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The Ultimate

GUIDE BAR & SPROCKET IDENTIFICATION GUIDE

At www.chainsawbars.co.uk we have a unique product selector so you don't have to get too involved in understanding the ins and outs of identifying your bar and chain. If you buy a bar, chain and drive sprocket together from us then these will all be compatible with each other. The selector guides run off a database that in turn is based on standard information for new chainsaws.

However, if your chainsaw is second hand or an older model, someone may have fitted a non standard bar, chain or drive sprocket. It is always worth looking at your existing equipment in order to understand the basics of bar, chain and sprocket identification. This guide will help you do this

CHAIN | GUIDE BAR | SPROCKET IDENTIFICATION PART 1

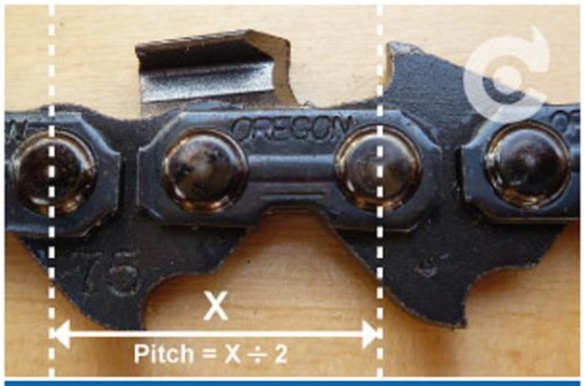
THE BASICS

There are 3 fundamental measurements when talking about bars and chains – pitch, gauge and the number of drive links.

PITCH

On this website 3/8" is often referred to as .375" and 1/4" as .250."

Pitch is the measurement between any three consecutive drive rivets divided by 2.



Pitch measurement

A simpler way to look at it is pitch measures the size of the chain, it will be one of 5 measurements:

- 1/4 is the smallest size chain
- 3/8 lo pro (also called '91' by Oregon and 'Picco' by Stihl) for smallest saws
- .325 mid size/smaller saws
- 3/8 for mid size saws
- .404 the largest for 90cc+ saws

Chain sizes

The difference between 3/8" & 3/8" lo pro.

A difficult idea to grasp. The 3/8" lo pro chain is different to 3/8" standard. In the picture, you can see the two chains share the same pitch but are different sizes.

A 3/8" lo pro chain will not work with a standard 3/8" sprocket and vice versa. Stihl call their 3/8" lo pro chain a picco chain and often have 3/8" p.

3/8 lo pro chain usually has a gauge of .050 and is used on small chainsaws. 3/8 standard chain is used on mid size saws up to and including 90cc.

The pitch of the chain must match the pitch of the drive sprocket / drive rim and this must match the end sprocket of the bar. If these elements don't match then damage will occur.

3/8 lo pro & 3/8 chain

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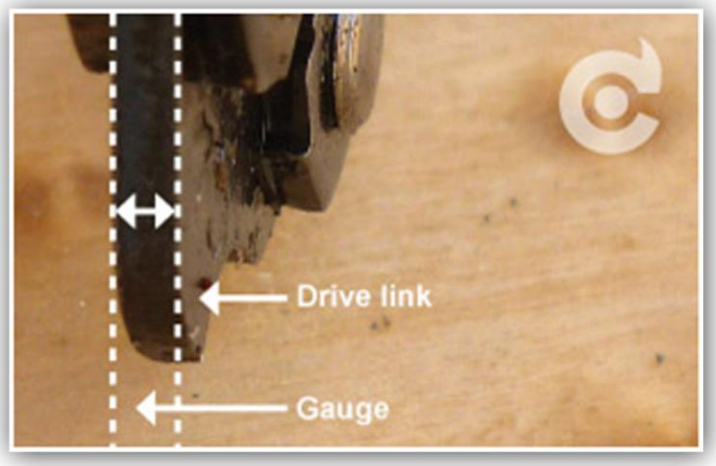
GAUGE

This is the thickness of the drive links

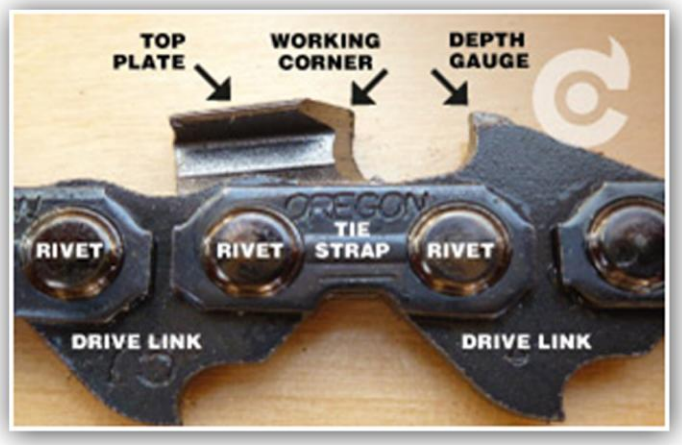
The drive links are the part of the chain that sit inside the bar. They are not the actual chainsaw cutting teeth. The gauge is often written on the bar. It may be in inches or millimetres:

- .063" or 1.6mm
- .058" or 1.5mm
- .050" or 1.3mm
- .043" or 1.1mm



The gauge on both the bar and chain must match up. Too wide a chain gauge and the chain will not fit into the bar. Or it may fit into the bar but will need force to do so. Too narrow a chain gauge and the chain will be sloppy in the bar causing poor cutting and rapid bar wear.

Chain Parts



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Number of drive links

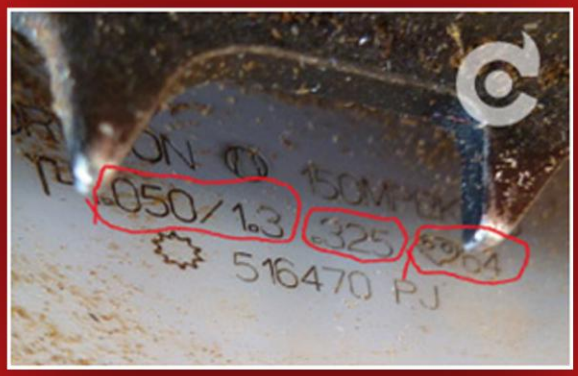
Again this will usually be written on the bar, but you can always count the number of drive links on an existing chain. Remember these are not the cutting teeth of the chain they are the parts of the chain that sit inside the bar. The number of drive links needs to be correct or you will either not be able to fit the chain (too few), or you will not be able to tension the chain (too many).

Identifying the chain from information on the bar

Bars are the best place to determine what size chain you are running. Have a look on the bar for numbers that would help indicate pitch, gauge and drive link count. Some bars are much clearer than others!

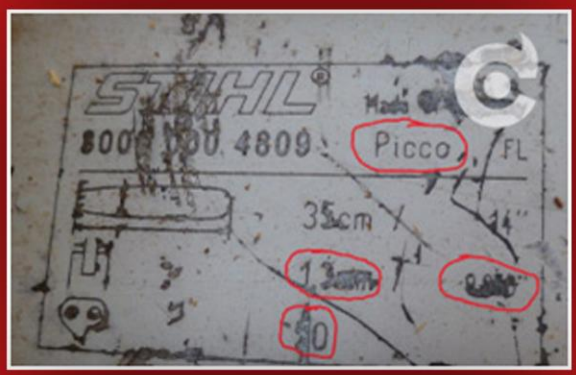
Bar ID Example 1

This tells us that the pitch is 3/8", the gauge is .058" and the number of drive links is 92.



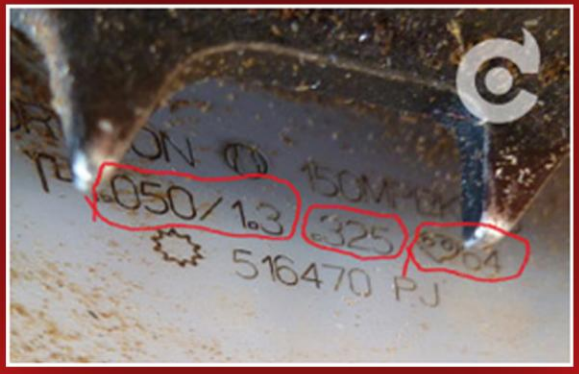
Bar ID Example 2

The pitch here is a picco chain – Stihl's way of saying 3/8 lo pro. Usually this is .050" and this is confirmed here as 1.3mm or .050". Finally the drive link count is difficult to make out – 50 drive links. In this case, double checking manually would be sensible.



Bar ID Example 3

Tucked in behind the saw dogs, this tells us the pitch is .325, the gauge is 1.3mm or .050" and the number of drive links 64.



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Identifying chain from the chain

Harder to identify but still rewarding. You can also count the number of drive links. Also look for numbers and letters on the chain itself

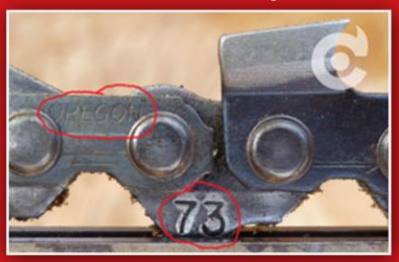
Chain ID example 1

The chain tells us it is made by Stihl. The number 6 on the cutter tells us the pitch is 3/8 lo pro or (picco) and the number 3 on the drive link indicates a gauge of .050" (or 1.3mm).

Chain ID example 2

The chain tells us it is an Oregon chain. The number on the drive link says '95' and on the chart below we can see the pitch is .325 and the gauge is .050" or 1.3mm.

Chain ID example 3



Again we have an Oregon chain. The number on the drive link says 73 and the chart tells us it is a 3/8 pitch chain and .058" gauge (or 1.5mm).

Chain ID Chart

Our chain ID chart will help you find out what these numbers mean:

Stihl		Oregon		Carlton	
Number marked on cutter	Pitch	Number on drive link	Pitch & gauge	Marked on drive link	Pitch & gauge
1	1/4	20	.325 .050	N1C	3/8 lo pro.050
2	0.325	21	.325 .058	K1	.325 .050
3	3/8	22	.325 .063	K2	.325 .058
4	0.404	25	1/4 .050	K3	.325 .063
6	3/8 lo pro (or picco)	27	.404 .063	B2	.404 .058
		33	.325 .050	B3	.404 .063
Number on drive link	Gauge	34	.325 .058	A1	3/8 .050
1	0.043	35	.325 .063	A2	3/8 .058
3	0.050	50	.404 .050	A3	3/8 .063
5	0.058	51	.404 .058		
6	0.063	52	.404 .063		
		58	.404 .058		
		59	.404 .063		
		72	3/8 .050		
		73	3/8 .058		
		75	3/8 .063		
		90	3/8 lo pro .043		
		91	3/8 lo pro .050		
		95	.325 .050		

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CHAIN | GUIDE BAR | SPROCKET IDENTIFICATION PART 3

Identifying sprockets and rims

Sprockets are the hardest to identify and sometimes it's just not possible. Usually the pitch will be stamped on a rim or sprocket.

Sprocket ID example 1

Stihl picco (3/8 lo pro) spur sprocket with 6 teeth.

Sprocket ID example 2

Stihl .325 pitch spur sprocket with 7 teeth.

Rim example 1

Oregon Powermate .325 rim with 8 slots.

Rim example 2

Stihl 3/8 pitch rim with 8 slots.

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Identifying sprockets and rims

Sprockets are the hardest to identify and sometimes it's just not possible. Usually the pitch will be stamped on a rim or sprocket.

Bar nose ID

Identifying a bar is easy as long as the writing on it is still legible and the paint is intact. The information we need to know is the length (usually in inches) and the bar gauge (which will correspond to the chain gauge). If the bar has a nose sprocket it is useful to know the nose sprocket pitch)

Bar ID Example 1

Stihl Picco bar 10" Type Rollamatic E Mini Light.

Bar ID Example 2

Oregon bar 173RNFE031. The main thing to realise is the first 2 numbers refer to the bar length in this case 17". The third number relates to the bar gauge .063" (or 1.6mm).

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