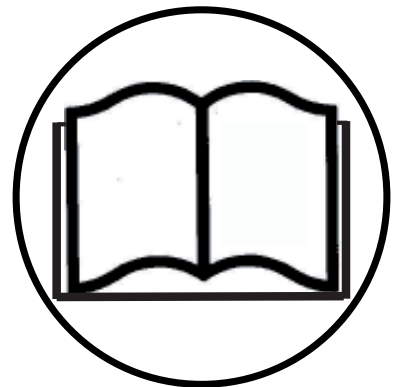


# **Operator's manual**

# **34303**

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



**English**

# KEY TO SYMBOLS

## Symbols

**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. It is extremely important that you read and understand the contents of the operator's manual.



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



Always wear:

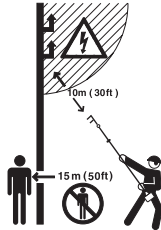
- A protective helmet where there is a risk of falling objects
- Approved hearing protection
- Protective goggles or a visor



This product is in accordance with applicable EC directives.



This machine is not electrically insulated. If the machine touches or comes close to high-voltage power lines it could lead to death or serious bodily injury. Electricity can jump from one point to another by arcing. The higher the voltage, the greater the distance electricity can jump. Electricity can also travel through branches and other objects, especially if they are wet. Always keep a distance of at least 10 m between the machine and high-voltage power lines and/or any objects that are touching them. If have to work within this safe distance you should always contact the relevant power company to make sure the power is switched off before you start work.



This machine has a long reach. Make sure that no people or animals come closer than 15 m when the machine is running.

Always wear approved protective gloves.

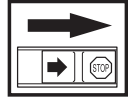


Wear sturdy, non-slip boots.

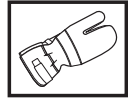


**Other symbols/decals on the machine refer to special certification requirements for certain markets.**

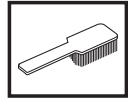
The engine is switched off by moving the stop switch to the stop position. **CAUTION!** The stop switch automatically returns to the start position. In order to prevent unintentional starting, the spark plug cap must be removed from the spark plug when assembling, checking and/or performing maintenance.



Always wear approved protective gloves.



Regular cleaning is required.



Visual check.



Protective goggles or a visor must be worn.



Filling with chain oil and adjusting oil flow



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## Note the following before starting:

Please read the operator's manual carefully.



**WARNING!** Long-term exposure to noise can result in permanent hearing impairment. So always use approved hearing protection.



**WARNING!** Under no circumstances may the design of the machine be modified without the permission of the manufacturer. Non-authorized modifications and/or accessories can result in serious personal injury or the death of the operator or others.



**WARNING!** A hardvester machine is a dangerous tool if used carelessly or incorrectly and can cause serious, even fatal injuries. It is extremely important that you read and understand the contents of this Operator's Manual.

---

# INTRODUCTION

---

## Dear Customer,

Congratulations on your choice to buy a Husqvarna product! Husqvarna is based on a tradition that dates back to 1689, when the Swedish King Karl XI ordered the construction of a factory on the banks of the Husqvarna River, for production of muskets. The location was logical, since water power was harnessed from the Huskvarna River to create the water-powered plant. During the more than 300 years of being, the Husqvarna factory has produced a lot of different products, from wood stoves to modern kitchen appliances, sewing machines, bicycles, motorcycles etc. In 1956, the first motor driven lawn mowers appeared, followed by chain saws in 1959, and it is within this area Husqvarna is working today.

Today Husqvarna is one of the leading manufacturers in the world of forest and garden products, with quality as our highest priority. The business concept is to develop, manufacture and market motor driven products for forestry and gardening as well as for building and construction industry. Husqvarna's aim is also to be in the front edge according to ergonomics, usability, security and environmental protection. That is the reason why we have developed many different features to provide our products within these areas.

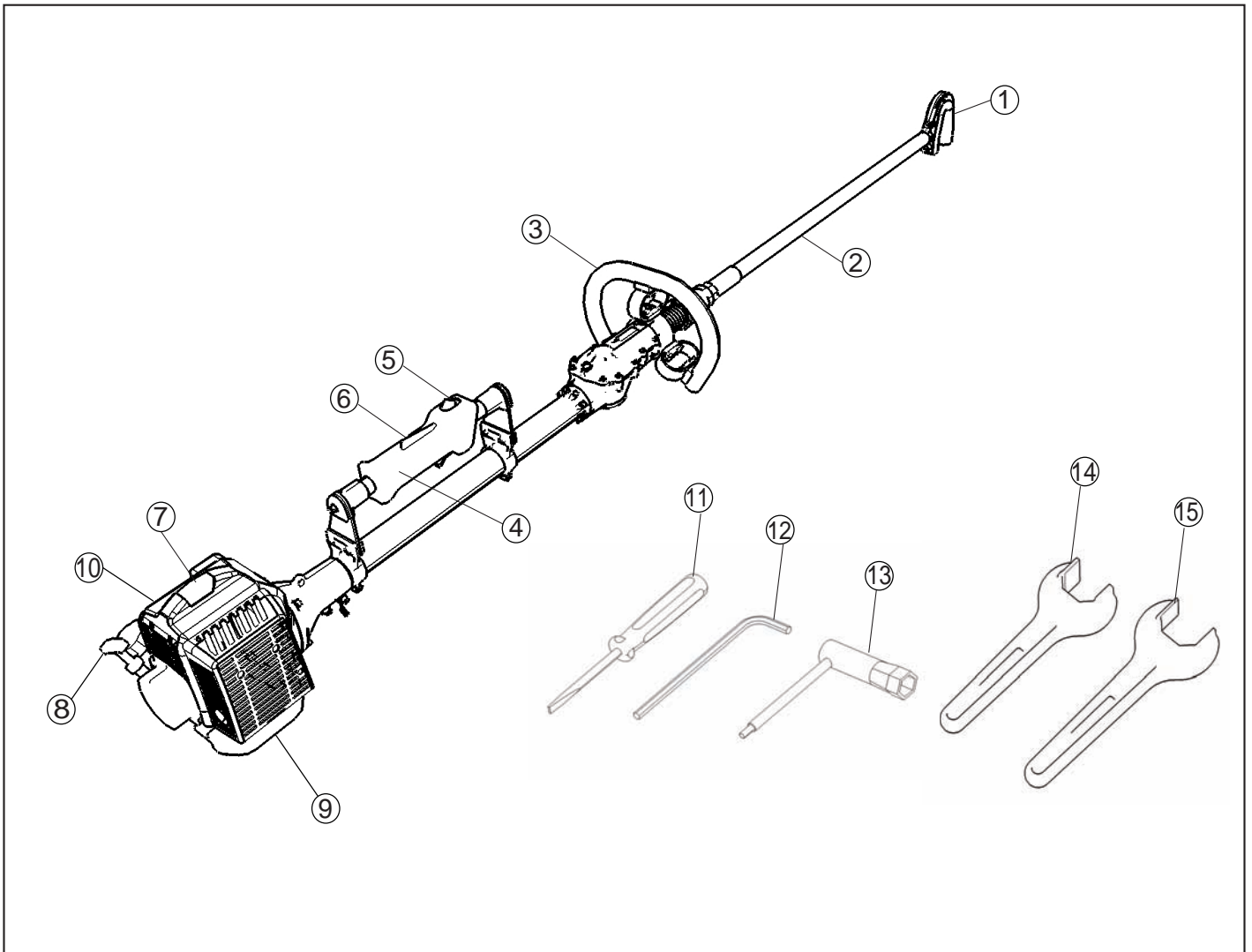
We are convinced that you will appreciate with great satisfaction the quality and performance of our product for a very long time to come. The purchase of one of our products gives you access to professional help with repairs and service whenever this may be necessary. If the retailer who sells your machine is not one of our authorised dealers, ask for the address of your nearest service workshop.

It is our wish that you will be satisfied with your product and that it will be your companion for a long time. Think of this operator's manual as a valuable document. By following its' content (using, service, maintenance etc) the life span and the second-hand value of the machine can be extended. If you will sell this machine, make sure that the buyer will get the operator's manual.

Thank you for using a Husqvarna product.

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.

## WHAT IS WHAT?



### What is what?

- 1 Hook
- 2 Shaft
- 3 Left handle
- 4 Throttle control
- 5 Stop switch
- 6 Throttle lock
- 7 Cylinder cover
- 8 Starter handle
- 9 Fuel tank
- 10 Air filter cover
- 11 Combination screwdriver
- 12 Allen Key
- 13 Combination Spanner
- 14 Key n° 36
- 15 Key n° 41

# GENERAL SAFETY PRECAUTIONS

## Important

### IMPORTANT!

The machine is only designed for harvesting olive and fruits attached to the branches

Never use a machine that has been modified in any way from its original specification.

Never use the machine if you are tired, if you have drunk alcohol, or if you are taking medication that could affect your vision, your judgement or your co-ordination.

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

Never use the machine in extreme weather conditions such as severe cold, very hot and/or humid climates.

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

All covers and guards must be fitted before starting. Ensure that the spark plug cap and ignition lead are undamaged to avoid the risk of electric shock.



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



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



**WARNING!** Never allow children to use or be in the vicinity of the machine. As the machine is equipped with a spring-loaded stop switch and can be started by low speed and force on the starter handle, even small children under some circumstances can produce the force necessary to start the machine. This can mean a risk of serious personal injury. Therefore remove the spark plug cap when the machine is not under close supervision.

## Personal protective equipment

### IMPORTANT!

A harvesting equipment is a dangerous tool if used carelessly or incorrectly and can cause serious, even fatal injuries. It is extremely important that you read and understand the contents of this Operator's Manual.

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!** Listen out for warning signals or shouts when you are wearing hearing protection. Always remove your hearing protection as soon as the engine stops.

### PROTECTIVE HELMET AND VISOR



### HEARING PROTECTION

Wear hearing protection that provides adequate noise reduction.



### EYE PROTECTION

Blows from branches or objects that are thrown out by a cutting attachment can damage the eyes.



### GLOVES

Gloves should be worn when necessary, e.g., when fitting cutting attachments.



# GENERAL SAFETY PRECAUTIONS

## BOOTS

Wear sturdy, non-slip boots.



## CLOTHING

Wear clothes made of a strong fabric and avoid loose clothing that can catch on twigs and branches. Always wear heavy, long pants. Do not wear jewellery, shorts sandals or go barefoot. Secure hair so it is above shoulder level.

## FIRST AID KIT

Always have a first aid kit nearby.



## Machine's safety equipment

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. See the "What is what?" section to locate where this equipment is positioned on your machine.

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

### IMPORTANT!

All servicing and repair work on the machine requires special training. This is especially true of the machine's safety equipment. If your machine fails any of the checks described below you must contact your service agent. When you buy any of our products we guarantee the availability of professional repairs and service. If the retailer who sells your machine is not a servicing dealer, ask him for the address of your nearest service agent.

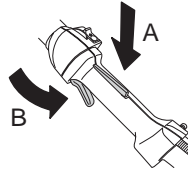


**WARNING!** Never use a machine with faulty safety equipment. The machine's safety equipment must be checked and maintained as described in this section. If your machine fails any of these checks contact your service agent to get it repaired.

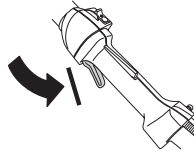
## Throttle lockout

The throttle lockout is designed to prevent accidental operation of the throttle control. When you press the lock (A) (i.e. when you grasp the handle) it releases the throttle control (B). When you release the handle the throttle

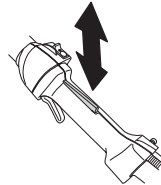
control and the throttle lockout both move back to their original positions. This movement is controlled by two independent return springs. This arrangement means that the throttle control is automatically locked at the idle setting.



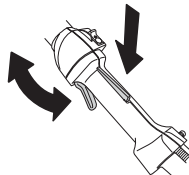
Make sure the throttle control is locked at the idle setting when the throttle lockout is released.



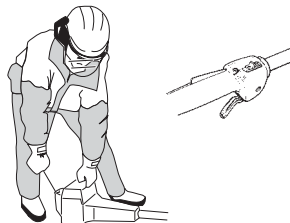
Press the throttle lockout and make sure it returns to its original position when you release it.



Check that the throttle control and throttle lockout move freely and that the return springs work properly.



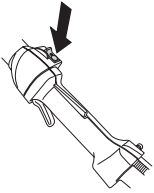
See instructions under the heading Start. Start the harvesting equipment and apply full throttle. Release the throttle trigger and check that the blades stop and remain stationary. If the shaft move when the throttle trigger is in the idle position then the carburettor idle setting must be adjusted. See instructions under the heading Maintenance.



# GENERAL SAFETY PRECAUTIONS

## Stop switch

Use the stop switch to switch off the engine.

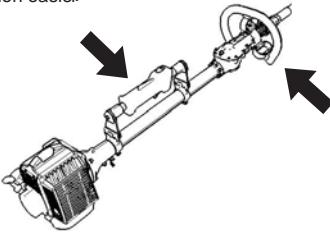


Start the engine and make sure the engine stops when you move the stop switch to the stop setting.

## Vibration damping system



Your machine is equipped with a vibration damping system that is designed to minimize vibration and make operation easier.

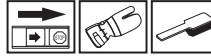


The machine's vibration damping system reduces the transfer of vibration between the engine unit/harvesting equipment and the machine's handle unit.



**WARNING!** Over exposure to vibration can lead to circulatory damage or nerve damage in people who have impaired circulation. Contact your doctor if you experience symptoms of over exposure to vibration. Such symptoms include numbness loss of feeling, tingling pricking, pain, loss of strength, changes in skin colour or condition. These symptoms normally appear in the fingers, hands or wrists. The risk increases at low temperatures.

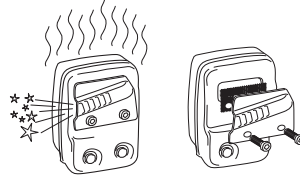
## Muffler



The muffler is designed to keep noise levels to a minimum and to direct exhaust fumes away from the user. A muffler fitted with a catalytic converter is also designed to reduce harmful exhaust gases.



In countries that have a warm and dry climate there is a significant risk of fire. We therefore fit certain mufflers with a spark arrester mesh. Check whether the muffler on your machine is fitted with this kind of mesh.



For mufflers it is very important that you follow the instructions on checking, maintaining and servicing your machine.

Never use a machine that has a faulty muffler.



Regularly check that the muffler is securely attached to the machine.



If the muffler on your machine is fitted with a spark arrester mesh this must be cleaned regularly. A blocked mesh will cause the engine to overheat and may lead to serious damage.



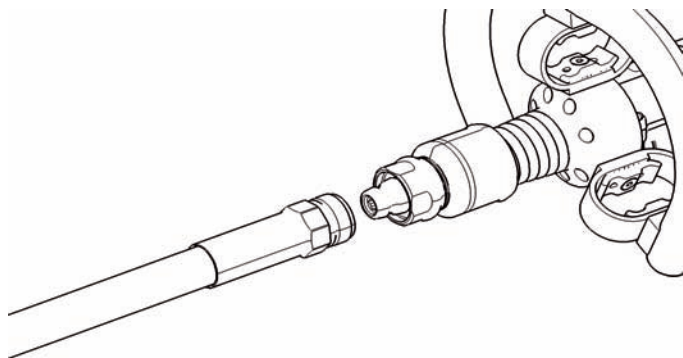
**WARNING!** Mufflers fitted with catalytic converters get very hot during use and remain so for some time after stopping. This also applies at idle speed. Contact can result in burns to the skin. Remember the risk of fire!



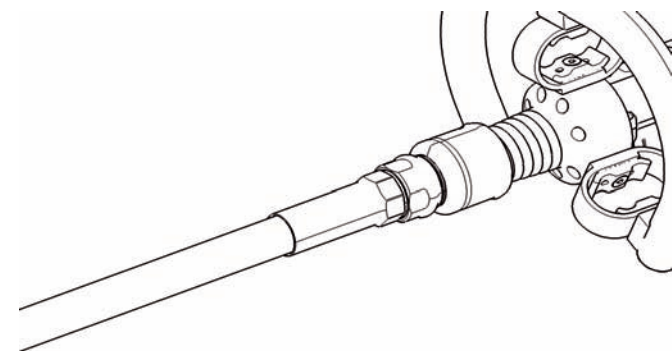
# STARTING UP

## SHAFT ASSEMBLY

Introduce the shaft for the screwed area, and center with the conical part of the machine axle.



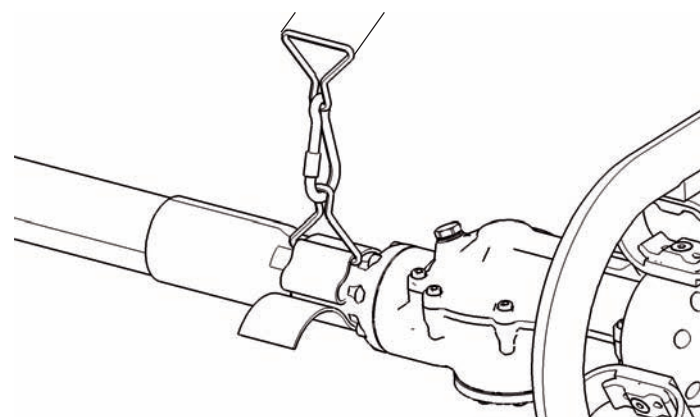
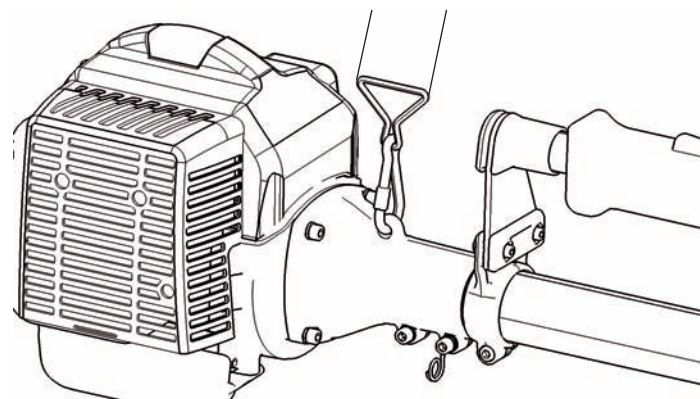
Screw the shaft using the nut and then using the fixed keys, tight them strongly.



## HARNES ADJUSTMENT

Place the lugs in the hook of the harnesses, then introduce the lug in the towing hook of the machine as showed in the pictures, then screw the security nuts on the lugs.

Take the strips on the harness and suit it according the user, after that put the harness in your left shoulder, take the machine and rise it up, them prove the adjustment and the confort of the harness, if it's correct unload the machine and proced to start the engine, if it is not correct readjust the strips of the harness untill it suits the user



# FUEL HANDLING

## Fuel safety

Never start the machine:

- 1 If you have spilt fuel on it. Wipe off the spillage and allow remaining fuel to evaporate.
- 2 If you have spilt 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.
- 3 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 naked 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.
- When storing the machine for long periods the fuel tank must be emptied. Contact your local petrol station to find out where to dispose of excess fuel.
- Ensure the machine is cleaned and that a complete service is carried out before long-term storage.
- The transport guard must always be fitted to the cutting attachment when the machine is being transported or in storage.
- In order to prevent unintentional starting of the engine, the spark plug cap must always be removed during long-term storage, if the machine is not under close supervision and when performing all service measures.



**WARNING!** Take care when handling fuel. Bear in mind the risk of fire, explosion and inhaling fumes.

## Fuel

**CAUTION!** The machine is equipped with a two-stroke engine and must always be run using a mixture of petrol and two-stroke engine oil. It is important to accurately measure the amount of oil to be mixed to ensure that the correct mixture is obtained. When mixing small amounts of fuel, even small inaccuracies can drastically affect the ratio of the mixture.



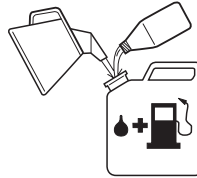
**WARNING!** Fuel and fuel fumes are highly inflammable and can cause serious injury when inhaled or allowed to come in contact with the skin. For this reason observe caution when handling fuel and make sure there is adequate ventilation.

## Petrol



**CAUTION!** Always use a quality petrol/oil mixture at least 90 octane (RON). If your machine is equipped with a catalytic converter (see chapter on Technical data) always use a good quality unleaded petrol/oil mixture. Leaded petrol will destroy the catalytic converter.

Use low-emission petrol, also known as alkylate petrol, if it is available.



- The lowest octane recommended is 90 (RON). If you run the engine on a lower octane grade than 90 so-called knocking can occur. This gives rise to a high engine temperature, which can result in serious engine damage.
- When working at continuous high revs a higher octane rating is recommended.

## Two-stroke oil

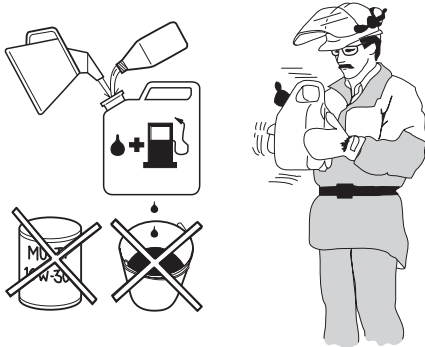
- For best results and performance use HUSQVARNA two-stroke engine oil, which is specially formulated for our air-cooled two-stroke engines.
- Never use two-stroke oil intended for water-cooled engines, sometimes referred to as outboard oil (rated TCW).
- Never use oil intended for four-stroke engines.
- A poor oil quality and/or too high oil/fuel ratio may jeopardise function and decrease the life time of catalytic converters.
- Mixing ratio  
1:50 (2%) with HUSQVARNA two-stroke oil.  
1:33 (3%) with oils class JASO FB or ISO EGB formulated for air-cooled, two-stroke engines.

Petrol, litre	Two-stroke oil, litre	
	2% (1:50)	3% (1:33)
5	0,10	0,15
10	0,20	0,30
15	0,30	0,45
20	0,40	0,60

# FUEL HANDLING

## Mixing

- Always mix the petrol and oil in a clean container intended for fuel.
- Always start by filling half the amount of the petrol to be used. Then add the entire amount of oil. Mix (shake) the fuel mixture. Add the remaining amount of petrol.
- Mix (shake) the fuel mixture thoroughly before filling the machine's fuel tank.



- Do not mix more than one month's supply of fuel at a time.
- If the machine is not used for some time the fuel tank should be emptied and cleaned.



**WARNING!** The catalytic converter 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.

## Fuelling



**WARNING!** Taking the following precautions, will lessen the risk of fire:

Do not smoke or place hot objects near fuel.

Always shut off the engine before refuelling.

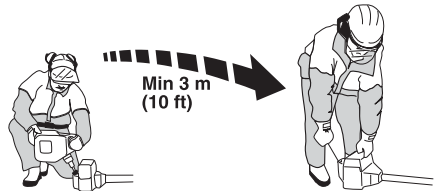
Always stop the engine and let it cool for a few minutes before refuelling.

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

Tighten the fuel cap carefully after refuelling.

Always move the machine away from the refuelling area before starting.

- Always use a fuel container with an anti-spill valve.
- Clean the area around the fuel cap. Contamination in the tank can cause operating problems.
- Ensure that the fuel is well mixed by shaking the container before filling the tank.



# STARTING AND STOPPING

## Check before starting



- Inspect the working area. Remove any objects that could be thrown out.
- Check the rubbers on the pole. Never use cracked or damaged rubbers, damaged rubbers can cause damage on the branches.
- Check that the machine is in perfect working order. Check that all nuts and screws are tight.
- Only use the machine for the purpose it was intended for.
- Make sure that the handle and safety features are in good working order. Never use a machine that lacks a part or has been modified outside its specifications.

## Starting and stopping



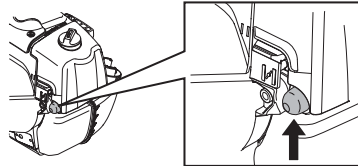
**WARNING!** The complete clutch cover and pole must be fitted before the machine is started, otherwise the clutch can come loose and cause personal injury.

Always move the machine away from the refuelling area before starting. Place the machine on a flat surface. Ensure that shaft and the pole cannot come into contact with any object. Make sure no unauthorised persons are in the working area, otherwise there is a risk of serious personal injury. The safety distance is 15 metres.

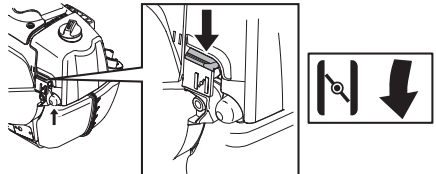
## Starting



**Primer bulb:** Press the air purge repeatedly until fuel begins to fill the bulb. The bulb need not be completely filled.



**Choke:** Set the choke control in the choke position.



**WARNING!** When the engine is started with the choke in either the choke or start throttle positions the cutting attachment will start to rotate immediately.

Hold the body of the machine on the ground using your left hand (CAUTION! Not with your foot!). Grip the starter handle, slowly pull out the cord with your right hand until you feel some resistance (the starter pawls grip), now quickly and powerfully pull the cord. **Never twist the starter cord around your hand.**

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## STARTING AND STOPPING

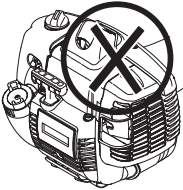
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Repeat pulling the cord until the engine starts. When the engine starts, return choke control to run position and apply full throttle; the throttle will automatically disengage from the start setting.

**CAUTION!** Do not pull the starter cord all the way out and do not let go of the starter handle when the cord is fully extended. This can damage the machine.

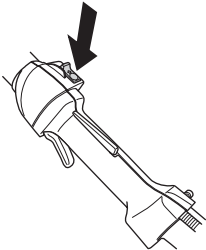


**CAUTION!** Do not put any part of your body in marked area. Contact can result in burns to the skin, or electrical shock if the spark plug cap has been damaged. Always use gloves. Do not use a machine with damaged spark plug cap.



### Stopping

Stop the engine by switching off the ignition.



**CAUTION!** The stop switch automatically returns to the start position. In order to prevent unintentional starting, the spark plug cap must be removed from the spark plug when assembling, checking and/or performing maintenance.

---

# WORKING TECHNIQUES

---

## Important

### IMPORTANT!

During the harvesting fruits of a relevant size and weight can hit the user and can be harmful if it is necessary take the preventive actions needed to avoid injuries to the final user.

### IMPORTANT!

The mechanical parts of the machine can be affected during the harvesting, if the harvested branch is not flexible enough, this branches can cause a backward movement causing an unbalance of the machine. According to the morphology of the branch it is possible to observe that the hook can be driven out from the branch when it's hooked from the superior part. In this situation the branch must be hooked for lower part.

### IMPORTANT!

The most ideal labor with the machine is obtained by 1 or 2 acceleration process with a maximum duration of 5 or 6 seconds. Once this operation is done it is recommended to change the branch, with this process the vibration frequency will be modified and as a consequence the result of the harvesting procedure will be improved. Acceleration times superior of 5 or 6 seconds will damage the surface of the branch. There is no increase on the productivity if we keep the machine with full gas at the same branch and in the same point. In order to obtain a better performance it is necessary to go through the whole different speed of the engine and change the position of the hook different times. With this procedure we will get a maximum productivity of the machine, and the branch and its surface will not be damaged.

Before start working observe the tree and select the optimum branches to be hooked, the best branches to be hooked are the ones that are flexible and able to transmit the vibration more efficiently in the area where fruits are taken.

When you have selected the branch to be vibrated, hook the selected branch making sure that the shaft is perpendicular with the branch to avoid possible movement of the hook on the surface of the branch.

When the hook is firmly secured on the branch, hang the machine between the branch and the harness. When the machine is hanging, make a slight pressure in the left handle in order to avoid accidental release or accidental kick back of the hook.

# MAINTENANCE INSTRUCCIONS

## OIL CHANGE OF THE REDUCER CASE

Oil change intervals:

- The first oil change has to be done between the first 20 and 25 hour of work, approximately 1 week of continuous work. This is the time needed for the reducer group running in.
- The successive oil change has to be done every 100 hours of work, approximately 1 month of continuous work.
- Recommended oil: Husqvarna SYNTHETIC HT, Quantity: 160 cc.
- This operation has to be done always in the technical services authorised by Husqvarna.

## PREVENTIVE MAINTENANCE

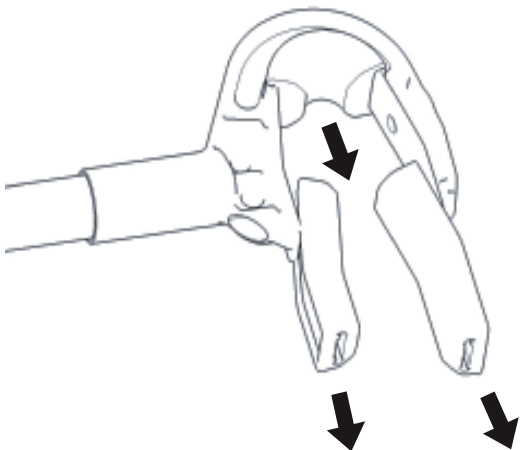
- At the end of the collection season it is recommended to have a preventive maintenance check done by the Authorised Technical Service.

## HOOK RUBBERS CHANGE

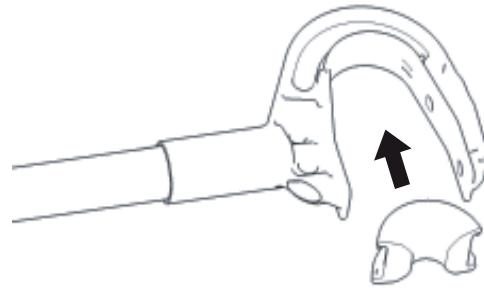
Take off the 4 hook screws with a wrench. These screws are placed in the marks.



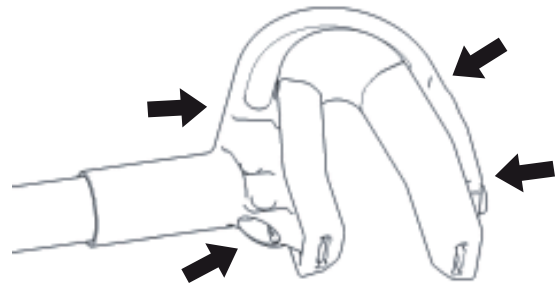
Remove the damaged rubbers and take off the metal nuts located inside of the rubber.



Introduce the nuts in the new rubbers and place them in the hook.



Tighten the 4 screws again as in the 1st step.



## Carburettor

Your Husqvarna product has been designed and manufactured to specifications that reduce harmful emissions. After the engine has used 8-10 tanks of fuel the engine will be run-in. To ensure that it continues to run at peak performance and to minimise harmful exhaust emissions after the running-in period, ask your dealer/ service workshop (who will have a rev counter at their disposal) to adjust your carburettor.

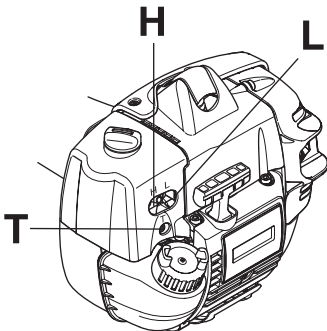


**WARNING!** The complete clutch cover and shaft must be fitted before the machine is started, otherwise the clutch can come loose and cause personal injury.

## Function



- The carburettor governs the engine's speed via the throttle control. Air and fuel are mixed in the carburettor. The air/fuel mixture is adjustable. Correct adjustment is essential to get the best performance from the machine.
- Adjusting the carburettor means that the engine is adapted to local operating conditions, e.g. climate, altitude, petrol and the type of 2-stroke oil.
- The carburettor has three adjustment controls:
  - L = Low speed jet
  - H = High speed jet
  - T = Idle adjustment screw



- The L and H-jets are used to adjust the supply of fuel to match the rate that air is admitted, which is controlled with the throttle. If they are screwed clockwise the air/fuel ratio becomes leaner (less fuel) and if they are turned anti-clockwise the ratio becomes richer (more fuel). A lean mixture gives a higher engine speed and a rich mixture gives a lower engine speed.

- The T-screw regulates the throttle setting at idle speed. If the T-screw is turned clockwise this gives a higher idle speed; turning it anti-clockwise gives a lower idle speed.

## Basic setting

- The basic carburettor settings are adjusted during testing at the factory. The basic setting is richer than the optimal setting and should be maintained for the first few hours the machine is in use. The carburettor should then be finely adjusted. Fine adjustment should be carried out by a skilled technician.

**CAUTION!** If the shaft is moving when the engine is idling the idle adjustment screw T should be turned anti-clockwise until the shaft stops moving.

**Rec. idle speed:** 2700 rpm

**Recommended max. speed:** See the Technical data section.



**WARNING!** If the idle speed cannot be adjusted so that the harvesting equipment stops, contact your dealer/ service workshop. Do not use the machine until it has been correctly adjusted or repaired.

## Fine adjustment

- When the machine has been "run-in" the carburettor should be finely adjusted. The fine adjustment should be carried out by a qualified person. First adjust the L-jet, then the idling screw T and then the H-jet.

## Conditions

- Before any adjustments are made, make sure that the air filter is clean and the air filter cover is fitted. If you adjust the carburettor when the air filter is dirty it will result in a leaner mixture when the filter is finally cleaned. This can lead to serious engine damage.
- Carefully turn both jets, L and H, so that they are midway between fully screwed in and fully screwed out.
- Do not attempt to adjust the L and H jets beyond either stop as this could damage the engine.
- Now start the machine according to the starting instructions and let it warm up for 10 minutes.

**CAUTION!** If the shaft is moving when the engine is idling the idle adjustment screw T should be turned anti-clockwise until the shaft stops moving.

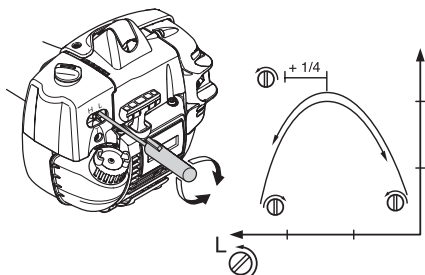
**Rec. idle speed:** 2700 rpm



# MAINTENANCE

## Low speed jet L

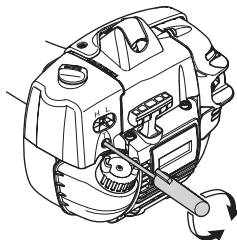
Try to find the highest idle speed by turning the low speed jet L clockwise then anti-clockwise. When the highest speed has been found, turn the low speed jet L 1/4 turn anti-clockwise.



**CAUTION!** If the shaft is moving when the engine is idling the idle adjustment screw T should be turned anti-clockwise until the cutting attachment stops.

## Fine adjustment of the idle speed T

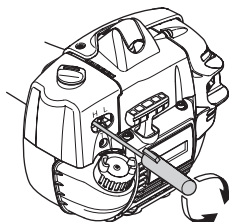
Adjust the idle speed using the idle adjustment screw T, if it is necessary to readjust. First turn the idle adjustment screw T clockwise until the cutting attachment starts to rotate. Then turn the screw anticlockwise until the cutting attachment stops. The idle speed is correctly adjusted when the engine will run smoothly in every position. The idle speed should also be well below the speed at which the cutting attachment starts to rotate.



**WARNING!** If the idle speed cannot be adjusted so that the harvesting equipment stops, contact your dealer/service workshop. Do not use the machine until it has been correctly adjusted or repaired.

## High speed jet H

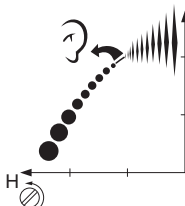
The high speed jet H affects the engine power, speed, temperature and fuel consumption. If the high speed jet H is set too lean (screwed in too far) the engine speed will be too high and cause engine damage. Do not let the engine run at full speed for more than 10 seconds.



Apply full throttle and turn the high speed jet H very slowly clockwise until the engine slows down. Then turn the high speed jet H very slowly anticlockwise until the engine starts to run unevenly. Now turn the high speed jet H slowly clockwise a little way until the engine runs smoothly.

Note that the engine should not be under load when you adjust the high speed jet H. You should therefore remove the cutting attachment, nut, support flange and drive disc before adjusting the high speed jet H.

The high speed jet H is adjusted correctly when the machine burbles a little. If the machine races then the setting is too lean. If the engine produces a lot of smoke and burbles a lot then the setting is too rich.



**CAUTION!** For optimum adjustment of the carburettor, contact a qualified dealer/service workshop that has a revolution counter at their disposal.

## Correctly adjusted carburettor

When the carburettor is correctly adjusted the machine will accelerate without hesitation and burble a little at maximum speed. It is also important that the cutting attachment does not rotate at idle. If the low speed jet L is set too lean it may cause starting difficulties and poor acceleration.

If the high speed jet H is set too lean it will result in less power, less performance, poor acceleration and/or damage to the engine.

If both the L and H jets are set too rich it will result in acceleration problems or too low a working speed.

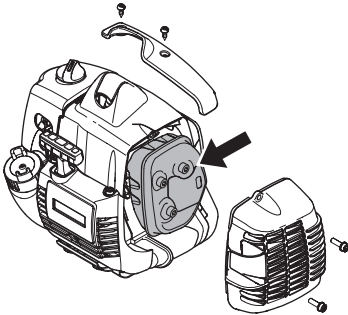
# MAINTENANCE

## Muffler

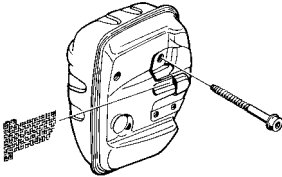


**CAUTION!** Some mufflers are fitted with a catalytic converter. See chapter on Technical data to see whether your machine is fitted with a catalytic converter.

The muffler is designed to reduce the noise level and to direct the exhaust gases away from the operator. The exhaust gases are hot and can contain sparks, which may cause fire if directed against dry and combustible material.



Some mufflers are equipped with a special spark arrestor mesh. If your machine has this type of muffler, you should clean the mesh at least once a week. This is best done with a wire brush.



On mufflers without a catalytic converter the mesh should be cleaned weekly, or replaced if necessary. On mufflers fitted with a catalytic converter the mesh should be checked, and if necessary cleaned, monthly. **If the mesh is damaged it should be replaced.**

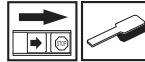
If the mesh is frequently blocked, this can be a sign that the performance of the catalytic converter is impaired. Contact your dealer to inspect the muffler. A blocked mesh will cause the machine to overheat and result in damage to the cylinder and piston. See also instructions under the heading Maintenance.

**CAUTION!** Never use a machine with a defective muffler.

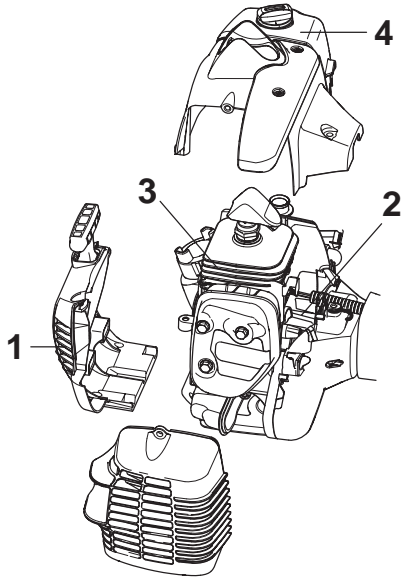


**WARNING!** Mufflers fitted with catalytic converters get very hot during use and remain so for some time after stopping. This also applies at idle speed. Contact can result in burns to the skin. Remember the risk of fire!

## Cooling system



To keep the working temperature as low as possible the machine is equipped with a cooling system.



The cooling system consists of:

- 1 Air intake on the starter.
- 2 Fins on the flywheel.
- 3 Cooling fins on the cylinder.
- 4 Cylinder cover (directs cold air over the cylinder).

Clean the cooling system with a brush once a week, more often in demanding conditions. A dirty or blocked cooling system results in the machine overheating which causes damage to the piston and cylinder.

## Spark plug



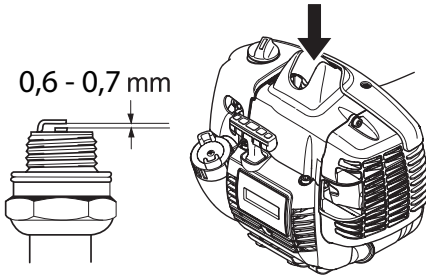
The spark plug condition is influenced by:

# MAINTENANCE

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

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

If the machine is low on power, difficult to start or runs poorly at idle speed always check the spark plug first before taking any further action. If the spark plug is dirty, clean it and check that the electrode gap is 0.6-0.7mm. The spark plug should be replaced after about a month in operation or earlier if necessary.



**CAUTION!** Always use the recommended spark plug type! Use of the wrong spark plug can damage the piston/cylinder. Check that the spark plug is fitted with a suppressor.

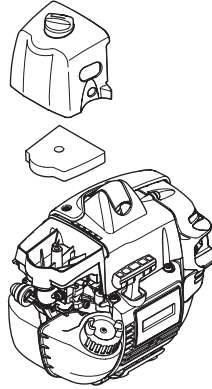
## Air filter



The air filter must be regularly cleaned to remove dust and dirt in order to avoid:

- Carburettor malfunctions
- Starting problems
- Loss of engine power
- Unnecessary wear to engine parts.
- Excessive fuel consumption.

Clean the filter every 25 hours, or more regularly if conditions are exceptionally dusty.



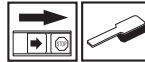
## Cleaning the air filter

Remove the air filter cover and take out the filter. Wash it clean in warm, soapy water. Ensure that the filter is dry before refitting it.

An air filter that has been in use for along time cannot be cleaned completely. The filter must there for be replaced with a new one at regular intervals. **A damaged air filter must always be replaced.**

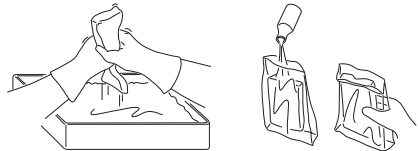
If the machine is used in dusty conditions the air filter should be soaked in oil. See instructions under the heading Oiling the air filter.

## Oiling the air filter



Always use HUSQVARNA filter oil, art. no. 5310092-48. The filter oil contains a solvent to make it spread evenly through the filter. You should therefore avoid skin contact.

Put the filter in a plastic bag and pour the filter oil over it. Knead the plastic bag to distribute the oil. Squeeze the excess oil out of the filter inside the plastic bag and pour off the excess before fitting the filter to the machine. Never use common engine oil. This would drain through the filter quite quickly and collect in the bottom.



# MAINTENANCE

## Maintenance schedule

The following is a list of the maintenance that must be performed on the machine. Most of the items are described in the Maintenance section. 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 authorised service workshop.

Maintenance	Daily maintenance	Weekly maintenance	Monthly maintenance
Clean the outside of the machine.	X		
Make sure the throttle trigger lock and the throttle function correctly from a safety point of view.	X		
Check that the stop switch works correctly .	X		
Check that the cutting attachment does not rotate at idle .	X		
Clean the air filter. Replace if necessary.	X		
Check that nuts and screws are tight.	X		
Check that there are no fuel leaks from the engine, tank or fuel lines.	X		
Clean the area under the protective cover.	X		
Check the starter and starter cord.		X	
Check that the vibration damping elements are not damaged.		X	
Clean the outside of the spark plug. Remove it and check the electrode gap . Adjust the gap to 0.5 mm or replace the spark plug. Check that the spark plug is fitted with a suppressor		X	
Clean the machine's cooling system.		X	
Clean or replace the spark arrestor mesh on the muffler (only applies to mufflers without a catalytic converter).		X	
Clean the outside of the carburettor and the space around it.		X	
Clean the fuel tank.			X
Check the fuel filter from contamination and the fuel hose from cracks or other defects. Replace if necessary.			X
Check all cables and connections.			X
Check the clutch, clutch springs and the clutch drum for wear. Replace if necessary by an authorized service work shop.			X
Replace the spark plug. Check that the spark plug is fitted with a suppressor.			X
Check and clean the spark arrestor mesh on the muffler (only applies to mufflers fitted with a catalytic converter).			X

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# TECHNICAL DATA

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## Technical data

	34303
Engine	
Cylinder displacement, cm <sup>3</sup>	45,2
Cylinder bore, mm	43
Stroke, mm	31.1
Recommended max. speed, rpm	10500-11500
Idle speed, rpm	2700
Max. engine output, acc. to ISO 8893, kW/ rpm	2.2/9500
Catalytic converter muffler	No
Speed-regulated ignition system	Yes
Ignition system	CDI
Manufacturer/type of ignition system	Walbro MB
Spark plug	NGK:CMR7H
Electrode gap, mm	0,6 - 0,7
Fuel and lubrication system	
Manufacturer/type of carburettor	Walbro / Diaphragm type
Fuel tank capacity, litre	0,8
Weight	
Weight without fuel, kg	11,7
Sound levels (see note 1)	
Equivalent sound pressure level at the operator's ear, measured according to EN ISO 22868, dB(A):	94
Noise emissions	
Equivalent noise power level, measured according to EN ISO 22868, dB(A)	107
Vibration levels	
Vibration levels at handles, measured according to EN ISO 22867, m/s <sup>2</sup>	
Idle speed, front/rear handles:	2.9/9
Max. speed, front/rear handles:	8.1/27.8

Note 1: Equivalent sound pressure level is calculated as the time-weighted energy total for sound pressure levels under various working conditions with the following time distribution: 1/2 idling and 1/2 max speed.

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## TECHNICAL DATA

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### EC-declaration of conformity (Applies to Europe only)

Husqvarna AB, SE-561 82 Huskvarna, Sweden, tel +46-36-146500, declares under sole responsibility that the hardvesting equipments Huskvarna 353O4 and 353O4 X-Series dating from 2009 serial numbers and onwards (the year is clearly stated on the rating plate followed by the serial number), comply with the requirements of the COUNCIL'S DIRECTIVE:

- 98/37/EC "relating to machinery"
- EN 61000 6-4 / EN 61000 6-2 "relating to electromagnetic compatibility"

The following standards have been applied: EN ISO 12100-1, EN ISO 12100-2, EN ISO 13850, EN1037, EN ISO 14121-1 APPLUS, CAmpus Universitat Autònoma S/N, 08193 Cerdanyola del Valles, has performed a voluntary type examination on behalf of Huskvarna AB. The certificates are numbered: 10/32300147

Huskvarna 24 August 2009



Michael Kullberg, Business manager



