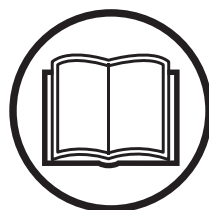


**Operator's manual**  
**535FBX, TA1100**



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

**English**

# KEY TO SYMBOLS

## Symbols (535FBX)

**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:

- Wear a protective helmet where there is a risk of falling objects
- Hearing protection
- Protective goggles or a visor

This product is in accordance with applicable EC directives.

The operator of the machine must ensure, while working, that no persons or animals come closer than 15 meters.

Kickback may occur when the nose or tip of the guide bar touches an object, and cause a lightning fast reverse reaction to the side. May cause serious personal injury. Always keep people and animals at least 15 metres from the machine.

Always wear protective gloves.

Wear boots with saw protection, steel toe-cap and non-slip sole.

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.



Primer bulb



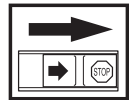
Set the choke control in the choke position.

The rating plate showing serial number. **yyyy** is the production year, **ww** is the production week.

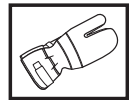
**yyyywwxxxxx**

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

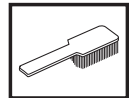
The engine is switched off by moving the stop switch to the stop position. **CAUTION!** The stop switch automatically returns to the start position. In order to prevent unintentional starting, the spark plug cap must be removed from the spark plug when assembling, checking and/or performing maintenance.



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. Always use original accessories. Non-authorized modifications and/or accessories can result in serious personal injury or the death of the operator or others.



**WARNING!** A backpack type chain saw 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 Husqvarna River to create the water-powered plant. During the more than 300 years in existence, 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 chainsaws 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 the building and construction industry. Husqvarna's aim is also to be at the front edge for ergonomics, usability, security and environmental protection. That is the reason why we have developed many different features to add to our products within these areas.

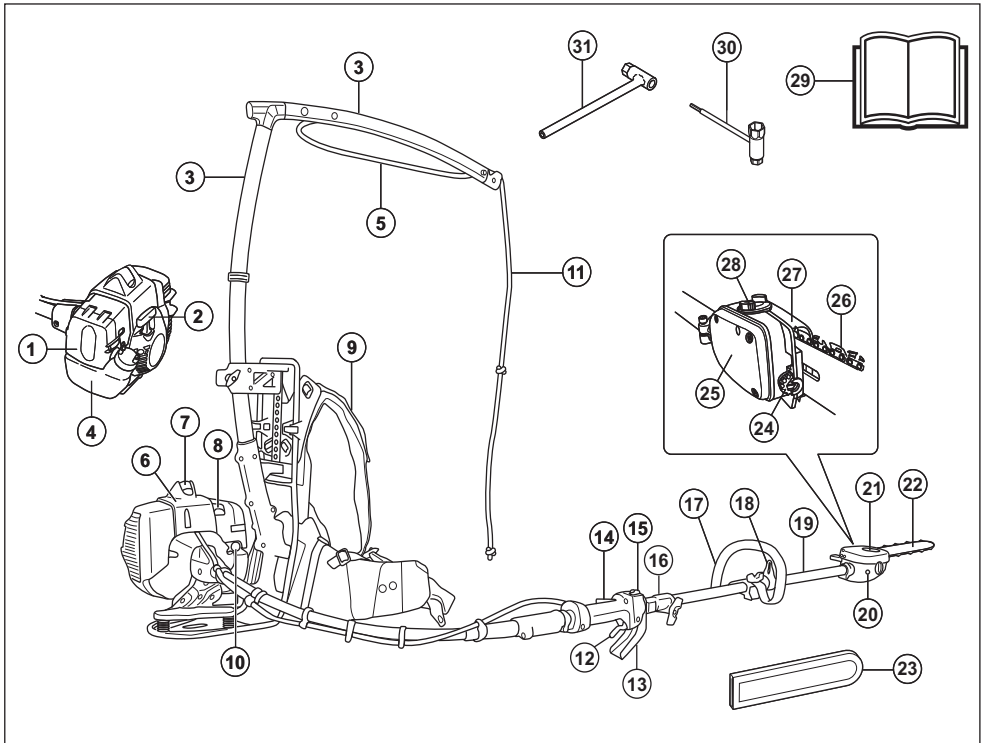
We are convinced that you will appreciate with great satisfaction the quality and performance of our product for a very long time to come. The purchase of one of our products gives you access to professional help with repairs and service whenever this may be necessary. If the retailer who sells your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

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 (usage, service, maintenance, etc), the life span and the second-hand value of the machine can be extended. If you sell this machine, make sure that the operator's manual is passed on to the buyer.

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? (535FBX)**

- |                                 |                                       |
|---------------------------------|---------------------------------------|
| 1 Air filter cover              | 17 Loop handle                        |
| 2 Starter handle                | 18 Suspension ring                    |
| 3 Load reducer                  | 19 Shaft                              |
| 4 Fuel tank                     | 20 Chain lubrication adjustment screw |
| 5 Stem guard                    | 21 Bar nut                            |
| 6 Cylinder cover                | 22 Guide bar                          |
| 7 Spark plug cap and spark plug | 23 Transport guard, bar               |
| 8 Choke control                 | 24 Chain tensioning screw             |
| 9 Harness                       | 25 Chain oil tank                     |
| 10 Air purge                    | 26 Saw chain                          |
| 11 Cord                         | 27 Protective guard for saw chain     |
| 12 Throttle trigger             | 28 Filling with chain oil             |
| 13 Throttle/hand guard          | 29 Operator's manual                  |
| 14 Throttle trigger lockout     | 30 Combination spanner                |
| 15 Stop switch                  | 31 Spark plug spanner                 |
| 16 Shaft coupling               |                                       |

# GENERAL SAFETY PRECAUTIONS

## Important

### IMPORTANT!

The machine is only designed for forestry clearing and cutting branches and twigs.

National or local regulations may regulate the use. Comply to given regulations.

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.

Take breaks when you need to. Try also to vary your working position.

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

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 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.

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! 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.**



**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 backpack type chain saw 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.

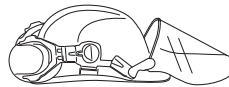
You must use approved personal protective equipment whenever you use the machine. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your dealer for help in choosing the right equipment.



**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

A helmet should be worn if the trees being cleared are taller than 2 m.



### HEARING PROTECTION

Wear hearing protection that provides adequate noise reduction.



### EYE PROTECTION

Protective goggles or a visor must be worn.



# GENERAL SAFETY PRECAUTIONS

## GLOVES

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



## BOOTS

Wear boots with saw protection, steel toe-cap and non-slip sole.



## TROUSERS

Use trousers with saw protection.



## CLOTHING

Wear clothes made of a strong fabric and avoid loose clothing that can catch on twigs and branches. 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!

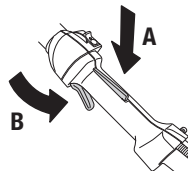
All servicing and repair work on the machine requires special training. This is especially true of the machine's safety equipment. If your machine fails any of the checks described below you must contact your service agent. When you buy any of our products we guarantee the availability of professional 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.



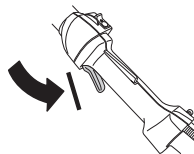
**WARNING! Never use a machine with faulty safety equipment. The machine's safety equipment must be checked and maintained as described in this section. If your machine fails any of these checks contact your service agent to get it repaired.**

## Throttle trigger lockout

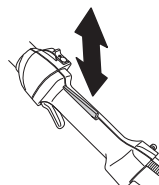
The throttle lockout is designed to prevent accidental operation of the throttle control. When you press the lock (A) (i.e. when you grasp the handle) it releases the throttle control (B). When you release the handle the throttle control and the throttle lockout both move back to their original positions. 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 that the throttle trigger is locked at idle setting when the throttle trigger lockout is released.

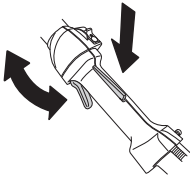


Press the throttle lockout and make sure it returns to its original position when you release it.



## GENERAL SAFETY PRECAUTIONS

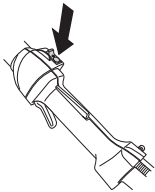
Check that the throttle trigger and throttle lockout move freely and that the return springs work properly.



See instructions under the heading Start. Start the machine and apply full throttle. Release the throttle and check that the cutting attachment stops and remains at a standstill. If the cutting attachment rotates with the throttle in the idle position then the carburettor idle setting must be checked. See instructions under the heading Maintenance.

### Stop switch

Use the stop switch to switch off the engine.

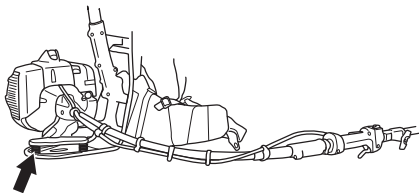


Start the engine and make sure the engine stops when you move the stop switch to the stop setting.

### Vibration damping system



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



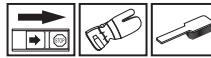
The machine's vibration damping system reduces the transfer of vibrations.

Regularly check the vibration damping units for cracks or deformation. Check that the vibration damping element is undamaged and securely attached.



**WARNING! Overexposure to vibration can lead to circulatory damage or nerve damage in people who have impaired circulation. Contact your doctor if you experience symptoms of overexposure 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.**

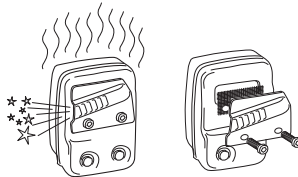
### Muffler



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 arrestor 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.





# GENERAL SAFETY PRECAUTIONS

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



If the muffler on your machine is fitted with a spark arrestor 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!



**WARNING!** The inside of the muffler contain chemicals that may be carcinogenic. Avoid contact with these elements in the event of a damaged muffler.



**WARNING!** Bear in mind that:

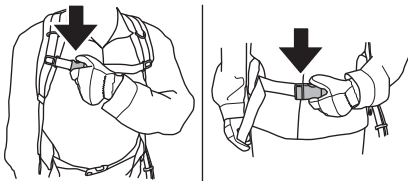
The exhaust fumes from the engine are hot and may contain sparks which can start a fire. Never start the machine indoors or near combustible material!

## Harness



Check that the harness is not damaged.

In an emergency situation, release yourself from machine and harness according to the following method.

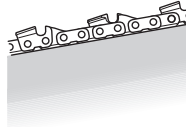


## Cutting equipment



This section describes how you can achieve maximum clearing capacity and extend the life of the cutting attachment through correct maintenance and using the right type of cutting attachment.

- **Only use cutting equipment recommended by us!**



- **Keep the chain's cutting teeth properly sharpened! Follow our instructions and use the recommended file gauge.** A damaged or badly sharpened chain increases the risk of accidents.



- **Maintain the correct raker clearance! Follow our instructions and use the recommended raker gauge.** Too large a clearance increases the risk of kickback.



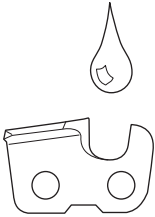
- **Keep the chain properly tensioned!** If the chain is slack it is more likely to jump off and lead to increased wear on the bar, chain and drive sprocket.



- **Keep cutting equipment well lubricated and properly maintained!** A poorly lubricated chain is

# GENERAL SAFETY PRECAUTIONS

more likely to break and lead to increased wear on the bar, chain and drive sprocket.



**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.**



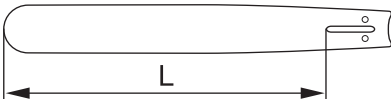
**WARNING! Always stop the engine before doing any work on the cutting attachment. This continues to rotate even after the throttle has been released. Ensure that the cutting attachment has stopped completely and disconnect the spark plug cap before you start to work on it.**

## Specification of bar and saw chain

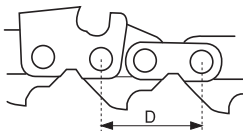
When the cutting attachment supplied with your machine has to be replaced, because it is worn out or damaged, you must only fit the types of bar and saw chain recommended by us.

### Guide bar

- Length (inches/cm)

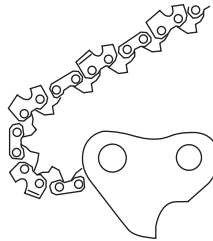


- Chain pitch (inches). The spacing between the drive links of the chain must match the spacing of the teeth on the bar tip sprocket and drive sprocket.

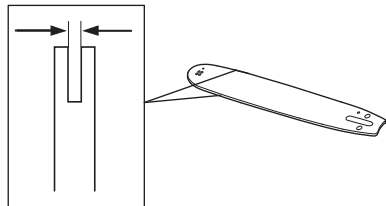


$$\text{PITCH} = \frac{D}{2}$$

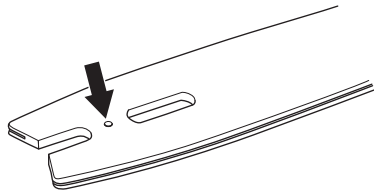
- Number of drive links. The number of drive links is determined by the length of the bar, the chain pitch and the number of teeth on the bar tip sprocket.



- Bar groove width (inches/mm). The groove in the bar must match the width of the chain drive links.

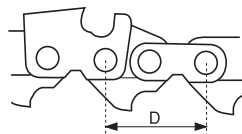


- Lubrication hole and hole for the chain tensioner.



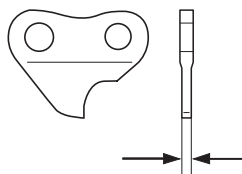
## Saw chain

- Saw chain pitch (inches). (The distance between three drive links, divided by two.)



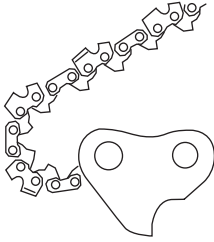
$$\text{PITCH} = \frac{D}{2}$$

- Drive link width (mm/inches)



# GENERAL SAFETY PRECAUTIONS

- Number of drive links.



## Sharpening your chain and adjusting raker clearance

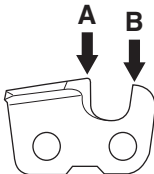


**WARNING! The risk of kickback is increased with a badly sharpened chain!**

### General information on sharpening cutting teeth

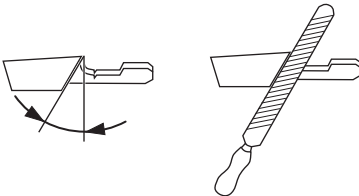


- Never use a blunt chain. When the chain is blunt you have to exert more pressure to force the bar through the wood and the cuttings will be very small. If the chain is very blunt it will not produce any cuttings at all. Wood powder would be the only result.
- A sharp chain eats its way through the wood and produces long, thick cuttings.
- The cutting part of the chain is called the cutting link and this consists of a cutting tooth (A) and the raker lip (B). The cutting depth is determined by the difference in height between the two.

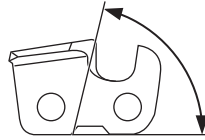


- When you sharpen a cutting tooth there are five important factors to remember.

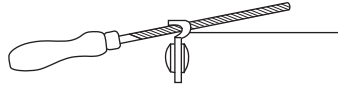
- Filing angle



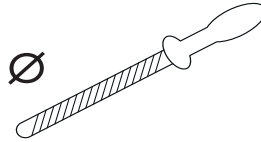
- Cutting angle



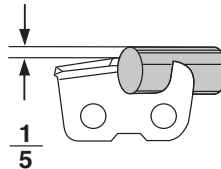
- File position



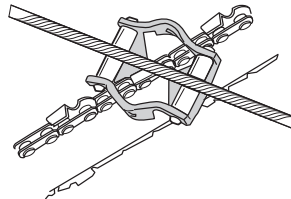
- Round file diameter



- File depth



It is very difficult to sharpen a chain correctly without the right equipment. We recommend that you use our file gauge. This will help you obtain the maximum kickback reduction and cutting performance from your chain.



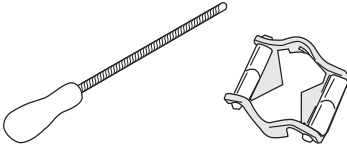
**WARNING! Departure from the sharpening instructions considerably increases the risk of kickback.**

# GENERAL SAFETY PRECAUTIONS

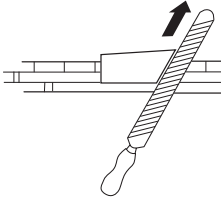
## Sharpening cutting teeth



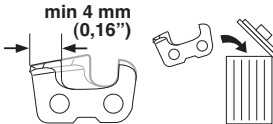
To sharpen cutting teeth you will need a round file and a file gauge.



- Check that the chain is correctly tensioned. A slack chain will move sideways, making it more difficult to sharpen correctly.
- Always file cutting teeth from the inside face outwards. Reduce the pressure on the return stroke. File all the teeth on one side of the bar first. Then turn the saw over and file the remaining teeth from the other side.



- File all the teeth to the same length. When the length of the cutting teeth is reduced to 4 mm (5/32") the chain is worn out and should be replaced.



## General advice on setting raker clearance

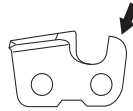


- When you sharpen the cutting teeth you reduce the raker clearance (=cutting depth). To maintain optimal cutting performance you must file back the raker lip to the recommended height.

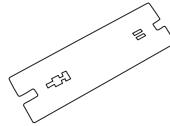


- On a low-kickback cutting link the front edge of the raker lip is rounded. It is very important that you

maintain this radius or bevel when you adjust the raker clearance.



- We recommend that you use our raker gauge to achieve the correct clearance and bevel on the raker lip.

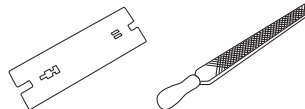


**WARNING! The risk of kickback is increased if the raker clearance is too large!**

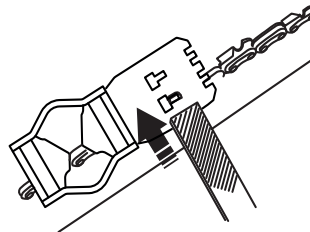
## Setting the raker clearance



- Before setting the raker clearance the cutting teeth should be newly sharpened.
- We recommend that you adjust the raker clearance every third time you sharpen the chain. NOTE! This recommendation assumes that the length of the cutting teeth is not reduced excessively.
- To adjust the raker clearance you will need a flat file and a raker gauge.



- Place the gauge over the raker lip.
- Place the file over the part of the lip that protrudes through the gauge and file off the excess. The clearance is correct when you no longer feel any resistance as you draw the file over the gauge.



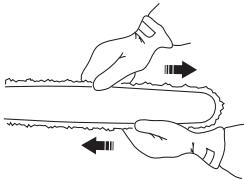
# GENERAL SAFETY PRECAUTIONS

## Tensioning the saw chain

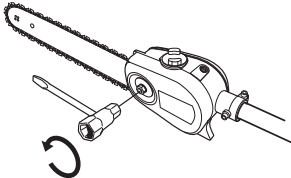


**WARNING! A slack chain may jump off and cause serious or even fatal injury.**

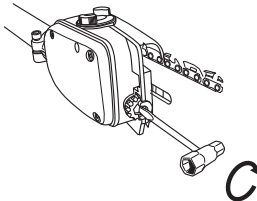
- The more you use a chain the longer it becomes. It is therefore important to adjust the chain regularly to take up the slack.
- Check the chain tension every time you refuel. **NOTE!** A new chain has a running-in period during which you should check the tension more frequently.
- Tension the chain as tightly as possible, but not so tight that you cannot pull it round freely by hand.



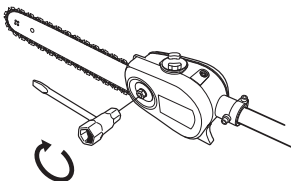
- Undo the bar nut.



- Tension the chain by turning the chain tensioning screw clockwise using the combination spanner. The chain should be tensioned until it does not sag from the underside of the bar.



- Tighten the bar nut using the combination spanner. Check that the chain can be pulled round easily by hand.



## Lubricating cutting equipment



**WARNING! Poor lubrication of cutting equipment may cause the chain to snap, which could lead to serious, even fatal injuries.**

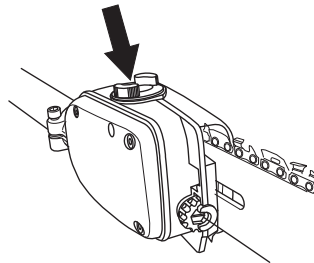
### Chain oil

- Chain oil must demonstrate good adhesion to the chain and also maintain its flow characteristics regardless of whether it is warm summer or cold winter weather.
- As a chainsaw manufacturer we have developed an optimal chain oil which, with its vegetable oil base, is also biodegradable. We recommend the use of our own oil for both maximum chain life and to minimise environmental damage.
- If our own chain oil is not available, standard chain oil is recommended.
- In areas where oil specifically for lubrication of saw chains is unavailable, ordinary EP 90 transmission oil may be used.
- **Never use waste oil!** This is dangerous for yourself, the machine and the environment.

### Filling with chain oil

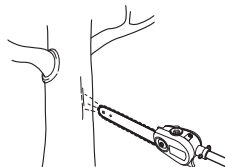


The oil pump is preset at the factory to satisfy most lubrication requirements. A full oil tank normally lasts about the same time as a full fuel tank. Therefore check the amount of oil in the oil tank when filling the fuel to prevent damage to the saw chain and bar that may arise due to a lack of lubrication.



### Checking chain lubrication

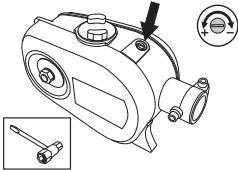
- Check the chain lubrication each time you refuel. Aim the tip of the bar at a light coloured surface about 20 cm (8 inches) away. After 1 minute running at 3/4 throttle you should see a distinct line of oil on the light surface.



# GENERAL SAFETY PRECAUTIONS

## Adjusting chain lubrication

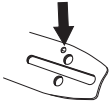
When cutting dry or hard species of wood it may be necessary to increase lubrication. Turn the adjuster screw anticlockwise to increase the oil flow. Remember that this will increase oil consumption, check the level in the oil tank regularly. Turn the adjuster screw clockwise to decrease the oil flow.



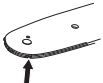
## What to do if lubrication does not work:



- Check that the oil channels in the bar are not obstructed. Clean if necessary.



- Check that the oil channel in the gear housing is clean. Clean if necessary.
- Check that the bar tip sprocket turns freely. If the chain lubrication system is still not working after carrying out the above checks you should contact your service workshop.



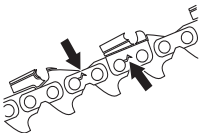
## Checking wear on cutting equipment

### Saw chain



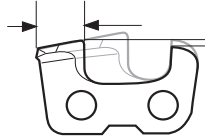
Check the chain daily for:

- Visible cracks in rivets and links.
- Whether the chain is stiff.
- Whether rivets and links are badly worn.

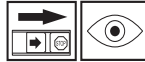


We recommend you compare the existing chain with a new chain to decide how badly the existing chain is worn.

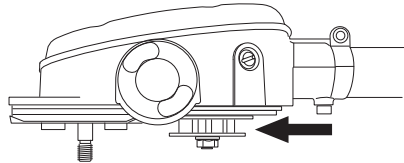
When the length of the cutting teeth has worn down to only 4 mm the chain must be replaced.



## Chain drive sprocket



Regularly check the degree of wear on the drive sprocket. Replace if wear is excessive.

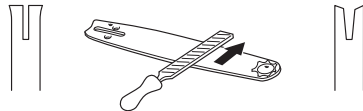


## Guide bar

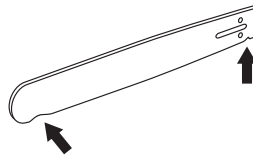


Check regularly:

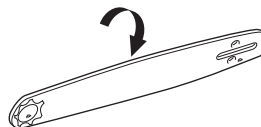
- Whether there are burrs on the edges of the bar. Remove these with a file if necessary.



- Whether the groove in the bar has become badly worn. Replace the bar if necessary.
- Whether the tip of the bar is uneven or badly worn. If a hollow forms on the underside of the bar tip this is due to running with a slack chain.



- To prolong the life of the bar you should turn it over daily.



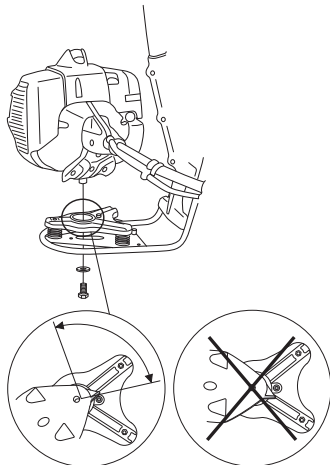
**WARNING! A faulty cutting attachment may increase the risk of accidents.**

## ASSEMBLY

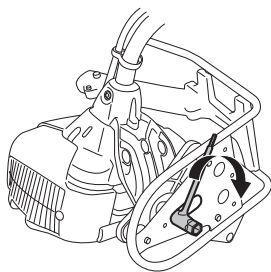
### Fitting the main body



- Assemble the engine and the frame using the bolt as shown. Make sure the heel is placed on the correct side of the stop.



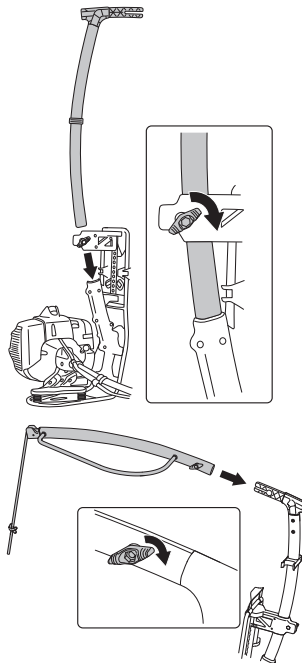
- Tighten the nut firmly (approx. 15 Nm) using the combination spanner.



### Assembling the load reducer

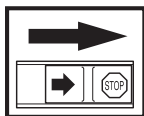


- Assemble the load reducer as shown, adjust to an appropriate height and tighten the knobs.



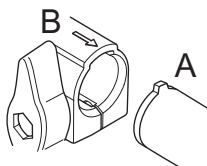
## ASSEMBLY

### Assembling and dismantling the two-piece shaft

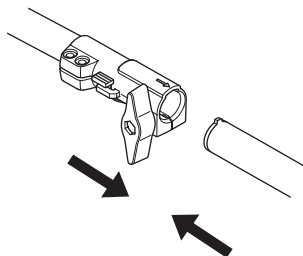


#### Assembly

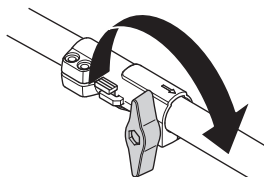
- Loosen the coupling by turning the knob counter-clockwise.
- Align the tab of the attachment (A) with the arrow on the coupling (B).



- Push the attachment into the coupling until the attachment snaps into place.

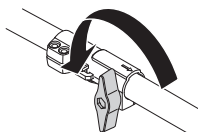


- Before using the unit, tighten the knob securely.

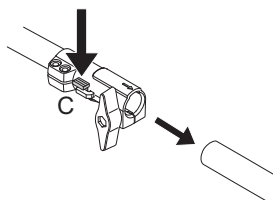


#### Dismantling

- Loosen the coupling by turning the knob (at least 3 times).



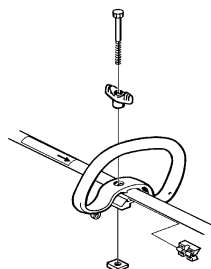
- Push and hold the button (C). While securely holding the engine end, pull the attachment straight out of the coupling.



### Fitting the loop handle



- Clip the loop handle onto the shaft. Note that the loop handle must not be fitted in front of the arrow marked on the shaft.



- Slide the spacer into the slot in the loop handle.
- Fit the nut, knob and screw. Do not overtighten.
- Now make a final adjustment to give yourself a comfortable working position. Tighten the knob.



# ASSEMBLY

## Fitting the bar and chain

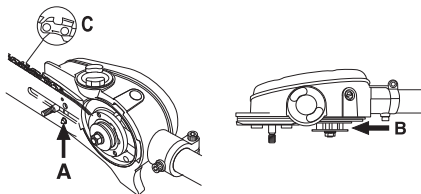


Unscrew the bar nut and remove the protective cover.

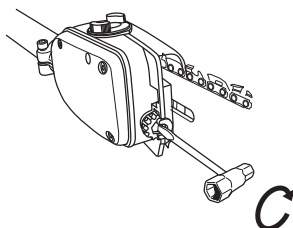
Fit the bar over the bar bolt. Place the bar in its rearmost position. Place the chain over the drive sprocket and in the groove on the bar. Begin on the top side of the bar.

Make sure that the edges of the cutting links are facing forward on the top edge of the bar.

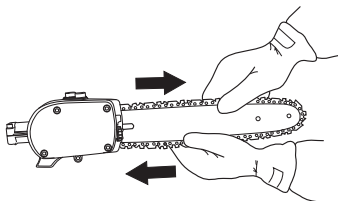
Fit the cover and locate the chain adjuster pin (A) in the hole in the bar. Check that the drive links of the chain fit correctly on the drive sprocket (B) and that the chain is in the groove in the bar (C). Tighten the bar nut finger-tight.



Tension the chain by turning the chain tensioning screw clockwise using the combination spanner. The chain should be tensioned until it does not sag from the underside of the bar.



- The chain is correctly tensioned when there is no slack on the underside of the bar, and it can still be turned easily by hand. Tighten the bar nut with the combination spanner while holding up the tip of the bar.



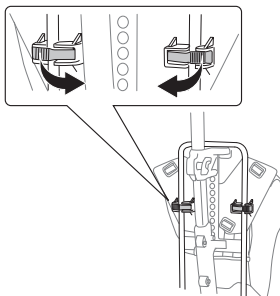
- **CAUTION!** When fitting a new chain, the chain tension has to be checked frequently until the chain is run-in. Check the chain tension regularly. A correctly tensioned chain ensures good cutting performance and long life.

## Adjusting the harness and pole saw

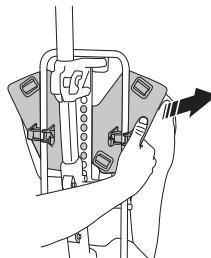


### Adjusting the backplate height

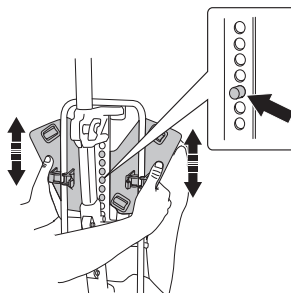
- Loosen the two fasteners holding the backplate.



- Loosen the backplate from the frame on one side.



- Move the backplate to the desired height and fasten it. Make sure the pin aligns with one of the holes on the frame, see picture.



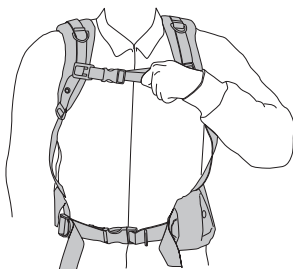
# ASSEMBLY

## Adjusting the harness

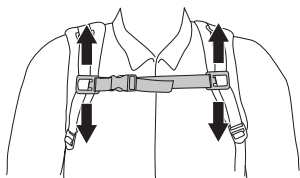
- Put on the harness.
- Tighten the waist strap so that it sits securely.



- Tighten the chest strap.



- Adjust the chest strap vertically if needed and make sure it fits well.



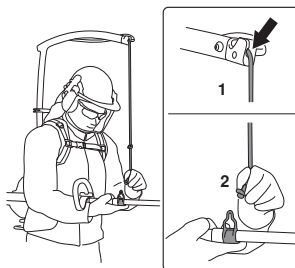
- Adjust the shoulder straps to distribute the load evenly across your shoulders.



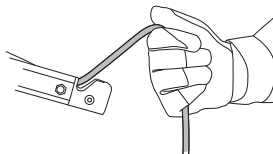
- Loosen or tighten the waist strap so that approx. 70% of the load is on your waist and 30% on your shoulders.

## Setting the working height

- Pull out the cord to the desired length and fasten as shown.



- Fasten the knot on the cord in the suspension ring on the shaft. You can also make more knots on the cord so that you are able to easily change between different working positions.
- To shorten the cord, loosen it from the load reducer and slacken it, which will make the cord spring back automatically.

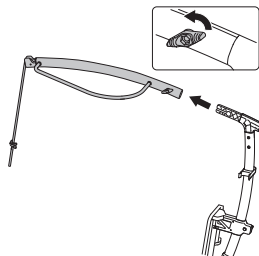


# ASSEMBLY

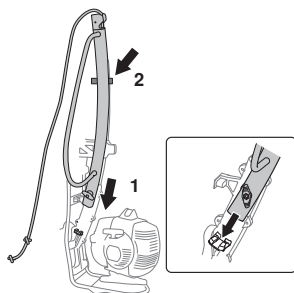
## Transport position



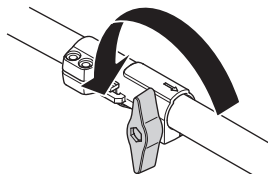
- Fit the transport guard to the cutting attachment.
- Dismantle the load reducer.



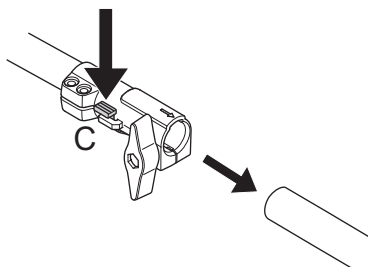
- Position the load reducer as shown and fasten it.



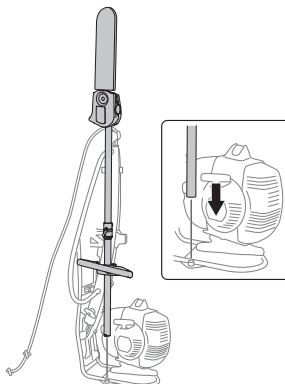
- Dismantle the shaft. Loosen the coupling by turning the knob (at least 3 times).



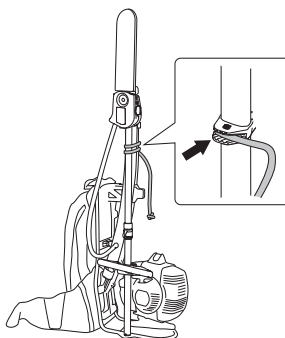
- Push and hold the button (C). Pull the shaft straight out of the clutch.



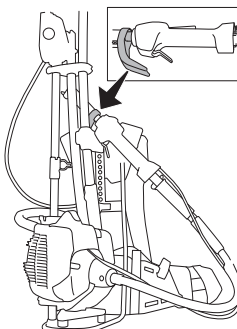
- Position the shaft as shown.



- Wind the cord around the load reducer and the shaft, then fasten it as shown.



- Hang the flex shaft onto the throttle handle as shown.



# FUEL HANDLING

## Fuel safety

Never start the machine:

- 1 If you have spilled fuel on it. Wipe off the spillage and allow remaining fuel to evaporate.
- 2 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.
- 3 If the machine is leaking fuel. Check regularly for leaks from the fuel cap and fuel lines. In the event of leakage, contact your service agent.

## 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.
- 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. Drain the tank into the appropriate containers and in a well ventilated area.
- 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.
- Secure the machine during transport.
- 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.
- Allow the machine to cool before putting it in storage.



**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 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 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.**

## 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.

Ethanol blended fuel, E10 may be used (max 10% ethanol blend). Using ethanol blends higher than E10 will create lean running condition which can cause engine damage.

- 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.

## Husqvarna alkylate fuel

Husqvarna recommends the use of Husqvarna alkylate fuel for best performance. The fuel contains less harmful substances compared to regular fuel, which reduces harmful exhaust fumes. The fuel provides low amount of residues when combusted which keeps the engine parts cleaner and optimizes the engine life. Husqvarna alkylate fuel is not available in all markets.

## Two-stroke oil

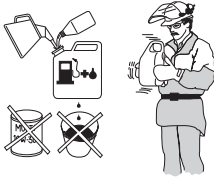
- For best results and performance use HUSQVARNA two-stroke engine oil, which is specially formulated for our air-cooled two-stroke engines.
- Never use two-stroke oil intended for water-cooled engines, sometimes referred to as outboard oil (rated TCW).
- Never use oil intended for four-stroke engines.
- 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.

# FUEL HANDLING

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

## 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.**

## Fueling



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

**Mix and pour fuel outdoors, where there are no sparks or flames.**

**Do not smoke or place hot objects near fuel.**

**Always shut off the engine before refuelling.**

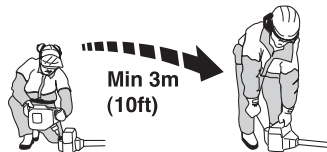
**Always stop the engine and let it cool for a few minutes before refuelling. Refuel in a well ventilated area. Never fuel the machine indoors.**

**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 and source before starting.**

- Always use a fuel container with an anti-spill valve.
- If you have spilled fuel on it. Wipe off the spillage and allow remaining fuel to evaporate.
- 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



- Check the cutting attachment. Never use blunt, cracked or damaged equipment.
- Check that the machine is in perfect working order. Check that all nuts and screws are tight.
- Make sure the chain is sufficiently tensioned. See instructions under the heading Tensioning the chain.
- Make sure the chain is adequately lubricated. See instructions under the heading Lubricating the cutting attachment.
- 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 shaft must be fitted before the machine is started, otherwise the clutch can come loose and cause personal injury.**

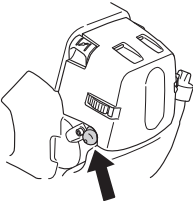
**Always move the machine away from the refuelling area and source before starting.**

**Place the machine on a flat surface. Ensure the cutting attachment 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 meters.**

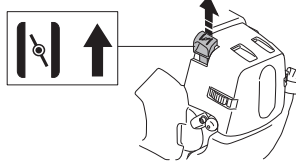
## Starting



**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.



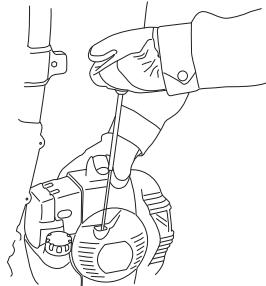
**WARNING! When the engine is started with the choke in choke position the cutting attachment will start to rotate immediately.**

Hold the body of the machine on the ground using your left hand (CAUTION! Not with your foot!). This is important to avoid damaging the machine's vibration damping system. Make sure the cutting attachment is not lying on the ground or against any loose objects when the machine is started.

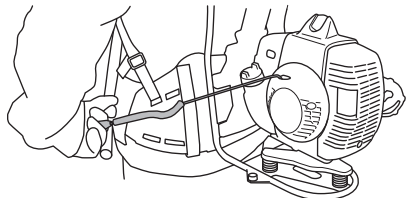
Grip the starter handle, slowly pull out the cord with your right hand until you feel some resistance (the starter pawls grip), now quickly and powerfully pull the cord. **Never twist the starter cord around your hand.**

Reset the choke when the engine fires, repeat pulling the cord until the engine starts.

**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.



When the engine has warmed up the machine can be started, even while carried on your back.



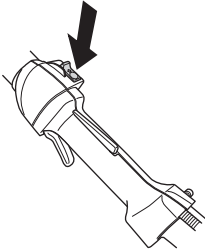
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## STARTING AND STOPPING

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### 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

## General working instructions

### IMPORTANT!

This section describes basic safety rules for using a backpack type chain saw.

If you encounter a situation where you are uncertain how to proceed you should ask an expert. Contact your dealer or your service workshop.

Avoid all usage which you consider to be beyond your capability.



**WARNING! The machine can cause serious personal injury. Read the safety instructions carefully. Learn how to use the machine.**



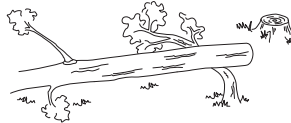
**WARNING! Cutting tool. Do not touch the tool without first switching off the engine.**



**WARNING! The machines can be thrown violently to the side when the tip of the guide bar comes into contact with a fixed object. This is called kickback. A kickback can be violent enough to cause the machine and/or operator to be propelled in any direction, and possibly lose control of the machine. Avoid cutting with the guide bar tip.**

suddenly. Take great care when working on sloping ground.

- 5 Take great care when cutting a tree that is in tension. A tree that is in tension may spring back to its normal position before or after being cut. If you position yourself incorrectly or make the cut in the wrong place the tree may hit you or the machine and cause you to lose control. Both situations can cause serious personal injury.



- 6 Keep a good balance and a firm foothold.
- 7 Always hold the machine with both hands. Hold the machine on the right side of your body.



- 8 Switch off the engine before moving to another area. Fit the transport guard before carrying or transporting the equipment any distance.
- 9 Never put the machine down with the engine running unless you have it in clear sight.

## Basic safety rules



- 1 Look around you:
  - To ensure that people, animals or other things cannot affect your control of the machine.
  - To ensure that people, animals, etc., do not come into contact with the cutting attachment or loose objects that are thrown out by the cutting attachment.
  - CAUTION! Do not use the machine unless you are able to call for help in the event of an accident.
- 2 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 often brings added risks, such as icy ground, unpredictable felling direction, etc.
- 3 Inspect the working area. Remove all loose objects, such as stones, broken glass, nails, steel wire, string, etc. that could be thrown out or become wrapped around the cutting attachment.
- 4 Make sure you can move and stand safely. Check the area around you for possible obstacles (roots, rocks, branches, ditches, etc.) in case you have to move



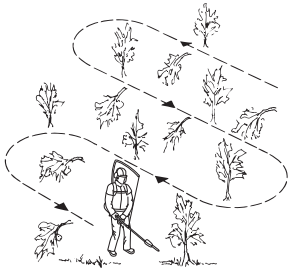
**WARNING! Keep unauthorised persons at a distance. Children, animals, onlookers and helpers should be kept outside the safety zone of 15 metres. Stop the machine immediately if anyone approaches. Never swing the machine around without first checking behind you to make sure no-one is within the safety zone.**



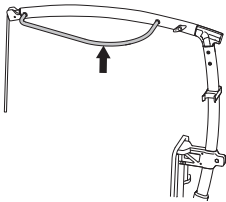
# WORKING TECHNIQUES

## Forestry clearing

- Before you start clearing, check the clearing area, the type of terrain, the slope of the ground, whether there are stones, hollows etc.
- Start at whichever end of the area is easiest, and clear an open space from which to work.
- Work systematically to and fro across the area, clearing a width of around 4-5 m on each pass. This exploits the full reach of the machine in both directions and gives the operator a convenient and varied working area to work in.



- Clear a strip around 75 m long. Move your fuel can as work progresses.
- On sloping ground you should work along the slope. It is much easier to work along a slope than it is to work up and down it.
- You should plan the strip so that you avoid going over ditches or other obstacles on the ground. You should also orient the strip to take advantage of wind conditions, so that cleared stems fall in the cleared area of the stand.
- The purpose of the stem guard is to avert cleared stems that could fall over the user and the machine.



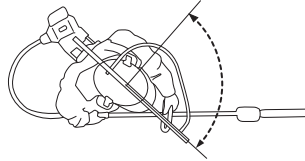
- If the stems are tightly packed, adapt your walking pace to suit.

## Tree felling technique



**WARNING! Never saw off a branch above waist height. A higher stump may cause uncontrolled felling direction.**

- 1 Never fell trees into uncleared areas.
- 2 When cutting, work in the 9 to 12 o' clock sector.



- 3 Position your body to comply with point 1 and 2 above.
- 4 Recommended max. diameter on trees to be cut is 15 cm.
- 5 A higher stump up to waist height increases the possibility to make the tree fall in the desired direction.
- 6 Cutting on the push stroke and pressure makes the tree fall backwards in relation the bar.
- 7 Cutting on the pull stroke makes the tree fall forwards in relation to the bar.
- 8 Use the bar to steer the tree into the desired direction of fall. For bigger trees, use the push- and pull hook positioned behind the bar.
- 9 Make sure that the tree falls after the trunk has been cut through and before moving the machine.

## WORKING TECHNIQUES

### Stem limbing



**WARNING!** Never stand directly underneath a branch that is being cut. This could lead to serious or even fatal personal injury.

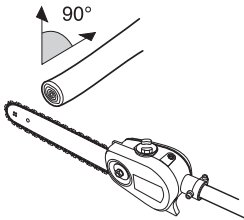


**WARNING!** Observe the applicable safety regulations for work in the vicinity of overhead power lines.

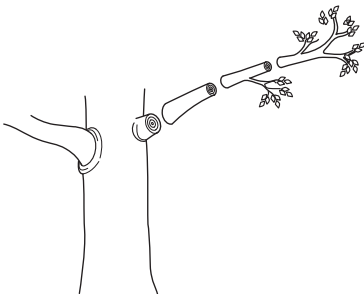


**WARNING!** This machine is not electrically insulated. If the machine touches or comes close to high-voltage power lines it could lead to death or serious bodily injury. Electricity can jump from one point to another by arcing. The higher the voltage, the greater the distance electricity can jump. 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.

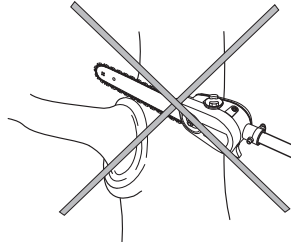
- Observe great care when working close to overhead power lines. Falling branches can result in short-circuiting.
- Whenever possible position yourself so that you can make the cut at right angles to the branch.



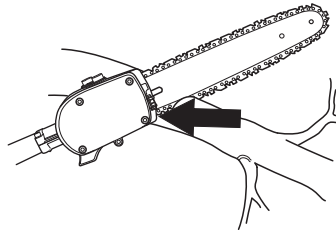
- Cut large branches in sections so that you have better control over where they fall. You should also pay attention to the fact that falling branches can bounce in the direction of the user after hitting the ground.



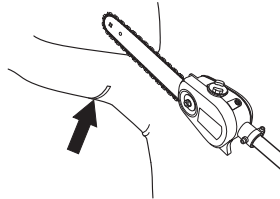
- Never cut through the swelling at the root of the branch as this will slow down healing and increase the risk of fungal attack!



- Use the stop at the base of the cutting head to provide support during cutting. This will help prevent the cutting attachment from "jumping" on the branch.



- Make an initial cut on the underside of the branch before cutting through the branch. This will prevent tearing of the bark, which could lead to slow healing and cause permanent damage to the tree. The cut should not be deeper than 1/3 of the branch thickness to prevent jamming. Keep the chain running while you withdraw the cutting attachment from the branch to prevent it jamming.



- Make sure you have a firm footing and that you can work without being hampered by branches, stones and trees.



**WARNING!** Never activate the throttle without having the cutting attachment in full view.

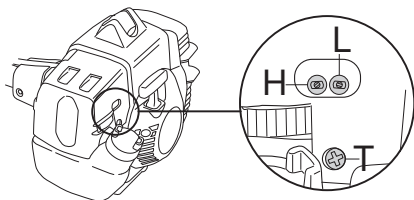
## Carburettor

Your Husqvarna product has been designed and manufactured to specifications that reduce harmful emissions.

### 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

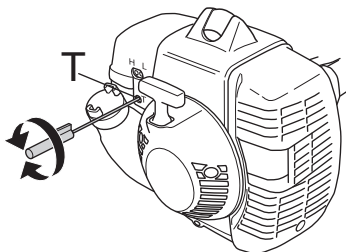
- The basic carburettor settings are adjusted during testing at the factory. The basic setting is richer than the optimal setting and should be maintained for the first few hours the machine is in use. The carburettor should then be finely adjusted. Fine adjustment should be carried out by a skilled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

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

## Adjustment of the idle speed

Before any adjustments are made, make sure that the air filter is clean and the air filter cover is fitted.

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 counter clockwise 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 cutting attachment stops, contact your dealer/service workshop. Do not use the machine until it has been correctly adjusted or repaired.

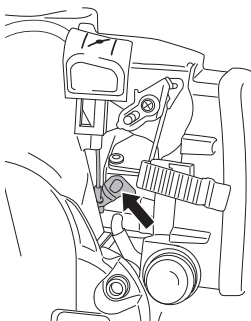
# MAINTENANCE

## Checking and adjusting of throttle wire

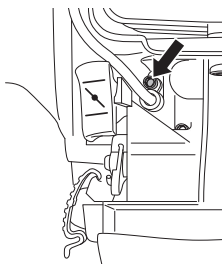


The throttle wire should be adjusted after 100 hours of operation or if the engine seems to run poorly.

- 1 Make sure that the idle speed is correctly adjusted. See instructions under the heading Adjustment of the idle speed.
- 2 Turn off the motor.
- 3 Remove the cylinder cover.
- 4 Hold the throttle trigger at the maximum throttle setting.
- 5 Feel with your finger if the carburettor throttle cam (A) can be pressed up further. If it can, the throttle wire should be adjusted.



- 6 To adjust, turn the adjustment screw (B) clockwise and try point 5 again until the carburettor throttle cam bottoms at maximum throttle setting.



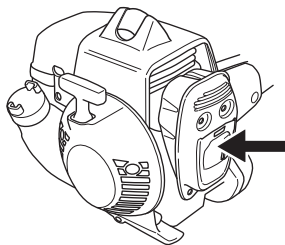
- 7 Fit the cylinder cover and check the idle speed. The cutting attachment must not rotate at idle. If it does, turn back the adjustment screw (anti-clockwise) until the cutting attachment does not rotate.

## 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 instructions under the Maintenance heading.

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



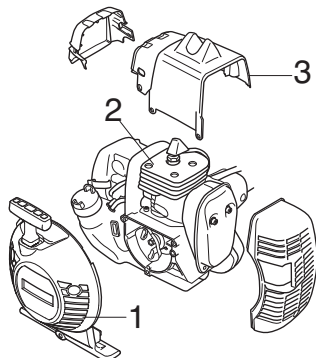
**WARNING!** Mufflers fitted with catalytic converters get very hot during use and remain so for some time after stopping. This also applies at idle speed. Contact can result in burns to the skin. Remember the risk of fire!

# MAINTENANCE

## 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 Cooling fins on the cylinder.
- 3 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



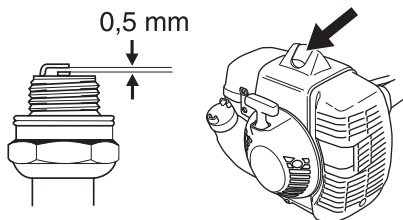
The spark plug condition is influenced by:

- 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 0,5 mm. The

spark plug should be replaced after about a month in operation or earlier if necessary.



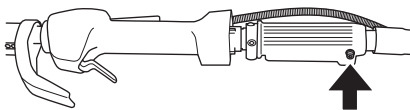
**CAUTION!** Always use the recommended spark plug type! Use of the wrong spark plug can damage the piston/cylinder. Check that the spark plug is fitted with a suppressor.

## Drive shaft

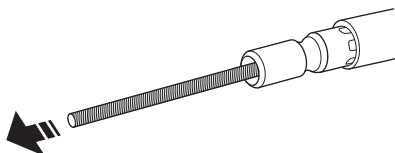


The flexible drive axle is lubricated with Husqvarna drive axle grease. The axle must be lubricated at least every 6 months.

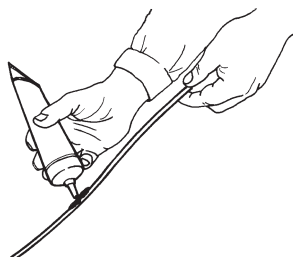
- 1 Dismantle the carriage bolt fastening the drive axle cover to the shaft.



- 2 Pull the shaft out of the flexible axle.
- 3 Remove the drive shaft from the sleeve either by shaking it out or pulling it out using pliers.

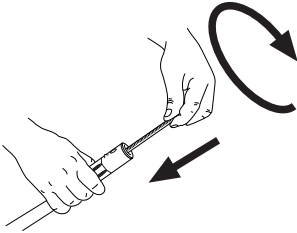


- 4 Apply the grease from the tube along the whole axle. Spread with a brush or cloth.

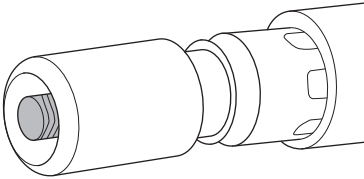


## MAINTENANCE

- 5 Slide the drive shaft back into the sleeve. Make sure the shaft engages correctly by turning it and pushing at the same time.



- 6 When the axle is correctly fitted in the cover, the end of the axle should align with the edge of the cover.

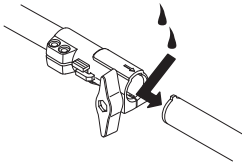


- 7 Fit the drive axle cover in the shaft. Twist the shaft back and forwards while pushing it in.  
8 Tighten the carriage bolt.  
9 Make sure the wire cover is not twisted around the flexible axle.

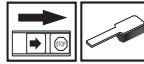
### Two-piece shaft



The drive shaft end in the lower shaft should be lubricated with grease every 30 hours. There is a risk that the drive shaft ends (splined coupling) on models with two-piece shafts will seize if they are not lubricated regularly.



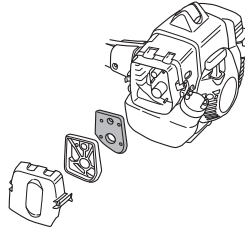
### Air filter



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.



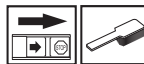
### Cleaning the air filter

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 a long time cannot be cleaned completely. The filter must therefore be replaced with a new one at regular intervals. **A damaged air filter must always be replaced.**

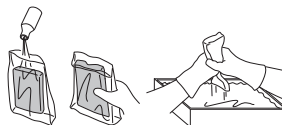
If the machine is used in dusty conditions the air filter should be soaked in oil. See instructions under the heading Oiling the air filter.

### Oiling the air filter



Always use HUSQVARNA filter oil, art. no. 531 00 92-48. 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.

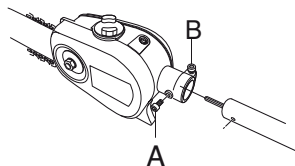


## Gear

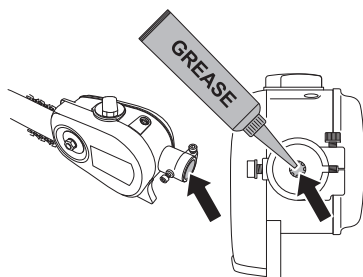


Check that there is grease in the gear housing, and fill with new grease if necessary. This should be done approximately every 6 months. Do as follows:

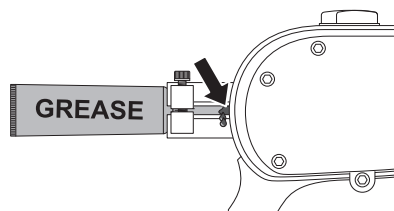
- 1 Loosen the two screws (A) and (B), and remove the cutting head from the shaft.



- 2 Check that there is grease in the gear housing by looking in the hole for the drive shaft (see picture). If no grease can be seen, the gear housing should be filled with new grease.



- 3 Fill with grease by putting the tube of grease as far into the hole as possible, and fill until grease starts to trickle out of the hole.



- 4 Fit the cutting head on the shaft and tighten the two screws.

## MAINTENANCE

### Troubleshooting schedule

Starting failure		
Check	Possible Cause	Action
Stop button	Stop position	Set the stop switch to the start position.
Starter pawls	Binding pawls	Adjust or replace the pawls.
		Clean around the pawls.
		Contact a servicing dealer.
Fuel tank	Incorrect fuel type	Drain it and use correct fuel.
Carburettor	Adjustment of the idle speed	Adjust the idling speed with the T-screw.
Sparkling (no spark)	Spark plug contaminated or wet	Make sure that the spark plug is dry and clean.
	Spark plug gap incorrect.	Clean the spark plug. Check that the electrode gap is correct. Make sure that the spark plug is fitted with a suppressor.
		Refer to technical data for correct electrode gap.
Spark plug	Spark plug loose.	Retighten the spark plug
Fuel filter	Clogged fuel filter	Replace the fuel filter.

Engine starts but does not stay running.		
Check	Possible Cause	Possible action
Fuel tank	Incorrect fuel type	Drain it and use correct fuel.
Fuel filter	Clogged fuel filter	Replace the fuel filter.
Carburettor	Engine will not idle properly.	Adjust the idling speed with the T-screw.
Air filter	Air filter clogged	Clean the air filter.



# MAINTENANCE

## Maintenance schedule

The following is a list of the maintenance steps 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 authorized service workshop.

Maintenance	Daily maintenance	Weekly maintenance	Monthly maintenance
Clean the outside of the machine.	X		
Check that the harness is not damaged.	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	
File off any burrs from the edges of the bar.		X	
Clean the fuel tank.			X
Check the fuel filter for contamination and the fuel hose for cracks or other defects. Replace if necessary.			X
Check all cables and connections.			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
Lubricate the drive axle with Husqvarna drive axle grease.	Do this every six months.		
Check that there is grease in the gear housing. If necessary, fill with new grease.	Do this every six months.		

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# TECHNICAL DATA

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## Technical data

### 535FBX

#### Engine

Cylinder displacement, cm <sup>3</sup>	34,6
Cylinder bore, mm	38,0
Stroke, mm	30,5
Recommended max. speed, rpm	11700
Idle speed, rpm	2900
Max. engine output, acc. to ISO 8893, kW/ rpm	1,6/8400
Catalytic converter muffler	Yes
Speed-regulated ignition system	Yes

#### Ignition system

Spark plug	Champion RCJ 6Y
Electrode gap, mm	0,5

#### Fuel and lubrication system

Fuel tank capacity, litre/cm <sup>3</sup>	0,6
Oil tank capacity, litre/cm <sup>3</sup>	0,14

#### Weight

Weight without fuel and cutting attachment, kg	12,4
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#### Noise emissions

(see note 1)

Sound power level, measured dB(A)	110
Sound power level, guaranteed dB(A)	111

#### Sound levels

(see note 2)

Equivalent sound pressure level at the operator's ear, measured according to EN ISO 22868, dB(A):	94
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#### Vibration levels

(see note 3)

Equivalent vibration levels ( $a_{hv,eq}$ ) at handles, measured according to EN ISO 22867, m/s<sup>2</sup>

Front/rear handles:	1,8/1,2
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Note 1: Noise emissions in the environment measured as sound power ( $L_{WA}$ ) in conformity with EC directive 2000/14/EC. Reported sound power level for the machine has been measured with the original cutting attachment that gives the highest level. 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: 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. Reported data for equivalent sound pressure level for the machine has a typical statistical dispersion (standard deviation) of 1 dB(A).

Note 3: Note 3: Equivalent vibration level is calculated as the time-weighted energy total for vibration levels under various working conditions with the following time distribution: 1/2 idling, 1/2 max. load. Reported data for equivalent vibration level has a typical statistical dispersion (standard deviation) of 1 m/s<sup>2</sup>.






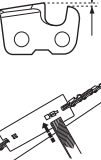
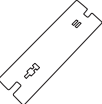

## TECHNICAL DATA

### Guide bar and saw chain combinations

The following cutting attachments are approved for the model Husqvarna 535FBX.

Guide bar				Saw chain	
Length, inch	Pitch, inch	Gauge, mm	Max. nose radius	Type	Length, drive links (no.)
13	0,325	1,3	11T	Husqvarna H30	56
				Husqvarna SP33G	
15	0,325	1,3	11T	Husqvarna H30	64
				Husqvarna SP33G	

### Saw chain filing and file gauges

							
	inch/mm				inch/mm		
H30	3/16 / 4,8	80°	30°	10°	0,025 / 0,65	5056981-00	5056981-08
SP33G	3/16 / 4,8	80°	30°	0°	0,025 / 0,65	—	5869384-01

### Approved accessories

Approved accessories	
PA1100	Pole saw attachment
HA850	Hedge trimmer attachment
TA1100	Trimmer attachment
EX780+PA1100	Extension attachment+PA1100
EX780+HA850	Extension attachment+HA850
PAX730	Pole saw attachment
PAX1100	Pole saw attachment

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## TECHNICAL DATA

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### EC Declaration of Conformity

**Husqvarna AB**, SE-561 82 Huskvarna, Sweden, tel +46-36-146500 declares that the backpack type chain saws **Husqvarna 535FBX** with serial numbers dating 2016 and onwards (the year is clear stated on the rating plate, followed by the serial number) comply 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**. Conformity assessment according to Annex V. For information relating to noise emissions, see the Technical data chapter.

The following standards have been applied:

**EN ISO 12100:2010, CISPR12:2007, EN ISO 14982:2009, EN ISO 11680-1:2011, EN ISO 11680-2:2011**

Notified body: **0404, SMP Svensk Maskinprovning AB**, Box 7035, SE-750 07 Uppsala, Sweden, has carried out EC type examination in accordance with the machinery directive's (2006/42/EC) article 12, point 3b. The certificates for EC type examination in accordance with annex IX, have the numbers: **0404/09/2163, 01/165/003**

Huskvarna 30 may 2017



Per Gustafsson, Development manager (Authorized representative for Husqvarna AB and responsible for technical documentation.)

# KEY TO SYMBOLS

## Symbols (TA1100)

**WARNING!** Clearing saws, brushcutters and trimmers can be dangerous! Careless or incorrect use can result in 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:

- Wear a protective helmet where there is a risk of falling objects
- Approved hearing protection
- Approved eye protection



Max. speed of output shaft, rpm



This product is in accordance with applicable EC directives.



Watch out for thrown objects and ricochets.



The operator of the machine must ensure, while working, that no persons or animals come closer than 15 meters.



Arrows which show limits for handle positioning.



Always wear approved protective gloves.



Wear sturdy, non-slip boots.



Only use non-metallic, flexible cutting attachments, i.e. trimmer heads with trimmer cord.

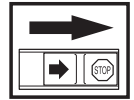


Noise emission to the environment according to the European Community's Directive. The machine's emission is specified in the Technical data chapter and on the label.



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

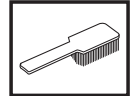
The engine is switched off by moving the stop switch to the stop position. **CAUTION!** The stop switch automatically returns to the start position. In order to prevent unintentional starting, the spark plug cap must be removed from the spark plug when assembling, checking and/or performing maintenance.



Always wear approved protective gloves.



Regular cleaning is required.



Visual check.



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## KEY TO SYMBOLS

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### Note the following before starting:

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.

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

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

These instructions supplement the instructions that were included with the machine. For other procedures, please refer to the operating instructions for the machine.



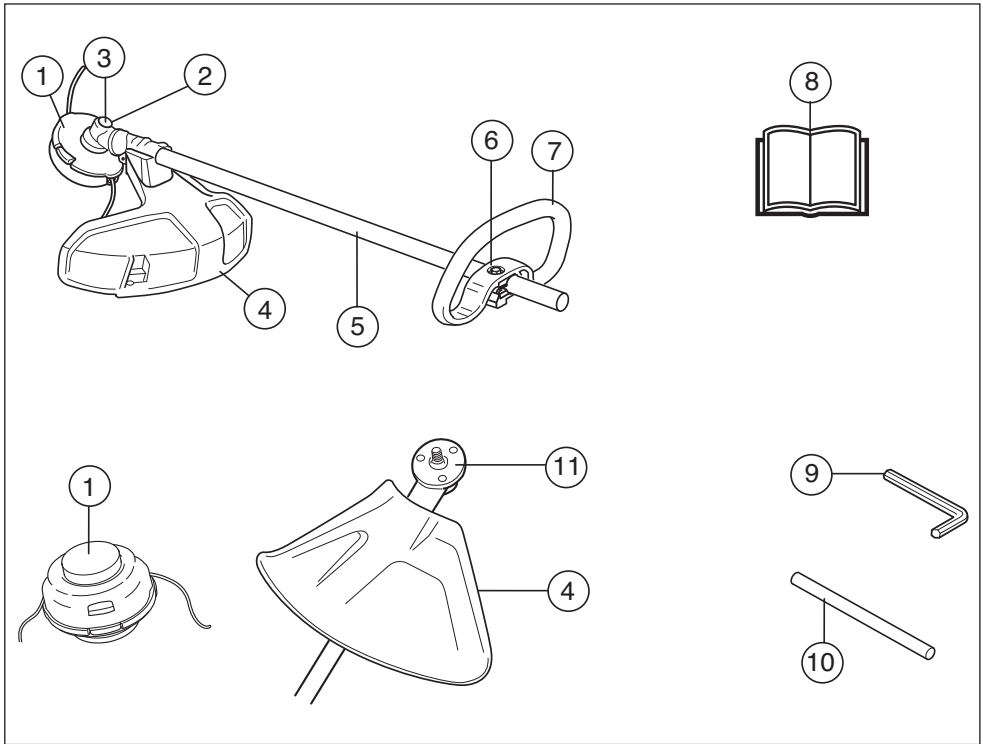
**WARNING! Under no circumstances may the design of the machine be modified without the permission of the manufacturer. Always use original accessories. Non-authorized modifications and/or accessories can result in serious personal injury or the death of the operator or others.**



**WARNING! This accessory may only be used together with the intended brush cutter/trimmer, see under heading "Approved accessories" in chapter Technical data in the machine's Operator's Manual.**

The machine is only designed for grass trimming and grass clearing.

## WHAT IS WHAT?



### What is what? (TA1100)

- |                                 |                     |
|---------------------------------|---------------------|
| 1 Trimmer head                  | 7 Loop handle       |
| 2 Grease filler cap, bevel gear | 8 Operator's manual |
| 3 Bevel gear                    | 9 Allen key         |
| 4 Cutting attachment guard      | 10 Locking pin      |
| 5 Shaft                         | 11 Drive disc       |
| 6 Handle adjustment             |                     |

# GENERAL SAFETY PRECAUTIONS

## Guards and cutting attachment

This section describes how to choose and maintain your cutting equipment in order to:

- Obtain maximum cutting performance.
- Extend the life of cutting equipment.

### IMPORTANT!

Only use cutting attachments with the guards we recommend! See the chapter on Technical data.

Refer to the instructions for the cutting attachment to check the correct way to load the cord and the correct cord diameter.



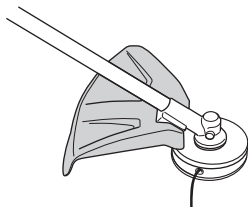
**WARNING! Always stop the engine before doing any work on the cutting attachment. This continues to rotate even after the throttle has been released. Ensure that the cutting attachment has stopped completely and disconnect the spark plug cap before you start to work on it.**



**WARNING! A faulty cutting attachment may increase the risk of accidents.**

## Cutting attachment guard

This guard is intended to prevent loose objects from being thrown towards the operator. The guard also protects the operator from accidental contact with the cutting attachment.



Check that the guard is undamaged and not cracked. Replace the guard if it has been exposed to impact or is cracked.

Check the cutting attachment for damage or cracks. A damaged cutting attachment should always be replaced.

Always use the recommended guard for the cutting attachment you are using. See chapter on Technical data.



**WARNING! Never use a cutting attachment without an approved guard. See the chapter on Technical data. If an incorrect or faulty guard is fitted this can cause serious personal injury.**

## Trimmer head

### IMPORTANT!

Always ensure the trimmer cord is wound tightly and evenly around the drum, otherwise the machine will generate harmful vibration.

A trimmer head is intended for trimming grass.



- Only use the recommended trimmer heads and trimmer cords. These have been tested by the manufacturer to suit a particular engine size. This is especially important when a fully automatic trimmer head is used. Only use the recommended cutting attachment. See the chapter on Technical data.



- Smaller machines generally require small trimmer heads and vice versa. This is because when clearing using a cord the engine must throw out the cord radially from the trimmer head and overcome the resistance of the grass being cleared.
- The length of the cord is also important. A longer cord requires greater engine power than a shorter cord of the same diameter.
- Make sure that the cutter on the trimmer guard is intact. This is used to cut the cord to the correct length.
- To increase the life of the cord it can be soaked in water for a couple of days before use. This will make the cord tougher so that it lasts longer.

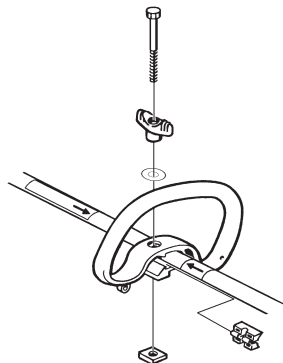


## ASSEMBLY

### Fitting the loop handle



- Clip the loop handle onto the shaft. Note that the loop handle must be fitted between the arrows on the shaft.



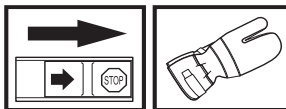
- Slide the spacer into the slot in the loop handle.
- Fit the nut, knob and screw. Do not overtighten.
- Now adjust the trimmer to give a comfortable working position. Tighten the bolt/knob.

### Assembling the cutting equipment



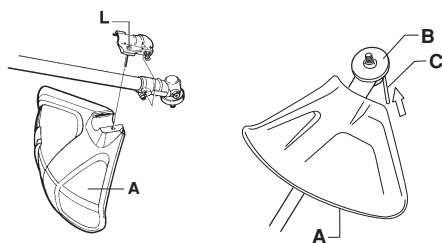
**WARNING! Never use a cutting attachment without an approved guard. See the chapter on Technical data. If an incorrect or faulty guard is fitted this can cause serious personal injury.**

### Fitting the cutting attachment guard and trimmer head

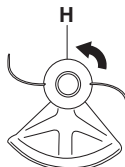


Fit the correct cutting attachment guard (A) for use with the trimmer head.

Hook the cutting attachment guard onto the fitting on the shaft and secure with the bolt (L).



- Fit the drive disc (B) on the output shaft.
  - Turn the output shaft until one of the holes in the drive disc aligns with the corresponding hole in the gear housing.
  - Insert the locking pin (C) in the hole to lock the shaft.
- Screw on the trimmer head (H) counter clockwise.



- To dismantle, follow the instructions in the reverse order.

## WORKING TECHNIQUES

**IMPORTANT!** This section takes up the basic safety precautions for working with a trimmer.

Before you use this trimmer attachment, also read and understand the safety precautions presented in the chapter Working technique regarding working with 535 FBX in this manual.

You must understand the difference between forestry clearing, grass clearing and grass trimming before use.

### Basic safety rules

- 1 Make sure you can move and stand safely. Check the area around you for possible obstacles (roots, rocks, branches, ditches, etc.) in case you have to move suddenly. Take great care when working on sloping ground.



- 2 Do not overreach. Keep proper footing and balance at all times.
- 3 Always hold the machine with both hands. Hold the machine on the right side of your body.



- 4 Keep the cutting attachment below waist level.
- 5 Keep all parts of your body away from the rotating cutting attachment. Keep all parts of your body away from hot surfaces.



**WARNING!** Neither the operator of the machine nor anyone else may attempt to remove the cut material while the engine is running or the cutting equipment is rotating, as this can result in serious injury.

Stop the engine and cutting equipment before you remove material that has wound around the blade shaft as otherwise there is a risk of injury. The bevel gear can get hot during use and may remain so for a while afterwards. You could get burnt if you touch it.



**WARNING!** Watch out for thrown objects. Always wear approved eye protection. Never lean over the cutting attachment guard. Stones, rubbish, etc. can be thrown up into the eyes causing blindness or serious injury.

### Basic working techniques

Always slow the engine to idle speed after each working operation. Long periods at full throttle without any load on the engine can lead to serious engine damage.



**WARNING!** Sometimes branches or grass get caught between the guard and cutting attachment. Always stop the engine before cleaning.

# WORKING TECHNIQUES

## Grass trimming with a trimmer head



### Trimming

- Hold the trimmer head just above the ground at an angle. It is the end of the cord that does the work. Let the cord work at its own pace. Never press the cord into the area to be cut.



- The cord can easily remove grass and weeds up against walls, fences, trees and borders. However it can also damage sensitive bark on trees and bushes, and damage fence posts.
- Reduce the risk of damaging plants by shortening the cord to 10-12 cm and reducing the engine speed.

### Clearing

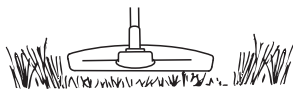
- The clearing technique removes all unwanted vegetation. Keep the trimmer head just above the ground and tilt it. Let the end of the cord strike the ground around trees, posts, statues and the like. CAUTION! This technique increases the wear on the cord.



- The cord wears quicker and must be fed forward more often when working against stones, brick, concrete, metal fences, etc., than when coming into contact with trees and wooden fences.
- When trimming and clearing, you should use less than full throttle (80%) so that the cord lasts longer and to reduce the wear on the trimmer head.

### Cutting

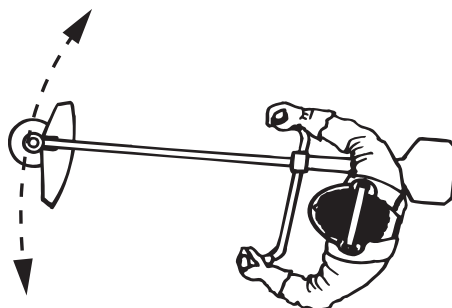
- The trimmer is ideal for cutting grass that is difficult to reach using a normal lawn mower. Keep the cord parallel to the ground when cutting. Avoid pressing the trimmer head against the ground as this can ruin the lawn and damage the tool.



- Do not allow the trimmer head to constantly come into contact with the ground during normal cutting. Constant contact of this type can cause damage and wear to the trimmer head.

## Sweeping

- The fan effect of the rotating cord can be used for quick and easy clearing up. Hold the cord parallel to and above the area to be swept and move the tool side to side.



- When cutting and sweeping you should use full throttle to obtain the best results.

**IMPORTANT!** To avoid unbalance and vibrations in handles trimmer head cover need to be cleaned every time cord is refilled. In addition, check other part of the head if needed to be cleaned.

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# TECHNICAL DATA

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## Technical data

Technical data	Trimmer attachment with shaft TA1100
<b>Weight</b>	
Weight with cutting attachment and guard, kg	1,4
<b>Noise emissions</b>	
(see note 1)	
Sound power level, measured dB(A)	111
Sound power level, guaranteed $L_{WA}$ dB(A)	113
<b>Sound levels</b>	
(see note 2)	
Equivalent sound pressure level at the operator's ear, measured according to EN ISO 11806 and ISO 22868, dB(A):	
Equipped with approved accessory (original)	98
<b>Vibration levels</b>	
(see note 3)	
Vibration levels at handles, measured according to EN ISO 22867, $m/s^2$	
Equipped with approved accessory (original), left/right	3,1/2,5

Note 1 Noise emissions in the environment measured as sound power ( $L_{WA}$ ) in conformity with EC directive 2000/14/EC. Reported sound power level for the machine has been measured with the original cutting attachment that gives the highest level. 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: Reported data for equivalent sound pressure level for the machine has a typical statistical dispersion (standard deviation) of 1 dB(A).

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

## Approved accessories

### Approved accessories

T35 + cutting attachment guard 588 54 37-01

Trimmer head with cutting attachment guard.

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## TECHNICAL DATA

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### EC Declaration of Conformity

We, Husqvarna AB, SE-561 82 Huskvarna, Sweden, tel +46-36-146500, declare that this trimmer attachment TA1100 in combination with clearing saw model 535FBX from 2016's serial number and onwards (the year is clearly stated in plain text on the type plate, with subsequel serial number), complies with the requirements of the COUNCIL'S DIRECTIVE:

- of May 17, 2006 "relating to machinery" **2006/42/EC**.
- of May 8, 2000 "relating to the noise emissions in the environment" **2000/14/EC**.

The following standards have been applied:

**EN ISO 12100:2010, EN ISO 11806-1:2011, EN ISO 11806-2:2011**

Notified body:

**0404, SMP Svensk Maskinprovning AB**, Box 7035, SE750 07 Uppsala, Sweden, has carried out voluntary EC type examination in accordance with the machinery directive's (2006/42/EC) article 12, point 3b. The certificate for EC type examination in accordance with annex VI, have the numbers:

**SEC/17/2473**

Huskvarna 30 may 2017



Per Gustafsson, Development manager (Authorized representative for Husqvarna AB and responsible for technical documentation.)





**Original instructions**

**1158824-26**



**2018-03-21**