

Ball Hitch Safety

General – Accidents can occur from improper installation of ball joint hitches and due to improper towing procedures. These accidents could cause serious vehicle / property damage and / or serious and/ or fatal injuries.

Hazards – Severe bodily impact
Vehicle / Property damage

PPE – Steel toed footwear

Pre-trip Planning:

1. Ensure staff has received appropriate training
2. Ensure the vehicle, hitch and trailer are sized properly and compatible.
3. Inspect the trailer to ensure it is safe to use:
 - Depending on the size of trailer and vehicle an equalizing hitch may be required.
 - Ensure the hitch coupler mechanism is free from dirt or rust and the parts move smoothly and freely.
 - Check the coupler pins and fasteners for signs of looseness or excessive wear.
 - Ensure safety chains are in good condition.
 - Ensure safety chains are of the proper size and length, i.e. strong enough for the weight of trailer and long enough to cross but not drag on the ground.
 - Ensure the attaching devices at the end of the chains are not damaged and work easily.
 - Ensure the trailer is structurally sound: check that braces, struts, spring hangers, fenders, tailgate hinges, etc are securely welded or bolted in place.
 - Ensure the axle springs are solidly attached to both anchor and pivot points.
 - Ensure the wheel bearings and spring pivot points are adequately greased.
 - Check the tires (including the spare) for wear, cracks, cuts, bulges and for proper inflation.
 - Ensure the wheel studs/nuts are tightened to specifications.
 - If so equipped, ensure the electrical brakes work on all wheels.
 - If so equipped, ensure the emergency break-away brake mechanism works.
 - If so equipped, ensure the rip cord for the break-away brake switch is of the proper length (if the trailer comes loose, the cord will activate the trailer breaks before the safety chains come tight).
 - Check the trailer electrical cable and plugs for cracks, fraying or wear.
4. Inspect the tow vehicle to ensure:
 - It has sufficient power and adequate cooling system to safely haul the trailer (see Appendix A)
 - The suspension and tires meet or exceed the vehicle's gross combined weight rating.
 - It has adequate side-view mirrors and they are properly adjusted.
 - If the vehicle is equipped with a receiver type frame hitch with a removable steel ball block, ensure the pin and cotter key holding them together are in good condition and in place.
 - Check the frame hitch for signs of bending or twisting and signs of cracked or or broken welds.
 - Ensure the ball and socket are the same size.
 - Ensure the ball is the correct height for the trailer coupler.
5. Properly load the trailer.
 - Never exceed the maximum gross trailer weight (includes the load and the trailer itself).
 - Ensure the trailer is loaded so that 10% to 15% of the load weight is on the hitch.
 - Ensure all cargo is secured to prevent shifting.
 - If covering the load with a tarpaulin, ensure it is strong enough and adequately tied down.

Hooking up the Trailer:

1. When assisted in hooking up and un-hooking a trailer ensure that:
 - The assistant can be seen at all times by the driver
 - That both the driver and assistant understand the hand signals to be used
 - The assistant is not caught between the vehicle and the trailer
 - The driver makes no attempt to move the vehicle while the assistant is connecting the trailer tongue to the tow ball
 - Keep hands clear at all times.
2. Attach safety chains to the diagonally opposite point on the hitch.

3. Ensure all trailer lights work and that they are sufficiently bright.
4. Remove tires blocks after the trailer is hooked to the tow vehicle.

Driving Techniques:

1. When towing a trailer, you must be fully aware of the restrictions on manoeuvrability, visibility and acceleration. You should also know that the way your vehicle brakes changes considerably with the added weight of a trailer. Here are some other points you should pay attention to:
 - Never go over 80 km per hour.
 - Allow extra distance for passing and take care when returning to the driving lane.
 - When turning drive beyond the normal turning point of conventional vehicles to ensure that sufficient clearance is allowed to make the turn safely.
 - Signal well in advance of any move.
 - When following another vehicle, keep back at least one full length of the vehicle plus trailer for each 16 kilometres per hour of speed.
 - Before reversing, leave the vehicle and check for hazards. If someone is available, ask them to stand outside the vehicle to direct the backing manoeuvre.
2. Trailer fishtailing, with the resulting loss of steering control, is a major cause of trailer accidents. Fishtailing is usually caused by:
 - poor load distribution on the trailer;
 - excessive speed;
 - an overloaded trailer;
 - the towing vehicle being too light or having inadequate suspension;
 - the effects of wind from passing vehicles;
 - improper tire inflation or defective tires; and/or
 - improper application of the brakes (the trailer brakes should always be applied before hitting the brakes on the towing vehicle).
3. If your trailer is fishtailing, slow down immediately and pull over when it is safe to do so. Stop your vehicle, assess the problem and take corrective measures.

Parking and Un-hooking the Trailer:

1. Ensure the ground or surface where the trailer will rest is firm and is not on an unreasonable incline.
 2. Ensure both trailer tires are blocked front and back to prevent movement.
 3. Ensure there is a solid surface on which the tongue support can rest.
 4. If so equipped, ensure that the pivoting front trailer jack is securely locked into place.
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