



COMPULSION TECHNICAL MANUAL

FELT[®]

BICYCLES / CALIFORNIA

INTRODUCTION

COMPULSION

Congratulations on purchasing a Felt Compulsion. As with all of our bikes and components, our aim is to provide the rider with the best product and riding experience. Read this manual supplement thoroughly, as it's to help you set your bike up correctly, and care for it.

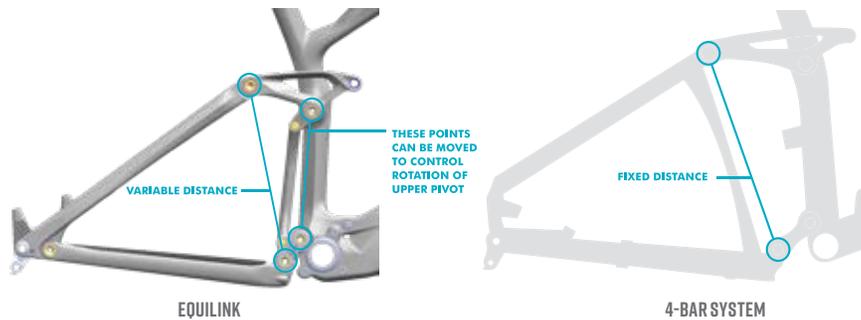
For further information, visit:
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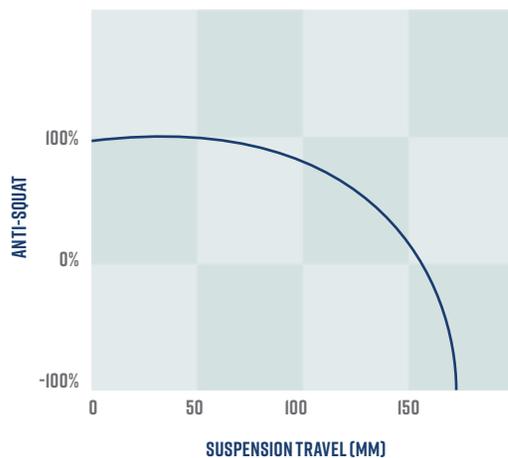
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EQUILINK EXPLAINED

Meet the definitive enduro bike. While versatile enough for everyday trail riding, the Compulsion is primed for the most technical descents of the world's roughest enduro courses. With 165mm of rear suspension travel paired with a 170mm fork, Felt's revolutionary Equilink technology maximizes pedaling efficiency while handling anything the trail throws your way, conquering the roughest, rock-laden, root-strewn terrain imaginable. Its 27.5-inch wheels are designed for optimal performance for all riders, and they combine with the Compulsion's unique geometry to make it a better climbing companion than other bikes in its class. For those riders looking to take on the challenge of enduro racing, or for those who simply want one bike that's capable of handling any ride, then the Compulsion is the ideal choice to conquer any trail, any terrain, anytime.



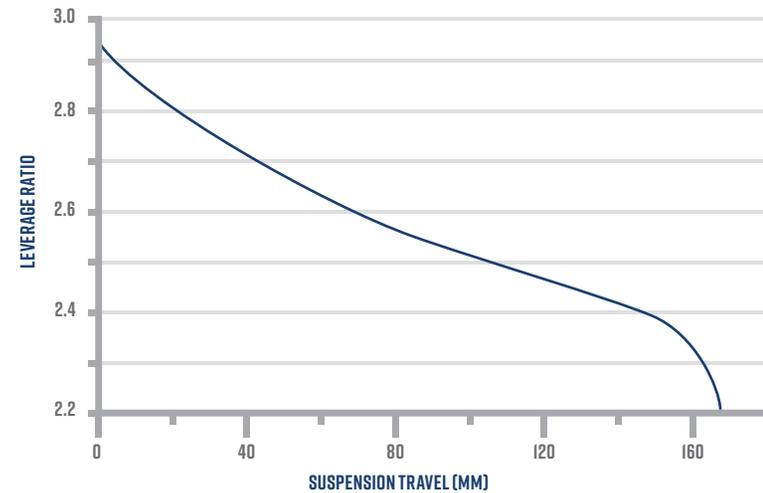
EFFICIENT PEDALING // To accomplish efficient pedaling, the suspension is designed with an ideal amount of anti-squat. A key benefit of the Equilink is that it allows for a downward sloping anti-squat curve which falls off more rapidly around 60% travel. This translates to a bike that pedals well and is able to absorb bumps at the same time.



EQUILINK EXPLAINED CONT.

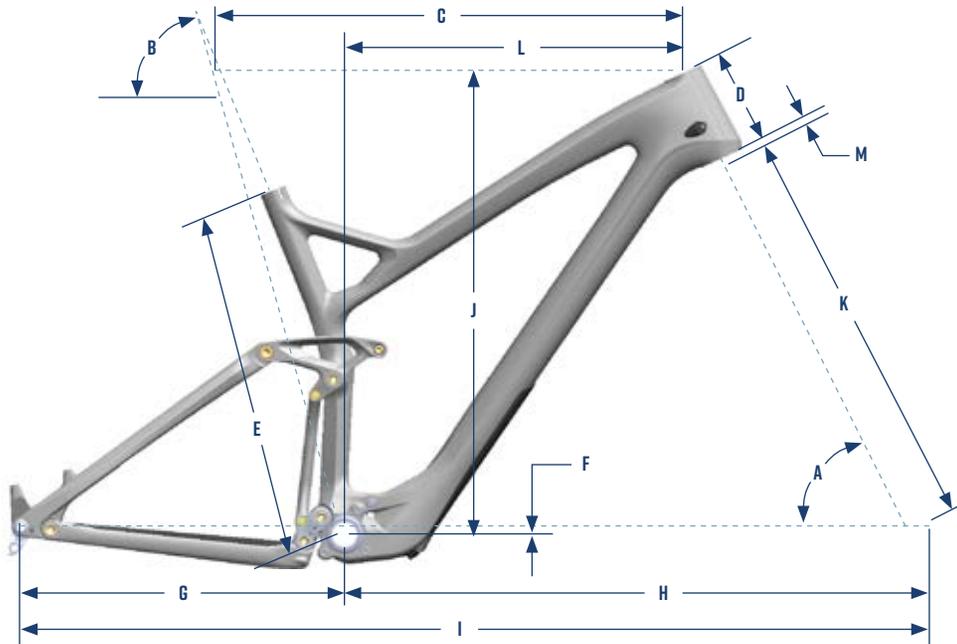
LARGE IMPACTS // To provide support on large impacts, the bike has a progressive leverage ratio. This means that the suspension gets progressively harder to compress as it moves through its travel.

LEVERAGE RATIO



SMALL-BUMP SENSITIVITY // For small-bump sensitivity, the shock is tuned with very little compression damping. Because the linkage is providing the pedaling efficiency and large impact support, the shock can remain active and absorb bumps when needed. The added benefit of doing this is the shock is not compensating for any shortcomings of the linkage design, therefore it is not working as hard which leads to less heat buildup and more consistent performance.

GEOMETRY



	SIZE	SMALL 16"	MEDIUM 17"	LARGE 18.5"	EXTRA LARGE 20"
A	HA	65	65	65	65
B	SA	74.4	74.4	74.4	74.4
C	TT HORIZ	568	597	627	654
D	HT LENGTH	90	105	125	150
E	SEAT TUBE C-T	405	435	470	505
F	BB DROP	10	10	10	10
G	CS	433	433	433	433
H	FRONT CENTER	723	754	788	819
I	WHEELBASE	1154	1187	1221	1252
J	STANDOVER	708	722	735	750
K	RAKE	46	46	46	46
L	REACH	405	430	455	475
M	STACK	583	597	615	638

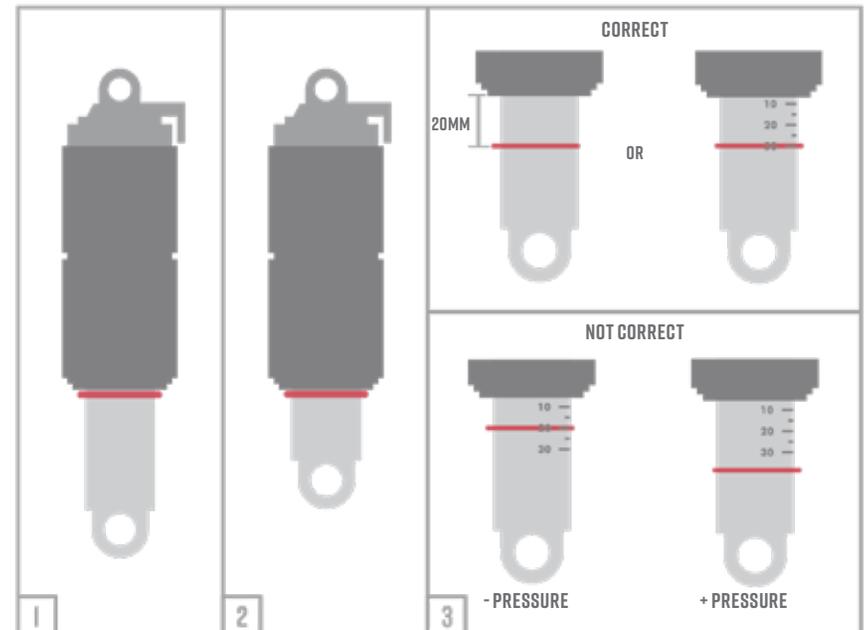
GEOMETRY IN MIDDLE CHIP POSITION

SHOCK SETUP

It is very important to have the correct amount of sag so that the suspension can be in the part of its travel that is most efficient and compliant. Felt recommends starting at 30% and adding/subtracting up to 5-10% to fine tune to your personal preference.

TO MEASURE SAG, FOLLOW THESE 4 STEPS:

1. Push the o-ring to the top of the shock shaft.
2. Sit on the bike with the seat at full ride height to compress the shock. Bounce a few times, then push the o-ring back to the top of the shaft.
3. Gently get off the bike, taking care not to change the position of the o-ring. On some shock models, the sag gradients will be printed on the shaft. In this case, simply read your sag percentage as it is printed on the shock shaft. If there are no sag gradients, measure the distance of the o-ring from the top of the shaft. To achieve 30% sag, the o-ring should be 20mm from the top of the shaft. If there is too much sag (>30%) add air pressure, if there is not enough sag (<30%), reduce air pressure.
4. Repeat process until desired sag is achieved.



HEAD TUBE CABLE GUIDES

THERE ARE 3 INTERCHANGEABLE CABLE GUIDES THAT FIT THE COMPULSION.



- Two Hole 5mm x 3mm (CCN098YB) This port fits a 4 or 5mm cable or hoses as well as a E-tube wire.



- Two Hole 5mm (CCN099YB) This Cable port fits two 4 or 5mm cables or hoses.

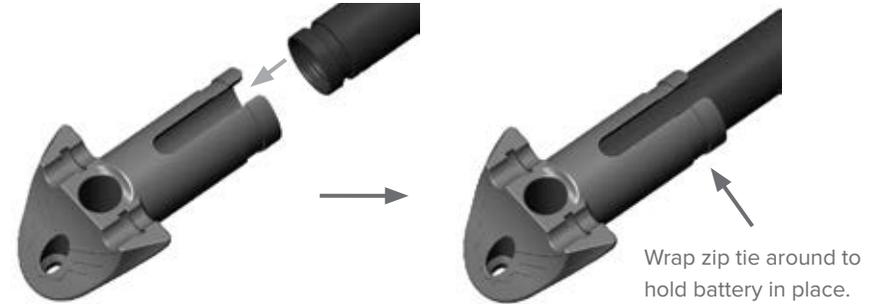


- Blanking plate (CCN096YB) This covers the cable port when it is not used



BOTTOM BRACKET CABLE GUIDES

The bottom bracket cable guide can be adapted to different configurations with rubber reducers for different sizes of cables. It can also be used as a battery holder.



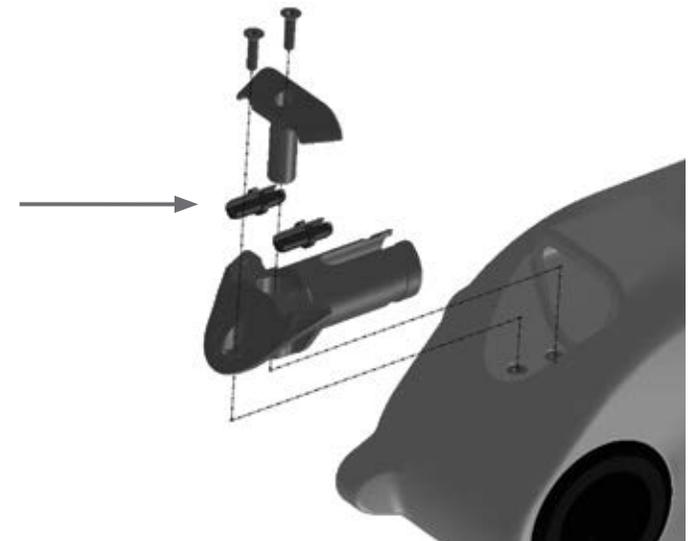
Di2 (2mm)



SHIFT (4mm)



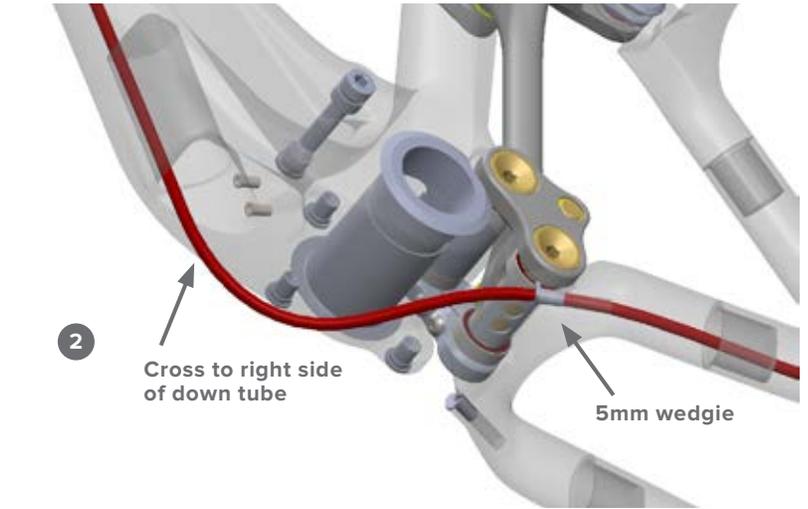
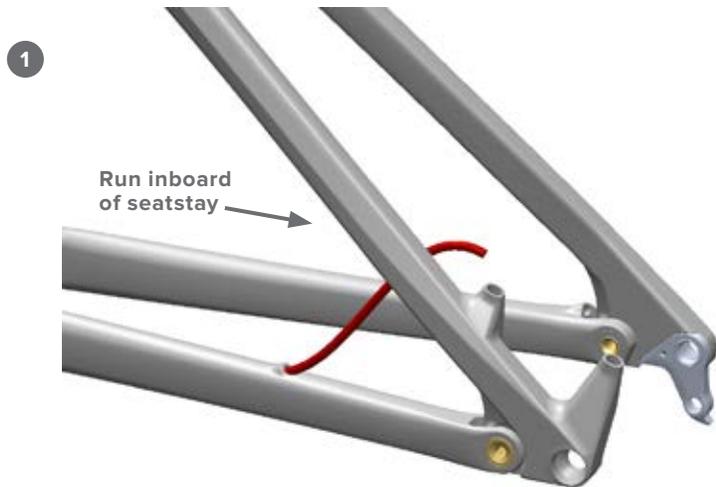
BRAKE (5mm)



REAR BRAKE ROUTING

With the shock removed, lift the rear axle up to gain access to the lower link pinch bolts. Loosen both pinch bolts with a T25 Torx wrench before removing lower link axles.

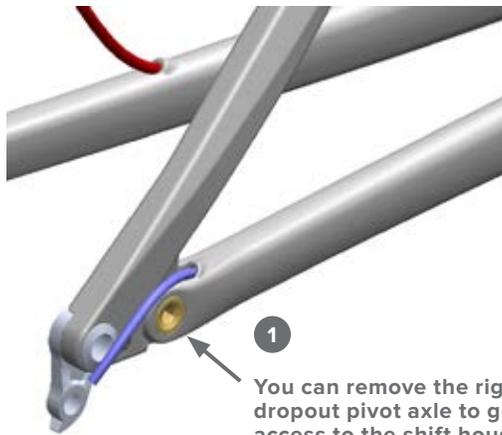
ORDER 1.2. 3



REAR SHIFTER

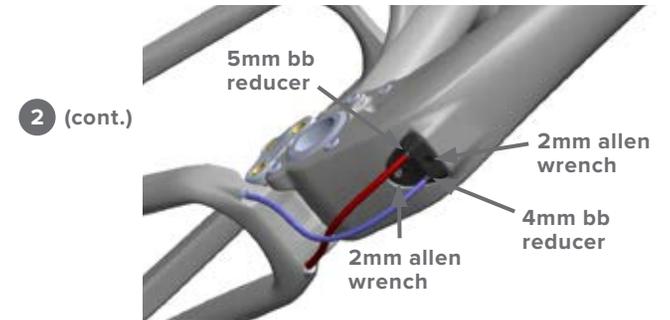
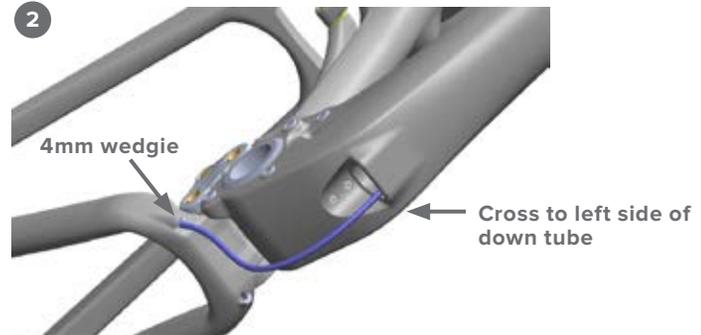
With the shock removed, lift the rear axle up to gain access to the lower link pinch bolts. Loosen both pinch bolts with a T25 Torx wrench before removing lower link axles.

ORDER 1. 2. 3

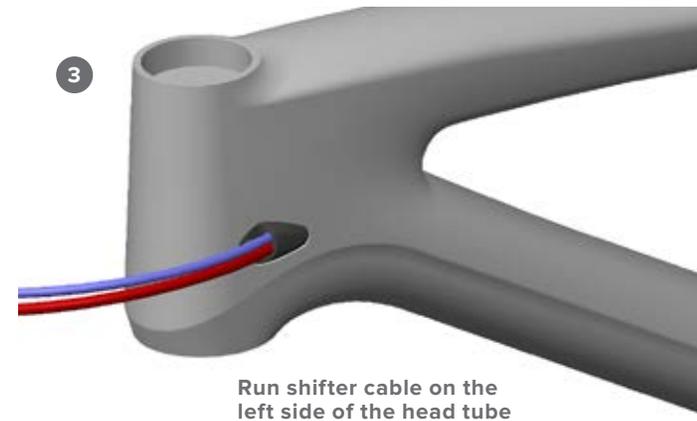


1
You can remove the right dropout pivot axle to get better access to the shift housing port in the chainstay

REAR SHIFTER



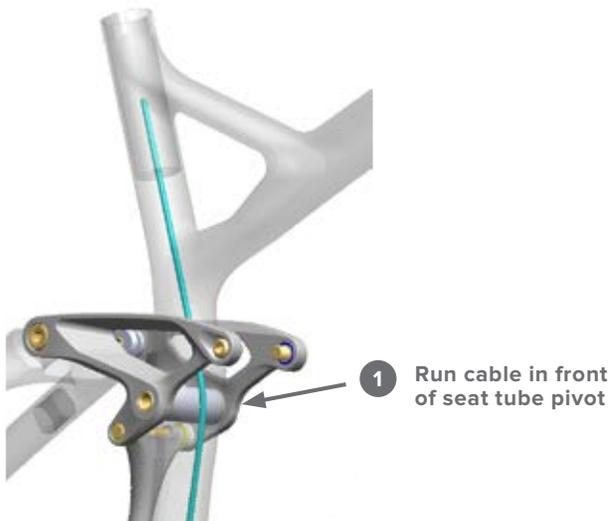
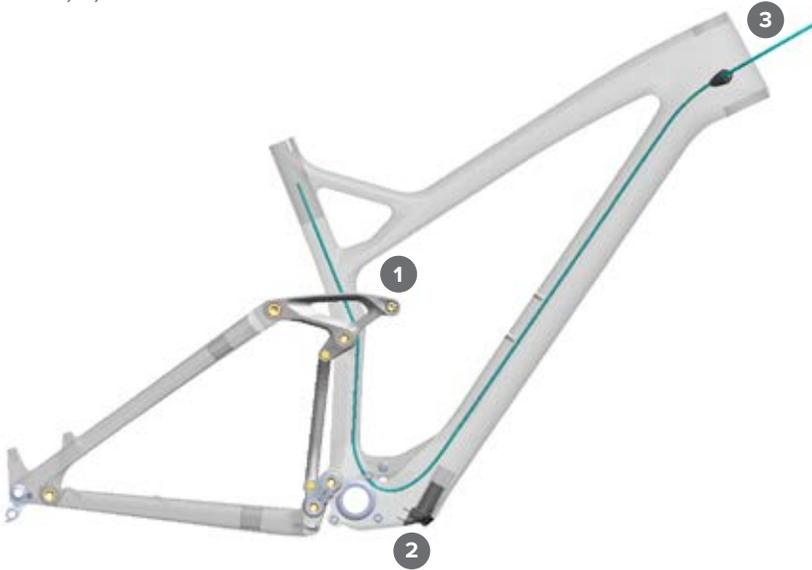
Before tightening the BB cable guide screws, move the suspension through its entire range of travel to insure smooth articulation of the brake and shift cables.



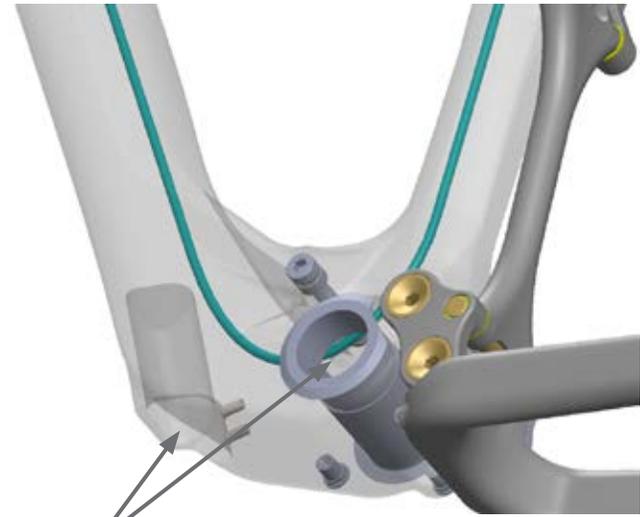
DROPPER POST

With the shock removed, lift the rear axle up to gain access to the lower link pinch bolts. Loosen both pinch bolts with a T25 Torx wrench before removing lower link axles.

ORDER 1, 2, 3



DROPPER POST

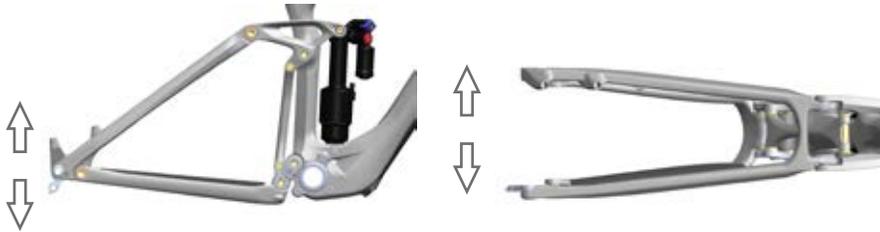


SUSPENSION PIVOT EVALUATION

In order to achieve optimum suspension performance, Felt recommends performing a simple pivot checking procedure after every 100 hours of riding or annually, whichever comes first. If any issues are discovered, please refer to the bearing removal/installation section or take your bike to the nearest Felt dealer.

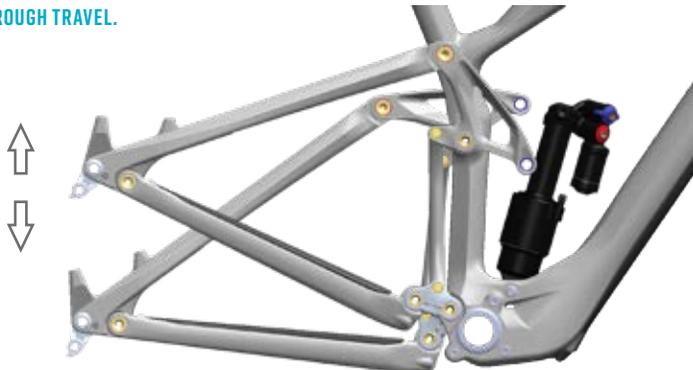
PIVOT CHECKING PROCEDURE

1. Check torque on all pivot bolts. If bolts are loose, remove, clean and apply Loctite 242, then tighten to correct torque (see technical section for torque values).
2. With the shock installed, apply pressure vertically and horizontally to feel for any play in the pivots. If play is discovered, please refer to the technical section for more information and instructions for bearing removal/installation.



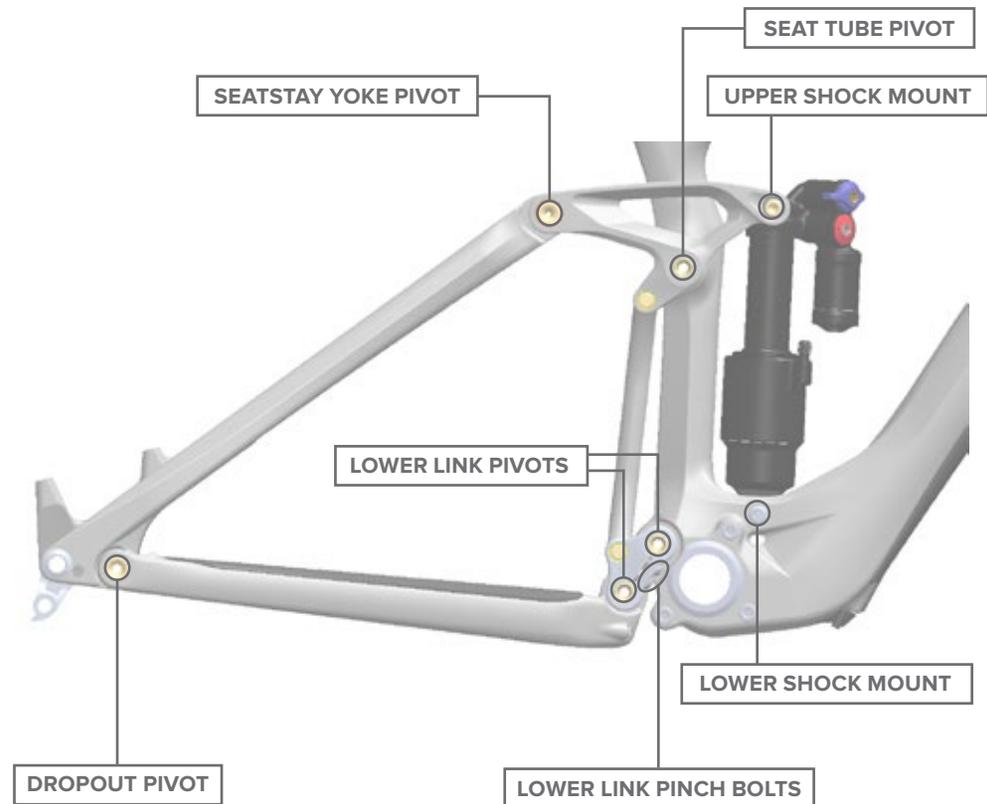
3. With the shock removed, move the suspension through its travel. There should be little to no resistance. If there is any resistance, please refer to the technical section for more information and instructions for bearing removal/installation.

MOVE REAR TRIANGLE THROUGH TRAVEL.



PIVOT TORQUE VALUES

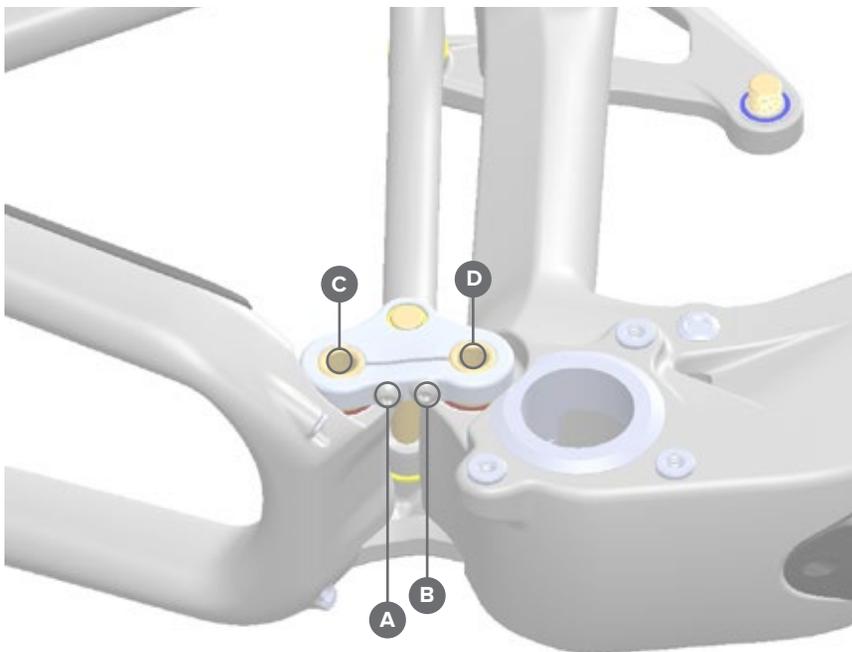
LOWER SHOCK MOUNT	15N-M
LOWER LINK PIVOT	18N-M
DROPOUT PIVOT	16N-M
SEATSTAY YOKE PIVOT	15N-M
SEAT TUBE PIVOT	18N-M
UPPER SHOCK MOUNT	13N-M
LOWER LINK PINCH BOLTS	8N-M



PIVOT TORQUE VALUES

With the shock removed, lift the rear axle up to gain access to the lower link pinch bolts. Loosen both pinch bolts with a T25 Torx wrench before removing lower link axles.

ORDER A, B, C, D



After reinstalling and tightening both lower axles, tighten each pinch bolt to 8 N-m. Repeat torquing each pinch bolt until neither one moves.

ORDER

- C 18 N-m
- D 18 N-m
- A 8 N-m
- B 8 N-m
- A 8 N-m
- B 8 N-m

CONTACT INFORMATION

FELT RACING, LLC
12 CHRYSLER
IRVINE, CA 92618
USA

FELT GMBH
INDUSTRIESTR. 39
26188 EDEWECHT
GERMANY

WWW.FELTBICYCLES.COM



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