to the device is especially dangerous.
- Keep a safe distance from the machine given by the handlebar.
- Always hold the handlebars of the device with both hands.
- The rotating brush always induces a reaction force with the tendency to steer the device to the right. The more you press on the brush, the greater is the force deviating the machine. In the case of a sudden increase of resistance against the brush (especially when hitting a curb) this force may result in sudden jumping of the handlebars to the right or backwards.

- Never fix the control lever of the clutch of the brush in the activated position. Loss of control over the device means a risk of injury to the operator or other persons or damage to property.
- Only work during daylight or with adequate artificial lighting. Never work under adverse light condition (rain, snowfall, fog, etc.).
- Never lift or carry the device when the motor is running.
- Take regular breaks to rest.
- Contact an authorized service centre to check the device:
 - if the brush hits into a solid object.
 - if the device starts to vibrate unusually severely

Work on steep slopes

- When working on steep slopes, there is a risk of slipping and tilting!
- Only brush on steep slopes if safe operation is assured.
- Never use the device on excessively steep slopes.
- Sure footing is essential for your safety, always wear skid resistant safety shoes.
- Be extremely careful when changing the direction.
- The device may roll away when you work downhill. Place the not used device on even surfaces only, prevent inadvertent rolling.

Fire hazard



The brush produces sparks when brushing against hard materials (especially rocks or concrete) which may ignite easily flammable materials (dry grass, etc.).

- Proceed with caution when working in extremely hot and dry weather conditions.
- Moisten any easily flammable material before you brush over it.
- Carry a sufficient amount a suitable extinguishing agent.
- Check the area you just worked on also after the brushing is completed to make sure that no fire breaks out.
- Never use the brush in explosive atmosphere.

1.2.9 WHEN WORK IS COMPLETED

- After the completion of the work or prior to leaving the machine, wait for the brushes to stop. Always remove all batteries.
- **Do not store** the machine with the battery installed.

1.2.10 PROCEED WITH CAUTION DURING MAINTENANCE AND REPAIR

- Do not perform any machine repair, adjustment, lubrication or cleaning unless the machine is idle and with the batteries removed from it.
 - Carry out only the service operations described in these operating instructions. Other repairs or adjusting is to be implemented by the manufacturer's or your dealer's authorized service centres.
 - When handling the steel brush, always use work gloves! The steel brush wires are sharp. Slight pieces "splinters" may also be released.
 - Use only original brushes and spare parts from AS-motor. Unoriginal brushes and spare parts may cause serious injuries.
 - We would like to emphasize expressly that according to act on product liability we may not be liable for the damage caused by our devices if:
 - any worn or damaged parts are not replaced or repaired in time
 - damage has been caused by an improperly completed repair
 - if unoriginal spare parts, not approved by the manufacturer, were used for repair
 - the repair has not been performed by an authorized service centre
- The same applies to spare parts and accessories.

1.2.11 NOISE AND VIBRATIONS LEVELS

Description	Value	Measurement uncertainty
Declared sound pressure level ⁴ A at the place of operation L_{pAd}	70 [dB]	4,2 [dB]
Declared sound power level ⁵ A $L_{WA,D}$	84 [dB]	3.75 [dB]
Observed summary acceleration of the vibrations ⁶ transferred to the operator's hand/arm a_{hv}	1.35 m.s ⁻²	-

Table 2: Noise and Vibrations Levels



The data in the **table 2** refer to the **TURBO** speed (3000 1/min)

⁴ Measured according to ČSN EN ISO 11201:April 2010

⁵ Measured according to ČSN EN ISO 3744:2010

⁶ Measured according to ČSN EN ISO 20643

1.2.12 SAFETY PICTOGRAMS

The user is obliged to keep the pictograms on the machine in a readable state and, in case of any damage, ensure their replacement.

Position:	Number:	Description:
Fig. 19 / p.31 Combined sticker, which is attached on the rear plastic front on the device frame	1	Before using the machine, read through these Operating Instructions. Always remove the batteries before any machine maintenance or long-term storage.
	2	Risk of being hit by flying debris, cuttings, ejected items, etc. Other persons and animals - keep a safe distance from the machine.
	3	It is forbidden to place your hands or feet into the tool's operating area – risk of getting cut.
	4	Electric shock hazard. Remove from the surface any network cables with electric current flowing through them because they might get damaged and cause electric shock or a short circuit.
	5	Use eye and hearing protection.
	6	Wear respiratory protection.
	7	Washing the machine with pressure washer is forbidden.
Fig. 18 / p.31 Sticker attached on the control lever 11 on the right handle 10 (Fig. 1 / p.23).	-	Starting the working tool drive: 0 = working tool not moving 1 = safety engaged 2 = working tool moving
Fig. 20 / p.31 Sticker attached on the control lever 13 on the left handle 9 (Fig. 1 / p.23).	-	Control of turning the machine to the sides: To the left – straight forward – to the right

Table 3: Safety Pictograms

1.3 BASIC INFORMATION

1.3.1 TECHNICAL DATA

Description		Unit	Value
Length x Width x Height – in operation ⁷		mm	1,730 x 600 x 1,053
Length x Width x Height – in transport ⁸		mm	1,185 x 600 x 985
Weight (without batteries)		kg	58
Maximum working width		cm	60
Safe slope operation		∠	10°
Type of working tool (standard)		–	brush
Brush speed ⁹	ECO	min ⁻¹	185
	TURBO		198
Tip speed at the brush end	ECO	m.s ⁻¹	5.8
	TURBO		6.22
Gearbox oil specification		type / kind / SAE / API	Car gearbox / mineral / 80W-90 / GL-5
Gearbox oil volume		litres	0,2
Operation range (temperature) ¹⁰		°C	5° - 30°

Table 4: Technical specifications

1.3.2 ENGINE INFORMATION



N.B.: Additional motor information can be found in the multilingual manual provided.

⁷ Without the additive screen attached, handlebars in the central position of the vertical adjustment

⁸ Without the additive screen attached, handle bars collapsed

⁹ Actual speed of unloaded brush including the loss in the belt transmission.

¹⁰ When the temperatures drop below 10°C observe the information of the motor and battery manufacturer' regarding the battery operation.

Description		Unit	Value	
Motor		-	EGO PU2700S	
Maximum output / rpm		KW / min ⁻¹	3.47 / 3,000	
Revolutions of the motor	ECO	min ⁻¹	2800	
	TURBO		3,000	
Weight (batteries not included)		kg	11.8	
Battery (not included among machine parts)		Lithium-ion	BA5600T	BA6720T
Voltage / Capacity		V / Ah	56/10	56/12
Charging time		min	approximately 70	approximately 90
Charger (not included among machine parts)		Lithium-ion charger	CH5500E (CH7000E, CHV1600E)	
Input voltage/frequency/ input power		V/Hz /W	220-240 AC / 50 / 550 (550, 700, 1,600)	
Output voltage / current		V / A	56 / 5-8	

Table 5: Motor – technical specification

1.4 OPERATING INSTRUCTIONS

1.4.1 COMMISSIONING

Before using the machine, always check that bolted joints, protective elements, covers and the engine are tightened! If you find any deficiency, remove it immediately.

-  First of all, thoroughly read the engine operating¹¹ instructions! This way, you will avoid its potential damage.
-  Read thoroughly the instructions for use of the charger/battery.

1.4.1.1 CHARGING THE BATTERY

Follow the instructions for use of all the batteries and chargers as well as the instructions supplied by the motor manufacturer!

-  **A plugged-in charger poses the electric shock hazard. Unplug the charger before cleaning or inspecting it.**
-  **Inspect the battery and charger for any visible damage.**

A lithium-ion battery has no memory effect and can be charged any time. If a battery is stored idle for a long time without charging, the charger switches to the recovery mode when charging the battery in this state and it may take 20 hours for the battery to get fully charged. The battery life is thereby extended. Once the battery is fully charged, the charging will switch to standard mode.

-  **A damaged or defective battery can produce smoke or catch fire and cause life-threatening harm or large property damage.**
-  **A damaged or defective battery must not be charged or used.**
-  **It must be disposed of in accordance with applicable local regulations.**
-  **Follow the instructions in the chapter 1.2.2 Lithium-ion batteries: safety provisions.**
-  Read carefully the user's manual for the charger and battery as well. This way, you will prevent their potential damage.
-  The battery is supplied only partially charged. Prior to the first use we recommend to charge it fully to ensure maximum service life.
-  To attain the best results, the battery should be charged at an ambient temperature between 10°C and 35°C.

Recommended charging procedure:

1. Connect the charger into a power (AC) outlet.
 2. Put the battery into the charger.
 -  During charging, you can check the charging state described in Chapter 1.4.1.2 State of the charger and battery and in the table 6.
 3. Once the battery has been fully charged, first unplug the charger and only then remove the battery from it.
-  **Always remove the battery from the charger after the charging is completed.**

1.4.1.2 STATE OF THE CHARGER AND BATTERY

LED **1** **2** **3** and **4** on the charger **Fig. 9** indicate the state at which the charging process of the battery is.

¹¹ The original operating instructions and their Czech translation are attached to the machine.

LED 1	LED 2	LED 3	LED 4	Description
Flashes red or is off	Off	Off	Off	The battery or charger is defective
Illuminates red	Off	Off	Off	The battery is too cold or too hot
Flashes green	Off	Off	Off	The battery is charging
Flashes alternately green		Off	Off	
Flashes alternately green			Off	
Flashes alternately green				
Illuminates green				The battery is fully charged
Flashes green quickly				The battery is in the automatic maintenance mode

Table 6: Battery/charger status

If LED 1 on the charger flashes red:

-  Follow the manuals with operating instructions for the battery and the charger.
-  Remove the battery from the charger and reinsert to the charger. If LED 1 flashes red again, the battery may be defective. Remove the battery and attempt to charge another battery. If this other battery is normally charged, discard the defective battery (dispose of it appropriately).
-  If LED 1 still flashes red even if another battery is charged, unplug the charger from the power (AC) outlet. Wait till the flashing LED 1 goes out. Connect the charger to a power (AC) outlet again. If LED 1 continues to flash red, the charger is defective and must be replaced.

1.4.1.3 BATTERY CHARGING INDICATOR

If the battery is removed from the charger, press the button **1** on **Fig. 8**. Approximately for 10 seconds, certain number of LED indicators, around the button **1**, will start shining **2**. The number of shining LEDs shows the charging state of the battery.

LED	Battery status
All 5 LEDs are shining green	80% - 100% capacity
In total, 4 LEDs are shining green	60% - 80% capacity
In total, 3 LEDs are shining green	40% - 60% capacity
In total, 2 LEDs are shining green	20% - 40% capacity
Only 1 LED is shining green	10% - 20% capacity
Only 1 LED flashes red	less than 10% capacity
All 5 LEDs are flashing red	the battery is too low and must be charged.
All 5 LEDs are shining red	The battery is too hot, allow it to cool down.

Table 7: Battery status

-  The LEDs on the battery may start shining spontaneously, if the battery is performing automatic maintenance. This state is indicated by the fact that all 5 LEDs on the battery are shining red for ten seconds and after that they stop shining for another ten seconds, or all 5 LEDs flashes green in the intervals of approximately two seconds. You can find more information on the battery maintenance in your battery manual.

1.4.2 TRANSPORT INSTRUCTIONS**1.4.2.1 MACHINE TRANSPORT**

-  **Always remove the both batteries from the motor.**
-  **When loading the machine onto the transport vehicle, work in pair (two persons) due to high weight of the machine!**
-  Before transporting the device, remove the turning screen if it is attached to the machine.
 - Loosen the plastic winged nut (**15** in **Fig. 1 / p.23**) by approx. 5 revolutions, so the handlebars are loose in the swivel holder. Loosen the plastic winged screw on the swivel holder of the handlebars so that the handlebars can be fully lowered.
 - Fig. 2 / p.24** Fold the handlebar forwards over the motor. Place a suitable soft mat over the motor, e.g. an old cloth, to prevent the plastic motor cover damage. It is appropriate to fix the handlebars in the collapsed position by tightening the plastic winged nut.
 - Points for handling are marked on **Fig. 2 / p.24** with a symbol of a **hand** – on the frame front, on the handlebar holder tube in the rear.
-  In some countries unsecured machine during transport by road vehicles is subject to high fines.
- 4.** When transporting by road vehicle, secure the machine against rolling, sliding or tilting using suitable slings. Fasten the machine during transport by using the eye in the front part of the frame and the handlebar holder tube in the points of its sliding into the machine frame – see the arrows in **Fig. 2 / on p.24**.

1.4.2.2 BATTERY TRANSPORT

-  **Protect the battery from direct solar radiation. Do not leave the battery in a parked vehicle.**

-  *The battery is subject to legislation governing dangerous things. If the battery is transported within business activities, specific requirements must be met and all applicable local and national laws must be complied with.*
-  A damaged or defective battery must be stored and transported so that no persons are endangered and no property damage takes place if smoke is formed or the battery material catches fire.
-  Transport the battery in an electrically non-conductive packaging/transport casing.
-  Secure the transport casing or battery in the non-conductive packaging against movement so that the object cannot move.

1.4.3 STARTING UP THE MOTOR

1.4.3.1 INSERTING THE BATTERIES INTO THE MOTOR

-  *First, read thoroughly the instructions¹² for use of the motor, charger and battery! This way, you will prevent their potential damage.*
 -  *It is advised to use 2 batteries possessing the same capacity and identically (best fully) charged.*
 -  *Use batteries of the capacity of at least 7,5 Ah or higher. Only 80% of the motor power is available if a single battery or batteries less than 7.5 Ah capacity are used.*
1. With your left hand, open the battery compartment cover and hold it open.
 2. Insert two batteries to the drive unit – see **Fig. 8 / p.25**. In order to connect the battery, align the battery fins with the installation grooves and push on the battery until clicking is heard.
 3. Make sure the battery-releasing button clicked home and the battery is properly seated and secured in the motor.
 4. Close slowly the battery compartment cover. Do not let the cover drop, the impact might damage it.

1.4.3.2 MOTOR SPEED SELECTOR

-  *By means of the motor speed selector, it is not possible to change the mode of the motor while the motor is running.*
-  *The motor control unit can, both in the **ECO** mode as well as in the mode **TURBO** temporarily lower the working speed if it comes to an assessment that the work tool is not mowing any growth.*

The speed selector is located under the battery cover – **Fig. 10 / p.25**. This selector can be used to set the motor speed.

-  **ECO**: Reduced motor speed, battery remains charged-up longer.
-  **TURBO**: High motor speed, shorter battery operating time before recharging.

1.4.3.3 ADVICE ON MOTOR SPEED SELECTION

-  **ECO**: Lower speed for a longer battery operation before recharging and lower emissions. To be used where a lower power is adequate or a longer service life of the working tool is required.
-  **TURBO**: High speed for a high performance. To be used where a high power is required.

1.4.3.4 SWITCHING THE MOTOR TO THE STATE READY FOR USE

Press the switch **ON/OFF** (**Fig. 7 / p.25**), **LED** the motor state led indicator is shining and indicating the state of the motor.

-  *Stand-by time during which the motor can be switched on is 120 s (2 minutes). Turn the machine on within this time. After this time, the motor shall be automatically switched off and it must be again switched on by pressing the switch **ON/OFF**.*

1.4.3.5 THE INDICATOR OF THE STATE OF THE MOTOR ON THE SWITCH (ON/OFF SWITCH)

The switch is combined with a motor status **LED** indicator. The motor status indicator states are as follows:

-  **It is not lit**: The motor is not ready for operation. Check that you have placed, as per the chapter **1.4.3.1 Inserting the batteries into the motor**, the charged batteries correctly into the motor.
-  **It flashes red**: Release the lever for starting the motor **Fig. 3 / p.24** to the home position. The indication **LED** in the button **ON/OFF** goes out.
-  **It is lit green**: The motor is ready for operation or rotates.
-  **It is lit yellow and the motor has stopped**: The motor is overheated. Allow the motor to cool down.
-  **It flashes yellow, the motor has stopped**: The motor is overloaded. Reduce working load.
-  **It flashes alternately red and green, the motor has stopped**: Communication failure. Have the machine overhauled in an authorised workshop.

1.4.4 SWITCHING OFF THE MOTOR

Hold the switch pressed **ON/OFF** (**Fig. 7 / p.25**) until **LED** the motor status indicator LED does not go out.

1.4.4.1 REMOVING THE BATTERIES OUT OF THE MOTOR

-  **Before replacing the batteries, always switch off the motor by pressing, for a longer moment of time, the button **ON/OFF** until the light goes out.**

¹² The original operating manual and its Czech translation are attached to the machine.

When replacing the batteries (e.g. with fully charged ones) or before long-term machine storage, remove the batteries from the motor as follows (see also **Fig. 9 / p.25**):

1. With your left hand, open the battery compartment cover and hold it open.
2. Push the battery-releasing button – designated **1-PUSH** in the picture. The battery will pop up.
3. Slide the battery out of the bed in the motor – designated **2-REMOVE** in the picture.
4. Close slowly the battery compartment cover. Do not let the cover drop, the impact might damage it.

 **Always remove (replace) both batteries.**

1.4.5 WORKING TOOL START

 **Make sure that all persons, animals, children are at a safe distance from the machine! Otherwise, do not continue in this activity!**

 **Prior to each use of the device, check the tightening of the bolts fastening the brush and all screwed connections of the guards, covers and the motor!**

 **Never start the working tool resting on the ground! Risk of abrupt movement of the machine to the right.**

Positions of the control level see **Fig. 3 / p.24**

1. Grasp the left-hand handle of the handlebar with your left hand (**9** in **Fig. 1 / p.23**).
2. Lift the brush by approx. 1cm above the cleaned surface (so that it does not touch it) by a slight pressure on the left handle of the handlebar.
3. With your thumb, press the arresting lock button as indicated by the arrow (designated with the word **PUSH**).
4. By fluent movement of your right hand, press the control lever fully towards the handle and hold it firmly.

1.4.6 WORKING TOOL STOP

If you want to stop the brush, release the lever (**9** in **Fig. 1 / p.23**) on the right handle. The brush will stop and the motor will turn off.

 **Before you start any activity in the vicinity of the device, always turn off the motor and wait until the brush stops moving! Before leaving the machine, turn off the motor by pressing and holding depressed the button **ON/OFF** until the indication LED light goes out. Remove all batteries.**

 *The electric motor has an integral brake and stops immediately, which can cause slight jerk of the machine to the right.*

1.4.7 VERTICAL AND HORIZONTAL ADJUSTMENT OF THE HANDLEBAR

 **Always turn the motor off and wait until working tool stops! Turn off the motor by pressing and holding depressed the button **ON/OFF** until the indication LED light goes out.**

1.4.7.1 VERTICAL ADJUSTMENT OF THE HANDLEBARS

It allows for the operator to assume the correct position and conveniently steer the machine. The height should be adjusted even during the long-term work with the machine. The bristles of the working tool gradually get shorter over the time, the machine gradually inclines forwards and the handlebars get lifted. That may lead to the situation that it is inconvenient for the operator to hold the handlebar handles.

Fig. 12A/ p.26

1. Loosen the plastic butterfly nut **1** by approximately 4 turns.
2. Lower the handlebars to the position that suits you the best.
3. Firmly tighten the plastic butterfly nut.

1.4.7.2 HORIZONTAL ADJUSTMENT OF THE HANDLEBARS

 **Always turn the motor off and wait until the working tool stops!**

The possibility of turning the handlebars to the side allows for the following:

-  To safely steer the machine around the fences, walls and other high vertical surfaces without being exposed to the danger of your hands getting to contact with solid surfaces.
-  To set the handlebars to the straight direction if the working tool is turned to the left or right. See **Chapter 1.4.8 Making the working tool turned to the sides.**

Fig. 12B/ p.26

1. Loosen and fully unscrew the plastic butterfly nut **2** in the front on the swivel holder of the handlebars.
2. Turn the handlebar handle to the extreme right or left (as far as it goes).
3. Place the plastic butterfly nut into the groove in the swivel holder of the handlebars and screw it in.

 *The butterfly nut is fitted with a small collar that must fit in the groove in the swivel holder of the handlebars. Therefore, slightly move the handlebars to the sides a few turns before the nut is fully tightened so that the collar falls in the groove.*

1.4.8 MAKING THE WORKING TOOL TURNED TO THE SIDES

Fig. 13 / p.27

For the cleaning to function perfectly, the machine is fitted with the option to turn the working tool from the default straight position in the direction to the left or right.

! Always turn the motor off and wait until the working tool stops!

i When turning the machine to the sides, the axle is a fixed point around which the frame of the machine turns.

1. Press on the handles of the handlebar and lower the machine backwards by approximately 10cm.
2. With your left hand, press the lever on the left handle.
3. By pressing on the handles of the handlebars towards the side, turn the machine to the left, straight forward or to the right.
4. Release the lever of the handlebars and slightly move the machine to the both sides until you hear the metallic clicking sound; that means that the arresting pin fell into the respective hole.

1.4.9 ADJUSTMENT OF THE SWIVEL SCREEN

! Always turn the motor off and wait until the working tool stops!

1.4.9.1 TURNING THE SWIVEL SCREEN TO THE SIDES

Fig. 14 / p.27

The swivel screen can be set within the range of approximately 90° to the both sides from the straight axis of the machine. Thus, it is possible to protect¹³ the objects around the area that is subject to cleaning in all directions where any objects could be thrown from the cleaned area.

i The swivel screen is not a part of the delivery; this optional accessories must be ordered as a separate product.

1. Loosen (by approximately 3 turns) the plastic butterfly screw on the upper part of the swivel arm of the screen.
2. Turn the swivel screen to the desired position.

i The end positions of the swivel screen are restricted by the stops of the swivel arm on the central pin. Do not attempt to surpass the stops by for instance lifting the swivel arm. When turning the machine to the side, the travel wheels may come into contact with the frame of the curtain of the swivel screen.

3. Now firmly tighten the plastic butterfly screw.

1.4.9.2 VERTICAL ADJUSTMENT OF THE SWIVEL SCREEN

The curtain on the swivel screen may be vertically adjusted in accordance with the wear of the working tool. The minimum safe distance from the surface is 1cm.

1. Loosen (by approximately 3 turns) the plastic butterfly screw on the lower part of the swivel arm of the screen.
2. By sliding up or down set the desired height of the curtain of the swivel screen above the surface.
3. Now firmly tighten the plastic butterfly screw.

1.4.10 USING THE MACHINE

! When checking the area to be brushed remove all large solid objects (such as stones, sticks, plastic bottles and similar municipal waste) that can be propelled away from the device or damage the device.

! Always hold the handlebars of the device firmly. In the case of a sudden increase of resistance against the brush (especially when hitting a curb) this force may result in sudden jumping of the handlebars to the left or backwards.

i Due to increased resistance at the tips of the bristles in corners at curbs and walls there may be a momentary slippage of drive belts. If this happens only for a short time or once in a long period, it is not necessary to tension the belt. The belt needs to be tensioned only if the brush stops with only a slightly increased pressure of the brush on the cleaned surface or in the corner near a curb or a wall.

1.4.10.1 BRUSHING IN CORNERS

When brushing in corners, the machine exerts the highest force if the working tool is turned to the left side. The dirt may be freely ejected to the right.

1. Turn the working tool in the direction to the left – see **Chapter 1.4.8 Making the working tool turned to the sides**
2. If there is no vertical obstacle on the left side next to the operator, it is suitable to set the handlebars in the straight direction – see **Chapter 1.4.7.2 Horizontal adjustment of the handlebars**
3. Turn the motor on – see **Chapter 1.4.3 Starting up the motor**
4. Start up the drive of the working tool – see **Chapter 1.4.5 Working tool start**
5. Move the device so that the left part of the working tool is at the brushed area in the corner between the curb and the pavement area.
6. By pulling the handlebars upwards, increase the pressure of the working tool onto the brushed surface.
7. Proceed very slowly forward. Allow sufficient time for perfect removal of plants and impurities.

i When brushing along curbs or walls, large amount of waste material (earth, sand, stones, etc.) is usually generated. In order to achieve perfect removal of all plants we recommend that you first remove this waste material (machine or manual sweeping) and then brush the surface clean removing all plants that still are present after first brushing.

¹³ 100% protection against the damage to the property or the injuries to persons cannot be guaranteed. Observe the rule of safe distance of other persons from the working area of the machine.

1.4.10.2 OPEN AREA BRUSHING

1. Turn the working tool so that the frame of the machine is situated in the straight-forward direction – see **Chapter 1.4.8 Making the working tool turned to the sides**
2. Turn the motor on – see **Chapter 1.4.3 Starting up the motor**
3. Start up the drive of the working tool – see **Chapter 1.4.5 Working tool start**
4. Move the device over to the brushed surface.
5. By pulling the handlebars upwards, increase the pressure of the working tool onto the brushed surface.
6. By moving the device back and forth several cm and at the same time from one side to another clean a small part of the whole brushed area. Leave the working tool rotating on one small part of the brushed surface until the surface is free of all plants and dirt.
7. Slowly move forward on the brushed area. The speed of the movement depends on the resilience and abundance of plants in the given area.

 *In order to achieve perfect removal of all plants we recommend that you first remove the waste material generated after first brushing of the area (machine or manual sweeping) and then brush the surface clean removing all plants that still are present after first brushing.*

1.5 MAINTENANCE, CARE, STORAGE

To secure a long-term satisfaction with our product, it is necessary to provide it with due care and maintenance. By providing regular maintenance you will prevent its rapid wear and you will secure correct operation of all its parts.

Follow all instructions concerning maintenance and adjusting intervals. We recommend that you keep records of operating hours and the conditions under which the machine is used (these may be useful for servicing centres). We recommend that you have the post-season maintenance implemented by one of our authorized service centres; the same applies to standard maintenance if you are not certain of your technical capabilities.

-  **Before every use of the machine, check that all screws fixing the working tool to the carrier are firmly tightened.**
-  **Electric shock hazard from the live parts. Carry out only those service operations that are described in these operating instructions. Follow the instructions in Chapter 1.2 Safety Regulations. People with pacemakers must not touch any live parts.**
-  **Before any maintenance/cleaning with the motor turned off, remove all the batteries and allow the machine to cool down for 20 minutes as a minimum.**

1.5.1 MACHINE LUBRICATION

-  **When working with lubricants, follow the basic hygiene regulations and observe the environmental protection regulations and laws.**
-  *If you are not sufficiently manually skilled, have the operations done by an authorized service centre.*

1.5.1.1 LUBRICATION POINTS

When selecting from a wide range of oils it is sufficient to select any technical spray oil. When selecting plastic lubricants (grease) any lubricant intended for water pump lubrication is sufficient. However, its application usually requires the dismantling of the corresponding slide assembly.

 *Never lubricate the flange bearings of the shaft of the wheels axis with oil or other lubricants; the bearing material is self-lubricating and resistant against the dust and dirt. The fine dust that is generated while using the machine would, in combination with the used lubricant, create the abrasive paste that could in a short time destroy the bearings.*

Lubrication point - description	Interval within season	After season	Lubricant	Figure	Note
Gearbox	After first 5 hours, then every 100 hours	Every 100 hours or once a year	Oil 80W-90 API GL-5	Fig.17 A,B p.30	Oil intended to be used with manual car gearboxes with synchronization.
Bowden cables of control levers	Every 50 hours or after every washing of the machine	Yes	Multi-purpose technical oil	Fig.17 C,D p.30	Ideally, the spray oil should be used
Screwed connections	-	Yes	Grease	Fig.30 E,F page30	Handlebars and protective guard fixing threads.

Table 8: Lubrication intervals

1.5.1.2 GEARBOX OIL CHANGE

-  *If you are not sufficiently manually skilled, have the operations done by an authorized service centre.*
 -  *The oil pours out of the gearbox faster if it is warm. Replace the oil either immediately after you finish the work or warm up the oil by running the machine without the working tool attached for approximately 10 minutes.*
 -  **Turn the motor off by pressing and holding depressed the button **ON/OFF** until the light goes out and take out all the batteries from the motor.**
1. Demount the working tool from the gearbox shaft – unscrew the self-locking nut with a big flat washer and slide the working tool off the gearbox shaft.

2. Clean the surroundings of the oil plug on the right side of the body of the gearbox and unscrew it.
3. Catch the oil into the suitable vessel.

! Dispose of the oil in accordance with the local regulations concerning the handling of hazardous waste.

4. Clean the area surrounding the thread and screw the oil plug on. Tighten Degrease the surroundings of the oil plug using e.g. brake cleaner.
5. Demount the belt cover – 4x M6 screw.
6. Clean the area surrounding the screw used for filling the oil . Unscrew the screw.
7. Using the JANETTE-type syringe, add 0.2 litres of the gearbox oil complying with the specification as per **Table 4**.
8. Clean the area around the thread and screw the oil-filling screw. Tighten Degrease the vicinity of the screw using e.g. the brake cleaner.
9. Have the machine run for approximately for 5 minutes and check that no oil is leaking through the oil plug or oil-filling screw.
10. Mount back the cover and the working tool.

1.5.2 WEAR OF THE PLAIT BRUSHES

During the operation of the machine, the wires of the plait brushes get worn away over the time. Their mounting system allows for utilizing the entire length of the brush. We recommend to move the plait brushes to the next lower position on the rail if the distance of the protruding part of the plait brush is approximately 30 mm – **see Fig.15 / p.28 at the top**.

- i** Only use the original plait brushes from AS motor bearing the spare part No. **G07352047**.
- i** If it is necessary, for some reason, to replace one or more plait brushes for new one(s), shorten the new plait brushes as well as the ones that are not to be replaced so that they are all of the same length (use e.g. the angle grinder to do that). Only after that their uniform stiffness and uniformity of the applied pressure of the whole set of the plait brushes will be guaranteed.
- ! The machine must be placed on a hard horizontal surface and must be secured so that there is good access from below to the plait brushes and that no inadvertent device movement occurs or that the machine may not tip over.**
- ! When handling the plait brushes, always use work gloves! The tips of the wires are sharp. Slight pieces “splinters” may also be released.**
- ! Turn the motor off by pressing and holding depressed the button **ON/OFF** until the light goes out and take out all the batteries from the motor.**

Fig.15 / p.28.

1. **>1** Tilt the machine backwards until it rests on the handles of the handlebars. Underlay the both handles with suitable mats (such as cardboard, piece of cloth, etc.).
2. **>2** Unlock the plait brush locking pin by pulling the pin shackle – arrow **1**.
3. **>2** Hold the plait brush with your hand and take the pin out of the hole – arrow **2**.
4. **>3** Move the plait brush downwards by one hole.
5. **>4** Insert the pin in the hole in the rail and in the hole in the head of the plait brush – arrow **1**. The body of the pin is directed against the direction of turning.
6. **>4** Using the shackle, secure the pin so that it cannot drop out – arrow **2**.

1.5.3 ADJUSTING TENSION PULLEY

Adjusting of tension pulley must be checked after approx. 5 hours of operation when the belt has been run in (it applies to belts in a new machine and to new changed belts), to prevent belt damage due to its elongation and insufficient tension.

The belt needs tensioning only if the brush stops with only a slightly increased pressure of the brush on the cleaned surface. If the brush is pressed to a curb or wall corner, where increased resistance on bristle tips is developed, short-term drive belt slippage may occur. If this happens only for a short time or once in a long period, it is not necessary to tension the belt.

To check the correct tension of the belt, we recommend to use the mechanical measuring instrument OPTIKRIK II or the mobile application for measuring the tension of the v-belts from OPTIBELT. The belt tensioning force value in the towing part is **253N** or, respectively, **42Hz**. Perform the measurement in the longest part of the belt on the right side of the machine at the point located opposite to the hole in the crosspiece in the frame.

- i** If you are not sufficiently manually skilled, have the operations done by an authorized service centre.

! Turn the motor off by pressing and holding depressed the button **ON/OFF until the light goes out and take out all the batteries from the motor.**

Fig. 16 / p.29

1. **>1** Demount the belt cover – 4x M6 screw, spanner no. 10.
2. **>2** Loosen the nut and the screw holding the tensioning pulley by approximately 1 turn – spanner no.10 and 13, socket head no. 13.
3. **>3** Insert the wide flat screwdriver into the groove in the arm of the pulley and, by applying strong pressure upon the arm of the pulley, push the pulley towards the belt. Tension the belt so that the required value is achieved.
4. **>4** Tighten the nut and screw – spanner no.10 and 13, socket head no. 13.

1.5.4 CHANGING THE V-BELT

Replace the V-belt with a new one every time cracks or ruptures appear on the surface of the belt and also when the belt is worn by the operation to such an extent that it can no longer be tensioned with its tensioning pulley.

-  Have the operation always performed by an authorized service centre equipped with professional fixtures and belt tensioning gauges.
-  It is necessary to use exclusively v-belts recommended by the manufacturer. If you use belts from other manufacturers, proper operation of the drive cannot be guaranteed.

1.5.5 MOTOR MAINTENANCE

The instructions for use of the motor have been developed by the motor manufacturer. All the mandatory regulations and maintenance guidelines are listed and explained in the instructions, as are the warranty conditions. If any operations falling in the warranty have to be performed on the motor, please contact the authorised service organisation.

1.5.5.1 AIR FILTER MAINTENANCE

Adequate motor cooling is vital for maintaining a long service life. Take steps to maintain the air filter constantly clean.

-  **The use of flammable cleaners is associated with the fire or explosion hazard. Never use flammable solvents to clean the air filter.**

Fig. 11 / p.25

1. Turn the arresting pin **1** counter-clockwise and remove the air filter casing **2**.
2. Cautiously remove the air filter from the air filter casing **2**.
3. Clean the air filter (e.g., with compressed air) or replace it.
4. Reinsert the air filter into the air filter casing **2**. Make sure the air filter is uniformly seated and is not corrugated.
5. Reinsert the air filter casing **2** into the motor cover.
6. Push the air filter casing **2** and turn the arresting button **1** clockwise.

Follow the guidelines in the instructions for use of the motor.

1.5.5.2 BATTERY/CHARGER INSPECTION

-  **A damaged or defective battery can produce smoke or catch fire and cause life-threatening harm or large property damage.**
-  **A damaged or defective battery must not be charged or used.**
-  **It must be disposed of in accordance with applicable local regulations.**
-  **Follow the instructions in Section 1.2.4 Lithium-ion batteries: General safety**
-  **A plugged-in charger poses the electric shock hazard. Unplug the charger before cleaning or inspecting it.**

Inspect the battery and charger for any visible damage. If the battery or charger is damaged, replace it immediately.

Check the state of the battery and charger – see Chapter **1.4.1.2 State of the charger and battery**

Follow the instructions for use of all the batteries and chargers as well as the instructions developed by the motor manufacturer.

1.5.5.3 INSPECTION OF THE BATTERY COMPARTMENT

Make sure the battery has correctly snapped into place in the battery compartment as per the chapter **1.4.3.1 Inserting the batteries into the motor**. Make sure that the disengaging button in the battery compartment releases the battery properly as per the chapter **1.4.4.1 Removing the batteries out of the motor**. If it does not, contact the authorised service organisation.

1.5.6 SERVICING INTERVALS

Activity	Prior to each use	Prior to long-term storing
Check of the charging state of the batteries	Yes	yes, charge to 30% - 50% of the capacity
Check for battery casing integrity	yes, do not use the damaged battery any longer!	yes, do not use the damaged battery any longer!
Washing	as necessary, preferably when work is finished	Yes
Removal of dirt	Yes	Yes
The check that the carrier of the working tool and screw connections are fully tightened.	Yes	Yes
Lubrication	Check of the condition	Table 8
The check of the V-belt	after every 20 hours	Yes

Table 9: Servicing intervals

1.5.7 MACHINE WASHING AND CLEANING

-  **When washing and cleaning the machine, proceed so as to observe valid provisions and laws regarding protection of water courses and other water resources against pollution or contamination by chemical agents.**

-  **To minimize the risk of fire, electric shock or death, do not use wet rags, cleaning agents or solvents on the battery of the charger.**
-  **Prior to maintenance, cleaning, washing or inspection of the working tool, always remove the battery from the motor.**
-  **Never wash the machine using pressure washer or jet of water.**

1.5.8 TROUBLESHOOTING

Problem	Cause	Remedy
The motor does not work	Batteries are not correctly put in place	Remove the batteries and seat them correctly
	The motor is not ready for operation.	Switch the motor to the state ready for use
	Automatic switching-off	Switch the motor to the state ready for use
	The motor bowden cable is not set correctly	Visit an authorized service centre.
	Batteries are not charged	Charge the batteries
	The arresting button of the batteries is damaged	Replace the batteries or visit an authorized service centre.
	The batteries most likely require service intervention or replacement	Replace the batteries or visit an authorized service centre.
	Another defect	Visit an authorized service centre.
The motor is not turning and the switch is flashing red	The pressed motor-starting lever before pressing the ON/OFF button on the motor.	The motor-starting lever should be released; the ON/OFF button on the motor must be pressed first when starting the motor.
The motor does not work or stops, the switch lights yellow.	The motor is overheated	Allow the machine to cool down.
	The air filter is clogged.	Perform air filter maintenance.
The motor has stopped and the switch is flashing red	Batteries are depleted or defective	Insert the batteries to the charger, check the charging status of the battery, charge the battery
The motor does not work or stops, the switch flashes yellow	The motor is overloaded	Reduce working load
The motor does not work or stops, the switch flashes alternately red and green	Defect of the motor	Visit an authorized service centre.
Motor is rotating but the work tool will not rotate	Insufficient belt tension	Adjust the tension pulley
	Broken v-belt	Visit an authorized service centre.
	Fallen off V-belt	Put on the V-belt
	Another defect	Visit an authorized service centre.
Strong vibrations during operation.	Unbalanced work tool due to uneven wear.	Adjust the length of plait brushes so that they are of the same length; Plait brushes must be attached in the holes at the same height
	Deformation of the work tool as a consequence of the collision with the solid obstacle	Visit an authorized service centre.
	Motor mounting is loose.	Visit an authorized service centre.
The control lever for starting the motor will not come back	Another defect	Visit an authorized service centre.
The machine cannot be turned to the side	Non-functioning control of the arresting pin for turning the axle	Check whether the pin fully and freely moves into the frame of the machine; If needed, adjust the step of the arresting pin using the adjusting fitting on the bowden device. Lubricate the way for the arresting pin with the spray oil.
	Jammed axle turning due to accumulated dirt (dust, small stones, etc.)	Clean the bottom of the machine, especially the gap between the axle and frame of the machine; use pressurized air; Demount the axle with wheels - unscrew the both nuts of the axle guidance and unscrew the central pin serving for turning the axle; clean the parts and check them for any sign of jamming in the pin seat.
	Another defect	Visit an authorized service centre.
Another defect		Visit an authorized service centre.

Table 10: Troubleshooting

1.5.9 STORAGE



After switching the engine off, let the device cool down for at least 20 minutes. Then you may store it in a dry and ventilated room.

- Eliminate any machine faults before putting it to storage: the machine should be constantly operable and safe.
- Prior to any long-term storage (e.g. at the season end) remove all the dirt and plant residues from the machine.
- Prevent unauthorized persons (particularly children) from access to the device.
- Protect the machine against climatic conditions but do not use impermeable protection to prevent excessive corrosion it may cause.

We strongly recommend the following:

- Take out all the batteries from the motor
- Repair any paint damage.
- Perform after-season lubrication of the machine *Table 8*.

1.5.9.1 BATTERY STORAGE



A damaged or defective battery can produce smoke or catch fire and cause life-threatening harm or large property damage.



A damaged or defective battery must be stored and transported so that no persons are endangered and no property damage may take place.



It must be disposed of in accordance with applicable local regulations.



Follow the instructions in Section 1.2.4 Lithium-ion batteries: General safety



Read thoroughly the instructions for use of the charger/battery. This way, you will prevent their potential damage.

- Remove all batteries.
- Store the batteries separately from the machine to prevent unauthorized start-up of the machine.
- You can find out more information on the storage in the respective instructions for use of the battery.

1.5.10 DISPOSAL OF PACKAGING AND THE MACHINE AT THE END OF ITS SERVICE LIFE

When you unpack the machine you are bound to dispose of the packaging material according to national laws and decrees concerning waste disposal. When disposing of the machine at the end of its service life, we recommend proceeding as follows:

- Demount from your machine all the parts that may still be used.
- Remove any plastic and non-ferrous metal parts.
- The remaining machine and its removed demounted parts are to be disposed of according to national laws and decrees concerning waste disposal.

1.5.11 SAFE USED BATTERY STORAGE AND RECYCLING

Used batteries are potentially dangerous and must be stored and handled with care. **Used batteries must be stored out of the reach of children.** Some materials inside the batteries are toxic, inspect the batteries frequently for any damage or leakage. The batteries must be protected from direct sun rays and heat.



More information can be found in the instructions for use of the charger and battery.

1.5.12 BATTERY/CHARGER DISPOSAL

All toxic materials must be disposed of by a method preventing any environmental contamination.

	Do not use or charge a battery with cracks (leaking or not leaking). Such a battery must be disposed of and replaced with a new battery. DO NOT ATTEMPT TO REPAIR IT! To prevent injury and risk of fire, explosion or electric shock, and to prevent any damage of equipment or the environment: ■ Cover the battery contacts with a strong adhesive tape. ■ Do not attempt to remove and/or destroy any battery parts. ■ Do not attempt to open the battery or charger. ■ In case of leakage, the released electrolytes and aggressive and toxic. Prevent contact with eyes or skin, do not eat.
---	---

		Electric products may not be disposed of in communal waste. To return all used equipment, please use the return and collection systems or contact the dealer who sold the product. Dealers can accept the product for recycling, which is environment friendly. Prior to disposing of damaged or used batteries, contact the local collection yard or environmental protection agency for information and instruction for a correct disposal, or contact the dealer, who sold the product. ■ Do not throw the batteries into household waste. ■ Do not flush. ■ Do not place them anywhere where it could become part of the land fill or communal waste. ■ Hand it over to a certified centre for lithium recycling or disposal.
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More information can be found in instructions for use of the charger and battery.

1.5.13 SPARE PARTS

The reliable and safe operation of the device also depends on the quality of the spare parts used. Only use original spare parts and accessories that were approved by AS-Motor. When unoriginal parts are installed, the warranty and guarantee shall be void for the unoriginal parts and for the device and for any resulting damage.

Inform your authorized service centre about the device type and serial number of your device when you order spare parts.

1.5.14 WEAR PARTS

Some parts are wear parts. They wear during use and must be replaced. The warranty does not cover the following parts:

- plait brushes
- bearings
- V-belt
- Protective screen
- Mudguard between the wheels
- Wheels
- Batteries

1.5.15 WARRANTY

The conditions of the warranty can be found on the reverse side of your warranty card. Send the filled-out warranty card immediately to **AriensCo GmbH** or the supplier immediately after purchasing the product.. A product for which no card has been submitted will not be covered by the warranty. Preserve the proof of purchase or the warranty card that was filled out by the vendor.

1.6 ACCESSORIES

The recommended accessories **are not** included with this device. You may purchase the accessories from your dealer.

G00011050	Corrective paint, spray, 400 ml, orange
G01299001	Battery BA5600T, 56 V, 10 Ah
G01299006	Battery BA6720T, 56 V, 12 Ah
G01299002	Charger CH5500E (550W) for the batteries BA5600T, BA6720T
G01299011	Charger CH7000E (700W) for the batteries BA5600T, BA6720T
G01299009	Multi-port charging box CHU6000-K0004 with the charger CHU1600E (1600W) for 6 pcs of the batteries BA5600T, BA6720T

1.6.1 MACHINE ASSEMBLY

 *Request the machine unpacking and basic training from your dealer as part of the pre-sale service.*

During assembly, proceed as follows. **We recommend that assembly be done by two persons.** Instructions regarding right/left directions are given from the operator's view.

Fig. 21 / p.32

1. Demount the plastic butterfly nut from the screw fixing the handlebars on the swivel handlebars holder; take the screw out. Turn the handlebars handle clockwise (to the right) by 180° to the rear.

2. Slide the feet on the handle of the handlebars onto swivel holder so that the flat toothed wheels mutually fit in. Insert the big thick washer into the gap between the right foot of the handle and the foot on the swivel holder of the handlebars (Ø60/Ø11/6) – see the arrow with the exclamation mark.

3. From the left, insert the screw until its head stops you; the square prism must fit into the square hole in the foot. Lubricate the thread of the screw with the plastic lubricant or at least with any technical oil. Set the approximate working position of the handlebars. Put the small flat washer on the screw thread and screw the plastic butterfly nut on and tighten it.

4. Cut the vertical edges of the both heads of the box and lower the walls of the box to the ground. Put aside both the wheels, the brush cage and the mudguard between the wheels.

 *The following step is to be done by two persons.*

5. The second person should now grasp the handlebars and lift the rear of the machine by approximately 20 cm.

6. Put the both wheels on the shaft of the wheel axis and lock them with pins from the bag containing various parts. To make the wheels mounting process easier, it is suitable to lubricate the shaft with suitable technical oil (WD-40 or similar). Using the adjustable pliers (the so called SIKI pliers), install the locking rings into the grooves in the shaft of the wheel axis.

7. Tilt the machine backwards until it rests on the handles of the handlebars.

8. Remove the loosely inserted strap from the axle, put the plastic mudguard between the wheels onto the screws and place the strap back on the mudguard. Screw the three self-locking nuts in and tighten them gently so that the strap does not get deformed. Tightening torque **Mu_{max}=6Nm**.

9. Put the brush cage on the hexagonal shaft in the front of the bottom section of the machine. Put in place the big washer (Ø60/Ø11/4) and secure it with the self-locking nut. Tighten it fully applying the tightening torque **Mu=42Nm**.

10. Loosen the screw connections of the both plastic clamps on the handlebars feet.

11. Fix the bowden cable leading from arresting lever used for locking of the position when turning the machine to the sides (left lever) to the clamp on the left foot.

12. Attach the bowden cable leading from the lever for starting the motor (the right lever) to the clamp on the right foot.

13. Tighten the screws so that the clamp can turn.



When handling the steel brush, always use work gloves! The steel brush wires are sharp. Slight pieces "splinters" may also be released.



Never lubricate the shaft prior to its installation. Oil or grease will, in combination with dust and other dirt, create solid compound during the operation, which shall prevent the brush from being demounted during service actions or when replacing it for another working tool.

1.6.2 ADJUSTMENT OF THE SWIVEL SCREEN



The swivel screen is not a part of the delivery; this optional accessories must be ordered as a separate product.

Fig. 22 / p.33

>A The frame of the screen, along with the mudguard, is to be screwed, using the four screws and self-locking nuts, on the vertical holder. Attach the mudguard to the frame with additional two screws with the flat washer and a self-locking nut.

>B Screw the mudguard to the inclined sides of the frame using the screws with washers and self-locking nuts.

>C Put the assembled screen to the square guiding device of the arm of the screen and secure it with the plastic winged screw. Lubricate the thread of the screw with the lubricating grease.

>D Demount the cover of the belt of the machine – 4 x M6 screw.

>E Demount the metal holder of the cover – 4 x M6 screw. Fasten the holder of the screen with the pin from the screen packaging – 4 x M6 screw. Pay attention to the correctness of the position of the holder – the protrusions on the holder must be on the front part of the machine!

>D Fix the belt cover back in its place – 4 x M6 screw.

>F Slide the arm of the screen on the pin protruding from the belt cover. The slot on the tube of the arm must fit behind the arresting pin on the pin of the holder. Secure in the desired position using the plastic winged screw. Lubricate the thread of the screw with the lubricating grease.



Never lubricate the pin of the arm before putting the arm on! Oil or grease will, in combination with dust and other dirt, form solid compound, which prevents the protective screen to turn properly or to be demounted.

2 EC DECLARATION OF CONFORMITY



AriensCo GmbH
 Ellwanger Straße 15
 D-74424 Bühlertann
 www.as-motor.com

EC Declaration of Conformity

Manufacturer:¹⁴ AriensCo GmbH
Address: Ellwanger Straße 15; D-74424 Bühlertann
Product (machine) – type: AS 60 E-WeedHex
Serial No.: from 0401240500001
Description:

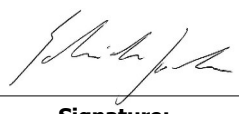
Machine type	Motor	Max. operation width
Weed remover AS 60 EWeedHex	EGO PU2700S	60 cm

The weed remover is intended exclusively for effective removal of weed, moss or other impurities from paved areas especially in tight spots at walls or curbs.

All the respective provisions met by the product: 2006/42/EU
 2014/30/EU
 2011/65/EU
Harmonized technical standards used for conformity assessment: EN ISO 12100:2010
 ČSN EN 55014-1 ed.3,+/A1,+/A2,+/Z1
Other technical standards and specifications used for conformity assessment: -

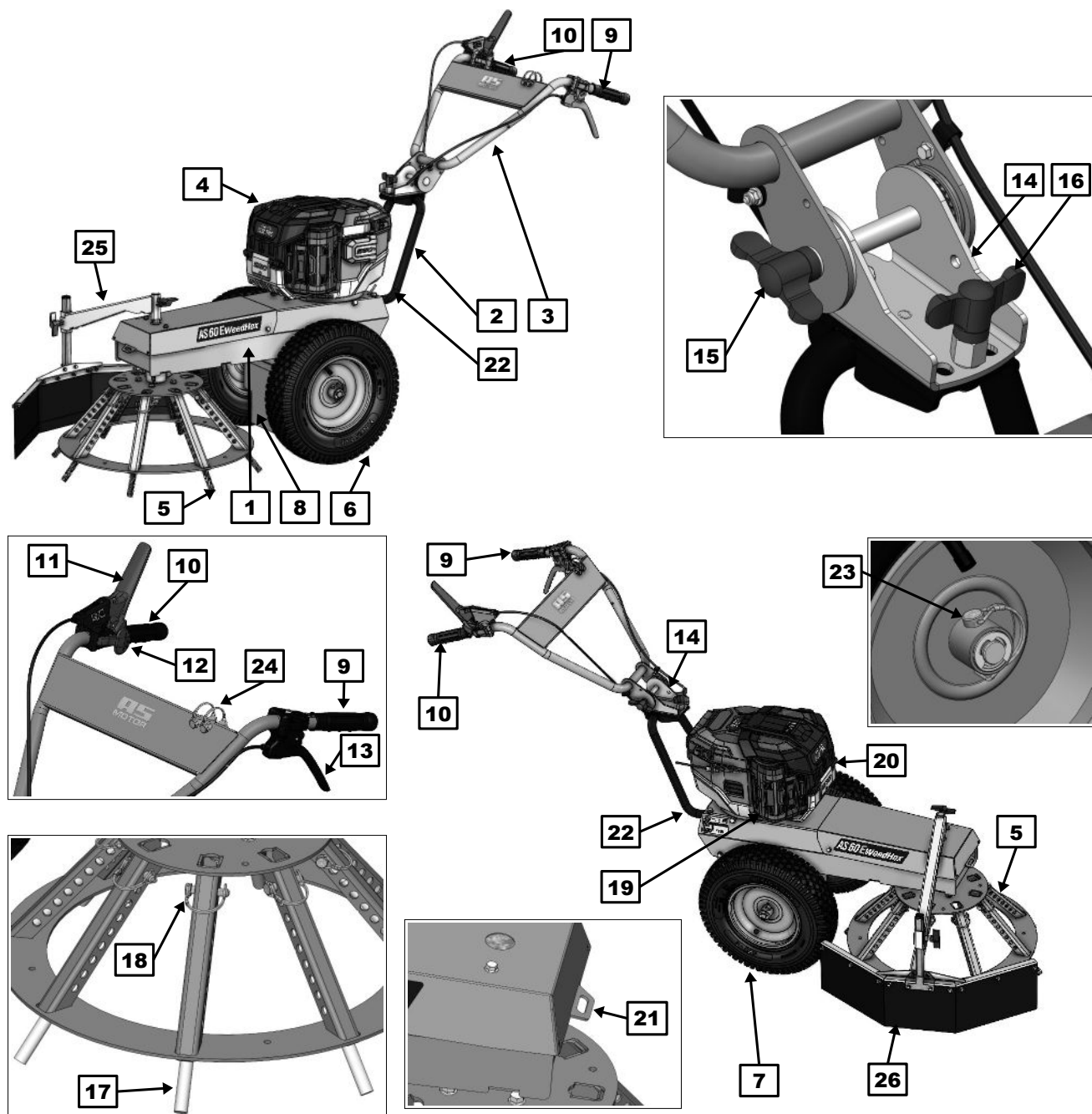
We declare that the equipment specified above is in conformity with the requirements of the above-mentioned directives.

Note: All regulations have been used as amended at the moment of issuing of this declaration without expressly specifying the amendments.

Place of issue:		Bühlertann
Date of issue:		02. 06. 2024
Person authorized to sign on behalf of the manufacturer:		
Name: Jochen Schneider	Position: Company Director	Signature: 
Name: Frank Einsiedler	Position: Development Manager	Signature: 

¹⁴ The manufacturer also prepares and archives all technical documents regarding all directives relevant to the present EC declaration of conformity

3 **EN** ATTACHED ILLUSTRATIONS



- | | | |
|---|--|---|
| 1 Device frame | 10 Right handle | 18 Pin for securing the plait brush |
| 2 Handlebar holder tube | 11 Motor starting lever | 19 Battery ¹⁵ |
| 3 Handlebars | 12 Safety lock | 20 Hinged cover of the motor |
| 4 Motor | 13 Arresting lever for the function of turning the machine to the sides | 21 Front binding point |
| 5 Working tool | 14 The turntable for turning the handlebar to the side | 22 Rear binding points |
| 6 Left wheel | 15 Plastic star for vertical adjustment of the handlebars | 23 Pin for interconnecting the both wheels |
| 7 Right wheel | 16 Plastic star for horizontal adjustment of the handlebars | 24 Place for laying the pins for interconnecting the both wheels |
| 8 Polyurethane mudguard between the wheels | 17 Plait brush | 25 Swivel screen arm ¹⁶ |
| 9 Left handle | | 26 Swivel screen ¹⁷ |

Fig. 1: Basic description of the machine

¹⁵ Not part of the delivery of the machine; it is sold separately as accessories
¹⁶ Not part of the delivery of the machine; it is sold separately as accessories
¹⁷ Not part of the delivery of the machine; it is sold separately as accessories

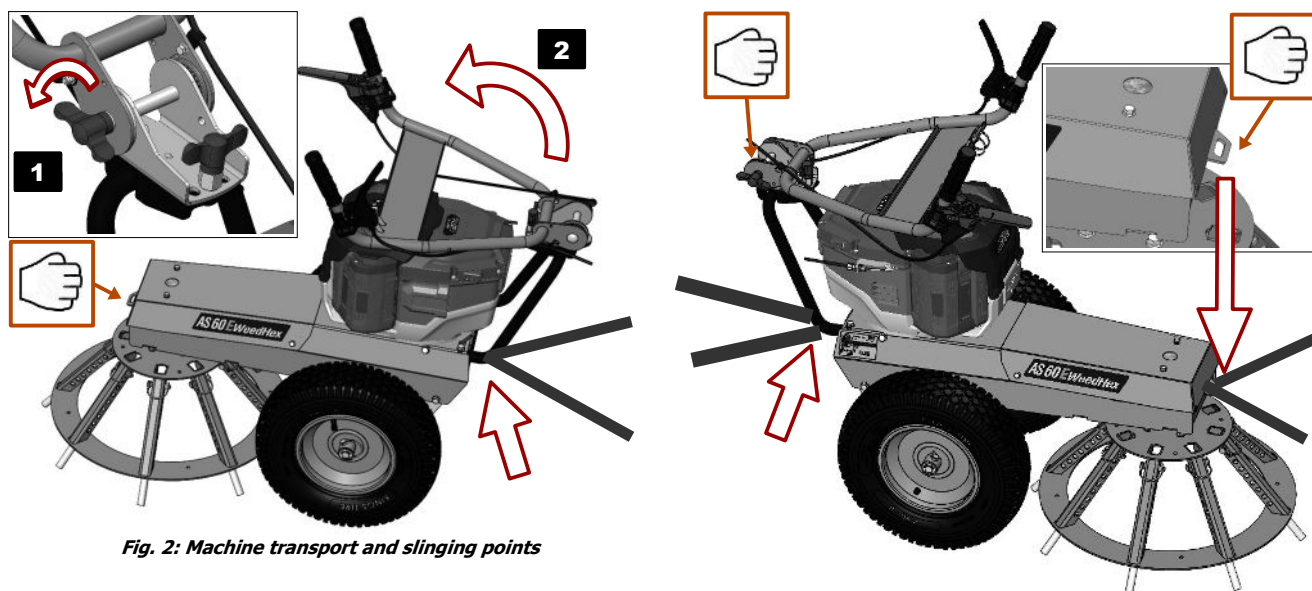


Fig. 2: Machine transport and slinging points

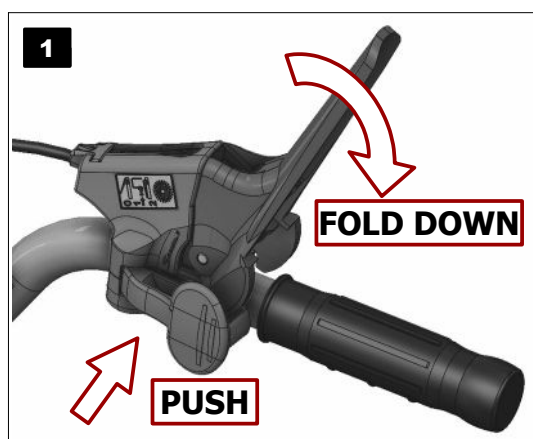


Fig. 3: Positions of the control lever for starting the motor

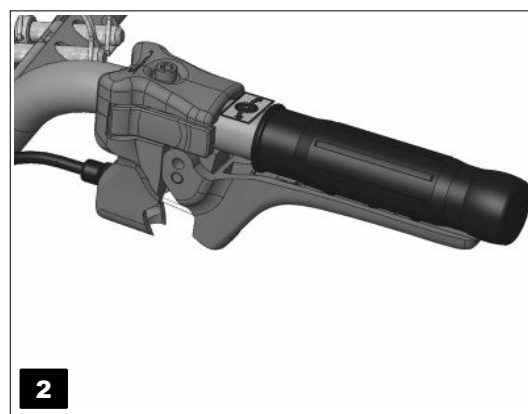
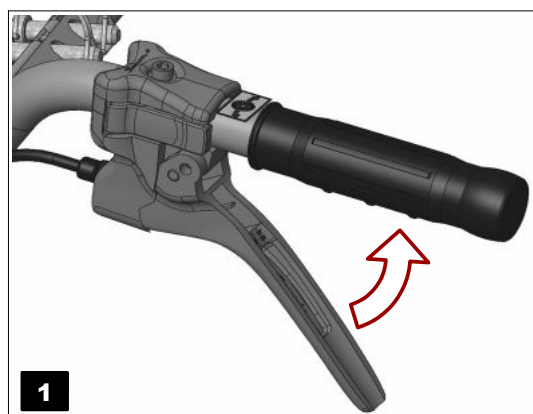


Fig. 4: Positions of the arresting lever for the function of turning the machine to the sides

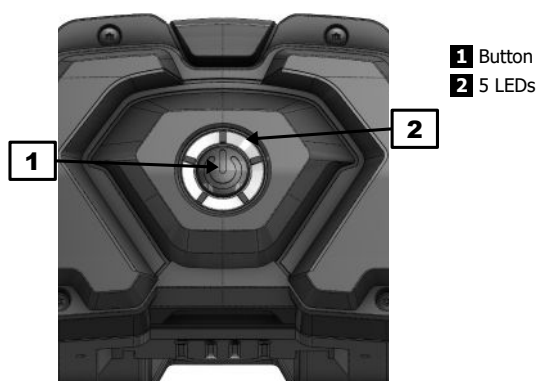


Fig. 5: Battery charging indicator

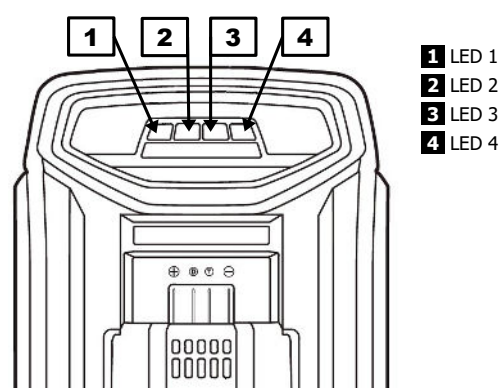


Fig. 6: Status of the battery and charger

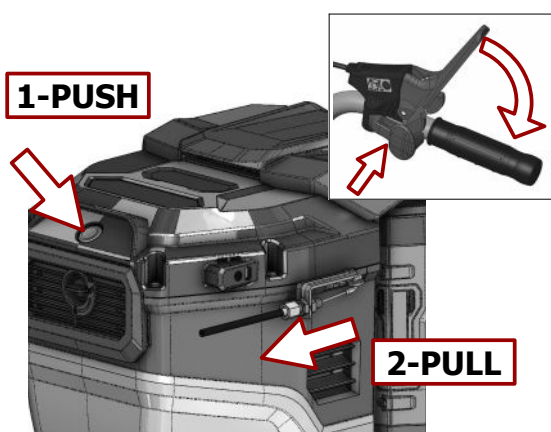


Fig. 7: Motor start-up

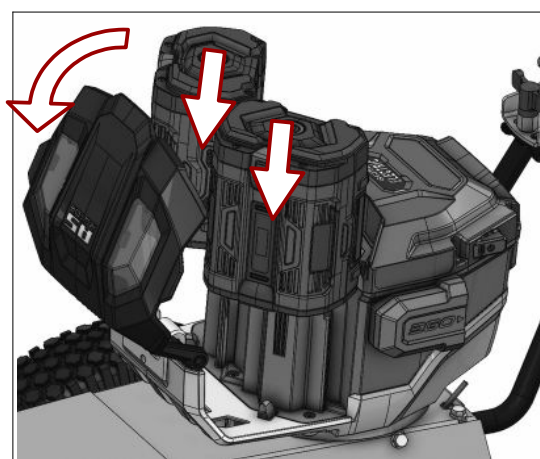


Fig. 8: Placing the battery to the motor

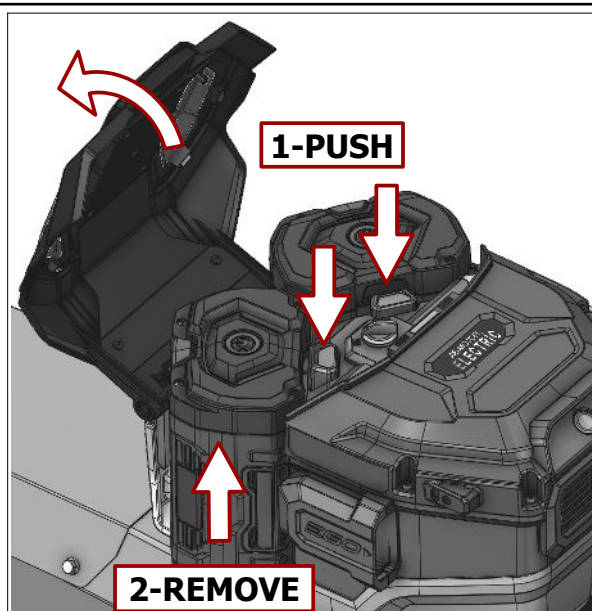


Fig. 9: Removal of the battery.

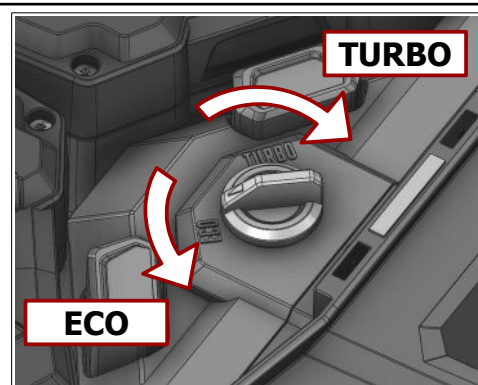


Fig. 10: Speed selector ECO-TURBO.

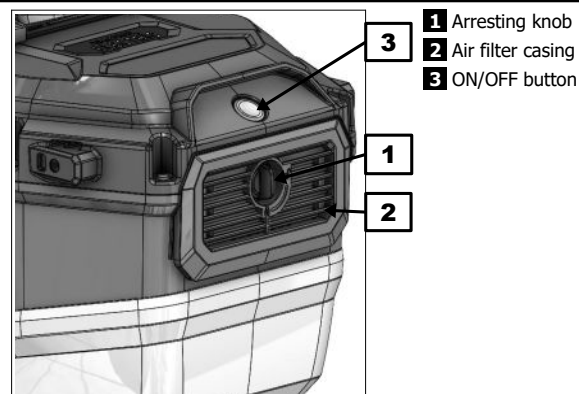


Fig. 11: Air filter maintenance

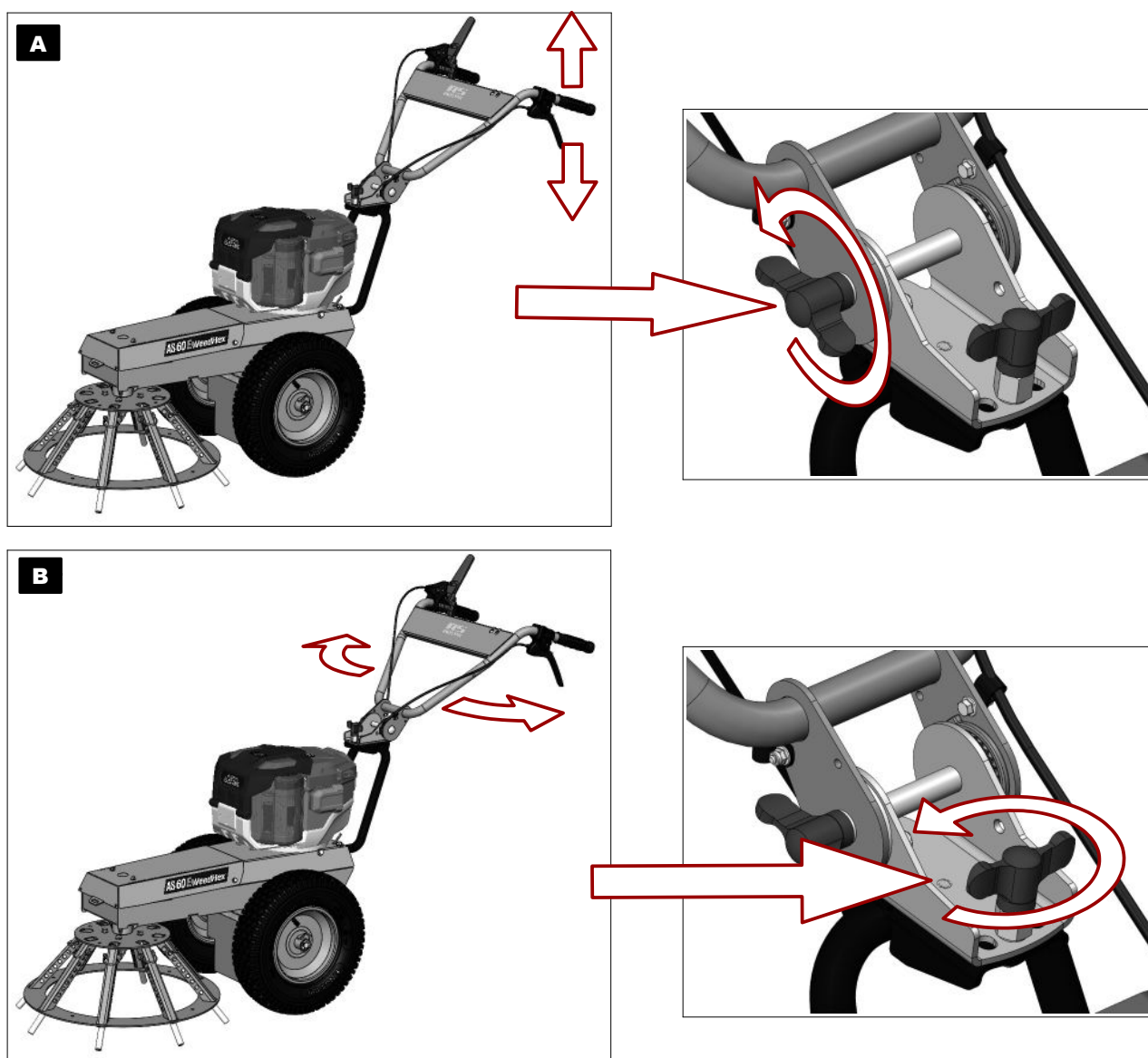


Fig. 12: Horizontal and vertical adjustment of the handlebars

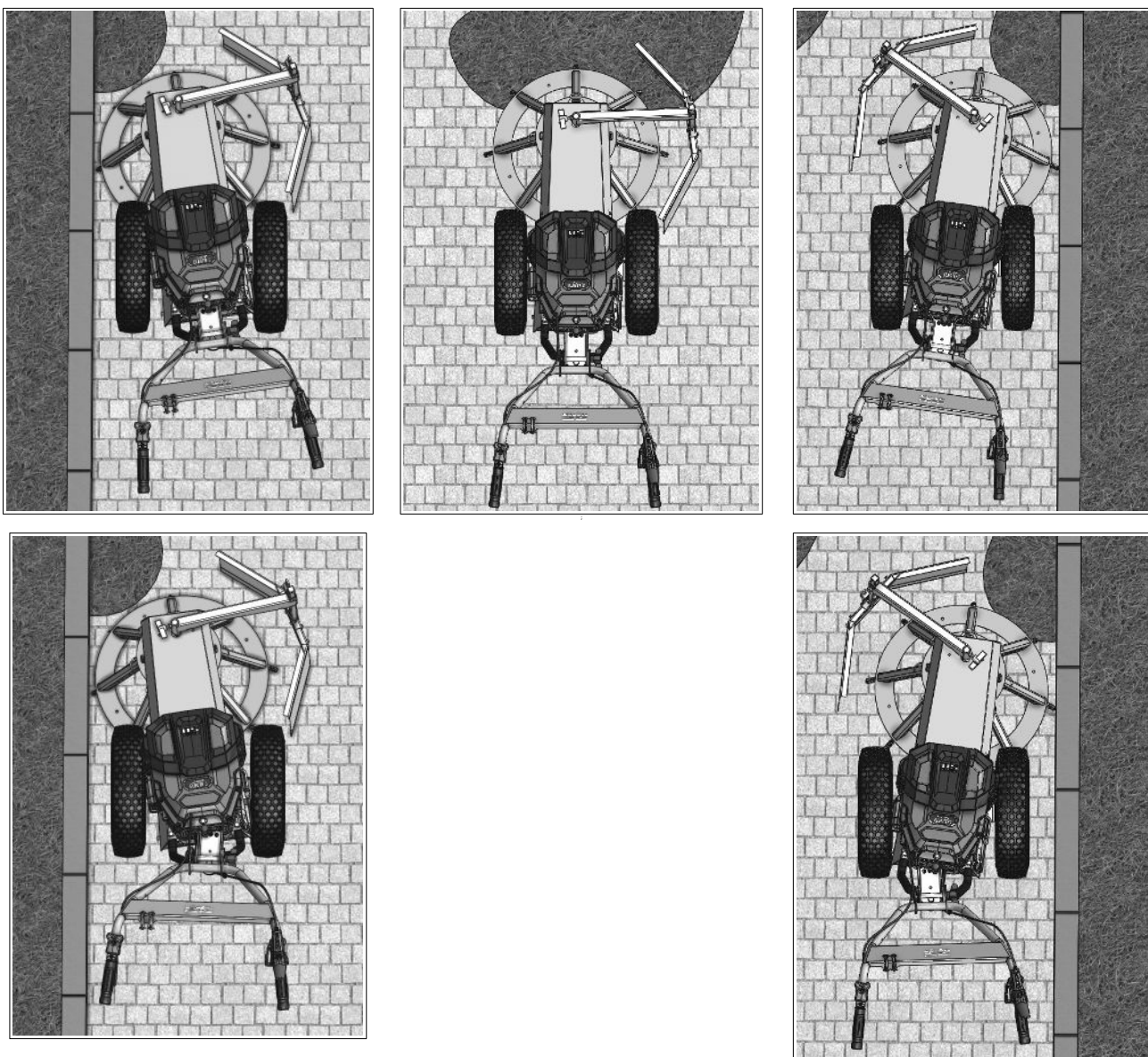


Fig. 13: Possibilities of turning the working tool and handlebars to the sides

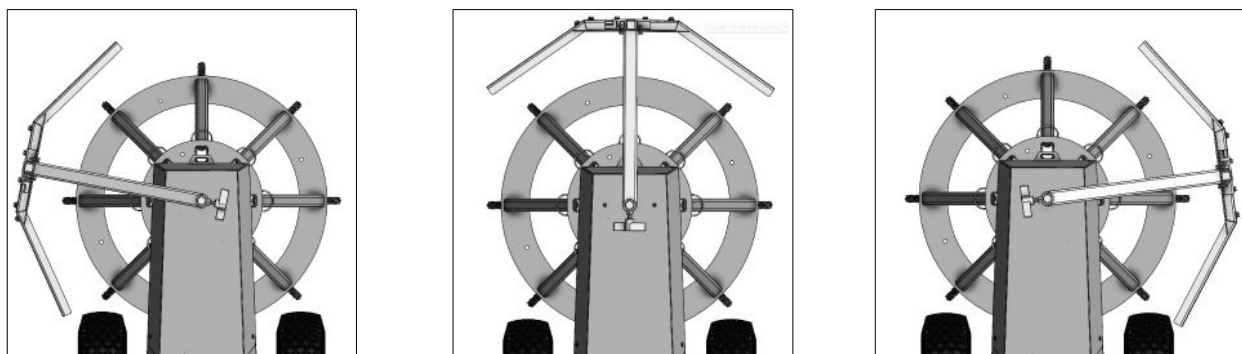


Fig. 14: Adjustment, in terms of turning, of the swivel screen to various positions

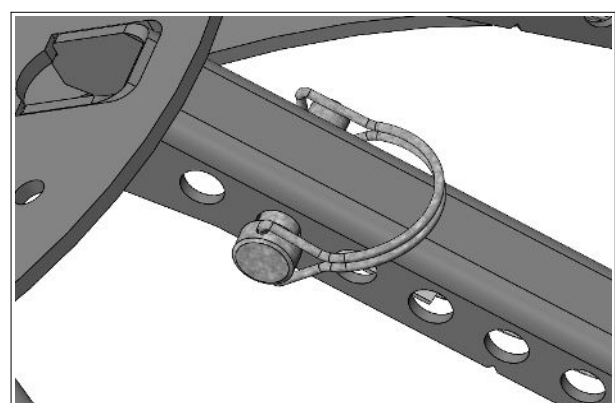
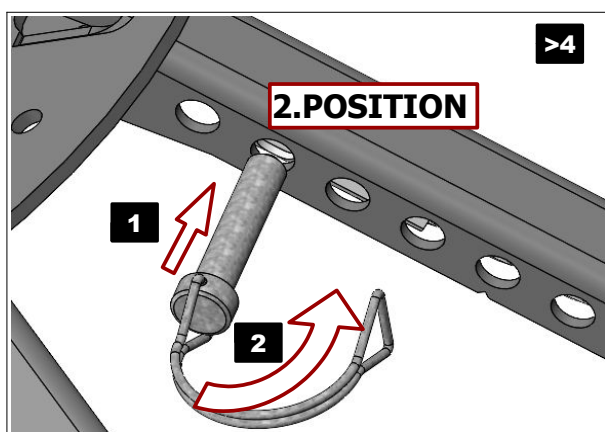
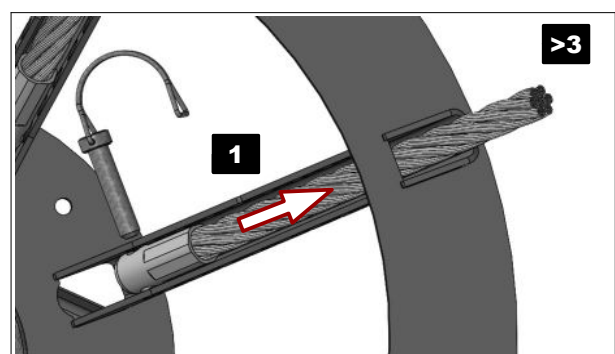
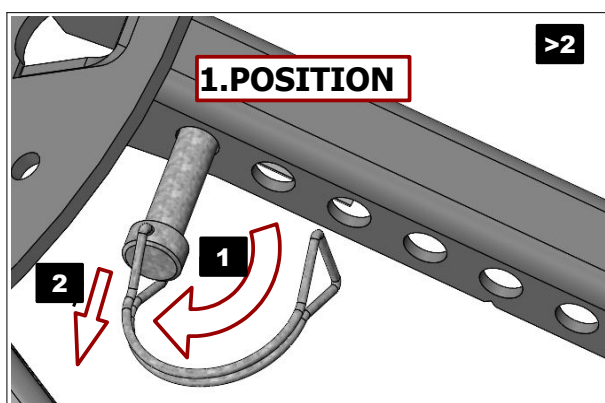
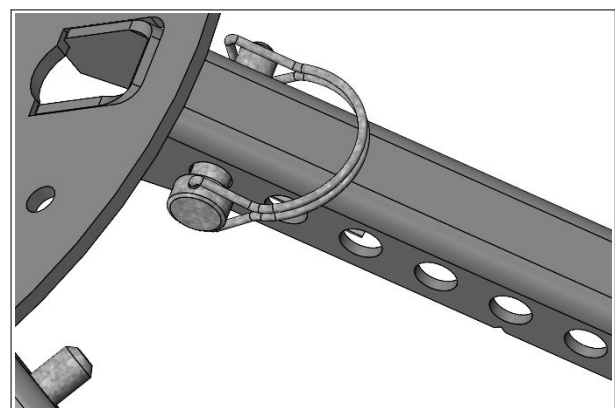
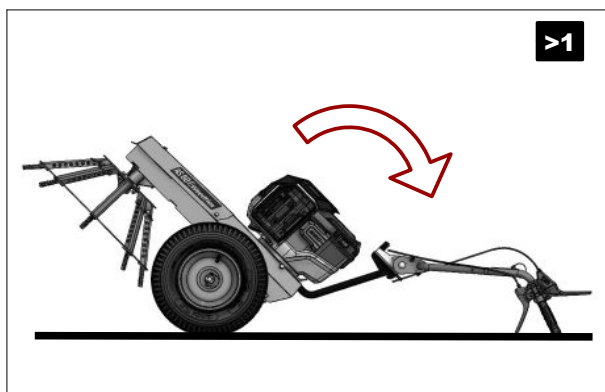
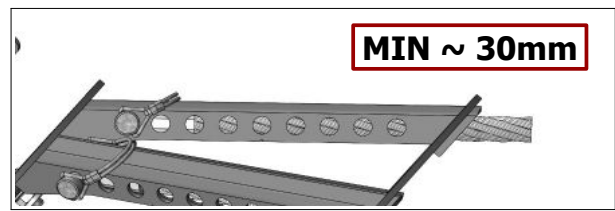
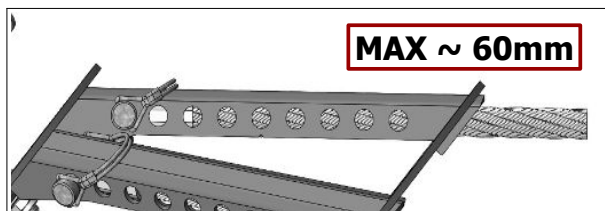
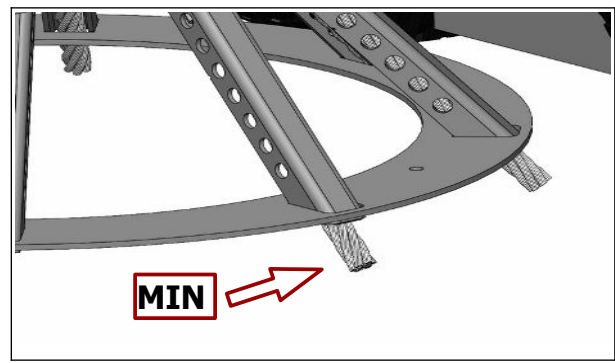
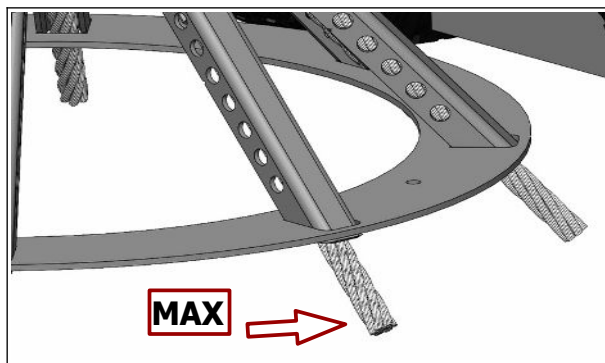


Fig. 15: Wear of the plait brushes. Extension to the operation width.

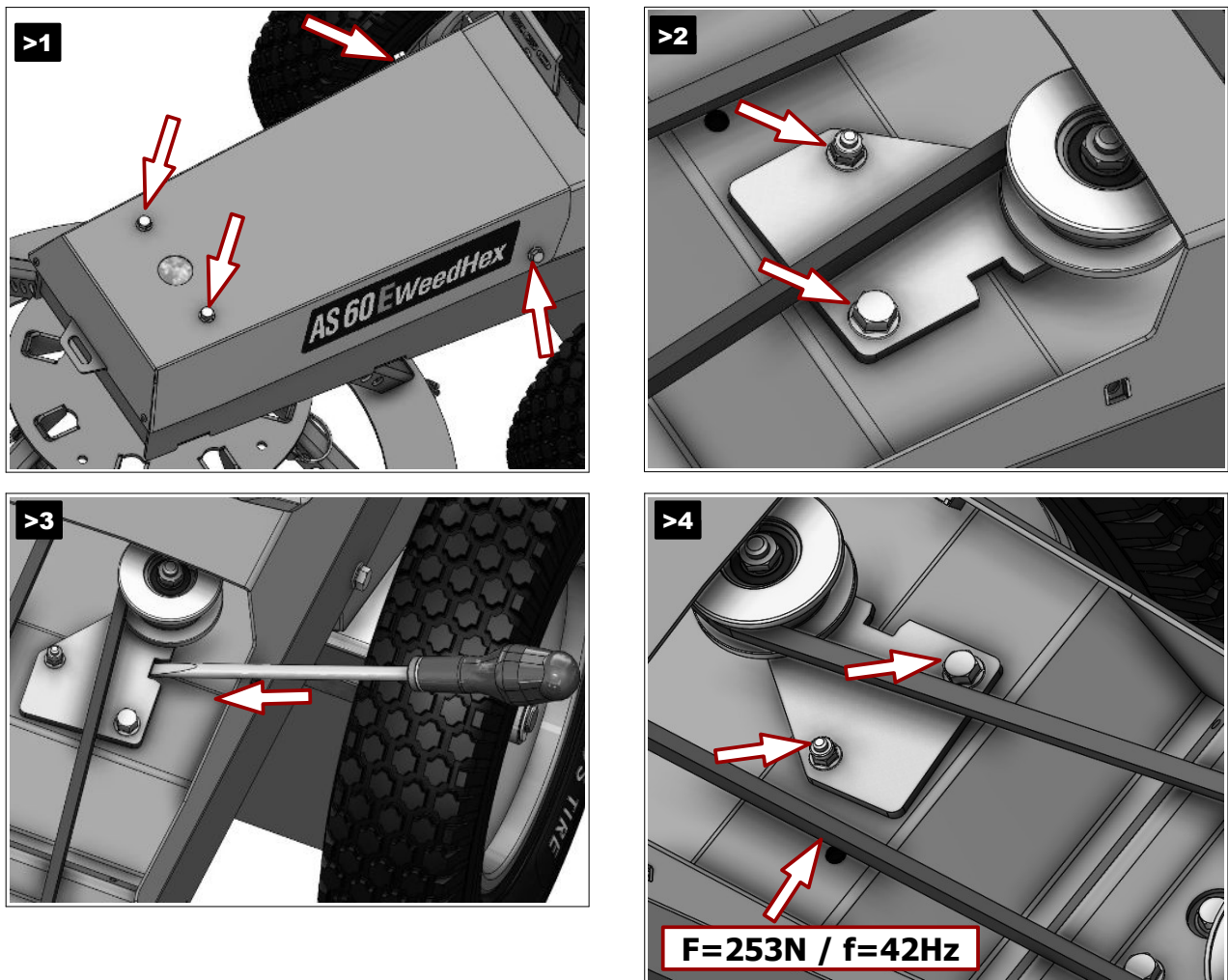
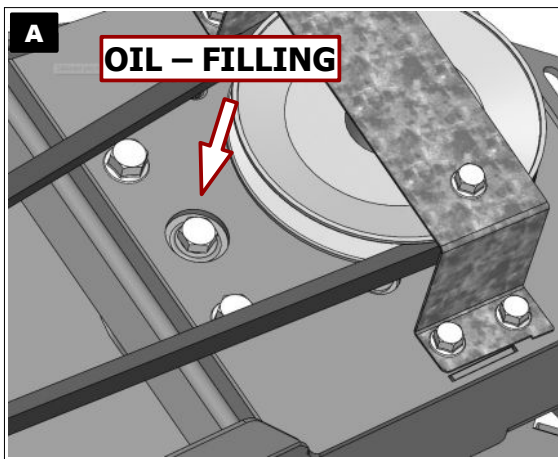
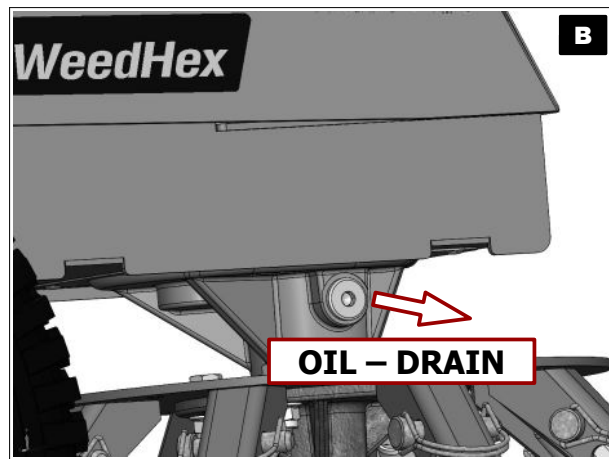


Fig. 16: Tensioning of the belt



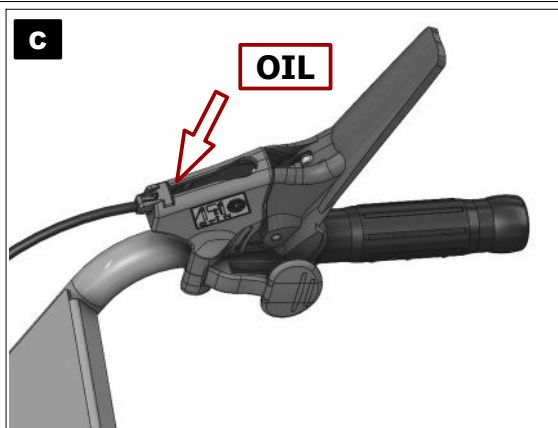
Gearbox oil filling screw



Gearbox oil draining screw



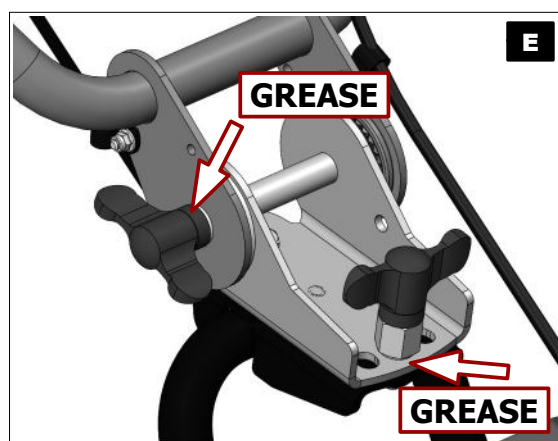
JANETTE syringe for filling the gearbox with oil



Control lever for starting the motor



Control lever for the function of turning the machine to the sides



Threads on the stars for attachment of the handlebars

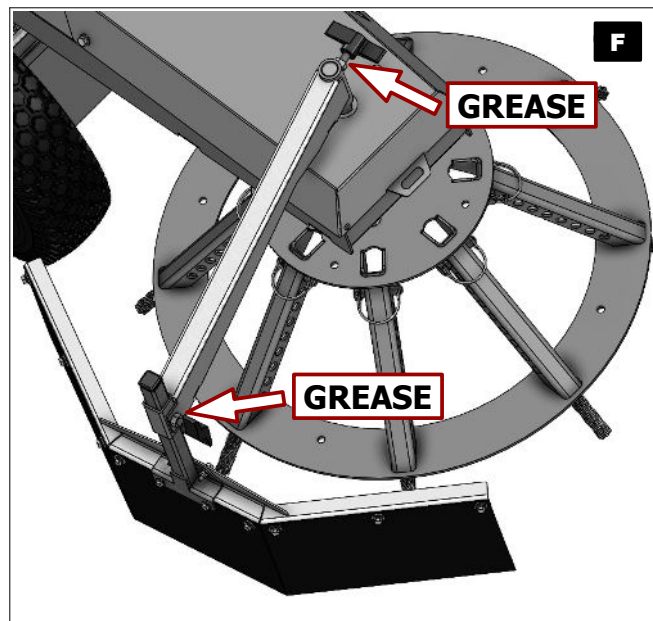
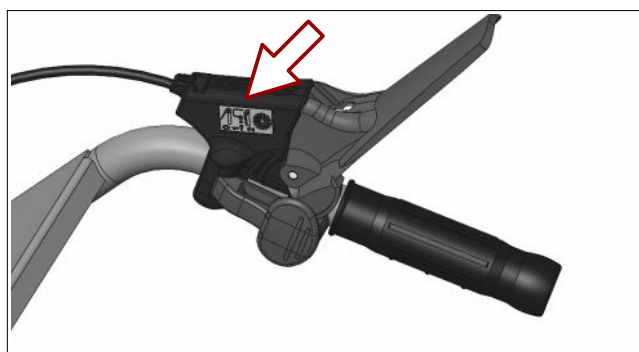


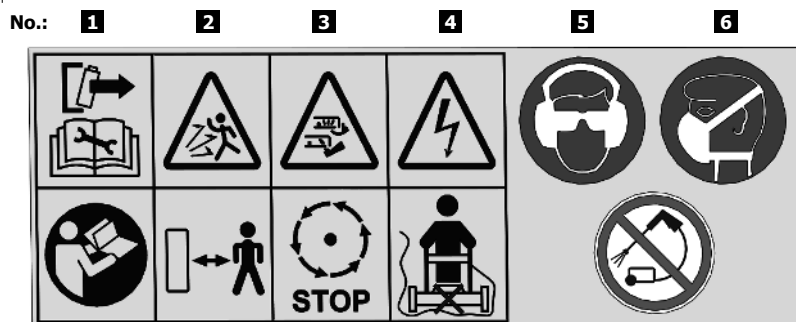
Fig. 17: Lubrication Points



Fig. 18: Safety pictogram - control lever for starting the motor



Position on the machine



Location on the machine

7

Fig. 19: Safety label - combined sticker

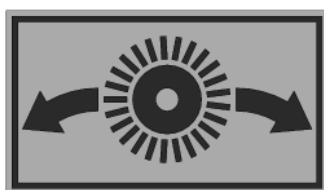
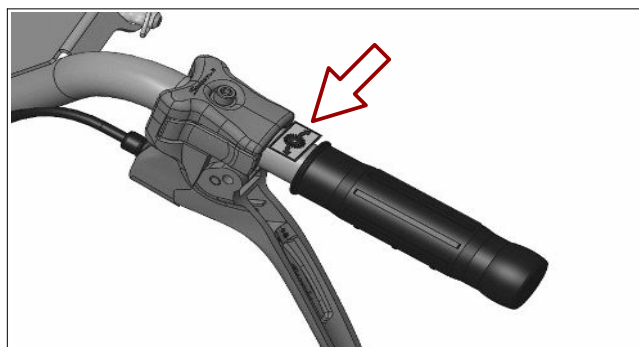


Fig. 20: Safety label - control lever for turning the machine to the sides



Position on the machine

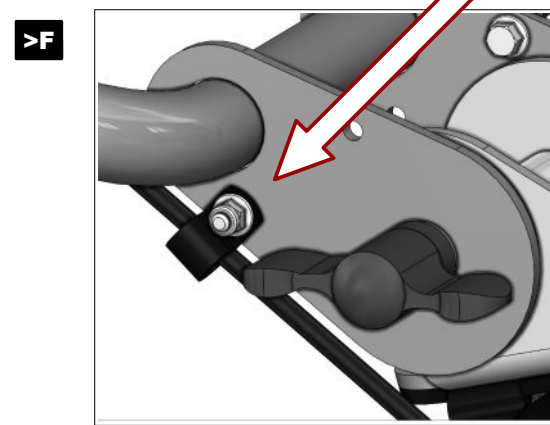
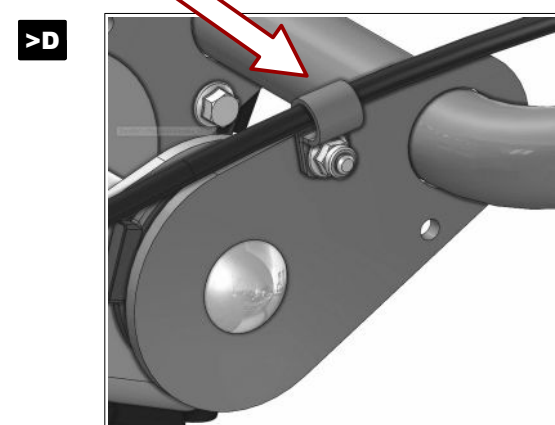
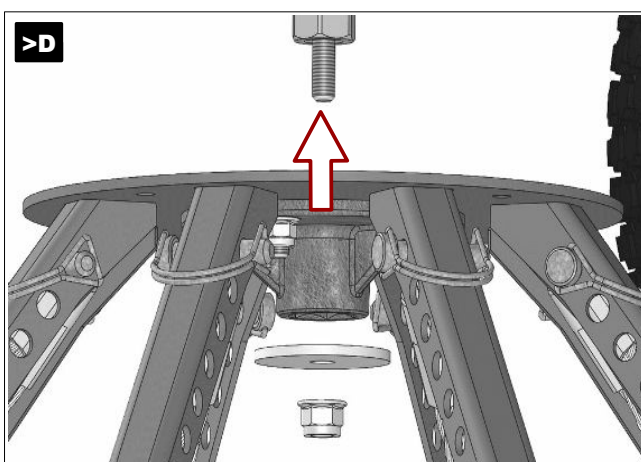
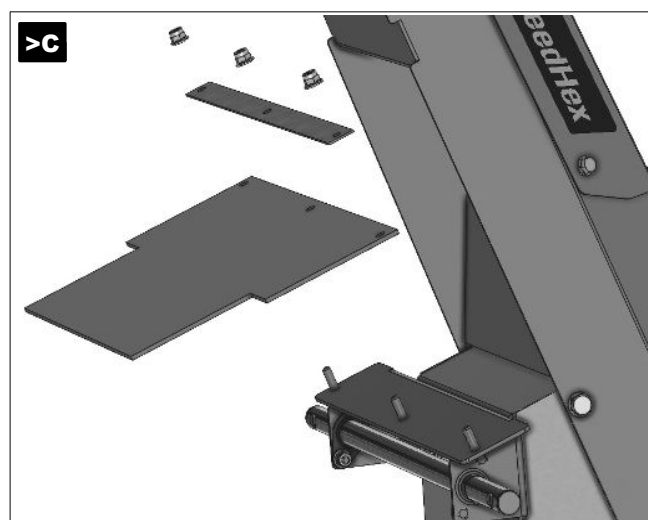
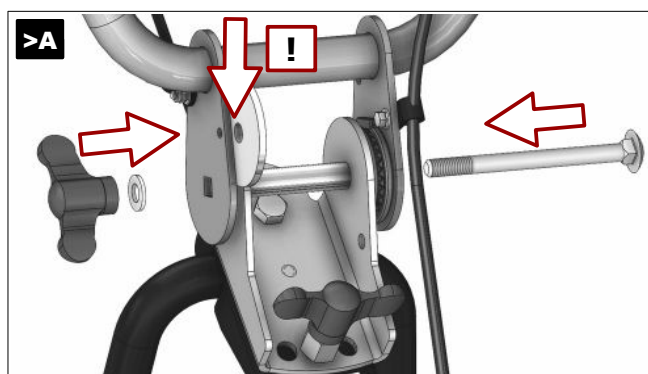


Fig. 21: Machine assembly

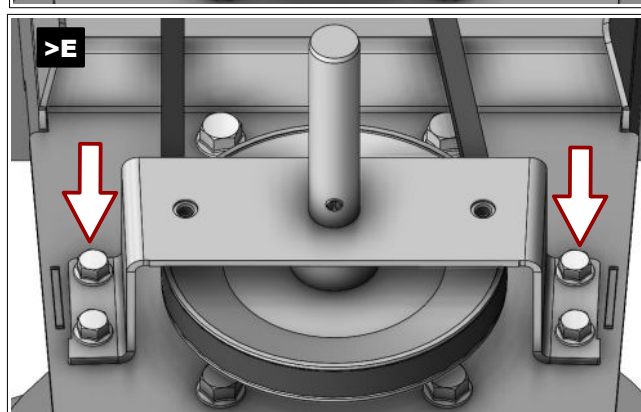
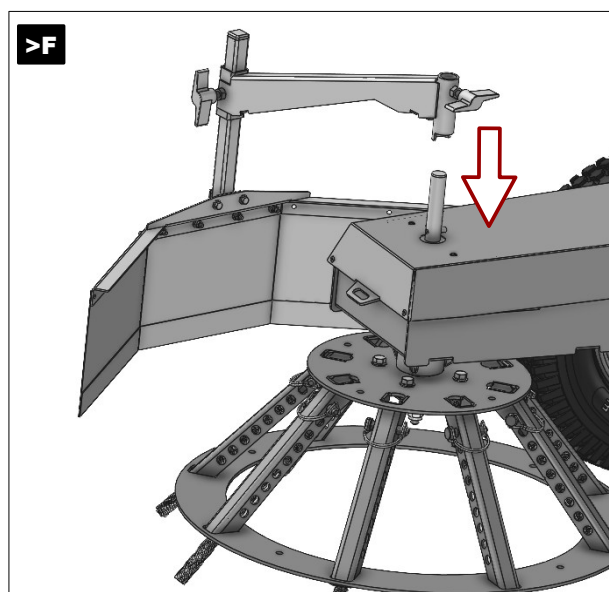
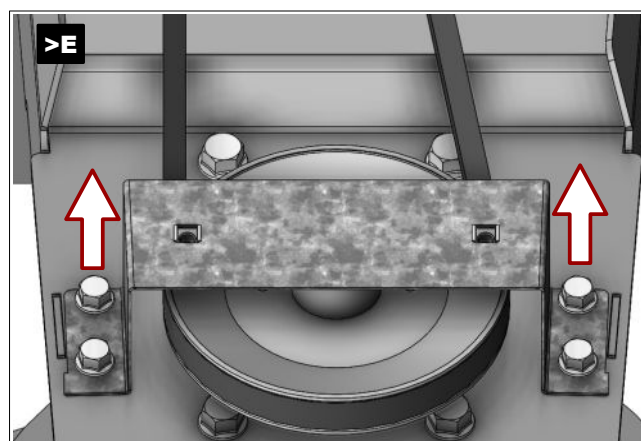
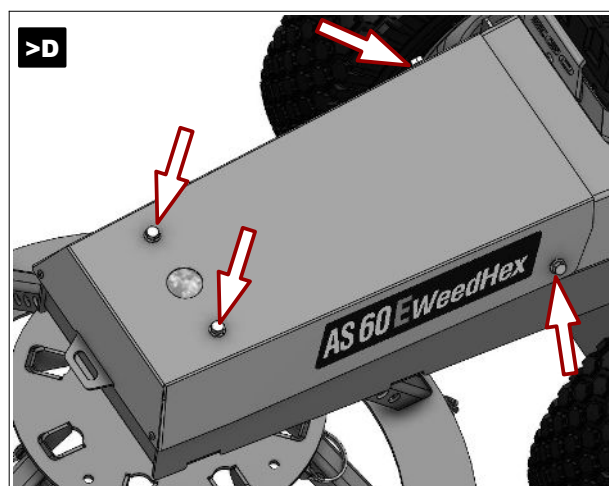
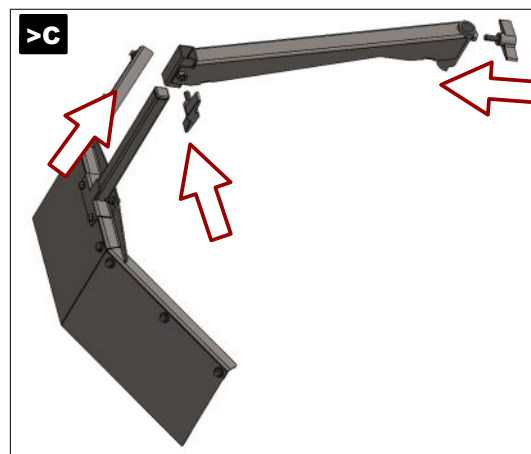
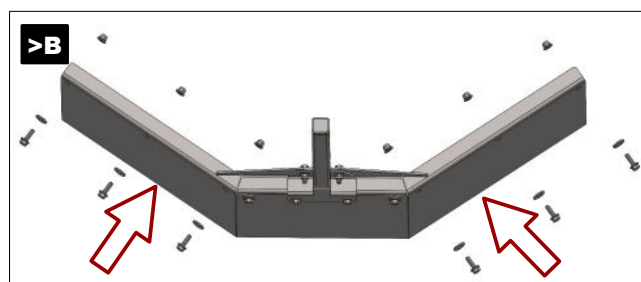
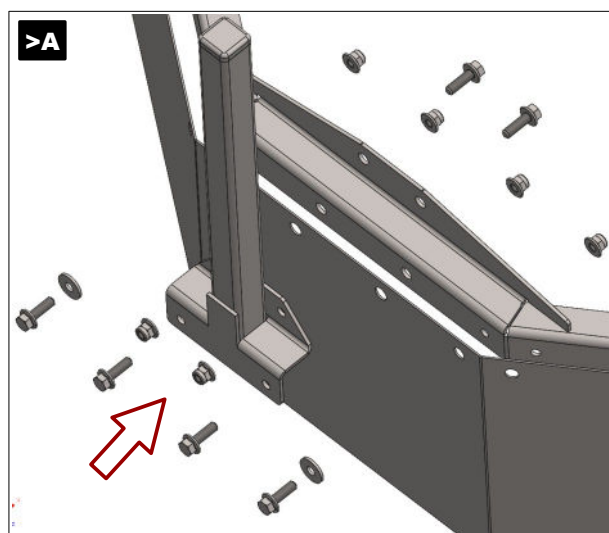


Fig. 22: Assembly of the swivel screen



AriensCo GmbH
Ellwanger Straße 15
D-74424 Bühlertann
www.as-motor.com



AS-Motor is a leading brand of grass and tall vegetation mowers and weed removing products. To our customer, we offer professional technology for steep slopes, inaccessible terrain and lawn maintenance. With our wide product range, from the manually steered basic machine to remotely controlled machines, we offer individual customers, service providers, municipalities and road maintenance companies always the right product. For over 60 years we develop and manufacture a wide range of machines in southern Germany and supply it to a network of our dealers in over 45 countries worldwide.

Mulching mowers	AS-Motor mulching mowers cut the grass to fine pieces, so it is left on the lawn as almost “invisible” fertilizer. Disposal of the cut grass is not necessary.
Professional mowers	Professional mowers with rear or side ejection for all kinds of use, even with all-wheel drive, brake and reverse.
Allmäher®	Tossing grass mowers for extensive care of greenery. Allmäher® machines reliably mow 1 meter tall grass, shrubs and weeds.
Flail mulchers	Tall grass with shrubs, steep slope or areas in unknown terrain? Floating flail blades of the AS-Motor flail mulchers avoid stones and obstacles and provide for even cutting.
Tractor Mowers	Large areas, weed, bushes or extraordinarily tall grass – that’s what the AS-Motor tractor mowers are made to deal with. Furthermore, the tractor mowers with the all-wheel drive are perfectly suited for difficult terrain.
Tool/Extensions Carriers	The AS-Motor tool carriers allow for flexibility for every-day work of the professional services providers. Among the areas where the carriers are beneficial are insect-friendly mowing, sweeping, snow clearing, etc.
Remotely controlled mowers	Cutting in the steep slopes is demanding for both the man and machine. With the modern RC machines, such hard work is significantly easier and safer.
Rotary Mowers	Ideal for fodder preparation in the non-professional segment. Grass is laid in the non-cut state to the side and forms rows.
Weed remover	AS-Motor weed remover mechanically removes the growing weeds from paved areas and curb edges – quickly, safely and effectively.
AS-Motor Electric	The AS-Motor Electric drive sets a new bar of power, force and endurance. The power of machines equipped with this drive is equal to that of machines with internal-combustion engines.

AS-Motor is a brand of Ariens Company

ARIENS | CO
EST. 1933

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VL-463-2024
CSKV: 63006600351
V1.0 EN
Revision 06/2024