

2016 GUIDE TO DINGHY TOWING

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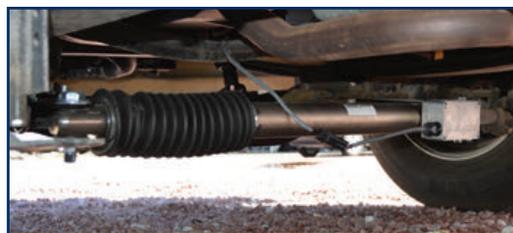
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TOW AND GO

If you enjoy the thrill of exploring the open road in your motorhome, you've probably found a few instances where bigger is not always better. That's where towing a dinghy behind your coach becomes advantageous. Want to know more? The 2016 Guide to Dinghy Towing provides a selection of informative articles and a listing of new vehicles ready-made to enhance motorhome ownership.

Granted, no manufacturer has yet to engineer a plug-and-play setup directly from the factory, but it's never been simpler to equip both dinghy and motorhome for road duty.

For starters, as highlighted in "Things to Know Before You Tow" (page 6), the hard hookup between motorhome and dinghy has become an easy one-person operation. Self-aligning tow bars make cinching up a breeze, and with some models, designed to have the cables and wires routed through the hollow arms, connections are simple and aesthetically pleasing. Plus, manufacturers are offering an array of accessories to help keep it that way: An RV underskirt, fitted beneath the towing equipment, will safeguard the dinghy vehicle and hardware from debris. For more ironclad protection, nearly indestructible rock guards are available that quickly attach to the tow bar and shield the dinghy from road debris.

Yet another device to aid in safe dinghy transport, supplemental braking systems have likewise evolved. Portable systems can be installed in just minutes, and permanent installations remain unobtrusive. Dinghy brakes are

mandatory in most states and Canadian provinces and any time you add a few tons of weight to the back of your motorhome you need a way to slow it down without overtaxing the brakes on the motorhome.

And make no mistake, contemporary coaches can accommodate a lot of dinghy weight. While many new chassis are rated to handle at least 4,000 pounds of dinghy weight, certain luxury coaches today carry gross combined weight ratings (GCWR) of 60,000 pounds or more — with up to 25 percent of that available for towing.

The focus of the annual dinghy towing guide is the dinghies themselves. Manufacturers are becoming increasingly sensitive to the needs of the motorhome community and advances in technology are changing the vehicle-availability landscape. The "2016 Dinghy Roundup" (beginning on page 14) lists vehicles that have been manufacturer-approved for four-wheels-down towing. The list includes many of the newest vehicles — from luxurious to economical. For all-terrain fun, there are plenty of 4WD vehicles to choose from. While some vehicles are easy to tow, others require that very specific procedures be followed before and during towing to prevent damage. We've included expanded information on the manufacturer guidelines required for flat towing, though you'll still need to check the owner's manual for more detailed procedures.

As motorhomes continue to grow in size and stature, life on the road has never been more comfortable. A dinghy adds to that enjoyment. **M**



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THINGS TO KNOW BEFORE YOU TOW

The Right Equipment Adds Safety, Simplicity and Convenience

Traveling with a dinghy vehicle is almost a given with today's larger motorhomes. Although the trend to bigger coaches has injected the lifestyle with more creature comforts than a luxury hotel room, it's not without its drawbacks. Even rigs with a 60-degree wheel cut will encounter some difficulty negotiating narrow roads in smaller towns during sightseeing tours — and it's just not fun trying to park a 40-footer at local markets when picking up perishables.

A dinghy simplifies such tasks, and eliminates the need to break camp and stow everything each time you need (or want) to venture away from the campground. Additionally, the dinghy can stow gear securely when

motorhome storage is filled (within weight restrictions), and there is the security of having a spare set of wheels in the event of an emergency. It's not without consequences; towing a dinghy will affect the acceleration, fuel economy and braking of any coach, to some degree. However, proper selection of a dinghy vehicle and towing equipment will enable you to



A drop receiver might be needed to keep the tow bar level. ▶



safely and conveniently enjoy the benefits of auxiliary transportation.

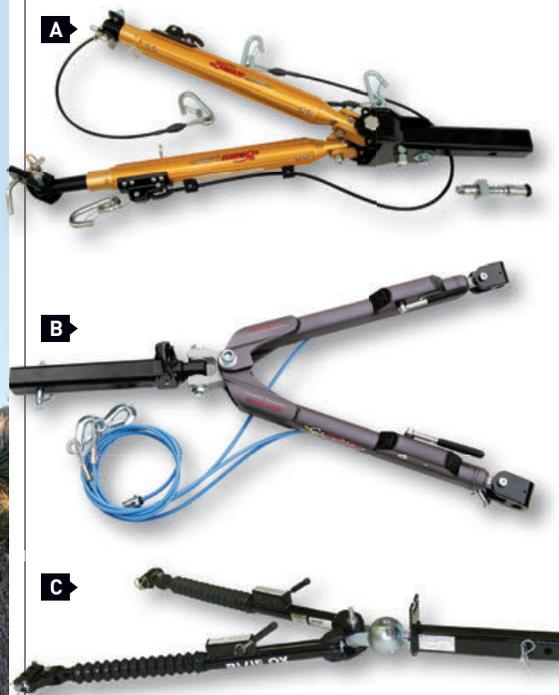
FLAT TOWING

The first and most essential step in selecting a dinghy vehicle is to make sure it is approved by its manufacturer for flat towing (see “2016 Dinghy Roundup,” page 14). While many non-approved passenger cars or light trucks can safely be used as a dinghy, provided the appropriate towing accessory (such as a transmission lube pump) is used for that specific model as an aftermarket modification, or towing on a dolly or trailer is planned — these vehicles have been certified for four-wheels-down towing without affecting their warranties. However, since manufacturers reserve the right to make engineering changes, buyers should always first confirm flat-towability by consulting the respective vehicle’s owner’s manual before the purchase is finalized.

When selecting a dinghy, first find out the maximum towing limit of your coach and then

determine which vehicles fall within that limit. Towing limits aren’t the only factor to consider, but they help to eliminate many choices based on weight alone. The weight rating of the coach’s hitch receiver is another concern, although most are adequate, and receivers can often be upgraded. Keep in mind, however, that an upgraded hitch receiver cannot increase the specified weight limit set by the chassis manufacturer.

An economical four-passenger compact car can double as a family’s second car when not traveling, but even a larger SUV or pickup can be towed, provided its weight is within the towing limit of the chassis.



[A] Demco’s Dominator aluminum tow bar has a rating up to 7,500 pounds. Easy trigger release and self-supporting arms provide convenient connection to baseplate.

[B] Roadmaster’s aluminum Sterling All-Terrain tow bar is rated to handle vehicles up to 6,000 pounds. Nonbinding design facilitates hookup. Roadmaster’s BlackHawk 2 All-Terrain has a rating up to 10,000 pounds.

[C] Aventa LX from Blue Ox uses a ball-in-socket design that allows the arms to swivel 360 degrees for quick hookup. The tow bar is rated to tow vehicles up to 10,000 pounds.





Above: Once the tow bar is pinned in the hitch receiver, make sure electric connections and safety cables are secure. Left: While driving the dinghy, this type of tow bar remains on the coach, out of harm's way.



Most flat-towed dinghies track so well that many motorhome drivers don't even know they are there. Front-wheel-drive (FWD) vehicles with manual transmissions and most compact 4WD vehicles with manual transfer cases are among the easiest and most economical to tow. Plus, they tend to rank among the lightest vehicles.

Some auto manufacturers also produce FWD vehicles equipped with automatic transmissions that are flat-towable. They are popular because they're easier to drive and the setup for towing is usually just as simple as a manual.

But some vehicles do require special procedures, such as starting the engine every 200 miles to circulate transmission fluid. Note that this cannot simply be circumvented by overfilling the transmission before towing, because the problem isn't caused by lack of sufficient fluid but rather by lack of oil circulation. Such practices, although inconvenient, are designed to prevent drivetrain damage and must be incorporated into the towing routine.

Another vehicle-specific consideration is that towing some dinghies with the ignition switch in a position that allows the steering column to

remain unlocked and also leaves power applied to various electrical circuits. Over the course of a full day of towing, this can lead to significant battery drain. While strategies for dealing with this vary by model, most fixes involve temporarily pulling one or more fuses from the vehicle's fuse box before towing. Another alternative is to connect the offending circuit through an owner-added switch or by installing Roadmaster's FuseMaster switch, allowing these circuits to be made tow-ready quickly and conveniently. A charge line from the motorhome can often be a viable alternative.

2016 GUIDE TO DINGHY TOWING SPONSORS

Produced by the editors of *MotorHome* for the publication's April issue, the 2016 Guide to Dinghy Towing was developed with assistance from the following companies:

Blue Ox Products

800-228-9289, www.blueox.com

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THE MOTORHOME/DINGHY LINK

An essential ingredient in safe dinghy towing involves a solid, properly designed and installed mechanical linkage between the coach and the towed vehicle. Hitch receivers, tow bars and baseplates must all be in good working order, rated for the weight you intend to pull and designed for the specific application.

HITCH RECEIVERS

Check the rating of the hitch receiver to ensure that it is suited for the heaviest load you intend to tow. If a receiver is already installed on your coach, the weight limits and class should be visible on it.

However, the ride height of a motorhome rarely matches up with that of the chosen dinghy, oftentimes necessitating the use of a drop receiver to allow the tow bar to ride level. These

are available in 2- to 10-inch variations. Receivers should be bolted (not welded) in place, using at least Grade 5 bolts and lock washers, locking nuts and thread-locking sealer.

TOW BARS

Tow bars are available in two basic styles: A-frame or self-aligning. A-frame tow bars (offered as “solid” or “folding”), while the most economical, are designed to fit a limited number of baseplates (the mounting brackets affixed to the dinghy) or specific applications; however, the folding design will fit a wider range than the solid design. These types of tow bars are strong, but heavy, and require storage space when not in use. Hitching is easier with a helper to guide alignment.

Self-aligning tow bars are available in two styles: dinghy-mounted and coach-mounted.

➔ AS YOU GO

- Observe the speed limit for towing in each state or province you traverse.
- Maintain adequate stopping distance from the vehicle in front of you. A minimum five-second interval is recommended.
- Avoid towing in snowy or icy conditions.
- Pay particular attention to traffic merging onto the freeway, and be prepared to take evasive action to avoid “daydreamers.”
- Plan ahead — most flat-towed dinghies can’t be backed more than a few feet, so it’s necessary to focus on easy ingress and egress. Most tow-bar manufacturers will not warrant damage caused by backing. Dollies tend to jackknife quickly. It’s better to disconnect the dinghy and drive to a safe place to reconnect.
- Avoid having to make tight turns; they put a lot of pressure on tow bars.
- Towing in deep sand or gravel may cause the dinghy’s front wheels to turn to one side. If this happens, you must manually re-center them before continuing.
- Walk around the coach and dinghy to inspect all connections, check tire pressure (or use a monitoring system like the nVISION TPMS from Hopkins) and look for signs of trouble every time you stop.



1



2

Coach-mounted units are the most desirable, as there is less chance of damage when not in use — and hitching is a one-person operation. Highly adaptable, self-aligning tow bars fit a broad range of vehicles by attaching to model-specific baseplates: Class III (5,000-pound) or Class IV (10,000-pound) models are available. Contact tow-bar manufacturers to find out if baseplates are offered for the dinghy you plan to tow.

BASEPLATES

Baseplates are perhaps the most critical variable in this link. While tow bars and, obviously, hitch receivers are intended for mass fitment, various brands, models and years of dinghy vehicles require specific baseplates and installation procedures, so proper selection and installation are essential.

Installing a baseplate typically entails very detailed procedures. On some vehicles, the bumper covering (fascia) must be temporarily removed. Some minor drilling may be required and the bumper covering and/or grille may also require some trimming.

On some vehicles, the baseplate installation process can be even more intricate. For example, the air dam may need to be trimmed or the factory-installed belly pan may require either trimming or permanent removal. Such requirements are described in the manufacturer's fitment charts — hopefully eliminating any unpleasant surprises at installation time. Today's baseplates do a good job of blending into the exterior lines of the dinghy vehicle.

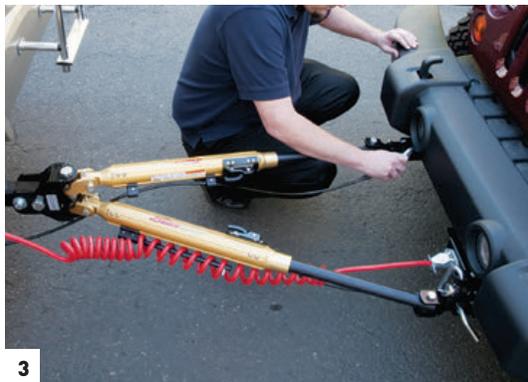
Remember that all 50 states require properly

BEFORE YOU TOW

- Make sure your equipment is rated for the dinghy's weight and that you are not exceeding the motorhome's gross combination weight rating (GCWR).
- Confirm hitch height is correct.
- Confirm all hitch bolts, tow-bar and baseplate fasteners are securely tightened.
- Confirm all hitch and wiring connections are engaged and secure; all safety chains or cables are attached; and all locking pins are properly installed.
- Connect brake system and breakaway device.
- Check motorhome and dinghy for proper function of taillights, brakelights and turn signals.
- Check tire pressure on motorhome and dinghy — including spare tires.
- Make sure the dinghy is set up for towing: steering unlocked; emergency brake off; gear selector in the position specified by manufacturer; ignition in proper position; lube-pump switch, driveshaft coupler, 4WD transfer case and hubs (if applicable) in proper position.

rated safety chains or cables to keep the dinghy from separating from the coach if the tow bar or ball fails. Safety chains or cables must be connected securely to the dinghy and crossed under the tow bar, then secured to the hitch receiver. They should be long enough to allow full turning without binding, but should not drag when slack.

[1] Baseplate installation doesn't require welding or specialized tools, but can be involved. If you have any reservations, have a professional do it. [2] To hook up using a telescoping tow bar, the dinghy vehicle only needs to be near the center and mid-length of the bar. [3] Connecting tow-bar arms to the baseplate requires the use of pins and clips. Then secure the safety cables and plug in the electrical umbilical cord. [4] Once the pins are in, the motorhome is driven ahead slowly (or the dinghy is backed up) to lock the arms in position.



3



4



▲ Modern baseplates are secured to the frame of the dinghy. While some installations are more complicated, the end result usually is a clean appearance.

OTHER TOWING EQUIPMENT

Should you choose (or already own) a vehicle that is not flat-towable as produced, there are retrofit kits for many models. A good percentage of passenger vehicles can be modified to serve as dinghies using retrofit products that are on the market.

For rear-wheel-drive (RWD) and some four-wheel-drive applications, couplers from REMCO DSC (www.remcodsc.com) enable the driveshaft to be easily disconnected from the transmission or differential by a cable or lever mounted near the driver's seat. These kits run about \$750 and can be installed in about three hours.

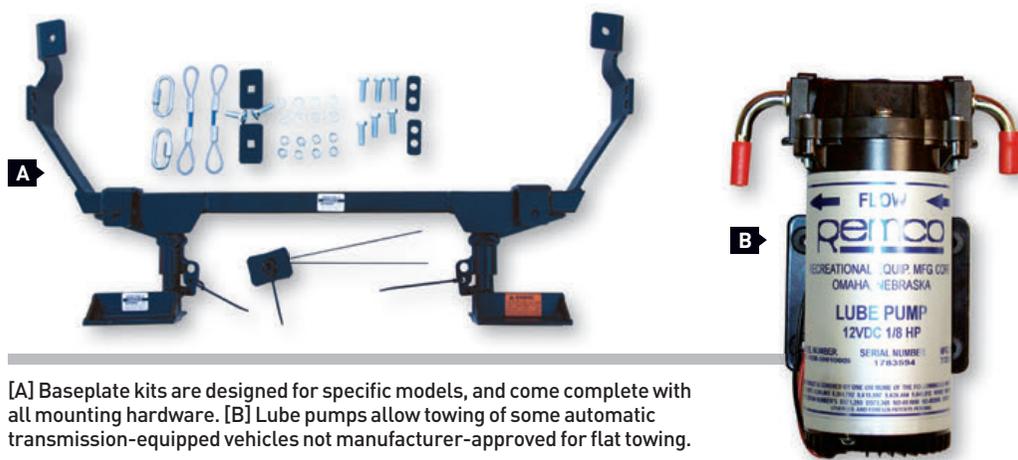
A transmission-lube pump sold by Remco Industries (www.remcotowing.com) can be mounted and plumbed into some automatic transmissions to keep fluid circulating while the vehicle is in tow. Bear in mind that modifications

to the vehicle may affect the warranty.

Tow dollies also offer an alternative to flat towing, although they take up space in camp. Remember that the dolly weight must be figured in with the total weight of the dinghy.

Trailers track better than dollies, but they take up even more precious space in camp. Also, the weight of the trailer drastically cuts into the total weight that can be pulled behind a motorhome, thereby making this method a distant third choice.

There are a number of other accessories for dinghy towing. Some, like dinghy braking devices, should be considered mandatory, while others (such as rock guards and RV underskirts) can be considered conveniences. These components are addressed in "Towing Accessories" (page 26), along with dinghy wiring and lighting. **M**



[A] Baseplate kits are designed for specific models, and come complete with all mounting hardware. [B] Lube pumps allow towing of some automatic transmission-equipped vehicles not manufacturer-approved for flat towing.

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DINGHY TOWING 2016

Old Standbys Remain on the List, While Some Fresh Faces Join the Fray

So you finally joined the RVing community and are looking for a car to tow behind your new motorhome. Or, perhaps you're a seasoned veteran who just wants a new vehicle to tool around in once at camp. Either way, you'll find deciding what vehicle you want to drive is the easy part; finding one that is light enough to tow and is approved by its manufacturer for dinghy towing (also known as flat towing or recreational towing) can be more challenging. As you shop, you'll find that some manufacturers still don't understand the practice of dinghy towing, and fewer still dealers can advise you of what is required to tow the vehicle in question — not to mention if it would be under warranty should mechanical problems arise. That is why we've always advised potential buyers to ask the dealer for a copy of the owner's manual before making a purchase, as this is the only way to know for sure if you can tow the vehicle with the manufacturer's blessing.

The good news is, more and more manufacturers have made owner's manuals available for download on the Internet. It started out with just a few, but now nearly every manufacturer publishes entire owner's manuals for each vehicle in the lineup. That's important, because now you

can not only find out if the vehicle you're considering is towable, but also what special procedures are required to tow it without draining the battery or damaging the driveline.

The shift (no pun intended) away from manual transmissions means that fewer new vehicles are towable nearly every year, but thankfully there are always the old standbys as well as some fresh faces. We've highlighted some of the new or significantly redesigned towable models for your consideration below.

Keep in mind that, even though a vehicle isn't officially deemed towable by its manufacturer doesn't necessarily mean it can't be towed. Many manufacturers have simply never tested the towability of their vehicles, so they don't know if they're towable or not. But even the ones that explicitly state their vehicle cannot be towed usually cite automatic transmission lubrication as the main reason. In these instances, an after-market lubrication pump from Remco (www.remcoindustries.com) might do the trick — the company has a substantial database of vehicles that can be upfitted with its products. Just keep in mind that the manufacturer's warranty will not cover any damage to the drivetrain caused by dinghy towing a nonapproved vehicle.

▲ (Above) | The Chevy Cruze is the Chevrolet division's best-selling global car. With a handsome redesign, upscale options and 40+ MPG on tap, it will probably stay that way.



If all you want is something practical, economical and reliable, look no further than the Chevy Spark. Redesigned for this year, its new 1.4-liter engine produces 16 percent more power than the previous model.

camera and four-wheel disc brakes with ABS. Available safety features include Side Blind Zone Alert, Rear Cross-Traffic Alert, Lane Keep Assist and Forward Collision Alert. The Cruze's comfortable cabin also features next-generation Chevrolet MyLink with smartphone integration capability, including a standard 7-inch diagonal screen and an available 8-inch screen with Apple CarPlay and Android Auto coming later. The Cruze also offers available features that are uncommon in a compact car, including wireless phone charging, heated rear leather seats and a heated, leather-wrapped steering wheel. Perhaps most important to motorhome owners is that the Cruze is towable with a manual transmission, and the procedures necessary for towing are minimal. Hot on the heels of the new Cruze is the 2017 Cruze Hatch, a handsome four-door hatchback that will arrive this fall. It is not yet known, however, if it will be towable as well.

The family-sized Chevy Malibu has traditionally struggled to find its own identity in recent years, but may have finally hit its stride with the 2016 model. All new from the ground up, the

In addition to helpful information like vehicle weight, speed/distance limits and price range, we also include a "special procedures" column that will help give you some idea of what's required before (and sometimes during) towing. While we don't have the space to list every step for every vehicle (some are quite lengthy), we've listed the most important ones — the finite details can be found in the owner's manual.

If you will be choosing a brand-new vehicle as your dinghy, make sure that the equipment necessary to tow it is available through the aftermarket. You might find that a baseplate or other application-specific hardware isn't available for it yet. While you're at it, ask (or research) what is involved in the installation of a baseplate; some of these bolt on with minimal modifications, while others require the whole front fascia to be removed, along with modifications to the grille or lower valance.

With all of this in mind, here are a few of the new dinghy-towable offerings for 2016.

CHEVY

Chevy has made numerous attempts at small-car stardom, but seems to have finally made the grade with its attractively styled and reasonably priced Cruze — the brand's best-selling global car. For 2016, the Cruze is larger and lighter, featuring an all-new 1.4-liter turbocharged engine with direct injection and start/stop technology that GM estimates will garner an impressive 40-plus MPG. A class-leading 106.3-inch wheelbase creates more rear seat leg/knee room for your passengers, and there are more standard features too, including 10 air bags, a rearview



Completely new from the ground up, the Chevy Malibu is a family sedan that delivers on styling, features and passenger comfort.

Malibu features a longer wheelbase for greater interior comfort, yet at the same time is 300 pounds lighter than its predecessor. A standard Ecotec direct injection 1.5-liter turbo engine that makes 163 horsepower is mated to a six-speed automatic, or choose the optional larger 2.0-liter engine generating an impressive 250 horsepower delivered to the front wheels via an eight-speed automatic. Both versions are towable, according to Chevrolet, with minimal fuss. As you might expect, the new Malibu offers many of the same features found in the smaller Cruze, including 10 standard air bags and available features such as Forward Collision Alert, Rear Cross Traffic Alert, and available Automatic Parking Assist. Segment-exclusive OnStar 4G LTE in-vehicle connectivity and available wireless phone charging help you stay in touch on the road.

FIAT

Though not necessarily a new car, the sporty mini compact Fiat Abarth and 500c (Cabrio) Abarth are officially approved for dinghy towing with the standard five-speed manual transmission. Though not suited for more than two (the back seat is essentially a package shelf), the tiny Abarth is big on fun, with a turbocharged four-cylinder engine that churns out 160 horsepower on regular fuel. For 2016, the Abarth models feature the Uconnect 5.0 system with a 5-inch touchscreen that enables hands-free calling via Bluetooth-equipped phones, as well as voice command control of the AM/FM stereo, optional SiriusXM radio and navigation system. Weighing in at just a tad over 2,300 pounds, the diminutive Abarth can be towed behind just about any



The Fiat Abarth may be cute, but it's a serious performance machine perfect for two auto enthusiasts. The manual version is towable, and light enough to be towed behind almost anything.

motorhome, and offers Italian-styled driving fun wherever your travels take you.

SCION

While the boxy but practical xB may have left the Scion building, the good news is that there is an all-new model to take its place: the sporty five-door Scion iM. Like its siblings, the iM is targeted at a younger audience, but mature owners will find there's much to like about this new car — including a reasonable price tag, roomy versatility and a “mono spec” trim level that includes everything you need, such as dual-zone automatic climate control, Bluetooth hands-free phone capability, a 4.2-inch multi-information display, power folding sideview mirrors and a 60/40 split folding rear seatback. The six-speed manual version is towable with hardly any prep, and comes standard with Hill Start Assist to prevent rollback when pulling away from a stop on an incline. **M**

▼ The Scion iM offers sporty, contemporary styling with the practicality of a wagon. Its 1.8-liter four-cylinder engine is easy on gas, and the six-speed manual version is towable.



MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE W/ MANUAL TRANS.	TOWABLE W/ AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE RANGE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
BUICK							
Enclave FWD/AWD	4,724/ 4,922	65 MPH/None	N/A	Yes	17/24-16/22	\$39,065-\$48,440	Run engine at the beginning of each day and at each fuel stop for 5 minutes. Remove the 15-amp ECM fuse, 15-amp OnStar fuse and 50-amp BATT1 fuse while towing.
CADILLAC							
SRX FWD/AWD	4,277/ 4,442	65 MPH/None	N/A	Yes	17/24-16/23	\$37,605-\$52,725	Run at the beginning of each day and at each RV fuel stop for about 5 minutes. Remove shift lever boot. Use small screwdriver to press and hold the manual release button. Put vehicle in NEUTRAL. Once destination is reached, start engine and allow it to idle for more than 3 minutes before driving the vehicle. Reinstall shift lever boot.
Escalade 4WD (all)	5,840	None	N/A	Yes	15/21	\$76,565-\$92,945	Only four-wheel-drive vehicles with a two-speed transfer case with a NEUTRAL position and a four-wheel-drive LOW setting can be towed. Negative battery cable must be disconnected.
CHEVROLET							
Colorado 4WD	4,140	None	No	Yes	19/25	\$28,080-\$35,835	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel drive LOW setting. Disconnect the negative battery cable.
Cruze	3,084	65 MPH/None	Yes	No	28/42	\$16,995-\$20,040	To prevent the battery from draining while the vehicle is being towed, remove fuses 22, 23 and 24 from the instrument panel fuse block.
Equinox	3,777	65 MPH/None	N/A	Yes	22/32	\$23,495-\$32,385	Run engine at the beginning of each day and at each RV fuel stop for 5 minutes. Remove fuse 32 while towing.
Malibu	3,086	65 MPH/None	N/A	Yes	27/37	\$22,500-\$31,795	Shift the transmission to NEUTRAL. Place the ignition in the ACC/ACCESSORY position. Remove fuses 8, 22 (key access only), and 24 from the instrument panel fuse block.
Silverado 1500 4WD	4,816	None	N/A	Yes	17/22	\$32,030-\$51,035	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.
Silverado 2500 HD 4WD	6,066	None	N/A	Yes	N/A	\$37,105-\$58,130	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.
Silverado 3500 HD 4WD	6,322	None	N/A	Yes	N/A	\$37,415-\$58,130	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE W/ MANUAL TRANS.	TOWABLE W/ AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE RANGE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
Sonic (except RS with automatic transmission)	2,720	65 MPH/None	Yes	Yes	29/40	\$15,220-\$20,970	Run the vehicle at the beginning of each day and at each RV fuel stop for about 5 minutes. To prevent battery from draining while vehicle is being towed, remove the Discrete Logic Ignition Switch fuse from the fuse block.
Spark	2,246	70 MPH/None	Yes	No	30/41	\$13,535-\$17,060	
Suburban 4WD	5,896	None	N/A	Yes	15/22	\$53,895-\$68,635	Only four-wheel-drive vehicles with a two-speed transfer case with a NEUTRAL position and a four-wheel-drive LOW setting can be flat towed. Negative battery cable must be disconnected.
Tahoe 4WD	5,683	None	N/A	Yes	16/22	\$51,195-\$65,805	Only four-wheel-drive vehicles with a two-speed transfer case with a NEUTRAL position and a four-wheel-drive LOW setting can be flat towed. Negative battery cable must be disconnected.
Traverse FWD	4,713	65 MPH/None	N/A	Yes	17/24	\$32,100-\$43,040	To prevent the battery from draining while the vehicle is being towed, remove the 15-amp ECM fuse and the 15-amp OnStar fuse. Also, remove the 50-amp BATT1 fuse from the underhood fuse block. The vehicle should be run at the beginning of each day and at each RV fuel stop for about 5 minutes.
DODGE							
Dart	3,122	None	Yes	No	28/41	\$16,995-\$24,395	Transmission must be in NEUTRAL.
Durango R/T AWD 5.7-L V-8	5,331	None	N/A	Yes	14/22	\$42,895	Buyer must choose two-speed transfer case option. Transmission in PARK, transfer case must be set to NEUTRAL.
RAM							
1500 4WD	4,750	None	N/A	Yes	18/25	\$30,615-\$55,900	Automatic transmission in PARK, transfer case in NEUTRAL.
2500 4WD	6,321	None	Yes	Yes	N/A	\$34,800-\$59,120	Automatic transmission in PARK, manual transmission in gear (not in NEUTRAL), transfer case in NEUTRAL.
3500 4WD	6,370	None	Yes	Yes	N/A	\$35,405-\$59,910	Automatic transmission in PARK, manual transmission in gear (not in NEUTRAL), transfer case in NEUTRAL.
FIAT							
500/500c	2,366	None	Yes	No	31/40	\$16,845-\$24,700	Transmission must be in NEUTRAL.
500 Abarth/ 500c Abarth	2,512	None	Yes	No	28/34	\$22,495-\$26,595	Transmission must be in NEUTRAL.
500L	3,212	None	Yes	*Yes *Euro Twin Clutch Transmission in Pop model only	25/33	\$19,345-24,695	Transmission must be in NEUTRAL. For Euro Twin Clutch transmission in Pop model, place transmission in NEUTRAL, turn key to the ON/RUN position without starting engine, press brake pedal and shift transmission to NEUTRAL. Turn key to the OFF position.

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No Braking System

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With SMI Systems

170-205 Feet



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*Approximate distances. Actual stopping distances will vary. Results from 60 MPH.

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Towing without a braking system is **illegal!**

Police officers and insurance adjusters are checking that towed vehicles are equipped with a braking system. Tow legal with SMI.

■ Required ■ Not Required



Tow Confident

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- ✓ Legendary 24/7 customer support
- ✓ A design that fits all vehicles, even hybrids
- ✓ A simple & direct universal install process
- ✓ Everything you need, no extras to buy
- ✓ Fully transferable to any new vehicle



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MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE W/ MANUAL TRANS.	TOWABLE W/ AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE RANGE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
FORD							
C-MAX Hybrid/ Energi	3,640	70 MPH/None	N/A	Yes	42/37	\$24,170-\$31,770	Start the vehicle, press the brake pedal and shift the transmission into NEUTRAL before towing. Place the transmission in PARK, start the vehicle, and allow the engine to run for 1 minute at the beginning of each day. After allowing the vehicle to run, place the transmission back into NEUTRAL and the ignition in the OFF position.
Edge 2.7-L/3.5-L FWD/AWD	3,912/ 4,078	65 MPH/None	N/A	Yes	18/26-17/25	\$28,895-\$35,795	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. With the engine running and your foot on the brake, shift into DRIVE and then REVERSE before shifting back into NEUTRAL.
Expedition 4WD	5,897	None	N/A	Yes	15/20	\$47,805-\$62,820	Place the transfer case and transmission in the NEUTRAL position and engage the four-wheel-down towing feature.
Explorer 3.5-L FWD/AWD	4,457/ 4,633	65 MPH/None	N/A	Yes	17/24-16/23	\$31,050-\$41,300	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. With the engine running and your foot on the brake, shift into DRIVE and then REVERSE before shifting back into NEUTRAL.
Explorer 3.5-L EcoBoost AWD	4,890	65 MPH/None	N/A	Yes	16/22	\$43,500-\$52,970	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. With the engine running and your foot on the brake, shift into DRIVE and then REVERSE before shifting back into NEUTRAL.
F-150 4WD	4,305	None	N/A	Yes	17/23	\$31,074-\$53,301	Place the transfer case and transmission in the NEUTRAL position and engage the four-wheel-down towing feature.
F-250/F-350/ F-450/F-550 Super Duty 4WD	6,351/ 8,623	None	N/A	Yes	N/A	\$35,180-\$71,320	Only flat towable with Manual-shift Transfer Case vehicles, not Electronic Shift-on-the-Fly or 4x2 vehicles. Transmission in NEUTRAL, manual transfer case shifted into NEUTRAL, both hub locks in FREE position.
Fiesta (all except ST)	2,578	70 MPH/None	Yes	Yes	28/36	\$14,090-\$18,340	On automatic transmission-equipped vehicles, transmission must be in NEUTRAL during four-wheel-down towing (ignition must be "ON" before shifting into NEUTRAL).
Flex 3.5-L FWD/AWD	4,439/ 4,637	65 MPH/None	N/A	Yes	16/23-16/22	\$29,600-\$40,645	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. With the engine running and your foot on the brake, shift into DRIVE and then REVERSE before shifting back into NEUTRAL.

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE W/ MANUAL TRANS.	TOWABLE W/ AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE RANGE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
Focus (all except ST and Electric)	2,960	70 MPH/None	Yes	Yes	26/36	\$17,225-\$23,725	Automatic transmission must be in NEUTRAL during four-wheel-down towing (ignition must be "ON" before shifting into NEUTRAL).
Fusion Hybrid	3,639	70 MPH/None	N/A	Yes	44/41	\$25,185-\$30,940	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
Fusion Hybrid Energi	3,913	70 MPH/None	N/A	Yes	95/81	\$33,900-\$35,730	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
Taurus 3.5-L FWD/AWD	3,969/ 4,343	65 MPH/None	N/A	Yes	18/27-17/24	\$27,110-\$40,275	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. With the engine running and your foot on the brake, shift into DRIVE and then REVERSE before shifting back into NEUTRAL.
GMC							
Acadia FWD/AWD	4,656/ 4,850	65 MPH/None	N/A	Yes	17/24-16/23	\$31,900-\$45,220	Run engine at the beginning of each day and at each RV fuel stop for 5 minutes. To prevent the battery from draining while the vehicle is being towed, remove the 15-amp ECM fuse and the 15-amp OnStar fuse. Also remove the 50-amp BATT1 fuse from the underhood fuse block.
Canyon 4WD	4,100	None	N/A	Yes	19/25	\$29,755-\$36,430	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.
Sierra/Sierra Denali 1500 4WD	4,816	None	N/A	Yes	17/22	\$32,650-\$55,535	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.
Sierra/Sierra Denali 2500 HD 4WD	6,066	None	N/A	Yes	N/A	\$37,685-\$58,985	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.
Sierra/Sierra Denali 3500 HD 4WD	6,066	None	N/A	Yes	N/A	\$38,785-\$59,320	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.
Terrain/Terrain Denali FWD/AWD	3,853/ 4,020	65 MPH/None	N/A	Yes	22/32-20/29	\$25,295-\$36,850	Run engine at the beginning of each day and at each RV fuel stop for 5 minutes. To prevent the battery from draining while the vehicle is being towed, remove fuse 32, the Discrete Logic Ignition Switch fuse, from the instrument panel fuse block.
Yukon/ Yukon Denali, Yukon XL/Yukon XL Denali 4WD	5,545/ 6,009	None	N/A	Yes	16/22	\$52,510-\$72,220	Only dinghy tow four-wheel-drive vehicles that have a NEUTRAL and a four-wheel-drive LOW setting. Disconnect the negative battery cable.

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE W/ MANUAL TRANS.	TOWABLE W/ AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE RANGE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
JEEP							
Cherokee 4WD	4,046	None	N/A	Yes	21/27	\$23,995-\$32,295	Only 4x4 models with 2-Speed Power Transfer Unit may be towed. The Power Transfer Unit must be shifted into NEUTRAL and the transmission must be in PARK.
Compass 4WD	3,354	None	Yes	No	22/27	\$19,595-\$24,890	Only 4x4 models with 2-Speed Power Transfer Unit may be towed. The Power Transfer Unit must be shifted into NEUTRAL and the transmission must be in PARK.
Grand Cherokee	4,677	None	N/A	Yes	18/25	\$31,995-\$51,995	Only 4WD vehicles equipped with Quadra-Trac II and Quadra-Drive II systems are towable. The transfer case must be shifted into NEUTRAL and the transmission must be in PARK.
Patriot 2WD/4WD	3,133/ 3,290	None	Yes	No	21/31	\$17,595-\$26,540	Transmission in NEUTRAL. Key in ACC position.
Wrangler 4WD	3,760	None	Yes	Yes	17/21	\$23,895-\$37,895	Automatic transmission in PARK. Manual transmission in gear (not in NEUTRAL). Transfer case in NEUTRAL.
Wrangler Unlimited 4WD	4,075	None	Yes	Yes	17/21	\$27,695-\$41,695	Automatic transmission in PARK. Manual transmission in gear (not in NEUTRAL). Transfer case in NEUTRAL.
LINCOLN							
MKS 3.7-L/3.5-L EcoBoost FWD/AWD	TBD	65 MPH/None	N/A	Yes	17/26-17/24	TBD	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. With the engine running and your foot on the brake, shift into DRIVE and then into REVERSE before shifting back into NEUTRAL.
MKT 3.5-L EcoBoost AWD	4,885	65 MPH/None	N/A	Yes	16/23	\$45,205	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. With the engine running and your foot on the brake, shift into DRIVE and then into REVERSE before shifting back into NEUTRAL. Vehicles with keyless start, see owner's manual.
MKX 3.7-L/2.7-L EcoBoost FWD/AWD	4,168/ 4,387	65 MPH/None	N/A	Yes	17/26-16/23	\$38,260-\$42,755	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. Select "NEUTRAL Tow" mode.
MKZ 3.7-L V-6 FWD/AWD	3,687/ 3,848	65 MPH/None	N/A	Yes	17/26-16/23	\$35,190-\$38,380	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. Select "NEUTRAL Tow" mode.



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The most versatile and easiest to use braking system anywhere!



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- Rich and Lisa C.
(35' Itasca Meridian & Honda CRV)



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MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE W/ MANUAL TRANS.	TOWABLE W/ AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE RANGE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
MKZ Hybrid	3,792	70 MPH/None	N/A	Yes	41/39	\$35,190	Start the engine and allow it to run for 1 minute at the beginning of each day. With the engine running and your foot on the brake, shift into DRIVE and then into REVERSE before shifting back into NEUTRAL. Select "NEUTRAL Tow" mode.
NISSAN							
370Z Coupe	3,292	70 MPH/ 500 miles	Yes	No	18/26	\$29,990-\$45,490	Idle engine in NEUTRAL for 2 minutes every 500 miles.
370Z Roadster	3,463	70 MPH/ 500 miles	Yes	No	17/24	\$41,820-\$48,100	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Juke NISMO	2,981	70 MPH/ 500 miles	Yes	No	28/34	\$24,830-\$28,020	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Sentra S	2,848	None/500 miles	Yes	No	27/36	\$16,780	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Versa Note	2,414	None/500 miles	Yes	No	27/36	\$14,230	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Versa Sedan	2,363	None/500 miles	Yes	No	27/36	\$11,990	Idle engine in NEUTRAL for 2 minutes every 500 miles.
SCION							
iM	2,943	None	Yes	No	27/36	\$18,460	Shift the shift lever to NEUTRAL. Turn the engine switch to the "ACC" position. Ensure that the audio system and other powered devices are turned off. Release the parking brake. After towing, start the engine and let it idle for at least 3 minutes before driving.
tC	3,082	None	Yes	No	23/31	\$19,385	Shift the shift lever to NEUTRAL. Vehicles without a smart key system: Turn the engine switch to the "ACC" position. Vehicles with a smart key system: Turn the "ENGINE START STOP" switch to ACCESSORY mode. Ensure that the audio system and other powered devices are turned off. Release the parking brake. After towing, leave the engine in idle for at least 3 minutes before driving.
TOYOTA							
Corolla	2,800	None	Yes	No	28/37	\$17,230	Shift the shift lever to NEUTRAL. Turn the engine switch to the "ACC" position (without a smart key system) or ACCESSORY mode (with a smart key system). Ensure the audio system and other powered devices are turned off. Release the parking brake. After towing, leave the engine in idle for at least 3 minutes before driving.
Yaris Hatchback	2,315	None	Yes	No	30/37	\$17,670	Shift the shift lever to NEUTRAL. Turn the engine switch to the "ACC" position. Ensure that the audio system and other powered devices are turned off. Release the parking brake. After towing, start the engine and let it idle for at least 3 minutes before driving. M



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Avail™ Motorhome Mount Tow Bar

- Latches will not bind. No matter what
- Raised gold badge and premium powder coat
- Legs are 2" longer. More room for tight turns and hook up
- No centering pin. Simply fold up and the Avail™ stays put

Patriot™

In Vehicle Electronic Braking System

True proportional braking that applies the brakes smoothly while you're slowing down to a stop, instead of suddenly jolting your tow vehicle, causing costly damage to your brakes.



- Lightweight, only 15 lbs
- On dash controller
- Easy to install, transferable
- Works with all vehicles, including hybrids
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- Standard on/off switch
- One button setup
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- Two year warranty

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▲ Plug receptacles added to the dinghy and coach allow easy hookup of an electrical connector for taillights, turn signals and the supplemental braking system.

TOWING ACCESSORIES

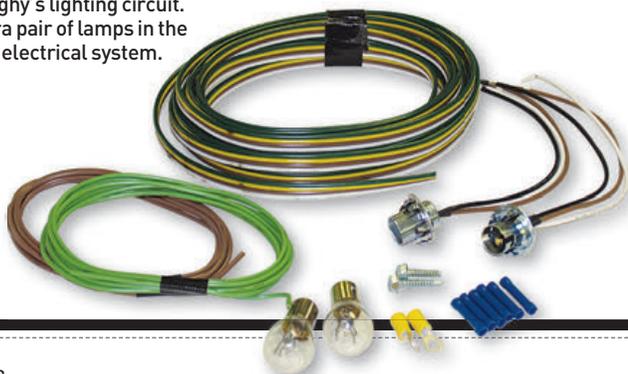
Prepping a Dinghy Vehicle for Safe Towing

The research has been done, the financing arranged, the papers signed ... and that new dinghy vehicle is now sitting in your driveway. You've shopped carefully to pick a model that's approved by its manufacturer for flat towing, you've checked the vehicle's weight to confirm that it's within the motorhome's safe towing capabilities and you've ordered it with any requisite factory options to make it towable with all wheels rolling.

Now what?

As any seasoned motorhome owner will tell you, there are a lot of steps involved in getting a new vehicle to the point where it can be towed safely. Unfortunately, no automaker offers a plug-and-play solution that makes its products ready for safe dinghy towing right from the factory. Thus, it's up to you (and perhaps a knowledgeable towing equipment dealer) to get the job done right.

Below: One-way diodes, such as this one from Roadmaster, prevent electrical feedback when connected to the dinghy's lighting circuit. Right: As an alternative, you can install an extra pair of lamps in the dinghy's taillight assembly, independent of its electrical system.





Accessory kits with diodes, such as this one from Demco, include everything needed for a safe hookup, including wiring kits, pins, locks, receptacles and a cover to protect the tow bar from the elements. Kits are also available with bulbs and wiring when diodes are not needed.

DINGHY WIRING

One of the most important aspects of dinghy prep involves connecting the wiring between the two vehicles. Tail, brake and turn signals on the back of the dinghy are required in all 50 states and all Canadian provinces, so this isn't a step that you can overlook. (Neither side clearance nor backup lights are required, and are rarely used.)

The most common source of dinghy wiring confusion centers on differences in the way the turn-signal lights are wired on various cars and motorhomes. Some models are wired to supply turn-signal power to the same bulbs that are used for the brakelights (commonly referred to as a 4-wire system), while others use separate amber bulbs for the rear turn signals (a 5-wire system). Note that 4- and 5-wire systems are used on both motorhomes and cars, so any one of four solutions may be needed for any particular application. Adapters are readily available to electronically match the wiring systems of the dinghy and motorhome.

The traditional method of wiring a dinghy vehicle involves the use of steering diodes, which function as one-way gates to the flow of electricity, allowing power from either the motorhome or vehicle to be supplied to the rear bulbs. Because no electricity can flow backward through a diode, it also prevents power from the motorhome from being inadvertently introduced to any other circuits in the dinghy vehicle.

Many late-model vehicles are equipped with onboard diagnostics that continuously check for proper operation of turn-signal and brakelight bulbs. Unfortunately, the introduction of after-market steering diodes into the vehicle's wiring can "fool" this diagnostic function, typically

causing it to give false warnings about burned-out bulbs.

For this reason, it's common to modify each of the vehicle's tail-lamp assemblies to accept a separate bulb. This bulb is then connected directly to the motorhome, eliminating any connections to the vehicle's existing wiring harness. This modification usually involves drilling a large hole in the tail-lamp reflector. Fortunately, special snap-in sockets are available that make this job somewhat easier. Since the new socket takes up considerable space behind the lamp assembly, care must be taken in selecting a location for the new hole that avoids socket interference with any other objects behind it.

Note that most states allow the turn signals to be red or amber in color, but only permit the brakelights to be red. Thus, on automobiles equipped with amber turn signals, the new socket is typically installed behind the red brakelight lens.

In situations where modifications to the dinghy's original wiring aren't desirable or practical, a set of removable towing lights often provides a workable solution. Most of these products are affixed with magnets, although some models can be equipped with suction cups or hook-and-loop fasteners (ideal for use on plastic or fiberglass surfaces). A cable is then snaked across the vehicle to the connector at the motorhome hitch receiver.



Hopkins nVISION Tire Pressure Monitoring System keeps an eye on motorhome and dinghy tire air pressure. The wireless system can be easily transferred between vehicles and used in the dinghy without the motorhome.



The KarGard shield from Blue Ox attaches to the tow bar and adds yet another level of dinghy protection, guarding against potential damage from road debris.

In some cases, the cable is semipermanently routed inside or underneath the vehicle, allowing the lights to be quickly removed and stowed inside the trunk. Several companies offer wireless, removable towing lights, thereby eliminating the need for this cable altogether.

Although many motorhomes come with a factory-installed 4- or 5-pin connector, there are situations where a different connector is necessary. Some unapproved dinghies equipped with an automatic transmission must also be equipped with an electric lube pump, which requires a connector pin for 12-volt DC power (and, ideally, a separate connector pin for ground, in order to avoid drawing excessive current through the existing one). Also, some auxiliary braking systems require connections to the motorhome, further increasing the connector-pin count. Many motorhome manufacturers provide a standard seven-way receptacle from the factory.

Ideally, the industry-standard connection scheme should be observed when installing a

new connector, so that it can also be used when towing boats, ATVs, horse trailers, etc.

Unfortunately, since no industrywide standard exists for wire color codes used in automobiles, another hurdle in dinghy wiring involves identifying the proper wires for the stop, turn and tail lamps (as well as a suitable ground connection). If you've had the foresight to purchase a service manual for your particular vehicle, this can sometimes be accomplished by visual inspection of the wire harness. More often than not, it involves connecting a test light to each suspected wire in order to match it with the corresponding bulb. Note that on 4-wire systems, the same wire may be "hot" when either the brake or one of the turn signals is operated.

When splicing diodes or other connections into the vehicle's wiring harness, it is important to use top-quality connectors or soldered splices. In order to prevent any chance of corrosion, all connections should be waterproof. Heat-shrink tubing works very well for this purpose, as does self-vulcanizing plastic tape. **M**



Tow Defender's mesh material is suspended over the tow bar, covering the space between the motorhome and dinghy vehicle.



BECAUSE THEY ARE WORTH IT

*I'm flat towing with the **RVi brake2** portable braking system.*





DINGHY BRAKING SYSTEMS

More Complete and Better Than Ever

If you're like a lot of motorhome owners, you'd probably like to put a bumper sticker on the back of your towed vehicle that reads, "It's a motorhome thing. You wouldn't understand." Because only motorhome owners realize the benefits of dinghy towing — the freedom to travel anywhere without having to break camp. But when you're shopping for the necessary equipment to tow a vehicle behind your motorhome, don't stop at the tow bar and baseplate. A supplemental dinghy brake system — designed to apply the brakes in the towed vehicle when the motorhome's brakes are applied — should be considered a necessity as well.

Anytime you tow something and apply the brakes, that towed load is going to push on the coach, extending its stopping distance. For that reason, some chassis manufacturers specify that towed loads in excess of 1,500 pounds must have independent brakes and safety breakaway systems.

The fact that dinghy brakes are not required by law in all states is inconsequential. Many state and local governments are either unfamiliar with the practice of dinghy towing, or simply have not considered it, but that doesn't

mean towing without supplemental dinghy braking is a safe practice.

Fortunately, there are a number of dinghy braking systems on the market. Some are completely portable (easily transferable from one vehicle to another); some are semiportable (can be used in another vehicle with some exceptions); and some are permanent (require modification to the motorhome and/or dinghy and therefore can't be transferred from one vehicle to the next).

The BrakeBuddy STEALTH is the latest from Hopkins and it can be installed in an inconspicuous place virtually anywhere in the dinghy vehicle. From Danko, the RVibrake2 is the first unit to have a tire air pressure monitor as part of the package. Refinements from Roadmaster, Blue Ox and SMI continue to make braking devices more effective and user-friendly.

The popular systems on the following pages — those from Blue Ox, BrakeBuddy, Roadmaster, RVibrake and SMI — are most commonly used among motorhome owners. Use of a dinghy-braking device saves wear and tear on your coach's brakes, while providing the confidence of state and provincial compliance and safe travels.

HOPKINS MANUFACTURING



BRAKEBUDDY DIGITAL CLASSIC

Portable Supplemental Braking System

MSRP: \$1,149

How it's Installed:

First, install the emergency breakaway system. Next, set the BrakeBuddy on the dinghy's driver's-side floor in front of the driver's-side seat and attach the clevis to the brake pedal. Adjust the driver's seat forward to touch the adjustable handle of the BrakeBuddy. Plug in the 12-volt DC power and emergency breakaway cables. Then, verify the program settings are customized to the dinghy's weight or braking sensitivity and plug in the wireless remote inside the coach. Installation time is less than 30 minutes; after the initial installation, the setup time for towing is less than five minutes.

How it Works:

By way of an electronic decelerometer, the BrakeBuddy senses the inertia created during braking. The sensed inertia activates an internal air cylinder that puts a specified amount of pressure on the towed vehicle's brake pedal. An air compressor and tank supply the air pressure. The coach operator is notified of the towed vehicle's braking via the BrakeBuddy Alert System, which has a light that indicates that safe braking has occurred.

Features and Benefits:

- Billions of miles of experience.
- Three-year warranty, 30-day money-back guarantee.
- Meets or exceeds state and provincial towing laws.
- Utilizes advanced terrain-sensing technology and provides the right braking force needed.
- The unit's compact design fits into all dinghies and it only weighs 12 pounds. Because it's portable, it can be transferred from vehicle to vehicle.

What's Included:

Diagnostic wireless remote and emergency breakaway system.



BRAKEBUDDY VANTAGE SELECT

Portable Supplemental Braking System

MSRP: \$1,499

How it's Installed:

Same installation procedure as the Digital Classic BrakeBuddy.

How it Works:

Operates the same as the Classic BrakeBuddy, but with the addition of a fully automatic one-touch startup button. Choose between Full and Proportional braking technology at the touch of a button.

Features and Benefits:

- "On-the-fly" Braking Adjustability: Vantage Select lets the driver adjust braking sensitivity on the fly from the coach to react to changing road conditions. Utilizes radio frequency technology and is AA-battery powered.
- Fully Automatic Startup feature: Push the auto start button and Vantage Select prepares itself for use. This allows the driver the opportunity to ensure the dinghy brakelights are operational.

What's Included:

Diagnostic wireless remote and emergency breakaway system.

BRAKEBUDDY STEALTH

Supplemental Braking System

MSRP: \$1,099

How it's Installed:

STEALTH main unit mounts anywhere in the towed vehicle you desire. Patent-pending all-in-one adapter mounts at the front of the vehicle, and the dual controller mounts inside the motorhome where



it is easily viewed and within reach.

How it Works:

Senses the inertia of the braking event, and communicates the exact amount of pressure to apply the towed vehicle's brake pedal. After braking, the vacuum pump restores vacuum to the towed vehicle.

Features and Benefits:

- Compact unit mounts anywhere in dinghy.
- Easy installation.
- Dual controller offers "on-the-fly" sensitivity and gain adjustments. Can be switched between dinghy towing and conventional trailer towing.
- Dual braking mode allows towing a dinghy vehicle or trailer at the push of a button.
- Easy to use. Plug in adapter while attaching the tow bar and it's ready to go (also connects lights, braking system and charge line).

What's Included:

Main unit, All-In-One adapter, Dual Controller and mounting hardware.

Contact:

Hopkins Manufacturing Corp.
800-470-2287, www.brakebuddy.com

BLUE OX



PATRIOT

Portable Supplemental Braking System
MSRP: \$1,395

How it's Installed:

Place the Patriot on the driver's-side floorboard, adjust the push pad/feet, attach the spring-loaded brake claw to the brake pedal, plug the unit in, push the button and the unit will self-calibrate.

How it Works:

When the coach's brakes are applied, the Patriot

applies progressive and proportional braking force using an electric cylinder and actuator.

Features and Benefits:

- Self-contained unit sits on the floor in front of the driver's seat. Installed within a few minutes after the initial installation.
- Works with all coaches and towed vehicles.
- Features internal 12-volt battery to extend towed vehicle battery life.
- Adjustable push pad and feet.
- Weighs only 15 pounds.

What's Included:

Everything needed for basic installation, including hardware and brake bracket assembly.

Contact:

Blue Ox
800-228-9289, www.blueox.com

ROADMASTER

BRAKEMASTER

Permanently Mounted Brake System

MSRP:
\$1,234.23 (for coaches with hydraulic brakes),
\$801.67 (for coaches with air over hydraulic or air brakes)

How it's Installed:

The BrakeMaster is connected directly to the motorhome's air or hydraulic brake line. The initial installation (in the coach and the towed vehicle) takes from four to six hours, depending on the motorhome's brake system and the specific towed vehicle. Once the initial installation is complete, BrakeMaster connects and disconnects from the towed vehicle in just a minute or two, without any tools, adjustments or settings. Attach the brake pedal clamp to the towed vehicle's brake pedal, secure to the floor or seat adapter and quick-connect the air hose.



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Durable Galvanized Finish

- Custom chrome wheels and radial tires make this tow dolly one you'll be proud to use for years to come

Hydraulic Surge Brake System

- Provides safe, controlled stopping

Hinged Hitch

- Hitch folds back to promote minimal storage capacity

Tilt-bed Frame

- Provides fast, easy loading. Positive locking mechanism on tilt-bed; does not require a separate loose pin

Adjustable Ramps

- Ramps fold up to allow for comfortable fit in almost any RV park or garage

Disc Brakes

- Provides optimal braking



KAR KADDY™ SS



Before



After

The KarKaddy SS Solves the Space/Storage Problem

Unfolded Kar Kaddy™ SS length is 133"

Many RV park lots are not deep enough to accommodate your motorhome and tow dolly.

Folded Kar Kaddy™ SS length is 67"

By using only half the space, you can fit both the motorhome and tow dolly comfortably in almost any RV lot. Or you can store your tow dolly in front of your car in your garage at home.

How it Works:

Because it connects directly to what powers the motorhome's brakes, BrakeMaster is a truly proportional, synchronized braking system — brake line pressure in the coach controls the brakes in the towed vehicle. Whenever the motorhome's brakes are applied, BrakeMaster automatically applies the same pressure to the dinghy vehicle.

Features and Benefits:

- Proportional braking means the towed vehicle's brakes respond to the coach's brakes, at the same time and at the same intensity.
- Emergency breakaway system is included.
- Works in virtually any vehicle with power brakes.
- Monitor light in the motorhome's dash illuminates when the towed vehicle's brakes are applied.
- Meets U.S. and Canadian braking requirements.

What's Included:

BrakeMaster system, monitor light, breakaway system, wiring and electrical components, easy-to-read installation and operating instructions.



EVEN BRAKE

Portable Supplemental Braking System

MSRP: \$1,537.39

How it's Installed:

The initial installation of electrical components in the towed vehicle takes less than an hour. Once the initial installation is complete, Even Brake connects and disconnects from the towed vehicle in just a minute or two. Position Even Brake between the driver's seat and the brake pedal, and adjust the pedal clamp over the brake pedal, move the driver's seat forward against Even Brake, plug in the wiring harness cord and the power cord, and press the test button.

How it Works:

Even Brake automatically increases or decreases braking pressure in direct proportion to coach deceleration. When the motorhome brakes are applied, an electronic microprocessor inside Even Brake signals a magnetic valve to release a proportional amount of air pressure, activating the brake cylinder, which applies braking force on the towed vehicle's brake pedal. The amount of brake pressure applied is determined by the amount of braking pressure applied in the coach.

Features and Benefits:

- Proportional braking.
- Three-tiered motorhome monitor (LED light, LCD text message, audio tone) provides complete, continuous braking information at a glance. Reports any braking activity, or a change in system status, to a wireless monitor in the motorhome.
- Continuous monitoring allows any changes in system status to be transmitted to the coach monitor.
- Power Save low-battery protection warns of a low battery in the towed vehicle with LED and LCD alerts at the motorhome monitor.
- Automatic brake protection alerts the driver after an extended period of continuous braking, then releases braking pressure to avoid excessive wear on dinghy brakes.
- Onboard memory remembers the settings even when unplugged, and will automatically adjust itself.
- Includes a brake relay to allow the dinghy's turn signals and brakelights to work simultaneously with the dinghy-to-motorhome electrical connection.

What's Included:

Even Brake unit, motorhome monitor, towed vehicle transmitter, breakaway system, brakelight relay, easy-to-read installation and operating instructions.

INVISIBRAKE

Fully Automatic, Progressive Supplemental Braking System

MSRP: \$1,081.27

How it's Installed:

In most applications, the InvisiBrake control-



ler is installed beneath the front seat of the towed vehicle. An air cylinder is installed close to the controller; a bracket and cable pulley are installed on the brake pedal arm. The entire system is designed to stay in the vehicle.

How it Works:

InvisiBrake uses the towed vehicle's electrical harness — the same electrical signal that activates the towed vehicle's brakelights also activates InvisiBrake.

Features and Benefits:

- Nothing to put in or take out to tow or drive.
- Hidden from view — no unsightly equipment in the car. InvisiBrake is so small (8¾ by 8¾ by 2¾ inches) it can usually be mounted under the driver's seat.
- Simple operation. Works intuitively. No fuss, no hassle.
- Charges the battery — InvisiBrake connects directly to the towed vehicle's battery providing a constant charge during towing.
- InvisiBrake engages the power braking system whether towing or driving.
- Works in virtually any towed vehicle with vacuum-powered brakes, including hybrids and those with full-time (active) power braking systems.
- Includes an emergency breakaway system and two-stage monitor alarm.

What's Included:

The InvisiBrake controller, cable, air cylinder, brake-pedal bracket, all electrical wiring and a breakaway system.

Contact:

Roadmaster Inc.
800-669-9690, www.roadmasterinc.com

DANKO MANUFACTURING

RVIBRAKE2

Portable Supplemental Braking System

**MSRP: \$1,375 with TPMS sensors,
\$1,150 without TPMS sensors**

RVibrake2 is the first braking system to integrate tire-pressure monitoring and towed vehicle braking all in one. RVibrake Tire Pressure Sensors simply thread on to the towed vehicle's valve stems and are activated when the RVibrake2 Wireless Monitor is enabled.



How it's Installed:

The Breakaway System is the only thing that has to be permanently installed in the dinghy vehicle. Installation of the breakaway takes approximately 25 to 45 minutes. Once the breakaway is installed, place RVibrake2 on the floorboard of the towed vehicle and push the auto-start button. This will not only deplete the vacuum in the brakes, but it will also auto-position itself. There is no need to adjust the seat, because RVibrake2 pushes up against the rise in the floor pan. Setting up the RVibrake2 takes less than 60 seconds.

How it Works:

RVibrake2 is an inertia-activated system. It applies the brakes in the towed vehicle in proportion to motorhome braking. RVibrake2's cutting-edge software adjusts for terrain, whether the motorhome is going uphill or downhill.

The RVibrake2 housing pushes against the floor pan (the rise in the floor where the driver's seat is mounted) instead of the soft seat when activating. This allows RVibrake2 to be truly proportional.

Features and Benefits:

- RVibrake2 is compatible with RVibrake Tire Pressure Sensors.
- Installation only takes 60 seconds.
- One-touch auto positioning.
- True proportional braking.
- Three-year warranty.
- Motorhome driver can monitor performance and adjust settings on the fly from the coach with the Wireless Monitor.
- Fits in all vehicles.
- Weighs 8 pounds.

- Available accessories include a soft-shell case for storage (\$35) and a 12-volt DC Direct to Battery Kit (\$20).

What's Included:

Wireless Monitor and breakaway system.

Contact:

Danko Manufacturing
800-815-2159, www.rvbrake.com



SMI MANUFACTURING

AIR FORCE ONE

Permanently Mounted Brake System
MSRP: \$1,249.95

How it's Installed:

The Coach Protection Assembly (CPA) mounts near the rear axle of the coach with two bolts. Supply and metered air connections are made in the same location with Department of Transportation (DOT)-approved push-to-connect fittings. In the towed vehicle, the operating unit is secured under the hood with provided stainless-steel ties. The direct-pull actuator is attached to the brake arm just above the pedal, using a sandwich-type clamp. The system's design allows the firewall anchor to be installed with a single self-drilling screw without the use of a pulley.

How it Works:

Air is delivered from the CPA to the operating unit (in the dinghy vehicle), which then mechanically generates vacuum for the towed vehicle's power assist. It also stores an emergency reserve supply for breakaway activation and passes air to the actuator, which provides the proportional braking.

Features and Benefits:

- Five-year warranty.

- Powder-coated aluminum enclosure.
- Made in the USA.
- Directly proportional.
- Universal fit on all vehicles, including those with hydroboost braking systems and hybrids.
- DOT-compliant coach installation.
- Patented actuator allows for easy mounting to accommodate firewall irregularities without the use of a pulley.
- Tow-ready in seconds.
- Integrated breakaway system.
- Provides vacuum assist for towed vehicle's power brake system.
- Easy-to-follow instructions, installation DVD and factory tech support.

What's Included:

- All-inclusive installation kit for any motorhome with air brakes and any towed vehicle.
- Coiled air line jumper and coiled breakaway cable.
- Integrated breakaway.



STAY-IN-PLAY DUO

Permanently Mounted Brake System
MSRP: \$1,099.95

How it's Installed:

The Stay-IN-Play DUO is mounted in the towed vehicle. A lightweight operating unit is secured under the hood with provided stainless-steel ties. The G-Force Controller is secured to the toe-kick panel above the driver's left foot. The direct pull actuator is attached to the brake arm just above the brake pedal, using a sandwich-type clamp. The design allows the firewall anchor to be installed with a single self-drilling screw without the use of a pulley.

How it Works:

The G-Force Controller monitors the tow-vehicle wiring brakelight signal and deceleration to provide dual-signal, progressive braking.

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Engineered for diesel motorhomes with air brakes.



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The operating unit under the hood generates vacuum for the towed vehicle's power assist and air pressure for the actuator. The actuator uses variable amounts of air pressure to modulate braking effort while stopping.

Features and Benefits:

- Five-year warranty.
- Rugged, powder-coated aluminum enclosure.
- Made in the USA.
- Dual signal activation — brakelights and deceleration.
- Universal fit on all vehicles, including those with hydroboost braking systems and hybrids.
- Patented actuator allows for easy mounting to accommodate firewall irregularities without the use of a pulley.
- Tow-ready in seconds.
- Integrated breakaway system.
- Provides vacuum assist for towed vehicle's power brake system.
- Easy-to-follow instructions, installation DVD and factory tech support.

What's Included:

- All-inclusive installation kit for any vehicle pulling any towed vehicle.
- Coiled breakaway cable.



DELTA FORCE

Portable Supplemental Braking System
MSRP: \$1,199.95

How it's Installed:

Adjust the Set-It-Once pedal clamp. Install the tether connection using the provided single self-tapping screw. There are two optional inputs: the included breakaway switch and the included connection for the tow-vehicle wiring brakelight signal, which allows the Delta to operate in Dual-Signal Mode.

How it Works:

The Delta Force is placed on the driver's-side floorboard. The actuator is rotated from the storage position as it incorporates the flexball actuator mount. The Set-It-Once pedal clamp is secured to the brake pedal by maneuvering it over the top of the brake pedal and pressing down on the actuator to lock it in place. The tether is secured to the base of the actuator with a stainless-steel carabiner.

The system's flexball design allows Delta Force to fit all towed vehicles. The tether allows for automatic self-alignment with every activation, and does not require the unit to be positioned against the driver's seat or floor bracket. Activation is proportional based on deceleration, and can be dual-signal with the addition of the optional brakelight connection. The driver is informed of the system's status by the wireless CoachLink receiver, which includes an active link monitor.

Features and Benefits:

- Five-year warranty.
- Rugged, powder-coated aluminum enclosure.
- Made in the USA.
- Can be used as inertia only or dual signal.
- Proportional.
- Patent-pending tether-anchoring system.
- Patent-pending Set-it-Once pedal clamp.
- Simple foldaway storage.
- Weighs a little more than 9 pounds.
- Small in both displacement and footprint.
- Universal fit on all vehicles, including hydroboost and hybrids.
- Intelligent fault monitoring and display, including low-battery indicator.
- Visual and audible breakaway alert.
- CoachLink constantly monitors radio connection to towed vehicle.
- Easy-to-follow instructions and factory tech support.

What's Included:

- All-inclusive installation kit for any vehicle pulling any towed vehicle.
- Wireless CoachLink.
- Breakaway system.
- Tow-wiring and charge-wire connections.

Contact:

SMI Manufacturing Inc.
800-893-3763
www.smibrake.com 



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Activates dinghy brakes at the same rate as the motorhome

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The system that created an industry. Over 20 years of experience with thousands of satisfied users

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