

# tielbürger®

## Weed brush operating instructions

(GB)

AD-460-040TS, AD-461-040TS, AD-462-040TS,  
AD-463-040TS, AD-464-040TS

### tw50 and tw50s



EN- Translation of the Original Operating Instructions

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## 1 Operating instructions

### 1.1 General

These operating instructions are intended to help users familiarise themselves with the machine and use it in line with its intended applications.

The operating instructions contain important information on how to operate the machine safely, properly and economically. Observing these operating and installation instructions helps to avert risks, to reduce repair costs and downtime and to increase the reliability and service life of the machine.

The operating instructions must be supplemented by the relevant national rules and regulations for accident prevention and environmental protection.

The operating instructions must always be available wherever the machine is in use.

The operating instructions must be read and applied by any person in charge of carrying out work with or on the machine, such as:

-Operation, including setting up, fault rectification in the course of work, removal of production waste, maintenance and disposal of operating and auxiliary materials

-Maintenance (servicing, inspection, repair) and/or

-Transport.

The generally recognised rules of technology for safe and proper working must be observed in addition to the operating instructions and mandatory regulations for accident prevention which apply to the country and place of use.

## 1.2 Warnings and symbols



Read the operating instructions



**DANGER!**  
Indicates an immediate threat of danger. If this instruction is ignored, there is a risk of death or extremely serious injury.



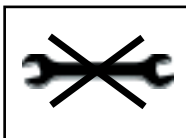
**WARNING:**  
Indicates a potentially hazardous situation. If this instruction is ignored, there may be a risk of death or extremely serious injury.



**CAUTION:**  
Indicates a potentially hazardous situation. If this instruction is ignored, there may be a risk of minor injury.



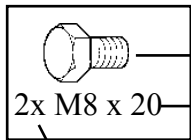
**IMPORTANT:**  
Indicates operating tips and other useful information.



Do not use a tool



Work on a workbench



Symbol

Type

Quantity

Symbol	Example types:	Explanation
Bolt	M8 x 16	M = Metric S = Diameter in mm 16 = Length in mm
Washer	8,1 - 58 - 5	8.1 = Inner diameter 58 = Outer diameter 5 = Material thickness in mm
Nut	M8 (L)	M = Metric 8 = Inner diameter in mm (L) = Lock nut
Combination spanner Hexagon head screwdriver Screwdriver	8	8 = Size in mm
Crosshead screwdriver	PZ 2 PH 2	PZ 2 = Pozidriv size 2 PH 2 = Phillips size 2

## 2 Basic safety instructions

### 2.1 Intended use

The machine has been constructed using state-of-the-art technology and in line with the recognised technical safety regulations. However, use of this machine may still result in the risk of injury or death to the user or third parties, or of damage to the machine and other material assets.

Only use the machine in technically perfect working order, for its intended use and with safety and hazards in mind, in compliance with the operating instructions. In particular, you must immediately rectify faults that could impair safety or have such faults rectified immediately by a third party.

The machine is solely intended for the removal of weed growth on paved, concrete and/or tarmac surfaces outdoors. Any other or additional form of use

is considered non-compliant with the intended use. For example, the machine must not be used to sweep animal feed. Twisted knot brushes can come loose and be consumed by animals, causing harm to them. The manufacturer/supplier shall not be held liable for any damage or loss suffered as a result. The risk is borne solely by the user. Intended use also includes complying with the operating instructions and adhering to the inspection and maintenance conditions.

The machine may only be operated with twisted knot brushes that have been approved by the manufacturer.

### 2.2 Organisational measures

The operating instructions must always be to hand wherever the machine is in use.

In addition to the operating instructions, observe and follow the generally valid legal regulations and any other binding regulations for accident prevention and environmental protection.

Such obligations may also include handling hazardous substances or making available/wearing personal protective equipment and complying with road traffic regulations, for example.

Supplement the operating instructions with instructions including site management and reporting obligations concerning special operational requirements, for example with regard to work organisation, workflows, personnel used, etc.

Any personnel instructed to perform work on the machine must have read the operating instructions before starting work, specifically the section entitled "Safety instructions". Reading the instructions after work has begun is too late. This applies in particular to personnel who only work on the machine occasionally, for example for set-up and maintenance.

At least occasionally, check that the personnel are working with safety and hazards in mind and are following the operating instructions.

Personnel must not have long hair which is not tied back or wear loose clothing or jewellery including rings. There is a risk of injury from being caught or drawn into the machine, for example.

Wear personal protective equipment if necessary or

required by regulations.

Observe all safety and hazard notices on the machine. Ensure that all safety and hazard notices at/on the machine can be read in full at all times.

In the event of any modification to the machine or any change in the machine's performance that may affect safety, shut down the machine immediately and report the fault to the responsible individual or office.

Do not modify, convert or attach equipment to the machine without approval from the supplier if this could impair safety. This also applies to fitting and adjusting safety equipment and valves, as well as for welding on supporting parts.

Spare parts must fulfil the technical requirements determined by the manufacturer. This must always be guaranteed for genuine spare parts.

Adhere to the prescribed time periods or those indicated in the operating instructions for recurring tests/inspections.

Workshop equipment which is appropriate for the work is mandatory for carrying out maintenance measures. Make personnel aware of the location of fire extinguishers and how to use them.

Observe the fire alarm and fire fighting procedures.

### 2.3 Personnel selection and qualifications; basic obligations

Work on/with the machine may only be carried out by reliable personnel. Observe the legal minimum age.

Only use trained or instructed personnel and clearly define the responsibilities of the personnel for operation, set-up, maintenance and repair.

Ensure that only authorised personnel work on the machine.

Appoint an operator responsible for the machine – including with regard to traffic regulations – and give them the authority to refuse instructions issued by third parties that may cause a hazard.

Only allow personnel who are yet to complete training, instruction and induction or who are still completing a general apprenticeship to carry out work on the

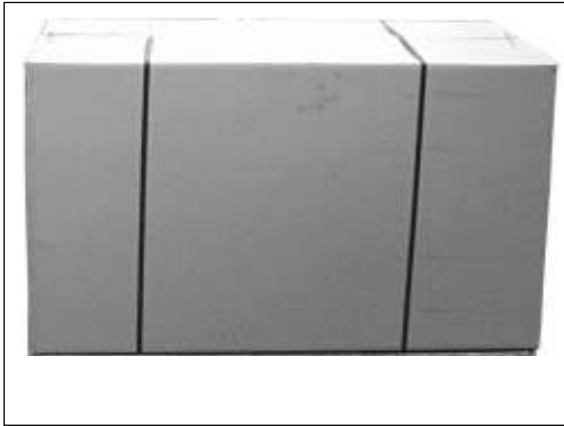
machine under the constant supervision of an experienced person.

Work on the machine's electrical equipment may only be carried out by a qualified electrician or by trained personnel under the guidance and supervision of a qualified electrician in accordance with electrical engineering regulations.

Work on chassis, braking and steering systems must only be carried out by qualified personnel trained for such work.

Clean the implement regularly, particularly in the exhaust and engine area. Otherwise, there is an increased risk of fire.

### 3 Scope and condition of delivery



1) Product packaging



2) Inspect the original packaging



3) tw50s weed brush as-delivered condition

The product is delivered in a collapsible box:

- 1 Weed brush
- 1 Accessories bag containing
  - Operating instructions
  - Operating instructions for the engine

Accessories (must be ordered separately)

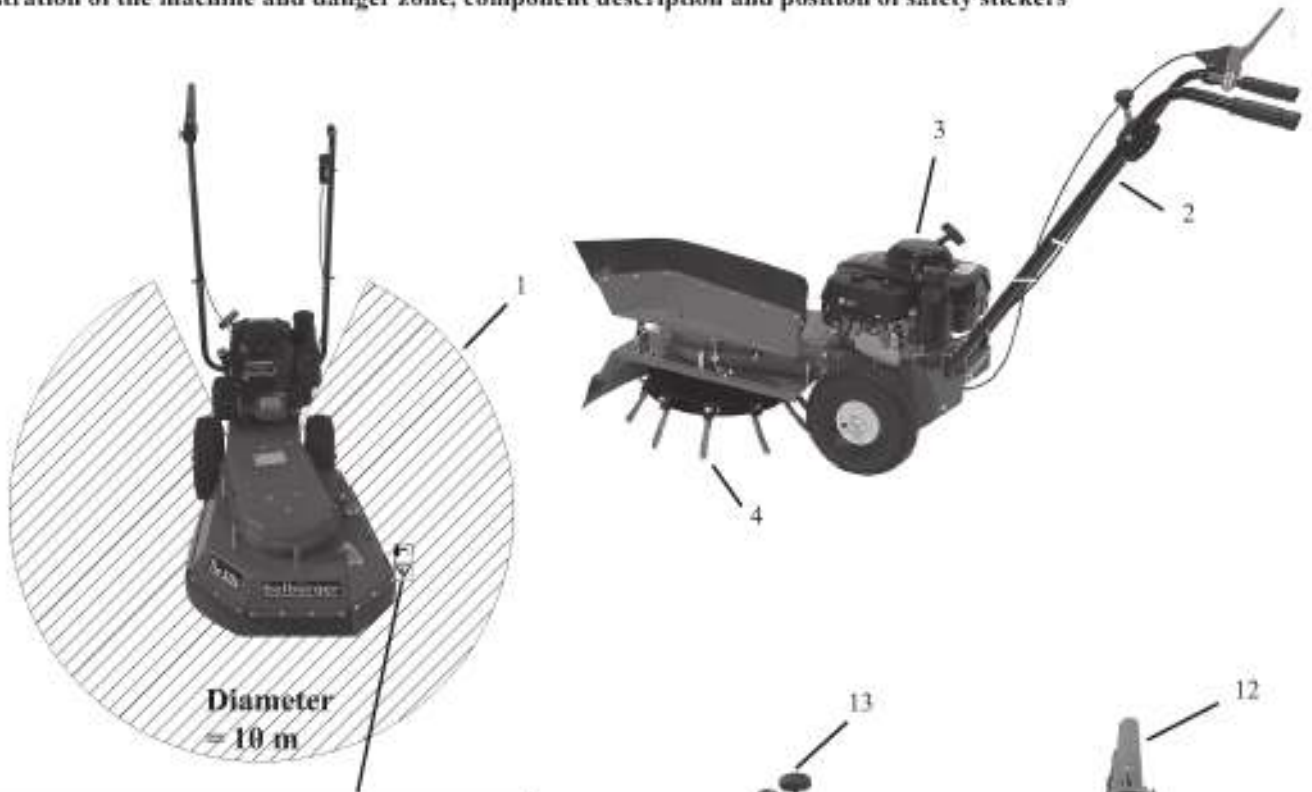
- Impact guard
- Support roller



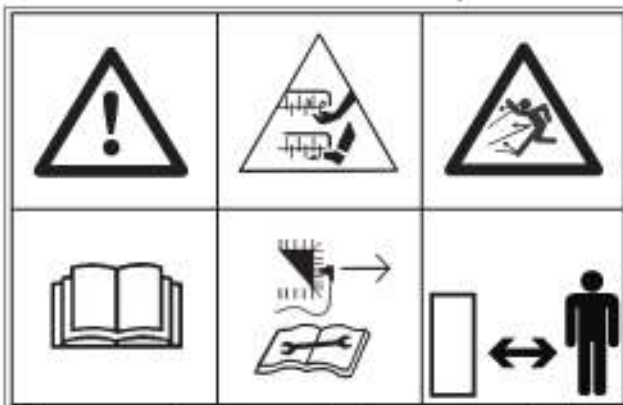
4) Please recycle the packaging material .



4 Illustration of the machine and danger zone, component description and position of safety stickers



Diameter  
= 10 m



Before putting the machine into operation, read and take note of the operating and safety instructions.

Keep a safe distance away from the scarifier blades during operation. Switch off the engine and remove the spark plug connector before any repair or maintenance work.

Keep third parties at a distance




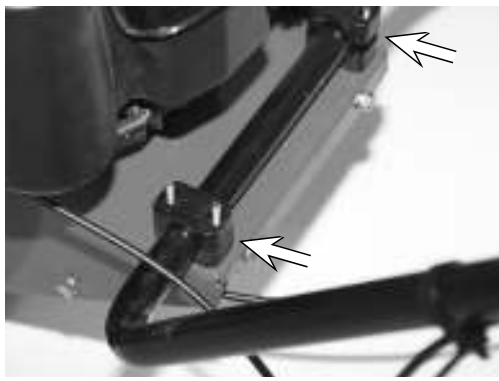





- 1. Danger zone
- 2. Handlebar, height-adjustable
- 3. Engine
- 4. Twisted knot brushes
- 5. Manufacturer name
- 6. CE marking
- 7. Serial number
- 8. Engine power








- 9. Engine manufacturer
- 10. Machine designation
- 11. Manufacturer address
- 12. Engage/disengage brush drive lever
- 13. Throttle regulation lever
- 14. Weight
- 15. Year of construction
- 16. Part number







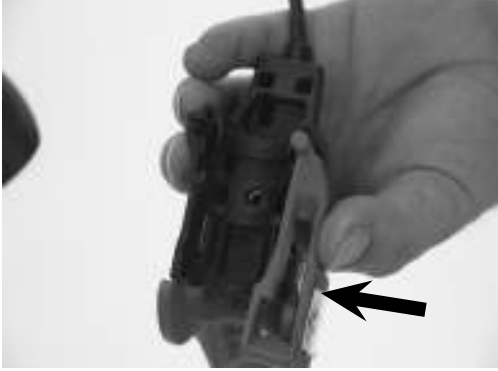

## 5 Installation








**IMPORTANT:**  
Do not fill the engine with any oil or petrol at this point.  
Before you begin, acquire an overview of the installation sequence and the required parts and tools.

		<p>Position the handlebar. Place the handlebar on the pipe brackets.</p>
		<p>Place the pipe brackets onto the bolts.</p>
 <p>4x M6</p>  <p>4x 6.4-16-1.6</p>		<p>Preassemble the handlebar with the washer and lock nut.</p>
		<p>Only tighten the nuts to the point that the handlebar can still move without dropping on its own.</p>

		<p>Undo the star grip. Adapt the height of the handlebar to the height of the operator.</p>
		<p>Secure the handlebar using the star grip.</p>
		<p><b>Install the throttle regulation lever.</b> Position the throttle cable.</p>
 <p>1 x 6x65 x 20</p>		<p>Insert the hex bolt with washer.</p>
 <p>2x 6.4-12-1.6</p>  <p>1x M6</p>		<p>Attach the washer. Screw down the nut.</p>

		<p>Tighten the bolt.</p>
		<p><b>Install the clutch lever.</b></p>
		<p>Undo the hex socket bolt.</p> <p> <b>IMPORTANT:</b> Push down the lateral grip to prevent the compression spring jumping out.</p>
		<p>Keep the lateral grip pushed down.</p>
		<p>Position both halves of the lever on the handlebar pipe so that they can be connected to each other.</p>

		<p>Connect the two halves of the lever.</p>
		<p> <b>IMPORTANT:</b> Check that the lateral grip works properly.</p> <p>Tighten the hex socket bolt.</p>
		<p>Correctly installed clutch lever.</p>

## 6 Start-up

### 6.1 Basic safety instructions for normal operation

Never operate the machine in a manner that could compromise safety.

Before beginning work, familiarise yourself with the work environment at the location where the machine is used. The work environment includes, for example, obstacles in the work and traffic area, the load-bearing capacity of the floor and the required means of cordoning the location where the machine is used off from the public traffic area.

Take appropriate measures to ensure that the machine is only operated in a safe and fully functional condition. Only operate the machine when all protective equipment and safety-critical equipment, for example detachable protective equipment, sound-insulating equipment and extraction equipment, is present and in proper working order.

Always check for externally visible damage and defects before using the machine. Report any machine modifications (including changes in performance) immediately to the office/person responsible. Shut down the machine immediately and secure it if necessary.

In the event of a malfunction, shut down and secure the machine immediately. Have faults rectified immediately.

Only start the machine from the driver's seat.

Switch the machine on and off in accordance with the

operating instructions, observing the control displays. Before switching on/starting up the machine, ensure that no one can be endangered by the machine starting up.

Before travelling with the machine or beginning work, check that the brakes, steering, signal and lighting systems are fully functional.

Before moving the machine, always check that the accessories are securely in place.

When driving on public roads and paths and in public places, comply with the applicable road traffic regulations and bring the machine into a condition which is permitted by road traffic regulations in advance.

In poor visibility or in the dark, always ensure sufficient lighting.

Always maintain an adequate distance from pit edges and slopes.

Prohibit any manner of working that may impair the stability of the machine.

Do not drive across slopes; always transport work equipment and loaded goods close to the ground, particularly when descending hills.

Always adapt your driving speed to the conditions on sloping terrain. Never change to a lower gear on a slope; you should do this before you reach the slope.

Upon leaving the machine, always secure it against accidentally rolling away and unauthorised use.

### 6.2 Operating the machine in winter



**DANGER!**

Never spray silicone spray on the engine while it is hot. This could cause a fire. Follow the instructions on the spray can.



**CAUTION:**

Switch off the engine and allow it to cool down. Secure the machine to prevent it from being started inadvertently.

Check if the air filter is dry at regular intervals. If the filter is damp because of condensation, allow it to dry overnight. Otherwise, there is a chance that the air filter will freeze and the engine will not start. Before start-up, spray the throttle cable, throttle regulation lever and the linkage on the engine with silicone spray. Move the throttle regulation lever into both end positions so that the Bowden pull cable on the engine and on the

throttle regulation lever is lubricated as well. This prevents frozen condensation obstructing the mechanics. Silicone spray is recommended for maintaining the Bowden pull cables on the other levers as well. After sweeping, clear any snow off the machine using a brush.



**IMPORTANT:**

Store the machine in a room protected from frost. Prevent the machine freezing. If a component has been frozen solid, this could damage the machine.

Silicone spray attracts dust. This means that it is only suitable as a care product in the winter when there is snow.

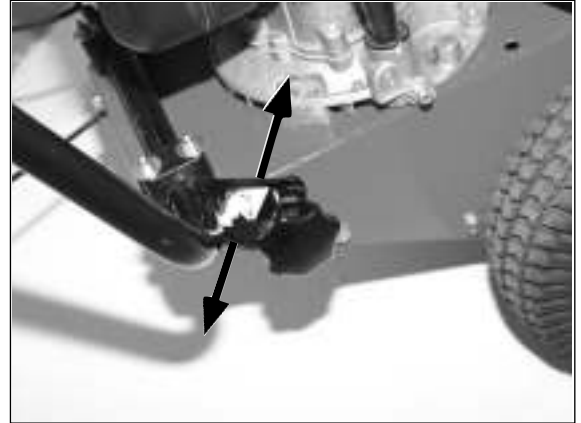
### 6.3 Adjusting the height of the handlebar



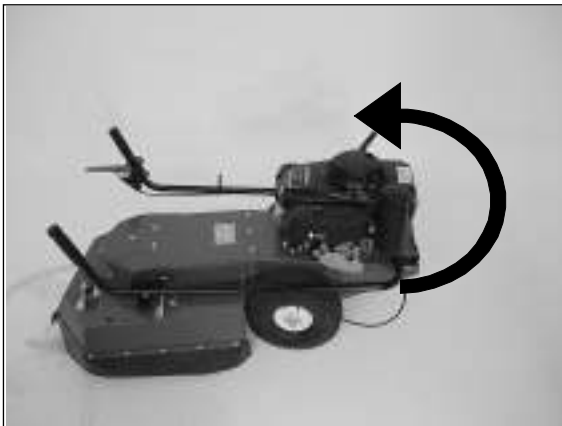
**CAUTION:**  
Switch off the engine. Secure the machine to prevent it from being started inadvertently.



1) Undo the star grip and select the required position.



2) Note the settings available.



3) You can fold the handlebar all the way forward and therefore reduce the amount of space required by the machine for storage purposes or when it needs to be set aside temporarily.



**CAUTION:** Make sure that the star grip is securely tightened.



**DANGER!**  
Wearing clothing with loose sleeves runs the risk of the handlebar grip becoming caught in the sleeve. This can prevent the gear lever disengaging. Wear appropriate clothing. It may help to set the handlebar to a lower position.

## 6.4 Bristle pressure



1) The bristle pressure can be adjusted. This is why the height of the support wheel is adjustable.



2) Adjusting the height of the bristles  
The height is adjusted by rearranging the washers.



3) Remove the linchpin. Set the required height.



4) Reinsert the linchpin.



### IMPORTANT:

If you are using a badly worn brush or working on cobblestones, lower the brush by an additional washer.

Please note: Excessive brush pressure impairs cleaning effectiveness because the bristles will be too bent.

Reduce the pressure on the brushes after each use. Raise the brush.



### 6.5 Brush drive



**DANGER!**  
Wearing clothing with loose sleeves runs the risk of the handlebar grip becoming caught in the sleeve. This can prevent the gear lever disengaging. Wear appropriate clothing. It may help to set the handlebar to a lower position.



**WARNING:**  
Ensure that no persons or property are located in the danger zone, as otherwise this could result in injury or material damage. Secure the machine to prevent it from being started inadvertently.



**CAUTION:**  
The handlebar must be firmly secured at the required height.



1) The gear lever for the sweeper brush drive is located on the handlebar.



2) Unlock the lever.



3) Move the lever into position.



4) Operating the gear lever switches on the brush drive.

## 6.6 tw50s steerable freewheel



**WARNING:**  
Switch off the engine. Secure the machine to prevent it from being started inadvertently.

The weed brush is fitted with a steerable freewheel. This makes it easier to turn the weed brush



1. Engage the steerable freewheel: Insert the linchpin through the axle only.



2) Disengage the steerable freewheel: Insert the linchpin through the axle and the hub (e.g. for sweeping on inclines)

## 6.7 Starting/switching off the engine (quick guide)



Read the operating instructions provided by the engine manufacturer.



### DANGER!

Never allow the engine to run in closed or confined spaces. The exhaust gases contain poisonous carbon monoxide gas. Ensure that the travel drive and brush drive are switched off. The handlebar must be securely locked at the required height.




### IMPORTANT:

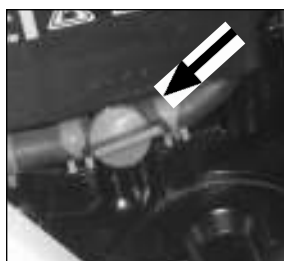
Before starting the engine, please check to ensure that the engine crankcase is filled with a sufficient quantity of oil. For reasons relating to transport, the engine is not supplied filled with engine oil when the sweeper is delivered.

### 1. Starting the engine

Briggs & Stratton




1) Move the throttle regulation lever to  the choke position.

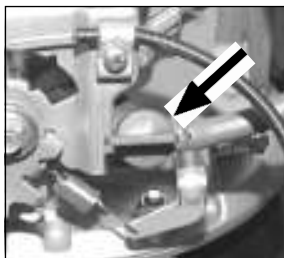


2) Open the fuel cock (on the right of the engine in the direction of travel).

Honda



1) Move the throttle regulation lever to  the choke position.



2) Open the fuel cock (on the left of the engine in the direction of travel).



3) Pull on the starter cable. Ensure that you are behind the handlebar and outside of the danger zone.



### DANGER!

Never push down a lever while pulling on the starter cable.

## 2. Controlling the engine speed

Briggs & Stratton



Slow = Move the throttle regulation lever to

Fast = Move the throttle regulation lever to

Honda



### IMPORTANT:

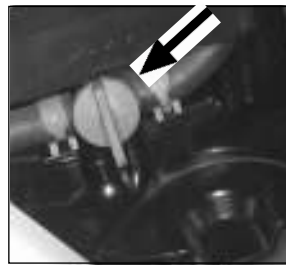
Once the engine has warmed up, the throttle regulation lever must be taken out of the choke position. The choke must not be used when the engine is warm or when the air temperature is high.

## 3. Switching off the engine

Briggs & Stratton



- 1) Move the throttle regulation lever to **0**.



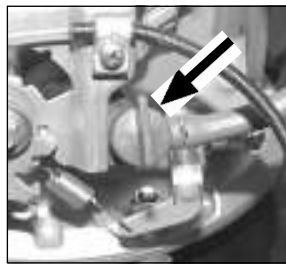
- 2) Close the fuel cock (on the right of the engine in the direction of travel).

## 3. Switching off the engine

Honda



- 1) Move the throttle regulation lever to **0**.



- 2) Close the fuel cock (on the left of the engine in the direction of travel).

## 6.8 Charging the B&S InStart battery



### WARNING:

Incorrect use of the battery and charger can result in electric shock or fire.

#### When charging the battery

- Only use the Briggs & Stratton battery charger to charge the Briggs & Stratton battery
- Do not use the Briggs & Stratton battery charger to charge other battery types
- The battery and battery charger must be kept dry. Do not expose the battery or charger to rain or damp.
- When disconnecting the charger, do not pull on the cable – pull on the plug to reduce the risk of damaging the plug and cable.
- Unless absolutely necessary, do not use an extension cable. If an inappropriate extension cable is used, this runs the risk of fire and electric shock.

If an extension cable must be used, take the following into account:

1. The number, size and shape of the pins on the extension cable connector must correspond to the plug on the charger.
  2. The extension cable must be connected correctly and be in good condition.
  3. The wire thickness required for the AC rated output of the charger must be at least AWG 16.
- The charger must not be used if the plug or the cable is damaged. The cable cannot be replaced. If the cable is damaged, the charger must be replaced

immediately.

- Do not use the charger if it has been subjected to a heavy impact, has been dropped or has been otherwise damaged. If the charger is damaged, it must be replaced. It cannot be repaired.
- Do not disassemble the charger and do not attempt to repair it yourself.
- Remove the plug on the charger from the socket prior to cleaning in order to prevent electric shocks.
- Do not short-circuit the device. Never insert objects in the battery contacts.
- The charger must not be operated by people (including children) with physical or mental disabilities or limited sensory capabilities, insofar as they are not instructed in the use of the machine by an individual responsible for their safety.
- Children must be supervised to ensure that they cannot play with the charger.

#### When the battery is being charged

**For the first time** - The lithium-ion battery has been partially charged before delivery. To hold the charge and prevent damage during storage, the battery is programmed to enter a "sleep mode". To wake up the battery, a quick charge of around ten (10) seconds is required. Leave the battery in the charger until it has been fully charged. To charge the battery, refer to the section entitled **How the battery is charged** below.

**As required** - To check the available charge, press the

battery charge indicator button and charge the battery accordingly. See the section on the battery charge indicator.

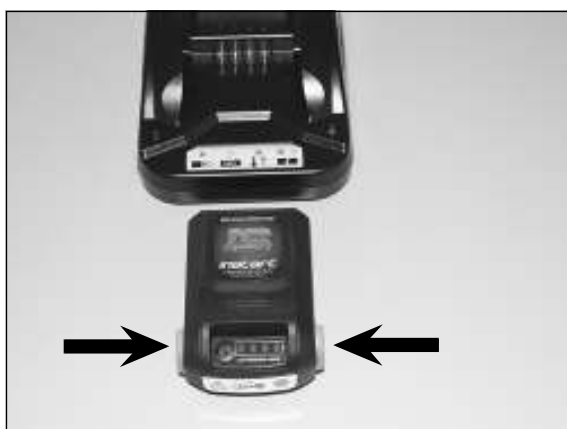
1. Connect the battery charger to the power supply – the supply voltage and the operating voltage of the charger must match.  
Only operate the charger in closed, dry rooms with ambient temperatures of +5 °C to +40 °C.



**WARNING:**

The battery and battery charger must be kept dry. Do not expose the battery or charger to rain or damp.

2. Firmly insert the battery into the battery charger. If the red charge indicator light does not light up, remove the battery and reinsert it. Ensure that the battery is firmly seated in the battery charger.



Push down both locking levers at the same time and push the battery into the charger until resistance is felt – then push it up to the stop.



After inserting the battery, the red LED on the left-hand side of the charger lights up and the charging process starts.

- A red indicator light means that the battery is being charged normally.
  - A green indicator light means that the battery is now fully charged.
  - A FLASHING red indicator light means that the battery is either too hot or too cold and cannot be charged. Leave the battery connected. Once the normal operating temperature has been reached, the charging process will start automatically.
  - FLASHING red/green indicator lights mean that the battery cannot be charged and must be replaced.
3. The battery wakes up from "sleep mode" in around ten (10) seconds.
  4. A completely drained battery needs roughly one (1) hour to be fully charged.  
The battery remains fully charged if it remains in the charger.
  5. If the green indicator light shows that the battery has been fully charged, it can be removed from the charger.
  6. To check the available charge, press the battery charge indicator button.
  7. Remove the battery charger from the socket when it is not being used.



If the battery has been fully charged, the charger automatically switches off. The red LED goes out and the green LED on the right lights up. Remove the battery from the charger once it has finished charging.

**Battery charge indicator**

To check the available charge, press the battery charge indicator button. The indicator lights show the approximate charge remaining in the battery.

Indicator lights	Available charge
Four lights	78% to 100%
Three lights	55% to 77%
Two lights	33% to 54%
One light	10% to 32%
Flashing light	Less than 10%



**IMPORTANT:**  
Additional information can be found in the enclosed Briggs & Stratton operating instructions.

### 6.9 Connecting the battery to the engine



Read the operating instructions provided by the engine manufacturer.



**WARNING:**

Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently.



**IMPORTANT:**

The battery is not fully charged on delivery. It is recommended to fully charge the battery before the machine is first started up.



Push both locking levers down at the same time and insert the battery into the compartment.



Press on it gently until it audibly engages.



A connection to the engine is now established.



### 6.10 Starting/switching off the engine



Read the operating instructions provided by the engine manufacturer.



**DANGER!**

Never allow the engine to run in closed or confined spaces. The exhaust gases contain poisonous carbon monoxide gas. Ensure that the travel drive and brush drive are switched off. The handlebar must be securely locked at the required height.



**IMPORTANT:**

Before starting the engine, please check to ensure that the engine crankcase is filled with a sufficient quantity of oil. For reasons relating to transport, the engine is not supplied filled with engine oil when the weed brush is delivered.

#### 1. Starting the engine





1) Move the throttle regulation lever to the choke position.



2) Hold down the button until the engine starts

#### 2. Controlling the travel speed



Slow = Move the throttle regulation lever to   
Fast = Move the throttle regulation lever to 



**IMPORTANT:**

Once the engine has warmed up, the throttle regulation lever must be taken out of the choke position. The choke must not be used when the engine is warm or when the air temperature is high.

#### 3. Switching off the engine



1) Move the throttle regulation lever to



### 6.11 Disconnecting the battery from the engine



Push both locking levers down at the same time and remove the battery from the housing.



The connection to the engine is now disconnected.



**IMPORTANT:**

The battery must then be connected to the charger – see the section entitled "Charging the battery"



**DANGER!**

Never leave the weed brush unattended with the battery inserted. Always remove the battery when leaving the weed brush.

A child could start the weed brush in a few simple steps, subsequently placing themselves and others at risk of serious injury.

## 6.12 Support roller (accessory)



**WARNING:**  
Switch off the engine. Secure the machine to prevent it from being started inadvertently.



Support roller scope of delivery

1. Support roller
2. Installation instructions

## 6.13 tw50 lateral protective cover (accessory)



**WARNING:**  
Switch off the engine. Secure the machine to prevent it from being started inadvertently.



Lateral protective cover scope of delivery

1. Impact guard
2. Installation instructions



If the lateral protective cover is swung up, the weed brush can be used right up against walls (e.g. of buildings, kerbs).

## 7 Maintenance and care

### 7.1 Basic safety instructions



**DANGER!**

Clean the implement regularly, particularly in the exhaust and engine area. Otherwise, there is an increased risk of fire.

Comply with the adjustment, maintenance and inspection tasks and intervals specified in the operating instructions, including the information on replacing parts/equipment. These tasks may only be carried out by qualified personnel. See the maintenance schedule. Inform operating personnel in advance before carrying out special work and maintenance work. Designate a supervisor.

Switch the machine on and off in accordance with the operating instructions and comply with the instructions on maintenance work for all work that may affect operation, production adjustment, conversion or adjustment of the machine and its safety-critical equipment, as well as work involving inspection, maintenance and repairs. Cordon off a large area for maintenance work if required.

The machine must be secured against being switched back on inadvertently if it is completely switched off for maintenance and repair work:

-Remove the key

-Affix a warning sign to the starter.

Only carry out maintenance and repair work when the machine is parked on a level surface with sufficient load-bearing capacity and when the machine is secured against rolling away and overturning.

During replacement, individual parts and larger assemblies must be carefully attached and secured to lifting gear such that they do not pose any risks. Only use suitable lifting gear in technically perfect condition and load-handling equipment with sufficient load-bearing capacity. Do not stand or work under suspended loads. Do not use machine parts as climbing aids.

Keep all handles and steps free from dirt, snow and ice. Clean oil, fuel or care products from the machine, and the connections and screw connections in this case in particular, before starting maintenance/repair work. Do not use aggressive cleaning agents. Use lintfree cleaning cloths.

Before the machine is cleaned with water, a high-pressure cleaner or other cleaning agents, all openings which must not allow water/vapour/cleaning agents to penetrate for reasons of safety or operational functioning must be covered over or sealed. Electric motors and other live components are particularly at risk.

After cleaning, the covers and seals must be completely removed.

After cleaning, inspect all fuel and oil lines for leaks, loose connections, areas of abrasion and damage. Immediately rectify any defects that have been identified.

Always retighten screw connections that have come loose during maintenance or repair work.

If safety devices need to be removed during set-up or maintenance and repair work, they must be reinstalled and tested immediately after the maintenance and repair work has been completed.

Ensure that operating and auxiliary materials and replacement parts are disposed of safely and in an environmentally friendly manner.

Electrical equipment on a machine must be inspected/ tested on a regular basis. Defects, such as loose connections and burnt cables, must be rectified immediately. When working on high-voltage assemblies, connect the supply cable to earth after the power has been disconnected and short-circuit the components, e.g. capacitors, using an earthing rod.

Never allow combustion engines to run in closed or confined spaces. The exhaust gases contain poisonous carbon monoxide gas.

Comply with the regulations which apply to the site of use in question.

Only carry out welding, open-flame and grinding work on the machine if this has been expressly approved. For example, there may be a risk of fire or explosion. Before welding, open-flame and grinding work is carried out, remove dust and combustible materials from the machine and its surrounding area and ensure that there is sufficient ventilation (risk of explosion). Check all lines, hoses and screw connections regularly for leaks and signs of external damage. Rectify any damage immediately. Oil escaping under pressure may result in injuries and fires.

Noise insulation equipment on the machine must be in the protective position during operation.

Wear the prescribed personal hearing protection.

Observe the safety instructions which apply to the product when handling oils, greases and other chemical substances.

Take care when handling hot operating and auxiliary materials (risk of burning or scalding).



**IMPORTANT:**

Check to ensure that

- No fuel or oil is leaking, and rectify if necessary
- Bolts and nuts are securely fastened, and tighten if necessary
- All moving parts run smoothly, and lubricate if necessary

## 7.2 Refuelling



Read the operating instructions provided by the engine manufacturer.



### DANGER!

Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently.

Petrol is highly flammable and explosive under certain conditions.

Only refuel in well ventilated environments and with the engine switched off. Do not smoke and keep open flames and sparks away when refuelling and in areas where fuel is stored.

Do not overfill the tank. There must be no fuel in the filler neck. After refuelling, ensure that the tank cap is properly closed.

Ensure that no fuel is spilled when refuelling. Petrol fumes or spilled fuel can ignite. If petrol has been spilled, it is vital to ensure that this area is completely dry before the engine is started and that any petrol fumes have evaporated.

Avoid repeated or extended contact with the skin and inhaling fumes.

STORE PETROL OUT OF THE REACH OF CHILDREN.

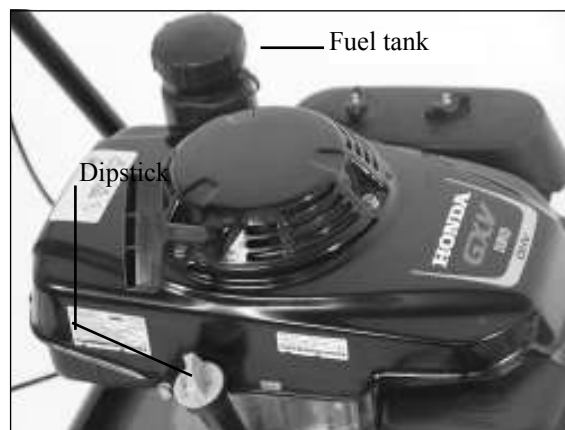


### IMPORTANT:

Use petrol intended for motor vehicles. Never use an oil-petrol mix or dirty or old petrol.



1) Fuel and oil tank on the B&S engine



1) Fuel and oil tank on the Honda engine



2) Hold the canister as shown in the image. Only ever pour in a small quantity at a time and monitor the fill level.



2) Hold the canister as shown in the image. Only ever pour in a small quantity at a time and monitor the fill level.

## 7.2 Refuelling



Read the operating instructions provided by the engine manufacturer.



**DANGER!**

Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently.

Petrol is highly flammable and explosive under certain conditions.

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Do not overfill the tank. There must be no fuel in the filler neck. After refuelling, ensure that the tank cap is properly closed.

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Avoid repeated or extended contact with the skin and inhaling fumes.

STORE PETROL OUT OF THE REACH OF CHILDREN.



**IMPORTANT:**

Use petrol intended for motor vehicles. Never use an oil-petrol mix or dirty petrol.

### B&S InStart



1) Fuel and oil tank on the B&S engine



2) Hold the canister as shown in the image. Only ever pour in a small quantity at a time and monitor the fill level.

### 7.3 Checking the oil



Read the operating instructions provided by the engine manufacturer.



**WARNING:**

Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently.

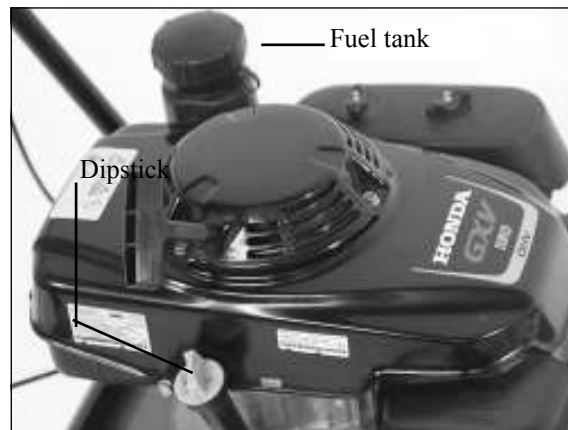


**IMPORTANT:**

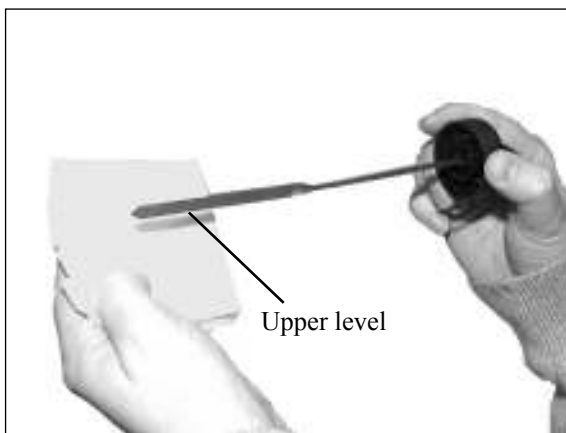
If the engine is operated with an insufficient volume of oil, this can cause serious damage to the engine. Only oils recommended by the manufacturer may be used.



1) Fuel and oil tank on the B&S engine



1) Fuel and oil tank on the Honda engine



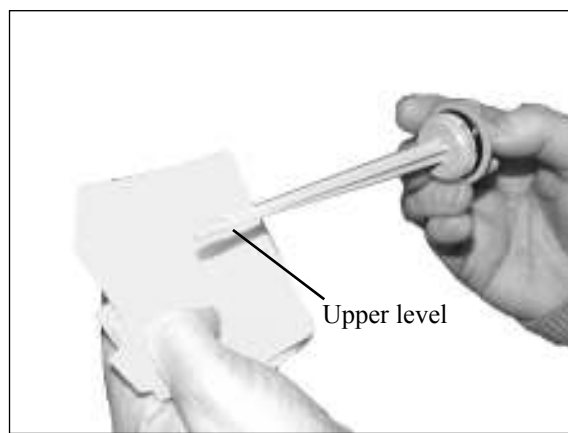
2) B&S engine dipstick.

- Remove the oil filler cap and wipe the dipstick clean.

- Insert the dipstick into the oil filler nozzle and screw it in. Remove the dipstick and check the oil level. The oil should come up to the FULL marking.

- If the oil level is too low, top up the tank with the recommended oil until the FULL marking on the dipstick is reached.

Refer to the markings on the dipstick for the fill level.



2) Honda engine dipstick.

- Remove the oil filler cap and wipe the dipstick clean.

- Insert the dipstick into the oil filler nozzle but **do not screw it in**. Remove the dipstick and check the oil level. The oil should come up to the top marking.

- If the oil level is too low, top up the tank with the recommended oil until the top marking on the dipstick is reached.

Refer to the markings on the dipstick for the fill level.

## 7.4 Battery and charger



**WARNING:**  
Incorrect use of the battery and charger can result in electric shock or fire.

### Battery and charger

Detach the charger and store it in a cool, dry place when not in use. Damp environments can result in the terminals and electrical contacts corroding. Extended storage at high temperatures (50 °C) can result in permanent damage to the battery. Check the electrical terminals and contacts on the battery and charger. Wipe them down using a clean cloth or blow them clean using compressed air.

After storage, it may be necessary to charge the battery as usual. To check the available charge, press the battery charge indicator button and charge the battery accordingly. See the section on the battery charge indicator.



**IMPORTANT:**  
These specifications refer to normal operating conditions. Difficult conditions (large amounts of dust, etc.) and longer daily operating times can shorten the specified intervals accordingly.

		Before start- ing work	After work or daily	In the event of a fault	In the event of damage	As required
Battery	Visual in- spection	X		X	X	X
Battery	Clean		X			
Safety label	Replace				X	








### 7.5 Replacing the twisted knot brushes



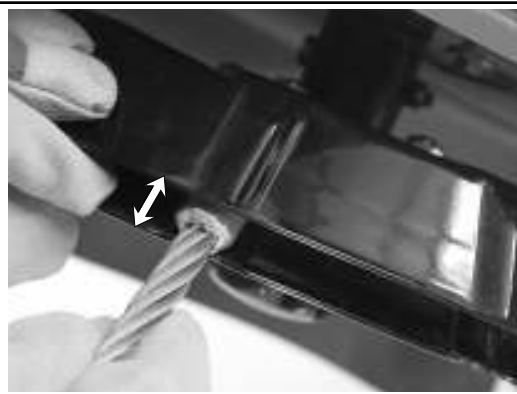




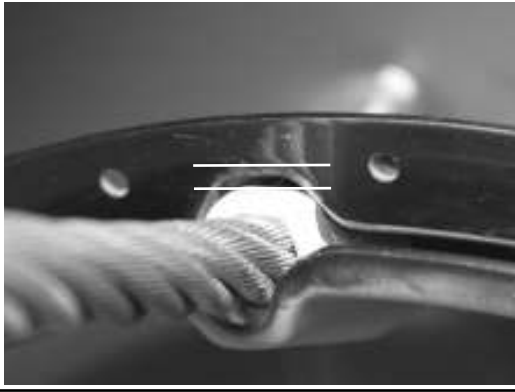
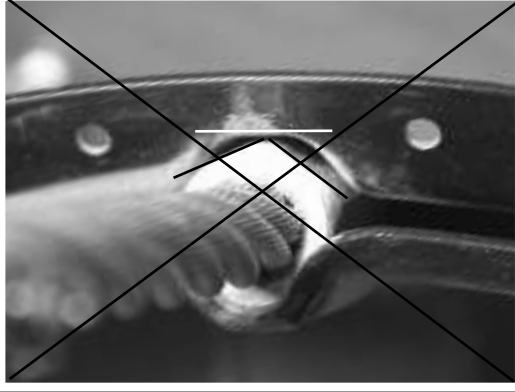
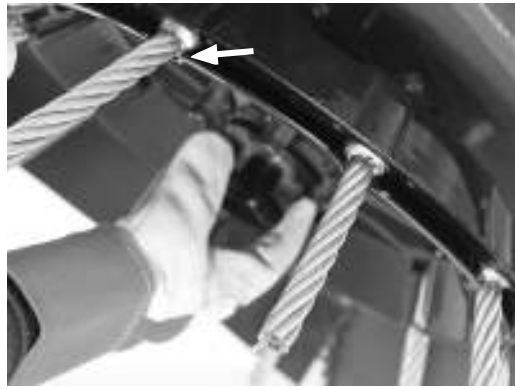

**WARNING:**  
Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently.



**IMPORTANT:**  
The wire bristles must be at least 5 cm long. The wire bristles must be replaced if they have been worn beyond this point.

		<p>Tip the machine backwards.</p> <div style="display: flex; align-items: center; gap: 10px;">  <div style="border: 1px solid black; padding: 5px;"> <p><b>CAUTION!</b> Wear gloves.</p> </div> </div>
		<p>Undo the star grip.</p>
		<p>Remove any worn twisted knot brushes.</p>
		<p>Worn twisted knot brushes.</p> <p>The twisted knot brushes must be at least 5 cm long. The wire bristles must be replaced if they have been worn beyond this point.</p>

		
		<p>Mount new twisted knot brushes between the upper and lower plate.</p>
		<p>Gently push the upper and lower plate apart so that the twisted knot brushes are held on the opposite side.</p>
		<p>Mount all 10 twisted knot brushes between the upper and lower plate.</p>
		<p>If twisted knot brushes fall out, tighten the star grip slightly. Ensure that the twisted knot brushes are mounted as shown in the images.</p>

		<p>Correctly mounted twisted knot brushes.</p>
		<p>Incorrectly mounted twisted knot brushes.</p>
		<p>Check that the twisted knot brushes are seated correctly.</p> <div style="display: flex; align-items: center; margin-top: 10px;">  <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p><b>CAUTION!</b> Pay attention to the stop.</p> </div> </div> <p>Firmly tighten the star grip by hand. After briefly using the machine, check that the twisted knot brushes are seated correctly again. Retighten the star grip if required.</p>

## 7.6 Cleaning the implement

You should clean the weed brush regularly to keep it in good condition.  
Remove loose dirt or dust using a soft brush. Wash the plastic surfaces using water and soap.



### IMPORTANT:

Chemical or aggressive cleaning agents must not be used under any circumstances. Doing so will permanently damage the plastic surfaces and paintwork.

Only use readily biodegradable cleaning agents and care products. This will help to protect the environment and avoid groundwater pollution.

Cleaning the machine using high-pressure cleaners, steam cleaners and similar devices can permanently damage components like ball bearings, seals, engine parts and plastic parts, among others. In addition, this can result in water entering the engine. We therefore recommend keeping any cleaning device hoses a reasonable distance from at-risk components. The water temperature must not exceed 50 °C.

Please observe any relevant operating instructions for the engine as well.

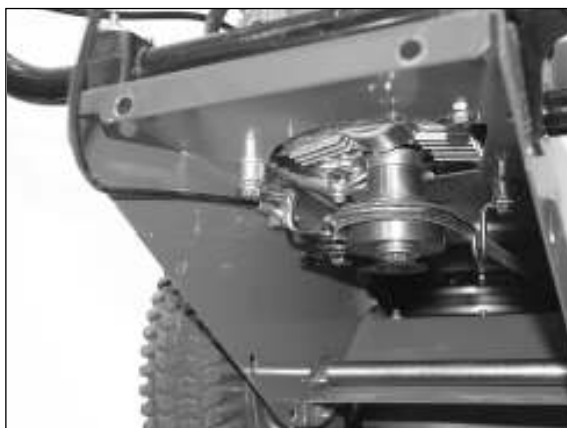
## 7.7 Setting and readjusting the Bowden cables



**WARNING:**  
Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently.



**IMPORTANT:**  
After the machine has been run for several operating hours, it may be necessary to readjust the Bowden cables. If the adjustment track of the Bowden cables is insufficient to do so, please contact your specialist dealer.



1) Undo the bolts on the base plate and remove the base plate.



2) Undo the nut. Readjust the Bowden cable.



3) Then firmly retighten the nut. Check the adjustment you have made by operating the lever in question.



4) Pay attention to the correct position of the V-belt tensioner.

If the adjustment is still not correct, please repeat steps 1) to 3).

## 7.8 Checking and correcting the tyre pressure



**WARNING:**

Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently. Comply with the permitted tyre pressure. The tyres will burst at excessive pressures.



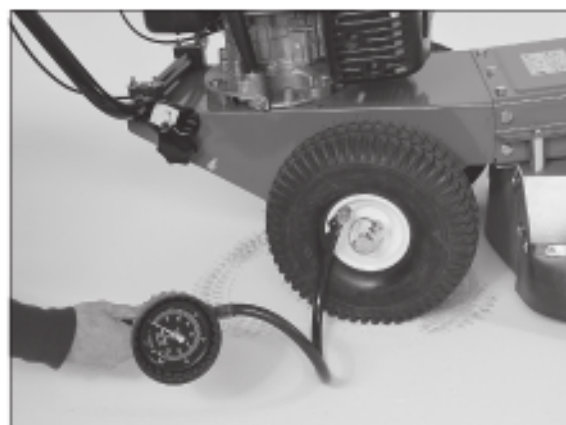
**IMPORTANT:**

If the tyre pressure is too low, the tube may rub against the rim and become damaged.



- 1) Please check the tyre pressure of the drive wheels on a regular basis.

Unscrew the valve cap and apply the air tool to check or adjust the pressure. Then screw the valve cap back onto the valve.



- 2) Drive wheels: 1,5 bar.

### 7.9 Cleaning the air filter

To clean the air filter, please observe the information provided by the engine manufacturer (engine manufacturer operating instructions).

### 7.10 Storage

The weed brush must be properly stored if it will not be required for an extended period of time. Please contact your local specialist dealer for this purpose. They will inform you of which measures must be taken.

### 7.11 Maintenance plan

	Be- fore each use	After the following number of operating hours:					At least every three months	At least once per year	After each clean
		5	10	25	50	100			
Check the bolts and nuts			C						
Check the engine oil level, top up as required		C							
First engine oil change			S						
All other engine oil changes					S		S		
Check the air filter				M			M		
Clean the air filter element					M				
Replace the air filter element, earlier if necessary							S (2 years)		
Replace the fuel lines						S			
Clean the cooling air filter					S				
Clean the baffle plates, cooling fins, earlier if necessary						S			
Clean the spark plug, adjust the electrode spacing					S				
Replace the spark plug						S			
Clean the exhaust		M							
Lubricate all sliding parts							M	M	
Check the play setting on the hand lever	C								
S = maintenance by a specialist workshop C = check by the operator M = maintenance by the operator									

8 Faults and how to rectify them

Fault	Possible cause	How to rectify the fault
Engine does not start	<ul style="list-style-type: none"> <li>- Fuel tank empty</li> <li>- Throttle regulation lever not at choke with cold engine</li> <li>- Spark plug connector not fitted</li> <li>- Fuel line blocked</li> <li>- Engine supplied with false air due to loose carburettor</li> <li>- Petrol valve on Honda engine closed</li> </ul>	<p>Fill fuel tank</p> <p>Set throttle regulation lever to choke</p> <p>Fit spark plug connector</p> <p>Have fuel line cleaned by a specialist workshop</p> <p>Tighten securing bolts</p> <p>Open petrol valve on Honda engine</p>
Engine does not start, smells of petrol	<ul style="list-style-type: none"> <li>- Engine is being supplied with too much fuel</li> <li>- Air filter dirty</li> </ul>	<p>Set throttle regulation lever to full throttle, not to choke</p> <p>Clean air filter</p>
Engine does not run smoothly, cuts out	<ul style="list-style-type: none"> <li>- Engine running with choke activated</li> <li>- Ignition cable loose</li> <li>- Air filter dirty</li> <li>- Air supply in fuel tank cover blocked</li> <li>- Fuel line blocked</li> <li>- Carburettor not set correctly</li> <li>- Engine overheats</li> </ul>	<p>Take throttle regulation lever out of choke position</p> <p>Allow engine to cool down and securely connect plug connector to spark plug</p> <p>Clean air filter</p> <p>Replace fuel tank cover</p> <p>Have fuel line cleaned by a specialist workshop</p> <p>Have carburettor adjusted by a specialist workshop</p> <p>See "Engine overheats" in the "fault" column</p>
Engine cuts out at high speeds	<ul style="list-style-type: none"> <li>- Electrode spacing on spark plug not correct</li> <li>- Carburettor not set correctly</li> </ul>	<p>Have electrode spacing adjusted by a specialist workshop</p> <p>Have carburettor adjusted by a specialist workshop</p>
Engine overheats	<ul style="list-style-type: none"> <li>- Insufficient engine oil</li> <li>- Cooling air system restricted</li> <li>- Air filter dirty</li> <li>- Carburettor not set correctly</li> </ul>	<p>Top up engine oil</p> <p>Have fan grille and cooling fins cleaned by a specialist workshop</p> <p>Clean air filter</p> <p>Have carburettor adjusted by a specialist workshop</p>
Engine regularly stops when idling	<ul style="list-style-type: none"> <li>- Throttle regulation lever not at choke with cold engine</li> <li>- Electrode spacing on spark plug not correct</li> <li>- Air filter dirty</li> </ul>	<p>Set throttle regulation lever to choke</p> <p>Have electrode spacing adjusted by a specialist workshop</p> <p>Clean air filter</p>
Engine has insufficient power	<ul style="list-style-type: none"> <li>- Air filter dirty</li> <li>- Insufficient compression</li> </ul>	<p>Clean air filter</p> <p>Find a specialist workshop</p>

**Faults and how to rectify them (continued)**

<b>Fault</b>	<b>Possible cause</b>	<b>How to rectify the fault</b>
Engine does not stop	<ul style="list-style-type: none"> <li>- Engine stop actuator incorrectly adjusted</li> </ul>	See the operating instructions for the engine, contact your specialist workshop
Sustained grating noise when the sweeper brush is switched on	<ul style="list-style-type: none"> <li>- Gear lever not pushed down fully</li> <li>- Bowden cable not set correctly</li> </ul>	Push down gear lever for brush drive fully Readjust the Bowden cable
The brushes are not turning or stop under load	<ul style="list-style-type: none"> <li>- Gear lever not pushed down fully</li> <li>- Bowden cable not set correctly</li> <li>- defective V-belt</li> </ul>	Push down gear lever for brush drive fully Readjust the Bowden cable Have V-belt replaced by a specialist workshop
Noise at tool head	<ul style="list-style-type: none"> <li>- Bristles installed incorrectly</li> <li>- Bristles loose</li> <li>- Not using original bristles</li> </ul>	Install bristles correctly Check bristles are seated correctly Firmly tighten the star grip by hand.



## 9 Transport



**WARNING:**  
Switch off the engine and allow it to cool down. The machine must be secured to prevent it from being started inadvertently. Wear solid footwear.



1) Front tensioning belt guide.



2) The rear axle serves as the fixing point



3) Always use both fixing points.



4) The handlebar is folded all the way forward.

### 10 Technical specifications

Engine:	See spare parts list
Track width:	380 mm
Width:	approx. 700 mm
Height to engine:	approx. 550 mm
Handlebar height:	Adjustable from approx. 800 mm to approx. 1150 mm
Overall length:	Max. 1850 mm (handlebar in low position)
Brush diameter:	500 mm
Weight:	55 kg
Tyre pressure:	1.5 bar

Engine	Capacity	Output
Honda GCV 160	160 ccm	3.5 kW/3000 rpm
Honda GXV 160	160 ccm	3.6 kW/3000 rpm
B&S Ready Start	190 ccm	2.6 kW/3000 rpm
B&S 850 IC	190 ccm	3.4 kW/3060 rpm
B&S 675 iS InStart	163 ccm	2.6 kW/3000 rpm

Engine	Oil filling capacity	Fuel tank capacity
Honda GCV 160	0.55 l	0.9 l
Honda GXV 160	0.65 l	1,4 l
B&S Ready Start	0.6 l	1.5 l
B&S 850 IC	0.6 l	1.5 l
B&S 675 iS InStart	0.44 l	1.0 l

## 10 Technical specifications

### Hand-arm vibrations on the sweeper

according to VDI 2057, sheet 2

#### 1. Description of the measurement

The measurement is carried out on a tarmacked road.

The vibrations are measured on the handlebar along three axes: x, y, z axis; see DIN 45675, Part 8. The mean is calculated over 60 seconds.

#### 2. The measuring device used complies with DIN 45675.

#### 3. Operating state of the sweeper:

Warm, run-in machine under full load.

Brush height setting: Standard

Fuel tank: Approx. 50% full

Brush axle: Middle position

4. **Measurement result:** 60 s mean value = 4.8 m/s<sup>2</sup> (Honda GCV 160)  
 60 s mean value = 4.8 m/s<sup>2</sup> (Honda GXV 160)  
 60 s mean value = 4.8 m/s<sup>2</sup> (B&S Ready Start)  
 60 s mean value = 4.8 m/s<sup>2</sup> (B&S 850 IC)  
 60 s mean value = 4.8 m/s<sup>2</sup> (B&S 675 iS InStart)

### Noise emission values for sweepers

in accordance with EC Directive 98/37/EC or 2006/42/EC

#### 1. Description of the measurement

The measurement is carried out on a tarmacked road, with the machine with the brush drive at a standstill.

- 1.1 Sound pressure level at operator ear  $L_{p\text{Bediener}}$  = 73 dB (Honda GCV 160)  
 Sound pressure level at operator ear  $L_{p\text{Bediener}}$  = 73 dB (Honda GV 160)  
 Sound pressure level at operator ear  $L_{p\text{Bediener}}$  = 73 dB (B&S Ready Start)  
 Sound pressure level at operator ear  $L_{p\text{Bediener}}$  = 73 dB (B&S 850 IC)  
 Sound pressure level at operator ear  $L_{p\text{Bediener}}$  = 73 dB (B&S 675 iS InStart)
- 1.2 Sound power level  $L_w$  = 93 dB (Honda GCV 160)  
 Sound power level  $L_w$  = 93 dB (Honda GXV 160)  
 Sound power level  $L_w$  = 93 dB (B&S Ready Start)  
 Sound power level  $L_w$  = 93 dB (B&S 850 IC)  
 Sound power level  $L_w$  = 93 dB (B&S 675 iS InStart)

#### 2. Measuring devices used in accordance with DIN 45634.

#### 3. Operating state of the sweeper:

Warm, run-in machine under full load.

Brush height setting: Standard

Fuel tank: Approx. 50% full

# EC Declaration of Conformity

in accordance with EC Directive 2006/42/EC

Manufacturer: **Julius Tielbürger GmbH & Co. KG**  
**Maschinenfabrik**  
**Postdamm 12**  
**D-32351 Stemwede-Oppenwehe, Germany**

Authorised representative for technical documentation:  
**Mr Jörg Tielbürger**  
**Julius Tielbürger GmbH & Co. KG**  
**Maschinenfabrik**  
**Postdamm 12**  
**D-32351 Stemwede-Oppenwehe, Germany**

We hereby declare that the **Tielbürger product:**  
**Weed brush tw50 AD-460-040TS, AD-461-040TS,**  
**AD-464-040TS**  
**tw50s AD-462-040TS, AD-463-040TS**

in combination with:	<b>For</b>	<b>tw50, tw50s</b>
<b>Lateral protective cover</b>		<b>AD-460-004</b>
<b>Support roller</b>		<b>AD-460-005</b>

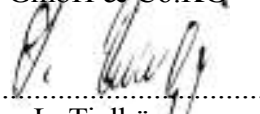
from serial no.:**4609917**

**for cleaning surfaces**

complies with all the relevant provisions of EC Machinery Directive 2006/42/EC and the Electromagnetic Compatibility Directive 2014/30/EU.

Stemwede, 18.04.2016

Julius Tielbürger  
GmbH & Co.KG



.....  
L. Tielbürger  
(Managing Director)

KR-332-083TS