

Trailer Safety

Tow your trailer safely and securely with the required equipment, proper maintenance and safe-driving tips



MANITOBA
PUBLIC INSURANCE

Trailer safety

Towing a utility trailer, camper trailer or boat trailer?

Inside, you'll find tips about these important topics:

- trailer and vehicle sizes
- equipment
- maintenance
- preparation
- driving safely, with your trailer in tow

Please note that the information in this brochure does not apply to commercial trailers and farm implements. For more information visit mpi.mb.ca.



Registering your trailer

Here are some terms you should be familiar with when you register your trailer:

- Gross Vehicle Weight Rating (GVWR) is the maximum loaded weight a trailer can be. GVWR is specified either by the trailer manufacturer on the compliance label or by provincial authorities.
- Gross Vehicle Weight (GVW) is the actual weight of your trailer when you are towing it. GVW is the total of the curb weight (found in the owner's manual) and the weight of what you typically carry in the trailer (for example, bikes, barbeque, watercraft, etc).

A trailer cannot be registered for more than its GVWR, nor for less than its curb weight. Talk to your Autopac agent about what weight you should register your trailer at.

Certain inspection requirements apply to trailers with a GVWR of 4,500 kilograms (9,920 pounds) or more. Exemptions may apply for some trailers, such as those designed or modified for the purpose of mobile living accommodation.

If your trailer's GVW is more than 4,540 kg (10,000 lb) you must hold a Class 1, 2 or 3 driver's licence.



Weighing your trailer

Owners can weigh their vehicles at vehicle weigh scales located throughout the province. Visit gov.mb.ca/mit/mcd for more information.

1. Weigh each axle on the tow vehicle separately and compare with the compliance label to ensure individual axles are not over-loaded.
2. Weigh the whole vehicle to ensure it is under the GVWR.
3. Weigh the trailer, all wheels at one time, and compare to the trailer manufacturer's compliance label.

Exceeding the manufacturer's Gross Combination Weight Rating (GCWR) may affect the vehicle warranty.

Trailer and vehicle size

Whether your vehicle and your trailer are attached or apart, each one can be up to:

- 2.6 m (8 ft 6 in) wide
- 4.15 m (13 ft 6 in) tall – including anything that sticks up, like antennas or air conditioners



When attached, your towing vehicle and trailer can be **up to 21.5 m (70 ft)** long. When apart, each can be **up to 12.5 m (41 ft)** long.

The trailer can be up to 14.65 m/48 ft if it meets the following criteria:

- two thirds or more of the length of the vehicle is designed as temporary living quarters,
- it is attached to the truck by a 5th wheel coupler, and
- a substantial portion of the vehicle's weight rests on the truck.

The maximum combined truck and trailer length of 21.5 m (70 ft) still applies to 5th wheel trailers that are eligible to be up to 14.65 m (48 ft).

In Manitoba, you can pull two trailers if you meet these three requirements:

- You must use a fifth-wheel hitch for the first trailer to pull another trailer behind it.
- The combined weight of the trailers isn't more than twice your vehicle's registered gross vehicle weight.
- The combined length of your vehicle with two trailers attached is no more than 23 m (75 ft).

Match your trailer and towing vehicle

Make sure your trailer and your vehicle match. Never tow a trailer that's too large or too heavy.

You'll need to consider these two factors:

- how heavy your trailer is when loaded
- how much power your vehicle has (check the owner's manual and compare your vehicle's towing capacity to the weight of the trailer you're towing)

Unsure if your trailer and your vehicle are a proper match? Check with a dealer who sells that type of vehicle, or its manufacturer.

Equipment

Hitches

There are two main factors to consider when using a hitch:

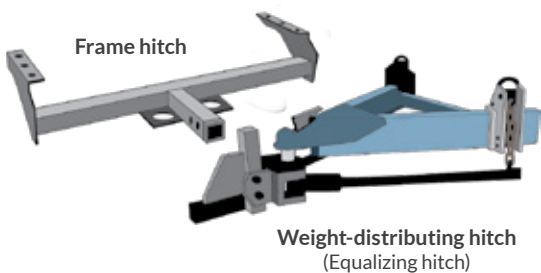
- how you attach the hitch to your vehicle
- how you attach your trailer to the hitch

To attach the hitch to your vehicle properly, you must bolt it to your vehicle's frame.

To attach your trailer to the hitch properly, you must use two methods, so that it doesn't come apart:

- By tow-bar, which is connected to the hitch.
- By safety chains or cables. These must be loose enough to allow you to turn right and left, and be capable of supporting the weight of both the trailer and the load.

If your trailer weighs more than 910 kg (2,000 lb) use a weight-distributing or equalizing hitch instead of a frame hitch. Transferring part of your trailer's weight towards the front of your towing vehicle gives you a smoother ride and more control.



Make sure the hitch allows a clear view of your vehicle's rear licence plate when you're not towing a trailer.

If your trailer is longer than 5.2 m (17 ft) use an anti-sway device to keep your trailer stable.

Trailer brakes

If your trailer's registered gross vehicle weight is more than 1,360 kg (2,998 lb), the law says it must have brakes.

The law doesn't require brakes on lighter trailers. But they're still a good idea because they help you stop more efficiently.

If your trailer has no brakes, your vehicle's brakes must work that much harder. When you're slowing down, your trailer's weight pushes your vehicle forward.

Brakes on your trailer help prevent this from happening because they work with your vehicle's brakes for added stopping power.

That helps you stop faster and shorter.

Trailer brakes should have a breakaway device to stop the trailer, in case it separates from the tow hitch.

Lighting and reflectors for trailers

Your trailer must have all the following lights:

- one or more red tail lights per side
- one or more red stop lights at the rear per side
- red or amber turn signal lights per side
- side marker lights (amber at the front, red at the rear)
- a white licence plate light

If your trailer is 2.05 m (80 in) wide or wider, it must also have these lights:

- amber clearance lights at the front
- red clearance lights at the back
- three red identification lights at the back

Your trailer must have all the following reflectors:

- two red reflex reflectors, one per side facing backward
- two red reflex reflectors at rear, one per side facing sideward
- two amber reflex reflectors at front, one per side facing sideward

Many trailer lights have reflectors built within the lights,

but that isn't always the case. Check to ensure you have the required reflex reflectors.

If your trailer is 9.1 m (30 ft) or longer, two amber side marker lamps are required.

If your load extends more than 1 m (39 in) beyond the rear of your trailer, you must have a red light or reflector at the end of the load. In daylight, you must attach a red flag not less than 30 cm square, visible at a distance of 60 m.

Lighting connections between your trailer and your vehicle should include an independent ground wire.

Mirrors for your towing vehicle

When you're pulling a trailer, you must have a clear view to the rear of your trailer. To do this, you may need to reposition your vehicle's mirrors or add extended mirrors.

When you're not towing your trailer, remove any mirrors you've added to your towing vehicle.

Tires

Trailer tires must be DOT (Department of Transport) approved or contain the National Safety Marking and be rated for the GVWR of the trailer they are attached to.

For safety sake, keep your trailer's tires at the pressure recommended by the manufacturer.

Check your tire pressure **before** driving, when your tires are cold.

Underinflation may cause sway, while overinflation may cause a rough ride. Too little or too much air pressure can also cause severe tire wear, blowouts or loss of control.

While you may need more air pressure in your vehicle's rear tires to compensate for the trailer load, never inflate them more than the manufacturer recommends.



Trailer splashguards or fenders

When you're towing your trailer, it must have either splashguards or fenders.

Trailer package

If you're towing a heavy trailer, your vehicle needs heavy-duty equipment.

Start by installing a trailer package, which includes these upgrades:

- oversized radiator
- transmission cooler
- anti-sway bar
- heavier rear suspension

Other equipment

Keep these items on hand in case of emergency:

- flags and reflectors (or flares)
- fire extinguisher
- tool kit (wrenches, pliers, screwdrivers and a hammer)
- spare tire
- special jack for the trailer
- blocks for parking



Maintenance

Axle care: boat trailers and water

After long drives, trailer wheel bearings get hot. Before backing your boat trailer into water, give the wheel bearings time to cool.

Immersing hot wheel bearings in water causes sudden cooling. It can also draw water into the hubs, thinning the axle oil. In turn, this contaminated oil can damage the axle.

Lubrication

Lubricating your vehicle and trailer properly helps keep both operating smoothly and safely.

Pay close attention to your vehicle's transmission oil. With the added stress of pulling a trailer, you need to change it more often.

Grease the wheel bearings on your trailer each year. Poor lubrication could lead to wheel bearing failure which could cause a wheel to drag or an axle to break.

Preparation

General tips

Practice towing your trailer away from traffic. You'll become more skilled at handling your trailer, and gain confidence.

- Turn off all propane appliances including shut-off valves on the propane tanks.
- Make sure all the lights work and the hitch and chain connections are secure.
- Check that your tires are in good shape and properly inflated, lug nuts or bolts are tight, the load is secure, vents are closed, the breakaway switch is connected and the trailer is riding level.
- Limit the weight on the hitch or else the tow vehicle's back end will be pushed down. This will strain the rear springs, tires and axle and also affect steering, braking, headlight aim and mirror alignment.
- Check the tongue weight of your trailer (see the Trailer classifications table in this brochure) and adjust the load as needed. Keeping enough weight on the hitch prevents fishtailing.

Inspect the engine cooling system. If your trailer has brakes, inspect the linings each year.

Key point about loading your vehicle

Don't overload your vehicle's trunk. Too much weight at the back will raise your vehicle's front end. That affects your steering, braking, headlights and mirrors.

Key points about loading your trailer

- While your trailer is being towed, it's illegal for passengers to ride in it.
- In an open trailer, you must secure your load to make sure it doesn't fall out.
- Keep the load 91 kg (200 lb) below the rated capacity.
- On utility trailers, keep heavy loads between axles.
- Divide your load evenly on each side and secure it there, to prevent sway.
- Keep heavy items low in the trailer— either on the floor or in lower cupboards.
- To prevent sway, keep water tanks either full or empty.
- On a boat trailer, place the heaviest load where the hull support is the greatest (usually over the keel). Adjust the roller and hull support so that it supports all points.
- If your boat or utility trailer is empty, avoid braking too hard. This may cause your trailer to swerve severely.
- An empty trailer may be harder to control on bumps and turns.

Checking your trailer's tongue weight

You will need a 2 x 4 board, two pieces of pipe, a brick and a bathroom scale (see diagram opposite).

1. Place the 2 x 4 on the two round pieces.
2. Screw the jack extension down on the top of the 2 x 4 until it supports your trailer.
3. Multiply the reading on a bathroom scale by three. This is the tongue weight of your trailer.
4. If you exceed the capacity of the scale, increase the two-foot dimension to three or four or more feet, but always multiply the scale reading by the total number of feet between the brick and the scale.

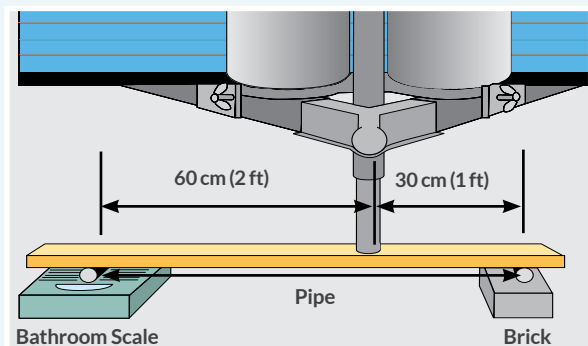
Is your trailer's tongue weight correct?

What the tongue weight should be depends on the type of hitch.

For fifth-wheel hitches, tongue weight can be up to 25 per cent of your trailer's Gross Trailer Weight (GTW). For all other hitches, tongue weight should be 10 to 15 per cent of your trailer's GTW.

If the tongue weight is too high, shift your trailer's contents to the back. If the tongue weight is too low, shift your trailer's contents to the front.

After adjusting your trailer's load to the back or front, recheck the tongue weight to make sure it's correct.



Caution: be sure the trailer is level when you read the scale.

Driving safely with your trailer in tow

Take it slow and steady

- Accelerate slowly. Fast starts put strain on your power train.
- Steer gently. Sudden turns of the wheel can cause swaying or even an upset.
- Stop gradually, by applying your brakes at intervals to prevent overheating and wear.
- Drive at a steady speed. Drive at the speed limit or below, but avoid going too slowly. If traffic lines up behind you, pull over and let it pass.
- If it's rainy or windy, slow down.

Passing

- Be especially careful when passing. Allow at least twice the normal passing distance – your trailer's added weight slows you down. That means it'll take longer for you to pass.
- When returning to the right lane, move over gradually and allow enough space for your trailer.

Being passed

- Stay in the right lane.
- Leave enough room ahead for the passing vehicle to re-enter the lane.
- If cars are lining up behind you, pull over, stop and let them pass.
- Avoid driving on the shoulder.
- If a bus or semi is passing you, limit swerving by gripping the steering wheel firmly and accelerating slightly. This will help you regain control.

Following

- For every 16 km/h (10 mph), leave at least two trailer lengths between your vehicle and traffic ahead of you. That's more space than you'd need if you weren't pulling a trailer, but there's a good reason for it: **pulling a trailer increases the distance you need to stop.**

Turning

- Avoid sharp turns.
- Allow for the length of the trailer behind you. Check the traffic carefully and pull straight ahead about half a metre (18 in) before turning. This will prevent the trailer from cutting the corner too sharply.

Curves

- When going around a curve to your left, keep to the right side of the lane. This prevents you from crossing the centre line.
- When rounding a curve to your right, stay in the centre of the lane, away from the shoulder.

Grades

- Downhill, use your engine to slow down by downshifting. Brake on and off, not continuously.
- Uphill, get more pulling power by downshifting.

Backing up

- Check the conditions (ground, clearance, pedestrians and other vehicles) before backing up.
- Before backing up, ask someone to act as a guide and agree on the signals you'll use. Make sure the guide is standing on your driver's side to be easily seen.
- Back out of traffic, not into it.
- If possible, back in a curve on the driver's side. This gives a better view and better control.

- Back up slowly and check both sides. Do not depend entirely on mirrors to judge the distance to the rear.
- If you don't have a guide, check the conditions and back up promptly. Remember, conditions may change quickly. If your trailer starts to jackknife, stop, pull straight ahead, and start again.
- Practice backing up away from traffic until you can do it smoothly.

Parking

- When parking on a highway, park away from curves and hills and clear of the pavement.
- Park where you won't block the view of oncoming traffic.
- Avoid parking on soft ground.
- Always apply the tow vehicle's parking brake.
- Always block your wheels.
- Choose a level spot for parking overnight.



Trailer classifications

	Gross Trailer Weight (GTW) (including load items)	Tongue Weight (weight on hitch)	Types of Trailers
Light Duty	under 910 kg (2,000 lb)	91 kg (200 lb) or 10 per cent of GTW	tent, snowmobile, motorcycle, utility and light boat trailers
Medium Duty	911–1,820 kg (2,001–4,000 lb)	10–15 per cent of GTW	travel trailers up to 5.5 m (18 ft) and boat trailers
Heavy Duty	1,821–2,730 kg (4,001–6,000 lb)	10–15 per cent of GTW	large dual-axle trailers
Extra Heavy Duty	2,731–4,540 kg (6,001–10,000 lb)	10–15 per cent of GTW	largest recreational trailers

Need more information?

Call us: 204-985-0920 (in Winnipeg) or
1-866-323-0542 (toll-free outside Winnipeg).

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Visit us at mpi.mb.ca.

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