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CONVERTING  
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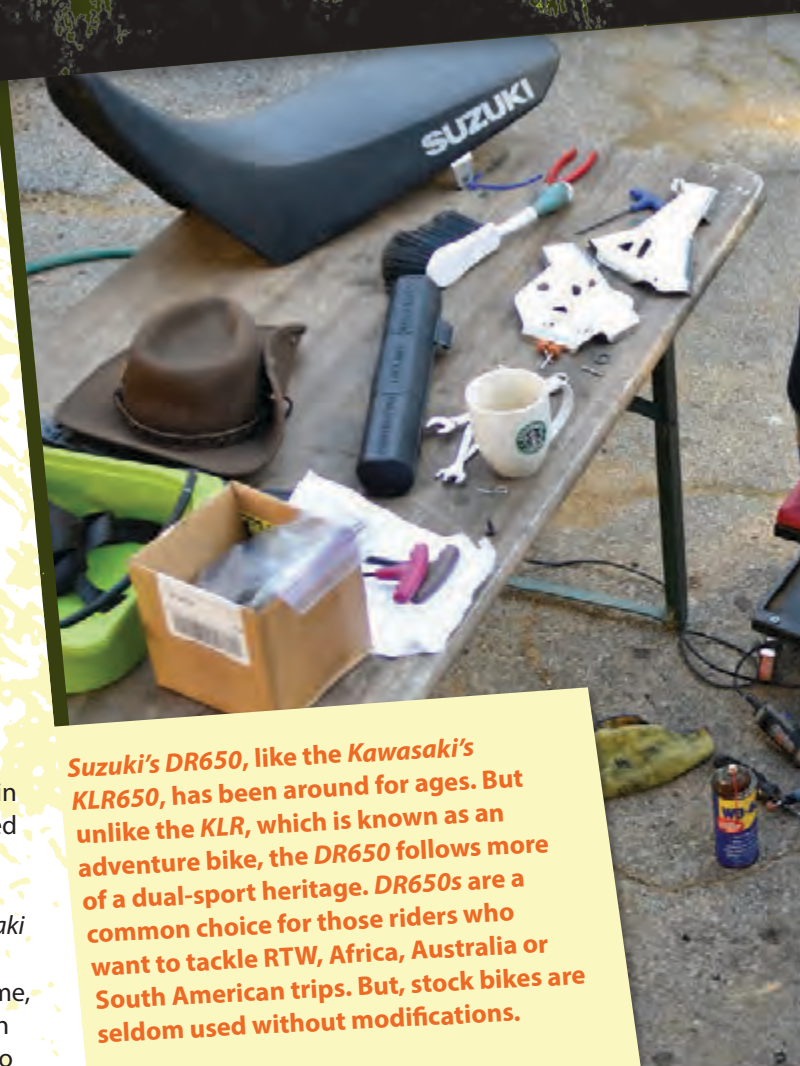
**OH** how we love to tinker, modify and attempt to improve our ADV bikes. Out of the box, Suzuki's venerable *DR650* is a relatively pedestrian dual-sport, not particularly suited for RTWing or schlepping a rider with lots of gear across continents. But with a little help from the aftermarket and some wrenching skills, that can be remedied.

So why consider a motorcycle that's been more or less unchanged since 1990? *ADVmoto* keeps tabs on bikes that have made their way around the globe, and a good number of them are Suzuki *DR650*s—there must be a reason. Put it down to a minimalist design that's proven to be both highly functional and reliable: air-cooled, single cylinder, single-carb, mechanically simple and easy to repair (or *bodger* fix in a pinch) with easy access to new and used parts anywhere in the world, relatively lightweight, uses low octane fuel, gets ~50 mpg, sells for a bargain (~\$6,000–\$6,500 new and ~\$3,500–\$4,000 used), and is supported by a HUGE aftermarket. And one more thing—it's actually fun to ride on- and off-road.

In some ways the *DR650* is comparable to the ubiquitous *Kawasaki KLR650*, but its far more off-road worthy, and also has a reputation for being one of the most reliable bikes ever built in its class. To some, simplicity is the bike's strength, especially if the idea of dealing with a sophisticated onboard computer network isn't your thing—not to mention the potential of costly repairs of a more complex bike that, alone, could easily eclipse the purchase of a *DR*.

If there's an issue with the *DR650* it's that it's disguised as a dual-sport runabout that, at first blush, has little appeal to the adventure crowd. You could say that the only thing wrong with the *DR650* is that Suzuki never got around to re-packaging this extremely worthy machine for long distancing. Although that's a pity, it's also an opportunity. With such a brisk aftermarket making everything imaginable for this bike, you can easily ruggedize and customize the *DR* into one of the best general-purpose adventure bikes available anywhere—and still save a bundle.

Suzuki's *DR650*, like the *Kawasaki's KLR650*, has been around for ages. But unlike the *KLR*, which is known as an adventure bike, the *DR650* follows more of a dual-sport heritage. *DR650*s are a common choice for those riders who want to tackle RTW, Africa, Australia or South American trips. But, stock bikes are seldom used without modifications.





ADVMOTO'S "LOST FOR A REASON" PROJECT BIKE

# INTO an ENDRUEO TOURING BIKE

by Paul H. Smith



We'd like to especially thank *Suzuki* and the aftermarket companies who contributed to this project bike for their support of the "Lost for a Reason" (AKA: "LFAR") charity.

**ADVMoto** has been behind it all the way, and it's fast becoming the North American ADV community charity of choice.

**LostforaReason.org**





## THE LOWDOWN

The good folks at Suzuki HQ provided a stock donor for this project with the idea of **ADVMoto** transforming their dual-sport into an adventurer. However, we intentionally left the engine alone, and concentrated on strengthening the rest of bike for the roads of the world, long distance rider comfort and carrying capacity. Although there are plenty of engine mods available, it's so ridiculously reliable we didn't see any need to alter it.

We'd also like to thank *Suzuki* and our aftermarket sponsors who got behind using the project bike to increase awareness of Ron Grace's "Lost for a Reason" ("LFAR"), the charity that's so popular with North American adventure riders.

We ended up doing a lot more to the bike than was necessary to accomplish the goal of making it ADV worthy. However, this "kitchen sink" approach will at least give you some idea of the many upgrade options available.

## THE SEAT

No secret to *DR650* riders is the necessity to replace the stock seat. Like most aftermarket parts for the *DR*, there are many options. We went with *Seat Concepts* because of their exceptional quality, inexpensive reskinning kit that transforms it into an all-day-er.

*Seat Concepts'* Robert Lightfeldt does the heavy lifting for a reskinning over a stock seat pan. For long distance riders, an improved seat is a must. The folks at *Seat Concepts* provide an extremely comfortable and durable, yet inexpensive solution.

**ADVMoto** spent a year trying out and testing a large array of modifications. The idea behind this project bike was to experiment with different aftermarket products to determine the best ways of improving on the rock solid platform of *Suzuki's DR650*. Read our report and decide which modifications are most relevant to you.





## GAS TANK & FAIRING

The stocker gas tank holds about 4 U.S. gallons. That's not bad, but typically runs dry before 200 miles. Amongst the upgrades available we liked *Safari's* design the best because of its construction, weight distribution and capacity (~8 U.S. gallons). Another reason is *Safari's* rally fairing that bolts onto the tank, effectively moving weight off the handlebars and extending the windscreen farther away from the rider. The stock windscreen is attached to the handlebars and too close to the rider, tending to "punch" the rider when standing. *Safari's* rally fairing also gives you a dash to add gadgets, aux lighting and controls, as well as room to mount a much more effective windscreen. And that's where *Madstad Engineering* joined in, by custom designing a windscreen and mount, as well as etching the *LFAR* and *ADVMoto* logos onto it. *Madstad's* large windscreen upgrade significantly reduces wind/rain buffeting.

Also stepping up to help get the word out on *LFAR* was *LA Car Wrap*. *Safari's* fairing comes "in the white" and required a paint job. Our friends at *LA Car Wrap* gave it a very cool industrial-strength makeover while adding to the bike's visibility.

## ARMOR, RACKS AND LUGGAGE SYSTEM

One of the big debates these days is whether to go with a hard or soft pannier option. We went with soft for several reasons: On a world trip the bike will often be dropped and soft bags make superior "landing cushions." Unlike aluminum panniers, they don't need to be pounded back into shape when dented or crushed. And with the *DR's* shorter frame, it's easy to get an ankle wedged and mangled between a footpeg and an aluminum pannier. We went with *Wolfman Luggage* because of many years of prior experience and the rugged versatility of their products. Because fuel capacity was covered, the other important liquid is water, especially for extended camping or long, hot climate rides. For this, *Wolfman* included an adaptable rack bracket and the innovative *RotopaX* system—allowing one or two gallons of aqua to be easily stowed. The racks were another matter. It was difficult to find a well built and sturdy set. Plus, we needed a system that would work well with *Wolfman's Rocky Mountain Saddlebags*. *Barrett Products* in Australia impressed us with their armor-like quality that substantially strengthens the rear end of the bike. Another Australian firm, *B&B Off Road*, supplied us with their tough and extremely well made skid plate, BIG rear rack and side frame armor.



**Above** On the road testing along the Central California coastline. The *DR's* transformation into a comfortable long-hauler was truly remarkable.

**Below** Many of Paul's mods were to better accommodate his height when standing on the pegs.







**Above** EPM Performance Imports' Hyperpro rear shock made all the difference in the world.

**Below** Warp 9's heavy duty rim and spokes, with enlarged brake disc available with/without the DR's speedo mechanism in the hub.



Most of the steering and dash components were modified to support easier standing up and improved instrumentation.



## SUSPENSION

Those who've followed my reviews in the past know my pet peeve. Until recently, most bikes came with spongy, soft, and pogo stick-like suspension that begs upgrading. We put out the word and EPM Performance Imports came to the rescue with their Hyperpro line of monoshocks and progressive fork springs. Their monoshock made all the difference in the world to rider comfort and the handling of the loaded bike. And a simple swap of the fork springs cured what ailed the front end, too.

## WHEELS AND BRAKES

Although stock wheels do the job, dented and warped rims, as well as broken spokes, are common on long trips. Tougher rims, bigger disc brakes and stronger spokes are expensive upgrades, but worth considering. I'd never worked with Warp 9 Racing before, but I was duly impressed with their quality and craftsmanship. Warp 9 also supplied a brake and chain armor as well as other important components (see below).

The lesser known tire company, Vee Rubber, has been a loyal sponsor of **ADVMoto** since we returned to a print magazine a few years ago. They allowed us to sample several of their offerings to determine which tires would be best suited to the task ahead. From full knobbies to 80/20s they got us through some of the toughest environments that even extensive testing in Death Valley could throw at us.

## CONTROLS AND DASH

I'm a tall rider, and was determined to work stand-up riding comfort into the redesign. Twisted Throttle, ProCycle, and Warp 9 joined in as solution providers. Bar risers were provided by Warp 9 and Rox Speed FX to push the standing height limit. And we added Pro Moto Billets' Fastway Adventure footpegs (prototyped on our bike), along with ProCycle's footpeg mount lowering kit, to transform the DR into THE most relaxing and controllable bike imaginable for off-the-seat riding.

Twisted Throttle supplied Barkbusters VS handlebars and VPS handguards as well as a set of innovative AdMore LED turning light strips that attach to the handguards. We also adapted their Denali D2 winglights to the Safari fairing, providing an extra measure of night riding and oncoming car safety. Meanwhile, we used Warp 9's clutch and brake levers for a more comfortable feel and shorter throw.

On the gadget front, Trail Tech supplied their Vapor gauge, replacing the rudimentary instruments of the stock bike. Beyond an option, the Vapor supplies other much-needed data such as tach, engine temps, and more. And **Black Dog Cycle Works** provided their rugged throttle control to ease hand cramping on those long slab riding days.



## OTHER GOODIES

Anyone wanting to mod their *DR* needs to start their project with the guys at *ProCycle*. They're *DR* specialists and THE resource for many invaluable upgrades to our project bike. See their list of components on the accompanying table. (*ProCycle* also supplied an industrial strength clutch and pumper carb to be the subject of a future review.)

A must-have component is the *SuperBrace*. It stabilizes the bike's forks just above the fender and man, does it improve the bike's ride! And, *Twisted Throttle* provided another option that I wouldn't go without—a center-stand. Even though it adds weight and can get in the way off-road, it just makes maintenance and bike loading/unloading so much easier.

*Racetech Electric's* resident genius, Evan Grist, rebuilt the *DR's* stator and supplied a bigger regulator to support extra lighting, gadgets and heated clothing. The new dash provided room for adding switches, power ports and lights. But that also meant plenty of extra wires running everywhere (something we're still trying to neaten up!). *Twisted Throttle's* *PowerHub2* took a little finessing, but we

squeezed it in under the seat. Without their hub the battery would be a rat's nest of wires. Speaking of batteries, our longtime supporter *Shorai*, came through with a solid-state battery and a special computerized charger. I'm their No. 1 fan and have been using their batteries since they opened for business, and wouldn't go back to a lead-acid style for any reason.

*Barrett* also supplied one of their substantially smaller and lightweight replacement exhaust canisters. Another option I won't leave home without is Ned Suesse's *Doubletake Mirrors*. *JNS Engineering* supplied a heavy-duty aluminum chain guard and welded-on sidestand foot enlarger—a no-brainer feature that should be on every adventure bike.

*Motion Pro* was their usual big help with miscellaneous components, including their high-end clutch and throttle cables, spring pulling tool, and braided fuel lines with connectors. And, *DSA Concepts* supplied new white plastics to replace the original "invisible" dark grey versions.

The stock *Suzuki DR650SE* we began this project with.



## TIP:

Use high grade stainless nuts, bolts and washers whenever possible. Steel parts rust FAST, and you'll quickly appreciate the extra costs of doing it right.

## CONCLUSION

If you're looking for an inexpensive barebones machine that's rugged, built to last, easy to fix, and can handle just about any terrain the planet can throw at it, look no further than *Suzuki's DR650*. The upgrades we've shown in this article are our endorsed options, but if budget is an issue all you'd really need are a set of racks and luggage. However, if your requirements call for a bike that's better outfitted, then we recommend exploring what the aftermarket has to offer. The sampling provided here is the tip of the iceberg of what's available, but these products are all tried and true.

We're not quite done with the project bike yet, so stay tuned for more product reviews in upcoming issues or on the *ADVMoto* website. Also note that the bike is slated to begin its multi-year world trip starting in the fall of 2015.

Look for the *ADVMoto "Lost for a Reason" DR650 Project Bike* at events around North America. [SuzukiCycles.com](http://SuzukiCycles.com), [LostforaReason.org](http://LostforaReason.org) **ADV**

*Extra special thanks goes out to those who went beyond the call of duty to help make the ADVMoto "Lost for a Reason" DR650 project bike possible. Honorable mention goes to: Eric Hougen of Wolfman, Kevin Tanis of Warp 9, Gary Latimer of Vee Rubber, Kevin Nixon of Twisted Throttle, the incomparable Drum Evans of ProCycle, Wayne at Safari Fuel Tanks, Mark Stadnyk of Madstad Engineering, Ron Grace and his wonderful family for their relentless efforts to aid the REZ families of "Lost for a Reason," and Larry Vandiver, Jim "Capt'n" Kirkland, Steve Bortolenedi and Frankie Garcia of Suzuki for their support of this project.*

B&B Off Road (BBOffRoad.com.au)	
side plate & mount kit	\$14
rear rack	\$135
rear luggage plate	\$67
frame guards	\$99
Barrett Products (BarrettExhausts.com.au)	
exhaust	\$375
pannier racks	\$329
Black Dog Cycle Works (BlackDogCW.com)	
throttle control	\$160
Doubletake Mirrors (DoubletakeMirror.com)	
rally mirrors	\$83
EPM Performance Imports (EPMPerf.com)	
Hyperpro 460 monoshock	\$400
Hyperpro progressive fork springs	Call
Garmin (Garmin.com)	
zūmo 350LM	\$550
JNS Engineering (JNSEngineering.com)	
sidestand foot*	\$16
chain guard	\$45
LA Car Wrap (LABanners.com)	
custom paint job of fairing	\$550
Madstad Engineering (Madstad.com)	
custom windshield	Call
Motion Pro (MotionPro.com)	
spring hook	\$16
T3 Slidelight cables	Call
braided fuel lines and quick disconnects	Call

ProCycle (ProCycle.us)	
footpeg lowering	\$150
billet aluminum throttle tube	\$40
ProGrip 714 rally grips	\$11
fender brace	\$30
choke button	\$18
digital volt meter	\$50
Tuff Lites turn signals (with diode kit)	\$73
locking gas cap for Safari tank	\$33
engine armor	\$90
secondary breather filter	\$15
Tool Tube with locking plug	\$50
DT1 air filter	\$30
Pro Moto Billet (ProMotoBillet.com)	
Fastway adventure footpegs & fit kit	\$250
Racetech Electric (RacetechElectric.com)	
40W stator upgrade	\$300
Rox Speed FX (RoxSpeedFX.com)	
Elite pivoting 2" risers	\$97
Safari Fuel Tanks (SafariTanksUSA.com)	
8-gallon gas tank	\$589
rally fairing	\$365
Seat/DSA Concepts (SeatConcepts.com)	
rebuild seat kit	\$160
replacement rear fender and body panel plastics	\$255
Shorai (ShoraiPower.com)	
lithium iron battery	\$190
battery charger	\$85

SuperBrace (SuperBrace.com)	
SuperBrace fork brace	\$165
Trail Tech (TrailTech.net)	
Vapor instrument panel	\$130
Twisted Throttle (TwistedThrottle.com)	
Denali D2 lights	\$360
Denali PowerHub2 module	\$120
Barkbusters VS handlebars	\$94
Barkbusters VPS handguards	\$120
AdMore LED turning signal strips for Barkbusters	\$79
SW-Motech center stand	\$170
Vee Rubber (VeeRubber.com)	
tires and inner tubes—VRM 109 (knobs); VRM 193 (90/10) and VRM 163 (80/20)	Call
Warp 9 Racing (Warp9Racing.com)	
billet wheels (3.5" rear)	\$~900
clutch and brake levers	\$90
1" bar risers	\$40
reusable oil filter	\$38
rear disc brake guard	\$110
lower chain guide	\$60
various engine access covers	Call
Wolfman Luggage (WolfmanLuggage.com)	
Rocky Mountain saddle bags & accessories	\$442
Expedition dry duffel (large)	\$139
Enduro tank bag	\$95
Enduro fender bag	\$28
RotopaX and Pawnee plate attachment hardware	\$249

\*Special thanks to Steve's Plating (StevesPlating.com) in Burbank, CA, for welding the JNS Engineering foot onto the sidestand.