

The Pivot LES defines fast.

There are days when the race just demands something a little (or a lot) more rigid but there's no reason to suffer unnecessarily while sprinting off the front of the pack. We designed the LES to be the lightest, fastest race machine made and ensured that it delivered this performance at every point in the race from the smoothest to the roughest parts of the course. The LES provides all of this and more due to its ultra lightweight ride tuned composite chassis that's incredibly stiff in all the right places yet still the most comfortable riding race bike ever developed.

For the single speed rider, the LES pulls out all the stops with our patent pending Swinger dropout system. The Swinger adjustable system allows single speed riders the simplicity of a vertical dropout design with quick click indexed adjustable chain tensioning. The Swinger's quick indexing allows for a lightweight, stable and compact adjustment system with quick, easy gearing changes and great chain tension stability. Once you ride the LES with the Swinger system, you'll see that this is a revelation in simplicity and pure functionality for the single speed rider. For those wanting to go fast with gears or without, the new Pivot LES offers you the ultimate ultra-lightweight, go fast tool in a high performance race package like only Pivot can deliver.

"I can hardly imagine a bike that is more versatile and better designed down to the last little detail."

-TWENTYNINEINCHES.com

LES

2015 LES Features

- Pivot's exclusive hollow box, high-compression internal mandrel technology allows for greater compaction and smoother internal walls resulting in a lighter, stronger, highly optimized, ride tuned frame design. This technology allows the frame to be extremely lightweight while also having a very balanced feel with a great combination of stiffness and ride quality.
- Full internal shift cable routing with under bottom bracket access port design for hassle free installation. The LES features well thought-out internal cable routing that protects the cables from contamination while also being very user serviceable and easy to route which is something that cannot be said for most internal routed designs.
- Chainstay length and tire clearance: The LES features extremely short 17.1" chain stays. This is in 26" wheel territory and matches the shortest chainstay lengths out there so riders have a tight handling, responsive bike along with the benefits of 29" wheels. The real magic in the LES design is that we clear some of the biggest 29er tires in the market. Go ahead and run your 2.3's; the LES has ample clearance.
- Dropouts: The LES dropouts (included with every frame) are full molded hi-mod carbon fiber featuring a 142 X 12mm through axle, post style disk brake mounts and a replaceable derailleur hanger. These cleanly integrate into the frame giving little hint that the dropouts are removable. The Swinger system provides quick, consistent, indexed chain adjustments for single speed use along with fast wheel changes and no change in brake adjustments.

Frequently Asked Questions

Which size bike should I purchase?

To ensure the best sizing, we recommend that you visit your local Pivot dealer to get a professional fit and refer to our geometry chart to check your measurements. However, we can provide a rough guideline:

Small: 5'6" – 5'10"

Medium: 5'9" – 6'1"

Large: 6'1" – 6'4"

X-Large: 6'3" +

What bottom bracket is used on the LES and which cranks are compatible?

Pivot is the first frame manufacturer to feature the 92mm wide bottom bracket shell standard, originally developed in conjunction with Shimano XTR. With the press fit 92 system, there are no external washers or threads in the shell. The bearings are housed in light composite resin cups with a full sealed sleeve to keep out the elements. This design allows for easy crank installation, with no frame facing or special spacers required. Chain line is perfectly optimized and as an added advantage, the bearings are extremely easy to replace. Another bonus is that the XTR version includes a 3 year warranty from Shimano. The system works with Shimano, FSA and Race Face cranks (all compatible with the Shimano cup design) as well as the SRAM GXP system for which SRAM offers both standard and ceramic versions. In addition, Enduro and several other aftermarket companies offer both replacement bottom brackets and bearings to support every major crank brand.

Are there any other bottom brackets that will work with the LES? Can you upgrade to ceramic bearings?

We use a Press Fit 92 BB (sometimes called PF92 or BB92) design. Almost every crank and BB manufacturer offers a bottom bracket that is compatible with the Press Fit 92 system.

What is the narrowest Q factor crank that the LES will accept?

The LES will accept cranks with a Q factor measurement as low as 156mm (Such as the narrower option in the SRAM XX1 or the new XTR Race crank). Of course, anything greater than 156mm will work as well. Most standard MTB Q factor measurements are at 163mm.

What hub/wheel spacing does the LES use?

The LES uses the 142mm X 12mm hub/wheel spacing. Our custom 12mm DT Swiss axle is included with the frame. The axle is based off of Shimano's 12mm through axle specifications for length and thread pitch so if you were ever to lose your axle, a Shimano or Shimano compatible axle will work properly as well.

What size seatpost does the LES use?

The LES frame uses a 30.9mm seatpost.

What size seat clamp does the LES use?

The LES frame uses a 34.9mm or 35mm (as some manufacturers call it) seatpost clamp.

Can I use a dropper post with this frame?

Yes, although there is not dropper specific routing on this model. However, any dropper post with external routing can be used on this frame.

What front derailleurs does the LES use?

The LES uses a DM (direct mount) style front derailleur. You can use a SRAM direct mount top pull X-9 or XO version for any 2X system. The SRAM top pull is best if you are running a 10 speed rear cassette and a large front chainring smaller than a 38 tooth. If you are running a 2X or 3X Shimano system with 10 speed rear cassette then use a Shimano direct mount FD. You will need to look at Shimano's technical specifications in order to source the correct Shimano top pull DM front derailleur for the front chainring combination you are using.

What headset do I need for the LES?

The LES uses a ZS (zero stack) 44mm top and (zero stack) 56mm bottom, or a Chris King Inset 2.

How wide of a tire can I run on the LES?

We use the Maxxis Ikon 2.2 in our complete bike builds. However, the LES is designed to easily accept most 2.3 tires in the market. For instance, a Maxxis High-Roller II 2.3 fits with plenty of clearance. For 2.35 tires in the market, some may fit, but rim width and tire manufacture sizing call outs and tire inconsistency can result in huge difference among both tire brands and individual tires. For anything beyond a 2.3, we suggest you check the fit with your chosen rim and tire combination to make sure it has proper clearance before riding.

Can I run the new 27.5"/650+ wheels/ tires on the LES 29" ?

We have tested the LES with the new WTB 2.8" tire size and a 30mm inner rim width, and the size clears fine. It is a fun setup and the overall tire diameter is roughly equal to that of a 29" XC tire, meaning that geometry will remain unaffected while allowing you to try out the new "mid-Fat" size on your 29er LES. We have only tested the WTB tire on a 30mm wide rim, so your results may vary depending on rim width and specification. Also, the larger 3" and 3.25" 27.5"/650+ tires will not fit the LES.

How large of a rotor will fit on the LES?

The LES will clear either a 160mm or 180mm rotor.

What type of rear brake adapter do I need?

No brake adapter is needed for a 160mm rotor. However, many manufacturers make adapters for larger rotor sizes, in which case you would need a 160mm direct mount/ post to post adapter.

What travel fork can I use on my LES?

The LES was designed for either a 100mm or 120mm fork. We use a 100mm fork in all our complete bike builds (although for special orders you can request a 120mm). The maximum travel length that can be used on the LES is 120mm travel.

What is the fork offset on the LES?

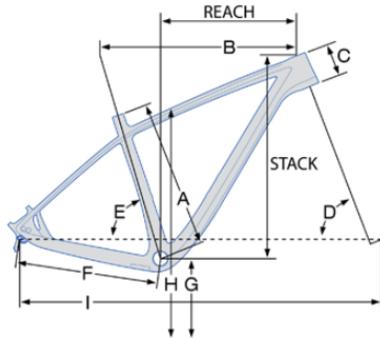
We use a Fox 100mm, 32 forks with a 44mm offset in all our complete bike builds. The 120mm travel special order option also features 44mm offset.

Can I use a 142mm x 12mm wheel with the LES Swinger Dropout Single Speed kit?

Yes, the new Les Swinger Dropout SS kit is designed for a 142mm x 12mm spacing.

What are the torque specs?

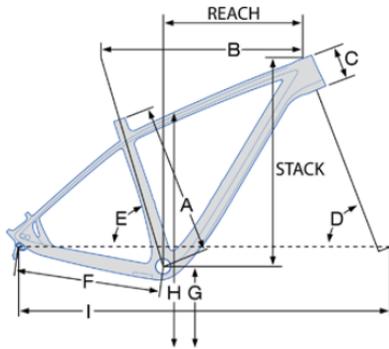
A detailed PDF of the torque specs can be found under the "Tech Specs" tab.



LES 29 100mm Travel Fork

	S	M	L	XL
A Seat Tube Length (C-T)	16.00	17.75	19.00	21.00
B Top Tube Length	22.90	23.90	24.50	25.50
C Head Tube Length	3.85	4.00	4.45	5.50
D Head Tube Angle	69.30°	69.50°	69.50°	70.00°
E Seat Tube Angle	73.00°	72.50°	72.50°	72.50°
F Chain Stay Length	17.10	17.10	17.10	17.10
G Bottom Bracket Height	12.10	12.10	12.10	12.10
H Standover Height	28.50	29.20	29.60	29.70
I Wheelbase	42.58	43.27	43.90	44.74
Stack	23.96	24.13	24.83	25.64
Reach	15.57	16.29	16.66	17.43

Values in inches CM



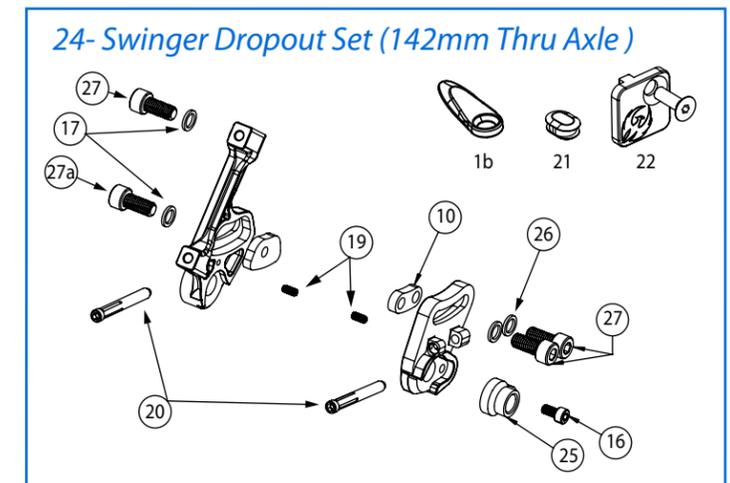
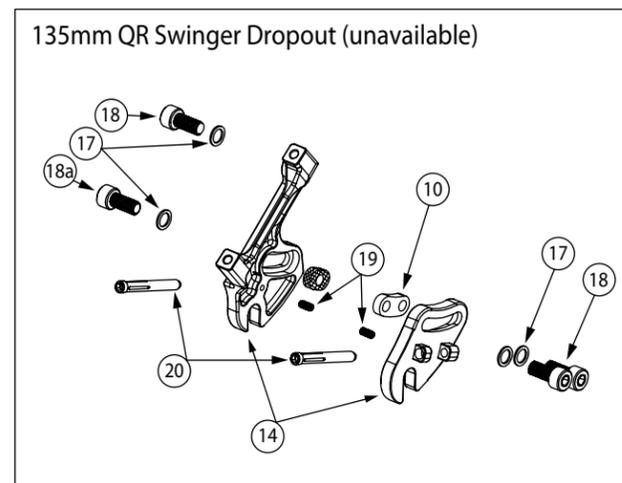
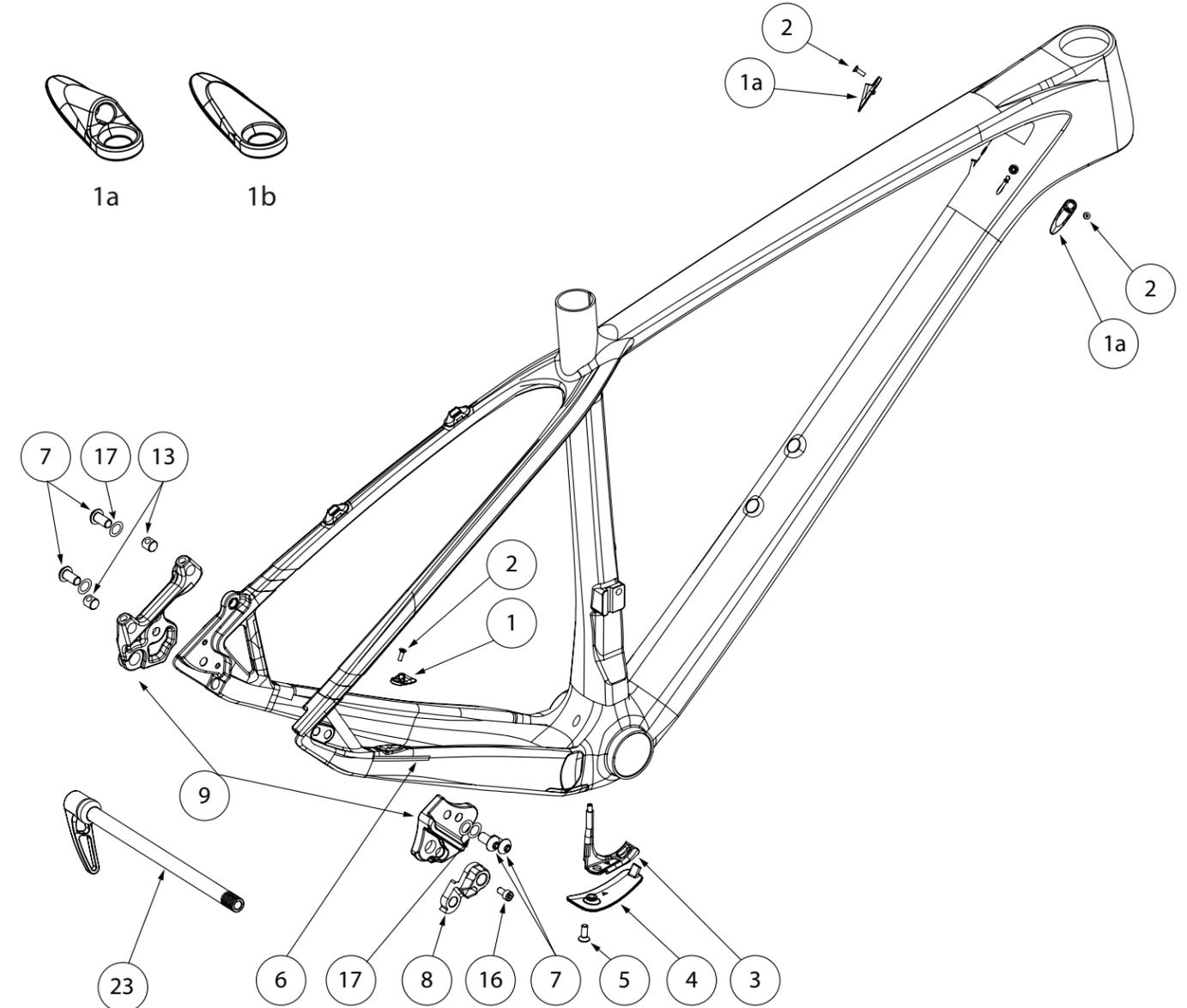
LES 29 100mm Travel Fork

	S	M	L	XL
A Seat Tube Length (C-T)	40.64	45.09	48.26	53.34
B Top Tube Length	58.17	60.71	62.23	64.77
C Head Tube Length	9.78	10.16	11.30	13.97
D Head Tube Angle	69.30°	69.50°	69.50°	70.00°
E Seat Tube Angle	73.00°	72.50°	72.50°	72.50°
F Chain Stay Length	43.43	43.43	43.43	43.43
G Bottom Bracket Height	30.73	30.73	30.73	30.73
H Standover Height	72.39	74.17	75.18	75.44
I Wheelbase	108.15	109.91	111.51	113.64
Stack	60.86	61.29	63.07	65.13
Reach	39.55	41.38	42.32	44.27

Values in centimeters IN

LES 29

NUMBER	PART NAME	DESCRIPTION	Torque	*
1a	FP-GDE-MECH-FRM-V1	GUIDE MECHANICAL FRAME V1		
1b	FP-CVR-MECH-FRM-V3	COVER MECHANICAL FRAME V3		
2	FP-SCW-FLT-M4*10	SCREW FLAT 4X10		
3	FP-GDE-MECH-BB-V1	GUIDE MECHANICAL BOTTOM BRACKET VER1		
4	FP-CVR-MECH-BB-V2	COVER MECHANICAL BOTTOM BRACKET VER2		
5	FP-SCW-FLT-M5*14	SCREW FLAT 5X14		
6	FP-PRO-LES29-CS-V2-R1	LES CARBON CHAINSTAY GUARD V2		
7	FP-SCW-BTN-M8*16	SCREW BUTTON 8X16	13 Nm (10 lb-ft)	□
8	FP-RDH-TA-12MM-BLK-V1	REAR DERAILLEUR HANGER THROUGH AXLE 12MM BLACK V1		
9	FP-DRO-LES-SET-V1-R1	DROPOUTS LES SET VER1 REV1		
10	FP-NUT-SWINGER-SET-V1-R1	NUT SWINGER SET VER1 REV1		
13	FP-BRP-INS-6I	BRAKE POST INSERT		
14	FP-DRO-SWINGER-SET-V1-R1	DROPOUT SWINGER SET VER1 REV1		
16	FP-SCW-SCK-M5*10	SCREW SOCKET 5X10	7 Nm (5 lb-ft)	□
17	FP-WSH-8I*140*1W	WASHER 8I X 120 X 1W		
18	FP-SCW-SCK-M8*16	SCREW SOCKET 8X16	13 Nm (10 lb-ft)	□
18a	FP-SCW-SCK-M8*16	SCREW SOCKET 8X16	20 Nm (14 lb-ft)	□
19	FP-SCW-SET-M4*8	SCREW SET 4X8		
20	FP-SCW-SCK-M6*55	SCREW SOCKET 6X55		
21	FP-PLG-DI2-7*8*2.5	PLUG DI2 7X8X2.5		
22	FP-CVR-DM-FD-V1	COVER DIRECT MOUNT FRONT DERAILLEUR V1		
23	DT SWISS 142 RWS	DT SWISS 142 RWS		
24	KIT-DROSWINGERSETV1R2	LES SWINGER SS 142 DROPOUT KIT		
25	FP-RDH-NUT-12MM-BLK-V1	Rear Derailleur Hanger SS Nut 12mm TA		
26	FP-WSH-8I*140*1.5W	WASHER 8I X 140 X 1.5W		
27	FP-SCW-SCK-M8*18	SCREW SOCKET 8X18	13 Nm (10 lb-ft)	□
27a	FP-SCW-SCK-M8*18	SCREW SOCKET 8X18	20 Nm (14 lb-ft)	□



* ○ = grease ● = anti-seize ◐ = anti-seize or grease □ = loctite 243

SWINGER DROPOUT INSTALLATION GUIDE

1



LES single speed dropout kit.

2



NDS dropout installed like image.
Flip nut 180 degrees to extend travel.

3



DS dropout installed.

4



Use 4mm hex key to adjust chain tension. Count indexed "clicks" on each side to match DS/NDS dropout distance.

5



Torque bolts as shown. Use Blue Loctite.



LES



For those race days when it is essential to be as stiff and light as possible: A Pivot without a pivot!

With the all new full carbon Pivot Les 29er we've created a frame that offers the complete package: A balance of frame stiffness, tuned compliance and straight up performance.



LES



CARBON TECHNOLOGY

Built from the inside, out.

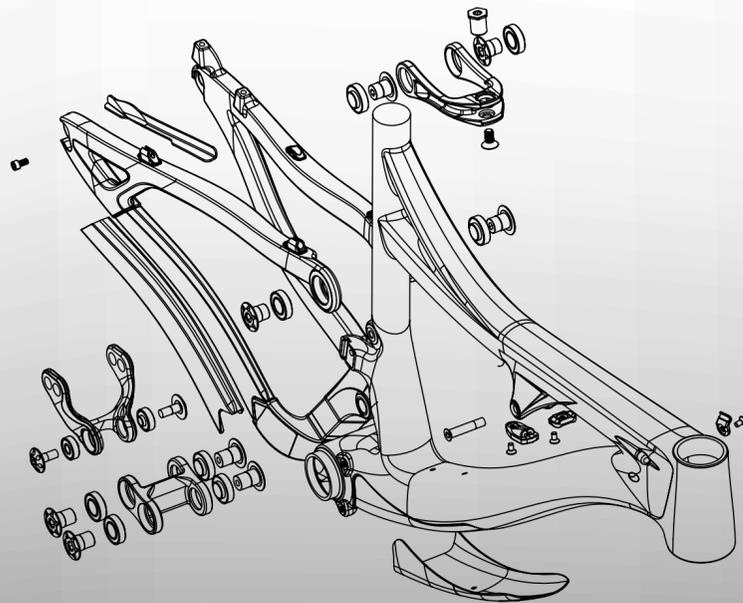
We use a proprietary hollow core internal molding technology to create our Pivot carbon frames. This technology is extraordinary and sets the bar well above everything else that's out there. Other high-end brands utilize previous generation molding techniques, but we've taken the technology to the next level of development to produce a frame that is unmatched in nearly every conceivable category.

The quality of the frame that exits the mold is near perfection inside and out and requires little to no finish work prior to painting. It's a shame we have to paint them at all!



Traditional Methods

Other frames require hours of work after they come out of the molds filling the voids and imperfections with epoxy filler which not only adds weight but can also compromise strength and stiffness in critical areas. Our hollow core internal molding technology produces a much lighter and stiffer frame because there is less material required to fill imperfections. This also produces a better ride because an ultra precise and carbon layup can be optimized and tuned to provide the perfect feel without needing to worry about adding extra material.

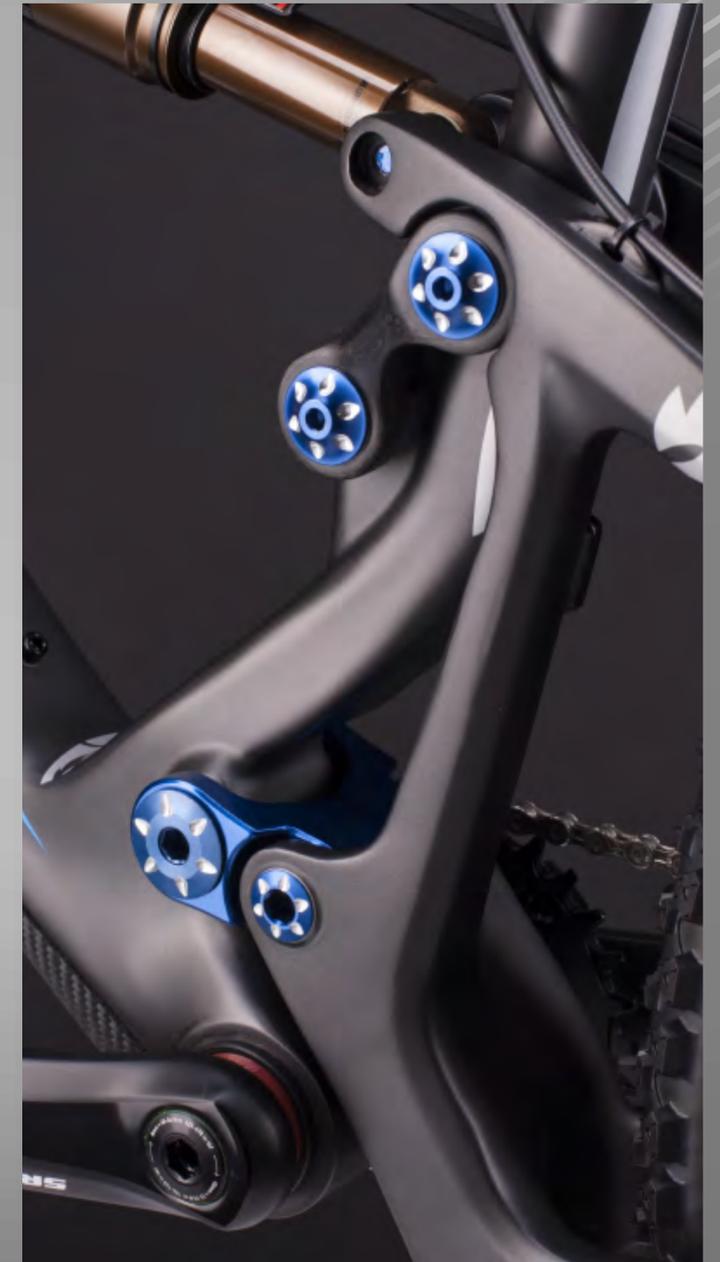


Both our full suspension and hardtail models require less material to achieve target stiffness and strength numbers - meaning a lighter frame with greater stiffness and much higher quality structures. All of this combines to produce a frame that goes above and beyond the engineering to create bikes that are much greater than the sum of their parts.

Pressure and control.

All carbon bikes are not created equal. A nice looking frame on the outside does not tell the story of what's going on inside. Without giving away too many secrets, we can tell you a little bit about how carbon frames are made and what sets Pivot's hollow core internal molding technology apart. Traditional molding is done with standard polybag bladders. Basically, plastic tubes (similar in material to a plastic zip-lock sandwich bag) are placed inside the frame and inflated with pressure while the carbon frame is in the mold and being heated. The pressure from the poly bags push the carbon into the mold creating pressure from the inside that results in the material following the form of the mold and creating the final shape of the carbon frame.

This is the way that the vast majority of carbon frames are made. It's a perfectly fine way to make carbon frames and there is nothing wrong with it. It is simply not a very precise process. Pressure may not be constant in all areas resulting in internal wrinkles and weak spots that require the manufactures to compensate by using more material in key areas. Some of the more advanced companies with lighter frames in the market go one step further and use pre-shaped latex bladders (the internal bladders are made to the shape of the actual internal structure) this method is better as it helps eliminate wrinkles, but there is still a possibility of inconsistent pressure in critical areas and it is much more difficult to control the lay-up on soft, flexible bladders.





CARBON TECHNOLOGY

Hollow core internal molding.

Pivot's hollow core internal molding process goes well beyond this by using hard internal forms for both lay-up and molding that eliminate the possibility of inconsistent pressures, providing the highest levels of compaction and extremely precise control over the entire structure.



The other key part of this is that **we also have greater control over the individual carbon layup that goes into each frame.** This is a true attention to detail item that sets the best apart from the rest. The “kitting” of composites is more on par with making a precision road fork lay-up or handlebar where tuning is critical to the ride and strength is paramount. It is not simply a matter of taking sheets of mid modulus composites and placing them at 45 degree angles in the mold like many other manufacturers.



CARBON TECHNOLOGY

How we got there.

A lot of testing goes into exactly which composites are needed in each location and of what type to optimize the frame. So, we know it makes for a fascinating discussion to throw out material names with super high modulus numbers, and to quote crazy high compaction pressures for marketing purposes. However, the real magic happens in product development and testing.

At Pivot, we are committed to taking the time, effort and high cost involved with developing the perfect lay-up structures, and using all the best materials available in just the right places, in order to develop a truly optimized frame, **with a stiffness to weight ratio and superior ride tuning that puts the competition to shame.**

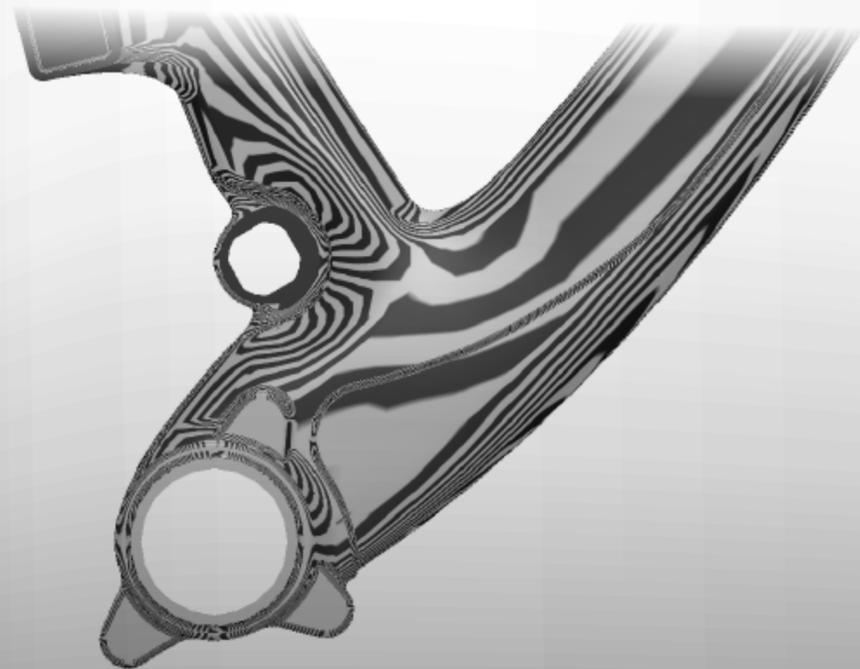




CARBON TECHNOLOGY

Real World Testing.

In the creation of Pivot's truly ground breaking line of composite frames, we didn't just rely on FEA programs or engineering data alone- we tested the frames in the real world with real riders. We built numerous versions of the frame, each with a slightly different lay-up schedule- producing more stiffness, less stiffness and ultimately the right stiffness. We changed the lay-up and the materials until we were happy with the frames stiffness and ride characteristics as much as the test data.

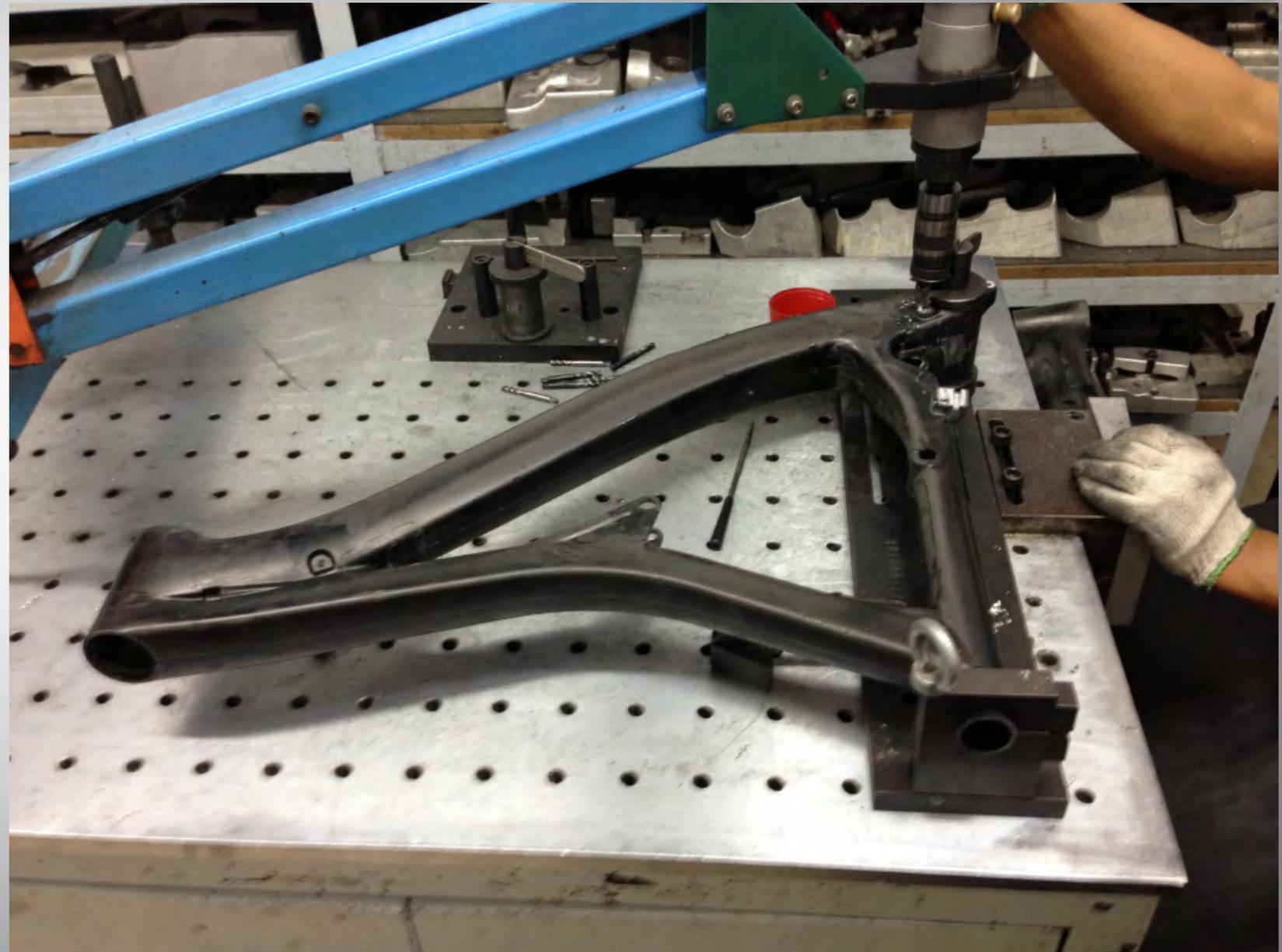




CARBON TECHNOLOGY

Crunching the numbers.

We do live by the test data! We spend a ton of time crunching the numbers and comparing them to those of the other premium brands. We test the competitor's products as a benchmark and go about developing a better frame. In the case of our suspension frames that means a superior stiffness to weight ratio with the highest strength standards in the sport. With our non-suspended models, we focus on achieving the maximum stiffness in the bottom bracket, head tube and rear triangle side to side so that all the riders power gets to the rear wheel. At the same time we develop the perfect lay-up structure that makes the frame both comfortable and lively.





CARBON TECHNOLOGY

What this means for the rider.

The end result is a frame that actually lives up to the words “laterally stiff, yet vertically compliant”. In the case of bikes like our Mach 5.7 and 429, our superior chassis stiffness has become a huge differentiator between us and the competition. Every magazine test report features comments regarding the precision and the immediate acceleration that occurs when getting on a Pivot carbon bike. When it comes to our LES model, these comments are also followed up with compliments on the bikes overall ride quality and light weight. Several testers have written that the LES is the most perfectly balanced hard tail mountain bike they have ever ridden. We know we have done our home work so that you can have a better bike when we get comments like that.





CARBON TECHNOLOGY

Additional Pivot Carbon Frame Technology

Along with the Hollow Box molding process, we use several other technologies to make Pivot bikes as light, stiff and reliable as possible.

Rubberized Leather Protection

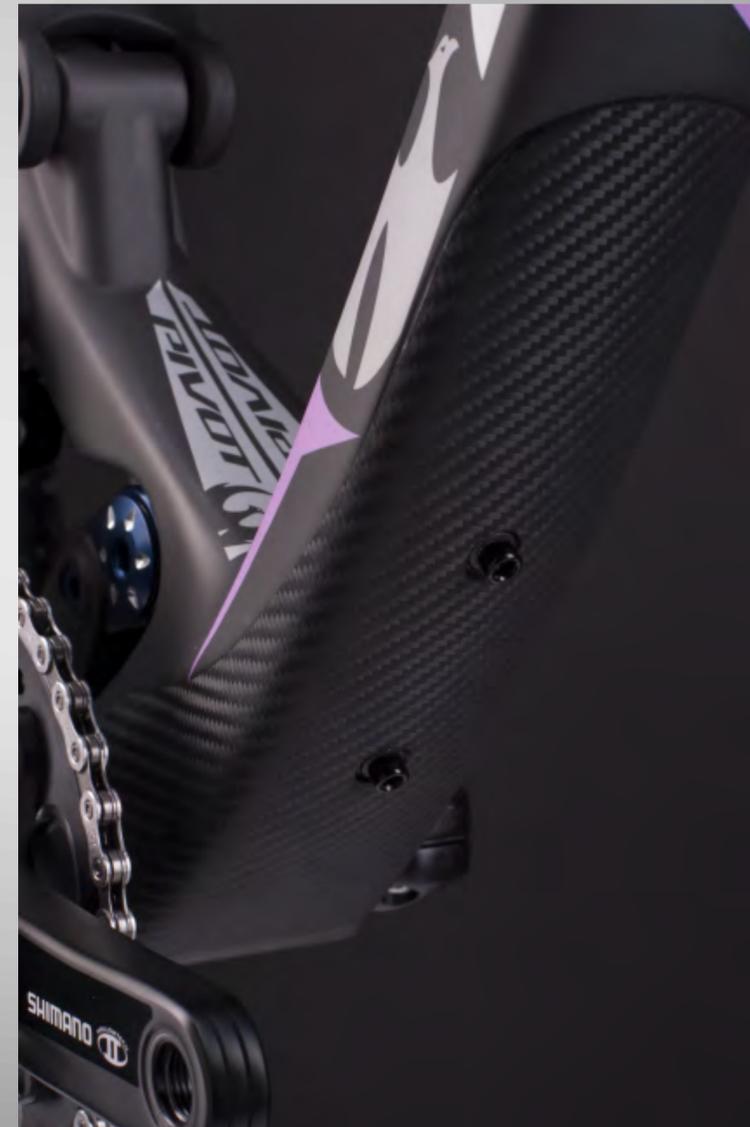
Rubberized leather chainstay, inner seat stay, and down tube protectors for a quiet ride and higher impact resistance.

Tapered 1.5' Headtube

Wider head tube allows us to take full advantage of oversized tubes to create amazing stiffness to weight ratios while keeping the ride quality at what you expect from a Pivot.

Press Fit 92 Bottom Bracket

PF92 bottom bracket 92mm shell allows for wider pivots and better bearing support for increased frame strength and stiffness while maintaining better control over the chain-line. The PF92 design also means that our carbon frames are 100% molded carbon with no threaded metal bottom bracket inserts required.





CARBON TECHNOLOGY

Direct Mount Front Derailleur

Stiffer, lighter and more precise. Allows for ease of set up and perfect front shifting.

Oversized Bearings

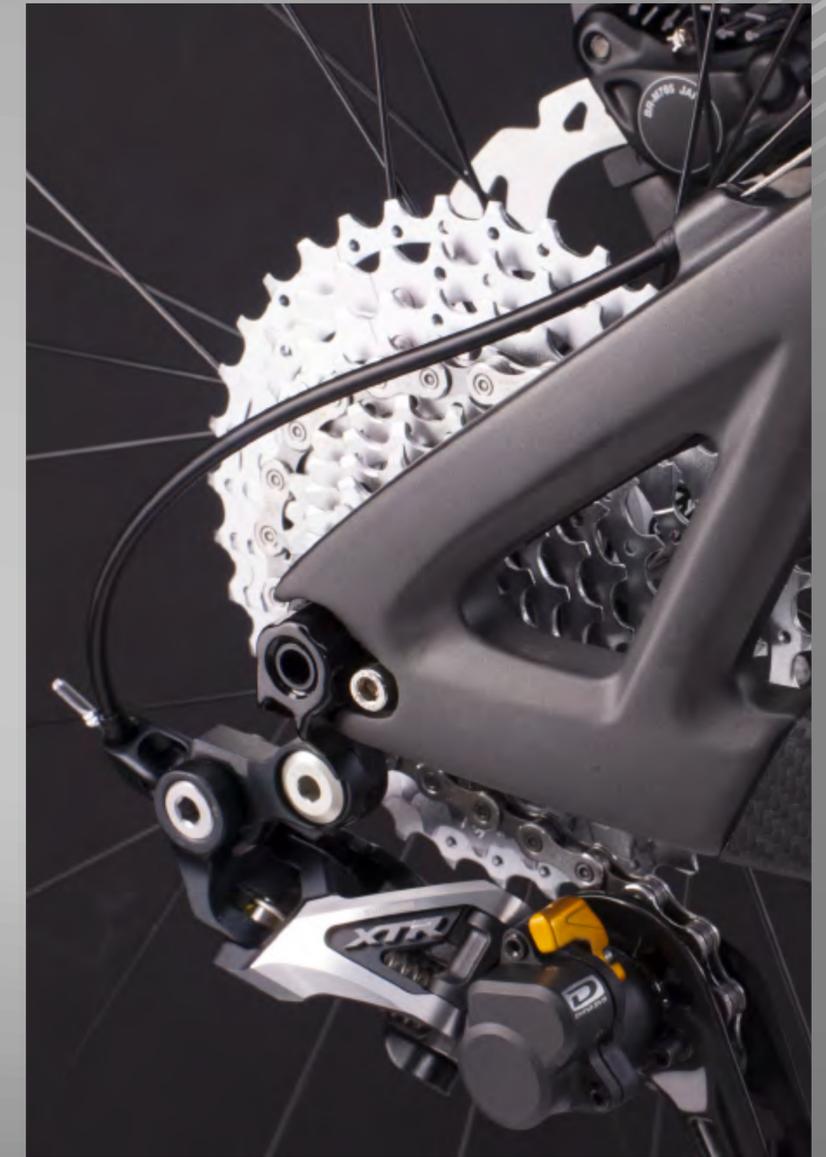
Oversized bearings all around and double row Enduro Max bearings in the dw-link.

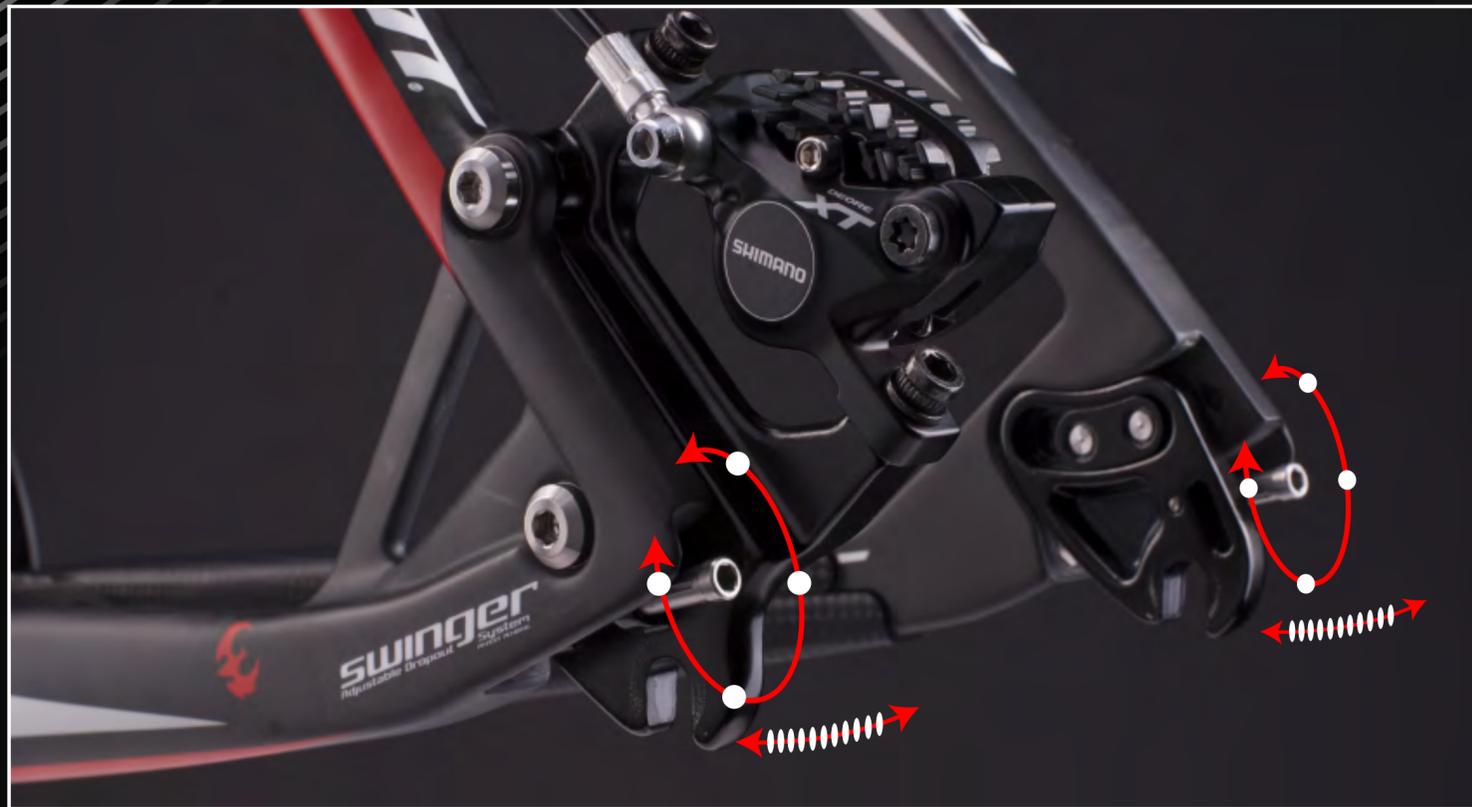
142 X 12mm through axle design

142 X 12mm through axle design with forged 7075-T6 derailleur hanger and integrated axle nut adds even more stiffness to the carbon rear triangle.

Direct Mount rear brake posts

160mm bosses mount calipers directly to rear triangle resulting in higher levels of stiffness and lower overall system weight.





Swinger System:

Swinger Patent Pending adjustable single speed System: Single speeders can rejoice with this design. It's light, simple to adjust and really sets a new bar for single speeders. The system provides quick, consistent, indexed chain adjustments for single speed use along with fast wheel changes and no change in brake adjustments. The design works with bolt on or quick release single speed disc brake hubs.

The Swinger kit is a option that includes the dropouts, front derailleur plate with a cool Pivot bird engraving and all the caps to remove and cover the gear cable locations so the bike becomes a true single speed specific machine.

The Swinger dropouts are cold forged aluminum and feature a rear chain tension adjuster with a spring loaded ball bearing detent design. The rider can make quick gear changes and adjust the chain tension evenly on each side. The adjust features 4 clicks per rotation for counting off even adjustments per side. The adjusters cannot self loosen and will not allow the axle to slide forward. It is faster, more accurate, and more reliable than any single speed design made.





Features

Full internal shift cable routing with under bottom bracket access port design for hassle free installation.

100mm or 120mm fork compatibility.

Sub 2.5lb frame weight.

The LES features extremely short 17.1" chainstays. This in 26" wheel territory and matches the shortest chainstay lengths out there so riders have a tight handling, responsive bike along with the benefits of 29" wheels. The real magic in the LES design is that we clear some of the biggest 29er tires in the market. Go ahead and run your 2.3's or even WTB's Weirwolf 2.5. The LES has ample clearance.

Color Options



Matte Natural Carbon with Blue or Red highligths, or fully painted Team Orange

LES