



Husqvarna®



# Operator's manual FS7000 DL



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

**GB 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 "Personal protective equipment" heading.



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



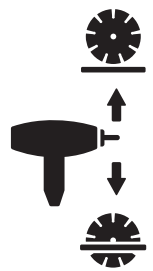
Slow



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. Petrol 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 EC 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.



# KEY TO SYMBOLS

Always use the machine mounted lifting eye when lifting.



Arrow on tool guard indicating the direction of tool rotation.



Remove the blade prior to hoisting, loading, unloading and transporting the machine.



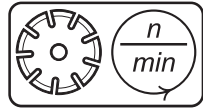
Weight



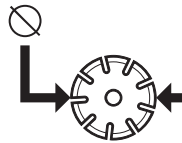
Nominal engine output, kW



Max. blade speed, rpm



Blade diameter, mm



Type plate

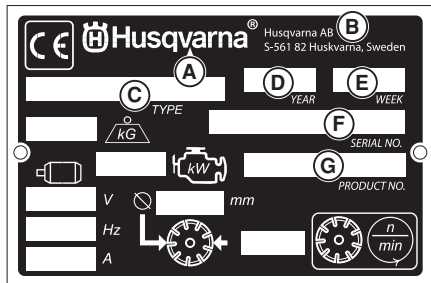
**A:** Brand

**B:** Manufacturer, address

**D, E:** Manufacturing date, year, week

**F:** Serial Number

**G:** Product number



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

## Explanation of warning levels

The warnings are graded in three levels.

### WARNING!



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

### CAUTION!



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

### NOTICE!



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

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# 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 authorized 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 (operating, service, maintenance etc.) the life span and the second-hand value of the machine can be extended. If you will sell this machine, make sure that the buyer will get the operator's manual.

## More than 300 years of innovation

Husqvarna AB is a Swedish company based on a tradition that dates back to 1689, when the Swedish King Karl 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.

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

## The manufacturer's reservation

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.

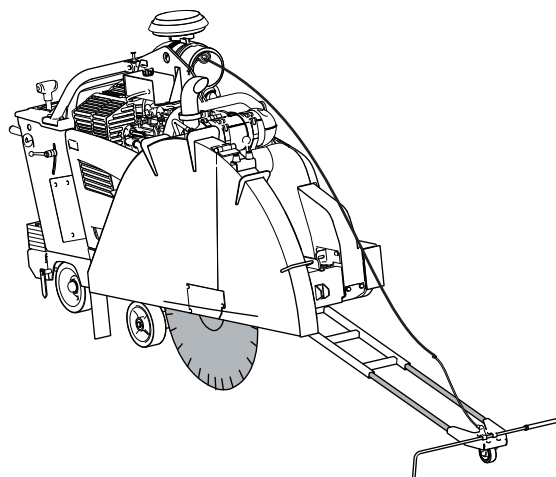
## Design and features

These walk behind floor 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 Husqvarna dealer if you need more information.

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

## Floor saw FS7000 DL



### Engine

Powerful, water cooled and electronically controlled diesel engines for optimal torque curves.

### Long chassis

Floor saw FS7000 DL has a longer base than FS7000 D to suit larger diamond blades.

### Power transmission

Robust and efficient power transmission between engine and blade for maximum power at the blade shaft.

### 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

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 offering a convenient overview of features and functions to operate the machine.

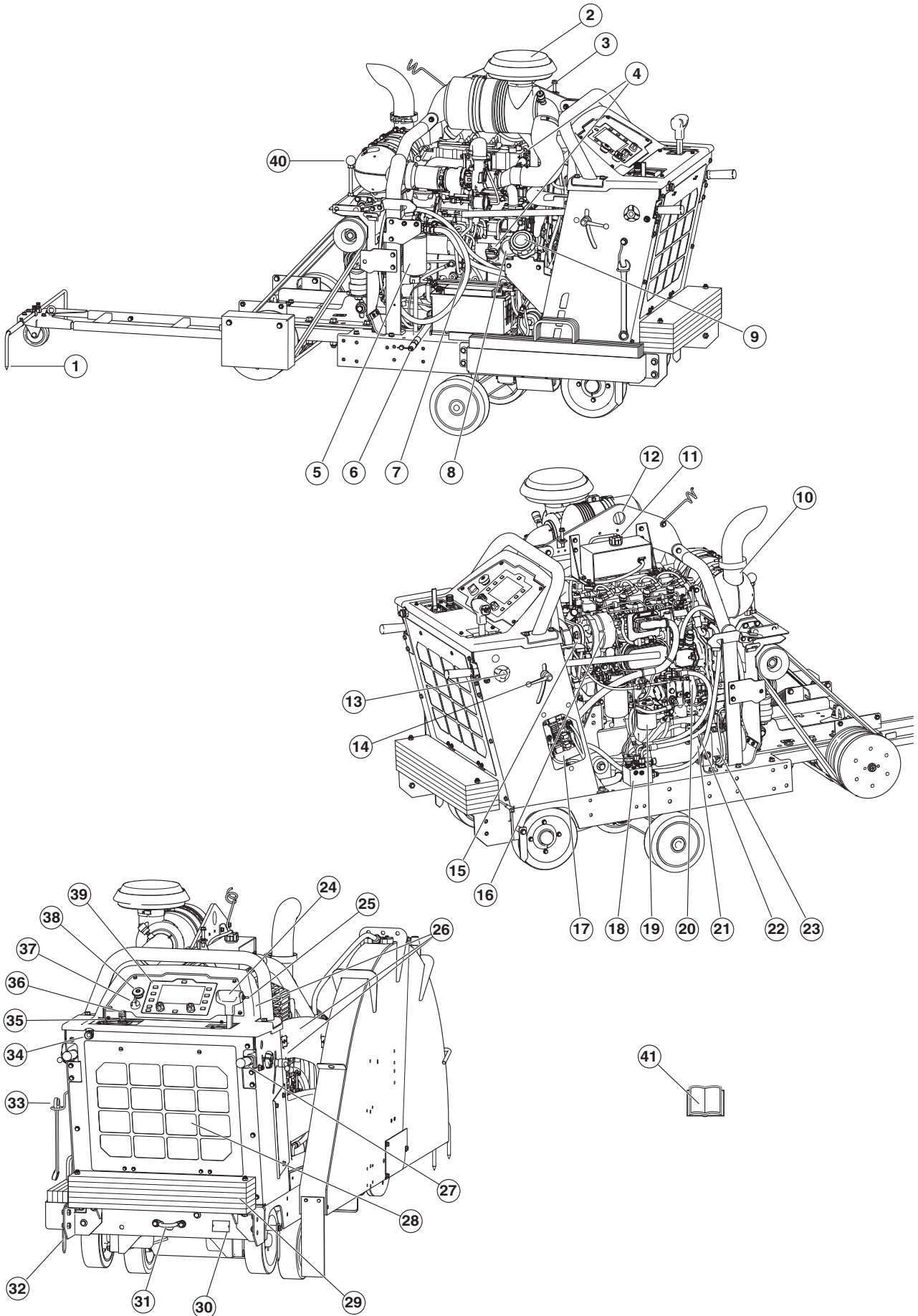
### Front guide

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

# PRESENTATION

## What is what on the floor saw - FS7000 DL?

Covers removed for illustration purpose.



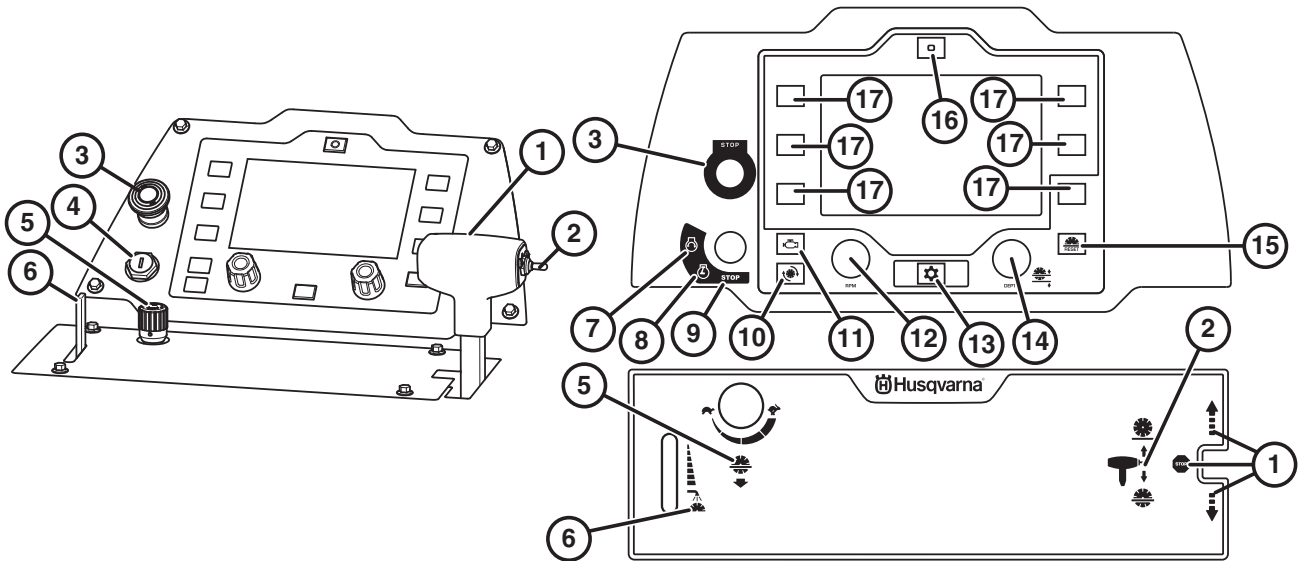
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# PRESENTATION

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- 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
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- 11 Radiator coolant fill
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- 25 Raise/lower switch (blade)
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- 27 Handlebar
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- 29 Weight kit
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- 32 Rear guide
- 33 Blade shaft wrench
- 34 Water inlet
- 35 Water valve
- 36 Saw lowering speed control knob
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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             | 9  | Engine stops                |
| 2 | Raise/lower switch (blade)      | 10 | Display of blade speed, rpm |
| 3 | Machine stop                    | 11 | Display of motor speed, rpm |
| 4 | Engine start switch             | 12 | Throttle speed adjustment   |
| 5 | Saw lowering speed control knob | 13 | Menu button                 |
| 6 | Water valve                     | 14 | Blade depth adjustment      |
| 7 | Engine starts                   | 15 | Blade zero button           |
| 8 | Ignition on                     | 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.

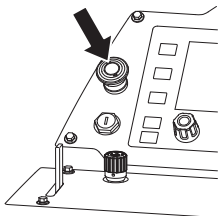


**WARNING!** The bladeshaft rotates when the engine is cranked or started. Applicable for versions without installed blade clutch.

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

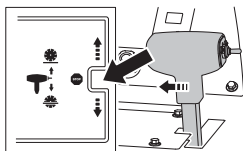
The machine stop is used to quickly switch off the engine and all electrical functions except lights.



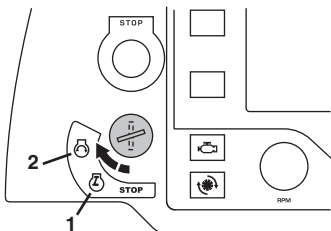
**NOTICE!** Do not use for routine stop.

## 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.

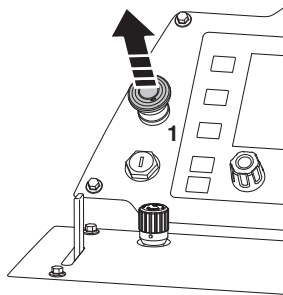


- 1 Start the engine, turn the Engine start switch to ignition on position. Follow the procedure in the engine manual.
- 2 When preheat symbol is displayed, wait for the engine glow plugs to warm the engine. When the preheat symbol disappears turn the Engine start switch to position engine start to start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

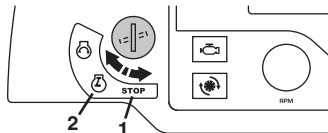


- Press the machine stop and check that the engine stops. This will set the machine in safe mode.

- Reset the machine stop by pulling the knob 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.

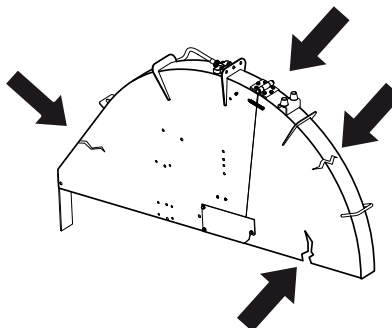
It will also protect the user from the blade and cool the blade with water when wet cutting.

## 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

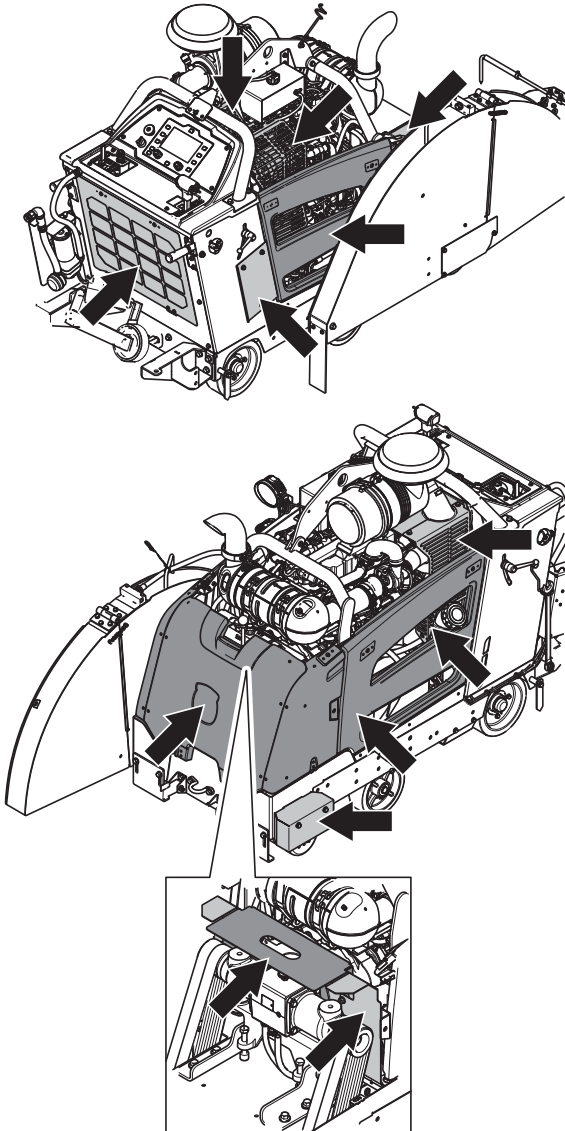


**WARNING!** Always check that the protection covers are correctly fitted before starting the machine.

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.



## Muffler - 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 - DOC

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

**NOTICE!** Muffler - 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.

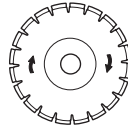


**WARNING! Diamond blades become very hot when used. An overheated blade is a result of improper use, and may cause deformation of the blade, resulting in damage and injuries.**

**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.

**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 flammable 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.

### 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 refuelling.

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

Clean the area around the fuel cap.

Tighten the fuel cap carefully after refuelling. 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 3 m from the refuelling point before starting it.

Never start the machine:

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

## Transport and storage

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

# BATTERY HANDLING

## General



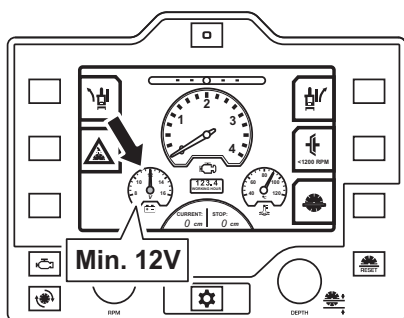
**WARNING! Lead-acid batteries produce explosive gases. Avoid sparks, open flames and smoking close to batteries.**

- 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.

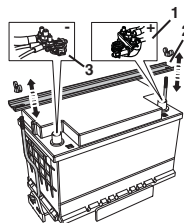


- If battery has difficulties holding voltage over long time periods when load is not applied, replace battery. For more information about recommended batteries, see section "Technical data"
- Charge battery regularly.
- Keep battery terminals and its accessories clean.

## 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

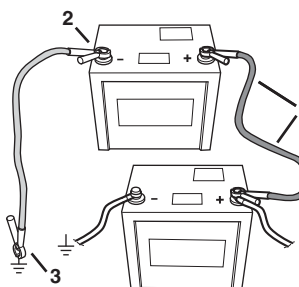
## Starting the engine with a weak battery

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 vapours which may contain hazardous chemicals. Check the nature of the material you intend to process and use an appropriate breathing mask.**

**Long-term exposure to noise can result in permanent hearing impairment. 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 Maintenance heading.**

**Always use genuine accessories.**



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

## Cutting area safety

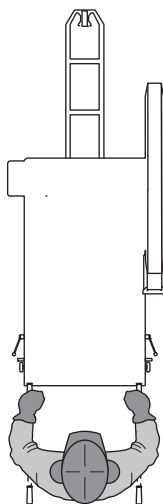


**WARNING! You are responsible to ensure that animals and onlookers are not within the working area. Do not start cutting until the working area is clear.**

- 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 install a blade on the machine until it has been transported into the cutting area.
- 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.
- 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

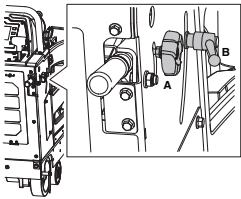
## Handle position

**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 locking 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.

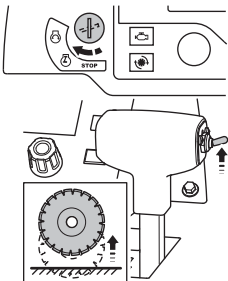


## Moving the machine

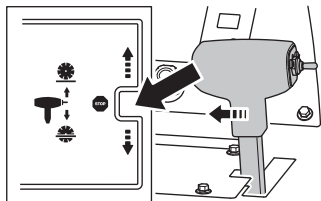
Prior to moving the machine, read and understand section "Starting and stopping".

### 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.



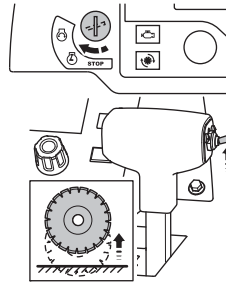
- Set the Transmission bypass valve counterclockwise to the up (neutral) position.
- The saw can now be moved by standing behind it and pushing (while holding the handlebars).



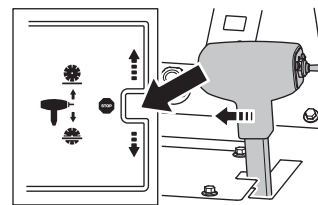
**WARNING!** Do not attempt to push the saw while it is in neutral position on a grade (or hill). The saw operator could lose control of the saw and cause injury to oneself or other persons in the area.

## Moving the saw with the engine on

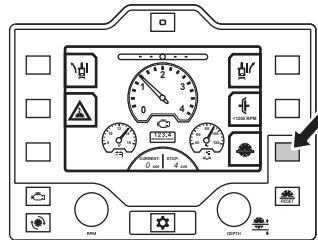
- Turn Engine start switch to the ignition on position.
- Raise the saw by pressing up the Raise/lower switch on the Speed control lever until the blade (if installed) clears the pavement surface.



- Put Speed control lever into the STOP position.

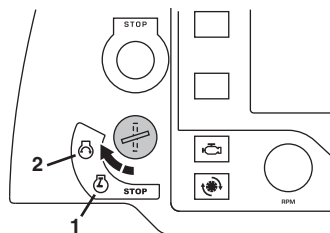


- The Engine throttle is at idle speed setting per default.
- Ensure that the Blade clutch is disengaged (if clutch installed).



**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 cutting 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.



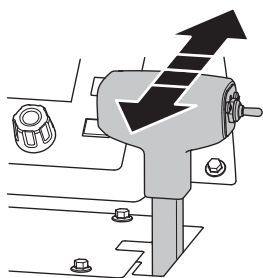
**NOTICE!** If the engine does not start, turn Engine start switch to STOP position and check the display for any messages. If none, repeat above steps. Else, take measures according to message in the display prior to new starting attempt.



# OPERATING

- Push the Speed control lever forward for forward saw movement, or to the rear for reverse saw movement.

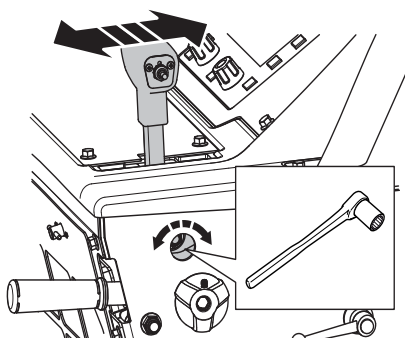
The further you push the lever the faster the speed. For more information, see the "Technical data" section.



**WARNING! Do not open or close the Transmission bypass valve while engine is running.**

**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.



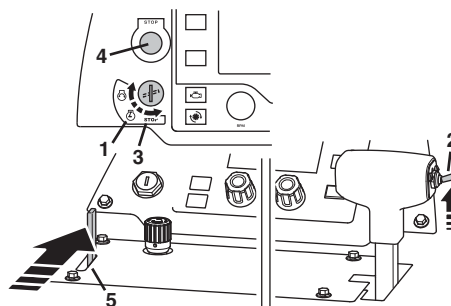
## Fitting the blade

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

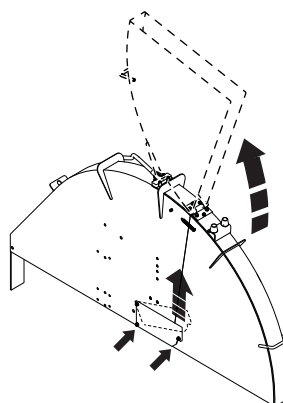
**NOTICE! Check the blade's direction of rotation. The arrow on the blade and the blade guard indicates the direction of rotation.**

- 1 Transport the machine to within the cutting area and check your surroundings according to the information found under the heading Cutting area safety.
- 2 Set Engine start switch to ignition on position.
- 3 Raise the saw to a high position using the Raise/lower switch on the Speed control lever.
- 4 Set the Engine start switch to STOP position.
- 5 Press the Machine stop on the control panel.

- 6 Turn off the Water valve.



- Loosen the blade guard front bolt and lift the blade guard latch.
- Raise blade guard front and use spring hook 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.**

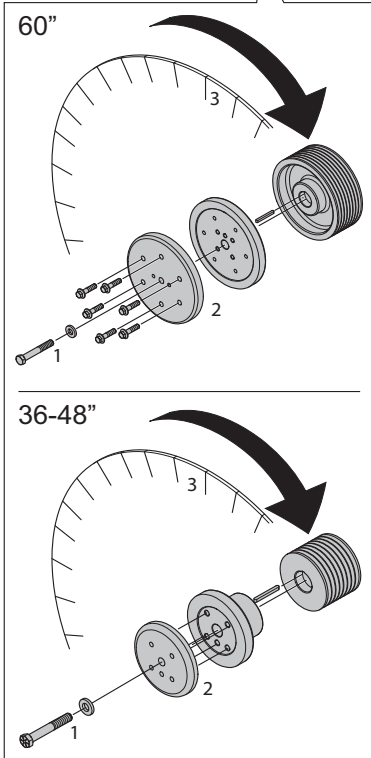
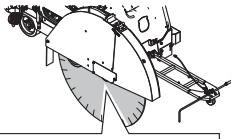
**The blade shaft bolt on the right hand side of the saw has left hand threads and the blade shaft bolt on the left hand side of the saw has right hand threads. Replace the blade shaft bolt and plain washer when worn or damaged.**

- 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 safety pins passes through the diamond blade and into the inner flange.  
Always use plain washer with blade shaft bolt.  
Rotate the blade in the opposite direction of blade rotation to remove backlash.
- 5 Tighten the blade shaft bolt firmly with the supplied wrench.

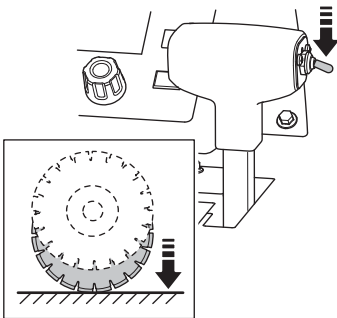
On 60"/1500mm blade, loose and tighten the flange as described above, in addition tighten the 6 bolts firmly that holds the flange.

# OPERATING

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



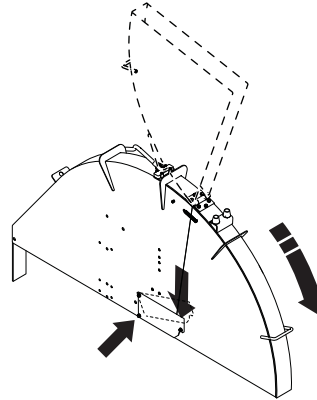
- Lower the saw by pushing the Raise/lower switch on the speed control lever downwards until the blade touches the surface to be cut.



**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.

- 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.

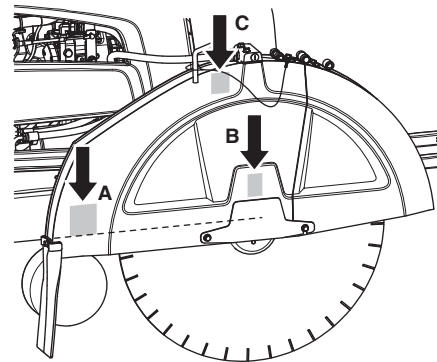
## Install the blade guard 36"-42"

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.

Lower the guard onto the support spades and use moderate force to press down the blade guard until lock engages.

- 36" and 42" guards are lowered on three spades **A**, **B** and **C**.

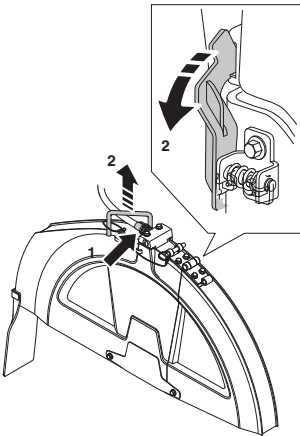


## Remove the blade guard 36"-42"

- 1 Disconnect the water hose from the blade guard.

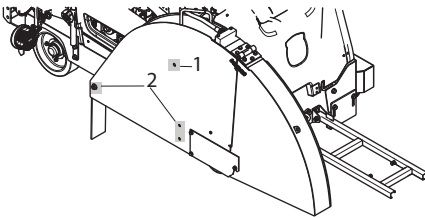
# OPERATING

- 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).

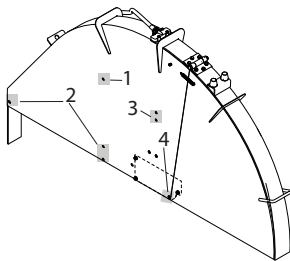


## Install the blade guard 48"-60"

48"



60"



- 1 screw fixed to the bracket blade guard upper.
- 3 screws fixed to the baseplate.
- 2 screws fixed to the bracket blade guard.
- 1 screw fixed to the belt guard.

## Remove the blade guard 48"-60"

- Disconnect the water hose from the blade guard.
- Remove the bolt holding the blade guard.
- Remove the blade guard

## Blade depth stop

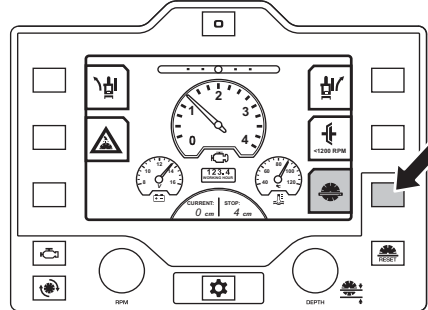
The saw is equipped with a Blade depth stop on the control panel. When activated, the cutting depth will stop at the cutting depth chosen by the operator.

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

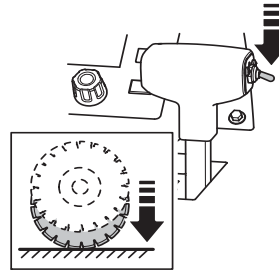
## Setting the cutting depth

**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.

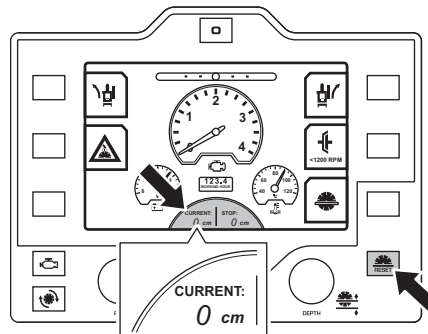


- Lower the saw by pushing the Raise/lower switch on the speed control lever downwards until the blade touches the surface to be cut. This will be the reference point.

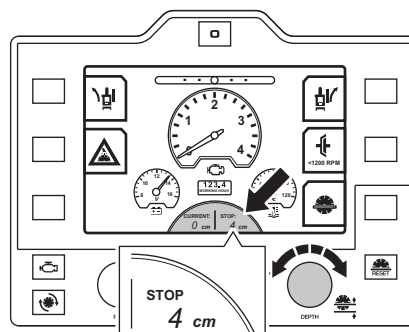


**CAUTION!** The touch should be smooth to prevent damaging the blade. Use Saw lowering speed control knob to slow down the lowering speed.

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

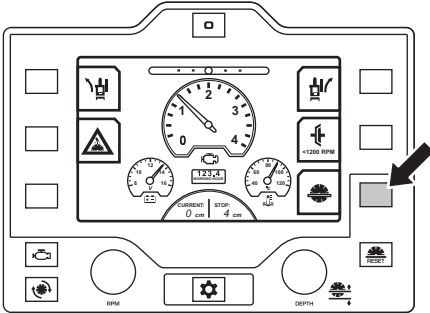


- Set the desired cutting depth by rotating the Depth knob. The chosen cutting depth is now shown in the display in small box called stop.



# OPERATING

- 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.

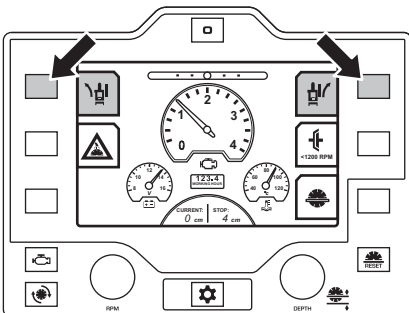


## Straight line sawing

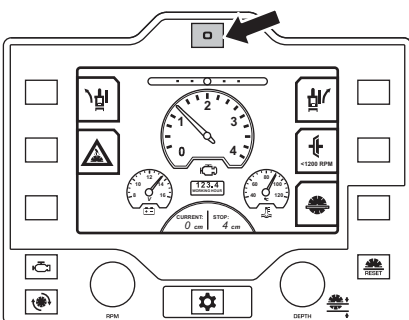
While cutting, the blade is creating resistance to driving force from rear wheels which will cause the machine to yaw in the same direction as the blade is mounted on. This effect can be counteracted by adjusting the angle of the rear axle using E-track or manual axle adjustments.

## Saw with E-track

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

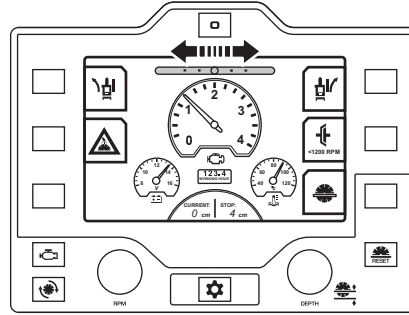


- By pressing the E-track zero button on the control panel the rear axle will return to predefined center angle.



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

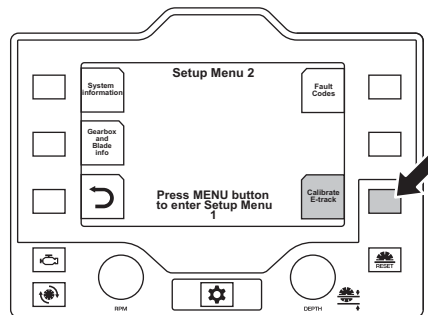
- The E-track gauge on the display will indicate the present angle of the rear axle. The change is saved both if the ignition is switched off or if the machine is without power.



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

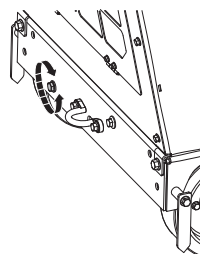
## To set new center angle for E-track

- 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



**WARNING!** Remove the cutting blade prior to lifting, loading, unloading or transporting the machine.

# OPERATING

## Transport

The 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.

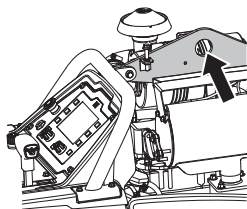


**WARNING! When moving the saw up and down ramps, with engine on, use extreme caution. For steep ramps, always use a winch. Never stand below the machine. Stand only beside.**

- 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".

## 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



**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.**

## 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.

# OPERATING

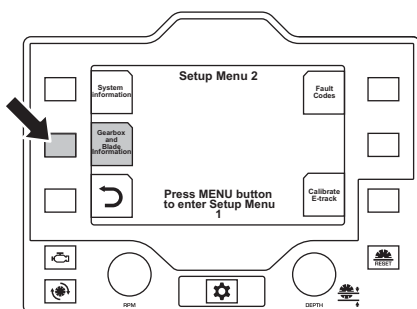
## 1-Speed gearbox model

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.

For information regarding full range of blade sizes available, contact your local sales or service provider.

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: FS7000 DL 1-Speed gearbox model

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

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

## 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	PULLEY 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

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

# OPERATING

## 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.

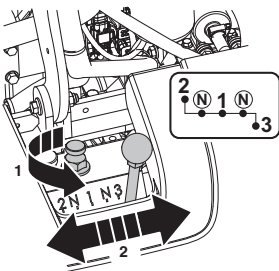
### Shifting gears



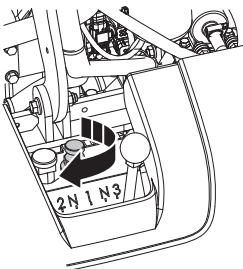
**WARNING!** After shifting gear, hand tight knob and tighten jam nut or the gearbox could be damaged.

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 (40 Nm/30 ft-lb).



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.

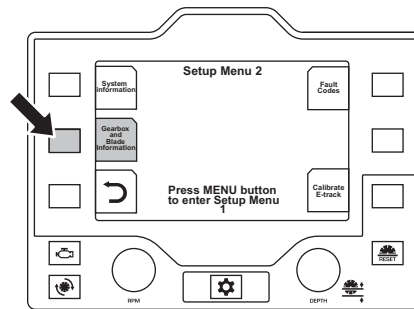
There are 4 possible machine drive configurations on these machines:

- 500-900, for 500 to 900mm (20" to 36") blades
- 650-1000, for 650-1000mm (26" to 42") blades
- 750-1200, for 750-1200mm (30" to 48") blades
- 900-1500, for 900-1500mm (36" to 60") blades

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.

- 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.

# OPERATING

For example:

To change the blade size on a blade drive configuration FS7000 DL 3-speed, 650-1000/26–42 **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: FS7000 DL 3-Speed gearbox model

To change a 3-speed gearbox model from a 900mm/30" drive to a 1000mm/42" 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 FS7000 DL, 3 speed 650-1000/26–42, the current flange should be 178mm/7" which is correct to use with 1000mm/42" blade.

GEARBOX RANGE / BLADE RPM (650-1000, FS 7000 DL)						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	650mm	1860	1860			
2	900mm	178mm	1300	146mm	2600	109mm
1	1000mm	1110	1110			

GEARBOX RANGE / BLADE RPM (20-36, FS 7000 DL)						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	26"	7"	1860			
2	36"	7"	1300	5.75"	2600	4.29"
1	42"	1110	1110			

- 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.

Or.

- 1 If the current machine drive configuration is a 3 speed 500-900/20-36, the flange should be 152mm/6" which is too small for a 1000mm/42" blade and needs to change.

GEARBOX RANGE / BLADE RPM (500-900, FS 7000 DL)						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	500mm	152mm	2240			
2	750mm	152mm	1560	121.5mm	2600	109mm
1	900mm	1340	1340			

GEARBOX RANGE / BLADE RPM (20-36, FS 7000 DL)						
GEAR	BLADE SIZE (Maximum)	FLANGE SIZE	BLADE RPM	PULLEY	ENGINE RPM	PULLEY
3	20"	6"	2240			
2	30"	6"	1560	4.78"	2600	4.29"
1	36"	1340	1340			

- 2 Change the blade shaft pulley from 121,5mm/4.78" diameter to 146mm/5.75".
- 3 Change the outer flange and inner flange from 152 mm/6" diameter to 178mm/7".
- 4 Shift the gears from 3 to 1.
- 5 Change belts from 1473mm/58" to 1524mm/60"
- 6 Verify that installed blade drive configuration and blade shaft speed corresponds with FS7000 DL, 3 speed 650–1000/26–42 US drive configuration information on the display, under "Gearbox and blade information" inside Setup menu 2.



## 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, mm/ inch	Blade sizes, mm/ inch
1500/60	900-1500/36-60
1200/48	750-1200/30-48
1000/42	650-1000/26-42
900/36	500-900/20-36

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

### Optional kits

585 92 46-01 Dual light kit

589 33 90-01 Water pump kit

589 65 06-01 Dual light kit CE

582 55 73-01 5th wheel 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 "Personal protective equipment" heading.**

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

- Perform daily maintenance. See instructions in section "Maintenance and service".
- Check that the blade is not in contact with anything when the machine is started.

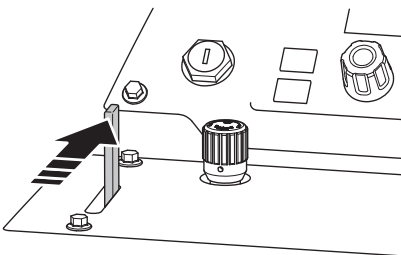
**NOTICE!** Read the operator's manual supplied by the engine manufacturer.

## Starting for the first time

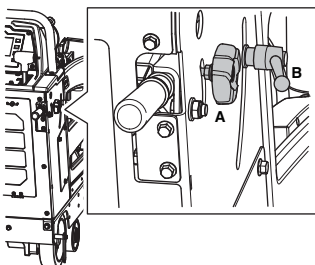
- Check engine oil level without blade and the saw horizontal for a flat saw level.
- Connect battery cables. The floor saw unit is supplied with no battery cables connected.  
For some markets batteries are not supplied due to safety reason during transportation. Install a new battery.  
For more information, 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

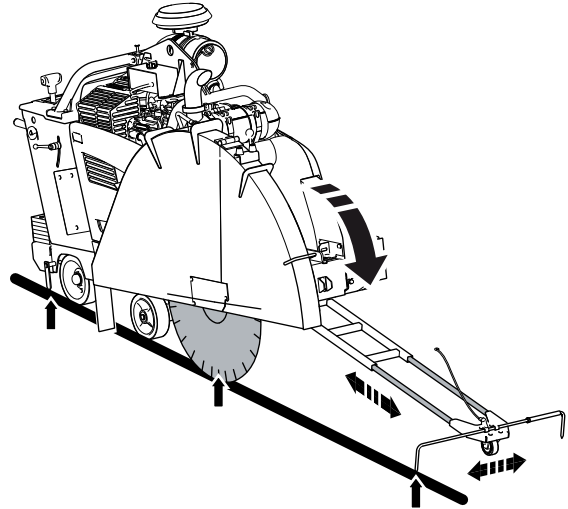
- Connect the machine to a water supply. Turn off the Water valve.



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

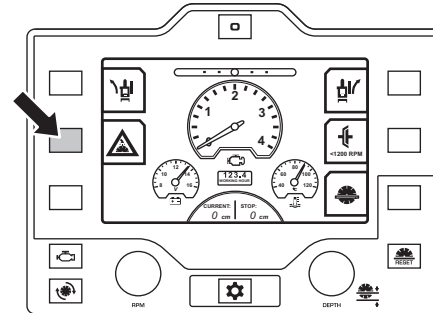


- Lower the front guide and align the front guide, rear guide and the diamond blade with the line on the surface. The front guide is telescopic, adjust the length with the screws on the inside of the front guide.



## Start the engine

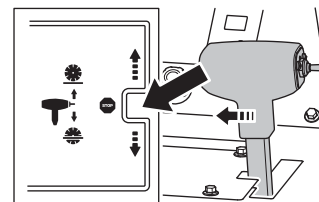
- To start the saw when no water pressure is present, disengage the Water safety switch.



## 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.

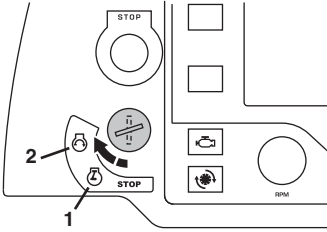
- Set Speed control lever to the STOP position. The engine will not start unless the Speed control lever is in the distinct STOP position.



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

# STARTING AND STOPPING

- 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).
- Do not warm up the machine outside the cutting area, with the blade installed and rotating. To fit the blade, see the instructions under the heading Fitting the blade.



**WARNING!** When the engine is running the exhaust contains chemicals such as unburned hydrocarbons and carbon monoxide. The content of the exhaust fumes is known to cause respiratory problems, cancer, birth defects or other reproductive harm.

Carbon monoxide is colorless and tasteless and is always present in exhaust fumes. The onset of carbon monoxide poisoning is distinguished by a slight dizziness which may or may not be recognized by the victim. A person may collapse and lapse into unconsciousness with no warning if the concentration of carbon monoxide is sufficiently high. Since carbon monoxide is colorless and odorless, its presence can not be detected. Any time exhaust odors are noticed, carbon monoxide is present. Never use a combustion engine powered product indoors or in confined areas without ensuring proper ventilation.



**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.

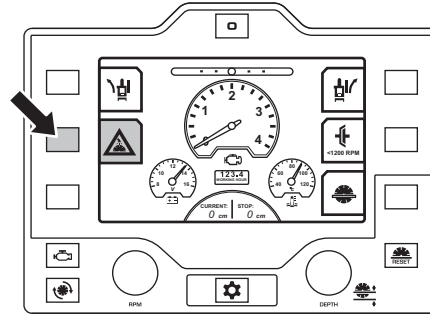
## Start the cutting



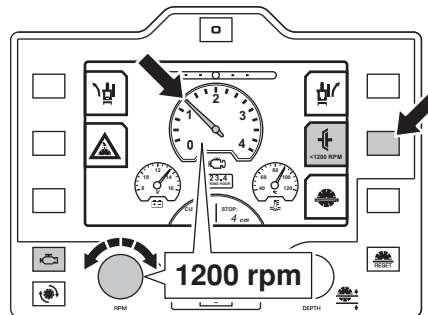
**WARNING!** Never use a blade with a lower speed rating than that of the machine. Make sure the blade is properly installed.

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

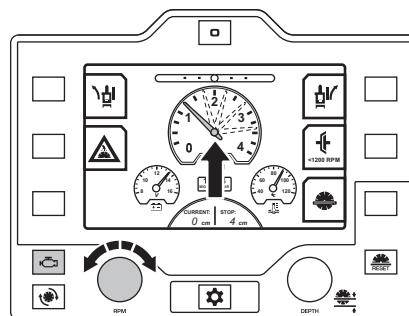
- Test for adequate water supply. Low water flow will cause damage to diamond blades. Engage the Water safety switch on the control panel and open the Water valve.



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

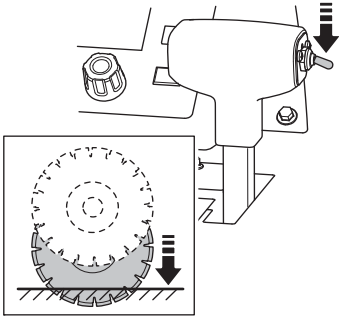


- Set the Engine throttle knob to maximum rpm.



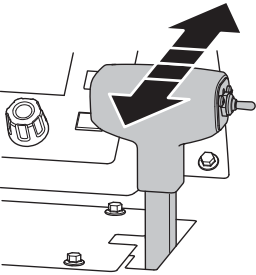
# STARTING AND STOPPING

- 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.

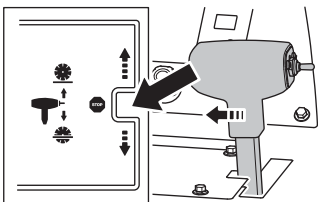
## Stopping



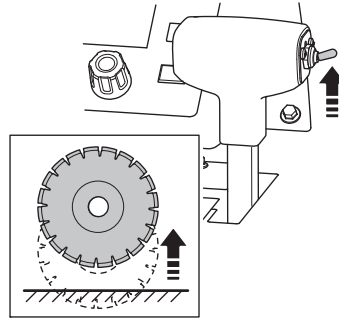
**WARNING!** Always keep all parts of your body away from blade and all other moving parts.

## Stop the cutting

- Put Speed control lever into the STOP position.

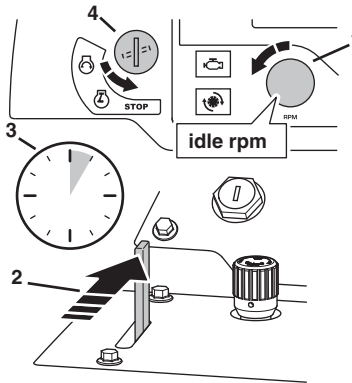


- Raise the diamond blade out of the cut by pressing the Raise/lower switch on the control lever upward until the diamond blade clears the surfaces.



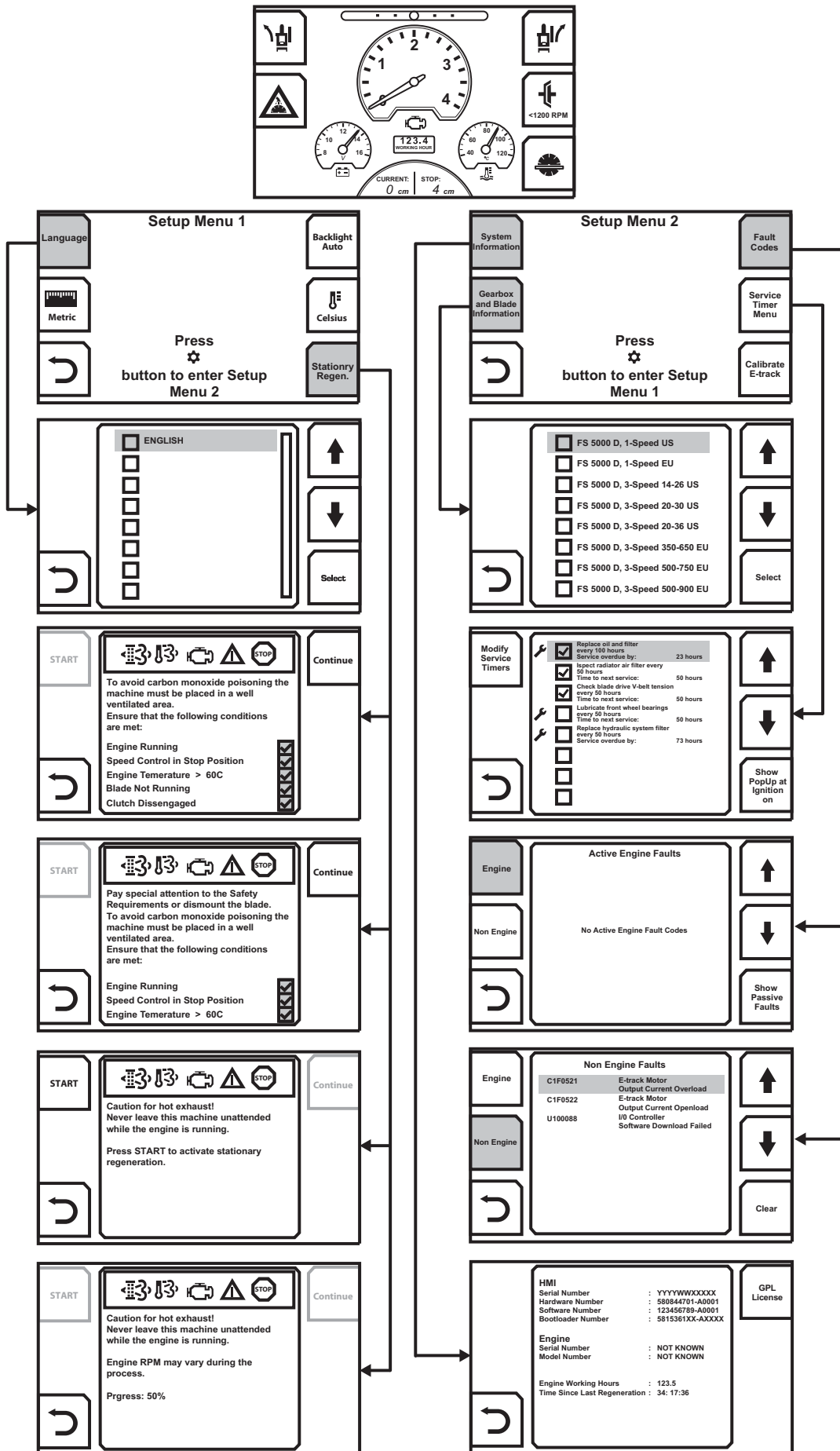
## Stop the engine

- 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. Do this within the cutting area and do not leave the machine unsupervised.
- Stop the engine by turning the Engine start switch to the STOP position.



# MENU SYSTEM

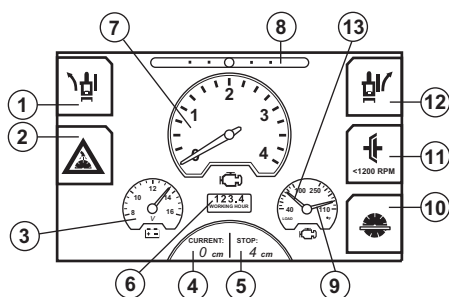
## Menu overview



See following page for an explanation of each menu.

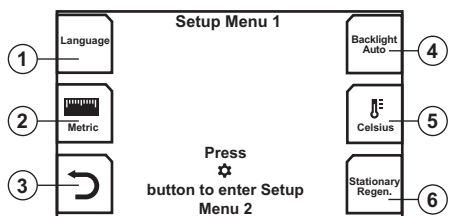
# MENU SYSTEM

## 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 Engine temperature
- 10 Blade depth stop
- 11 Blade clutch
- 12 E-track, adjustment right
- 13 Engine load

## Setup Menu 1

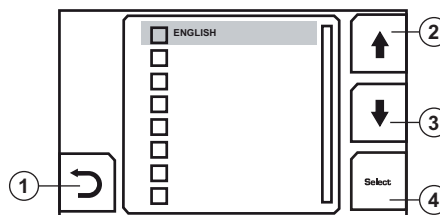


- 1 Language
- 2 Distance unit. Switch between metric and imperial length units.
- 3 Return button (previous menu)
- 4 Backlight. Switch between three different levels of brightness and an auto setting. Auto is default.
- 5 Temperature unit. Switch between Celsius and Fahrenheit.
- 6 Stationary regeneration. The system will inform when the particulate filter needs cleaning.

See instructions in section "Maintenance and service".

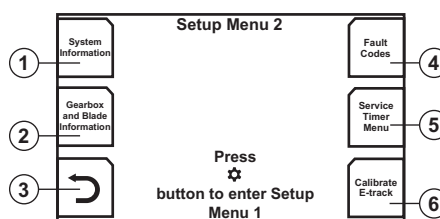
## Languages

Select the required display language.



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

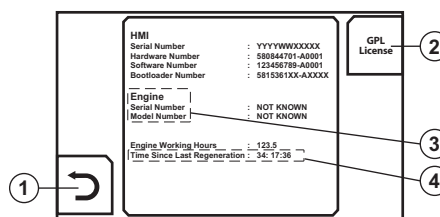
## Setup Menu 2



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

## System information

Software related information.



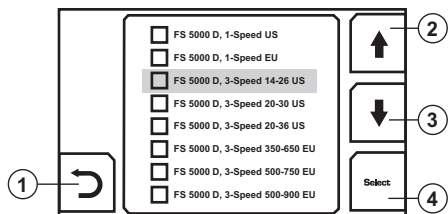
- 1 Return button (previous menu)
  - 2 GPL license
  - 3 Engine information.
- FS7000 DL Software ID.

# MENU SYSTEM

## Gearbox and blade information

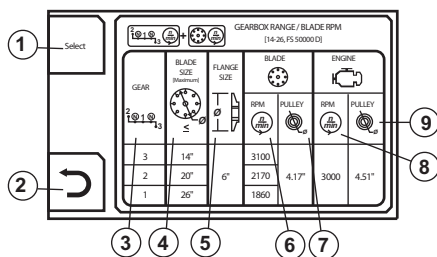
Shows the recommended rpm and gear for available blade sizes.

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, mm/inch
- 5 Blade flange diameter, mm/inch
- 6 Rotational speed of diamond blade
- 7 Blade shaft pulley diameter, mm/inch
- 8 Maximum rotational speed of engine
- 9 Gearbox pulley diameter, mm/inch

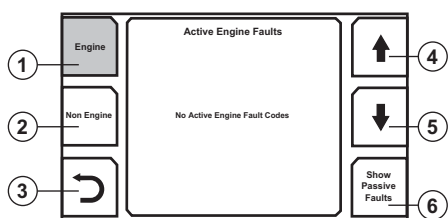
## Fault codes

Shows fault codes when the machine detects a fault.

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

### Engine

If there is no active or passive fault codes or if there is no contact between HMI and ECU (Engine control Unit) messages with this information will appear.

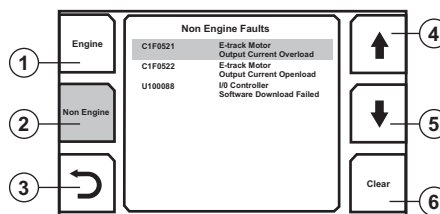


- 1 Fault codes, engine \*

- 2 Fault codes, non engine-related
- 3 Return button (previous menu)
- 4 Browse to previous fault code
- 5 Browse to next fault code
- 6 Switch between active and passive engine fault codes.

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

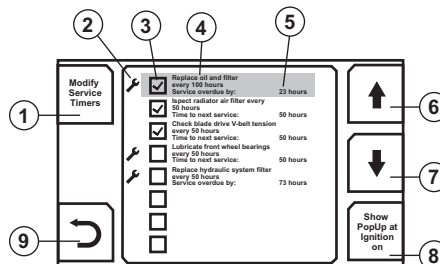
### Non Engine



- 1 Fault codes, engine
- 2 Fault codes, non engine-related
- 3 Return button (previous menu)
- 4 Browse to previous fault code
- 5 Browse to next fault code
- 6 Clear rectified fault code

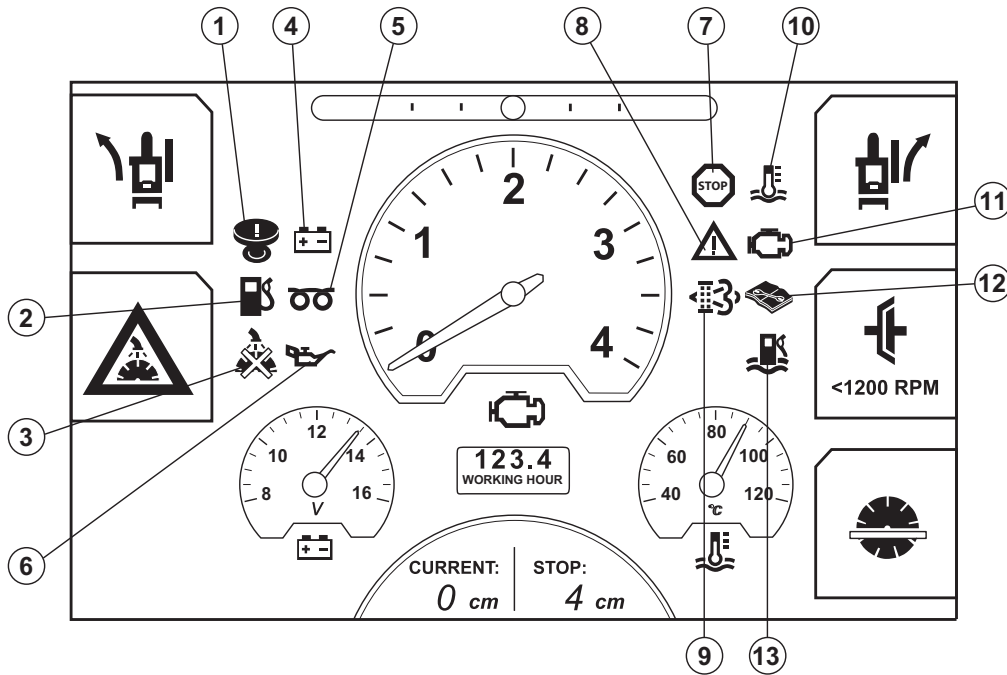
## Service Timer Menu

Settings and information of the service schedule.



- 1 Button to the service mode and requires a PIN code.
- 2 Indication of service.
- 3 Indication of pop up message of service.
- 4 Type of service and how often it should be done.
- 5 The time when the next service is to be performed or the time that has passed since the service would have been carried out.
- 6 Browse to previous service message.
- 7 Browse to next service message.
- 8 Activation of pop up message for the service displayed when the ignition is switched on.
- 9 Return button (previous menu)

# MENU SYSTEM



## Explanation of the warning symbols on the display

- 1 **Machine in stop state** (release machine stop and cycle ignition to regain full functionality). Turned off when the following three conditions are met:
  - Engine start switch is turned off.
  - Engine speed received from ECU\* equals 0 rpm for 1 second or more.
  - Blade speed is 0 rpm.
- 2 **Low fuel level.**
- 3 **No blade water pressure** Pressure switch is open (no water pressure) and blade water safety function is selected.
- 4 **No charging** Turned on when:
  - Ignition is on and engine stand still.
  - Battery voltage has not increased 15 seconds after engine start.
  - Battery voltage is below 12,8V.
  - Battery voltage is above 15V.

(Battery voltage is not checked while hydraulic pump is running or 15 seconds after the pump have stopped running as battery voltage always drop when pump is running.)
- 5 **Preheat** Please see the engine Operator's Manual for more information.
 

Deutz: Fault Code SO1 \*\*

- 6 **Low oil pressure** Please see the engine Operator's Manual for more information.
 

Deutz: Fault Code SO1 \*\*

Any ECU\*, engine or floor saw: Fault Code SPN 100
- 7 **Engine stop.** Cutting can not continue. For more information, see the "Troubleshooting" section.
- 8 **Warning light.** Moderate engine problem/condition. Cutting can continue. For more information, see the "Troubleshooting" section.
- 9 **Engine over heated.** Cutting can not continue. Please see the engine Operator's Manual for more information.
 

Deutz: Fault Code SO1 \*\*
- 10 **Engine fail lamp** always in combination with pos. 7 and 8. Please see the engine Operator's Manual for more information.
- 11 **Active fault codes.** Non engine related fault codes are active. For more information, see the "Troubleshooting" section.
- 12 **Water in fuel**
  - Deutz: Fault Code WFI For more information, see the "Maintenance and service" section.

\* Engine or Electronic Control Unit.

\*\* HMI does not make any decision on its own. It only displays information coming from ECU\*.



# 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 Operator's 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.
- Remove the cutting blade before performing maintenance, service or trouble shooting.

### Protective equipment

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

### 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					
Lubricate hydraulic cylinder pivot pin.	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 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



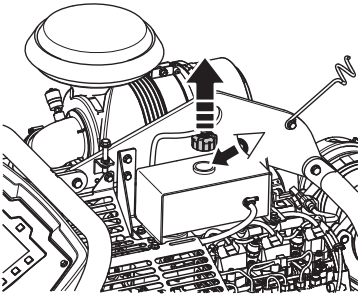
**WARNING!** Switch off the engine before carrying out any checks or maintenance.

### Check radiator coolant level.



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

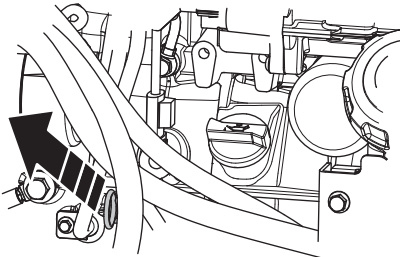
- Remove the lid and look down, the level should reach the start of the tube inside. Fill with coolant if needed.



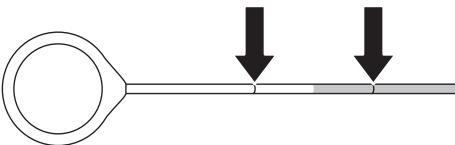
### Check the engine's oil level

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.

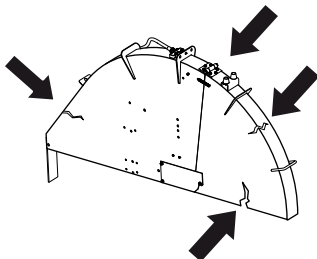


- Make sure the level is between the limits.



### Check blade guard for damage

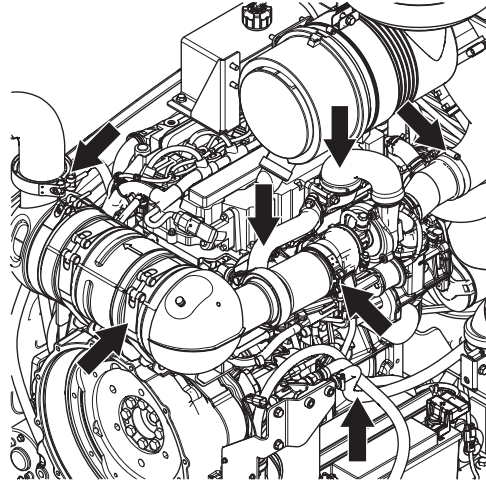
- Check the blade guard for cracks.



- Never use a broken or damaged blade guard.

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

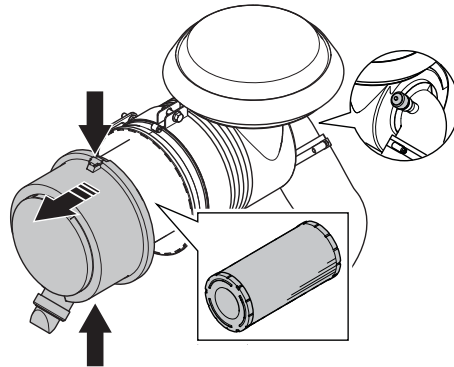
The image only shows some of the hoses and clamps.



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

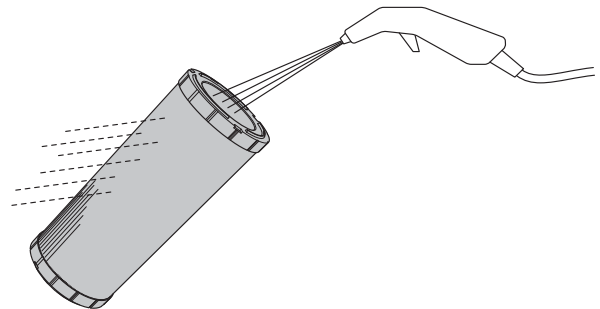
### Check air cleaner restriction indicator.

- 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 0,29-0,49 MPa; 3,0-5,0 kgf/cm<sup>2</sup> (42-47 PSI) 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.

# MAINTENANCE AND SERVICE

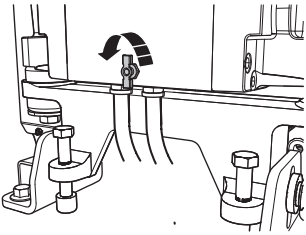
## Protection covers

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

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

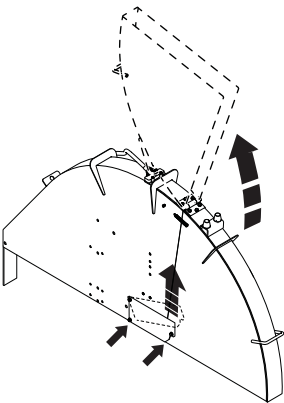
## Drain cooling water from gearbox to prevent rust and/or freeze damage.

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

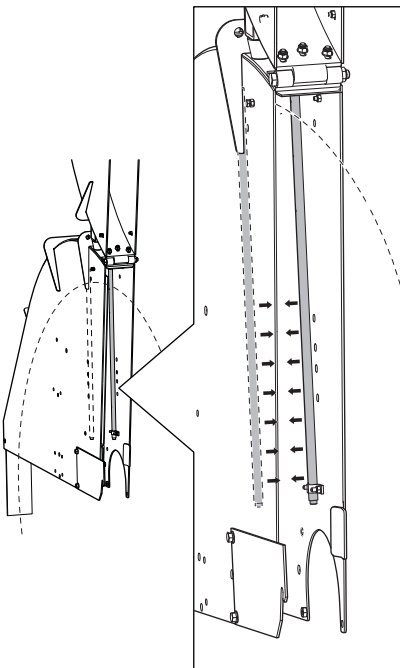


## Check the water spray over the diamond blade.

Raise blade guard front and use spring hook to lock it in upright position.

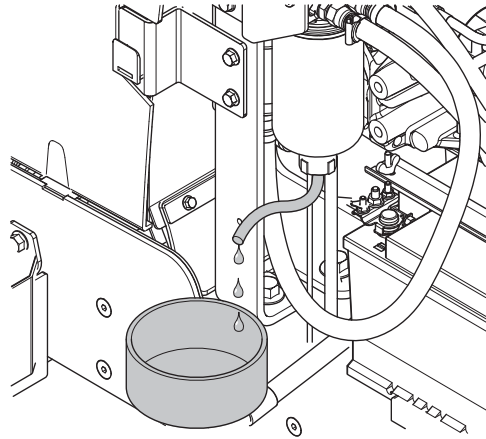


- Open the Water valve on the control panel. Make sure it is straight jets of water out of the holes from the water pipes on both sides of the blade and no leakage. Replace water pipe if damaged.



## 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.



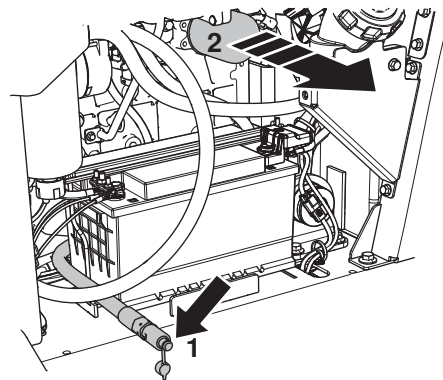
**NOTICE!** Treat this water as fuel and dispose properly.

## After the first 50 hours

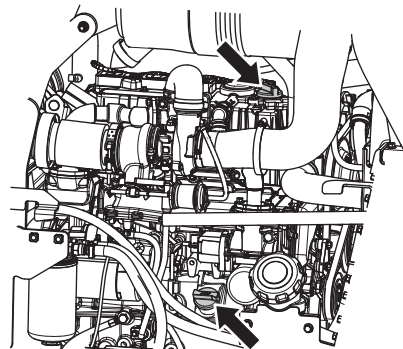
### Replace engine oil and filter

- 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.



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

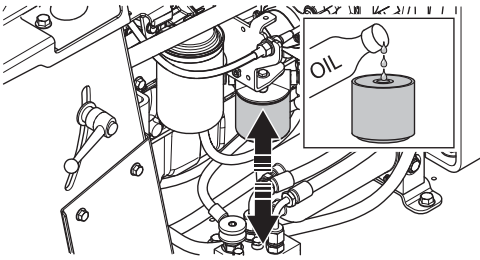


- Check the engine's oil level, see instructions under heading "Daily maintenance".

# MAINTENANCE AND SERVICE

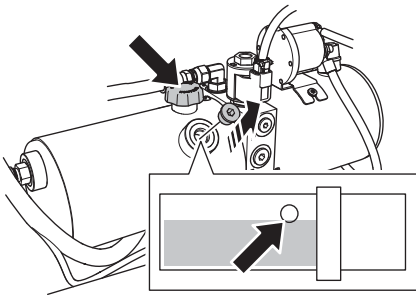
## Replace the hydraulic system filter.

- 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.

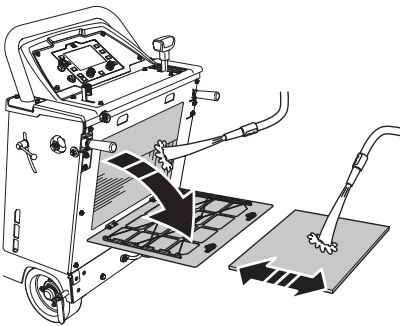
Ensure that machine is level prior refilling.



**NOTICE!** Do not overfill!

## 50 hours service

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

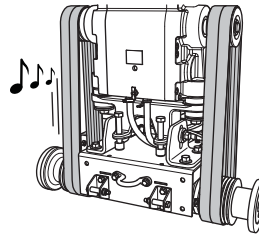


**CAUTION!** Always keep the radiator air filter in place

## Check drive V-belt tension.

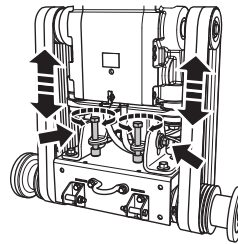
The V-belts are properly tensioned at the factory but after a few hours of operation they will stretch and become loose. Loose V-belts result in poor saw performance and short belt life.

- 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.

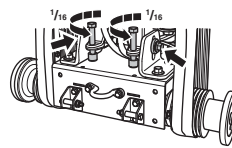


To tension the belts.

- 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.



- 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".

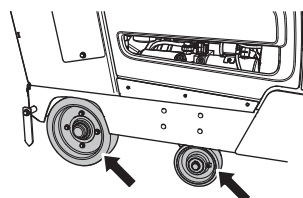
## 100 hours service

### Replace engine oil and filter

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

### Check wheels for wear or damage.

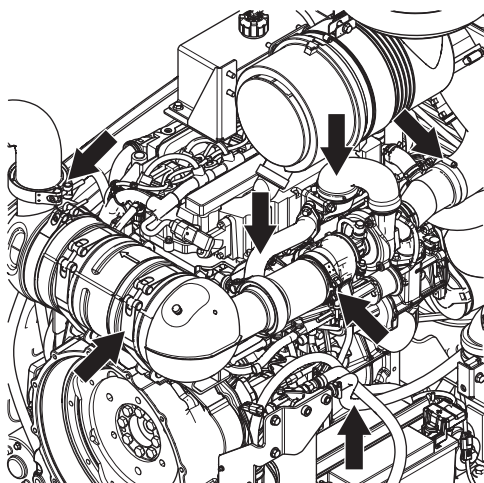
### Check rear wheel hubs and wheels for looseness



# MAINTENANCE AND SERVICE

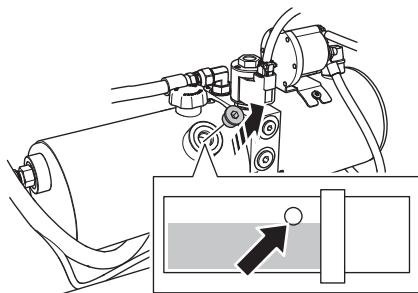
## Check engine air cleaner hose and clamps

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".

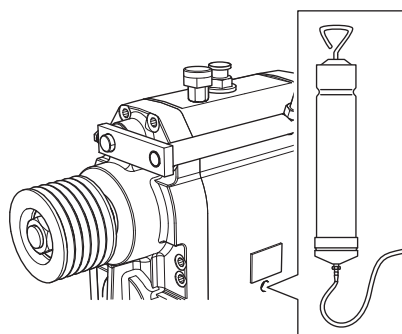
## 500 hours service

### Replace engine gearbox fluid

Select one of the following options to drain gearbox fluid:

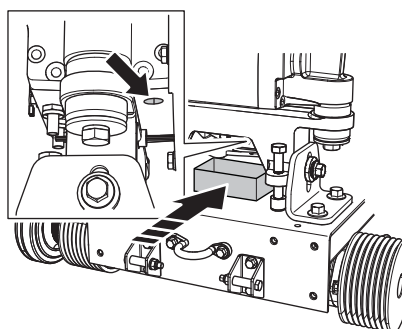
Option 1

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

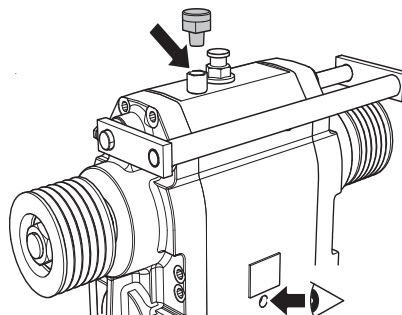


Option 2

- 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.

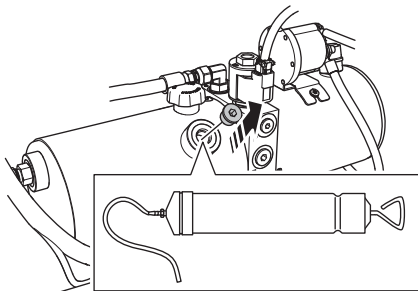


- Refit the screw and follow the steps in reverse order.

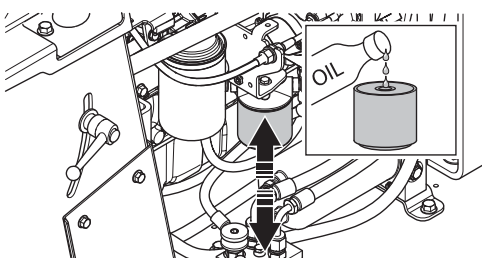
# MAINTENANCE AND SERVICE

## Replace hydraulic system fluid

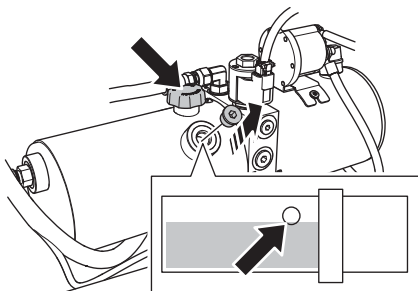
- Remove the plug in the inspection opening on the hydraulic reservoir and use an oil extractor to suck out the fluid through the inspection opening.



- 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.



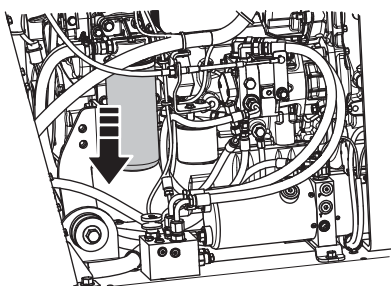
**NOTICE!** Do not overfill!

## 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.

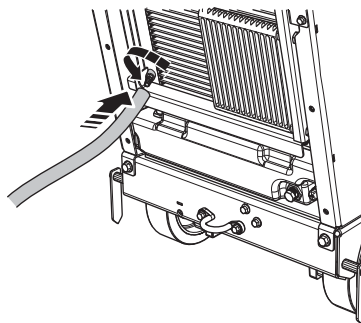


## Flush and clean radiator and cooling system



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

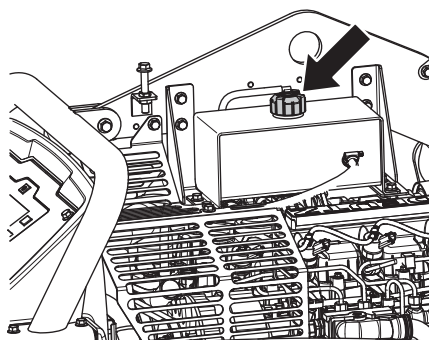
- Remove the back cover, put an extension on the valve and open the valve. Remove the lid on top and empty the system.



- Close the valve and refill the radiator coolant.

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

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



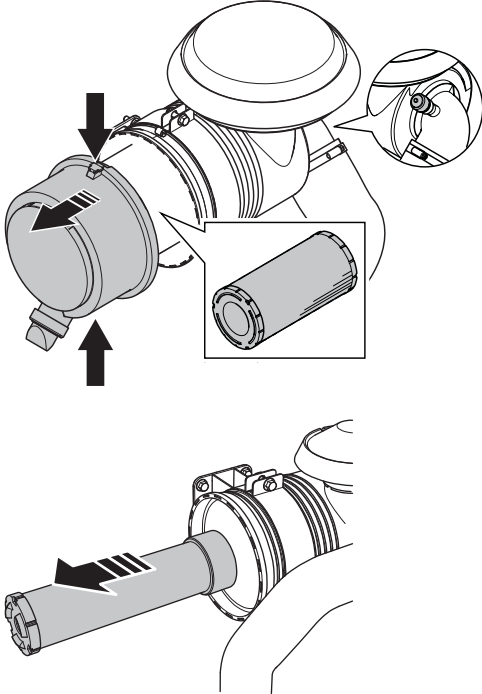
The coolant level should reach the start of the tube inside.

# MAINTENANCE AND SERVICE

## 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

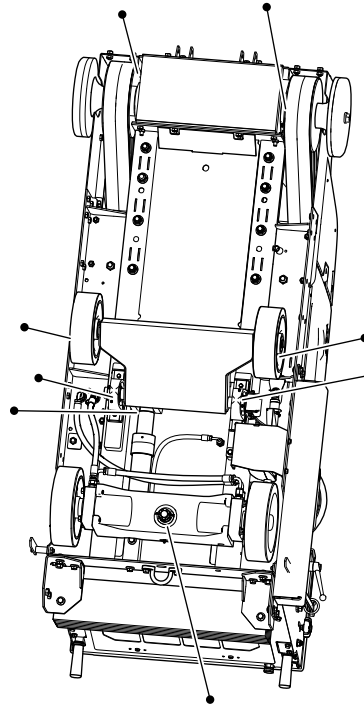
Maintain 50/50 mixture of glycol and water. For more information, see the "Technical data" section.

### 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.





# 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.
	Warning symbol*		
	Machine stop pressed: Restore machine stop and cycle ignition.	The Machine stop has been pressed down	Reset the machine stop by pulling the knob outward.
	Warning symbol*		
		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.
		Circuit breaker fuse is blown	Inspect and replace fuses
The diamond blade stops during sawing		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.
		The Blade clutch (if equipped) has an electrical failure or blown fuse.	Inspect and replace fuses
Saw lowers too fast		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 connectors X1, X4, X14 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		Contact your service agent.
P060745	IOC MPU	Program memory failure		Contact your service agent for further information.
P060742	IOC MPU	General memory failure		
C1F0612	Crank signal	Circuit short to battery	Engine can not be started.	Check damage to key switch, key switch connectors X30, X32 and harness. If found, repair and restart system, reset fault code.
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 X13 and X14 connectors and harness to sensors. If found, repair and restart system, reset fault codes.
C1E0112	Blade depth sensor signal	Circuit short to battery		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 X14 and X1 connector and harness. If found, repair and restart system, reset fault code.
C1D0111	Starter	Circuit short to ground	Engine can not be started.	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
C1D0712	Power supply external device	Circuit short to battery	May not be able to read sensor values.	E-track position sensor and sensor itself Neutral start switch and switch itself Lower/raise switch and switch itself Water safety switch and switch itself
C1D0815	AUX1	Circuit short to battery or open	AUX1 can not be controlled by the HMI.	Check K4 relay in relay/fuse box.
C1D0811	AUX1	Circuit short to ground		Check damage to X14 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 (5th wheel) can not be controlled by the HMI.	Check K5 relay in relay/fuse box.
				Check damage to X14 connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
C1D0211	AUX2	Circuit short to ground		If problem still exists, contact your service agent for further information.
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 K7 in relay/fuse box.
				Check damage to X14 connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
C1D0311	Blade clutch	Circuit short to ground		If problem still exists, contact your service agent for further information.

# TROUBLESHOOTING

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 K2 in relay/fuse box.
				Check damage to X14 connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
C1D0611	Water pump	Circuit short to ground	Water pump can not be turned on.	If problem still exists, contact your service agent for further information.
C1D0915	Working light	Circuit short to battery or open	Working light can not be controlled by the HMI. May not be able to turn on.	Check working light relay K3 in relay/fuse box.
				Check damage to X14 connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
C1D0911	Working light	Circuit short to ground		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 K8 in relay/fuse box.
				Check damage to X14 connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
				Also check the machine stop (X33) and X30.
				If problem still exists, contact your service agent for further information.
				Deutz:
C1D0C11	Ignition	Circuit short to ground		Check damage to X14 and X1 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 K6 in relay/fuse box.
				Check damage to X14 connector, harness to relay/fuse box and relay/fuse box connector. If found, repair and restart system, reset fault code.
C1D0D11	Hydraulic lift pump	Circuit short to ground	Hydraulic lift pump can't be used for raising the blade.	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 X14 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		Check damage to X14 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 and recalibrate.
C1E0512	E-track position sensor	Circuit short to battery		If problem still exists, contact your service agent for further information.

# TROUBLESHOOTING

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		
C1F0212	E-track motor B	Circuit short to battery		
C1F0211	E-track motor B	Circuit short to ground		
C1F0521	E-track motor	Output current 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.	Check damage to connectors X1, X4, X14 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

	<b>FS7000 DL</b>
Terminal type	Standard SAE
Voltage, V	12
CCA, A	765
Maximum size (LxWxH), mm/inch	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, litre/qt
Engine oil (low ash oil only)	FS7000 DL	SAE 15W40 or SAE 10W30	API CJ-4	8,5/9
			ACEA E6-08	
Gearbox oil	(3-speed gearbox)	SAE 75W90	ACEA E9-08	1,77/1,87
	(1-speed gearbox)			1/0,95
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

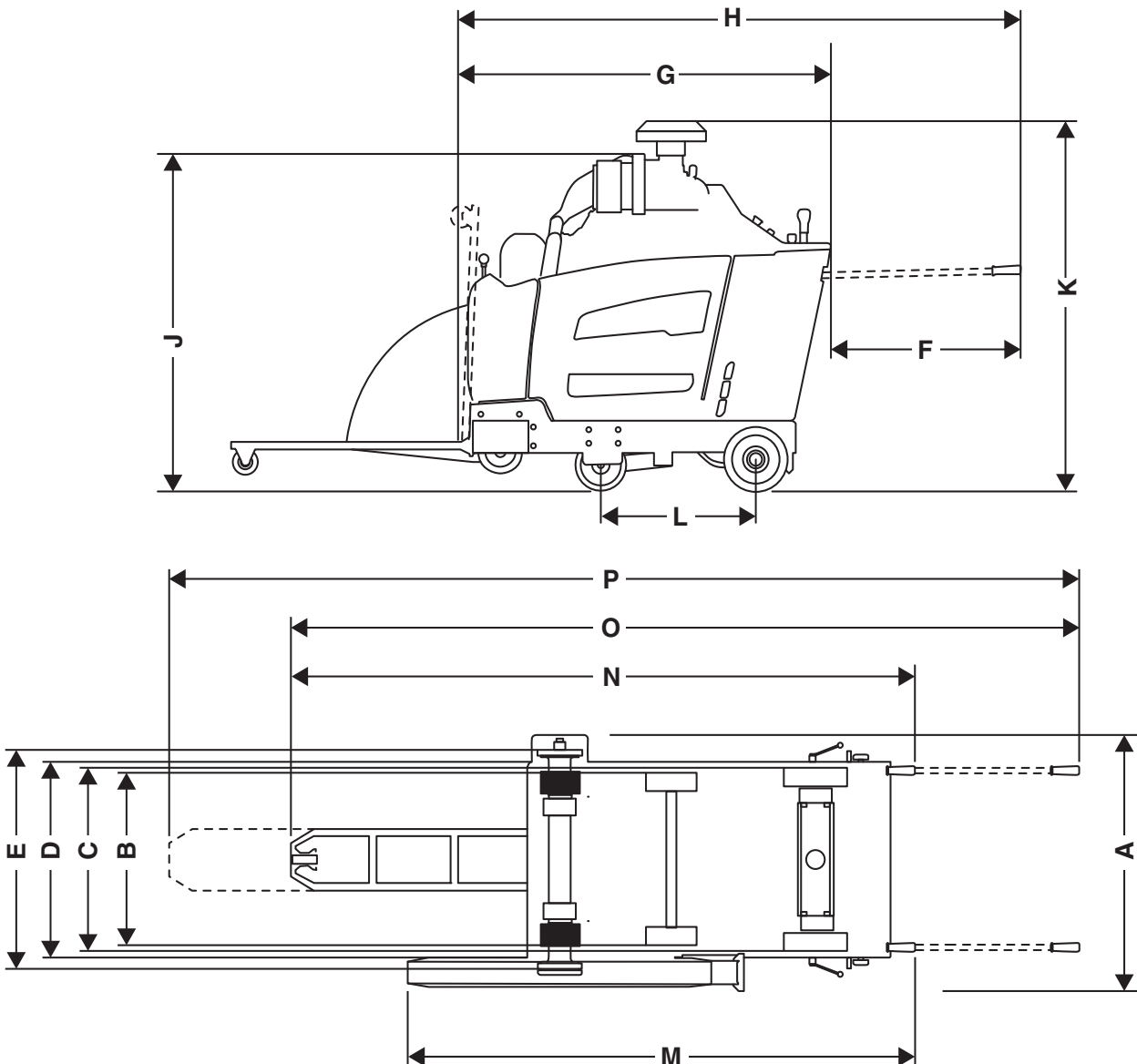
Saw feature	900/36	1000/42	1200/48	1500/60
Blade guard capacity, mm/inch	900/36	1000/42	1200/48	1500/60
Maximum cutting depth, mm/inch	374/15	411/17,5	498/20	623/25
Blade shaft, rpm	1354	1150	1015	792
Approximate blade shaft output, hp/kW	68/50			
Arbor size, mm/inch	1/25,4 with 6 screws			
Quick disconnect blade flange Ø, mm/inch	152,5/6	178/7	203,2/8	254/10
Blade shaft diameter, mm/inch	63,5 / 2 1/2			
Blade shaft bearings	Cast sealed blade shaft with 2 maintenance-free angular contact ball.			
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		Bolt on	
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, mm/inch	Front, 25.4/1			
	Rear, easy adjust center pivot with 2 hydraulic powered wheel motors			
Wheels, mm/inch	Front, 229x76x25 / 9x3x1, thick polyurethane tread, sealed ball bearing requiring less maintenance		Front, 229x76x25 / 9x3x1, thick polyurethane tread, sealed ball bearing requiring less maintenance	
	Rear, 254x76x32/10x3x1.25, 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: 0-250 fpm / 0-76m/min forward and reverse. 25m/min maximum reverse speed on CE models.			
Chassis	Heavy duty, rigid, box and channel section construction			
Weight (uncrated), kg/lb	1042/2297	1065/2347	1068/2355	1306/2879
Maximum operating mass, kg/lb	1092/2407	1123/2476	1134/2500	1393/3071

# TECHNICAL DATA

## Saw dimensions

FS7000 DL (36" - 48")

A	Width, mm/inch		990/39	H	Saw length (pointer up, handles extended), mm/inch	2417 / 95 1/8
B	Center to center wheel width, mm/inch	Front	604 / 23 3/4	J	Min. overall height (no exhaust pipe, no pre-cleaner cap), mm/inch	1319 / 51 7/8
		Rear	646 / 25 3/8	K	Max. overall height (top of pre-cleaner), mm/inch	1499 / 59
C	Outside to outside wheel width, mm/inch	Front	680 / 26 3/4	L	Wheel base length, mm/inch	597 / 23 1/2
		Rear	722 / 28 3/8	M	Guard to handle length (handles in), mm/inch	2465 / 97 1/16
D	Frame width, mm/inch		750 / 29 1/2	N	Max. overall length (handles in), mm/inch	2793 / 110
E	Inner flange to inner flange width, mm/inch		830 / 32 5/8	O	Max. overall length (handles extended, pointer down), mm/inch	3483 / 137 1/8
F	Handle extension, mm/inch		809 / 31 7/8	P	Max. overall length (handles extended, pointer extended), mm/inch	3963 / 156 1/16
G	Min. saw length (handles removed, pointer and guard up), mm/inch		1941 / 76 7/16			

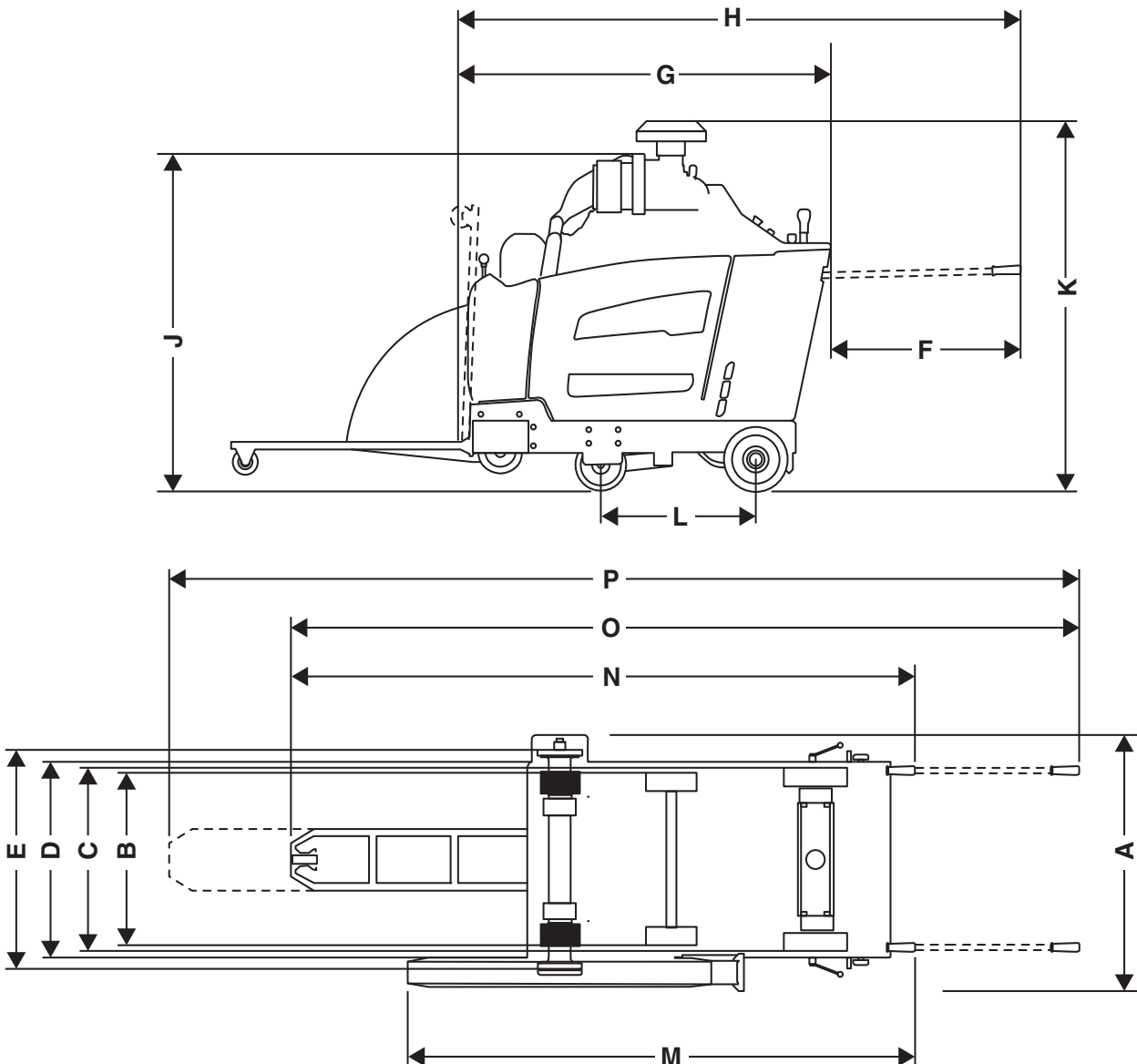


# TECHNICAL DATA

## Saw dimensions

FS7000 DL (60")

A	Width, mm/inch		1003 / 39 1/2	H	Saw length (pointer up, handles extended), mm/inch	2417 / 95 1/8
B	Center to center wheel width, mm/inch	Front	604 / 23 3/4	J	Min. overall height (no exhaust pipe, no pre-cleaner cap), mm/inch	2918 / 114 7/8
		Rear	646 / 25 3/8	K	Max. overall height (top of pre-cleaner), mm/inch	1499 / 59
C	Outside to outside wheel width, mm/inch	Front	680 / 26 3/4	L	Wheel base length, mm/inch	597 / 23 1/2
		Rear	722 / 28 3/8	M	Guard to handle length (handles in), mm/inch	2465 / 97 1/16
D	Frame width, mm/inch		750 / 29 1/2	N	Max. overall length (handles in), mm/inch	2977 / 117 7/32
E	Inner flange to inner flange width, mm/inch		825 / 32 1/2	O	Max. overall length (handles extended, pointer down), mm/inch	3571 / 140 19/32
F	Handle extension, mm/inch		809 / 31 7/8	P	Max. overall length (handles extended, pointer extended), mm/inch	4051 / 159 1/2
G	Min. saw length (handles removed, pointer and guard up), mm/inch		2324 / 91 1/2			





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# TECHNICAL DATA

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## Engine

Engine specifications	Deutz, TD 2.9 L4
Max. engine output (see note 1)	74.3hp@2600rpm (55.4kW@2600rpm)
Displacement, dm <sup>3</sup> / cu.in.	2,92 / 178
Cylinders	4
Stroke, mm / in.	92/110 3,6/4,3
Fuel tank capacity, l / gallon	40 / 10,6
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.

## Noise emissions

	FS7000 DL
<b>Noise emissions (see note 1)</b>	
Sound power level, measured dB(A)	115
Sound power level, guaranteed L <sub>WA</sub> dB(A)	119
<b>Sound levels (see note 2)</b>	
Sound pressure level at the operators ear, dB(A)	101
<b>Vibration levels, a<sub>hv</sub> (see note 3)</b>	
Handle right, m/s <sup>2</sup>	<2,5
Handle left, m/s <sup>2</sup>	<2,5

Note 1: Noise emissions in the environment measured as sound power (L<sub>WA</sub>) 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.

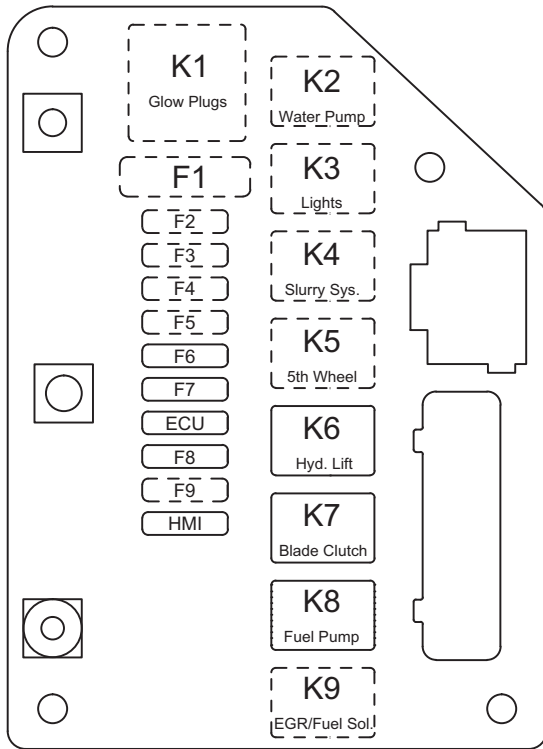
Note 2: Noise pressure level according to EN 13862. Reported data for noise pressure level has a typical statistical dispersion (standard deviation) of 1.0 dB(A).

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

# RELAYS AND FUSES

## Relays and fuses - FS7000 DL

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

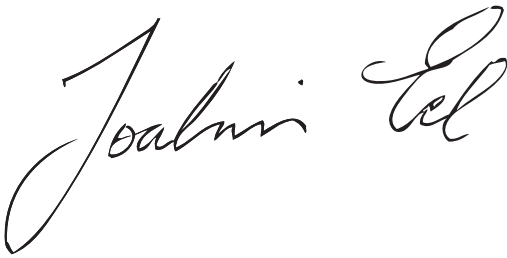
### (Applies to Europe only)

**Husqvarna AB**, SE-561 82 Huskvarna, Sweden, tel: +46-36-146500, hereby declares that the floor saw **Husqvarna FS7000 DL** from 2016'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 DIRECTIVE:

- of May 17, 2006 "relating to machinery" **2006/42/EC**.
- of February 26, 2014 "relating to electromagnetic compatibility" **2014/30/EU**.
- 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 December 12, 2016



Joakim Ed

Global R & D Director

Construction Equipment Husqvarna AB

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



[www.husqvarnacp.com](http://www.husqvarnacp.com)

GB - Original instructions



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2016-12-20