

**Operator's manual**

**FS5000 D**

**FS7000 D**



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

**English**

# KEY TO SYMBOLS

## Symbols on the machine:

Some of the symbols below refer to the CE market.

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.



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 heading "Personal protective equipment"



All displacement of the machine outside the cutting area shall be carried out with the tool not in rotation.



The guards should always be fitted on the machine. Never allow blade exposure to exceed 180°.



Check the cutting attachment. Never use blunt, cracked or damaged equipment.



The blades should be marked with the same or a higher speed than that stated on the machine's rating plate. A cutting blade running at a too high speed can break or cause serious damage.



Do not use the machine near ignitable substances or gases.



WARNING! Dust forms when cutting, this can cause injuries if inhaled. Use an approved breathing mask. Avoid inhaling exhaust fumes. Always provide for good ventilation.



Hot surface.



Machinery hazard! Always keep all parts of your body away from blade and all other moving parts.



Caution, risk of cutting



Water supply adjustment



Lower blade



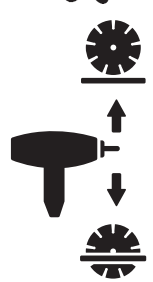
Slow



Fast



Switch for lower and raise the blade



Ignition on



Engine starts



Engine stops

**STOP**

Machine stop



Transmission stop



Gear range: Select 1, 2, 3 or neutral.



Refuelling Fill with diesel fuel. Gasoline must not be used under any circumstances.



Engine oil



Dipstick, maintain proper engine oil level



Do not raise the saw when checking engine oil level.



Keep saw leveled, without blade, when checking oil level.



This product is in accordance with applicable CE directives. If marked on the machine.



Noise emission to the environment according to the European Community's Directive. The machine's emission is specified in the Technical data chapter and on the label.



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

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# KEY TO SYMBOLS

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## 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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## Note the following before starting:



**WARNING!** Cutting, especially when DRY cutting, generates dust that comes from the material being cut, which frequently contains silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Exposure to excessive amount of such dust can cause:

Respiratory disease (affecting your ability to breath), including chronic bronchitis, silicosis and pulmonary fibrosis from exposure to silica. These diseases may be fatal;

Skin irritation and rash.

Cancer according to NTP\* and IARC\* \*/ National Toxicology Program, International Agency for Research on Cancer

Take precautionary steps:

Avoid inhalation of and skin contact with dust, mist and fumes.

Wear and ensure that all bystanders wear appropriate respiratory protection such as dust masks designed to filter out microscopic particles. (See OSHA 29 CFR Part 1910.1200)

Wet cut when feasible, to minimize dust.

## WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



# PRESENTATION

## 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 ever lend or sell this machine, make sure that the borrower or buyer gets the operator's manual, so they will also know how to properly maintain and use it.

## 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.

## Owner 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.

Local regulations could restrict the use of this machine. Find out what regulations are applicable where you work before you start using the machine.

## The manufacturer's reservation

Subsequent to publishing this manual Husqvarna may issue additional information for safe operation of this product. It is the owner's obligation to keep up with the safest methods of operation.

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.

For customer information and assistance, contact us at our website: [www.husqvarna.com](http://www.husqvarna.com) or call at 1-800-845-1312.

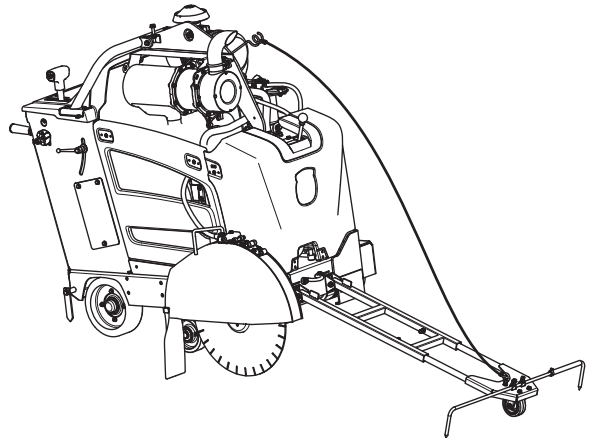
## Design and features

These walk behind flat saws are intended to use with diamond blades for wet cutting only. They are designed to cut fresh and hardened concrete in different hardness classes and asphalt.

Values such as high performance, reliability, innovative technology, advanced technical solutions and environmental considerations distinguish Husqvarna's products. Safe operation of this product requires the operator to read this manual carefully. Ask your dealer or Husqvarna should you need more information.

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

## Flat saw FS5000 D, FS7000 D



### Engine

Powerful, water cooled and electronically controlled engine which provides maximum power

### Power transmission

Robust and efficient power transmission between the motor and blade for maximum utilization of engine power.

### Tier 4 Final/ Stage IIIB

These products are Tier 4 Final / Stage IIIB compliant: New after treatment system of exhaust gases that complies with new laws in USA and EU.

### E-track (optional)

Electronically controlled rear axle where the operator with a press of a single button can adjust to allow saw to track straight while cutting.

### Digital display

Digital display makes it easier to operate the machine

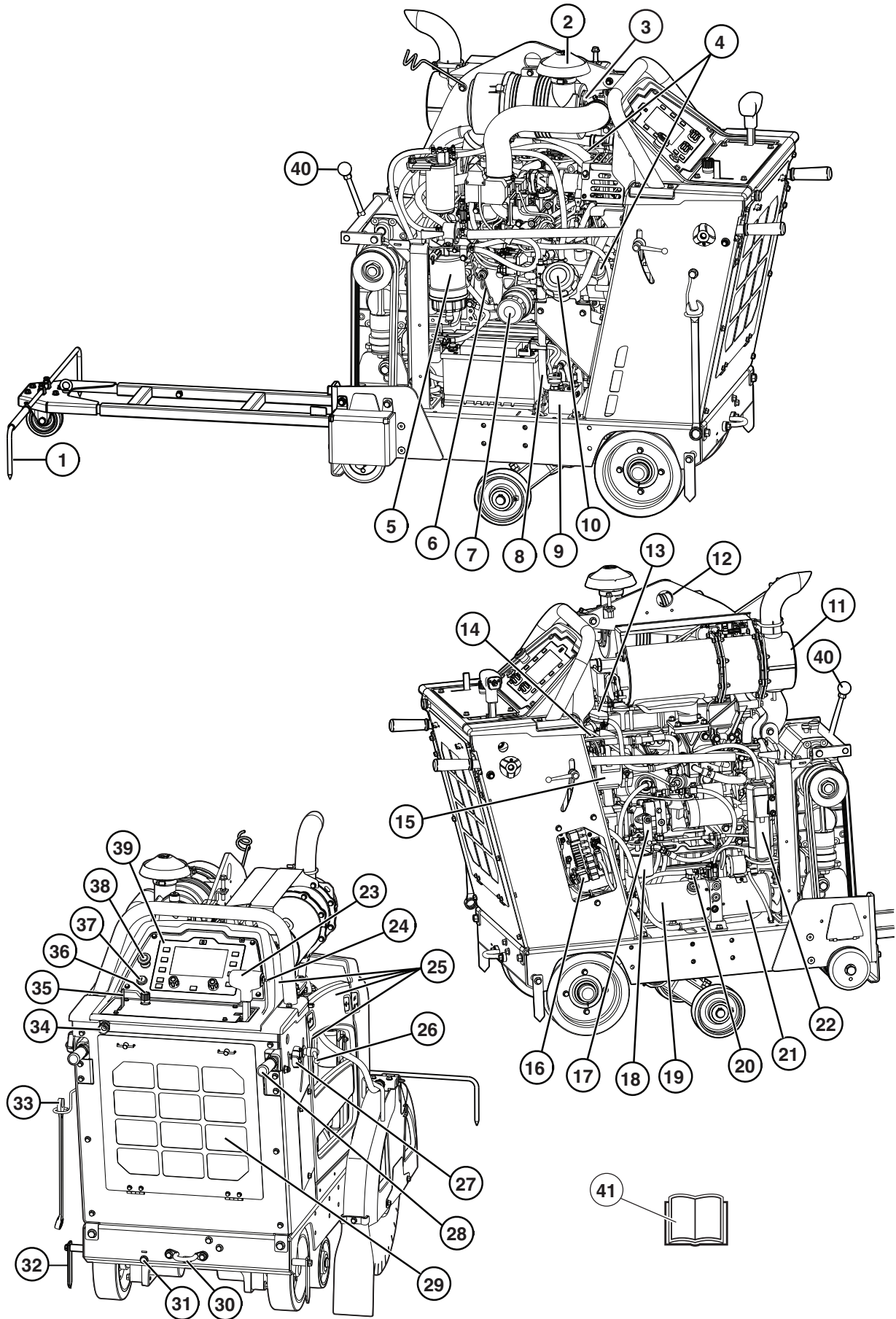
### Front guide

Front guide has telescopic adjustment which gives good visibility and convenient storage

# PRESENTATION

## What is what on the flat saw - FS5000 D?

Covers removed for illustration purpose.



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# PRESENTATION

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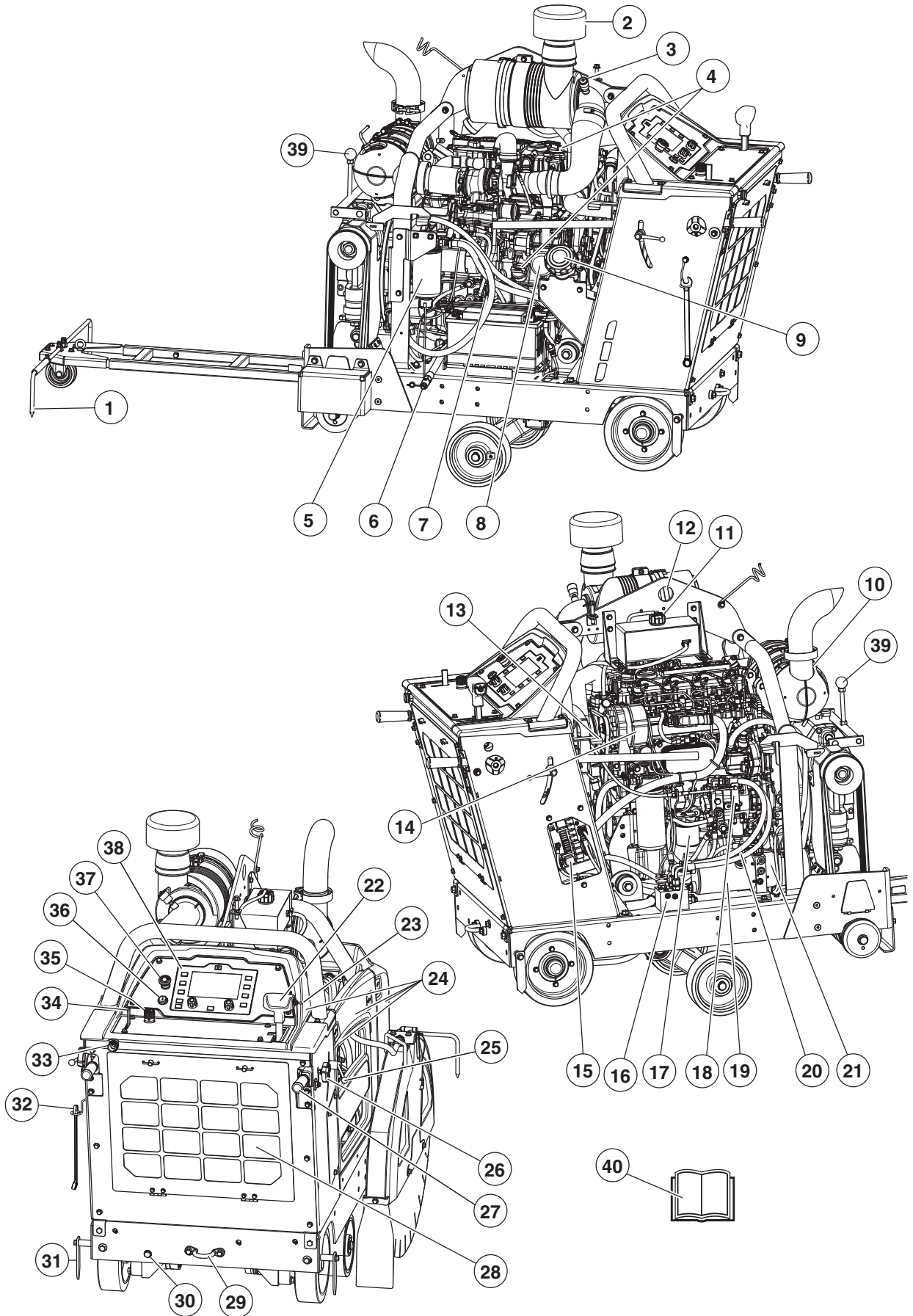
## **FS5000 D**

- 1 Front guide
- 2 Air filter
- 3 Air restriction indicator
- 4 Engine oil fill
- 5 Fuel filter water separator
- 6 Engine oil check (dipstick)
- 7 Engine oil filter
- 8 Engine oil drain hose with valve
- 9 Transmission bypass valve
- 10 Fuel tank fill
- 11 Muffler - DPF
- 12 Lifting eye
- 13 Radiator coolant fill
- 14 Alternator/waterpump belt
- 15 Alternator
- 16 Relay and fuse box
- 17 Hydrostatic transmission pump
- 18 Hydraulic filter
- 19 Hydraulic reservoir
- 20 Hydraulic reservoir fill
- 21 Hydraulic lift pump
- 22 Radiator coolant overflow bottle
- 23 Speed control lever - directional forward/reverse
- 24 Raise/lower switch (blade)
- 25 Protection covers
- 26 Locking knob for handlebar adjustment in height
- 27 Locking knob for handlebar adjustment in length.
- 28 Handlebar
- 29 Radiator air filter
- 30 Tie down lug (front and rear)
- 31 Manual axle adjustment
- 32 Rear guide
- 33 Blade shaft wrench
- 34 Water inlet
- 35 Water valve
- 36 Saw lowering speed control knob
- 37 Engine start switch
- 38 Machine stop
- 39 Control Panel
- 40 Gearbox shift lever (3-speed gearbox model)
- 41 Operator's manual

# PRESENTATION

## What is what on the flat saw - FS7000 D?

Covers removed for illustration purpose.



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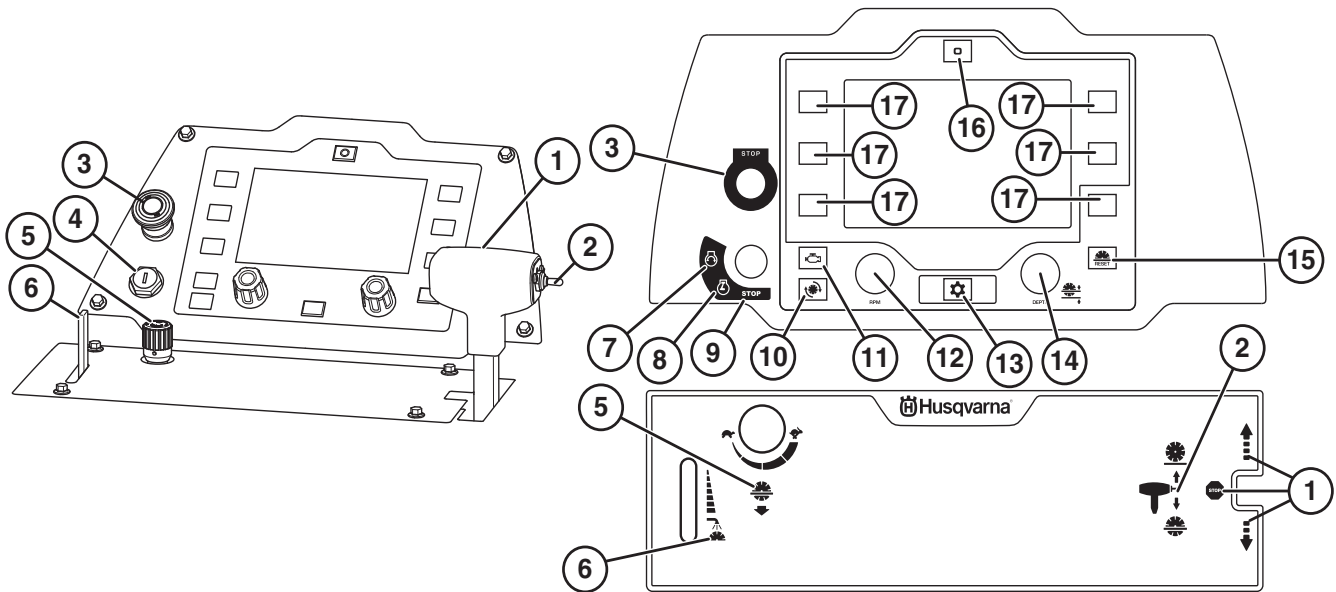
# PRESENTATION

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## FS7000 D

- 1 Front guide
- 2 Air filter
- 3 Air restriction indicator
- 4 Engine oil fill
- 5 Fuel filter water separator
- 6 Engine oil drain hose with valve
- 7 Engine oil check (dipstick)
- 8 Engine oil filter
- 9 Fuel tank fill
- 10 Muffler - DOC
- 11 Radiator coolant fill
- 12 Lifting eye
- 13 Alternator/waterpump belt
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- 15 Relay and fuse box
- 16 Transmission bypass valve
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# PRESENTATION



The control panel is the operator's link to the machine. From here the operator can control anything from engine rpm, cutting depth of the blade and read the current status of the engine and the machine.

All information to the operator will be shown on a 7" anti glare coated screen with LED backlight, making it clearly visible in both very bright and pitch-black working sites.

Display texts are illustrated in English in the manual, but will appear in the chosen language on the product display. Depending on how the machine is configured, different menu options are valid. For more information, see section "Menu system".

Use the function buttons (17) on both sides of the display to choose the respective functions shown on the display.

## What is what on the control panel?

- 1 Speed control lever
- 2 Raise/lower switch (blade)
- 3 Machine stop
- 4 Engine start switch
- 5 Saw lowering speed control knob
- 6 Water valve
- 7 Engine starts
- 8 Ignition on
- 9 Engine stops
- 10 Display of blade speed, rpm
- 11 Display of motor speed, rpm
- 12 Throttle speed adjustment
- 13 Menu button
- 14 Blade depth adjustment
- 15 Blade zero button
- 16 E-track zero button
- 17 Select button



# MACHINE'S SAFETY EQUIPMENT

## General

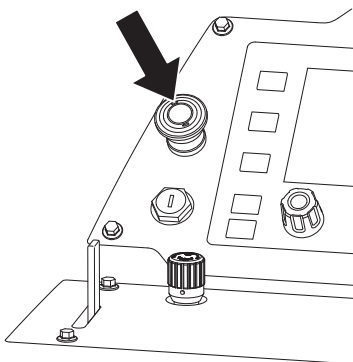


**WARNING! Never use a machine that has faulty safety equipment! If your machine fails any checks contact your service agent to get it repaired. The engine should be switched off, and the Engine start switch in STOP position.**

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

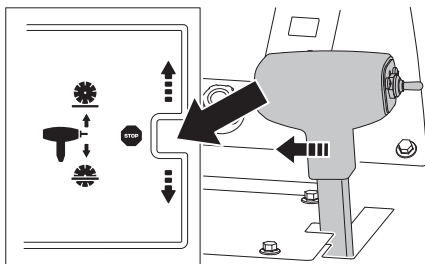
The machine stop is used to quickly switch off the engine and all electrical functions except lights.



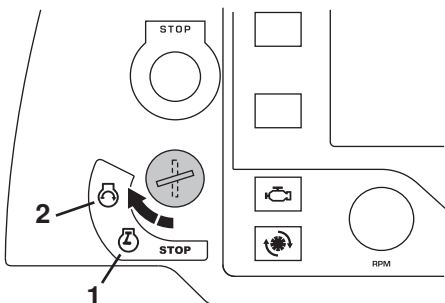
**NOTICE!** Do not use for routine stop.

## Testing the machine stop

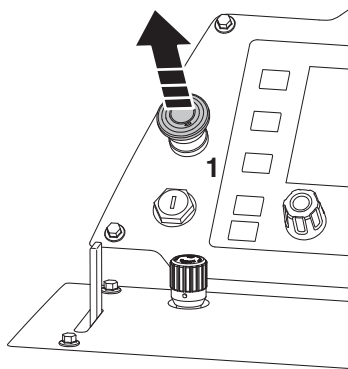
- Set Speed control lever to the STOP position. The engine will not start unless the Speed control lever is in the distinct STOP position.



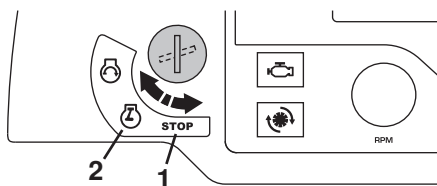
- 1 Start the engine, turn the Engine start switch to ignition on position. Follow the procedure in the engine manual.
- 2 When preheat symbol is displayed, wait for the engine glow plugs to warm the engine. When the preheat symbol disappears turn the Engine start switch to position engine start to start the engine.



- Press the machine stop and check that the engine stops. This will set the machine in safe mode.
- Reset the emergency stop by pulling it outward.



- Reset the safe mode by turning Engine start switch to the STOP position and back to ignition on position.



## Blade Guard



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

This guard is fitted above the blade and is designed to prevent parts of the blade or cutting fragments from being thrown towards the user.

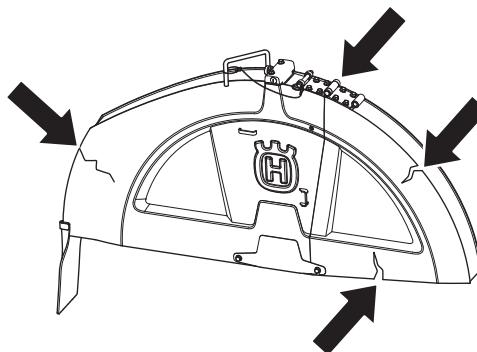
It will also protect the user from the blade and cool the blade with water when wet cutting.

## Checking the blade guard



**WARNING! 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.**

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



# MACHINE'S SAFETY EQUIPMENT

## Protection covers



**WARNING!** Always check that the protection covers are correctly fitted before starting the machine.

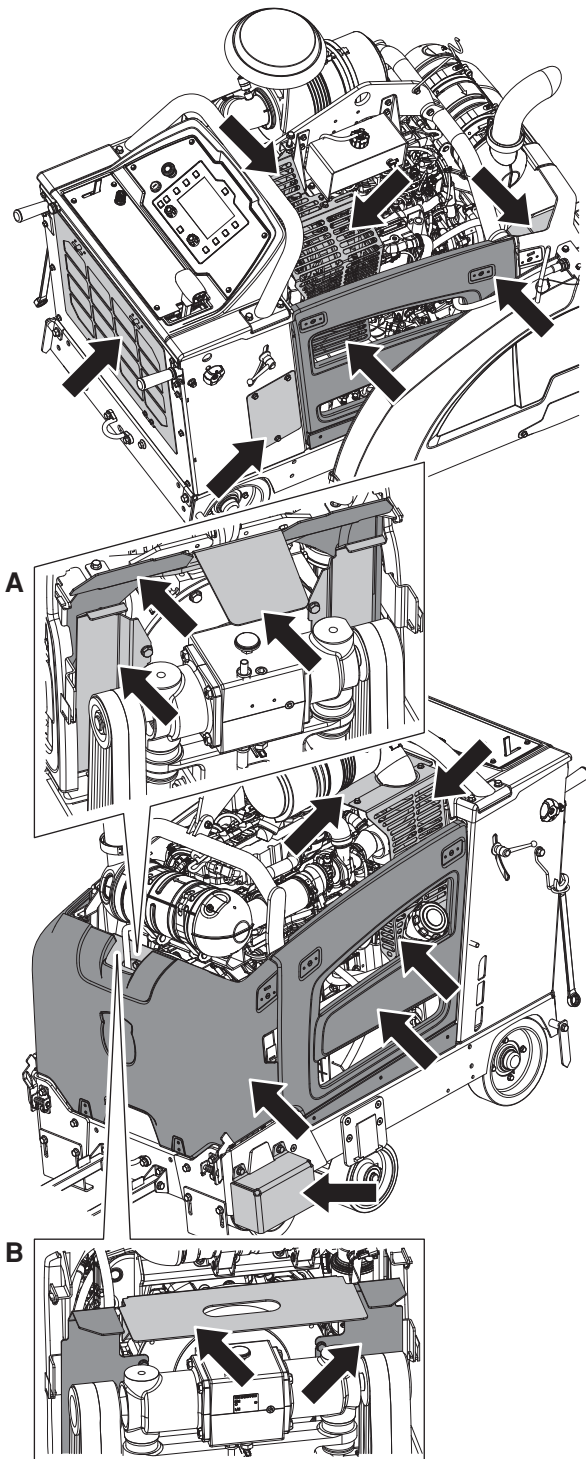
Protective covers on the machine protect the user from the cooling fan, belt drives and hot surfaces.

### Checking the protective covers

- Check the protective covers for cracks or other damages. Replace damaged covers.

**A:** FS5000 D

**B:** FS7000 D



## Muffler - DPF/DOC



**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 - DPF/DOC

- Check regularly that the muffler is complete and secured correctly.

**NOTICE!** Muffler - DPF/DOC is a part of emissions compliance. Do not modify!



# BLADES

## General



**WARNING! A cutting blade may burst and cause injury to the operator.**

The cutting blade manufacturer issues warnings and recommendations for the use and proper care of the cutting blade. Those warnings come with the cutting blade.

A cutting blade should be checked before it is assembled on the saw and frequently during use. Look for cracks, lost segments (diamond blades) or pieces broken off. Do not use a damaged cutting blade.

- High-quality blades are often most economical. Lower quality blades often have inferior cutting capacity and a shorter service life, which results in a higher cost in relation to the quantity of material that is cut. See the instructions under the heading Assembling the blades.



**WARNING! Never use a blade for any other materials than that it was intended for. Never use a blade with a lower speed rating than that of the machine. Do not use circular saw blades or carbide tipped blades.**

## Blade instability

- The blade can wobble and burst if an excessive rotational speed rating is used.
- A lower rotational speed rating can stop the wobbling. Check for correct blade transmission configuration and/or gear. Otherwise replace the blade.

## Diamond blades

### General

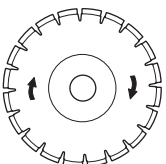
The cutting blade continues to rotate up to a minute after the motor has stopped. Never stop the blade with your hands. Personal injuries can occur.



**WARNING! Diamond blades become very hot when used. An overheated blade is a result of improper use, and may cause deformation of the blade, resulting in damage and injuries.**

Cutting metal generates sparks that may cause fire. Do not use the machine near ignitable substances or gases.

- Diamond blades consist of a steel core provided with segments that contain industrial diamonds.
- Diamond blades ensure lower costs per cutting operation, fewer blade changes and a constant cutting depth.
- When using diamond blades make sure that it rotates in the direction indicated by the arrow on the blade.



## Sharpening diamond blades

- Always use a sharp diamond blade.
- Diamond blades can become dull when the wrong feeding pressure is used or when cutting certain materials such as heavily reinforced concrete. Working with a dull diamond blade causes overheating, which can result in the diamond segments coming loose.
- Sharpen the blade by decreasing the cutting depth and engine speed for a short time. This will expose new and sharp diamonds on the blade

## Diamond blades and cooling

- During cutting the friction in the cut causes the diamond blade to be heated up. If the blade is allowed to get too hot this can result in loss of blade tensioning or core cracking. Therefore the diamond blade needs to be cooled with water.

## Diamond blades for wet cutting

During cutting the friction in the cut causes the diamond blade to be heated up. If the blade is allowed to get too hot this can result in loss of blade tensioning or core cracking.

Allow the blade to cool down before touching it.

- Wet cutting diamond blades must be used with water to keep the blade core and segments cool during sawing. Wet cutting blades should NOT be used dry.
- Using wet cutting blades without water can cause excessive heat build-up, resulting in poor performance, severe blade damage and is a safety hazard.
- Water cools the blade and increases its service life while also reducing the formation of dust.
- Use wet sawing of old and new concrete and asphalt.

Blade size, inch/mm	Maximum cutting depth, inch/mm
14/350	4,75/118
500/20	7,75/193
26/650	10,5/262
30/750	12,5/312
36/900	15/374
42/1000	17,5/411

**NOTICE! Always use blade flange size specified for current blade size. Never use damage flanges.**

## Transport and storage

- Store cutting blades in a safe place so it can not be damage.
- Store cutting blades in dry, frost free conditions.
- Inspect new blades for transport or storage damage.

# 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

### Engine

The engine on this machine is certified to the environmental exhaust emission standards as per US, EPA and CARB Tier 4 Final / EU stage IIIB.

The FS5000 D saw is equipped with a Yanmar 4-cylinder Tier 4 Final / Stage IIIB diesel engine.

The FS7000 D saw is equipped with a Deutz 4-cylinder Tier 4 Final / Stage IIIB diesel Engine.

### Diesel fuel

- Use only Ultra Low Sulfur Diesel (0.0015% or 15ppm). For additional information regarding fuel please see engine manufacturer's manual supplied with the product.

**NOTICE!** Never use bio-diesel! Bio-diesel will harm the fuel hoses.

### Engine oil

Always park the machine on a level surface before checking the oil. Keep saw leveled, without blade, when checking oil level.

- Check the oil level before starting the machine. A too low oil level can cause serious damage to the engine. See instructions in section "Maintenance and service".
- Never use oil intended for two-stroke engines. Use only Low ash engine oil, as specified in "Technical data".

**NOTICE!** Make sure there is always sufficient oil in the engine.

## Fueling



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

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 refueling. If the cap is not properly tightened the cap might vibrate lose and fuel may escape from the fuel tank creating a fire hazard.

Move the machine at least 10 ft (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 spillage and allow 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.

# BATTERY HANDLING

## General



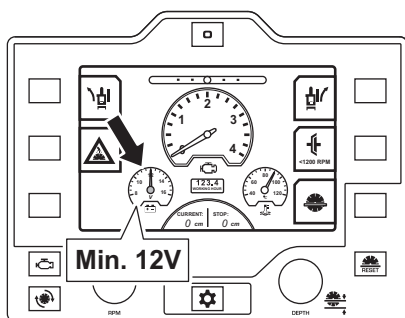
**WARNING! Lead-acid batteries produce explosive gases. Avoid sparks, open flames and smoking close to batteries.**

- Connecting or disconnecting the battery may cause sparks and short circuits.
- A spark or flame can cause a lead acid battery to explode.
- Never connect both terminals on the battery at the same time with a wrench or other metal as this may short-circuit the battery.
- Always handle battery with care.
- Unused batteries must be kept away from metal objects such as nails, coins, jewellery.
- Remove metal bracelets, watches, rings, etc., before connecting the battery. Wear gloves and protective goggles or a dust mask when working with the battery.
- The original battery is maintenance free. Do not attempt to open or remove caps or covers. It is usually not necessary to check or adjust the level of electrolyte.
- Replace only with a similar maintenance-free battery. See information in the Technical data section.
- When welding on the machine, always disconnect both battery cables and store cables away from battery poles.
- Always connect the minus pole of welding gear as close as possible to the weld spot.

**NOTICE!** Do not override maximum physical size of battery. Too large battery can damage or be damaged by adjacent parts.

Handle the battery carefully, of environmental considerations. Follow the local recycling requirements.

- Check the battery daily. When the Engine start switch is in ignition on position, battery gauge in the display should not reach under 12V.

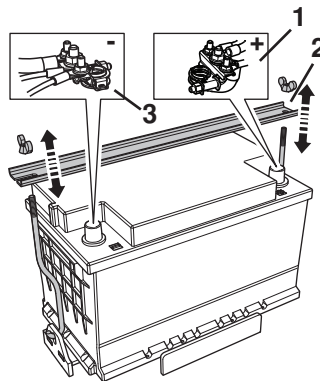


- If battery has difficulties holding voltage over long time periods when load is not applied, replace battery. For more information about recommended batteries, see section "Technical data"
- Charge battery regularly.
- Keep battery terminals and its accessories clean.

## Connecting the battery

Note! Install and remove the battery cables only in the sequence described in this section.

- 1 Always connect positive terminal first.
- 2 Remount the battery holder.
- 3 Connect negative terminal.



## Disconnecting the battery

- Remove the cables in the reverse order

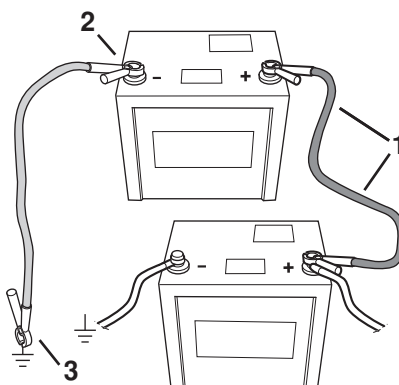
## Starting the engine with a weak battery

If the battery is too weak to start the engine, it should be recharged.

When jump leads are used for emergency starting, follow the procedure below:

## Connecting the jump leads

- 1 Connect each end of the red cable to the POSITIVE pole (+) on each battery, exercise care not to short circuit any of the ends against the chassis.
- 2 Connect one end of the black cable to the NEGATIVE pole (-) on the fully charged battery.
- 3 Connect the other end of the black cable to a good ENGINE BLOCK EARTH, away from the fuel tank and the battery.



## Remove the cables in the reverse order

- The BLACK cable is removed from the engine block and then the fully charged battery.
- Finally the RED cable from both batteries.

## Storage

- Store the battery cool and dry area.

# OPERATING

## Protective equipment

### General

Make sure that there is always another person close at hand when you use the machine, so that you can call for help if an accident should occur.

### 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.



**WARNING! The use of products such as cutters, grinders, drills, saws that sand or form material can generate dust and vapors 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. Always use approved hearing protection. Listen 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
- Hearing protection
- Approved eye protection. If you use a face shield then you must also wear approved protective goggles. Approved protective goggles must comply with standard ANSI Z87.1 in the USA or EN 166 in EU countries. Visors must comply with standard EN 1731.
- Breathing mask
- Heavy-duty, firm grip gloves.
- Tight-fitting, heavy-duty and comfortable clothing that permits full freedom of movement. Cutting generates sparks that can ignite clothing. Husqvarna recommends that you wear flame-retardant cotton or heavy denim. Do not wear clothing made of material such as nylon, polyester or rayon. If ignited such material can melt and cling to the skin. Do not wear shorts
- Boots with steel toe-caps and non-slip sole

### Other protective equipment



**CAUTION! 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. It is recommended that first time operators also obtain practical instruction before using the machine.
- Keep in mind that it is you, the operator that is responsible for not exposing people or their property to accidents or hazards.
- The machine must be kept clean. Signs and stickers must be fully legible.

## Service

Have your machine serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the machine is maintained.

## 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.**

# OPERATING



**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 heading Maintenance.**

**Always use genuine accessories.**

**Your warranty may not cover damage or liability caused by the use of non-authorized accessories or replacement parts.**



**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 consult their physician and the medical implant manufacturer before operating this machine.**

## Work area safety

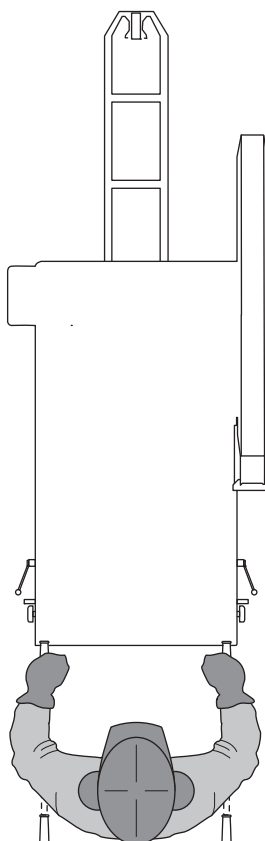


**WARNING! You are responsible to ensure that animals and onlookers are not within the working area. Do not start cutting until the working area is clear.**

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

## Basic working techniques

- This machine is designed and intended for cutting of fresh and hardened concrete in different hardness classes and of asphalt.
- 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 engine 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.
- Under all circumstances avoid grinding using the side of the blade; it will almost certainly be damaged, break and can cause immense damage. Only use the cutting section.
- Do not stand behind or in front of the blade path while the engine is running.
- Do not leave the machine unattended while the engine is running.
- Never cock, jam wedge or twist blade in a cut.
- Make sure that there is always another person close at hand when you use the machine, so that you can call for help if an accident should occur.
- Never stand behind or in front of blade path while the engine is running. The operator position is between the two handlebars.



# OPERATING

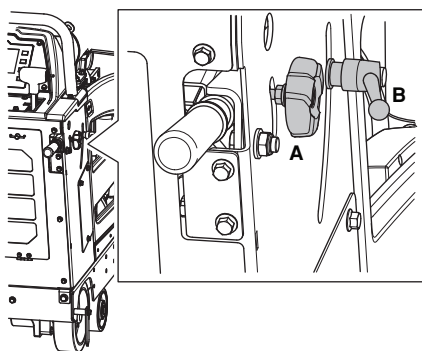
## Handle position

**CAUTION!** Never use the handlebars to lift the saw.

Use the handlebars to maneuver the saw.

The position of the handlebars can be adjusted in height and length.

- Loosen the lock knob **A** to adjust the length.
- Turn handle adjustment locking knob **B** counterclockwise to unlock and reposition handlebar. Turn clockwise to lock handlebar in position. Set handle to most comfortable working height. Tighten the locking knob.

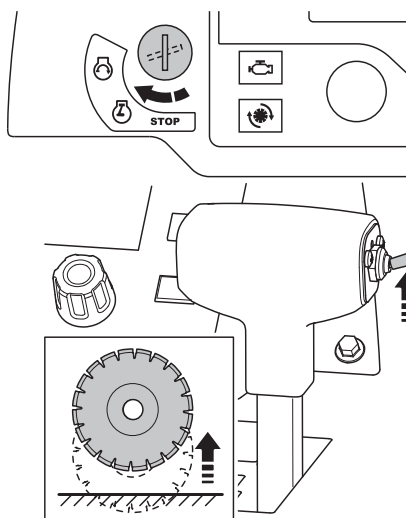


## Moving the machine

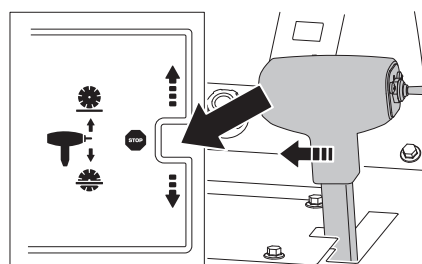
Prior to moving the machine, read and understand section "Starting and stopping".

### Moving the machine with the engine off

- Turn Engine start switch to the ignition on position.
- Raise the saw by pressing up the Raise/lower switch on the Speed control lever until the blade (if installed) clears the pavement surface.



- Put Speed control lever into the STOP position.



- Set the Transmission bypass valve counterclockwise to the up (neutral) position.
- The saw can now be moved by standing behind it and pushing (while holding the handlebars).



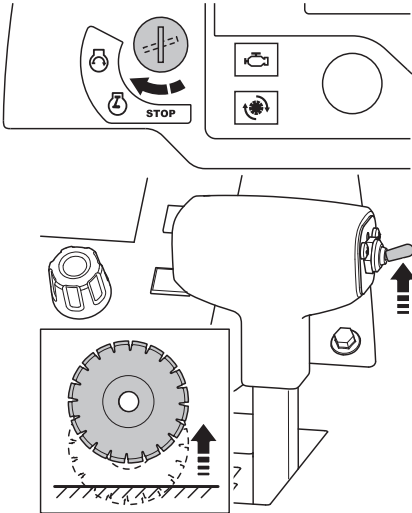
**WARNING!** Do not attempt to push the saw while it is in neutral position on a grade (or hill). The saw operator could lose control of the saw and cause injury to oneself or other persons in the area.



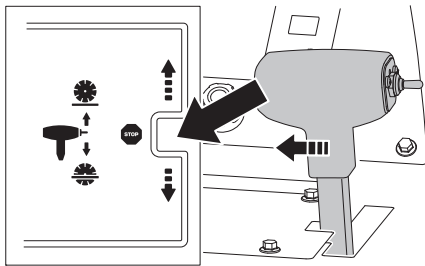
# OPERATING

## Moving the saw with the engine on

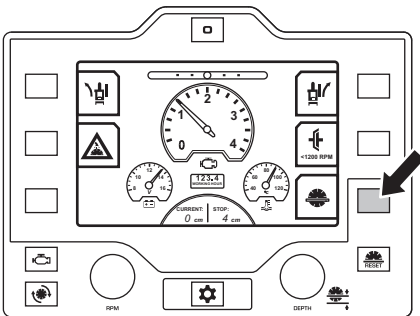
- Turn Engine start switch to the ignition on position.
- Raise the saw by pressing up the Raise/lower switch on the Speed control lever until the blade (if installed) clears the pavement surface.



- Put Speed control lever into the STOP position.



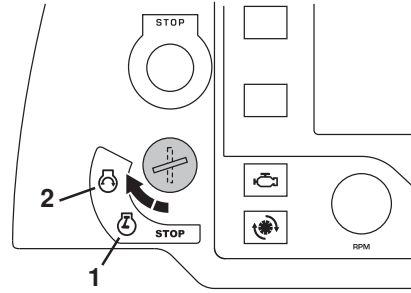
- The Engine throttle is at idle speed setting per default.
- Ensure that the Blade clutch is disengaged (if clutch installed).



**CAUTION!** Pay special attention on clutchless machines, blade starts rotating at start. For safety reason, do not move the saw sideways or out of the working area with blade installed and rotating.

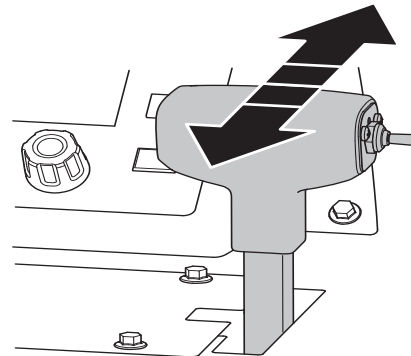
- While the Engine start switch is in the ignition on position, check the display and ensure that preheat symbol is turned off. If it is lit, the glow plugs warm the engine and the engine will not start. Wait a few seconds until turned off.

- When preheat symbol is off, turn the Engine start switch to the engines start position until the engine starts, then release the switch. It will return to ignition on position automatically.



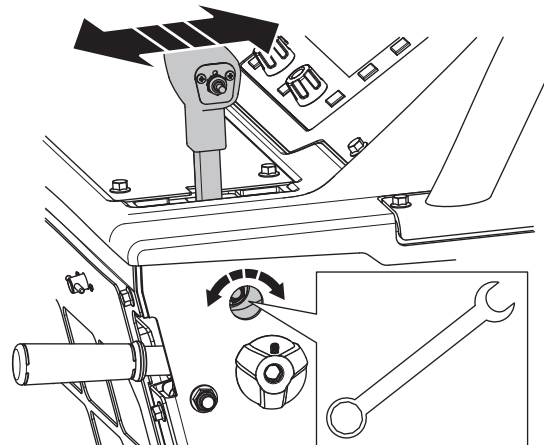
**NOTICE!** If the engine does not start, turn Engine start switch to STOP position and check the display for any messages. If none, repeat above steps. Else, take measures according to message in the display prior to new starting attempt.

- Push the Speed control lever forward for forward saw movement, or to the rear for reverse saw movement.  
The further you push the lever the faster the speed. For more information, see the "Technical data" section.



**WARNING!** Do not open the Transmission bypass valve to neutral while the saw is parked on a grade (or hill). The operator will lose control and injury or damage could occur.

Adjust the resistance on the Speed control lever with the nut on the side of the lever.



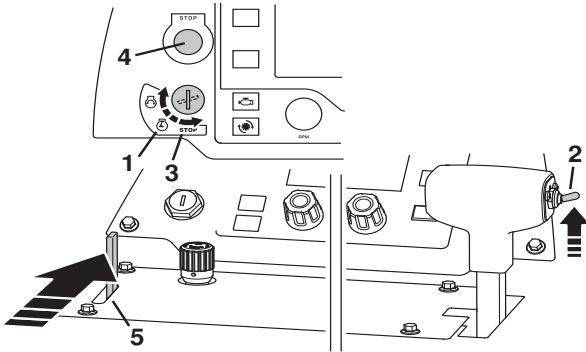
# OPERATING

## Fitting the blade

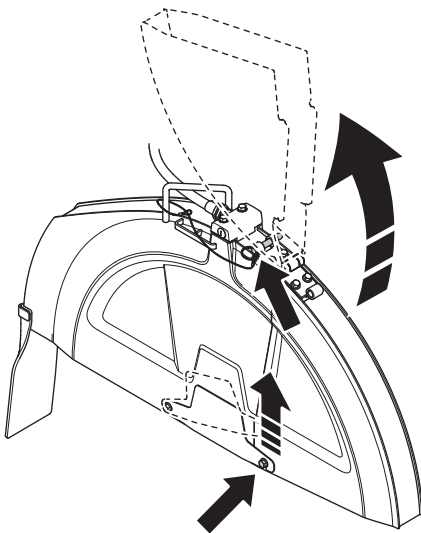
Prior to fitting the blade, read and understand section "Engine-Blade shaft-Gearbox speed adjustment".

**NOTICE!** Check the blade's direction of rotation. The arrow on the blade and the blade guard indicates the direction of rotation.

- 1 Set Engine start switch to ignition on position.
- 2 Raise the saw to a high position using the Raise/lower switch on the Speed control lever.
- 3 Set the Engine start switch to STOP position.
- 4 Press the Machine stop on the control panel.
- 5 Turn off the Water valve.



- Loosen the blade guard front bolt and lift the blade guard latch.
- Raise blade guard front and use quick release pin to lock it in upright position.



**WARNING!** Check that the blade, blade flanges and blade flange arbor are undamaged. Clean the contact surfaces of the blade and the blade flanges. Make sure the blade and the flanges are clean and free of dirt and debris before mounting the blade on the machine.

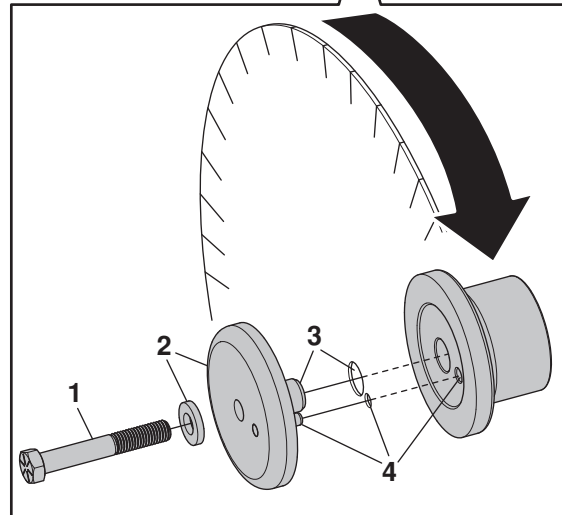
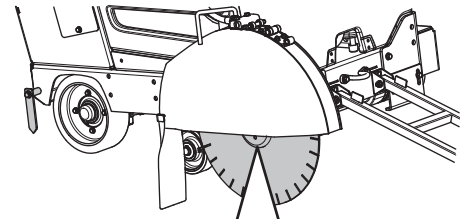
The blade shaft bolt on the right hand side of the saw has left hand threads and the blade shaft bolt on the left hand side of the saw has right hand threads. Replace the blade shaft bolt and plain washer when worn or damaged.

- 1 Loosen blade shaft bolt which is used to clamp the blade between the inner and outer flange.
- 2 Remove outer flange and plain washer.
- 3 Fit diamond blade to outer flange arbor.
- 4 Install outer flange with blade pre-installed into the inner flange making sure that the locking pin passes through the diamond blade and into the inner flange.

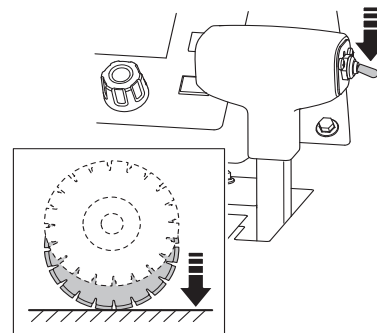
Always use plain washer with blade shaft bolt.

Rotate outer flange and the blade in the opposite direction of blade rotation to remove backlash.

Install and tighten blade shaft bolt and plain washer using the blade shaft wrench while firmly holding the blade.



- Lower the saw by pushing the Raise/lower switch on the speed control lever downwards until the blade touches the surface to be cut.

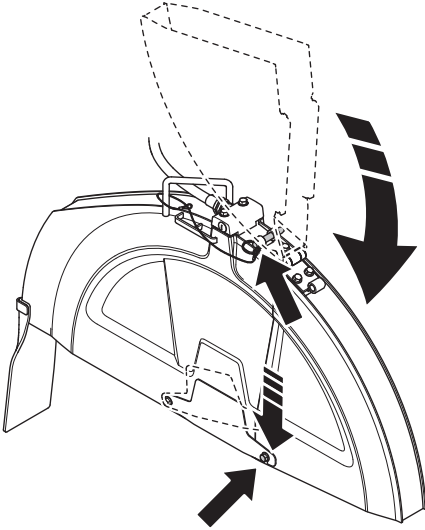


**CAUTION!** The touch should be smooth to prevent damaging the blade. Use Saw lowering speed control knob to slow down the lowering speed. Never let the front weight of the machine be supported by the blade since this will damage the blade.



# OPERATING

- Tighten the blade shaft bolt firmly using the blade shaft wrench while resistance between diamond blade and ground helps to achieve proper and final tightening.
- Lower blade guard front and position the blade guard latch on the blade guard front bolt. Tighten the blade guard front bolt.



**NOTICE!** Do not operate this saw without the latch engaged and the bolt installed. Do not use if damaged.

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

## Install the blade guard

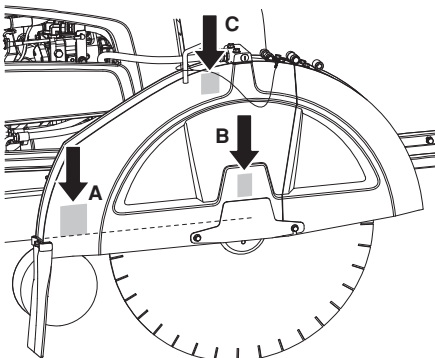
Slip on blade guards are secured with a blade guard lock which engages the rear half of the blade guard.

Do not operate this saw without the lock engaged. Inspect blade guards and locks frequently. Do not use if damaged.

Different number of support spades are in use depending on the size of the blade guard which is used.

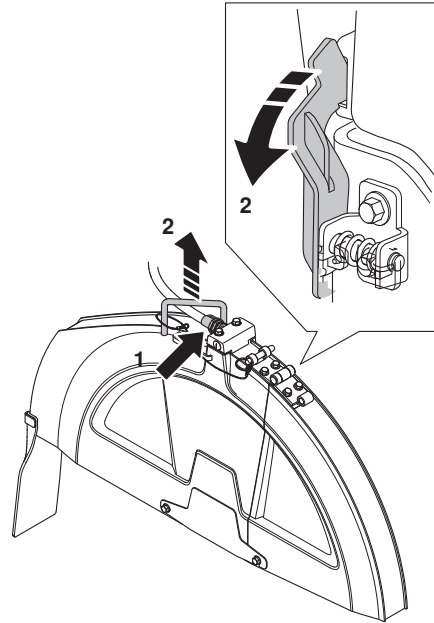
Lower the guard onto the support spade(s) and use moderate force to press down the blade guard until lock engages.

- 14", 20" and 26" guards are lowered on only one spade **B**.
- 30" guard is lowered on two spades **B** and **C**.
- 36" and 42" guards are lowered on three spades **A**, **B** and **C**.



## Remove the blade guard

- 1 Disconnect the water hose from the blade guard.
- 2 Use the blade shaft wrench, turn the blade guard lock forward until it stops and unlatches. Lift at the same time the blade guard with its handle off the support spade(s).



## Blade depth stop

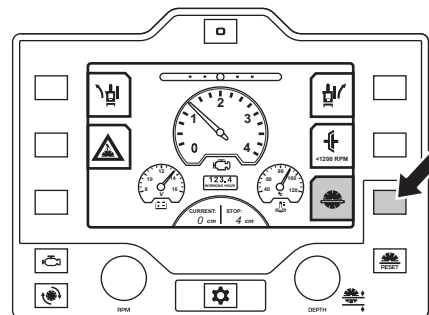
The saw is equipped with a Blade depth stop on the control panel. When activated, the cutting depth will stop at the cutting depth chosen by the operator.

For more information about maximum cutting depth for different blade sizes, see section "Blades"

## Setting the cutting depth

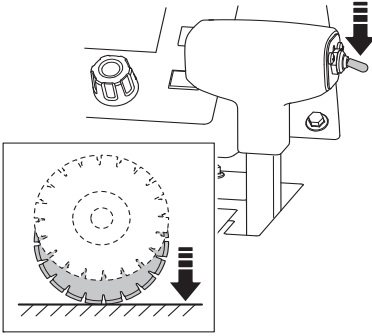
**NOTICE!** Only saw as deep as the job specifications require since deeper sawing can cause structural strength problems.

- Activate the Blade depth stop on the control panel.



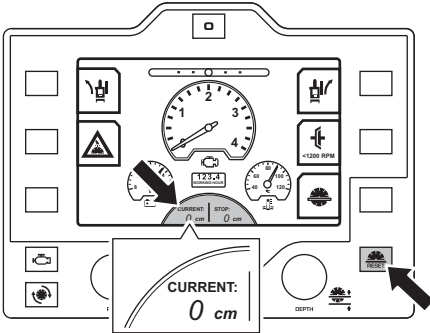
# OPERATING

- Lower the saw by pushing the Raise/lower switch on the speed control lever downwards until the blade touches the surface to be cut. This will be the reference point.

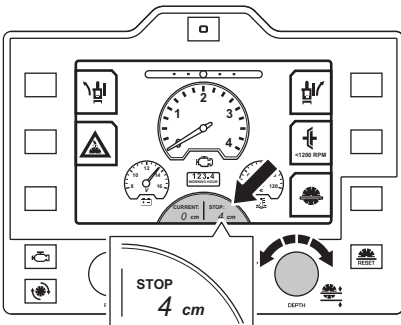


**CAUTION!** The touch should be smooth to prevent damaging the blade. Use Saw lowering speed control knob to slow down the lowering speed.

- Press the Blade zero button on the control panel. The current value in the display now reads 0.

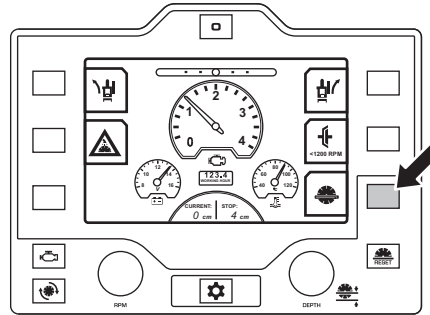


- Set the desired cutting depth by rotating the Depth knob. The chosen cutting depth is now shown in the display in small box called stop.



- When the blade is lowered the current cutting depth will be showing the difference between the reference point and the diamond blade.

- The saw will not lower to any depth greater than the stop position set in the display. If a deeper cut is required, turn the Blade depth knob to a new depth position. You can also disengage the Blade depth stop by pushing the Blade depth stop button to override the depth stop feature.

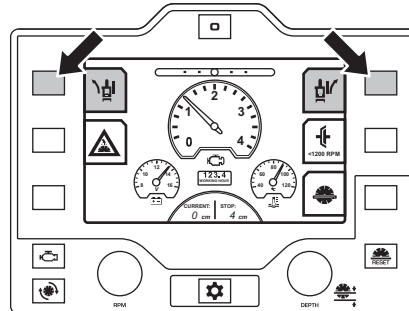


## Straight line sawing

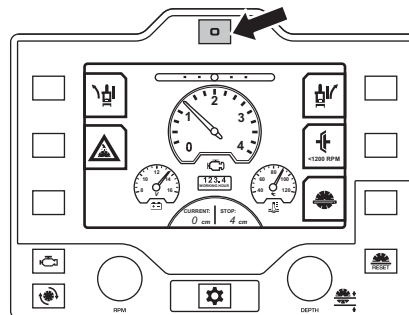
While cutting, the blade is creating resistance to driving force from rear wheels which will cause the machine to yaw in the same direction as the blade is mounted on. This effect can be counteracted by adjusting the angle of the rear axle using E-track or manual axle adjustments.

## Saw with E-track option

- On the control panel, push the E-track adjustment buttons representing left and right rear axle adjustments. Press several times for fine adjustments.



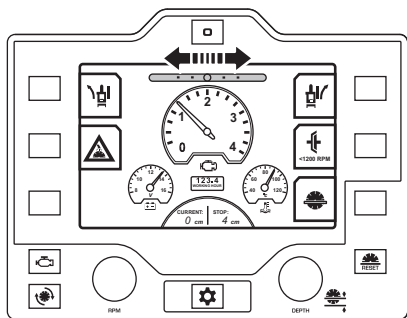
- By pressing the E-track zero button on the control panel the rear axle will return to predefined center angle.



- Return to previous setting by once again pressing the E-track zero button on the control panel.

# OPERATING

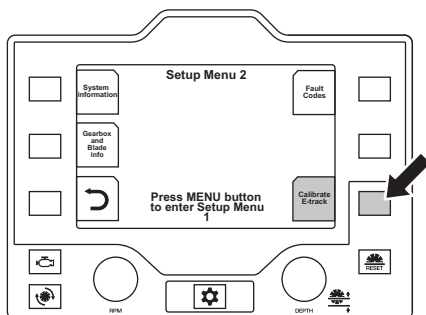
- The E-track gauge on the display will indicate the present angle of the rear axle. This setting will not be saved after the engine restart.



- Adjustments can be made both while sawing and not sawing.
- Visually confirm the axle movement and direction.

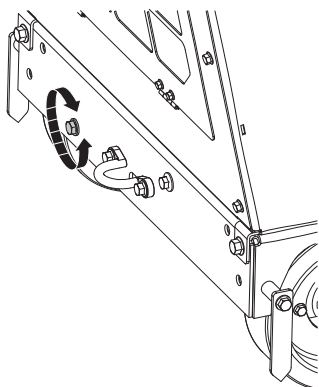
## To set new center angle for E-track.

- Adjust the rear axle to the desired new center angle.
- In the display enter the Setup menu 2 and press calibrate E-track button. This setting will be saved even after engine restart.



## Saws with manual axle adjustment

- The rear axle is adjusted by turning the adjustment bolt located at the rear lower left of saw frame with an 18mm wrench.
- If the saw steers to the right while sawing, turn the adjustment bolt counterclockwise.
- If the saw steers to the left while sawing, turn the adjustment bolt clockwise.



## Transport and storage

- Remove the blade before transportation or storage of the machine, to avoid damage to the blade.
- Remove all adjustment tools and wrenches

## Transport

The flat saw is not equipped with a parking brake. It will slowly roll away by itself if left in steep grade or hill. Never leave the saw unattended in steep grade or hill unless properly secured.

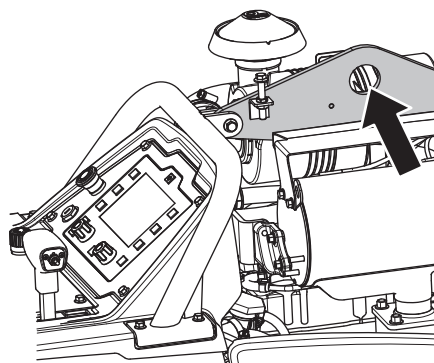


**WARNING!** When moving the saw up and down ramps, with engine on, use extreme caution. For steep ramps, always use a winch. Never stand below the machine. Stand only beside.

- To go down a ramp, drive the saw backwards slowly.
- To go up a ramp, drive the saw forward slowly.

## Lifting the saw

- 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.



## To transport by vehicle

- Secure the equipment during transportation in order to avoid transport damage and accidents. Use the factory installed tie down lugs on the saw, front and rear to prevent movement during transport.
- Do not tow this saw with another vehicle as this may damage drive components.

## Storage

Store the equipment in a lockable area so that it is out of reach of children and unauthorized persons.

- Stop the engine by turning the Engine start switch to the STOP position.
- Put Speed control lever into the STOP position.
- If there is a risk of freezing, the machine must be drained of any remaining water coolant in the gearbox.

For transport and storage of fuel and battery, see the section "Fuel handling" and "Battery handling".

For transport and storage of Blades, see the section "Blades".

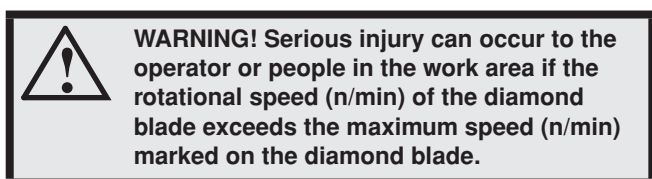
# OPERATING

## Long-term storage

Ensure the machine is cleaned and that a complete service is carried out before long-term storage.

- Remove the blade for storage and store it carefully.
- Grease all nipples before storage.
- Disconnect negative terminal and secure in safe distance from battery.
- Trickle charge the battery during long-term storage.
- When storing the machine for long periods the fuel tank must be full. This will minimize condensed water in the fuel system.
- Store the machine and its equipment in a dry and frost proof place.
- If the machine is stored outside, cover the machine.
- Check that the engine coolant's freezing point is adequate for temperatures where the machine is stored.
- Drain water from gearbox
- Check and empty water in fuel filter water separator.
- Change engine oil after a long-term storage

## Engine-Blade shaft-Gearbox speed adjustment



### Engine speed

The engine speed on these machines does not need to be changed from factory set speed. For more information, see the "Technical data" section.

### Blade shaft speed

The blade shaft speed on these machines should be checked before fitting the diamond blade to the machine.

Never install a diamond blade if the blade shaft rotational speed (n/min) of the machine is greater than the maximum speed (n/min) marked on the diamond blade.

The blade shaft pulley, outer flange and inner flange may need to be changed if the diameter of the diamond blade is changed.

## 1-Speed gearbox model

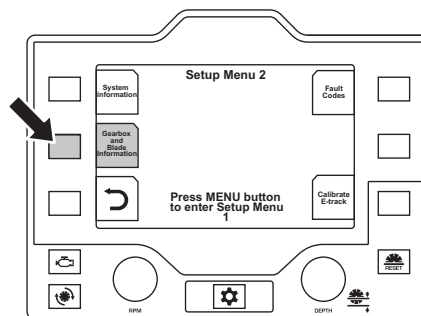
Each saw model with single speed gearbox, as delivered from the factory is configured to operate with one specific blade size inside the specific blade guard installed on the machine. If a blade size must be changed to another size, within available sizes, then the blade drive configuration must be changed.

Available blade sizes for single speed flat saw models can be seen in the table.

Available sizes	
FS5000 D, inch/mm	FS7000 D, inch/mm
14/350	20/500
20/500	26/650
26/650	30/750
30/750	36/900
36/900	42/1000

If changing from a small to a very large diamond blade or vice versa on a machine with a single speed gearbox, following must be changed:

- Blade shaft pulleys
- Gearbox pulleys
- Blade shaft flanges
- Belts
- Blade Guard
- Enter gearbox and blade information inside Setup menu 2 on the display to see the specifications for wanted configuration.



See Blade size conversion charts under heading "Blade size conversion" for specific information on necessary parts. Contact your Husqvarna dealer to order.

### Example: FS5000 D 1-Speed gearbox model

To change from 20"/500mm drive to a 36"/900mm drive:

- 1 Change engine gearbox pulleys from 4.51"/114,5mm diameter to 3.5"/89mm diameter.
- 2 Change blade shaft pulleys from 4.17"/106mm diameter to 5.75"/146mm
- 3 Change blade shaft flanges (outer and inner) from 4,5"/114mm to 6"/152,5mm
- 4 Change blade guard from 20"/500mm to 36"/900mm
- 5 Change belt from 450"/11430mm to 460"/11684mm

# OPERATING

## 6 Engine speed does not change

Select	ENGINE SPEED / BLADE SIZE (FS 5000 D)				
	BLADE SIZE	FLANGE SIZE	BLADE SHAFT LOADED RPM	PULLEY SIZE	ENGINE SPEED RATED RPM
	14"	4.5"	3200	4.17"	3000
	20"	4.5"	2400	4.17"	3000
	26"	5"	1870	4.17"	3000
	30"	5"	1630	4.78"	3000
	36"	6"	1360	5.75"	3000

Select	FS 5000 D					
	Blade Size	Flange Size	RPM	Pulley Size	RPM	Blade Size
	350mm	114mm	3200	106mm	3000	152.5mm
	500mm	114mm	2400	106mm	3000	114.5mm
	650mm	127mm	1870	106mm	3000	89mm
	750mm	127mm	1630	121.5mm	3000	89mm
	900mm	152.5mm	1360	146mm	3000	89mm

## 3-Speed gearbox model



**WARNING!** Serious injury can occur to the operator or people in the work area if the rotational speed (n/min) of the diamond blade exceeds the maximum speed (n/min) marked on the diamond blade.



**CAUTION!** Never shift the gears with engine running. Gearbox damage could occur. Never shift gears prior checking the blade drive configuration.

## Shifting gears

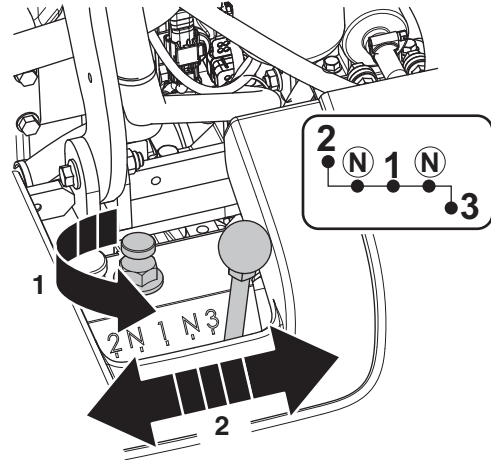


**WARNING!** After shifting gear, hand tight knob and tighten jam nut or the gearbox could be damaged.

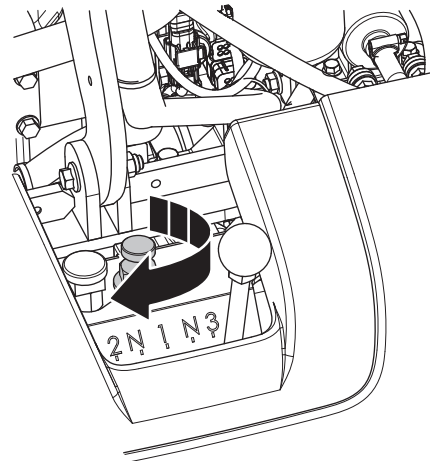
The 3-speed gearbox has three speeds and two neutral positions available. This gearbox can be shifted into neutral if the blade rotation needs to be eliminated while the engine is running. If the machine is equipped with the optional blade clutch the blade clutch can be disengaged to eliminate blade rotation while the engine is running.

- Set the Engine start switch to STOP position. Always turn engine OFF before shifting gears.
- Verify that pulley size, flange size and blade shaft speed are correct for the blade size mounted on the machine.
- Loosen jam nut. Turn knob two turns.

- Move Gearbox shift lever to required gear. If gearbox seems hard to shift, a slight movement of the blade shaft may ease movement of gearbox shift lever into proper gear.



- Hand tight knob. Tighten jam nut (30 ft-lbs / 40 Nm).



A machine that is factory equipped with a 3-speed gearbox is designed to minimize the necessary adjustments for blade size changes. However it will require some adjustments. The machine is configured from factory to operate with a specified range of blade sizes inside the factory installed blade guard.

There are 4 possible machine drive configurations on these machines:

- 14-26, for 14" to 26" (350 to 650mm) blades
- 20-30, for 20" to 30" (500 to 750mm) blades
- 20-36, for 20" to 36" (500 to 900mm) blades
- 26-42\*, for 26" to 42" (650 to 1000mm) blades

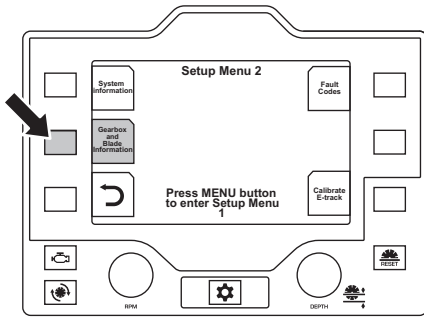
\*Only available on FS7000 D

If a blade size must be changed to another size, **within** the current configuration, then only the gears need to be shifted.

If a blade size must be changed to another, **outside** the current configuration, then the blade drive configuration must be changed.

# OPERATING

- Enter gearbox and blade information inside Setup menu 2 on the display to see the specifications for wanted configuration.



See Blade size conversion charts under heading "Blade size conversion" for specific information on necessary parts.

For example:

To change the blade size on a blade drive configuration FS5000 D 3-speed, 20-30/500-750 **within** this range, requires only that gearbox shift lever be moved into the correct position (1,2 or 3).

If the required blade size is **outside** of the blade drive configuration range, below (20"/500mm) or above (30"/750mm) for this example, then the blade drive configuration must be changed. This may require shifting the gears, changing blade shaft pulleys, gearbox pulleys, belts and blade shaft flanges.

## Example: FS5000 D 3-Speed gearbox model

To change a 3-speed gearbox model from a 20"/500mm drive to a 36"/900mm drive:

- 1 First determine the current machine drive configuration. This should correspond to the blade shaft flange diameter installed on the saw.
- 2 If the current blade drive configuration is a FS5000 D, 3 speed 20-36/500-900, the current flange should be 6"/152mm which is correct to use with 36"/900mm blade.

Select		GEARBOX RANGE / BLADE RPM (20-36, FS 5000 D)					
GEAR	BLADE SIZE (Inch/mm)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY	
3	20"		2190				
2	30"	6"	1530	5.43"	3000	4.13"	
1	36"		1310				

Select		GEARBOX RANGE / BLADE RPM (500-900, FS 5000 D)					
GEAR	BLADE SIZE (mm)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY	
3	500mm		2190				
2	750mm	152mm	1530	138mm	3000	105mm	
1	900mm		1310				

- 3 Verify proper pulley diameters are installed . See blade size conversion charts on the display for specific information.
- 4 Shift the gears from 3 to 1.
- 5 Verify that installed blade drive configuration and blade shaft speed corresponds with information on the display, under "Gear and blade information" inside Setup menu 2.



# OPERATING

Or.

- 1 If the current machine drive configuration is a 3 speed 20-30/500-750, the flange should be 5"/127mm which is too small for a 36"/900mm blade and needs to change.

GEARBOX RANGE / BLADE RPM [20-30, FS 5000 D]						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	20"		2630			
2	26"	5"	1830	4.53"	3000	4.13"
1	30"		1570			

GEARBOX RANGE / BLADE RPM [500-750, FS 5000 D]						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	500mm		2630			
2	650mm	127mm	1830	115mm	3000	105mm
1	750mm		1570			

- 2 Change the blade shaft pulley from 4.53"/115mm diameter to 5.43"/138mm.
- 3 Change the outer flange and inner flange from 5"/127mm diameter to 6"/152mm.
- 4 Shift the gears from 3 to 1.
- 5 Change belts from 550"/13970mm to 560"/14224mm
- 6 Verify that installed blade drive configuration and blade shaft speed corresponds with FS5000 D, 3 speed 20-36/500-900 drive configuration information on the display, under "Gearbox and blade information" inside Setup menu 2.

Or.

- 1 If the current blade drive configuration is a FS5000 D, 3 speed 14-26/350-650, the current flange should be 5"/127mm which is too small for a 36"/900mm blade and need to change.

GEARBOX RANGE / BLADE RPM [14-26, FS 50000 D]						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	14"		3100			
2	20"	6"	2170	4.17"	3000	4.51"
1	26"		1860			

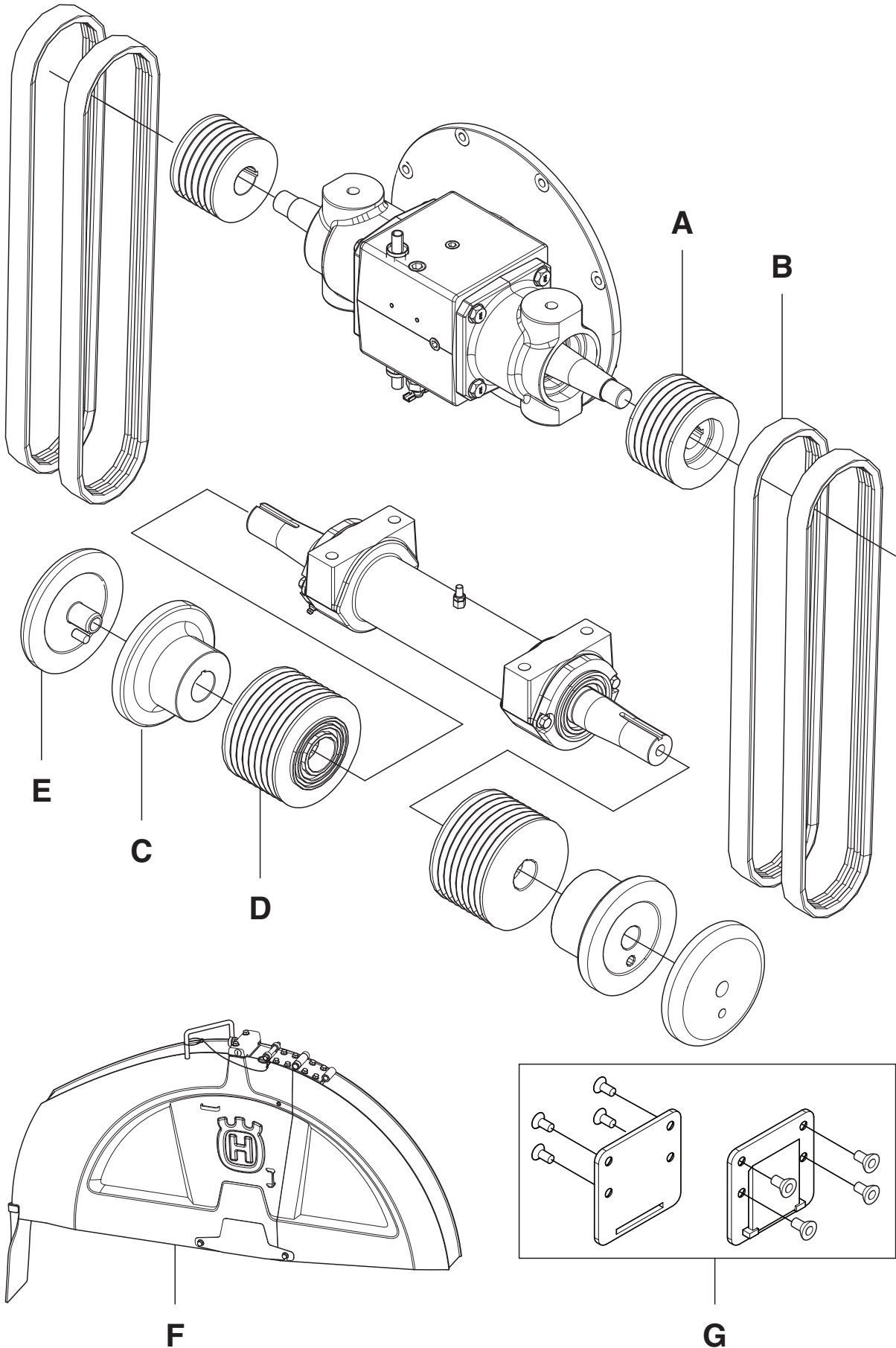
GEARBOX RANGE / BLADE RPM [350-650, FS 50000 D]						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	350mm		3100			
2	500mm	127mm	2170	106mm	3000	114,5mm
1	650mm		1860			

- 2 Change the blade shaft pulley from 4.17"/106mm diameter to 5.43"/138mm.
- 3 Change the outer flange and inner flange from 5"/127mm diameter to 6"/152mm.
- 4 Change the gearbox pulleys from 4.51"/114,5mm diameter to 4.13"/105mm.
- 5 Shift gears from 2 to 1.
- 6 Change belts from 550"/13970mm to 560"/14224mm
- 7 Verify that installed blade drive configuration and blade shaft speed corresponds with FS5000 D, 3 speed 20-36/500-900 drive configuration information on the display, under "Gearbox and blade information" inside Setup menu 2.

# OPERATING

## Blade size conversion

### FS5000 D 1-Speed gearbox model





# OPERATING

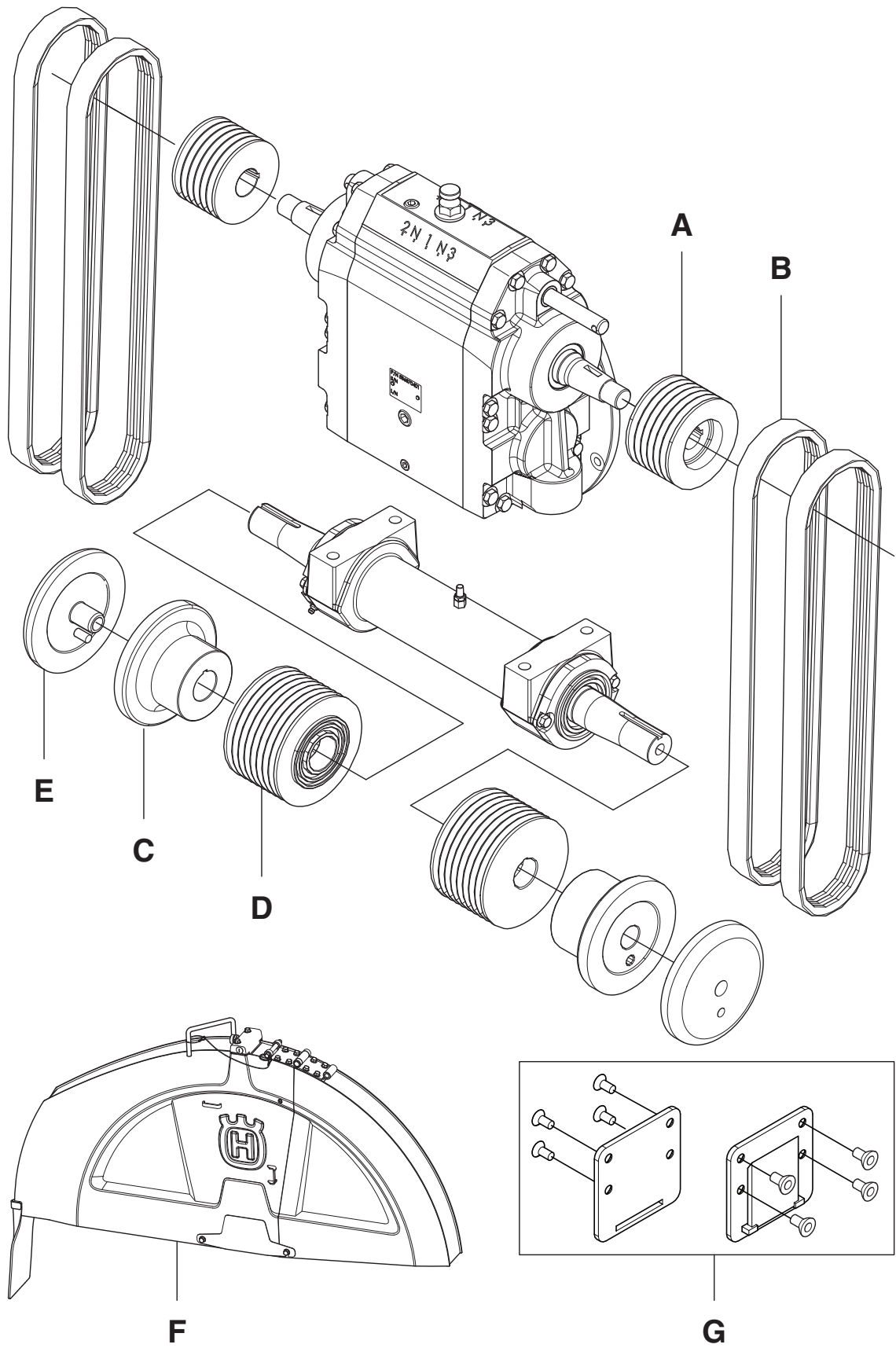
Convert from size, inch/mm	Convert to size, inch/mm				
	14/350	20/500	26/650	30/750	36/900
<b>14/350</b>	-	A=581 09 62-03 (x2)	A=581 09 62-01 (x2)	A=581 09 62-01 (x2)	A=581 09 62-01 (x2)
	-	B=505 77 74-01 (x4)	B=576 44 91-50 (x4)	B=505 77 74-01 (x4)	B=581 29 41-01 (x4)
	-	C=580 93 97-01 (x2)*	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	C=580 96 20-01 (x2)
	-	D=581 10 84-01 (x2)*	D=581 10 84-01 (x2)*	D=581 10 84-03 (x2)	D=581 10 84-05 (x2)
	-	E=586 00 92-01 (x2)	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	E=586 00 94-01 (x2)
	-	F=586 34 32-01	F=586 34 33-01	F=586 34 34-01	F=586 34 35-01
	-	-	-	-	G=586 05 06-01
<b>20/500</b>	A=581 09 86-01 (x2)	-	A=581 09 62-01 (x2)	A=581 09 62-01 (x2)	A=581 09-62-01 (x2)
	B=576 44 91-51 (x4)	-	B=576 44 91-50 (x4)	B=505 77 74-01 (x4)	B=581 29 41-01 (x4)
	C=580 93 97-01 (x2)*	-	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	C=580 96 20-01 (x2)
	D=581 10 84-01 (x2)*	-	D=581 10 84-01 (x2)*	D=581 10 84-03 (x2)	D=581 10 84-05 (x2)
	E=586 00 92-01 (x2)	-	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	E=586 00 94-01 (x2)
	F=586 34 31-01	-	F=586 34 33-01	F=586 34 34-01	F=586 34 35-01
	-	-	-	-	G=586 05 06-01
<b>26/650</b>	A=581 09 86-01 (x2)	A=581 09 62-03 (x2)	-	A=581 09 62-01 (x2)	A=581 09-62-01 (x2)*
	B=576 44 91-50 (x4)	B=505 77 74-01 (x4)	-	B=505 77 74-01 (x4)	B=581 29 41-01 (x4)
	C=580 93 97-02 (x2)	C=580 93 97-01 (x2)	-	C=580 93 97-01 (x2)*	C=580 96 20-01 (x2)
	D=581 10 84-01 (x2)*	D=581 10 84-01 (x2)*	-	D=581 10 84-03 (x2)	D=581 10 84-05 (x2)
	E=586 00 92-01 (x2)	E=586 00 92-01 (x2)	-	E=586 00 93-01 (x2)	E=586 00 94-01 (x2)
	F=586 34 31-01	F=586 34 32-01	-	F=586 34 34-01	F=586 34 35-01
	-	-	-	-	G=586 05 06-01
<b>30/750</b>	A=581 09 86-01 (x2)	A=581 09 62-03 (x2)	A=581 09 62-01 (x2)*	-	A=581 09-62-01 (x2)*
	B=576 44 91-51 (x4)	B=505 77 74-01 (x4)*	B=505 77 74-01 (x4)*	-	B=581 29 41-01 (x4)
	C=580 93 97-01 (x2)	C=580 93 97-01 (x2)	C=580 93 97-02 (x2)*	-	C=580 96 20-01 (x2)
	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	-	D=581 10 84-05 (x2)
	E=586 00 92-01 (x2)	E=586 00 92-01 (x2)	E=586 00 93-01 (x2)	-	E=586 00 94-01 (x2)
	F=586 34 31-01	F=586 34 32-01	F=586 34 33-01	-	F=586 34 35-01
	-	-	-	-	G=586 05 06-01
<b>36/900</b>	A=581 09 86-01 (x2)	A=581 09 62-03 (x2)	A=581 09 62-01 (x2)*	A=581 09 62-01 (x2)*	-
	B=576 44 91-51 (x4)	B=505 77 74-01 (x4)	B=576 44 91-50 (x4)	B=505 77 74-01 (x4)	-
	C=580 93 97-01 (x2)	C=580 93 97-01 (x2)	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	-
	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	D=581 10 84-03 (x2)	-
	E=586 00 92-01 (x2)	E=586 00 92-01 (x2)	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	-
	F=586 34 31-01	F=586 34 32-01	F=586 34 33-01	F=586 34 34-01	-

\* Already present in your current configuration.

Other parts not listed in this table will be reused from the initial configuration.

# OPERATING

## FS5000 D 3-Speed gearbox model



# OPERATING

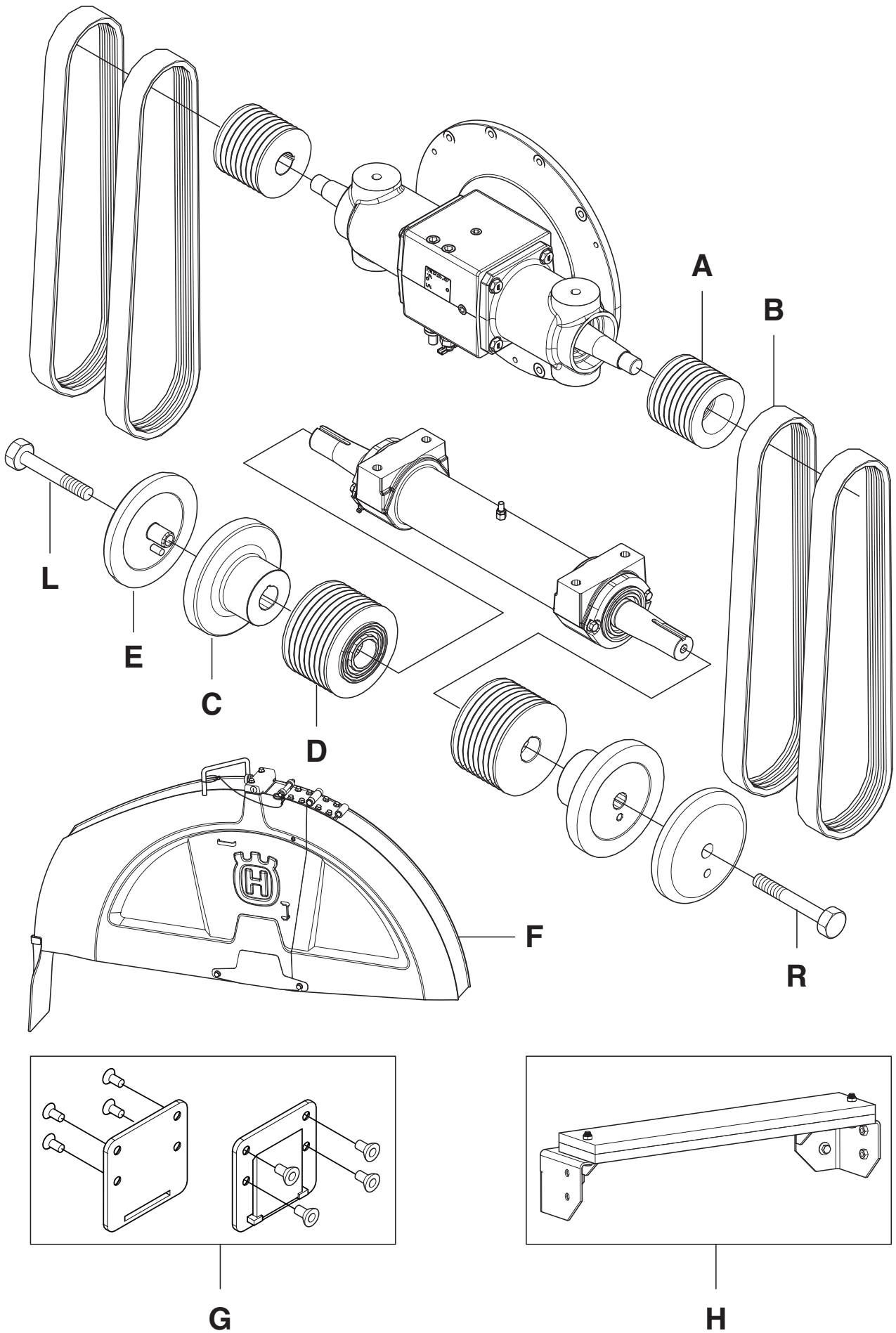
Convert from size, inch/mm	Convert to size, inch/mm		
	14-26/350-650	20-30/500-750	20-36/500-900
<b>14-26/350-650</b>	-	A=581 09 62-02 (x2)	A=581 09 62-02 (x2)
	-	B=585 51 50-01 (x4)	B= 541 20 13-91 (x4)
	-	C=580 93 97-02 (X2)*	C=580 96 20-01 (x2)
	-	D=581 10 84-02 (x2)	D=581 10 84-04 (x2)
	-	E=586 00 93-01 (x2)*	E=586 00 94-01 (x2)
	-	F=586 34 34-01	F=579 55 94-01
	-	-	G=586 05 06-01
<b>20-30/500-750</b>	A=581 09 62-03 (x2)	-	A=581 09 62-02 (x2)*
	B=585 51 50-01 (x4)*	-	B= 541 20 13-91 (x4)
	C=580 93 97-02 (X2)*	-	C=580 96 20-01 (x2)
	D=581 10 84-01 (x2)	-	D=581 10 84-04 (x2)
	E=586 00 93-01 (x2)*	-	E=586 00 94-01 (x2)
	F=586 34 33-01	-	F=586 34 35-01
	-	-	G=586 05 06-01
<b>20-36/500-900</b>	A=581 09 62-03 (x2)	A=581 09 62-02 (x2)*	-
	B=585 51 50-01 (x4)	B=585 51 50-01 (x4)	-
	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	-
	D=581 10 84-01 (x2)	D=581 10 84-02 (x2)	-
	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	-
	F=586 34 33-01	F=586 34 34-01	-

\* Already present in your current configuration.

Other parts not listed in this table will be reused from the initial configuration.

# OPERATING

## FS7000 D 1-Speed gearbox model



# OPERATING

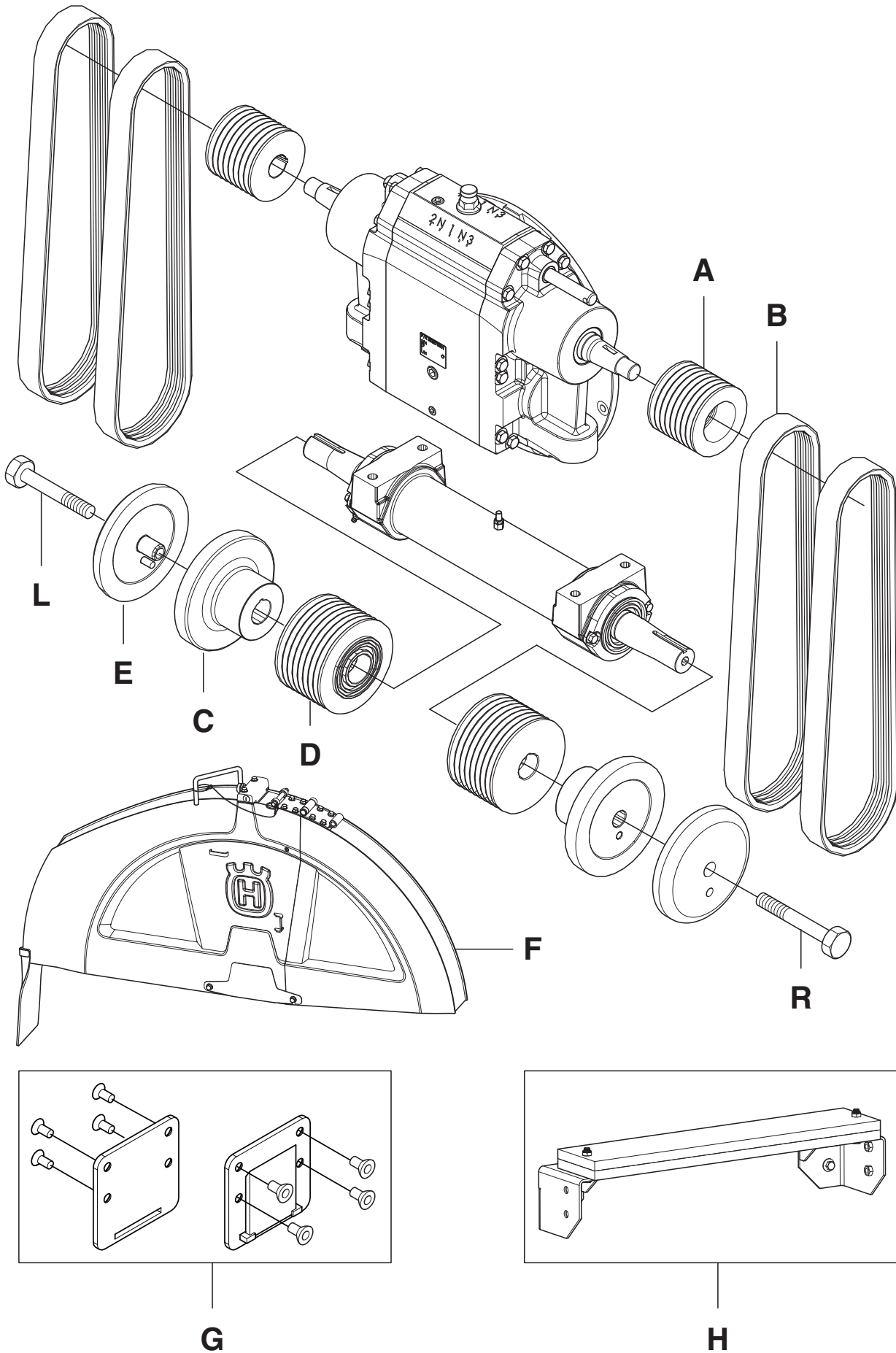
Convert from size, inch/mm	Convert to size, inch/mm				
	20/500	26/650	30/750	36/900	42/1000
20/500	-	A=581 09 98-01 (x2)	A=581 09 98-01 (x2)	A=581 09 98-01 (x2)	A=581 09 98-01 (x2)
	-	B=542 16 63-62 (x4)	B=542 16 63-62 (x4)	B=585 51 49-01 (x4)*	B=542 19 97-64 (x4)
	-	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	C=580 96 20-01 (x2)	C=580 96 42-01 (x2)
	-	D=581 10 84-01 (x2)*	D=581 10 84-02 (x2)	D=581 10 84-04 (x2)	D=581 10 85-01 (x2)
	-	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	E=586 00 94-01 (x2)	E=586 00 95-01 (x2)
	-	F=586 34 33-01	F=586 34 34-01	F=586 34 35-01	F=586 34 36-01
	-	L=586 25 59-01*	L=586 25 59-01*	G=586 05 06-01	G=586 05 06-01
	-	R=586 25 57-01*	R=586 25 57-01*	L=586 25 59-01*	H=581 67 89-02
	-	-	-	R=586 25 57-01*	L=586 25 61-01
26/650	A=581 09 98-03 (x2)	-	A=581 09 98-01 (x2)*	A=581 09 98-01 (x2)*	A=581 09 98-01 (x2)*
	B=585 51 49-01 (x4)	-	B=542 16 63-62 (x4)*	B=585 51 49-01 (x4)	B=542 19 97-64 (x4)
	C=580 93 97-01 (x2)	-	C=580 93 97-02 (x2)*	C=580 96 20-01 (x2)	C=580 96 42-01 (x2)
	D=581 10 84-01 (x2)*	-	D=581 10 84-02 (x2)	D=581 10 84-04 (x2)	D=581 10 85-01 (x2)
	E=586 00 92-01 (x2)	-	E=586 00 93-01 (x2)*	E=586 00 94-01 (x2)	E=586 00 95-01 (x2)
	F=586 34 32-01	-	F=586 34 34-01	F=586 34 35-01	F=586 34 36-01
	L=586 25 59-01*	-	L=586 25 59-01*	G=586 05 06-01	G=586 05 06-01
	R=586 25 57-01*	-	R=586 25 57-01*	L=586 25 59-01*	H=581 67 89-02
	-	-	-	R=586 25 57-01*	L=586 25 61-01
30/750	A=581 09 98-03 (x2)	A=581 09 98-01 (x2)*	-	A=581 09 98-01 (x2)*	A=581 09 98-01 (x2)*
	B=585 51 49-01 (x4)	B=542 16 63-62 (x4)*	-	B=585 51 49-01 (x4)	B=542 19 97-64 (x4)
	C=580 93 97-01 (x2)	C=580 93 97-02 (x2)*	-	C=580 96 20-01 (x2)	C=580 96 42-01 (x2)
	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	-	D=581 10 84-04 (x2)	D=581 10 85-01 (x2)
	E=586 00 92-01 (x2)	E=586 00 93-01 (x2)*	-	E=586 00 94-01 (x2)	E=586 00 95-01 (x2)
	F=586 34 32-01	F=586 34 33-01	-	F=586 34 35-01	F=586 34 36-01
	L=586 25 59-01*	L=586 25 59-01*	-	G=586 05 06-01	G=586 05 06-01
	R=586 25 57-01*	R=586 25 57-01*	-	L=586 25 59-01*	H=581 67 89-02
	-	-	-	R=586 25 57-01*	L=586 25 61-01
36/900	A=581 09 98-03 (x2)	A=581 09 98-01 (x2)*	A=581 09 98-01 (x2)*	-	A=581 09 98-01 (x2)*
	B=585 51 49-01 (x4)*	B=542 16 63-62 (x4)	B=542 16 63-62 (x4)	-	B=542 19 97-64 (x4)
	C=580 93 97-01 (x2)	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	-	C=580 96 42-01 (x2)
	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	D=581 10 84-02 (x2)	-	D=581 10 85-01 (x2)
	E=586 00 92-01 (x2)	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	-	E=586 00 95-01 (x2)
	F=586 34 32-01	F=586 34 33-01	F=586 34 34-01	-	F=586 34 36-01
	L=586 25 59-01*	L=586 25 59-01*	L=586 25 59-01*	-	G=586 05 06-01
	R=586 25 57-01*	R=586 25 57-01*	R=586 25 57-01*	-	H=581 67 89-02
	-	-	-	-	L=586 25 61-01
42/1000	A=581 09 98-03 (x2)	A=581 09 98-01 (x2)*	A=581 09 98-01 (x2)*	A=581 09 98-01 (x2)*	-
	B=585 51 49-01 (x4)	B=542 16 63-62 (x4)	B=542 16 63-62 (x4)	B=585 51 49-01 (x4)	-
	C=580 93 97-01 (x2)	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	C=580 96 20-01 (x2)	-
	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	D=581 10 84-02 (x2)	D=581 10 84-04 (x2)	-
	E=586 00 92-01 (x2)	E=586 00 92-01 (x2)	E=586 00 93-01 (x2)	E=586 00 95-01 (x2)	-
	F=579 46 76-01	F=586 34 33-01	F=586 34 34-01	F=586 34 35-01	-
	L=586 25 59-01	L=586 25 59-01	L=586 25 59-01	G=586 05 06-01*	-
	R=586 25 57-01	R=586 25 57-01	R=586 25 57-01	L=586 25 59-01	-
	-	-	-	R=586 25 57-01	-

\* Already present in your current configuration.

Other parts not listed in this table will be reused from the initial configuration.

# OPERATING

## FS7000 D 3-Speed gearbox model



# OPERATING

Convert from size, inch/mm	Convert to size, inch/mm			
	14-26/350-650	20-30/500-750	20-36/500-900	26-42/650-1000
14-26/350-650	-	A=581 09 98-02 (x2)	A=581 09 98-02 (x2)	A=581 09 98-02 (x2)
	-	B=504 11 97-07 (x4)	B=541 20 08-47 (x4)	B=504 11 97-01 (x4)
	-	C=580 93 97-02 (x2)*	C=580 96 20-01 (x2)	C=580 96 42-01 (x2)
	-	D=581 10 84-01 (x2)*	D=581 10 84-03 (x2)	D=581 10 84-05 (x2)
	-	E=586 00 93-01 (x2)*	E=586 00 94-01 (x2)	E=586 00 95-01 (x2)
	-	F=586 34 34-01	F=586 34 35-01	F=586 34 36-01
	-	L=586 25 59-01*	L=586 25 59-01*	G=586 05 06-01
	-	R=586 25 57-01*	R=586 25 57-01*	H=581 67 89-02
	-	-	-	L=586 25 61-01
	-	-	-	R=586 25 60-01
20-30/500-750	A=581 09 98-03 (x2)	-	A=581 09 98-02 (x2)*	A=581 09 98-02 (x2)*
	B=504 11 97-06 (x4)	-	B=541 20 08-47 (x4)	B=504 11 97-01 (x4)
	C=580 93 97-02 (x2)*	-	C=580 96 20-01 (x2)	C=580 96 42-01 (x2)
	D=581 10 84-01 (x2)*	-	D=581 10 84-03 (x2)	D=581 10 84-05 (x2)
	E=586 00 93-01 (x2)*	-	E=586 00 94-01 (x2)	E=586 00 95-01 (x2)
	F=586 34 33-01	-	F=586 34 35-01	F=586 34 36-01
	L=586 25 59-01*	-	G=586 05 06-01	G=586 05 06-01
	R=586 25 57-01*	-	L=586 25 59-01*	H=581 67 89-02
	-	-	R=586 25 57-01*	L=586 25 61-01
	-	-	-	R=586 25 60-01
20-36/500-900	A=581 09 98-03 (x2)	A=581 09 98-02 (x2)*	-	A=581 09 98-02 (x2)*
	B=504 11 97-06 (x4)	B=504 11 97-07 (x4)	-	B=504 11 97-01 (x4)
	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	-	C=580 96 42-01 (x2)
	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	-	D=581 10 84-05 (x2)
	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	-	E=586 00 95-01 (x2)
	F=586 34 33-01	F=586 34 34-01	-	F=586 34 36-01
	L=586 25 59-01*	L=586 25 59-01*	-	G=586 05 06-01
	R=586 25 57-01*	R=586 25 57-01*	-	H=581 67 89-02
	-	-	-	L=586 25 61-01
	-	-	-	R=586 25 60-01
26-42/650-1000	A=581 09 98-03 (x2)	A=581 09 98-02 (x2)*	A=581 09 98-02 (x2)*	-
	B=504 11 97-06 (x4)	B=504 11 97-07 (x4)	B=541 20 08-47 (x4)	-
	C=580 93 97-02 (x2)	C=580 93 97-02 (x2)	C=580 96 20-01 (x2)	-
	D=581 10 84-01 (x2)	D=581 10 84-01 (x2)	D=581 10 84-03 (x2)	-
	E=586 00 93-01 (x2)	E=586 00 93-01 (x2)	E=586 00 94-01 (x2)	-
	F=586 34 33-01	F=586 34 34-01	F=586 34 35-01	-
	L=586 25 59-01	L=586 25 59-01	G=586 05 06-01	-
	R=586 25 57-01	R=586 25 57-01	L=586 25 59-01	-
	-	-	R=586 25 57-01	-

\* Already present in your current configuration.

Other parts not listed in this table will be reused from the initial configuration.

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# OPERATING

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## Accessories

### Blade guard conversion kits

Use proper size blade guard for the particular diamond blade size being operated. The following blade guards are available for these diamond blades.

Blade guards, inch/mm	Blade sizes, inch/mm
42/1000	30-42/750-1000
36/900	20-36/500-900
30/750	20-30/450-750
26/600	14-26/350-650
20/500	14-20/350-450
14/350	14/350

See Blade size conversion charts under heading "Blade size conversion" for specific information on necessary parts.

### Weight kit

581 67 89-02 Rear weight kit, 2 bars

Standard as on: 42"/1000mm

### Optional kits

585 92 46-01 Dual light kit

586 01 23-01 Water pump kit



# 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 heading "Personal protective equipment".**

**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 section "Maintenance and service".
- Check that the blade is not in contact with anything when the machine is started.

**NOTICE!** Read the operator's manual supplied by the engine manufacturer.

## Starting for the first time

- Check engine oil level without blade and the saw horizontal for a flat saw level.
- Connect battery cables. The flat saw unit is supplied with no battery cables connected.

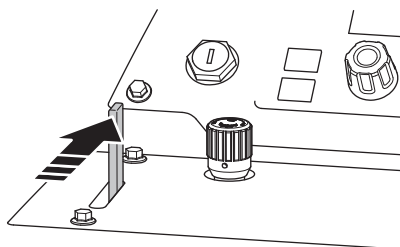
For some markets batteries are not supplied due to safety reason during transportation. Install a new battery.

For more information, see the "Technical data" section.

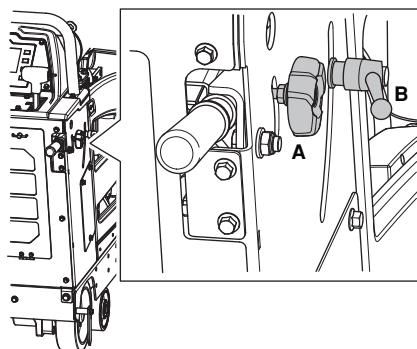
- Check coolant level
- Check and set units on the control panel (temperature and measures).
- Choose language on the control panel

## Starting

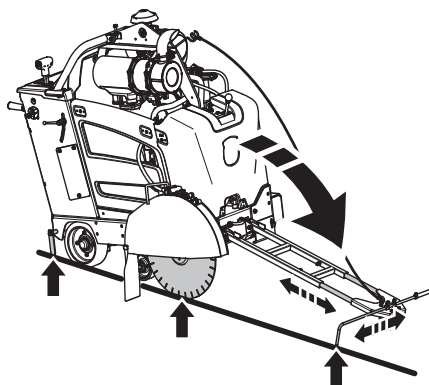
- Connect the machine to a water supply. Turn off the Water valve.



- Mark the cuts to be made.
- Pull out handle bars to desired length and height and tighten the knobs.

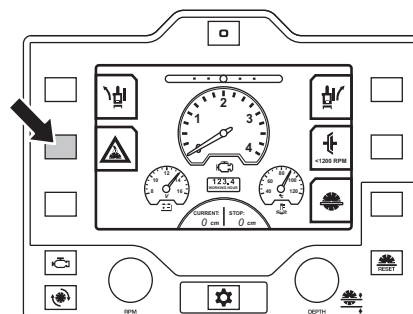


- Lower the front guide and align the front guide, rear guide and the diamond blade with the line on the surface. The front guide is telescopic, adjust the length with the screws on the inside of the front guide.



## Start the engine

- To start the saw when no water pressure is present, disengage the Water safety switch.

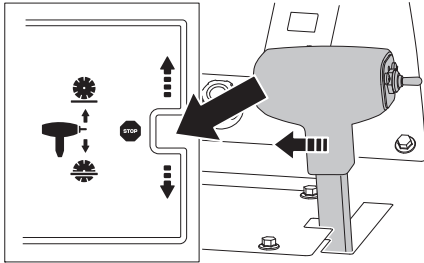


# STARTING AND STOPPING

## Water safety system

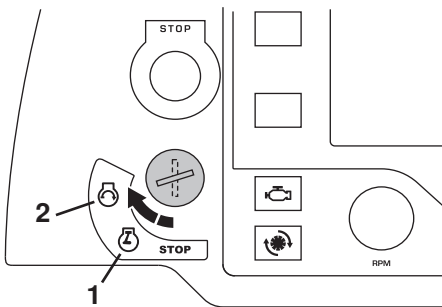
Water is used to prevent overheating the blade while controlling the dust that results from sawing. The water safety system monitors the water pressure to the machine and interrupts the sawing process if the pressure drops.

- Set Speed control lever to the STOP position. The engine will not start unless the Speed control lever is in the distinct STOP position.



**NOTICE!** Check to be certain, the transmission bypass valve is closed in the down position.

- When preheat symbol is displayed, wait for the engine glow plugs to warm the engine. When the preheat symbol disappears turn the Engine start switch to position engine start to start the engine.



- Let the engine warm up for several minutes with Engine throttle at idle speed (minimum).



**CAUTION!** Pay special attention on clutchless machines, blade starts rotating at start. For safety reason, do not move the saw sideways or out of the working area with blade installed and rotating.

**NOTICE!** If all start conditions are not fulfilled this will be shown on the display. Perform the action and try to start the engine again.

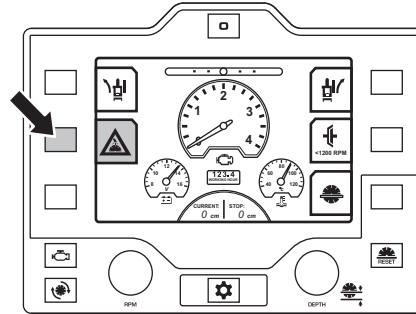
## Start the cutting.



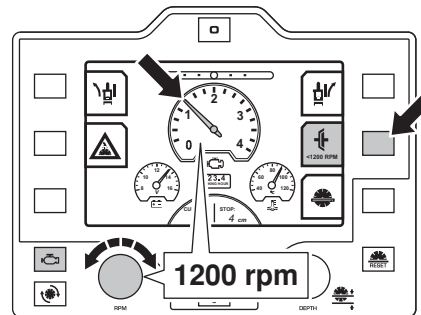
**WARNING!** Never use a blade with a lower speed rating than that of the machine. Make sure the blade is properly installed.

**NOTICE!** See chart for the appropriate blade shaft and engine speeds for specific blade sizes in the display.

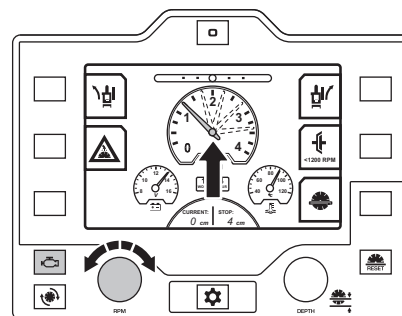
- Test for adequate water supply. Low water flow will cause damage to diamond blades. Engage the Water safety switch on the control panel and open the Water valve.



- Engage the Blade clutch (if equipped) to engage the blade drive. Only at 1200rpm or less.

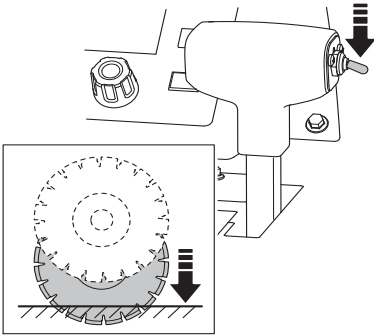


- Set the Engine throttle knob to maximum rpm.



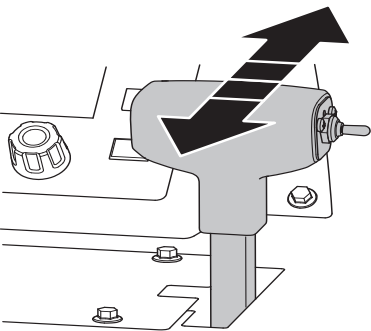
# STARTING AND STOPPING

- Lower the blade by pressing the Raise/lower switch on the Speed control lever until the diamond blade is at the desired cutting depth. For more information see section "Blade depth stop".



**CAUTION!** When lowering the blade into a partial cut, align the blade exactly with the cut to prevent damage to the blade.

- Move the saw forward slowly by pushing on the Speed control lever. Listen to the sound of the engine. If the engine starts to slow down compensate by pulling Speed control lever backwards to decrease feeding and prevent stalling the blade. Make sure the front guide, rear guide and diamond blade stays on the line.



To adjust tracking, see the "Straight line sawing" section.

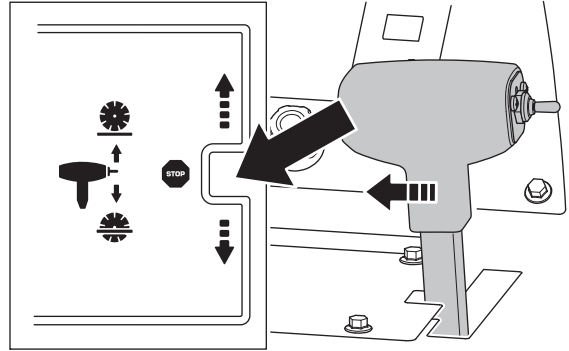
## Stopping



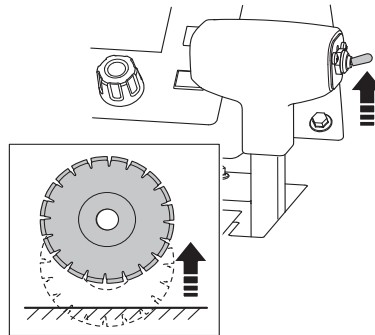
**WARNING!** Always keep all parts of your body away from blade and all other moving parts.

### Stop the cutting.

- Put Speed control lever into the STOP position.

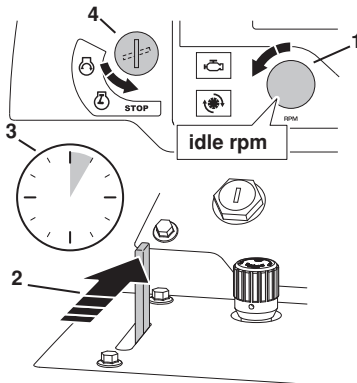


- Raise the diamond blade out of the cut by pressing the Raise/lower switch on the control lever upward until the diamond blade clears the surfaces.



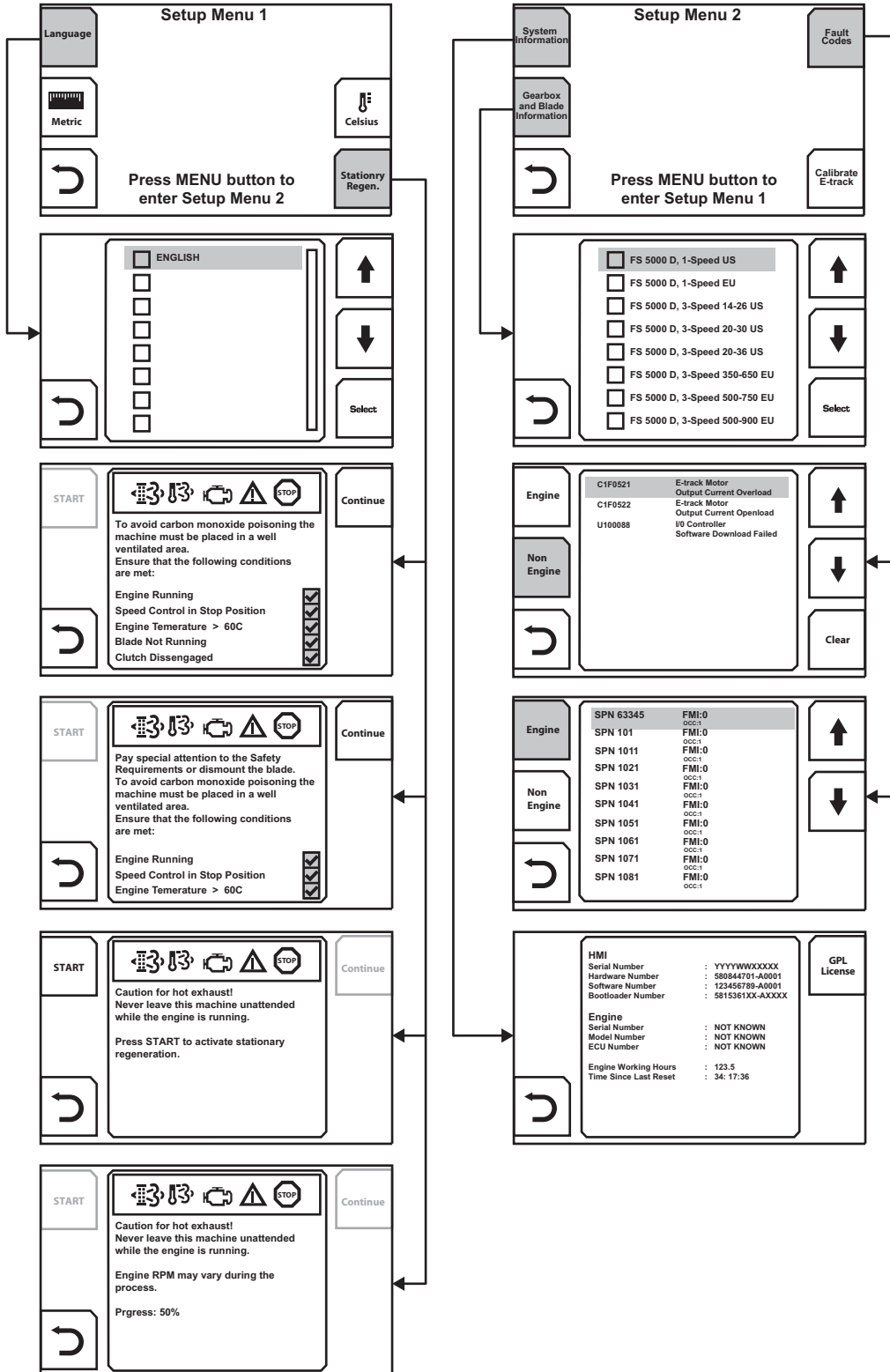
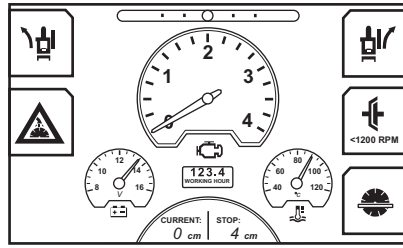
### Stop the engine

- Turn the Engine throttle knob to the low idle position.
- Turn off the Water valve.
- Let the engine run at idle for a few minutes before shutting off.
- Stop the engine by turning the Engine start switch to the STOP position.



# MENU SYSTEM

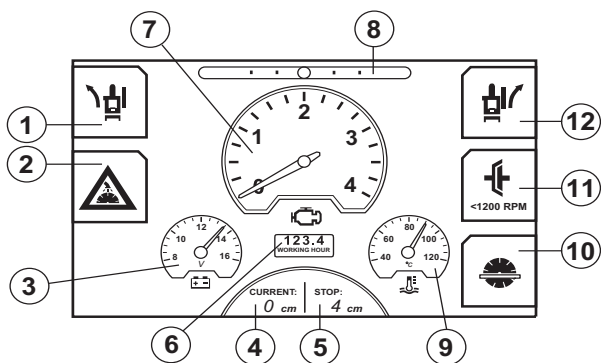
## Menu overview



See following page for an explanation of each menu.

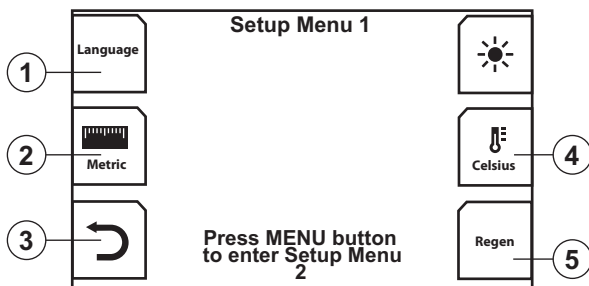
# MENU SYSTEM

## Menu system explanation



- 1 E-track, adjustment left
- 2 Water safety system
- 3 Battery voltage
- 4 Current blade depth
- 5 Blade depth stop setting
- 6 Run time
- 7 Engine or blade speed
- 8 E-track, position
- 9 Motor temperature
- 10 Blade depth stop
- 11 Blade clutch
- 12 E-track, adjustment right

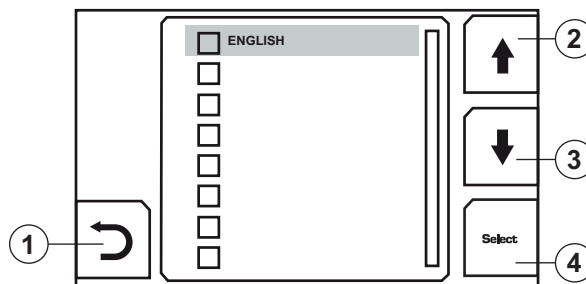
## Setup Menu 1



- 1 Language
- 2 Distance unit. Switch between metric and imperial length units.
- 3 Return button (previous menu)
- 4 Temperature unit. Switch between Celsius and Fahrenheit.
- 5 Stationary regeneration. The system will inform when the particulate filter needs cleaning.  
See instructions in section "Maintenance and service".

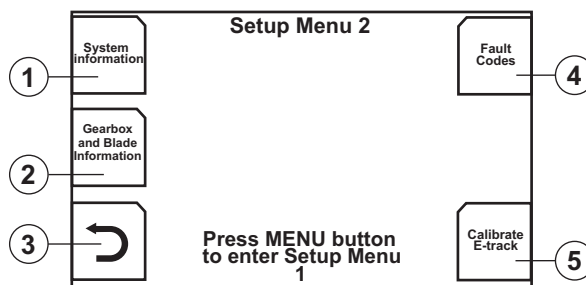
## Languages

Select the required display language.



- 1 Return button (previous menu)
- 2 Browse to previous language
- 3 Browse to next language
- 4 Select button

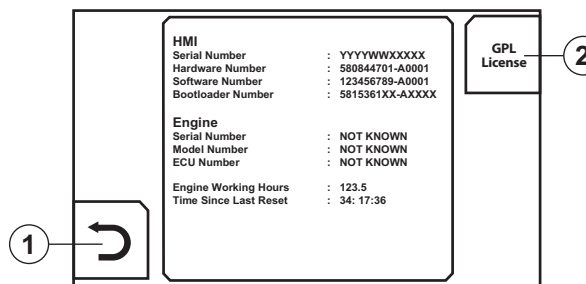
## Setup Menu 2



- 1 System information
- 2 Gearbox and blade information
- 3 Return button (previous menu)
- 4 Fault codes
- 5 Calibrate E-track. Present E track position becomes center position.

## System information

Software related information.



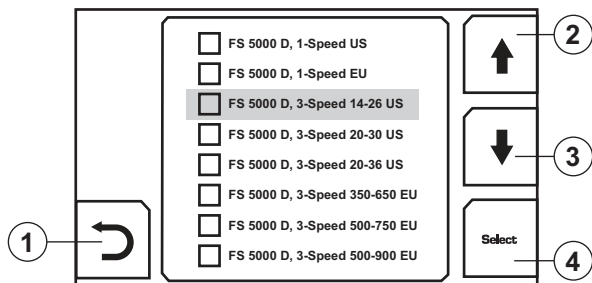
- 1 Return button (previous menu)
- 2 GPL license

# MENU SYSTEM

## Gearbox and blade information

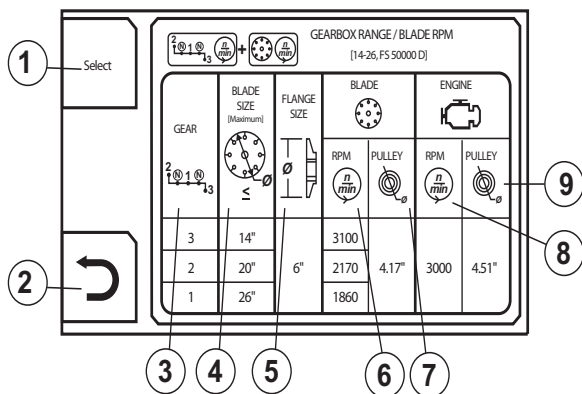
Shows the recommended rpm and gear for available blade sizes.

The tables are different depending on whether the machine is configured for 1-Speed or 3-Speed gearbox. Select your product model.



- 1 Return button (previous menu)
- 2 Browse to previous FS-model
- 3 Browse to next FS-model
- 4 Select button

## Selected product's gearbox and blade information



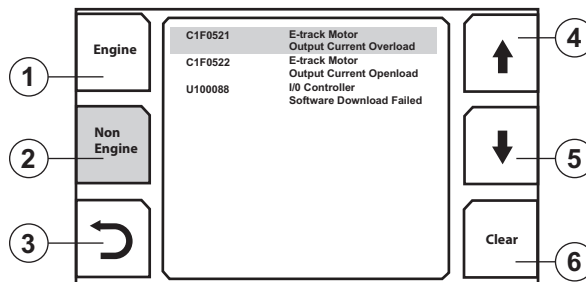
- 1 Select button
- 2 Return button (previous menu)
- 3 Gearbox range (3-speed gearbox)
- 4 Diamond blade diameter, inch/mm
- 5 Blade flange diameter, inch/mm
- 6 Rotational speed of diamond blade
- 7 Blade shaft pulley diameter, inch/mm
- 8 Maximum rotational speed of engine
- 9 Gearbox pulley diameter, inch/mm

## Fault codes

Shows fault codes when the machine detects a fault.

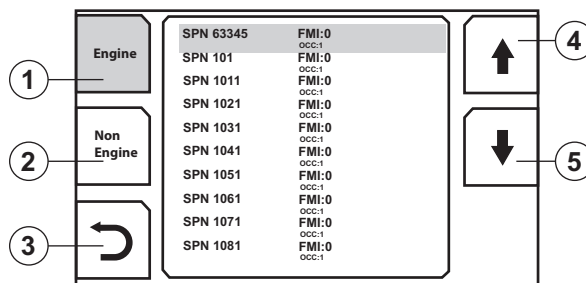
For more information, see the "Maintenance and service" section.

## Non Engine



- 1 Fault codes, engine
- 2 Fault codes, not engine-related
- 3 Return button (previous menu)
- 4 Browse to previous fault code
- 5 Browse to next fault code
- 6 Clear rectified fault code

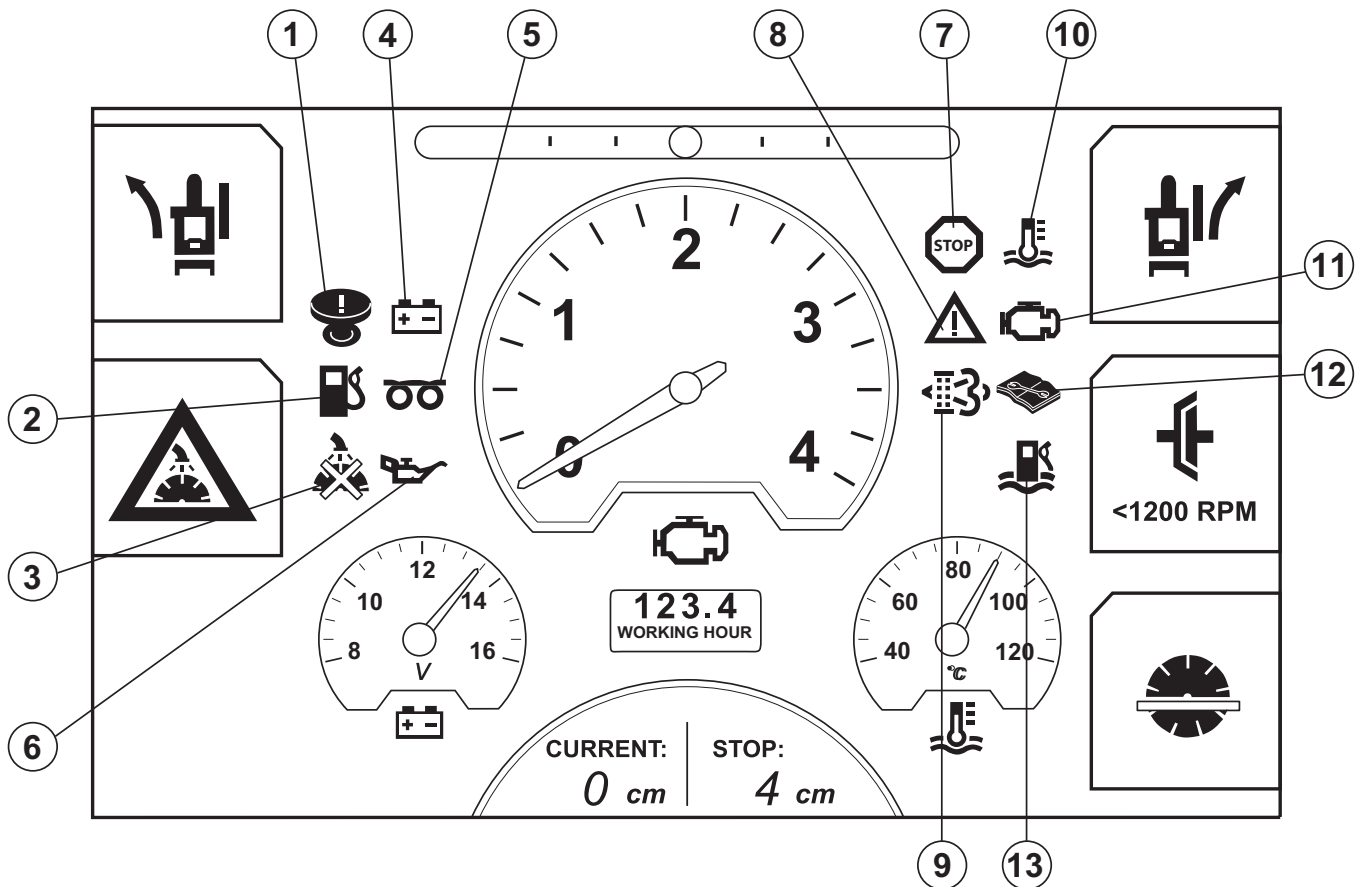
## Engine



- 1 Fault codes, engine
- 2 Fault codes, not engine-related
- 3 Return button (previous menu)
- 4 Browse to previous fault code
- 5 Browse to next fault code

Please see the engine Operator's Manual for more information.

# MENU SYSTEM



## Explanation of the warning symbols on the display

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1 Machine stop activated</li> <li>2 Low fuel level</li> <li>3 No blade water pressure</li> <li>4 No charging</li> <li>5 Preheat</li> <li>6 Low oil pressure</li> <li>7 Severe engine problem/condition. Cutting can not continue. For more information, see the "Troubleshooting" section.</li> <li>8 Moderate engine problem/condition. Cutting can continue.</li> </ul> | <ul style="list-style-type: none"> <li>9 Stationary regeneration requested, only FS5000 D. For more information, see the "Maintenance and service" section.</li> <li>10 Engine over heated. Cutting can not continue.</li> <li>11 Engine fail lamp always in combination with pos. 7 and 8.</li> <li>12 Non engine related fault codes are active. Please see the engine Operator's Manual for more information.</li> <li>13 Water in fuel, FS7000 D. For more information, see the "Maintenance and service" section.</li> </ul> |
|--|---|



# MAINTENANCE AND SERVICE

## General



**WARNING!** Most accidents involving machines occur during trouble shooting, service and maintenance as staff have to locate themselves within the machine's risk area. Prevent accidents by being alert and by planning and preparing the work.

If servicing operations require the motor to be in operation, be aware of risks when working with or in the vicinity of moving parts.

Perform maintenance and servicing in accordance with this Operator's Manual to avoid shutdowns and to maintain the machine's value.

Maintain the machine's supplementary equipment and tools as well.

The user must only carry out the maintenance and service work described in this manual. More extensive work must be carried out by an authorized service workshop.

Use only original spare parts for repairs.

## Measures to take in advance of maintenance, service and trouble shooting

### General

- Ensure that the machine is situated in a safe area.
- Always park the machine on a level surface with the engine OFF and the Engine start switch set in the STOP position before starting. Press the Machine stop on the control panel.
- Several components heat up during use of the machine. Do not commence any servicing or maintenance tasks until the machine has cooled.
- Set out clear signs to inform persons in the vicinity that maintenance work is in progress.
- Ensure that the working area is sufficiently illuminated to create a safe working environment.
- Ascertain the location of fire-extinguishers, medical supplies and emergency telephone.

### Protective equipment

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

### Working environment

- The area around the machine must be free of dirt in order to minimize the risk of slipping.

## Cleaning



**CAUTION!** When cleaning the machine there is a risk of getting dirt and harmful substances in the eyes, for example.

Dirt and harmful substances can be released from the machine when using high pressure equipment.

High-pressure jetting using water or air can permeate into the skin and cause serious injury. Never aim a high-pressure jet towards the skin.

After each use clean the machine when cooled down.

### Cleaning method

The cleaning method varies depending on type of contaminants and how dirty the machine is. A mild degreasing agent can be used. Avoid skin contact. Use high-pressure washers to clean the machine.

### Cleaning of components

There are a number of components that require special consideration when cleaning.

**NOTICE!** Do not use high-pressure washers to clean the control panel. Make sure the cover for relay and fuse box is in place before washing.

### Radiator

Allow the radiator to cool down before cleaning. Use compressed air to clean the air fins. If necessary, use high-pressure washing and degreasing agent. Incorrect use of high-pressure washing or compressed air can distort the cooler's fins and thereby impair the cooling capacity.

- Spray directly towards the radiator, in parallel with the fins.
- Keep a distance of at least 40 cm between the cooler and the nozzle.

### Control Panel

- Clean electrical components with a cloth or with compressed air. Do not spray water at electrical components. Dry the control panel with a damp cloth.

### Engine

- Keep a distance of at least 40 cm between the nozzle and engine and its components. Do not spray too aggressively on the engine to prevent damage to electrical components like electrical plugs and alternator. Do not spray water directly in to the exhaust pipe or in engine air filter.

### After washing

- Lubricate all the machine's lubrication points.
- Blow electrical terminals dry using compressed air.
- Let the machine dry thoroughly before start.
- Exercise caution when the machine is started after washing. If any components have been damaged due to moisture, the machine's movements can be defective.

# MAINTENANCE AND SERVICE

## Service schedule

The service schedule is based on the machine's operating time. More frequent service intervals might be necessary when working in dusty or hot environments and in conjunction with work that generates high temperatures. A description of how the operations are to be performed is to be found in the service review.

For certain service requirements, refer to the service intervals in the service schedule below and keep track on the next service. The machine will keep track on the working hours and it can be seen in the display.

- Always park the machine on a level surface with the engine OFF and the Engine start switch set in the STOP position before performing any maintenance. Press the Machine stop on the control panel.

Please read the engine manual for your machine carefully and make sure you understand the instructions before using the machine. There are some maintenance intervals specified in the engine manual.

In case where same services operation is recommended both in this machine's operator manual and in the engine operator manual, follow the schedule recommendations given in this manual.

## Daily maintenance

Daily maintenance must also be carried out after transportation.

	Daily	50h	100h	250h	500h	Yearly
Check radiator coolant level.	X					
Check the engine's oil level	X					
Check blade guard for damage	X					
Check hoses and clamps for damage or looseness. Tighten or replace as required.	X					
Check air cleaner restriction indicator. Clean outer air filter if indicator is red.	X					
Make sure all safety guards are in place and in good condition.	X					
Drain cooling water from gearbox to prevent rust and/or freeze damage.	X					
Check the water spray over the diamond blade.	X					
Drain fuel filter water separator from water	X					
Replace engine oil and filter*		X				
Check and clean radiator air filter or replace if necessary.		X				
Check blade drive V-belt tension (first time after 2 hours). Tension both side evenly. Do not over tension		X				
Lubricate front wheels		X				
Replace hydraulic system filter**		X				
Replace engine oil and filter*			X			
Lubricate front axle pivot bearings			X			
Check wheels for wear or damage.			X			
Check rear wheel hubs and wheels for looseness			X			
Check engine air cleaner hose and clamps			X			
Check hydraulic system fluid level			X			
Replace hydraulic system filter**				X		
Lubricate blade shaft (2 pumps each end)				X		
Lubricate hydraulic cylinder pivot pin.				X		
Lubricate rear axle bearing.				X		
Replace engine gearbox fluid					X	
Replace hydraulic system fluid					X	
Replace engine fuel filter (spin-on-type)					X	
Flush and clean radiator and cooling system					X	
Replace outer and inner air filter						X
Check coolant freeze protection						X

\* Once at 50h then every 100h

\*\* Once at 50h then every 250h

# MAINTENANCE AND SERVICE

## Daily maintenance



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

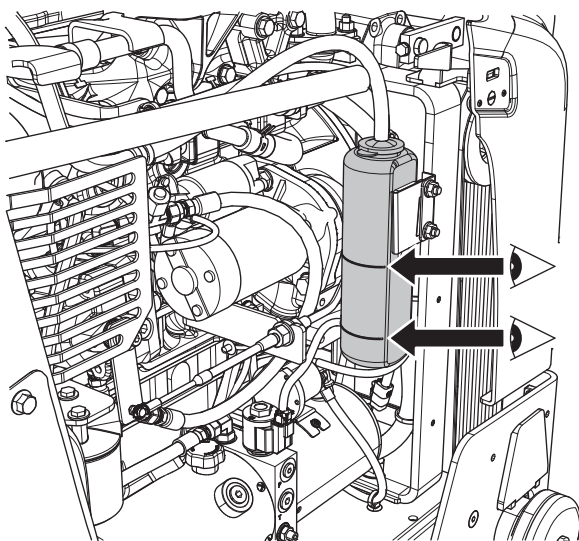
### Check radiator coolant level.



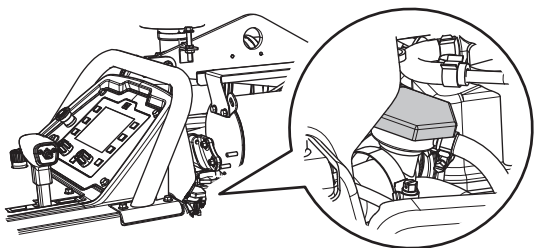
**WARNING!** Let the engine cool down before opening the radiator coolant lid.

#### FS5000 D

- The coolant level should be between the two marks.

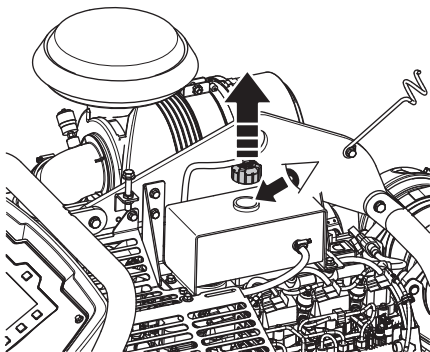


- Fill with coolant if needed.



#### FS7000 D

- Remove the lid and look down, the level should reach the start of the tube inside. Fill with coolant if needed.

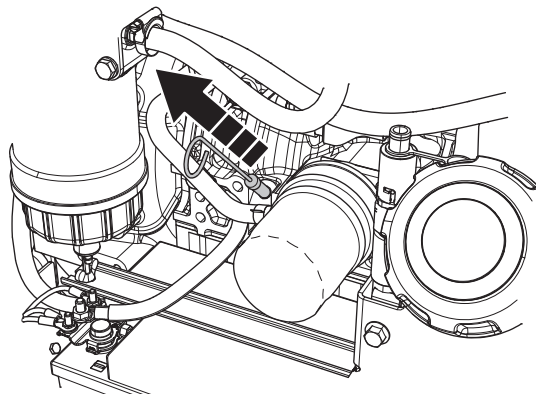


### Check the engine's oil level

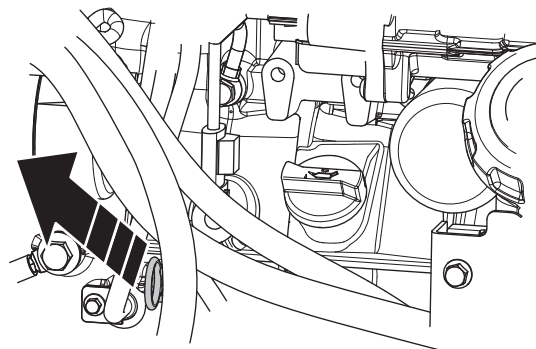
Check engine oil level without blade and the saw horizontal for a flat saw level.

- On the left side of the saw, check the engine oil level.

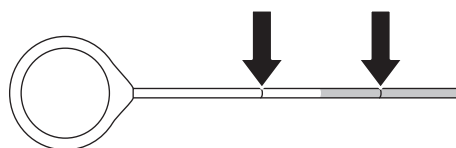
#### FS5000 D



#### FS7000 D

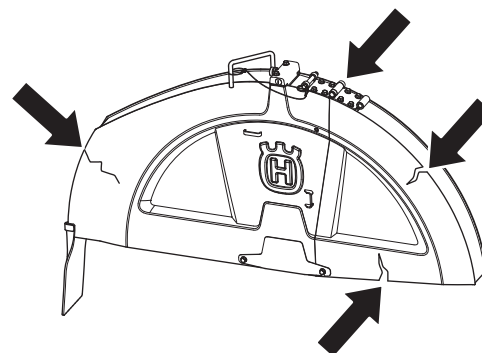


- Make sure the level is between the limits.



### Check blade guard for damage

- Check the blade guard for cracks.

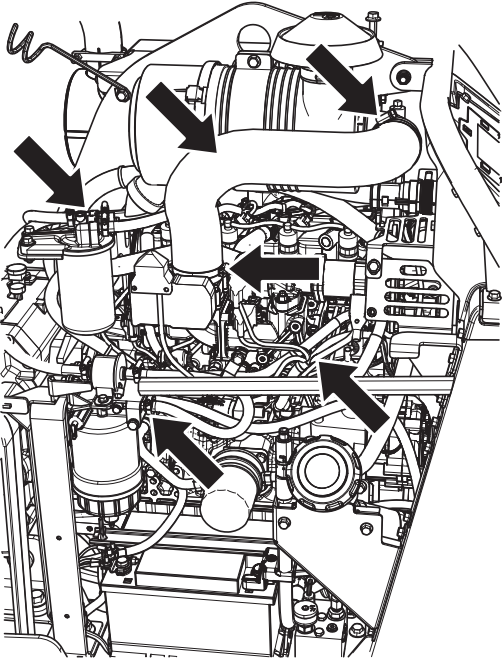


- Never use broken or damage blade guard.

# MAINTENANCE AND SERVICE

## Check all hoses and clamps for damage or looseness.

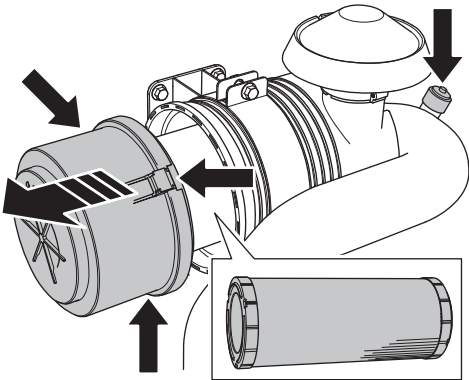
The image only shows some of the hoses and clamps.



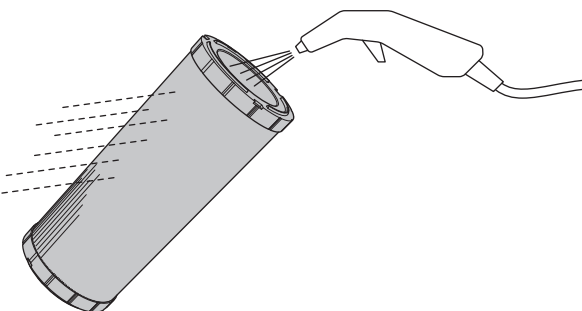
- Look for leakage on fuel, hydraulics and cooling system. Tighten or replace as necessary.

## Check air cleaner restriction indicator.

- Check and clean the outer air filter if the air cleaner indicator is red, remove the rear cover by opening the 3 air filter housing clamps and pulling the housing off.



- Clean the filter by blowing the element from inside out. Use the lowest possible air pressure to remove the dust without damaging the element. Use 42-47 PSI (0,29-0,49 MPa;3,0-5,0 kgf/cm<sup>2</sup>) compressed air to remove particulates.



- Replace any damaged filters or gaskets and check air hose and clamps for damages or looseness. Tighten or replace as required.

**NOTICE!** No need to clean the inner filter on a daily basis. The 3 air filter housing clamps can not be closed unless the outer air filter is properly installed.

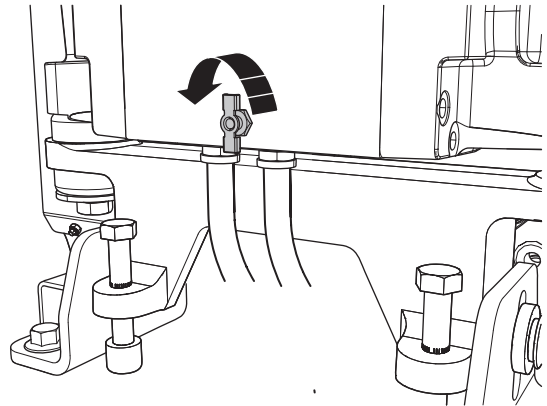
## Protection covers

- Make sure all protection covers are in place and in good condition.

For more information, see the "Machine's safety equipment" section.

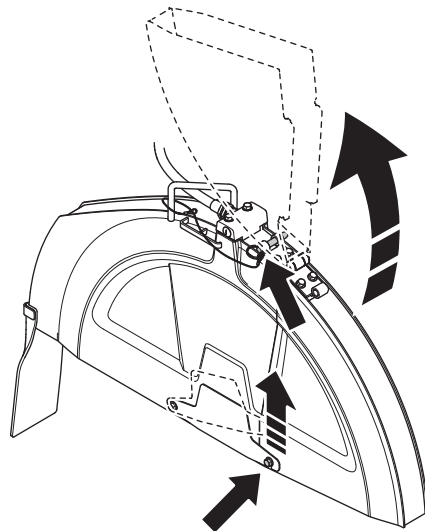
## Drain cooling water from gearbox to prevent rust and/or freeze damage.

- To drain water from gearbox, turn the drain tap counterclockwise to open and clockwise to close.



## Check the water spray over the diamond blade.

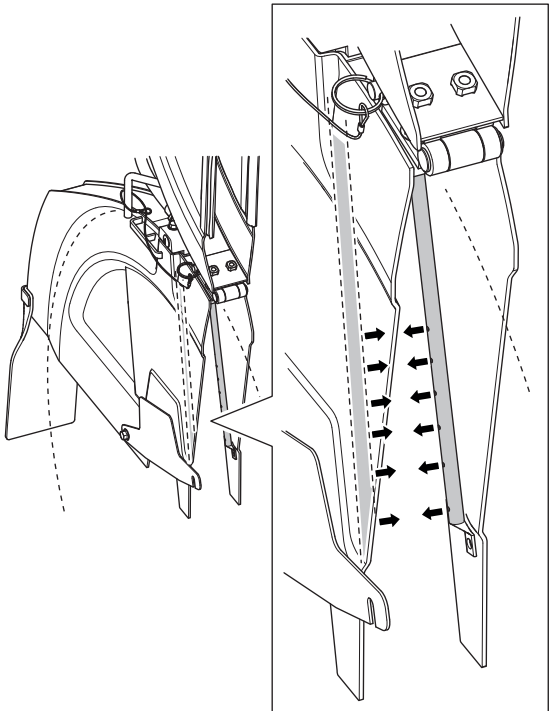
- Raise blade guard front and use quick release pin to lock it in upright position.





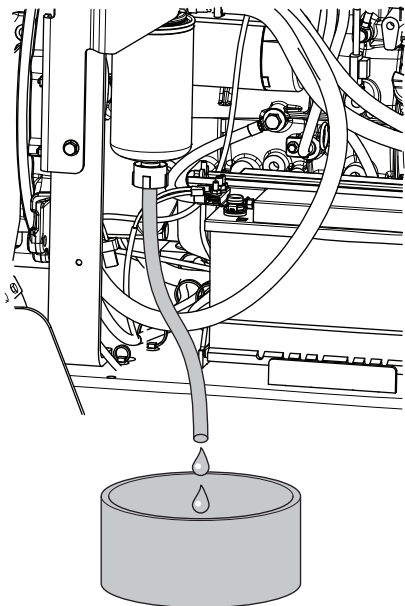
# MAINTENANCE AND SERVICE

- Open the Water valve on the control panel. Make sure it is straight jets of water out of the holes from the water pipes on both sides of the blade and no leakage. Replace water pipe if damaged.



## Drain fuel filter water separator from water

- Drain the fuel filter water separator by using the hose in the bottom. Put the hose in a bottle or a can, loosen the drain tap and drain any water collected inside the separator.



**NOTICE!** Treat this water as fuel and dispose properly.

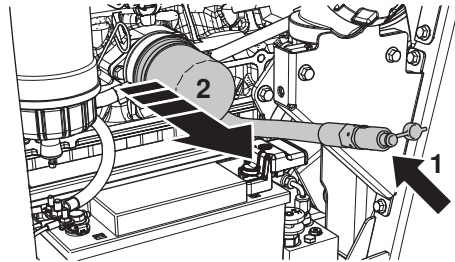
## After the first 50 hours

### Replace engine oil and filter

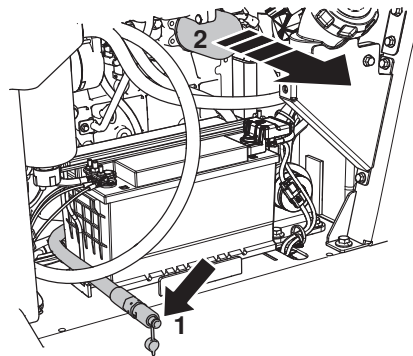
- Remove the top cap from the hose. Open the valve and bend it down to empty the system.  
Remove the filter and replace it.  
Fill the new filter with oil and lubricate the seal with a few drops of oil prior to refitting it.

**NOTICE!** Protect the battery from oil spill prior to removing and refitting.

FS5000 D

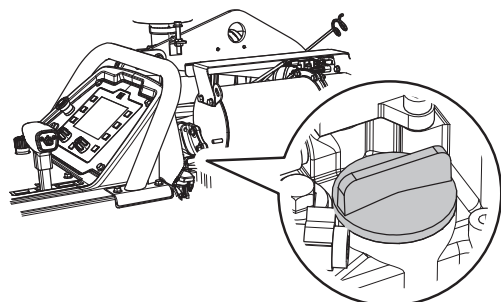
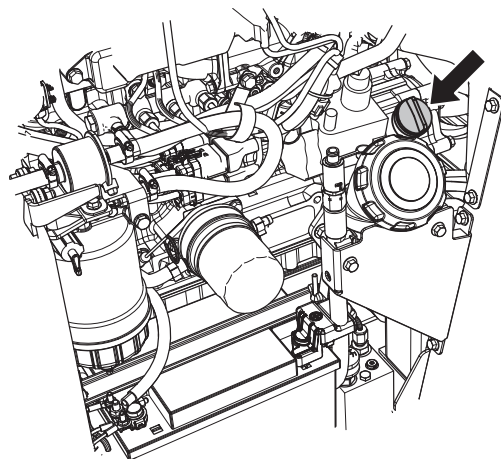


FS7000 D



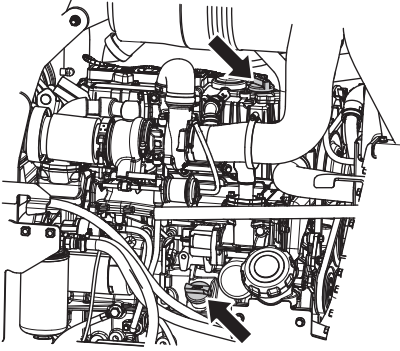
- Refill the system at either of 2 locations on the engine.

FS5000 D



# MAINTENANCE AND SERVICE

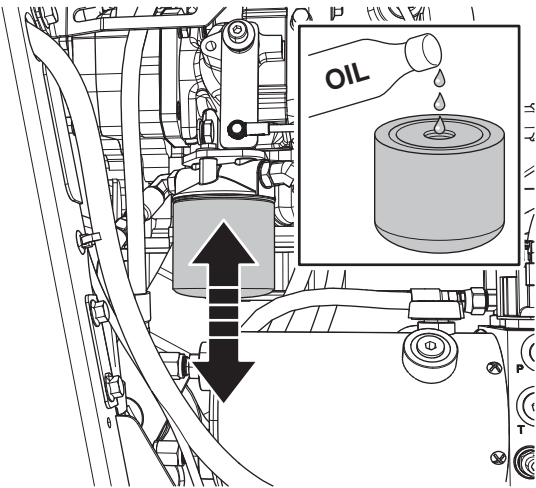
FS7000 D



- Check the engine's oil level, see instructions under heading "Daily maintenance".

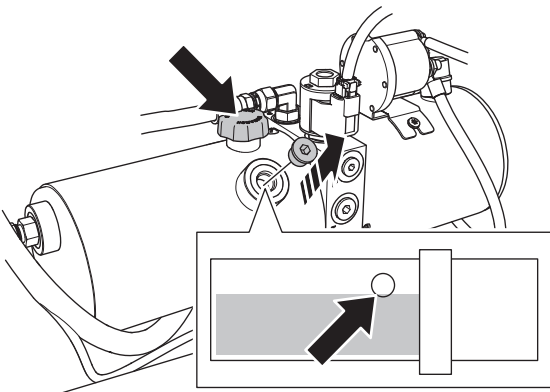
## Replace the hydraulic system filter.

- Remove the hydraulic system filter. Fill the new filter with oil and lubricate the seal with a few drops of oil prior to refitting it.



- Refill the reservoir with new oil.

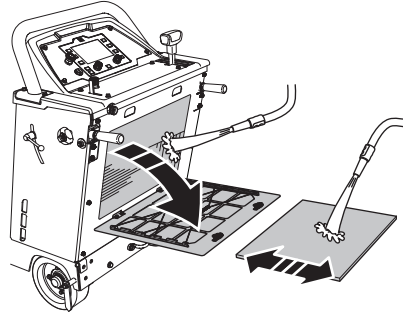
Ensure that machine is level prior refilling.



**NOTICE!** Do not overfill!

## 50 hours service

- Check and clean radiator air filter or replace if necessary.

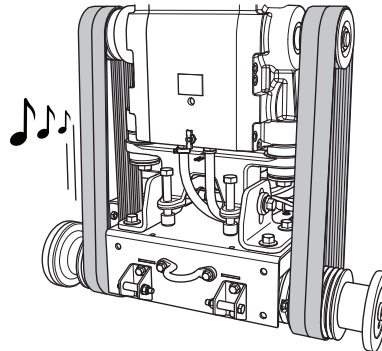


**CAUTION!** Always keep the radiator air filter in place

## Check drive V-belt tension.

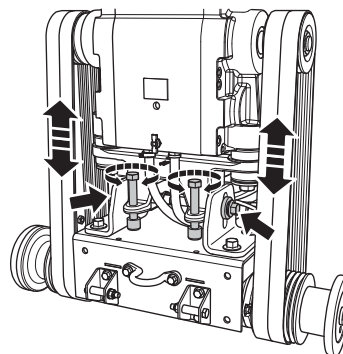
The V-belts are properly tensioned at the factory but after a few hours of operation they will stretch and become loose. Loose V-belts result in poor saw performance and short belt life.

- Check the blade drive V-belt tension by plucking the belt like a string. The belt should give a long tone rather than a dull sound.



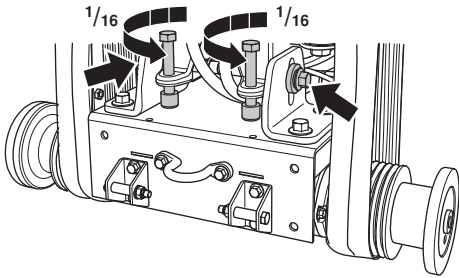
To tension the belts.

- Open the front cover. Loosen the two horizontal locking bolts with the blade shaft wrench, raise the gearbox and engine by using the belt tensioning bolts. Turn both of these bolts clockwise until V-belts are tight and check the belt by plucking it again.



# MAINTENANCE AND SERVICE

- Fasten the two horizontal bolts again.
- Loosen the belt tensioning bolts counterclockwise approximately 1/16 of a turn.



**CAUTION!** Be sure to tension both sides evenly, do not over tension.

Replace V-belts in complete sets only. Always re-tension new belts after first 2-4 hours of use.

## Lubricate front wheels

See instructions under the heading "Lubrication".

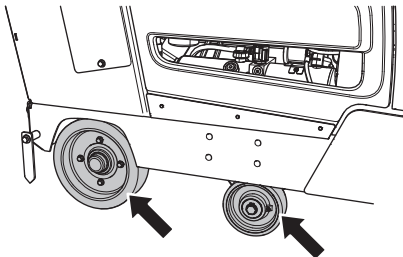
## 100 hours service

### Replace engine oil and filter

See instructions under the heading "After the first 50 hours"

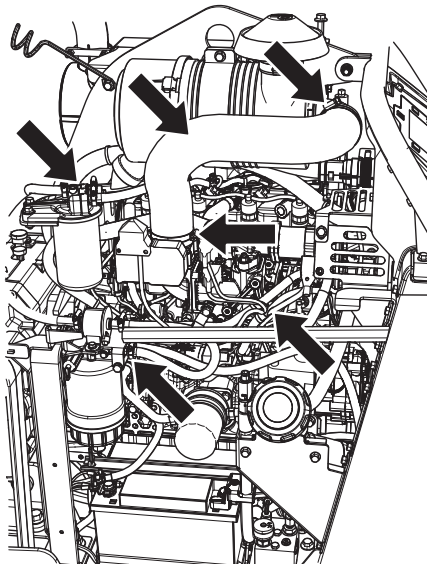
### Check wheels for wear or damage.

### Check rear wheel hubs and wheels for looseness



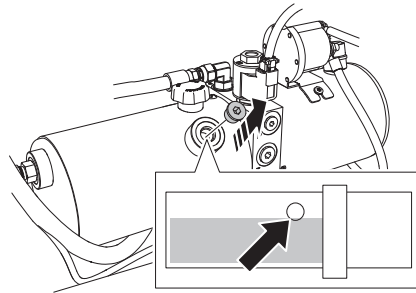
### Check engine air cleaner hose and clamps

The image only shows some of the hoses and clamps.



## Check hydraulic system fluid level

- Remove the plug in the inspection opening on the hydraulic reservoir. The level should be to the bottom edge of the opening on the hydraulic reservoir, fill if necessary.



**NOTICE!** Do not overfill!

## Lubricate front axle pivot bearings

See instructions under the heading "Lubrication".

## 250 hours service

### Replace the hydraulic system filter.

See instructions under the heading "After the first 50 hours"

### Lubricate blade shaft (2 pumps each end)

See instructions under the heading "Lubrication".

### Lubricate hydraulic cylinder pivot pin.

See instructions under the heading "Lubrication".

### Lubricate rear axle bearing.

See instructions under the heading "Lubrication".

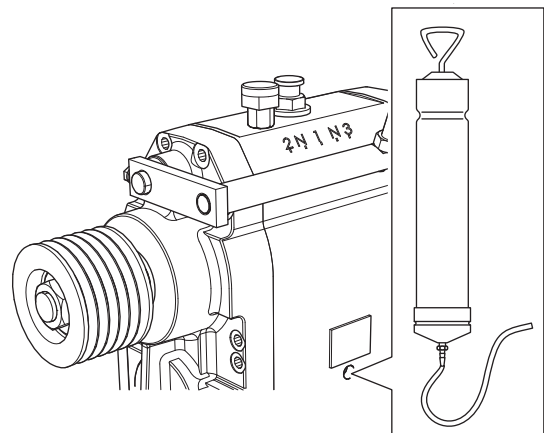
## 500 hours service

### Replace engine gearbox fluid

Select one of the following options to drain gearbox fluid:

Option 1

- Open the window by removing the plug and suck the oil out with an oil extractor.

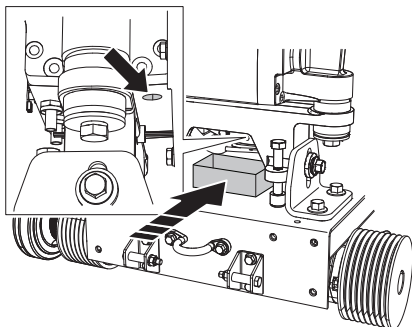




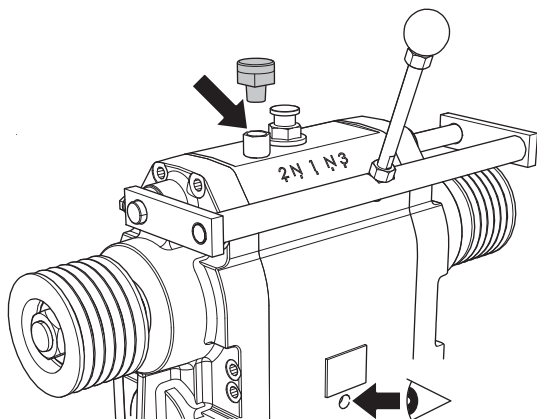
# MAINTENANCE AND SERVICE

## Option 2

- Slip a vessel under the bell housing of the engine. Loosen the screw and drain the oil. Once the system is empty, fasten the screw.



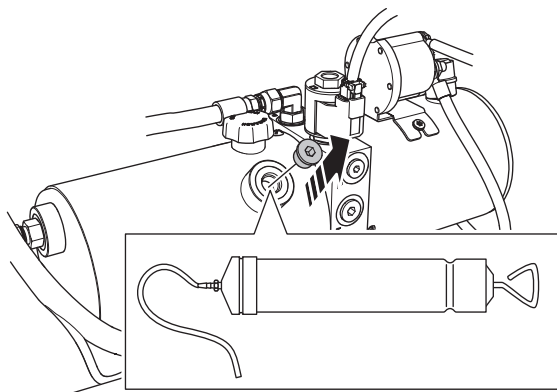
- Refill the system by removing the left screw and pour oil into the tube. Look in the window and fill until the correct level is reached.



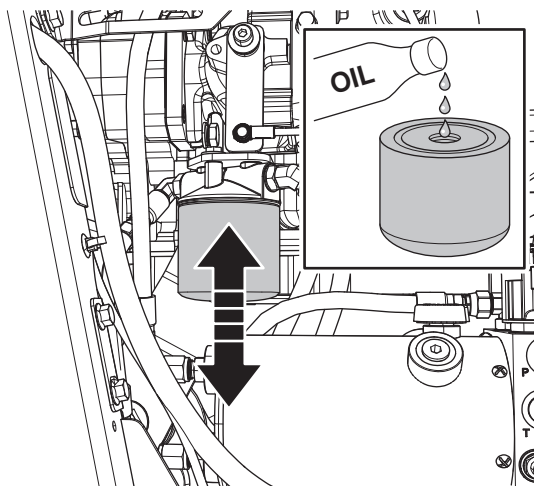
- Refit the screw and follow the steps in reverse order.

## Replace hydraulic system fluid

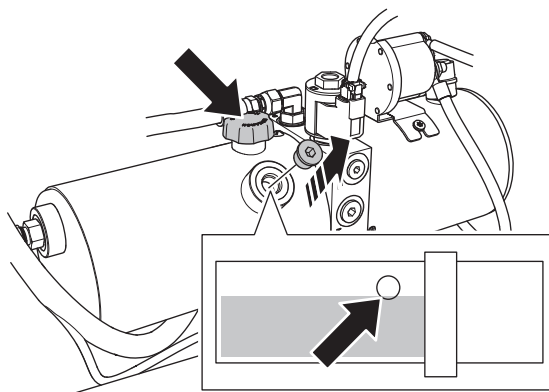
- Remove the plug in the inspection opening on the hydraulic reservoir and use an oil extractor to suck out the fluid through the inspection opening.



- Replace the hydraulic system filter. Fill the new filter with oil and lubricate the seal with a few drops of oil prior to refitting it.



- Refill the reservoir with new oil. Ensure that machine is level prior refilling.



**NOTICE!** Do not overfill!

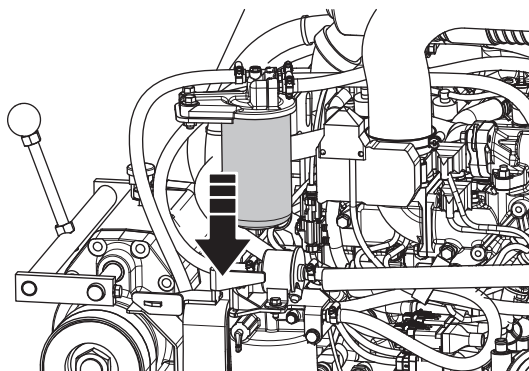
## Replace engine fuel filter (spin-on-type)

**NOTICE!** Maintenance of the fuel filter should be done after the valve of the pre-filter is closed.

Make sure the valve is open before you start the engine (see engine manual)

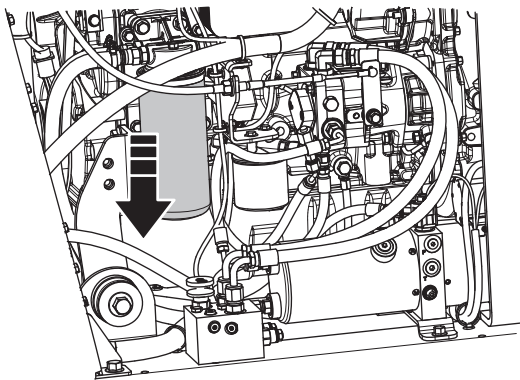
- Remove the fuel filter by turning it counterclockwise. Replace the fuel filter. Beware of diesel that may spill. Fill the new filter with diesel and lubricate the seal with a few drops of diesel prior to refitting it.

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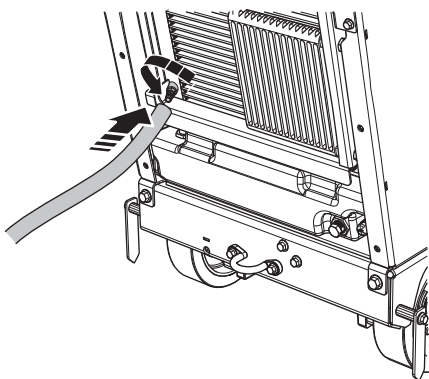


## Flush and clean radiator and cooling system



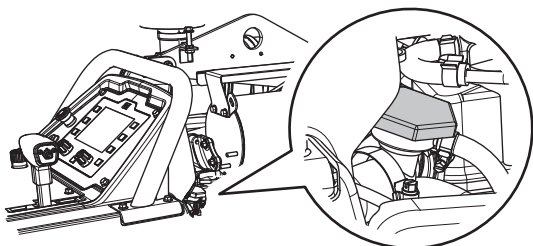
**CAUTION!** Let the engine cool down before opening the radiator coolant lid.

- Remove the back cover, put an extension on the valve and open the valve. Remove the lid on top and empty the system.



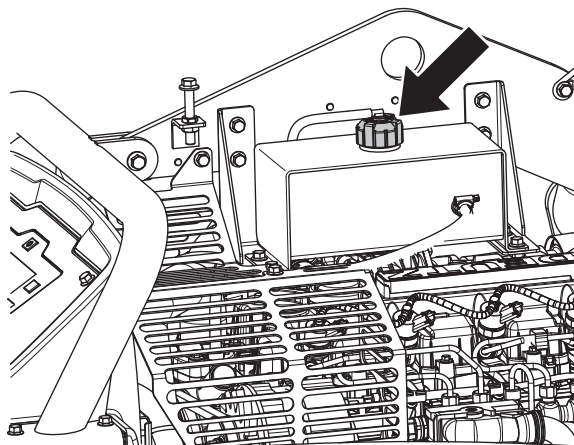
- Close the valve and refill the radiator coolant.  
For more information, see the "Technical data" section.

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Fill up until the coolant level is between the two marks on the radiator coolant overflow bottle when engine is cool.

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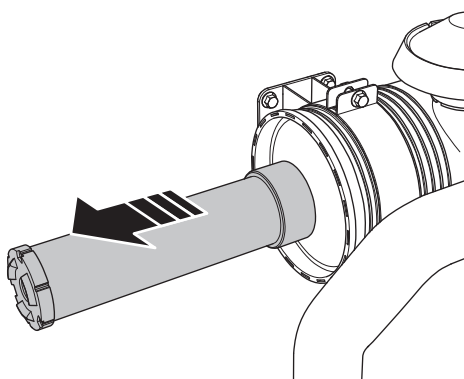
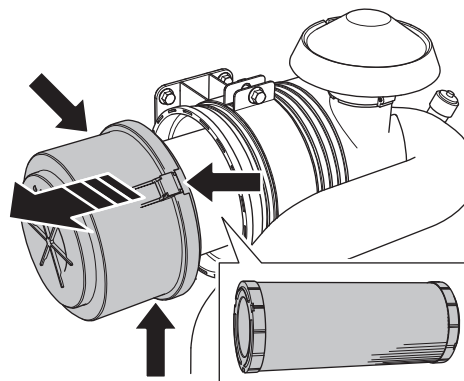


The coolant level should reach the start of the tube inside.

## Yearly maintenance

### Replace outer and inner air filter

Remove the rear cover by opening the 3 air filter housing clamps and pulling the housing off. Replace both filters and refit them in reverse order.



**CAUTION!** The 3 air filter housing clamps can not be closed unless the outer air filter is properly installed.

### Check coolant freeze protection

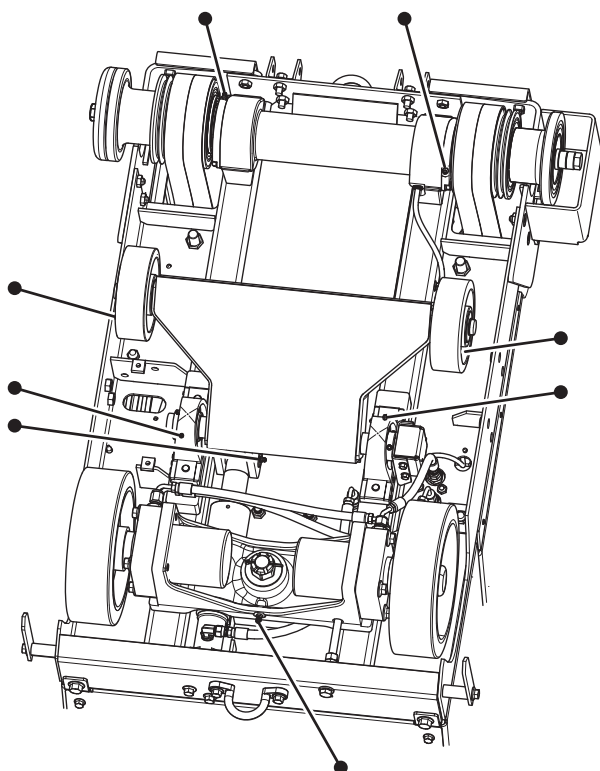
Maintain 50/50 mixture of glycol and water. For more information, see the "Technical data" section.

# MAINTENANCE AND SERVICE

## Lubrication

The image shows all the lubrication points (8 grease nipples). Clean the nipple. Replace broken or blocked nipples.

- Lubricate the front wheels.
- Lubricate the front axle pivot bearings.
- Lubricate the blade shaft. Two pumps at each end.
- Lubricate hydraulic cylinder pivot pin.
- Lubricate rear axle bearing.



## Stationary regeneration, only FS5000 D

### Diesel particulate filter - DPF

To keep emissions and particulate level down the engine is equipped with diesel particulate filter that accumulates particulates matter/ soot form the exhaust.

The concentration of particulate in the filter is constantly increasing which means that the filter occasionally must be cleaned.

This is done by raising the temperature in the diesel particulate filter where the particulates matter/soot is combusted.

This procedure is known as a DPF regeneration and is a fully automated procedure controlled by the engine control unit, ECU.

### There are different modes of regeneration:

- Reset regeneration
- Stationary regeneration standby
- Stationary regeneration.
- Regeneration back up mode

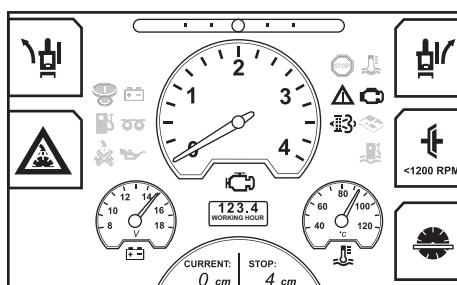
### Reset regeneration

In normal run mode performs the diesel particulate filter an Reset regeneration, which means keeping the particle content in the diesel particulate filter down. This is a fully automated procedure and does not require operator attention. The sawing can continue as normal

### Stationary regeneration standby

When the DPF is in this mode and the warnings symbols appears user is highly recommended to perform a stationary regeneration as soon as opportunity is given

If an certain time elapses (up to 10h run time) and a certain level of accumulated particulate is reached, the DPF will enter regeneration back up mode with all that implies.



**WARNING!** Perform the regeneration in a well ventilated location. This will lower the risk of carbon monoxide poisoning.

**Make sure there are no flammable materials near the exhaust pipe.**

**To avoid injury, make sure there are no people close the exhaust pipe.**

**NOTICE!** The smoke from the exhaust pipe can turn pale white during regeneration. This is normal and will turn transparent as the temperature increases.

# MAINTENANCE AND SERVICE

## Stationary regeneration.

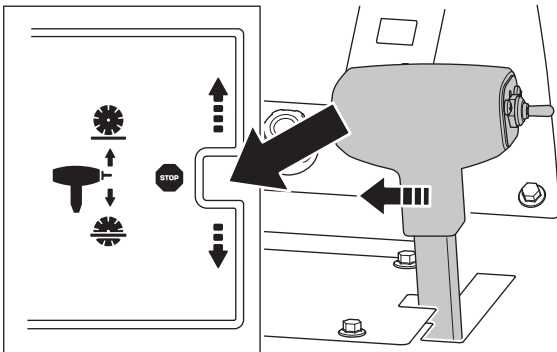
Once the stationary regeneration is activated, warning symbols will be active. The stationary regeneration will occupy approx. 25-30min run time and will cause engine to automatically increase to 2300rpm and exhaust temperatures will increase to 600° C.

The procedure is controlled by the engine control unit and will do best without help from the operator and no sawing is possible during the procedure.

It is possible to manually activate stationary regeneration as a preventive measure, but only after 50h run time after latest stationary or back up regeneration.

### Activate stationary regeneration

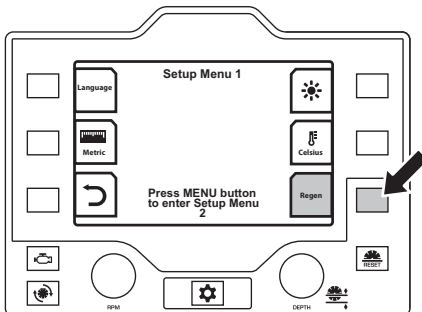
- Move the machine to a well ventilated location.
- Check fuel level, make sure there is fuel enough for specified run time at high engine load.
- Put Speed control lever into the STOP position.



- Start the engine.
- Turn the Throttle knob to low idle.
- Disengage the Blade clutch (if equipped and engaged).

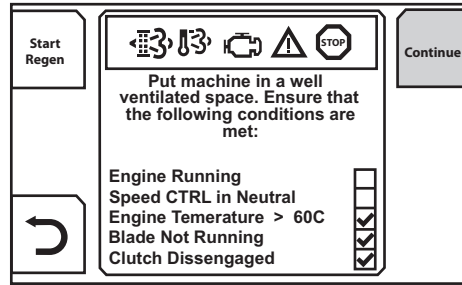
**CAUTION! Pay special attention on clutchless machines, blade starts rotating at start. For safety reason, do not move the saw sideways or out of the working area with blade installed and rotating.**

- Enter the stationary regeneration menu.

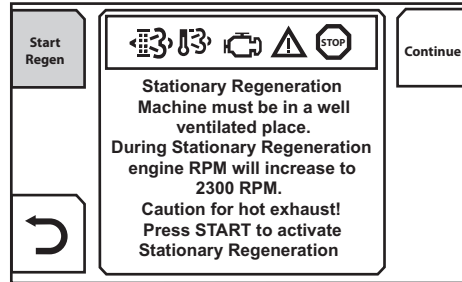


- Fulfill the requirements:
  - Engine running
  - Speed control lever in STOP position
  - Engine temperature is >60° C
  - Blade is not running
  - Blade clutch is disengaged

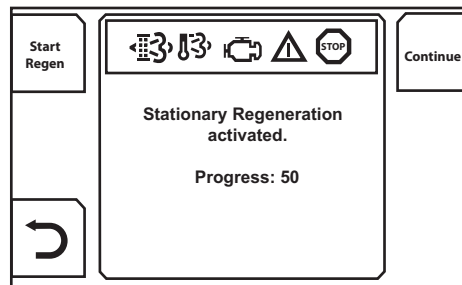
- Press Continue.



- Follow the instructions and press Start regen to confirm and activate stationary regeneration.

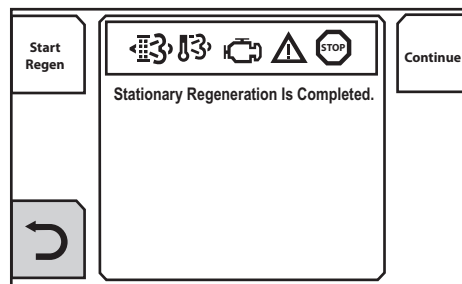


- Let the machine cycle rpm and regenerate the DPF (25-30min)

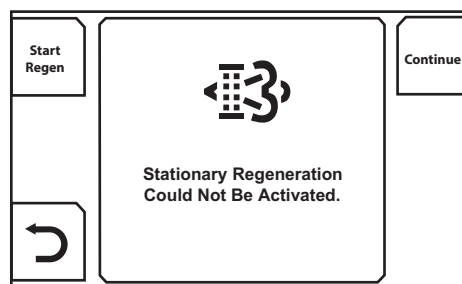


**NOTICE! Warning symbols in the message window may flicker during the stationary regeneration process.**

- When stationary regeneration is completed, press return button.



If you get the message Stationary Regeneration Could Not Be Activated, please contact your service agent.



## Abort stationary regeneration

Abort stationary regeneration by performing either of following operations.

- Press Return button
- Set the Engine start switch to STOP position.

## Regeneration back up mode

**NOTICE!** Sawing is not allowed.

- Warning symbols are active and engine will run in low rpm (limp home).

To return to normal operation contact Husqvarna service center.

# TROUBLESHOOTING

## Incidents during sawing

**CAUTION!** If the engine or blade stops for any reason, raise the blade completely from the cut. Set the Engine start switch to STOP position. Press the Machine stop on the control panel. Inspect the machine thoroughly before restarting the engine.

- Entrust all repairs to your authorized dealer only

Problem	Message on the display	Cause	Possible action
Engine stops during sawing	Warning symbol*	Engine out of fuel.	Refill with fuel
	No blade water pressure	Lack of water signals the Water safety switch to stop the engine	Disengage the Water safety switch and check water supply, then restart the engine.
		Excessively fast cutting will stall the engine	Listen to the sound of the engine. If the engine starts to slow down compensate by pulling Speed control lever backwards to decrease feeding and prevent stalling the blade.
		The Machine stop has been pressed down	Reset the machine stop by turning it clockwise until it pops up.
The diamond blade stops during sawing		Circuit breaker fuse is blown	Inspect and replace fuses
		Drive belt tension is inadequate	Check the tension of the drive belt.
		The Blade clutch (if equipped) has been disengaged.	Engage the Blade clutch (if equipped) to engage the blade drive. Only at 1200rpm or less.
Saw lowers too fast		The Blade clutch (if equipped) has an electrical failure or blown fuse.	Inspect and replace fuses
		The valve that controls the saw lowering is open too much.	The lowering rate of the saw can be adjusted using the Saw lowering speed control knob at the control panel. If the saw lowers too quickly, turn the knob clockwise until an adequate lowering rate is set.
The blade cuts too slowly.		The blade has become dull or it is too high feeding pressure	Decrease the cutting depth and engine speed for a short time
The control unit reboots during cranking		The battery voltage is too low	Charge battery, change battery or use jump leads

\* For more information about warning symbols, see section "Menu system".



# TROUBLESHOOTING

## Error messages

Fault Code	Message on the display	DTC description	Indication on the machine	Possible action
U100087	I/O Controller	No CAN communication	Engine can not be started. No machine function can be controlled.	Check damage to HMI connector and chassis harness. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
U100088	I/O Controller	Software download failed	Engine can not be started. No machine function can be controlled.	Contact your service agent.
P060745	IOC MPU	Program memory failure	Engine can not be started. No machine function can be controlled.	Contact your service agent for further information.
P060742	IOC MPU	General memory failure	Engine can not be started. No machine function can be controlled.	Contact your service agent for further information.
C1E0111	Blade depth sensor signal	Circuit short to ground	Blade depth can not be displayed. Blade depth stop can not be used.	Disconnect sensor and reset fault code. If fault code no longer exists check sensor and sensor harness.
				Check damage to HMI connectors and harness to sensors. If found, repair and restart system, reset fault codes.
				Contact your service agent for further information.
C1E0112	Blade depth sensor signal	Circuit short to battery	Blade depth can not be displayed. Blade depth stop can not be used.	Disconnect sensor and reset fault code. If fault code no longer exists check sensor and sensor harness.
				Check damage to HMI connectors and harness to sensors. If found, repair and restart system, reset fault codes.
				Contact your service agent for further information.
C1D0115	Starter	Circuit short to battery or open	Engine starter can not be controlled. Cutting can not continue.	Check damage to HMI and ECU connector and harness. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0111	Starter	Circuit short to ground	Engine can not be started.	Check damage to HMI and ECU connector and harness. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0711	Power supply external device	Circuit short to ground	Cutting can not continue.	Check cables to: Blade depth sensor and sensor itself E-track position sensor and sensor itself Neutral start switch and switch itself Fuel level sensor and sensor itself Lower/raise switch and switch itself Water safety switch and switch itself
				Change HMI
C1D0815	AUX1	Circuit short to battery or open	AUX1 can not be controlled by the HMI.	Check AUX1 relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0811	AUX1	Circuit short to ground	AUX1 can not be controlled by the HMI.	Check AUX1 relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0215	AUX2	Circuit short to battery or open	AUX2 can not be controlled by the HMI.	Check AUX2 relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0211	AUX2	Circuit short to ground	AUX2 can not be controlled by the HMI.	Check AUX2 relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.



# TROUBLESHOOTING

C1D0315	Blade clutch	Circuit short to battery or open	Blade clutch can not be controlled by the HMI. Blade might be engaged or disengaged the whole time.	Check blade clutch in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0311	Blade clutch	Circuit short to ground	Blade clutch can not be controlled by the HMI. Blade might be engaged or disengaged the whole time.	Check blade clutch in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0615	Water pump	Circuit short to battery or open	Water pump can not be controlled by the HMI. May not be able to turn on.	Check water pump relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0611	Water pump	Circuit short to ground	Water pump can not be turned on.	Check water pump relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0915	Working light	Circuit short to battery or open	Check working light relay in relay/fuse box.	Working light can not be controlled by the HMI. May not be able to turn on.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0911	Working light	Circuit short to ground	Check working light relay in relay/fuse box.	Working light can not be turned on.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0C15	Ignition	Circuit short to battery or open	Engine can not be started.	Yanmar:
				Check fuel pump relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
				Deutz:
Check damage to HMI and ECU connector and harness. If found, repair and restart system, reset fault code.				
If problem still exists, contact your service agent for further information.				
C1D0C11	Ignition	Circuit short to ground	Engine can not be started.	Yanmar:
				Check fuel pump relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
				Deutz:
				Check damage to HMI and ECU connector and harness. If found, repair and restart system, reset fault code.
If problem still exists, contact your service agent for further information.				
C1D0D15	Hydraulic lift pump	Circuit short to battery or open	Hydraulic lift pump can't be used for raising the blade.	Check relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.

# TROUBLESHOOTING

C1D0D11	Hydraulic lift pump	Circuit short to ground	Hydraulic lift pump can't be used for raising the blade.	Check relay in relay/fuse box.
				Check damage to HMI connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0E15	Hydraulic lowering valve	Circuit short to battery or open	Hydraulic lowering valve can't be used for lowering the blade.	Check that hydraulic valve is properly connected.
				Check damage to HMI connector, harness and hydraulic valve. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1D0E11	Hydraulic lowering valve	Circuit short to ground	Hydraulic lowering valve can't be used for lowering the blade.	Check damage to HMI connector, harness and hydraulic valve. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1E0511	E-track position sensor	Circuit short to ground	Cutting can continue but E-track position can not be detected until fault is resolved.	Check damage to actuator, connector and harness. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1E0512	E-track position sensor	Circuit short to battery	Cutting can continue but E-track position can not be detected until fault is resolved.	Check damage to actuator, connector and harness. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.
C1F0112	E-track motor A	Circuit short to battery	Cutting can continue but E-track can not be used for drift compensation until fault is resolved.	Disconnect E-track and reset fault code. Press left and right E-track button in an attempt to control E-track. If fault code doesn't appear again check damage to E-track actuator, harness and connector. (Fault codes C1E0511 and C1E0512 may appear instead since E-track is not connected.)
				If fault code still exists check damage to cowling harness and connector. If found, repair and reset fault codes.
				If problem still exists, contact your service agent for further information.
C1F0111	E-track motor A	Circuit short to ground	Cutting can continue but E-track can not be used for drift compensation until fault is resolved.	Disconnect E-track and reset fault code. Press left and right E-track button in an attempt to control E-track. If fault code doesn't appear again check damage to E-track actuator, harness and connector. (Fault codes C1E0511 and C1E0512 may appear instead since E-track is not connected.)
				If fault code still exists check damage to cowling harness and connector. If found, repair and reset fault codes.
				If problem still exists, contact your service agent for further information.
C1F0212	E-track motor B	Circuit short to battery	Cutting can continue but E-track can not be used for drift compensation until fault is resolved.	Disconnect E-track and reset fault code. Press left and right E-track button in an attempt to control E-track. If fault code doesn't appear again check damage to E-track actuator, harness and connector. (Fault codes C1E0511 and C1E0512 may appear instead since E-track is not connected.)
				If fault code still exists check damage to cowling harness and connector. If found, repair and reset fault codes.
				If problem still exists, contact your service agent for further information.
C1F0211	E-track motor B	Circuit short to ground	Cutting can continue but E-track can not be used for drift compensation until fault is resolved.	Disconnect E-track and reset fault code. Press left and right E-track button in an attempt to control E-track. If fault code doesn't appear again check damage to E-track actuator, harness and connector. (Fault codes C1E0511 and C1E0512 may appear instead since E-track is not connected.)
				If fault code still exists check damage to cowling harness and connector. If found, repair and reset fault codes.
				If problem still exists, contact your service agent for further information.
C1F0521	E-track motor	Circuit overload	Cutting can continue but E-track can not be used for drift compensation until fault is resolved.	Check if E-track is stuck or jammed, and if so, resolve the problem and reset fault codes. Try E-track again after 1 minute. If fault code still exists check contact your service agent for further information.
C1F0513	E-track motor	Circuit open	Cutting can continue but E-track can not be used for drift compensation until fault is resolved.	Check connection between E-track harness to Cowling harness. Check connection between E-track actuator and E-track harness. Check damage to E-track and harness. If found repair and reset fault codes.
				If problem still exists, contact your service agent for further information.
U100187	Engine ECU	No CAN communication	Cutting can not continue. No information available from ECU. Engine can be started but rpm can not be controlled.	Check damage to HMI and ECU connector and harness. If found, repair and restart system, reset fault code.
				If problem still exists, contact your service agent for further information.

# TECHNICAL DATA

## Battery

	FS5000 D	FS7000 D
Terminal type	Standard SAE	Standard SAE
Voltage, V	12	12
CCA, A	700	765
Maximum size (LxWxH), mm/inch	280x175x175 / 11x6-7/8x6-7/8	316x175x190 / 12-7/16x6-7/8x7-1/2

## Hydraulic fluid and lubricants

### Hydraulic fluid

Quality	Standard
SAE 15W40	API Class SE
	API Class CC
	API class CD

### Lubricants

Component	Model	Quality	Standard	Oil tank capacity, qt/ litre
Engine oil (low ash oil only)	FS5000 D	SAE 15W40 or SAE 10W30	API CJ-4	7,5/7,1
			ACEA E6-08	
			ACEA E9-08	
Engine oil (low ash oil only)	FS7000 D	SAE 15W40 or SAE 10W30	API CJ-4	9/8,5
			ACEA E6-08	
			ACEA E9-08	
Gearbox oil	1-Speed gearbox model	SAE 75W90		1/0,95
	3-Speed gearbox model			1,87/1,77
Lubrication points (baseplate)*		NLGI 2	SAE J310	

\* See instructions in section "Maintenance and service".

### Coolant fluid

Ethylene glycol and water, 50/50 mixture (coolant at delivery)
Propylene glycol and water, 50/50 mixture



**CAUTION!** Do not mix directly into the machine's tank, it is difficult to determine when it's 50/50 mixture. Mix 50/50 for best cooling performance and corrosion protection of the engine.

# TECHNICAL DATA

## Technical data

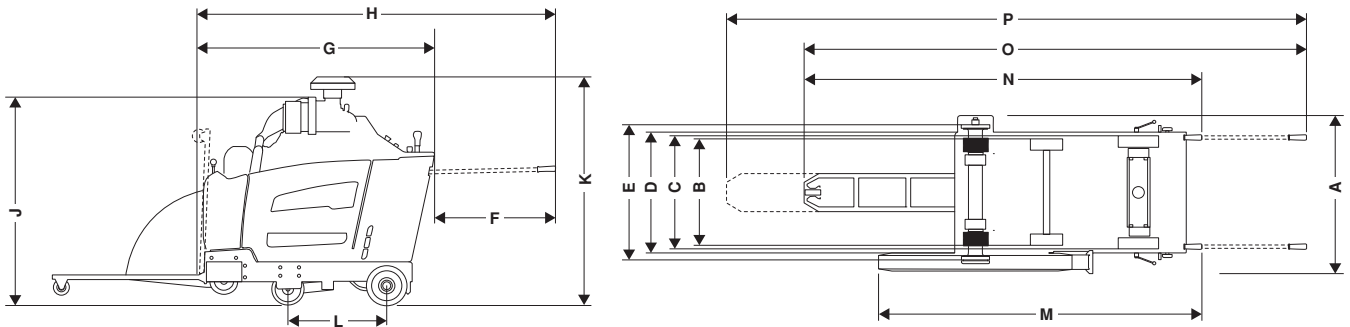
### FS5000 D

<b>Saw feature</b>	<b>14/350</b>	<b>500/20</b>	<b>26/650</b>	<b>30/750</b>	<b>36/900</b>
Blade guard capacity, inch/mm	14/350	20/500	26/650	30/750	36/900
Maximum cutting depth, inch/mm	4,75/118	7,75/193	10,5/262	12,5/312	15/374
Blade shaft, rpm	3197	2400	1866	1628	1355
Approximate blade shaft output, hp/kW	42/31				
Arbor size, inch/mm	1/25,4 with single drive pin				
Quick disconnect blade flange Ø, inch/mm	4,5/114,5	4,5/114,5	5/127	5/127	6/152,5
Blade shaft diameter, inch/mm	2-1/8 / 54				
Blade shaft bearings	Cast sealed blade shaft with 2 maintenance-free ball bearings				
Blade shaft drive	Dual 3-rib banded 3VX V-belts per side (12 ribs total)				
Blade coolant	Zinc plated dual multiple-jet water spray tubes				
Blade guard attachment	Slip-on, auto-latch				
Blade control	Electro-hydraulic pump raises blade; Switch controlled raise/lower on speed control handle; Software controlled depth stop and cutting depth indicator; Blade drive disengagement system (clutch); Quick disconnect blade flanges				
Axle Ø, inch/mm	Front, 1/25,4 Rear, easy adjust center pivot with 2 hydraulic powered wheel motors				
Wheels, inch/mm	Front, 8x3x1/203x76x25, thick polyurethane tread, sealed ball bearing requiring less maintenance Rear, 10x3x1.25/254x76x32, solid rubber, quick disconnect				
Transmission	Hydrostatic pump, with 2 hydraulic wheel motors connected with hoses, neutral start switch, single handle speed control, hydraulic bypass valve for pushing				
Max. ground speed	Infinitely variable: 0-122 fpm / 0-37m/min forward and reverse. 25m/min maximum reverse speed on CE models				
Chassis	Heavy duty, rigid, box and channel section construction				
Weight (uncrated), lb/kg	1656/751	1667/756	1678/761	1687/765	1700/771
Maximum operating mass, lb/kg	1744/791	1761/799	1781/808	1801/817	1828/829

# TECHNICAL DATA

## Saw dimensions FS5000 D

A	Width, inch/mm	33 1/4 / 844	H	Saw length (pointer up, handles extended), inch/mm	86 1/4 / 2191
B	Center to center wheel width, inch/mm	Front, 20 3/8 / 518	J	Min. overall height (no exhaust pipe, no pre-cleaner cap), inch/mm	50 3/4 / 1289
		Rear, 21 / 533	K	Max. overall height (top of pre-cleaner), inch/mm	52 1/2 / 1332
C	Outside to outside wheel width, inch/mm	Front, 22 3/8 / 569	L	Wheel base length, inch/mm	16 3/4 / 427
		Rear, 24 / 609	M	Guard to handle length (handles in), inch/mm	69 / 1753
D	Frame width, inch/mm	25 / 635	N	Max. overall length (handles in), inch/mm	89 1/2 / 2273
E	Inner flange to inner flange width, inch/mm	28 5/8 / 726,5	O	Max. overall length (handles extended, pointer down), inch/mm	116 3/4 / 2964
F	Handle extension, inch/mm	31 7/8 / 809	P	Max. overall length (handles extended, pointer extended), inch/mm	135 1/2 / 3444
G	Min. saw length (handles removed, pointer and guard up), inch/mm	58 1/2 / 1485			



## Engine FS5000 D

Engine specifications	Yanmar, 4TNV88C-DHQ
Max. engine output (see note 1)	47,6hp@3000rpm (35,5kW@3000rpm)
Displacement, cu.in. / dm <sup>3</sup>	134 / 2,2
Cylinders	4
Stroke, inch / mm	3,5/3,55 / 88/90
Fuel tank capacity, gallon / l	6,5 / 24,5
Air filter	Radial seal with pre-cleaner and restriction indicator
Starter	Electric

For further information and questions about this specific engine please see, [www.yanmar.com](http://www.yanmar.com)

Note 1: As specified by engine manufacturer. The power rating of the engines indicated is the average net power output (at specified rpm) of a typical production engine for the engine model measured to ISO3046. Mass production engines may differ from this value. Actual power output for the engine installed in the final machine will depend on the operating speed, environmental conditions and other variables.

# TECHNICAL DATA

## Technical data

### FS7000 D

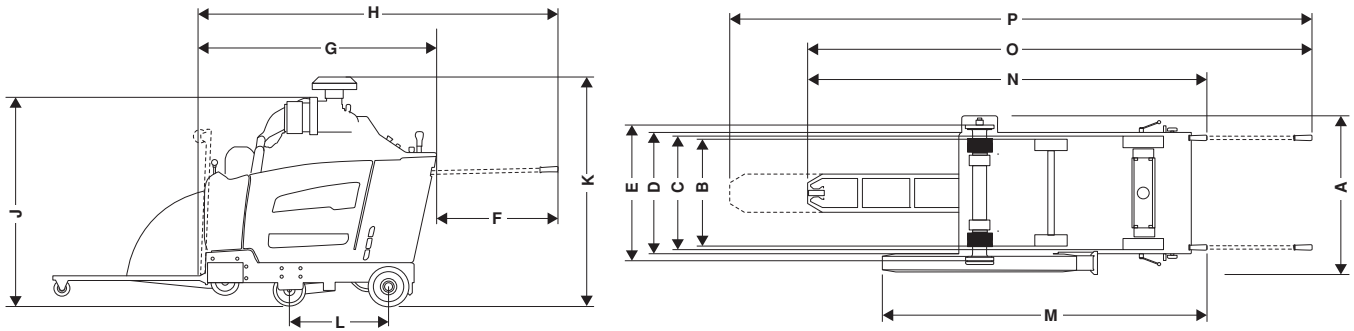
Saw feature	20/500	26/650	30/750	36/900	42/1000
Blade guard capacity, inch/mm	20/500	26/650	30/750	36/900	42/1000
Maximum cutting depth, inch/mm	7,75/193	10,5/262	12,5/312	15/374	17,5/411
Blade shaft, rpm	2362	1762	1624	1354	1150
Approximate blade shaft output, hp/kW	68/50				
Arbor size, inch/mm	1/25,4 with single drive pin				
Quick disconnect blade flange Ø, inch/mm	4,5/114,5	5/127	5/127	6/152,5	7/178
Blade shaft diameter, inch/mm	2-1/8 / 54				
Blade shaft bearings	Cast sealed blade shaft with 4 maintenance-free ball bearings				
Blade shaft drive	Dual 4-rib banded 3VX V-belts per side (16 ribs total)				
Blade coolant	Zinc plated dual multiple-jet water spray tubes				
Blade guard attachment	Slip-on, auto-latch				
Blade control	Electro-hydraulic pump raises blade; Switch controlled raise/lower on speed control handle; Software controlled depth stop and cutting depth indicator; Blade drive disengagement system (clutch); Quick disconnect blade flanges				
Axle Ø, inch/mm	Front, 1/25,4				
	Rear, easy adjust center pivot with 2 hydraulic powered wheel motors				
Wheels, inch/mm	Front, 8x3x1/203x76x25, thick polyurethane tread, sealed ball bearing requiring less maintenance				
	Rear, 10x3x1.25/254x76x32, solid rubber, quick disconnect				
Transmission	Hydrostatic pump, with 2 hydraulic wheel motors connected with hoses, neutral start switch, single handle speed control, hydraulic bypass valve for pushing				
Max. ground speed	Infinitely variable: 0-76m/min / 0-250 fpm forward and reverse. 25m/min maximum reverse speed on CE models.				
Chassis	Heavy duty, rigid, box and channel section construction				
Weight (uncrated), lb/kg	2103/954	2114/959	2123/963	2136/969	2275/1032
Maximum operating mass, lb/kg	2235/1014	2255/1023	2275/1032	2301/1044	2328/1056



# TECHNICAL DATA

## Saw dimensions FS7000 D

A	Width, inch/mm	38 3/8 / 974	H	Saw length (pointer up, handles extended), inch/mm	95 1/8 / 2417
B	Center to center wheel width, inch/mm	Front, 23 3/4 / 604	J	Min. overall height (no exhaust pipe, no pre-cleaner cap), inch/mm	51 7/8 / 1319
		Rear, 25 3/8 / 646	K	Max. overall height (top of pre-cleaner), inch/mm	59 / 1499
C	Outside to outside wheel width, inch/mm	Front, 26 3/4 / 680	L	Wheel base length, inch/mm	23 1/2 / 597
		Rear, 28 3/8 / 722	M	Guard to handle length (handles in), inch/mm	77 1/4 / 1961
D	Frame width, inch/mm	29 1/2 / 750	N	Max. overall length (handles in), inch/mm	98 3/8 / 2500
E	Inner flange to inner flange width, inch/mm	32 5/8 / 829.5	O	Max. overall length (handles extended, pointer down), inch/mm	125 5/8 / 3190
F	Handle extension, inch/mm	31 7/8 / 809	P	Max. overall length (handles extended, pointer extended), inch/mm	144 1/2 / 3670
G	Min. saw length (handles removed, pointer and guard up), inch/mm	64 5/8 / 1642			



## Engine FS7000 D

Engine specifications	Deutz, TD 2.9 L4
Max. engine output (see note 1)	74,3hp@2600rpm (55,4kW@2600rpm)
Displacement, cu.in. / dm <sup>3</sup>	178 / 2,92
Cylinders	4
Stroke, inch / mm	3,6/4,3 / 92/110
Fuel tank capacity, gallon / l	10,6 / 40
Air filter	Radial seal with pre-cleaner and restriction indicator
Starter	Electric

For further information and questions about this specific engine please see, [www.deutz.com](http://www.deutz.com)

Note 1: As specified by engine manufacturer. The power rating of the engines indicated is the average net power output (at specified rpm) of a typical production engine for the engine model measured to ISO3046. Mass production engines may differ from this value. Actual power output for the engine installed in the final machine will depend on the operating speed, environmental conditions and other variables.

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# TECHNICAL DATA

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## Noise emissions

	FS5000 D	FS7000 D
<b>Noise emissions (see note 1)</b>		
Sound power level, measured dB(A)	113	115
Sound power level, guaranteed $L_{WA}$ dB(A)	119	119
<b>Sound levels (see note 2)</b>		
Sound pressure level at the operators ear, dB(A)	102	101
<b>Vibration levels, <math>a_{HV}</math> (see note 3)</b>		
Handle right, $m/s^2$	<2,5	<2,5
Handle left, $m/s^2$	<2,5	<2,5

Note 1: Noise emissions in the environment measured as sound power ( $L_{WA}$ ) in conformity with EC directive 2000/14/EC. The difference between guaranteed and measured sound power is that the guaranteed sound power also includes dispersion in the measurement result and the variations between different machines of the same model according to Directive 2000/14/EC.

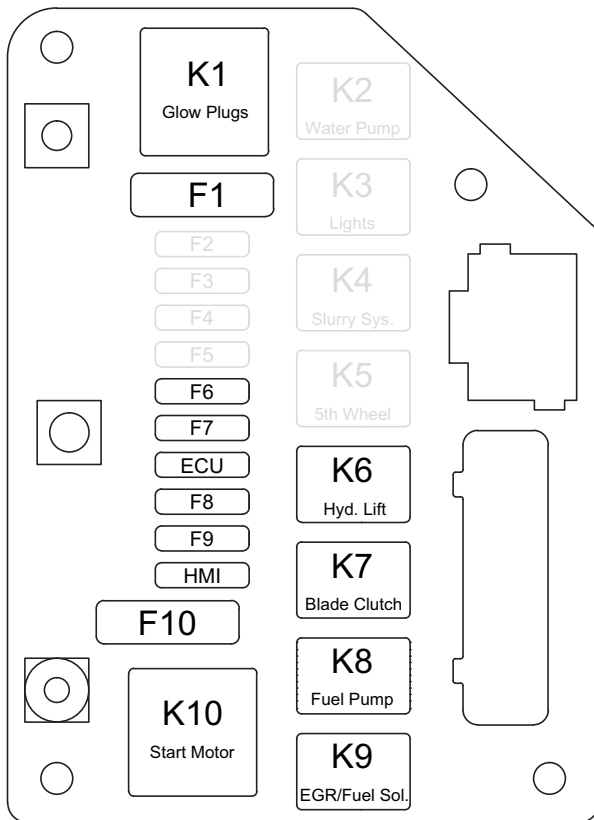
Note 2: Noise pressure level according to EN 13862. Reported data for noise pressure level has a typical statistical dispersion (standard deviation) of 1.0 dB(A).

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

# RELAYS AND FUSES

## Relays and fuses - FS5000 D

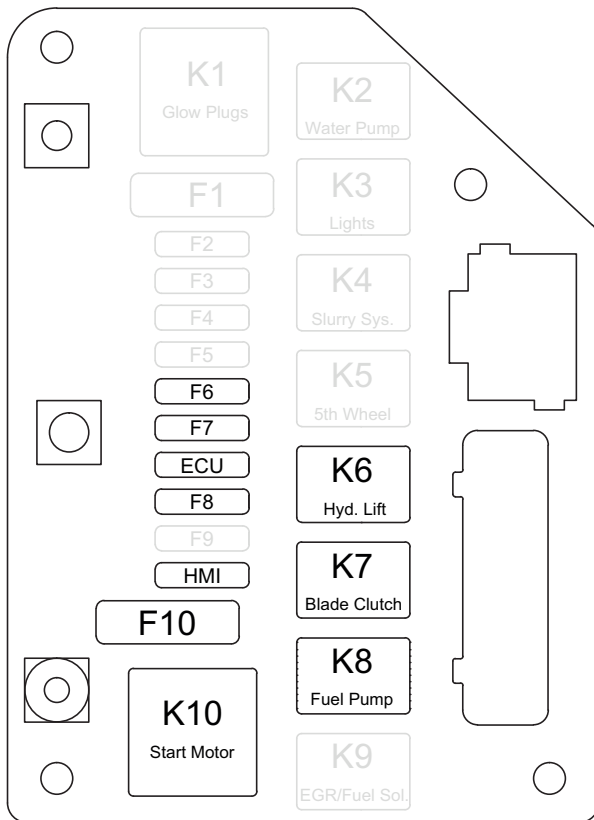
Function	Designation	Relay (amp)	Designation	Fuse (amp)
Glow plugs	K1	70	F1	60
Water pump, (optional)	K2	25	F2	25
Lights, (optional)	K3	25	F3	25
Slurry system, (optional)	K4	25	F4	25
5th wheel, (optional)	K5	25	F5	25
Hydraulic lift pump	K6	25	F6	25
Blade clutch	K7	25	F7	15
Fuel pump	K8	25	F8	20
EGR/Fuel Sol.	K9	25	F9	20
Start motor	K10	70	F10	60
ECU	n/a	n/a	ECU	25
HMI	n/a	n/a	HMI	25



# RELAYS AND FUSES

## Relays and fuses - FS7000 D

Function	Designation	Relay (amp)	Designation	Fuse (amp)
Glow plugs	K1	(not used)	F1	(not used)
Water pump, (optional)	K2	25	F2	25
Lights, (optional)	K3	25	F3	25
Slurry system, (optional)	K4	25	F4	25
5th wheel, (optional)	K5	25	F5	25
Hydraulic lift pump	K6	25	F6	25
Blade clutch	K7	25	F7	15
Fuel pump	K8	25	F8	20
EGR/Fuel Sol.	K9	(not used)	F9	(not used)
Start motor	K10	70	F10	60
ECU	n/a	n/a	ECU	25
HMI	n/a	n/a	HMI	25



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# EC DECLARATION OF CONFORMITY

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## 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 flat saws **Husqvarna FS5000 D, FS7000 D** from 2013's serial numbers and onwards (the year is clearly stated in plain text on the rating plate with subsequent serial number), complies with the requirements of the COUNCIL'S DIRECTIVES:

- 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 13309:2010, CISPR12:2007+Amd1:2009, ISO 11451-2:2005, ISO 10605:2008, EN13862+A1:2009**

Gothenburg, 15 December 2013



Helena Grubb

Vice President, Construction Equipment Husqvarna AB

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

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# US WARRANTY STATEMENT

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## WARRANTY POLICY

All warranty claims will be determined after inspection at a designated facility. A Returned Goods Authorization is required for all warranty claims. Contact Husqvarna Customer Service Department at 800-845-1312 for an RGA. The customer must prepay the freight and absorb any labor expense required to return or replace a product submitted for warranty consideration. Husqvarna will pay return shipping expenses for repaired or approved replacement products.

## EQUIPMENT

Equipment manufactured by Husqvarna is warranted to be free from manufacturing defects in normal service for a period of two (2) years from date of purchase by the original consumer purchaser. **Component manufacturers offer separate warranty periods. Call Technical Services at 800-288-5040 for complete information.**

Our obligation under this warranty is expressly limited to the replacement or repair at Husqvarna Construction Products North America, Olathe, Kansas 66061, or at a service facility designated by us, of such part or parts as inspection shall disclose to have been defective.

This warranty does not apply to defects caused by damage, unreasonable use, faulty repairs made by others than an approved Husqvarna servicing dealer, or defects caused by failure to provide reasonable maintenance, while in the possession of the consumer. Further, the warranty is void if the product, or any of its components, are altered or modified by the consumer purchaser, or if the product is used in an inappropriate manner or with tools not recommended by the manufacturer.

**Exceptions:** Drill motors - 3 months, Wall saws - 1 year, Power cutters - 3 months, DM230 - 1 year, DM225 - 3 months, Gyro systems - 1 year, CD40 system - 1 year, DS160 C - 1 year, Smart box - 1 year, CS2515 - 1 year, PP455 E - 1 year, PP345 E - 1 year, HP40 - 1 year.

**Wear items:** Filters, spark plugs, bearings\*, belts, wheels\*\* and wear pads.

\*Except IntelliSeal™ system. \*\*Except delamination.

**Original instructions**

**1156928-95**



**2014-09-23**