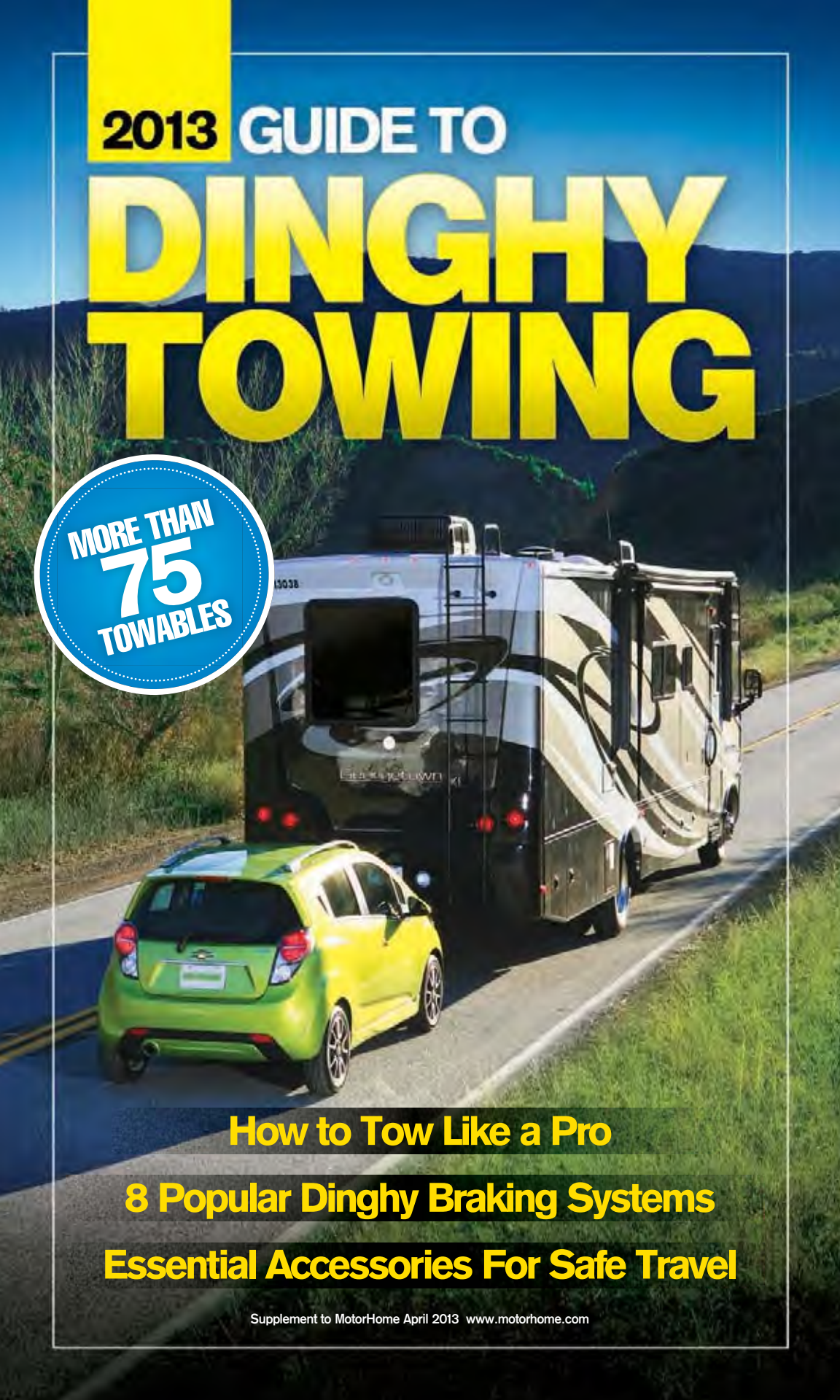
2013 GUIDE TO DINGHY TOWING



How to Tow Like a Pro

8 Popular Dinghy Braking Systems

Essential Accessories For Safe Travel

Supplement to MotorHome April 2013 www.motorhome.com

IMPROVE YOUR STEERING SAFELY AND EASILY



Blue Ox® TruCenter®
Steering Control



Blue Ox® TigerTrak™
track bar

Everyone wants their motorhome to drive more like their car. We're telling you it can be done with the TruCenter® steering control system and TigerTrak™ track bars from Blue Ox®.

Traveling in your motorhome should be about spending time with your loved ones, exploring the great outdoors, and enjoying the ride. But too often you're fighting rear-end sway from the side-to-side shift that happens in the springs. TigerTrak™ improves your steering and your safety. Couple this with the double-sealed Nitrogen gas springs of the TruCenter® which exert up to 270 pounds of pressure, the floating feeling is elimiinated from driving. It also keeps your steering stable in the event of a tire blow out.

Get improved steering and improved safety all around your coach. Get the TruCenter® steering control and TigerTrak™ track bar today!



BLUE OX®

Strong As An Ox™

800-228-9289 • www.BlueOx.com

Tow & 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 2013 Guide to Dinghy Towing provides a selection of informative articles and a listing of new vehicles ready-made to enhance your RVing lifestyle.

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; with some tow-bar designs, even routing cables and wiring through hollow arms, the connection is more than easy, it's eye-pleasing. Plus, manufacturers are offering an array of accessories to help keep it that way: An RV underskirt, fitted beneath the equipment, will safeguard the dinghy vehicle and towing 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 may not be mandatory in some states but any time you add a few tons of weight to the back of your motorhome, you need a way to slow it down without taxing the brakes on your coach.

And make no mistake, contemporary motorhomes 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 dedicated to towing.

The focus of our annual dinghy towing guide is the dinghies themselves. Manufacturers are becoming increasingly sensitive to the needs of the motorhome community, and the "2013 Dinghy Roundup" (beginning on page 12) lists vehicles that have been manufacturer-certified for four-wheels-down towing. The list includes many of the newest vehicles — including nine hybrids. 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. This year 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. ■



Contents

6 THINGS TO KNOW BEFORE YOU TOW
Linking up with the proper equipment

12 2013 DINGHY ROUNDUP
Our annual guide to manufacturer-approved flat-towable cars, trucks and SUVs

24 TOWING ACCESSORIES
Prepping your dinghy for safe travel

26 DINGHY BRAKING SYSTEMS
Popular devices to improve stopping power



Publisher Bob Livingston
Editor-in-Chief Eileen Hubbard
Art Director Rick Damien
Managing Editor Laura Michaels
Contributors Rich Cox, Chris Hemer

EDITORIAL/BUSINESS OFFICE
3300 Fernbrook Lane N #200
Minneapolis, MN 55447
800-848-6247
Email info@motorhomemagazine.com

ADVERTISING
VP/National Sales Terry Thompson

NATIONAL ADVERTISING SALES
Southeast Region Tacy Hendershot
1010 SW Lighthouse Drive, Palm City, FL 34990 772-288-0387

Northeast Region Lou Cicirelli
1400 NW 108th Avenue, #266, Plantation, FL 33322 954-297-9234

Seattle, Washington Scott Oakes, John Marciano
1818 Westlake Avenue N, #420, Seattle, WA 98109 Tel 206-283-9545 Fax 206-283-9571

MotorHome is a registered trademark of Affinity Group Inc. Copyright 2013 by Affinity Group Inc. All rights reserved. MotorHome (ISSN 0744-074X) is published monthly by GS Media & Events (a division of Good Sam Enterprises, LLC). Subscription price, U.S. and possessions: 1 year, $19.97. All other countries, add $12 per year. For more information, visit our website:www.motorhome.com.

What is InvisiBrake?

InvisiBrake is the world's best towed car supplemental braking system.

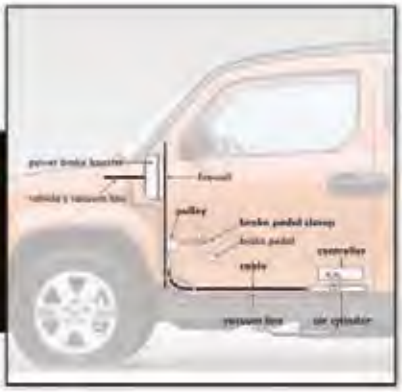
MOTORHOME READERS' CHOICE AWARDS 2012 AWARD WINNER



Why is InvisiBrake better?

- **NOTHING** to put in or take out to tow or drive.
- **HIDDEN** from view. No unsightly equipment in your car.
- **SIMPLE** operation. Works intuitively. No fuss, no hassle.
- **CHARGES** your battery. Trickle charges the battery while towing. Never drains your towed vehicle's battery.
- **MONITORS** your towed car. Rest easy knowing your towed car's braking condition with audio and visual alerts.
- **SAFETY** is standard. Includes breakaway kit & monitor alarm for safety.

InvisiBrake is the most effective and easiest to use supplemental braking system on the market. Nothing to put in. Nothing to take out.



ROADMASTER

Towing and Suspension Solutions

800-669-9690

www.roadmasterinc.com



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 camping 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 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 "2013 Dinghy Roundup," page 12). While you do have other options — many passenger cars or light trucks can safely be used as a dinghy, provided a towing accessory (such as a transmission lube pump) is available for that specific model as an aftermarket add-on, or towing on a dolly or trailer is planned — these vehicles have been certified for four-wheels-down towing without affecting their warranties. However, **buyers should always first confirm flat-towability by consulting the vehicle's owner's manual before the purchase is finalized.**

When selecting a dinghy, first find out the maximum towing limit of your motorhome and then determine which vehicles fall within that limit. Towing limits aren't the only factor to consider, but they help to eliminate many



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



Roadmaster's aluminum Sterling All-Terrain tow bar is rated to handle vehicles up to 6,000 pounds. Non-binding design facilitates hookup. Roadmaster's Black Hawk 2 All-Terrain has a rating up to 10,000 pounds.



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



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.

choices based on weight alone. The weight rating of the motorhome's hitch receiver is another concern, although most are adequate, and receivers can be upgraded. Keep in mind, however, that an upgraded hitch receiver cannot increase the specified towing 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 sport truck can be towed, providing its weight is within the towing limit of your chassis.

Most flat-towed dinghies track so well that many motorhome drivers don't even know it's 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 towing equipment is readily available, and readying for towing usually involves fewer steps.

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 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 unplugging one or more fuses from the vehicle's fuse box before towing. A more involved alternative is to connect the offending circuit through an owner-added switch, allowing these circuits to be made tow-ready by the mere flip of a switch. A charge line from the coach can often be a viable alternative.

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






A


B

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, when applicable, designed for the specific application.

HITCH RECEIVERS

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

However, the riding 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.


C


D

A) Baseplate installation doesn't require welding or specialized tools, but can be involved. If you have any reservations, have a professional do it. B) To hook up using a telescoping tow bar, the dinghy vehicle only needs to be near the center and mid-length of the bar. C) 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. D) Once the pins are in, the motorhome is driven ahead slowly (or the dinghy is backed up) to lock the arms in position.

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-lb) or Class IV (10,000-lb) 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 different baseplates and installation procedures, so proper selection and installation are essential.

Installing a baseplate typically entails very specific 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.

Before You Tow

- Make sure your equipment is rated for the dinghy's weight and that you are not exceeding your motorhome's gross combination weight rating (GCWR).
- Confirm hitch height is correct.
- Confirm all hitch bolts and 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 of all tires on coach 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.

Today's baseplates do a good job of blending into the exterior lines of the dinghy vehicle.

Remember that all 50 states require properly 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 should 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 not drag when slack.



Modern baseplates are secured to the frame of the dinghy vehicle. While some installations are a little 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. One retrofitter, Remco Manufacturing (www.remcotowing.com) estimates 80 percent of passenger vehicles can be modified to serve as dinghies with its line of retrofit products.

For rear-wheel-drive (RWD) and some 4WD applications, couplers 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 can be mounted and plumbed into some automatic transmissions to keep fluid circulating while the vehicle is in tow.

Other FWD vehicles can be adapted using a Remco axle-lock disengagement device. Check with your dealer to make sure a specific modification does not affect the dinghy's warranty.



Baseplate kits are designed for specific models, and come complete with all mounting hardware.

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) protect against road debris. These components are addressed in "Towing Accessories" (page 24), along with dinghy wiring and lighting. ■



Lube pumps allow towing of some automatic transmission-equipped vehicles not manufacturer-approved for flat towing.

2013 Guide to Dinghy Towing Sponsors

Produced by the editors of *MotorHome* for the publication's April issue, the *2013 Guide to Dinghy Towing* was developed with assistance from the following companies:

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

Demco
888-689-1810, www.towdemco.com

Forest River
574-533-5934, www.forestriverinc.com

Hopkins Manufacturing
800-835-0129, www.hopkinsmfg.com

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

RVibrake
800-815-2159, www.rvibrake.com

In 1996 BrakeBuddy revolutionized towed vehicle braking by creating the original brake-in-a box ...

A BREAKTHROUGH THAT'S OUT OF SIGHT

In 2013 we've done it again - **introducing Stealth™**

- A braking system so advanced it applies the brakes to either a towed vehicle or trailer ... no other braking system gives you this option
- Eliminates all setup ... getting ready to tow is as simple as plug and go
- Engineered to make the install up to 5x faster, saving you hundreds of dollars

BRAKEBUDDY

STEALTH

The most versatile and easiest to use towed vehicle braking system on the market™

SCAN HERE TO CHECK OUT THIS MAJOR BREAKTHROUGH IN OUR SHORT VIDEO

or visit www.facebook.com/brakebuddy



Dinghy Towing 2013

Fuel-Efficient Hybrids and Small SUVs Top This Year's List

The practice of towing another vehicle four-wheels-down behind a motorhome is still the most practical way for motorhome owners to get around once they've reached their destination. In the early years, only a handful of manufacturers recognized the practice, but by the year 2000, it seemed that the movement was finally gaining steam. Although some models have withdrawn for 2013 (see sidebar, "Where are they now?"), the demand for more fuel-efficient cars has expanded the field of dinghy offerings. Examples include vehicles by Dodge, Ford, Hyundai and Subaru, which will suit a variety of needs and lifestyles.

You've probably noticed that there are other vehicles out there being dinghy towed that aren't on our list, and you may have wondered why. To put it simply, the vehicles in our guide must be approved by the manufacturer for dinghy towing in order to qualify. That means the manufacturer is familiar with the practice of dinghy towing, and has confirmed that its vehicle can be towed in this manner without causing damage to the drivetrain or otherwise voiding the warranty. Second, the vehicle must be towable without requiring significant mechanical modification (such as disconnecting the driveshaft, for example). Lastly, the vehicle must be towable at a speed of at least 55 MPH for no fewer than 200 miles before some sort of prescribed startup procedure is required to circulate fluid through the transmission and/or transfer case.

You'll note that some vehicles will appear and disappear from the list every year, and that's largely because of changes to the vehicle and/or its drivetrain. In other instances, a manufacturer may not have had time to test a new vehicle's dinghy towing worthiness in time for last year's guide, and has since determined that the vehicle is towable.

Keep in mind that we've made every effort to check, and double check with each manufacturer to make sure that our listings are correct and current. However, much of the information we receive is preliminary when the guide is compiled, and can change by the time this issue goes



HYUNDAI VELOSTER

to press. Therefore, we cannot stress enough that you **check with the dealer to be certain that the vehicle you are considering is dinghy towable. Ask to see a copy of the owner's manual; somewhere in the index, there should be a notation for "recreational," "four-down," or "flat" towing. If the owner's manual states that the vehicle is not towable, consider something else, or be prepared to modify the vehicle and probably void any stated warrantees.**

With all that being said, let's take a look at some of the new flat-towable offerings for 2013.



FORD FUSION ENERGI

DODGE DART

With old model names like Charger and Challenger making a comeback at Chrysler Corp., it should come as no surprise that it has added another to the list: the Dodge Dart. All-new for 2013, the Dart is the first child of the Chrysler/Fiat marriage, based on Fiat Group architecture. Built in the U.S., the Dart is available in five trim levels, 12 exterior colors, 14 interior color and trim combinations, six wheel options, three engine options and three transmissions, although only the six-speed manual version is deemed towable. It also was engineered with more than 60 safety and security features, including 10 air bags, four-wheel



DODGE DART

anti-lock disc brakes, stability control, hill start assist and more. Inside, the Dart features a class-exclusive "floating island bezel," which houses an available 7-inch thin film transistor (TFT) LED customizable gauge cluster display or the available Uconnect Touch 8.4-inch touchscreen Media Center — the largest touchscreen in its class, according to Chrysler.

FORD C-MAX HYBRID AND C-MAX ENERGI PLUG-IN HYBRID

The Ford C-MAX Hybrid and C-MAX Energi Plug-In Hybrid are two new environmentally friendly choices on this year's list. Designed specifically to compete with Toyota's popular Prius v, the C-MAX Hybrid combines a 1.4 kW lithium-ion battery and a 2.0-L four-cylinder Atkinson cycle engine to achieve 47 MPG city/highway mileage. Standard features include seven air bags, AdvanceTrac traction control with Roll Stability Control and Sync with MyFord Touch, an infotainment system that offers multiple ways for customers to manage their phone, navigation, climate and entertainment functions. The C-MAX Energi is mechanically similar, but with its larger 7.6 kW lithium-ion battery, it gets an EPA-estimated 108 city/92 highway MPGE (miles per gallon equivalent). The battery can be charged at home with a 120-volt AC outlet in roughly seven hours, or just 2.5 hours with an available 240-volt AC charging station. It offers the same standard features as the C-MAX Hybrid, plus an interesting remote control feature. Using Ford's MyFordMobile smartphone app, owners can receive instant vehicle status information, perform key functions, monitor the vehicle's state of charge and current range, get alerts when the vehicle requires charging or has finished charging, program charge settings and download vehicle data for analysis — all remotely. For those interested in a more familiar form, Ford is also offering its Fusion in plug-in hybrid form with the introduction of the Fusion Energi. Using the same drivetrain as the C-MAX Energi, Ford projects that the Fusion Energi will be the most fuel-efficient midsize car in America.

HYUNDAI VELOSTER TURBO

Last year, the unusual Hyundai Veloster made the list, and this year it's followed by the even sportier Veloster Turbo. Powered by a 201-HP, 1.6-L direct-injected turbocharged four-cylinder engine, Hyundai claims the 2,800-pound

Where Are They Now?

Each year, we see models come, and models go. This year, a few real favorites are no longer approved for towing by their manufacturers, including the Ford Escape and Suzuki Grand Vitara. As we're sure you're aware, the Ford Escape was completely redesigned for 2013, and that update includes a non-towable six-speed automatic transmission as its sole offering. And American Suzuki Motor Corporation has unfortunately filed for bankruptcy, so obviously we can't list any 2013 models — though you can probably make a smoking deal on a 2012 while they last. The Dodge Caliber has been discontinued, the Hyundai Sonata is no longer approved for dinghy towing, Kia has withdrawn the models it said were towable last year, and Toyota's Scion brand has politely excused all of its models from dinghy-tow duty.

Veloster turbo has a better power-to-weight ratio than rivals like the Mini Cooper S and VW GTI. Aside from the more powerful engine, the Veloster turbo also gets sport-tuned suspension, 18-inch alloy wheels with chrome inserts, a unique front fascia with fog lights, ground effects package and more. Inside, Veloster turbo features leather seating with the word "turbo" stitched into the seatbacks, and Hyundai Blue Link, which offers voice-to-text messaging, point of interest (POI) web search download, turn-by-turn navigation and other features. Only manual transmission models are towable.

JEEP PATRIOT 4WD

Adventurous drivers will be glad to know that the Jeep Patriot 4WD with manual transmission is now approved for towing. Billed as the best-priced compact sport utility vehicle in America, the Patriot includes standard features such as electronic stability control, electronic roll mitigation, hill-start assist, anti-lock disc brakes, fog lamps, tilt steering column, cruise control and a 60/40 split folding rear seat. Options include a Uconnect media center with iPod interface, SiriusXM Radio, navigation with SiriusXM Travel Link, power sunroof and a premium audio system.

JEEP PATRIOT ▸





◂ SUBARU XV CROSSTREK

SUBARU XV CROSSTREK

Subaru is famous for high-riding, all-wheel-drive models like the Forester and Outback. For 2013, it offers a new addition to the lineup with the XV Crosstrek. Boasting the best fuel efficiency of any AWD crossover utility in America, according to Subaru, the XV Crosstrek offers 8.7 inches of ground clearance, 17-inch alloy wheels, larger front brake rotors and a 15.9-gallon fuel tank. It's available in Premium and Limited models, with standard features like heated front seats, mirrors and windshield de-icer, tilt-telescoping steering wheel, power door locks and mirrors, Bluetooth connectivity and more. The upscale Limited model adds luxury features like leather, auto climate control and auto on/off headlights. Only manual transmission models are towable. ■

This guide addresses only 2013 vehicles. Guides for earlier model years are available online at www.motorhome.com

Demco 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 motor home and tow dolly.

Folded Kar Kaddy ™ SS length is 67"

By using only half the space, you can fit both motor home 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.

Durable Galvanized Finish
with 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.



Tilt-bed Frame
provides fast, easy loading. Positive locking mechanism on tilt-bed does not require a separate loose pin.

Disc Brakes
for optimal braking.

Attached "SURE-GRIP" Loading Ramps
provide safe loading traction

MOTORHOME READERS CHOICE AWARDS 2012 AWARD WINNER

Demco
Since 1964
Doing Our Best to Provide You the Best

Toll Free: 800-543-3626

www.towdemco.com

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE WITH MANUAL TRANS.	TOWABLE WITH AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE	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	$39,270-$46,450	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove 15-amp ECM and OnStar fuses, and 50-amp BATT1 fuse.
Regal	3,600/3,671	60 MPH/None	Yes	No	19/31-25/36	$29,900-$35,865	Run engine at beginning of day and at each fuel stop for 5 minutes.
CADILLAC							
SRX FWD/AWD	4,277/4,442	65 MPH/None	N/A	Yes	17/24-16/23	$38,050-$45,920	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove shift lever boot. Press and hold manual release button.
CHEVROLET							
Avalanche 4WD	5,803	None	N/A	Yes	15/21	$38,355-$40,025	Requires optional Active, 2-Speed Transfer Case.
Cruze	3,102	65 MPH/None	Yes	No	28/42	$16,720-$23,110	Remove fuses 22, 23, 24 and 25 from fuse block.
Equinox	3,777	65 MPH/None	N/A	Yes	22/32	$24,015-$31,775	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove fuse 32.
Equinox AWD	3,922	65 MPH/None	N/A	Yes	20/29	$26,765-$33,525	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove fuse 32.
Silverado 1500 4WD	4,892	None	N/A	Yes	15/21	$24,585-$42,930	
Silverado 1500 4WD Hybrid	5,882	None	N/A	Yes	20/23	$45,255-$52,035	
Sonic	2,690	65 MPH/None	Yes	Yes*	26/35	$13,735-$18,495	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove fuse DLIS. *1.8 model only
Spark	2,269	55 MPH/None	Yes	No	32/38	$12,995-$16,720	
Suburban 1500 4WD	5,824	None	N/A	Yes	15/21	$47,630-$60,680	Requires optional Active, 2-Speed Transfer Case.
Tahoe 4WD	5,567	None	N/A	Yes	15/21	$44,885-$58,145	Requires optional Active, 2-Speed Transfer Case.
Tahoe 4WD Hybrid	5,891	None	N/A	Yes	20/23	$56,845	
Traverse	4,713	65 MPH/None	N/A	Yes	17/24	$31,370-$41,285	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove 15-amp ECM and OnStar fuses, and 50-amp BATT1 fuse.
Traverse AWD	4,956	65 MPH/None	N/A	Yes	16/23	$33,370-$43,285	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove 15-amp ECM and OnStar fuses, and 50-amp BATT1 fuse.
DODGE							
Challenger	4,082	65 MPH/ None	Yes	No	18/27	$25,795-$44,775	Transmission in NEUTRAL.
Dart	3,186	None	Yes	No	25/36	$15,995-$19,295	Transmission in NEUTRAL.
Durango R/T AWD 5.7-L V-8	5,330	None	N/A	Yes	13/20	$37,095-$42,195	Requires 2-Speed Transfer Case. Transmission in PARK, transfer case set to NEUTRAL.
Ram 1500 4WD	4,893	None	N/A	Yes	16/24	$23,595-$46,270	Transmission in PARK, transfer case set to NEUTRAL.
Ram 2500 4WD	5,997	None	Yes	Yes	Not Rated	$31,405-$48,875	For automatic transmissions, shift into PARK; manual trans-

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE WITH MANUAL TRANS.	TOWABLE WITH AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
							missions place in gear, not NEUTRAL. Manual and electronic shift transfer cases must be in NEUTRAL: See "Shifting Into Neutral," in owner's manual.
Ram 3500 4WD	7,152	None	No	Yes	Not Rated	$39,520-$56,570	For automatic transmissions, shift into PARK; manual transmissions place in gear, not NEUTRAL. Manual and electronic shift transfer cases must be in NEUTRAL: See "Shifting Into Neutral," in owner's manual.
FIAT							
500	2,358	None	Yes	No	31/40	$15,500-$17,500	Transmission in NEUTRAL.
500 Cabrio	2,408	None	Yes	No	31/40	$19,500-$23,500	Transmission in NEUTRAL.
FORD							
C-MAX Energi	3,899	65 MPH/None	N/A	Yes	108/92	$33,745	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.
C-MAX Hybrid	3,640	65 MPH/None	N/A	Yes	47/47	$24,995-$27,995	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.
Edge 3.5-L/3.7-L	4,056	65 MPH/None	N/A	Yes	19/27	$25,850-$35,435	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.
Explorer 3.5-L	4,534-4,697	65 MPH/None	N/A	Yes	17/24	$28,460-$40,045	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.
F-150 4WD	4,925	None	N/A	Yes	16/21	$28,310-$52,455	Turn ignition to ON, press and hold brake pedal, move 4WD switch to 2H, shift transmission to NEUTRAL. Rotate 4WD switch from 2H to 4L and back five times. Turn ignition as far as it will go toward OFF. Leave key in ignition while towing.
F-250/F-350/F-450 Super Duty 4WD	6,985	None	N/A	Yes	Not Rated	$29,455-$65,140	Only 4WD models with manual-shift transfer case (not Electronic Shift-On-the-Fly) are towable. Shift manual transfer case into NEUTRAL, set hub locks to FREE.
Fiesta	2,578	70 MPH/None	Yes	Yes	29/37	$13,745-$17,600	For automatic transmission, but no push-button start: release parking brake; turn ignition to II; press brake pedal, shift into NEUTRAL; turn ignition key to OFF position, release brake pedal; disconnect negative cable from battery. After towing, start engine within 15 minutes of reconnecting battery cable. For automatic transmission and push-button start: release parking brake; activate ignition, press START/STOP button, press brake pedal, then shift to NEUTRAL and release

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE WITH MANUAL TRANS.	TOWABLE WITH AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
							brake pedal; deactivate ignition, press START/STOP button, disconnect negative cable from the battery. After towing, start engine within 15 minutes of reconnecting battery cable.
Flex	4,471-4,643	65 MPH/None	N/A	Yes	18/25	$28,210-$36,555	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.
Focus	2,907	70 MPH/None	Yes	Yes	26/36	$15,495-$24,495	For automatic transmission, but no push-button start: release parking brake; turn ignition to II; press brake pedal, shift into NEUTRAL; turn ignition key to OFF position, release brake pedal; disconnect negative cable from battery. After towing, start engine within 15 minutes of reconnecting battery cable. For automatic transmission and push-button start: release parking brake; activate ignition by pressing START/STOP button; press brake pedal, then shift to NEUTRAL and release brake pedal; deactivate ignition by pressing START/STOP button; disconnect negative cable from the battery. After towing, start engine within 15 minutes of reconnecting battery cable.
Fusion	3,333	70 MPH/None	Yes	No	25/37	$21,700	Transmission in NEUTRAL.
Fusion Energi	3,913	70 MPH/None	N/A	Yes	N/A	N/A	Start engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
Fusion Hybrid	3,615	70 MPH/None	N/A	Yes	47/47	$27,200	Start engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter. Select "Neutral Tow" mode — refer to owner's manual.
Taurus 3.5-L	3,969-4,196	65 MPH/None	N/A	Yes	19/29	$27,395-$36,995	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.
GMC							
Acadia FWD/AWD	4,656/4,850	65 MPH/None	N/A	Yes	17/24-16/23	$35,070-$46,965	Run engine at beginning of day and at each fuel stop for 5 minutes. Remove 15-amp ECM and OnStar fuses, and 50-amp BATT1 fuse.
Sierra 1500 4WD	4,877	None	N/A	Yes	14/18	$27,330-$43,085	Transfer case must be set to NEUTRAL.
Sierra 1500 4WD Hybrid	5,791	None	N/A	Yes	20/23	$44,705-$51,485	Transfer case must be set to NEUTRAL.
Terrain FWD/AWD	3,853	65 MPH/None	N/A	Yes	22/32-20/29	$26,660-$32,995	Run engine at beginning of each day and at each fuel stop for 5 minutes. Remove fuse 32. After towing, let engine idle for more than 3 minutes before driving vehicle.

RV brake

where **PASSION** *meets* **INNOVATION**

NEW

Tire Pressure Sensors



*Sold Separately

Life is a journey,
protect the journey.

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE WITH MANUAL TRANS.	TOWABLE WITH AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
Yukon 4WD	5,567	None	N/A	Yes	15/21	$45,440-$49,770	Only 4WD models equipped with a 2-speed automatic transfer case are towable.
Yukon 4WD Hybrid	5,917	None	N/A	Yes	20/23	$56,625	Transfer case must be set to NEUTRAL.
Yukon XL 1500 4WD	5,824	None	N/A	Yes	15/21	$47,690-$51,870	Only 4WD models equipped with a two-speed automatic transfer case are towable.
HONDA							
CR-V	3,305	65 MPH/None	N/A	Yes	23/31	$22,795-$29,045	Start engine, press brake pedal, move shifter through all positions, shift into DRIVE and hold for 5 seconds, then to NEUTRAL and let engine run for 3 minutes. Repeat at least every 8 hours thereafter. When towing for long periods, remove 7.5-A radio fuse.
CR-V 4WD	3,426	65 MPH/None	N/A	Yes	22/30	$24,045-$30,295	Start engine, press brake pedal, move shifter through all positions, shift into DRIVE and hold for 5 seconds, then to NEUTRAL and let engine run for 3 minutes. Repeat at least every 8 hours thereafter. When towing for long periods, remove 7.5-A radio fuse.
Fit	2,496-2,577	65 MPH/None	Yes	Yes*	28/35	$15,425-$19,790	*On automatic transmission models, run engine at the beginning of each day, press brake pedal and move shifter through all positions, shift into DRIVE and hold for 5 seconds, then to NEUTRAL and let engine run for 3 minutes. Repeat at least every 8 hours thereafter. When towing for long periods, remove 30A radio fuse.
HYUNDAI							
Accent	2,396	None	Yes	No	28/37	$14,545-$16,095	
Elantra (all)	2,661	None	Yes	No	28/38	$16,815-$18,395	
Tucson GL FWD	3,319	None	Yes	No	22/29	$19,245	
Genesis Coupe	3,362	None	Yes	No	21/30	$22,250	
Veloster	2,584	None	Yes	No	27/37	$17,450	
Veloster Turbo	2,800	None	Yes	No	24/35	$21,950	
INFINITI							
G37S Sport 6MT Convertible	4,149	70 MPH/500 miles	Yes	No	16/24	$52,000	Idle engine in NEUTRAL for 2 minutes every 500 miles.
G37S Sport 6MT Coupe	3,708	70 MPH/500 miles	Yes	No	17/25	$50,500	Idle engine in NEUTRAL for 2 minutes every 500 miles.
G37S Sport 6MT Sedan	3,709	70 MPH/500 miles	Yes	No	17/25	$41,500	Idle engine in NEUTRAL for 2 minutes every 500 miles.
JEEP							
Compass	3,101	None	Yes	No	23/30	$19,210-$24,495	
Compass 4WD	3,216	None	Yes	No	23/28	$21,395-$26,395	
Grand Cherokee Limited and Overland	4,850	None	N/A	Yes	16/23	$26,995-$42,995	Only 4WD vehicles with Quadra-Trac II (V-6 models) and Quadra-Drive II systems

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE WITH MANUAL TRANS.	TOWABLE WITH AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
							(V-8 models) are towable. Shift transfer case to NEUTRAL, transmission must be in PARK. See "Shifting Into Neutral," in owner's manual.
Patriot 2WD	3,111	None	Yes	No	23/30	$15,995-$23,795	
Patriot 4WD	3,263	None	Yes	No	23/28	$17,995-$25,695	
Wrangler 4WD	3,760	None	Yes	Yes	17/21	$22,045-$29,995	With engine off, press brake pedal, shift automatic transmission into NEUTRAL or press clutch pedal on manual transmission, shift transfer case lever into NEUTRAL, start engine. Shift transmission into REVERSE, release brake pedal (and clutch pedal on manual transmissions) for 5 seconds, shift automatic transmission in DRIVE or manual transmission in first gear, release brake pedal (and clutch pedal on manual transmissions) for 5 seconds. Turn engine off, apply parking brake, shift transmission into PARK or place manual transmission in gear (not in NEUTRAL), hook up vehicle to tow bar, release parking brake.
Wrangler Unlimited 4WD	4,075	None	Yes	Yes	16/20	$25,695-$34,095	With engine off, press brake pedal, shift automatic transmission into NEUTRAL or press clutch pedal on manual transmission, shift transfer case lever into NEUTRAL, start engine. Shift transmission into REVERSE, release brake pedal (and clutch pedal on manual transmissions) for 5 seconds, shift automatic transmission in DRIVE or manual transmission in first gear, release brake pedal (and clutch pedal on manual transmissions) for 5 seconds. Turn engine off, apply parking brake, shift transmission into PARK or place manual transmission in gear (not in NEUTRAL), hook up vehicle to tow bar, release parking brake.
LINCOLN							
MKS FWD/AWD	4,204-4,436	65 MPH/None	N/A	Yes	17/25-18/27	$42,810-$49,800	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.
MKT 3.7-L FWD/AWD	4,702-4,942	65 MPH/None	N/A	Yes	17/25-16/23	$45,285-$47,280	Run engine at beginning of day for 5 minutes (shift into DRIVE,then REVERSE and NEUTRAL) and every 6 hours thereafter.
MKX 3.7-L FWD/AWD	4,236-4,413	65 MPH/None	N/A	Yes	19/26-17/23	$39,545-$41,395	Run engine at beginning of day for 5 minutes (shift into DRIVE, then REVERSE and NEUTRAL) and every 6 hours thereafter.

MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE WITH MANUAL TRANS.	TOWABLE WITH AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
MKZ 3.7-L FWD/AWD	3,719-3,874	65 MPH/None	N/A	Yes	22/33-22/31	$35,925-$39,045	Run engine at beginning of day for 5 minutes and every 6 hours thereafter. See "Neutral Tow," in owner's manual.
MKZ Hybrid	3,828	70 MPH/None	N/A	Yes	45/45	$35,925	Run engine for 1 minute at beginning of day (shift into DRIVE, then REVERSE and NEUTRAL). See "Neutral Tow," in owner's manual.
NISSAN							
370Z Coupe	3,245	70 MPH/500 miles	Yes	No	18/26	$33,910	Idle engine in NEUTRAL for 2 minutes every 500 miles.
370Z Roadster	3,459	70 MPH/500 miles	Yes	No	18/25	$44,960	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Cube	2,768	60 MPH/500 miles	Yes	No	25/30	$17,550	Idle engine in NEUTRAL for 2 minutes every 500 miles. Models with Continuously Variable Transmission (CVT) are not flat towable.
Frontier King/ Crew Cab 2WD I-4	3,690	None/500 miles	Yes	No	19/23	$20,085	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Frontier King/ Crew Cab 2WD V-6	4,152	None/500 miles	Yes	No	16/20	$23,965	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Frontier King/ Crew Cab 4WD V-6	4,294	None/500 miles	Yes	No	15/19	$27,915	Place transfer case in 2H range. Idle engine in NEUTRAL 2 minutes every 500 miles.
Juke FWD SL, SV	2,959	70 MPH/500 miles	Yes	No	27/32	$21,481	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Sentra	2,822	None/500 miles	Yes	No	27/36	$15,990	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Versa	2,345	None/500 miles	Yes	No	27/36	$10,990	Idle engine in NEUTRAL for 2 minutes every 500 miles.
Xterra Manual 4WD S	4,143	None/500 miles	Yes	No	16/20	$29,295	On 4WD models, place transfer case in 2H range. Idle engine in NEUTRAL for 2 minutes every 500 miles.
SUBARU							
Forester 2.5X	3,250	None	Yes	No	21/27	$21,295-$24,295	
Impreza 2.0i	2,911	None	Yes	No	25/34	$17,895-$20,795	
Impreza WRX	3,208	None	Yes	N/A	19/25	$25,795-$29,295	
Impreza WRX STI	3,384	None	Yes	N/A	17/23	$34,295-$37,645	STI requires driver's control center differential (DCCD) be set in MANUAL mode and DCCD control dial be set to the farthest rearward position.
Legacy 2.5i	3,315	None	Yes	No	21/28	$20,295	
Outback 2.5i	3,423	None	Yes	No	19/27	$23,495- $29,095	
XV Crosstrek	3,087	None	Yes	No	23/30	$21,995-$22,995	
TOYOTA							
Corolla	2,734	None	Yes	No	27/34	$16,230-$18,230	After towing, idle engine for at least 3 minutes before driving.
Matrix 1.8-L	2,844	None	Yes	No	26/32	$19,275	After towing, idle engine for at least 3 minutes before driving.
Matrix 2.4-L	2,976	None	Yes	No	21/28	$20,265	After towing, idle engine for at least 3 minutes before driving.
Yaris	2,295	None	Yes	No	30/37	$14,370-$16,480	After towing, idle engine for at least 3 minutes before driving.

Georgetown

INTRODUCING LIFE ON THE ROAD!







WHY IS GEORGETOWN THE #1 SELLING GAS MOTORHOME ON THE MARKET?

It Is In the Construction: Feel protected at the campsite and on the road. With 3" laminated steel frame floors, 2" laminated aluminum frame sidewalls, and a one-piece fiberglass roof, our construction is second to none. Life on the road has never been so safe.

It Is In the Details: Georgetown is built for weekend campers and full-time campers alike. Engineered for the road and designed for living, each model offers expansive storage and amenities. And, with multiple floorplans, decors and paints to choose from, you are sure to find a model that meets your needs. Life on the road has never been so stylish.

To learn more about Georgetown Motorhomes visit www.ForestRiverInc.com/Georgetown, today!

FOREST RIVER

FIND YOUR LOCAL DEALER

FIND US ON FACEBOOK

© 2013 Forest River Inc., a Berkshire Hathaway company

Towing Accessories



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

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 certified 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.

DINGHY WIRING

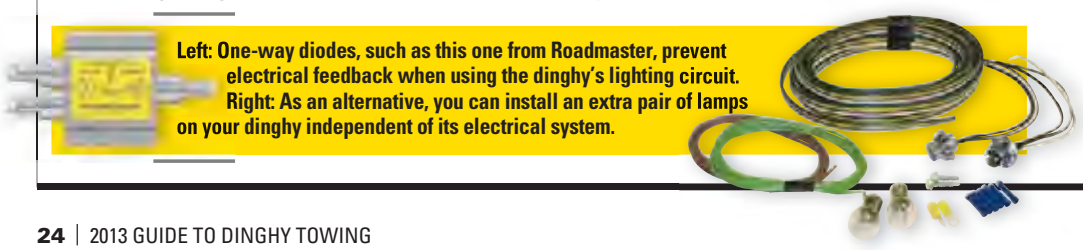
One of the most important aspects of dinghy prep involves connecting the wiring between the two vehicles. Tail, brake and turn signals on the back of the dinghy are required in all 50 states and all Canadian provinces, so this isn't a step that you can overlook. (Neither side clearance nor backup lights 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 on-board diagnostics that continuously check for proper operation of turn-signal and brakelight bulbs. Unfortunately, the introduction of aftermarket 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



Left: One-way diodes, such as this one from Roadmaster, prevent electrical feedback when using the dinghy's lighting circuit. Right: As an alternative, you can install an extra pair of lamps on your dinghy independent of its electrical system.



Accessory kits such as this one from Demco include everything needed for a safe hookup, including wiring kits, pins, locks, receptacles — and a cover to keep the tow bar protected from the elements.

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 either 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 brake-lamp lens.



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.

In situations where modifications to the dinghy's original wiring either 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.

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.

Ideally, the industry-standard connection scheme should be observed when installing this 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 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. ■



Above: Adding large rubber flaps at the rear of a motorhome, such as these from Blue Ox, will minimize towed-vehicle damage from debris, dirt and grime kicked up by coach tires. Below: 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.



by Chris Hemer

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 coach'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 should have independent brakes and safety breakaway systems.

The fact that dinghy brakes are not always 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 semi-portable (can be used in another vehicle with some exceptions) and some are permanent (require modification to coach and/or dinghy and therefore can't be transferred from one vehicle to the next).

This year a couple of new systems were introduced to the market. 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 and Blue Ox continue to make braking devices more effective and user friendly.

The popular systems on the following pages — those from Blue Ox, BrakeBuddy, Roadmaster and RViBrake — generally have a significant edge in ease of installation. 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.



WOULD YOU LIKE TO ENJOY THE HILLS AND THE VALLEYS?

Blue Ox® has the solution. We call it the Patriot. You'll call it peace of mind.

When traveling in your motorhome, it should be about creating new friendships, breathing the fresh air of the outdoors, and spending time with those you love. Too often you're spending precious time holding your breath as you slowly make your way through unavoidable mountain passes and steep hills. Blue Ox offers a braking system built of all-electric components that stops your towed car smoothly and proportionally. It is compatible with all towed vehicles, even hybrids, so you don't have to worry.

We have thousands of specially designed baseplates with removable tabs to keep things clean. Each baseplate has safety cables, convenience links, and breakaway brackets that come standard. We do this so you can spend less time shopping and more time exploring.

We also have tow bars that range from 5,000 pounds to 20,000 pounds allowing you to bring along whatever vehicle you wish.

Now you can spend more time enjoying the ride, and let us handle the rest.



BRK2012, Patriot™ Brake System



BX7365, Alpha®Tow Bar



BX1128, 2011 Jeep® Grand Cherokee™ with tow hook option

BLUE OX

Strong As An Ox™

800-228-9289 • www.BlueOx.com

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 cords. Then, verify the program settings customized to your dinghy's weight or braking sensitivity and plug in the wireless remote inside the motorhome. Total 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, 30-day money-back guarantee.
- Meets or exceeds all state and provincial towing laws.
- Utilizes advanced terrain sensing technology and provides the right braking force needed.
- The unit's compact design fits within all towed vehicles and is lightweight at only 12 pounds. Because it is portable, it can easily 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: $999-$1099



How it's Installed: STEALTH main unit

Demco
VICTORY SERIES TOW BARS

Patent# 6502847, 6612604, 6764092,
7837216 & Patent Pending



MOTORHOME READERS CHOICE AWARDS 2012 AWARD WINNER

MADE IN USA

Demco

Since 1964

Doing Our Best to Provide You the Best

Toll Free: 800-543-3626

www.towdemco.com

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: $999.99



How it's Installed: Place on the driver's side floorboard, adjust push pad/feet, attach spring-loaded brake claw to brake pedal, plug unit in, push the button and the unit self-calibrates.

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
888-425-5382; www.blueox.com

ROADMASTER

BrakeMaster

permanently mounted brake system
MSRP: $1,304.68 (for coaches with hydraulic brakes), **$883.85** (for motorhomes 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.

How it Works: Because it connects directly to what powers the motorhome's brakes, BrakeMaster is a truly proportional, truly 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

RV brake™

where **PASSION** *meets* **INNOVATION**

State by State Towing Laws





Before you tow, you need to know!

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 braking system

MSRP: $1,555.60



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 the motorhome. When the coach 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 motorhome.

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 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.
- On-board 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: $999.99



How it's Installed: In most applications, the InvisiBrake controller is installed beneath the front seat of the towed vehicle. An air cylinder is installed close to the controller; a bracket

Berkshire
MOTORHOMES





2013 INTERIOR FEATURES

* Mosaic Hand Laid Tile Backsplash
* Solid Surface Countertops
* Hardwood Cherry Doors
* Hardwood Slide-Out Room Fascia
* On Demand Tankless Hot Water Heater
* Three Interior Decor and Two Woodgrain Options
* 18" High Gloss Floor Tiles with Color Coordinated Key Inserts

To learn more about the Berkshire Difference use the QR Code or visit www.forestriverinc.com/Berkshire 2013

THE BERKSHIRE DIFFERENCE

A living experience without equal is around every turn when traveling in a Berkshire. Sophisticated decor, sumptuous hardwoods and unsurpassed attention to detail are all Berkshire hallmarks. Whether a weekend excursion or an extended stay at a favored destination, these unrivaled motorhomes set the standard for luxury.

Berkshire

© 2013 Forest River, Inc., a Berkshire Hathaway company

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 and constantly charges the battery during towing.
- InvisiBrake engages the power braking system, providing the same power brakes 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

auxiliary braking system

MSRP: $1,350



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 25-45 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 only when the coach driver applies the brakes in the motorhome. 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.rvibrake.com ■

In a bind?



MotorHome READERS' CHOICE AWARDS 2012 AWARD WINNER

Roadmaster ALL TERRAIN tow bars can help you get out of any bind.

With our patented Freedom Latch™ technology, Roadmaster All Terrain tow bars can release from nearly any bind to get you going on your way safely and easily.

STERLING ALL TERRAIN™



576 Sterling All Terrain tow bar
6k lb. capacity RV-mounted tow bar with safety cables and a six-wire power cord with one 6-wire plug (attached) and one 7-wire plug



FALCON ALL TERRAIN™



522 Falcon All Terrain tow bar *6k lb. capacity RV-mounted tow bar*

BLACKHAWK 2 ALL TERRAIN™



422 BlackHawk 2 All Terrain tow bar *10k lb. capacity RV-mounted tow bar*

STOWMASTER ALL TERRAIN™



502 StowMaster All Terrain tow bar *6k lb. capacity car-mounted tow bar*

ROADMASTER

800-669-9690 or visit
www.roadmasterinc.com

Time Tested • Time Proven

Scan this QR code with your smart phone app

You Tube

"A PIECE OF CAKE"

Just one of the many things being said about the latest breakthrough from BrakeBuddy.

Getting ready to tow behind your motorhome should not be where your adventure starts. The BrakeBuddy Stealth eliminates the setup, making getting ready to tow as easy as plug and go. **Who says you can't have your cake and eat it too?**

BRAKEBuddy® STEALTH

The most versatile and easiest to use towed vehicle braking system on the market™

"Setup is easier than ever. We definitely recommend Stealth to all of our RVing friends!"
- Rich and Lisa C. (35' Itasca Meridian)



SCAN HERE TO SEE RICH AND LISA'S WHOLE STORY
or visit www.facebook.com/brakebuddy

