



BLUE OX



TOWING GUIDE

What Kind of Trailer Will You Be Towing?

Choosing the right trailer will depend on what you plan on towing because not all trailers are suited for every towing scenario. Trailers have different purposes, weight limitations, and hitch types that must be considered when choosing your towing setup. Some types of trailers you may find yourself towing include:



Travel



5th Wheel



Utility



Conventional



Gooseneck



Boat

Towing Methods



Standard Towing

Standard towing includes towing a boat, a utility trailer, or another type of conventional trailer.



Travel Trailer Towing

The weight of the trailer is often much heavier and requires additional equipment to tow safely.



Flat Towing

Flat towing is used to tow a car behind a motorhome. All four wheels of the towed vehicle on the ground.

Basic Parts of a Trailer Hitch

A towing system can be viewed in three parts: the trailer, vehicle, and equipment connecting the two. Regardless of the type of trailer you will be towing, the trailer hitch is a key component. Within the trailer hitch itself, there are several additional necessary parts.



Hitch Receiver:

The main connection point between the trailer and the tow vehicle. It is attached to the chassis of the tow vehicle.

Hitch Pin:

Secures the ball mount to the receiver hitch.

Ball Mount & Trailer Ball:

The ball mount is inserted into the receiver hitch. Its design consists of a shank (inserted into the receiver hitch); a hitch pin; a hitch ball, and ball platform (the point where the trailer is mounted).

Wiring Harness:

Connects the trailer's turn signals and brake lights to the tow vehicle's electrical power supply.

Trailer Coupler:

Connects the trailer to the trailer ball.

Trailer Ball:

Connects the tow vehicle to the trailer.

Safety Chains:

Keep the trailer connected to the tow vehicle in case of a receiver or coupler failure.

Types of Trailer Hitches



Receiver Hitch

A receiver hitch is one of the most common types of trailer hitches. These are mounted to the frame of the tow vehicle and have a tube extending out for the ball mount to be inserted. Their towing capacity may vary depending on what class they are in, but most are at least up to 2,000 lbs.



5th Wheel Hitch

5th wheel hitches are used for pickup trucks only and use a plate for the trailer tongue to rest and a trailer-tongue kingpin. These hitches are mounted in the bed of the truck. They are a better design for medium to heavy-duty towing, often up to 30,000 lbs, because the load of the trailer is placed over the rear axle of the truck rather than behind it, so it creates more towing power.



Weight Distributing Hitch

A weight distribution hitch is a slightly different type of hitch. It doesn't pull the full weight of the trailer; rather it helps distribute the weight between the trailer and tow vehicle to prevent trailer sway and make for a smoother ride. A weight distribution hitch is an essential piece of equipment for towing safely.



Gooseneck Hitch

A gooseneck hitch is a heavy-duty hitch type that also places the load of the trailer over the rear axle of the truck and uses a hitch ball fitted to the truck bed. The trailer is then lowered onto the ball and secured. Gooseneck hitches offer a higher towing capacity up to 38,000 lbs and are relatively lightweight for how much weight they can handle.



Pintle Hitch

A pintle hitch is not as common but can be useful for heavy-duty towing where a flexible link pivot is necessary. This heavy-duty hook and jawed style hitch attaches to the tow vehicle's rear and makes towing in rugged terrain easier. A pintle hitch can tow up to 60,000 lbs.

Trailer Hitch Classes



Class 1

Class 1 hitches are typically used for cars or crossover vehicles towing light trailers or accessories like a bike rack or jet ski. They have a tongue weight capacity up to 200 lbs and are rated for a gross trailer weight of up to 2,000 lbs. The receiver size is 1 ¼ inch.



Class 2

Class 2 hitches have 1 ¼ inch receivers and can be used for cars or crossovers as well as minivans to tow medium-weight trailers, a boat, or a moderately sized camper. They have a tongue weight capacity of up to 350 lbs and a gross trailer weight of up to 3,500 lbs.



Class 3

The receiver opening is 2 inches. Weight carrying Class 3 hitches have a tongue weight maximum of 600 lbs and a gross trailer weight rating of 6,000 lbs. Weight distributing Class 3 hitches are rated for 1,000 lbs of tongue weight and 10,000 lbs gross trailer weight.



Class 4

Class 4 hitches can be used for trucks and SUVs towing larger items like a horse trailer. Weight carrying Class 4 hitches have a tongue weight maximum of 1,000 lbs and a gross trailer weight rating of 10,000 lbs. Weight distributing Class 4 hitches are typically rated for 1,400 lbs of tongue weight and 14,000 lbs gross trailer weight. The receiver size is 2 inches.



Class 5 & Class 5 Commercial

Extra Duty hitches have a tongue weight maximum of 1,200 lbs and a gross trailer weight rating of 12,000 lbs. Weight distributing Class 5 Extra Duty hitches are typically rated for 1,700 lbs of tongue weight and 17,000 lbs gross trailer weight. The receiver size is 2 inches.

Class 5 Commercial hitches can be used for trucks and SUVs towing some of the largest trailers. They have a tongue weight capacity of up to 2,700 lbs and are rated for a gross trailer weight of up to 20,000 lbs. The receiver size is 2 ½ inches.

Legal Requirements

Aside from knowing the weight capacities for towing, there are also legal requirements you must follow to ensure you are towing safely. Towing laws vary by state, so it is important to check your local requirements before hitting the road. However, some general towing requirements you may encounter include:

Maximum Weight Limits

Trailer Brakes

Brake Lights

Turn Signals

Reflectors

Safety Chains

Breakaway Brakes

Cargo Tie-Downs

Licensing & Registration

Insurance

Road Conditions

Being prepared for the road conditions you will encounter while towing will help keep you and other drivers on the road safe. Some road conditions to look out for include:



Uneven Roads

Whether you will be driving down rural roads or roads with many potholes, being prepared is important. Make sure you have cargo strapped down and secured properly while reducing speed through bumpy areas. Hitting big bumps could jostle your cargo loose and affect how evenly the weight is distributed or worse; your cargo could end up on the road.



Wet Roads

You will need to drive with more caution when you are towing a trailer while it's raining or shortly after rainfall. Water can pool on roads and cause hydroplaning, which is dangerous whether you are towing a trailer or not. The chances you will experience trailer sway increase when roads are wet, so installing a sway control device will help. However, it's primarily your responsibility as the driver to reduce speed and drive with caution.



Snow & Ice

If you can avoid towing your trailer in snow or ice, this is ideal, but if you must, you will need to use the utmost caution. Greatly reduce your speed, avoid braking suddenly, and install sway control equipment to prevent trailer sway, which could quickly cause an accident.



Wind

Wind gusts are often unexpected and unavoidable and can make controlling your vehicle challenging. Whether the wind is caused by a passing truck or the weather, it can create trailer sway or blow poorly secured cargo off into the road, so be aware of this when planning your travel.

Towing Capacities

Towing capacity is considered the maximum amount of weight your tow vehicle can pull safely. This number can change depending on various factors like how much weight the tow vehicle is already carrying and how the weight is distributed. Determining towing capacity requires a series of calculations that all factor into what weight is within your vehicle's limit.

Towing Terms to Know

GCWR

Gross Combined Weight Rating:

Maximum weight your vehicle can tow.

GVWR

Gross Vehicle Weight Rating:

Maximum weight your loaded vehicle can handle.

GAWR

Gross Axle Weight Rating:

Maximum weight rating on each axle of the tow vehicle.

GTW

Gross Trailer Weight:

Total weight your trailer can safely haul.

TW

Tongue Weight:

Total weight capacity at the coupler point.

Curb Weight

Total weight of your tow vehicle without passengers or cargo.

Dry Weight

Total weight of your tow vehicle without fluids like gas or oil.

Payload

Total weight of any passengers or cargo.

How to Calculate Towing Capacity

You will always need to consult the owner's manual for your vehicle when calculating towing capacity. Many vehicles also have the towing capacity listed on the door jamb of the driver's side, so you can access it easily. The total weight of the trailer you are towing should not exceed the vehicle's rating, even if your trailer is weighted to pull more. When in doubt, never exceed the lowest-rated component of your towing setup.

The most important numbers to know are the GVWR, GTW, and GCWR. The GCWR should be less than the total of the GVWR and GTW. You can use this simplified equation:

$$\text{GVWR} + \text{GTW} < \text{GCWR}$$

GROSS VEHICLE WEIGHT RATING

GROSS TRAILER RATING

GROSS COMBINED WEIGHT RATING

Calculating the Gross Trailer Weight of your travel trailer is a key step. Your travel trailer will be filled with all of the items you plan on taking with you for your trip, and the additional weight must be accounted for. The GTW is the total weight of the trailer itself plus the cargo inside. The GTW should never be more than the GVWR. To get an accurate GTW measurement, you can use a trailer weight scale once your travel trailer is fully loaded.

Standard Trailer Towing Equipment

Whether you are towing a small utility trailer, a boat trailer, or a flatbed trailer, there are a handful of essential pieces of equipment you will need to get the job done right.



Hitch Ball

Hitch balls are removable and replaceable. So if you find you need a hitch ball with a different rating, a different size, or if one you have has been damaged, you can swap them out.



Standard Ball Mounts

Some new trucks have the option for a towing package, so your vehicle may come with a standard ball mount already installed at the factory. If this is the case, be sure to check the load capacity before hooking up your trailer. If you are buying a new vehicle, you may be able to request a higher capacity tow package if you already know your towing needs. If you are purchasing a used vehicle with a ball mount already installed, be sure to check the tow capacity. If it's lower than what you need, you can install an aftermarket ball mount.



Adjustable Ball Mounts

Adjustable ball mounts are a great option if you have more than one trailer, each with a different coupler height or weight capacity. An adjustable ball mount allows you to choose the height you need and many can also be flipped to the drop or rise position for added versatility.



Hitch Locks

When you have a valuable trailer and cargo, you will want to protect it from theft while on the road. Using a hitch lock can prevent trailer theft when you are parked overnight, at a rest stop, or any other time your trailer is left unattended.



Hitch Immobilizer

Installing a hitch immobilizer can eliminate excess movement between the ball mount and the receiver hitch, creating a smoother, safer ride. Too much mobility at this connection point could cause trailer sway.

Trailer Towing with a Weight Distributing Hitch

A weight distributing hitch spreads the weight of the trailer over the axles of the tow vehicle and the trailer.



Without a weight distributing hitch the tongue weight of the trailer pushes down on the rear axle of the tow vehicle causing squat while lifting the front axle causing an unsafe driving condition.



With a weight distributing hitch the tongue weight of the trailer is spread over the axles of the tow vehicle and trailer returning the front axle of the tow vehicle to its normal position and removing squat from the rear axle.

Preventing Trailer Sway

A Blue Ox Weight Distributing is one of the most effective ways to prevent trailer sway. Trailer sway can be caused by a number of things such as improper weight distribution, an overloaded trailer, strong gusts of wind, poor road conditions, driving too fast, or stopping suddenly.

How Does Blue Ox Sway Prevention Work?

Blue Ox Weight Distributing hitch heads are designed with integrated positive caster working in tandem with loaded spring bars.

Just like the steering wheel in your car or truck returns to center after you turn a corner, our hitch head keeps the trailer centered.

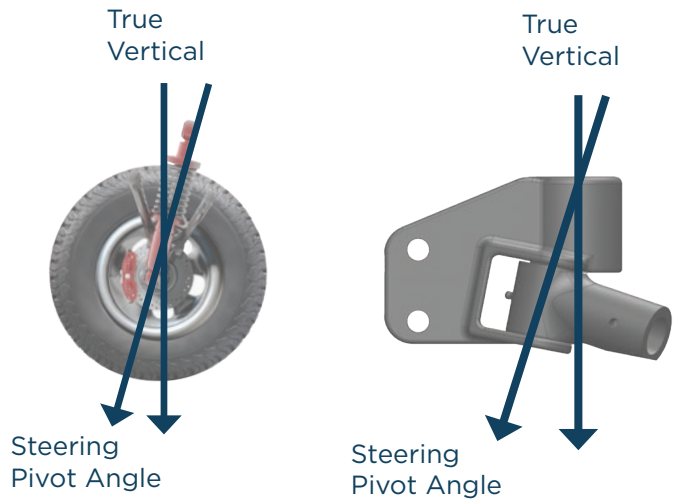


Built-in to SwayPro™ & TrackPro Weight Distributing Hitches

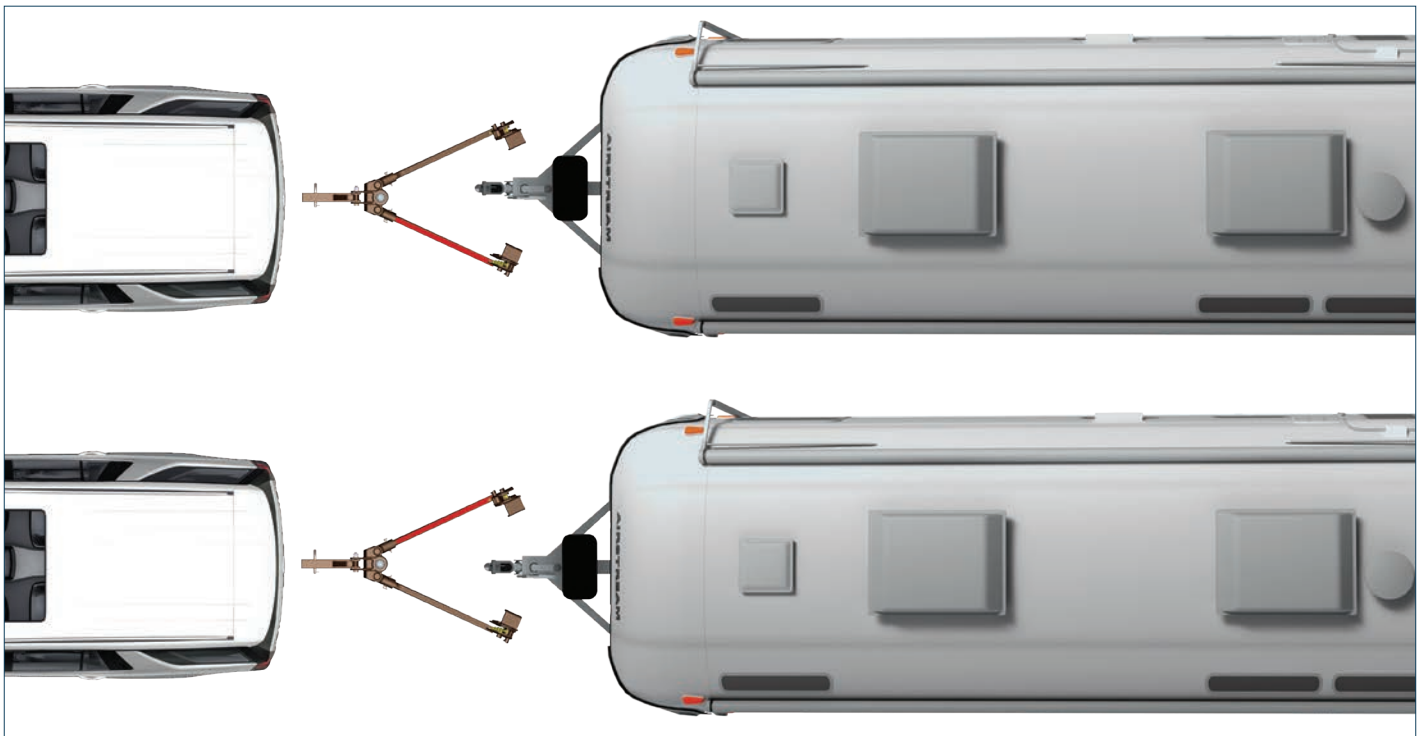
Positive Caster: Caster is the measure of how far forward or behind the steering axis is to the vertical axis, viewed from the side. This is measured by drawing a line between the top and bottom pivot points of the front upright. The angle between the drawn line and vertical is the caster angle.

If the line slopes towards the rear of the vehicle, then you have positive caster. Positive caster increases the lean of the tire when the vehicle is cornering, while returning it to an upright position when driving straight ahead.

SwayPro and TrackPro hitch heads employ positive caster, constantly pushing the trailer to the center of the towed vehicle.



Forces like wind, uneven pavement, or curves in the road pushing the right side of the trailer to sway to the left, shifts the heavier load to the left spring bar.



Similarly, forces pushing on the left side causing it to sway right, shifts the heavier load to the right spring bar.

The spring bars pivot on the hitch head balancing the load and pushing the trailer to the center of the tow vehicle.



Blue Ox Weight Distributing Hitches



SwayPro™

- Evenly distributes weight over axles of the tow vehicle and trailer
- Noise-free sway prevention never stops working, even in rain or snow
- Caster in the hitch head constantly centers the trailer
- Spring bars augment the suspensions of the tow vehicle & trailer
- Rotating latches with clamp-on brackets for quick and easy setup
- Backup without disconnecting
- Powder-coated steel construction

Specifications:

- Tongue weights available: 350, 550, 750, 1000, 1500 & 2000 (2.5" Shank)
- Gross Towing Weight 20K maximum
- 2" receiver. 2-1/2" receiver shank available



TrackPro™

- Evenly distributes weight over axles of the tow vehicle and trailer
- Manages sway caused by bad roads, wind, and weather
- Caster in the hitch head constantly centers the trailer
- Spring bars augment the suspensions of the tow vehicle & trailer
- Rigid L-brackets provide additional points of sway controlling friction
- Backup without disconnecting
- Powder-coated steel construction

Specifications:

- Tongue weights available: 600 (2 inch ball), 800, 1000 & 1300
- Gross towing weight: 13K maximum
- 2" receiver, 2-1/2" receiver shank available



2-Point™

- Evenly distributes weight over axles of the tow vehicle and trailer
- Steel-on-steel friction minimizes sway
- Round spring bars flex for a controlled ride
- L-Brackets keep spring bars in place
- Pre-installed 2-5/16" hitch ball, 600lb LTW pre-installed 2" inch ball
- Powder-coated steel construction

Specifications:

- Tongue weights available: 600 (2 inch ball), 800, and 1200 lbs
- Gross towing weight: 12K maximum
- 2" receiver

Common Towing Mistakes

Overloading Your Trailer

Trying to pull too much weight with your vehicle can cause a whole list of issues. It is crucial to follow the towing capacities set for your vehicle, trailer, and other towing equipment.

Monitoring the Engine in Your Tow Vehicle

Towing can put additional stress on your engine, and it could suffer damage if it isn't being cooled properly. If you allow your engine to overheat, don't be surprised if you end up with a warped head, cracked pistons, or scored cylinder walls. Keep an eye on all of your gauges when towing to avoid this issue.

Low Tire Pressure

Always check the tire pressure on every tire before hitting the road. Incorrect tire pressure can cause uneven wear and result in a blowout. If your trailer sat for a season, the tires likely lost some air, so make sure you don't skip this checklist item.

Using the Wrong Trailer Ball

There are some common ball sizes, including 1 7/8 inch, 2 inches, and 2 5/16 inch, each with its own separate weight rating. Using the incorrect ball can pitch your trailer and put extra stress on your rig.

Towing in Inclement Weather

You know to be on the lookout for trailer sway when towing, but understanding the role weather plays in trailer sway can help you be more prepared. One of the most common and unexpected causes of trailer sway is wind. High winds, gusting winds, and bow winds can set your trailer into a swaying motion. Rain can also create a perfect storm for trailer sway. As the roads become wet and slippery, your tires could lose traction or you could hydroplane. Snow and ice are another risk factor for trailer sway and it is best to avoid towing a trailer when this kind of wintery weather hits.

Handling Trailer Sway

Knowing what to do when trailer sway starts can keep you from getting in an accident, damaging your vehicle or trailer, and hurting yourself or others on the road. Even those with years of experience in towing a trailer can be caught off guard by trailer sway. Here are the basic steps you can follow when trailer sway starts:

1. Let off the gas
2. Keep the steering wheel straight
3. Don't step on the brakes, but let the vehicle slow down naturally
4. Once you have slowed down some, gently and slowly apply trailer brakes if you have them
5. Pull over once you've regained control and check your cargo to see if it's shifted
6. Check your tires, straps, and hitch to make sure you're ready to get back on the road

Driving Tips While Towing a Trailer

Maintain a Moderate Speed

Driving too fast when towing a trailer can cause problems. High speeds can make your trailer fishtail and create trailer sway. Getting to your destination faster shouldn't be at the expense of the safety of yourself and others on the road.

Pass with Patience

It will take you longer to pass other vehicles, so make sure you have plenty of room and time to make it around them. If you are on a two-lane road, you should avoid passing if at all possible.

Leave Extra Room to Stop

When you're hooked up to a trailer, it will take your vehicle longer to stop. So leave plenty of room between yourself and others. Installing a trailer brake controller can help you have more braking power as well.

Stay Alert

One of the best things you can do when towing a trailer is to stay alert and anticipate problems before they happen. If there are others in the vehicle with you, ask someone to help navigate so you can keep your eyes on the road. Also, if you're traveling a long distance, plan to stop and rest when you start to get tired or have a 2nd driver ready to take over.



Flat Towing

Flat towing is very common when traveling with an RV. Flat towing a car, gives RVers increased mobility without having to move the RV once it's parked and hooked up at the campsite.



Best Flat Towed Vehicles

Not all cars or trucks can be flat towed. Some vehicles need the continuous operation of a pump within the transmission to keep certain parts lubricated, otherwise, the transmission can become damaged. However, some vehicles can be flat towed without any issues. Many front-wheel drive, manual transmission vehicles do not need modifications to be flat towed. Always check your owner's manual to determine whether it is suited for flat towing.

The top 10 flat towed vehicles according to Blue Ox baseplate sales:

BX1139	JEEP WRANGLER RUBICON UNLIMITED JL
BX1126	JEEP WRANGLER, RUBICON
BX1145	JEEP GLADIATOR
BX1746	GMC CANYON AT4
BX1128	JEEP GRAND CHEROKEE WK
BX2681	FORD F150 RAPTOR
BX1143	JEEP CHEROKEE TRAILHAWK W/TECHNOLOGY PACKAGE & ACC
BX2689	FORD RANGER XLT
BX2686	FORD F-150 LARIAT
BX2417	2020 DODGE RAM 1500 ECO DIESEL

Motorhome Classes

There are several different classes of motorhomes to choose from, each with its own capacity for flat towing.



Class A

Class A motorhomes are the largest you will see on the road.

Built on either a commercial truck, commercial bus, or a motor vehicle chassis, they offer the most luxury and comfort and can also flat tow heavier vehicles. On average, a Class A motorhome can tow between 5,000 and 10,000 lbs. You usually can locate your Class A motorhome's towable weight on your RVs hitch or on a sticker on the inside of the driver's door or refer to your owner's manual.



Class B

Class B motorhomes are the smallest of the motorhome classes and often look like an oversized van. They have the best fuel economy but due to the smaller size, they can only flat tow smaller, lightweight vehicles. The average Class B motorhome can flat tow between 3,000 and 5,000 lbs. You can typically find your Class B motorhome's towable weight on your RVs hitch or on a sticker on the inside of the driver door or refer to your owner's manual.



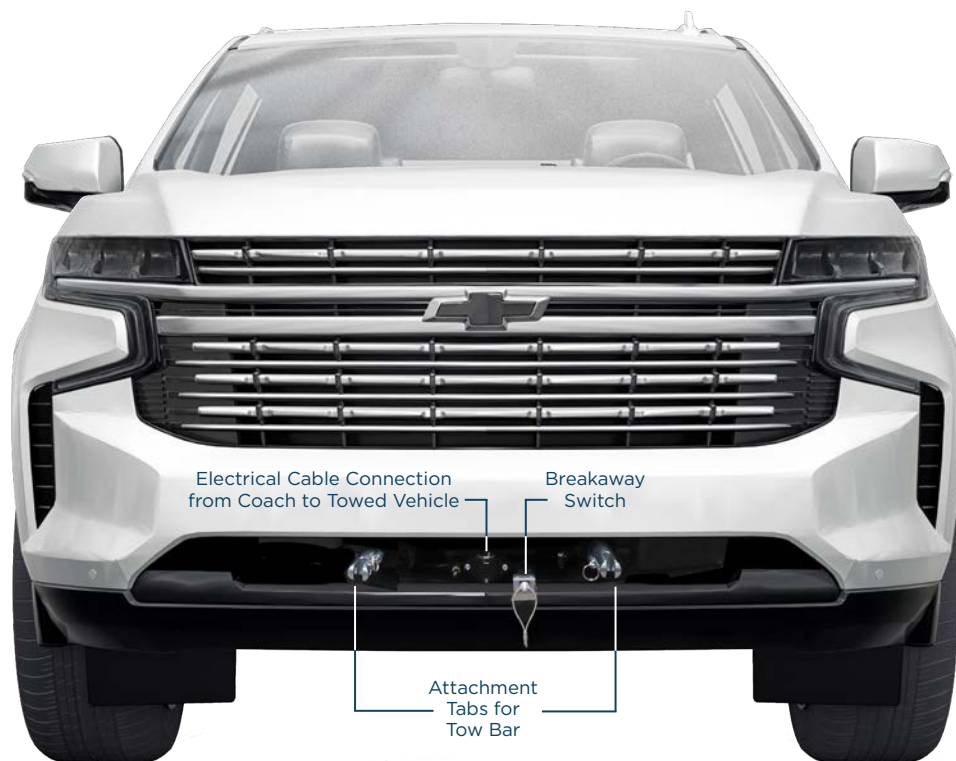
Class C

Class C motorhomes are in between the size of a Class A and Class B. They are a great mid-level option when it comes to space as well as towing capacity. Class C motorhome towing capacities range from 3,500 to 8,000 lbs on average. Locate your Class C motorhome's towable weight on your RVs hitch or on a sticker on the inside of the driver door or refer to your owner's manual.

Baseplates

Baseplates are an essential part of flat towing. They create a connection point between the tow bar and your vehicle.

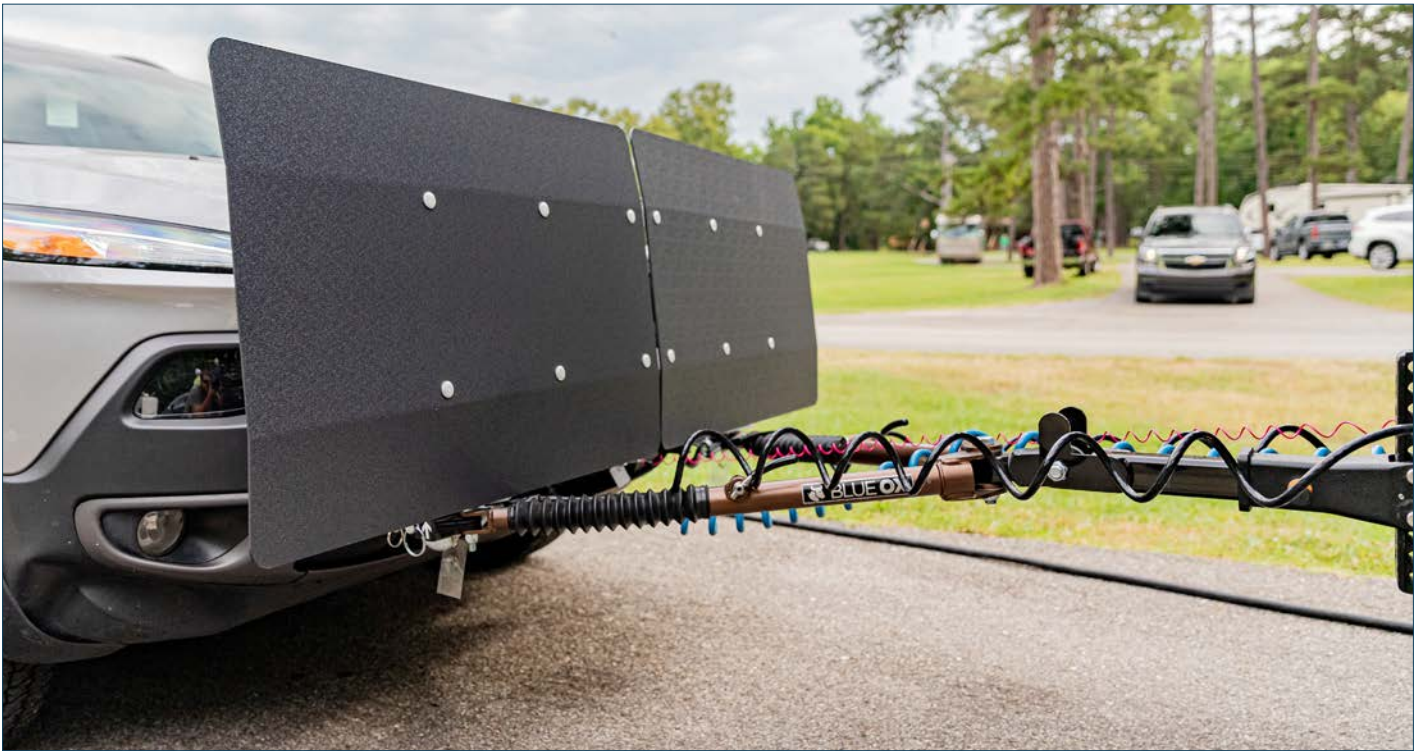
Baseplates are engineered to be strong, making this connection safe and secure. Blue Ox offers baseplates made specifically for your vehicle make and model.



Find your exact vehicle fit at blueox.com

Tow Bars

Tow bars are the best and safest way to tow a vehicle behind your motorhome. The tow bar attaches to your vehicle's frame via the baseplate and the motorhome's receiver hitch.



Blue Ox Tow Bars

Patented non-binding latches quickly disconnect, even in rugged terrain. Offset triple lugs for easy attachment to the baseplate. Rubber boots protect the tow bar from dirt and debris. No centering pin, easy to stow and store. Safety cables included. 3-year warranty.



Capacity 15K **Features** **Apollo:** Steel, Non-binding Latches, 2.5" Receiver



Capacity 7.5K **Features** **Ascent:** Aluminum, Non-binding Latches, 2" Receiver
7.5K **Ascent:** Steel, Non-binding Latches, 2-1/2" Receiver



Capacity 10K **Features** **Avail:** Steel, Non-binding Latches, 2" Receiver
10K **Avail:** Steel, Non-binding Latches, 2-1/2" Receiver

Tow Brakes

The Blue Ox Patriot Flat Tow Brake can be set up quickly and is easy to use. It is electric, self-contained, and has an in-cab controller that monitors the brake and lets you manually input a braking response if you need to. There is no tank to drain and no hoses or pumps to connect. It automatically checks brake pressure during setup and continuously monitors brake pressure while you're towing.



Blue Ox Patriot Brake

New smaller profile, fits more towed vehicles (8 X 7.5 X 11.5 vs 9 X 10 X 12).

New lighter design (6.2lbs vs 9.5lbs.).

Faster extension of the braking action.

Electric, self-contained.

Checks brake pressure to ensure proper setup.

No tank to drain, no pumps or hoses to connect.

In-cab controller monitors the brake & allows manual input.

Works with hybrids.



Flat Towing Accessories



Accessory Kits

Include 7-6 electrical cable, tow bar cover, hitch locks, and hitch immobilizer.



Wiring Kits

Connect a towed vehicle to an RV's electrical system for active taillights, turn signals, and brake lights on the towed vehicle.



Adjustable Rise/Drop Receivers

Keeps tow bars level within the recommend range of the baseplate tabs within 3" of level with the receiver connection on the motorhome.



Hitch Locks

Secures a tow bar to a baseplate and receiver hitch to prevent theft. Prevents accidental unhitching. 3 and 4 lock sets have matched keys.



Hitch Immobilizer

Installing a hitch immobilizer can eliminate excess movement between the tow bar and the receiver hitch, creating a smoother, safer ride.

Flat Towing FAQs

Can You Back Up With A Tow Bar?

Do not back up with a tow bar still connected. Backing up without disconnecting your tow bar may be tempting, but it will cause damage to your motorhome, the tow bars, and your vehicle.

How Do I Know Which Tow Bar To Buy?

There are various classes or weight ratings for tow bars. The tow bar you select should be rated to tow more than the weight of the vehicle you plan to be flat towing. You will also need to choose a tow bar with a receiver that fits your hitch size. Typically it will be either 2" or 2.5".

How Do I Install A Tow Bar?

Each Blue Ox tow bar comes with a set of instructions for installation and operation. A link to these instructions can also be found on each tow bar product page on the Blue Ox website.

Is My Vehicle Flat Towable?

Blue Ox does not determine if a vehicle is flat towable. This information can be found in the vehicle's owner's manual or by contacting the dealership from whom you purchased your vehicle or the vehicle manufacturer.

Do I Need a Tow Brake?

In most U.S. states and Canadian provinces/territories, a supplemental braking system is required by law whenever you're towing. In all but a few states, you MUST have a towed car braking system installed whenever you tow a trailer of a certain weight or any vehicle. A towed car brake system helps to reduce the strain on your RV's primary brakes. Your motorhome will brake more easily and the wear and tear on the brakes will be reduced considerably by using a supplemental braking system. Also, here at Blue Ox it will put less strain on your tow bar and baseplate.

How Often Do I Service My Tow Bar?

You should service your tow bar every two years or every 10,000 miles, whichever comes first.

Where Do I Find My Serial Number?

Tow Bars: Engraved in the metal on the bottom of the driver's side leg.

Brakes: Found on a sticker on the side of the brake.

Customer Care

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