

ALTERNATOR 2.0 DROPOUT INSTRUCTIONS

At Salsa, we believe that a sense of adventure makes life better. The bicycle can be so much more than just a bike; it's a path to new places, new people, and amazing experiences.

Thank you for your purchase. We hope it makes a good riding experience even better!

Salsa. Adventure by bike.®

⚠ WARNING: CYCLING CAN BE DANGEROUS. BICYCLE PRODUCTS SHOULD BE INSTALLED AND SERVICED BY A PROFESSIONAL MECHANIC. NEVER MODIFY YOUR BICYCLE OR ACCESSORIES. READ AND FOLLOW ALL PRODUCT INSTRUCTIONS AND WARNINGS INCLUDING INFORMATION ON THE MANUFACTURER'S WEBSITE. INSPECT YOUR BICYCLE BEFORE EVERY RIDE. ALWAYS WEAR A HELMET.

Intended Use & Compatibility

Alternator 2.0 Dropouts create a modular system consisting of replaceable dropout plates and fixing hardware. They are specifically designed for, and only compatible with, Salsa frames using the 2.0 system. Frames designed around the first generation Alternator dropout system are not compatible with the 2.0 system parts, and frames designed around the Alternator 2.0 dropout system are not backward compatible with first generation Alternator dropout plates and hardware. The same Alternator 2.0 Dropout plates are used for 142, 148, 177, or 197mm spacing, etc. Hardware kits must always be paired with the style of dropout plates being installed on the frame.

Required Tools

10mm box-end wrench
4, 5, & 6 hex wrenches
Torque wrench with 5 & 6mm hex bits
Thread-locking compound

Dropout System Overview

Alternator 2.0 Dropout plates comes in two styles; **fixed-position plates** (Fig. 1, items A and B), and **adjustable-position plates** (Fig. 2, items A and B). All dropout plates are sold individually to facilitate mixing and matching to accommodate various drivetrain and axle combinations.

Salsa frames featuring the Alternator 2.0 Dropout system come stock with the most appropriate dropout plate style for the frame's intended use, but are fully compatible with all other 2.0 dropout plates, given a matching rear hub exists.

Fixed-Position Dropout Plates

Fixed-position plates feature two threaded holes, which allow the user to select between two different "fixed" rear-center lengths. The first hole results in the shortest possible rear-center for the frame model it is mounted to, and the second hole increases the rear-center by 10mm. These style plates are best used when a singlespeed setup is NOT needed/wanted, or the user wants to

eliminate any chance of the dropout slipping under unusually heavy loading events. The second hole is primarily intended to create adequate clearance between the frame and tire when larger than stock tire is fitted. Fixed-position dropout plates are offered in 10mm quick-release and 12mm thru-axle (1.5 and 1.75mm thread pitches) axle styles and all driveside plates feature a hanger tab (no singlespeed option). Fender mounting tabs are also an option on some plates.

For further details refer to the Fixed-Position Dropout Plate Installation section of these instructions.

Adjustable-Position Dropout Plates

Adjustable-position plates feature a slot and recess that accepts a square fixing nut. This style of plate allows for the rear axle location to be adjusted through a ~17mm range relative to the bottom bracket axle. Additionally, "anti-slip" hardware is also used with this plate style, which helps to resist any movement in the plates from excessive pedaling or braking forces. Adjustable-position plates are intended for singlespeed and internally geared hub drivetrain setups, or when the user wants rear-center adjustability or the option to create a singlespeed drivetrain in the field. Adjustable plates are offered in a 10mm quick-release and 12mm thru-axle (1.5 and 1.75mm thread pitches). Driveside plates are available with a hanger tab (geared) and without (singlespeed). There is a non-driveside plate specifically for Rohloff OEM 1 and it features a fender mount. Fender mounts are also available on other drive and non-drive styles. For further details refer to the Adjustable-Position Dropout Plate Installation section of these instructions.

⚠ WARNING: Never use the fender mounting tabs (if present) to attach a rack or any other load bearing accessory.

⚠ WARNING: Never attempt to mount Alternator 2.0 dropout plates to a Salsa frame featuring the first generation Alternator dropout system.

⚠ WARNING: Never attempt to mount first-generation Alternator dropout plates to a Salsa frame featuring the Alternator 2.0 dropout system.

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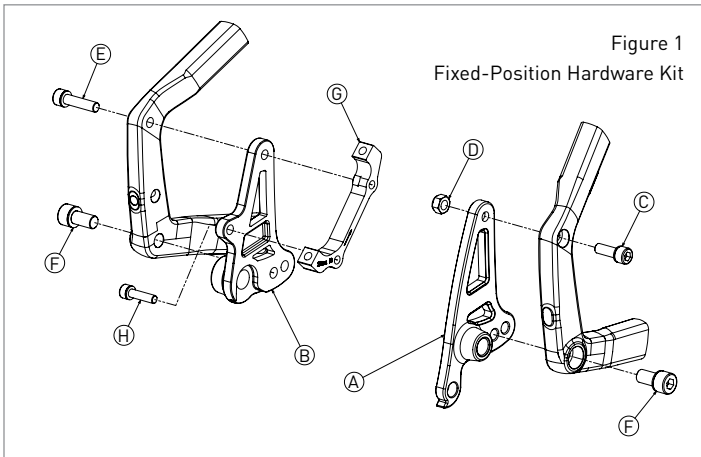


Figure 1
Fixed-Position Hardware Kit

A	Driveside fixed-position plate
B	Non-driveside fixed-position plate
C	Upper pivot bolt, driveside, M6 x 1.0, 18mm w/ captured washer, qty. 1
D	Nut, M6 x 1.0 w/ nylon insert, qty. 1
E	Upper pivot bolt, non-driveside, M6 x 1.0, 25mm w/ captured washer, qty. 1
F	Lower fixing bolt, M8 x 1.25, 16mm, w/ captured washer, qty. 2
G	Third-party I.S. brake adapter (see note about size below)
H	Third-party brake adapter mounting bolt (included with item G)

Hardware Kit Options

There are two hardware kit options for attaching to Alternator 2.0 dropout plates to compatible Salsa frames; a Fixed-Position Hardware Kit (Fig. 1) and an Adjustable-Position Hardware Kit (Fig. 2). As the names imply, the kit used to attach the dropout plates is determined by the plate style being used on the frame. Fixed-Position and Adjustable-Position Hardware Kits are sold separately, and independent of dropout plates. Each hardware kit contains enough hardware to mount both a right and left dropout plate of the corresponding style.

⚠ WARNING: Never attempt to mount an adjustable-position dropout plate with a fixed-position hardware kit.

⚠ WARNING: Never attempt to mount a fixed-position plate with an adjustable-position hardware kit.

⚠ WARNING: Never attempt to use a fixed-position hardware kit to mount an adjustable-position dropout plate.

Parts Not Included but Needed for Assembly

Refer to Figure 1:

G Third-party I.S. brake adapter (see note about size below)

H Third-party brake adapter mounting bolt (included with item G)

NOTE: The Alternator 2.0 dropout system is compatible with I.S. disc brake adapters sized for 140 and 160mm disc rotors, as well as *most* common disc brake calipers mounted to these adapter sizes. 180mm rotors can also be fitted to Salsa frames equipped with the Alternator 2.0 system, but some I.S. adapters designed for this rotor size may interfere with the seatstay of the frame. In this case, it is best to use a different adapter, or use an I.S. adapter sized for 160mm rotors in conjunction with a +20mm

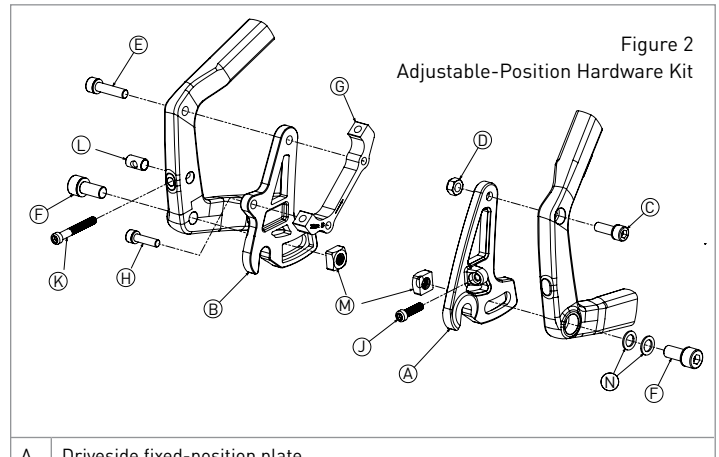


Figure 2
Adjustable-Position Hardware Kit

A	Driveside fixed-position plate
B	Non-driveside fixed-position plate
C	Upper pivot bolt, driveside, M6 x 1.0, 18mm w/ captured washer, qty. 1
D	Nut, M6x1.0 w/ nylon insert, qty. 1
E	Upper pivot bolt, non-driveside, M6 x 1.0, 25mm w/ captured washer, qty. 1
F	Lower fixing bolt, M8 x 1.25, 18mm, w/ captured washer, qty. 2
G	Third-party I.S. brake adapter (see note about size below)
H	Third-party brake adapter mounting bolt (included with item G)
J	Anti-slip screw, driveside, M5 x 0.8, 18mm, qty. 1
K	Anti-slip screw, non-driveside, M5 x 0.8, 36mm [25mm total length], qty. 1
L	Barrel nut, Ø8 x 13.5mm, M5 x .08, asymmetric, qty. 1
M	Square nut, M8 x 1.25, qty. 2
N	Washer, Ø8 x Ø13 x 1, qty. 2

post-to-post adapter to adjust the caliper position to fit 180mm rotors. The Alternator 2.0 dropout system and all Salsa frames equipped with them are NOT compatible with I.S. adapters to fit rotors that are larger than 180mm in diameter.

⚠ WARNING: Never attempt to fit an I.S. disc brake adapter that contacts any part of the frame other than the non-driveside dropout plate it is attached to. If adjustable dropout plates are used, check for clearance through the entire adjustment range.

⚠ WARNING: Never attempt to fit a disc brake caliper that makes contact with non-driveside dropout plate or any part of the frame. If adjustable dropout plates are used, check for clearance through the entire adjustment range.

Fixed-Position Dropout Plate Installation

Refer to Figure 1 for all referenced item numbers in this section.

Fixed-position plates must be installed using the Fixed-Position Hardware Kit. This hardware kit consists of:

- C Upper pivot bolt, driveside, M6 x 1.0, 18mm w/ captured washer, qty. 1
- D Nut, M6 x 1.0 w/ nylon insert, qty. 1
- E Upper pivot bolt, non-driveside, M6 x 1.0, 25mm w/ captured washer, qty. 1
- F Lower fixing bolt, M8 x 1.25, 16mm, w/ captured washer, qty. 2

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The fasteners provided in the hardware kit come with factory applied thread-locking compound. This thread-locking compound will be effective for the initial installation and a couple of adjustments (fully loosen and re-torque) of the dropouts. Blue thread-locking compound should be applied to the last 5–6 threads of each fixing bolt (C, E, F, and H) for subsequent adjustments and removal/re-installations.

1. If the frame came with adjustable-position plates pre-installed, remove these plates and ALL hardware. Store these in a safe place for future use. Take care not to mix adjustable-position hardware with fixed-position hardware. Proceed to Step 3.
2. If the frame came with fixed-position plate pre-installed, proceed with Steps 3–10, but note the hardware is already installed. You will only need to adjust the tightness of the hardware as described at the end of each step.
3. Install the driveside fixed-position plate:
 - a. Insert the upper pivot bolt w/ captured washer (C) through the frame and the dropout plate (A), and thread into the M6 nut (D). Make sure the nut seats into the hex broach on the backside of the plate. Turn the upper pivot bolt until it is 1/2 turn from fully tight, and the dropout plate is still free to rotate relative to the frame.
 - b. Insert the lower fixing bolt w/ captured washer (F) through the frame and thread it loosely into the threaded hole closest to the rear axle on the dropout plate (A) until it is 1/2 turn from tight.
4. Install the non-driveside fixed-position plate:
 - a. If present, remove the M6 nut (not pictured) that is helping to secure the non-driveside dropout plate (A) to the frame via the upper pivot bolt (E). Set this nut aside as it is no longer needed.
 - b. Insert the upper pivot bolt (E) through the frame, through the dropout plate, and thread it into the upper hole of the I.S. brake adapter (G) until it is 1/2 to 1 turn from tight.
 - c. Using one of the bolts supplied with the brake adapter (H), finish aligning the I.S. brake adapter (G) to the dropout plate (B) by passing the bolt through the lower brake mount hole on the dropout plate, and threading it into the adapter. Turn until finger tight.
 - d. Insert the remaining lower fixing bolt w/ captured washer (F) through the frame and thread it loosely into the threaded hole closest to the axle of the dropout plate (B). Thread the bolt in until it is a 1/2 turn from tight.
5. Install the rear wheel and fully tighten rear thru-axle or quick-release.
6. Check for adequate tire clearance around the chainstays and seatstays:
 - a. If there is 6mm or more clearance between all parts of the tire and the frame, proceed to Step 7. If not, proceed to 6b.
 - b. Remove both of the lower fixing bolts (F), carefully push the wheel and dropout plate assembly rearward, until the threaded holes furthest from the rear axle of the dropout plates (A) and (B) line up with the lower holes in the frame. Re-install the lower fixing bolts until they are finger tight. Check for adequate tire clearance again.

▲ **WARNING:** If the clearance is still not greater than 6mm, STOP. The tire is too large, and not compatible with the frame. Consider changing to a smaller rear tire, or using adjustable-position plates adjusted as far back as possible (an additional ~7mm of rear-center) in an attempt to create adequate clearance between the tire and frame.
7. Using a torque wrench tighten both the right and left side lower fixing bolts (F) to 10Nm each.
8. Using a torque wrench tighten both the right and left upper pivot bolts (C) and (E) to 8Nm each.
9. Using a torque wrench tighten the lower I.S. brake adapter bolt (G) to the manufacturer's specification, if none is given, torque to 8Nm.
10. The fixed-position dropouts are now properly installed on the frame and should resemble approximately what is shown in Figure 3 (rear wheel and axle omitted for clarity). Proceed to install and adjust the rear brake per the brake manufacturer's instructions.

▲ **WARNING:** Periodically check all the fixing bolts for tightness and re-torque if necessary. If a bolt is repeatedly coming loose, apply blue thread locking compound.

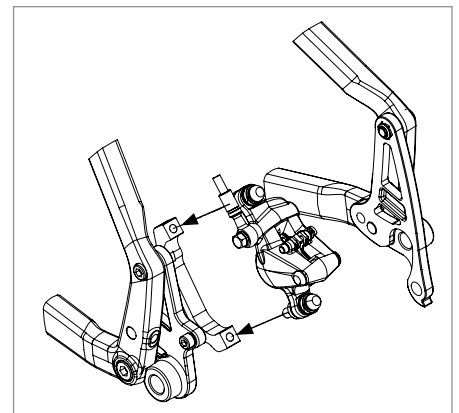


Figure 3

Adjustable-Position Dropout Plate Installation

Refer to Figure 2 for all referenced item numbers in this section.

Adjustable-position plates must be installed using the Adjustable-Position Hardware Kit. This hardware kit consists of:

- C Upper pivot bolt, driveside, M6 x 1.0, 18mm w/ captured washer, qty. 1
- D Nut, M6x1.0 w/ nylon insert, qty. 1
- E Upper pivot bolt, non-driveside, M6 x 1.0, 25mm w/ captured washer, qty. 1
- F Lower fixing bolt, M8 x 1.25, 18mm, w/ captured washer, qty. 2
- M Square nut, M8 x 1.25, qty. 2
- N Washer, Ø8 x Ø13 x 1, qty. 2
- J Anti-slip screw, driveside, M5 x 0.8, 18mm, qty. 1
- K Antil-slip screw, non-driveside, M5 x 0.8, 36mm (25mm total length), qty. 1
- L Barrel nut, Ø8 x 13.5mm, M5 x .08, asymmetric, qty. 1

The fasteners provided in the hardware kit come with factory applied thread-locking compound. This thread-locking compound will be effective for the initial installation and a couple of adjustments (full loosen and re-torque) of the dropouts. Blue thread-locking compound should be applied to the last 5-6 threads of each fixing bolt (C, E, F, and H) for subsequent adjustments and removal/re-installations.

1. If the frame came with fixed-position plates pre-installed, remove these plates and ALL fixing hardware. Store these in a safe place for future use. Take care to not mix adjustable hardware with fixed-position hardware.
2. If the frame came with adjustable plates pre-installed, proceed with Steps 3-13, but note the hardware is already installed. You will only need to adjust the tightness of the hardware as noted at the end of each step.
3. Install the driveside adjustable-position plate:
 - a. Insert the upper pivot bolt w/ captured washer (C) through the frame and the dropout plate (A), and thread into the M6 nut (D). Make sure the nut seats into the hex broach on the backside of the plate. Turn the upper pivot bolt until it is 1/2 turn from fully tight, and the dropout plate is still free to rotate relative to the frame.
 - b. Place a square nut (M) into the track on the inside face of the driveside dropout plate (A) with the larger, square surface against the dropout plate (rounded side towards the frame's centerline).
 - c. Insert the lower fixing bolt w/ captured washer (F) through the frame and the slot in the dropout plate (A) and thread it loosely into the square nut (G) until it is 1/2 turn from tight. DO NOT include either of the two loose washers (N) included with the kit at this time as these are accounted for later in Step 7.
 - d. Thread the driveside anti-slip screw (J) four to five turns into the threaded tab on the driveside plate (A), but not so much that it protrudes past the back face of the tab on the plate.
4. Install the non-driveside adjustable plate using the Adjustable Plate Hardware Kit and an appropriate third-party I.S. brake adapter and bolt as described below, with reference to Figure 2:
 - a. If present, remove the M6 nut (not pictured) that is helping to secure the non-driveside dropout plate (A) to the frame via the upper pivot bolt (E). Set this nut aside, it is no longer needed.
 - b. Insert the upper pivot bolt (E) through the frame, through the dropout plate, and thread it into the upper hole of the I.S. brake adapter (H) until it is 1/2 to 1 turn from tight.
 - c. Using one of the bolts supplied with the brake adapter (H), finish aligning the I.S. brake adapter (G) to the dropout plate (B) by passing the bolt through the lower brake mount hole on the dropout plate, and threading it into the adapter. Turn until finger tight.
 - d. Place the remaining square nut (M) into the track on the inside face of the non-driveside dropout plate (B) with the larger, square surface against the dropout plate (rounded side towards the frame's centerline).
 - e. Insert the remaining lower fixing bolt w/ captured washer (F) through the frame and the slot in the dropout plate (B) and thread it loosely into the square nut (M) until it is 1/2 turn from tight.
 - f. DO NOT install the non-driveside anti-slip hardware at this time as this is accounted for in Step 12.
5. Install the rear wheel and tighten with rear axle (or quick-release).
6. Position/tension the dropouts:
 - a. If using a geared drivetrain configuration and the shortest rear-center is desired, push the wheel/dropout assembly toward the front of the bike, making sure the square nuts are up against the back end of the recessed track in both dropout plates. Proceed to Step 6c, otherwise, proceed to the next step.
 - b. If using a singlespeed drivetrain, or more tire clearance is needed, use a 4mm hex key and slowly turn the driveside anti-slip screw (J) clockwise, so that the end of the screw contacts the mating surface on the frame and starts to pull the dropout/hub assembly rearward (Fig. 4). Adjust this screw until adequate chain tension, tire clearance, or both is reached.

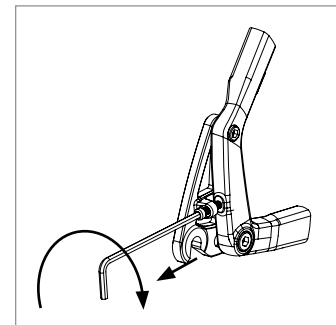


Figure 4

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- c. Inspect the tire near the front of the chainstay opening and make sure it is centered. If it is sitting slightly to the left or right, push on the rim from the opposite direction just above the chainstay area to center the wheel/tire/dropout assembly to the frame. While still applying pressure to the rim, tighten both the driveside and non-driveside lower fixing bolts (F) lightly. (Enough to prevent any movement, but not full torque.)
 - d. Check for adequate chain tension and/or tire clearance. If the chain is too tight or too loose, loosen both lower fixing bolts (F), and repeat Steps 6b and 6c. Likewise, if clearance between the frame the tire is less than 6mm at any point, the dropout plate must be adjusted further rearward per Steps 6b and 6c until clearance is 6mm or more at all points to the tire. Once proper chain tension and/or tire clearance is achieved, proceed to the next step.
7. Check the driveside lower fixing bolt, shim if necessary:
- a. If adjustable-position dropout plates are positioned in the front 1/3 of their adjustment (shortest), check the clearance between the smallest cog of the rear cassette and the end of the driveside lower fixing bolt (F) to ensure there is no contact and at least 1mm of clearance (Fig. 5).

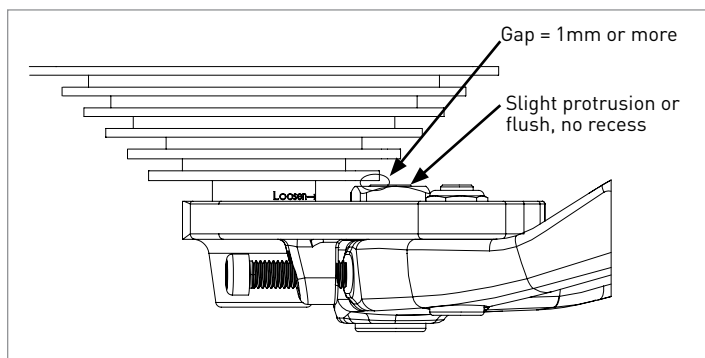


Figure 5

Spin the cassette thru a full rotation to ensure all the teeth clear the end of the bolt. If clearance is adequate, skip ahead to Step 8. If there is contact or less than 1mm of clearance, proceed to Step 7b.

- b. Remove the driveside lower fixing bolt with captured washer (F) and place one of the two provided loose washers (N) onto the bolt. Reinstall the bolt and washer assembly and re-check the clearance as described in the previous step. Up to two washers may be used to shorten the lower fixing bolt to create clearance. The end of the lower fixing bolt should just slightly protrude, or be flush with, the end of the square nut (M), but never recessed (Fig. 5).
8. Using a torque wrench tighten both the right and left side the lower fixing bolts (F) to 10Nm.
 9. Using a torque wrench tighten both the right and left upper pivot bolts (C and E) to 8Nm
 10. Using a torque wrench tighten the lower I.S. brake adapter bolt (H) to the manufacturer's specification. If none is given, torque to 8Nm.

11. Ensure the driveside anti-slip screw (J) is still touching the strike plate surface on the back end of the frame. Turn the driveside set screw 1/4 turn to snug it against the frame to keep tension on it. This will prevent it from rattling loose. The driveside anti-slip screw is designed to prevent forward slip of the driveside dropout under higher loads due to hard accelerations.
12. Install the non-driveside anti-slip screw (K):

- a. Insert the asymmetric barrel nut (L) into the left side of the frame, with the marked "chamfered" end first. (Flat side facing outboard) Take care to keep the threaded hole in line with anti-slip bolt hole in the frame (Fig. 6).

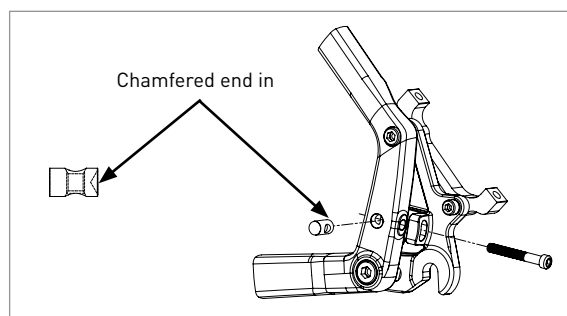


Figure 6

- b. Insert the non-driveside anti-slip screw (K) through the slot on the back side of the non-driveside plate, through the hole in the frame, and engage the threads of the barrel nut (Fig. 6).
- c. Tighten the anti-slip screw until the bolt head contacts the tab on the dropout plate. Adjust the angle of the bolt so that the portion of the head in line with the bolt axis (3 and 6 o'clock) are touching the curved surface of the tab (Fig. 7). Tighten 1/4 turn past snug. This screw is designed to prevent the non-driveside dropout plate from slipping rearward under higher loads from hard braking.

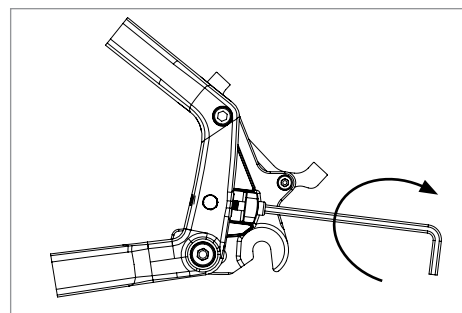


Figure 7

ALTERNATOR 2.0 DROPOUT INSTRUCTIONS

13. The adjustable-position dropouts are now properly installed on the frame and should resemble approximately what is shown in Figure 8 (rear wheel and axle omitted for clarity). Proceed to install and adjust the rear brake per the brake manufacturer's instructions.

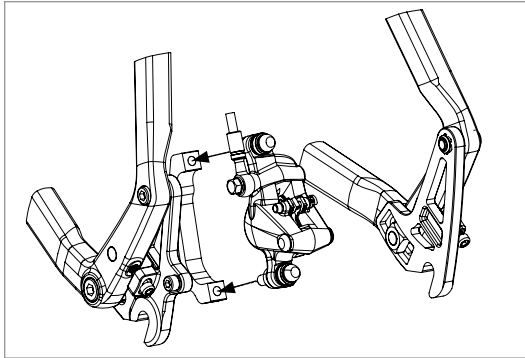


Figure 8

Warranty

Proof of purchase is required before a warranty claim is processed. Salsa Cycles therefore strongly encourages warranty registration at salsacycles.com. Failure to register will not affect consumer rights under the limited warranty stated above, so long as the consumer can show in a reasonable manner proof of original ownership and the date the Salsa Cycles product was purchased.

If you have any questions contact warranty@salsacycles.com or visit salsacycles.com/support for more warranty information.

Ongoing Maintenance

Periodically check to make sure all Alternator 2.0 Dropout hardware and wheel retention skewers and axles are tightened to the recommended torque specifications.

⚠ WARNING: Periodically check all the fixing bolts and anti-slip screws for tightness and re-torque if necessary. If a bolt is repeatedly coming loose, apply blue thread-locking compound.

SALSA CYCLES

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