

# Practical 5<sup>th</sup> Wheel Information

Hodge RV Co imported fully NZ compliant “X-treme” 5<sup>th</sup> wheels and autoslide hitches from the USA for four years before they started building “RoadGlide” 5<sup>th</sup> wheels here in NZ two years ago. They are the NZ authorized distributors and service agents for “Pullrite” rigid and autoslide 5<sup>th</sup> wheel hitches.

## # 1 - Getting hitched... by Dean Hodge of Hodge RV Co

*Perhaps the most important part of your rig, the connection between the ute and trailer is a source of great mystery to those who are new to 5<sup>th</sup> wheels. Because of this, many people end up with a setup that does not really suit their purposes.*

### The KINGPIN.

Most USA manufactured trailers will arrive with welded-in kingpins. In the case of a light 5<sup>th</sup> wheel, it falls to the discretion of the WOF inspector to determine if it is safe – which for light trailer purposes it usually will be. Although weld-in kingpins are not necessarily illegal for heavier COF 5<sup>th</sup> wheels in NZ, most will lack the required certification stamping, and will also have the welds too close to the kingpin centre for our regulations. NZ regs for welding of kingpins are different to those in the USA. Given their scarcity of use in NZ, replacement weld-in (also known as “mushroom”) kingpins are not always readily available.

If you find that you need to replace the weld-in kingpin on your trailer, your best course of action is not to cut out the kingpin, but rather to cut the entire skid plate off the pinbox. This is easier and cleaner than cutting out the pin, and you can just get a new skid plate fabricated to suit a bolt-in kingpin. Once you have the new plate welded up in place of the old plate, it also makes any future kingpin replacements an easy half hour job. If anyone needs help with this I have a computer file with bolt patterns that I can email to the profile cutting shop you wish to use.

If you need to replace your existing bolt-in kingpin, it is imperative that you accurately measure the thickness of your skidplate before heading off to the parts shop! Getting the wrong kingpin protrusion can damage your hitch latching mechanism.

### The HITCH

There are many different brands and styles of hitches, from cheap and nasty, to super fancy ones complete with air bags to soak up the bumps!

For the last 6 years we have been supplying the “Pullrite” range of autoslide and rigid hitches to the NZ market. So we could export to Australia, we also had to have the autoslide hitch tested and complied for use in the Australian market. This was quite expensive, and required the destruction of a hitch during testing.

Here in Kiwiland, there are currently no compliance regulations for hitches – only the hitch mountings. However, at Hodge RV we still remove the USA rating plates on the Pullrite autoslide hitches, and replace them with NZ

printed ones showing the safe rating (as specified by the AUS testing). We sell a lot of these hitches.

#### **There are a number of ways to classify hitches.**

There are sliding and non-sliding hitches, single and dual oscillating heads, clam-jaw, slide-bar, and horseshoe pin retention, quick-release and permanent mounting, etc, etc, etc.

In the sliding group you have manual sliders made by many manufacturers, and the autoslide type such as those made by Pullrite.

Manual sliders have different ways of switching, but all of them require you get out and move a lever or pull pins before driving around the corner. The autoslide does away with that, and glides back and forth whenever you turn a tight corner without any further action by the driver. The downside of manual sliders is that you have to remember to get out and set the hitch before turning tightly. The downside of the autoslider is the amount of deck space it takes up, and the higher purchase cost.

A single oscillating head is one where the head of the hitch is able to pivot or tilt on a single axis running across the deck (giving front to back tilt). A dual oscillating head adds a second pivot axis running along the vehicle, (giving side to side tilt). Hitches with single oscillating heads are cheaper, but that is their only advantage. While they are sufficient for rigs that stay on the freeways of North America, they are not well suited to the NZ recreational 5<sup>th</sup> wheel market. When driving thru dips in a straight line, a single oscillating hitch does just fine and allows the trailer to change angle relative to the ute, but what about when you turn a corner that also has a dip in it, such as turning out of a service station driveway or maneuvering around on a lumpy POP site? With a single oscillating hitch, you're now forcing your rig into a twisting motion that the hitch cannot absorb, and instead it transfers it straight to the chassis of your ute and trailer. It's not just a “small rig” problem either. In the Shenandoah National Park a few years ago, I saw a Dodge Ram 2500 reversing a very large 5<sup>th</sup> wheel up around a corner onto an elevated site. He had a single oscillating hitch, and as he reversed up and around this corner, the inside wheel of his pickup got so light it almost lifted off the ground. At the same time, the suspension on that side of the trailer got lower and lower and lower.

Most manufacturers offer a single oscillating hitch as their cheapest model, but thoughtfully, many of them also sell upgrade kits that you can retrofit later to make your hitch a dual oscillating type. RBW and Reese both have such kits available.

There are many types of kingpin retention systems. The most common are the slide-bar and clam-jaw, and most other types are variants of these designs.

The slide bar is exactly that, a bar that slides across behind the kingpin when you hitch up – much like a deadbolt across a door. The downside to the slide-bar system is that when the trailer turns, you're rubbing a round kingpin against a flat bar, and therefore the contact surface is very small. Over a fairly short period of time the kingpin will wear a semi-circle into the slidebar, causing the “stop-start, bump-bump” feel often associated with older 5<sup>th</sup> wheels. These are the cheapest type of hitch – but nevertheless are also one of the safest! Because the bar is supported at both ends, the pin simply cannot pull out under load. It is also very difficult to hitch up incorrectly, as either the bar is across or it's not. These are a very easy hitch to visually check.

The clam-jaw is a system that was quite popular a few years ago, but after a few failures (mainly operator error rather than the hitches themselves), some manufacturers are now steering clear of them. Clam-jaws open up two opposing half circles, which lock together when the pin enters the gap and triggers the spring-loaded mechanism. Because the round kingpin is then clamped in a round housing, the contact surface area is quite large, and wear is minimal. Unfortunately, it is easy to think these hitches are latched when they really aren't. When this happens, you pull away from your site – and your trailer falls out of the hitch and crashes onto the sides of your deck... Some manufacturers have now come up with effective safeguards and safety latches to improve this style of hitch. You will get many many kms out of a clam-jaw hitch without any perceptible wear or slackness, but this type of hitch needs to be double and triple checked every time.

We carry the Pullrite range of hitches, and they employ the “horseshoe” system of pin retention. Taking the best of the clam-jaw and the slide-bar, they hold the pin with a horseshoe shape that rotates 180 degrees around the pin when latched. This gives the contact surface area of a clam-jaw, with the retention of a slide-bar. They are more expensive because of the mechanism that drives the rotating horseshoe, but they are virtually impossible to mis-hitch, and are as close to wear-free as you can get. We sell the non-slider version for \$1500 + GST.

## The MOUNTING

**Mounting** your hitch is where you enter into certification issues.

**On a WOF vehicle**, your hitch mountings must withstand the same level of scrutiny that your towbar installation would. It's still a good idea (as we do) to have an independent party such as a towbar manufacturer or engineer do your installation, and put their company sticker on it. If you do decide to do the hitch install yourself, welding to the chassis is a definite no-no. If you do you'll need to have a low volume certification inspection done on your ute before you're issued a WOF.

**For a COF vehicle**, you must have an engineer do the work, it must be certified and a compliance plate must be affixed to the vehicle. Although the guidelines give rather large minimum bolt sizes and quantities (meant to suit large commercial rigs), most certifiers these days will pro-rate the requirements down to the maximum tow rating of your vehicle. If your certifier refuses to do this, then find a new certifier. In this case common sense should prevail. Installing a hitch to full heavy commercial specs on a light to medium ute, would entail drilling such a large number of big holes that the end result would be a weakened chassis.

**Some** of the quick release hitch mount systems available for American trucks are very good, but be careful. Some do not have enough "meat" in the chassis mounts to satisfy even a pro-rated hitch installation. You also want to bank on having to throw out and source locally some of the high tensile components, such as quick release lug pins and bolts. The parts in these imported kits are often not stamped as high tensile, and therefore are not acceptable for certification. If you have the sample parts however, it's usually not too hard to get replacements made.

## QUESTIONS?

**Anyone** can claim to be an "expert". I make no such claim, however I do have a substantial amount of knowledge and experience in 5<sup>th</sup> wheels.

**Hodge RV** have imported specifically built NZ compliant models since 2001 and also designed and built them here in Christchurch for the past 2 years. I have investigated and got on top of most aspects of 5<sup>th</sup> wheels.

**I've driven** all around and across the USA many times myself, and still travel over there 3-4 times a year. When we were importing 5<sup>th</sup> wheels I spent nearly half my time in the USA, but now I only spend a week or two there at a time.

As well as a heavy 5<sup>th</sup> wheel, we also keep a 46' utility gooseneck trailer and F-250 in the USA.

**If you** need help or have any questions on 5<sup>th</sup> wheels I'll certainly do my best to help you out. Obviously I'm biased towards the lightweight 5<sup>th</sup> wheel market, but I'll still help you sort out your heavies!!

I can be contacted on (021) 599-998, or thru our website – [www.HodgeRV.co.nz](http://www.HodgeRV.co.nz)

## 5<sup>th</sup> Wheel Parts

Although we don't have a "parts shop" as such, Hodge RV Co is always happy to help 5th wheel owners whenever we can.

We do not build caravans or motorhomes, just 5th wheels. We **are** the 5th wheel specialists, and we carry many 5th wheel specific parts that other RV supply companies simply don't.

Some of these harder-to-find 5th wheel parts that we carry include -

**Hitches (rigid and sliding), landing jacks (manual and electric), leg snaps, pin locks, lube plates, etc, etc.**

We source almost all of our parts direct from the USA, and carry many other direct replacement parts for American RV's such as -

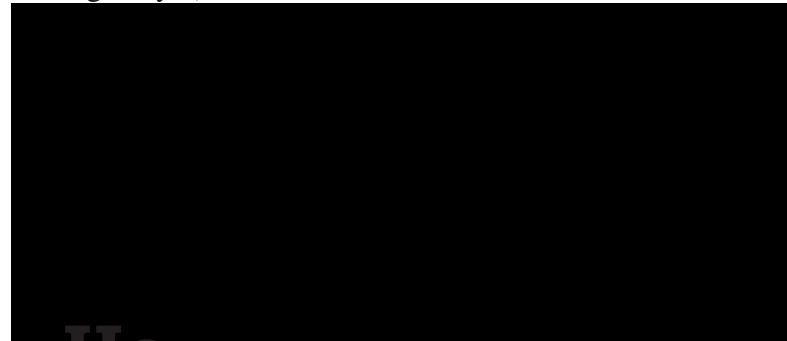
**Hub sets, axles, quality brake controllers, vents, folding steps, rain hoods, door handles, windows, doors, sewer assemblies & hoses, hatches, epdm roof rubber, textured roof vinyl, lighting, ducting, tapware, electronics, auxiliary showers, range hoods, etc.**

## Visiting Us

We don't allow people inside the factory; however you are most welcome to park overnight at our premises in Christchurch. We also have a dump station on site, and water for filling your fresh tank.

If we have time we're also happy to do repairs on your 5th wheel for you. We have about 15 staff, including 2 qualified welders who can do chassis work.

Our address is 36 Hickory Place, Templeton, Christchurch (just off Highway 1).



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