LATCH AND RELEASE B&W MAKES SHORT WORK OF INSTALLING A FIFTH-WHEEL HITCH

NO BO

REMOTE CONTROLLER REDARC APPLIES DOWN-UNDER TECHNOLOGY FOR TRAILER BRAKING

SCIENCE OF SANITATION HOW TO LOSE THE BLACK-AND GRAY-WATER TANK BLUES

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LIGHTER FIVER > NORTHWOOD ARCTIC FOX

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SET IN STONE

Home to North America's only natural white-marble arch, Natural Bridge State Park preserves the ancient span in Massachusetts' Berkshire Mountains. Page 30

Adopting an Orphan

Is buying a used RV from an out-of-business manufacturer a good idea or a setup for disaster?

he recession of the late 2000s and early 2010s took a tremendous toll on the RV industry, with some of the most well-known brands disappearing into the ether, and their factory-support and parts-supply systems vanishing along with them. Manufacturers like Alfa Leisure, Carriage, Fleetwood's trailer division, King of the Road, Monaco, Peterson, Teton Homes and Travel Supreme all closed their doors.

While some RV brands would be resurrected post-downturn, few if any were able to offer factory technical support or parts. This was an issue for people who had purchased new RVs and were expecting warranty coverage and availability of parts, only to find none existed cottage industry has developed to supply parts that might have been model- or brand-specific, such as



body parts. Companies that offer these parts include All-Rite Custom Manufacturing, Icon Direct and Pelland Enterprises.

Fortunately, many appliances for these RVs remain available. And while a particular cabinet design, lamp or audiovisual component may have gone away, these are relatively easily retrofitted for new, more advanced products. In the case of cabinetry and fiberglass, replacement pieces can be crafted.

There are other sources for parts and components, like RVsurplus and -salvage warehouses around the country. While the supply of surplus products for newer RVs has declined due to the adoption of "just-in-time supply" in RV manufacturing, there's still quite a bit out there, especially for prerecession rigs. RV-surplus warehouses are frequently found in areas where RVs are built, but

Should you buy an orphan RV? If the deal is right, absolutely. Make sure to go through the rig from top to bottom to confirm that it's in good shape.

once these companies went out of business.

Fast forward a decade, and the environment has changed dramatically. "Orphan" trailers and motorhomes are now some of the best deals out there for those looking to purchase a used RV. Because of the popularity of RVing and the number of orphan rigs on the road, a some others are dotted around the country. An internet search for "RV surplus" will get you started, but some include Bontrager's Surplus, Elkhart RV Parts, Northwest RV Supply, Tim's RV and Visone RV, among others.

So, should you buy an orphan RV? If the deal is right, absolutely. Make sure to go

through the rig from top to bottom to confirm that it's in good shape. Independent RV inspectors, RVDA/RVIA-certified RV technicians and mobile RV-service providers offer inspection services for a fee. As long as the bones are good, an older or orphan model can be the perfect canvas upon which to create your dream RV.

We'll see you down the road. 🚥

- Chris Dougherty, Technical Editor

IN THE MARKET FOR AN RV?

Whether you're looking for a new or used RV, the annual RV Buyers Guide can be an invaluable resource. The 2019 edition contains specs, photos, floorplans and prices for more than 600 new travel trailers, fifth-wheels, toy haulers, truck campers and motorhomes. Priced at \$7.99, the 292-page guide is available at select bookstores and newsstands, and online at www.rvbuyersguideorder.com. Information on RVs from model years dating back to 2003 can be found at www.rvbg.com.



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Publisher Ann Emerson Editor Valerie Law Managing Editor Donva Carlson Technical Editor Chris Dougherty Art Director Rick Damien Production Director Bob Dawson Production Manager Brenda Hutchinson Prepress Specialist Rob Roy Marketing Manager Lorisa Pierson Business Manager Katey Purgatorio Publisher Emeritus Bob Livingston

Consulting Editors Chris Hemer, Jeff Johnston Contributors Lisa Ballard, Ross Connolly, Kenneth W. Dahse, Shelley Dennis, Bruce Leonard, Jim Popovich, Barb Riley, Pamela Selbert, Bruce W. Smith Vice President National Sales Terry Thompson 847-229-6759

RV Marketplace/Classifieds Katey Purgatorio 847-229-6756, katey.purgatorio@goodsam.com

Advertising Sales/Southwest Sue Seidlitz 847-229-6813, sue.seidlitz@goodsam.com

Advertising Sales/Southeast Kim Whitaker 919-412-6325, kim.whitaker@goodsam.com

Advertising Sales/Northeast Lou Cicirelli 954-297-9234, lou.cicirelli@goodsam.com

Advertising Sales/Northwest Scott Oakes 847-229-6758, scott.oakes@goodsam.com

CUSTOMER SERVICE

Subscriptions (print and digital) 800-825-6861, trailerlife@cdsfulfillment.com

Editorial info@trailerlife.com, www.trailerlife.com



Vice President/Publisher Ann Emerson Vice President/Advertising Sales Terry Thompson



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LETTERS



COUNTRY-STYLE FIVER

Re: Barb Riley's RV Close-Up of the new Jayco Eagle 321RSTS fifth-wheel in the February 2019 issue:

Love the new light kitchen! - Amy Ward

It's lovely to see lighter colors! - Carla Walrath

Our next floorplan! - Diane Mendes Repp



HAVE A COMMENT?

Write to us at info@trailerlife.com or Trailer Life. 2750 Park View Court, Suite 240, Oxnard, California 93036. Please include your full name, city and state or province.



€ The Road Ahead

I read each issue with lots of interest, especially the February edition, which introduced many new RVs of different sizes and layouts. One thing I noticed right away was the lack of color in nearly every interior. While the outsides are getting interesting, the insides are bland. It made my wife, Faye, and me appreciate all the more our 2015 Rockwood Mini Lite. which at least has some color. in it. Will interior color make a return? I certainly hope so. Larry Krainson

Longmeadow, Massachusetts

Reading February's "New RVs for 2019," I began to be puzzled by a couple of specification issues. You list the Keystone Hideout 29DFS as 33 feet long, when I'd bet the living space or "box" is only 29 feet, hence the "29" in 29DFS. For the Forest River Luxury Surveyor 250FKS, you list a length of 29

POLL RESULTS: GAS OR DIESEL?

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feet, although, again, it's almost certainly only 25 feet long inside.

In shopping for trailers, it's been my experience that the first number in the model designation is generally the length of the trailer box, the actual living area. My own trailer, a 2011 Forest River Wildwood 23FBS, measures just a couple inches under 23 feet for the box but is 26¹/₂ feet from hitch to bumper. The length of the living area is obviously far more important to the purchaser than overall length, although it's nice to have both. Is there some reason you're giving hitch-to-bumper length?

I'm also a bit puzzled by the gross vehicle weight ratings (GVWR) for these trailers, since they don't seem consistent with the dimensions. The Hideout 29DFS is listed with an 8,400-pound gvwr, not a lot more than my very lightly equipped Wildwood, with a GVWR of 7,507 pounds. Odder

still is the Luxury Surveyor 250FKS with a gvwr of only 5,500 pounds, well below my smaller Wildwood's gvwr. Ken Reed, Caldwell, Idaho

You're right that the Luxury Surveyor 250FKS seemed oddly light, Ken. Its gvwr is actually 7,775 pounds, according to Forest River. Keystone confirmed that the Hideout 29DFS has an 8,400-pound GVWR, but its exterior length is a little longer than we reported, measuring 33 feet, 11 inches from coupler to bumper. Manufacturers have traditionally used coupler-to-bumper length in travel trailer specs, and in articles like this one, when we haven't tested the trailers. we use their measurements. You're also right that the numbers designated in model names often refer to the length of interior living space, but that's not a hard-and-fast rule. Editors

MORE BIKES ON BOARD

"Chain Reaction," Emily Fagan's bicycling article in the January issue, caught my attention, especially the part about RV bike racks. After several costly mishaps with my bikes mounted on the rear of the camper, I came up with a custom solution to mounting a rack on my



R-Pod. I worked with a local welding shop and designed a hitch receiver that is mounted to the A-frame, just over the battery and LP-gas cylinders. We modified a tray-style bike rack to allow just enough room to remove the battery and cylinders while providing a good turning radius for the tow vehicle.

This provides several benefits. First, it allows for a lower mounting point, so I don't have to lift the bikes shoulder height to load them. Second, I can easily move the bike rack to my tow vehicle to drive to bike trails that are a ways from the campground. And most important, I can see in the rearview mirror that my bikes are secure and not lying on the interstate. I have about \$400 invested in the system, and it was well worth it. Kevin Duncan, Marshalltown, Iowa 🎞

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CENTRAL TEXAS

Welcome to Waco

You don't have to be a *Fixer Upper* fan to make a pilgrimage to the home of Dr Pepper, Baylor University and Magnolia Market - by shelley Dennis

Waco, Texas, has become a popular hangout lately, thanks to Chip and Joanna Gaines of HGTV's *Fixer Upper* fame. But you don't have to be an interior-design junkie or shop at Magnolia Market to enjoy the many trappings of this central Texas town.

The Huaco Indians knew this settlement on the Brazos River was a great place to camp back in the 1840s, and that tradition continues today with several RV campgrounds located right on the banks of Lake Waco. This vast body of water is 10 minutes from town, so you can catch dinner and fry it up at your campsite, or mosey into the city where an endless selection of restaurants, bistros and brewpubs awaits.

Activities in the area range from boating and kayaking on the Brazos and Bosque rivers to cycling the miles of country back roads and the

• From 1870s' cattle crossings to wake surfers on the Brazos below it, the Waco Suspension Bridge has witnessed a lot in its nearly 150 years.

scenic loop around Lake Waco, along with wine tasting at local vineyards and visiting the animals at Cameron Park Zoo. Don't miss the Dr Pepper Museum and the requisite ice-cream float at its soda fountain, and while you're downtown, pick up a few trinkets from the shopping district's numerous offerings.

Prehistoric visitors to the area are on display at Waco Mammoth National Monument, with a full complement of archeological wonders at Baylor University's Mayborn Museum. If you're a fan of Wild West law enforcement, the Texas Ranger Hall of Fame is a must, and catching a football game at Baylor's McLane Stadium is an experience unto itself.

The streets of town are hopping with festivals, concerts and live

performances throughout the year, and a weekly farmer's market showcases locally grown foods, as well as hand-forged creations by resident artisans. A few blocks to the east is Waco's historic suspension bridge, built to help cowboys and their herds cross the Brazos back in 1870.

 \bigcirc

Waco lies 90 minutes south of Dallas and 90 minutes north of Austin, making it the perfect base camp from which to explore all of central Texas.

WHERE TO STAY

The Find a Campground tool on the Good Sam Club website can help locate RV parks throughout the region, including three Good Sam Parks in Waco and nearby Woodway: Flat Creek Farms RV Resort, I-35 RV Park and Quail Crossing RV Park. www.goodsam.com/campgrounds-rv-parks

APRIL 2019 / TRAILER LIFE 9

PHOTO: MARK RANDOLPH/CITY OF WACO

A R O U N D THE BEND



Superman Returns

• It's a bird! It's a plane! It's Superman! Well, you probably won't mistake him for a bird or an airplane, but he is imposing, this 15-foot-tall painted-bronze statue of the archetype of superheroes who stands in Superman Square, wearing his familiar blue-tights costume and red cape. This is Metropolis — not the fictional town of the comics and movies, but the real deal on the southern tip of Illinois.

The town (population 6,500) claimed the "Metropolis Marvel" as its favorite son in 1972, and since 1978 has hosted an annual Superman Celebration, June 6 through 9 this year. Metropolis Chamber of Commerce Executive Director Amanda King says upward of 30,000 fans attend the festivities. All events are family-friendly, she adds, and include a carnival, fair-style foods and appearances by celebrity guests, among them actors who have portrayed Superman.

King says fans visit throughout the year to tour the city's Super Museum and see a kryptonite "meteor" and statues of the superhero and his love interest, fellow *Daily Planet* reporter Lois Lane. — *Pamela Selbert* www.supermancelebration.net, www.supermuseum.com

RVers attending this year's Superman Celebration can camp at the 50site Fort Massac State Park in Metropolis, all with water and electricity. Dedicated in 1908, Illinois' first state park sits on the banks of the Ohio River on the site of historic Fort Massac. **www.dnr.illinois.gov**

Wake Up and Smell the Coffee



What's better than starting the day surrounded by nature?

Enjoying your favorite morning brew, whether sipping it out under the awning or at the dinette. Camp Casual's 15-ounce ceramic mugs not only rise and shine with you, they make a statement about your RV lifestyle. Two new mugs, Vintage Blues and Paws and Relax, showcase classic travel trailers, and the latter (pictured above) sweetens the pot with a canine companion. One of Camp Casual's popular throw-blanket patterns, Travel Map (also pictured), adorns a third new mug.

The sturdy, microwave-safe mugs (\$12.99) and machine-washable throw (\$79.99) are currently sale priced at Camping World (\$9.99 and \$61.52, respectively). They can also be ordered on the Camp Casual website along with the company's full line of RV-inspired dishware and blankets. **www.campcasual.com**, www.campingworld.com

EASY-TOWING TRAILERS

Three nimble new RVs hit the road with lightweight packages and lengths under 30 feet



KZ Sportsmen SE The Sportsmen SE travel trailer debuted this year with six floorplans. Despite budget-friendly pricing, all SE models are packed with standard features, starting with a drop-in range with a glass cover and a multimedia stereo and DVD player with wireless connectivity. The 26-foot, 4-inch **240FBSE** has a 7,000-pound gross vehicle weight rating (GVWR) and room to snooze on the convertible dinette, jackknife sofa and walk-around queen bed. Starting price is a thrifty \$19,771. www.kz-rv.com

Starcraft Super Lite In developing



its all-new line of Super Lite travel trailers, Starcraft aimed to make them lightweight, practical and affordable. True to its first objective, the 29-foot, 5-inch 242RL has a 6,500-pound GVWR. On the practical side, it comes with easy-care vinyl flooring and a walkaround queen bed with a residential mattress. With a base price of \$25,780, it's also easy on the wallet. www.starcraftrv.com



Winnebago Minnie Drop A new floorplan for 2019, the **210RBS** is the first Minnie Drop equipped with tandem axles, allowing Winnebago to install larger holding tanks for longer stays when untethered to campground hookups. Even with dual axles, the 25-foot, 2-inch travel trailer has the characteristic retro look of the Minnie Drop, yet amenities are decidedly modern. Base MSRP is \$30,378, and GVWR is 7,400 pounds. www.winnebagoind.com

The R-Pod Turns 10

In 2009 North America was in the midst of a recession, and many RVers had a new mindset, that less is more. That's the year Forest River introduced its ultralightweight R-Pod, a teardrop-style trailer

with a classic shape and compact size. In the August 2009 issue, *Trailer Life* showcased the inaugural RP-175, an 18-foot, 2-inch-long R-Pod with a streetside slideout and a 3,735-pound GWR.

Ten years have passed, and R-Pods are now the best-selling travel trailers under 20 feet, with a devoted following of owners. The brand has expanded to 11 models, including the 10th-Anniversary Edition RP-191, a unique twin-bed layout with a single slideout and dog-friendly amenities such as a pet-bowl drawer and an outside leash connection.

With a GVWR of 3,765 pounds and a starting price of \$21,428, the new RP-191 continues the R-Pod tradition of lightweight camping in an affordable trailer. All 2019 models can be towed by properly equipped midsize vehicles and feature aluminum framing, Azdel composite sidewall panels and self-adjusting electric brakes.

www.forestriverinc.com/traveltrailers/rpod





• The 10th-anniversary R-Pod RP-191 (top) and the RP-175 on our August 2009 cover (above) are both compact, comfy and cute.

MORE ONLINE

For more RV news you can use, visit our website, www.trailerlife.com

MINI AND MINNIE

Two website exclusives take stock of the Little Guy Mini Max teardrop ("Tiny Trailer") and the Winnebago Minnie 2455BHS bunkhouse ("Family-Friendly RV").

DIESEL TECH Q&A

To maximize fuel economy in a diesel pickup, is it smarter to focus more on the right axle ratio or the right foot? Bruce W. Smith has the answer ("Diesel Tech Q&A").

It's a Jolly Ollie-Day

Owners of Oliver's fiberglass travel trailers meet up in the southern Appalachians

Owners' rallies run the gamut from modest get-togethers for niche RVs to major events with acronyms like FROG, WIT and WBCCI (Forest River Owners' Group, Winnebago International Travelers and Wally Byam Caravan Club International, respectively). Regardless of where these gatherings fall on the size spectrum, getting together with fellow owners of your recreational vehicle brand is a fun way to share information, troubleshoot problems and make the most of the RV experience.

Owners of Oliver's distinctive molded-fiberglass travel trailers, known affectionately as "Ollies," are throwing their annual bash, May 16 through 19, at northern Alabama's Lake Guntersville State Park. The 2018 Oliver Owner's Rally took place at the 6,000-acre park, and things went so well that the Tennessee-based manufacturer and its loyal fan base are back for more in 2019.

High on the agenda for most attendees are the Oliver-specific workshops. Owners can ask questions and watch demonstrations of various components. Of course, they'll also have time to socialize, rent boats to get out on the lake, explore the park's hiking and biking trails, and swing through the trees on its network of zip lines. Although most participants will be Ollie owners, the rally is open to everyone. www.olivertraveltrailers.com/ 2019-oliver-owners-rally

NORTHERN

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Safe braking at your fingertips. With fingertip control it delivers smooth, safe braking on all trailer types. The control knob can be mounted on the dash and the main unit is so compact it can be hidden away where the driver's knees can't knock it accidentally. It's easy to install and is suitable for both 12V and 24V vehicles.

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SHORT BUT SWEET

Northwood's smallest Arctic Fox fifth-wheel is big on features, quality and comfort

QUICK I	NFO
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Exterior Height	13' 3"
Freshwater Cap	72 gal.
Black-Water Cap	65 gal.
Gray-Water Cap	102 gal.
LP-Gas Cap	20 gal.
UVW	10,455 lbs.
Hitch Weight	2,068 lbs.
GVWR	13,400 lbs.
MSRP. Base	\$61 475



onsumers walking through dealer lots — or among the many rows of gleaming units at RV shows — are often faced with a painful question: How much is enough? How big do we really need this thing to be? How many gizmos and gadgets does our family require to enjoy a weekend away from home?

Legitimate questions, all. But if you're shopping for a moderate-sized fifth-wheel, Arctic Fox, a division of La Grande, Oregon-based Northwood

Manufacturing, has the answer: the 29-foot, 5-inch 27-5L. It has everything a couple or small family could want, including impressive holding-tank capacities and plenty of options, all in a manageable package that doesn't require a dually to pull it.

Many "entry-level" fifth-wheels look like just that, but Northwood gets it right from the get-go with a handsome gray-and-white gel-coat exterior and niceties like a Carefree of Colorado power awning, exterior speakers, MORryde StepAbove entry steps with a sturdy stainless-steel railing, and lots of exterior lights including handy LEDs above the kingpin box and utility center. A generously proportioned and wellfinished cargo area is accompanied by dual LP-gas cylinders on the curb side and a compartment for dual batteries on the street side.

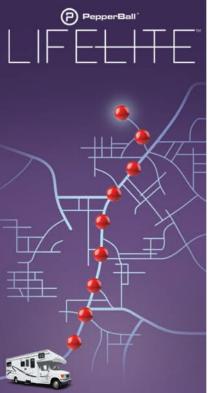
The living area promotes hang time with friends and family. The kitchen, located in the rear-curbside corner, offers solid-surface countertops, a stainless-steel sink and faucet, a 10-cubic-foot refrigerator with raised

A) pantry B) Dream Dinette C) reclining sofa D) 60"x80" queen bed E) entertainment center





Far left: The bath area has plenty of elbow room and storage. The corner lavatory is small but features a solid-surface countertop with enough room for essentials and a medicine cabinet above. Left: In the master bedroom, the use of a small wardrobe slideout and a queen bed nets plenty of walkaround space and allows the use of two real nightstands.



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wood-panel front, and a large pantry that should hold enough groceries for a weeklong trip. There's also plenty of well-made cabinetry and drawers. Furrion appliances, including a range with commercial-style cast-iron grates and an overhead microwave, enhance the feeling of quality.

Opposite the kitchen in a large flush-floor slideout is the dining area, which can be furnished with either a freestanding table and four chairs or a Dream Dinette booth. Small families or those who expect the occasional overnight guest should opt for the latter, as it quickly turns into a bed and offers extra storage underneath each bench.

Forward of the dinette is the sofa, which in this case was the optional Thomas Payne cross-stitch model with cupholders and a large center storage area beneath the armrest. The seats recline and offer footrests, and are a very comfortable place to enjoy the 32-inch Vizio LED smart TV, located in





Top: The rear kitchen offers lots of cabinet and drawer space, a large pantry and solid-surface countertops. The entertainment center to the left of the fridge features a flat-screen TV, AM/FM/CD/DVD player, USB charging station and command center. Above: A large flushfloor slideout houses a comfortable sofa and the Dream Dinette booth, a no-cost option.

an entertainment console with an AM/ FM/CD/DVD player just below. The area also offers additional storage, a shelf with four USB charge ports, and an access door for the command center.

All in all, the area is very wellconceived and makes good use of space, but the forward wall, adorned with nothing more than a plain mirror, looks a bit odd. We're accustomed to seeing an entertainment center (or something) here, but this isn't possible in this floorplan due to the slideout's path. This is really more of an observation than a complaint, however, and a small compromise given all the livability the space offers.

The bath area employs a tradi-

tional Jack-and-Jill layout, but again, use of space is well-conceived and the materials have a substantial feel. A small lavatory with a solid-surface countertop that matches the kitchen lives in the right-hand corner and is equipped with a small stainless-steel bowl and burnished-bronze faucet. Above is a mirrored medicine cabinet, and there is storage both underneath the counter and in a good-sized linen closet in the opposite corner.

A porcelain toilet and a large fiberglass shower enclosure with a glass door make the area feel like home, and a skylight and powered roof vent are overhead. What we really appreciated, however, was the quality of the materials, particularly the bathroom and bedroom doors; they have a heavy, residential feel that is missing from even some higher-end fifth-wheels.

In response to customer requests, many manufacturers wedge a king bed into the master suite, which sacrifices space elsewhere. The 27-5L has a queen bed, and as a result, boasts usable nightstands on either side, each with generous counter space, a drawer, reading light and 120-volt AC/USB outlets. A small wardrobe slideout on the street side offers room for hanging clothes on the left, shelf space on the right and drawers underneath.

In lieu of full-length overhead cabinets above the bed, the 27-5L has a shelf with rope lighting underneath and small overhead cabinets on either side, which seem to be more than adequate. If you need more storage, Northwood provided plenty of it under the comfy (albeit bouncy) queen bed, which is fitted with appropriate gas struts to make lifting the mattress platform easy.

If you've been looking for a "rightsized" fifth-wheel that can be towed with just about any three-quarter-ton truck, the Arctic Fox 27-5L will give you what you need.

Northwood Manufacturing
 www.northwoodmfg.com
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Special thanks to Apache Camping Center in Portland, Oregon. www.apachecamping.com







Now available with Lift Assist option! Featuring a Lift Assist Strut that makes lowering & raising your SolidStep easy!

Quick Facts

- The Lift Assist strut keeps the SolidStep from dropping completely when disengaged from the door-jamb.
- The heavy-duty gas strut system that takes the weight off of the SolidStep makes it virtually weightless when it is released to the ground.
- Because of the Lift Assist strut, the weight of the SolidStep allows for minimal effort on lowering. Lowering the SolidStep with Lift Assist can even be done with one finger.

Lift Assist Kit compatible with all generation 3 triple and quad SolidSteps.





Just Say NoBo

Paired with the Toyota Sequoia, the off-road-ready No Boundaries offers a lightweight alternative to toy haulers for adventure-minded RVers

– by Barb Riley

nce upon a time, travelers put extra gear on the roof of their cars as a natural necessity. Adventurers progressed to bigger trunks, hatchbacks and SUVs with cargo areas rivaling that of a pickup truck.

When the toy hauler came into being, it was a new era. *A garage! Fully portable! Inside the RV!* Owners could put almost anything in there. A car pulling an

RV, that's so last-century. The RV could swallow the car and drive around with it in its belly. The lines were redrawn.

But however far the pendulum swings, it always comes back the other way. Just ask Edgar Allan Poe. Hello, recession. Hello, downsizing. Hello, demand for lighter units to tow with family vehicles. You remember — you were there.

The bad times are behind us, but the new niche remained and is still growing, if somewhat self-contradictory (aka, spoiled). There's a prevalent urge to simplify without sacrifice; we want to enjoy life to the max, within the tenets of moderation.

Enter the No Boundaries line of travel trailers measuring 10, 16 or 19 feet long, all with a gross vehicle weight rating (GVWR) under 5,000 pounds and prepped for rooftop Rhino Racks fitting a variety of outdoor equipment, among a host of other off-roadready features.

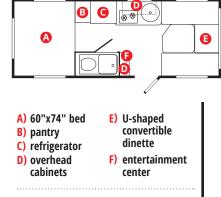
OUT AND ABOUT

We tested the NB16.5 model and could tell a difference from our first walk-around. The utilities have a more rudimentary setup; various hookups are dotted along the side of the trailer, as opposed to being consolidated in a utility center, but they're still within easy reach of a campground pedestal if you're using one. The NoBo's oversize nitrogen-filled all-terrain tires and 13-inch



pounds — a handy option, at least for those who are less vertically challenged than I am. That boost wasn't quite enough for me, so I scaled the sturdy rear ladder and, perk up your ears here, because this is where the NoBo shines. While I'm not afraid of ladders or reasonable heights, I haven't always felt secure making that climb or cruising the roof once I did. Here, that wasn't an issue.

The fully walkable PVCcovered roof is designed to handle this kind of use. Not just the pitterpatter of little feet, but heavier activity like pulling up kayaks or bikes, strapping them into the Rhino Rack, and later doing it all in reverse. I could probably do a jig up there and feel pretty good about it (note to self: must learn how to jig). That roof functionality is a unique feature, and I suspect a core selling



point, for the NoBo line.

Back down on the ground, you'll have other baggage that has to go somewhere. The "exterior storage" on the NB16.5 is actually inside storage with dual-access points; there's a curbside compartment door to a small space under the dinette, and doors on both sides for the area under the rear queen bed.

The No Boundaries is aptly named. It's all about possibilities here, being both specialized and customizable.

ground clearance make it easier to nose your way into a self-made spot near whatever nature-world adventure you're chasing. And you're undoubtedly going to get dirty while you're doing it, so there's an exterior shower to help with that.

Whatever your surroundings, you can drop anchor and make yourself at home, like we did. I liked the stable MORryde steps that extend to the ground. The manual 12-foot box awning was a little tricky to figure out; even after I swallowed my "I can do it myself" pride and asked for help, it took two of us awhile to get it properly deployed. But afterward, we could plug in to the exterior power outlets to play our jams or use the standard JBL Flip 4 portable Bluetooth speaker, which also has a handy cradle on the wall right inside the entry door.

When it's time to help steady fun stuff taken off the roof, you can improve reach from the side via the wheel skirts that are treaded and rated for 300

Right, from top: Two stove-top burners convert to counter space with the flush cover, and the roll-up sink cover converts to food-prep space. The bedside cubby has plenty of room to comfortably hold and charge items within reach.





STASH AND SLEEP

Right: Smooth-glide kitchen drawers are a nice storage element. Below right: A roomy threeway silent-absorption refrigerator has adjustable shelving and a bonus removable freezer compartment. Beyond the fridge, a queen-size bed occupies the rear of the NB16.5.

COME IN, TAKE A LOAD OFF

Stepping inside the NB16.5, a wall console on the left provides hooks, a bottle opener and netted storage compartments, crowned with an in-counter safe. I liked the idea of having a secure space for small valuables, but the lock became jammed when I tried to insert the key, so I couldn't take a look. An optional 28-inch HDTV, complete with audio output, PC-game and HDMI jacks, hangs on the wall facing the dinette but can swing around for bedroom viewing.

Straight ahead is the kitchen area. I'm pretty hardcore about an RV kitchen's functionality, and I'm pleased to say the NB16.5's kitchen was quite well designed and outfitted. The sink features a nicely arched faucet and is respectably roomy for an RV this size, and a slide-open window provides airflow for the two-burner cooktop that's fitted with a flush cover.

There's a surprising amount of storage here. The shelved under-sink cabinet has an inset spice-rack running the length of the counter, three drawers that slide out smoothly and farther than expected, and an overhead cabinet deep enough

> to fit bulkier items but shallow enough so that I didn't bump my

head while doing dishes. I found myself wishing they'd left part of the under-sink area open so it could house a small trash can. Instead, I stashed ← Seated at the dinette, the whole crew will enjoy plenty of natural light and air from the surrounding windows, and dropping the table for nighttime use as a bed for two is a snap. The dinette's curbside under-seat storage can also be accessed from the outside.





it under the dinette when no one was sitting there.

At the front is the dinette, and we'll alight here on the highly subjective topic of decor. The NB16.5's dominant grays and whites contribute to a light, pleasant interior, a necessity for a smaller RV that can feel even smaller with a too-dark palette. Still, to my eyes, the dinette's warm amber brown and cream battled against the cool, bluer undertones of the grayish-brown cabinets, and the two throw pillows' shades of orange in a blocky Arizona-style pattern seemed oddly out of place against the soft-gray bedspread. It's just one person's perspective, of course.

The NoBo still boasts a cheerful ambience overall, thanks largely to plentiful natural light provided in part by the



WHAT WE LIKED Climbable, walkable exterior surfaces. Deep bedside cubby with power outlets. Oversize all-terrain tires and high ground clearance for off-road exploration. WHAT WE'D LIKE TO SEE
Interior door leading to the under-bed
storage space. A more-opaque bathroom
door. More headroom at the dinette's center
seat. Softer interior lighting options.

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Sabre Security Equipment Corp., Circle 131 on Reader Service Card U-shaped dinette's two side windows and wide panoramic front window. Aside from a slight adult head-clearance problem toward the front, we enjoyed

SPECIFICATIONS

2019 FOREST RIVER NO BOUNDARIES NB16.5

2015 FOREST RIVER NO	DOUNDARIES ND 10.5
Exterior Length	20'
Exterior Width	8'
Exterior Height (without A	/C) 8' 7"
Interior Width	6' 3"
Interior Height	6' 6"
Construction Alumin	um framing, block-foam
insulation, pir	ch-roll laminated walls,
fiberglass shell, wa	Ikable PVC-covered roof
Freshwater Cap.	30 gal.
Black-Water Cap.	30 gal.
Gray-Water Cap.	30 gal.
LP-Gas Cap.	20 gal.
Water-Heater Cap.	6 gal.
Refrigerator	3.7 cu. ft.
Furnace	20,000 Btu
Air Conditioner	13,500 Btu
Converter	30 amp
Battery	Dealer installed
Tires	ST235/75R15
Suspension	Torsion-axle with
i	ndependent suspension
Weight (freshwater and	
LP-gas full; no cargo)	2,991 lbs.
Hitch Weight	312 lbs.
Axle Weight	2,679 lbs.
GVWR	4,712 lbs.
GAWR	4,400 lbs.
Cargo Carrying Cap.	1,721 lbs.
MSRP, Base	\$18,930
MSRP, As Tested	\$24,331
Basic Warranty	1 year
Forest River, www.fores	triverinc.com/nobo

Forest River, www.forestriverinc.com/nobo Circle 141 on Reader Service Card

2019 TOYOTA SEQUOIA LIMITED 4X4

Engine	5.7L V-8
Horsepower	381 @ 5,600 rpm
Torque	401 lb-ft @ 3,600 rpm
Transmission	6-speed auto
Axle Ratio	4.30:1
Fuel Cap.	26.4 gal.
Tires	P275/55R20
Suspension, Front/Rear	Coil-spring independent
double wishbone,	gas shocks, stabilizer bar
Brakes	Disc
Tow Rating	7,100 lbs.
GVWR	7,300 lbs.
GCWR	13,500 lbs.
Wheelbase	122"
MSRP, Base	\$60,020
MSRP, As Tested	\$62,900
Basic Warranty	3 years/36,000 miles
	comprehensive
Powertrain Warranty	5 years/60,000 miles

Toyota, www.toyota.com/sequoia

the dinette area and its good-sized, easy-lift freestanding table, from which you can easily scoot in or out. It lowers to seat level to create another sleeping area for two, and an outlet on the nearby sink cabinet is handy for charging devices.

LOOKING BACK

Heading toward the rear of the trailer is a wet bath. Hot water was routed pretty quickly to the shower, and the sink has its own faucet rather than the showerhead being the only water source. We were missing a mirror, though: there wasn't one anywhere in the trailer. Another caveat is the translucent door, reminiscent of what you'd see on a sliding-door shower. That does let light into a very small space, but it also means people can see in easily, which gave us the willies, privacy-wise. My work-around was hanging an oversize beach towel on the door. but it sure would be nice to have a moreopaque material there.

Back toward the bedroom, the open cubby and two pullout drawers of the 'pantry" comprise the NoBo's closest thing to a dresser, so we used it for sundries rather than munchies. On the side facing the bed, there's a nice, deep cutout with an outlet in the back (great for charging my Kindle overnight, which I always read much too far past my bedtime), and a ridge around the opening so my ever-present lip balm wasn't in danger of rolling out. It was even tall enough to hold a bottle of water upright inside. An actual RVer had to have taken part in the creation of this thoughtful feature, which should always be the case, to my mind.

The under-bed space is open to the interior, presumably to accommodate longer cargo like skis or fishing rods, but because there was no door on it, we had some outdoor-temperature encroachment and nothing to keep items from sliding around during travel. After a day on the road, I found a bag I'd stashed back there sitting right inside the entry door when I opened it. A sliding door would be a simple remedy that doesn't restrict function.

We stashed a couple bags on two

drop-down fabric cargo shelves over the side windows, since the under-bed space mostly held outdoorsy items like campfire supplies and lawn games. The bed itself is very, very firm, so a mattress topper is recommended, if not a replacement mattress.

TAKIN' IT TO THE STREETS

Towing the No Boundaries trailer with the Toyota Sequoia Limited 4x4 presented only a small challenge for the stout V-8. The Sequoia, which can be best compared to the Chevrolet Tahoe for size, is powered by a 381-horsepower, 5.7-liter i-Force engine that has proved its mettle over the years. Toyota rates this SUV for towing trailers up to 7,100 pounds in the four-wheel-drive iteration, and since the trailer weight sucked up less than half of the available rating, the engine pulled with no complaint.

Highway speeds were maintained easily, and when it came to passing slower traffic, throttle response was lively enough to make the maneuvers safely. It's a smooth-running, quiet engine that consumes gasoline judiciously when solo and won't break the bank when towing trailers to its rated limit.

The only issue experienced when pulling the No Boundaries was handling at highway speeds. Since the lightweight trailer has only a 310-pound hitch weight, it was connected to the Sequoia with a weight-carrying hitch, a hitch decision that proved a mistake. That choice was less than desirable and resulted in an unsettling feeling at highway speed. Drivers had to be careful to go easy on steering input, obviously, since even the light hitch weight unloaded the compliant front suspension enough to create stability problems. A weight-distributing hitch will help improve towing stability and is highly recommended for this type of towing setup, and you can also add a friction-type or some other swaycontrol device if the situation warrants.

Solo, the Sequoia is a dream to drive. The plush cockpit is graced with Limited-package amenities, and the seats are very comfortable. Seven people can travel in this SUV with



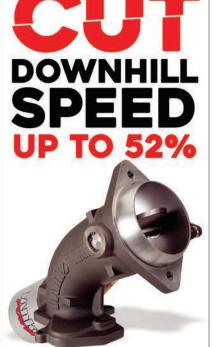
The wet bath has a sunken shower pan and a raised toilet platform, plus a separate sink faucet in addition to the showerhead.

surprising comfort for those who draw the short straws and are relegated to the third-row seating. Road noise is squelched nicely, and entertainment from the optional Premium JBL Audio package with integrated navigation and apps complements the cabin. Other than the JBL system, power memory for the driver's seat and outside mirrors, carpeted floor mats and doorsill protector, everything else in the highly equipped Toyota is standard.

Although the Sequoia has a factory-installed hitch receiver and seven-way receptacle, the owner will be responsible for adding a brake controller. A connector for the wiring harness can be accessed by removing the driver's-side kick panel. Alternatively, an app-controlled model like the Curt Echo could be used. Sideview-mirror extensions will also be the owner's responsibility.

A host of electronic gizmos are provided by the factory, including a tow/haul position for the six-speed automatic transmission (to optimize shift points) and sway control, which had minimal effect on this combination.

Safety-wise, Toyota offers a Pre-Collision System with Pedestrian warning to help with braking when the



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An exhaust brake can prevent the nightmare of overheated service brakes and uncontrollable speeds. And folks who want the *strongest* (and *smartest*) exhaust brake go with the **Banks Brake**. How strong is it? Down a 5-mile, 6% grade, the Banks Brake slowed an 18,000-lb pickup/trailer from *60 to 25 mph* without using the service brakes.







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human factor isn't enough, and a Lane Departure Alert, which warns the driver when the vehicle is moving out of the lane. A radar-supported automatic cruise control is also provided as standard equipment, which maintains speed and distance with traffic ahead.

PULLING INTO HOME

The No Boundaries is aptly named. It's all about possibilities here, both specialized and customizable. You can stamp outings with your own flavor of fun, whether you're an adrenaline junkie like my daughter, or you're like my brother-in-law for whom fishing is required by law, or you just want to ride your bicycle.

We RVers have blown way past the lure of the open road; we're now swayed by the siren song of the open non-road. And we're exploring that frontier by going back to basics, just a little smarter.

Below: Toyota's Entune Premium Audio, part of the options package, features a 6.1-inch high-res touchscreen, HD radio, predictive traffic and Doppler weather overlay. Bottom: The exterior lines of the Sequoia are sleek and aerodynamic. Running boards make getting in and out a snap.



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GREAT LAKES OF THE SOUTHEAST

On the border of Tennessee and Kentucky, America's largest inland peninsula entices RVers to a vast outdoor playground just waiting to be explored

– by Bruce Leonard

Steam rose in shimmering columns from the blacktop, as dark-gray clouds slid across the sky, carrying the summer squall east. The sun's rays edged across the parking lot, then brightened the entrance to the Homeplace. Inside the boundaries of this replica of a working 1850s family farm, only a few travelers wandered the grounds on a late-June Wednesday afternoon.

The Homeplace, promoted as a living-history museum, is located within the 170,000 acres of forest, wetlands and open pastures that make up Land Between the Lakes National Recreation Area in western Kentucky and middle Tennessee. Land Between the Lakes — almost universally called "LBL" in the region — gets its name because it lies between Kentucky Lake to the west and Lake Barkley to the east. The two long, north-south bodies of water serve up 300 miles of undeveloped shoreline and countless sections of water to explore or fish for largemouth bass, catfish, crappie and other species.

Justin Keeling, agriculture coordinator at the Homeplace, was crafting various woodworking projects after the storm rolled through that June

TAKE THE BAIT

Early morning and late-evening fishing in LBL can pay off with big catches of bass, catfish and crappie.



afternoon. "It's way too wet to be doing fieldwork," he said. The farm raises oxen, mules, sheep, pigs and chickens, including rare and endangered breeds. Various plants and field crops grow on the property, most of them cultivated from heirloom seeds that date to before the Civil War. Visitors can purchase the legacy seeds in the gift shop.

Unlike places such as Colonial Williamsburg where employees remain in character and use speech appropriate for a particular time period, the six full-time employees and two interns at the Homeplace dress in period outfits but do not portray specific people. This eliminates the awkwardness of trying to explain to modern-day visitors the intricacies of farmwork in language they don't understand or being forced to use anachronisms.

"I'm a historian, not an actor," said Keeling, before he demonstrated how to craft a table leg on a lathe spring pole, a hands-on example of 1850s' craftsmanship.



Above and left: With miles of horseback-riding and mountain-biking trails, Land Between the Lakes attracts equestrian and pedal-powered adventurers. Lower left: Hillman Ferry Campground has 374 wooded and lakefront campsites and easy access to hiking and mountain biking.

A TALE OF TWO RIVERS

President John F. Kennedy officially designated the national recreation area in 1963, but the land between the Cumberland and Tennessee rivers had been inhabited and used for numerous purposes for at least 3,000 years before then. The Woodland Indians foraged and hunted in the area from 1000 B.C. to 1000 A.D. The Mississippian Indians later farmed the region, then were followed by various tribes, including the Shawnee, Choctaw, Chickasaw and Cherokee.

The land, known as Between the Rivers before it became a national recreation area, teemed with herds of elk and bison and was home to deer, bears, wolves, turkeys and bobcats. The animals were so plentiful that a section of Between the Rivers was often called the Garden of the West.

The first European explorers passed through

LAND BETWEEN THE LAKES — ALMOST UNIVERSALLY CALLED "LBL" IN THE REGION — GETS ITS NAME BECAUSE IT LIES BETWEEN KENTUCKY LAKE TO THE WEST AND LAKE BARKLEY TO THE EAST. in 1540, and the French established a trading post on the Cumberland River as early as 1692 so they could trade with the Shawnee. By 1800, however, all of the bison in the region had been killed, and by 1846, so had the elk. The area continued to thrive, however, because the land held large amounts of minerals and vast hardwood forests.

Deposits of limestone, hematite, magnetite and iron ore enabled eight furnaces to produce iron in large quantities from 1820 until the beginning of the Civil War in 1861. The hardwood forests were so productive that in 1906 one company moved 3 million railroad ties via the Tennessee River, enough ties to build a railroad from Washington, D.C., to Denver, Colorado. Flatboats also moved iron, tobacco, wheat, hemp, flax, cotton, corn and livestock to markets in cities as far away as Philadelphia.

Settlers from England, Scotland, Ireland and Germany brought family recipes for whiskey from their homelands, and the region became noted for its whiskey, as well as for the tanning of animal hides.

The history of the area is so unusual that during a border dispute between Right, from top: Fallow deer make their home throughout Land Between the Lakes, and more than 70 bison find sanctuary in the recreation area's Elk and Bison Prairie.

Tennessee and Kentucky, residents didn't know which state they lived in, so they called themselves residents of Between the Rivers. The region also played a role in the Trail of Tears, the forced migration of Native Americans after the passage of the Indian Removal Act of 1830, and in the Civil War when the Confederate fort along the Tennessee River, Fort Henry, fell in 1862.

The Tennessee Valley Authority came into existence as part of President Franklin D. Roosevelt's New Deal as a means to put people to work during the Great Depression. To help combat flooding, facilitate trade and create recreational opportunities, the TVA dammed the Tennessee River in the early 1940s,



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creating Kentucky Lake. Nearly 3,500 residents of Between the Lakes were displaced when the 134,000acre reservoir was created, and the government's use of eminent domain to acquire the land was controversial.

In the 1960s, the U.S. Army Corps of Engineers dammed the Cumberland River, creating Lake Barkley, named for President Harry S. Truman's vice president, Alben Barkley, from nearby Paducah, Kentucky. The Corps then built a canal between the two bodies of water, decreasing the shipping distances for goods being transported to market without the use of locks.

SOUTHEASTERN ADVENTURE PARK

Today, Land Between the Lakes attracts tourists from around the world. Emily Formed by the damming of the Cumberland River, Lake Barkley stretches 134 miles and has more than 1,000 miles of shoreline.

Cleaver, who works for the U.S. Forest Service, said approximately 1,672,000 visitors entered LBL in 2017.

One attraction not to be missed, especially for families, is the Elk and Bison Prairie, just north of the visitor center on the Woodlands Trace National Scenic Byway. Within the 700-acre enclosure, more than 40 elk and more than 70 bison roam freely. After paying \$5 per vehicle to enter, visitors slowly drive their enclosed vehicles along the 3.5-mile loop that winds through the native grassland of Kentucky. The best times to view wildlife are at dawn and dusk because the

+ PLANNING YOUR TRIP

First-time visitors to Land Between the Lakes **National Recreation Area** should begin their stays at the Golden Pond Visitor Center. Located along the Woodlands Trace National Scenic Byway, which runs north-south for the length of LBL, the visitor center provides a detailed overview of the history of the region, including the people who lived there and the creation of the recreation area. Visitors can browse through regional information, watch a 15-minute film and have their questions answered by a member of the U.S. Forest Service. For a small fee, they can take in the 40-minute show in the adjacent planetarium.



animals generally take cover in the heat of the day. The elk and bison are large and wild, so visitors should remain in their vehicles at all times.

Children and visitors who are young at heart may enjoy a visit to the Woodlands Nature Station, located between Honker Lake and Hematite Lake, where staff will inform them about the area's flora and fauna. LBL is home to some 1,310 plant species, 352 land animal species, 69 reptile and amphibian species, and 260 bird species.

Hikers can explore 261 miles of trails, ranging from moderate nature walks to multiday adventures. "Our easiest nature hikes are the Hematite Trail, a 2-mile trail that wraps around Hematite Lake, and Honker Trail, a 5-mile trail that goes around Honker Lake and the nature station," Cleaver said.



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WHERE TO CAMP

Land Between the Lakes National Recreation Area has 1,400 campsites in 21 campgrounds. **Energy Lake, Fenton and Hillman Ferry** campgrounds in the northern section and **Piney and Wranglers** campgrounds in the southern section offer sites with full and partial hookups. RVers who bring horses can stay in one of Wranglers' 220 sites and explore 100 miles of equestrian trails. **Turkey Bay Off-Highway Vehicle Area** offers access to OHV trails and primitive campsites. www.landbetweenthelakes.us

Three Kentucky state resort parks surrounding LBL offer campsites with full and partial hookups. Lake Barkley State Park Resort sits on the eastern shore of Lake Barkley. Kenlake State Park Resort is on the midwest shore of Kentucky Lake, and Kentucky Dam Village is on Kentucky Lake's northern shore. www.parks.ky.gov/parks/resortparks

In Tennessee, on the western shore of Kentucky Lake, **Paris Landing State Park** accommodates RVs with 45 sites with water and electric hookups, along with 18 primitive sites. www.tnstateparks.com/parks/paris-landing

The following Kentucky **Good Sam Parks** welcome RVers near LBL:

BENTON

Lakeside Campground and Marina www.visitlakesidecampground.com

Stagecoach Station Campground www.stagecoachcampground.com

EDDYVILLE

Murphy's Outback RV Resort www.murphysrv.com/outback_rv_resort.cfm

PADUCAH

Duck Creek RV Park www.duckcreekrv.com

Fern Lake Campground www.fernlakecampground.net Mountain bikers can pedal more than 70 miles of trails, many of which demand a high degree of skill. Cyclists on road bikes or beach cruisers will find few experiences more sublime, especially at sunset, than riding the bike path that crosses the top of Kentucky Dam, which holds back Kentucky Lake.

Though LBL obviously holds plenty of terrestrial appeal for travelers, the lakes are the primary attractions. Various federal and state agencies are in the process of creating water trails — "blueways" — within LBL's boundaries. Canoers and kayakers, however, don't need an official map to investigate the countless coves and inlets that exist within the hundreds of miles of undeveloped LBL shoreline. Anglers and boaters of all kinds can launch their watercraft at any of the 27 boat ramps.

CAMPING ON THE WATERFRONT

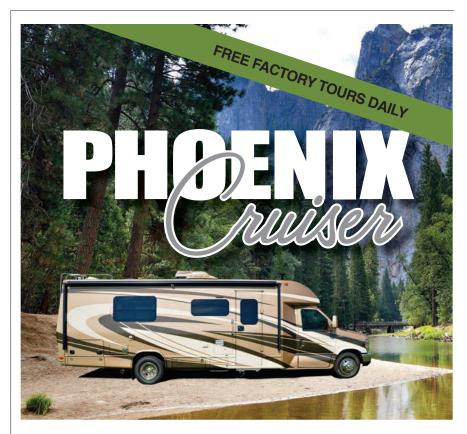
Not surprisingly, the campsites that fill up the quickest are those along the water, granting campers the ability to take a dip, cast a line or launch a kayak only steps from their sites. On that late-June Wednesday, most of Hillman Ferry Campground's 374 sites were filled, and all of the waterside sites were occupied. This well-run campground, featuring various play areas, a swimming area and easy access to mountain-biking trails, features all manner of sites, though many RVers may prefer not to be so close to their neighbors.

Robert Smith has been boondocking annually in the small, rustic Taylor Bay Campground since before he was born. He said he has a 1979 photo of his mother, pregnant with him, standing in front of the campsite that his 31-foot Hornet trailer and bass boat currently sat in, with his parents' trailer parked in the neighboring site.

Smith had spent the day fishing, pursuing "anything that's biting," he said. The extreme heat of summer, however, made the fishing less productive than it is during the cooler spring and fall. During those seasons, it is more difficult to secure a campsite, though that doesn't stop him from setting up in the same campsite at Taylor Bay month after month.

Matt Tomc, from St. Louis, slowly backed his 37-foot Mesa Ridge trailer into a campsite in Kentucky Dam Village State Resort Park, just outside of LBL. The campground is open from April through October and features 221 paved sites with hookups. Tomc and his family had traveled to numerous campgrounds in this part of the country, and they "thought it was time to check out Land Between the Lakes," Tomc said. They intended to visit the Homeplace and rent a boat, he added.

Regardless of where LBL visitors stay, they will almost certainly want to at least cool off in all of that water. They can do so at numerous beaches, but Cleaver, who knows LBL well, recommends Moss Creek as one of the best day-use areas for swimming. "It has a nice place to picnic, grill and enjoy Kentucky Lake."



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BEST OF THE BERKSHIRES

From Mount Greylock to the Mohawk Trail, northwestern Massachusetts rolls out magnificent scenery, picturesque towns and cultural activities

– by Kenneth W. Dahse

Williamstown sits in the shadow of Mount Greylock, the highest peak in Massachusetts, and is surrounded by the forests of northwest Massachusetts' Berkshire Mountains. From the southern entrance, an 8-mile serpentine road with several overlooks leads to the 3,491-foot summit of Mount Greylock and its expansive panorama. On a clear day, parts of five states are visible: Vermont, Connecticut, New Hampshire, New York and Massachusetts. Williamstown is home to Williams College, founded in 1793, and has restaurants, cultural activities and impressive churches. For RVers, a beautiful campground at the base of Mount Greylock adds to the allure of the area.

MASSACHUSETTS ICON Rising majestically above the trees on Mount Greylock, the Veterans War Memorial Tower honors all U.S. soldiers who fought and died in World War I and later conflicts.

MOUNT GREYLOCK

Created in 1898, Mount Greylock State Reservation is a 12,500acre wilderness park and our favorite state park in Massachusetts. With more than 70 miles of trails for hiking, mountain biking, snowshoeing, cross-country skiing and snowmobiling, the park satiates multiple desires for outdoor adventure. Home to bear, marmot, deer, wild turkey and hawks, among others, it offers wildlife-viewing possibilities.

The 93-foot-tall granite Veterans War Memorial Tower, completed in 1932, gives a 360-degree view of the mountains that encircle the peak like green waves rolling onto the shores of an island. As Jimmy Cagney yelled in the film *White Heat*, "Made it, Ma! Top of the world!" For those who like a challenge, the Stony Ledge Trail offers some of the best views on the mountain.

The summit is also home to Bascom Lodge, built in the 1930s by the Civilian Conservation Corps with local stone and old-growth red-spruce timbers. Its rustic style became the blueprint for many of the lodges in the Western national parks. From June 15 through October 20 this year, lunch and dinner are served daily, and breakfast is open to the public Fridays, Saturdays and Sundays.

Greylock Glen in Adams covers 1,060 acres on the slopes



of Mount Greylock with meadows, swamps and woodlands. The pond area has picnic tables, as well as mountain-biking and hiking trails that provide impressive views in all directions.

The 300-acre Field Farm Reservation on Sloan Road in Williamstown is a nice place to experience a peaceful nature walk. Four miles of trails meander through fields, woodlands and gardens with modern sculptures. The fields and uplands are home to coyote, turtle, bobcat, deer and a beaver colony. If you're lucky, you might spot a majestic blue heron standing in the shallows of the pond or a red-tailed hawk soaring across the heavens.

The mile-long North Trail is a popular loop that circles the pasture. The Oak Loop crosses a flowing stream and leads to an oak forest overflowing with ferns. The Caves Trail loop follows small streams that dissipate underground and caves that were carved over thousands of years. Two houses from the former homestead remain; one now serves as a bed-andbreakfast, and the other is open for tours. Cliffs of 550-millionyear-old white marble are visible from the road and trail in Natural Bridge State Park, located in North Adams. The woodland scenery is breathtaking in this 48-acre park.

MUSEUMS, ART AND PERFORMANCES

If you are interested in cultural activities, Williamstown has much to offer. The Williams College Museum of Art is located in the heart of the campus, and works by students, faculty and internationally respected artists are on display. The Clark Art Institute has a permanent collection of Impressionist art (Renoir, Monet, Degas), 19th-century artists and decorative art that spans five centuries. The Lunder Center at Stone Hill (open seasonally) houses rotating exhibits and an art-conservation center. The center encompasses 140 acres of land with trails that lead off from the building to woods, meadows and sculptures.

From June through August, the Williamstown Theatre Festival brings Tony Award-winning actors



Right: How sweet it is bicycling back in time over the Bissell Covered Bridge near an old mill dam in Charlemont. Far right: With its towering steeple, the impressive First Congregational Church stands like a sentinel on Main Street in Williamstown and epitomizes the New England-style church.



and television and film stars to perform in a series of plays. In addition to main-stage productions, actors sing at cabarets and often use the festival to launch edgier plays. In 2012, Bradley Cooper starred in *The Elephant Man*. He and the entire cast went on to a successful run on Broadway. When Williams College is in session, its '62 Center for Theatre and Dance presents performances on a regular basis.

MOHAWK TRAIL

One of the most scenic drives in Massachusetts runs approximately 44 miles east from Williamstown to Greenfield on State Route 2. Also known as the Mohawk Trail, it mainly follows a Native American trade route that connected the upstate New York tribes with the Atlantic tribes. Opened in 1914, Route 2 is one of the oldest designated scenic roads in New England.



NEW Williamstown YORK North Adams Florid Charlemont Adams (43) Shelburne Falls 8 Buckland / 17 Deerfield River (91) MASSACHUSETTS Hancock Lanesborough (112) STAY AND PLAY

VERMONT

LANESBOROUGH

A Good Sam Park, **Mount Greylock Campsite Park** is beautiful, rustic and forested. The park has large sites with electric and water hookups, a dump station, as well as play areas, a swimming pool, a catchand-release pond and a recreation hall. www.mtgreylockcampsitepark.com

NORTH ADAMS

Located at Windsor Lake, **Historic Valley Campground** has 100 wooded sites with water and 20- and 30-amp service. The municipal campground, operated by the City of North Adams, offers fishing, boating, swimming, organized activities, a playground, bathhouses and a dump station. camping.northadams-ma.gov

FOR MORE INFORMATION

Destination Williamstown www.destinationwilliamstown.org

Mohawk Trail Association www.mohawktrail.com

The Mohawk Trail not only played an important part in the history of precolonial Indian Nations but also figured in the Colonial era and the Revolutionary War. Benedict Arnold, while still a patriot, traveled from Boston to Fort Ticonderoga in New York. He recruited additional troops in Deerfield and joined Ethan Allen and his Green Mountain Boys to defeat the British at Fort Ticonderoga.

Literary giants such as Nathanial Hawthorne and Henry David Thoreau traveled the trail: Hawthorne in 1838 and Thoreau in 1844. Both men climbed Mount Greylock and wrote about their experiences.

Today, beautiful scenery, historic markers, unique shops, inns, villages, and 50,000 acres of state parks and forests line the trail's path. Starting in Williamstown, you can visit the college's 1904 Thompson Memorial Chapel. This Right: Forested Mount Greylock Campsite Park is located at the base of its namesake. Far right: The Lunder Center at Stone Hill in Williamstown, a sanctuary in the woods, houses an art-conservation facility and hosts a summer exhibition that opens in July.

Gothic-style chapel's stained-glass windows are especially beautiful when viewed from within. Heading east, you pass the impressive First Congregational Church on Main Street. This classic white-clapboard New England Church was established in 1765. A new building was completed in 1869 but remodeled to its current style in 1914.

In North Adams we took a short side excursion to visit Natural Bridge State Park, home to the only natural whitemarble arch in North America. Made of 550-million-year-old bedrock marble, it was created more than 13,000 years ago by glacier melt. An easy trail above the ¼-mile chasm leads to an abandoned marble quarry and a white-marble dam. The park, open from Memorial Day through Columbus Day, has a small visitor center and picnic tables.

Heading east from North Adams, the Mohawk Trail climbs into the mountains and makes its famous hairpin turn. Linda finds this section a real nail-biter. The trail rises sharply to the Western Summit, called Spirit Mountain by members of the Iroquois League. Once at the top, the overlook affords excellent views of Mount Greylock, the Hoosac Valley and the Green Mountains in southern Vermont.

Passing through the scenic town of Florida leads to Whitcomb Summit, the highest point on the Mohawk Trail at 2,200 feet and home to the Elk on the Trail Monument. It was erected in 1923 by the Benevolent and Protective

PLANNING YOUR TRIP

My wife, Linda, and I never miss a stop at the Mount Greylock Visitor Center on Rockwell Road in Lanesborough. The visitor center offers abundant information about the area, as well as some nice views south of the Berkshire and Taconic mountains and the Housatonic River Valley. From the visitor center parking lot, an easy 1.8-mile-roundtrip hike on the Bradley Farm Interpretive Trail loops through a hardwood forest and colonies of ferns.



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Order of Elks to honor those who lost their lives in World War I. From the summit, you can see far into southern Vermont and New Hampshire.

At Charlemont, the *Hail to the Sunrise* statue honors the Mohawk Nation, one of the Five Nations of the Iroquois Confederacy that ruled the region before being conquered during Colonial wars. For those yearning for outdoor excitement, Charlemont is home to Zoar Outdoor Adventures, which offers whitewater rafting, kayaking, bike rentals and an extensive zip-line canopy ride.

Just north of Route 2 on Route 8A is the 92-foot-long Bissell Covered Bridge, which was listed on the National Register of Historic Places in 2004. Built in 1951 as a pedestrian bridge to replace the 1881 span, the bridge was subsequently reconstructed to accommodate modern vehicles. In Shelburne Falls, the Native Views store has one of the most politically incorrect "cigar-store Indian statues" I have ever seen. Standing 20 feet tall, it was erected in 1974. In agreement with local Mohawks, a statement at the base explains that the statue is a stereotype of the western "Plains Indians" and does not represent the eastern "Woodland Indians." Nonetheless, the store gift shop is worth a visit.

BRIDGE OF FLOWERS AND BACK TO WILLIAMSTOWN

The 400-foot-long Bridge of Flowers in Shelburne Falls is an archaic arched trolley bridge that is converted into a garden from spring to fall (April 1 through October 30 this year). It connects Shelburne Falls and Buckland, as it crosses the Deerfield River.

At this point, we usually head back toward Williamstown. A historic stop off Route 8 in



Several companies in Charlemont offer adventures on the Deerfield River, from stimulating whitewater rafting to tame kayaking in the heart of the scenic Mohawk Trail region. Adams is the Susan B. Anthony Birthplace Museum, which honors this social reformer who was born into a Quaker family in 1820. Involved in multiple causes, Anthony is most known as a suffragette and lifelong social

activist for the cause of women's rights. Her birthplace home is a strong example of Federal-style architecture and is listed on the National Register of Historic Places.

Williamstown has several highly rated golf courses sitting within the shadows of the Berkshire Mountains. Adventure for the whole family can be found at the Jiminy Peak Mountain Resort in Hancock. During summer, the resort's aerial-adventure park offers six elevated courses and three zip lines, its mountain-adventure park has rides and activities, and two chairlifts service its mountain-bike trails (no rentals available).

All these opportunities for fun, adventure, culture, history and natural beauty make the heart of the Berkshire Mountains in northwestern Massachusetts an excellent RV destination and one we look forward to experiencing again soon.

MORE ONLINE: TAG ALONG WITH KEN DAHSE ON HIS ROAD TRIPS THROUGHOUT THE NORTHEAST AT WWW.TRAILERLIFE.COM/ TAG/KENNETH-W-DAHSE.





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ABOVE AND

UNDERSTANDING THE RV WASTE SYSTEM WILL K

SHOWER

Nothing portrays affection more than being the person responsible for dumping and maintaining the RV holding tanks. And yet, how many owners truly understand what makes the system tick and how to keep it performing at its best?

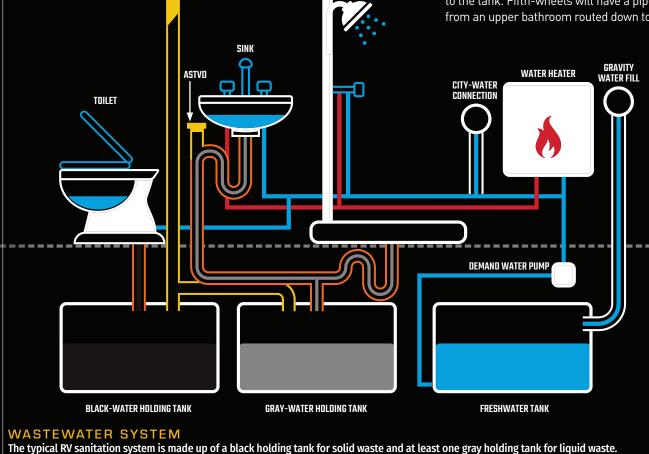
First of all, it really isn't rocket science. It's just science. We use water throughout our day to hydrate, to wash and to eliminate. In fixed structures, many people forget about the process after the contents are flushed away, but with an RV, this is only the first stage of the sewage-treatment process. We store the waste, treat it and systematically send it into an appropriate receiving system, commonly known as a dump station. Done correctly, the system remains relatively clean and operational with little fuss. Done wrong, solids can build up in the tanks, which can lead to trouble.

VENT

ABOVE THE FLOOR

When looking at a diagram of a waste plumbing system in the average trailer, it's pretty simple. The system is usually divided into two waste systems: the black system, which is solid waste, and the gray system, which is liquid waste from sinks and the shower.

The black waste system is usually made up of 3-inch black PVC pipe that runs from the toilet down to the holding tank. In most travel trailers, there's almost no pipe; the toilet flange is glued to a threaded fitting that attaches directly to the tank. Fifth-wheels will have a pipe from an upper bathroom routed down to



BELOW

EEP THINGS FLOWING SMOOTHLY



the tank. In all cases, the tank is vented through the roof.

The gray waste system has 1½-inch black PVC pipe that is routed from each water fixture, sink, shower and clothes washer to one or more gray holding tanks. Each will have a P-trap or a HepVo device to prevent gas flowback. A HepVo is a waterless valve that will prevent gas and tank overflow liquid from backing up into the shower or sink. The most obvious benefit is that, unlike a P-trap, water is not required to maintain the seal, which means the chance of odor coming back up into the RV when water splashes out of the P-trap is reduced to zero. The HepVo also requires much less physical space to install, and winterizing is not needed.

The gray waste system also needs ventilation to work correctly, to vent the tank and allow water to properly drain. Modern RVs reduce the number of roof fixtures by using small vents that are usually hidden in walls or cabinetry. Anti-siphon trap vent devices (ASTVD) are attached to a vertical pipe near the appliance and have a neoprene or rubber flap inside that opens when there is a vacuum. Higher-end models are spring-loaded. ASTVDs are maintenance-free; however, if there is an odor problem in the RV, especially from gray water,

4) Most trailers will have a 3-inch pipe that comes straight out of the black tank, which makes attaching a clear external flush fitting (not shown) a practical option. The gray 1½-inch pipe goes into the valve at a right angle. For ease of identification, handles on this RV are color-coordinated (black for waste and gray for wastewater). Another variation has the gray line coming in at a 45-degree angle. 5) Macerators can be installed or twisted on to the sewer outlet and allow waste to be ground up and pumped to a disposal site. 1) Unlike residential toilets, RV counterparts use a foam gasket instead of a wax seal. It is recommended to replace the gasket each time the toilet is removed. 2) RVs with hidden tank valves will operate using remote, cable-controlled handles. The handle attaches to a frame that connects to a shielded bicycle-brake-type cable. 3) Some RV builders will mount the tanks in a heated area, and the discharge comes directly off the tanks. The compartment hatch has to be opened to connect the sewer hose to an articulating hose connection.

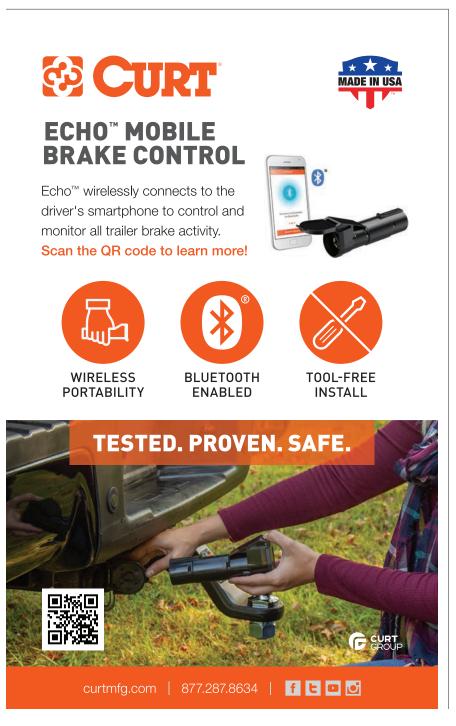




maintenance or replacement may be required. The ASTVD can be twisted off, via threads, for replacement. If the rubber has become misformed, the unit should be replaced.

To save weight, most plumbing components in an RV are plastic, but they rarely fail.

There are many models and styles of freshwater toilets on the market for RVs. They range from plastic economy models to full china-bowl electricmacerator flush models. While the latter usually depends on 1-inch rubber hose that's routed to the black-water tank, the others connect to the aforementioned toilet flange on the floor. The toilets will have a two-position flush valve; the first fills the bowl with water, and the second flushes the bowl,



which is done either with a hand lever or a foot pedal. When flushing, a sliding blade or ball valve opens to empty the contents straight down the pipe.

The toilet flange is similar to the one in a stationary home, but the seal is made of foam rubber rather than wax. If the toilet is removed for any reason, the best practice is to replace the foam-rubber seal. However, if it passes a careful inspection and is reinstalled just as it came out, it should be OK.

BELOW THE FLOOR

In a house, the soil stacks run into the cellar or below the foundation and then out to the sewer or septic system. Once you open a drain or flush the toilet, there's nothing more to think about. In an RV, wastewater is collected in holding tanks by type: "gray" for the sink and shower water and "black" for sewage. The tanks are piped to termination valves and a fitting to which the sewer hose is connected.

Tanks are usually made of polyethylene or ABS plastic, and pipe fittings are either glued or spin welded in place, depending on the type of tank. The tanks are vented through the roof via a 1½-in pipe.

Some RVs have more than two holding tanks. This is not just for added holding capacity but to accommodate certain floorplans and for plumbing slope. For a waste pipe to drain correctly, it has to maintain a slope of at least ½-inch per foot, as required by the NFPA 1192 building code. Depending on the length and style of the RV, there may not be enough vertical drop to maintain that slope.

For example, a travel trailer might have only 3 to 4 inches from the top of the floor to the top of the tanks. Since the tanks sit right up against the bottom of the floor, the drain plumbing must be

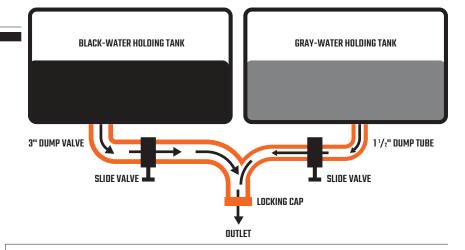
TECH TIP

With the RV toilet and black tank, water is your friend. Start with a few gallons of water and toilet chemical in an empty tank. When solids are involved, use plenty of water in the bowl before flushing. run above the floor, or, in the case of the toilet, drain directly into the tank. If the waste facilities in the RV are far apart, the solution is often to install multiple tanks. When configured in this manner, the waste systems are entirely separate from each other. Some motorhome manufacturers use macerator pumps to move waste from a passenger's-side discharge tank to a driver's-side sewage-dump connection, again, because of slope, and often a motorhome chassis is in the way of running directly to the discharge.

Some RVs are equipped with a black-tank flush; aftermarket systems can also be retrofitted, which is a great option, since it helps rinse solids from the inside of the tank. The flushing system usually runs from a gardenhose connection on the side of the RV directly to the flush nozzle via hose/ tubing and an inline vacuum breaker to prevent any chance of backflow. Line pressure works fine for a flushing system, and best practice is to use a hose for rinsing duties that will not be used for potable water. Varying lengths of gray hose are available from RV-supply stores, or you can make one from an old hose — making sure to mark it clearly for this purpose.

The diameter of the black-tank discharge pipe is 3 inches; the gray tank is 1½ inches in most cases. If a gray tank has its own sewer connection, it may have a 3-inch discharge pipe. The sewer-hose connection, however, remains the same. For those using a "gray-water pit" (where it is allowed), a replacement sewer cap with a gardenhose fitting is available. It is recommended to make a ¾- or 1-inch hose for this purpose using parts that can be found at a home-improvement center.

Many RVs are designed and built for "all-season" use. This can be a bit misleading because, although some RVs can usually do well in mild winter and snow conditions, most cannot handle severe weather. One of the ways manufacturers help to accomplish this is to enclose the dump valves and piping in a heated and enclosed underbelly,





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and add electric heating pads to tanks and plumbing. Often the dump valves will be remotely controlled, and some will be electric. The basic design and operation of the valves remain the same.

Dump valves in RVs use a sliding blade that minimizes the opportunity for clogging while being easy to disassemble and service. When the system is built, a flange is glued to the waste pipe on each side of the valve. Gaskets sit in a groove in these flanges, and the valve is inserted between the flanges and secured with four bolts. Should the valve fail to close, or if it leaks, the fix is pretty straightforward. Dropping the underbelly may be required.

Termination valve sets, where both valves are attached to a common, sometimes articulating sewer-hose connection, are relatively common.



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comfort on the move

In trailers with this type of connection, the valves are usually exposed to the outside air, and thus can freeze, while some larger motorhomes will have this type of connection in a heated compartment.

MAKING THE SYSTEM WORK BETTER

The black tank can be the most problematic. These tanks can collect solids and become a source of odor. Water is your friend here. It, along with an effective toilet treatment, is what allows the tank, and nature, to do their work. Too little water, and solids pile up on the bottom of the tank and can accumulate to the point where they prevent complete tank flushing, which is nasty and will produce an equally nasty repair bill.

Always start with a flushed tank and add a few gallons of water along with a preferred toilet treatment. Do not be tempted to use homemade concoctions in the tank. There's plenty of bad advice on the internet, and mixing the wrong chemicals can be damaging to some components in the waste system, such as valve seals. Using anything but chemicals designed for RV holding tanks can create hazardous and even deadly gases, which can lead to system damage — and affect septic systems tied to dump stations. Again, add plenty of water to the toilet each time solids are introduced, and make sure there is plenty of water in the black tank before dumping.

Macerators, like those from Thetford, are becoming more popular in RVs. Portable models can be attached directly to the sewer-hose connection and are designed to pump the effluent through a 1-inch hose routed to the dump station. It will pump uphill to a certain degree and can offer the flexibility of dumping tanks into a residential cleanout. Whichever hose system you use, always drain and flush the black tank first, then the gray. Do not open both valves at the same time.

With a little practice and forethought, RV waste systems will be easy to use, and the experience can be as pleasant as possible. 🎞

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RV SANITATION RESOURCES

HOLDING-TANK SENSORS Garnet Technologies (SeeLevel), www.garnetinstruments.com Horst Miracle Probe, www.rvprobes.com

HOLDING-TANK TREATMENTS

Camco (TST), www.camco.net Century Chemical (Travel Jon), www.centurychemical.com Dometic, www.dometic.com/usa Eco-Save, www.eco-save.com Star brite (Instant Fresh), www.starbrite.com Thetford (Aqua-Kem, Campa-Chem, Eco-Smart), www.thetford.com Valterra (Odorlos, Potty Toddy, Pure Power), www.thetford.com Walex (Bio-Active, Bio-Pak, Commando, Elemonate, Porta-Pak), www.walex.com Worldwide Monochem (Dyna-Bact, T-5), www.monochem.net

MACERATORS

Clean Dump, www.cleandump.com Thetford (Sani-Con Turbo), www.thetford.com Valterra (Sewer Solution), www.valterra.com Xylem (Flojet), www.xylemflowcontrol.com

SEWER HOSES

Camco (RhinoFlex), www.camco.net Drain Master (Waste Master), www.drainmaster.com/rv Lippert (Waste Master), www.lci1.com Prest-o-Fit (Blueline, DuraForm), www.prestofit.com Thetford (Titan), www.thetford.com Valterra (Dominator, EZ Flush, Quick Drain, Viper), www.valterra.com

TERMINATION VALVES AND PARTS

Barker Manufacturing, www.barkermfg.com Camco, www.camco.net Drain Master, www.drainmaster.com LaSalle Bristol, www.lasallebristol.com Valterra, www.valterra.com

TOILETS

Dometic, www.dometic.com/usa Thetford, www.thetford.com

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MOUNTING SYSTEMS

A fifth-wheel at one time represented the greatest commitment to trailering — not just the rig itself, but the equipment involved. A trip to an RV center was a virtual certainty, where technicians would have to spend hours grinding, drilling and/or welding a substructure underneath the truck to which a fifth-wheel hitch could be securely mounted. Once complete, mounting rails were permanently bolted to the bed, which would make it difficult to slide cargo into place. Then there was often the initial concern that the job was done properly; after all, that's a lot of weight back there, and if anything was overlooked, the result could be disastrous.

Then something brilliant happened: Domestic truck manufacturers started making their heavy-duty pickups available with so-called puck mounting systems, which incorporate a factoryinstalled fifth-wheel substructure

TANA

with four mounting points located flush with the bed floor. These systems not only make mounting a fifth-wheel hitch easier, but also make removal a snap, returning a completely flat-load floor to the user. The first hitches designed for puck systems were built by third parties and sold exclusively by the Big Three, but since then, a number of hitch manufacturers have introduced their own designs, giving RVers a multitude of choices.



1) The B&W Companion OEM is a two-piece design that makes installation and removal a one-person job in most instances. 2) No shop is required for installation. If you have a few simple hand tools and a driveway, installing the Companion OEM can be accomplished in a couple of hours. B&W Trailer Hitches has been a trusted name in towing since 1987 and is perhaps best known for its original Turnoverball under-bed mounting system that makes it possible to tow a gooseneck trailer or a fifth-wheel with the same truck using the company's Companion hitch. As a result of this engineering success, B&W has grown steadily and now offers a range of products, including its Companion OEM fifth-wheel-hitch line for OEM puck-mount systems.

LATCH AND RELEASE

Available for Ford, GM and Ram applications in standard and sliding designs, the Companion OEM features a fully articulating head and a cam-action latching handle for easy release. Kingpin "slop" and rattle are the bane of any fifth-wheel enthusiast, so the Companion OEM also incorporates beefy 1-inch-thick hitch jaws and polyurethane bushings for a smooth and quiet towing experience.



3) The first step is to mount the pivot arms. Six different mounting locations allow flexibility in coupler height and distance from the cab so you can achieve a level trailer ride height and adequate clearance from the cab when turning. Threaded blocks (one per side) located on the back of the bolt plate match up with its five vertical holes. 4) After all the ½-inch bolts are started through the arms, each bolt is tightened to 80 lb-ft with a torque wrench. 5) Next, the leveling kit is installed. A ¼-inch bolt is passed through the mounting clip and wire spring, then the lock nut is threaded into place. 6) The clip is attached to the flange closest to the cab on the driver's-side pivot arm. Once correctly located in line with the edge of the arm, the clip is driven onto the flange with a hammer.

Unlike the fifth-wheel hitches of yesteryear, puck-mount hitches are designed for easy installation by the end user, so we recently contacted B&W to see how easy it would be to install its RVK3305 Companion OEM fifth-wheel hitch in a 2017 Ford F-350. This hitch is rated for 25,000 pounds gross trailer weight (GTW) and up to 6,250 pounds of pin weight, but B&W also offers its RVK3300 hitch with 20,000 GTW and up to 5,000 pounds pin weight for the same application.

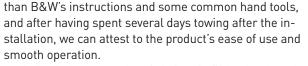
We found the hitch simple to install using little more



FIFTH-WHEEL HITCH

Product	B&W Companion OEM	
GTW	25,000 lbs.	
Difficulty	نې نې نې نې نې نې نې کې کې	
Time to Install	2 hours	
Cost	\$1,415/RVK3305	
www.bwtrailer	hitches.com/	

product/companion-ford-pucks



Indeed, there are a lot of choices in fifth-wheel products on the market today, but with legendary American-made quality, a limited lifetime warranty and a reasonable price tag of \$1,415 (MSRP), the B&W Companion OEM hitch is a good fit for puck systems.



7) The puck covers are removed with a flat-blade screwdriver in preparation for the hitch-base installation. 8-9) The latch pins from each side of the base are removed, and the handles are rotated out. The base is placed over the puck attachment points and lowered until the latch cams pass through the floor and the base rests flat.

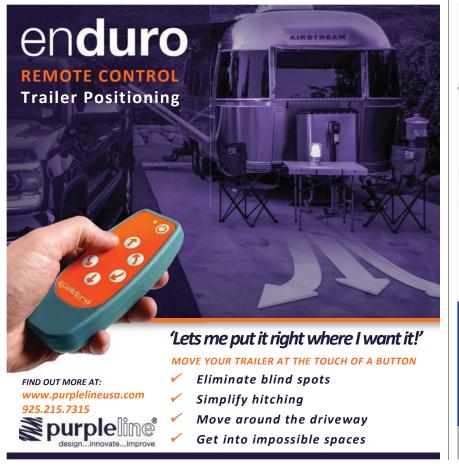


10) With the base correctly located in the puck mounting points, the cotter pins from each of the four castle nuts are removed. The cams at each mounting point are then engaged by rotating the latch handles back to their locked position against the base. If a handle does not turn easily, the nut can be loosened until the cam will turn without effort. 11) With the handles in the locked position, the castle nut is tightened



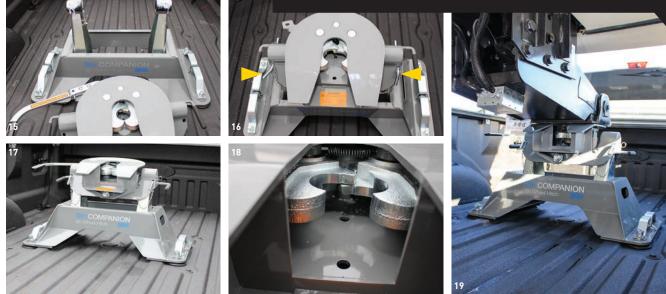


until snug to increase tension on the latch. From here, each latch is opened/closed and the nut tightened until the cam engages the puck attachment point while locking the handle. The goal is to be able to feel some tension in the handles without having to bump, tap or force them in place. 12) Once the tension is satisfactory, the handles are returned to their locked positions and the latch pins are inserted on each side. 13-14) Next, the handle is attached to the coupler arm using the two supplied %-inch buttonhead bolts and lock nuts.





TECH TIP © Companion OEM fifth-wheel hitches are available for Ford, GM and Ram trucks with puck mounting systems. For shortbed applications, B&W offers sliding versions of the hitch.



15-16) The coupler is now ready to be mounted on the hitch base. First, the polyurethane bushings on top of the pivot arms are lubricated with lithium grease, and then the coupler is placed over the pivot arms before the saddle lock pins are inserted (arrows). These are then secured with clevis pins. 17) The resting angle of the coupler plate can be adjusted by rotating the spring that was installed earlier on the driver's-side pivot arm. Pulling

the top of the spring away from the cab will increase the angle of the coupler plate. The angle is correctly set when the head tilts away from the tab slightly during coupling, as shown. 18) Beefy 1-inch-thick hitch jaws clamp securely around the hitch pin. 19) Once hitched up, the test truck and the Montana fifth-wheel towed perfectly, with no noticeable slop. Here the coupler plate was greased, but a lube plate is a cleaner option.



REDARC'S TOW-PRO ELITE RIVALS FACTORY-INSTALLED BRAKE CONTROLLERS, APPLIES SOPHISTICATED ELECTRONIC TECHNOLOGY AND ADDS A BIG DOSE OF SAFETY

- by Bob Livingston

ELECTRIC TRAILER-BRAKE CONTROLLER

Cost \$261.68 Difficulty & & & & Time 1-2 hours **Stopping a tow vehicle** and trailer requires a team effort. Electric-drum or electric-overhydraulic disc brakes on trailers provide proportional braking in concert with the rate of deceleration during stopping. Controllers are used to activate trailer brakes, and these devices are typically mounted under the

dash in tow vehicles that are not factory equipped for this purpose. Redarc Electronics, a supplier to the RV industry Down Under, has introduced the Tow-Pro Elite Electric Trailer Brake Controller, a product that minimizes required dash space while providing selectable proportional braking using sophisticated electronics.

Rather than incorporating a single component with a built-in activation lever, the Tow-Pro separates the control head from the main unit. The remote head can be integrated into the dash seamlessly within easy reach of the driver, circumventing the need to hang a box under the dash. This solves three problems: The control can be reached quickly during emergency braking, it can be adjusted without distracting the driver by simply turning a knob, and the device won't collide with the driver's knees.

Beyond the comfort factor, this device features an Active Calibration program that makes it just about impossible to set up the controller improperly. Once the main unit is mounted securely in a logical location, it calibrates orientation automatically by driving for a short distance — even without the trailer in tow. The only caveat is that the main unit must be mounted securely in any fixed position inside the cabin. The main unit cannot be attached to a wire loom, for example, using a cable tie. A solid mount makes it possible for the controller to measure braking force correctly and send the proper signal to activate braking in proportion to tow-vehicle deceleration.

Gain adjustments and mode selection are accomplished by turning the knob on the remote head. To activate the brakes in an emergency, the knob is simply pushed. A lighted bezel provides the necessary information during



1) Wire from the optional Circuit Breaker Kit was routed through a rubber plug in the firewall to prevent possible chafing. 2) The remote head can be placed in the dash using the optional knockout panel. The driver should sit behind the wheel when finding an unobstructed location within easy reach. 3) Although the template was printed on paper that was rather light, it was necessary to drill holes in the right locations. You get only one shot at this. 4) A hole saw is used to drill the main hole in the dash. Instructions are in metric; here, a 1-inch hole saw is closest in size to the 25mm spec.

the calibration process and informs the driver of the selected mode.

There are two modes: proportional (blue LED) and user-controlled (green LED). In the proportional mode, the harder the tow-vehicle brakes are applied, the harder the trailer braking. This is the desired mode for effective trailer braking. The usercontrolled mode will apply the brakes to the level set on the remote head, regardless of the rate of deceleration. The driver might select this mode in heavy stop-and-go traffic or in an off-pavement environment.

Modes can be changed via a sequence of rotating and pushing the knob and applying the vehicle brakes (when stopped). If the controller detects vehicle braking while stopped for more than three seconds, trailerbraking effort will be reduced intelligently — and even decreased to zero —depending on conditions. No user input is required to operate electric-over-hydraulic brakes, but will likely require a separate 12-volt DC feed to power the hydraulic pump.



5) Foam tape is applied to the back side of the knockout panel. Extra foam is needed to compensate for any contours in the dash. 6) The remote head is simply positioned from behind the dash, through the knockout panel, and secured with the provided nut. 7) The wiring harness from the truck is plugged into one side of the main unit, and the connector cable from the remote head (8) goes into the other end.



TECH

NO SEPARATION ANXIETY >>

We have a new trailer that has a cover for the LP-gas cylinders. On our first trip, we encountered strong winds that blew the access lid away. I ordered a replacement lid and installed it. Then for extra precaution, I looped a zip tie through an existing hole in the main cover and drilled a hole into the access lid. Now if the lid were to blow off again, the zip tie would prevent it from getting lost on the highway.

Nyles Nielson, Westworth Village, Texas



Hitch-Bar Storage Mount

• I have used a system for the past five years to lock and store out of the way the trailer's Equal-i-zer hitch bars when we are in a campground. It was easy to make and doesn't interfere with any operation of the bars.

Basically, the holder consists of two square U-bolts installed around the A-frame of the trailer (no drilling necessary), which are available at most hardware

stores, and two 2½-inch metal-conduit, rigid pipe straps attached to the bottom of the U-bolts so they stick out under the side of the frame. One holds up the front of the bar, and the other holds up the end. The U-bolts (sized to fit the A-frame) are slipped over the frame and tightened, then the pipe straps are slipped onto the U-bolts.

Even with my Forest River Windjammer's V-nose front, the back U-bolt slips under the body of the trailer. In the front strap, I drilled a hole the same size as the hole in the hitch bar so I can put a long-shackle padlock through it.

On my trailer, the holders are high enough to be out of the way of anything when the bars are in the "hooked-up" mode, and they work very well. When our trailer is in indoor storage, the bars are put on the holders, and the padlock is left unlocked. **Chuck Derry,** Dexter, Michigan



Awning Guard

• After replacing the awning on my RV due to UV damage when it was stored outside and uncovered, I found a simple solution to block the sun's rays. I bought a piece of 4-inch corrugated solid drain pipe (\$3 at the local Habitat for Humanity nonprofit organization), cut it to the length of the awning and then cut about 2 inches out of the diameter, and slipped it

around the awning. To figure out how much of the diameter to cut out, I practiced with a 12-inch "demo" section and cut a little bit off at a time until I knew what would work. I use this only when my RV is in storage and always take it off before moving the RV. **Kent Miller,** Santa Rosa, California TECH ED TIP

71P TIF

LP-GAS CYLINDER

COVER-ACCESS LID

WAX ON, WAX OFF ➔ Welcome to the RV high season! Since your rig is a major investment, a little time spent keeping it clean inside and out will pay big dividends in appearance. personal pride and resale value. The best way to keep the exterior surface protected and looking like new is to wax it at least once a year. Dirt can get into the microscopic nooks and crannies on the surface and can be almost impossible to remove if left alone. Wax provides a barrier that protects the surface and allows dirt to be washed off. -Chris Dougherty 🛄



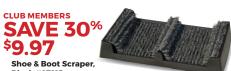
To submit a DIY tip, email 10minutetech@trailerlife.com or write to *Trailer Life*, 10-Minute Tech, 2750 Park View Court, Suite 240, Oxnard, California 93036. Provide a selection of good-quality high-resolution photos. *Trailer Life* will pay \$35 for original 10-Minute Tech ideas. All payments require an SSN or FEIN.

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SWAPPING OUT THE ORIGINAL DINETTE FOR HIS-AND-HER RECLINERS PUTS ONE COUPLE AT EASE

INVESTMENT 🕒 Cost: \$820 | Time: 8 hours

My wife, Connie, and I didn't have a comfortable place to relax inside our 2013 Aerolite travel trailer in the evenings, so we unseated the U-shaped dinette and replaced it with side-by-side recliners.

It took less than two hours to remove the dinette from the slideout. After measuring the slideout's dimensions, we ordered a RecPro Charles double RV wall-hugger recliner sofa with a center console to fit in the space. The sofa measures 67 inches wide by 39 inches high by 37 inches deep, and came in three pieces, so it was easy to get through the door of the RV.

It took 20 minutes to install the new sofa. Then I spent about five hours constructing two articulating arms and attaching them to the walls to hold trays for eating in the recliners, since we no longer have a dining table.

This was the best decision I ever made for relaxing inside our

RV RENOVATIONS

Have you modified your RV or remodeled it completely? Tell us about it in 500 words or less, including the total cost and time spent, and email your description to **info@trailerlife.com**. Include an ample selection of photos illustrating the project, along with your full name and mailing address. We'll pay \$50 for every RV Makeover we publish.







FRONT-ROW SEATS 1) Jim Popovich removed the stock dinette from the slideout in his Aerolite trailer. 2) A sofa now fills the space, and Popovich fashioned wall-mounted articulating arms •. 3) The arms hold trays for dining.

RV. I listed the dinette on a local online sales site and sold it four hours after it was removed.

— Jim Popovich, Mora, New Mexico 🎞

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ECH

- by Bruce W. Smith and Valerie Law

FRANK CRANK \$65

Schultz Precision Tooling of Leechburg, Pennsylvania, has a reputation for meticulously crafting components for the aerospace, automotive and electronics markets. With the invention of the Frank Crank, it's clear that the family-owned machine shop takes leisure pursuits just as seriously. The rotisserie-style campfire roasting stick has a knob at the bottom that turns manually so the food on the other end cooks evenly over the campfire. The 35-inch-long stainlesssteel-and-brass tool roasts everything from hot dogs and meat to fruit, veggies and marshmallows, and twin skewers on each side keep dinner from sliding off into the embers. For an additional \$10, the hardwood handle can be personalized. www.thefrankcrank.com



STAFF PICK When I brought the Frank Crank home, my 10-year-old daughter, Maddi (left), couldn't wait for our next camping trip to try it out. It was easy for her to load hot dogs on the spears, and the Frank Crank was long enough so she wasn't too close to the fire. Maddi had so much fun with it, she kept asking to cook more hot dogs. This got a thumbs-up from our family! — Lorisa Pierson, Marketing Manager

SINISTER DIESEL OIL BYPASS KIT \$299.99

Sinister Diesel's latest bypass oil-filter system works on 2013 to 2018 Cummins 6.7-liter engines to provide supplemental filtration that will extend the life of the oil. The kit includes a Sinister Diesel filter block and oil cap, a 2-micron Amsoil filter, braided stainless lines, a mounting bracket and hardware. Kits are also available for 2003 to 2007 Ford Power Stroke 6.0-liter engines and 2006 to 2007 Cummins 5.9-liter engines. www.sinisterdiesel.com





BATTERY SAVER PULSE \$129.95

The all-in-one Battery Saver Pulse 2365-LCD is a fully automatic 12-volt battery charger, maintainer and tester. It's pulse-charging technology is capable of quickly charging up to six batteries in parallel, safely maintaining them for long periods of time, and diagnosing any voltage-related issues with its built-in LCD digital battery tester, according to the company. www.batterysaver.com



BANKS BOOST TUBE KIT \$410

Banks Power's intercooler Boost Tube Upgrade Kit for 2011 to 2016 GM 6.6-liter LML Duramax diesels more than doubles the flow area compared to stock, according to the manufacturer. This is claimed to increase performance by allowing quicker turbo spool, and improved boost pressure between turbo, intercooler and intake, resulting in maximum horsepower. The emissions-compliant kit (25993) fits OEM and aftermarket intercoolers. www.bankspower.com

TROJAN TRILLIUM LI-ION BATTERY

Trojan Battery Company's new Trillium intelligent lithium-ion deep-cycle batteries are a direct replacement for standard lead-acid batteries, as well as other LiFePO4 batteries, lowering operating costs, since they don't need to be replaced as often, while maximizing energy output.

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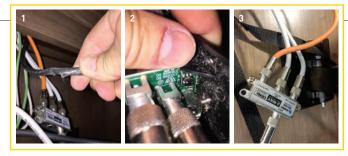
REALITY TV

An Alabama reader asked RV Resolutions for help after struggling with "snowy" cable-television reception in the living room of his fifth-wheel:

C I have been dealing with a TV problem in my 2018 Keystone Cougar 368MBI ever since we bought it. The problem concerns poor picture quality on the living room 4K TV when connected to campsite cable service. The picture on the TV in the master bedroom is crystal clear. However, the picture from the same cable channel in the main living room is extremely snowy, to the point of being unwatchable. Over-the-air channels work just fine.

After visiting several Facebook forums for Cougar owners, it became obvious that my problem was not unique, as others posted similar complaints. Being a NASA electrical engineer and working in the RF (radio frequency) and microwave field for almost 30 years, I felt qualified to troubleshoot the cause of the problem.

In our fifth-wheel, we have four cable drops. The first choice was to remove and replace all external cable drops, from wall plates to TVs, which did not solve the problem. I then removed and replaced the satellite/cable jumper cable behind the master-



bedroom TV, and still no change. At this point it was obvious that the problem was within the walls, so I removed the cover plates to all four drops and began tracing the wiring, since I had no schematic of the wiring setup.

The first thing I noticed was that one cable had a significant gash in the outer cover (photo 1), which is a quality-control issue and should have been fixed at the factory. After that cable section was cut out, a new RF connector was installed, but this did not solve the low-signal quality to the living room TV. Looking at the booster circuit (2), I was able to determine the pinout and see that the booster/amp has two outputs to support two TVs in the fifth-wheel. (I have four drops in the fifth-wheel, so why did they use a two-output amplifier?)

TV Port 2 from the boost/amp goes directly to the master bedroom TV. However, TV Port 1 goes to a three-way power splitter **(3)**. After much signal tracing using sophisticated microwave-test equipment, I was able to trace two of the three cables coming from the three-way power splitter — the two



black cables. However, I was unable to determine where the orange cable ends.

One of the two black cables goes directly to the cable connection in my storage compartment, while the second black cable goes to the second bedroom plate. Removing that plate, I found there was another two-way power splitter to send signals to that TV in the second bedroom as well as to the TV in the living room. Looking at the living room TV plate, there was yet another two-way power splitter that sent the signal to the 4K TV as well as the surround-sound system for the AM/FM radio.

I must say that once I had the wiring diagram documented, it became exceedingly clear as to why my (and everyone else's) living room TV was having so much trouble with cable service at the campgrounds. The only way I was able to get the living room TV to function was to bypass the other drops (external and second bedroom), but when we add TVs to those areas, we are back to where we started — with no functioning TV in the living room.

I have reached out to a number of people at Keystone but have received zero support in getting this problem solved. I am contacting you in the hope that you can put the weight and backing of your magazine behind a request to get Keystone to fix this problem. **William "Herb" Sims,** New Market, Alabama

THE COMPANY RESPONDS

RV Resolutions forwarded William Sims' concerns to the manufacturer and heard back from the customersupport department:

Keystone has been in contact with William Sims. It is our understanding that Mr. Sims has agreed to work with a Keystone-authorized dealership and Keystone RV Company to resolve this concern. Thank you for bringing this matter to our attention.

Alisha Howton

Customer Support Manager Keystone RV Company, Goshen, Indiana

After taking his fifth-wheel to an RV dealership authorized to handle Keystone warranty work, Sims sent the following update:

ff I would like to thank everyone involved with getting this resolved in a very timely and satisfactory manner. Keystone (specifically, Alisha Howton) and Camping World of Chattanooga worked efficiently to resolve the issue. I have been extremely pleased with the results. W.S. **T**

NEED HELP RESOLVING AN RV ISSUE 🖌

RV Resolutions is *Trailer Life*'s forum for the settlement of conflicts between consumers and RV dealers and manufacturers, accessory suppliers and service providers. After exhausting all other resources without success, mail a typed letter to *Trailer Life* RV Resolutions, 2750 Park View Court, Suite 240, Oxnard, California 93036. Include copies of appropriate bills and correspondence along with a self-addressed, stamped envelope. Selected letters will be edited and published unless otherwise requested.



SAFETY FIRST: **30-AMP VERSUS 50-AMP**

I live on the outskirts of Pensacola, Florida, and there are several large state parks Q within a three-hour drive that only have 30-amp electric hookups. I have a 2012 Dutchmen Denali 262RLX fifth-wheel that has a 50-amp cord that came with the RV when I bought it new. Is it safe to use an adapter so I can plug into the 30-amp outlet? I do not want to damage my Denali's power converter. Dan Higgins, Pensacola, Florida

There's no danger in plugging your 50-amp-equipped trailer into a 30-amp supply using an appropriate adapter, Dan. The only drawback is that you can't use all of the higherconsumption 120-volt AC appliances as you would if plugged into 50-amp service. For example, you can use only one air conditioner instead of both, because there isn't as much amperage available for accessories. As long as you keep the reduced power availability in mind, you'll be good.

Tire-Pressure Monitor Selection

C Thirteen TPMS systems were presented in the December 2018 "Watch Your Back" article by Bruce W. Smith, but no advice is given on which is the best for which application. I have a 31-foot travel trailer and want to monitor both the trailer's and tow vehicle's tires. I called TireMinder, and its reps advised using the new A1A product. What other systems might do just as well for me so that I can do a cost comparison of equally good systems? Also, do you have any idea on which manufacturers might have deals? Bob Dewey, Lakewood, Colorado

Your local accessory dealers might Α have occasional seasonal sales, Bob, but that information isn't available to us. A buyer's guide, like the one Smith wrote, is meant to provide you with a list of many available products of a given type, and from there, it's up to you to compare their features and decide which is best for your application.

Neither Smith nor the Trailer Life staff test and evaluate every system in such a guide. Each listing details the product's strong points and functional abilities, based on manufacturer input. For example, some people don't like the idea of needing to replace the batteries in a sensor mounted inside the tire, which calls for dismounting the tire from the wheel, so they choose a valve-stemmounted system. Evaluate the features and choose the one that's best for you.

You can also search online for user reports and comments from people with hands-on experience.

RamBox Hitch Matchup

We own a travel trailer and a Q 2015 Ram 2500 Crew Cab with a 6.4-foot bed and RamBox Cargo Management System but would like to upgrade to a fifth-wheel, possibly a Keystone Springdale 262FWRK. Opinions seem to vary as to a suitable hitch setup with a shortbed RamBox. The number of available hitches is also a bit overwhelming. Can you recommend a hitch combination that would give enough cab and also sideto-side clearance for this setup? Tanya Lutz, Scranton, Pennsylvania

Every hitch manufacturer has Δ online details and dimension specifications about its hitches, as well as application guides about which truck make and model they will fit. You can use those guides, along with measurements taken from your truck, to find a hitch that fits. You can also take the truck to a local RV-hitch shop

or RV dealer with a service department and have the technician measure it for a possible fifth-wheel hitch installation. Not a lot of RV owners do their own hitch installations, so a trip to the dealer will be time well spent.

There should not be any problem finding a hitch to fit your RamBoxequipped pickup. Given the shortbed configuration, however, you'll need a hitch that's adjustable front to back to accommodate tight turns. This helps avoid expensive damage that can occur when you turn sharply and the front of the trailer hits the back of the truck cab.

PullRite makes a hitch that automatically slides back during turns and moves forward for towing, and other manufacturers also make sliding hitches that must be manually released and relocked with each such turn. But you can't forget to do this in a sharp turn — not even once.

Depending on the size and body shape of your planned fifth-wheel trailer, you may be able to use one of the hitch pin-box extenders on the market as an alternative to the sliding hitch. You can replace the pin box with an extended model or use a product such as the Reese Sidewinder. The extenders move the trailer back from the truck, and in many cases, provide extra turning clearance. Here again, depending on the trailer-body configuration, they may not accommodate a full 90-degree turn or have enough clearance to the top of the truck bed/tailgate.

Satellite-Antenna Placement

I have a 2018 Keystone Dutchmen Atlas fifth-wheel. I called Keystone, and a tech there recommended putting the satellite antenna on the roof. Is there a reason not to install it on the roof? Would it be advisable to make a wood mount and attach the disk to it like a portable satellite antenna? Paul Clark, Sanford, Florida

Well, Paul, you have a couple of options depending on what provider you want to use. If you want to watch DirecTV HD, then the Winegard Trav'ler is the only option you have, aside from a complex tripod-mounted Slimline antenna. If you want Dish HD, you're in much better shape.

Mounting to the roof makes it easy to operate the satellite. However, if you park under or around trees, you may be unable to receive a signal. A portable or hybrid portable/permanent mount system will work the best because you can move the dish around without moving the whole RV.

As far as mounting the hardware to the roof, follow the instructions carefully, and be sure to use the proper sealants for the roof on your RV. Once installed, it's not really any different than any other roof-mounted accessory. If you're getting a hybrid model, like the King Quest or Tailgater with the quick-disconnect roof mount, attach the mount, if possible, not only where it will have the best signal (away from the air conditioner, etc.) but also where you can get to it easily to remove it if needed.

Tub/Shower Leakage

I have a travel trailer with a tub/ shower combination. Water will run out of the tub when we are showering if the front of the trailer is too high in the front or level. What happens is water will run down the shower wall, catch the lip of the tub and run out on the floor. I purchased a piece of plastic in the shape of a triangle with a 90-degree angle to place in the corner where the water runs out. I used silicone to hold it in place. The silicone would not hold, and the plastic quickly dislodged. The obvious solution would be to have the trailer slope toward the A-frame, but this would place my head down when trying to sleep and would not work for me.

Bob Davis, Shady Spring, West Virginia

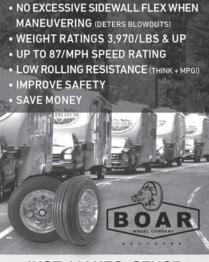
You're on the right track with the triangular add-on water deflector, Bob; you just used the wrong adhesive. As useful as many RTV silicone products are for some sealing purposes, they aren't always the best choice as an adhesive for the surfaces you're dealing with. Check your local hardware store and look for a urethaneor acrylic-based product such as an acrylic caulk. Lexel is a great product for this and is available at Ace hardware stores. Be sure the surfaces to be glued are clean, for example, by wiping them down with alcohol first. You could also use some fine-grade steel wool on the triangular deflector piece to give the adhesive a better surface to grab. With the right glue, you should have better luck keeping the deflector in place, your shower water where it belongs and your head from being too low.

COMMENT: FOREIGN TIRE AVAILABILITY

→ Several years ago when we were traveling in Mexico, one of the ST225/75R15E tires on our travel trailer started coming apart. We put the spare on and went looking for a replacement tire. We could not find the tire size that failed but did find a Michelin Agilis 225/70R15C tire with the same weight-carrying capacity. As the other tires failed, they were replaced with the Michelin tires, and we have

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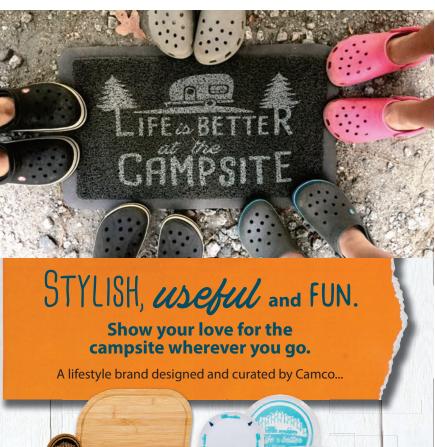
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had no further tire problems. Unfortunately, this tire is not available in the States. Larry Hannan, Brookings, Oregon

We're delighted you found some tires that work for you, Larry. As you discovered, not every tire brand and model is available in the United States, and the Michelin Agilis appears to be widely available overseas and in Mexico.

However, you might want to doublecheck the tire load ratings. Tire ratings go up with higher letters of the alphabet. A C-rated tire has a lower rating than a D or E tire, an E-rated tire is lower than an F-rated tire, and so on. The E-rated ST225/75R15 tires you removed have an approximate load rating of 2,830 pounds. The Michelin Agilis 225/70R15C are rated at 1,120 kilograms, or about 2,469 pounds per tire. That means your trailer's tires now have approximately 1,444 pounds less combined weightcarrying capacity than the original tires. It wouldn't hurt to have your trailer weighed — packed and ready to go to see where you stand on how the new tires are loaded.

It's also a good idea to select, whenever possible, a tire with an ST, or Special Trailer, rating. Your Michelins are not ST tires, but they seem to be working for you, and that's what matters. An ST tire has a carcass designed to handle the unique stresses exerted by trailer use, and its rubber compound is blended to withstand ozone and UV-ray aging, which can be as detrimental to tire life as simply wearing out the tread. Trailers can also successfully use LT, or light truck, tires, and those are a good alternative to ST tires.

Hitch-Weight Percent?

I have heard various figures about the percentage of hitch weight that gets transferred from the ball/hitch to the tow vehicle and trailer frame. If a trailer has 1,000 pounds of hitch weight and is placed on the hitch ball, the ball and hitch carry the full weight, and the tow vehicle's rear springs compress. When we add the weight-distributing (WD) hitch bars, the ball and hitch weight is redistributed, taking some weight off the rear springs and shifting it to the tow vehicle front axle and the trailer axles, allowing a level ride.

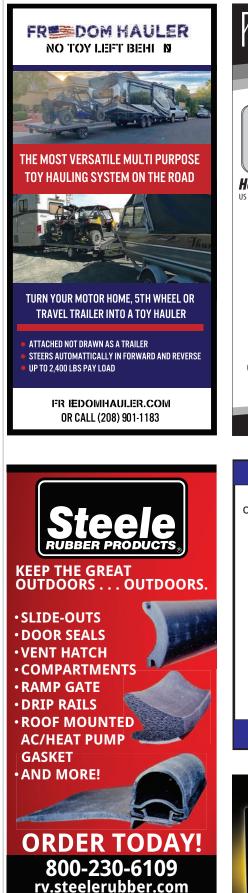
Years ago, there was an extreme WD hitch advertisement where the hitch was large enough to remove all the



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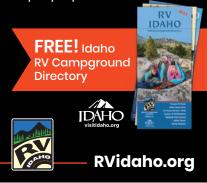


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ball weight, plus the vehicle's rear-axle weight, and the trailer was being pulled by a front-wheel-drive car with no back wheels. It was an interesting gimmick.

So, I was wondering, in a typical setup, about what percentage of the ball/hitch weight is transferred to the tow vehicle front axle and trailer axles? Also, would the 1,000-pound weight the ball and hitch were carrying before the hitch bars were in place be reduced by this amount? **Ron Prusinski,** Plymouth, Indiana

Wasn't that a great ad way back when? It was a front-wheel-drive Oldsmobile Toronado hitched to a trailer with a WD hitch that had just hit the market. To illustrate what the WD hitch did, in a rather extreme way, the car's rear wheels were removed and the WD hitch provided the bridging between the car and trailer, which were driven nationwide on a promotion tour. The combination garnered a lot of attention, even during the pre-social-media days.

Due to the number of variables involved, it would be difficult to determine exactly what percent of hitch weight is reduced or transferred by use of a WD hitch. Hitch weight, the WD spring-bar rating and how tight the spring bars are adjusted all play a role in weight distribution.

In day-to-day use, however, knowing that exact figure isn't important. As long as the tow vehicle rides in a mostly level or near-stock position so its steering geometry is not adversely affected, and the combination tows and handles well, the hitch is doing its job.

HAVE A TECH QUESTION @

Email **rvclinic@trailerlife.com** or write to RV Clinic, 2750 Park View Court, Suite 240, Oxnard, California 93036. Include your full name and hometown. Selected letters will be answered in the magazine, but time does not permit individual replies. No phone calls, please.

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(continued from page 47)

30-amp Circuit Breaker Kit (\$51.41); wires in the original harness for the brake-light trigger, ground and to the trailer brakes were reused.

It took a bit of time to route the power lead through the firewall, and the wire in the kit had to be extended. Routing a power wire was deemed prudent since the power lead was in bad shape and too light a gauge to carry the rated load. Redarc offers a number of premade harnesses (\$18.50) that will plug right into a number of vehicles with tow packages, and can even provide wiring to connect directly into existing harnesses for other popular brake controls.

From here, mounting the main unit behind a dash-access panel and routing the wiring was relatively easy. Finding a suitable place for the remote head was dependent on clearance, and the cutout template provided drilling locations for the optional knockout panel (\$8.17). Printing the template on heavier paper stock would be helpful, but the process went without much consternation — just remember to test the location carefully. Adding a layer of transparent packaging tape will make the template more durable for use. There's no going back once holes are drilled in the dash.

Using the Tow-Pro Elite presents a new level of driver confidence, braking safety and convenience. Gain adjustments while towing the Grand Design Momentum G-Class 21G toy-hauler travel trailer were user-friendly and precise, and trailer braking ramped up smoothly. For safety's sake, there's no comparison between simply pushing an ergonomically placed button for emergency braking and leaning down to reach a lever under the dash. For \$202.10 (MSRP), the user can install a high-quality brake controller that rivals factory-installed systems and adds a big element of safety. 🖬

Redarc Electronics

www.redarcelectronics.com/towpro

Special thanks to Mike Thompson's RV in Colton, California, for providing the Grand Design Momentum toy hauler. www.mikethompson.com/colton





Floral Fantasia

With its stunning variety of plant species, something's always in bloom at Indiana's Brincka Cross Gardens

– by Lisa Ballard

Last spring, while visiting Indiana Dunes National Lakeshore, I discovered Brincka Cross Gardens in Porter County, just inland from Lake Michigan. I had given up gardening in lieu of traveling, but Brincka Cross inspired me to find my trowel again. With 83 acres of cultivated flowers, exotic shrubs and woodlands, this residence-turned-countypark is gardening as art. In the 1960s, Bill Brincka, a professor at the Art Institute of Chicago, developed the property with his partner, Basil Cross, a buyer for Marshall Field's. At a crossroads of microclimates, the grounds include 450 types of daffodils, a "tickle garden" (decorative grasses), 400-plus varieties of hostas, a daffodil hill and 50 different magnolias. A rare Franklin tree towers above the "sky garden." I had never heard of a cucumber tree until I saw one there.

Each part of the property blends color and textures in creative ways, the result of Brincka sometimes spending an entire day figuring out where to put one plant. The payoff is a public sanctuary that awes the eyes.

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