

Towing Hitches

Towing hitches join a towing vehicle with a trailer to ensure a safe connection between the two for transport.

For conventional trailers, there are two different kinds of towing hitches to choose from: weight-distributing and weight-carrying. Fifth-wheel trailers can use two completely different kinds of towing hitches, but they are beyond the scope of this article.

A weight-distributing towing hitch is made of spring bars that connect to the ball mount and the trailer frame. This is done so that the towing hitch and trailer axle's weights are distributed properly amongst themselves and with each other. When correctly used, a weight-distributing towing hitch keeps the towing vehicle and the pulled trailer level once the full weight of the trailer has been placed on the ball mount. Because a weight-distributing towing hitch can be somewhat unstable (especially when turning corners), sway control devices are often used.

Alternatively, a weight-carrying towing hitch bears all of its weight on the ball mount (or the ball itself if a ball mount is not used). If the weight of the towing hitch is sizeable, the rear of the tow vehicle will initially face downward, but as the towing vehicle is weighted down, the front of the towing vehicle will rise. Because this may result in diminished front-brake efficiency and generally poor towing vehicle handling, weight-carrying towing hitches are rated for lightweight towing only. Like weight-distributing towing hitches, sway-control devices can be used with weight-carrying towing hitches, depending upon what exactly is being towed.

Towing Hitch Classifications

Conventional towing hitches are manufacturer-rated according to the highest weight they are able to pull. The highest weight calculation includes having the trailer's freshwater tank full, the propane tank and/or cylinders full, and all necessary items loaded. The towing hitch ratings are as follows:

- *Class I Towing Hitches:* up to two thousand pounds.
- *Class II Towing Hitches:* up to three thousand, five hundred pounds.
- *Class III Towing Hitches:* can be either weight-carrying or weight-distributing and are rated for up to five thousand pounds.
- *Class IV Towing Hitches:* includes both weight-distributing and fifth-wheel towing hitches and are rated for trailers between five thousand and ten thousand pounds.
- *Beyond Class IV Towing Hitches:* greater than ten thousand pounds.

Conventional Towing Hitch Hardware

A conventional towing hitch platform is attached under the bottom of the towing vehicle. The very back of the platform is where the receiver is housed. The receiver is where a section of reinforced square tubing is placed into the shank of the ball mount.

1. Shanks

Lightweight towing hitch loads use ball mount shanks made of square steel tubing, whereas heavy towing hitch loads require a solid shank. In both cases, the shank has a hole punched through it that lines up with holes on opposite sides of the receiver. When the hole in the shank is lined up with the holes in the receiver, a hitch pin is inserted and held in place by a clip or lock.

2. Ball Mounts

A ball mount attaches to the end of the shank. Some ball mounts adjust to accommodate different coupler heights and permit fine tuning of the towing hitch, which in turn improves towing performance. Once the ball mount has been adjusted and set up, it should never require changing or retuning unless it is used with a different towing trailer or towing vehicle.

3. The Ball

Balls are installed on the ball mount. Balls are available in sizes ranging from 1 7/8 inches to 2 5/16 inches, and have a variety of risers that raise the ball above the ball mount for proper positioning. Balls are rated for loads ranging from two thousand to ten thousand pounds. Make sure that the ball used is rated equal to or greater than the gross vehicle weight rating (GVWR) of the trailer.

4. Spring Bars

Spring bars are used with weight-distributing towing hitches to spread the towing hitch weight among the trailer and tow vehicle axles. Spring bars are rated in various weight capacities because the proper ones must be used to allow the load-distributing system to work. Generally speaking, use a spring bar that is rated up to two hundred and fifty pounds more than the actual trailer's towing hitch weight to be safe.

5. Safety Chains

Safety chains and hooks (or other attaching devices) are only used safely with towing hitches when they are rated higher than the GVWR of the trailer. The chains are installed properly if they run from the A-frame to a series of loops fastened securely to the towing hitch receiver, are loose enough to allow sharp cornering but tight enough to prevent dragging.

When attached correctly, towing hitch safety chains cross under the coupler so that if the trailer were disengage, the A-frame would still be propped up above the round in the framework of the crossed chains.