

CRAWL

The Hardcore Offroad Magazine

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From suspension technology to engine performance, everything has taken leaps forward thanks, in part, to series like Ultra4 and builders inspired to take things a few steps beyond the backyard builds of yesteryear. It's inspired a new breed of trail rig that, for once, seems to excel at nearly everything. Scott Cunningham at Addicted Offroad, a Toyota-focused shop in Northern Colorado, set off on a build to suit all of his needs a few years ago. He calls it project 'Always Smooth.'

The build started with the idea that he wanted to be able to race it should the opportunity ever arise and eventually evolved into a family wheeler first and foremost. Sure, it is absolutely a race capable rig, but wheeling with friends and family is what he is really about.

Scott chose an EVO2 EX chassis from Bent Fabrications. Tim Chiles, the owner of Bent, cranks out some nice pieces of offroad goodness and it was a perfect platform for what he wanted to build in a buggy. Once link geometry was calculated suspension mounts were placed; the upper link mounts allow for three positions for squat/anti-squat adjustment. A rear halo was added to account for a rear seat for kids, a push bar, and winch mount added amongst other tube work to suit Scott's needs.....See the Full Article in Issue #55 [BACK ISSUE](#)

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Owner	Scott Cunningham
Hometown	Windsor, Colorado
Vehicle Type	Toyota FJ40 based buggy
Builder	Scott Cunningham, Addicted Offroad

Chassis

Frame / Chassis Design	Bent Fabrications , Georgetown, Kentucky
Frame / Chassis Materials	2 x 3 inch, .120"
Cage / Cage Material	1.75" by .120" DOM
Overall Wheelbase	112"
Overall Length	151.5"
Belly Pan Clearance	19.5"
Overall Height	71.5"
Wheel Track Width	84"
Overall Weight	4,000 pounds

Drivetrain

Front Suspension / Type / Materials	Dual triangulated 4-link, 1.25" lower Ruff Stuff heims, 7/8" upper
Front Sway Bar	N/A
Front Shocks	FOA Race Shock coilovers, 14" by 2.5"
Front Bump Stops	Fox 3" air bumps
Front Axle Housing	Diamond Axle
Front Differential / Locker	Yukon Grizzly
Front Ring & Pinion / ratio	4.88:1
Front Differential Cover	N/A
Front Axle Shafts	RCV 30-spline FJ80 Birfields Diamond Axle custom length inners
Front U-Joints	N/A
Front Drive Flanges / Hubs	Diamond Axle chromoly drive flanges
Front Brakes	Toyota FJ80
Front Steering Setup	Trail Gear full hydraulic steering with Hellfire Steering knuckles/arms
Front Driveshaft	Addicted Offroad .250" wall custom
Rear Suspension / Type / Materials	Dual triangulated 4-link, 1.25" lower Ruff Stuff heims, 7/8" upper
Rear Sway bar	Currie Antirock
Rear Shocks	FOA Race Shock coilovers, 16" by 2.5"
Rear Bump Stops	Fox 3" air bumps
Rear Axle Housing	Diamond Axle 9.5"
Rear Differential / Locker	Yukon Grizzly
Rear Ring & Pinion / Ratio	4.88:1
Rear Differential Cover	N/A
Rear Axle Shafts	Diamond Axle full float chromoly
Rear U-Joints	N/A
Rear Drive Flanges	Diamond Axle chromoly drive flanges
Rear Brakes	Toyota minitruck disc brakes and calipers
Rear Driveshaft	Northern Colorado Driveline 1410 to Toyota 9.5"
Rear Steering Setup	N/A
Tire Make / Size	Maxxis Trepador 40-13.50 x 17" competition compound
Wheel Make / Size / Bolt Pattern	Trail Gear Creeper Locks 17 x 8.5"

Powertrain

Engine Make	Lexus 1UZ-FE V8
Engine Displacement	4.0 liters
Engine TQ	270 lb/ft
Engine HP	300 hp
Engine Induction	Normally aspirated
Engine Modifications	2UZ headers, cold air intake, '95+ fuel injectors
Batteries	Dual custom U.P.S. batteries
Radiator / Fans	Griffin with Spal fan
Air Intake	AEM Dryflow
Exhaust	2.5" custom crossover to 3" to the rear, Thrush muffler
Transmission Make	Aisin Warner AW4/A340 combo
Transmission Adapters	N/A
Transmission Cooling System	Hayden 26k cooler
Torque Converter	Zach's Transmission , Longmont, Colorado
Transmission Shifter	RA Designs/Winters Shifter
Transfer Case(s)	Advance Adapters Atlas 4.3:1
Fuel Containment	Jaz 22 gallon , Alltech Motorsports baffles, custom internal pickup

Body / Interior

Body / Body Panels	Addicted Offroad skins
Body Modifications	Aluminum skins
Skid plate / Material	Bent Fabrications skid
Painter Name	Addicted Offroad
Hood / Grille	Twisted Customs FJ40 56" hood, Addicted Offroad FJ40 grill
Floors / Firewalls	Aluminum
Dash / Gauges / Switches	Autometer and Addicted Offroad

Dash / Gauges / Switches	
Steering Column / Wheel	Speedway quick release wheel
Pedal Assembly / Cutting Brakes	Wilwood dual 3/4" master cylinders, CNC cutting brakes
Seats / Harnesses	PRP Daily Driver seats, PRP 32" rear bench, PRP harnesses
Electronics	Chassis wiring – Zané Wewerka / Engine harness – Tweak'd Performance
Lights Interior / Exterior	20" and 44" LED light bars, Ruff Stuff rear light panel
Safety – Fire Extinguisher	Two 3 pound fire extinguishers
Winches – Front / Rear	Front 8,000 pound
Extras	

ALWAYS SMOOTH

A Yota Based TMR Buggy out of Addicted Offroad

Words and Photos by Tim Magee

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Scott chose an EVO2 EX chassis from Bent Fabrications. Tim Chiles, the owner of Bent, cranks out some nice pieces of offroad goodness and it was a perfect platform for what he wanted to build in a buggy. Once link geometry was calculated suspension mounts were placed; the upper link mounts allow for three positions for squat/anti-squat adjustment. A rear halo was added to account for a rear seat for kids, a push bar, and winch mount added amongst other tube work to suit Scott's needs.

From the get go, the drivetrain was, obviously with Scott being a loyal Toyota guy, going to be Toyota based. And let's face it, as owner of Addicted Offroad and working on Toyotas for years he knows what makes them tick. The drivetrain features a Lexus 1UZ-FE 4.0L V8 out of a '92 Lexus SC400 with less than 30k on it. Scott chose it for a few reasons. One, it only weighs about 75 lbs. more than a 4-cylinder 22re. Two, it is capable of making decent power at around 300hp. And three, it is a Toyota product! It really is a solid choice, no matter how you look at it, and something great to see in a sea of LS-based builds.

It took a little work to get everything to fit properly, but that is part of the fun of building a buggy. These engines were not engineered to fit between the upper links of a dual triangulated 4-link suspension! To clear the upper links, the oil filter needed to be relocated from its front lower block location and the alternator was also relocated. Other under the hood magic includes an ECU that was mounted inside an ammo can to protect it from the elements. On a tube under the hood we even found a VIN tag, it is registered as a 1986 4Runner and is street legal in Colorado.

The transmission is an A340/AW4 hybrid. The custom torque converter uses the flex plate side off the A340 and the spline side from the AW4 with a stall rate of 2500. The bell housing is also A340, but the rest is all AW4. At the back, Scott went with a 4.3:1 Atlas II. With the drivetrain sorted, the blank canvas of a chassis was ready for firewall, floor, and skins featuring an FJ40 based grill bezel and fiberglass Twisted Customs FJ40 grill.

Diamond Axles are the most obvious choice for a buggy like this. Brian Ellinger, the owner of Diamond, is one of the most competent people in the offroad industry and builds some solid units, on top of being a fellow Toyota diehard on the front range of Colorado. Toyota 9.5" based Diamond housings were used as a base. The front uses a 9.5" third member with 4.88:1 gears, RCV 30-spline birfields, and Diamond Axle Chromoly inner shafts and drive flanges, and Hellfire knuckles and steering arms.

The rear is a full float housing, with Diamond Axle chromoly shafts and drive flanges. Built for the tight and tough rocks, he runs Toyota mini truck brakes with cutting brake control. All of this is more than stout enough to handle the traction put down by the 40" sticky Maxxis Trepadors.

'Always Smooth' on the rocks may seem like a far-fetched idea if your mind is caught up in, as Scott calls him, "Keith Stone". But this is about a rock buggy and not your favorite 16-ounces of snow-capped mountain goodness. Scott wheels the hell out of this rig nearly every weekend and the proof was in the first set of red label Krawlers that hardly lasted half a season.

The name, to me, signifies the smoothness of suspension whether crawling through rocks or ripping through the desert. It is the smoothness and throttle control attributed to proper tuning and custom torque converters built for our application. It's the clean lines of a chassis, the quality of fabrication, and the thought that went into each part or aspect of the build. Project 'Always Smooth' can smooth out the often rough and rocky landscape we are accustomed to.

Crew, Jason Hensel of RCCrawler.com and Weston Blackie of Trail Jeeps) Tim was approached by CRAWL and offered the opportunity to work with the magazine.

It was, and still is, a dream to get to capture the hardcore offroad lifestyle and the amazing people and vehicles that come along with it. When not shooting photos for CRAWL he shoots for manufacturers and energy companies throughout Colorado, as well as hopping in a helicopter at least once a month for aerial photography projects.



About Tim Magee

Director of Photography As a kid, Tim was obsessed with John Deere tractors and heavy equipment. He never quite outgrew the fascination with trucks and eventually figured out that a Jeep was an awesome way to get away from things and enjoy the backcountry near his home at the foot of the Rocky Mountains. After attending the Art Institute and earning a degree in photography, Tim focused his photo skills on anything industrial. After shooting photos at a few XRRR races (thanks to Aaron Dusenbury of Carnage Crew, Jason Hensel of RCCrawler.com and Weston Blackie of Trail Jeeps) Tim was approached by CRAWL and offered the opportunity to work with the magazine. It was, and still is, a dream to get to capture the hardcore offroad lifestyle and the amazing people and vehicles that come along with it. When not shooting photos for CRAWL he shoots for manufacturers and energy companies throughout Colorado, as well as hopping in a helicopter at least once a month for aerial photography projects. Contact: [Website](#) | [Facebook](#) | [More Posts](#)