



THE 2015 RAM 1500

RAMTRUCKS.COM

AND A COMMO



BEST-IN-CLASS 29 HWY MPG 5-YR 100K-MI POWERTRAIN WARRANTY

1) Standard pickup class. EPA est. 21 city/29 highway MPG hased on EcoDiesel V6 4x2 quad cab HFE model. Crew cab 4x4 EcoDiesel shown with EPA est. 19 city/27 highway MPG. Actual results may vary.

STEEL AND

SPARKS

NFIRE WITHIN





More people are driving Ram Trucks than ever before

CONTENTS







TRAVEL

20 Camping in Kiwiland

Tag along on an RV trip of a lifetime from one end of New Zealand's North Island to the other

38 What a Rush!

Whet your appetite for adventure at Niagara Falls where there's more to do in this fascinating border-crossing region than being enthralled by the mighty waterfalls

49 Montana's Small Town With a Big History

Following in the footsteps of Lewis and Clark, the author rediscovers his roots in Three Forks, where the Madison, Gallatin and Jefferson rivers converge at the headwaters of the Missouri River

Niagara Falls straddles the U.S.-Canada border, where the Niagara River cascades into a deep gorge. Page 38



11 Letters

Readers respond loud and clear

15 Around the Bend

News, events, places and trends

121 New Products

Goodies to improve the RV lifestyle

A Host RV's triple-slide Aspen for shortbed trucks offers a host of conveniences. Page 16

127 Hands On

Doran 360RV Tire Pressure Monitor

133 RV Clinic

Answers from the Trailer Life tech team

144 10-Minute Tech

Now why didn't I think of that?

146 America's Outback

Pechanga Resort & Casino, California

On the cover: The 2015 Ford Transit and Jayco Octane Super Lite make their way to California's high desert. Photo by Scott Hirko.



Sharing family traditions

Courtesy of Cummins Onan

B/\ OG 3600 | P

RVing is a great way to kindle a passion for family activities like fishing. Relying on a Cummins Onan installed generator is another tradition worth passing on to the next generation. It makes all your adventures even more enjoyable, with comfort and convenience at the push of a button.

With over 50 years' experience in making reliable RV generators, it's no surprise that Cummins Onan models have some important advantages:

- Lowest noise and vibration
- Highest reliability
- Most extensive and experienced service network

Learn more about the benefits of a Cummins Onan installed generator at http://powertotrailers.com. And pass on what's important.

Cummins Onan



Performance you rely on.™

Onan Corporation, Circle 101 on Reader Service Card

CONTENTS







TRAILERS & TECHNICAL

58 Ford Transit and Jayco Octane

We head out to the California desert to test the capability of Ford's next generation van paired with a compact toy-hauler

66 Control Issues

Weight-distributing hitches, many with built-in sway control, improve the towing experience

76 Winnebago Spyder

The company's 24FQ inaugural toy hauler zeroes in on adventurers looking to stay on the shorter side, without giving up style and comfort

83 Take Charge

Upgrading to the Xantrex TRUECharge2 takes the guesswork out of battery conditioning for better performance and longevity

93 Watt's Up

Learning how to properly maintain a built-in or portable generator can save you time, trouble and money

105 Pedal Power

Adventurer folding bicycles add a strong element of versatility to local transportation that's fun, healthy and affordable

110 The Heat Is On

Replacing an old mechanical wall thermostat with a digital model improves furnace efficiency

114 Rayzar's Edge

Winegard makes it easier to tune in to digital and HD broadcast TV with its state-of-the-art automatic amplified broadcast dome

The 2015 Ford Transit and smallest of Jayco's Octane Super Lite series made a dynamic duo for a father-and-son weekend motorcycle adventure. Page 58





Flo doesn't personally cover your RV, but we do.

Progressive is America's #1 specialty RV insurance provider.From motor homes to camper vans and travel trailers, we've got you covered.



1.800.PROGRESSIVE / PROGRESSIVE.COM

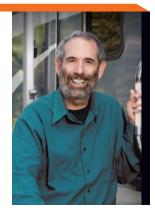
Progressive Casualty Ins. Co. & affiliates. Insurance prices and products are different when purchased directly from Progressive or through independent agents/brokers.

No. 1 in specialty RV insurance from 2013 Millward Brown national survey data.



The Next Generation of Vans Is Buzzing the RV Community

Ford's discontinuation of the venerable E-Series makes way for the Transit and new competition for the Sprinter



t one time, full-size vans were coveted among the best vehicles for towing travel trailers. A long wheelbase and short rear-axle-to-hitch-point contributed greatly to overall towing stability. The dynamics between the van and trailer kept lateral sway at bay, a towing trait that can be disconcerting. But for the most part, vans ended up being relegated to commercial service and hauling lots of people.

So when Ford mothballed the venerable full-size E-Series van, leaving only the Chevy in play, there was not much of a memorial service among trailer enthusiasts. The introduction of the Ford Transit, replacing the E-Series, was not one of the more lively debates around the fire in camp, but after spending time with two iterations lately, I believe these vans are destined to be significant players in the RV field.

Our first eye-opener came as we assembled this year's Guide to Towing that was packaged with the February issue. Obviously, Ford spent considerable time determining tow ratings for the Transit because the length of the listings is humongous. Itty-bitty details drive small differences in tow ratings, but the intention is clear: Ford wants the Transit to be noticed.

The options are also plentiful. For example, there are three roof heights and a number of seating arrangements — or you can buy one without any seats and use the space for cargo. We ordered up a cargo van with the high roof to tow the Jayco Octane toy hauler featured on page 58.

The extra space in the Transit's cargo hold was perfect for loading the motorcycles that could not be stashed in the Octane. It's a win-win situation for those who like the agility of a compact toy hauler like the Octane but still need space to handle machines for the whole family. The Transit's 7,100-pound rating made easy work out of towing the Octane.

We also checked out the feasibility of transporting 10 people in another version of the Transit, and I can report assuredly that the seating positions and comfort are among the best ever designed. Hook this baby up to a family-style lightweight trailer and you have a great traveling combo that's easy to handle and fun to drive.

Ford's Transit will likely steal some of the Sprinter's thunder, and van fans will have lots to talk about as the competition heats up. 🗬

- Bob Livingston, publisher

If Connect with us...

facebook.com/TrailerLifeMagazine twitter.com/TrailerLifeMag

INDEPENDENCE DAY Many RVers use laptops these days, but did you know that Thomas Jefferson drafted the Declaration of Independence on his own "laptop"? It was a small desk that was held on one's lap. Jefferson's laptop is on display at the Smithsonian's National Museum of American History in Washington, D.C.



Publisher Bob Livingston Editorial Director Eileen Hubbard Editor Valerie Law Managing Editor Donya Carlson Technical Editor Chris Hemer Senior Art Director Rick Damien Production Director Bob Dawson Production Manager Brenda Hutchinson Sales Administrator Katey Purgatorio

Consulting Editors Wes Caughlan, Ken Freund, Jeff Johnston

Contributors Jack Ballard, Lisa Ballard, Bobbie Hasselbring, Kristopher Bunker, Bill and Jenn Gehr, Bill Graves, Kevin Livingston, John Stein

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 530-268-3005, 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

Advertising Sales/Detroit Scott Crompton, Crompton Holdings, 334-546-7243, scottcrompton@mac.com

Chairman Emeritus Art Bouse Publisher Emeritus Bill Estes

Customer Service

Subscriptions (print and digital) trailerlife@cdsfulfillment.com

Website www.trailerlife.com Editorial info-tl@goodsam.com



President Mark Boggess Senior Vice President/Group Publisher Bob Livingston Vice President/Advertising Sales Terry Thompson Vice President Ann Emerson



Trailer Life (ISSN 0041-0780) is published monthly by GS Media & Events (a division of Good Sam Enterprises, LLC), 2750 Park View Court, Suite 240, Oxnard, CA 93036. Periodicals postage paid at Oxnard, CA 93036, and additional mailing offices. The annual subscription rate is \$17.97 per year in the U.S. For Canadian and International subscriptions, add \$12 per year. U.S. funds only.

U.S. Postmaster Send address changes to Trailer Life, P.O. Box 5860, Harlan, IA 51593-1360.

Canadian Return Address GS Media & Events, 4960-2 Walker Road, Windsor, Ontario N9A 6J3. Publication Sales Agreement

Printed in the United States

Trailer Life is a registered trademark of Affinity Group, Inc. Copyright 2015 by Affinity Group, Inc. All rights reserved.

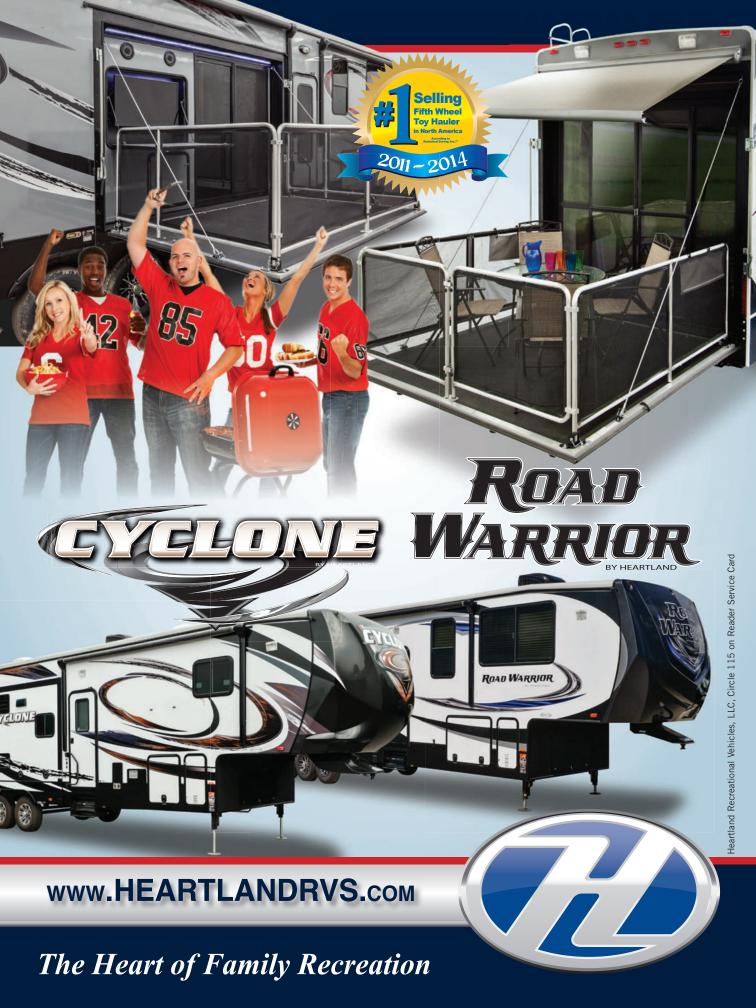
Privacy Promise Trailer Life will never intentionally share subscribers' names, addresses or other personal information with other companies when requested not to do so. If you do want to opt out from receiving marketing offers in the mail from other reputable companies, or you opt out and subsequently desire to opt back in, contact *Trailer Life* by mail, phone or email: *Trailer Life* Mail Preference Service

P.O. Box 5860, Harlan, IA 51593-1360

800-825-6861, trailerlife@cdsfulfillment.com This policy applies to postal mail; Trailer Life will not send commercial emails to subscribers unless authorized to do so

A DIVISION OF GOOD SAM ENTERPRISES, LLC





\$25 REBATE Super Summer Special!

IT'S TIME TO UPGRADE YOUR RV'S TOILET!

Make over your RV bathroom now with select new Thetford toilets and receive a special \$25 mail-in rebate!







Fresh NEW Aqua-Kem® Scents!





Same Great Performance!

- Powerful odor control & superior waste digestion
- · Rapid-dissolve, water-soluble packs deodorize fast
- No measuring, spills or mess
- 100% biodegradable



From the RV Sanitation Expert

THETF RD Going Places



YOUR OPINIONS, STORIES AND FEEDBACK

Keep on Truckin'

I was very interested in Chris Hemer's May article, "Family Time," pairing the 2015 F-150 with a Wildwood travel trailer. I have been researching that truck to replace my 2004 F-150. The tips on the Smart Trailer module and Blind Spot Information System were helpful, because those are options I will want. I am trying to decide if I need a three-quarter-ton truck or if I can stay with a half-ton. My current truck, fitted with a 5.4-liter Triton, struggles in the North Carolina mountains. My trailer, a Keystone Bullet, weighs 5,050 pounds dry, which is lighter than the 8,300-pound capacity of the truck. If you revisit the F-150, please include a climbing scenario.

Martin Meaders, Jefferson, Georgia

We own a 2011 Toyota Tundra with the towing package and tow a 2012 Wildwood 23RKS trailer that weighs 5,350 pounds unloaded. It was fun to compare my setup with the 2015 Ford F-150 mated to the Wildwood that Chris Hemer tested in the May issue. I liked his comment that Ford should include extendable side mirrors with towing packages, and I think Ford should also include larger fuel tanks.

My Tundra has a 25-gallon fuel tank, and the Ford has a 23-gallon tank. The Tundra's small V-8 easily pulls my Wildwood at posted highway speeds up and over the California Sierra. However, the mileage drops from 20 MPG to 10 MPG when towing. With these small fuel tanks, we have a range of about 200 miles.

Them's the Brakes

In his May Driver's Seat column, Bob Livingston was absolutely right about the trailer brake situation. It needs

to be addressed by the industry. Shortly after we stopped at MORryde in Elkhart and had

Gone but Not Forgotten

My wife and I were saddened to receive news that the 50 years of manufacturing Peterson Excel fifth-wheels and other RVs has come to an end ("Peterson Industries Shuts Down," June 2015]. We are being told the recession is over and the economy is on the rebound. That was not true for Peterson Industries.

After owning two motorhomes, a year ago we went looking for an RV to live in full time. My son, who owns a fifth-wheel, suggested we choose the same. We found a beautiful, well-kept 39-foot Excel with three slideouts. We contacted Peterson regarding several needs, including manuals, and found them very cooperative and helpful. We will miss Peterson but expect to enjoy the next years in the comfort of their quality construction.

Barton and Beverly Buhtz, Castaic, California

I love reading your test reports and accompanying data. I am a mechanical engineer, and we engineers just love data. Keep campaigning for extended side mirrors and larger fuel tanks with OEM towing packages.

Martin Torres, Rio Del Mar, California

Big E-Go

Great to see Kevin Livingston's article on the E-Go remote trailer mover in the May issue. I had seen the trailer mover in Europe and was so glad to see that we can now get them from Purple Line. I just installed the two-motor system on my Starcraft Comet trailer. I had all the right tools, and it was easy to install, including a second battery that powers the trailer mover. I replaced the A-frame jack wheel with dual pneumatic tires. The typical U.S. A-frame wheel does not track the same as the European style. Bill Hendrix, Elk Grove, California

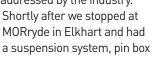
and disc brakes installed, a Ford pickup pulled out right in front of us with the bed of the truck full of little kids. My wife screamed, and I stomped on the brakes and missed the truck by maybe an inch. If I'd still had the drum brakes, I would have hit them broadside and probably injured or killed some kids. We stopped to recover our nerves, and I saw four streaks of rubber from the truck and four more from the trailer, which weighs in at about 13,000 pounds. Lesson learned. I will never pull another rig without disc brakes. Thomas C. Hurd, Port Charlotte, Florida

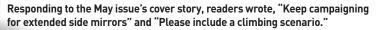
Oregon Trails

Emily Fagan's May article, "The Sunny Side of Oregon," referred to the McKenzie Pass Highway, Route 242, in central Oregon, but I didn't see any mention that there is a 35-foot overall length limit on that highway, which I have confirmed with the Oregon Department of Transportation. Paul Wilcox, Troutdale, Oregon

Having grown up on the McKenzie River, I was amused to learn that "the McKenzie River flows on the west side of Bend." While that is true, you could also say that the Pacific Ocean sits on the west side of Bend, but to be







Emily Fagan replies: The naming conventions in this region can be confusing. I was describing the McKenzie Passthe combination of two roads: Route 242, which goes over McKenzie Pass, and Route 126, which goes over Santiam Pass and follows the McKenzie River. If you own a longer trailer, you will definitely want to leave it at the campground before taking the scenic drive over McKenzie Pass.

Charmer in the Dells

In regard to Jack Ballard's "Wisconsin

you're going to Wisconsin Dells, check out Country Roads Motorhome and RV Park. It's about a half mile off the interstate and close to everything to do in the Dells and Baraboo, with level campsites and lots of nice shade trees. Another benefit is that it is a playground for the older folks. No pool, no swings, no slides — just peace and quiet.

Gary Lewis, Brooklyn, Wisconsin

Riding the Rails

Terrific article on the Ozark Zephyr in America's Outback in May. It looks like a really fun ride. You may want to add the Great Smoky Mountains Railroad out of Bryson City, North Carolina, to your itinerary. It's a spectacularly scenic ride through the Nantahala River gorge.

Keith Engelmeier, Rockville, Maryland

Less Is More

My wife and I really enjoyed Kristopher Bunker's April article "Little Big Trailers." We are the proud owners of a T@B teardrop trailer, and we love it! We really enjoy *Trailer Life*, but we're not interested in the big trailers anymore.

Jerry Paine, West Farmington, Ohio

We own a 16-foot Scamp that we tow with a six-cylinder 2012 Ford Escape and just love it! Don't forget about us "little guys" out there. We feel we belong beside the huge fifth-wheels with slideouts.

Doug Allen, St. Charles, Missouri

Fan Club

I purchased a SAM-1 range hood fan from Fabulous Operating Products based on Bill and Jenn Gehr's great article, "Overhead Overhaul," in the April issue. The pictures were a valuable reference, along with the instruction manual that came with the fan. The fan works wonderfully — better than the noisy old one that was factory installed in our 2011 Jayco Jay Flight travel trailer. Thank you for the detailed article.

Athena Sabala, Gooding, Idaho

Take Your Meds

I read the "Prescription for Travel" letter in the April issue regarding a couple having great difficulty getting the wife's



prescription for narcotic pain relievers filled while traveling. I have the same problem when we travel to Florida each winter in our fifth-wheel trailer. I solved it by working with my doctor and my neighborhood pharmacist.

My doctor writes the prescriptions in advance for each month I will be away. I hand-deliver these to my neighborhood pharmacist before I leave. Each of these prescriptions is written so it can be filled only on the specified date. When this date approaches, I call the pharmacy and give them the shipping address of the park I am staying at along with my campsite number and cell phone number. They, in turn, overnight the medication to me via FedEx with a signature required. When it arrives. someone in the park office signs for the package or they call me to sign for it.

I have never had a problem doing this. I do believe it is imperative that you work not only with your doctor but also with a neighborhood pharmacist you know well enough to help you.

Name withheld, River Falls, Wisconsin

Happy Campers

Forest River, we would like to thank your Rockwood warranty department for its diligent and competent attention to detail on the repair of our travel trailer. We are very pleased with our trailer now, look forward to many years of service and will highly recommend the quality that Forest River Rockwood represents. Jack and Rana Anderson, Snyder, Texas

We purchased a 2014 Outdoors RV Black Stone travel trailer from Cordelia RV in Fairfield, California. The first vear we owned the trailer, it was at Cordelia RV for six months and the Outdoors RV factory for two months for warranty repairs. I felt that not being able to use our trailer for eight months out of 12 was excessive, and I wrote a letter saying so. Outdoors RV agreed to provide compensation for what I believe to be a fair amount. In today's business atmosphere of ignoring the customer once the trailer is sold. Outdoors RV has shown a commitment to the customers who buy their trailers.

Mahlon Pringle, Paradise, California

Finally, somebody got it right! After many years and much advice, the battery-drain-while-driving problem has finally been solved.

After driving to Manteca, just south of Stockton, California, our brand-new trailer batteries were drained. We took the trailer to California RV at 477 E. Wetmore Street and talked to Tommy. He found the problem, fixed it and did not charge us "an arm and a leg." The batteries held up just fine during our

10 days of dry camping.

I encourage anyone with an electrical problem or other RV repair need to visit Tommy at California RV a small shop with a good man.

David R. Boldt, Monmouth, Oregon 폊

TALK TO US! Write to: Trailer Life, 2750 Park View Court, Suite 240, Oxnard, California 93036 or email info@trailerlife.com. Please include

your full name and location.



Adventure Anywhere

really can have it all. affordability, the absolute freedom to make each day your own adventure on the road or in the campsite. We have nine floorplans and can custom build your unit. Call Phoenix and begin living your dream today.

#1 Choice in Downsizing

TRITED BRUDGE VERIFIELD DATES

We take trades and we offer financing. Call us today to begin your adventure...

Factory Direct phoenixcruiser.com Visit our website for more 2601 Marina Drive Elkhart, IN 877-754-8535 photos and information.

EXPECT MORE!



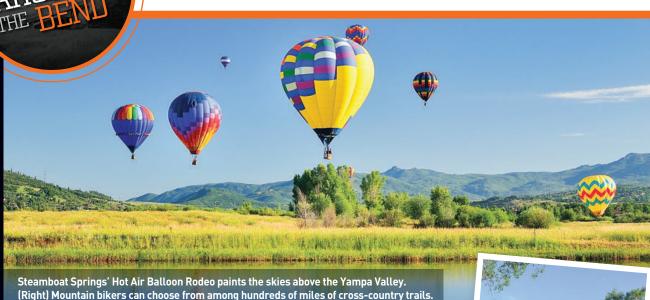
For true hot water comfort – Go for the new Truma AquaGo™

- Most powerful and efficient instant water heater
- Endless hot water regardless of flow rate
- Constant water temperature no scalding
- All-season use with optional Anti-freeze function

More information on ${\color{red} {\bf www.truma-aquago.com}}$

Learn more about Europe's leading brand for RV equipment on **www.truma.net**





Summertime in Steamboat Springs

Although best known as a winter destination, Colorado's Steamboat Springs offers unique and fun things to do all Summer long article by Nancy Deutsch

From a gondola ride up Mount Werner overlooking the Yampa Valley with wildflowers in bloom, to hiking trails, bike paths, fly-fishing, historical tours, water activities, music on the green and the weekly farmer's market, there is something for everyone in Steamboat Springs, Colorado.

Among the more than 150 hot springs in and around Steamboat Springs, Old Town Steamboat Hot Springs boasts a family-friendly facility with hot-springs-fed pools. A visit to Strawberry Park Hot Springs is in order for those looking for something a bit more rustic. If hot springs are not your thing, you can float down the Yampa River relaxing in a tube or hit the whitewater in a raft.

On the Fourth of July, the town's festivities kick off with a pancake breakfast, followed by a parade through downtown and a dance party in the street. Steamboat Springs' famous Pro Rodeo Series takes place at 6:30 p.m., and the celebration wraps up with a spectacular fireworks display.

The town's award-winning Pro Rodeo Series takes place every Friday and Saturday night from June 19 through August 22. Rodeos in Steamboat Springs date back more than 100 years but were officially sanctioned by the Pro Rodeo Cowboy Association in 1988. The heart-thumping action includes bareback riding, steer wrestling, barrel racing, bull riding and lots more action.

Another summer highlight is the Hot Air Balloon Rodeo, July 11 and 12, when more than 30 balloons dot the skies above the Yampa Valley in all their colorful splendor. Pilots compete in various exciting maneuvers. At night, with a mountain backdrop, these balloons put on a "glowing" show. In between, there is an art fair in the nearby park with more than 140 artists and vendors.

For hiking and bicycling, trails of

varying length ribbon the surrounding countryside. If you just want to hoof it, take the Vista Nature Trail from the top of the gondola, or Devil's Causeway, a more advanced hiking trail. For a more relaxed hike for the whole family, the 1/4-mile Fish Creek Falls Trail takes you to the lower falls. Mountain bikes are welcome on Hot Springs Trail, while Hare Loop and Manzanares are great for dirt riding and ATVing.

Several campgrounds and RV parks accommodate RVs in the area. Some offer all the amenities, while others are a bit more rustic. A few of the full-service RV parks include Steamboat Springs KOA (970-879-0273, www.koa.com/campgrounds/ steamboat-springs), Eagle Soaring RV Park (970-879-0164, www.eaglesoaring rvpark.com) and Stagecoach State Park Campground (970-736-8342, www .cpw.state.co.us/placestogo/parks/ stagecoach).

www.steamboat-chamber.org



A Host of Truck Campers

Host RV of Bend, Oregon, has a reputation for building large and luxurious campers for longbed trucks. For those looking for a camper for a shortbed, Host fulfills that wish with "more than just the basics," according to the manufacturer. The 9-foot triple-slide Aspen SB 9.5 has an 8-footwide main floor. Enter through the side door, and to the right is one slideout with a 72-inch dinette/sleeper sofa. Ahead is the kitchen slideout. To the left, the third slideout houses an 8-cubic-foot refrigerator and floor-to-ceiling pantry, leaving a big, open space in the center.





In the bedroom a wardrobe, nightstand, storage shelf and reading lights complement the 60 x 80-inch queen bed, which you can access from both sides. An optional swiveling 22-inch LCD TV is available for viewing from bed. The walk-through bathroom boasts a full-size shower and a swing door that separates the lavatory from the galley. In the kitchen a three-burner stove and Granicoat solid-surface countertops accent the large area. Cabinets have raised-panel doors throughout.

The Aspen SB 9.5 holds 65 gallons of freshwater and has two 7-gallon propane cylinders, almost 32 cubic feet of basement storage, rain gutters and a winterization system. Prices start from the high \$40,000s.

Host RV, 541-330-2328, www.hostcampers.com

Winnebago Giveaway

Winnebago Industries has partnered with Casey's General Stores to give away monthly prizes of



gas and camping gear, as well as two grand prizes of an RV road trip rental. Two winners will have the weeklong use of a Winnebago Brave motorhome, which features colorful exteriors and interiors combining modernism and retro styling. Customers can enter the No Coast Vacation Road Trip by discovering clues placed at the more than 1,850 Casey's General Store locations in 14 states across the Midwest.

"We are excited to participate with Casey's with this promotion," said Winnebago's director of marketing, Chad Reece. "Casey's is a premier quality brand, and the No Coast Vacation Road Trip is a great fit with the fun and adventure that is core to the essence of Winnebago and our products."

"Casey's is extremely proud to be able to partner with such an iconic company as Winnebago," said Michael Richardson, vice president of marketing for Casey's. "The joint promotion not only gives us each a chance to showcase our goods and services, but it also draws attention to all the fun and exciting places that can be enjoyed right here in the Heart of America."

So hit the road soon, as the promotion ends August 31, 2015. For information, visit www.winnebagoind.com or www.caseys.com.

Bannack Days in Montana

Celebrate pioneer life in a once-booming Montana gold-mining town, July 18 and 19. In its heyday after



gold was discovered there in 1862, Bannack was buzzing with activity. Now, a ghost town listed on the National Register of Historic Places, Bannack celebrates its heritage every year with a fun-filled weekend. Pan for gold, watch a blacksmith at work, learn how wagon wheels are made, shoot a blackpowder rifle, take a ride in a horse-drawn wagon, tour the mill, find out how to pack a mule, take old-time dance lessons and get involved in a great debate about "Should Women Vote?"

There'll be music in the air with bluegrass, gospel and banjo players, as well as an old-time piano player. Since Bannack also had a reputation for lawlessness, there will be re-created shootouts on Main Street in front of Skinner's Saloon and a stagecoach robbery planned for Sunday. Bannack State Park, 406-834-3413, www.bannack.org

Bannack State Park has two dry campgrounds, Road Agent and Vigilante, with picnic tables and fire rings. 855-922-6768, www.stateparks.mt.gov

Thirty miles away, Dillon has a couple more RV parks: Countryside RV Park, 406-683-9860, www.csrmt.com Southside RV Park, 406-683-2244, www.southsidervpark.com

RV Humor Illustrated

We all have amusing stories to tell about our RV camping adventures, but authors John Brunkowski and Michael Closen have written a 144-page book about theirs. Camper & RV Humor: The Illustrated Story of Camping Comedy covers camping history, road conditions, campground dilemmas and driving habits, and adds a humorous twist by describing how things can go wrong.

More than 200 color and black-andwhite photos illustrate the hard-cover book, many from the authors' personal collections of postcards from the various places they've gone RVing — Portugal, Australia, the Netherlands, Canada, England, France, Germany, Italy and other destinations.

Camper & RV Humor: The Illustrated Story of Camping Comedy is available for \$17.99 through Amazon.

www.schifferbooks.com





CrossRoads Acquires New Facility

CrossRoads RV, manufacturer of travel trailers, fifth-wheels and toy haulers, is expanding its facilities with 276,000 square feet of manufacturing space. The Topeka, Indiana-based company acquired an additional 44 acres of land that will provide the capacity needed to accommodate the company's continued growth. "We are pleased to have the opportunity to grow our operations in Topeka," CrossRoads President Andy Cripe said. "We view this investment as a critical step to meet our current production needs as well as our long-term strategic plans."

CrossRoads RV is part of the Thor Industries family of companies, which, combined, represents one of the world's largest manufacturers of recreational vehicles. The RVs are distributed through dealers in the United States, Canada, France, Japan and Australia.



Torklift Named Manufacturer of the Year

Torklift International, manufacturer of aftermarket parts for the RV and automotive industries, was named Manufacturer of the Year by Seattle Business Magazine. Torklift General Manager Jay Taylor accepted the award during an April 29 banquet at Seattle's Museum of Flight. The Sumner, Washington-based company was recognized for upholding lean manufacturing practices and its dedication to producing lifetimewarranty products to niche markets.

Taylor said, "It's our future, it's our dreams, it's our tomorrow, and our customers depend on us to put the very best products forward that we possibly can. Through this recognition tonight, I would say it's safe to say we are accomplishing that task. On behalf of everyone in the Torklift family, I thank you all."



A Taste of Colorado

A Taste of Colorado returns to Denver for its 32nd year on Labor Day weekend 2015. The festival highlights visual and performing arts, educational programs, culinary demonstrations and a KidZone with hands-on craft activities, carnival rides and games. Admission to the outdoor event is free, with offerings from 275 marketplace artisans and vendors, more than 50 food establishments and a variety of music from regional and national performers. Families can learn about Colorado's pioneer past through interactive exhibits such as watching a blacksmith at work and Navajo weaving and rug-braiding demonstrations.

Celebrate the diverse Western and cultural heritage of the region, September 4 to 7, in downtown Denver's Civic Center Park. 303-295-6330 www.atasteofcolorado.com







Teaming Up for RV Rentals

International rental provider Apollo Motorhome Holidays is purchasing more than 500 Winnebago motorhomes to provide unique travel and vacation experiences for its customers within the United States. Winnebago Industries, a leading U.S. manufacturer of RVs that include motorhomes, travel trailers, fifth-wheels and transit buses,

entered into the agreement with Apollo for 2014, and it was so successful that the relationship continues for 2015.

Winnebago Industries Chairman of the Board, CEO and President Randy Potts said, "Winnebago's recognizable name, high construction quality standards and premium resale value all provide great value to Apollo for their U.S. rental business.... We believe the rental market provides a great opportunity for people looking to experience the RV lifestyle and create future RV owners. We are pleased that the program last year was a win-win for both Winnebago and Apollo and welcome the opportunity to provide the Winnebago motorhome experience to new entrants in the RV lifestyle through Apollo's rental program."

Apollo Motorhome Holidays is the largest privately owned leisure vehicle operator in the world and has a fleet of 4,000 RVs at 23 branches across Australia, New Zealand, Canada and the United States. U.S. rental locations include Los Angeles, San Francisco, Las Vegas and Denver. Equipment and options are available for rent, and the company offers suggested travel routes and places to camp. The motorhomes and campervans sleep from two to five adults, plus kids. Apollo Motorhome Holidays 800-370-1262, www.apollorv.com



Jayco's line of Jay Flight travel trailers has spent 10 consecutive years as the top-selling RV worldwide. The Jay Flight line was launched in 2001, and the company claims that nearly 150,000 families have chosen Jay Flight travel trailers, including the SLX and Bungalow.

Said Jayco's Amy Duthie, who has worked closely with the Jay Flight lineup as senior director of product development, "We have strived to remain true to the original goal of bringing the best in livability, features and value to the retail owner. Derald Bontrager, president and CEO, has always said 'We build campers one at a time for one family at a time.' This is what we have always done, and will continue to do every day. It is this principle, along with our great dealer partners, which has helped Jay Flight reach and remain at the top of the RV industry for 10 years."

Updates for the Jay Flight's 2016 model year, which will be out by the time you read this, include all-new exteriors, interior décor upgrades and the addition of new features including power awnings on SLX models, upgraded technology and a digital remote control for slide rooms, awnings and lighting.

In honor of this achievement, Jayco has launched a website commending the Jay Flight: www.jayco.com/about/jay-flight



In other Jayco news, the company announced its continued commitment to its EcoAdvantage program, started in 2011, which aims to build more eco-friendly RVs by reducing waste and conserving energy and water. Through the combined efforts of employees, suppliers, community partners and three Jayco operating divisions, the program has garnered impressive results:

- Saved enough electricity to power 10,932 homes for one year.
- Saved enough landfill space to accommodate a year's worth of trash for 163.839 Americans.
- Conserved enough gas for 138.9 trips around the earth (in a car).

Additionally, Jayco's green manufacturing practices have saved trees and water. Jayco claims that it strives to create products that are lighter and more aerodynamic to deliver better fuel economy. 🕶

Vent it!



Flush it!



Support it!





- Prevents odors from invading living space
- Speeds up waste breakdown
- Eliminates the need for chemicals.
- Works in any wind condition
- Easy installation and universal fit

Waste Master F



- Smooth hose interior doesn't trap waste
- 18 ft. extended, 5 ft. compressed
- Stays extended during use
- Nozzle features clear port & shut-off valve





- Adjusts to nearly any slope
- Prevents waste buildup
- Pivots hose around obstructions.
- Extends up to 10 feet
- Stores in included bag, hose not included



Buy Online! store.lci1.com







Camping in TAG ALONG ON AN RV TRIP n The Hobbit and The Lord of the Rings film adaptations, New Zealand is Middle-Earth, site of fantasy and mystery, where creatures like hobbits, trolls, wizards and dragons roam. In reality, this island nation is renowned for adrenaline-fueled adventure. That's why we decided to fly a dozen hours to New Zealand's North Island and explore this mystical place in a rented RV. Our goal: to cram in as many adventures and sensory highs as possible. New Zealanders are crazy for RVing. The country has plenty of RV rentals and places to camp, and the gently winding However, roads tend to be narrow, so RVs are often small motorhomes. And since driving on the left can be a challenge to right-driving visitors, smaller rigs can be a good thing. Flights from North America are long, so it's wise to recover before renting a rig. We land in Auckland, the country's largest city, and recoup at Auckland's Pullman hotel, a luxury property within walking distance of the



OF A LIFETIME FROM ONE END OF NEW ZEALAND'S NORTH ISLAND TO THE OTHER

city's shops, restaurants and marina district. We rest and enjoy restorative massages at the hotel's spa. Then we jump into action.

After a delicious waterfront lunch, including sweet, rare Bluff oysters at the Foodstore, we join America's Cup Sailing for a thrilling 90-minute sail. If you've ever dreamed of jumping aboard a lightning-fast sailing yacht, this is your chance. We motor out of Viaduct Harbor and pair up around grinders — metal cranks to raise and lower the sails. On the captain's order, we forward crank, then back crank, putting our muscles into it as the big sails catch the wind. Soon we're heeled over 45 degrees, hanging on for dear life and shooting across the bay at 9-plus knots. When the captain offers me the helm, I eagerly grasp the big wheel and feel the power of the waves and wind, as I steer the 83-foot yacht through swirling waters.

The next morning, we meet
Maori guide Trace on Mount Eden,
or Maungawhau, a dormant 643-foot
volcano and the highest natural point in

Auckland. From its summit, we enjoy sweeping 360-degree views of the skyline and coastal waters, including 50-plus volcanic cones around the city.

Polynesians who sailed here from Asia and islands in the Pacific, the Maori used Mount Eden as a fortified village. We amble down dirt and paved tracks, while Trace points out old homesites and food-storage areas of these early settlers.

We meander through the city, stopping at Auckland Domain, a garden with two large glass conservatories housing plants from all over the world and the Fernery, a cool, shady garden with native vegetation, including tea trees, delicate bamboo orchids and five ferns native to New Zealand. It's staggering to think the country was once covered in this dense jungle.

We end our city tour at the Auckland War Memorial Museum, a huge building featuring an impressive collection of Maori canoes, tools, weapons, musical instruments and artwork, including large communal

meeting houses with intricate wood carvings. Trace explains the different exhibits and shows us a canoe prow carved by his great-great grandfather. We also enjoy a live 30-minute show of Maori dances, including the haka, a war dance with bulging-eye and tongue gestures to intimidate adversaries.

In the evening, we join Auckland Sea Kayaks for a paddle to Browns Island. Owner Nic Mead helps us into water-resistant jackets, life vests and watertight sea skirts. We shinny into the front of two slender crafts, and, with Nic and the other guide in the rear, head across Auckland Harbor.

It takes 50 minutes to reach Browns Island, one of several undeveloped islands around the city. While one guide readies dinner, we hike to a high spot to enjoy the sunset. When we return, steaks are ready, and we eat our meal watching the city lights wink on.

When we haul the kayaks back into the water, the sky is black. Nic fixes lights atop flexible poles, so we're visible to passing boats. Moonlight dances on the flat, calm water, and, as we soundlessly paddle under brilliant stars, it feels as though we're the only people on the planet.

AUCKLAND TO LAKE ROTORUA

The next morning, we pick up our RV from Kea Campers, one of the largest rental companies in New Zealand, Australia and Southern Africa. We

(Left) Sailing on Lake Taupo gives visitors a sense of the caldera's size. (Top) Maori performers demonstrate a traditional game designed to increase hand-eye coordination.





Kiwi thrill rides (above from left): Rope bridges and ziplines at Rotorua Canopy Tours give participants a treetop experience of New Zealand forests. An America's Cup-style sailing yacht takes wannabe sailors across Auckland Harbor at a swift 9-plus knots.



TREASURE ISLAND
The author's harbor-to-harbor RV
route from Auckland to Wellington
spans most of North Island, one of
two main islands in New Zealand.

leave the city behind and drive into a countryside filled with oak, pine and eucalyptus, and golden hillsides dotted with sheep, cows and farm fields. We're surprised at how much the land resembles Northern California. Except for driving on the left side of the road (which takes some getting used to), North Island feels like home.

We churn south on Highway 27, a well-maintained two-laner with easy curves. We're going to Rotorua, three hours southeast. We're here in mid March, the end of summer in New Zealand, and the trees display the first yellow-golden blush of fall. We pass tiny farm villages, like Maramarua and Waharoa, but it's mostly rural and isolated, and we're grateful for the full tank of diesel. We're also glad about the RV's Navman GPS. It constantly chatters about road changes and directions, and clangs loudly when we exceed speed limits.

We pass through Matamata, aka Hobbiton, where many Lord of the Rings movies were filmed. The streets are jammed with buses for movie-set tours and tourists buying Hobbit merchandise. Not being Hobbit fans, we press on.

We turn onto Highway 5, the Thermal Explorer Highway, and gain elevation, the terrain becoming lush with tree-size ferns and green trees. As the road angles down, we get our first glimpse of town and Lake Rotorua.

A cute, walkable city of about 70,000, Rotorua is famous for geysers, hot springs, bubbling mud pots and its sulfur aroma. Both the town and sky-blue Lake Rotorua are located in the caldera of an ancient volcano.

Hungry and road weary, we pull into Third Place Café, a neighborhood spot with great lake views. They offer all-day breakfast, including Mumble Jumble, a plate with roasted sweet potato, caramelized onions, tomatoes, chorizo, bacon, egg and creamy hollandaise.

We drive a few miles out of town to Blue Lake Top 10 Holiday Park, a well-maintained 14-acre RV park overlooking

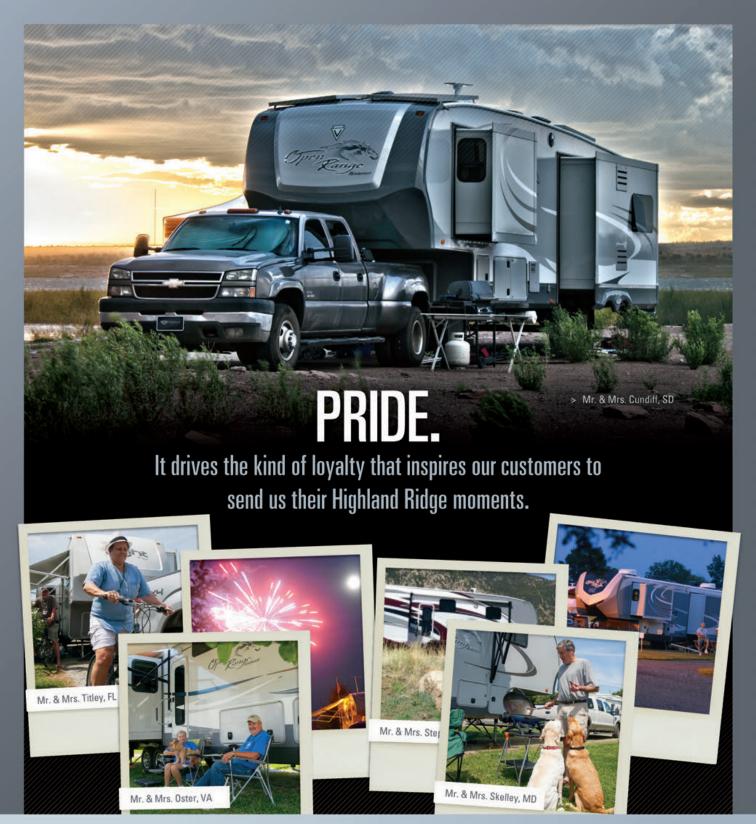
sparkling Blue Lake. We've barely hooked up utilities when the bus from Te Puia Maori cultural center arrives to pick us up.

Maori culture has a huge influence in New Zealand, so we're eager to learn more. Te Puia houses the New Zealand Arts Institute, which offers tuition-free classes in weaving, and wood and green stone (jade) carving to Maori youth who return to their villages and teach others. The center is in the 150-acre Whakarewarewa valley, a place with boiling mud pools and Pohutu, one of the world's largest active geysers. We stand on a bridge overlooking steaming pools and frozen-in-time flows of white silica and brilliant orange algae. Suddenly, a smaller geyser steams and spurts, then the larger one joins in. They push up streams of boiling water and steam, slowly at first, and then, within moments, gush skyward 30, 50, 75, 100 feet, until twin fountains of water and roiling billows of steam arch against the blue sky.

Our tour also includes a dance performance and Maori feast (hangi) cooked over native tea tree wood in an underground steam box. After one of us is elected "chief," young Maori men and women welcome him by touching foreheads and breathing one another's breath. We're ushered into a meeting house (wharenui) decorated with Maori weavings and wood carvings, and the troupe performs traditional



(Right) Trails along Mount Eden provide sweeping views of Auckland.





Own the Outdoors





dances. They convince several men in the audience to perform a warrior dance and the women to come on stage to learn a flowing *poi* dance.

When the show ends, our stomachs are rumbling. After a Maori welcome and prayer, we enjoy New Zealand mussels, chicken, lamb, corn on the cob, an array of salads and desserts, traditional rewena bread and dips, and a local drink made from kawakawa extract and manuka honey. Delicious!

LAKE ROTORUA TO RAINBOW SPRINGS

We're up early the next morning for a half-day zipline adventure with Rotorua Canopy Tours. Since I've been sketchy about heights all my life, my adrenaline is pumping. We strap on helmets and cumbersome climbing harnesses, and join a half-dozen others for a 10-minute ride to an old-growth New Zealand forest. Before humans arrived 1,000 years ago, North Island was covered in dense conifer and broadleaf forests of rimu, totara, kahikatea, mata and

massive kauri trees (similar to cedars). After 150 years of logging and clearing for development, less than 25 percent of the country's native forests remain. This 1,200-acre forest is one of them.

Our first zipline platform isn't too high. I get in line quickly, so I don't have to think about stepping into thin air. With one guide across the ravine and another working the rigging at the launch, I stand at the edge, heart pounding in my ears, and step off. Effortlessly, I'm sailing over the forest and, before I know it, landing gracefully (sort of). "Great job," says Joe, as he unhooks and reattaches my safety cable.

It takes a couple of hours for us to make our way through six ziplines, each successively higher, longer and scarier. On several, the launch platform slants steeply, so I gingerly creep to the edge before "sitting in space," allowing the rigging and gravity to whisk me away. Between zips are canopy bridges, narrow planks with wire "railings" that shake like crazy as we cross.

(Above from left) Modern Maori rock carvings at Lake Taupo demonstrate impressive artistry. At the wood-carving school at Te Puia, Maori men hone their craft.

On our way to one zipline, guide Dan points out dozens of wooden boxes and strange-looking contraptions tucked into the brush. These traps kill introduced pests like rats, stoats and possums that eat the native bird population. Forty percent have gone extinct, and the staff at Rotorua Canopy Tours are working to restore forest birds. They donate money from every tour and countless hours restoring the forest.

We're finally at our last zipline, a breathtaking 115 feet above the forest floor. By now, I'm pretty comfortable, and I step confidently off the ledge. As I streak by, Joe shouts, "Do something cool," and I flip upside down and mug for the camera.

All that adrenaline has stimulated our appetites, so we grab giant sandwiches and puffy onion rings in town at Fat Dog Café, a local favorite. Then we drive to Rainbow Springs, a





KEEP TO THE LEFT

To get behind the wheel of a rented RV in New Zealand, all you need is a current driver's license from your home country. Remember to drive on the left and measure your speed in kilometers per hour. Also be advised that New Zealand does not allow left turns when the traffic signal is red.

unique 22-acre park showcasing New Zealand's native plants and animals. We wend through tree-lined paths, past streams and enclosures with native tuatara (large lizards) and big free-flight aviaries with colorful parakeets, wood pigeons, keas, kingfishers, banded rails, shell ducks and the world's only alpine parrots. For kids of all ages, the Big Splash log ride floats visitors back through time and ends with a stomachdropping flume plunge that leaves my shirt damp and me grinning.

Rainbow Springs' most impressive attraction is Kiwi Encounter, a behind-the-scenes look at the park's efforts to hatch and release native kiwis. We meet Claire, the park's animal-husbandry manager in charge of kiwi conservation. She tells us that kiwis, like other native birds, are under attack from introduced pests, and, since they're flightless, they're especially vulnerable. Rainbow Springs spends \$3,000 on each successful egg hatch, and they've released 1,200 brown kiwis back into the wild.

Claire gingerly lifts a 21-day-old chick from a darkened box (kiwis are nocturnal), cuddling him to her chest before weighing him. "He's a fat boy," she pronounces with a satisfied smile. "He's almost ready to go free."

RAINBOW SPRINGS TO LAKE TAUPO

It's an hour to our next destination. Lake Taupo, the country's largest lake - at nearly 240 square miles, roughly the size of Singapore. We head south on the Thermal Explorer Highway, climbing into hills fringed with beech trees, their leaves turning yellow as fall approaches. Along the way, we stop at Benny Bee, a small store and café selling local honey, including manuka honey renowned for its healing properties. Proponents claim manuka honey is effective for everything from cancer to diabetes and high cholesterol. It's labeled according to its Unique Manuka Factor, or UMF. The higher the UMF, the stronger the antibacterial properties — and the higher the price. I opt for one of the lower-priced jars.

We pull into Lake Taupo just in





time for the Huka Falls jet boat tour. We scramble aboard the bright blue jet boat. Our driver fires up twin engines putting out 520 horsepower, makes a quick 360-degree spin and roars down the Waikato River. At 50 miles per hour, we fly past sheer rock cliffs with just inches to spare, sending local ducks and geese fleeing. Every few minutes, our driver careens maniacally close to shore and spins a doughnut, sending sprays of water over the bow and leaving us howling with laughter.

At the Aratiatia dam, we make a sharp U-turn and thunder upriver toward Huka Falls. As we approach the base of the falls, the boat's jet engines, churning out 640 liters of water per second, strain against the river's

current. This is where the Waikato River, New Zealand's longest, narrows from 300-plus feet across to less than 50 and drops nearly 20 feet, sending a torrent of 83,000-plus gallons of water per second over the falls. It's exhilarating to feel its power.

We're more than ready to snug our rig into a level gravel site at Taupo DeBretts Thermal Resort, a hot springs park and RV campground overlooking the lake. This is the perfect place to pause for a couple of days — up where breezes blow, with power and water, free Wi-Fi, clean showers, laundry facilities and a well-equipped communal kitchen and barbecue area. Best of all, campers get discounts to the park's hot and cold mineral pools.

We lounge in the hot pools and plunge again and again down the super slide into cool mineral water. Ahhh!

In the evening, we walk up the hill and treat ourselves to dinner at Bistro Lago, an upscale restaurant at the Hilton Lake Taupo. As we dine on perfectly grilled scallops, über-fresh fish and local grass-fed beef so tender I cut it with my fork, we can't decide if the food or the glorious lake views are more breathtaking.

The next morning, we're back on the adrenaline trail with a half-day white-water raft trip with Tongariro River Rafting. The Tongariro River is renowned for trout fishing, but it's also famous for 64 thrilling Class III rapids. Dressed head-to-toe in





X KIWI CAMPGROUNDS

New Zealand's Department of Conservation manages more than 250 public camping areas. North Island also has its share of commercially operated campgrounds, including the following four along the author's driving route:

NAPIER Kennedy Park Resort, www.kennedypark.co.nz ROTORUA Blue Lake Top 10 Holiday Park, www.bluelaketop10.co.nz TAUPO Taupo DeBretts Thermal Resort, www.taupodebretts.co.nz WELLINGTON Wellington Waterfront Motorhome Park, www.wwmp.co.nz

DISC BRAKE CONVERSIONS

IMPROVE YOUR STOPPING ABILITY BY OVER 50 PERCENT

- · Fits all trailers
- · Easy to install
- · Includes all components
- Excellent quality featuring Titan Brakerite, Disc Brakes, and line kits.





179 feet

Disc stopping distance is nearly 50% shorter



340 feet

Stopping distance for electric drum brakes

Information based on stopping 15,500 lbs. at 60 mph, trailer brakes only

FIND YOUR LOCAL DEALER/INSTALLER

www.titandist.com • 1.800.USA-BEAR



neoprene, we join two women from Australia and our guide, Ryan, and board the six-person raft. I've rafted in large boats with lots of people paddling. Today, it's just the four of us and our guide against a river known to dump rafters into its chilly depths.

Accessible only by raft, the Tongariro River cuts through native New Zealand beech forests and towering limestone and volcanic cliffs. This ribbon of water presents itself as deep pools and long runs of shallow, crystal-clear water; at other times it's a maze of boulders the size of cars and boisterous rapids that have us clambering to stay in the raft.

When we approach rapids, we listen intently for Ryan's commands: "Paddle right. Paddle left. Back-paddle. Hang on."

I've got "hang on" down. Each time we climb a roller-coaster rapid, my foot jams under the seat in front of me and I tightly grip the wet rope to stay safely onboard. By the time we reach the calm waters at the takeout two-and-a-half hours later, we're happy, tired and feeling like we're sisters with our raft mates.

LAKE TAUPO TO HAWKE'S BAY

Back in Taupo, we take a break in the RV, and I hit the park's hot mineral springs to work out the paddling kinks. And by early evening, we're raring to go again, joining Sail Barbary for their Maori Rock Carvings Cruise.

Captain Sarah eases us out of the marina, but without a breath of wind, there's no reason to hoist the sails. Instead, we motor along, and Sarah offers drinks and tells us about this massive lake. "We're actually sailing on the second largest volcano in

LAKE TAUPO IS SO LARGE AND DEEP, IT HAS ITS OWN HORIZON AND CREATES ITS OWN WEATHER PATTERNS

history," she says. "The lake is in a collapsed caldera of a volcano that was so big it darkened skies in China."

The super-volcano that created Lake Taupo is quiet but not dead. It erupts every 1,000 years or so. "If Lake Taupo's volcano wakes up," Sarah deadpans, "no one on North Island is going to have enough baked beans in their cupboards."

The breezes are warm, as the sun slants over volcanic peaks surrounding the lake. This body of water is so large and deep, it has its own horizon and creates its own weather patterns. The lake's average depth is 325 feet, and 610 feet at its deepest.

We round a thumb of land on the lake's west side and come to massive Maori rock carvings staring out at us from a flat-faced cliff. The largest, more than 30 feet high, is of Ngatoro-i-rangi, the navigator who guided the Maori people to Taupo more than a thousand years ago. As we look closely, more carvings in the surrounding rocks emerge — a fish, a giant lizard, a reclining woman and more. Accessible only by boat, the carvings were created in the 1970s by master Maori carvers and have become an important cultural and tourist attraction.

I'm enchanted by Lake Taupo and love being on its deep blue water. So the next morning, we join Captain Simon and First Mate Millie from Chris Jolly Outdoors for a fishing excursion aboard the *Waikare II*, a 57-foot steel-hulled gunship built during the Vietnam War.

Today, it offers visitors catered trips to fish for huge brown and rainbow trout in Lake Taupo.

Trout aren't native to New Zealand, but with the lake's cold, clean water and abundant food sources, they've thrived, and many grow 4 to 5 pounds or larger. Simon and Millie rig up our gear, and soon we're trolling. It's not long before my friend reels one in. It's a rainbow but doesn't meet the nearly 16-inch (40 centimeter) minimum size, so we carefully let it go. Then I pull in a beauty — at least 4 pounds and well over the required length.

Within an hour, we've caught 11 fish, and we keep three big ones (the limit is three each). Captain Simon fillets our catch and thinly slices us some trout sashimi. It's mild and tender with a clean fresh flavor, and served with a ginger-soy sauce. Millie delivers a gourmet lunch — baconwrapped chicken stuffed with cream cheese, salads, ciabatta rolls and tiny lemon tarts for dessert.

Back at the dock, we give Captain Simon one of our fish and head back to the RV with a huge amount of fresh trout we happily dine on for days.

Next we head to Hawke's Bay, a two-and-a-half hour drive through golden hills ribbed with conifers. We're more comfortable driving on the left and navigating roundabouts now, and we make good time. We arrive in Napier and check into our grassy, shady site at Kennedy Park Resort. Soon after, Gareth Kelly, owner of Odyssey New Zealand winery tours, picks us up in his





(Far left) Rebuilt in the style of the times after a 1931 earthquake, the Hawke's Bay town of Napier is the Art Deco capital of New Zealand. (Left) Kayaking from Auckland to Browns Island is a fun way to spend a few hours.

TV LIKE HOME WHEREVER YOU ROAM

















GO anywhere TV!

KING presents the go anywhere, fully automatic satellite TV antenna!



NEW!

VQ4500



WORKS WITH DIRECTV®

WORKS WITH DISH®

GO Camping GO RVing GO Fishing GO Tailgating **GO Trucking GO ANYWHERE!**







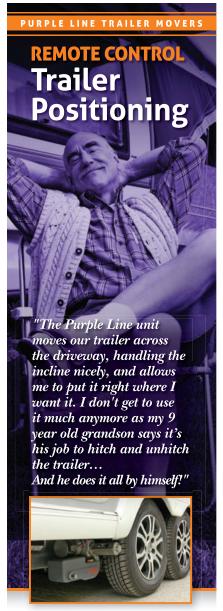












All With One Effortless Touch!

- ✓ Eliminate Blind Spots
- ✓ Simplify Hitching
- ✓ Get Into Impossible Spaces
- ✓ Maneuver Around Driveway



black Hummer for a progressive dinner with wine tastings at several area wineries. It's an enjoyable evening, and we return to our home on wheels and tumble, tired and contented, into bed.

HAWKE'S BAY TO WELLINGTON

The seaside town of Napier on Hawke's Bay is known as Art Deco City. In 1931, a magnitude-7.8 earthquake reduced the city to rubble. It also raised 2,000 acres out of the sea, "gifting" the town muchneeded flat, buildable land. They rebuilt in Art Deco style, and today the town celebrates with events like the Art Deco Festival that draws thousands.

We meet Tony and his 1949 Packard for a driving-and-walking tour of Napier's Art Deco past and present. He tells us about the town's history, teaches us about Art Deco and the architects who shaped the town, and shows us several impressive buildings, including the theater and the National Tobacco Company with its bronze doors and jade green tiles.

Hawke's Bay is wine country, and we're scheduled for a winery bicycle tour. However, rain and wind convince us otherwise, and instead, we stop at the Silky Oak Chocolate Shop and Museum, and load up on creamy sweets for us and friends back home.

Lunch is at Elephant Hill winery, an impressive modernist space surrounded by grapevines on a hill overlooking the sea. We enjoy a salad of buffalo mozzarella and heirloom tomatoes, a puff-pastry tart and coconut-poached John Dory, a local white fish.

In the afternoon, we pile into a Land Cruiser with Jo, a local artist and driver for Gannet Safaris Overland tours. We pass through a locked gate and then bounce along a dirt track to a green expanse of hills and sheer cliffs known as Cape Kidnappers. At 7,000 acres, the Cape Sanctuary is the country's largest private wildlife restoration project, and Jo points out harrier hawks and shell ducks, along with native trees and bushes, including the famous manuka honey bush. But it's the gannets we've come to see — large black and white seabirds with yellow heads, long bills

and 6-foot wingspans — that dive for fish at 100 miles per hour.

We motor up a steep hill, and at the top, thousands of gannets mill about. Perched 600 feet above the ocean, this barren rock is the perfect gannet breeding ground. The birds are unperturbed by our presence, and we snap photos to capture this magical moment.

After a restful night at Kennedy Park, we head for Wellington, our last stop on our New Zealand adventure. It's a four-and-a-half hour drive under a brilliant blue sky through lush green hills on a good two-lane road. Along the way we're entertained by a series of distinctly Kiwi road signs like "Merge Like a Zip" and "Plan Your Corners."

We catch our first glimpse of Wellington Harbor and the city. Nestled between forested hills and the water, the nation's capital is a walkable cosmopolis of about 200,000. It's not especially RV-friendly, so we leave the rig at the city's only "RV park," Wellington Waterfront Motorhome Park, a paved lot with portable toilets and showers next to the Bluebridge Cook Strait Ferry terminal.

We cab over to the i-Site visitor center, and eight of us cram into a 4x4 driven by Billy, an affable Kiwi with Seal Coast Safari. We drive up steep green hills on the edge of town and through a private gate into the Te Kopahou Reserve, climbing up and up with magnificent views of the sea. It begins to rain, Billy shifts into four-wheel drive, and we motor down onto a rocky beach. We bump and roll over big boulders and rocky sand, and ford beach streams. A half hour later, the rain has stopped, and we're on an isolated beach with dozens of seals, some weighing more than 400 pounds. They lounge on the rocky shore and swim in the tumbling waves, as we eagerly take photos.

Back at the RV, rain and wind from a passing cyclone howl all night, but by morning the sky is blue. Wellington is a foodie town, and we meet Zest Food Tours for a walking-and-eating exploration of the city. Our first stop is Mojo, a local coffee roaster, where we sip the Kiwi favorite, a "flat white" LARGEST
MOTORHOME
SHOW

IN NEW YORK STATE

at Turning Stone Resort Casino
Sponsored by RVOne Superstores

July 31st to August 2nd

Show Hours

Friday & Saturday - 10am to 8pm Sunday - 10am to 5pm

- √ The Nation's Top Brands
- √ Gas Motorhomes
- √ Diesel Motorhomes
- √ New & Pre-Owned
- ✓ Over 100 Units on Display
- √ Special Financing Available
- **√** Bank Reps On Hand
- √ Free Admission



Also Now Featuring



Touring Coaches & Travel Trailers

Visit for complete details RVOne.com/TurningStoneShow

SPONSORED BY



RVOne.com







July 31st to August 2nd

IN THE EVENT CENTER AT TURNING STONE RESORT CASINO 5218 PATRICK RD VERONA, NY 13478

ALBANY RV . BUFFALO RV . DES MOINES RV . ORLANDO RV . TAMPA RV

espresso with steamed milk. Then it's onto Gelissimo, where they use locally sourced ingredients to make gelato and sorbet in unusual flavors like ginger beer and blood orange. Next, it's Wellington Chocolate Factory, where they make chocolate from cacao beans from all over the world, and Moore Wilson's Fresh, an urban market that specializes in everything Kiwi, from grass-fed meats and locally made cheeses to pasta and produce. We end our delicious tour with tea and sweets at Floriditas Café, a local restaurant and bakery.

In the afternoon, we catch a shuttle to Zealandia, a bird and wildlife sanctuary in the hills above the city. A fully fenced urban eco-sanctuary, Zealandia creates a safe haven for some of New Zealand's rarest native birds, reptiles and insects, and is just 10 minutes from central Wellington. Set in verdant Sanctuary Valley, with a lake and steep mountains covered in lush native bush, the 630-acre

park features a paved, handicapaccessible walkway. We step off the path frequently to read educational signs and enjoy bird sounds around shady feeders, including the kaka (forest parrots), the endangered hihi (stitchbird), tieke (saddleback) and kakariki (parakeet). While it's difficult to see birds through the thick brush, we enjoy the hike. On our way back to the information center, we're treated to a rare sighting of two critically threatened takahe (birds about the size of turkeys), and they pose for photos.

The next morning is our last in New Zealand, and, after stopping at Mojo's Coffee, we walk to Te Papa (treasure box), New Zealand's national museum. We meet Tina, a Maori guide, for a tour of some of the museum's 110,000 Maori items. Tina shows us a number of historic artifacts, explaining their cultural importance, and shows us the work of modern Maori artists, including some beautiful glass panels. There's also an elaborate Maori meeting room

FOR MORE INFORMATION

Kea Campers New Zealand nzrentals.keacampers.com

New Zealand Department of Conservation

www.doc.govt.nz/parks-and-recreation

New Zealand Tourism www.newzealand.com/us

with modern carvings, a fascinating example of traditional craft reinterpreted by today's Maori.

We end our tour in the museum café with traditionally inspired Maori refreshments: kawakawa tea (bush herb) with manuka honey, rewena (potato bread) with fern-frond pesto, greenlipped mussel and seaweed salad, and sweet potato chips with horopito (native bush pepper) mayonnaise. Since Maori culture is such a big part of New Zealand, and we began this adventure with a Maori tour, this taste of Maori makes a perfect — and appetizing — end to our high-flying journey.





well, then most likely your trip will be a good one.

active outdoor lifestyle.



Dometic offers an extensive line of patio awnings for trailers and 5th wheels, including the easy-operating 9100 Power and Manual Awnings. Power models extend and retract with a wall-mounted switch: manual models open easily with selflocking lift hands. All models offer the new Linen Fade vinyl fabric in a variety of colors plus specialty race flag and rodeo designs.

Visit CampingWorld.com/Dometic

AWNINGS

The popular 8500 Manual Awning features double-sided Linen Fade vinyl fabric and is available in straight or curved hardware to fit virtually any vehicle, including Airstream trailers. The 8500's smooth-operating universal manual hardware allows effortless one-person operation.



SLIDETOPPERS



Stain- and mildew-resistant vinyl SlideToppers shield the top of RV slideout rooms, extending automatically to keep water and debris from entering the RV when the slideout is retracted. They enhance the look and value of your RV, and extend the life of seals and gaskets.

The NEW Deluxe EZ features a vinyl weathershield and reflects heat and light to help keep the interior cooler. An anti-billow mechanism holds the stain and mildew resistant vinyl canopy snug, and the new EZ design is a complete kit that is quicker and easier to install than earlier versions and includes awning rail and mounting hardware.

WINDOW AWNINGS



Complement your patio awning with Deluxe Plus vinyl or Elite woven acrylic window awnings. They provide privacy, protect your furniture and draperies from sun damage, and allow open windows during gentle rains.

PATTY O' SHADE



Reduce the sun's intensity by more than 50% with the Patty O'Shade that slides into the utility slots of the roller tube on most awnings. Available in 10' or 15' lengths, the weather-resistant 54" high vinyl mesh panel filters sunlight to shade the area under the awning throughout the day.

PATTY O' ROOM



The Patty O'Room turns your RV patio awning into a comfortable screened-in enclosure free from flying insects, and nearly doubles your living space. Setup is fast and simple. The starter set includes end panels, 3' door panel, skirting, wheel well cover, hardware kit and zippered storage bag. Fits most RVs.

Dometic

REFRIGERATORS



In the 1950s Dometic invented absorption RV refrigeration and has been perfecting it ever since, so it's not surprising Dometic refrigerators grace more RV kitchens than any other brand today, offering world class RV refrigeration.



Americana Plus

New Generation refrigerators increase storage space but not the outside dimensions, thanks to advanced insulation technology. Available in 7 cu ft. and 9 cu ft. sizes, the self-locking door handles are easy to operate. Eyelevel LED controls display fresh food temperatures for easy monitoring.

Americana Plus refrigerators offer a contemporary exterior with electronic controls, automatic locking handles, and right- or left-swinging doors that open a full 180 degrees. With 6 cu. ft. or 8 cu ft. of interior storage, they feature adjustable, removable shelving and door bins. A climate control system saves energy, and helps prevent condensation.



Americana models offer solid steelframe construction, improved electronic controls and a versatile racking system - all at an affordable price. Available in 3.8 to 7.5 cu. ft. sizes with automatic electronic controls, there is an Americana for virtually any RV.

Elite™ 2 + 2 residential double door refrigerators by Dometic are also available at Camping World SuperCenters.

PORTABLES



The new CFX Portable Freezer/Fridge runs on 120V AC or 12V/24V DC, with a cooling/freezing range from 50°F to -8°F. It's a great way to add refrigerator space to any RV. Portable CF series refrigerators offer a cooling/freezing range of 50°F to 0°F, in a variety of sizes across seven models.



TropiCool cooler/warmers conserve energy and come in handy sizes.

TropiCool portable thermoelectric cooler/warmers come in 7, 15, 21 and 37-quart sizes. They operate on 120V AC, 12V DC or 24V DC. The units can cool 48°F below ambient and heat up to 150°F.

ICE MAKERS

15"H x 13½"W x 17"D

Dometic offers two sizes of portable ice makers. The Large model makes up to 33 lbs. of ice every 24 hours, producing the first batch in less than 15 minutes. The Compact model produces 26 lbs. of ice per day, and its smaller size makes it ideal for RVs, boats or even cars vans and SUVs.

MICROWAVES



Quick, convenient microwave cooking is just a touch away with Dometic's DCM series of microwave ovens designed for RV use. Models are available with regular cook mode only, or with grill and convection capabilities. All have numerous user-friendly features and 1,000 watts of cooking power, plus they come complete with trim frame and exhaust kits.

WASHER/DRYER



Dometic's ventless Washer/Dryer features separate compartments for pretreatment, detergent and fabric softener.

Dometic's Ventless Washer/Dryer Combo is designed for easy installation and uses 20% less water than competing brands. It offers an easy-to-read LCD display, programmable frequently used settings, and a generous 13 lb. capacity.

The system also includes cycle-timer display with complete alarm notification. An ergonomic door handle and easy drainage and service access are other benefits. The unit features three separate compartments for pre-treatment, detergent and fabric softener.

AIR CONDITIONERS

An air-conditioning/heating system is a must-have aboard an RV-reliable climate control makes life on the road more pleasant. Whether you are looking for an RV air conditioner or an RV heat pump, Dometic's line of rooftop air conditioners and heat pumps and RV climate control systems can help keep your camper or motorhome comfortable all year round.

Dometic's rooftop air conditioners and heat pumps keep your motorhome comfortable throughout the year. The Brisk II offers a 15% air flow increase and is 19% lighter than previous models. Fan motor sound-dampening brackets reduce noise and vibration. The aerodynamic Penguin II low profile model is less than 10" high. Both the Brisk II and Penguin II have been recently redesigned and offer numerous improvements over previous models. Available thermostat controls include the multi-zone Comfort Control Center II and single-zone Liquid Crystal Display.









Dometic has toilets for RVs of all sizes, including the industry's number one gravity discharge 310 toilet with PowerFlush technology, full-sized vitreous ceramic bowl, residential-sized seat and easy foot-pedal operation. Removable components simplify winterization. The fully featured 320 offers an elongated, full-size enameled wood seat and deep ceramic bowl. Its pressurized full-rim flush delivers a bowl-clearing rinse every time. Just press the ergonomic foot pedal for easy, hands-free flushing. It's available in white or bone colors, and standard or low-profile heights. The 300 ultra-light toilet features powerful triple-jet rinse action, innovative dropaway ball and valve system plus a full-size bowl.

Dometic

D-Line™ eco-friendly Premium Holding Tank Treatment comes in drop-in or liquid form, with additives that break down effluent to help tanks rinse cleaner. They offer the most powerful, longest-lasting control of tank odors without formaldehyde, and are formulated for all-season use - they won't break down in hot conditions. D-Line™ 3 'n 1 Bowl Cleaner and Tank Treatment combines air freshener, bowl cleaner and tank treatment. The enzyme-based formula naturally neutralizes odors, leaving a fresh lavender scent, and the effervescent cleaning action conveniently cleans the bowl when you drop in one of the rapid-dissolving packets. Non-toxic D-Line™ Clean 'n Green features an advanced, non-toxic biological formula that neutralizes waste holding tank odors. D-Line™ Odor Eze Neutralizer offers powerful, formaldehyde-free odor control for gray water tanks. D-Line™ Toilet Bowl & Seal Cleaner cleans and deodorizes, leaving a fresh scent, plus it lubricates seals and valves.

CLEANING PRODUCTS



D-Line™ RV Wash 'N Wax Cleaner is a professional strength, multi-purpose wash formula that cleans and polishes your vehicle, removing grime, grease, bugs and more. Carnauba wax offers spot-free drying. D-Line™ RV Roof Cleaner and Sealer work together to provide all-weather protection, preventing drying, cracking and oxidation while repelling dirt and rain. The RV Roof Sealer leaves a silky, UV-resistant finish.

CA039279 TL

Camping World offers RV owners a tremendous value on Dometic products, with a Lowest Installed Price Guarantee. See pp. 80 and 81 for deals going on right now. Also, look for a full selection of Dometic products at Camping World SuperCenters. For more information about these and other Dometic products, visit CampingWorld.com/Dometic.

WHAT A RUSH!

WHET YOUR APPETITE FOR ADVENTURE AT NIAGARA FALLS, WHERE THERE'S MORE TO DO IN THIS FASCINATING BORDER-CROSSING REGION THAN BEING ENTHRALLED BY THE MIGHTY WATERFALLS

oneymooners have traveled to Niagara Falls since before Napoleon ruled France. In fact, Napoleon's younger brother, Jerome Bonaparte, visited the falls with his first bride, American Elizabeth Patterson, in the early 1800s. But the future king of Westphalia and his new wife couldn't hold a candle to the effect Marilyn Monroe had on the popularity of Niagara Falls as a getaway for lovers.

In the 1953 movie *Niagara*, Monroe plays the steamy seductress Rose Loomis, vacationing at Niagara Falls with her gloomy, neurotic husband, George (Joseph Cotten). Rose plans to do away with George, by — you guessed it — sending him over the falls, so she can take up with another

man. However, two honeymooners, Polly and Ray Cutler (played by Jean Peters and Casey Adams), intervene. It's a soggy, predictable plot, but the audience gets doused with spectacular views of the falls. The film also whets viewers' interest with scenes at Cave of the Winds, a series of wooden scaffolds

beside Bridal Veil Falls, and aboard Maid of the Mist, the sightseeing boat that ferries tourists past American Falls and Bridal Veil to the base of Horseshoe Falls, the largest of the three falls that make up Niagara's famous cascades.

THE FALLS

The falls straddle the U.S.-Canada border, 20 miles north of Buffalo, New York, where the Niagara River gushes into a deep gorge. Horseshoe Falls blocks the end of the cliff-framed ravine separating the U.S. and Canadian sides of the river. American Falls, the second



largest, streams next to the 230-foot observation tower on the U.S. side. The smallest — and this is relative, as it's still impressively large — is Bridal Veil Falls, adjacent to American Falls.

In addition to the waterfalls, the communities on both the New York and Ontario sides of the river are called Niagara Falls. The American side has Niagara Falls State Park, New York's oldest state park. The Canadian side is more developed with large hotels and an urban, commercial feel. Remember to bring a passport or passport card for each person — although technically, only a birth certificate is required for minors under 16. If a minor is traveling with only one parent, a letter of consent from the other parent is highly recommended (www.ezbordercrossingcom).



Geologically, Niagara Falls is only about 11,000 years old. It formed as the continental ice sheets receded at the end of the last ice age. Originally located between Lewiston, New York, and Queenston, Ontario, the falls have eroded 6.8 miles to their present location. While the current rate of

erosion, 1 foot per year, is a third of its historic rate, scientists estimate that the falls will erode the remaining 20 miles to the source of the Niagara River at Lake Erie and disappear in another 50,000 years.

An average of 60 tons of rock









(Above from left) The boardwalk to Cave of the Winds climbs beside Bridal Veil Falls, one of three enormous cascades that make up Niagara Falls. A gull guards her nest by the path to Cave of the Winds. The *Maid of the Mist* noses passengers into the bottom of American Falls.

particles flows over Niagara Falls every minute, giving the water a stunning aqua-green color. The volume of water crashing over the falls varies by the season and time of day. When Lake Erie is at its highest (in the spring) and hydroelectric power needs are curtailed, as much as 225,000 cubic feet of water per second flow over the massive cascades. During the summer, at the height of the tourist season, about 100,000 cubic feet of water goes over the falls per second, 90 percent of which tumbles over Horseshoe Falls.

WINE COUNTRY

After a visit to the falls, sampling some

of the Niagara region's many wines is a popular way to spend the afternoon. It's one of the largest grape-growing areas in North America, with 30,000 acres of vineyards. Since the 1800s, the area has attracted grape-growers with its well-drained soil and proximity to Lake Erie and Lake Ontario, which create a moderating effect on the region's climate. Today, you can drive along New York's well-marked Niagara Wine Trail, which goes to 22 wine-tasting locations among acres of rolling farmland and friendly rural communities.

Some of the tasting rooms are at the vineyards where the grapes are grown. Others are at wineries that use local grapes to create their signature wines.



SPANNING TWO COUNTRIES

Niagara Falls' three impressive cascades plunge down between two towns of the same name, one on the American side of the Niagara River and the other on the Canadian side. The river runs from Lake Erie to Lake Ontario.

A TOAST TO NIAGARA

If you love wine but tire of the usual cabernets and chardonnays, you'll love tasting the many varietals and hybrids in New York's Niagara region. Twenty-two wineries line the Niagara Wine Trail (www.niagarawinetrail.org). Here's a taste:

Chateau Niagara Winery, Newfane: Behind its huge oak doors, you'll find a number of less familiar wines including kagor, a dessert wine once made exclusively for Russian czars and now produced in the western hemisphere only by this winery. www.chateauniagarawinery.com

Long Cliff Vineyard and Winery, Sanborn: This tasting room was originally built as a hog barn but now pours Rieslings,

pinot whites and Lemberger reds. www.longcliff winery.com

Schulze Vineyards and Winery, Burt: Among German-born Martin Schultze's many wines, look for the sweet, rare ice wine, produced from grapes picked during the coldest night of winter. **www.schulzewines.com**

Flight of Five Winery, Lockport: The only urban tasting room on the trail, Flight of Five is located beside the Erie Canal and named for the series of five canal locks below its front door. www.flightoffivewinery.com

Honeymoon Trail Winery, Lockport: With more than 30 wines to choose from, wine lovers can mix tasting and romance by the winery's massive fireplace. www.honeymoontrailwinery.com

Johnson Estate Winery, Westfield: The oldest estate winery in New York has produced wine since Prohibition from grapes grown on its 120-acre vineyard. www.johnsonwinery.com

(From far left) Vintner Martin Schulze tends to his ripening grapes near Niagara Falls. Wine made from the crushed grapes fills bottles at Schulze's Burt, New York, winery.



North American cicada: 109 decibels. Honda EU3000is generator: 49-58 decibels.



Don't miss the call of the wild because of a clanky generator at the RV campsite. Try the remarkably quiet Honda
EU3000is. Its light-

weight, easy starting, fuel efficient power and legendary reliability make it the generator of choice for RVers and their camping neighbors. To hear even more, visit gen.honda.com.



Very Smart.









TAKING THE PLUNGE

It is illegal to go over the falls, with stiff fines and penalties from both the U.S. and Canadian governments, but that hasn't stopped people from trying. Since the early 1800s, many have attempted various stunts around and over Niagara Falls.



Annie Edson Taylor

1829 Sam Patch, known as the Yankee Leapster, was the first of many daredevils to challenge themselves at Niagara Falls. He jumped from a tower into the gorge below the falls and survived.

1859 Charles Blondin completed the first tightrope crossing by Niagara Falls, a 1,000-foot span across the river with a 60-foot sag in the 3-inch line. The feat took 17 minutes. He offered to carry a volunteer on his back, but no one volunteered.

1883 An Englishman, Captain Matthew Webb, who was the first man to swim the English Channel, drowned attempting to swim across the Niagara River below the falls.

1901 Annie Edson Taylor, a 63-year-old school-teacher from Michigan, was the first to go over the falls in a barrel. She survived with only a few cuts.

1960 A seven-year-old boy was swept over the falls wearing only a life vest. Dubbed "the miracle at Niagara," he was rescued by the *Maid of the Mist*.

1989 Peter DeBernardi and Jeff Petkovich were the first duo to plunge over the falls and live. DeBernardi designed a high-tech "barrel" made of steel and fiberglass with harnesses, windows and music. The stunt promoted the prevention of drug abuse by local kids.

1993 John Munday became the first person to go over the falls twice and survive.

2003 Kirk Jones was the first to survive going over the falls without a flotation device. Only two others have survived since then in unprotected plunges over the falls.

2012 Nik Wallenda was the first tightrope walker to cross directly over the falls. Wallenda took 30 minutes to traverse the 1,800-foot, 2-inch-diameter wire through mist and fog in front of television cameras and 129,000 spectators.

(Right) A passenger boat enters one of the locks on the Erie Canal. (Below) Gate of Five Nations, the outer gate and drawbridge at Old Fort Niagara.

The region is gaining a reputation for its pinot noirs, chardonnays, cabernets, Rieslings and Syrahs. You can also sample wines made from New York's native concord and Niagara grapes. As a special treat, look for a tasting room that serves ice wine, a rare dessert wine made from grapes that are picked on the coldest night of the winter.



ERIE CANAL

Flight of Five Winery in a renovated city hall in Lockport, New York, is named for the series of five locks through the middle of the town. Lockport is an admirable example of how towns along the once heavily industrialized banks of the Erie Canal are transforming into attractive tourist destinations.

Local farmers and hundreds of British, German and Irish immigrant laborers built the 363-mile canal, which was completed in 1825 at a cost of \$7 million. An important shipping route connecting Lake Erie to the Hudson River, the canal reduced the cost to ship a ton of goods from Buffalo to New York City to \$10 per ton, \$90 less than pre-canal days. However, when rail travel became commercially widespread in the late 1800s, the canal diminished in importance, eventually ceasing to be used for the transport of cargo.

Today, the canal is used mainly by recreational boaters. A cruise on the canal through the Lockport Locks is a relaxing way to spend the afternoon after a turbulent morning at Niagara Falls. The open-top boat ride starts with a peaceful poke down a forested portion of the canal, then through the five locks in the town of Lockport. Along the way, passengers get a sense of the history of the canal and what it was like in its heyday, as a great shipping lane.



A HTCH FOR EVERY TRUCK



The **Companion**[™] was designed for a smooth ride. It's completely removable when not towing.

ALSO AVAILABLE:

The Companion Slider™ adds 12 inches additional clearance that you might need with a short-bed truck.

The Companion Flatbed. The coupler is attached to a low-profile base. It's designed to be used with steel flatbeds.

*The same coupler (RVC3006) is used in all Companion models.



The Patriot 18K™ is our rail mounted hitch with cam-operated jaws. The one piece base design makes for easier install and a higher safety rating.

ALSO AVAILABLE:

The Patriot 18K Slider™ is our rail mounted hitch now available with 12 inches of slide for maneuvering a short-bed truck.

The Patriot 16K™ is our rail mounted hitch. It's a less-expensive, lighter weight version of the Companion.

*The same coupler (RVC3200) is used in all Patriot models.

COMPANION

The Companion for Ford or Ram Pucks are designed to work with the factory hitch platform.

ALSO AVAILABLE:

The Companion for Ford Pucks is designed to work with the Ford factory hitch platform.

The Companion for Ram Pucks is designed to work with the Ram factory hitch platform.

*The same coupler (RVC3006) is used in all Companion models.

To check out all of our 5th wheel options for your truck visit www.turnoverball.com







FORT NIAGARA

For an even earlier step back in time, Old Fort Niagara in Youngstown, New York, near the mouth of the Niagara River, is a must-see. The French established the fort in 1679 to control the Great Lakes, both for the resources provided and because the lakes offered an early route into the interior of the continent. The British captured the fort during the French and Indian War, only to give it up to the Americans twice by treaty, the first time at the end of the American Revolution and the second time after the War of 1812. The United States continued to use Old Fort Niagara as a training facility until 1963.





(Above from left) Costumed interpreters dressed in French and English military uniforms educate visitors about life at Old Fort Niagara during the colonial era. Another interpreter displays vintage fishing tackle used at the fort in the 1700s.



The French Castle at Fort Niagara across the parade grounds guards Lake Ontario and the mouth of the Niagara River.

America's #1 Choice for Innovative RV Air Conditioning

Dometic's Rooftop A/C Units Always Stay on Top of the Heat!



Brisk II Is 19% Lighter With 15% More Air Flow

- High-performance motor and fan
- EPP foam housing reduces weight
- Larger air openings for improved air flow and cooling
- Fan motor brackets reduce noise and vibration
- Perfect for ducted or non-ducted cooling systems



Penguin II Reduces Drag & Improves Mileage

- Low profile under 10 in. high
- Sleek shroud design reduces drag for improved mileage
- Redesigned base pan is stronger and more durable
- Perfect for ducted or nonducted cooling systems



Penguin II with black shroud



MORE INFO

Watch the Brisk II Video



Sunset view along the shore of Lake Ontario at New York's Four Mile Creek State Park.

Visitors can wander through the fort's superbly maintained buildings and grounds, which still hum with colonial-era activity. Touring the sleeping quarters and commissary, you can imagine life at the fort during the early 1800s. Dressed in military uniforms from the various French and British periods of occupation, interpreters teach Old World ball games to modern-day kids. A blacksmith hammers iron hooks in the forge. Soldiers play cards with no numbers, because in those days some soldiers couldn't read. Another soldier

CAMPING NEAR THE FALLS

The Niagara Falls area has no shortage of RV accommodations, including the following New York state park campground and eight Good Sam Parks on both sides of the U.S.–Canada border.



NEW YORK

AA Royal Motel and Campground, North Towanda 716-693-5695

www.royalmotelandcampground.com

Four Mile Creek State Park, Youngstown

716-745-3802

www.nysparks.com/parks

Niagara Falls Campground and Lodging, Niagara Falls 716-731-3434

www.niagarafallscampground.net

ONTARIO

Campark Resorts, Niagara Falls 877-226-7275 www.campark.com Knights Hideaway Campground, Ridgeway 905-894-1911 www.knightsfamilycamping.com

Riverside Park Motel and Campground, Niagara Falls 905-382-2204 www.riversidepark.net

Scott's Tent and Trailer Park, Niagara Falls

905-356-6988

www.scottstrailerpark.com

Yogi Bear's Jellystone Park Camp-Resort, Niagara Falls 800-263-2570 www.jellystoneniagara.ca

Vine Ridge Resort, Queenston 877-814-4141 www.vineridgeresort.com

WE MANUFACTURE TRUST

Products and services that turn customers into raving fans.

















RUBBER PIN BOXES

SLIDING TRAYS

TV MOUNT

SUSPENSIONS

EASY REEL

RUNNING GEAR

SLIDEZILLA



Visit www.**TRUST.MORRYDE.COM** to learn how.

A climb up the winding stone stairwell to the top of the French Castle, the main stronghold of the fortress, gives an unobstructed view across Lake Ontario through old lead-glass windows, more pink and blue than clear, and an appreciation for just how huge the lake is.

RV CAMPING

The easternmost and smallest among the five Great Lakes, Lake Ontario is an enormous freshwater sea, covering 7,340 square miles. It forms a natural 250-mile boundary between the United States and Canada, from Old Fort Niagara at the northwestern corner of New York state to Cape Vincent

at the start of the Saint Lawrence River. Luckily, one of the best lakeside RV-camping spots on Lake Ontario, Four Mile Creek State Park, is in the Niagara area, a couple miles east of Old Fort Niagara and 15 minutes north of Niagara Falls.

Four Mile Creek State Park has hiking trails on the wooded bluffs above the shoreline and a broad lawn extending to the edge of the water, the perfect place to pitch a lawn chair, read a book and watch the sunset. Don't be surprised if a whitetail deer wanders by your RV or a great blue heron lands on your picnic table. The campground is also close to Lewiston, yet another historic spot, made famous during the Civil War era as the departing point into Canada for slaves escaping via the Underground Railroad. Lewiston is also home to Artpark, a unique state park that hosts open-air concerts and theater productions.

Thinking of a trip to Niagara
Falls? There's more to the area than



impressive waterfalls. While it remains a popular destination for honeymooners, it also appeals to history buffs, wine lovers, families and adventurous types who like to get intimate with powerful forces of nature.

FOR MORE INFORMATION

Niagara Falls Canada

800-563-2557

www.niagarafallstourism.com

Niagara Tourism USA

877-325-5787, www.niagara-usa.com





GET ON THE ROAD TO BIGGER REWARDS!

FOR EVERY \$1 SPENT

5 POINTS

at Camping World and on Good Sam purchases

3 POINTS

at private campgrounds across the U.S. and Canada

1 POINT

everywhere else VISA® is accepted

REDEEM for cash back as a statement credit, Good Sam memberships, restaurant, retail and gas gift cards, PLUS MUCH MORE!

NO ANNUAL FEE**

AUTOPAY for when you're on the road

30 EXTRA DAYS FOR RETURNS

on Camping World purchases made with the card

APPLY TODAY! CALL: 1-844-271-2591 CLICK: GoodSamCampingWorldVisa.com

or Visit a Camping World SuperCenter near you!

*Offer subject to credit approval. 0% Intro APR offer is valid through 7/5/2015. Cardholders will earn five (5) points for every one dollar (\$1.00) of Net Purchases spent on Good Sam Club related products and services made on their Account rounded to the nearest dollar. "Good Sam Club eligible purchases," are defined as products and services purchased from Good Sam Enterprises, LLC and its affiliates and partners, including but not limited to the following: Coast to Coast, Camping World, Good Sam, TL Enterprises, and NGIC. Cardholders will earn three (3) points for every one dollar (\$1.00) of Net Purchases made at any retail establishments that classify their merchant location to Visa as Campgrounds and Trailer Parks within the U.S. and Canada. For all other purchases made anywhere else, Cardholders will earn one (1) point for every one dollar (\$1.00) of Net Purchases made on their Account rounded to the nearest dollar. A one-time bonus award of (2,000) Rec Rewards Points will be awarded to new cardholders after the first purchase is posted to the Account. Bonus Rec Rewards Points will be posted approximately 30 days after the initial qualifying transaction. This rewards program is provided by Comenity Capital Bank and its terms may discontinue or change at any time. For information about the rates, fees, other costs, and the reward program rules (including point accrual rate, bonus point awards, etc.) and benefits associated with the use of this credit card program please visit www.comenity.net/goodsamcampingworld for complete terms and conditions.

**Standard variable ARP of 24.99%, 19.99% and 13.99% based on Prime Rate and your credit worthiness. Balance transfer and Cash Advance APR of 25.99% based on Prime Rate. Minimum interest charged is \$2.00 per credit plan. Offer subject to credit approval.

POWER YOUR ADVENTURE

Special events, RV camping, hunting, fishing, tent or tailgating—wherever the road takes you, Champion lets you bring the power with you. Let's hit the road.





POWERFUL

No matter the size of your RV, Champion powers all the things you need to add home comforts to your adventure.



EASY TO OPERATE

All of the Champion products are designed with ease of use in mind. Robust, simple to operate and easy to maintain.



OUIET

Camp out and enjoy the sounds of nature while leaving the setting undisturbed.
Champion's camping generators are always designed for quiet operation.



LIGHTWEIGHT

Create the perfect camping setting. Lightweight Champion camping generators allow you to take some of the conveniences of home with you to the woods.



DEPENDABLE

Designed for remote use where finding service is simply not an option.
Champion generators are designed for the highest level of dependability every time.



3100 Watt Inverter





2000 Watt Inverter





CHOOSE THE RIGHT GENERATOR

Model	Cell Phone	Inflator Pump	TV	Microwave	Refrigerator	Washing Machine	Electric Grill	Water Heater	Heat Pump	10,000 BTU Air Conditione	40,000 BTU r Air Conditioner
2000											
3100											
3800											
4000											
7500											

Every unit includes Champion's 2-year warranty and is backed by a legendary technical support team.

MONTANA'S SMALL TOWN WITH A BIG HISTORY

Following in the footsteps of Lewis and Clark, the author rediscovers his roots in Three Forks, where the Madison, Gallatin and Jefferson rivers converge at the headwaters of the Missouri River

is name was Clyde. In my 20 years of education, he was the only fellow student who offered me fresh macadamia nuts as a snack. I met Clyde, a native Hawaiian, while attending graduate school in Kentucky. To me, his childhood home seemed exotic and idyllic. How magical it must be to live year-round on an island that most people visit as a holiday destination. But Clyde's attitude toward his homeland was different. When he spoke of Hawaii, it was in terms of family and friends rather than beaches and surfboards. It almost seemed as if he failed to appreciate his roots in relation to the world of leisure travel.

In reality, I can't be too hard on Clyde. Three Forks, Montana, was the "urban" center of my childhood, which occurred more specifically on a ranch west of town. A bedroom community of sorts to Bozeman, and a back door to Yellowstone National Park, Three

Forks is a fascinating playground of history and recreation, but seldom appreciated in its own right due to its proximity to attractions more centrally focused in the national spotlight.

As a kid, I didn't think much of my hometown and its surroundings. As

a well-traveled adult, it now has more esteem in my mind.

When a pretty girl from New Hampshire accepted my marriage proposal a couple of years ago and moved west, it set the stage for a visit to the Three Forks area. Lisa was curious about my old stomping grounds. On a blushing day in August, we hit the road to my hometown in a peppy Winnebago Trend, an RV perfectly suited for our journey.

The Three Forks Fly-In is an annual event bringing vintage and unusual aircraft to Pogreba Field, the local airport. Nearing its 40th anniversary, the annual gathering occurs August 6 through 8 this year. Planes



Good Sam Extended Service Plan pays for your repairs



Good Sam Extended Service Plans feature:

- We pay for your repairs at any repair facility
 - 2000+ Good Sam Preferred Providers
- Rates are locked in from 3-7 years on new policies
 - Flexible payment options
- The backing of Good Sam 100% satisfaction guarantee

CALL OR CLICK FOR A FREE, NO OBLIGATION QUOTE

GoodSamESP.com/TL715

877-273-9004



PROTECT YOURSELF FROM HIGH REPAIR BILLS TODAY







begin arriving on Thursday for the three-day reunion. Saturday is the highlight, with pilots vying for top honors in contests that include precision landing and "flour bombing," a crowd favorite in which two-person teams fly over a runway attempting to manually drop a sack of flour into a barrel below.

We hit the fly-in late Friday afternoon. Most of the flying was done for the day, but an array of intriguing aircraft was parked on the tarmac. Many pilots lounged by their craft or mingled with onlookers.

A sleek wooden airplane caught our eyes. It appeared very old, but unlike most of the planes that seemed engineered for just a couple of occupants, this plane had a row of windows and was larger than many on the field. It had reddish-orange wings jutting from the top of the glistening black fuselage that looked to be made of wood. The words "Travel Air" were embossed on its tail and just behind the engine in a flowing script.

As we circled the plane, admiring its unique lines and speculating about its origin, the pilot stepped forward to greet us and asked if we'd like a peek inside. Hank, who is from Kalispell, Montana, explained that the Travel Air 6000 was built in the late 1920s. Delta Air Service (now Delta Air Lines) bought three of the planes and began its first commercial air service between Dallas, Texas, and Jackson, Mississippi.

Inside, we marveled at the beautiful wicker seats for six passengers. Hank urged Lisa to sit in the pilot seat. He offered another tidbit of the plane's history, noting that the Travel Air did not last long as a commercial passenger plane, ousted from the fledgling market by faster models not long into the 1930s

Toward sunset, after viewing dozens of other interesting aircraft, we pointed the grille of the Trend toward the campground at Missouri Headwaters State Park. The park is located less than 5 miles from Three Forks on a route I know well. When I was in high school, the track coach sometimes

well. When I was in high school, the track coach sometimes

WONTANA

Missouri River

THREE FORKS

Jefferson River

Gallatin River

(Above left) Each August the Three Forks Fly-In brings scores of vintage airplanes to the town, where onlookers of all ages are intrigued by the rare aircraft. (Above middle) A tepee lends a historical aura to the campground at Missouri Headwaters State Park. Visitors looking for a unique camping experience can rent the American Indian-inspired lodging. (Above right) The area abounds with many species of birds and other wildlife, including sandhill cranes that wander the grasslands west of Three Forks. (Below) The drive to Lewis and Clark Caverns goes through a scenic foothills forest dominated by junipers and fir trees.







(Above) The Gallatin River, viewed here from Fort Rock at Missouri Headwaters State Park, is the final "fork" to join the Jefferson and Madison rivers to form the Missouri River. The town of Three Forks is named for the three rivers. (Right) The author casts for trout on the Madison River, not far from Three Forks. The area boasts excellent fishing on a variety of streams.

herded our entire team onto a bus, drove us to the park, then dumped us with orders to run back to school.

We found the campground toward the south end of the park, vastly improved from the days of my youth. A rentable tepee lent a historic air to the bivouac near the entrance. Not far beyond the tepee was an area for outdoor games. Moments later, we slid the Winnebago into our reserved site, prepared dinner, then took Percy, our English setter, for a stroll around the campground.

Missouri Headwaters State Park

sits in a broad valley with towering mountain ranges visible in nearly any direction. Despite its setting, the park's history is perhaps its primary attraction. One of the goals of the Lewis and Clark Expedition was to discover the source of the Missouri River. Within the 532-acre boundary of the park, the Madison, Gallatin and Jefferson rivers twine to form the Missouri. On July 25, 1805, the Corps of Discovery reached the ground upon which Missouri Headwaters State Park is located. They spent five nights at the headwaters, the captains wishing

TO OUR RIGHT, THE GALLATIN RIVER SNAKED
THROUGH THE VALLEY, ITS GLISTENING WATERCOURSE
FLANKED BY TOWERING GREEN SENTINELS, MASSIVE
COTTONWOOD TREES WHOSE LEAFY CANOPIES SWAY
IN THE SUMMER BREEZE

Proudly made in the U.S.A.



to scout ahead and rest the men before pushing forward into what they described as intimidating surroundings of vertiginous mountains and hot, unshaded valleys.

The following day we left on foot from our campsite, leashed animal companion in tow. A walking path led from the campground to Fort Rock, an elevated mound of limestone located between the Gallatin River and the confluence of the Jefferson and Madison rivers. It's an easy 1-mile hike from the campground to this unique geological feature that received its moniker from a comment Meriwether Lewis made in his journal regarding its potential as a fortified outpost. The level path turned to a quick scramble, as we made our way to the top of the rock.



control, there is simply no better hitch on the market.



EqualizerHitch.com Toll Free 800-478-5578



Equalizer, Circle 140 on Reader Service Card





The e2 hitch gives you built-in sway control, for a faster, easier, and safer towing experience.



FastwayTrailer.com Toll Free 877-523-9103

Fastway e2 - Faster, Easier.™

astway Products, Circle 141 on Reader Service Card

(Right) Relaxing at the campground at Missouri Headwaters State Park. Reserve in advance to ensure you get a spot at this historic place. (Far right) Lewis and Clark Caverns is one of the most highly decorated limestone cave systems in the world.

"Wow."

My sweetheart's words caught me by surprise. I glanced sideways to view an intense sense of wonderment on Lisa's face. Overwhelmed by a view I'd seen many times (one of my summer jobs off the ranch was as a part-time caretaker at the park), she prompted me to breathe deeply and take a fresh look at the scene. To our right, the Gallatin River snaked through the valley, its glistening watercourse flanked by towering green sentinels, massive cottonwood trees whose leafy canopies sway in the summer breeze. Before us, the Gallatin joined the other two melded forks of the Missouri. So taken with the significance of the location, Lewis and Clark recorded with painstaking care their survey of



the country and sketched a map for reference.

Our return route to the campground included a side trip to an interpretive site at the confluence of the Jefferson and Madison rivers, the spot commonly accepted as the headwaters of the Missouri. One sign recounted the story of Sacagawea, an American Indian



woman who served as a guide and interpreter for the expedition after joining Lewis and Clark with her husband in the Dakota Territory. Sacagawea was kidnapped into slavery at this site much earlier by a raiding band of Hidatsa Indians. Her knowledge of the surrounding country and reunion with her familial tribe, the Lemhi Shoshone, was



to prove pivotal in the success of the expedition, as it traversed the rugged mountain territory west of Three Forks.

Leaving the headwaters, we motored west in roughly the same direction taken by Lewis and Clark more than 200 years previously. Our destination was Lewis and Clark Caverns State Park, home to one of the most highly decorated limestone caverns in the world. As we drove happily along the highway, views of the Tobacco Root Mountains and the Jefferson River captured my wife's gaze and necessitated several stops for photos. The entrance to the park came just a half-hour after we lunched at a city park on the outskirts of Three Forks. A winding road leads from the park's entrance to the visitor center. Leaving a narrow plain along the Jefferson River, we climbed quickly through a series of canted ravines, smattered with pale limestone formations poking among dark stands of aromatic Douglas fir trees.

LEWIS AND CLARK SLEPT HERE

Meriwether Lewis and William Clark wrote extensively in their journals while camped at the headwaters of the Missouri. Here are some of the things they had to say:

"Both Capt. C. and myself corrisponded in opinion with rispect to the impropriety of calling either of these streams the Missouri and accordingly agreed to name them after the President of the United States and the Secretaries of the Treasury and state... In pursuance of this resolution we called the S.W. fork, that which we meant to ascend, Jefferson's River in honor of [that illustrious personage] Thomas Jefferson. The Middle fork we called Madison's River in honor of James Madison, and the S.E. Fork we called Gallitin's River in honor of Albert Gallitin."

- Meriwether Lewis, on naming the three forks of the Missouri River

"Between the middle and S.E. forks near their junctions with the S.W. fork there is a handsom site for a fortification it consists of a limestone rock of an oblong form; its sides perpendicular and about 25 ft high except at the extremity towards the middle fork where it ascends gradually and like the top is covered with a fine terf of greenswoard."

- Meriwether Lewis, describing Fort Rock

"The beds of all these streams are formed of smooth pebble and gravel, and their waters perfectly transparent; in short they are three noble streams."

- Meriwether Lewis

"Our present Camp is the prosise Spot the Snake Indians were Camped at the time the Minetarries came in Sight, attacked & killed 4 men 4 women & a number of boys, & made prisoners of all the females & 4 boys."

- William Clark, describing the capture of Sacagawea



MONTANA'S SMALL TOWN WITH A BIG HISTORY

The highlight of this state park is a guided tour of the caverns. As we hiked from the visitor center to the entrance of the cave, I wondered aloud how much of the tour I would remember from my days as a tour guide some 35 years earlier. We passed through the underground labyrinth of naturally sculpted limestone at the back of the group, Lisa savoring the geology lessons imparted by the guide and peering at the colorful array of formations.

My memory piqued by the surroundings, much of what I'd forgotten about the cavern returned in a veritable flood. Our guide made jokes about many unusual formations including a stalagmite in the shape of a frog. I smiled with zipped lips, remembering the punch line to each witticism, reliving a snippet of my early adulthood with a renewed appreciation for the natural wonder that supplied me employment and savings for college.

Exiting the cave, we blinked owlishly in the late-afternoon sunshine. Halfway down the walking trail to the visitor center, we stopped to admire the view. The Jefferson River wove through the vale below in a silver ribbon. Hollowtop Mountain, the highest summit in the Tobacco Root range, thrust its pate above the lowlands, replete with a crescent snowbank just below its open, rocky top.

"Nice place to grow up," murmured Lisa, as she looked around.

It was. Decades later, the Three Forks area holds even greater charm for me as an adult than it did as a kid. 🗭





WHERE TO EAT

Land of Magic Steakhouse

Located on the I-90 frontage road in a little spit of a town (Logan), just five minutes east of Missouri Headwaters State Park, this restaurant is a local favorite for all things beef. 406-284-3794, www.landofmagicsteakhouse.com

Sacajawea Hotel

"The Sac," as it's known locally, is a picturesque, historic hotel in Three Forks. Pompey's Grill, located in the hotel, is named in honor of Sacagawea's son. It offers excellent dining in a classic setting. 406-285-6515, www.sacajaweahotel.com

Wheat Montana Bakery and Deli

We never drive through the area without stopping for coffee and a pastry at Wheat Montana, where locally grown grains are milled into flour and baked into scrumptious cinnamon rolls, breads and other goodies. Located at the intersection of I-90 and U.S. Highway 287, just a few miles west of Three Forks. 406-285-3614, www.wheatmontana.com

WHERE TO CAMP

Bear Canyon Campground

Thirty miles away in Bozeman, Bear Canyon is open May 1 through October 1 and has full RV hookups, an outdoor heated pool, free Wi-Fi, scenic mountain views and easy access to outdoor activities.

800-438-1575, www.bearcanyoncampground.com

Camp Three Forks

Open May 21 to September 15, Camp Three Forks offers full RV hookups, laundry facilities, a playground, a gift shop and high-speed Internet.

406-285-3611, www.campthreeforks.com

Lewis and Clark Caverns State Park

Located 17 miles west of Three Forks, the year-round park has 25 campsites, including some with electric hookups, for RVs of varying lengths. Tours of the caverns are available daily, May through September.

406-287-3541, www.stateparks.mt.gov/lewis-and-clark-caverns

Missouri Headwaters State Park

Open year-round, the park has historical exhibits, hiking trails and 16 primitive campsites for RVs of varying lengths. Lewis and Clark camped here in 1805, and you can too.

855-922-6768, www.stateparks.mt.gov/missouri-headwaters

FOR MORE INFORMATION

Three Forks Chamber of Commerce

Information on local events and attractions including golfing, fishing, canoeing and historic sites.
406-285-4753, www.threeforksmontana.com

Three Forks Fly-In

August 6 through 8, 2015. Contact Three Forks Chamber of Commerce or email kenflikkema@gmail.com.





Gimme Shelter





ometimes the problem with the great outdoors is there's just a bit too much of it. For example, sunny at home but then cloudy and cold en route, dust storms followed by thunderstorms, a deceptive lull and then winds kicking up at midnight and howling like a wolf through dawn's early light. Such was the case at Willow Springs International Raceway in the Southern California desert last spring for the annual Corsa Moto Classica riding school, vintage motorcycle races, bike show and swap meet. The event is but once a year, and the track generously opens its large pit area for RVs at no additional cost. With so much to see and do, not going due to blustery weather wasn't an option, meaning the only option was to prepare — and then go do it.

Under such conditions, having a vehicle that can store motorcycles as well as people and gear, safe and secure from the elements, becomes paramount. Ford's new long-wheelbase, extended-body, high-roof Transit van, a competitor to the Mercedes-Benz Sprinter and Ram ProMaster, deserves serious consideration. While the Sprinter has been the gold standard here through 13 years and two generations, it was followed last year by a Fiat-built Ram ProMaster van offering front-wheel drive for an impressively flat and low floor, but with limited towing and some ergonomic challenges.

Like the Sprinter and ProMaster, the new Transit is available in multipassenger wagon and two-passenger cargo-van configurations. For our motorcycle-track weekend, we chose the two-passenger extended wheelbase T350 HD model equipped with a 3.2-liter Power Stroke five-cylinder turbodiesel engine producing 185 horsepower and 350 lb-ft of torque, driving through a six-speed automatic and dual rear

wheels with 195/75R16 tires. The MSRP as equipped was \$50,295.

The diesel powertrain lends the Transit greater towing capacity than the 3.5-liter EcoBoost and 3.7-liter V-6 gas engines that are also available. The maximum tow capacity of the diesel van is 7,100 pounds, adequate to tow the test Jayco Octane Super Lite 161 toy hauler. As it turns out, the van's 14 feet of inside storage length and 5-foot 8-inch interior width (not counting fender wells) was plenty adequate to store three motorcycles.

Loading bikes and gear into the Transit was straightforward enough with the Jayco trailer detached. However, with the trailer hitched, we found it was still possible by angling a loading ramp to either side at the rear opening or the side opening. We limited this unconventional technique to dirt bikes only, and I would not relish the loading-at-an-angle approach with most road bikes. The 6-foot 8-inch ceiling height inside the Transit was a wonderful asset for moving about





(Left) Large and in charge: Ford's biggest Transit model is at ease towing Jayco's Octane Super Lite 161. (Above from left) Good ergonomics and a high seating position make the Transit cockpit friendly. Our test vehicle's 3.2-liter five-cylinder turbodiesel returned 12 MPG while towing.







without banging our heads.

When storing bikes in a stationary garage, you don't need anything but a center or sidestand, but stout tiedown points are critical in any truck or trailer. Motorcycles can become a major mess and dangerous projectiles if they break loose during transit. Fortunately, the van featured a dozen separate tie-down rings located in convenient places around the interior.

Our 270-mile round-trip route took us from Southern California to

(Above from left) The 161's 7-foot ramp greatly simplified bike loading. Six feet 3 inches between the trailer's fender wells is plenty of storage room for two bikes, and maybe three smaller ones. The Transit van is equally motorcycle-friendly.

the desert town of Rosamond where Willow Springs, a 62-year-old road course, features events most every weekend. A weight-distributing hitch and sway control are always useful features on a sizable trailer setup, but in this case the sway control was not necessary even with the high winds that were present in the desert.

The Transit towed the Jayco trailer beautifully. Partly out of respect for the winds, we never pushed our speed past the legal or prudent range. As a result, there were no issues whatsoever with stability, and we never needed to use the included trailer brake controller manually because we never experienced extreme sway



Weber Q[™] 1000 (Mfr. #50060001)

- 189 sq. in.
- Push-button ignition

Q® Portable Propane Grills by Weber®

Now with upgraded features for an even better backyard, tailgate or camp cooking experience!

- Re-contoured lids accommodate whole chickens or roasts for more grilling versatility
- Split grates simplify cleaning and allow use of optional griddle over one side of burner
- Improved porcelain enamel finish extends life of cast iron grates
- Larger side tables are stronger and more stable
- Larger lid handle grip and control knobs
- Ergonomic side handles for easy transport
- Uses disposable LP cylinders or refillable 20 lb. tank with optional adapter (both sold separately)
- Mfr. 5 year warranty.









Griddle for Q® 1000 & 1200 Models (Mfr. #6557)

Griddle for Q® 2000 & 2200 Models (Mfr. #6559)



Cover for Q® 1000 & 1200 Models (Mfr. #6550) Cover for Q® 2000 & 2200

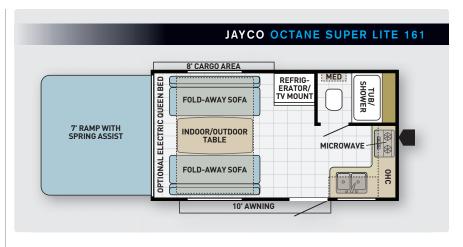
Cast aluminum

lid and body

Cover for Q[®] 2000 & 2200 Models (Mfr. #6551) issues. Under normal conditions, the brake application was smooth and progressive.

The ergonomics in the Transit are superior to the Ram ProMaster and competitive with those of the Mercedes-Benz Sprinter. The seating position is high, there is ample glass area, and the 10-way power seats are plenty comfortable. On the highway, as expected, the interior is a bit on the noisy side when the vehicle is unloaded, due to the cavernous shape and heavy-duty rear suspension and axle, but once the vehicle was loaded and the trailer hitched up, the ride quality improved and the noise level dropped to comfortable levels.

Along with factory insulation on the interior walls, other Transit niceties included a handy backup camera, Bluetooth for smartphone pairing, multiple small storage spaces including door bins, cup holders and even dual overhead storage bins. Downsides for our test van included



the lack of available second-row seating, a rather uninspiring six-speaker sound system, and the absence of a navigation system on the small multifunction display (although a nav system is available optionally).

The Transit did not operationally "present" as a diesel at all, either in terms of starting, noise or vibration, although it did require extra attentiveness to seek out diesel fuel stations

and the pump locations en route. With the trailer in tow, it delivered 12 miles per gallon, and without trailer, after our trip was completed, nearly 25 miles per gallon, which is comparable to a similarly equipped Sprinter van. Adding positively to the experience was a trip computer that provided real-time status of the remaining fuel range.

Various other features on the



Our Sea Eagle 370 inflatable kayak provides instant adventure to go! This large 12' 6" inflatable kayak packs to the size of a small duffel bag, inflates in less than 8 minutes and can be used almost anywhere there is water. Paddle wild rivers, remote ponds, scenic lakes... even ocean surf! The SE 370 weighs just 32 lbs., holds up to 650 lbs. of people & gear. This great inflatable kayak features 2 deluxe kayak seats with deluxe valves, 2 skegs for better tracking, 5 deluxe air valves, drain valve, rigid I-beam floor, spray skirts & carry handles.

Sea Eagle 370 Pro Package includes: 2 8' 4-Part Aluminum Paddles, 2 Deluxe Kayak Seats, Foot Pump, Repair Kit and Nylon Shoulder Strap Carry Bag that holds it all.

<u>NOW ON SALE ONLY FOR \$349</u> with FREE Ground Shipping to 48 contiguous U.S. 6 month Trial Guarantee / 3 Year Warranty Against Defects.

To Order Visit: SeaEagle.com

or Call: 1-800-748-8066 Mon-Fri, 9-5 EST



Dept. TL075B, 19 N. Columbia St., Suite 1, Port Jefferson, NY 11777 Sea Eagle, Circle 147 on Reader Service Card



(Above) Stainless-steel appliances and Espresso wood cabinetry give the kitchen an upscale look. A cutting board fits over the deep double-bowl sink to create more food prep space.

Transit make using the vehicle simpler and more enjoyable, including a capless fuel filler, especially handy with diesel fuel, which can make your hands more odiferous than a dinner of Sloppy Joes and onion rings. Central locking is another handy feature, as are nonskid, easy-cleanup vinyl flooring, and USB and MP3 ports for importing music.

One last Transit feature worth mentioning is the rear doors, which open almost 270 degrees and attach to the sides of the body with magnets. However, we discovered that, while parked, some wind gusts were enough to dislodge the doors and swing them closed, making a supplemental restraint necessary if frequently operating under such windy conditions. Even so, we were impressed overall by the Transit's spaciousness, driving experience, fuel economy, comfort and utility features. Right out of the box, it is indeed a viable contender for the already

established Sprinter and front-wheel-drive ProMaster.

Do-It-All Trailer

As the smallest of Jayco's Octane Super Lite series, the 161 model has a gvwR of 7,000 pounds, just 100 pounds less than the Transit van's 7,100-pound maximum loaded trailer tow rating. So they truly are happy together. The Jayco is ideally sized for two people. You can store two bikes or possibly three narrower ones in back, where a 7½-foot-wide folddown wall doubles as a loading ramp. Maximum useful storage space is 10 feet 4 inches long and 8 feet 2 inches wide, not counting fender wells. Seven really stout tie-down rings give huge confidence that your bikes, ATV or side-by-side will be right where you parked them when you arrive.

The trailer comes with just about everything an adventure-seeker needs, including air conditioning and a con-

People Wagon

While John Stein was busy hauling motorcycles to the Mojave Desert in a Transit van, we were hard at work testing the Transit Wagon to find out how



good it was at hauling a group of eight people. OK, so it wasn't work, really... we were touring central California's wine country with some friends from out of town. But that's beside the point.

Wagon" is what Ford calls its vans with passenger seats in them, and the largest Transit Wagon offers enough padded expanse for 15 backsides. Since we run neither a small school nor an airport shuttle, we opted for the 10-passenger, medium-roof model with the base 3.7-liter V-6 engine. "Base" is somewhat a misnomer here, as this spirited double-overhead-cam engine produces a silky smooth 275 horsepower and 260 lb-ft of torque, more than enough for our impromptu tour-bus operation. Our guests found the seats comfortable, and taller passengers appreciated the adequate legroom and 6 feet of interior height.

If you have a large family — or a lot of friends — this is a vehicle that offers a place for everyone and a carlike driving experience. The Wagon is back.

– Chris Hemer









(Left) The 161's flexible interior gives plenty of options, from entertaining to sleeping to storage. The fold-down bunks are too short for some adults, however, at 5 feet 8 inches long.

With our food stored and our bedding and gear bags close at hand, the Jayco was as easy to utilize as if we were simply walking into another room of the house.

vection microwave oven, a furnace, a large refrigerator/freezer, a twoburner LP-gas stove, and a private bathroom with a toilet, shower and tub. Additional features include an onboard fuel station, roof ladder, fully automatic electric awning, window coverings and a stereo system with twin USB ports for playing tunes or charging phones or tablets. We never came close to using up the available water supply or holding tanks over our Willow Springs weekend, although we admittedly did have a sink and toilets available in a nearby building.

Additional handy features include a folding dining table (that desperately needs a storage solution other than lying on the floor on a piece of carpeting), plenty of cupboard and drawer space in the kitchen, and simplicity of operation for everything. Actually, aside from its economy-oriented features, the \$23,231 Jayco trailer doesn't have many downsides at all. A glaring one, however, is the size of the fold-down twin bunks, which measure 5 feet 8 inches long. Obviously, this is fine for many people, but if you're taller, you'll need to either curl up or be content to have your feet stick off the end of the bed. There is room for longer bunks inside, so it's a bit of a mystery why they are sized as they are. Jayco also offers an electric queen bed which is a good option for couples.

Also, as mentioned above, with its dual-axle setup and 205/75R15 rubber, the Jayco towed beautifully behind the Transit with no noticeable swaying even in crosswinds. We arrived at Willow Springs on a Thursday afternoon in time to begin the long weekend. Setting up camp was easy because of the simplicity of unlatching and lowering the Jayco's rear ramp and then releasing and removing the motorcycles. For anyone who's ever

struggled with this process in a van or pickup, a toy hauler is bliss.

With our food already stored in the cabinets and our bedding and gear bags close at hand, the Jayco was as easy to utilize as if we were simply walking into another room of the house. In lieu of carpeting, the trailer has the requisite vinyl floor covering for a toy hauler, with a wood pattern that sweeps or wipes clean easily, making for trouble-free housekeeping during the weekend.

Ample lighting in both the trailer and van made nighttime activities easy. The Jayco is nicely illuminated both inside and on the exterior, where both the entry door and loading ramp



ast Master Products, Circle 110 on Reader Service Card



are well lit. Meanwhile, the Transit has five bright LED lights inside the cargo area, and they'll stay on for as long as you have a door open — a nice feature made even more practical by their low-energy draw.

In the crosswinds that were present all weekend, having the four manual stabilizing jacks, one at each corner of the trailer, helped keep the unit secure, both in the winds and when people were moving around inside.

To Prove It, Do It

Traveling is always something of a leap of faith, and so the idea of combining a big, boxy van and a trailer, altogether measuring some 42 feet long, full of people, gear and motorcycles, definitely needed a litmus test.

Our route started in the California foothills, descended to the Pacific coast, traveled the freeways to the famous Grapevine leading from SoCal into the 3,800-foot Tehachapi Mountains, and finally wound up in the

California desert. Along the way, we encountered passing truck blasts, a heavy thunderstorm that left parts of the roadway submerged, and in the desert, wind aplenty. There's a reason the Mojave is the location of enormous wind-power stations.

At every turn, literally and figuratively, the Transit and Jayco package handled the conditions with ease. Once at Willow Springs, the high winds prevented us from using the electric awning or even setting up our folding chairs, as the latter might only have blown away. But even on this blustery weekend, we surely found huge validation for our original idea: If you bring the great indoors along with you, the great outdoors can be hospitable, no matter how inhospitable it gets.

I've always liked vans, and the Transit is a salute to our successful Willow Springs motorcycle adventure. After this drive, I'll definitely give the Ford Transit and Jayco Octane Super Lite experiment a rousing "two wheels up." 🖷



Small and light as it is, the 161 has everything needed, including a mirrored medicine cabinet, a combination shower/tub and a marine toilet with a foot flush in the compact bathroom.



SPECIFICATIONS

2015 FORD TRANSIT VAN T350HD

Fuel Economy, Solo	24.9 mpg
Towing	12 mpg
Engine di	3.2-liter Power Stroke esel inline five-cylinder
Horsepower	185 hp
Torque	350 lb-ft
Transmission	6-speed automatic
Axle Ratio	3.73:1
Fuel Cap.	25 gallons
Tires	195/75R16C
Suspension, Front	Independent, MacPherson strut with stabilizer bar
Suspension, Rear spring	Solid axle with leaf s, gas shock absorbers
Brakes For	ur-wheel disc with ABS
Tow Rating	7,100 lbs.
GCWR	13,500 lbs.
Weight, as tested	6,260 lbs.
Length	22'
Charles Charles	

Wheelbase	147.6"
MSRP, base	\$40,885
MSRP, as tested	\$50,295
Basic Warranty	3-year/36,000-mile (5-year/60,000-mile powertrain)

2015 JAYCO OCTANE SUPE	R LITE 161
Exterior Length	20' 7"
Exterior Width	8' 6"
Exterior Height	11' 1"
Interior Width	8' 2"
Interior Height	7' 4"
vacuum-bonded	aluminum floor, walls, fiberglass inch roof decking
Freshwater Cap.	59 gal.
Gray-Water Cap.	28 gal.
Black-Water Cap.	45 gal.
LP-Gas Cap.	10 gal.

Refrigerator	6 cu. ft.
Furnace	25,000 Btu
Air Conditioner	13,500 Btu
Converter	60 amp
Battery	Dealer supplied
Tires	ST205/75R15
Suspension	Leaf spring
Weight (water and propan full, no supplies)	e 4,980 lbs.
Hitch Weight	900 lbs.
Axle Weight	4,080 lbs.
GVWR	7,000 lbs.
GAWR (2)	3,500 lbs.
Cargo Carrying Cap.	2,020 lbs.
MSRP, base	\$23,231
MSRP, as tested	\$23,231
Basic Warranty	2-year
TOTAL STATE OF THE PERSON OF T	A STATE OF THE STA

Jayco 574-825-5861, www.jayco.com Circle 161 on Reader Service Card



CONTROL Weight-distrib many with buil improve the to

Weight-distributing hitches, many with built-in sway-control, improve the towing experience

espite any RVer's best efforts, towing a trailer is often a learn-on-the fly proposition. Somebody new to the lifestyle can scour every issue of *Trailer Life* for expert tips, research techniques online, chat with RVing friends and watch how-to videos, but there is simply no substitute for hands-on knowledge.

Once you experience the unsettling feeling of an unstable trailer "wandering" behind your tow

vehicle, you won't soon forget it. It's the ultimate trial by fire, and in some cases, it can be enough to make drivers hesitant to attempt trip number two and beyond. All other setup items being correct, that white-knuckle experience might have happened because your tow vehicle wasn't equipped with a weight-distributing hitch, a sway-control device or both.

When a travel trailer is hitched to a tow vehicle, the downward

weight of the trailer A-frame (known as hitch or tongue weight) on the tow vehicle's hitch ball loads the back of the vehicle down, which in turn causes the front of the vehicle to lift, and that somewhat changes the steering geometry. This leverage effect reduces stability and increases the possibility of losing control.

The way to offset this is to install a weight-distributing (WD) hitch, which, with proper installation and



adjustment, evenly distributes the weight between the tow vehicle's front and rear axles. And a sway-control device will help keep the trailer in line with the tow vehicle, reducing the side-to-side movement. Sway-control devices are not required or necessary on every towing setup for travel trailers, but they can help even the best of setups tow with greater stability.

We could easily fill up the following pages with an in-depth discussion of how each component works and why they're necessary (check out "The Basics of Hitching" in Trailer Life's 2015 Guide to Towing for that), but instead we present a list of many of the specialized hitches available on the market today. Each has its own particular method of distributing weight and/or controlling trailer sway, and each is worth its weight in gold in terms of making your towing experience more enjoyable, and safer to boot.



Blue Ox

The popular **SwayPro** from Blue 0x is an all-in-one WD hitch with integrated sway control. The SwayPro is designed to prevent trailer sway while acting like a supplemental suspension system, reducing the forces transferred between the tow vehicle and the trailer. The spring bars feature spring-steel construction and perform much like the leaf springs in truck suspensions; road forces are absorbed by the spring bars (which are inserted into pivot heads), resulting in less force being transferred between the tow vehicle and the trailer. The rotating latches' pre-adjusted hitch head means there's minimal fine-tuning, and the grease is trapped in the hitch head, meaning no mess on the spring bars. Once the hitch is properly set up the first time, installation should take no more than 15 or 20 minutes, and the result is a smooth, quiet ride, according to the company. SwayPro hitches feature a limited lifetime warranty. MSRP: starting at \$779.

800-228-9289, www.blueox.com/trailer-towing/swaypro



Camco Manufacturing

Online distributor Camco offers a pair of hitch-up helpers to keep things in control. The **Eaz-Lift ReCurve R3** is an extremely user-friendly WD hitch with adjustable sway control. The R3 is a mono-trunnion, inverted-bent-bar hitch featuring a streamlined design. The mono-trunnion aligns with the A-frame of the trailer, making the trailer and hitch move as one. The spring bars are inserted on the top of the ball mount instead of the bottom, making it easier to install and giving it more ground clearance. The mono-

CONTROL ISSUES

trunnion design allows for rotation about the same centerline as the hitch ball — meaning the spring bars do not rotate — eliminating the need for messy greasing of spring bars. Plus, the R3's friction band works to clamp the center spindle to resist rotation, thus resisting sway. Sway control is adjusted by the user (by tightening a bolt on the clamp) and is not dependent on hitch weight. Sway resistance is applied by tightening the bolt on the back of the clamp, which increases the amount of clamping force applied to the center spool of the trunnion, MSRP: \$439.

The **Eaz-Lift ReCurve R6** is a WD hitch that features adaptive sway control. While the weight-distributing component of the R6 operates the same as the R3, the hitch will control sway for normal towing, but the sway-control component will automatically disengage during turns, making the



maneuver smoother and easier on the driver. The R6's adaptive sway technology means resistance is built only as needed until it peaks at the maximum point. According to the manufacturer, the hitch is factory precalibrated for optimal sway-control performance and does not rely on hitch weight to apply sway-resistive forces. MSRP: \$799.

800-334-2004, www.camco.net

Curt Manufacturing

Curt Manufacturing's brand-new TruTrack weight-distribution system is an impressive update to the traditional trunnion-bar weightdistribution hitch, combining precise load equalization and active swav control to deliver a smooth, safe ride. The TruTrack connects to the trailer frame using a pair of trunnionstyle spring bars and heavy-duty, adjustable support brackets, which are set at fixed positions by the user and hold the spring bars in place, laterally and vertically. While regular spring bars angle from side to side as the trailer rounds a corner or shifts from a crosswind, the active swaycontrol arms resist this movement, keeping the trailer aligned with the tow vehicle and stopping trailer sway before it starts. If it does begin to sway, TruTrack has a special integrated spring and cam system that builds up pressure to actively

stop sway, and then relaxes to make smooth turns. And, perhaps most impressively, the TruTrack utilizes a pair of interlocking nuts that can be accessed on the outside of the head. Six preset holes give users specific angles of tilt and a simpler method of adjustment, reducing time on the side of the road and increasing miles on it. MSRP: \$796.54.

877-287-8634, www.curtmfg.com





Fastway Trailer Products

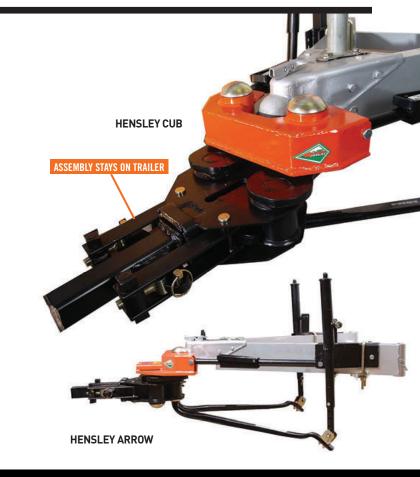
The Fastway e2 hitch, available in trunnion- and round-bar configurations, utilizes rigid brackets to help control sway, in addition to acting as a "bridge" between the tow vehicle and trailer for a fast and easy setup. Instead of the spring arm swinging back and forth freely at the bottom of a chain, the e2's spring arms rest on top of a bare metal bracket. which the manufacturer claims can help reduce driver fatique and greatly improve trailer control while towing. The Fastway e2 is backed by a 10-year warranty. MSRP: \$388 to \$505.

877-523-9103 www.fastwaytrailer.com

Hensley Manufacturing

The Hensley Arrow and Hensley Cub are specialized sway-control hitches that utilize a converging linkage system developed by Hensley back in 1993. By applying basic physics, Hensley projected the pivot point of the trailer forward and over the rear axle of the vehicle, which is how a (much more stable) fifth-wheel hitch setup works. The Hensley hitch allows only the tow vehicle to initiate the pivot on the pivot point, so forces applied to the side of the trailer cannot cause the trailer to sway. The Arrow and Cub mount directly to the trailer and can be left in place once installed. Hensley hitches are designed for self-installation and can usually be set up in less than an hour. Hensley currently provides four models: the original Hensley Arrow; the Hensley Cub for smaller trailers; the **SwiftArrow**, which utilizes a snap-up style weight-distribution system; and the **SwiftCub**. Reconditioned Hensleys are available at a discounted price. Hensley provides a lifetime warranty for the original owner, in addition to a 60-day money-back guarantee. MSRP: \$1,495 to \$3,195.

800-410-6580, www.hensleymfg.com





Husky Towing Products

Husky offers RVers a pair of innovative WD/sway-control options, starting with the Center Line TS hitch system. The TS combines weight distribution and sway control in a strong, lightweight design that delivers outstanding performance with significantly less noise than competing hitches, according to the manufacturer. To make the TS both strong and light, Husky uses 1035 carbon steel in a single-piece, forged top plate with trunnions of hardened 1045 steel. Used in conjunction with the innovative head design, these super-strong materials complement each other to provide the right amount

INDUSTRY EXCLUSIVE MOUNTING TABS allow for **FAST**

Twin lifting arms help prevent lid flutter in high winds or when driving.

and TOOL-FREE INSTALLATION of optional MAXXAIR

*2 year limited warranty with LIFETIME limited warranty on lid.

FANMATE cover (sold separately).

Visit AIRXCEL.com for details.

of clamping force to assist the spring bars and lift brackets in resisting sway. This head plate clamping force on the trunnions provides resistance against side-to-side movement and is the reason it is so quiet. The lift brackets. head and spring bars are also designed to work together to promote a quiet and smooth ride. The round, straight spring bars provide a superior fit that promotes improved sway control by reacting to trailer movement earlier than other products, reports Husky, and the tapered design of the spring bars is said to improve ride quality. The hitch ball comes preinstalled, and the lift tool can load and unload the

spring bars as well as tighten the lift bracket bolts. MSRP: \$429.95

Husky's **Center Line HD** WD hitch features active self-centering sway control, which employs compression-cylinder technology and torsion spring bars to distribute weight and combat trailer sway before it begins. Compression cylinders actively center the trailer behind the tow vehicle, while trunnion-style torsion bars (in one of three weight ranges to correspond to the trailer weight) create a smooth, safe towing experience. MSRP: \$789.95.

877-544-4449, www.huskytow.com





▶ LESS than 5% airflow restriction

FULL ACCESS to the fan and optional bug screen courtesy

*6 year limited warranty. Visit AIRXCEL.com for details.

► OPTIONAL bug screen

of the **EZ**Clip

WHEREVER ADVENTURE TAKES YOU.



POWERHOUSE ISTHERE.

INTRODUCING:

The New Powerhouse PH4000Ri/E

Powerhouse's first Electronically Fuel Injected portable generator is designed with the active RVer in mind. The new PH4000Ri/E delivers pure, clean inverter power that is safe for sensitive electronics, quiet enough to enjoy in camp and stingy with fuel. Ideal for high altitude or cold weather use, the 4000 also features remote electric start. See the new PH4000Ri/E at leading RV retailers, or visit powerhouse-products.com for more information.

Powering life in the great outdoors.™

powerhouse-products.com

PH4000Ri/E

- Electronic fuel injection
 - 4000 peak watts/3600 running watts
- Great high altitude performance
- Superior starting at cold temperatures
- Exceptional fuel economy
- Telescoping, wheelbarrow style handles

POWERHOUSE.

INVERTER GENERATORS



Progress Manufacturing

Celebrating its 70th anniversary this year, the **Equal-i-zer** sway-control hitch has been around for a very long time. Since day one, the Equali-zer hitch has had the sway control built right into the hitch. Equal-i-zer hitches utilize friction-type four-point swav control, which resists trailer movement in both directions. The Equal-i-zer head utilizes two points of rotational friction to resist trailer sway; this is activated by downward pressure from the trailer tongue and upward pressure on the spring arms. The spring arms link the rotational sway control to the sway-control brackets and distribute the trailer's

tongue weight. The Equal-i-zer's rigid bracket design provides the other two points of the four-point sway control, working with the rotational friction sway controls to reduce trailer sway. Plus, the forward and back friction of the hitch arm on the bracket serves as a secondary sway-control system. The four-point sway control also offers extra protection from hazards like passing semis, wind gusts and/or emergency maneuvers. Backed by a lifetime warranty, Equal-i-zer hitches are a product of Progress Manufacturing, formerly Lindon Hitch. MSRP: Starting at \$733.

800-478-5578, www.equalizerhitch.com

Reese Products

One of the most recognizable manufacturers in the industry, Reese offers a number of WD and sway-control systems including the **Steadi-Flex**, which features six-point sway control and tapered steel spring bars for smaller vehicles, though it is still compatible with 17/8-, 2- and $2^{5}/_{16}$ -inch balls (sold separately). The Steadi-Flex mounts to any 3- to 6-inch frame without drilling. Once in place, Reese claims the superior friction-pad design of the Steadi-Flex leads to more swav resistance and a safer, smoother ride. Plus. the lack of true metalon-metal contact means a longerlasting product that operates more quietly. MSRP: \$783 to \$920.

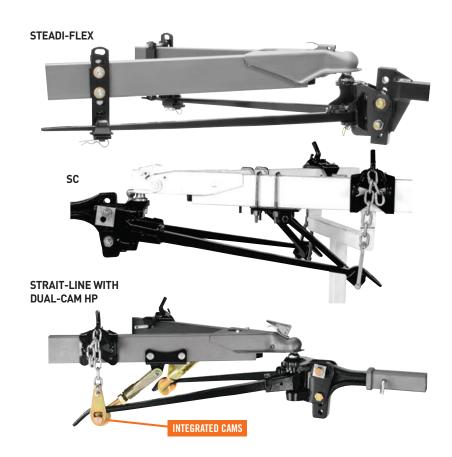
For more conventional, heavier than light-duty applications, Reese makes the **SC** WD hitch with integrated sway control. For trailers up to 15,000 pounds, the



SC offers what Reese describes as 10 times more sway control than most other brands by utilizing automotive-grade friction pads. The system delivers improved handling and a safer ride with six-point sway control, and it performs without metal-on-metal contact. MSRP: Starting around \$700.

For tough-to-handle, larger trailers, Reese offers the Strait-Line WD hitch with proactive sway control. The Strait-Line combines the control of a WD hitch with a dual-cam, highperformance sway-control system designed to resist sway before it can start. Available in weight ratings up to 17,000 pounds trailer weight, the Strait-Line literally forces the trailer to stay in a straight line with the tow vehicle, delivering strong sway resistance that automatically increases on demand. Plus, it doesn't interfere with parking or backing the trailer. MSRP: \$843 to \$1,235.

800-632-3290, www.reeseprod.com





Torklift International

For RVers looking for a serious WD hitch for heavy-duty towing, Torklift's SuperHitch towing series is rated at an impressive 3,000 pounds tongue weight and 30,000 pounds towing. The system includes both the SuperHitch Magnum 30k and the SuperHitch Everest 30k (compatible only with the SuperHitch system). The frame-mounted receiver system means no drilling into the A-frame, while the dual receiver allows insertion of stout dual shanks for strength. The Everest WD system features spring-bar hookup clips available in both hydraulic-assist and traditional styles, while a hydraulic spring-bar tension assist makes for easy user adjustment. The SuperHitch system is available with a lifetime warranty. MSRP: \$1,269.99 for the Everest 30K; \$808.99 for the Magnum 30k.

800-246-8132, www.torklift.com 🗭



Every Inch is WITHIN REACH with Adjust-A-Brush



If it doesn't say Adjust-A-Brush, it's just a brush.

Great TV on the Road... Just the Way You Want It!



- Turn your DISH® ViP 211 or 411 series receiver into a DVR
- Record up to 150 hours of HD programming
- Simple USB connection (USB 2.0 & eSATA interface)
- May require one-time \$40 DVR activation fee

- Pay only for the months you use
- Only DISH lets you watch your favorite shows in HD
- No charge to start or stop monthly service
- Programming for as little as \$49.99 per month!

Hurry! Offer expires July 5, 2015!

Call Camping World at 1-888-875-1540 to activate your DISH programming!

*Important Terms and Conditions: Requires antenna and receiver purchase. Monthly fees and limits on number and type of receivers will apply. All prices, packages, programming, features, functionality and offers subject to change without notice. All charges, including monthly programming, pay-per-view and equipment upgrades, must be paid in advance; failure to pay by due date will lead to service disconnection within 24 hours. Offer subject to terms of applicable Promotional and Residential Customer agreements. Taxes or reimbursement charges for state gross earnings taxes may apply. Additional restrictions may apply. Premium Channels: Premium offer value is up to \$57; after 3 months then-current everyday price applies unless you downgrade. Offers end 10/30/15. HBO® and related channels and service marks are the property of Home Box Office. Inc. STARZ and related channels and service marks are property of Starz Entertainment, LLC.





CAMPING WORLD

First Time's the Charm

The Spyder, Winnebago's inaugural toy-hauler trailer, zeros in on adventurers looking to stay on the shorter side of things

n the world of RV manufacturing, it isn't unusual to see several renditions of a new product, whereby changes in features, options, build specs and floorplans are made over a period of time to refine the end result. In many instances, the second or third time's the charm, so to speak, before the truly polished RV is up to the company's — and the customers' — standards.

Although building towables for only a few years, Winnebago is certainly no stranger to RV manufacturing and has amassed decades of knowledge and experience. The company capitalized on that experience when it began building its first travel trailer tow hauler, named the Spyder, earlier this year, and the result is a versatile lineup of three floorplans targeted at high-energy enthusiasts. The smallest of these sporty, no-nonsense trailers is the 24FQ, which we've highlighted here.

Winnebago designers started with a solid 8-inch I-beam frame, riding on a pair of E-Z Lube axles suspended by an Equa-Flex equalizer and augmented by the Correct Track alignment system. Added to this configuration are load range D rated nitrogen-filled 225/75R15 tires mounted to optional Lionshead aluminum wheels.

To complete the lower portion of the Spyder 24FQ, a fully enclosed, heated underbelly using a combination of corrugated plastic and Darco material is strategically placed to protect the 5/8-inch tongue-and-groove plywood flooring and components. A number of optional upgrades and useful exterior features grace the exterior, including smallish but hearty slam-latch front-compartment doors. Modern and stylish frameless windows add a touch of class, as do the smooth, glossy black gel-coated side walls. A practical accommodation is the almost-all-inclusive docking station, which houses the satellite and cable connections, city water port, blacktank flush and an outside shower.

Rounding out the exterior



(Right) Opposing sofas make into a large bed; the HappiJac bed lift reveals a queen-size bed. The kitchen is compact but workable. (Below right) The living area shares space for storing toys and can be set up for comfortable dining and lounging. The ramp doubles as a raised patio with optional railings.

details are four-corner power stabilizer jacks, a Dometic power awning with LED lighting, a prewired TV location with a built-in bracket backer, a 4,000-watt Cummins Onan generator and two independent fuel tanks for fueling both the generator (18 gallons) and motorized toys (40 gallons). This full-featured Spyder undoubtedly caters to the toy-hauling RVer while remaining competitively priced.

Construction-wise, the all-aluminum framed roof and walls promise long life, and the standard insulation can be uprated to the Extreme Weather Package, which should provide enhanced comfort in hot and cold environments.

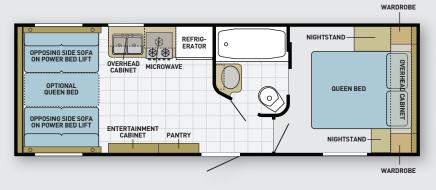
Once aboard the Spyder 24FQ, occupants are treated to bright yet richly toned interior hues and optional stainless-steel trim, medium dark natural wood and bold black and red accents. The rugged but classy-looking interior complements the nicely appointed kitchen. Here, the chef will find an optional 8-cubic-foot Dometic refrigerator beside a trim-matching microwave, range/oven and hood, and an ultracompact collection of cabinetry. Working counter space is limited, but the covers on the large double sink





QUICK INFO

Exterior Length	28' 9"
Exterior Width	8' 4"
Interior Height	8' 2"
Exterior Height	11' 11"
Freshwater Cap.	100 gal.
Black-/Gray-water Cap.	41 gal./41 gal.
LP-gas Cap.	40 gal.
UVW	6,940 lbs.
Hitch Weight	760 lbs.
GVWR	10,400 lbs.
MSRP, base	\$43,210



Winnebago, 574-825-5250, www.winnebagoind.com Circle 162 on Reader Service Card.

and range help.

The 24FQ has a limited supply of cabinets for other storage, most of which are located in either the master bedroom or the entertainment center (more on this below). Pretty much the only other indoor storage can be found in an enclosed aluminum-diamond-plate box in the floor. This compartment is ideal for chemicals that might spill or leak and could also be used for riding gear and helmets when chemicals are not stored here.

Now, back to the entertainment center. The Spyder's optional entertainment upgrade is second to none in the world of travel trailers. Music fans will love the dramatic, full sound system made up of nearly everything Rockford Fosgate makes for vehicles. Included are a powered 12-inch subwoofer, massive five-channel 1,800-watt amplifier and four 6¾-inch speakers coupled with a pair of 6-inch wall-mounted exterior marine speakers — all controlled with a remote for ease

of use. For visual entertainment, Winnebago includes a 39-inch Jensen TV residing on a swiveling bracket.

Like most shorter toy-hauler configurations, the 24FQ's living room is part of the garage. When in the living mode, most of the area is devoted to opposing 60-inch sofa sleepers. A HappiJac bed-lift system reveals an overhead queen bunk.

Once the toys are unloaded, the rear cargo door can be fitted with optional rails to convert it into a raised patio featuring a unique folding table. In the open (level) position, the ramp cables are capable of supporting up to 1,500 pounds before requiring extra support. The garage portion of the Spyder offers a total length of 12 feet 6 inches before reaching the rear bathroom wall. Maximum width is 8 feet 1 inch before necking down at the galley, where floor space is reduced to 5 feet 2 inches. Even large, heavy toys can be safely secured to one of several 6,000-pound-rated, frame-mounted tie points.

Within the forward sleeping quarters is a full walk-around 60 x 80inch memory-foam mattress tucked between curved nightstands with cabinets. From here, there's an entry to the generously proportioned passthrough bathroom, which can also be accessed via the hallway door. There is nothing fancy found in the lavatory, but with a very tall and spacious glassenclosed shower and plenty of room on and around the toilet, functionality quickly surpasses the need for luxury. The trailer is also equipped with a 25.000-Btu ducted furnace and can be optioned out with a 15.000-Btu lowprofile roof air conditioner and Atwood tankless water heater.

If your travel trailer search takes you in the direction of a toy hauler, especially one that screams adventure, check out Winnebago's all new Spyder 24FQ. It offers many desirable options, aggressive exterior graphics and a decent price, strong evidence that Winnebago did its homework.

INCREASE YOUR DRIVING RANGE & LOWER YOUR FUEL COSTS!

Auxiliary Fuel Tank/Toolbox Combos

- Go further with more fuel
- Purchase more fuel where price is lower – more value for your money!
- Mounts in your pickup bed – even under tonneau covers
- Meets all DOT standards
- Made of "no-rust" aluminum in USA



Built-in locking tool box for extra secure storage (select models)



- Includes gas cap, suction tube, drain fittings, manual sight gauge and fuel filler shroud
- Connect to truck's OEM fuel hose with Diesel Install Kit (sold separately)
- Internal baffles help prevent sloshing
- Secure fill compartment prevents tampering

Diesel Install Kit for Auxiliary Fuel Tanks

Automatically controls fuel flow to OEM fuel tank. For 150/1500, 250/2500 and 350/3500 diesel pickup trucks. Includes hoses, clamps and fittings.



2ND ANNUAL **CRACKER***** NOW THRU JULY 8TH!

4.99% APR FINANCING!

WE WILL TAKE ALMOST ANYTHING ON TRADE!



NEW 2015 STARCRAFT AUNCH 16RB

Payment based on 10% down @ 5.50% APR for 144 mos.



NEW 2015 JAYCO IAY FLIGHT 290BS

Payment based on 10% down @ 5.50% APR for 144 mos.



NEW 2015 FOREST RIVER ROCKWOOD

Payment based on 10% down @ 4.99% APR for 180 mos



NEW 2015 HEARTLAND SILVERADO 35RES

Payment based on 10% down @ 4.99% APR for 180 mos



NEW 2015 KEYSTONE **MONTANA** 3750FL

Payment based on 10% down @ 4.99% APR for 240 mos



NEW 2015 CROSSROADS EVATION 4212

Payment based on 10% down @ 4.99% APR for 240 mos



ASK HOW YOU CAN **UPGRADE** TO **Good Sam** El

*Government fees, state taxes, dealer fees and emissions testing charges as applicable will be added to comply with state vehicle codes. Freight and prep costs vary by state (Not applicable in CA, OH, TX, TN, GA or UT). Inventory and floorplans vary by location, not all advertised manufacturers available at participating dealers. New units will be delivered from the nearest authorized dealer. Contact your area dealer for availability. ^^All payments to qualified buyers with approved credit. Subject to lender terms. †On select models. Available to qualified buyers based on lender credit qualifications. Down payment may be required. VIN numbers posted at dealership. Advertised inventory available at time of production. New unit photography for illustration purposes only. May not be combined with any other offer and not applicable to prior sales. Offers valid at any Camping World RV Sales or FreedomRoads dealer only. See dealer for details. Offers expire 7/8/15.

866-9-RV-CENTER | CampingWorld.com



CAMPING WORLD

TAKE ADVANTAGE



Dometic

CLUB SALE STARTING AT

Reg. \$1399.99

New Generation Refrigerators

7 and 9 cu. ft. units offer more food storage when replacing 6 and 8 cu. ft. models. Door panels sold separately.

RM3762RB, 7 cu. ft. #34424* 53³/₄" x 23¹¹/₁₆" x 24". Club SALE \$1199.97 Reg. \$1399.99

RM3962RB, 9 cu. ft.

(not shown) #34425 6161/64" x 23¹¹/16" x 24".

Club SALE \$1359.97 Reg. \$1539.99

Let Us Install It—Club SALE \$221-\$243 *Available in stores

◆Catalog & Internet Only | ➡ | ▼



17"H x 15"W x 17"D

Reg. \$299.99

Dometic® Portable Stainless Steel Ice Maker, Large #55033

Makes 12 ice cubes in only 14 minutes in three selectable cube sizes. LED touchpad controls. 120-volt.





fills and flushes

Dometic® 310 Series High **Profile Gravity Discharge Toilet**

White #49446 Bone #49447 Let Us Install It—Club SALE \$134 | Reg. \$1399.99

Dometic® Ventless Washer/Dryer #75215 33⁷/₁₆"H x 23⁷/₁₆"W x 22¹/₄"D. 120-volt. Let Us Install It—Club SALE \$223 | 🗪 | 🛡



CLUB MEMBERS ONLY ST INSTALLED PRICE GUARANTEED OR IT'S FRE



Offer valid on select products. For more installation information go to CampingWorld.com/install

STARTING AT CLUB SALE

Reg. \$11.99

Holding Tank Treatment Tip & Measure, 32 oz. #74366

Holding Tank Treatment Drop-ins, 24-Pack #74358

3 'N 1 Bowl Cleaner and Tank Treatment, 12-Pack #74368

PRICES OF THE SEASON! PRICES EXPIRE JULY 5, 2015

Dometic







EXCLUSIVE! Zig Zag Rocker #69305 Extra-wide seat with no bar to pinch or bind. **,**

ENTER THE



Wraparound Radius Step Rugs, 22"W

Brown #49185 Black #49189 Stone Gray #49190 **Burgundy Wine #49191** Imperial Blue #49188

◆Catalog & Internet Only



NEW! Folding Picnic Table & Benches #81957 All three pieces fold compactly to only 42"L x 24"W x 31/2"H—the benches nest under the table. Table is 42"L x 24"W x 29"H open. Benches are 37"L x 9 1/4"W x 165/8"H open. |

BEAT THE *
* HEATSWEEPS!

Sponsored by Dometic NOW THRU JULY 5TH

For a chance to WIN an outdoor accessory package valued at over \$1800!

Espresso #49187

Green #49184+

Gold #49186+

Visit any Camping World SuperCenter nationwide or go to CampingWorld.com/BeatTheHeat to enter and for complete details and rules. No purchase necessary. Must be US or Canadian resident 18 or older. Void where prohibited.

They say money can't buy happiness... but it can buy an RV and that's pretty close!



- Refinance Your Existing RV Loan
- Loans For New Or Pre-Owned RVs
- Private Party RV Loans
- Cash Recapture: Obtain A Loan Within
 Six Months Of Your Original Purchase Date

APRS* AS LOW AS

3.99%

on loan amounts of 575k+

4.12%**

on loan amounts of 50k to \$74,999

4.59%**

on loan amounts of \$25k to \$49.999

CALL

VISIT

1-800-444-1476 mention priority code 541

GoodSamRVLoans.com/541



EQUAL HOUSING LENDER

* Estimated APR (Annual Percentage Rate). Subject to consumer loan program requirements and credit approval. Certain fees, closing costs, and restrictions may apply.

^{**} Rates and terms may vary with market conditions and are subject to change without notice. APR applied to the loan is the APR in effect on the date the application is received and is valid until 30 days after the loan is approved. APRs may vary with loan term. For a refinance request, RV must be 2005 model year or newer. For a purchase request, RV must be 2007 model year or newer. Maximum loan to value is determined by the following: credit score and model year, with collateral value being established per NADA Used Wholesale Trade-in value. Maximum loan term may vary based on model year, loan amount, loan type and lender guidelines. Example of an RV loan: A 15 year fixed-rate \$55,000 loan. Based on an APR of 4.37%, this loan has 180 monthly payments of \$417.10 each. Information is accurate as of April 10, 2015. This offer is not available to applicants who use their RV as a principal dwelling (Full-Timer); visit website for Full-Timer rates and terms. Good Sam Finance Center¹⁰ provided through Essex Credit, a division of the West. © 2015 Bank of the West NMLS 1D #19116. GRI. 39974 - 0415



Upgrading to the Xantrex TRUECharge2 takes the guesswork out of battery conditioning for better performance and longevity

battery bank is the heart of any 12-volt DC electrical system, providing versatility on or off the grid. The larger the battery bank, the better the efficiency, especially when you're spending time in primitive locations. Most owners are aware of how many batteries are carried onboard and, hopefully, the capacity of the battery bank. Surprisingly, however, few people give any thought to how these batteries are charged, figuring that the power converter automatically takes care of that process. The

result: out of sight and mind until the batteries go kaput and there's not enough power to run 12-volt DC appliances and accessories.

Naturally, those who always plug in to a utility pole have less concern for battery charging until they find themselves in a state park with no hookups and a curfew on running the generator. Add in a residential refrigerator running off an inverter and batteries, and the situation can become even more demanding. Proper battery conditioning is key to battery service

and longevity, and the fact remains that most RVs have converter/ chargers that do a much better job "converting" than charging. An expert in the battery business put it succinctly: "If you want a five-year battery to last two years, use the stock converter/charger."

Typical converter/chargers do nothing more than keep the battery at a set voltage without regard to conditioning. That means the plates inside a battery are not being hit with enough voltage to prevent sulfation, which restricts the flow of acid and







[1] Removing the plate in the corner of the unit provides access to the power leads. [2] The wires were connected to a 12-gauge extension cord, which took a little maneuvering [3] to get all terminals and wires contained in the tight space.

[4] Once the wires and connectors are contained, the strain relief is put in place and the cover [5] is reinstalled for a clean look. [6] A 50-amp (specified by the manufacturer) marine-grade circuit breaker was used to protect the charger. [7] Insulation on the four-gauge marine-grade electrical cable is stripped to get ready to install the terminals.

eventually stifles the ability of the battery to receive a full charge. Intelligent, multistage chargers take the guesswork out of battery conditioning, providing proper charge rates through three phases: bulk, absorption and float. And one of the best products on the market to achieve this type of smart charging is the Xantrex TRUECharge2.

For a battery to be conditioned properly, it must first be subjected to a bulk charge. At this point the voltage from the TRUECharge2 is at 14.4 volts and the current (amperage) is at its maximum without causing damage to the batteries. The TRUECharge2 will allow you to configure the battery bank, which instructs the unit to produce the most effective charge algorithms for optimum conditioning, without risking battery damage. This is especially important when using AGM batteries because this type of battery has charging-voltage limitations. (The charger is factory set for flooded-cell batteries; selecting the type of battery in your RV is as simple as pushing a button on the onboard display panel.) At the end of the bulk-stage cycle, the batteries will be about 80 percent charged.

The next step is the absorption stage, when the charger maintains the voltage from the bulk stage but allows the current to drop in response to battery resistance. When the state of charge reaches 100 percent, the absorption stage gives way to a float stage that will keep the batteries at the full level. At this point, voltage is limited to around 13.4, which is high enough to keep the batteries charged but low enough to limit gassing of open-cell batteries.

Single-stage chargers provide only a float voltage, and many times this voltage is poorly regulated and may creep up to 13.8 and even higher, which can cause flooded-cell batteries to gas and electrolyte to evaporate. If these batteries are left unattended, the electrolyte level becomes too low and the plates sulfate. Gassing also causes corrosion, which can damage terminals and hold-down hardware. Float voltage that exceeds the threshold for AGM batteries will shorten their lifespan.

To be fair, there are some converter/chargers with three-stage capabilities provided by the factory, but most are not sophisticated enough to condition properly, much less handle the charging requirements of AGM batteries. RVs equipped with good quality inverter/chargers will have capabilities comparable to the TRUECharge2.

A big factor that comes into play when charging is battery temperature. A warmer battery will accept current easier than one that is cold. An optional temperature sensor is offered by Xantrex for the TRUECharge2 and should be considered mandatory for efficient battery charging. The sensor simply attaches to a negative terminal











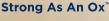
DIY TIP

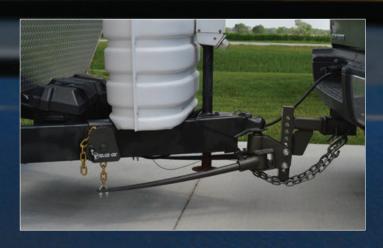
Take time to lay out the entire system first so that the proper-length cables are determined and the location of the equipment meets the manufacturer's specifications.

Stop sway before it starts.

- Spring steel spring bars act like leaf springs
- Less force transferred between the towing vehicle and the trailer
- Sway prevention that works in any weather
- Back up without disconnecting
- Pre-adjusted hitch head
- Rotating latches
- No noise









SWAYPRO

Weight Distributing Hitch

BLUEOX.COM • 800-228-9289

📑 facebook.com/blueoxproducts 🗩 You Tube

Blue Ox, Circle 104 on Reader Service Card

and can be plugged into the charger via an RJ12 telecommunication connector. The default on the display panel is set for "Warm," which means the batteries can be between 41 and 86 degrees Fahrenheit. "Cold" and "Hot" settings are when the batteries are below 41 degrees or above 86 degrees Fahrenheit, respectively. The temperature sensor eliminates any guessing, and in the long run the additional cost of around \$35 is worth the improved battery longevity.

Another option well worth the \$100 investment is the Remote Panel, which can be installed within 25 feet of the charger (a 50-foot cable is optionally available from Xantrex). Since the likelihood of installing the converter in an exterior compartment is great, the Remote Panel provides continuous monitoring of the batteries without going outside. The Remote Panel pretty much clones the onboard display panel and allows the user to make mode changes. A glance will confirm that everything is working properly, and the fault icons will inform of any malady in the system, like when a breaker opens.

Installation of the Remote Panel is fairly easy since the rectangular housing can be surface mounted on any flat surface and requires drilling only a 48-millimeter (1.89-inch) hole. The caveat is making sure there's enough clearance in the back of the mounting surface to tighten the 1½-inch locking nut and ensure it doesn't interfere with other structures. In our case, we just cleared the drawer behind the mounting area.

It took us about an hour and a half to install the charger and Remote Panel, following directions that are clear and concise. There are a number of warnings from the factory, so reading the instructions first is a good idea. Also, if you're somewhat leery of working with electrical components and wiring, have a certified technician do the install. Pay particular attention to the mounting instructions that specify charger orientation and ventilation. Xantrex recommends against mounting





[8] Professional-grade cable crimpers are used to install terminals for connecting to the batteries. [9] Battery cable terminals are attached to studs that are found under the cover plate on the other side of the charger.

the charger and battery bank in the same compartment to prevent corrosion, but we assume that's aimed at the use of flooded-cell batteries. We have Lifeline AGMs, which do not gas or corrode. Wire and circuit-breaker size

A big factor that comes into play when charging is battery temperature. A warmer battery will accept current easier than one that is cold.







[10] RJ12 cable for the remote panel is plugged into the top position in the charger. The bottom position is for the battery temperature sensor. [11] The access cover is reinstalled on the charger after completing the wiring procedure. [12] Once wired, the charger can be installed in its permanent home.

QUALITY PRODUCTS

FOR YOUR EVERYDAY NEEDS STROMBERG CARLSON PRODUCTS INC.



and terminal type are specified; we used marine-grade 4-gauge cable, terminals and a 50-amp breaker.

To get power to the charger, we elected to route a 12-gauge extension cord to the nearest GFCI outlet, hardwiring the other end directly into the charger's AC input. Romex wire can also be used to hardwire the unit into the RV's power-distribution panel.

A lesser-known stage of the battery-conditioning process among RV owners is equalization, whereby the batteries are subjected to high voltage for a controlled period of time. In most cases, voltage is raised to around 15.5, which technically overcharges the batteries. This is done to break up sulfation and is normally a process reserved for flooded-cell batteries.

The TRUECharge2 has an equalization provision that can be activated only when two buttons on the onboard display or Remote Panel are intentionally depressed at the same time. This

is a safeguard to prevent accidental overcharging, which leads to overheating and possible damage when equalization is not necessary or recommended. Recognizing the potential damage to gel or AGM batteries that are subjected to high voltage, Xantrex allows equalization only when floodedcell battery type is selected on the display or remote. But there are circumstances when an AGM battery, for example, should be equalized.

We installed a second TRUE-Charge2 unit in another RV that has older 6-volt AGM batteries. A discussion with a Lifeline technician led to the discovery that the batteries were not conditioned properly by the factory converter/charger, even though it supposedly is a three-stage unit. Lifeline recommended equalizing the batteries for five hours, but the TRUECharge2 limits equalizing to one hour, so we had to reset the cycle five times. Fresh AGM batteries that

are continuously connected to the TRUECharge2 should never need equalization.

Flooded-cell (lead-acid) batteries, in an RV environment, must be fully charged every three to five weeks, which may be problematic for owners on two fronts: the aforementioned lack of a charger that will fully condition batteries, and neglect simply because the RV is in storage for a period of time and it's difficult to hook up to a power source.

The sulfation on the plates is a substance that's jellylike, and it's easy to reverse this buildup within three weeks in hot weather and about five weeks in cold weather. If that jellylike substance is not driven back into the solution before the three- to five-week time frame, it crystallizes and is much harder to reverse. There's no need to equalize if the batteries are fully conditioned on a regular basis. Equalization is hard on the batteries, but not as

FLOW-PUR

Enjoy Soft, Great-Tasting Water Anywhere Your RV Takes You

FICNAPUR. RV-PRO 10,000 WATER SOFTENE WHATTS WHATTS

Flow-Pur Portable

Water Softener

- Recharge with table salt
- Reduces scale build up
- Protects fixtures, easier on skin and hair

Water Filter

- Traps contaminants
- Interior and exterior models available
- Clean, clear, great-tasting water



Flow-Pur External

THE BEST PORTABLE WASTE TANK IS NOW EVEN BETTER



SmartTote² 4-Wheel LX Models Feature:



PermaStore™ Storage compartment protects pre-attached hose and fittings.



90° Sewer Elbow Nozzle keeps the process quick, clean and easy at the dump port.



Large opening allows improved rinsing with a garden hose.



AutoStop™ Level Gauge speeds emptying and prevents overfilling.



No heavy lifting – handle hooks onto trailer hitch.

Standard 2-Wheel Waste Tank

Redesigned for 2015: 18, 27, & 35 Gallon



- PermaStore[™] Hose always connected for a more sanitary process.
- Retainer Strap holds Hose in place.
- Improved venting speeds emptying.
- AutoStop[™] Level Gauge prevents messy overfilling.

From the RV Sanitation Expert



CA038014





[13] The remote panel is installed in a convenient location inside the RV. Controls and indicator lights mimic the panel [14] on the outside of the charger housing. [15] The temperature sensor is connected to the negative post of the battery.

damaging as plate sulfation. The high voltage drives the water out of the batteries and corrodes the grids that hold the lead, so it should be done only as needed — and not very often. For ultimate battery longevity, it's best to use an efficient charger like the TRUECharge2 and keep it plugged in when in storage, if possible.

TRUECharge2 series battery

chargers are available with 20-, 40and 60-amp outputs. Choosing the right charger is dependent on the size of the battery bank. The general rule is that charger size is determined by dividing the capacity of the battery bank by five. The 40-amp model is good for a 200-amp-hour (Ah) battery bank, which was a close match for the 220-Ah capacity of the two Lifeline



AGM 6-volt batteries. For larger battery banks, two TRUECharge2 units can be wired in parallel to provide up to 120 amps of charging power.

The TRUECharge2 takes the guesswork out of proper battery conditioning and is a cost-effective way to realize the intended life cycle of any battery bank. The street price for the TRUECharge2 40A is around \$370.

Xantrex

800-670-0707, www.xantrex.com/industry-solutions/recreational-vehicles







AWARD WINNING SATELLITE TV ANTENNAS









PATHWAY® X1

Designed exclusively for DISH programming. Powered through the receiver for ultra fast set up and acquisition.



dish

CARRYOUT® G2

Compatible with DISH, DIRECTV and Bell TV programming and most satellite receivers.

Convert your portable antenna

to a roof-mounted unit!



RK-2000

Quickly elevate and hang your portable

antenna to a window or vehicle exterior with included brackets.



MT-SM30

Raise your antenna off the ground

adjustable settings for uneven surfaces



CA039898







DISH is a registered trademark of DISH Network L.L.C. DIRECTV is a registered trademark of DIRECTV, LLC. Bell TV is a trademark of Bell Canada, Inc. © 2015 Winegard Co.

GOOD SAM CLUB

MEMBERS SAVE MORE ON EASY RV ROUTING WITH EXCLUSIVE GOOD SAM RV GPS

RVND™ 7735 IM



Enter your specific RV information and relax, knowing the GPS will find the best route for safe, early, worry-free travel!

- NEW! Large, higher resolution HD screen with updated graphics and more map detail
- NEW! Faster processor for improved route calculation time
- NEW! Robust lane guidance and junction views help you stay in the correct lane
- NEW! View toll costs and compare toll vs. non toll routes
- PLUS! Displays 8,000 privately owned RV parks and campgrounds, including 2,100+ Good Sam Parks
- PLUS! RV Safe and easy routing for 11 types of RV, plus car mode
- PLUS! Wi-fi® connected services: weather, fuel prices and more

LIMITED TIME OFFER!

CLUB SALE

^{\$24999}

Reg. \$349.99

on Good Sam 7"GPS #77601

PRICING EXPIRES 7/5/15



5" RVND5525

EXCLUSIVE! GOOD SAM 5" GPS POWERED BY RAND MCNALLY®

Same features as the larger Good Sam GPS powered by Rand McNally in a more compact size. See RV-friendly features at CampingWorld.com/GoodSamGPS.





WALLS UP

Learning how to properly maintain a built-in or portable generator can save time, trouble and money

s a trailer owner, it probably took you only a few camping trips in the boonies to realize that your home on wheels wasn't really designed for long-term camping without electrical hookups. Hey, you've got a battery (or two), right? How much power could a few lights and a refrigerator take, anyway? As it turns out, quite a bit. And if your trailer is outfitted with all the comforts of home, like a microwave, television and air conditioning, they'll be little more than electronic paperweights without a steady supply of 120-volt AC power from a humble generator.

Whether you power up with a small portable unit or own a toy hauler or fifth-wheel with a built-in model, you rely on a generator every time you camp off the beaten path. Yet, paradoxically, most of us don't maintain our generators properly. You wouldn't think about buying a tow vehicle, driving it a few miles each summer and then ignoring it for the rest of the year, but that's precisely what a lot of RVers do. A generator is comprised mainly of an engine — one that shares a lot of similarities with other engines including a carburetor (or a venturi in LP-gas generators), air and oil filters, belts and other components. You may have grown accustomed to that power plant roaring to life whenever you pull the cord or push the Start button, but all it takes is a few months of neglect, and

your generator could go on strike when you need it most.

To get some expert advice on generator maintenance, we visited Smith Powerhouse, Inc. in Bellflower, California, a factory-authorized service and warranty center for Cummins Onan, Honda, Kohler and Generac generators. Owner David Voloshin and shop foreman Matt Rudametkin are certified master generator technicians who have nearly 50 years of experience between them, and they've seen it all.

By far the most common built-in RV generators in use today are the 4,000-watt Cummins Onan (known as the MicroLite 4000, MicroQuiet 4000 and RV QG 4000), its 3,600-watt LP-gas variant (MicroLite, MicroQuiet and RV QG 3600 LP) and the larger Cummins

Onan Marquis Gold 5500 and 7000 (also known as the RV QG 5500 and RV QG 7000), and their propane counterparts, the Marquis Gold/RV QG 5500 LP and 6500 LP, so these will be the focus of this article. There are a lot of good choices for portable generators as well, but from our experience, the most popular model among RVers is the 2,000-watt Honda EU2000i, so we'll be covering maintenance tips on this model as well.

Now, while the most frequent types of maintenance, such as oil/filter and spark-plug changes, shouldn't prove too challenging for most DIYers (and can save some time and money), Smith Powerhouse recommends against more advanced maintenance procedures for two important reasons. One, you will likely do more harm than good if you don't know exactly what you are doing, and two, you can seriously hurt yourself. When it comes to major scheduled maintenance, it's best to leave the heavy lifting to experts like Smith Powerhouse.

With all that said, let's take a closer look at what makes our favorite generators tick.

Cummins Onan MicroLite, MicroQuiet and RV QG 4000/3600 LP



1) This is what most of us are familiar with when we open the generator compartment door: a plastic box that tells us little or nothing about its inner workings. But the popular Onan 4,000-watt gas generators are actually very easy to service — start by turning the two black levers to release the front cover.



2) The Cummins Onan 4,000-watt generator is a single-cylinder, air-cooled engine designed to run on gasoline. Above the Start/Stop switch (A) is the carburetor (B), which is fitted with a mixture screw (C) at the bottom to allow limited adjustments for altitude. The cover emblazoned with "Onan OHV" is the valve cover. Bottom right is the yellow oil filler/dipstick (D). Note the large brush assembly (E); this acts as a gasket to compartmentalize the engine components when the cover is in place, promoting proper airflow from the fan (at left, not visible) over the critical engine components. It is for this reason that you should never run the generator with the cover off, even in very hot weather. Make sure you have the ID tag info (F) on hand when ordering parts.

WATT'S UP

- 3) The Cummins Onan RV QG 3600 is functionally identical to the MicroLite/ MicroQuiet/QG 4000 generator, except that it runs on LP-gas. On the upside, LP-gas-powered generators don't suffer from a gummed up carburetor if allowed to sit for long periods. On the downside, they don't produce as much power as their gasoline-burning counterparts, which is why they are derated somewhat. With the covers off, you can see the venturi (A), which functions similarly to a carburetor, and the LP regulator (B).
- 4) Checking the oil is similar to any other engine; unscrew the cap and note the level. If the generator has been properly maintained and the oil has been changed at the recommended intervals, it should be brown like this, not dark brown or black.
- 5) Before changing the generator's oil, run it for at least 10 minutes to get it up to operating temperature, which helps the oil drain easily and completely. Trailers factory-equipped with a generator like this one (or even generator prep) will have an access panel underneath the generator compartment. Simply remove the two screws, and the drain plug will be exposed.



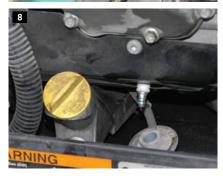




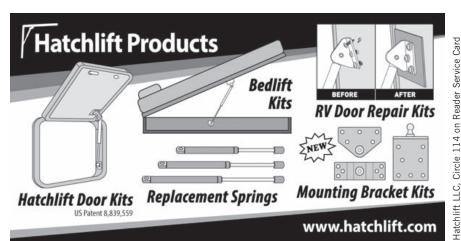


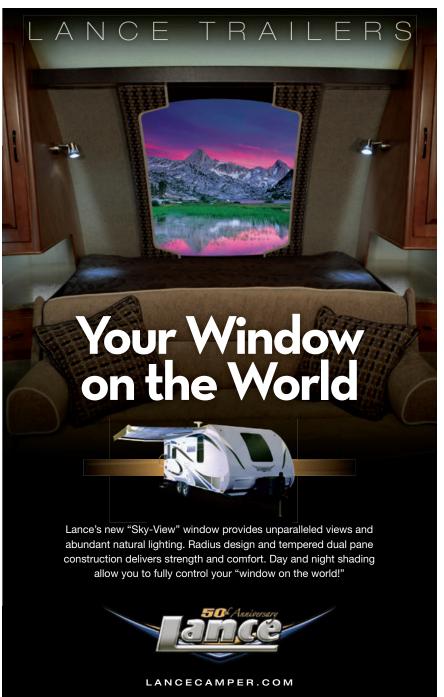






- 6) Remove the plug and allow the oil to drain into a suitable container. Cummins Onan 4000/3600 LP generators hold only 1.7 quarts of oil, so this process goes pretty quickly. This generator doesn't use an oil filter, so all you have to do now is replace the drain plug and access panel, and refill the crankcase with the recommended oil.
- 7) The air filter housing is also clearly labeled, and the element is very easy to inspect/replace. Simply remove the wing nut on the side of the housing, then remove the wing nut that holds the filter in place. The filter can then be pulled free. This one still looks in good condition; a filter in need of replacement will be a dark color. When replacing the filter, be sure to reinstall both wing nuts, not just the one on the housing, or the filter will not be seated properly and will not clean incoming air.
- 8) To the right of the yellow oil filler is a gray (in this instance) or black spark plug cover boot. Pull it down, and the end of the engine's single spark plug will be revealed. The plug can then be removed with a common spark-plug wrench and inspected/replaced.







For more than a decade, RV FlexArmor® has been providing RV owners with peace of mind.





187 mils thick, dry to the touch in 6 seconds!

RV FlexArmor® roofs are unlike any other option in the RV industry.

- No More Leaks!
- No More Caulking!
- No More Tears or Punctures!
- Insurance Approved!
- Fully Transferrable Warranty!
- Dry in 6 seconds!



WATT'S UP













9, 10, 11) These gas generators also come equipped with a small fuel filter that should be replaced periodically according to the maintenance schedule. Remove the fuel hose clamp (arrow) first, then pull the hose off the filter barb. Next, pull the rubber gasket out of its groove to gain access to the filter. The filter assembly is threaded and can be easily removed with a 9/16-inch-deep socket.

12) An inexpensive upgrade Smith Powerhouse recommends is a second fuel filter (routed inline in an accessible location) to further ensure against dirt and grit entering the fuel system.

13) The most common cause of hard starting (or not starting at all) with an RV generator is lack of use. Smith Powerhouse recommends that you run your generator every four weeks for two hours under load (such as a running air conditioner) to keep it properly exercised. The discoloration at the bottom of this carburetor float bowl means that fuel sat there for several months, and the deposits clogged the tiny orifices in the carburetor. Once allowed to deteriorate to this point, you're looking at a \$300 bill for the carburetor, plus removal/replacement labor. If running the generator regularly isn't an option, Smith Powerhouse recommends installing a shutoff valve in the fuel line before the generator. Turn the valve off, then run the generator until it is out of fuel. Adding a fuel stabilizer (like Onan OnaFresh) is also recommended.

14) Don't forget that the generator is more than just an engine — it's a power-generation system. Letting it sit for long periods can also cause the brushes to stick and the slip ring (shown) to oxidize, causing any number of power-delivery issues. This damage is not easily repairable and will more than likely require the attention of a professional.



Prices and specifications subject to change without notice.

- 15) The Cummins Onan 4,000-watt gas/3,600-watt LP generator uses an overhead valve engine complete with valve springs and rocker arms. Valve clearance is adjusted in similar fashion, with a pair of wrenches and a feeler gauge. However, neither Smith Powerhouse nor Cummins Onan recommends you try this yourself. For one thing, valves that are too tight or loose will cause engine damage. Plus, an accidental bump of the starter can mean serious injury.
- 16) Wherever you take your generator for service or trouble-shooting, Smith Powerhouse recommends you ask the shop personnel if they have a load bank. Similar to a dynamometer for cars, a load bank can load the generator to different percentages to make sure it's running properly and producing the correct frequency, amperage and voltage for a given load. Smith Powerhouse conducts this test with every generator it services.









Cummins Onan Marquis Gold/RV QG 5500 and 7000, 5500 LP and 6500 LP

- 1) Other popular Cummins Onan generators are the gas-powered 5,500and 7,000-watt models (typically found in larger toy haulers) and the 5500 LP/6500 LP found in some fifth-wheels. This is a V-twin engine oriented on its side, with the valve covers facing up (the right cylinder is visible). Though it is a completely different design from the 4,000-watt generators, many maintenance procedures are similar. Note that the oil fill/dipstick is in the same location as the 4000/3600 LP.
- 2) The air cleaner uses a paper element that is readily accessible from the front of the unit. Simply unsnap the clips, and the cover comes right off. This filter element still looks good.



SAVE TODAY. VACATION TOMORROW.

See how much you could save on RV insurance.

geico.com | 1-877-434-2678 | local office











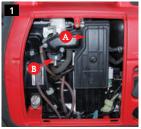
- 3) Draining the oil on the 5500 and 7000 is simple, since it uses a petcock instead of a drain plug. Warm the engine for about 10 minutes, then put a pan underneath and open the petcock; the oil is routed underneath the RV through a rubber hose.
- 4) Unlike its smaller brother, the Marquis
 Gold 5500/7000 does have an oil filter
 (arrow) that looks like a small automotive

filter. It is accessed through a hole in the bottom of the generator compartment. Both the replacement filter and handy wrench are available through Cummins Onan dealers.

5) The Marquis Gold 5500/7000 has its spark plugs oriented on the sides of the cylinders (arrow), which can make them a challenge to reach. A swivel socket does the trick here. Removing the left (or Number 1) cylinder

spark plug requires the removal of the air-filter assembly first.

6) Depending on the year and model, the 5500/7000 gas generators may actually have two fuel filters: this secondary one, near the carburetor, and a primary one at the fuel pump. Be sure to inspect your particular generator to see if it has two; replacing one won't do it.





Honda EU2000i

- 1) The popular Honda EU2000i portable generator is not only reliable but easy to service. Popping off the front cover reveals the air-filter housing (A), carburetor (B) and oil fill/dipstick.
- 2) Removing the single screw reveals the main filter (C), which is made from a higher density foam, and the low-density foam pre-filter (D). Both are washable with a mild detergent and can be reused. The manufacturer recommends that these filters be oiled to help trap dirt, but be careful not to overdo it.

The VENT CONTROL CONTROL For All Your Ventilation Needs!







ENDLESS BREEZE PRODUCES A Constant 10MPH WIND!

- Use in Combination with Your FAN-TASTIC VENT High Powered Vent Fan for Unmatched Air Flow
- Variable 3 Speed Control
- Less than 3 Amps on High
- Quiet Operation
- Lightweight & Portable

MADE # USA

INTRODUCING The BRAND NEW EZ-BREEZE™!

- Built in Rain Cover For Uninterrupted Air Flow
- Translucent Dome Casts a Soft Light Inside the Coach
- Class Leading 350 CFM
- Ceiling Fan Mode Available on 12-Volt Model
- 50% Larger Fan Blade than other Vent Fans in its Class
- Uses the Standard FAN-TASTIC VENT Garnish

The PERFECT PARTNER FOR Your FAN-TASTIC VENT FAN!

- Up to 75% More Airflow Than The Competition
- Fits Over Most 14" x 14" Roof Vents and High-Powered Ventilators, Including ALL FAN-TASTIC VENT Fans
- 3 Year Limited Warranty
- Available in Black, White and Smoke
- Hardware Included

How Does Harbor Freight Sell GREAT QUALITY Tools at the LOWEST Prices?

We have invested millions of dollars in our own state-of-the-art quality test labs and millions more in our factories, so our tools will go toe-to-toe with the top professional brands. And we can sell them for a fraction of the price because we cut out the middle man and pass the savings on to you. It's just that simple! Come visit one of our 550 Stores Nationwide.



POWDER-FREE NITRILE GLOVES

PACK OF 100



SUPER COUPON



WITH FIBERGLASS HANDLE

PITTSBURGH CLAW RIP

I OT 47873 show I OT 69006 69005/61262

HARDY MEDIUM • 5 mil. thickness L01 68496/61363 YOUR CHOICE! LARGE LOT 68497/61360 X-LARGE LOT 61359 68498 shown REG. PRICE \$11.99 RAPID PUMP® 1.5 TON **ALUMINUM RACING JACK** PITTSBURGH AUTOMOTIVE 3-1/2 Pumns Lifts

· Weighs 27 lbs.

LOT 69252 60569/62160 62496/62516 REG. PRICE \$119.99

SLIDING COMPOUND DOUBLE-BEVEL MITER SAW WITH LASER GUIDE LOT 98194/61776/61969/61970/69684 shown Haul¶<u>Master</u> TRIPLE BALL TRAILER HITCH LOT 94141 shown 69874/61320 61913/61914

MOVER'S DOLLY <u>Haul</u>Master 1899/62399

SAVE 40% • 1000 lb. Capacity

US★**GENERAL E** 26", 16 DRAWER ROLLER CABINET

· 1060 lb. Capacity 14,600 cu. in. of storage

LOT 61609

REG. PRICE \$649.99



3/8" x 14 FT. GRADE 43 **TOWING CHAIN** Haul¶Master LOT 60658

2.5 HP, 21 GALLON 125 PSI VERTICAL

AIR COMPRESSOR

| 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 1881 | 188

CENTRAL PNEUMATIC

LOT 67847 shown 61454/61693

REG. PRICE \$219.99

REG. PRICE \$44.99



1650 PSI PRESSURE WASHER LOT 69488



CHICAGO WILLIAM **MIG-FLUX WELDING CART** Welder and accessories sold separately.

LOT 69340 show 60790/90305/61316

9 REG. PRICE \$59.99

- 100% Satisfaction Guaranteed
- Over 25 Million Satisfied Customers
- No Hassle Return Policy
- Lifetime Warranty on All Hand Tools
- 550 Stores Nationwide
- HarborFreight.com 800-423-2567

4) Changing the Honda's oil isn't difficult, but it can be messy — that's why Smith Powerhouse offers this handy trick. Bend a piece of common cardboard into a trough and wedge it underneath the filler. Then you can tip the oil out of the crankcase and into a pan

without it running into/onto the generator.

5) Cardboard is also employed during refill. Why not a funnel? Because the crankcase holds less than half a quart of oil, and since a funnel makes it difficult to see the level, it's easy to overfill and make a mess. Pouring the oil in using this method allows you to clearly see when the oil is nearing its recommended level. The EU2000i does not use an oil filter.

6) Smith Powerhouse load tests all the

portable units it services, too. Here you can see the EU2000i is putting out 122.2 volts, which is right in spec.

7) If you won't be able to run the EU2000i for a while, it is easy to drain the fuel from the carburetor by turning this small screw underneath the float bowl counterclockwise. Fuel drains down the tube to the left and out the bottom of the generator. Put fuel stabilizer in the tank, keep the unit indoors, and you should be good for the off-season.



Move any trailer with our compact, powerful, battery-powered trailer dolly.



www.parkit360.com

1-888-926-5517











Smith Powerhouse

562-633 1390, www.smithpowerhouse.com

Cummins Power Generation

www.power.cummins.com

Honda Power Equipment

www.powerequipment.honda.com/generators



A MARK OF PASSION

Exploring the world. Dreaming of new places. Waking up to the most epic sunrises. Discovering it all with your loved ones. That's your passion. Right?

Our passion is creating the world's best propane cylinders, so you can fully enjoy your passion. Viking Cylinders are the modern, lightweight alternative to traditional steel propane tanks. Our corrosion-free and translucent design means no rust rings, plus you see exactly how much propane is available. Viking Cylinders are the perfect choice for the RV owner. With more than 9 million cylinders in use worldwide you can be sure it's the safest way to enjoy your passion.



VIKING

Viking Cylinders is a registered trademark of Hexagon Ragasco AS.

sleep number.





Whether you're on the road or out seeing the sights,

feeling well rested is an important part of your RV lifestyle. That's why you need a bed that will give you deep, restorative sleep. With the SLEEP NUMBER® RV bed, you'll make the most of the 8 hours you're asleep, so you can enjoy every minute of the 16 hours you're awake.

Sleep Number® RV Premier Bed

- Comfort layer for responsive and resilient support
- Wireless SLEEP NUMBER® remote

Fits Your RV Lifestyle

- Designed for your vehicle
- Decades of durability
- Energy-efficient operation
- Lighter on the road
- Several sizes for your RV

Discover the Sleep Number® Difference

Exclusive DualAir™ technology lets you adjust each side of the bed to your ideal level of firmness—your SLEEP NUMBER® setting. You can both wake up refreshed and rejuvenated, ready to face whatever the day may bring.

In clinical studies...

93% experienced back-pain relief

89% reported improved sleep quality

77% found increased energy

Visit CampingWorld.com/sleepnumber



PEDALPOWER

Adventurer folding bicycles add a strong element of versatility to local transportation that's fun, healthy and affordable

s an experienced bicyclist who has ridden a number of high-end road and mountain bikes, I find the idea of pedaling a folding bike somewhat less than invigorating. But as an RVer, I understand the benefits of having a bicycle that can fold into a small package that can be easily stowed in a storage compartment. So I took the assignment of testing Camping World's line of Adventurer folding bikes with an open mind.

There are a number of folding bikes on the market, and the Adventurer models are built using an interesting assortment of well-known components in the cycling world and less exotic materials like a steel frame, which is heavier than carbon or aluminum. But strength, which is obviously provided by the steel frame, is important when designing and building a bicycle that folds into a

compact package and relies on hinges to keep it together. The result is a lineup of models that have reliable, easy-to-use components and a few more pounds that are offset by multiple-speed gearing. Adventurer folding bicycles come in models with three, six and 12 gears and, of course, a single-speed version for the purists or for those riders who rarely go uphill. Multiple gear sets, made by Shimano, an icon in the cycling industry, make it easier for riders to regulate pedaling effort. Speeds are changed by turning a grip-type shifter on the handlebars, except for the trike.

For most RV owners, there are enough bells and whistles to make these bikes practical for tooling around campgrounds and nearby neighborhoods, without the high cost. Make no mistake; folding bikes are not performance

PEDAL **P**WER

machines, but they transform into highly rideable transportation that's a healthy alternative to using a tow or dinghy vehicle. I have to admit, these bikes were a lot more fun to ride than I expected.

The operation for folding the bikes is pretty simple; quick-release clamps are used in strategic locations. We found it easiest to drop the seat after releasing the clamp, then the handlebar is turned to be parallel with the frame. Next the stem is released and folded down. The bigger clamp on the top tube is then released and the bike folded in half. Opening is just the opposite, and the entire process takes only a few minutes after the acclimation. Make sure the seat post is not extended past the marked limit line: even most taller riders will be able to find a comfortable position. The trike folds similarly but is a little more bulky due to the extra wheel and basket. Nevertheless, it's still pretty compact when folded.

The following bicycles are the most popular among RV owners.



Adventurer Single-Speed Folding Bike

transportation around camp or where there are few hills.

Remember your first bike? Chances are, it was a one-speed. It was simple, and you loved it. The Adventurer single-speed folding bike harks back to those days, with all the features you need and none that you don't. It sets up fast with quick-release clamps on the handlebars and seat post, as well as a folding hinge in the steel top tube. Once unfolded, the bike's seat and handlebars adjust for riders of just about any height. Even with its rugged construction, it's still manageable at 35.4 pounds and supports up to



A luggage rack with a springloaded hold-down is designed to handle lightweight items, like a small bag or water bottle.

HWH CORPORATION

Hydraulic Leveling & Landing Gear for 5th Wheels & Travel Trailers





Single-Step BI-AXIS® Touch Panel



Minimize RV Rock & Sway!

Precision high-strength steel jack rods, minimize RV rock & sway while enjoying activities in your coach.

HWH° products are hydraulically powered!

Greater force, less weight & sealed against harsh road environments.

Manufactured specifically for the RV industry!

HWH® makes systems to fit virtually ANY size RV.

Fun to Operate!

With the HWH° Single-Step Automatic Leveling, relax while the coach levels itself.

CA039989

(Right) The six-speed bike gives riders enough gearing to handle small hills. (Below right series) Folding the bike is accomplished by releasing clamps on the seat, handlebar, stem and top tube. Setup is just as easy.

250 pounds. It folds to just 30% inches long by 171/2 wide by 26 inches high, so it will fit in many storage compartments or in the bed of a pickup or trunk of a dinghy vehicle. Unlike your first bike, however, this one has front and rear hand brakes instead the ol' coaster brake. It's most practical for cruising around flat, paved roads. Regular price: \$204.99, sale price: \$129

Adventurer Six-Speed Folding Bike

For more ambitious rides, consider the Adventurer six-speed folding bike. Like the single-speed model, it is designed for fast setup with quickrelease clamps on the handlebars and seat post, as well as a folding

















PEDAL **P** WER

hinge in the frame. The handlebars and seat are adjustable, and shifting is performed via the handy twist-shifter on the right-hand grip and a Shimano derailleur. Braking controls are right at your fingertips as well. Even with the added features, this bike is only a few pounds heavier than the single-speed model at 37.7 pounds and folds to the same dimensions. Good for flat roads with some minor grades. Regular price: \$229.99, sale price: \$149.97

Adventurer 12-Speed Folding Bike

Half the size of the 10-speed you used to "borrow" from your older siblings, this diminutive cruiser actually packs two more speeds for a bike that bridges the gap between campground runner and road bike. Ready to ride in less than a minute, this bike features quick-release clamps on the handlebars and seat post, and a hinge in the top tube. However, where the single- and



six-speed bikes have 20-inch wheels, this one boasts 22s, as well as a thickly padded $8\frac{1}{2}$ -inch-wide seat for more comfortable riding. As a result, it's a little larger than its siblings at 35 inches long by $16\frac{1}{2}$ inches wide by 30 inches high but weighs the same as the six-speed version at 37.7 pounds. A twist-grip and Shimano derailleur handle the shifting duties, and hand brakes help bring the rider to a safe stop. This is the best bike for those who want to venture out of the RV park and tackle longer



America's #1 Choice for RV Protection

Protect Your RV From Damage

Dometic's RV Slide Topper Keeps Off Rain, Twigs and Mildew

- Reflects heat to keep indoor areas cooler
- Anti-billow device keeps fabric snug even when closed
- Time-tested reliability

MORE INFO

- Vinyl or metal weathershield
- Polar white, black, or satin fabric and hardware colors



Sleeker Slide Topper hardware comes in polar white, black, silver or champagne colors



Watch the Slide Topper Video



CA037810_041



(Above from left) Trikes make it safe for those who may be uncomfortable balancing a twowheeler. The seat is big, the handlebars can be adjusted for easy reach, and the wire basket will hold a lot of stuff. It takes some time to learn how to turn without wandering, but after acclimation, this folding trike is not only a kick to ride but easy to store.

rides with elevation changes.

Regular price: \$249.99, sale price: \$159.97

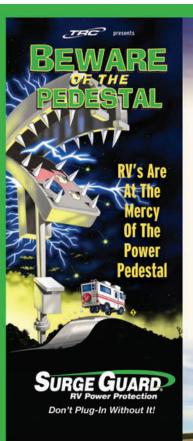
Adventurer Three-Speed Folding Trike

Maybe what you need is a little extra stability in your life. If so, check out the

Adventurer folding trike. This three-wheeler features a large cargo basket so you can carry groceries, supplies or your pet, and a thumb shifter lets you select gears effortlessly. Braking is controlled by a motorcycle-style drum brake with a hand lever on the front and a coaster-style brake on the back for smooth, easy stops.

Though not lightweight at 50 pounds, it does support up to 250 pounds of rider and folds to 36 inches long by 29½ inches wide by 29½ inches high. The handlebar and seat height can be adjusted for riders short and tall, and the wide, padded seat is designed for hours of comfortable riding. Allweather durability is ensured by a red powder-coated finish that resists corrosion and 20-inch all-surface tires mounted on rugged alloy wheels. Once you get the hang of making turns, the ride is fun. **Regular price: \$439.99**,

sale price: \$369.97 🗭





THE HEAT ISON







AUTO

Replacing an old mechanical wall thermostat with a digital model improves furnace efficiency

HEAT

eing able to regulate interior temperature is perhaps the single most significant thing separating RVs from more rudimentary forms of camping. The humble thermostat, strategically placed in the living area, helps keep the interior comfortable, allowing us to focus on recreation rather than just staying warm. Until fairly recently, RVs came with mechanical thermostats, but these are gradually being phased out in favor of the more accurate digital thermostats. The good news is, upgrading to a digital model is a relatively simple do-it-yourself project that greatly improves furnace function.

A little history: For some 35 years, forced-air furnaces received the signal to operate from a simple mechanical wall thermostat (T-stat) that contained a set of points and a bimetal spring sensitive enough to recognize room temperature fluctuations. Although not very accurate, they did get the job done. A few years later, a heat anticipator was added and fine-tuned to manufacturer's specifications. The purpose of this add-on device was to make the T-stat less sensitive to fluctuations when temperatures hover around the set point.





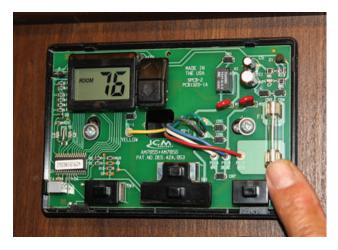
The LuxPro model PSD010BF is a simple two-wire digital thermostat that's available for a reasonable price and can be used in most furnace applications.

The heat anticipator's sole purpose was to try to prevent "short cycling" of the furnace burner or blower motor, which impacted temperature consistency. The heat anticipator is basically a piece of metal attached to the bimetal coil spring that provides electrical resistance. Although it's easy to adjust, it should not be done without consulting the owner's manual or the manufacturer.

The next step in thermostat design and function for RVs was an air-conditioner-and-furnace control in one. Early-model dual thermostats were commonly analog

◆ OLD-SCHOOL TECH

Basic mechanical thermostats with the heat anticipator are durable but not extremely accurate and are easily replaced with a LuxPro thermostat.





with slide switches and a bimetal temperature sensor. This design was not without its drawbacks, but these thermostats were convenient. Advancements in technology have led to digital thermostats in RVs, which are much more accurate in regulating temperature.

Digital thermostats are quite simply an on/off switch face that includes a readout. Temperatures are sensed via a thermistor that signals micro switches to open and close. Swapping out that old mechanical thermostat is a highly effective way to regulate interior comfort with controlled cycling and temperatures.

Technically, short cycling of the furnace should not be an issue when controlled by a digital thermostat, but placement of the thermostat can be critical for the optimal performance of a forced-air heating unit. Unfortunately, wall space is often limited in an RV, and, as a result, thermostat placement is not always perfect. It's not uncommon to find the thermostat on an interior wall within a few feet of a heat register, for example. With the heat blowing directly on the thermostat, a false reading can cause the furnace to shut down prematurely. Moving a dual-control thermostat to a different location is not much of an option, largely due to the complex wiring harness. Perhaps more important, digital models offer more precise control, and users can learn to compensate for less-than-optimal locations.

(Above left) The Coleman Mach digital wall thermostat can be very accurate if mounted in the proper location. Be sure to check the fuse under the faceplate should it become inoperative. (Above right) Dual thermostats can malfunction on the heat portion of the thermostat. An aftermarket digital thermostat can be used in conjunction with the dual thermostat to solve this problem.

Adding a heat-only thermostat to the existing dual thermostat will give you the option of relocating the secondary thermostat to a more efficient location and allow much better control of warm air. We did this using a LuxPro model PSD010BF heat-only thermostat with fan control, available on Amazon for about \$28.

Before you dive in, you need to determine suitability and choose the

right thermostat. A direct replacement is always the safest option, so first check with the manufacturer of the particular furnace to find out if a digital furnace thermostat upgrade is available. Also, keep in mind that not all air-conditioning/furnace thermostats can be changed to an aftermarket digital model. Check with a certified technician or the manufacturer of the air-conditioner/furnace to determine if command functions

WIRED FOR HEAT

Basic schematics for two popular mechanical (analog) thermostats:

Coleman/RVP

12-VOLT DC POSITIVE
HIGH FAN
LOW FAN
NEGATIVE
A/C
FURNACE

Duo-Therm

GREEN	GROUND
BLUE	HIGH FAN
BROWN	LOW FAN
RED	7.5 VOLTS DC
RED WHITE	7.5 VOLTS DC FURNACE

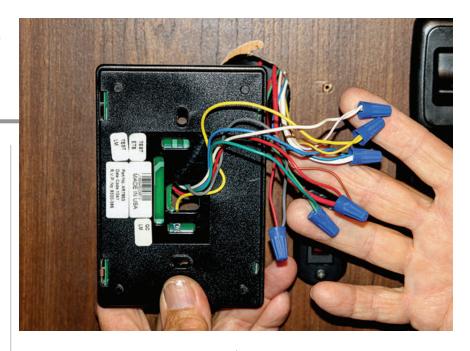
CAUTION: Making changes to any wiring can be dangerous and can cause multiple failures. Recognize your skill level, and if you are not experienced with this type of project, use a qualified technician.

Not all manufacturers adhere to the basic wiring schematic. Have a qualified technician perform any unfamiliar wiring tasks. Wire nuts are not the best option for making wiring connections to the thermostat. Use the proper size butt connectors; they won't fall off and disappear into the wall space.

occur inside the thermostat itself and that they are basically an on/off-type system. A 24- or 48-volt digital model thermostat with battery backup can be used in this case.

Installation

Disconnect the RV house battery or pull the fuse before starting this project. Determine a suitable location for the new thermostat, whether replacing the existing thermostat or adding a heat-only thermostat nearby. We wanted to add the new digital thermostat to the existing digital factory unit, and after testing several locations, we decided to install the LuxPro thermostat on an interior wall in the



bedroom. This was due to the fact that the original T-stat was installed within 3 feet of a heat register, and, as a result, the furnace kept short cycling.

Next, we cut the wire that runs from

the original thermostat to the furnace. In this case, it was the cold side of the two blue wires that ran to the furnace. We then attached the wire from the original thermostat to the R terminal





TANDEM WHEEL CHOCKS

X-Chock, single pack

- · Stabilizes by preventing tire shift
- · Uses opposing force to hold trailer steady
- · Fits tight wheel spacing, down to only 1 3/8"
- · Buy 2 to lock down both sides of trailer

JACK TO FRAME STABILIZER



Lock-Arm Stabilizing Bars

- · Eliminates most leveling or stabilizing iack movement
- · Simple one-time installation
- Self-storing—moves up and down with jacks
- · Kit includes two bars and hardware
- · Buy 3 kits for 5th wheel-2 for landing gear & 1 for rear jacks



FOOT PADS

Big Bad Foot Pad, set of 2

- 10" x 10" pads provide firm footing on soft terrain
- · Universal design fits 5th wheel landing gear, single leg stabilizers and scissor jacks
- · Work with manual or electric jacks
- · Adjustable brackets for easy installation

KIN PIN STABILIZER

Tripod FASTJACK

- · Adds stability to front overhang on 5th wheels
- · Slips on to king pin and hangs for easy setup
- · All legs fully adjustable & extend to ground
- · Lightweight—only 15 lbs.



CA039970



When replacing a heat-only mechanical-style thermostat, place the positive blue wire to the R terminal and the other blue wire to the W1 terminal on the LuxPro digital thermostat. Home-style digital thermostats will run exclusively on the back-up batteries, AA or AAA size. With high-quality batteries, the thermostat will run approximately two years (depending on the amount of use) before battery replacement is necessary.

OEM dual thermostats can be very expensive. An alternative such as the Honeywell model RTH111B1016 or any nonprogrammable model can be substituted with a little ingenuity. Replacing a dual air-conditioner/ furnace thermostat will be a bit more

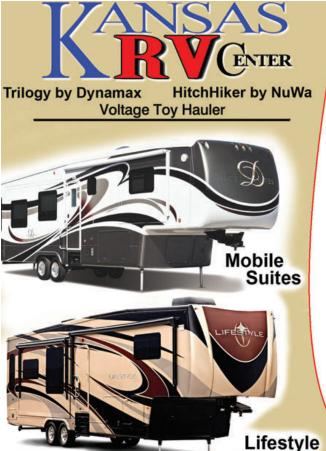
of a challenge, especially in the wiring department. Before attempting such a project, it's not a bad idea to take a picture or draw the wiring schematic on a piece of paper before removing the original T-stat. This will give you the option of referring back to the original wiring schematic should it be necessary. Keep in mind that some manufacturers extend the wiring harness using their own color schematic. You will have to convert these wires to the correct color code. Also, remember that this conversion will not work for all dual thermostat systems, so check out specs carefully.

Most household-type thermostats will have only a single fan-speed position (high) because a two-speed fan is not necessary for home use. Should you desire two-speed fan operation, you will need to install a double-pole, double-throw micro switch to the side of the thermostat.

When adding a switch to the new digital thermostat that is replacing

the Coleman/RVP unit, you will need to connect a jumper wire from the G terminal on the new thermostat to the center of the double-pole, doublethrow switch. The existing green and gray wires go to the other two poles on the switch. Also, most new digital thermostats will require a little bit of setup internally via positioning of DIP switches. If the new digital thermostat has a Centigrade/Fahrenheit option, select the Fahrenheit position. If the furnace has an HG/HE option, select the HG (gas) position. Once done, test all functions for accuracy.

Keeping up with modern electronic advances can be a challenge, but it's definitely worth the trouble. For example, 20 years ago, who would have thought an iPad or a computer could control the electronics in an RV? It's hard to imagine what will be next. With simple upgrades such as a new digital thermostat, you can enjoy modern technology without burning up your budget. 🗭



FULL TIMER 5TH WHEEL BUYERS WANT: JAW DROPPING NO NONSENSE PRICES

EXPERT PRODUCT KNOWLEDGE NO SURPRISE DELIVERY EXPERIENCE ADD OPTIONS NOW: DO IT RIGHT RESPOND TO ME AFTER THE SALE

THAT'S WHY

Buyers from all over U.S. come to us for:

- Expert knowledge of all things 5th wheel
- Negotiate purchase/trade by phone/email
- 60 new and used 5th wheels available
- Indoor Leisurely comparison of brands
- Indoor, no rush customer orientation
- In 2-3 days be on the road in new trailer
- Free RV Park for transfer of belongings
- "In the Park" service during & after sale
- * 15 Bay service dept. is affordable/reliable
- Famous for service response after the sale
- * At center of U.S. on the way to everywhere

Call, email sales@nuwa.com, or come visit We like to pleasantly surprise our customers

> www.kansasrvcenter.com www.nuwa.com

3701 Johnson Rd. - Chanute, KS 1-800-835-0676



Winegard makes it easier to tune in to digital and HD broadcast TV with its state-of-the art automatic amplified broadcast dome

ree TV" has a nice
ring to it. The idea
of receiving local
programming via over-the-air broadcasting is appealing to those who
prefer not to incur a monthly service
charge for watching TV. Many RV
parks offer cable-TV hookups, but
the signal could be coming from a
far-off location and be void of local
programming, which is useful when
in unfamiliar places. Once the feds

mandated that all TV broadcasters convert to a digital signal in 2009, the paradigm changed for the better — a lot better.

High-definition programming is now the norm, and most owners rely on batwing antennas to pull in the signals. While that works OK, and a few other suppliers offer more sophisticated antennas, Winegard has taken this segment to the next level with its new Rayzar Automatic Amplified Broadcast HDTV Antenna.

The Rayzar Automatic looks like

a mini-satellite dish and works using similar principles. It employs state-of-the-art electronics to bring in the most channels. For example, it's easy to find a signal or two using just about any antenna, but the Rayzar computes the best antenna position to bring in the highest number of signals automatically. And it's designed to bring in signals that are more distant. It has an ultralow noise amplifier to boost signal strength, resulting in minimal picture pixelation.

When a search is initiated, the antenna rotates automatically in a direction that allows for the most channel availability. It typically takes around two to three minutes to go through the search process, and when the optimum number of TV frequencies is found, a figure will show up

Winegard's Rayzar broadcast antenna sits smartly on the roof of any RV. Its low profile helps blend into the exterior lines, and the dome can be ordered in black or white.

on the display screen. From here, a scan is initiated in the TV, which will determine how many stations can actually be viewed. The sub channels affect this process, and the frequency figure on the display screen will likely be different from channels that are watchable.

During our test, we positioned the RV in a location where we knew it was difficult to receive broadcast signals. The readout showed 20 frequencies, but only six channels were watchable. Those channels were crystal clear, and the picture was HD quality. One of the channels was pixelating a little, so the manual control was used to move the antenna slightly and fine-tune the signal. Pushing the Search button again returns the antenna to the Automatic Search Mode.

Once we relocated to a more populated area, the frequencies were vast, with dozens of channels to watch.

The control panel, which replaces an existing batwing antenna counterpart, is loaded with features to keep the user informed of available frequencies and antenna positioning. Red and green LEDs indicate antenna position and will blink when the antenna is rotating. The on/off button has the same function found on batwing antenna controls, activating the amplifier, which will lock out the cable signal when on.

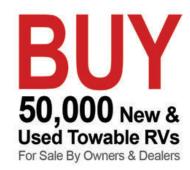
Winegard specifically designed the aftermarket kit to retrofit existing batwing antennas. Included in the box is all the necessary hardware to plug any holes left by the batwing antenna; there's even a ceiling plate to cover the hole vacated by the old antenna crank-up mechanism. The intention of the installation design is to remove the existing antenna and place the new dome in the same location. A roof plate handles the modifications up top. But that may not be possible, as we found out. There are very specific instructions for locating the dome, and it must not be farther than 30 feet from the control panel (a 20-foot coaxial cable is included and recommended for optimum performance) and have the necessary clearance from the front and side of the RV roof. In our case, we needed to move the dome away from the original location to meet these requirements, which was easily accomplished but left the roof plate exposed — not a big deal.

In the end, the dome sits nicely on the roof and has a low enough profile so it looks integrated into the design of the RV. Performance and ease of use are exceptional, and there's no risk of leaving a batwing antenna up when on the road. Available at Camping World, the Rayzar has a \$399 MSRP and comes in black or white.

Here's how the installation went:



[1] The original crank mechanism in the ceiling is removed, exposing a rod, which will pull out with the batwing antenna body.















Millions of RV Buyers! Place a Free ad today

SELL

NEVER GET ON YOUR ROOF AGAIN!

- RV ARMOR is lightweight: Seamless, and maintenance free
- RV ARMOR is convenient: Don't Move! We'll come to you and install your new roof. Two-day process with nationwide service.
- RV ARMOR is permanent: Lifetime material and labor warranty. Tracked by the VIN #
- RV ARMOR is affordable: Less expensive than a traditional roof replacement



FIND OUT WHY MANY EXPERTS CONSIDER RV ARMOR THE ULTIMATE RV ROOFING SOLUTION

www.RV-ARMOR.com Call 855-RV-ARMOR (855-782-7667)

RV ARMOR is the "Direct Bond" new RV roof system with a manufactured, custom fit

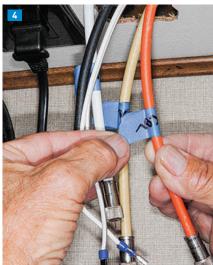
Bonds directly over:

- rubber metal
- fiberglass wood decking

RV ARMOR is a Federally Registered Trademark of RV Armor, Inc. All Rights Reserved.







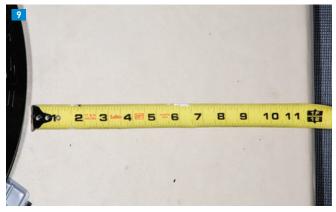


[2] The existing control panel is removed from the ceiling or wall, [3] exposing the coaxial cables and power wires. [4] To make life easier, painter's tape is used to mark the coaxial cables and power wires after identifying and removing them from the existing control panel. [5] Sealant must be peeled off the batwing antenna base before removal. A sharp putty knife makes the job a little easier, but use caution not to cut into the roof, especially if it's rubber.











[6] Once the old putty is cleared from the base of the batwing antenna, the screws are removed. Using a screw gun facilitates this process. [7] The batwing antenna should peel off the roof easily, but use caution not to lift the rubber membrane, if so equipped. Pull up the base to clear the inner rod from the hole in the roof. [8] The existing coaxial cable is disconnected from the batwing antenna, which is removed from the roof at this point. [9] Choosing a location for the dome requires a few measurements. The dome requires a minimum of 181/2 by 183/4 inches of space for the installation. It needs to be 12 inches from the edge of the RV and at least 24 inches from the front, and clear of nearby obstructions. [10] The roof plate is positioned over the hole used to mount the batwing antenna. In a perfect world, the new dome can be placed over this plate, but in our case, the required clearances would not allow for that positioning.







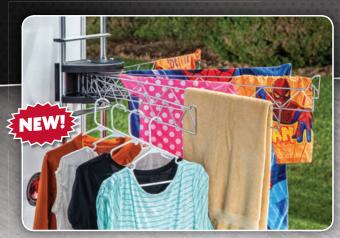




[11] Rubber-roof lap sealer is applied to the back of the roof plate. Make sure to use the proper sealant for the type of roof material. [12] The roof plate is screwed down onto the roof after routing the connecting coaxial cable from the control box. In this case, the original cable was long enough. [13] Once the roof plate is screwed down, a line of lap sealer is applied to the edges and over the screw heads. Lap sealer will fill in openings and surfaces that are not level. Control the bead and don't over-apply the sealant. [14] After positioning the dome at its permanent location, make sure the coaxial-cable connection is facing the back of the RV. In this case, the dome was placed next to the roof plate.

LAUNDRY DAY...SIMPLIFIED







EXTEND-A-LINE CLOTHES DRYER

- 42"L truss-design arms support up to 10 lbs. each
- Mounts on RV ladder or with included wall-mount
- 52"L x 7"H x 7"D folded

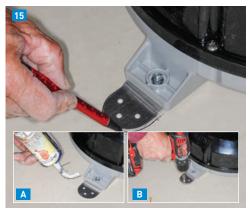
BUMPER MOUNT RV CLOTHESLINE

- Metal brackets bolt to 4"-41/2" square bumper
- Extension rods support four 7' lengths of poly line
- Removes easily and stores compactly for travel

[15] Mounting the dome to the roof is a simple process. Mark the location of the feet and [15A] move the dome to the side to apply lap sealer on the area. [15B] Carefully place the dome's feet over the sealant and attach to the roof using the provided screws; apply sealant around the edges on the screw heads. [16] The ceiling plate does a nice job of covering the hole left by the batwing antenna crank mechanism. [17] Previously marked coaxial cables and power wires are connected to the Rayzar control box. In this case, the original batwing antenna was not a Winegard brand unit, but the wiring was similar. [18] The final step is installing the Rayzar control box in the same location as the original panel. The new box will easily cover the hole in the wall or ceiling. 룢

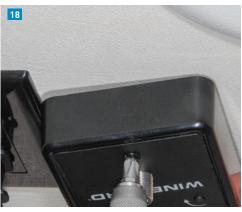
Winegard

800-288-8094 www.winegard.com/rayzarauto



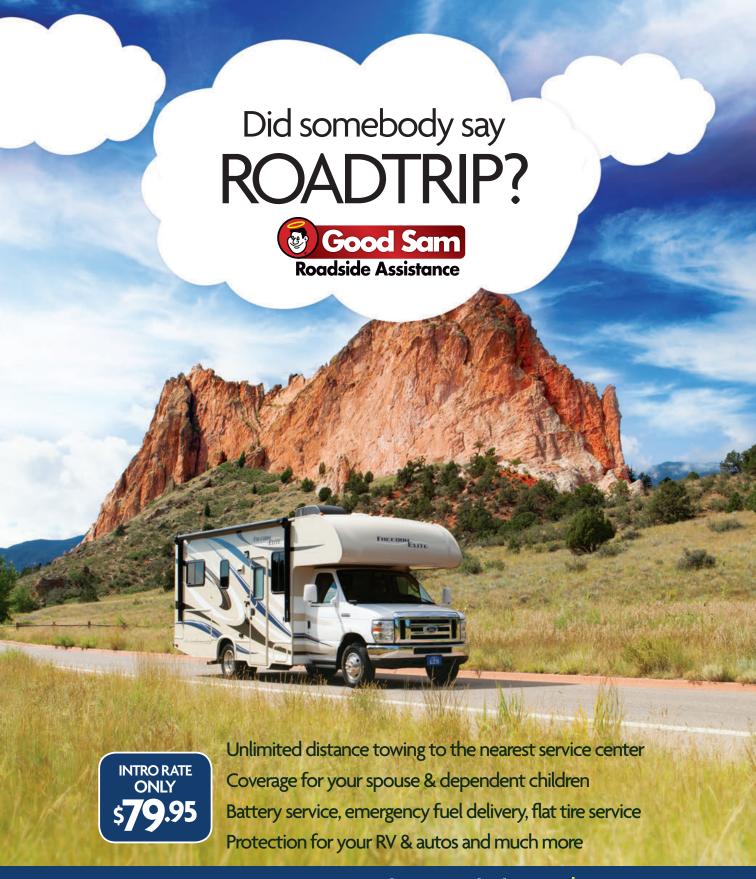








nsight, Circle 121 on Reader Service Card



JOIN TODAY AND YOU'LL NEVER BE ALONE! GoodSamRoadside.com | 800-665-4687

Introductory rate for Good Sam members who are first time buyers. Benefits and services provided by Americas Road & Travel Club, Inc. for Members residing in Alaska, Alabama, Utah and Virginia; and by Affinity Road & Travel Club, LLC for Members residing in all other States. Note: All program benefits are subject to limitations set forth in the current Member Benefit Brochures, which can be found at goodsamroadside.com/mbbs. GRA38757 0415





CRDI-fied Performance

Electronically controlled common rail direct injection (CRDI) diesel engines have very small holes in the injector nozzle tips, which are prone to form deposits. These deposits disrupt the fuel spray pattern, causing inefficient fuel dispersion and diminished performance. Bardahl CRDI Cleaner + Cetane Booster uses advanced deposit-control technology developed specifically for modern diesel engines. According to Bardahl, the product is a one-tank additive that thoroughly cleans a CRDI system, repairing the spray pattern, removing deposits and reducing fuelsystem coking. At the same time, the company claims the product improves fuel economy and reduces emissions, while the cetane booster improves combustion for strong performance.

MSRP: \$7 to \$19.99

888-227-3245, www.bardahl.com/en Circle 157 on Reader Service Card



Ferociously Strong Stuff

It's often been said that you can fix anything that goes wrong on the road with duct tape and bailing wire. That might be an overstatement, but there's no denying the value of good heavy-duty tape. T-Rex tape from ShurTech Brands is manufactured using a technology called coextrusion, where the tape's aggressive adhesive is melted and pressed through a high-tensile woven fabric and into a molten polyethylene skin using heat and pressure to lock the layers together. The result is what the company calls "ferociously strong tape" offering four times the staying power of standard duct tape, three times the holding power and two times the bite of other tapes, even on rough and dirty surfaces, according to the company.

MSRP: \$7.84/35-yard roll at Walmart

800-321-0253, www.trextape.com Circle 158 on Reader Service Card



Shockles with Muscle

The mobile nature of the RVing lifestyle frequently calls for strapping stuff down, but sometimes you need more than just a common bungee cord to feel confident your belongings will stay secure. The, uhh, interestingly named MiniShockles from Davis Instruments are made from durable black nylon webbing sewn over a marine-grade elastomer, with a 316 stainless-steel wire gate snap at each end. Boasting a safe working load of up to 300 pounds, or 10 times the capacity of a standard bungee cord, according to the company, Mini-Shockles are easily opened with one hand, and the soft, rounded edges help protect fingers. MiniShockles are available in 12-, 18- and 24-inch lengths. The company calls them "A bungee cord on steroids."

MSRP: \$13.99 to \$15.99

510-732-9229, www.davisnet.com Circle 159 on Reader Service Card



Tent Amping

Most of the time when we use portable generators, we're camping in good weather. But have you ever thought about using it in driving rain or even snow? Odds are, your idea of protecting it under these conditions is putting it underneath the trailer, but this can allow poisonous carbon monoxide to enter your living space. GenTent Safety Canopies help solve this problem by making the generator virtually weatherproof. As the name implies, GenTent is an application-specific mini-tent that goes over a portable generator, protecting it in wet weather from any angle, according to the company. Simply clamp on the base, attach the frame and cover it. GenTent Safety Canopies are available for all popular portable generators, and they're made in the USA.

MSRP: Starting at \$199, 781-334-8368, www.gentent.com

Circle 160 on Reader Service Card 🖙

INTRODUCING THE **NEW**

KING TAILGATER & KING QUEST

PORTABLE OR ROOF-MOUNTABLE SATELLITE TV ANTENNAS





VQ4500



VQ4100

FOR USE WITH DISH®

FOR USE WITH DIRECTV®*

- Fully Automatic, Simple Set-up Portable or Roof-Mount Ready
 - Supports Multiple TV Viewing**
 - Compact, Lightweight Design (13.5" x 18.75" x 17" / 8 lbs)

SMALLER, LIGHTER AND EASIER THAN EVER.

Whether you want a portable antenna (with built-in handle) or roof mounted satellite antenna, you can get either with the new KING Quest™ or KING® Tailgater®.









ENJOY SATELLITE TV ANYWHERE YOU GO







Turbochargers

Turbochargers have revolutionized the towing of heavy trailers arguably more than anything else. These relatively simple devices dramatically increase the engine's volumetric efficiency, and therefore power output, by taking advantage of exhaust energy. First, they were universally adopted in the trucking industry for big-rig diesels, then more recently by manufacturers of light diesel trucks.

A turbocharger (frequently called a "turbo") increases power by pumping additional air into the combustion chambers of an engine using an exhaust turbine and a compressor wheel, usually connected by a common shaft. Naturally aspirated (non-turbocharged or supercharged) engines rely on atmospheric pressure to push air into the combustion chamber. This limits the amount of air that can be drawn in and therefore limits power potential.

By forcing more air (and proportionately more fuel with proper controls) into the combustion chambers, dramatically more torque and power can be produced. This is especially true at higher elevations, as air density drops. Turbocharged engines can maintain power outputs similar to sea level performance at altitudes of 10,000 feet or more. Without turbocharging, diesels, especially at high altitude, are typically sooty, smoky and underpowered.

Background

In the early days, turbochargers were often called "turbo-superchargers" at a time when all forced-induction devices were lumped together as superchargers. The essential difference between a turbocharger and a supercharger is that a turbocharger is driven by a turbine spun by the engine's exhaust gases, while a supercharger is mechanically driven by the engine via gears, shafts or a belt.

Turbochargers tend to be more efficient but less responsive, compared to superchargers, which provide nearinstant response. To combine the advantages of both types, some engines have "twinchargers," using both a supercharger and a turbocharger, but this is complex and expensive, and is not commonly used.

Turbocharger outlet air temperature is cooler and therefore denser than the air produced by a supercharger, creating more power potential. Turbochargers often develop 15 to 30 percent greater horsepower because of their greater adiabatic (thermal) efficiency than superchargers. However, they do still add considerable heat (see "Intercoolers" below).

A turbocharger doesn't put a direct mechanical load on the engine, although it does increase exhaust backpressure, which raises pumping losses somewhat. Still, turbos are more efficient than superchargers, because much of the energy that spins the turbine comes from still-expanding exhaust gases that would otherwise be wasted as heat energy out the exhaust pipe.

The main operational downside of turbocharging is lag time (also known as "turbo lag" or "boost lag"), which is the delay between the accelerator pedal being pressed and the time it takes for the turbocharger(s) to spool up and provide increased boost. Below a certain flow rate, a compressor develops insignificant boost. Lag occurs because a turbocharger requires exhaust gas pressure to spin the turbine.

At low RPM and low throttle settings, there's insufficient exhaust pressure to spin up the turbine. The turbocharger's boost threshold is the lower portion of the compressor's operating range. Only when the engine reaches sufficient speed does the turbine section start to spin fast enough to develop intake-manifold pressure (boost). Boost pressure may be monitored on a dashboard gauge, usually displayed in pounds per square inch (PSI) or metric BAR units.

Turbocharging works on gasoline and diesel engines, and both types of turbocharged engines are gaining popularity due to upcoming stricter fuel economy standards. However, turbodiesels have some advantages over gas models. Turbocharging a gas engine generally raises its octane requirement, because the resulting higher cylinder pressures can lead to detonation on lower-grade fuels. Newer engines have sophisticated systems in place to prevent enginedamaging detonation, but if the recommended octane isn't used, the engine's performance potential cannot be fully realized. Increasing combustion temperatures also raises the amount of nitrogen oxides in the exhaust, which is a regulated pollutant and must be controlled.

Because diesels essentially function on controlled detonation, they generally still work fine on the same cetane-rated fuel as before. Diesels also tend to burn their fuel more completely with turbocharging, which reduces soot and particulate matter in the exhaust.

Types and Sizing

Turbocharger output and performance are closely related to size, and there's always a trade-off. Turbine housing and wheel sizes determine the amount



The turbocharger shown on the left is available from BD Diesel Performance, along with various stock replacement and custom turbos.

of air and exhaust that can flow through a system and its operating efficiency. Generally, the larger the exhaust turbine wheel and compressor wheel, the greater the flow capacity but larger turbochargers also require more exhaust pressure to spin their turbines and therefore create more low-speed lag. Smaller turbos spin up more quickly but don't deliver as much airflow during higher-RPM acceleration. To combine benefits of both kinds, various designs, including twin turbochargers, twin-scroll turbochargers and variable-geometry turbochargers, have been developed.

Twin-turbo (also called bi-turbo) installations utilize two turbochargers working either in parallel or sequentially. In parallel configurations, both turbos receive half the engine's exhaust. These are often installed on separate banks of a V-6 or V-8 engine. With sequential systems, one turbo operates at low speeds and the other comes online at a preset engine RPM or load. Sequential turbochargers reduce lag time but can require complex plumbing to connect both turbos.

Two-stage, variable twin-turbos employ a small turbocharger for low RPM and a larger unit for higher RPM. They're plumbed in series; this way, boost from one turbo is further raised by the other. Exhaust gas routing is continuously variable, allowing smooth transitions from the small turbo to the larger unit. Both turbochargers operate in the midrange, with one feeding into the other, while at higher RPM, only the larger turbo runs. A bypass valve controls exhaust flow to each turbo.

Variable-geometry or variable-nozzle turbochargers are now widely used as original equipment. These units employ movable turbine vanes to control flow into the turbine, allowing optimal efficiency across the power curve. The vane's angle is adjusted by an actuator to vary airflow to the turbine. This variation helps maintain flow velocity and backpressure throughout the engine's RPM range, resulting in improved fuel efficiency and reduced turbocharger lag.

Turbonetics, maker of the GT-K turbo shown here, offers a wide variety of custom and standard replacement turbochargers.

Wastegates

Boost pressure must be limited to keep the engine components, including the turbocharger, within their mechanical and thermal operating ranges. Overboosting an engine causes damage, including overheating, overstressing the engine's internal components and, in gas engines, detonation. To avoid damage, boost pressure must not get too high, thus the pressure at the intake manifold must be controlled.

Opening the wastegate allows the excess pressure headed for the turbine to bypass it and exit into the exhaust pipe, thus reducing boost pressure. Wastegates regulate exhaust-gas flow entering the turbine and therefore limit airflow. The wastegate is used to limit maximum boost and can be controlled by a simple spring-loaded diaphragm, the engine's electronic control unit or a separate boost control.

Relief Valves

Turbochargers operating at full throttle and high RPM pump large volumes of air into the engine. With gasoline engines, when the throttle is closed suddenly, compressed air can "stack" against the closed throttle valve. The sudden surge can raise air pressure high enough to cause damage, including what is known as compressor stalling. This results when the pressurized air flows backward through the impeller and out the inlet.

To avoid this, a pressure-relief valve (also known as a blow-off, anti-surge, diverter, bypass, turbo-relief or dump valve) is fitted between the turbo-charger and engine, which vents excess pressure. Air is usually routed back into the turbocharger inlet (with diverter or bypass valves), but can also be vented to the atmosphere (blow-off valve). By recycling the air, the time needed to spool up the turbocharger after deceleration is reduced.

Intercoolers

As air is compressed, its temperature



rises quickly and dramatically. Hot air is less dense (contains less oxygen) than cooler air, and it also has some serious negative affects when it is drawn into either a diesel or gas engine. Power drops off, and in gasoline engines, detonation can occur. As combustion-chamber temperatures rise to critical levels, pistons can overheat and crack or melt, and valve seats can burn and valves warp.

Intercoolers, also known as "aftercoolers," are heat exchangers that remove heat from the air after it exits the turbocharger and before it enters the engine's intake manifold. Newer turbocharged vehicles come with them stock, but the aftermarket also makes larger and more effective replacement units, which provide even more cooling. Additional cooling increases air density and power, while reducing thermal stress on the engine's internal parts, and is recommended for modified and even stock vehicles subjected to heavy use.

Operational Tips

Turbocharged engines, especially modified ones, should have boost pressure and exhaust gas temperature (EGT) gauges. By being able to monitor boost and EGT, the driver can detect problems early and prevent major failures from occurring by intervening right away. Throttle position can be reduced to lower boost pressures and temperatures below critical levels.

Turbochargers spin at extremely high peak speeds; some reach as high as 250,000 RPM, and 150,000 RPM is not uncommon. Their bearings must receive a good flow of oil to survive. Synthetic oil is more resistant to high temperatures than conventional oil and is recommended for turbo use.

Original equipment turbochargers are usually water-cooled via the

engine's cooling system. Coolant should be kept fresh and at the proper level, and the correct antifreeze/coolant ratio should be maintained to prevent freezing and ensure the boiling point is high enough.

If an engine is shut off when the turbocharger is too hot, some of that extreme heat is absorbed by the motor oil that is circulated through the turbocharger bearings by the engine's oil pump. When the oil gets too hot, it begins to break down and carbonize, or form hard carbon "coke" (which comes from coal terminology). These hard particles will quickly destroy bearings.

After a hard pull, the engine should be allowed to idle for several minutes to allow the turbo to cool down and oil to circulate through the bearings. When diesel engines idle, the exhaust cools down substantially. Some engines incorporate a feature that controls the engine idling cool down. If your truck doesn't have this, an aftermarket turbo timer product can be installed. This

allows the engine to idle for several minutes and then shut down after you have left the vehicle.

Future Technology

One new technology undergoing development is electrical-assisted boosting, which employs an electric motor to spin the turbocharger up sooner with only available exhaust gases. Another new technology is to separate the turbine and compressor units to create a turbinegenerator and an electric-motor-driven compressor. This is called a hybrid turbocharger and allows the compressor turbine speed to be independent of the exhaust-driven turbine speed.

Hot-Rodding

There are always folks who aren't satisfied with the performance of their stock vehicles and want to accelerate and climb hills a little faster (OK, sometimes a whole lot faster). Turbochargers can boost power more than almost any other device, and many af-

termarket companies offer custom turbocharger kits that can produce extra boost, volume and power.

It's very tempting, and substantial improvements in torque and horsepower can be achieved. Just keep in mind that moderation is usually best for longevity and reliability, especially with the extra strain of towing. Also consider the effects of modifications on warranties (if still in effect) and emission controls, particularly in states where smog checks are performed. Products that have a California Air Resources Board (CARB) executive order (EO) number are legal for use in all states on applicable vehicles.

Sources

Banks Power/Gale Banks Engineering 800-601-8072, www.bankspower.com

BD Diesel Performance

800-887-5030, www.dieselperformance.com

Turbonetics

805-581-0333, www.turboneticsinc.com



CONTROL YOUR TOWING EXPERIENCE

WITH TEKONSHA® BRAKE CONTROLS AND REESE® / PRO SERIES™ WEIGHT DISTRIBUTION SYSTEMS

Whether you're looking for the best brake control and weight distribution system money can buy, or a well-engineered economical alternative, we have got you covered.

PROPORTIONAL TRAILER BRAKE CONTROLS

GOOD



PRIMUS[™] IQ

- Proportional forward and reverse
- No leveling required
- Up to 3 axles

BETTER



Prodigy® P2

- Proportional forward and reverse
- Works with electric over hydraulic brakes
- Up to 4 axles

BEST



P3®

- Industry's most advanced electric brake control
- Proportional forward and reverse
- Easy-to-use diagnostics
- Up to 4 axles

WEIGHT DISTRIBUTION & SWAY CONTROL SYSTEMS

GOOD



COMPLETE ROUND BAR KIT

- Weight distribution at an economical price
- Includes friction sway control and mounting hardware
- In 550, 750, 1000 & 1200 lb. tongue weight ratings

BETTER



SC HITCH KITS

- Weight distribution plus sway control
- Works to resist sway in any weather condition
- In 600, 800, 1200 & 1500 lb.
 tongue weight ratings

BEST



STRAIT-LINE® SYSTEM

- Dual cam sway control and weight distribution in one package
- Keeps trailer in a straight line behind the tow vehicle
- In 600, 800, 1200, 1500 lb.
 & 1700 lb. tongue
 weight ratings

Under Pressure

Doran's new 360RV monitoring system keeps a critical eye on tire inflation while on the road

DIFFICULTY

1 2 3 4 5

TIME TO COMPLETE

11/2 HOURS

TOOLS NEEDED DRILL WITH VARIOUS-SIZED DRILL BITS, ALLEN WRENCH (INCLUDED)

nce upon a time, you could look at a tire and tell that it was running low on pressure. Those days are long gone. Radial construction, combined with stiffer sidewalls means that, by the time a tire looks low on air, it is severely underinflated. As you are probably already aware, just being low a few pounds can result in shorter tread life and reduced fuel economy — but in the case of a truck and/or trailer, which often carries heavy loads, the consequences of underinflation can be far more dire, including a possible blowout and resultant body damage. Keeping tabs on tire inflation pressure values with a gauge is OK while the RV is in a park or storage area, but what about monitoring while on the road?

Tire pressure monitoring systems (TPMS) are the answer, of course, but not all of them are created equal and not all are designed for the unique requirements of RV owners. Recently, however, Doran Manufacturing developed the 360RV, its next-generation TPMS made especially for RVs and tow vehicles.



Doran's locking ring securely fastens the sensors to each valve stem.

The Doran 360RV is designed to take accurate readings of air pressure at each tire and communicate real-time data to the driver via a dash-mounted monitor. Complete with low-air-pressure alarms, the Doran TPMS is always on call to alert you to a potential problem. This system has

multiple visual and audio warnings including a new, fast-leak warning that is triggered when pressure in a tire drops 2.8 PSI in less than 12 seconds. In addition, the high temperature alarm will warn of tire failures, as well as brake shoes that are dragging or a wheel bearing that may be failing.

The Doran 360RV is equipped with an easy-to-read LCD monitor that is roughly the size of a dollar bill. This smart TPMS is outfitted with simple programming to read baseline and current tire pressure and temperature. The Doran is easy to install and offers multiple mounting options by way of its suction-cup base.

Before installation, be sure to



REAL-TIME DATA Easy to read, easy to set, the Doran TPMS display offers several mounting options to suit a variety of applications.

Exclusive Savings for



12 feature-packed issues loaded with information

- Reviews of the latest trailers and equipment
- Helpful technical and DIY articles from our tech-savvy editors
- 10-Minute Tech, our popular monthly column featuring handy, simple tips by fellow RVers
- Travel features on the best RV destinations
- Plus: Trailer Life's annual Guide to Towing

Subscribe Today!

One-Year Subscription Only \$11.97 Save 70% off Newsstand

Two-Year Subscription Only \$19.97 Save 75% off Newsstand

Call or click today to get Trailer Life delivered right to your mailbox!

GoodSamClub.com/TLoffer or call 866-799-4038

inspect all valve stems and tires thoroughly to make sure they are in good condition. Mounting the sensors on a basic four-tire system should run approximately 35 minutes, but labor time will increase to about 1½ hours with the remote antenna and the hardwiring process of the monitor.

The first part of the installation requires mounting the monitor and plugging it to a 12-volt DC accessory outlet, then following the directions for programming each sensor in the desired tire position (right front, left front and so on). Write the sensor numbers on a piece of paper with the corresponding tire position diagram. Once the programming is complete, the sensors can be installed. Be sure that each tire sensor and tire match the diagram of the wheel positions on the monitor once installed.

Doran designed its durable tire sensors with a three-piece seal that will minimize the potential for air leaks. Each tire sensor is secured with





(Above from left) Doran's testing tool takes the guesswork out of proper installation, allowing the user to achieve optimal signal from each sensor. The windshield-mounting kit features replaceable suction cups specifically designed to fit multiple angles.

an adjustable locking ring, and the valve stem inserts can be changed, if necessary, to keep the sensors from leaking. An included tool can be used to gauge insert depth and make sure the sensors will seal properly. After installation, the sensors should be checked with soapy water to confirm there are no air leaks.

There are multiple optional accessories available through Doran, includ-

ing a remote antenna to extend RF signal reception, and flow-through valve stem extensions and adapters that will eliminate the need to remove the sensors when adding air to the tires.

We installed the optional remote antenna kit on the test truck. In doing so, the signal reception of the RF (radio frequency) is moved to the rear of the truck, improving the reception of the wheel sensors' signals. The

America's #1 Choice for RV Shade

Easy Push-Button Power Awning

Dometic's 9100 Power Awning Features Adjustable Arms for Rain Runoff

- No need to lift the hardware a real plus for 5th wheels with basement storage
- Easy operation just press a button to extend or retract
- Internal motor for a clean look and moisture protection
- Adjustable arms allow more pitch for shading
- Choices of hardware color and fabric designs
- Easy manual operation in the event of power failure
- Available in vinyl OR acrylic fabrics

Manual-operation 9100 Patio Awning also available.









Watch the 9100 Power Awning Video



antenna option is imperative for long trailers, where the RF signal has a much greater distance to the monitor. Find a suitable location for the remote antenna, install the bracket and route the coax cable along the frame and through the firewall to the monitor. The coax cable will attach to the monitor in place of the supplied short antenna.

The test trailer tires were set at 80 PSI. Driving approximately four hours in 45-degree weather, we saw that the pressure rose roughly 6 to 8 PSI in each tire. The pressure from the base number will rise more in higher ambient temperature.

One week later, we checked the cold pressure in all the tires to be certain there were no air leaks by simply turning on the ignition and checking the monitor. If there had been a tire with low pressure, the Doran 360RV monitor would have alerted us. Pressures were checked against the readings from a manual gauge, to confirm

The remote antenna is imperative in preventing signal loss when the TPMS is being used on RVs longer than 25 feet.

accuracy.

Once you go back to the manual gauge for checking each tire, you'll quickly realize the value and convenience of a TPMS. By adding a TPMS to your RV, you are also installing safety and peace of mind. The Doran 360RV retails for \$499.99 and comes with a two-year warranty.

Doran Manufacturing LLC

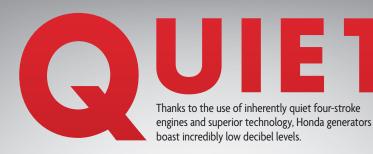
866-816-7233 www.doranmfg.com



Doran TPMS Sensor and Monitor Specifications:

Sensor Dimensions	1.31" W x 1.16" H
Sensor Pressure Range	10 to 188 psi +/-2 psi over operating pressure range
Monitor Dimensions	5.7" W x 2.16" L x 1.1" D
Fast Leak Alert	2.8 psi drop within 12 seconds
High Temperature Alert	175 degrees F





HONDA GENERATORS

PORTABLE

Honda EU Series generators are made for true portability, from the lightweight, easy-to-carry suitcase design to the compact design of the EU7000iSAT with wheeled transport kit.

RELIABLE

Honda has an unmatched reputation for reliable generators that offer dependable starts and keep running year after year.

FUEL-EFFICIENT

Honda's superior technology, with features such as Eco-Throttle, means increased fuel efficiency and longer run times.

	Quiet	
_	50	Private Office
Honda Portable —	60	Normal Speech
Generators	70	Vacuum Cleaner
	80	Inside a Car at 50 mph
	90	Rotary Mower
	100	Heavy City Traffic
	110	Chain Saw
	120	Auto Horn at 3 ft.







130

Loud

Jet Plane at 50 ft.









EU2000i COMPANION

EU3000i HANDI

ois EU7000iSAT

What Can a PORTABLE HONDA GENERATOR Power?

			Corree	Small	Electric	Small	Large	rriage/	AIr
Model	TV	Computer	Maker	Microwave	Fry Pan	Heater	Microwave	Freezer	Conditioner
EU2000i/Companion™									
EU3000i/Handi™									■ (13,500 BTU)
EU7000iSAT				_			_		(15,000 BTU)

IN A MEDICAL EMERGENCY, IT'S HARD TO BEAT AN AIR AMBULANCE.



UNLESS IT'S AN AIR AMBULANCE THAT COSTS 28¢ PER DAY.

TravelAssist membership includes emergency medical evacuations to a more capable hospital if the one you're taken to isn't equipped to care for your emergency. Other benefits include:

- RV/Vehicle Return Service
- Return of Deceased Remains
- Prescription Replacement Assistance
- Transportation Home After Stabilization
- Travel Companion Benefits
- Pet Return Assistance

CALL OR CLICK TO JOIN!

GoodSamTravelAssist.com

866-457-7347



TOWING IN REVERSE

I have a 2005 Dodge Ram 3500 longbed 4x4 with a 5.9-liter diesel engine, a 48RE automatic transmission and single rear wheels. I tow a 33-foot fifth-wheel that weighs approximately 11,000 pounds loaded.

When I back up on level ground, it does fair. When I try to back up a 5 percent grade (the grade I have in my yard to garage my trailer) or steeper, I get a torque converter stall and a transmission fluid heat-up alarm. The local Dodge service department says this is normal. If this is a true statement, then maybe *Trailer Life* should test trucks (Ram, Ford, Chevy, etc.) in reverse on a grade also. If you cannot back up your RV, why have the truck? **Emil Zgabay, Adkins, Texas**

A truck should be able to move its rated load in reverse, Emil, but many owners of these trucks have



cited a torque converter that feels "too loose" (has too high of a stall speed for the application). BD Diesel Performance and other companies offer "tighter" torque converters that remedy this issue. You did not mention if your driveway is curved or not, but if it's straight or slightly curved, you might consider backing up in 4WD low range, which will take advantage of torque multiplication and let you move the trailer into its spot very easily. — Jeff Johnston

SPARKING BATTERY SOURCE

In February's "Mystery Power Draw" RV Clinic letter, John Kester had questions about seeing and hearing a spark when he reconnects his battery lead. I had a 2008 Forest River Rockwood with the WFCO power converter. I discovered the converter has capacitors in the electronic circuit. These discharge over time when the battery is disconnected.

When John reconnects the battery lead, these capacitors draw a momentary current that causes the little spark he sees and hears. I found the same spark when I unplugged either of the two 40-amp fuses found in the top center of the fuse board. These are safety fuses that blow in case a battery is connected with reverse polarity.

My solution and recommendation to John and many other folks is to install a battery-disconnect switch. This will save the battery(s) from gradual discharge by those phantom loads found in all RVs.

Danny Dobson Louisville, Kentucky

A Installing a battery-disconnect switch is one of our standard answers for solving a battery-drain-instorage problem. Thank you for sharing your note about the capacitors in the converter. — J.J.

SHAKY TRAILER BRAKES

I purchased a 2014 Shadow Cruiser 313BHS late last summer. I have found that the trailer brakes do not seem to have enough braking force. The tow vehicle is a 2013 Suburban 4WD half-ton with a factory brake controller. I checked the adjustment of the trailer brakes, and they drag slightly. With the wheel raised off the ground, the wheel stops rolling when

the brakes are applied. However, the trailer can still be pulled forward at engine idle, even with the emergency brakeaway cable pulled. I suspect that either the wires are undersized or the brake shoes are saturated with grease. Any suggestions would be helpful.

Tim Sielaff Forestville, Michigan

A You're right, Tim. Grease saturation can make the brakes ineffective. You can easily check to verify the grease theory by removing a wheel and drum to see if everything's clean inside.

Given that your trailer isn't very old, I'd look elsewhere for the problem — and I'd start with the Suburban's gain setting on the integrated brake control. Gain is the adjustment that regulates the maximum voltage that's sent to the brakes, and it allows the user to adjust that voltage to accommodate trailers of different weights and different numbers of axles, and therefore, different numbers of brakes.

Check your owner's manual and adjust the gain higher than it is currently set, then check your braking power again. With the truck and trailer rolling slowly, perhaps at 15 MPH, you

THE TECH TEAM



KEN FREUND: Ken is a former ASE Certified Master Technician, service manager and shop owner who has authored numerous books on automotive repair.

JEFF JOHNSTON: Jeff served as technical director of *Trailer Life* for 20 years and has been an RV enthusiast, mechanic and writer since he could hold a wrench.

should be able to stop the truck and trailer with the manual-application brake lever. The trailer brakes shouldn't lock up but just draw the combo to a stop. This may take some trial and error to find the right setting. If it doesn't work with the gain set at 100 percent, move to the next step.

To check for wiring flaws, turn the gain all the way up and have a helper apply the manually activated emergency brake lever. In a process of elimination, use a multimeter to check the voltage in the power wire at the brake magnet. With the gain up, the voltage should be in excess of 12 volts. If not, check the main power line where it meets the axles and is distributed to the drums. Next, move to the front of the trailer and check the voltage at the plug. If you find good voltage, the problem lies "downstream" from that

point, and you have something wrong in the wiring, either a faulty ground connection, bad power wiring with a faulty connection or some such defect. Inspect the wiring and you may well find your problem, which can then be repaired. - J.J.

REFRIGERATOR FANS REVISITED

I have a 2013 Evergreen Bay Hill fifth-wheel with a double-door Norcold gas/electric refrigerator in the streetside slide. I read the two "Refrigerator Fans" letters in the April 2015 RV Clinic regarding refrigerator cooling fans. While I feel that the refrigerator works OK, the cabinets around it stay pretty warm. I removed the upper vent door to see if there was a fan, and to my surprise, two-thirds of the opening is covered by a piece of paneling. Is this normal, or should I remove it and install an aftermarket fan?

Don Frank, Phoenix, Arizona

If the vent opening is partly blocked by a type of wallboard or paneling due to some "misunderstanding" at the factory, that could cause a reduction in refrigerator performance. The fridge vent door opening has a specified square-inch dimension, per the fridge manufacturer, to provide a certain amount of airflow, and if that airflow is partially blocked, it's going to harm performance. I'd start by talking to your dealer about the situation and see if you can get them to perform the modification to make it right. If you feel comfortable with such projects, be sure to check for wiring or plumbing behind the area you'll be cutting.

Absorption refrigerator cooling fans are optional and not required to make the unit perform as it should. Some manufacturers install them at the factory because they designed the cabinetry or located the refrigerator in such a way that cooling airflow is not up to manufacturer's specifications. If the refrigerator works OK as is, you don't need one, but it sure can't hurt if you do choose to install one.



The Safest Sway Control Hitch now comes in four models

Visit HensleyMfg.com to find the right Hensley for you

- Eliminates 100% of Trailer Sway, Guaranteed.
- Models for Small or Large Trailers. Easy Installation.
- Lifetime Warranty.
- Free Shipping when you mention this ad.

Get on the road to safety. Call us today . . .



READER SERVICE

I read the "Refrigerator Fans" letters in April's RV Clinic, and they caused me to again contemplate something I've often pondered.

My fridge is on the totally exposed road side of my camper, and at many campsites it gets full sun for a good portion of the day. I've thought about making a fabric sun blocker, the same size as (or slightly larger than) the exterior fridge panel. I envision it being mounted about an inch (maybe 2) out from the wall and removed for travel. While blocking the direct sun, it would still fully allow air to flow through the panel's vents.

Is this a good idea and would it be beneficial (or potentially harmful) to the efficiency of the refrigerator? Michael P. Gleason, Bangor, Maine

Your idea sounds perfectly plausible. Absorption or compression, the cooler a refrigerator's environment, the better it's going to perform. A portable shade seems like a great way to help keep your fridge operating in top shape. As long as you leave enough space between the shade and the RV side wall for air circulation as you intend, it should be fine. — J.J.

HITCH-WEIGHT CALCULATIONS

When a manufacturer, specifically Forest River, determines the hitch weight of a trailer, are the propane cylinders installed and filled and a battery installed? The weight of these two items alone could add 100 pounds to the weight. Are those weights also taken into consideration when determining the gross weight of the trailer? The only thing documented on my Forest River trailer is the deduction of a full tank of freshwater from the cargo weight. Love your magazine for RV Clinic alone, but the rest is pretty darn fantastic as well. Tom Poe, Finksburg, Maryland

A Thank you for the kind words, Tom. Most trailer manufacturers measure the unit's weight without the propane cylinders filled or battery aboard, just as they leave the freshwater tank empty, and in some cases, the weight

	ADVERTISERS' INDEX
RS#	
NO#	ADVERTISER FACE
	Adjust A Brush74
154	AquaGo by Truma Corp14
	BAL112
102	B&W Trailer Hitches43
103	BD Brake64
104	Blue Ox85
	Camco90
	Camping World79-81
	Cequent126
	Champion48
	Classifieds142-143
106	Coast Distribution71
	Coleman145
	DISH Network75
108	DRV46
	Destinations141
	Dometic
100	Dometic44, 108, 129
	Escape Trailer57
140	Equalizer53
110	Fantastic Vent
	Fast Master Products
141 111	Fastway Products
111	Flowmatic88
112	Geico
	Giraffe G4 Systems
115	Good Sam Extended
	Service Plan50
	Good Sam RV Loans82
	Good Sam Roadside
	Assistance
	Good Sam Travel Assist132
	Good Sam Visa47
	HWH Corporation106
	Harbor Freight Tools101
114	Hatchlift LLC95
115	Heartland Recreational
	Vehicles, LLC9
	Hensley Manufacturing Inc63
	Hensley Manufacturing Inc134
	Highland Ridge RV, Inc23
	HitchGrip52
120	Honda Generators41
	Honda Generators131
136	iBall Hitch Cam137
	Icon Technologies
123	_
121	Insight
	KZ Inc147
125	King
126	King
120	
	Lippert Components
	MOR/Ryde45
	.,

	ADVERTISERS' IND	EX
RS#		PAGE#
I\O _{II}	ADVERTISER	IAULII
	Mr Heater	94
	Maxxair	70
130	Maxxis International	54-55
	Minder Research	98
133	New Horizons RV Corp	117
	Northwood Mfg	
	NuWa Industries	
	Onan Corporation	
	Park It 360	
	Phoenix USA Inc.	
	Phoenix	
142	Progressive Insurance	
	Purple Line LLC	
100	RDS	
144	RV Armor, Inc.	
	RV One Superstores Inc	
140	RV Marketplace	
1/16	RVRoof.com	
	RVT.com	
	RVawningsmart	
105	RAM	
1/2	Rand McNally Rear View Safety	
147	Sea Eagle	
1.40	Select Comfort	
148	SpaceCraft Mfg	
	Stromberg	
	Stromberg	
	Technology Research	
	Thetford Corporation	
150	Thetford Corporation	
	Titan Fuel Tanks	
151		
152	Torklift International	
153	Transfer Flow Inc	
	Valterra	
110	Valterra	72
118	Viking Cylinders by	100
	Hexagon Ragasco	
	Walex	
	Weber	
149	Warrior RV	
	Winegard	91
155	Yamaha Outdoor Power	
	Equipment	32
F	EDITORIAL PRODUCT I	INDEX
157	Bardahl CRDI	121
	Davis Instruments	
	GenTent.	
	Jayco 151 Octane	
	T-Rex Tape	
162	Winnebago Spyder	/6
While e	every effort is made to maintain accuracy ar inute changes may occasionally result in or	nd completeness, missions or errors.





RV CLINIC

also doesn't include certain options they install. At best, a manufacturer's posted weight figure is just a guideline or starting point when making your tow rig and trailer setup calculations.

If, for example, the trailer has a 6,000-pound gross vehicle weight rating (gww) and the manufacturer says it weighs 4,500 pounds dry and empty of cargo (leaving an alleged 1,500 pounds of payload capacity), you should add the full propane cylinders and battery weight to that base figure, as well as the freshwater weight. The hitch weight will definitely be boosted by the battery and LP-gas weight. Better yet, take the trailer to a certified scale to determine its actual weight, and you'll know exactly where you stand. — J.J.

EMPTY OR FULL WATER TANKS?

My wife and I are fairly new to RVing. We recently traded in our 2014 Coachmen 27-foot motorhome for a 2015 Grand Design Solitude 37foot fifth-wheel. A few days after the purchase, we were talking to one of the salesmen and were told that we should make sure all water tanks were empty when traveling or risk damage to the tanks. I asked what we should do if we were going dry camping. He said to try to find somewhere close to the campground to fill up. For some reason, this does not sound right. Is it safe to travel with water in the freshwater tank? James Holliday, Sebring, Florida

Just when you think you've heard A it all, something like this comes along. There is no danger to your freshwater tanks if you travel with them full or semi-full of fluids. That salesman could have been concerned that, with the fresh and waste tanks full or partly full, the trailer could be overloaded by exceeding its gross vehicle weight rating (GVWR), in the event it has a minimal cargo capacity in addition to its wet, loaded weight. You can check that by taking the trailer to a certified scale and weighing it, wet and fully loaded for the road, and comparing that figure to its GVWR. And use your

fluid tanks on the road: that's what they're for. — J.J.

SUMMER RV STORAGE

We are planning to leave our 2014 40-foot fifth-wheel in Apache Junction, Arizona, for the summer. What plans should we make to keep it from getting too hot? We have the wheels covered, but should we cover the two air conditioners? We plan to spray conditioner on the slideout seals and put the slides in. We will also put water containers inside so it will not get too dry. High temperatures can range from 100 to 115 degrees Fahrenheit here in the summer. Could you advise us about anything else we should do?

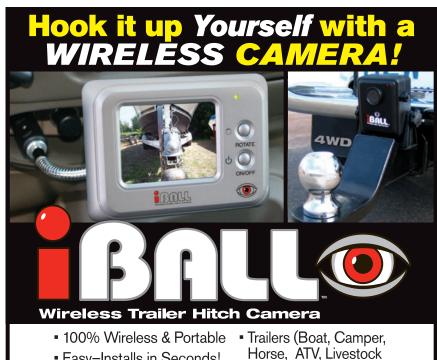
Dennis and Rosemary Howard Buffalo, Missouri

You're taking the right steps, and one more item would be to use a fitted RV cover on the trailer. A good quality RV cover will shade the trailer from direct sunlight and provide some small degree of insulation. The trailer will still get hot, of course, but the cover avoids having the skin, window and door seals, plastic A/C covers and the like exposed to direct sunlight. Be sure to leave roof vents and some windows open a bit to provide air circulation. That's about the best you can do under the circumstances. - J.J.

RV WIND RESISTANCE

I have been a Trailer Life subscriber for about three years, and I have never seen an article about methods to reduce wind resistance on travel trailers. I just finished a trip from Kentucky to Arizona and back, and could not help noticing how much the 18-wheelers have been doing to reduce their wind resistance. They have rear fairing arrangements and even fairings under the body of the trailer.

There must be a way for us to capitalize on that research and add a fairing of some sort to our trucks that would help the air move more smoothly over our travel trailers, and even a way to attach some type of fairing on the rear of



- Easy-Installs in Seconds!
- Magnetic & Submersible Camera

Info/Buy Now: 1-877-298-2055 or visit our website at:

and More!)

w/Free US Shipping SAVE \$15 Today! Use Promo Code TL715



VISIT WWW.RVAWNINGSMART.COM

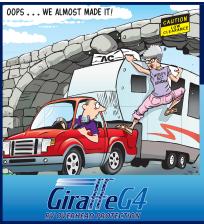
Hitch Cam, Circle 136 on Reader Service Card

John Taylor, Lexington, Kentucky

Those aerodynamic enhancenents you see on commercial trucks work, John, and many would also likely work on RVs such as travel trailers. It's largely a matter of cost of the devices versus potential gains and payback in the form of improved MPG. An average over-the-road fleet truck may drive 120,000 miles per year, and according to a Freightliner engineering source, those aero devices can save an as much as 10 to 15 percent or more. Even a big truck that achieves only 4 or 5 MPG can rack up the savings over that type of annual driving mileage.

The average RV owner drives relatively few miles per year. Commercially built aerodynamic devices, such as a tail-end fairing for the trailer, the underside air dams or a fairing type of device for the back of the truck could be costly enough that the average RV user would recoup the money only after many years of trailer towing.

There are commercial wind wings available that can be mounted on a pickup cab when towing a fifth-wheel trailer or the back of a truck bed cap for those who tow a travel trailer. As per some wind-tunnel testing done by Ford some years ago, they work, but they need to be as large as practical and angled to direct the air back up and over the top front edge of the trailer. They also work best at freeway speeds, as that's when wind drag starts to become a serious factor. You'll need to run some numbers on your average towing MPG, think about your annual towing mileage and the cost of devices to determine if they are right for you. — J.J.



Protect Your AC Unit and

The GiraffeG4 System will tell you the exact height of the **Bridge, Trestle, Campground Tree** and Gas Station Canopy you've encountered, so you don't hit it.

www.GiraffeG4.com 1-877-543-1087

REARVIEWSAFETY.COM LIMITED QUANTITIES

CALL US TODAY 1.800.764.1028



BLACK-TANK DUMPING

We have a 2013 30-foot fifth-wheel Keystone Montana Mountaineer. I have a hard time dumping the blackwater waste tank, even when the trailer is level. The first few times it took more than an hour. I had to beat on the drainpipe to get it to drain. Then I found if I raised the front of the fifth-wheel 6 to 8 inches, it dumps much easier but causes extra wear on the landing gear. So I had a septic company send a camera through the line and tank. There were no clogs, but when the camera entered the tank, it dropped down, meaning the bottom of the tank is lower than the drain. I contacted the dealer where I purchased the fifth-wheel, and they said they had never had the problem. I tried to contact the manufacturer concerning my problem and got no response.

Homer Rhodaback, Waldport, Oregon

The drop-down discovered in your A tank plumbing is odd, Homer, since most waste holding tanks are designed with a lowered area with the drain plumbing (continued on page 141)

Giraffe G4 Systems, Circle 113 on Reader Service Card

RV Marketplace

For advertising information contact: Terry Thompson

Phone: 206-310-6234 Fax: 270-495-6278 Email: terry.thompson@goodsam.com Mail Attn: Trailer Life Marketplace, 3431 S. 257th Street, Kent, WA 98032

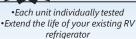


Don't buy a new RV refrigerator

Replace your existing cooling unit with a **NEW** replacement cooling unit Made in the USA



onsider Doing Factory Install



•3 Year warranty on ALL of our units • Fast & friendly customer service



JC Refrigeration Call Us Today

(260) 768-4067

www.JC-Refrigeration.com

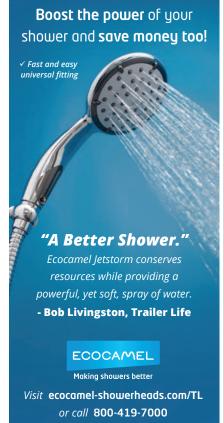
RV Trip Wizard™ **BEST EVER RV TRIP PLANNER**



Plan trips the way you want to. Over 17,000 parks, including private, city, county, state, and national parks and more...

Highlight your memberships. Take advantage of discounts.

Try our FREE Demo! www.RVTripWizard.com







OR ORDER ONLINE AT

WWW.TRUCKSPRING.COM



RV Marketplace

For advertising information contact Terry Thompson:

Phone: 206-310-6234 Fax: 270-495-6278 Email: terry.thompson@goodsam.com Mail Attn: Trailer Life Marketplace, 3431 S. 257th Street, Kent, WA 98032



All units are shipped pre-serviced and tested for output with extra spark plug.

Free shipping continental U.S. No sales tax. No insurance charge.

Get your back-up power now!

Full Line Honda Dealer Lightweight • Super quiet • Eco throttle • D.C. charging Couple 2 units together to Double output

Kansas City, MO (877) 225-5200 Toll Free

DUAL WHEEL CONVERSIONS

-The -DYNAMIC DUAL



Convert your Pick-up or Suburban to dual wheels the Arrowcraft way.

- No Axle Changes
- Easy Installation
- Steel or Aluminum Wheels
- Custom Styled Fenders

For More information: Arrowcraft Products, Inc. 5022 Leafdale Blvd. Royal Oak, MI 48073 (248) 280-0210 Fax: (248) 280-1679

Web Site: www.arrowcraft.com E-Mail: duallies@arrowcraft.com

has your RV sinbrella covered!

Since 1982

Highest UV Rated Water Resistant

Mold/Mildew Resistant

• 100% Non Abrasive

Breathable

CalMark Cover Co.

Made by Glen

1-800-838-7236

calmarkcovers.com

info@calmarkcovers.com

Best fabric for ALL weather conditions in USA & Canada

Specializing in all types of RVs, Horse trailers & more!

sunbrella Raven Mills

100% USA Made

FSR® Construction

Zipper Doors Full 6 Year Warranty 100% Guarantee





Elite Series to Economy

Easy Retrofit LED Bulbs for all Motorhomes & Trailers

Round & wedge base, tube lights, halogen replacements, festoons, plate lights, reading lamps, and more.

Priority Mail Shipping!



Made Specifically for RVs Quality Circuits, Realistic Prices

detailed informative website http://m4led.com 5% off code: tl5 818.717.8840



The online resource for the RV enthusiast







When Quiet Counts. **Count on Honda**



SHIPPED SAME DAY EU20

LOWEST PRICES ANYWHERE!!

800-832-7365

MOTOSPORTS

1850 N. State St.

Ukiah, Ca. 95482

NEVER WAX AGAIN



SEE our video demo on our website! www.poliglowproducts.com

RVing Women

- Support
- Adventure
- Friendship
- Education



Learn More 480-671-6226 www.rvingwomen.org

TO ADVERTISE IN THE

RV Marketplace or Dealers & **Destinations**

CONTACT:

Terry Thompson 206-310-6234

terry.thompson@goodsam.com

Dealers & Destinations

OREGON





(continued from page 138)

attached at the lowest point. The way such tanks are usually built into an RV makes replacement an expensive and complex process, although it can be done if absolutely needed. Many such tanks are large and flat to fit between the frame rails, and that doesn't help the waste flow any. Rather than use your landing-gear jacks, you may choose to run the tow vehicle's rear tires up on some leveling blocks to raise the trailer's front end during dumping.

It sounds as if you didn't have enough water in the tank in addition to the waste solids. That can cause slow or incomplete draining in even the best waste-tank plumbing setups. As a workaround, you can try adding freshwater to the tank until it's nearly full, then dump it, and the extra volume of freshwater will help flush it clean. - J.J.

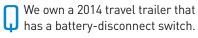
SLIDEOUT SEALS

In the March RV Clinic letter "Slideouts...Don't," you gave Frank Guinan several tips on his RV's slideout problem. One of those tips was to clean and lube the slideout seals. How do you clean the seals, and what lubricant would you use?

Tim Rodkey, Clearfield, Pennsylvania

The type of cleaner needed depends on what type of dirt is getting on the slide seals. If it's just dust. a universal cleaning product would be sufficient, but if it's tree sap, for example, you'll need to get a stronger cleaner to remove the pitch. I'd start with Simple Green or another mild spray-on product, and, if needed, use something like Fantastik spray cleaner. For slideout seal lubrication. avoid any petroleum-based product. Protect All, Camco, 303 Aerospace and a number of other companies offer slideout care kits and sprays, which are available at Camping World and other sources. - Ken Freund

DISCONNECT SWITCH



Classifieds

ACCESSORIES

Turbo KOOL®

12-Volt Cooling for RVs

TurboKOOL Evaporative "Swamp" Coolers Powered by Battery and/or Solar. Cools your RV (up to 29°) without "plugging in"! Quiet and Affordable 1-800-326-4410 free brochure www.turbokool.com

LEAKY ROOF? Liquid Roof® goes on like paint --

cures to a sealed EPDM rubber membrane. UV & Ozone resistant -- good to 300° F. 5-year warranty. 800-467-7135 www.AdvancedRubberCoatings.com

RV Bunkhouse Sheets • Custom Sheets • Best Rates

Our Specialty Bunk Pad Sheets • Asst'd Colors Short Queens • Lg Inventory • 4-6 wk Del. 717-269-9675 rybunkhousesheets@hotmail.com

CAMPGROUND MEMBERSHIPS FOR SALE

CAMPGROUND MEMBERSHIP OUTLET-SINCE 1991

To buy 800-272-0401 To sell 800-952-0401.

Any Membership-Nationwide. Best prices ever.

FOR SALE

Multi Resort Membership \$10-\$15 per night w/your RV or Trailer Call Rod @ 330-324-5148.

Multi-Resort/Year Round Camping Membership

Near Southern Pines, NC with camping throughout US & Canada + condo stays in 77 countries For info contact Wayne Bradshaw 704-883-7719.

HELP WANTED

DELIVER RVs. DRIVERS NEEDED NOW!

Pick up new RVs and deliver to dealers. Top pay. Choose your own trips - drive as much or as little as you like all across US & Canada. Free orientation & training.

See video: www.classictransport.com. For app & more info call 866-724-1606 or email Lisa at LKratzer@classictransport.com

NEED 3 CDL TRUCK DRIVERS FOR FRUIT hauling

8/10/15 to 10/29/15. Short hauls, long hours, good pay. Free RV site. Arrowhead Ranch, 610-E Jack Wells Rd., Bridgeport, WA 98813.

Earn While You Travel. Up to 65% Commission.

Complimentary RV Site While Working. Need self-motivated people with computer & sales experience. Adventure Awaits!!! 800-832-3292 • SoutheastPublications.com

IOMES FOR SALE



#1 RATED RV RESORTS - S. Texas

Retama Village & Bentsen Palm Village RV Lots \$20s, RV Casitas \$120s. **956-380-6500 www.bentsenpalm.com**



TOP RATED RESORT - S. Texas

Retama Village - Supersites \$50s. RV Casitas \$120s RV Port Homes \$170s. **956-380-6500 www.bentsenpalm.com**



BRICK 3BR/2BA HOME IN SOMERSET, KY.

10 mi to lake, 29X29 Garage, 18X40 RV or boat garage. \$184,900 Call 352-356-2051 or 606-379-6752

INVESTMENTS

EARN 9.6% INTEREST

PER ANNUM 1 (855) 306-3223 Toll Free Not available in some states.

LOTS FOR SALE

2 LOTS IN SOUTH CENTRAL COLORADO

Private RV Development. Utilities on site. Walk to river, lots of area attractions. Deeded lots, \$85,000 both. 806-239-5974.

MAIL FORWARDING

AMERICAS MAILBOX Forwarding in SD

LOW Rates/NO State Income Tax/Save \$\$\$ NO Wheel Tax/NO Safety Inspect / 866-747-3700 www.Americas-Mailbox.com/TL *Call us first!*

OUR MAIL TRAVEL SERVICE • 800-723-0110

Merritt Island, FL No State Income Tax

NO ADDRESS-USE OURS FOR LOW VEHICLE REG

25 Yrs Exp • FREE BROCHURE • mailtravelservice.com

RECREATIONAL VEHICLES FOR SALE

RV REGISTRY

www.rvregistry.com Motorhomes, Trailers & Fifth Wheels For Sale by Owners No Sales Commissions Buyers/Sellers 800-546-8457

RV ONLINE -- RVONLINE.COM

Buying or selling an RVonline.com \$39.95, 4 month photo Internet Ad! 1000's have listed and SOLD -- 831-475-5533

SERVICES

Let us help you BUY YOUR RV ... TAX FREE! We guarantee BEST service and price Receive \$100 Gas Card & FREE Mail Fwding Call 888.430.3388 www.MontanaRV.net

ACTION SERVICES, LLC

Consult a Licensed Montana Attorney No Sales Tax in MT -- Low License Fees Financing & Insurance -- For Professional Service Call 800-481-0013 www.actionservices-mt.com

#1 IN SALES TAX SAVINGS

PAY NO SALES TAX! We have helped 1000's save over the past 18 yrs. Call & talk to a CPA for professional, friendly service! **www.rvtax.com** Mountain States Consulting 800-565-4504

TOURS



RV CARAVANS AND RALLIES

Enjoy hassle free RV Travel to amazing destinations across North America. Get your FREE RV Vacation Catalog today. 800-952-8496 www.fantasyrvtours.com





RV Tours & Rallies across North America Alaska • Canada • USA • Mexico + Overseas Visit www.AdventureCaravans.com or call for your FREE Catalog 844-872-7897

TOW VEHICLES FOR SALE



2006 MED DUTY TRUCK, RV, BIKE CARRIER 275 auto, 43K mi, auto, std cab seats 3 & is shorter than my pickup, all air ride \$39K. 33' 5th Load MC, Quad, Rhino \$15K. 623-451-7121



2010, 1999 & 2000 RV HAULERS & 2009 NEW HORIZON DIESEL, AUTO, all air ride, low miles, huge storage, hitches, beautiful interiors. mountainmaster.net 623-451-7121

TRAVEL TRAILERS & FIFTH-WHEEL!



NEW 2015 Heartland Landmark

Bath and 1/2. Loaded Only \$87,900. Guar Best Price! 877-643-7532 New units-Loaded. Cust order avail no chg. View/New/Used Units www.rvsforless.net



NEW 2015 DRV MOBILE SUITES 36RSSB3: Loaded Only \$102,800 New units-Cust order avail at no chg. Guar Best Price! More info at 877-643-7532. View Full Line of New/Used Units. www.rvsforless.net

Classified Rates

Private Parties:

\$32 per line, four-line minimum. 40 characters and spaces per line. Add \$65 for color photo. All red text add \$25.

Commercial:

\$74 per line, four-line minimum, 40 characters and spaces per line. For photo ads (limited to RVs and real estate), add \$95 B/W or \$115

For logo add \$95 B/W, \$115 color. No category limitations for logos. All red text add \$50.

Display Advertising:

1" ad B/W \$395. 2" ad B/W \$675. Add \$75 for color. Frequency discounts apply.

Payment: Check, VISA, MasterCard, Discover, American Express.

Email: katey.purgatorio@goodsam.com Phone: (847) 229-6756

ax: (270) 495-6278



When I pull the switch out, the battery is in use. Pushing it in disconnects it. My question is, do I keep the switch in when plugging it in at a campsite or at my home?

Tom Watson, Phoenix, Arizona

The battery acts to stabilize system voltage and absorb alternating current "ripples" that get through the power converter into the 12-volt DC system. This helps protect circuit boards and reduces hum in audio devices. Therefore, the battery should be connected when the RV is being used. You need to determine if you have a "smart" charger in the power converter or not. If it has a multistage charging regimen, then you can leave the battery connected when the coach is parked at home and plugged in. If not, then the battery should be disconnected and kept properly charged by using a special maintenance charger, such as a Battery Tender or equivalent. — K.F.

RV MANUAL

We recently purchased our camping trailer, an Amerilite by Gulf Stream, which we like very much. My working experience has been maintenance of cars, trucks, heavy equipment, power plants, etc. Therefore, I know the importance of preventive maintenance. My question: Is there a book that covers the care and maintenance of a camping trailer?

Charlie Russell, Fairmount, Georgia

There are a number of good books on this subject. Our own Bob Livingston authored Trailer Life's RV Repair & Maintenance Manual, which, although it is out of print, is still available through sources such as Amazon. A quick Google search for RV maintenance manual will also lead you to what you are looking for. — K.F. 🗭

HAVE A QUESTION?) Email our experts at rvclinic@trailerlife.com or write to RV Clinic, 2750 Park View Court, Suite 240, Oxnard, California 93036. Please include your hometown. No phone calls, please.



At-a-Glance Battery Check

We installed a DC voltmeter (purchased online for \$5) into our RV's stove hood. Carefully cut a hole (we used a Dremel) to fit the meter. There are a lot of wires inside the hood to select from to connect the meter, so be careful when cutting the hole. Now we can tell at a glance the condition of our RV's batteries.

Jerry B. Prickett, Santa Rosa, California



Chock It Up

I went to my local Lowe's and got a twisted/bent 4x6-inch piece of wood that was 16 feet long. In speaking with the store manager, I was able to get it for only \$5, since it was a piece of scrap wood. I cut two pieces to 13-inch lengths and mitered the corners to 45 degrees to fit between my trailer's tires. They don't have to fit too tightly; just leave a little space so they won't be too snug on uneven ground. I put an eye hook in each block, so I can use our RV's awning wand to pull the blocks out without even bending over.

I then cut the rest of the 4x6-inch lumber into leveling blocks for under the jacks after making two sets of chocks for my friend's trailer. These literally cost me less than a couple of bucks for each set, and they work well going forward or reverse. I've seen people with rubber mallets hammering chocks so they don't pop out. Not me; I just set them in between the tires.

Mark Wisor, Madera, Pennsylvania

To send your submission, write to 10-Minute Tech, 2750 Park View Court, Suite 240, Oxnard, California 93036 or email 10minutetech@trailerlife.com. Please include an illustration or photo, if applicable. Trailer Life will pay \$35 for original 10-Minute Tech ideas.



Storage for Hitch Bars

I got tired of moving around dirty hitch spring bars, so I came up with this solution. I simply store my trailer's Eaz-Lift hitch spring bars in a clean, easy-to-carry space using a fabric rifle case I purchased for less than \$20. Zip it up, and it's neatly put away.

Paul Krutsch
McMinnville, Oregon 🗭

EXCEPTIONAL SAVINGS ON COLEMAN® OUTDOOR ESSENTIALS!







Bingo!

Many casinos are RV-friendly and offer a different game of chance in a decisively more tranquil environment



discovered years ago that casinos outside of the big cities are consistently RVer-friendly. I think they look at a group of RVs in their parking lots — aside from housing a captive audience — as a mini-hotel in which they don't have to change the towels.

I have a new discovery from a recent casino visit: There actually is

a place to escape the masses and find tranquillity: It's the bingo room. At this casino it reminded me of a bigcity public library. Folks were quietly busying themselves at tables, some hunched over papers, scratching with colored markers.

The place was huge, big enough to seat 700 people. I don't think anybody was talking, or if they were, the sound did not carry. This was the one place in the casino I could relax in a comfortable chair, enjoy free popcorn and drinks, do nothing and still be in the game.

I remember playing bingo at the Riverside Casino in Laughlin, Nevada, years ago. We bought bingo cards and sat at long tables, as you would at a church potluck dinner. A man in a steady monotone called out the B-7s and the 0-61s, etc. Every few minutes somebody would yell "Bingo!" causing the rest of us to shift in our seats and moan. Life would stop while the numbers were confirmed. Then came a new game — again anticipation and suspense took over the room.

Today bingo is a whole new thing.

I am in Southern California, in Temecula, at Pechanga Resort & Casino. It is just off Interstate 15, 50 miles north of San Diego. Bingo players can still buy a card here, but most people go for the Electronic Buy-In that starts here at 55 bucks. For that you get a Planet Bingo tablet that is like an iPad encased for battlefield use. It has 48 cards built in, plus some peripheral ways to win. It is connected wirelessly to a computer apparently controlled by the guy who calls the numbers. The tablet really plays itself, even playing a tune when a card wins.

I had wandered into the bingo room and eventually sat





(Top) Guests staying at Pechanga RV Resort have full use of the resort's facilities, including the 18-hole championship golf course. (Above) The bingo room is on the second level, overlooking the Round Bar in the Pechanga casino.

down at a kitchen-size table where a guy — he was alone — had just won \$150. His day job involved computers at nearby Camp Pendleton. I would guess he was a rare breed here, one of the few people in the room who was not retired.

He comes here one night a week. A bingo session runs about two hours, which gets him home before 10 p.m. "The beauty of playing with the electronic boards is that they never make a mistake," he told me. "Some people play both. They also get a paper buy-in. It gives them something to do. But then you have to pay attention."

Between games, the number-caller announced that a player named Susan was having a birthday, which brought scattered applause. Then he sang "Happy Birthday." He had a pretty good voice, which got more polite applause.

Pechanga Resort & Casino also has a 168-site RV park, a golf course, 11 restaurants and the usual resort amenities, all of which are first-class. Out in front is a huge, level parking lot. A couple of dozen RVs were randomly parked at the far end where there was plenty of room. Motorhomes had levelers down, and fifth-wheels had awnings out. Obviously, folks had set up housekeeping.

Pechanga Resort even has a pump for diesel fuel near where the RVs were parked, along with a "big vehicle cleaning station" with long-handled squeegees.

Welcome to America's Outback. 🗬

NEXT MONTH

Bill will be in McAllen, Texas. To connect with Bill, email him at roadscribe@aol.com

YOUR MUST-HAVE RV TRAVEL RESOURCE FOR 2015!



- OVER\$1,000 in Camping World coupons!
- 2,100+ Good Sam RV Parks& Campgrounds!
- NEW! UP TO \$500 in SAVINGS on Dining, Shopping and Travel— Powered by Entertainment®
- TRAVEL with easy, user-friendly, full-color state & provincial maps











KZ takes the phrase 'favorite vacation spots' to a whole, new level. Simple finishes, soothing neutral tones and natural wood provide a peaceful backdrop conducive to relaxation. Living spaces are creatively thought out.

Storage areas are generous and multi-functional. Floorplans are imaginatively planned.

Durango fifth wheels are presented in three lines, and all offer casual, yet sophisticated, style.

All in all, we think you'll find each of our Durango fifth wheels to be the perfect family getaway package.



QUALITY . RELIABILITY . INNOVATION

Take control of your vacation, create more memories on the road!

- 2895 miles from Southern California to New York City
- 11 nights, 11 campgrounds
- 13 states
- 37 points of interest
- Countless, priceless memories
- Only 1 fill up of diesel in Southern California thanks to a truck equipped with TITAN Fuel Tanks!

Multiple styles of tanks and mounting locations for late model diesel pickup trucks

