

15 MOST COMMON DECK CONSTRUCTION MISTAKES

November,
2012

Mistakes to avoid

The 15 most common deck construction mistakes are easy to avoid. In this guide we look at the main causes for these mistakes and how to avoid them.

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FOOTINGS

#1- Hitting underground water, power and/or gas mains

The consequences of hitting a water, power and/or gas main may be serious or even fatal injuries, not to mention the inconvenience of a loss of power, gas or water. To avoid this unnecessary and dangerous frustration, ensure you carry out all your checks with your local government agency and service providers first (call “Dial before you dig” on 1100 in Australia). Once you have the information regarding the locations for each of the services, mark them out on the ground before you dig your footings. This way you lessen your chances of hitting the mains, because you can see where they are meant to be.

When you dig your footings, it is highly recommended that you dig them by hand using a shovel and crow bar. This way if you are unfortunate enough to hit a mains service, there is less chance of you seriously damaging it.

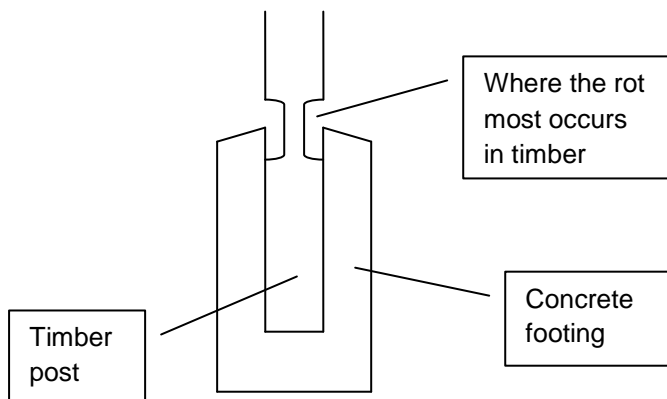
One thing to keep in mind: if you do hit a water, power and/or gas main and you have spoken to “Dial before you dig” and you have done as much research as possible to locate the mains, you will substantially minimise your liability.

For more information go to Howtodecks.com.au

#2 – Timber posts rotting away within a few years of the deck being completed

There can be many reasons for this, the most common are as follows:

1. Timber posts being directly concreted into the concrete footings.
This is a problem because concrete is porous and absorbs ground moisture. This means the timber post will be continually moist, the perfect environment for timber rot. The post will rot in the location shown below the quickest, as it is the last place to dry out and the first place to get wet.



To find out more, purchase your copy of “Digging and installing footings” from Howtodecks.com.au, simply click on this link – [Buy Now](#)

2. Timber posts that have gardens or dirt/soil built up around them and/or touching the timber post will cause the post to rot. Below is a picture of a timber post that has rotted away because of soil build up.

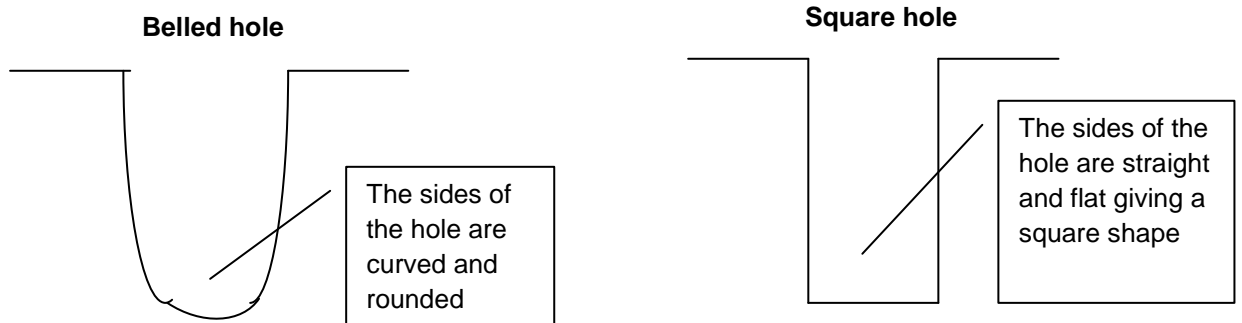


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#3 - Sinking deck frames

The most common reason for sinking deck frames is incorrect footing sizes. This is normally due to not instructing an engineer to design the structural components of the deck. Another reason could be that the owner bolts the deck posts directly to an untested existing concrete slab, usually a pathway. Most concrete paths over 20 years old do not have any form of reinforcing in them.

The best and only recommended way to install deck posts is directly into dug footings using galvanised steel stirrups. Make sure the footing hole is dug straight down and not “belled” (this is a commonly-used industry term, which is illustrated below) and all the loose dirt is dug out from the hole.



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SUBFLOOR FRAMING

#4 – Deck floor sagging and bouncy to walk on

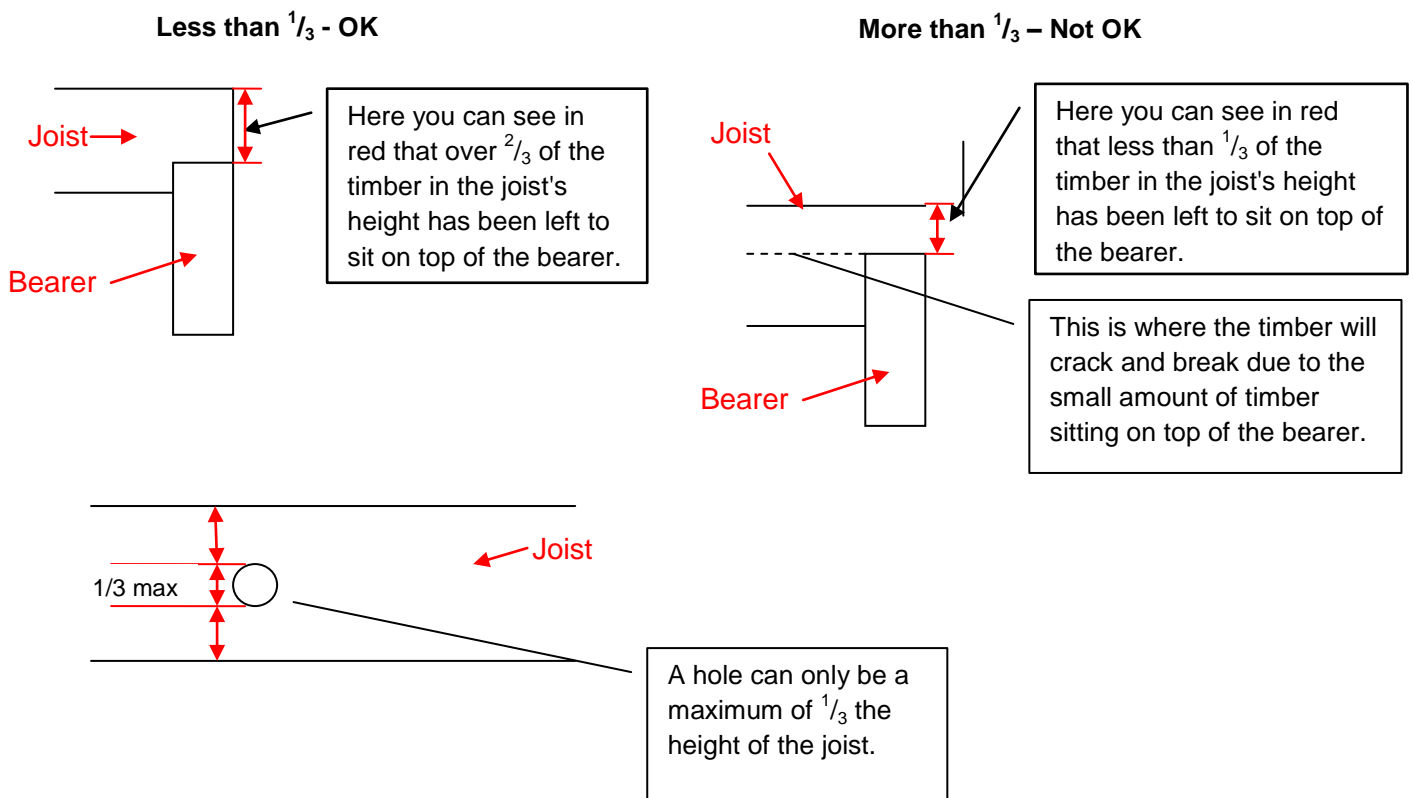
Saggy and bouncy deck flooring usually occurs because incorrect timber/timber sizes have been used. There are two main types of timber: hardwoods and softwoods (all types of pines, etc). As you can guess from the name, one is stronger than the other. You can swap softwoods with hardwoods and not have a problem, keeping in mind that you must use structurally rated timber. However when people make this mistake it is usually because they have gone the other way, more often than not in an attempt to try and save some money. By swapping hardwoods for softwoods, you are asking for major problems later on - worst case scenario: your deck will collapse.

By employing the services of an engineer you have an opportunity to discuss your budget, the different materials available and work out the best solutions for your project.

To find out more, purchase your copy of “Deck building material calculations check list” from Howtodecks.com.au, simply click on this link – [Buy Now](#)

#5 – Timber cracking and breaking

Aside from using the wrong sized timber, cracking and breaking is most commonly caused by too much timber cut being out of the joist. The maximum amount of timber that can be cut out of a joist is $\frac{1}{3}$ of the height, width or thickness at any one time. There are a few ways this can be measured:



When more than $\frac{1}{3}$ of the timber height, width or thickness needs to be cut out, additional supports need to be added. This can be in the form of metal brackets or something similar.

For more information go to Howtodecks.com.au

#6 – Bolts, nails and steel rusting

USE GALVANISED BOLTS, NAILS AND STEEL!!!!!!

This is not optional. Your deck will start to fall apart in a matter of months if you do not use galvanised bolts, nails and steel. Galvanising is where zinc coats the steel, and is usually done by dipping the steel into a molten vat of zinc. Zinc as a metal is more corrosive than steel, so when steel is coated in zinc, the zinc will corrode before the steel does. This in turn will leave your steel corrosion-free for a very long time. Be aware that some steel fixings, known in the industry as “bright” fixings (fixings that have a shiny metal finish), are coated in zinc. However the coating is so thin it will not offer you any protection whatsoever.



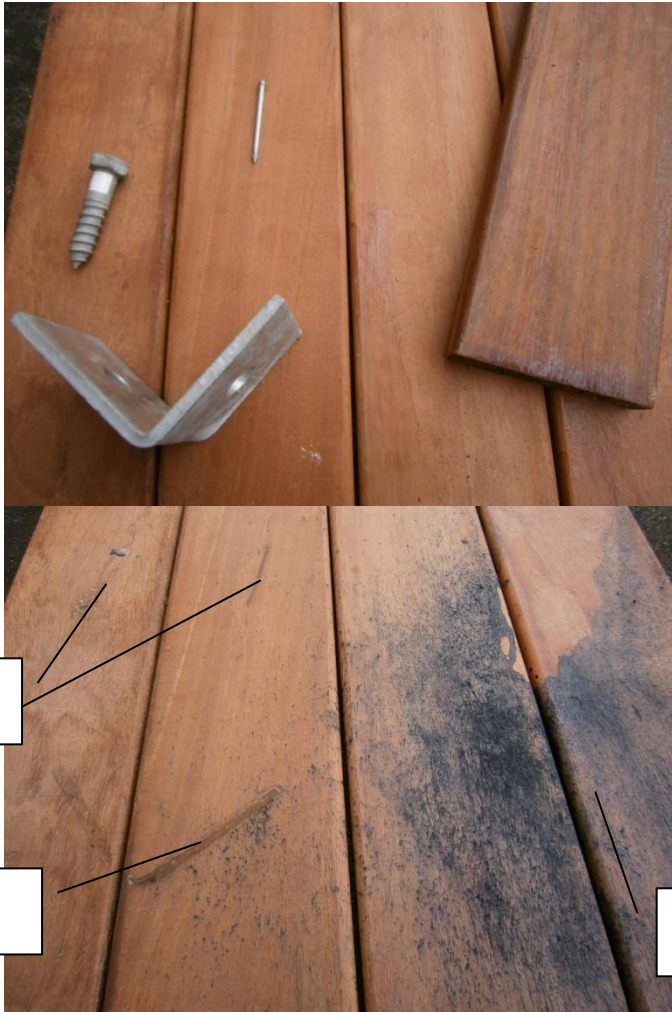
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DECKING

#7 – Black stains on decking boards

Black stains are caused by leaving metal objects on a wet deck. The only way to stop this from happening is to clean the deck after each day of construction. Pick up all tools, nails, bolts and anything else metal and sweep the deck down. It is also worth noting that when you hammer in nails, there is a small amount of metal filings that fall off the nail.

Finally, do not use a grinder on the deck, anywhere near the deck or where people will walk where you were grinding and then walk onto the deck. Grinding sparks leave metal filings everywhere and as you will see in the pictures below they leave a very ugly black mark.



There are a couple of ways to remove black marks, however they both take a lot of elbow grease:

Option one - Clean the deck with a product called “Deck Clean” (a mild acid) and scrub like you have never scrubbed before and then repeat; and repeat; and repeat...

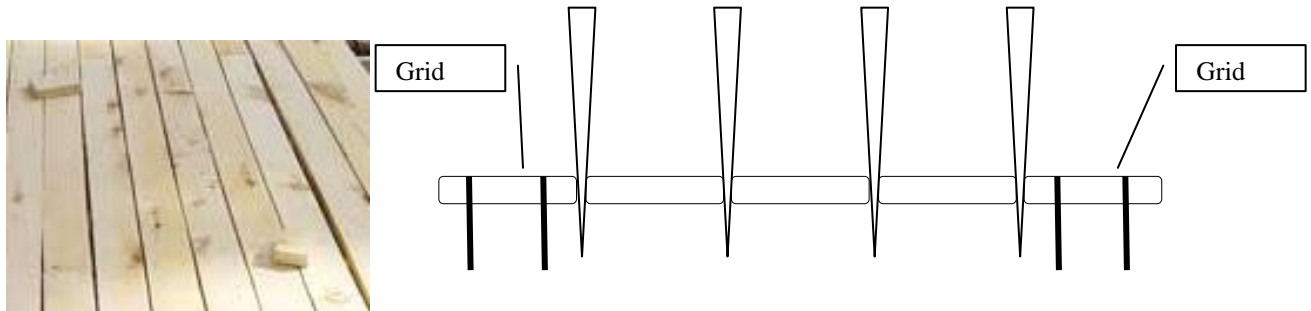
Option two - Sand the marks out. It is best to do this by hand as power sanders can end up making more of a mess than the black mark itself.

To find out more, purchase your copy of “Installing decking boards” from Howtodecks.com.au, simply click on this link – [Buy Now](#)

#8 – Decking boards not installed straight

This happens because the installer has installed the decking boards one after another, usually using a nail to space the current board from the previous board. This is a problem because no nail or decking board is exactly the same size. Your decking boards can vary in size by up to plus or minus 0.5mm, and you may have 40 rows of decking boards to be laid. Over the entire span of your deck that is plus or minus 20mm, and this variation is the same for every joint that you nail a decking board too! And that is not even allowing for the size of the nail to vary at all. With those sorts of numbers you can see it is nearly impossible to get a totally straight-looking deck.

There are many ways to install your decking boards in a straight line. The easiest way to do this is to use a chalk line (a chalk line is a string line coated in chalk, that when you flick it leaves behind a straight line of chalk) and mark out every fourth or fifth board (called a grid board) and nail that board to every floor joist aligned straight to your flicked chalk line. Once you have installed all the grid boards, place all the other boards in between them and use wedges to evenly space these boards. Make sure when you do this that you allow a 2-3mm gap between each board.



There is much more to installing decking than that. Did you know that there is a legal requirement about where and how you join your decking boards?

To find out more, purchase your copy of “Installing decking boards” from Howtodecks.com.au, simply click on this link – [Buy Now](#).

#9 – Greying and rotting decking boards

This is either caused by not coating the deck with a decking oil or stain once the deck was complete or poor deck maintenance, i.e. not maintaining the decking oil or stain during the life of the deck. If your deck does not have a roof over it, the sun will deteriorate the coating faster than it would for a covered deck. A good rule of thumb is that the moment any of the coating is starting to fade, or look grey it is time to re-coat the whole deck.



To find out more, purchase your copy of “How to maintain your deck” from Howtodecks.com.au, simply click on this link – [Buy Now](#)

ROOF FRAME, ROOFING & CEILINGS

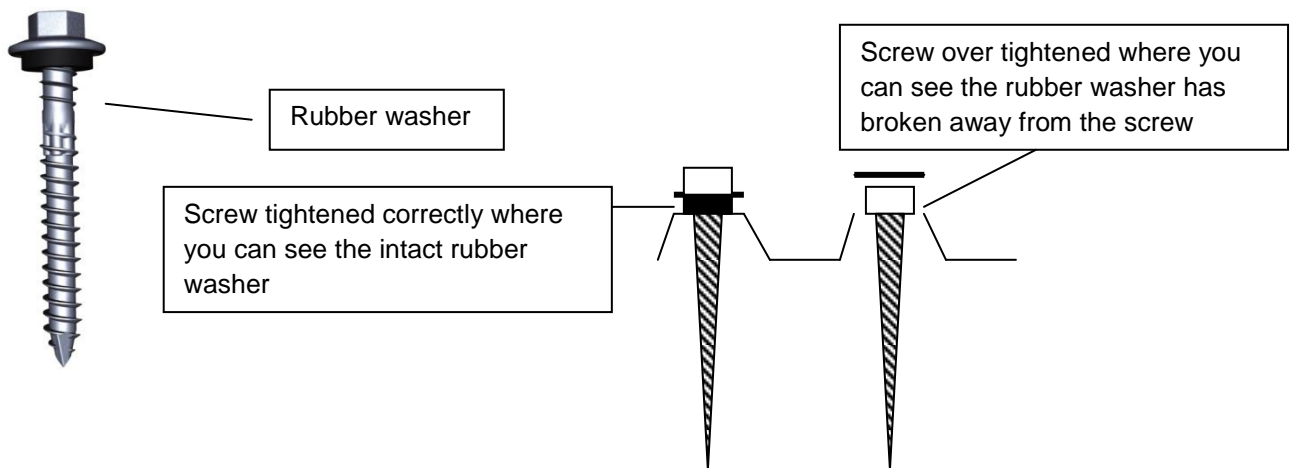
#10 – Losing your deck roof in a severe storm

To avoid this you need to engage an engineer to design all structural aspects of your deck. This is not a recommendation, this is a must. If you build your deck without the appropriate engineering experience and something goes wrong, **you** are liable. If someone gets hurt **you** can be charged with assault or worse.

For more information go to Howtodecks.com.au

#11 – Leaking roofs

The most common yet sometimes not the most obvious reason for this is that the roof screws have been over tightened. The roof screw has a rubber washer at the base of the head. This washer seals the hole that the roof screw has made in the roof sheeting when the screw is screwed in. When the screw has been over tightened it squashes the rubber washer and breaks it, allowing water to enter into the screw hole. See below.



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#12 – Sagging ceiling

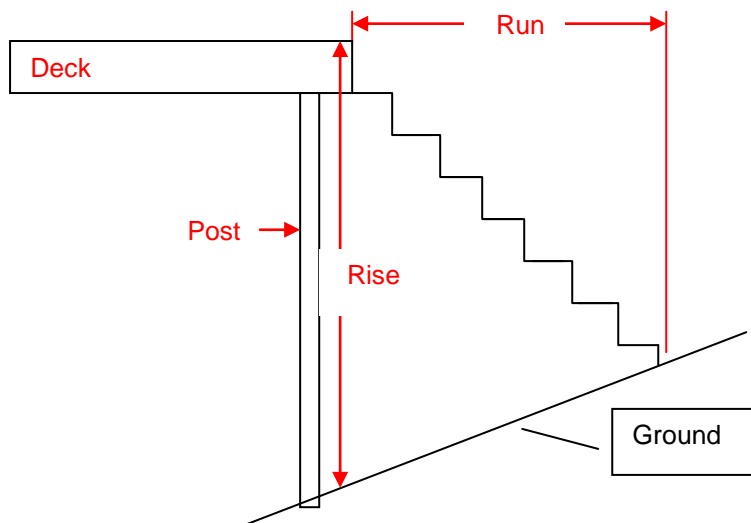
The most common reason for sagging ceilings is that the supports are positioned too far apart. When the ceiling was first installed, it may have been flat and straight. However, over time (usually after about 6 months), moisture in the air will soften the ceiling enough for gravity to start to take effect. This makes the ceiling sag causing a wave like effect on the ceiling. To avoid this always follow the manufacturer's instructions.

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STAIRS & HANDRAILS

#13 – Stairs not level

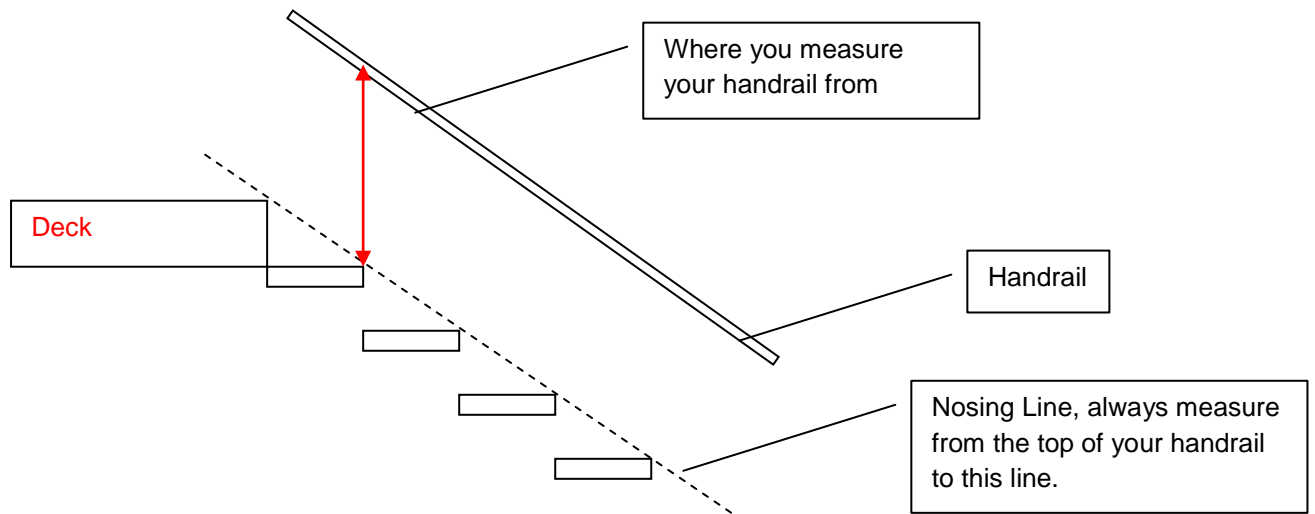
This happens because when the stair set height was first measured, called the “rise” (the height from the ground to top of the decking boards), it was not done correctly. The rise was probably measured straight down from the edge of the deck and not where the stairs meet the ground, called the “run” (the distance from edge of decking boards to front edge of the bottom step tread). In the diagram below you can see the height difference between straight down from the edge of the deck, compared to where the stairs actually meet the ground. If the rise height is measured close to the deck and not where the stairs meet the ground, you will either have too many or not enough step treads for your flight of stairs. This will result in your step treads either tilting forwards or backwards.



To find out how to build timber stairs purchase your copy of “Timber stair construction” from Howtodecks.com.au, simply click on this link – [Buy Now](#)

#14 – Stair handrails too low

Firstly if you don't know what the minimum heights of handrails are, you need to check with your local building authority or engineer. The top of the handrail is measured straight up and down from the top, front edge of the step tread, which is called the “nosing line”. The nosing line is an imaginary line that runs along the top front edge of every step tread. This is where your local government agency will measure your handrail height from when they check to see your handrails meet building regulations.



For more information go to Howtodecks.com.au

THE BIGGEST MISTAKE MADE

#15 – Local government agency having decks altered or removed

This is a very easy mistake to avoid, simply ensure your deck is approved before building it. If you choose to try and build without the correct approvals, this can end up costing far more than just the local government fees you saved by not having the approvals in the first place. The local government agency may not make you remove your deck; they may just want you to change the size or even location of the deck. As you can imagine this is going to be a major cost and re-work for you.

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