SIMPLY **FAST**

GAMBLER

TECH
AND FACTS
REPORT

SCOTT

OPTIMIZED IN THE FIELD

RACE TUNING AND PROTOTYPING

In late 2009 we started race tuning the original Gambler with Nick Beer and Fabien Pedemanaud of the Scott 11 WC DH race team. We made some custom links in a small machine shop in Champery, in an effort to get the suspension working better in big holes and g-out forces commonly seen on a WC DH track. After many prototypes we found performance improvements in geometry, suspension curve and feel.

Before we got the chance to analyze the new links with the engineers at Scott, Nick Beer and Fabien Pedemanaud both graced the podium at Windham and Maribor. These two podium results really fueled the fire, and we started extensive testing with Fox to further improve many aspects of the suspension. To take things a step further we started building custom DH test tracks to better test the suspension.

REFINE EVERY DETAIL

IN ORDER TO OPTIMIZE A BIKE FOR RACING EVERY DETAIL NEEDS TO BE QUESTIONED.

Just because things have been done a certain way for years does not mean that it is the best for everyone everywhere. We found that geometry trends were getting lower and lower, and so were chain lines. The rear axles stayed at the same height and we noticed a compromise in square edged hit performance, acceleration and braking. This trend provoked a couple of prototypes to be built to test main pivot heights and chain line forces. One had an idler pulley that we could mount just about anywhere and a 25mm higher main pivot.
The 25mm higher pivot was a big improvement for things like late braking in rough terrain, sprinting on uneven ground with a low BB and greatly improved square edged big hit performance. The bike was moving forward faster than ever. A lot was learned from this bike and helped us back up the computer simulations with real world feel testing.

SUSPENSION LAYOUT TEST MULE

The next step was to find a force curve that could provide the support AND comfort. We played around with many different linkages and layouts until we decided it was not possible to have both with the style of linkages we were using.
We needed another degree of manipulation of the force curve to be able to have that support without compromising traction and comfort. That was when Mat Landre, the engineer working on the bike, came up with the idea of the floating link. We were not sure if it was too extreme, and we would not want to create problems with the damping in the shocks, so we built 3 prototypes to test the proposed curves.

DH RACE OPTIMIZATION

One of the main goals was the optimization of support in rough situations without compromising traction and comfort. In addition, we decided to fully dedicate our efforts to DH racing and creating the fastest bike possible. This is where Brendan Fairclough comes into the picture to help us take the bike even further. We feel he is the last piece of the puzzle we need to complete the ideal development conditions. Between creating custom tracks for testing, rapid prototyping, an engineering department in the Swiss Alps and Brendan Fairclough testing, we feel very confident our new Gambler is completely dialed and ready for the roughest tracks the WC DH circuit has to offer.

WHO ARE THE GUYS BEHIND THE NEW GAMBLER?

THOMAS RAEMY

PRODUCT MANAGER

"This is a dream bike! It has everything a racer needs to be on the podium."

MATHIEU LANDRE

ENGINEER

"Every detail on this bike is there for a calculated reason."

BEN WALKER

PRODUCT MANAGER AND R&D TESTER

"We live to build and ride better bikes. Our Development process has enabled us to confidently deliver a winning bike."

BRENDAN FAIRCLOUGH

WC DH RACER & STYLISH FILM RIDER

WC DH racer & Stylish film rider "I knew joining a new team would be a big challenge but I am very happy with where we have the bike. I now have what I need to be on the top step."

CLAUDIO CALUORI

SCOTT 11 WC DH TEAM MANAGER & EX –RED BULL WC DH RACER

"My team needs the best tool to get the results. The new Gambler is that tool!."

A FULLY REFINED WC DH RACE BIKE AVAILABLE TO THE GENERAL PUBLIC.

Downhill bikes are a passion of ours here at Scott. Champéry, one of the most legendary tracks of the UCI WC DH racing circuit, is only an hour down the road from our engineering department. The course builders and race directors of this steep track work here at Scott. This close relationship between engineering and track building created the perfect venue for testing and prototyping. Out test team included Ben Walker, Claudio Caluori and his Scott 11 DH race team, with riders like Brendan Fairclough and Floriane Pugin to complete the ultimate development team.

Our development team lives and breathes DH bikes and we feel confident that our team, process and passion are key elements to making a fast bike. If these guys are happy with the bike then we are ready to show it to the world. For those who are serious about downhill, this is a bike that will give you every advantage.

FEATURES

ADJUSTABLE GEOMETRY

The new Gambler has race tuned geometry with a low and slack or a higher and steeper setting. Some tracks are rough and some are pedally therefore we want a bike that can do both. The chain stay length is also adjustable from 420mm to 440mm. The ability to dial in the bike for your track and your riding style is key to going fast. We want you to feel the best you can on your track. Whether you are Brendan Fairclough or new to DH, this bike has the geometry to make you a faster rider.

FLOATING LINK

FLOATING LINK

The floating link suspension system enabled us to mix both support and comfort, providing a confidence inspiring ride. This linkage arrangement allowed us to fine tune the leverage rate and force curve to better meet the demands of the world's fastest racers. In addition, we almost eliminated DU bushing rotation, increasing small bump sensitivity and minimizing bushing wear. Another advantage of this layout is low bearing load, further increasing durability and sensitivity. The weight of the bike is centered and gets lower when things get rough. Brendan tells us this is one of the nicest bikes he has ever whipped! The bike feels like it pivots around its center whether in the air or fully committing to a difficult corner. The floating link, has enabled us to achieve all of our design objectives.

DOWN TUBE PROTECTOR

The down tube of a DH bike gets abused by rocks kicked up by the front wheel on a regular basis. This adhesive backed lightweight guard provides huge protection where it matters most.

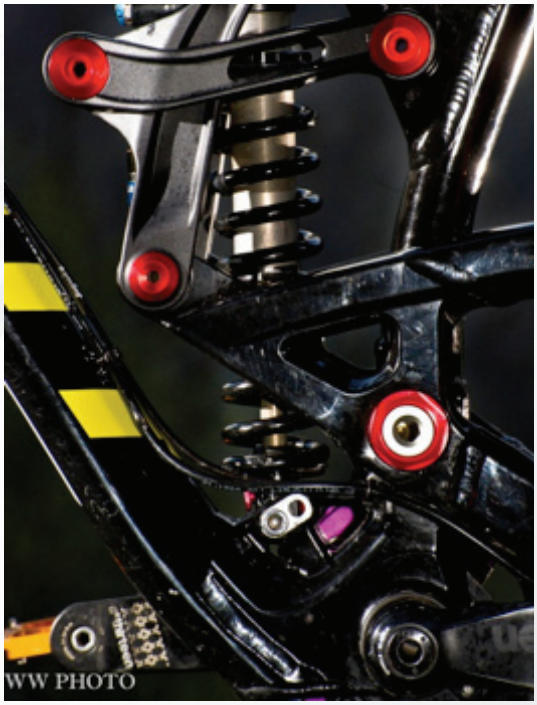
INTEGRATED FORK BUMPER

INTEGRATED FORK BUMPERS

A DH fork can impact the frame pretty hard in the event of a crash. In addressing this we optimized frame strength and integrated bumpers at the point where the fork can hit the frame. Cable routing was also optimized to eliminate the possibility of being crushed in a crash. No more worrying if your fork bumpers are in the right place, and a cleaner tidier looking front end.

IDS-X DROPOUTS

The rear axle of the Gambler features a unique design which increases the torsional rigidity of the rear end of the frame, providing better cornering and suspension performance. The simple to use system has an innovative shaped head which fits like a key in the rear dropout of the frame. The axle head is both eccentric and conical, two features which lock the rear axle in place, illuminating the need for pinch bolts. Reduced weight, reduced complexity, improved tracking and more consistent drifts: the new IDS-X Dropouts, simpler and better.



LOWER LEVERAGE RATIO PROVES ITSELF BOTH ON THE GROUND AND IN THE COMPUTER

In the past we found that the long and rough tracks pushed many shocks to their limits, and since this project was all about minimizing compromise and optimizing the bike for the roughest tracks, we set out to find a solution. After testing many different shock tunes, linkages, shock lengths and layouts, the development team and WC race testers found a substantial advantage to the lower leverage ratios on longer stroke shocks. These longer shocks gave us a better useable adjustable range of tuning, enabling us to provide the support and grip our riders need, without creating higher internal pressures inside the shocks. Another advantage was more consistent damping at the end of long runs. There was less heating inside the shocks compared to the shorter shocks we were testing, and the oil was doing a better job for longer service intervals. The increased tuning options alone were enough to convince the team, so the increased durability and more consistent damping at the end of a long run were a bonus. After testing all the variables we decided running a shorter shock might be lighter, but the performance increases gained by a longer shock and lower leverage ratio definitely outweighed the small weight penalty. This is a serious bike for serious tracks, and a suspension compromise was not an option.

SUSPENSION TECHNOLOGY

THE LOW AND CENTERED FLOATING LINK OPTIMIZES THE SUSPENSION CURVE TO SUPPORT THE RIDER IN EXTREME G-OUT SITUATIONS, WHILE MAINTAINING COMFORT & TRACTION

This suspension layout enabled our engineers to achieve all of the criteria our racers need. The heaviest parts of the frame are located in the same low central location. The weight gets lower under compression, keeping the weight between the rider's ankles. This feature makes the bike change directions faster, corner with more stability and is a real blast to whip around in the air.

The floating link has almost no DU bushing rotation, increasing sensitivity and extending bushing life. We tested fancy bearing systems to decrease friction but felt this was a compromise. In the end we figured out a way to eliminate the problem rather than treat the symptoms. In addition, there is extremely low bearing load at beginning stroke, adding further sensitivity and durability.

Thanks to the floating link our engineers were able to give our racers exactly what they want in a suspension curve. The extra degree of manipulation allows for a perfect blend of support and traction, in the form of a slightly progressive beginning stroke, transitioning to a rising linear rate. Combining a linear and a progressive suspension curve is the key to giving our racers the tool to win races.

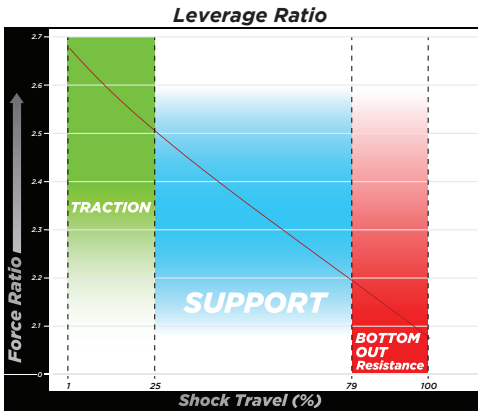
The lower leverage ratio with the longer shock enables the rider to tackle longer runs without compromising damping performances. Furthermore, the shock sees lower internal pressures and provides for a wider useable adjustable range of damping through external adjusters. This bike was developed on long extreme tracks and the lower leverage ratio really showed it's advantages in both durability and performance.

FACTS BOX

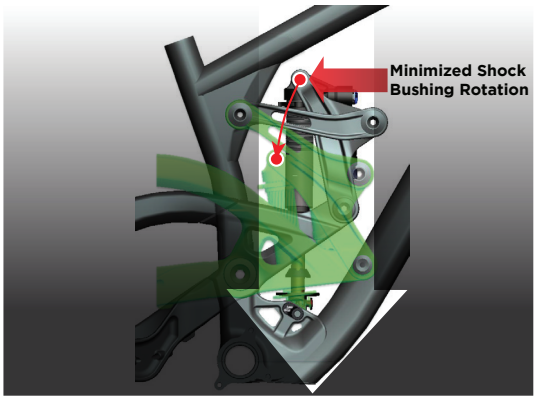
The Floating Link balances support & traction.

Minimized DU bushing rotation, improves small bump sensitivity & increases durability.

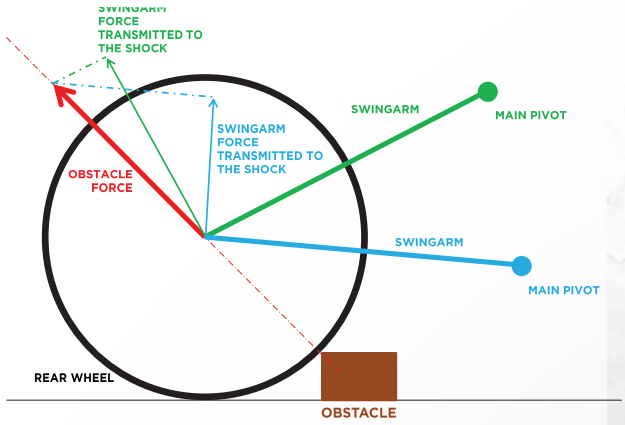
The low and centered mass placement enables faster direction changes& sicker whips.



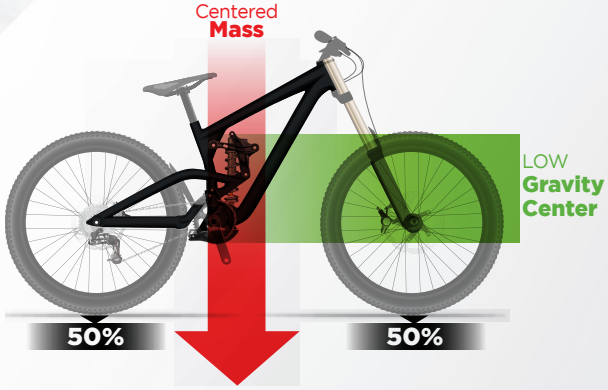
The floating link enabled the engineers to mix comfort and support, providing the riders with exactly what they need to go fast. There is a subtle dual progressive curve to achieve the goals, but not too exaggerated to avoid shock tuning limitations.



The floating link creates a progressive feeling suspension with an almost direct compression of the shock, minimizing DU bushing rotation. By our calculations and testing this increases shock bushing life and improves small bump sensitivity.

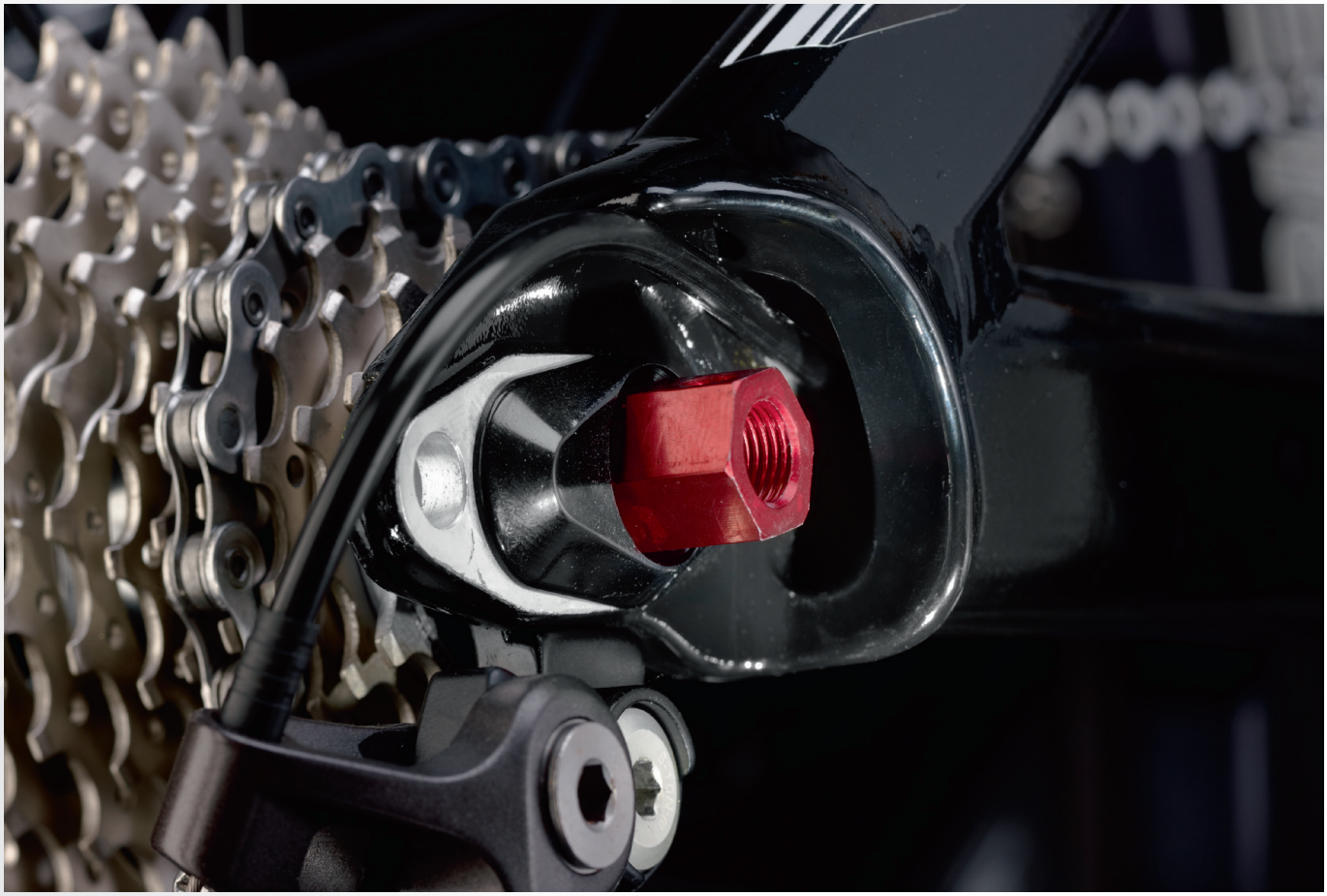


The more the pivot height increases the more efficiently the impact is absorbed. The Gambler pivot height is as high as it can go before needing an Idler pulley. We find the pivot height on the new Gambler to be a perfect mix of improved acceleration, braking and impact absorption, without any negative performance traits.



This layout keeps all the weight centered and low between the rider's ankles. This makes direction changes faster and more efficient because the bikes mass is pivoting around the center. In addition, this low and centered weight aids in cornering stability. The mass mimics the weight shift of a rider in a corner on the vertical axis. We feel this helps the rider feel "one" with the bike.

WORLD CUP DOWNHILL RACE TRACKS ARE NEVER THE SAME



420mm, 425mm, 435mm, 440mm Chain stay length

0mm or +10mm BB Drop

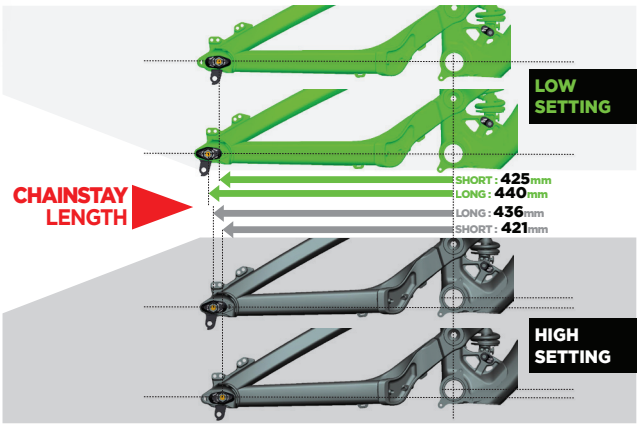
When designing the adjustable WC DH race geometry on the new Gambler we knew we wanted to offer what the pros have as stock. However, we also wanted to make sure normal riders would not be held back. Therefore; this bike has 2 distinctly different feeling setups. Much of the testing we did was to see if an intermediate rider could handle Brendan Fairclough's exact race geometry. There is nothing wrong with pressing in angled headsets or short shocking bikes to get the low BB heights. However, we wanted to run stock geometry on real WC DH tracks. The higher and steeper setup works better for pedally tracks like in South Africa, and the lower and slacker setup is optimized for tracks like Champery. This is basically like having 2 completely different bikes, giving the racer a better chance of geometry optimization on any given race weekend.

FACTS BOX

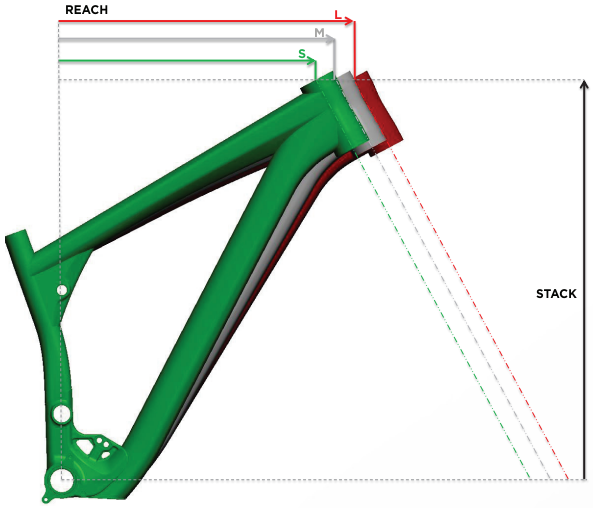
The adjustable geometry on the Gambler is ready for racing.

Riding style and different race tracks need different setups.

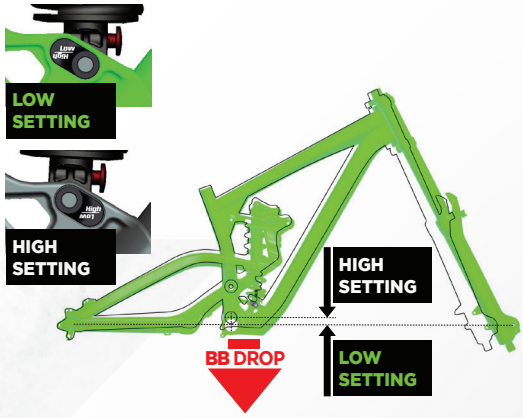
The low and slack geo can handle the demands of tracks like Champery while the higher and steeper settings feel right at home on tracks like Pietermauritzberg or bike parks.



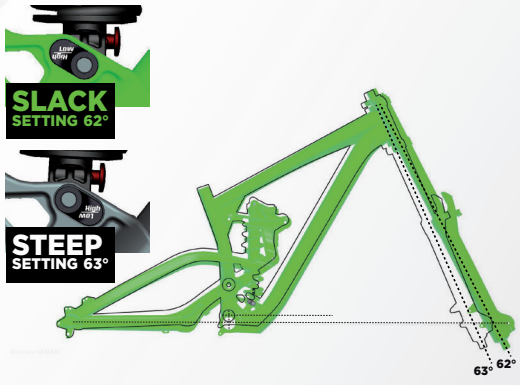
The chain stay length is adjustable from 421mm to 436mm in the high BB setting and from 425mm to 440mm in the low BB setting.



The Gambler is offered in three sizes with the seat tube staying at the same low height. The low seat tube and top tube help the bike to keep the weight lower to the ground.



The Gambler has two BB height options adjusted by the lower shock bolt. The lower hole provides a 0mm BB Drop, while the upper hole gives a +10mm BB Drop.



The Gambler has two head angle options adjusted by the lower shock bolt. The lower hole provides a 62° head angle while the upper hole gives a 63° head angle. The head tube is also very short allowing an extra degree of adjustment by raising or lowering the crowns of the fork. Three centimeters of additional fork height equals one degree of head angle adjustment.

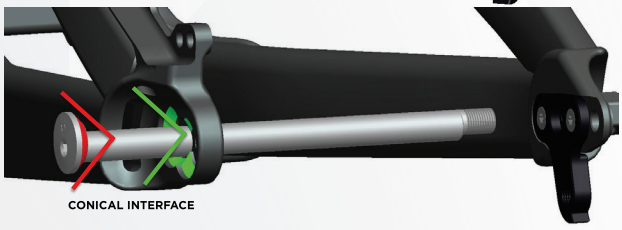
DROPOUTS AND REAR AXLE TECHNOLOGY

OUR TEST TRACKS CREATED PROBLEMS AND WE FOUND SOLUTIONS

In our development process we created a track with compression in mind. There are holes, g-outs, hard berms, roots in holes and many other things to give the compression damping a real challenge. On this track we routinely saw the negative effects of the rear ends twisting and scissoring until everything was coming loose. The bikes were not only coming loose but the tracking and suspension performance was also being compromised by extreme side loading in the hard corners. We started creating rear axles that are simpler, stiffer, lighter and easier to use than anything we have seen before. We created a track that created problems and then we found a solution that had more than one benefit.

The IDS-X system adds torsional rigidity and ease of use over a traditional pinch bolt design. Thanks to the eccentric and conically shaped axle heads that key into the frame, we were able to gain performance in flat cornering drifts through a more consistent feel, improved suspension performance deeper in the stroke and an easier to use system compared to a pinch bolt design.

ECCENTRIC INTERFACE



CONICAL INTERFACE

The combination of a conical interface and eccentric axle ends add torsional rigidity and ease of use to the rear axle compared to a traditional pinch bolt design.

FACTS BOX

IDS-X dropouts enable the rider to hold a tighter line when the drifting gets rough.

Sliding the rear end becomes easier with a more consistent feel.

The axles are simpler to use and stiffer than traditional pinch bolt rear axles.

GAMBLER

THE GAMBLER IS A VERY CAPABLE DOWNHILL AND FREERIDE BIKE. IT BOASTS CHAIN STAY LENGTH ADJUSTMENT, A PROGRESSIVE MULTI-PIVOT LINKAGE SYSTEM, AND A LOW-SLUNG FRONT TRIANGLE FOR MAXIMUM STANDOVER CLEARANCE. IT IS USED BY OUR WORLD CUP DH TEAM, SCOTT11, AS WELL AS BY OUR BIG MOUNTAIN FREERIDERS. THE GAMBLER IS AVAILABLE IN TWO MODELS TO SUIT YOUR NEEDS.

GAMBLER **10**

Sizes **S / M / L**

FRAME	Gambler Alloy 6061, Hydroformed custom butted, PF BB107 / IDS X 12 x150mm Dropout, BB height and chainstay length adjustable, ISCG05 / 210mm rear travel
FORK	Fox 40 RC2 FIT Factory 203mm travel / Coil, preload adj. / Reb-Comp High & low speed adj., 20mm thru axle / alloy steerer
REAR SHOCK	Fox DHX RC2 Coil / Boost valve technology, Reb.,low-speed comp., Bottom out force adj, custom tuned / 267 x 89mm, spring rates S 250 / M 300 / L 350"
HEADSET	Syncros DH adjustable, semi integrated / adj +-1° or +-2° with cup, ID 49.6mm / OD 55mm
REAR DERAILLEUR	Shimano Saint RD-M820-SS , short cage / 10 Speed
CHAINGUIDE	E.thirteen LG-1 ISCG05 w/Taco, alloy backplate
SHIFTERS	Shimano Zee SL-M640, Rapidfire Plus / 2 way release
BRAKELEVERS	Shimano Zee BL-M640 Disc
BRAKES	Shimano Zee BR-M640 / Disc 4 piston, 203mm F + R SM-RT76 IT Rotor
CRANKSET	Shimano Saint FC-M825, 36T alloy chainring, Hollowtech II / 165mm
BB-SET	Shimano SM-BB71-41A / shell 41x104.5mm
HANDLEBAR	Funn Fatboy, 6069-T6 Alloy, 15mm rise, 810mm Syncros Pro DH dual lock on grips
STEM	Funn RSX Light Direct mount , 15mm rise / 45-50mm ext.
PEDAL	nil
SEATPOST	Funn Arrow / 31.6mm, Alloy 7050 / 0mm offset
SEAT	Syncros DH 20 / CROM rails
HUB FRONT	Formula DH-92 20mm thru axle,
HUB REAR	DT Swiss FR 350 / 12mm thru axle, 150mm wide
CHAIN	Shimano CN-HG54
CASSETTE	Shimano CS-4600, 11-25 T DH cassette
SPOKES	DT Swiss super comp black
RIMS	DT Swiss FR 600, 32H
TIRES	Schwalbe Downhill Evolution Line, front: Muddy Mary 26 x2.35 Vertstar, rear: Muddy Mary 26 x 2.35 Trailstar , Triple Nano Compound / Wire Bead, 2-ply DH casing,, Snake Bite Protection / 67EPI
WEIGHT	--- kg / --- lbs

WHAT'S NEW Brendan Fairclough approved geometry & suspension. Highlights are a low leverage ratio suspension system based around a 10.5" shock and a floating linkage. The centered mass and low center of gravity enable quick direction changes and stability in corners, Syncros DH components

SALES ARGUMENTS The Brendan Fairclough WC DH replica bike. A no compromises DH weapon with custom race tuned Fox suspension and World Cup podium proven components. All the custom World Cup options, like lower and slacker geometry, longer shock and tweaked leverage ratio, are now available to you.