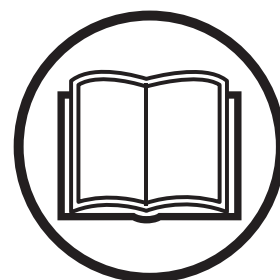




Husqvarna®



Operator's manual FS400 LV



English

Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

KEY TO SYMBOLS

Symbols on the machine:

WARNING! The machine can be a dangerous tool if used incorrectly or carelessly, which can cause serious or fatal injury to the operator or others.



Wear personal protective equipment. See instructions under the "Personal protective equipment" heading.



Before moving, the blade must stop rotating.



Remove the blade prior to transport



Environmental marking. Symbols on the product or its packaging indicate that this product cannot be handled as domestic waste.



By ensuring that this product is taken care of correctly, you can help to counteract the potential negative impact on the environment and people that can otherwise result through the incorrect waste management of this product.

For more detailed information about recycling this product, contact your municipality, your domestic waste service or the shop from where you purchased the product.

Other symbols/decals on the machine refer to special certification requirements for certain markets.

Explanation of warning levels

The warnings are graded in three levels.

WARNING!



WARNING! Used if there is a risk of serious injury or death for the operator or damage to the surroundings if the instructions in the manual are not followed.

CAUTION!



CAUTION! Used if there is a risk of injury to the operator or damage to the surroundings if the instructions in the manual are not followed.

NOTICE!

NOTICE! Used if there is a risk of damage to materials or the machine if the instructions in the manual are not followed.

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Dear Customer,

Thank you for choosing a Husqvarna product!

It is our wish that you will be satisfied with your product and that it will be your companion for a long time. A purchase of one of our products gives you access to professional help with repairs and services. If the retailer who sells your machine is not one of our authorised dealers, ask him for the address of your nearest service workshop.

This operator's manual is a valuable document. Make sure it is always at hand at the work place. By following its content (using, service, maintenance etc.) the life span and the second-hand value of the machine can be extended. If you will sell this machine, make sure that the buyer will get the operator's manual.

More than 300 years of innovation

Husqvarna AB is a Swedish company based on a tradition that dates back to 1689, when the Swedish King Charles XI ordered the construction of a factory for production of muskets. At that time, the foundation was already laid for the engineering skills behind the development of some of the world's leading products in areas such as hunting weapons, bicycles, motorcycles, domestic appliances, sewing machines and outdoor products.

Husqvarna is the global leader in outdoor power products for forestry, park maintenance and lawn and garden care, as well as cutting equipment and diamond tools for the construction and stone industries.

User responsibility

It is the owner's/employer's responsibility that the operator has sufficient knowledge about how to use the machine safely. Supervisors and operators must have read and understood the Operator's Manual. They must be aware of:

- The machine's safety instructions.
- The machine's range of applications and limitations.
- How the machine is to be used and maintained.

National legislation could regulate the use of this machine. Find out what legislation is applicable in the place where you work before you start using the machine.

The manufacturer's reservation

All information and all data in the Operator's Manual were applicable at the time the Operator's Manual was sent to print.

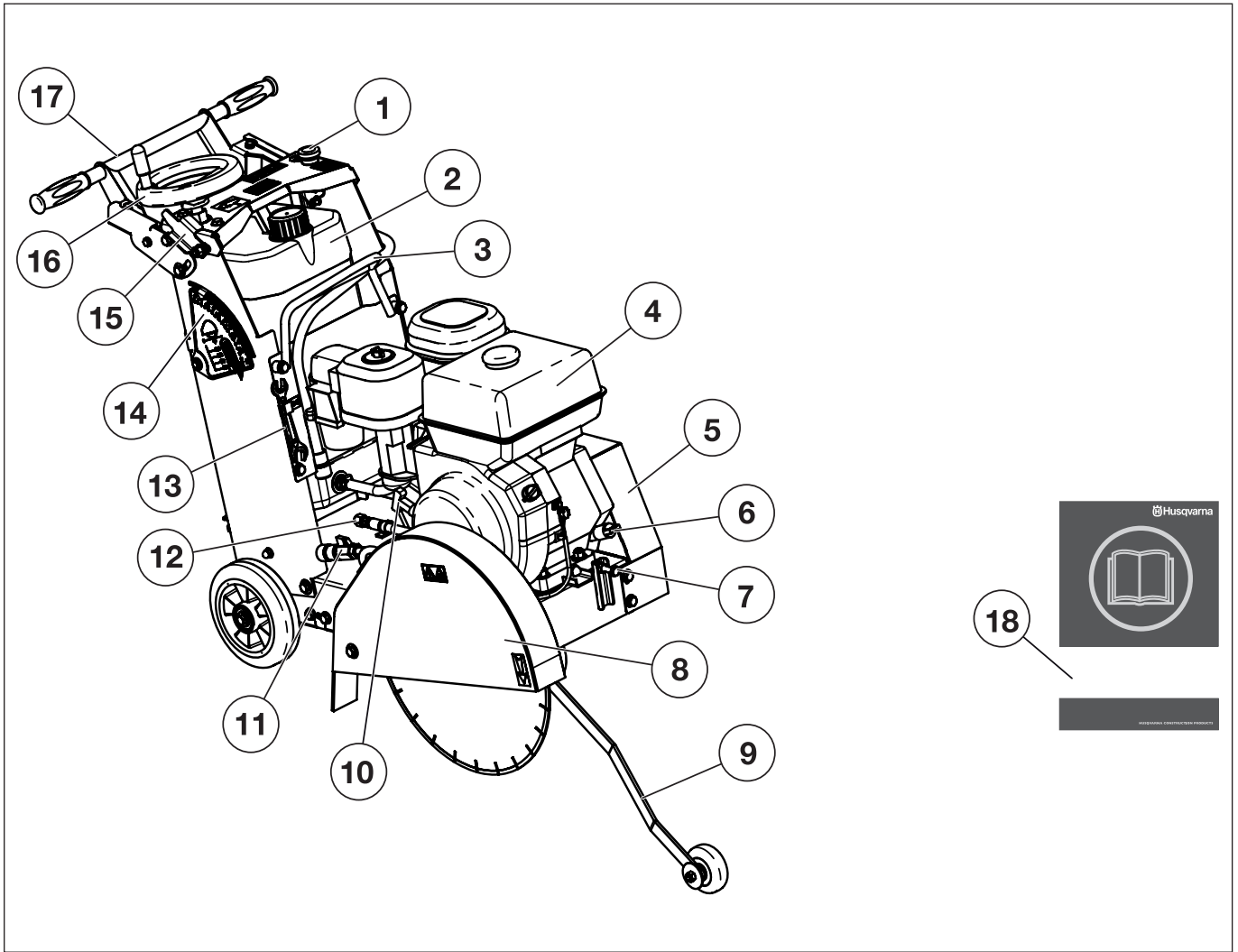
Husqvarna AB has a policy of continuous product development and therefore reserves the right to modify the design and appearance of products without prior notice.

Features

Values such as high performance, reliability, innovative technology, advanced technical solutions and environmental considerations distinguish Husqvarna's products.

Some of the unique features of your product are described below.

PRESENTATION



What is what on the machine?

- | | |
|---------------------------------|---------------------------------|
| 1 Machine stop | 10 Starter handle |
| 2 Water tank | 11 Water tap |
| 3 Lifting eye | 12 Draining, engine oil |
| 4 Fuel tank | 13 Service spanner |
| 5 Protective cover - drive belt | 14 Cutting depth indicator |
| 6 Engine oil fill | 15 Locking lever, cutting depth |
| 7 Tension screw, drive belt | 16 Feeding wheel, cutting depth |
| 8 Blade guard | 17 Handle |
| 9 Front guide | 18 Operator's manual |

MACHINE'S SAFETY EQUIPMENT

General



WARNING! Never use a machine that has faulty safety equipment! If your machine fails any checks contact your service agent to get it repaired.

The engine should be switched off, and the stop switch in STOP position.

This section describes the machine's safety equipment, its purpose, and how checks and maintenance should be carried out to ensure that it operates correctly.

Machine stop

The machine stop is used to quickly switch off the engine and all electrical functions except lights.

Testing the machine stop

- Press the machine stop and check that the engine stops.
- Disengage machine stop button (twist clockwise)

Blade guard



WARNING! Always check that the blade guard is fitted correctly before starting the machine.

The blade guard is designed to prevent parts of the blade or cutting fragments from being thrown towards the user.

Checking the blade guard

Check that the blade guard is not damaged or cracked. Replace the blade guard if it is exposed to impact or is cracked.

Always check that the guard is correctly fitted before starting the machine. Also check that the blade is fitted correctly and is not damaged in any way. A damaged blade can cause personal injuries.

Muffler



WARNING! Never use a machine without a muffler, or with a faulty muffler. A damaged muffler may substantially increase the noise level and the fire hazard. Keep fire fighting equipment handy.

The muffler gets very hot during and after use. This also applies during idling. Be aware of the fire hazard, especially when working near flammable substances and/or vapours.

The muffler is designed to keep noise levels to a minimum and to direct exhaust fumes away from the user.

Inspecting the muffler

Check regularly that the muffler is complete and secured correctly.

ASSEMBLING AND ADJUSTMENTS

General

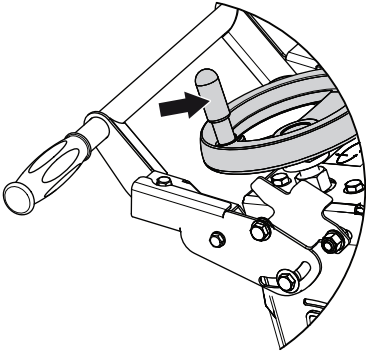


WARNING! Switch off the engine before carrying out any checks or maintenance.

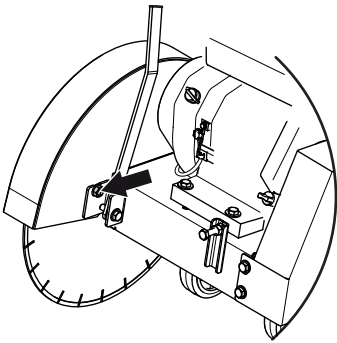
Check that the blade and the blade guard are correctly fitted before starting the machine.

Fitting the blade

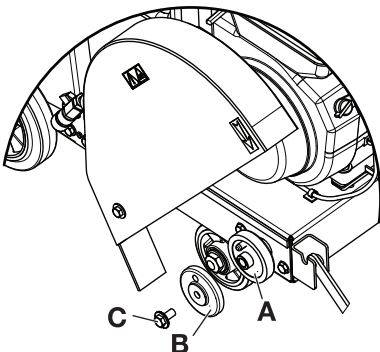
- Wind up the cutting depth feeding wheel.



- Switch off the water tap. Disconnect the water hose from the blade guard.
- Remove the screw. Tilt the blade guard.



- Check that the blade, blade flange and blade shaft are undamaged. Clean the contact surfaces of the blade and the blade flange.
- Check the blade's direction of rotation. The arrow on the blade indicates the direction of rotation.
- Fit the blade on the blade shaft (A). Fit the blade flange (B) over the blade. Tighten the screw (C) properly using the supplied spanner.

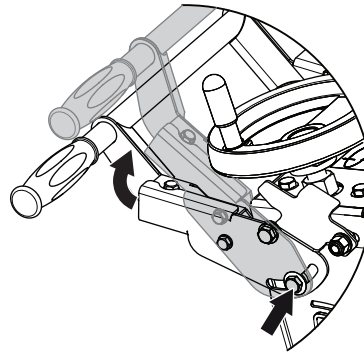


- Refit the blade guard and water hose.
- Test run the machine and check that no unusual sounds occur. Unusual sounds are a sign of an incorrectly mounted blade.

Handle height

The height of the lever can be adjusted in height.

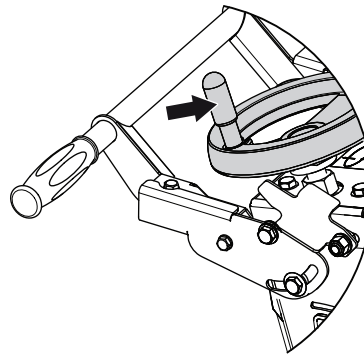
- Loosen the screw. Set handle to most comfortable working height. Tighten the screw.



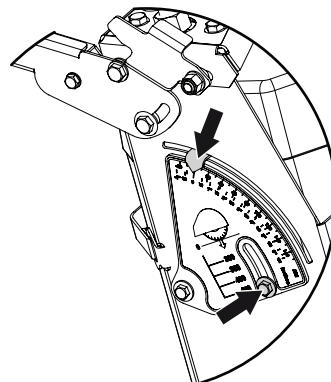
Cutting depth indicator

The indicator must be calibrated before it is taken into use.

- Wind down the blade so that it barely touches the ground.



- Loosen the screw. Position the indicator arrow to "0". Tighten the screw.



BLADES

General

- Diamond blades consist of a steel core provided with segments that contain industrial diamonds.
- Always use a sharp diamond blade.
- The blades should be marked with the same or a higher speed than that stated on the machine's rating plate.
- Never use blades other than original blades designed for the machine.

Water cooling

Water cooling must always be used. This cools the blades and increases their life and prevents dust build-up.

Diamond blades for different materials



WARNING! Never use a blade for any other materials than that it was intended for.

Husqvarna has a wide range of wet cutting blades for floor and wall cutting, including blades for everything from fresh to hardened concrete in different hardness classes as well as a comprehensive range of asphalt blades. Check with your Husqvarna dealer to see which blades are best suited for your usage.

Checking the blade

- Check that the blade and the blade guard is not damaged or cracked. Replace the blade or the blade guard if it has been exposed to impact or is cracked. Never use a damaged or worn blade.
- Check that the right amount of water reaches the blade.

Transport and storage

- Inspect new blades for transport or storage damage.
- The blade should be removed from the machine after use and stored well. Store the blade dry.

FUEL HANDLING

General



WARNING! Running an engine in a confined or badly ventilated area can result in death due to asphyxiation or carbon monoxide poisoning.

Fuel and fuel fumes are highly inflammable and can cause serious injury when inhaled or allowed to come in contact with the skin. For this reason observe caution when handling fuel and make sure there is adequate ventilation.

The exhaust fumes from the engine are hot and may contain sparks which can start a fire. Never start the machine indoors or near combustible material!

Do not smoke and do not place any hot objects in the vicinity of fuel.

Fuel

NOTICE! The machine is equipped with a four-stroke engine. Make sure there is always sufficient oil in the engine.

Petrol

- Use good quality unleaded or leaded petrol.
- The lowest octane recommended is 90 (RON). If you run the engine on a lower octane grade than 90 so-called knocking can occur. This gives rise to a high engine temperature, which can result in serious engine damage.

Environment fuel

Engine oil

- Check the oil level before starting the machine. A too low oil level can cause serious damage to the engine. See instructions in the section "Maintenance".
- Never use oil intended for two-stroke engines.

Fueling



WARNING! Always stop the engine and let it cool for a few minutes before refuelling.

When refuelling, open the fuel cap slowly so that any excess pressure is released gently.

Clean the area around the fuel cap.

Tighten the fuel cap carefully after refuelling.

Move the machine at least 3 m from the refuelling point before starting it.

Never start the machine:

- If you have spilled fuel or engine oil on the machine. Wipe off the spill and allow the remaining fuel to evaporate.
- If you have spilled fuel on yourself or your clothes, change your clothes. Wash any part of your body that has come in contact with fuel. Use soap and water.
- If the machine is leaking fuel. Check regularly for leaks from the fuel cap and fuel lines.

Transport and storage

- Store and transport the machine and fuel so that there is no risk of any leakage or fumes coming into contact with sparks or open flames, for example, from electrical machinery, electric motors, electrical relays/switches or boilers.
- When storing and transporting fuel always use approved containers intended for this purpose.

Long-term storage

- When storing the machine for long periods the fuel tank must be emptied. Contact your local petrol station to find out where to dispose of excess fuel.

OPERATING

Protective equipment

General

- Do not use the machine unless you are able to call for help in the event of an accident.

Personal protective equipment

You must use approved personal protective equipment whenever you use the machine. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your dealer for help in choosing the right equipment.



The use of products such as cutters, grinders, drills, that sand or form material can generate dust and vapours which may contain hazardous chemicals. Check the nature of the material you intend to process and use an appropriate breathing mask.

Long-term exposure to noise can result in permanent hearing impairment. So always use approved hearing protection. Listen out for warning signals or shouts when you are wearing hearing protection. Always remove your hearing protection as soon as the engine stops.

Always wear:

- Approved protective helmet
- Approved hearing protection
- Protective goggles or a visor
- Breathing mask
- Tight-fitting, heavy-duty and comfortable clothing that permits full freedom of movement.
- Boots with saw protection, steel toe-cap and non-slip sole

Other protective equipment

IMPORTANT! Sparks may appear and start a fire when you work with the machine. Always keep fire fighting equipment handy.

- Fire Extinguisher
- Always have a first aid kit nearby.

General safety precautions

This section describes basic safety directions for using the machine. This information is never a substitute for professional skills and experience.

- Please read the operator's manual carefully and make sure you understand the instructions before using the machine.
- Keep in mind that the operator is responsible for accidents or hazards occurring to other people or their property.
- The machine must be kept clean. Signs and stickers must be fully legible.

Always use common sense

It is not possible to cover every conceivable situation you can face. Always exercise care and use your common sense. If you get into a situation where you feel unsafe, stop and seek expert advice. Contact your dealer, service agent or an experienced user. Do not attempt any task that you feel unsure of!



WARNING! The machine can be a dangerous tool if used incorrectly or carelessly, which can cause serious or fatal injury to the operator or others.

Never allow children or other persons not trained in the use of the machine to use or service it.

Never allow anyone else to use the machine without first ensuring that they have read and understood the contents of the operator's manual.

Never use the machine if you are fatigued, while under the influence of alcohol or drugs, medication or anything that could affect your vision, alertness, coordination or judgement.



WARNING! Unauthorized modifications and/or accessories may lead to serious injury or death to the user or others. Under no circumstances may the design of the machine be modified without the permission of the manufacturer.

Do not modify this product or use it if it appears to have been modified by others.

Never use a machine that is faulty. Carry out the safety checks, maintenance and service instructions described in this manual. Some maintenance and service measures must be carried out by trained and qualified specialists. See instructions under the Maintenance heading.

Always use genuine accessories.

OPERATING



WARNING! This machine produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this machine.

Work area safety

- Observe your surroundings to ensure that nothing can affect your control of the machine.
- Ensure that no one/nothing can come into contact with the cutting equipment or be hit by parts if the blade breaks.
- Do not use the machine in bad weather, such as dense fog, heavy rain, strong wind, intense cold, etc. Working in bad weather is tiring and can lead to dangerous conditions, e.g. slippery surfaces.
- Never start to work with the machine before the working area is clear and you have a firm foothold. Look out for any obstacles with unexpected movement. Ensure when cutting that no material can become loose and fall, causing injury to the operator. Take great care when working on sloping ground.
- Ensure that the working area is sufficiently illuminated to create a safe working environment.
- Make sure that no pipes or electrical cables are routed in the working area or in the material to be cut.
- Make sure that electrical cables within the working area are not live.

Basic working techniques

- This machine is designed and intended for cutting of fresh and hardened concrete in different hardness classes and of asphalt. Use in any other way is considered as contrary to the intended use.
- Always saw in a manner that permits easy access to the machine stop.
- Check that no tools or other objects have been left lying on the machine.
- Never leave the machine unsupervised with the motor running.
- Always check that the blade guard is fitted correctly before starting the machine. Never cut without using the blade guard.
- Clearly mark out all cuts to be made before you start sawing, plan these so they can be carried out without danger to persons or the machine.
- Do not turn, rotate or move the machine sideways while the blade is rotating.
- Firmly secure or anchor concrete blocks before cutting. The heavy weight of cut material can cause both extensive damage to the machine and serious personal injury if it cannot be moved under controlled conditions.
- Make sure that there is always another person close at hand when you use the machines, so that you can call for help if an accident should occur.

Jammed blade

A blade can become jammed because of:

- The tension of the drive belt
- Incorrect fuel type
- Too high feed rate
- Too sharp inclination of the work piece

Always loosen the blade from the groove and carefully inspect the machine before you continue to work.

Transport and storage

- The machine is equipped with transportation wheels, and can easily be transported without the engine running. Make sure that the blade is in the top position before moving the machine.
- Remove the blade before transportation or storage of the machine.
- Observe care when lifting. You are handling heavy parts, which imply the risk of pinch injuries or other injuries.
- Always use the machine mounted lifting eye when lifting.
- Secure the equipment during transportation in order to avoid transport damage and accidents.
- For transport and storage of fuel, see the section "Fuel handling".
- For transport and storage of Blades, see the section "Blades".
- Store the equipment in a lockable area so that it is out of reach of children and unauthorized persons.
- If there is a risk of freezing, the machine must be drained of any remaining water coolant.

STARTING AND STOPPING

Before starting

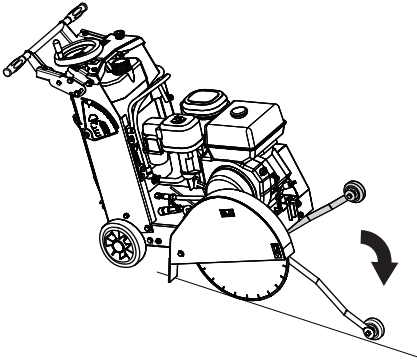


WARNING! Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

Wear personal protective equipment. See instructions under the "Personal protective equipment" heading.

Make sure no unauthorised persons are in the working area, otherwise there is a risk of serious personal injury.

- Perform daily maintenance. See instructions in the section "Maintenance".
- Fill the water tank or connect the machine to a water supply.
- Mark the cuts to be made.
- Lower the front guide and align the machine with the marking.



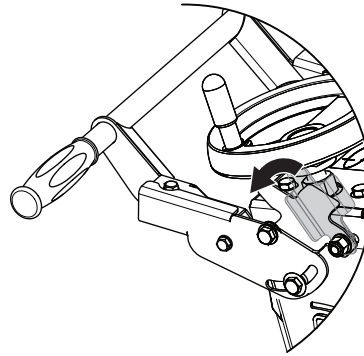
Starting

Start the engine

- Read the operator's manual supplied by the engine manufacturer.

Start the cutting.

- Open the water tap.
- Run the engine on full throttle.
- Lower the wheel locking control for setting of cutting depth.



- Wind down the blade to the cutting depth required. Lower the blade slowly to avoid engine stop.
- Raise the wheel locking control for setting of the cutting depth.
- Slowly push the machine forwards. Make sure that the front guide and the blade do not deviate from the marking.

Stopping

Stop the cutting.

- Lower the wheel locking control for setting of cutting depth. Unwind the blade from the groove.
- Raise the wheel locking control for setting of the cutting depth.
- Switch off the water tap.

Stop the engine

- Read the operator's manual supplied by the engine manufacturer.
- Move the power lever to the "STOP" position.

MAINTENANCE

General



WARNING! The user must only carry out the maintenance and service work described in this Operator's Manual. More extensive work must be carried out by an authorized service workshop.

Switch off the engine before carrying out any checks or maintenance.

Wear personal protective equipment. See instructions under the "Personal protective equipment" heading.

The life span of the machine can be reduced and the risk of accidents can increase if machine maintenance is not carried out correctly and if service and/or repairs are not carried out professionally. If you need further information please contact your nearest service workshop.

- Let your Husqvarna dealer regularly check the machine and make essential adjustments and repairs.

Maintenance schedule

In the maintenance schedule you can see which parts of your machine that require maintenance, and with which intervals it should take place. The intervals are calculated based on daily use of the machine, and may differ depending on the rate of usage.

Daily maintenance
Cleaning
External cleaning
Air filter
Sediment cup
Functional inspection
General inspection
Engine oil
Drive belt
Machine stop*
Blade guards*
Muffler*
Blade**
Lubrication
Blade shaft
Grease nipple for depth adjustment system

*See instructions in the section "Machine's safety equipment".

** See instructions in the section "Blades" and "Assembly and settings".

Cleaning

External cleaning

- Check that all couplings, connections and cables are intact and free from dirt.
- The blade is cooled by water being sprayed through small holes in the blade guard. Make sure that these small holes are unblocked so that the blade is properly cooled.

Air filter

For cleaning and change of air filter, read the operator's manual supplied by the engine manufacturer.

- The air filter may need cleaning 2-3 times per day in extremely dusty environments.
- A damaged air filter must always be replaced.

Spark plug

- If the machine is low on power, difficult to start or runs poorly at idle speed: always check the spark plug first before taking other steps.
- Ensure that the spark plug cap and ignition lead are undamaged to avoid the risk of electric shock.
- If the spark plug is dirty, clean it and at the same time check the electrode gap. Replace if necessary. See the supplied instruction manual for the engine.

CAUTION! Always use the recommended spark plug type! Use of the wrong spark plug can damage the piston/cylinder.

These factors cause deposits on the spark plug electrodes, which may result in operating problems and starting difficulties.

- An incorrect fuel mixture (too much or incorrect type of oil).
- A dirty air filter.

MAINTENANCE

Functional inspection

General inspection

- Check that nuts and screws are tight.

Engine oil

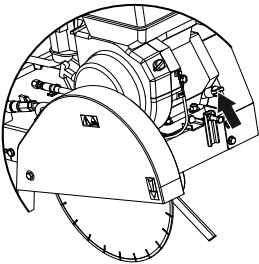


CAUTION! Remember that oil can pose a hazard to health and the environment. Follow local regulations for disposal and recycling.

For change of engine oil, read the operator's manual supplied by the engine manufacturer.

Checking the engine's oil level.

- The engine must be placed in a horizontal position when checking the oil level. Dismantle the blade or take other measures to be able to tilt the machine so that the engine is placed in a horizontal position.
- Check oil level and top up if necessary. The oil level must never be below the lower measuring line.



- For the best result and function use HUSQVARNA engine oil.
- When HUSQVARNA engine oil is not available another high grade engine oil can be used. Use engine oil of quality SAE 10W-30, class API, MS, SD, SE or higher.
- Never use oil intended for two-stroke engines.

Drive belt

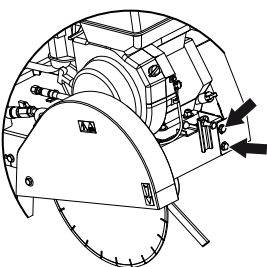
NOTICE! Do not over-tension the drive belt.

- Check that drive belt is not damaged and is not visibly defective.

Tighten the drive belt

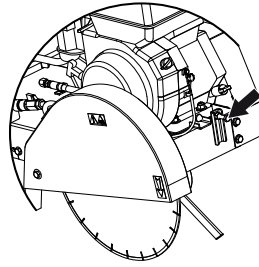
The tension of a new drive belt must be readjusted after one or two tanks of fuel have been used.

- Loosen the screws. Remove the cover.



- Loosen the screws holding the engine in place.

- Turn the tension screw a quarter turn. The engine will be pushed towards the rear, and the belt is tensioned.



- Make sure that the belt pulleys are parallel and aligned with each other. Tighten the screws holding the engine and then unscrew the tension screw 2 turns to prevent it coming into contact with the engine block. Refit the belt guard and tighten the screws holding the belt guard in place.

Fuel system

General

- Check that the fuel cap and its seal are not damaged.
- Check the fuel hose. Replace if necessary.

Greasing

Blade shaft

- Grease the blade shaft. Connect the grease gun and pump 3-5 strokes or until grease can be seen at the edges. Only use lithium 12-based grease of quality NGL1 Grade 2.

Grease nipple for depth adjustment system

Lubricate the grease nipples for setting of the cutting depth daily.

Nut for feeding of cutting depth

Grease the feeding screw a couple of cm above and below the nut and adjust the saw up and down a couple of times to spread the grease.

Worn product

This machine has the prerequisites to last for many years. This minimizes the machine's environmental impact. Perform service and maintenance according to the instructions in this manual. This way the engine will last longer and the hazardous emissions are minimized.

When the machine is worn out it should be disposed of for recycling or scrapping. Follow local regulations for disposal and recycling.

Main materials

Engine

Aluminium (AL), Steel (AC), Copper (CU), Polyamide (PA)

Machine

Steel (AC), Fonte (FT), Aluminium (AL).

TECHNICAL DATA

Technical data

Blade size - max, mm/inches	450/17,7
Depth of cut, blade size 450 mm / 18"	162/6,5
The rotation speed of the spindle (at engine speed 3700 rpm), rpm	2950
Engine oil	SAE 10W-30, class API, MS, SD, SE or higher.
Weight	
Machine with empty tanks, kg/lb	99/218
Operating weight, kg/lb	135/298
Dimensions (LxWxH), mm/inch	1220x600x1000/48,0x23,6x39,4
Noise emissions (see note 1)	
Sound power level, measured dB (A)	107
Sound power level, guaranteed L_{WA} dB (A)	108
Sound levels (see note 2)	
Sound pressure level at the operators ear, dB(A)	89
Vibration levels, a_{HV} (see note 3)	
Handle right, m/s^2	3,5
Handle left, m/s^2	3,5

Note 1: Noise emissions in the environment measured as sound power (L_{WA}) in conformity with EC directive 2000/14/EC.

Note 2: Noise pressure level according to EN 13862. Reported data for noise pressure level has a typical statistical dispersion (standard deviation) of 1.0 dB(A).

Note 3: Vibration level according to EN 13862. Reported data for vibration level has a typical statistical dispersion (standard deviation) of 1 m/s^2 .

EC Declaration of Conformity

(Applies to Europe only)

Husqvarna AB, SE-561 82 Huskvarna, Sweden, tel: +46-36-146500, declares under sole responsibility that the **Husqvarna FS400 LV** dating from 2014 serial numbers and onwards (the year is clearly stated on the rating plate, followed by the serial number), complies with the requirements of the COUNCIL'S DIRECTIVE:

- of May 17, 2006 "relating to machinery" **2006/42/EC**.
- of December 15, 2004 "relating to electromagnetic compatibility" **2004/108/EC**.
- of May 8, 2000 "relating to the noise emissions in the environment" **2000/14/EC**.

The following standards have been applied: EN ISO 12100:2010, EN 55014-1:2006, EN 55014-2/A1:2001, EN 61000-3-2:2006, EN 61000-3-3/A1/A2:2005, EN 13862/A1:2009.

Gothenburg 7 March, 2014



Helena Grubb

Vice President, Head of Power Cutters and Construction Equipment Husqvarna AB

(Authorized representative for Husqvarna AB and responsible for technical documentation.)



www.husqvarnacp.com

Original instructions

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