



# FILING THE CHAIN



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The chainsaw and guide bar should be fixed in a position that ensures stability, and in a way that makes it possible for you to have both hands free for filing. The easiest way is to use a vice on a workbench to secure the guide bar. Make sure the chain is properly tensioned – preferably harder than while cutting – so that it doesn't move around. For extra stability, you can always activate the chain break.

## Cutting tooth angles



The cutting teeth on the chain must be filed according to specific filing angles, these angles vary depending on the type of chain you have. If you use a filing gauge you don't have to think about the different angles to ensure a good result. Just follow the instructions and you'll get the right angles on the cutting teeth.

## METHOD

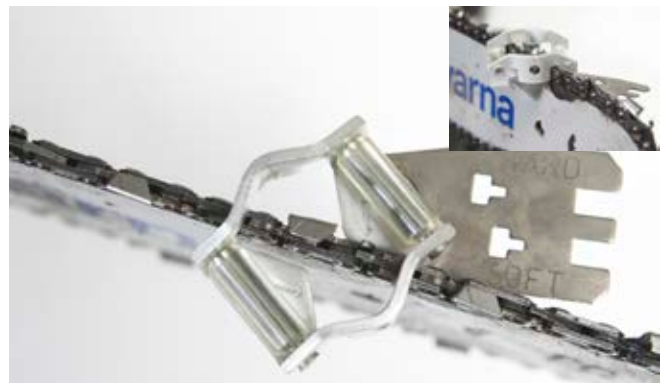
### Filing the chain with a filing gauge

1

**START WITH THE CUTTING TEETH** Use the round file and filing gauge designed for the type of chain you've got. Correct size is stated on the chain packaging as well as on the template.

2

**PLACE THE FILING GAUGE ON THE CHAIN** The arrows on the filing gauge should point in the chain's direction of rotation (towards the nose wheel). Make sure the gauge has contact with the chain.



### 3

**FILE WITH BOTH HANDS** Place the file at a 90-degree angle in relation to the rollers on the filing gauge. The file should rest on both rollers. The filing angle is then 25–35 degrees depending on the type of chain. File the cutting tooth away from you, with smooth strokes.



### 4

**NOW PROCEED TO FILE EVERY TOOTH ON ONE SIDE** Each cutting tooth should be filed until it is sharp. It's important that all the cutting teeth are filed to equal length.

### 5

**ONCE YOU HAVE FINISHED FILING** When you are done with all the cutting teeth on one side, loosen the vice and then attach the guide bar from the other direction.

### 6

**THE OPPOSITE DIRECTION** Then sharpen the cutting teeth in the same way from the opposite direction.



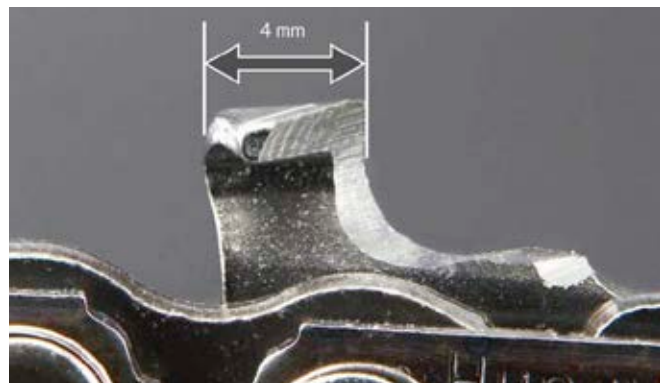
## Freehand filing



If you are used to filing, you can also file without the filing gauge. Be sure to maintain the original angles for the cutting teeth. To maintain the correct angle and depth of the cutting teeth, we recommend that you keep on using the filing gauge even after you've filed freehand a few times.

Avoid filing too high which will make the chain blunt, or deep, which will produce a 'hook', making the chain too aggressive. This will make the saw exposed to unnecessary strain and the user to increased vibration.

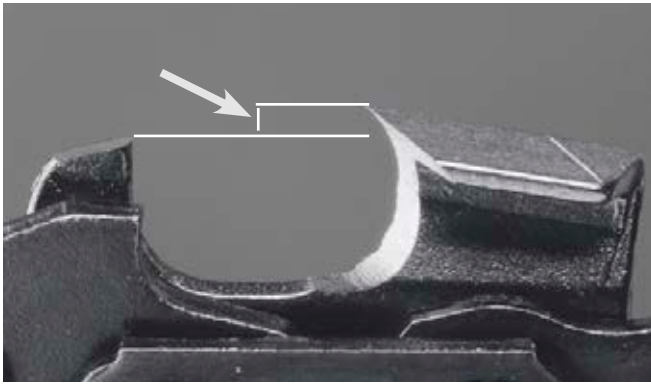
## Replace the chainsaw chain



It's time to replace the chain when the longest portion of the cutting tooth has been worn down to less than 4 mm, or if you find cracks.

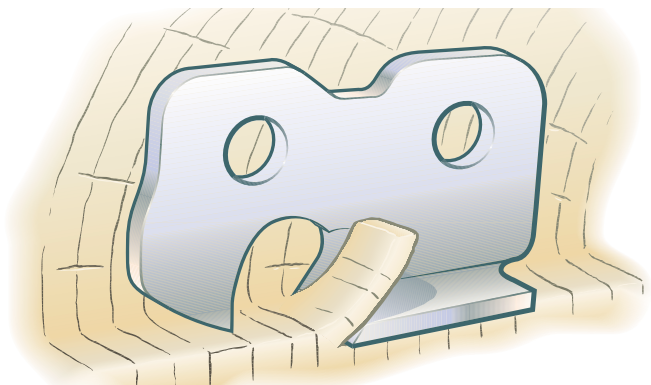


## Depth gauge



The height difference between the position of the depth gauge and the tip of the tooth (depth gauge clearance) determines how much the cutting tooth will cut. It works much like a plane. When a plane is set up with minimal cutting blades, it cuts a very small amount of wood. The same thing happens with the saw chain if the distance between the depth gauge clearance lip and the tip of the tooth is too small. Also, it's never good if the depth gauge clearance lip has been filed down too much. This will make the cutting tooth cut too deeply into the wood. The cut will then be more aggressive with high vibrations as a result. The risk of kickback increases and the chainsaw is exposed to unnecessary stress.

A beneficial technique to get the best result is to file in an angle (as shown in the image above). Using the template will help secure this.



## METHOD

### Filing the depth gauge



We recommend that you file the depth gauges after you have filed the cutting teeth 3–4 times during normal wear. For example, should you have happened to hit stone or gravel, with a lot of filing as a result, you should also make sure to file the depth gauges. The depth gauge has the words “Soft” and “Hard” stamped on it. “Soft” stands for soft wood (conifers) and “Hard” stands for frozen and hard wood (deciduous/leafy trees). If the depth gauges are filed using the “Hard” setting, each tooth takes slightly less wood than when filing with “Soft”. When the timber is hard, you cannot cut as much wood at one time as you can with soft wood. The measure of the depth gauge varies with the type of chain. For exact information, please consult the saw’s user manual.

1

**PLACEMENT** Place one of the holes in the gauge over one of the depth gauges on the chain. Select “Soft” or “Hard”, depending on the timber you intend to cut. Let the gauge sit against the cutting tooth behind it.

2

**HOLD THE GAUGE FIRMLY IN ONE HAND** Hold the flat file in your other hand and file the depth gauge until the file comes in contact with the gauge.



### 3

**RIGHT OR LEFT DEPENDENCIES** How the gauge sits against the chain depends on whether the cutting tooth is positioned to the left or right.



### Sharpening the chainsaw chain in the forest

Make sure you are on solid, stable ground where you can safely secure the saw when you use the file. Here are some examples of how to proceed. Use the method that works best for you. The main thing is to make sure you always have a sharp chain to facilitate your work.

#### METHOD

#### The simplest method

### 1

Use a filing vice.

### 2

Fasten it securely in a stump or log using an axe or a breaking bar. Then proceed to securing the guide bar like in a normal vice.

### 3

File according to the filing instructions.



#### METHOD

#### Use a smaller tree

### 1

Make a vertical bore at a suitable working height for filing.

### 2

Make sure to avoid kickback when you make the bore (see previous chapter).

### 3

Stop the engine and insert the guide bar in the bore.

### 4

Secure the guide bar by inserting the combination spanner between the guide bar and the saw cut.

### 5

File according to the filing instructions.

### 6

For increased stability, make an angle cut below the chainsaw and then insert a lifting hook in the slot and use the hook grip to support the chainsaw.



## METHOD

### Sit astride a tree trunk

This method allows you to file with both hands.

1

Sit astride a tree trunk.

2

Hold the saw body between your thighs.

3

Lean over the chainsaw body and support your forearms on your thighs.

4

Start by filing all the cutting teeth in one direction with the same file grip.

5

Now change the file grip to your other hand and file the other side. In this stage, you can choose to lean the saw against a stump or log.

6

File according to the filing instructions.

7

Press your right leg against the engine body so that it's kept in a secure position.

8

File the rest of the cutting teeth on the other side, according to the filing instructions.



### How often should the chain be sharpened?

A saw chain's sharpness is impaired after time – even if you have avoided cutting into objects that reduce the sharpness (rock, soil, etc.). Should you cut through stone, the chain is more or less useless and must be sharpened immediately.

Cutting only wood will help the chain's sharpness to last and the need for filing and sharpening varies instead depending on the amount of work and factors such as the hardness of the wood. However, if you use a chainsaw for much of the day, you should make it a habit to check it every time you refuel. Should you feel the need to “lean in” and put extra effort and weight into your cutting, it's a clear sign of a blunt chain.

### Chain type

Always use the guide bar and chain that is recommended by the manufacturer. If you're not sure of which chain you should use, please don't hesitate to contact your nearest authorised Husqvarna dealer for advice.

### Chain tension



Make sure the chain is correctly tensioned. A slack chain can jump off the guide bar, cause injuries and damage the chainsaw. A slack chain – as well as an overly tight one – can also cause premature wear on the bar.

A properly tensioned chain should not hang under the guide bar. The chain tension is correct when the chain is in contact with the underside of the guide bar, and you still can pull it around easily by hand.

