

10 GREATEST ATVs OF ALL TIME!



APRIL 2023

DirtWheels

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**2023 POLARIS RZR
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**DUNCAN
RACING
TRX 450R
A REAL WINNER**



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ATV PROJECT

**JOSH ROW'S
DUNCAN RACING
HONDA TRX 450R**

Josh Row used his Duncan Racing-modified 2014 Honda TRX 450R to earn the BITD Pro ATV number-one plate. You can see the hits the CRF skid plate has deflected.

Born to dominate BITD desert racing

By the staff of Dirt Wheels

□ ATV pro Josh Row is a second-generation ATV racer. His father, Greg Row, traces his racing days back to the Honda glory days of ATC three-wheeler racing. Though Josh spent some time teamed with Dustin Nelson on Yamahas contesting the WORCS races, he is comfortable on a Honda after a literal lifetime of riding them.

This Duncan Racing International and Roll Design 2014 Honda TRX 450R is what Josh and his sponsors see as the ideal desert race bike. Since Josh Row is Best in the Desert's number-one ATV pro, it looks like the team of Josh and his sponsors know what they are doing.



ATV PROJECT

Duncan Racing made sure that this TRX 450R has the power to rearrange corners and hammer the extended speeds that desert racing requires.



THE QUAD

Why start with a 2014? That was the last year Honda built the TRX 450R, though it was available for a few years from dealers. Like many other riders, Josh took the opportunity to start with a late-model machine while they were still available.

After choosing the machine to use as a starting point, a three-pronged attack descended on the machine. Duncan Racing was in charge of the build and the engine modifications. Duncan looked to Roll Design and Elke for the suspension upgrades. Finally, protection and longevity modifications were made to make sure that this Honda could thrive on the brutal desert courses of BITD, as well as survive the epic mileage that each race requires.

ENGINE TIME

Duncan has a proven package for the TRX that starts at the top. The head is ported, and a high-tech SERDI machine cuts the valve seats oversized for the Big Valve kit. The valves are installed in high-performance guides with heavy-duty valve springs captured using titanium retainers. Last on the head modification list is a billet

cam-shaft.

On one side of the head is a Pro Flow filter kit to get clean air through the Keihin 41mm FCR carburetor (like those used on the final carbureted Honda CRF450Rs) and into the engine efficiently. On the other side of the head is a Fat Boy 4 complete stainless exhaust to evacuate spent race fuel.

Below the head is a stock displacement 13:1 custom JE piston. It isn't merely slapped onto a stock crank. The entire engine gets a precision rebuild that includes having the factory crankshaft trued.

Part of that bottom end rebuild and bulletproofing is a complete Hinson Racing Billetproof clutch. Every part of the clutch is machined from billet aluminum and hard anodized to make it as tough as possible.

In the search for performance, a Vortex X10 CDI box has 10 preprogrammed spark maps. That makes it brilliantly easy to fine-tune the engine package for various race and weather conditions. Keeping the engine lubricated and cool are a variety of quality Maxima products.

MAKE IT ROLL

Compared to some race quads, Josh

keeps a good number of the major parts that Honda blessed the TRX with. It uses the stock frame, subframe, swingarm and most of the stock body parts. Naturally, there are a lot of parts that are replaced in the name of race performance.

Starting at the front, that list of replacement parts starts with Roll Design Lobo front suspension with Roll-tuned Elka Stage 5 shocks. A Roll stem and big bar clamp are used as well. Keeping that stem and the steering calm is a GPR steering stabilizer. Much of the front brake and hub system are stock as well, but the wide, arched Lobo A-arms require longer Duncan Crown Series braided steel brake lines.

Above the front suspension is a Fasst Co. Flexx bar that helps the front suspension by using elastomers to add shock absorption to the handlebar itself.

Even though the swingarm and bearing carrier are stock, the axle is an RPM Dominator. An Elka Stage 5 shock is found in the back as well. It does use a different linkage than stock.

Connecting all these great parts to the engine are steel Sunstar sprockets and a quality RK O-ring chain. Steel



Top: Row stayed with a color scheme that is largely Honda red, and the overall look of this TRX is purposeful and battle-ready. This is a race-proven pro rig.

Bottom: Neither the Roll Design A-arms or the Elka Stage 5 shocks are cheap, but they are strong and vastly elevate the suspension capability. It takes hits yet has comfort.

sprockets are the way to go for desert use. Even so, Teixeira Tech sprocket and rotor guards are added for protection.

Mating with the stock plastic and seat are a larger IMS Products fuel tank with a dry-break connection. The dry break allows fast refueling with no spills. There is also a Duncan Pro Top seat cover for butt traction and a QuadTech hood for a great look. That look is furthered by Duncan SSI graphics and number-plate backgrounds.

Just as the chain and sprockets are for performance and longevity, the rolling stock is the same. The Maxxis tires look great and have the appropriate specifications for desert racing. DWT makes light and strong beadlock wheels that keep the tires on the rim no matter what.

Further guaranteeing that, the tires are filled with foam Tire Blocks. Tire Blocks keep the tire performing even if it loses all the air. Some riders claim that the tires are less bouncy, so handling remains more consistent and predictable as well.

FINISHING UP

A myriad of small details need attention to complete a solid race quad. Some of those peripheral parts

ATV PROJECT

Roll Design gets the credit for the Lobo wide, high-clearance front end and the three Elka Stage 5 shocks that ensure the quad can handle whatever terrain comes up.



Engine performance comes from intake, exhaust and Vortex CDI mods. Internally, there is more compression, big valves, porting and a cam. It runs hard.



Peek under the rear of the machine and you will see that it doesn't use a stock linkage but one specific to the Elka shock. The Roll Design nerf adds safety and peace of mind.

might make your race day, and leaving them off could ruin your year. Perfect examples are the toothy Roll Design footpegs and companion nerf bars. The pegs have massive boot traction and aggressive kick-ups at the outside edge to keep the rider's boots in place. If the rider has a boot bounce off the peg (how could that happen at a million through the desert, right?), the nylon web netting inside the nerf bar keeps that boot away from the ground and the rear wheel. The rear of the Roll nerf kicks up, so it doubles as a heel guard. Together, they add rider control

and rider safety.

For this build, plastic Powermadd flag-type handguards are fitted in front of the handlebar controls. They add a little crash protection, but they are to keep flying roost from hitting the rider's hands. Some desert races start early, and they add cold protection so team members can run a light glove for optimum grip.

At the front is a Duncan Racing bumper. It protects the delicate front-end parts, including the radiator, from impact damage. At the rear is a Duncan grab bar. The bumper doubles

as a grab bar as well. Together, they allow the quad to be righted, pulled around in tight situations or maneuvered into position to hit tricky lines.

Even small details matter. A Works Connection hour meter with a billet base mount keeps track of maintenance intervals and will keep the small device safe. While not seen in these shots, when Josh is racing the quad, it's equipped with Rugged Radios' moto-style communications. They allow the rider to alert the pits and pass news to other racers in case of delays of various types.



You can see how much the Roll Design Lobo front A-arms have widened the TRX and added travel. The Elka shocks and the Fasst Co. Flexx bar ease the landings.

POWER IN MOTION

Having the BITD number-one plate shows that Josh, his co-riders and this machine are up to the task of open desert racing. Most BITD course are shared with cars and trucks, so they are open and quite fast for a quad. Watching Josh ride for photos was truly an eye-opener. His TRX seems calm and controllable at stunning velocities. It is hard to believe that he can run that pace for hours at a time.

It doesn't matter if the track has

turns, ruts or straights with bumps, hops and even flight time, the speed is high. Despite that fact, when we rode the quad in the dunes at a recreation rider pace, it worked amazingly well.

Keep in mind, this was with desert tires and gearing! Much of the sandy terrain was chewed and chopped up by UTV tracks, and that is usually brutal on a straight-axle sport quad. With the Roll and Elka suspension, everything smooths right out at 25 mph and above. When you learn that threshold speed, you simply

stay aggressive on the throttle for an amazingly smooth ride. It helps that the GPR steering stabilizer doesn't allow the handlebar to get jerked away from you.

Any pro race build is going to hone certain aspects of performance to a high level. This quad is tuned to the highest level, but it remains a blast for the average rider on normal trails at a reasonable pace. But, you always know that warp speeds are there at the twist of the Motion Pro CRF-type twist throttle.

Desert racing would be very tough without the oversized IMS tank. It holds more fuel than stock. The color lets the rider see the fuel level, and the dry break speeds pit stops. □



2014 HONDA TRX 450R PARTS AND SERVICES

DOUGLAS WHEEL & TIRE:

www.dvtracing.com, (800) 722-3746
Beadlock wheels 4-piece set: \$699

Duncan Racing International:

www.duncanracing.com, (619) 258-6306

Fat Boy 4 complete stainless exhaust: \$649

Valve train HP4 kit: \$1695

Keihin 41mm FCR: \$799

Vortex X10 CDI: \$699

13:1 custom JE piston: \$235

Complete engine build: Price varies

Pro Flow filter kit: \$169

Rotor guards: \$150

Crown Series brake lines

Duncan Racing chrome F. bumper

\$249. Rear grab bar DR Pro Top seat cover: \$199

Number plates: \$199

Engine skid plate: \$125

FASST COMPANY: www.fasstco.com, (877) 306-1801

Flexx bar: \$399

GPR Stabilizer: www.gprstabilizer.com, (619) 661-0101

Steering stabilizer: \$525

Hinson Racing: www.hinsonracing.com

www.imsproducts.com, (909) 946-2942

Billetproof clutch kit: \$1259

IMS Products: www.imsproducts.com, (800) 237-9906

3.2 gal. desert tank w/ dry break: \$325

Dry break: \$225

Maxima Racing Oils: www.maximausa.com, (800) 345-8761

All lubricants: Varies

Maxxis Tire: www.maxxis.com

Razr 2 21x7-10: N/A

Razr XC 20x11-9: N/A

Motion Pro: www.motionpro.com, (650) 594-9600

CR Pro SE throttle kit: \$81.99

Quad Tech: www.quadtech-atv.com, (208) 417-1726

Hood: \$140

RK Excel: www.rkexcelamerica.com, (760) 732-3161

O-ring 520 chain: \$99.95

Roll Design: www.rolldesign.com, (760) 731-5920

Lobo A-arms: \$1695

Elka Stage 5 front shocks: \$2200

Steering stem: \$329

Big bar clamp: \$129.95

Elka Stage 5 rear shock: \$1895

Rear link: \$495

Footpegs: \$239

Heel guard combo: \$299

RPM: www.team-rpm.com, (928) 771-9363

Dominator II axle w/ OEM carrier: \$659

Sunstar Sprockets: www.sunstar-braking.com, (937) 704-1462

Steel front: \$26.95

Steel rear: \$45.95

Teixeira Tech: www.teixeiratech.com, (209) 833-9160

Rear rotor guard: \$174

Sprocket guard: \$69

Tire Blocks: (253) 973-5111, www.ridetireblocks.com

Front: \$270

Rear: \$300

WORKS CONNECTION: www.worksconnection.com, (530) 642-9488

Pro clutch perch: \$169

Hour meter w/ base mount: \$65