**Two categories, one champion.**

From cross country to trail, the Mach 429 Carbon reigns supreme. The 429 has won awards for best XC 29er and now follows it up by winning this year's Bicycling Magazine's Editor's Choice award for best 29er trail bike. The Mach 429 has enjoyed podiums in everything from National XC races, to the biggest 24 hour and Endurance races while being at home on your favorite trails as well.

The 429 Carbon is a bike that is seems without boundaries. At its heart is an incredibly potent racing platform that is by far the stiffest, most efficient chassis in its class. Combined with the dw-link's® unparalleled pedaling efficiency, there is nothing that can lay down the power like the 429. At the same time, the 429's handling strikes that perfect balance between short track precision and all day long trail riding capability. The dw-link® suspension, custom tuned Fox shock and the Mach 429's balanced geometry delivers descending capabilities that flat out surpass much longer travel designs. Throw a leg over the Mach 429 Carbon, and you'll know immediately that you're riding the most efficient, fastest, and best 29er full suspension bike made.

**Mach 429 Carbon Features**

- Pivot-exclusive hollow box, high-compression internal mandrel technology allows for greater compaction and smoother internal walls resulting in a lighter, stronger, highly optimized frame design with the best stiffness to weight ratio in the class.
- 100mm travel dw-link® suspension design with position-sensitive anti-squat makes for a 29er that pedals, accelerates and handles like nothing else.
- Pivot specific, custom tuned Fox Float CTD shock technology: increased performance and adjustment range allows riders to quickly and easily adjust for changing course or ride conditions.
- Internal top tube shift cable routing with clean disc brake and dropper seat post routing.
- Rubberized leather chainstay, inner seat stay, and down tube protectors for a quiet ride and higher impact resistance.

MACH429 CARBON

## 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: 5'5" – 5'10"
Medium: 5'9" – 6'1"
Large: 6'1" – 6'4"
X-Large: 6'3" +

**What bottom bracket is used on the Mach 429 Carbon 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 Mach 429 Carbon? 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 Mach 429 Carbon will accept?**

The Mach 429 Carbon 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 429 Carbon use?**

The Mach 429 Carbon 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 Mach 429 Carbon use?**

The Mach 429 Carbon frame uses a 30.9mm seatpost.

**What size seat clamp does the Mach 429 Carbon use?**

The Mach 429 Carbon frame uses a 34.9mm or 35mm (as some manufacturers call it) seatpost clamp.

**Can I use a dropper post with this frame?**

Yes, any dropper post with external routing will work on this frame.

**What front derailleur does the Mach 429 Carbon use?**

The Mach 429 Carbon 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 then 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.

**Can I mount a chain guide on my Mach 429 Carbon?**

Yes. The Mach 429 carbon features ISCG05 mounts on the frame. Most upper guides on the market will fit. For full upper and lower guides, the two chain guides we found that fit best are the Blackspire Twinty2x, ISG05/36T - 40t and the 32 - 36t.

**What headset do I need for the Mach 429 Carbon?**

The Mach 429 Carbon uses a ZS (zero stack) 44mm top and (zero stack) 56mm bottom, or a Chris King Inset 2.

**Can I run a large water bottle on the Mach 429 Carbon?**

Yes, the Mach 429 carbon was designed to clear a large water bottle on top of the down tube. For best clearance, we suggest removing the rear shock and swapping the spacer hardware from front to rear and then re-installing the shock with the air can side facing the rear triangle and the CTD adjusters facing up towards the top tube. This will open up the clearance significantly at the front allowing easy access to the larger bottles. This is the set up all our racers run and we designed the frame to be run this way for those wanting to use large bottles.


**How wide of a tire can I run on the Mach 429 Carbon?**

We use the Maxxis Ardent Race 2.2 in our complete bike builds. However, the Mach 429 Carbon 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.

**How large of a rotor will fit on the Mach 429 Carbon?**

The Mach 429 Carbon 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 Mach 429 Carbon?**

The Mach 429 Carbon was designed for either a 100mm or 120mm fork. We use a 120mm fork in all our complete bike builds (although for special orders you can request a 100mm). The maximum travel length that can be used on the Mach 429 carbon is 130mm travel.

**What is the fork offset on the Mach 429 Carbon?**

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

**What is the eye-to-eye shock length and stroke length on the Mach 429 Carbon?**

The eye to eye shock length is 7.25 inches and the stroke length is 1.75 inches.

**If I want to run a different brand of shock on my Mach 429 Carbon, what else do I need to know?**

The Mach 429 shock uses M8 through bolt hardware on both the front and rear. Shock spacer dimensions are 22mm wide front and 36mm wide rear. The frame is designed around a standard size air can volume and we typically run light to medium valving on the compression side (depending on rider weight) and light rebound damping.

**Can I put a coil-over shock on my Mach 429 Carbon?**

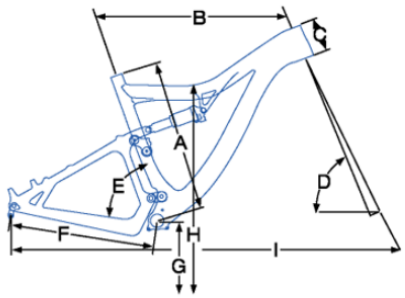
You cannot run a coil-over on your Mach 429 Carbon! The Mach 429 Carbon was designed to work with the progressiveness of an air spring. A coil-over shock (even one with separate bottoming control) does not offer the progressive spring curve that the Mach 429 requires. Running a coil-over shock on the Mach 429 will result in hard bottoming and damage to the frame.

**What are the torque specs?**

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

MACH429 CARBON

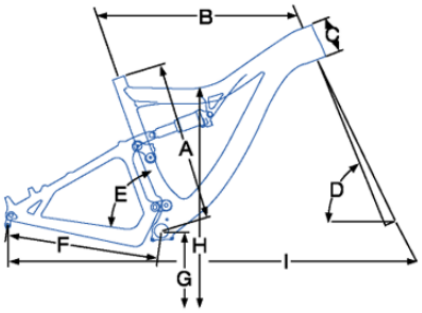
## Geometry Chart




**Mach 429 Carbon 120mm Travel Fork**

| | | S | M | L | XL |
|---|---|---|---|---|---|
| **A** | Seat Tube Length (C-T) | 17.00 | 18.50 | 20.00 | 22.00 |
| **B** | Top Tube Length | 23.00 | 24.00 | 24.75 | 25.60 |
| **C** | Head Tube Length | 4.00 | 4.00 | 4.70 | 5.90 |
| **D** | Head Tube Angle | 69.30° | 69.30° | 69.30° | 69.30° |
| **E** | Seat Tube Angle | 71.90° | 71.90° | 71.90° | 71.90° |
| **F** | Chain Stay Length | 17.65 | 17.65 | 17.65 | 17.65 |
| **G** | Bottom Bracket Height | 13.00 | 13.00 | 13.00 | 13.00 |
| **H** | Standover Height | 28.00 | 29.60 | 29.60 | 30.80 |
| **I** | Wheelbase | 43.16 | 44.17 | 44.96 | 45.85 |
| | Stack | 23.96 | 23.96 | 24.65 | 25.77 |
| | Reach | 15.24 | 16.27 | 16.80 | 17.29 |

Values in inches CM



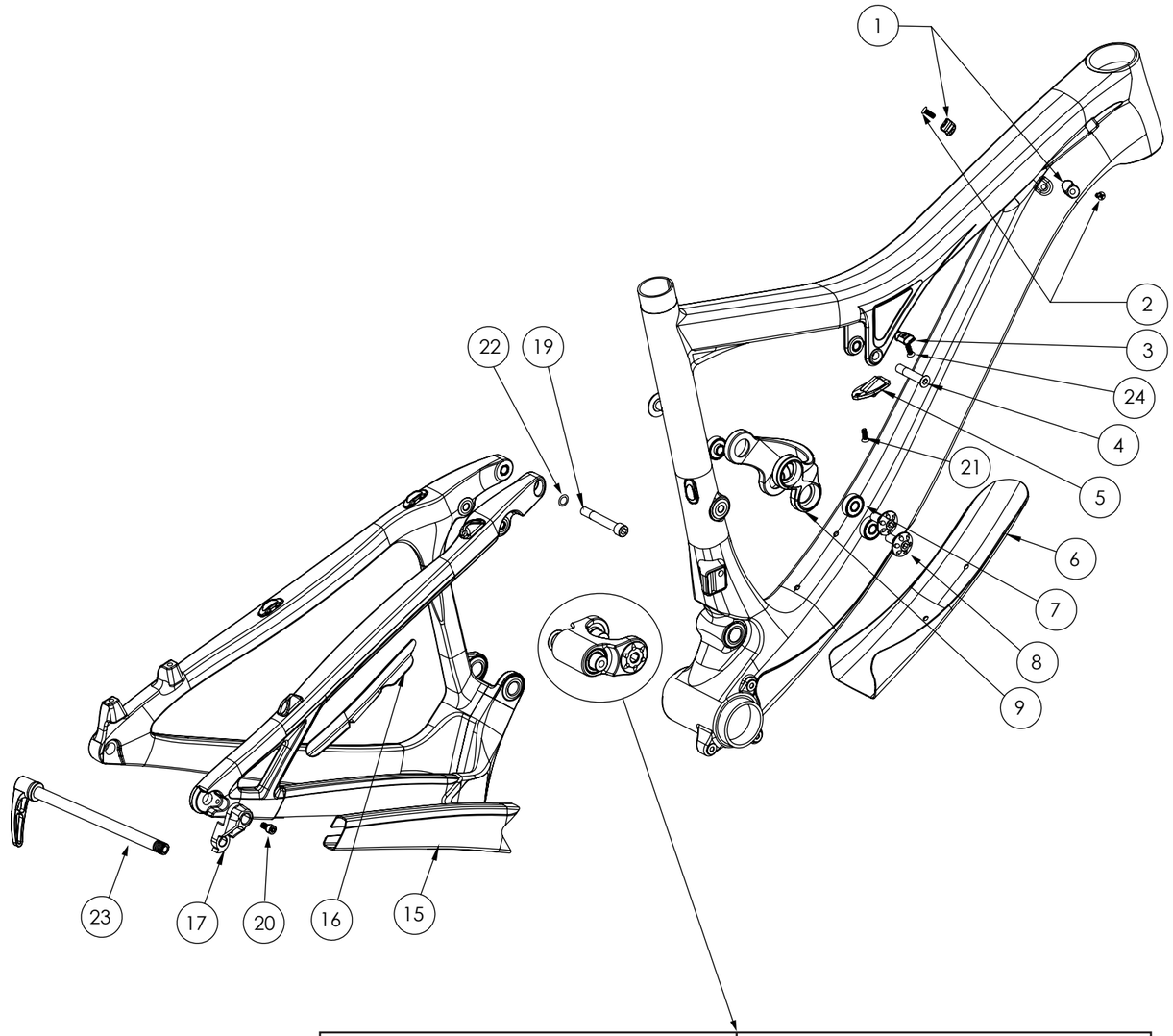

**Mach 429 Carbon 120mm Travel Fork**

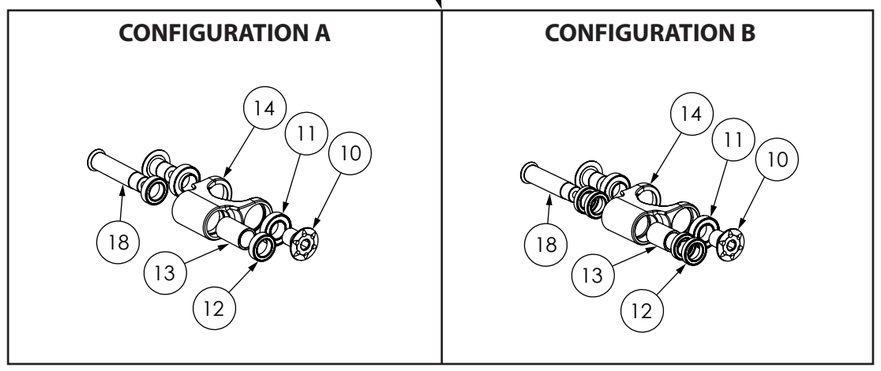
| | | S | M | L | XL |
|---|---|---|---|---|---|
| **A** | Seat Tube Length (C-T) | 43.18 | 46.99 | 50.80 | 55.88 |
| **B** | Top Tube Length | 58.42 | 60.96 | 62.87 | 65.02 |
| **C** | Head Tube Length | 10.16 | 10.16 | 11.94 | 14.99 |
| **D** | Head Tube Angle | 69.30° | 69.30° | 69.30° | 69.30° |
| **E** | Seat Tube Angle | 71.90° | 71.90° | 71.90° | 71.90° |
| **F** | Chain Stay Length | 44.83 | 44.83 | 44.83 | 44.83 |
| **G** | Bottom Bracket Height | 33.02 | 33.02 | 33.02 | 33.02 |
| **H** | Standover Height | 71.12 | 75.18 | 75.18 | 78.23 |
| **I** | Wheelbase | 109.63 | 112.19 | 114.20 | 116.46 |
| | Stack | 60.86 | 60.86 | 62.61 | 65.46 |
| | Reach | 38.71 | 41.33 | 42.67 | 43.92 |

Values in centimeters IN

## *MACH 429 CARBON*

| NUMBER | PART NAME | DESCRIPTION | Torque | * |
|---|---|---|---|---|
| **1** | FP-CLM-MECH-HT-V1 | *CLAMP MECHANICAL HEADTUBE* | | |
| **2** | FP-SCW-FLT-M5*10 | *M5X10 FLAT HEAD BOLT* | | |
| **3** | FP-CLM-MECH-TT-V1 | *CLAMP MECHANICAL TOPTUBE* | | |
| **4** | FP-BLT-M8*38-BLK | *BOLT 8X38 BLACK* | 13 Nm *(10 lb·ft)* | ● |
| **5** | FP-STP-SHFT-V1 | *STOP SHIFTER V1* | | |
| **6** | MACH 429 CBN DOWNTUBE GUARD | *MACH 429 CBN DOWNTUBE GUARD* | | |
| **7** | FP-BRG-608-LLUMAXE | *608 LLU MAX-E* | | |
| **8** | FP-BLT-M8*20-BLK | *BOLT 8X20 BLACK* | 13 Nm *(10 lb·ft)* | ● |
| **9** | FP-LNK-UL-50MM-V2-R2 | *LINK UPPER 50MM VER2 REV2* | | |
| **10a** | FP-BLT-M14*20-BLK-V2 | *BOLT 14*20 BLACK V2* | 35 Nm *(27 lb·ft)* | □ |
| **11a** | FP-BRG-6902-LLUMAXECN | *6902 LLU MAX-E CN* | | |
| **12a** | FP-BRG-3802-LLBMAXSP | *3802 LLB MAX* | | |
| **13a** | FP-SLV-LL-31MM | *SLEEVE LOWER LINK 31MM* | | |
| **14a** | FP-LNK-LL-ALM-610 | *34MM LOWER LINK* | | |
| **10b** | FP-BLT-M14*20-BLK-V2 | *BOLT 14*20 BLACK V2* | 35 Nm *(27 lb·ft)* | □ |
| **11b** | FP-BRG-6902-LLUMAXECN | *6902 LLU MAX-E CN* | | |
| **12b** | FP-BRG-6802-LLBMAX | *6802 LLB MAX* | | |
| **13b** | FP-SLV-LL-25MM | *SLEEVE LOWER LINK 25MM* | | |
| **14b** | FP-LNK-LL-BLU-V2-R1 | *LINK LOWER BLU VER2 R1* | | |
| **15** | MACH 429 CBN CHAINSTAY GUARD | *MACH 429 CBN CHAINSTAY GUARD* | | |
| **16** | MACH 429 CBN SEATSTAY GUARD | *MACH 429 CBN SEATSTAY GUARD* | | |
| **17** | FP-RDH-TA-12MM-BLK-V1 | *REAR DERAILLEUR HANGER THROUGH AXLE 12MM BLACK V1* | | |
| **18a** | FP-BLT-M14*66-BLK | *BOLT 14X66 BLACK* | 35 Nm *(27 lb·ft)* | ● |
| **18b** | FP-BLT-M14*66-BLK | *BOLT 14X66 BLACK* | 35 Nm *(27 lb·ft)* | ● |
| **19** | FP-BLT-M8*55-BLK | *BOLT 8X55 BLACK* | 13 Nm *(10 lb·ft)* | ● |
| **20** | FP-SCW-SCK-M5*10 | *SCREW SOCKET 5X10* | 7 Nm *(5 lb·ft)* | □ |
| **21** | FP-SCW-FLT-M4*12 | *SCREW FLAT 4X12* | | |
| **22** | FP-WSH-8I*12O*1W | *WASHER 8I X 12O X 1W* | | |
| **23** | DT SWISS 142 RWS | *DT SWISS 142 RWS* | | |
| **24** | FP-SCW-FLT-M5*16 | *M5x16 FLAT HEAD BOLT* | | |




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

# SUSPENSION SETUP GUIDE

**Setting Rebound and Propedal on FOX CTD Rear Shocks with Boost Valve:** In general, rebound should be turned all the way out and dialed back in 1-5 clicks depending on rider weight. A sub 145lb rider is full out (fastest setting). Average is 1 click in on a Mach 4, 2 clicks in on a Mach 5.7, and 4 clicks in on a Mach 6/Firebird. We generally recommend starting your ride with the CTD open (descend mode) for all bikes other then the Mach 5.7, Mach 6, and Firebird. With these models, the Trail 1 setting provides the best all around general starting set up and you can tune from there.

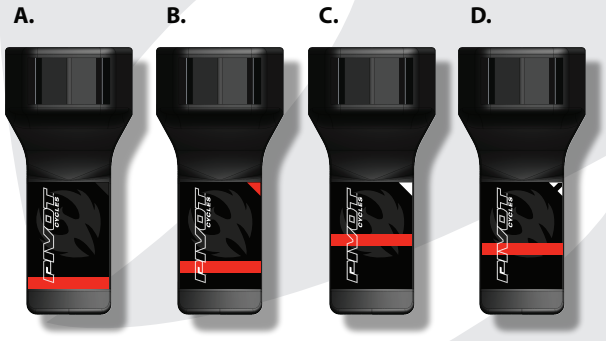
**Setting Rebound, Bottom Out, and Boost Valve on DHX Air Shocks:** In general, a good starting rebound setting is 7 clicks in from full open for a rider weight of 170lbs. We recommend setting the bottom-out with two lines showing on the reservoir. A good starting Boost Valve pressure is 170psi. We do not recommend going below 150psi on the Firebird.

**Setting Rebound, Bottom Out, Boost Valve, High Speed Compression and Low Speed Compression damping adjustments on RC4 Coil Shocks for Phoenix DH: In general, for a rider between 160-180lbs, we recommend the following baseline settings:**

- Rebound: 5 clicks out from all the way in
- High Speed Compression: 7 clicks out from all the way in
- Low Speed Compression: 10 clicks out from all the way in
- Bottom Out: Two turns in on the reservoir.
- Boost Valve: A good starting Boost Valve pressure is 160psi. We do not recommend going below 130psi on the Phoenix DH.

**Setting rear shock sag on mountain bikes:** Always set sag with the CTD lever turned to the open position (Descend Mode), which means the lever is turned toward the non-drive side of the bike. (In the case of the Float X CTD this means that the lever will be flipped towards the remote reservoir). Have the rider sit on the bike (preferably with their hydration pack on) and have them sit down hard into the saddle to achieve accurate sag settings. The rider does not need to bounce up and down nor should they sit down gently. If they sit down hard once, the suspension will cycle well into the stroke and return to the natural sag setting with the rider in the saddle. With the rider in the saddle (not moving), slide the O-ring up into position against the air can. Once the O-ring is set in place, have the rider slowly step off the bike so as not to move the O-ring. The O-ring needs to line up with the red line on the sag indicator. Add or remove air as required to get the O-ring to line up with the red line. If there is no sag indicator on the shock, set the sag to the recommended setting shown below. (Different models and sizes of Pivot bikes use different length shocks and therefore require different sag settings.

- Mach 4 (all years) XX-Small and X-small: Sag = .49” or 12.4mm (Sag indicator C)
- 2010 and older Mach 4 Small, Medium, Large, X-large, Mach 5 X-Small and Small, and all 429 Alloy’s : Sag = .65” or 16.5mm (Sag indicator B)
- 2011-2014 Mach 4 Small, Medium, Large, X-large as well as All years for Mach 429 Carbon: Sag = .55” or 14mm (Sag indicator D)
- Mach 5.7/Mach 5.7 Carbon X-Small, Small, Medium, Large, X-large and Mach 5 Medium, Large and X-large: Sag = .74” or 18.8mm (Sag indicator A)
- Mach 6, Firebird and Firebird 27.5”: Sag = .8” or 20.3mm. We use Sag indicator A on these models where the red line is .74” or 18.8mm and the end of the indicator is .98” or 24.9mm. If you set sag just past the red line, towards the end of the indicator, this will give you the proper sag setting on these models.
- Phoenix DH: Sag = .99” or 25mm



**Spring Weight recommendations for RC4 Coil Shocks on the Phoenix DH:**

- Rider Weight: 130-160lbs Spring Weight: 300lb coil
- Rider Weight: 160-190lbs Spring Weight: 350lb coil
- Rider Weight: 190-220lbs Spring Weight: 400lb coil
- Rider Weight: 220-250lbs Spring Weight: 450lb coil

**Setting Rebound, Low Speed Compression damping, and Lockout threshold on all Fox 32 RLC forks with Fit Damper:**

- Rebound: Make sure the lock out is fully open (not locked out), and that the rebound is not set too fast or too slow. Rebound adjust-ment is highly dependent on rider weight and air pressure. You will need to cycle the fork several times after making a change to the rebound.
- Low Speed Compression: The LSC (low speed compression) is the blue large serrated outer knob on the top of the right fork leg. Start with the knob turned about 5 clicks from full open. Full open is all the way to the left (counter clockwise) and then turn 5 clicks to the right.
- Lockout Threshold: There is a blue lever on the top of the fork that turns the lockout on or off. There is a black knob is in the center of the adjusters that determines how locked out the fork is and how easily the lockout will "blow off" on an impact when the lockout is in the locked position. Unless racing, we recommend running the threshold all the way open or close to all the way open (counter clockwise) for maximum oil flow.

**Setting Rebound, High Speed Compression and Low Speed Compression damping adjustments on Fox 36 RC2 Fit damper forks for Firebird 26": I**n general, for a rider between 160-180lbs, we recommend the following baseline settings:

- Rebound: 10 clicks out from all the way in
- High Speed Compression: 15 clicks out from all the way in
- Low Speed Compression: 17 clicks out from all the way in

**Setting Rebound, High Speed Compression and Low Speed Compression damping adjustments on Fox 40 Dual Crown forks for Phoenix DH:** In general, for a rider between 160-180lbs, we recommend the following baseline settings:

- Rebound: 8 clicks out from all the way in
- High Speed Compression: 15 clicks out from all the way in
- Low Speed Compression: 18 clicks out from all the way in

**Setting Fork Pressures on Fox CTD Air forks:** We start with the manufacturers recommended air pressure charts for rider weight. We have found that these charts tend to run on the high side of the range (too much air) so we will typically go one pressure setting below the setting shown for the recommended rider weight as per the charts below:

Mach 6 and Firebird

**2014 34 FLOAT 27.5"**

| Rider Weight | 150mm | 160mm |
|---|---|---|
| ≤125 (lbs) | 45psi | 45psi |
| 125 - 135 | 50psi | 50psi |
| 135 - 145 | 55psi | 55psi |
| 145 - 155 | 65psi | 65psi |
| 155 - 170 | 70psi | 70psi |
| 170 - 185 | 75psi | 75psi |
| 185 - 200 | 80psi | 80psi |
| 200 - 215 | 90psi | 90psi |
| 215 - 230 | 100psi | 100psi |
| 230 - ≥250 | 110psi | 110psi |

Mach 4

**2014 32 FLOAT 26"**

| Rider Weight | 120mm |
|---|---|
| ≤125 (lbs) | 50psi |
| 125 - 135 | 50psi |
| 135 - 145 | 55psi |
| 145 - 155 | 65psi |
| 155 - 170 | 75psi |
| 170 - 185 | 80psi |
| 185 - 200 | 85psi |
| 200 - 215 | 95psi |
| 215 - 230 | 100psi |
| 230 - ≥250 | 110psi |

Mach 5.7

**2014 34 FLOAT 26"**

| Rider Weight | 150mm |
|---|---|
| ≤125 (lbs) | 45psi |
| 125 - 135 | 50psi |
| 135 - 145 | 55psi |
| 145 - 155 | 65psi |
| 155 - 170 | 70psi |
| 170 - 185 | 75psi |
| 185 - 200 | 80psi |
| 200 - 215 | 90psi |
| 215 - 230 | 100psi |
| 230 - ≥250 | 110psi |

Mach 429 and Les

**2014 32 FLOAT 29"**

| Rider Weight | 100mm | 120mm |
|---|---|---|
| ≤125 (lbs) | 55psi | 50psi |
| 125 - 135 | 55psi | 50psi |
| 135 - 145 | 60psi | 55psi |
| 145 - 155 | 70psi | 65psi |
| 155 - 170 | 80psi | 75psi |
| 170 - 185 | 85psi | 80psi |
| 185 - 200 | 90psi | 85psi |
| 200 - 215 | 95psi | 95psi |
| 215 - 230 | 100psi | 100psi |
| 230 - ≥250 | 110psi | 110psi |

Les 27.5

**2014 32 FLOAT 27.5"**

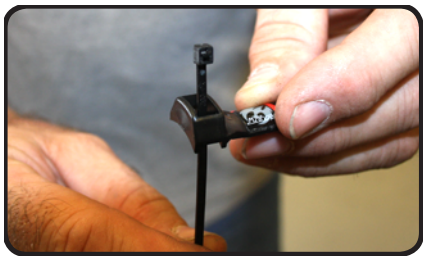
| Rider Weight | 100mm |
|---|---|
| ≤125 (lbs) | 55psi |
| 125 - 135 | 55psi |
| 135 - 145 | 60psi |
| 145 - 155 | 70psi |
| 155 - 170 | 80psi |
| 170 - 185 | 85psi |
| 185 - 200 | 90psi |
| 200 - 215 | 95psi |
| 215 - 230 | 100psi |
| 230 - ≥250 | 110psi |

**Spring Weight recommendations for Fox 40 Coil Forks on the Phoenix DH:**

- Rider Weight: 120-150lbs Spring Weight: *Optional Light*
- Rider Weight: 150-185lbs Spring Weight: *Stock Medium*
- Rider Weight: 185lbs + Spring Weight: *Optional Heavy*

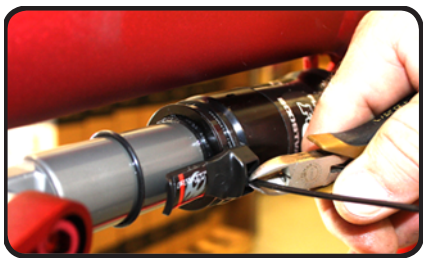
PIVOT CYCLES

## **Setting Up Your Sag Indicator** (Meet Your New Travel Companion)



**1**

- Insert the supplied zip tie into your Sag Indicator, making sure the head of the zip tie is facing outward.

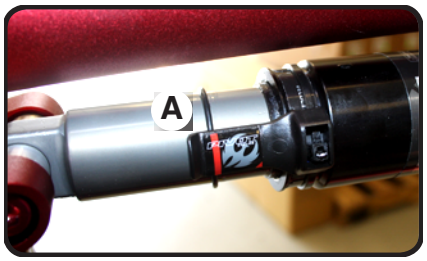


**2**

- Place the Sag Indicator above the bottom collar of the shock body.
- Tightly pull zip tie tail until indicator is tightly secured to shock before cutting excess.
- Cut excess zip tie.

**3**

- The Sag Indicator will rotate around the shock body if it is properly installed. Use your Suspension Set Up Guide (provided separately) to ensure proper sag.




**4**

- You will know you've achieved proper sag when the rubber gasket aligns perfectly with the red line on the Sag Indicator (A).


You MUST rotate the Sag Indicator to the bottom of the shock body before riding! (B) Otherwise you risk breaking and losing the Sag Indicator.



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# Washing & Maintenance Tips for Mach 4, Mach 5, Mach 5.7 and Mach 429

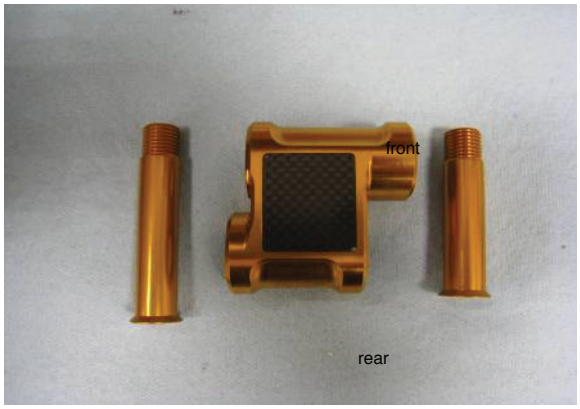
**Cleaning and Washing :** If the bike gets past the point of basic wipe down or it is a really muddy day, then a true washing is acceptable.
The preferred method is a warm bucket of water sponges and Palmolive and a light hose rinse **(NO POWER WASHER!).**
Towel dry and use compressed air to get the water out of the tight spots. Lube chain and derailleurs after washing.
Avoid pressurized water on bearing seals.

**Maintenance:** Replace cables and housing and lube with Slick Honey any time shifting becomes less then perfect.
Check brake pads regularly for wear. Replace as needed.
For disc brakes, check lever for spongy feel and bleed brakes if needed. Make sure brakes are not dragging and adjust as required.
Check bar, stem, seat post head and rear derailleur mounting bolts and grease bolts regularly.
Lube compression sleeve in headset to avoid creaking
Apply grease to shock mounts to avoid squeaks


**Install long shock bolt using anti-seize and torque to (10lb. ft, 120lb. in, 13Nm.)**

**Install short shock bolt. Use blue loctite on the M5 bolt. Torque M5 bolt to ( 5lb.ft, 60lb.in, 7Nm. )**

**Install rocker bolts using grease or anti-seize. Torque to (10 lb.ft, 120 lb.in, 13 Nm.)**




**Use anti-seize and torque link pins to ( 27lb ft, 35 Nm. )**

# MACH 429 CARBON


PIVOT CYCLES

PIVOT CYCLES


Pivot has upped the ante once again by taking the proven performance of the Mach 429 and adding carbon

Two years were dedicated to testing and designing the all new geometry and revised dw-link suspension design make this 29er handle and accelerate like a 26” wheel bike.

# MACH 429 CARBON

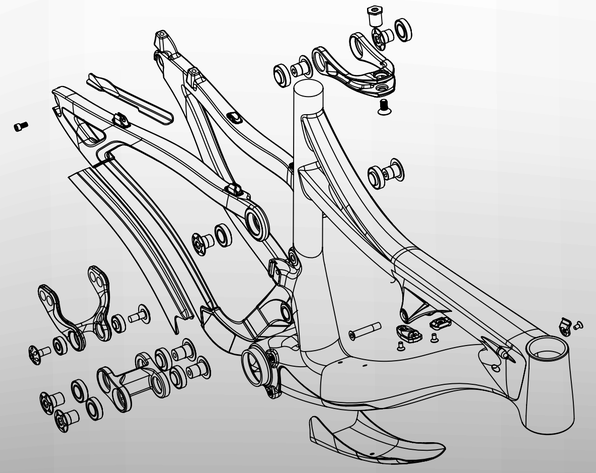
# Built from the inside, out.

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.

# 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.

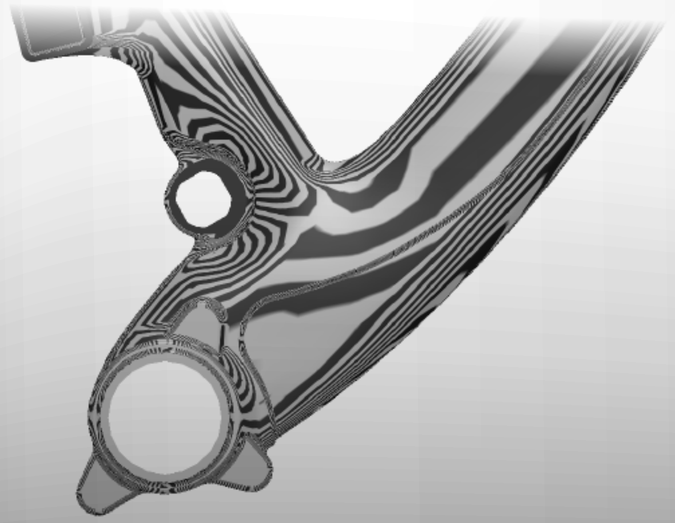
# How we got there.

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**.

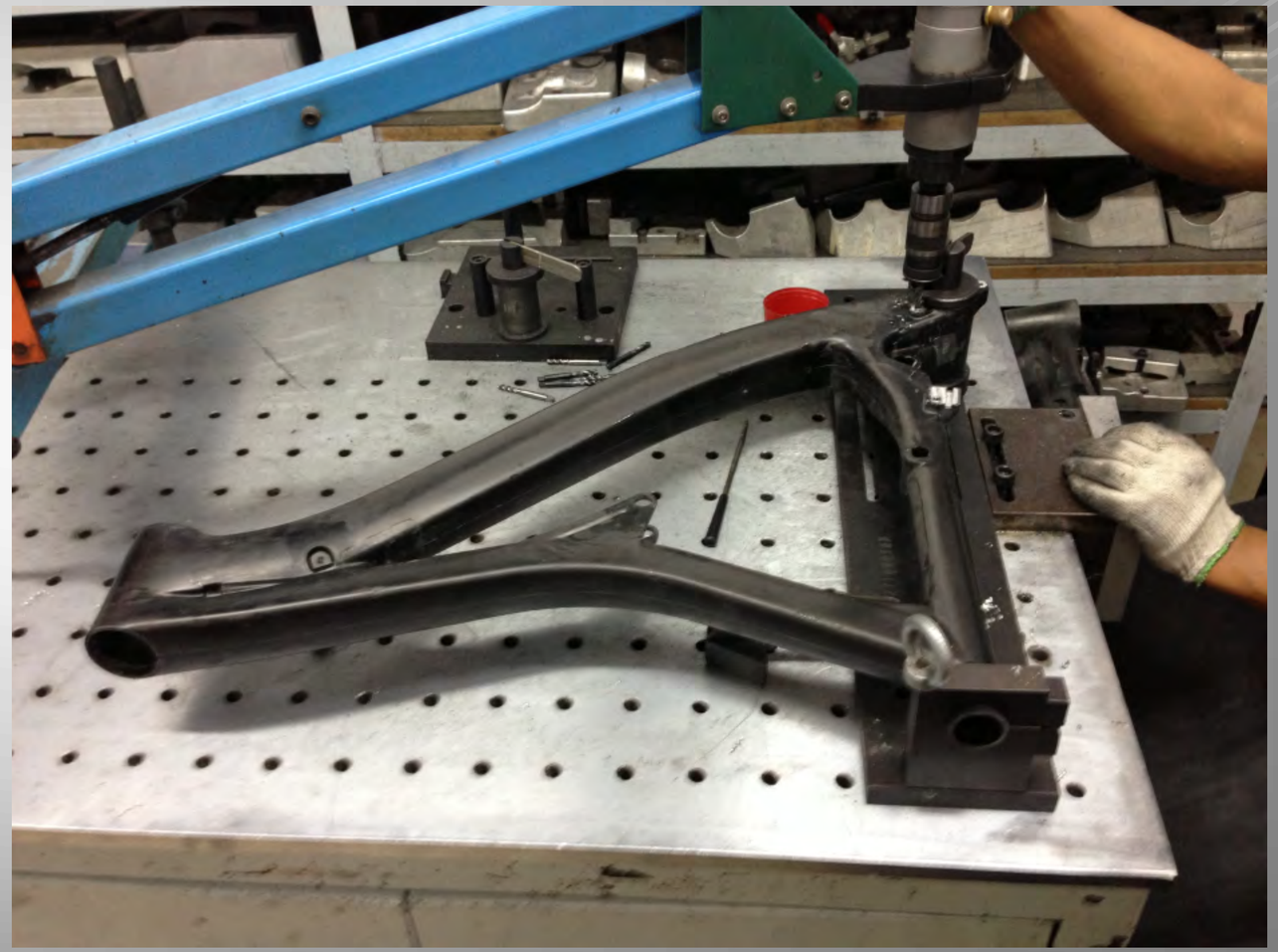

# Real World Testing.

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.



# 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.



# 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

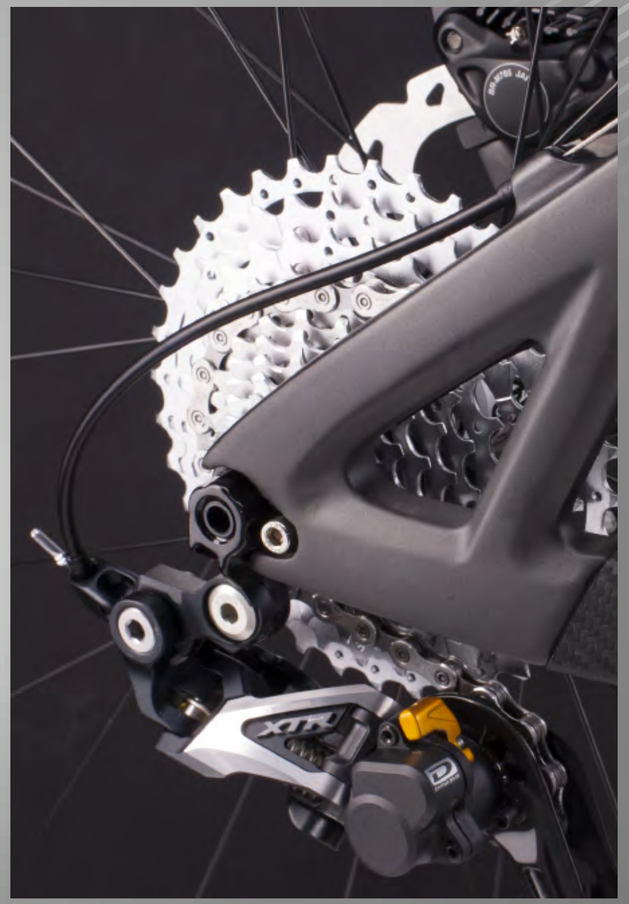
Oversized bearings all around and double row Enduro Max bearings in the dw-link.

## 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.


# Features

100mm rear travel

1.75” stroke shock w/ increased leverage ratio.

Internally routed derailleur cables exit under the shock tabs with clean external routing for rear brake and dropper seatpost lines.  All routing is super clean and hidden under the top tube.

Integrated ISCG 05 mounts.

100mm rear travel with 100-125mm travel fork compatibility.

MACH 429 CARBON



# Features

Geometry including 17.65” chainstays and a revised dw-link® suspension design with position-sensitive anti-squat makes for a 29er that pedals, accelerates and handles like a 26” wheel bike.

Pivot specific, custom tuned Fox CTD shock technology: Increased performance and adjustment range allows riders to quickly and easily adjust for changing course or ride conditions.

***Color Options***

Matte Natural Carbon with Blue or Red highlights, or fully painted Team Green

MACH 429 CARBON