



RASCAL TECH MANUAL

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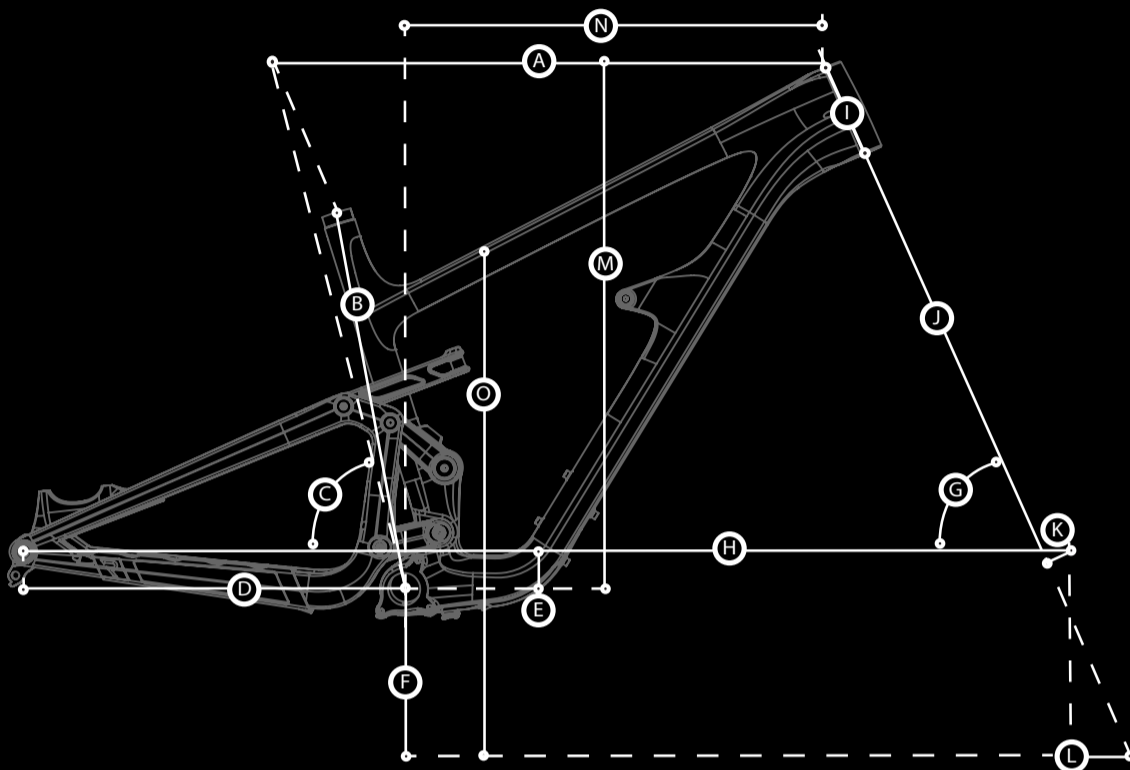
PREFACE

This manual is to serve as guidance for service and specification of Revel Rangers (model year 2023+). If you have an earlier version please refer to the Revel Bike Vault. If you are unsure what version bike you have contact Revel for aid. This document includes component compatibility and instructions on linkage service and frame features. If there are any questions about specific component compatibility please reach out to Revel's customer support line at [\(970\)-456-7336](tel:9704567336) or email at Contact@revelbikes.com.

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GEO & USER SPECIFICATION



FRAME GEO	Small - 5'1" - 5'6"	Medium - 5'5" - 5'10"	Large - 5'9" - 6'1"	X-Large 6'0" - 6'4"	XX-Large 6'3" - 6'8"
(A) EFFECTIVE TOP TUBE LENGTH	582mm	603mm	625mm	650mm	678mm
(B) SEAT TUBE LENGTH	385mm	415mm	445mm	475mm	505mm
(C) SEAT TUBE ANGLE (EFFECTIVE/ACTUAL)	76°/71°	76°/71°	76°/71°	76.5°/72°	77°/72°
(D) CHAIN STAY LENGTH	436mm	436mm	436mm	436mm	436mm
(E) BOTTOM BRACKET DROP	34.2mm	34.2mm	34.2mm	34.2mm	34.2mm
(F) BOTTOM BRACKET HEIGHT	345mm	345mm	345mm	345mm	345mm
(G) HEAD TUBE ANGLE	65.5°	65.5°	65.5°	65.5°	65.5°
(H) WHEEL BASE	1175mm	1198mm	1222mm	1256mm	1293mm
(I) HEAD TUBE LENGTH	95mm	101mm	110mm	129mm	145mm
(J) AXLE TO CROWN	551mm	551mm	551mm	551mm	551mm
(K) FORK OFFSET	44mm	44mm	44mm	44mm	44mm
(L) TRAIL	123mm	123mm	123mm	123mm	123mm
(M) STACK	604mm	610mm	618mm	635mm	650mm
(N) REACH	431mm	451mm	471mm	498mm	528mm
(O) STANDOVER	717mm	720mm	728mm	742mm	760mm

User Specification

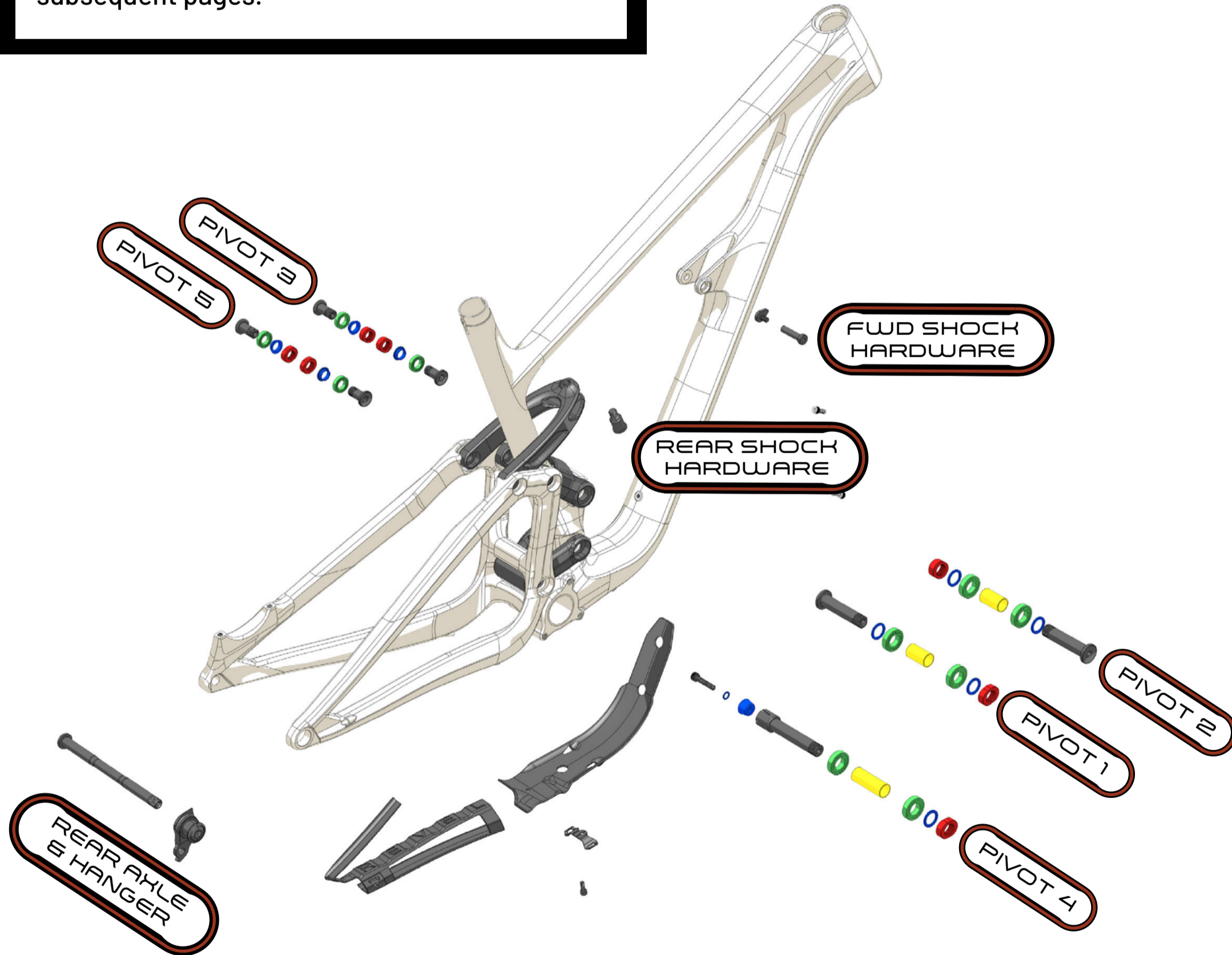
- 1) Headset - IS 42/52
- 2) Pivot Hardware - Torque pivots to value specified on bolt head. See assembly drawing for additional assembly instructions, and hardware and bearing specification.
- 3) Threaded BB - BSA, 73mm Shell Width.
- 4) Crankset - 55mm Chainline. 36T Max chainring size. See BB manufacturers' frame fit specification for appropriate spacer configuration.
- 5) Rear Dropout - Boost Spacing (148mm X 12mm), 177 X M12 X P1.0 Axle, Sram Universal Derailleur Hanger (UDH), Sram Transmission compatible
- 6) Rear Disc Brake - Post mount, 180mm/200mm max rotor size, torque bolts to manufacturer specification.

- 7) Shock - 210mm X 50mm Shock size. No DU Bushing on rear of shock. 25.0mm X 8.0mm Spacer on front of shock.
- 8) Seat Post - 31.6mm Dia post. 34.9mm Dia. Clamp size. Internal routing guides provided for dropper post.
- 9) Tire Limit Size - 29" X 2.6" max tire size. All tires must be checked for appropriate clearance prior to use.
- 10) Bottle Cage Bosses - 2 Sets of bosses. 1 set located along top of down tube. 1 set located along bottom of down tube. Size XXL has an additional set underneath the top tube
- 11) Fork - 140mm min travel/150mm max travel.

EXPLODED VIEW

NOTES

Table shows total quantity of parts used on frame assembly. For detailed view and part information on specific pivots, see subsequent pages.



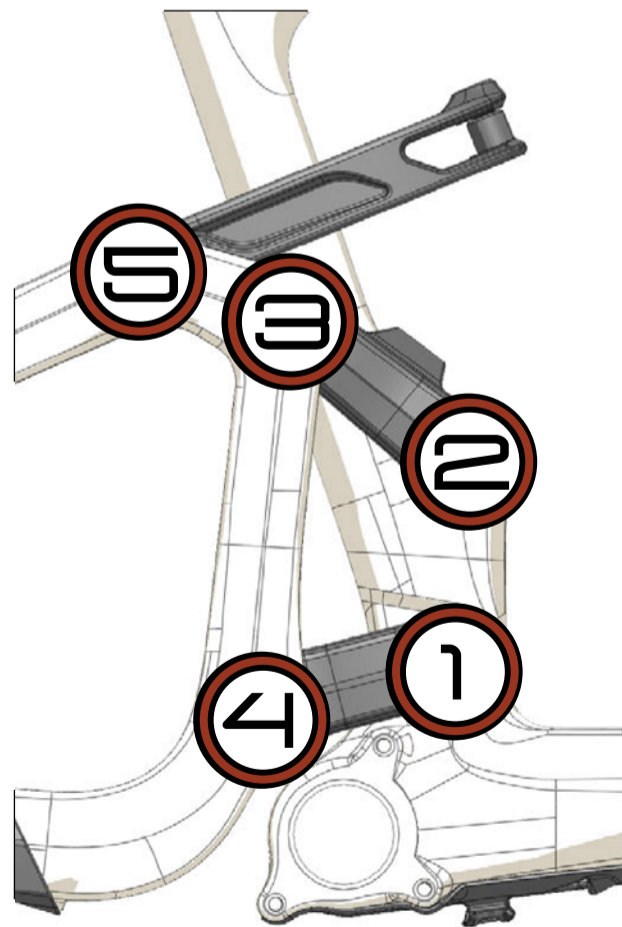
	PART NUMBER	QTY.	ASSEMBLY	TORQUE
1	320-10021-0043-XX REVEL RASCAL-V2 FRONT TRIANGLE	1		
2	320-10021-0049-XX REVEL RASCAL-V2 REAR TRIANGLE	1		
3	320-10021-0047-XX REVEL RASCAL-V2 LOWER LINK	1		
4	320-10021-0048-XX REVEL RASCAL-V2 SHOCK YOKE	1		
5	320-10021-0046-XX REVEL RASCAL-V2 UPPER LINK	1		
6	310-10021-0063 HARDWARE PIVOT AXLE M15X1.0X71	2	GREASE TO SHAFT; SUB LOCTITE 243 FOR PATCH LOCK ON THREADS	15 Nm
7	310-10021-0060 HARDWARE AXLE NUT M15X1.0X8.8	3		
8	100-BEA21-0001 BOLU BEARING 6902 V2RD 15X28X7	6	GREASE	
9	310-10021-0058 HARDWARE PIVOT SPACER 21X15.2X2	5		
10	310-10021-0062 HARDWARE AXLE SPACER 15.20X17.20X29.85	2		
11	310-10021-0064 HARDWARE AXLE NUT M12X1.0X7.5	4		
12	310-10021-0066 HARDWARE PIVOT AXLE M12X1.0X28	4	GREASE TO SHAFT; SUB LOCTITE 243 FOR PATCH LOCK ON THREADS	15 Nm
13	310-BEA18-0106 BOLU BEARING 6801V2RD 12X21X5	4	GREASE	
14	310-10021-0088 HARDWARE PIVOT SPACER 17.5X12.1X4.8	4		
15	310-10021-0091 HARDWARE PIVOT AXLE COLLET M15X1.0X97	1	GREASE TO SHAFT; SUB LOCTITE 243 FOR PATCH LOCK ON THREADS	15 Nm
16	310-10021-0061 HARDWARE AXLE SPACER 15.20X17.20X47.25	1		
17	310-10021-0089 HARDWARE COLLET WEDGE 20 DEGREE	1	GREASE TO OUTER SURFACE	
18	HARDWARE SOCKET HEAD CAP SCREW M6X1.0X30MM	1	LOCTITE 243	12 Nm
19	310-10021-0106 HARWARE FORWARD SHOCK MOUNT CAPTIVE BOLT M6X1.0	1	TI PREP	10 Nm
20	310-10021-0105 HARDWARE FORWARD SHOCK MOUNT AXLE M6X1.0	1	GREASE TO SHAFT	10 Nm
21	310-10021-0077 HARDWARE SHOCK EYELET BOLT M10X1.25	1	TI PREP	15 Nm
22	Sram UDH Hanger	1	GREASE TO SHAFT	25 Nm
23	310-10021-0056 AXLE 12X1.0X177 REVEL UDH	1	GREASE	13 Nm
24	320-10021-0017 REVEL 29150 FRONT TRIANGLE DOWNTUBE PROTECTOR	1		
25	320-10021-0018 REVEL 29150 CHAINSTAY PROTECTOR	1		
26	310-10021-0068 HARDWARE BB CABLE CLAMP	1		
27	HARDWARE SOCKET HEAD CAP SCREW M5X0.8X14	5		2 Nm
28	310-10021-0092 HARDWARE WASHER 10X6.4X1.0	1		

LINKAGE SERVICE

Things to note before/after service:

- 1) Ensure all bolts are torqued to spec listed in this manual and on bolt head.
- 2) All bolts are right hand threaded but have hex profiles on either end. If turning the bolt from the threaded side, turning counter clockwise will tighten the bolt
- 3) Bolts come with Nylock patch installed. This serves the function of thread locker and can be reused for multiple installations. Verify condition of patch before assembly. If patch looks worn or damaged add Blue Loctite 243.
- 4) It is easier to tighten linkage assembly to torque once it has been fully assembled. Similarly it is easiset to break bolts free when linkage is fully assembled.
- 5) All images shown in exploded views of pivots correspond to exploded view on Page 4 of Tech Manual.

See diagram below for pivot location numbers:



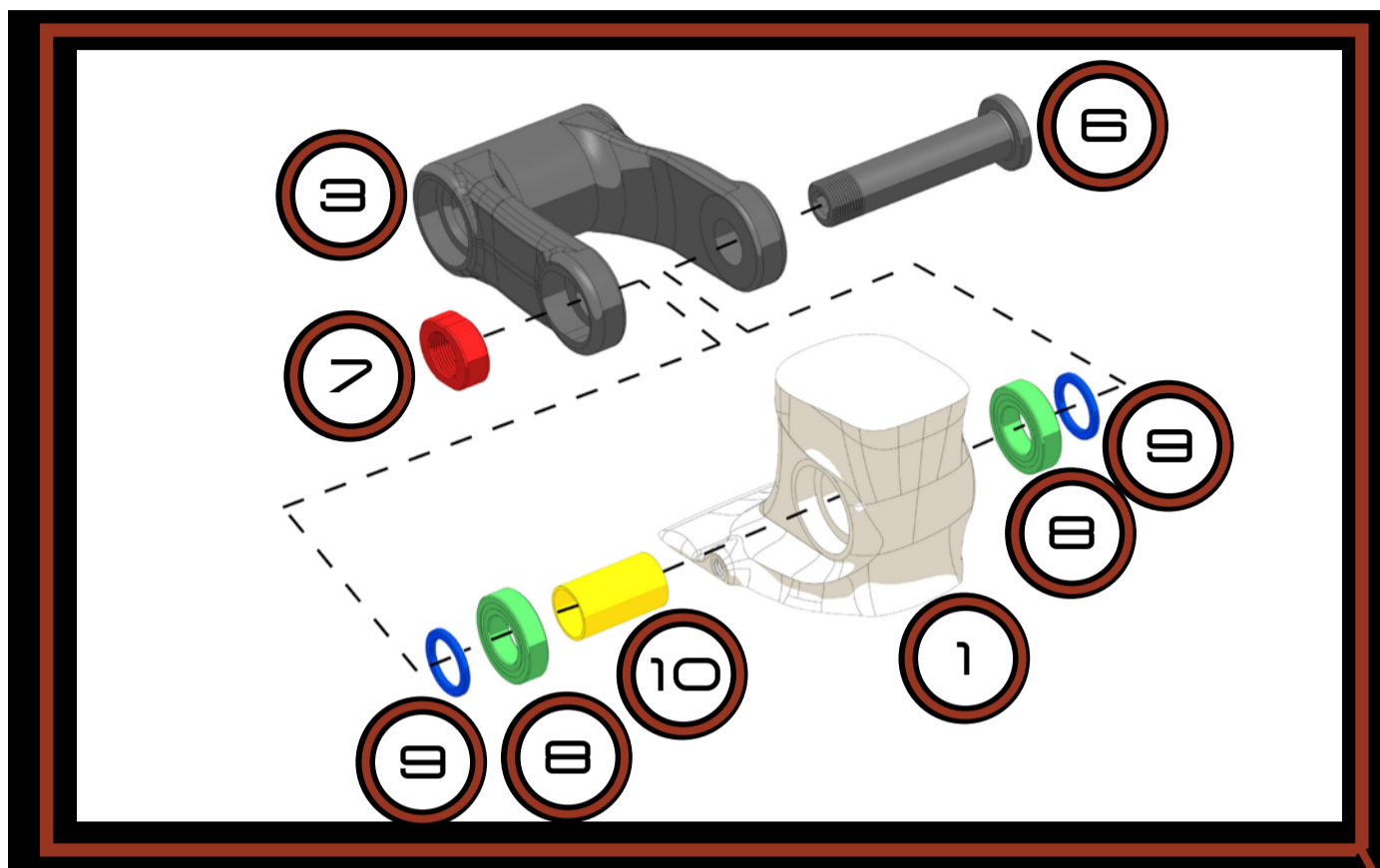
Tools Needed:

- 1) 4mm Hex Key
- 2) 5mm Hex Key
- 3) 6mm Hex Key
- 4) 8mm Hex Key
- 5) Torque Wrench
- 6) Grease
- 7) Titanium Anti-Seize Compound

Additional tools needed when performing a full bearing replacement:

- 8) Bearing Puller (Slide Hammer)
 - 8a) 12mm Bearing Collet
 - 8b) 15mm Bearing Collet
- 9) Bearing Press
 - 9a) 12mm ID Bearing Drift (Ensure largest diameter on drift measures less than or equal to 21mm)[Used on Pivot 1, Pivot 2, Pivot 3 & Pivot 5]
 - 9b) 15mm ID Bearing Drift (Ensure largest diameter on drift measures less than or equal to 24mm)[Used on Pivot 4]

PIVOT 1



NOTES

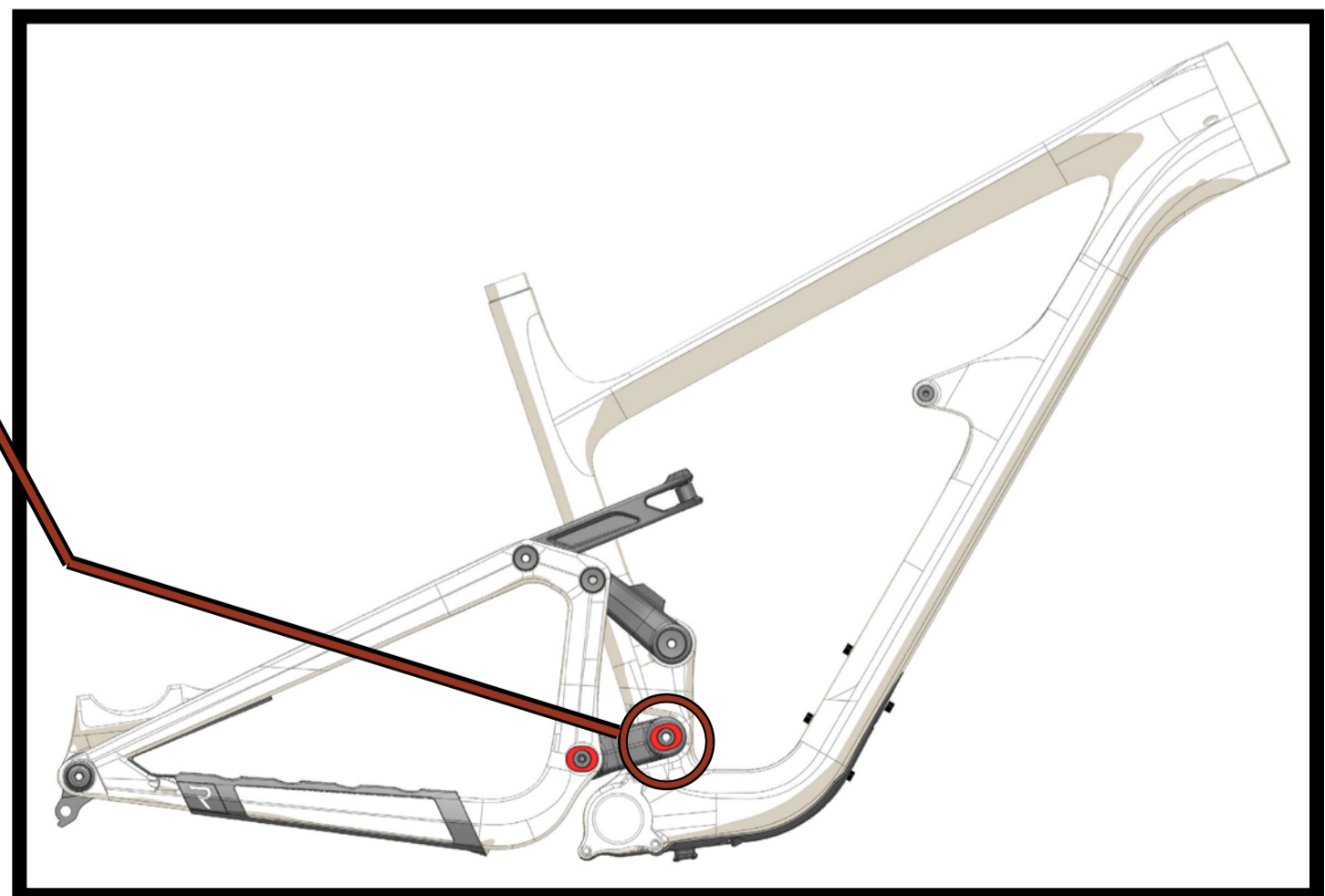
- 1) Torque axle to 15 Nm.
- 2) Apply grease to axle shaft (DO NOT apply grease to threads).

	PART NUMBER	QTY.
1	320-10021-0043-XX REVEL RASCAL-V2 FRONT TRIANGLE	1
3	320-10021-0047-XX REVEL RASCAL-V2 LOWER LINK	1
6	310-10021-0063 HARDWARE PIVOT AXLE M15X1.0X71	1
7	310-10021-0060 HARDWARE AXLE NUT M15X1.0X8.6	1
8	100-BEA21-0001 BOLU BEARING 6902 V2RD 15X28X7	2
9	310-10021-0058 HARDWARE PIVOT SPACER 21X15.2X2	2
10	310-10021-0062 HARDWARE AXLE SPACER15.20X17.20X29.85	1

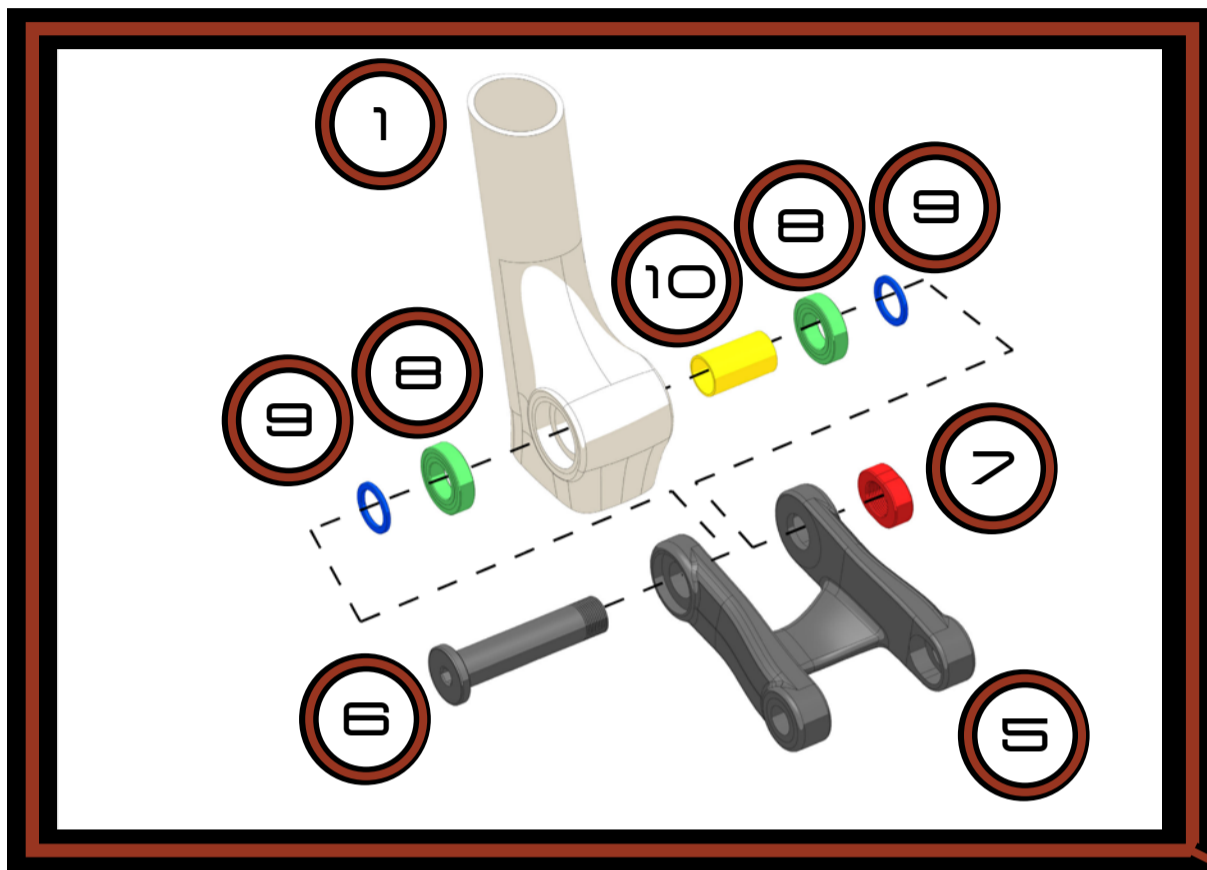
TOOLS NEEDED

6mm Hex Key

Grease



PIVOT 2



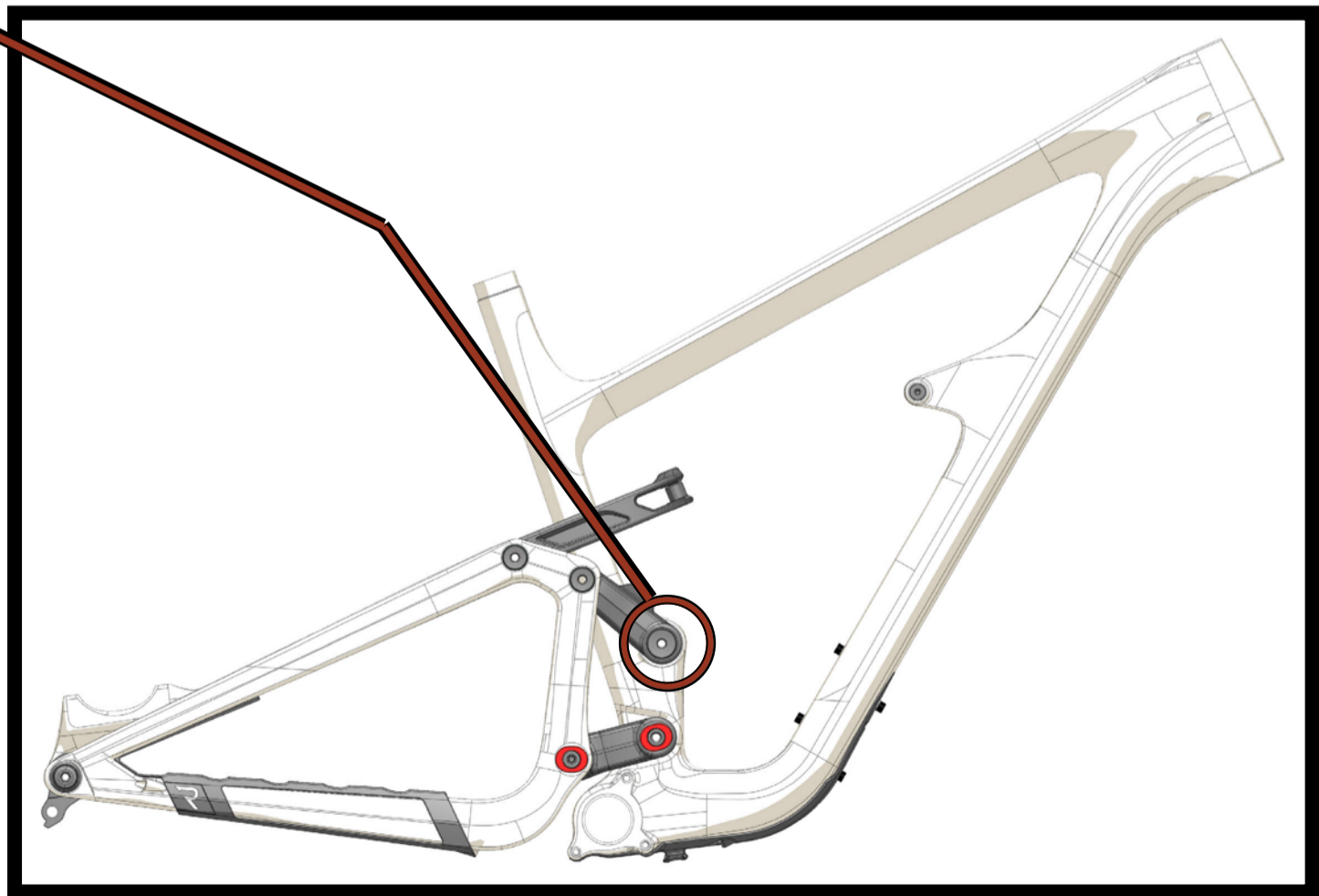
NOTES

1) Torque axle to 15 Nm.
 2) Apply grease to axle shaft (DO NOT apply grease to threads).

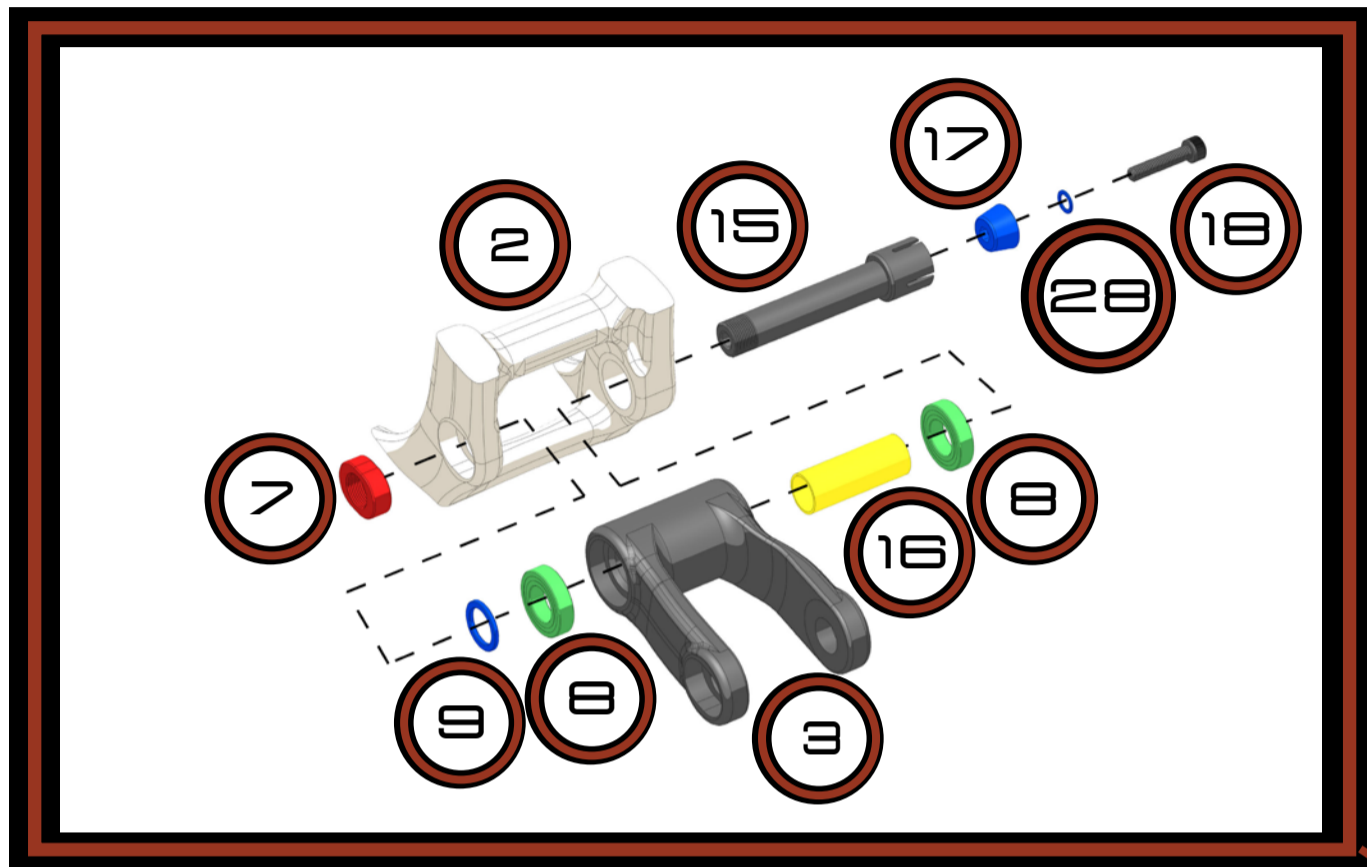
	PART NUMBER	QTY.
1	320-10021-0043-XX REVEL RASCAL-V2 FRONT TRIANGLE	1
5	320-10021-0046-XX REVEL RASCAL-V2 UPPER LINK	1
6	310-10021-0063 HARDWARE PIVOT AXLE M15X1.0X71	1
7	310-10021-0060 HARDWARE AXLE NUT M15X1.0X8.6	1
8	100-BEA21-0001 BOLU BEARING 6902 V2RD 15X28X7	2
9	310-10021-0058 HARDWARE PIVOT SPACER 21X15.2X2	2
10	310-10021-0062 HARDWARE AXLE SPACER 15.20X17.20X29.85	1

TOOLS NEEDED

6mm Hex Key
 Grease



PIVOT 4



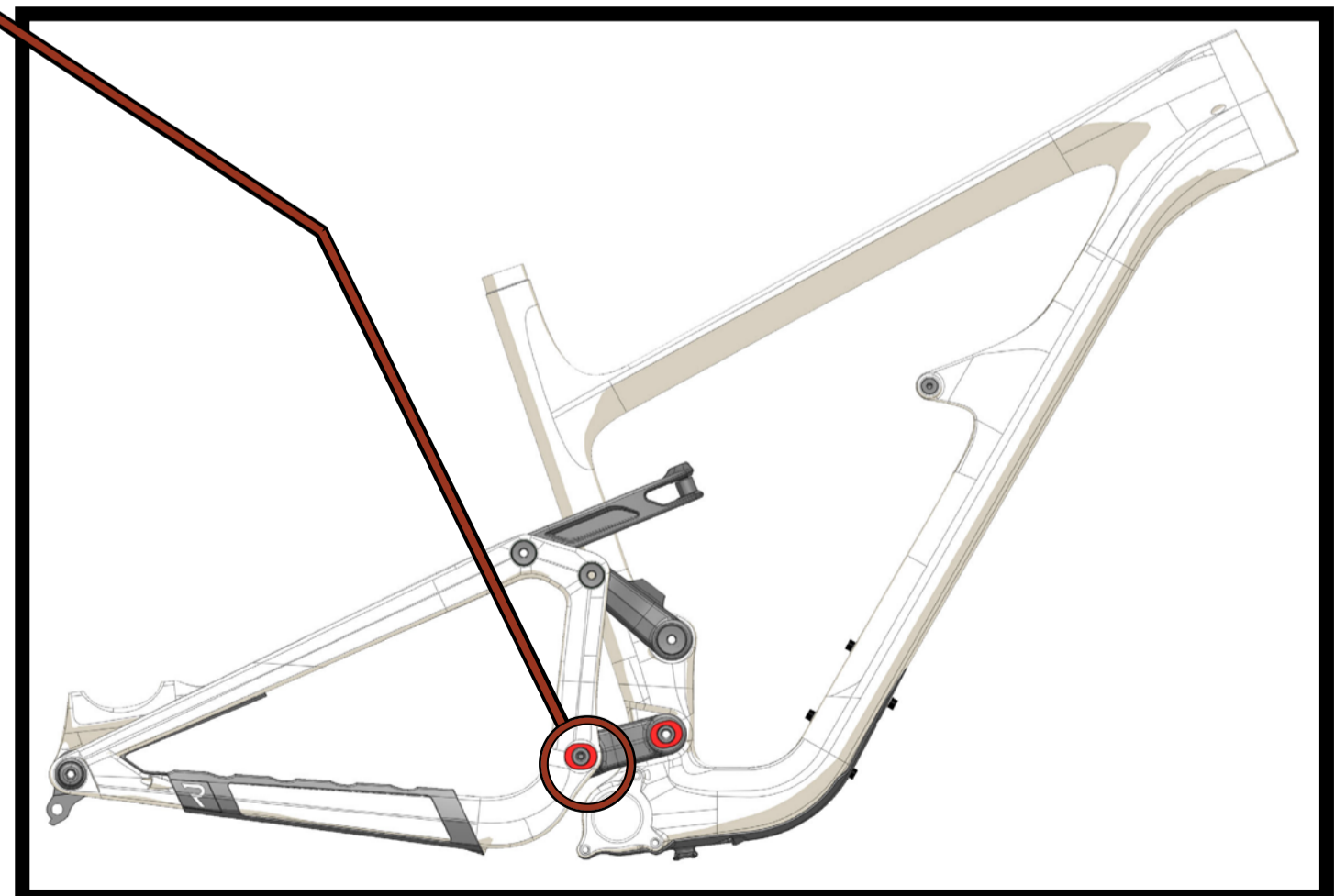
NOTES

- 1) Torque axle to 15 Nm
- 2) Torque collet wedge to 12 Nm.
- 3) Only one washer is used on this pivot. It sits on the drive side of bike, between lower link and rear triangle.
- 4) Apply grease to axle shaft (DO NOT apply grease to threads).
- 5) Pivot 4 makes assembly of rear triangle to front triangle easier if performed before Pivot 3 & Pivot 5.

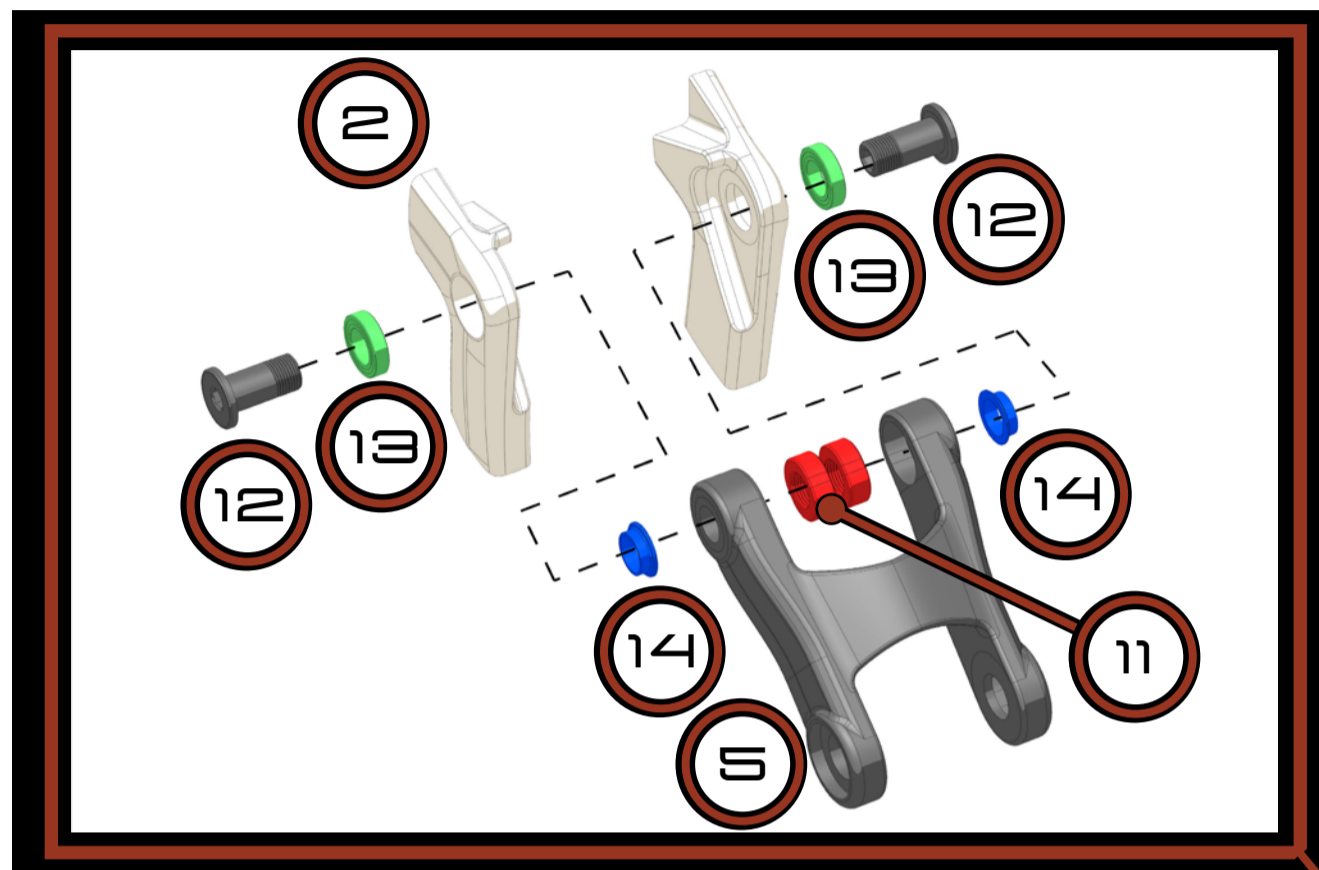
	PART NUMBER	QTY.
2	320-10021-0049-XX REVEL RASCAL-V2 REAR TRIANGLE	1
3	320-10021-0047-XX REVEL RASCAL-V2 LOWER LINK	1
7	310-10021-0060 HARDWARE AXLE NUT M15X1.0X8.6	1
8	100-BEA21-0001 BOLU BEARING 6902 V2RD 15X28X7	2
9	310-10021-0058 HARDWARE PIVOT SPACER 21X15.2X2	1
15	310-10021-0091 HARDWARE PIVOT AXLE COLLET M15X1.0X97	1
16	310-10021-0061 HARDWARE AXLE SPACER 15.20X17.20X47.25	1
17	310-10021-0089 HARDWARE COLLET WEDGE 20 DEGREE	1
18	HARDWARE SOCKET HEAD CAP SCREW M6X1.0X30MM	1
28	310-10021-0092 HARDWARE WASHER 10X6.4X1.0	1

TOOLS NEEDED

8mm Hex Key
5mm Hex Key
Grease



PIVOT 3



NOTES

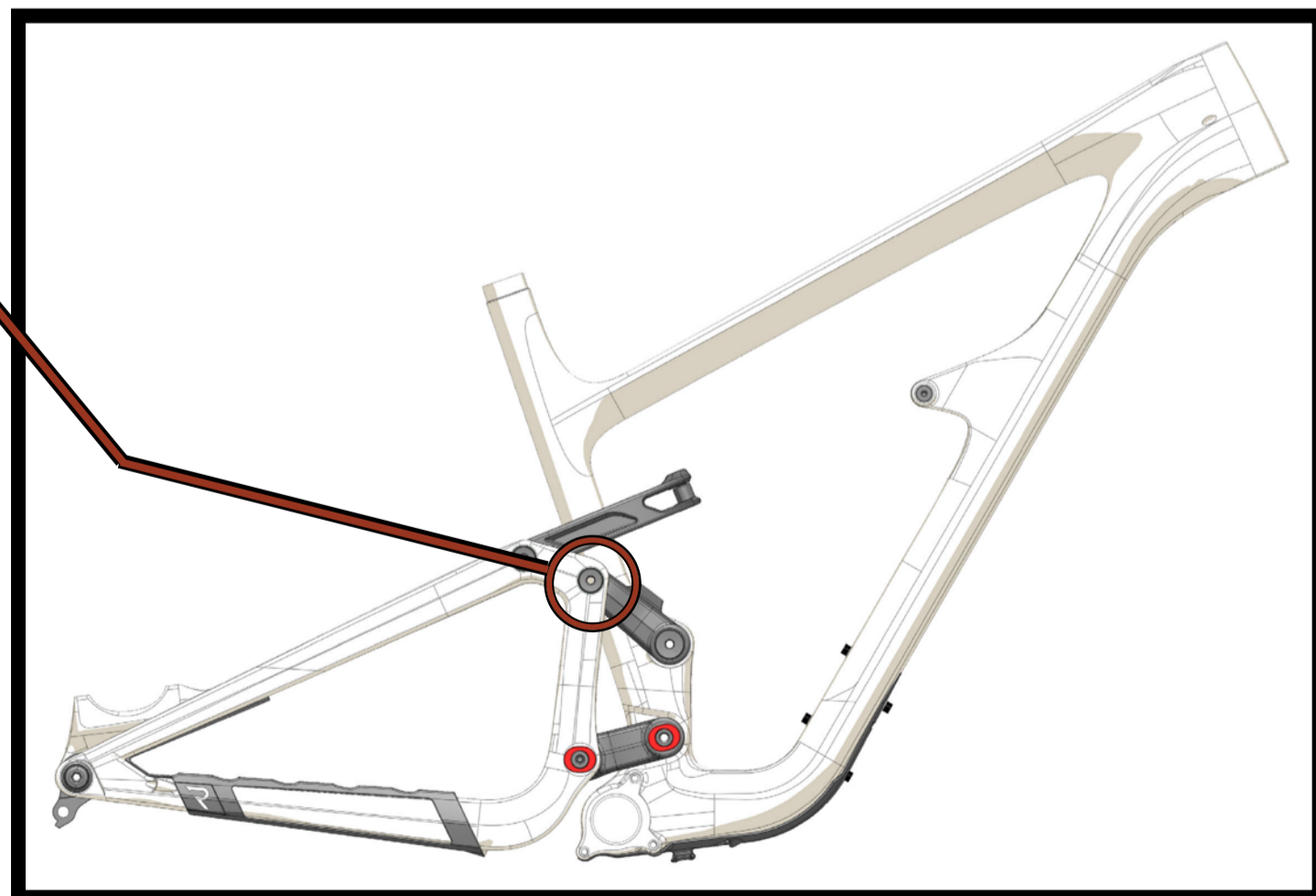
- 1) Torque axle to 15 Nm.
- 2) Apply grease to axle shaft (DO NOT apply grease to threads).
- 3) Front triangle and rear triangle must be assembled before upper link is connected to rear triangle.

	PART NUMBER	QTY.
2	320-10021-0049-XX REVEL RASCAL-V2 REAR TRIANGLE	1
5	320-10021-0046-XX REVEL RASCAL-V2 UPPER LINK	1
11	310-10021-0064 HARDWARE AXLE NUT M12X1.0X7.5	2
12	310-10021-0066 HARDWARE PIVOT AXLE M12X1.0X28	2
13	310-BEA18-0106 BOLU BEARING 6801V2RD 12X21X5	2
14	310-10021-0088 HARDWARE PIVOT SPACER 17.5X12.1X4.8	2

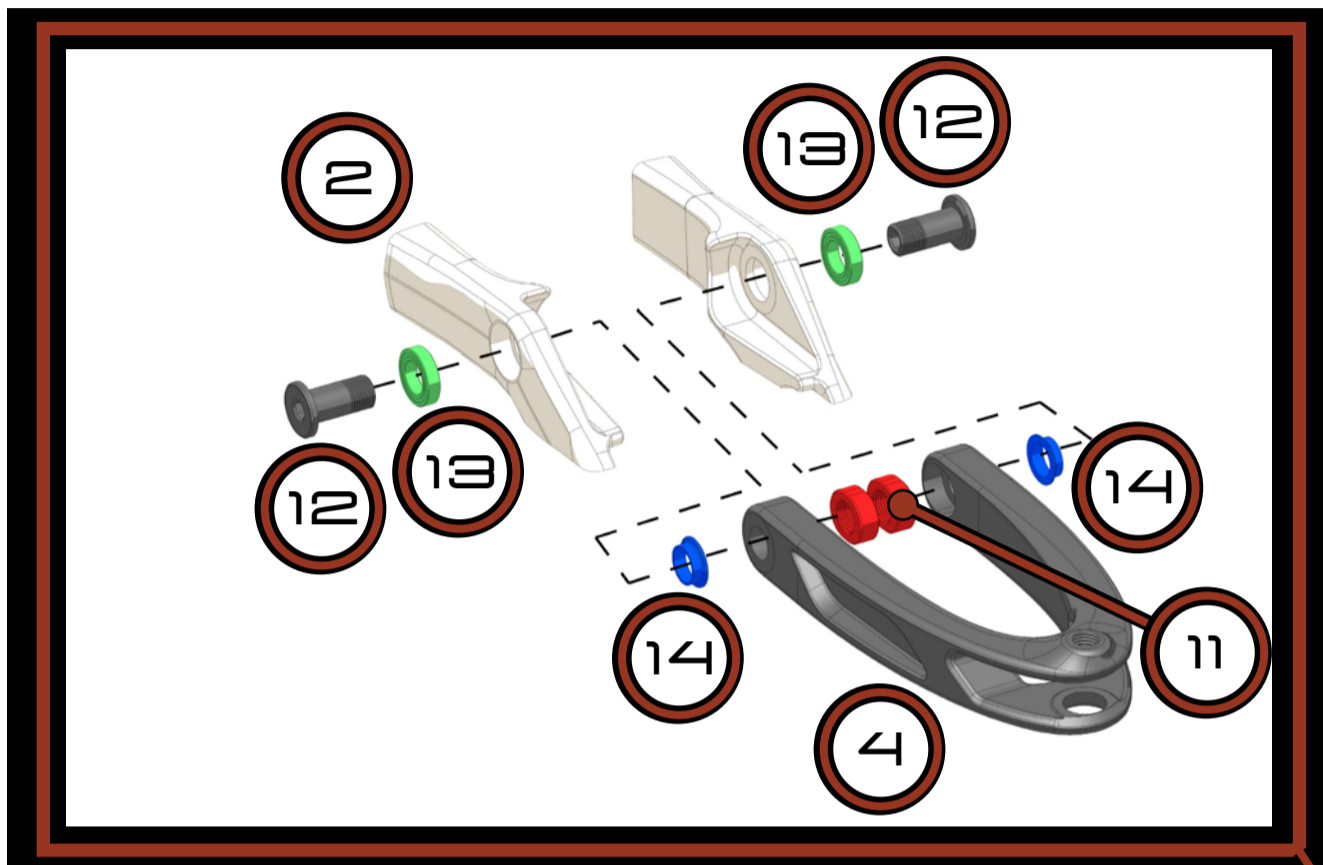
TOOLS NEEDED

6mm Hex Key

Grease



PIVOT 5



NOTES

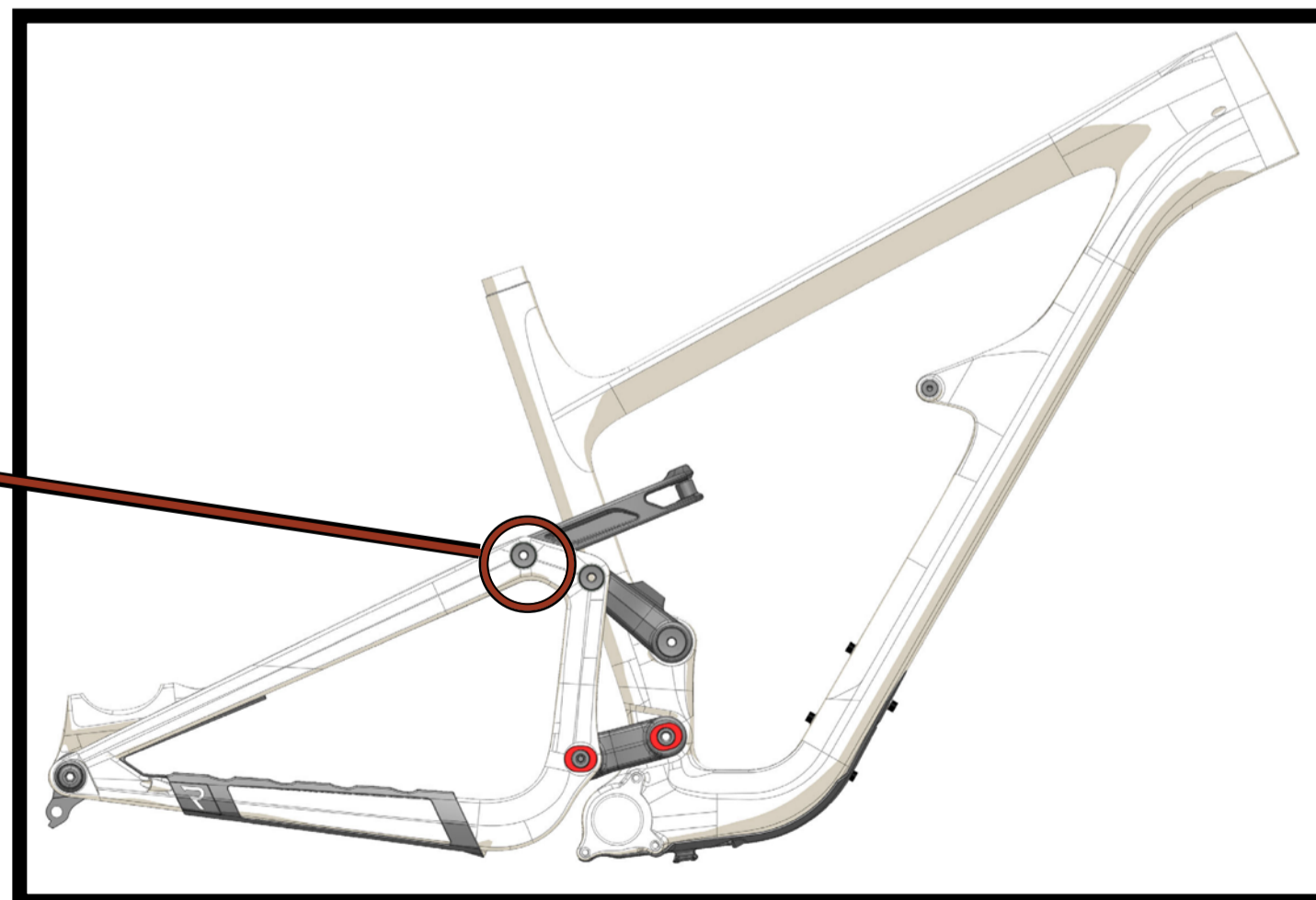
- 1) Torque axle to 15 Nm.
- 2) Apply grease to axle shaft (DO NOT apply grease to threads).
- 3) Front triangle and rear triangle must be assembled before upper link is connected to rear triangle.

	PART NUMBER	QTY.
2	320-10021-0049-XX REVEL RASCAL-V2 REAR TRIANGLE	1
4	320-10021-0048-XX REVEL RASCAL-V2 SHOCK YOKE	1
11	310-10021-0064 HARDWARE AXLE NUT M12X1.0X7.5	2
12	310-10021-0066 HARDWARE PIVOT AXLE M12X1.0X28	2
13	310-BEA18-0106 BOLU BEARING 6801V2RD 12X21X5	2
14	310-10021-0088 HARDWARE PIVOT SPACER 17.5X12.1X4.8	2

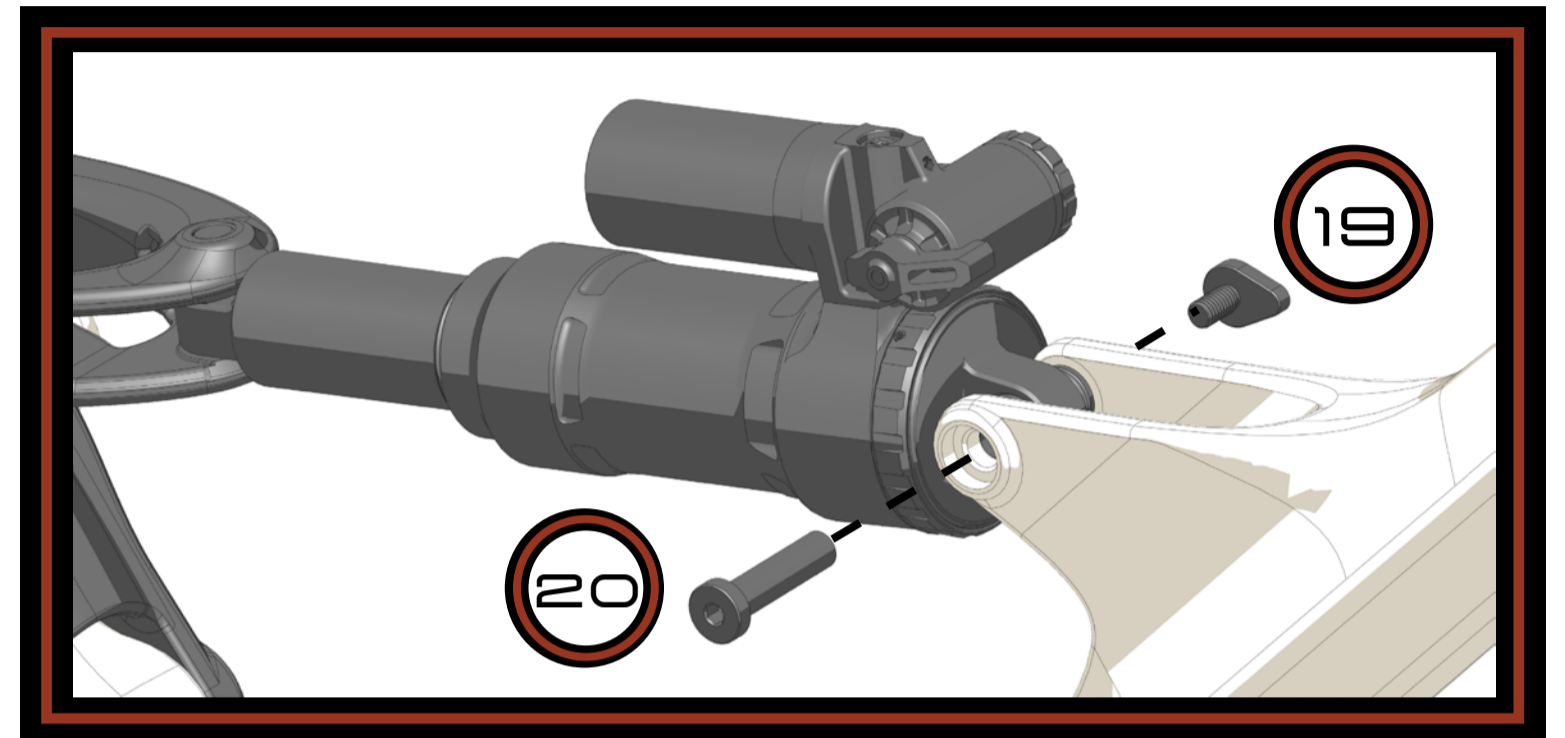
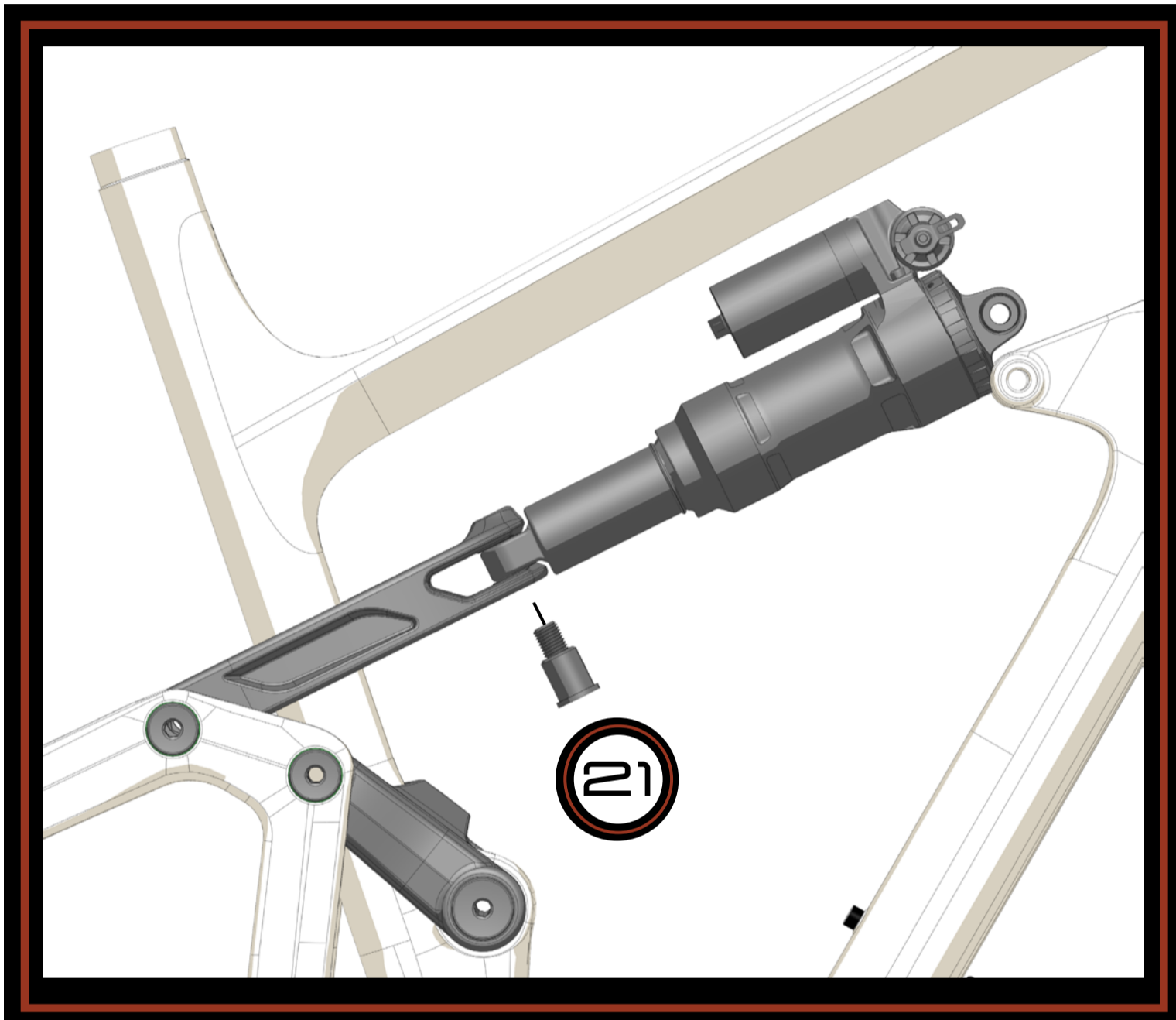
TOOLS NEEDED

6mm Hex Key

Grease



SHOCK INSTALL



	PART NUMBER	QTY.
1	320-10021-0043-XX REVEL RASCAL-V2 FRONT TRIANGLE	1
4	320-10021-0048-XX REVEL RASCAL-V2 SHOCK YOKE	1
19	310-10021-0106 HARWARE FORWARD SHOCK MOUNT CAPTIVE BOLT M6X1.0	1
20	310-10021-0105 HARDWARE FORWARD SHOCK MOUNT AXLE M6X1.0	1
21	310-10021-0077 HARDWARE SHOCK EYELET BOLT M10X1.25	1

NOTES

- 1) Torque foward shock bolt to 10 Nm.
- 2) Torque rear shock bolt to 15 Nm.
- 3) Apply titanium anti-seize to threads on rear shock bolt.
- 4) Install rear shock to shock yoke, first then rotate shock down into forward shock mount.

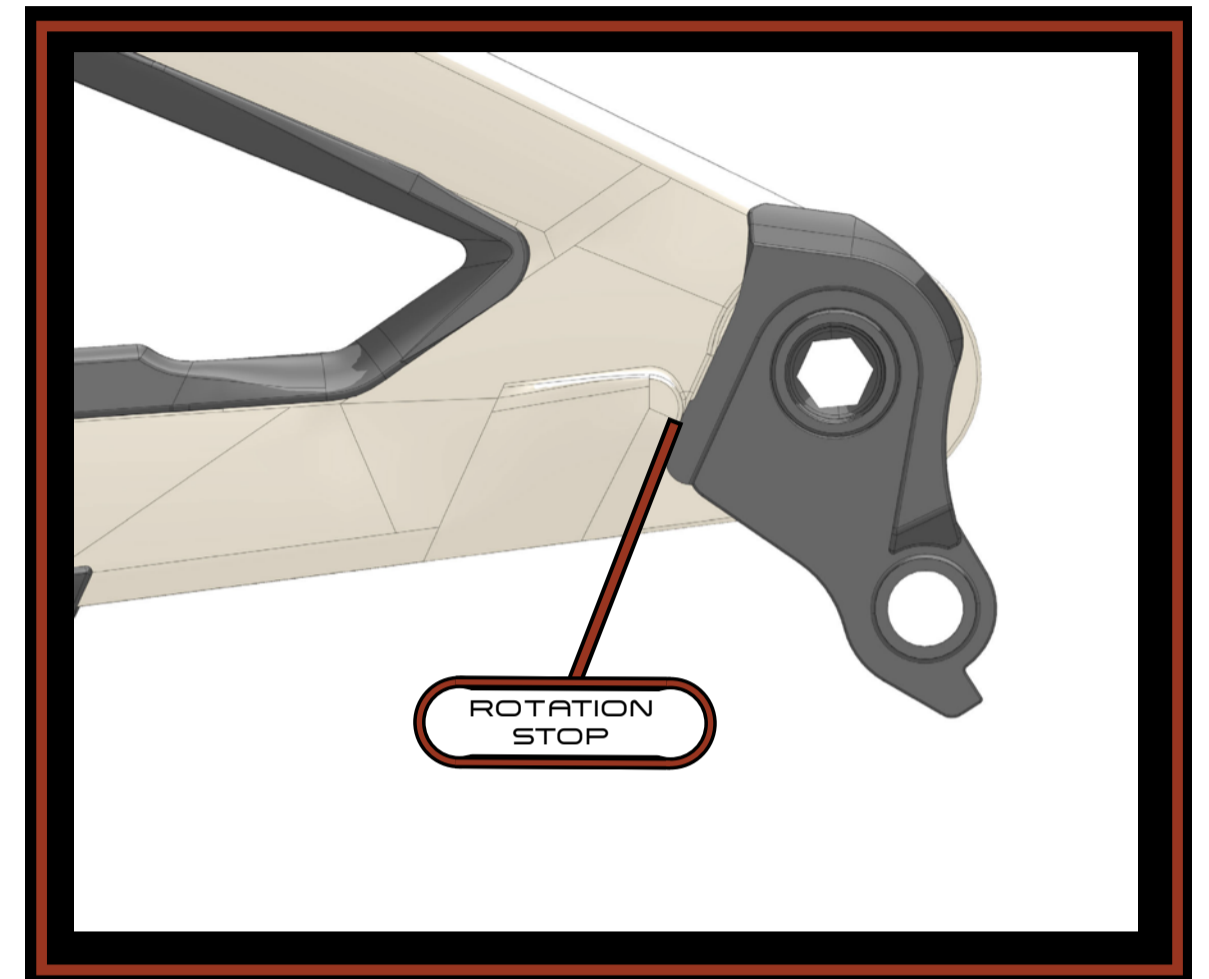
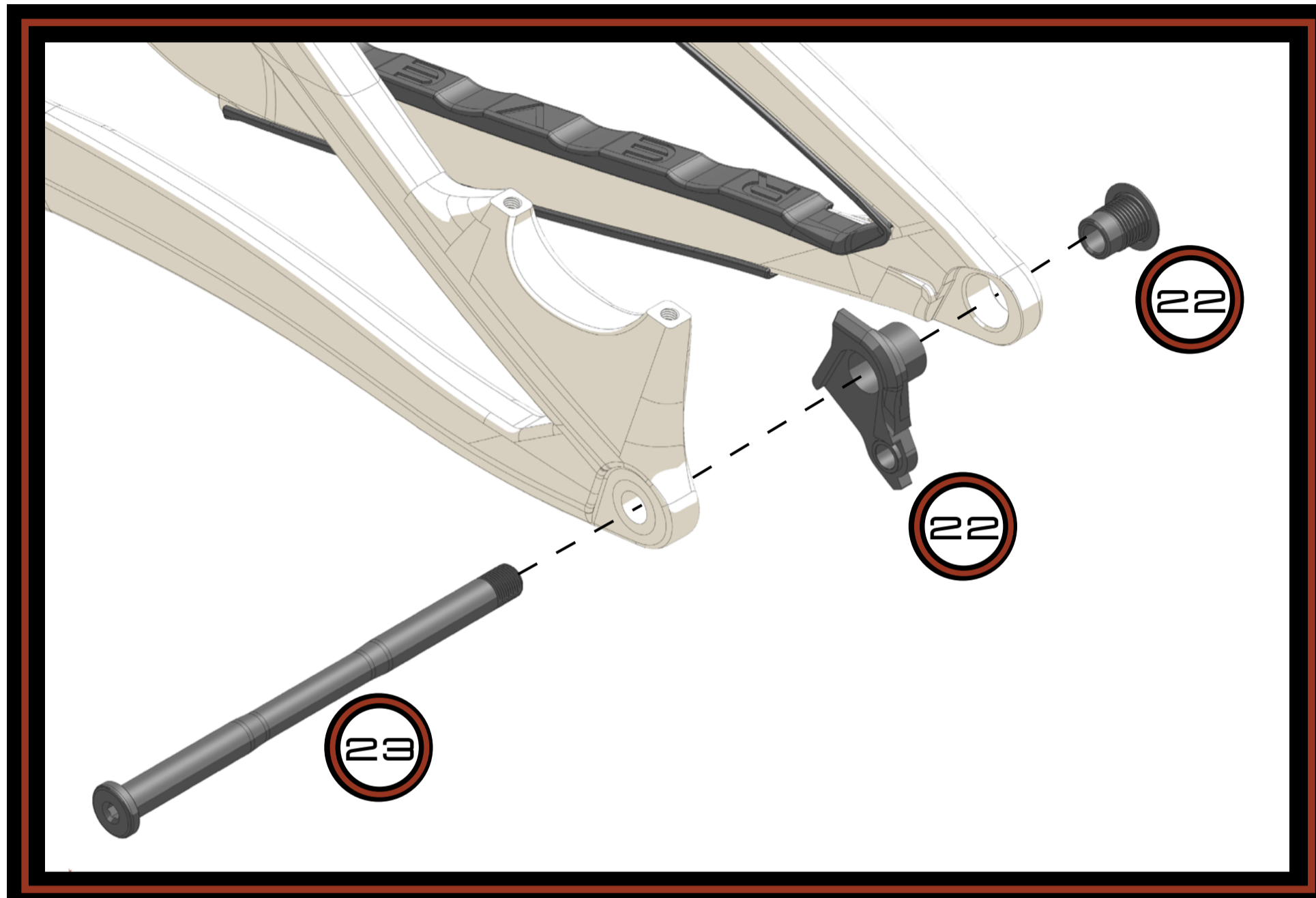
TOOLS NEEDED

8mm Hex Key

4mm Hex Key

Titanium Anti-Seize Compound

UDH HANGER & AXLE INSTALL



	PART NUMBER	QTY.
2	320-10021-0049-XX REVEL RASCAL-V2 REAR TRIANGLE	1
22	Sram UDH Hanger	1
23	310-10021-0056 AXLE 12X1.0X177 REVEL UDH	1

NOTES

- 1) Torque UDH hanger to 25 Nm. **NOTE:** UDH hanger is left-hand threaded.
- 2) Ensure UDH hanger is rotated fully forward and resting on rotation stop.
- 3) Torque Reveal UDH compatible axle to 13 Nm.
- 4) DO NOT apply grease to frame, UDH hanger or UDH bolt threads.
- 5) Apply grease to axle shaft (DO NOT apply grease to threads).
- 6) DO NOT torque axle to torque spec without wheel installed.

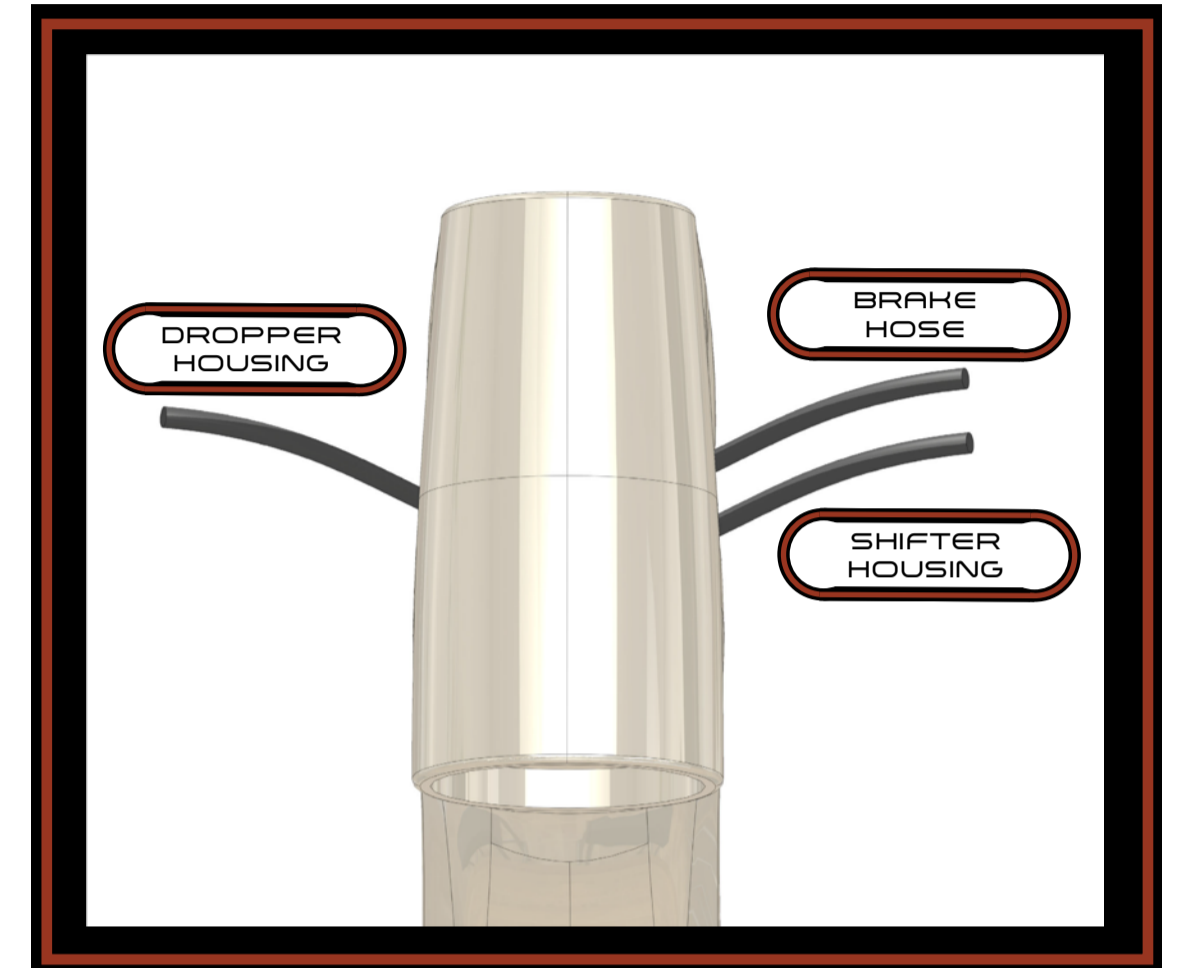
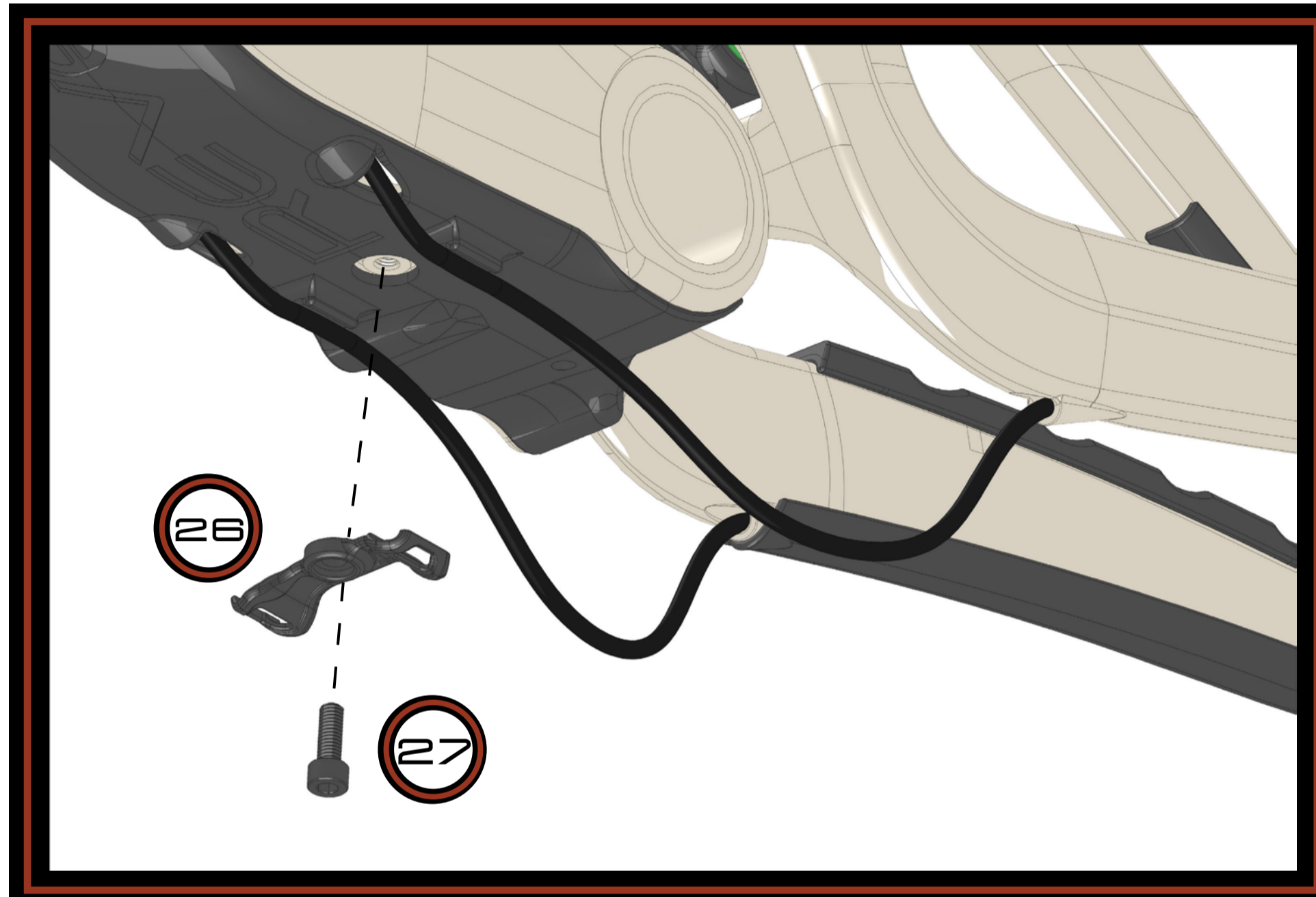
TOOLS NEEDED

8mm Hex Key

5mm Hex Key

Grease

INTERNAL ROUTING



using brake hoses feel tight isopropyl alcohol can be used as a lubricant

	PART NUMBER	QTY.
26	310-10021-0068 HARDWARE BB CABLE CLAMP	1
27	HARDWARE SOCKET HEAD CAP SCREW M5X0.8X14	5

NOTES

- 1) Torque Cable Clamp Bolt to 2 Nm
- 2) When sizing shifter housing and brake hose leave 40mm (1.57") extra length to account for cable growth during suspension travel
- 3) If cable housing/brake hoses feel tight isopropyl alcohol can be used as a lubricant
- 4) Remove cable end before pulling cable housing through frame

TOOLS NEEDED

4mm Hex Key



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