

TESTED

# PROJECT QUAD

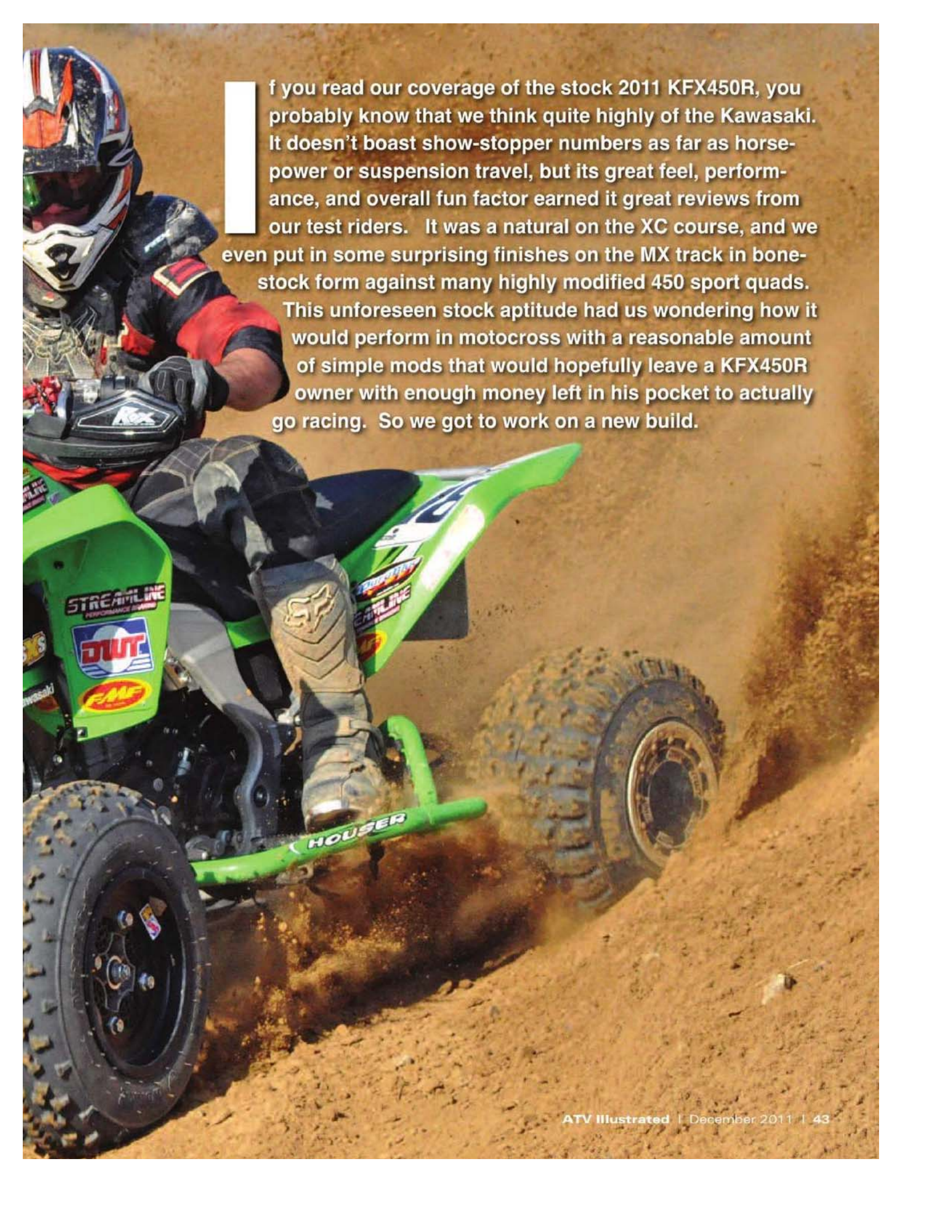
## 2011 KFX450R, Part II

*Let's get ready  
to MOTO!*

Photos & article by Pete Bengel

Kawasaki's KFX450R is one of the most comfortable, easy to ride hi-performance sport machines we've ever tried. With a few simple modifications we made it even better, and Brian blasts through a berm to show us what it's got.



A rider wearing a helmet and protective gear is shown from a side profile, leaning forward on a green Kawasaki KFX450R quad bike. The bike is equipped with large, knobby tires and has several sponsor stickers, including 'STREAMLINE PERFORMANCE SYSTEMS', 'DWT', 'EMF', and 'HOUSER' on the front fender. The rider is in a desert environment, and the bike is kicking up a cloud of dust. The text is overlaid on the right side of the image.

If you read our coverage of the stock 2011 KFX450R, you probably know that we think quite highly of the Kawasaki. It doesn't boast show-stopper numbers as far as horsepower or suspension travel, but its great feel, performance, and overall fun factor earned it great reviews from our test riders. It was a natural on the XC course, and we even put in some surprising finishes on the MX track in bone-stock form against many highly modified 450 sport quads. This unforeseen stock aptitude had us wondering how it would perform in motocross with a reasonable amount of simple mods that would hopefully leave a KFX450R owner with enough money left in his pocket to actually go racing. So we got to work on a new build.

# KAWASAKI KFX450R

Don't think for a second that this project was low-budget using cheap parts. We could have picked "Joe Blow" parts and it definitely would have fit into the definition of "budget build," but we wanted this to be a no-nonsense build with some of the best parts that the ATV industry has to offer. Where the budget part comes in is that we didn't go overboard with a bunch of "bling bling" parts that wouldn't significantly add to the total package. Every part or modification on this project had to be functionally effective as well as cost effective.

## Goesintas and Goesouttas

The first aftermarket part that graced our KFX450R project was a matter of necessity. After our stock air filter literally fell apart at the seams after only a couple of cleanings, we replaced it with a No Toil foam filter. The No Toil filter is well built and stands up much better to repeated cleanings. On top of that, they come pre-oiled with the perfect amount of oil right from the manufacturer. Oiling foam air filters has to be one of the worst jobs in the sport, and it's nice that the folks at No Toil have us covered at least for that first time. The filter also comes with a pair of disposable rubber gloves to keep your hands clean while installing your new filter or for that first cleaning. Not only is it well constructed, the No Toil filter flows much better than the stocker.

In addition to our new air filter, we also opened up our airbox a bit. We removed the rubber air horn from the airbox lid and drilled a series of neat holes farther forward in the lid. The goal with our extra holes was to

keep them looking good and also allow us to easily cover them with duct tape if we ran into really muddy conditions. We considered an aftermarket airbox for our project to eliminate the restrictive Kawasaki intake boot and allow the KFX to breathe much easier. Ultimately, though, we chose to stay with the stock part because it offered much more protection to the filter. Many aftermarket airbox setups leave the filter exposed to a lot of elements where it will be bombarded with mud, water, or anything else that gets thrown by the tires.

To match our increased air intake, we called on FMF Racing to handle our exhaust needs. They rec-

ommended their Power Bomb stainless steel head pipe and PowerCore 4 muffler. We really like the FMF systems for a few reasons. Their styling, fit, and finish is excellent, and they make great power without being obnoxiously loud! FMF is one of the relatively few companies who

are building racing exhausts with a more responsible sound output. Yes, there is probably a system somewhere that puts out more peak HP than the FMF, but when it comes to useable horsepower without excessive noise, the FMF is definitely at the top of the class. On our KFX project, the combination of the Power Bomb head pipe and the PowerCore 4 gave us a healthy in-



The KFX has a much more aggressive feel thanks to the easy modifications we bolted on yet it's still easy to ride. Every rider who tried it loved it!



This is why we chose the Douglas Wheel Technologies Rokout rear wheels and G2 front wheels. In aggressive cornering they keep the tire on the bead!



\$20k dream-build; we wanted it to be extremely functional without more than doubling the cost of the ATV.

One of the things we wanted to accomplish with

our choice of A-arms was to have adjustable caster to help get the Kawasaki's twitchiness under control, and one of the best choices out there is Houser Racing's Slicast system. The Slicast system lets you quickly change your caster with a simple cam style adjuster built into the top ball joint mount. This would work out perfectly on the front end of our Kaw, so we chose Houser's regular travel +2.25" A-arms to get us out to MX width. The Houser A-arms are EXCELLENT quality and are built with needle bearing pivots for ultra-smooth movement throughout their travel, and the automotive style ball joints have great range of motion for bind-free performance and great durability. For \$675, this system is likely the best value in the industry!

To keep from finding the limits of our stock brake lines with the Houser +2.25" front end, we installed Streamline Performance Braking's 3-line extended brake hoses. The Streamline hoses are plenty long enough to get to the ends of the Houser front end, and they give us much stronger braking performance than stock. We also installed a 7-position rebuildable steering damper from Streamline Performance to keep the feedback from the race track under control.

When it came to a shock builder, we wanted someone who could coordinate and work well with our Houser Racing front end, and that led us to Hygear Suspension out of Lansing, NY. Hygear is perhaps best known for their performance suspension work in the snowmobile world, but they are steadily growing their ATV line as well. In addition to offering Fox or Custom Axis shocks, Hygear Suspension offers several options to rework your stock shocks. Our "Pro Package" rework was

custom tailored to our needs and consisted of hard anodized and Teflon coated bodies, longer shafts for extended travel and decreased frame bottoming, revised rebound needles, custom MX valving, and Twisted spring kits.

To get our rear wheels out to the 50" range, we chose a Durablu Eliminator 2+2

axle along with a new sprocket and brake hub. If there was ever a manufacturer in this industry who has truly stood the test of time, it has to be Durablu! They have been building performance axles since 1980, long before most of us even considered racing an ATV! The years of experience, countless championships, and the best warranty in the business make the Eliminator axle tough to beat. It lets you ride with confidence. Also, since we didn't figure we'd need a parking brake on the MX track, we added Durablu's parking brake block-off plate to our rear brake caliper.

## Hook Me Up!

If you've been around ATV racing as long as we have, you probably remember when the choices for tires were rather limited. Fast Trekkers or Turf Tamers on Douglas Blue Label wheels were the norm back then, and finishing a race with all 4 tires inflated was a rarity! Today's high performance ATVs place more demands on tires and wheels than ever, and DWT knows more about those demands than anyone.

We chose DWT's MXF V2 tires on ROK-OUT wheels for the front of our KFX450R, and MXR V1 tires on G2 beadlock wheels for the rear. The combination of front and rear tires really supports the great handling characteristics of our KFX project and lets us charge through any situation without worrying about whether we're going to dig in or wash out. The V2 fronts steer incredibly consistently in pretty much any condition, and the V1 rear tires provide incredible forward traction while staying firmly planted side-to-side. Test rider Bryan Scribner got what we thought was a bit wide on a long, loamy berm several times during our photo shoot without even thinking of backing off on the throttle. "These tires are awesome! I can't believe I could hold that line at that speed," were the

crease in bottom end and midrange power, while allowing us a few extra revs on top. In stock form, the KFX's power is smooth and strong, but rewards a roll-on throttle application. With the FMF system, we have noticeably more "punch" and the power builds much faster out of the corners, especially after a quick stab at the clutch.

Equally as important as the horsepower gains, our FMF exhaust system did for our KFX450R what Jenny Craig did for cougars. The OEM Kawasaki head pipe is a great piece and it is very light, but the muffler is bulky and weighs a ton! The Power Bomb header doesn't seem to save us much as far as weight, but the Power-Core 4 muffler is a nice, clean looking part and feels like it is easily half of the weight of the stock muffler. Both the FMF head pipe and muffler have a much bigger diameter for a huge increase in flow.

## Suspension and Chassis: Building on a Positive

One of our favorite things about the stock KFX450R was its overall great handling. With the exception of a tendency to be a bit twitchy in the front end, we really loved the way the Kawasaki made its way around the tracks and trails. But this build would be for the motocross track, and for that we needed to get the KFX widened out to the 50" neighborhood and bring some extra travel and plushness to the stock KYB shocks.

When it comes to front end mods, things can get mega-expensive in a hurry! We didn't want this project to end up being a



# KAWASAKI KFX450R

first words out of his mouth when he came off the track!

The ROKOUT wheels do a great job at keeping us from skidding (or worse, ending) to a stop due to stones in the front wheels, and the G2 reinforced beadlock wheels keep our MXF V1 tires from parting company even under the most aggressive cornering.

Performance goodies might be the first things that come to mind when you think about modifying your ATV, but you won't even be allowed to race without a few extremely important safety items: a tether kill switch and nerf bars. Houser Racing stepped up to the plate with their "Pro Bounce" nerf bars for our KFX project. We've used a lot of nerf bars over the years, but this system could very well be the best we've ever seen. They mount incredibly solid to the chassis with no tendency to flop around like a seagull's wings in rough terrain, they are extremely well built, and they look AMAZING! If that isn't enough, the wide, self-cleaning foot pegs actually have SUSPENSION! Houser uses a pivoting foot peg, and a rubber ball keeps the jolts from traveling up into your feet. At first it seemed like a bit of overkill, but the Pro Bounce foot pegs work great, and you would be amazed at how much energy they absorb! Houser Racing has taken nerf bars from being a mundane

safety item to being a functioning part of the ATV.

## Ride Impressions

The first thing that we noticed about our modified KFX was that a gearing change was definitely in order. Between the added power from the FMF exhaust and the shorter 18" DWT tires, we were shifting like we were riding a 125 two stroke, and we spent a lot of the time on the track tapped out in 5th gear. We went to a 15 tooth countershaft sprocket and that spaced the gears out much better and allowed us to make much better use of the Kawasaki's torque and midrange pull. The extra power and taller gearing made it easy to rail through a corner under power the whole way, where some ATVs with peakier power have us going from a bog to a WOT situation. It is very easy to be smooth on the modified KFX, and that will keep us stronger throughout a moto.

Out on the track at speed, our thoughts quickly turned to the suspension. Our Houser front end and Hygear suspension worked INCREDIBLY well! We adjusted our Houser SliCast A-arms to the 2nd position for more positive caster. Stability in rough terrain was now excellent, and turned responsively and precisely. The combination of DWT tires and wheels had our KFX tracking exactly where we wanted it at all times, and the traction was excellent with just enough slide in the rear tires

to be able to kick the back end out when needed. Our Streamline steering damper did a great job at keeping the bars in our hands, and we only had to use it on the 2nd setting which kept the steering effort to a minimum while taking a ton of stress off of our arms.

Many aftermarket shock companies claim that you can't get top-level performance out of stock shocks, and admittedly, we have ridden some real doozies when it comes to re-worked stockers. But what we found on our first ride with Hygear's Pro Package modified stock shocks was nothing short of amazing! Our shocks were plush, super controlled, and had excellent bottoming resistance! By the end of the day, we had only made four clicks worth of changes to our suspension - two clicks softer on the front and rear compression, and two clicks out on the rear rebound adjuster to correct a slight tendency to fly nose high. ALL of our test riders were amazed at the performance of these shocks and some actually preferred them over their high dollar aftermarket shocks!

As the number of laps increased and the track started to get choppy, another great feature of our KFX build came to light. We were amazed at the amount of shock that was absorbed by the suspension footpegs on our Houser Pro Bounce nerf bars. They keep a huge amount of energy from being passed into your feet, legs, and even your upper body! These footpegs are something we never would have thought about before,

The Hygear shocks easily soaked up big landings with no problem. We were impressed with them, and even riders who owned much more expensive aftermarket shocks preferred the Hygear.



We really like the longer HyGear shocks on the House Racing SliCast A-Arms. The shocks do a great job of absorbing impacts while the wider A-Arms let us corner much more aggressively. We also installed Streamline brake lines to match the wider A-Arms.

but now we don't want to ride anything without them!

### The Verdict

At the end of the day, each of our 5 test riders was very impressed with the overall MX performance of our KFX450R. The FMF powered machine makes a nice broad, useable power that is easy to ride and will not burn you out on the track. The comfort, balance and suspension of our modified KFX is excellent, and everyone was able to put in some very impressive laps regardless of how many laps they had already ridden on their own quad.

Most importantly, everyone was amazed at the level of performance we achieved with relatively modest modifications; that was precisely our goal with this project. These are all no-nonsense mods that anyone can do to their ATV and still have enough money left in the bank to actually take it racing!



To widen our rear end for better cornering we installed a Durablu axle. Douglas Wheel Technologies Rokout front wheels and G2 rear wheels mounted with their MFX and MFR tires definitely improved tire and wheel durability and handling.



Notice the wheel travel difference between the stock shock on the left, and the Hygear shock on the right. Which would you rather have in the rough stuff?

<b>HOUSER RACING</b> toll free: 877-646-3278	+2.25" Regular Travel A-arms with SIICast Pro Bounce Suspension Nerf Bars	\$ 675.00 \$ 475.00
<b>HYGEAR SUSPENSION</b> 607-533-7434	Pro Package Shock Mods	\$ 1299.99
<b>FMF RACING:</b> 310-631-4363	Power Bomb Stainless Header PowerCore 4 Muffler	\$ 199.99 \$ 299.99
<b>STREAMLINE PERFORMANCE</b> 909-987-4213	3-line Extended Brake Lines 7-way Rebuildable Steering Damper	\$ 89.99 \$ 179.99
<b>DOUGLAS WHEEL TECHNOLOGIES</b> toll free: 800-722-3746 760-758-5560	Rokout Front Wheels G2 Rear Wheels MXF V1 Front Tires MXR V2 Rear Tires	\$ 86.95ea \$143.95ea \$ 79.95ea \$ 70.95ea
<b>DURABLU</b> 949-770-5533	Eliminator 2+2 Axle Brake Disc Hub Sprocket Hub Park Brake Blockoff Plate Tether Kill Switch	\$ 456.13 \$ 141.51 \$ 128.83 \$ 16.98 \$ 34.95
<b>PRO DESIGN</b> 714-534-0620		
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