



Selecting a Tow Vehicle

How to choose the best vehicle to tow your horse trailer

The horse trailer is only half of the towing rig; selecting the appropriate vehicle to haul your trailer is just as important as selecting the trailer itself. Those hauling horses must have a solid understanding of how to pair a trailer with a vehicle that can tow it effectively and safely.

Many people mistakenly think that if a vehicle has enough power to pull a trailer, it must be a safe match. This is not always so. A vehicle must be able to pull the trailer but, more importantly, it must be able to safely *stop* the trailer as well. Some smaller vehicles can pull horse trailers but are not safe towing vehicles because they lack sufficient braking capability.

Keep this in mind, along with the other guidelines below, when determining which vehicle is best equipped to do the job.

Style Compatibility

A pickup truck is not always necessary for towing a horse trailer. Some SUVs or larger vans can make safe and efficient tow vehicles for bumper pull trailers. However, gooseneck trailers can only be towed by trucks due to the configuration of the trailer and placement of the hitch, which must be located in the bed of the vehicle.

Weight Compatibility

Not all tow vehicles are created equal. In general, a half-ton or larger vehicle is required to tow a horse trailer. The smallest pickup trucks, for example, are not designed to be heavy-duty enough to safely haul a horse trailer.

All vehicles are rated and labeled by their manufacturers to communicate the maximum



weight the vehicle can hold and the maximum weight it can tow. These ratings provide the most reliable guidelines for safely matching a tow vehicle to a trailer.

Gross vehicle weight rating (GVWR).

The GVWR of a vehicle or trailer communicates the maximum that the vehicle or trailer can weigh when it is fully loaded. All tow vehicles and all trailers are



The GVWR is listed on a tag inside the driver's door of the vehicle.

labeled with their individual GVWRs. On a trailer, this value is

listed on a tag affixed to the tongue or neck. On a tow vehicle, this value is listed on a tag inside the driver's side door. Remember, the GVWR tells you how much weight the vehicle or trailer itself can hold. The GVWR of a tow vehicle does not account for any weight being towed.

Gross combination weight rating (GCWR).

The GCWR is a value only given for tow vehicles, not for trailers. The GCWR tells you the maximum that the entire rig can weigh as hauled by that particular vehicle. This value includes the weight of the vehicle itself, the trailer itself, and all cargo in the vehicle and trailer (horses, people,

tack, and everything else). This value is listed in the vehicle owner's manual.

Knowing a vehicle's gross combination weight rating can be useful in several ways. If you already own a vehicle and are looking for a trailer, the GCWR of the vehicle will dictate how big of a trailer you can tow. If you already own a trailer and are looking for a vehicle to haul it, you can determine what size truck you need.

It is important to not exceed the gross vehicle weight rating for either a vehicle or trailer, but it can be difficult to estimate the total weight of horses, people, and cargo that have been loaded into the vehicle and trailer. It is a good idea to weigh the vehicle and trailer, fully loaded, to determine the gross combination weight of the entire rig. Weighing services are usually available at highway weigh stations or the local dump. Some grain farmers may allow use of their scales.

Compatibility does not necessarily mean suitability.

The gross combination weight rating for a vehicle communicates the maximum amount of weight the vehicle can safely haul. It does not, however, communicate the ideal vehicle for hauling. Because horses (and other animals) are live cargo, special considerations should be made when evaluating weight ratings. The shifting weight of horses moving during transport can have a substantial effect on how the vehicle handles. When hauling live weight, a good rule of thumb is to not exceed 85% of the tow vehicle's gross combination weight rating.

The gross combination weight rating of the tow vehicle should always be the basis of any decision regarding matching to a trailer. Even so, a few general assumptions can be helpful in exploring potential truck-trailer combinations.

A half ton vehicle is usually sufficient to tow a standard two-horse bumper pull trailer. A

three-horse gooseneck trailer will usually require at least a three-quarter ton vehicle. It is also important to note that not all vehicles in the same series have the same weight rating; not every half-ton truck will have the same rating. Likewise, not every vehicle of a certain model is exactly the same. The options and variables on each individual tow vehicle will affect its gross vehicle combination weight. Always check the owner's manual for the GCWR, and use this value as the final say in whether or not a truck-trailer combination is safe.

Finally, consider that a larger vehicle will almost always handle a load better than a smaller one. A larger vehicle is heavier, and the heavier the vehicle, the less the vehicle is pushed around by the weight of the trailer. Furthermore, a larger vehicle will have a stronger suspension, and the stronger the suspension, the less the rig bounces and sways. Overall, these factors contribute to a smoother, safer rider for the horses in the trailer.

Licensing Requirements

Per federal and state regulations, special licensing is required to operate some larger vehicles and rigs. This requirement may be a factor in your vehicle selection.

Most drivers possess a non-commercial class C driver's license. This license is sufficient for most two- and three-horse trailers pulled by an SUV or pickup truck for non-commercial purposes. A class C license permits the operation of a vehicle with a gross vehicle weight rating (GVWR) of 26,000 pounds or less and the towing of a vehicle or trailer with GVWR of 10,000 pounds or less. If you are operating a vehicle with gross vehicle weight rating (GVWR) greater than 26,000 pounds, or if you are towing more than 10,000 pounds, you will need a different class license.

Note that additional regulations apply to commercial businesses. (Per federal definition, your enterprise is considered a commercial business if any money changes hands, even if your business does not turn a profit.) For more information regarding these requirements, contact the Truck and Bus Enforcement Section within your State Police.

Fuel Type

Many models of trucks are available with either a gas or diesel engine. A diesel engine is also an option in some SUVs. When deciding between gas and diesel, consider how much weight will be hauled and how often you will tow; how much money is budgeted for the vehicle purchase; and how long the vehicle is intended to last.

Gas vehicles are more affordable to buy initially, and gasoline is less expensive than diesel fuel. However, diesel vehicles get better fuel mileage, and diesel engines typically have a longer useful life, all other factors considered equal. Diesels also generally have higher gross combination weight ratings. Therefore, in general, they have more power and can tow heavier loads.

2-Wheel versus 4-Wheel Drive

Many models of trucks and some SUVs are available in either 2- or 4-wheel drive. All other factors considered equal, 2-wheel drive trucks have a higher towing capacity and better fuel economy than 4-wheel drive trucks. They are typically less expensive to purchase. 4-wheel drive trucks are heavier, which accounts for their lower towing capacity and decreased fuel economy, but 4-wheel drive allows the truck to have better traction in adverse driving conditions.

When deciding between 2- and 4-wheel drive, consider where you are taking your trailer and what else you will use the vehicle for. A 4-wheel drive vehicle will handle off-road and snowy road conditions better. If you plan to drive through pasture or mud or use the towing vehicle for personal transportation during wintery weather, 4-wheel drive may be a good option.

Axle Ratio

The axle ratio is another of the many options available to choose from when buying a new vehicle. Vehicles come equipped with the standard option, but other options are usually available to improve pulling performance.

The axle ratio is a measure of the gears in the rear axle, which transfers power from the engine to the spinning wheels to move the vehicle forward. A lower value means a higher ratio which typically translates to better fuel mileage. A higher value means a lower ratio which typically translates to better towing capability. For example, an axle ratio of 3.73 would provide better fuel economy than a 4.10 ratio. However, a 4.10 ratio would provide more towing capacity.

Tires

Tires are usually an option when buying a new vehicle, but all available options will work equally well for towing. Tires on new trucks are always rated for towing the truck's capacity.

When it's time to replace the tires, be sure to make the right selection. New tires should be the same size as the old tires and must be rated for the correct amount of weight. A tire's load rating tells how much weight one individual tire can support. Load ratings are denoted by letters; for towing, E-rated tires are usually the most appropriate choice. The old tires and the

owner's manual will provide the most reliable information on how to choose new tires.

Braking Ability

There are typically no options for brakes when buying a new vehicle. However, the vehicle's stock brakes will be sufficient as long as the truck's weight rating is not exceeded and the brakes are kept in good repair. Regular maintenance is key in brake functionality and safety.

Electrical System

Tow vehicles must be equipped with some special electrical components in order to safely haul a trailer. A brake controller, which is easily accessed by the driver, allows for control of how sensitive the trailer brakes are to pressure on the vehicle's brake pedal. This level of sensitivity can be adjusted to the optimum level to accommodate different trailers or differently weighted loads. In some vehicles, the brake



Plugging in the trailer electric cord to a bumper-mounted input.

controller is installed in the dash. In other cases, it is contained within a small box mounted under the steering wheel. The tow vehicle also must provide electricity to the trailer to power the trailer lights.

All horse trailers have an electrical cord through which the trailer receives electricity to power the brakes and lights. The tow vehicle must be equipped with an input for the plug either inside the bed of the truck or on the bumper of the vehicle. Some new vehicles come

equipped with this input; on others it can be installed after market.

Tow Packages

A tow package may be an option on a new vehicle or it may be installed after market. A typical tow package includes installation of the hitch, brake controller, and wiring in the rear of the vehicle. Other options such as a heavier duty alternator or slide-out side mirrors may also be included. The exact components will vary

depending on where it is installed and whether it is installed after-market.

Making Your Selection

Matching the trailer to the right tow vehicle is important to ensure optimum safety for horses and handlers. Always think safety first, and also consider what you want and what you need in a tow vehicle as well as what you can afford. These points, along with the guidelines above, will help you make the best choice.

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