

Bicycle Torque Specifications

From <https://www.parktool.com/blog/repair-help/torque-specifications-and-concepts> (Nov 2021)

Wheel, Hub, Rear Cog Area

Component	Type/Brand	Newton Meters	Inch-Pounds
Axle	Solid axle nuts (non-quick-release type wheels)	29.4–44	266–390
Cassette sprocket lockring	Shimano®	29.4–49	260–434
	SRAM®	40	354
	Campagnolo®	50	442
Hub cone locking nut	Bontrager®	17	150
	Chris King®	12.2	100
	Shimano®	9.8–24.5	87–217
Freehub body	Bontrager®	45	400
	Shimano®	35–50	305–434
	Shimano® XTR w/ 14mm Hex	45–50	392–434

Headset, Handlebar, Seat and Seat Post Area

Component	Type/Brand	Newton Meters	Inch-Pounds
Threaded headset locknut	Chris King® Gripnut type	14.6–17	130–150
	Tange-Seiki®	24.5	217
Stem binder bolt: Quill type for threaded headsets	Shimano®	19.6–29.4	174–260
	Generic brand range	16-18	144–168
Threadless stem steering column binder bolts	Deda®	8	71
	FSA® carbon	8.8	78
	Syncros® cotter bolt type	10.1	90
	Thomson®	5.4	48
	Time® Monolink	5	48
	Race Face®	6.2	55
Stem handlebar binder: 1 or 2 binder bolts	Shimano®	19.6–29.4	174–260
	Control Tech®	13.6–16.3	120–144
Stem handlebar binder: 4-bolt faceplate	Control Tech®	13.6–16.3	120–144
	Deda® magnesium	8	71
	FSA® OS-115 carbon	8.8	78
	Race Face®	6.2	55
	Thomson®	5.4	48
	Time® Monolink	6	53
MTB handlebar end extensions	Cane Creek®	7.9	70
	Control Tech®	16.3	144
Seat rail binder	Shimano®	20–30	174–260
	Campagnolo®	22	194
	Control Tech® two-bolt type	16.3	144
	Control Tech® one-bolt type	33.9	300
	Syncros®	5 each bolt	44.2 each bolt
	Truativ®	M8 bolt: 22–24 M6 bolt: 6–7.1	M8 bolt: 195–212 M6 bolt: 53–63
Seat post binder*	Campagnolo®	4–6.8	36–60

**NOTE: Seat posts require only minimal tightening to not slip downward. Avoid over tightening.*

Crankset, Bottom Bracket and Pedal Area

Component	Type/Brand	Newton Meters	Inch-Pounds
Pedal into crank	Shimano®	35 minimum	309.7 minimum
	Campagnolo®	40	354
	Ritchey®	34.7	307
	Truvativ®	31.2–33.9	276–300
Compression slotted crank pinch bolts	Shimano® Hollowtech® II	9.9–14.9	88–132
	FSA® MegaExo™	9.8–11.3	87–100
Crank adjusting cap	Shimano® Hollowtech® II	0.5–0.7	4–6
	FSA® MegaExo™	0.5–0.7	4–6
Crank bolt (including spline-type cranks and square-spindle cranks)	Shimano®	34–44	305–391
	Shimano® Octalink® XTR® (M15 thread)	40.3–49	357–435
	Campagnolo®	32–38	282–336
	Campagnolo® Ultra-Torque®	42	371
	FSA® M8 bolt	34–39	304–347
	FSA® M14 steel	49–59	434–521
	Race Face®	54	480
	Syncros®	27	240
	Truvativ® ISIS Drive	43–47	384–420
	Truvativ® square spindle	38–42	336–372
White Industries™	27–34	240–300	
Crank bolt one-key release cap	Shimano®	5–6.8	44–60
	Truvativ®	12–14	107–124
Chainring cassette to crankarm (lockring)	Shimano®	50–70	443–620
Chainring bolt: steel	Shimano®	7.9–10.7	70–95
	Campagnolo®	8	71
	Race Face®	11.3	100
	Truvativ®	12.1–14	107–124
Chainring bolt: aluminum	Shimano®	5–10	44–88.5
	Campagnolo®	8	70.8
	Truvativ®	8–9	70.8–79.6

Bottom bracket: cartridge type	Shimano®	49.1–68.7	435–608
	Shimano® Hollowtech® II	34.5–49.1	305–435
	Campagnolo® (three-piece type)	70	612
	Campagnolo® Ultra-Torque® cups	35	310
	FSA®	39.2–49	347–434
	Race Face®	47.5	420
	Truvativ®	33.9–40.7	300–360
	White Industries™	27	240

Derailleur and Shift Lever Area

Component	Type/Brand	Newton Meters	Inch-Pounds
Drop bar dual control brake/shift lever clamp bolt	Shimano® STI™	6–8	53–70
	Campagnolo®	10	89
	SRAM®	6–8	53–70
Shift lever: upright/flat bar type	Shimano® STI™	5–7.4	44–69
Shift lever: twist grip	Shimano® Revoshift®	6–8	53–70
	SRAM®	17	150
Shift lever: MTB “thumb type”	Shimano® STI™	2.4–3	22–26
Front derailleur clamp mount	Campagnolo®	5	44
	Campagnolo®	7	62
	Shimano®	5–7	44–62
	SRAM®	4.5	39.8
	SRAM®	5–7	44–62
Front derailleur cable pinch bolt	Shimano®	5-6.8	44–60
	Campagnolo®	5	44
	Mavic®	5–7	44–62
	SRAM®	4.5	40
Rear derailleur mounting bolt	Shimano®	8–10	70–86
	SRAM®	8–10	70–86
	Campagnolo®	15	133
Rear derailleur cable pinch bolt	Shimano®	5–7	44–60
	SRAM®	4–5	35.4–44.2
	Campagnolo®	6	53
Rear derailleur pulley wheel bolt	Shimano®	2.9–3.9	27–34

Brake Caliper and Lever Area

Component	Type/Brand	Newton Meters	Inch-Pounds
Upright bar brake levers	Shimano®	6–8	53–69
	Avid®	5–7	44–62
	Campagnolo®	10	89
Brake caliper mount to frame: side-pull, dual-pivot, center-pull	Shimano®	7.8–9.8	70–86
	Campagnolo®	10	89
	Cane Creek®	7.7–8.1	68–72
	Tektro®	8–10	69–89
Brake caliper mount to frame: linear-pull or cantilever	Shimano®	8–10	69–89
	SRAM®	5–6.8	45–60
	Avid®	4.9–6.9	43–61
	Control Tech®	11.3–13.6	100–120
	Tektro®	6–8	53–69
Brake pad: threaded stud	Avid®	5.9–7.8	53–69
	Campagnolo®	8	71
	Cane Creek®	6.3–6.7	56–60
	Tektro®	5–7	43–61
	Shimano®	5–7	43–61
	SRAM®	5.7–7.9	50–70
Brake pad: smooth stud	Shimano®	7.9–8.8	70–78
Brake pad: side-pull and dual-pivot bolts	Campagnolo®	8	72
	Cane Creek®	6.3–6.7	56–60
	Shimano®	6–8	53–69
	Tektro®	5–7	43–61
Brake cable pinch bolt: linear pull & cantilever	Control Tech®	4.5–6.8	40–60
	Shimano®	6–7.8	53–69
	SRAM®	5.6–7.9	50–70
	Tektro®	6–8	53–69
Brake cable pinch bolt: side pull/dual pivot/center pull	Campagnolo®	5	44
	Cane Creek®	7.7–8.1	68–72
	Shimano®	6–8	53–69
	Tektro®	6–8	53–69

Disc Brake Systems

Component	Type/Brand	Newton Meters	Inch-Pounds
Disc rotor to hub: lockring	Avid®	40	350
	Shimano®	40	350
Disc rotor to hub: M5 bolts	Avid®	6.2	55
	Hayes®	5.6	50
	Magura®	3.8	34
	Shimano®	2–4	18–35
Caliper body mount	Avid®	9–10.2	80–90
	Hayes®	12.4 9 with Manitou forks	110 80 with Manitou forks
	Magura®	5.7	51
	Shimano®	6–8	53–69
	Tektro®	6–8	53–69
Hydraulic hose fittings	Hayes®	6.2	55

Torque Equivalencies

Nm	in-lb	ft-lbs
1	8.9	0.7
2	17.7	1.5
3	26.6	2.2
4	35.4	3.0
5	44.3	3.7
6	53.1	4.4
7	62.0	5.2
8	70.8	5.9
9	79.7	6.6
10	88.5	7.4
11	97.4	8.1
12	106.2	8.9
13	115.1	9.6
14	123.9	10.3
15	132.8	11.1
16	141.6	11.8
17	150.5	12.5
18	159.3	13.3
19	168.2	14.0
20	177.0	14.8
21	185.9	15.5
22	194.7	16.2
23	203.6	17.0
24	212.4	17.7
25	221.3	18.4
26	230.1	19.2
27	239.0	19.9
28	247.8	20.7
29	256.7	21.4
30	265.5	22.1

Nm	in-lb	ft-lbs
31	274.4	22.9
32	283.2	23.6
33	292.1	24.3
34	300.9	25.1
35	309.8	25.8
36	318.6	26.6
37	327.5	27.3
38	336.3	28.0
39	345.2	28.8
40	354.0	29.5
41	362.9	30.2
42	371.7	31.0
43	380.6	31.7
44	389.4	32.5
45	398.3	33.2
46	407.1	33.9
47	416.0	34.7
48	424.8	35.4
49	433.7	36.1
50	442.6	36.9