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The Basics Of Flat Towing

Discover the benefits and equipment necessary to tow a vehicle four wheels down behind a motorhome.

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Anyone who has toured fantastic Yellowstone National Park in a 38-foot, wide-body motorhome on the park's narrow, highly crowned roads understands how difficult and exhausting this type of driving can be. The same goes for anyone who has driven through Los Angeles or New York City, or has tried to find their heart in San Francisco while negotiating its tight streets and steep hills in a full-size motorhome. Leaving the motorhome in a safe harbor and driving a smaller vehicle is more fun, less stressful, more economical, and safer, especially when trying to get through rush-hour traffic or navigate winding mountain roads.

That's why so many people choose to tow another vehicle behind their motorhome when traveling. A towed vehicle (also called a towable, a toad, or a dinghy) can vary in size from a compact car to a large sport-utility vehicle, with some folks even towing full-size pickups. A towed vehicle provides convenient transportation after arriving at a destination in a motorhome. Let's face it; after finding a campsite, positioning and leveling the motorhome, and hooking up the shore connections, who wants to break camp just to make a trip to the store or the museum a few miles away?

Motorhome owners have three options when it comes to towing a second vehicle: on a trailer with all four wheels off the ground; via tow dolly with the drive wheels off the ground and the rear wheels on the ground; or flat towing with all four wheels on the ground. Which towing method you choose often will be determined by the vehicle you wish to tow.

All vehicles can be towed on a trailer, making it the most versatile of the three options. Because all four wheels of the towed vehicle are off the ground, this method does not require the installation of additional equipment or necessitate any special procedures. The major drawbacks with a trailer are the additional weight and finding a place to store it once you reach the campground.

A tow dolly can be used for most two-wheel-drive vehicles in which the rear wheels are not part of the power train. As with the trailer, a vehicle being towed on a dolly does not require the installation of additional equipment, but the owners manual may include special instructions that should be followed before it is towed. Once you reach your destination, you will have to find a place to store the dolly, but because it is smaller than a trailer, it is less of an issue.

Flat towing, or four-wheels-down towing, is the most popular method of towing among motorhome owners, because of its simplicity and convenience. This type of towing requires the installation of a base plate on the towed vehicle and the use of a tow bar that links the motorhome and the towed vehicle. Because all four wheels travel on the ground, the automobile manufacturers approve only certain vehicles to be towed in this manner, and each vehicle will include special instructions and procedures that must be followed before, during, and after towing. The most significant benefit of flat towing is that once a destination is reached, it takes little time to disconnect the towed vehicle from the motorhome, and, other than the tow bar itself, there is nothing to store.

The towing method(s) approved by the manufacturer for a particular vehicle are typically detailed in the vehicle's owners manual under a heading such as "Recreational Towing." Whether you already own a vehicle you would like to tow or are looking to purchase a new or preowned vehicle to tow, always check the owners manual to determine how it can be towed.

Because flat towing is so popular and the number of vehicles that can be towed in this manner is limited, *Family Motor Coaching* has compiled a list of vehicles that can be towed four wheels down for each model year since 1999. The "Towables For 2012" story, which includes 2012 model-year vehicles, was published in the January 2012 issue of FMC (page 58). FMCA members can access the 2012 guide and previous lists by visiting www.FMCmagazine.com.

The Art Of Towing

Fortunately, it doesn't take much effort or equipment to turn a motorhome into an efficient towing vehicle, as most are equipped with a receiver hitch and a taillight connector at the factory. However, a bit more effort must go into prepping a vehicle to be towed. While there are several things to consider when towing by any method, the following two items are very important when it comes to safety.

1. Do not exceed the motorhome's gross combination weight rating (GCWR) — the combined weight of the motorhome, the towed vehicle, and their contents.
2. The motorhome's gross vehicle weight rating (GVWR) — rather than the GCWR — is the key figure when considering the need for a supplemental brake system. The GCWR should be used when considering the total weight to be moved forward under the motorhome's power. You must use the motorhome's GVWR — the maximum allowable weight — for braking purposes. A motorhome's service brakes are designed for its GVWR, not its GCWR. Many motorhome manufacturers recommend the installation of a supplemental brake control system to activate the brakes on a vehicle, dolly, or trailer that is being towed. It's been discussed many times in the pages of Family Motor Coaching that the physics of weight enter the picture when you're towing, and you need the additional safety and peace of mind that supplemental braking gives you. Many of the supplemental brake systems include a breakaway safety device that will activate the towable's own service brakes should the motorhome and the towable become separated.

During the process of connecting the towed vehicle, dolly, or trailer to the motorhome, never allow yourself to be distracted. Use a checklist if you need it. I've found that a laminated list and a dry-erase marker work the best. If you do become distracted before the hookup is completed, start over. After all, if you've forgotten something and your towed vehicle, dolly, or trailer

breaks free, the result could be catastrophic. My suggestion is to get into a daily (or departure) routine. If you hook up the towed vehicle, including coupler, safety chains/cables, lights, etc. the same way each time, it becomes second nature. Before buckling in to drive away, always do a final walk around. Make sure all the lights work properly, no trash or equipment is left lying around, and the towed vehicle is properly set up for towing.

When hooking up the safety chains (or cables), make sure to cross them under the coupler between the tow bar or dolly/trailer tongue and the receiver. This method offers two safety improvements over simply attaching the chains in parallel. Should the coupler become disconnected from the hitch, the crossed chains will not only support the coupler/tow bar, but they also tend to hold the towed vehicle, dolly, or trailer in a straight line behind the motorhome. Safety chains connected to the motorhome in parallel will allow the coupler/tow bar to fall down to the pavement and the towed vehicle to wander back and forth to the limit of the chains, which could cause severe damage to both vehicles

Flat-Towing Equipment

The tow bar assembly transports vehicles with all four wheels touching the ground. In general, flat towing is the easiest and the least expensive towing method. Most tow bars are rated from 3,500 pounds to 5,000 pounds, with a few offerings that are rated up to 10,500 pounds (or even higher). The system usually consists of two elements: the tow bar (or wishbone portion) that connects the motorhome and towed vehicle, and the base plate, which attaches to the chassis of the towed vehicle. The tow bar is more generic, while the base plate is designed and made for a particular vehicle or a chassis that is used on a number of models. The base plate provides a secure point of attachment for the tow bar.

Many tow bar manufacturers offer motorhome-mounted tow bars that remain attached to the motorhome and connect to the towed vehicle's base plate only when the car is being pulled. This type of tow bar offers the advantage of a built-in storage location (on the back of the motorhome) and a cleaner-looking towed vehicle. They also have the advantage of applying their weight to the rear of the motorhome instead of to the front of the towable. Folding models that can be flipped and stowed horizontally or vertically on the base plate of the towed vehicle also are available.

While flat towing with a tow bar is favored by many motorhome owners, there are some disadvantages to this method. First, tow bar base plates tend to be unique to a particular model, and if a base plate does not exist for your vehicle, a custom-made installation can be expensive. During flat towing, some portions of the towed vehicle's drivetrain (tires, wheel bearings, driveshaft components, etc.) will undergo wear and tear. Plus, many vehicles cannot be towed in this manner without drivetrain modification. Remco Manufacturing produces a lube pump that will continuously lubricate the transmission's inner gears while the vehicle is being towed. Remco officials can tell you whether your vehicle can be towed four wheels down without modification and, if not, whether the company has a lube pump that will work on your vehicle.

With virtually all tow bar systems, the motorhome cannot be backed up when the towed vehicle is attached. Almost every time a flat-towed vehicle is backed, even with an assistant driver attempting to control the towed vehicle's steering wheel, its front wheels will try to crank to their

stops on one side or the other — sometimes resulting in injury to the person holding the steering wheel. This is caused by the caster angle in the front end of the towed vehicle. To be on the safe side, don't back up with any tow bar.

While tow dollies and trailers come with lights and can be equipped with brakes, motorhomers who choose to flat tow must equip the towed vehicle with a light kit or wire into the towed vehicle's lighting system. These vehicles also should include a supplemental braking system.

Tow Bars And Base Plates

In the RV world, several companies account for the majority of tow bars purchased, and they are highlighted in this story. While there are other tow bar manufacturers that produce quality products not listed here, investigating the products from one or more of these companies is a great place to begin your search.

Blue Ox offers an excellent brochure that includes its lineup of tow bars and towing accessories. The company produces 11 tow bars, but this article will highlight only those rated up to 10,000 pounds, although they make models rated up to 120,000 pounds. All of the featured tow bars include a three-year warranty.

The Blue Ox Aventa LX has a ball-in-socket design that is said to reduce wear points and to allow for an extremely strong and durable attachment between the motorhome and the towed vehicle. It is a Class IV tow bar rated for up to10,000 pounds. The tow bar weighs approximately 42 pounds and has rubber boots to protect it from road grime. Its 360-degree swivel allows the motorhome and towed vehicle to be out of alignment or on uneven surfaces during the hookup process. It includes a foldaway feature that allows the tow bar to be stored on the back of the motorhome.

The Aladdin aluminum tow bar is a Class III tow bar for use with towed vehicles up to 7,500 pounds. It weighs less than 36 pounds and stores on the back of the RV.
The Alpha tow bar is touted as an easy-to-use foldaway tow bar with a capacity of 6,500 pounds. It mounts and stores on the back of the RV, weighs less than 40 pounds, and includes 7,500-pound-rated safety cables.

The Acclaim is a Class III tow bar (tows vehicles up to 5,000 pounds) with easy-release handles and rubber-protected arms that give it a maintenance-free design. It weighs 35 pounds.

Blue Ox's Adventurer is the newest tow bar in the company's lineup and is aimed at part-time RVers who are interested in a less expensive, universal tow bar. It is a Class III tow bar for use with towed vehicles up to 5,000 pounds, and it can be adapted to almost any vehicle. Its legs, which fold together for easy storage, are adjustable from 16 inches to 34 inches. It has a 2-inch ball coupler and weighs less than 36 pounds.

Another Class III tow bar for use with towed vehicles up to 5,000 pounds, the Ambassador is an entry-level model said to offer a maintenance-free design at an inexpensive price. It can be used

only with base plates that have 24-inch centers. The Ambassador offers quick mounting and dismounting, weighs 24 pounds, and attaches to the towed vehicle's base plate.

The Allure is designed to fit and haul heavy-duty vehicles and offers 10,000 pounds of towing capacity. Its adjustable legs provide for easier coupling and uncoupling. The Allure stores in the motorhome's receiver when not in use. It is said to have superior handling on rough terrain and a tight turning radius. It includes a clevis connection that is manufactured to the client's specifications.

Demco Manufacturing Company may be best known for its lineup of tow dollies, but the company also offers several tow bars, all rated above 5,000 pounds towing capacity. All Demco tow bars come with safety cables.

The Commander weighs in at 41 pounds, is rated at 6,000 pounds towing capacity, and remains on the coach's rear when not connected to the towed vehicle. Its independent, self-supporting arms facilitate hookup.

The Dominator weighs 30 pounds and has 7,500 pounds of towing capacity. It is constructed of marine- and aircraft-grade aluminum alloy with steel used in areas where the greatest wear occurs. It, too, has self-supporting arms. The Dominator remains on the coach's rear.

The Excali-Bar II, which is also stored on the rear of the coach, is the company's heftiest tow bar, with 10,500 pounds of rated towing capacity — assuming the hitch is also up to the task. It weighs 46 pounds and has solid stainless-steel connecting arms, as well as gold-sealed lock collars to prevent dirt, grime, and moisture from getting into the connecting arms.

The Kwik-Tow collapsible rigid tow bar is rated at 5,000 pounds and can be carried on the front of the towable or removed, collapsed, and placed in a motorhome's storage compartment when not in use. It weighs 40 pounds. The arms adjust from 20 inches to 36.5 inches.

Roadmaster Inc. offers several tow bar models and designs — with base plates to match — that are split into two subcategories: Classic and All-Terrain.

The Classics start with the Tracker, which is Roadmaster's basic tow bar. The Tracker is a rigid A-frame tow bar that is rated at 5,000 pounds, weighs only 22 pounds, and comes with a safety crossbar to fit Roadmaster mounting brackets. Its design holds the tow bar rigid while in use, but the A-frame can be folded so that the tow bar legs come together for easier storage.

The StowMaster is rated at 6,000 pounds, mounts and stores on the front of the towed vehicle, but can be removed easily with just two pins. The Stowmaster utilizes stainless-steel arms, an internal safety collar that prevents separation of the tow bar, a full-length safety crossbar, self-lubricating nylon bushings to eliminate friction between the inner and outer arms, and

Roadmaster's trademarked Autowlok, which allows the arms to be adjusted for easy, one-person hookup. The Stowmaster is available with a pintle ring connector or a ball coupler.

The Falcon 2 is rated at 6,000 pounds, stores on the back of the motorhome, includes a full-length steel crossbar, solid stainless-steel inner arms, a stainless-steel locking mechanism, a powder-coat finish, and a patented automatic storage latch that doesn't require a pin to secure.

Roadmaster's All-Terrain tow bar lineup starts with the Sterling, which offers 6,000 pounds of towing capacity, and comes with safety cables and a wiring cord that are routed through the center channel guides. Sterling has a unique design due to its aluminum outer arms and solid stainless-steel inner arms. The tow bar includes EZ Hook safety cables that the factory claims are much easier to connect and disconnect. When not in use, it stows on the back of the motorhome. The tow bar also incorporates the nonbinding All-Terrain Freedom Latch.

The Falcon All-Terrain has the same features as the Falcon 2, with the addition of Roadmaster's nonbinding technology. According to factory literature, with the All-Terrain Freedom Latch, you'll never struggle to connect or disconnect your tow bar — the Freedom Latch releases the tow bar at any angle, level, or bind.

The StowMaster All-Terrain has all the same features as the 6,000-pound-rated StowMaster Classic, with the addition of Roadmaster's All-Terrain nonbinding technology.

If you wish to tow a full-size van, pickup, or a Hummer and your motorhome has a hitch with the necessary rating and a GCWR high enough to handle the weight of these vehicles, the BlackHawk 2 All-Terrain merits consideration. Rated at 10,000 pounds towing capacity, it is one of the highest-rated folding tow bars on the market.

A relative newcomer to the tow bar market is **NSA RV Products Inc**. and its ReadyBrute RV Tow Bar. The ReadyBrute is an all-aluminum tow bar that is rated at 8,000 pounds towing capacity. This self-locking tow bar features a nonbinding clevis design that is said to make it easy to hook up and unhook, even when the tow bar is not aligned with the motorhome. The ReadyBrute includes rubber boots that cover the arm extension to help keep operation smooth, and a powder-coat finish for extra durability. The tow bar weighs 30 pounds and stores on the back of the motorhome when not in use.

The company also offers the ReadyBrute Elite RV Tow Bar, which is a combination tow bar and supplemental braking system. This dual-purpose tow bar includes the same features as the ReadyBrute but also adds the company's ReadyBrake Supplemental Surge Braking System, which is built into the front of the tow bar. The system uses the weight of the towed vehicle to stop it. When the driver steps on the motorhome brakes, the towed vehicle pushes forward to activate the towed vehicle brakes via a tow-bar-mounted lever and aircraft cable. The all-aluminum tow bar weighs 40 pounds.

Summation

Several options are available for those who wish to tow another vehicle when traveling. Although motorhomers have their preferences — and this story focuses on flat towing — there is

no consensus as to the “best” way or “best” vehicle to tow. Whichever towing method you choose, make sure to follow all safety recommendations, check the equipment for excessive wear or damage on a regular basis, and understand how the extra weight will affect the handling and maneuverability of your motorhome.

Information about the manufacturers that were mentioned in this article follows. For details about the tow bar manufacturers and their products, visit their Web sites or give them a call.

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