### **CHOOSING A MANUFACTURER**







MAGAZINE

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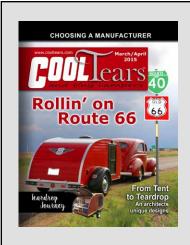
March/April 2015

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**Editor** Kevin Cross

### **Contributing Authors**

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# LETTER FROM THE EDITOR



## A New Addition to our Team!

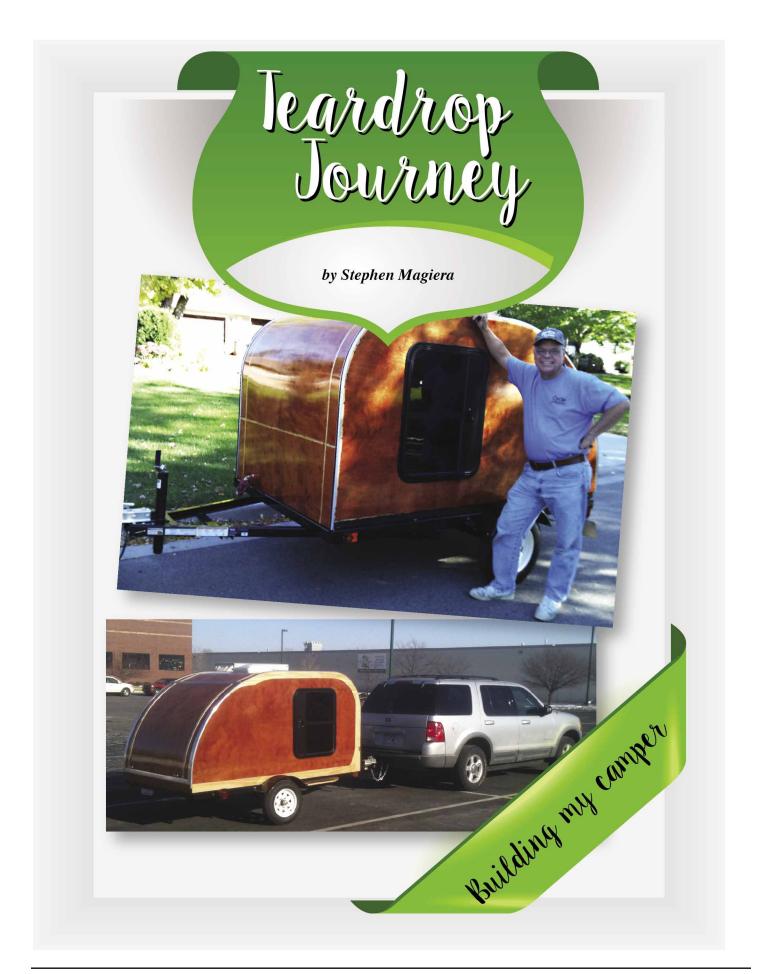
We are proud to announce a new member of the Cool Tears and Tiny Campers team. Recently Sarah Tucker was brought on board to help with a variety of things beginning with the layout and design of the magazine. In fact, she put together this entire issue! She has jumped in with great enthusiasm and is already contributing a lot to the publication.

Sarah has been doing graphic design work in a variety of markets for over 13 years and has worked for other publications including local newspapers. I am very enthusiastic about what Sarah will bring to Cool Tears and Tiny Campers Magazine and I am confident that we will all enjoy the result.

Kevin Cross

Editor

Cool Tears and Tiny Campers Magazine TM



Lhave always loved camping; probably because I had five brothers and sisters and needed time for myself. When I was 18, I outfitted my first camper—a 1960 four-ton StepVan—with a crudely constructed bunk bed and an old army cook stove.

Fast forward 48 years when I saw my first teardrop go by on the highway. I said to myself, "I have to have one!" I jumped on the Internet and looked at hundreds (and hundreds) of pictures and decided I could build my own, no problem. Aluminum or wood? Tough choice but I like the look of wood so my teardrop is going to be a "woody." I figured that a teardrop is just a well-built wood box on wheels. constructed the same way I would make a piece of furniture. I pride myself in being able to make just about anything out of wood carving trees into sculpture, turning old barn board into desks and twoby-fours into chairs. I've said to my wife a thousand times (quoting Austrian poet Konstantin Jireček) "I have done so much with so little for so long, that I am now qualified to do anything with nothing." That is, until I started building my very own teardrop. To date, I've spent over 500 hours and \$3,800 constructing it and I've loved every minute of it! It has, however, become an obsession.

The idea of a lightweight, easy to tow camper that I can store in the garage and pull around the driveway by hand (I've always had trouble backing things in) was appealing to me. So here's how I began: I ordered a 5x8 foot utility trailer online from Northern Tools; it arrived via UPS—assembly required! Side note: Northern Tools is using one of my teardrop pictures on their website under customer responses. I chose a 5x8 foot trailer because my wife said that size would fit a queen size mattress; that extra foot in width cost me twice as much money and time to build—if only I'd known that going in. So, with no detailed plans in hand (after all, I can remember everything I saw on-line, right?) I began construction. I started by building a 5x8 foot frame out of 2x4s and covered

that with a 4x8 sheet of foot ½" plywood. I put an<sup>1</sup>/<sub>4</sub>" sheet of plywood on underside ofthe frame covered and the bottom of that with roofing cement protect from the road. I pre-wired the 2x4 floor frame with threequarterinch PVC pipe for access to run the

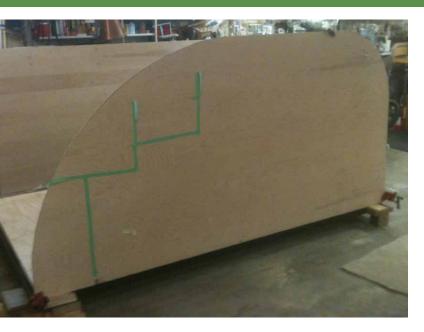




wiring later. The 2x4 frame also provided me with space for hard foil-backed foam insulation.

After fitting the teardrop floor onto the trailer, I then removed it and put it on my four wheel dolly so I could move it around the garage to the work areas where my tools are.





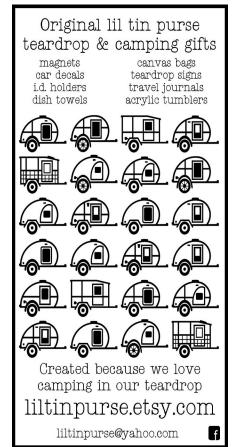
Now for the side walls. I attached the side walls(1/2" birch plywood) to the floor and bracing ribs I built from 2x2s and 2x4s.In hindsight, I should have used 3/4" plywood and insulated the sides asthe doors I purchased needed one and 5/8" thickness to fit correctly.

The roughin framing for the twoway fan and Starlitestargazer window were also done at this time; this process went quickly. Now that I've passed the point of no return, it was time to order some parts. I bought most of my supplies (trim, doors, windows, fan, struts, etc.) from Vintage Technologies in Union City, Michigan.

They had everything I needed, as well as a whole new bunch of challenges to go with every one of them!









Frank Bear, the owner of Vintage Technologies (www.teardroptrailerparts.com), became my new best friend; he gave me several pointers to help me through my build. While I did find some diagrams on the internet that helped me determine spacing and what size things should be, they were sometimes confusing. Frank gave me all the rough opening measurements over the phone so I could continue working while the parts were being shipped.



There have been several challenges that stand out more than others; one in particular was cutting the curved struts to support the galley deck lid. I glued two pieces of <sup>3</sup>/<sub>4</sub>" plywood together to achieve a one and <sup>1</sup>/<sub>2</sub>" thickness for the five struts I needed. I tried several methods of cutting the curved struts; I tried using a saber saw, Sawsall, router and even a band

saw. After several failed attempts, I found the best method was to use a seven and 1/4"circular saw normally used to cut in straight lines. In this case, I cut along the curve but compensated for the back end of the blade that will also be cutting because of the curve, a good 1/4" more will be cut depending on the radius or arc of the cut. Once all the pieces were cut, I clamped them together. With a wood blade called "Bad Blade" and an angle grinder, I ground all the struts simultaneously to create the uniform curves needed to match the radius of the galley deck lid hatch side seal. I glued and clamped 1/4" birch plywood over the struts, similar to an airplane wing. (Img 7912, 8036) I did the same for the inside top and ceiling, wetting the wood at the

















radius so it would bend easier. To secure the plywood, I used ¼" crown staples at the ends to hold the ¼" plywood in place. The staples will later be covered with trim.

Once the body of the teardrop was constructed, I stained it Gunstock (by Minwax) and sealed it with three coats of Spar varnish. It's starting to look like the piece of furniture I had envisioned. The outside trim is, obviously, custom made to fit and glued in

place with a rubber caulking made by Tremco® Dymonic FC. I used clear outdoor window and trim caulking to seal every edge of the trim, then revarnished.

Finally! The day has arrived for my first test drive! My wife drove so I could ride inside the teardrop to see how it handled. It rode like a dream! But there is still more work to do...a lot more!





To save space, I put all my wiring, fuses, battery, and power converter in a trailer tongue box, also purchased from Northern Tools. I added venting for the

converterand battery and also added a male outlet box for incoming landline electricity that powers the converter and 110 volt circuits.



The galley and interior cabinets were my next challenge. Every square inch of space had to be accounted for and made useable, not to mention fitting the interior cabinets under a curved roof space. The wardrobe cabinets are the same birch plywood stained to match the exterior. I used a piece of acrylic to simulate glass in the wardrobe doors, which I sanded to get a "frosty" look. The galley is designed with a swing-out table that doubles the size of the built-in counter. The double-burner cook top is useable in its drawer but can also be set on top of the counter.

For easier entrance to the sleeping area, I added short running boards to both sides of the teardrop. This required welding a brace on to the frame and covering it with plywood, stained and varnished to match. I also added grab handles at each entry door (milled from the wood of my apple tree) they also double as an umbrella holder.





# ...life by the 'Drop

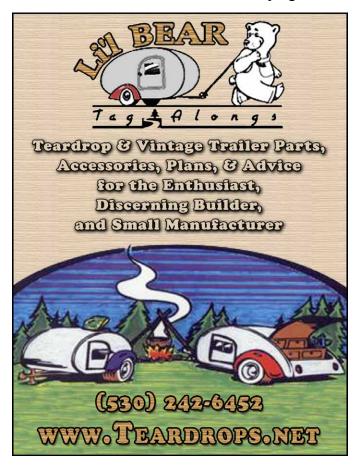


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I decided to use two,4" thick foam pieces for the mattress. They are flexible enough to bend along the hinge lines of the two "recliners" I made out of three-eighths inch plywood which is double hinged to accommodate any desired position. It's really very comfortable and folds down flat for sleeping.





My first "real" road test was, of course, to the local building supply, as I always seem to need something from them. It's only five miles from home but all freeway. I wasn't alone anymore—there were trucks and other full-grown vehicles—waiting to mess up my "fresh-out-of-the-womb" baby.



I was nervous; it felt like I traveled 50 miles instead of five! After I parked, strangers cameup to me asking, "What is that?" "Where did you get that?" "How can I get one of these?" Naturally, I had to open it up and explain all of its features to total strangers in the parking lot as if this was an RV show. Wow! Did that ever feel great! Even while driving off, someone in the other lane flagged me down to stop and ask questions. He didn't care that I was holding up traffic.

When I first started thinking about building a teardrop, my plan was to buy a 5x8 foot utility trailer with a ramp, build the teardrop and slide it on and off the trailer as needed. How cool would that be—one



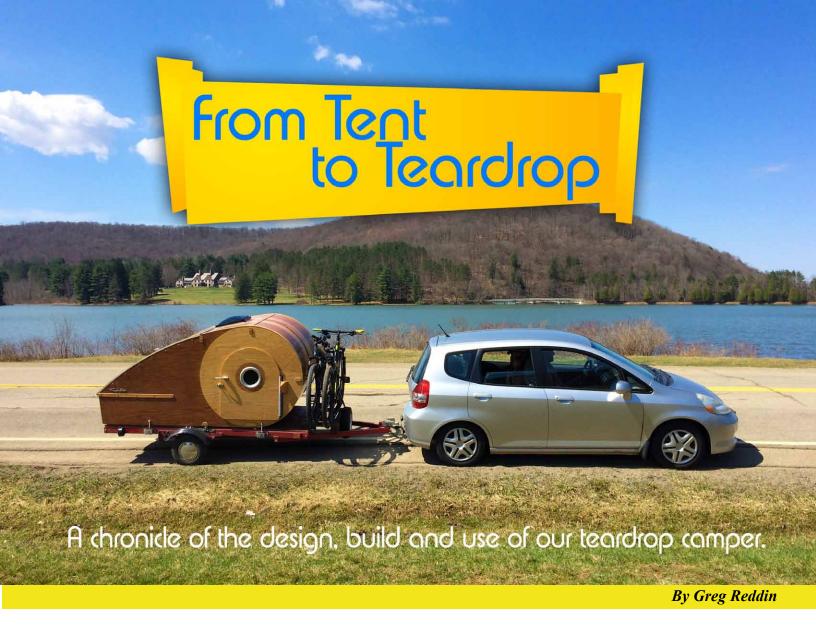


trailer registered in Minnesota for life doing multiple functions. When I wasn't camping, I would have a utility trailer to haul more stuff! A perfect way to beat the system instead of owning multiple trailers, or so I thought. Have you ever tried to push and pull a 400 pound box on and off a trailer? Bad idea. Long story short, I now have two trailers—one dedicated for the teardrop, the other to haul parts for the teardrop!

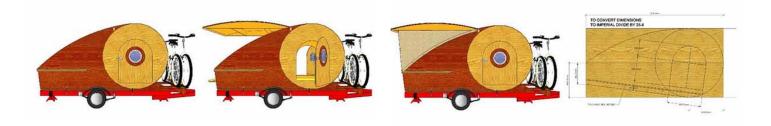
There are a few little details left to complete and it will be ready for our first "official" camping trip in May. However, I expect to take several maiden "shakedown" cruises before then when the country-side starts calling me and the weather cooperates.I haven't weighed it yet, but the total weight should be about 800-900 pounds, including the trailer.

This was truly a labor of love and I can't thank enough those folks along the way that helped me and answered many, *many* of my questions. If you decide to build one yourself—and I think you should—have fun and enjoy the process. And remember "you'll never be lost if you don't know where your going"





atalie and I have been tent campers for many years, we still do wilderness canoeing/camping. For us the realities of sleeping on the ground are that we don't actually get much sleep, but being outside in nature was/is worth the discomfort.



12

A few years ago a couple of things happened that directly led to the idea of designing and building a camper. First, we bought a gently used fuel sipping Honda Fit as our family car, a smart car rounds out the remainder of our fleet of vehicles – we are committed to doing pour part for environmental preservation. We later bought a trailer hitch receiver to support a bike rack, it came with a ball hitch that sat around our garage for a few years. While Spring was blossoming all around us here in the Niagara Peninsula of Canada, 2013, I was thinking about a project that could keep me occupied, outside and creative on the weekends. We had seen a T@B camper somewhere in our travels and that must have been the inspiration for an idea how to make use of that ball hitch that I kept seeing in our garage.





As owners of a small car, we wanted to be sure not to get drawn into the seemingly necessary vehicle upgrades that seem to go hand-in-hand with owning a camper. We applied our minimalist requirements for motor vehicles to this camper design, keep it small, keep it simple, keep it light. I'm not sure that my skills as an architect were necessary for a project like this, however, I think they helped in the detailing and execution of the build. The first decision was to build the camper/cab on a flatbed trailer such that it could be removed fairly easy for use of the trailer for hauling, although we have never yet hauled amything except the camper.

Harbor Freight, across the river in Buffalo, had a busted box of a folding trailer kit that was sold to me for \$220 – weighing 230 lbs. when assembled. With the trailer assembled and ready I decided on a design profile that I liked, and the materials, using Sketchup, 3D modeling software that I use as a tool for designing buildings, I just applied it to working out a camper design. In addition to the design being small, simple and light, the other criteria was that the materials had to be readily available at our local building supply retailer. The sides and floor are ½" oak plywood, good both





sides, and the curved nose and roof was achieved with 1/8" verola pine plywood. The design also included the purchase of plastic rounded replacement fenders, aluminum hurricane hinges, aluminum marine portholes with removable bug

screens, a roof ventilator, a detachable camping tarpaulin, and chrome baby moon wheel covers as accessories. After about 8 weekends of building, Natalie and I went for our first weekend camping trip, September 2013.

The entire camper weight is 505 lbs, it is 4'1" wide, 8' long (of which 6'8" is flat), and costs





about \$1,200 in materials, including the trailer, and \$360 for the porthole windows. Since our first camping trip, I have added a few pieces of wood trim. I had a friend 3D print my signature that I painted a chrome finish and secured to the sides and tailgate. Our camping does not include a lot of cooking, so the typically included galley kitchen was never part of the project. The fabric enclosed pop-up hatch back was an idea that came later and by Spring 2014 we added that feature to the setup. We have been enjoying every

opportunity we can to spend the weekend in our local Provincial, State and National Parks. We sleep very well in our cozy camper, even when sharing space with our dog, who likes being with us, but is not a fan of camping.

The architect in me had to do more designing. I have two other teardrop design plans that are just waiting for someone to build. By taking the initial design and pushing it a bit further, the plans now include more headroom, better aerodynamics and different detailing. If you have any interest in building these designs please contact Cool Tears and they can pass on our info to you!









I'm sure
many of you
remember the
song or even
the TV show
about Route
66. It has always
been something
I've thought about but
never thought I would

"Get Your Kicks on Route 66"

to see, let
alone drive.
A few years ago
my wife Debbie
and I bought a
1940 Ford street
rod. I was excited
about a new hobby,
she wrote it off as
"midlife crisis".





We had taken a few short trips in the old car but were looking for something more. Route 66 came up as a possibility. After doing a little research we decided that would be number one on our bucket list.

In checking with a few trip itineraries that included some questionable hotels, the topic of camping came up. We had done tents and a popup camper when our two girls were little. While driving one weekend to visit our daughter I saw a Little Guy Silver Shadow on the side of the road. We stopped to look and decided something like that would be fun to take on the trip. It had a look that would go great with our old car.

I began doing research on what other teardrops were available. On a walk through our neighborhood my wife and I saw a smaller







teardrop in the backyard of a home and stopped to talk with the owner. "Ace" was a wealth of information about the different clubs, events and specifics about camping life in a teardrop. He told me about a company that was in a nearby town if I wanted to see other styles.

That's where I met Frank Bear from Vintage Technologies. He sold complete trailers, parts and kits. I was looking to save some money, thought I was pretty handy and had the time so I went with a kit.

It took several months to build, mainly because we had a very cold winter and I was working in an unheated garage. The fun part of the build when I needed extra hands, was working with my friend Jim Mills and my grandson Keagan. Building our own allowed us to personalize our trailer just as we wanted.











We decided to go with a subtle Route 66 theme. We found several Route 66 decorations; door pulls and converted a Route 66 lamp to DC. We designed and had a custom decal made for the kitchen lid. It says "The Foley's Route 66 Bed & Breakfast". My wife informed me that on this trip she was on vacation too. She would make the

bed and we were going to have toast or cereal for breakfast, the rest of the meals we were eating out.



We began our Route 66 adventure from our home in Portage MI, then to Chicago for the official starting point and on to LA California. It was the best road trip we had ever taken. Think about it driving 2400 miles from Chicago to LA for the most part on a two-lane country road.

The scenery was amazing. There were hundreds of small towns with their historic buildings, diners, hotels and gas stations. Sad to say some





the towns were just shells of buildings and old signs for hotels left vacated when the super highways bypassed them.

The best part of the trip was the people we got to meet along the way. Not only US citizens, but also people from all over the world who were traveling Route 66 as part of their vacation. With the combination of old car and old style teardrop camper we were never without someone to talk too. Small town America is alive and well.

In all when you add in a side trip to Ft Worth TX

and another Bucket List trip from LA to the Redwood Forest on Pacific Coast Highway 1 we travelled a total of 7123 miles in just under 3 weeks. I can't think of a better way to spend a vacation with your best friend.

Back to the song theme, how many of you can say you actually were "Standing on the corner in Winslow Arizona"?



It's a great country, get off the main drag and see some of it.





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By Jay Taylor

fter our 2013 family camping trip, we knew we needed something more than a tent and found teardrops as the ideal solution for us. The next journey was to figure out whether we wanted to build or buy a teardrop. Once we decided to buy, we needed to figure out a budget and then went through the arduous process of trying to determine which manufacturer had the right teardrop design and quality that we wanted in a trailer.

We looked at a number of different manufacturers online as well as some in person. There were trailers in various price ranges from \$8,000 up to \$20,000. No small amount of money for sure. so careful examination was required before I was ready to lay down such a large sum of cash on a trailer. Now, you may be thinking "but you can get a brand new travel trailer for around \$10,000" so it naturally begs the question, why so much for a teardrop? Unlike typical travel trailers, most of the manufacturers listed above do not mass produce their trailers, they are often built especially for you when you order. Having a trailer built just for you allows you to get it exactly how you want it, whether it is no frills or fully loaded. In addition to the custom nature of a build, like any other product, the more you spend, the higher the quality of materials used, the more

amenities you get and the more attention to detail (think labor intensive) put into the building of your teardrop. For example, to protect the trailer from wood rot and moisture, Camp-Inn uses marine grade plywood, not standard plywood or press board. They sand and finish all the wood 3 times and seal all the ends of the plywood. This is a labor intensive process that ensures the trailer will last for years to come.

We had already heard great things about Camp-Inn's customer support and after seeing one of their trailers in person, we were stunned by the quality of the build. The fit and finish was truly impressive and a demonstration of their expert craftsmanship. Now, I will say that some of the other trailers were also extremely well made and would have easily been a good choice but none of

them had the Raindrop design which combined with the quality was what ultimately sold us on the Camp-Inn.

The design and layout of the Camp-Inn 560 Ultra offered more room. The extra space up front that serves as a couch and gives us a place to sit out bad weather and watch TV or Movies in comfort. It also serves as a place for our dog to sleep as she can be quite the bed hog.

Additionally as proud new grandparents, we knew at some point, we might have a grandchild or two sleeping in the trailer with us on family camping trips (like our Thanksgiving trip in 2015, woohoo!). We can't wait to take this little angel camping with us.

After much deliberation, we settled on Camp-Inn for the trailer. Now came the hard part of waiting and saving to make our purchase. While it only takes them 4-5 weeks to make a trailer, Camp-Inn typically has a 4 to 6 month waiting period due to all the orders they are getting in for these fine products. With Thanksgiving fast approaching, we were resigned to the fact we would be in a tent one more year.

We had considered buying used, but these trailers rarely come up for sale and when they do, they sell fast and are nearly the cost of a new one. In the 8 months we were looking, we never saw one Raindrop model go up for sale.

So, we scrimp and save to raise the money for our trailer and with a bit of good luck in not having to fix the foundation on our house (that's a story for another time), we finally have everything together. It was a Thursday in October 2014 and we are ready to place our order. We get our quote from Cary at Camp-Inn and get ready to send our deposit when a Raindrop goes up for sale on

the Unofficial Camp-Inn Forum. I immediately contact the seller as these things go fast...it was a 2009 model with lots of great features but not quite what we wanted. It's now Friday and so again, I get ready to send out our deposit when low and behold, another Raindrop gets posted on the forum. Again, I reach out to the seller, this one was even nicer, a 2010 model. I like it but it was all the way out near Camp-Inn's office so I decide once again to place my order on the following Monday. And as luck would have it, 2 more get posted over the weekend. Keep in mind, for 8 months, nothing and now over the course of 3 days, 4 trailers get posted for sale. Both these units are exceptionally nice, one in Vermont (30+ hour drive one way) and the other in Florida.

Now, I am really starting to go through the emotional ringer trying to figure out what to do. Every time I think I have the answer, another wrench tossed into the mix. Throughout this ordeal, I had been speaking with Cary at Camp-Inn, he knew each of these sellers and their trailers and was advising me on each trailer. He knew what I was looking for and knew whether each trailer would be a fit. After careful consideration, he recommended the trailer in Florida. To me, this speaks volumes about the integrity of Camp-Inn. Instead of just trying to sell me a new trailer, they recommended buying a used one.

After speaking at length with the seller, we finally agree to meet and buy the trailer if all checks out.



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The sellers were some great people...a retired couple that bought the trailer specifically for a trip to Alaska and then were planning on selling upon their return. However, they liked it so much they kept it for one more year and only selling because they were losing their indoor storage location. The seller agrees to save me some driving time and meet me part of the way so I'm thinking great, he iust knocked 6 hours off my drive time and saved me some gas money too. He then calls me back the next day saying he always wanted to visit Dallas and would be passing through my area on the way so how about just meeting me out here...I can't believe my luck. So we meet







him at a campground about 40 minutes from my house and we love the trailer. Before I can even hand him the money he profusely apologizes for how dirty the trailer is and explains he hit every rainstorm on the way out and knocks \$1K off the already agreed price and proceeds to throw in all the gear he had for camping.

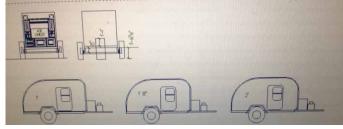
I felt truly blessed to be able to meet such a generous couple and to own such a wonderful trailer. While it was a lengthy ride to get here and quite a emotional roller coaster, I can say it was truly worth the wait and it made our 2014 Thanksgiving camping trip so much more joyful.



am a firefighter with Santa Barbara City Fire and a general contractor. The question we get asked the most about our build is "Why?" My son was 18 and he was going to Utah to be a river guide. When I asked him where he was going to stay in a town with a population of less than 1000, he said he would just sleep in a tent. After some discussion we came up with the idea of a teardrop, as it would be easy for him to tow behind his Tacoma.

We started looking at teardrops. The commercial ones were too expensive and/or didn't have all the options he would want or need. The homemade ones were OK but most of the ones we looked at were built on Harbor Freight frames. Not that that was bad, my daughter works for them, but we knew he would be going off road and we needed something that was much stronger. I also didn't like the square tubing most people were using because of the concern of it rusting from the inside out. I

wanted to use steel channel. I had just built a flat bed trailer for my truck so why not start with an axel? What better way for my son to learn how to weld? I drew up some plans on my CAD and away we went.





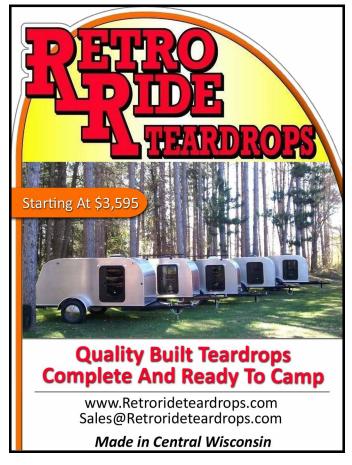




My wife didn't understand all the excitement and still refers to it as the "coffin". We made a list of what we wanted such as hot water, sink, stereo, USB chargers, shower, stove, LED lighting, solar panels, full size tires (they are the same as on his truck so that he has yet another spare), 2 doors, aluminum skin, etc. We purposely didn't install a refrigerator, as it would take up a lot of room and use a lot of power. An ice chest is what we use on river trips so why not in a teardrop. We also wanted it to be well insulated and strong enough to stand on and take a beating. We decided on 6' x 10' as that gave us enough room for him to

live but not so big that he couldn't tow it. After the frame was built that became our workbench for building the sides. Once the sides were built, it was time to go to our lake house for a few weeks so I loaded everything on the flat trailer and we assembled it while on our vacation. I wanted to make a lightweight rear hatch so I had some square aluminum arched and welded one together. In hindsight it would have been way easier to use wood but it is definitely strong. We used prefinished plywood for the inside, which saved us a lot of finishing. Every connection was glued and screwed for strength and it sure





### **FATHER-SON BUILD**

worked. It is very solid. We even made the fenders out of 3/16" diamond plate so you could sit or stand on them. Of course all of this heavy-duty materials has a price. I was hoping for #1500 but it came in at #2000 but is balanced perfectly. Not bad for guessing where to put the axel.

It was an amazing project that we are both very proud of. It took about a year to build and it still has a few small things to get done. Funny thing about the whole experience. The river company my son got the job with provided room and board so he ended up not using it but he is planning on getting plenty of use out of it soon. What my son and I both learned was amazing. Who knew how hard it was to figure out what size gas springs were needed to hold up the rear hatch. We ended up just ordering 3 different







spring weights and sending back what didn't work. Grainger is great about that. We were able to incorporate many of the things we wanted and were even able to add a few more, like under floor storage in the frame of the trailer. I just want to build a bigger trailer for my wife and I but she says after missing 3 months work due to a table saw accident (a cabinet door kicked back and broke my thumb) she says she would just rather buy one.



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