



TACOMA

MAGAZINE

SEPTEMBER 2013 VOLUME 3 : ISSUE 3



Winter Prep

FJ Summit #7

MORV Explore

SUBSCRIBE FREE AT WWW.TACOMAMAG.COM

Inside . . .

6 | Our take on the MORV Explore



10 | Monte's EPIC: Part 1



12 | FJ Summit #7



16 | Get Ready for Winter!



20 | Heated Mirror Mod



28 | Toytec Open House



Departments

New & Noteworthy | 4

On The Cover:

Testing the MORV Explore on the way to Ouray



TOYTEC™ lifts

www.toyteclifts.com

1.866.254.0076



-4RUNNER

-FJ CRUISER

-TACOMA

-TUNDRA

-SEQUOIA

-LANDCRUISER



Fort's TOYOTA OF PEKIN



Fort's Toyota of Pekin • 120 Radio City Dr • Pekin, IL 61554 • (309) 382-4000

FROM THE EDITOR

These are exciting times to be a part of the Tacoma Magazine team, the FJC Magazine team, and most of all the Zaxyn Media team. We have had the privilege of experiencing some amazing growth in the last couple of years. The direction that we are headed as a company has gone from hobby to now we are talking about ways that we can grow, expand, take on, and take over the Toyota Off-Road Market with our coverage. Wow! The more people in this industry I meet, the more I think we are headed in the right direction!

The events that we cover and the way we cover them has grown in leaps and bounds. We are having more and more organizations contact us to cover and more importantly to attend and experience their events.

We are getting more and more engagement and participation from YOU the readers. The emails and pm's with article suggestions, questions, and even submissions for articles of your own are making the content easier to come up with and flow like we have never experienced before.

As individuals we keep pushing for our own growth, in our positions within this company and within our personal abilities. With this being said, I have been given a new position within our family. I am going to be taking on our Ad Sales & Vendor Relations, as well as, event coordinator positions. I am going to be leaving the Managing Editor position in some very capable hands. I am very sure you are all familiar with Robert Holliday or NYCO as he's known on the forums. Robert has been our Associate Editor for a while now and a contributor that without him we wouldn't be what we are today! I will still be contributing; however, this will be Robert's baby now! I am sure that you will all join me in congratulating and welcoming Robert to his new Managing Editor position!

Thank you all for the experiences and encouragement that you have shared with me while I have been the Managing Editor for this Magazine! You truly are what make this magazine so special!

--Jim Akers

Tacoma Magazine
Published by Zaxyn Media, LLC
Colorado Springs, CO 80923

www.tacomamag.com

EDITORIAL

Publisher

Shane Williams

Managing Editors

Robert Holliday

Jim Akers

Associate Editors

Jonathan Harris

Beau Johnston

Phil Jones

Wes Craiglow

Photography

Jim Akers

Robert Holliday

Shane Williams

Kayla Kotash

Creative Director

Kimberly Proffitt

CONTRIBUTORS

Monte Nickles

Ben Lightner

Tim "Top Tool" Mitchell

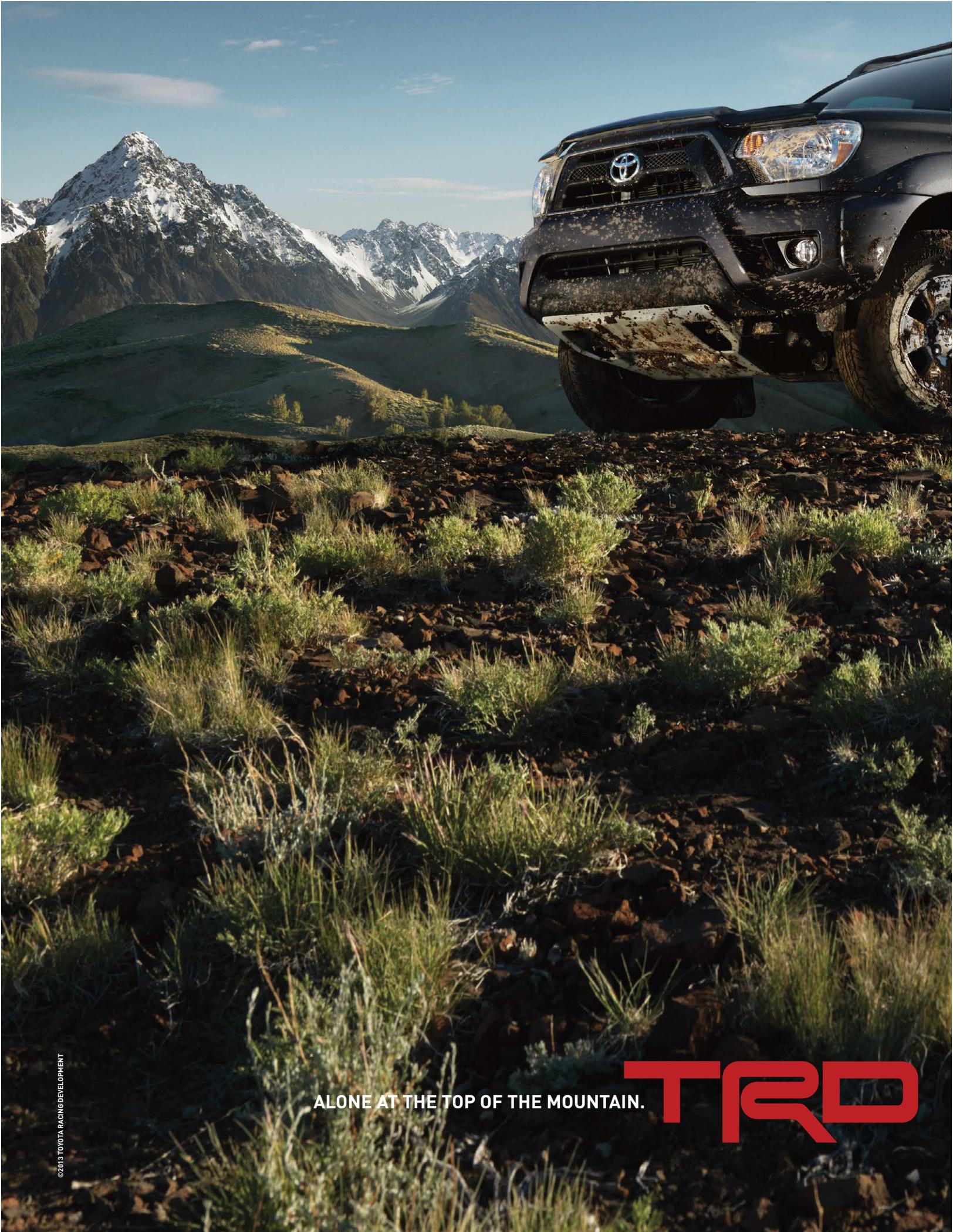
"TOYOTA", "TACOMA" are registered trademarks of Toyota Motor Corporation. Tacoma Magazine is not affiliated with, endorsed, sponsored, or supported by Toyota Motor Corporation,

Toyota Motor Sales, U.S.A., Inc. or any of Toyota's affiliated companies. These terms are used for descriptive purposes only, and not to denote affiliation or connection with Toyota Motor Corporation. All content in this magazine is licensed under the Creative Commons Attribution-No Derivative Works License. For details, visit: <http://creativecommons.org/licenses/by-nd/3.0/us> Reviews, opinions, comments, and ratings of any product do not represent endorsement of said product by Tacoma Magazine, it's editors, or publisher

Published by Zaxyn Media, LLC

www.zaxyn.com

ZAXYN
MEDIA, LLC



©2013 TOYOTA RACING DEVELOPMENT

ALONE AT THE TOP OF THE MOUNTAIN.

TRD

New & Noteworthy

Bully Dog Tuner

Bully Dog has been known for years in the domestic truck market for building amazing tuners that delivered extra HP, MPG, and pulling power. They FINALLY have released a product for the Toyota Truck market!

Their initial release supports '07-'13 4.0L Tacoma, '07-13 5.7L Tundra, '08-'13 5.7L Sequoia, and '08-'13 4.0L 4Runner. More models will be available soon, but this is a pretty good start for heavy truck users. As we saw in the Live Tuning Demo, the GT-T+ can give you as much as +25hp and +30ft/lb of torque in some applications. It can also remove or adjust speed limiters, and includes 4 tuning levels in the box.



Retail on the GT-T+ is \$998.00 but we've seen it as low as \$840 in some online stores.

Source: <http://www.bullydog.com>



Our Time with the MORV

By Bob Holliday & Jim Akers

The Tacoma & FJC Mag team have put over 4,000 miles on the MORV Explore Trailer (with CVT RTT) this summer with multiple Arizona, Utah, and Colorado trips. We can honestly say this trailer has taken everything we've thrown at it and performed flawlessly in sand, mud, dirt, and rocks. We've both had plenty of trips to test this gem out, so here are our thoughts.

Jim

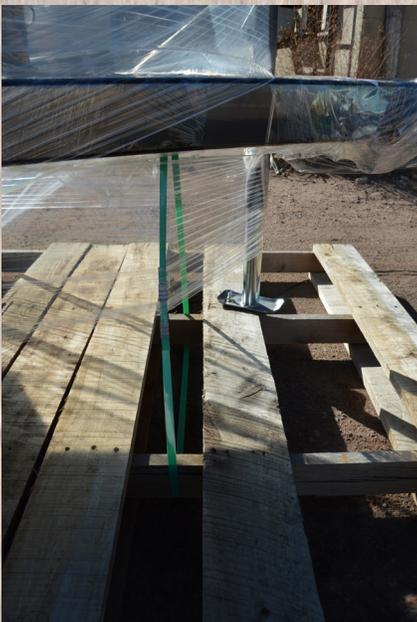
Right out of the gate there were a few things to take note of. First, you definitely have more room to store things for the trip. This is both good and bad. The good side, you do not have to cram things and have little idea where you put them. The bad side, you have more room so you tend to over pack. Next, there went what little gas mileage you might have had in a V6 Tacoma. Finally, another plus is the fact that if you are camping somewhere for a few days and still want to take the truck for some wheeling, you drop the trailer and you are off.

When the MORV trailer showed up I was very impressed by the way it was put together—very solid construction, nice shock system with the lid, and the tire size matching the truck makes the tow a nice ride. The trailer weighs 775 lbs. empty but has a 2000 lb. capacity, and it tends to fill up. It is nice to be able to put things like the propane, camp chairs, and equipment in the trailer instead of the truck. The frame is a fully boxed 2"X4"X1/8", mitered



and fully welded. The tub is 14 gauge with an 1/8" floor. The outside seams are all ground smooth for a clean look before the entire tub and frame are powder coated. They use a solid axle with leaf spring suspension because you do not want to skimp there. I really liked the fact that they have an actual tail gate that made great table top for cooking or eating.

The trailer pulls like a dream behind my truck. Honestly, other than when you come to a mountain incline you cannot tell the trailer is there. I am



completely blown away with how it rides on the highway.

I took it off-road with the Max-Coupler hitch, off-camber, sudden elevation climbs and descents which were easily handled. The positive connection between truck and trailer is something I have never experienced. So far I think the most angle I have tested is about

20 degrees one way and 10-15 on the truck in the opposite direction. That puckered me more than the truck and trailer, that's for sure.

Having the rack and the rooftop tent mounted on the trailer actually seem to help with backing up to park the trailer. You are less likely to lose sight of the trailer during a sharp turn. With enough practice, you can park this rig just about anywhere you can find a flat camp site.

There are some other things that MORV is doing that I really like. You have a limited selection for trailers: MORV Original, Utility, and the Explore. Yes, there are some options to choose from but they are limited as well. My favorite option is the choice between having the frame and tub made overseas and one that the entire trailer is made and assembled right here in the good old USA. Amazingly their quality seems to be pretty impeccable with either of these choices so the difference is personal preference to spend the extra \$1500 for the US made. Prices are pretty reasonable as well and you can get into the MORV Original with the import frame and tub for under \$3000.00 or get the MORV Explore which is 100% made in the USA for under \$7800.00.

All in all, my use of this trailer is going to be dependent upon just what we are up to for that trip. If we are going somewhere that we are going to be setting up camp for a couple of days, I guarantee you will see us towing the trailer. If it is it's a wheel to our spot and wheel back out you might just see my truck though it might still come down to a coin flip! I do have to admit that it does look pretty nice hooked up to my truck!

Bob

While attending the 2013 FJ Summit in July, I was able to camp and explore with a Manley ORV (MORV)

trailer mounted with a tent by Cascadia Vehicle Tent (CVT). With this opportunity to test the MORV and CVT setup, I decided to take a slight detour on the way to Ouray. The normal route to Ouray from the Front Range is a beautiful drive offering great views and a variety of

terrain to travel through, but what better way to test out the setup than to take a detour down to Lake City and see how well the trailer handled the rugged Engineer Pass.

One of the first benefits of the off-road trailer setup in our situation is the ease of transferability between vehicles. If you have a capable receiver hitch, you can hook up and hit the trails. FJC Magazine had the trailer down in Colorado Springs, so I made the trek down to pick up it up. I was hooked up and ready to go within a few minutes, full with most of the gear I needed. Once you have reached your camping destination and wish to explore, you can easily unhitch the trailer and be on your way.

Like many trailer users, I was glad to have the added storage capabilities outside of the truck. On long trips, I normally have to pack my bed full, most of the time limiting my views through my rear window. The trailer has a great deal of storage to allow you to spread the cargo out between vehicle and trailer. There are countless





customized options that you can incorporate into the trailer if you can manage it. I have seen people mount a slide out grill and ice box, water tanks, additional camp lighting, solar panels and secondary battery systems and much more. No matter what options you incorporate into your trailer, make sure everything is secured properly! While traveling through the rugged terrain to Ouray, I was disappointed when I found my grill in a dozen pieces after I overlooked properly securing the grill within the trailer.

Some of you may wonder how the trailer handles on-road versus off-road. With the narrower wheelbase and the added weight of the tent elevated off the trailer top, stability was a major concern of mine. However, the trailer tracked behind the truck perfectly; I barely noticed it was there.

When traveling on the rugged terrain of Engineer Pass, most of the tasks handed to the MORV were handled with ease; however there were some noticeable downfalls of towing a trailer over rough roads. The journey over Engineer Pass is a typical high mountain pass in the San Juans with narrow shelf roads, tight switch backs and occasional tight tree sections. Fortunately, like the on-road handling, the trailer tracked behind the truck fairly well throughout the trail, making the switchbacks a non-concern. The springs on the trailer are rated and tuned for a full load of cargo, so when the trailer is not at max weight, it can be bouncy. Neglecting to air-down the trailer tires can also lead to additional instability at higher dirt road speeds, so you will end up going slower than you normally would.

When traveling off-road with the trailer, you may experience added difficulty when backing up in tight situations. As many of you know, proper trail etiquette gives the uphill traffic the right of way which poses a huge problem when you have a loaded trailer behind you as you're traveling



downhill and come across uphill traffic. If you are lucky, you are given a pull out to allow room for the uphill traffic or the uphill traffic realizes you are towing and pulls over to allow you pass. If not, you are left with the daunting task of backing the trailer uphill. A spotter will come in very handy if you are faced with this situation.

Between the ease of setup and elevating your sleeping quarters off the ground which may consist of mud, rocks and other non-pleasant campsite features, having the MORV trailer on a multi-day event such as the 2013 FJ Summit proved to be a great addition and improvement to the camping lifestyle. I have especially enjoyed the ability to unload unwanted weight from the truck and having

a secure location for extra items. This helped to keep the truck lighter for trail runs unlike the bed rack/ roof rack mounting system which keeps your camp within your vehicle. The trailer also allows you to leave camp setup the entire duration of the event and there is no need to break down camp every time you need to use your vehicle. Simply set up, and enjoy! ■



Ricochet

- Offroad Armor -

Leading Name in High Quality Aluminum Armor for over 30 Years

Stand out in a crowd with a customized anodize color

- Black
- Orange
- Red
- Gold
- Blue
- Gun Metal



Reinforced Heavy Duty Bash Plate & Engine Skid

Tackle any trail with confidence with our complete bumper to bumper kit.

Constructed with 1/4" Aircraft Aluminum

Mounts easily with no modifications

Kits for FJ Cruiser, Tacoma, and 4Runner

We also offer armor kits for over 500 models of ATVs, UTVs, & Dirt Bikes



ricochetoffroad.com

1-866-273-1197

THE EPIC:

By Monte Nickles

Like many good ideas, the seed of this trip was planted in my head at the ending nights of my last trip the year before. Enjoying ourselves in the middle of Idaho, my friends Ben and Mike and I came up with a rough idea to do a long trip through Wyoming and parts of Colorado. Of course being bigger and better than the trip we were on it would be twice as long, more mountain passes and peaks, and many more challenging trails.

I half joked when I put the original rough outline of the trip together by calling The Epic Wyoming, Montana, and Colorado trip. Now that is over, and remembering all that happened in the 13 days on the road -- the people I met, the sights I saw, repairs we made and the brotherhood we formed -- I don't think I am alone when I say this trip really did deserve the title Epic. The Epic. It was one of the trips when you forget what day it is, and nothing matters but what you're doing right now in the moment. And so like the great stories of the Greeks and Romans, I am going to tell you of our Epic, our story and journey in three great states covering 16 trails off road, over 1200 miles of highway, more photos than I care to count, and bashed and battered Toyota Tacomas.

Hang on. Better put it in 4lo. This could get bumpy.

The Epic Adventure Begins on Page 24



**BULLY
DOG**

TUNED

GT T⁺

Works on Toyota[®]
'07-'13 Tacoma & Tundra

Up to 25Hp and
30 ft.-lbs. of Torque*
* Dependent upon application



MAXIMUM
POWER GAINS



UNMATCHED
ECONOMY



VEHICLE
MONITOR



for more information go to:
www.bullydog.com

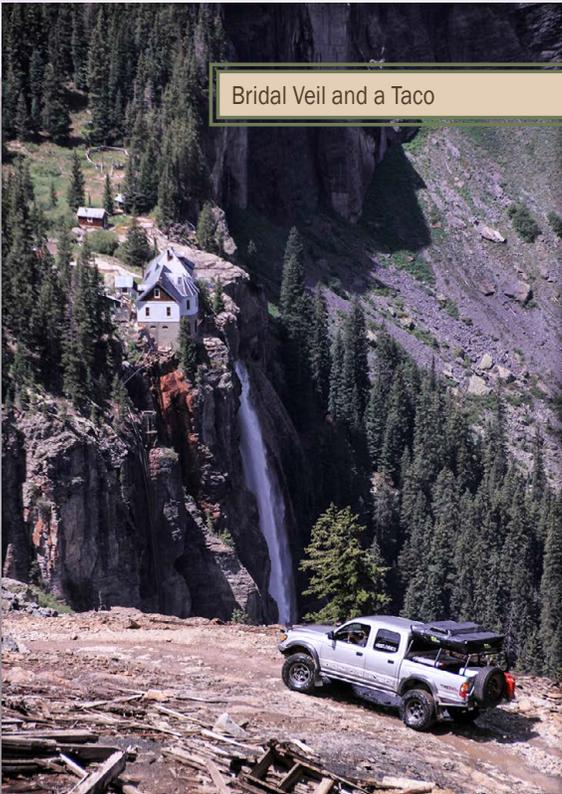
Toyota® is a registered trademark of Toyota Motor Corporation. Bully Dog's GT product is not sponsored by, associated or affiliated with Toyota®. Not legal for sale or use in California on pollution-controlled vehicles



MANLEYORV.com

MANLEY
ORV
COMPANY

MORV
TRAILERS
A LEGEND IN THE (RE)MAKING.



Bridal Veil and a Taco



2014 4Runner Photo Shoot

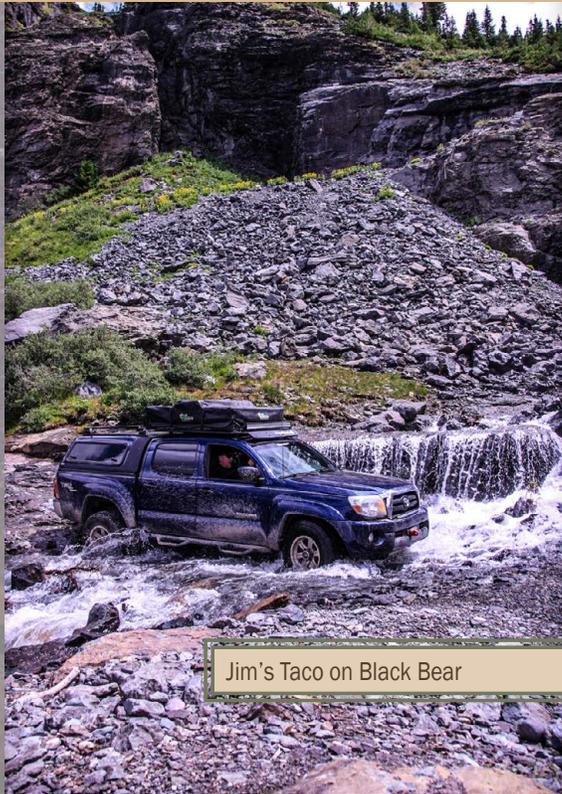
OURAY, COLORADO

FJ SUMMIT 7

JULY 17-21, 2013

★

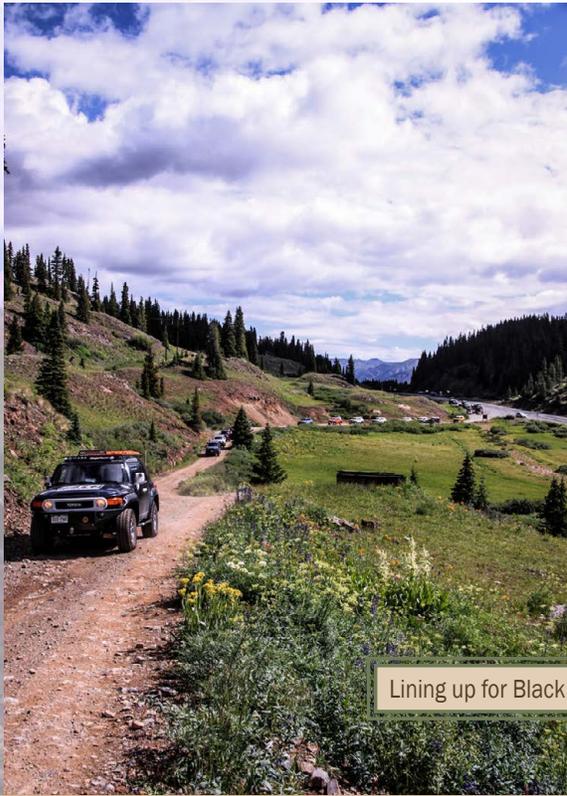
*Photos by
Bob Holliday, Kayla Kotash,
Shane Williams, & Jim Akers*



Jim's Taco on Black Bear



A great FJC lineup



Lining up for Black Bear Pass



2014 4Runners overlooking Ouray

2013 FJ Summit Photo Essay



2013 4Runner up the Waterfall



Bobs Truck near Black Bear Summit



A nice first gen at the group photo





4Runners were a hit this year



Base of Bridal Veil Falls



Traffic jam on Black Bear



Heading up the Black Bear Waterfall



Supercharged 4Runner had no problem



Toyotas all over the Summit

"WHEN I'M IN A CRUISER,
I'M USUALLY WITH PEOPLE I LOVE,
DOING WHAT I LOVE,
IN A PLACE I LOVE."

GREG MILLER



The Fifth Annual

2013 CRUISER FEST

September 20-22, 2013

CRUISER ART SHOW • DRIVE-IN MOVIE • OFF-ROAD COMPETITION
SEMINARS • LAND CRUISER MUSEUM TOURS • SHOW 'N' SHINE

Cruiser Expeditions from Moab to Tooele &
City of Rocks (Idaho) to Tooele

FIND OUT MORE OR REGISTER AT

CRUISERFEST.COM

Winter Driving Preparation and Tips

By Bob Holliday

With Labor Day passing us by, the time has come to start ramping up for the winter season. Whether you will be fighting blizzards on your way to the mountain to catch first tracks or busting through snow on your local trails, having an ill-prepared truck and/or driver can quickly put an end to what could have been an amazing trip. Even if you are not a powder hound, there are many steps you can take to make sure that you and your truck are prepared for whatever old man winter may bring this year.

We here at Tacoma Magazine have pulled together some useful tips that may help you make the most of those cold winter days that sideline most others and make sure you not become that truck who shuts down the road. Whether you are heading to the store for beer or heading into the forest for some exploration, know the weather and what to expect during your travels.

On-road:

❄ Drive for the conditions—slower speeds, slower acceleration and braking may be necessary.

- ❄ Do not use cruise control.
- ❄ Four-wheel drive does not make your truck invincible. You will have a hard time stopping and turning on slippery roads just as the rest of the drivers. It will help you get moving faster, but does not help you stop any faster.
- ❄ Leave more distance than normal between your vehicle and the vehicle in front of you.
- ❄ Anticipate slippery roads at intersections and turns. Slow down prior to approaching them.
- ❄ Remember that bridges will ice over sooner than the rest of the roads. Expect shady areas to have a higher chance of icy conditions.
- ❄ Be aware of your surroundings. If you notice an accident on the shoulder, there is a good chance there was an underlying condition that caused it. Do not overreact! Slow down and adjust your driving for the changing conditions.
- ❄ Do not slam on your brakes as this will only make things worse. Learn the point where your brakes will begin to lock up, and stay within the





boundaries of non-lockup. If you have a manual transmission, learn to down shift (make sure to match rpm!) to help maintain a controlled deceleration.

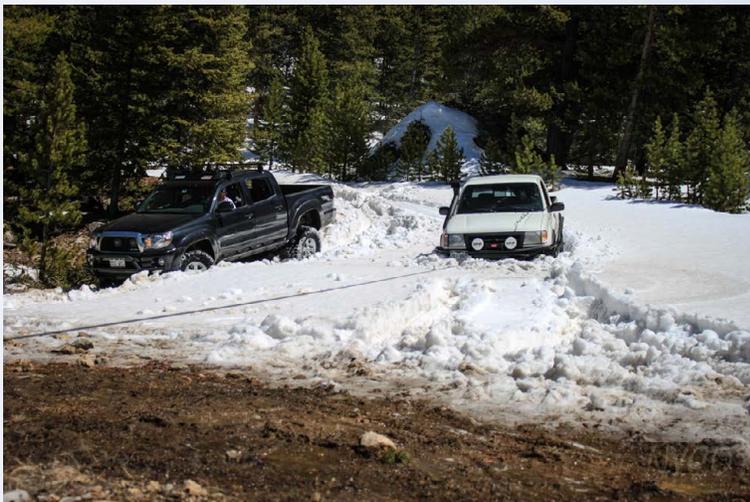
- ❄ If you are a manual and are descending a hill while in 2wd, remember that if you down shift and are not matching rpms properly, your rear tires will have a tendency to begin sliding and fishtailing. Know your vehicle's limitations!
- ❄ Watch out for slushy/adverse lane transitions when changing lanes/passing, as these are a common area for lost traction.
- ❄ Keep some warm clothes in the vehicle in case of emergencies.

Off-road:

- ❄ NEVER TRAVEL OFF-ROAD DURING THE WINTER ALONE!
- ❄ MAKE SURE OTHERS KNOW WHERE YOU ARE GOING!
- ❄ Determine the depth and consistency of the snow early on. Sometimes snow conditions

will effect whether your group continues on or has to turn back. And keep in mind that snow conditions will change as the day progresses.

- ❄ Air down (10-20psi depending on tire and wheel. Some setups can allow you to go lower).
- ❄ Make sure you have all of the necessary recovery gear within your group.
- ❄ Bring extra clothes to change into (getting out of cold wet clothes could save your life), extra food and water (more than if you were only traveling on-road).
- ❄ Keep camping supplies handy in case your day trip turns into an overnight recovery.
- ❄ Bring a water filter if you have one.
- ❄ Winch and winching supplies are essential if you are traveling off-road during the winter time. Even if it is only a hi-lift with chains and tow straps. Do not go out there without some sort of winching capabilities!
- ❄ Traction pads have become more popular in recent years and are a very handy tool to have





in the snow. They can help in a quick recovery where winching would normally be required.

- ❄ CB and/or HAM radio. In many cases, cell phone service can be scarce where you may be off-roading.
- ❄ Spare parts and tools to aid in trail repairs.
- ❄ And do not forget your sunscreen!

Vehicle/Equipment tips:

- ❄ Go ahead and give your vehicle a fresh coat of wax prior to the winter season.
- ❄ Invest in a nice set of floor mats to help protect your vehicle's interior from the mud, slush and snow that will be tracked into your vehicle.
- ❄ Make sure your tires are rated for the conditions you plan to drive in.
- ❄ Stop by your local tire shop and have your tires siped (the process of cutting tiny slits in the tread for increased traction in icy and hard packed conditions) if more traction is desired.
- ❄ Depending on the tires you have and your state's laws, you may be able to add studding to

your tire for added traction in icy and snow pack conditions.

- ❄ Invest in a set of tire chains to aid in traction.
- ❄ Ensure you have proper fluids for the climate you are located in. Antifreeze, oil and windshield fluids are common areas of concern. Make sure to change out fluids before the cold weather hits.
- ❄ Top off your washer fluid periodically as you will use fluid much faster traveling on slushy streets. Keep extra fluid in your vehicle.
- ❄ Change out windshield wipers if necessary.
- ❄ If it recently snowed or saw freezing temperatures, make sure the wipers are free before turning them on. This will help prevent premature wear on your wiper blades and damage to the mechanical parts.
- ❄ **MAKE SURE AN ICE SCAPER IS IN YOUR VEHICLE IF YOU WILL BE IN WINTER CONDITIONS.** That small hole you scratched open with your hand will not be sufficient, no matter how short of a distance you have to travel.
- ❄ Check your vehicle's heating system **PRIOR** to cold weather.
- ❄ Check to make sure your headlights, turn signals and brake lights all work properly. It is important to make sure that you can see and be seen.



* If your battery is on its last legs, change it out before you are stranded in the freezing cold miles from home or a town.

Additional equipment/supplies to consider:

- * First aid kit
- * Blankets
- * Flashlights
- * Shovel
- * Tow rope/strap

- * Spare tire
- * Tire chains
- * Tire repair kit
- * Air pump
- * Vehicle jack
- * Saw or axe
- * Waterproof matches
- * Duct tape and other sealants



Do not let winter keep you down. Be prepared, drive safe and get out there! ■



discounttiredirect.com

GREAT BRANDS. CHEAP PRICES.

FREE SAME-DAY SHIPPING! Some restrictions apply.

Grabber AT2	Dynapro ATM	Rocky Mountain ATS	Terra Grappler	Warrior	Guardian	Chaos	Buckshot
PRICES START AT \$103	PRICES START AT \$108	PRICES START AT \$120	PRICES START AT \$158	16" PRICES START AT \$95	16" PRICES START AT \$110	16" PRICES START AT \$110	PRICES START AT \$119

OVER 1,500 TIRE & WHEEL CHOICES IN STOCK EVERY DAY!

discounttiredirect.com

866.895.8034

M-F 8 a.m. - 8 p.m. EST SAT 8 a.m. - 5 p.m. EST

DISCOUNT
TIRE DIRECT



HEATED MIRRORS

Mod

By Ben Lightner

With cold weather just around the corner, some Tacoma owners are reminded of one option that is not available for our trucks, regardless of the trim level - Heated Mirrors. While it's a small luxury to have, it is convenient and relatively inexpensive to add Heated Mirrors yourself.

There are a few different methods to add heated mirrors to your Tacoma: motorcycle grip warmers, Muth Co. Mirrors, ProEFX Towing Mirrors, or an OEM 4Runner mirror swap. These methods range in cost from \$50-\$500+, with \$300 being the median average. In this write-up, we'll be installing heated mirrors using OEM Toyota Highlander mirrors and a matching OEM switch, with the total cost being about \$200.

NOTE: This mod requires the use of one full-sized OEM switch blank (to the left of the steering wheel). If you do not have any full-sized blanks, e.g. - newer TRD Off-Roads, please see bgreenley's supplemental write-up on TacomaWorld.

DISCLAIMER: I do not in any way consider myself to be an expert, and I accept no responsibility for any harm, damage, or injury that comes from anyone attempting this mod. Do so at your own risk.

Parts & Tools Needed

Toyota Parts

These can be purchased online or from your local Toyota dealership.

- Toyota Highlander Mirror Left—Part No. 87961-0E070
- Toyota Highlander Mirror Right—Part No. 87931-0E080
- Toyota Highlander Mirror Switch—Part No. 84871-48030
- Toyota Amber Bulb (optional)—Part No. 90011-01058
- Toyota Highlander Mirror Switch Plug—Part No. 90980-10789
- (5) Toyota Terminal Leads—Part No. 82998-12340
- OR-
- (5) Sumitomo TS/SL Female Terminal 0.5-1.25mm 2 Terminal Plugs (sourced online @ bmotorsports.com)

Other Parts

- 10-Amp ATM Fuse Tap
- (1) SPST or SPDT Relay
- (1) SPST or SPDT Plug
- (3) 14-16 gauge Quick-Splices
- (4) 14-16 gauge butt connectors
- (3) 14-16 gauge 1/4" Ring Terminals

- (4) 0.110" 16 gauge Female Spade Terminals
- (2) 0.187" 16-22 gauge Male/Female Terminals
- 30' 16 AWG Primary Wire
- Heat-Shrink Tubing (various sizes)

Tools

- Wire cutters
- Wire crimpers
- Wire strippers
- Needle nose pliers
- Large philips head screwdriver
- Various flathead screwdrivers (from micro to large)
- Soldering iron (optional)
- Panel removal tool
- Zip-ties
- Electrical tape
- Corrugated conduit (optional)
- Coat hanger or wirepuller
- Scissors and/or utility knife
- T-25 torx bit driver or wrench
- Vise grips
- 10mm & 11mm sockets
- ATM fuses
- Safety glasses

- Safety gloves
- Light

Approximate Wire Lengths (about 30' total)

- Driver's side +12v mirror lead (0.110" female spade to quick-splice to relay 87) = 60"
- Passenger side +12v mirror lead (0.110" Female spade to Quick-Splice) = 140"
- Mirror ground leads x2 (0.110" female spade to 1/4" ring terminal) = 30"/each
- Fuse-tap (quick-splice from switch #5 lead to fuse-taps butt connector)= 10"
- (5) Switch +12v Lead (Sumitomo to butt connector to relay 30) = 24"
- (4) Switch (Sumitomo to butt connector to relay 85) = 24"
- (3) Switch ground (Sumitomo to 1/4" ring terminal) = 15"
- (2) Switch (Sumitomo to 0.187" female spade) = 5"
- (1) Switch (Sumitomo to 0.187" female spade) = 5"

Procedure

Before you begin, disconnect the battery.

In general, we will need to remove the door panels, lower-dash instrument panel, and mirrors to perform this installation. This is a pretty straight-forward process needing only a 10mm socket and a Philips-head screwdriver, but there are some screws and bolts hiding behind covers. If needed, you can check online for different "how-tos" to take your door panels, lower dash, and mirrors apart.

Remove the Door Panels and Lower Dash Panel

A good how to for removing the door panels can be found here: http://youtu.be/yjhYKzE_yBg (video from TacoTunes.com)

Lower Dash Panel

*NOTE: You may want to remove the front seats to allow for more room to work under the dash.

1. Remove out the storage tray to the right of the steering wheel (if equipped).
2. Flip down that little panel to reveal a hidden bolt.
3. Pull the scuff-plate trim up.

4. Remove the foot-rest right next to the parking brake.
5. Unscrew the rubber cap-screw and remove the lower kick-panel.
6. Remove the two bolts and gently pull out to unclip the lower dash assembly.
7. Unplug any switches/connectors.
8. Don't forget about the TPMS plug and hood-latch cable.

Remove and Disassemble the Side Mirrors, and Run Your Mirror Leads

Here's a useful guide from Muth Co: <http://shop.muthco.com/content/pdf/install/21001150.pdf>

1. Disconnect the white plug harness. Unscrew the three nuts holding the mirror with an 11mm socket, making sure to support the mirror so it doesn't fall after you loosen the nuts. Remove both mirrors and set them on a soft surface to begin disassembly.
2. Carefully remove the mirror glass. Gently press on the top of the mirror glass to create a gap on the bottom. You can slide a flat-head screwdriver in the gap and into the small recessed areas of the white back plate. Pop the glass out from the back plate, and pull down and out to remove.

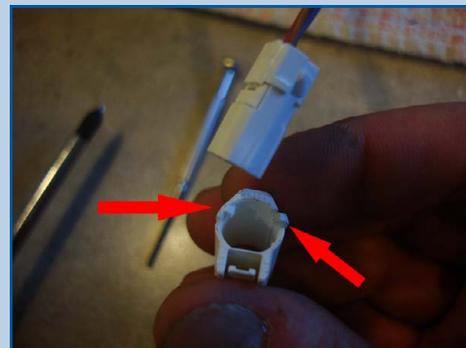


Gently press up on the mirror glass to un-clip it with a flat-head screwdriver.



3. Remove the electrical tape on the wiring harness, and remove the plastic piece inside the sail. Also, this plug-

cover will need to be removed from the plug in order for it to fit through the openings.



Remove this plug cover.

4. Open the plastic cover on the bottom of the mirror, and unscrew the two screws with a T-25 torx bit. Remove the sail from the mirror housing, and remove the last hidden torx screw.
5. Unkink the wiring harness, and prep your wire-leads. Remove the power window motor from the housing to make it easier to run the leads. I ran my wires inside the plastic sheath, but you can run them outside as well.
6. Crimp or solder the 0.110" female spade terminals that will connect to the Highlander mirror tab terminals. I heat-shrunk the terminals since they will be the most exposed component.



Wire-leads to the Highlander mirrors.

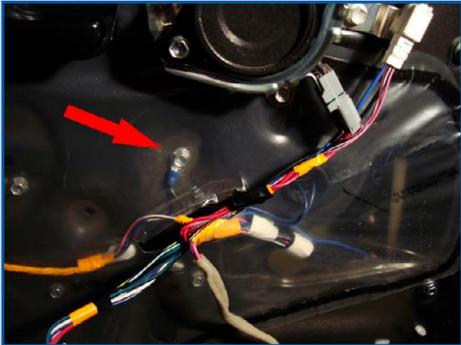


0.110" terminals.

7. After weaseling the leads through each mirror assembly and putting

them back together, make sure you have at least 7.5" hanging out for the mirror plug to reach the connector (don't forget to slip the cover back on the plug).

8. Connect your 0.110" terminals to the Highlander mirror, and carefully install the Highlander mirrors in the back plate. They will snap into place with a little persuasion.
9. I crimped a 1/4" ring terminal on each 30" mirror ground lead. I then grounded each mirror to this bolt inside the door.



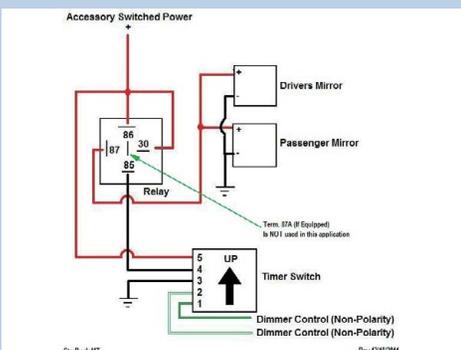
I ran each mirror ground to this bolt.

10. Next, feed each +12v POS mirror lead through the door and into the cab. I found it was easiest to unplug both sides of the boot. I taped some extra length of zip-tie to my wire, fed it through, and plugged the boot back in.

*Note: For the passenger side once it was inside the cab, I wrapped the lead in 3/8" black plastic conduit, and ran it along the silver tube behind the dash, and used some zip-ties along the way.

Assemble Your Circuit

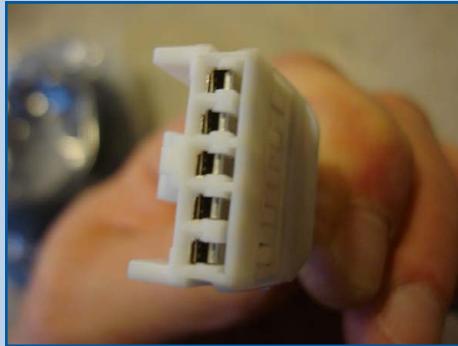
I followed this great schematic made by CtryBoyInMT on TacomaWorld.



Wiring Schematic by Christian, CtryBoyInMT

1. On the back plug of the Highlander switch, I used the five Sumitomo terminals instead of the Toyota pigtails. It was much cheaper and worked

great. Follow the 1-5 sequence in the wiring diagram to measure & connect your leads.



The Sumitomo terminals were a perfect fit in the plug.

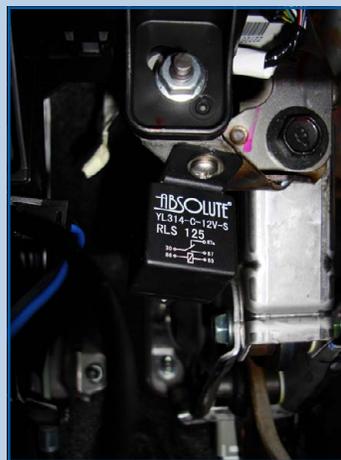
2. Wire-up your relay plug.



I used a Quick-Splice to connect 86 & 30 from the Relay. Next, I connected 30 from the relay to #5 from the switch with a butt connector.

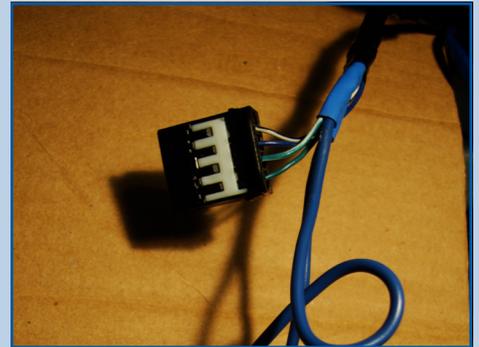
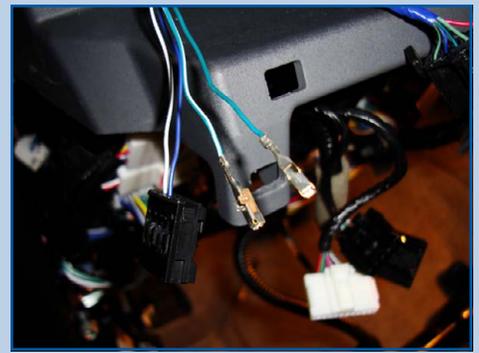
used a Quick-Splice to connect #86 & #30 from the relay. Next, I connected #30 from the relay to #5 from the switch with a butt connector.

3. Mount your relay. There's an open hole on a metal mount up and to the left of the brake pedal that is a great location.



Here's a good spot to mount the relay; up and to the left of the brake pedal.

4. I had to splice into the illumination dimmer wires from the fog light switch and used SOLID GREEN for plug #1, and GREEN with WHITE for plug #2. This allowed the switch to illuminate and dim with the rheostat control like the other switches.



I soldered the splices and used 0.187" male/female quick-connect terminals and heat-shrunked everything.



The plug is ready to be connected to the switch.



Here is where I connected the ground for the switch (#3 plug).

5. Gather all your leads (mirror POS leads, fuse-tap, switch leads) and connect them to your relay plug.



I connected both positive leads from the mirrors with a Quick-Splice, and used a butt connector to tie them into #87 on the relay.

I connected both POS leads from the mirrors with a Quick-Splice, and used a butt connector to tie them into #87 on the relay.

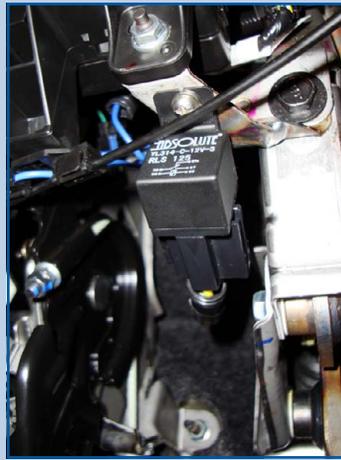


I used another Quick-Splice to connect #5 from the switch with the fuse-tap lead and tie them into #86 & #30 on the relay.

I used another Quick-Splice to connect #5 from the switch with the fuse-tap lead, and tied them into #86 & #30 on the relay.



After cleaning everything up with conduit, electrical tape, and zip-ties, your relay is ready to be plugged in.



6. Plug in the fuse-tap. I tapped into the gauges fuse. I added a 10A fuse (might be overkill), and had to install a 7.5A fuse for the gauges circuit. This is an ignition controlled circuit, and my heated mirrors will only work when the ignition is turned ON. The switch itself has a 15 minute timer, so it will turn off after 15 minutes, if you press the button again or turn the ignition off. The standard fuses are low-profile ATM fuses, whereas the fuse tap takes standard ATM fuses, so be sure to have a couple on-hand.



Tapped into the gauges fuse.

Re-Assemble Everything

1. Give all wires a good once over. Use as much tape, zip-ties, and conduit as desired. Make sure everything is tucked-up nicely and secure. Plug

everything back in, re-assemble the dash, instrument panel, doors, kick panels etc. Re-connect your battery.

2. Crack open your favorite frosty beverage, turn on the ignition, and test out your new heated mirrors.



- See the Heated Mirrors in action: <http://youtu.be/j1fvnjOUx4Q>
- The original write-up can be found on TacomaWorld.com: www.tacomaworld.com/forum/2nd-gen-tacomas/193528-oem-heated-mirrors-diy-mod.html. Be sure to check it out for alternative methods, discussions, and more useful information!

Thanks to TacomaWorld Members: tsilliker, shawnd2, CtryBoylnMT, 84Hilux, bgreenley, File IFR, and OldEric11.

Special Thanks to: Shane, Bob, and Jim at Tacoma Magazine!

Feel free to contact me (Benson X) on TacomaWorld with any questions or comments. Also, be sure to check out my other write-ups and reviews while you're there!

Stay Safe, Be Prepared, Tread Lightly, and Happy Trails!

© 2013 B. Lightner (Benson X). All photographs by B. Lightner, unless otherwise noted. ■



THE EPIC:

Leg 1—The Start of Something Amazing

By Monte Nickles

Our trip starts Monday, August 5, 2013 at 6:30 a.m. in Powell, WY. With me is my brother Grant, good friend Jessica, and fellow Tacoma owner and enthusiast Mark from central Idaho. Our trucks are packed to the brim for the journey and we are all very anxious to get on the road. But like most plans, we where late. However, it wasn't before long when we hit the road to Clark, WY to get to our first trail—Morrison Jeep Trail.

Mark and I met our third brave member to drive the switchbacks at Edelweiss in Clark, WY. Joey, from Northern Colorado, had driven all day Sunday to get here. We were 30 minutes late and then we spent plenty more time talking and greeting each other before setting off to the trail.

As we drove to the mouth of the luminous canyon in the morning sun, the excitement started sinking in, as well as the jitters of knowing what we were about to go up—27 tight corners up steep switch backs on a loose rocky trail right up the canyon wall. ATVs fear this road. I was particularly a bit more worried having a manual transmission with a brand new clutch only days old. No going back now, we aired down and hit the dirt. I lead with Mark, and Joey in tow, and set a very quick pace trying to make up time. It was a bit too quick at one point as Joey commented over the radio.

Note: When wheeling with Monte. Air down more and tie s**t down better.

We slowed down a tad as we took in the pure awesomeness of the canyon. The walls cast large shadows down on us along the river bed. It wasn't long before we met a few locals on ATVs fishing the river.

“You all going up the switchbacks?” said one rather large fellow atop his ATV.

“You bet!” I said with a big smile on my face.

“HA! Good luck.” says the man puttering off.

Wonderful. Very uplifting of him. Regardless we marched on. We soon came to the base of the switchbacks

where is a lovely sign is at the bottom warning people of the inevitable danger of going up the road. Once you start, there is no turning back. Our kind of trail!

We hit the first corner and it was merely a three point turn, as was the next corner ... and the next. Grip was plentiful despite the loose rock and we kept the pace up. Before we knew it, we were what appeared to be about halfway. The view was spectacular.

And no matter how simple the corners appeared to be, the rush of driving on a cliff's edge was amazing. One slipped tire and down you went. Very far down.

By this time some of our other companions that had decided the cliff's edge was not for them had gathered at the top. They had camped further up on the trail the night before. Of course the three of us had to tease them by shouting up the canyon walls about how





easy yet exhilarating it really was, and then the bad karma kicked in.

No sooner had we uttered “easy” and “wusses” than we arrived at the next corner, which had a rather large ledge right on the apex. This proved rather difficult to get around—



almost too difficult. After several attempts, including one that felt a tad too tippy, I somehow three-wheeled it up and around the corner. Mark didn’t have it much better. Because we were more prepared for the tippy part, we gladly jumped on the slider to counterbalance and help him avoid the tumble of doom. After yet another 10 point turn or so, Mark made it up. Joey made it up much easier after we learned how to correctly tackle the corner. That one corner claimed over 20 minutes of our time. Luckily it was the worst.

From this point the corners were very tight. We were driving by tapping our bumpers



against the granite faces of the cliff claiming every inch we could muster. We would then roll backwards to the edge of the loose rock cliff as far as we dared. Talk about adrenaline. We all three made it up alive and unharmed aside from some paint missing off our front bumpers.

It was spectacular. Never have I driven a trail that made me so antsy and excited, yet scared and cautious. Add this one to your list. It’s very fun, but not for the faint of heart.

From the top of the switchbacks, we continued on to meet up with the rest of our crew who had camped up on top the night before. Joining us was Jason and Mike from Arizona, Lisa and Micheal “Keys” from Montana, Gage from southern Wyoming, and finally my two good friends Ben from Idaho and Mike from Washington, who helped plan the trip. They were enjoying a nice lunch of which we joined in.



The rest of the trail took us a while to get through due to the length. It goes through many open meadow areas with some fun rocky sections in the trees. Overall, it was more scenic than anything, very fun and well worth the trip. Before long, we were back out on the highway but only for a while.



At the last minute we had decided to add a new trail to the agenda in order to find a place to camp that night—Sawtooth Lake. It’s a very mild trail in terms of terrain, but man, what an awesome payout at the end. We came down into a lush small area with room for all nine Tacomas right on the lake. We quickly set up camp and got ready for our favorite part of these trips ... campfire time.



Despite a bit a rain, nothing could get in the way of our beloved huddled mass around the campfire. Some of the greatest memories are made around a campfire after a day’s worth of wheeling. We all thoroughly enjoyed the evening and into the night, high on the fact it had only been day one and it was only going to get better.



The next morning we were greeted with the lovely sound of my alternator belt screaming—not the way anyone wants to start their day, especially before coffee. Luckily, it was an easy fix for both and soon we were back on the highway and ready to air up and head to Cooke City. Much to Mike’s surprise his ARB compressor had suddenly stopped working

THE EPIC:



and I had the great pleasure of letting him borrow my CO2 setup. It's the little things I tell ya ...

After taking over all of the gas stations in Cooke city, we set off up the mountain right from town on a road that tied into Daisy Pass. The views were unbelievable all around. I had never seen the Beartooth so green before. We went from look out point to look out point more and more amazed until we hit the mother of all look outs, shown at the top of this article. You can see for miles mountains everywhere. It was breath taking and mesmerizingly beautiful. And we weren't even on the main trail yet.



After a bit more exploring down into Lulu Pass, we found Goose Lake and once again encountered an elderly gentleman on an ATV coming out of the trail. The man said, "You guys are crazy! You'll never make it!"



We just chuckled and continued on our way enjoying our A/C and stereo equipped trucks.

But soon nothing really mattered. Before we knew it, it seemed like we were driving on another planet. There were many lakes, ponds streams, creeks, rocks and trees with mountain peaks jutting out of no where. It was fantastically delicious—a middle Earth on its own. It was truly a trail with everything you could want—smooth sections, rocky sections, water crossings, mind blowing beauty and a couple of nice obstacles to boot. It had it all.



The only thing bad about this majestic trail is the end. Sadly, due to people not following Tread Lightly Rules, they have closed off the last third of a mile to all vehicles. So you can no longer drive to the actual lake and camp there. That didn't stop us from going to explore it and instead,

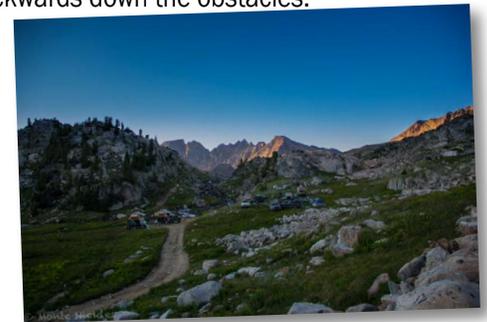


we camped at the stream's edge that drains from Goose Lake.

There's something about being at 10,000 or so feet above sea level in a cove of mountain peaks with the sunset lighting them on fire with a calm lake at your feet. It is peacefully satisfying. Up there everything melts away. Time seems to stand still and in many ways you wish it could just stand still so you could live there in that picture perfect moment of beautiful serenity. We enjoyed our evening. We were amazed by our camp spot, the sights we all saw, and the roads we had conquered.



The next morning we all seemed to drive slower down Goose Lake trail; none of us really wanting to leave the mysterious place. We still enjoyed experiencing everything from a new angle and going backwards down the obstacles.

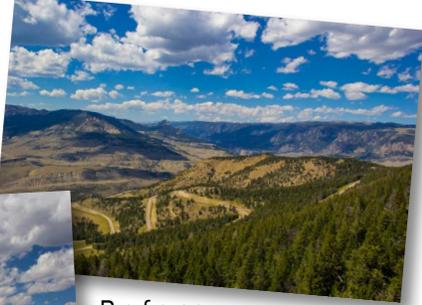


When we finally hit pavement again some had to say their good-byes from the trip. The rest of us had many more adventures ahead. The first of which was driving the Chief Joseph highway to the top of Dead Indian pass. This road, I tell you, is one of the most twisty, curvy roads of driving perfection I think you can ever drive. Ben and I instantly went into race truck mode enjoying every





down shift with glee all the way to the top. Upon our arrival, we were greeted with the breathtaking view of the Sunlight Basin.



trails. Everyone else set to work on getting a nice shower, some laundry, or fixing assorted odds and ends.



Before setting off from the top, we noticed a rather large pool of oil

We then enjoyed a lovely home cooked meal put on by my beloved mother and lit up the campfire. We then continued the great tradition of story telling and reminiscing of the trip. I snuck away to take my truck to a larger shop and tear apart half the front diff in hopes that I could possibly repair it so we could continue our adventures the following morning.



under the front of my truck, it was indeed gear oil. Lucky for me we were all headed to my home town of Powell for a nice BBQ gathering and shower. So we hit the road with a to do list quite a bit longer than we had anticipated.

What I found, was not promising ...

Upon arriving in town, we met my dad in the shop prepping to cut up his baby to install his new Bruteforce Fab high clearance bumper for Leg 2's

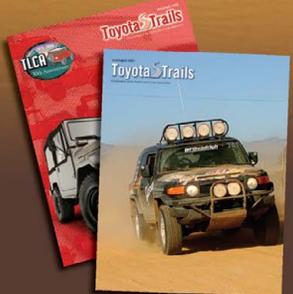
To be continued..

The Epic: Leg 2—It's Only a Scratch ... Or Two ... ■

Dreaming of your next adventure?




We sure are.
The Toyota Land Cruiser Association is a club dedicated to bringing Toyota 4-Wheel Drive enthusiasts together. Visit us at www.tlca.org to learn more.

TLCA membership includes a subscription to **Toyota Trails** magazine, featuring in-depth tech and trail articles, event listings, TLCA merchandise and Land Cruiser classifieds.

Toyota Land Cruiser Association
P.O. Box 230, Verona, KY, 41092
(800) 655-3810 • www.tlca.org



X
expedition
OVERLAND

"A journey is best measured in friends, rather than miles."
— Tim Cahill



THIS ADVENTURE IS ABOUT THE JOURNEY, NOT THE DESTINATION.

A reality-based web series that follows six overlanders and their outfitted vehicles.

X

Xoverland.com

TOYTEC™ lifts

Customer Appreciation Day

Photos by
Bob Holliday



- 1) The Tacoma Mag Setup
- 2) Toyotas & Nissans represent
- 3) Doug & Chris brought their 'other' toys
- 4) A great turnout, including Stay The Trail!
- 5) Nice Taco Lineup!

Opposite:
A nice view of the setup 'before the madness'





You have **PLAY** ed on this old dirt road for years.

Isn't it **NICE** to know you have the power to conserve it for years to come?

Our mission is to empower generations to enjoy the outdoors responsibly. So join us. Stay on designated trails. Be courteous. Leave a good impression. It's up to you to become an ambassador for your sport and the great outdoors. To become a member of Tread Lightly!, go to www.treadlightly.org or call 1-800-966-9900.

treadlightly!
LEAVING A GOOD IMPRESSION

© Tread Lightly! 2006

A RESPONSIBLE OHV ENTHUSIAST LEADS BY EXAMPLE.

All of us that enjoy exploring the beauty of Colorado's public lands should do so responsibly. Responsible use includes keeping your vehicle on designated routes, protecting natural resources, sharing trails with other users, and riding or driving safely and in control.

Through education and outreach the mission of Stay The Trail Colorado is to encourage the responsible use of the roads and trails that are open to motorized recreation in Colorado.

And now Stay The Trail is growing.

We need you to be a part of the community that is actively helping to improve trails and educating others about responsible use. You can be part of a statewide network of volunteers who are ready to be examples for others and help improve OHV trails on public lands. Visit our web sites to learn more and for useful information and detailed trail maps.

StayTheTrail.org | StayTheTrailAmbassadors.org

GREAT SHOTS



Getting Work Done



The Adventure Portal on the trail



Washington State



On The Beach of Lake Superior



Rock Therapy Fun!

**Send your great shots to
pics@tacomamag.com
or post them on our Facebook Page**



September 2013 • Volume 3 • Issue 3

