





130, 135 Mark II

EN Operator's manual

2-25

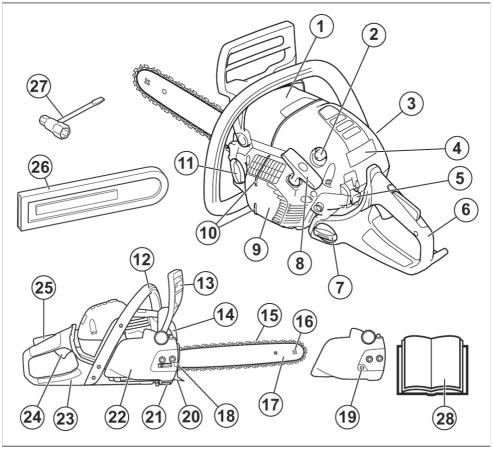
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## Introduction

## Operator's manual

The initial language of this operator's manual is English. Operator's manuals in other languages are translations from English.

## Overview



1. Cylinder cover

2. Air purge bulb

- 3. Product and serial number plate
- 4. Information and warning decal
- 5. Stop switch
- 6. Rear handle
- 7. Fuel tank
- 8. Starter rope handle
- 9. Starter housing
- 10. Felling direction mark
- 11. Chain oil tank
- 12. Front handle
- 13. Chain brake and front hand guard
- 14. Muffler
- 15. Saw chain
- 16. Bar tip sprocket
- 17. Guide bar
- 18. Chain tensioning screw (130)
- 19. Chain tensioning screw (135 Mark II)
- 20. Spiked bumper
- 21. Chain catcher
- 22. Clutch cover
- 23. Right hand guard
- 24. Throttle trigger
- 25. Throttle trigger lockout
- 26. Transportation guard
- 27. Combination tool
- 28. Operator's manual

## Symbols on the product



Warning



Read this manual



Use a protective helmet in locations where objects can fall on you. Use approved hearing protection and approved eye protection.



Use approved protective gloves



The product agrees with the applicable EC Directives



Noise emission to the environment label as per EU and UK directives and regulations, and New South Wales legislation "Protection of the Environment Operations (Noise Control) Regulation 2017". The guaranteed sound power level

of the product is specified in *Technical Data on page 22* and on the label.



Chain brake, not engaged (left). Chain brake, engaged (right)



Choke control



Air purge bulb



Refuelling



Chain oil fill



This product agrees with the applicable Korea directives



This product agrees with the applicable Japan directives



Hold the product properly with both hands



Do not use with one hand



Do not let the guide bar tip touch an object.

**Note:** Other symbols/decals on the product refer to certification requirements for other commercial areas.

#### California Proposition 65



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

#### Euro V Emissions



**WARNING:** Tampering with the engine voids the EU type-approval of this product.

### **Product liability**

As referred to in the product liability laws, we are not liable for damages that our product causes if:

- · the product is incorrectly repaired.
- the product is repaired with parts that are not from the manufacturer or not approved by the manufacturer.
- the product has an accessory that is not from the manufacturer or not approved by the manufacturer.
- the product is not repaired at an approved service center or by an approved authority.

## Safety

#### Safety definitions

The definitions below give the level of severity for each signal word.



WARNING: Injury to persons.



**CAUTION:** Damage to the product.

**Note:** This information makes the product easier to use.

## General safety instructions

- Use the product correctly. Injury or death is a
  possible result of incorrect use. Only use the product
  for the tasks found in this manual. Do not use the
  product for other tasks.
- Read, understand and obey the instructions in this manual. Obey the safety symbols and the safety instructions. If the operator does not obey the instructions and the symbols, injury, damage or death is a possible result.
- Do not discard this manual. Use the instructions to assemble, to operate and to keep your product in good condition. Use the instructions for correct installation of attachments and accessories. Only use approved attachments and accessories.
- Do not use a damaged product. Obey the maintenance schedule. Only do the maintenance work that you find an instruction about in this

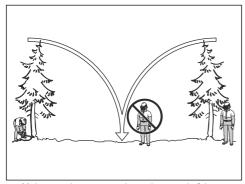
manual. An approved service center must do all other maintenance work.

- This manual cannot include all situations that can occur when you use the product. Be careful and use your common sense. Do not operate the product or do maintenance to the product if you are not sure about the situation. Speak to a product expert, your dealer, service agent or approved service center for information.
- Disconnect the spark plug cable before you assemble the product, put the product into storage or do maintenance.
- Do not use the product if it is changed from its initial specification. Do not change a part of the product without approval from the manufacturer. Only use parts that are approved by the manufacturer. Injury or death is a possible result of incorrect maintenance.
- Do not breathe in the exhaust fumes from the engine. A health risk can occur if you breathe in exhaust fumes, chain oil fumes and sawdust for a long period.
- Do not start the product indoors or near flammable material. The exhaust fumes are hot and can contain a spark which can start a fire. Without sufficient airflow, injury or death can result from asphyxiation or carbon monoxide.
- This product makes an electromagnetic field during operation. The electromagnetic field can cause damage to medical implants. Speak to your physician and medical implant manufacturer before you operate the product.
- · Do not let a child operate the product.
- Do not let a person, without knowledge of the instructions, operate the product.

- Always monitor a person, with decreased physical capacity or mental capacity, that uses the product. A responsible adult must be there at all times.
- Lock the product in an area that children and not approved persons cannot access.
- The product can eject objects and cause injuries.
   Obey the safety instructions to decrease the risk of injury or death.
- Do not go away from the product when the engine is on. Stop the engine and make sure that the chain does not rotate.
- The operator of the product is responsible if an accident occurs.
- Make sure that parts are not damaged before you use the product.
- Refer to national or local laws. They can prevent or decrease the operation of the product in some conditions.

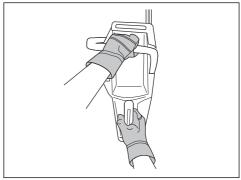
## Safety instructions for operation

- Continuous or regular operation of the product can cause "white finger" or equivalent medical problems from vibrations. Examine the condition of your hands and fingers if you operate the product continuously or regularly. If your hands or fingers have discoloration, have pain, tingle, or are numb, stop work and speak to a physician immediately.
- Make sure the product is fully assembled before you use it.
- The product can cause objects to eject, which can cause damage to the eyes. Always use approved eye protection when you operate the product.
- Be careful, a child can come near the product without your knowledge during operation.
- Do not operate the product if there are persons in the work area. Stop the product if a person goes into the work area.



- Make sure that you are always in control of the product.
- The product must be operated with two hands. Do not operate the product with one hand. Serious injury to the operator, workers, bystanders, or a

- combination of these persons may result from operation with only one hand.
- Hold the front handle with your left hand and the rear handle with your right hand. Hold the product on the right side of your body.

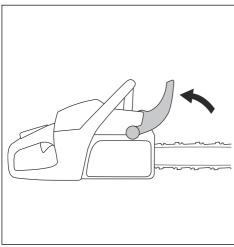


- Do not operate the product when you are fatigued, ill or under the influence of alcohol or other drugs.
- Do not use the product if you cannot receive aid if an accident occurs. Make others aware that you will operate the product before you start the product.
- Do not turn with the product before you make sure that no persons or animals are in the safety area.
- Remove all unwanted materials from the work area before you start. If the chain hits an object, the object can eject and cause injury or damage. Unwanted material can wind around the chain and cause damage.
- Do not use the product in bad weather, such as fog, rain, strong winds, risk of lightning or other weather conditions. Dangerous conditions, such as slippery surfaces, can occur because of bad weather.
- Make sure that you can move freely and work in a stable position.
- Make sure that you cannot fall when you use the product. Do not tilt when you operate the product.
- Always hold the product with your two hands. Hold the front handle with your left hand and the rear handle with your right hand. Hold the product on the right side of your body.
- The saw chain starts to rotate if the choke control is in the choke position when the engine starts.
- · Stop the engine before you move the product.
- Do not put down the product with the engine on.
- Before you remove the unwanted materials from the product, stop the engine. Let the chain stop before you or an aid remove the cut material.

 Do not operate this product in a tree. Operation of the product while up in a tree may result in personal injury.

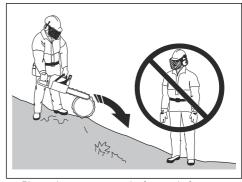


 The chain brake must be engaged when the product is started to decrease the risk that the saw chain touches you during start.

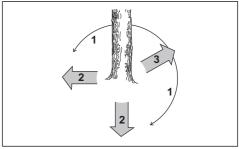


- A kickback can cause serious injury or death to the operator or others. To decrease the risk you must know the causes of kickback and how to prevent them
- Obey all safety instructions to decrease the risk of kickback and other forces which can cause serious injury or death.
- Adjust the saw chain tension regularly to make sure that the saw chain does not slack. A slack saw chain may jump off and cause serious injury or death.
- Do not fell trees using an incorrect procedure. This
  can cause injury to persons, hit a utility line or cause
  damage to property.

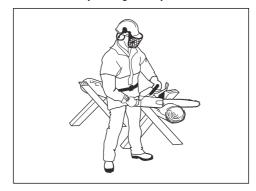
 The operator should remain on the uphill side of the terrain as the tree is likely to roll or slide downhill after it is felled.



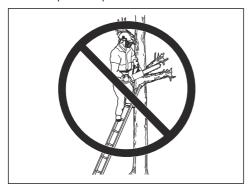
- Plan and prepare your path of retreat before you start to cut. Your path of retreat must be approximately 135 degrees away from the felling direction.
  - · 1. The danger zone
  - · 2. The path of retreat
  - 3. The felling direction



- Always stop the engine before you move the product.
- Make sure you firmly plant your feet on the ground and distribute your weight evenly.



 Only operate the product with your feet on stable ground. Without stable ground, operation can cause serious injury or death to the operator or others. Do not do operate the product on a ladder or in a tree.



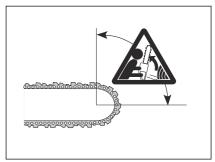
#### Kickbacks, skating, bouncing and dropping

Different forces can have an effect on the safe control of the product.

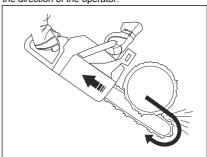
- Skating is when the guide bar moves quickly across the wood.
- **Bouncing** is when the guide bar lifts off the wood and touches it again and again.
- Dropping is when the product drops down after the cut is made. This can cause the moving chain to touch a part of the body or other objects, causing injury or damage.
- Kickback is when the end of the guide bar touches objects and moves rearward, up or suddenly forward. Kickback also occurs when the wood closes in and pinches the saw chain during the cut. Loss of control can result if the product touches an object in wood.



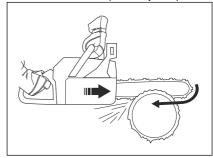
 Rotational Kickback can occur when the moving chain touches an object at the top of the guide bar. This can cause the chain to bury into the object and cause the chain to stop immediately. The result is a very fast, reverse reaction that moves the guide bar up and rearward in the direction of the operator.



**Pinch-Kickback** can occur when the saw chain suddenly stops during the cut. The wood closes in and pinches the moving saw chain along the top of the guide bar. The sudden stop of the chain reverses the chain force and causes the product to move in the opposite direction of the turn of the chain. The product moves rearward in the direction of the operator.



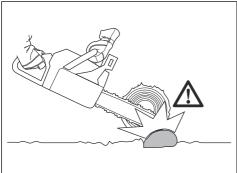
 Pull-In can occur when the saw chain suddenly stops when the moving chain touches an object in the wood along the bottom of the guide bar. The sudden stop pulls the product forward and away from the operator, which can easily cause the loss of control of the product by the operator.



Make sure that you understand the different forces and how to prevent them before you operate the product. See *To prevent kickbacks, skating, bouncing and dropping on page 8.* 

## To prevent kickbacks, skating, bouncing and dropping

- While the motor runs, make sure to hold the product tightly. Keep your right hand on the rear handle and the left hand on the front handle. Tightly hold with thumbs and fingers around the handles. Do not let go.
- Keep control of the product during the cut and after the wood falls to the ground. Do not let the weight of the product drop down after the cut is made.
- Make sure that the area in which you are cutting is free from blockage. Do not let the nose of the guide bar touch a log, branch or other blockages while you operate the product.



- · Cut at high motor speeds.
- Do not overreach or cut above shoulder height.



- Obey the sharpening and maintenance instructions by the manufacturer for the saw chain.
- Only use replacement guide bars and saw chains specified by the manufacturer.
- The risk of kickback is increased if the depth gauge is set too large.

#### Personal protective equipment

 Always use the correct personal protective equipment when you operate the product. Personal protective equipment decreases the grade of injury if an accident occurs, but does not erase it.

- Do not use loose clothing that can become caught in the saw chain.
- Use an approved protective helmet.
- Always use approved ear protection while you operate the product. Noise for a long period can cause hearing loss.
- Use protective glasses or a face visor to decrease the risk of injury from flying objects. The product can move objects with strong force, such as wood chips and small pieces of wood. This can result in serious injury, including to the eyes.
- · Use gloves with chainsaw protection.
- Use pants with chainsaw protection.
- Use boots with chainsaw protection, steel toe-caps and nonslip soles.
- Make sure that you have a first aid kit near.
- Sparks can come from the muffler, the guide bar and saw chain or other sources. Always keep fire extinguishing tools and a shovel to help prevent forest fires.

#### Protective devices on the product

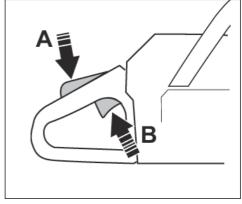
 Do not use a product with damaged protective equipment. If the product is damaged, speak to an approved service center.

#### To examine the stop switch

- 1. Start the engine. See *Before you start the engine on* page 11.
- 2. Make sure that the engine stops when you move the stop switch to the stop position.

#### To examine the throttle trigger lockout

 Make sure that the throttle trigger (B) is locked at idle speed when you release the throttle trigger lockout (A)



Push the throttle trigger lockout (A) and make sure that it goes back to its initial position when you release it.

- Push the throttle trigger (B) and make sure that it goes back to its initial position when you release it.
- 4. Start the engine, and then apply full throttle.
- Release the throttle trigger and examine if the saw chain stops.
- If the saw chain rotates at idle speed, turn the idle speed screw counterclockwise until the saw chain stops.

#### Guard

The guard prevents objects from being ejected in the direction of the operator. The guard also prevents accidental touch between the operator and the saw chain.

- Make sure that the guard is permitted for operation in combination with the product.
- · Do not use the product without the guard.
- Make sure that the guard is not damaged. Replace the guard if it is worn or has cracks.

#### Fuel safety

- Do not start the product if there is fuel or engine oil on the product. Remove the unwanted fuel/oil and let the product dry. Remove unwanted fuel from the product.
- If you spill fuel on your clothing, change clothing immediately.
- Do not get fuel on your body, it can cause injury. If you get fuel on your body, use a soap and water to remove the fuel.
- Do not start the engine if you spill oil or fuel on the product or on your body.
- Do not start the product if the engine has a leak.
   Examine the engine for leaks regularly.
- Be careful with fuel. Fuel is flammable and the fumes are explosive and can cause injuries or death.
- Do not breathe in the fuel fumes, it can cause injury.
   Make sure that there is a sufficient airflow.
- · Do not smoke near the fuel or the engine.
- Do not put warm objects near the fuel or the engine.
- Do not add the fuel when the engine is on.
- Make sure that the engine is cool before you refuel.
- Before you refuel, open the fuel tank cap slowly and release the pressure carefully.
- Do not add fuel to the engine in an indoor area. Not sufficient airflow can cause injury or death because of asphyxiation or carbon monoxide.
- Tighten the fuel tank cap carefully or a fire can occur.
- Move the product at a minimum of 3 m (10 ft) from the position where you filled the tank before a start.
- Do not put too much fuel in the fuel tank.

- Make sure that a leak cannot occur when you move the product or fuel container.
- Do not put the product or a fuel container where there is an open flame, spark or pilot light. Make sure that the storage area does not contain an open flame
- Only use approved containers when you move the fuel or put the fuel into storage.
- Empty the fuel tank before long-term storage. Obey the local law on where to dispose fuel.
- Clean the product before long-term storage.
- Remove the spark plug cable before you put the product into storage to make sure that the engine does not start accidentally.

#### Safety instructions for maintenance

- Disconnect the spark plug before doing maintenance on the product, not including carburetor adjustments.
- Have all product servicing done by an approved dealer, not including the tasks in *Maintenance on* page 16.
- Make sure the saw chain stops moving when the throttle trigger is released.
- Keep the handles dry, clean, and free from oil or fuel mixture.
- Keep caps and fasteners correctly tightened.
- Replacement components that are not approved or the removal of safety devices can cause damage to the product. This can also cause possible injury to the operator or bystanders. Only use accessories and replacement parts as recommended. Do not change your product.
- Keep the saw chain sharp and clean for safe and high performance.
- Obey the instructions for lubricating and changing accessories.
- Examine the product for damaged parts. Before
  more use of the product, make sure the damaged
  guard or part operates correctly. Examine for broken
  or incorrectly aligned parts, and parts that do not
  move freely. Examine for other conditions that can
  have an effect on the operation of the product. Make
  sure the product is correctly installed. A guard or
  other damaged part must be repaired or replaced by
  an approved dealer unless written in the operator's
  manual.
- When not in operation, keep the product in a dry, high or locked area away from children.
- During transportation or storage of the product, use a transportation guard or case to move the product.
- Do not use waste oil. Waste oil can be dangerous to you and can cause damage to the product and environment.

**9** 

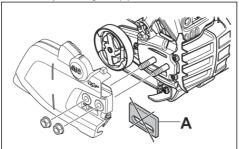
## **Assembly**



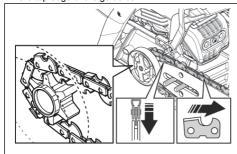
**WARNING:** Read and understand the safety chapter before you assemble the product.

# To assemble the guide bar and saw chain

1. Remove the bar nuts and the clutch cover. Remove the transportation guard (A).

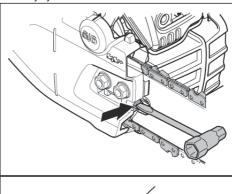


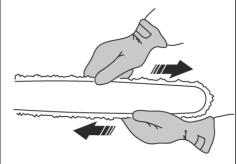
- 2. Put the guide bar above the bar bolts. Steer the guide bar to its most rear position.
- 3. Put on protective gloves.
- Lift the saw chain above the drive sprocket and engage it in the groove on the guide bar. Start on the top edge of the guide bar.



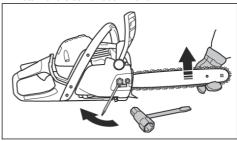
- 5. Make sure that the edges of the cutters are turned forward on the top edge of the guide bar.
- 6. Assemble the clutch cover and steer the chain adjuster pin to the hole in the guide bar.
- Make sure that the drive links of the saw chain fit correctly on the drive sprocket. Also make sure that the saw chain is correctly engaged in the groove in the guide bar.
- 8. Tighten the guide bar nuts finger.

Turn the chain tensioning screw clockwise to tighten the saw chain. Tighten the saw chain until it does not hang from below the guide bar, but you can turn it easily by hand.





 Hold up the end of the guide bar and tighten the bar nuts with the combination wrench.



- Examine the chain tension frequently after you assemble a new saw chain and until the saw chain has been run-in.
- Examine the chain tension regularly. Correct chain tension results in good performance and a long life.

## Operation



**WARNING:** Read and understand the safety chapter before you operate the product.

#### To use fuel



**CAUTION:** This product has a two-cycle engine. Use a mixture of gasoline and two-cycle engine oil. Make sure to use the correct quantity of oil in the mixture. Incorrect ratio of gasoline and oil can cause damage to the engine.

#### Fuel mixture ratio

The fuel mixture ratio for the gasoline and two-cycle engine oil is 50:1 (2%)

Gasoline	Two-cycle engine oil
1 U.S. Gal.	77 ml (2.6 oz)
1 UK Gal.	95 ml (3.2 oz)
51	100 ml (3.4 oz)

#### To make the fuel mixture

- Determine the correct quantity of gasoline and engine oil (mixture ratio 50:1). Do not make more than 30 days quantity of fuel mixture. See Fuel mixture ratio on page 11.
- 2. Add half of the gasoline quantity to a clean fuel container with an antispill valve.



**CAUTION:** Do not use gasoline with more than 10% ethanol concentration (E10). This can cause damage to the product.



**CAUTION:** Do not use gasoline with an octane number less than 90 RON (87 AKI). This can cause damage to the product.

**Note:** Use gasoline with a higher octane number if you frequently use the product at continuously high engine speed.

Add the full quantity of the two-cycle engine oil to the fuel container.



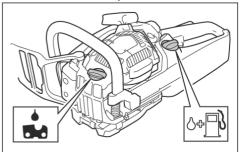
**CAUTION:** Always use air-cooled two-cycled engine oil of high quality.

Other oils can cause damage to the product.

- 4. Shake the fuel mixture to mix the contents.
- Add the remaining gasoline quantity to the fuel container
- 6. Shake the fuel mixture to mix the contents.
- 7. Fill the fuel tank of the product with the fuel mixture. See *Fuel mixture ratio on page 11*.

#### To fill the fuel tank

- Make sure that the fuel mixture is correct and that the fuel mixture is in a fuel container with an antispill valve.
- If fuel is on the container, remove the unwanted fuel and let the container dry.
- Make sure that the area near the fuel tank cap is clean.
- 4. Remove the fuel tank cap.



- Shake the fuel container before you add the fuel mixture to the fuel tank.
- 6. Put back the fuel tank cap.

#### To lubricate the saw chain

The product has an automatic lubrication system. Make sure to only use the correct chain oil and obey the instructions.

- Use vegetable-based saw chain oil or a standard chain oil.
- Make sure that the area near the cap of the saw chain oil tank is clean.
- 3. Remove the cap of the saw chain oil tank.
- 4. Fill the saw chain oil tank with the recommended saw chain oil.
- 5. Put back the cap of the saw chain oil tank.

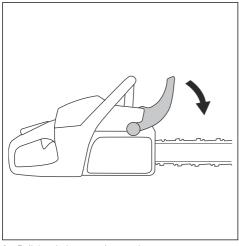
## Before you start the engine

 Examine the product for missing, damaged, loose or worn parts.

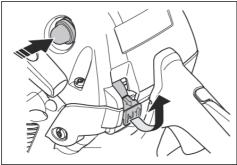
- · Examine the nuts, screws and bolts.
- · Examine the air filter.
- Examine the throttle trigger lockout and the throttle control for correct operation.
- · Examine the stop switch for correct operation.
- Examine the product for fuel leaks.
- Examine the saw chain sharpness and tension.

## To start a cold engine

 Move the front hand guard forward to engage the chain brake.

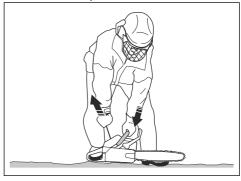


- 2. Pull the choke control out and up.
- 3. Push the air purge bulb 6 times.



- Hold the body of the product on the ground with your left hand.
- 5. Put your right foot through the rear handle.
- Pull the starter rope handle slowly with your right hand until you feel some resistance.

7. Pull the starter rope handle with force.

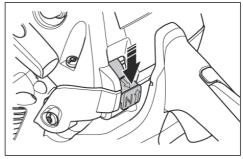




**CAUTION:** Do not pull the starter rope until it stops. Do not let go of the starter rope when it is fully extended. Release the starter rope slowly. If you do not obey these instructions, it can cause damage to the engine.

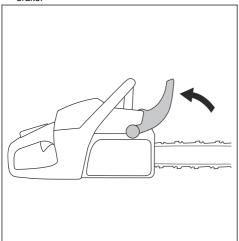
**Note:** Do not pull the throttle trigger when you start the engine.

- Continue to pull the starter rope handle until the engine starts or tries to start (pull max 3 times).
- 9. If the engine starts or tries to start, push the choke control down.



- 10. Continue to pull until the engine starts.
- 11. Hold the rear handle with your right hand and the front handle with your left hand.

 Immediately pull the front hand guard rearward in the direction of the front handle to disengage the chain brake.

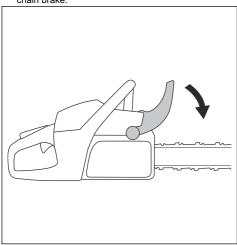


Note: The chain will move.

- 13. Run 20-30 seconds at elevated idle speed.
- 14. Pull the throttle trigger lightly to set normal idle.
- 15. Run 20-30 seconds at normal idle.
- 16. Use the product.

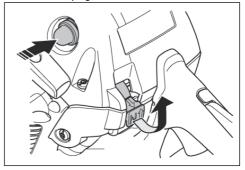
## To start a warm engine

 Move the front hand guard forward to engage the chain brake.

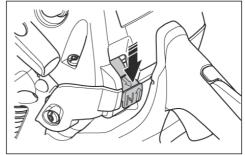


2. Pull the choke control out and up.

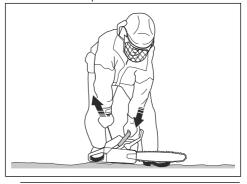
3. Push the air purge bulb 6 times.



Push the choke control down.



- Hold the body of the product on the ground with your left hand.
- 6. Put your right foot through the rear handle.
- Pull the starter rope handle slowly with your right hand until you feel some resistance.
- 8. Pull the starter rope handle with force.

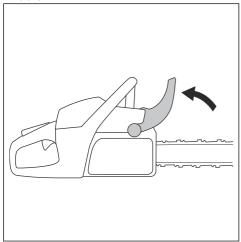




**CAUTION:** Do not pull the starter rope until it stops. Do not let go of the starter rope when it is fully extended. Release the starter rope slowly. If you do not obey these instructions, it can cause damage to the engine.

**Note:** Do not pull the throttle trigger when you start the engine.

- 9. Pull the starter rope handle until the engine starts.
- Hold the rear handle with your right hand and the front handle with your left hand.
- Immediately pull the front hand guard rearward in the direction of the front handle to disengage the chain brake.



Note: The chain will move.

- 12. Wait 10-15 seconds.
- 13. Pull the throttle trigger lightly to set normal idle.
- 14. Use the product.

# To start the engine when the fuel is too hot

If the product does not start, the fuel can be too hot.

**Note:** Always use new fuel and decrease the operation time during warm weather.

- Put the product in a cool area away from open sunlight.
- Let the product cool down for 20 minutes at minimum.
- Press the air purge bulb again and again for 10-15 seconds.
- 4. Obey the procedure to start a cold engine. Refer to *To start a cold engine on page 12.*

#### To stop

Push the stop switch to stop the engine.

**Note:** The stop switch automatically goes back to its initial position.

#### To use a spiked bumper

A spiked bumper holds the wood as you cut. The spiked bumper is a pivot between the engine body and the quide bar.

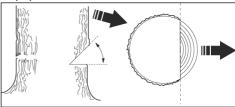
- Put the lower end of the spiked bumper at the correct felling hinge width.
- 2. Push against the front handle with your left hand and lift the rear handle with your right hand.
- 3. Cut until you get the correct felling hinge width.

**Note:** The felling hinge must have an equal thickness

Cut more than half of the diameter and then put the felling wedge into the saw cut.

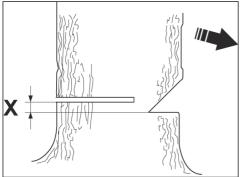
#### To fell a tree

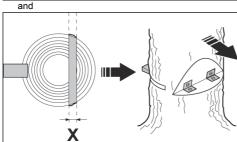
- Remove dirt, stones, loose bark, nails, staples and wire from the tree.
- Make a notch 1/3 the diameter of the tree, perpendicular to the direction of the fall.



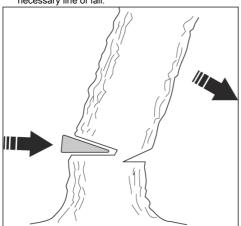
Make the lower horizontal notch cut. This helps prevent pinching the saw chain or the guide bar when the second notch is made.

4. Make the felling back cut (X) a minimum of 50 mm (2 in) higher than the horizontal notch cut. Keep the felling back cut parallel to the horizontal notching cut so sufficient wood is left to be a hinge. Do not cut through the hinge. The hinge wood keeps the tree from twisting and falling in the incorrect direction.





5. As the felling back cut nears the hinge, the tree starts to fall. Make sure that the tree can fall in the correct direction and not rock rearward and pinch the saw chain. Stop the cut before the felling back cut is complete to prevent this. Use wedges of wood or plastic to open the cut and let the tree fall along the necessary line of fall.

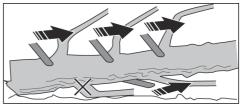


When the tree starts to fall, remove the product from the cut. Stop the motor, put the product down and use the planned escape path. Be careful of limbs falling from above and monitor your footing.



#### To limb a tree

- 1. Use larger limbs to hold the log off the ground.
- 2. Remove small limbs in one cut.



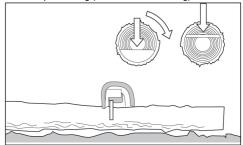
Cut branches that have tension from the bottom to the top to prevent pinching the saw chain or the guide bar.

## To buck a log

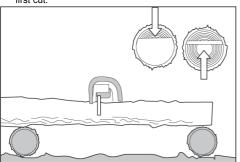


**CAUTION:** Do not let the saw chain touch the ground.

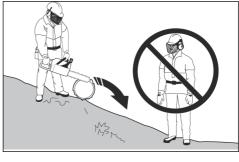
 If the log has support along its full length, cut from the top of the log (known as overbucking).



- If the log has support on one end, cut 1/3 the diameter from below the log (known as underbucking).
- If the log has support on the two ends, cut 1/3
  the diameter from the top. Complete the cut by
  underbucking the lower 2/3 of the log to touch the
  first cut.



 If you buck a log on a slope, always stay on the uphill side of the log. Cut through the log while you keep complete control of the product. Then release the cutting pressure near the end of the cut while tightly holding the rear handle and front handle.



#### Maintenance



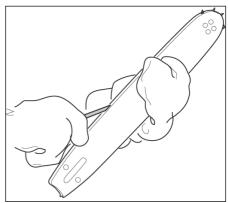
**WARNING:** Read and understand the safety chapter before you clean, repair or do maintenance on the product.

#### Maintenance schedule

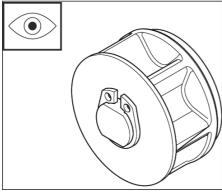
Make sure that you obey the maintenance schedule. The intervals are calculated from daily use of the product. The intervals are different if you do not use the product each day. Only do the maintenance work that is found in this manual. Speak to an approved service center about other maintenance work not found in this manual.

#### Daily maintenance

- Clean the external surfaces.
- Make sure that the throttle trigger lockout and throttle trigger work correctly.
- Clean the chain brake and make sure that it operates correctly.
- Examine the chain catcher for damage. Replace the chain catcher if it is damaged.
- · Turn the guide bar daily for more equal wear.
- Make sure that the lubrication hole in the guide bar is not clogged.
- Remove saw dust and other unwanted material from below the clutch cover.
- · Clean the guide bar groove.



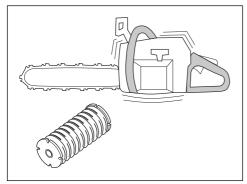
- Make sure that the guide bar and saw chain get sufficient oil.
- Examine the saw chain for cracks and irregularly worn rivets and links. If necessary, replace the saw chain.
- Examine the saw chain for the correct tension and for burrs on the chain drive links. If necessary, replace the saw chain.
- Sharpen the saw chain. Refer to *To sharpen the saw* chain on page 19.
- Examine the drive sprocket for too much wear and replace if necessary.



- · Clean the air intake of the starter housing.
- · Make sure that the nuts and screws are tight.
- · Make sure that the controls operate correctly.

## Weekly maintenance

- Make sure that the cooling system works correctly.
- Make sure that the starter, starter cord and return spring work correctly.
- Make sure that the vibration damping elements are not damaged.



File off any burrs from the edges of the guide bar.

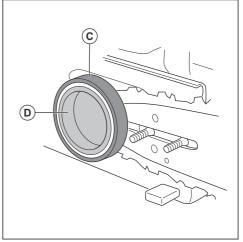
 Clean or replace the spark arrester mesh on the muffler



- Clean the external surfaces of the carburetor and its adjacent areas.
- Clean the air filter. Install a new air filter if it is damaged or too dirty to be fully cleaned. Refer to To clean the air filter on page 18 for more information.

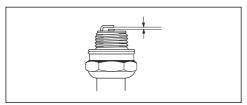
#### Monthly maintenance

 Examine the brake band on the chain brake for wear. Replace when the brake band thickness is less than 0.6 mm (0.024 in) at the most worn point.



 Examine the clutch center, clutch drum and clutch spring for wear.

 Clean the spark plug. Make sure that the electrode gap is correct.



- Clean the external surfaces of the carburetor and its adjacent areas.
- Examine the fuel filter and the fuel hose. Replace if necessary.
- · Empty the fuel tank.
- · Empty the oil tank.
- Examine all cables and connections.

#### Yearly maintenance

- Examine the spark plug.
- Clean the external surfaces of the carburetor and its adiacent areas.
- · Clean the cooling system.
- · Examine the spark arrester mesh.
- Examine the fuel filter.
- · Examine the fuel hose for damage.
- Examine all cables and connections.

#### Intermittent maintenance

- Have an approved service center repair or replace the muffler after 50 hours of operation.
- · Do maintenance on the spark plug when:
  - · the power level in the engine is low.
  - · it is hard to start the engine.
  - the engine does not work correctly at idle speed.
- Do a check of the saw chain lubrication each time you refuel. See To do a check of the saw chain lubrication on page 21.

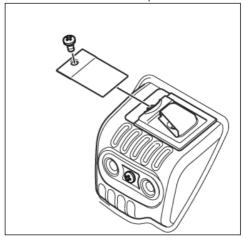
## To adjust the idle speed

Make sure that the air filter is clean and the air filter cover is attached before you adjust the idle speed.

- Turn the idle adjustment screw, which is identified with a "T" mark, clockwise until the saw chain starts to turn.
- Turn the idle adjustment screw, which is identified with a "T" mark, counterclockwise until the saw chain stops.
- The idle speed must be below the speed when the saw chain starts to turn. The idle speed is correct when the engine operates smoothly in all positions.

# To do maintenance on the spark arrester mesh

Use a wire brush to clean the spark arrester mesh.

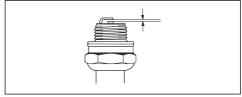


## To do maintenance on the spark plug



**CAUTION:** Use the recommended spark plug. Make sure that the replacement is the same as the manufacturer supplied part. An incorrect spark plug can cause damage to the product.

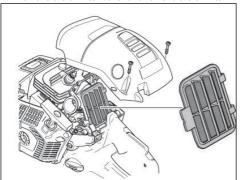
- If the product is hard to start or operate, examine the spark plug for unwanted materials. To decrease the risk of unwanted material on the spark plug electrodes:
  - a) make sure that the idle speed is correctly adjusted.
  - b) make sure that the fuel mixture is correct.
  - c) make sure that the air filter is clean.
- Clean the spark plug if it is dirty. Make sure that the electrode gap is correct.



3. Replace the spark plug when it is necessary.

#### To clean the air filter

1. Remove the air filter cover and remove the air filter.

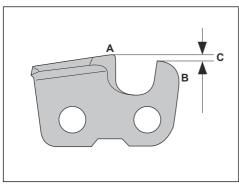


- 2. Clean the air filter with warm soap water. Make sure that the air filter is dry before you install it.
- Replace the air filter if it is too dirty to fully clean it. Always replace a damaged air filter.

## To sharpen the saw chain

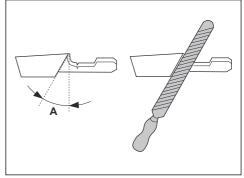
#### The cutter

The cutting part of the saw chain is called the cutter and consists of a cutting tooth (A) and the depth gauge (B). The cutters cutting depth is determined by the difference in height between the two, the depth gauge setting (C).

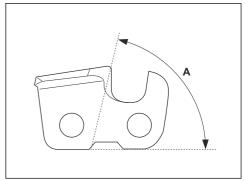


When you sharpen a cutting tooth there are four important factors to remember:

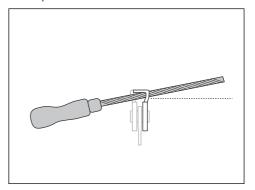
· Filing angle.



Cutting angle.

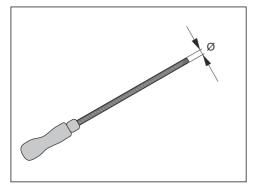


File position.



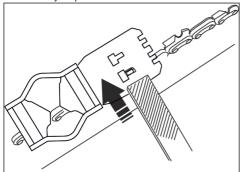
**19** 

Round file diameter.



#### To sharpen the cutting teeth

Use a round file and a file gauge to sharpen the cutting teeth. See Saw chain filing and saw chain combinations on page 24 for information on the recommended dimension of the file and gauge for the saw chain installed on your product.

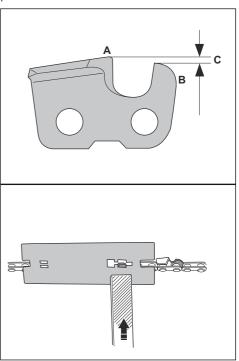


- Make sure that the saw chain has the correct tension. A chain without the correct tension moves to one side does and not sharpen correctly.
- Use the file on all the teeth on one side. Then use the file on the cutting teeth from the inner face and decrease the pressure in the reverse direction.
- 3. Turn the product on the opposite side and use the file on the teeth.
- Use the file to keep all teeth the same length.
   Replace a worn saw chain when the length of the cutting teeth decreases to 4 mm (5/32 in).

#### To adjust the depth gauge setting

Sharpen the cutting teeth before you adjust the depth gauge setting. See *To sharpen the cutting teeth on page 20.* When you sharpen the cutting tooth (A), the depth gauge setting (C) will decrease. To maintain optimal cutting performance, the depth gauge (B) has to be filed down to achieve the recommended depth gauge setting. See *Saw chain filing and saw chain combinations on* 

page 24 to find the correct depth gauge setting for your particular chain.



**Note:** This recommendation assumes that the length of the cutting teeth is not reduced excessively.

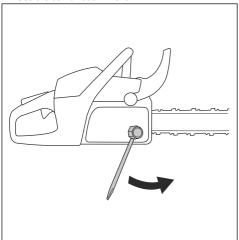
Use a flat file and depth gauge tool to adjust the depth gauge.

- Put the depth gauge tool above the saw chain.
  Detailed information regarding how to use the depth
  gauge tool will be found on the package of the depth
  gauge tool.
- Use the flat file to file off the tip of the depth gauge that protrudes through the depth gauge tool. The depth gauge setting is correct when you no longer feel resistance as you draw the file along the depth gauge tool.

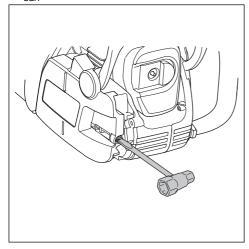
#### To tension the saw chain

**Note:** Check the tension of a new saw chain frequently during its running-in period.

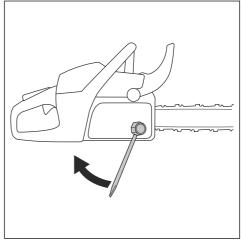
Loosen the guide bar nuts that hold the clutch cover.
 Use the combination wrench.



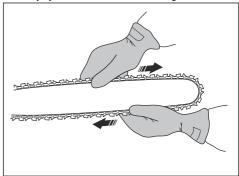
- 2. Tighten the guide bar nuts by hand as tight as you can.
- Lift the top of the guide bar and extend the saw chain by tightening the chain tensioning screw. Use the combination wrench. Tighten the saw chain until it does not hang down from the bottom of the guide bar.



 Tighten the guide bar nuts using the combination wrench and lift the tip of the guide bar at the same time.



5. Make sure that you can pull the saw chain round freely by hand and that it does not sag.



# To lubricate the cutting equipment To do a check of the saw chain lubrication

Do a check of the chain saw lubrication each time you refuel.

- Start the product and let it run at 3/4 speed. Point the nose of the guide bar at a light color surface almost 20 cm (8 in) away.
- 2. After 1 minute of running, a line of oil shows on the light surface.
- If you cannot see the line of oil after 1 minute, clean
  the oil channel in the guide bar. Clean the groove
  in the edge of the guide bar. Make sure the guide
  bar nose sprocket turns freely and that there are no
  blockages in the lubrication hole. Clean and lubricate
  the tip sprocket.

- Start the product and let it run at 3/4 speed. Point the nose of the bar at a light color surface almost 20 cm (8 in) away.
- 5. After 1 minute of running, a line of oil shows on the light surface.
- 6. If you cannot see the line of oil after 1 minute, speak to your approved dealer.

## **Transportation**

- Put the transportation guard on the cutting attachment during transportation to prevent injuries.
- Make sure that the product can not move during transportation.

## Storage

- Always put the product away safely when not in operation. Leakages and fumes from the product can touch sparks, naked flames from electrical equipment, electrical mowers, relays/switches, boilers and more.
- Always save fuel in an approved container.
- Empty the fuel tank and the chain oil tank when the product is in storage for longer periods of time.
   Discard used fluids correctly.
- Put the transportation guard on the cutting attachment during storage to prevent injuries.
- Remove the spark plug cap from the spark plug and engage the chain brake before storage.

#### **Technical Data**

	unit	130 (H13038HV)	135 Mark II (H13038HV)		
Engine specifications					
Cylinder displacement	cm <sup>3</sup>	38	38		
Spark plug	_	NGK BPMR 7A, BRISK HQT-1R	NGK BPMR 7A, BRISK HQT-1R		
Electrode gap	mm (in)	0.5 (0.02)	0.5 (0.02)		
Fuel tank volume	cm <sup>3</sup>	350	350		
Idling speed	min <sup>-1</sup>	2800-3200	2800-3200		
Power output at 9000 min <sup>-1</sup>	kW	1.5	1.6		
Emission durability period	h	125	125		
Noise and vibration data					
Equivalent vibration level (ahv, eq) left handle <sup>1</sup>	m/s <sup>2</sup>	3.72	3.72		
Equivalent vibration level (ahv, eq) right handle <sup>2</sup>	m/s <sup>2</sup>	5.5	5.5		
Sound power level, guaranteed (L <sub>WA</sub> ) <sup>3</sup>	dB(A)	116	116		

Equivalent vibration level is calculated as the time-weighted energy total for vibration levels under various working conditions. Reported data for equivalent vibration level has a typical statistical dispersion (standard deviation) of 1.5 m/s<sup>2</sup>.

<sup>&</sup>lt;sup>2</sup> Equivalent vibration level is calculated as the time-weighted energy total for vibration levels under various working conditions. Reported data for equivalent vibration level has a typical statistical dispersion (standard deviation) of 1.5 m/s<sup>2</sup>.

<sup>&</sup>lt;sup>3</sup> Noise emissions in the environment measured as sound power ( $L_{WA}$ ).

	unit	130 (H13038HV)	135 Mark II (H13038HV)
Sound power level, measured <sup>4</sup>	dB(A)	114	114
Sound pressure level at operator's ear <sup>5</sup>	dB(A)	102	102
Product dimensions			
Weight (excluding cutting equipment)	kg	4.68 (10.3)	4.68 (10.3)
Oil tank volume	cm <sup>3</sup>	260	260
Fuel and lubrication system			
Oil pump capacity at 9000 min <sup>-1</sup>	ml/min	9	9
Type of oil pump	_	Automatic	Automatic
Saw chain and guide bar			
Standard guide bar length	cm (in)	35-40 (14-16)	35-40 (14-16)
Recommended guide bar length	cm (in)	35-40 (14-16)	35-40 (14-16)
Usable cutting length	cm (in)	33-38 (13-15)	33-38 (13-15)
Maximum saw chain speed	m/s	22.3	22.3
Saw chain pitch	mm (in)	9.52 (3/8)	9.52 (3/8)
Thickness of drive links (gauge)	mm (in)	1.3 (0.050)	1.3 (0.050)
Type of drive sprocket	_	Spur	Spur
Number of drive sprocket teeth	_	6	6

## Accessories

## Guide bar and saw chain combinations

Guide bar			Saw chain		
Length	Pitch	Gauge	Max. nose radius	Туре	Drive link count
14 inch	3/8 inch	0.050 inch	7T	Husqvarna H37	52
16 inch				Husqvarna S93G	56

 $<sup>^4</sup>$  Noise emissions in the environment measured as sound power (L<sub>WA</sub>).

<sup>5</sup> Equivalent sound pressure level is calculated as the time-weighted energy total for different sound pressure levels under various working conditions. Typical statistical dispersion for equivalent sound pressure level is a standard deviation of 2.5 dB(A).

## Saw chain filing and saw chain combinations

Chain type	Round file size	Side plate angle	Top plate angle	File guide angle	Depth gauge set- ting	Depth gauge part no.	File gauge part no.
H37, S93G	5/32 in	80°	30°	0°	0.025 / 0.65	5056981-03	5052437-01 (H37)
	4.0 111111						5878090-01 (S93G)

## **Declaration of Conformity**

### **EU Declaration of Conformity**

We, Husqvarna AB, SE 561 82 Huskvarna, Sweden, tel: +46-36-146500, declare under our sole responsibility that the product:

Description	Gasoline Chainsaw	
Brand	Husqvarna	
Platform / Type / Model	Platform H13038HV, representing model 130	
Identification	Serial number dating 2022 and onwards	

complies fully with the following EU directives and regulations:

Regulation	Description	
2006/42/EC	"relating to machinery"	
2014/30/EU	"relating to electromagnetic compatibility"	
2000/14/EC	"relating to outdoor noise"	
2011/65/EU	"restriction of use of certain hazardous substances"	

Harmonized standards and/or technical specifications applied are as follows:

EN ISO 12100:2010, EN ISO 11681-1:2011, CISPR 12:2007, ISO 14982:2009, EN IEC 63000:2018

In accordance with Annex V, the declared sound values are:

Measured sound power level: 114 dB(A)
Guaranteed sound power level: 116 dB(A)

TÜV Rheinland LGA Products GmbH Notifi ed Body for Machinery (notifi ed under 0197) Tillystraße 2 - 90431 Nürnberg, Germany TÜV Rheinland has carried out 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 IX, has the number: BM 50444521

This type examination certificate is applicable to all manufacturing locations and Countries of Origin, as stated on the product.

The supplied gasoline chainsaw conforms to the example that underwent EC type examination.

On behalf of Husqvarna AB, SE 561 82 Huskvarna, SWEDEN, 2022-05-13

Claes Losdal, R&D Manager, Husqvarna AB Responsible for technical documentation



# **Husqvarna**

www.husqvarna.com

Original instructions