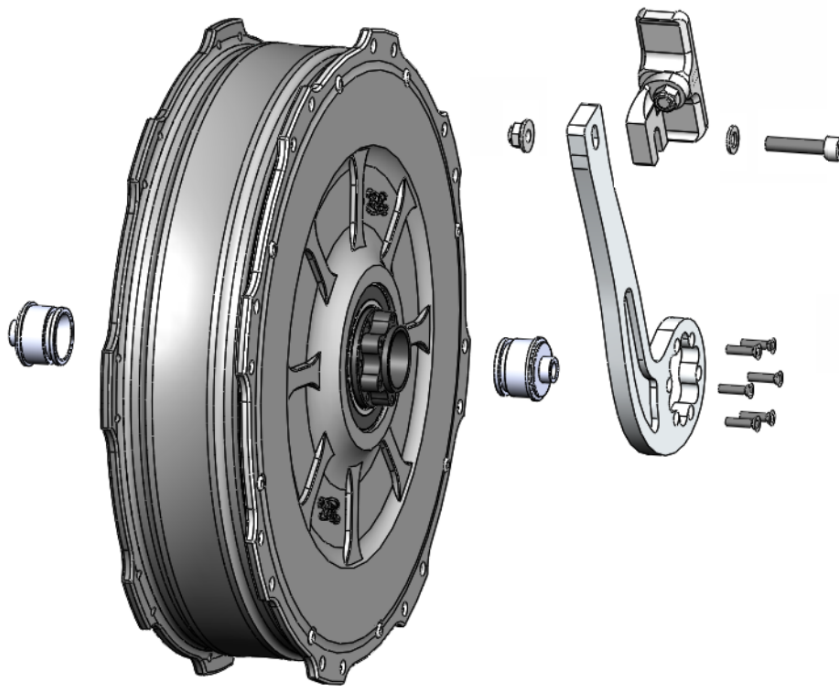


The Grin All-Axle Hub Motor Installation Manual

For 9x100mm Quick Release, and 12x100mm, 15x100mm, 15x110mm, 15x150mm,
20x110mm Thru-Axle Adapters



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All-Axle Installation Manual

Rev 0



1 Parts Included

- All-Axle Hub Motor
- Torque Arm
- Axle Adapter Set (9x100mm, 12x100mm, 15x100mm, 15x110mm, 15x150mm, 20x110mm)
- 6x M3 T20 Torx Bolts
- 6x M5x10mm Disc Rotor Bolts
- Frame Clamp
- M5 Bolt and Nyloc Nut
- 2x Stainless Steel Hose Clamps
- 8mm Socket Wrench
- Blue Loctite

2 Tools Required

- 2.5mm Hex Tool
- 8mm or Adjustable Crescent Wrench

3 Installation

Step 1: Install the Torque Arm

Install the torque arm on the non-cable side of the motor, oriented such that the cable exits below the axle when mounted. The arm should be oriented with the cutout facing away from the bike, as pictured. Secure the torque arm to the motor with the 6 T20 Torx bolts – use a drop of the provided blue Loctite on these bolts to ensure a secure installation.

If using 15x150mm adapters, refer to the Appendix for spacer installation instructions.

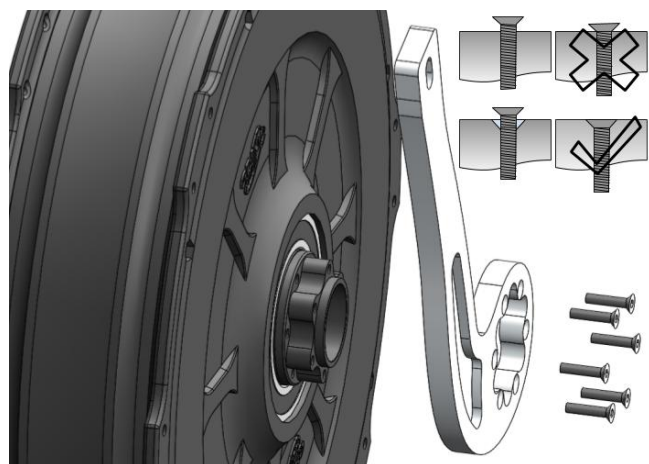


Fig. 1: Orient the torque arm with the cutout facing out.

All-Axle Installation Manual

Rev 0



Step 2: Insert the Axle Spacers

Insert the axle spacers into the bore of the motor.

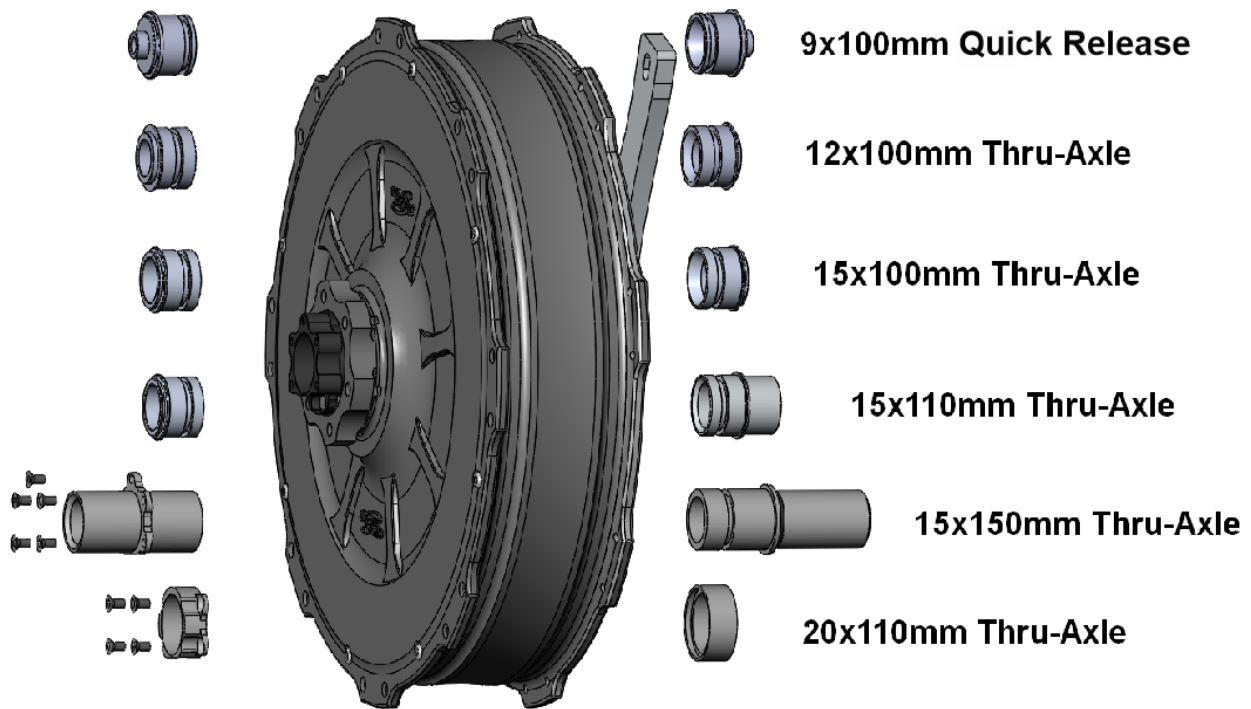


Fig. 2: Range of axle inserts. Special install notes about 15x110mm, 15x150mm, and 12x110mm boost adapters in Appendix.

Step 3: Install the Disc Brake (Optional)

The All-Axle motor has a 6 bolt ISO standard disc mount. It is important that the disc rotor has an inner diameter of at least 35mm. When the rotor ID is smaller, it can rub against and damage the cable guard on the axle resulting in cable damage. You can grind or file away excess metal around each screw hole if your rotor interferes.

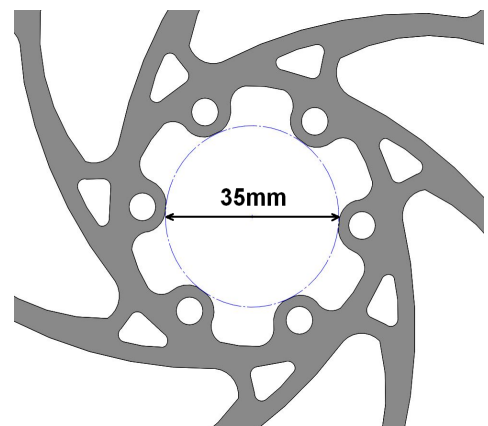


Fig. 3: It is critical that the disc rotor ID clears the cable exit.

All-Axle Installation Manual

Rev 0



The All-Axle provides 18.25mm of clearance between the disc rotor and side plate, which fits most calipers.

Some caliper models are wider than this gap and will rub against the side plate. In that case, either swap to a different model caliper, or use a spacer under the disc to position it further out.

Secure the rotor with the 6 low profile M5x10mm disc rotor bolts.

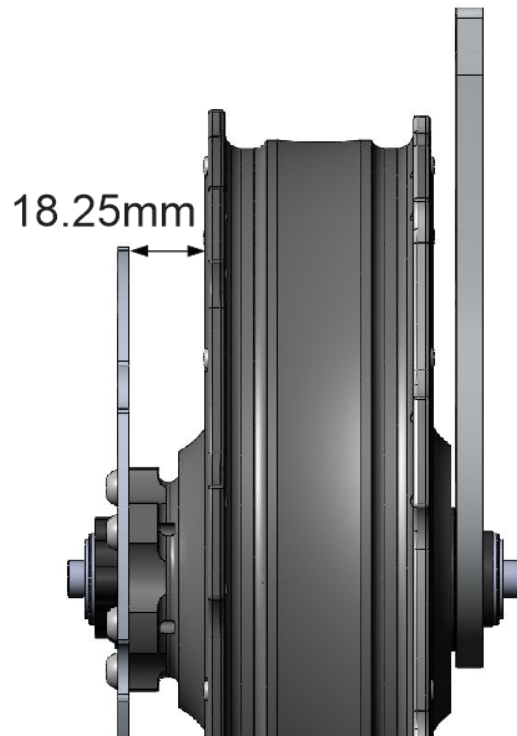


Fig. 4: Some calipers may be too wide for the 18mm gap.

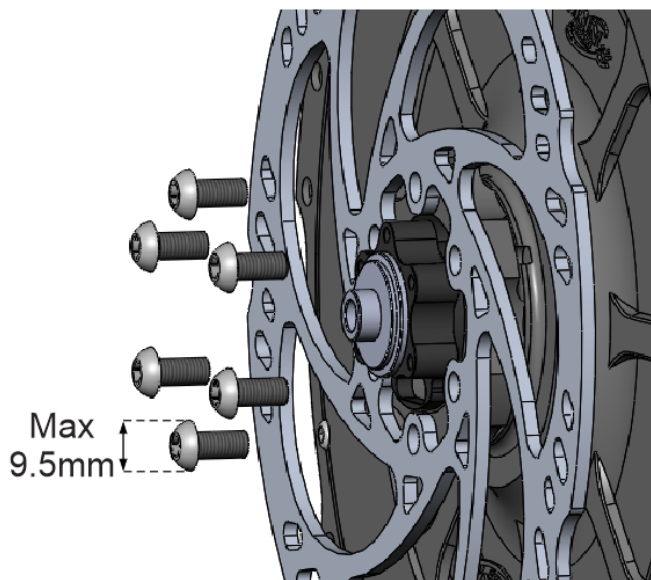


Fig. 5: Low profile and small diameter disc bolts required.

Note: If using bolts other than those provided, make sure the diameter of the bolt heads is less than 9.5mm, as larger head diameter bolts can rub against the cable and damage the wiring.

If using 15x110mm, 15x150mm, or 20x110mm boost adapters, refer to the Appendix for additional installation instructions.

All-Axle Installation Manual

Rev 0



Step 4: Insert the Motor into the Forks

Insert the motor into the forks with the torque arm roughly lined up and temporarily secure it with the quick release or thru-axle. If you have slotted dropouts, ensure the spacers are fully seated at the top of the fork slots before tightening.

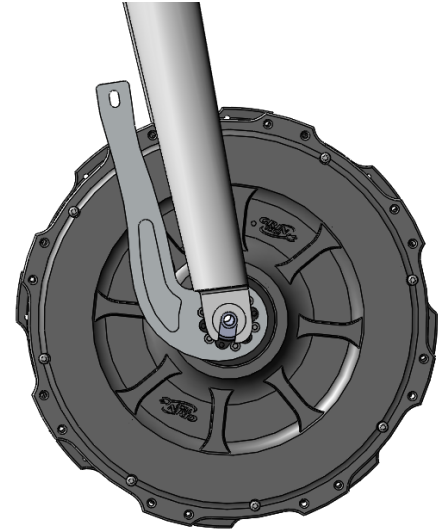
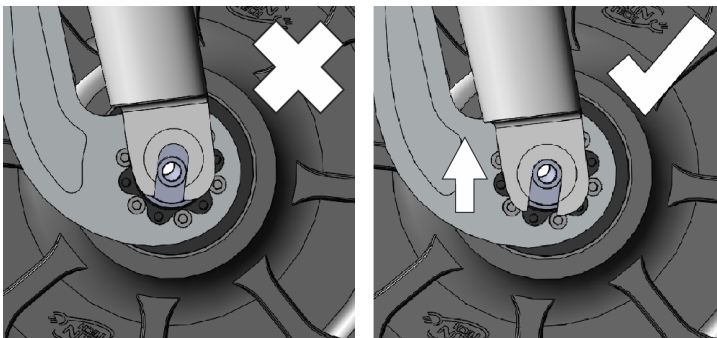


Fig. 6: Roughly line up the torque arm with the fork.

Step 5: Install the Frame Clamp and Secure the Torque Arm

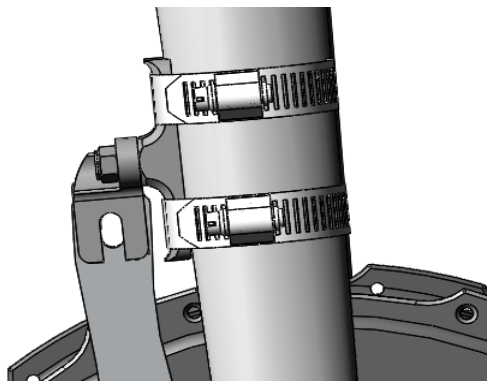


Fig. 7: Use the hose clamps to secure the frame clamp.

Slide and rotate the frame clamp to line up flat with the torque arm, and bolt the two pieces together with the M5 screw and Nyloc nut. You may need to loosen the quick release or axle bolts in order to rotate the torque arm to the frame clamp first.

Secure the frame clamp to the frame using the two hose clamps. The black heat shrink tubing can be installed over each hose clamp in order to protect the paint finish and achieve a more discrete look.

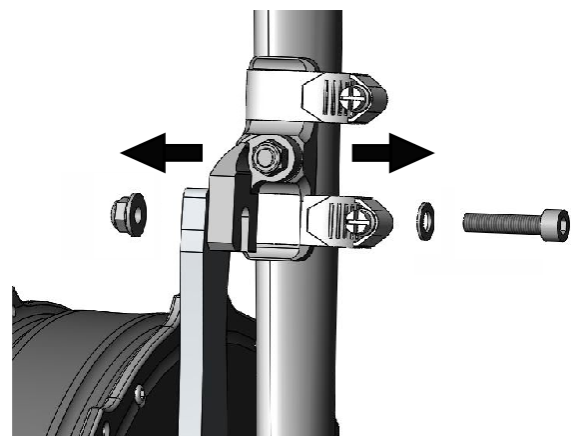


Fig. 8: Slide the frame clamp until it sits flat against the torque arm.

All-Axle Installation Manual

Rev 0



With the torque arm attached, tighten the bracket nut to ~8Nm using the supplied socket.

Note: No parts of the frame holder should move when the wheel is in operation. The connecting bolt must be tightened at the end of the installation, ensuring that the threads of the bolt fully penetrate the nylon of the Nyloc nut.

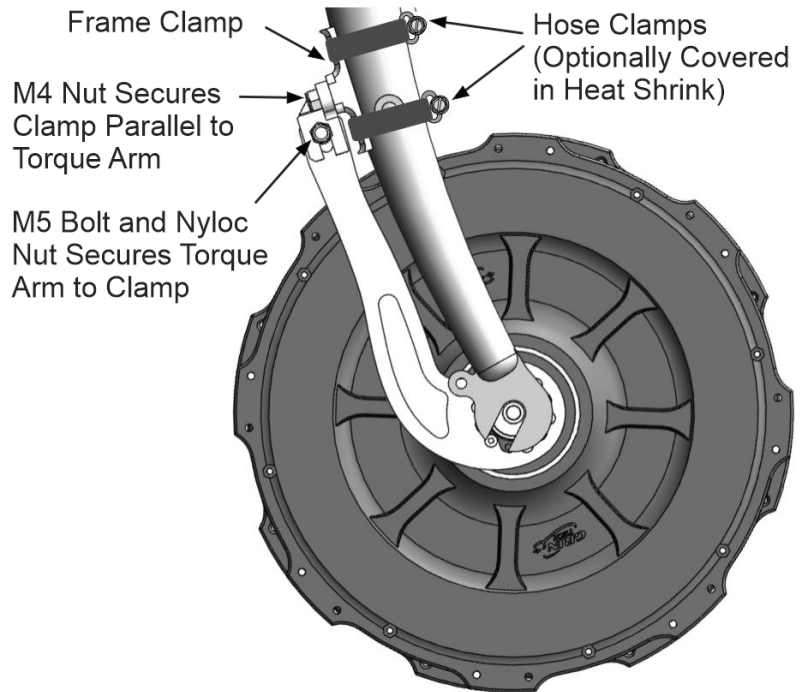


Fig. 9: Correct installation of the torque arm and frame clamp.

Step 6: Secure the Motor

If the bike uses a bolt-on thru axle, tighten it to 40Nm (30ft-lbs).

If the bike uses a quick release, first lightly tighten the nut with the lever parallel to the axle, then close the lever all the way. The lever should close firmly.

Note: Do not use tools to tighten the quick release lever, hand tighten the quick release lever only.

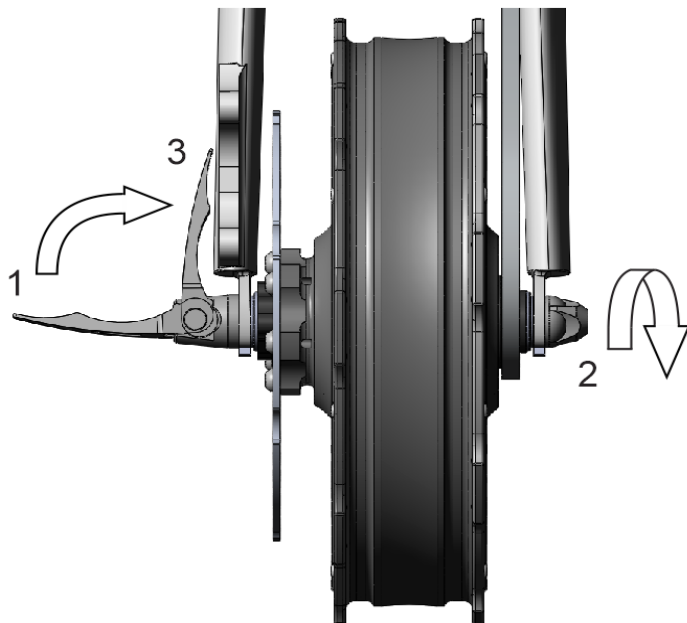


Fig. 10: Order of operations for securing the motor with a quick release.

All-Axle Installation Manual

Rev 0



4 Additional Notes

- The motor and torque arm must be mounted securely. There should be no motion or play in any of the components, especially in the torque arm or frame clamp. After assembly and after your first test ride you should check to ensure all components remain snug and secure.
- If you reuse bolts in this kit or use bolts not provided in this kit, use a drop of mild thread lock when reassembling.
- Part of your normal periodic bike tuning procedure should include ensuring that all of your ebike components are also securely and safely fastened.



See the installation video here:

Or visit <https://www.youtube.com/c/GrinTechnologies>

All-Axle Installation Manual

Rev 0



Appendix

15x110 Boost Adapters

For QR15x110mm boost adapters, use the provided torque arm spacer between the torque arm and frame clamp.

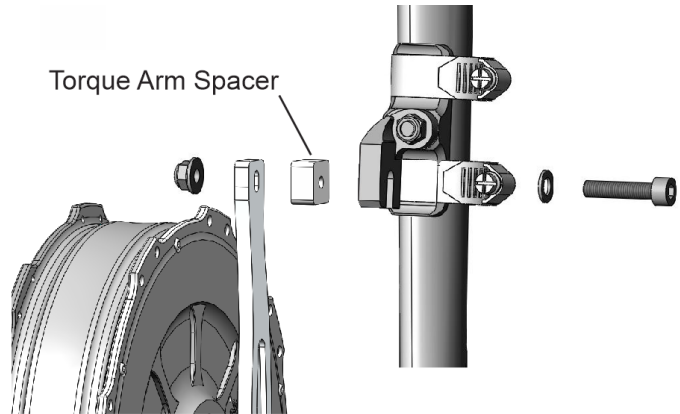


Fig. 11: Use the torque arm spacer to align the torque arm spacer.

15x150 Fatbike Adapters

If using 15x150mm adapters, use the included torque arm spacer between the hub and torque arm. Secure with the 6 40mm long T20 Torx bolts.

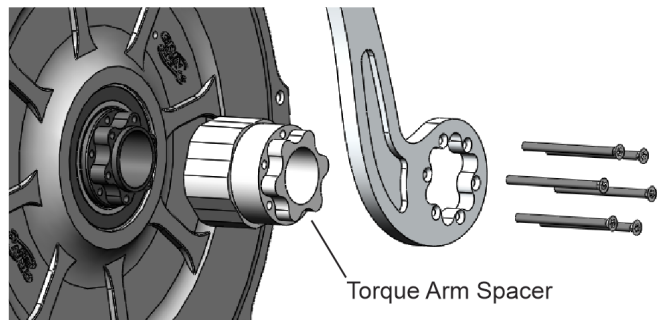


Fig. 12: Use the long M3 bolts to secure the spacer between the motor and torque arm.

Use the provided disc mount spacer before installing the rotor. Secure the spacer with the provided 6 M5x16 bolts using an M5 Allen key.

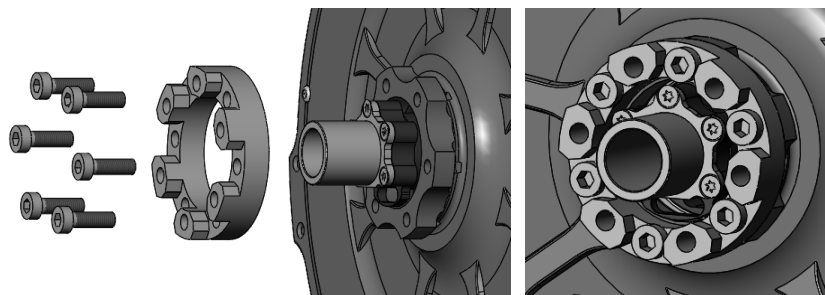


Fig. 13: Use the disc spacer before installing the disc rotor.

20x110 Boost Adapters

For 20x110mm boost adapters you will need an additional 5mm thick spacer under the disc rotor.