



Napa Community Animal Response Team

VEHICLE INSPECTION

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Use the CART pre-operational vehicle checklist to guide your vehicle inspection



NAPA CART PRE-OPERATIONAL VEHICLE CHECKLIST

Paperwork

- Proper license for the vehicle you are operating.
- Registration.
- Proof of insurance.

Engine compartment

- *Engine oil* - Clear brown to light black color. Oil should be smooth and not gritty. Oil that is contaminated with water or coolant is creamy brown and foamy looking.
- *Transmission fluid*
- *Brake fluid*
- *Power steering fluid*
- *Windshield washer fluid*
- *Engine Coolant* - Radiator fins clean. Radiator cap in good condition and tightly secured. Fan condition and mounting. Coolant hose clamps tight, no cracks or soft spots
- *Battery* - Clean. Cables tight with no rust or corrosion (excessive corrosion may indicate a failing battery). Battery cells at the top of level. Fill cells with DISTILLED WATER ONLY. Maintenance free battery green indicator (if equipped)
- *Air cleaner* - Clean and securely mounted
- *Belts(s)* - Tight, no cracks.
- *Exhaust system* - Check for cracks and leaks

Tires

- *Air pressure* - Check the owners manual for the proper tire inflation for your vehicle. The pressure on the side of the tire is the maximum pressure allowed for that tire. Use of a pressure gauge is the only way to properly check the air pressure.
- *Tread depth* - Minimum allowable: 4/32" front, 2/32" rear and trailer. Check for tread separation from the tire body.
- *Side wall* - Check for cracking, bulges or soft spots.
- *Age* - The date of manufacture is stamped on the side of the tire. A 4 digit number: the first 2 numbers are the week, the second 2 numbers are the year. Manufacturers recommend replacing tires after 6-10 years.
- *Lug nuts* - No missing lug nuts, and tight. Check owners manual for proper torque. Check for rust between the lug nuts and rim indicating a loose nut.
- *Rims* - Check for cracks, bent bead wall.
- Don't forget to check the spare tire.

Lights

All lights need to be clean and functioning properly

- *Headlights*- High and low beam
- *Turn signals/ Emergency Flashers*
- *Tail lights*
- *Brake lights*
- *Marker lights/ reflectors*
- *Back up lights*
- *Interior lights*

Glass

- *Windshield* - Clean, no cracks that interfere with the driver's or co-driver's visibility. Wipers functioning properly, no excessive streaking. Windshield washer functioning.
- *Windows* - Clean, no cracks that interfere with the drivers or co-driver visibility. Functioning properly.
- *Mirrors* - Clean, no cracks. Properly adjusted.

Trailer

- *Truck & trailer* - must be compatible for size, coupling device, brakes, and electrical systems
- *Ball & hitch* - Proper size safety pin securing the hitch into the receiver. No cracks, ball securely mounted. Check towing weight rating. Check for proper ball/ coupler size on truck and trailer. Balls mounted directly to the bumper typically have a much less towing weight rating. A small amount of grease on the ball to lubricate the hitch.
- *Trailer coupler* - Coupler firmly closes on the ball. Safety pin MUST be on hitch
- *Safety chains* - Secured to trailer. Cross the chains when attaching to the truck. Chains only need to be long enough to permit proper turning. Check chains for worn, bent, or stretched links. Hooks not bent or twisted. Hooks should face away from the truck.
- *Electrical plug* - Proper type and firmly attaches to truck plug. Clean, no dirt, rust inside plug.
- *Trailer jack* - Secured to the trailer. must be fully raised when connected to the truck. If the wheel or foot pad is not on landing gear use a block of wood when landing gear is lowered.
- *Axles* - Grab the top of the tire and shake to ensure the axle nut is tight. Some trailers have a grease fitting on the axles. Remove the hub covers and lube the grease fittings.
- *Trailer brakes* - Check trailer brakes by slowly rolling the truck forward and applying trailer brakes. Adjust brake tension according to the weight of trailer load. Battery charged. Safety line in good condition.
- *Tongue* - Check for wear, looseness, cracks, distortion or structural damage
- *Doors and Ramps* - Check and lube hinges. Must close and lock securely.
- *Floor* - Remove rubber mats and check the condition of floor boards.



Vehicle Inspection Form

Print the vehicle inspection form, fill it out, scan and email to allen@napacart.org

Keep the hard copy in your vehicle.

 Napa CART Vehicle Inspection Form

One

Date

Vehicle Type & VIN

	Y	N	Comments
License			
Registration			
Proof of Insurance			
Oil, coolant, fluids			
Fuel			
Horn			
Tires			
Headlights			
Turn Indicators			
Brake lights			
Windows & Mirrors			
Road flares/reflector kit			
Fire extinguisher			
First aid equipment			
Flashlight			
Maps			

Trailer

Registration
Tongue latch mechanism
Tires
Spare tire
Clearance lights
Brake lights
Turn Indicators
Electric brake system
Emergency brake system
Safety chain
Floorboards
Chock block

Driving test: Pass Fail Comments

Inspector approval _____ *Signature and Date* _____



Vehicle weight

To safely operate your vehicle you must know the weight limitations of your vehicle.

To start we will explain the different terms used in determining vehicle weights.

This information can be found in your owners manual.



Tare Weight

Tare weight is the weight of your vehicle empty, with only the fluids needed to operate the vehicle. Engine oil, coolant , etc. plus ten liters (2.6 gal.) of fuel.

Unladen weight is same as above but with a full tank of fuel



GVWR

Gross Vehicle Weight Ratio.

The maximum weight your vehicle fully loaded can safely and legally operate.



GVW

Gross Vehicle Weight.

Also known as curb weight, this is the actual weight of your vehicle including all passengers, tools, and cargo.

The GVW of your vehicle can not exceed the GVWR.



GTWR

Gross Trailer Weight Ratio

The maximum weight your trailer fully loaded can safely and legally operate.



GTW

Gross Trailer Weight.

The actual weight of your trailer including all animals, tools and cargo.

The GTW can not exceed the GTWR



TW

Tongue Weight

The downward pressure on the trailer tongue placed on the ball by the coupler. The tongue weight should be 10 to 15 percent of the trailer weight.



GCVWR

Gross Combination Vehicle Weight Ratio

The maximum weight your vehicle and trailer fully loaded can safely and legally operate.



GCVW

Gross Combination Vehicle Weight.
The actual weight of your vehicle and trailer
including all passengers, animals, tools, and cargo.

The GCVW can not exceed the GCVWR



You must have the proper license for the vehicle you are operating

You have a...	you may drive...	and you may tow...
Non-com'l Class A license	all vehicles under Class C	<ul style="list-style-type: none">• any vehicle under Class C.• a travel trailer weighing over 10,000 lbs. GVWR, not used for hire.• a fifth-wheel travel trailer weighing over 15,000 lbs. GVWR, not used for hire. <i>With a vehicle weighing 4,000 lbs. or more unladen, you may tow:</i>• a livestock trailer over 10,000 lbs. GVWR but not over 15,000 lbs. GVWR if the vehicle is operated by a farmer to transport livestock, not for hire, and within 150 miles of his/her farm.
Non-com'l Class B	<ul style="list-style-type: none">• all vehicles under Class C• a housecar over 40 feet but not over 45 feet, with endorsement	all vehicles under Class C.
Class C	<ul style="list-style-type: none">• any 2-axle vehicle with a GVWR of 26,000 lbs. or less• any 3-axle vehicle weighing 6,000 lbs. gross or less• any housecar 40 feet and under, in length.	<ul style="list-style-type: none">• a single vehicle with a GVWR of 10,000 lbs. or less including a tow dolly, if used.

continued on next page

You have a...	you may drive...	and you may tow...
Class C, continued	A farmer or employee of a farmer may also drive: <ul style="list-style-type: none">• any combination of vehicles with a GCWR of 26,000 lbs. or less if used exclusively in agricultural operations and it is not for hire or compensation.	With a vehicle weighing at least 4,000 lbs. or more unladen, you may tow: <ul style="list-style-type: none">• trailer coach not exceeding 9,000 lbs. gross.• trailer coach or fifth-wheel travel trailer under 10,000 lbs. GVWR when towing is not for hire.• fifth-wheel travel trailer exceeding 10,000 lbs. but under 15,000 lbs. GVWR, when towing is not for hire and with an endorsement.
<p>NOTE: No passenger vehicle regardless of weight, may tow more than one vehicle. No motor vehicle under 4,000 lbs. unladen may tow any vehicle weighing 6,000 lbs. or more gross. (VC §21715)</p>		
Class M1	any 2-wheel motorcycle, motor driven cycle, or a motorized scooter	
Class M2	any motorized bicycle, moped, any bicycle with an attached motor, or a motorized scooter	
<p>NOTE: Class M1 or M2 is added to any other class license after passing law and skills tests.</p>		



Vehicle registration and insurance

You are required to properly register your vehicle, and to carry insurance as required by California state law.

The insurance provided by Napa CART/ Napa County during an activation DOES NOT cover vehicle accidents.



Engine Compartment

Ensure that all fluid levels are at the proper operating range.

- Engine oil
- Transmission oil
- Engine coolant
- Brake fluid
- Power steering fluid
- Windshield washer fluid



Engine Compartment

Radiator clean with no blockage to allow for air flow. Radiator cap in good condition and tightly secured.

Battery clean. Cables tight with no rust or corrosion and cells full. Fill battery cells with distilled water only. Green indicator on maintenance free batteries.

Air cleaner clean and securely mounted.

Belts properly tensioned, no cracks.

Check exhaust for leaks.



Engine compartment

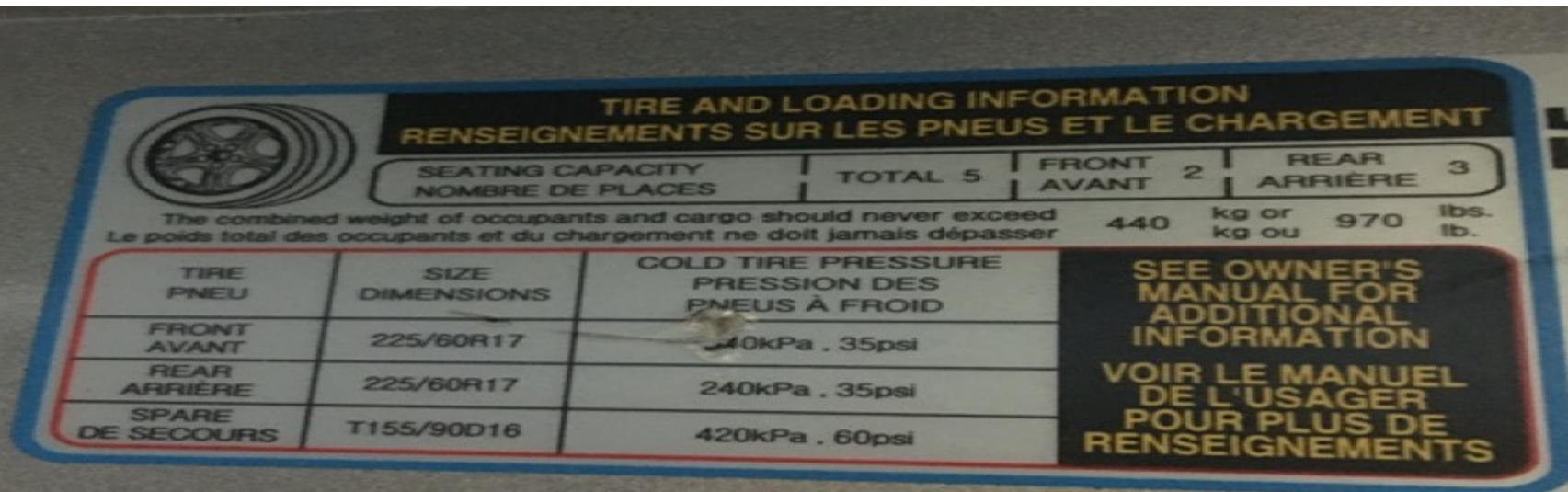
While engines are basically the same they differ between manufacturers and models. Check your owners manual for the location ,correct fill levels and proper type of fluids.





Tires

Check the tire pressure using a pressure gauge. The proper inflation can be found on the stickers located in the driver side door frame or owners manual. The pressure stamped on the tire is the maximum allowable for that tire, not the recommended inflation for that vehicle.

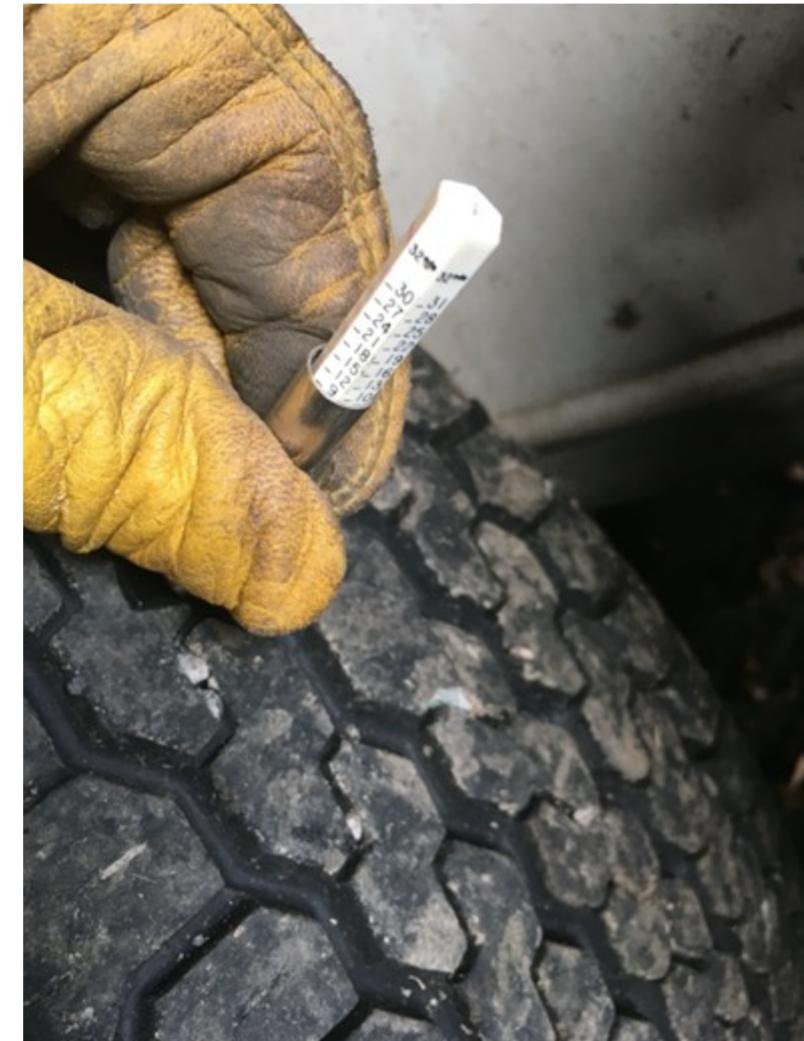




Tread Depth

The minimum tire tread depth is $4/32$ of an inch for the front tires. $2/32$ of an inch for the rear and the trailer.

Check for tread separation or missing pieces of tread.





Side wall

Check the tire sidewall for cracking, bulges, and soft spots.

The date of manufacture is stamped on the tire. A four digit number, the first 2 is the week, the last 2 is the year.

Manufacturers recommend replacing tires after 6-10 years. Check owners manual





Rims

Check the rims for cracks, and bent beadwall.

No missing lug nuts, and tight. Check for rust between the lug nuts and rim indicating a loose nut.

Check owners manual for proper torque on lug nuts.

**DON'T FORGET TO
CHECK THE SPARE!**





Lights

All lights must be clean and functioning properly.

Headlights- High and Low beam.

Tail lights.

Brake lights.

Turn signals

Emergency flashers.

Marker lights.



Glass

Windshield and windows can have no cracks that interfere with driver or co-drivers visibility. Must be kept clean.

Windshield wipers functioning properly, no excessive streaking, windshield washer full and functioning properly.

Mirrors must be clean, have no cracks and be properly adjusted.



You must be familiar with the operation of the vehicle before getting on the road. Know the location of the light switches, windshield wipers, trailer brake control heater, and radio. Be familiar with the gauges.





When working behind the evacuation lines in a disaster you may come across very adverse conditions including but not limited to, downed power and phone lines, hazardous road debri, down trees, heavy smoke and falling ash.

It is important our vehicles are in top operating condition so we can accomplish our mission without becoming a hindrance to the first responders doing their jobs.



Trailer Hauling





The truck and trailer must be compatible for size, weight, brakes and electrical connections.



Ball, Hitch and Receiver

Ensure the ball is firmly bolted onto the hitch. The hitch and receiver are the same size and the proper safety pin used to secure the hitch into the receiver. Check the assembly for cracks or wear. The ball should have the size and weight stamped on it. If it is worn then you need to replace the ball.





Ball, Hitch and Receiver

For easier and safer towing the trailer should sit level when connected to the truck. This is done by using a hitch with the proper rise or drop to match the ball height to the level height of the trailer coupler. When towing heavier trailers the use of an adjustable ball and hitch combination is not recommended.





Trailer Coupler

Check that coupler is securely mounted to trailer.

No cracks

Coupler and ball same size.

Coupler closes firmly on ball.

Safety pin MUST be used to keep coupler from releasing while traveling.

All Napa CART trailers use a 2 5/16" ball.





Safety Chains

Chains to be securely mounted to trailer. Check for worn, bent, or stretched links. Hooks not bent or twisted. Cross chains when attaching to truck, this is to catch the trailer tongue if it separates from the truck.

Hooks should face away from the truck.

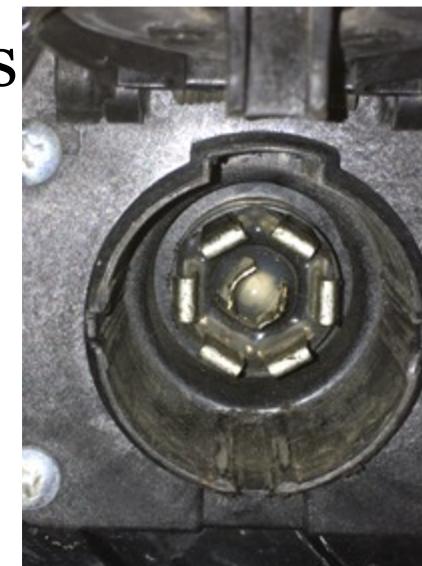




Electric plug

Electric plugs must be of the same type and size.
Must be clean, no dirt or rust inside. Must be
firmly attached to mating plug end.

All Napa CART trailers
use the seven flat pin
plugs pictured.





Trailer Brakes

There are three basic types of trailer brakes.
Air- found on commercial vehicles. No need to discuss this type here.

Surge- some older model horse trailers have surge brakes. These are operated by a brake cylinder on the tongue of the trailer and when the towing vehicle slows the trailer pushes forward in to the brake cylinder activating the brakes. When backing up a hill it activates the brakes making difficult to back up.



Trailer Brakes

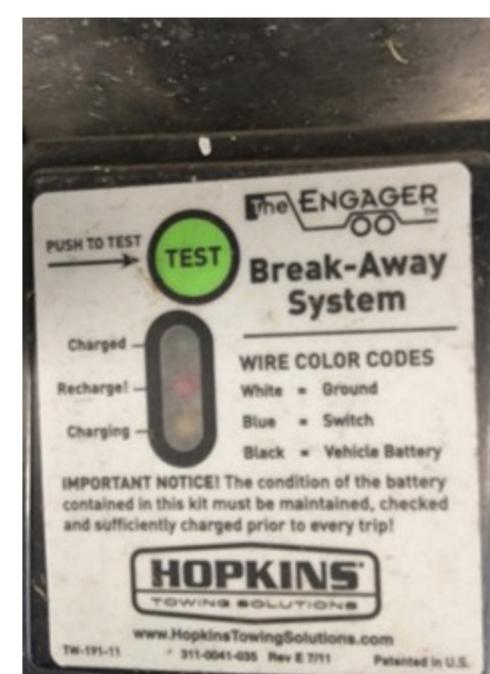
Electric- the most common type of brakes on trailers. These require the towing vehicle to have a brake controller mounted in it.

To check the trailer brakes you would slowly roll forward then apply the trailer brakes using the brake controller. Adjust the trailer brake tension according the weight of the trailer load. To little tension in a loaded trailer the brakes will not stop correctly. To much tension in an empty trailer and your tires may lock up and skid when braking.



Trailer Brakes

Electric brakes typically have a battery for emergency braking if the trailer becomes separated from the truck. Check to ensure the battery is charged. Pictured on the left is a battery charger. If you don't have one it is recommended to install one.





Trailer Brakes

The emergency brake is activated by the brake safety line pulling a pin in the breakaway switch. The safety line must be connected shorter than the chains, in order to pull the pin.

Ensure the safety line is in good condition.





Wheel Hubs

Ensure the wheel hubs are tight, by shaking the top of the tire. if you feel any movement the hubs need to be tightened

Many trailers have grease fittings in the hubs to grease the bearings.



Wheel Hubs

Hub cover on



Hub cover removed
Rubber seal on





Wheel Hubs

Rubber seal removed
exposing grease fitting



Use a grease gun
to grease fitting





Trailer Jack

Check that trailer jack is firmly secured to trailer tongue. No cracks, able to raise and lower easily.

Trailer jack must be fully raised when attached to truck to provide for ground clearance.

If you have a tire as pictured it needs to removed when attached to truck.





Towing Tips

The addition of a trailer adds weight and length to the tow vehicle . With additional weight your rig will accelerate slower and take longer to stop. You need to allow for extra time when switching lanes, passing other vehicles and stopping.

Because of the extra length the trailer does not follow the exact path of the truck on turns, you must swing out wider arounds bends and corners.



Towing Tips

How you load a trailer can determine how easily it will tow. Remember 10 to 15 percent of the trailer weight should be on the tongue. Not enough weight on the trailer tongue will cause your trailer to sway, place heavier cargo forward of the axles, and centered left to right. Tie down cargo to keep it from sliding.



Towing Tips

However we all know you can not securely tie animals to keep them from moving.

Special caution is needed when hauling animals as they will move around affecting the performance of the trailer.

Place larger horses in the front of the trailer.

The driver is responsible for the safety, as well of the comfort of the animals being hauled.



Towing Tips

Keep the animals securely in the trailer.

Allowing the animals to put their heads out the window is extremely hazardous to the animals and could result in severe injury or even death.





THANK YOU

The leadership at Napa CART would like to thank you for your service to the community thru our organization.

If you need assistance please contact me.
allen@napacart.org

