

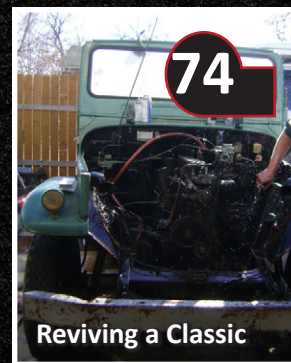
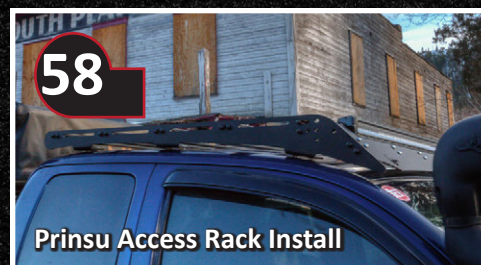
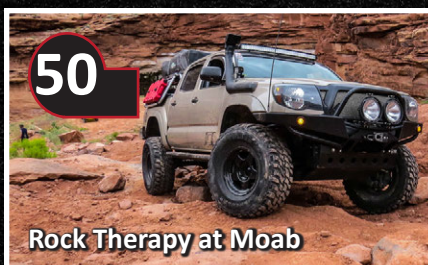
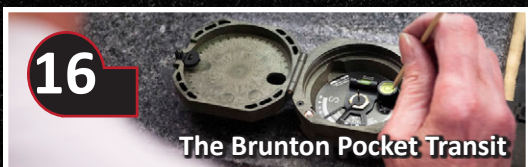
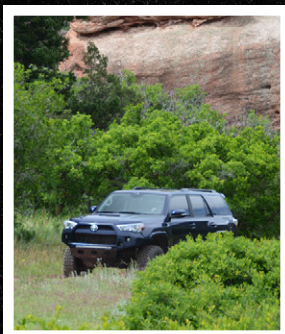
TCT MAGAZINE



JULY 2015 • VOLUME 8 • ISSUE 3

On The Cover:
The Toytec Lifts
SEMA 4Runner
explores dirt
tracks near
Perry Park, CO

photo by Shane
Williams



Cheap Tricks 4

Framed 40

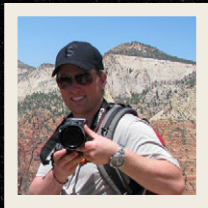
EDITORIAL STAFF



Shane Williams | Publisher
2015 TCT Explorer Tundra
2014 4Runner
Colorado Springs, CO



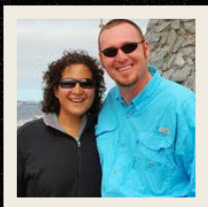
Jim Akers
2016 Tacoma on Order
Colorado Springs, CO



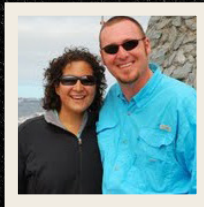
Bob Holliday
2006 Tacoma TRD
2007 FJ Cruiser TRD SE
Denver, CO



Jonathan Harris
2005 100 Series Land Cruiser
Grand Junction, CO



Krista Johnston
1998 4Runner | 1969 FJ-40
Casper, WY



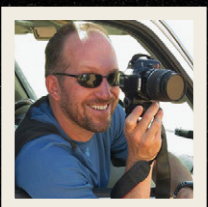
Beau Johnston | Editor In Chief
1998 4Runner | 1969 FJ-40
Casper, WY



Phillip Jones
2007 4Runner | 2006 Tacoma TRD
Frisco, TX



Dennis Lloyd
2010 FJ Cruiser
Irvine, CA



Daniel Markofsky
1993 80 Series Land Cruiser
Denver, CO



FROM THE PUBLISHER

FLASH! There goes another 3 months!

I can't believe we're already publishing the July issue, and summer is already half over. Next week many of us will descend upon Ouray, Colorado for the 9th Annual FJ Summit, and our team is already planning for our whirlwind fall schedule.

It's going to be a great second half of 2015, that's for sure!

By now I hope you know that we've selected Beau Johnston as our new Editor in Chief, you'll hear much more from Beau in the coming weeks, months, and hopefully years. He's an outstanding member of the outdoor and overland communities, and will most definitely take Toyota Cruisers & Trucks to the next level!

I quickly want to send out a PSA to those looking to purchase items or services from the many vendors out there in off-road, overland, 4x4 land. It's important to know who you're purchasing from and their reputation in the industry. We've all had orders take too long to arrive, and many times its worth the wait. Other times the product is not what was promised, delivery times are continually slipped, or customer service leaves much to be desired.

Due to the nature of our magazine we don't normally cover customer service, order wait times, or delivery expectations since those items all can (and do) change frequently. Like many of you, we rely on feedback through forums and social networks, and reviews on various online shopping websites to make informed decisions. The point is before you fork out your hard earned cash, make sure you understand all the variables to help ensure your product is delivered as expected and you get the customer service you deserve.

Until next time, Tread Lightly, Stay the Trail, and HAVE FUN!

Shane



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www.tctmagazine.net

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Statement of Ownership

Number of issues published annually: Five
Annual in-app subscription price: \$9.99 in U.S.A.
Location of known office of publication:
7248 Midnight Rose Dr, Colorado Springs, CO 80923
Owner: Zaxyn Media, LLC 7248
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TOYOTA RACING DEVELOPMENT
TRD

Cheap Tricks

FJ Cruiser Hood Light Install

By Dennis Lloyd



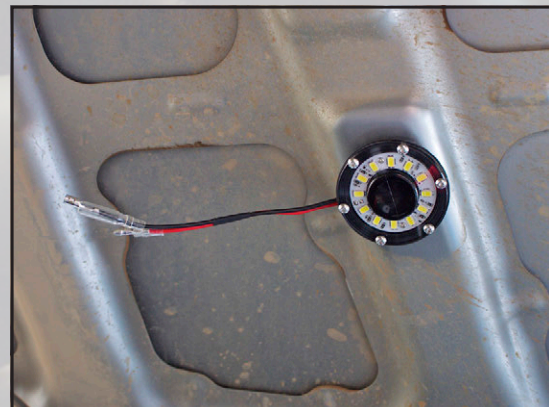
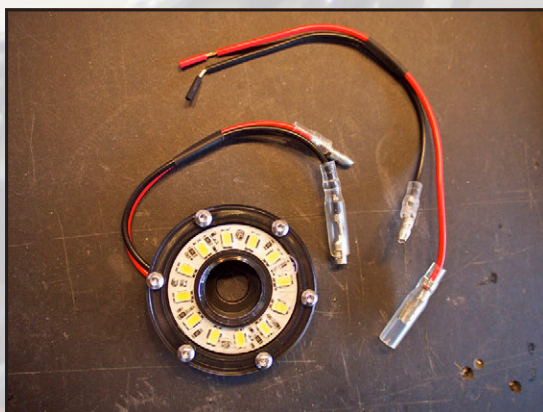
Ever been out on a trail in the dark with your hood open and can't see a darn thing? Well, we have. It's time to install a set of LED lights. We wish we'd have done this mod a lot sooner.

We're doing a simple install with a set of KC-Hilites Cyclone LEDs rated at 400 lumens each. The switch we're using is a waterproof push button instead of a pressure switch. We don't need the light coming on every time we open the hood. The brand is Trail Tech and is found on Amazon.com.

The FJ has several holes available in the structure on the underside of the hood. Use two of these existing holes to mount the Cyclone LEDs. Don't mount the LEDs too high or too low on the hood, because the angle at which the light will be mounted won't illuminate the engine area as effectively. There's a set of holes on the left and right of the hood, midpoint between top and bottom that work the best. We found that generic, push type panel clips with barbs on the post fit the holes.



The Cyclone lights have a hole in the center for various mounting applications. We cut a 1-inch piece of 3M VHB double-sided tape, placed it on the back side of the light and cut two slits forming an X over the light's hole for the panel clip post to poke through. The panel clips hold the lights tight and the VHB tape added another layer of mounting security.





We covered both butt connectors in shrink tubing, routed the wires straight down, then turned them toward the driver's side hood hinge leaving enough slack to allow for the hood to be opened and closed. At the battery we have a Blue Sea SafetyHub 150 installed on top of the factory fuse box to which all our accessories are connected. We crimped a ring terminal to the end of the wire, covered it in shrink tube and screwed it to an available terminal on the SafetyHub. We installed a 15 amp ATC fuse, but a 10 amp fuse is plenty.

The next step is to wire the lights to the battery. Each light comes with a set of pigtails with bullet terminals attached. We extended the pigtails with 16 gauge silicone wire. As you can see by the photo the lights are connected in a T-shaped harness.

With the lights mounted to the hood we measured to see how much wire we needed to wire both lights together to form the top of the T. We then added a couple of inches to the measurement for some slack. We added butt connectors to the stripped ends of each set of pigtails, connected each butt connector with the measured length of 16 gauge wire and used shrink tubing on the connections. We found the center of the wires and cut them in half. Now we have four cut wires, two positive and two negative. We twisted both positive wires together and crimped on a butt connector. We did the same for the negative wires. Now we have two butt connectors, one positive wire and one negative wire to which we crimp on a length of 16 gauge wire to run to the battery.

The simple on/off switch will be connected inline with the negative wire coming from the lights. We drilled about a 3/8-inch hole in the front reinforcement beam near the driver's turn signal to mount the switch. The switch comes with two stripped wire pigtails. We butt connected and shrink tubed the negative wire from the lights to one of the pigtails. The other pigtail we butt connected, shrink tubed and added 16 gauge wire to reach the SafetyHub. We crimped on a ring terminal, wrapped it in shrink tube and screwed it to an available negative terminal on the SafetyHub.



We pressed the switch and now have 800 lumens of light shining down into the dark engine bay. We tidied up all the wiring by covering it in split loom, zip ties and adhesive backed zip tie mounting tabs to secure the split loom on the hood. Enjoy your new hood lights! 🇺🇸



NMBR

Ghost Divide Expedition

Photos and Story by Phillip Jones

Traveling through New Mexico and Arizona typically involves pounding pavement across I-40, or further south on I-10. These two interstates are like the chocolate sections of an Oreo cookie. While those routes offer scenic views, they are not as tasty as the creamy middle. Jake Quiñones wants you to experience the territories that exist between these two interstates by following in his tire tracks on roads less traveled and void of pavement. Jake operates a 4WD guide service called New Mexico Backroads (NMBR), offering a variety of overland/expedition-based trips each season. While New Mexico is his home and the namesake of his business, his trips are inclusive of the surrounding states. Jake is an expert guide with an immense amount of knowledge about the areas he covers.



New Mexico Backroads guide Jake Quiñones goes over the route for the day.

I followed Jake on his *Ghost Divide Expedition* through the Oreo filling sections of New Mexico and Arizona en route to Overland Expo West. Each year, Jake offers trips to and from Overland Expo via 300+ miles of backroads through scenic wilderness. The historical value of New Mexico is easy to take for granted unless you have someone in your midst who can reveal details of what occurred where. I feel privileged to have gained exposure to significant pieces of American Native history while traveling with Jake. What details exactly? Revealing the answer in literary form simply won't do it justice. I recommend taking an expedition with Jake so you can truly experience the answer.





The five day expedition took us through the Gila National Forest where the southern Rocky Mountains end and the northern Sierra Madre Mountains of Mexico begin. We brushed up against the Chihuahuan and Sonoran deserts, as well as the Colorado Plateau, and we followed the Mogollon Rim into Apache-Sitgreaves National Forest. Our elevation spanned from 5,351 ft to 9,563 ft. The four evenings of camping all occurred above 7,000 ft, ensuring chilly conditions.





Once we left our starting point, the first 178 miles did not take us by any trendy coffee shops, fast food outlets, or fuel sources. Social media apps stalled as our phones lost connectivity, which is why Jake carries a satellite communications mechanism, as well as a host of other equipment, for emergencies. Yes, we really were in the remote backcountry.



Pulling a trailer over rugged, high altitude hilly terrain with a 4,000 ft elevation climb while my truck's air filter collected dust nearly every

mile meant my 21 gallon tank was not going to get me to the fuel source in Reserve, NM. I brought an extra 13 gallons, five of which I actually used. I also packed in extra food and water. If only I had packed an extra blanket, I could have better endured the few nights where temperatures dipped well below freezing.



These preparations were not a surprise. Jake advised us in advance with detailed e-mails communicating what provisions were necessary. Yes, he mentioned cold temperatures. I underestimated the warmth abilities of my mummy bag and rooftop tent. Or maybe I've reached that tier in the aging process where tolerance for cold is on the decline. From the multiple e-mails, it was clear that Jake is organized, thorough, and speaking from years of experience.





Vincent Bouchard fixes dinner behind his expedition-modified Ford Raptor.

I took to heart the information I gleaned from his e-mails. Privacy tent ... check. Camping toilet and human waste bags ... check. Shower system ... check. Tools and spare vehicle parts ... check. Vehicle inspection ... check. This last one was costly. My mechanic found my UCAs were not



About New Mexico Backroads



Jake Quiñones is founder and owner of New Mexico Backroads. NMBR provides professional backcountry guiding, scouting, skills training and photography services to a host of individuals, companies and government agencies. In the time leading up to the NMBR's guided 4WD based adventures, participants will be provided with helpful information on how to prepare and what to expect. An extensive list of essential and recommended supplies/equipment/gear is provided, accompanied with advice, tips, and tricks. The self sufficient aspect of NMBR guided 4WD based adventures challenges and prepares participants for their future 4WD based endeavors—to go boldly, prepared, and with confidence. Visit the NMBR website to learn more about upcoming 4WD based adventures.

Website: <http://www.newmexicobackroads.com>

Facebook: <https://www.facebook.com/NewMexicoBackroads>

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installed correctly, my inner tie-rods were worn, and my exhaust was coming apart. The UCA fix and inner tie-rod replacements cured the steering wheel vibration feedback—something that never registered with me as a symptom of underlying issues.



Jim McCoy uses onboard air to mix margaritas.

Our group met in Truth or Consequences, NM on Sunday at high noon. From there, ten 4x4 trucks, outfitted for expedition travel, followed Jake's well-built AEV equipped Jeep JKUR. Among the trucks were a 1983 Toyota HJ47 diesel and a 1984 Land Rover Defender 90 diesel. Both right-hand drive trucks were imported. Also on the trip was a modified Ford Raptor driven all the way from Canada and a Dodge Ram with a Four Wheel Camper.



The remaining five rigs were Jeep JKs. Three of us were pulling trailers. Two of the trailers were built by modern manufacturers of outdoor trailers: a Turtleback and my XVenture XV-1. The other trailer was rather interesting: a former military cargo trailer made of aluminum and equipped with multiple access points. This was a hydraulic tool and repair trailer based on an M-101 chassis. Pat turned it into an ideal expedition trailer.



Pat Bowen poses next to his 1960's aluminum military trailer.

Each evening, we arrived at our campsites with plenty of time to set up, cook supper, and socialize. My fellow adventurers hailed from Chicago,

Florida, French-speaking Canada, Arkansas, Arizona, Colorado, and Texas. The personalities of the various participants blended well and comradery was achieved quickly. By the end of the trip, there were numerous running jokes, frequent sarcasm, and lots of laughter. Never a dull moment with this group.

After five days of driving across diverse terrain, rarely seeing other vehicles, and limited exposure to civilization, I can say there is something existential, yet therapeutic, about taking in what nature has to offer in the great Southwest. When we rolled into Overland Expo, I was excited about seeing the various rigs and meeting the vendors. Yet, I was still clinging to that wonderful adventurous high that had carried me for the past five days. I was unwilling to accept that our trip had concluded. The *Ghost Divide Expedition* had affected me. The longing to return to the natural beauty off the beaten path is why I am certain this will not be my last trip with New Mexico Backroads. Hopefully you can join me on one of Jake's trips in the future. 🇺🇸

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The Toytec SEMA 4Runner

By Shane Williams



You probably saw a few photos of this very nicely built 5th Gen 4Runner from our SEMA 2014 coverage last year. Toyota was kind enough to place this truck in their outdoor featured vehicles area and it was very well covered.



Early this year, about the same time we were planning our TCT Explorer Tundra Build, Angie and I started talking about our Family Hauler, the 2007 GX 470. With its V8 engine and plenty of room, the GX served us well for the two years we had her. However, every time we took her into the dirt we just weren't sure she was a good fit. That feeling, combined with our fond memories of the TRD FJC, had us both thinking of something a little more suitable for exploration needs.

I remembered Doug (owner of Toytec Lifts) mentioning that he may sell the SEMA 4Runner in order to make room for a 2016 Tacoma when they become available in a couple of months. I told Angie I may know of a well-built 5th Gen 4Runner for sale and showed her some of our SEMA photos. The conversation lasted about 5 minutes:

Shane: Here's Dougs 4Runner, not sure what the details are but it's a great truck with several custom features.



Angie: I want it.

Shane: Ok, let me get in touch with Doug and see if it's still for sale.

Angie: Great, tell him we'll come get it next week.

Shane: I heard back from Doug, he does want to sell it, and is willing to keep the price reasonable since he knows she'll be very well taken care of.

Angie: Can we go get it now?

Shane: No, we need to figure out financing and make arrangements.

Angie: Excellent, let me know when I can go get it.

If you haven't met my better half yet, she's very much as passionate about great trucks (and fast cars) as I am, so when she's excited about a new vehicle, there's no stopping her. That's reason number 89 why I married her. ☺

Not less than 10 days later, the 4Runner joined our CrewMax Tundra in the garage. Our stable is now full and ready for the next round of adventure!



This truck has already been out and about exploring Colorado this year, as you may have seen via our social networks: Facebook, Instagram, and Twitter. Last weekend we headed to the hills just north of Colorado Springs to get a few shots near the red rocks. We even found a little mud. ☺





In a few weeks we'll attend our 9th FJ Summit, but it will be the first without an FJ Cruiser. The truth is that the last two years we didn't really use the FJ while at the Summit, so while it will be a major change, the 4Runner really is a perfect fit. We're very excited to get her on the trails this summer! ❤️

For those wondering, here's a rundown of how Doug and the Toytec Lifts team built this amazing truck:

Suspension, Wheels, Tires

- Toytec Boss suspension
- Signature series rear full link package
- Pro Comp 17x8 wheels with 285/70/17 Pro Comp Xtreme MT-2 tires

Armor

- Custom color matched aluminum front and rear bumpers by InSain Fab
- Bolt on rock sliders by InSain Fab

Lighting

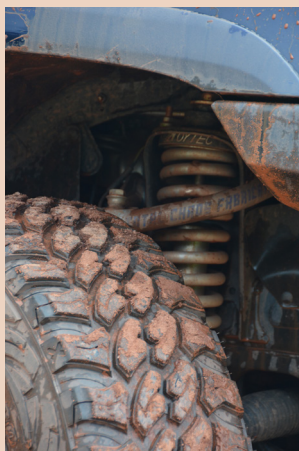
- 30" Rigid single row light bar.
- Rigid Dually Hyper spot cubes
- Rigid Dually Flood cubes
- HID high and low beam upgrade

Other

- Borla cat back exhaust
- WeatherTech floor liners
- Custom carbon fiber accents on roof rack rails, mirrors, and door pillars

Future

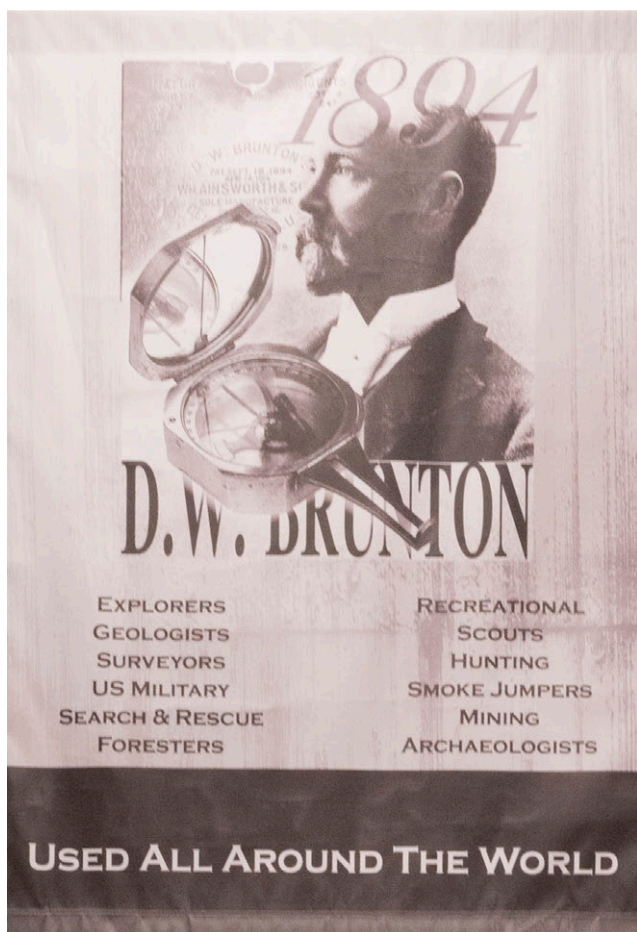
- Aluminum skid plates
- Roof rack upgrades
- Yaesu FTM-400DR APRS Dual Band Ham Radio



Building a Legend

A visit to Brunton's Riverton, Wyoming manufacturing facility

Photos and text by Beau Johnston



In 1894 David W. Brunton, a geologist working in Colorado, revolutionized modern navigation with the introduction of the Pocket Transit. Geologists and engineers of the time routinely carried around survey transits and compasses, tripods, clinometers, and plane tables while developing exploratory mineral maps. Originally manufactured for Mr. Brunton by Wm. Ainsworth & Sons, the Brunton Pocket Transit successfully combined the ability to measure compass bearings, horizontal and vertical angles, and obtain clinometer readings into an "instrument sufficiently small and light to be carried in a vest pocket."¹ The Pocket Transit virtually eliminated the need for tripods, or an assistant, to sight and read the bearing of distant objects and was built strong enough to remain accurate in the most demanding of professions.

Fast-forward to 2015 and D.W. Brunton's legendary Pocket Transit continues to be relied upon by geologists, engineers, and the United States Military; often holding a special place in the hearts of those who rely upon it for day-to-day navigation and mapping. While the materials and manufacturing technology continue to improve and functions are added, the overall

design remains the same as those early units. Each Pocket Transit is made, by hand, in the small town of Riverton, Wyoming and that is where I was able to meet the talented men and women whose job it is to continue the tradition of designing and building this legendary equipment.



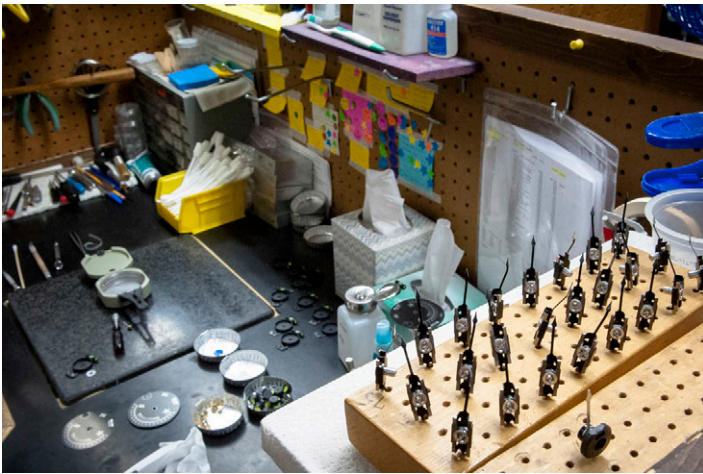
Employees hard at work.

¹ Specification forming part of Letters Patent No. 526,021, dated September 18, 1894

I have spent a lot of time working in, and building, large manufacturing facilities. The hiss of steam lines venting and the clanking of equipment often feels orchestrated, as if the production lines are conducting a concert. This was not the case at Brunton; the quiet, almost Zen-like, sound of the employees assembling Pocket Transits and compasses was faint. The building was not void of sound, the machine shop was cranking out components and the sonic welder was humming, but it felt like the production area was more focused. At times I was afraid the sound of my camera shutter might disrupt their focus.



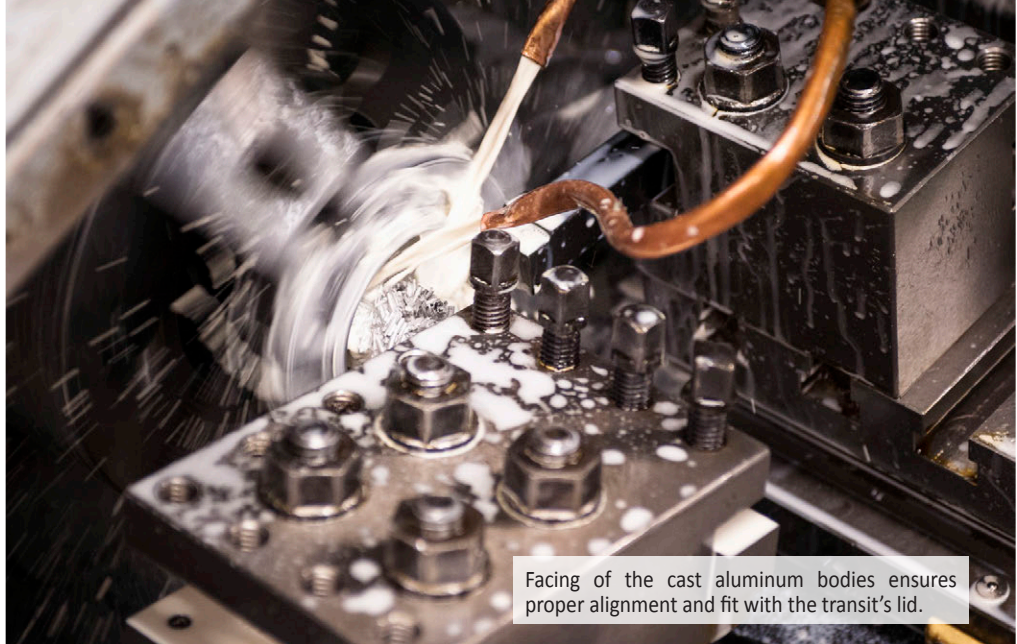
Today's Pocket Transits contain a myriad of small components, all interlocked to provide accurate navigation and measurement. Each unit is carefully checked, after each component is installed, to ensure proper function. A unit is not given the greenlight to move onto the next step until it meets these quality requirements. Bodies and components that do not make the grade are recycled to prevent poor-quality components from making it into the field.



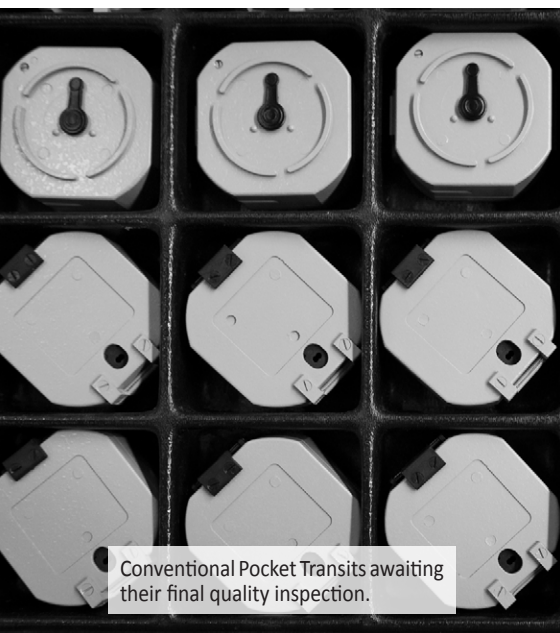
Conventional Pocket Transit lids ready for final machining and the installation of their hinge.



Modern transit bodies are available in both aluminum and composite, depending on the model, with the aluminum bodies cast at a foundry in Colorado and the composite bodies molded in Wyoming. Keeping the entire manufacturing processes



Facing of the cast aluminum bodies ensures proper alignment and fit with the transit's lid.



Conventional Pocket Transits awaiting their final quality inspection.

state-side allows Brunton maintain its commitment to quality and ensure their products meet the daily rigors of the end user. While many companies are looking to send production overseas, Brunton now assembles all of its navigation products at their Riverton facility.



Brunton only entrusts the repairs of their Pocket Transits to one person. Mrs. Betty has been making, and repairing, these measurement instruments since 1975.



Proper installation of the Pocket Transit's bubble level ensures accurate measurements in the field.



The employees demonstrate a real sense of pride in their work and the equipment they manufacture. They understand the Pocket Transit once revolutionized how the world was explored and mapped. I believe that, by continuing their tradition of innovative design, Brunton has secured the Pocket Transit as a valuable tool for generations to come. ❤️

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2015 Overland Expo West

By Beau Johnston

Photography by Beau Johnston, Phillip Jones, Bob Holliday

To paraphrase Charles Dickens, “It was the best of times, it was the worst of times, it was a weekend of sunshine, it was a weekend of rain (a lot of rain, oh and there was the snow too!).” Despite the less than desirable weather, the Overland Expo team pulled off an amazing event. I think the weather actually brought everyone closer together. In fact, I don’t remember seeing anyone angry or frustrated due to the weather. I do remember seeing a lot of smiling faces, and I am positive I was grinning from ear to ear the entire weekend. This weather helped me, at least, slow down and really take my time to talk to the instructors, vendors, and attendees.

What can be said about Overland Expo that has not already been said? This year marked my fourth time attending the event at Mormon Lake and, while I was not able to teach this year, I enjoyed every moment of the event—yes even the weather. There are few events that are greater than the sum of their parts, and Overland Expo is one of them! The event has become more than the amazing classes (I might be biased but they bring in some amazing instructors) and vendors. Like many others, Overland Expo has become an annual reunion of the overland community. Work schedules and geography often keep us from seeing our friends throughout the year, but we try to make time for Overland Expo.

It is not the place that is important, although Mormon Lake Lodge is a great venue, it really

is about the people. The event gives me a chance to share a meal with folks I would consider some of my closest friends. Few events I am privileged with attending offer this sense of community. I look up to a lot of the attendees, vendors, and Overland Expo team; spending time with them helps keep me focused on what is important in life and why I am passionate about travel, seeing new places, and meeting new people.

You owe it to yourself to attend Overland Expo at least once in your life. I must warn you if you do attend, it may result in an increased desire to travel, see new places, and meet new people. But that’s okay! You can count on me being at the 2016 Overland Expo West, so maybe you should too. I would love to grab a beer with you and “talk shop” about travel! 🍷

Toyota was well represented by a variety of domestic and international trucks. The current model 4Runner is gaining in popularity for those seeking an ideal expedition rig.



Attendees participating in the Recovery Course were given the opportunity to use their own vehicles.



All-Pro Booth.





Expedition Overland debuted their latest series at Overland Expo and we cannot wait for it to come out!



Overland Expo attracts a diverse spectrum of travel vehicles.



FZJ80, that is all I have to say!



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Free Membership!



ARB Tacoma new look.



Jürgen, our new German Land Cruiser friend, talking to Tyler and Joel about the finer points of owning a HZJ78 that has traveled the globe.



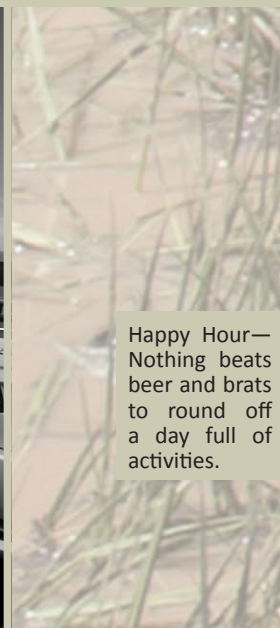
Overland Expo is a great place to bring the whole family. Lots of activities and classes are geared toward getting the entire family into the back country.



American Adventure.



Overland Expo offers great roundtable discussions on everything from border crossings to travel wellness.



Happy Hour—Nothing beats beer and brats to round off a day full of activities.



Learning from the experts—attendees take time to listen as vendors showcased the latest technology for adventure travel



Total Chaos Race Truck.



So much want.



BFG Booth.



Hema Cruiser Display.

CVT Booth.



XO discussions.



IBS DBS

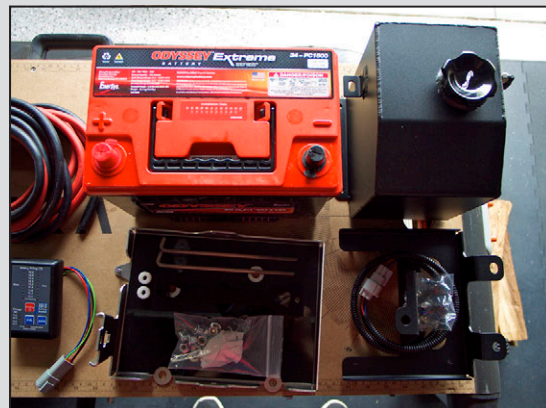
Dual Battery System Install

By Dennis Lloyd

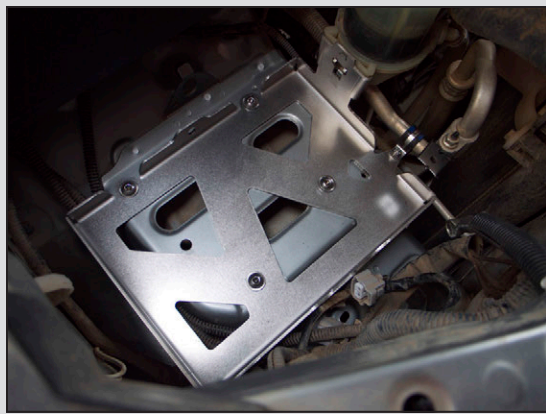
There are many dual battery systems available. Some of the more famous kits being National Luna, Dirty Parts and Painless Wiring. You can easily build your own system as well using solenoids and isolators. The IBS (Intelligent Battery System) DBS system is a relatively new system available in the states for the past several years. It was created by Swiss, Beat Wyss after having suffered two dead batteries while traveling in Australia's Great Victorian Desert with his 60 Series Land Cruiser. IBS has created and made Intelligent Battery Systems for over 15 years in Switzerland. We chose the IBS DBS system due to its proven solid state design and if the starter battery dies or discharges to 10v or below we can self jump from the auxiliary battery with the optional RBM (Relay Booster Module) module. Our kit came from ExtemeOutback.com, the US distributor for IBS Switzerland.



I replaced the factory battery about two years ago with a Die Hard Platinum 31m marine battery. All my accessories are connected to the Die Hard. I will be installing a new Odyssey 34-PCT1500T as my new secondary battery. I didn't want to move all the accessory wiring to the secondary battery location so I decided to reroute the factory power and negative wires to the new battery and make it my starter battery. I rerouted my winch wires to the new battery location on the passenger side since the IBS DBS system wants the winch to be running off the starter battery and alternator.



The FJ has a secondary reinforced battery shelf on the passenger side front corner. This is where right hand drive FJs mount their factory batteries and it's also where we'll be mounting an Odyssey 34-PCT1500T battery. I needed to source a battery tray that would relocate my power steering fluid reservoir and AC line. I also needed to replace my Expedition One windshield washer bottle with one that would fit on the passenger side fender near the firewall. About a year ago ShrockWorks developed a built-like-a-tank windshield washer bottle for 2010 plus FJs and soon followed up with a secondary battery tray that relocated the power steering and AC line. The washer bottled is a tig welded aluminum box and the battery tray is made of heavy gauge stainless steel. These would become the perfect compliments to a neat and clean dual battery install.



about a gallon of fluid and comes with a new wiring harness to extend the washer bottle to the rear of the engine bay.



The ShrockWorks battery tray was a simple install. I'm not going to go into details, but clear instructions with photos are provided. Remove the factory power steering reservoir mounting bracket, unclip the reservoir and unscrew the AC line. Once those are free, mount the battery tray using the four provided bolts. Install the power steering reservoir into the new mount on the battery tray and install the AC line into the provided rubber clamp. The tray is ready for the new Odyssey battery and the factory items have been relocated. Like the battery tray, the Shrockworks windshield washer bottle is a straight forward install. It provides



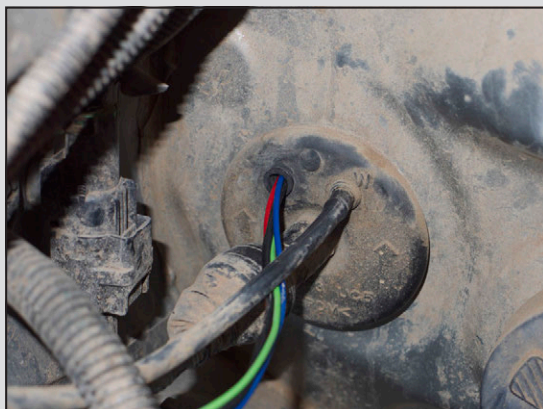
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Now we're ready to install the IBS dual battery system with the optional RBM. The IBS system is a complete kit which includes the IBS-DBS monitor, 500-amp-capable/12-volt relay, 4 gauge cables, terminal lugs, 4-wire harness, and terminals for connecting the small gauge control wires to the batteries. We opted to upgrade the 4-gauge cables to heavier 2-gauge welding cable, because it's recommended for better performance. The IBS control wires will be routed through the large factory grommet on the passenger side of the firewall, inside the engine bay.



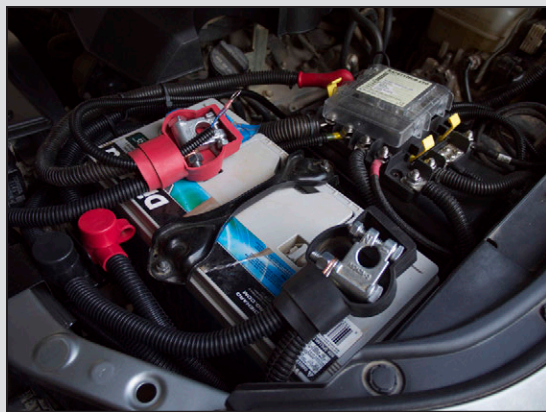
You'll see a small rubber nub on the top left of the grommet. Cut off the nub and fish your IBS control wires through it from inside the FJ. You could do this with fish tape or a metal coat hanger. Here's how we did it. We used a long piece of leftover 10-gauge wire and fished it through the hole in the grommet from the engine bay and into the floorboard of the FJ. Don't pull it all the way through. Back in the FJ, we wrapped the four wire ends to the 10-gauge wire with electrical tape and pulled the wire bundle through from the engine bay. We didn't run our wires through the main factory grommet on the driver's side because our RAM mount for the IBS battery monitor is near the passenger side of the dash. More on mounting the battery monitor when we finish the wiring.

Note that throughout the wiring portion of this install I've used marine grade heat shrink tubing with adhesive on all crimped terminal and lug connections. All the wires are covered with split loom tubing with zip ties on each end to hold the tubing in place on the wire.



To make for a clean install we made a custom L-shaped bracket out of sheet metal, painted it black then screwed the IBS relay and the RBM booster module to it. We drilled a hole in the bottom of the bracket, slid the j hook through the hole and the battery hold down, and tightened the nut to secure the bracket, hold down and the battery together. Since the IBS relay and the RBM booster are now next to each other and close to the battery we can make easy wire connections.





Since we are installing the optional RBM booster module we will be following the wiring diagram provided in the instructions. Note that the RBM booster module instructions/wiring diagram supersede the IBS DBS instructions/wiring diagram. There are four wires that you need to connect coming from the wires we fished through the firewall. The black ground wire is connected to the negative post on the starter battery and the red power wire is connected to the positive post on the starter battery. The green wire is connected to the IBS relay at terminal 86 and the blue wire is connected to the positive post on the auxiliary battery.



The RBM booster module has four wires that need to be connected to the IBS relay. The red wire is connected to terminal 87 on the IBS relay. The yellow wire connects to terminal 85 on the IBS relay. The blue wire connects to terminal 30 on the IBS relay. The green wire connects to terminal 86 on the IBS relay. You can connect the remaining black ground wire to the sheet metal with a self tapping screw or connect it to the negative post on the starter battery.

The final wire connections will be to take the 2-gauge welding cable and connect the positive post on the starter battery to the positive post of the auxiliary battery. Do the same by connecting a length of 2-gauge welding cable

to the negative posts on each battery. Now all your wiring connections are complete.



It's time to connect the IBS battery monitor in the FJ to the wire bundle fished through the firewall via the Deutsche connector. We repurposed an extra RAM X-Grip to mount the IBS battery monitor inside the FJ. Our FJ has a seat bolt mounted RAM telescoping pole from which several accessories are mounted including the iPad, HAM radio control head and now the IBS battery monitor.

The IBS system works as advertised. When you start the engine, the batteries are linked and the monitor will display the voltage for each battery and the charging volt (13.0, 13.5, 14.0 or 14.5). When the engine is off the batteries are unlinked and isolated. You can use the battery monitor to check the voltage for each battery at any time by pressing the display button. When you need to link both batteries and use your winch, turn your engine on and manually link the batteries for 30 or 120 minute intervals by pressing the link button once for 30 minutes or twice for 120 minutes. This allows the batteries to share the load and reduce the stress on your alternator. In addition to LED indicators on the battery monitor there are also audible alarms to indicate low battery voltage and link failure. If you want to use a solar panel to charge your batteries connect it to the auxiliary battery and the IBS will automatically link and charge both batteries.

We field tested all the above mentioned features including charging the system with our 100 watt solar panel while attending Overland Expo West 2015. The IBS system worked as advertised. Since its a solid state, smart system we have no qualms about its quality and can recommend it without hesitation.

Sources: ExtremeOutback.com | Shrock-Works.com

All-Pro's Timbren Bumpstop Kit

By Bob Holliday



All-Pro has paired up their U-bolt flip kit for the 2005+ Tacoma with Timbren's Suspension Enhancement System

to create the ultimate bumpstop upgrade. Ok, well ultimate is debatable, but after years of trying out numerous bump stop systems in my 2006 Tacoma, I am very pleased with the ride and support that this system provides.



The All-Pro u-bolt flip kit comes with heavy duty u-bolts, hardened u-bolt nuts and washers along with a heavy-duty plate. The concept of a u-bolt flip kit is simple: 1) moves the u-bolt nuts above the axle and out of harm's way and 2) removes the factory plate that hangs down from the axle and creates a smooth surface for rocks to slide upon. As an off-roader, you should always be aware of where your differential hangs down to avoid costly damage due to an unwanted hit which could leave you stranded in the middle of nowhere. To avoid the differential, large rocks are preferred to pass on either side of the pumpkin and unfortunately, we aren't always able to get rubber on the obstacle forcing it to slide under the axle. With the factory u-bolt plate, rocks and other obstacles can easily get hung up, causing you to stop, stack rocks or change your line. Getting that plate up over the axle is an easy way to prevent this from happening.



If you're like me, you tend to carry a lot of weight in your bed while heading out for long weekends or longer excursions. And if you're like me, you like to keep your center of gravity as low as possible. My current setup is utilizing a 2-inch leaf pack from Toytec Lifts on a shackle flip from ATO, creating approximately 2.75 inches total rear lift. This setup works great for off-road suspension travel, but when I'm loaded up, I am very limited on my uptravel on and off road. This was very noticeable when hitting unexpected washouts or rocks on the trail while traversing the backcountry. Every hit I was worried about damage to my

suspension and my frame. That was until installing the All-Pro Timbren Flip Kit. Timbren was an excellent answer for my setup where I will routinely carry extra weight in my bed. Loaded up with a bed rack, roof top tent, fridge/cooler, high clearance bumper with swing arm and various other camping gear, having extra support in my suspension was a much needed upgrade. That's where Timbren's SES upgrade excels. From unexpected washes to giving an obstacle a "Moab bump," the Timbrens have provided a consistent cushion for the truck frame and suspension components, which I appreciate for the sake of my back.



Installation of the kit can be done in less than an hour with some basic mechanics tools and a vehicle jack. The use of jack stands is recommended while the tire is off during the installation.



The hardest part of the installation actually is getting the old u-bolts off. Depending on the last time you had your u-bolts taken off, they can be quite stubborn. In this demonstration, a previous u-bolt kit was installed with a custom bump setup. The factory u-bolt system has the nuts under the axle and once removed, the u-bolt plate will drop out.



The factory u-bolts use the factory bumpstop for holding onto the leaf spring's centering pin. When doing a u-bolt flip, the flip plate will have a hole cut out to accept the leaf spring centering pin. After removing the factory setup, clean the leaf spring near the centering pin and lay the new plate on.



With the plate on the leaf springs and the centering pin in place, slide the u-bolts up from the bottom with the rounded portion of the bolt securing the axle housing in place. Drop a washer and nut on each of the bolt ends and loosely tighten them down. A tip on the tightening steps, go ahead and lay the Timbren bump setup on the plate and make sure the washer does not shift over causing the Timbren mount to not sit flush. When tightening the nuts down, the washers have a tendency to rotate/shift over.



Go ahead and tighten down the u-bolts in a criss-cross pattern to allow the bolts to seat properly. Tighten down the u-bolts to 85-90 ft lbs and remember to re-torque the bolts after a few hundred miles of driving.



Hang in there, you're almost ready for the trails. Using the supplied bolts, attach the Timbren bump stop mount to the All-Pro flip plate.



Time to lower your rig back on its own feet and get some dirt on the new setup!



For more information about the All-Pro Timbren bumpstop kit, visit All-Pro's website <https://www.allprooffroad.com/05tacomarearsuspension/05flipkit>

For more information about Timbren and their long line of suspension enhancers, stop over to their website, <http://timbren.com/>

'83 HJ47 Land Cruiser

Story and Photos by Phillip Jones



Carter Beckworth poses with his HJ47.

Texas resident Carter Beckworth rolled into Truth or Consequences, NM in a vehicle that looked ready to go on safari on another continent. He arrived to join the Ghost Divide Expedition entourage headed to Overland Expo. His Land Cruiser immediately attracted attention due to its rarity: a 1983 Aussie spec HJ47 powered by a 4.0 naturally aspirated 2H diesel.



In action on the Ghost Divide Expedition trail.

Beckworth acquired the HJ from Australia via the import services provided by AUStoUSA.com. He attempted to locate an internationally-sourced Cruiser on his own, but ran into numerous hurdles. It was on IH8MUD.com that he learned about Phil of AUStoUSA.com. Phil helped Beckworth evaluate multiple trucks before finding the right one. The importer handled everything and had it shipped to Texas in late 2013.

When the truck arrived, Beckworth had parts waiting. AUStoUSA had supplied numerous photos, giving Beckworth a good idea of what he was dealing with. He ordered parts from CCOT, e.g. door panels and body repair panels (both rear corners were rotten). He turned to Specter to obtain upholstery and non-US parts.

Next up was repacking and resealing the axles, pulling differentials and installing an Aussie rear locker. Beyond that, everything was in great shape. The engine looked like it had a lot of new parts, which was the result of some work done by the previous owner. The refreshed engine had only 15,000 KM.

For suspension, Beckworth added HFS shocks from CCOT and OME Springs (heavy rear and medium in front). He converted to a 100 amp Isuzu NPR alternator for more juice, thus allowing the truck to run a T-Max dual battery system.

The HJ is outfitted with a homemade swing out tire carrier and rear bumper, which includes a telescoping floodlight. Also homemade are the rock sliders, roof rack, back-up light bracket, and a mount to haul the Hi-Lift jack he has been using since his teens. While the roof rack is sturdy, it is also quite heavy and not usually on the truck. The plan is to replace it with a lighter and lower rack. For the back-up light bracket, he figured out a way to attach a single Nordic LED spotlight to a bracket that fits perfect on the factory license plate holder between the little plate lights.



The owner fabricated a sturdy roof rack and a rear lighting mount.

He added an auxiliary FJ40 fuel tank from Marks Off-road, and wired it in to transfer fuel to the main tank, providing more than 500 miles of range when combined with the main tank. Beckworth's favorite homegrown gadget is his lantern hanger made from an old hinge and some all thread. Attaches anywhere on the roof, and with the lantern filled with citronella oil, it provides pleasant light and keeps mosquitos away.



The decades-old Hi-Lift jack is attached with homemade mounting brackets.

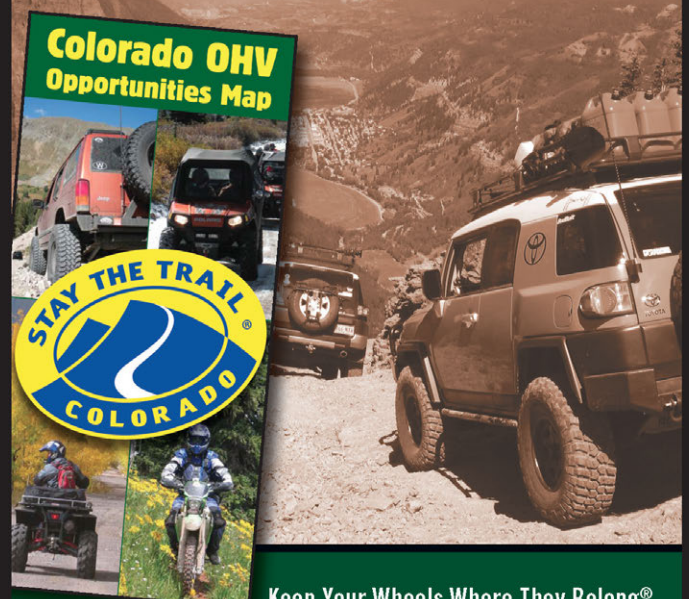


The oil lantern is held by a homemade hanger mechanism that attaches to the roof.



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His first big trip with the HJ was in the summer of 2014. "I traveled from El Paso to Socorro, NM following the Camino Real route, finding important Parajes (camps) and locations and traces of the route of America's early overlanders. I then cut west, exploring the Sawtooth range and areas around Magdalena and Pie Town, returning through the San Mateos and Black Range. In all, about 400 off-road miles. It was a neat solo trip and I would like to revisit it with friends. This is when the factory alternator gave up and the Isuzu alt and dual battery system came on the scene."

The HJ performed well on the 500 mile Ghost Divide trip, which comprised of a 5-day expedition over 300 miles of off-road trails. The HJ is used monthly for camping and will be used in the future on more long-distance expeditions. 🇺🇸



Beckworth compliments Toyota for the rugged ability of the HJ and his 60-series, which is driven primarily by his wife.



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f/9 1/400s 21mm





Standing on a Corner | Ann Sookswat



East of Lander, WY | Marc Mayer

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Photo by Ian Womack

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Rock Therapy Session in the Moab Desert

By Bob Holliday



What is Rock Therapy? It's a Moab adventure created by wheelers for wheelers. It's an outlet for many to get away and clear their minds. It's an excuse for many to take their rigs out in one of the best known off-road trail systems in the country. It's a gathering created to bring together crowds from all over North America and experience what Moab has to offer.



Navigating the River—Always a highlight on Kane Creek is the numerous water crossings along the way. (Photo credit Petra McKercher)

From blown third members and near-death rollovers to a 2016 Tacoma and sponsor dinners, there were many highlights that made this year's Rock Therapy one for the ages.

Toyota USA had brought out their 2016 Tacoma TRD Off-Road to show off while they had on-hand a lead engineer to go over the new design features and answer any questions the fellow Toyota enthusiasts had. The group photo this year was held again at Area BFE with the 2016 Tacoma as the special guest and to top everything off, during #TacomaTime, the attendees were treated to a taco dinner after the group lineup. Another new addition to Rock Therapy this year was a sponsor potluck dinner provided by Pelfreybilt, BAMF, All-Pro and Rebel on Saturday before the big giveaway that so many look forward to.



Weather held out wonderfully during #TacomaTime.

With ever growing number of gatherers, the need for continuing sponsor support was crucial in the success of Rock Therapy 2015. This year Rock Therapy had a great supporting cast including: Toytec Lifts, Pelfreybilt Off-Road,



Kokopelli group gathered at the CO/UT border.

Bay Area Metal Fabrication, All-Pro Off Road, Warrior Products, Rebel Offroad, Low Range Off Road, Cascadia Vehicle Tents, Area BFE, CBI Off Road, PrInSu Design Studio, Beer Snap, RORCK, GKC Armory, Brute Force Fab, Relentless Fabrication, Downsouth Motorsports, Addicted Offroad, InSain Fabrication, Emblem Art, RCI Metalworks, Toywerx, Anti-Dark, TCT Magazine, Stay the Trail Colorado, and last minute contributions from ADS Racing Shocks, Overland Empire, Frontrunner Outfitters, Goose Gear, ARB USA, Rigid Industries, Husky Liners and Rockford Fosgate.



After the sponsor dinner on Saturday night, the group gathered for the big send-off including many generous giveaways from the many sponsors who help make this weekend unforgettable.



Rock Therapy saw some distant attendees this year coming from all corners of the continent. There were trucks making the trip from the East Coast from Virginia all the way up to Maine. West Coast expanded its reach from SoCal all the way up the Pacific Coast to British Columbia this year, as well as many of the states in between the two big ponds.

From the children enjoying their youth to the adults who refuse to grow up, this melting pot of Toyota owners showed us once again why Rock Therapy is a one of a kind gathering built for all those who need to get away and clear their minds, or for those who need to feed their Moab addiction and wheel some of the best trails America has to offer...



Sometimes you have to get a bit creative parking for the group photos.



Big turnout for #TacomaTime with Toyota USA and their 2016 Tacoma TRD Offroad.



Until next year's Rock Therapy, keep the rubber side down and toasts held high!

If you have some photos from Rock Therapy 2015 that you would like featured on our social media outlets, use #TheToyotaMagazine and #RockTherapy2015, and you could be featured in an upcoming TCT Magazine issue!



Quiet lays over camp during the day as a sun shower passes overhead while the crowds are off playing



Brian putting his newly built rear bumper to the test crossing the gully heading into Kane Creek (Photo credit Petra McKercher).



With each rain storm, the rock hill on Kane Creek continues to change, giving a different challenge each trip up (Photo credit Petra McKercher).



Traveling from Virginia, many drivers were treated to a new variety of terrain to play on.



Sometimes the best way to keep a relationship strong is to spot for one another.



Sometimes in Moab, it's not that bad waiting in line for an obstacle with so many great views.



Phil taking the fun line up the stairs on Dome Plateau.



The Kokopelli group took a detour to explore some of the more unique features of Dome Plateau.



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Rock Therapy 2015
Group Photo





Kicking up dirt along the Kokopelli Trail.

One of the many benefits of the double overnight route into Moab.



With a deep history of ranching, areas along the Kokopelli trail are scattered with old ranching relics to explore.

As the sun began to rise, blue skies were a welcome sign.



With so many miles along to the Kokopelli to traverse, getting to camp early at Fish Ford was a relaxing time and allowed many to dry out their camping gear.



Yellowjacket Canyon is a fun optional canyon through Dome Plateau that the Kokopelli Trail traverses.



before go overlooked, but still offer some fun terrain to traverse.



The group along Yellowjacket Canyon.



The optional canyon past Top of the World along Kokopelli offers a surprise set of ledges to tackle after a long climb to keep the heart racing a bit while you climb high above the canyon floor.



With Rose Garden Hill grabbing all the attention in the latter portion of the Kokopelli, some of the sections

Tuesday night's highlight for the Kokopelli group was a trip on Top of the World



Top of the World offers a variety of mild challenges as you climb and descend numerous ledges to access the legendary views above



Not only did the atracyttendeeds get a dinner Friday night with Toyota, but everyone at Rock Therapy was treated with an additional dinner put on by Pelfreybilt, BAMF, All-Pro and Rebel. 🇺🇸



Prinsu AccessRac Installation

By Bob Holliday



Looking for a roof rack for your Toyota Tacoma, but limited on your options due to your Access Cab? Look no further, Zach Scott with Prinsu Design Studio offers his AccessRac option to not only solve your roof rack deficiency, but also includes an option for a recessed light bar, adjustable crossbars all in a lightweight aluminum package.

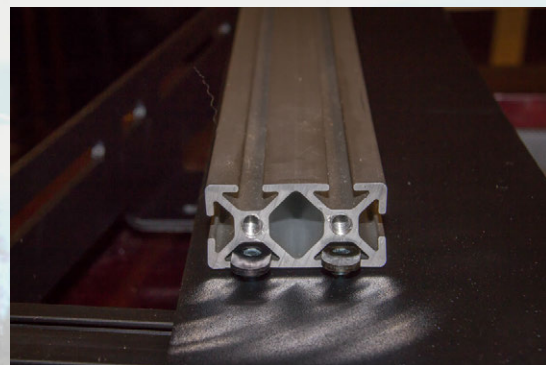
Prinsu is a small company in comparison to some of the other roof rack manufacturers, but what they lack in flashy packaging, they make up for in care and quality in designing and producing their products. The hardware was nicely labeled and packaged in separate zip-lock bags for the different components of the rack system, and the powdercoated aluminum rails were well wrapped to minimize chances for damage during transportation.



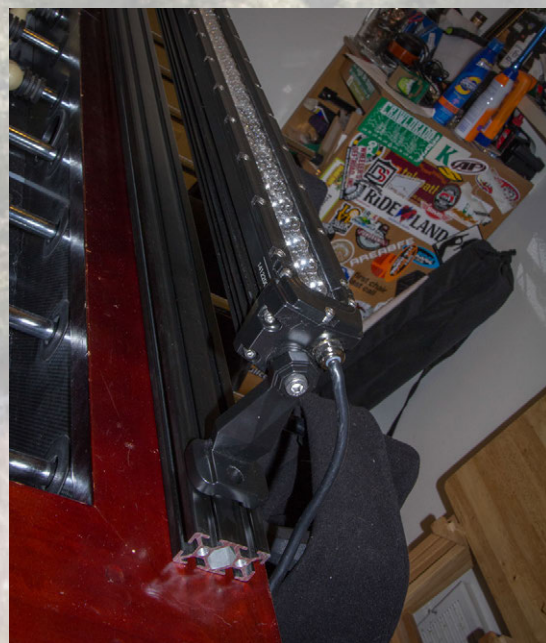
Overall the installation process of the Prinsu AccessRac is very straight forward. The most difficult part of the installation is modifying your access cab roof placing the inserts within the roof track that will allow you to mount a roof rack on your access cab Tacoma. A downfall with Toyota's access cab is the lack of mounting holes for a roof rack as the double cabs have. So in order to install a roof rack on an access cab, mounting holes will need to be created in your roof to accept a roof rack. This step is the most time consuming part of this install and requires great care as you really don't want your roof to randomly start leaking on you. With care and ample sealant, this task can be completed with confidence in your roof.



We chose to install a 40-inch Heretic light bar with our Accessrac. Prinsu offers a pre-cut wind deflector allowing you to run a recessed light bar on the roof. So our first task was to mock up the light bar while the rack was off the truck. Prinsu provides slot nuts to run in the rails of the cross bar which is used to attach the deflector to the Accessrac.



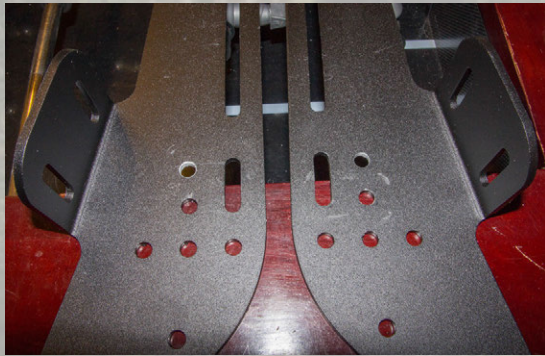
With the light bar centered on one of the crossbars, mark your mounting holes to attach the light bar.



Use a hole punch or similar to make the drilling process easier, then drill out your two light bar mounting holes and attach the light bar. With the deflector in place (we suggest installing one or more crossbars to keep the Accessrac rigid during mock up), loosely attach the light bar cross bar. In our install, we kept the deflector as low as we could which reduced the space above the roof and also kept the light bar low relative to the rest of the rack.



You will need to drill one hole on each side for the light bar mount when you decided on a location.



It is important to run through all steps of the installation prior to digging in too deep. Lay out all your parts, make sure you have all the hardware and tools needed to complete the task at hand.



With a handful of cross bars installed, take the roof rack and place it carefully on the roof for mock up. This took me a little bit to find a location that appealed to me. Where I sit now, I have a 1 3/4-inch overhang from the

roof edge, which puts the front hole center approximately 7 3/8 inches from the roof edge.



To make the install look more “factory” and help in the waterproofing, I decided to modify the rubber molding on the roof. With the rack mocked up where desired, I marked the edges of the rack mounts. Then using a Dremel, I cut out six sections of the molding where I gained access to the roof to drill for the inserts.



I took each of the sections I cut out and cut out areas that the spacer and mounting bolts could sit, allowing a water tight seal around the rack mounting locations. Take note that there is a metal strip running along the bottom of the rubber molding that you will be cutting through during these steps. After completing this install, another method came into thought to simplify this process. You can keep the molding intact and mark where the holes will be drilled. This way you can only cut out the sections for the spacer and bolt to go through, leaving the molding in one long piece.



Installation

With your favorite RTV sealant, apply an ample amount on the recently drilled hole before inserting the rivnut. Then using the supplied tool, tighten down, securing the rivnut in place.



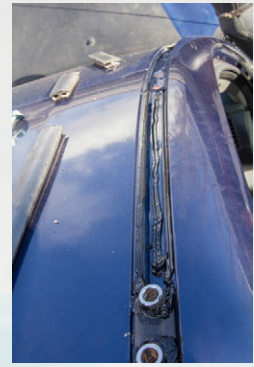
Each rivnut is designed to clamp down on the sheet metal as you tighten down with the tool. This gives you a threaded insert securely attached to your roof allowing you to now fasten the roof rack down.



With the rear most hole set, I did a final mockup of the rack and marked the remaining eleven holes to be drilled.



When all holes are drill and rivnuts inserted, it's time to lay down the molding and place your spacers. For the molding, I used black silicone as the sealant/adhesive, laying a bead on both sides and along the middle. Additional sealant was used around the edge of the spacers completing the seal.



And finally on to the final installation! Lay the assembled rack on the spacers and loosely tighten the mounting bolts allowing enough room for final adjustments.



When you're happy with the alignment, tighten down all the mounting bolts (tight but not too tight), tighten down your light bar mounts as well as each cross bar and finish wiring your light bar.



Since we've had the Accessrac on the Tacoma, we've added a pair of watertight storage cases as well as moved our MaxTrax to the rack for easier access. I've stood on the rack numerous times with no worries and am constantly using the rack to pull myself up to access the storage. Besides additional storage, Maxtrax mounting and giving a 40-inch a home, the rack has helped deflect wind over my CVT Mt. Rainier that I have mounted over the bed. As with most roof racks, the only downfall has been the occasional wind noise if the wind hits the holes just right on the sides.

the Toprac for those with a topper, and the Roofrac for an FJ Cruiser or an 80-series Land Cruiser.



Visit Prinsu Design Studios on Facebook, Instagram and see their full lineup online. 🇺🇸



In addition to the Accessrac, Prinsu also offers the Cabrac for the Double Cab Tacoma,



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Preparing the 4Runner for the Ghost Divide Expedition

Story and Photos by Phillip Jones

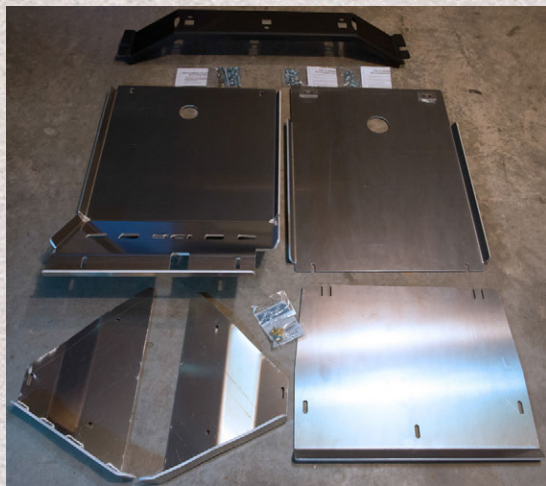
Most of us have in the back of our minds those ideal modifications we still want done. When I registered for the *Ghost Divide Expedition*, I realized I needed to fulfill some of those backburner items. Here's what I did...

RCI MetalWorks—Aluminum Skids Plates

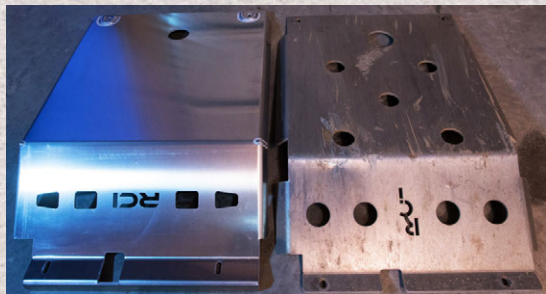
RCI is one of the few companies that offers off-road protection hardware for the 4th generation 4Runner. Having recently bottomed out on my unprotected transfer case, I decided it was time to add the skids for the transfer case and transmission. I already owned the front RCI aluminum skid, which replaces the two OEM front skids. When I spoke with Josh Rudkin at RCI, I learned he had updated the front skid design to provide more coverage via increased width, and altered the curved up edges so they avoid the front sway bar. Thus, I ordered a full set of 1/4-inch 5052 bare aluminum skids, along with matching lower control arm skids. The full set of skids are also available in 3/16-inch steel in bare

or black satin powdercoat. In addition to the 4th generation 4Runner, RCI offers protection products for the 5th generation 4Runner, FJ Cruiser, and the 2nd generation Tacoma (I have the steel RCI front skid on our 2006 Tacoma and am very pleased with it).

After a year-and-a-half of heavy off-roading use, it was interesting to examine my old RCI front skid. The durability of this aluminum skid is impressive, so I had no performance concerns about the new full set of skids. My new skids arrived in time for Lone Star Toyota Jamboree where they performed as expected—same with the *Ghost Divide Expedition*. They do the job, look great, and are lighter than steel.



RCI full skid plate kit includes a cross-member and all the necessary hardware. Also pictured: Matching RCI aluminum lower control arm skids.



Comparison of the 18-month old, heavily used RCI aluminum skid with the newly designed aluminum skid. Notice the old skid has only scratches.



Installation of the complete system went smoothly. The skids overlap each other where the bolts go in. The rearward skid plate terminates at the RCI cross-member.



These pretty aluminum skids are fully functional, lighter than steel, and well-designed. They fit perfectly and align as expected.

Rock Smasher Engineering—2Way Air

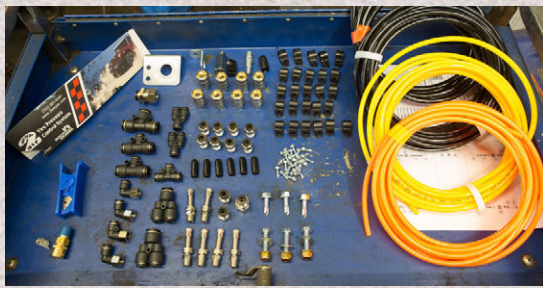
In case you missed our previous coverage of this slick air system, the 2Way Air product allows for even distribution of inflation and deflation. Since I don't have onboard air—which is another item on my backburner list—I had it installed for portable air compressor connectivity. Frisbee Automotive, Inc. did the install and opted to place the whip connectors in the front and rear bumpers to keep them safe and away from mud.



Ben Edwards of Frisbee Automotive, Inc. installs the 2-Way Air lines and outlet ports. The install was clean and structured to prevent failures.



With the 4 whips attached to each air outlet and tire, the portable air compressor is able to inflate the 4 tires evenly.



We organized the 2Way Air parts prior to the install.

AutoHome—Columbus Variant Roof Top Tent

I chose the Columbus Variant because it was one of the lightest tents available, quick and easy to set up and collapse, and can fit atop my 4Runner just fine for those times when I opt not to pull my trailer. Being triangular, it grants more headroom when sitting up than the rectangular style tents. The tent has a solitary latch at the rear. The pair of gas shocks raise the tent after a gentle upward push. The interior features an LED light and a net for holding clothing out of the way while sleeping. The tent floor is a comfortable 2.5-inch foam pad. Tent material is thick and rugged, and the hard shell is fiberglass. The two sides and the rear have zipped doors with optional screen doors hiding inside. The tent seems durable, is very easy to use, and is priced competitively. A lightweight collapsible aluminum ladder with bag is included. Sleeping bag and pillow can remain inside when the tent is closed.



Don't let the compact size fool you. There is plenty of room inside the Columbus Variant roof top tent for sitting up, moving about, and changing attire.

FN Wheels—Five Star 17x8.5 Matte Black alloy wheels

At only 21.8 lbs. per wheel with a load rating that is more than enough, I couldn't resist these attractive, lightweight rims. Having seen the various styles of FN rims on friends' Toyota 4WD trucks, I had grown envious. My new

Five Star wheels arrived in time for Lone Star Toyota Jamboree, so they were immediately put to off-road use. These aesthetically pleasing works of metallic art garnered many compliments at Jamboree, and later at Overland Expo. The rolling effects of unsprung mass are legitimate. While I didn't head to the 1/4-mile track to do baseline times with my previous rims for comparison, I did notice that the truck accelerated easier after the FN wheels were installed.

Hankook—Dynapro MT Tires

After prematurely wearing out a set of popular trail tires by a well-known brand several years ago, I decided to try a different brand and tread. Since I was losing chunks of tread off the trail tires, my hope was mud-terrains would be more rugged. I found that Hankook Dynapro M/T tires were priced very competitively and had good reviews. I purchased a set of five 285/70 17 tires from Discount Tire. After over 20,000 miles, which included heavy off-road use, I compared the four on the ground with the unused spare and found that the tread was exactly at the halfway mark. Considering the amount of tire spin against rock and granite they were put through at off-road parks over the two year span, I was quite pleased with their wear—especially since the wear was even. Knowing that I needed two tires for the XVenture trailer, I decided to take the best three tires on the ground, make one a spare and the other two went to the trailer. I purchased three new tires to accompany the unused spare. For mud-terrains, the noise level is decent, the ride is smooth, and the off-road traction is impressive. They performed well in mud, even when I pulled the trailer through dirt trails after a heavy rainstorm.



The 17x8.5 Matte Black Five Star wheel by FN Wheels are aesthetically pleasing, light, and functional, and work well with the Hankook Dynapro MT tires. 🇺🇸

Frisbee Automotive, Inc.

Having seen the professional level of air compressor lines installation work done on Land Cruisers by Frisbee Automotive, I chose Frisbee for installing the 2Way Air system. Mike Frisbee is a Toyota specialist, especially for Land Cruiser mechanical and outfitting work. The shop is located just south of the Dallas in Waxahachie, TX. In addition to the 2Way Air install, they also replaced my worn inner tie rods and did an alignment. Visit www.frisbeeauto.com.



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10th Annual Lone Star Toyota Jamboree

Photos and story by Phillip Jones



A competitor in the high-speed timed obstacle course gets a wheel up.

Each year, the Dallas-based Toyota Trail Riders club reserves the Barnwell Mountain OHV Park for the 4-day event.

The 2015 Lone Star Toyota Jamboree event experienced an attendance record that practically doubled the previous record.



Brad Cooper and Chris Ferguson await their turns to take the off-camber drop.

With 286 Toyota 4x4 trucks in attendance, the 2015 Lone Star Toyota Jamboree event experienced an attendance record that practically

doubled the previous record. What was the recipe for this success? Since this was the 10th anniversary of the event, the organizers increased publicity, sought out more vendors and special guests, and provided more meals and over \$40,000 in prizes.

Each year, the Dallas-based Toyota Trail Riders club reserves the Barnwell Mountain OHV Park for the 4-day event. Located in East Texas near the town of Gilmer, the 1,850 acre park features long and challenging trails at all difficulty levels. The presence of the easier trails allows TTR to promote the event as ideal for folks new to off-roading. TTR fulfills this feature by offering an off-roading 101 class, followed by guided runs specifically for beginners and stock vehicles.



Trucks line up for a guided trail run.



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Special guest Ivan “Ironman” Stewart discussed his racing career, signed autographs, posed for photos, and rode along on trail runs. Toyota made a surprise visit offering tacos for lunch while displaying the 2016 TRD Off-road Tacoma. A Toyota engineer was on-hand during Taco Time to discuss the new Tacoma.



To introduce the 2016 Tacoma, Toyota provided tacos for Taco Time.



Ivan “Ironman” Stewart poses with Toyota Engineer, Mike Sweers and the 2016 TRD Off-road Tacoma.

Special guest Ivan “Ironman” Stewart discussed his racing career, signed autographs, posed for photos, and rode along on trail runs.

The event is always well-organized, and this year was no exception. Vendor presence was quite massive as compared to previous years. The designated vendor area was located just outside of the main pavilion. As people lined up for meals, they were routed through the vendor area for maximum exposure.

The park trails were more challenging due to the amount of rain leading up to the event, resulting in increased levels of truck damage and extractions. The first section of the ever popular Clyde’s Ravine trail was transformed into a massive mud pit and was thus closed off. Night runs are always a highlight at Jamboree, but this year, the runs were far more interesting with the added fun of soaked trails.

The event is always well-organized, and this year was no exception.



Getting tippy on Clyde’s Ravine.



Muddy trails made for challenging night runs. Chris Devereaux uses his 4Runner to extract a Tacoma driven by Andrew Konosky.

Despite the increased carnage, fun was had by all. Each day, stories, videos, and photos of the multiple trials and tribulations were shared with laughter and smiling faces.



Kase Schindler takes a different line, achieving a dramatic effect.

Night runs are always a highlight at Jamboree, but this year, the runs were far more interesting with the added fun of soaked trails.



Andrea Moritz and Stuart Lightfine pose next to Andrea's new TRD Pro 4Runner, which has a bit of bumper damage.

If you missed out, there is always next year. Jamboree usually falls on the first weekend of May, so mark your calendar now. Updates will appear on the Facebook page, as well as the website:

www.lonestartoyotajamboree.com

www.facebook.com/ToyotaJamboree



XVenture XV-1 and XV-2 Review

photos and story by
Phillip Jones

In January 2015, I had the opportunity to borrow a fully loaded XVenture XV-2 for a multi-day expedition on the 4x4 roads of Big Bend National Park (see story in April 2015 issue). I was quite impressed with the trailer—so impressed, that I decided to buy the lighter weight version: the XV-1. In the first two months of ownership, I used the XV-1 at Lone Star Jamboree, on a weekend expedition in Oklahoma, and again on the *Ghost Divide Expedition* to Overland Expo.



XV-2 in action at Big Bend N.P.



Camping with the XV-1 on the *Ghost Divide Expedition*.

The two XV models share the frame, multi-axis hitch, lever-triggered parking brakes, axle, and independent torsion suspension. The trailer is essentially a pickup truck bed configured as an off-road trailer. Width between wheel wells is 49-inches, and length with tailgate up is 89-inches. Metal tie-down loops adorn the inside and outside walls near the corners. The parking brake levers are located at the front for ease of access when hitching/unhitching. Pulling the levers forward lock the brakes into place, preventing the trailer from rolling.



The tri-axis coupler hitch gives the trailer freedom to move with the rugged terrain independent of the tow rig.

The XV-2 offers more features, such as a 22 gallon water tank mounted under the trailer, a water pump and heater, plumbing lines with quick disconnects for a faucet and shower, gas line for an included stove, and a heavy-duty galley that attaches to the side of the trailer. The galley has a slot for the stove, holes for mounting the faucet, and a slot for a single sink. The included front cargo box can hold a large fridge, two 5-gallon jerry cans, and a dual battery system. LED lighting is mounted underneath, in the bed, and on the elevated rack. The full roof rack can hold a large roof top tent and an awning. The sectioned heavy-duty cover folds up for bed access.



With the large kitchen galley and the flat tailgate, the XV-2 offers plenty of countertop space. Both the stove and sink faucet have quick connects directly underneath.

For my XV-1, I opted to get the smaller battery box, a GoalZero Yeti 400 battery, full Rigid lighting, and crossbars instead of a roof rack. My objective was to keep the trailer as light as possible. I chose a tonneau cover and passed on the liner treatment for the bed. Instead, I purchased a rubber bed flooring from Tractor Supply.



GoalZero Yeti 400 with switches and fuse box sit snug in the smaller battery box.

When pulling the XV-2 on the highway, I could definitely feel the trailer. When off-roading, the 32-inch tires rolled over rocks and ledges with ease, and the torsion suspension kept the trailer from jerking hard. The spacing between the tires was nearly in line with my tires on the 4Runner. This actually made it easier to pick lines on more technical

segments. Being able to see the tires in my rearview mirror meant I could see exactly what I was dragging the tires over.



It is easy to see what the tires are doing via the side mirrors.

Towing my XV-1, the first thing I noticed is I could barely feel the trailer behind me, even with the 33-inch mud-terrain tires. Having a smaller and lighter roof top tent, less accessories, smaller battery box, and minus the water tanks and plumbing, definitely made a difference. However, each chilly night we were camping at over 7,000 ft. elevation on the 5-day *Ghost Divide Expedition*, I desperately wanted to take a hot shower. I was wishing then that I had that 22 gallon water tank along with the water heater, pump, and shower plumbing. I was also wishing I had a second fridge sitting in the

trailer because the ARB fridge in my 4Runner was overloaded. When we arrived at Overland Expo and the strong winds were knocking over tables, I was wishing I had the heavy-duty galley. If neither model are exactly what someone needs, XVenture has a lengthy list of options and can customize configurations to handle any adventure.

Overall, I am happy with my trailer. It served me well on the 5-day expedition plus Expo trip. That was a 9-day trip, and having all of that cargo space in the trailer meant my 4Runner roof rack could be empty, and the rear SUV cargo space didn't have to be packed to the roof, allowing me to see out my rearview mirror. The trailer is well-built and definitely meets the demands of off-road adventuring. When at home, it has a utilitarian advantage: I can use it like a pickup truck for hauling mulch, boards, giant flat screen TVs, and moving my kid off to college. 🐶

THERE AND BACK

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2/16/2013

Reviving a Classic

Annie

By Ige Gustavson

Part 1

It has been nearly three years now since that Colorado January when my boyfriend and I brought home a rig I've coveted for years and it still feels great!

It began just over 9 years ago when a woman had posted on one of the forums that she needed help getting her Land Cruiser running. A friend and I volunteered to swing by and give her some direction. What we found in that garage was a 1962 FJ40 that had barely been touched by the previous owners (read: previous owner unbutchered). Her boyfriend at the time had bought it years before with the intention of getting it back on the road. Eventually he determined that he didn't want it anymore, and he gave it to her.

The boyfriend was gone, but she had the cruiser.

My friend Jeff hooked up his battery charger/jumpstarter and I grabbed a small can of gas. Within moments, it was running. From there, we looked it over and gave her ideas on what to do, beginning with brakes. She's not much of a wrencher and over the years all that got done was the vehicle up on stands and the tires removed.

Between life happening and her hating to see it sitting, she decided to sell it a few years later. I wanted it, but just couldn't swing the money, but fate was on my side! She couldn't find the title and wasn't even sure she'd gotten one, so she couldn't trade it in. And so the Cruiser sat.

The next year, a second potential buyer kept saying he wanted it, but never even went to look at it. And so the Cruiser sat.

It was October when I showed Greg the pictures and asked him what he would do if I brought it home. He volunteered his spot in the garage. The topping on the cake was Christmas: I got the rest of the money to buy it, and a little extra to begin fixing it up.

I contacted the seller. "Still available? I have the money." It was, but it would be two weeks before we'd be able to get together and I'd bring

it home. Greg and I were both so giddy and coworkers looked at us odd when we talked about our new baby. At one point, I made the comment that our baby would be home from the hospital soon, and Greg pointed out that hospitals were for sick babies. Our baby was just neglected for the last couple of decades so it was more like bringing our baby home from a foster home or orphanage. So it became Annie...Little Orphan Annie.

Before leaving with the Cruiser, we soaked the engine with Simple Green and headed to a car wash. The only areas that came clean were where the paint under the crud peeled off. Next task was backing it on the car dolly up the driveway...with near flat tires. That task easily peeled both rear tires off the rims, with me laughing the entire time. This challenge was going to be fun.

I started looking into to getting a title and found that the first step would require an appointment with the state patrol to get a certified VIN inspection (different than a regular VIN inspection and only done by state patrol). I could tow it down in it's condition, but that would assign it a salvage title and I didn't want that, so the VIN verification was going to have to wait until we got it roadworthy.

Greg pulled the plugs and I poured in a little Marvel Mystery Oil. After that soaked a bit, Greg got out one of the hand crank bars and began turning the engine over slowly to free the cylinders. A note for those not familiar

with the Toyota Land Cruisers is that all the 60s and 70s models came from the factory with a bar made to turn the engine over and literally start the rig by hand. The crankshaft has a special nut to capture the bar, and yes, it does work.



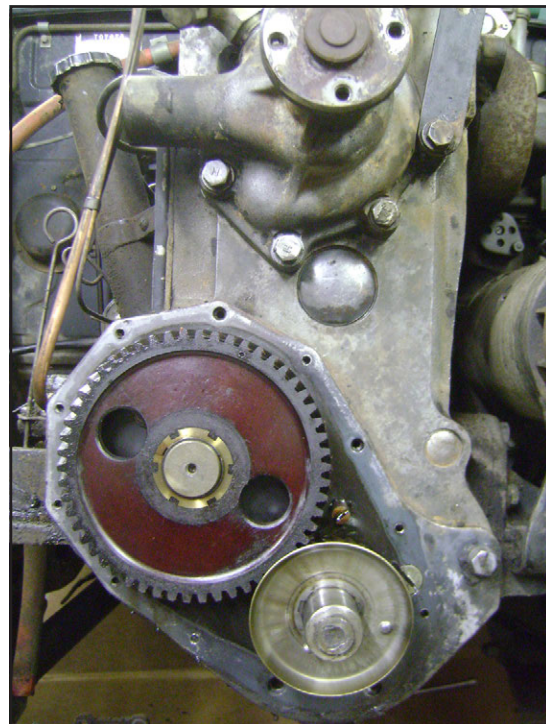
The next day, in the rather freezing January weather, I crawled under and drained the 10 gallons of the fluid formerly known as gasoline, and Greg started gapping plugs. We got it running again, but found we had to feed a steady diet of petrol into the carb throat. In addition, the clutch master had puked all its fluid down the firewall, the plugs were horribly fouled, and the wires were manufactured in 1961. The steering ends all were missing boots, front main seal and thermostat housing had been leaking long enough to begin remolding the block with the gunk buildup, same with the rear axle and the transfer case and the transmission were unidentifiable. Let the games begin.



A shopping list was made and sent out to a couple of Toyota parts managers that I know to see what was still available and what could be retrofitted. From there, the narrowed down list was farmed out to Cruiser Outfitters in Utah, and after Kurt was done, a few other Cruiser shops were contacted. Once I knew

where I was getting stuff from, I began figuring out priorities for the parts, trying to lump purchases from the same places as much as possible, but realizing that after household bills, what was left of my paycheck could only handle so much.

While waiting for parts, we rolled it onto a flattened out cardboard pallet box and it was time to go to town with scrapers, screwdrivers, picks, chisels, whatever we could find to scrape everything down to the metal. In some places, the grime was almost an inch thick. I don't want to recall how many hours were spent scraping, but we changed out the cardboard underneath Annie every weekend for three weekends. It seems like whenever I'd think there's no more to scrape, I'm scraping for another two hours. Then we'd accomplish something and I'd have to scrape again.



After a few days, what seemed like a never ending Christmas began. Almost every day I came home from work, there was a package at the doorstep. It became so common, that now I still look at the doorstep as I pull up the driveway and catch myself wondering why there isn't a box on the doorstep. New tie rods and ends, gaskets galore, brake rebuild kits, firewall grommets and seals, door straps, hoses, restoration stickers, it didn't stop. And talk of parts rolling in stemmed conversations at work of "I know a guy who might be able to make that part" and "Did I mention my husband does upholstery?" Like a tornado generating weather, our project was spiraling!

The coolant was drained and the front end torn apart. The hood and front bib were removed, the radiator and cradle. Eventually, all that was left of the engine was a long block. From there, we'd do everything we could to get it cleaned up...including hooking a hose directly to the hot water heater so we could try to "hot water" blast the gunk off.

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there was a package at the doorstep. It
became so common, that now I still look at
the doorstep as I pull up the driveway and
catch myself wondering why there isn't a box
on the doorstep.*
.....

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This is to inform you that as a result of several suggestions from individuals, dealers, and the Post Office Department, we are eliminating the grease which was formerly furnished in each box.

The grease container had a habit of brooding up in the packaging and shipping. This softened the container and damage to hubs and lost washers, pins, and bolts was the result. Therefore, this will not be furnished in future deliveries of these products.

Installation sheets will reflect this change in the next printing; however, until that time use a small amount of average weight grease or Petroleum Jelly (Vaseline).

We also went through the little pile of paperwork that came with the rig in hopes that there would be a title stashed away. There wasn't but there was a lot of cool paperwork. The original paperwork from the Husky hubs that had been installed. A Toyota service booklet with the coupons still there for the 2500 and 5000 mile services (Can I still use those?). A service booklet from a local service station with markings

for the fuel fill-ups and services early on in little Annie's life...a veritable Smithsonian of information.

It may not seem like much, but it was a couple months work to get to here, so I'll make you wait a couple months to hear the rest...I need a break, after all, I'm not just writing this story, I'm still working on this sexy beast. ;) 🍷

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Almost every day I came home from work, there was a package at the doorstep. It became so common, that now I still look at the doorstep as I pull up the driveway and catch myself wondering why there isn't a box on the doorstep.

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YOUR RIGS

Beach, sun and
my 4Runner...
need I say more

From Ray Lopez



FJ on Shafer
Trail, Canyon-
lands Nat Park,
Utah

From Tom
Evans



John Millman's classic 4Run-
ner and Glen Roediger's FJC
at the rock cut above US-41
between Marquette and
Harvey, MI

Photo By Kaleigh Rozel

Want to see your rig here? Submit it on our site:
<http://tctmag.me/tctRRig>