Horse Float Safety

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This document discusses horse float design, not training. It is recommended that a horse and handler(s) are trained to be competent and comfortable with floating before attempting to float the horse.

For training visit http://www.normglenn.com

G'day horse enthusiast,

A lot of my time is spent helping people retrain horse's that will not float load. Some times it is the owner's float that has caused the horse to be unwilling to load. Hence, this paper is my opinion based on years of personal experience and research in helping troubled horses regain their confidence in floating. You do not need to agree with anything I say but at least consider everything before dismissing any of the suggestions. The objective of this is to have more horse owners truly think about float design for the horse's sake.

Happy reading and safe floating.
Norm Glenn

Disclaimer

Equine activities can be a hazardous, which may subject participants to possible serious injury. About Australia Horsemanship, Norm Glenn or any associates, will not assume any liability for your activities. This document provides general information, instruction and techniques that may not be suitable for you. No warranty is given regarding the suitability of this information, the instructions and techniques to you or other individuals acting under your instructions.

The Perfect Safe Float

The first prerequisite is for a float that is structurally sound and road worthy. The idea is to then eliminate anything that could result in the horse being:-

1. Cut or bruised from protruding objects and sharp edges.
2. Trapped by getting a leg/hoof in a hole such as between the draw bars; between the rear light support frame; or centre divider support legs etc.
3. Caught up or hooked by the lead-rope or headstall catching on items such as a protruding object, the under-corner edge of the mud-guard rear ramp latches, the spare tyre etc.

There are many gadgets fitted to floats that are unnecessary and many engineering aspects created that result in the horse being subjected to potential harm.

As the manufacturers of horse floats have not offered us what I consider to be the ultimate in safe float design, we need to take control and order a float that does the job.

To start the process, we need to think of the possible hazardous scenarios and instead of saying to ourselves *"it is unlikely to happen"* we need to say *"if we think it could happen, we need to fix it before it happens."* Hopefully, this paper will highlight some risks that you may not have considered before.

Aren't new floats safe enough?

Rather than answer that question, it is more a question of understanding what can go wrong. Then, you can assess a float and choose for yourself what risks exist.

However, before proceeding further, please understand that some people mistakenly believe that other than when travelling, float accidents never happen. Hence, they conclude that float design is not that important, except for their own comfort. Hopefully, you and your horse will never experience a float accident whether moving or stationary. However, it does happen when travelling and stationary, horses do suffer unnecessarily.

From the simple act of getting a lead-rope caught on a protruding float object, such as the under-corner edge of a mud-guard, it can send a horse into a frenzy of extreme flight from fear as it suddenly feels unexpected pressure on its head. The reaction can result in gashes, broken legs, even death or maybe create future fear of the float making it difficult to reload the horse.

The bottom line is that we can design/order much safer floats, rather than continuing to expose horses to harm from avoidable hazards.

The best way to avoid stationary float accidents

Avoid tying the horse to or near the float, simple! Yeah but I know, this is not practicable in many situations. So, it is best to build or modify the float, to achieve the perfect safe float or as near to it as possible.

Your next float order

In the aspiration of the goal of ultimate safety, this document contains recommended design features. These things can be kept in mind when buying your next float or should I say ordering, because I have not yet found a manufacturer who has an off-the-shelf version of these recommendations. Some go part of the way but not all.

The good news is that if you adopt my centre divider recommendations at the end of this paper, you can divert some money to spend on other important safety aspects.

What to do if you are not ready for a new float

The ultimate would be to order a new float immediately but this is not always practicable. However, you can easily assess your current float and without too much expense, make modifications to immediately enhance safety.

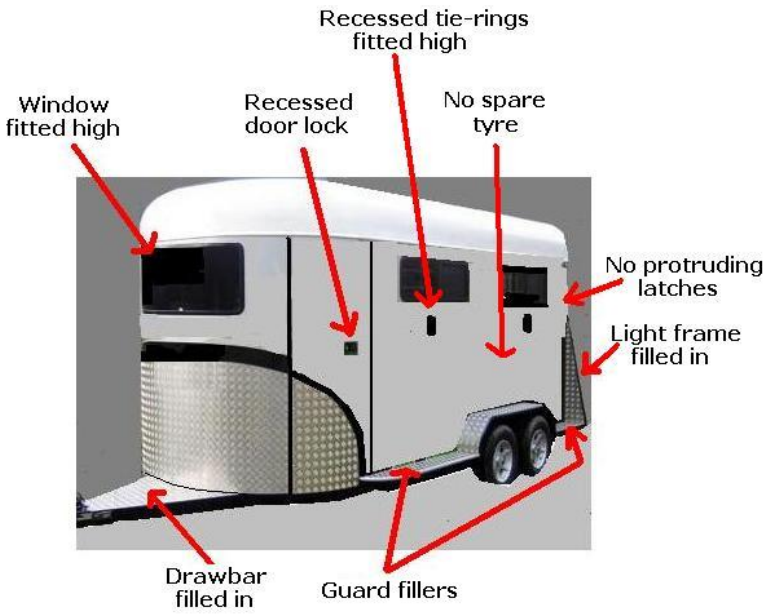
Outside of the float

Think about the outside, what can the horse get caught-up on, trap itself in or cut itself on? (also refer pics below):-

- Eliminate gaps that horses could get legs trapped in such as drawbars and rear light support frames etc. Checker plate is often a good material to fill gaps.
- Seek to eliminate corners, edges or handles that could result in a lead-rope or headstall being caught on.
- Mud-guard fillers, which fill in from the under-corner edge of the mud-guard will reduce the risk of the lead-rope or headstall getting caught on the mud-guard. The filler should fit from say the front side door, to the guard; and from the guard to the back end of the float.
- Tie-up hooks, which are set high on the outside, so the horse won't get a hoof or leg caught on a hay-net and/or lead-rope when they hang down.
- Feed buckets attached to side of float, are a hazard as these can snag the lead-rope.

Make sue you see How to tie up a your horse

- Fit recessed levers, handles, hooks and rear lights. Horses have a habit of catching the lead-rope or headstall on any protruding objects.
- The spare tyre is best fixed inside the float or on top of the draw bar. If it absolutely has to be on the side of the float, it is best on top of a mud-guard filler in front of a mud-guard. Side fitted spare tyres often snag lead ropes.
- Fit the front window so that the horse can see out without stooping, it will also may enhance light inside. However, it is essential, to fit a heavy duty wire mesh or metal bars, inside to prevent the horse breaking the window.
- A correct size tow ball. An incorrect size may result in the float coming off the vehicle.
- Rear doors, ramps need to be high enough so a horse cannot hang its bum over the top, it also discourages jumping out if the horse happens to turn around in the float. Split doors, a ramp with swing door over or fully enclosed rear doors can be an advantage. However, any spilt doors etc need to swing around the outside of the float so that they do not hang out to be knocked or caught on whilst open. Also refer notes for rear ramps on the next page, 'inside' section.



Recessed door handle

Recessed tie-up ring

Inside –

The inside has similar issues to think about:-

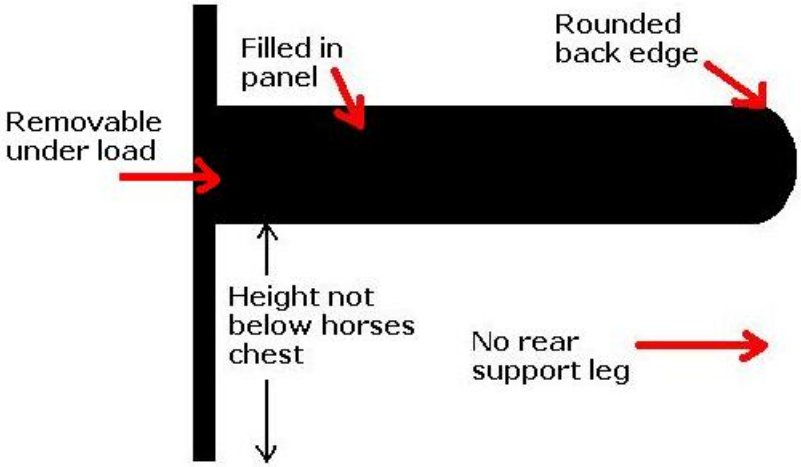
- The inside must give adequate room for the body and head of the horse. Sounds obvious but many floats pressure the horse above, down, forward of the chest bar and in body length, due to inadequate space.
- Health wise, the horse needs to be able lower its head to remove debris (hay dust and other contaminants floating in the air) by coughing, in order to keep the respiratory tract clear. There needs to be enough room for the horse to do this.
- Considering horses tend to be claustrophobic, most floats are too low. A roof height of 2200mm to 2250mm is ideal to give most horses a feeling of spaciousness and to minimise the likelihood of the horse's head hitting the roof. Many manufacturers build a float about 2100mm as standard, an extra 150mm makes a big difference. It also allows the front window to be set at a more practicable height for the horse to look out and enhance light.
- Tubular steel support bars over head are preferred rather than box channel steel. If a horse strikes its head on box channelling hard enough, it will gash a lot easier than with tubular steel.
- An interior light should be located so that the horse cannot touch it.
- A head divider (often called stallion divider) is recommended to prevent horses biting each other. Whilst they may be the best of paddock mates, travelling in a float can cause emotions which trigger biting. However, the head divider must be easily removable in case a horse gets into difficulty. Yet, it needs to be secure whilst travelling so it does not swing and hit the horse's head or frighten it.
- Forward, high fitted tie-up rings should be fitted in front of the horse. The purpose of tying-up in the float is to stop a horse turning around, not to stop it pulling back. To prevent the horse from turning around or breaking the tie, the tie-up ring is best in front, not at the side of the horse's head. **The back door/tailgate should never be opened whilst the horse is tied in the float.** It is better to let the horse out than to have it pull back, break the tie and cause itself emotional trauma or hurting itself and then be difficult to reload. **Always undo the tie before opening the rear of the float. When lowering the ramp/tailgate, always stand to the side of the ramp, never behind** in case the horse comes out before fully lowered.

Make sue you see How to tie up a your horse

- Adjustable height chest rails cater for different size horses. However, that is only a part of the job. They should also be truly removable to release a horse if it were straddled over the chest bar. Most so-called removable chest bars could not be released once the weight of a horse is on top of it.
- I do not recommend using centre dividers at all in forward facing floats; refer to the 'The Dreaded Centre Divider' section at the end of this paper. However, if to be fitted, a centre divider should be adjustable in height and easily removable if a horse was straddled over it. Also, it should not hang down lower than the chest of the horse. The horse should be able to move its legs freely underneath the divider. There should be no rear support leg on the centre divider, horses catch their legs on them, especially when backing out. The divider must be fixed firm when the horse is shut in. This can be achieved with a rear breach door that locks onto the centre divider. The divider must not be able to sway, rock or rattle from side to side. Horses often mistrust centre dividers so they need to be very firm. It is best to have a curved end on the centre divider, avoid square finishes, sharp edges and protrusions and make sure it is filled in, no gaps.
- Ditto centre dividers but if to be fitted, rear breach doors are preferred to bars or chains. The door should be deep enough, preferably the same as the centre divider, so the horse cannot reverse under it and skin its back. It should also swing around the outside of the float so it can rest flush against the outside, rather than sticking out when open, waiting for the horse and/or handler to catch or hit themself on.
- Fit recessed door handles so that a headstall or lead-rope cannot get caught up or hooked onto a protruding handle.
- The rear ramp with a non-slip surface is of vital importance. Ramps cause a lot of float loading problems. I have discovered that for many horses, their apparent reluctance to enter the float is actually a fear of coming out. Many so called non-slip surfaces are not non-slip in both dry and wet conditions. Rubber matting with raised nodules is the only true non-slip ramp that I know of. I have been using the one pictured below for many years. The springs that assist the raising of the ramp should also be adjusted so the front edge of the ramp lays flat on the ground when down. Avoid having the ramp hover a few centimetres above the ground due to poor spring setting, causing uncertainty for the horse.

Look at the pictures on the next page.

Centre Divider (remember to read *'The Dreaded Centre Divider'* section at the end)



A true non-slip ramp: a rubber mat featuring raised rubber nodules/lugs.

Currently, this is the best non-slip mat I have ever seen.

For more details visit http://www.normglenn.com/horse-float-flooring.html.

What the Law Requires

Trailer (float) Construction

Like any other vehicle on the road, the trailers must be roadworthy and meet specific standards. (Note that any trailer not used for trade purposes that is less than 3m long, weighs less than 200kg empty, is narrower than the towing car and is not specifically constructed to carry a boat is exempt from registration in Victoria).

The standards a trailer must meet include requirements for brakes, lights, safety chains, mudguards etc. and can vary depending on when the trailer was built, its size and its carrying capacity.

Check you State laws for specific in the Road Safety section.

Trailer Brakes

It is mandatory for all trailers that have an Aggregate Trailer Mass (ATM) more than 750kg to have brakes (irrespective of when the trailer was built). The ATM is the maximum loaded weight of the trailer. If the trailer has an ATM over 2 tonne, over-run brakes are not acceptable. These latter trailers must also have brakes that automatically apply if the trailer accidentally becomes uncoupled from the car.

Towing Ratio

The loaded trailer cannot be any heavier than the load rating of your car's towbar and it must not exceed the trailer towing recommendations of the vehicle manufacturer. Where the vehicle manufacturer's recommendation is not available, the trailer must not exceed:

- for trailers with brakes - 1.5 times the empty weight of the car and,
- for trailers without brakes - the empty weight of the car.

Note: Trailers with an ATM over 750kg must have brakes fitted.

The Balancing Act - Safe Loading

Proper balance between the car and the trailer is essential for a stable, safe towing combination. This includes the distribution of the load on the trailer and the load the trailer puts onto the back of the car.

The ideal load distribution on the trailer is to have the load concentrated slightly forward of the trailer's axle line so that between 5 per cent and 15 per cent of the trailer weight is transferred downwards on the car's towbar. Too much weight on the back of the car will tend to lift the car's front wheels resulting in poor steering and braking. Conversely, if

the centre of the load is behind the trailer axle line it will tend to lift the rear of the car and result in unstable handling and fishtailing.

Note: Horse floats are generally designed for a drawbar load of approximately 15 per cent to reduce the chance of the float lifting the rear of the towing vehicle.

Safety Tips

- Maintain a greater space to the vehicle in front to allow for the longer stopping distance
- Provide extra distance when overtaking other vehicles as this will take much longer.
- Take care near cyclists. Leave plenty of room between you and the cyclist particularly when overtaking.
- Select a lower gear on long or steep downhill grades (*automatic's too) to increase control and conserve the brakes.
- On up-hill grades, a lower gear can help to maintain a smooth climb, particularly with automatics that may be inclined to change up and down thereby jerking the vehicle.
- Avoid sudden lane changes or swerving to reduce the risk of developing sway. Gentle manoeuvring (and braking) is most important with horse floats as sudden movements could injure the horse. Sudden movements may also make the horse move which could cause the float to sway.
- Cornering requires smooth braking in advance. Bring the vehicle down to the speed required for cornering before reaching the corner, not during cornering. The idea is not to upset the horse's balance. The reality is that many horses are thrown off balance unnecessarily, by poor cornering, which can trigger a fall down, scrambling or destroy the horse's confidence. Many drivers think they are going slow enough when in fact they are way too fast. Slowly, slowly, smoothly is best. A good idea is to get into the float sometime, in a paddock or long driveway, to feel what it is like just at a slow speed. That is a sure way to help you slow down.
- Be cautious in high winds or when passing large oncoming vehicles as buffeting may induce sway.
- If sway develops, the car brakes should not be applied (except as an absolute last resort). A steady speed or slight acceleration should be maintained until the sway has ceased. Alternatively, if the trailer brakes can be applied independently, gentle application of the trailer brakes will restore stability.

- Keep an eye on following traffic as they will have more difficulty passing you and a long queue can quickly develop. Where possible make provision for this queue to overtake you. On some narrow roads this may mean pulling over and stopping occasionally.
- Take more frequent rest breaks or driver changes. At these rest breaks and/or driver changes the condition of the car and trailer should be checked.

Important: since this publishing this document, changes may have occurred to the law so make sure you check your State requirements and do not rely on this document as your source of State requirements.

Other Reading

Your State Department of Primary Industries has created (certainly in Victoria) a "Code of Practice" for horse transport, which applies to anyone transporting a horse, not just commercial carriers.

And as the code points out, "ignorance is no excuse for inappropriate handling of horses".

Look for the code of practice on the relevant state department web site

The Dreaded Centre Divider - next page

The Dreaded Centre Divider

The centre divider is one of the most common causes of problems in forward facing floats. I consider the centre divider to be the most unnecessary part of a float.

Whilst many horses will never have a problem, centre dividers consistently cause more trouble than any other aspect of the float.

There is much anecdotal evidence to support the fact that scrambling problems and reluctance to enter the float are often caused or exacerbated, by a centre divider. Fortunately, the troubled horse can also be cured by removing the centre divider in combination with retraining. But why wait until you cause a problem?

My recommendation is to:-

(i) **Train yourself** so that you act safely and can manage the horse and floating competently

(ii) **Train your horse** so that it is comfortable and confident with float loading

(iii) Throw the centre divider away or relegate it to the tack room as a rug rack, the centre divider is not necessary!

Unnecessary? Yes, because a **well trained horse** will walk on and stand still whilst the tailgate is shut. Refer - http://www.normglenn.com/floatloading.html .

One or two horses will travel comfortably without a centre divider. Although they may lean on each other, they do not squash each other and they give each other security.

I have not had a centre divider in a float since 1992 and have floated many horses one or two at a time. I will never have a centre divider again. I know I am repeating myself but trust me when I say, they are not necessary. **What is necessary is thorough float loading training**. The divider creates an extra expense in the manufacturing process and causes more problems than it is worth.

When a horse falls down in a float, the last thing you need is a centre divider in the way. Horses frequently do not trust the divider. Horses frequently get caught on them when backing out. They often cause scrambling problems. Horses can and do knock centre dividers down whilst travelling, all very ugly.

I have seen many horses travel well for years then come unstuck. Taking the divider out has assisted in solving the problem along with some retraining. Read the stories on the internet at http://www.normglenn.com/stories.html , whilst it is not stated in the stories, I can tell you that removing the divider was a key component for many.

If you are worried about floating two vastly different sized horses (say 16hh horse and Shetland), I suggest that maybe they shouldn't be together in a float. You will not get a

centre divider that is safe and suitable for both. It will be either too low for one or too high for the other.

Rear breach/butt-bars/chains/doors: ditto above, expensive, not necessary and often dangerous. I have seen a number of horses who have come out under the doors/bars/chains and scrape the skin off their back/spine..... OUCH!.... and good luck getting the horse back on the float! I am also not joking when I say that I have seen horses sit on them and fall out of the float backwards. Get rid of them. Poor training, lack of knowledge and/or salesmanship by manufacturers are the reasons so many people have them.

"But I need to stop the horse from coming out!" I hear you say....

No you don't. What you need is to have your horse trained or learn to train it yourself!

I cannot stress this strongly enough so I am going to make it bigger –

If a horse will not walk onto the float and stand quietly, without being constrained once inside, it is not trained sufficiently to float safely!

Standing quietly in a float unrestrained

A word about float boots: some are rubbish! Some slide down the horse's legs and even slip under the horse's hoof. Hence, the horse can be irritated, which can cause it to kick out. It may kick out and hit its float mate or put its hoof through the back door. I prefer sports medicine boots and bell boots. They fit snugly and will not slip down. However, whatever the boot, you must get your horse accustomed to wearing them before floating. **It is also best to fit bell boots.** These will protect the Coronet and stop boots sliding down.

If you need to learn more or want your horse trained, call me on 0419 556 783 or

Email: mail@normglenn.com and visit http://www.normglenn.com

