

Tightening All Fasteners on a Lectric XP 1.0 and 3.0 eBikes, Version 1.9

By **R. G. Sparber**

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My Lectric XP 1.0 eBike user's manual lists fasteners and their torque spec. This was an essential starting point, but I wanted more. I also figured that some owners may not be mechanically inclined, so pictures might be helpful. In some cases, I have included my experience applying the specified torque.

I am no expert, so may have misidentified a given fastener or its quantity. Please let me know of any errors so I may correct them. I also do not know how often you should torque these fasteners. It would be prudent to try and wiggle each fastener each time you charge the battery. **If in doubt, contact Lectric eBike's technical support.**

The following page contains my torque table based on the XP 1.0 owner's manual. I have added inch-pounds, given a total count of the number of fasteners that I think are involved, and the size of the needed hex wrench, socket wrench, or open-ended wrench.

I use two beam style torque wrenches: a Neiko 0 to 80 inch-pound ¼ inch drive and a Craftsman 0 to 600 inch-pounds 3/8 inch drive. The total cost was around \$60. An easier to use but higher-cost option is the click type torque wrench. If this appeals to you, I suggest looking at Park Tool. For about \$300, you can buy three click type torque wrenches that will cover the needed range.

If you do not have a torque wrench or are not comfortable tightening these fasteners, take your eBike to your local bike shop for a check up before riding for the first time.

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I have added the torque table for the XP 3.0, graciously provided by John Courtney.

XP 1.0 Lectric eBike XP Torque Specifications

Fastener	in-lbs	N*m	size. mm	quant.	note
Front Wheel Axle Nuts	354	40	15	2	socket or wrench
Rear Wheel Axle Nuts	354	40	18	2	wrench
Disc Rotor Mounting Bolts	62	7	4	12	hex wrench
Brake Lever Clamp Bolts	62	7	5	2	hex wrench
Brake Caliper Mounting Bolts	62	7	5	8	hex wrench
Shifter Clamp Screw	44	5	#2	1	Phillips
Seatpost Clamp	80	9	6	1	hex wrench
SaddleRail Binder	195	22	14	2	socket or wrench
Pedals	310	35	-	2	footnote 1
Bottom Bracket	575	65	-	-	footnote 2
Headset Parts	301	34	-	-	footnote 3
Stem Binder Bolt	186	21	6	1	hex wrench, footnote4
Handlebar Stem Clamp Bolts	88	10	5	2	hex wrench
Handlebar Stem Quick Release	62	7	4	1	hex wrench
Rear Derailleur Cable Clamp Bolt	35	4	9	1	socket or wrench
Rear Derailleur Mounting Bolt	71	8	5	1	hex wrench
Crank Bolts	398	45	8	2	hex wrench
Torque Arm Bolt	62	7	4	2	hex wrench
Fender Mounting Bolts	53	6	5	2	rear bolt hard to reach
Fender Mounting Screws	-	-	#2	4	Phillips
Rear Rack Mounting Bolts	62	7	4	4	hex wrench
Kickstand Mounting Bolts	88	10	5	2	hex wrench
Headlight Mounting Screw	62	7	#2	1	hand tight
Spokes	73 - 81		-	-	in pounds, footnote 5
battery plug cover teather	snug		#2	1	Phillips
motor screws	-	-	-	6	footnote 6

Tools:
hex wrenches: 4, 5, 6, 8 mm
socket or wrench: 9, 14, 15 mm
open ended wrench: 9, 15, 18 mm
#2 Phillips screwdriver
torque wrenches

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Footnotes

- 1) There are two styles of pedals. The first screws into the crank while the second is secured with a bolt from the back. Use either a 15 mm open ended wrench or a 6 mm hex wrench. For the right pedal, tighten clockwise. For the left pedal tighten counterclockwise.
- 2) Lectric eBikes says "The bottom bracket has both crank sets and the PAS sensor attached and is torqued appropriately. We do not recommend removing them to check the torque value as you would need special tools and you can cause damage."
- 3) If your handlebars are not tightly secured to the front fork, contact Lectric eBike's technical support for guidance.
- 4) The Stem Binder Bolt is also called the Quill Bolt.
- 5) If any of the spokes are loose, take the bike to a bike shop.
- 6) These screws are tightened in the factory and should not be touched. If you find them loose, contact Lectric eBike's technical support for guidance.

XP 3.0

You can convert from Nm to inch-pounds by multiplying by 8.85.

<i>Tightening Torque</i>	<i>Spec</i>
Bottom Bracket	30 Nm
Brake Caliper Mounting Bolts	8 Nm
Brake Lever Clamp Bolts	6 Nm
Crank Bolts	50 Nm
Disc Rotor Mounting Bolts	4 Nm
Fender Mounting Bolts	4 Nm
Headlight Mounting Screw	4 Nm
Headset Compression Bolt	4 Nm
Kickstand Mounting Bolts	7 Nm
Pedals	30 Nm
Rear Derailleur Cable Clamp Bolt	7 Nm
Rear Derailleur Mounting Bolt	12 Nm
Seat Rail Binder	20 Nm
Seatpost Clamp	18 Nm
Shifter Clamp Bolt	5 Nm
Spokes	160-190 (KGF)
Stem Clamp Bolts	6 Nm
Torque Arm Bolt	4 Nm
Wheel Axle Nuts	35 Nm

Reminder: the following numbers are for the XP 1.0

Front Wheel Axle Nuts 354 inch-pounds



I found them at about 200 inch-pounds.

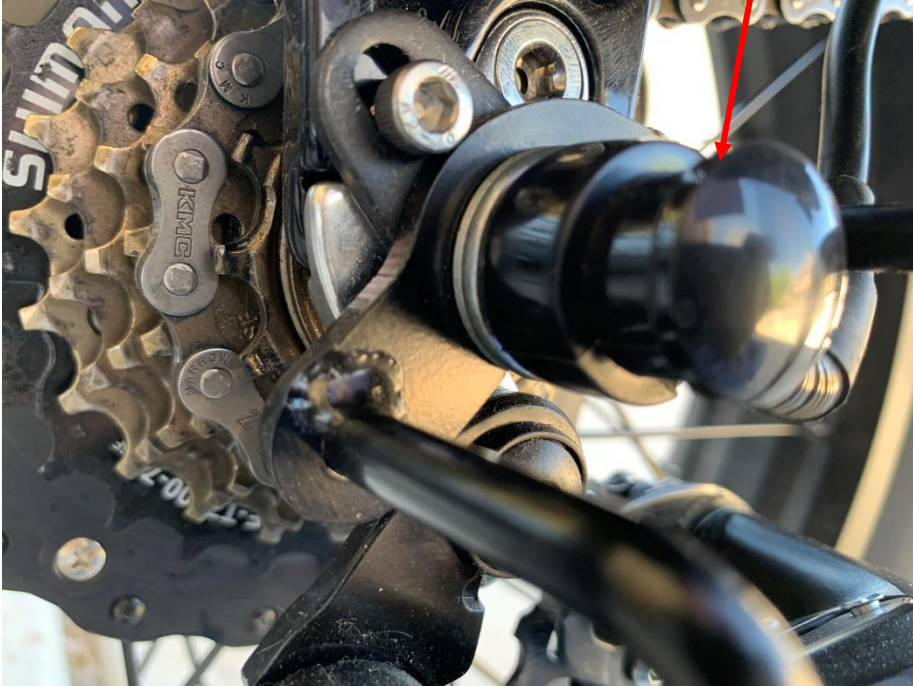
Rear Wheel Axle Nuts

354 inch-pounds



A rubber boot covers the nut on the left end of the rear axle. It pulls off.





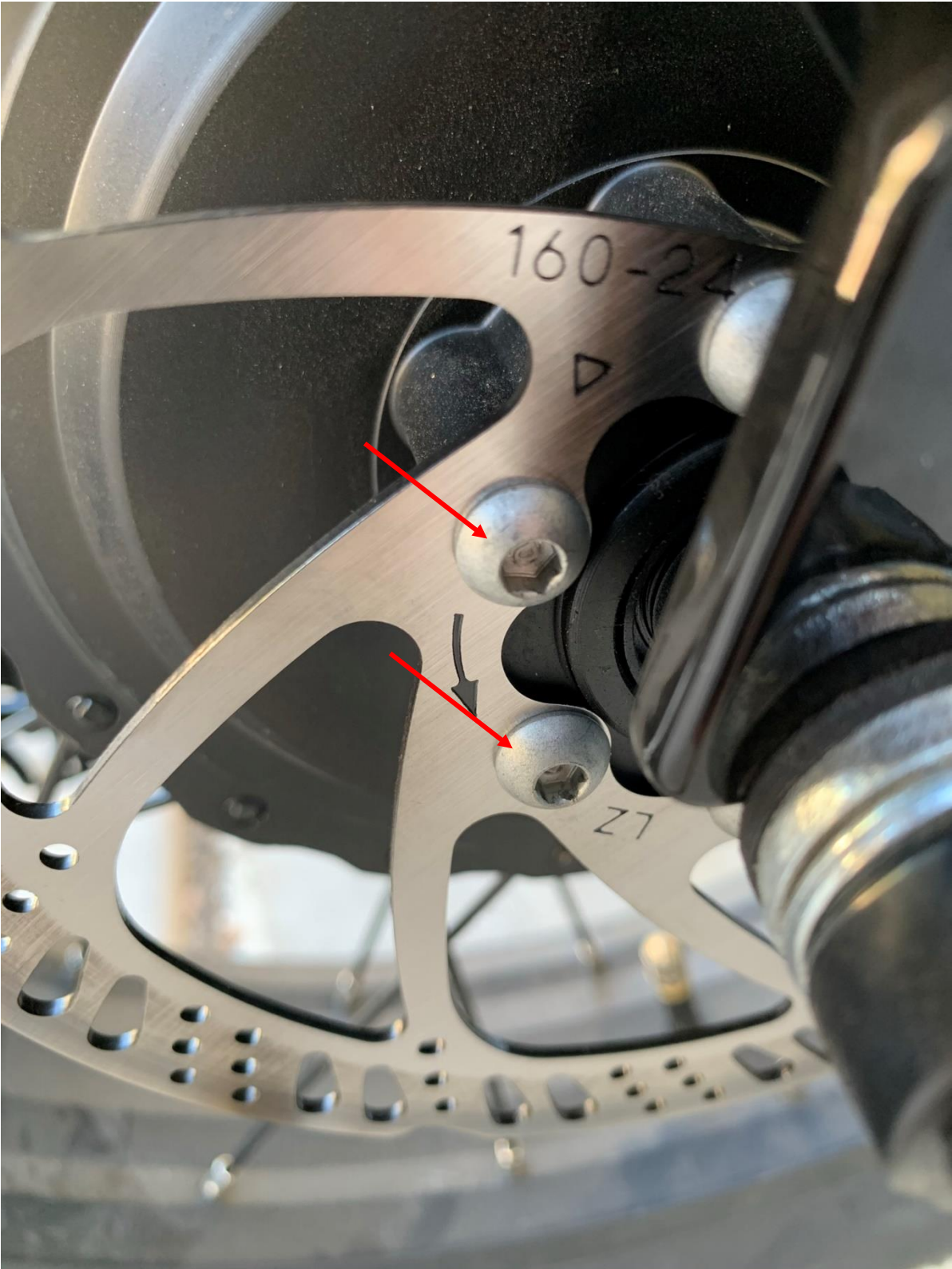
The right end of the rear axle also has a rubber boot, but a power cord extends out from it. I didn't want to risk damaging this cord, so I did not try to pull off the boot.



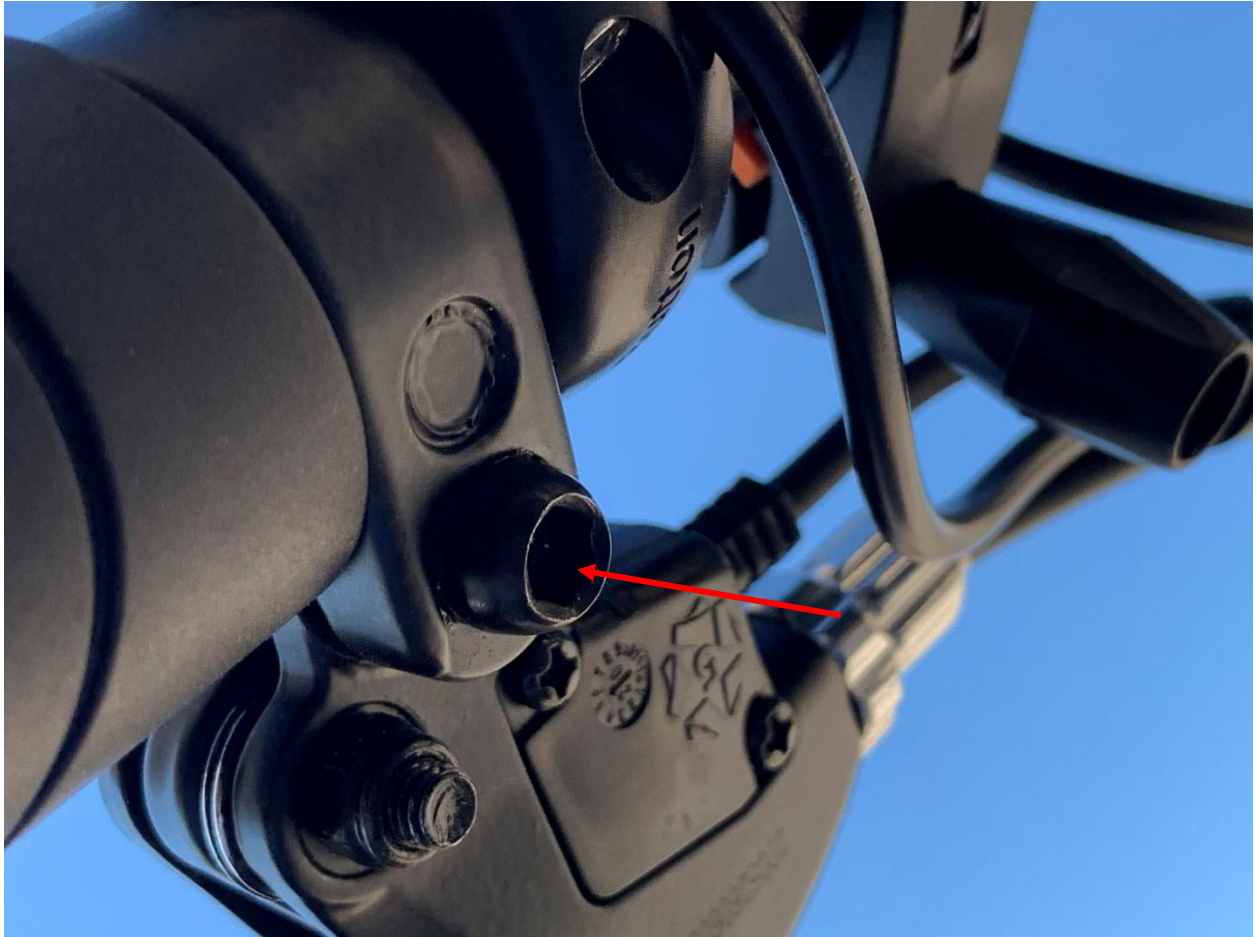
An alternate view.

Disc Rotor Mounting Bolts 62 inch-pounds

Here are two of the six bolts on this disk.

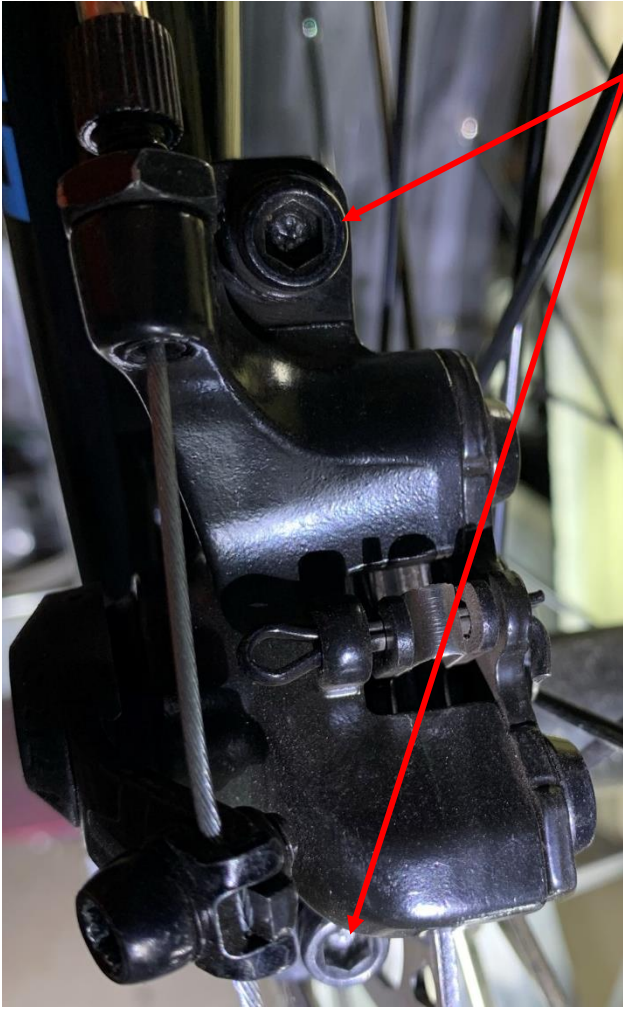


Brake Lever Clamp Bolt 62 inch-pounds



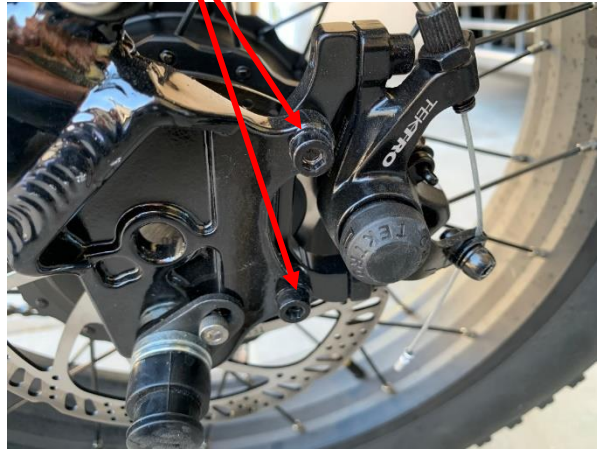
I am looking up at the underside of the handlebar. The Arizona sky sure is pretty.

Brake Caliper Mounting Bolts 62 inch-pounds



These two bolts are involved in adjusting the brakes.

These two bolts attach the brake assembly to the frame.



Shifter Clamp Screw

44 inch-pounds



I felt this was way too much torque. I was able to only get to 25 inch-pounds.

Seatpost Clamp

80 inch-pounds



[This official video](#), at time stamp 0:45, explains how to torque this knurled nut.

Saddle Rail Binder 195 inch-pounds



This is not the original seat.

This is a lot of torque, but it needs it. If you find your seat slowly tilting forward or back, check these nuts.

Pedals

310 inch-pounds

See also footnote 1 on page 3.

There are two styles of pedals with matching cranks. Shown here is the one with a bolt securing the pedal from the back of the crank. It uses a 6 mm hex wrench, although other sizes are possible.



The other style has the pedal screwing in from the front of the crank. It uses a 15 mm open-ended wrench.

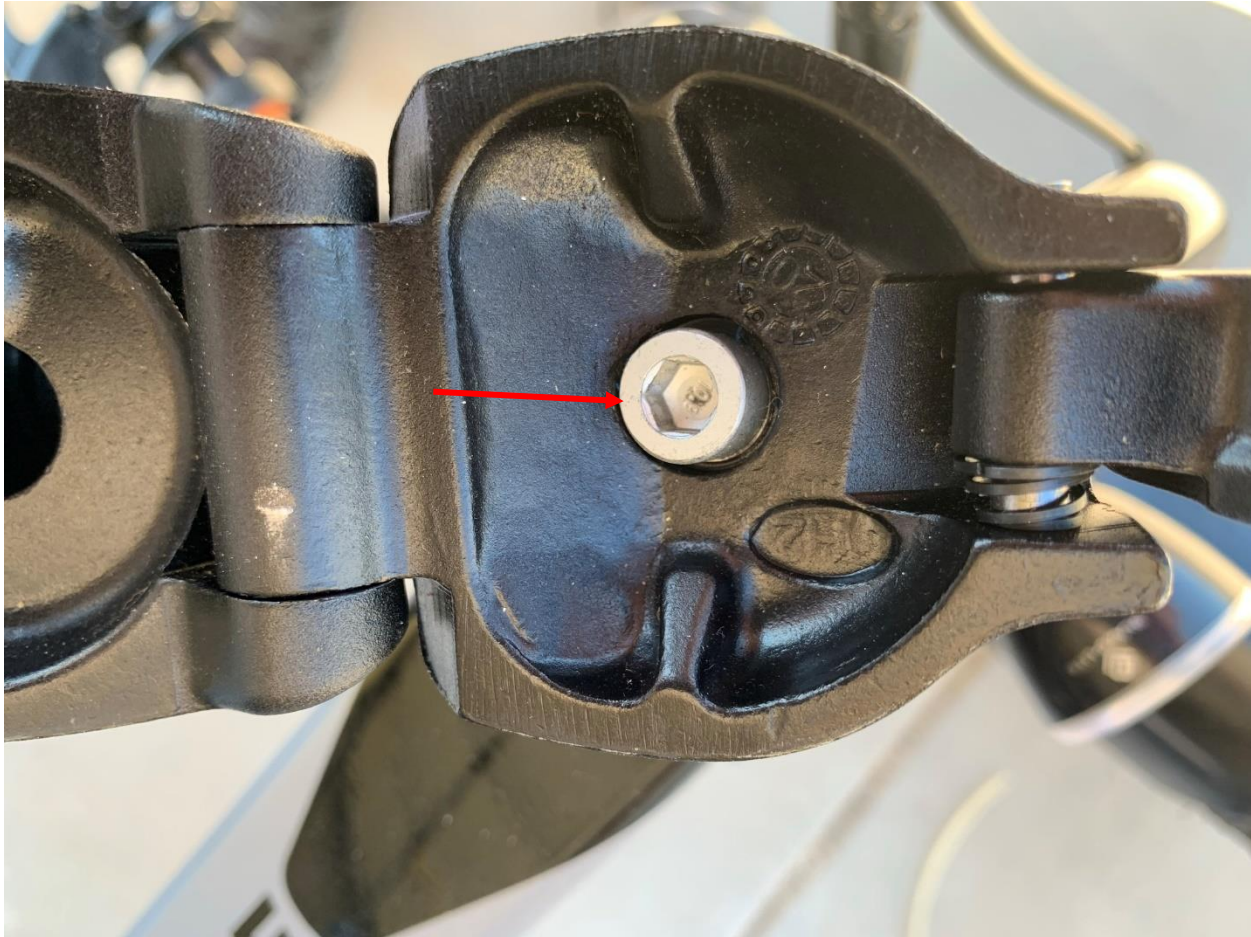
Thanks to Michael Schiff for pointing out this design.

The pedal on the right side of the bike is tightened by turning the fastener clockwise. The pedal on the left side of the bike is tightened by turning the fastener counterclockwise. This is true for both styles of pedals.

One way to remember this is to realize that you want the action of pedaling to tighten the pedal. When you face the bike on the right side, the pedal is turning clockwise. The right-hand thread in the fastener will tighten. The opposite is true when facing the left side of the bike. That pedal turns counterclockwise. A left-handed thread will tighten.

I found the fastener on the back of the crank was very tight, yet the pedal was loose.

**Stem Binder Bolt, which is also called the Quill Bolt
186 inch-pounds**



This picture may mess with your mind. The bolt head might initially look like it points to the right, and the center sticks out, but then it will flip and point to the left with the center recessed.

Handlebar Stem Clamp Bolts 88 inch-pounds



The display blocks access to the rear bolt.

Handlebar Stem Quick Release

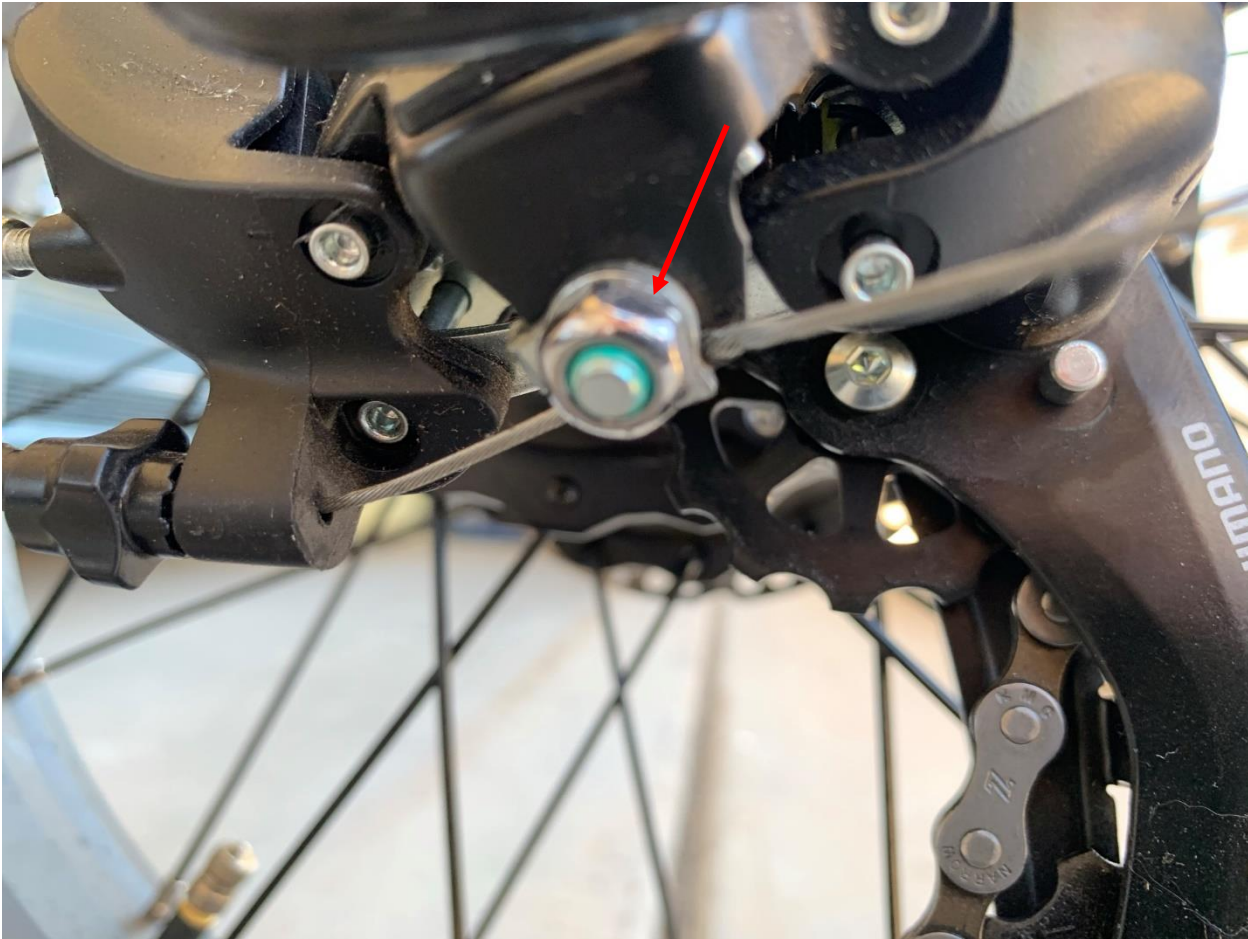
62 inch-pounds



I don't think it could take the specified torque, so I just went with tight enough to close the latch with effort. Sorry that I can't be more specific. Obviously, if the handlebar stem slides down, it is too loose. If you can't close the latch, it is too tight.

Rear Derailleur Cable Clamp Bolt

35 inch-pounds



Rear Derailleur Mounting Bolt 71 inch-pounds



Initially, I was getting a constant torque while I tightened this fastener. I couldn't tell if there was a lot of friction in the threads or if it was tearing out. By removing the fastener and coating it with an anti-seize compound, I tightened it to spec.

Crank Bolts

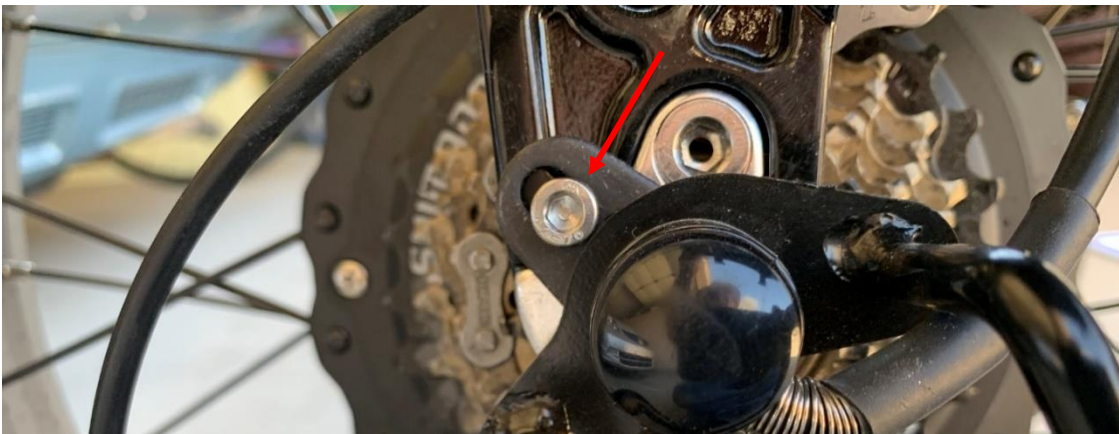
398 inch-pounds



Torque Arm Bolts 62 inch-pounds



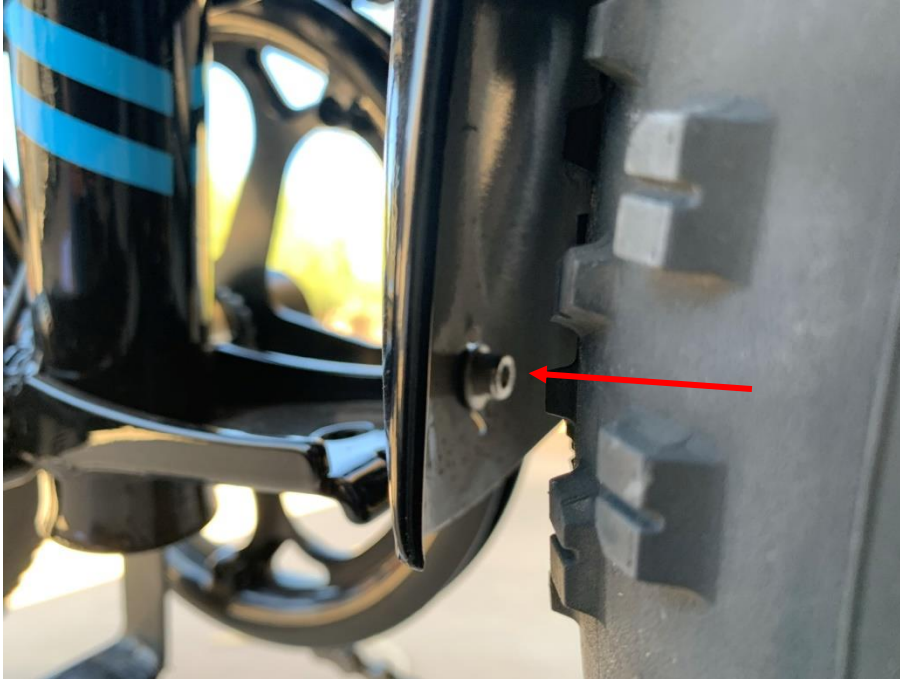
Left side.



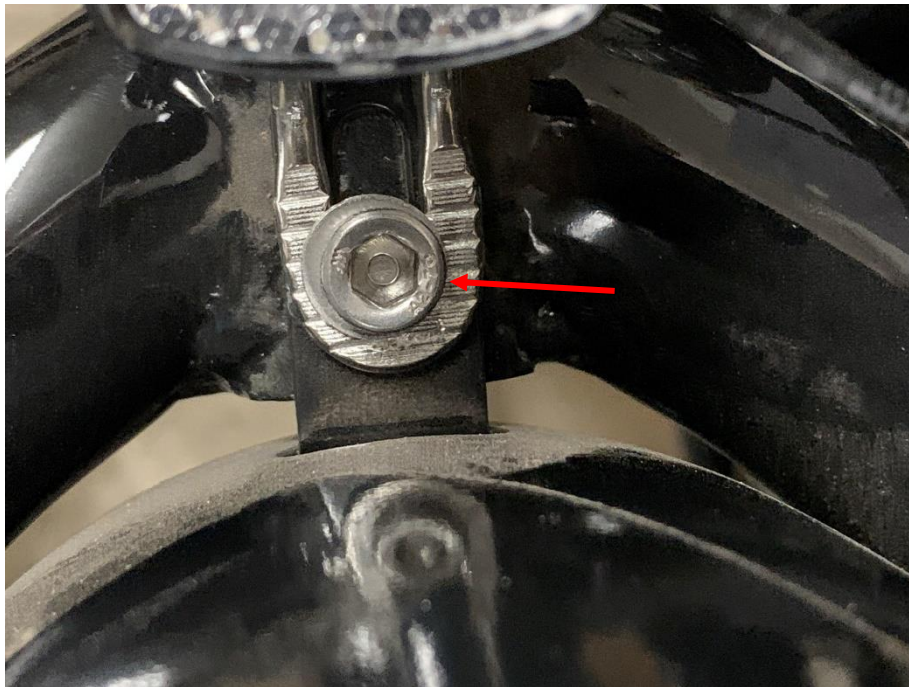
Right side.

Coating these bolts with an anti-seize compound let me get to the specified torque.

Fender Mounting Bolts 53 inch-pounds



Rear fender bolt.
There isn't much
room between the bolt
and the tire.

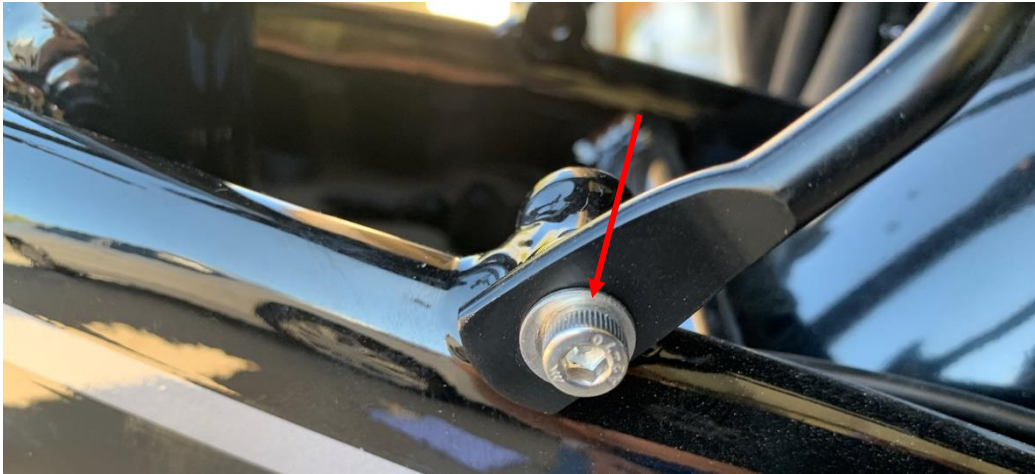


Front fender bolt.
It also secures the
front-facing reflector
and headlight.

Fender Mounting Screws hand tight



Rear Rack Mounting Bolts 62 inch-pounds



Coating these bolts with an anti-seize compound let me get to the specified torque.

Kickstand Mounting Bolts 88 inch-pounds



Each of these fasteners engages with a 10 mm nut on the back. Be sure to hold the nut with a wrench while torquing the fastener.

Headlight Mounting Screw 62 inch-pounds



I was afraid that the specified torque would tear this screw out so I went with hand tight.

Battery plug cover tether hand tight



There was no spec for this fastener.

Acknowledgments

Thanks to Lectric eBikes technical support staff Katie, Christian, and Brandon for answering so many of my questions.

Thanks to Michael Schiff for pointing out that some pedals screw into the front of the crank.

Thanks to Robert Brullo for supplying the torque specs for the XP3.0.

I welcome your comments and questions.

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