

NEW 2020 POLARIS ATVs & UTVs

CCC
02968

Dirt Wheels

THE #1 UTV/ATV MAGAZINE

dirtwheelsmag.com

NOVEMBER 2019

PRO XP:

**FASTEST
RZR
EVER
181
HP**



**BANSHEE
PROJECT:
NOTHING LIKE
A 2-STROKE!**

**ELECTRIFYING
YAMAHA INVADES
MOUNTAIN BIKES**



**SPORTSMAN
XP 1000 S:
WIDER,
MORE TRAVEL,
MORE FUN**

**ALL-NEW
CAN-AM
SPORT
MAX**

**TIE DOWN
YOUR MACHINE
EXACTLY RIGHT
NEVER WORRY**

\$5.99

0 71486 02968 7

A full-page photograph of a rider on a blue and white racing ATV leaning into a turn on a dirt track. The rider is wearing a red and white helmet with 'Arai' and 'Duncan' logos, a blue and white jersey with 'EXR' and 'RIDE' text, and green and yellow gloves. The ATV is blue and white with 'flexx' and 'ROLL DESIGN' branding. The background is a dusty, brown dirt track.

PROJECT ATV

DR DESERT BANSHEE

Two-stroke bliss

By the staff of Dirt Wheels, photos by Pat Carrigan

Josh Row piloted the Duncan Racing Banshee expertly through corners. It has a lot of midrange power but is controllable.



□ The iconic Yamaha Banshee has found a place in the hearts of thousands with its two-stroke, twin-cylinder, fire-breathing engine. They scream and sing over dunes, rip through the desert and are even seen looping around racetracks and negotiating tight trails. After an amazingly long run, Yamaha eventually ceased production of the Banshee in 2006 for the U.S. market. That means there are a good number of YFZ350s on the used market. Duncan Racing (DR) offers

some of the best upgrades for the two-smoker and has helped put them on podiums throughout multiple countries, which includes Baja 1000 victories. Recently, DR was tasked with turning this Yamaha from old to gold with some of the best components in the industry.

IT BEGINS

Building a project ATV this labor-intensive is not a task for the feeble. It takes time, dedication and research. Or, you can trust Loren and Lenny Duncan and their many years of experience to put together a piece of art that shreds! They started by disassembling the machine down to the frame for a gusset kit and fresh powdercoat. Moving on to making

the Banshee a roller again, DR began installing the suspension. On the front end, Roll Design's LOBO II Desert kit found a home. The kit includes Roll's gullwing A-arm set, tie-rods, Stage 5 Elka long-travel shocks and Crown steel-braided brake lines and line clamps. Attached to the ball joints on the arms are Yamaha YFZ450R spindles and hubs. Doug Roll designed the kit specifically to work with the YFZ450R parts to improve the steering.

A Roll Design anti-vibe steering stem and handlebar clamp assembly were mounted up next. Attached to the stem is a GPR steering stabilizer. It makes a major difference in handling and steering. The owner of the Banshee requested a Fasst Company Flexx handlebar be installed to aid the suspension kit in making the Banshee's front end as plush, controllable and as comfortable as possible. Moving backward, a set of Roll Design footpegs were installed with Duncan's custom heel guards.



Duncan Racing built the Yamaha to ride in multiple types of terrain. A Fasst Co. Flexx handlebar helps soften the ride.

DESERT BANSHEE



The suspension is beyond smoother than a stock Banshee could ever perform. The Roll Design A-arms allow camber, castor and toe adjustments.

The rear of the Yamaha was next. A Roll swingarm was installed, along with an Elka linkage and a Stage 5 long-travel shock. The Elka shock has two compression adjustments, rebound, spring preload and a dual-rate spring setup. The fronts are similar. Next, an RPM Dominator II wide axle was run through the carrier and

tightened down. Eventually, both Sunstar sprockets were mounted up with an RK Excel chain, and Galfer brake rotors were installed as well. Duncan picked up Yamaha YFZ450R front and rear brake calipers and custom-made the rear mounting bracket to be able to install all three brakes on the 350. DWT front and rear beadlock wheels

were wrapped with STI Tech 4 tires and then mounted to the quad to make it a roller.

TOO MUCH TWO-STROKE

Before the engine found its home back in the frame, Loren Duncan placed it on his bench and cracked it open for a full rebuild. Every single OEM part gets cleaned, inspected and



An RPM Dominator II axle is one of the best upgrades in the business. Sunstar sprockets and an RK-Excel chain help drive the rear wheels.

Front and rear DWT beadlock wheels are wrapped with STI tires.

replaced if needed with their rebuild service. However, the owner of the Yamaha craved more power, but demanded that the engine remain reliable, so a Duncan Racing/ Paul Turner Racing National midrange kit was installed. The kit has PTR midrange pipes, DR Fat Boy silencers, porting, a PTR Powerhead, Pyramid reed valves, MasterFlow intake manifold, DR pre-jetted Keihin 34mm PJ carburetors, a jet kit, a K&N air filter setup with outerwear, spark plugs and technical instructions. Duncan Racing offers their tech support with the kit. That was just the start!

DR continued with their flywheel mod, Super Flow carb mods, a shift star mod,

their water pump drain cover and pump cover, an adjustable stator plate, as well as their billet stator cover. The engine gained a DR quick-change clutch cover mod and a billet gear shift lever. The clutch components consist of Hinson Racing's billet clutch basket with the cushion kit, but the clutch plates are Duncan Racing's C33 kit.

The highly modified Banshee engine found its way back in the frame before the exhaust pipes could be installed. The Paul Turner pipes were triple-chromed before installation, with DR's

custom pipe clamps included. Instead of utilizing the old stock radiator, Lenny mounted a CBR Performance radiator in the frame.

BUTTON IT UP

Once the engine was installed and the chassis was a roller, the rest of the components could be included on the build. Lenny took a 1/2-inch-thick poly skid plate from Campbell Racing Fabrication and modified it to fit perfectly under the Banshee. Moving on up, the air intake was installed with Pro Design's

Pro Flow air-cleaner flange. Once the IMS fuel tank and the Banshee plastics were mounted to the frame, the recovered seat with a Pro Top cover was clipped back onto the 350.

Before some of that occurred, a set of Baja Designs Squadron Pro LED pods replaced the

stock headlights. Duncan Racing didn't like the fact that the lights would dim and brighten with rpm changes, so they visited Ricky Stator for a high-output stator, a voltage regulator, a battery-dimmer assist to keep the lights bright and a switch to control them.

TESTING TIME

Combining some of the best parts in the industry onto one machine always makes us smile ear to ear. Upon sitting on the pristine build, we were mentally taken back to screaming up sand dunes and blasting berms on the two-stroke



Duncan designed an awesome graphics kit that complements the silver and chrome throughout the build.

DESERT BANSHEE

PARTS & CONTACTS

BAJA DESIGNS: (800) 422-5292, www.bajadesigns.com

Squadron Pro LED pods\$430

CAMPBELL RACING FABRICATION:

(435) 632-4902,

www.campbellracingfabrication.com

1/2-inch Skid plate/modified

by DR\$150

CBR PERFORMANCE: (951) 245-2900,

www.cbr-performance.com

Radiator\$399

DOUGLAS WHEEL & TIRE:

(800) 722-3746, www.dwttracing.com

Front and rear beadlock wheelset\$749

DUNCAN RACING: (619) 258-6309,

www.duncanracing.com

Engine rebuild\$695 + parts

DR/PTR National

midrange engine kit\$2395

Pipe chrome/triple chromed\$195

Pipe clamps\$69

Flywheel mod\$95

Super Flow carb mods\$60 each

Shift star mod\$50

C33 DR clutch kit\$199.95

Water pump drain cover\$39.95

Water pump cover\$99.95

Adjustable stator plate\$99.95

Billet stator cover\$350

Quick-change clutch cover mod\$250

Billet shifter\$89.95

Block-off plates\$14.95

Frame gusseting/sand blast

and powder coat\$799

Chrome front bumper\$199

Crown series steel-braided

brake line: rear\$39.95

Custom chromoly heel guards\$399

Graphics kit\$149

ELKA SUSPENSION: (800) 557-0552,

www.us.elkasuspension.com

Stage 5 front shocks: Included in RD kit

Stage 5 rear shock\$1,295

Linkage\$495

FASST CO.: (877) 306-1801,

www.fasstco.com

Flexx handlebar\$359.99

Bar pad cover\$10

GALFER USA: (805) 988-2900,

www.galferusa.com

Rotors\$119.95 each

GPR STABILIZER: (619) 661-0101,

www.gprstabilizer.com

V1 ATV damper kit\$549

HINSON RACING: (909) 946-2942,

www.hinsonracing.com

Billet clutch basket w/ cushion kit....\$250

MAXIMA RACING OILS:

(800) 345-8761, www.maximausa.com

PRO DESIGN: (714) 534-0620,

www.prodesignracing.com

Billet water pump shaft\$79.95

Pro Flow air cleaner flange\$69

RICKY STATOR: (760) 787-0094,

www.rickystator.com

Hi-output stator\$229

Voltage regulator\$24.95

Battery-dimmer assist\$69.95

Switch\$69.95

RK EXCEL: (760) 732-3161,

www.rkexcelamerica.com

O-ring chain\$85

ROLL DESIGN: (760) 731-5920,

www.rolldesign.com

Lobo II Desert front suspension kit\$3495

Anti-vibe steering stem\$399

Anti-vibe handlebar clamp\$99.95

Footpegs\$239

RPM: (928) 771-9363,

www.team-rpm.com

Dominator II axle\$389.99

STI TIRE & WHEEL:

www.stipowersports.com

Front 21x7-10 Tech 4 tire\$65.99 each

Rear 20x11-9 Tech 4 tire\$85.99 each

SUNSTAR: (937) 704-1462,

www.sunstar-braking.com

Powerdrive countershaft

sprocket 15T\$26.95

Rear steel sprocket - 38T\$45

WORKS CONNECTION: (530) 642-

9488, www.worksconnection.com

Clutch perch assembly\$149.95

YAMAHA

Spindles\$389 pair

Front hubs\$399 pair

Front and rear brake calipers\$875

ZIP: www.zipracing.biz

Pro Top seat cover\$199

monster years ago. The performance of this Duncan Banshee is beyond almost any you could ever pilot, though. That was made apparent the instant we rolled on the throttle.

The engine fired up extremely easy with one kick. The "Shee" takes off smoothly and is very controllable if you are easy on the throttle. Once you start raising the rpm and pushing the plush Roll/Elka suspension setup, a blip of the throttle into the powerband will break the tires loose in an instant and send the whole quad sideways. We tested the DR Banshee on a dry, desert-style motocross track, and we knew that if the STI tires could gain the proper traction, the Yamaha's front wheels would rarely touch the ground.

The suspension was smooth and impressive. Chop was easily soaked up, and blasting over whoops was made easy compared to most any Banshee you could pilot. The rear shock was a little soft, but quick tuning fixed that issue. Doug Roll's design of the Lobo II Desert suspension kit with the Yamaha YFZ450R spindles improved the handling and cornering characteristics of the 350. The quad was flickable and controllable. As

always, the Fasst Co. Flexx bar was the cherry on top to cut down on vibration and rough hits through the front end. We would have loved to take this build to some big sand dunes with paddle tires mounted up.

FINAL THOUGHTS

It was an epic experience for our staff to have some seat time on Duncan Racing's latest two-stroke build. Their Banshee could have found a home in a museum, but it was meant to be ridden. Its owner couldn't be happier to receive such an incredible build from these Banshee experts. We can still hear the sound of the throttle snapping open and the pipes singing two-stroke notes of pure happiness. Once again, great job on the epic build, Duncan Racing! □



A Duncan Racing chrome bumper and Baja Designs headlights were mounted to the front of the quad.



The Paul Turner pipes were triple-chrome-plated to resist abuse. Plenty of other parts were polished or chromed for that custom look.



The National engine upgrade kit is a combined effort from Duncan Racing and Paul Turner Racing. Duncan installed plenty more of their upgrades on the Yamaha.