




INSTRUCTION MANUAL

EARTH AUGER ST-GD520

CE



WARNING

 Before using this earth auger, please read the manual carefully, to ensure the correct use of this unit.

www.sherpatools.co.uk

Sherpa Tools Ltd.

ST-GD520 EARTH AUGER

If you experience any problems with this product,
please do not return to the store. Contact Sherpa
Tools direct on our UK helpline.

UK Helpline: 01522 283 020

www.sherpatools.co.uk

Feb 2016



You may not start to operate the machine until you have read these operating instructions, observed all the instructions given and installed the machine as described!

Keep the instructions in a safe place for future use.

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Extent of delivery

After unpacking, check the contents of the box for

- ▶ completeness
- ▶ possible transport damage.

Report any damage or missing items to your dealer, supplier or the manufacturer immediately. Complaints made at a later date will not be acknowledged.

- 1 Drive unit
- 3 Drills (Ø 100, 150, 200 mm)
- 1 Fuel mixing can
- 1 Tool bag containing
 - 1 Allen key, size 4
 - 1 Allen key, size 5
 - 1 Allen key, size 6
 - 1 Open-end wrench (size 8 and 10)
 - 1 Philips screw driver
 - 1 Spark plug socket spanner
- Original instruction

EC Declaration of Conformity

We, Importer

Mower Magic Ltd, trading as Sherpa Tools

LN6 9AL

Declare:

that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us.

In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity

Machine Description: Petrol Earth Auger

Model: ST-GD520

Rated power: Engine displacement: 52cc
Max. engine power: 2.2kw/7500rpm

Applicable EC Directives: EG-Maschinenrichtlinie 2006/42/EG
EC Machinery Directive: 2006/42/EC
EG-Richtlinie über elektromagnetische Verträglichkeit (EMV)
2004/108/EWG
EC Directive of Electromagnetic Compatibility (2004/108/EEC)

Applicable Harmonized Standards: ISO12100: 2010
EN ISO14962:2009

Signatory: 
Mr. Jonathan Hall, Managing Director
Magic House, Station Road, North Hykeham, Lincoln, Lincolnshire, LN6 9AL
Date: 28/02/2016

Symbols original instructions

	Potential hazard or hazardous situation. Failure to observe these instructions may lead to injuries or cause damage to property.
	Important information on proper handling. Failure to observe these instructions may lead to malfunction.
	User information. This information helps you to use all the functions optimally.
	Assembly, operation and servicing. Here you are explained exactly what to do.
	Important notes for environmentally compatible conduct. Failure to observe these instructions may lead to environmental damage.
	Please refer to the attached assembly and operating instruction sheet for references to figure numbers in the text.

Symbols on the machine

	Read and follow the operating instructions and safety advices before starting up the machine.
	Warning! This earth auger may cause serious injury.
	Danger – objects may be thrown out at high speed. Keep bystanders away. Safety distance at least 15 m.
	Wear hardhat, eye and ear protection.
	Wear protective gloves.
	Wear safety shoes.
	Protect against humidity.
	Do not reach in rotating parts.
	Petrol and oil are a fire hazard and can explode. Fire, open light and smoking are prohibited.
	Risk of carbon monoxide poisoning. Do not start or operate the engine in closed rooms even if doors and windows are open.
	Fuel, fuel mixture (40:1)

	Engine switched off (STOP) Engine started I
OFF	Choke closed
ON	Choke open
	Open the venting valve before starting the engine to prevent damages to the gearbox. After completion of your work, allow the gearbox to cool down first. Close then the venting valve.
	Warning of hot surfaces. Danger of burning! Do not touch hot engine parts. Such parts may remain hot for a short time even after the machine has been stopped.
	This product complies with European regulations specifically applicable to it.

Operating times

Please observe as well the regional regulations for noise protection.


Proper use

- This machine is only intended for drilling cylindrical holes in soil (loam, topsoil, sand or the like) in private home and hobby gardens. This includes holes for planting small trees, for installing fencing posts or the like. This gasoline engine driven earth auger may only be used in its vertical position (drill facing downwards).
- This machine is only designed for outdoor use (garden) and must be held with both hands during operation.
- The device is not allowed to be used in public gardens, parks, sports centres or at roadsides as well as in agriculture and forestry.
- This device may not be used:
 - in ice, stone or rock
 - in areas where electric cables, gas, water or telephone lines are buried
 Otherwise, there is a risk of injury.
- Always use drills suited for the machine as designated in the operating instructions.
- The intended usage also includes compliance with the operating, servicing and repair conditions prescribed by the manufacturer and following the safety instructions included in the instructions.
- Any other utilisation counts as improper use, especially mixing combustible or explosive materials (fire and explosion hazard) and use with foodstuffs. The manufacturer is not liable for damages resulting from improper use.

→ the user alone shall bear the risk.

- The intended usage also includes compliance with the operating, servicing and repair conditions prescribed by the manufacturer and following the safety instructions included in the instructions.
- The relevant accident prevention regulations for the operation as well as the other generally acknowledged occupational medicine and safety rules must be complied with.
- Unauthorised modifications on the earth auger exclude a liability of the manufacturer for damages of any kind resulting from it.
- Only persons who are familiarised with the device and informed about possible risks are allowed to prepare, operate and service this device. Repair works may only be carried out by us or by a customer service agent nominated by us.

Residual risks

 Even if used properly, residual risks can exist even if the relevant safety regulations are complied with due to the design determined by the intended purpose.

Residual risks can be minimised if the "Safety advices" and the "Intended usage" as well as the whole of the operating instructions are observed.

Observing these instructions, and taking proper care, will reduce the risk of personal injury or damage to the equipment.

- Inhalation of dust (soil)
- Contact of the skin with operating substances (gasoline/oil)
- **Noncompliance with safety instructions may result in injuries of the operator or property damages.**
- Risk of serious injuries when operating the machine without suited protective equipment.
- Risk of injury by entangling and winding up ropes, wires or pieces of clothing when contacting the auger.
- Risk of injury by kickback of the handles when the auger suddenly stops.
- Risk of electric shock when touching the spark plug connector while the engine runs.
- Risk of thrown out object, e.g. stones.
- Risk of burns when touching hot parts.
- Carbon monoxide poisoning when using the product in closed or poorly ventilated rooms.
- Risk of fire and explosion by highly inflammable fuel, e.g. during fuelling.
- Physical impairment by vibrations when working with the machine over a longer period of time.
- Impairment of hearing when working on the machine for longer periods of time without ear protection.

In addition, in spite of all the precautionary measures taken, non-obvious residual risks can still exist.

Vibrations (hand arm vibrations)

21.206 m/s²; K = 1.5 m/s²

Warning!

The actual vibration emission level during the use of the machine may differ from that indicated in the operating instructions or indicated by the manufacturer. This may be caused by the following factors to be minded before and during the use:

- Proper use of the machine
- Correct operating of the machine
- Proper condition of the machine for use
- Use of the correct and sharp cutting tool
- Handles and optional anti-vibration handles properly mounted on the machine body

When you feel uncomfortable or notice discoloration of skin on your hands during the use of the machine, stop working immediately. Observe sufficient break times to rest. Failure to have sufficient break times may result in a hand-arm vibration syndrome.

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




If you intend to use this machine frequently, contact your local authorised dealer and purchase anti-vibration accessories if required.

Avoid the use of this machine at temperatures under 10°C. Create a work schedule in order to minimise vibration exposure.

Safety advices

Observe the following advices in order to protect yourself and other persons against possible injuries.

Before starting this device, read and keep to the following advice. Also observe the preventive regulations of your professional association and the safety provisions applicable in the respective country, in order to protect yourself and others from possible injury.

-  Pass the safety instructions on to all persons who work with the machine.
-  Keep these safety instructions in a safe place.
-  Repair works on the safety cut out must be carried out by the manufacturer or by companies appointed by the manufacturer respectively.

- Make yourself familiar with the equipment before using it, by reading and understanding the operating instructions.
- Do not use the machine for unsuitable purposes (see 'Normal intended use').
- Be careful what you do. Behave sensibly when working. Do not use the device when you are tired or under the influence of drugs, alcohol or medicaments. One moment of

carelessness when using the device can result in serious injuries.

- **Children and young persons** under 18 years of age as well as persons who have not read the instruction manual are not allowed to operate this product.

Personal protective equipment

- **Never work without suited protective equipment.**
 - Do not wear loose-fitting clothes or jewellery, they could be caught by movable parts.
 - Hairnet in case of long hair
 - Approved helmet in situations where head injury has to be expected
 - Visor
 - ear protection
 - Anti-slipping cut-proof boots (safety shoes) with steel-toes
 - Fire extinguisher and spade (sparks may occur during working)
 - First-aid material
 - Mobile telephone if required

Safety instructions – before working

Carry out the following checks before the initiation and regularly during the working process. Observe the relevant sections in the operating instruction manual:

- Is the device assembled completely and properly?
- Is the device in good and safe condition?
- Are the handles clean and dry?
- Before starting your work make sure that:
 - no other persons, children or animals stay within the working area,
 - you can always step back without any barriers,
 - your standing area is free from foreign objects, brushwood and branches,
 - you have always a secure standing position.
- Is workplace free of risks to stumble? Keep your workplace in an orderly condition! Untidiness can result in accidents. Risk of stumbling.
- Take environmental influences into consideration:
 - Do not work under insufficient light conditions (e.g. fog, rain, snow flurry or twilight).
 - Do not use this machine near inflammable liquids or gases. Risk of fire!
 - The operator is responsible for accidents or risks which occur to other persons or their properties.

Safety instructions – operating

- **Never work with only one hand.** Hold the device always firmly with both hands.
- Never work
 - with stretched arms
 - on hardly accessible places
 - above shoulder height
 - standing on a ladder, a staging or a tree.

- Always work on nonskid and flat ground. Avoid abnormal posture. Provide a safe standing position and keep at any time the balance.
- To have a break stop the machine and place it so that nobody is at risk. Secure the device against unauthorized access.

Safety instructions – while working


- **Never work alone.** Keep acoustic and visual contact to other persons at all times to allow immediate first aid in emergency cases.
- Immediately stop the engine at imminent danger or in emergency cases.
- Never leave the device running unattended.
- **This device chain saw produces harmful substances.** Never start the product in closed rooms or poorly ventilated areas risk of carbon monoxide poisoning. Provide for a sufficient change of air when working in wells, trenches or confined spaces. **There is the risk of carbon monoxide poisoning or death by suffocation.**
- Immediately stop working when you feel unwell (e.g. headache, dizziness, nausea, etc.). Otherwise there is an increased risk of accidents.
- Do not overload the machine! You work better and safer in the given performance range.
- Take breaks when working so that the engine can cool down.
- Do not place a hot machine in dry grass or onto inflammable objects.
- Never touch the silencer and the engine while the machine is running or shortly after it was stopped. Danger of burning!





General safety instructions

- Maintain the machine carefully:
 - Follow the maintenance instructions and the instructions for tool exchange.
 - Keep handles dry and free of oil and grease.
- Only assemble tools that are designed for this machine.
 - ⚠ The use of other tools and other accessories may present a risk of injury to you.
- Check the machine for possible damage:
 - Before further use of the machine the safety devices must be checked carefully for their proper and intended function. Only operate the device with complete and correctly attached safety equipment and do not alter anything on the device that could impair its safety.
 - Check whether movable parts function perfectly and do not stick or whether parts are damaged. All parts must be correctly installed and fulfil all conditions to ensure perfect operation of the machine.
 - Damaged safety devices and parts must be properly repaired or exchanged by a recognized, specialist workshop; insofar as nothing else is stated in the instructions for use.
 - Damaged or illegible safety labels have to be replaced.


- Do not allow any tool key to be plugged in!
Before switching on, check always that all tools are removed.
- Store unused equipment in a dry, locked place out of the reach of children.
- Stop the machine and remove the spark plug connector when
 - the auger drill comes in contact with stones, nails or other foreign objects
 - Carrying out repair work.
 - Performing maintenance and cleaning work.
 - Eliminating faults.
 - transporting or storing
 - Changing the auger drill
 - Leaving of machine (also for short-term interruption)

 Do not carry out repair operations on the machine other than those described in section "Maintenance" but contact the manufacturer or authorized customer service centres.

 Repairs to other parts of the machine must be carried out by the manufacturer or one of his customer service points.

 Use only original spare parts, accessories and special accessory parts. Accidents can arise for the user through the use of other spare parts. The manufacturer is not liable for any damage or injury resulting from such action.

Safety instructions for the earth auger

-  Make sure that the auger drill does not rotate when the engine is idling. Contact the customer service if the auger drill rotates with idling engine.
- Make sure that no electric cables, water and gas pipes are buried in the soil of the working area.
- Check that no loose stones or other objects lie on the soil in the working area.
- Remove high grass, shrubs, etc. from the working area. There is the risk that they are wound up by the auger drill.
- Take utmost care when working in soil containing a lot of roots and/or stones. There is the risk of a sudden jamming of the earth auger.
- Do not use the earth auger on uneven ground or on a **slope**.
- Do not use the earth auger on icy or other slippery **surfaces**.
- Stop the engine and allow it to cool down if the earth auger drill is jammed. Then, try to remove it manually.
- Do not use a gasoline engine driven earth auger the switch of which is defective. A gasoline engine driven earth auger that can no longer be switched on/off is dangerous and must be repaired.
- **Keep the auger drills in a sharp and clean condition.** Carefully maintained tools with sharp cutting edges show less jamming and can be easier operated.
- Use the machine, accessories, tools etc. in compliance with these instructions. When doing so take the work conditions and the activity to be carried out into account. The use of

the machine for other than the intended applications may cause dangerous situations.

- Check the machine **before each use and after any contact** with stones, nails or other **foreign objects** for damages. Have the device repaired if required.
- Always keep your hands and feet away from the auger drill, in particular when starting the engine.

Behaviour in an emergency situation

- Initiate all required first aid measures suited for the injury and seek qualified medical advice as quick as possible.
- Protect the injured person against further injuries and immobilise the injured person.

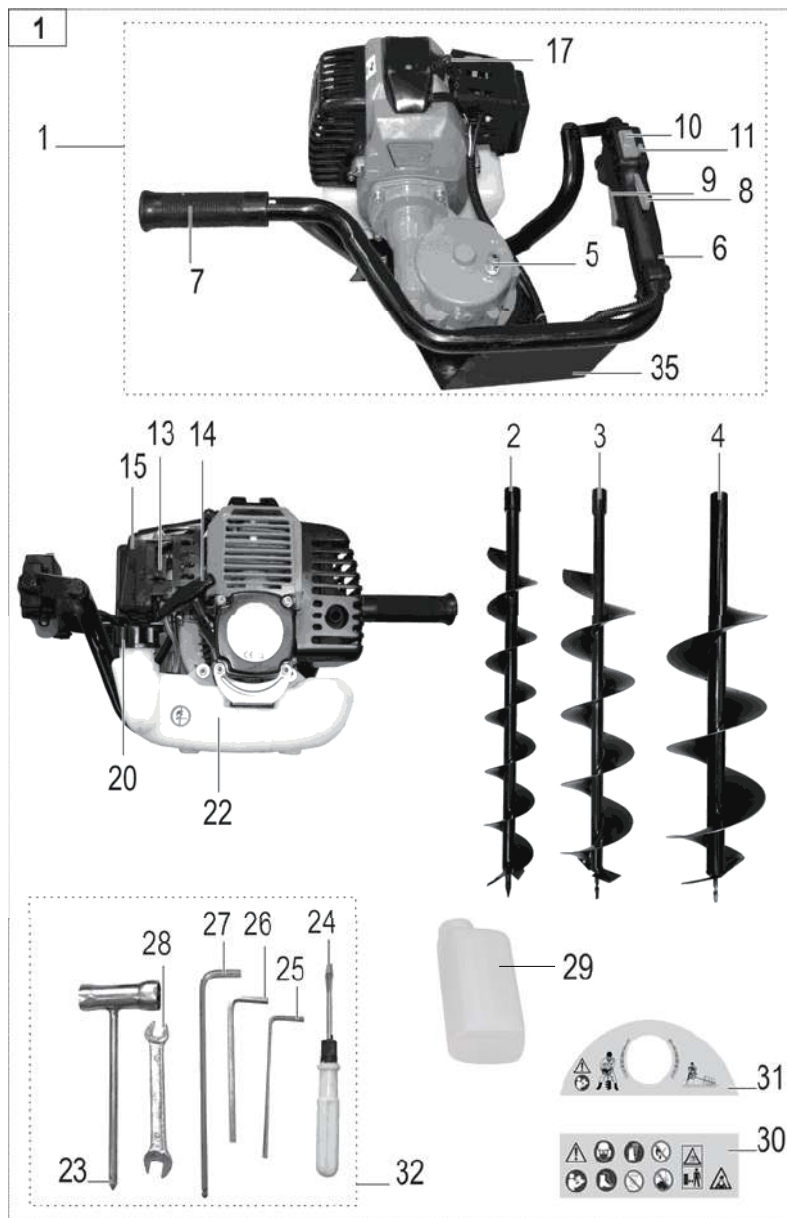
Safety instructions - Safe handling with fuels

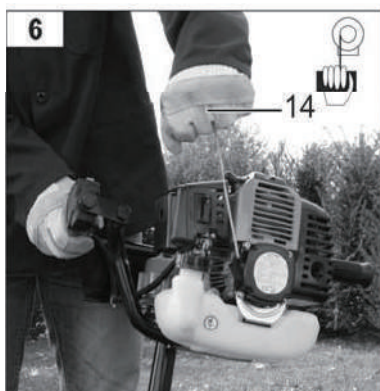
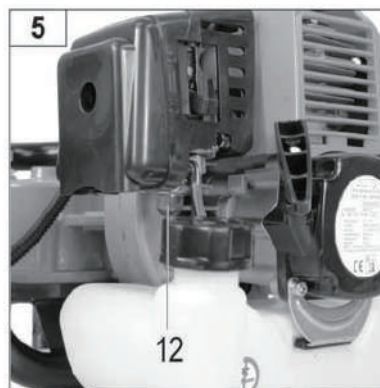
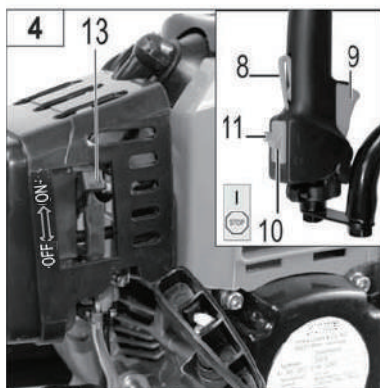
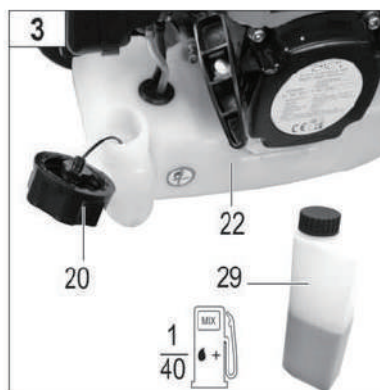
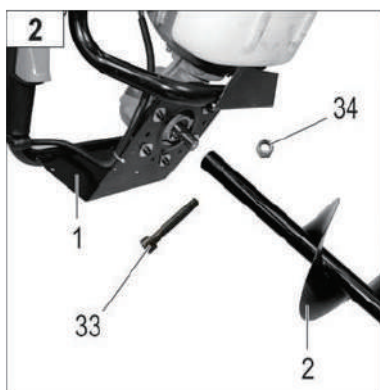


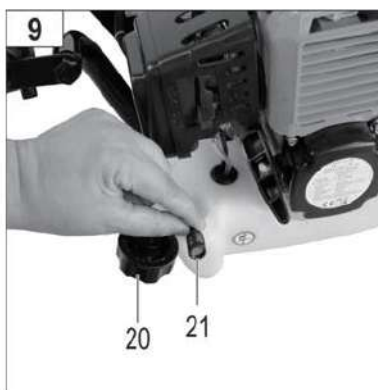
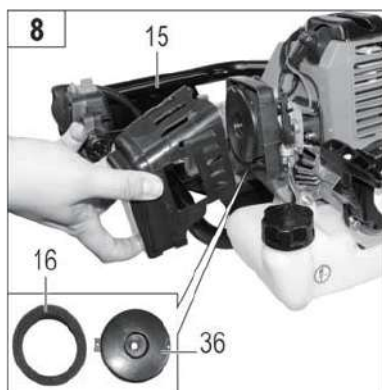
Fuels and fuel vapours are inflammable and may cause serious injury on the skin or when inhaled. Therefore be careful and provide sufficient ventilation when handling with fuels.

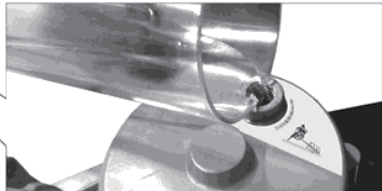
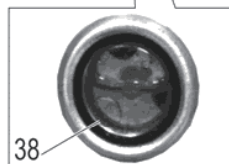
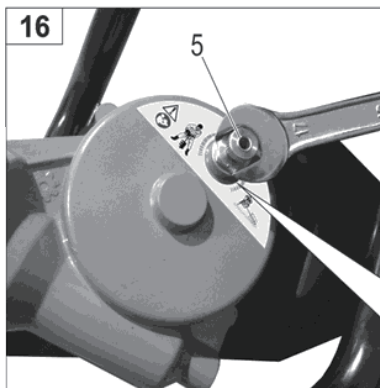
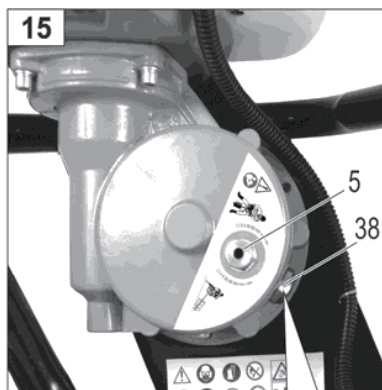
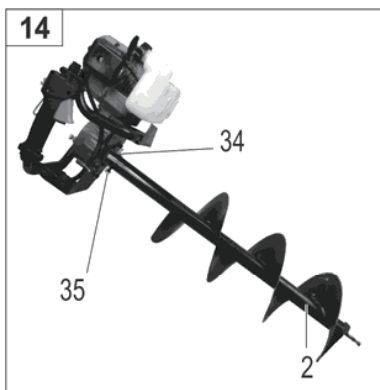
- Do not smoke and avoid open flames when fuelling.
- Wear gloves when fuelling.
- Do not fuel in closed rooms.
- Stop the chain saw and allow it to cool down.
- Carefully open the tank cap to allow possible overpressure to relax.
- Avoid spilling of fuel or oil. Clean the device immediately when you have spilled fuel or oil. Change your clothes immediately when you have spilled fuel or oil on them. Make sure that no fuel can come into the soil.
- Carefully close the tank cap after fuelling and check that it does not get loose during operation.
- Check that there is no leakage on the tank cap and fuel lines. If there are leaks this product may not be started.
- Never use a device with damaged ignition cable and spark plug connector.
- Only transport and store fuels in containers approved and identified for this.
- Keep children away from fuels.
- Do not handle and store fuels close to combustible and highly inflammable materials as well as sparks and open flames.
- Go away at least three metres from the fuelling place to start the chain saw.











Description of device












Pos.	Denomination
1	Drive unit
2	Auger drill Ø 100 mm
3	Auger drill Ø 150 mm
4	Auger drill Ø 200 mm
5	Venting valve
6	Operating handle
7	Handle
8	Throttle lever lock
9	Throttle trigger
10	ON/OFF switch
11	Locking pin
12	Priming pump  5
13	Choke lever
14	Cranking handle
15	Air filter housing
16	Air filter  7
17	Spark plug connector
18	Spark plug  10
19	Silencer  12
20	Tank cap
21	Fuel filter  9
22	Tank
23	Spark plug socket spanner
24	Installation wrench
25	Allen key, size 4
26	Allen key, size 5
27	Allen key, size 6
28	Open-end wrench, size 8/10
29	Fuel mixing bottle
30	Safety label 1
31	Safety label 2
32	Accessories bag - Installation tools
33	Cylinder head screw M 8 x 40  2
34	Cylinder head screw M 8 x 50  2
35	Self-locking hexagon nut  2
36	Protective cover
37	Air filter cover  8
38	Escape opening  12
38	Oil level indicator



Assembly

Clamping the auger drill:

-   2 /  14 Plug one of the auger drills (2-4) on the shaft of the drive unit (1). Plug the cylinder head screw (33) through the auger drill and the drive shaft. Secure the cylinder head screw using the hexagon nut (34).



Preparing for startup

Fuelling




Utmost care is required when handling fuel and oil. Keep away smoke and open flames (risk of explosion).



This product is operated by a mixture from regular gasoline (unleaded) and two-stroke engine oil.

Petrol: Octane number at least 91 ROZ unleaded

- Do not fill in leaded gasoline, diesel or other non-approved fuels.
- Do not use gasoline having a smaller octance number than 91 ROZ. This may lead to severe engine damages due to increased engine temperatures.
- If you frequently operate the product at high speeds, you should use gasoline with a higher octane number.
 -  The use of unleaded gasoline is recommended for environment protection reasons.

Two-stroke engine oil:

acc. to JASO FC or ISO EGD specifications


- Do only use two-stroke engine oil for air-cooled engines.


Mixing

Ratio of mixture 40:1

Gasoline	Two-stroke engine oil
1 litres	0.025 litres
2 litres	0.050 litres
5 litres	0.125 litres
10 litres	0.250 litres

- Measure the oil quantity accurately as a small deviation of it has a large effect on the ratio of mixture in particular for small fuel quantities.
- Do not change the ratio of mixture. This will lead to more residues of combustion, a higher fuel consumption, a decrease of output or damages to the engine.

 Mix petrol and oil in the supplied fuel mixing bottle (29).

- Fuels have only a limited shelf-life. Outdated fuels and fuel mixtures may result in starting problems. Therefore, mix only that quantity of fuel which you can use within a month.
- Only store fuels in containers approved and identified for this. Keep fuel containers in a dry and safe area.
- Make sure that fuel containers are kept out of the reach for children.
 -  Make sure to dispose of fuel remainders and liquids used for cleaning according to relevant regulations and in an environmentally compatible manner.

Fuelling of the device



- **Stop the engine and allow it to cool down.**
- **Wear protective gloves.**
- **Avoid eye and skin contact.**
- **Strictly follow the instructions under "Safe handling with fuels".**



- ⇒ Clean the area around the filler neck. Contamination in the tank may result in malfunction.
- ⇒ **3** Carefully open the tank cap (20) to allow possible overpressure to relax.
- ⇒ Shake the container once more before pouring the fuel mixture into the tank.
- ⇒ Carefully fill the fuel mixture up to the lower edge of the filler neck. Avoid spilling of fuel or oil. Clean the device immediately when you have spilled fuel or oil. Make sure that no fuel can come into the soil.
- ⇒ Carefully close the tank cap after fuelling and check that it does not get loose during operation.
- ⇒ Check that there is no leakage on the tank cap and fuel lines. If there are leaks this product may not be started.
- ⇒ Clean the tank cap and the area around it.
 - ⚠ Go away at least three metres from the fuelling place to start the chain saw.



Start-up

- Check that the machine is completely and correctly assembled.
- Before each use, check
 - the correct assembly of the drill
 - the machine for possible damage
 - loose fastenings
- ⇒ **4** Make sure that the ON/OFF switch, the throttle lock-out switch, the throttle trigger and the machine properly work.
 - ⓘ The engine of the machine is supplied without gasoline and oil in it. Fuel the device as described under "Fuelling".
- ⇒ **15** Open the venting valve (5) before starting the engine to prevent damages to the gearbox.
- ⚠ When starting make sure that the drill can freely rotate.

Starting with cold engine

- ⇒ **5** Firmly press on the fuel pump (12) several times until petrol (gasoline)/foam is visible in the priming pump.
- ⇒ **4** Put the choke lever (13) to **ON**.
- ⇒ Put the ON/OFF switch (10) to **I**.
- ⇒ Press the throttle lock-out switch (8) and operate the throttle trigger (9) at the same time.
- ⇒ **4** Lock the throttle lever using the locking pin (11).
- ⇒ **6** Grasp the cranking handle (14) and slowly pull the cranking rope until a resistance is felt. Then, pull quickly and firmly.




Do not fully pull out the cranking rope and slowly guide the cranking handle back to make sure that the cranking rope is correctly wound up.

- Repeat this operation until the engine starts.
- ⇒ **4** Put the choke lever (13) halfway back when the engine has started.
- ⓘ **The engine will idle when you release the throttle trigger.**
- ⇒ **4** When the engine runs smoothly put the choke lever (13) to OFF.
- ⇒ Allow the engine to warm up for 30 seconds before starting your work.

Stopping the engine

- ⇒ **4** Release the throttle trigger (9).

Put the ON/OFF switch (10) to the position .

Starting with warm engine

Start the device as described under "Starting with cold engine", but leave the choke lever in its operating position OFF and do not operate the throttle trigger.



Working instructions



You may not start to operate the machine until you have read these operating instructions, observed all the instructions given and installed the machine as described!

Working with the earth auger

- Only use auger drills recommended by the manufacturer.
- ⚠ Pay attention to the max. diameter.
- Put your feet shoulder-width apart and firmly grasp the earth auger on both handles.
- Start the drilling with "half throttle" and gradually increase the speed so that the drill penetrates into the soil without any problems.
- Drill holes without exerting too much body weight on the auger. Allow the auger to advance by its own weight.
- If the auger drill is jammed in the soil and cannot be pulled out, stop the engine and turn the earth auger counterclockwise.
- The clutch may still slip during the run-in time of approx. 2 operating hours. Make sure that the clutch is free from oil or moisture.
- ⚠ After completion of your work, allow the gearbox to cool down first. Do not place the unit horizontally for cooling. Otherwise, hot fluid can escape. Close then the venting valve.

Maintenance and cleaning

Before each maintenance and cleaning work

- Stop the engine.
- Wait until the cutting device does not longer move.
- Remove the spark plug connector.



- Wear protective gloves in order to avoid injury to the hands.



- Do not carry out maintenance work close to open flames. Risk of fire.

Maintenance and repair work other than those described in this chapter is only allowed to be carried out by service staff.

For maintaining and cleaning, removed security devices must unconditionally be mounted properly and proved again.

Only use genuine spare parts. Other than genuine parts may result in unpredictable damages and injury.

Maintenance

The tool will not come to a standstill immediately after cut-off. Before starting any service work wait until all parts are stationary.

To guarantee a long and reliable usage of the product carry out the following maintenance works regularly.

Check the device for obvious defects such as

- loose fastening elements
- worn or damaged components
- correctly assembled and faultless covers and protective devices.

Necessary repair works or maintenance have to be carried out before using the machine.

Cleaning the air filter

Clean the air filter from dust and dirt on a regular basis to prevent

- starting problems
- loss of output,
- too high fuel consumption.

Clean the air filter every 8 operating hours, or more frequently in dusty environments.

- ⇒ **4** Put the choke lever to the position ON to prevent dirt from entering the carburetor.
- ⇒ **7** Remove the screw from the air filter housing (15) and remove the air filter housing.
- ⇒ **8** Remove the air filter cover (36).
- ⇒ Remove the air filter (16).
- ⇒ Wash the air filter in a luke warm soapy solution.



Do not puff/blow out dirt particles, otherwise there is a risk of eye injury.

- ⇒ Allow the air filter to dry well and reinsert it.

i Damaged air filters must be replaced without delay.

Cleaning/replacing the fuel filter

Check the fuel filter if required. A contaminated fuel filter restricts the fuel supply.

- ⇒ **9** Open the tank cap (20) and pull the fuel filter (21) through the opening using a wire hook.

⇒ Slight contamination:

Pull the fuel filter from the fuel line and clean it in petroleum ether.

⇒ Bad contamination:

Replace the fuel filter.

Checking/replacing the spark plug



- Do not touch the spark plug or the spark plug connector while the engine is running. **High voltage!**
- Risk of burning on the hot engine.
- Wear protective gloves.

Check the spark plug and the spark gap on a regular basis. For this proceed as follows:

Allow the engine to cool down.

- ⇒ **10** Pull the spark plug connector (17) from the spark plug (18).

- ⇒ Remove the spark plug using the supplied spark plug socket spanner (23).

The spark gap must be 0.6 to 0.7 mm.

- ⇒ Clean the spark plug when it is contaminated. Install the spark plug in reverse order.



Do not overtighten the spark plug.

Replace the spark plug:

- every 100 hours or each season (whichever case comes first)
- when the insulating body is damaged,
- when the electrodes show excessive erosion,
- when the electrodes show excessive dirt or oil.

Use the following spark plug type:

Torch L8RTC, NGK-BPMR 7 A, BOSCH WSR6F, OREGON O-PR15Y, Champion RCJ 6Y

Checking the ignition spark

- ⇒ **10** Remove the spark plug (18).

Firmly connect the spark plug connector (17).

- ⇒ **11** Use an insulated pair of tongs to press the spark plug against the engine body (away from the spark plug hole).

- ⇒ Put the ON/OFF switch to the position **I**.

Pull the cranking rope.

i If there is no spark visible between the electrodes, the spark plug may be defective.

Silencer/exhaust outlet

☞ [12] Check the silencer (19) on a regular basis

ⓘ **Clean the exhaust outlet (37) on a regular basis.**

⚠ Do not clean the silencer when the engine is hot. Danger of burning!

Adjusting the carburetor (idle speed)

The carburetor is factory-set to the correct idle speed so that the correct fuel-air mixture is fed to the engine.

In the cases below the carburetor (idle speed) has to be corrected:

- Speed too high (auger drill continues to move in idle speed)
- Erratic running or lack of acceleration (idle speed too low)
- Adjustment to weather conditions and temperatures

⚠ **An incorrect carburetor adjustment results in severe engine damages. Do not continue working with the machine in such a condition.**

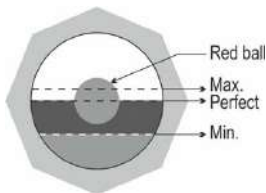
ⓘ **Contact a specialist workshop and have the carburetor adjustment done.**

Checking the gearbox oil level / refilling gearbox oil

To check the oil level:

Place the earth auger vertically (work position).

☞ [15] Check the oil level at the inspection window (38). Make sure that the oil level is as shown in the figure:



Refilling gearbox oil

☞ [16] Remove the venting valve (5).

Top up oil until the perfect / max. filling level is reached (do not overfill). Use GL 85 W gearbox oil.

Re-install the venting valve (5) and tighten it.

Cleaning

ⓘ Clean the machine and its accessories thoroughly after each application so that the faultless function is kept.

- Clean all movable parts on a regular basis.
- Clean the case with a soft brush or a dry cloth.
- Do not clean the machine under running water or using a high-pressure cleaner.
- Do not use solvents (gasoline, alcohol, etc.) for plastic parts, otherwise such parts may be damaged.

- Keep the handles free of oil and grease.

⚠ Water, solvents and polishing agents shall not be applied.

- ☞ [12] Make sure that the ventilation slots (i) for the engine cooling are free (risk of overheating).
- ☞ [13] Keep also the cooling fins for the cylinder (j) free from dust and dirt.

Transport



Before each transport

– Switch off device.



– Wait until the cutting device does not longer move.

- Carry the product with the handle.
- When transporting the product within a car put it in the boot or on a separate loading area. Secure the machine against tipping over, damages and fuel spillage.

Storage

- Keep unused machines in a dry and closed area out of the reach of children. Do not store them close to a cooker, oven or hot-water apparatus with permanent flame or other spark-generating devices.
- Allow the engine to cool down before storing the machine.
- Before extended storage, please observe the following to increase the service life of the device and to ensure smooth operation:
 - ⇒ Thoroughly clean the device.
 - ⇒ Oil all moving parts with environmentally compatible oil.
 - ⓘ Do not use grease.
 - ⇒ Empty the fuel tank completely.
 - ☼ Dispose of remaining fuel in an environmentally compatible manner.
 - ⇒ Operate the engine until the carburetor is empty.
 - ⇒ Check the machine for perfect condition to ensure a safe use of it after a longer period of storage.

Maintenance and cleaning schedule

Maintenance work	Before each use	After each use	Every 8 Std.	Every 25 Std.	Every 100 hours	Ifff required / damaged	Each season
Fuelling	■						
Throttle trigger / throttle lock-out switch / ON/OFF switch – Functional test	■						
Throttle trigger / throttle lock-out switch / ON/OFF switch – Have it replaced						■	
Cranking rope - Functional test	■						
Cranking rope Have it replaced						■	
Check the fuel tank caps Replace	■					■	
Clean fuel filling filter				■		■	■
Clean the fuel filter				■			■
Replace air filter						■	
Cleaning the air filter			■				■
Replace air filter						■	
Spark plug Check the spark plug connector			■				■
Replace the spark plug					■	■	
Clean the silencer			■				■
Check the carburetor in idle speed (drill may not rotate) Have this adjusted	■					■	■
Check the machine	■						■
Clean the machine		■					■
Replace the safety label						■	
Checking the gearbox oil level	■						
Refilling gearbox oil						■	

Possible faults



Before each fault elimination:

- Switch off device.
- Wait until the cutting device does not longer move.
- Remove the spark plug connector.
- Wear gloves.



After each fault clearance, put into operation and recheck all security installations.

Fault code	Possible cause	Corrective action
Motor does not start	<ul style="list-style-type: none"> ⇒ Incorrect starting sequence ⇒ Air filter contaminated. ⇒ Fuel filter fouled ⇒ No fuel supply ⇒ Fault in the fuel line ⇒ Cranking mechanism defective ⇒ Engine flooded. 	<ul style="list-style-type: none"> ⇒ Observe the correct starting sequence ⇒ Clean or replace the air filter ⇒ Clean or replace the fuel filter ⇒ Fill the fuel tank. ⇒ Check the fuel line for kinks or damages ⇒ Contact the customer service ⇒ Screw off, clean and dry the spark plug. Then pull the cranking rope several times and reinstall the spark plug
	<ul style="list-style-type: none"> ⇒ Spark plug connector not placed on. ⇒ No ignition spark. 	<ul style="list-style-type: none"> ⇒ Place on the spark plug connector. ⇒ a) Clean or replace the spark plug. b) Check the ignition cable. c) Fault cannot be eliminated? Contact the customer service
Engine starts and is stalled immediately	<ul style="list-style-type: none"> ⇒ Engine defective. ⇒ Carburettor defective 	<ul style="list-style-type: none"> ⇒ Contact the customer service ⇒ Contact the customer service ⇒ Contact the customer service
Chain saw works with interruptions	<ul style="list-style-type: none"> ⇒ Incorrect idle adjustment ⇒ Carburettor incorrectly adjusted ⇒ Spark plug fouled 	<ul style="list-style-type: none"> ⇒ Contact the customer service ⇒ Clean or replace the spark plug Check the spark plug connector
Smoke	<ul style="list-style-type: none"> ⇒ Incorrect fuel mixture ⇒ Carburettor incorrectly adjusted 	<ul style="list-style-type: none"> ⇒ Use two-stroke oil, ratio of mixture 40:1 ⇒ Contact the customer service
Machine does not work with full performance	<ul style="list-style-type: none"> ⇒ Machine overloaded. ⇒ Air filter contaminated ⇒ Carburettor incorrectly adjusted ⇒ Silencer blocked 	<ul style="list-style-type: none"> ⇒ Soil too tough ⇒ Clean or replace the air filter ⇒ Contact the customer service ⇒ Clean the outlet of the silencer
Drill rotates at idling	<ul style="list-style-type: none"> ⇒ Idle speed too high ⇒ Clutch spring broken 	<ul style="list-style-type: none"> ⇒ Adjust a lower idle speed ⇒ Replace the spring
Drill rotates but has no power	<ul style="list-style-type: none"> ⇒ Choke put to ON ⇒ Carburettor defective ⇒ Gear broken ⇒ Worn clutch shoes 	<ul style="list-style-type: none"> ⇒ Put choke to OFF once the engine runs ⇒ Contact the customer service ⇒ Contact the customer service ⇒ Replace the clutch shoes and the spring
Drill jumps	<ul style="list-style-type: none"> ⇒ Drill damaged 	<ul style="list-style-type: none"> ⇒ Replace by a new drill
Drill cuts only slowly	<ul style="list-style-type: none"> ⇒ Blunt drill 	<ul style="list-style-type: none"> ⇒ Replace the drill or have it sharpened

Technical specifications

Model	ST-GD520
Year of construction	2016
Max. engine output / speed	2.2 kW / 7500 min ⁻¹
Cubic capacity	51,7 cm ³
No-load speed n ₀	3000 min ⁻¹
Max. engine speed	9000 min ⁻¹
Auger drill speed, max.	300 rpm
Ignition system	Electronic ignition - CDI
Spark plug	LD BM6A or TORCH BMA6
Carburetor	HUA LONG
Fuel tank capacity	1,2 l
Ratio of mixture (fuel/two-stroke oil)	40:1
Spark gap	0,6 – 0,7 mm
Hand/arm vibration on the handle (according to regulation EN 1033/DIN 45675)	$a_{vhw} = < 21.206 \text{ m/s}^2$
Hand/arm vibration on the handle (according to regulation EN 1033/DIN 45675)	$a_{vhw} = < 20.882 \text{ m/s}^2$
Measuring uncertainty K	K = 1,5 m/s ²
Sound power level L _{WA}	113 dB (A)
Sound pressure level L _{PA}	88,4 dB (A)
Measuring uncertainty K	K = 3 dB (A)
Weight (without drill and with empty tank)	8.8 kg
Weight (with drill (Ø 200 mm x 800 mm) and empty tank)	12,2 kg



Conditions Of Warranty

The manufacturer warrants this product against faulty materials and workmanship for a period of 2 years after the date of purchase to the original purchaser. The warranty is applicable when the product is used in a "home owner" application. If products are used for commercial or professional purposes, the warranty period of 3 months from the date of first purchase. Warranty does not extend to failure due to fair wear and tear.

The manufacturer undertakes to replace any spare parts that are classified as defective by and appointed service dealer. The manufacturer will not accept liability for the replacement of the machine, either partially or wholly, and/or consequential damages.

Warranty does not cover failure due to:

- Insufficient maintenance
- Incorrect fuel mixture and stale fuel
- Abnormal use or accidental damage
- incorrect assembly, adjustment or operation of the product, including saw chain, guide bar and sprocket
- spare parts that are subject to wear e.g. safety parts, saw chain, guide bar, sprocket, guards, deflectors, spark plugs, filters etc.

Neither does warranty extend to:

- Freight and parking costs
- Use of non-genuine spare parts i.e. those from another manufacturer
- Use of the machine for any other purpose than that for which it was designed
- Use and maintenance of the machine in a manner not described in the owner's manual

As part of our policy of continuous product improvement, we reserve the right to alter or amend this specification without notice. As a result, the product may differ from the information contained herein, but any alteration will only be implemented without notice if it is classified as an improvement to the above specification.

READ THE MANUAL CAREFULLY BEFORE OPERATING THE MACHINE

Retain the receipt of purchase without which no warranty can be offered

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