Lawnmower

AS 531 4T MK, AS 531 4T MK B, AS 531 2T ES MK B

From serial number: AS 531 4T MK: 032118030001, AS 531 4T MK B: 032018030001, AS 531 2T ES MK B: 034419010001

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Dear customer,

Congratulations on your purchase. You have acquired a reliable quality product by "AS-Motor Germany".

This product has been manufactured according to modern manufacturing methods and comprehensive quality assurance measures. Only when you are satisfied with your device have we attained our goal.

These operating instructions contain important information to help you avoid hazards and to increase the reliability and the life span of the device.

Read the operating instructions before using the device. Share these operating instructions and the operating instructions of the engine with other users of the device.

Contact

If you have questions about your device, please contact your customer service.

For international AS partners, please see: www.as‑motor.de.

Device data

Please fill in all data referring to your device. When ordering spare parts, provide your dealer with the serial and engine numbers.

Serial number (see manufacturer’s certificate or type plate):

Engine number:

Date of purchase:

Address of dealer:

Intended use

The device is exclusively intended for mowing well maintained grassed lawn areas.

Only use attachments and cutting tools authorised by “AS-Motor Germany”.

Any other use exceeding this purpose is inadmissible.

Observe the instructions chapter for Maintenance. Otherwise, operational safety is endangered.

The user of the device is responsible for accidents or damage that can happen to other persons or their property.

The device must not be used:

– To cut hard objects, rocks, rubble, or pieces of wood.
– To trim bushes, hedges, and shrubbery.
– To cut plants in flower pots or planters or on rooftops.
– To clean (vacuum) footpaths.
– As shredder for shredding tree and hedge cuttings.
– As drive unit for work tools and any type of tool sets that are not authorised by “AS-Motor Germany”.
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Explanation of the symbols

Symbols in the instructions

In these operating instructions, the following symbols are used to denote special dangers.

- **Warning.** These symbols denote special dangers.

- **Prohibition sign.** These symbols denote inadmissible procedures.

- **Directive sign.** These symbols denote required protective measures.

Warnings

In these operating instructions, warning instructions are marked with signal words. The signal words are used to indicate the following hazards and potential consequences.

- **Danger**
  Imminent danger
  Indicates an imminently hazardous situation with a **high level of** risk that, if not avoided, **will** result in minor or moderate injury.

- **Warning**
  Hazardous situation
  Indicates a possibly hazardous situation with a **medium level of** risk that, if not avoided, **could** result in minor or moderate injury.

- **Caution**
  Hazardous situation
  Indicates a possibly hazardous situation with a **low level of** risk that, if not avoided, **could** result in minor or moderate injury.

Notice

Danger of property damage
Indicates a possible risk of damage of the device and its surroundings.

Signs on the device

The following signs are attached to the device to provide a reminder that during use of the device, you will have to be careful and attentive:

- Working with the device requires extreme cautiousness. Read the operating instructions before you use the device.

- Risk of injury!
  Make sure that no one is within the danger zone of the device. Objects may be ejected.

- The quickly rotating blade can cause life threatening injuries or immense property damage! Be especially careful to keep your hands and feet away from the blade when the device is put into operation.

- Prior to any repair and maintenance work, pull off the spark plug connector.
Clean the ventilation grid! The cooling air of the motor is sucked in through the ventilation grid of the engine cover. Always keep the entire surface open and free!

Noise is causing health problems. Use personal ear protection to avoid hearing damage.

Hot surface. Do not touch the engine or the silencer. They become very hot during operation and you can get burned.

Do not clean the device with water spray or high-pressure cleaner!

Type plate

The type plate on the device provides you with information on the device type and the technical data.

1. Name and address of the manufacturer
2. Device designation
3. Type designation
4. Rated power output in kW / engine speed
5. Weight
6. Year of manufacture
7. Serial number
8. CE marking
9. Sound level $L_{WA}$

Type overview

In this operating manual, the following device types are described. Depending on the equipment of your device, the corresponding descriptions of this operating manual apply.

The illustrations in this operating manual may show different device types.

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<td>X</td>
<td>-</td>
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Safety instructions

Get informed!

For your safety, read these operating instructions carefully. Familiarize yourself with the control elements and the proper use of the device. Share these operating instructions with other users of the device.

Have skilled personnel who were trained by AS-Motor show you the safe handling of the device before you work with it for the first time.

Get familiar with the device in a wide, open and flat terrain first.

User restrictions and hours of operation

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.

Unsuitable for operation of the device are persons who

– are under the influence of alcohol, drugs or reaction retarding medicines.
– have physical and mental/emotional impairments.
– are tired or sick.

People fitted with pace makers are not allowed to touch any current carrying parts of the ignition system.

Safe handling of fuel

Fuel is toxic and highly flammable. There is a burn and explosion hazard!

Keep fuel away from ignition sources and do not smoke during handling.

Do not inhale fuel vapours, they are dangerous to your health.

Use gloves and avoid skin contact with the fuel.

Always refuel outdoors when the engine is cold and stopped completely. When doing so, always use a filler spout or a funnel.

Do not spill any fuel or do not let fuel enter canalisation or drain away.

When fuel has overflown, do not start the device until the fuel vapours have evaporated (wipe dry). Move the device away from the spilled fuel.

Always close the tank cap tightly and do not open it while the engine is running or the device is still hot.

Empty the fuel only when outdoors. Use the approved container for this or run the fuel tank empty.

Store the fuel away from children and keep it in a suitable container in a dark, cool and dry place.

Never store the device when there is fuel in the tank inside a building where fuel vapours might come into contact with open fire or sparks.

Immediately replace the fuel tank or tank cap if they are damaged (authorised service centre).
First aid
When swallowing fuel or inhaling fuel vapours, do not force vomiting and immediately consult a doctor.

In case of skin contact, immediately wash with water and soap. Change your soiled clothing as soon as you can.

Measures in case of a fire
In case of a fire, use foam, dry powder extinguisher, or carbon dioxide (CO₂). Never douse with water!

Check the device prior to use
Prior to use, check the blade, drive and fastening parts, cables and cable connections for proper working condition and firm seating by visual inspection.

Never use the device with defective or missing covers, impact protection flap or grass collection bag.

Do not remove, change or override any safety devices or control elements.

Observe the maintenance instructions (see Maintenance).

Have an authorised service centre check your device if the blade does not stop within 3 seconds.

Danger area
Within the danger area of the device, there is a risk of injury.

The rotating knife can cause injuries and objects can be thrown out. The area in front of and to the right of the device is especially dangerous.

On slopes, the device can topple over and slide towards persons or run them over.

Make sure
– that nobody else besides the user is on the mowing area.
– that people are never positioned in the direction of travel in front of the device.
– that nobody is positioned on the slope below the device.
– that you have a complete overview of the danger area at all times.
– that you keep your hands and feet away from the rotating parts.
Use caution during operation

Danger of injury during motor start
Do not start the engine
– if fuel was spilled.
– in closed or poorly ventilated rooms (danger of poisoning!).
– if there are other persons nearby.
Start the device only when your feet are at a safe distance to the blade.
Start the device only when the starter rope is fixed to the guide.
When the engine is started, do not tilt the device.

Risk of injury when the motor is running
Switch off the engine and wait until the blade stops
– before you tilt or transport the device.
– before you step away from the device, even for just a short time.
– before you adjust the cutting height.
– before you refuel.
Switch off the engine and wait until the blade comes to a standstill, and pull off the spark plug connector
– before you clean or check the device or before you carry out work on the device.
– before you unblock or unclog the discharge area.

Risk of injury when the blade is running
Switch off the blade and wait until the blade stops
– before you open the impact protection flap or remove the grass collection bag.
– when you drive on surfaces other than grass.

Risk of burns
Do not touch the engine or the silencer. These parts become very hot during operation and you can get burned. If a jumpy movement occurs, the risk of additional injuries can result.

Prior to mowing

Personal protective measures

During mowing, always wear safety shoes with good grip and long trousers. Do not mow with open sandals or while shoeless.

Wear safety gloves to protect yourself against injuries and vibrations.

Noise is causing health problems. Use personal ear protection to avoid hearing damage. Wear safety glasses and headgear.

Ask your specialised dealer about suitable protective equipment.

Preparing the mowing area

Prior to mowing, carefully check the perimeter of the lawn. Remove rocks, pieces of wood, bones, wires, and other objects that could be picked up and thrown out by the device.
Use caution when mowing

Risk of injury
Risk of injury caused by ejected objects. Never mow when persons, children, pets or material assets are in the danger area.

Keep your hands and feet away from the rotating parts. Keep a distance to the ejection area while working with the device.

Make sure that help can be provided in case of an emergency.

Never open the impact protection flap and never empty the grass collection bag as long as the knife is running. The rotating knife can cause injuries and objects can be thrown out.

Only mow during daylight or with adequate artificial lighting. Never mow in the event of uncertain weather conditions and risk of lightning.

Be especially carefully when mowing on soft ground, nearby landfills, ditches, dikes and water edges.

Avoid mowing damp grass, there is a sliding risk!

Be extremely cautious when turning the device round or pulling it toward you and when moving in reverse.

Always walk slowly!

Never lift or carry the device when the engine is running.

Pay attention to traffic when working close to roads.

Vibrations
When the device is used over a longer period of time, vibrations can cause disturbances in the blood supply of the hands. A generally accepted usage time cannot be determined.

– Use gloves.

– Take breaks on time.

Have an authorised service centre check the device

– when the blade has hit an object.

– if the device starts to vibrate unusually severely.

Mowing surfaces with fire hazard
– Carry a sufficient amount of suitable extinguishing agent.

– If side inclination is too great, fuel may leak from the carburetor or the tank. This poses a fire hazard!

– Observe the mowed surface also after moving is completed to ensure that no fire will start.

To avoid risk of fire, keep the following components free of dirt, grass, hay, leaking oil, grease, etc.:

– Engine

– Silencer (manifold, guard, clearances)

– Area around the fuel tank
Caution when mowing slopes

Risk of injury during mowing on slopes due to tipping over or sliding.

– Mow on steep terrain only when safe operation can be guaranteed.
– Do not mow excessively steep slopes.
– Take suitable precautions on steep slopes, e.g. by using step irons.
– Always mow crossways to the slope, never upwards or downwards.
– Always pay attention to step safely, wear non-slip safety shoes.
– Be extremely cautious when changing the direction.
– Mow only when the ground is dry and has a good grip.

When facing downhill, the device can roll away. Park the device on level ground only and secure it against rolling away.

Devices fitted with a four stroke engines may only be operated on less than 20° slopes. Otherwise, the four stroke engine can by damaged due to insufficient oil lubrication.

If the device tilts or slips

– If you attempt to stop a device that is tilting or slipping, severe injuries can result. If tilting or sliding cannot be stopped in the beginning without endangering anyone, do not continue to try to stop the device.
– Remove leaking fluids (oil, fuel, battery acid) from the device and the floor. Deposit of contaminated soil environment friendly according to the local regulation.
– Undetectable damage may have occurred to the device. In case of malfunctions, there is a risk of injury. Have an authorised service centre check the device.

When work is completed

After mowing, always close the fuel valve and the tank ventilation.

Prior to leaving the device, wait until the engine comes to a standstill and pull off the spark plug connector.

After switching it off, let the device cool down for at least 20 minutes before you store it in a dry, closed, sufficiently ventilated room.

Never store the device when there is fuel in the tank inside a building where fuel vapours might come into contact with open fire or sparks.
Use caution during maintenance and repair

Only carry out work as described in these operating instructions. Have an authorised service centre perform all other work.

Only use the blades and spare parts authorised by “AS-Motor Germany”. Unauthorised blades and spare parts can cause severe injuries.

Prior to all maintenance work, wait until the engine comes to a standstill and pull off the spark plug connector.

We explicitly point out that, in accordance with the Product Liability Act, we are not liable for damages that were caused by our devices if

– worn or damaged parts were not repaired or replaced on time.
– these damages were caused by improper repair.
– when changing a part, our original parts or parts authorised by us were not used.
– the repair work was not carried out by an authorised service station.

The same applies for spare parts and accessories.
1 Handlebar with control elements
2 Height adjustment of handlebar
3 Tank ventilation
4 Tank filler spout
5 Fuel valve
6 Spark plug connector
7 Ventilation grid
8 Silencer
9 Cutting height adjustment
10 Impact protection
11 Cover
12 Air filter
13 Abrasive strip
14 Choke
15 Engine stop switch
16 Type plate
17 Starter grip
18 Impact protection flap
19 Grass collection bag/mulching accessories (no illustration)
20 Lateral adjustment handlebar
Device description 4-stroke devices

Illustration shows AS 531 4T MK and AS 531 4T MK B

1 Handlebar with control elements
2 Height adjustment of handlebar
3 Tank ventilation
4 Tank filler spout
5 Fuel valve
6 Spark plug connector
7 Ventilation grid
8 Silencer
9 Cutting height adjustment
10 Impact protection
11 Cover
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14 Oil filler opening
15 Engine stop switch
16 Type plate
17 Starter grip
18 Impact protection flap
19 Grass collection bag/mulching accessories (no illustration)
20 Lateral adjustment handlebar
21 Second fuel valve
**Control elements**

Handlebar with control elements (1)  
AS 531 2T ES MK B

![Control elements](image)

**Especially for devices with parking brake**

**Blade clutch lever/parking brake (B)**

The blade clutch lever/parking brake is a protective device. When you release the lever, the blade comes to a standstill within 3 seconds. Simultaneously the parking brake is applied.

**Especially for devices without parking brake**

**Blade clutch lever (B)**

The engine clutch lever is a guard device. When you release the lever, the blade comes to a standstill within 3 seconds.

**Disengaging blade (0):**  
Release the blade clutch lever and set the accelerator lever to MIN.

**Engaging blade (I):**  
Lift the blade clutch lever, engage latch knob (C) and press blade clutch lever towards the handlebar.

**Especially for 2-stroke devices**

**Engine stop switch (15)**

Switch the ignition on and off with the engine stop switch. When you switch off the ignition, the engine is switched off.

<table>
<thead>
<tr>
<th>0: OFF</th>
<th>I: ON</th>
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Activate the parking brake.  
Disengaging blade (0):  
Release the blade clutch lever.

Release the parking brake,  
blade disengaged (I):  
Press the blade clutch lever without latch knob (C) towards the handlebar.

Release the parking brake,  
Engaging blade (II):  
Lift the blade clutch lever, engage latch knob (C) and press blade clutch lever towards the handlebar.
Carburetor with choke and tickler (14)

For cold start of the engine, you require the choke (1) and the tickler (2).

Open the choke:
Turn clockwise as far as it will go.

Close the choke:
Turn anti-clockwise as far as it will go.

Filling carburetor with fuel:
Press the tickler briefly until fuel flows out.

Especially for 4-stroke devices

Engine stop switch with accelerator lever (15/I)
With the accelerator lever, you can change the engine speed and thus control the engine output.

Turn the accelerator lever to “Choke” (1) when you start the cold engine. When turned to position “STOP” (4) the ignition is switched off and the engine is shut down.

1: Choke is closed
2: Full throttle
3: Idle speed
4: Engine off

Second fuel valve (21)
The second fuel valve must always be open. The fuel supply is regulated with the fuel valve at the tank.

1: Closed
2: Open

For all devices

Drive lever (A)
With the drive lever, you switch the drive on and off.

Drive off (0):
Release the lever.

Drive on (I):
Press the lever towards the handlebar and continue to hold.

Vario lever (D)
Using the vario lever, you can continually adjust the speed of the device while the engine is running.

MIN/turtle:
slow

Max/rabbit:
fast

Fuel valve (5)

1: Reserve
2: Open
3: Closed

Lever for lateral adjustment of handlebar (20/E)
The handlebar can be fixed in 3 positions.

1. Pull the stop bolt (E) out of the notch (H).
2. Beware: Do not squeeze the Bowden cables when swivelling the handlebar. Swivel the handlebar to the side to the desired position. Let the stop bolt (E) engage in one of the three notches (H) at the guide bar.

Beware: A loose handlebar fastening can result in failure of the screwed connection. Always firmly tighten the central handlebar fastening (F).
Height adjustment of handlebar (2)

The height of the handlebar can be adjusted via the screw of the handlebar height adjustment. 3 positions are possible.

Vibration Protect dampening (G)

To reduce vibration, the support of the lever is flexibly mounted.

Information on mowing

Prior to mowing, check your device for completeness, proper functioning, and cleanliness. A dirty ventilation grid causes overheating of the engine, this can damage the engine. A dirty protective grid at the silencer poses a fire hazard.

Frequent engagement and disengagement of the clutch increases wear of the blade drive belt and the blade brake. Especially in case of high grass, clutch engagement leads to overload.

To keep the area well maintained, mow frequently and keep the grass short. Do not mow your lawn too low in dry and hot conditions because the lawn is susceptible to sun and heat damage and will look unsightly!

Only mow with a sharp and undamaged blade. Have the blade sharpened and balanced regularly (by authorised service centre).

Do not mow when the grass is wet or when it is raining. The turf may be damaged and there is a danger of slipping!

Turn the device around only in already mown sections. Do not leave the device unattended while the engine is running.

To collect the grass without blockage, we recommend, for flat terrain, to proceed according to the mowing patterns.

If the grass is extremely high, mow twice at different cutting height settings.

Mowing with mulching accessory

The mulch layer that results from mowing should not be thicker than 1-2 cm. Otherwise, during the decomposing process, a thick layer forms that negatively effects the important air-gas-exchange of the soil. In addition, the mower can clog.
If you mow once a week or every other week, we recommend a cutting height of 7-8 cm. If you desire a lawn that is lower, you need to mow more often. As a rule, you should not be cutting off more than 1/3 of the length of blade of grass.

**Prior to starting**

**Fuel used (2-stroke devices)**

The engine must be run on a mixture of petrol and two-stroke oil.

For possible mixing ratios, see chapter Mixing ratios fuel.

Use unleaded petrol (octane rating at least ROZ 91). You can use E10 petrol. Do not store E10 petrol longer than 30 days. Do not use fuels with more than 10 % ethanol (e.g. E15, E85).

Only use fully synthetic two-stroke oil intended for mixing in ratio 1:50. Do not use any mineral two-stroke oil.

**AS-Motor recommendation:**

Fully synthetic two-stroke oil **TITAN 2T 100S** in ratio **1:100**.

Your benefits:

- **Halve oil consumption compared to 1:50** - therefore more environmentally and cost friendly.
- Optimum protection of the engine for a long service life.
- Low engine wear.
- Maximum engine performance.

You can buy Fuchs "**TITAN 2T 100S**" of from your AS-dealer:

<table>
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<td>G00041042</td>
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<td>100 ml (disposable container)</td>
<td>G00041056</td>
</tr>
<tr>
<td>40 * 100 ml (disposable containers in box)</td>
<td>G00041058</td>
</tr>
</tbody>
</table>

**Notice:** You can find on the market ready mixed two-stroke fuels. Based on our experience, the ready mixed fuels “STIHL Motomix 1:50”, “ASPEN 2-stroke” and “Oest Oecomix” can be used. No guarantee can be given for operation of the device with other fuels and oils!

Do not use mixtures with more oil than 1:50 (e.g. 1:35).

Too much oil results in carbon deposits and reduces the service life of the engine.

Only use the fully synthetic two-stroke oils explicitly intended for mixing.

Use of engine oils or even waste oil results in engine damage.

No warranty is given in these cases.

**Storing fuel mixture**

The fuel mixture ages and can cause engine damages. Only mix as much fuel as you are going to use up during the next mowing.

**Fuel used (4-stroke devices)**

As fuel, use unleaded petrol (see operating instructions of the engine manufacturer).

You can use E10 petrol. Do not store E10 petrol longer than 30 days.
Check engine oil level (4-stroke devices)

Attention! Prior to each use, check the engine oil level (see operating instructions of the engine manufacturer).

To ensure sufficient oil supply for the four stroke engine and to avoid resulting engine damage, the device may only be used on slopes up to 20°.

Tanking up

⚠️ Warning

Fuel is ignited by hot engine parts.

- Prior to filling up, switch off the engine and wait for at least 20 minutes until the engine has cooled down. Observe the safety instructions regarding the fuel!

⚠️ Warning

The fuel tank at the engine is not connected.

Filled fuel can run out and ignite.

- Never fill fuel into the tank on the engine.

Filling up with fuel

1. For filling, use a canister with filler spout or a funnel.
2. Open the canister carefully so that existing excess pressure is slowly reduced.
3. Open the tank cap carefully so that existing excess pressure is slowly reduced and no fuel sprays out.
4. Fill the fuel tank.
5. Tightly close the tank cap again.

Adjusting the cutting height

Adjust the cutting height setting only when the engine is switched off.

Set the cutting height so that the blade does not touch the ground even in case of terrain unevenness. If the cutting height is set too high, objects can be ejected and the “clean cut appearance” can be destroyed.

The cutting height can be adjusted in 1 cm increments from 3 cm to 8 cm.

1. Switch off the engine and wait until the blade has come to a standstill.
2. With the adjusting lever (1) adjust each wheel to the same cutting height. While doing so, adjust wheel after wheel only by one position at a time.

Setting the cutting height

Under high load, adjust the cutting height by tightening the screw (2).
Attaching the starter grip

1. Slowly pull the starter rope at the starter grip (1) to the rear and slide it into the guide.

Starting

⚠️ Warning

During startup, there is a risk of injury caused by the rotating blade.
- Make sure that no one is within the danger zone of the blade. Do not tip the device over to one side during startup.

⚠️ Warning

Danger of poisoning due to poisonous exhaust gases.
- Do not operate the engine in closed or insufficiently ventilated rooms.
- Please observe the safety instruction regarding the poisoning risk.

⚠️ Warning

If after startup the carburetor does not close properly, fuel will overflow and a fire hazard occurs.
- Close the fuel valve and contact an authorised service centre.

Starting the device
(2-stroke device)

1. Place the device on even terrain, not in high grass.
2. Close the fuel valve and the tank ventilation.
3. Plug in the plug connector.
4. Only for cold start: Close the choke at the carburetor (turn anti-clockwise).
5. Press the tickler at the carburetor until fuel flows.
6. Actuate and hold the engine brake bar.
7. Pull the starter rope slowly out until you feel resistance and then pull out quickly – engine starts to run.
8. Slowly release the starter rope.
9. Reopen the choke (turn clockwise).
Starting the device (4-stroke device)

1. Place the device on even terrain and not in high grass.
2. Open the two fuel valves and the tank ventilation.
3. Plug in the plug connector.
4. Set the accelerator lever during cold start to the position “Choke”, otherwise to medium speed.
5. Pull the starter rope slowly out until you feel resistance and then pull out quickly – engine starts to run.
6. Slowly release the starter rope.
7. For mowing, set the accelerator lever to the maximum speed.

Driving and engaging the blade

**Warning**
Risk of injury caused by tripping or sliding while moving the mower backwards and turning it round.
- Make sure that the area is clear of objects and watch for safe footing.

**Caution**
Driving while the parking brake is on can damage the parking brake.
- Only drive when the parking brake is released.

In case of a hazardous situation, switch off the drive and declutch the blade.

When crossing over paths, declutch the blade.

Driving with the blade

1. Lift the blade clutch lever.
2. Press the latch knob at the blade clutch lever.
3. Press blade clutch lever towards the handlebar.
   - Blade starts up.
   - Parking brake is released (if existing).

Driving without the blade

1. Press blade clutch lever towards the handlebar (do not press the latch knob).
   - Parking brake is released (if existing).

Drive on

1. Pull the drive bar towards the handlebar – device starts moving.
2. Use the vario lever to control the desired speed.

Drive off:

1. Release the drive lever.

Pushing

1. Press blade clutch lever towards the handlebar.
   - Parking brake is released (if existing).
   - Device can be pushed or rolls.

Driving down slope

When driving down slope, continue to have the drive switched on to keep the driving speed constant.

Adjusting speed

With the vario lever, you can continuously adjust the speed of the device.

Only adjust the driving speed when the engine is running; otherwise, the vario drive can be damaged.

Turning

Turn the device round only where the grass has been mowed already.

Turning round on an even surface:
1. Switch off the drive.
2. Turn the device to the desired side.
3. Switch the drive back on.
Turning round on a sloping area:
1. Keep the drive switched on.
2. Turn the device upslope.
3. Hold back the handlebar and the inner wheel.
The drive prevents sliding and supports the turn manoeuvre.

Emptying the grass collection bag

Display of fill level: If the grass collection bag is full, the sewn-on material goes down (1) (dust protection).

Warning
Risk of injury caused by rotating blades.
► When the engine is running, never reach into the discharge channel.

Emptying the grass collection bag
1. Disengage the blade and wait until it comes to a standstill.
2. Lift the impact protection flap (2).
3. Remove the grass collection bag (3).
4. Lower the impact protection flap.
5. Empty the grass collection bag completely.

Switching off and parking

Warning
On a slope, the device can roll away.
► Put the device on even ground only or secure it against rolling away.

1. Release the drive lever.
2. Release the blade brake clutch lever.
3. 2-stroke devices: Set the engine stop switch to “0”.
   4-stroke devices: Turn the accelerator lever to “STOP”.
4. Wait for the engine to stop completely before you step away from the device.
5. Close the fuel valve and the tank ventilation.
6. Pull off the plug connector.

Transport

Switch off the engine and wait until the blade comes to a standstill before you lift the device. Two people should lift the device.

Switch off the device before every transport and let it cool down for at least 20 minutes. Close the tank ventilation and the fuel valve.

For transport, you can fold up the handlebar and the guide bar.

During transport on vehicles, secure the device against rolling, sliding, tilting, and fuel leakage.

Observe the instructions in chapter Switching off and parking.
Use straps that support the weight of the device to secure the device.

**Notice**

Risk of damage due to incorrect fastening of straps.
► Fasten the straps only at the points shown in the figure.
► Do not overtighten the straps.

**Maintenance**

**Warning**

Risk of injury due to unexpected movement. When inspections are carried out, the device can move unexpectedly.
► Make sure that no persons or objects are in the danger area of the blade.
► Make sure that no further hazards result from an unexpected movement.

**Warning**

Risk of injury during maintenance and cleaning work when the engine is running.
► Perform maintenance tasks only then with a running engine if this is required in the Maintenance table.

**Warning**

Danger of poisoning due to poisonous exhaust gases.
► Do not operate the engine in closed or insufficiently ventilated rooms.
► Please observe the safety instruction regarding the poisoning risk.

Prior to all maintenance and cleaning work when the engine is not running:
1. Let the device cool down for at least 20 minutes.
2. Pull off the plug connector.
3. Close the fuel valve and the tank ventilation.

Improper maintenance can make the device unsafe for operation and result in accidents. Regular maintenance keeps your device ready for use.

Service the device according to the following maintenance instructions.

Contact an authorised service centre if problems during maintenance occur or if you determine deficiencies during one of the following inspections.
## Maintenance overview

<table>
<thead>
<tr>
<th>Component</th>
<th>Action</th>
<th>Maintenance interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>Check for safe working condition (basic inspection).</td>
<td>■ ▲</td>
</tr>
<tr>
<td></td>
<td>Clean</td>
<td>■</td>
</tr>
<tr>
<td></td>
<td>Customer service</td>
<td>▲</td>
</tr>
<tr>
<td>Fuel</td>
<td>Check fuel level</td>
<td>■</td>
</tr>
<tr>
<td></td>
<td>Is the tank cap closed?</td>
<td>▲</td>
</tr>
<tr>
<td>Tank, fuel valve, and fuel line</td>
<td>Check parts for leaks and check for good condition.</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Carburetor</td>
<td>Does the carburetor close again after starting?</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Ventilation grid</td>
<td>Clean</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Engine cooling</td>
<td>Clean</td>
<td>▲</td>
</tr>
<tr>
<td>Spark plug</td>
<td>Check/replace</td>
<td>▲</td>
</tr>
<tr>
<td>Air filter</td>
<td>Maintain</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Blade and fastening components</td>
<td>Check for wear and damage. See chapter Checking the blade.</td>
<td>■ ▲</td>
</tr>
<tr>
<td></td>
<td>Change</td>
<td>▲</td>
</tr>
<tr>
<td>Blade brake</td>
<td>Does the blade function safely and does the blade come to a standstill within 3 seconds?</td>
<td>□ ▲</td>
</tr>
<tr>
<td>Parking brake</td>
<td>Check</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Release the drive lever</td>
<td>Does the device stop when the lever is in zero position?</td>
<td>□ ▲</td>
</tr>
<tr>
<td>Drive</td>
<td>Check</td>
<td>■ ▲</td>
</tr>
<tr>
<td>V-belt</td>
<td>Are the belts tensioned correctly, without fissures, and in good condition?</td>
<td>▲</td>
</tr>
<tr>
<td>Bowden cables</td>
<td>Check for proper function and ease of movement.</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Chassis and impact protection</td>
<td>Check for rust and fissures and check the welding seams.</td>
<td>■ ▲</td>
</tr>
<tr>
<td></td>
<td>Are all protective devices and covers in place, fastened correctly and properly functioning?</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Label</td>
<td>Condition of the labels.</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Flammable material</td>
<td>Remove easily flammable debris buildup from the engine and the device.</td>
<td>■ ▲</td>
</tr>
<tr>
<td>Tyres</td>
<td>Check tyres and, if necessary, the tyre pressure.</td>
<td>■ ▲</td>
</tr>
</tbody>
</table>
For 4-stroke devices:

<table>
<thead>
<tr>
<th>Engine</th>
<th>For reliable information, see the operating manual of the engine manufacturer.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Check oil level (see operator’s manual of the engine manufacturer).</td>
</tr>
<tr>
<td></td>
<td>Oil change.</td>
</tr>
</tbody>
</table>

A  Before and after each use.
B  Annually or every 50 h.
■  By the user when the engine is not running.
□  By the user when the engine is running.
▲  By the authorised service centre.
Cleaning position

![Diagram of a lawn mower]

**Caution**

Risk of injury.
Guide bar can snap back.

To provide secure stand, place the guide bar onto the ground.

1. Slacken the screw of the height adjustment and flip the guide bar to the front (do not crush the Bowden cables).
2. Flip the device to the rear as shown in the figure.
3. Place the guide bar on the floor.

Beware: Do not tilt the device towards the air filter side because then the engine oil can enter the air filter and thus render the filter useless.

Cleaning the device

Depending on use, clean the device thoroughly, especially the bottom and the blade.

Grass cuttings and dirt that are stuck interfere with the grass ejection and impair the cutting quality. To sufficiently cool the engine, keep the engine cover, ventilation grid and engine clean.

**Fire hazard!** Take particular care that the components at the silencer are clean.

For cleaning, use a hand brush. Remove stubborn dirt with a wooden or plastic spatula. Clean the outside housing parts with a cloth.

Do not clean the device with water spray or high-pressure cleaner! Do not use any aggressive cleaning agents.

General inspection

To make sure that the device can be operated safely, check all nuts, bolts, screws, connections of fuel lines, air filters etc. regularly for proper condition and firm seating. Check the ignition wire and the spark plug connector for damage.

Change the damaged or used parts especially covers, grass collection bag, silencer, abrasive strip, impact protection or fuel immediately (authorised service centre).

Check all parts that that contain fluids for leaks and proper condition. These can be: Fuel tank, fuel valve, fuel lines, carburetor, engine, gears, battery, hydraulic system.

In case of leaks, contact an authorised service centre.
Checking the blade

**Warning**

Wear or damage at the blades and the fastening elements can result in the blades or the fastening elements coming off.

► Check the blades and all fastening elements according to the following instructions.

**Warning**

There is a considerable risk of injury due to improperly mounted and maintained blades.

► Work at blades must be carried out by an authorised service centre.

Use solid gloves when you check the blade.

Work on the blade requires specific expertise because an imbalance inspection is necessary and torques must be observed.

Blades that are sharpened improperly increase the workload of the device and can result in vibration cracks or breaks.

Check the blade and all fastening elements for wear, damage and cracks

– each time before and after you mow.

– in case of noticeable changes or unusual vibrations.

Contact an authorised service centre if you detect faults or damage during inspection.

All shown blade parts and their fastening elements must be changed

– if damage or cracks are detected.

– if unusually strong vibrations occur.

– at least once a year or every 50 operating hours, no matter if wear does exist or not.

The material weakens, can suffer cracks, endangering people and material assets. Ejected broken pieces can cause severe injuries.

Unusual vibrations are an indication that

– blades are missing or broken,

– the blade is worn excessively or on one side or

– damage to the engine or cutter deck fastening.

**Blade change**

It is absolutely necessary to change the blade:

– When one of the wear markings (1) was reached. Original blades are engraved with wear markings (marking in form of a ball-shaped imprint on the rear side of the blade).

– When the thickness of the blade at the rear edge of the vane (2) or at another point is below 1 mm (exception: cutting edge).

**Original blade**

An original AS-blade is engraved with:

AS XXXXXXXX

The engraving shows the spare part number.

**Checking the blade clutch**

Check the blade clutch for proper function by disengaging the blade. The blade must come from full speed to a standstill in less than 3 seconds. Contact an authorised service centre if this is not the case.
Maintenance especially for devices with parking brake

Checking the drive

1. Place the device on a surface with a good grip (e.g. concrete or asphalt).
2. Switch off the engine.
3. Press blade clutch lever towards the handlebar.
4. Actuate the drive.
5. Try to pull the device backwards.
If the rear wheels block, the drive is set correctly. If you can pull the device, the drive must be readjusted.

Re-adjusting the drive
Turn the adjusting screw (1) at the drive so that the wheels lock, while the drive is actuated, when the device is pulled. If there is no improvement after the adjustment, have the device checked by an authorised service centre.

Checking the parking brake

1. Place the device on a surface with a good grip (e.g. concrete or asphalt).
2. Switch off the engine.
3. Try to pull the device backwards.
If you can pull the device easily, the parking brake must be readjusted. Contact an authorised service centre.

Maintenance especially for devices without parking brake

Checking the drive

1. Put the device on a non-slip surface (e.g. concrete or asphalt).
2. Switch off the engine.
3. Actuate the drive.
4. Try to pull the device backwards.
If the rear wheels lock, the drive is correctly adjusted. If you can pull the device, the drive must be re-adjusted.

Re-adjusting the drive
Turn the adjusting screw (1) at the drive so that the wheels lock, while the drive is actuated, when the device is pulled. If there is no improvement after the adjustment, have the device checked by an authorised service centre.
## Maintenance especially for 2-stroke devices

### Maintaining the engine

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the speed of rotation is set too high, objects can be ejected. The engine can be damaged and noise pollution increases.</td>
</tr>
</tbody>
</table>

► Do not change the basic setting of the carburetor or the speed control.

To ensure a long service life of the engine, sufficient engine cooling is required.

Keep the
- engine cover (ventilation grid),
- silencer (protective grid) and
- cooling fins of the engine clean at all times.

### Checking the spark plugs

<table>
<thead>
<tr>
<th>Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ignition system generates an electromagnetic field.</td>
</tr>
</tbody>
</table>

► Wearers of pacemakers must not work on live parts.

Soiled spark plugs reduce the engine output. Clean the electrode of the spark plug with a brass wire brush. Check the electrode gap (see “Technical data”). Make sure that the insulator around the electrode is not damaged. Never use a damaged spark plug.

Tighten the spark plug with the torque indicated in the technical data.

### Maintaining the air filter

<table>
<thead>
<tr>
<th>Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning agents pose a fire and explosion hazard.</td>
</tr>
</tbody>
</table>

► Never clean the air filter with flammable solvents.

<table>
<thead>
<tr>
<th>Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A cleaning of the air filter with compressed air damages the filter fabric and the air filter becomes useless.</td>
</tr>
</tbody>
</table>

► Change the air filter when it is dirty.

<table>
<thead>
<tr>
<th>Notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>When you use air filters from accessory suppliers, the engine can be damaged.</td>
</tr>
</tbody>
</table>

► Only use the original AS-Motor air filter cartridges.

Make sure that the air filter is always clean. A dirty air filter reduces the engine performance and leads to increased engine wear and fuel consumption. Irrespective of the operating hours, change the filter insert at least once a year. Cleaning the air filter is not possible. Do not operate the engine without air filter.

**Beware!** During filter change, accumulated dirt in the air filter can get into the carburetor and damage it.

1. Screw off the air filter cap.
2. Carefully pull out the filter element. Make sure that no dirt from the inside of the air filter housing enters the carburetor.
3. Close the suction opening with a clean cloth.
4. Thoroughly clean the inside of the air filter housing.
5. Remove rough, loose dirt from the filter element by tapping. Replace the filter element in case of heavy, stubborn dirt.
6. Remove the cloth of the suction opening.
7. Re-insert the filter element.
8. Close the air filter cap again.
Maintenance especially for 4-stroke devices

Maintaining the engine

⚠️ Warning

If the speed of rotation is set too high, objects can be ejected. The engine can be damaged and noise pollution increases.

► Do not change the basic setting of the carburetor or the speed control.

The engine manufacturer has prepared the operating manual of the engine. The manual contains all maintenance requirements and warranty conditions for the engine. If warranty work at the engine is required, contact your authorised service centre or the next authorised dealer for engines.

To ensure a long service life of the engine, sufficient engine cooling is required.

Keep the
- engine cover (ventilation grid),
- silencer (protective grid) and
- cooling fins of the engine clean at all times.

Checking the engine oil level

Never allow the oil level to be too low otherwise the engine can be damaged. Never fill in too much oil. Otherwise, there is the risk that the oil enters and destroys the air filter.

For this, observe the attached operating instructions of the engine.

Checking the spark plugs

⚠️ Danger

The ignition system generates an electromagnetic field.

► Wearers of pacemakers must not work on live parts.

Soiled spark plugs reduce the engine output. Clean the electrode of the spark plug with a brass wire brush. Check the electrode gap (see operating instructions of the engine manufacturer). Make sure that the insulator around the electrode is not damaged. Never use a damaged spark plug.

Tighten the spark plug using the correct torque (see operating instructions of the engine manufacturer).

Maintaining the air filter

⚠️ Warning

There is a fire and explosion risk due to cleaning agents.

► Never clean the air filter with flammable solvents.

Make sure that the air filter is always clean. A dirty air filter reduces the engine power and leads to increased engine wear and fuel consumption. Independent of the operating hours, change the filter insert at least once a year. Do not operate the engine without air filter.

For this, observe the attached operating instructions of the engine.
Assembly

Scope of delivery

The device is shipped in a carton.
The scope of delivery included:

- The device.
- This operating manual.
- Manufacturer’s certificate.
- Grass collection bag.
- Mulching accessory.
- Tool bag with small parts.
- Operating manual engine manufacturer (for 4-stroke devices)

Unpacking

1. Remove the loose parts from the box.
2. Cut open the front side of the box.
3. Push the device out of the box

Mounting guide bar and handlebar

1. Move the guide bar (1) to the rear.

2. Slide the screw (5) at the guide bar into one of the three notches and tighten the nut (see Control elements - height adjustment of handlebar.

3. Beware: Do not squeeze the Bowden cables when swivelling the handlebar (3). Swivel the handlebar (2) clockwise to the rear and let the stop bolts engage into one of the notches (4) at the guide bar.
Assembling the grass collection bag

1. Pull the grass collection bag (1) over the frame (2).
2. Fasten the grass collection bag with the plastic profiles to the frame.
3. On both sides of the grass collection bag: Screw the rod (3) through the eyelets of the grass collection bag to the frame (4 x screw and nut M6).

Mounting the grass collection bag

1. Switch off the blade and wait until the blade comes to a standstill.
2. Lift the impact protection flap (1).
3. Insert the grass collection bag (2) into the recesses.
4. Lower the impact protection flap onto the grass collection bag.

Inserting mulching accessory

1. Switch off the engine and wait until the blade has come to a standstill.
2. Lift the impact protection flap (1).
3. Insert the mulching accessory (2) into the discharge chute.
4. Lower the impact protection flap again.
Storage

Storing the device

Keep the device in a closed, dry, and well ventilated room and out of reach of children. Always eliminate all problems of the device before you store it so that the device is always in a safe-to-operate state. Let the engine cool down before you store the device in closed rooms.

Longer storage

1. Observe the safety instructions for handling the fuel.
2. Emptying fuel tank. Place a piece of hose onto the fuel valve and let the fuel run into an approved fuel container.
3. Emptying carburetor: Start the engine and let it run until it stops by itself.
4. Thoroughly clean the device.
5. Touch up any possible damage to the paint finish (for paint, see Accessories).

Before longer storage, e.g. in the fall, have an authorised service centre check the device!

Restarting

If you want to start the device after a longer storage, carry out the tasks described in chapter Maintenance.

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 Germany”. When foreign parts are installed, the warranty and guarantee shall be void for the foreign part and for the device and for any resulting damage.

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

Wear parts

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

- Blades, cutting blades, cutter bars, blade bolts,
- Sliding plates, V-belt, chains, Bowden cables,
- Starter ropes, pressure plates, air filters, spark plugs, disc springs, lock washers, fuses, discs,
- Thrust plates, pressure discs, protection skirts, impact protection, wheels, tires.

Disposal

Grass clippings must not be thrown into the waste but should be composted.

Shredded plant material decomposes quickly, can be utilized as fertilizer, and, therefore, be left on the ground.

Dispose of waste oil and fuel in accordance with the local regulations or return it to an oil shop.

Packaging, device, and accessories are made of recyclable materials and must be disposed of accordingly.

Warranty

Please see our AS-Motor website for warranty information.

Please print out the documents that you receive during the online registration. Keep them together with your sales receipt.
# Possible faults

The following table contains the most frequent problems and their elimination. If more problems occur, contact the closest authorised service centre.

You can find an authorised service centre on our home page [www.as-motor.de](http://www.as-motor.de).

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engine does not start</strong></td>
<td>Turn the engine stop switch to “0” or “STOP”.</td>
<td>Turn the engine stop switch to “I” or “Choke”.</td>
</tr>
<tr>
<td></td>
<td>Fuel valve is closed.</td>
<td>Open fuel valve. For devices with two fuel valves, open both.</td>
</tr>
<tr>
<td></td>
<td>Tank ventilation screw is closed.</td>
<td>Open tank ventilation screw.</td>
</tr>
<tr>
<td></td>
<td>No fuel is in the tank.</td>
<td>Refill fuel.</td>
</tr>
<tr>
<td></td>
<td>Choke is open.</td>
<td>Close the choke.</td>
</tr>
<tr>
<td></td>
<td>Spark plug connector is pulled off.</td>
<td>Observe the safety instructions! Put spark plug connector back on.</td>
</tr>
<tr>
<td></td>
<td>Device was tilted – oil leaked into the air filter.</td>
<td>Replace air filter, unscrew spark plug and start several times when the fuel valve is closed, dry the spark plug and screw it back in.</td>
</tr>
<tr>
<td></td>
<td>Engine was flooded due to too many start attempts.</td>
<td>Unscrew spark plug and start several times when the fuel valve is closed, dry the spark plug and screw it back in.</td>
</tr>
<tr>
<td></td>
<td>Air filter is dirty.</td>
<td>Maintain air filter (see Maintenance).</td>
</tr>
<tr>
<td></td>
<td>Spark plug is dirty, damaged, or incorrect electrode gap.</td>
<td>Clean spark plug and check electrode gap (see Maintenance). Replace spark plug if necessary.</td>
</tr>
<tr>
<td></td>
<td>Wrong spark plug connector</td>
<td>Use the specified spark plug connector (see spare part information of the authorised service centre).</td>
</tr>
<tr>
<td></td>
<td>Housing of the mower is jammed.</td>
<td>See Maintenance.</td>
</tr>
<tr>
<td></td>
<td>Poor quality, dirty, or old fuel.</td>
<td>Clean fuel system (authorised service centre). Always use fresh fuel.</td>
</tr>
<tr>
<td>Engine starts badly or runs irregularly</td>
<td>Choke is closed.</td>
<td>Open the choke.</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Air filter is dirty.</td>
<td>Maintain air filter (see Maintenance).</td>
<td></td>
</tr>
<tr>
<td>Poor quality, dirty, or old fuel.</td>
<td>Always use fresh fuel.</td>
<td></td>
</tr>
<tr>
<td>Spark plug is dirty, damaged, or incorrect electrode gap.</td>
<td>Clean spark plug and check electrode gap (see also Maintenance). Replace spark plug if necessary.</td>
<td></td>
</tr>
<tr>
<td>Wrong spark plug connector</td>
<td>Use the specified spark plug connector (see spare part information of the authorised service centre).</td>
<td></td>
</tr>
<tr>
<td>Housing of the mower is jammed.</td>
<td>See Maintenance.</td>
<td></td>
</tr>
</tbody>
</table>

| No drive when drive lever is actuated | Drive belt is insufficiently tensioned. | See also Checking the drive. |

| The blade does not rotate | V-belt is insufficiently tensioned or damaged. | Authorised service centre. |
| Bowden cable is defective. | Authorised service centre. |

| The blade slides | Replace friction discs. | Authorised service centre. |

| Strong vibrations during operation | Imbalance of the blade caused by incorrect sharpening or chips on the blade. | Have blade resharpened and balanced by an authorised service centre. Replace a damaged blade immediately. |
| Blade drive shaft is bent due to collisions with foreign objects. | Authorised service centre. |
| Engine fastening is loose. | Authorised service centre. |
| Blade fastening is loose. | Authorised service centre. |

| Irregular noises | Loose fastening elements. | Authorised service centre. |
| Silencer is defective. | Authorised service centre. |

| Engine is smoking | Air filter is dirty or drenched with oil. | Maintain or replace air filter (see Maintenance). |
| Oil level is too high. | Have authorised service centredrainoil level up to the marking. |

<p>| Engine gets hot | Ventilation grid is dirty. | Clean ventilation grid. |
| Oil level in the engine is too low (4-stroke devices). | Refill engine oil (see operating instructions of the engine manufacturer). |
| Cooling fins of the engine are dirty. | Have cooling fins cleaned by authorised service centre. |</p>
<table>
<thead>
<tr>
<th>Issue</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uneven cut, lawn becomes unsightly</td>
<td>Blade is dull or worn.</td>
<td>Have blade resharpened and balanced by an authorised service centre. Replace a damaged blade immediately.</td>
</tr>
<tr>
<td></td>
<td>Speed is too high proportionately to the cutting height.</td>
<td>Reduce speed and/or select the correct cutting height.</td>
</tr>
<tr>
<td></td>
<td>Housing of the mower is heavily contaminated.</td>
<td>Clean.</td>
</tr>
<tr>
<td>Housing is jammed</td>
<td>Mowed grass was too long or too damp.</td>
<td>Adjust cutting height and mowing speed to the mowing conditions.</td>
</tr>
<tr>
<td></td>
<td>Blade is worn</td>
<td>Authorised service centre.</td>
</tr>
<tr>
<td></td>
<td>Engine speed is too low.</td>
<td>Authorised service centre.</td>
</tr>
<tr>
<td>Housing clogs up when mulching accessory is used.</td>
<td>Mulched grass was too long or too damp.</td>
<td>Adjust cutting height and mowing speed to the mowing conditions.</td>
</tr>
<tr>
<td></td>
<td>Mulched grass was too long or too damp.</td>
<td>Remove mulching accessory. Mow without mulching accessory.</td>
</tr>
<tr>
<td></td>
<td>Blade is worn</td>
<td>Authorised service centre.</td>
</tr>
<tr>
<td></td>
<td>Engine speed is too low.</td>
<td>Authorised service centre.</td>
</tr>
<tr>
<td>The device does not stop</td>
<td>Drive belt does not declutch.</td>
<td>Authorised service centre.</td>
</tr>
<tr>
<td></td>
<td>Parking brake is defective.</td>
<td>Authorised service centre.</td>
</tr>
<tr>
<td>The engine does not switch off</td>
<td>Switching off system is defective.</td>
<td>Close the fuel valve. Authorised service centre.</td>
</tr>
</tbody>
</table>
Accessories

Spray paint 400 ml, colour orange: G00011050
Operating hours counter: G06927008
Clinometer: G06950027
Mulching accessory: G53126007

Fuel ratios of fuel 2-stroke devices

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Fully synthetic two-stroke oil</th>
<th>Only with Titan 2T 100S</th>
</tr>
</thead>
<tbody>
<tr>
<td>(octane rating ROZ 91 min.)</td>
<td>1:50</td>
<td>1:100</td>
</tr>
<tr>
<td>litres</td>
<td>Litre (=ml/cm³)</td>
<td>Litre (=ml/cm³)</td>
</tr>
<tr>
<td>1</td>
<td>0.02 (20)</td>
<td>0.01 (10)</td>
</tr>
<tr>
<td>2</td>
<td>0.04 (40)</td>
<td>0.02 (20)</td>
</tr>
<tr>
<td>3</td>
<td>0.06 (60)</td>
<td>0.03 (30)</td>
</tr>
<tr>
<td>4</td>
<td>0.08 (80)</td>
<td>0.04 (40)</td>
</tr>
<tr>
<td>5</td>
<td>0.1 (100)</td>
<td>0.05 (50)</td>
</tr>
<tr>
<td>10</td>
<td>0.2 (200)</td>
<td>0.1 (100)</td>
</tr>
<tr>
<td>20</td>
<td>0.4 (400)</td>
<td>0.2 (200)</td>
</tr>
</tbody>
</table>

Do not use mixtures with more oil than 1:50 (e.g. 1:35).
Too much oil results in carbon deposits and reduces the service life of the engine.
Only use the fully synthetic two-stroke oils explicitly intended for mixing. Do not use mineral two-stroke oil.
Use of engine oils or even waste oil results in engine damage.
No warranty is given in these cases.
## Technical data 4-stroke devices

<table>
<thead>
<tr>
<th>Type</th>
<th>AS 531 4T MK</th>
<th>AS 531 4T MK B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range of application</strong> <em>(temperature)</em></td>
<td>0 - 30 °C</td>
<td>For temperatures below 5 °C, observe the engine manufacturer's information regarding the engine oil.</td>
</tr>
<tr>
<td><strong>Engine, type</strong></td>
<td>One cylinder four stroke engine</td>
<td>Honda</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Honda</td>
<td>GSV 190</td>
</tr>
<tr>
<td>Type</td>
<td>GSV 190</td>
<td>190 cm³</td>
</tr>
<tr>
<td>Cylinder capacity</td>
<td>190 cm³</td>
<td>3,2 kW (4,4 PS)</td>
</tr>
<tr>
<td>Performance</td>
<td>3,2 kW (4,4 PS)</td>
<td>2800 min⁻¹</td>
</tr>
<tr>
<td><strong>Cutting device, type</strong></td>
<td>Blade</td>
<td></td>
</tr>
<tr>
<td>Cutting width</td>
<td>Blade</td>
<td>53 cm</td>
</tr>
<tr>
<td>Cutting height</td>
<td>Single wheel 30 – 80 mm, in 6 levels</td>
<td>up to approx. 40 cm</td>
</tr>
<tr>
<td>Growth height</td>
<td>53 cm</td>
<td>53 cm</td>
</tr>
<tr>
<td><strong>Starting device</strong></td>
<td>Rope start</td>
<td></td>
</tr>
<tr>
<td><strong>Traction drive</strong></td>
<td>Rear wheel drive with vario lever for continuous speed adjustment (3 - 4,5 km/h)</td>
<td></td>
</tr>
<tr>
<td><strong>Maximum area coverage</strong></td>
<td>ca. 2300 m²/h</td>
<td></td>
</tr>
<tr>
<td><strong>Measures and weight</strong></td>
<td>Transport size with packaging L/W/H</td>
<td>max. tyre dimensions L/W/H</td>
</tr>
<tr>
<td>120/60/71 cm</td>
<td>164/52/99 cm</td>
<td>120/60/71 cm</td>
</tr>
<tr>
<td>164/52/99 cm</td>
<td>164/52/99 cm</td>
<td>55 kg</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>54 kg</td>
<td>55 kg</td>
</tr>
<tr>
<td><strong>Capacities</strong></td>
<td>3 litres</td>
<td>75 litres with fill level indicator</td>
</tr>
<tr>
<td><strong>Sound level</strong></td>
<td>95,9 dB</td>
<td>95,9 dB</td>
</tr>
<tr>
<td>according to DIN EN ISO 5395</td>
<td>98,0 dB</td>
<td>98,0 dB</td>
</tr>
<tr>
<td>Measured sound level $L_{WA}$</td>
<td>86,5 dB</td>
<td>86,5 dB</td>
</tr>
<tr>
<td>Guaranteed sound level $L_{WA}$</td>
<td>86,5 dB</td>
<td>86,5 dB</td>
</tr>
<tr>
<td><strong>Vibration emission value</strong></td>
<td>2,4 m/s² according to DIN EN ISO 5395</td>
<td>1,5 m/s²</td>
</tr>
<tr>
<td>Hand-arm-vibrations $a_{h,W}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measurement uncertainty U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,4 m/s² according to DIN EN ISO 5395</td>
<td>1,5 m/s²</td>
<td></td>
</tr>
</tbody>
</table>
## Technical data AS 531 2T ES MK B

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>AS 531 2T ES MK B</td>
</tr>
<tr>
<td><strong>Range of application (temperature)</strong></td>
<td>0 – 30 °C</td>
</tr>
<tr>
<td><strong>Engine, type</strong></td>
<td>One cylinder two stroke engine</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>AS-Motor Germany</td>
</tr>
<tr>
<td>Type</td>
<td>AS 165 ES (Easystart)</td>
</tr>
<tr>
<td>Cylinder capacity</td>
<td>165 cm³</td>
</tr>
<tr>
<td>Performance</td>
<td>2,8 kW (3,8 PS)</td>
</tr>
<tr>
<td>Engine speed</td>
<td>2800 min⁻¹</td>
</tr>
<tr>
<td><strong>Spark plug</strong></td>
<td></td>
</tr>
<tr>
<td>Torque</td>
<td>NGK BR 6 HS</td>
</tr>
<tr>
<td>Electode gap for optimal starting behaviour</td>
<td>25 Nm 0.5 – 0.7 mm</td>
</tr>
<tr>
<td><strong>Cutting device, type</strong></td>
<td></td>
</tr>
<tr>
<td>Cutting width</td>
<td>Blade</td>
</tr>
<tr>
<td>Cutting height</td>
<td>53 cm</td>
</tr>
<tr>
<td>Growth height</td>
<td>Single wheel 30 – 80 mm, in 6 levels</td>
</tr>
<tr>
<td></td>
<td>up to approx. 40 cm</td>
</tr>
<tr>
<td><strong>Starting device</strong></td>
<td></td>
</tr>
<tr>
<td>Traction drive</td>
<td>Rope start</td>
</tr>
<tr>
<td>Traction drive</td>
<td>Rear wheel drive with Variomat for variable adjustment of the speed (3 - 4,5 km/h)</td>
</tr>
<tr>
<td></td>
<td>Automatic parking brake with differential lock</td>
</tr>
<tr>
<td><strong>Maximum area coverage</strong></td>
<td>ca. 2300 m²/h</td>
</tr>
<tr>
<td><strong>Measures and weight</strong></td>
<td></td>
</tr>
<tr>
<td>Transport size with packaging L/W/H</td>
<td>120/60/71 cm 164/52/99 cm</td>
</tr>
<tr>
<td>max. tyre dimensions L/W/H</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>57 kg</td>
</tr>
<tr>
<td><strong>Capacities</strong></td>
<td></td>
</tr>
<tr>
<td>Fuel tank</td>
<td>3 litres</td>
</tr>
<tr>
<td>Grass collection bag</td>
<td>75 litres with fill level indicator</td>
</tr>
<tr>
<td><strong>Sound level</strong></td>
<td></td>
</tr>
<tr>
<td>Measured sound level L_{WA}</td>
<td>97,4 dB</td>
</tr>
<tr>
<td>Guaranteed sound level L_{WA}</td>
<td>98,0 dB</td>
</tr>
<tr>
<td>Sound level at working place L_{PA}</td>
<td>87,7 dB</td>
</tr>
<tr>
<td><strong>Vibration emission value</strong></td>
<td></td>
</tr>
<tr>
<td>Hand-arm-vibrations aₚ,W</td>
<td>2,5 m/s²</td>
</tr>
<tr>
<td>Measurement uncertainty U</td>
<td>1,5 m/s²</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Declaration of conformity

We declare that the lawnmowers

<table>
<thead>
<tr>
<th>Type</th>
<th>AS 531 4T MK</th>
<th>AS 531 4T MK B</th>
<th>AS 531 2T ES MK B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutting width</td>
<td>53 cm</td>
<td>53 cm</td>
<td>53 cm</td>
</tr>
<tr>
<td>starting from serial no.</td>
<td>032118030001</td>
<td>032018030001</td>
<td>034419010001</td>
</tr>
</tbody>
</table>

as brought into circulation by us conform to all relevant safety and health requirements of the EC directives listed.

- 2006/42/EC
- 2000/14/EC
- 2014/30/EC

Function:
The devices are exclusively intended for the mowing of well maintained grasslands and lawns.

Applied standards:
DIN EN ISO 5395

Applies to 2000/14/EC:
Applied conformity assessment procedures
Annex VI

<table>
<thead>
<tr>
<th>Type</th>
<th>AS 531 4T MK</th>
<th>AS 531 4T MK B</th>
<th>AS 531 2T ES MK B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured sound level</td>
<td>95,9 dB</td>
<td>95,9 dB</td>
<td>97,4 dB</td>
</tr>
<tr>
<td>Guaranteed sound power level</td>
<td>98,0 dB</td>
<td>98,0 dB</td>
<td>98,0 dB</td>
</tr>
</tbody>
</table>

Notified body:
DPLF, 64823 Groß-Umstadt, EC identification number 0363

Place where all technical records are filed:
AS-Motor Germany GmbH & Co. KG
Ellwanger Straße 15
D-74424 Bühlertann

Bühlertann, in February 2019

Eberhard Lange
Managing director

By proxy Frank Einsiedler
Head of development
THE HIGH GRASS MOWER AND 2 STROKE ENGINE MANUFACTURE

AS-Motor is your premium manufacturer for lawn and high grass mowers as well as 2 stroke engines. We offer our customers professional technology for steep slopes, rough terrain, and lawn care. Our extensive product range which includes hand-held entry-level devices up to the world’s first all-wheel ride-on mower with remote control will always offer private customers, municipalities service providers the right product. For more than 60 years, we have been developing and producing with a high production depth in Southern Germany and supply our dealer network in more than 30 countries all over the world.

Mulching mower
Mulching mower – the time-saving alternative!
AS-Motor mulching mowers shred the grass to create such a fine mulch, almost an “invisible” fertiliser, that sinks right away back into the lawn.
Disposition of the cuttings is not required.

Professional lawn mower
Professional lawn mowers with rear or side discharge for every requirement, even with all-wheel drive, brake and reverse gear.

Brush cutter®
An agile lawn mower for maintenance of extensive grassed areas. The Allmähler® reliably mows and mulches metre-high grass, brushes and weeds.

Flail mower
High grass with undergrowth, steep slope or extensive areas in unknown terrain? The movably mounted flail blades of the AS-Motor flail mower give way to rocks and obstacles and chop the cuttings several times over.

Ride-on brush cutter
If extensive areas, weeds and undergrowth up to 1.2 m, the AS-Motor all-wheel mowers are also perfect for steep and even extremely steep terrain. Ease of use and high area performance combined in one compact ride-on mower. For more safety, comfort and efficiency in difficult terrain we have developed the innovative and the world’s first remote controlled ride-on mower.

Rotary mower
The cost-effective alternative to the cutter-bar mower. Also ideal for feed production. The grass is not shredded but deposited in straight rows as a windrow next to the machine.

Weed remover