

Torque & Fastener Reference

Correct torque prevents two opposite failures: fasteners working loose, and components being crushed or cracked by overtightening.

“ Always use a calibrated torque wrench for safety-critical fasteners — axles, stem bolts, brake calipers and suspension mounts.

Published torque values

Fastener	Torque	Source
Rear rack fixing screw	16 N·m	CEMOTO owner manual
Rear axle nuts	Firm — wheel must be secure with correct chain tension	Owner manual procedure
Handlebar stem bolts (M8, D-series)	Tighten with 8 mm hex; firm, in a cross pattern	Assembly procedure
Handlebar clamp bolts (M6, D-series)	Tighten with 6 mm hex; do not crush the clamp block	Assembly procedure
Front axle nut (D-series)	Firm; wheel must spin freely with no lateral play	Assembly procedure
Brake caliper mounting bolts	Firm; recheck after the first ride	Assembly procedure
Front fender screws (M5, D-series)	Firm with 5 mm hex; fender must not move under pressure	Assembly procedure
Front number plate bolt (M5, D-series)	Firm with 5 mm hex	Assembly procedure
Throttle / brake lever clamp (M4, D-series)	Firm with 4 mm hex; throttle must snap back freely	Assembly procedure
Pedals (eBikes)	Firm — hand-start, then wrench finish	Assembly procedure
Seat post clamp	Tight enough that the saddle cannot be rotated by hand	Assembly procedure

Note: CEMOTO does not publish a complete torque table for every fastener. Where a value is not published, tighten to the general guidance below and never exceed the marking on the fastener or component.

General tightening guidance

Fastener size	Typical application	Guidance
M4	Lever clamps, small brackets, plastics	Light — these thread into aluminum or plastics and strip easily. Firm by hand plus a short wrench
M5	Fender screws, number plate, panels	Firm, not forceful
M6	Handlebar clamps, brake calipers, disc bolts	Firm with a standard-length wrench. A cross pattern where there are multiple bolts
M8	Stem bolts, larger brackets	Firm with a longer wrench; use a cross pattern
Axle nuts	Wheel axles	Firm. The wheel must spin freely with no lateral play, and must not shift under braking or drive load
Suspension mounts	Shock and fork mounts	Follow the component guidance; these carry high loads

Tightening technique

1. **Clean the threads** and remove any grit. Debris in a thread causes false torque readings.
2. **Apply the correct lubricant or threadlocker** if specified. Never apply threadlocker to a nylon-insert self-locking nut.
3. **Start fasteners by hand** to avoid cross-threading.
4. **Bring multiple bolts up gradually in a cross (diagonal) pattern.** Fully tightening one bolt first distorts the component.
5. **Use a torque wrench** for the final pass on safety-critical fasteners.
6. **Never reuse** a self-locking nut whose locking feature has worn, or a bolt that has stretched.

Safety-critical fasteners

These fasteners should be checked after assembly, after the first ride, and at every service:

Fastener	Consequence of failure
Front axle	Wheel detachment — loss of control
Rear axle	Wheel shift, chain tension loss, possible rear wheel lock
Handlebar stem and clamp bolts	Bars rotate or detach — loss of control
Brake caliper mounting bolts	Brake loss
Brake lever clamp	Inability to brake
Suspension mounting bolts	Structural failure
Pedal spindles	Pedal detachment and crank damage
Motor mounting bolts	Motor movement, chain misalignment, phase wire damage

Re-check after the first ride

Components seat and settle during the first 20–30 minutes of riding. **Re-check every fastener above** after your first ride — this is the single highest-value maintenance action on a new bike.

Threadlocker and lubricant guidance

Application	Recommendation
Brake caliper bolts, stem bolts, suspension mounts	Medium-strength threadlocker is commonly used. Apply to clean, degreased threads
Axle nuts with nylon insert	No threadlocker. Replace the nut when the insert loses grip
Pedal threads	Light grease. Never threadlocker — pedals must be removable
Seat post	Light grease on the post, not on the clamp bolt
General bolts into aluminum	Anti-seize if the bike is ridden in wet or salty conditions

Inspecting for loose fasteners

A fastener check takes a few minutes and catches most emerging problems. Look for:

- **Witness marks.** Paint flaking or a bright ring around a bolt head indicates movement.
 - **Thread wear.** A bolt that requires noticeably less torque to tighten is stretching — replace it.
 - **Corrosion.** Rust on a structural fastener reduces its strength.
 - **Missing hardware.** Nuts and bolts lost on the trail should be replaced before the next ride, not after.
 - **Elongated holes.** A bolt hole that has become oval indicates the joint has been moving — the component may need replacement.
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Fastener maintenance intervals

Interval	Action
After assembly	Torque all safety-critical fasteners
After first ride (20-30 min)	Re-check all safety-critical fasteners
Before every ride	Visual check of axles, stem and pedals
Weekly / after rough off-road use	Full fastener walk-around
Monthly	Check suspension mounts and motor mounts
Every 6 months	Full fastener inspection with a torque wrench

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