



BREAKING LIMITS

DH-R
EVO

TRP

DH-R
EVO



TRP



100 RACE DAYS LATER

DEVELOPMENT OF NEW TRP DH-R EVO BRAKES

A special TRP E-MTB disc brake project caught the attention of our sponsored rider Neko Mulally in the summer of 2018. He was keen to test the brake with the new 2.3 mm thick rotors (standard rotors measure 1.8 mm), and since Neko couldn't hide his excitement, his teammate Aaron Gwin soon wanted to try them out as well. Aaron liked them so much that he even raced the brakes on September 8th, 2018 in Lenzerheide, Swiss at the UCI Downhill World Championships where he finished 5th. By the first race of the 2019 World Cup season in Maribor, all the major TRP sponsored downhill teams were racing on the new TRP DH-R disc brake.

A mixture of steeper courses and the switch from 27.5 to 29-inch wheels certainly raised the performance requirement throughout the season. All the sudden, good brakes were not good enough.

"Bikes and speeds are increasing each year, so if frame and suspensions are changing, you have to change the brakes, wheels, and other parts. It's the logical path to follow, we were riding 200mm/180mm when we raced on 26-inch wheels, everybody rides 203 with 27 (inch wheels), so it makes sense to have bigger 223/2,3 mm rotors with 29inch wheels." Thomas Estaque, Team Commencal 100%.

The TRP R&D teams traveled to team camps and races in Maribor, Leogang, Les Gets and Snowshoe. They observed the mechanics working on the brakes, they discussed test runs with athletes, and they took samples of the different soils back to the test-lab in Taichung.

The question we asked ourselves was how do we adapt our brake performance and power to the new standard of World-Cup level downhill racing as quickly as possible?

No stone was left untouched and the result at the end of the season was a completely re-designed DH-R: the new DH-R EVO. New ergonomic lever-blade, newly formulated brake pad compounds, new high-performance hydraulic oil, new 5 mm brake hose-system, newly designed and CNC-machined adapters, new selection of 2.3 rotors, newly designed oil flow inside the calipers, new hydraulic leverage ratio, and a smaller size master cylinder piston lift the overall performance of the DH-R EVO to this new standard of racing. These new features were approved by Scott DH Factory rider Brendan Fairclough during his 4th place run at Rampage in Utah.

A big thank you to all the athletes and mechanics for their trust and hard test work.



What was the hardest part of the DH-R Redesign process?

Re-Designing the oil flow inside the caliper was the biggest challenge and took the most effort and time. After turning all our ideas into prototype solutions, we tested those in the lab and with our athletes. The team mechanics gave us feedback about bleeding handling, and we paid attention to every little detail to narrow down the options. To find the best solution was like searching for gold.

What did you and the R&D team learn during this process?

In short, developing many more solutions to test than we did before and involving many more different users than before. Next to the riders from our four teams and their mechanics, we involved a group of dealers and consumers. It was important that all individuals had vast riding and wrenching experience with all the products in the market. This heterogeneous mix of users was key.

What things were most helpful for you and the team to reach the new product level?

Changing the process of development from product-focused to a customer-centric. Before we started, the team got trained in this different approach, a challenge in the beginning for our engineers. We spent a lot of time with the individual rider and their mechanic, observing, listening and asking questions. This different way to look at problems was a big learning curve for us. Once getting used to it however, it made working much quicker and more successful.

NEW EVO FEATURES

- + Ergonomic Lever Blade
- + Internal Brake Lever piston 9 mm
- + Brake hose 5 mm
- + Performance Hydraulic oil
- + Hybrid Pistons
- + Performance Resin Pad Compound - Blue
- + New PF-calipers (Performance Flow)
- + 2,3 mm thick Rotors
- + 223, 220, 203, 180, 160, 140 mm
- + CNC machined and marked Adapters



"When it comes to braking, I've always wanted performance over everything. I don't care about weight, I just want my brakes to have the absolute best power, feel, and consistency that we can get. The bigger wheels on the 29er downhill bike now make them even harder to slow down. We've got a brake now that is extremely powerful while maintaining the feel and modulation that make them easy to control." Aaron Gwin

TRP DH-R EVO SPECIFICATIONS

RECOMMENDED CATEGORIES	Gravity/Downhill/Enduro/E-MTB
WEIGHT	310g - without rotor & adapter
MATERIALS	Forged Alloy
COLOR	Silver
CALIPER	4 Piston Hybrid Design
LEVER BLADE	1-2 Finger Ergonomic Design/Alloy
LEVER REACH ADJUSTABLE	Index tool free
OIL	Performance Mineral oil
OIL HOSE	TRP 5 mm

BANJO FIT	Banjo interface for easy and flexible cable routing
PADS	Blue: Performance Resin - Copper: Full Metallic
ROTORs	2,3 mm thick
SIZES 6-BOLT	180/203/220/223 mm
SIZES CENTER LOCK	160/180/203 mm
SHIFTER INTEGRATION	MMX : HD3.6/ I-spec II direct
INTERFACE	Direct Mount
ADAPTER	Post Mount

NEW TRP DH-R EVO FEATURES



NEW CNC ADAPTERS

- + CNC machined
- + Increased stiffness and clean fit
- + Simple Info branding



NEW BRAKE PADS

- + New performance resin compound
- + Increased heat stability
- + Shorter bed-in process



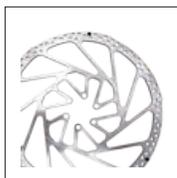
NEW MINERAL OIL

- + Decreased viscosity for better fluid flow
- + Increased heat stability up to 230 °C
- + Easier to bleed



ERGONOMIC LEVER BLADES

- + Lightweight aluminum body
- + Ergonomic single finger positioning
- + Dimpled accents for better grip on the trail



NEW 2.3 MM ROTORS

- + 8% increase in heat stability
- + 47% increase in lateral stiffness
- + 223 mm option increasing braking leverage over larger wheels



NEW 5 MM OIL HOSE

- + Increased stiffness for better hydraulic pressure
- + Increased heat stability
- + Easier to work with for internal frame routing



NEW PF-CALIPER

- + Increased oil speed flow
- + Quicker response at rearbrake
- + Quicker bleeding

* Performane Flow



NEW 9 MM LEVER PISTON

- + Slimmer internal machining for an easier single-finger lever throw
- + New hydraulic leverage ratio brings more power
- + Seamless transfer of power for less arm pump



CALIPER ADAPTERS



NEW P17



NEW P20



NEW P23



NEW P40



NEW P43

MODEL	Ø140	Ø160	Ø180	Ø203	Ø220	Ø223
PM 140	-	P20	P40	-	-	-
PM 160	-	-	P20	P43	-	-
PM 180	-	-	-	P23	P40	P43
PM 200	-	-	-	-	P20	P23
PM 203	-	-	-	-	P17	P20

Specifications subject to change without notice.

ROTORS



RS01E



RC01E

MODEL	SIZE	1.8/2.3	MOUNTING	SPIDER	HARDWARE
RS01E	180/203/220/223	2.3	SIX BOLTS	W/O	UCP BLACK
RC01E	160/180/203	2.3	CL	WITH	-

BRAKE PADS



RESIN PAD
P - Q12RS



SINTERED METALLIC PAD
P - Q15TS