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**2015**  
GUIDE TO **DINGHY**  
**TOWING**

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# Tow & Go

**I**f 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 2015 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 "2015 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

**T**raveling 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. Addition-

ally, 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



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



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 truck can be towed, providing its weight is within the towing limit of the chassis.

and conveniently enjoy the benefits of auxiliary transportation.

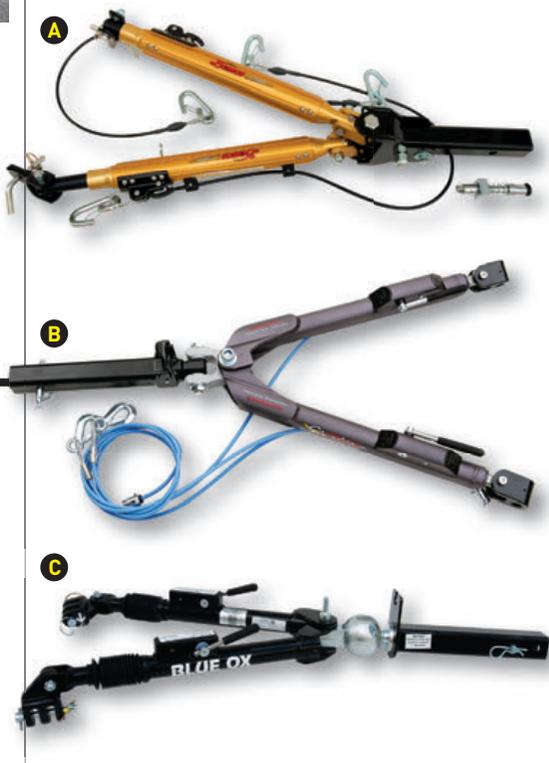
## Flat Towing

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 "2015 Dinghy Roundup," page 14). While many non-approved passenger cars or light trucks can

[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 your dinghy, this type of tow bar remains on the coach, out of harm's way.



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. 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.

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 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

## 2015 Guide to Dinghy Towing Sponsors

Produced by the editors of *MotorHome* for the publication's April issue, the 2015 Guide to Dinghy Towing was developed with assistance from the following companies:

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# The Motorhome/Dinghy Link

**A**n 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 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.

## 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] 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.

Self-aligning tow bars are available in two styles: dinghy-mounted and coach-mounted. 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 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 should not drag when slack.

## 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.



## Other Towing Equipment

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

**S**hould 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](http://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.

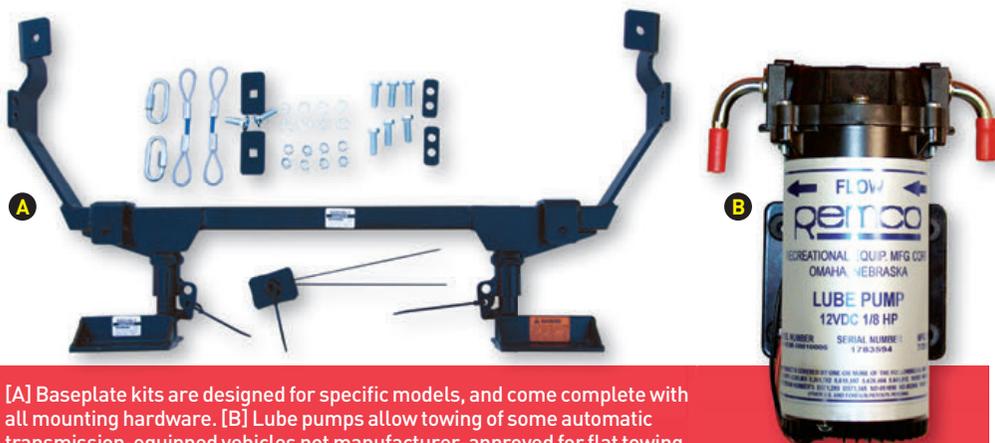
A transmission-lube pump sold by Remco Industries ([www.remcotowing.com](http://www.remcotowing.com)) can be mounted and plumbed into some automatic transmissions to keep fluid circulating while the vehicle is in tow. Bear in mind that modifications

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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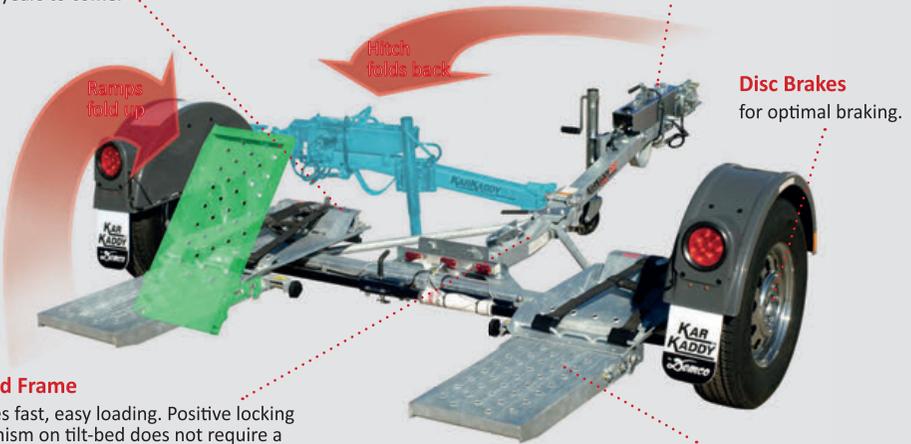
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MAKE/ MODEL	BASE CURB WEIGHT	SPEED/ DISTANCE LIMITS	TOWABLE W/ MANUAL TRANS.	TOWABLE W/ AUTO TRANS.	MILEAGE CITY/ HWY.	APPROX. RETAIL PRICE RANGE	SPECIAL PROCEDURES (SEE OWNER'S MANUAL FOR DETAILED INSTRUCTIONS)
<b>BUICK</b>							
Enclave FWD/AWD	4,724	65 MPH/None	N/A	Yes	17/24	\$39,050-\$48,230	Run engine at the beginning of each day and at each fuel stop for 5 minutes. Requires removal of two 15-amp and one 50-amp fuse.
Regal GS FWD	3,600	None	Yes	No	20/31	\$38,310	Start the vehicle as often as possible to prevent battery drain.
<b>CADILLAC</b>							
Escalade 4WD (all)	5,840	None	N/A	Yes	14/21	\$71,515-\$84,065	Only vehicles with a 2-speed transfer case with a Neutral position and 4WD Low setting can be towed. Negative battery cable must be disconnected.
SRX	4,277	65 MPH/None	N/A	Yes	17/24	\$38,600-\$52,725	Put vehicle in Neutral. Start engine and let it idle for more than 3 minutes before driving the vehicle.
<b>CHEVROLET</b>							
Colorado 4WD	4,140	None	No	Yes	19/25	\$27,760-\$35,290	Only vehicles with a 2-speed transfer case with a Neutral position and 4WD Low setting can be towed. Negative battery cable must be disconnected.
Cruze	3,093	65 MPH/None	Yes	No	25/36	\$16,995-\$20,920	Remove fuse 22, 23, 24 and 25 from instrument panel fuse block.
Equinox	3,777	65 MPH/None	N/A	Yes	22/32	\$25,395-\$32,795	Remove fuse 32. Run engine at the beginning of each day and at each fuel stop for 5 minutes.
Equinox AWD	3,922	65 MPH/None	N/A	Yes	20/29	\$27,145-\$34,545	Remove fuse 32. Run engine at the beginning of each day and at each fuel stop for 5 minutes.
Malibu	3,393	65 MPH/None	N/A	Yes	25/36	\$23,290-\$31,305	Shift transmission to Neutral. Put ignition in ACC/Accessory position. Remove fuse 8, 22 and 24.
Silverado 1500 4WD	4,749	None	N/A	Yes	17/22	\$31,240-\$52,345	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Silverado 2500 HD 4WD	6,044	None	N/A	Yes	N/A	\$36,315-\$55,760	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Silverado 3500 HD 4WD	6,281	None	N/A	Yes	N/A	\$37,415-\$56,860	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Sonic (except RS)	2,690	65 MPH/None	Yes	Yes	26/35-25/35	\$15,670-\$21,070	Run vehicle at the beginning of each day and at each RV fuel stop for about 5 minutes. Remove the DLIS fuse.
Spark	2,269	70 MPH/None	Yes	No	31/39	\$13,095-\$16,265	
Suburban 1500 4WD	5,896	None	N/A	Yes	15/22	\$52,445-\$67,230	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.

# 2015 DINGHY ROUNDUP

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)
Tahoe 4WD	5,683	None	N/A	Yes	16/22	\$49,745-\$64,530	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Traverse FWD/AWD	4,713	65 MPH/None	N/A	Yes	17/24	\$31,870-\$42,810	Remove 15-amp ECM fuse, the 15-amp OnStar fuse and 50-amp BATT1 fuse. Run vehicle at the beginning of each day and at each RV fuel stop for about 5 minutes.
<b>DODGE</b>							
Challenger	3,834	65 MPH/None	Yes	No	19/30	\$26,995-\$59,995	Transmission must be in Neutral.
Dart	3,081	None	Yes	Yes*	25/36	\$16,495-\$23,095	Transmission must be in Neutral.
*1.4-liter turbo engine with DDCT automatic transmission only.							
Durango AWD	4,913	None	N/A	Yes*	17/24	\$32,995-\$40,995	Put transmission in Park, transfer case in Neutral.
*All-wheel-drive models with single speed transfer case only.							
Ram 1500 4WD	4,725	None	N/A	Yes	18/25	\$26,545-\$49,430	Automatic transmission in Park, transfer case in Neutral.
Ram 2500 4WD	6,331	None	Yes	Yes	N/A	\$34,510-\$56,040	Both the manual shift and electronic shift transfer cases must be shifted into Neutral. Automatic transmissions must be shifted into Park. Manual transmissions must be placed in gear (not Neutral).
Ram 3500 4WD	6,370	None	Yes	Yes	N/A	\$35,570-\$54,440	Both the manual shift and electronic shift transfer cases must be shifted into Neutral. Automatic transmissions must be shifted into Park. Manual transmissions must be placed in gear (not Neutral).
<b>FIAT</b>							
500	2,366	None	Yes	No	31/40	\$17,145-\$19,600	Transmission must be in Neutral.
500 Cabrio	2,424	None	Yes	No	31/40	\$20,145-\$22,600	Transmission must be in Neutral.
500L	3,203	None	Yes	No	25/33	\$19,195-\$24,395	Transmission must be in Neutral.
<b>FORD</b>							
C-MAX Hybrid	3,640	70 MPH/None	N/A	Yes	42/32	\$24,170-\$31,770	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
C-MAX Hybrid Energi	3,899	70 MPH/None	N/A	Yes	95/81	\$31,770	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
Explorer FWD/AWD*	4,432-4,610	65 MPH/None	N/A	Yes	17/24-17/23	\$30,700-\$43,100	Place transmission in Neutral. Place the ignition in the accessory position. Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
*Except 2.0-liter FWD models.							
F-150 4WD	4,309	None	N/A	Yes	17/23	\$25,420-\$50,960	Place the transfer case and transmission in the Neutral position and engage the four-wheels-down towing feature. See owner's manual.

# SITUATION REPORT:



**MESSAGE STATUS:** UNCLASSIFIED

**ORIGINATOR:** READERSHIP/MOTORHOME MAGAZINE

**DETAILS:** 2014 GOLD WINNER SELECTED

**DEPARTMENT:** AUXILIARY BRAKING

**WINNER CALL SIGN:** SMI MANUFACTURING, INC.



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## PRODUCT LINE IDENTIFICATION



## DESIGNATED CONTACT

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# 2015 DINGHY ROUNDUP

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Ford F-250/F-350/ F-450/F-550 Super Duty 4WD	6,990	None	N/A	Yes	Not Rated	\$31,235-\$69,250	Only 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. See owner's manual.
Fiesta (all except ST)	2,578	70 MPH/None	Yes	Yes	31/43	\$13,965-\$20,945	On automatic transmission-equipped vehicles, transmission must be in Neutral during four-wheels-down towing. Disconnect the negative battery cable. See owner's manual for more details.
Flex FWD/AWD	4,439	65 MPH/None	N/A	Yes	18/25	\$29,015-\$37,600	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
Fusion Hybrid	3,668	70 MPH/None	N/A	Yes	44/41	\$26,085-\$31,840	Place the transmission in P position, start the vehicle and allow it to run for 5 minutes at the beginning of each day. Place transmission back into N position and ignition in the off position. Allow vehicle to run for 5 minutes every 6 hours of towing.
Fusion Hybrid Energi	3,913	70 MPH/None	N/A	Yes	95/81	\$34,800-\$36,630	Start the vehicle and allow it to run for 1 minute at the beginning of each day and every 6 hours thereafter.
Taurus FWD/AWD	3,969	65 MPH/None	N/A	Yes	19/29	\$27,055-\$40,220	Start the engine and allow it to run for 5 minutes at the beginning of each day and every 6 hours thereafter.
<b>GMC</b>							
Acadia FWD/AWD	4,656	65 MPH/None	N/A	Yes	17/24	\$33,975-\$45,020	Remove 15-amp ECM fuse and 15-amp OnStar fuse. Remove 50-amp BATT1 fuse. Vehicle should be run at the beginning of each day and at each RV fuel stop for about 5 minutes.
Canyon 4WD	4,100	None	N/A	Yes	19/25	\$21,880-\$35,235	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Sierra 1500 4WD	4,749	None	N/A	Yes	17/22	\$32,040-\$47,345	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Sierra 2500 HD 4WD	5,962	None	N/A	Yes	N/A	\$36,570-\$51,185	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Sierra 3500 HD 4WD	6,092	None	N/A	Yes	N/A	\$37,670-\$52,625	Only vehicles with a 2-speed transfer case with a Neutral position and 4WD Low setting can be towed. Negative battery cable must be disconnected.

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)
Terrain FWD/AWD	3,853	65 MPH/None	N/A	Yes	22/32	\$27,485-\$35,740	Remove Fuse 32. After reaching destination, start the engine and let it idle for more than 3 minutes before driving the vehicle.
Yukon 4WD	5,707	None	N/A	Yes	16/22	\$51,185-\$59,670	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
Yukon XL 1500 4WD	5,926	None	N/A	Yes	15/22	\$53,885-\$62,370	Only vehicles with a 2-speed transfer case with a Neutral position and a 4WD Low setting can be towed. Negative battery cable must be disconnected.
<b>HYUNDAI</b>							
Accent	2,480	None	Yes	No	27/38	\$14,745-\$16,495	
Elantra 1.8-L	2,773	None	Yes	No	27/37	\$17,250-\$21,700	
Elantra 2.0-L	2,890	None	Yes	No	24/34	\$21,600-\$23,800	
Genesis Coupe	3,514	None	Yes	No	16/24	\$26,750-\$33,400	
Veloster	2,584	None	Yes	No	26/35	\$18,000-\$22,600	
Veloster Turbo	2,800	None	Yes	No	26/35	\$21,600-\$22,600	
<b>INFINITI</b>							
Q60 Sport Convertible	4,083	70 MPH/500 miles	Yes	No	18/26	\$48,550-\$53,400	Idle engine in Neutral for 2 minutes every 500 miles.
Q60 Sport Coupe	3,633	70 MPH/500 miles	Yes	No	19/27	\$40,950-\$46,050	Idle engine in Neutral for 2 minutes every 500 miles.
<b>JEEP</b>							
Cherokee 4WD	3,953	None	N/A	Yes	22/31	\$26,795-\$30,095	Models with 2-Speed Power Transfer Unit only. Transfer case must be shifted into Neutral and transmission in Park. See owner's manual for more details.
Compass 2WD	3,107	None	Yes	No	23/30	\$18,995-\$26,195	Transmission in Neutral, key in the ACC position
Compass 4WD	3,258	None	Yes	No	22/27	\$20,995-\$26,195	Transmission in Neutral, key in the ACC position
Grand Cherokee	4,677	None	N/A	Yes	17/24	\$31,995-\$51,695	Quadra-Trac II/Quadra-Drive II Four-Wheel Drive models with 4-LO range only. Transmission in Park, transfer case in Neutral. The Neutral selection button is adjacent to the transfer case selector switch.
Patriot 2WD	3,211	None	Yes	No	23/30	\$16,695-\$24,695	Transmission in Neutral, key in the ACC position
Patriot 4WD	3,367	None	Yes	No	22/27	\$18,995-\$26,695	Transmission in Neutral, key in the ACC position
Wrangler 4WD	3,785	None	Yes	Yes	17/21	\$22,795-\$36,195	Automatic transmission in Park, manual transmission in gear (NOT in Neutral) transfer case in Neutral. See owner's manual.
Wrangler Unlimited 4WD	4,075	None	Yes	Yes	17/21	\$26,595-\$39,995	Automatic transmission in Park, manual transmission in gear (NOT in Neutral) transfer case in Neutral. See owner's manual.

## 2015 DINGHY ROUNDUP

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)
<b>LINCOLN</b>							
MKX 3.7 FWD/AWD	4,236- 4,413	65 MPH/None	N/A	Yes	18/26	\$38,900-\$40,850	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.
MKZ 3.7 FWD/AWD	4,236	65 MPH/None	N/A	Yes	18/26	\$38,900-\$40,850	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.
MKZ Hybrid	4,263	70 MPH/None	N/A	Yes	41/39	\$35,190	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.
<b>NISSAN</b>							
370Z Coupe	3,278	70 MPH/ 500 miles	Yes	No	19/26	\$29,990-\$45,490	Idle engine in Neutral for 2 minutes every 500 miles.
370Z Roadster	3,470	70 MPH/ 500 miles	Yes	No	18/25	\$41,820-\$48,100	Idle engine in Neutral for 2 minutes every 500 miles.
Frontier King/Crew Cab 2WD I-4	3,470	None/ 500 miles	Yes	No	19/23	\$17,990-\$22,700	Idle engine in Neutral for 2 minutes every 500 miles.
Frontier King/Crew Cab 2WD V-6	4,256	None/ 500 miles	Yes	No	16/22	\$23,610-\$25,510	Idle engine in Neutral for 2 minutes every 500 miles.
Frontier King/Crew Cab 4WD V-6	4,454	None/ 500 miles	Yes	No	16/21	\$30,550-\$31,510	Place transfer case in the 2H range. Idle engine in Neutral for 2 minutes every 500 miles.
Juke FWD SV	2,981	70 MPH/ 500 miles	Yes	No	28/34	\$20,250-\$28,020	Idle engine in Neutral for 2 minutes every 500 miles.
Sentra	2,832	None/ 500 miles	Yes	No	27/36	\$15,990-\$19,640	Idle engine in Neutral for 2 minutes every 500 miles.
Versa Note	2,414	None/ 500 miles	Yes	No	27/36	\$14,180-\$18,750	Idle engine in Neutral for 2 minutes every 500 miles.
Versa Sedan	2,363	None/ 500 miles	Yes	No	27/36	\$11,990-\$16,890	Idle engine in Neutral for 2 minutes every 500 miles.
Xterra 4WD S	4,358	None/ 500 miles	Yes	No	16/22	\$25,670-\$30,590	On 4WD models, place transfer case in 2H. Idle engine in Neutral for 2 minutes every 500 miles.
<b>SCION</b>							
tC	3,082	None	Yes	No	23/31	\$19,980	Shift the lever to N. Turn engine switch or Smart Key button to ACC position. Ensure the audio system and other powered devices are turned off. After towing, leave the engine in idle for at least 3 minutes before driving the vehicle.



THE TOWED VEHICLE BRAKING EXPERTS™

# STEALTH™ INNOVATION

We've incorporated every lesson from the billions of miles that BrakeBuddy® has traveled into the innovative STEALTH™ ... The most versatile and easiest to use braking system anywhere!

## VERSATILE

Tow a vehicle  
or a trailer

“The Stealth gave us peace of mind while traveling to Alabama, a 1,200 mile journey! It worked flawlessly! Definitely going to recommend Stealth to our RVing friends!”

Rich and Lisa C.

*(35' Itasca Meridian & Honda CRV)*

## HIDDEN

Mounts out  
of sight

## SIMPLE

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**MOST TRUSTED • EASIEST TO USE • BEST PERFORMING**

## 2015 DINGHY ROUNDUP

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)
xB	3,027	None	Yes	No	22/28	\$17,740	Shift lever to N. Turn the engine switch to ACC position. Ensure the audio system and other powered devices are turned off. After towing, leave the engine in idle for at least 3 minutes before driving the vehicle.
xD	2,625	None	Yes	No	27/33	\$16,690	Shift lever to N. Turn the engine switch to ACC position. Ensure the audio system and other powered devices are turned off. After towing, leave the engine in idle for at least 3 minutes before driving the vehicle.
<b>SMART</b>							
Pure Coupe/ Pure Cabriolet	1,808	None	Yes	N/A	34/38	\$13,270-\$17,930	Manufacturer recommends installing a matching on/off switch on the battery terminal and has very detailed procedures for towing. See owner's manual.
<b>SUBARU</b>							
Forester 2.5i	3,296	None	Yes	No	22/29	\$22,195-\$30,095	Release parking brake and put the transmission in the Neutral position. The ignition switch should be in the ACC position while the vehicle is being towed.
Impreza 2.0i	3,131	None	Yes	No	28/37	\$18,195-\$23,295	Release parking brake and put the transmission in the Neutral position. The ignition switch should be in the ACC position while the vehicle is being towed.
WRX	3,267	None	Yes	N/A	21/28	\$26,295-\$29,995	Release parking brake and put the transmission in the Neutral position. The ignition switch should be in the ACC position while the vehicle is being towed.
WRX STI	3,386	None	Yes	N/A	17/23	\$34,495-\$38,495	Release parking brake and put the transmission in the Neutral position. The ignition switch should be in the ACC position while the vehicle is being towed.
XV Crosstrek	3,109	None	Yes	No	26/34	\$21,595-\$24,795	Release parking brake and put the transmission in the Neutral position. The ignition switch should be in the ACC position while the vehicle is being towed.
<b>TOYOTA</b>							
Corolla	2,820	None	Yes	No	28/37	\$16,900-\$23,730	After towing, run engine in idle for at least 3 minutes before driving.
Yaris	2,315	None	Yes	No	30/37	\$14,845-\$17,645	After towing, run engine in idle for at least 3 minutes before driving.



**Driving your motorhome should be as fun as driving your favorite car.**

### **BLUE OX<sup>®</sup> SWAY BARS**

- Reduces sway caused by wind, curves in the road, and passing trucks
- Improves cornering traction and stability
- Specifically designed to fit RV models
- 4140 chromium steel/polyurethane bushings
- Limited lifetime warranty



### **TIGERTRAK<sup>™</sup>**

- Virtually eliminates tail wag caused by long parabolic springs and extended rear overhang
- Fits most gas motorhomes
- Easy installation



### **TRUCENTER<sup>™</sup>**

- Applies the force needed to keep your motorhome on course through buffeting crosswinds, uneven pavement, and passing trucks
- Stay in control in case of a blowout
- Exerts up to 270 lbs of pressure to keep your coach in its lane



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# 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.

## Prepping a Dinghy Vehicle for Safe Towing

**T**he 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 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,

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.

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 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.





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.





# 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 semi-portable (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, 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: \$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](http://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](http://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.



# VICTORY SERIES TOW BARS



### Easy Trigger Release

Makes unhooking the Tow Bar safe and easy.



### Independent Self-supporting Arms

If it were any easier, it would hook-up itself.



### 4-Position Storage Lock

Folds to either side and rides neatly on the bumper when not in use.



### Excali-Bar II

10,500 lbs. Capacity



### Dominator™

7,500 lbs. Capacity



### Commander

6,000 lbs. Capacity

# Demco

DOING OUR BEST TO PROVIDE YOU THE BEST

(800) 543-3626

[www.towdemco.com](http://www.towdemco.com)



## 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 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.
- 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: \$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](http://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](http://www.rvbrake.com)



## SMI MANUFACTURING

### Air Force One

Permanently Mounted Brake System  
MSRP: \$1,199.95

### 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.



## **CRITICAL INFORMATION**

DELTA FORCE IS THE SMALLEST PORTABLE (BOTH DISPLACEMENT AND FOOTPRINT) AND WEIGHS IN AT JUST OVER 9 LBS. DELTA FORCE BOASTS NUMEROUS PROPRIETARY FEATURES; A RUGGED, POWDER-COATED ALUMINUM ENCLOSURE; AND IS MADE IN THE USA WITH US PARTS. 5 YEAR WARRANTY.



## **FEATURES**

- PROPORTIONAL
- WIRELESS COACHLINK™
- FLEXBALL CYLINDER
- DUAL-SIGNAL ACTIVATION
- BREAKAWAY SYSTEM
- SET-IT-ONCE PEDAL CLAMP™

## **FLEXBALL**

- NON-BINDING, SELF-ALIGNING
- SIDE-ROTATES FOR STORAGE
- ALLOWS PEDAL TO BE OFFSET
- DIRECTS FORCE DOWNWARD
- TETHER ANCHOR MOUNTS WITH JUST ONE SELF-DRILLING SCREW
- NO FORCE ON TOWED'S SEAT



## **DESIGNATED CONTACT**

SMI MANUFACTURING, INC. • 800-893-3763 • [WWW.SMIBRAKE.COM](http://WWW.SMIBRAKE.COM)

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** 

# INVISIBRAKE

A fully automatic supplemental braking system

## Presto!



*InvisiBrake  
isn't magic,  
it just seems  
that way*

**What is InvisiBrake?** The world's best towed car supplemental braking system



### Why is InvisiBrake better?

- **NOTHING** to put in or take out.
- **CHARGES** the battery while towing. Never drains the towed car's battery.
- **EASY** operation. Works intuitively. No fuss, no hassle. It just works.
- **MONITORS** the towed vehicle's braking condition with audio and visual alerts.
- **SAFETY** is standard. Includes breakaway system and alarm for safety.

## FUSEMASTER

Eliminates the hassle of pulling fuses

What is FuseMaster? An easy way to remove fuses that must be pulled to tow some cars. Just flip a switch! FuseMaster stops the hassle of having to find and pull fuses every time you tow.



Simply push a button to disconnect the fuse.



Easy to Install!



Stop the pain. Stop doing the fuse limbo.

For more information scan the QR code with your smartphone or tablet.



800-669-9690  
or visit [roadmasterinc.com](http://roadmasterinc.com)



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