

Trailer Safety

“Working with drivers to make our roads safer”



- Required equipment
- Maintenance
- Safe operation
- Trailer classification



**Manitoba
Public Insurance**

Trailer safety

Towing a utility trailer, a camper trailer or a 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

**This brochure doesn't apply to commercial trailers and farm implements.*

Trailer and vehicle sizes

Towing a trailer heavier than 4,540 kg (10,000 lb.)?

Check your trailer's gross vehicle weight. It appears on your trailer registration.

If it's more than 4,540 kg (10,000 lb.), you must hold a class 1, 2, or 3 driver's licence.

Match your trailer and towing vehicle

Make sure your trailer and your vehicle are a proper 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, *and*
- ▶ how much power your vehicle has.*

** using your vehicle owner's manual, 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.



How wide and how tall

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

- ▶ 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).

How long

When attached to each other, 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.

Manitoba allows pulling 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 gross vehicle weight
- ▶ The combined length of your vehicle with two trailers attached, is no more than 23 m (75 ft.).



Equipment

Hitches

Using your hitch properly has two main parts:

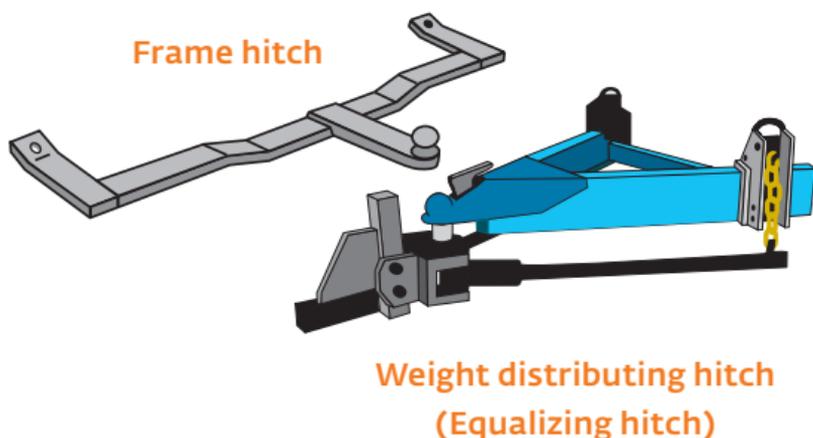
- ▶ How you attach your hitch to your vehicle;
and
- ▶ How you attach your trailer to your hitch.

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

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

- ▶ by tow-bar, which is connected to the hitch, *and*
- ▶ by safety chains or cables, loose enough to allow you to turn right and left.

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



Finally, make sure your 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 add stopping power

If your trailer's gross vehicle weight is more than 910 kg (2,000 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 for trailers

Your trailer must have these lights:

- ▶ one or more tail lights
- ▶ one or more stop lights at the rear
- ▶ red or amber turn signal lights
- ▶ side marker lights (amber at the front, red at the rear)
- ▶ a white licence plate light
- ▶ if your trailer is 2,032 mm (80 in.) wide

or wider, it must also have these lights:

- amber clearance lights at the front
- red clearance lights at the back
- red identification lights at the back
- ▶ if your load extends more than 1 m (3 ft.) 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 to the end of the load.

Lighting connections between your trailer and your vehicle should include a 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 mirror or add extended mirrors.

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

Trailer splashguards or fenders

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

Tires

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 package

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

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

- ▶ an oversized radiator
- ▶ a five-blade cooling fan
- ▶ a transmission cooler
- ▶ anti-sway bar
- ▶ heavier rear suspension.

You should also install a heavy-duty battery, alternator, front suspension and tires.

Other equipment to have on-hand for your trailer

Keep these items on hand, in case of emergencies:

- ▶ flags and reflectors (or flares)
- ▶ a fire extinguisher
- ▶ a tool kit (wrenches, pliers, screwdrivers and a hammer)
- ▶ a spare tire
- ▶ a 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. That can weaken the axle.

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 can 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 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 table on **Trailer Classifications** showing **Tongue Weights**) and adjust the load as needed. Keeping enough weight on the hitch prevents fishtailing.

Top up your radiator – it may help prevent your vehicle from overheating. 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.



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.

Checking your trailer's tongue weight:

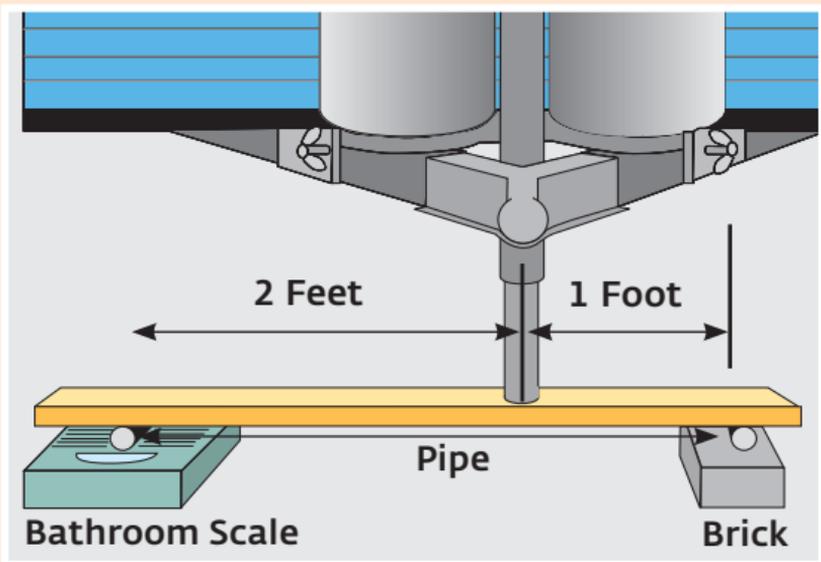
1. Place a 2 x 4 on the two round pieces.
2. Screw the jack extension down on the top of the 2 x 4 until it supports your trailer.
3. Multiply the reading on a bathroom scale by three. This is the tongue weight of your trailer.
4. If you exceed the capacity of the scale, increase the two-foot dimension 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.

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 can strain your engine
- ▶ 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 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.

Remember:

- ▶ 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 a foot or two 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 – especially on a steep climb.

Backing up

- ▶ 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

- ▶ 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
- ▶ 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

Need more information?

Inside Winnipeg, call us at **985-0920**

Outside Winnipeg,
call us toll free at **1-866-323-0542**

Our address is:

**Manitoba Public Insurance
Vehicle Standards and Inspections
Box 6300, Winnipeg MB, R3C 4A4**

This pamphlet is for general information only.

All charges and fines are subject to change.

Website: **www.mpi.mb.ca**

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% of GTW	tent, snowmobile, motorcycle, utility and light boat trailers
Medium Duty	911–1,820 kg (2,001–4,000 lb.)	10–15% 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% of GTW	large dual-axle trailers
Extra Heavy Duty	2,731–4,540 kg (6,001–10,000 lb.)	10–15% of GTW	largest recreational trailers



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