

Trailer Safety and Response

Dr. Rebecca Husted

PREVENTION OF TRAILER ACCIDENTS STARTS AT MAINTENANCE

Find a trailer maintenance person in your area and make an appointment **TODAY**. Improper hitching is an unfortunately common cause of trailer accidents, and separation of the trailer is often a death sentence for the precious cargo in the trailer. Despite rumors, the data prove that both gooseneck and tag-along hitches are safe – *as long as they are hitched properly*. Be sure the hitch on the towing vehicle is the correct type, size and rating to match the coupler. Also be sure the hitch is properly installed onto the towing vehicle. Fasten the safety chains and breakaway switch actuating chain securely. Check the floor to ensure serviceability. Service the battery to the breakaway and ensure it is connected so that the brakes will lock in case of separation. A loose trailer can roll for thousands of feet and can kill other drivers as well as the occupants.



SAFETY WALKAROUND – EVERY TIME YOU GET IN THE VEHICLE.

Make a SAFETY WALKAROUND **part of your routine before towing**. Use a checklist to make sure you don't forget a step in the hitching process. Even if you get out to fuel up or take a break – **do it**. Look at the tires for objects, uneven wear or tears, listen for hissing air, feel them for any unusual heat. Check the hitch system – is everything still attached? Are the lights working? Look in on the horses – do they look relaxed and comfortable? As you pull forward, test the brake systems, especially with controllers.

CHOICE OF VEHICLE AND TRAILER

Choose a towing vehicle with an appropriate rating and braking system – no mismatches between the size of the vehicle and the trailer. Being able to **PULL** the Trailer is not as important as being able to **STOP**. There is expertise from your vehicle manufacturer and trailer maintenance technicians on the proper size vehicle to tow a particular Trailer. Generally, heavy duty towing packages are recommended. 3 horse tag along trailers are not recommended – **VERY** few trucks are large enough to haul them safely.



GVWR (Gross Vehicle Weight Rating)

The maximum allowable gross vehicle weight. The gross vehicle weight is the total weight of the vehicle. When towing a trailer, it is the sum of the vehicle weight (including the occupants, cargo and any optional equipment installed on the vehicle) and the tongue weight of the trailer.

GCWR (Gross Combination Weight Rating)

The maximum allowable gross combination weight. The gross combination weight is the sum of the total vehicle weight (including the occupants, cargo and any optional equipment installed on the vehicle) and the weight of the trailer being towed (including the cargo in the trailer).

STEPS FOR DETERMINING CORRECT LOAD LIMIT – TRAILERS

Determining the load limits of a trailer is complicated. On all trailers there is a Federal Certification/VIN label located on the forward half of the left (road) side - which indicates the trailer's Gross Vehicle Weight Rating (GVWR). This is the most weight the fully loaded trailer can weigh. If your trailer has a GVWR of 10,000 pounds or less, there is a vehicle placard with tire and loading information, and maximum cargo capacity. Cargo up to maximum weight specified should not exceed (combined weight) provided as a single number. The total weight of a fully loaded trailer cannot exceed the stated GVWR.

STEPS FOR DETERMINING CORRECT LOAD LIMIT – TOWING VEHICLE

Locate statement, "The combined weight of occupants and cargo should never exceed XXX lbs.," on your vehicle's placard (usually inside of driver's door or owner's manual). Determine combined weight of the driver + passengers riding in vehicle. Subtract the combined weight of the driver + passengers from combined weight on placard. Result equals the available amount of cargo and luggage capacity.

For example, if "XXX" amount equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage capacity is 650 lbs. $1400 - (5 \times 150 \text{ passengers} = 750) = 650 \text{ lbs.}$

Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed that weight calculated above. If vehicle is towing a trailer, load from trailer is transferred to the vehicle. Consult the tow vehicle's manual to determine how this weight transfer reduces the available cargo and luggage capacity of your vehicle.

Use an appropriately sized trailer for the horse so that it has room to allow it to balance by moving its head and neck, as well as its feet. A trailer roof that is too short or space too small for the horse will cause it to panic and scramble. Pushing a draft horse into a Trailer made for standard size horses is very dangerous as an unbalanced or overweight load may cause a trailer to overturn in an accident.

DRIVING SKILLS

The animals in the Trailer cannot see what is coming or what you are doing as you drive, warn them with a small touch of the brake that you are getting ready to stop, or by starting the curve slowly so that they can brace themselves. Studies have shown that even animals that are used to hauling and not stressed by the prospect of many kilometers in a Trailer still use a lot of energy bracing and balancing themselves.

Just for fun – drive your Trailer across the pasture slowly with some passengers standing in the back. Tell them they can't use their hands and arms to balance or brace. This exercise makes believers out of horse people! They will be able to tell good from bad driving practices. It is a GREAT learning exercise.

Single-vehicle with Trailer accidents are repeatedly attributed by the investigators to a lack of sleep (going to or coming home from horse related events) or lack of experience in the driver. Teenagers should be well supervised when driving Trailers – it is a huge responsibility to be allowed to haul horses and it takes driving experience to get good at it. TEACH them to drive the trailer. **Who taught YOU?**

BEST PRACTICES FOR TRANSPORT (FOR OWNERS)

- DRIVER'S HITCHING, MAINTENANCE AND SAFETY COURSE
- LEARN THE ANATOMY OF YOUR TRUCK AND TRAILER COMBINATION
- TRAIN HORSES TO LOAD NICELY AND BE CALM IN TRAILERS
- HAVE A LOAD PLAN AND AN EMERGENCY EVACUATION PLAN
- HAVE A RELATIONSHIP WITH YOUR VETERINARIAN (VPCR)
- CHECK, CHECK and CHECK AGAIN (Tires, Electrical, Hitch, Floor, Doors)
- PREPARE TO BREAK DOWN WITH YOUR TRAILER
- BE PREPARED TO PERFORM FIELD EUTHANASIA ON THE SIDE OF THE ROAD

Accidents caused by “the other guy” are as common as they are for cars out on the road – especially when other drivers attempt to beat your Trailer by whipping out into the lane so they won't have to wait for you to pass. Drive defensively, watch for other drivers running stop or red lights in attempts to avoid waiting for you, and look out for drivers misjudging your speed or your ability to stop the rig. Driving a Trailer, you must make greater allowances for adverse driving conditions plus you should **double the following distance recommended for passenger cars.**

Operator error factors, such as driving too fast for conditions or over facing their vehicle's abilities (particularly to stop the vehicle combination loaded with horses), cause majority of Trailer accidents. Thus, it is imperative for drivers to be very careful and remain attentive. Drive at or slightly under the speed limit and close to the speed of traffic, **driving TOO slow will actually increase** the chance of an accident as other drivers attempt to pass you, especially on 2 lane roads.

HORSE SAFETY IN THE TRAILER

Those who use a video camera in their Trailers know that the horses shift around in their stanchions trying to stay comfortable. This is an excellent way to monitor the actions and health of your horses in the Trailer, and allows you to know if animals are stressed, biting and kicking each other, or even fallen down. Other recommendations include use of a constant towing vehicle and trailer tire pressure monitoring system which will warn you of a drop in tire pressure before a blowout occurs, and a wireless

temperature gauge to inform you of the actual temperature in the trailer (which may be MUCH hotter than you thought).

One of the oldest arguments in hauling is to *tie or not to tie while in the Trailer?* There are legitimate arguments for both, but if you choose to tie the horses while hauling, ensure there is a breakaway weak point in the system (leather strap, hay string, etc.) on the Trailer side so that if the Trailer flips, the animal will not be left hanging by the tie. Check the trailer for sharp objects that might injure the horses in transit, especially in a wreck. Did I mention leg wraps and boots? Use them – those precious lower legs take the brunt of injuries in Trailer mishaps, along with heads and faces.



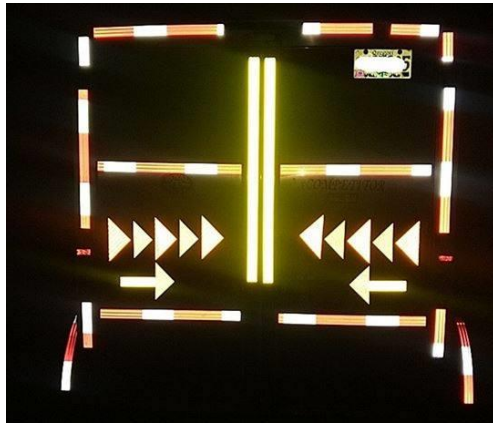
The majority of injuries to horses and trailers occur before you take the vehicle out of “Park” and start to drive! The most common cause of “Trailer accidents” to horses is in the parking lot while loading or unloading them. Teach your horses to go into and out of Trailers, in any conditions (rain, cold, hot, dark, windy, etc.) and do that often enough that they will go in quietly and stand there. Horses get their legs cut, suffer rope burns, bang their heads on the roof, cut their faces on metal obstacles, and cause serious hoof injuries struggling to avoid going into trailers, or fighting to get out of them. Training them to do it consistently and calmly is a crucial training milestone... far more useful than sliding stops.

Equine veterinary technicians have estimated to this author that they spend 15 to 30 percent of their time in the parking lot helping clients load and unload their horses – usually because owners don’t realize that teaching a horse to load is a very difficult skill that takes time and patience (on the part of the human!). **When it comes to a disaster evacuation, that skill can save your animal’s life!** There are so many clinicians, trainers and natural horsemanship teachers that are available to teach you how to do this properly – take advantage of the opportunity to learn this skill. Don’t drag or push or pull!



A few simple things to have in your trailer to make it efficient, safe, and prepared in case you have to respond to a trailer incident:

- Tire pressure gauge and source of air
- Drive ON Jacks and tire tools that FIT YOUR TRAILER and TRUCK
- Fire Extinguisher in TRUCK and in the TRAILER
- Reflective vest, gloves, flares, cones, chocks
- (2 total) spare tires for trailer, one for truck
- Current first aid kit for humans and one for horses
- Contact information for your home veterinarian in your cell phone
- Reflective tape on the BACK, SIDES and INSIDE doors of your trailer
- Optional: video camera to watch horses in trailer, thermal sensor in trailer, air bottle or compressor, reciprocating saw (battery powered)



LEARNING FROM OTHER'S SAD OR SCARY STORIES

Sometimes it takes a picture or a story to make people believe that things CAN happen.

Allowing humans (kids, employees, etc.) to ride in the Trailer while it is motion is dangerous (and against the law). A friend of mine called to say her horse was colicking and would I meet her at the vet's clinic? I arrived in time to see her jumping out of the escape door from a horse thrashing in the rear of the trailer and throwing itself to the floor. She was back there - with no contact with her husband who was driving the Trailer for 60 miles (with no working lights or brakes.) The horse was not trying to hurt her – it was in severe pain and euthanized immediately. She escaped with a tragic story and a few lucky bruises.

At a local horse handling clinic, I was asked by an owner to help with a horse that was difficult to load. We worked with the horse for about 30 minutes and taught him to load quietly in the trailer. Walking around to the front of the hitch, I realized that the safety pin was not placed and the coupler had not been closed fully onto the ball! Somehow this person made it to the clinic without having a wreck!

RESPONSE TO TRAILER ACCIDENTS FOR HORSE PEOPLE



Incident scenes (especially involving vehicles and on roadways) are typically managed by professional emergency responders. However, they may have no idea how to safely handle horses, nor any expertise in the behavior of panicky horses that may be trapped, or running loose. This is where horse owners can best assist – by offering safe advice to them on how to calm the animals by turning off sirens, how to safely approach and do an assessment of the Trailer, by reminding them to wait for a veterinarian, and by remaining as calm and professional as possible.

Horse owners should involve emergency services personnel from the beginning (trailer overturn, horse trapped under chest bar, etc.) because it speeds up the overall efficiency of the response instead of waiting or unsuccessfully trying to get the horses out themselves. Fire brigades have the techniques and expertise to stabilize the Trailer, provide safety and security to people as well as the horse victim, and they do extrications of people from car incidents as a matter of course. Law enforcement is necessary for on-road safety, directing traffic around the incident, and dealing with the bystanders. Ambulance paramedics may be necessary for injured people, and some of them may be able to assist the veterinarian with treatment for injured animals. Very few horse owners will have the equipment, training and expertise to attempt extrications safely.

TRAILER INCIDENT ON THE ROAD

- DO call 911 immediately, STAY CALM and give your location and explain the scenario – ask for police, fire and ambulance (for possibly injured people)
- DO put on a reflective jacket or vest and put out flares, turn on your flashers, etc. for road safety
- DO call a veterinarian and ask them to come to the scene
- DO call another friend with another Trailer to come transport the animals if compromised
- DO an assessment from the OUTSIDE of the trailer thru the windows and openings
- DO throw hay to animals to encourage them to relax and wait patiently
- DON'T open any doors or windows – animals will try to come OUT thru those openings
- DON'T go into a compromised horse Trailer with live animals inside
- DON'T get injured by passing cars (especially in the dark)
- DON'T remove animals from Trailer until secondary containment so they don't get loose
- DON'T try to tell firefighters and police officers how to do their jobs

In real accident scenes, there are very few situations where an overturned trailer should be turned back onto its wheels while live animals are inside. However – there are many where the Trailer must be stabilized or moved to a safe area before the animals are extricated (Trailer is down an embankment, hanging off a bridge, trapped in trees or sinking into water, etc.) Fire brigades have the equipment to

safely stabilize the weight of such a large object, then to make access (cutting may or may not be required) large enough for the animals to be removed safely.



Why do we not recommend going INTO Trailers? After all, most horse people go into trailers all the time with their horses, right? After an accident, the animals may be stressed, injured, scared by the incident as well as the response. As prey animals, they don't think – they react! To firefighters, the inside of a compromised horse trailer is a confined space with a bunch of dangerous obstacles around the victim. They may have to cut the trailer tie, cut rear tack rooms, doors, and other obstacles. The veterinarian will make an assessment on whether sedation or anesthesia should be used before going close to the animals in the trailer. However, if animals are standing and have a clear way out – it may be possible for a person to go in, cut the trailer tie and attach a lead, then bring the animal out safely.

CONCLUSION

Trailer wrecks and incidents are dangerous but highly preventable situations that depend on the preparation of owners to mitigate the risks. **YOU can make the difference for your OWN horse.**

DOWNLOAD FREE: <https://ppp.purdue.edu/wp-content/uploads/2017/02/PPP-114.pdf>

UNDERSTANDING THE HORSE TRAILER RIG – Purdue University

“Non-Commercial Horse Transport: New Standards for Trailers in Canada” paper (Creiger & Gimenez, Nov. 2015) Challenges manufacturers, veterinarians, animal welfare advocates, engineers, animal owners, and standards associations to develop and implement improvements. FREE DOWNLOAD https://www.academia.edu/18507742/Non-Commercial_Horse_Transport_The_need_for_standards

Join 21k Study Group

“Technical Large Animal Emergency Rescue”



In an effort to help improve safety of horses and those who travel with horses in Trailers, nationally known technical large-animal rescue experts Drs. Tomas and Rebecca (Gimenez) Husted partnered with USRider in 2002 to find ways to PREVENT accidents. Their research has provided useful information for improving horse Trailer-safety practices. "The data shows that the main causes of horse transport wrecks are lack of proper maintenance, operator error, and equipment mismatch," notes Dr. Tomas Gimenez.

For your Safety

We offer these safety recommendations to those who travel with horses:

- 1. Drive carefully.** With operator error factors, such as driving too fast, causing the majority of trailer accidents, it's imperative for you to be very careful and remain attentive. Drive as though you have a cup of water on the floorboard of your vehicle, and stay slightly under the speed limit to make allowances for adverse driving conditions. Double the following distance recommended for passenger cars. Maintain that distance even when cars cut in front of you.
- 2. Hang up, and pay attention.** Avoid talking on a cell phone or texting while pulling a trailer. Transportation experts have determined that talking on a cell phone or texting while driving proves to be just as dangerous as driving while impaired by alcohol. Get HANDS FREE.
- 3. Pull over safely.** If your vehicle becomes disabled, continue driving if possible, until you can pull over to a safe area. Do this even if you have a flat tire, and it means destroying a wheel. Wheels can be easily replaced. Stopping on the shoulder is extremely dangerous, particularly on a high speed roadway, and can put you, your horse, and emergency responders at great risk. Pull over on the grass as much as possible, away from the white line.
- 4. Use your headlights.** Drive with the headlights on at all times to increase your visibility.
- 5. Use reflective material.** Apply reflective material to the back of your trailer. If you lose trailer lighting or experience an electrical failure, this material will help other drivers see you as they approach. You should be able to

see the trailer even if the doors are opened in the rear. Keep a reflective vest in the vehicle for use on YOURSELF in case of emergency.

6. Replace your tires. Replace your tow-vehicle and trailer tires every five years regardless of mileage. Make sure that tires are rated to support more than the gross weight of the trailer and its contents. Check the air pressure in all tires (tow vehicle, trailer, and spare) at least every 30 days. Purchase a high-quality air pressure gauge, and learn how to operate it.

7. Check your inside dually tires. If you pull your Trailer with a dually truck, check the inside tires for wear. Since these tires are "hidden" behind the outside tires, they're easy to neglect. Also check the inside tires' air pressure. Even if an inside tire is completely flat, it'll be supported by the outside tire, making it appear properly inflated.

8. Leave tire-changing to the pros. Even if you know how to change a tire, don't do it by yourself if you have an on-road breakdown; call for professional help. *Your life is worth the time waiting for help.* Use flares, cones and warning lights while you are waiting – *even in daytime.* NOTE: If you can get to a parking lot – feel free to change it yourself.

9. Maintain your vehicle and Trailer. Perform regular maintenance on your tow vehicle and trailer. Have your trailer wiring inspected for un-insulated, loose, and/or exposed wires, and poor connections. This applies to old and new trailers alike. New trailers aren't trouble-free; inspect them closely. Have your trailer axles greased/ serviced annually or every 6,000 miles, whichever comes first. Make an appointment with a maintenance technician today!

10. Use ICE. Make use of the ICE program; ICE stands for "in case of emergency." This simple program is designed to help emergency responders identify victims and determine who needs to be notified. Make it easy for first responders to know who to contact for information on handling your horse: Program an entry into your cell phone called "ICE - Horse." Key in the contact information of someone with the authority to make decisions about your horse's care, should you become incapacitated.

11. Draw up a power-of-attorney document. In conjunction with the ICE program, initiate a power-of-attorney document with a trusted friend or relative. If you become incapacitated, this will provide for your horse's emergency medical treatment. Also, prepare the corresponding Notice to Emergency Responders document. Keep copies of both documents in the glove box of your tow vehicle.

12. Hitch up safely. Improper hitching is a common cause of trailer accidents. Use a hitch that's the correct type, size, and rating to match the coupler. Make sure the hitch is properly installed onto your towing vehicle. Securely fasten all safety chains, locking pins and the breakaway switch actuating chain. Ensure battery to the Trailer brakes is charged. CHECK, check, recheck.

13. Balance your load. An unbalanced load can cause a trailer to jackknife and even overturn in an accident. When loading your trailer, load the heaviest or single cargo on the crown (high point) of the road. After loading, secure trailer doors and hatches. Teach horses to load and stand quietly in the trailer. Ensure no cargo can slide or move while you are driving.

14. Use protective gear. To help ensure your horse's safety, always apply shipping boots. If you tie your horses in the Trailer, use a breakaway weak point (hay string) at the trailer side of the tie so that the horse can break free in an overturn or accident. Never use bungee type trailer ties.

15. Carry a first-aid kit. Carry a current veterinarian-approved first aid kit. Recommendations for such a kit are something you should discuss with your equine veterinarian.

16. Teach your horses to LOAD. Under duress, in the dark, in the wind, in the rain, alone or with other horse, and into other types of trailers. *THE MOST COMMON EVACUATION THAT OWNERS HAVE TO PERFORM IS TO THE VET WITH A SICK HORSE.* Too many horses aren't good loaders, and they are even worse when they are injured or sick. Practice. If you continue to have problems, take a clinic and learn to teach your horses to load reliably.