Yearly Trailer Maintenance

Your horse trailer carries one of your favorite companions. Taking care of it protects both you and your horse's well-being. Although you may not be skilled to do the work yourself, it helps to understand what should be done.

Below are checks & steps that should be done **at least yearly** for safety: Use a flashlight when inspecting your trailer. It helps you to see and focus on the various items on the trailer. Keep a list of everything you find. Ideally keep a trailer log with what is found and the date of repair.

Cleaning

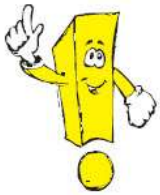
Start with a good cleaning of the trailer. Dirt and grime can hide problems. Remove all rubber mats, and ideally everything out of the trailer including the tack room. Hose or pressure wash inside, outside and the underside of the trailer including the wheel wells. Use a brush to remove stubborn debris. Use soap and water to clean every surface including the roof. You can expect this to take at least half a day. Wash the mats outside and dry completely before reinstallation.

Floor Boards

Look and test (poke) the wooden floor boards with a screwdriver or icepick. The wood should feel solid with no soft spots or observed rot or large cracks. Rotten or soft boards need to be replaced ASAP and should be considered critical. You don't want to have your horse fall through the floor.

Tack Room

Remove everything from the tack room. Get rid of the old & broken stuff. Restock any first-aid equipment or supplies. It is recommended that you have some cut ointment and an Ace bandage at a minimum for your horse or even you. Throw out old out of date medicine and replenish.



Tack repair Kit

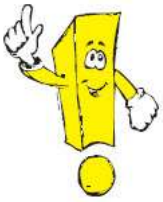
It is also great idea to carry an **Emergency tack repair kit**. This should include:

- Chicago Screws to repair your tack
- Securing bands for straps
- A spare bit & reins
- A spare rope Halter
- A spare lead-line
- A knife
- Some Duct Tape
- A few screw drivers and a Pair of pliers
- A small package of Paracord (rope)
- Some 6” Nylon wire ties.
- A small can of WD40 or other lubricant

Trailer Jack

Most trailer jacks have a lubrication hole or a cover that can be removed for lubrication. The gears need some grease so they don’t wear. Check the foot or wheel to see that it functions correctly. A little lubrication on the wheel pivots helps a lot. Crank up the trailer as far as it will go. Sometimes a light coating of grease on the shaft will allow it to slide much more freely in use.

Hint: When loading, unloading, parking, disconnecting or jacking up a trailer, use a wheel chock block to prevent rolling. This will also help to keep your jack from becoming bent if the trailer rolls.



Trailer Ball Hitch Socket

Inspect the trailer hitch for cracks or rust. Does the hitch lever or clamp move freely?

Inspect the hitch Latch for cracks and free movement. Remove the old grease/dirt and lubricate the ball socket with new grease.

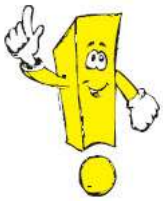
Lubricate the pivot points with oil or spray lubrication. Operate by hand until free movement is observed.

The trailer ball on the tow vehicle also should be checked for excessive wear and looseness. Yes, it should be greased. (It's also a great way to lubricate your pant legs ☹)

Always make sure the trailer ball size matches the socket size, the most common sizes are 2" and 2 5/8". They are all marked.

Safety Chains

Now is a good time to inspect the safety chains. When used, the safety chains should be crossed under the hitch then attached to the tow vehicle. They are designed to catch the hitch if it breaks and to keep the trailer attached to the tow vehicle. They should be long enough to prevent binding in a sharp turn yet be short enough to prevent dragging on the ground. They should be about 3" off the ground. Chains that have more than a small amount of scrapes should be replaced. Chains need to be secured to the tow vehicle. If hooks are used, they need to have a securing rubber or spring retainer to prevent the hook from coming off on bumpy roads.



FYI- This is the law. You can get a ticket for an improperly secured trailer and dragging chains create sparks that can start a fire.

Electrical

Inspect the electrical connector and wiring for corrosion or abrasion of the wire sheath.

Sometimes the wire can drag on the ground wearing away the rubber and exposing the wires. If the wires are damaged they need to be repaired. If the loom has too much damage, just replace it.

Check for corrosion on the electrical pins of the trailer and the truck connector. This is a common reason trailer lights or electric brakes don't work. Any green is bad. Clean the pins if corrosion is found. They can be cleaned with a small screwdriver, some fine sandpaper and electrical contact cleaner. They should be protected with a dialectic grease to limit future corrosion. (Dielectric grease can be purchased at most auto supply stores). If the pins can't be cleaned or if the pins are spread, replace the connector.

Test all of the lights on the trailer. Check the brake lights, tail lights, back-up lights, turn signal lights, license plate lights, and all running lights. Also include checking of any cargo lights if equipped. (Leave your truck running when checking the lights. Have an assistant help you.

If any of the lights are dimmer than normal, this is usually due to corrosion somewhere. Make sure the same lights are working on the tow vehicle. (The problem may not be with the trailer)

Consider replacing bad lights with LED versions as these tend to be brighter and more reliable.

Most lights unscrew or pry out if equipped with a rubber gasket. (If you lubricate the gasket with silicone spray (not WD40), the lens will slide out much easier.

Hint: If your lights start acting weird with lights dimming or flashing when the brake is applied or turn signals used, that is a typical sign of the trailer with a bad ground. The electricity is trying to find a path to follow. Cleaning connection points many times will fix a weird electrical concern on a trailer or vehicle.

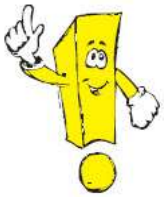
Some trailers use a support battery for the electrical system and brakes. (This is different than the Batteries in an LQ.) If it is older than 5 years or so, it may be worn out.

Look with a critical eye for cracking in the trailer structure. Small cracks can develop over time. Sometimes these are not really important, other times they are critical. All cracks should be repaired on the hitch or trailer spring mounts or other critical areas. Keep an eye on cracks noticed and if they are expanding, get them fixed. Cracks can sometimes be drilled at the end to limit the spread. We recommend this to be professionally repaired.

Lubrication

Most trailers have lubrication points. Look for them on hinges, axles and suspension. Lubricate any Zerk fittings with grease. What's a Zerk? A Zerk fitting is a lubrication point with a built in spring loaded check ball that allows grease in and then seals to keep dirt out.

Zerk Grease Fitting



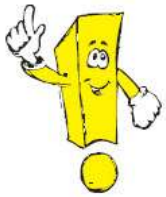
Be sure to wipe off the Zerk Fitting with a rag before and after greasing to prevent dirt entering the lubricated area.

Loose Fasteners

Take a screw driver and try to tighten all screws observed. Many times, panel screws will back out over time. If a screw will not tighten, you can sometimes use a small piece of plastic from a wire tie placed in the hole before installing the screw. Other times, a larger screw is needed. Locktite can also be used on threaded fasteners, (nuts and bolts).

Preparing to Check the Underside

- Attach the trailer to your truck and set the parking brake. Chock the tire on one side of the trailer.
- On the opposite side, remove the hubcaps from the wheels if equipped (they normally pry off). Loosen all the lug nuts ½ turn, on both wheels, but do not remove them yet!
- Jack up the trailer on the frame on that side and use a jack stand to support the trailer on the frame. (Never use just a jack to support a lifted trailer) Spin each tire by hand. Does it spin easy? Do you hear any sounds? It is normal to hear a slight rubbing of the brake shoes touching the drums as the wheel rotate. A growling/rumble sound is NOT normal. That is usually the sound of a bad wheel bearing. Get this fixed immediately as having a wheel seize up or fail and fall off will really spoil your day.
- Remove the loosened lug bolts, and remove the wheel from the trailer. Also use care when removing the wheel as they are heavy and you may have worn tires with metal cords that are ready to poke you.
- After reinstalling the wheels, repeat the process for the other side.



Note: Wheel Lug Nuts should always be torqued with a torque wrench. If you do your own work, invest in one. Most horse trailers will have a lug nut torque of 90-120 lbs., but check your owner's manual to be sure.

Tires

With the tire removed, inspect the tire carefully. The tire should have full tread all the way across. No bald areas should be observed. Bald spots around the tire can be caused when locking up the brakes. Look to see if the tread indicators are showing. Look for abnormal bulging on the tire. Verify that there are no cuts or bubbles on the sidewalls. Also tires should be replaced if older than 6 years regardless of wear. Rubber on trailer tires can degrade over an extended period of time, even if they only have a few miles on them. There is a date code on the sidewall to tell when they were made.

In the example above:

DOT U2LL LMLR 5107

DOT U2LL LMLR 5107 Manufactured during the **51st** week of the year

DOT U2LL LMLR 5107 Manufactured during 20**07**

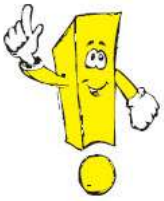
This also applies to the spare tire! Many times when a trailer has a flat tire, the spare is put on, and then it fails just a few more miles down the road. This happens due to the age of the tire or under inflation. **Always check the spare tire pressure when you check the rest of the tires for proper inflation!** Ideally the spare tire should have a cover to protect it from the sun.

Look at the rims. It should not have any cracks, dings or other damage. It should not be rusty. Basic trailer rims are not very expensive. Sometimes replacing the tire and the rim at the same time is almost the same cost of just replacing the tire. If your rims are rusty, keep this in mind. Make sure when replacing the tires that they have the correct load ratings. Most horse trailers have a load

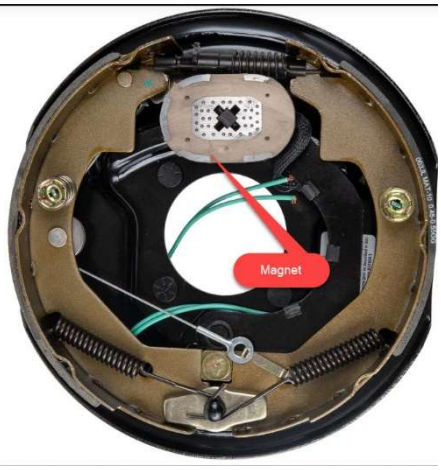
rating of “E”. A trailer tire construction is a bit different than typical car or truck tires as they are designed more for supporting a load than for grip or turning.

A little more about trailer tires:

Ideally check the inflation at the beginning of every trip or at least once a month. Have a tire pressure gauge that you can rely on. Many gauges at gas stations are unreliable.
Did you know that the tires on the right side have more problems that the tires on the left? That is because drivers don’t pay as much attention to where the tires are rolling, and many times the right side tires hit curbs on turns and run off the right side of the road edge on narrow roads, leading to tire damage.

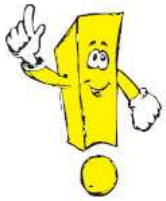


Hint: make a label with the preferred tire pressure and wheel torque and put above each fender. This will save you time. Tires should be filled when cold. The pressure can increase as much as 10 PSI when hot. Do not let air out of a hot tire!



Brakes

Trailer brakes should be inspected every year. If you have electric brakes, now is a good time to verify each brake is actually working. With a helper in the tow vehicle, you can spin the drum and ask the helper to step on the brake, you should see the wheel stop turning. If the brake does not work, inspect the wires going to the activation magnet carefully for breaks or corrosion at the connectors. When the wheel is off, it is a good time to pull the brake drums and inspect the shoes for wear and hydraulic leaks if equipped with hydraulic brakes. Most horse trailers use Electric brakes that uses an electromagnet instead of a hydraulic cylinder.



Hint: You should test your trailer brakes at the beginning of <u>every</u> trip. With electric brakes, Squeeze the brake controller by hand when you are rolling about 5 MPH on flat ground. The trailer should be able to slow or stop the rig. If not, Your gain may be set too low, the trailer brakes are out of adjustment or they may be malfunctioning or have a broken activation wire.

Excessive use or just relying on just your tow vehicle brakes will get you in trouble. When towing downshift your transmission and use your gears, don't ride your brakes! This extends the life of your brakes and gives you more control of the rig. Brake smoothly if possible, remember that you have an unbelted horse in the back.

A little more Gain

Nope, we are not talking about laundry soap! No fresh scent beads here. The gain control in your truck allows you to adjust how strong the trailer brakes are applied. Too much and the brakes will lock up and your trailer tires will skid, too little and your trailer can become squirrely when braking hard and allow the trailer to push you down the road.

The lighter the load, the less gain. Start in the middle with the adjustment. If you usually tow with one horse, this will be about right. If you add a second horse, increase the gain. An empty trailer, uses much less gain.

Wheel Bearings

Check the bearings by spinning the wheel by hand when the trailer is jacked up. No growling noise should be heard. The wheel bearings should be cleaned and repacked every 3 years or so. Grease gets old and even if you have grease zerks on the caps, they should still be manually checked and cleaned every few years. Once a year is not too much, especially if you take long trips with your trailer. Use new Cotter pins when reinstalling the brake drums.

When the drums are off, it is a good time to hose out the excess brake dust. This can help to reduce squealing and grinding at the wheel. Water will not hurt the brakes, but use caution on the first brake apply if the brakes are still wet as they will not be as effective.

Suspension

The suspension is one of the most neglected maintenance items. There are items that wear; Spring end mounts can have rubber or plastic bushings. Tandem axle systems have an equalizer bar that wears and may need to be lubricated. Bolts and links can come loose and wear. U bolts holding the springs to the axle can bottom out and get damaged or come loose. The frame mounting points need to be checked for cracks. Some suspension components have Zerk fitting that need greasing.

Axles

Axles are bent from hitting potholes and dropping a tire off the pavement edge on narrow roads. A bent axle will cause extreme tire wear. It can wear out a new tire in as little as 100 miles. Front axles are more likely to get bent since they are impacted first.

Trailers usually do not have shocks, but they do have springs of many different designs.

Rust

Surface rust on the frame generally is not a concern. Trailer frames are rarely well painted when built. However, flaking rust is a Concern. Any holes caused by rust would be a major concern as well.

Fenders

Check to see if the fenders are secure. Also check to make sure that they have adequate clearance to avoid tire damage.

Saddle racks and horse dividers

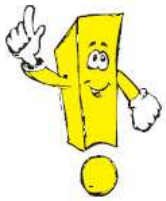
Check the operation of the horse divider panel in the trailer. It should latch easy without lifting or slamming it closed. Most hinges or latches can be adjusted if it sags. Clean and lubricate the hinges and latch with a spray lubricant if there isn't a Zerk fitting to lubricate. Operate it several times to work in the lubricant.
Pivoting saddle racks should be lubricated as well. Some may be equipped with zerk fitting for lubrication. (Invest in a grease gun and a couple tubes of grease if your trailer has these)

Doors and Seals

The doors should not sag or rub on the frame when closing. If they do, the hinge or mounting screws may be loose and need to be tightened. Lubricate the hinges with grease if fitted with a fitting or lubricate with a spray lubricant. Check the latch for good operation. Many times a small amount of spray lubricant will do wonders with the operation of a door. Wipe off any extra grease after lubing.

All rubber seals on doors should be lubricated with silicone spray to preserve them. Torn seals can sometimes be glued back into place with 3M Super Weatherstrip Adhesive (or similar product).

Check the door stop. Rubber stops can be lubricated with a little silicone paste or spray to make it easier to use.



Hint: Do not use any Petroleum Product on Rubber seals. Silicone is the only safe lubricant for rubber seals.

Paint

The paint on a trailer gets abused! Many owners fail to wash their trailer often enough, and a trailer rarely if ever gets waxed. Chips happen from road debris and stones that get kicked up from the tow vehicle. Lead lines are tied and banged into them. They usually get left outside uncovered and even worse, may be parked on dirt with weeds growing up around them. Waxing the trailer will help to make the paint last.

Water storage tanks

The water storage tank should be drained at least yearly and the water refreshed. Adding a drop or two of Chlorine to the water will help to keep algae at bay and the water fresher. It doesn't take much. Most bleach is chlorine based If the active ingredient is Chlorine, it is okay to use.

Final notes

Sliding widow tracks should be vacuumed or blown out with compressed air. Lubricate hinges and latches with spray lubricant. Clean the windows inside and out.

Check all horse tie down rings inside and out for loose screws or problems. Tighten any loose rings, and lubricate any pivoting rings.

The good news: Most parts for trailers are generic. Axles, brakes, lights, wiring and suspension are rarely unique to a specific trailer. However with that said, there are lots of different styles and sizes of the parts, so it can be a bit challenging to order the correct replacement part.
For example: Dexter Axle (the most common trailer axle company) probably has more than 500 different configurations for their axles, and usually they custom make a replacement axle to order. They have many different load ratings, brakes, spring systems, bearing systems, lug configuration and width that have to be considered when ordering a replacement unit.

This information was prepared for
SCCHA by Steve Shupe 4/2024