

STRUCTURE MEDIA KIT 2019

MEET STRUCTURE CYCLEWORKS

Structure Cycleworks is a Calgary, Alberta, Canada company that produces the world's first high-end mountain bike utilizing a patented linkage frame system. Founded by electric motorcycle racing pioneer Loni Hull, Structure is driven by innovation.

As the first mountain bike company to offer a carbon fiber, integrated linkage frameset in MTB, Structure Cycleworks' mission is to prove that a front-rear harmonized linkage system will not only perform at a superior level but also withstand the test of time.

Spawning from a crash that left founder Loni Hull with a broken collarbone and a concussion, the idea of the SCW 1 developed from Hull's motorcycle racing background. Hull has never been one to ask "why", but rather "why not?." As a pioneer in the electric vehicle world, having helped develop early electric drive systems for motorcycles and cars, he was a founding member of the Portland, Oregon-based Motoczysz team that won the Isle of Man TT Zero motorcycle race four times. Bringing that same passion to Structure Cycleworks, Hull's vision is the backbone of the SCW 1 enduro, Structure's first publicly available bike model.

Because the SCW 1 uses industry-standard bearings that can be easily removed with conventional tools, anyone who can service a rear shock can service the SCW 1. Knowing that weight and durability are concerns for mountain bikers, Structure's SCW 1 comes in an all-carbon frame that weighs around 31 lbs (depending upon spec) - an average weight for bikes used in the World Enduro Series - and the company offers a lifetime warranty on both frame and bearings.

Structure knows that the SCW 1 will turn heads with its unique design, but the company also understands that enabling riders to ride the most challenging terrain more confidently will also turn heads. Ride the SCW 1 and see for yourself why this is the most significant evolution in mountain bike frame design since rear suspension.

ORIGIN STORY



"Taking a new step, uttering a new word, is what people fear most." Fyodor Dostoevsky famously said this. Whether you are a fan of realism or not, you have to admit, change frightens most creatures of habit. But history tends to favor those who think outside of the box, whether it occurs in their time or later on. Loni Hull will be one of those thinkers; visionaries who dare.

Born in Quebec, raised in Colorado, a student in New York, and proven in Portland, Hull has not followed a set path. As a child, he raced in the Rocky Mountain foothills with his friends on enduro motos. Being the son of an electrician who designed automated systems, Hull grew up tinkering - with cars, bikes, whatever he could get his hands on. He put his passion first and opted for a career in automobiles, receiving ASE training in New York where he also began mountain biking. Soon after, seeking personal growth, he moved to Portland, Oregon and began his legacy work.

In Portland, Hull began to restore and overhaul vehicles in every aspect - from body and engine work to electrical and chassis design. Developing a reputation, he was approached by a fellow Honda rider to help convert a VFR motorcycle to electric. The project was successful and Hull began consulting for the EV (electric vehicle) community in earnest.

Hull saw EVs going mainstream, including the potential for high-performance electric motorcycles. In 2008, he and a small group of engineers approached Michael Czysz of MotoCzysz to create an electric racebike. Czysz agreed and Hull took lead on the electric drive system. The rest, as they say, is history, with the MotoCzysz E1pc going on to win 4 Isle of Man TT Zero championships from 2010-2013.

After MotoCzysz, Hull met the love of his life, Megan, and began a family as well as a successful business in Calgary. But Hull's inventiveness never diminished. Long inspired by bikes such as the ELF-Honda racing motorcycles of the 1980s and by linkage suspension pioneers Norman Hossack and Horst Leitner, Hull recognized a need for improvement in mountain bike frame design. His vision led to the founding of Structure Cycleworks and is embodied in the company's Without Telescoping Fork (WTF) suspension system and in every detail of the SCW 1.

WTF IS WTF?



Unconventional, yet surprisingly practical, Structure's first model, the SCW 1, features a front linkage suspension system called WTF or "Without Telescoping Fork." Linkage front suspension is not a new concept, but its execution in the SCW 1 has been perfected over many years by some of the most talented engineers and designers in the industry.

Structure Cycleworks' innovative WTF system offers a 40% reduction in brake dive and has nearly frictionless small bump compliance. During compression, the head angle becomes slacker, trail increases, and there is less wheelbase reduction early in the travel, resulting in a significantly more stable ride. Our riders have tested the WTF linkage system on some of the most technical and challenging trails in North America, discovering through brutal testing that even distribution of forces through the system keeps any single component from taking maximum abuse. The SCW 1 also uses large 30mm bearings and colleted 17mm axles at all main pivots to keep downtime to regular scheduled maintenance. If you need replacement bearings, get in touch and we'll send out a service kit right away. We made them easy to replace, and hey, no more fork bushing and seal maintenance...ever.



THE SCW 1



The Structure SCW 1 is a 150mm travel, 27.5" wheeled, full carbon enduro bike built on the best-handling, most advanced mountain bike frameset in the world. The WTF front suspension platform solves performance issues inherent to all telescopic suspension forks. Be among the first to experience the enhanced stability, reduced dive, improved braking performance, and unparalleled bump handling of the SCW 1.

Stability - Head angle slackens throughout travel, with 40% less brake dive, increased trail, and nearly constant front center.

Sensitivity - A telescoping fork is a stressed chassis element that is asked to slide while subjected to enormous bending loads. The WTF linkage rotates on 30 mm cartridge bearings and isolates the shock from bending loads, allowing the system to move with minimal friction over bumps large and small, with unprecedented control at the contact patch.

Integrated frameset - Balance between the front and rear suspension is vital to stable and confident handling. The SCW 1 features matching leverage ratios and progressivity at both front and rear. Weight and strength are optimized by keeping hollow, carbon, double-crown fork and monocoque carbon control arms low and mounted to the strong core of the frame.

Size Specific Kinematics - The changing location of a rider's centre of mass from one size to the next can create more performance discrepancy between sizes, for a given model, than between brands. Structure is the only company that adjusts the location of the shocks and pivots to keep all kinematic properties consistent between frame sizes.

LINKAGE 101



Linkage bicycle suspension is really pretty simple once you understand the basics. It's all about staying on the bike and handling impacts. Under hard application of the front brakes, the handlebars of a bike with a telescoping fork pitch downward toward the front axle, which likewise inclines the rider forward and down. It's an experience most of us are painfully familiar with, as almost every mountain bike rider has hit an obstacle or applied the front brakes too hard and been thrown OTB (over the bars).

With the goal of keeping riders on bikes, Structure Cycleworks looked at every aspect of how a frame moves around a rider. They named the resulting full-suspension linkage system WTF (Without Telescoping Fork) because of its unique, performance-focused aesthetic...and the response it often gets when seen for the first time.

The head angle of the WTF Suspension System becomes 8° slacker as the suspension compresses, making steering light under small loads but progressively more stable as the suspension is loaded. Instead of a more traditional axle path, which tucks the front wheel under the front of the bike during hard braking or large impacts, the focus was kept on a more vertical axle path, smoothly channeling suspension forces to the strong heart of the frame. At the same time, the system resists brake dive up to 40% more than on a bike with telescoping forks; and because the whole suspension rotates almost frictionlessly on bearings - and has no sliding bushings - small-bump compliance has to be felt to be believed.

WTF uses less travel upon application of the front brakes, which leaves more travel for bump-handling. What this means is that the WTF Suspension System's 150mm of travel will feel more like a 180mm fork in action, and you'll feel more confident on the bike, with more precise handling and stability that increases the harder you push. Also, while riding tight technical features, you won't feel like you are on a long-travel bike.

If it's that simple, why haven't all bike brands adopted linkage front suspension? In fact, a number of brands have developed linkage forks to replace a telescoping fork in a traditional frame, and such systems are increasing in popularity the world over, but Structure is the first to build an entirely carbon fiber frame around a linkage system that harmonizes the kinematics of front and rear, resulting in use of the same shock for the front suspension as for the rear; incredible balance; and more of a centered feel on the bike.

At Structure, we think performance is beautiful.

10 REASONS WHY OUR WTF Harmonized Linkage Frame Is better



- 1. Suspension energy is directed to the strong heart of the frame and not directly to the upper steerer and handlebars.
- 2. Front and rear suspensions can be tuned to work as a system, with matched front-rear motion ratios, shock leverage ratios, and shock stroke and eye-to-eye measurements. The result is a bike with unmatched balance, designed around the rider's center of gravity.
- 3. Because both front and rear suspensions pivot on large, precise, sealed cartridge bearings, both wheels are free to track the trail better than bikes with conventional forks, which experience bushing bind, especially when hard on the front brakes.
- 4. The WTF suspension system does a better job of separating suspension, steering, and braking forces from one another than conventional forks do. This means the front suspension is free to respond to impacts even when the front brake is fully applied.
- 5. Application of the front brake results in up to 40% less suspension dive than a telescoping fork under braking. This means that you can use the front brake more effectively even while descending with more travel left to handle bumps.
- 6. The WTF suspension system becomes slacker as the suspension travels toward full bump (as much as 8°, while a telescoping fork becomes steeper under pitch (as much as 11° with compression of the front suspension alone)
- 7. Suspension performance is optimised for climbing, while offering excellent compliance.
- 8. We use large, proven, industry-standard bearings you might recognize them from current rear linkage suspensions at all main pivots, and we've made them easy to remove from the opposite side of the frame.
- 9. No more fork rebuilds!
- 10. We offer lifetime warranty on frame and bearings for the original owner.



SCW 1 FOUNDATION SERIES LIMITED

Structure Cycleworks has created a completely innovative bike design that Bike Radar named the most anticipated mountain bike of 2018. The SCW 1 not only revolutionizes mountain bike design with enhanced linkage fork suspension, but creates huge performance advantages that the industry has not seen since Gary Fischer launched the RS-1 almost 30 years ago. The WTF front suspension platform solves performance issues inherent to all telescopic suspension forks, while the SCW 1 offers enhanced stability, reduced dive, improved braking performance, and unparalleled bump handling.

DRIVE TRAIN

Chain	SRAM Eagle XX1
Bottom Bracket	SRAM DUB
Crankset	SRAM Eagle XX1
Shift Lever	SRAM Eagle XX1
Casset	SRAM Eagle XX1
Chainring	Eagle 32T, non-Boost (better chainline)
Rear Derailleur	SRAM Eagle XX1

SUSPENSION

Front Shock	DVO Topaz T3 (trunnion)
Rear Shock	DVO Topaz T3 (trunnion)

COCKPIT

Saddle	WTB Volt Pro
Seat Post	OneUp
Stem	Renthal Apex 35 6° drop, 50mm length
Handlebar	Race Face Next R
Grips	Race Face Half Nelson - Black
Head set: Upper & Low	Cane Creek

WHEELS & TIRES

ront Hub	DT240
lear Hub	DT240, 36-spline
ubes	Tubeless Kit
pokes	Sapim CX-Ray
lims	We Are One Carbon, 35mm internal
ront Tire	Maxxis Minion DHF 3C MaxxTerra EXO+ WT, 2.6"
Rear Tire	Maxxis Aggressor 3C, 2.5"

BRAKES

Front Brakes	Magura MT7 Pro
Rear Brakes	Magura MT7 Pro
Front Rotor	Magura Storm HC - 203 mm
Rear Rotor	Magura Storm HC - 180mm

FRAMESET

Frame	Carbon Fiber
Bearings	Sealed Cartridge with sealed caps
Colour	Gold and Matte Black

*Specifications are subject to change without notice. Images may not depict actual spec.

THE FOUNDATION PERKS



The first 100 private owners (dealers excluded) of the Foundation version of each Structure model are inducted into the Foundation club. Members will enjoy exclusive features and benefits like a numbered Foundation frame, custom colors and graphics, and much more.

Exclusive features:

- Engraved numbered frame stamp indicating Foundation status
- Foundation series colours and graphics

Exclusive member package, including:

- Bike luggage for transport
- Park Tool MT-40
- Structure Cycleworks Tire levers
- Structure Cycleworks Jersey
- Structure Cycleworks Hat
- Structure Cycleworks Stickers
- Invitations to Foundation events and rides with Structure team members
- Monthly progress reports regarding tooling and manufacture of your SCW 1

As well as benefits shared by all Structure owners:

- Lifetime warranty on frame and bearings
- Lifetime access to upgraded pivot hardware and half-price upgrades of compatible linkage elements to keep your SCW 1 at the cutting edge
- Two month Love It or Return It Money-back Guarantee (see Conditions for details).



The Structure SCW 1 Janus was developed for riders who demand maximum performance on the most challenging trails on the mountain, but don't want to pay top dollar when a component needs replacement. Janus Series bikes are perfect for riders who hold nothing back...and sometimes take out a wheel or derailleur in the process.

DRIVE TRAIN

Chain	SRAM Eagle GX
Bottom Bracket	SRAM DUB
Crankset	SRAM Eagle GX
Shift Lever	SRAM Eagle GX
Casset	SRAM Eagle GX
Chainring	Eagle 32T, non-Boost (better chainline)
Rear Derailleur	SRAM Eagle GX

SUSPENSION

Front Shock	DVO Topaz T3 (trunnion)
Rear Shock	DVO Topaz T3 (trunnion)

COCKPIT

Saddle	WTB Volt Pro
Seat Post	OneUp
Stem	Renthal Apex 35 6° drop, 50mm length
Handlebar	Race Face Next R
Grips	Race Face Half Nelson - Black
Head set: Upper & Lower	Cane Creek

WHEELS & TIRES

Front Hub	DT350
Rear Hub	DT350
Tubes	Tubeless Kit
Spokes	M 1700 SPLINE 35
Rims	M 1700 SPLINE 35
Front Tire	Maxxis Minion DHF 3C MaxxTerra EXO+ WT, 2.6"
Rear Tire	Maxxis Aggressor 3C, 2.5"

BRAKES

Front Brakes	Magura MT7 Pro
Rear Brakes	Magura MT7 Pro
Front Rotor	Magura Storm HC - 203 mm
Rear Rotor	Magura Storm HC - 180mm

FRAMESET

Frame	Carbon Fiber
Bearings	Sealed cartridge with cap seals
Colour	Gloss black on matte carbon

*Specifications are subject to change without notice. Images may not depict actual spec.

THE GEOMETRY

SIZING

	GI	G2	G3
(A) Reach	420	461	505
(B) Stack	634	640	649
(C) Seat Tube Angle @ Head Tube Top	77°	77°	77°
(D) Seat Tube Angle @ Full Pedaling Height	76°	76°	76°
(E) Head Tube Angle	66°	66°	66°
(F) Trail	110	110	110
(G) BB Drop	16	16	16
(H) BB Height	341	341	341
(I) Chainstay Length	435	435	435
(J) Front Centre	741	790	833
(K) Wheelbase	1171	1224	1263



SUGGESTED RIDER HEIGHT

	Gl	G2	G3
Playful Handling	165cm-180cm	175cm-190cm	185cm-197cm
	5'5"-5'11"	5'9"-6'3"	6'1"-6'5"
Purposeful Handling	155cm-170cm	165cm-180cm	177cm-190cm
	5'1"-5'7"	5'5"-5'11"	5'10″-6'3″

THE QUESTIONS



World's first?

Yup, there have been other brands who have made aftermarket linkages in the past, but we are the first to offer an integrated, front-rear harmonized carbon fiber frameset from the ground up.

Why now?

We designed the WTF suspension system because we thought the time was right. Trust our experience and come for a ride with us.

Why should I trust a new brand like Structure?

The brand might be new, but our talented group of designers and engineers are not. They have designed and manufactured some of the most highly reviewed and loved bikes in the world for decades.

How does the weight of a linkage bike compare with a traditional bike with telescoping fork?

With careful component selection we can hit industry average weight of about 31 lbs, and we'll keep working on weight:stiffness optimization for years to come. Goal number one? Build a bike that's strong, stiff, incredibly fast, and won't let you down.

What travel range is the SCW 1 designed for?

150mm front and rear. We don't recommend experimenting with alternate shock lengths or other modifications, as the SCW 1 has been carefully designed for optimal performance with 150mm of travel.

THE QUESTIONS



Is a linkage bike reliable?

Yes. We have tested the WTF linkage system on some of the most technical and challenging trails in North America, and even distribution of forces through the system keeps any single bearing from taking maximum abuse. We also use large 30mm bearings and colleted 17mm axles at all main pivots to keep downtime to regular scheduled maintenance. If you need replacement bearings, get in touch and we'll send out a service kit right away. We made them easy to replace, and hey, no more fork bushing and seal maintenance...ever.

Does a WTF frameset require any special maintenance?

No more than a rear linkage suspension system, and we made the process simple. If your mechanic can service a rear shock they can service the front of the SCW1.

Where can I demo Structure bike?

See our site for a schedule of upcoming demo events or visit a dealer that carries Structure Cycleworks' products.

Do you have women-specific bikes?

No, but we don't have men-specific bikes either. Our bikes are for people who want the most advanced and capable bike on the mountain. If you ride a Structure bike, you are family. Enough said.

Why not a 29'er? Do you have plans for one?

We think that for the SCW 1's intended use the 27.5" wheel size is a great choice, and we have not come to regret it. The SCW 1 is nimble when managing precise, technical trails, eats up terrain like no other bike, and maintains composure when the going gets rowdy. Nevertheless, we like 29ers too, so stay tuned.

THE QUESTIONS



How do I determine the frame size of my bike?

First, look over your frame to see if there are any stickers indicating its size (for example: G1, G2, or G3). If a sticker indicating the size does not exist, follow these simple steps:

- 1. Measure the length of your bicycle's seat tube.
- 2. Jot it down and visit structure.bike for a look at our geometry charts
- 3. Once you've found a match, scan to the top of that column and you'll see the size of your bicycle.

Note: The serial number does not directly indicate size, model, or year of a bicycle. If you do not know the model and year of your bicycle, you will need to contact customer service with your serial number so we can look up your bike's details.

Where are Structure bikes made?

We design, engineer, and perform quality control inspection of our bikes in Calgary, Alberta, Canada. Our frames are manufactured at our partner factory in Taiwan (where most high-end bikes are currently built). Our components are sourced from the most reputable brands in MTB.

If you have a question you need to have answered and don't see it here, please <u>connect with us</u>!

THE WARRANTY



Lifetime Warranty

- Structure warrants all frame parts and bearings to be free from defects in materials or workmanship for the life of the original owner from the original purchase date (product registration required). Non-transferable.
- Modified, misplaced, misused, melted, improperly installed, or blatantly abused Structure product is not covered by warranty. Purchases made through eBay or similar resale sites are not supported by Structure.
- Warranty claims for Structure products purchased through a dealer will be handled by the dealer for frame/bearing defects only, and will be handled between dealer representative and Structure customer service agent.
- Warranty claims for Structure products purchased online for direct-to-consumer delivery will be handled between the customer and Structure customer service agent for frame / bearing defects only.

Lifetime Crash Replacement Claims

- Structure offers a Lifetime Crash Replacement Program to any owner of Structure products. This catchall program covers accidents which fall outside of our Warranty coverage for any reason.
- Our goal is to keep customers in the Structure family for life. No matter what the circumstance, as part of this program, the price of replacement Structure product is 50% off the listed local price. Please note that sales tax, freight, VAT/Import duties, shipping, and labor are not covered by Structure. Additional replacement parts are not covered by Structure but may be available for purchase. Please speak with a Customer Service representative for details.