

CSB1 P21

OPERATING INSTRUCTIONS



NORTON
SAINT-GOBAIN®

clipper®



Declaration of conformity

The undersigned manufacturer:

SAINT - GOBAIN ABRASIVES S.A.
190, BD J.F. KENNEDY
L- 4930 BASCHARAGE

Declares that this product:

Floor saw: **CSB1 P21 KIA HONDA**

Code: **70184645495**

is in conformity with the following Directives:

- ***European Machinery Directive 2006/42/EC***
- ***Electromagnetic Compatibility Directive 2004/108/EC***

and European standard:

- ***EN 13862 – Floor cutting-off machines – Safety***

A handwritten signature in black ink, appearing to read "Olivier Plenert", with a long horizontal flourish extending to the right.

Olivier Plenert
Machine Design Manager

CSB1 P21

OPERATING INSTRUCTIONS

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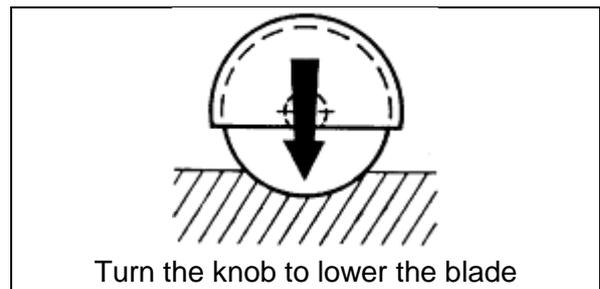
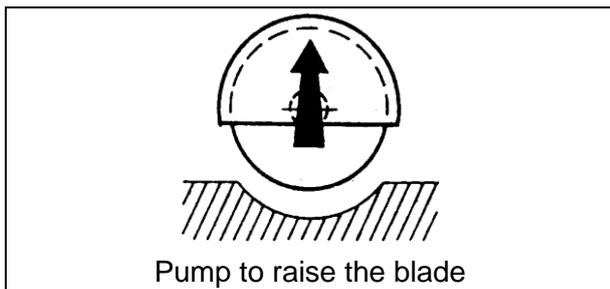
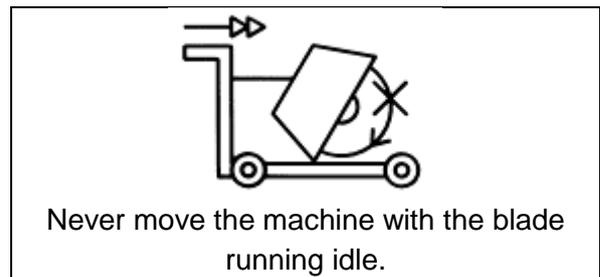
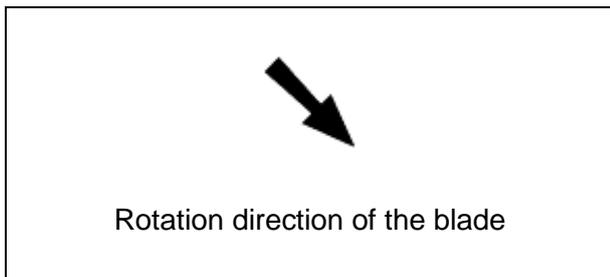
1 Basic Safety Instructions

The CSB1 is exclusively designed for the cutting of floors made of asphalt, green and cured concrete (reinforced or not) as well as of industrial cement.

Uses other than the manufacturer's instructions shall be considered as contravening the regulations. The manufacturer shall not be held responsible for any resulting damage. Any risk shall be borne entirely by the user. Observing the operating instructions and compliance with inspection and servicing requirements shall also be considered as included under use in accordance with the regulations.

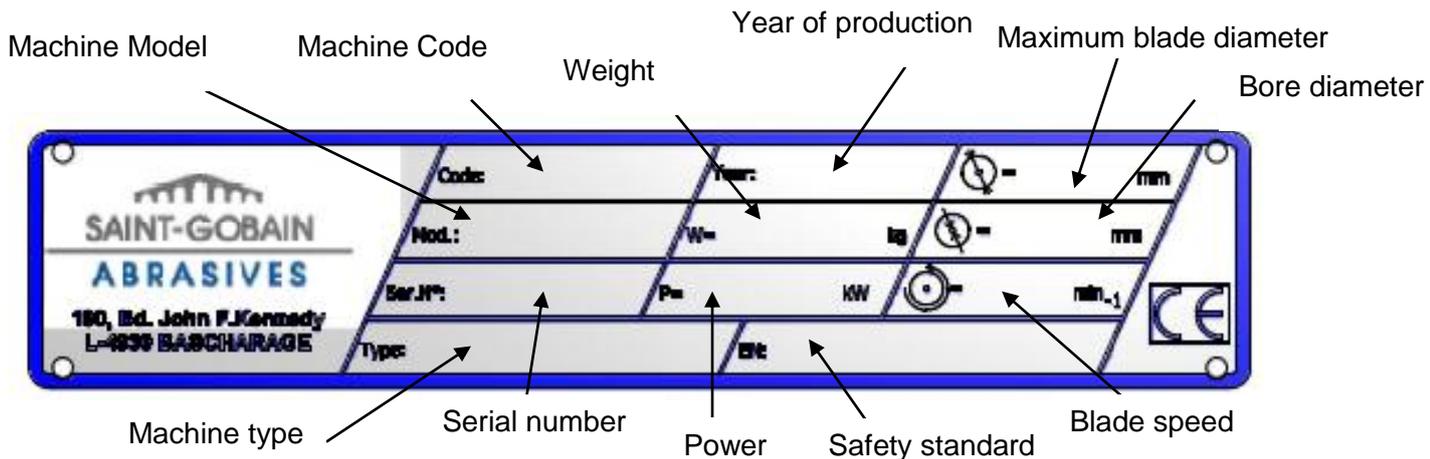
1.1 Symbols

Important warnings and pieces of advice are indicated on the machine using symbols. The following symbols are used on the machine:



1.2 Machine plate

Important data can be found on the following plate located on the machine:



1.3 Safety instructions for particular operating phases

Before commencing work

- Before commencing work, make yourself familiar with the working environment at the place of use. The working environment includes: obstacles in the area of work and manoeuvre, the firmness of the floor, necessary protection at the site relating to public thoroughfares and the availability of help in the event of accidents.
- Check for correct mounting of the blade regularly.
- Immediately remove damaged or badly worn blades, as they endanger the operator whilst rotating.
- Always cut with the blade guard in position.
- Only fit NORTON diamond blades to the machine! The use of other tools can damage the machine!
- Attention is drawn to the use of BS2092 safety goggles in conformity with specified Processes No.8 of the Protection of Eyes Regulation 1974, Regulation 2(2) Part 1.
- For security reasons, never leave the machine unattended, untied or unlocked.

While the engine is running

- Do not move the machine whilst the blade is running idle.
- Do not run the machine without the security guards in place.
- Apply cooling water continuously whilst cutting and in good time!

Petrol powered machines:

- Always use the fuel advised.
- In confined areas, exhaust gases should be evacuated and the job site properly aerated.
- Petrol and diesel machines, which by their nature emit toxic exhaust gases, must not be used in places prohibited by the Health at Work Act 1974 or which are prohibited by Factory Inspectors or Safety Officers.
- Fuel is flammable. Before filling the tank, shut down the engine, extinguish all open flames and do not smoke. Take care that no petrol is spilled on any motor part. Always wipe up spilled fuel.

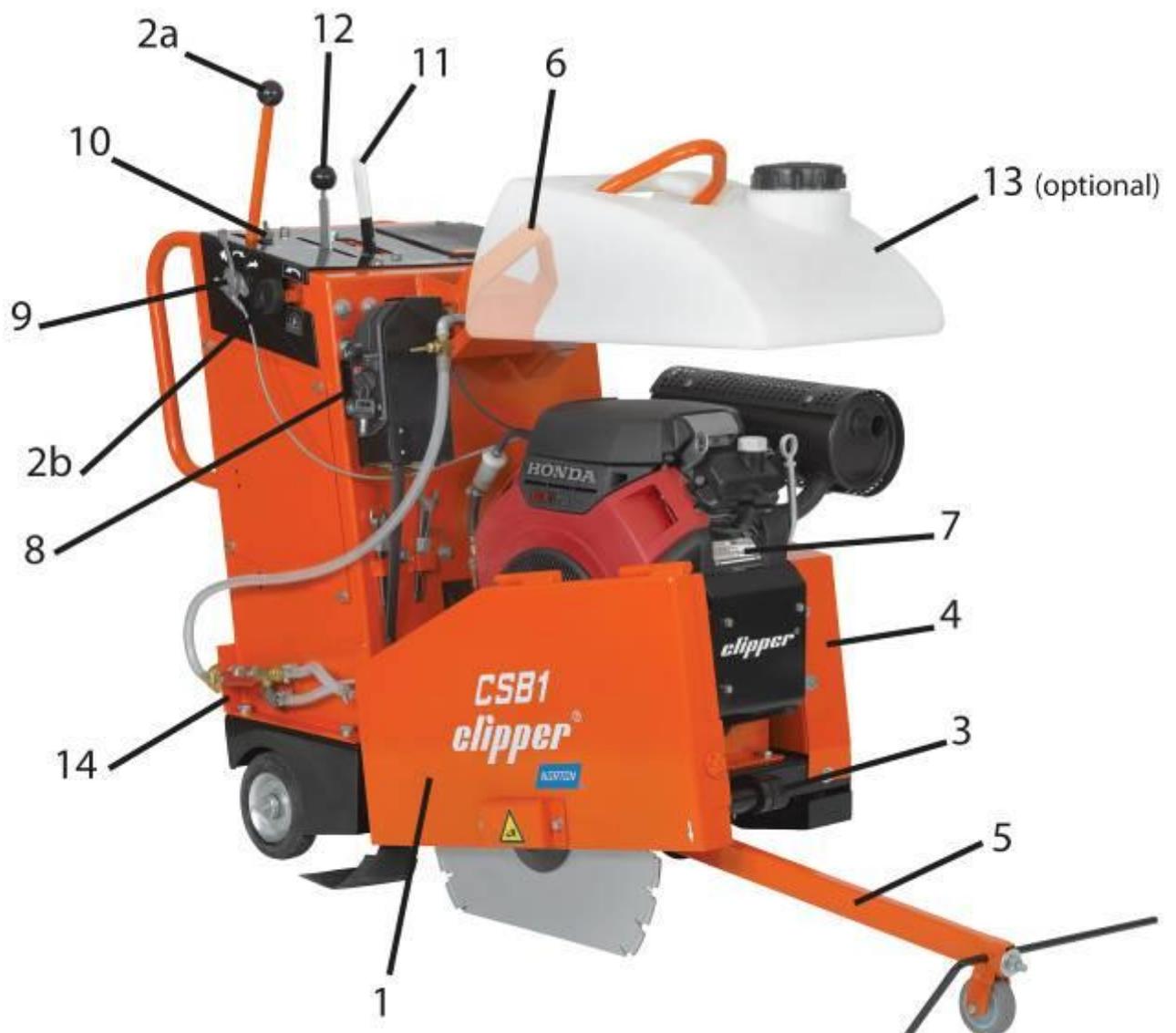
2 General description of the CSB1

Any modification, which could lead to a change in the original characteristics of the machine, may be done only by Saint-Gobain Abrasives S.A. who shall confirm that the machine is still in conformity with the safety regulations. Saint-Gobain Abrasives S.A. keeps the right of making technical or design modification without prior notification.

2.1 Short description

The **Floor Saw CSB1** you have chosen is used for repair works in concrete and asphalt on highways and runways, for trench sawing or cable loop cutting applications. It can be used for either wet or dry cutting operations. It can be easily transported in a van. The limited width of machine allows precision cuts in the tightest of situations. All component parts on the **CSB1 P21** are assembled to a high quality standard, ensuring long life, reliability and a minimum of maintenance. Special types of blades are available for asphalt, green concrete, cured concrete (reinforced or not) as well as for industrial cement flooring.

2.2 Layout



Made of jig welded open profile steel, the **CSB1** is stable but at the same time, easily transportable.

The blade guard (1) fully protects the operator and his working environment. It is firmly fixed to the main frame but can be opened to change blades.

A manually operated hydraulic pump (2a) enables graduated depth setting. Pumping on the handle will raise the blade, using the knob (2b) on the side of the machine will lower the blade.

The pivoting frame (3), hinged on the rear axle, is supporting the engine, the blade shaft assembly, and the protecting guards. Five heavy-duty belts drive the blade.

The precisely manufactured blade shaft is fitted into two heavy-duty self-aligning pillow block bearings, including grease nipples. A pulley is fitted on one end. The shaft is reduced to 25,4mm at the other end, allowing an inner flange complete with dowel pinholes to be fixed.

The steel belt guard (4) is bolted to the mainframe of the machine. It is covering the five drive belts and pulleys for protection of the environment while the machine is running.

The pointer (5) allows the operator to make precise cut easily.

A hook (6) on the machine allows the machine to be transported using a crane.

The Honda GX630 engine (7) is started using a key (8). The handle (9) regulates the speed of the motor. The motor is connected to an emergency shut down switch (10) on the board of the machine. This allows an immediate stop of the machine in case of danger.

The machine can be moved back and forward through a hydrostatic device. The clutch is engaged or disengaged using the handle (11). The direction and speed of movement is regulated using the handle (12).

The water cooling system is composed of a 25 liters optional water tank (13), a water tank tap (14) and two water nozzles on the blade guard ensuring adequate flow of water to both sides of the blade. External water supply may also be used by connecting to the palm coupling.

2.3 Technical data

Engine	Honda GX630, 4 strokes, 2 cylinders, 20.8HP (15.5kW)
Fuel	Automotive unleaded gasoline (RON 91 mini)
Oil (Motor)	Honda 4-Stroke, or equivalent high detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirement for service classification SG, SF. (SG, SF designated on the oil container). SAE 10W-30 recommended
Oil (Hydrostatic)	Hydraulic oil with a viscosity equivalent to the one of an automotive oil SAE 20W-20
Spark plugs	ZFR5F (NGK)
Starter	With key
Max. blade diameter	600 mm
Bore	25,4 mm
Max. cutting depth mm	225 mm
Flange diameter	125 mm
Blade shaft speed	1775 min ⁻¹
Driving belts	5
Water tank	- / 25 l optional
Machine dimensions (length x width x height)	1200x600x1100mm
Weight	240 kg
Max. operating weight	280 kg
Sound pressure level	89 dB (A) following ISO EN 11201
Sound energy level	107 dB (A) following ISO EN 3744

3 Assembly and commissioning

Before beginning the work with the CSB1, you have to assemble some parts.

3.1 Tool assembly

Only use NORTON blades with the CSB1.

A blade with a maximum diameter of 600 mm can be fitted. All tools used must be selected with regard to their maximum permitted cutting speed for the machine's maximum permitted rotation speed.

Before mounting a new blade, switch the machine off.

To mount a new blade, follow these steps:

- Pump until the cutting head is in the raised position.
- Take the water nozzle off the blade guard.
- Loosen the two screws maintaining the blade guard with the 19mm wrench, and open it.
- Loosen the screw holding the removable outer flange with the 19mm wrench.
- Remove the outer flange.
- Clean the flanges and blade shaft and inspect for wear.
- Mount the blade on the shaft ensuring that direction of rotation is correct. Wrong direction of rotation blunts the blade quickly.
- Replace outer blade flange.
- Tighten screw with 19mm wrench.
- Close the blade guard and retighten the two screws.
- Reconnect water nozzle.

The blade bore must correspond exactly to the blade shaft. Cracked or damaged bore is dangerous for the operator and for the machine.

3.2 Water cooling system

Fill the optional water tank with clean water.

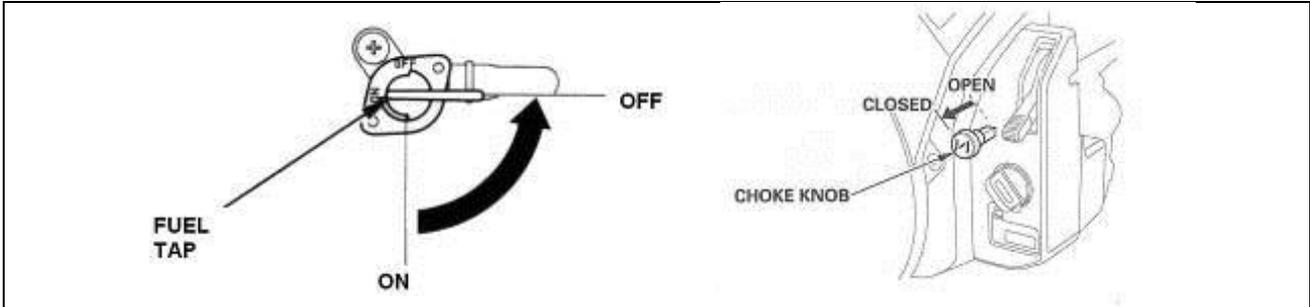
Open water-tap (note that handle on water-tap should be in line with water-flow).

Ensure that water is flowing freely in the circuit and delivered adequately to both sides of the blade, as insufficient water supply may result in premature failure of the diamond blade.

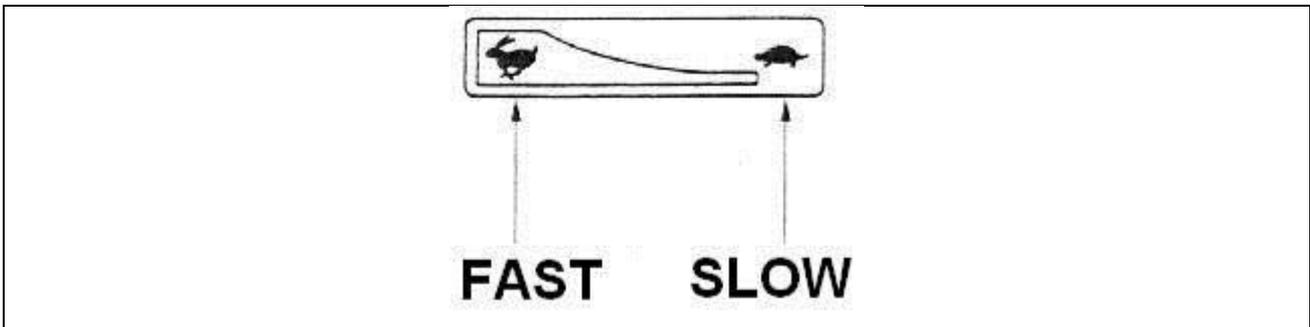
In case of frost, empty the water cooling system.

3.3 Starting the machine

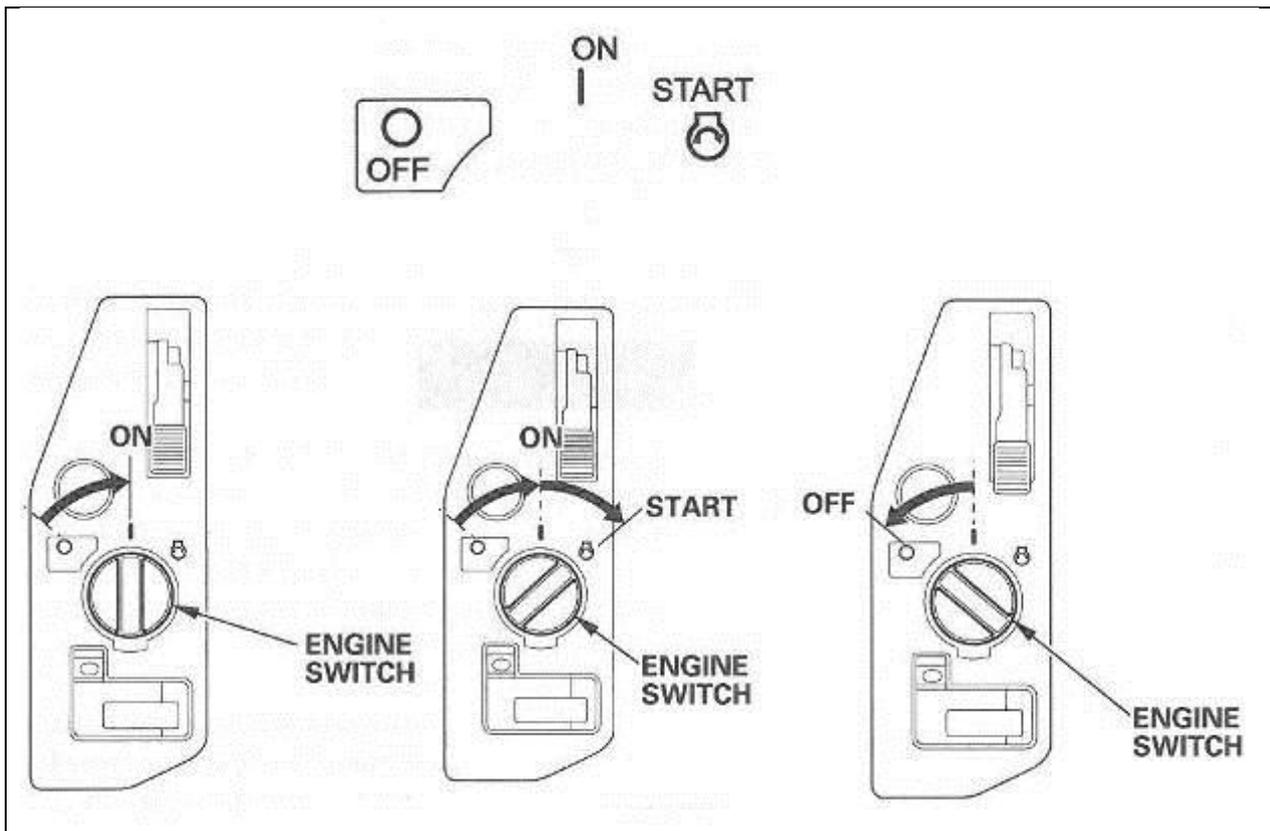
Make sure the blade is raised clear up the ground before starting the machine. For hydrostatic drive machines, also ensure the clutch is disengaged.



To put petrol in the fuel tank. Place the fuel tap on the position ON. To start a cold engine, leave the button choke on the CLOSED position. Do not use the choke when the engine is hot or when the atmospheric temperature is high.



Move the control lever of gases of 1/3 towards the FAST position.



To start the engine:

Turn the key of starting towards the position **START** and maintain it 5 seconds or until the engine starts. Do not use the electric starter during more than 5 seconds of continuation. If the engine does not start, leave the key, and wait at least 10 seconds before actuating the key again.

When the engine starts, leave the key on the position **START**.

Move the button of choke on the position **OPEN** as soon as the engine heats sufficiently to turn regularly.

Place the control lever of gases according to the maximum speed.

To turn off the engine:

Put the lever of gases completely to the minimum speed, towards the position **SLOW**, then turn the switch of the engine to the off position. Place then the fuel tap on **STOP**.

Do not use the switch of emergency stop to turn off the engine under the normal conditions. Indeed, if the key remains in the position **START**, the battery discharges, leave your key on the off position.

4 Transport and Storing

Take the following measures in order to transport and store the CSB1 P21 securely.

4.1 Securing for transport

Before transporting the machine:

- Remove the blade.
- Empty the water tank.
- Raise the guide-a-cut in its upright position.
- Raise the cutting frame to its highest position using the hydraulic pump.
- Take the key off the starter.

4.2 Transport procedure

The machine can be moved on a flat surface using its wheels. You have two possibilities:

- Disengage the clutch of the machine and push it without starting the motor.
- Make sure the clutch is disengaged and then start the engine. Make sure the speed handle is in middle position, then engage the clutch and use the speed handle to move the machine backwards or forwards, and to regulate the speed.

Use the metal lifting eye, located above the engine when lifting the CSB1 with a crane. This lifting eye must not be used to lift the saw if the blade is stuck in the cut.

4.3 Long period of inactivity

If the machine is not going to be used for a long period, please take the following measures:

- Completely clean the machine.
- Loosen the drive belts.
- Disconnect the battery.
- Change the motor oil.
- Empty the water system.

The storage site must be clean, dry and at a constant temperature.

5 Operating the CSB1

5.1 Site of work

Before you start working, please check the following points:

- Remove from the site anything, which might hinder the working procedure.
- Make sure the site is sufficiently well lit.
- Make sure you have a continual adequate view of the working area so you can intervene in the working process at any time.
- Keep other staff out of the area, so you can work securely.

5.2 Cutting method

In this section, you can find instructions to make a straight cut at the desired depth.

5.2.1 Preparing your cut

Before starting the machine,

- Draw a line on the floor over the cutting length.
- Make sure you have filled the engine tank with fuel, and the optional water tank with water, or that you have connected the blade guard to the water supply. No petrol is supplied with the machine.
- The engine is shipped with oil. Check oil level before starting. Top up if required.
- Make sure you have mounted the correct blade as recommended by the manufacturer depending on the material to be worked, the working procedure (dry or wet cut) to be carried out, and the efficiency required.
- Make sure that the flanges securely hold the diamond blade.
- Make sure that the blade is not touching the floor before starting.
- Roll the machine until the blade is over the line.
- Lower the guide-a-cut so it touches the line.
- Set the speed handle in the middle position, so that if you engage the clutch, the machine will not move unexpectedly. Make also sure that the clutch is disengaged.

5.2.2 Cutting the floor

You can now start the engine.

To make your cut,

- Turn the knob on the side of the machine until the blade slightly touches the floor.
- Open water valve to control the amount of water required for the type of blade, using 15 to 25l/min for wet and 1-2l/min for dry cutting, dust control. Check for minimum water level regularly in the optional water tank.
- Turn the knob to lower blade into the cut. Once the required depth of cut is reached, you can engage the clutch and use the back and forward handle to regulate speed. Always cut with the machine moving forward, as cutting backwards will damage the blade and the blade shaft. Follow the line with the pointer. The feed speed must be adjusted depending on the material being cut, and depth of cut.
- At the end of the cut, raise the blade out of the cut by pumping, switch off the engine using the key and shut-off the water.

6 Maintenance and service

ATTENTION : to perform maintenance on the machine, always switch it off. Wear a face mask and safety goggles while performing the maintenance of the machine.

6.1 Maintenance of the machine

To ensure a long-term quality from the cutting with the CSB1, please follow the maintenance plan below:

	Regular service period Perform at every indicated period →	After one hour of work	Begin of the day	During the changing of the tool	End of the day	Every week	After a fault	After a damage
Whole machine	Visual control (general aspect, watertightness)							
	Clean							
Oil (hydrostatic)	Control and refill							
Flange and blade fixing devices	Clean							
Belts tension	Control							
Water hoses and nozzles	Clean							
Engine housing	Clean							
Reachable nuts and screws	Tighten up							

Adjustment and replacement of the belts

After one hour of work, the belts heat and stretch. Therefore, you have to re-tension them.

To adjust the belts, firstly remove the belt guard by unscrewing the 3 screws with the 17mm wrench. Loose the 2 bolts maintaining the part holding the tension pulley with the 17mm wrench. You can know re-tension the belts by moving the tension pulley (60N by belt for a displacement of 10mm where the belt is unloaded). Retighten the two screws maintaining the holder of the tension pulley, and re-assemble the belt guard.

To replace the belts, move the tension pulley completely forward by loosening the two screws maintaining the holding part. Adjust the belts and retighten them by moving the tension pulley on the belts.

Always use a matched set of belts. Do not replace single belts. After controlling or retightening the belts, reassemble the belt guard on the frame of the machine.

Lubrication

The CSB1 P21 uses life-lubricated bearings. Therefore, you don't need to lubricate them at all.

At the beginning of a working day, check the level of oil in your hydrostatic transmission. You must have 1 cm of oil in the oil container over the hydrostatic transmission. Do not fill more than 1 cm, otherwise you will damage this device.

Cleaning of the machine

Your machine will last longer if you clean it thoroughly after each day of work.

6.2 Maintenance of the engine

	Regular service period Perform at every indicated month or operating hour interval, whichever comes first →	Each use	First month or 20 hours	Every 3 months or 50 hours	Every 6 months or 100 hours	Every 6 months or 100 hours
Engine oil	Check level					
	Change					
Air cleaner filter	Check					
	Clean					
	Change paper filter element					
Fuel strainer cup	Clean					
Spark plug	Check-Clean					
Fuel line	Check (Replace if necessary)	Every 2 years				

All information of maintenance related to the engine is available in the handbook of the engine. For other maintenance, please contact a center of maintenance of the engine.

The handbook of the engine and all information referring itself are also available in download in the language of the country at this address:

<http://www.honda-engines-eu.com>

7 Faults: causes and cures

7.1 Fault-finding procedures

Should any fault occur during the use of the machine, turn it off. Let only qualified staff make any intervention other than the one described in the previous section.

7.2 Trouble-shooting guide

Trouble	Possible source	Resolution
Hard starting	Not enough fuel	Fill fuel tank
	Low oil level	Add oil
	Fuel filter clogged	Clean fuel filter
	Spark plug faulty	Inspect spark plug
Engine lacks power	Stronger fault	Contact nearest engine maintenance centre
	Air filter restricted	Clean or replace air filter

7.3 Customer service

When ordering spare parts, please mention:

- The serial number (7 digits).
- The code of the part.
- The exact denomination.
- The number of parts required.
- The delivery address.
- Please indicate clearly the means of transportation required such as "express" or "by air". Without specific instructions, we will forward the parts through the means which seem appropriate to us and but which is not always the quickest way.

Clear instructions will avoid problems and faulty deliveries.

If not sure, please send us the defective part.

In the case of a warranty is claim, the part must always be returned for evaluation.

Spare parts for the engine can be ordered with the manufacturer of the engine or with their dealer, which is often quicker and cheaper.

This machine has been manufactured by Saint-Gobain Abrasives S.A.

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Guarantee can be claimed and technical support obtained from your local distributor where machines, spare parts and consumables can be ordered as well:

Benelux and France:

From Saint-Gobain Abrasives
in the Grand-Duché de Luxembourg

Free telephone numbers:

Belgium : 0 800 18951

France: 0 800 90 69 03

Holland: 0 8000 22 02 70

e-mail: sales.nlx@saint-gobain.com

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