

Caravan Talk

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Diary Dates

- Leisurefest at Sandown 1-4 October, 2009
- Get to Know Your Caravan Seminars
13 June, 22 August
- Hardings Caravan Storage Opening June

Bouncing Around Australia

Suspensions

Caravanners are becoming more and more adventurous as the years go on. Our traditional trip to Rosebud or Merimbula at Christmas has evolved into a yearly trip around the big block - Australia! As we embark on these intrepid travels, we probably need to spare a thought for our caravan suspensions! This is what will ensure our trip is memorable for all the right reasons!

Over our 34 years at Hardings we have rebuilt, serviced and replaced many suspensions and have the experience to understand the conditions where they all best fit. For many years we supported the philosophy of 'keeping it simple' by using straight axle and leaf springs. This still is a very good option and the most common suspension still around, however caravanners now go where they never did before, plus much further! This has led us to fitting several different suspensions in the last few years which are all tailored to the customers travel habits.

This article provides an insight into some of the lessons we've learnt and will help you understand your current caravan suspension as well as assist in specifying the suspension on your next caravan purchase. These are our opinions based on our experience.



Axle and Leaf Springs (Single axle)

A very simple system that is suitable for made and unmade road conditions. With a suitable rating on the springs and axle this system will last for many years

without much maintenance at all. Springs are most commonly an eye-slipper type where the rear section of the spring slides loosely in a hanger, or on eye to eye springs like you often see on the axle of a utility. Springs will flatten out and need replacing after 50,000km. The signs of wear on the slipper springs are when they start to point downwards (i.e. away from the horizontal direction) at the rear end of the spring. Historically we had lots of bent and broken stub issues however this virtually never occurs these days due to axles being more appropriately rated, particularly in the stub section. If you were doing a lot of unmade road travelling then packing a spare spring may be a good asset as they can occasionally crack when used on corrugated/unmade roads.



Alko Independent axles

This independent axle has come out of Europe and been installed on several Australian caravans over the years. It works on a rubberised cam system that if rated appropriately will provide maintenance free travelling for many years. They now come fitted with shock absorbers as well, however even without shockers they don't bounce excessively. They can be used for off-road conditions, but are probably not ideal for extensive off-road travelling. For instance if a repair was required en-route it would be quite difficult as they are a complete axle. In saying that they are generally a good option and wouldn't require attention unless overloaded.

After several years/kilometers they may need re-rubbering and the signs of this is wear on the inner edges of the tyres. Re-rubbering can only be done at Alko where they press in new rubbers based on the required axle rating.

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Suspensions



Simplicity Suspensions (Single and Tandem)

When they talk about keeping it simple this suspension ticks all the boxes. A very robust but simple independent suspension system that is very durable and used on many off-road caravans. The suspension has a swing-arm for each wheel which is extremely strong to ensure long term reliability. This system comes in a single and tandem system. The tandem system is load sharing, which means it evenly distributes weight to all 4 wheels whatever angle the caravan may be on. We recently serviced a single system that had just ticked over 350,000km's and it appeared the original bushes were still in the swing-arms. Springs are about the only wear component plus the top bush in the tandem model. Carrying a spare spring is often worthwhile where the caravan is travelling long distances in offroad conditions. The single axle system uses a standard eye-slipper spring, an eye to eye spring for heavier applications, whilst the tandem system uses a unique leaf spring.



Knee Suspension (Single and Tandem)

This independent suspension is mainly found on one brand of caravan in Australia. It is like the simplicity system in that it is simple plus seems to virtually never wear the moving components it uses. It doesn't distribute the weight on all 4 wheels evenly so in a tandem situation it's important to have the caravan setup level so weight isn't falling onto the axle that has more of the caravans balanced weight. Maintenance seems very little again apart from leaf springs that need changing when flattening out. The swing-arm on this system is different from the rest in Australia in that it hinges from the middle of the caravan, so when a spring is starting to flatten out it will wear the inner edge of the tyre. They are suitable system for some unmade road conditions although carrying a spare spring would be advisable.



Tandem Rocker Suspensions (Tandem Only)

You may have heard and seen all our discussions on these suspensions. They are fantastic at distributing the weight evenly on all 4 wheels (ie. Load sharing against being independent), but in the process they wear the components at a faster rate than most other suspensions. They are probably half the price of the other independent suspensions thus they are the most common tandem suspension system around.

Their downfall though is they do need more regular maintenance than most of the other systems we have discussed (Important every 10,000km). Carrying a spare spring with this system is strongly advised if you plan to do the odd detour on unmade roads. On a more positive note we have manufactured a special 'low wear' bush which extends the wear out a lot further and seems to help reduce springs breakages. We believe these bushes may take a suspension that is wearing standard bushes every 15,000km and push this out to around 40,000km. Every tandem serviced at Hardings has its suspension thoroughly checked. We usually recommend waiting till the bushes start wearing and then changing to the low wear bushes.



Tandem Rocker-Roller Suspensions (Tandem Only)

This is a load sharing system similar to the Rocker suspension, however at the end of each spring is a big loop where a roller runs in. This loop provides free play at the end of each spring for smaller axle movements, while the bigger axle movements rock on the main pivot arm like the rocker system. This difference enables this system to achieve much greater distances before wear appears and significantly decreases the risk of spring breakages. We have converted quite a few caravans over to this system for around \$1600 to provide a better suspension for the long term in respect to spring breakages en-route and general maintenance. This conversion makes the system much more appropriate for outback touring than the standard rocker system which is quite prone to spring breakages on unmade roads. Whilst they are similar suspensions the loop in the back of this system's springs reduce the shattering type movement which breaks leaf springs on the rocker system.



Independent Coils (Single and Tandem)

These suspensions have become a lot more popular in the past 10 years. The engineering on some of these suspensions is now very well designed and is probably one of the best systems for outback touring. These suspensions are often fitted to the very well respected caravans and tent trailers built specifically for off-road use. Sugarglider has built a very reliable system for many years. The control rider system also seems to be well engineered and is now being fitted to one long standing and well respected caravan. Coils have the advantage of being less prone to breakage than leaf springs however they do need to be assisted by shock absorbers to prevent excessive bouncing. Shock absorbers need to be monitored every 10,000km or in situations where they may sit for a few years between use. These suspensions do provide for a smooth ride for your caravan on corrugated rides and possibly don't suffer from spring breakages like leaf spring systems.

[Suspensions continued next page >](#)

News & Information

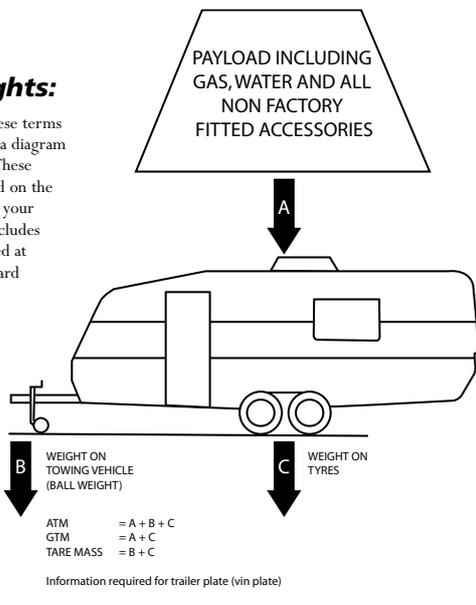


Air Assisted (Single and Tandem)

There are a few very well respected outback touring caravans using the air suspension system and it has earned a very good reputation for outback touring. Those who do a lot of outback touring and are prepared to spend a little more on their suspension would not be disappointed by an air suspension system. Customers talk about an appreciable difference on unmade roads. Trucks are progressively moving across to air suspensions and in time it's likely the caravan industry will also make the transition. If you were installing it you would need to ensure the pipes and compressor system are well protected.

Caravan Weights:

ATM, GTM, TARE etc. These terms can be confusing. Below is a diagram explaining their meaning. These expressions are often found on the VIN plate of your van. For your information Tare weight includes all standard fittings included at the factory. Industry Standard Payload is 300kg for a single axle and 400 kg for a tandem axle but of course this may vary from owner to owner. Payload includes water and gas along with all personal belongings and food etc.



Staff Profile



Dave, Andy H, Andy G

Andy H

Andy is a well known face if you're having work done on a car at Hardings. Andy comes from an Automotive background and is currently doing additional studies in the Auto Electrical Area. He's been with Hardings for just over a year now and has been a valuable (and youngest) addition to our team! Andy is our resident expert on fitting brake controllers to European Cars. Out of work you may bump into Andy at a couple of his favourite past times - Swap Meets or Playing 8 Ball.

Dave

Dave heads up our Storage Site plus keeps a caravan service or body repair moving back at base. Dave is one of our tractor driving gurus, plus being a long time caravanner is ideal for heading up the storage site. Many readers will know Dave as a one of the leading executives of the RACV caravan club. Dave likes his club time and is also a talented handyman.

Andy G

Andy has recently joined us again after some 13 years away. Andy ran the Body Workshop for Tom during the 90's and returns to a similar position (although with a bigger team and workload) Andy has worked in the caravan industry for some 17 years in various roles and has a high product and service knowledge. Coupled with his skills early in his career as a qualified carpenter it makes him ideal for managing the Bodyworkshop. Now his kids are older Andy has enjoyed taking more time out to get his 4WD off the beaten track again.



The Don'

Too true. We serviced a well known 'Don' caravan very recently that is in remarkable condition. You have to commend the owner for the condition it has been kept in. It's like owning a weatherboard house 40 years ago, as the delicate timber ply needs constant painting to keep the caravan water tight. The caravan is in very original condition and has been within the same family since 1947. It would be the oldest caravan we have worked on for several years, apart from ours!

News & Information

The Tekonsha Range

The Tekonsha range is growing but the Prodigy is still hard to beat. If you have brakes that need constant readjustment, we'll fit a Prodigy, and if you're still not happy we'll give you your money back. Greg Harding took this approach and he never had a return. They just make so many people with horrible brakes happy!



Prodigy P2

Still the Hardings favourite. Simple to use, highly reliable and the smoothest brakes you could ask for. The key to the success of this unit was the technology in the pendulum/accelerometer that provides a very smooth transition of power to the brake magnets based on the cars stopping speed.



Prodigy P3

The P3 is really a prodigy P2 with a slightly more user friendly control panel. Rather than having to hold the hand control across whilst dialing up your digital number, you just scroll down and enter it. The boost system is also a little easier to see. We've been running a few in staff vehicles to ensure there are no faults that appear early on and one year down it looks positive. The Americans have given it a good rap. The additional features do make it a little more expensive than the P2.



Primus

This is the unit we fit when a customer rarely tows or is after a budget system. It still has a pendulum system however it is like the older pendulum units in that it is set by an external lever (ie not self levelling like the Prodigy units) It uses a digital system like the P2 Prodigy and seems smoother than the older generation Hayes and Voyager units but in our opinion not quite as smooth as the Prodigy!

Take Charge of yourself!!



Charge those batteries, please.

We hate replacing batteries and you seem to hate that too! And yet we still seem to do it quite frequently. A battery really needs to be kept on charge constantly. The notion of charging it every 2-3 weeks doesn't always work as you suddenly remember 2 months later. Unfortunately then a discharge process has occurred and often led to sulphation where the battery has been damaged. From experience there are a couple of approaches to address this:



- Solar left on 24-7 keeps the battery constantly charged (only works if the caravan's not under a carport!!)



- A smart charger that is left on 24-7. We have been installing the C-TEK units now for well over 12 months. They have the ability to be left on for almost forever and smart enough not to overcharge a battery. There are very few units that can do this.

Booking Times

We harp on about this but we continue to ensure strict booking times, to ensure we provide you great service. It's a bit like visiting the doctor, arriving 1 hour late, and expecting the doctor to drop the patients booked in 1 hour later. If you are running late (or early) please notify us so we can then aim to make changes necessary to clear our front yard and free-up time with our staff. The nature of the work required on jobs these days will often mean we spend about a half hour with you writing down the job description and getting a detailed understanding of the work required. We deliberately stagger our drop-offs and deliveries in order to spend this time with you. So please try and stick to your appointment time and let us know if things change. Thanks.

PS. We generally arrange caravan drop-offs in the morning keeping the afternoon for collections. We can be flexible but we give you better service when we can operate within these times.



Jobs for the experts

Recent Jobs that may interest you



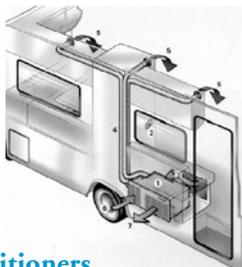
Insurance Work

At Hardings we do a lot of insurance work. Awnings are easily damaged whether through a windy night or driving too close to a pole. Lower dents and scrapes are pretty common, trees that fall on caravan roofs or front stoneguards that fly away. It certainly keeps our Body Workshop busy.



Access Doors

Access doors are often installed where people have a dead area of space within the caravan that isn't easily accessible from within but could be easily accessed from outside. They're supplied and installed for around \$300-500 depending upon the difficulty.



Climaster Air Conditioners

This is a one piece unit made by Dometic for retro installation into caravans. Ideal for pop-tops or caravans up to around 17', as they only use up a seat box area (ie. Not like a 2-piece unit). They have 3 outlet vents which can be located separately or together and are a very reliable air conditioner. Supplied and installed from \$2600

Roll Out Awnings

Always a popular installation on a caravan that doesn't already have one! As we enjoy outdoor living in our homes and caravans the awning makes this much more enjoyable.



Drop Down Table

We have done a few of these recently. They provide a good table which is almost 1 metre wide for your outdoor living area. Supplied and fitted from around \$450.

Front Stoneguards

The fitting of heavy aluminium checkerplate is becoming popular. It doesn't dent like regular aluminum and holds its good looks for longer than the vinyl.

The other popular modification is the larger mesh system that comes out in front of the A-frame which also helps deflect stones from breaking the back window in your 4WD.



Resealing

Not so much a modification but we're always conducting reseals. We still find a lot of rot in caravans and it's always cheaper to seal first than deal with rot later!!

Battery and Smart Charger

Often done within both the Body Workshop and Auto Electrical area. Installing a 100amp hr battery along with a suitable C-Tek charger provides a 12V circuit in your caravan that gives you somewhere between 3-5 nights away on un-powered sites (dependant upon power use) Andersen charging circuits or Solar can then be added at a later date.



Diesel Heaters

Ignore the name as you instantly imagine an old tractor and plumes of thick black smoke. Total opposite. A very impressive heater that pumps out heat very quickly and with very little noise. We have already installed a few of these units and they are becoming very popular on new vans.



The caravan mover

We've installed two but I'm confident they will become more popular. There's about one day's work to install these and connect all the wiring to a battery within the caravan. And its critical they're mounted with enough bracket strength so over time the pressure they apply to the wheels doesn't distort the mounts. However once installed it's a great way of moving the caravan at home on your own. In Europe they are almost commonplace now.

Suspensions

For better reliability or improved travelling smoothness we notice that each year we carry out more suspension conversions. We remove the existing suspension and carry out the engineering work to make the new system fit. The 3 most common suspension conversions are to a Rocker-Roller System, Simplicity System and Independent Coil System.

Your Place or Mine?



Over the years customers have told us about the struggle they have storing their caravans or campers. Many people have used Lowline or Wantirna Caravan Park for caravan storage. Both organisations have a very good reputation and we have an excellent working relationship with these storage sites. However, as both sites are often full we

have been on the lookout for a property that is close to our main base to cater for the additional demand. We have been fortunate enough to find a good long term storage site that will accommodate several hundred caravans as we grow!

Whilst we can offer casual storage, our most economical option is a permanent storage site. This provides you with access to your van 7 days a week and includes several collections and deliveries throughout the year. Permanent sites cost \$850/year and we have already signed up several customers ahead of time. As an introductory special we are offering a huge 30% discount for a permanent site for one year for the first 45 customers. That's just \$600 for a years storage. Afterwards the price will revert to our standard permanent site cost.

The site is based on a main road and access is only through our staff (we won't be handing out keys). Drop offs and pick ups need to be pre-arranged a few hours ahead of time and we can also open on weekends with sufficient notice. The site is very well lit and has been suitably protected with barb wire fences and steel boom gates at the front entrance. We insist that all caravans be locked via a coupling lock whilst on site and have additional security monitoring in place that we can discuss with interested customers.

We hope some of our existing customers will take up the use of our storage and we can offer the following concessions on your Undercarriage Servicing. For those on the standard yearly fee of \$850 we can either take your caravan from storage, service it and re-deliver it to storage, OR offer a 15% discount on your service (if you deliver and collect).

Whilst cost is a big consideration for everyone, we continue to place great importance on customer service. We are in the good hands of Dave who knows a thing or two about caravans

If you're interested in knowing more about our storage site and storage options then just give **Dave a call on 0488 489 268** to discuss. We are aiming to be open after 15th June, 2009.

Thanks

Andrew.

Hardings provides you with all the necessary products and services for your caravan.

- Accessories and spare parts
- Towbars, level rides and sway controls
- Electric brake controls
- Caravan repairs
- Trailer parts
- Camper trailer windup service and repairs
- Resealing
- Lift up beds
- Caravanners education programs
- Brakes and undercarriage servicing
- Chassis upgrades and repairs
- Aerolite chassis strengthening
- Sway problems corrected
- Improved lighting
- Bumper bars
- Outback preparation
- Caravanners advice
- Insurance repairs
- Solar equipment & installations
- Jacking systems
- Raise your van
- New pop top vinyls



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