



## Horse Trailer Info Sheet

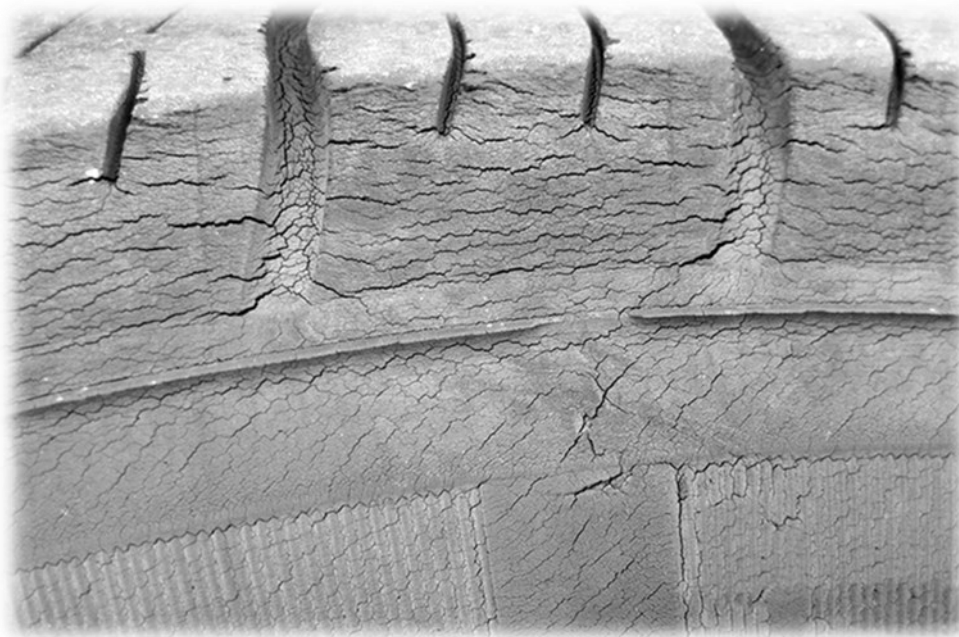
# Give Your Trailer a Spring “Health Check”!

Trailers are a piece of equipment that we sometimes take for granted. Trailers wait patiently, often for months at a time during the winter, between trips. Preventive maintenance is a worthwhile investment to make in your trailer, and starts with an overall inspection.

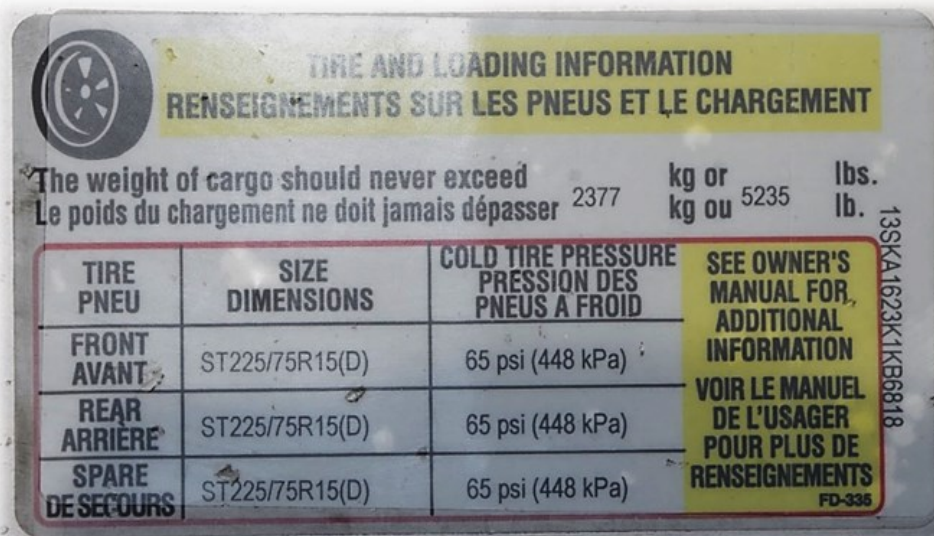
As you get ready for this season, here is a brief guide to giving your trailer a spring “health check”. We’ll start from the ground up, and divide items to look at into three main areas.

### Tires and Wheels:

The expression “No Hoof, No Horse” is very true – and a similar expression of “No Tire, No Trailer” is equally true since tires are the only part of your trailer which should contact the road surface when travelling.



To begin with, what condition are the tires in? Tires which have faded to a dull gray colour and are severely cracked, such as the example pictured above, are a cause for concern. Two important ingredients in tire rubber are carbon black, which gives tires their colour and protects against UV radiation from sunlight, and a wax-based, sacrificial protectant which keeps the rubber from drying out. As a tire rolls down the highway, this wax is brought to the surface as the tire flexes and heats up. Long periods of inactivity result in this wax on the tire’s surface being depleted by ozone in the air. The carbon black absorbs UV radiation, and as the rubber dries out it turns gray and cracks. Although there may be plenty of tread depth remaining, severely dried out, cracked tires should be replaced to prevent a tire failure while on the road.



Are tires the correct size and type? Look for a decal similar to the one pictured above for tire information. This decal should be located on left side of trailer near the front. Some trailers will have decal placed on side of the trailer body, on others it will be on side of trailer tongue. Size information molded into the sidewall of your tires should match what is listed in "Size Dimensions" column. Inflation pressure is listed in "Cold Tire Pressure" column. Check inflation pressure with a proper tire gauge – and don't forget to check the spare tire as well.



This tire is the correct size and type for trailer - size information matches decal. Number combination 225/75 describes the tire's width and sidewall height, R indicates a radial tire and 15 is the wheel diameter in inches. D is the tire's load range. For this size of tire, load range D means the tire is rated for 2,540 pounds at 65 pounds per square inch (psi) inflation pressure. The really important letters are ST which stand for Special Trailer. Trailer sway can be very dangerous. To help reduce and control trailer sway, trailer tires are constructed differently than car or truck tires and have a much stiffer sidewall. Look for the ST designation and the words "For Trailer Service Only" on tire sidewall.



How old are your trailer's tires? Every tire has a unique serial number, which consists of a letter and number sequence beginning with DOT and ending in a four digit number which is a date code that indicates the week (first two digits) and year of manufacture. This date code usually has an oval border around it as pictured above. This tire was manufactured in the third week (03) of 2018 (18). Although there is not a specific age limit for tires (some tire manufacturers recommend tire replacement at 5 years, regardless of tread wear, while others suggest a maximum of 7-year replacement intervals).

If you can't find the date code on your tires, go underneath trailer and look at opposite side of tire. Tire date codes usually appear on one sidewall only, depending on how tire was installed on wheel the date code may be on the sidewall facing toward inside of fender.



A plywood sheet or individual tire covers are effective ways to protect tires from the sunlight. Recreational vehicle trailer dealerships are a good source for tire covers as many RV owners use them – similar to horse trailers, many RVs spend long periods of time parked between trips.

Steel wheels are subject to rust. Minor surface rust as shown on left does not affect the wheel's structural integrity and can be corrected with a light sanding and touch-up painting. Wheels with severe rust should be removed and inspected thoroughly, and replaced if necessary. Aluminum wheels do not rust but are subject to corrosion. Inspect aluminum wheels for corrosion, pitting, and cracks.



A specialty tool worth purchasing is a torque wrench. Trailer axles do not steer, so every time you turn a corner the tires and wheels are dragged sideways. Over time this can lead to lug nuts becoming loose. Trailer manufacturers advise checking lug nut torque before every trip. The correct torque specification is provided in trailer owner's manual, and may also appear on an information decal. If no torque specification can be located, 90 ft/lbs is a suggested minimum.

### **Floor, Frame and Body:**

Four hooves supporting a 1,000 + pound animal concentrates a significant amount of weight in small areas, making the structural integrity of your trailer extremely important.



Remove mats and check condition of floor. Pay special attention to corners where moisture may accumulate. These two photos show a trailer with steel frame and wood plank floor. Corrosion is visible on steel components with rust holes in some areas of frame along bottom of side wall. Rust damage of this nature affects the trailer's structural integrity.



Look for deteriorated floor boards. This floor is in good condition overall with the exception of back corner near the ramp which is an area subject to moisture accumulation. Wood that is beginning to rot should be replaced before one of your horse's hooves breaks through.



Although the low floor height of most horse trailers can make access a bit challenging, it is important to inspect the underside of your trailer. This one is constructed from a combination of steel frame, plywood floor in tack room and aluminum floor in horse area. Floor panels and frame members all appear to be in good condition with only light surface rust on steel components and no corrosion of the aluminum floor.



Aluminum does not rust the way steel does, but aluminum does corrode. In a damp environment, pitting corrosion of aluminum often takes place, especially where water cannot travel away from the metal – such as when water (and “other” liquids!) sits between a horse trailer’s rubber mats and the floor panels. In photo on left, seam between mats is clearly visible as an area of heavier corrosion and deep pitting.



Interior and exterior views of floor and frame on an aluminum trailer. Preventive maintenance, in the form of regular “deep cleaning” of your trailer combined with keeping it dry inside, will help keep your trailer’s floor in good condition. Another form of preventive maintenance which will protect the exterior of your trailer’s frame and floor is an annual oil spray (often referred to as “rustproofing”) which is a worthwhile investment to make in any trailer, used or new.



At front of trailer, check condition of the trailer coupler and attachment to trailer frame. Left photo shows coupler bolted to an aluminum trailer. On steel trailers, coupler may be welded in place. Inspect the jack and safety chains. Safety chains should be in good condition and of the proper grade – look for a marking similar to the “AC70” shown (above, right).



Check all latches for condition and smooth operation. If keyed locks are fitted, lubricate them to prevent seizing. Use a graphite lubricant for keyed locks to keep dirt out of the mechanism.



A few drops of light oil on hinges and latches helps to keep them from corroding and becoming stiff. If your trailer's hinges have grease fittings, add a small amount of grease as required and wipe off any excess grease when finished to keep things tidy.



If your trailer has a ramp, look at the condition and attachment of hinges on both inside and outside. Check for smooth operation of the ramp. Corroded hinges will cause the movement of ramp to be stiff and creaky. If the hinges operate smoothly but ramp seems very heavy when you open and close it, look for broken springs.





The interior is just as important as the exterior. Inspect the condition of all padding, dividers, tie rings, windows (glass, screens, and latches), window guards, vents, and floor mats.

## Electrical:

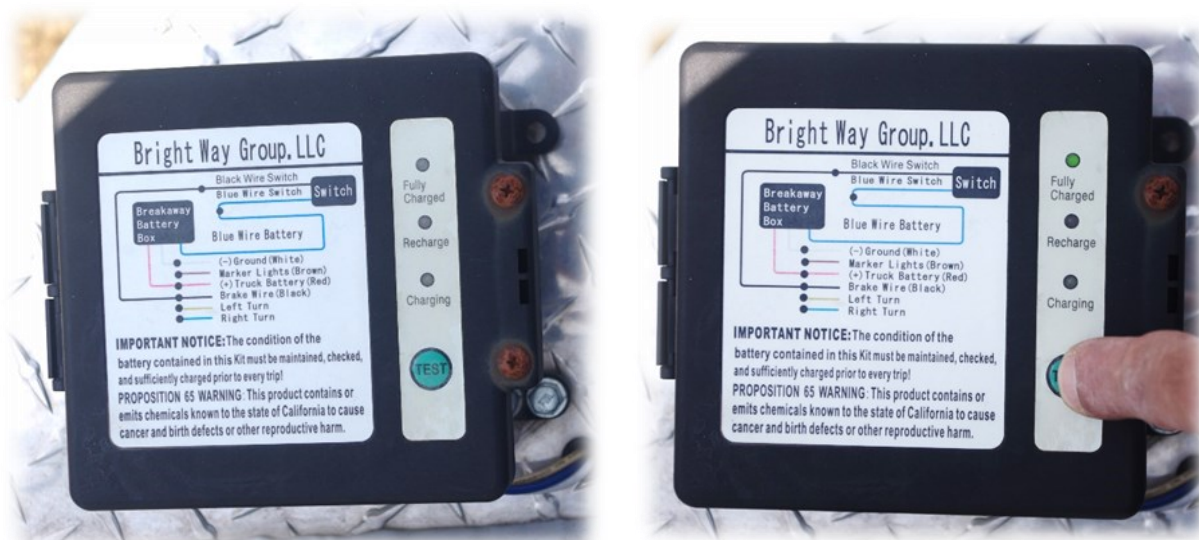
Your trailer's lights and brakes require an electrical system that is in good condition to ensure proper operation of all components.



Check electrical connection to towing vehicle. Plug should be free of any corrosion, which will appear as green, powdery residue on the metal terminals. A small amount of dielectric grease applied to plug terminals helps prevent corrosion. In addition, storing the plug in a vertical position, with open end facing down, will keep water out of the plug when trailer is parked. Some trailers are equipped with a holder for the plug like the example pictured. These holders can be purchased separately and added to your trailer if it does not have one.



Some trailers have junction boxes, for brake wiring, installed between the axles. Check that these boxes are covered and tightly sealed. If they are not tightly sealed, dirt and water will get into the boxes and cause wiring corrosion which can affect proper brake operation. Photo at right shows same junction box before and after it was cleaned out.



All trailers equipped with electric brakes are required to have a breakaway system that will apply the trailer brakes in the event of a complete separation from towing vehicle. Trailers without living quarters use a small 12-volt battery to provide this power. Trailer manufacturers put this battery box in different locations, the example shown is located on the outside at front of trailer. Some trailers have this battery in the tack room and on others it is on the underside of trailer tongue near the coupler.

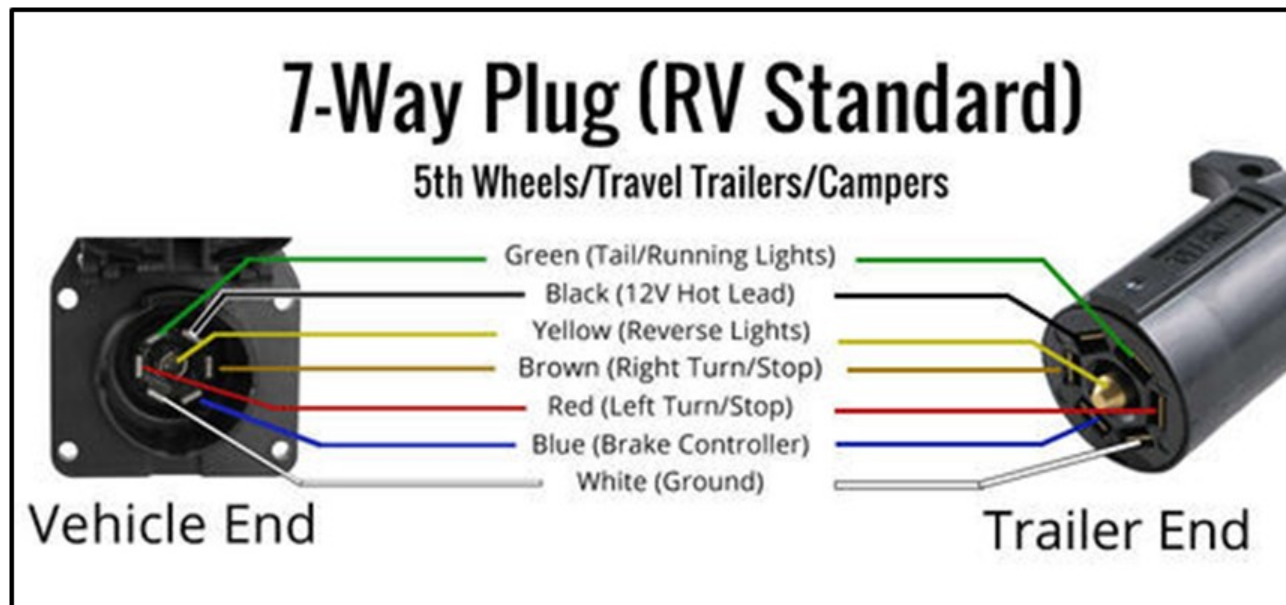
A test button is provided to check battery charge. "Fully Charged" green light should illuminate when test button is pressed. Long periods of inactivity can cause the battery to become partially or fully discharged, especially if the battery has been left on the trailer over winter.



If your breakaway battery is low on charge, first try charging it with an automotive 12 volt charger or battery tender. If the battery does not take a charge, it will require replacement. These batteries are readily available and relatively inexpensive, typically in the \$40 - \$50 range.



The last two items to check are lights and operation of trailer brakes. Your tow vehicle and trailer are both wired with a 12 volt, negative ground electrical system with frame and body of tow vehicle and trailer serving as the ground (return) side of circuit. Brakes or lights not working at all may indicate damaged wiring, a blown fuse on the tow vehicle, or a defective bulb. If electrical items work but behave strangely (for example, tail lights work but go out every time a turn signal flashes or the brakes are applied) this may indicate a problem with the ground portion of circuit.



Most tow vehicles and trailers will be fitted with the standard 7-way plug as shown. The functions of each terminal are standardized however wiring colours on your tow vehicle and trailer may be different from the colours shown on plug diagram.



**“Health check” complete, time to load up and travel! Stay safe on the road and we hope to see you at different events this summer.**

*Contributors: Beverly Sheremeto and Robert Nagle, Firefighters and horse owners—*

*B & R's Northern Horse Journey*

*Photos by Robert Nagle*